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EXPERIMENTAL RESULTS FOR A FLAPPED NATURAL-LAMINAR-FLOW AIRFOIL WITH HIGH LIFT/DRAG RATIO

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INTRODUCTION

Research on advanced-technology airfoils for general aviation applications has received considerable attention over the past decade at the NASA Langley Research Center. The initial emphasis in this research program was on the design and testing of turbulent-flow airfoils with the basic objective of producing a series of airfoils which had the following performance requirements: low cruise drag, high climb lift-drag ratios, high maximum lift, and predictable, docile stall behavior. A summary of this work is presented in reference 1. While these airfoils did achieve improved climb performance and higher maximum lift coefficients compared to the earlier NACA four- and five-digit airfoils, the cruise drag coefficients were about the same. Accordingly, the emphasis in the research program has been shifted toward natural-laminar-flow (NLF) airfoils in an attempt to obtain lower cruise drag coefficients while retaining the high maximum lift coefficients of the NASA airfoils. Reference 2 reports the results of a recent NLF airfoil designed for 0.40c laminar flow on the upper surface and 0.60c on the lower surface. (NLF(1)-0215F).

The present investigation was conducted to determine the low-speed aerodynamic characteristics of a 14-percent-thick NLF airfoil designed for 0.70c laminar flow on both surfaces, a lift coefficient of 0.40, a Reynolds number of 10.0×10^6, and a Mach number of 0.40. This airfoil is designated as NLF(1)-0414F. The tests were conducted in the Langley Low-Turbulence Pressure Tunnel.

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SYMBOLS

C_p	pressure coefficient, $\frac{p_\ell - p_\infty}{q_\infty}$
c	airfoil chord, 36 in.
c_c	section chord-force coefficient, $\oint C_p \, d\left(\frac{z}{c}\right)$
c_d	section profile-drag coefficient, $\int_{Wake} c_d' \, d\left(\frac{h}{c}\right)$
c_d'	point-drag coefficient
c_ℓ	section-lift coefficient, $c_n \cos \alpha - c_c \sin \alpha$
c_m	section pitching-moment coefficient about quarter-chord point $-\oint C_p \, (x/c - 0.25) \, d\left(\frac{x}{c}\right) + \oint C_p \frac{z}{c} \, d\left(\frac{z}{c}\right)$
c_n	section normal force coefficient, $-\oint C_p \, d\left(\frac{x}{c}\right)$
h	vertical distance in wake profile, in.
M	free-stream Mach number
p	static pressure, lb/ft^2
q	dynamic pressure, lb/ft^2
R	Reynolds number based on free-stream conditions and airfoil chord
x	airfoil abscissa, in.
y	spanwise station, in.
z	airfoil ordinate, in.
α	angle of attack, deg
δ_f	flap deflection, positive downward, deg

Subscripts:

ℓ	local point on airfoil
max	maximum
∞	free-stream conditions
T	transition

Abbreviations:

NLF	natural laminar flow
LTPT	Langley Low-Turbulence Pressure Tunnel

AIRFOIL DESIGNATION

A sketch of the section shape for the 14-percent-thick NLF airfoil is shown in figure 1. The airfoil is designated in the form NLF(1)-0414F. NLF(1) indicates natural laminar flow (first airfoil). The next two digits designate the airfoil design lift coefficient in tenths (0.40), and the last two digits designate the airfoil maximum thickness in percent chord (14). The second "F" designates "flapped."

AIRFOIL DESIGN

The NLF airfoil was designed by Dr. Werner Pfenninger and Mr. Jeffrey Viken under contract to the NASA Langley Research Center (reference 3). The airfoil was designed for a c_ℓ = 0.40-0.45 at a Reynolds number of 10×10^6 and $M \leq 0.40$ with a thickness of 0.143 chord. Theoretical development allowed for the achievement of 0.70 chord laminar flow on both surfaces by the use of accelerated flow (figure 2). With such a rearward pressure recovery, a concave type deceleration was implemented. This type of recovery efficiently recovers pressure by decelerating where the boundary layer has the most energy, then continuously decreasing the gradient toward the trailing edge. The airfoil leading-edge is moderately sharp representing a

compromise between a sharp nose needed for a wide low-drag c_ℓ range and a blunt nose for better $c_{\ell_{max}}$ performance. A 0.125 chord simple flap is incorporated to substantially increase the low-drag c_ℓ-range by keeping the stagnation point at the leading edge at different values of lift coefficients. The airfoil design coordinates are presented in table I.

MODEL, APPARATUS, AND PROCEDURE

Model

The forward portion and 0.125 chord flap of the wind-tunnel model were constructed of aluminum. The cruise flap was positioned behind the forward portion of the model in a sealed radius region and attached to the model mounting plates with bolts. Slotted cut-outs were provided in the attachment plate to provide for various flap deflections (-10° to 12.5°). The location of the flap-hinge point was $x/c = 0.875$, $z/c = -0.015$. The airfoil surface was sanded in the chordwise direction with No. 500 dry silicon carbide paper to provide a smooth aerodynamic finish. Figure 3 shows a photograph of the model. The model had a chord of 36 inches and a span of 36 inches. Upper- and lower-surface orifices were located on the model at the chord stations listed in table II. All orifices were 0.020 inch in diameter with their axes perpendicular to the local surface. The model contour accuracy was generally within ± 0.003 inches as determined by measurements. The model surface waviness was less than 1/3000 (height to length ratio) as measured by a 2-inch dial gage. In order to obtain data on the airfoil in a high-lift configuration, a 0.20c split flap deflection 60° was installed on the model. The split flap was constructed from aluminum and orifices were installed on this flap as indicated in table II.

Wind Tunnel

The Langley Low-Turbulence Pressure Tunnel (reference 4) is a closed-throat, single-return tunnel which can be operated at stagnation pressures from 1.0 to 10.0 atm. with tunnel-empty test-section Mach numbers up to 0.46 and 0.22, respectively. The maximum Reynolds number is about 15.0×10^6 per foot. The tunnel test section is 3 feet wide and 7.5 feet high. The turbulence level in the test section of the tunnel is less than 0.08 percent for unit Reynolds number below about 6.0×10^6 per foot.

The model and support system are shown in figures 4 and 5. The airfoil model is mounted between two endplates which are connected to the inner drums. The inner drums are held in place by an outer drum and yoke-arm support system. The yoke support system is mounted to a force balance which is, in turn, connected to the tunnel through a balance platform. The yoke arm is fabricated from aluminum in a monocoque structure to minimize weight loads on the balance system. For the present test the force balance was not used. The attitude of the model is controlled by a motor-driven, externally-mounted pitch mechanism that rotates the bearing-mounted inner drums. A multi-path labyrinth seal is used to minimize air leakage from the test section into the outer tunnel plenum. An electrical fouling indicator is incorporated in the seal to detect any fouling at the seal components.

Wake Survey Rake

The wake survey rake (figure 6) was mounted on the tunnel survey apparatus and located 0.60 chord behind the trailing-edge of the airfoil. The rake contained seven total-pressure tubes 0.063 inches in diameter which were flattened to 0.020 inch (internal height) for 0.25 inch from the tip of the tube. The rake is equipped with both

standard and disc-type static pressure probes. The standard probes were used to measure the static pressure in the wake for the present test. The static probes were 0.125 inches in diameter with eight flush orifices (0.018 inches in diameter) drilled 45° apart and located 8 tube diameters from the tip of the probe. The rake also contained two claw-type flow-angularity probes, which consisted of two open-ended probes inclined 90° with respect to each other. These probes were used to obtain the mean flow direction of the wake.

Survey Apparatus

The wake rake was positioned at various spanwise stations behind the model by means of the remote-controlled survey apparatus (figure 7). The apparatus basically consists of an articulating arm mounted on an arc strut. Movement of the arm enables the wake surveys to be made for various angles of attack.

The arm is comprised of three movable components; a main boom, an offset boom, and a forward pivoting head. Each component has a position control device. The main boom is mounted on the strut with a pivot point allowing rotation in the vertical plane. Its motion is controlled by the linear actuator. The offset boom can be rotated about the main boom by the roll actuator. This allows survey positions to be made at distances up to 12 inches from the tunnel centerline. The forward pivoting head is mounted at the end of the offset boom and may be rotated in the vertical plane by the (internally mounted) pitch adjustment mechanism. Figure 7 shows the survey apparatus with the wake rake mounted on the forward pivoting head assembly. In addition, the entire apparatus can be positioned vertically in the wind tunnel by utilizing the movable strut which moves within the confines of fixed leading- and trailing-edge

fairings. Positioning and rate of movement of the rake is controlled by a microprocessor controller. In general, wake surveys using this apparatus provided good drag results with a survey rate of about 0.10 inch/sec or less.

INSTRUMENTATION

Measurements of static pressures on the model surfaces and wake-rake pressures were made using variable-capacitance precision transducers. These transducers were automatically calibrated to an accuracy of ± 0.25 percent of reading from -25 percent to 100 percent of full scale reading. An automatic pressure-scanning system was used to record the static pressures on the model. Basic tunnel pressures were measured with precision quartz manometers. Geometric angle of attack was measured by a calibrated digitial shaft encoder driven by a pinion gear and rack attached to the inner drum of the model support system. Data were obtained by a high-speed data-acquisition system and were recorded on magnetic tape. Real-time data plots were displayed on cathode-ray tubes with hard-copy capability.

TESTS AND METHODS

The model was tested at Reynolds numbers based on airfoil chord from approximatey 3.0×10^6 to 10.0×10^6. Additional drag data were obtained up to a Reynolds number of about 22.0×10^6 at design lift coefficient. The Mach number was varied from about 0.05 to 0.40. The model was tested both smooth (transition free) and with transition fixed by roughness located at 0.01c and 0.075c on both surfaces. The granular roughness was sparsely distributed along the 0.10-inch wide strips which were applied to the model with lacquer. Also, for

several runs turbulator tape was placed at 0.68c on both surfaces to eliminate laminar separation bubbles that occurred at low Reynolds numbers.

For several test runs, thin hot-film gages were mounted on the model upper surface to determine the location of the boundary-layer transition from laminar to turbulent. These results are shown in figure 8.

The static-pressure measurements at the model surface were reduced to standard pressure coefficients and numerically integrated to obtain section normal-force and chord-force coefficients and section pitching-moment coefficients about the quarter-chord point. Section profile-drag coefficients were computed from the wake-rake total and static pressures by the method of reference 5.

Standard low-speed wind-tunnel boundary corrections (reference 5), have been applied to the section data. Corrections were applied to the free-stream dynamic pressure due to solid and wake blockage and to lift, pitching-moment, and angle of attack due to the effects of flow and ceiling constraint on streamline curvature. No blockage corrections have been applied to the pressure coefficient data. The magnitude of these corrections for the NLF(1)-0414F airfoil are:

$$\alpha_{corrected} = \alpha + 0.30\ (c_\ell + 4\ c_m)$$

$$c_{\ell_{corrected}} = c_\ell\ [0.95 - 0.20\ c_d]$$

$$c_{m_{corrected}} = c_m\ [0.98 - 0.20\ c_d] + 0.0083\ c_\ell$$

$$c_{d_{corrected}} = c_d [0.97 - 0.20 c_d]$$

PRESENTATION OF RESULTS

The results of this investigation have been reduced to coefficient form and are tabulated in Appendix A and B. Selected results are presented in the following figures:

Figure

Effect of Reynolds number on section characteristics; model smooth; $M \leq 0.12$; $\delta_f = 0°$. 9
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SUMMARY OF RESULTS

The following results were determined from this investigation:

1. Natural laminar flow was achieved on both surfaces back to 0.70 chord at design conditions and a drag coefficient of 0.0027 was measured.

2. A wide low-drag lift-coefficient range (c_ℓ = 0.0 to 0.81) was achieved by deflecting a 0.125 chord trailing-edge flap. A lift-drag ratio of 245 was measured at a lift-coefficient of 0.81 and a Reynolds number of 10.0×10^6.

3. A maximum lift coefficient of about 1.80 was obtained for the basic airfoil and about 2.70 with a 0.20 chord split-flap deflected 60°.

4. Stall characteristics were of the trailing-edge type.

5. Increasing the Mach number from 0.12 to 0.30 at a constant Reynolds number of about 10.0×10^6 decreased the maximum lift coefficient about 0.25.

6. The application of a roughness strip near the leading-edge of the airfoil decreased the maximum lift coefficient only about 0.04.

7. Application of tape turbulators decreased the drag coefficient about 0.0010 at a lift coefficient of 0.40 and a Reynolds number of 3.0×10^6 by eliminating laminar separation bubbles on the airfoil.

8. When transition moved forward (outside of low drag bucket) on the airfoil, trailng-edge separation occurred resulting in large increases in drag coefficient.

REFERENCES

1. McGhee, Robert J.; Beasley, William D.; and Whitcomb, Richard T.: NASA Low- and Medium-Speed Airfoil Development. NASA TM-78709, 1979.

2. Somers, Dan M.: Design and Experimental Results for a Flapped Natural-Laminar-Flow Airfoil for General Aviation Applications. NASA TP-1865, 1981.

3. Viken, Jeffrey K.: Aerodynamic Design Considerations and Theoretical Results for a High Reynolds Number Natural Laminar Airfoil. Master's Thesis, George Washington University, January 1983.

4. McGhee, Robert J.; Beasley, William D.; and Foster, Jean M.: Recent Modifications and Calibration of the Langley Low-Turbulence Pressure Tunnel. NASA TP-2328, 1984.

5. Pankhurst, R. C.; and Holder, D. W.: Wind-Tunnel Technique. Sir Isaac Pitman and Sons, Ltd., London, 1965.

TABLE I. - NLF(1) - 0414F AIRFOIL COORDINATES (DELTA F = 0 DEG.)

UPPER SURFACE (CHORD = 36 INCHES)

X/C	Z/C	X/C	Z/C
.000000	.000000	.486327	.081507
.000085	.001585	.504159	.080794
.000299	.003274	.521931	.079893
.001231	.007144	.539641	.078779
.002695	.010618	.557254	.077489
.004989	.014163	.574742	.075988
.008005	.017552	.592064	.074285
.011774	.020769	.609177	.072377
.016268	.023816	.626040	.070245
.021468	.026795	.642629	.067900
.027356	.029735	.658928	.065348
.033891	.032633	.674926	.062510
.041042	.035480	.690596	.059376
.048811	.038317	.705860	.055889
.057201	.041092	.720751	.051944
.066189	.043825	.735392	.047492
.075767	.046482	.750058	.042542
.085915	.049070	.764925	.037208
.096610	.051588	.779951	.031694
.107826	.054033	.795034	.026178
.119545	.056398	.810124	.020750
.131756	.058692	.825179	.015483
.144443	.060917	.840076	.010464
.157592	.063092	.854693	.005783
.171193	.065206	.868960	.001467
.185212	.067240	.882768	-.002475
.199628	.069172	.896006	-.006044
.214447	.071009	.908644	-.009267
.229647	.072735	.920659	-.012161
.245187	.074349	.931980	-.014739
.261054	.075830	.942511	-.017008
.277233	.077161	.952200	-.018994
.293699	.078380	.961042	-.020722
.310424	.079454	.969034	-.022206
.327391	.080369	.976155	-.023456
.344571	.081151	.982370	-.024492
.361925	.081781	.987660	-.025333
.379421	.082240	.992021	-.026006
.397052	.082536	.995456	-.026519
.414812	.082677	.997952	-.026872
.432667	.082633	.999480	-.027067
.450558	.082429	1.000000	-.027122
.468450	.082047		

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TABLE I. (CONTINUED) - NLF(1) - 0414F AIRFOIL COORDINATES (DELTA F = 0 DEG.)

LOWER SURFACE (CHORD = 36 INCHES)

X/C	Z/C	X/C	Z/C
.000000	.000000	.473222	-.059785
.000085	-.001535	.492319	-.059950
.000164	-.002120	.511402	-.060012
.000740	-.004536	.530430	-.059979
.002095	-.006984	.549361	-.059792
.004174	-.009008	.568160	-.059456
.007129	-.010993	.586782	-.058982
.010874	-.012933	.605204	-.058340
.015540	-.014882	.623397	-.057533
.021096	-.016854	.641303	-.056524
.027380	-.018787	.658920	-.055246
.034569	-.020742	.676262	-.053698
.042393	-.022654	.693229	-.051845
.050985	-.024572	.709795	-.049388
.060274	-.026487	.726433	-.046065
.070243	-.028383	.743743	-.042296
.080881	-.030259	.761642	-.038850
.092159	-.032116	.779550	-.035991
.104058	-.033945	.797188	-.033529
.116557	-.035741	.814513	-.031444
.129635	-.037497	.831368	-.029735
.143277	-.039212	.847719	-.028310
.157457	-.040888	.863493	-.027230
.172148	-.042521	.878523	-.026450
.187328	-.044107	.892802	-.025925
.202969	-.045646	.906336	-.025641
.219043	-.047125	.919043	-.025539
.235525	-.048542	.930841	-.025569
.252387	-.049901	.941715	-.025689
.269586	-.051189	.951668	-.025861
.287087	-.052411	.960696	-.026061
.304866	-.053561	.968804	-.026275
.322901	-.054635	.975996	-.026483
.341156	-.055635	.982266	-.026675
.359611	-.056539	.987613	-.026858
.378260	-.057344	.992033	-.027036
.397074	-.058052	.995503	-.027211
.416017	-.058658	.997994	-.027367
.435049	-.059142	.999497	-.027475
.454127	-.059517	1.000000	-.027514

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TABLE II - MODEL ORIFICE LOCATIONS

UPPER SURFACE c = 36 INCHES

DELTA F = 0.0 DEGS.			
ORIFICE	x/c	y/c	z/c
1	.0001	.0747	.0022
2	.0052	.0768	.0144
3	.0101	.0776	.0195
4	.0150	.0790	.0231
5	.0201	.0804	.0261
6	.0251	.0818	.0287
7	.0301	.0833	.0310
8	.0400	.0856	.0351
9	.0500	.0879	.0387
10	.0600	.0902	.0420
11	.0751	.0952	.0463
12	.1000	.0891	.0524
13	.1500	.0798	.0619
14	.2000	.0703	.0693
15	.2500	.0809	.0749
16	.3000	.0915	.0789
17	.3500	.1008	.0814
18	.4000	.0909	.0826
19	.4500	.0754	.0825
20	.5000	.0939	.0810
21	.5501	.0844	.0781
22	.6000	.0738	.0735
23	.6250	.0826	.0704
24	.6500	.0923	.0668
25	.6750	.0973	.0626
26	.7000	.0887	.0573
27	.7250	.0784	.0508
28	.7500	.0719	.0426
29	.7751	.0769	.0335
30	.8001	.0868	.0244
31	.8500	.0993	.0073
32	.9000	.0877	-.0071
33	.9500	.0752	-.0185
34	.9700	.0833	-.0224

DELTA F = -10.0 DEGS.			
ORIFICE	x/c	y/c	z/c
32	.8982	.0877	-.0029
33	.9494	.0752	-.0055
34	.9698	.0833	-.0058
DELTA F = -5.0 DEGS.			
32	.8992	.0877	-.0049
33	.9500	.0752	-.0120
34	.9703	.0833	-.0141
DELTA F = 5.0 DEGS.			
32	.9006	.0877	-.0093
33	.9494	.0752	-.0251
34	.9690	.0833	-.0306
DELTA F = 10.0 DEGS.			
32	.9010	.0877	-.0115
33	.9483	.0752	-.0315
34	.9673	.0833	-.0388
DELTA F = 12.5 DEGS.			
32	.9012	.0877	-.0127
33	.9475	.0752	-.0347
34	.9662	.0833	-.0428
Orifices 32, 33, 34 change with flap deflection			

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TABLE II CONTINUED - MODEL ORIFICE LOCATIONS

LOWER SURFACE c = 36 INCHES

DELTA F = 0.0 DEGS.			
ORIFICE	x/c	y/c	z/c
101	.0001	.0740	-.0019
102	.0053	.0756	-.0099
103	.0101	.0769	-.0126
104	.0151	.0784	-.0147
105	.0201	.0798	-.0165
106	.0250	.0813	-.0181
107	.0301	.0828	-.0196
108	.0400	.0852	-.0221
109	.0500	.0874	-.0244
110	.0600	.0896	-.0265
111	.0750	.0947	-.0293
112	.1001	.0887	-.0334
113	.1501	.0794	-.0400
114	.1999	.0698	-.0454
115	.2500	.0804	-.0497
116	.3000	.0910	-.0533
117	.3500	.1004	-.0561
118	.4001	.0903	-.0582
119	.4500	.0750	-.0595
120	.4999	.0933	-.0600
121	.5500	.0839	-.0598
122	.5999	.0731	-.0586
123	.6248	.0819	-.0575
124	.6499	.0916	-.0560
125	.6749	.0966	-.0539
126	.6999	.0880	-.0509
127	.7249	.0777	-.0464
128	.7499	.0712	-.0411
129	.7750	.0763	-.0367
130	.8000	.0862	-.0332
131	.8499	.0987	-.0282
132	.9000	.0877	-.0257
133	.9500	.0752	-.0258
134	.9700	.0833	-.0263

DELTA F = -10.0 DEGS.			
ORIFICE	x/c	y/c	z/c
132	.9014	.0877	-.0213
133	.9507	.0750	-.0126
134	.9705	.0833	-.0096
DELTA F = -5.0 DEGS.			
132	.9008	.0877	-.0235
133	.9506	.0750	-.0192
134	.9706	.0833	-.0180
DELTA F = 5.0 DEGS.			
132	.8990	.0877	-.0279
133	.9488	.0750	-.0323
134	.9687	.0833	-.0345
DELTA F = 10.0 DEGS.			
132	.8978	.0877	-.0299
133	.9470	.0750	-.0387
134	.9666	.0833	-.0426
DELTA F = 12.5 DEGS.			
132	.8971	.0877	-.0309
133	.9459	.0750	-.0418
134	.9654	.0833	-.0466
DELTA F = 60.0 DEGS. (Split Flap)			
135	.8083	.0833	-.0504
136	.8361	.0833	-.0985
137	.8639	.0833	-.1466
138	.8917	.0833	-.1947
Orifices 132, 133, 134 change with flap deflection			

APPENDIX A

This appendix contains a computer listing of the section characteristics for the NASA NLF(1)-0414F airfoil section. Standard low-speed wind-tunnel boundary conditions have been applied to the data.

APPENDIX A.- SECTION CHARACTERISTICS

RUNS 3,4,6 R = 10.0 MILLION M = 0.12 DELTA F = 0 DEG.

ALPHA,DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-3.99	.054	.0057	-.0701
-3.00	.171	.0048	-.0726
-2.97	.176	.0052	-.0728
-2.44	.236	.0041	-.0745
-1.94	.291	.0034	-.0758
-1.87	.300	.0033	-.0763
-1.41	.352	.0029	-.0774
-.94	.409	.0027	-.0790
-.92	.407	.0027	-.0784
-.41	.465	.0033	-.0798
.05	.512	.0044	-.0801
.07	.513	.0055	-.0802
.59	.568	.0060	-.0806
1.14	.626	.0065	-.0810
2.24	.744	.0075	-.0825
3.12	.837	.0084	-.0833
4.17	.942	.0094	-.0836
5.17	1.039	.0107	-.0832
6.16	1.125	.0118	-.0817
7.16	1.199	.0127	-.0789
7.17	1.207	****	-.0789
8.17	1.277	.0145	-.0758
8.22	1.287	****	-.0752
9.20	1.358	****	-.0722
10.21	1.431	****	-.0690
10.21	1.439	****	-.0694
11.23	1.507	****	-.0672
12.27	1.577	****	-.0635
13.24	1.639	****	-.0608
14.32	1.707	****	-.0599
15.19	1.753	****	-.0589
16.30	1.801	****	-.0612
17.23	1.820	****	-.0607
17.75	1.829	****	-.0576
17.95	1.827	****	-.0569

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX A.- SECTION CHARACTERISTICS

RUN 7 R = 8.1 MILLION M = 0.09 DELTA F = 0 DEG.

ALPHA, DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-2.98	.172	.0050	-.0712
-2.54	.226	.0044	-.0734
-1.93	.293	.0032	-.0751
-1.60	.331	.0029	-.0762
-1.01	.401	.0029	-.0784
-.49	.458	.0030	-.0786
.02	.510	.0036	-.0791
.59	.568	.0054	-.0802
1.13	.622	.0071	-.0808
2.16	.727	.0086	-.0817
3.17	.834	.0100	-.0832
4.20	.932	.0110	-.0828
5.17	1.019	.0124	-.0821
6.20	1.103	.0154	-.0796
8.23	1.255	.0232	-.0736
10.31	1.385	****	-.0655
12.34	1.524	****	-.0599
14.44	1.659	****	-.0562
16.48	1.761	****	-.0598
17.48	1.787	****	-.0594
18.34	1.798	****	-.0580

ORIGINAL PAGE IS
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APPENDIX A.- SECTION CHARACTERISTICS

RUNS 8,9 R = 6.1 MILLION M = 0.07 DELTA F = 0 DEG.

ALPHA,DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-4.02	.062	.0058	-.0701
-3.00	.178	.0052	-.0727
-2.02	.273	.0032	-.0742
-1.39	.344	.0032	-.0751
-.89	.417	.0032	-.0771
.04	.528	.0036	-.0809
.59	.582	.0043	-.0817
1.17	.618	.0065	-.0808
2.11	.728	.0089	-.0830
2.19	.732	.0093	-.0821
3.14	.821	.0106	-.0822
3.16	.831	.0106	-.0835
4.14	.905	.0120	-.0817
4.17	.915	.0122	-.0817
5.24	1.009	.0154	-.0800
6.24	1.073	.0204	-.0774
8.28	1.219	****	-.0703
10.32	1.351	****	-.0613
12.38	1.510	****	-.0585
14.44	1.626	****	-.0554
16.38	1.742	****	-.0565
17.43	1.766	****	-.0585
18.45	1.818	****	-.0606

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APPENDIX A.- SECTION CHARACTERISTICS

RUN 10 R = 4.4 MILLION M = 0.05 DELTA F = 0 DEG.

ALPHA, DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-4.07	.034	.0062	-.0678
-3.04	.155	.0052	-.0713
-2.51	.216	.0037	-.0735
-1.94	.282	.0038	-.0754
-1.02	.384	.0038	-.0767
.04	.534	.0038	-.0796
.59	.599	.0040	-.0810
1.14	.626	.0048	-.0812
2.02	.695	.0087	-.0805
3.20	.795	.0112	-.0785
4.18	.878	.0138	-.0785
5.01	.971	.0172	-.0780
6.26	1.012	****	-.0696
8.26	1.160	****	-.0625
10.46	1.299	****	-.0549
12.44	1.448	****	-.0518
14.44	1.560	****	-.0441
16.46	1.662	****	-.0313
17.55	1.703	****	-.0310
18.47	1.757	****	-.0295

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APPENDIX A.- SECTION CHARACTERISTICS

RUNS 11,12 R = 3.0 MILLION M = 0.07 DELTA F = 0 DEG.

ALPHA,DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-4.00	.079	.0073	-.0700
-3.49	.128	.0066	-.0695
-3.05	.180	.0046	-.0728
-2.69	.214	.0046	-.0723
-2.42	.254	.0047	-.0752
-1.95	.303	.0051	-.0744
-.84	.436	.0051	-.0789
-.40	.486	.0049	-.0797
.07	.539	.0046	-.0796
.08	.542	.0047	-.0806
.57	.601	.0046	-.0817
1.15	.664	.0047	-.0819
1.66	.708	.0052	-.0815
2.24	.752	.0084	-.0826
3.16	.819	.0126	-.0805
4.17	.884	.0206	-.0757
5.18	.942	****	-.0721
5.20	.919	****	-.0715
6.26	.992	****	-.0661
8.24	1.167	****	-.0621
10.31	1.277	****	-.0524
12.47	1.439	****	-.0455
14.43	1.523	****	-.0353
16.41	1.593	****	-.0329
17.47	1.647	****	-.0342
18.43	1.656	****	-.0400
18.42	1.628	****	-.0413

ORIGINAL PAGE IS
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APPENDIX A.- SECTION CHARACTERISTICS

RUN 13 R = 10.0 MILLION M = 0.30 DELTA F = 0 DEG.

ALPHA,DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-4.06	.049	.0060	-.0727
-2.99	.181	.0053	-.0757
-2.45	.247	.0047	-.0775
-1.95	.308	.0036	-.0798
-.94	.427	.0029	-.0819
-.90	.433	.0029	-.0819
-.71	.454	.0032	-.0826
-.53	.473	.0049	-.0832
.08	.540	.0062	-.0844
1.09	.645	.0075	-.0850
2.26	.772	.0086	-.0854
3.12	.862	.0096	-.0858
4.19	.964	.0111	-.0845
5.14	1.046	.0120	-.0819
6.28	1.141	.0133	-.0783
8.30	1.294	.0203	-.0670
10.37	1.445	****	-.0589
12.43	1.583	****	-.0524
13.53	1.547	****	-.0309
14.44	1.533	****	-.0233
15.30	1.452	****	-.0263
16.42	1.442	****	-.0327

ORIGINAL PAGE IS
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APPENDIX A.- SECTION CHARACTERISTICS

RUN 14 ALPHA = -1 DEG. LIFT COEFFICIENT = 0.4 DELTA F = 0 DEG.

R(MILLION)	MACH NUMBER	DRAG COEFFICIENT
3.0	.14	.0045
4.5	.05	.0038
6.1	.07	.0032
8.1	.09	.0029
9.2	.06	.0029
10.1	.12	.0027
10.1	.11	.0027
10.1	.06	.0028
11.1	.07	.0028
12.2	.08	.0029
13.1	.08	.0031
14.0	.09	.0037
14.6	.09	.0037
15.0	.09	.0041
15.1	.10	.0042
16.0	.10	.0044
16.2	.10	.0043
17.1	.11	.0045
18.1	.11	.0055
20.0	.13	.0058
22.0	.14	.0060

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APPENDIX A.- SECTION CHARACTERISTICS

RUN 15 R = 9.5 MILLION M = 0.40 DELTA F = 0 DEG.

ALPHA, DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-3.04	.174	.0056	-.0773
-2.52	.241	.0051	-.0794
-2.01	.306	.0037	-.0816
-.97	.434	.0030	-.0848
-.46	.498	.0030	-.0863
.09	.560	.0059	-.0873
1.13	.670	.0076	-.0878
1.64	.725	.0082	-.0880
2.15	.777	.0088	-.0878
3.22	.875	.0104	-.0852
4.17	.953	.0115	-.0819
5.16	1.037	.0142	-.0773
6.26	1.127	.0183	-.0704

RUN 20 R = 3.0 MILLION M = 0.15 DELTA F = 0 DEG.

(TURBULATOR TAPE, ON)

ALPHA, DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-3.03	.166	.0050	-.0714
-2.51	.225	.0041	-.0736
-1.99	.282	.0042	-.0742
-1.47	.345	.0041	-.0760
-.94	.403	.0041	-.0765
.06	.521	.0043	-.0788
1.13	.637	.0044	-.0802
1.63	.680	.0060	-.0806

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX A.- SECTION CHARACTERISTICS

RUN 23 R = 4.0 MILLION M = 0.20 DELTA F = 0 DEG.

(TURBULATOR TAPE, ON)

ALPHA, DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-3.04	.154	.0054	-.0708
-2.53	.211	.0039	-.0727
-2.04	.268	.0038	-.0742
-1.52	.328	.0038	-.0751
-1.01	.393	.0038	-.0758
-.49	.448	.0039	-.0774
.06	.512	.0040	-.0785
.59	.579	.0040	-.0796
1.14	.621	.0052	-.0799

RUN 24 R = 6.1 MILLION M = 0.07 DELTA F = 0 DEG.

(TURBULATOR TAPE, ON)

ALPHA, DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-3.04	.154	.0053	-.0700
-2.51	.213	.0039	-.0720
-2.00	.272	.0033	-.0737
-1.47	.331	.0033	-.0745
-.97	.389	.0033	-.0756
-.43	.453	.0034	-.0771
.08	.509	.0035	-.0776
.62	.563	.0044	-.0786
1.15	.612	.0064	-.0790

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX A.- SECTION CHARACTERISTICS

RUN 26 R = 8.1 MILLION M = 0.10 DELTA F = 0 DEG.

(TURBULATOR TAPE, ON)

ALPHA,DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-3.02	.160	.0053	-.0707
-2.54	.215	.0046	-.0722
-2.01	.276	.0035	-.0741
-1.50	.333	.0031	-.0755
-1.25	.363	.0031	-.0761
-.94	.399	.0031	-.0764
-.48	.449	.0032	-.0774
.06	.506	.0037	-.0784
.58	.559	.0053	-.0791
1.11	.611	.0069	-.0797

RUN 27 R = 10.1 MILLION M = 0.12 DELTA F = 0 DEG.

(TURBULATOR TAPE, ON)

ALPHA,DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-3.03	.163	.0052	-.0713
-2.54	.218	.0049	-.0727
-2.00	.281	.0038	-.0747
-1.49	.339	.0033	-.0760
-1.24	.367	.0031	-.0763
-.97	.396	.0031	-.0770
-.97	.398	.0031	-.0772
-.71	.427	.0031	-.0778
-.45	.454	.0034	-.0782
.08	.507	.0052	-.0793
.57	.560	.0058	-.0799
1.11	.615	.0072	-.0803

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX A.- SECTION CHARACTERISTICS

RUN 28 R = 10.0 MILLION M = 0.23 DELTA F = 0 DEG.

ALPHA,DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-3.00	.171	.0051	-.0732
-2.56	.224	.0047	-.0747
-1.94	.296	.0035	-.0767
-1.48	.351	.0030	-.0781
-.96	.408	.0029	-.0794
-.47	.463	.0030	-.0806
.08	.522	.0043	-.0814
.60	.575	.0056	-.0819
1.14	.632	.0070	-.0822
2.19	.746	.0081	-.0831
3.15	.848	.0092	-.0838
4.18	.950	.0106	-.0836
5.19	1.042	.0121	-.0820
6.32	1.132	.0128	-.0782
8.34	1.293	****	-.0710
10.34	1.438	****	-.0626
12.38	1.583	****	-.0583
14.45	1.699	****	-.0546
15.52	1.742	****	-.0556
16.46	1.750	****	-.0519
16.80	1.657	****	-.0287
17.32	1.496	****	-.1381

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX A.- SECTION CHARACTERISTICS

RUNS 29,30 R = 10.1 MILLION M = 0.12 DELTA F = 5 DEG.

ALPHA,DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-2.98	.398	.0039	-.1195
-2.52	.454	.0034	-.1215
-1.97	.519	.0029	-.1236
-1.74	.545	.0028	-.1239
-1.74	.546	.0028	-.1243
-1.45	.574	.0029	-.1241
-.91	.619	.0036	-.1231
-.49	.660	.0050	-.1230
.08	.714	.0071	-.1223
.08	.716	.0067	-.1223
1.10	.817	.0082	-.1216
2.18	.923	.0093	-.1206
3.17	1.020	.0103	-.1197
4.20	1.115	.0112	-.1181
5.24	1.202	.0126	-.1150
6.33	1.280	.0136	-.1097
8.34	1.414	****	-.0989
10.39	1.553	****	-.0908
12.44	1.685	****	-.0846
14.47	1.802	****	-.0833
16.46	1.869	****	-.0835
16.99	1.876	****	-.0828
17.49	1.872	****	-.0794
18.02	1.884	****	-.0828

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX A.- SECTION CHARACTERISTICS

RUN 31 R = 6.1 MILLION M = 0.07 DELTA F = 5 DEG.

ALPHA,DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-4.05	.265	.0056	-.1141
-3.54	.325	.0046	-.1169
-3.02	.388	.0036	-.1196
-2.53	.444	.0035	-.1209
-1.99	.503	.0035	-.1212
-1.75	.531	.0035	-.1212
-1.50	.558	.0035	-.1214
-1.50	.559	.0035	-.1214
-.96	.619	.0037	-.1222
-.48	.672	.0035	-.1232
.05	.713	.0046	-.1217
1.13	.798	.0084	-.1189
2.14	.889	.0101	-.1173
3.18	.979	.0118	-.1150
4.19	1.058	.0128	-.1117
5.18	1.128	.0140	-.1069
6.24	1.201	.0145	-.1023
8.30	1.341	****	-.0920
10.38	1.485	****	-.0846
12.43	1.618	****	-.0820
14.45	1.743	****	-.0809
16.42	1.827	****	-.0846
16.94	1.835	****	-.0834
17.50	1.833	****	-.0779
18.32	1.788	****	-.0685

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX A.- SECTION CHARACTERISTICS

RUN 32 R = 3.0 MILLION M = 0.07 DELTA F = 5 DEG.

ALPHA, DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
.08	.725	****	-.1215
2.17	.852	****	-.1111
4.18	.978	****	-.1001
6.23	1.118	****	-.0908
8.31	1.294	****	-.0853
9.31	1.362	****	-.0802
10.35	1.429	****	-.0777
11.38	1.491	****	-.0735
12.43	1.556	****	-.0696
13.42	1.612	****	-.0639
14.41	1.652	****	-.0630
15.45	1.702	****	-.0579
16.49	1.724	****	-.0553
17.50	1.748	****	-.0600
18.28	1.717	****	-.0603

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX A.- SECTION CHARACTERISTICS

RUNS 33,34 R = 8.1 MILLION M = 0.09 DELTA F = 5 DEG.

ALPHA,DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-3.55	.328	.0048	-.1166
-3.30	.357	.0043	-.1175
-3.04	.388	.0038	-.1186
-2.73	.424	.0034	-.1196
-2.51	.450	.0032	-.1204
-2.00	.509	.0031	-.1220
-1.74	.540	.0030	-.1228
-1.49	.568	.0030	-.1231
-1.22	.596	.0030	-.1237
-.97	.619	.0030	-.1233
-.71	.644	.0031	-.1231
-.45	.666	.0041	-.1225
-.16	.691	.0053	-.1214
.06	.709	.0061	-.1211
.58	.756	.0077	-.1199
1.11	.808	.0084	-.1201
2.14	.908	.0097	-.1194
4.19	1.095	.0118	-.1160
8.33	1.389	****	-.0972
12.42	1.660	****	-.0830
14.46	1.781	****	-.0828
15.47	1.830	****	-.0855
16.49	1.860	****	-.0852
17.46	1.867	****	-.0813
18.31	1.859	****	-.0781

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX A.- SECTION CHARACTERISTICS

RUNS 35,36 R = 10.1 MILLION M = 0.12 DELTA F = 10 DEG.

ALPHA,DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-5.10	.364	.0054	-.1568
-4.59	.423	.0051	-.1585
-4.03	.493	.0043	-.1609
-3.52	.555	.0037	-.1633
-2.98	.619	.0034	-.1655
-2.49	.676	.0031	-.1671
-2.46	.681	.0032	-.1674
-2.27	.698	.0031	-.1670
-1.99	.721	.0031	-.1665
-1.97	.722	.0030	-.1659
-1.72	.737	.0030	-.1639
-1.49	.756	.0035	-.1634
-.92	.798	.0065	-.1607
.11	.890	.0086	-.1581
1.15	.986	.0100	-.1556
2.18	1.079	.0110	-.1526
4.24	1.254	.0128	-.1458
6.26	1.398	****	-.1355
8.26	1.518	****	-.1248
10.33	1.649	****	-.1139
12.39	1.779	****	-.1088
13.41	1.835	****	-.1066
14.46	1.883	****	-.1064
15.44	1.916	****	-.1069
16.46	1.932	****	-.1014
17.46	1.936	****	-.0955

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OF POOR QUALITY

APPENDIX A.- SECTION CHARACTERISTICS

RUN 37 R = 8.1 MILLION M = 0.10 DELTA F = 10 DEG.

ALPHA, DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-5.08	.361	.0056	-.1557
-4.58	.421	.0051	-.1580
-4.02	.490	.0042	-.1613
-3.52	.549	.0037	-.1631
-3.04	.604	.0035	-.1640
-2.52	.664	.0032	-.1650
-2.25	.694	.0033	-.1656
-1.97	.724	.0032	-.1660
-1.71	.742	.0033	-.1643
-1.49	.759	.0033	-.1633
-1.48	.759	.0033	-.1632
-.99	.795	.0051	-.1608
-.41	.833	.0077	-.1573
.08	.873	.0087	-.1555

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX A.- SECTION CHARACTERISTICS

RUNS 41,42 R = 6.1 MILLION M = 0.07 DELTA F = 10 DEG.

ALPHA,DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-5.06	.357	.0059	-.1542
-4.55	.419	.0052	-.1572
-4.03	.486	.0042	-.1605
-3.52	.545	.0038	-.1624
-3.04	.602	.0037	-.1639
-2.45	.669	.0037	-.1658
-2.00	.733	.0037	-.1668
-1.48	.777	.0038	-.1659
-.93	.815	.0039	-.1627
-.44	.836	.0062	-.1571
.07	.865	.0088	-.1537
.58	.904	.0098	-.1517
1.14	.950	.0108	-.1500
2.18	1.036	.0121	-.1468
3.16	1.114	.0136	-.1430
4.20	1.187	****	-.1379
6.25	1.320	****	-.1250
8.32	1.457	****	-.1159
10.37	1.594	****	-.1088
12.35	1.716	****	-.1036
14.47	1.835	****	-.1030
15.48	1.876	****	-.1039
16.43	1.898	****	-.1014
17.52	1.878	****	-.0897
18.09	1.855	****	-.0854

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX A.- SECTION CHARACTERISTICS

RUN 43 R = 3.0 MILLION M = 0.07 DELTA F = 10 DEG.

ALPHA, DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-5.58	.307	.0073	-.1496
-5.07	.370	.0064	-.1528
-4.56	.435	.0050	-.1572
-4.04	.497	.0049	-.1591
-3.52	.558	.0049	-.1612
-3.02	.615	.0050	-.1618
-2.50	.672	.0051	-.1624
-1.99	.700	.0052	-.1618
-1.45	.789	.0054	-.1646
-.96	.843	.0056	-.1656
-.43	.904	.0055	-.1674
.09	.942	.0055	-.1635
.60	.943	.0079	-.1542
1.12	.950	.0109	-.1462
2.15	1.006	.0137	-.1386
4.21	1.125	****	-.1245
6.18	1.255	****	-.1154
8.26	1.399	****	-.1076
10.37	1.532	****	-.0994
12.41	1.656	****	-.0901
14.44	1.765	****	-.0969
15.41	1.795	****	-.0867
16.47	1.780	****	-.0733
17.47	1.820	****	-.0836
18.18	1.795	****	-.0843

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX A.- SECTION CHARACTERISTICS

RUNS 44,45 R = 10.1 MILLION M = 0.12 DELTA F = -5 DEG.

ALPHA,DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-5.16	-.324	.0064	-.0175
-4.09	-.198	.0060	-.0200
-3.02	-.072	.0058	-.0227
-2.08	.034	.0054	-.0266
-1.51	.098	.0047	-.0277
-1.04	.154	.0029	-.0290
-.71	.187	.0028	-.0298
-.47	.212	.0027	-.0301
-.46	.220	.0027	-.0307
.06	.278	.0031	-.0319
.57	.332	.0047	-.0327
1.11	.393	.0061	-.0345
2.13	.510	.0067	-.0377
3.15	.626	.0075	-.0408
4.16	.735	.0085	-.0430
5.22	.846	.0098	-.0447
6.25	.949	.0109	-.0456
7.27	1.045	.0119	-.0457
8.30	1.127	****	-.0434
10.35	1.294	****	-.0392
12.47	1.434	****	-.0342
14.44	1.580	****	-.0300
16.43	1.690	****	-.0350
17.57	1.722	****	-.0365

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX A.- SECTION CHARACTERISTICS

RUN 46 R = 8.1 MILLION M = 0.09 DELTA F = -5 DEG.

ALPHA,DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-3.07	-.079	.0061	-.0221
-2.01	.044	.0056	-.0247
-1.46	.103	.0043	-.0259
-.99	.154	.0031	-.0268
-.47	.212	.0030	-.0276
.04	.271	.0030	-.0290
.28	.301	.0033	-.0301
.59	.335	.0046	-.0315
1.03	.385	.0055	-.0338
1.68	.458	.0066	-.0366
2.14	.510	.0070	-.0384
3.14	.620	.0078	-.0413
4.18	.729	.0090	-.0437
5.20	.833	.0104	-.0453
6.21	.929	.0114	-.0453
7.26	1.024	.0133	-.0455
8.26	1.103	****	-.0429
10.34	1.269	****	-.0376
12.41	1.420	****	-.0332
14.44	1.556	****	-.0302
16.46	1.673	****	-.0353
17.48	1.707	****	-.0391

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX A.- SECTION CHARACTERISTICS

RUN 47 R = 6.1 MILLION M = 0.07 DELTA F = -5 DEG.

ALPHA,DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-3.03	-.075	.0065	-.0219
-2.02	.040	.0057	-.0241
-1.77	.065	.0048	-.0246
-1.47	.096	.0037	-.0251
-.99	.149	.0036	-.0260
-.47	.211	.0036	-.0281
.05	.273	.0036	-.0298
.54	.331	.0036	-.0313
.80	.361	.0036	-.0321
1.10	.394	.0041	-.0333
1.60	.449	.0058	-.0360
2.14	.509	.0070	-.0389
3.13	.614	.0083	-.0423
4.17	.717	.0094	-.0445
5.20	.816	.0114	-.0453
6.21	.905	.0131	-.0443
8.27	1.073	****	-.0402
10.35	1.234	****	-.0354
12.48	1.391	****	-.0303
14.50	1.519	****	-.0275
16.37	1.633	****	-.0339
17.46	1.677	****	-.0384

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX A.- SECTION CHARACTERISTICS

RUN 49 R = 10.1 MILLION M = 0.12 DELTA F = -10 DEG.

ALPHA, DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-3.06	-.288	.0061	.0206
-2.05	-.171	.0057	.0158
-1.51	-.108	.0055	.0146
-1.03	-.055	.0053	.0134
-.48	.002	.0037	.0131
-.22	.031	.0030	.0127
.04	.059	.0031	.0121
.30	.088	.0033	.0114
.56	.115	.0034	.0114
1.08	.178	.0041	.0092
1.59	.239	.0049	.0063
2.13	.306	.0057	.0034
3.12	.427	.0074	-.0015
4.18	.547	.0084	-.0057
5.19	.659	.0093	-.0088
6.19	.767	.0103	-.0113
7.25	.876	.0114	-.0125
8.30	.971	****	-.0137
10.33	1.150	****	-.0117
12.45	1.318	****	-.0074
14.44	1.460	****	-.0041
16.44	1.586	****	-.0066
17.40	1.624	****	-.0114

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX A.- SECTION CHARACTERISTICS

RUN 50 R = 8.1 MILLION M = 0.10 DELTA F = -10 DEG.

ALPHA, DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-2.00	-.165	.0059	.0184
-1.46	-.104	.0057	.0175
-.95	-.048	.0052	.0166
-.71	-.024	.0043	.0166
-.51	-.007	.0032	.0169
-.22	.025	.0032	.0163
.01	.049	.0033	.0163
.56	.114	.0034	.0141
1.16	.186	.0038	.0103
1.59	.241	.0044	.0067
2.09	.302	.0053	.0033
3.11	.426	.0077	-.0030
4.20	.548	.0090	-.0074
5.20	.653	.0101	-.0103
6.21	.759	.0110	-.0123
8.28	.953	****	-.0127
10.30	1.128	****	-.0112
12.39	1.292	****	-.0075
14.43	1.438	****	-.0042
16.37	1.562	****	-.0071
17.45	1.610	****	-.0123
18.32	1.632	****	-.0136

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX A.- SECTION CHARACTERISTICS

RUNS 51,52 R = 6.1 MILLION M = 0.07 DELTA F = -10 DEG.

ALPHA,DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-3.03	-.281	.0068	.0199
-1.97	-.161	.0064	.0179
-.93	-.050	.0045	.0168
-.51	-.007	.0036	.0173
-.19	.025	.0036	.0160
.02	.051	.0036	.0148
.54	.112	.0036	.0140
1.07	.175	.0036	.0119
1.59	.235	.0037	.0110
2.10	.299	.0044	.0069
2.60	.366	.0057	.0003
3.13	.430	.0077	-.0040
4.14	.541	.0098	-.0091
5.19	.648	.0116	-.0118
6.21	.744	****	-.0121
7.23	.837	****	-.0120
8.35	.936	****	-.0116
10.33	1.098	****	-.0083
12.38	1.261	****	-.0056
14.39	1.401	****	-.0019
16.47	1.531	****	-.0046
17.48	1.580	****	-.0091
18.31	1.611	****	-.0147

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX A.- SECTION CHARACTERISTICS

RUNS 56,57 R = 6.1 MILLION M = 0.07 DELTA F = 60 DEG. (SPLIT FLAP

ALPHA, DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-4.97	1.331	****	-.3177
-2.89	1.557	****	-.3248
-.87	1.763	****	-.3262
.17	1.866	****	-.3261
1.22	1.973	****	-.3272
2.30	2.078	****	-.3265
3.27	2.172	****	-.3243
4.30	2.273	****	-.3244
5.30	2.379	****	-.3293
6.36	2.464	****	-.3217
7.40	2.561	****	-.3204
8.43	2.655	****	-.3178
9.45	2.721	****	-.3108
9.96	2.734	****	-.3034
10.47	2.708	****	-.2916
11.50	2.605	****	-.2617
12.49	2.554	****	-.2443
13.49	2.507	****	-.2300
14.50	2.476	****	-.2247
14.98	2.477	****	-.2267
15.47	2.435	****	-.2267

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX A.- SECTION CHARACTERISTICS

RUN 59 R = 3.0 MILLION M = 0.15 DELTA F = 60 DEG. (SPLIT FLAP)

ALPHA, DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-.86	1.783	****	-.3314
1.23	1.994	****	-.3321
3.26	2.195	****	-.3318
5.31	2.396	****	-.3297
7.39	2.580	****	-.3255
8.45	2.648	****	-.3202
8.93	2.661	****	-.3147
9.50	2.663	****	-.3069
9.94	2.657	****	-.2976
10.48	2.647	****	-.2888
10.97	2.651	****	-.2823
11.50	2.605	****	-.2669
12.46	2.497	****	-.2551
13.42	2.487	****	-.2785
14.39	2.464	****	-.3155
15.28	2.393	****	-.3623
16.16	2.283	****	-.4417

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX A.- SECTION CHARACTERISTICS

RUNS 63,64 R = 10.1 MILLION M = 0.12 DELTA F = 0 DEG.

(ROUGHNESS, ON)

ALPHA,DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-4.07	.034	.0084	-.0704
-3.02	.156	.0080	-.0727
-2.00	.272	.0081	-.0749
-.98	.387	.0084	-.0766
.03	.501	.0087	-.0786
1.09	.619	.0092	-.0803
2.14	.734	.0098	-.0816
3.15	.840	.0109	-.0822
4.22	.946	.0117	-.0823
5.23	1.040	.0127	-.0815
8.31	1.281	****	-.0730
10.36	1.431	****	-.0656
12.42	1.571	****	-.0595
14.45	1.708	****	-.0591
15.47	1.759	****	-.0603
16.47	1.795	****	-.0648
17.46	1.806	****	-.0628
18.24	1.813	****	-.0571

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX A.- SECTION CHARACTERISTICS

RUN 65 R = 6.0 MILLION M = 0.07 DELTA F = 0 DEG.

(ROUGHNESS, ON)

ALPHA,DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-5.13	-.075	.0090	-.0670
-4.10	.028	.0087	-.0685
-3.01	.151	.0085	-.0717
-2.00	.264	.0088	-.0731
-.97	.376	.0092	-.0747
.08	.490	.0098	-.0763
1.09	.596	.0105	-.0773
1.10	.601	.0105	-.0779
2.13	.712	.0111	-.0803
3.18	.814	.0120	-.0793
4.21	.900	.0135	-.0779
5.21	.978	.0174	-.0754
6.24	1.053	****	-.0718
7.28	1.136	****	-.0691
8.30	1.209	****	-.0650
10.36	1.361	****	-.0590
12.42	1.511	****	-.0568
14.47	1.642	****	-.0561
15.45	1.699	****	-.0578
16.49	1.750	****	-.0617
17.46	1.769	****	-.0633
18.30	1.744	****	-.0536

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX A.- SECTION CHARACTERISTICS

RUN 66 R = 10.1 MILLION M = 0.11 DELTA F = 0 DEG.

(ROUGHNESS, ON)

ALPHA,DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-5.11	-.080	.0084	-.0678
-4.04	.041	.0084	-.0706
-3.03	.159	.0083	-.0729
-2.01	.274	.0084	-.0748
-1.00	.387	.0086	-.0765
.06	.499	.0091	-.0781
2.17	.728	.0105	-.0809
4.17	.936	.0111	-.0836
6.18	1.117	.0141	-.0812
8.26	1.272	****	-.0744
10.32	1.421	****	-.0672
12.41	1.564	****	-.0619
14.40	1.686	****	-.0598
16.56	1.767	****	-.0601
17.46	1.776	****	-.0588
18.29	1.785	****	-.0732

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX A.- SECTION CHARACTERISTICS

RUNS 67,68 R = 10.1 MILLION M = 0.12 DELTA F = 12.5 DEG.

ALPHA, DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-6.10	.342	.0056	-.1742
-5.07	.463	.0051	-.1774
-4.03	.587	.0039	-.1816
-3.53	.647	.0036	-.1833
-3.00	.709	.0034	-.1850
-2.49	.762	.0033	-.1854
-1.99	.794	.0032	-.1812
-1.81	.809	.0033	-.1807
-1.69	.820	.0039	-.1803
-1.43	.833	.0059	-.1783
-.93	.869	.0081	-.1756
.10	.959	.0096	-.1724
1.13	1.049	.0108	-.1693
2.16	1.140	.0116	-.1662
4.23	1.301	****	-.1570
6.27	1.456	****	-.1482
8.33	1.588	****	-.1383
10.39	1.712	****	-.1282
12.42	1.831	****	-.1212
14.47	1.925	****	-.1163
16.46	1.969	****	-.1114
17.46	1.961	****	-.1027
18.27	1.979	****	-.1289

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX A.- SECTION CHARACTERISTICS

RUN 69 R = 6.1 MILLION M = 0.07 DELTA F = 12.5 DEG.

ALPHA, DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
-4.54	.518	.0044	-.1780
-4.04	.577	.0041	-.1805
-3.51	.641	.0039	-.1825
-2.51	.755	.0039	-.1849
-1.96	.815	.0039	-.1858
-1.48	.863	.0039	-.1852
-.94	.881	.0040	-.1771
-.43	.893	.0084	-.1697
.10	.923	.0103	-.1653
2.15	1.080	****	-.1573
4.20	1.239	****	-.1487
6.26	1.368	****	-.1339
8.29	1.491	****	-.1229
10.36	1.634	****	-.1178
12.42	1.759	****	-.1147
14.43	1.863	****	-.1131
16.46	1.922	****	-.1091
17.33	1.885	****	-.0924
18.29	1.867	****	-.0920

RUN 70 R = 3.0 MILLION M = 0.07 DELTA F = 12.5 DEG.

ALPHA, DEG.	LIFT COEFFICIENT	DRAG COEFFICIENT	PITCHING-MOMENT COEFFICIENT
12.38	1.677	****	-.0985
14.42	1.751	****	-.0938
15.43	1.820	****	-.0954
16.47	1.859	****	-.0837
17.46	1.830	****	-.0926
18.26	1.821	****	-.0964

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B

This appendix contains a computer listing of the pressure coefficients for the NASA NLF(1)-0414F airfoil section. No wind-tunnel blockage corrections have been applied to the data.

APPENDIX B

(A).- MODEL ORIFICE LOCATIONS

UPPER SURFACE c = 36 INCHES

DELTA F = 0.0 DEGS.			
ORIFICE	x/c	y/c	z/c
1	.0001	.0747	.0022
2	.0052	.0768	.0144
3	.0101	.0776	.0195
4	.0150	.0790	.0231
5	.0201	.0804	.0261
6	.0251	.0818	.0287
7	.0301	.0833	.0310
8	.0400	.0856	.0351
9	.0500	.0879	.0387
10	.0600	.0902	.0420
11	.0751	.0952	.0463
12	.1000	.0891	.0524
13	.1500	.0798	.0619
14	.2000	.0703	.0693
15	.2500	.0809	.0749
16	.3000	.0915	.0789
17	.3500	.1008	.0814
18	.4000	.0909	.0826
19	.4500	.0754	.0825
20	.5000	.0939	.0810
21	.5501	.0844	.0781
22	.6000	.0738	.0735
23	.6250	.0826	.0704
24	.6500	.0923	.0668
25	.6750	.0973	.0626
26	.7000	.0887	.0573
27	.7250	.0784	.0508
28	.7500	.0719	.0426
29	.7751	.0769	.0335
30	.8001	.0868	.0244
31	.8500	.0993	.0073
32	.9000	.0877	-.0071
33	.9500	.0752	-.0185
34	.9700	.0833	-.0224

DELTA F = -10.0 DEGS.			
ORIFICE	x/c	y/c	z/c
32	.8982	.0877	-.0029
33	.9494	.0752	-.0055
34	.9698	.0833	-.0058
DELTA F = -5.0 DEGS.			
32	.8992	.0877	-.0049
33	.9500	.0752	-.0120
34	.9703	.0833	-.0141
DELTA F = 5.0 DEGS.			
32	.9006	.0877	-.0093
33	.9494	.0752	-.0251
34	.9690	.0833	-.0306
DELTA F = 10.0 DEGS.			
32	.9010	.0877	-.0115
33	.9483	.0752	-.0315
34	.9673	.0833	-.0388
DELTA F = 12.5 DEGS.			
32	.9012	.0877	-.0127
33	.9475	.0752	-.0347
34	.9662	.0833	-.0428
Orifices 32, 33, 34 change with flap deflection			

APPENDIX B
(B.) - MODEL ORIFICE LOCATIONS

LOWER SURFACE c = 36 INCHES

DELTA F = 0.0 DEGS.			
ORIFICE	x/c	y/c	z/c
101	.0001	.0740	-.0019
102	.0053	.0756	-.0099
103	.0101	.0769	-.0126
104	.0151	.0784	-.0147
105	.0201	.0798	-.0165
106	.0250	.0813	-.0181
107	.0301	.0828	-.0196
108	.0400	.0852	-.0221
109	.0500	.0874	-.0244
110	.0600	.0896	-.0265
111	.0750	.0947	-.0293
112	.1001	.0887	-.0334
113	.1501	.0794	-.0400
114	.1999	.0698	-.0454
115	.2500	.0804	-.0497
116	.3000	.0910	-.0533
117	.3500	.1004	-.0561
118	.4001	.0903	-.0582
119	.4500	.0750	-.0595
120	.4999	.0933	-.0600
121	.5500	.0839	-.0598
122	.5999	.0731	-.0586
123	.6248	.0819	-.0575
124	.6499	.0916	-.0560
125	.6749	.0966	-.0539
126	.6999	.0880	-.0509
127	.7249	.0777	-.0464
128	.7499	.0712	-.0411
129	.7750	.0763	-.0367
130	.8000	.0862	-.0332
131	.8499	.0987	-.0282
132	.9000	.0877	-.0257
133	.9500	.0752	-.0258
134	.9700	.0833	-.0263

DELTA F = -10.0 DEGS.			
ORIFICE	x/c	y/c	z/c
132	.9014	.0877	-.0213
133	.9507	.0750	-.0126
134	.9705	.0833	-.0096
DELTA F = -5.0 DEGS.			
132	.9008	.0877	-.0235
133	.9506	.0750	-.0192
134	.9706	.0833	-.0180
DELTA F = 5.0 DEGS.			
132	.8990	.0877	-.0279
133	.9488	.0750	-.0323
134	.9687	.0833	-.0345
DELTA F = 10.0 DEGS.			
132	.8978	.0877	-.0299
133	.9470	.0750	-.0387
134	.9666	.0833	-.0426
DELTA F = 12.5 DEGS.			
132	.8971	.0877	-.0309
133	.9459	.0750	-.0418
134	.9654	.0833	-.0466
DELTA F = 60.0 DEGS. (Split Flap)			
135	.8083	.0833	-.0504
136	.8361	.0833	-.0985
137	.8639	.0833	-.1466
138	.8917	.0833	-.1947
Orifices 132, 133, 134 change with flap deflection			

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 3,4,6 R= 10.0 MILLION M= 0.12 DELTA F= 0.0 DEG.

ORIFICE	-3.92	-2.96	-2.92	-2.42	-1.94	-1.87	-1.42	-0.97
1	0.1582	0.5439	0.5588	0.7067	0.8224	0.8387	0.9176	0.9773
2	0.8821	0.7190	0.7126	0.6025	0.4823	0.4613	0.3341	0.1797
3	0.6400	0.4243	0.4155	0.2974	0.1537	0.1302	-0.0070	-0.1773
4	0.4830	0.2662	0.2573	0.1334	0.0059	-0.0277	-0.1553	-0.3025
5	0.3796	0.1733	0.1649	0.0473	-0.0802	-0.1007	-0.2178	-0.3517
6	0.2967	0.0980	0.0896	-0.0215	-0.1424	-0.1622	-0.2711	-0.3965
7	0.2372	0.0474	0.0400	-0.0740	-0.1791	-0.1968	-0.3004	-0.4172
8	0.1417	-0.0443	-0.0507	-0.1461	-0.2422	-0.2594	-0.3508	-0.4571
9	0.0635	-0.1125	-0.1193	-0.2074	-0.2975	-0.3135	-0.3995	-0.4955
10	0.0071	-0.1590	-0.1653	-0.2481	-0.3329	-0.3455	-0.4255	-0.5155
11	-0.0698	-0.2149	-0.2209	-0.2969	-0.3724	-0.3860	-0.4599	-0.5417
12	-0.1442	-0.2729	-0.2796	-0.3461	-0.4145	-0.4236	-0.4903	-0.5604
13	-0.2365	-0.3440	-0.3490	-0.4046	-0.4616	-0.4689	-0.5220	-0.5812
14	-0.3175	-0.4126	-0.4166	-0.4649	-0.5146	-0.5218	-0.5668	-0.6181
15	-0.3816	-0.4673	-0.4705	-0.5131	-0.5572	-0.5635	-0.6038	-0.6503
16	-0.4295	-0.5090	-0.5120	-0.5506	-0.5888	-0.5960	-0.6322	-0.6725
17	-0.4721	-0.5410	-0.5442	-0.5797	-0.6143	-0.6217	-0.6536	-0.6904
18	-0.5037	-0.5688	-0.5659	-0.6033	-0.6356	-0.6324	-0.6716	-0.6930
19	-0.5287	-0.5919	-0.5870	-0.6249	-0.6542	-0.6495	-0.6858	-0.7075
20	-0.5562	-0.6103	-0.6119	-0.6388	-0.6626	-0.6668	-0.6922	-0.7202
21	-0.5834	-0.6356	-0.6339	-0.6588	-0.6840	-0.6826	-0.7072	-0.7313
22	-0.6082	-0.6569	-0.6553	-0.6753	-0.6978	-0.6998	-0.7215	-0.7387
23	-0.6059	-0.6461	-0.6484	-0.6675	-0.6873	-0.6912	-0.7103	-0.7294
24	-0.6134	-0.6515	-0.6538	-0.6723	-0.6892	-0.6939	-0.7099	-0.7290
25	-0.6230	-0.6570	-0.6581	-0.6762	-0.6927	-0.6950	-0.7127	-0.7295
26	-0.6154	-0.6500	-0.6493	-0.6674	-0.6819	-0.6819	-0.6982	-0.7092
27	-0.5461	-0.5831	-0.5728	-0.6003	-0.6120	-0.6017	-0.6255	-0.6243
28	-0.3827	-0.4123	-0.4064	-0.4250	-0.4353	-0.4295	-0.4462	-0.4483
29	-0.2266	-0.2456	-0.2461	-0.2548	-0.2636	-0.2647	-0.2737	-0.2810
30	-0.1090	-0.1226	-0.1249	-0.1309	-0.1377	-0.1416	-0.1456	-0.1564
31	0.0453	0.0332	0.0315	0.0268	0.0210	0.0187	0.0144	0.0063
32	0.1255	0.1209	0.1154	0.1157	0.1117	0.1051	0.1073	0.0944
33	0.1675	0.1687	0.1604	0.1660	0.1639	0.1544	0.1611	0.1470
34	0.1776	0.1778	0.1726	0.1760	0.1748	0.1688	0.1726	0.1633

ORIGINAL PAGE IS
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APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 3,4,6 R= 10.0 MILLION M= 0.12 DELTA F= 0.0 DEG.

ORIFICE	-3.92	-2.56	-2.42	-2.42	-1.94	-1.87	-1.42	-0.97
101	0.1582	0.5439	0.5588	0.7067	0.8224	0.8387	0.9176	0.9773
102	-1.2296	-0.6833	-0.6661	-0.4186	-0.2020	-0.1678	0.0147	0.1955
103	-1.0508	-0.6256	-0.6087	-0.4172	-0.2445	-0.2150	-0.0671	0.0855
104	-0.9013	-0.5422	-0.5310	-0.3706	-0.2262	-0.2024	-0.0755	0.0533
105	-0.7901	-0.4911	-0.4808	-0.3427	-0.2161	-0.1948	-0.0835	0.0325
106	-0.6795	-0.4612	-0.4512	-0.3256	-0.2126	-0.1930	-0.0911	0.0134
107	-0.6475	-0.4349	-0.4261	-0.3109	-0.2067	-0.1903	-0.0962	0.0009
108	-0.5886	-0.3967	-0.3886	-0.2916	-0.2000	-0.1849	-0.1022	-0.0174
109	-0.5410	-0.3703	-0.3635	-0.2754	-0.1943	-0.1813	-0.1072	-0.0298
110	-0.5141	-0.3506	-0.3513	-0.2708	-0.1962	-0.1838	-0.1162	-0.0454
111	-0.4807	-0.3217	-0.3113	-0.2621	-0.1966	-0.1853	-0.1257	-0.0606
112	-0.4471	-0.3142	-0.3094	-0.2580	-0.2015	-0.1927	-0.1389	-0.0837
113	-0.4023	-0.2977	-0.2943	-0.2427	-0.2058	-0.1971	-0.1547	-0.1088
114	-0.3759	-0.2890	-0.2852	-0.2409	-0.2082	-0.2059	-0.1675	-0.1291
115	-0.3608	-0.2847	-0.2825	-0.2422	-0.2078	-0.2006	-0.1796	-0.1443
116	-0.3484	-0.2820	-0.2794	-0.2444	-0.2132	-0.2083	-0.1873	-0.1575
117	-0.3428	-0.2821	-0.2799	-0.2493	-0.2220	-0.2164	-0.1972	-0.1699
118	-0.3342	-0.2806	-0.2786	-0.2512	-0.2249	-0.2214	-0.2027	-0.1803
119	-0.3223	-0.2733	-0.2723	-0.2476	-0.2245	-0.2198	-0.1984	-0.1847
120	-0.3121	-0.2684	-0.2669	-0.2458	-0.2250	-0.2208	-0.1999	-0.1894
121	-0.3102	-0.2711	-0.2697	-0.2508	-0.2322	-0.2292	-0.2108	-0.1939
122	-0.3033	-0.2688	-0.2672	-0.2506	-0.2341	-0.2315	-0.2161	-0.1998
123	-0.2977	-0.2672	-0.2657	-0.2509	-0.2352	-0.2333	-0.2196	-0.2030
124	-0.2535	-0.2633	-0.2618	-0.2494	-0.2354	-0.2340	-0.2219	-0.2074
125	-0.2750	-0.2496	-0.2470	-0.2360	-0.2249	-0.2231	-0.2136	-0.2008
126	-0.2485	-0.2250	-0.2240	-0.2171	-0.2084	-0.2061	-0.2016	-0.1945
127	-0.1129	-0.0931	-0.0924	-0.0845	-0.0744	-0.0730	-0.0667	-0.0580
128	0.0222	0.0414	0.0428	0.0535	0.0653	0.0682	0.0807	0.0937
129	0.0836	0.1066	0.1074	0.1194	0.1321	0.1338	0.1476	0.1605
130	0.1280	0.1453	0.1461	0.1576	0.1698	0.1721	0.1841	0.1960
131	0.1808	0.1947	0.1959	0.2062	0.2173	0.2200	0.2298	0.2408
132	0.1948	0.2060	0.2067	0.2149	0.2236	0.2248	0.2319	0.2388
133	0.1916	0.1998	0.1992	0.2054	0.2105	0.2107	0.2161	0.2182
134	0.1901	0.1956	0.1961	0.2001	0.2047	0.2048	0.2081	0.2102

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX 5. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 3,4,6 R= 10.0 MILLION M= 0.12 DELTA F= 0.0 DEG.

ORIFICE	-0.95	-0.45	-0.01	0.01	0.52	1.05	2.11	2.97
1	0.9776	1.0066	1.0117	1.0107	0.9914	0.9438	0.7441	0.4857
2	0.1819	0.0049	-0.1655	-0.1716	-0.3774	-0.6054	-1.1243	-1.5941
3	-0.1779	-0.3547	-0.5150	-0.5214	-0.7227	-0.9382	-1.4207	-1.6450
4	-0.3016	-0.4641	-0.6088	-0.6145	-0.7954	-0.9874	-1.4023	-1.7775
5	-0.3491	-0.4981	-0.6267	-0.6316	-0.7895	-0.9597	-1.3287	-1.6504
6	-0.3934	-0.5322	-0.6507	-0.6532	-0.7991	-0.9586	-1.2909	-1.5845
7	-0.4134	-0.5444	-0.6543	-0.6579	-0.7916	-0.9342	-1.2439	-1.5148
8	-0.4522	-0.5677	-0.6667	-0.6721	-0.7887	-0.9160	-1.1848	-1.4213
9	-0.4992	-0.5996	-0.6881	-0.6903	-0.7973	-0.9134	-1.1540	-1.3059
10	-0.5085	-0.6107	-0.6934	-0.6969	-0.7942	-0.8988	-1.1199	-1.2784
11	-0.5356	-0.6268	-0.7020	-0.7033	-0.7895	-0.8871	-1.0822	-1.2236
12	-0.5595	-0.6331	-0.6978	-0.7009	-0.7653	-0.8495	-1.0054	-1.1494
13	-0.5763	-0.6404	-0.6923	-0.6925	-0.7443	-0.8037	-0.9402	-1.0517
14	-0.6114	-0.6691	-0.7150	-0.7136	-0.7583	-0.8096	-0.9288	-1.0191
15	-0.6411	-0.6950	-0.7212	-0.7225	-0.7710	-0.8198	-0.9201	-0.9979
16	-0.6654	-0.7113	-0.7341	-0.7374	-0.7763	-0.8249	-0.9078	-0.9788
17	-0.6807	-0.7151	-0.7459	-0.7455	-0.7824	-0.8233	-0.9011	-0.9601
18	-0.6994	-0.7250	-0.7547	-0.7546	-0.7862	-0.8217	-0.8876	-0.9423
19	-0.7099	-0.7336	-0.7582	-0.7578	-0.7871	-0.8140	-0.8790	-0.9249
20	-0.7106	-0.7435	-0.7675	-0.7673	-0.7890	-0.8179	-0.8716	-0.9084
21	-0.7211	-0.7528	-0.7698	-0.7714	-0.7930	-0.8174	-0.8616	-0.8929
22	-0.7323	-0.7569	-0.7724	-0.7733	-0.7883	-0.8123	-0.8510	-0.8744
23	-0.7312	-0.7488	-0.7611	-0.7589	-0.7762	-0.7925	-0.8265	-0.8508
24	-0.7326	-0.7445	-0.7552	-0.7542	-0.7683	-0.7820	-0.8124	-0.8302
25	-0.7375	-0.7394	-0.7496	-0.7486	-0.7615	-0.7721	-0.7966	-0.8090
26	-0.7208	-0.7221	-0.7282	-0.7241	-0.7351	-0.7438	-0.7573	-0.7700
27	-0.6418	-0.6394	-0.6423	-0.6366	-0.6425	-0.6472	-0.6572	-0.6592
28	-0.4606	-0.4608	-0.4647	-0.4573	-0.4643	-0.4677	-0.4729	-0.4741
29	-0.2859	-0.2907	-0.2953	-0.2924	-0.2979	-0.2992	-0.3060	-0.3070
30	-0.1550	-0.1629	-0.1697	-0.1697	-0.1752	-0.1795	-0.1876	-0.1926
31	0.0157	-0.0036	-0.0131	-0.0145	-0.0232	-0.0320	-0.0476	-0.0597
32	0.1087	0.0895	0.0787	0.0730	0.0653	0.0531	0.0336	0.0161
33	0.1606	0.1466	0.1373	0.1301	0.1246	0.1115	0.0919	0.0721
34	0.1736	0.1622	0.1532	0.1470	0.1419	0.1309	0.1109	0.0931

ORIGINAL PAGE IS
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APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 3,4,6 R= 10.0 MILLION M= 0.12 DELTA F= 0.0 DEG.

ORIFICE	-0.95	-0.45	-0.01	0.01	0.52	1.05	2.11	2.97
101	0.0776	1.0066	1.0117	1.0107	0.5914	0.9438	0.7441	0.4857
102	0.2042	0.3648	0.4922	0.4967	0.6278	0.7422	0.9111	0.9855
103	0.0929	0.2317	0.3449	0.3486	0.4697	0.5812	0.7674	0.8785
104	0.0598	0.1796	0.2783	0.2822	0.3513	0.4930	0.6702	0.7883
105	0.0372	0.1454	0.2341	0.2373	0.3372	0.4311	0.6005	0.7162
106	0.0194	0.1180	0.1998	0.2026	0.2951	0.3848	0.5456	0.6595
107	0.0063	0.0976	0.1748	0.1766	0.2636	0.3477	0.5018	0.6123
108	-0.0130	0.0684	0.1369	0.1390	0.2173	0.2930	0.4348	0.5394
109	-0.0255	0.0473	0.1098	0.1126	0.1836	0.2538	0.3853	0.4844
110	-0.0416	0.0264	0.0844	0.0866	0.1533	0.2186	0.3426	0.4365
111	-0.0572	0.0042	0.0572	0.0583	0.1191	0.1794	0.2941	0.3824
112	-0.0815	-0.0268	0.0194	0.0205	0.0746	0.1279	0.2308	0.3105
113	-0.1070	-0.0626	-0.0249	-0.0241	0.0201	0.0643	0.1513	0.2189
114	-0.1262	-0.0895	-0.0563	-0.0557	-0.0174	0.0212	0.0972	0.1571
115	-0.1425	-0.1090	-0.0808	-0.0802	-0.0457	-0.0120	0.0550	0.1092
116	-0.1548	-0.1249	-0.1005	-0.1000	-0.0694	-0.0388	0.0224	0.0697
117	-0.1676	-0.1416	-0.1191	-0.1191	-0.0907	-0.0637	-0.0085	0.0361
118	-0.1790	-0.1542	-0.1343	-0.1337	-0.1076	-0.0839	-0.0326	0.0073
119	-0.1863	-0.1603	-0.1420	-0.1428	-0.1185	-0.0967	-0.0514	-0.0144
120	-0.1892	-0.1671	-0.1508	-0.1506	-0.1305	-0.1100	-0.0686	-0.0352
121	-0.1967	-0.1801	-0.1666	-0.1663	-0.1476	-0.1281	-0.0915	-0.0605
122	-0.1973	-0.1896	-0.1766	-0.1767	-0.1599	-0.1431	-0.1091	-0.0813
123	-0.2012	-0.1951	-0.1822	-0.1832	-0.1660	-0.1522	-0.1179	-0.0929
124	-0.2045	-0.2000	-0.1876	-0.1871	-0.1722	-0.1579	-0.1270	-0.1028
125	-0.2000	-0.1972	-0.1852	-0.1855	-0.1701	-0.1558	-0.1253	-0.1032
126	-0.1537	-0.1922	-0.1772	-0.1769	-0.1613	-0.1433	-0.1141	-0.0922
127	-0.0568	-0.0548	-0.0686	-0.0696	-0.0955	-0.1238	-0.0953	-0.0714
128	0.0958	0.1173	0.1270	0.1277	0.1370	0.1476	0.1706	0.1895
129	0.1620	0.1793	0.1847	0.1850	0.1924	0.1984	0.2128	0.2250
130	0.1975	0.2108	0.2154	0.2154	0.2208	0.2268	0.2388	0.2482
131	0.2419	0.2505	0.2532	0.2532	0.2572	0.2607	0.2694	0.2765
132	0.2406	0.2448	0.2452	0.2449	0.2480	0.2497	0.2553	0.2588
133	0.2217	0.2222	0.2211	0.2198	0.2215	0.2206	0.2213	0.2217
134	0.2140	0.2123	0.2096	0.2082	0.2086	0.2064	0.2039	0.2015

ORIGINAL PAGE IS OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 3,4,6 R= 10.0 MILLION M= 0.12 DELTA F= 0.0 DEG.

ORIFICE	3.98	4.95	5.92	6.89	6.90	7.87	7.92	8.87
1	0.0891	-0.3873	-0.9276	-1.5533	-1.5451	-2.2388	-2.2560	-3.0173
2	-2.1591	-2.8042	-3.4499	-4.0998	-4.1017	-4.8033	-4.8285	-5.5357
3	-2.3747	-2.9138	-3.4638	-4.0303	-4.0377	-4.6336	-4.6576	-5.2456
4	-2.2266	-2.6831	-3.1604	-3.6536	-3.6663	-4.1970	-4.2316	-4.6759
5	-2.0543	-2.4669	-2.8914	-3.0757	-3.0872	-3.4985	-3.5201	-3.9370
6	-1.9442	-2.2490	-2.5322	-2.6840	-2.8590	-3.2639	-3.2809	-3.6434
7	-1.8346	-2.2619	-2.3895	-2.6957	-2.7127	-3.0219	-3.0540	-3.3517
8	-1.6424	-1.9208	-2.1853	-2.4457	-2.4588	-2.7242	-2.7436	-3.0013
9	-1.5711	-1.8149	-2.0475	-2.2710	-2.2858	-2.5168	-2.5352	-2.7563
10	-1.5064	-1.7227	-1.9315	-2.1325	-2.1429	-2.3463	-2.3603	-2.5701
11	-1.4205	-1.6134	-1.7963	-1.9679	-1.9815	-2.1477	-2.1685	-2.3411
12	-1.3154	-1.4765	-1.6249	-1.7688	-1.7804	-1.9194	-1.9377	-2.0795
13	-1.1799	-1.3006	-1.4165	-1.5213	-1.5337	-1.6341	-1.6468	-1.7453
14	-1.1272	-1.2271	-1.3180	-1.4023	-1.4110	-1.4942	-1.5034	-1.5852
15	-1.0905	-1.1798	-1.2553	-1.3181	-1.3307	-1.3933	-1.4088	-1.4671
16	-1.0554	-1.1314	-1.1981	-1.2514	-1.2588	-1.3099	-1.3213	-1.3685
17	-1.0290	-1.0998	-1.1458	-1.1888	-1.2013	-1.2372	-1.2502	-1.2862
18	-1.0021	-1.0559	-1.1015	-1.1348	-1.1441	-1.1722	-1.1837	-1.2139
19	-0.9746	-1.0246	-1.0614	-1.0841	-1.0929	-1.1132	-1.1207	-1.1394
20	-0.9537	-0.9926	-1.0227	-1.0336	-1.0467	-1.0540	-1.0670	-1.0734
21	-0.9328	-0.9608	-0.9836	-0.9866	-0.9965	-0.9968	-1.0010	-1.0040
22	-0.9027	-0.9242	-0.9350	-0.9288	-0.9369	-0.9209	-0.9301	-0.9169
23	-0.8756	-0.8888	-0.8956	-0.8902	-0.8939	-0.8735	-0.8767	-0.8598
24	-0.8509	-0.8606	-0.8639	-0.8462	-0.8426	-0.8172	-0.8205	-0.7938
25	-0.8237	-0.8270	-0.8191	-0.7865	-0.7963	-0.7566	-0.7445	-0.7130
26	-0.7744	-0.7700	-0.7539	-0.7072	-0.7118	-0.6381	-0.6507	-0.5772
27	-0.6612	-0.6477	-0.6186	-0.5506	-0.5494	-0.4647	-0.4588	-0.4237
28	-0.4691	-0.4537	-0.4171	-0.3291	-0.3536	-0.3075	-0.2915	-0.2639
29	-0.3036	-0.2911	-0.2632	-0.2338	-0.2374	-0.2228	-0.2289	-0.2262
30	-0.1934	-0.1899	-0.1828	-0.1849	-0.1808	-0.2011	-0.1953	-0.2232
31	-0.0727	-0.0894	-0.1093	-0.1352	-0.1418	-0.1856	-0.1715	-0.1870
32	-0.0060	-0.0331	-0.0666	-0.1137	-0.1089	-0.1591	-0.1524	-0.1858
33	0.0476	0.0137	-0.0326	-0.0865	-0.0885	-0.1276	-0.1315	-0.1647
34	0.0663	0.0340	-0.0171	-0.0526	-0.0656	-0.1186	-0.1276	-0.1623

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 3,4,6 R= 10.0 MILLION M= 0.12 DELTA F= 0.0 DEG.

ORIFICE	3.98	4.95	5.92	6.89	6.90	7.87	7.92	8.87
101	0.0891	-0.3873	-0.9276	-1.5533	-1.5451	-2.2388	-2.2560	-3.0173
102	1.0076	0.9697	0.8767	0.7345	0.7353	0.5422	0.5380	0.3009
103	0.9621	1.0023	1.0018	0.9736	0.9723	0.9106	0.9049	0.8180
104	0.8895	0.9567	0.9539	1.0078	1.0056	0.9953	0.9947	0.9644
105	0.8254	0.9029	0.9564	0.9912	0.9888	1.0051	1.0028	1.0017
106	0.7674	0.8539	0.9160	0.9603	0.9584	0.9901	0.9879	1.0048
107	0.7208	0.8074	0.8745	0.9263	0.9254	0.9639	0.9648	0.9893
108	0.6435	0.7317	0.8030	0.8632	0.8606	0.9104	0.9105	0.9486
109	0.5845	0.6700	0.7422	0.8040	0.8022	0.8571	0.8566	0.9002
110	0.5333	0.6180	0.6881	0.7523	0.7487	0.8075	0.8082	0.8547
111	0.4734	0.5540	0.6241	0.6867	0.6850	0.7427	0.7424	0.7910
112	0.3958	0.4702	0.5362	0.5978	0.5956	0.6515	0.6523	0.7022
113	0.2925	0.3581	0.4170	0.4721	0.4709	0.5243	0.5247	0.5721
114	0.2212	0.2802	0.3336	0.3838	0.3823	0.4309	0.4308	0.4753
115	0.1672	0.2201	0.2683	0.3135	0.3130	0.3573	0.3585	0.3984
116	0.1235	0.1717	0.2158	0.2571	0.2560	0.2982	0.2977	0.3359
117	0.0845	0.1287	0.1691	0.2072	0.2058	0.2443	0.2428	0.2789
118	0.0519	0.0925	0.1291	0.1641	0.1622	0.1960	0.1964	0.2285
119	0.0254	0.0631	0.0960	0.1283	0.1267	0.1579	0.1578	0.1881
120	0.0017	0.0358	0.0652	0.0932	0.0922	0.1208	0.1207	0.1475
121	-0.0271	0.0034	0.0303	0.0556	0.0539	0.0790	0.0790	0.1039
122	-0.0518	-0.0251	-0.0016	0.0209	0.0195	0.0431	0.0410	0.0637
123	-0.0637	-0.0388	-0.0176	0.0029	0.0014	0.0217	0.0216	0.0405
124	-0.0760	-0.0519	-0.0318	-0.0144	-0.0161	0.0032	0.0027	0.0210
125	-0.0788	-0.0571	-0.0396	-0.0229	-0.0248	-0.0059	-0.0077	0.0091
126	-0.0701	-0.0525	-0.0380	-0.0245	-0.0259	-0.0111	-0.0142	0.0012
127	-0.0477	-0.0272	-0.0099	0.0057	0.0028	0.0199	0.0183	0.0344
128	0.2060	0.2171	0.2244	0.2317	0.2299	0.2376	0.2355	0.2429
129	0.2369	0.2465	0.2532	0.2582	0.2566	0.2618	0.2604	0.2670
130	0.2580	0.2659	0.2709	0.2749	0.2734	0.2779	0.2756	0.2814
131	0.2831	0.2880	0.2887	0.2891	0.2881	0.2894	0.2878	0.2902
132	0.2625	0.2648	0.2618	0.2551	0.2548	0.2512	0.2504	0.2493
133	0.2200	0.2157	0.2058	0.1913	0.1904	0.1789	0.1781	0.1691
134	0.1965	0.1877	0.1737	0.1501	0.1525	0.1342	0.1313	0.1154

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 3,4,6 R= 10.0 MILLION M= 0.12 DELTA F= 0.0 DEG.

ORIFICE	9.86	9.86	10.85	11.86	12.81	13.87	14.73	15.82
1	-3.8561	-3.8472	-4.7498	-5.7225	-6.6245	-7.6845	-8.5600	-9.5428
2	-6.3433	-6.3005	-7.1010	-7.9329	-8.7264	-9.5906	-10.2012	-10.8836
3	-5.9279	-5.5317	-6.6031	-7.2976	-7.5590	-8.4420	-8.9336	-9.3923
4	-5.0037	-4.9941	-5.4070	-5.9159	-6.4256	-7.0708	-7.5046	-7.9370
5	-4.3970	-4.3840	-4.8223	-5.2920	-5.6810	-6.1407	-6.5105	-6.8911
6	-4.0280	-4.0260	-4.3954	-4.8103	-5.1573	-5.5618	-5.8589	-6.1802
7	-3.7212	-3.7004	-4.0427	-4.3794	-4.7131	-5.0606	-5.3251	-5.6250
8	-3.2491	-3.2869	-3.5764	-3.8563	-4.1202	-4.4007	-4.6039	-4.8417
9	-3.0208	-3.0123	-3.2573	-3.4965	-3.7294	-3.9494	-4.1592	-4.3311
10	-2.7972	-2.7822	-3.0058	-3.2287	-3.4162	-3.6240	-3.7904	-3.9427
11	-2.5430	-2.5291	-2.7200	-2.9036	-3.0713	-3.2386	-3.3775	-3.5161
12	-2.2368	-2.2312	-2.3782	-2.5267	-2.6593	-2.8080	-2.9019	-3.0035
13	-1.8729	-1.8599	-1.9692	-2.0767	-2.1700	-2.2609	-2.3305	-2.3839
14	-1.6788	-1.6644	-1.7523	-1.8339	-1.9025	-1.9804	-2.0194	-2.0640
15	-1.5521	-1.5347	-1.6033	-1.6659	-1.7189	-1.7709	-1.8010	-1.8268
16	-1.4378	-1.4220	-1.4764	-1.5249	-1.5599	-1.6027	-1.6242	-1.6368
17	-1.3360	-1.3274	-1.3701	-1.4059	-1.4374	-1.4574	-1.4767	-1.4711
18	-1.2542	-1.2405	-1.2746	-1.2965	-1.3198	-1.3333	-1.3379	-1.3269
19	-1.1718	-1.1620	-1.1839	-1.2066	-1.2142	-1.2157	-1.2142	-1.1911
20	-1.0990	-1.0885	-1.0998	-1.1021	-1.1046	-1.1125	-1.0950	-1.0761
21	-1.0126	-1.0038	-1.0065	-1.0084	-1.0054	-0.9871	-0.9698	-0.9398
22	-0.9166	-0.8997	-0.8996	-0.8745	-0.8541	-0.8489	-0.8425	-0.8048
23	-0.8432	-0.8375	-0.8327	-0.8145	-0.8099	-0.7742	-0.7711	-0.7400
24	-0.7676	-0.7590	-0.7471	-0.7120	-0.6995	-0.7082	-0.6652	-0.6714
25	-0.6684	-0.6680	-0.6493	-0.6249	-0.5763	-0.5764	-0.5845	-0.5976
26	-0.5421	-0.5450	-0.4967	-0.4835	-0.4297	-0.4930	-0.4733	-0.5120
27	-0.3855	-0.3684	-0.3446	-0.3068	-0.3369	-0.3959	-0.4185	-0.4462
28	-0.2718	-0.2713	-0.2907	-0.2806	-0.3015	-0.3147	-0.3597	-0.4173
29	-0.2429	-0.2499	-0.2506	-0.2736	-0.2838	-0.3089	-0.3229	-0.4186
30	-0.2240	-0.2334	-0.2558	-0.2666	-0.2762	-0.3043	-0.3266	-0.4030
31	-0.2380	-0.2224	-0.2486	-0.2503	-0.2905	-0.2992	-0.3348	-0.3901
32	-0.2085	-0.2150	-0.2398	-0.2681	-0.2875	-0.3039	-0.3305	-0.3700
33	-0.2033	-0.1977	-0.2318	-0.2614	-0.2809	-0.3061	-0.3408	-0.3794
34	-0.1859	-0.1948	-0.2235	-0.2564	-0.2780	-0.3078	-0.3289	-0.3795

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 3,4,6 R= 10.0 MILLION M= 0.12 DELTA F= 0.0 DEG.

ORIFICE	9.86	9.86	10.85	11.86	12.81	13.87	14.73	15.82
101	-3.8561	-3.8472	-4.7498	-5.7225	-6.6245	-7.6845	-8.5600	-9.5428
102	0.0113	0.0125	-0.3067	-0.6764	-1.0569	-1.4720	-1.8005	-2.2240
103	0.6691	0.6864	0.5361	0.3564	0.1672	-0.0461	-0.2407	-0.4532
104	0.9082	0.9048	0.8286	0.7370	0.6293	0.5021	0.3928	0.2596
105	0.9784	0.9781	0.9425	0.8897	0.8281	0.7489	0.6787	0.5884
106	1.0010	1.0017	0.9866	0.9599	0.9246	0.8730	0.8259	0.7660
107	1.0015	1.0003	1.0029	0.9904	0.9723	0.9417	0.9103	0.8658
108	0.9741	0.9743	0.9952	1.0026	1.0019	0.9951	0.9829	0.9658
109	0.9354	0.9371	0.9636	0.9824	0.9960	1.0008	1.0020	0.9969
110	0.8932	0.8940	0.9276	0.9552	0.9751	0.9888	0.9956	1.0006
111	0.8359	0.8365	0.8748	0.9069	0.9317	0.9545	0.9691	0.9817
112	0.7498	0.7482	0.7922	0.8280	0.8597	0.8866	0.9079	0.9277
113	0.6154	0.6175	0.6598	0.6972	0.7310	0.7642	0.7861	0.8126
114	0.5177	0.5181	0.5585	0.5956	0.6310	0.6595	0.6834	0.7102
115	0.4367	0.4370	0.4777	0.5123	0.5434	0.5739	0.5982	0.6224
116	0.3714	0.3724	0.4075	0.4411	0.4698	0.4994	0.5185	0.5426
117	0.3119	0.3121	0.3457	0.3770	0.4032	0.4298	0.4508	0.4703
118	0.2591	0.2597	0.2909	0.3195	0.3428	0.3678	0.3856	0.4058
119	0.2143	0.2153	0.2422	0.2691	0.2912	0.3146	0.3310	0.3460
120	0.1727	0.1739	0.1976	0.2218	0.2412	0.2611	0.2745	0.2871
121	0.1250	0.1265	0.1484	0.1692	0.1859	0.2041	0.2163	0.2288
122	0.0822	0.0814	0.1019	0.1208	0.1351	0.1500	0.1599	0.1669
123	0.0572	0.0577	0.0784	0.0931	0.1058	0.1222	0.1284	0.1366
124	0.0348	0.0389	0.0533	0.0670	0.0796	0.0910	0.1004	0.1029
125	0.0202	0.0201	0.0349	0.0472	0.0605	0.0700	0.0745	0.0762
126	0.0121	0.0114	0.0242	0.0350	0.0408	0.0494	0.0537	0.0526
127	0.0448	0.0479	0.0603	0.0728	0.0799	0.0913	0.0934	0.0947
128	0.2479	0.2496	0.2544	0.2603	0.2637	0.2673	0.2672	0.2639
129	0.2701	0.2709	0.2766	0.2805	0.2805	0.2840	0.2837	0.2786
130	0.2837	0.2957	0.2864	0.2913	0.2917	0.2921	0.2893	0.2848
131	0.2863	0.2875	0.2875	0.2892	0.2842	0.2854	0.2815	0.2738
132	0.2412	0.2444	0.2395	0.2358	0.2346	0.2286	0.2235	0.2101
133	0.1572	0.1570	0.1458	0.1433	0.1330	0.1220	0.1189	0.0976
134	0.1048	0.0978	0.0548	0.0746	0.0661	0.0586	0.0382	0.0255

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX D. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 3,4,6 R= 10.0 MILLION M= 0.12 DELTA F= 0.0 DEG.

ORIFICE	16.75	17.26	17.46
1	-10.3514	-10.8081	-10.9095
2	-11.4575	-11.7123	-11.8542
3	-9.8578	-10.1491	-10.1901
4	-8.3268	-8.4815	-8.5413
5	-7.1684	-7.2836	-7.3527
6	-6.3873	-6.5751	-6.5680
7	-5.8303	-5.8981	-5.5659
8	-4.9790	-5.1091	-5.1023
9	-4.4652	-4.5675	-4.5747
10	-4.0701	-4.1203	-4.1398
11	-3.5865	-3.6558	-3.6866
12	-3.0733	-3.1061	-3.1087
13	-2.4163	-2.4635	-2.4564
14	-2.0737	-2.0920	-2.0864
15	-1.8200	-1.8231	-1.8170
16	-1.6322	-1.6067	-1.5916
17	-1.4512	-1.4343	-1.4123
18	-1.2808	-1.2641	-1.2574
19	-1.1558	-1.1202	-1.1085
20	-1.0103	-0.9856	-0.9691
21	-0.8738	-0.8413	-0.8032
22	-0.7479	-0.6945	-0.6665
23	-0.6658	-0.6311	-0.5951
24	-0.5881	-0.5681	-0.5257
25	-0.5236	-0.5047	-0.5138
26	-0.5029	-0.4946	-0.5032
27	-0.4780	-0.4996	-0.4833
28	-0.4678	-0.4878	-0.4971
29	-0.4905	-0.4940	-0.5001
30	-0.4710	-0.4974	-0.5023
31	-0.4703	-0.4858	-0.5150
32	-0.4432	-0.4516	-0.5025
33	-0.4417	-0.4799	-0.4631
34	-0.4355	-0.4591	-0.4869

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX D. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 3,4,6 R= 10.0 MILLION M= 0.12 DELTA F= 0.0 DEG.

ORIFICE	16.75	17.26	17.46
101	-10.3514	-10.8081	-10.9095
102	-2.5670	-2.7433	-2.7723
103	-0.6329	-0.7558	-0.7766
104	0.1415	0.0820	0.0620
105	0.5140	0.4761	0.4587
106	0.7159	0.6788	0.6750
107	0.8342	0.8142	0.8005
108	0.9495	0.9370	0.9328
109	0.9907	0.9882	0.9857
110	1.0021	1.0001	1.0003
111	0.9895	0.9905	0.9938
112	0.9401	0.9483	0.9478
113	0.8310	0.8420	0.8423
114	0.7286	0.7383	0.7412
115	0.6376	0.6474	0.6458
116	0.5582	0.5661	0.5691
117	0.4858	0.4922	0.4932
118	0.4144	0.4240	0.4289
119	0.3563	0.3612	0.3617
120	0.2945	0.3021	0.3015
121	0.2308	0.2343	0.2365
122	0.1668	0.1677	0.1680
123	0.1367	0.1334	0.1315
124	0.1041	0.1016	0.0980
125	0.0709	0.0706	0.0698
126	0.0470	0.0417	0.0386
127	0.0891	0.0842	0.0856
128	0.2558	0.2510	0.2452
129	0.2706	0.2655	0.2638
130	0.2728	0.2699	0.2650
131	0.2602	0.2514	0.2449
132	0.1917	0.1829	0.1783
133	0.0714	0.0561	0.0425
134	-0.0034	-0.0272	-0.0442

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 7 R= 8.1 MILLION M= 0.09 DELTA F= 0.0 DEG.

ORIFICE	-2.95	-2.52	-1.93	-1.61	-1.04	-0.53	-0.04	0.51
1	0.5455	0.6776	0.8226	0.8832	0.9621	0.9974	1.0040	0.9864
2	0.7115	0.6190	0.4765	0.3851	0.2072	0.3286	-0.1668	-0.3807
3	0.4187	0.3109	0.1487	0.0496	-0.1524	-0.3327	-0.5126	-0.7209
4	0.2627	0.1573	0.0020	-0.1053	-0.2787	-0.4429	-0.6056	-0.7910
5	0.1698	0.0704	-0.0867	-0.1718	-0.3303	-0.4751	-0.6225	-0.7888
6	0.0949	0.0008	-0.1483	-0.2296	-0.3758	-0.5127	-0.6461	-0.7988
7	0.0465	-0.0589	-0.1861	-0.2615	-0.3982	-0.5244	-0.6505	-0.7913
8	-0.0350	-0.1313	-0.2466	-0.3152	-0.4394	-0.5527	-0.6633	-0.7878
9	-0.1181	-0.1954	-0.3015	-0.3644	-0.4781	-0.5829	-0.6843	-0.7960
10	-0.1637	-0.2365	-0.3362	-0.3937	-0.4995	-0.5976	-0.6877	-0.7926
11	-0.2192	-0.2852	-0.3758	-0.4311	-0.5263	-0.6137	-0.6965	-0.7893
12	-0.2763	-0.3354	-0.4154	-0.4626	-0.5479	-0.6219	-0.6954	-0.7745
13	-0.3480	-0.3972	-0.4626	-0.5006	-0.5696	-0.6318	-0.6876	-0.7516
14	-0.4157	-0.4589	-0.5152	-0.5507	-0.6086	-0.6627	-0.7107	-0.7589
15	-0.4676	-0.5084	-0.5579	-0.5875	-0.6397	-0.6874	-0.7313	-0.7659
16	-0.5088	-0.5455	-0.5905	-0.6161	-0.6653	-0.7075	-0.7433	-0.7743
17	-0.5404	-0.5738	-0.6138	-0.6382	-0.6826	-0.7201	-0.7422	-0.7800
18	-0.5685	-0.6002	-0.6364	-0.6596	-0.6889	-0.7331	-0.7482	-0.7810
19	-0.5933	-0.6207	-0.6534	-0.6737	-0.7100	-0.7405	-0.7569	-0.7827
20	-0.6173	-0.6417	-0.6718	-0.6923	-0.7247	-0.7390	-0.7638	-0.7881
21	-0.6400	-0.6625	-0.6873	-0.7065	-0.7341	-0.7491	-0.7687	-0.7886
22	-0.6567	-0.6787	-0.6994	-0.7185	-0.7449	-0.7568	-0.7736	-0.7888
23	-0.6532	-0.6688	-0.6934	-0.7075	-0.7319	-0.7440	-0.7577	-0.7721
24	-0.6574	-0.6721	-0.6960	-0.7090	-0.7331	-0.7411	-0.7523	-0.7632
25	-0.6639	-0.6811	-0.6999	-0.7135	-0.7378	-0.7407	-0.7479	-0.7556
26	-0.6551	-0.6684	-0.6909	-0.7043	-0.7277	-0.7238	-0.7275	-0.7303
27	-0.6135	-0.6302	-0.6505	-0.6647	-0.6547	-0.6446	-0.6411	-0.6421
28	-0.3827	-0.3935	-0.4143	-0.4278	-0.4513	-0.4637	-0.4642	-0.4648
29	-0.2327	-0.2430	-0.2559	-0.2626	-0.2766	-0.2892	-0.2948	-0.2975
30	-0.1099	-0.1164	-0.1260	-0.1313	-0.1435	-0.1598	-0.1687	-0.1749
31	0.0513	0.0468	0.0409	0.0372	0.0289	0.0095	-0.0075	-0.0224
32	0.1337	0.1306	0.1266	0.1255	0.1189	0.1025	0.0846	0.0664
33	0.1754	0.1744	0.1725	0.1704	0.1677	0.1555	0.1423	0.1265
34	0.1829	0.1832	0.1827	0.1819	0.1802	0.1702	0.1580	0.1438

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 7 R= 8.1 MILLION M= 0.29 DELTA F= 0.0 DEG.

ORIFICE	-2.95	-2.52	-1.93	-1.61	-1.04	-0.53	-0.04	0.51
101	0.5455	0.6776	0.8226	0.8832	0.9621	0.9974	1.0040	0.9864
102	-0.6695	-0.4568	-0.1934	-0.0555	0.1658	0.3428	0.4873	0.6256
103	-0.6138	-0.4501	-0.2353	-0.1237	0.0613	0.2129	0.3413	0.4689
104	-0.5335	-0.3956	-0.2183	-0.1252	0.0331	0.1634	0.2753	0.3897
105	-0.4241	-0.3646	-0.2085	-0.1266	0.0137	0.1305	0.2325	0.3364
106	-0.4532	-0.3447	-0.2053	-0.1305	-0.0026	0.1044	0.1980	0.2950
107	-0.4266	-0.3297	-0.2026	-0.1327	-0.0139	0.0857	0.1730	0.2636
108	-0.3911	-0.3047	-0.1946	-0.1336	-0.0302	0.0575	0.1351	0.2175
109	-0.3643	-0.2898	-0.1888	-0.1349	-0.0406	0.0382	0.1093	0.1837
110	-0.3511	-0.2824	-0.1924	-0.1410	-0.0550	0.0184	0.0836	0.1537
111	-0.3368	-0.2731	-0.1920	-0.1472	-0.0686	-0.0027	0.0566	0.1199
112	-0.3074	-0.2673	-0.1979	-0.1589	-0.0907	-0.0324	0.0193	0.0760
113	-0.2932	-0.2504	-0.2008	-0.1702	-0.1154	-0.0667	-0.0245	0.0218
114	-0.2847	-0.2468	-0.2073	-0.1803	-0.1326	-0.0918	-0.0555	-0.0149
115	-0.2819	-0.2465	-0.2128	-0.1884	-0.1471	-0.1121	-0.0796	-0.0441
116	-0.2790	-0.2473	-0.2160	-0.1973	-0.1584	-0.1273	-0.0984	-0.0664
117	-0.2792	-0.2504	-0.2189	-0.2047	-0.1708	-0.1431	-0.1167	-0.0884
118	-0.2782	-0.2512	-0.2210	-0.2124	-0.1805	-0.1549	-0.1314	-0.1054
119	-0.2706	-0.2475	-0.2206	-0.2130	-0.1844	-0.1603	-0.1404	-0.1164
120	-0.2670	-0.2462	-0.2222	-0.2132	-0.1877	-0.1673	-0.1478	-0.1265
121	-0.2697	-0.2511	-0.2296	-0.2154	-0.1966	-0.1804	-0.1630	-0.1424
122	-0.2656	-0.2508	-0.2326	-0.2189	-0.2050	-0.1879	-0.1735	-0.1553
123	-0.2641	-0.2505	-0.2343	-0.2219	-0.2099	-0.1935	-0.1786	-0.1618
124	-0.2601	-0.2476	-0.2336	-0.2246	-0.2130	-0.1967	-0.1827	-0.1666
125	-0.2451	-0.2354	-0.2242	-0.2181	-0.2090	-0.1923	-0.1787	-0.1618
126	-0.2225	-0.2143	-0.2080	-0.2079	-0.2007	-0.1805	-0.1667	-0.1487
127	-0.0914	-0.0825	-0.0738	-0.0711	-0.0761	-0.1197	-0.1416	-0.1377
128	0.0403	0.0534	0.0684	0.0798	0.1086	0.1225	0.1327	0.1466
129	0.1049	0.1190	0.1354	0.1470	0.1717	0.1786	0.1851	0.1943
130	0.1433	0.1573	0.1736	0.1838	0.2042	0.2096	0.2142	0.2214
131	0.1914	0.2060	0.2205	0.2291	0.2463	0.2487	0.2523	0.2572
132	0.2049	0.2159	0.2261	0.2314	0.2423	0.2432	0.2444	0.2482
133	0.1992	0.2076	0.2132	0.2156	0.2234	0.2221	0.2210	0.2220
134	0.1958	0.2037	0.2077	0.2099	0.2167	0.2133	0.2103	0.2092

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 7 R= 0.1 MILLION M= 0.09 DELTA F= 0.0 DEG.

ORIFICE	1.04	2.04	3.02	4.02	4.96	5.96	7.53	9.96
1	0.9365	0.7583	0.4743	0.0916	-0.3506	-0.8943	-2.2067	-3.8093
2	-0.6002	-1.0701	-1.5939	-2.1670	-2.7342	-3.3763	-4.7211	-6.2638
3	-0.9307	-1.3660	-1.8463	-2.3503	-2.8448	-3.4030	-4.5297	-5.8504
4	-0.9758	-1.3539	-1.7650	-2.2013	-2.6251	-3.1004	-4.1307	-5.0816
5	-0.9540	-1.2865	-1.6482	-2.0292	-2.4118	-2.8426	-3.3980	-4.3097
6	-0.9468	-1.2541	-1.5785	-1.9226	-2.2705	-2.4806	-3.2101	-3.9777
7	-0.9299	-1.2094	-1.5061	-1.8287	-2.0097	-2.3521	-2.9888	-3.6595
8	-0.9109	-1.1508	-1.4138	-1.6036	-1.8810	-2.1503	-2.6773	-3.2461
9	-0.9079	-1.1249	-1.3461	-1.5554	-1.7814	-2.0197	-2.4860	-2.9726
10	-0.8948	-1.0924	-1.2615	-1.4904	-1.6880	-1.9081	-2.3205	-2.7619
11	-0.8800	-1.0574	-1.2190	-1.4096	-1.5805	-1.7684	-2.1305	-2.5015
12	-0.8512	-0.9789	-1.1460	-1.3057	-1.4497	-1.6050	-1.8980	-2.2055
13	-0.7975	-0.9211	-1.0472	-1.1691	-1.2807	-1.3985	-1.6169	-1.8478
14	-0.8050	-0.9082	-1.0129	-1.1167	-1.2060	-1.3030	-1.4770	-1.6529
15	-0.8151	-0.9044	-0.9930	-1.0802	-1.1558	-1.2381	-1.3802	-1.5234
16	-0.8171	-0.8933	-0.9760	-1.0455	-1.1119	-1.1777	-1.2972	-1.4135
17	-0.8183	-0.8832	-0.9558	-1.0202	-1.0752	-1.1283	-1.2240	-1.3187
18	-0.8172	-0.8752	-0.9352	-0.9931	-1.0361	-1.0852	-1.1643	-1.2302
19	-0.8134	-0.8660	-0.9167	-0.9676	-1.0041	-1.0429	-1.1029	-1.1523
20	-0.8163	-0.8577	-0.9051	-0.9463	-0.9748	-1.0039	-1.0433	-1.0730
21	-0.8139	-0.8495	-0.8879	-0.9205	-0.9428	-0.9631	-0.9780	-0.9835
22	-0.8061	-0.8346	-0.8637	-0.8889	-0.9027	-0.9097	-0.9089	-0.8853
23	-0.7855	-0.8117	-0.8355	-0.8552	-0.8644	-0.8656	-0.8430	-0.8114
24	-0.7754	-0.7971	-0.8160	-0.8321	-0.8362	-0.8299	-0.7752	-0.7416
25	-0.7638	-0.7808	-0.7957	-0.8039	-0.8006	-0.7803	-0.6964	-0.6338
26	-0.7343	-0.7415	-0.7486	-0.7512	-0.7384	-0.7058	-0.5890	-0.4985
27	-0.6414	-0.6421	-0.6426	-0.6353	-0.6127	-0.5684	-0.4270	-0.3837
28	-0.4612	-0.4617	-0.4569	-0.4453	-0.4187	-0.3690	-0.2712	-0.2559
29	-0.2967	-0.2982	-0.2939	-0.2870	-0.2710	-0.2277	-0.2195	-0.2418
30	-0.1786	-0.1833	-0.1857	-0.1858	-0.1826	-0.1778	-0.2076	-0.2300
31	-0.0336	-0.0497	-0.0651	-0.0816	-0.0993	-0.1279	-0.1833	-0.2259
32	0.0519	0.0285	0.0037	-0.0207	-0.0526	-0.0988	-0.1713	-0.2256
33	0.1112	0.0858	0.0586	0.0290	-0.0113	-0.0665	-0.1538	-0.2142
34	0.1299	0.1067	0.0788	0.0484	0.0090	-0.0505	-0.1481	-0.2103

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 7 R= 8.1 MILLION M= 0.05 DELTA F= 0.0 DEG.

ORIFICE	1.04	2.04	3.02	4.02	4.96	5.96	7.93	9.96
101	0.9365	0.7583	0.4743	0.0916	-0.3506	-0.6943	-2.2067	-3.8093
102	0.7339	0.8922	0.9801	0.9989	0.9654	0.8753	0.5430	0.0042
103	0.5753	0.7469	0.8756	0.9552	0.9926	0.9959	0.9044	0.6822
104	0.4868	0.6501	0.7837	0.8819	0.9460	0.9847	0.9871	0.8983
105	0.4261	0.5817	0.7138	0.8173	0.8923	0.9454	0.9968	0.9718
106	0.3794	0.5287	0.6574	0.7619	0.8414	0.9058	0.9820	0.9928
107	0.3432	0.4855	0.6103	0.7139	0.7966	0.8641	0.9561	0.9916
108	0.2900	0.4191	0.5375	0.6373	0.7212	0.7917	0.9000	0.9665
109	0.2504	0.3718	0.4821	0.5786	0.6597	0.7319	0.8474	0.9260
110	0.2165	0.3302	0.4362	0.5290	0.6069	0.6782	0.8000	0.8883
111	0.1773	0.2826	0.3808	0.4688	0.5443	0.6142	0.7347	0.8281
112	0.1262	0.2206	0.3106	0.3914	0.4624	0.5273	0.6449	0.7436
113	0.0639	0.1433	0.2197	0.2897	0.3513	0.4097	0.5175	0.6109
114	0.0205	0.0901	0.1571	0.2191	0.2748	0.3261	0.4257	0.5128
115	-0.0124	0.0492	0.1099	0.1647	0.2152	0.2628	0.3520	0.4332
116	-0.0380	0.0174	0.0718	0.1214	0.1677	0.2105	0.2923	0.3680
117	-0.0628	-0.0124	0.0372	0.0832	0.1250	0.1635	0.2786	0.3082
118	-0.0823	-0.0371	0.0087	0.0504	0.0881	0.1234	0.1930	0.2550
119	-0.0955	-0.0544	-0.0133	0.0241	0.0592	0.0909	0.1527	0.2093
120	-0.1082	-0.0712	-0.0329	0.0006	0.0319	0.0599	0.1162	0.1689
121	-0.1260	-0.0928	-0.0580	-0.0279	0.0002	0.0247	0.0748	0.1199
122	-0.1414	-0.1112	-0.0793	-0.0527	-0.0275	-0.0067	0.0381	0.0768
123	-0.1483	-0.1195	-0.0908	-0.0647	-0.0418	-0.0216	0.0183	0.0549
124	-0.1544	-0.1268	-0.1002	-0.0766	-0.0548	-0.0364	-0.0009	0.0340
125	-0.1505	-0.1249	-0.0993	-0.0785	-0.0584	-0.0439	-0.0115	0.0176
126	-0.1344	-0.1091	-0.0845	-0.0676	-0.0508	-0.0400	-0.0137	0.0096
127	-0.1208	-0.0930	-0.0669	-0.0471	-0.0278	-0.0139	0.0160	0.0426
128	0.1571	0.1841	0.2090	0.2190	0.2284	0.2323	0.2440	0.2519
129	0.1991	0.2123	0.2279	0.2359	0.2448	0.2479	0.2597	0.2669
130	0.2255	0.2348	0.2478	0.2542	0.2621	0.2634	0.2725	0.2779
131	0.2589	0.2647	0.2742	0.2779	0.2825	0.2805	0.2816	0.2801
132	0.2468	0.2502	0.2568	0.2571	0.2576	0.2510	0.2443	0.2342
133	0.2181	0.2162	0.2182	0.2124	0.2068	0.1899	0.1668	0.1436
134	0.2037	0.1988	0.1971	0.1874	0.1767	0.1540	0.1217	0.0862

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 7 R= 8.1 MILLION M= 0.09 DELTA F= 0.0 DEG.

ORIFICE	11.94	13.99	16.01	17.00	17.85
1	-5.6722	-7.7002	-9.6911	-10.5555	-11.1655
2	-7.8299	-9.5211	-10.3419	-11.5498	-12.2322
3	-7.1604	-8.6515	-9.8003	-10.3585	-10.5490
4	-5.8453	-6.9481	-7.8561	-8.2469	-8.5784
5	-5.1906	-6.0516	-6.8584	-7.2158	-7.3817
6	-4.7378	-5.4975	-6.1464	-6.4209	-6.6417
7	-4.3208	-5.0134	-5.5917	-5.8255	-5.9636
8	-3.8098	-4.3690	-4.8264	-5.0043	-5.1476
9	-3.4583	-3.9352	-4.3468	-4.4993	-4.6029
10	-3.1877	-3.5997	-3.7613	-4.0899	-4.1862
11	-2.8748	-3.2372	-3.5037	-3.6285	-3.6997
12	-2.5075	-2.7978	-3.0097	-3.0697	-3.1354
13	-2.0610	-2.2619	-2.3869	-2.4351	-2.4717
14	-1.8154	-1.9719	-2.0669	-2.0838	-2.0897
15	-1.6494	-1.7665	-1.8244	-1.8349	-1.8159
16	-1.5160	-1.5959	-1.6224	-1.6249	-1.5845
17	-1.4004	-1.4625	-1.4649	-1.4347	-1.3968
18	-1.2898	-1.3312	-1.3305	-1.2801	-1.2537
19	-1.1876	-1.2172	-1.1916	-1.1442	-1.0965
20	-1.0925	-1.0985	-1.0561	-0.9980	-0.9385
21	-0.9831	-0.9778	-0.9413	-0.8716	-0.7946
22	-0.8498	-0.8147	-0.7997	-0.7325	-0.6440
23	-0.7719	-0.7512	-0.7128	-0.6502	-0.5620
24	-0.6736	-0.6150	-0.6232	-0.5697	-0.5176
25	-0.5343	-0.5690	-0.5517	-0.5340	-0.4570
26	-0.4263	-0.4050	-0.5066	-0.4849	-0.4966
27	-0.3178	-0.3282	-0.4412	-0.4725	-0.4967
28	-0.2673	-0.3049	-0.4244	-0.4825	-0.5259
29	-0.2687	-0.3134	-0.4157	-0.4571	-0.4946
30	-0.2685	-0.3047	-0.4085	-0.4713	-0.5205
31	-0.2641	-0.3116	-0.4227	-0.4855	-0.5618
32	-0.2743	-0.3120	-0.3876	-0.4685	-0.5027
33	-0.2701	-0.3218	-0.3947	-0.4459	-0.5061
34	-0.2579	-0.3177	-0.3778	-0.4535	-0.5317

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 7 R= 8.1 MILLION M= 0.09 DELTA F= 0.0 DEG.

ORIFICE	11.94	13.99	16.01	17.00	17.85
101	-5.6722	-7.7002	-9.6911	-10.5555	-11.1655
102	-0.6830	-1.5152	-2.3238	-2.6767	-3.0590
103	0.3609	-0.0714	-0.5042	-0.7305	-0.9269
104	0.7306	0.4867	0.2282	0.1005	-0.0213
105	0.8850	0.7347	0.5639	0.4723	0.4076
106	0.9542	0.8626	0.7443	0.6892	0.6302
107	0.9824	0.9307	0.8519	0.8116	0.7744
108	0.9943	0.9868	0.9515	0.9336	0.9149
109	0.9767	0.9929	0.9871	0.9794	0.9737
110	0.9500	0.9823	0.9923	0.9931	0.9936
111	0.9012	0.9499	0.9743	0.9852	0.9876
112	0.8214	0.8839	0.9227	0.9392	0.9502
113	0.6922	0.7607	0.8108	0.8290	0.8445
114	0.5911	0.6581	0.7075	0.7318	0.7478
115	0.5066	0.5724	0.6230	0.6407	0.6566
116	0.4354	0.4954	0.5431	0.5606	0.5717
117	0.3712	0.4265	0.4726	0.4880	0.5009
118	0.3158	0.3668	0.4039	0.4200	0.4322
119	0.2662	0.3124	0.3484	0.3564	0.3680
120	0.2176	0.2601	0.2880	0.2985	0.3057
121	0.1648	0.2023	0.2291	0.2363	0.2438
122	0.1152	0.1485	0.1683	0.1739	0.1731
123	0.0917	0.1198	0.1338	0.1395	0.1353
124	0.0673	0.0914	0.1039	0.1033	0.1019
125	0.0469	0.0681	0.0827	0.0787	0.0741
126	0.0334	0.0501	0.0592	0.0511	0.0460
127	0.0720	0.0897	0.0987	0.0942	0.0851
128	0.2664	0.2734	0.2708	0.2679	0.2550
129	0.2784	0.2819	0.2785	0.2752	0.2655
130	0.2860	0.2867	0.2822	0.2733	0.2635
131	0.2852	0.2815	0.2678	0.2612	0.2499
132	0.2302	0.2242	0.2074	0.1925	0.1741
133	0.1358	0.1195	0.0939	0.0609	0.0407
134	0.0700	0.0575	0.0160	-0.0126	-0.0467

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 8,9 R= 6.1 MILLION M= 0.07 DELTA F= 0.0 DEG.

ORIFICE	-3.95	-2.97	-2.01	-1.40	-0.92	-0.02	0.51	1.08
1	0.1494	0.5401	0.8015	0.9159	0.9701	0.9960	0.9782	0.9261
2	0.8737	0.7101	0.5196	0.3441	0.1652	-0.1937	-0.4033	-0.6030
3	0.6359	0.4215	0.1947	-0.0185	-0.2042	-0.5364	-0.7384	-0.9299
4	0.4818	0.2651	0.0484	-0.1530	-0.3265	-0.6272	-0.8063	-0.9693
5	0.3795	0.1734	-0.0537	-0.2139	-0.3734	-0.6458	-0.8043	-0.9476
6	0.2986	0.0991	-0.1152	-0.2660	-0.4162	-0.6673	-0.8125	-0.9427
7	0.2396	0.0497	-0.1527	-0.2941	-0.4360	-0.6699	-0.8041	-0.9206
8	0.1455	-0.0567	-0.2168	-0.3437	-0.4739	-0.6824	-0.7999	-0.8990
9	0.0670	-0.1249	-0.2718	-0.3898	-0.5099	-0.6996	-0.8096	-0.8920
10	0.0114	-0.1707	-0.3060	-0.4145	-0.5306	-0.7049	-0.8072	-0.8792
11	-0.0810	-0.2250	-0.3477	-0.4459	-0.5526	-0.7110	-0.7990	-0.8678
12	-0.1562	-0.2830	-0.3877	-0.4745	-0.5722	-0.7106	-0.7862	-0.8373
13	-0.2465	-0.3533	-0.4362	-0.5080	-0.5923	-0.7025	-0.7633	-0.7988
14	-0.3269	-0.4202	-0.4906	-0.5491	-0.6265	-0.7236	-0.7762	-0.7915
15	-0.3906	-0.4727	-0.5322	-0.5849	-0.6581	-0.7436	-0.7898	-0.7968
16	-0.4392	-0.5133	-0.5657	-0.6148	-0.6809	-0.7579	-0.7987	-0.7983
17	-0.4785	-0.5461	-0.5904	-0.6325	-0.6977	-0.7664	-0.7997	-0.7979
18	-0.5119	-0.5739	-0.6126	-0.6521	-0.7130	-0.7733	-0.7947	-0.7971
19	-0.5417	-0.5969	-0.6316	-0.6632	-0.7235	-0.7786	-0.7937	-0.7938
20	-0.5708	-0.6203	-0.6499	-0.6796	-0.7364	-0.7872	-0.7984	-0.7941
21	-0.5978	-0.6429	-0.6649	-0.6914	-0.7451	-0.7934	-0.8037	-0.7933
22	-0.6213	-0.6586	-0.6792	-0.7034	-0.7548	-0.7962	-0.8035	-0.7866
23	-0.6030	-0.6442	-0.6814	-0.7111	-0.7323	-0.7650	-0.7721	-0.7818
24	-0.6099	-0.6476	-0.6853	-0.7110	-0.7313	-0.7616	-0.7668	-0.7708
25	-0.6173	-0.6544	-0.6874	-0.7134	-0.7313	-0.7578	-0.7612	-0.7613
26	-0.6069	-0.6405	-0.6741	-0.6985	-0.7176	-0.7421	-0.7383	-0.7299
27	-0.5639	-0.5996	-0.6393	-0.6606	-0.6796	-0.6643	-0.6518	-0.6392
28	-0.5589	-0.4935	-0.4110	-0.4132	-0.4294	-0.4772	-0.4717	-0.4620
29	-0.1934	-0.2214	-0.2442	-0.2585	-0.2707	-0.2975	-0.3010	-0.2964
30	-0.0880	-0.1055	-0.1228	-0.1333	-0.1416	-0.1620	-0.1739	-0.1770
31	0.0636	0.0517	0.0419	0.0347	0.0290	0.0121	-0.0126	-0.0322
32	0.1410	0.1332	0.1267	0.1214	0.1174	0.1062	0.0795	0.0521
33	0.1786	0.1739	0.1715	0.1686	0.1657	0.1589	0.1383	0.1122
34	0.1844	0.1812	0.1814	0.1796	0.1778	0.1727	0.1551	0.1306

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 8,9 R= 6.1 MILLION M= 0.07 DELTA F= 0.0 DEG.

ORIFICE	-3.95	-2.97	-2.01	-1.40	-0.92	-0.02	0.51	1.08
101	0.1494	0.5401	0.8015	0.9159	0.9701	0.9960	0.9782	0.9261
102	-1.2151	-0.6692	-0.2210	0.0344	0.2122	0.4995	0.6323	0.7417
103	-1.0363	-0.6147	-0.2565	-0.0483	0.1016	0.3529	0.4742	0.5853
104	-0.8872	-0.5343	-0.2369	-0.0607	0.0676	0.2869	0.3945	0.4957
105	-0.7938	-0.4835	-0.2258	-0.0694	0.0449	0.2433	0.3415	0.4353
106	-0.7306	-0.4532	-0.2206	-0.0784	0.0251	0.2091	0.3012	0.3895
107	-0.6316	-0.4286	-0.2139	-0.0835	0.0120	0.1830	0.2686	0.3510
108	-0.5769	-0.3894	-0.2062	-0.0922	-0.0068	0.1455	0.2224	0.2975
109	-0.5333	-0.3637	-0.1996	-0.0972	-0.0200	0.1176	0.1896	0.2572
110	-0.5070	-0.3516	-0.2018	-0.1068	-0.0359	0.0923	0.1590	0.2235
111	-0.4747	-0.3340	-0.1999	-0.1160	-0.0520	0.0642	0.1252	0.1842
112	-0.4409	-0.3174	-0.2032	-0.1315	-0.0751	0.0267	0.0801	0.1327
113	-0.3956	-0.2885	-0.2068	-0.1472	-0.1019	-0.0178	0.0268	0.0691
114	-0.3708	-0.2809	-0.2108	-0.1598	-0.1214	-0.0484	-0.0104	0.0256
115	-0.3544	-0.2778	-0.2151	-0.1708	-0.1368	-0.0725	-0.0393	-0.0082
116	-0.3438	-0.2757	-0.2200	-0.1798	-0.1498	-0.0917	-0.0617	-0.0336
117	-0.3371	-0.2770	-0.2259	-0.1909	-0.1629	-0.1095	-0.0832	-0.0578
118	-0.3285	-0.2748	-0.2300	-0.1977	-0.1719	-0.1235	-0.0992	-0.0784
119	-0.3185	-0.2686	-0.2288	-0.2004	-0.1773	-0.1330	-0.1104	-0.0914
120	-0.3065	-0.2636	-0.2291	-0.2031	-0.1816	-0.1408	-0.1206	-0.1041
121	-0.3047	-0.2655	-0.2366	-0.2108	-0.1913	-0.1548	-0.1370	-0.1224
122	-0.2977	-0.2622	-0.2355	-0.2156	-0.1989	-0.1643	-0.1488	-0.1359
123	-0.2928	-0.2604	-0.2373	-0.2200	-0.2030	-0.1691	-0.1546	-0.1423
124	-0.2860	-0.2569	-0.2368	-0.2203	-0.2045	-0.1713	-0.1565	-0.1463
125	-0.2674	-0.2417	-0.2287	-0.2142	-0.1976	-0.1622	-0.1492	-0.1398
126	-0.2394	-0.2177	-0.2203	-0.1962	-0.1788	-0.1410	-0.1263	-0.1169
127	-0.1081	-0.0874	-0.0808	-0.1614	-0.1765	-0.1315	-0.1159	-0.1058
128	0.0195	0.0434	0.0778	0.1122	0.1241	0.1583	0.1747	0.1894
129	0.0826	0.1076	0.1468	0.1673	0.1754	0.1965	0.2053	0.2099
130	0.1218	0.1456	0.1827	0.1984	0.2033	0.2217	0.2264	0.2283
131	0.1719	0.1941	0.2289	0.2399	0.2430	0.2563	0.2596	0.2587
132	0.1886	0.2078	0.2296	0.2369	0.2387	0.2497	0.2501	0.2478
133	0.1979	0.2019	0.2146	0.2178	0.2190	0.2286	0.2255	0.2187
134	0.1963	0.1979	0.2083	0.2123	0.2122	0.2190	0.2135	0.2043

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS.

RUNS 8,9 R= 6.1 MILLION M= 0.07 DELTA F= 0.0 DEG.

ORIFICE	1.99	2.07	2.99	3.01	3.96	3.99	5.03	6.01
1	0.7793	0.7509	0.4979	0.4950	0.1515	0.1385	-0.3264	-0.8517
2	-1.0394	-1.0767	-1.5493	-1.5745	-2.0658	-2.0895	-2.7030	-3.2965
3	-1.3373	-1.3710	-1.8041	-1.8238	-2.2629	-2.2746	-2.8258	-3.3333
4	-1.3342	-1.3640	-1.7573	-1.7515	-2.1205	-2.1447	-2.6017	-3.0342
5	-1.2742	-1.2948	-1.6136	-1.6359	-1.9561	-1.9768	-2.3917	-2.7913
6	-1.2381	-1.2595	-1.5475	-1.5679	-1.8555	-1.8699	-2.2562	-2.4771
7	-1.1745	-1.2173	-1.4815	-1.4994	-1.7612	-1.7848	-2.0666	-2.2751
8	-1.1451	-1.1596	-1.3931	-1.4060	-1.6115	-1.6291	-1.8688	-2.1040
9	-1.1182	-1.1293	-1.3372	-1.3541	-1.4697	-1.5133	-1.7790	-1.9702
10	-1.0897	-1.0993	-1.2863	-1.2974	-1.4460	-1.4626	-1.6925	-1.8684
11	-1.0555	-1.0669	-1.1838	-1.2008	-1.3630	-1.3865	-1.5844	-1.7351
12	-1.0030	-1.0092	-1.1326	-1.1421	-1.2652	-1.2860	-1.4523	-1.5745
13	-0.9210	-0.9273	-1.0370	-1.0486	-1.1337	-1.1547	-1.2808	-1.3622
14	-0.9149	-0.9144	-1.0044	-1.0156	-1.0882	-1.1029	-1.2117	-1.2708
15	-0.9059	-0.9089	-0.9864	-0.9915	-1.0550	-1.0687	-1.1610	-1.2046
16	-0.8998	-0.9014	-0.9678	-0.9755	-1.0206	-1.0418	-1.1147	-1.1501
17	-0.8895	-0.8930	-0.9451	-0.9568	-0.9923	-1.0102	-1.0749	-1.0968
18	-0.8851	-0.8812	-0.9302	-0.9403	-0.9653	-0.9875	-1.0422	-1.0513
19	-0.8752	-0.8730	-0.9110	-0.9199	-0.9371	-0.9600	-1.0065	-1.0079
20	-0.8662	-0.8659	-0.8981	-0.9049	-0.9163	-0.9400	-0.9717	-0.9644
21	-0.8598	-0.8563	-0.8827	-0.8875	-0.8902	-0.9110	-0.9334	-0.9205
22	-0.8450	-0.8400	-0.8564	-0.8627	-0.8566	-0.8783	-0.8905	-0.8608
23	-0.7999	-0.7988	-0.8171	-0.8216	-0.8274	-0.8272	-0.8318	-0.8245
24	-0.7859	-0.7845	-0.7980	-0.8014	-0.8085	-0.8029	-0.7956	-0.7767
25	-0.7678	-0.7670	-0.7762	-0.7775	-0.7771	-0.7697	-0.7564	-0.7255
26	-0.7306	-0.7299	-0.7299	-0.7295	-0.7193	-0.7148	-0.6908	-0.6360
27	-0.6305	-0.6278	-0.6139	-0.6180	-0.5972	-0.5926	-0.5519	-0.4808
28	-0.4488	-0.4476	-0.4322	-0.4330	-0.4092	-0.4063	-0.3498	-0.3234
29	-0.2874	-0.2880	-0.2764	-0.2763	-0.2596	-0.2586	-0.2272	-0.2078
30	-0.1784	-0.1775	-0.1769	-0.1776	-0.1756	-0.1725	-0.1740	-0.1896
31	-0.0546	-0.0551	-0.0735	-0.0754	-0.0952	-0.0964	-0.1257	-0.1586
32	0.0181	0.0161	-0.0141	-0.0157	-0.0507	-0.0503	-0.0955	-0.1387
33	0.0763	0.0730	0.0382	0.0371	-0.0055	-0.0067	-0.0638	-0.1152
34	0.0560	0.0546	0.0596	0.0577	0.0151	0.0126	-0.0480	-0.1017

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 8,9 R= 6.1 MILLION M= 0.07 DELTA F= 0.0 DEG.

ORIFICE	1.99	2.97	2.99	3.01	3.96	3.99	5.03	6.01
101	0.7793	0.7509	0.4979	0.4950	0.1515	0.1385	-0.3264	-0.8517
102	0.8831	0.8902	0.5701	0.9781	1.0023	0.9954	0.9674	0.8874
103	0.7360	0.7475	0.8634	0.8701	0.9489	0.9432	0.9918	0.9998
104	0.6403	0.6540	0.7734	0.7772	0.8707	0.8696	0.9412	0.9858
105	0.5731	0.5837	0.7005	0.7069	0.8049	0.8034	0.8877	0.9448
106	0.5187	0.5306	0.6454	0.6506	0.7503	0.7466	0.8353	0.9024
107	0.4757	0.4872	0.5988	0.6035	0.7011	0.7003	0.7895	0.8596
108	0.4116	0.4217	0.5274	0.5301	0.6251	0.6242	0.7155	0.7879
109	0.3644	0.3720	0.4727	0.4769	0.5668	0.5669	0.6548	0.7249
110	0.3222	0.3311	0.4265	0.4302	0.5166	0.5176	0.6026	0.6743
111	0.2751	0.2831	0.3714	0.3758	0.4581	0.4578	0.5407	0.6074
112	0.2147	0.2216	0.3019	0.3060	0.3808	0.3814	0.4573	0.5208
113	0.1372	0.1440	0.2121	0.2149	0.2799	0.2796	0.3463	0.4030
114	0.0850	0.0910	0.1510	0.1541	0.2102	0.2098	0.2690	0.3208
115	0.0451	0.0506	0.1034	0.1067	0.1567	0.1563	0.2088	0.2575
116	0.0127	0.0183	0.0658	0.0681	0.1134	0.1129	0.1615	0.2045
117	-0.0163	-0.0119	0.0318	0.0345	0.0751	0.0746	0.1180	0.1579
118	-0.0399	-0.0364	0.0035	0.0060	0.0431	0.0426	0.0815	0.1180
119	-0.0575	-0.0542	-0.0183	-0.0163	0.0172	0.0169	0.0523	0.0855
120	-0.0736	-0.0705	-0.0381	-0.0358	-0.0071	-0.0069	0.0241	0.0542
121	-0.0955	-0.0922	-0.0626	-0.0608	-0.0364	-0.0349	-0.0082	0.0194
122	-0.1114	-0.1091	-0.0835	-0.0807	-0.0613	-0.0600	-0.0362	-0.0125
123	-0.1204	-0.1179	-0.0945	-0.0916	-0.0719	-0.0719	-0.0508	-0.0286
124	-0.1257	-0.1244	-0.1021	-0.0998	-0.0822	-0.0815	-0.0628	-0.0435
125	-0.1223	-0.1196	-0.1003	-0.0988	-0.0820	-0.0833	-0.0671	-0.0494
126	-0.1012	-0.0997	-0.0821	-0.0797	-0.0662	-0.0677	-0.0549	-0.0411
127	-0.0877	-0.0863	-0.0669	-0.0637	-0.0481	-0.0500	-0.0324	-0.0173
128	0.2074	0.2046	0.2143	0.2194	0.2280	0.2251	0.2343	0.2446
129	0.2204	0.2192	0.2275	0.2312	0.2353	0.2335	0.2382	0.2458
130	0.2363	0.2342	0.2417	0.2464	0.2496	0.2463	0.2513	0.2581
131	0.2651	0.2629	0.2663	0.2728	0.2724	0.2690	0.2708	0.2733
132	0.2502	0.2473	0.2483	0.2545	0.2509	0.2460	0.2435	0.2398
133	0.2154	0.2120	0.2080	0.2124	0.2019	0.1987	0.1826	0.1749
134	0.1982	0.1934	0.1847	0.1881	0.1759	0.1708	0.1512	0.1317

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 8,9 R= 6.1 MILLION M= 0.07 DELTA F= 0.0 DEG.

ORIFICE	7.99	9.98	11.98	14.00	15.91	16.95	17.96
1	-2.1155	-3.7096	-5.5578	-7.5718	-9.4500	-10.3745	-11.1710
2	-4.6278	-6.0852	-7.6984	-9.2962	-10.7934	-11.4926	-12.2061
3	-4.4610	-5.6514	-7.0416	-8.4380	-9.8100	-10.4788	-10.9523
4	-4.0430	-5.2273	-5.9521	-6.6440	-7.6491	-8.1298	-8.5047
5	-3.3746	-4.1548	-5.1323	-5.9529	-6.7927	-7.0880	-7.4969
6	-3.1525	-3.8775	-4.6779	-5.4011	-6.0725	-6.3337	-6.5815
7	-2.9504	-3.6081	-4.3008	-4.9313	-5.5207	-5.7352	-6.0028
8	-2.6560	-3.1984	-3.7711	-4.3041	-4.7829	-4.9678	-5.2212
9	-2.4745	-2.9106	-3.4336	-3.8667	-4.3011	-4.4428	-4.5733
10	-2.2994	-2.6990	-3.1661	-3.5557	-3.9174	-4.0492	-4.2073
11	-2.1178	-2.4571	-2.8513	-3.1735	-3.4837	-3.5968	-3.6950
12	-1.8935	-2.1636	-2.4890	-2.7236	-2.9899	-3.0303	-3.1442
13	-1.6091	-1.8102	-2.0441	-2.2160	-2.3643	-2.4033	-2.4723
14	-1.4725	-1.6210	-1.8067	-1.9297	-2.0522	-2.0685	-2.1386
15	-1.3738	-1.4908	-1.6382	-1.7280	-1.8124	-1.7910	-1.8571
16	-1.2929	-1.3760	-1.5122	-1.5677	-1.6223	-1.5985	-1.6544
17	-1.2268	-1.2846	-1.3886	-1.4285	-1.4695	-1.4210	-1.4608
18	-1.1603	-1.1968	-1.2864	-1.2985	-1.3116	-1.2644	-1.2920
19	-1.0944	-1.1100	-1.1751	-1.1684	-1.1845	-1.1164	-1.1102
20	-1.0392	-1.0285	-1.0777	-1.0613	-1.0365	-0.9548	-0.9774
21	-0.9718	-0.9536	-0.9751	-0.9461	-0.9123	-0.8488	-0.7751
22	-0.8829	-0.8331	-0.8363	-0.8072	-0.7867	-0.7013	-0.6204
23	-0.8026	-0.7667	-0.7234	-0.6649	-0.6850	-0.6114	-0.5409
24	-0.7355	-0.6739	-0.6286	-0.5507	-0.5954	-0.5472	-0.5400
25	-0.6606	-0.6083	-0.5214	-0.5536	-0.5278	-0.5035	-0.5110
26	-0.5205	-0.4373	-0.3989	-0.4461	-0.4552	-0.4806	-0.5099
27	-0.3583	-0.3015	-0.2854	-0.3608	-0.4192	-0.4776	-0.4703
28	-0.2596	-0.2504	-0.2757	-0.3079	-0.4181	-0.4642	-0.4899
29	-0.2194	-0.2593	-0.2836	-0.3007	-0.4027	-0.4691	-0.4991
30	-0.1957	-0.2334	-0.2947	-0.3077	-0.3822	-0.4713	-0.5135
31	-0.1938	-0.2236	-0.2733	-0.3317	-0.4028	-0.4828	-0.5983
32	-0.2408	-0.2265	-0.2715	-0.3319	-0.4069	-0.4691	-0.5269
33	-0.1830	-0.2276	-0.2816	-0.3225	-0.3992	-0.4597	-0.5027
34	-0.1723	-0.2289	-0.2732	-0.3241	-0.3863	-0.4792	-0.5225

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 8,9 R= 6.1 MILLION M= 0.07 DELTA F= 0.0 DEG.

ORIFICE	7.99	9.98	11.98	14.00	15.91	16.95	17.96
101	-2.1155	-3.7096	-5.5578	-7.5718	-9.4500	-10.3745	-11.1710
102	0.5654	0.0494	-0.5411	-1.4605	-2.2923	-2.7208	-3.1290
103	0.9134	0.7021	0.3788	-0.0451	-0.4501	-0.7152	-0.9255
104	0.9897	0.9074	0.7431	0.5087	0.2470	0.1002	-0.0227
105	0.9917	0.9767	0.9893	0.7505	0.5753	0.4761	0.3757
106	0.9770	0.9955	0.9562	0.8671	0.7537	0.6890	0.6377
107	0.9500	0.9957	0.9828	0.9345	0.8598	0.8161	0.7731
108	0.8937	0.9656	0.9919	0.9855	0.9569	0.9339	0.9126
109	0.8417	0.9224	0.9752	0.9917	0.9867	0.9787	0.9742
110	0.7913	0.8824	0.9458	0.9792	0.9905	0.9925	0.9927
111	0.7260	0.8234	0.8981	0.9446	0.9728	0.9833	0.9907
112	0.6352	0.7353	0.8177	0.8799	0.9199	0.9354	0.9497
113	0.5078	0.6033	0.6901	0.7529	0.8029	0.8228	0.8470
114	0.4162	0.5038	0.5883	0.6518	0.7023	0.7259	0.7458
115	0.3431	0.4273	0.5024	0.5635	0.6154	0.6369	0.6560
116	0.2829	0.3583	0.4304	0.4894	0.5371	0.5572	0.5749
117	0.2297	0.2998	0.3675	0.4237	0.4656	0.4851	0.5047
118	0.1831	0.2484	0.3106	0.3603	0.4002	0.4187	0.4310
119	0.1443	0.2021	0.2592	0.3049	0.3412	0.3520	0.3706
120	0.1048	0.1610	0.2106	0.2523	0.2836	0.2931	0.3092
121	0.0654	0.1120	0.1569	0.1955	0.2219	0.2346	0.2474
122	0.0263	0.0689	0.1079	0.1407	0.1627	0.1653	0.1793
123	0.0064	0.0446	0.0846	0.1140	0.1310	0.1377	0.1487
124	-0.0119	0.0243	0.0591	0.0837	0.1023	0.1014	0.1109
125	-0.0216	0.0104	0.0414	0.0622	0.0736	0.0753	0.0848
126	-0.0210	0.0045	0.0284	0.0475	0.0542	0.0504	0.0553
127	0.0089	0.0382	0.0661	0.0842	0.0917	0.0951	0.1009
128	0.2534	0.2687	0.2833	0.2865	0.2861	0.2855	0.2818
129	0.2517	0.2629	0.2769	0.2791	0.2770	0.2736	0.2665
130	0.2592	0.2710	0.2810	0.2825	0.2783	0.2723	0.2656
131	0.2694	0.2742	0.2779	0.2768	0.2669	0.2573	0.2474
132	0.2276	0.2247	0.2260	0.2132	0.1988	0.1853	0.1800
133	0.1471	0.1281	0.1206	0.1013	0.0785	0.0578	0.0419
134	0.0984	0.0725	0.0564	0.0402	0.0042	-0.0128	-0.0379

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 10 P= 4.4 MILLION M= 0.05 DELTA F= 0.0 DEG.

ORIFICE	-4.00	-3.00	-2.49	-1.93	-1.04	-0.03	0.51	1.05
1	0.1227	0.5222	0.6764	0.8126	0.9562	0.9976	0.9771	0.9214
2	0.9355	0.7724	0.6668	0.5293	0.2623	-0.2077	-0.4346	-0.6044
3	0.6998	0.4826	0.3584	0.2051	-0.1273	-0.5507	-0.7673	-0.9329
4	0.5416	0.3282	0.2036	0.0570	-0.2527	-0.6418	-0.8377	-0.9781
5	0.4419	0.2363	0.1184	-0.0667	-0.3070	-0.6614	-0.8389	-0.9560
6	0.3612	0.1615	0.0000	-0.1281	-0.3530	-0.6801	-0.8431	-0.9433
7	0.3019	0.1106	-0.0446	-0.1653	-0.3746	-0.6857	-0.8395	-0.9230
8	0.2066	-0.0205	-0.1173	-0.2279	-0.4162	-0.6982	-0.8325	-0.9003
9	0.1274	-0.0879	-0.1801	-0.2820	-0.4538	-0.7181	-0.8384	-0.8978
10	0.0732	-0.1347	-0.2203	-0.3179	-0.4735	-0.7258	-0.8372	-0.8823
11	-0.0429	-0.1898	-0.2705	-0.3577	-0.5023	-0.7343	-0.8330	-0.8688
12	-0.1177	-0.2480	-0.3224	-0.3997	-0.5212	-0.7310	-0.8132	-0.8379
13	-0.2109	-0.3205	-0.3821	-0.4449	-0.5460	-0.7237	-0.7937	-0.8007
14	-0.2907	-0.3879	-0.4433	-0.4961	-0.5830	-0.7455	-0.8045	-0.8071
15	-0.3540	-0.4396	-0.4946	-0.5419	-0.6159	-0.7613	-0.8148	-0.8076
16	-0.4032	-0.4840	-0.5273	-0.5720	-0.6372	-0.7735	-0.8226	-0.8122
17	-0.4435	-0.5140	-0.5556	-0.5968	-0.6565	-0.7849	-0.8258	-0.8106
18	-0.4783	-0.5413	-0.5832	-0.6190	-0.6712	-0.7922	-0.8327	-0.8041
19	-0.5064	-0.5651	-0.6009	-0.6376	-0.6865	-0.7935	-0.8333	-0.7951
20	-0.5368	-0.5927	-0.6242	-0.6533	-0.6951	-0.8081	-0.8403	-0.7955
21	-0.5636	-0.6142	-0.6430	-0.6705	-0.7098	-0.8157	-0.8432	-0.8005
22	-0.5840	-0.6305	-0.6569	-0.6811	-0.7148	-0.8128	-0.8468	-0.7930
23	-0.5991	-0.6344	-0.6556	-0.6796	-0.7180	-0.7608	-0.7865	-0.7845
24	-0.6042	-0.6398	-0.6592	-0.6817	-0.7146	-0.7582	-0.7831	-0.7793
25	-0.6094	-0.6393	-0.6596	-0.6827	-0.7167	-0.7558	-0.7782	-0.7758
26	-0.5899	-0.6220	-0.6372	-0.6589	-0.6525	-0.7378	-0.7616	-0.7514
27	-0.5522	-0.5872	-0.6005	-0.6237	-0.6631	-0.7046	-0.6911	-0.6646
28	-0.5467	-0.5833	-0.6059	-0.6426	-0.5187	-0.4401	-0.4823	-0.4790
29	-0.1582	-0.1794	-0.1946	-0.2198	-0.2516	-0.2824	-0.3039	-0.3067
30	-0.0800	-0.0953	-0.1025	-0.1141	-0.1330	-0.1528	-0.1665	-0.1792
31	0.0652	0.0538	0.0494	0.0419	0.0306	0.0184	0.0102	-0.0204
32	0.1408	0.1329	0.1292	0.1240	0.1168	0.1104	0.1038	0.0728
33	0.1771	0.1730	0.1720	0.1686	0.1644	0.1614	0.1569	0.1324
34	0.1827	0.1803	0.1815	0.1793	0.1754	0.1738	0.1704	0.1486

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 10 R= 4.4 MILLION M= 0.05 DELTA F= 0.0 DEG.

ORIFICE	-4.00	-3.00	-2.49	-1.93	-1.04	-0.03	0.51	1.05
101	0.1227	0.5222	0.6764	0.8126	0.9562	0.9976	0.9771	0.9214
102	-1.2483	-0.6938	-0.4492	-0.1949	0.1623	0.4939	0.6356	0.7436
103	-1.0609	-0.6310	-0.4401	-0.2379	0.0580	0.3480	0.4782	0.5882
104	-0.9004	-0.5502	-0.3877	-0.2193	0.0299	0.2819	0.3994	0.4999
105	-0.8092	-0.4999	-0.3566	-0.2093	0.0109	0.2388	0.3471	0.4396
106	-0.7488	-0.4676	-0.3381	-0.2068	-0.0049	0.2039	0.3038	0.3897
107	-0.6896	-0.4387	-0.3203	-0.2017	-0.0158	0.1780	0.2733	0.3532
108	-0.5755	-0.4000	-0.2994	-0.1943	-0.0314	0.1409	0.2263	0.2989
109	-0.5411	-0.3719	-0.2844	-0.1891	-0.0424	0.1135	0.1916	0.2599
110	-0.5159	-0.3583	-0.2781	-0.1914	-0.0563	0.0884	0.1611	0.2255
111	-0.4829	-0.3411	-0.2708	-0.1924	-0.0709	0.0617	0.1264	0.1859
112	-0.4484	-0.3252	-0.2641	-0.1971	-0.0920	0.0242	0.0816	0.1356
113	-0.4028	-0.2951	-0.2531	-0.2012	-0.1154	-0.0202	0.0277	0.0729
114	-0.3760	-0.2866	-0.2530	-0.2048	-0.1325	-0.0509	-0.0105	0.0302
115	-0.3603	-0.2822	-0.2528	-0.2101	-0.1481	-0.0755	-0.0393	-0.0037
116	-0.3481	-0.2759	-0.2521	-0.2150	-0.1584	-0.0940	-0.0616	-0.0289
117	-0.3405	-0.2780	-0.2527	-0.2230	-0.1707	-0.1122	-0.0837	-0.0529
118	-0.3316	-0.2762	-0.2556	-0.2267	-0.1808	-0.1270	-0.1004	-0.0720
119	-0.3197	-0.2700	-0.2546	-0.2282	-0.1836	-0.1357	-0.1110	-0.0853
120	-0.3099	-0.2661	-0.2519	-0.2262	-0.1879	-0.1430	-0.1219	-0.0974
121	-0.3059	-0.2677	-0.2555	-0.2321	-0.1967	-0.1565	-0.1370	-0.1161
122	-0.2979	-0.2643	-0.2541	-0.2366	-0.2023	-0.1642	-0.1464	-0.1273
123	-0.2936	-0.2648	-0.2522	-0.2370	-0.2034	-0.1673	-0.1511	-0.1330
124	-0.2869	-0.2592	-0.2520	-0.2356	-0.2027	-0.1684	-0.1522	-0.1348
125	-0.2682	-0.2442	-0.2443	-0.2253	-0.1895	-0.1554	-0.1410	-0.1248
126	-0.2374	-0.2209	-0.2315	-0.2063	-0.1671	-0.1301	-0.1159	-0.0998
127	-0.1088	-0.0912	-0.0933	-0.2013	-0.1597	-0.1251	-0.1089	-0.0911
128	0.0155	0.0398	0.0620	0.1033	0.1219	0.0710	0.0408	0.0429
129	0.0789	0.1049	0.1324	0.1582	0.1825	0.2123	0.2220	0.2326
130	0.1166	0.1428	0.1692	0.1886	0.2045	0.2232	0.2300	0.2414
131	0.1675	0.1923	0.2175	0.2307	0.2393	0.2529	0.2581	0.2679
132	0.1845	0.2040	0.2208	0.2281	0.2368	0.2461	0.2503	0.2569
133	0.1845	0.1988	0.2071	0.2111	0.2161	0.2232	0.2265	0.2299
134	0.1834	0.1952	0.2016	0.2050	0.2097	0.2139	0.2148	0.2179

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 10 R= 4.4 MILLION M= 0.05 DELTA F= 0.0 DEG.

ORIFICE	1.91	3.05	4.01	4.61	6.03	7.98	10.13	12.05
1	0.7945	0.5030	0.1805	-0.1440	-0.7545	-1.9589	-3.4848	-5.3053
2	-0.9585	-1.5160	-2.0050	-2.4823	-3.1440	-4.4302	-5.8557	-7.4422
3	-1.2596	-1.7656	-2.2020	-2.6238	-3.1867	-4.2489	-5.4301	-6.7543
4	-1.2609	-1.7000	-2.0603	-2.4303	-2.9203	-3.8409	-5.0155	-6.4070
5	-1.2031	-1.5916	-1.9097	-2.2395	-2.6684	-3.6390	-3.9036	-4.9055
6	-1.1739	-1.5154	-1.8043	-2.1057	-2.5218	-2.9538	-3.7408	-4.5261
7	-1.1327	-1.4492	-1.7157	-2.0114	-2.1947	-2.8154	-3.4916	-4.1455
8	-1.0829	-1.3563	-1.6016	-1.7732	-2.0367	-2.5542	-3.0802	-3.6515
9	-1.0608	-1.3088	-1.4942	-1.6964	-1.9216	-2.3679	-2.8442	-3.3184
10	-1.0272	-1.2570	-1.3991	-1.6223	-1.8087	-2.2123	-2.6402	-3.0639
11	-1.0030	-1.2045	-1.3355	-1.5308	-1.6897	-2.0334	-2.4020	-2.7560
12	-0.9534	-1.0861	-1.2355	-1.4049	-1.5285	-1.8093	-2.1079	-2.4085
13	-0.8880	-1.0047	-1.1080	-1.2471	-1.3320	-1.5386	-1.7626	-1.9634
14	-0.8630	-0.9766	-1.0590	-1.1852	-1.2355	-1.4138	-1.5791	-1.7384
15	-0.8580	-0.9515	-1.0301	-1.1350	-1.1716	-1.3133	-1.4455	-1.5684
16	-0.8525	-0.9360	-0.9910	-1.0980	-1.1163	-1.2323	-1.3360	-1.4377
17	-0.8456	-0.9145	-0.9632	-1.0644	-1.0659	-1.1620	-1.2422	-1.3159
18	-0.8416	-0.8980	-0.9436	-1.0314	-1.0149	-1.0978	-1.1541	-1.2087
19	-0.8345	-0.8762	-0.9105	-0.9937	-0.9735	-1.0363	-1.0746	-1.1076
20	-0.8241	-0.8604	-0.8855	-0.9620	-0.9294	-0.9726	-0.9926	-1.0074
21	-0.8136	-0.8406	-0.8567	-0.9266	-0.8882	-0.9058	-0.8993	-0.8863
22	-0.8027	-0.8173	-0.8247	-0.8838	-0.8227	-0.8116	-0.7849	-0.7385
23	-0.7934	-0.8037	-0.7992	-0.7891	-0.7892	-0.7572	-0.7005	-0.6438
24	-0.7765	-0.7793	-0.7722	-0.7569	-0.7233	-0.6847	-0.6093	-0.5203
25	-0.7609	-0.7546	-0.7366	-0.7029	-0.6561	-0.6075	-0.5070	-0.4281
26	-0.7233	-0.7026	-0.6663	-0.6323	-0.5386	-0.4986	-0.4841	-0.3301
27	-0.6229	-0.5909	-0.5381	-0.4824	-0.4144	-0.3231	-0.2881	-0.3076
28	-0.4434	-0.4043	-0.3500	-0.2846	-0.2438	-0.2352	-0.2509	-0.3069
29	-0.2826	-0.2549	-0.2264	-0.1970	-0.1979	-0.2171	-0.2426	-0.2821
30	-0.1737	-0.1660	-0.1639	-0.1729	-0.2039	-0.2120	-0.2406	-0.2796
31	-0.0539	-0.0849	-0.1147	-0.1478	-0.1728	-0.2089	-0.2371	-0.3285
32	0.0163	-0.0363	-0.0825	-0.1192	-0.1615	-0.2033	-0.2431	-0.2838
33	0.0732	0.0106	-0.0520	-0.1020	-0.1479	-0.2008	-0.2492	-0.2920
34	0.0931	0.0293	-0.0363	-0.0849	-0.1457	-0.1997	-0.2485	-0.3041

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 10 R= 4.4 MILLION M= 0.65 DELTA F= 0.0 DEG.

ORIFICE	1.91	3.05	4.01	4.81	6.03	7.98	10.13	12.05
101	0.7945	0.5030	0.1805	-0.1440	-0.7545	-1.9589	-3.4848	-5.3053
102	0.9657	0.9703	0.5960	0.5804	0.8582	0.6029	0.1220	-0.5760
103	0.7186	0.8614	0.9399	0.9760	0.9895	0.9245	0.7287	0.4032
104	0.6238	0.7708	0.8582	0.9158	0.9723	0.9877	0.9112	0.7571
105	0.5566	0.7031	0.7968	0.8573	0.9277	0.9880	0.9750	0.8921
106	0.5048	0.6450	0.7397	0.8013	0.8835	0.9648	0.9897	0.9611
107	0.4621	0.5978	0.6926	0.7571	0.8434	0.9389	0.9890	0.9837
108	0.3983	0.5239	0.6187	0.6831	0.7712	0.8840	0.9510	0.9898
109	0.3525	0.4715	0.5594	0.6249	0.7106	0.8254	0.9123	0.9651
110	0.3118	0.4254	0.5097	0.5713	0.6588	0.7804	0.8683	0.9369
111	0.2664	0.3709	0.4517	0.5108	0.5935	0.7108	0.8057	0.8878
112	0.2068	0.3006	0.3743	0.4324	0.5082	0.6195	0.7171	0.8081
113	0.1318	0.2101	0.2733	0.3229	0.3889	0.4945	0.5890	0.6768
114	0.0810	0.1482	0.2050	0.2477	0.3085	0.4014	0.4909	0.5735
115	0.0429	0.1018	0.1526	0.1907	0.2441	0.3297	0.4116	0.4921
116	0.0106	0.0630	0.1098	0.1440	0.1920	0.2719	0.3382	0.4199
117	-0.0174	0.0294	0.0710	0.1027	0.1457	0.2162	0.2874	0.3509
118	-0.0417	0.0005	0.0386	0.0667	0.1053	0.1690	0.2343	0.2979
119	-0.0583	-0.0214	0.0131	0.0378	0.0738	0.1301	0.1877	0.2489
120	-0.0737	-0.0413	-0.0101	0.0106	0.0416	0.0929	0.1450	0.1988
121	-0.0940	-0.0664	-0.0382	-0.0202	0.0051	0.0508	0.0987	0.1471
122	-0.1093	-0.0868	-0.0636	-0.0461	-0.0259	0.0138	0.0526	0.0974
123	-0.1173	-0.0973	-0.0739	-0.0598	-0.0414	-0.0073	0.0292	0.0729
124	-0.1217	-0.1051	-0.0837	-0.0715	-0.0566	-0.0252	0.0088	0.0470
125	-0.1153	-0.1006	-0.0827	-0.0728	-0.0596	-0.0336	-0.0066	0.0298
126	-0.0918	-0.0781	-0.0620	-0.0552	-0.0476	-0.0274	-0.0055	0.0251
127	-0.0800	-0.0644	-0.0464	-0.0361	-0.0251	-0.0003	0.0266	0.0627
128	0.0420	0.0533	0.0751	0.0876	0.1043	0.1241	0.1491	0.1638
129	0.2349	0.2346	0.2432	0.2442	0.2409	0.2461	0.2552	0.2694
130	0.2409	0.2401	0.2484	0.2477	0.2452	0.2492	0.2569	0.2708
131	0.2659	0.2615	0.2657	0.2634	0.2572	0.2529	0.2547	0.2641
132	0.2508	0.2408	0.2424	0.2328	0.2198	0.2095	0.2055	0.2107
133	0.2150	0.1969	0.1884	0.1765	0.1497	0.1296	0.0951	0.1020
134	0.1981	0.1715	0.1574	0.1350	0.1086	0.0705	0.0299	0.0359

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 10 R= 4.4 MILLION M= 0.05 DELTA F= 0.0 DEG.

ORIFICE	14.01	15.98	17.06	17.96
1	-7.3048	-9.4332	-10.2020	-11.2983
2	-8.9743	-10.6790	-11.1708	-12.1176
3	-8.1392	-9.6749	-10.2799	-11.0767
4	-6.4731	-7.4367	-7.9583	-8.4310
5	-5.7576	-6.6678	-7.1339	-7.4096
6	-5.2355	-6.0352	-6.3323	-6.6425
7	-4.7663	-5.4829	-5.9055	-6.0337
8	-4.1886	-4.7494	-4.5759	-5.1874
9	-3.7981	-4.2415	-4.4602	-4.6680
10	-3.4444	-3.8813	-4.0714	-4.2141
11	-3.0938	-3.4356	-3.5831	-3.7391
12	-2.6743	-2.9500	-3.0502	-3.1935
13	-2.1521	-2.3453	-2.4226	-2.4698
14	-1.8771	-2.0177	-2.0673	-2.1449
15	-1.6822	-1.7790	-1.7979	-1.8585
16	-1.5123	-1.5685	-1.5842	-1.6328
17	-1.3785	-1.4047	-1.3755	-1.4102
18	-1.2471	-1.2458	-1.2105	-1.2021
19	-1.1292	-1.0865	-0.9924	-1.0486
20	-0.9863	-0.9276	-0.9357	-0.8609
21	-0.8435	-0.7417	-0.6226	-0.6446
22	-0.6735	-0.4868	-0.4482	-0.4935
23	-0.5566	-0.4402	-0.5377	-0.4261
24	-0.4538	-0.3908	-0.4911	-0.4145
25	-0.3792	-0.3626	-0.4389	-0.3985
26	-0.3349	-0.3398	-0.3812	-0.3906
27	-0.3119	-0.3344	-0.3734	-0.3985
28	-0.2951	-0.3327	-0.3676	-0.3976
29	-0.3093	-0.3351	-0.3755	-0.4068
30	-0.2953	-0.3347	-0.3775	-0.4009
31	-0.3071	-0.3386	-0.3865	-0.4071
32	-0.3520	-0.3442	-0.3883	-0.4075
33	-0.3260	-0.3448	-0.3854	-0.4134
34	-0.3138	-0.3470	-0.3709	-0.4036

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 10 R= 4.4 MILLION M= 0.05 DELTA F= 0.0 DEG.

ORIFICE	14.01	15.58	17.06	17.26
101	-7.3048	-9.4332	-10.2020	-11.2983
102	-1.3605	-2.3123	-2.6461	-3.1867
103	0.0039	-0.4923	-0.7005	-0.9655
104	0.5328	0.2291	0.0695	-0.0630
105	0.7586	0.5699	0.4533	0.3807
106	0.8769	0.7481	0.6707	0.6137
107	0.9387	0.8481	0.8015	0.7578
108	0.9850	0.9536	0.9264	0.9026
109	0.9914	0.9864	0.9722	0.9618
110	0.9750	0.9888	0.9857	0.9844
111	0.9379	0.9706	0.9782	0.9841
112	0.8685	0.9172	0.9384	0.9448
113	0.7471	0.8040	0.8288	0.8427
114	0.6426	0.7065	0.7276	0.7475
115	0.5543	0.6164	0.6410	0.6575
116	0.4803	0.5382	0.5600	0.5742
117	0.4116	0.4682	0.4916	0.5030
118	0.3507	0.3997	0.4211	0.4354
119	0.2962	0.3424	0.3589	0.3737
120	0.2428	0.2844	0.3023	0.3052
121	0.1842	0.2233	0.2397	0.2474
122	0.1317	0.1632	0.1756	0.1817
123	0.0990	0.1308	0.1437	0.1486
124	0.0752	0.1007	0.1060	0.1095
125	0.0528	0.0746	0.0821	0.0825
126	0.0433	0.0580	0.0567	0.0650
127	0.0821	0.1008	0.1038	0.1056
128	0.1754	0.2130	0.2012	0.2072
129	0.2777	0.2765	0.2764	0.2742
130	0.2749	0.2752	0.2749	0.2665
131	0.2652	0.2613	0.2547	0.2511
132	0.2012	0.1944	0.1825	0.1736
133	0.0918	0.0708	0.0557	0.0436
134	0.0296	-0.0046	-0.0255	-0.0426

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 11,12 R= 3.0 MILLION M= 0.07 DELTA F= 0.0 DEG.

ORIFICE	-3.94	-3.44	-3.02	-2.67	-2.41	-1.95	-0.88	-0.45
1	0.1561	0.3669	0.5143	0.6232	0.7028	0.8113	0.9749	0.9989
2	0.8778	0.8015	0.7323	0.6607	0.6028	0.4913	0.1672	0.0143
3	0.6378	0.5381	0.4462	0.3612	0.2926	0.1636	-0.2333	-0.3839
4	0.4839	0.3782	0.2900	0.2050	0.1380	0.0166	-0.3589	-0.4958
5	0.3813	0.2798	0.1946	0.1167	0.0526	-0.1161	-0.4073	-0.5308
6	0.2987	0.2023	0.1194	0.0468	-0.0153	-0.1783	-0.4469	-0.5609
7	0.2399	0.1481	0.0686	-0.0013	-0.1150	-0.2150	-0.4684	-0.5749
8	0.1460	0.0593	-0.0139	-0.1333	-0.1866	-0.2788	-0.5061	-0.6036
9	0.0681	-0.0122	-0.1405	-0.1982	-0.2480	-0.3321	-0.5440	-0.6334
10	0.0129	-0.1184	-0.1877	-0.2387	-0.2883	-0.3653	-0.5644	-0.6423
11	-0.1125	-0.1795	-0.2439	-0.2901	-0.3362	-0.4077	-0.5921	-0.6578
12	-0.1848	-0.2449	-0.3024	-0.3444	-0.3865	-0.4484	-0.6024	-0.6671
13	-0.2828	-0.3281	-0.3781	-0.4089	-0.4456	-0.4939	-0.6247	-0.6731
14	-0.3663	-0.3987	-0.4448	-0.4702	-0.5030	-0.5475	-0.6624	-0.6994
15	-0.4313	-0.4575	-0.4971	-0.5224	-0.5526	-0.5878	-0.6854	-0.7265
16	-0.4795	-0.5025	-0.5372	-0.5598	-0.5892	-0.6203	-0.7061	-0.7441
17	-0.5155	-0.5388	-0.5732	-0.5884	-0.6193	-0.6484	-0.7276	-0.7553
18	-0.5487	-0.5721	-0.5986	-0.6176	-0.6423	-0.6702	-0.7372	-0.7685
19	-0.5753	-0.5978	-0.6233	-0.6365	-0.6641	-0.6834	-0.7472	-0.7746
20	-0.6040	-0.6221	-0.6494	-0.6602	-0.6834	-0.7018	-0.7630	-0.7860
21	-0.6310	-0.6430	-0.6709	-0.6759	-0.7002	-0.7198	-0.7703	-0.7930
22	-0.6508	-0.6676	-0.6861	-0.6904	-0.7140	-0.7302	-0.7776	-0.7930
23	-0.5962	-0.6151	-0.6333	-0.6446	-0.6586	-0.6729	-0.7220	-0.7384
24	-0.6022	-0.6188	-0.6332	-0.6440	-0.6567	-0.6758	-0.7166	-0.7353
25	-0.6030	-0.6209	-0.6327	-0.6437	-0.6558	-0.6692	-0.7049	-0.7238
26	-0.5804	-0.5956	-0.6065	-0.6161	-0.6267	-0.6406	-0.6792	-0.7001
27	-0.5436	-0.5602	-0.5733	-0.5844	-0.6006	-0.6136	-0.6548	-0.6750
28	-0.5382	-0.5546	-0.5702	-0.5832	-0.5534	-0.6116	-0.6732	-0.6719
29	-0.1423	-0.1499	-0.1540	-0.1637	-0.1673	-0.1801	-0.2228	-0.2455
30	-0.0645	-0.0730	-0.0773	-0.0825	-0.0866	-0.0953	-0.1227	-0.1364
31	0.0664	0.0595	0.0578	0.0532	0.0499	0.0437	0.0279	0.0224
32	0.1388	0.1343	0.1337	0.1307	0.1283	0.1240	0.1127	0.1082
33	0.1762	0.1724	0.1735	0.1720	0.1708	0.1683	0.1595	0.1580
34	0.1832	0.1803	0.1806	0.1809	0.1796	0.1777	0.1729	0.1704

ORIGINAL PAGE IS OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 11,12 R= 3.0 MILLION M= 0.07 DELTA F= 0.0 DEG.

ORIFICE	-3.84	-3.44	-3.02	-2.67	-2.41	-1.95	-0.88	-0.45
101	0.1561	0.3669	0.5143	0.6232	0.7028	0.8113	0.9749	0.9989
102	-1.2056	-0.5202	-0.7110	-0.5362	-0.4412	-0.2024	0.2188	0.3642
103	-1.0263	-0.8121	-0.6491	-0.5119	-0.4131	-0.2431	0.1067	0.2304
104	-0.8786	-0.6966	-0.5642	-0.4495	-0.3663	-0.2261	0.0717	0.1793
105	-0.7944	-0.6256	-0.5096	-0.4113	-0.3403	-0.2155	0.0478	0.1463
106	-0.7204	-0.5783	-0.4762	-0.3899	-0.3216	-0.2116	0.0295	0.1183
107	-0.6723	-0.5445	-0.4477	-0.3673	-0.3074	-0.2061	0.0161	0.0990
108	-0.6020	-0.4924	-0.4078	-0.3398	-0.2865	-0.1997	-0.0038	0.0688
109	-0.5405	-0.4525	-0.3814	-0.3211	-0.2722	-0.1936	-0.0172	0.0496
110	-0.4885	-0.4360	-0.3644	-0.3114	-0.2664	-0.1959	-0.0323	0.0290
111	-0.4666	-0.4098	-0.3483	-0.2984	-0.2591	-0.1962	-0.0484	0.0064
112	-0.4357	-0.3843	-0.3301	-0.2905	-0.2555	-0.2015	-0.0719	-0.0237
113	-0.3916	-0.3403	-0.3076	-0.2751	-0.2485	-0.2052	-0.0988	-0.0594
114	-0.3672	-0.3228	-0.2941	-0.2703	-0.2467	-0.2106	-0.1193	-0.0849
115	-0.3485	-0.3161	-0.2921	-0.2674	-0.2445	-0.2139	-0.1334	-0.1047
116	-0.3377	-0.3086	-0.2851	-0.2657	-0.2471	-0.2176	-0.1486	-0.1210
117	-0.3294	-0.3066	-0.2861	-0.2677	-0.2493	-0.2254	-0.1609	-0.1364
118	-0.3216	-0.3039	-0.2803	-0.2676	-0.2507	-0.2306	-0.1682	-0.1480
119	-0.3074	-0.2940	-0.2732	-0.2651	-0.2494	-0.2305	-0.1732	-0.1544
120	-0.3027	-0.2888	-0.2703	-0.2612	-0.2463	-0.2289	-0.1787	-0.1595
121	-0.3051	-0.2869	-0.2725	-0.2635	-0.2495	-0.2356	-0.1883	-0.1697
122	-0.2975	-0.2828	-0.2693	-0.2641	-0.2500	-0.2355	-0.1898	-0.1762
123	-0.2927	-0.2797	-0.2673	-0.2634	-0.2492	-0.2353	-0.1891	-0.1767
124	-0.2821	-0.2743	-0.2665	-0.2609	-0.2462	-0.2323	-0.1862	-0.1721
125	-0.2624	-0.2588	-0.2516	-0.2510	-0.2308	-0.2171	-0.1660	-0.1551
126	-0.2296	-0.2306	-0.2298	-0.2341	-0.2104	-0.1941	-0.1438	-0.1313
127	-0.1018	-0.1014	-0.0953	-0.1936	-0.2129	-0.1931	-0.1405	-0.1279
128	0.0212	0.0245	0.0443	0.0764	0.0879	0.0639	-0.1035	-0.1468
129	0.0027	0.0874	0.1128	0.1428	0.1586	0.1653	0.2119	0.2233
130	0.1201	0.1254	0.1528	0.1751	0.1859	0.1879	0.2224	0.2303
131	0.1704	0.1740	0.2034	0.2175	0.2278	0.2238	0.2480	0.2512
132	0.1892	0.1896	0.2121	0.2174	0.2280	0.2231	0.2417	0.2441
133	0.1885	0.1865	0.2026	0.2027	0.2115	0.2051	0.2224	0.2222
134	0.1877	0.1840	0.1991	0.1962	0.2072	0.1987	0.2139	0.2139

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 11,12 R= 3.0 MILLION M= 0.07 DELTA F= 0.0 DEG.

ORIFICE	-0.00	0.01	0.49	1.05	1.54	2.11	3.01	3.99
1	1.0005	1.0002	0.9855	0.9227	0.8526	0.7508	0.5389	0.2375
2	-0.2185	-0.2211	-0.4172	-0.6732	-0.8864	-1.1189	-1.5081	-1.9863
3	-0.5633	-0.5649	-0.7577	-0.9926	-1.1969	-1.4131	-1.7630	-2.1831
4	-0.6511	-0.6568	-0.8244	-1.0425	-1.2101	-1.3989	-1.7096	-2.0711
5	-0.6731	-0.6717	-0.8307	-1.0224	-1.1733	-1.3357	-1.6024	-1.9248
6	-0.6957	-0.6978	-0.8398	-1.0083	-1.1447	-1.3015	-1.5386	-1.8273
7	-0.7009	-0.7039	-0.8361	-0.9657	-1.1187	-1.2470	-1.4833	-1.7299
8	-0.7124	-0.7141	-0.8294	-0.9661	-1.0818	-1.1956	-1.3879	-1.6207
9	-0.7326	-0.7300	-0.8394	-0.9613	-1.0609	-1.1705	-1.3372	-1.5336
10	-0.7331	-0.7352	-0.8326	-0.9495	-1.0401	-1.1280	-1.2942	-1.4839
11	-0.7427	-0.7413	-0.8282	-0.9313	-1.0161	-1.0933	-1.2355	-1.3695
12	-0.7401	-0.7397	-0.8210	-0.9070	-0.9745	-1.0457	-1.1636	-1.2705
13	-0.7338	-0.7327	-0.7934	-0.8667	-0.9262	-0.9700	-1.0457	-1.1556
14	-0.7505	-0.7545	-0.8063	-0.8711	-0.9184	-0.9487	-1.0236	-1.1065
15	-0.7765	-0.7727	-0.8220	-0.8729	-0.9128	-0.9330	-1.0045	-1.0690
16	-0.7831	-0.7848	-0.8274	-0.8754	-0.9090	-0.9260	-0.9843	-1.0441
17	-0.7920	-0.7887	-0.8343	-0.8745	-0.9067	-0.9167	-0.9679	-1.0185
18	-0.8002	-0.7989	-0.8344	-0.8784	-0.8927	-0.9071	-0.9468	-0.9803
19	-0.8028	-0.8054	-0.8366	-0.8731	-0.8852	-0.9023	-0.9318	-0.9553
20	-0.8128	-0.8112	-0.8379	-0.8804	-0.8781	-0.8907	-0.9165	-0.9317
21	-0.8202	-0.8160	-0.8476	-0.8769	-0.8757	-0.8846	-0.9000	-0.9016
22	-0.8140	-0.8178	-0.8472	-0.8730	-0.8703	-0.8681	-0.8731	-0.8570
23	-0.7589	-0.7577	-0.7836	-0.8073	-0.8092	-0.8055	-0.7844	-0.7738
24	-0.7538	-0.7535	-0.7740	-0.8046	-0.7985	-0.7906	-0.7676	-0.7438
25	-0.7487	-0.7480	-0.7716	-0.7932	-0.7883	-0.7745	-0.7384	-0.6929
26	-0.7182	-0.7210	-0.7442	-0.7771	-0.7552	-0.7327	-0.6851	-0.6256
27	-0.6943	-0.6911	-0.7192	-0.7020	-0.6669	-0.6332	-0.5644	-0.4876
28	-0.6070	-0.6011	-0.4870	-0.5025	-0.4820	-0.4539	-0.3819	-0.3102
29	-0.2658	-0.2680	-0.2885	-0.3108	-0.3119	-0.2887	-0.2413	-0.1993
30	-0.1476	-0.1484	-0.1602	-0.1740	-0.1859	-0.1783	-0.1584	-0.1668
31	0.0170	0.0167	0.0116	0.0006	-0.0269	-0.0540	-0.0912	-0.1352
32	0.1067	0.1068	0.1031	0.0974	0.0636	0.0180	-0.0551	-0.1146
33	0.1556	0.1556	0.1552	0.1510	0.1235	0.0746	-0.0137	-0.0904
34	0.1691	0.1689	0.1694	0.1669	0.1408	0.0941	0.0058	-0.0697

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX H. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 11,12 R= 3.0 MILLION M= 0.07 DELTA F= 0.0 DEG.

ORIFICE	-0.00	0.01	0.49	1.05	1.54	2.11	3.01	3.99
101	1.0005	1.0002	0.9855	0.9227	0.8526	0.7508	0.5389	0.2375
102	0.5001	0.5016	0.6273	0.7499	0.9307	0.8999	0.9672	1.0011
103	0.3543	0.3563	0.4737	0.5887	0.6765	0.7564	0.8518	0.9318
104	0.2962	0.2903	0.3925	0.5028	0.5811	0.6591	0.7610	0.8518
105	0.2430	0.2446	0.3409	0.4427	0.5181	0.5905	0.6892	0.7856
106	0.2071	0.2131	0.2995	0.3943	0.4644	0.5385	0.6327	0.7298
107	0.1814	0.1853	0.2688	0.3568	0.4247	0.4908	0.5867	0.6775
108	0.1441	0.1467	0.2220	0.3022	0.3638	0.4270	0.5146	0.6047
109	0.1165	0.1188	0.1886	0.2611	0.3189	0.3797	0.4619	0.5429
110	0.0915	0.0935	0.1590	0.2270	0.2806	0.3361	0.4151	0.4930
111	0.0631	0.0664	0.1251	0.1876	0.2363	0.2885	0.3619	0.4362
112	0.0258	0.0285	0.0909	0.1361	0.1803	0.2265	0.2936	0.3585
113	-0.0198	-0.0168	0.0273	0.0721	0.1093	0.1485	0.2037	0.2603
114	-0.0502	-0.0480	-0.0102	0.0297	0.0609	0.0970	0.1430	0.1924
115	-0.0740	-0.0712	-0.0373	-0.0045	0.0236	0.0551	0.0963	0.1386
116	-0.0920	-0.0906	-0.0603	-0.0315	-0.0049	0.0230	0.0595	0.0959
117	-0.1111	-0.1084	-0.0811	-0.0549	-0.0317	-0.0062	0.0246	0.0568
118	-0.1266	-0.1232	-0.0977	-0.0743	-0.0540	-0.0302	-0.0033	0.0258
119	-0.1356	-0.1325	-0.1101	-0.0880	-0.0699	-0.0493	-0.0242	-0.0008
120	-0.1432	-0.1399	-0.1177	-0.0998	-0.0836	-0.0646	-0.0444	-0.0246
121	-0.1537	-0.1525	-0.1324	-0.1166	-0.1034	-0.0862	-0.0690	-0.0534
122	-0.1636	-0.1589	-0.1423	-0.1275	-0.1160	-0.1003	-0.0887	-0.0765
123	-0.1643	-0.1603	-0.1445	-0.1319	-0.1211	-0.1079	-0.0973	-0.0889
124	-0.1614	-0.1559	-0.1432	-0.1309	-0.1225	-0.1109	-0.1029	-0.0961
125	-0.1442	-0.1393	-0.1263	-0.1174	-0.1097	-0.1000	-0.0942	-0.0912
126	-0.1202	-0.1168	-0.1010	-0.0911	-0.0833	-0.0729	-0.0689	-0.0663
127	-0.1164	-0.1118	-0.0953	-0.0872	-0.0762	-0.0646	-0.0580	-0.0531
128	-0.1412	-0.1370	-0.1132	-0.0968	-0.0865	-0.0731	-0.0640	-0.0571
129	0.2336	0.2402	0.2525	0.2554	0.2572	0.2637	0.2628	0.2541
130	0.2363	0.2405	0.2477	0.2492	0.2494	0.2563	0.2502	0.2411
131	0.2544	0.2591	0.2682	0.2648	0.2642	0.2700	0.2627	0.2495
132	0.2452	0.2506	0.2575	0.2549	0.2518	0.2549	0.2401	0.2214
133	0.2224	0.2275	0.2344	0.2287	0.2241	0.2194	0.1941	0.1618
134	0.2118	0.2178	0.2239	0.2163	0.2090	0.1993	0.1668	0.1293

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 11,12 R= 3.0 MILLION M= 0.07 DELTA F= 0.0 DEG.

ORIFICE	4.98	5.01	6.04	7.06	9.96	12.08	14.00	15.96
1	-0.1386	-0.1421	-0.6263	-1.7805	-3.0328	-5.0293	-6.8436	-8.6885
2	-2.4873	-2.4258	-3.0269	-4.2801	-5.6209	-7.1957	-8.6454	-9.9692
3	-2.6202	-2.5635	-3.0986	-4.1449	-5.2113	-6.5397	-7.8241	-9.0715
4	-2.4359	-2.3828	-2.8127	-3.7538	-4.8466	-6.2750	-7.5375	-7.2010
5	-2.2420	-2.1979	-2.5869	-3.5762	-4.7022	-4.5716	-5.4874	-6.2193
6	-2.1194	-2.0648	-2.4393	-2.8428	-3.5882	-4.4210	-5.0913	-5.7244
7	-2.0193	-1.9815	-2.3235	-2.7589	-3.3809	-4.1179	-4.6602	-5.2009
8	-1.8800	-1.8106	-1.9510	-2.5302	-3.0000	-3.6283	-4.0725	-4.5107
9	-1.6775	-1.6093	-1.8623	-2.3624	-2.7681	-3.2947	-3.6777	-4.0240
10	-1.6120	-1.5498	-1.7601	-2.1957	-2.5755	-3.0444	-3.3752	-3.7031
11	-1.5293	-1.4742	-1.6473	-2.0253	-2.3262	-2.7545	-3.0177	-3.2626
12	-1.4084	-1.3526	-1.4944	-1.8204	-2.0531	-2.3948	-2.6079	-2.7800
13	-1.2546	-1.1724	-1.2969	-1.5621	-1.7164	-1.9794	-2.0982	-2.2328
14	-1.1963	-1.0963	-1.2089	-1.4343	-1.5353	-1.7450	-1.8234	-1.9106
15	-1.1331	-1.0842	-1.1502	-1.3348	-1.4182	-1.5887	-1.6333	-1.6687
16	-1.0905	-1.0509	-1.0923	-1.2552	-1.3117	-1.4431	-1.4695	-1.4756
17	-1.0530	-1.0046	-1.0431	-1.1925	-1.2150	-1.3236	-1.3209	-1.2984
18	-1.0195	-0.9637	-1.0018	-1.1150	-1.1278	-1.2250	-1.1822	-1.1221
19	-0.9949	-0.9231	-0.9485	-1.0524	-1.0386	-1.1111	-1.0500	-0.9323
20	-0.9531	-0.8941	-0.9079	-0.9861	-0.9457	-0.9996	-0.9121	-0.7733
21	-0.9028	-0.8533	-0.8562	-0.9175	-0.8509	-0.8814	-0.7321	-0.5650
22	-0.8530	-0.7950	-0.7850	-0.8221	-0.7316	-0.6980	-0.5800	-0.4440
23	-0.7575	-0.7489	-0.7426	-0.7085	-0.6459	-0.5796	-0.4684	-0.4240
24	-0.7244	-0.7071	-0.6932	-0.6317	-0.5652	-0.4809	-0.4229	-0.4083
25	-0.6566	-0.6503	-0.6088	-0.5419	-0.4615	-0.4005	-0.3602	-0.3965
26	-0.5773	-0.5628	-0.5120	-0.4294	-0.3523	-0.3362	-0.3363	-0.3852
27	-0.4141	-0.4127	-0.3653	-0.3005	-0.2892	-0.2920	-0.3279	-0.3895
28	-0.2559	-0.2570	-0.2406	-0.2443	-0.2636	-0.2886	-0.3190	-0.3790
29	-0.1978	-0.2000	-0.2093	-0.2301	-0.2546	-0.2914	-0.3204	-0.3957
30	-0.1822	-0.1840	-0.2017	-0.2268	-0.2505	-0.2860	-0.3252	-0.3878
31	-0.1597	-0.1709	-0.1928	-0.2267	-0.2574	-0.2938	-0.3292	-0.4115
32	-0.1493	-0.1572	-0.1791	-0.2220	-0.2770	-0.3232	-0.3316	-0.4032
33	-0.1375	-0.1410	-0.1759	-0.2215	-0.2647	-0.3065	-0.3401	-0.4056
34	-0.1272	-0.1249	-0.1666	-0.2229	-0.2716	-0.3008	-0.3337	-0.4126

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS -

RUNS 11,12 R= 3.0 MILLION M= 0.07 DELTA F= 0.0 DEG.

ORIFICE	4.98	5.01	6.04	7.96	9.98	12.08	14.00	15.96
101	-0.1386	-0.1421	-0.6263	-1.7805	-3.2328	-5.0293	-6.8436	-8.6885
102	0.9854	0.9813	0.9166	0.6555	0.2032	-0.4483	-1.1099	-1.9358
103	0.9788	0.9738	0.9983	0.9388	0.7655	0.4623	0.0955	-0.3039
104	0.9180	0.9176	0.9676	0.9940	0.9357	0.7820	0.5812	0.3377
105	0.8585	0.8601	0.9199	0.9862	0.9837	0.9057	0.7912	0.6402
106	0.8078	0.8065	0.8728	0.9634	0.9944	0.9644	0.8943	0.7918
107	0.7609	0.7581	0.8305	0.9330	0.9862	0.9876	0.9535	0.8862
108	0.6883	0.6840	0.7562	0.8723	0.9461	0.9863	0.9885	0.9687
109	0.6242	0.6197	0.6941	0.8163	0.9030	0.9583	0.9858	0.9858
110	0.5731	0.5701	0.6422	0.7632	0.8538	0.9274	0.9690	0.9868
111	0.5118	0.5082	0.5771	0.6995	0.7971	0.8745	0.9289	0.9611
112	0.4293	0.4282	0.4938	0.6096	0.7081	0.7947	0.8546	0.9065
113	0.3204	0.3194	0.3777	0.4845	0.5757	0.6608	0.7091	0.7851
114	0.2447	0.2451	0.2955	0.3893	0.4788	0.5555	0.6258	0.6807
115	0.1886	0.1876	0.2305	0.3196	0.3972	0.4732	0.5359	0.5921
116	0.1404	0.1397	0.1793	0.2608	0.3309	0.4018	0.4594	0.5142
117	0.0978	0.0971	0.1328	0.2063	0.2739	0.3375	0.3959	0.4456
118	0.0611	0.0611	0.0924	0.1594	0.2198	0.2792	0.3315	0.3730
119	0.0314	0.0328	0.0584	0.1208	0.1734	0.2262	0.2763	0.3109
120	0.0040	0.0095	0.0279	0.0843	0.1336	0.1800	0.2218	0.2564
121	-0.0266	-0.0190	-0.0068	0.0415	0.0837	0.1265	0.1665	0.1938
122	-0.0527	-0.0607	-0.0393	0.0045	0.0400	0.0751	0.1104	0.1335
123	-0.0679	-0.0733	-0.0556	-0.0131	0.0177	0.0520	0.0811	0.1047
124	-0.0780	-0.0820	-0.0683	-0.0338	-0.0033	0.0248	0.0521	0.0752
125	-0.0774	-0.0790	-0.0704	-0.0386	-0.0172	0.0086	0.0334	0.0466
126	-0.0563	-0.0562	-0.0495	-0.0272	-0.0107	0.0045	0.0246	0.0314
127	-0.0392	-0.0401	-0.0306	-0.0018	0.0199	0.0407	0.0642	0.0772
128	-0.0402	-0.0415	-0.0345	-0.0016	0.0205	0.0435	0.0661	0.0810
129	0.2612	0.2602	0.2571	0.2660	0.2701	0.2698	0.2760	0.2768
130	0.2448	0.2453	0.2376	0.2488	0.2516	0.2531	0.2604	0.2580
131	0.2535	0.2487	0.2433	0.2470	0.2467	0.2411	0.2456	0.2394
132	0.2170	0.2170	0.2061	0.2009	0.1929	0.1817	0.1797	0.1675
133	0.1508	0.1490	0.1253	0.1142	0.0922	0.0702	0.0626	0.0372
134	0.1098	0.1045	0.0823	0.0573	0.0322	0.0072	-0.0103	-0.0343

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 11,12 R= 3.0 MILLION M= 0.07 DELTA F= 0.0 DEG.

ORIFICE	17.00	17.97	17.97
1	-9.5101	-10.0175	-9.7846
2	-10.6448	-13.9767	-11.0471
3	-9.7080	-9.9877	-9.8404
4	-7.2978	-7.4996	-7.5090
5	-6.6961	-6.7673	-6.8282
6	-6.0089	-6.1162	-6.0966
7	-5.4711	-5.5941	-5.4639
8	-4.7534	-4.9254	-4.7873
9	-4.2516	-4.3604	-4.2555
10	-3.8460	-3.9615	-3.7872
11	-3.4456	-3.4063	-3.4053
12	-2.9290	-2.9744	-2.9370
13	-2.3314	-2.3013	-2.2781
14	-1.9988	-1.9584	-1.9024
15	-1.6880	-1.6700	-1.6449
16	-1.4899	-1.4433	-1.4006
17	-1.3090	-1.2683	-1.1915
18	-1.1293	-1.0466	-0.8723
19	-0.8966	-0.7975	-0.6787
20	-0.7047	-0.7183	-0.6274
21	-0.5699	-0.5979	-0.5824
22	-0.5041	-0.5020	-0.5687
23	-0.4388	-0.4790	-0.5471
24	-0.4331	-0.4833	-0.4818
25	-0.4305	-0.4855	-0.5576
26	-0.4414	-0.4819	-0.4891
27	-0.4357	-0.4739	-0.4935
28	-0.4424	-0.4985	-0.5204
29	-0.4406	-0.4846	-0.5726
30	-0.4399	-0.4845	-0.5067
31	-0.4538	-0.4398	-0.5125
32	-0.4455	-0.4847	-0.5259
33	-0.4463	-0.5506	-0.5738
34	-0.4453	-0.4772	-0.5123

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS.

RUNS 11,12 R= 3.0 MILLION M= 0.07 DELTA F= 0.0 DEG.

ORIFICE	17.00	17.97	17.97
101	-9.5101	-10.0175	-9.7846
102	-2.3104	-2.5670	-2.5840
103	-0.5141	-0.6187	-0.5824
104	0.2159	0.1294	0.1379
105	0.5455	0.5019	0.5089
106	0.7417	0.6989	0.7108
107	0.8456	0.8199	0.8410
108	0.9505	0.9346	0.9426
109	0.9971	0.9829	0.9802
110	0.9872	0.9885	0.9515
111	0.9719	0.9751	0.9697
112	0.9219	0.9288	0.9277
113	0.8034	0.8177	0.8154
114	0.7007	0.7187	0.7087
115	0.6137	0.6274	0.6135
116	0.5324	0.5504	0.5367
117	0.4577	0.4714	0.4625
118	0.3929	0.3905	0.3860
119	0.3278	0.3394	0.3306
120	0.2703	0.2725	0.2609
121	0.2075	0.2087	0.1914
122	0.1361	0.1440	0.1204
123	0.1035	0.1080	0.0935
124	0.0728	0.0700	0.0595
125	0.0503	0.0446	0.0195
126	0.0287	0.0263	-0.0030
127	0.0743	0.0705	0.0559
128	0.0795	0.0610	0.0564
129	0.2632	0.2440	0.2553
130	0.2479	0.2390	0.2336
131	0.2279	0.2206	0.2077
132	0.1533	0.1431	0.1331
133	0.0184	0.0038	-0.0128
134	-0.0641	-0.0779	-0.0930

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 13 R= 10.0 MILLION M= 0.30 DELTA F= 0.0 DEG.

ORIFICE	-3.59	-2.95	-2.43	-1.95	-0.97	-0.93	-0.75	-0.57
1	0.1653	0.5813	0.7362	0.8497	0.9985	0.9987	1.0132	1.0224
2	0.5137	0.7384	0.6250	0.5037	0.2115	0.1898	0.1247	0.0657
3	0.6732	0.4396	0.3046	0.1652	-0.1532	-0.1738	-0.2412	-0.3056
4	0.5146	0.2774	0.1456	0.0080	-0.2883	-0.3071	-0.3699	-0.4232
5	0.4095	0.1804	0.0564	-0.0714	-0.3397	-0.3600	-0.4170	-0.4709
6	0.3243	0.1030	-0.0207	-0.1382	-0.3508	-0.4079	-0.4563	-0.5090
7	0.2633	0.0500	-0.0666	-0.1788	-0.4171	-0.4316	-0.4825	-0.5207
8	0.1621	-0.0369	-0.1431	-0.2443	-0.4597	-0.4746	-0.5181	-0.5558
9	0.0807	-0.1094	-0.2087	-0.3054	-0.4998	-0.5126	-0.5546	-0.5906
10	0.0223	-0.1583	-0.2476	-0.3389	-0.5201	-0.5363	-0.5758	-0.6083
11	-0.0526	-0.2167	-0.3020	-0.3831	-0.5476	-0.5629	-0.5984	-0.6300
12	-0.1316	-0.2021	-0.3512	-0.4218	-0.5730	-0.5859	-0.6141	-0.6420
13	-0.2306	-0.3545	-0.4173	-0.4788	-0.5978	-0.6049	-0.6285	-0.6577
14	-0.3186	-0.4266	-0.4838	-0.5339	-0.6399	-0.6476	-0.6732	-0.6855
15	-0.3858	-0.4812	-0.5365	-0.5792	-0.6715	-0.6828	-0.6990	-0.7173
16	-0.4412	-0.5321	-0.5726	-0.6154	-0.6988	-0.7056	-0.7239	-0.7274
17	-0.4807	-0.5644	-0.6035	-0.6411	-0.7139	-0.7213	-0.7317	-0.7400
18	-0.5215	-0.5954	-0.6364	-0.6658	-0.7367	-0.7400	-0.7432	-0.7503
19	-0.5547	-0.6190	-0.6557	-0.6853	-0.7469	-0.7446	-0.7555	-0.7673
20	-0.5832	-0.6433	-0.6774	-0.7078	-0.7563	-0.7556	-0.7700	-0.7764
21	-0.6119	-0.6728	-0.6941	-0.7231	-0.7580	-0.7684	-0.7792	-0.7878
22	-0.6405	-0.6892	-0.7139	-0.7425	-0.7698	-0.7759	-0.7889	-0.7899
23	-0.6487	-0.6895	-0.7171	-0.7397	-0.7718	-0.7726	-0.7773	-0.7805
24	-0.6533	-0.6980	-0.7142	-0.7442	-0.7687	-0.7727	-0.7768	-0.7770
25	-0.6636	-0.7063	-0.7241	-0.7519	-0.7706	-0.7689	-0.7734	-0.7776
26	-0.6617	-0.7003	-0.7170	-0.7408	-0.7566	-0.7533	-0.7562	-0.7514
27	-0.6198	-0.6594	-0.6792	-0.6638	-0.6682	-0.6661	-0.6676	-0.6676
28	-0.3820	-0.4167	-0.4352	-0.4569	-0.4791	-0.4765	-0.4729	-0.4762
29	-0.2244	-0.2492	-0.2600	-0.2748	-0.2968	-0.2953	-0.2992	-0.2952
30	-0.0977	-0.1144	-0.1249	-0.1345	-0.1574	-0.1609	-0.1641	-0.1659
31	0.0680	0.0554	0.0483	0.0411	0.0210	0.0137	0.0074	-0.0014
32	0.1493	0.1400	0.1382	0.1318	0.1166	0.1089	0.1018	0.0933
33	0.1894	0.1841	0.1823	0.1795	0.1707	0.1643	0.1597	0.1522
34	0.1955	0.1907	0.1933	0.1918	0.1830	0.1777	0.1749	0.1678

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 13 R= 10.[illegible] MILLION M= 0.30 DELTA F= 0.0 DEG.

OPTFICE	-3.59	-2.45	-2.43	-1.95	-0.97	-0.93	-0.75	-0.57
101	0.1653	0.5813	0.7362	0.8497	0.9585	0.9987	1.0132	1.0224
102	-1.2961	-0.6760	-0.4062	-0.1887	0.2110	0.2255	0.2912	0.3468
103	-1.1215	-0.6337	-0.4205	-0.2431	0.0926	0.1071	0.1624	0.2109
104	-0.9621	-0.5521	-0.3751	-0.2244	0.0580	0.0700	0.1174	0.1621
105	-0.8013	-0.5023	-0.3494	-0.2157	0.0373	0.0466	0.0898	0.1273
106	-0.7360	-0.4721	-0.3344	-0.2143	0.0169	0.0253	0.0680	0.1011
107	-0.6939	-0.4465	-0.3201	-0.2112	0.0019	0.0114	0.0469	0.0825
108	-0.6274	-0.4056	-0.3000	-0.2028	-0.0159	-0.0091	0.0237	0.0537
109	-0.5757	-0.3785	-0.2840	-0.1991	-0.0276	-0.0211	0.0077	0.0342
110	-0.5452	-0.3658	-0.2789	-0.2003	-0.0436	-0.0388	-0.0102	0.0112
111	-0.5073	-0.3255	-0.2735	-0.2007	-0.0603	-0.0556	-0.0308	-0.0083
112	-0.4715	-0.3259	-0.2651	-0.2065	-0.0840	-0.0786	-0.0594	-0.0393
113	-0.4221	-0.3067	-0.2482	-0.2025	-0.1044	-0.1025	-0.0888	-0.0753
114	-0.3988	-0.2977	-0.2499	-0.2077	-0.1248	-0.1206	-0.1133	-0.1001
115	-0.3771	-0.2532	-0.2490	-0.2167	-0.1410	-0.1405	-0.1296	-0.1195
116	-0.3669	-0.2935	-0.2526	-0.2205	-0.1559	-0.1552	-0.1467	-0.1367
117	-0.3591	-0.2922	-0.2557	-0.2292	-0.1684	-0.1676	-0.1623	-0.1536
118	-0.3506	-0.2902	-0.2606	-0.2336	-0.1778	-0.1779	-0.1724	-0.1666
119	-0.3377	-0.2864	-0.2539	-0.2283	-0.1835	-0.1829	-0.1765	-0.1729
120	-0.3269	-0.2786	-0.2546	-0.2331	-0.1889	-0.1866	-0.1807	-0.1815
121	-0.3255	-0.2808	-0.2611	-0.2391	-0.2012	-0.1995	-0.1965	-0.1880
122	-0.3163	-0.2760	-0.2617	-0.2412	-0.2057	-0.2065	-0.2019	-0.1961
123	-0.3129	-0.2784	-0.2590	-0.2431	-0.2099	-0.2087	-0.2069	-0.2008
124	-0.3036	-0.2723	-0.2569	-0.2418	-0.2095	-0.2091	-0.2080	-0.2049
125	-0.2866	-0.2565	-0.2468	-0.2314	-0.2036	-0.2038	-0.2030	-0.1975
126	-0.2574	-0.2307	-0.2231	-0.2122	-0.1848	-0.1843	-0.1929	-0.1925
127	-0.1134	-0.0916	-0.0839	-0.0744	-0.0498	-0.0506	-0.0650	-0.0586
128	0.0242	0.0434	0.0582	0.0694	0.0906	0.0880	0.1019	0.1060
129	0.0910	0.1113	0.1248	0.1360	0.1552	0.1543	0.1667	0.1741
130	0.1332	0.1507	0.1649	0.1762	0.1943	0.1924	0.2035	0.2089
131	0.1877	0.2027	0.2144	0.2255	0.2403	0.2385	0.2472	0.2528
132	0.2028	0.2154	0.2255	0.2336	0.2454	0.2425	0.2481	0.2513
133	0.2014	0.2099	0.2167	0.2228	0.2303	0.2271	0.2288	0.2297
134	0.2008	0.2064	0.2110	0.2177	0.2231	0.2189	0.2189	0.2190

ORIGINAL PAGE IS OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 13 R= 10.0 MILLION M= 0.30 DELTA F= 0.0 DEG.

ORIFICE	0.02	1.00	2.13	2.96	4.00	4.92	6.03	7.99
1	1.0323	0.9772	0.7808	0.5548	0.1983	-0.1799	-0.7213	-1.8542
2	-0.1583	-0.5604	-1.1213	-1.5916	-2.1929	-2.7566	-3.5248	-5.0062
3	-0.5291	-0.9234	-1.4468	-1.8878	-2.4497	-2.9576	-3.6298	-4.9412
4	-0.6317	-0.9821	-1.4546	-1.8226	-2.2932	-2.7418	-3.3080	-4.3461
5	-0.6516	-0.9664	-1.3813	-1.7022	-2.1161	-2.5083	-2.8918	-3.7497
6	-0.6772	-0.9647	-1.3416	-1.6404	-2.0070	-2.2905	-2.6936	-3.4703
7	-0.6793	-0.9485	-1.2892	-1.5630	-1.9044	-2.1255	-2.5176	-3.2005
8	-0.6979	-0.9253	-1.2334	-1.4640	-1.6872	-1.9746	-2.2967	-2.8453
9	-0.7175	-0.9297	-1.1950	-1.3833	-1.6292	-1.8589	-2.1402	-2.6385
10	-0.7202	-0.9207	-1.1643	-1.3184	-1.5537	-1.7691	-2.0240	-2.4540
11	-0.7322	-0.9092	-1.1268	-1.2767	-1.4826	-1.6574	-1.8719	-2.2696
12	-0.7336	-0.8791	-1.0509	-1.1985	-1.3725	-1.5193	-1.7011	-2.0110
13	-0.7260	-0.8298	-0.9853	-1.0922	-1.2263	-1.3415	-1.4733	-1.7047
14	-0.7414	-0.8402	-0.9715	-1.0651	-1.1750	-1.2646	-1.3745	-1.5675
15	-0.7614	-0.8491	-0.9572	-1.0400	-1.1337	-1.2192	-1.3051	-1.4403
16	-0.7707	-0.8536	-0.9532	-1.0233	-1.1006	-1.1642	-1.2382	-1.3679
17	-0.7866	-0.8574	-0.9442	-1.0016	-1.0669	-1.1253	-1.1845	-1.2860
18	-0.7909	-0.8577	-0.9264	-0.9858	-1.0362	-1.0842	-1.1288	-1.2088
19	-0.7960	-0.8555	-0.9167	-0.9632	-1.0103	-1.0494	-1.0881	-1.1345
20	-0.8094	-0.8511	-0.9088	-0.9445	-0.9860	-1.0154	-1.0401	-1.0674
21	-0.8088	-0.8529	-0.8923	-0.9251	-0.9586	-0.9694	-0.9904	-0.9914
22	-0.8092	-0.8436	-0.8770	-0.8969	-0.9159	-0.9214	-0.9179	-0.8964
23	-0.8009	-0.8276	-0.8540	-0.8728	-0.8838	-0.8781	-0.8668	-0.8259
24	-0.7945	-0.8134	-0.8404	-0.8577	-0.8596	-0.8466	-0.8201	-0.7570
25	-0.7972	-0.8006	-0.8131	-0.8254	-0.8258	-0.7985	-0.7545	-0.6519
26	-0.7620	-0.7646	-0.7766	-0.7732	-0.7570	-0.7196	-0.6465	-0.5276
27	-0.6664	-0.6617	-0.6619	-0.6498	-0.6195	-0.5660	-0.4753	-0.3500
28	-0.4760	-0.4684	-0.4653	-0.4541	-0.4191	-0.3598	-0.2929	-0.2570
29	-0.2990	-0.2981	-0.2937	-0.2856	-0.2634	-0.2336	-0.2246	-0.2248
30	-0.1744	-0.1808	-0.1844	-0.1831	-0.1799	-0.1833	-0.2066	-0.2194
31	-0.0183	-0.0396	-0.0596	-0.0771	-0.1012	-0.1303	-0.1760	-0.2090
32	0.0757	0.0426	0.0119	-0.0144	-0.0519	-0.1024	-0.1517	-0.1975
33	0.1375	0.1038	0.0707	0.0381	-0.0119	-0.0646	-0.1225	-0.1921
34	0.1532	0.1239	0.0915	0.0604	0.0088	-0.0519	-0.1135	-0.1870

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 13 RE 10.0 MILLION M= 0.30 DELTA E= 0.0 DEG.

ORIFICE	0.92	1.00	2.13	2.96	4.00	4.92	6.03	7.99
101	1.0323	0.5772	0.7401	0.5548	0.1583	-0.1799	-0.7213	-1.8542
102	0.8212	0.7466	0.8250	1.0019	1.0297	1.0090	0.5712	0.6581
103	0.3685	0.5535	0.7805	0.8954	0.9767	1.0149	1.0255	0.9650
104	0.2591	0.4547	0.6848	0.7561	0.8583	0.9602	1.0079	1.0252
105	0.2535	0.4340	0.6151	0.7250	0.8315	0.9020	0.9666	1.0237
106	0.2176	0.3869	0.5590	0.6673	0.7755	0.8495	0.9223	1.0047
107	0.1911	0.3493	0.5147	0.6201	0.7274	0.8031	0.8808	0.9763
108	0.1501	0.2537	0.4466	0.5465	0.6500	0.7267	0.8076	0.9164
109	0.1226	0.2547	0.3971	0.4903	0.5896	0.6647	0.7462	0.8627
110	0.0964	0.2185	0.3529	0.4428	0.5392	0.6127	0.6936	0.8124
111	0.0663	0.1789	0.3054	0.3872	0.4784	0.5491	0.6272	0.7466
112	0.0264	0.1265	0.2380	0.3140	0.3985	0.4643	0.5389	0.6551
113	-0.0189	0.0621	0.1571	0.2210	0.2946	0.3516	0.4173	0.5246
114	-0.0547	0.0201	0.0998	0.1570	0.2222	0.2728	0.3327	0.4294
115	-0.0793	-0.0159	0.0571	0.1079	0.1651	0.2126	0.2651	0.3547
116	-0.0998	-0.0424	0.0219	0.0691	0.1203	0.1602	0.2093	0.2928
117	-0.1177	-0.0694	-0.0029	0.0331	0.0816	0.1174	0.1611	0.2382
118	-0.1346	-0.0894	-0.0350	0.0019	0.0445	0.0790	0.1206	0.1866
119	-0.1461	-0.1038	-0.0546	-0.0206	0.0177	0.0480	0.0840	0.1464
120	-0.1540	-0.1155	-0.0734	-0.0408	-0.0068	0.0194	0.0528	0.1066
121	-0.1684	-0.1266	-0.0872	-0.0694	-0.0385	-0.0146	0.0142	0.0595
122	-0.1829	-0.1503	-0.1143	-0.0903	-0.0640	-0.0469	-0.0209	0.0240
123	-0.1863	-0.1592	-0.1271	-0.1035	-0.0781	-0.0594	-0.0370	-0.0017
124	-0.1947	-0.1678	-0.1366	-0.1135	-0.0902	-0.0753	-0.0547	-0.0230
125	-0.1903	-0.1667	-0.1334	-0.1165	-0.0935	-0.0811	-0.0621	-0.0350
126	-0.1853	-0.1576	-0.1248	-0.1050	-0.0833	-0.0789	-0.0655	-0.0400
127	-0.0534	-0.1061	-0.1046	-0.0832	-0.0640	-0.0534	-0.0360	-0.0082
128	0.1264	0.1482	0.1729	0.1878	0.2004	0.2063	0.2122	0.2245
129	0.1897	0.2034	0.2175	0.2280	0.2357	0.2383	0.2422	0.2506
130	0.2223	0.2327	0.2440	0.2495	0.2562	0.2568	0.2600	0.2645
131	0.2609	0.2663	0.2725	0.2772	0.2778	0.2746	0.2723	0.2689
132	0.2552	0.2577	0.2594	0.2617	0.2592	0.2517	0.2441	0.2311
133	0.2293	0.2263	0.2028	0.2170	0.2074	0.1916	0.1741	0.1473
134	0.2175	0.2112	0.2026	0.1960	0.1786	0.1556	0.1348	0.0926

ORIGINAL PAGE IS OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 13 R= 10.0 MILLION M= 0.30 DELTA F= 0.0 DEG.

ORIFICE	10.00	12.01	13.09	14.00	14.89	16.02
1	-3.1957	-4.4324	-4.7785	-5.1159	-5.0191	-5.4207
2	-6.8261	-9.0435	-9.4256	-9.3801	-9.7346	-10.1721
3	-6.4555	-8.7836	-9.5285	-9.9723	-9.8134	-10.1350
4	-5.2667	-6.1278	-7.1572	-7.4262	-7.7438	-7.7123
5	-4.6829	-5.4603	-5.5791	-5.6837	-5.7723	-5.8796
6	-4.2519	-4.9635	-5.0378	-5.1555	-5.0516	-5.1535
7	-3.5074	-4.5316	-4.6533	-4.7451	-4.6374	-4.7205
8	-3.4494	-3.9824	-4.0500	-4.1718	-4.0586	-4.1095
9	-3.1466	-3.6104	-3.6678	-3.7003	-3.6700	-3.7108
10	-2.9095	-3.3246	-3.4096	-3.4051	-3.3604	-3.3746
11	-2.6585	-2.5876	-3.0629	-3.1154	-2.9984	-3.0097
12	-2.3285	-2.5050	-2.6513	-2.6889	-2.5850	-2.5572
13	-1.9370	-2.1390	-2.1566	-2.1636	-2.0431	-1.9977
14	-1.7364	-1.8832	-1.8821	-1.8799	-1.7471	-1.6433
15	-1.6014	-1.7038	-1.6961	-1.6569	-1.5030	-1.3822
16	-1.4721	-1.5546	-1.4940	-1.4761	-1.2809	-1.1388
17	-1.3716	-1.4287	-1.3477	-1.3064	-1.0933	-0.9037
18	-1.2728	-1.3147	-1.2093	-1.1289	-0.8798	-0.7246
19	-1.1845	-1.1988	-1.0981	-0.9610	-0.6619	-0.6150
20	-1.0975	-1.0987	-0.9646	-0.7851	-0.5538	-0.5703
21	-0.9987	-0.8786	-0.7796	-0.5833	-0.5067	-0.5536
22	-0.8786	-0.7355	-0.6066	-0.4482	-0.4930	-0.5454
23	-0.7513	-0.7566	-0.5328	-0.4160	-0.4768	-0.5474
24	-0.7030	-0.6879	-0.4297	-0.3977	-0.4811	-0.5517
25	-0.5998	-0.5828	-0.3756	-0.3906	-0.4859	-0.5593
26	-0.4651	-0.4106	-0.3460	-0.3816	-0.4949	-0.5652
27	-0.3403	-0.3377	-0.3664	-0.3834	-0.4943	-0.5638
28	-0.2705	-0.3078	-0.3175	-0.3942	-0.4988	-0.5703
29	-0.2491	-0.3017	-0.3357	-0.3900	-0.5059	-0.5757
30	-0.2525	-0.3034	-0.3263	-0.3936	-0.5125	-0.5793
31	-0.2473	-0.3063	-0.3395	-0.3909	-0.5102	-0.5729
32	-0.2345	-0.3057	-0.3555	-0.4019	-0.5105	-0.5605
33	-0.2444	-0.3014	-0.3544	-0.3925	-0.5083	-0.5652
34	-0.2431	-0.2993	-0.3396	-0.3978	-0.4985	-0.5650

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 13 R= 10.0 MILLION M= 0.30 DELTA F= 0.0 DEG.

ORIFICE	10.00	12.01	13.09	14.00	14.89	16.02
101	-3.1957	-4.4324	-4.7785	-5.1159	-5.0191	-5.4207
102	0.2429	-0.2449	-0.3719	-0.5377	-0.5241	-0.6631
103	0.7948	0.5778	0.5127	0.4326	0.4380	0.3600
104	0.9649	0.9542	0.9236	0.7708	0.7789	0.7289
105	1.0159	0.9634	0.9424	0.9138	0.9165	0.8876
106	1.0247	1.0049	0.9959	0.9837	0.9854	0.9678
107	1.0190	1.0234	1.0243	1.0127	1.0131	1.0044
108	0.9848	1.0175	1.0217	1.0242	1.0244	1.0264
109	0.9421	0.9899	0.9999	1.0088	1.0079	1.0167
110	0.9008	0.9369	0.9696	0.9842	0.9811	0.9917
111	0.8400	0.8950	0.9196	0.9378	0.9353	0.9488
112	0.7512	0.8238	0.8412	0.8602	0.8568	0.8730
113	0.6170	0.6960	0.7101	0.7285	0.7214	0.7381
114	0.5163	0.5875	0.6044	0.6208	0.6116	0.6277
115	0.4341	0.5005	0.5159	0.5298	0.5174	0.5322
116	0.3643	0.4274	0.4404	0.4531	0.4365	0.4471
117	0.3057	0.3603	0.3701	0.3792	0.3607	0.3714
118	0.2485	0.3006	0.3085	0.3126	0.2905	0.2958
119	0.2028	0.2478	0.2447	0.2529	0.2273	0.2291
120	0.1567	0.1963	0.1964	0.1966	0.1672	0.1652
121	0.1057	0.1398	0.1393	0.1324	0.0981	0.0937
122	0.0576	0.0872	0.0600	0.0719	0.0330	0.0261
123	0.0336	0.0602	0.0288	0.0375	-0.0032	-0.0219
124	0.0097	0.0309	0.0024	0.0050	-0.0401	-0.0540
125	-0.0076	0.0086	-0.0138	-0.0211	-0.0668	-0.0866
126	-0.0205	-0.0087	-0.0378	-0.0447	-0.0978	-0.1172
127	0.0155	0.0305	0.0032	-0.0014	-0.0526	-0.0692
128	0.2324	0.2365	0.2010	0.1980	0.1537	0.1377
129	0.2550	0.2556	0.2257	0.2184	0.1727	0.1584
130	0.2660	0.2664	0.2429	0.2225	0.1787	0.1597
131	0.2634	0.2579	0.2204	0.2037	0.1478	0.1319
132	0.2246	0.2097	0.1832	0.1476	0.0976	0.0696
133	0.1302	0.1090	0.0745	0.0281	-0.0351	-0.0684
134	0.0692	0.0433	-0.0148	-0.0502	-0.1171	-0.1527

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 15 R= 9.5 MILLION M= 0.40 DELTA F= 0.0 DEG.

ORIFICE	-3.00	-2.50	-2.00	-1.00	-0.51	0.03	1.03	1.53
1	0.5748	0.7252	0.8443	0.9992	1.0346	1.0422	0.9952	0.9351
2	0.7742	0.6693	0.5480	0.2543	0.0745	-0.1246	-0.5315	-0.7570
3	0.4800	0.3503	0.2090	-0.1188	-0.3085	-0.5144	-0.9244	-1.1465
4	0.3153	0.1864	0.0500	-0.2612	-0.4364	-0.6252	-0.9980	-1.1979
5	0.2150	0.0948	-0.1369	-0.3201	-0.4768	-0.6548	-0.9805	-1.1680
6	0.1272	0.0141	-0.1074	-0.3764	-0.5238	-0.6842	-0.9993	-1.1503
7	0.0805	-0.0325	-0.1492	-0.4008	-0.5420	-0.6920	-0.9773	-1.1251
8	-0.0106	-0.1134	-0.2205	-0.4517	-0.5815	-0.7078	-0.9622	-1.0934
9	-0.0897	-0.1853	-0.0875	-0.4983	-0.6091	-0.7392	-0.9675	-1.0848
10	-0.1422	-0.2309	-0.3215	-0.5262	-0.6307	-0.7460	-0.9573	-1.0705
11	-0.2006	-0.2866	-0.3760	-0.5585	-0.6570	-0.7588	-0.9443	-1.0467
12	-0.2734	-0.3472	-0.4242	-0.5794	-0.6698	-0.7575	-0.9300	-0.9864
13	-0.3518	-0.4143	-0.4810	-0.6105	-0.6793	-0.7606	-0.8683	-0.9285
14	-0.4334	-0.4978	-0.5434	-0.6637	-0.7174	-0.7792	-0.8797	-0.9376
15	-0.4926	-0.5402	-0.5941	-0.6980	-0.7564	-0.7961	-0.8919	-0.9457
16	-0.5459	-0.5899	-0.6319	-0.7238	-0.7739	-0.8123	-0.8934	-0.9377
17	-0.5777	-0.6192	-0.6661	-0.7426	-0.7863	-0.8189	-0.8969	-0.9400
18	-0.6130	-0.6514	-0.6873	-0.7608	-0.7941	-0.8285	-0.8965	-0.9352
19	-0.6406	-0.6757	-0.7105	-0.7766	-0.8007	-0.8351	-0.8913	-0.9238
20	-0.6657	-0.7020	-0.7336	-0.7983	-0.8169	-0.8516	-0.8957	-0.9201
21	-0.6932	-0.7190	-0.7489	-0.8065	-0.8310	-0.8489	-0.8903	-0.9094
22	-0.7164	-0.7390	-0.7668	-0.8091	-0.8248	-0.8470	-0.8782	-0.8958
23	-0.7151	-0.7389	-0.7582	-0.7928	-0.8129	-0.8292	-0.8557	-0.8668
24	-0.7282	-0.7486	-0.7680	-0.8023	-0.8231	-0.8354	-0.8496	-0.8555
25	-0.7326	-0.7511	-0.7791	-0.8040	-0.8181	-0.8272	-0.8325	-0.8316
26	-0.7219	-0.7440	-0.7638	-0.7878	-0.7941	-0.7936	-0.7901	-0.7852
27	-0.6808	-0.6976	-0.7084	-0.6932	-0.6888	-0.6890	-0.6688	-0.6636
28	-0.4200	-0.4387	-0.4556	-0.4907	-0.4891	-0.4849	-0.4666	-0.4532
29	-0.2472	-0.2576	-0.2690	-0.2950	-0.3007	-0.3017	-0.2529	-0.2818
30	-0.1104	-0.1192	-0.1278	-0.1528	-0.1668	-0.1702	-0.1757	-0.1747
31	0.0605	0.0553	0.0489	0.0285	0.0087	-0.0200	-0.0519	-0.0644
32	0.1440	0.1414	0.1392	0.1211	0.1039	0.0752	0.0306	0.0074
33	0.1913	0.1881	0.1852	0.1758	0.1621	0.1404	0.0985	0.0730
34	0.1976	0.1974	0.1968	0.1922	0.1791	0.1601	0.1181	0.0985

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 15 R= 5.5 MILLION M= 0.40 DELTA F= 0.0 DEG.

ORIFICE	-3.00	-2.50	-2.00	-1.00	-0.51	0.03	1.03	1.53
101	0.5742	0.7252	0.8443	0.9992	1.0346	1.0422	0.9952	0.9351
102	-0.7154	-0.4392	-0.2007	0.2058	0.3782	0.5332	0.7578	0.8439
103	-0.6912	-0.4707	-0.2777	0.0792	0.2337	0.3750	0.5549	0.6864
104	-0.6005	-0.4213	-0.2545	0.0453	0.1793	0.3051	0.5043	0.5909
105	-0.5474	-0.3869	-0.2442	0.0243	0.1456	0.2577	0.4433	0.5243
106	-0.5104	-0.3705	-0.2390	0.0043	0.1161	0.2216	0.3948	0.4725
107	-0.4811	-0.3515	-0.2322	-0.0074	0.0958	0.1940	0.3567	0.4312
108	-0.4372	-0.3275	-0.2235	-0.0264	0.0643	0.1554	0.3015	0.3701
109	-0.4094	-0.3112	-0.2189	-0.0390	0.0469	0.1246	0.2604	0.3247
110	-0.3702	-0.3052	-0.2204	-0.0551	0.0247	0.0963	0.2248	0.2837
111	-0.3602	-0.2927	-0.2182	-0.0709	-0.0038	0.0679	0.1842	0.2392
112	-0.3524	-0.2824	-0.2254	-0.0932	-0.0335	0.0269	0.1298	0.1796
113	-0.3290	-0.2718	-0.2197	-0.1220	-0.0704	-0.0216	0.0660	0.1054
114	-0.3188	-0.2691	-0.2256	-0.1410	-0.0981	-0.0555	0.0177	0.0552
115	-0.3150	-0.2679	-0.2310	-0.1585	-0.1212	-0.0836	-0.0158	0.0138
116	-0.3108	-0.2756	-0.2372	-0.1720	-0.1382	-0.1044	-0.0448	-0.0155
117	-0.3129	-0.2753	-0.2402	-0.1880	-0.1535	-0.1251	-0.0730	-0.0484
118	-0.3068	-0.2772	-0.2493	-0.1986	-0.1692	-0.1417	-0.0928	-0.0714
119	-0.3044	-0.2748	-0.2476	-0.2005	-0.1759	-0.1506	-0.1119	-0.0870
120	-0.2957	-0.2695	-0.2468	-0.2058	-0.1806	-0.1639	-0.1225	-0.1024
121	-0.2995	-0.2770	-0.2543	-0.2141	-0.1967	-0.1770	-0.1444	-0.1286
122	-0.2937	-0.2732	-0.2565	-0.2191	-0.2086	-0.1907	-0.1603	-0.1472
123	-0.2953	-0.2774	-0.2581	-0.2231	-0.2096	-0.1977	-0.1673	-0.1542
124	-0.2861	-0.2705	-0.2557	-0.2269	-0.2134	-0.2013	-0.1755	-0.1653
125	-0.2703	-0.2580	-0.2449	-0.2203	-0.2097	-0.1980	-0.1735	-0.1641
126	-0.2426	-0.2329	-0.2244	-0.2107	-0.2025	-0.1916	-0.1616	-0.1516
127	-0.0967	-0.0897	-0.0807	-0.0658	-0.0581	-0.0806	-0.1352	-0.1288
128	0.0414	0.0542	0.0666	0.0965	0.1126	0.1327	0.1507	0.1588
129	0.1079	0.1220	0.1361	0.1680	0.1848	0.1959	0.2067	0.2095
130	0.1500	0.1617	0.1791	0.2054	0.2185	0.2264	0.2359	0.2379
131	0.2015	0.2124	0.2259	0.2520	0.2600	0.2625	0.2656	0.2669
132	0.2185	0.2277	0.2408	0.2551	0.2607	0.2619	0.2620	0.2618
133	0.2145	0.2219	0.2294	0.2371	0.2377	0.2363	0.2321	0.2261
134	0.2105	0.2164	0.2224	0.2287	0.2283	0.2222	0.2131	0.2079

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX 3. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 15 P= 9.5 MILLION M= 0.40 DELTA F= 0.0 DEG.

ORIFICE	2.02	3.06	3.98	4.94
1	0.8535	0.6269	0.3684	0.0402
2	-0.9975	-1.5264	-2.0228	-2.6194
3	-1.3812	-1.8963	-2.3917	-3.0008
4	-1.4058	-1.8567	-2.2730	-2.7836
5	-1.3504	-1.7377	-2.1132	-2.5755
6	-1.3213	-1.6775	-1.9582	-2.4162
7	-1.2780	-1.6362	-1.7128	-2.1001
8	-1.2192	-1.5165	-1.6859	-1.9931
9	-1.2113	-1.4564	-1.6389	-1.8976
10	-1.1768	-1.3616	-1.5752	-1.7992
11	-1.1490	-1.3236	-1.4964	-1.6982
12	-1.0655	-1.2461	-1.3881	-1.5447
13	-0.9986	-1.1412	-1.2533	-1.3665
14	-0.9947	-1.1094	-1.1881	-1.2976
15	-0.9900	-1.0840	-1.1610	-1.2449
16	-0.9817	-1.0651	-1.1224	-1.1909
17	-0.9762	-1.0367	-1.0934	-1.1510
18	-0.9650	-1.0179	-1.0570	-1.0975
19	-0.9492	-0.9930	-1.0271	-1.0621
20	-0.9336	-0.9723	-0.9960	-1.0165
21	-0.9247	-0.9470	-0.9546	-0.9704
22	-0.9031	-0.9264	-0.9094	-0.9008
23	-0.8712	-0.8673	-0.8569	-0.8408
24	-0.8616	-0.8504	-0.8234	-0.8005
25	-0.8310	-0.8046	-0.7705	-0.7366
26	-0.7778	-0.7320	-0.6713	-0.6146
27	-0.6491	-0.5795	-0.5040	-0.4351
28	-0.4389	-0.3673	-0.2992	-0.2697
29	-0.2711	-0.2329	-0.2220	-0.2206
30	-0.1704	-0.1733	-0.1916	-0.2025
31	-0.0812	-0.1175	-0.1538	-0.1794
32	-0.0153	-0.0793	-0.1240	-0.1604
33	0.0432	-0.0347	-0.0886	-0.1403
34	0.0708	-0.0081	-0.0678	-0.1184

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 15 R= 0.5 MILLION M= 0.40 DELTA F= 0.0 DEG.

ORIFICE	2.02	3.06	3.98	4.54
101	0.8535	0.6269	0.3684	0.0402
102	0.5121	1.0081	1.0403	1.0357
103	0.7638	0.8511	0.9683	1.0205
104	0.6665	0.7975	0.8852	0.9554
105	0.5972	0.7261	0.8177	0.8947
106	0.5421	0.6689	0.7604	0.8407
107	0.4985	0.6216	0.7122	0.7937
108	0.4330	0.5468	0.6362	0.7169
109	0.3910	0.4916	0.5770	0.6554
110	0.3404	0.4432	0.5257	0.6026
111	0.2892	0.3870	0.4655	0.5394
112	0.2267	0.3140	0.3856	0.4554
113	0.1445	0.2203	0.2811	0.3420
114	0.0879	0.1536	0.2054	0.2614
115	0.0439	0.1007	0.1507	0.2004
116	0.0100	0.0627	0.1053	0.1472
117	-0.0223	0.0228	0.0637	0.1029
118	-0.0517	-0.0099	0.0285	0.0616
119	-0.0682	-0.0328	-0.0002	0.0324
120	-0.0860	-0.0560	-0.0292	0.0012
121	-0.1127	-0.0855	-0.0580	-0.0383
122	-0.1318	-0.1091	-0.0905	-0.0703
123	-0.1428	-0.1235	-0.1043	-0.0858
124	-0.1542	-0.1330	-0.1206	-0.1044
125	-0.1527	-0.1363	-0.1223	-0.1083
126	-0.1410	-0.1273	-0.1177	-0.1083
127	-0.1156	-0.1004	-0.0908	-0.0764
128	0.1653	0.1753	0.1836	0.1870
129	0.2149	0.2186	0.2206	0.2215
130	0.2407	0.2386	0.2399	0.2392
131	0.2657	0.2587	0.2545	0.2488
132	0.2082	0.2493	0.2407	0.2318
133	0.2205	0.2020	0.1833	0.1634
134	0.1997	0.1733	0.1492	0.1220

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ORIGINAL PAGE IS OF POOR QUALITY

APPENDIX D. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 20 R= 3.0 MILLION M= 0.15 DELTA F= 0.0 DEG.

(TURBULATOR TAPE, ON)

ORIFICE	-2.09	-2.49	-1.99	-1.48	-0.97	-0.00	1.03	1.52
1	0.5203	0.6713	0.7938	0.8909	0.9548	0.9924	0.9226.	0.8574
2	0.7291	0.6248	0.5035	0.3627	0.2051	-0.1769	-0.6116	-0.8175
3	0.4420	0.3167	0.1802	0.0243	-0.1634	-0.5218	-0.9428	-1.1281
4	0.2843	0.1624	0.0310	-0.1384	-0.2932	-0.6179	-0.9954	-1.1620
5	0.1913	0.0758	-0.0697	-0.2043	-0.3408	-0.6401	-0.9665	-1.1134
6	0.1140	0.0062	-0.1338	-0.2572	-0.3876	-0.6637	-0.9641	-1.1014
7	0.0633	-0.0812	-0.1719	-0.2987	-0.4109	-0.6657	-0.9456	-1.0739
8	-0.0425	-0.1361	-0.2348	-0.3463	-0.4520	-0.6778	-0.9264	-1.0348
9	-0.1112	-0.1997	-0.2919	-0.3956	-0.4917	-0.6935	-0.9244	-1.0199
10	-0.1582	-0.2392	-0.3269	-0.4144	-0.5149	-0.7055	-0.9034	-1.0012
11	-0.2151	-0.2906	-0.3686	-0.4508	-0.5372	-0.7132	-0.8948	-0.9751
12	-0.2752	-0.3413	-0.4124	-0.4822	-0.5592	-0.7090	-0.8681	-0.9346
13	-0.3464	-0.4030	-0.4576	-0.5184	-0.5817	-0.7039	-0.8326	-0.8851
14	-0.4125	-0.4638	-0.5104	-0.5709	-0.6194	-0.7248	-0.8337	-0.8753
15	-0.4705	-0.5129	-0.5581	-0.6005	-0.6508	-0.7430	-0.8431	-0.8699
16	-0.5126	-0.5496	-0.5900	-0.6330	-0.6766	-0.7543	-0.8379	-0.8707
17	-0.5447	-0.5821	-0.6167	-0.6507	-0.6936	-0.7625	-0.8415	-0.8617
18	-0.5705	-0.6076	-0.6431	-0.6739	-0.7049	-0.7743	-0.8413	-0.8575
19	-0.5957	-0.6295	-0.6561	-0.6865	-0.7174	-0.7738	-0.8415	-0.8539
20	-0.6209	-0.6498	-0.6759	-0.7030	-0.7326	-0.7894	-0.8370	-0.8461
21	-0.6420	-0.6653	-0.6901	-0.7175	-0.7368	-0.7952	-0.8254	-0.8390
22	-0.6559	-0.6803	-0.7024	-0.7259	-0.7539	-0.7943	-0.8244	-0.8327
23	-0.6358	-0.6575	-0.6775	-0.7022	-0.7260	-0.7653	-0.7920	-0.7929
24	-0.6445	-0.6642	-0.6817	-0.7040	-0.7224	-0.7647	-0.7856	-0.7849
25	-0.6733	-0.6556	-0.6717	-0.6951	-0.7100	-0.7489	-0.7159	-0.7162
26	-0.6366	-0.6571	-0.6761	-0.6933	-0.7144	-0.7512	-0.7579	-0.7409
27	-0.5933	-0.6036	-0.6188	-0.6367	-0.6495	-0.6738	-0.6646	-0.6399
28	-0.4026	-0.4191	-0.4297	-0.4398	-0.4507	-0.4738	-0.4837	-0.4651
29	-0.2353	-0.2410	-0.2522	-0.2612	-0.2707	-0.2926	-0.3098	-0.2992
30	-0.1095	-0.1159	-0.1238	-0.1351	-0.1412	-0.1574	-0.1800	-0.1795
31	0.0502	0.0453	0.0392	0.0308	0.0263	0.0171	-0.0177	-0.0429
32	0.1299	0.1266	0.1214	0.1190	0.1125	0.1044	0.0798	0.0385
33	0.1699	0.1650	0.1665	0.1630	0.1611	0.1559	0.1364	0.1013
34	0.1791	0.1795	0.1774	0.1763	0.1735	0.1701	0.1521	0.1189

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 20 R= 3.0 MILLION M= 0.15 DELTA F= 0.0 DEG.

(TURBULATOR TAPE, ON)

ORIFICE	-2.99	-2.49	-1.99	-1.48	-0.97	-0.00	1.03	1.52
101	0.5203	0.6713	0.7938	0.2909	0.9548	0.9924	0.9226	0.8574
102	-0.6853	-0.4412	-0.2119	-0.0016	0.1692	0.5022	0.7424	0.8190
103	-0.5406	-0.4475	-0.2612	-0.0881	0.0750	0.3522	0.5839	0.6649
104	-0.5546	-0.3954	-0.2423	-0.0934	0.0411	0.2846	0.4950	0.5706
105	-0.5041	-0.3664	-0.2301	-0.0993	0.0232	0.2397	0.4337	0.5050
106	-0.4751	-0.3470	-0.2257	-0.1057	0.0044	0.2049	0.3864	0.4551
107	-0.4477	-0.3282	-0.2190	-0.1091	-0.0063	0.1791	0.3504	0.4162
108	-0.4071	-0.3063	-0.2095	-0.1162	-0.0243	0.1417	0.2963	0.3557
109	-0.3796	-0.2900	-0.2034	-0.1208	-0.0369	0.1156	0.2557	0.3120
110	-0.3669	-0.2843	-0.2022	-0.1270	-0.0522	0.0888	0.2198	0.2735
111	-0.3471	-0.2765	-0.2056	-0.1333	-0.0661	0.0621	0.1810	0.2299
112	-0.3324	-0.2701	-0.2083	-0.1458	-0.0877	0.0224	0.1317	0.1752
113	-0.3075	-0.2606	-0.2104	-0.1619	-0.1134	-0.0230	0.0692	0.1028
114	-0.2967	-0.2557	-0.2149	-0.1704	-0.1309	-0.0529	0.0251	0.0539
115	-0.2896	-0.2557	-0.2203	-0.1856	-0.1453	-0.0762	-0.0089	0.0192
116	-0.2838	-0.2558	-0.2252	-0.1917	-0.1577	-0.0946	-0.0341	-0.0108
117	-0.2839	-0.2571	-0.2297	-0.1970	-0.1724	-0.1162	-0.0562	-0.0383
118	-0.2830	-0.2602	-0.2337	-0.2057	-0.1802	-0.1309	-0.0785	-0.0595
119	-0.2764	-0.2575	-0.2348	-0.2078	-0.1861	-0.1393	-0.0931	-0.0754
120	-0.2697	-0.2551	-0.2316	-0.2094	-0.1899	-0.1478	-0.1058	-0.0906
121	-0.2688	-0.2590	-0.2367	-0.2213	-0.2006	-0.1618	-0.1237	-0.1088
122	-0.2661	-0.2579	-0.2426	-0.2209	-0.2067	-0.1718	-0.1390	-0.1262
123	-0.2581	-0.2524	-0.2436	-0.2235	-0.2113	-0.1761	-0.1435	-0.1351
124	-0.2008	-0.2182	-0.2424	-0.2066	-0.2109	-0.1772	-0.1476	-0.1382
125	-0.3115	-0.2708	-0.2748	-0.2301	-0.2437	-0.2158	-0.1965	-0.1785
126	-0.2085	-0.2149	-0.2271	-0.2005	-0.1966	-0.1668	-0.1428	-0.1362
127	-0.0953	-0.0928	-0.0868	-0.0768	-0.0641	-0.0419	-0.0205	-0.0131
128	0.0315	0.0585	0.0759	0.0851	0.0938	0.1096	0.1292	0.1326
129	0.1014	0.1318	0.1461	0.1519	0.1595	0.1754	0.1912	0.1961
130	0.1406	0.1691	0.1804	0.1859	0.1941	0.2084	0.2200	0.2221
131	0.1917	0.2128	0.2225	0.2279	0.2335	0.2448	0.2536	0.2542
132	0.2050	0.2214	0.2272	0.2315	0.2374	0.2455	0.2527	0.2492
133	0.1998	0.2061	0.2104	0.2144	0.2155	0.2221	0.2261	0.2182
134	0.1952	0.2008	0.2036	0.2066	0.2086	0.2144	0.2117	0.2012

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX F. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 23 R= 4.0 MILLION M= 3.20 DELTA F= 0.0 DEG.

(TURBULATOR TAPE, ON)

ORIFICE	-3.00	-2.51	-2.03	-1.53	-1.04	-0.53	-0.00	0.51
1	0.5251	0.6705	0.7921	0.8884	0.9527	0.9886	0.9951	0.9765
2	0.7461	0.6466	0.5301	0.3915	0.2261	0.0655	-0.1524	-0.3765
3	0.4589	0.3404	0.2045	0.0541	-0.1330	-0.3020	-0.5021	-0.7228
4	0.3010	0.1825	0.0544	-0.1026	-0.2631	-0.4124	-0.5957	-0.7964
5	0.2262	0.0961	-0.0360	-0.1677	-0.3142	-0.4535	-0.6187	-0.8032
6	0.1320	0.0259	-0.1004	-0.2253	-0.3626	-0.4902	-0.6392	-0.8091
7	0.0783	-0.0363	-0.1406	-0.2557	-0.3904	-0.5057	-0.6437	-0.8001
8	-0.0171	-0.1078	-0.2047	-0.3109	-0.4314	-0.5352	-0.6592	-0.7990
9	-0.0840	-0.1588	-0.2649	-0.3600	-0.4713	-0.5633	-0.6758	-0.8031
10	-0.1345	-0.2132	-0.2977	-0.3901	-0.4953	-0.5799	-0.6827	-0.8046
11	-0.1912	-0.2646	-0.3444	-0.4225	-0.5202	-0.5952	-0.6919	-0.7996
12	-0.2480	-0.3142	-0.3857	-0.4374	-0.5442	-0.6095	-0.6878	-0.7885
13	-0.3220	-0.3780	-0.4397	-0.4959	-0.5690	-0.6108	-0.6892	-0.7591
14	-0.3921	-0.4438	-0.4920	-0.5397	-0.6085	-0.6457	-0.7029	-0.7805
15	-0.4503	-0.4891	-0.5316	-0.5840	-0.6393	-0.6726	-0.7369	-0.7876
16	-0.4903	-0.5296	-0.5690	-0.6114	-0.6644	-0.6897	-0.7382	-0.7980
17	-0.5217	-0.5571	-0.5919	-0.6319	-0.6789	-0.7053	-0.7456	-0.8028
18	-0.5514	-0.5837	-0.6188	-0.6500	-0.7009	-0.7181	-0.7576	-0.8065
19	-0.5735	-0.6073	-0.6314	-0.6667	-0.7092	-0.7358	-0.7620	-0.8082
20	-0.6007	-0.6279	-0.6509	-0.6823	-0.7233	-0.7408	-0.7675	-0.8019
21	-0.6242	-0.6419	-0.6673	-0.6941	-0.7377	-0.7533	-0.7769	-0.8103
22	-0.6458	-0.6645	-0.6853	-0.7032	-0.7416	-0.7533	-0.7773	-0.8042
23	-0.6437	-0.6637	-0.6873	-0.7055	-0.7251	-0.7500	-0.7723	-0.7845
24	-0.6521	-0.6702	-0.6885	-0.7109	-0.7274	-0.7474	-0.7726	-0.7763
25	-0.6396	-0.6534	-0.6802	-0.6947	-0.7153	-0.7374	-0.7582	-0.7039
26	-0.6504	-0.6692	-0.6887	-0.7052	-0.7235	-0.7404	-0.7620	-0.7514
27	-0.5863	-0.6009	-0.6150	-0.6286	-0.6382	-0.6524	-0.6586	-0.6702
28	-0.4047	-0.4153	-0.4277	-0.4390	-0.4482	-0.4622	-0.4733	-0.4845
29	-0.2389	-0.2473	-0.2557	-0.2633	-0.2759	-0.2848	-0.2943	-0.3051
30	-0.1112	-0.1170	-0.1245	-0.1327	-0.1414	-0.1502	-0.1586	-0.1737
31	0.0531	0.0491	0.0400	0.0361	0.0302	0.0247	0.0164	-0.0030
32	0.1309	0.1291	0.1253	0.1209	0.1413	0.1124	0.1093	0.0891
33	0.1733	0.1728	0.1693	0.1695	0.1662	0.1639	0.1606	0.1472
34	0.1938	0.1840	0.1814	0.1802	0.1782	0.1759	0.1756	0.1620

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 23 R= 4.3 MILLION M= 0.20 DELTA F= 0.0 DEG.

(TURBULATOR TAPE, ON)

ORIFICE	-3.60	-2.51	-2.03	-1.53	-1.04	-0.53	-0.00	0.51
101	0.5051	0.6705	0.7921	0.8884	0.9527	0.9886	0.9951	0.9765
102	-0.6636	-0.4468	-0.2242	-0.0122	0.1749	0.3484	0.5070	0.6384
103	-0.6434	-0.4515	-0.2763	-0.0571	0.0800	0.2112	0.3558	0.4802
104	-0.5593	-0.4041	-0.2543	-0.1038	0.0304	0.1628	0.2888	0.3997
105	-0.5071	-0.3716	-0.2393	-0.1071	0.0132	0.1283	0.2436	0.3443
106	-0.4740	-0.3515	-0.2333	-0.1139	-0.0046	0.1023	0.2090	0.3029
107	-0.4505	-0.3387	-0.2275	-0.1163	-0.0181	0.0834	0.1827	0.2719
108	-0.4094	-0.3122	-0.2163	-0.1205	-0.0330	0.0554	0.1446	0.2242
109	-0.3781	-0.2921	-0.2120	-0.1232	-0.0434	0.0373	0.1180	0.1916
110	-0.3655	-0.2887	-0.2105	-0.1302	-0.0579	0.0179	0.0918	0.1588
111	-0.3488	-0.2772	-0.2085	-0.1381	-0.0726	-0.0023	0.0630	0.1258
112	-0.3309	-0.2724	-0.2158	-0.1522	-0.0921	-0.0339	0.0249	0.0812
113	-0.3059	-0.2645	-0.2140	-0.1616	-0.1147	-0.0683	-0.0185	0.0274
114	-0.2933	-0.2581	-0.2174	-0.1767	-0.1347	-0.0948	-0.0509	-0.0118
115	-0.2885	-0.2558	-0.2236	-0.1858	-0.1504	-0.1131	-0.0764	-0.0395
116	-0.2816	-0.2548	-0.2262	-0.1934	-0.1617	-0.1287	-0.0937	-0.0624
117	-0.2843	-0.2573	-0.2327	-0.2029	-0.1748	-0.1451	-0.1128	-0.0865
118	-0.2830	-0.2587	-0.2393	-0.2076	-0.1828	-0.1557	-0.1287	-0.1032
119	-0.2741	-0.2533	-0.2375	-0.2114	-0.1882	-0.1644	-0.1369	-0.1164
120	-0.2697	-0.2516	-0.2389	-0.2136	-0.1923	-0.1657	-0.1490	-0.1235
121	-0.2722	-0.2565	-0.2442	-0.2198	-0.2029	-0.1802	-0.1596	-0.1439
122	-0.2717	-0.2553	-0.2439	-0.2275	-0.2078	-0.1890	-0.1711	-0.1524
123	-0.2679	-0.2566	-0.2479	-0.2291	-0.2111	-0.1911	-0.1749	-0.1601
124	-0.2580	-0.2486	-0.2437	-0.2281	-0.2075	-0.1918	-0.1743	-0.1614
125	-0.2345	-0.2267	-0.2614	-0.2494	-0.2349	-0.2166	-0.2025	-0.1894
126	-0.2204	-0.2206	-0.2230	-0.2158	-0.1979	-0.1864	-0.1672	-0.1534
127	-0.0926	-0.0864	-0.0897	-0.1051	-0.1233	-0.1405	-0.1320	-0.1193
128	0.0355	0.0533	0.0902	0.0968	0.1061	0.1180	0.1322	0.1410
129	0.0993	0.1152	0.1470	0.1623	0.1704	0.1782	0.1868	0.1938
130	0.1390	0.1589	0.1823	0.1927	0.2018	0.2077	0.2146	0.2219
131	0.1870	0.2075	0.2259	0.2322	0.2386	0.2433	0.2516	0.2545
132	0.2048	0.2185	0.2305	0.2363	0.2403	0.2466	0.2508	0.2533
133	0.1994	0.2094	0.2144	0.2178	0.2208	0.2239	0.2288	0.2278
134	0.1953	0.2031	0.2080	0.2112	0.2124	0.2151	0.2191	0.2168

ORIGINAL PAGE IS OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 23 R= 4.0 MILLION M= 0.20 DELTA F= 0.0 DEG.

(TURBULATOR TAPE, ON)

ORIFICE	1.05
1	0.9296
2	-0.5605
3	-0.7166
4	-0.9468
5	-0.9466
6	-0.9386
7	-0.9200
8	-0.9072
9	-0.9016
10	-0.8841
11	-0.8754
12	-0.8469
13	-0.8104
14	-0.8096
15	-0.8172
16	-0.8103
17	-0.8119
18	-0.8145
19	-0.8087
20	-0.8096
21	-0.8084
22	-0.7988
23	-0.7861
24	-0.7804
25	-0.7155
26	-0.7392
27	-0.6456
28	-0.4633
29	-0.2852
30	-0.1773
31	-0.0750
32	0.0532
33	0.1145
34	0.1327

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 23 R= 4.0 MILLION M= 0.20 DELTA F= 0.0 DEG.

(TURBULATOR TAPE, ON)

ORIFICE	1.05
101	0.8096
102	0.7432
103	0.5933
104	0.4946
105	0.4342
106	0.3874
107	0.3505
108	0.2953
109	0.2563
110	0.2218
111	0.1909
112	0.1310
113	0.0694
114	0.0254
115	-0.0100
116	-0.0361
117	-0.0584
118	-0.0800
119	-0.0939
120	-0.1076
121	-0.1237
122	-0.1417
123	-0.1448
124	-0.1494
125	-0.1806
126	-0.1425
127	-0.1125
128	0.1466
129	0.1977
130	0.2242
131	0.2560
132	0.2516
133	0.2221
134	0.2091

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 24 R= 6.1 MILLION M= 0.07 DELTA F= 0.0 DEG.

(TURBULATOR TAPE, ON)

ORIFICE	-3.00	-2.49	-1.99	-1.48	-1.00	-0.47	0.02	0.54
1	0.5241	0.6783	0.8065	0.9510	0.9608	0.9958	0.9991	0.9796
2	0.7497	0.6427	0.5213	0.3792	0.0235	0.0359	-0.1788	-0.3833
3	0.4615	0.3343	0.1953	0.0421	-0.1457	-0.3368	-0.5219	-0.7218
4	0.3025	0.1798	0.0478	-0.1211	-0.2697	-0.4464	-0.6127	-0.7905
5	0.2100	0.0551	-0.0531	-0.1249	-0.3208	-0.4805	-0.6276	-0.7880
6	0.1352	0.0008	-0.1154	-0.2394	-0.3651	-0.5131	-0.6512	-0.7970
7	0.0847	-0.0441	-0.1538	-0.2704	-0.3880	-0.5252	-0.6534	-0.7880
8	-0.0223	-0.1174	-0.2166	-0.3226	-0.4269	-0.5498	-0.6625	-0.7800
9	-0.0910	-0.1608	-0.2727	-0.3696	-0.4675	-0.5785	-0.6822	-0.7873
10	-0.1370	-0.2200	-0.3070	-0.3951	-0.4874	-0.5901	-0.6865	-0.7838
11	-0.1919	-0.2692	-0.3477	-0.4323	-0.5132	-0.6062	-0.6924	-0.7803
12	-0.2519	-0.3199	-0.3894	-0.4621	-0.5344	-0.6143	-0.6905	-0.7661
13	-0.3243	-0.3796	-0.4378	-0.4964	-0.5570	-0.6202	-0.6822	-0.7443
14	-0.3932	-0.4397	-0.4919	-0.5434	-0.5920	-0.6502	-0.7020	-0.7554
15	-0.4449	-0.4887	-0.5341	-0.5811	-0.6233	-0.6760	-0.7197	-0.7644
16	-0.4860	-0.5260	-0.5671	-0.6084	-0.6475	-0.6938	-0.7336	-0.7680
17	-0.5203	-0.5540	-0.5913	-0.6279	-0.6638	-0.7056	-0.7436	-0.7711
18	-0.5471	-0.5791	-0.6143	-0.6469	-0.6815	-0.7174	-0.7491	-0.7676
19	-0.5706	-0.6010	-0.6314	-0.6611	-0.6897	-0.7226	-0.7530	-0.7687
20	-0.5966	-0.6225	-0.6507	-0.6785	-0.7030	-0.7341	-0.7630	-0.7778
21	-0.6185	-0.6406	-0.6669	-0.6919	-0.7134	-0.7429	-0.7671	-0.7777
22	-0.6365	-0.6571	-0.6797	-0.7007	-0.7206	-0.7480	-0.7634	-0.7741
23	-0.6403	-0.6614	-0.6825	-0.7032	-0.7237	-0.7468	-0.7563	-0.7696
24	-0.6460	-0.6641	-0.6827	-0.7038	-0.7245	-0.7445	-0.7510	-0.7592
25	-0.6325	-0.6494	-0.6694	-0.6879	-0.7084	-0.7290	-0.6687	-0.6909
26	-0.6300	-0.6481	-0.6692	-0.6838	-0.6970	-0.7102	-0.7323	-0.7326
27	-0.5652	-0.5796	-0.5928	-0.6065	-0.6212	-0.6387	-0.6529	-0.6472
28	-0.4226	-0.4125	-0.4051	-0.4370	-0.4477	-0.4620	-0.4726	-0.4688
29	-0.2369	-0.2459	-0.2566	-0.2648	-0.2748	-0.2854	-0.2964	-0.2992
30	-0.1119	-0.1185	-0.1259	-0.1340	-0.1423	-0.1508	-0.1621	-0.1724
31	0.0512	0.0467	0.0415	0.0361	0.0295	0.0235	0.0111	-0.0145
32	0.1304	0.1272	0.1242	0.1194	0.1146	0.1114	0.1019	0.0752
33	0.1726	0.1718	0.1706	0.1675	0.1644	0.1625	0.1566	0.1348
34	0.1815	0.1823	0.1814	0.1800	0.1768	0.1758	0.1707	0.1521

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 24 R= 0.1 MILLION M= 0.07 DELTA F= 0.0 DEG.

(TURBULATOR TAPE, OP)

ORIFICE	-3.00	-2.49	-1.99	-1.48	-1.00	-0.47	0.02	0.54
101	0.8941	0.6783	0.8065	0.9010	0.9608	0.9958	0.9991	0.9796
102	-0.6977	-0.4493	-0.2215	-0.0097	0.1781	0.3602	0.5079	0.6337
103	-0.6377	-0.4422	-0.2587	-0.0858	0.0716	0.2293	0.3602	0.4780
104	-0.5496	-0.3505	-0.2384	-0.0910	0.0412	0.1783	0.2917	0.3979
105	-0.4981	-0.3593	-0.2257	-0.0967	0.0207	0.1441	0.2471	0.3450
106	-0.4669	-0.3414	-0.2215	-0.1043	0.0041	0.1166	0.2122	0.3028
107	-0.4391	-0.3257	-0.2166	-0.1064	-0.0077	0.0971	0.1859	0.2707
108	-0.4020	-0.3030	-0.2065	-0.1120	-0.0246	0.0681	0.1476	0.2230
109	-0.3756	-0.2868	-0.2007	-0.1152	-0.0359	0.0477	0.1202	0.1902
110	-0.3608	-0.2806	-0.2016	-0.1234	-0.0508	0.0268	0.0944	0.1592
111	-0.3419	-0.2714	-0.2016	-0.1309	-0.0651	0.0051	0.0662	0.1255
112	-0.3252	-0.2655	-0.2057	-0.1446	-0.0866	-0.0258	0.0284	0.0807
113	-0.3069	-0.2573	-0.2081	-0.1585	-0.1109	-0.0612	-0.0172	0.0259
114	-0.2981	-0.2512	-0.2125	-0.1698	-0.1308	-0.0870	-0.0485	-0.0118
115	-0.2845	-0.2466	-0.2172	-0.1804	-0.1458	-0.1067	-0.0731	-0.0403
116	-0.2914	-0.2477	-0.2206	-0.1864	-0.1555	-0.1222	-0.0925	-0.0634
117	-0.2710	-0.2505	-0.2280	-0.1990	-0.1695	-0.1385	-0.1112	-0.0850
118	-0.2782	-0.2521	-0.2311	-0.2057	-0.1793	-0.1508	-0.1259	-0.1023
119	-0.2725	-0.2486	-0.2318	-0.2074	-0.1842	-0.1578	-0.1355	-0.1137
120	-0.2683	-0.2459	-0.2316	-0.2090	-0.1887	-0.1637	-0.1436	-0.1252
121	-0.2704	-0.2458	-0.2382	-0.2183	-0.1985	-0.1767	-0.1581	-0.1415
122	-0.2652	-0.2495	-0.2382	-0.2235	-0.2049	-0.1858	-0.1679	-0.1525
123	-0.2630	-0.2492	-0.2373	-0.2259	-0.2090	-0.1903	-0.1738	-0.1583
124	-0.2552	-0.2418	-0.2319	-0.2238	-0.2082	-0.1905	-0.1754	-0.1608
125	-0.2337	-0.2236	-0.2137	-0.2593	-0.2454	-0.2272	-0.2116	-0.1981
126	-0.2193	-0.2149	-0.2174	-0.2041	-0.1921	-0.1770	-0.1633	-0.1519
127	-0.0215	-0.0339	-0.0792	-0.0649	-0.0556	-0.0482	-0.0457	-0.0445
128	0.0374	0.0515	0.0756	0.0943	0.1045	0.1173	0.1279	0.1352
129	0.1008	0.1178	0.1424	0.1580	0.1667	0.1764	0.1844	0.1901
130	0.1383	0.1566	0.1753	0.1912	0.1961	0.2064	0.2133	0.2176
131	0.1967	0.2046	0.2233	0.2322	0.2385	0.2449	0.2494	0.2526
132	0.2027	0.2165	0.2293	0.2353	0.2387	0.2449	0.2486	0.2487
133	0.1979	0.2069	0.2127	0.2170	0.2189	0.2238	0.2259	0.2238
134	0.1953	0.2023	0.2076	0.2109	0.2127	0.2157	0.2164	0.2120

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 24 RE= 6.1 MILLION M= 0.07 DELTA F= 0.0 DEG.

(TURBULATOR TAPE, ON)

ORIFICE	1.06
1	0.0318
2	-0.5952
3	-0.0211
4	-0.9667
5	-0.9422
6	-0.9372
7	-0.9196
8	-0.9038
9	-0.8923
10	-0.8795
11	-0.8641
12	-0.8379
13	-0.8011
14	-0.7876
15	-0.7938
16	-0.7999
17	-0.7980
18	-0.7984
19	-0.7952
20	-0.7966
21	-0.7946
22	-0.7850
23	-0.7791
24	-0.7666
25	-0.6965
26	-0.7262
27	-0.6321
28	-0.4560
29	-0.2940
30	-0.1742
31	-0.0343
32	0.0494
33	0.1107
34	0.1287

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX A. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 24 RE= 6.1 MILLION M= 0.07 DELTA E= 0.0 DEG.

(TURBULATOR TAPE, ON)

ORIFICE	1.06
101	0.9318
102	0.7393
103	0.5795
104	0.4917
105	0.4314
106	0.3840
107	0.3478
108	0.2931
109	0.2534
110	0.2187
111	0.1794
112	0.1282
113	0.0649
114	0.0022
115	-0.0098
116	-0.0359
117	-0.0607
118	-0.0799
119	-0.0943
120	-0.1072
121	-0.1245
122	-0.1384
123	-0.1470
124	-0.1493
125	-0.1875
126	-0.1432
127	-0.0376
128	0.1402
129	0.1537
130	0.2300
131	0.2535
132	0.2487
133	0.2192
134	0.2041

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 26 RE= 2.1 MILLION M= 0.10 DELTA F= 0.0 DEG.

(TURBULATOR TAPE, ON)

ORIFICE	-2.98	-2.52	-2.00	-1.51	-1.27	-0.97	-0.52	-0.00
1	0.5392	0.6817	0.5093	0.3023	0.2392	0.5722	1.0013	1.0087
2	0.7356	0.6382	0.5109	0.3727	0.2583	0.1937	0.0406	-0.1054
3	0.4430	0.3269	0.1637	0.0334	-0.0503	-0.1671	-0.3211	-0.5149
4	0.2550	0.1716	0.0352	-0.1194	-0.1520	-0.2510	-0.4329	-0.6052
5	0.1924	0.0950	-0.0546	-0.1855	-0.2513	-0.3403	-0.4671	-0.6326
6	0.1162	0.0011	-0.0978	-0.2378	-0.3019	-0.3837	-0.5030	-0.6472
7	0.0667	-0.0437	-0.1554	-0.2689	-0.3293	-0.4072	-0.5172	-0.6486
8	-0.0288	-0.1175	-0.2196	-0.3232	-0.3754	-0.4457	-0.5442	-0.6586
9	-0.0582	-0.1786	-0.2757	-0.3719	-0.4187	-0.4837	-0.5738	-0.6801
10	-0.1449	-0.2222	-0.3112	-0.3983	-0.4438	-0.5020	-0.5674	-0.6864
11	-0.2009	-0.2716	-0.3526	-0.4333	-0.4740	-0.5285	-0.6047	-0.6528
12	-0.2592	-0.3219	-0.3938	-0.4656	-0.5012	-0.5482	-0.6117	-0.6881
13	-0.3313	-0.3937	-0.4410	-0.5011	-0.5297	-0.5704	-0.6201	-0.6833
14	-0.3556	-0.4433	-0.4961	-0.5452	-0.5727	-0.6056	-0.6506	-0.7024
15	-0.4534	-0.4939	-0.5386	-0.5840	-0.6073	-0.6356	-0.6776	-0.7240
16	-0.4935	-0.5313	-0.5719	-0.6127	-0.6347	-0.6605	-0.6952	-0.7300
17	-0.5073	-0.5493	-0.5995	-0.6341	-0.6514	-0.6758	-0.7071	-0.7334
18	-0.5554	-0.5858	-0.6187	-0.6528	-0.6683	-0.6908	-0.7209	-0.7405
19	-0.5794	-0.6064	-0.6390	-0.6664	-0.6842	-0.7014	-0.7284	-0.7490
20	-0.5936	-0.6283	-0.6577	-0.6844	-0.6971	-0.7156	-0.7303	-0.7554
21	-0.6268	-0.6473	-0.6735	-0.6986	-0.7098	-0.7266	-0.7355	-0.7597
22	-0.6444	-0.6652	-0.6856	-0.7085	-0.7193	-0.7336	-0.7422	-0.7608
23	-0.6507	-0.6702	-0.6905	-0.7095	-0.7218	-0.7320	-0.7413	-0.7582
24	-0.6542	-0.6739	-0.6935	-0.7092	-0.7209	-0.7317	-0.7377	-0.7493
25	-0.6588	-0.6583	-0.6760	-0.6947	-0.7036	-0.6681	-0.6553	-0.6753
26	-0.6364	-0.6405	-0.6582	-0.6737	-0.6811	-0.7050	-0.7204	-0.7246
27	-0.5745	-0.5879	-0.6033	-0.6182	-0.6223	-0.6346	-0.6389	-0.6394
28	-0.4102	-0.4194	-0.4301	-0.4407	-0.4479	-0.4553	-0.4622	-0.4639
29	-0.2419	-0.2503	-0.2593	-0.2683	-0.2738	-0.2811	-0.2890	-0.2937
30	-0.1144	-0.1213	-0.1282	-0.1368	-0.1404	-0.1475	-0.1585	-0.1668
31	0.0498	0.0457	0.0401	0.0351	0.0329	0.0279	0.0125	-0.0073
32	0.1301	0.1267	0.1241	0.1209	0.1183	0.1147	0.1010	0.0831
33	0.1735	0.1724	0.1709	0.1692	0.1678	0.1655	0.1565	0.1418
34	0.1928	0.1929	0.1922	0.1903	0.1903	0.1783	0.1711	0.1580

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 26 R= 0.1 MILLION M= 0.10 DELTA F= 0.0 DEG.

(TURBULATOR TAPE, ON)

ORIFICE	-2.98	-2.52	-2.00	-1.51	-1.07	-0.97	-0.52	-0.00
101	0.5392	0.6817	0.8093	0.8023	0.5392	0.9722	1.0013	1.0087
102	-0.6582	-0.4604	-0.3257	-0.0161	0.0798	0.1970	0.3467	0.4984
103	-0.4299	-0.4516	-0.3615	-0.0520	-0.0116	0.0880	0.2156	0.3522
104	-0.5459	-0.3967	-0.2406	-0.1116	-0.0298	0.0539	0.1656	0.2845
105	-0.4952	-0.3658	-0.2293	-0.1028	-0.0417	0.0336	0.1323	0.2402
106	-0.4651	-0.3476	-0.2231	-0.1089	-0.0541	0.0155	0.1061	0.2061
107	-0.4380	-0.3313	-0.2176	-0.1120	-0.0615	0.0024	0.0867	0.1793
108	-0.3995	-0.3081	-0.2080	-0.1173	-0.0727	-0.0165	0.0589	0.1417
109	-0.3720	-0.2901	-0.2027	-0.1198	-0.0795	-0.0284	0.0391	0.1148
110	-0.3591	-0.2848	-0.2034	-0.1285	-0.0906	-0.0441	0.0179	0.0890
111	-0.3412	-0.2750	-0.2034	-0.1355	-0.1019	-0.0598	-0.0033	0.0603
112	-0.3132	-0.2698	-0.2082	-0.1490	-0.1195	-0.0827	-0.0227	0.0227
113	-0.2990	-0.2524	-0.2092	-0.1621	-0.1382	-0.1082	-0.0672	-0.0217
114	-0.2894	-0.2429	-0.2144	-0.1733	-0.1525	-0.1277	-0.0924	-0.0529
115	-0.2856	-0.2497	-0.2185	-0.1844	-0.1664	-0.1430	-0.1126	-0.0772
116	-0.2826	-0.2492	-0.2169	-0.1921	-0.1764	-0.1552	-0.1282	-0.0976
117	-0.2831	-0.2528	-0.2231	-0.2013	-0.1872	-0.1682	-0.1441	-0.1163
118	-0.2814	-0.2546	-0.2276	-0.2082	-0.1952	-0.1787	-0.1565	-0.1310
119	-0.2743	-0.2525	-0.2262	-0.2104	-0.1986	-0.1834	-0.1621	-0.1391
120	-0.2690	-0.2492	-0.2260	-0.2132	-0.2015	-0.1887	-0.1683	-0.1486
121	-0.2711	-0.2523	-0.2336	-0.2162	-0.2116	-0.1987	-0.1919	-0.1630
122	-0.2673	-0.2523	-0.2344	-0.2163	-0.2165	-0.2052	-0.1906	-0.1742
123	-0.2644	-0.2513	-0.2355	-0.2192	-0.2179	-0.2106	-0.1951	-0.1794
124	-0.2562	-0.2444	-0.2314	-0.2153	-0.2136	-0.2096	-0.1953	-0.1809
125	-0.2352	-0.2253	-0.2121	-0.1966	-0.1935	-0.2217	-0.2136	-0.1955
126	-0.2220	-0.2154	-0.2087	-0.2045	-0.1992	-0.1869	-0.1763	-0.1668
127	-0.1922	-0.1947	-0.1761	-0.1692	-0.1627	-0.0547	-0.0444	-0.0348
128	0.0380	0.0495	0.0647	0.0815	0.0916	0.1016	0.1104	0.1187
129	0.1022	0.1145	0.1312	0.1490	0.1588	0.1661	0.1735	0.1798
130	0.1411	0.1527	0.1688	0.1848	0.1928	0.1989	0.2053	0.2111
131	0.1896	0.2010	0.2152	0.2294	0.2357	0.2399	0.2452	0.2483
132	0.1942	0.2140	0.2251	0.2341	0.2377	0.2414	0.2452	0.2465
133	0.1994	0.2055	0.2127	0.2175	0.2196	0.2215	0.2232	0.2223
134	0.1964	0.2012	0.2075	0.2112	0.2129	0.2144	0.2154	0.2118

ORIGINAL PAGE IS
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APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 26 R= 0.1 MILLION M= 0.10 DELTA F= 0.0 DEG.

(TURBULATOR TAPE, ON)

ORIFICE	0.51	1.02
1	0.9885	0.9424
2	-0.7614	-0.5750
3	-0.7029	-0.5108
4	-0.7734	-0.9563
5	-0.7766	-0.9338
6	-0.7837	-0.9290
7	-0.7796	-0.9119
8	-0.7729	-0.9898
9	-0.7941	-0.1509
10	-0.7818	-0.8757
11	-0.7761	-0.8643
12	-0.7638	-0.8583
13	-0.7408	-0.7844
14	-0.7498	-0.7900
15	-0.7539	-0.7970
16	-0.7617	-0.8041
17	-0.7694	-0.8036
18	-0.7717	-0.8035
19	-0.7748	-0.8027
20	-0.7778	-0.8039
21	-0.7820	-0.8003
22	-0.7779	-0.7994
23	-0.7680	-0.7906
24	-0.7582	-0.7996
25	-0.6881	-0.6995
26	-0.7258	-0.7287
27	-0.6388	-0.6355
28	-0.4601	-0.4572
29	-0.2959	-0.2544
30	-0.1725	-0.1755
31	-0.0224	-0.0343
32	0.0656	0.0505
33	0.1266	0.1129
34	0.1437	0.1298

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 26 R= 8.1 MILLION M= 0.10 DELTA R= 0.0 DEG.

(TURBULATOR TAPE, ON)

ORIFICE	0.51	1.02
101	0.6685	0.6424
102	0.6033	0.7307
103	0.4668	0.5734
104	0.3272	0.4839
105	0.3354	0.4240
106	0.2930	0.3773
107	0.2624	0.3418
108	0.2157	0.2873
109	0.1828	0.2479
110	0.1522	0.2128
111	0.1189	0.1747
112	0.0740	0.1237
113	0.0197	0.0614
114	-0.0173	0.0188
115	-0.0459	-0.0140
116	-0.0686	-0.0462
117	-0.0906	-0.0445
118	-0.1081	-0.0845
119	-0.1195	-0.0986
120	-0.1299	-0.1116
121	-0.1464	-0.1296
122	-0.1590	-0.1438
123	-0.1651	-0.1525
124	-0.1684	-0.1549
125	-0.1790	-0.1612
126	-0.1557	-0.1456
127	-0.0272	-0.0195
128	0.1253	0.1316
129	0.1248	0.1508
130	0.2150	0.2191
131	0.2513	0.2544
132	0.2470	0.2484
133	0.2203	0.2134
134	0.2084	0.2052

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 27 R=10.1 MILLION M= 0.12 DELTA F= 0.0 DEG.

(TURBULATOR TAPE, ON)

ORIFICE	-2.99	-2.52	-1.99	-1.50	-1.26	-1.00	-1.00	-0.75
1	0.5498	0.6843	0.8175	0.9107	0.9456	0.9741	0.9744	0.9950
2	0.7348	0.6370	0.5055	0.3648	0.2889	0.2052	0.2038	0.1177
3	0.4407	0.3240	0.1754	0.0232	-0.0652	-0.1520	-0.1554	-0.2421
4	0.2819	0.1677	0.0253	-0.1259	-0.1998	-0.2786	-0.2827	-0.3626
5	0.1873	0.0200	-0.0601	-0.1957	-0.2571	-0.3316	-0.3343	-0.4060
6	0.1114	0.0014	-0.1234	-0.2452	-0.3079	-0.3770	-0.3788	-0.4453
7	0.0605	-0.0442	-0.1614	-0.2780	-0.3355	-0.3984	-0.4002	-0.4617
8	-0.0300	-0.1191	-0.2249	-0.3302	-0.3828	-0.4389	-0.4387	-0.4971
9	-0.0599	-0.1821	-0.2807	-0.3774	-0.4271	-0.4785	-0.4806	-0.5317
10	-0.1461	-0.2249	-0.3170	-0.4054	-0.4521	-0.4999	-0.5025	-0.5481
11	-0.2020	-0.2747	-0.3597	-0.4410	-0.4809	-0.5273	-0.5277	-0.5697
12	-0.2622	-0.3254	-0.3996	-0.4725	-0.5053	-0.5466	-0.5469	-0.5849
13	-0.3352	-0.3870	-0.4426	-0.5080	-0.5378	-0.5684	-0.5682	-0.5998
14	-0.4028	-0.4484	-0.5035	-0.5534	-0.5815	-0.6060	-0.6084	-0.6336
15	-0.4576	-0.4983	-0.5469	-0.5914	-0.6150	-0.6387	-0.6387	-0.6630
16	-0.5012	-0.5362	-0.5793	-0.6215	-0.6405	-0.6616	-0.6623	-0.6836
17	-0.5325	-0.5661	-0.6046	-0.6414	-0.6606	-0.6789	-0.6904	-0.7007
18	-0.5617	-0.5918	-0.6261	-0.6623	-0.6771	-0.6952	-0.6956	-0.7102
19	-0.5854	-0.6127	-0.6469	-0.6779	-0.6925	-0.7051	-0.7074	-0.7161
20	-0.6095	-0.6340	-0.6658	-0.6925	-0.7070	-0.7144	-0.7189	-0.7220
21	-0.6336	-0.6576	-0.6818	-0.7055	-0.7195	-0.7200	-0.7203	-0.7314
22	-0.6496	-0.6700	-0.6844	-0.7169	-0.7257	-0.7248	-0.7286	-0.7385
23	-0.6572	-0.6761	-0.6955	-0.7187	-0.7187	-0.7254	-0.7259	-0.7380
24	-0.6609	-0.6789	-0.7014	-0.7175	-0.7142	-0.7248	-0.7252	-0.7336
25	-0.6469	-0.6630	-0.6842	-0.6622	-0.6204	-0.6420	-0.6447	-0.6568
26	-0.6329	-0.6468	-0.6656	-0.6509	-0.7049	-0.7126	-0.7129	-0.7186
27	-0.5815	-0.5946	-0.6101	-0.6236	-0.6312	-0.6367	-0.6370	-0.6389
28	-0.4129	-0.4229	-0.4358	-0.4468	-0.4524	-0.4578	-0.4575	-0.4592
29	-0.2440	-0.2527	-0.2624	-0.2732	-0.2783	-0.2836	-0.2835	-0.2860
30	-0.1156	-0.1219	-0.1279	-0.1390	-0.1452	-0.1520	-0.1509	-0.1573
31	0.0510	0.0457	0.0409	0.0349	0.0284	0.0212	0.0203	0.0124
32	0.1312	0.1280	0.1240	0.1202	0.1156	0.1097	0.1091	0.1033
33	0.1758	0.1735	0.1718	0.1689	0.1669	0.1621	0.1626	0.1577
34	0.1844	0.1833	0.1829	0.1812	0.1797	0.1760	0.1759	0.1715

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 27 R=10.1 MILLION M= 0.12 DELTA F= 0.0 DEG.

(TURBULATOR TAPE, ON)

ORIFICE	-2.99	-2.52	-1.99	-1.50	-1.26	-1.00	-1.00	-0.75
101	0.5408	0.6843	0.8175	0.9107	0.9456	0.9741	0.9744	0.9950
102	-0.6961	-0.4660	-0.2206	-0.0111	0.0849	0.1804	0.1824	0.2716
103	-0.6382	-0.4559	-0.2607	-0.0378	-0.0077	0.0723	0.0750	0.1496
104	-0.5516	-0.4009	-0.2381	-0.0955	-0.0264	0.0419	0.0439	0.1087
105	-0.5012	-0.3701	-0.2278	-0.1007	-0.0402	0.0216	0.0232	0.0808
106	-0.4691	-0.3513	-0.2226	-0.1065	-0.0518	0.0036	0.0049	0.0587
107	-0.4413	-0.3349	-0.2166	-0.1109	-0.0606	-0.0088	-0.0071	0.0426
108	-0.4028	-0.3108	-0.2082	-0.1156	-0.0716	-0.0262	-0.0241	0.0190
109	-0.3755	-0.2949	-0.2014	-0.1189	-0.0791	-0.0367	-0.0363	0.0029
110	-0.3525	-0.2887	-0.2033	-0.1275	-0.0903	-0.0525	-0.0515	-0.0150
111	-0.3267	-0.2782	-0.2033	-0.1350	-0.1016	-0.0671	-0.0661	-0.0334
112	-0.3186	-0.2651	-0.2080	-0.1487	-0.1198	-0.0898	-0.0887	-0.0604
113	-0.3009	-0.2536	-0.2085	-0.1623	-0.1395	-0.1147	-0.1139	-0.0902
114	-0.2922	-0.2505	-0.2089	-0.1727	-0.1547	-0.1327	-0.1328	-0.1121
115	-0.2883	-0.2514	-0.2118	-0.1825	-0.1661	-0.1488	-0.1472	-0.1305
116	-0.2856	-0.2531	-0.2176	-0.1933	-0.1774	-0.1604	-0.1606	-0.1444
117	-0.2842	-0.2564	-0.2245	-0.2021	-0.1887	-0.1737	-0.1741	-0.1584
118	-0.2818	-0.2582	-0.2291	-0.2032	-0.1964	-0.1841	-0.1831	-0.1698
119	-0.2759	-0.2534	-0.2267	-0.2013	-0.1980	-0.1876	-0.1870	-0.1758
120	-0.2715	-0.2510	-0.2274	-0.2050	-0.1958	-0.1921	-0.1914	-0.1809
121	-0.2724	-0.2545	-0.2339	-0.2138	-0.2039	-0.1966	-0.1988	-0.1931
122	-0.2691	-0.2533	-0.2354	-0.2182	-0.2090	-0.1989	-0.1982	-0.1984
123	-0.2678	-0.2526	-0.2357	-0.2212	-0.2123	-0.2024	-0.2020	-0.1980
124	-0.2582	-0.2453	-0.2303	-0.2161	-0.2092	-0.2003	-0.1999	-0.1966
125	-0.2382	-0.2269	-0.2135	-0.2016	-0.1930	-0.1834	-0.1832	-0.1717
126	-0.2252	-0.2165	-0.2085	-0.2016	-0.1981	-0.1926	-0.1928	-0.1873
127	-0.0936	-0.0850	-0.0762	-0.0671	-0.0632	-0.0575	-0.0584	-0.0527
128	0.0388	0.0487	0.0629	0.0775	0.0848	0.0922	0.0931	0.1013
129	0.1043	0.1151	0.1294	0.1441	0.1515	0.1586	0.1589	0.1666
130	0.1432	0.1532	0.1676	0.1808	0.1874	0.1944	0.1948	0.2005
131	0.1924	0.2013	0.2148	0.2267	0.2323	0.2369	0.2375	0.2425
132	0.2074	0.2142	0.2245	0.2332	0.2368	0.2396	0.2402	0.2425
133	0.2013	0.2062	0.2132	0.2185	0.2205	0.2216	0.2219	0.2225
134	0.1982	0.2021	0.2075	0.2122	0.2133	0.2137	0.2142	0.2144

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 27 R=10.1 MILLION M= 0.12 DELTA F= 0.0 DEG.

(TURBULATOR TAPE, ON)

ORIFICE	-0.49	0.02	0.50	1.02
1	1.0090	1.0126	0.9977	0.9500
2	0.0287	-0.1647	-0.3607	-0.5820
3	-0.3331	-0.5166	-0.7033	-0.9155
4	-0.4428	-0.6080	-0.7765	-0.9630
5	-0.4793	-0.6262	-0.7777	-0.9442
6	-0.5149	-0.6509	-0.7663	-0.9398
7	-0.5281	-0.6534	-0.7804	-0.9180
8	-0.5534	-0.6629	-0.7763	-0.8991
9	-0.5827	-0.6850	-0.7873	-0.8964
10	-0.5955	-0.6915	-0.7834	-0.8856
11	-0.6152	-0.6972	-0.7815	-0.8723
12	-0.6238	-0.6885	-0.7681	-0.8396
13	-0.6284	-0.6770	-0.7277	-0.7920
14	-0.6607	-0.7001	-0.7434	-0.7968
15	-0.6850	-0.7183	-0.7599	-0.8049
16	-0.7024	-0.7315	-0.7692	-0.8070
17	-0.7060	-0.7404	-0.7742	-0.8134
18	-0.7150	-0.7476	-0.7764	-0.8111
19	-0.7236	-0.7524	-0.7797	-0.8087
20	-0.7347	-0.7594	-0.7852	-0.8090
21	-0.7426	-0.7641	-0.7854	-0.8065
22	-0.7488	-0.7637	-0.7828	-0.7951
23	-0.7461	-0.7573	-0.7743	-0.7903
24	-0.7402	-0.7522	-0.7668	-0.7775
25	-0.6674	-0.6796	-0.6913	-0.7020
26	-0.7192	-0.7191	-0.7302	-0.7348
27	-0.6387	-0.6326	-0.6410	-0.6442
28	-0.4619	-0.4574	-0.4626	-0.4634
29	-0.2906	-0.2912	-0.2968	-0.2975
30	-0.1619	-0.1674	-0.1740	-0.1769
31	0.0040	-0.0150	-0.0221	-0.0316
32	0.0945	0.0724	0.0654	0.0530
33	0.1509	0.1324	0.1252	0.1123
34	0.1658	0.1495	0.1425	0.1318

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX 5. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 27 R=10.1 MILLION M= 0.12 DELTA F= 0.0 DEG.

(TURBULATOR TAPE, ON)

ORIFICE	-0.49	0.02	0.50	1.02
101	1.0090	1.0126	0.8977	0.9500
102	0.3548	0.5006	0.6240	0.7373
103	0.2218	0.3518	0.4651	0.5761
104	0.1704	0.2844	0.3860	0.4861
105	0.1371	0.2391	0.3328	0.4261
106	0.1093	0.2050	0.2912	0.3784
107	0.0906	0.1791	0.2595	0.3411
108	0.0620	0.1414	0.2129	0.2883
109	0.0419	0.1135	0.1804	0.2483
110	0.0205	0.0876	0.1499	0.2138
111	-0.0011	0.0591	0.1162	0.1748
112	-0.0317	0.0215	0.0710	0.1232
113	-0.0673	-0.0238	0.0169	0.0605
114	-0.0924	-0.0545	-0.0195	0.0173
115	-0.1135	-0.0800	-0.0482	-0.0153
116	-0.1297	-0.0993	-0.0719	-0.0419
117	-0.1445	-0.1197	-0.0932	-0.0667
118	-0.1581	-0.1337	-0.1110	-0.0863
119	-0.1647	-0.1423	-0.1222	-0.1000
120	-0.1699	-0.1512	-0.1328	-0.1128
121	-0.1842	-0.1669	-0.1497	-0.1321
122	-0.1925	-0.1762	-0.1625	-0.1456
123	-0.1979	-0.1832	-0.1691	-0.1525
124	-0.1971	-0.1943	-0.1713	-0.1581
125	-0.1706	-0.1651	-0.1516	-0.1374
126	-0.1798	-0.1673	-0.1565	-0.1455
127	-0.0469	-0.0377	-0.0294	-0.0200
128	0.1082	0.1161	0.1232	0.1303
129	0.1720	0.1785	0.1841	0.1905
130	0.2053	0.2103	0.2147	0.2200
131	0.2450	0.2474	0.2510	0.2548
132	0.2443	0.2451	0.2477	0.2480
133	0.2225	0.2207	0.2212	0.2205
134	0.2132	0.2093	0.2084	0.2061

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 28 R= 10.0 MILLION M= 0.23 DELTA F= 0.0 DEG.

ORIFICE	-2.96	-2.54	-1.94	-1.49	-0.99	-0.51	0.02	0.52
1	0.5635	0.6931	0.8391	0.9225	0.9627	1.0154	1.0207	1.0039
2	0.7360	0.6457	0.4973	0.3664	0.2102	0.0419	-0.1612	-0.3613
3	0.4383	0.3309	0.1624	0.0196	-0.1482	-0.3226	-0.5183	-0.7168
4	0.2776	0.1712	0.0070	-0.1259	-0.2812	-0.4386	-0.6140	-0.7938
5	0.1828	0.0838	-0.0707	-0.1927	-0.3332	-0.4733	-0.6368	-0.7932
6	0.1063	0.0059	-0.1347	-0.2503	-0.3804	-0.5102	-0.6591	-0.8030
7	0.0553	-0.0382	-0.1724	-0.2821	-0.4031	-0.5305	-0.6639	-0.8009
8	-0.0330	-0.1161	-0.2381	-0.3350	-0.4445	-0.5564	-0.6775	-0.7964
9	-0.1024	-0.1812	-0.2962	-0.3868	-0.4853	-0.5890	-0.6968	-0.8058
10	-0.1502	-0.2231	-0.3298	-0.4153	-0.5082	-0.5978	-0.7031	-0.8037
11	-0.2074	-0.2752	-0.3738	-0.4496	-0.5342	-0.6226	-0.7113	-0.7978
12	-0.2690	-0.3290	-0.4135	-0.4811	-0.5584	-0.6307	-0.7096	-0.7870
13	-0.3438	-0.3915	-0.4626	-0.5194	-0.5774	-0.6388	-0.7057	-0.7459
14	-0.4141	-0.4582	-0.5201	-0.5671	-0.6207	-0.6719	-0.7215	-0.7618
15	-0.4661	-0.5069	-0.5633	-0.6071	-0.6518	-0.6958	-0.7348	-0.7800
16	-0.5107	-0.5486	-0.5983	-0.6370	-0.6761	-0.7100	-0.7477	-0.7899
17	-0.5456	-0.5766	-0.6226	-0.6589	-0.6939	-0.7181	-0.7574	-0.7909
18	-0.5741	-0.6082	-0.6468	-0.6777	-0.7104	-0.7317	-0.7695	-0.7959
19	-0.5997	-0.6258	-0.6643	-0.6915	-0.7153	-0.7407	-0.7693	-0.8007
20	-0.6285	-0.6502	-0.6846	-0.7068	-0.7254	-0.7544	-0.7786	-0.8029
21	-0.6491	-0.6687	-0.6979	-0.7243	-0.7374	-0.7610	-0.7810	-0.8043
22	-0.6677	-0.6879	-0.7157	-0.7344	-0.7437	-0.7629	-0.7812	-0.8012
23	-0.6768	-0.6925	-0.7180	-0.7315	-0.7455	-0.7636	-0.7773	-0.7931
24	-0.6803	-0.6995	-0.7245	-0.7309	-0.7454	-0.7598	-0.7757	-0.7858
25	-0.6861	-0.7028	-0.7276	-0.7317	-0.7450	-0.7586	-0.7657	-0.7761
26	-0.6835	-0.7002	-0.7208	-0.7191	-0.7322	-0.7378	-0.7401	-0.7489
27	-0.6416	-0.6574	-0.6456	-0.6415	-0.6472	-0.6468	-0.6514	-0.6532
28	-0.4037	-0.4187	-0.4431	-0.4584	-0.4636	-0.4641	-0.4669	-0.4671
29	-0.2390	-0.2475	-0.2631	-0.2775	-0.2855	-0.2943	-0.2947	-0.2990
30	-0.1104	-0.1174	-0.1289	-0.1397	-0.1520	-0.1624	-0.1688	-0.1737
31	0.0595	0.0538	0.0456	0.0360	0.0202	0.0035	-0.0110	-0.0222
32	0.1387	0.1354	0.1304	0.1231	0.1100	0.0967	0.0783	0.0651
33	0.1825	0.1804	0.1774	0.1737	0.1641	0.1521	0.1382	0.1271
34	0.1900	0.1891	0.1886	0.1858	0.1773	0.1682	0.1549	0.1436

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 28 R= 10.0 MILLION M= 0.23 DELTA F= 0.0 DEG.

ORIFICE	-2.96	-2.54	-1.94	-1.49	-0.99	-0.51	0.02	0.52
101	0.5635	0.6931	0.8391	0.9225	0.9827	1.0154	1.0207	1.0039
102	-0.6839	-0.4711	-0.1937	0.0002	0.1891	0.3543	0.5090	0.6369
103	-0.6319	-0.4594	-0.2393	-0.0794	0.0786	0.2206	0.3596	0.4777
104	-0.5491	-0.4093	-0.2226	-0.0872	0.0459	0.1700	0.2916	0.3970
105	-0.4981	-0.3752	-0.2134	-0.0936	0.0250	0.1368	0.2465	0.3430
106	-0.4665	-0.3571	-0.2100	-0.1031	0.0064	0.1103	0.2113	0.3018
107	-0.4387	-0.3384	-0.2047	-0.1072	-0.0055	0.0881	0.1851	0.2688
108	-0.4032	-0.3160	-0.1991	-0.1116	-0.0227	0.0607	0.1457	0.2219
109	-0.3740	-0.2972	-0.1948	-0.1166	-0.0351	0.0405	0.1187	0.1878
110	-0.3634	-0.2926	-0.1949	-0.1243	-0.0505	0.0200	0.0918	0.1562
111	-0.3224	-0.2822	-0.1970	-0.1328	-0.0669	-0.0025	0.0637	0.1223
112	-0.3214	-0.2642	-0.2007	-0.1478	-0.0896	-0.0337	0.0245	0.0767
113	-0.3032	-0.2591	-0.2005	-0.1612	-0.1142	-0.0680	-0.0212	0.0215
114	-0.2931	-0.2555	-0.2047	-0.1723	-0.1340	-0.0958	-0.0545	-0.0155
115	-0.2907	-0.2557	-0.2135	-0.1852	-0.1504	-0.1152	-0.0798	-0.0449
116	-0.2871	-0.2574	-0.2185	-0.1906	-0.1629	-0.1306	-0.0985	-0.0701
117	-0.2866	-0.2608	-0.2247	-0.1958	-0.1758	-0.1453	-0.1185	-0.0926
118	-0.2849	-0.2620	-0.2301	-0.2030	-0.1849	-0.1616	-0.1340	-0.1091
119	-0.2794	-0.2583	-0.2273	-0.2039	-0.1852	-0.1670	-0.1435	-0.1222
120	-0.2752	-0.2546	-0.2276	-0.2079	-0.1845	-0.1734	-0.1535	-0.1328
121	-0.2772	-0.2606	-0.2359	-0.2171	-0.1981	-0.1877	-0.1675	-0.1499
122	-0.2715	-0.2582	-0.2374	-0.2220	-0.2044	-0.1906	-0.1801	-0.1635
123	-0.2712	-0.2555	-0.2395	-0.2251	-0.2091	-0.1969	-0.1859	-0.1712
124	-0.2686	-0.2561	-0.2384	-0.2268	-0.2125	-0.1992	-0.1909	-0.1755
125	-0.2525	-0.2452	-0.2281	-0.2165	-0.2061	-0.1946	-0.1908	-0.1742
126	-0.2286	-0.2206	-0.2077	-0.2006	-0.1932	-0.1895	-0.1833	-0.1678
127	-0.0946	-0.0860	-0.0738	-0.0642	-0.0583	-0.0513	-0.0601	-0.0858
128	0.0423	0.0525	0.0665	0.0793	0.0918	0.1070	0.1291	0.1383
129	0.1083	0.1180	0.1320	0.1462	0.1599	0.1744	0.1884	0.1945
130	0.1480	0.1568	0.1710	0.1941	0.1958	0.2067	0.2191	0.2236
131	0.1971	0.2060	0.2186	0.2298	0.2394	0.2499	0.2560	0.2587
132	0.2116	0.2190	0.2289	0.2376	0.2443	0.2489	0.2507	0.2539
133	0.2066	0.2111	0.2183	0.2224	0.2255	0.2268	0.2258	0.2259
134	0.2036	0.2082	0.2123	0.2163	0.2174	0.2175	0.2144	0.2116

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 28 R= 10.0 MILLION M= 0.23 DELTA F= 0.0 DEG.

ORIFICE	1.05	2.06	2.99	3.99	4.97	6.07	8.03	9.98
1	0.9580	0.7789	0.5151	0.1417	-0.3042	-0.8716	-2.1261	-3.7020
2	-0.5885	-1.0810	-1.5986	-2.1856	-2.8135	-3.5257	-4.9770	-6.5453
3	-0.9334	-1.4064	-1.8760	-2.4107	-2.9625	-3.5917	-4.8332	-6.1694
4	-0.9834	-1.3910	-1.8038	-2.2564	-2.7271	-3.2551	-4.3824	-5.1461
5	-0.9682	-1.3265	-1.6850	-2.0847	-2.4953	-2.8333	-3.6637	-4.5302
6	-0.9582	-1.2863	-1.6094	-1.9482	-2.2639	-2.6508	-3.3302	-4.1669
7	-0.9415	-1.2479	-1.5346	-1.8218	-2.1210	-2.4756	-3.1460	-3.8202
8	-0.9249	-1.1852	-1.4401	-1.6752	-1.9490	-2.2375	-2.8124	-3.3770
9	-0.9195	-1.1587	-1.3379	-1.6005	-1.8385	-2.1026	-2.5998	-3.0921
10	-0.9100	-1.1259	-1.2941	-1.5263	-1.7418	-1.9816	-2.4180	-2.8645
11	-0.8945	-1.0911	-1.2433	-1.4441	-1.6368	-1.8475	-2.2239	-2.6018
12	-0.8561	-1.0066	-1.1744	-1.3398	-1.4972	-1.6639	-1.9741	-2.2897
13	-0.8143	-0.9466	-1.0717	-1.1962	-1.3183	-1.4466	-1.6812	-1.9098
14	-0.8167	-0.9341	-1.0358	-1.1453	-1.2387	-1.3432	-1.5322	-1.6936
15	-0.8303	-0.9276	-1.0159	-1.1024	-1.1917	-1.2740	-1.4292	-1.5604
16	-0.8294	-0.9183	-0.9956	-1.0714	-1.1480	-1.2142	-1.3379	-1.4480
17	-0.8349	-0.9102	-0.9749	-1.0383	-1.1047	-1.1632	-1.2612	-1.3488
18	-0.8339	-0.8994	-0.9579	-1.0181	-1.0590	-1.1143	-1.1953	-1.2658
19	-0.8287	-0.8869	-0.9353	-0.9896	-1.0293	-1.0686	-1.1252	-1.1697
20	-0.8282	-0.8788	-0.9229	-0.9671	-1.0006	-1.0254	-1.0647	-1.0885
21	-0.8289	-0.8664	-0.9081	-0.9395	-0.9626	-0.9744	-0.9960	-0.9999
22	-0.8183	-0.8545	-0.8798	-0.9042	-0.9154	-0.9169	-0.9126	-0.8878
23	-0.8117	-0.8398	-0.8638	-0.8844	-0.8911	-0.8783	-0.8504	-0.8134
24	-0.7991	-0.8219	-0.8423	-0.8528	-0.8593	-0.8351	-0.7865	-0.7252
25	-0.7850	-0.8084	-0.8173	-0.8254	-0.8196	-0.7876	-0.7061	-0.6058
26	-0.7522	-0.7639	-0.7719	-0.7683	-0.7517	-0.6936	-0.5809	-0.4736
27	-0.6566	-0.6602	-0.6581	-0.6454	-0.6149	-0.5400	-0.4002	-0.3252
28	-0.4669	-0.4682	-0.4629	-0.4487	-0.4138	-0.3412	-0.2661	-0.2573
29	-0.2979	-0.3022	-0.2949	-0.2850	-0.2608	-0.2185	-0.2250	-0.2459
30	-0.1787	-0.1833	-0.1861	-0.1845	-0.1804	-0.1797	-0.2147	-0.2449
31	-0.0316	-0.0485	-0.0648	-0.0824	-0.1030	-0.1410	-0.1938	-0.2401
32	0.0510	0.0283	0.0053	-0.0230	-0.0602	-0.1091	-0.1853	-0.2387
33	0.1129	0.0882	0.0620	0.0272	-0.0166	-0.0862	-0.1666	-0.2264
34	0.1332	0.1095	0.0815	0.0471	-0.0003	-0.0673	-0.1574	-0.2176

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 28 R= 10.0 MILLION M= 0.23 DELTA F= 0.0 DEG.

ORIFICE	1.05	2.06	2.99	3.99	4.97	6.07	8.03	9.98
101	0.9580	0.7789	0.5151	0.1417	-0.3042	-0.8716	-2.1261	-3.7020
102	0.7491	0.5102	0.5958	1.0164	0.9880	0.8958	0.5848	0.1298
103	0.5871	0.7657	0.8874	0.9704	1.0119	1.0162	0.9312	0.7370
104	0.4978	0.6688	0.7953	0.8939	0.9608	1.0030	1.0097	0.9343
105	0.4362	0.5996	0.7247	0.8091	0.9060	0.9654	1.0156	0.9960
106	0.3890	0.5447	0.6667	0.7730	0.8564	0.9239	0.9978	1.0145
107	0.3521	0.5009	0.6197	0.7248	0.8096	0.8836	0.9724	1.0099
108	0.2965	0.4338	0.5457	0.6486	0.7336	0.8101	0.9171	0.9809
109	0.2574	0.3841	0.4905	0.5892	0.6728	0.7500	0.8630	0.9395
110	0.2217	0.3418	0.4430	0.5379	0.6205	0.6977	0.8133	0.8988
111	0.1815	0.2934	0.3874	0.4771	0.5563	0.6315	0.7482	0.8394
112	0.1302	0.2267	0.3153	0.3982	0.4713	0.5433	0.6577	0.7516
113	0.0662	0.1500	0.2233	0.2939	0.3590	0.4229	0.5285	0.6191
114	0.0204	0.0944	0.1579	0.2232	0.2804	0.3372	0.4343	0.5180
115	-0.0125	0.0513	0.1112	0.1673	0.2192	0.2715	0.3595	0.4374
116	-0.0402	0.0196	0.0797	0.1225	0.1701	0.2175	0.2977	0.3694
117	-0.0660	-0.0127	0.0356	0.0834	0.1258	0.1685	0.2429	0.3089
118	-0.0853	-0.0383	0.0069	0.0499	0.0882	0.1263	0.1945	0.2549
119	-0.0981	-0.0551	-0.0172	0.0226	0.0576	0.0939	0.1549	0.2082
120	-0.1130	-0.0728	-0.0378	-0.0013	0.0296	0.0612	0.1148	0.1641
121	-0.1316	-0.0964	-0.0638	-0.0328	-0.0030	0.0238	0.0720	0.1170
122	-0.1477	-0.1149	-0.0859	-0.0562	-0.0336	-0.0091	0.0317	0.0709
123	-0.1538	-0.1247	-0.0975	-0.0704	-0.0491	-0.0259	0.0125	0.0454
124	-0.1630	-0.1340	-0.1075	-0.0813	-0.0625	-0.0439	-0.0081	0.0216
125	-0.1615	-0.1335	-0.1091	-0.0872	-0.0651	-0.0517	-0.0216	0.0042
126	-0.1516	-0.1234	-0.0987	-0.0802	-0.0640	-0.0521	-0.0290	-0.0075
127	-0.1106	-0.1038	-0.0784	-0.0575	-0.0399	-0.0237	0.0043	0.0293
128	0.1469	0.1687	0.1980	0.2038	0.2135	0.2199	0.2287	0.2378
129	0.2012	0.2147	0.2269	0.2373	0.2443	0.2475	0.2552	0.2621
130	0.2299	0.2406	0.2498	0.2583	0.2626	0.2642	0.2693	0.2732
131	0.2612	0.2690	0.2745	0.2783	0.2796	0.2761	0.2718	0.2682
132	0.2558	0.2596	0.2619	0.2636	0.2617	0.2524	0.2416	0.2306
133	0.2248	0.2247	0.2219	0.2165	0.2080	0.1981	0.1638	0.1407
134	0.2102	0.2063	0.2019	0.1918	0.1765	0.1490	0.1151	0.0832

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 28 R= 10.0 MILLION M= 0.23 DELTA F= 0.0 DEG.

ORIFICE	11.97	14.00	15.05	15.99	16.33	17.03
1	-5.2675	-6.8701	-7.6695	-8.1831	-7.9025	-4.9732
2	-9.2587	-10.0269	-10.8321	-11.4299	-10.5054	-7.6644
3	-7.6620	-9.2010	-9.9056	-10.9036	-9.5148	-7.3106
4	-6.1121	-7.1485	-7.6164	-7.9375	-7.8440	-5.4005
5	-5.4295	-6.2248	-6.6169	-6.8227	-6.7092	-4.8131
6	-4.9389	-5.6241	-5.5183	-6.1516	-6.0026	-4.2267
7	-4.5041	-5.1304	-5.4181	-5.5778	-5.4243	-3.9701
8	-3.9291	-4.4355	-4.6411	-4.7874	-4.6833	-3.2143
9	-3.5770	-4.0206	-4.2093	-4.3074	-4.1913	-2.8775
10	-3.2881	-3.6507	-3.8094	-3.8944	-3.8197	-3.1779
11	-2.9617	-3.2779	-3.4117	-3.4788	-3.3965	-2.8863
12	-2.5727	-2.8319	-2.9087	-2.9734	-2.8567	-2.4290
13	-2.1136	-2.2706	-2.3322	-2.3404	-2.2879	-1.4919
14	-1.8639	-1.9776	-2.0184	-2.0206	-1.9560	-1.2789
15	-1.6892	-1.7755	-1.7877	-1.7749	-1.7198	-1.2862
16	-1.5468	-1.6064	-1.5982	-1.5830	-1.5215	-1.2269
17	-1.4215	-1.4522	-1.4451	-1.4019	-1.3486	-1.2045
18	-1.3108	-1.3218	-1.3063	-1.2494	-1.1924	-1.1842
19	-1.2025	-1.1975	-1.1716	-1.1209	-1.0559	-1.1246
20	-1.1066	-1.0814	-1.0241	-0.9335	-0.9152	-1.1280
21	-0.9505	-0.9613	-0.9143	-0.8521	-0.7910	-1.1419
22	-0.8647	-0.8332	-0.7892	-0.7227	-0.6496	-1.0869
23	-0.7966	-0.7571	-0.7197	-0.6370	-0.5727	-1.0573
24	-0.6807	-0.6822	-0.6310	-0.5905	-0.5229	-1.0743
25	-0.5745	-0.5750	-0.5601	-0.5275	-0.4535	-1.0396
26	-0.4607	-0.5164	-0.5084	-0.5011	-0.4876	-1.0859
27	-0.4229	-0.4121	-0.4682	-0.4874	-0.4712	-1.0999
28	-0.3944	-0.3525	-0.4246	-0.4673	-0.4590	-1.0789
29	-0.2788	-0.3407	-0.4333	-0.4762	-0.4777	-0.9023
30	-0.2771	-0.3319	-0.4321	-0.4826	-0.4713	-1.0301
31	-0.2844	-0.3452	-0.4361	-0.4841	-0.4681	-0.9990
32	-0.2821	-0.3416	-0.4119	-0.4578	-0.4331	-0.9504
33	-0.2772	-0.3350	-0.3931	-0.4363	-0.3922	-0.9064
34	-0.2700	-0.3266	-0.3833	-0.4421	-0.3766	-0.8936

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 28 R= 10.2 MILLION M= 0.23 DELTA F= 0.0 DEG.

ORIFICE	11.97	14.00	15.05	15.99	16.33	17.03
101	-5.2675	-6.8701	-7.6699	-8.1831	-7.5025	-4.5732
102	-0.4478	-1.1178	-1.4174	-1.6580	-1.5295	-0.4528
103	0.4584	0.1408	-0.0167	-0.1470	-0.0804	0.4224
104	0.7924	0.6094	0.5127	0.4337	0.4721	0.7865
105	0.9246	0.8156	0.7545	0.7049	0.7068	0.8198
106	0.9840	0.9160	0.8777	0.8449	0.8584	0.9907
107	1.0081	0.9729	0.9473	0.9256	0.9363	0.9933
108	1.0099	1.0106	1.0021	0.9942	0.9982	1.0130
109	0.9984	1.0107	1.0140	1.0125	1.0121	0.9931
110	0.9523	0.9924	1.0016	1.0077	1.0058	0.9559
111	0.9090	0.9562	0.9716	0.9823	0.9763	0.9147
112	0.8282	0.8850	0.9070	0.9203	0.9127	0.8256
113	0.6971	0.7589	0.7834	0.8006	0.7864	0.6855
114	0.5832	0.6548	0.6783	0.6945	0.6816	0.5665
115	0.5082	0.5662	0.5868	0.6036	0.5871	0.4601
116	0.4352	0.4886	0.5094	0.5234	0.5049	0.3872
117	0.3691	0.4187	0.4368	0.4491	0.4278	0.3360
118	0.3110	0.3575	0.3712	0.3790	0.3568	0.2478
119	0.2590	0.2982	0.3111	0.3205	0.2937	0.1919
120	0.2086	0.2439	0.2554	0.2588	0.2278	0.0775
121	0.1545	0.1945	0.1914	0.1913	0.1588	0.0080
122	0.1029	0.1257	0.1295	0.1295	0.0878	-0.0712
123	0.0755	0.0965	0.0989	0.0923	0.0491	-0.1004
124	0.0452	0.0668	0.0644	0.0597	0.0127	-0.1585
125	0.0265	0.0433	0.0371	0.0310	-0.0239	-0.1944
126	0.0110	0.0191	0.0124	0.0049	-0.0601	-0.2410
127	0.0493	0.0592	0.0565	0.0475	-0.0129	-0.1721
128	0.2453	0.2454	0.2389	0.2271	0.1697	0.0277
129	0.2665	0.2651	0.2579	0.2446	0.1790	0.0456
130	0.2738	0.2717	0.2622	0.2470	0.1709	0.0519
131	0.2651	0.2570	0.2391	0.2240	0.0931	0.0021
132	0.2236	0.2087	0.1927	0.1705	0.0526	-0.0684
133	0.1245	0.1057	0.0801	0.0528	-0.0012	-0.2401
134	0.0657	0.0402	0.0090	-0.0278	-0.0506	-0.3595

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 29,30 RE= 10.1 MILLION M=0.12 DELTA F= 5.0 DEG.

ORIFICE	-2.96	-2.51	-1.98	-1.75	-1.75	-1.47	-0.95	-0.54
1	0.8168	0.9551	0.9746	0.9925	0.9935	1.0040	1.0117	1.0000
2	0.5031	0.3702	0.1968	0.1212	0.1206	0.0255	-0.1635	-0.3169
3	0.1716	0.0292	-0.1033	-0.2403	-0.2422	-0.3384	-0.5157	-0.6678
4	0.0206	-0.1213	-0.2995	-0.3616	-0.3693	-0.4497	-0.6096	-0.7452
5	-0.0664	-0.1983	-0.3377	-0.4067	-0.4109	-0.4854	-0.6279	-0.7507
6	-0.1305	-0.2443	-0.3835	-0.4464	-0.4515	-0.5226	-0.6534	-0.7661
7	-0.1688	-0.2766	-0.4044	-0.4639	-0.4687	-0.5360	-0.6546	-0.7621
8	-0.2345	-0.3321	-0.4471	-0.5020	-0.5034	-0.5645	-0.6711	-0.7624
9	-0.2922	-0.3821	-0.4800	-0.5385	-0.5405	-0.5966	-0.6934	-0.7775
10	-0.3280	-0.4123	-0.5153	-0.5585	-0.5499	-0.6111	-0.6997	-0.7759
11	-0.3722	-0.4507	-0.5426	-0.5829	-0.5736	-0.6292	-0.7076	-0.7775
12	-0.4173	-0.4844	-0.5654	-0.6008	-0.5931	-0.6408	-0.7063	-0.7607
13	-0.4705	-0.5270	-0.5935	-0.6197	-0.6145	-0.6542	-0.7007	-0.7453
14	-0.5310	-0.5796	-0.6375	-0.6600	-0.6530	-0.6910	-0.7274	-0.7661
15	-0.5799	-0.6242	-0.6743	-0.6972	-0.6913	-0.7216	-0.7522	-0.7872
16	-0.6200	-0.6583	-0.7051	-0.7251	-0.7210	-0.7468	-0.7703	-0.8013
17	-0.6510	-0.6855	-0.7286	-0.7457	-0.7443	-0.7639	-0.7886	-0.8145
18	-0.6791	-0.7129	-0.7490	-0.7640	-0.7647	-0.7760	-0.7992	-0.8236
19	-0.7037	-0.7318	-0.7690	-0.7802	-0.7817	-0.7892	-0.8121	-0.8327
20	-0.7296	-0.7582	-0.7887	-0.8008	-0.8038	-0.8030	-0.8274	-0.8437
21	-0.7571	-0.7816	-0.8119	-0.8162	-0.8218	-0.8212	-0.8409	-0.8550
22	-0.7788	-0.8027	-0.8290	-0.8281	-0.8380	-0.8380	-0.8520	-0.8645
23	-0.7899	-0.8101	-0.8356	-0.8357	-0.8366	-0.8427	-0.8559	-0.8676
24	-0.8002	-0.8199	-0.8410	-0.8392	-0.8403	-0.8493	-0.8577	-0.8658
25	-0.8133	-0.8337	-0.8496	-0.8503	-0.8536	-0.8568	-0.8592	-0.8675
26	-0.8115	-0.8307	-0.8469	-0.8472	-0.8584	-0.8494	-0.8442	-0.8503
27	-0.7685	-0.7866	-0.7704	-0.7751	-0.7787	-0.7723	-0.7613	-0.7682
28	-0.5283	-0.5470	-0.5829	-0.5884	-0.5921	-0.5918	-0.5851	-0.5889
29	-0.3704	-0.3821	-0.4014	-0.4078	-0.4107	-0.4159	-0.4138	-0.4192
30	-0.2446	-0.2536	-0.2691	-0.2780	-0.2787	-0.2871	-0.2904	-0.2934
31	-0.1098	-0.1152	-0.1267	-0.1335	-0.1343	-0.1417	-0.1458	-0.1484
32	0.0014	-0.0031	-0.0101	-0.0137	-0.0061	-0.0181	-0.0253	-0.0290
33	0.1205	0.1181	0.1136	0.1083	0.1161	0.1008	0.0818	0.0752
34	0.1502	0.1495	0.1461	0.1411	0.1475	0.1337	0.1112	0.1044

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX E. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 29,30 RE= 10.1 MILLION M=0.12 DELTA F= 5.0 DEG.

ORIFICE	-0.96	-2.51	-1.98	-1.75	-1.75	-1.47	-0.95	-0.54
101	0.8169	0.9951	0.9746	0.9925	0.9935	1.0040	1.0117	1.0000
102	-0.2111	-0.0149	0.1932	0.2715	0.2718	0.3581	0.5013	0.6002
103	-0.2479	-0.0488	0.0862	0.1524	0.1524	0.2294	0.3543	0.4463
104	-0.2256	-0.0934	0.0543	0.1124	0.1109	0.1784	0.2466	0.3696
105	-0.2141	-0.0969	0.0327	0.0856	0.0965	0.1463	0.2457	0.3193
106	-0.2084	-0.1028	0.0154	0.0643	0.0854	0.1192	0.2102	0.2805
107	-0.2022	-0.1149	0.0025	0.0502	0.0607	0.1003	0.1850	0.2507
108	-0.1929	-0.1379	-0.0125	0.0278	0.0289	0.0728	0.1482	0.2077
109	-0.1860	-0.1186	-0.0233	0.0129	0.0142	0.0545	0.1221	0.1767
110	-0.1869	-0.1165	-0.0381	-0.0036	-0.0025	0.0344	0.0971	0.1486
111	-0.1947	-0.1214	-0.0501	-0.0206	-0.0193	0.0146	0.0715	0.1172
112	-0.1870	-0.1327	-0.0695	-0.0440	-0.0428	-0.0140	0.0358	0.0764
113	-0.1810	-0.1414	-0.0911	-0.0695	-0.0670	-0.0446	-0.0049	0.0283
114	-0.1770	-0.1481	-0.1060	-0.0875	-0.0840	-0.0662	-0.0326	-0.0040
115	-0.1796	-0.1547	-0.1176	-0.1012	-0.0961	-0.0823	-0.0528	-0.0279
116	-0.1820	-0.1557	-0.1252	-0.1110	-0.1052	-0.0945	-0.0492	-0.0462
117	-0.1825	-0.1561	-0.1345	-0.1214	-0.1137	-0.1065	-0.0833	-0.0633
118	-0.1822	-0.1586	-0.1394	-0.1277	-0.1200	-0.1141	-0.0930	-0.0755
119	-0.1764	-0.1544	-0.1332	-0.1287	-0.1222	-0.1156	-0.0988	-0.0818
120	-0.1711	-0.1516	-0.1274	-0.1263	-0.1228	-0.1172	-0.1022	-0.0868
121	-0.1716	-0.1535	-0.1330	-0.1219	-0.1184	-0.1224	-0.1101	-0.0971
122	-0.1659	-0.1505	-0.1324	-0.1238	-0.1202	-0.1148	-0.1140	-0.1023
123	-0.1834	-0.1484	-0.1325	-0.1254	-0.1227	-0.1163	-0.1134	-0.1045
124	-0.1575	-0.1444	-0.1300	-0.1242	-0.1230	-0.1156	-0.1114	-0.1064
125	-0.1408	-0.1307	-0.1169	-0.1119	-0.1121	-0.1059	-0.0991	-0.1004
126	-0.1146	-0.1076	-0.1003	-0.0963	-0.0979	-0.0933	-0.0886	-0.0926
127	0.0152	0.0222	0.0315	0.0344	0.0337	0.0354	0.0425	0.0489
128	0.1462	0.1582	0.1712	0.1776	0.1780	0.1831	0.1905	0.2026
129	0.2136	0.2254	0.2382	0.2443	0.2456	0.2505	0.2569	0.2653
130	0.2765	0.2860	0.2810	0.2861	0.2866	0.2914	0.2956	0.3026
131	0.3071	0.3353	0.3574	0.3590	0.3600	0.3642	0.3679	0.3719
132	0.3284	0.3376	0.3476	0.3504	0.3507	0.3527	0.3513	0.3524
133	0.2748	0.2796	0.2835	0.2841	0.2839	0.2838	0.2771	0.2761
134	0.2533	0.2467	0.2400	0.2557	0.2552	0.2575	0.2470	0.2452

ORIGINAL PAGE IS OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 25,30 RE 10.1 MILLION M=0.10 DELTA E= 5.0 DEG.

ORIFICE	0.01	0.01	1.00	2.05	3.00	4.00	5.01	6.07
1	0.9552	0.9569	0.7965	0.5136	0.1469	-0.3173	-0.8623	-1.4967
2	-0.5416	-0.5440	-1.0045	-1.5464	-2.1060	-2.7206	-3.3664	-4.0598
3	-0.8819	-0.8854	-1.3146	-1.8085	-2.3113	-2.8470	-3.4042	-4.0073
4	-0.9337	-0.9357	-1.3137	-1.7392	-2.1702	-2.6315	-3.1180	-3.6269
5	-0.9178	-0.9193	-1.2523	-1.6277	-1.9971	-2.4204	-2.8567	-3.0745
6	-0.9180	-0.9214	-1.2225	-1.5560	-1.8598	-2.2407	-2.4917	-2.8906
7	-0.9035	-0.9053	-1.1828	-1.4900	-1.8079	-2.0198	-2.3668	-2.7045
8	-0.8964	-0.8984	-1.1325	-1.4017	-1.6052	-1.8895	-2.1571	-2.4401
9	-0.8900	-0.8911	-1.1107	-1.3089	-1.5495	-1.7958	-2.0311	-2.2798
10	-0.8805	-0.8796	-1.0805	-1.2653	-1.4841	-1.6990	-1.9151	-2.1369
11	-0.8714	-0.8726	-1.0503	-1.2201	-1.4077	-1.5979	-1.7913	-1.9792
12	-0.8493	-0.8508	-0.9796	-1.1512	-1.3075	-1.4692	-1.6319	-1.7841
13	-0.8045	-0.8058	-0.9253	-1.0606	-1.1791	-1.3021	-1.4276	-1.5435
14	-0.8170	-0.8211	-0.9067	-1.0330	-1.1367	-1.2359	-1.3383	-1.4308
15	-0.8315	-0.8335	-0.9260	-1.0232	-1.1080	-1.1943	-1.2801	-1.3532
16	-0.8435	-0.8431	-0.9243	-1.0066	-1.0821	-1.1592	-1.2258	-1.2941
17	-0.8489	-0.8509	-0.9219	-0.9956	-1.0589	-1.1225	-1.1943	-1.2378
18	-0.8555	-0.8576	-0.9206	-0.9839	-1.0409	-1.0963	-1.1475	-1.1891
19	-0.8640	-0.8634	-0.9176	-0.9714	-1.0199	-1.0691	-1.1192	-1.1441
20	-0.8705	-0.8712	-0.9170	-0.9644	-1.0073	-1.0488	-1.0918	-1.1051
21	-0.8773	-0.8779	-0.9182	-0.9590	-0.9917	-1.0251	-1.0487	-1.0623
22	-0.8821	-0.8802	-0.9176	-0.9462	-0.9743	-1.0003	-1.0146	-1.0147
23	-0.8788	-0.8811	-0.9276	-0.9373	-0.9609	-0.9792	-0.9915	-0.9827
24	-0.8776	-0.8769	-0.9044	-0.9284	-0.9450	-0.9595	-0.9637	-0.9485
25	-0.8770	-0.8786	-0.8967	-0.9145	-0.9291	-0.9364	-0.9318	-0.9072
26	-0.8564	-0.8558	-0.8723	-0.8818	-0.8839	-0.8932	-0.8829	-0.8377
27	-0.7703	-0.7701	-0.7804	-0.7849	-0.7824	-0.7801	-0.7577	-0.7044
28	-0.5896	-0.5903	-0.5952	-0.5957	-0.5935	-0.5830	-0.5578	-0.5050
29	-0.4204	-0.4199	-0.4243	-0.4234	-0.4207	-0.4100	-0.3881	-0.3434
30	-0.2948	-0.2952	-0.3006	-0.3017	-0.3004	-0.2926	-0.2749	-0.2447
31	-0.1499	-0.1499	-0.1538	-0.1561	-0.1554	-0.1545	-0.1532	-0.1599
32	-0.0324	-0.0315	-0.0392	-0.0471	-0.0548	-0.0660	-0.0857	-0.1169
33	0.0664	0.0676	0.0500	0.0305	0.0113	-0.0139	-0.0483	-0.0975
34	0.0954	0.0965	0.0730	0.0527	0.0308	0.0017	-0.0382	-0.0869

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 29,30 RE= 10.1 MILLION M=0.12 DELTA F= 5.0 DEG.

ORIFICE	0.01	0.01	1.00	2.05	3.00	4.00	5.01	6.07
101	0.9552	0.9569	0.7965	0.5136	0.1466	-0.3173	-0.8623	-1.4967
102	0.7164	0.7197	0.8835	0.9836	1.0075	0.9760	0.8887	0.7456
103	0.5594	0.5609	0.7357	0.8726	0.9572	0.9985	1.0034	0.9765
104	0.4726	0.4746	0.6391	0.7804	0.8811	0.9506	0.9517	1.0040
105	0.4142	0.4161	0.5717	0.7106	0.8137	0.8960	0.9512	0.9889
106	0.3688	0.3707	0.5192	0.6531	0.7594	0.8433	0.9084	0.9578
107	0.3343	0.3356	0.4775	0.6075	0.7119	0.7985	0.8686	0.9238
108	0.2829	0.2840	0.4138	0.5353	0.6370	0.7239	0.7961	0.8575
109	0.2455	0.2459	0.3670	0.4815	0.5774	0.6639	0.7362	0.7997
110	0.2126	0.2136	0.3267	0.4356	0.5280	0.6121	0.6850	0.7497
111	0.1765	0.1772	0.2810	0.3825	0.4701	0.5494	0.6216	0.6848
112	0.1284	0.1295	0.2217	0.3142	0.3943	0.4690	0.5356	0.5974
113	0.0713	0.0724	0.1497	0.2269	0.2964	0.3613	0.4205	0.4762
114	0.0330	0.0334	0.1011	0.1693	0.2302	0.2876	0.3414	0.3915
115	0.0038	0.0051	0.0640	0.1249	0.1801	0.2313	0.2794	0.3251
116	-0.0174	-0.0168	0.0362	0.0908	0.1401	0.1869	0.2303	0.2720
117	-0.0375	-0.0364	0.0107	0.0602	0.1055	0.1479	0.1879	0.2259
118	-0.0529	-0.0520	-0.0086	0.0358	0.0773	0.1162	0.1520	0.1861
119	-0.0611	-0.0601	-0.0220	0.0186	0.0561	0.0911	0.1233	0.1536
120	-0.0689	-0.0681	-0.0329	0.0031	0.0372	0.0692	0.0979	0.1239
121	-0.0810	-0.0816	-0.0499	-0.0163	0.0143	0.0426	0.0680	0.0919
122	-0.0876	-0.0876	-0.0592	-0.0309	-0.0031	0.0217	0.0445	0.0637
123	-0.0920	-0.0908	-0.0645	-0.0370	-0.0114	0.0116	0.0325	0.0503
124	-0.0928	-0.0927	-0.0684	-0.0424	-0.0180	0.0034	0.0219	0.0378
125	-0.0875	-0.0873	-0.0641	-0.0388	-0.0163	0.0035	0.0196	0.0337
126	-0.0788	-0.0771	-0.0522	-0.0254	-0.0024	0.0158	0.0294	0.0397
127	0.0497	0.0491	0.0023	-0.0120	0.0138	0.0332	0.0498	0.0622
128	0.2119	0.2117	0.2272	0.2447	0.2633	0.2769	0.2864	0.2912
129	0.2708	0.2710	0.2817	0.2934	0.3045	0.3122	0.3195	0.3216
130	0.3062	0.3069	0.3155	0.3236	0.3329	0.3391	0.3437	0.3443
131	0.3746	0.3743	0.3802	0.3852	0.3906	0.3935	0.3948	0.3920
132	0.3534	0.3537	0.3558	0.3587	0.3610	0.3617	0.3599	0.3521
133	0.2744	0.2747	0.2729	0.2708	0.2692	0.2636	0.2552	0.2413
134	0.2417	0.2421	0.2376	0.2310	0.2265	0.2177	0.2038	0.1806

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 29,30 R= 10.1 MILLION M=0.12 DELTA F= 5.0 DEG.

ORIFICE	8.03	10.03	12.03	14.02	15.99	16.52	17.01	17.54
1	-2.8578	-4.5627	-6.4262	-8.3474	-10.1368	-10.5427	-10.9267	-11.3231
2	-5.4320	-6.9730	-8.5501	-10.1231	-11.4148	-11.6576	-11.9542	-12.1840
3	-5.1668	-6.4587	-7.8457	-9.0574	-9.8664	-10.1165	-10.2592	-10.4117
4	-4.6407	-5.5327	-6.3808	-7.3664	-8.2715	-8.4616	-8.5236	-8.6953
5	-3.8769	-4.7498	-5.6240	-6.4542	-7.1145	-7.2865	-7.3945	-7.5857
6	-3.5941	-4.3538	-5.1159	-5.8346	-6.3855	-6.5551	-6.6360	-6.7509
7	-3.3269	-3.5971	-4.0693	-5.2934	-5.6157	-5.9187	-6.0574	-6.1811
8	-2.9671	-3.5330	-4.0861	-4.5936	-5.0082	-5.1036	-5.1782	-5.2474
9	-2.7449	-3.2194	-3.7183	-4.1581	-4.5036	-4.5841	-4.6429	-4.6337
10	-2.5528	-2.9824	-3.4153	-3.7772	-4.0934	-4.1331	-4.2050	-4.2847
11	-2.3318	-2.7045	-3.0736	-3.3776	-3.6276	-3.6813	-3.7104	-3.7602
12	-2.0773	-2.3739	-2.6685	-2.9099	-3.1052	-3.1473	-3.1529	-3.1923
13	-1.7635	-1.9912	-2.1845	-2.3513	-2.4613	-2.4681	-2.4871	-2.5036
14	-1.5971	-1.7729	-1.9255	-2.0439	-2.1038	-2.1274	-2.1312	-2.1246
15	-1.4923	-1.6255	-1.7408	-1.8245	-1.8638	-1.8558	-1.8586	-1.8590
16	-1.4044	-1.5096	-1.5976	-1.6564	-1.6597	-1.6488	-1.6315	-1.6498
17	-1.3204	-1.4057	-1.4695	-1.5129	-1.4828	-1.4627	-1.4468	-1.4413
18	-1.2524	-1.3159	-1.3637	-1.3816	-1.3401	-1.3255	-1.3081	-1.2502
19	-1.1914	-1.2330	-1.2564	-1.2699	-1.2056	-1.1689	-1.1335	-1.0805
20	-1.1291	-1.1497	-1.1665	-1.1457	-1.0714	-1.0112	-0.9526	-0.9699
21	-1.0641	-1.0651	-1.0510	-1.0331	-0.9195	-0.8877	-0.8403	-0.8256
22	-0.9927	-0.9657	-0.9169	-0.9022	-0.8019	-0.7565	-0.6970	-0.7025
23	-0.9350	-0.8954	-0.8545	-0.8399	-0.7047	-0.6745	-0.6421	-0.5954
24	-0.8774	-0.8115	-0.7554	-0.7258	-0.6224	-0.5914	-0.5647	-0.6187
25	-0.8034	-0.7275	-0.6785	-0.6657	-0.5486	-0.5573	-0.5254	-0.6105
26	-0.7192	-0.5860	-0.5103	-0.5630	-0.5316	-0.5155	-0.5201	-0.6010
27	-0.5226	-0.3976	-0.4058	-0.4516	-0.5030	-0.5157	-0.5139	-0.5340
28	-0.3419	-0.3167	-0.3262	-0.4093	-0.5002	-0.5096	-0.5124	-0.5298
29	-0.2668	-0.2872	-0.3095	-0.3643	-0.5043	-0.5256	-0.5209	-0.5262
30	-0.2406	-0.2748	-0.3086	-0.3637	-0.5062	-0.5299	-0.5620	-0.5817
31	-0.2148	-0.2626	-0.3125	-0.3583	-0.5109	-0.5562	-0.5764	-0.6423
32	-0.2105	-0.2581	-0.3097	-0.3603	-0.4757	-0.5278	-0.5269	-0.5928
33	-0.1925	-0.2574	-0.3139	-0.3625	-0.4643	-0.5043	-0.5241	-0.5688
34	-0.1875	-0.2610	-0.3045	-0.3736	-0.4955	-0.5032	-0.5608	-0.5661

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 29,30 RE 10.1 MILLION M=0.10 DELTA F= 5.0 DEG.

ORIFICE	8.03	10.03	12.03	14.02	15.99	16.52	17.01	17.54
101	-2.8578	-4.5627	-6.4262	-8.3474	-10.1368	-10.5427	-10.9267	-11.3231
102	0.3422	-0.2329	-0.7532	-1.7195	-2.4807	-2.6491	-2.8242	-2.9955
103	0.8325	0.5715	0.2221	-0.1862	-0.5884	-0.6972	-0.7792	-0.8809
104	0.9677	0.9503	0.6567	0.4193	0.1750	0.0591	0.0658	-0.0084
105	1.0034	0.9538	0.8437	0.6894	0.5347	0.4877	0.4508	0.4042
106	1.0001	0.9935	0.9339	0.8375	0.7272	0.6970	0.6688	0.6427
107	0.9864	1.0043	0.9764	0.9169	0.8404	0.8203	0.7953	0.7752
108	0.9423	0.9921	1.0029	0.9852	0.9535	0.9434	0.9344	0.9225
109	0.8944	0.9591	0.9941	1.0026	0.9934	0.9904	0.9858	0.9783
110	0.8476	0.9232	0.9723	0.9959	1.0028	0.9997	1.0030	0.9950
111	0.7861	0.8668	0.9283	0.9652	0.9908	0.9905	0.9939	0.9993
112	0.6989	0.7848	0.8542	0.9052	0.9397	0.9448	0.9513	0.9578
113	0.5694	0.6558	0.7274	0.7854	0.8286	0.8396	0.8468	0.8529
114	0.4779	0.5567	0.6266	0.6841	0.7289	0.7368	0.7464	0.7564
115	0.4033	0.4777	0.5441	0.5986	0.6390	0.6505	0.6578	0.6612
116	0.3429	0.4117	0.4726	0.5245	0.5630	0.5751	0.5808	0.5847
117	0.2907	0.3528	0.4110	0.4567	0.4926	0.4994	0.5064	0.5163
118	0.2431	0.3020	0.3549	0.3971	0.4296	0.4342	0.4397	0.4451
119	0.2046	0.2574	0.3054	0.3436	0.3716	0.3763	0.3771	0.3840
120	0.1700	0.2163	0.2588	0.2926	0.3144	0.3172	0.3199	0.3246
121	0.1315	0.1719	0.2096	0.2391	0.2540	0.2608	0.2634	0.2610
122	0.0980	0.1325	0.1644	0.1861	0.2001	0.1991	0.2031	0.2021
123	0.0807	0.1125	0.1389	0.1621	0.1693	0.1697	0.1672	0.1702
124	0.0637	0.0931	0.1183	0.1359	0.1404	0.1381	0.1380	0.1368
125	0.0558	0.0800	0.1007	0.1174	0.1162	0.1181	0.1150	0.1090
126	0.0554	0.0741	0.0908	0.1031	0.0964	0.0956	0.0910	0.0846
127	0.0834	0.1066	0.1274	0.1388	0.1387	0.1361	0.1306	0.1330
128	0.2970	0.3042	0.3119	0.3153	0.3062	0.3034	0.2984	0.2894
129	0.3254	0.3309	0.3356	0.3386	0.3282	0.3236	0.3193	0.3153
130	0.3457	0.3487	0.3532	0.3519	0.3392	0.3323	0.3290	0.3203
131	0.3682	0.3861	0.3858	0.3796	0.3632	0.3563	0.3502	0.3388
132	0.3397	0.3332	0.3262	0.3184	0.2562	0.2908	0.2797	0.2684
133	0.2114	0.1918	0.1803	0.1616	0.1288	0.1134	0.1018	0.0707
134	0.1435	0.1125	0.0951	0.0767	0.0203	0.0131	-0.0164	-0.0277

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 31 R= 6.1 MILLION M=0.07 DELTA F= 5.0 DEG.

ORIFICE	-3.99	-3.50	-2.99	-2.52	-2.00	-1.76	-1.52	-1.52
1	0.5141	0.6699	0.7016	0.8923	0.9560	0.9785	0.9921	0.9923
2	0.7547	0.6507	0.5247	0.3923	0.2303	0.1457	0.0602	0.0613
3	0.4642	0.3412	0.1970	0.0544	-0.1375	-0.2242	-0.3123	-0.3088
4	0.3067	0.1863	0.0467	-0.1111	-0.2674	-0.3458	-0.4255	-0.4217
5	0.2130	0.0989	-0.0535	-0.1774	-0.3191	-0.3910	-0.4628	-0.4590
6	0.1374	0.0050	-0.1172	-0.2345	-0.3662	-0.4318	-0.4984	-0.4951
7	0.0853	-0.0422	-0.1569	-0.2666	-0.3904	-0.4523	-0.5115	-0.5098
8	-0.0229	-0.1171	-0.2212	-0.3220	-0.4317	-0.4866	-0.5390	-0.5403
9	-0.0925	-0.1817	-0.2778	-0.3718	-0.4726	-0.5236	-0.5732	-0.5721
10	-0.1419	-0.2243	-0.3151	-0.4003	-0.4547	-0.5432	-0.5900	-0.5880
11	-0.2006	-0.2761	-0.3583	-0.4368	-0.5249	-0.5655	-0.6096	-0.6068
12	-0.2625	-0.3294	-0.4018	-0.4717	-0.5493	-0.5844	-0.6230	-0.6196
13	-0.3398	-0.3964	-0.4568	-0.5148	-0.5757	-0.6051	-0.6353	-0.6352
14	-0.4144	-0.4631	-0.5164	-0.5674	-0.6187	-0.6446	-0.6718	-0.6709
15	-0.4737	-0.5188	-0.5647	-0.6104	-0.6591	-0.6783	-0.7051	-0.7022
16	-0.5213	-0.5604	-0.6036	-0.6439	-0.6854	-0.7064	-0.7250	-0.7281
17	-0.5591	-0.5961	-0.6347	-0.6659	-0.7102	-0.7295	-0.7458	-0.7457
18	-0.5939	-0.6270	-0.6608	-0.6974	-0.7327	-0.7478	-0.7652	-0.7665
19	-0.6248	-0.6542	-0.6858	-0.7191	-0.7486	-0.7632	-0.7800	-0.7782
20	-0.6570	-0.6838	-0.7127	-0.7429	-0.7705	-0.7831	-0.7968	-0.7996
21	-0.6873	-0.7139	-0.7374	-0.7637	-0.7902	-0.8014	-0.8158	-0.8141
22	-0.7147	-0.7374	-0.7601	-0.7839	-0.8099	-0.8186	-0.8309	-0.8296
23	-0.7255	-0.7498	-0.7720	-0.7912	-0.8117	-0.8208	-0.8349	-0.8356
24	-0.7398	-0.7612	-0.7812	-0.8006	-0.8196	-0.8323	-0.8417	-0.8410
25	-0.7514	-0.7699	-0.7894	-0.8095	-0.8297	-0.8381	-0.8503	-0.8480
26	-0.7469	-0.7625	-0.7790	-0.7995	-0.8230	-0.8295	-0.8436	-0.8387
27	-0.6992	-0.7163	-0.7356	-0.7546	-0.7785	-0.7886	-0.7999	-0.7954
28	-0.6862	-0.7095	-0.7369	-0.7062	-0.6144	-0.5772	-0.5424	-0.5672
29	-0.3113	-0.3250	-0.3407	-0.3575	-0.3757	-0.3821	-0.3883	-0.3882
30	-0.2150	-0.2240	-0.2326	-0.2449	-0.2551	-0.2593	-0.2628	-0.2643
31	-0.0509	-0.0968	-0.1045	-0.1127	-0.1191	-0.1219	-0.1245	-0.1250
32	0.0115	0.0069	0.0030	-0.0019	-0.0061	-0.0076	-0.0101	-0.0099
33	0.1237	0.1212	0.1192	0.1158	0.1134	0.1129	0.1112	0.1113
34	0.1508	0.1496	0.1483	0.1457	0.1436	0.1443	0.1431	0.1433

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX F. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 31 R= 6.1 MILLION M=0.07 DELTA F= 5.0 DEG.

ORIFICE	-3.99	-3.50	-2.99	-2.52	-2.00	-1.76	-1.52	-1.52
101	0.5141	0.6699	0.9016	0.9923	0.9560	0.9785	0.9921	0.9923
102	-0.7043	-0.4621	-0.2210	-0.0224	0.1738	0.2638	0.3417	0.3393
103	-0.6377	-0.4471	-0.2535	-0.0919	0.0696	0.1460	0.2138	0.2120
104	-0.5515	-0.3924	-0.2311	-0.0963	0.0423	0.1081	0.1663	0.1653
105	-0.4975	-0.3593	-0.2165	-0.0982	0.0234	0.0821	0.1343	0.1339
106	-0.4623	-0.3384	-0.2121	-0.1039	0.0078	0.0619	0.1095	0.1085
107	-0.4329	-0.3207	-0.2051	-0.1054	-0.0021	0.0468	0.0919	0.0901
108	-0.3944	-0.2965	-0.1943	-0.1088	-0.0175	0.0266	0.0664	0.0640
109	-0.3629	-0.2784	-0.1870	-0.1098	-0.0275	0.0119	0.0485	0.0463
110	-0.3496	-0.2707	-0.1876	-0.1161	-0.0413	-0.0032	0.0289	0.0278
111	-0.3286	-0.2591	-0.1856	-0.1219	-0.0534	-0.0198	0.0088	0.0083
112	-0.2972	-0.2508	-0.1872	-0.1318	-0.0723	-0.0437	-0.0178	-0.0191
113	-0.2773	-0.2337	-0.1844	-0.1404	-0.0922	-0.0680	-0.0475	-0.0474
114	-0.2637	-0.2208	-0.1856	-0.1474	-0.1065	-0.0858	-0.0679	-0.0682
115	-0.2549	-0.2190	-0.1869	-0.1529	-0.1164	-0.0985	-0.0834	-0.0838
116	-0.2484	-0.2154	-0.1860	-0.1573	-0.1248	-0.1083	-0.0948	-0.0950
117	-0.2437	-0.2133	-0.1887	-0.1623	-0.1331	-0.1190	-0.1060	-0.1068
118	-0.2373	-0.2095	-0.1884	-0.1642	-0.1387	-0.1249	-0.1139	-0.1139
119	-0.2256	-0.2003	-0.1810	-0.1613	-0.1385	-0.1255	-0.1156	-0.1155
120	-0.2143	-0.1929	-0.1700	-0.1582	-0.1362	-0.1250	-0.1158	-0.1164
121	-0.2098	-0.1911	-0.1705	-0.1608	-0.1402	-0.1300	-0.1219	-0.1224
122	-0.1986	-0.1849	-0.1657	-0.1592	-0.1402	-0.1294	-0.1229	-0.1230
123	-0.1924	-0.1791	-0.1637	-0.1574	-0.1384	-0.1296	-0.1219	-0.1236
124	-0.1820	-0.1717	-0.1593	-0.1508	-0.1370	-0.1285	-0.1201	-0.1212
125	-0.1609	-0.1529	-0.1434	-0.1357	-0.1281	-0.1186	-0.1107	-0.1117
126	-0.1275	-0.1235	-0.1226	-0.1194	-0.1152	-0.1035	-0.0955	-0.0953
127	-0.0014	0.0049	0.0105	0.0156	0.0102	-0.0043	-0.0215	-0.0202
128	0.1193	0.1326	0.1507	0.1669	0.1860	0.1926	0.1984	0.1984
129	0.1826	0.1979	0.2199	0.2356	0.2492	0.2538	0.2574	0.2567
130	0.2239	0.2413	0.2624	0.2767	0.2878	0.2927	0.2949	0.2941
131	0.2969	0.3098	0.3364	0.3517	0.3609	0.3640	0.3644	0.3655
132	0.2971	0.3137	0.3322	0.3419	0.3472	0.3485	0.3503	0.3508
133	0.2572	0.2646	0.2729	0.2765	0.2796	0.2817	0.2826	0.2830
134	0.2380	0.2446	0.2506	0.2533	0.2560	0.2580	0.2593	0.2586

ORIGINAL PAGE IS OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 31 R= 6.1 MILLION M=0.07 DELTA F= 5.0 DEG.

ORIFICE	-1.90	-0.53	-0.02	1.03	2.11	3.02	4.90	4.97
1	0.5081	0.5837	0.5444	0.7855	0.5493	0.2014	-0.2064	-0.6781
2	-0.1598	-0.3513	-0.5419	-0.5653	-1.4468	-1.5989	-2.5376	-3.1007
3	-0.5066	-0.5724	-0.5751	-1.2652	-1.7073	-2.1913	-2.3648	-3.1585
4	-0.5600	-0.7655	-0.5271	-1.2731	-1.6544	-2.0675	-2.4641	-2.8882
5	-0.6211	-0.7685	-0.5105	-1.2194	-1.5461	-1.9122	-2.2706	-2.6514
6	-0.6433	-0.7814	-0.5072	-1.1858	-1.4820	-1.8169	-2.1455	-2.4719
7	-0.6480	-0.7735	-0.5958	-1.1500	-1.4332	-1.7274	-2.0326	-2.1832
8	-0.6629	-0.7720	-0.5791	-1.1039	-1.3446	-1.6074	-1.7753	-2.0303
9	-0.6940	-0.7823	-0.5787	-1.0796	-1.2592	-1.4592	-1.7011	-1.9189
10	-0.6893	-0.7825	-0.5704	-1.0539	-1.2468	-1.4218	-1.6214	-1.8124
11	-0.7018	-0.7805	-0.5617	-1.0230	-1.1910	-1.3585	-1.5224	-1.6549
12	-0.7018	-0.7702	-0.5403	-0.9779	-1.1051	-1.2602	-1.4024	-1.5454
13	-0.7309	-0.7556	-0.5116	-0.9032	-1.0207	-1.1415	-1.2498	-1.3565
14	-0.7287	-0.7757	-0.5224	-0.8995	-1.0005	-1.0979	-1.1852	-1.2690
15	-0.7536	-0.7353	-0.5266	-0.9042	-0.9848	-1.0688	-1.1463	-1.2170
16	-0.7717	-0.8101	-0.5318	-0.9042	-0.9727	-1.0447	-1.1096	-1.1566
17	-0.7862	-0.7209	-0.5413	-0.8996	-0.9621	-1.0236	-1.0754	-1.1228
18	-0.8001	-0.8303	-0.5477	-0.9010	-0.9528	-1.0038	-1.0479	-1.0856
19	-0.8127	-0.8393	-0.5525	-0.8964	-0.9409	-0.9854	-1.0138	-1.0526
20	-0.8300	-0.8470	-0.5616	-0.8961	-0.9360	-0.9714	-1.0103	-1.0217
21	-0.8432	-0.8544	-0.5703	-0.8954	-0.9292	-0.9539	-0.9754	-0.9834
22	-0.8559	-0.8637	-0.5764	-0.8928	-0.9121	-0.9345	-0.9465	-0.9382
23	-0.8589	-0.8676	-0.5714	-0.8871	-0.9026	-0.9179	-0.9139	-0.9135
24	-0.8639	-0.8698	-0.5728	-0.8783	-0.8931	-0.9023	-0.9025	-0.8804
25	-0.8702	-0.8742	-0.5739	-0.8719	-0.8776	-0.8800	-0.8700	-0.8410
26	-0.8812	-0.8863	-0.8553	-0.8446	-0.8442	-0.8376	-0.8163	-0.7745
27	-0.8210	-0.7914	-0.7718	-0.7537	-0.7416	-0.7296	-0.6983	-0.6281
28	-0.5655	-0.5867	-0.5906	-0.5710	-0.5586	-0.5425	-0.5095	-0.4418
29	-0.4033	-0.4245	-0.4217	-0.4054	-0.3945	-0.3776	-0.3497	-0.2948
30	-0.2740	-0.2920	-0.2964	-0.2875	-0.2815	-0.2684	-0.2528	-0.2279
31	-0.1321	-0.1455	-0.1495	-0.1465	-0.1472	-0.1460	-0.1503	-0.1457
32	-0.0140	-0.0215	-0.0304	-0.0424	-0.0529	-0.0728	-0.0979	-0.1383
33	0.1089	0.0989	0.0735	0.0357	0.0052	-0.0297	-0.0659	-0.1263
34	0.1414	0.1325	0.1030	0.0584	0.0252	-0.0123	-0.0574	-0.1121

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX E. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 31 R= 6.1 MILLION M=0.27 DELTA F= 5.0 DEG.

ORIFICE	-1.00	-0.53	-0.02	1.03	2.01	3.02	4.00	4.97
101	0.5481	0.5837	0.6444	0.7954	0.8493	0.2014	-0.0764	-0.1781
102	0.4955	0.5198	0.7161	0.4481	0.8644	0.8970	0.9907	0.9117
103	0.3519	0.4651	0.4586	0.7208	0.8478	0.9363	0.9823	0.9949
104	0.2269	0.3560	0.4728	0.6265	0.7564	0.8581	0.9258	0.9711
105	0.2452	0.3765	0.4144	0.5612	0.6855	0.7924	0.8704	0.9255
106	0.2107	0.2966	0.3696	0.5075	0.6286	0.7379	0.8175	0.8815
107	0.1954	0.2664	0.3357	0.4570	0.5843	0.6891	0.7716	0.8400
108	0.1498	0.2219	0.2842	0.4047	0.5156	0.6151	0.6876	0.7660
109	0.1231	0.1709	0.2474	0.3585	0.4634	0.5570	0.6377	0.7062
110	0.0998	0.1612	0.2145	0.3185	0.4186	0.5084	0.5871	0.6533
111	0.0734	0.1298	0.1786	0.2741	0.3661	0.4518	0.5248	0.5917
112	0.0389	0.0983	0.1310	0.2169	0.2988	0.3783	0.4463	0.5082
113	-0.0014	0.0397	0.0741	0.1456	0.2149	0.2817	0.3415	0.3954
114	-0.0281	0.0076	0.0365	0.0971	0.1577	0.2172	0.2685	0.3177
115	-0.0485	-0.0169	0.0083	0.0612	0.1154	0.1677	0.2144	0.2570
116	-0.0635	-0.0356	-0.0130	0.0333	0.0811	0.1290	0.1708	0.2058
117	-0.0777	-0.0522	-0.0330	0.0096	0.0527	0.0950	0.1320	0.1675
118	-0.0884	-0.0640	-0.0476	-0.0107	0.0286	0.0672	0.1012	0.1319
119	-0.0924	-0.0700	-0.0559	-0.0237	0.0119	0.0458	0.0755	0.1041
120	-0.0950	-0.0750	-0.0632	-0.0346	-0.0030	0.0273	0.0534	0.0781
121	-0.1028	-0.0846	-0.0745	-0.0499	-0.0224	0.0048	0.0293	0.0496
122	-0.1042	-0.0885	-0.0798	-0.0599	-0.0351	-0.0119	0.0050	0.0252
123	-0.1055	-0.0902	-0.0819	-0.0635	-0.0404	-0.0200	-0.0021	0.0136
124	-0.1043	-0.0897	-0.0821	-0.0644	-0.0438	-0.0248	-0.0097	0.0041
125	-0.0942	-0.0750	-0.0712	-0.0550	-0.0362	-0.0197	-0.0067	0.0045
126	-0.0759	-0.0683	-0.0502	-0.0323	-0.0140	0.0045	0.0120	0.0197
127	-0.0608	-0.0611	-0.0461	-0.0238	-0.0084	0.0125	0.0262	0.0370
128	0.2102	0.2228	0.2314	0.2566	0.2739	0.2854	0.2910	0.2953
129	0.2660	0.2742	0.2756	0.2843	0.2937	0.3002	0.3044	0.3044
130	0.3012	0.3073	0.3073	0.3108	0.3177	0.3215	0.3233	0.3231
131	0.3763	0.3734	0.3710	0.3707	0.3755	0.3743	0.3743	0.3721
132	0.3538	0.3562	0.3512	0.3458	0.3455	0.3435	0.3404	0.3340
133	0.2852	0.2850	0.2761	0.2630	0.2584	0.2472	0.2365	0.2189
134	0.2605	0.2585	0.2446	0.2266	0.2146	0.2016	0.1941	0.1587

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 31 R= 6.1 MILLION M=0.07 DELTA R= 5.0 DEG.

ORIFICE	6.00	8.00	10.03	12.03	14.01	15.96	16.48	17.03
1	-1.2554	-2.6153	-4.2370	-6.1279	-8.0677	-9.9084	-10.3481	-10.7093
2	-3.7288	-5.2818	-6.5729	-8.1652	-9.7025	-11.0843	-11.4011	-11.8072
3	-3.6298	-4.8472	-6.1780	-7.3953	-8.8670	-10.1045	-10.5313	-10.7857
4	-3.3831	-4.4125	-5.4677	-6.0129	-6.7399	-7.9301	-8.0612	-8.2296
5	-3.1221	-3.5509	-4.4686	-5.3412	-6.1611	-6.8673	-6.5978	-7.2423
6	-2.6435	-3.3525	-4.1600	-4.8710	-5.6089	-6.2045	-6.3065	-6.4882
7	-2.5005	-3.1573	-3.8169	-4.4750	-5.1074	-5.5541	-5.7341	-5.8812
8	-2.2544	-2.8173	-3.3786	-3.9211	-4.4424	-4.8773	-4.9619	-5.0573
9	-2.1431	-2.6083	-3.1885	-3.5553	-4.0007	-4.3629	-4.4476	-4.5579
10	-2.0150	-2.4318	-2.8639	-3.2645	-3.6730	-3.9653	-4.0476	-4.0747
11	-1.8736	-2.2305	-2.5015	-2.9502	-3.2921	-3.5484	-3.5540	-3.6275
12	-1.6918	-1.9809	-2.2776	-2.5629	-2.8362	-3.0235	-3.0574	-3.1003
13	-1.4634	-1.6640	-1.8872	-2.1004	-2.2831	-2.4066	-2.4397	-2.4292
14	-1.3598	-1.5787	-1.7030	-1.8647	-1.9852	-2.0626	-2.0525	-2.0804
15	-1.2999	-1.4277	-1.5650	-1.6848	-1.7764	-1.8180	-1.8097	-1.8110
16	-1.2077	-1.3410	-1.4525	-1.5364	-1.6084	-1.6180	-1.6127	-1.5834
17	-1.1731	-1.2666	-1.3464	-1.4202	-1.4601	-1.4484	-1.4370	-1.3964
18	-1.1273	-1.1985	-1.2564	-1.3085	-1.3300	-1.2985	-1.2746	-1.2467
19	-1.0784	-1.1298	-1.1746	-1.2030	-1.2054	-1.1465	-1.1424	-1.0810
20	-1.0375	-1.0685	-1.0879	-1.1025	-1.0959	-1.0135	-0.9465	-0.8308
21	-0.9836	-0.9989	-1.0063	-1.0055	-0.9955	-0.8662	-0.8089	-0.7483
22	-0.8337	-0.9106	-0.8880	-0.8778	-0.8442	-0.7318	-0.6710	-0.6232
23	-0.8946	-0.8611	-0.8142	-0.7838	-0.7615	-0.6571	-0.6000	-0.5618
24	-0.8539	-0.7838	-0.7741	-0.7129	-0.6829	-0.5788	-0.5528	-0.5384
25	-0.7972	-0.6977	-0.6307	-0.5588	-0.6188	-0.5213	-0.5238	-0.5319
26	-0.7111	-0.5704	-0.4634	-0.4613	-0.5097	-0.5147	-0.5239	-0.5300
27	-0.5882	-0.4116	-0.3699	-0.4085	-0.3993	-0.5036	-0.5350	-0.5258
28	-0.3506	-0.2588	-0.3085	-0.3401	-0.3778	-0.4882	-0.5231	-0.5536
29	-0.2642	-0.2565	-0.2798	-0.3233	-0.3727	-0.5014	-0.5555	-0.5788
30	-0.2325	-0.2501	-0.2714	-0.3139	-0.3683	-0.5352	-0.5508	-0.5634
31	-0.2008	-0.2380	-0.2684	-0.3098	-0.3724	-0.5405	-0.5581	-0.5547
32	-0.1688	-0.2321	-0.2749	-0.3159	-0.3762	-0.5272	-0.5516	-0.5439
33	-0.2006	-0.2300	-0.2684	-0.3178	-0.3875	-0.5142	-0.5293	-0.5680
34	-0.1707	-0.2282	-0.2786	-0.3386	-0.3841	-0.4868	-0.5314	-0.5591

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 71 R= 6.1 MILLION M=0.07 DELTA F= 5.0 DEG.

ORIFICE	6.00	8.00	10.03	12.03	14.01	15.96	16.48	17.03
101	-1.2554	-2.6153	-4.2370	-6.1279	-8.0677	-9.9084	-10.3481	-10.7093
102	0.7930	0.4114	-0.1525	-0.8802	-1.6871	-2.4752	-2.6831	-2.9213
103	0.9792	0.8529	0.6079	0.2588	-0.1795	-0.5654	-0.7217	-0.8190
104	0.9930	0.9714	0.8606	0.6709	0.4351	0.1665	0.1122	0.0529
105	0.9672	0.9967	0.9538	0.8506	0.7023	0.5352	0.4938	0.4272
106	0.9339	0.9894	0.9873	0.9295	0.8368	0.7195	0.6937	0.6484
107	0.8973	0.9705	0.9938	0.9729	0.9136	0.8345	0.8156	0.7857
108	0.8291	0.9199	0.9767	0.9918	0.9768	0.9480	0.9323	0.9180
109	0.7694	0.8711	0.9411	0.9783	0.9909	0.9849	0.9762	0.9704
110	0.7204	0.8253	0.9030	0.9569	0.9829	0.9925	0.9914	0.9885
111	0.6559	0.7631	0.8510	0.9120	0.9556	0.9785	0.9801	0.9813
112	0.5690	0.6753	0.7647	0.8363	0.8926	0.9294	0.9375	0.9425
113	0.4505	0.5483	0.6354	0.7109	0.7714	0.8172	0.8266	0.8387
114	0.3670	0.4565	0.5374	0.6111	0.6723	0.7194	0.7306	0.7369
115	0.3016	0.3839	0.4595	0.5273	0.5872	0.6314	0.6413	0.6519
116	0.2492	0.3241	0.3951	0.4580	0.5124	0.5540	0.5647	0.5717
117	0.2030	0.2716	0.3365	0.3938	0.4480	0.4834	0.4934	0.4991
118	0.1639	0.2263	0.2854	0.3358	0.3880	0.4221	0.4272	0.4335
119	0.1327	0.1874	0.2407	0.2908	0.3345	0.3625	0.3700	0.3761
120	0.1033	0.1529	0.1998	0.2448	0.2830	0.3094	0.3175	0.3164
121	0.0713	0.1147	0.1562	0.1969	0.2283	0.2507	0.2509	0.2572
122	0.0435	0.0809	0.1175	0.1517	0.1768	0.1941	0.1956	0.1976
123	0.0300	0.0642	0.0985	0.1280	0.1526	0.1665	0.1668	0.1680
124	0.0181	0.0479	0.0783	0.1066	0.1287	0.1384	0.1380	0.1376
125	0.0159	0.0422	0.0672	0.0914	0.1106	0.1140	0.1182	0.1175
126	0.0299	0.0479	0.0671	0.0860	0.0971	0.0993	0.1039	0.0966
127	0.0490	0.0723	0.0966	0.1185	0.1361	0.1385	0.1374	0.1334
128	0.2995	0.3088	0.3227	0.3313	0.3352	0.3276	0.3275	0.3267
129	0.3064	0.3125	0.3195	0.3278	0.3398	0.3246	0.3228	0.3191
130	0.3247	0.3275	0.3345	0.3388	0.3423	0.3305	0.3306	0.3275
131	0.3702	0.3674	0.3720	0.3707	0.3693	0.3583	0.3515	0.3416
132	0.3258	0.3175	0.3169	0.3138	0.3083	0.2865	0.2868	0.2727
133	0.2033	0.1831	0.1723	0.1605	0.1499	0.1160	0.1003	0.0848
134	0.1394	0.1105	0.0913	0.0762	0.0574	0.0157	-0.0059	-0.0236

ORIGINAL PAGE IS OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 31 R= 6.1 MILLION M=0.07 DELTA F= 5.0 DEG.

ORIFICE	17.85
1	-11.4010
2	-11.9154
3	-11.2222
4	-8.4700
5	-7.3552
6	-6.6534
7	-5.[illegible]636
8	-5.0566
9	-4.6470
10	-4.1549
11	-3.6313
12	-3.1118
13	-2.3956
14	-2.0229
15	-1.6817
16	-1.4619
17	-1.2294
18	-1.0268
19	-0.8540
20	-0.7141
21	-0.5781
22	-0.5977
23	-0.5606
24	-0.5548
25	-0.5413
26	-0.5595
27	-0.5598
28	-0.6515
29	-0.5593
30	-0.5522
31	-0.5502
32	-0.5696
33	-0.5723
34	-0.5816

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 31 R= 6.1 MILLION M=0.07 DELTA F= 5.0 DEG.

ORIFICE	17.85
101	-11.4010
102	-3.0521
103	-1.0306
104	-0.0481
105	0.3656
106	0.6008
107	0.7586
108	0.9033
109	0.9648
110	0.9858
111	0.9835
112	0.9512
113	0.8482
114	0.7422
115	0.6587
116	0.5869
117	0.5124
118	0.4397
119	0.3821
120	0.3171
121	0.2566
122	0.1856
123	0.1605
124	0.1287
125	0.1067
126	0.0902
127	0.1304
128	0.3088
129	0.3074
130	0.3132
131	0.3345
132	0.2529
133	0.0539
134	-0.0455

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX G. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 32 R= 3.0 MILLION M= 0.07 DELTA F= 5.0 DEG.

ORIFICE	0.01	2.05	4.00	6.00	8.02	8.99	10.01	11.01
1	0.9356	0.9005	-0.0247	-0.9607	-2.2671	-2.9793	-3.7922	-4.6332
2	-0.5579	-1.3544	-2.2828	-3.4275	-4.7608	-5.4723	-6.1821	-6.8827
3	-0.8832	-1.6139	-2.4426	-3.4131	-4.5504	-5.0965	-5.7020	-6.2540
4	-0.5332	-1.5859	-2.2748	-3.0930	-4.1469	-4.7043	-5.3050	-5.9936
5	-0.5162	-1.4989	-2.3971	-2.8675	-3.5936	-4.2846	-4.3425	-4.4147
6	-0.5175	-1.4318	-1.9764	-2.7150	-3.1047	-3.5168	-3.9031	-4.2690
7	-0.8874	-1.3726	-1.9778	-2.3220	-2.9006	-3.3251	-3.6540	-3.9777
8	-0.9888	-1.2973	-1.7390	-2.1324	-2.7101	-2.9841	-3.2548	-3.5223
9	-0.8833	-1.2560	-1.6150	-2.0211	-2.5246	-2.7590	-2.9867	-3.2212
10	-0.8674	-1.2007	-1.4980	-1.9057	-2.3593	-2.5644	-2.7764	-2.9801
11	-0.8610	-1.1560	-1.4329	-1.7775	-2.1694	-2.3405	-2.5301	-2.6990
12	-0.8665	-1.0901	-1.3244	-1.6022	-1.9383	-2.0867	-2.2377	-2.3695
13	-0.8650	-0.9854	-1.1217	-1.3980	-1.6628	-1.7656	-1.8691	-1.9612
14	-0.8659	-0.9652	-1.1292	-1.2915	-1.5134	-1.6007	-1.6782	-1.7527
15	-0.8343	-0.9541	-1.0900	-1.2278	-1.4173	-1.4802	-1.5446	-1.6114
16	-0.8315	-0.9429	-1.0586	-1.1737	-1.3355	-1.3936	-1.4290	-1.4812
17	-0.8465	-0.9403	-1.0220	-1.1144	-1.2546	-1.2967	-1.3357	-1.3657
18	-0.8554	-0.9270	-0.9938	-1.0682	-1.1822	-1.2189	-1.2464	-1.2704
19	-0.8574	-0.9185	-0.9713	-1.0172	-1.1237	-1.1396	-1.1573	-1.1730
20	-0.8690	-0.9127	-0.9429	-0.9703	-1.0570	-1.0621	-1.0788	-1.0677
21	-0.8826	-0.9029	-0.9121	-0.9207	-0.9818	-0.9763	-0.9770	-0.9663
22	-0.8982	-0.8887	-0.8742	-0.8508	-0.8820	-0.8691	-0.8449	-0.8213
23	-0.8891	-0.8718	-0.8407	-0.8038	-0.7670	-0.7409	-0.7132	-0.6529
24	-0.8882	-0.8618	-0.8040	-0.7565	-0.6907	-0.6558	-0.6298	-0.5739
25	-0.8851	-0.8402	-0.7673	-0.6855	-0.5930	-0.5363	-0.5108	-0.4720
26	-0.8658	-0.8110	-0.6858	-0.5562	-0.4770	-0.4324	-0.3869	-0.3911
27	-0.8284	-0.7058	-0.5423	-0.4160	-0.3493	-0.3360	-0.3224	-0.3269
28	-0.7022	-0.5241	-0.3533	-0.2819	-0.2858	-0.2843	-0.3030	-0.3056
29	-0.4002	-0.3645	-0.2533	-0.2489	-0.2637	-0.2826	-0.3024	-0.2998
30	-0.2928	-0.2563	-0.2164	-0.2390	-0.2682	-0.2770	-0.2942	-0.3070
31	-0.1398	-0.1396	-0.1821	-0.2260	-0.2647	-0.2749	-0.2890	-0.3114
32	-0.0203	-0.0665	-0.1614	-0.2197	-0.2677	-0.2751	-0.2982	-0.3285
33	0.1015	-0.0283	-0.1517	-0.2214	-0.2760	-0.2837	-0.3053	-0.3196
34	0.1351	-0.0144	-0.1507	-0.2235	-0.2681	-0.2877	-0.3155	-0.3291

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 32 R= 3.0 MILLION M= 0.07 DELTA F= 5.0 DEG.

ORIFICE	0.01	2.05	4.00	6.00	8.02	8.99	10.01	11.01
101	0.9356	0.5905	-0.0247	-0.9807	-2.2671	-2.9793	-3.7922	-4.6332
102	0.7243	0.9508	0.9881	0.8500	0.5104	0.2787	-0.0013	-0.3139
103	0.5662	0.8245	0.9635	0.9887	0.8896	0.7957	0.6771	0.5240
104	0.4804	0.7363	0.8972	0.9815	0.9792	0.9461	0.8870	0.8167
105	0.4216	0.6666	0.8365	0.9496	0.9526	0.9872	0.9651	0.9316
106	0.3784	0.6108	0.7829	0.9060	0.9787	0.9897	0.9840	0.9738
107	0.3423	0.5651	0.7363	0.8679	0.9515	0.9751	0.9844	0.9856
108	0.2919	0.4965	0.6606	0.7958	0.8954	0.9332	0.9601	0.9793
109	0.2538	0.4459	0.6025	0.7390	0.8458	0.8875	0.9202	0.9478
110	0.2214	0.4008	0.5514	0.6870	0.8028	0.8414	0.8879	0.9137
111	0.1847	0.3503	0.4914	0.6233	0.7379	0.7804	0.8313	0.8653
112	0.1375	0.2843	0.4138	0.5373	0.6471	0.6951	0.7386	0.7802
113	0.0800	0.2019	0.3109	0.4198	0.5211	0.5669	0.6080	0.6510
114	0.0420	0.1455	0.2412	0.3383	0.4305	0.4703	0.5112	0.5505
115	0.0137	0.1029	0.1881	0.2732	0.3575	0.3970	0.4360	0.4699
116	-0.0083	0.0705	0.1439	0.2219	0.2996	0.3342	0.3695	0.4023
117	-0.0272	0.0411	0.1056	0.1763	0.2464	0.2787	0.3120	0.3413
118	-0.0417	0.0173	0.0757	0.1370	0.1998	0.2304	0.2598	0.2870
119	-0.0502	-0.0001	0.0507	0.1053	0.1626	0.1894	0.2175	0.2419
120	-0.0559	-0.0133	0.0284	0.0774	0.1277	0.1501	0.1741	0.1987
121	-0.0656	-0.0317	0.0031	0.0451	0.0884	0.1107	0.1291	0.1507
122	-0.0693	-0.0436	-0.0166	0.0170	0.0557	0.0730	0.0916	0.1097
123	-0.0679	-0.0468	-0.0246	0.0054	0.0386	0.0551	0.0722	0.0888
124	-0.0610	-0.0467	-0.0292	-0.0048	0.0248	0.0395	0.0534	0.0692
125	-0.0418	-0.0321	-0.0215	-0.0027	0.0228	0.0352	0.0469	0.0592
126	-0.0226	-0.0071	0.0029	0.0208	0.0389	0.0484	0.0577	0.0672
127	-0.0209	-0.0022	0.0137	0.0342	0.0595	0.0716	0.0844	0.0941
128	0.0033	-0.0142	0.0061	0.0310	0.0549	0.0681	0.0825	0.0931
129	0.3072	0.3180	0.3142	0.3185	0.3226	0.3255	0.3281	0.3302
130	0.3226	0.3189	0.3083	0.3099	0.3142	0.3169	0.3189	0.3216
131	0.3728	0.3599	0.3469	0.3457	0.3454	0.3459	0.3467	0.3470
132	0.3550	0.3307	0.3103	0.2984	0.2933	0.2921	0.2897	0.2874
133	0.2857	0.2373	0.1934	0.1669	0.1565	0.1464	0.1404	0.1349
134	0.2587	0.1934	0.1324	0.0965	0.0757	0.0684	0.0593	0.0500

ORIGINAL PAGE IS OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 32 R= 3.0 MILLION M= 0.07 DELTA F= 5.0 DEG.

ORIFICE	12.04	13.00	13.98	15.00	16.03	17.04	17.83
1	-5.5874	-6.5215	-7.3298	-8.3326	-9.2776	-10.1161	-10.5758
2	-7.7262	-8.4017	-9.0545	-9.9024	-10.5532	-11.1526	-11.4980
3	-6.9782	-7.5751	-8.0546	-9.0572	-9.6631	-10.3297	-10.4465
4	-6.6956	-7.4082	-7.8035	-7.4921	-7.2557	-7.4625	-7.5395
5	-4.9386	-5.3981	-5.8557	-6.2624	-6.6626	-6.9327	-7.0185
6	-4.6711	-5.0416	-5.4295	-5.7391	-6.0502	-6.2670	-6.1002
7	-4.3034	-4.6071	-4.9496	-5.2186	-5.5141	-5.7066	-5.8759
8	-3.8071	-4.0849	-4.3072	-4.5663	-4.7475	-4.9489	-4.8500
9	-3.4247	-3.6792	-3.8705	-4.1062	-4.2832	-4.4247	-4.4609
10	-3.1881	-3.3829	-3.5183	-3.7427	-3.9083	-3.8889	-3.9633
11	-2.8722	-3.0489	-3.1697	-3.3487	-3.4463	-3.5299	-3.6556
12	-2.5085	-2.6464	-2.7366	-2.8867	-2.9608	-3.0562	-3.0136
13	-2.0722	-2.1656	-2.2128	-2.3006	-2.3775	-2.4038	-2.2544
14	-1.8267	-1.9002	-1.9106	-2.0137	-2.0267	-2.0259	-1.9702
15	-1.6610	-1.6996	-1.7163	-1.7906	-1.7963	-1.7706	-1.7206
16	-1.5164	-1.5491	-1.5652	-1.5884	-1.5639	-1.5588	-1.4405
17	-1.4200	-1.4146	-1.4157	-1.4401	-1.3864	-1.3250	-1.1672
18	-1.2790	-1.2996	-1.2869	-1.2683	-1.2150	-1.1509	-0.8590
19	-1.1708	-1.1741	-1.1668	-1.1174	-1.0471	-1.0079	-0.8615
20	-1.0605	-1.0391	-1.0232	-0.9839	-0.8572	-0.8255	-0.8787
21	-0.9452	-0.9088	-0.8565	-0.7976	-0.6951	-0.6300	-0.6415
22	-0.7761	-0.7503	-0.6665	-0.5995	-0.5673	-0.5344	-0.5888
23	-0.6439	-0.5759	-0.5746	-0.4507	-0.4489	-0.4751	-0.5075
24	-0.5402	-0.4995	-0.4737	-0.4356	-0.4404	-0.4761	-0.5440
25	-0.4326	-0.4037	-0.4274	-0.4124	-0.4352	-0.4704	-0.5243
26	-0.3776	-0.3642	-0.3825	-0.3982	-0.4262	-0.5357	-0.5161
27	-0.3347	-0.3549	-0.3672	-0.3943	-0.4198	-0.4713	-0.5592
28	-0.3244	-0.3409	-0.3635	-0.3940	-0.4205	-0.4655	-0.5529
29	-0.3186	-0.3321	-0.3588	-0.3874	-0.4233	-0.4747	-0.5183
30	-0.3338	-0.3380	-0.3577	-0.3951	-0.4309	-0.4727	-0.5513
31	-0.3496	-0.3380	-0.3750	-0.3949	-0.4377	-0.4800	-0.5904
32	-0.3355	-0.3554	-0.4041	-0.3965	-0.4294	-0.5854	-0.5515
33	-0.3372	-0.3591	-0.3953	-0.4056	-0.4314	-0.5003	-0.5093
34	-0.3414	-0.3508	-0.3533	-0.4028	-0.4487	-0.4760	-0.5463

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 32 R= 3.0 MILLION M= 0.07 DELTA F= 5.0 DEG.

ORIFICE	12.04	13.00	13.98	15.00	16.03	17.04	17.83
101	-5.5874	-6.5215	-7.3298	-8.3326	-9.0776	-10.1161	-10.5758
102	-0.6888	-1.0505	-1.4113	-1.8619	-2.2575	-2.6263	-2.8590
103	0.3400	0.1670	-0.0344	-0.2582	-0.4862	-0.7004	-0.7782
104	0.7214	0.6145	0.5029	0.3623	0.2367	0.1459	0.0742
105	0.8744	0.8135	0.7415	0.6527	0.5589	0.4842	0.4399
106	0.9437	0.9102	0.8645	0.8073	0.7450	0.6862	0.6896
107	0.9761	0.9551	0.9278	0.8918	0.8512	0.8133	0.7784
108	0.9885	0.9913	0.9804	0.9699	0.9527	0.9304	0.9286
109	0.9656	0.9790	0.9855	0.9833	0.9836	0.9732	0.9686
110	0.9395	0.9595	0.9698	0.9817	0.9857	0.9840	0.9853
111	0.8948	0.9186	0.9346	0.9572	0.9646	0.9777	0.9828
112	0.8187	0.8472	0.8640	0.8963	0.9200	0.9317	0.9357
113	0.6869	0.7209	0.7478	0.7823	0.8031	0.8098	0.8207
114	0.5896	0.6216	0.6385	0.6744	0.7037	0.7068	0.7364
115	0.5061	0.5361	0.5608	0.5902	0.6115	0.6237	0.6321
116	0.4366	0.4652	0.4783	0.5144	0.5385	0.5486	0.5600
117	0.3716	0.3989	0.4176	0.4485	0.4710	0.4692	0.4791
118	0.3141	0.3424	0.3593	0.3855	0.4013	0.4096	0.4253
119	0.2664	0.2904	0.3059	0.3322	0.3445	0.3539	0.3509
120	0.2206	0.2422	0.2516	0.2753	0.2931	0.2948	0.2843
121	0.1705	0.1902	0.1919	0.2206	0.2296	0.2328	0.2270
122	0.1268	0.1407	0.1445	0.1687	0.1755	0.1766	0.1722
123	0.1040	0.1168	0.1199	0.1427	0.1474	0.1492	0.1517
124	0.0817	0.0950	0.0947	0.1187	0.1162	0.1136	0.0860
125	0.0687	0.0814	0.0785	0.0976	0.0999	0.1003	0.0575
126	0.0754	0.0839	0.0831	0.0957	0.0936	0.0948	0.0625
127	0.1050	0.1133	0.1212	0.1314	0.1315	0.1332	0.1054
128	0.1048	0.1139	0.1233	0.1330	0.1375	0.1364	0.1151
129	0.3341	0.3366	0.3368	0.3387	0.3339	0.3244	0.3115
130	0.3238	0.3227	0.3255	0.3259	0.3225	0.3182	0.3040
131	0.3475	0.3479	0.3476	0.3476	0.3408	0.3334	0.3137
132	0.2881	0.2846	0.2815	0.2757	0.2672	0.2457	0.2151
133	0.1292	0.1231	0.1163	0.1070	0.0915	0.0504	0.0527
134	0.0424	0.0356	0.0255	0.0142	-0.0052	-0.0278	-0.0637

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 33,34 R= 8.1 MILLION M= 0.09 DELTA F= 5.0 DEG.

ORIFICE	-3.51	-3.27	-3.01	-2.71	-2.50	-2.01	-1.75	-1.51
1	0.6748	0.7403	0.8022	0.8643	0.9012	0.9659	0.9889	1.0017
2	0.6448	0.5867	0.5197	0.4376	0.3756	0.2182	0.1298	0.0439
3	0.3324	0.2668	0.1911	0.1012	0.0337	-0.1442	-0.2339	-0.3202
4	0.1762	0.1115	0.0414	-0.0588	-0.1202	-0.2712	-0.3544	-0.4327
5	0.0879	0.0139	-0.0516	-0.1294	-0.1880	-0.3241	-0.4003	-0.4692
6	0.0021	-0.0542	-0.1165	-0.1896	-0.2441	-0.3711	-0.4430	-0.5044
7	-0.0445	-0.0971	-0.1562	-0.2245	-0.2756	-0.3946	-0.4610	-0.5198
8	-0.1196	-0.1682	-0.2219	-0.2833	-0.3291	-0.4369	-0.4968	-0.5480
9	-0.1849	-0.2301	-0.2803	-0.3388	-0.3812	-0.4782	-0.5336	-0.5808
10	-0.2279	-0.2702	-0.3171	-0.3707	-0.4114	-0.5022	-0.5519	-0.5959
11	-0.2793	-0.3192	-0.3621	-0.4116	-0.4480	-0.5310	-0.5764	-0.6135
12	-0.3329	-0.3651	-0.4062	-0.4503	-0.4835	-0.5535	-0.5936	-0.6263
13	-0.4026	-0.4315	-0.4622	-0.4997	-0.5243	-0.5844	-0.6164	-0.6400
14	-0.4697	-0.4952	-0.5220	-0.5527	-0.5774	-0.6272	-0.6570	-0.6759
15	-0.5242	-0.5482	-0.5720	-0.5985	-0.6216	-0.6658	-0.6919	-0.7086
16	-0.5680	-0.5851	-0.6093	-0.6352	-0.6533	-0.6949	-0.7166	-0.7340
17	-0.6031	-0.6229	-0.6403	-0.6630	-0.6812	-0.7167	-0.7390	-0.7522
18	-0.6349	-0.6530	-0.6692	-0.6899	-0.7077	-0.7381	-0.7589	-0.7699
19	-0.6632	-0.6801	-0.6949	-0.7150	-0.7285	-0.7579	-0.7753	-0.7864
20	-0.6926	-0.7067	-0.7222	-0.7389	-0.7527	-0.7796	-0.7979	-0.8035
21	-0.7215	-0.7375	-0.7480	-0.7622	-0.7772	-0.8302	-0.8155	-0.8222
22	-0.7462	-0.7604	-0.7715	-0.7885	-0.7957	-0.8203	-0.8306	-0.8394
23	-0.7618	-0.7733	-0.7803	-0.7941	-0.8033	-0.8251	-0.8401	-0.8433
24	-0.7700	-0.7811	-0.7910	-0.8033	-0.8135	-0.8337	-0.8468	-0.8478
25	-0.7842	-0.7941	-0.8034	-0.8154	-0.8251	-0.8461	-0.8555	-0.8575
26	-0.7798	-0.7900	-0.8030	-0.8120	-0.8193	-0.8396	-0.8488	-0.8514
27	-0.7351	-0.7455	-0.7551	-0.7667	-0.7782	-0.7962	-0.8089	-0.8103
28	-0.5591	-0.5423	-0.5315	-0.5308	-0.5367	-0.5502	-0.5642	-0.5717
29	-0.3498	-0.3565	-0.3635	-0.3697	-0.3766	-0.3873	-0.3948	-0.3968
30	-0.2304	-0.2361	-0.2415	-0.2461	-0.2506	-0.2593	-0.2647	-0.2653
31	-0.1004	-0.1040	-0.1079	-0.1118	-0.1153	-0.1196	-0.1242	-0.1243
32	0.0068	0.0052	0.0012	-0.0003	-0.0028	-0.0063	-0.0083	-0.0074
33	0.1227	0.1223	0.1194	0.1188	0.1176	0.1153	0.1140	0.1160
34	0.1520	0.1517	0.1489	0.1487	0.1485	0.1475	0.1470	0.1479

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 33,34 R= 8.1 MILLION M= 0.09 DELTA F= 5.0 DEG.

ORIFICE	-3.51	-3.27	-3.01	-2.71	-2.50	-2.01	-1.75	-1.51
101	0.6748	0.7403	0.8022	0.8643	0.9012	0.9659	0.9889	1.0017
102	-0.4648	-0.3502	-0.2297	-0.1003	-0.0148	0.1767	0.2677	0.3525
103	-0.4503	-0.3605	-0.2633	-0.1579	-0.0863	0.0718	0.1487	0.2240
104	-0.3549	-0.3195	-0.2392	-0.1513	-0.0505	0.0435	0.1104	0.1752
105	-0.3620	-0.2961	-0.2258	-0.1477	-0.0953	0.0248	0.0836	0.1428
106	-0.3414	-0.2833	-0.2184	-0.1483	-0.1004	0.0091	0.0636	0.1167
107	-0.3245	-0.2702	-0.2116	-0.1467	-0.1027	-0.0016	0.0482	0.0980
108	-0.2979	-0.2521	-0.2007	-0.1442	-0.1061	-0.0171	0.0272	0.0721
109	-0.2792	-0.2382	-0.1924	-0.1424	-0.1083	-0.0270	0.0124	0.0535
110	-0.2724	-0.2348	-0.1927	-0.1469	-0.1148	-0.0406	-0.0040	0.0346
111	-0.2605	-0.2282	-0.1907	-0.1482	-0.1200	-0.0535	-0.0205	0.0146
112	-0.2516	-0.2240	-0.1921	-0.1557	-0.1311	-0.0722	-0.0440	-0.0131
113	-0.2305	-0.2085	-0.1883	-0.1599	-0.1404	-0.0932	-0.0691	-0.0438
114	-0.2219	-0.2030	-0.1892	-0.1646	-0.1465	-0.1067	-0.0866	-0.0645
115	-0.2185	-0.2023	-0.1816	-0.1689	-0.1534	-0.1173	-0.1005	-0.0799
116	-0.2159	-0.2006	-0.1820	-0.1708	-0.1583	-0.1256	-0.1097	-0.0919
117	-0.2149	-0.2000	-0.1848	-0.1726	-0.1635	-0.1340	-0.1197	-0.1032
118	-0.2115	-0.1981	-0.1846	-0.1680	-0.1660	-0.1393	-0.1265	-0.1100
119	-0.2018	-0.1909	-0.1779	-0.1630	-0.1618	-0.1379	-0.1262	-0.1122
120	-0.1958	-0.1852	-0.1726	-0.1608	-0.1493	-0.1379	-0.1270	-0.1128
121	-0.1924	-0.1836	-0.1725	-0.1611	-0.1526	-0.1423	-0.1331	-0.1190
122	-0.1837	-0.1770	-0.1675	-0.1565	-0.1509	-0.1322	-0.1319	-0.1205
123	-0.1790	-0.1726	-0.1635	-0.1549	-0.1466	-0.1305	-0.1280	-0.1225
124	-0.1713	-0.1659	-0.1579	-0.1501	-0.1456	-0.1295	-0.1253	-0.1214
125	-0.1523	-0.1485	-0.1418	-0.1357	-0.1326	-0.1186	-0.1137	-0.1120
126	-0.1235	-0.1208	-0.1165	-0.1146	-0.1127	-0.1054	-0.1005	-0.0976
127	0.0053	0.0093	0.0133	0.0172	0.0195	0.0274	0.0314	0.0381
128	0.1328	0.1383	0.1457	0.1539	0.1594	0.1732	0.1796	0.1921
129	0.1981	0.2045	0.2122	0.2208	0.2273	0.2415	0.2471	0.2584
130	0.2404	0.2476	0.2558	0.2640	0.2703	0.2830	0.2881	0.2970
131	0.3075	0.3170	0.3253	0.3363	0.3426	0.3558	0.3619	0.3693
132	0.3141	0.3202	0.3268	0.3338	0.3391	0.3470	0.3500	0.3552
133	0.2665	0.2694	0.2733	0.2765	0.2779	0.2826	0.2830	0.2876
134	0.2468	0.2485	0.2512	0.2536	0.2550	0.2591	0.2597	0.2631

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 33,34 R= 8.1 MILLION M= 0.08 DELTA F= 5.0 DEG.

ORIFICE	-1.25	-1.01	-0.76	-0.50	-0.22	-0.01	0.50	1.01
1	1.0051	1.0080	1.0027	0.9936	0.9733	0.9549	0.8903	0.7979
2	-0.0629	-0.1495	-0.2469	-0.3399	-0.4524	-0.5332	-0.7480	-0.9864
3	-0.4141	-0.5002	-0.5928	-0.6833	-0.7894	-0.8698	-1.0740	-1.2962
4	-0.5186	-0.5951	-0.6798	-0.7583	-0.8532	-0.9237	-1.1046	-1.2958
5	-0.5487	-0.6165	-0.6911	-0.7653	-0.8460	-0.9105	-1.0692	-1.2368
6	-0.5786	-0.6417	-0.7104	-0.7768	-0.8530	-0.9096	-1.0536	-1.2083
7	-0.5866	-0.6454	-0.7103	-0.7728	-0.8420	-0.8923	-1.0268	-1.1673
8	-0.6070	-0.6609	-0.7176	-0.7705	-0.8353	-0.8797	-0.9945	-1.1200
9	-0.6361	-0.6849	-0.7367	-0.7846	-0.8405	-0.8837	-0.9944	-1.0994
10	-0.6474	-0.6918	-0.7402	-0.7837	-0.8356	-0.8721	-0.9673	-1.0704
11	-0.6621	-0.7013	-0.7459	-0.7837	-0.8299	-0.8629	-0.9501	-1.0411
12	-0.6708	-0.7028	-0.7414	-0.7741	-0.8159	-0.8428	-0.9172	-0.9756
13	-0.6771	-0.7033	-0.7330	-0.7578	-0.7926	-0.8033	-0.8573	-0.9195
14	-0.7095	-0.7285	-0.7562	-0.7783	-0.7943	-0.8121	-0.8612	-0.9154
15	-0.7386	-0.7559	-0.7797	-0.7854	-0.8110	-0.8288	-0.8705	-0.9161
16	-0.7591	-0.7766	-0.7880	-0.8012	-0.8225	-0.8372	-0.8751	-0.9158
17	-0.7765	-0.7915	-0.7983	-0.8127	-0.8323	-0.8450	-0.8779	-0.9141
18	-0.7901	-0.7930	-0.8075	-0.8249	-0.8404	-0.8512	-0.8811	-0.9131
19	-0.7998	-0.8035	-0.8210	-0.8342	-0.8451	-0.8567	-0.8822	-0.9101
20	-0.8119	-0.8209	-0.8362	-0.8444	-0.8593	-0.8665	-0.8870	-0.9100
21	-0.8265	-0.8372	-0.8485	-0.8569	-0.8645	-0.8737	-0.8889	-0.9091
22	-0.8451	-0.8468	-0.8600	-0.8646	-0.8715	-0.8769	-0.8892	-0.9070
23	-0.8470	-0.8535	-0.8596	-0.8656	-0.8716	-0.8753	-0.8849	-0.9003
24	-0.8522	-0.8560	-0.8638	-0.8653	-0.8705	-0.8738	-0.8805	-0.8936
25	-0.8592	-0.8608	-0.8623	-0.8643	-0.8672	-0.8724	-0.8766	-0.8876
26	-0.8525	-0.8482	-0.8512	-0.8481	-0.8482	-0.8529	-0.8543	-0.8597
27	-0.7779	-0.7727	-0.7705	-0.7705	-0.7666	-0.7690	-0.7663	-0.7682
28	-0.5947	-0.5917	-0.5912	-0.5894	-0.5882	-0.5887	-0.5839	-0.5851
29	-0.4164	-0.4171	-0.4188	-0.4196	-0.4178	-0.4174	-0.4157	-0.4162
30	-0.2953	-0.2890	-0.2922	-0.2929	-0.2944	-0.2941	-0.2921	-0.2953
31	-0.1412	-0.1443	-0.1469	-0.1474	-0.1481	-0.1495	-0.1486	-0.1510
32	-0.0172	-0.0223	-0.0255	-0.0274	-0.0293	-0.0310	-0.0348	-0.0394
33	0.1020	0.0927	0.0856	0.0794	0.0732	0.0675	0.0546	0.0444
34	0.1341	0.1235	0.1160	0.1091	0.1015	0.0961	0.0817	0.0691

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 33,34 R= 8.1 MILLION M= 0.09 DELTA F= 5.0 DEG.

ORIFICE	-1.25	-1.01	-0.76	-0.50	-0.22	-0.01	0.50	1.01
101	1.0051	1.0080	1.0027	0.9936	0.9733	0.9549	0.8903	0.7979
102	0.4253	0.4004	0.5566	0.6124	0.6744	0.7130	0.8017	0.8772
103	0.2874	0.3456	0.4045	0.4565	0.5155	0.5539	0.6470	0.7304
104	0.2301	0.2816	0.3333	0.3800	0.4340	0.4688	0.5547	0.6345
105	0.1927	0.2386	0.2868	0.3293	0.3785	0.4108	0.4912	0.5671
106	0.1630	0.2055	0.2501	0.2898	0.3357	0.3661	0.4415	0.5148
107	0.1412	0.1806	0.2216	0.2602	0.3027	0.3310	0.4028	0.4727
108	0.1196	0.1453	0.1818	0.2150	0.2540	0.2805	0.3458	0.4096
109	0.0872	0.1198	0.1532	0.1844	0.2198	0.2437	0.3031	0.3637
110	0.0654	0.0954	0.1266	0.1557	0.1888	0.2108	0.2669	0.3236
111	0.0424	0.0694	0.0977	0.1249	0.1540	0.1743	0.2267	0.2621
112	0.0112	0.0346	0.0594	0.0822	0.1092	0.1277	0.1731	0.2201
113	-0.0242	-0.0045	0.0151	0.0344	0.0557	0.0708	0.1086	0.1476
114	-0.0479	-0.0316	-0.0149	0.0018	0.0197	0.0329	0.0652	0.0995
115	-0.0655	-0.0519	-0.0370	-0.0221	-0.0064	0.0043	0.0335	0.0638
116	-0.0799	-0.0670	-0.0538	-0.0401	-0.0265	-0.0175	0.0083	0.0355
117	-0.0920	-0.0815	-0.0699	-0.0581	-0.0458	-0.0365	-0.0137	0.0108
118	-0.1008	-0.0911	-0.0810	-0.0705	-0.0593	-0.0517	-0.0315	-0.0093
119	-0.1050	-0.0954	-0.0864	-0.0766	-0.0678	-0.0604	-0.0425	-0.0227
120	-0.1066	-0.0984	-0.0905	-0.0814	-0.0735	-0.0678	-0.0514	-0.0340
121	-0.1142	-0.1058	-0.0992	-0.0919	-0.0849	-0.0802	-0.0655	-0.0493
122	-0.1161	-0.1090	-0.1039	-0.0967	-0.0910	-0.0865	-0.0739	-0.0587
123	-0.1172	-0.1116	-0.1055	-0.0998	-0.0941	-0.0892	-0.0776	-0.0637
124	-0.1166	-0.1111	-0.1066	-0.1001	-0.0950	-0.0907	-0.0797	-0.0666
125	-0.1088	-0.1039	-0.0980	-0.0933	-0.0884	-0.0836	-0.0736	-0.0611
126	-0.0986	-0.0935	-0.0868	-0.0797	-0.0732	-0.0692	-0.0578	-0.0446
127	0.0389	0.0374	0.0283	0.0160	-0.0086	-0.0206	-0.0427	-0.0371
128	0.1954	0.2014	0.2055	0.2087	0.2119	0.2141	0.2224	0.2320
129	0.2600	0.2632	0.2648	0.2672	0.2688	0.2699	0.2741	0.2807
130	0.2980	0.3001	0.3015	0.3024	0.3031	0.3035	0.3070	0.3124
131	0.3695	0.3692	0.3701	0.3705	0.3700	0.3710	0.3726	0.3761
132	0.3533	0.3525	0.3527	0.3516	0.3507	0.3503	0.3507	0.3515
133	0.2836	0.2810	0.2787	0.2770	0.2743	0.2730	0.2695	0.2694
134	0.2580	0.2531	0.2493	0.2460	0.2428	0.2401	0.2358	0.2327

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 33,34 R= 8.1 MILLION M= 0.09 DELTA F= 5.0 DEG.

ORIFICE	2.01	4.00	8.02	12.01	14.01	15.01	16.02	16.99
1	0.5355	-0.2750	-2.7635	-6.2876	-8.2038	-9.2565	-10.1152	-11.0200
2	-1.4968	-2.6533	-5.3066	-8.4370	-9.9613	-10.7705	-11.3861	-12.0041
3	-1.7617	-2.7867	-5.0322	-7.6926	-9.0628	-9.6473	-10.2338	-10.9564
4	-1.6983	-2.5707	-4.6039	-6.2534	-7.2424	-7.7287	-8.1308	-8.4384
5	-1.5869	-2.3654	-3.7430	-5.5162	-6.3322	-6.7377	-7.0918	-7.3793
6	-1.5233	-2.2309	-3.5184	-5.0122	-5.7478	-6.0843	-6.3751	-6.6521
7	-1.4619	-1.9956	-3.0576	-4.5942	-5.0248	-5.5383	-5.7691	-5.9291
8	-1.3781	-1.8500	-2.9208	-4.0234	-4.5270	-4.7731	-4.9746	-5.1459
9	-1.3260	-1.7633	-2.6885	-3.6623	-4.1046	-4.3003	-4.4626	-4.6028
10	-1.2482	-1.6735	-2.5101	-3.3626	-3.7403	-3.9260	-4.0697	-4.1930
11	-1.1944	-1.5746	-2.2963	-3.0210	-3.3461	-3.5058	-3.6119	-3.6965
12	-1.1307	-1.4460	-2.0427	-2.6253	-2.8843	-2.9999	-3.0905	-3.1598
13	-1.0439	-1.2875	-1.7302	-2.1575	-2.3343	-2.4014	-2.4407	-2.4830
14	-1.0188	-1.2190	-1.5719	-1.9013	-2.0254	-2.0709	-2.1110	-2.0899
15	-1.0047	-1.1763	-1.4691	-1.7247	-1.8129	-1.8400	-1.8470	-1.8500
16	-0.9919	-1.1415	-1.3770	-1.5767	-1.6349	-1.6456	-1.6563	-1.6264
17	-0.9814	-1.1087	-1.3040	-1.4570	-1.4928	-1.4877	-1.4608	-1.4356
18	-0.9708	-1.0805	-1.2319	-1.3454	-1.3613	-1.3540	-1.3268	-1.2478
19	-0.9600	-1.0524	-1.1676	-1.2421	-1.2495	-1.2211	-1.1806	-1.1184
20	-0.9555	-1.0298	-1.1105	-1.1342	-1.1288	-1.0915	-1.0283	-0.9196
21	-0.9445	-1.0083	-1.0421	-1.0349	-1.0112	-0.9618	-0.8742	-0.7318
22	-0.9361	-0.9811	-0.9605	-0.9297	-0.8900	-0.8266	-0.7373	-0.6516
23	-0.9235	-0.9597	-0.9128	-0.8266	-0.8172	-0.7612	-0.6607	-0.5822
24	-0.9153	-0.9386	-0.8683	-0.7214	-0.7331	-0.6680	-0.5768	-0.5539
25	-0.9031	-0.9151	-0.7915	-0.6270	-0.6257	-0.5805	-0.5372	-0.5310
26	-0.8687	-0.8663	-0.6819	-0.4887	-0.5208	-0.5285	-0.5273	-0.5467
27	-0.7679	-0.7525	-0.4771	-0.3713	-0.4546	-0.4675	-0.5081	-0.5481
28	-0.5829	-0.5590	-0.3296	-0.3343	-0.3851	-0.4533	-0.5214	-0.5456
29	-0.4147	-0.3926	-0.2582	-0.3074	-0.3755	-0.4653	-0.5282	-0.5659
30	-0.2953	-0.2765	-0.2490	-0.3071	-0.3780	-0.4606	-0.5346	-0.5631
31	-0.1517	-0.1516	-0.2251	-0.3038	-0.3668	-0.4698	-0.5582	-0.6196
32	-0.0499	-0.0770	-0.2127	-0.3172	-0.3647	-0.4418	-0.5145	-0.5729
33	0.0212	-0.0360	-0.2088	-0.3161	-0.3786	-0.4441	-0.5025	-0.5701
34	0.0438	-0.0202	-0.2065	-0.3115	-0.3811	-0.4383	-0.5034	-0.5516

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 33,34 R= 8.1 MILLION M= 0.09 DELTA F= 5.0 DEG.

ORIFICE	2.01	4.00	8.02	12.01	14.01	15.01	16.02	16.99
101	0.5355	-0.2750	-2.7635	-6.2876	-8.2038	-9.2565	-10.1152	-11.0200
102	0.9747	0.9771	0.3724	-0.9274	-1.7187	-2.1719	-2.5299	-2.8467
103	0.8613	0.9934	0.8428	0.2373	-0.1898	-0.4190	-0.6234	-0.8259
104	0.7686	0.9407	0.9716	0.6627	0.4225	0.2849	0.1545	0.0458
105	0.6975	0.8864	0.9994	0.8442	0.6985	0.6067	0.5122	0.4267
106	0.6418	0.8347	0.9974	0.9325	0.8363	0.7759	0.7107	0.6468
107	0.5966	0.7896	0.9795	0.9759	0.9169	0.8772	0.8328	0.7941
108	0.5261	0.7139	0.9355	0.9986	0.9838	0.9685	0.9476	0.9273
109	0.4723	0.6542	0.8851	0.9902	0.9985	0.9957	0.9890	0.9793
110	0.4269	0.6019	0.8409	0.9659	0.9897	0.9956	0.9975	0.9960
111	0.3737	0.5409	0.7782	0.9218	0.9622	0.9769	0.9863	0.9903
112	0.3060	0.4605	0.6887	0.8502	0.8993	0.9208	0.9379	0.9483
113	0.2206	0.3536	0.5617	0.7211	0.7800	0.8064	0.8296	0.8482
114	0.1629	0.2805	0.4696	0.6197	0.6812	0.7061	0.7266	0.7441
115	0.1195	0.2256	0.3964	0.5365	0.5953	0.6201	0.6430	0.6572
116	0.0856	0.1810	0.3356	0.4670	0.5209	0.5473	0.5648	0.5812
117	0.0552	0.1423	0.2831	0.4051	0.4548	0.4772	0.4952	0.5100
118	0.0318	0.1102	0.2371	0.3481	0.3940	0.4149	0.4304	0.4419
119	0.0148	0.0856	0.1987	0.2993	0.3405	0.3597	0.3717	0.3837
120	-0.0003	0.0632	0.1632	0.2548	0.2909	0.3055	0.3137	0.3245
121	-0.0197	0.0376	0.1246	0.2041	0.2358	0.2497	0.2589	0.2596
122	-0.0322	0.0171	0.0911	0.1596	0.1847	0.1952	0.2009	0.2053
123	-0.0392	0.0067	0.0735	0.1357	0.1582	0.1672	0.1745	0.1744
124	-0.0438	-0.0010	0.0569	0.1144	0.1327	0.1381	0.1387	0.1412
125	-0.0385	-0.0001	0.0493	0.0980	0.1136	0.1210	0.1206	0.1145
126	-0.0205	0.0149	0.0518	0.0891	0.1024	0.1035	0.1022	0.1000
127	-0.0083	0.0310	0.0774	0.1220	0.1379	0.1413	0.1413	0.1378
128	0.2534	0.2869	0.3008	0.3155	0.3203	0.3202	0.3140	0.3060
129	0.2917	0.3091	0.3203	0.3354	0.3359	0.3348	0.3292	0.3204
130	0.3208	0.3336	0.3398	0.3479	0.3472	0.3446	0.3405	0.3279
131	0.3790	0.3863	0.3809	0.3797	0.3758	0.3704	0.3609	0.3478
132	0.3534	0.3534	0.3316	0.3237	0.3144	0.3065	0.2922	0.2724
133	0.2650	0.2546	0.2023	0.1728	0.1578	0.1411	0.1172	0.0916
134	0.2253	0.2061	0.1313	0.0881	0.0685	0.0455	0.0153	-0.0205

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 33,34 R= 8.1 MILLION M= 0.09 DELTA F= 5.0 DEG.

ORIFICE	17.83
1	-11.4691
2	-12.3892
3	-10.6626
4	-8.7814
5	-7.5968
6	-6.7758
7	-6.0982
8	-5.2811
9	-4.6990
10	-4.2279
11	-3.7198
12	-3.1855
13	-2.4636
14	-2.0986
15	-1.8175
16	-1.5730
17	-1.3864
18	-1.1807
19	-1.0246
20	-0.7996
21	-0.6954
22	-0.5959
23	-0.5475
24	-0.5450
25	-0.5586
26	-0.5426
27	-0.5691
28	-0.5763
29	-0.5875
30	-0.5851
31	-0.6272
32	-0.6261
33	-0.5908
34	-0.6004

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 33,34 R= 8.1 MILLION M= 0.09 DELTA F= 5.0 DEG.

ORIFICE	17.83
101	-11.4691
102	-3.1389
103	-0.9093
104	-0.0715
105	0.3655
106	0.6116
107	0.7641
108	0.9076
109	0.9719
110	0.9953
111	0.9972
112	0.9569
113	0.8560
114	0.7552
115	0.6676
116	0.5897
117	0.5135
118	0.4459
119	0.3857
120	0.3261
121	0.2619
122	0.1993
123	0.1676
124	0.1382
125	0.1077
126	0.0900
127	0.1286
128	0.3007
129	0.3107
130	0.3209
131	0.3360
132	0.2647
133	0.0690
134	-0.0308

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 35,36 R=10.1 MILLION M= 0.12 DELTA F= 10.0 DEG.

ORIFICE	-5.02	-4.53	-3.98	-3.49	-2.97	-2.49	-2.46	-2.28
1	0.4766	0.6384	0.7887	0.8928	0.9646	1.0018	1.0016	1.0085
2	0.7708	0.6689	0.5342	0.3920	0.2256	0.0594	0.0475	-0.0261
3	0.4840	0.3614	0.2046	0.0504	-0.1343	-0.3038	-0.3152	-0.3800
4	0.3217	0.2033	0.0520	-0.1036	-0.2649	-0.4203	-0.4318	-0.4911
5	0.2233	0.1106	-0.0387	-0.1725	-0.3217	-0.4606	-0.4719	-0.5243
6	0.1447	0.0368	-0.1058	-0.2317	-0.3689	-0.4997	-0.5096	-0.5594
7	0.0903	-0.0207	-0.1462	-0.2663	-0.3943	-0.5188	-0.5243	-0.5713
8	-0.0065	-0.1007	-0.2159	-0.3232	-0.4396	-0.5496	-0.5572	-0.5977
9	-0.0816	-0.1695	-0.2779	-0.3772	-0.4842	-0.5851	-0.5910	-0.6293
10	-0.1329	-0.2160	-0.3162	-0.4095	-0.5097	-0.6023	-0.6087	-0.6439
11	-0.1944	-0.2730	-0.3639	-0.4497	-0.5399	-0.6250	-0.6308	-0.6631
12	-0.2642	-0.3320	-0.4147	-0.4899	-0.5681	-0.6431	-0.6493	-0.6752
13	-0.3520	-0.4087	-0.4771	-0.5582	-0.6058	-0.6652	-0.6675	-0.6920
14	-0.4350	-0.4946	-0.5431	-0.5993	-0.6550	-0.7085	-0.7130	-0.7322
15	-0.5011	-0.5457	-0.5997	-0.6497	-0.6985	-0.7468	-0.7499	-0.7666
16	-0.5559	-0.5978	-0.6467	-0.6908	-0.7355	-0.7785	-0.7817	-0.7948
17	-0.6011	-0.6395	-0.6845	-0.7241	-0.7667	-0.8041	-0.8048	-0.8192
18	-0.6436	-0.6799	-0.7204	-0.7552	-0.7935	-0.8265	-0.8308	-0.8426
19	-0.6809	-0.7136	-0.7513	-0.7830	-0.8199	-0.8501	-0.8517	-0.8632
20	-0.7019	-0.7531	-0.7854	-0.8169	-0.8475	-0.8784	-0.8791	-0.8782
21	-0.7632	-0.7858	-0.8204	-0.8508	-0.8809	-0.9017	-0.9056	-0.9035
22	-0.8055	-0.8270	-0.8575	-0.8825	-0.9072	-0.9289	-0.9337	-0.9285
23	-0.8203	-0.8464	-0.8742	-0.8969	-0.9239	-0.9467	-0.9456	-0.9408
24	-0.8435	-0.8636	-0.8909	-0.9130	-0.9398	-0.9574	-0.9601	-0.9525
25	-0.8668	-0.8884	-0.9118	-0.9337	-0.9583	-0.9749	-0.9766	-0.9684
26	-0.8763	-0.8942	-0.9190	-0.9403	-0.9638	-0.9787	-0.9807	-0.9723
27	-0.8283	-0.8468	-0.8721	-0.8906	-0.9195	-0.9309	-0.9313	-0.9034
28	-0.6890	-0.6823	-0.6897	-0.6540	-0.6685	-0.6967	-0.7047	-0.7189
29	-0.4515	-0.4650	-0.4903	-0.4935	-0.5085	-0.5235	-0.5234	-0.5379
30	-0.3382	-0.3469	-0.3610	-0.3704	-0.3825	-0.3927	-0.3948	-0.4094
31	-0.2461	-0.2529	-0.2627	-0.2700	-0.2780	-0.2847	-0.2860	-0.2946
32	-0.1243	-0.1293	-0.1348	-0.1406	-0.1457	-0.1493	-0.1497	-0.1487
33	0.0771	0.0735	0.0711	0.0674	0.0652	0.0629	0.0622	0.0522
34	0.1257	0.1243	0.1221	0.1201	0.1184	0.1161	0.1160	0.1039

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 35.36 R=10.1 MILLION M= 0.12 DELTA F= 10.0 DEG.

ORIFICE	-5.02	-4.53	-3.98	-3.49	-2.97	-2.49	-2.46	-2.28
101	0.4766	0.6384	0.7887	0.8928	0.9646	1.0018	1.0016	1.0085
102	-0.7745	-0.5215	-0.2561	-0.0370	0.1674	0.3333	0.3442	0.3990
103	-0.6902	-0.4942	-0.2800	-0.1042	0.0662	0.2085	0.2173	0.2651
104	-0.5896	-0.4277	-0.2517	-0.1037	0.0408	0.1633	0.1707	0.2123
105	-0.5290	-0.3883	-0.2341	-0.1033	0.0239	0.1334	0.1410	0.1783
106	-0.4910	-0.3641	-0.2247	-0.1069	0.0096	0.1093	0.1160	0.1502
107	-0.4568	-0.3435	-0.2159	-0.1072	0.0002	0.0927	0.0990	0.1308
108	-0.4081	-0.3126	-0.2022	-0.1067	-0.0132	0.0685	0.0740	0.1019
109	-0.3508	-0.2883	-0.1917	-0.1066	-0.0217	0.0524	0.0571	0.0827
110	-0.3434	-0.2781	-0.1899	-0.1123	-0.0340	0.0345	0.0392	0.0630
111	-0.3226	-0.2633	-0.1842	-0.1145	-0.0451	0.0175	0.0210	0.0424
112	-0.3022	-0.2370	-0.1819	-0.1224	-0.0617	-0.0071	-0.0034	0.0147
113	-0.2703	-0.2202	-0.1654	-0.1259	-0.0766	-0.0324	-0.0297	-0.0147
114	-0.2510	-0.2082	-0.1603	-0.1285	-0.0866	-0.0486	-0.0463	-0.0333
115	-0.2367	-0.2000	-0.1592	-0.1255	-0.0933	-0.0603	-0.0581	-0.0467
116	-0.2246	-0.1928	-0.1548	-0.1222	-0.0972	-0.0682	-0.0655	-0.0561
117	-0.2146	-0.1868	-0.1516	-0.1238	-0.1019	-0.0749	-0.0731	-0.0645
118	-0.2013	-0.1779	-0.1463	-0.1209	-0.0945	-0.0780	-0.0765	-0.0690
119	-0.1862	-0.1633	-0.1370	-0.1125	-0.0866	-0.0762	-0.0750	-0.0673
120	-0.1701	-0.1499	-0.1260	-0.1039	-0.0823	-0.0641	-0.0655	-0.0651
121	-0.1583	-0.1402	-0.1186	-0.1008	-0.0803	-0.0613	-0.0602	-0.0539
122	-0.1391	-0.1234	-0.1062	-0.0905	-0.0728	-0.0574	-0.0559	-0.0508
123	-0.1271	-0.1137	-0.0977	-0.0835	-0.0676	-0.0528	-0.0524	-0.0474
124	-0.1120	-0.0999	-0.0866	-0.0741	-0.0612	-0.0476	-0.0459	-0.0427
125	-0.0850	-0.0750	-0.0641	-0.0531	-0.0419	-0.0303	-0.0304	-0.0267
126	-0.0444	-0.0366	-0.0300	-0.0226	-0.0169	-0.0091	-0.0083	-0.0065
127	0.0819	0.0890	0.0968	0.1037	0.1110	0.1183	0.1189	0.1208
128	0.1985	0.2070	0.2193	0.2306	0.2412	0.2521	0.2530	0.2547
129	0.2601	0.2701	0.2845	0.2968	0.3087	0.3189	0.3201	0.3221
130	0.3033	0.3136	0.3296	0.3430	0.3548	0.3652	0.3658	0.3676
131	0.3698	0.3818	0.4057	0.4239	0.4397	0.4530	0.4541	0.4563
132	0.3854	0.3961	0.4151	0.4290	0.4411	0.4505	0.4504	0.4515
133	0.3235	0.3278	0.3359	0.3411	0.3447	0.3484	0.3485	0.3457
134	0.2903	0.2934	0.2987	0.3024	0.3058	0.3084	0.3081	0.3026

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX D. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 35,36 R=10.1 MILLION M= 0.12 DELTA F= 10.0 DEG.

ORIFICE	-2.01	-1.99	-1.74	-1.52	-0.57	0.03	1.04	2.04
1	1.0128	1.0100	1.0070	1.0007	0.9695	0.8365	0.5942	0.2527
2	-0.1207	-0.1237	-0.2025	-0.2830	-0.4767	-0.9058	-1.4045	-1.9577
3	-0.4762	-0.4782	-0.5587	-0.6363	-0.8185	-1.2263	-1.6912	-2.1794
4	-0.5793	-0.5788	-0.6546	-0.7190	-0.8833	-1.2365	-1.6373	-2.0624
5	-0.6037	-0.6024	-0.6666	-0.7293	-0.8712	-1.1860	-1.5378	-1.9040
6	-0.6312	-0.6297	-0.6917	-0.7461	-0.8763	-1.1649	-1.4846	-1.8123
7	-0.6374	-0.6381	-0.6925	-0.7444	-0.8670	-1.1326	-1.4234	-1.7310
8	-0.6550	-0.6572	-0.7052	-0.7503	-0.8611	-1.0911	-1.3469	-1.5313
9	-0.6832	-0.6831	-0.7284	-0.7711	-0.8676	-1.0734	-1.3016	-1.4925
10	-0.6938	-0.6927	-0.7304	-0.7732	-0.8623	-1.0531	-1.2116	-1.4412
11	-0.7038	-0.7061	-0.7438	-0.7795	-0.8591	-1.0286	-1.1845	-1.3739
12	-0.7043	-0.7136	-0.7381	-0.7669	-0.8305	-0.9683	-1.1257	-1.2869
13	-0.7091	-0.7222	-0.7373	-0.7603	-0.8123	-0.9229	-1.0501	-1.1737
14	-0.7478	-0.7569	-0.7664	-0.7858	-0.8317	-0.9300	-1.0342	-1.1356
15	-0.7805	-0.7912	-0.7946	-0.8110	-0.8535	-0.9400	-1.0264	-1.1168
16	-0.8095	-0.8132	-0.8203	-0.8325	-0.8680	-0.9446	-1.0222	-1.0999
17	-0.8315	-0.8298	-0.8384	-0.8530	-0.8847	-0.9488	-1.0168	-1.0827
18	-0.8486	-0.8449	-0.8586	-0.8699	-0.8853	-0.9545	-1.0145	-1.0724
19	-0.8684	-0.8651	-0.8761	-0.8862	-0.9077	-0.9573	-1.0095	-1.0597
20	-0.8899	-0.8899	-0.8965	-0.9063	-0.9260	-0.9660	-1.0124	-1.0527
21	-0.9132	-0.9113	-0.9196	-0.9262	-0.9406	-0.9764	-1.0124	-1.0486
22	-0.9357	-0.9381	-0.9375	-0.9475	-0.9567	-0.9841	-1.0127	-1.0410
23	-0.9450	-0.9481	-0.9466	-0.9505	-0.9597	-0.9862	-1.0085	-1.0314
24	-0.9564	-0.9581	-0.9556	-0.9596	-0.9654	-0.9858	-1.0033	-1.0245
25	-0.9726	-0.9703	-0.9668	-0.9693	-0.9710	-0.9880	-1.0048	-1.0134
26	-0.9763	-0.9706	-0.9674	-0.9600	-0.9613	-0.9703	-0.9783	-0.9853
27	-0.9091	-0.8974	-0.8867	-0.8864	-0.8819	-0.8848	-0.8869	-0.8842
28	-0.7234	-0.7147	-0.7088	-0.7061	-0.7002	-0.7010	-0.7011	-0.6934
29	-0.5388	-0.5391	-0.5340	-0.5341	-0.5296	-0.5279	-0.5246	-0.5182
30	-0.4085	-0.4127	-0.4092	-0.4088	-0.4060	-0.4030	-0.3998	-0.3939
31	-0.2936	-0.2936	-0.2867	-0.2846	-0.2780	-0.2672	-0.2577	-0.2452
32	-0.1438	-0.1429	-0.1317	-0.1322	-0.1253	-0.1188	-0.1134	-0.1120
33	0.0366	0.0443	0.0303	0.0260	0.0189	0.0017	-0.0189	-0.0375
34	0.0798	0.0519	0.0707	0.0645	0.0535	0.0293	0.0031	-0.0212

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 35,36 R=10.1 MILLION M= 0.12 DELTA F= 10.0 DEG.

ORIFICE	-2.01	-1.99	-1.74	-1.52	-0.97	0.03	1.04	2.04
101	1.0128	1.0100	1.0078	1.0007	0.9695	0.8365	0.5542	0.2527
102	0.4764	0.4748	0.5317	0.5834	0.6888	0.8552	0.9626	1.0060
103	0.3341	0.3329	0.3846	0.4312	0.5305	0.7049	0.8441	0.9380
104	0.2745	0.2712	0.3184	0.3588	0.4488	0.6091	0.7493	0.8576
105	0.2329	0.2307	0.2734	0.3102	0.3928	0.5453	0.6797	0.7894
106	0.2016	0.1998	0.2386	0.2736	0.3502	0.4947	0.6247	0.7336
107	0.1780	0.1764	0.2120	0.2448	0.3176	0.4547	0.5804	0.6890
108	0.1441	0.1424	0.1748	0.2042	0.2694	0.3940	0.5116	0.6154
109	0.1208	0.1193	0.1485	0.1753	0.2345	0.3496	0.4603	0.5575
110	0.0976	0.0959	0.1238	0.1487	0.2041	0.3125	0.4164	0.5094
111	0.0735	0.0732	0.0976	0.1206	0.1706	0.2701	0.3663	0.4542
112	0.0419	0.0419	0.0626	0.0825	0.1273	0.2150	0.3018	0.3814
113	0.0066	0.0064	0.0242	0.0402	0.0765	0.1489	0.2214	0.2892
114	-0.0150	-0.0153	-0.0009	0.0129	0.0431	0.1052	0.1682	0.2281
115	-0.0288	-0.0308	-0.0189	-0.0068	0.0195	0.0746	0.1293	0.1826
116	-0.0383	-0.0419	-0.0316	-0.0210	0.0017	0.0501	0.0998	0.1473
117	-0.0495	-0.0523	-0.0424	-0.0339	-0.0138	0.0287	0.0735	0.1172
118	-0.0575	-0.0576	-0.0508	-0.0424	-0.0250	0.0137	0.0538	0.0931
119	-0.0569	-0.0574	-0.0513	-0.0433	-0.0281	0.0051	0.0413	0.0768
120	-0.0563	-0.0560	-0.0508	-0.0440	-0.0306	-0.0007	0.0307	0.0623
121	-0.0603	-0.0555	-0.0542	-0.0477	-0.0370	-0.0115	0.0172	0.0456
122	-0.0521	-0.0440	-0.0439	-0.0452	-0.0375	-0.0149	0.0108	0.0343
123	-0.0441	-0.0410	-0.0385	-0.0381	-0.0374	-0.0159	0.0072	0.0303
124	-0.0388	-0.0378	-0.0354	-0.0319	-0.0367	-0.0148	0.0064	0.0279
125	-0.0240	-0.0235	-0.0221	-0.0181	-0.0237	-0.0078	0.0129	0.0332
126	-0.0078	-0.0056	-0.0059	-0.0039	-0.0016	0.0031	0.0259	0.0468
127	0.1207	0.1224	0.1212	0.1228	0.1255	0.1386	0.1233	0.0792
128	0.2599	0.2579	0.2584	0.2612	0.2663	0.2809	0.2918	0.3042
129	0.3272	0.3254	0.3254	0.3278	0.3322	0.3412	0.3487	0.3573
130	0.3723	0.3706	0.3699	0.3725	0.3744	0.3815	0.3868	0.3928
131	0.4636	0.4609	0.4602	0.4633	0.4654	0.4698	0.4722	0.4751
132	0.4524	0.4527	0.4492	0.4504	0.4493	0.4483	0.4477	0.4482
133	0.3365	0.3413	0.3322	0.3312	0.3257	0.3195	0.3150	0.3106
134	0.2924	0.2961	0.2829	0.2805	0.2745	0.2648	0.2559	0.2488

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX E. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

FLM 35,36 R=10.1 MILLION M= 0.12 DELTA F= 10.0 DEG.

ORIFICE	4.03	6.00	7.95	9.96	11.98	12.98	14.01	14.98
1	-0.6834	-1.8845	-3.1990	-4.9546	-6.8141	-7.8761	-8.8290	-9.6663
2	-3.1687	-4.4756	-5.7662	-7.3874	-8.9685	-9.7255	-10.5077	-11.0434
3	-3.2424	-4.3589	-5.4603	-6.8155	-8.1901	-8.8176	-9.3814	-9.6641
4	-2.9643	-3.9532	-4.8271	-5.5771	-6.6462	-7.1634	-7.6415	-8.0541
5	-2.7318	-3.3020	-4.0753	-4.9811	-5.8446	-6.2561	-6.6690	-7.0291
6	-2.3926	-3.1130	-3.7817	-4.5596	-5.3125	-5.6632	-6.0210	-6.3008
7	-2.2716	-2.9101	-3.4997	-4.1901	-4.8534	-5.1644	-5.4656	-5.7333
8	-2.0896	-2.6248	-3.1160	-3.6770	-4.2392	-4.4932	-4.7548	-4.9649
9	-1.9749	-2.4435	-2.8842	-3.3803	-3.8408	-4.0757	-4.2737	-4.4599
10	-1.8681	-2.2879	-2.6677	-3.1136	-3.5242	-3.7147	-3.9017	-4.0496
11	-1.7479	-2.1209	-2.4456	-2.8236	-3.1744	-3.3307	-3.4818	-3.5993
12	-1.6010	-1.8969	-2.1739	-2.4761	-2.7643	-2.8888	-3.0032	-3.0954
13	-1.4185	-1.6395	-1.8358	-2.0561	-2.2533	-2.3383	-2.4164	-2.4669
14	-1.3342	-1.5152	-1.6744	-1.8436	-1.9889	-2.0488	-2.1049	-2.1347
15	-1.2857	-1.4322	-1.5578	-1.6930	-1.8037	-1.8494	-1.8734	-1.9065
16	-1.2400	-1.3650	-1.4624	-1.5732	-1.6549	-1.6833	-1.7053	-1.7125
17	-1.2059	-1.3110	-1.3915	-1.4668	-1.5255	-1.5518	-1.5472	-1.5447
18	-1.1783	-1.2589	-1.3206	-1.3701	-1.4173	-1.4279	-1.4247	-1.3873
19	-1.1503	-1.2125	-1.2514	-1.2886	-1.3178	-1.3216	-1.2989	-1.2722
20	-1.1246	-1.1761	-1.1989	-1.2102	-1.2214	-1.2040	-1.1893	-1.1387
21	-1.1025	-1.1384	-1.1366	-1.1361	-1.1210	-1.1007	-1.0656	-1.0317
22	-1.0815	-1.0956	-1.0693	-1.0265	-0.9850	-0.9524	-0.9491	-0.8842
23	-1.0625	-1.0601	-1.0207	-0.9774	-0.9453	-0.9266	-0.8785	-0.8093
24	-1.0427	-1.0322	-0.9831	-0.9055	-0.8579	-0.8283	-0.7891	-0.7081
25	-1.0236	-0.9940	-0.9165	-0.7747	-0.7826	-0.7627	-0.7032	-0.6370
26	-0.9771	-0.9285	-0.7802	-0.6439	-0.6350	-0.6046	-0.5253	-0.5656
27	-0.8651	-0.7559	-0.6763	-0.5150	-0.5460	-0.5202	-0.5285	-0.5141
28	-0.6676	-0.5926	-0.4547	-0.4170	-0.4311	-0.4236	-0.4644	-0.4858
29	-0.4887	-0.4253	-0.3444	-0.3264	-0.3621	-0.3989	-0.4324	-0.4547
30	-0.3644	-0.3193	-0.2882	-0.3168	-0.3417	-0.3760	-0.4267	-0.5040
31	-0.2188	-0.2044	-0.2508	-0.3302	-0.3336	-0.3690	-0.4775	-0.5136
32	-0.1200	-0.1565	-0.2350	-0.2833	-0.3256	-0.3590	-0.4169	-0.5062
33	-0.0948	-0.1454	-0.2240	-0.3017	-0.3520	-0.3709	-0.4193	-0.4706
34	-0.0782	-0.1456	-0.2360	-0.2957	-0.3448	-0.3789	-0.4260	-0.4951

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 35.36 R=10.1 MILLION M= 0.12 DELTA F= 10.0 DEG.

ORIFICE	4.03	6.00	7.95	9.96	11.98	12.98	14.01	14.98
101	-0.6834	-1.8845	-3.1990	-4.9546	-6.8141	-7.8761	-8.8290	-9.5663
102	0.9210	0.6410	0.2348	-0.4008	-1.1296	-1.5077	-1.9243	-2.2745
103	1.0064	0.9418	0.7862	0.4954	0.1236	-0.0815	-0.3022	-0.5007
104	0.9901	1.0017	0.9497	0.6084	0.6061	0.4837	0.3545	0.2373
105	0.9368	0.9981	0.9950	0.9294	0.8114	0.7329	0.6535	0.5690
106	0.8921	0.9760	1.0027	0.9817	0.9114	0.8621	0.8083	0.7519
107	0.8495	0.9476	0.9952	0.9999	0.9635	0.9350	0.8968	0.8588
108	0.7772	0.8892	0.9570	0.9940	0.9590	0.9915	0.9768	0.9616
109	0.7177	0.8344	0.9138	0.9707	0.9973	1.0022	0.9989	0.9953
110	0.6676	0.7854	0.8671	0.9364	0.9789	0.9925	0.9967	1.0006
111	0.6054	0.7219	0.8078	0.8868	0.9415	0.9593	0.9716	0.9825
112	0.5225	0.6355	0.7223	0.9063	0.8709	0.8946	0.9143	0.9335
113	0.4125	0.5150	0.5949	0.6791	0.7487	0.7773	0.8017	0.8229
114	0.3365	0.4286	0.5038	0.5819	0.6479	0.6758	0.7017	0.7249
115	0.2796	0.3631	0.4318	0.5029	0.5667	0.5935	0.6185	0.6368
116	0.2350	0.3097	0.3721	0.4389	0.4975	0.5213	0.5449	0.5647
117	0.1958	0.2637	0.3194	0.3820	0.4349	0.4587	0.4792	0.4971
118	0.1646	0.2263	0.2764	0.3317	0.3807	0.4014	0.4205	0.4344
119	0.1407	0.1955	0.2401	0.2904	0.3342	0.3525	0.3700	0.3820
120	0.1196	0.1677	0.2069	0.2516	0.2905	0.3068	0.3205	0.3309
121	0.0969	0.1383	0.1714	0.2096	0.2426	0.2577	0.2708	0.2781
122	0.0785	0.1144	0.1426	0.1736	0.2018	0.2149	0.2210	0.2303
123	0.0710	0.1028	0.1272	0.1563	0.1819	0.1915	0.1996	0.2050
124	0.0649	0.0931	0.1154	0.1400	0.1633	0.1718	0.1768	0.1805
125	0.0679	0.0933	0.1098	0.1316	0.1517	0.1566	0.1619	0.1606
126	0.0816	0.1031	0.1148	0.1306	0.1445	0.1510	0.1514	0.1518
127	0.0967	0.1208	0.1366	0.1580	0.1754	0.1814	0.1865	0.1845
128	0.3285	0.3430	0.3464	0.3540	0.3602	0.3609	0.3602	0.3593
129	0.3707	0.3781	0.3802	0.3835	0.3881	0.3887	0.3874	0.3839
130	0.4023	0.4068	0.4061	0.4080	0.4102	0.4097	0.4063	0.4017
131	0.4790	0.4777	0.4740	0.4708	0.4690	0.4670	0.4621	0.4563
132	0.4471	0.4416	0.4330	0.4254	0.4221	0.4185	0.4097	0.4023
133	0.2992	0.2818	0.2588	0.2417	0.2301	0.2232	0.2100	0.1916
134	0.2301	0.2039	0.1728	0.1484	0.1303	0.1182	0.0987	0.0791

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 35,36 RE10.1 MILLION M= 0.12 DELTA E= 10.0 DEG.

ORIFICE	15.99	16.58
1	-10.5519	-11.3715
2	-11.7986	-12.1601
3	-10.1396	-10.5459
4	-8.4487	-8.8088
5	-7.3224	-7.6058
6	-6.6139	-6.7786
7	-5.9680	-6.1343
8	-5.1348	-5.2757
9	-4.6078	-4.7376
10	-4.1297	-4.2877
11	-3.7082	-3.7920
12	-3.1742	-3.2331
13	-2.5104	-2.5482
14	-2.1604	-2.1729
15	-1.9019	-1.9856
16	-1.6952	-1.6604
17	-1.5358	-1.4743
18	-1.3613	-1.3300
19	-1.2191	-1.1275
20	-1.0793	-0.9988
21	-0.9373	-0.8726
22	-0.8194	-0.7486
23	-0.7113	-0.6556
24	-0.6431	-0.5994
25	-0.5686	-0.5527
26	-0.5441	-0.5000
27	-0.5244	-0.5355
28	-0.5246	-0.5385
29	-0.5058	-0.5770
30	-0.5187	-0.4948
31	-0.5707	-0.5537
32	-0.5391	-0.5072
33	-0.5113	-0.5473
34	-0.5457	-0.5591

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 35,36 P=10.1 MILLION M= 0.12 DELTA F= 10.0 DEG.

ORIFICE	15.99	19.98
101	-10.5519	-11.3715
102	-2.6794	-2.9579
103	-0.7043	-0.9968
104	0.1125	-0.0114
105	0.4901	0.4083
106	0.6906	0.6417
107	0.8209	0.7775
108	0.9425	0.9201
109	0.9884	0.9804
110	1.0004	0.9571
111	0.9905	0.9966
112	0.9474	0.9593
113	0.8392	0.8549
114	0.7435	0.7635
115	0.6580	0.6716
116	0.5812	0.5956
117	0.5115	0.5225
118	0.4473	0.4591
119	0.3918	0.4001
120	0.3386	0.3476
121	0.2840	0.2879
122	0.2302	0.2288
123	0.2048	0.2026
124	0.1819	0.1736
125	0.1586	0.1590
126	0.1448	0.1364
127	0.1829	0.1767
128	0.3532	0.3449
129	0.3767	0.3676
130	0.3924	0.3878
131	0.4488	0.4384
132	0.3919	0.3779
133	0.1743	0.1500
134	0.0558	0.0235

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 37 R= 0.1 MILLION M= 0.10 DELTA F= 10.0 DEG.

ORIFICE	-5.00	-4.52	-3.97	-3.49	-3.02	-2.52	-2.26	-1.99
1	0.4749	0.6364	0.7851	0.8346	0.5501	0.9922	1.0027	1.0020
2	0.7680	0.6701	0.5371	0.4002	0.2515	0.0782	-0.0306	-0.1327
3	0.4834	0.3632	0.2090	0.0602	-0.1082	-0.2881	-0.3815	-0.4846
4	0.3233	0.2063	0.0575	-0.0959	-0.2411	-0.4040	-0.4910	-0.5837
5	0.2264	0.1155	-0.0368	-0.1661	-0.2981	-0.4466	-0.5239	-0.6083
6	0.1479	0.0415	-0.1020	-0.2234	-0.3479	-0.4850	-0.5570	-0.6339
7	0.0936	-0.0209	-0.1436	-0.2581	-0.3741	-0.5020	-0.5680	-0.6401
8	-0.0069	-0.1000	-0.2126	-0.3169	-0.4202	-0.5361	-0.5954	-0.6579
9	-0.0810	-0.1682	-0.2728	-0.3689	-0.4661	-0.5702	-0.6270	-0.6847
10	-0.1318	-0.2140	-0.3124	-0.4024	-0.4918	-0.5898	-0.6397	-0.6930
11	-0.1937	-0.2700	-0.3614	-0.4425	-0.5241	-0.6126	-0.6574	-0.7056
12	-0.2610	-0.3283	-0.4106	-0.4821	-0.5533	-0.6298	-0.6705	-0.7124
13	-0.3474	-0.4046	-0.4710	-0.5314	-0.5912	-0.6530	-0.6861	-0.7183
14	-0.4302	-0.4772	-0.5378	-0.5917	-0.6420	-0.6945	-0.7263	-0.7517
15	-0.4966	-0.5402	-0.5932	-0.6404	-0.6855	-0.7363	-0.7609	-0.7842
16	-0.5504	-0.5894	-0.6385	-0.6802	-0.7205	-0.7651	-0.7889	-0.8108
17	-0.5950	-0.6341	-0.6762	-0.7124	-0.7509	-0.7907	-0.8114	-0.8297
18	-0.6369	-0.6714	-0.7095	-0.7450	-0.7771	-0.8184	-0.8337	-0.8533
19	-0.6736	-0.7055	-0.7411	-0.7753	-0.8034	-0.8389	-0.8536	-0.8707
20	-0.7144	-0.7448	-0.7783	-0.8080	-0.8345	-0.8646	-0.8788	-0.8905
21	-0.7549	-0.7808	-0.8144	-0.8387	-0.8646	-0.8931	-0.9058	-0.9063
22	-0.7947	-0.8186	-0.8468	-0.8712	-0.8952	-0.9190	-0.9326	-0.9321
23	-0.8110	-0.8363	-0.8625	-0.8840	-0.9055	-0.9300	-0.9439	-0.9408
24	-0.8717	-0.8531	-0.8800	-0.9009	-0.9225	-0.9425	-0.9544	-0.9533
25	-0.8563	-0.8744	-0.8985	-0.9196	-0.9396	-0.9600	-0.9699	-0.9683
26	-0.8621	-0.8802	-0.9016	-0.9200	-0.9421	-0.9603	-0.9739	-0.9708
27	-0.8122	-0.8318	-0.8532	-0.8715	-0.8926	-0.9160	-0.9265	-0.9024
28	-0.7879	-0.8108	-0.8312	-0.7986	-0.7518	-0.6831	-0.6834	-0.7169
29	-0.4371	-0.4494	-0.4620	-0.4768	-0.4532	-0.5070	-0.5139	-0.5379
30	-0.3320	-0.3416	-0.3529	-0.3641	-0.3747	-0.3851	-0.3899	-0.4086
31	-0.2421	-0.2487	-0.2575	-0.2651	-0.2730	-0.2795	-0.2838	-0.2944
32	-0.1214	-0.1259	-0.1326	-0.1376	-0.1420	-0.1460	-0.1479	-0.1471
33	0.0766	0.0737	0.0695	0.0672	0.0649	0.0621	0.0614	0.0507
34	0.1259	0.1245	0.1210	0.1186	0.1170	0.1153	0.1145	0.1010

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX P. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 37 R= 8.1 MILLION M= 0.10 DELTA F= 10.0 DEG.

ORIFICE	-5.00	-4.52	-3.97	-3.49	-3.02	-2.52	-2.26	-1.99
101	0.4749	0.6364	0.7851	0.8846	0.9501	0.9922	1.0027	1.0020
102	-0.7620	-0.5155	-0.2549	-0.0427	0.1433	0.3197	0.4018	0.4810
103	-0.6809	-0.4864	-0.2773	-0.1066	0.0459	0.1985	0.2684	0.3394
104	-0.5819	-0.4230	-0.2492	-0.1054	0.0235	0.1540	0.2155	0.2777
105	-0.5221	-0.3841	-0.2322	-0.1061	0.0090	0.1253	0.1808	0.2375
106	-0.4832	-0.3590	-0.2236	-0.1081	-0.0031	0.1024	0.1527	0.2058
107	-0.4514	-0.3388	-0.2137	-0.1089	-0.0128	0.0862	0.1334	0.1815
108	-0.4061	-0.3083	-0.2003	-0.1087	-0.0244	0.0625	0.1050	0.1484
109	-0.3704	-0.2861	-0.1891	-0.1067	-0.0312	0.0467	0.0850	0.1248
110	-0.3286	-0.2750	-0.1883	-0.1125	-0.0425	0.0294	0.0654	0.1017
111	-0.3168	-0.2597	-0.1821	-0.1153	-0.0523	0.0128	0.0449	0.0778
112	-0.2997	-0.2441	-0.1807	-0.1227	-0.0674	-0.0109	0.0173	0.0460
113	-0.2675	-0.2167	-0.1720	-0.1256	-0.0809	-0.0347	-0.0121	0.0116
114	-0.2481	-0.2047	-0.1634	-0.1284	-0.0905	-0.0507	-0.0317	-0.0116
115	-0.2349	-0.1980	-0.1569	-0.1295	-0.0969	-0.0616	-0.0452	-0.0267
116	-0.2225	-0.1905	-0.1526	-0.1296	-0.0999	-0.0691	-0.0537	-0.0382
117	-0.2128	-0.1846	-0.1520	-0.1298	-0.1039	-0.0762	-0.0623	-0.0483
118	-0.2007	-0.1759	-0.1468	-0.1196	-0.1043	-0.0794	-0.0666	-0.0538
119	-0.1841	-0.1617	-0.1356	-0.1117	-0.0999	-0.0764	-0.0654	-0.0539
120	-0.1684	-0.1492	-0.1248	-0.1041	-0.0859	-0.0725	-0.0622	-0.0511
121	-0.1571	-0.1385	-0.1187	-0.1004	-0.0804	-0.0709	-0.0644	-0.0533
122	-0.1381	-0.1229	-0.1060	-0.0899	-0.0745	-0.0573	-0.0547	-0.0513
123	-0.1264	-0.1123	-0.0976	-0.0831	-0.0688	-0.0531	-0.0470	-0.0464
124	-0.1107	-0.0998	-0.0865	-0.0740	-0.0623	-0.0480	-0.0410	-0.0381
125	-0.0833	-0.0739	-0.0635	-0.0547	-0.0438	-0.0335	-0.0259	-0.0209
126	-0.0421	-0.0361	-0.0300	-0.0265	-0.0205	-0.0127	-0.0082	-0.0036
127	0.0824	0.0881	0.0958	0.1012	0.1071	0.1155	0.1189	0.1232
128	0.1956	0.2056	0.2186	0.2303	0.2411	0.2515	0.2569	0.2627
129	0.2557	0.2677	0.2837	0.2969	0.3083	0.3194	0.3244	0.3290
130	0.2980	0.3107	0.3298	0.3434	0.3546	0.3651	0.3696	0.3739
131	0.3614	0.3770	0.4040	0.4253	0.4415	0.4553	0.4609	0.4655
132	0.3795	0.3929	0.4138	0.4293	0.4400	0.4493	0.4536	0.4547
133	0.3201	0.3266	0.3333	0.3386	0.3414	0.3453	0.3467	0.3437
134	0.2876	0.2919	0.2971	0.3003	0.3028	0.3058	0.3066	0.3014

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 37 R= 8.1 MILLION M= 0.10 DELTA F= 10.0 DEG.

ORIFICE	-1.74	-1.52	-1.51	-1.04	-0.47	-0.00
1	1.0011	0.9948	0.9947	0.9878	0.9141	0.8428
2	-0.2168	-0.2943	-0.2969	-0.4654	-0.6683	-0.8711
3	-0.5648	-0.6427	-0.6447	-0.8077	-1.0005	-1.1914
4	-0.6553	-0.7237	-0.7244	-0.8693	-1.0366	-1.2024
5	-0.6712	-0.7319	-0.7332	-0.8621	-1.0108	-1.1560
6	-0.6935	-0.7493	-0.7501	-0.8665	-1.0021	-1.1361
7	-0.6965	-0.7476	-0.7475	-0.8588	-0.9836	-1.1010
8	-0.7075	-0.7512	-0.7535	-0.8506	-0.9574	-1.0650
9	-0.7271	-0.7698	-0.7720	-0.8552	-0.9567	-1.0485
10	-0.7335	-0.7717	-0.7740	-0.8528	-0.9410	-1.0309
11	-0.7420	-0.7785	-0.7782	-0.8478	-0.9289	-1.0077
12	-0.7438	-0.7713	-0.7734	-0.8316	-0.9057	-0.9631
13	-0.7444	-0.7671	-0.7683	-0.8159	-0.8844	-0.9065
14	-0.7737	-0.7733	-0.7935	-0.8272	-0.8665	-0.9105
15	-0.8024	-0.8205	-0.8198	-0.8455	-0.8854	-0.9227
16	-0.8275	-0.8363	-0.8352	-0.8615	-0.8962	-0.9295
17	-0.8464	-0.8494	-0.8468	-0.8761	-0.9064	-0.9332
18	-0.8594	-0.8616	-0.8624	-0.8893	-0.9128	-0.9392
19	-0.8704	-0.8802	-0.8801	-0.9014	-0.9237	-0.9436
20	-0.8842	-0.8937	-0.8929	-0.9190	-0.9343	-0.9522
21	-0.9152	-0.9227	-0.9233	-0.9369	-0.9490	-0.9639
22	-0.9394	-0.9442	-0.9439	-0.9515	-0.9595	-0.9708
23	-0.9465	-0.9524	-0.9505	-0.9571	-0.9606	-0.9688
24	-0.9563	-0.9592	-0.9594	-0.9615	-0.9618	-0.9716
25	-0.9674	-0.9710	-0.9694	-0.9703	-0.9683	-0.9745
26	-0.9665	-0.9673	-0.9640	-0.9602	-0.9515	-0.9540
27	-0.8942	-0.8936	-0.8906	-0.8829	-0.8727	-0.8706
28	-0.7123	-0.7118	-0.7102	-0.7025	-0.6913	-0.6882
29	-0.5371	-0.5364	-0.5343	-0.5319	-0.5218	-0.5154
30	-0.4102	-0.4092	-0.4093	-0.4064	-0.3968	-0.3940
31	-0.2901	-0.2885	-0.2878	-0.2780	-0.2675	-0.2589
32	-0.1405	-0.1365	-0.1364	-0.1270	-0.1180	-0.1146
33	0.0418	0.0353	0.0348	0.0222	0.0084	-0.0033
34	0.0868	0.0780	0.0762	0.0576	0.0380	0.0215

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 37 R= 8.1 MILLION M= 0.10 DELTA F= 10.0 DEG.

ORIFICE	-1.74	-1.52	-1.51	-1.04	-0.47	-0.00
101	1.0011	0.5949	0.5947	0.5678	0.5141	0.8428
102	0.5382	0.5870	0.5885	0.6809	0.7718	0.8432
103	0.3902	0.4357	0.4378	0.5257	0.6167	0.6926
104	0.3232	0.3631	0.3638	0.4437	0.5270	0.5991
105	0.2783	0.3143	0.3156	0.3893	0.4664	0.5339
106	0.2442	0.2776	0.2780	0.3468	0.4186	0.4839
107	0.2177	0.2497	0.2504	0.3147	0.3832	0.4441
108	0.1796	0.2086	0.2092	0.2672	0.3284	0.3848
109	0.1533	0.1791	0.1803	0.2328	0.2896	0.3414
110	0.1283	0.1525	0.1533	0.2025	0.2554	0.3045
111	0.1019	0.1241	0.1250	0.1691	0.2180	0.2629
112	0.0669	0.0864	0.0871	0.1260	0.1689	0.2085
113	0.0281	0.0438	0.0447	0.0759	0.1105	0.1435
114	0.0031	0.0168	0.0168	0.0435	0.0723	0.1005
115	-0.0151	-0.0037	-0.0029	0.0205	0.0452	0.0698
116	-0.0279	-0.0175	-0.0174	0.0026	0.0243	0.0465
117	-0.0393	-0.0307	-0.0304	-0.0128	0.0065	0.0256
118	-0.0458	-0.0386	-0.0380	-0.0230	-0.0064	0.0110
119	-0.0471	-0.0396	-0.0397	-0.0261	-0.0125	0.0029
120	-0.0460	-0.0404	-0.0397	-0.0284	-0.0167	-0.0034
121	-0.0487	-0.0440	-0.0434	-0.0347	-0.0246	-0.0127
122	-0.0464	-0.0424	-0.0419	-0.0345	-0.0274	-0.0166
123	-0.0454	-0.0410	-0.0411	-0.0339	-0.0272	-0.0178
124	-0.0414	-0.0388	-0.0384	-0.0314	-0.0248	-0.0161
125	-0.0277	-0.0273	-0.0285	-0.0220	-0.0156	-0.0076
126	-0.0038	-0.0069	-0.0054	-0.0104	-0.0019	0.0073
127	0.1235	0.1271	0.1261	0.1268	0.1202	0.0992
128	0.2644	0.2667	0.2670	0.2723	0.2754	0.2797
129	0.3305	0.3321	0.3329	0.3350	0.3350	0.3373
130	0.3739	0.3743	0.3751	0.3761	0.3752	0.3769
131	0.4650	0.4664	0.4659	0.4661	0.4634	0.4639
132	0.4522	0.4513	0.4505	0.4478	0.4434	0.4426
133	0.3379	0.3346	0.3334	0.3267	0.3177	0.3142
134	0.2915	0.2865	0.2852	0.2758	0.2648	0.2599

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX D. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 41,42 R= 6.1 MILLION M= 0.07 DELTA F= 10.0 DEG.

ORIFICE	-4.98	-4.49	-3.98	-3.49	-3.02	-2.45	-2.02	-1.51
1	0.4796	0.6408	0.7841	0.8838	0.9511	0.9941	1.0020	0.9918
2	0.7796	0.6766	0.5486	0.4127	0.2667	0.0730	-0.1428	-0.3252
3	0.4932	0.3700	0.2229	0.0733	-0.1042	-0.3028	-0.4902	-0.6699
4	0.3334	0.2111	0.0709	-0.0941	-0.2376	-0.4185	-0.5881	-0.7508
5	0.2363	0.1216	-0.0345	-0.1639	-0.2942	-0.4592	-0.6123	-0.7577
6	0.1585	0.0489	-0.1011	-0.2226	-0.3427	-0.4975	-0.6394	-0.7703
7	0.1037	-0.0241	-0.1432	-0.2555	-0.3699	-0.5132	-0.6465	-0.7666
8	-0.0081	-0.1020	-0.2103	-0.3148	-0.4165	-0.5447	-0.6641	-0.7692
9	-0.0818	-0.1705	-0.2712	-0.3695	-0.4631	-0.5783	-0.6881	-0.7850
10	-0.1326	-0.2157	-0.3100	-0.3982	-0.4870	-0.5954	-0.6970	-0.7866
11	-0.1943	-0.2703	-0.3563	-0.4363	-0.5204	-0.6165	-0.7131	-0.7901
12	-0.2606	-0.3287	-0.4062	-0.4776	-0.5486	-0.6358	-0.7159	-0.7832
13	-0.3475	-0.4046	-0.4686	-0.5279	-0.5866	-0.6543	-0.7276	-0.7778
14	-0.4280	-0.4769	-0.5342	-0.5857	-0.6375	-0.6975	-0.7624	-0.8023
15	-0.4936	-0.5385	-0.5907	-0.6352	-0.6813	-0.7347	-0.7939	-0.8305
16	-0.5467	-0.5885	-0.6345	-0.6758	-0.7155	-0.7666	-0.8172	-0.8489
17	-0.5924	-0.6297	-0.6696	-0.7118	-0.7446	-0.7903	-0.8384	-0.8665
18	-0.6331	-0.6685	-0.7082	-0.7416	-0.7762	-0.8141	-0.8605	-0.8825
19	-0.6718	-0.7030	-0.7387	-0.7684	-0.8011	-0.8380	-0.8777	-0.8970
20	-0.7115	-0.7417	-0.7746	-0.8015	-0.8308	-0.8629	-0.9022	-0.9169
21	-0.7509	-0.7792	-0.8090	-0.8328	-0.8596	-0.8893	-0.9273	-0.9388
22	-0.7913	-0.8144	-0.8425	-0.8660	-0.8882	-0.9151	-0.9509	-0.9604
23	-0.8065	-0.8290	-0.8587	-0.8797	-0.8998	-0.9253	-0.9513	-0.9700
24	-0.8279	-0.8474	-0.8755	-0.8945	-0.9139	-0.9378	-0.9418	-0.9785
25	-0.8477	-0.8720	-0.8932	-0.9091	-0.9293	-0.9544	-0.9534	-0.9912
26	-0.8520	-0.8740	-0.8929	-0.9094	-0.9246	-0.9477	-0.9482	-0.9905
27	-0.8032	-0.8204	-0.8422	-0.8602	-0.8758	-0.9003	-0.9027	-0.9457
28	-0.7767	-0.8033	-0.8264	-0.8454	-0.8602	-0.9000	-0.9003	-0.7299
29	-0.4164	-0.4291	-0.4424	-0.4518	-0.4633	-0.4864	-0.4857	-0.5237
30	-0.3282	-0.3375	-0.3490	-0.3592	-0.3673	-0.3793	-0.3783	-0.3995
31	-0.2414	-0.2485	-0.2574	-0.2659	-0.2710	-0.2788	-0.2756	-0.2915
32	-0.1202	-0.1250	-0.1309	-0.1358	-0.1399	-0.1442	-0.1391	-0.1514
33	0.0771	0.0738	0.0705	0.0673	0.0653	0.0625	0.0664	0.0590
34	0.1260	0.1240	0.1212	0.1186	0.1168	0.1147	0.1188	0.1128

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 41,42 R= 6.1 MILLION M= 0.07 DELTA F= 10.0 DEG.

ORIFICE	-4.98	-4.49	-3.98	-3.49	-3.02	-2.45	-2.02	-1.51
101	0.4796	0.6408	0.7841	0.8838	0.9511	0.9941	1.0020	0.9918
102	-0.7555	-0.5037	-0.2548	-0.0415	0.1426	0.3362	0.4796	0.6075
103	-0.6731	-0.4789	-0.2790	-0.1056	0.0451	0.2114	0.3402	0.4553
104	-0.5766	-0.4151	-0.2503	-0.1054	0.0241	0.1663	0.2775	0.3812
105	-0.5193	-0.3764	-0.2330	-0.1062	0.0094	0.1369	0.2380	0.3305
106	-0.4748	-0.3535	-0.2232	-0.1085	-0.0038	0.1131	0.2063	0.2932
107	-0.4472	-0.3336	-0.2148	-0.1086	-0.0122	0.0956	0.1838	0.2638
108	-0.4042	-0.3033	-0.2007	-0.1092	-0.0249	0.0712	0.1496	0.2211
109	-0.3715	-0.2820	-0.1899	-0.1086	-0.0317	0.0546	0.1270	0.1910
110	-0.3529	-0.2715	-0.1875	-0.1122	-0.0420	0.0369	0.1050	0.1633
111	-0.3205	-0.2574	-0.1823	-0.1146	-0.0519	0.0187	0.0807	0.1344
112	-0.2947	-0.2448	-0.1806	-0.1227	-0.0678	-0.0046	0.0496	0.0957
113	-0.2665	-0.2158	-0.1721	-0.1251	-0.0810	-0.0310	0.0157	0.0523
114	-0.2472	-0.2035	-0.1668	-0.1277	-0.0904	-0.0465	-0.0066	0.0242
115	-0.2340	-0.1942	-0.1628	-0.1285	-0.0953	-0.0579	-0.0218	0.0038
116	-0.2208	-0.1865	-0.1561	-0.1282	-0.0992	-0.0658	-0.0331	-0.0105
117	-0.2133	-0.1820	-0.1520	-0.1293	-0.1036	-0.0728	-0.0423	-0.0232
118	-0.2008	-0.1736	-0.1452	-0.1261	-0.1035	-0.0756	-0.0484	-0.0309
119	-0.1837	-0.1601	-0.1350	-0.1197	-0.0984	-0.0737	-0.0478	-0.0326
120	-0.1686	-0.1477	-0.1248	-0.1128	-0.0917	-0.0689	-0.0455	-0.0324
121	-0.1564	-0.1377	-0.1181	-0.0980	-0.0800	-0.0692	-0.0475	-0.0360
122	-0.1364	-0.1215	-0.1057	-0.0871	-0.0829	-0.0631	-0.0430	-0.0337
123	-0.1252	-0.1123	-0.0978	-0.0827	-0.0729	-0.0603	-0.0400	-0.0308
124	-0.1094	-0.0987	-0.0863	-0.0756	-0.0588	-0.0550	-0.0343	-0.0262
125	-0.0815	-0.0739	-0.0662	-0.0566	-0.0435	-0.0391	-0.0226	-0.0151
126	-0.0409	-0.0370	-0.0347	-0.0327	-0.0253	-0.0142	-0.0069	-0.0004
127	0.0837	0.0884	0.0930	0.0969	0.1040	0.1157	0.1197	0.1197
128	0.1950	0.2067	0.2191	0.2319	0.2438	0.2555	0.2766	0.2780
129	0.2535	0.2681	0.2858	0.2996	0.3107	0.3218	0.3388	0.3379
130	0.2939	0.3116	0.3307	0.3452	0.3545	0.3644	0.3811	0.3775
131	0.3543	0.3786	0.4077	0.4281	0.4421	0.4523	0.4720	0.4633
132	0.3740	0.3941	0.4174	0.4324	0.4418	0.4470	0.4583	0.4543
133	0.3192	0.3256	0.3329	0.3369	0.3404	0.3429	0.3508	0.3480
134	0.2861	0.2924	0.2956	0.2986	0.3024	0.3044	0.3111	0.3078

ORIGINAL PAGE IS
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APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 41,42 R= 6.1 MILLION M= 0.07 DELTA F= 10.0 DEG.

ORIFICE	-0.98	-0.50	-0.01	0.49	1.03	2.04	2.99	4.00
1	0.9536	0.9126	0.8482	0.7558	0.6266	0.3196	-0.0629	-0.5267
2	-0.5196	-0.6749	-0.8538	-1.0636	-1.3165	-1.8269	-2.3562	-2.9282
3	-0.8539	-1.0019	-1.1713	-1.3669	-1.5951	-2.0472	-2.5157	-3.0276
4	-0.9128	-1.0395	-1.1912	-1.3552	-1.5595	-1.9542	-2.3593	-2.7773
5	-0.8993	-1.0132	-1.1468	-1.2847	-1.4712	-1.8113	-2.1660	-2.5571
6	-0.9016	-1.0050	-1.1254	-1.2593	-1.4188	-1.7275	-2.0520	-2.4094
7	-0.8871	-0.9812	-1.0926	-1.2148	-1.3603	-1.6476	-1.9548	-2.1279
8	-0.8772	-0.9603	-1.0545	-1.1610	-1.2860	-1.5411	-1.6982	-1.9768
9	-0.8847	-0.9591	-1.0386	-1.1361	-1.2510	-1.4597	-1.6537	-1.8824
10	-0.8753	-0.9425	-1.0192	-1.1069	-1.2113	-1.3645	-1.5805	-1.7771
11	-0.8692	-0.9289	-0.9969	-1.0747	-1.1667	-1.3183	-1.4911	-1.6641
12	-0.8525	-0.9015	-0.9615	-1.0267	-1.0789	-1.2408	-1.3761	-1.5238
13	-0.8285	-0.8727	-0.9004	-0.9482	-1.0146	-1.1321	-1.2408	-1.3520
14	-0.8467	-0.8761	-0.9041	-0.9479	-1.0028	-1.0958	-1.1861	-1.2792
15	-0.8670	-0.8862	-0.9138	-0.9558	-0.9979	-1.0785	-1.1582	-1.2302
16	-0.8801	-0.8950	-0.9220	-0.9565	-0.9932	-1.0631	-1.1302	-1.1929
17	-0.8921	-0.9044	-0.9293	-0.9571	-0.9879	-1.0485	-1.1046	-1.1608
18	-0.8956	-0.9119	-0.9339	-0.9555	-0.9888	-1.0407	-1.0814	-1.1296
19	-0.9079	-0.9221	-0.9403	-0.9587	-0.9830	-1.0274	-1.0650	-1.1021
20	-0.9272	-0.9380	-0.9512	-0.9628	-0.9845	-1.0244	-1.0529	-1.0821
21	-0.9451	-0.9475	-0.9580	-0.9686	-0.9829	-1.0125	-1.0331	-1.0555
22	-0.9630	-0.9581	-0.9639	-0.9725	-0.9829	-1.0001	-1.0177	-1.0210
23	-0.9649	-0.9657	-0.9633	-0.9658	-0.9758	-0.9924	-1.0019	-1.0060
24	-0.9748	-0.9671	-0.9625	-0.9646	-0.9699	-0.9805	-0.9835	-0.9802
25	-0.9786	-0.9694	-0.9638	-0.9658	-0.9649	-0.9652	-0.9640	-0.9569
26	-0.9757	-0.9563	-0.9489	-0.9416	-0.9419	-0.9373	-0.9285	-0.9052
27	-0.9006	-0.8781	-0.8644	-0.8506	-0.8496	-0.8348	-0.8179	-0.7841
28	-0.7183	-0.6981	-0.6827	-0.6731	-0.6652	-0.6479	-0.6288	-0.5896
29	-0.5403	-0.5244	-0.5114	-0.5025	-0.4940	-0.4790	-0.4597	-0.4237
30	-0.4133	-0.4007	-0.3891	-0.3813	-0.3726	-0.3599	-0.3407	-0.3165
31	-0.2891	-0.2693	-0.2538	-0.2449	-0.2348	-0.2202	-0.2069	-0.2014
32	-0.1356	-0.1163	-0.1104	-0.1076	-0.1075	-0.1145	-0.1252	-0.1433
33	0.0329	0.0108	-0.0099	-0.0265	-0.0418	-0.0709	-0.0956	-0.1245
34	0.0731	0.0396	0.0131	-0.0082	-0.0276	-0.0613	-0.0893	-0.1252

ORIGINAL PAGE IS
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APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 41,42 R= 6.1 MILLION M= 0.07 DELTA F= 10.0 DEG.

ORIFICE	-0.98	-0.50	-0.01	0.49	1.03	2.04	2.99	4.00
101	0.9536	0.9126	0.8482	0.7558	0.6266	0.3196	-0.0629	-0.5267
102	0.7106	0.7763	0.8402	0.8972	0.9463	0.9970	0.9937	0.9380
103	0.5524	0.6196	0.6877	0.7569	0.8216	0.9167	0.9734	0.9972
104	0.4689	0.5297	0.5956	0.6604	0.7294	0.8358	0.9127	0.9646
105	0.4117	0.4695	0.5306	0.5919	0.6616	0.7671	0.8495	0.9176
106	0.3679	0.4217	0.4802	0.5420	0.6066	0.7126	0.7995	0.8692
107	0.3346	0.3954	0.4405	0.4987	0.5612	0.6653	0.7535	0.8253
108	0.2858	0.3319	0.3802	0.4347	0.4927	0.5923	0.6783	0.7520
109	0.2510	0.2929	0.3374	0.3872	0.4429	0.5373	0.6186	0.6928
110	0.2191	0.2581	0.3004	0.3477	0.4001	0.4900	0.5677	0.6418
111	0.1841	0.2212	0.2592	0.3027	0.3504	0.4356	0.5088	0.5797
112	0.1403	0.1722	0.2053	0.2446	0.2877	0.3647	0.4323	0.4976
113	0.0882	0.1136	0.1411	0.1734	0.2092	0.2745	0.3339	0.3899
114	0.0544	0.0762	0.0984	0.1263	0.1573	0.2138	0.2665	0.3170
115	0.0305	0.0482	0.0674	0.0918	0.1198	0.1688	0.2165	0.2604
116	0.0122	0.0277	0.0440	0.0658	0.0906	0.1353	0.1765	0.2167
117	-0.0036	0.0100	0.0241	0.0432	0.0649	0.1043	0.1418	0.1779
118	-0.0135	-0.0033	0.0092	0.0260	0.0459	0.0809	0.1146	0.1467
119	-0.0176	-0.0086	0.0009	0.0157	0.0328	0.0648	0.0947	0.1232
120	-0.0195	-0.0138	-0.0051	0.0080	0.0231	0.0510	0.0775	0.1023
121	-0.0257	-0.0212	-0.0139	-0.0032	0.0099	0.0345	0.0576	0.0790
122	-0.0252	-0.0220	-0.0176	-0.0078	0.0037	0.0246	0.0441	0.0631
123	-0.0236	-0.0213	-0.0177	-0.0088	0.0021	0.0205	0.0383	0.0549
124	-0.0195	-0.0185	-0.0153	-0.0067	0.0027	0.0201	0.0361	0.0498
125	-0.0074	-0.0073	-0.0039	0.0050	0.0140	0.0302	0.0451	0.0564
126	0.0096	0.0101	0.0158	0.0255	0.0362	0.0531	0.0660	0.0769
127	0.0741	0.0531	0.0141	0.0283	0.0416	0.0599	0.0745	0.0875
128	0.2846	0.2806	0.2871	0.2945	0.3040	0.3245	0.3378	0.3478
129	0.3418	0.3359	0.3377	0.3412	0.3448	0.3524	0.3592	0.3620
130	0.3816	0.3731	0.3752	0.3769	0.3783	0.3819	0.3848	0.3889
131	0.4690	0.4577	0.4598	0.4586	0.4599	0.4587	0.4606	0.4604
132	0.4522	0.4417	0.4376	0.4352	0.4340	0.4313	0.4300	0.4280
133	0.3366	0.3194	0.3094	0.3046	0.3001	0.2913	0.2841	0.2739
134	0.2863	0.2666	0.2538	0.2457	0.2382	0.2254	0.2149	0.1995

ORIGINAL PAGE IS
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APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 41,42 R= 6.1 MILLION M= 0.07 DELTA F= 10.0 DEG.

ORIFICE	6.00	8.01	10.01	11.95	14.03	15.03	15.97	17.05
1	-1.6498	-3.0651	-4.7798	-6.6282	-8.5889	-9.5504	-10.4788	-11.4068
2	-4.1824	-5.5630	-7.0474	-8.5532	-10.1351	-10.9095	-11.5578	-12.0399
3	-4.0844	-5.2162	-6.4740	-7.7322	-9.2409	-9.9414	-10.6267	-10.9573
4	-3.6808	-4.7934	-6.0443	-6.2308	-7.2880	-7.7502	-8.2317	-8.4707
5	-3.4459	-3.8287	-4.7522	-5.5800	-6.4685	-6.8094	-7.0616	-7.3969
6	-2.9118	-3.6529	-4.3972	-5.1307	-5.8436	-6.1704	-6.4326	-6.6824
7	-2.7394	-3.3889	-4.0362	-4.6664	-5.3360	-5.5960	-5.8364	-6.0988
8	-2.4933	-3.0164	-3.5649	-4.0854	-4.6346	-4.8547	-5.0470	-5.2184
9	-2.3354	-2.7978	-3.2646	-3.7246	-4.1615	-4.3704	-4.5475	-4.6349
10	-2.1704	-2.5891	-3.0036	-3.4048	-3.8165	-3.9525	-4.1047	-4.1878
11	-2.0158	-2.3742	-2.7302	-3.0569	-3.4034	-3.5314	-3.6406	-3.6895
12	-1.8094	-2.1061	-2.3897	-2.6733	-2.9320	-3.0130	-3.1051	-3.1645
13	-1.5687	-1.7836	-1.9937	-2.1915	-2.3646	-2.4190	-2.4832	-2.4969
14	-1.4528	-1.6190	-1.7791	-1.9372	-2.0623	-2.0999	-2.1375	-2.1533
15	-1.3695	-1.5020	-1.6353	-1.7496	-1.8376	-1.8674	-1.8611	-1.8211
16	-1.3036	-1.4170	-1.5163	-1.6076	-1.6624	-1.6641	-1.6517	-1.5714
17	-1.2496	-1.3411	-1.4137	-1.4878	-1.5049	-1.5067	-1.4737	-1.3593
18	-1.1993	-1.2733	-1.3238	-1.3714	-1.3785	-1.3573	-1.3079	-1.2350
19	-1.1535	-1.2011	-1.2377	-1.2596	-1.2619	-1.2178	-1.1749	-1.0892
20	-1.1108	-1.1404	-1.1577	-1.1671	-1.1361	-1.1036	-1.0288	-0.7687
21	-1.0566	-1.0733	-1.0711	-1.0746	-1.0249	-0.9609	-0.8497	-0.6487
22	-0.9951	-0.9901	-0.9711	-0.9144	-0.8902	-0.8284	-0.7085	-0.5815
23	-0.9717	-0.9218	-0.9052	-0.8429	-0.8080	-0.7188	-0.6526	-0.5500
24	-0.9201	-0.8942	-0.8130	-0.7728	-0.7304	-0.6571	-0.5666	-0.5698
25	-0.8655	-0.7865	-0.7203	-0.7226	-0.6472	-0.5617	-0.5504	-0.5684
26	-0.7903	-0.6357	-0.5975	-0.5113	-0.5582	-0.5514	-0.5473	-0.5594
27	-0.6414	-0.4922	-0.4553	-0.4435	-0.4865	-0.5099	-0.5449	-0.5497
28	-0.4180	-0.3814	-0.3608	-0.3530	-0.4416	-0.4992	-0.5241	-0.5806
29	-0.3169	-0.3157	-0.3268	-0.3514	-0.4154	-0.5122	-0.5324	-0.5559
30	-0.2771	-0.2968	-0.3079	-0.3431	-0.4244	-0.5106	-0.5532	-0.5706
31	-0.2361	-0.2771	-0.3310	-0.3475	-0.4364	-0.5132	-0.5760	-0.5550
32	-0.2238	-0.2655	-0.3086	-0.3553	-0.4355	-0.5055	-0.5867	-0.5403
33	-0.2124	-0.2718	-0.3163	-0.3589	-0.4229	-0.4845	-0.5799	-0.7167
34	-0.2165	-0.2708	-0.3205	-0.3687	-0.4509	-0.5101	-0.5389	-0.5667

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 41,42 R= 6.1 MILLION M= 0.07 DELTA F= 10.0 DEG.

ORIFICE	6.00	8.01	10.01	11.95	14.03	15.03	15.97	17.05
101	-1.6498	-3.0651	-4.7798	-6.6282	-8.5889	-9.5504	-10.4788	-11.4068
102	0.6966	0.2636	-0.3397	-1.0609	-1.9058	-2.3405	-2.7201	-3.0604
103	0.9557	0.7980	0.5206	0.1645	-0.2846	-0.5014	-0.7288	-0.8921
104	0.9967	0.9474	0.8179	0.6185	0.3540	0.2247	0.0831	-0.0182
105	0.9893	0.9911	0.9337	0.8206	0.6471	0.5655	0.4936	0.3932
106	0.9630	0.9970	0.9799	0.9169	0.8056	0.7462	0.6863	0.6168
107	0.9276	0.9877	0.9953	0.9615	0.8922	0.8541	0.8119	0.7574
108	0.8686	0.9465	0.9871	0.9947	0.9743	0.9522	0.9350	0.9083
109	0.8129	0.9025	0.9590	0.9872	0.9928	0.9890	0.9815	0.9719
110	0.7607	0.8567	0.9263	0.9697	0.9927	0.9952	0.9941	0.9908
111	0.6957	0.7956	0.8735	0.9283	0.9697	0.9794	0.9834	0.9944
112	0.6110	0.7096	0.7903	0.8577	0.9069	0.9272	0.9405	0.9516
113	0.4900	0.5839	0.6649	0.7354	0.7917	0.8164	0.8317	0.8509
114	0.4066	0.4903	0.5686	0.6362	0.6912	0.7172	0.7344	0.7587
115	0.3425	0.4185	0.4898	0.5541	0.6072	0.6324	0.6504	0.6719
116	0.2895	0.3600	0.4261	0.4837	0.5337	0.5590	0.5722	0.5924
117	0.2439	0.3076	0.3678	0.4226	0.4734	0.4909	0.5078	0.5217
118	0.2067	0.2632	0.3188	0.3667	0.4131	0.4303	0.4443	0.4542
119	0.1755	0.2268	0.2763	0.3218	0.3617	0.3762	0.3891	0.4012
120	0.1483	0.1932	0.2378	0.2784	0.3131	0.3264	0.3389	0.3441
121	0.1184	0.1565	0.1957	0.2333	0.2629	0.2753	0.2838	0.2935
122	0.0940	0.1265	0.1608	0.1908	0.2166	0.2268	0.2278	0.2291
123	0.0829	0.1134	0.1435	0.1715	0.1920	0.1985	0.2026	0.2019
124	0.0741	0.0996	0.1271	0.1548	0.1698	0.1772	0.1766	0.1798
125	0.0753	0.0961	0.1201	0.1423	0.1571	0.1607	0.1580	0.1613
126	0.0911	0.1080	0.1258	0.1430	0.1555	0.1527	0.1520	0.1453
127	0.1071	0.1295	0.1508	0.1694	0.1837	0.1898	0.1863	0.1821
128	0.3526	0.3618	0.3725	0.3799	0.3828	0.3801	0.3766	0.3695
129	0.3628	0.3703	0.3764	0.3823	0.3827	0.3808	0.3746	0.3714
130	0.3853	0.3905	0.3951	0.3998	0.4008	0.3965	0.3931	0.3806
131	0.4566	0.4568	0.4570	0.4582	0.4547	0.4519	0.4446	0.4359
132	0.4151	0.4124	0.4102	0.4072	0.4001	0.3928	0.3829	0.3663
133	0.2486	0.2331	0.2222	0.2132	0.1934	0.1775	0.1643	0.1391
134	0.1622	0.1390	0.1224	0.1163	0.0835	0.0555	0.0422	0.0074

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 41,42 R= 6.1 MILLION M= 0.07 DELTA F= 10.0 DEG.

ORIFICE	17.62
1	-11.7162
2	-12.2751
3	-11.2863
4	-8.7429
5	-7.5146
6	-6.7376
7	-6.1083
8	-5.1580
9	-4.5968
10	-4.1878
11	-3.7529
12	-3.1519
13	-2.4525
14	-2.0008
15	-1.7643
16	-1.5215
17	-1.3615
18	-1.0643
19	-0.8809
20	-0.7107
21	-0.6225
22	-0.5791
23	-0.5672
24	-0.5483
25	-0.5646
26	-0.5730
27	-0.5678
28	-0.5898
29	-0.5886
30	-0.6019
31	-0.5919
32	-0.6040
33	-0.5896
34	-0.5895

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 41,42 R= 6.1 MILLION M= 0.07 DELTA F= 10.0 DEG.

ORIFICE	17.62
101	-11.7162
102	-3.2244
103	-1.0709
104	-0.1120
105	0.3419
106	0.5960
107	0.7407
108	0.9054
109	0.9671
110	0.9938
111	0.9952
112	0.9583
113	0.8607
114	0.7643
115	0.6738
116	0.6018
117	0.5249
118	0.4634
119	0.4030
120	0.3428
121	0.2883
122	0.2289
123	0.1988
124	0.1830
125	0.1554
126	0.1409
127	0.1827
128	0.3670
129	0.3659
130	0.3723
131	0.4231
132	0.3594
133	0.1234
134	-0.0082

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX D. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 43 R= 3.0 MILLION M= 0.07 DELTA F= 10.0 DEG.

ORIFICE	-5.49	-5.00	-4.50	-4.00	-3.49	-3.01	-2.51	-2.01
1	0.2592	0.4564	0.6290	0.7661	0.8673	0.9419	0.9842	1.0024
2	0.8460	0.7644	0.6610	0.5396	0.4033	0.2547	0.0909	-0.0973
3	0.5924	0.4858	0.3572	0.2191	0.0699	-0.1392	-0.3098	-0.4446
4	0.4330	0.3235	0.1984	0.0663	-0.1263	-0.2720	-0.4272	-0.5468
5	0.3321	0.2264	0.1086	-0.0659	-0.1963	-0.3319	-0.4721	-0.5757
6	0.2489	0.1483	0.0353	-0.1322	-0.2562	-0.3809	-0.5108	-0.5980
7	0.1903	0.0941	-0.0644	-0.1731	-0.2925	-0.4067	-0.5299	-0.6101
8	0.0949	0.0062	-0.1442	-0.2455	-0.3512	-0.4574	-0.5632	-0.6289
9	0.0163	-0.1189	-0.2110	-0.3068	-0.4032	-0.5023	-0.6034	-0.6570
10	-0.0887	-0.1719	-0.2565	-0.3475	-0.4381	-0.5303	-0.6202	-0.6640
11	-0.1561	-0.2323	-0.3104	-0.3932	-0.4770	-0.5628	-0.6436	-0.6770
12	-0.2325	-0.3000	-0.3715	-0.4447	-0.5187	-0.5698	-0.6629	-0.6839
13	-0.3297	-0.3869	-0.4471	-0.5074	-0.5700	-0.6291	-0.6922	-0.6953
14	-0.4183	-0.4712	-0.5212	-0.5744	-0.6258	-0.6789	-0.7322	-0.7264
15	-0.4895	-0.5364	-0.5812	-0.6304	-0.6777	-0.7227	-0.7709	-0.7646
16	-0.5475	-0.5874	-0.6317	-0.6706	-0.7182	-0.7613	-0.8013	-0.7902
17	-0.5942	-0.6335	-0.6718	-0.7137	-0.7508	-0.7889	-0.8270	-0.8123
18	-0.6373	-0.6755	-0.7057	-0.7483	-0.7817	-0.8151	-0.8471	-0.8333
19	-0.6791	-0.7078	-0.7420	-0.7788	-0.8114	-0.8418	-0.8712	-0.8488
20	-0.7221	-0.7520	-0.7793	-0.8119	-0.8415	-0.8733	-0.8933	-0.8725
21	-0.7672	-0.7892	-0.8175	-0.8467	-0.8773	-0.8967	-0.9244	-0.8975
22	-0.7999	-0.8275	-0.8522	-0.8815	-0.9014	-0.9236	-0.9472	-0.9146
23	-0.7668	-0.7932	-0.8195	-0.8422	-0.8614	-0.8855	-0.9051	-0.9360
24	-0.7873	-0.8104	-0.8341	-0.8527	-0.8739	-0.8948	-0.9170	-0.9472
25	-0.8092	-0.8321	-0.8505	-0.8656	-0.8891	-0.9062	-0.9286	-0.9486
26	-0.8043	-0.8222	-0.8418	-0.8581	-0.8748	-0.8885	-0.9057	-0.9258
27	-0.7526	-0.7717	-0.7903	-0.8094	-0.8255	-0.8480	-0.8633	-0.8863
28	-0.7382	-0.7561	-0.7822	-0.7963	-0.8185	-0.8354	-0.8519	-0.8711
29	-0.4154	-0.4216	-0.4333	-0.4442	-0.4698	-0.4729	-0.4891	-0.4884
30	-0.2878	-0.2964	-0.3084	-0.3155	-0.3234	-0.3314	-0.3368	-0.3465
31	-0.2256	-0.2325	-0.2401	-0.2490	-0.2540	-0.2618	-0.2681	-0.2737
32	-0.1103	-0.1165	-0.1228	-0.1288	-0.1334	-0.1375	-0.1390	-0.1407
33	0.0793	0.0744	0.0699	0.0657	0.0633	0.0611	0.0595	0.0598
34	0.1265	0.1227	0.1191	0.1145	0.1123	0.1108	0.1098	0.1106

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 43 R= 3.0 MILLION M= 0.07 DELTA F= 10.0 DEG.

ORIFICE	-5.49	-5.00	-4.50	-4.00	-3.49	-3.01	-2.51	-2.01
101	0.2592	0.4564	0.6290	0.7661	0.8673	0.9419	0.9842	1.0024
102	-1.0496	-0.7792	-0.5171	-0.2780	-0.0614	0.1305	0.3006	0.4534
103	-0.8038	-0.6968	-0.4881	-0.2972	-0.1233	0.0357	0.1813	0.3135
104	-0.7672	-0.5950	-0.4244	-0.2674	-0.1207	0.0139	0.1379	0.2543
105	-0.6851	-0.5350	-0.3850	-0.2487	-0.1183	0.0000	0.1120	0.2166
106	-0.6291	-0.4927	-0.3625	-0.2362	-0.1200	-0.0121	0.0898	0.1859
107	-0.5931	-0.4600	-0.3406	-0.2256	-0.1198	-0.0198	0.0737	0.1637
108	-0.5221	-0.4139	-0.3102	-0.2123	-0.1177	-0.0310	0.0514	0.1313
109	-0.4765	-0.3814	-0.2857	-0.2009	-0.1151	-0.0379	0.0371	0.1092
110	-0.4457	-0.3592	-0.2753	-0.1962	-0.1206	-0.0482	0.0208	0.0884
111	-0.3859	-0.3367	-0.2619	-0.1916	-0.1227	-0.0576	0.0049	0.0658
112	-0.3666	-0.3132	-0.2489	-0.1970	-0.1277	-0.0718	-0.0173	0.0355
113	-0.3209	-0.2692	-0.2268	-0.1776	-0.1303	-0.0848	-0.0414	0.0024
114	-0.2930	-0.2494	-0.2124	-0.1721	-0.1311	-0.0935	-0.0561	-0.0182
115	-0.2740	-0.2343	-0.2028	-0.1682	-0.1325	-0.1005	-0.0674	-0.0333
116	-0.2565	-0.2221	-0.1949	-0.1644	-0.1332	-0.1034	-0.0739	-0.0430
117	-0.2440	-0.2152	-0.1888	-0.1619	-0.1334	-0.1072	-0.0797	-0.0521
118	-0.2279	-0.2027	-0.1806	-0.1553	-0.1301	-0.1070	-0.0821	-0.0569
119	-0.2096	-0.1865	-0.1634	-0.1464	-0.1235	-0.1015	-0.0798	-0.0563
120	-0.1902	-0.1707	-0.1471	-0.1347	-0.1146	-0.0951	-0.0769	-0.0529
121	-0.1759	-0.1605	-0.1399	-0.1284	-0.1084	-0.0920	-0.0744	-0.0529
122	-0.1534	-0.1406	-0.1252	-0.1177	-0.1002	-0.0825	-0.0668	-0.0486
123	-0.1398	-0.1285	-0.1166	-0.1106	-0.0941	-0.0784	-0.0616	-0.0435
124	-0.1198	-0.1123	-0.1043	-0.0968	-0.0856	-0.0687	-0.0526	-0.0350
125	-0.0887	-0.0848	-0.0806	-0.0719	-0.0725	-0.0541	-0.0359	-0.0174
126	-0.0430	-0.0404	-0.0491	-0.0470	-0.0557	-0.0372	-0.0192	-0.0007
127	0.0771	0.0805	0.0800	0.0824	0.0677	0.0409	0.0069	-0.0096
128	0.1783	0.1902	0.2075	0.2212	0.2438	0.2523	0.2613	0.2727
129	0.2324	0.2486	0.2751	0.2904	0.3090	0.3155	0.3234	0.3341
130	0.2660	0.2891	0.3211	0.3337	0.3523	0.3593	0.3664	0.3725
131	0.3174	0.3469	0.3968	0.4190	0.4448	0.4492	0.4516	0.4543
132	0.3416	0.3682	0.4058	0.4241	0.4368	0.4377	0.4408	0.4429
133	0.3033	0.3134	0.3230	0.3274	0.3312	0.3330	0.3352	0.3394
134	0.2760	0.2807	0.2878	0.2910	0.2925	0.2943	0.2970	0.2986

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 43 R= 3.0 MILLION M= 0.07 DELTA F= 10.0 DEG.

ORIFICE	-1.49	-1.02	-0.50	-0.00	0.50	1.01	2.01	4.02
1	0.9873	0.9571	0.8846	0.8024	0.7431	0.6643	0.4186	-0.3116
2	-0.3455	-0.5459	-0.7831	-0.9947	-1.1375	-1.2788	-1.7060	-2.7018
3	-0.6886	-0.8776	-1.1028	-1.3049	-1.4312	-1.5713	-1.9426	-2.8200
4	-0.7722	-0.9440	-1.1406	-1.3158	-1.4225	-1.5369	-1.8682	-2.6089
5	-0.7796	-0.9273	-1.1095	-1.2601	-1.3562	-1.4557	-1.7402	-2.3925
6	-0.7941	-0.9344	-1.0916	-1.2349	-1.3141	-1.4130	-1.6630	-2.2553
7	-0.7923	-0.9200	-1.0733	-1.1993	-1.2768	-1.3613	-1.5995	-2.1521
8	-0.8015	-0.9123	-1.0416	-1.1565	-1.2243	-1.2941	-1.5050	-1.9529
9	-0.8181	-0.9166	-1.0321	-1.1388	-1.1927	-1.2675	-1.4399	-1.7846
10	-0.8201	-0.9126	-1.0202	-1.1139	-1.1637	-1.2331	-1.3949	-1.7149
11	-0.8194	-0.9084	-1.0037	-1.0877	-1.1329	-1.1879	-1.3352	-1.6284
12	-0.8172	-0.8906	-0.9767	-1.0503	-1.0830	-1.1291	-1.2427	-1.5002
13	-0.8143	-0.8685	-0.9386	-0.9938	-1.0215	-1.0455	-1.1271	-1.3302
14	-0.8391	-0.8887	-0.9433	-0.9911	-1.0115	-1.0247	-1.1014	-1.2644
15	-0.8642	-0.9133	-0.9581	-0.9994	-1.0052	-1.0279	-1.0887	-1.2206
16	-0.8814	-0.9255	-0.9691	-1.0016	-1.0065	-1.0183	-1.0735	-1.1809
17	-0.8998	-0.9365	-0.9759	-1.0047	-1.0047	-1.0148	-1.0594	-1.1486
18	-0.9183	-0.9511	-0.9862	-1.0134	-1.0100	-1.0149	-1.0505	-1.1206
19	-0.9343	-0.9626	-0.9954	-1.0202	-1.0119	-1.0181	-1.0409	-1.0870
20	-0.9565	-0.9819	-1.0101	-1.0261	-1.0176	-1.0126	-1.0318	-1.0592
21	-0.9751	-0.9961	-1.0215	-1.0359	-1.0187	-1.0180	-1.0215	-1.0303
22	-0.9945	-1.0158	-1.0416	-1.0444	-1.0299	-1.0174	-1.0115	-0.9911
23	-0.9465	-0.9708	-0.9952	-0.9966	-0.9819	-0.9573	-0.9489	-0.9108
24	-0.9536	-0.9754	-0.9970	-0.9955	-0.9780	-0.9469	-0.9352	-0.8673
25	-0.9576	-0.9768	-1.0027	-1.0044	-0.9746	-0.9483	-0.9174	-0.8278
26	-0.9384	-0.9632	-0.9927	-0.9976	-0.9564	-0.9182	-0.8812	-0.7573
27	-0.8959	-0.9143	-0.9521	-0.9158	-0.8707	-0.8237	-0.7739	-0.6251
28	-0.8891	-0.9188	-0.9232	-0.7318	-0.6862	-0.6456	-0.5900	-0.4251
29	-0.4592	-0.4781	-0.5174	-0.5523	-0.5170	-0.4774	-0.4295	-0.3087
30	-0.3632	-0.3832	-0.4025	-0.4236	-0.3935	-0.3579	-0.3206	-0.2615
31	-0.2812	-0.2875	-0.2943	-0.2953	-0.2521	-0.2214	-0.1959	-0.2218
32	-0.1464	-0.1480	-0.1520	-0.1343	-0.1004	-0.1031	-0.1277	-0.1994
33	0.0540	0.0514	0.0533	0.0285	-0.0142	-0.0537	-0.1055	-0.1997
34	0.1055	0.1039	0.1058	0.0657	0.0043	-0.0423	-0.1013	-0.2074

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 43 R= 3.0 MILLION M= 0.07 DELTA F= 10.0 DEG.

ORIFICE	-1.49	-1.02	-0.50	-0.00	0.50	1.01	2.01	4.02
101	0.9873	0.9571	0.8846	0.8024	0.7431	0.6643	0.4186	-0.3116
102	0.5922	0.6992	0.7985	0.8647	0.9040	0.9270	0.9827	0.9631
103	0.4415	0.5439	0.6453	0.7206	0.7619	0.8033	0.8679	0.9869
104	0.3685	0.4624	0.5561	0.6290	0.6688	0.7059	0.8042	0.9374
105	0.3202	0.4039	0.4942	0.5604	0.5987	0.6385	0.7330	0.8822
106	0.2822	0.3602	0.4452	0.5109	0.5463	0.5857	0.6777	0.8331
107	0.2539	0.3272	0.4090	0.4697	0.5038	0.5399	0.6326	0.7890
108	0.2133	0.2799	0.3525	0.4089	0.4416	0.4724	0.5625	0.7169
109	0.1842	0.2450	0.3111	0.3656	0.3953	0.4263	0.5065	0.6570
110	0.1567	0.2143	0.2767	0.3261	0.3542	0.3841	0.4589	0.6078
111	0.1284	0.1801	0.2381	0.2834	0.3101	0.3343	0.4074	0.5467
112	0.0905	0.1374	0.1889	0.2298	0.2500	0.2741	0.3377	0.4640
113	0.0473	0.0867	0.1279	0.1621	0.1795	0.1977	0.2511	0.3594
114	0.0198	0.0530	0.0903	0.1181	0.1319	0.1471	0.1927	0.2865
115	0.0010	0.0293	0.0618	0.0872	0.0982	0.1107	0.1492	0.2317
116	-0.0138	0.0114	0.0411	0.0638	0.0716	0.0810	0.1159	0.1891
117	-0.0270	-0.0032	0.0234	0.0434	0.0488	0.0564	0.0852	0.1510
118	-0.0343	-0.0137	0.0114	0.0285	0.0323	0.0362	0.0637	0.1195
119	-0.0358	-0.0163	0.0046	0.0200	0.0222	0.0253	0.0482	0.0959
120	-0.0354	-0.0164	0.0023	0.0150	0.0155	0.0169	0.0335	0.0747
121	-0.0376	-0.0208	-0.0031	0.0079	0.0050	0.0047	0.0184	0.0524
122	-0.0331	-0.0184	-0.0014	0.0079	0.0046	0.0004	0.0097	0.0369
123	-0.0276	-0.0139	0.0019	0.0113	0.0063	-0.0001	0.0078	0.0300
124	-0.0189	-0.0045	0.0105	0.0195	0.0130	0.0071	0.0115	0.0291
125	-0.0017	0.0135	0.0298	0.0385	0.0326	0.0257	0.0289	0.0407
126	0.0143	0.0287	0.0450	0.0546	0.0498	0.0444	0.0501	0.0656
127	0.0008	0.0242	0.0458	0.0563	0.0527	0.0476	0.0543	0.0728
128	0.2738	0.2622	0.2477	0.2102	0.1445	0.0669	0.0393	0.0588
129	0.3419	0.3510	0.3620	0.3663	0.3653	0.3620	0.3643	0.3685
130	0.4107	0.3834	0.3912	0.3947	0.3880	0.3793	0.3759	0.3718
131	0.4598	0.4624	0.4671	0.4643	0.4550	0.4478	0.4409	0.4335
132	0.4479	0.4493	0.4538	0.4486	0.4359	0.4229	0.4120	0.3985
133	0.3427	0.3438	0.3477	0.3364	0.3107	0.2879	0.2659	0.2314
134	0.3005	0.3025	0.3055	0.2861	0.2520	0.2260	0.1974	0.1504

ORIGINAL PAGE IS OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 43 R= 3.0 MILLION M= 0.07 DELTA F= 10.0 DEG.

ORIFICE	5.94	7.96	10.02	12.01	14.02	14.96	16.01	17.01
1	-1.3025	-2.6472	-4.3339	-6.0756	-8.0313	-9.1232	-9.5297	-10.1965
2	-3.8272	-5.1509	-6.6495	-8.1069	-9.6288	-10.4108	-10.9095	-11.1404
3	-3.7630	-4.8604	-6.0941	-7.3733	-8.6351	-9.3481	-10.2148	-10.6821
4	-3.4239	-4.4485	-5.7343	-7.1359	-7.6161	-7.1438	-7.4956	-8.0480
5	-3.1968	-4.3125	-4.2439	-5.2081	-6.0293	-6.4677	-6.4853	-7.2015
6	-3.0492	-3.3544	-4.1656	-4.9729	-5.6407	-5.8245	-6.1082	-6.2791
7	-2.5153	-3.2054	-3.8808	-4.5487	-5.1228	-5.3648	-5.6756	-5.7138
8	-2.3626	-2.8998	-3.4370	-3.9869	-4.4094	-4.6608	-5.0473	-5.1649
9	-2.2294	-2.6891	-3.1795	-3.6272	-4.0102	-4.2281	-4.5139	-4.4002
10	-2.0938	-2.4935	-2.9181	-3.3260	-3.6856	-3.8507	-3.9486	-4.1666
11	-1.9472	-2.3020	-2.6669	-2.9965	-3.2734	-3.4078	-3.5823	-3.6916
12	-1.7563	-2.0586	-2.3539	-2.6281	-2.8144	-2.9765	-3.0740	-3.0406
13	-1.5284	-1.7480	-1.9642	-2.1773	-2.3012	-2.3928	-2.4916	-2.3995
14	-1.4205	-1.5947	-1.7590	-1.9129	-2.0010	-2.0835	-2.0227	-2.0322
15	-1.3469	-1.4908	-1.6209	-1.7355	-1.8007	-1.8280	-1.7699	-1.7812
16	-1.2855	-1.3978	-1.4954	-1.5878	-1.6172	-1.6638	-1.5438	-1.6236
17	-1.2323	-1.3216	-1.3996	-1.4538	-1.4646	-1.5056	-1.3768	-1.4177
18	-1.1874	-1.2535	-1.3036	-1.3430	-1.3392	-1.3283	-1.1785	-1.1872
19	-1.1339	-1.1836	-1.2188	-1.2389	-1.2311	-1.1886	-0.9855	-0.9813
20	-1.0921	-1.1151	-1.1240	-1.1218	-1.0890	-1.0585	-0.8137	-0.8008
21	-1.0402	-1.0468	-1.0250	-0.9867	-0.9606	-0.8930	-0.6819	-0.7334
22	-0.9715	-0.9446	-0.9041	-0.8411	-0.8228	-0.7344	-0.6141	-0.6607
23	-0.8709	-0.8301	-0.7715	-0.6911	-0.6474	-0.5044	-0.5751	-0.5912
24	-0.8180	-0.7665	-0.6891	-0.5813	-0.5737	-0.5299	-0.5344	-0.5862
25	-0.7328	-0.6700	-0.5965	-0.4930	-0.5319	-0.5016	-0.4704	-0.4976
26	-0.6272	-0.5176	-0.4490	-0.4071	-0.4947	-0.4663	-0.5073	-0.4995
27	-0.4788	-0.4029	-0.3578	-0.3759	-0.4872	-0.4314	-0.5065	-0.4945
28	-0.3453	-0.3399	-0.3428	-0.3647	-0.4414	-0.4457	-0.5367	-0.5780
29	-0.2952	-0.3135	-0.3315	-0.3593	-0.4365	-0.4455	-0.4830	-0.5794
30	-0.2821	-0.3093	-0.3339	-0.3572	-0.4859	-0.4675	-0.4574	-0.5034
31	-0.2655	-0.3025	-0.3316	-0.3671	-0.4958	-0.4657	-0.4579	-0.5959
32	-0.2581	-0.3091	-0.3463	-0.3755	-0.4462	-0.4901	-0.5409	-0.5201
33	-0.2651	-0.3073	-0.3526	-0.3830	-0.4811	-0.4959	-0.4657	-0.5051
34	-0.2634	-0.3189	-0.3439	-0.3734	-0.5029	-0.4660	-0.4678	-0.5854

ORIGINAL PAGE IS
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APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 43 R= 3.0 MILLION M= 0.07 DELTA F= 10.0 DEG.

ORIFICE	5.94	7.96	10.02	12.01	14.02	14.96	16.01	17.01
101	-1.3025	-2.6472	-4.3339	-6.0756	-8.0313	-9.1232	-9.5297	-10.1965
102	0.7774	0.3911	-0.1878	-0.8714	-1.6649	-2.1216	-2.4247	-2.6532
103	0.9725	0.8438	0.5920	0.2435	-0.1434	-0.3569	-0.6330	-0.8225
104	0.9939	0.9663	0.8488	0.6682	0.4497	0.3182	0.1734	-0.0112
105	0.9686	0.9954	0.9524	0.8428	0.7144	0.6085	0.5469	0.4306
106	0.9379	0.9907	0.9839	0.9351	0.8379	0.7802	0.7364	0.6843
107	0.9025	0.9726	0.9928	0.9700	0.9130	0.8764	0.8409	0.8050
108	0.8346	0.9268	0.9744	0.9920	0.9787	0.9669	0.9407	0.9168
109	0.7768	0.8770	0.9478	0.9820	0.9900	0.9890	0.9828	0.9826
110	0.7281	0.8293	0.9113	0.9546	0.9788	0.9915	0.9929	0.9900
111	0.6620	0.7696	0.8516	0.9155	0.9467	0.9655	0.9843	0.9783
112	0.5753	0.6824	0.7685	0.8419	0.8873	0.9057	0.9250	0.9442
113	0.4597	0.5556	0.6411	0.7142	0.7661	0.7922	0.8139	0.8387
114	0.3760	0.4619	0.5455	0.6107	0.6720	0.6916	0.7194	0.7355
115	0.3115	0.3905	0.4688	0.5328	0.5897	0.6055	0.6246	0.6589
116	0.2619	0.3321	0.4039	0.4631	0.5129	0.5319	0.5540	0.5863
117	0.2155	0.2793	0.3442	0.4031	0.4502	0.4673	0.4804	0.5082
118	0.1787	0.2360	0.2967	0.3470	0.3840	0.4024	0.4301	0.4448
119	0.1472	0.2003	0.2529	0.2987	0.3334	0.3555	0.3721	0.3720
120	0.1190	0.1676	0.2148	0.2562	0.2824	0.3050	0.3258	0.3139
121	0.0884	0.1335	0.1731	0.2093	0.2322	0.2550	0.2522	0.2587
122	0.0668	0.1030	0.1379	0.1710	0.1873	0.2007	0.2027	0.2040
123	0.0572	0.0881	0.1214	0.1501	0.1653	0.1793	0.1773	0.1943
124	0.0509	0.0774	0.1074	0.1321	0.1443	0.1544	0.1523	0.1601
125	0.0572	0.0804	0.1032	0.1253	0.1322	0.1350	0.1366	0.1467
126	0.0825	0.1005	0.1200	0.1372	0.1399	0.1457	0.1322	0.1310
127	0.0930	0.1147	0.1406	0.1607	0.1649	0.1707	0.1672	0.1594
128	0.0858	0.1109	0.1367	0.1603	0.1646	0.1713	0.1723	0.1780
129	0.3743	0.3788	0.3845	0.3913	0.3842	0.3846	0.3741	0.3701
130	0.3755	0.3776	0.3854	0.3872	0.3862	0.3848	0.3704	0.3701
131	0.4323	0.4326	0.4379	0.4412	0.4374	0.4279	0.4196	0.4288
132	0.3928	0.3897	0.3885	0.3887	0.3750	0.3691	0.3630	0.3475
133	0.2169	0.2027	0.1943	0.1886	0.1617	0.1413	0.1342	0.1116
134	0.1266	0.1075	0.0947	0.0844	0.0468	0.0265	0.0111	0.0194

ORIGINAL PAGE IS
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APPENDIX 5. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 43 R= 3.0 MILLION M= 0.07 DELTA F= 10.0 DEG.

ORIFICE	17.73
1	-10.6419
2	-11.5354
3	-10.6108
4	-7.4494
5	-7.2426
6	-6.6009
7	-5.6886
8	-5.2001
9	-4.6270
10	-4.0347
11	-3.5824
12	-3.1578
13	-2.3942
14	-2.0425
15	-1.7701
16	-1.4767
17	-1.1636
18	-0.9860
19	-0.9912
20	-0.7553
21	-0.6555
22	-0.6135
23	-0.6435
24	-0.5762
25	-0.5783
26	-0.6135
27	-0.5697
28	-0.5518
29	-0.6459
30	-0.5561
31	-0.5505
32	-0.6347
33	-0.6089
34	-0.5463

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 43 R= 3.0 MILLION M= 0.07 DELTA F= 10.0 DEG.

ORIFICE	17.73
101	-10.6419
102	-2.9403
103	-0.5279
104	0.0854
105	0.4142
106	0.6285
107	0.8060
108	0.8996
109	0.9570
110	0.9850
111	0.9791
112	0.9420
113	0.8356
114	0.7176
115	0.6477
116	0.5701
117	0.4944
118	0.4259
119	0.3820
120	0.3119
121	0.2601
122	0.2074
123	0.1719
124	0.1284
125	0.1196
126	0.1040
127	0.1562
128	0.1749
129	0.3726
130	0.3715
131	0.4112
132	0.3508
133	0.1265
134	-0.0284

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 44,45 R= 10.1 MILLION M= 0.12 DELTA F= -5.0 DEG.

ORIFICE	-5.04	-4.00	-2.97	-2.06	-1.51	-1.05	-0.73	-0.50
1	-1.0873	-0.4026	0.1482	0.5155	0.6881	0.7989	0.8671	0.9071
2	1.0277	0.9997	0.9984	0.7499	0.6346	0.5171	0.4371	0.3708
3	0.9508	0.8327	0.6580	0.4586	0.3221	0.1900	0.1005	0.0299
4	0.8402	0.6918	0.5010	0.2998	0.1676	0.0419	-0.0526	-0.1173
5	0.7439	0.5877	0.3985	0.2051	0.0817	-0.0443	-0.1229	-0.1805
6	0.6611	0.5020	0.3159	0.1307	0.0030	-0.1080	-0.1806	-0.2354
7	0.5959	0.4382	0.2570	0.0798	-0.0416	-0.1443	-0.2133	-0.2653
8	0.4870	0.3337	0.1623	-0.0049	-0.1060	-0.2008	-0.2612	-0.3065
9	0.3974	0.2484	0.0845	-0.0769	-0.1682	-0.2554	-0.3094	-0.3520
10	0.3282	0.1845	0.0282	-0.1231	-0.2147	-0.2985	-0.3463	-0.3859
11	0.2449	0.1089	-0.0467	-0.1783	-0.2633	-0.3389	-0.3847	-0.4215
12	0.1469	0.0230	-0.1187	-0.2279	-0.3019	-0.3695	-0.4083	-0.4396
13	0.0207	-0.0954	-0.2065	-0.2958	-0.3590	-0.4155	-0.4449	-0.4702
14	-0.0874	-0.1831	-0.2828	-0.3600	-0.4140	-0.4642	-0.4897	-0.5117
15	-0.1647	-0.2511	-0.3409	-0.4100	-0.4595	-0.5047	-0.5237	-0.5464
16	-0.2237	-0.3032	-0.3852	-0.4459	-0.4906	-0.5319	-0.5488	-0.5671
17	-0.2729	-0.3442	-0.4204	-0.4756	-0.5144	-0.5531	-0.5655	-0.5819
18	-0.3122	-0.3791	-0.4485	-0.4964	-0.5325	-0.5674	-0.5801	-0.5939
19	-0.3476	-0.4074	-0.4709	-0.5165	-0.5477	-0.5789	-0.5893	-0.6026
20	-0.3804	-0.4378	-0.4936	-0.5314	-0.5620	-0.5911	-0.6000	-0.6112
21	-0.4101	-0.4591	-0.5118	-0.5448	-0.5726	-0.5982	-0.6062	-0.6182
22	-0.4325	-0.4789	-0.5259	-0.5534	-0.5752	-0.6010	-0.6047	-0.6161
23	-0.4407	-0.4846	-0.5279	-0.5536	-0.5719	-0.5873	-0.6026	-0.6081
24	-0.4498	-0.4892	-0.5292	-0.5513	-0.5665	-0.5829	-0.5959	-0.6041
25	-0.4546	-0.4936	-0.5312	-0.5463	-0.5601	-0.5740	-0.5865	-0.5921
26	-0.4476	-0.4836	-0.5205	-0.5253	-0.5367	-0.5467	-0.5586	-0.5646
27	-0.4081	-0.4454	-0.4841	-0.4435	-0.4536	-0.4613	-0.4704	-0.4738
28	-0.1974	-0.2299	-0.2593	-0.2774	-0.2867	-0.2928	-0.2996	-0.3037
29	-0.0626	-0.0832	-0.1045	-0.1214	-0.1276	-0.1312	-0.1381	-0.1407
30	0.0560	0.0388	0.0209	-0.0023	-0.0083	-0.0125	-0.0169	-0.0192
31	0.2304	0.2190	0.2070	0.1539	0.1473	0.1420	0.1365	0.1352
32	0.2913	0.2824	0.2734	0.2201	0.2127	0.2084	0.2041	0.2030
33	0.2545	0.2484	0.2425	0.2230	0.2191	0.2183	0.2169	0.2159
34	0.2362	0.2324	0.2282	0.2146	0.2132	0.2133	0.2125	0.2124

ORIGINAL PAGE IS
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APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 44,45 R= 10.1 MILLION M= 0.12 DELTA F= -5.0 DEG.

ORIFICE	-5.04	-4.00	-2.97	-2.06	-1.51	-1.05	-0.73	-0.50
101	-1.0873	-0.4026	0.1482	0.5155	0.6881	0.7989	0.8671	0.9071
102	-2.7294	-1.9324	-1.2523	-0.7403	-0.4635	-0.2602	-0.1189	-0.0217
103	-2.0365	-1.6154	-1.0711	-0.6741	-0.4558	-0.2939	-0.1783	-0.0981
104	-1.7062	-1.2218	-0.9192	-0.5863	-0.4048	-0.2690	-0.1719	-0.1066
105	-1.5014	-1.1146	-0.8105	-0.5330	-0.3760	-0.2561	-0.1698	-0.1122
106	-1.3626	-1.0278	-0.6980	-0.4979	-0.3577	-0.2504	-0.1716	-0.1203
107	-1.2608	-0.9532	-0.6683	-0.4715	-0.3424	-0.2431	-0.1721	-0.1241
108	-1.1049	-0.8470	-0.6070	-0.4312	-0.3211	-0.2351	-0.1714	-0.1299
109	-1.0026	-0.7748	-0.5619	-0.4058	-0.3049	-0.2278	-0.1716	-0.1342
110	-0.9337	-0.7278	-0.5365	-0.3642	-0.3003	-0.2302	-0.1781	-0.1440
111	-0.8537	-0.6730	-0.5038	-0.3571	-0.2922	-0.2296	-0.1841	-0.1520
112	-0.7692	-0.6157	-0.4726	-0.3491	-0.2879	-0.2363	-0.1960	-0.1688
113	-0.6640	-0.5443	-0.4325	-0.3330	-0.2774	-0.2355	-0.2090	-0.1863
114	-0.6045	-0.5038	-0.4115	-0.3282	-0.2782	-0.2398	-0.2216	-0.2031
115	-0.5668	-0.4800	-0.3984	-0.3270	-0.2826	-0.2517	-0.2340	-0.2172
116	-0.5393	-0.4633	-0.3914	-0.3261	-0.2890	-0.2599	-0.2441	-0.2305
117	-0.5203	-0.4525	-0.3893	-0.3301	-0.2967	-0.2707	-0.2526	-0.2435
118	-0.5032	-0.4428	-0.3854	-0.3334	-0.3039	-0.2766	-0.2599	-0.2563
119	-0.4832	-0.4302	-0.3787	-0.3317	-0.3047	-0.2821	-0.2648	-0.2633
120	-0.4696	-0.4227	-0.3753	-0.3322	-0.3097	-0.2890	-0.2734	-0.2696
121	-0.4620	-0.4203	-0.3792	-0.3410	-0.3198	-0.3014	-0.2888	-0.2787
122	-0.4542	-0.4166	-0.3804	-0.3458	-0.3286	-0.3123	-0.3001	-0.2925
123	-0.4496	-0.4156	-0.3818	-0.3496	-0.3339	-0.3189	-0.3088	-0.3011
124	-0.4456	-0.4127	-0.3830	-0.3534	-0.3381	-0.3251	-0.3151	-0.3093
125	-0.4264	-0.3986	-0.3715	-0.3442	-0.3320	-0.3200	-0.3132	-0.3085
126	-0.4002	-0.3749	-0.3519	-0.3303	-0.3197	-0.3093	-0.3066	-0.3087
127	-0.2554	-0.2350	-0.2129	-0.1926	-0.1835	-0.1736	-0.1687	-0.1668
128	-0.1107	-0.0892	-0.0694	-0.0500	-0.0381	-0.0263	-0.0155	-0.0047
129	-0.0413	-0.0224	-0.0035	0.0141	0.0268	0.0385	0.0499	0.0609
130	-0.0033	0.0146	0.0310	0.0475	0.0585	0.0703	0.0800	0.0892
131	0.0270	0.0403	0.0536	0.0659	0.0741	0.0825	0.0896	0.0947
132	0.0590	0.0675	0.0779	0.0863	0.0925	0.0984	0.1025	0.1041
133	0.1178	0.1248	0.1318	0.1381	0.1436	0.1484	0.1517	0.1528
134	0.1379	0.1435	0.1494	0.1543	0.1580	0.1626	0.1655	0.1663

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 44,45 R= 10.1 MILLION M= 0.12 DELTA F= -5.0 DEG.

ORIFICE	-0.49	0.01	0.51	1.03	2.02	3.01	3.99	5.01
1	0.9077	0.9744	1.0069	1.0108	0.9387	0.7459	0.4520	0.0155
2	0.3582	0.1990	0.0308	-0.1776	-0.6049	-1.1077	-1.6389	-2.2818
3	0.0167	-0.1559	-0.3293	-0.5255	-0.9365	-1.3991	-1.8855	-2.4571
4	-0.1295	-0.2816	-0.4378	-0.6147	-0.9799	-1.3852	-1.8004	-2.2863
5	-0.1931	-0.3313	-0.4696	-0.6288	-0.9550	-1.3103	-1.6738	-2.0997
6	-0.2472	-0.3780	-0.5044	-0.6506	-0.9454	-1.2724	-1.6037	-1.9818
7	-0.2769	-0.3968	-0.5137	-0.6507	-0.9264	-1.2203	-1.5276	-1.8166
8	-0.3172	-0.4233	-0.5276	-0.6469	-0.8851	-1.1367	-1.3844	-1.6701
9	-0.3625	-0.4614	-0.5550	-0.6625	-0.8779	-1.1063	-1.3283	-1.5897
10	-0.3978	-0.4894	-0.5735	-0.6688	-0.8643	-1.0666	-1.2743	-1.4949
11	-0.4318	-0.5146	-0.5943	-0.6837	-0.8609	-1.0178	-1.2177	-1.4211
12	-0.4507	-0.5214	-0.5869	-0.6661	-0.8176	-0.9784	-1.1351	-1.3066
13	-0.4815	-0.5399	-0.5900	-0.6554	-0.7740	-0.9022	-1.0254	-1.1568
14	-0.5220	-0.5720	-0.6142	-0.6702	-0.7717	-0.8824	-0.9831	-1.0938
15	-0.5561	-0.5995	-0.6364	-0.6837	-0.7747	-0.8666	-0.9559	-1.0525
16	-0.5775	-0.6172	-0.6482	-0.6908	-0.7700	-0.8524	-0.9327	-1.0125
17	-0.5924	-0.6296	-0.6558	-0.6928	-0.7631	-0.8379	-0.9069	-0.9743
18	-0.6040	-0.6357	-0.6588	-0.6910	-0.7561	-0.8213	-0.8796	-0.9435
19	-0.6139	-0.6431	-0.6607	-0.6912	-0.7480	-0.8017	-0.8542	-0.9087
20	-0.6209	-0.6474	-0.6633	-0.6895	-0.7388	-0.7901	-0.8321	-0.8773
21	-0.6247	-0.6474	-0.6622	-0.6849	-0.7257	-0.7697	-0.8068	-0.8417
22	-0.6242	-0.6441	-0.6542	-0.6726	-0.7104	-0.7425	-0.7724	-0.7974
23	-0.6076	-0.6297	-0.6462	-0.6629	-0.6944	-0.7240	-0.7471	-0.7683
24	-0.6018	-0.6194	-0.6357	-0.6495	-0.6755	-0.7020	-0.7196	-0.7363
25	-0.5935	-0.6056	-0.6238	-0.6345	-0.6554	-0.6736	-0.6870	-0.6977
26	-0.5628	-0.5768	-0.5904	-0.5978	-0.6144	-0.6255	-0.6314	-0.6306
27	-0.4741	-0.4841	-0.4955	-0.5013	-0.5107	-0.5132	-0.5108	-0.4994
28	-0.3029	-0.3125	-0.3214	-0.3251	-0.3292	-0.3301	-0.3237	-0.3108
29	-0.1407	-0.1486	-0.1569	-0.1619	-0.1693	-0.1708	-0.1709	-0.1677
30	-0.0193	-0.0268	-0.0375	-0.0458	-0.0591	-0.0696	-0.0807	-0.0918
31	0.1330	0.1235	0.1102	0.0892	0.0607	0.0293	0.0006	-0.0301
32	0.2001	0.1919	0.1795	0.1586	0.1244	0.0876	0.0511	0.0139
33	0.2150	0.2096	0.2019	0.1890	0.1664	0.1361	0.1048	0.0663
34	0.2116	0.2083	0.2020	0.1924	0.1748	0.1514	0.1248	0.0889

ORIGINAL PAGE IS
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APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 44,45 R= 10.1 MILLION M= 0.12 DELTA F= -5.0 DEG.

ORIFICE	-0.49	0.01	0.51	1.03	2.02	3.01	3.99	5.01
101	0.9077	0.9744	1.0069	1.0108	0.9387	0.7459	0.4520	0.0155
102	-0.0172	0.1758	0.3501	0.5074	0.7452	0.9090	0.9908	1.0067
103	-0.0542	0.0669	0.2164	0.3556	0.5839	0.7638	0.8894	0.9739
104	-0.1018	0.0346	0.1645	0.2873	0.4936	0.6674	0.7983	0.9025
105	-0.1087	0.0141	0.1293	0.2407	0.4315	0.5965	0.7261	0.8372
106	-0.1163	-0.0051	0.1023	0.2048	0.3825	0.5409	0.6688	0.7809
107	-0.1208	-0.0183	0.0813	0.1774	0.3455	0.4960	0.6205	0.7336
108	-0.1266	-0.0365	0.0508	0.1366	0.2894	0.4277	0.5458	0.6559
109	-0.1311	-0.0498	0.0299	0.1079	0.2484	0.3775	0.4884	0.5947
110	-0.1417	-0.0662	0.0076	0.0808	0.2118	0.3332	0.4399	0.5428
111	-0.1505	-0.0827	-0.0149	0.0508	0.1705	0.2841	0.3829	0.4768
112	-0.1669	-0.1074	-0.0484	0.0100	0.1158	0.2182	0.3087	0.3925
113	-0.1845	-0.1369	-0.0880	-0.0402	0.0481	0.1343	0.2121	0.2852
114	-0.2005	-0.1604	-0.1172	-0.0767	0.0004	0.0759	0.1446	0.2095
115	-0.2162	-0.1792	-0.1425	-0.1067	-0.0371	0.0304	0.0923	0.1492
116	-0.2285	-0.1948	-0.1629	-0.1299	-0.0677	-0.0072	0.0495	0.1014
117	-0.2430	-0.2144	-0.1837	-0.1528	-0.0974	-0.0413	0.0103	0.0604
118	-0.2532	-0.2274	-0.2006	-0.1732	-0.1210	-0.0703	-0.0235	0.0242
119	-0.2582	-0.2368	-0.2117	-0.1877	-0.1405	-0.0945	-0.0504	-0.0066
120	-0.2630	-0.2475	-0.2240	-0.2025	-0.1597	-0.1162	-0.0763	-0.0363
121	-0.2771	-0.2657	-0.2447	-0.2247	-0.1855	-0.1461	-0.1092	-0.0724
122	-0.2916	-0.2813	-0.2623	-0.2435	-0.2078	-0.1713	-0.1383	-0.1056
123	-0.3003	-0.2911	-0.2724	-0.2552	-0.2197	-0.1865	-0.1557	-0.1235
124	-0.3083	-0.3002	-0.2819	-0.2648	-0.2312	-0.2004	-0.1709	-0.1403
125	-0.3068	-0.3006	-0.2828	-0.2650	-0.2347	-0.2053	-0.1775	-0.1510
126	-0.3046	-0.2996	-0.2760	-0.2573	-0.2265	-0.1984	-0.1746	-0.1513
127	-0.1639	-0.1846	-0.2458	-0.2363	-0.2027	-0.1740	-0.1472	-0.1210
128	-0.0068	0.0241	0.0410	0.0567	0.0867	0.1075	0.1223	0.1370
129	0.0575	0.0824	0.0931	0.1023	0.1192	0.1357	0.1493	0.1629
130	0.0866	0.1067	0.1155	0.1227	0.1372	0.1512	0.1635	0.1749
131	0.0947	0.1069	0.1133	0.1190	0.1301	0.1413	0.1503	0.1591
132	0.1057	0.1119	0.1161	0.1197	0.1277	0.1356	0.1412	0.1460
133	0.1544	0.1576	0.1601	0.1611	0.1642	0.1663	0.1674	0.1658
134	0.1668	0.1694	0.1710	0.1709	0.1712	0.1708	0.1681	0.1622

ORIGINAL PAGE IS
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APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 44,45 R= 10.1 MILLION M= 0.12 DELTA F= -5.0 DEG.

ORIFICE	6.02	7.01	8.01	10.00	11.87	13.99	15.95	17.09
1	-0.4884	-1.0792	-1.7488	-3.3116	-4.9972	-7.1061	-9.0075	-9.9200
2	-2.9205	-3.6073	-4.3119	-5.8237	-7.7638	-9.0964	-10.5098	-11.1419
3	-3.0118	-3.6116	-4.2007	-5.5136	-6.7870	-8.2743	-9.2449	-9.6922
4	-2.7593	-3.2694	-3.8084	-4.7885	-5.5414	-6.6584	-7.6163	-8.0757
5	-2.5415	-2.8917	-3.1804	-4.0909	-4.9513	-5.8733	-6.6517	-6.9989
6	-2.2502	-2.6144	-3.0016	-3.7671	-4.5083	-5.3227	-5.9748	-6.2763
7	-2.1131	-2.4601	-2.7906	-3.4732	-4.1364	-4.8503	-5.3998	-5.6765
8	-1.9443	-2.2337	-2.5154	-3.0943	-3.6379	-4.2206	-4.6720	-4.9173
9	-1.8344	-2.0847	-2.3313	-2.8351	-3.3128	-3.8127	-4.2044	-4.3783
10	-1.7320	-1.9483	-2.1761	-2.6205	-3.0333	-3.5020	-3.8345	-3.9750
11	-1.6132	-1.8146	-2.0040	-2.3912	-2.7355	-3.1206	-3.4116	-3.5369
12	-1.4717	-1.6348	-1.7933	-2.1025	-2.3956	-2.6944	-2.9282	-2.9981
13	-1.2807	-1.4092	-1.5272	-1.7614	-1.9619	-2.1778	-2.3168	-2.3631
14	-1.1967	-1.2975	-1.3921	-1.5782	-1.7361	-1.8968	-1.9915	-2.0204
15	-1.1400	-1.2230	-1.3012	-1.4484	-1.5788	-1.6982	-1.7526	-1.7676
16	-1.0844	-1.1564	-1.2167	-1.3420	-1.4464	-1.5360	-1.5700	-1.5536
17	-1.0369	-1.1024	-1.1530	-1.2511	-1.3302	-1.3916	-1.4054	-1.3707
18	-0.9938	-1.0465	-1.0888	-1.1680	-1.2259	-1.2678	-1.2628	-1.2239
19	-0.9532	-0.9936	-1.0260	-1.0844	-1.1282	-1.1512	-1.1319	-1.0957
20	-0.9147	-0.9445	-0.9694	-1.0087	-1.0322	-1.0325	-1.0048	-0.9344
21	-0.8695	-0.8901	-0.9076	-0.9271	-0.9233	-0.9115	-0.8614	-0.7900
22	-0.8167	-0.8262	-0.8294	-0.8219	-0.8008	-0.7817	-0.7540	-0.6611
23	-0.7821	-0.7841	-0.7816	-0.7595	-0.7190	-0.6674	-0.6639	-0.5733
24	-0.7448	-0.7375	-0.7235	-0.6767	-0.6270	-0.6049	-0.5807	-0.5280
25	-0.6953	-0.6807	-0.6526	-0.5791	-0.5172	-0.4476	-0.5014	-0.4950
26	-0.6151	-0.5919	-0.5604	-0.4468	-0.3833	-0.3683	-0.4514	-0.4926
27	-0.4735	-0.4288	-0.3763	-0.2900	-0.2593	-0.2992	-0.3905	-0.4684
28	-0.2842	-0.2526	-0.2060	-0.2067	-0.2289	-0.2686	-0.3710	-0.4636
29	-0.1602	-0.1557	-0.1625	-0.1920	-0.2187	-0.2601	-0.3788	-0.4673
30	-0.1025	-0.1280	-0.1392	-0.1905	-0.2171	-0.2593	-0.3609	-0.4500
31	-0.0614	-0.1008	-0.1260	-0.1735	-0.2290	-0.2711	-0.3737	-0.4587
32	-0.0313	-0.0687	-0.1089	-0.1624	-0.2105	-0.2669	-0.3606	-0.4418
33	0.0213	-0.0346	-0.0752	-0.1502	-0.1946	-0.2621	-0.3433	-0.3994
34	0.0468	-0.0083	-0.0481	-0.1385	-0.1545	-0.2438	-0.3212	-0.3960

ORIGINAL PAGE IS
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APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 44,45 R= 10.1 MILLION M= 0.12 DELTA F= -5.0 DEG.

ORIFICE	6.02	7.01	8.01	10.00	11.87	13.99	15.95	17.09
101	-0.4884	-1.0792	-1.7488	-3.3116	-4.9972	-7.1061	-9.0075	-9.9200
102	0.9569	0.8446	0.6814	0.2036	-0.4153	-1.2257	-1.9971	-2.3823
103	1.0056	1.0002	0.9556	0.7714	0.4915	0.0802	-0.3253	-0.5559
104	0.9658	0.9998	1.0059	0.9446	0.8056	0.5771	0.3332	0.1999
105	0.9159	0.9680	0.9972	0.9961	0.9302	0.7953	0.6360	0.5469
106	0.8652	0.9288	0.9717	1.0067	0.9812	0.9039	0.7989	0.7424
107	0.8197	0.8894	0.9384	0.9948	0.9997	0.9596	0.8933	0.8520
108	0.7427	0.8182	0.8752	0.9586	0.9970	0.9990	0.9776	0.9565
109	0.6804	0.7568	0.8164	0.9128	0.9692	0.9982	1.0015	0.9954
110	0.6275	0.7041	0.7660	0.8683	0.9352	0.9809	0.9990	1.0014
111	0.5622	0.6364	0.6995	0.8077	0.8837	0.9418	0.9758	0.9863
112	0.4750	0.5459	0.6093	0.7162	0.7976	0.8699	0.9172	0.9344
113	0.3587	0.4218	0.4782	0.5818	0.6664	0.7408	0.7954	0.8185
114	0.2759	0.3336	0.3854	0.4810	0.5625	0.6362	0.6904	0.7133
115	0.2115	0.2631	0.3111	0.4003	0.4747	0.5463	0.5994	0.6216
116	0.1582	0.2063	0.2498	0.3326	0.4029	0.4705	0.5194	0.5401
117	0.1102	0.1545	0.1953	0.2718	0.3356	0.4014	0.4445	0.4629
118	0.0686	0.1091	0.1462	0.2185	0.2768	0.3348	0.3769	0.3936
119	0.0336	0.0709	0.1050	0.1704	0.2256	0.2794	0.3167	0.3286
120	0.0005	0.0340	0.0660	0.1233	0.1739	0.2226	0.2555	0.2649
121	-0.0389	-0.0078	0.0200	0.0726	0.1182	0.1616	0.1870	0.1948
122	-0.0758	-0.0475	-0.0231	0.0234	0.0645	0.1016	0.1213	0.1274
123	-0.0944	-0.0685	-0.0440	-0.0014	0.0366	0.0689	0.0852	0.0883
124	-0.1138	-0.0904	-0.0688	-0.0276	0.0052	0.0367	0.0513	0.0481
125	-0.1255	-0.1040	-0.0841	-0.0479	-0.0206	0.0073	0.0200	0.0183
126	-0.1301	-0.1124	-0.0944	-0.0633	-0.0394	-0.0182	-0.0125	-0.0149
127	-0.0973	-0.0760	-0.0573	-0.0245	0.0042	0.0263	0.0376	0.0300
128	0.1489	0.1588	0.1672	0.1844	0.1961	0.2074	0.2059	0.1985
129	0.1737	0.1827	0.1913	0.2030	0.2146	0.2215	0.2210	0.2087
130	0.1845	0.1923	0.1977	0.2093	0.2166	0.2184	0.2153	0.2016
131	0.1650	0.1688	0.1707	0.1737	0.1733	0.1721	0.1599	0.1396
132	0.1471	0.1443	0.1407	0.1324	0.1229	0.1156	0.0983	0.0767
133	0.1594	0.1514	0.1344	0.1123	0.0928	0.0773	0.0469	0.0262
134	0.1525	0.1327	0.1139	0.0850	0.0529	0.0262	0.0006	-0.0368

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 46 R= 6.1 MILLION M= 0.09 DELTA F= -5.0 DEG.

ORIFICE	-3.02	-1.99	-1.46	-1.00	-0.50	-0.01	0.23	0.53
1	0.1245	0.5398	0.6944	0.8071	0.9042	0.9667	0.9887	1.0027
2	0.9040	0.7362	0.6270	0.5137	0.3727	0.2150	0.1306	0.0256
3	0.6678	0.4429	0.3158	0.1881	0.0345	-0.1436	-0.2293	-0.3350
4	0.5119	0.2862	0.1616	0.0407	-0.1157	-0.2684	-0.3471	-0.4432
5	0.4102	0.1932	0.0768	-0.0477	-0.1807	-0.3168	-0.3889	-0.4755
6	0.3283	0.1179	-0.0052	-0.1105	-0.2341	-0.3622	-0.4281	-0.5073
7	0.2698	0.0697	-0.0487	-0.1477	-0.2637	-0.3837	-0.4464	-0.5201
8	0.1751	-0.0240	-0.1182	-0.2111	-0.3151	-0.4203	-0.4783	-0.5417
9	0.0977	-0.0913	-0.1798	-0.2655	-0.3592	-0.4588	-0.5113	-0.5704
10	0.0425	-0.1363	-0.2194	-0.2971	-0.3864	-0.4802	-0.5257	-0.5808
11	-0.0375	-0.1887	-0.2669	-0.3383	-0.4186	-0.5028	-0.5440	-0.5956
12	-0.1097	-0.2445	-0.3117	-0.3751	-0.4461	-0.5194	-0.5556	-0.5998
13	-0.1976	-0.3105	-0.3657	-0.4179	-0.4765	-0.5355	-0.5654	-0.5988
14	-0.2739	-0.3726	-0.4217	-0.4661	-0.5173	-0.5666	-0.5932	-0.6235
15	-0.3322	-0.4217	-0.4638	-0.5036	-0.5482	-0.5931	-0.6156	-0.6435
16	-0.3757	-0.4545	-0.4955	-0.5302	-0.5699	-0.6112	-0.6317	-0.6540
17	-0.4114	-0.4826	-0.5186	-0.5487	-0.5855	-0.6218	-0.6398	-0.6632
18	-0.4394	-0.5063	-0.5371	-0.5660	-0.5996	-0.6330	-0.6476	-0.6537
19	-0.4629	-0.5241	-0.5520	-0.5753	-0.6069	-0.6360	-0.6500	-0.6549
20	-0.4866	-0.5402	-0.5639	-0.5883	-0.6154	-0.6422	-0.6441	-0.6589
21	-0.5030	-0.5525	-0.5765	-0.5969	-0.6199	-0.6406	-0.6458	-0.6584
22	-0.5164	-0.5615	-0.5823	-0.5997	-0.6219	-0.6329	-0.6420	-0.6530
23	-0.5200	-0.5625	-0.5813	-0.5983	-0.6199	-0.6267	-0.6384	-0.6459
24	-0.5219	-0.5626	-0.5789	-0.5961	-0.6156	-0.6219	-0.6272	-0.6371
25	-0.5236	-0.5628	-0.5784	-0.5933	-0.6147	-0.6154	-0.6200	-0.6259
26	-0.5111	-0.5472	-0.5631	-0.5811	-0.5819	-0.5939	-0.5946	-0.5984
27	-0.4741	-0.5096	-0.5163	-0.4962	-0.4981	-0.5081	-0.5062	-0.5077
28	-0.2479	-0.2794	-0.2940	-0.3080	-0.3238	-0.3313	-0.3297	-0.3307
29	-0.1008	-0.1209	-0.1301	-0.1388	-0.1504	-0.1593	-0.1607	-0.1633
30	0.0226	0.0065	0.0007	-0.0070	-0.0155	-0.0254	-0.0303	-0.0351
31	0.2062	0.1950	0.1915	0.1867	0.1802	0.1632	0.1480	0.1294
32	0.2713	0.2637	0.2611	0.2595	0.2526	0.2362	0.2212	0.2046
33	0.2415	0.2368	0.2364	0.2354	0.2337	0.2263	0.2212	0.2133
34	0.2269	0.2240	0.2252	0.2259	0.2254	0.2201	0.2165	0.2106

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 46 R= 8.1 MILLION M= 0.09 DELTA F= -5.0 DEG.

ORIFICE	-3.02	-1.99	-1.46	-1.00	-0.50	-0.01	0.23	0.53
101	0.1245	0.5398	0.6944	0.8071	0.9042	0.9667	0.9887	1.0027
102	-1.2684	-0.6910	-0.4411	-0.2318	-0.0188	0.1725	0.2598	0.3577
103	-1.0827	-0.6358	-0.4394	-0.2706	-0.0958	0.0636	0.1388	0.2235
104	-0.9293	-0.5526	-0.3894	-0.2492	-0.1049	0.0323	0.0974	0.1702
105	-0.8335	-0.5018	-0.3617	-0.2395	-0.1083	0.0116	0.0700	0.1356
106	-0.7078	-0.4713	-0.3453	-0.2353	-0.1177	-0.0068	0.0476	0.1076
107	-0.6686	-0.4460	-0.3315	-0.2293	-0.1213	-0.0191	0.0307	0.0866
108	-0.6106	-0.4109	-0.3098	-0.2226	-0.1266	-0.0371	0.0061	0.0570
109	-0.5675	-0.3850	-0.2957	-0.2174	-0.1306	-0.0503	-0.0108	0.0352
110	-0.5401	-0.3726	-0.2922	-0.2205	-0.1411	-0.0665	-0.0294	0.0124
111	-0.5075	-0.3579	-0.2855	-0.2202	-0.1498	-0.0825	-0.0486	-0.0109
112	-0.4739	-0.3309	-0.2828	-0.2268	-0.1660	-0.1072	-0.0773	-0.0444
113	-0.4322	-0.3213	-0.2712	-0.2343	-0.1840	-0.1357	-0.1119	-0.0842
114	-0.4096	-0.3171	-0.2732	-0.2434	-0.2002	-0.1588	-0.1384	-0.1140
115	-0.3981	-0.3173	-0.2791	-0.2515	-0.2124	-0.1785	-0.1595	-0.1386
116	-0.3913	-0.3186	-0.2845	-0.2603	-0.2269	-0.1947	-0.1778	-0.1593
117	-0.3870	-0.3249	-0.2922	-0.2709	-0.2410	-0.2128	-0.1969	-0.1793
118	-0.3840	-0.3265	-0.2993	-0.2752	-0.2529	-0.2267	-0.2121	-0.1975
119	-0.3774	-0.3252	-0.2985	-0.2770	-0.2597	-0.2355	-0.2224	-0.2087
120	-0.3726	-0.3272	-0.3028	-0.2842	-0.2677	-0.2452	-0.2339	-0.2201
121	-0.3769	-0.3353	-0.3150	-0.2975	-0.2840	-0.2625	-0.2525	-0.2408
122	-0.3780	-0.3419	-0.3237	-0.3092	-0.2968	-0.2777	-0.2679	-0.2579
123	-0.3784	-0.3435	-0.3296	-0.3162	-0.3047	-0.2870	-0.2779	-0.2670
124	-0.3796	-0.3470	-0.3346	-0.3223	-0.3124	-0.2947	-0.2856	-0.2766
125	-0.3676	-0.3399	-0.3289	-0.3203	-0.3129	-0.2952	-0.2846	-0.2756
126	-0.3479	-0.3246	-0.3169	-0.3118	-0.3040	-0.2833	-0.2735	-0.2615
127	-0.2115	-0.1895	-0.1804	-0.1740	-0.2576	-0.2662	-0.2562	-0.2425
128	-0.0696	-0.0481	-0.0361	-0.0211	0.0201	0.0347	0.0451	0.0559
129	-0.0050	0.0151	0.0287	0.0451	0.0747	0.0849	0.0901	0.0959
130	0.0286	0.0473	0.0606	0.0754	0.0992	0.1071	0.1112	0.1158
131	0.0518	0.0652	0.0759	0.0860	0.1004	0.1067	0.1096	0.1132
132	0.0764	0.0862	0.0934	0.0993	0.1074	0.1120	0.1145	0.1166
133	0.1302	0.1380	0.1442	0.1496	0.1552	0.1586	0.1597	0.1605
134	0.1466	0.1534	0.1551	0.1647	0.1689	0.1704	0.1712	0.1714

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 46 R= 3.1 MILLION M= 0.09 DELTA F= -5.0 DEG.

ORIFICE	0.95	1.58	2.03	3.00	4.01	5.00	5.98	7.00
1	1.0060	0.9800	0.9327	0.7490	0.4520	0.0503	-0.4375	-1.0290
2	-0.1495	-0.4087	-0.6059	-1.0856	-1.6247	-2.2117	-2.6314	-3.5234
3	-0.4942	-0.7442	-0.9354	-1.3767	-1.8662	-2.3896	-2.9326	-3.5118
4	-0.5845	-0.8059	-0.9757	-1.3635	-1.7810	-2.2309	-2.6679	-3.1946
5	-0.6032	-0.8013	-0.9494	-1.2891	-1.6621	-2.0532	-2.4689	-2.9586
6	-0.6263	-0.8072	-0.9417	-1.2525	-1.5829	-1.9414	-2.2828	-2.5280
7	-0.6291	-0.7967	-0.9204	-1.2011	-1.5106	-1.8394	-2.0418	-2.4082
8	-0.6402	-0.7861	-0.8993	-1.1431	-1.4135	-1.6118	-1.9017	-2.1886
9	-0.6564	-0.7909	-0.8923	-1.1113	-1.3073	-1.5529	-1.7966	-2.0471
10	-0.6621	-0.7847	-0.8760	-1.0762	-1.2550	-1.4777	-1.6953	-1.9164
11	-0.6678	-0.7802	-0.8602	-1.0373	-1.2007	-1.3959	-1.5839	-1.7797
12	-0.6634	-0.7546	-0.8293	-0.9544	-1.1211	-1.2838	-1.4431	-1.6052
13	-0.6498	-0.7285	-0.7678	-0.8883	-1.0174	-1.1414	-1.2587	-1.3786
14	-0.6650	-0.7156	-0.7629	-0.8690	-0.9739	-1.0767	-1.1760	-1.2731
15	-0.6788	-0.7255	-0.7659	-0.8552	-0.9480	-1.0327	-1.1172	-1.1991
16	-0.6764	-0.7273	-0.7633	-0.8400	-0.9193	-0.9945	-1.0665	-1.1340
17	-0.6790	-0.7233	-0.7600	-0.8257	-0.8956	-0.9585	-1.0197	-1.0758
18	-0.6810	-0.7223	-0.7505	-0.8122	-0.8677	-0.9258	-0.9777	-1.0221
19	-0.6811	-0.7171	-0.7428	-0.7945	-0.8436	-0.8942	-0.9336	-0.9721
20	-0.6812	-0.7138	-0.7349	-0.7791	-0.8212	-0.8621	-0.8938	-0.9235
21	-0.6785	-0.7028	-0.7224	-0.7602	-0.7945	-0.8248	-0.8502	-0.8738
22	-0.6672	-0.6880	-0.7044	-0.7328	-0.7576	-0.7812	-0.7943	-0.8059
23	-0.6581	-0.6767	-0.6872	-0.7132	-0.7365	-0.7512	-0.7593	-0.7600
24	-0.6474	-0.6618	-0.6689	-0.6917	-0.7067	-0.7157	-0.7168	-0.7133
25	-0.6325	-0.6421	-0.6485	-0.6626	-0.6721	-0.6756	-0.6674	-0.6431
26	-0.6005	-0.6021	-0.6064	-0.6129	-0.6123	-0.6053	-0.5838	-0.5455
27	-0.5075	-0.5045	-0.5016	-0.4989	-0.4890	-0.4714	-0.4349	-0.4017
28	-0.3304	-0.3257	-0.3221	-0.3179	-0.3023	-0.2861	-0.2549	-0.2338
29	-0.1650	-0.1644	-0.1637	-0.1623	-0.1584	-0.1550	-0.1512	-0.1612
30	-0.0435	-0.0510	-0.0583	-0.0701	-0.0818	-0.0957	-0.1116	-0.1382
31	0.1039	0.0708	0.0508	0.0172	-0.0152	-0.0504	-0.0775	-0.1136
32	0.1772	0.1389	0.1104	0.0725	0.0260	-0.0163	-0.0543	-0.0963
33	0.2003	0.1784	0.1602	0.1249	0.0825	0.0379	-0.0112	-0.0584
34	0.2006	0.1845	0.1706	0.1430	0.1062	0.0621	0.0210	-0.0475

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 46 R= 0.1 MILLION M= 0.09 DELTA F= -5.0 DEG.

ORIFICE	0.95	1.58	2.03	3.00	4.01	5.00	5.98	7.00
101	1.0060	0.9800	0.9327	0.7490	0.4520	0.0503	-0.4375	-1.0290
102	0.4861	0.6484	0.7442	0.9022	0.9866	1.0008	0.9581	0.8512
103	0.3377	0.4886	0.5847	0.7562	0.8837	0.9633	0.9999	0.9943
104	0.2699	0.4064	0.4939	0.6603	0.7922	0.8912	0.9556	0.9529
105	0.2254	0.3497	0.4320	0.5890	0.7226	0.8268	0.9038	0.9592
106	0.1913	0.3068	0.3835	0.5347	0.6641	0.7703	0.8522	0.9174
107	0.1645	0.2735	0.3459	0.4892	0.6166	0.7216	0.8074	0.8797
108	0.1252	0.2241	0.2900	0.4215	0.5424	0.6443	0.7309	0.8074
109	0.0987	0.1882	0.2491	0.3719	0.4855	0.5842	0.6707	0.7468
110	0.0716	0.1553	0.2125	0.3288	0.4375	0.5333	0.6155	0.6933
111	0.0428	0.1193	0.1719	0.2793	0.3809	0.4710	0.5507	0.6270
112	0.0028	0.0707	0.1180	0.2147	0.3069	0.3912	0.4657	0.5369
113	-0.0453	0.0111	0.0497	0.1319	0.2107	0.2835	0.3502	0.4151
114	-0.0806	-0.0320	0.0021	0.0742	0.1435	0.2087	0.2682	0.3267
115	-0.1087	-0.0651	-0.0346	0.0290	0.0911	0.1500	0.2041	0.2577
116	-0.1317	-0.0933	-0.0661	-0.0083	0.0485	0.1021	0.1518	0.2006
117	-0.1553	-0.1194	-0.0948	-0.0417	0.0096	0.0590	0.1044	0.1494
118	-0.1748	-0.1431	-0.1201	-0.0711	-0.0230	0.0209	0.0633	0.1043
119	-0.1885	-0.1575	-0.1388	-0.0934	-0.0500	-0.0099	0.0281	0.0664
120	-0.2020	-0.1758	-0.1572	-0.1159	-0.0767	-0.0398	-0.0040	0.0295
121	-0.2232	-0.1989	-0.1818	-0.1448	-0.1088	-0.0745	-0.0432	-0.0122
122	-0.2419	-0.2194	-0.2037	-0.1702	-0.1385	-0.1071	-0.0791	-0.0516
123	-0.2526	-0.2314	-0.2165	-0.1841	-0.1532	-0.1250	-0.0989	-0.0722
124	-0.2621	-0.2405	-0.2283	-0.1976	-0.1691	-0.1419	-0.1174	-0.0931
125	-0.2619	-0.2422	-0.2288	-0.2026	-0.1746	-0.1508	-0.1284	-0.1067
126	-0.2470	-0.2298	-0.2167	-0.1925	-0.1686	-0.1486	-0.1295	-0.1121
127	-0.2278	-0.2096	-0.1964	-0.1689	-0.1430	-0.1195	-0.0979	-0.0780
128	0.0753	0.0947	0.1075	0.1252	0.1375	0.1483	0.1575	0.1653
129	0.1053	0.1159	0.1225	0.1364	0.1492	0.1604	0.1701	0.1792
130	0.1226	0.1318	0.1367	0.1501	0.1613	0.1715	0.1791	0.1857
131	0.1188	0.1254	0.1296	0.1388	0.1474	0.1542	0.1585	0.1612
132	0.1205	0.1256	0.1269	0.1338	0.1389	0.1403	0.1395	0.1362
133	0.1619	0.1634	0.1633	0.1643	0.1624	0.1577	0.1503	0.1382
134	0.1718	0.1714	0.1704	0.1586	0.1631	0.1526	0.1403	0.1187

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 46 R= 8.1 MILLION M= 0.09 DELTA F= -5.0 DEG.

ORIFICE	7.97	10.00	12.01	14.00	15.99	17.00
1	-1.6737	-3.2334	-5.0202	-6.9867	-8.9292	-9.7557
2	-4.1964	-5.7180	-7.2895	-8.9136	-10.4132	-11.0723
3	-4.1063	-5.3787	-6.7390	-8.1261	-9.3594	-9.9497
4	-3.7061	-4.8219	-5.5172	-6.5315	-7.4865	-7.8898
5	-3.1217	-3.9792	-4.9001	-5.7478	-6.5455	-6.8272
6	-2.9127	-3.7037	-4.4833	-5.2365	-5.8950	-6.1802
7	-2.7326	-3.4183	-4.1153	-4.7658	-5.3530	-5.5986
8	-2.4615	-3.0304	-3.5951	-4.1473	-4.6462	-4.8173
9	-2.2845	-2.7854	-3.2803	-3.7551	-4.1566	-4.3059
10	-2.1300	-2.5738	-3.0197	-3.4393	-3.7925	-3.9394
11	-1.9657	-2.3512	-2.7246	-3.0774	-3.3712	-3.4709
12	-1.7590	-2.0693	-2.3751	-2.6497	-2.8827	-2.9633
13	-1.4957	-1.7294	-1.9501	-2.1438	-2.2942	-2.3289
14	-1.3646	-1.5512	-1.7236	-1.8657	-1.9682	-1.9926
15	-1.2783	-1.4245	-1.5634	-1.6699	-1.7383	-1.7403
16	-1.1943	-1.3254	-1.4310	-1.5105	-1.5501	-1.5401
17	-1.1278	-1.2293	-1.3085	-1.3706	-1.3931	-1.3657
18	-1.0665	-1.1467	-1.2081	-1.2512	-1.2425	-1.2101
19	-1.0040	-1.0635	-1.1086	-1.1310	-1.1145	-1.0624
20	-0.9455	-0.9848	-1.0111	-1.0193	-0.9719	-0.9177
21	-0.8818	-0.9037	-0.8995	-0.8847	-0.8543	-0.7707
22	-0.8038	-0.8006	-0.7787	-0.7328	-0.7148	-0.6335
23	-0.7537	-0.7421	-0.6794	-0.6711	-0.6402	-0.5649
24	-0.6982	-0.6450	-0.6125	-0.5646	-0.5379	-0.5176
25	-0.6139	-0.5508	-0.4996	-0.4859	-0.4858	-0.5023
26	-0.5020	-0.4156	-0.3685	-0.3731	-0.4527	-0.4802
27	-0.3362	-0.2723	-0.2584	-0.2983	-0.4043	-0.4824
28	-0.2228	-0.2113	-0.2407	-0.2658	-0.3849	-0.4771
29	-0.1647	-0.1978	-0.2167	-0.2642	-0.3876	-0.4862
30	-0.1497	-0.1895	-0.2285	-0.2896	-0.3698	-0.4817
31	-0.1367	-0.1818	-0.2232	-0.2713	-0.3878	-0.4974
32	-0.1220	-0.1700	-0.2193	-0.2650	-0.3698	-0.4502
33	-0.1057	-0.1582	-0.2175	-0.2753	-0.3433	-0.4243
34	-0.0810	-0.1459	-0.2044	-0.2555	-0.3496	-0.3950

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 46 R= 8.1 MILLION M= 0.09 DELTA F= -5.0 DEG.

ORIFICE	7.97	10.00	12.01	14.00	15.99	17.00
101	-1.6737	-3.2334	-5.0202	-6.9867	-8.9292	-9.7557
102	0.6950	0.2179	-0.4317	-1.2064	-2.0198	-2.3910
103	0.9570	0.7773	0.4756	0.0910	-0.3349	-0.5497
104	1.0003	0.9425	0.7980	0.5784	0.3328	0.2028
105	0.9875	0.9916	0.9226	0.7984	0.6354	0.5577
106	0.9626	0.9999	0.9765	0.9039	0.7963	0.7377
107	0.9315	0.9892	0.9964	0.9575	0.8886	0.8476
108	0.8666	0.9496	0.9910	0.9944	0.9715	0.9549
109	0.8070	0.9050	0.9653	0.9943	0.9956	0.9904
110	0.7556	0.8606	0.9331	0.9753	0.9936	0.9971
111	0.6888	0.7783	0.8798	0.9365	0.9683	0.9806
112	0.5988	0.7094	0.7966	0.8632	0.9116	0.9300
113	0.4693	0.5755	0.6611	0.7355	0.7904	0.8121
114	0.3780	0.4749	0.5596	0.6305	0.6862	0.7088
115	0.3045	0.3949	0.4727	0.5423	0.5955	0.6152
116	0.2440	0.3262	0.4009	0.4643	0.5142	0.5340
117	0.1883	0.2644	0.3346	0.3953	0.4422	0.4616
118	0.1406	0.2113	0.2761	0.3319	0.3742	0.3885
119	0.0996	0.1649	0.2239	0.2729	0.3114	0.3254
120	0.0608	0.1197	0.1729	0.2185	0.2518	0.2613
121	0.0146	0.0690	0.1160	0.1576	0.1868	0.1958
122	-0.0279	0.0190	0.0626	0.0978	0.1205	0.1255
123	-0.0503	-0.0054	0.0339	0.0651	0.0863	0.0898
124	-0.0731	-0.0321	0.0034	0.0330	0.0507	0.0503
125	-0.0875	-0.0513	-0.0192	0.0075	0.0186	0.0190
126	-0.0967	-0.0673	-0.0393	-0.0205	-0.0100	-0.0142
127	-0.0610	-0.0259	0.0027	0.0253	0.0344	0.0345
128	0.1720	0.1891	0.2031	0.2111	0.2147	0.2078
129	0.1852	0.1984	0.2107	0.2169	0.2174	0.2098
130	0.1912	0.2028	0.2083	0.2174	0.2106	0.2013
131	0.1637	0.1676	0.1645	0.1651	0.1558	0.1403
132	0.1350	0.1339	0.1191	0.1132	0.0935	0.0723
133	0.1242	0.1023	0.0830	0.0637	0.0426	0.0114
134	0.1032	0.0726	0.0464	0.0243	-0.0072	-0.0434

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 47 R= 6.1 MILLION M= 0.07 DELTA F= -5.0 DEG.

ORIFICE	-2.98	-2.00	-1.76	-1.47	-1.00	-0.50	-0.00	0.48
1	0.1445	0.5339	0.6030	0.6837	0.8030	0.8967	0.9605	0.9951
2	0.5048	0.7444	0.6996	0.6388	0.5231	0.3811	0.2212	0.0519
3	0.6681	0.4543	0.4004	0.3301	0.1991	0.0461	-0.1458	-0.3171
4	0.5127	0.2976	0.2458	0.1773	0.0539	-0.1132	-0.2687	-0.4244
5	0.4106	0.2063	0.1568	0.0929	-0.0453	-0.1776	-0.3183	-0.4582
6	0.3294	0.1328	0.0865	0.0013	-0.1079	-0.2314	-0.3611	-0.4915
7	0.2720	0.0829	0.0357	-0.0422	-0.1447	-0.2609	-0.3815	-0.5029
8	0.1787	-0.0200	-0.0613	-0.1131	-0.2069	-0.3113	-0.4190	-0.5284
9	0.1021	-0.0869	-0.1051	-0.1734	-0.2608	-0.3568	-0.4558	-0.5563
10	0.0476	-0.1313	-0.1667	-0.2131	-0.2929	-0.3842	-0.4734	-0.5660
11	-0.0412	-0.1848	-0.2174	-0.2583	-0.3328	-0.4130	-0.4983	-0.5815
12	-0.1118	-0.2396	-0.2683	-0.3048	-0.3701	-0.4415	-0.5159	-0.5883
13	-0.1955	-0.3058	-0.3277	-0.3598	-0.4133	-0.4703	-0.5310	-0.5847
14	-0.2745	-0.3675	-0.3882	-0.4135	-0.4607	-0.5110	-0.5627	-0.6126
15	-0.3325	-0.4158	-0.4345	-0.4551	-0.4980	-0.5417	-0.5882	-0.6336
16	-0.3761	-0.4491	-0.4669	-0.4869	-0.5245	-0.5642	-0.6078	-0.6439
17	-0.4087	-0.4762	-0.4918	-0.5100	-0.5423	-0.5787	-0.6176	-0.6529
18	-0.4360	-0.4990	-0.5121	-0.5293	-0.5591	-0.5919	-0.6254	-0.6567
19	-0.4597	-0.5175	-0.5266	-0.5426	-0.5693	-0.5986	-0.6287	-0.6583
20	-0.4817	-0.5322	-0.5414	-0.5555	-0.5812	-0.6089	-0.6364	-0.6594
21	-0.4995	-0.5450	-0.5534	-0.5652	-0.5898	-0.6135	-0.6400	-0.6625
22	-0.5106	-0.5533	-0.5604	-0.5721	-0.5934	-0.6145	-0.6366	-0.6594
23	-0.5146	-0.5546	-0.5619	-0.5719	-0.5915	-0.6096	-0.6308	-0.6545
24	-0.5161	-0.5543	-0.5612	-0.5698	-0.5861	-0.6078	-0.6274	-0.6469
25	-0.5174	-0.5502	-0.5587	-0.5664	-0.5823	-0.6030	-0.6232	-0.6321
26	-0.4785	-0.5215	-0.5423	-0.5482	-0.5657	-0.5827	-0.6050	-0.6030
27	-0.4631	-0.4997	-0.5067	-0.5169	-0.5317	-0.5483	-0.5258	-0.5185
28	-0.2570	-0.2654	-0.2668	-0.2737	-0.2875	-0.3060	-0.3240	-0.3404
29	-0.0539	-0.1156	-0.1189	-0.1225	-0.1321	-0.1430	-0.1539	-0.1653
30	0.0233	0.0085	0.0056	0.0031	-0.0040	-0.0117	-0.0213	-0.0309
31	0.2038	0.1933	0.1927	0.1909	0.1867	0.1813	0.1748	0.1639
32	0.2675	0.2615	0.2606	0.2604	0.2567	0.2535	0.2481	0.2398
33	0.2382	0.2344	0.2352	0.2362	0.2354	0.2323	0.2286	0.2251
34	0.2234	0.2222	0.2237	0.2251	0.2250	0.2233	0.2214	0.2185

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 47 R= 6.1 MILLION M= 0.07 DELTA F= -5.0 DEG.

ORIFICE	-2.98	-2.00	-1.76	-1.47	-1.00	-0.50	-0.00	0.48
101	0.1445	0.5339	0.6030	0.6837	0.8030	0.8967	0.9605	0.9951
102	-1.2312	-0.6904	-0.5802	-0.4473	-0.2302	-0.0163	0.1767	0.3433
103	-1.0537	-0.6315	-0.5470	-0.4418	-0.2678	-0.0938	0.0686	0.2119
104	-0.8997	-0.5484	-0.4818	-0.3921	-0.2490	-0.1008	0.0373	0.1608
105	-0.8061	-0.5003	-0.4393	-0.3650	-0.2371	-0.1076	0.0166	0.1270
106	-0.7474	-0.4709	-0.4143	-0.3473	-0.2330	-0.1150	-0.0024	0.0996
107	-0.6565	-0.4448	-0.3958	-0.3313	-0.2272	-0.1191	-0.0147	0.0801
108	-0.5928	-0.4077	-0.3668	-0.3116	-0.2201	-0.1258	-0.0342	0.0502
109	-0.5521	-0.3836	-0.3459	-0.2971	-0.2154	-0.1295	-0.0473	0.0287
110	-0.5273	-0.3718	-0.3362	-0.2927	-0.2174	-0.1382	-0.0628	0.0076
111	-0.4952	-0.3560	-0.3258	-0.2855	-0.2184	-0.1475	-0.0786	-0.0151
112	-0.4649	-0.3430	-0.3168	-0.2831	-0.2243	-0.1637	-0.1033	-0.0478
113	-0.4245	-0.3201	-0.2993	-0.2777	-0.2314	-0.1822	-0.1327	-0.0864
114	-0.4030	-0.3122	-0.2956	-0.2806	-0.2400	-0.1981	-0.1552	-0.1160
115	-0.3919	-0.3129	-0.2992	-0.2799	-0.2483	-0.2113	-0.1742	-0.1387
116	-0.3850	-0.3148	-0.3010	-0.2841	-0.2581	-0.2239	-0.1897	-0.1595
117	-0.3814	-0.3201	-0.3070	-0.2929	-0.2690	-0.2395	-0.2068	-0.1789
118	-0.3777	-0.3239	-0.3118	-0.2969	-0.2780	-0.2496	-0.2225	-0.1961
119	-0.3706	-0.3220	-0.3106	-0.2986	-0.2823	-0.2569	-0.2320	-0.2083
120	-0.3678	-0.3240	-0.3127	-0.3037	-0.2881	-0.2641	-0.2412	-0.2167
121	-0.3718	-0.3326	-0.3243	-0.3148	-0.3016	-0.2798	-0.2586	-0.2385
122	-0.3731	-0.3394	-0.3328	-0.3232	-0.3126	-0.2919	-0.2725	-0.2552
123	-0.3744	-0.3419	-0.3369	-0.3299	-0.3191	-0.2993	-0.2819	-0.2630
124	-0.3734	-0.3451	-0.3406	-0.3355	-0.3239	-0.3044	-0.2873	-0.2706
125	-0.3612	-0.3371	-0.3341	-0.3308	-0.3209	-0.3000	-0.2814	-0.2654
126	-0.3414	-0.3228	-0.3194	-0.3192	-0.3056	-0.2802	-0.2588	-0.2438
127	-0.2066	-0.1879	-0.1845	-0.1815	-0.2952	-0.2668	-0.2467	-0.2294
128	-0.0696	-0.0481	-0.0421	-0.0332	0.0174	0.0429	0.0679	0.0867
129	-0.0058	0.0149	0.0222	0.0320	0.0677	0.0814	0.0960	0.1063
130	0.0278	0.0472	0.0540	0.0639	0.0911	0.1003	0.1102	0.1182
131	0.0506	0.0653	0.0705	0.0771	0.0932	0.0991	0.1072	0.1133
132	0.0763	0.0868	0.0897	0.0946	0.1020	0.1068	0.1122	0.1174
133	0.1285	0.1370	0.1407	0.1454	0.1502	0.1541	0.1568	0.1606
134	0.1453	0.1521	0.1562	0.1601	0.1652	0.1673	0.1687	0.1713

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 47 R= 6.1 MILLION M= 0.07 DELTA F= -5.0 DEG.

ORIFICE	0.73	1.02	1.51	2.03	2.99	4.00	5.01	5.99
1	0.9987	0.9996	0.9788	0.9279	0.7471	0.4610	0.0747	-0.3944
2	-0.0661	-0.1794	-0.3735	-0.6028	-1.0639	-1.5851	-2.1508	-2.7458
3	-0.4094	-0.5215	-0.7097	-0.9261	-1.3520	-1.8257	-2.3247	-2.8505
4	-0.5095	-0.6089	-0.7762	-0.9709	-1.3404	-1.7474	-2.1713	-2.6275
5	-0.5334	-0.6245	-0.7745	-0.9425	-1.2729	-1.6236	-2.0026	-2.3963
6	-0.5615	-0.6441	-0.7797	-0.9395	-1.2305	-1.5488	-1.8873	-2.2609
7	-0.5686	-0.6437	-0.7713	-0.9146	-1.1864	-1.4782	-1.7975	-2.0271
8	-0.5855	-0.6517	-0.7662	-0.8922	-1.1244	-1.3852	-1.5903	-1.8607
9	-0.6093	-0.6695	-0.7711	-0.8846	-1.0948	-1.3238	-1.5163	-1.7566
10	-0.6162	-0.6712	-0.7635	-0.8675	-1.0608	-1.2475	-1.4537	-1.6600
11	-0.6248	-0.6736	-0.7577	-0.8497	-1.0299	-1.1735	-1.3711	-1.5544
12	-0.6257	-0.6656	-0.7394	-0.8222	-0.9606	-1.1022	-1.2615	-1.4114
13	-0.6198	-0.6544	-0.7106	-0.7786	-0.8737	-0.9969	-1.1202	-1.2310
14	-0.6381	-0.6684	-0.7172	-0.7557	-0.8567	-0.9593	-1.0609	-1.1514
15	-0.6540	-0.6813	-0.7245	-0.7613	-0.8449	-0.9316	-1.0140	-1.0941
16	-0.6674	-0.6853	-0.7172	-0.7566	-0.8314	-0.9051	-0.9779	-1.0438
17	-0.6655	-0.6906	-0.7136	-0.7523	-0.8134	-0.8818	-0.9423	-0.9971
18	-0.6733	-0.6810	-0.7107	-0.7435	-0.8017	-0.8556	-0.9064	-0.9546
19	-0.6734	-0.6811	-0.7063	-0.7357	-0.7858	-0.8315	-0.8755	-0.9125
20	-0.6770	-0.6804	-0.7022	-0.7277	-0.7682	-0.8064	-0.8409	-0.8681
21	-0.6735	-0.6753	-0.6961	-0.7155	-0.7478	-0.7773	-0.8043	-0.8246
22	-0.6655	-0.6679	-0.6832	-0.6986	-0.7195	-0.7409	-0.7578	-0.7603
23	-0.6601	-0.6589	-0.6732	-0.6833	-0.7016	-0.7141	-0.7231	-0.7249
24	-0.6[illegible]	-0.6457	-0.6581	-0.6634	-0.6774	-0.6857	-0.6856	-0.6781
25	-0.6323	-0.6[illegible]	-0.6424	-0.6414	-0.6472	-0.6493	-0.6409	-0.6210
26	-0.6[illegible]	-0.6114	-0.6078	-0.6021	-0.5543	-0.5831	-0.5651	-0.5355
27	-0.5240	-0.5[illegible]	-0.5123	-0.4974	-0.4798	-0.4531	-0.4200	-0.3686
28	-0.3446	-0.3434	-0.3336	-0.3158	-0.2966	-0.2690	-0.2480	-0.2240
29	-0.1698	-0.1710	-0.1677	-0.1088	-0.1513	-0.1435	-0.1444	-0.1524
30	-0.0758	-0.0407	-0.0484	-0.0[illegible]57	-0.0694	-0.0892	-0.1095	-0.1274
31	0.1537	0.1327	0.0[illegible]	0.0451	-0.0002	-0.0390	-0.0776	-0.1034
32	0.2288	0.2076	0.1596	0.1095	0.0459	-0.0085	-0.0483	-0.0861
33	0.2211	0.2131	0.1913	0.1580	0.1035	0.0471	0.0009	-0.0633
34	0.2150	0.2094	0.1938	0.1686	0.1259	0.0772	0.0296	-0.0114

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 47 R= 6.1 MILLION M= 0.07 DELTA F= -5.0 DEG.

ORIFICE	0.73	1.02	1.51	2.03	2.99	4.00	5.01	5.99
101	0.9987	0.9996	0.9788	0.9279	0.7471	0.4610	0.0747	-0.3944
102	0.4222	0.5059	0.6275	0.7413	0.8941	0.9797	0.9956	0.9581
103	0.2822	0.3571	0.4713	0.5832	0.7480	0.8761	0.9528	0.9924
104	0.2214	0.2886	0.3905	0.4935	0.6531	0.7845	0.8791	0.9497
105	0.1815	0.2422	0.3368	0.4310	0.5853	0.7133	0.8165	0.8931
106	0.1496	0.2062	0.2938	0.3843	0.5292	0.6560	0.7590	0.8431
107	0.1268	0.1784	0.2616	0.3467	0.4851	0.6084	0.7116	0.7987
108	0.0919	0.1391	0.2134	0.2898	0.4179	0.5349	0.6344	0.7238
109	0.0675	0.1097	0.1781	0.2487	0.3680	0.4781	0.5753	0.6591
110	0.0434	0.0831	0.1461	0.2124	0.3261	0.4301	0.5233	0.6047
111	0.0168	0.0534	0.1107	0.1726	0.2763	0.3744	0.4639	0.5413
112	-0.0193	0.0125	0.0639	0.1185	0.2122	0.3014	0.3830	0.4577
113	-0.0628	-0.0365	0.0058	0.0511	0.1293	0.2060	0.2766	0.3410
114	-0.0951	-0.0727	-0.0355	0.0042	0.0727	0.1395	0.2024	0.2606
115	-0.1218	-0.1009	-0.0683	-0.0336	0.0274	0.0882	0.1441	0.1969
116	-0.1425	-0.1249	-0.0954	-0.0643	-0.0091	0.0457	0.0972	0.1452
117	-0.1646	-0.1481	-0.1213	-0.0924	-0.0422	0.0072	0.0544	0.0976
118	-0.1827	-0.1670	-0.1426	-0.1166	-0.0709	-0.0260	0.0169	0.0566
119	-0.1960	-0.1820	-0.1591	-0.1360	-0.0940	-0.0522	-0.0139	0.0232
120	-0.2086	-0.1956	-0.1751	-0.1539	-0.1152	-0.0780	-0.0435	-0.0100
121	-0.2282	-0.2165	-0.1988	-0.1780	-0.1438	-0.1106	-0.0786	-0.0493
122	-0.2444	-0.2347	-0.2186	-0.2012	-0.1689	-0.1388	-0.1103	-0.0848
123	-0.2558	-0.2426	-0.2284	-0.2123	-0.1829	-0.1549	-0.1291	-0.1042
124	-0.2615	-0.2525	-0.2382	-0.2232	-0.1960	-0.1696	-0.1456	-0.1231
125	-0.2579	-0.2489	-0.2365	-0.2224	-0.1981	-0.1737	-0.1519	-0.1320
126	-0.2372	-0.2294	-0.2176	-0.2054	-0.1849	-0.1640	-0.1459	-0.1293
127	-0.2233	-0.2139	-0.2007	-0.1873	-0.1624	-0.1394	-0.1187	-0.0984
128	0.0943	0.1011	0.1101	0.1213	0.1384	0.1512	0.1619	0.1716
129	0.1118	0.1159	0.1233	0.1296	0.1398	0.1500	0.1589	0.1669
130	0.1217	0.1261	0.1324	0.1381	0.1483	0.1575	0.1649	0.1712
131	0.1167	0.1200	0.1249	0.1297	0.1373	0.1436	0.1472	0.1484
132	0.1203	0.1222	0.1251	0.1274	0.1312	0.1325	0.1313	0.1287
133	0.1617	0.1633	0.1635	0.1635	0.1601	0.1535	0.1452	0.1328
134	0.1720	0.1729	0.1725	0.1696	0.1633	0.1513	0.1398	0.1165

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 47 R= 6.1 MILLION M= 0.07 DELTA F= -5.0 DEG.

ORIFICE	7.99	10.01	12.09	14.07	15.91	16.99
1	-1.5814	-3.1088	-4.0637	-6.8875	-8.6104	-9.6386
2	-4.0703	-5.5163	-7.1674	-8.7349	-10.1177	-10.7647
3	-3.9685	-5.1950	-6.5703	-7.8919	-9.1854	-9.8515
4	-3.5884	-4.7572	-5.9162	-6.2372	-7.2071	-7.6823
5	-3.3236	-3.8098	-4.7765	-5.6452	-6.3550	-6.7406
6	-2.8025	-3.5955	-4.3939	-5.1207	-5.7438	-6.0329
7	-2.6527	-3.3271	-4.0358	-4.6897	-5.2206	-5.4902
8	-2.3933	-2.9515	-3.5324	-4.0838	-4.5234	-4.7630
9	-2.2213	-2.7167	-3.2367	-3.6868	-4.0729	-4.2477
10	-2.0812	-2.5098	-2.9598	-3.3651	-3.6938	-3.8359
11	-1.9155	-2.2985	-2.6808	-3.0274	-3.2841	-3.4361
12	-1.7165	-2.0332	-2.3324	-2.5975	-2.8205	-2.9128
13	-1.4589	-1.6918	-1.9119	-2.1077	-2.2519	-2.3039
14	-1.3348	-1.5176	-1.6910	-1.8312	-1.9207	-1.9590
15	-1.2495	-1.3906	-1.5298	-1.6387	-1.7012	-1.7243
16	-1.1685	-1.2849	-1.3991	-1.4792	-1.5210	-1.5128
17	-1.1027	-1.1982	-1.2833	-1.3385	-1.3618	-1.3261
18	-1.0399	-1.1139	-1.1772	-1.2193	-1.2182	-1.1898
19	-0.9777	-1.0363	-1.0758	-1.0901	-1.0896	-1.0375
20	-0.9205	-0.9508	-0.9742	-0.9728	-0.9481	-0.8671
21	-0.8546	-0.8613	-0.8726	-0.8441	-0.8178	-0.7088
22	-0.7719	-0.7564	-0.7353	-0.6899	-0.6652	-0.5888
23	-0.7159	-0.6885	-0.6704	-0.6287	-0.5996	-0.5419
24	-0.6601	-0.6030	-0.5610	-0.4748	-0.5298	-0.4843
25	-0.5707	-0.5127	-0.4478	-0.4280	-0.4501	-0.4851
26	-0.4647	-0.3676	-0.3115	-0.3125	-0.4178	-0.4788
27	-0.2894	-0.2681	-0.2462	-0.2870	-0.3630	-0.4764
28	-0.1966	-0.1951	-0.2249	-0.2893	-0.3667	-0.4736
29	-0.1655	-0.1895	-0.2337	-0.2695	-0.3753	-0.5025
30	-0.1400	-0.2015	-0.2282	-0.2725	-0.3916	-0.4827
31	-0.1451	-0.1843	-0.2392	-0.2805	-0.3910	-0.4896
32	-0.1426	-0.1[illegible]	-0.2367	-0.2808	-0.3711	-0.4869
33	-0.1232	-0.[illegible]	-0.2243	-0.2[illegible]	-0.3544	-0.4244
34	-0.1077	-0.1704	-0.2250	-0.2676	-0.3442	-0.4248

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX C. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 47 RE 6.1 MILLION M= 0.17 DELTA FE -5.0 DEG.

ORIFICE	7.99	10.01	12.09	14.07	15.91	16.99
101	-1.5814	-3.1088	-4.9637	-6.8875	-8.6104	-9.6386
102	0.7087	0.2524	-0.4245	-1.1859	-1.9472	-2.3454
103	0.9580	0.7889	0.4774	0.0989	-0.3000	-0.5113
104	0.9942	0.9437	0.7929	0.5866	0.3451	0.2099
105	0.9796	0.9888	0.9170	0.7929	0.6466	0.5473
106	0.9509	0.9904	0.9704	0.8993	0.8005	0.7369
107	0.9190	0.9812	0.9881	0.9536	0.8867	0.8434
108	0.8540	0.9394	0.9815	0.9892	0.9699	0.9487
109	0.7949	0.8938	0.9588	0.9858	0.9911	0.9820
110	0.7435	0.8482	0.9240	0.9662	0.9851	0.9884
111	0.6782	0.7872	0.8713	0.9290	0.9618	0.9731
112	0.5872	0.6977	0.7898	0.8534	0.9016	0.9194
113	0.4592	0.5630	0.6558	0.7271	0.7785	0.8043
114	0.3677	0.4656	0.5528	0.6230	0.6755	0.6976
115	0.2955	0.3846	0.4677	0.5345	0.5862	0.6097
116	0.2360	0.3172	0.3946	0.4585	0.5045	0.5276
117	0.1805	0.2556	0.3277	0.3879	0.4312	0.4510
118	0.1318	0.2031	0.2689	0.3241	0.3635	0.3859
119	0.0925	0.1564	0.2157	0.2652	0.3045	0.3206
120	0.0516	0.1105	0.1659	0.2117	0.2449	0.2576
121	0.0074	0.0599	0.1112	0.1489	0.1766	0.1893
122	-0.0361	0.0094	0.0548	0.0907	0.1142	0.1242
123	-0.0590	-0.0141	0.0257	0.0586	0.0804	0.0852
124	-0.0800	-0.0432	-0.0050	0.0260	0.0438	0.0487
125	-0.0947	-0.0614	-0.0254	-0.0003	0.0148	0.0179
126	-0.1005	-0.0692	-0.0443	-0.0230	-0.0118	-0.0129
127	-0.0647	-0.0328	-0.0034	0.0203	0.0339	0.0322
128	0.1875	0.2005	0.2183	0.2266	0.2296	0.2217
129	0.1791	0.1926	0.2038	0.2114	0.2128	0.2056
130	0.1817	0.1933	0.2031	0.2082	0.2053	0.1937
131	0.1518	0.1559	0.1560	0.1570	0.1512	0.1348
132	0.1182	0.1135	0.1067	0.0988	0.0890	0.0647
133	0.1093	0.0843	0.0689	0.0562	0.0383	-0.0009
134	0.0947	0.0535	0.0294	0.0108	-0.0205	-0.0606

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 49 R= 10.1 MILLION M= 0.12 DELTA F= -10.0 DEG.

ORIFICE	-3.00	-2.02	-1.49	-1.03	-0.50	-0.24	0.01	0.26
1	-0.3353	0.1734	0.3984	0.5620	0.7126	0.7771	0.8330	0.8831
2	0.5909	0.8912	0.8081	0.7229	0.6132	0.5489	0.4857	0.4145
3	0.3161	0.6475	0.5345	0.4283	0.3978	0.2277	0.1555	0.0793
4	0.6740	0.4910	0.3774	0.2715	0.1457	0.0784	0.0018	-0.0706
5	0.5699	0.3896	0.2799	0.1798	0.0629	-0.0092	-0.0701	-0.1362
6	0.4856	0.3077	0.2033	0.1072	-0.0132	-0.0719	-0.1308	-0.1925
7	0.4229	0.2503	0.1490	0.0583	-0.0560	-0.1107	-0.1654	-0.2242
8	0.3203	0.1584	0.0654	-0.0272	-0.1247	-0.1742	-0.2231	-0.2760
9	0.2377	0.0833	-0.0133	-0.0931	-0.1825	-0.2287	-0.2759	-0.3241
10	0.1764	0.0289	-0.0622	-0.1368	-0.2197	-0.2631	-0.3051	-0.3505
11	0.1030	-0.0429	-0.1194	-0.1873	-0.2642	-0.3031	-0.3419	-0.3833
12	0.0216	-0.1025	-0.1701	-0.2300	-0.2968	-0.3319	-0.3656	-0.4010
13	-0.0989	-0.1848	-0.2415	-0.2910	-0.3443	-0.3732	-0.4011	-0.4288
14	-0.1711	-0.2546	-0.3051	-0.3467	-0.3545	-0.4181	-0.4420	-0.4681
15	-0.2324	-0.3083	-0.3521	-0.3916	-0.4343	-0.4553	-0.4770	-0.4985
16	-0.2792	-0.3467	-0.3859	-0.4201	-0.4593	-0.4777	-0.4965	-0.5169
17	-0.3147	-0.3747	-0.4116	-0.4435	-0.4770	-0.4919	-0.5107	-0.5285
18	-0.3447	-0.3969	-0.4309	-0.4599	-0.4883	-0.5037	-0.5190	-0.5357
19	-0.3686	-0.4143	-0.4435	-0.4699	-0.4975	-0.5089	-0.5229	-0.5379
20	-0.3869	-0.4299	-0.4576	-0.4799	-0.5050	-0.5154	-0.5283	-0.5392
21	-0.4029	-0.4389	-0.4638	-0.4849	-0.5048	-0.5154	-0.5267	-0.5374
22	-0.4113	-0.4421	-0.4638	-0.4815	-0.4986	-0.5079	-0.5162	-0.5269
23	-0.4121	-0.4392	-0.4590	-0.4753	-0.4909	-0.4982	-0.5064	-0.5162
24	-0.4103	-0.4316	-0.4496	-0.4650	-0.4793	-0.4879	-0.4945	-0.5013
25	-0.4098	-0.4227	-0.4385	-0.4529	-0.4657	-0.4716	-0.4780	-0.4846
26	-0.3952	-0.3943	-0.4095	-0.4214	-0.4303	-0.4354	-0.4413	-0.4484
27	-0.3563	-0.3097	-0.3224	-0.3311	-0.3380	-0.3420	-0.3456	-0.3495
28	-0.1426	-0.1487	-0.1570	-0.1643	-0.1690	-0.1710	-0.1744	-0.1775
29	0.0078	0.0052	-0.0025	-0.0079	-0.0103	-0.0114	-0.0136	-0.0161
30	0.1323	0.1198	0.1143	0.1086	0.1054	0.1035	0.1008	0.0980
31	0.3306	0.2525	0.2432	0.2347	0.2276	0.2226	0.2158	0.2109
32	0.3885	0.3042	0.2965	0.2875	0.2805	0.2755	0.2721	0.2663
33	0.3033	0.2850	0.2815	0.2781	0.2780	0.2759	0.2749	0.2731
34	0.2697	0.2593	0.2576	0.2561	0.2574	0.2572	0.2563	0.2558

ORIGINAL PAGE IS
OF POOR QUALITY

C-3

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 49 R= 10.1 MILLION M= 0.12 DELTA F= -10.0 DEG.

ORIFICE	-3.00	-2.02	-1.49	-1.03	-0.50	-0.24	0.01	0.26
101	-0.3353	0.1734	0.3984	0.5620	0.7126	0.7771	0.8330	0.8831
102	-1.8577	-1.2235	-0.9157	-0.6720	-0.4239	-0.3033	-0.1932	-0.0843
103	-1.5567	-1.0536	-0.8140	-0.6236	-0.4279	-0.3316	-0.2417	-0.1529
104	-1.1896	-0.9044	-0.7044	-0.5457	-0.3828	-0.3026	-0.2280	-0.1537
105	-1.0844	-0.8122	-0.6384	-0.4986	-0.3577	-0.2870	-0.2211	-0.1548
106	-1.0019	-0.6888	-0.5922	-0.4695	-0.3434	-0.2787	-0.2201	-0.1594
107	-0.9329	-0.6602	-0.5613	-0.4487	-0.3312	-0.2711	-0.2175	-0.1630
108	-0.8334	-0.6054	-0.4722	-0.4123	-0.3137	-0.2617	-0.2140	-0.1663
109	-0.7660	-0.5623	-0.4536	-0.3873	-0.3008	-0.2541	-0.2130	-0.1678
110	-0.7215	-0.5384	-0.4419	-0.3790	-0.2983	-0.2565	-0.2168	-0.1770
111	-0.6693	-0.5074	-0.4230	-0.3647	-0.2950	-0.2560	-0.2223	-0.1852
112	-0.6183	-0.4810	-0.4093	-0.3438	-0.2953	-0.2631	-0.2336	-0.2004
113	-0.5537	-0.4458	-0.3884	-0.3398	-0.2883	-0.2626	-0.2459	-0.2207
114	-0.5207	-0.4283	-0.3809	-0.3385	-0.2955	-0.2722	-0.2606	-0.2386
115	-0.5033	-0.4217	-0.3800	-0.3436	-0.3052	-0.2860	-0.2741	-0.2565
116	-0.4909	-0.4195	-0.3819	-0.3504	-0.3159	-0.2980	-0.2822	-0.2710
117	-0.4844	-0.4225	-0.3879	-0.3595	-0.3278	-0.3122	-0.2962	-0.2885
118	-0.4793	-0.4235	-0.3926	-0.3664	-0.3395	-0.3244	-0.3092	-0.3040
119	-0.4719	-0.4216	-0.3933	-0.3699	-0.3451	-0.3328	-0.3190	-0.3152
120	-0.4690	-0.4237	-0.3986	-0.3778	-0.3537	-0.3437	-0.3317	-0.3242
121	-0.4764	-0.4344	-0.4132	-0.3932	-0.3738	-0.3634	-0.3534	-0.3428
122	-0.4804	-0.4447	-0.4240	-0.4079	-0.3919	-0.3828	-0.3742	-0.3624
123	-0.4856	-0.4517	-0.4316	-0.4159	-0.4025	-0.3941	-0.3855	-0.3765
124	-0.4895	-0.4564	-0.4396	-0.4255	-0.4130	-0.4039	-0.3984	-0.3905
125	-0.4832	-0.4521	-0.4372	-0.4247	-0.4134	-0.4067	-0.4011	-0.3957
126	-0.4697	-0.4414	-0.4272	-0.4166	-0.4103	-0.4031	-0.4007	-0.4012
127	-0.3230	-0.3004	-0.2890	-0.2782	-0.2716	-0.2650	-0.2613	-0.2569
128	-0.1715	-0.1499	-0.1389	-0.1290	-0.1174	-0.1111	-0.1031	-0.0911
129	-0.1053	-0.0861	-0.0756	-0.0660	-0.0542	-0.0480	-0.0396	-0.0274
130	-0.0766	-0.0583	-0.0490	-0.0401	-0.0294	-0.0237	-0.0174	-0.0058
131	-0.0856	-0.0728	-0.0658	-0.0591	-0.0539	-0.0503	-0.0464	-0.0414
132	-0.0441	-0.0334	-0.0295	-0.0271	-0.0247	-0.0223	-0.0214	-0.0194
133	0.0746	0.0835	0.0875	0.0899	0.0945	0.0956	0.0978	0.1007
134	0.1097	0.1192	0.1214	0.1238	0.1291	0.1306	0.1325	0.1350

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 49 R= 10.1 MILLION M= 0.12 DELTA F= -10.0 DEG.

ORIFICE	0.51	1.01	1.51	2.03	2.99	4.02	5.00	5.97
1	0.9229	0.9828	1.0097	1.0094	0.9203	0.7069	0.3863	-0.0387
2	0.3409	0.1756	-0.3144	-0.2225	-0.6675	-1.1842	-1.7410	-2.3459
3	-0.0088	-0.1780	-0.3615	-0.5678	-0.9929	-1.4696	-1.9727	-2.5098
4	-0.1426	-0.3013	-0.4647	-0.6522	-1.0250	-1.4393	-1.8730	-2.3285
5	-0.2043	-0.3462	-0.4939	-0.6593	-0.9926	-1.3580	-1.7346	-2.1399
6	-0.2554	-0.3879	-0.5240	-0.6785	-0.9792	-1.3084	-1.6505	-2.0257
7	-0.2825	-0.4060	-0.5319	-0.6732	-0.9544	-1.2560	-1.5757	-1.8082
8	-0.3289	-0.4402	-0.5513	-0.6767	-0.9218	-1.1860	-1.4111	-1.6776
9	-0.3722	-0.4744	-0.5763	-0.6922	-0.9123	-1.1477	-1.3443	-1.5967
10	-0.3948	-0.4893	-0.5819	-0.6892	-0.8890	-1.1047	-1.2555	-1.5191
11	-0.4235	-0.5108	-0.5951	-0.6893	-0.8686	-1.0231	-1.2310	-1.4240
12	-0.4358	-0.5094	-0.5816	-0.6645	-0.8144	-0.9761	-1.1402	-1.3044
13	-0.4576	-0.5175	-0.5760	-0.6433	-0.7625	-0.8930	-1.0190	-1.1444
14	-0.4707	-0.5434	-0.5938	-0.6492	-0.7546	-0.8660	-0.9714	-1.0716
15	-0.5205	-0.5656	-0.6080	-0.6571	-0.7494	-0.8433	-0.9347	-1.0221
16	-0.5353	-0.5757	-0.6140	-0.6571	-0.7381	-0.8211	-0.8950	-0.9760
17	-0.5469	-0.5818	-0.6156	-0.6544	-0.7280	-0.7982	-0.8669	-0.9344
18	-0.5500	-0.5834	-0.6132	-0.6475	-0.7124	-0.7736	-0.8340	-0.8887
19	-0.5525	-0.5789	-0.6073	-0.6400	-0.6969	-0.7498	-0.8007	-0.8506
20	-0.5505	-0.5776	-0.6011	-0.6313	-0.6780	-0.7253	-0.7709	-0.8123
21	-0.5487	-0.5711	-0.5943	-0.6155	-0.6565	-0.6986	-0.7326	-0.7653
22	-0.5352	-0.5549	-0.5749	-0.5953	-0.6288	-0.6590	-0.6861	-0.7094
23	-0.5255	-0.5445	-0.5599	-0.5773	-0.6057	-0.6334	-0.6538	-0.6709
24	-0.5113	-0.5278	-0.5412	-0.5566	-0.5799	-0.6017	-0.6160	-0.6300
25	-0.4926	-0.5060	-0.5200	-0.5275	-0.5483	-0.5619	-0.5725	-0.5743
26	-0.4527	-0.4674	-0.4762	-0.4826	-0.4935	-0.4989	-0.5003	-0.4947
27	-0.3551	-0.3659	-0.3737	-0.3731	-0.3761	-0.3723	-0.3607	-0.3495
28	-0.1815	-0.1896	-0.1959	-0.1950	-0.1928	-0.1846	-0.1774	-0.1692
29	-0.0194	-0.0279	-0.0352	-0.0380	-0.0475	-0.0547	-0.0612	-0.0763
30	0.0945	0.0845	0.0699	0.0568	0.0330	0.0085	-0.0194	-0.0409
31	0.2044	0.1905	0.1637	0.1334	0.0947	0.0548	0.0233	-0.0106
32	0.2609	0.2447	0.2238	0.1925	0.1408	0.0912	0.0501	0.0136
33	0.2711	0.2635	0.2543	0.2386	0.1956	0.1551	0.1141	0.0768
34	0.2555	0.2509	0.2451	0.2352	0.2081	0.1741	0.1426	0.1064

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 48 R= 10.1 MILLION M= 0.12 DELTA F= -10.0 DEG.

ORIFICE	0.51	1.01	1.51	2.03	2.99	4.02	5.00	5.97
101	0.9229	0.9828	1.0097	1.0094	0.9203	0.7069	0.3863	-0.0387
102	0.0165	0.2100	0.3808	0.5396	0.7721	0.9274	0.9997	1.0044
103	-0.0694	0.0931	0.2412	0.3856	0.6092	0.7871	0.9070	0.9809
104	-0.0821	0.0567	0.1843	0.3115	0.5155	0.6878	0.8173	0.9120
105	-0.0919	0.0315	0.1461	0.2624	0.4525	0.6161	0.7459	0.8473
106	-0.1028	0.0106	0.1161	0.2230	0.4015	0.5593	0.6869	0.7920
107	-0.1106	-0.0050	0.0936	0.1935	0.3625	0.5130	0.6395	0.7420
108	-0.1198	-0.0273	0.0599	0.1504	0.3030	0.4423	0.5622	0.6631
109	-0.1264	-0.0430	0.0361	0.1183	0.2599	0.3901	0.5036	0.6017
110	-0.1392	-0.0616	0.0125	0.0885	0.2212	0.3444	0.4530	0.5496
111	-0.1508	-0.0805	-0.0144	0.0561	0.1769	0.2920	0.3937	0.4852
112	-0.1709	-0.1091	-0.0517	0.0108	0.1187	0.2227	0.3158	0.4004
113	-0.1959	-0.1452	-0.0972	-0.0458	0.0448	0.1331	0.2130	0.2877
114	-0.2166	-0.1733	-0.1319	-0.0871	-0.0080	0.0697	0.1403	0.2073
115	-0.2369	-0.1984	-0.1619	-0.1203	-0.0504	0.0195	0.0638	0.1436
116	-0.2545	-0.2197	-0.1856	-0.1499	-0.0859	-0.0227	0.0362	0.0910
117	-0.2732	-0.2419	-0.2107	-0.1782	-0.1190	-0.0614	-0.0077	0.0432
118	-0.2904	-0.2623	-0.2337	-0.2031	-0.1493	-0.0955	-0.0462	0.0012
119	-0.3025	-0.2763	-0.2500	-0.2232	-0.1731	-0.1240	-0.0782	-0.0355
120	-0.3158	-0.2919	-0.2681	-0.2439	-0.1976	-0.1520	-0.1096	-0.0700
121	-0.3393	-0.3180	-0.2963	-0.2727	-0.2307	-0.1891	-0.1503	-0.1128
122	-0.3622	-0.3415	-0.3204	-0.2991	-0.2608	-0.2226	-0.1879	-0.1539
123	-0.3743	-0.3554	-0.3359	-0.3150	-0.2782	-0.2423	-0.2083	-0.1764
124	-0.3894	-0.3696	-0.3507	-0.3307	-0.2967	-0.2614	-0.2293	-0.1993
125	-0.3935	-0.3752	-0.3564	-0.3375	-0.3054	-0.2720	-0.2427	-0.2139
126	-0.3944	-0.3686	-0.3503	-0.3343	-0.3053	-0.2761	-0.2492	-0.2255
127	-0.3480	-0.3427	-0.3232	-0.3065	-0.2732	-0.2421	-0.2138	-0.1878
128	-0.0584	-0.0352	-0.0153	0.0011	0.0208	0.0370	0.0531	0.0682
129	-0.0067	0.0058	0.0171	0.0280	0.0453	0.0630	0.0778	0.0922
130	0.0087	0.0191	0.0284	0.0379	0.0538	0.0693	0.0831	0.0951
131	-0.0335	-0.0250	-0.0172	-0.0083	0.0046	0.0182	0.0285	0.0379
132	-0.0163	-0.0101	-0.0033	0.0029	0.0127	0.0211	0.0271	0.0318
133	0.1027	0.1059	0.1095	0.1133	0.1176	0.1193	0.1197	0.1173
134	0.1369	0.1387	0.1406	0.1434	0.1445	0.1433	0.1403	0.1356

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 49 R= 10.1 MILLION M= 0.12 DELTA F= -10.0 DEG.

ORIFICE	7.00	8.02	9.99	12.05	14.00	15.96	16.92
1	-0.5974	-1.2179	-2.6920	-4.5171	-6.4272	-8.3196	-9.2161
2	-3.0405	-3.7377	-5.2302	-6.8905	-8.5235	-10.1217	-10.6738
3	-3.1176	-3.7222	-4.9803	-6.4104	-7.7672	-9.0122	-9.3268
4	-2.8467	-3.3681	-4.4865	-5.2440	-6.2976	-7.2985	-7.6636
5	-2.6193	-2.8976	-3.7254	-4.6763	-5.5419	-6.3628	-6.6707
6	-2.2787	-2.6782	-3.4635	-4.2785	-5.0095	-5.7270	-6.0177
7	-2.1654	-2.5114	-3.1985	-3.9197	-4.5872	-5.2151	-5.4365
8	-1.9839	-2.2625	-2.8452	-3.4511	-4.0015	-4.5163	-4.6888
9	-1.8603	-2.1117	-2.6211	-3.1440	-3.6236	-4.0480	-4.2052
10	-1.7520	-1.9765	-2.4356	-2.8989	-3.3164	-3.7056	-3.8217
11	-1.6318	-1.8321	-2.2196	-2.6188	-2.9824	-3.2918	-3.3915
12	-1.4771	-1.6432	-1.9618	-2.2863	-2.5719	-2.8130	-2.8860
13	-1.2744	-1.4053	-1.6362	-1.8804	-2.0763	-2.2361	-2.2781
14	-1.1791	-1.2797	-1.4699	-1.6554	-1.8048	-1.9191	-1.9399
15	-1.1148	-1.1969	-1.3518	-1.5001	-1.6172	-1.7017	-1.7182
16	-1.0530	-1.1228	-1.2516	-1.3684	-1.4587	-1.5196	-1.5078
17	-0.9981	-1.0572	-1.1629	-1.2598	-1.3254	-1.3628	-1.3380
18	-0.9475	-0.9964	-1.0795	-1.1537	-1.2018	-1.2185	-1.1920
19	-0.8972	-0.9351	-1.0027	-1.0589	-1.0845	-1.0876	-1.0577
20	-0.8504	-0.8800	-0.9279	-0.9573	-0.9658	-0.9535	-0.9182
21	-0.7932	-0.8156	-0.8428	-0.8570	-0.8447	-0.8248	-0.7917
22	-0.7271	-0.7401	-0.7398	-0.7279	-0.7001	-0.6822	-0.6606
23	-0.6809	-0.6881	-0.6815	-0.6485	-0.6054	-0.6105	-0.5781
24	-0.6348	-0.6322	-0.6001	-0.5573	-0.5105	-0.4769	-0.4912
25	-0.5749	-0.5684	-0.5066	-0.4323	-0.3889	-0.4246	-0.4511
26	-0.4741	-0.4545	-0.3916	-0.3111	-0.3097	-0.3544	-0.4235
27	-0.3174	-0.2871	-0.2226	-0.2135	-0.2362	-0.3059	-0.3980
28	-0.1629	-0.1621	-0.1546	-0.1784	-0.2126	-0.2933	-0.3774
29	-0.0919	-0.1113	-0.1385	-0.1716	-0.2142	-0.2920	-0.3805
30	-0.0731	-0.0861	-0.1337	-0.1774	-0.2131	-0.2859	-0.3568
31	-0.0449	-0.0699	-0.1305	-0.1766	-0.2290	-0.3111	-0.3778
32	-0.0226	-0.0562	-0.1134	-0.1697	-0.2184	-0.3036	-0.3666
33	0.0370	-0.0240	-0.0939	-0.1514	-0.2154	-0.2926	-0.3329
34	0.0714	0.0084	-0.0797	-0.1332	-0.1919	-0.2531	-0.3112

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 49 R= 10.1 MILLION M= 0.12 DELTA F= -10.0 DEG.

ORIFICE	7.00	8.02	9.99	12.05	14.00	15.96	16.92
101	-0.5974	-1.2179	-2.6920	-4.5171	-6.4272	-8.3196	-9.2161
102	0.9398	0.8158	0.4025	-0.2176	-0.9575	-1.7475	-2.0942
103	1.0080	0.9948	0.8593	0.5761	0.2210	-0.1902	-0.3781
104	0.9760	1.0029	0.9804	0.8556	0.6596	0.4174	0.3090
105	0.9275	0.9759	1.0049	0.9559	0.8454	0.6925	0.6195
106	0.8791	0.9385	1.0005	0.9945	0.9347	0.8400	0.7868
107	0.8350	0.9003	0.9806	1.0040	0.9792	0.9203	0.8873
108	0.7588	0.8277	0.9313	0.9902	1.0052	0.9875	0.9756
109	0.6946	0.7688	0.8812	0.9576	0.9946	1.0037	1.0022
110	0.6396	0.7136	0.8333	0.9197	0.9712	0.9938	1.0000
111	0.5726	0.6455	0.7669	0.8636	0.9266	0.9641	0.9792
112	0.4832	0.5538	0.6748	0.7764	0.8496	0.9013	0.9186
113	0.3608	0.4248	0.5377	0.6378	0.7168	0.7744	0.7976
114	0.2737	0.3323	0.4375	0.5319	0.6075	0.6686	0.6909
115	0.2044	0.2577	0.3565	0.4447	0.5159	0.5750	0.5967
116	0.1472	0.1971	0.2869	0.3705	0.4378	0.4951	0.5134
117	0.0952	0.1407	0.2248	0.3036	0.3657	0.4184	0.4356
118	0.0484	0.0907	0.1689	0.2414	0.3008	0.3480	0.3640
119	0.0089	0.0475	0.1197	0.1864	0.2411	0.2839	0.2959
120	-0.0297	0.0055	0.0710	0.1331	0.1833	0.2200	0.2314
121	-0.0760	-0.0430	0.0167	0.0732	0.1166	0.1512	0.1576
122	-0.1202	-0.0903	-0.0364	0.0124	0.0510	0.0808	0.0867
123	-0.1439	-0.1169	-0.0651	-0.0181	0.0186	0.0434	0.0460
124	-0.1685	-0.1419	-0.0949	-0.0534	-0.0184	0.0048	0.0039
125	-0.1867	-0.1631	-0.1174	-0.0793	-0.0512	-0.0324	-0.0329
126	-0.1998	-0.1782	-0.1424	-0.1067	-0.0832	-0.0684	-0.0717
127	-0.1607	-0.1374	-0.0990	-0.0614	-0.0344	-0.0205	-0.0241
128	0.0837	0.0958	0.1165	0.1362	0.1496	0.1545	0.1494
129	0.1057	0.1157	0.1336	0.1501	0.1594	0.1604	0.1583
130	0.1074	0.1162	0.1324	0.1451	0.1505	0.1498	0.1429
131	0.0457	0.0511	0.0578	0.0630	0.0623	0.0555	0.0437
132	0.0346	0.0336	0.0285	0.0192	0.0105	-0.0047	-0.0227
133	0.1107	0.1013	0.0819	0.0537	0.0330	0.0109	-0.0124
134	0.1236	0.1092	0.0761	0.0390	0.0084	-0.0174	-0.0354

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 50 R=8.1 MILLION M= 0.10 DELTA F= -10.0 DEG.

ORIFICE	-1.97	-1.45	-0.96	-0.72	-0.53	-0.25	-0.02	0.51
1	0.1969	0.4114	0.5807	0.6494	0.6957	0.7691	0.8202	0.9171
2	0.8846	0.8029	0.7097	0.6635	0.6275	0.5600	0.4999	0.3445
3	0.6383	0.5288	0.4137	0.3589	0.3165	0.2403	0.1743	-0.0063
4	0.4824	0.3709	0.2582	0.2045	0.1635	0.0914	0.0303	-0.1399
5	0.3819	0.2751	0.1685	0.1192	0.0810	-0.0010	-0.0579	-0.1998
6	0.3014	0.1993	0.0969	0.0493	-0.0004	-0.0644	-0.1184	-0.2513
7	0.2444	0.1473	0.0501	-0.0078	-0.0418	-0.1036	-0.1537	-0.2789
8	0.1545	0.0632	-0.0404	-0.0802	-0.1114	-0.1673	-0.2121	-0.3249
9	0.0808	-0.0192	-0.1026	-0.1408	-0.1700	-0.2209	-0.2627	-0.3669
10	0.0265	-0.0677	-0.1453	-0.1812	-0.2082	-0.2563	-0.2961	-0.3905
11	-0.0485	-0.1234	-0.1962	-0.2274	-0.2532	-0.2960	-0.3323	-0.4191
12	-0.1155	-0.1833	-0.2467	-0.2748	-0.2959	-0.3349	-0.3656	-0.4429
13	-0.1958	-0.2511	-0.3049	-0.3282	-0.3445	-0.3764	-0.4010	-0.4650
14	-0.2648	-0.3136	-0.3599	-0.3809	-0.3948	-0.4212	-0.4419	-0.4965
15	-0.3165	-0.3608	-0.4017	-0.4185	-0.4318	-0.4567	-0.4767	-0.5241
16	-0.3550	-0.3932	-0.4303	-0.4469	-0.4574	-0.4801	-0.4964	-0.5404
17	-0.3840	-0.4172	-0.4504	-0.4658	-0.4754	-0.4938	-0.5104	-0.5489
18	-0.4051	-0.4362	-0.4665	-0.4798	-0.4879	-0.5054	-0.5192	-0.5550
19	-0.4225	-0.4504	-0.4769	-0.4879	-0.4966	-0.5113	-0.5249	-0.5567
20	-0.4371	-0.4627	-0.4870	-0.4961	-0.5042	-0.5170	-0.5276	-0.5569
21	-0.4464	-0.4697	-0.4915	-0.5006	-0.5069	-0.5195	-0.5298	-0.5435
22	-0.4503	-0.4713	-0.4916	-0.4982	-0.5034	-0.5160	-0.5261	-0.5335
23	-0.4496	-0.4690	-0.4858	-0.4935	-0.4976	-0.5101	-0.5199	-0.5235
24	-0.4464	-0.4647	-0.4809	-0.4884	-0.4929	-0.5034	-0.5022	-0.5129
25	-0.4419	-0.4598	-0.4768	-0.4839	-0.4871	-0.4844	-0.4824	-0.5017
26	-0.4255	-0.4445	-0.4596	-0.4529	-0.4476	-0.4527	-0.4581	-0.4729
27	-0.3813	-0.3683	-0.3602	-0.3635	-0.3652	-0.3733	-0.3772	-0.3848
28	-0.1646	-0.1783	-0.1926	-0.1967	-0.1973	-0.2024	-0.2058	-0.2121
29	-0.0102	-0.0201	-0.0292	-0.0307	-0.0314	-0.0361	-0.0386	-0.0436
30	0.1172	0.1090	0.1019	0.1006	0.1002	0.0963	0.0939	0.0885
31	0.3181	0.3125	0.3070	0.3052	0.3041	0.2995	0.2944	0.2705
32	0.3775	0.3732	0.3685	0.3674	0.3652	0.3612	0.3576	0.3300
33	0.2958	0.2934	0.2916	0.2925	0.2942	0.2938	0.2948	0.2888
34	0.2647	0.2624	0.2620	0.2640	0.2661	0.2659	0.2688	0.2643

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 50 R=8.1 MILLION M= 0.10 DELTA F= -10.0 DEG.

ORIFICE	-1.97	-1.45	-0.96	-0.72	-0.53	-0.25	-0.02	0.51
101	0.1969	0.4114	0.5807	0.6494	0.6957	0.7691	0.8202	0.9171
102	-1.1845	-0.8880	-0.6312	-0.5221	-0.4441	-0.3147	-0.2114	0.0165
103	-1.0201	-0.7915	-0.5505	-0.5053	-0.4445	-0.3399	-0.2555	-0.0693
104	-0.8749	-0.6834	-0.5175	-0.4482	-0.3953	-0.3097	-0.2390	-0.0822
105	-0.7877	-0.6187	-0.4750	-0.4139	-0.3680	-0.2922	-0.2309	-0.0925
106	-0.7212	-0.5776	-0.4487	-0.3941	-0.3524	-0.2836	-0.2285	-0.1026
107	-0.6289	-0.5451	-0.4270	-0.3759	-0.3395	-0.2754	-0.2253	-0.1097
108	-0.5878	-0.4997	-0.3973	-0.3527	-0.3203	-0.2657	-0.2216	-0.1189
109	-0.5481	-0.4429	-0.3740	-0.3352	-0.3063	-0.2572	-0.2174	-0.1260
110	-0.5264	-0.4246	-0.3661	-0.3311	-0.3038	-0.2585	-0.2225	-0.1380
111	-0.4975	-0.4135	-0.3545	-0.3230	-0.2996	-0.2589	-0.2264	-0.1495
112	-0.4722	-0.4011	-0.3408	-0.3195	-0.2987	-0.2644	-0.2365	-0.1701
113	-0.4377	-0.3814	-0.3277	-0.3077	-0.2911	-0.2715	-0.2484	-0.1944
114	-0.4211	-0.3737	-0.3286	-0.3124	-0.2970	-0.2816	-0.2616	-0.2159
115	-0.4143	-0.3750	-0.3349	-0.3195	-0.3076	-0.2930	-0.2758	-0.2352
116	-0.4125	-0.3763	-0.3420	-0.3264	-0.3169	-0.2990	-0.2898	-0.2523
117	-0.4171	-0.3826	-0.3511	-0.3372	-0.3287	-0.3114	-0.3058	-0.2705
118	-0.4166	-0.3874	-0.3607	-0.3464	-0.3405	-0.3232	-0.3189	-0.2875
119	-0.4162	-0.3907	-0.3653	-0.3525	-0.3459	-0.3317	-0.3281	-0.3006
120	-0.4181	-0.3941	-0.3731	-0.3624	-0.3556	-0.3427	-0.3385	-0.3144
121	-0.4307	-0.4089	-0.3892	-0.3812	-0.3755	-0.3632	-0.3589	-0.3363
122	-0.4403	-0.4216	-0.4040	-0.3959	-0.3921	-0.3828	-0.3812	-0.3593
123	-0.4476	-0.4282	-0.4126	-0.4069	-0.4026	-0.3947	-0.3908	-0.3726
124	-0.4541	-0.4350	-0.4208	-0.4169	-0.4135	-0.4051	-0.4019	-0.3847
125	-0.4483	-0.4318	-0.4194	-0.4165	-0.4136	-0.4076	-0.4063	-0.3880
126	-0.4375	-0.4231	-0.4125	-0.4102	-0.4095	-0.4062	-0.4125	-0.3774
127	-0.2976	-0.2852	-0.2758	-0.2724	-0.2710	-0.2659	-0.3117	-0.3531
128	-0.1492	-0.1381	-0.1269	-0.1222	-0.1188	-0.1101	-0.0798	-0.0348
129	-0.0862	-0.0756	-0.0651	-0.0596	-0.0556	-0.0469	-0.0237	-0.0027
130	-0.0591	-0.0502	-0.0400	-0.0351	-0.0314	-0.0235	-0.0043	0.0093
131	-0.0733	-0.0661	-0.0597	-0.0573	-0.0559	-0.0517	-0.0439	-0.0335
132	-0.0348	-0.0303	-0.0275	-0.0273	-0.0263	-0.0249	-0.0231	-0.0160
133	0.0792	0.0827	0.0871	0.0888	0.0905	0.0924	0.0968	0.1006
134	0.1128	0.1161	0.1195	0.1222	0.1244	0.1273	0.1303	0.1340

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 50 R=8.1 MILLION M= 0.10 DELTA F= -10.0 DEG.

ORIFICE	1.09	1.51	1.99	2.98	4.04	5.01	5.99	8.00
1	0.9844	1.0046	1.0055	0.9196	0.6977	0.3894	-0.0343	-1.1739
2	0.1547	-0.0156	-0.2080	-0.6568	-1.1882	-1.7182	-2.3192	-3.6665
3	-0.2028	-0.3619	-0.5488	-0.9797	-1.4720	-1.9443	-2.4784	-3.6334
4	-0.3195	-0.4633	-0.6328	-1.0111	-1.4393	-1.8500	-2.2966	-3.2955
5	-0.3626	-0.4918	-0.6449	-0.9775	-1.3555	-1.7146	-2.1095	-3.0349
6	-0.4023	-0.5217	-0.6631	-0.9677	-1.3067	-1.6317	-1.9947	-2.6055
7	-0.4184	-0.5300	-0.6588	-0.9425	-1.2514	-1.5566	-1.8590	-2.4607
8	-0.4513	-0.5495	-0.6630	-0.9140	-1.1851	-1.4455	-1.6573	-2.2254
9	-0.4835	-0.5720	-0.6758	-0.9000	-1.1456	-1.3146	-1.5755	-2.0752
10	-0.4984	-0.5815	-0.6765	-0.8842	-1.1043	-1.2799	-1.4995	-1.9425
11	-0.5186	-0.5904	-0.6786	-0.8620	-1.0558	-1.2170	-1.4113	-1.7954
12	-0.5263	-0.5903	-0.6661	-0.8217	-0.9698	-1.1282	-1.2874	-1.6136
13	-0.5334	-0.5849	-0.6446	-0.7548	-0.8899	-1.0065	-1.1314	-1.3758
14	-0.5556	-0.6002	-0.6521	-0.7463	-0.8595	-0.9588	-1.0613	-1.2592
15	-0.5744	-0.6136	-0.6463	-0.7427	-0.8379	-0.9232	-1.0107	-1.1779
16	-0.5837	-0.6185	-0.6464	-0.7333	-0.8159	-0.8900	-0.9644	-1.1048
17	-0.5891	-0.6059	-0.6458	-0.7214	-0.7939	-0.8574	-0.9192	-1.0389
18	-0.5773	-0.6062	-0.6403	-0.7048	-0.7701	-0.8263	-0.8790	-0.9797
19	-0.5789	-0.6026	-0.6317	-0.6883	-0.7468	-0.7933	-0.8369	-0.9193
20	-0.5774	-0.6002	-0.6249	-0.6708	-0.7210	-0.7615	-0.7969	-0.8637
21	-0.5700	-0.5885	-0.6099	-0.6518	-0.6909	-0.7204	-0.7524	-0.7952
22	-0.5555	-0.5725	-0.5880	-0.6215	-0.6514	-0.6722	-0.6928	-0.7195
23	-0.5446	-0.5583	-0.5737	-0.6007	-0.6236	-0.6424	-0.6583	-0.6669
24	-0.5306	-0.5407	-0.5520	-0.5734	-0.5910	-0.6034	-0.6133	-0.6068
25	-0.5130	-0.5210	-0.5270	-0.5405	-0.5513	-0.5517	-0.5556	-0.5275
26	-0.4763	-0.4795	-0.4812	-0.4818	-0.4819	-0.4767	-0.4622	-0.4137
27	-0.3800	-0.3778	-0.3772	-0.3616	-0.3506	-0.3320	-0.3211	-0.2640
28	-0.2054	-0.2008	-0.1978	-0.1818	-0.1717	-0.1608	-0.1576	-0.1472
29	-0.0369	-0.0359	-0.0381	-0.0425	-0.0495	-0.0655	-0.0823	-0.1120
30	0.0864	0.0759	0.0593	0.0271	-0.0021	-0.0293	-0.0514	-0.0997
31	0.2193	0.1723	0.1358	0.0786	0.0342	0.0001	-0.0297	-0.0862
32	0.2797	0.2326	0.1935	0.1215	0.0683	0.0277	-0.0076	-0.0757
33	0.2768	0.2645	0.2442	0.1862	0.1299	0.0916	0.0437	-0.0248
34	0.2583	0.2495	0.2375	0.1990	0.1594	0.1182	0.0854	-0.0063

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 50 R=8.1 MILLION M= 0.10 DELTA F= -10.0 DEG.

ORIFICE	1.09	1.51	1.99	2.98	4.04	5.01	5.99	8.00
101	0.9844	1.0046	1.0055	0.9196	0.8977	0.3894	-0.0343	-1.1739
102	0.2361	0.3806	0.5273	0.7659	0.9253	0.9936	1.0001	0.8189
103	0.1167	0.2432	0.3735	0.6047	0.7867	0.8998	0.9750	0.9898
104	0.0757	0.1852	0.3019	0.5112	0.6879	0.8113	0.9051	0.9970
105	0.0492	0.1478	0.2529	0.4473	0.6175	0.7402	0.8415	0.9676
106	0.0269	0.1172	0.2150	0.3983	0.5601	0.6830	0.7867	0.9303
107	0.0105	0.0940	0.1858	0.3587	0.5138	0.6353	0.7385	0.8924
108	-0.0131	0.0612	0.1430	0.3010	0.4441	0.5581	0.6602	0.8201
109	-0.0304	0.0382	0.1123	0.2573	0.3916	0.4991	0.5986	0.7596
110	-0.0491	0.0135	0.0836	0.2195	0.3462	0.4493	0.5463	0.7066
111	-0.0692	-0.0122	0.0511	0.1761	0.2931	0.3905	0.4819	0.6375
112	-0.0994	-0.0495	0.0069	0.1183	0.2244	0.3128	0.3987	0.5463
113	-0.1371	-0.0949	-0.0482	0.0444	0.1345	0.2111	0.2858	0.4189
114	-0.1661	-0.1294	-0.0884	-0.0076	0.0716	0.1393	0.2059	0.3263
115	-0.1907	-0.1589	-0.1224	-0.0497	0.0213	0.0829	0.1429	0.2531
116	-0.2121	-0.1832	-0.1508	-0.0842	-0.0203	0.0354	0.0908	0.1922
117	-0.2350	-0.2089	-0.1783	-0.1190	-0.0589	-0.0081	0.0431	0.1364
118	-0.2561	-0.2303	-0.2036	-0.1479	-0.0935	-0.0459	-0.0002	0.0871
119	-0.2695	-0.2472	-0.2223	-0.1711	-0.1213	-0.0776	-0.0347	0.0447
120	-0.2864	-0.2660	-0.2425	-0.1952	-0.1500	-0.1093	-0.0702	0.0019
121	-0.3110	-0.2924	-0.2711	-0.2280	-0.1857	-0.1487	-0.1132	-0.0463
122	-0.3346	-0.3173	-0.2981	-0.2584	-0.2190	-0.1866	-0.1537	-0.0935
123	-0.3478	-0.3317	-0.3124	-0.2756	-0.2382	-0.2075	-0.1756	-0.1193
124	-0.3616	-0.3465	-0.3276	-0.2927	-0.2576	-0.2279	-0.1978	-0.1445
125	-0.3655	-0.3498	-0.3333	-0.2995	-0.2678	-0.2408	-0.2129	-0.1657
126	-0.3549	-0.3399	-0.3254	-0.2953	-0.2686	-0.2443	-0.2194	-0.1786
127	-0.3315	-0.3170	-0.3002	-0.2656	-0.2357	-0.2095	-0.1829	-0.1373
128	-0.0022	0.0115	0.0218	0.0388	0.0541	0.0683	0.0813	0.1029
129	0.0126	0.0205	0.0310	0.0478	0.0644	0.0777	0.0904	0.1127
130	0.0210	0.0286	0.0372	0.0541	0.0695	0.0819	0.0930	0.1112
131	-0.0242	-0.0167	-0.0093	0.0049	0.0169	0.0264	0.0347	0.0453
132	-0.0089	-0.0026	0.0029	0.0131	0.0206	0.0247	0.0292	0.0255
133	0.1056	0.1093	0.1127	0.1171	0.1166	0.1152	0.1111	0.0933
134	0.1378	0.1408	0.1426	0.1439	0.1409	0.1346	0.1280	0.1004

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 50 R=8.1 MILLION M= 0.10 DELTA F= -10.0 DEG.

ORIFICE	9.97	12.00	13.99	15.90	16.57	17.83
1	-2.6053	-4.3887	-6.3032	-8.2086	-9.1162	-9.8578
2	-5.1126	-6.7036	-8.3455	-9.8531	-10.5598	-11.0902
3	-4.8620	-6.2072	-7.6254	-8.9608	-9.5878	-9.9682
4	-4.4209	-5.1958	-6.1598	-7.1498	-7.5724	-7.8695
5	-3.6086	-4.5512	-5.4496	-6.2634	-6.5925	-6.8180
6	-3.3833	-4.1740	-4.9517	-5.6451	-5.9354	-6.1583
7	-3.1327	-3.8403	-4.5259	-5.1331	-5.4011	-5.5868
8	-2.7867	-3.3779	-3.9455	-4.4431	-4.6281	-4.7945
9	-2.5664	-3.0782	-3.5677	-3.9784	-4.1679	-4.3169
10	-2.3841	-2.8469	-3.2729	-3.6297	-3.7815	-3.8835
11	-2.1780	-2.5649	-2.9291	-3.2400	-3.3687	-3.4529
12	-1.9256	-2.2431	-2.5291	-2.7733	-2.8721	-2.9318
13	-1.6108	-1.8391	-2.0432	-2.2039	-2.2588	-2.2824
14	-1.4445	-1.6243	-1.7822	-1.8933	-1.9320	-1.9457
15	-1.3305	-1.4710	-1.5920	-1.6764	-1.6880	-1.6742
16	-1.2295	-1.3499	-1.4371	-1.4953	-1.4853	-1.4645
17	-1.1455	-1.2400	-1.3058	-1.3340	-1.3151	-1.2912
18	-1.0645	-1.1358	-1.1852	-1.1952	-1.1632	-1.1375
19	-0.9845	-1.0369	-1.0649	-1.0653	-1.0350	-0.9728
20	-0.9105	-0.9391	-0.9541	-0.9334	-0.8849	-0.8186
21	-0.8199	-0.8348	-0.8241	-0.8083	-0.7572	-0.6424
22	-0.7281	-0.7104	-0.6828	-0.6578	-0.6184	-0.5516
23	-0.6535	-0.6197	-0.6090	-0.5774	-0.5355	-0.5047
24	-0.5923	-0.5456	-0.4962	-0.4845	-0.4818	-0.4782
25	-0.5002	-0.4346	-0.3435	-0.4161	-0.4409	-0.4750
26	-0.3585	-0.2942	-0.2627	-0.3510	-0.4180	-0.4750
27	-0.2064	-0.2136	-0.2294	-0.3003	-0.4085	-0.4851
28	-0.1597	-0.1773	-0.2219	-0.2843	-0.3976	-0.4765
29	-0.1360	-0.1733	-0.2186	-0.2773	-0.3817	-0.5008
30	-0.1350	-0.1742	-0.2272	-0.2828	-0.4175	-0.5184
31	-0.1307	-0.1784	-0.2279	-0.3311	-0.4031	-0.4730
32	-0.1267	-0.1798	-0.2344	-0.3046	-0.3875	-0.4460
33	-0.1234	-0.1577	-0.2174	-0.2822	-0.3377	-0.3907
34	-0.0826	-0.1571	-0.2111	-0.2680	-0.3115	-0.3641

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 50 R=8.1 MILLION M= 0.10 DELTA F= -10.0 DEG.

ORIFICE	9.97	12.00	13.99	15.90	16.97	17.83
101	-2.6053	-4.3887	-6.3032	-8.2086	-9.1162	-9.8578
102	0.4228	-0.1838	-0.9282	-1.7155	-2.1220	-2.4254
103	0.8627	0.5957	0.2326	-0.1859	-0.4130	-0.5822
104	0.9784	0.8591	0.6640	0.4250	0.2954	0.1937
105	1.0023	0.9558	0.8479	0.6959	0.6157	0.5519
106	0.9947	0.9903	0.9320	0.8379	0.7809	0.7313
107	0.9750	1.0002	0.9745	0.9164	0.8771	0.8466
108	0.9239	0.9828	0.9999	0.9839	0.9679	0.9546
109	0.8725	0.9483	0.9884	0.9987	0.9956	0.9917
110	0.8237	0.9085	0.9625	0.9888	0.9965	0.9976
111	0.7580	0.8527	0.9196	0.9595	0.9732	0.9829
112	0.6659	0.7666	0.8417	0.8946	0.9137	0.9295
113	0.5296	0.6289	0.7084	0.7696	0.7938	0.8161
114	0.4291	0.5238	0.6021	0.6603	0.6850	0.7064
115	0.3487	0.4364	0.5114	0.5691	0.5951	0.6107
116	0.2803	0.3629	0.4336	0.4869	0.5106	0.5278
117	0.2179	0.2953	0.3621	0.4117	0.4334	0.4475
118	0.1622	0.2337	0.2955	0.3441	0.3642	0.3769
119	0.1145	0.1809	0.2360	0.2800	0.2981	0.3094
120	0.0653	0.1262	0.1766	0.2170	0.2321	0.2389
121	0.0115	0.0676	0.1129	0.1470	0.1592	0.1663
122	-0.0407	0.0064	0.0496	0.0786	0.0853	0.0865
123	-0.0691	-0.0248	0.0140	0.0416	0.0470	0.0475
124	-0.0993	-0.0575	-0.0225	0.0022	0.0052	0.0067
125	-0.1244	-0.0843	-0.0515	-0.0330	-0.0332	-0.0331
126	-0.1418	-0.1098	-0.0834	-0.0697	-0.0682	-0.0770
127	-0.0982	-0.0645	-0.0359	-0.0191	-0.0213	-0.0227
128	0.1225	0.1404	0.1544	0.1628	0.1578	0.1469
129	0.1312	0.1463	0.1574	0.1594	0.1551	0.1455
130	0.1259	0.1378	0.1462	0.1470	0.1397	0.1318
131	0.0547	0.0585	0.0572	0.0521	0.0387	0.0208
132	0.0232	0.0146	-0.0006	-0.0100	-0.0283	-0.0587
133	0.0697	0.0456	0.0295	0.0188	-0.0135	-0.0560
134	0.0612	0.0319	0.0087	-0.0139	-0.0458	-0.0944

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 51,52 R= 6.1 MILLION M= 0.07 DELTA F= -10.0 DEG.

ORIFICE	-2.07	-1.94	-0.94	-0.53	-0.22	-0.01	0.49	1.00
1	-0.2967	0.2134	0.5784	0.6940	0.7703	0.8154	0.9140	0.9804
2	0.9943	0.8863	0.7205	0.6358	0.5631	0.5098	0.3590	0.1833
3	0.8159	0.6381	0.4246	0.3261	0.2447	0.1874	0.0011	-0.1827
4	0.6726	0.4842	0.2700	0.1758	0.0974	0.0457	-0.1304	-0.2995
5	0.5714	0.3853	0.1796	0.0939	-0.0043	-0.0534	-0.1895	-0.3438
6	0.4875	0.3054	0.1091	0.0027	-0.0668	-0.1123	-0.2395	-0.3831
7	0.4254	0.2489	0.0632	-0.0406	-0.1057	-0.1472	-0.2699	-0.4018
8	0.3247	0.1597	-0.0369	-0.1098	-0.1690	-0.2053	-0.3136	-0.4351
9	0.2435	0.0863	-0.1001	-0.1681	-0.2217	-0.2529	-0.3550	-0.4678
10	0.1830	0.0340	-0.1430	-0.2052	-0.2564	-0.2821	-0.3809	-0.4828
11	0.1112	-0.0525	-0.1922	-0.2491	-0.2961	-0.3184	-0.4056	-0.5017
12	0.0315	-0.1175	-0.2427	-0.2930	-0.3319	-0.3535	-0.4287	-0.5103
13	-0.0932	-0.1976	-0.3009	-0.3418	-0.3744	-0.3875	-0.4500	-0.5165
14	-0.1728	-0.2658	-0.3560	-0.4555	-0.4188	-0.4281	-0.4846	-0.5406
15	-0.2343	-0.3168	-0.3967	-0.4280	-0.4526	-0.4589	-0.5101	-0.5552
16	-0.2787	-0.3542	-0.4262	-0.4521	-0.4761	-0.4779	-0.5241	-0.5705
17	-0.3136	-0.3808	-0.4459	-0.4702	-0.4921	-0.4924	-0.5352	-0.5790
18	-0.3422	-0.4024	-0.4617	-0.4853	-0.5018	-0.5011	-0.5386	-0.5797
19	-0.3647	-0.4185	-0.4706	-0.4931	-0.5075	-0.5054	-0.5415	-0.5795
20	-0.3830	-0.4338	-0.4813	-0.4984	-0.5124	-0.5102	-0.5423	-0.5782
21	-0.3990	-0.4443	-0.4853	-0.5020	-0.5160	-0.5099	-0.5408	-0.5719
22	-0.4069	-0.4481	-0.4843	-0.4978	-0.5101	-0.5047	-0.5320	-0.5598
23	-0.4067	-0.4460	-0.4814	-0.4940	-0.5042	-0.5054	-0.5231	-0.5604
24	-0.4053	-0.4418	-0.4749	-0.4859	-0.4954	-0.4971	-0.5137	-0.5493
25	-0.4017	-0.4352	-0.4672	-0.4770	-0.4882	-0.4887	-0.5052	-0.5327
26	-0.3817	-0.4168	-0.4483	-0.4590	-0.4729	-0.4698	-0.4869	-0.4865
27	-0.3515	-0.3867	-0.4097	-0.3934	-0.3791	-0.3675	-0.3911	-0.4002
28	-0.1256	-0.1530	-0.1788	-0.1870	-0.1957	-0.1945	-0.2018	-0.2264
29	0.0119	-0.0075	-0.0230	-0.0273	-0.0328	-0.0310	-0.0401	-0.0565
30	0.1310	0.1161	0.1050	0.1029	0.0984	0.0996	0.0928	0.0780
31	0.3245	0.3154	0.3079	0.3071	0.3040	0.3028	0.2984	0.2849
32	0.3798	0.3720	0.3681	0.3678	0.3661	0.3657	0.3626	0.3486
33	0.2962	0.2924	0.2913	0.2944	0.2941	0.2963	0.2927	0.2862
34	0.2631	0.2604	0.2621	0.2660	0.2678	0.2714	0.2677	0.2630

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 51,52 R= 6.1 MILLION M= 0.07 DELTA F= -10.0 DEG.

ORIFICE	-2.97	-1.94	-0.94	-0.53	-0.22	-0.01	0.49	1.00
101	-0.2967	0.2134	0.5784	0.6940	0.7703	0.8154	0.9140	0.9804
102	-1.7856	-1.1527	-0.6320	-0.4421	-0.3021	-0.1981	0.0199	0.2161
103	-1.4893	-0.9918	-0.5898	-0.4394	-0.3287	-0.2420	-0.0645	0.0984
104	-1.3054	-0.8530	-0.5183	-0.3939	-0.3012	-0.2266	-0.0789	0.0605
105	-1.0216	-0.7677	-0.4744	-0.3684	-0.2834	-0.2197	-0.0872	0.0338
106	-0.9666	-0.7105	-0.4485	-0.3517	-0.2773	-0.2168	-0.0969	0.0126
107	-0.9051	-0.6679	-0.4267	-0.3382	-0.2696	-0.2135	-0.1040	-0.0027
108	-0.8101	-0.5606	-0.3954	-0.3193	-0.2593	-0.2090	-0.1133	-0.0264
109	-0.7432	-0.5370	-0.3738	-0.3059	-0.2521	-0.2055	-0.1217	-0.0422
110	-0.7021	-0.5154	-0.3657	-0.3037	-0.2542	-0.2115	-0.1330	-0.0611
111	-0.6524	-0.4872	-0.3538	-0.2979	-0.2543	-0.2139	-0.1437	-0.0816
112	-0.6036	-0.4633	-0.3450	-0.2988	-0.2601	-0.2240	-0.1643	-0.1102
113	-0.5424	-0.4315	-0.3294	-0.2993	-0.2685	-0.2361	-0.1886	-0.1456
114	-0.5103	-0.4145	-0.3290	-0.3044	-0.2781	-0.2499	-0.2095	-0.1729
115	-0.4909	-0.4099	-0.3353	-0.3107	-0.2900	-0.2641	-0.2280	-0.1973
116	-0.4794	-0.4077	-0.3404	-0.3202	-0.3012	-0.2761	-0.2451	-0.2176
117	-0.4753	-0.4085	-0.3499	-0.3323	-0.3146	-0.2900	-0.2645	-0.2390
118	-0.4707	-0.4129	-0.3574	-0.3385	-0.3275	-0.3037	-0.2796	-0.2576
119	-0.4631	-0.4102	-0.3620	-0.3453	-0.3342	-0.3150	-0.2928	-0.2706
120	-0.4611	-0.4133	-0.3700	-0.3542	-0.3453	-0.3250	-0.3056	-0.2857
121	-0.4670	-0.4254	-0.3877	-0.3738	-0.3655	-0.3451	-0.3297	-0.3103
122	-0.4730	-0.4349	-0.4027	-0.3914	-0.3834	-0.3642	-0.3507	-0.3298
123	-0.4756	-0.4413	-0.4125	-0.4016	-0.3949	-0.3740	-0.3615	-0.3462
124	-0.4786	-0.4461	-0.4211	-0.4133	-0.4060	-0.3850	-0.3740	-0.3611
125	-0.4713	-0.4408	-0.4204	-0.4178	-0.4042	-0.3835	-0.3727	-0.3617
126	-0.4554	-0.4285	-0.4126	-0.4166	-0.3865	-0.3651	-0.3567	-0.3477
127	-0.3138	-0.2919	-0.2764	-0.2733	-0.3669	-0.3473	-0.3350	-0.3254
128	-0.1698	-0.1478	-0.1269	-0.1145	-0.0380	-0.0270	0.0064	0.0160
129	-0.1054	-0.0862	-0.0643	-0.0505	-0.0120	0.0022	0.0105	0.0163
130	-0.0766	-0.0590	-0.0394	-0.0271	-0.0020	0.0100	0.0150	0.0204
131	-0.0832	-0.0709	-0.0603	-0.0555	-0.0442	-0.0334	-0.0294	-0.0249
132	-0.0396	-0.0322	-0.0285	-0.0269	-0.0227	-0.0124	-0.0109	-0.0089
133	0.0726	0.0788	0.0861	0.0911	0.0951	0.1028	0.1028	0.1045
134	0.1058	0.1116	0.1195	0.1250	0.1287	0.1355	0.1355	0.1363

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 51,52 R= 6.1 MILLION M= 0.07 DELTA F= -10.0 DEG.

ORIFICE	1.50	2.00	2.49	3.00	3.99	5.01	6.00	6.99
1	1.0025	1.0017	0.5707	0.9093	0.7052	0.3897	-0.0165	-0.5085
2	-0.0129	-0.2166	-0.4401	-0.6706	-1.1555	-1.6968	-2.2869	-2.8945
3	-0.3560	-0.5554	-0.7687	-0.9858	-1.4366	-1.9274	-2.4383	-2.9647
4	-0.4571	-0.6362	-0.8277	-1.0164	-1.4111	-1.8259	-2.2696	-2.7205
5	-0.4864	-0.6456	-0.8167	-0.9823	-1.3293	-1.6910	-2.0718	-2.4917
6	-0.5149	-0.6615	-0.8172	-0.9711	-1.2831	-1.6093	-1.9615	-2.3434
7	-0.5227	-0.6604	-0.8014	-0.9439	-1.2288	-1.5357	-1.8686	-2.0479
8	-0.5421	-0.6617	-0.7882	-0.9149	-1.1626	-1.4272	-1.6080	-1.9025
9	-0.5654	-0.6760	-0.7884	-0.9054	-1.1256	-1.3502	-1.5499	-1.7854
10	-0.5737	-0.6752	-0.7770	-0.8818	-1.0842	-1.2475	-1.4844	-1.6849
11	-0.5849	-0.6747	-0.7676	-0.8631	-1.0406	-1.2073	-1.3959	-1.5725
12	-0.5840	-0.6632	-0.7396	-0.8219	-0.9514	-1.1164	-1.2736	-1.4248
13	-0.5776	-0.6402	-0.7027	-0.7685	-0.8725	-1.0002	-1.1165	-1.2320
14	-0.5934	-0.6473	-0.6994	-0.7442	-0.8456	-0.9501	-1.0439	-1.1402
15	-0.6061	-0.6521	-0.6928	-0.7386	-0.8253	-0.9110	-0.9991	-1.0730
16	-0.6129	-0.6519	-0.6855	-0.7328	-0.8031	-0.8790	-0.9523	-1.0149
17	-0.6124	-0.6509	-0.6769	-0.7178	-0.7829	-0.8474	-0.9072	-0.9627
18	-0.6119	-0.6475	-0.6679	-0.7040	-0.7595	-0.8142	-0.8648	-0.9092
19	-0.6066	-0.6332	-0.6560	-0.6852	-0.7349	-0.7793	-0.8222	-0.8600
20	-0.6029	-0.6162	-0.6438	-0.6711	-0.7092	-0.7466	-0.7829	-0.8104
21	-0.5950	-0.6066	-0.6270	-0.6501	-0.6793	-0.7080	-0.7303	-0.7526
22	-0.5833	-0.5895	-0.6030	-0.6177	-0.6363	-0.6566	-0.6767	-0.6786
23	-0.5659	-0.5780	-0.5884	-0.5949	-0.6084	-0.6214	-0.6298	-0.6367
24	-0.5405	-0.5604	-0.5689	-0.5662	-0.5754	-0.5816	-0.5871	-0.5871
25	-0.5267	-0.5389	-0.5393	-0.5310	-0.5357	-0.5316	-0.5300	-0.5114
26	-0.4979	-0.5003	-0.4888	-0.4724	-0.4637	-0.4516	-0.4406	-0.4145
27	-0.4096	-0.4014	-0.3769	-0.3512	-0.3289	-0.3108	-0.2768	-0.2592
28	-0.2322	-0.2222	-0.1938	-0.1687	-0.1531	-0.1463	-0.1396	-0.1416
29	-0.0606	-0.0520	-0.0361	-0.0327	-0.0501	-0.0746	-0.0907	-0.0996
30	0.0744	0.0723	0.0509	0.0242	-0.0135	-0.0443	-0.0660	-0.0914
31	0.2695	0.2037	0.1134	0.0678	0.0143	-0.0226	-0.0519	-0.0735
32	0.3322	0.2646	0.1674	0.1051	0.0427	0.0012	-0.0334	-0.0677
33	0.2823	0.2673	0.2280	0.1762	0.1070	0.0625	0.0217	-0.0108
34	0.2592	0.2497	0.2263	0.1917	0.1455	0.0919	0.0569	0.0275

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 51,52 R= 6.1 MILLION M= 0.07 DELTA F= -10.0 DEG.

ORIFICE	1.50	2.00	2.49	3.00	3.99	5.01	6.00	6.99
101	1.0025	1.0017	0.9707	0.9093	0.7052	0.3897	-0.0165	-0.5085
102	0.3812	0.5316	0.6639	0.7708	0.9169	0.9891	0.9963	0.9434
103	0.2427	0.3790	0.5021	0.6111	0.7782	0.8974	0.9696	0.9958
104	0.1859	0.3060	0.4173	0.5171	0.6809	0.8065	0.9018	0.9618
105	0.1479	0.2575	0.3613	0.4533	0.6094	0.7364	0.8354	0.9096
106	0.1175	0.2186	0.3154	0.4047	0.5525	0.6783	0.7817	0.8607
107	0.0949	0.1905	0.2802	0.3642	0.5059	0.6306	0.7336	0.8161
108	0.0617	0.1473	0.2290	0.3057	0.4375	0.5538	0.6529	0.7386
109	0.0379	0.1156	0.1914	0.2629	0.3853	0.4958	0.5915	0.6750
110	0.0132	0.0863	0.1578	0.2241	0.3403	0.4465	0.5410	0.6211
111	-0.0120	0.0532	0.1165	0.1799	0.2883	0.3895	0.4770	0.5549
112	-0.0483	0.0085	0.0679	0.1222	0.2195	0.3105	0.3925	0.4678
113	-0.0941	-0.0470	0.0028	0.0484	0.1309	0.2100	0.2821	0.3469
114	-0.1287	-0.0877	-0.0447	-0.0037	0.0689	0.1379	0.2018	0.2621
115	-0.1565	-0.1211	-0.0820	-0.0458	0.0189	0.0810	0.1385	0.1938
116	-0.1821	-0.1499	-0.1143	-0.0806	-0.0219	0.0341	0.0868	0.1367
117	-0.2072	-0.1764	-0.1442	-0.1143	-0.0605	-0.0096	0.0385	0.0855
118	-0.2301	-0.2010	-0.1717	-0.1445	-0.0946	-0.0478	-0.0028	0.0395
119	-0.2461	-0.2204	-0.1920	-0.1677	-0.1224	-0.0795	-0.0375	0.0010
120	-0.2642	-0.2396	-0.2150	-0.1919	-0.1491	-0.1106	-0.0725	-0.0381
121	-0.2907	-0.2685	-0.2444	-0.2254	-0.1848	-0.1496	-0.1156	-0.0835
122	-0.3150	-0.2938	-0.2741	-0.2546	-0.2188	-0.1854	-0.1574	-0.1268
123	-0.3295	-0.3086	-0.2893	-0.2731	-0.2366	-0.2064	-0.1799	-0.1510
124	-0.3421	-0.3244	-0.3041	-0.2877	-0.2558	-0.2276	-0.2019	-0.1763
125	-0.3457	-0.3284	-0.3094	-0.2946	-0.2644	-0.2382	-0.2158	-0.1895
126	-0.3318	-0.3164	-0.2992	-0.2841	-0.2601	-0.2372	-0.2179	-0.1972
127	-0.3087	-0.2907	-0.2723	-0.2580	-0.2292	-0.2040	-0.1825	-0.1600
128	0.0258	0.0353	0.0478	0.0568	0.0722	0.0879	0.0973	0.1098
129	0.0249	0.0351	0.0458	0.0537	0.0683	0.0799	0.0899	0.0988
130	0.0285	0.0378	0.0480	0.0556	0.0691	0.0799	0.0891	0.0979
131	-0.0187	-0.0101	-0.0003	0.0050	0.0158	0.0244	0.0290	0.0328
132	-0.0036	0.0029	0.0104	0.0136	0.0197	0.0225	0.0197	0.0164
133	0.1066	0.1114	0.1162	0.1156	0.1132	0.1095	0.0984	0.0911
134	0.1377	0.1410	0.1450	0.1426	0.1378	0.1259	0.1128	0.1052

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOJS ALPHAS

PUNS 51,52 R= 6.1 MILLION M= 0.07 DELTA F= -10.0 DEG.

ORIFICE	8.08	10.00	12.00	13.96	16.00	17.01	17.83
1	-1.1564	-2.5383	-4.2341	-6.1109	-8.1188	-9.0795	-9.7063
2	-3.6234	-5.0006	-6.5004	-8.0990	-9.7051	-10.4771	-10.9159
3	-3.5923	-4.7369	-6.0486	-7.3882	-8.7521	-9.4618	-9.9404
4	-3.2468	-4.3168	-5.6292	-5.8829	-6.8754	-7.3568	-7.7370
5	-3.0128	-3.4488	-4.3982	-5.3069	-6.1297	-6.4312	-6.7218
6	-2.5473	-3.2996	-4.0605	-4.8388	-5.5395	-5.8347	-6.0826
7	-2.4202	-3.0580	-3.7594	-4.4272	-5.0459	-5.3053	-5.4612
8	-2.2000	-2.7253	-3.3057	-3.8614	-4.3696	-4.6029	-4.7321
9	-2.0512	-2.5155	-3.0050	-3.5022	-3.9467	-4.0919	-4.2295
10	-1.9234	-2.3443	-2.7902	-3.2047	-3.5868	-3.7528	-3.8407
11	-1.7742	-2.1354	-2.5220	-2.8720	-3.1935	-3.3207	-3.4111
12	-1.5907	-1.8871	-2.1903	-2.4762	-2.7260	-2.8164	-2.8764
13	-1.3616	-1.5807	-1.7983	-2.0009	-2.1773	-2.2320	-2.2544
14	-1.2400	-1.4182	-1.5897	-1.7501	-1.8674	-1.9046	-1.9196
15	-1.1559	-1.3024	-1.4340	-1.5628	-1.6359	-1.6598	-1.6545
16	-1.0843	-1.2017	-1.3124	-1.4089	-1.4623	-1.4561	-1.4490
17	-1.0215	-1.1166	-1.1985	-1.2749	-1.3103	-1.2850	-1.2683
18	-0.9597	-1.0333	-1.1035	-1.1551	-1.1632	-1.1477	-1.1004
19	-0.9010	-0.9607	-0.9979	-1.0398	-1.0340	-0.9970	-0.9473
20	-0.8406	-0.8815	-0.9088	-0.9132	-0.9046	-0.8532	-0.7915
21	-0.7723	-0.7923	-0.7973	-0.7929	-0.7763	-0.7111	-0.6419
22	-0.6871	-0.6848	-0.6665	-0.6486	-0.6069	-0.5639	-0.5254
23	-0.6376	-0.6185	-0.5800	-0.5054	-0.5271	-0.5121	-0.4970
24	-0.5762	-0.5417	-0.5069	-0.4609	-0.4351	-0.4306	-0.4718
25	-0.4922	-0.4291	-0.3885	-0.3428	-0.3663	-0.4153	-0.4790
26	-0.3828	-0.3097	-0.2562	-0.2722	-0.3116	-0.3944	-0.4610
27	-0.2303	-0.2097	-0.2344	-0.2340	-0.3177	-0.4022	-0.4968
28	-0.1530	-0.1581	-0.1785	-0.2311	-0.2799	-0.4081	-0.5033
29	-0.1184	-0.1413	-0.2242	-0.2336	-0.3102	-0.3955	-0.5064
30	-0.1055	-0.1346	-0.1771	-0.2342	-0.2974	-0.3706	-0.4954
31	-0.1038	-0.1402	-0.2116	-0.2236	-0.3072	-0.4098	-0.4472
32	-0.0937	-0.1383	-0.1878	-0.2306	-0.3113	-0.3838	-0.4680
33	-0.0749	-0.1248	-0.1757	-0.2300	-0.2922	-0.3400	-0.4079
34	-0.0265	-0.1145	-0.1602	-0.2234	-0.2868	-0.3334	-0.4238

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 51,52 R= 6.1 MILLION M= 0.07 DELTA F= -10.0 DEG.

ORIFICE	8.08	10.00	12.00	13.96	16.00	17.01	17.83
101	-1.1564	-2.5383	-4.2341	-6.1109	-8.1188	-9.0795	-9.7063
102	0.8199	0.4415	-0.1415	-0.8668	-1.7243	-2.1719	-2.4428
103	0.9883	0.8678	0.6059	0.2513	-0.1760	-0.4015	-0.5583
104	0.9935	0.9779	0.8637	0.6742	0.4223	0.2943	0.1910
105	0.9642	0.9954	0.9553	0.8513	0.6956	0.6176	0.5443
106	0.9271	0.9890	0.9864	0.9356	0.8340	0.7788	0.7281
107	0.8868	0.9669	0.9949	0.9756	0.9114	0.8738	0.8459
108	0.8155	0.9157	0.9774	0.9942	0.9807	0.9633	0.9493
109	0.7557	0.8640	0.9394	0.9848	0.9942	0.9902	0.9847
110	0.7011	0.8152	0.9022	0.9579	0.9846	0.9879	0.9920
111	0.6351	0.7522	0.8442	0.9099	0.9523	0.9690	0.9759
112	0.5422	0.6602	0.7569	0.8311	0.8873	0.9099	0.9236
113	0.4146	0.5220	0.6167	0.7002	0.7652	0.7880	0.8079
114	0.3226	0.4235	0.5146	0.5926	0.6574	0.6836	0.7005
115	0.2491	0.3423	0.4296	0.5004	0.5633	0.5907	0.6081
116	0.1877	0.2741	0.3544	0.4224	0.4826	0.5076	0.5240
117	0.1324	0.2128	0.2895	0.3528	0.4090	0.4333	0.4441
118	0.0824	0.1560	0.2270	0.2876	0.3395	0.3599	0.3726
119	0.0406	0.1066	0.1697	0.2259	0.2758	0.2923	0.3031
120	-0.0008	0.0604	0.1178	0.1682	0.2135	0.2273	0.2324
121	-0.0509	0.0048	0.0591	0.1047	0.1443	0.1564	0.1622
122	-0.0992	-0.0482	-0.0022	0.0401	0.0732	0.0832	0.0847
123	-0.1235	-0.0769	-0.0346	0.0053	0.0355	0.0433	0.0448
124	-0.1502	-0.1057	-0.0676	-0.0312	-0.0011	0.0035	0.0030
125	-0.1660	-0.1304	-0.0898	-0.0638	-0.0382	-0.0331	-0.0366
126	-0.1780	-0.1432	-0.1172	-0.0873	-0.0684	-0.0683	-0.0758
127	-0.1396	-0.1018	-0.0677	-0.0413	-0.0190	-0.0177	-0.0197
128	0.1198	0.1380	0.1556	0.1688	0.1786	0.1752	0.1676
129	0.1072	0.1236	0.1392	0.1505	0.1552	0.1514	0.1425
130	0.1052	0.1157	0.1305	0.1397	0.1397	0.1299	0.1201
131	0.0374	0.0423	0.0433	0.0458	0.0453	0.0314	0.0129
132	0.0127	0.0072	0.0035	-0.0154	-0.0172	-0.0368	-0.0729
133	0.0805	0.0600	0.0324	0.0118	-0.0067	-0.0262	-0.0624
134	0.0744	0.0403	0.0220	-0.0076	-0.0328	-0.0718	-0.1057

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 56,57 R= 6.1 MILLION M= 0.07 DELTA F= 60.0 DEG.(SPLIT FLAP)

ORIFICE	-4.99	-2.97	-1.01	-0.00	1.02	2.06	3.00	4.00
1	0.8608	0.2578	-0.7591	-1.4440	-2.2601	-3.1850	-4.1021	-5.2062
2	-0.7699	-1.8724	-3.1773	-3.9090	-4.7558	-5.6270	-6.5156	-7.4572
3	-1.0881	-2.1090	-3.2414	-3.8924	-4.5903	-5.3239	-6.0727	-6.8835
4	-1.1279	-2.0090	-2.9707	-3.5126	-4.1859	-4.8821	-5.5961	-6.3325
5	-1.0817	-1.8628	-2.7296	-3.2965	-3.5512	-3.9355	-4.4751	-5.0329
6	-1.0872	-1.7820	-2.5695	-2.8015	-3.2688	-3.7318	-4.1972	-4.6710
7	-1.0579	-1.7052	-2.2721	-2.6773	-3.0880	-3.4764	-3.8919	-4.3220
8	-1.0334	-1.5976	-2.1243	-2.4596	-2.7929	-3.1439	-3.4800	-3.8188
9	-1.0389	-1.5346	-2.0385	-2.3155	-2.6262	-2.9148	-3.2279	-3.5130
10	-1.0223	-1.4291	-1.9432	-2.1883	-2.4586	-2.7348	-3.0015	-3.2880
11	-1.0103	-1.3917	-1.8299	-2.0470	-2.2852	-2.5400	-2.7575	-3.0091
12	-0.9950	-1.3355	-1.7039	-1.8875	-2.0854	-2.2941	-2.4867	-2.6876
13	-0.5892	-1.2658	-1.5447	-1.6895	-1.8433	-2.0029	-2.1405	-2.3071
14	-1.0192	-1.2611	-1.4949	-1.6316	-1.7452	-1.8756	-2.0008	-2.1274
15	-1.0484	-1.2647	-1.4797	-1.5847	-1.6955	-1.8084	-1.9082	-2.0150
16	-1.0792	-1.2859	-1.4567	-1.5601	-1.6575	-1.7587	-1.8411	-1.9340
17	-1.1157	-1.2881	-1.4584	-1.5422	-1.6246	-1.7194	-1.7839	-1.8751
18	-1.1488	-1.3064	-1.4578	-1.5241	-1.6057	-1.6835	-1.7495	-1.8187
19	-1.1914	-1.3407	-1.4675	-1.5265	-1.5908	-1.6639	-1.7145	-1.7765
20	-1.2241	-1.3632	-1.4785	-1.5335	-1.5885	-1.6464	-1.6977	-1.7486
21	-1.2765	-1.3835	-1.4997	-1.5354	-1.5958	-1.6437	-1.6867	-1.7244
22	-1.3124	-1.4225	-1.5069	-1.5438	-1.5925	-1.6468	-1.6744	-1.7059
23	-1.3428	-1.4358	-1.5191	-1.5512	-1.5930	-1.6334	-1.6566	-1.6928
24	-1.3682	-1.4416	-1.5242	-1.5521	-1.5971	-1.6215	-1.6533	-1.6797
25	-1.3856	-1.4657	-1.5297	-1.5614	-1.5946	-1.6161	-1.6420	-1.6665
26	-1.4023	-1.4642	-1.5131	-1.5325	-1.5721	-1.5873	-1.6003	-1.6229
27	-1.3123	-1.3697	-1.4052	-1.4394	-1.4535	-1.4676	-1.4802	-1.4867
28	-1.1095	-1.1556	-1.1870	-1.2075	-1.2250	-1.2318	-1.2432	-1.2527
29	-0.8936	-0.9488	-0.9825	-0.9965	-1.0134	-1.0165	-1.0284	-1.0365
30	-0.7418	-0.7926	-0.8243	-0.8426	-0.8542	-0.8649	-0.8791	-0.8849
31	-0.5595	-0.6140	-0.6490	-0.6569	-0.6758	-0.6817	-0.7023	-0.7095
32	-0.4797	-0.5302	-0.5677	-0.5720	-0.5831	-0.5989	-0.6059	-0.6110
33	-0.5279	-0.5583	-0.5731	-0.5789	-0.5783	-0.5881	-0.5715	-0.5977
34	-0.5813	-0.6165	-0.6140	-0.6133	-0.6263	-0.6206	-0.6013	-0.6392

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 56,57 R= 6.1 MILLION M= 0.07 DELTA F= 60.0 DEG.(SPLIT FLAP)

ORIFICE	-4.99	-2.97	-1.01	-0.00	1.02	2.06	3.00	4.00
101	0.9608	0.2578	-0.7591	-1.4440	-2.2501	-3.1850	-4.1021	-5.2062
102	0.8346	0.9896	0.8818	0.7237	0.4977	0.1982	-0.1402	-0.5465
103	0.6730	0.9375	0.9083	0.9578	0.8793	0.7550	0.6006	0.4063
104	0.6112	0.8674	0.9774	0.9876	0.9774	0.9246	0.8481	0.7461
105	0.5509	0.8026	0.9405	0.9815	0.9911	0.9781	0.9453	0.8837
106	0.5106	0.7533	0.9040	0.9544	0.9829	0.9882	0.9789	0.9466
107	0.4758	0.7138	0.8704	0.9269	0.9671	0.9841	0.9862	0.9775
108	0.4252	0.6487	0.8055	0.8720	0.9202	0.9570	0.9772	0.9849
109	0.3927	0.6004	0.7575	0.8208	0.8808	0.9183	0.9535	0.9699
110	0.3640	0.5616	0.7169	0.7772	0.8372	0.8846	0.9260	0.9448
111	0.3320	0.5157	0.6636	0.7288	0.7856	0.8361	0.8759	0.9104
112	0.2956	0.4609	0.5969	0.6566	0.7161	0.7664	0.8128	0.8496
113	0.2606	0.3998	0.5159	0.5690	0.6224	0.6696	0.7146	0.7533
114	0.2472	0.3643	0.4670	0.5163	0.5648	0.6084	0.6459	0.6820
115	0.2460	0.3482	0.4383	0.4810	0.5239	0.5638	0.6016	0.6351
116	0.2542	0.3437	0.4233	0.4614	0.4991	0.5373	0.5700	0.6013
117	0.2661	0.3456	0.4167	0.4515	0.4859	0.5178	0.5493	0.5796
118	0.2860	0.3569	0.4200	0.4499	0.4823	0.5129	0.5400	0.5666
119	0.3301	0.3791	0.4334	0.4643	0.4920	0.5187	0.5434	0.5661
120	0.3771	0.4265	0.4594	0.4849	0.5103	0.5343	0.5533	0.5768
121	0.4325	0.4755	0.5139	0.5344	0.5383	0.5531	0.5744	0.5943
122	0.5206	0.5450	0.5734	0.5872	0.6021	0.6184	0.6319	0.6465
123	0.5846	0.5982	0.6136	0.6279	0.6381	0.6512	0.6615	0.6712
124	0.6584	0.6603	0.6714	0.6785	0.6871	0.6981	0.6993	0.7121
125	0.6958	0.7197	0.7344	0.7429	0.7497	0.7586	0.7586	0.7667
126	0.7049	0.7466	0.7715	0.7838	0.7951	0.8061	0.8108	0.8185
127	0.6963	0.7406	0.7727	0.7870	0.8009	0.8102	0.8196	0.8294
128	0.6934	0.7355	0.7706	0.7802	0.7992	0.8074	0.8206	0.8294
129	0.6862	0.7280	0.7593	0.7727	0.7953	0.8053	0.8170	0.8260
130	0.7024	0.7448	0.7730	0.7879	0.8029	0.8196	0.8269	0.8330
131	0.6823	0.7294	0.7622	0.7840	0.7959	0.8096	0.8185	0.8268
132	0.7453	0.7759	0.8040	0.8212	0.8369	0.8327	0.8456	0.8460
133	0.6264	0.6358	0.6385	0.6437	0.6544	0.6580	0.6588	0.6650
134	0.0474	0.0803	0.0828	0.0974	0.1116	0.1271	0.1375	0.1523

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 56,57 R= 6.1 MILLION M= 0.07 DELTA F= 60.0 DEG.(SPLIT FLAP)

ORIFICE	4.97	6.00	7.01	8.00	8.99	9.49	10.00	11.02
1	-6.3621	-7.6620	-9.0893	-10.5332	-11.8852	-12.2708	-12.7329	-13.0928
2	-8.4371	-9.5294	-10.6346	-11.8147	-12.8829	-13.2258	-13.4177	-13.4319
3	-7.7239	-8.6557	-9.6701	-10.8213	-11.7625	-12.0483	-12.4312	-12.4022
4	-6.3500	-6.8911	-7.6721	-8.4646	-9.1672	-9.4996	-9.4265	-9.4929
5	-5.6116	-6.2239	-6.8487	-7.4543	-8.0240	-8.1758	-8.2527	-8.1965
6	-5.1500	-5.6640	-6.2211	-6.7697	-7.2572	-7.4032	-7.5625	-7.5768
7	-4.7448	-5.2244	-5.6809	-6.1794	-6.6246	-6.7122	-6.8414	-6.9467
8	-4.1985	-4.5864	-4.9859	-5.3857	-5.7258	-5.9012	-5.9220	-6.0233
9	-3.8520	-4.1979	-4.5221	-4.8906	-5.1720	-5.3120	-5.3320	-5.4904
10	-3.5654	-3.8763	-4.1650	-4.4864	-4.7193	-4.8253	-4.8434	-4.8890
11	-3.2757	-3.5103	-3.7797	-4.0426	-4.2442	-4.3479	-4.4069	-4.2899
12	-2.8974	-3.0961	-3.3265	-3.5342	-3.6977	-3.7559	-3.7776	-3.8655
13	-2.4800	-2.6238	-2.7799	-2.9261	-3.0517	-3.1181	-3.0879	-2.9680
14	-2.2680	-2.3877	-2.5063	-2.6340	-2.7232	-2.7735	-2.7755	-2.6901
15	-2.1345	-2.2369	-2.3487	-2.4394	-2.5151	-2.5441	-2.5533	-2.4767
16	-2.0384	-2.1208	-2.2042	-2.2906	-2.3666	-2.3878	-2.3266	-2.3139
17	-1.9664	-2.0231	-2.1011	-2.1709	-2.2311	-2.2160	-2.2124	-2.1077
18	-1.8996	-1.9492	-2.0136	-2.0814	-2.1255	-2.1125	-2.0766	-1.9611
19	-1.8503	-1.8936	-1.9450	-2.0024	-2.0205	-2.0352	-2.0163	-1.7600
20	-1.8064	-1.8492	-1.8976	-1.9296	-1.9656	-1.9533	-1.9412	-1.7434
21	-1.7750	-1.8086	-1.8499	-1.8728	-1.8831	-1.8700	-1.7476	-1.5787
22	-1.7451	-1.7681	-1.7964	-1.8148	-1.8283	-1.7938	-1.6769	-1.4437
23	-1.7219	-1.7415	-1.7710	-1.7876	-1.7743	-1.7180	-1.6550	-1.3787
24	-1.7024	-1.7245	-1.7369	-1.7562	-1.7356	-1.6846	-1.5975	-1.2138
25	-1.6816	-1.6914	-1.7010	-1.7138	-1.6750	-1.6058	-1.6020	-1.2176
26	-1.6317	-1.6401	-1.6399	-1.6464	-1.6046	-1.5842	-1.3661	-0.9987
27	-1.4920	-1.4570	-1.4927	-1.4934	-1.4528	-1.3609	-1.2114	-0.8580
28	-1.2572	-1.2583	-1.2571	-1.2589	-1.2249	-1.1543	-1.0725	-0.8416
29	-1.0503	-1.0507	-1.0509	-1.0610	-1.0336	-0.9707	-0.9241	-0.8307
30	-0.8969	-0.9053	-0.9121	-0.9177	-0.8997	-0.8891	-0.8264	-0.7872
31	-0.7295	-0.7410	-0.7519	-0.7633	-0.7654	-0.7653	-0.7511	-0.7364
32	-0.6413	-0.6314	-0.6600	-0.6827	-0.6796	-0.6813	-0.6918	-0.7517
33	-0.6176	-0.6197	-0.6505	-0.6366	-0.6246	-0.6332	-0.6427	-0.7097
34	-0.7781	-0.6312	-0.6336	-0.6351	-0.6152	-0.6057	-0.6356	-0.6843

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 56,57 R= 6.1 MILLION M= 0.07 DELTA F= 60.0 DEG.(SPLIT FLAP)

ORIFICE	4.97	6.00	7.01	8.00	8.95	9.49	10.00	11.02
101	-6.3621	-7.6620	-9.0893	-10.5332	-11.8852	-12.2708	-12.7329	-13.0928
102	-1.0049	-1.5550	-2.1521	-2.7892	-3.4148	-3.6182	-3.7713	-3.7922
103	0.1711	-0.1088	-0.4259	-0.7715	-1.1030	-1.2146	-1.4085	-1.4386
104	0.6182	0.4528	0.2626	0.0473	-0.1605	-0.2766	-0.2639	-0.2958
105	0.8094	0.7045	0.5800	0.4339	0.2861	0.2445	0.2181	0.2130
106	0.9020	0.8326	0.7500	0.6485	0.5421	0.5027	0.4669	0.4453
107	0.9507	0.9091	0.8493	0.7779	0.6999	0.6749	0.6511	0.6236
108	0.9848	0.9693	0.9452	0.9106	0.8676	0.8463	0.8365	0.8140
109	0.9840	0.9869	0.9762	0.9669	0.9404	0.9306	0.9272	0.9058
110	0.9680	0.9791	0.9855	0.9816	0.9692	0.9676	0.9685	0.9570
111	0.9346	0.9595	0.9732	0.9848	0.9839	0.9829	0.9835	0.9797
112	0.8802	0.9107	0.9348	0.9544	0.9692	0.9698	0.9725	0.9720
113	0.7876	0.8238	0.8507	0.8765	0.8989	0.9056	0.9020	0.9155
114	0.7174	0.7546	0.7839	0.8088	0.8293	0.8431	0.8453	0.8377
115	0.6668	0.7020	0.7311	0.7575	0.7781	0.7886	0.7947	0.7907
116	0.6289	0.6621	0.6904	0.7154	0.7388	0.7441	0.7521	0.7410
117	0.6020	0.6362	0.6593	0.6865	0.7042	0.7109	0.7117	0.7127
118	0.5896	0.6174	0.6401	0.6637	0.6809	0.6900	0.6936	0.6799
119	0.5845	0.6101	0.6326	0.6538	0.6689	0.6749	0.6753	0.6828
120	0.5938	0.6163	0.6344	0.6515	0.6684	0.6744	0.6712	0.6587
121	0.6102	0.6314	0.6471	0.6622	0.6766	0.6819	0.6832	0.6732
122	0.6539	0.6607	0.6692	0.6790	0.6939	0.6996	0.7003	0.6950
123	0.6821	0.6987	0.7087	0.7191	0.7274	0.7278	0.7259	0.7203
124	0.7209	0.7278	0.7371	0.7465	0.7565	0.7576	0.7592	0.7524
125	0.7712	0.7754	0.7801	0.7882	0.7946	0.7958	0.7956	0.7859
126	0.8266	0.8319	0.8354	0.8433	0.8454	0.8477	0.8484	0.8375
127	0.8392	0.8476	0.8525	0.8600	0.8647	0.8654	0.8671	0.8652
128	0.8388	0.8477	0.8570	0.8618	0.8670	0.8691	0.8652	0.8679
129	0.8359	0.8438	0.8523	0.8621	0.8677	0.8693	0.8669	0.8654
130	0.8455	0.8493	0.8570	0.8669	0.8715	0.8733	0.8716	0.8744
131	0.8358	0.8438	0.8511	0.8596	0.8678	0.8708	0.8717	0.8762
132	0.8505	0.8527	0.8528	0.8592	0.8596	0.8610	0.8621	0.8653
133	0.6740	0.6762	0.6825	0.6893	0.6981	0.7011	0.7000	0.6913
134	0.1695	0.1699	0.1947	0.2159	0.2339	0.2463	0.2462	0.2287

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 56,57 R= 6.1 MILLION M= 0.07 DELTA F= 60.0 DEG.(SPLIT FLAP)

ORIFICE	12.00	13.00	14.01	14.50	15.00
1	-13.7242	-13.8327	-14.5196	-14.8823	-15.5298
2	-13.9354	-14.6751	-15.0807	-15.3717	-15.0627
3	-12.2823	-12.7150	-12.4454	-12.7065	-12.7901
4	-9.4414	-10.0019	-10.5012	-10.3012	-10.5652
5	-8.6716	-8.5603	-8.6810	-9.0076	-8.9535
6	-7.5025	-7.7450	-7.8812	-7.8504	-7.8722
7	-7.0324	-7.0495	-7.4274	-7.3374	-7.2089
8	-6.0343	-6.1677	-6.3055	-6.1751	-6.3428
9	-5.2911	-5.5712	-5.5352	-5.6815	-5.5524
10	-5.0095	-4.9659	-4.9991	-4.9058	-5.0305
11	-4.3942	-4.4105	-4.4914	-4.6252	-4.3138
12	-3.7284	-3.7655	-3.7638	-3.8297	-3.8675
13	-3.2076	-3.0895	-3.0534	-3.0610	-2.9572
14	-2.7058	-2.6532	-2.6055	-2.5478	-2.5240
15	-2.3998	-2.3729	-2.3255	-2.3229	-2.2771
16	-2.1626	-2.1114	-2.0938	-2.0401	-1.8466
17	-1.9838	-1.9586	-1.7792	-1.8028	-1.7444
18	-1.8353	-1.7893	-1.6482	-1.6084	-1.4047
19	-1.6599	-1.5941	-1.4520	-1.4335	-1.3180
20	-1.5420	-1.3732	-1.2526	-1.1743	-1.0118
21	-1.5075	-1.1833	-1.0849	-0.9787	-0.9043
22	-1.3002	-0.9622	-0.8632	-0.8735	-0.9383
23	-1.2225	-0.9379	-0.8073	-0.8455	-0.8737
24	-1.0326	-0.9412	-0.8342	-0.8582	-0.8319
25	-0.8586	-0.8350	-0.7927	-0.8139	-0.8290
26	-0.7465	-0.7674	-0.8124	-0.8216	-0.8367
27	-0.8565	-0.7586	-0.7554	-0.8169	-0.8223
28	-0.7411	-0.7479	-0.7898	-0.8240	-0.8319
29	-0.7513	-0.7430	-0.8037	-0.8124	-0.8493
30	-0.7780	-0.7764	-0.7753	-0.8327	-0.8522
31	-0.7673	-0.7805	-0.8028	-0.8339	-0.8482
32	-0.7469	-0.7903	-0.8268	-0.8256	-0.8623
33	-0.7392	-0.7847	-0.8220	-0.8448	-0.9225
34	-0.7524	-0.7741	-0.8597	-0.8786	-0.8791

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 56,57 R= 6.1 MILLION M= 0.07 DELTA F= 60.0 DEG.(SPLIT FLAP)

ORIFICE	12.00	13.00	14.01	14.50	15.00
101	-13.7242	-13.8327	-14.5196	-14.8823	-15.5298
102	-4.1262	-4.5903	-4.8992	-5.0751	-4.9495
103	-1.4373	-1.7221	-1.7212	-1.9373	-2.0404
104	-0.3064	-0.5149	-0.7128	-0.6621	-0.7541
105	0.0686	0.0732	-0.0275	-0.0865	-0.0837
106	0.4583	0.3768	0.3219	0.3091	0.3039
107	0.5970	0.5694	0.5001	0.4996	0.4906
108	0.8085	0.7855	0.7509	0.7490	0.7265
109	0.9194	0.8871	0.8844	0.8625	0.8719
110	0.9625	0.9497	0.9299	0.9376	0.9319
111	0.9838	0.9789	0.9790	0.9780	0.9806
112	0.9811	0.9767	0.9845	0.9844	0.9787
113	0.9141	0.9225	0.9292	0.9345	0.9369
114	0.8523	0.8642	0.8612	0.8750	0.8761
115	0.7956	0.8117	0.8034	0.8100	0.8128
116	0.7455	0.7549	0.7601	0.7647	0.7608
117	0.7187	0.7176	0.7210	0.7127	0.7226
118	0.6869	0.6890	0.6920	0.7048	0.6820
119	0.6651	0.6698	0.6705	0.6779	0.6796
120	0.6793	0.6706	0.6690	0.6705	0.6665
121	0.6735	0.6716	0.6697	0.6664	0.6647
122	0.6881	0.6914	0.6919	0.6908	0.6928
123	0.7092	0.7053	0.7006	0.6989	0.6832
124	0.7452	0.7506	0.7421	0.7480	0.7419
125	0.7834	0.7912	0.7858	0.7805	0.7751
126	0.8406	0.8375	0.8365	0.8392	0.8378
127	0.8660	0.8649	0.8658	0.8671	0.8608
128	0.8714	0.8708	0.8669	0.8708	0.8643
129	0.8700	0.8649	0.8646	0.8659	0.8722
130	0.8712	0.8741	0.8695	0.8755	0.8836
131	0.8694	0.8657	0.8637	0.8665	0.8675
132	0.8612	0.8604	0.8548	0.8621	0.8607
133	0.6943	0.6880	0.6727	0.6723	0.6701
134	0.2211	0.2108	0.1921	0.1723	0.1615

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS VARIOUS ALPHAS

RUN 59 R= 3.0 MILLION M= 0.15 DELTA F= 60.0 DEG. (SPLIT FLAP)

ORIFICE	-1.00	1.03	2.99	4.98	7.00	8.03	8.50	9.06
1	-0.7052	-2.1482	-3.8873	-5.9618	-8.3856	-9.6601	-10.0529	-10.4594
2	-3.1733	-4.7100	-6.4564	-8.4555	-10.6065	-11.6968	-11.9331	-12.3201
3	-3.2499	-4.5895	-6.0958	-7.7780	-9.6611	-10.7111	-11.0905	-11.5087
4	-2.9902	-4.1648	-5.6511	-7.4631	-8.2271	-8.3494	-8.4398	-8.5605
5	-2.7427	-3.9897	-4.4014	-5.4394	-6.7081	-7.3155	-7.4641	-7.7590
6	-2.5791	-3.1397	-4.1497	-5.1602	-6.2321	-6.7206	-6.8366	-6.9707
7	-2.4622	-3.0475	-3.9103	-4.8070	-5.7152	-6.1381	-6.2075	-6.4019
8	-2.1152	-2.7959	-3.4691	-4.2541	-4.9597	-5.3349	-5.4698	-5.6222
9	-2.0397	-2.6411	-3.2380	-3.8902	-4.5163	-4.8303	-5.0212	-5.1273
10	-1.9431	-2.4658	-3.0510	-3.5992	-4.1753	-4.4240	-4.5322	-4.6755
11	-1.8638	-2.3193	-2.7858	-3.2817	-3.8188	-4.0369	-4.1146	-4.2164
12	-1.7202	-2.1172	-2.5106	-2.9345	-3.3817	-3.5337	-3.5675	-3.5932
13	-1.5634	-1.8817	-2.1681	-2.4925	-2.7869	-2.9278	-2.9840	-3.0099
14	-1.5006	-1.7786	-2.0590	-2.2758	-2.5364	-2.6486	-2.6936	-2.6813
15	-1.4988	-1.7250	-1.9223	-2.1620	-2.3700	-2.4407	-2.4618	-2.4758
16	-1.4871	-1.6630	-1.8734	-2.0630	-2.2221	-2.2886	-2.2926	-2.3122
17	-1.4680	-1.6581	-1.8108	-1.9702	-2.1334	-2.1743	-2.1841	-2.1864
18	-1.4811	-1.6340	-1.7732	-1.9212	-2.0424	-2.0853	-2.0841	-2.0775
19	-1.5005	-1.6109	-1.7432	-1.8603	-1.9574	-1.9879	-2.0028	-1.9787
20	-1.5085	-1.5988	-1.7136	-1.8081	-1.8971	-1.9300	-1.9324	-1.9005
21	-1.5162	-1.6232	-1.7079	-1.7795	-1.8660	-1.8797	-1.8561	-1.8070
22	-1.5270	-1.6289	-1.6850	-1.7596	-1.7936	-1.7869	-1.7562	-1.7304
23	-1.5253	-1.6087	-1.6593	-1.7097	-1.7399	-1.7292	-1.6993	-1.6423
24	-1.5410	-1.5963	-1.6532	-1.7109	-1.7401	-1.7086	-1.6449	-1.5811
25	-1.5470	-1.6054	-1.6642	-1.6892	-1.6718	-1.6370	-1.5987	-1.5307
26	-1.5297	-1.5678	-1.5995	-1.6159	-1.5979	-1.5501	-1.4873	-1.3657
27	-1.4165	-1.4511	-1.4730	-1.4721	-1.4451	-1.3951	-1.3294	-1.2509
28	-1.1864	-1.2352	-1.2417	-1.2473	-1.2342	-1.2062	-1.1310	-1.0462
29	-0.9871	-1.0165	-1.0469	-1.0683	-1.0565	-1.0316	-0.9766	-0.9431
30	-0.8465	-0.8718	-0.8944	-0.9344	-0.9330	-0.9311	-0.9244	-0.8975
31	-0.6742	-0.7097	-0.7466	-0.7915	-0.8155	-0.8301	-0.8496	-0.8520
32	-0.5862	-0.6142	-0.6695	-0.7064	-0.7436	-0.7584	-0.7734	-0.7941
33	-0.6012	-0.6157	-0.6314	-0.6618	-0.7019	-0.7141	-0.7206	-0.7502
34	-0.6239	-0.6435	-0.6530	-0.6741	-0.6944	-0.6943	-0.6962	-0.7168

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS VARIOUS ALPHAS

RUN 59 R= 3.0 MILLION M= 0.15 DELTA F= 60.0 DEG. (SPLIT FLAP)

ORIFICE	-1.00	1.03	2.99	4.98	7.00	8.03	8.50	9.06
101	-0.7052	-2.1482	-3.8873	-5.9618	-8.3856	-9.6601	-10.0529	-10.4594
102	0.8760	0.4950	-0.1132	-0.9857	-2.0789	-2.6490	-2.7844	-3.0350
103	0.9932	0.8834	0.6202	0.2064	-0.3387	-0.6352	-0.7445	-0.8791
104	0.9806	0.9780	0.8620	0.6398	0.3155	0.1300	0.0694	0.0093
105	0.9455	0.9921	0.9490	0.8209	0.6131	0.4976	0.4465	0.3872
106	0.9048	0.9839	0.9804	0.9120	0.7748	0.6813	0.6553	0.6151
107	0.8713	0.9625	0.9910	0.9605	0.8657	0.8040	0.7805	0.7511
108	0.8099	0.9184	0.9747	0.9886	0.9511	0.9217	0.9050	0.8982
109	0.7583	0.8752	0.9482	0.9861	0.9802	0.9672	0.9648	0.9583
110	0.7143	0.8361	0.9195	0.9681	0.9853	0.9817	0.9839	0.9824
111	0.6630	0.7850	0.8783	0.9351	0.9740	0.9824	0.9846	0.9818
112	0.5969	0.7148	0.8078	0.8814	0.9327	0.9489	0.9549	0.9573
113	0.5170	0.6225	0.7114	0.7849	0.8491	0.8724	0.8782	0.8830
114	0.4677	0.5630	0.6445	0.7167	0.7799	0.8057	0.8149	0.8245
115	0.4383	0.5233	0.5986	0.6665	0.7287	0.7535	0.7616	0.7622
116	0.4233	0.4988	0.5670	0.6301	0.6874	0.7114	0.7195	0.7255
117	0.4168	0.4871	0.5479	0.6047	0.6567	0.6778	0.6841	0.6952
118	0.4223	0.4833	0.5381	0.5905	0.6383	0.6570	0.6651	0.6724
119	0.4395	0.4921	0.5424	0.5885	0.6295	0.6492	0.6528	0.6561
120	0.4637	0.5118	0.5552	0.5962	0.6332	0.6502	0.6539	0.6562
121	0.5044	0.5317	0.5743	0.6137	0.6467	0.6618	0.6639	0.6648
122	0.5745	0.6071	0.6297	0.6312	0.6632	0.6773	0.6817	0.6811
123	0.6159	0.6406	0.6649	0.6905	0.7029	0.6999	0.6995	0.6923
124	0.6705	0.6879	0.7078	0.7248	0.7438	0.7507	0.7559	0.7554
125	0.7327	0.7470	0.7629	0.7740	0.7865	0.7902	0.7950	0.7943
126	0.7770	0.7935	0.8094	0.8241	0.8347	0.8397	0.8409	0.8394
127	0.7829	0.8034	0.8186	0.8348	0.8483	0.8541	0.8548	0.8576
128	0.7807	0.8047	0.8225	0.8362	0.8548	0.8574	0.8577	0.8596
129	0.7769	0.8011	0.8205	0.8397	0.8537	0.8574	0.8596	0.8620
130	0.7873	0.8098	0.8273	0.8435	0.8568	0.8627	0.8636	0.8677
131	0.7560	0.7810	0.8003	0.8187	0.8346	0.8422	0.8388	0.8426
132	0.8095	0.8268	0.8335	0.8387	0.8485	0.8499	0.8502	0.8481
133	0.6397	0.6501	0.6588	0.6673	0.6819	0.6864	0.6876	0.6867
134	0.1022	0.1304	0.1487	0.1695	0.1975	0.2150	0.2179	0.2165

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS VARIOUS ALPHAS

RUN 59 R= 3.0 MILLION M= 0.15 DELTA F= 60.0 DEG. (SPLIT FLAP)

ORIFICE	9.49	10.02	10.50	11.03	12.01	13.00	14.02	14.99
1	-10.7121	-11.0507	-11.5551	-11.9185	-11.7049	-11.6112	-11.6005	-10.4342
2	-12.5769	-13.1154	-13.2598	-13.1459	-13.3490	-13.6814	-12.6903	-12.1608
3	-11.7404	-12.0376	-12.3571	-12.5058	-12.0009	-12.6023	-11.9607	-11.9343
4	-8.7644	-8.8466	-9.0155	-9.1539	-8.9803	-8.8703	-8.8045	-8.5980
5	-7.5926	-8.0035	-8.0613	-7.9967	-7.8483	-8.2057	-7.7928	-7.2170
6	-7.2467	-7.2233	-7.3291	-7.3658	-7.3555	-7.4931	-6.9071	-6.3401
7	-6.5353	-6.6536	-6.7002	-6.7673	-6.6148	-6.6523	-6.1177	-5.4948
8	-5.6946	-5.7925	-5.9375	-5.9277	-5.8907	-5.6026	-5.4201	-4.8951
9	-5.1404	-5.1246	-5.2891	-5.1725	-5.2263	-4.9867	-4.8674	-4.3830
10	-4.7126	-4.7577	-4.8225	-4.8120	-4.6205	-4.8348	-4.4748	-3.8363
11	-4.1949	-4.2799	-4.3417	-4.4234	-4.1695	-4.1607	-3.8799	-3.3007
12	-3.6802	-3.6855	-3.8204	-3.7480	-3.6775	-3.5010	-3.3619	-2.7269
13	-3.0799	-3.0648	-3.1259	-3.1488	-2.9269	-2.9031	-2.7690	-2.1800
14	-2.7057	-2.7349	-2.7064	-2.6967	-2.6396	-2.3919	-2.3793	-1.9411
15	-2.4821	-2.5222	-2.4465	-2.4952	-2.3641	-2.1302	-1.9280	-1.9148
16	-2.3123	-2.3251	-2.3303	-2.2682	-2.1251	-2.0777	-1.8876	-1.8773
17	-2.1807	-2.1310	-2.1924	-2.0896	-2.0048	-1.8582	-1.7648	-1.7671
18	-2.0643	-2.0409	-2.0100	-2.0225	-1.8289	-1.7181	-1.6067	-1.5949
19	-1.9735	-1.9208	-1.9105	-1.8763	-1.6832	-1.5719	-1.5977	-1.5662
20	-1.8753	-1.8111	-1.7821	-1.6421	-1.5037	-1.3927	-1.4264	-1.4609
21	-1.7681	-1.7034	-1.6873	-1.5564	-1.2809	-1.3590	-1.3780	-1.6597
22	-1.6490	-1.5756	-1.5771	-1.3730	-1.1922	-1.2153	-1.3547	-1.4814
23	-1.5575	-1.4713	-1.4346	-1.3615	-1.0649	-1.1499	-1.1962	-1.3368
24	-1.4899	-1.4665	-1.3519	-1.1905	-0.9700	-1.0683	-1.2586	-1.4257
25	-1.4310	-1.3483	-1.2601	-1.1426	-0.9065	-1.0378	-1.2177	-1.2802
26	-1.3194	-1.2094	-1.1192	-0.9748	-0.8317	-1.0190	-1.1555	-1.3594
27	-1.0147	-1.0329	-0.9518	-0.8729	-0.9076	-0.9736	-1.1379	-1.4064
28	-1.0155	-0.9170	-0.8744	-0.8353	-0.8981	-1.0127	-1.2108	-1.3269
29	-0.9208	-0.8816	-0.8426	-0.8101	-0.8511	-0.9786	-1.1621	-1.2803
30	-0.8892	-0.8699	-0.8637	-0.8281	-0.8305	-0.9934	-1.1262	-1.2456
31	-0.8394	-0.8230	-0.8351	-0.8126	-0.8533	-0.9964	-1.1437	-1.3247
32	-0.8073	-0.8087	-0.8158	-0.7949	-0.8529	-0.9644	-1.1259	-1.2349
33	-0.7606	-0.7826	-0.7950	-0.8151	-0.8501	-0.9850	-1.1637	-1.3372
34	-0.7373	-0.7665	-0.7906	-0.7769	-0.8359	-0.9984	-1.1397	-1.2841

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX P. -

LOWER SURFACE PRESSURE COEFFICIENTS VARIOUS ALPHAS

RUN 59 P= 3.0 MILLION M= 0.15 DELTA F= 60.0 DEG. (SPLIT FLAP)

ORIFICE	9.49	10.02	10.50	11.03	12.01	13.00	14.02	14.99
101	-10.7121	-11.0507	-11.5551	-11.9185	-11.7049	-11.6112	-11.6005	-10.4342
102	-3.1577	-3.4452	-3.5698	-3.5843	-3.6168	-3.7812	-3.4899	-3.2887
103	-0.9410	-1.0555	-1.1575	-1.1849	-1.0813	-1.2379	-1.1219	-1.0966
104	-0.0699	-0.1300	-0.1777	-0.1863	-0.1972	-0.1959	-0.1898	-0.1554
105	0.3997	0.3173	0.2876	0.2898	0.3093	0.2594	0.2723	0.3649
106	0.5857	0.5667	0.5294	0.5396	0.5330	0.4919	0.5457	0.5812
107	0.7349	0.7133	0.6999	0.6933	0.6981	0.6862	0.6975	0.7364
108	0.8772	0.8645	0.8599	0.8472	0.8617	0.8589	0.8559	0.8789
109	0.9491	0.9431	0.9370	0.9346	0.9369	0.9357	0.9412	0.9540
110	0.9764	0.9735	0.9697	0.9681	0.9740	0.9744	0.9655	0.9703
111	0.9848	0.9863	0.9852	0.9860	0.9864	0.9822	0.9797	0.9872
112	0.9638	0.9658	0.9714	0.9715	0.9682	0.9653	0.9594	0.9712
113	0.8941	0.8978	0.9025	0.8964	0.8926	0.9079	0.8919	0.8766
114	0.8247	0.8251	0.8415	0.8412	0.8242	0.8342	0.8152	0.8006
115	0.7689	0.7783	0.7784	0.7839	0.7728	0.7687	0.7624	0.7337
116	0.7259	0.7327	0.7407	0.7411	0.7230	0.7208	0.7137	0.6945
117	0.6969	0.6996	0.7049	0.6991	0.6815	0.6894	0.6697	0.6514
118	0.6710	0.6755	0.6819	0.6773	0.6593	0.6493	0.6369	0.6219
119	0.6626	0.6587	0.6684	0.6609	0.6470	0.6366	0.6266	0.6004
120	0.6589	0.6617	0.6646	0.6641	0.6412	0.6309	0.6271	0.5970
121	0.6669	0.6696	0.6714	0.6678	0.6527	0.6361	0.6314	0.6049
122	0.6848	0.6863	0.6812	0.6894	0.6693	0.6570	0.6404	0.6300
123	0.6903	0.6914	0.6941	0.6872	0.6715	0.6678	0.6522	0.6386
124	0.7538	0.7526	0.7533	0.7506	0.7432	0.7371	0.7190	0.7046
125	0.7925	0.7902	0.7903	0.7917	0.7832	0.7799	0.7554	0.7444
126	0.8379	0.8382	0.8384	0.8359	0.8336	0.8287	0.8166	0.7999
127	0.8573	0.8577	0.8563	0.8534	0.8508	0.8486	0.8401	0.8370
128	0.8586	0.8606	0.8632	0.8626	0.8466	0.8530	0.8359	0.8438
129	0.8624	0.8633	0.8665	0.8619	0.8611	0.8591	0.8524	0.8396
130	0.8674	0.8726	0.8699	0.8691	0.8629	0.8543	0.8509	0.8460
131	0.8461	0.8456	0.8463	0.8495	0.8419	0.8378	0.8297	0.8159
132	0.8491	0.8479	0.8512	0.8451	0.8453	0.8393	0.8272	0.8143
133	0.6855	0.6846	0.6844	0.6839	0.6755	0.6609	0.6381	0.6269
134	0.2168	0.2097	0.2065	0.2066	0.1758	0.1265	0.1031	0.0249

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS VARIOUS ALPHAS

RUN 59 R= 3.0 MILLION M= 0.15 DELTA F= 60.0 DEG. (SPLIT FLAP)

ORIFICE	16.00
1	-7.5302
2	-8.3075
3	-8.1910
4	-6.3360
5	-4.8666
6	-3.8775
7	-4.0262
8	-2.8560
9	-1.9781
10	-3.1803
11	-2.0311
12	-2.5288
13	-1.9103
14	-2.0211
15	-1.9203
16	-1.6188
17	-1.8863
18	-1.8040
19	-1.8288
20	-1.7386
21	-1.6918
22	-1.6496
23	-1.5927
24	-1.6483
25	-1.6010
26	-1.5428
27	-1.5381
28	-1.4923
29	-1.4311
30	-1.4449
31	-1.4653
32	-1.4591
33	-1.5058
34	-1.5622

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS VARIOUS ALPHAS

RUN 59 R= 3.0 MILLION M= 0.15 DELTA F= 60.0 DEG. (SPLIT FLAP)

ORIFICE	16.00
101	-7.5302
102	-2.2267
103	-0.5136
104	0.0984
105	0.5557
106	0.6702
107	0.7861
108	0.9297
109	0.9741
110	0.9810
111	0.9899
112	0.9428
113	0.8482
114	0.7916
115	0.7284
116	0.6584
117	0.6487
118	0.5875
119	0.5831
120	0.5674
121	0.5850
122	0.6101
123	0.6006
124	0.6967
125	0.7278
126	0.7966
127	0.8272
128	0.8398
129	0.8280
130	0.8352
131	0.7983
132	0.8203
133	0.5868
134	-0.0237

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 63,64 R= 10.1 MILLION M= 0.12 DELTA F= 0.0 DEG.

(ROUGHNESS, ON)

ORIFICE	-3.99	-2.98	-1.99	-1.00	-0.03	1.00	2.02	2.99
1	0.1100	0.5301	0.8093	0.9720	1.0115	0.9491	0.7623	0.4702
2	0.9108	0.7436	0.5165	0.2219	-0.1405	-0.5806	-1.0839	-1.6219
3	0.6730	0.4512	0.1854	-0.1357	-0.4957	-0.9162	-1.3846	-1.8714
4	0.5165	0.2915	0.0371	-0.2610	-0.5886	-0.9612	-1.3708	-1.7936
5	0.4126	0.1972	-0.0499	-0.3143	-0.6076	-0.9399	-1.3020	-1.6699
6	0.3290	0.1211	-0.1140	-0.3608	-0.6343	-0.9383	-1.2652	-1.6008
7	0.2698	0.0703	-0.1527	-0.3823	-0.6357	-0.9190	-1.2217	-1.5268
8	0.1733	-0.0217	-0.2154	-0.4245	-0.6512	-0.8977	-1.1636	-1.4303
9	0.0925	-0.0913	-0.2732	-0.4640	-0.6717	-0.8962	-1.1334	-1.3162
10	0.0362	-0.1390	-0.3081	-0.4854	-0.6756	-0.8832	-1.0968	-1.2789
11	-0.0385	-0.1910	-0.3454	-0.5079	-0.6773	-0.8673	-1.0497	-1.2347
12	-0.1099	-0.2447	-0.3811	-0.5185	-0.6659	-0.8251	-0.9892	-1.1532
13	-0.2081	-0.3224	-0.4341	-0.5502	-0.6695	-0.7959	-0.9273	-1.0540
14	-0.2924	-0.3913	-0.4925	-0.5901	-0.6939	-0.8041	-0.9127	-1.0219
15	-0.3573	-0.4480	-0.5341	-0.6222	-0.7143	-0.8112	-0.9030	-0.9949
16	-0.4071	-0.4892	-0.5691	-0.6465	-0.7289	-0.8136	-0.8970	-0.9753
17	-0.4488	-0.5241	-0.5934	-0.6623	-0.7372	-0.8124	-0.8886	-0.9567
18	-0.4819	-0.5507	-0.6137	-0.6770	-0.7461	-0.8135	-0.8765	-0.9409
19	-0.5128	-0.5750	-0.6319	-0.6893	-0.7503	-0.8112	-0.8681	-0.9233
20	-0.5425	-0.5979	-0.6536	-0.7014	-0.7567	-0.8114	-0.8606	-0.9074
21	-0.5699	-0.6200	-0.6675	-0.7116	-0.7619	-0.8084	-0.8509	-0.8903
22	-0.5914	-0.6378	-0.6776	-0.7156	-0.7589	-0.8006	-0.8380	-0.8693
23	-0.5983	-0.6396	-0.6774	-0.7146	-0.7541	-0.7924	-0.8254	-0.8514
24	-0.6044	-0.6414	-0.6795	-0.7114	-0.7491	-0.7825	-0.8124	-0.8346
25	-0.6099	-0.6452	-0.6797	-0.7059	-0.7417	-0.7711	-0.7956	-0.8119
26	-0.5987	-0.6324	-0.6597	-0.6836	-0.7146	-0.7380	-0.7587	-0.7701
27	-0.5295	-0.5549	-0.5805	-0.5987	-0.6229	-0.6422	-0.6576	-0.6618
28	-0.3742	-0.3950	-0.4150	-0.4296	-0.4493	-0.4633	-0.4739	-0.4750
29	-0.2221	-0.2410	-0.2579	-0.2702	-0.2862	-0.2985	-0.3082	-0.3075
30	-0.1122	-0.1290	-0.1423	-0.1547	-0.1694	-0.1802	-0.1896	-0.1934
31	0.0275	0.0137	0.0004	-0.0103	-0.0244	-0.0365	-0.0489	-0.0616
32	0.1100	0.0978	0.0861	0.0765	0.0623	0.0490	0.0356	0.0151
33	0.1546	0.1458	0.1366	0.1291	0.1180	0.1063	0.0930	0.0709
34	0.1650	0.1585	0.1508	0.1445	0.1344	0.1248	0.1127	0.0913

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 63,64 P= 10.1 MILLION M= 0.12 DELTA F= 0.0 DEG.

(ROUGHNESS, ON)

ORIFICE	-3.99	-2.98	-1.99	-1.00	-0.03	1.00	2.02	2.99
101	0.1100	0.5301	0.8093	0.9720	1.0115	0.9491	0.7623	0.4702
102	-1.2975	-0.7116	-0.2349	0.1685	0.4841	0.7348	0.9057	0.9913
103	-1.1024	-0.6504	-0.2699	0.0635	0.3381	0.5756	0.7599	0.8863
104	-0.9446	-0.5639	-0.2474	0.0334	0.2726	0.4859	0.6620	0.7948
105	-0.7957	-0.5093	-0.2342	0.0152	0.2294	0.4257	0.5935	0.7239
106	-0.7170	-0.4775	-0.2292	-0.0019	0.1955	0.3796	0.5392	0.6679
107	-0.6752	-0.4490	-0.2226	-0.0138	0.1706	0.3433	0.4952	0.6192
108	-0.6107	-0.4107	-0.2129	-0.0296	0.1332	0.2885	0.4290	0.5465
109	-0.5606	-0.3827	-0.2059	-0.0408	0.1069	0.2500	0.3800	0.4916
110	-0.5326	-0.3409	-0.2081	-0.0544	0.0812	0.2151	0.3381	0.4441
111	-0.4987	-0.3356	-0.2031	-0.0665	0.0564	0.1798	0.2914	0.3911
112	-0.4611	-0.3248	-0.2000	-0.0815	0.0252	0.1320	0.2328	0.3216
113	-0.4127	-0.3062	-0.2062	-0.1103	-0.0227	0.0676	0.1519	0.2282
114	-0.3864	-0.2963	-0.2126	-0.1291	-0.0540	0.0224	0.0981	0.1651
115	-0.3695	-0.2921	-0.2182	-0.1446	-0.0791	-0.0105	0.0561	0.1163
116	-0.3575	-0.2891	-0.2241	-0.1577	-0.0995	-0.0376	0.0222	0.0764
117	-0.3489	-0.2888	-0.2303	-0.1704	-0.1179	-0.0614	-0.0068	0.0425
118	-0.3403	-0.2868	-0.2339	-0.1798	-0.1313	-0.0816	-0.0308	0.0136
119	-0.3290	-0.2792	-0.2327	-0.1840	-0.1406	-0.0945	-0.0485	-0.0078
120	-0.3179	-0.2750	-0.2314	-0.1885	-0.1490	-0.1069	-0.0661	-0.0291
121	-0.3151	-0.2752	-0.2389	-0.1980	-0.1630	-0.1253	-0.0874	-0.0547
122	-0.3079	-0.2742	-0.2389	-0.2033	-0.1724	-0.1384	-0.1042	-0.0735
123	-0.3038	-0.2723	-0.2414	-0.2068	-0.1777	-0.1453	-0.1133	-0.0849
124	-0.2981	-0.2694	-0.2390	-0.2068	-0.1804	-0.1497	-0.1211	-0.0939
125	-0.2795	-0.2538	-0.2264	-0.1974	-0.1739	-0.1459	-0.1175	-0.0949
126	-0.2517	-0.2302	-0.2062	-0.1807	-0.1596	-0.1348	-0.1097	-0.0890
127	-0.1154	-0.0958	-0.0776	-0.0542	-0.0365	-0.0161	0.0053	0.0228
128	0.0196	0.0383	0.0569	0.0762	0.0920	0.1106	0.1291	0.1439
129	0.0861	0.1041	0.1212	0.1390	0.1527	0.1690	0.1851	0.1987
130	0.1271	0.1431	0.1588	0.1747	0.1874	0.2021	0.2167	0.2278
131	0.1806	0.1945	0.2075	0.2210	0.2308	0.2434	0.2543	0.2625
132	0.1890	0.1999	0.2089	0.2188	0.2257	0.2341	0.2426	0.2476
133	0.1860	0.1917	0.1971	0.2036	0.2066	0.2112	0.2145	0.2143
134	0.1838	0.1868	0.1902	0.1944	0.1948	0.1970	0.1987	0.1942

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 63,64 R= 10.1 MILLION M= 0.12 DELTA F= 0.0 DEG.

(ROUGHNESS, ON)

ORIFICE	4.03	5.01	8.01	10.00	12.01	14.00	15.00	16.00
1	0.0614	-0.4149	-2.3112	-3.9413	-5.8129	-7.7992	-8.7930	-9.6362
2	-2.2307	-2.8459	-4.8870	-6.4140	-8.0571	-9.6814	-10.4138	-10.9929
3	-2.4192	-2.9496	-4.6996	-6.0273	-7.3957	-8.7898	-9.1960	-9.5736
4	-2.2565	-2.7127	-4.2714	-5.0385	-6.0091	-7.0593	-7.5697	-7.9955
5	-2.0760	-2.4964	-3.5317	-4.4418	-5.3383	-6.1878	-6.6134	-6.9133
6	-1.9676	-2.2533	-3.3138	-4.0668	-4.8521	-5.6207	-5.9533	-6.2342
7	-1.8401	-2.0794	-3.0790	-3.7566	-4.4419	-5.1101	-5.4288	-5.6879
8	-1.6551	-1.9253	-2.7526	-3.3292	-3.8905	-4.4439	-4.7012	-4.8825
9	-1.5871	-1.8273	-2.5472	-3.0542	-3.5308	-4.0045	-4.2351	-4.3863
10	-1.5054	-1.7253	-2.3698	-2.8090	-3.2452	-3.6715	-3.8413	-3.9711
11	-1.4335	-1.6211	-2.1858	-2.5716	-2.9287	-3.2755	-3.4358	-3.5431
12	-1.3251	-1.4782	-1.9451	-2.2547	-2.5511	-2.8261	-2.9420	-3.0180
13	-1.1806	-1.3045	-1.6528	-1.8847	-2.0880	-2.2788	-2.3527	-2.3919
14	-1.1276	-1.2246	-1.5056	-1.6850	-1.8482	-1.9852	-2.0265	-2.0698
15	-1.0886	-1.1740	-1.4034	-1.5441	-1.6693	-1.7792	-1.8086	-1.8252
16	-1.0562	-1.1282	-1.3197	-1.4343	-1.5308	-1.6088	-1.6315	-1.6283
17	-1.0275	-1.0893	-1.2454	-1.3393	-1.4099	-1.4677	-1.4682	-1.4468
18	-1.0013	-1.0504	-1.1802	-1.2509	-1.3014	-1.3403	-1.3220	-1.3009
19	-0.9723	-1.0173	-1.1159	-1.1699	-1.2012	-1.2184	-1.2078	-1.1692
20	-0.9505	-0.9885	-1.0581	-1.0855	-1.1029	-1.0990	-1.0711	-1.0306
21	-0.9281	-0.9537	-0.9939	-1.0009	-0.9932	-0.9787	-0.9576	-0.9000
22	-0.8962	-0.9135	-0.9196	-0.8954	-0.8714	-0.8378	-0.8251	-0.7813
23	-0.8774	-0.8887	-0.8701	-0.8181	-0.7798	-0.7530	-0.7412	-0.6760
24	-0.8541	-0.8617	-0.8094	-0.7538	-0.7018	-0.8152	-0.6588	-0.6000
25	-0.8264	-0.8254	-0.7271	-0.6474	-0.5791	-0.5796	-0.5678	-0.5381
26	-0.7740	-0.7668	-0.6200	-0.5262	-0.4493	-0.4594	-0.5013	-0.5133
27	-0.6585	-0.6425	-0.4602	-0.3615	-0.3741	-0.3891	-0.4127	-0.4749
28	-0.4673	-0.4466	-0.2870	-0.2687	-0.2825	-0.3389	-0.3867	-0.4720
29	-0.3017	-0.2846	-0.2242	-0.2444	-0.2664	-0.3094	-0.3677	-0.4703
30	-0.1931	-0.1869	-0.2026	-0.2296	-0.2557	-0.3119	-0.3554	-0.4927
31	-0.0749	-0.0909	-0.1819	-0.2285	-0.2621	-0.3086	-0.3899	-0.4670
32	-0.0088	-0.0379	-0.1670	-0.2121	-0.2634	-0.3141	-0.3708	-0.4423
33	0.0430	0.0069	-0.1380	-0.2040	-0.2596	-0.3274	-0.3651	-0.4382
34	0.0614	0.0287	-0.1348	-0.2018	-0.2504	-0.3129	-0.3542	-0.4236

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 63,64 R= 10.1 MILLION M= 0.12 DELTA F= 0.0 DEG.

(ROUGHNESS, ON)

ORIFICE	4.03	5.01	8.01	10.00	12.01	14.00	15.00	16.00
101	0.0614	-0.4149	-2.3112	-3.9413	-5.8129	-7.7992	-8.7930	-9.6362
102	1.0082	0.9684	0.5218	-0.0120	-0.7075	-1.4886	-1.9180	-2.2683
103	0.9691	1.0054	0.5031	0.6793	0.3411	-0.0657	-0.2863	-0.4850
104	0.8956	0.9623	0.5949	0.9042	0.7301	0.4945	0.3678	0.2460
105	0.8311	0.9100	1.0032	0.9801	0.8874	0.7438	0.6589	0.5844
106	0.7752	0.8601	0.9917	1.0023	0.9595	0.8725	0.8147	0.7615
107	0.7276	0.8142	0.9688	1.0043	0.9923	0.9401	0.9029	0.8676
108	0.6518	0.7385	0.9147	0.9811	1.0025	0.9957	0.9831	0.9680
109	0.5928	0.6775	0.8614	0.9434	0.9860	1.0037	1.0055	1.0001
110	0.5419	0.6255	0.8137	0.9024	0.9573	0.9923	0.9999	1.0030
111	0.4829	0.5610	0.7510	0.8423	0.9109	0.9573	0.9736	0.9859
112	0.4069	0.4796	0.6610	0.7575	0.8317	0.8912	0.9140	0.9326
113	0.3015	0.3653	0.5324	0.6241	0.7024	0.7689	0.7957	0.8152
114	0.2308	0.2879	0.4382	0.5251	0.6020	0.6669	0.6928	0.7136
115	0.1753	0.2271	0.3641	0.4460	0.5179	0.5783	0.6047	0.6235
116	0.1306	0.1778	0.3032	0.3783	0.4464	0.5034	0.5253	0.5454
117	0.0915	0.1342	0.2491	0.3168	0.3816	0.4342	0.4567	0.4703
118	0.0580	0.0981	0.2018	0.2656	0.3221	0.3714	0.3928	0.4062
119	0.0319	0.0688	0.1632	0.2196	0.2709	0.3168	0.3341	0.3435
120	0.0082	0.0406	0.1256	0.1771	0.2231	0.2635	0.2779	0.2864
121	-0.0209	0.0090	0.0838	0.1310	0.1721	0.2082	0.2168	0.2265
122	-0.0445	-0.0189	0.0444	0.0852	0.1206	0.1533	0.1590	0.1631
123	-0.0570	-0.0331	0.0263	0.0618	0.0966	0.1240	0.1311	0.1332
124	-0.0685	-0.0462	0.0082	0.0401	0.0683	0.0952	0.0995	0.0958
125	-0.0714	-0.0496	-0.0028	0.0248	0.0513	0.0715	0.0740	0.0727
126	-0.0672	-0.0504	-0.0119	0.0125	0.0342	0.0476	0.0507	0.0479
127	0.0398	0.0539	0.0840	0.1030	0.1187	0.1300	0.1084	0.0898
128	0.1581	0.1710	0.1954	0.2096	0.2201	0.2352	0.2553	0.2596
129	0.2114	0.2216	0.2399	0.2500	0.2617	0.2715	0.2797	0.2780
130	0.2387	0.2471	0.2597	0.2692	0.2751	0.2823	0.2848	0.2817
131	0.2704	0.2760	0.2768	0.2784	0.2800	0.2806	0.2796	0.2712
132	0.2509	0.2521	0.2383	0.2295	0.2226	0.2228	0.2136	0.1996
133	0.2116	0.2066	0.1659	0.1471	0.1259	0.1162	0.1060	0.0849
134	0.1881	0.1779	0.1182	0.0859	0.0716	0.0456	0.0321	0.0042

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 63,64 R= 10.1 MILLION M= 0.12 DELTA F= 0.0 DEG.

(ROUGHNESS, ON)

ORIFICE	16.98	17.75
1	-10.4078	-11.1423
2	-11.5168	-11.9622
3	-9.9666	-10.2871
4	-8.3741	-8.5913
5	-7.1798	-7.3973
6	-6.4915	-6.6222
7	-5.8827	-5.9950
8	-5.0315	-5.1471
9	-4.5431	-4.6048
10	-4.1143	-4.1769
11	-3.6181	-3.6948
12	-3.0836	-3.1367
13	-2.4307	-2.4522
14	-2.0812	-2.0777
15	-1.7992	-1.8153
16	-1.5880	-1.5615
17	-1.3792	-1.3923
18	-1.2441	-1.2232
19	-1.0929	-1.0681
20	-0.9412	-0.9118
21	-0.7956	-0.7614
22	-0.6637	-0.6285
23	-0.5865	-0.5695
24	-0.5496	-0.5276
25	-0.5343	-0.5154
26	-0.5229	-0.5044
27	-0.5274	-0.5186
28	-0.5288	-0.5186
29	-0.5399	-0.5661
30	-0.5618	-0.5149
31	-0.5491	-0.5605
32	-0.5024	-0.5224
33	-0.5078	-0.4977
34	-0.4966	-0.5291

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 63,64 R= 10.1 MILLION M= 0.12 DELTA F= 0.0 DEG.

(ROUGHNESS, ON)

ORIFICE	16.98	17.75
101	-10.4078	-11.1423
102	-2.5892	-2.8515
103	-0.6628	-0.8015
104	0.1283	0.0497
105	0.5074	0.4471
106	0.7087	0.6698
107	0.8250	0.7995
108	0.9461	0.9338
109	0.9932	0.9858
110	1.0030	1.0023
111	0.9941	0.9965
112	0.9452	0.9564
113	0.8352	0.8438
114	0.7313	0.7436
115	0.6411	0.6545
116	0.5598	0.5699
117	0.4891	0.4957
118	0.4180	0.4256
119	0.3561	0.3609
120	0.2951	0.2974
121	0.2305	0.2320
122	0.1637	0.1635
123	0.1304	0.1277
124	0.0943	0.0932
125	0.0659	0.0630
126	0.0373	0.0320
127	0.0859	0.0813
128	0.2519	0.2456
129	0.2693	0.2609
130	0.2712	0.2615
131	0.2547	0.2441
132	0.1736	0.1649
133	0.0486	0.0324
134	-0.0358	-0.0583

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 65 R= 6.0 MILLION M= 0.07 DELTA F= 0.0 DEG.

((ROUGHNESS, ON)

ORIFICE	-5.02	-4.02	-2.97	-1.99	-0.99	0.02	1.00	1.01
1	-0.4108	0.1086	0.5292	0.8017	0.9608	1.0012	0.9409	0.9450
2	0.9808	0.9153	0.7513	0.5282	0.2430	-0.1414	-0.5434	-0.5546
3	0.8201	0.6858	0.4589	0.2024	-0.1266	-0.4859	-0.8723	-0.8864
4	0.6820	0.5288	0.3030	0.0550	-0.2533	-0.5788	-0.9221	-0.9383
5	0.5792	0.4286	0.2107	-0.0450	-0.3058	-0.5976	-0.9009	-0.9154
6	0.4953	0.3452	0.1332	-0.1086	-0.3509	-0.6220	-0.8965	-0.9143
7	0.4318	0.2871	0.0827	-0.1461	-0.3734	-0.6257	-0.8780	-0.8935
8	0.3282	0.1912	-0.0239	-0.2089	-0.4146	-0.6379	-0.8600	-0.8742
9	0.2436	0.1137	-0.0931	-0.2644	-0.4526	-0.6578	-0.8573	-0.8714
10	0.1830	0.0588	-0.1330	-0.2981	-0.4719	-0.6618	-0.8462	-0.8598
11	0.1058	-0.0316	-0.1832	-0.3350	-0.4910	-0.6566	-0.8192	-0.8310
12	0.0213	-0.1053	-0.2404	-0.3737	-0.5098	-0.6573	-0.7948	-0.8068
13	-0.1185	-0.2014	-0.3164	-0.4274	-0.5396	-0.6568	-0.7686	-0.7784
14	-0.2110	-0.2821	-0.3844	-0.4815	-0.5785	-0.6822	-0.7752	-0.7861
15	-0.2833	-0.3469	-0.4410	-0.5246	-0.6121	-0.7005	-0.7805	-0.7926
16	-0.3406	-0.3959	-0.4812	-0.5566	-0.6330	-0.7144	-0.7832	-0.7936
17	-0.3888	-0.4368	-0.5145	-0.5819	-0.6505	-0.7235	-0.7837	-0.7944
18	-0.4263	-0.4719	-0.5406	-0.6021	-0.6629	-0.7284	-0.7832	-0.7919
19	-0.4604	-0.4997	-0.5657	-0.6192	-0.6749	-0.7348	-0.7822	-0.7908
20	-0.4943	-0.5279	-0.5898	-0.6391	-0.6862	-0.7402	-0.7787	-0.7901
21	-0.5262	-0.5528	-0.6088	-0.6521	-0.6957	-0.7438	-0.7766	-0.7867
22	-0.5513	-0.5750	-0.6229	-0.6627	-0.7008	-0.7429	-0.7690	-0.7743
23	-0.5350	-0.5806	-0.6251	-0.6636	-0.7001	-0.7323	-0.7563	-0.7700
24	-0.5428	-0.5844	-0.6277	-0.6621	-0.6920	-0.7243	-0.7457	-0.7564
25	-0.5499	-0.5901	-0.6279	-0.6596	-0.6872	-0.7146	-0.7323	-0.7444
26	-0.5428	-0.5766	-0.6130	-0.6408	-0.6649	-0.6869	-0.6976	-0.7120
27	-0.4770	-0.5085	-0.5391	-0.5583	-0.5788	-0.5942	-0.6005	-0.6120
28	-0.3313	-0.3560	-0.3844	-0.3986	-0.4125	-0.4241	-0.4265	-0.4381
29	-0.1909	-0.2113	-0.2373	-0.2476	-0.2596	-0.2703	-0.2709	-0.2788
30	-0.0966	-0.1055	-0.1281	-0.1384	-0.1490	-0.1600	-0.1634	-0.1704
31	0.0432	0.0258	0.0054	-0.0047	-0.0175	-0.0306	-0.0395	-0.0440
32	0.1211	0.1052	0.0889	0.0755	0.0617	0.0465	0.0346	0.0298
33	0.1602	0.1469	0.1365	0.1249	0.1148	0.1007	0.0888	0.0848
34	0.1688	0.1579	0.1493	0.1393	0.1308	0.1187	0.1079	0.1046

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 65 R= 6.0 MILLION M= 0.07 DELTA F= 0.0 DEG.

((ROUGHNESS, ON)

ORIFICE	-5.02	-4.02	-2.97	-1.99	-0.99	0.02	1.00	1.01
101	-0.4108	0.1086	0.5292	0.8017	0.9608	1.0012	0.9409	0.9450
102	-1.8890	-1.2656	-0.6956	-0.2295	0.1618	0.4837	0.7210	0.7209
103	-1.5676	-1.0796	-0.6325	-0.2651	0.0586	0.3390	0.5645	0.5642
104	-1.2867	-0.9172	-0.5505	-0.2433	0.0304	0.2734	0.4781	0.4773
105	-1.0699	-0.8271	-0.5025	-0.2308	0.0110	0.2298	0.4181	0.4171
106	-0.9969	-0.7437	-0.4713	-0.2263	-0.0058	0.1976	0.3730	0.3715
107	-0.9265	-0.6459	-0.4470	-0.2206	-0.0167	0.1708	0.3367	0.3356
108	-0.8204	-0.5957	-0.4086	-0.2114	-0.0313	0.1346	0.2840	0.2814
109	-0.7459	-0.5506	-0.3806	-0.2038	-0.0431	0.1090	0.2459	0.2438
110	-0.6950	-0.5200	-0.3654	-0.2031	-0.0560	0.0843	0.2140	0.2110
111	-0.6467	-0.4927	-0.3261	-0.1847	-0.0538	0.0711	0.1873	0.1849
112	-0.5838	-0.4554	-0.3217	-0.1989	-0.0855	0.0258	0.1292	0.1259
113	-0.5070	-0.4065	-0.3027	-0.2053	-0.1125	-0.0216	0.0657	0.0619
114	-0.4630	-0.3801	-0.2947	-0.2107	-0.1310	-0.0534	0.0240	0.0197
115	-0.4355	-0.3626	-0.2889	-0.2168	-0.1464	-0.0778	-0.0091	-0.0116
116	-0.4145	-0.3505	-0.2844	-0.2217	-0.1595	-0.0977	-0.0352	-0.0370
117	-0.3990	-0.3416	-0.2833	-0.2277	-0.1716	-0.1160	-0.0590	-0.0642
118	-0.3837	-0.3363	-0.2817	-0.2317	-0.1809	-0.1299	-0.0781	-0.0830
119	-0.3664	-0.3234	-0.2752	-0.2311	-0.1844	-0.1392	-0.0910	-0.0966
120	-0.3502	-0.3130	-0.2704	-0.2308	-0.1894	-0.1477	-0.1044	-0.1098
121	-0.3420	-0.3088	-0.2720	-0.2364	-0.1991	-0.1623	-0.1221	-0.1284
122	-0.3291	-0.3017	-0.2712	-0.2375	-0.2050	-0.1713	-0.1346	-0.1406
123	-0.3233	-0.2977	-0.2697	-0.2381	-0.2072	-0.1758	-0.1416	-0.1471
124	-0.3148	-0.2908	-0.2656	-0.2363	-0.2073	-0.1788	-0.1464	-0.1517
125	-0.2918	-0.2735	-0.2500	-0.2236	-0.1972	-0.1712	-0.1419	-0.1467
126	-0.2583	-0.2430	-0.2258	-0.2016	-0.1787	-0.1566	-0.1298	-0.1351
127	-0.1247	-0.1109	-0.0957	-0.0758	-0.0556	-0.0369	-0.0141	-0.0189
128	0.0036	0.0180	0.0341	0.0525	0.0697	0.0865	0.1076	0.1031
129	0.0687	0.0818	0.0985	0.1144	0.1310	0.1455	0.1640	0.1602
130	0.1087	0.1210	0.1377	0.1517	0.1656	0.1790	0.1963	0.1933
131	0.1622	0.1734	0.1878	0.1989	0.2114	0.2221	0.2358	0.2335
132	0.1773	0.1838	0.1938	0.2019	0.2101	0.2185	0.2284	0.2245
133	0.1780	0.1819	0.1868	0.1903	0.1942	0.1976	0.2041	0.1999
134	0.1779	0.1783	0.1822	0.1825	0.1848	0.1854	0.1885	0.1851

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 65 R= 6.0 MILLION M= 0.07 DELTA F= 0.0 DEG.

((ROUGHNESS. ON)

ORIFICE	2.01	3.03	4.03	5.00	6.00	7.02	8.01	10.01
1	0.7718	0.4838	0.1226	-0.2977	-0.8192	-1.4356	-2.1135	-3.6798
2	-1.0427	-1.5608	-2.0978	-2.6397	-3.2543	-3.9274	-4.6063	-6.0882
3	-1.3462	-1.8045	-2.2807	-2.7646	-3.2927	-3.8470	-4.4308	-5.6574
4	-1.3375	-1.7356	-2.1363	-2.5482	-2.9883	-3.4934	-4.0116	-5.2436
5	-1.2780	-1.6188	-1.9734	-2.3349	-2.7592	-3.2642	-3.3336	-4.1409
6	-1.2415	-1.5516	-1.8664	-2.2091	-2.4720	-2.7495	-3.1125	-3.8698
7	-1.1964	-1.4860	-1.7731	-2.0376	-2.2484	-2.5999	-2.9195	-3.5745
8	-1.1435	-1.3953	-1.6081	-1.8112	-2.0781	-2.3596	-2.6244	-3.1683
9	-1.1187	-1.3337	-1.5088	-1.7309	-1.9551	-2.1989	-2.4315	-2.9052
10	-1.0734	-1.2777	-1.4369	-1.6353	-1.8414	-2.0497	-2.2614	-2.6964
11	-1.0191	-1.1898	-1.3738	-1.5453	-1.7220	-1.9047	-2.0859	-2.4490
12	-0.9666	-1.1230	-1.2694	-1.4096	-1.5556	-1.7053	-1.8616	-2.1627
13	-0.9030	-1.0302	-1.1382	-1.2420	-1.3527	-1.4711	-1.5805	-1.8015
14	-0.8913	-0.9971	-1.0829	-1.1698	-1.2618	-1.3589	-1.4423	-1.6111
15	-0.8852	-0.9744	-1.0483	-1.1218	-1.1987	-1.2751	-1.3428	-1.4819
16	-0.8756	-0.9546	-1.0142	-1.0790	-1.1375	-1.2074	-1.2596	-1.3690
17	-0.8641	-0.9378	-0.9857	-1.0396	-1.0918	-1.1419	-1.1906	-1.2796
18	-0.8548	-0.9206	-0.9594	-1.0010	-1.0429	-1.0844	-1.1233	-1.1914
19	-0.8437	-0.9005	-0.9333	-0.9685	-0.9970	-1.0283	-1.0600	-1.1107
20	-0.8359	-0.8850	-0.9096	-0.9335	-0.9564	-0.9822	-0.9977	-1.0261
21	-0.8268	-0.8643	-0.8856	-0.8969	-0.9086	-0.9236	-0.9215	-0.9342
22	-0.8096	-0.8413	-0.8489	-0.8517	-0.8510	-0.8468	-0.8390	-0.8240
23	-0.8148	-0.8182	-0.8267	-0.8175	-0.8078	-0.7961	-0.7883	-0.7461
24	-0.7962	-0.7971	-0.7990	-0.7806	-0.7658	-0.7408	-0.7216	-0.6557
25	-0.7797	-0.7719	-0.7640	-0.7433	-0.7069	-0.6807	-0.6276	-0.5963
26	-0.7386	-0.7268	-0.7068	-0.6649	-0.6193	-0.5559	-0.5082	-0.4528
27	-0.6359	-0.6143	-0.5805	-0.5296	-0.4613	-0.4023	-0.3393	-0.3019
28	-0.4545	-0.4302	-0.3958	-0.3250	-0.2616	-0.2527	-0.2495	-0.2523
29	-0.2939	-0.2765	-0.2480	-0.2165	-0.1991	-0.2091	-0.2154	-0.2393
30	-0.1868	-0.1788	-0.1678	-0.1658	-0.1781	-0.2046	-0.2051	-0.2411
31	-0.0670	-0.0770	-0.0977	-0.1275	-0.1542	-0.1842	-0.1986	-0.2254
32	0.0056	-0.0202	-0.0550	-0.0989	-0.1343	-0.1696	-0.1917	-0.2331
33	0.0609	0.0297	-0.0166	-0.0755	-0.1201	-0.1536	-0.1806	-0.2222
34	0.0810	0.0509	0.0020	-0.0611	-0.1119	-0.1469	-0.1746	-0.2338

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 65 R= 6.0 MILLION M= 0.07 DELTA F= 0.0 DEG.

((ROUGHNESS, ON)

ORIFICE	2.01	3.03	4.03	5.00	6.00	7.02	8.01	10.01
101	0.7718	0.4838	0.1226	-0.2977	-0.8192	-1.4356	-2.1135	-3.6798
102	0.8860	0.9777	0.9991	0.9682	0.8868	0.7483	0.5634	0.0493
103	0.7394	0.8711	0.9490	0.9894	0.9943	0.9699	0.9106	0.6996
104	0.6417	0.7798	0.8742	0.9382	0.9778	0.9953	0.9892	0.9043
105	0.5747	0.7087	0.8097	0.8828	0.9384	0.9770	0.9924	0.9752
106	0.5193	0.6525	0.7531	0.8324	0.8979	0.9474	0.9751	0.9926
107	0.4766	0.6062	0.7047	0.7859	0.8539	0.9118	0.9504	0.9902
108	0.4116	0.5337	0.6290	0.7102	0.7816	0.8456	0.8944	0.9609
109	0.3635	0.4771	0.5730	0.6497	0.7206	0.7873	0.8396	0.9208
110	0.3223	0.4327	0.5220	0.5980	0.6695	0.7380	0.7891	0.8820
111	0.2858	0.3856	0.4677	0.5371	0.6065	0.6706	0.7250	0.8229
112	0.2172	0.3100	0.3873	0.4554	0.5202	0.5806	0.6358	0.7333
113	0.1381	0.2173	0.2858	0.3447	0.4027	0.4589	0.5099	0.6036
114	0.0858	0.1550	0.2165	0.2687	0.3209	0.3712	0.4182	0.5059
115	0.0442	0.1062	0.1621	0.2085	0.2559	0.3004	0.3442	0.4251
116	0.0118	0.0681	0.1180	0.1599	0.2030	0.2447	0.2841	0.3602
117	-0.0174	0.0337	0.0791	0.1180	0.1566	0.1946	0.2315	0.3018
118	-0.0409	0.0049	0.0468	0.0818	0.1174	0.1512	0.1836	0.2472
119	-0.0577	-0.0152	0.0216	0.0524	0.0834	0.1152	0.1448	0.2028
120	-0.0739	-0.0370	-0.0030	0.0242	0.0511	0.0804	0.1071	0.1603
121	-0.0948	-0.0625	-0.0316	-0.0074	0.0166	0.0423	0.0661	0.1135
122	-0.1111	-0.0819	-0.0565	-0.0355	-0.0136	0.0073	0.0282	0.0679
123	-0.1196	-0.0931	-0.0687	-0.0500	-0.0302	-0.0107	0.0079	0.0455
124	-0.1249	-0.1021	-0.0798	-0.0623	-0.0448	-0.0286	-0.0104	0.0241
125	-0.1231	-0.1023	-0.0814	-0.0670	-0.0527	-0.0361	-0.0213	0.0069
126	-0.1129	-0.0952	-0.0782	-0.0661	-0.0546	-0.0426	-0.0290	-0.0025
127	-0.0005	0.0144	0.0280	0.0364	0.0446	0.0549	0.0655	0.0846
128	0.1190	0.1326	0.1426	0.1503	0.1580	0.1668	0.1731	0.1903
129	0.1749	0.1865	0.1953	0.2010	0.2062	0.2118	0.2185	0.2323
130	0.2051	0.2166	0.2222	0.2261	0.2301	0.2351	0.2400	0.2482
131	0.2427	0.2484	0.2524	0.2526	0.2517	0.2544	0.2556	0.2603
132	0.2311	0.2334	0.2318	0.2257	0.2211	0.2168	0.2142	0.2096
133	0.2018	0.1974	0.1878	0.1739	0.1556	0.1465	0.1320	0.1176
134	0.1806	0.1746	0.1594	0.1359	0.1175	0.0990	0.0854	0.0630

ORIGINAL PAGE IS OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 65 R= 6.0 MILLION M= 0.07 DELTA F= 0.0 DEG.

(ROUGHNESS ON)

ORIFICE	12.03	14.03	15.00	16.03	16.99	17.83
1	-5.5244	-7.5165	-8.4838	-9.3930	-10.2852	-10.7613
2	-7.6729	-9.2711	-10.0134	-10.7695	-11.3811	-11.8033
3	-6.9659	-8.4270	-9.0993	-9.8270	-10.4209	-10.8099
4	-5.9020	-6.6169	-7.1339	-7.6302	-7.9545	-8.2591
5	-5.0855	-5.9409	-6.3222	-6.7435	-7.0081	-7.2220
6	-4.6785	-5.3869	-5.7189	-6.0564	-6.3002	-6.4734
7	-4.2709	-4.9316	-5.2107	-5.5056	-5.7164	-5.8129
8	-3.7482	-4.2812	-4.5029	-4.7475	-4.8639	-5.0786
9	-3.4007	-3.8776	-4.0661	-4.2577	-4.3793	-4.4493
10	-3.1139	-3.5287	-3.6885	-3.8865	-4.0146	-4.0345
11	-2.8290	-3.1794	-3.3206	-3.4468	-3.5388	-3.5932
12	-2.4611	-2.7371	-2.8419	-2.9619	-3.0220	-3.0713
13	-2.0159	-2.1983	-2.2733	-2.3458	-2.3695	-2.3774
14	-1.7786	-1.9171	-1.9695	-2.0182	-2.0213	-2.0095
15	-1.6136	-1.7105	-1.7585	-1.7759	-1.7698	-1.7168
16	-1.4796	-1.5513	-1.5753	-1.5754	-1.5412	-1.4698
17	-1.3594	-1.4109	-1.4217	-1.4088	-1.3739	-1.2391
18	-1.2485	-1.2819	-1.2798	-1.2621	-1.2017	-1.0382
19	-1.1480	-1.1696	-1.1554	-1.1306	-1.0628	-0.8845
20	-1.0452	-1.0481	-1.0337	-0.9824	-0.8952	-0.7234
21	-0.9361	-0.9279	-0.8876	-0.8472	-0.7316	-0.6073
22	-0.8124	-0.7691	-0.7706	-0.6753	-0.6159	-0.5552
23	-0.7189	-0.6815	-0.6833	-0.6049	-0.5555	-0.5371
24	-0.5958	-0.5977	-0.6100	-0.5417	-0.5181	-0.5352
25	-0.5064	-0.4320	-0.5290	-0.4979	-0.4947	-0.5226
26	-0.4164	-0.4280	-0.4750	-0.4843	-0.5366	-0.5398
27	-0.2959	-0.3750	-0.3885	-0.4658	-0.5268	-0.5184
28	-0.2825	-0.3398	-0.3566	-0.4556	-0.5167	-0.5028
29	-0.2902	-0.3213	-0.3584	-0.4488	-0.5274	-0.5443
30	-0.2991	-0.3237	-0.3647	-0.4789	-0.5459	-0.6467
31	-0.2850	-0.3293	-0.3859	-0.4699	-0.5730	-0.5396
32	-0.2860	-0.3348	-0.3722	-0.4647	-0.5257	-0.5268
33	-0.2784	-0.3380	-0.3704	-0.4384	-0.5153	-0.5308
34	-0.2796	-0.3357	-0.3670	-0.4362	-0.5065	-0.5562

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 65 R= 6.0 MILLION M= 0.07 DELTA F= 0.0 DEG.

((ROUGHNESS, ON)

ORIFICE	12.03	14.03	15.00	16.03	16.99	17.83
101	-5.5244	-7.5165	-8.4838	-9.3930	-10.2852	-10.7613
102	-0.6481	-1.4556	-1.8743	-2.3070	-2.6730	-2.9607
103	0.3734	-0.0493	-0.2644	-0.4972	-0.6975	-0.8554
104	0.7390	0.4980	0.3795	0.2300	0.1284	0.0272
105	0.8858	0.7415	0.6664	0.5695	0.4914	0.4199
106	0.9559	0.8657	0.8167	0.7506	0.6903	0.6469
107	0.9827	0.9318	0.8979	0.8538	0.8161	0.7857
108	0.9931	0.9851	0.9717	0.9555	0.9365	0.9187
109	0.9725	0.9903	0.9903	0.9864	0.9830	0.9707
110	0.9426	0.9762	0.9854	0.9910	0.9913	0.9900
111	0.8932	0.9426	0.9610	0.9717	0.9817	0.9894
112	0.8157	0.8786	0.9001	0.9186	0.9332	0.9452
113	0.6867	0.7520	0.7794	0.8063	0.8225	0.8360
114	0.5853	0.6509	0.6775	0.7033	0.7216	0.7347
115	0.4992	0.5632	0.5901	0.6134	0.6321	0.6496
116	0.4304	0.4872	0.5109	0.5360	0.5547	0.5701
117	0.3658	0.4211	0.4427	0.4670	0.4830	0.4890
118	0.3085	0.3599	0.3792	0.3987	0.4105	0.4212
119	0.2582	0.3061	0.3223	0.3426	0.3521	0.3592
120	0.2115	0.2510	0.2653	0.2817	0.2881	0.2969
121	0.1575	0.1944	0.2063	0.2220	0.2264	0.2333
122	0.1083	0.1397	0.1522	0.1613	0.1642	0.1618
123	0.0847	0.1115	0.1205	0.1287	0.1273	0.1295
124	0.0569	0.0820	0.0915	0.0975	0.0978	0.0916
125	0.0375	0.0607	0.0666	0.0730	0.0690	0.0602
126	0.0212	0.0446	0.0502	0.0526	0.0478	0.0379
127	0.1060	0.0873	0.0907	0.0954	0.0903	0.0837
128	0.2100	0.2853	0.2853	0.2862	0.2794	0.2702
129	0.2488	0.2768	0.2771	0.2715	0.2689	0.2606
130	0.2640	0.2807	0.2809	0.2756	0.2688	0.2545
131	0.2719	0.2775	0.2746	0.2662	0.2535	0.2411
132	0.2107	0.2108	0.2023	0.1916	0.1747	0.1618
133	0.1095	0.1023	0.0885	0.0698	0.0435	0.0106
134	0.0462	0.0287	0.0164	-0.0087	-0.0499	-0.0689

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 66 R= 10.1 MILLION M= 0.11 DELTA F= 0.0 DEG.

(ROUGHNESS, ON)

ORIFICE	-5.00	-3.97	-2.99	-2.00	-1.02	-0.00	2.05	3.99
1	-0.4267	0.1162	0.5254	0.8059	0.9654	1.0141	0.7627	0.0912
2	0.9926	0.8979	0.7385	0.5129	0.2266	-0.1373	-1.0701	-2.1716
3	0.9315	0.6629	0.4509	0.1904	-0.1245	-0.4809	-1.3640	-2.3598
4	0.6888	0.5029	0.2871	0.0371	-0.0540	-0.5762	-1.3345	-2.1577
5	0.5844	0.3993	0.1915	-0.0521	-0.3070	-0.5885	-1.2546	-1.9809
6	0.4985	0.3162	0.1188	-0.1075	-0.3484	-0.6156	-1.2353	-1.8918
7	0.4326	0.2562	0.0671	-0.1463	-0.3727	-0.6203	-1.1909	-1.7899
8	0.3279	0.1636	-0.0198	-0.2109	-0.4131	-0.6336	-1.1358	-1.6516
9	0.2413	0.0867	-0.0909	-0.2676	-0.4560	-0.6584	-1.1120	-1.5774
10	0.1763	0.0306	-0.1370	-0.3016	-0.4785	-0.6617	-1.0778	-1.4998
11	0.0992	-0.0473	-0.1937	-0.3474	-0.5074	-0.6709	-1.0440	-1.4195
12	0.0101	-0.1232	-0.2544	-0.3905	-0.5305	-0.6722	-0.9934	-1.3096
13	-0.1138	-0.2201	-0.3299	-0.4418	-0.5556	-0.6713	-0.9269	-1.1741
14	-0.2860	-0.3044	-0.4000	-0.4971	-0.5973	-0.6927	-0.9098	-1.1178
15	-0.2766	-0.3671	-0.4544	-0.5421	-0.6304	-0.7139	-0.9020	-1.0785
16	-0.3321	-0.4152	-0.4961	-0.5733	-0.6550	-0.7267	-0.8943	-1.0490
17	-0.3813	-0.4578	-0.5287	-0.6005	-0.6732	-0.7354	-0.8944	-1.0195
18	-0.4213	-0.4918	-0.5572	-0.6219	-0.6847	-0.7433	-0.8726	-0.9921
19	-0.4561	-0.5215	-0.5795	-0.6385	-0.6986	-0.7484	-0.8632	-0.9667
20	-0.4912	-0.5521	-0.6040	-0.6583	-0.7094	-0.7525	-0.8587	-0.9435
21	-0.5205	-0.5788	-0.6262	-0.6725	-0.7216	-0.7575	-0.8477	-0.9225
22	-0.5488	-0.5984	-0.6419	-0.6830	-0.7253	-0.7556	-0.8305	-0.8922
23	-0.5529	-0.6022	-0.6415	-0.6767	-0.7118	-0.7513	-0.8168	-0.8681
24	-0.5614	-0.6076	-0.6436	-0.6761	-0.7091	-0.7422	-0.8052	-0.8445
25	-0.5676	-0.6133	-0.6441	-0.6746	-0.7035	-0.7339	-0.7870	-0.8183
26	-0.5654	-0.5995	-0.6287	-0.6576	-0.6805	-0.7064	-0.7474	-0.7650
27	-0.5004	-0.5306	-0.5556	-0.5781	-0.5969	-0.6178	-0.6444	-0.6522
28	-0.3477	-0.3731	-0.3952	-0.4112	-0.4279	-0.4445	-0.4636	-0.4605
29	-0.2016	-0.2228	-0.2420	-0.2558	-0.2700	-0.2828	-0.2997	-0.2982
30	-0.0921	-0.1117	-0.1268	-0.1427	-0.1546	-0.1674	-0.1855	-0.1913
31	0.0450	0.0268	0.0119	0.0001	-0.0126	-0.0268	-0.0508	-0.0785
32	0.1264	0.1089	0.0967	0.0849	0.0720	0.0581	0.0275	-0.0140
33	0.1664	0.1536	0.1445	0.1347	0.1241	0.1136	0.0833	0.0367
34	0.1748	0.1643	0.1573	0.1493	0.1407	0.1303	0.1018	0.0554

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 66 R= 10.1 MILLION M= 0.11 DELTA F= 0.0 DEG.

(ROUGHNESS, ON)

ORIFICE	-5.00	-3.97	-2.99	-2.00	-1.02	-0.00	2.05	3.99
101	-0.4267	0.1162	0.5254	0.8059	0.9654	1.0141	0.7627	0.0912
102	-1.9396	-1.2835	-0.7186	-0.2376	0.1563	0.4866	0.9038	1.0093
103	-1.5159	-1.0364	-0.6091	-0.2384	0.0679	0.3485	0.7602	0.9680
104	-1.2692	-0.8828	-0.5402	-0.2353	0.0306	0.2746	0.6612	0.8921
105	-1.1240	-0.7927	-0.4954	-0.2251	0.0150	0.2358	0.5922	0.8276
106	-1.0251	-0.7313	-0.4666	-0.2209	-0.0031	0.2018	0.5375	0.7718
107	-0.9458	-0.6789	-0.4391	-0.2146	-0.0140	0.1766	0.4943	0.7234
108	-0.8369	-0.6087	-0.4021	-0.2076	-0.0295	0.1389	0.4292	0.6464
109	-0.7610	-0.5607	-0.3760	-0.2005	-0.0412	0.1120	0.3821	0.5857
110	-0.7129	-0.5309	-0.3625	-0.2037	-0.0557	0.0869	0.3410	0.5350
111	-0.6564	-0.4955	-0.3437	-0.2022	-0.0699	0.0593	0.2932	0.4753
112	-0.5939	-0.4596	-0.3304	-0.2060	-0.0923	0.0218	0.2298	0.3961
113	-0.5175	-0.4119	-0.3087	-0.2099	-0.1170	-0.0232	0.1502	0.2932
114	-0.4736	-0.3853	-0.2973	-0.2138	-0.1342	-0.0540	0.0965	0.2220
115	-0.4445	-0.3691	-0.2922	-0.2195	-0.1501	-0.0799	0.0545	0.1671
116	-0.4229	-0.3573	-0.2905	-0.2252	-0.1634	-0.0998	0.0211	0.1235
117	-0.4075	-0.3498	-0.2897	-0.2300	-0.1752	-0.1181	-0.0086	0.0845
118	-0.3918	-0.3409	-0.2861	-0.2346	-0.1842	-0.1318	-0.0326	0.0513
119	-0.3734	-0.3269	-0.2796	-0.2329	-0.1877	-0.1406	-0.0505	0.0255
120	-0.3582	-0.3172	-0.2745	-0.2323	-0.1912	-0.1499	-0.0677	0.0013
121	-0.3501	-0.3161	-0.2768	-0.2384	-0.2020	-0.1636	-0.0896	-0.0278
122	-0.3381	-0.3070	-0.2734	-0.2403	-0.2073	-0.1733	-0.1062	-0.0517
123	-0.3302	-0.3016	-0.2720	-0.2399	-0.2105	-0.1782	-0.1158	-0.0648
124	-0.3224	-0.2968	-0.2676	-0.2390	-0.2116	-0.1809	-0.1231	-0.0768
125	-0.3012	-0.2786	-0.2529	-0.2269	-0.2003	-0.1743	-0.1202	-0.0793
126	-0.2686	-0.2508	-0.2276	-0.2049	-0.1837	-0.1600	-0.1122	-0.0713
127	-0.1308	-0.1158	-0.0957	-0.0770	-0.0572	-0.0371	0.0016	-0.0487
128	0.0050	0.0191	0.0373	0.0556	0.0721	0.0905	0.1257	0.2086
129	0.0721	0.0865	0.1026	0.1192	0.1340	0.1510	0.1826	0.2391
130	0.1142	0.1267	0.1419	0.1565	0.1705	0.1852	0.2133	0.2609
131	0.1693	0.1802	0.1931	0.2051	0.2165	0.2290	0.2513	0.2884
132	0.1910	0.1889	0.1982	0.2068	0.2145	0.2237	0.2388	0.2594
133	0.1931	0.1859	0.1913	0.1957	0.1998	0.2042	0.2099	0.2164
134	0.1823	0.1826	0.1860	0.1888	0.1904	0.1923	0.1924	0.1917

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 66 R= 10.1 MILLION M= 0.11 DELTA F= 0.0 DEG.

(ROUGHNESS, ON)

ORIFICE	5.94	7.96	9.97	12.01	13.96	16.09	16.99	17.83
1	-0.9254	-2.2493	-3.8539	-5.7292	-7.6301	-9.5059	-10.1329	-10.3644
2	-3.4207	-4.8118	-6.3336	-7.9555	-9.5065	-10.9204	-11.3145	-11.6262
3	-3.4456	-4.6565	-5.7471	-7.0627	-8.3116	-9.3691	-9.7320	-9.6949
4	-3.0300	-3.9729	-4.9755	-6.0332	-7.0076	-7.8493	-8.2114	-8.2678
5	-2.7508	-3.5648	-4.4212	-5.3059	-6.1162	-6.8183	-7.0751	-7.1554
6	-2.5764	-3.2971	-4.0574	-4.8289	-5.5118	-6.1590	-6.3589	-6.4718
7	-2.4133	-3.0649	-3.7407	-4.4208	-5.0388	-5.6132	-5.7674	-5.8023
8	-2.1843	-2.7373	-3.3049	-3.8730	-4.3829	-4.8298	-4.9527	-5.0187
9	-2.0475	-2.5364	-3.0283	-3.5237	-3.9478	-4.3445	-4.4494	-4.4448
10	-1.9256	-2.3545	-2.7981	-3.2216	-3.6196	-3.9334	-4.0331	-4.0187
11	-1.7926	-2.1607	-2.5520	-2.9088	-3.2281	-3.4867	-3.5616	-3.5881
12	-1.6211	-1.9249	-2.2366	-2.5390	-2.7858	-2.9793	-3.0130	-3.0641
13	-1.4110	-1.6386	-1.8638	-2.0740	-2.2501	-2.3669	-2.3984	-2.3641
14	-1.3109	-1.4929	-1.6679	-1.8302	-1.9653	-2.0372	-2.0386	-2.0079
15	-1.2412	-1.3956	-1.5327	-1.6619	-1.7525	-1.7938	-1.7777	-1.7187
16	-1.1859	-1.3138	-1.4200	-1.5267	-1.5806	-1.5929	-1.5860	-1.5613
17	-1.1362	-1.2391	-1.3285	-1.4040	-1.4448	-1.4328	-1.3955	-1.3387
18	-1.0943	-1.1703	-1.2389	-1.2913	-1.3163	-1.2807	-1.2176	-1.1778
19	-1.0469	-1.1089	-1.1598	-1.1950	-1.2038	-1.1381	-1.0938	-1.0090
20	-1.0113	-1.0499	-1.0814	-1.0934	-1.0911	-1.0131	-0.9532	-0.8538
21	-0.9713	-0.9893	-0.9969	-0.9935	-0.9770	-0.8870	-0.8131	-0.7118
22	-0.9187	-0.9143	-0.8914	-0.8645	-0.8523	-0.7376	-0.6646	-0.6409
23	-0.8886	-0.8593	-0.8264	-0.7794	-0.7805	-0.6691	-0.6016	-0.6217
24	-0.8532	-0.8109	-0.7493	-0.7159	-0.6827	-0.6043	-0.5585	-0.6202
25	-0.8078	-0.7394	-0.6802	-0.5740	-0.5798	-0.5304	-0.5149	-0.6544
26	-0.7389	-0.6591	-0.5311	-0.4756	-0.5052	-0.4967	-0.4972	-0.6274
27	-0.6026	-0.4740	-0.3572	-0.3432	-0.3901	-0.4669	-0.4895	-0.6298
28	-0.4045	-0.2808	-0.2720	-0.3032	-0.3316	-0.4658	-0.4832	-0.6310
29	-0.2603	-0.2208	-0.2427	-0.2741	-0.3204	-0.4418	-0.4938	-0.6546
30	-0.1847	-0.2098	-0.2293	-0.2759	-0.3106	-0.4707	-0.5412	-0.6475
31	-0.1132	-0.1811	-0.2234	-0.2700	-0.3185	-0.4649	-0.5242	-0.6776
32	-0.0795	-0.1585	-0.2159	-0.2706	-0.3286	-0.4063	-0.4892	-0.6450
33	-0.0441	-0.1358	-0.2124	-0.2586	-0.3092	-0.4108	-0.4614	-0.6102
34	-0.0302	-0.1355	-0.2026	-0.2608	-0.3136	-0.4365	-0.4897	-0.5853

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 66 R= 10.1 MILLION M= 0.11 DELTA F= 0.0 DEG.

(ROUGHNESS, ON)

ORIFICE	5.94	7.96	9.97	12.01	13.96	16.09	16.99	17.83
101	-0.9254	-2.2493	-3.8539	-5.7292	-7.6301	-9.5059	-10.1329	-10.3644
102	0.8803	0.5391	0.0072	-0.6769	-1.4280	-2.1990	-2.4544	-2.6688
103	1.0045	0.9085	0.4892	0.3604	-0.0243	-0.4335	-0.5894	-0.6135
104	0.9939	0.9955	0.9062	0.7368	0.5178	0.2770	0.1652	0.1214
105	0.9581	1.0053	0.9808	0.8911	0.7561	0.5966	0.5319	0.4960
106	0.9155	0.9891	1.0036	0.9611	0.8805	0.7698	0.7237	0.6972
107	0.8755	0.9669	1.0031	0.9934	0.9479	0.8720	0.8406	0.8284
108	0.8027	0.9124	0.9780	1.0029	0.9996	0.9703	0.9541	0.9453
109	0.7428	0.8591	0.9377	0.9872	1.0041	0.9998	0.9939	0.9943
110	0.6901	0.8105	0.8969	0.9587	0.9912	1.0044	1.0032	1.0032
111	0.6240	0.7470	0.8380	0.9095	0.9543	0.9833	0.9907	0.9918
112	0.5362	0.6557	0.7518	0.8303	0.8884	0.9299	0.9414	0.9410
113	0.4162	0.5244	0.6186	0.7001	0.7615	0.8148	0.8259	0.8307
114	0.3333	0.4325	0.5202	0.5970	0.6582	0.7087	0.7257	0.7281
115	0.2677	0.3575	0.4404	0.5130	0.5699	0.6198	0.6336	0.6426
116	0.2143	0.2972	0.3724	0.4401	0.4954	0.5397	0.5511	0.5571
117	0.1675	0.2433	0.3118	0.3759	0.4278	0.4666	0.4782	0.4760
118	0.1277	0.1944	0.2599	0.3173	0.3632	0.3987	0.4077	0.4087
119	0.0945	0.1560	0.2125	0.2668	0.3085	0.3370	0.3435	0.3468
120	0.0639	0.1189	0.1712	0.2169	0.2548	0.2797	0.2846	0.2782
121	0.0279	0.0763	0.1226	0.1651	0.1985	0.2171	0.2189	0.2109
122	-0.0025	0.0388	0.0784	0.1150	0.1418	0.1560	0.1526	0.1382
123	-0.0184	0.0187	0.0561	0.0905	0.1145	0.1232	0.1233	0.1137
124	-0.0343	0.0013	0.0333	0.0638	0.0859	0.0914	0.0854	0.0661
125	-0.0421	-0.0118	0.0180	0.0440	0.0615	0.0615	0.0538	0.0433
126	-0.0388	-0.0161	0.0074	0.0284	0.0412	0.0347	0.0275	0.0137
127	-0.0129	0.0157	0.0425	0.0660	0.0827	0.0838	0.0758	0.0546
128	0.2257	0.2363	0.2482	0.2568	0.2623	0.2536	0.2446	0.2204
129	0.2542	0.2637	0.2702	0.2786	0.2820	0.2691	0.2585	0.2423
130	0.2721	0.2770	0.2830	0.2882	0.2894	0.2763	0.2620	0.2360
131	0.2934	0.2938	0.2929	0.2900	0.2858	0.2674	0.2487	0.2290
132	0.2565	0.2434	0.2366	0.2290	0.2212	0.1919	0.1739	0.1371
133	0.2006	0.1712	0.1476	0.1364	0.1161	0.0759	0.0456	-0.0133
134	0.1678	0.1225	0.0931	0.0692	0.0493	-0.0039	-0.0352	-0.1098

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 67,68 RE 10.1 MILLION M= 0.12 DELTA F= 12.5 DEG.

ORIFICE	-5.99	-4.99	-3.99	-3.50	-2.99	-2.50	-2.01	-1.84
1	0.2401	0.6192	0.8709	0.9497	0.9981	1.0139	1.0081	1.0027
2	0.8707	0.6883	0.4304	0.2782	0.1036	-0.0825	-0.2420	-0.3076
3	0.6150	0.3823	0.0906	-0.0805	-0.2615	-0.4387	-0.5991	-0.6637
4	0.4547	0.2210	-0.0665	-0.2157	-0.3833	-0.5451	-0.6870	-0.7449
5	0.3508	0.1277	-0.1395	-0.2768	-0.4275	-0.5732	-0.6996	-0.7516
6	0.2662	0.0513	-0.2003	-0.3300	-0.4700	-0.6041	-0.7205	-0.7675
7	0.2064	-0.0080	-0.2363	-0.3594	-0.4883	-0.6139	-0.7233	-0.7655
8	0.1093	-0.0900	-0.2994	-0.4081	-0.5253	-0.6379	-0.7319	-0.7696
9	0.0286	-0.1591	-0.3544	-0.4565	-0.5649	-0.6670	-0.7543	-0.7871
10	-0.0392	-0.2072	-0.3896	-0.4845	-0.5851	-0.6785	-0.7592	-0.7895
11	-0.1093	-0.2658	-0.4343	-0.5193	-0.6097	-0.6955	-0.7688	-0.7945
12	-0.1881	-0.3273	-0.4768	-0.5529	-0.6332	-0.7048	-0.7610	-0.7821
13	-0.2902	-0.4080	-0.5323	-0.5943	-0.6588	-0.7198	-0.7588	-0.7777
14	-0.3840	-0.4873	-0.5963	-0.6516	-0.7089	-0.7585	-0.7920	-0.8056
15	-0.4578	-0.5521	-0.6498	-0.6994	-0.7513	-0.7957	-0.8263	-0.8334
16	-0.5222	-0.6051	-0.6941	-0.7392	-0.7845	-0.8245	-0.8471	-0.8588
17	-0.5723	-0.6527	-0.7306	-0.7732	-0.8148	-0.8482	-0.8658	-0.8803
18	-0.6219	-0.6928	-0.7682	-0.8037	-0.8438	-0.8730	-0.8909	-0.8960
19	-0.6648	-0.7342	-0.8031	-0.8344	-0.8678	-0.8942	-0.9099	-0.9145
20	-0.7140	-0.7734	-0.8368	-0.8685	-0.9008	-0.9169	-0.9320	-0.9425
21	-0.7612	-0.8189	-0.8741	-0.9034	-0.9315	-0.9409	-0.9557	-0.9626
22	-0.8085	-0.8603	-0.9120	-0.9417	-0.9625	-0.9713	-0.9816	-0.9834
23	-0.8314	-0.8787	-0.9283	-0.9525	-0.9746	-0.9838	-0.9878	-0.9944
24	-0.8568	-0.9001	-0.9504	-0.9695	-0.9914	-0.9980	-0.9992	-1.0047
25	-0.8856	-0.9266	-0.9735	-0.9952	-1.0150	-1.0167	-1.0124	-1.0174
26	-0.9001	-0.9391	-0.9827	-1.0022	-1.0225	-1.0236	-1.0114	-1.0126
27	-0.8553	-0.8906	-0.9369	-0.9545	-0.9754	-0.9562	-0.9370	-0.9386
28	-0.8107	-0.8005	-0.7284	-0.7180	-0.7254	-0.7722	-0.7565	-0.7582
29	-0.4830	-0.5085	-0.5372	-0.5527	-0.5634	-0.5901	-0.5832	-0.5829
30	-0.3766	-0.3968	-0.4188	-0.4285	-0.4386	-0.4619	-0.4579	-0.4562
31	-0.2919	-0.3061	-0.3226	-0.3301	-0.3380	-0.3499	-0.3359	-0.3325
32	-0.2044	-0.2132	-0.2244	-0.2291	-0.2339	-0.2265	-0.1900	-0.1854
33	0.0542	0.0490	0.0429	0.0400	0.0380	0.0313	0.0056	0.0027
34	0.1150	0.1124	0.1075	0.1054	0.1029	0.0878	0.0441	0.0397

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 67,68 R= 10.1 MILLION M= 0.12 DELTA F= 12.5 DEG.

ORIFICE	-5.99	-4.99	-3.99	-3.50	-2.99	-2.50	-2.01	-1.84
101	0.2401	0.6192	0.8709	0.9497	0.9981	1.0139	1.0081	1.0027
102	-1.1020	-0.5543	-0.0872	0.1120	0.2966	0.4482	0.5617	0.6019
103	-0.9425	-0.5181	-0.1433	0.0198	0.1777	0.3097	0.4124	0.4500
104	-0.8016	-0.4472	-0.1355	0.0021	0.1378	0.2526	0.3412	0.3761
105	-0.7146	-0.4033	-0.1323	-0.0092	0.1109	0.2144	0.2956	0.3268
106	-0.5975	-0.3779	-0.1313	-0.0211	0.0893	0.1848	0.2601	0.2888
107	-0.5633	-0.3536	-0.1293	-0.0274	0.0747	0.1634	0.2339	0.2600
108	-0.5099	-0.3199	-0.1256	-0.0359	0.0532	0.1319	0.1945	0.2190
109	-0.4654	-0.2941	-0.1218	-0.0409	0.0388	0.1113	0.1676	0.1894
110	-0.4393	-0.2828	-0.1249	-0.0502	0.0231	0.0899	0.1418	0.1628
111	-0.4055	-0.2656	-0.1248	-0.0583	0.0080	0.0682	0.1156	0.1341
112	-0.3706	-0.2376	-0.1287	-0.0721	-0.0143	0.0397	0.0803	0.0964
113	-0.3204	-0.2187	-0.1278	-0.0813	-0.0345	0.0085	0.0416	0.0544
114	-0.2882	-0.2035	-0.1273	-0.0885	-0.0479	-0.0115	0.0160	0.0275
115	-0.2660	-0.1927	-0.1167	-0.0913	-0.0569	-0.0249	-0.0012	0.0091
116	-0.2470	-0.1829	-0.1163	-0.0932	-0.0622	-0.0339	-0.0127	-0.0045
117	-0.2318	-0.1741	-0.1147	-0.0872	-0.0667	-0.0407	-0.0231	-0.0158
118	-0.2142	-0.1633	-0.1100	-0.0843	-0.0678	-0.0441	-0.0293	-0.0217
119	-0.1924	-0.1463	-0.0989	-0.0765	-0.0550	-0.0409	-0.0288	-0.0226
120	-0.1705	-0.1306	-0.0886	-0.0685	-0.0454	-0.0380	-0.0261	-0.0208
121	-0.1539	-0.1181	-0.0813	-0.0640	-0.0447	-0.0237	-0.0291	-0.0227
122	-0.1277	-0.0977	-0.0665	-0.0517	-0.0350	-0.0191	-0.0134	-0.0107
123	-0.1141	-0.0852	-0.0578	-0.0442	-0.0292	-0.0152	-0.0094	-0.0047
124	-0.0938	-0.0701	-0.0452	-0.0338	-0.0209	-0.0082	-0.0043	-0.0009
125	-0.0625	-0.0409	-0.0224	-0.0116	-0.0017	0.0086	0.0096	0.0145
126	-0.0152	-0.0005	0.0116	0.0184	0.0256	0.0314	0.0297	0.0321
127	0.1110	0.1259	0.1383	0.1446	0.1510	0.1575	0.1554	0.1561
128	0.2220	0.2387	0.2606	0.2692	0.2789	0.2878	0.2880	0.2895
129	0.2815	0.2996	0.3248	0.3344	0.3445	0.3537	0.3528	0.3547
130	0.3224	0.3421	0.3703	0.3808	0.3910	0.3984	0.3981	0.3996
131	0.3830	0.4067	0.4470	0.4619	0.4775	0.4892	0.4897	0.4915
132	0.4090	0.4310	0.4668	0.4794	0.4941	0.5029	0.4985	0.5000
133	0.3505	0.3614	0.3739	0.3776	0.3811	0.3790	0.3615	0.3605
134	0.3131	0.3198	0.3279	0.3307	0.3335	0.3265	0.3007	0.2984

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX C. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 67,68 R= 10.1 MILLION M= 0.12 DELTA F= 12.5 DEG.

ORIFICE	-1.72	-1.47	-0.98	0.02	1.02	2.01	4.02	6.00
1	0.9983	0.9837	0.9435	0.7779	0.5117	0.1528	-0.8340	-2.1036
2	-0.3503	-0.4306	-0.6100	-1.0555	-1.5528	-2.1054	-3.3334	-4.6778
3	-0.7060	-0.7776	-0.9520	-1.3673	-1.8175	-2.3196	-3.3788	-4.5256
4	-0.7816	-0.8493	-0.9991	-1.3581	-1.7545	-2.1768	-3.0843	-4.1158
5	-0.7845	-0.8416	-0.9756	-1.2968	-1.6361	-2.0087	-2.8462	-3.4282
6	-0.8012	-0.8519	-0.9777	-1.2650	-1.5765	-1.9115	-2.4790	-3.2176
7	-0.7918	-0.8426	-0.9554	-1.2242	-1.5110	-1.8222	-2.3548	-2.9991
8	-0.7952	-0.8388	-0.9394	-1.1696	-1.4194	-1.6151	-2.1592	-2.7024
9	-0.8110	-0.8503	-0.9409	-1.1519	-1.3413	-1.5694	-2.0315	-2.5121
10	-0.8105	-0.8459	-0.9293	-1.1212	-1.2828	-1.4997	-1.9170	-2.3506
11	-0.8172	-0.8454	-0.9210	-1.0891	-1.2439	-1.4295	-1.7916	-2.1688
12	-0.7962	-0.8250	-0.8951	-1.0208	-1.1767	-1.3354	-1.6354	-1.9502
13	-0.7903	-0.8107	-0.8591	-0.9735	-1.0964	-1.2156	-1.4457	-1.6777
14	-0.8180	-0.8331	-0.8740	-0.9731	-1.0752	-1.1752	-1.3646	-1.5528
15	-0.8445	-0.8596	-0.8914	-0.9820	-1.0677	-1.1542	-1.3130	-1.4649
16	-0.8681	-0.8797	-0.9083	-0.9831	-1.0601	-1.1329	-1.2678	-1.3978
17	-0.8873	-0.8951	-0.9220	-0.9898	-1.0532	-1.1181	-1.2313	-1.3438
18	-0.9041	-0.9111	-0.9348	-0.9933	-1.0510	-1.1057	-1.2002	-1.2924
19	-0.9244	-0.9292	-0.9448	-0.9982	-1.0444	-1.0954	-1.1737	-1.2474
20	-0.9458	-0.9502	-0.9665	-1.0093	-1.0460	-1.0883	-1.1515	-1.2077
21	-0.9676	-0.9695	-0.9835	-1.0176	-1.0514	-1.0831	-1.1346	-1.1690
22	-0.9897	-0.9890	-0.9980	-1.0254	-1.0535	-1.0780	-1.1114	-1.1282
23	-0.9978	-0.9978	-1.0056	-1.0290	-1.0459	-1.0681	-1.0891	-1.0995
24	-1.0048	-1.0052	-1.0088	-1.0271	-1.0442	-1.0602	-1.0725	-1.0708
25	-1.0179	-1.0148	-1.0189	-1.0309	-1.0410	-1.0553	-1.0526	-1.0346
26	-1.0138	-1.0119	-1.0103	-1.0133	-1.0204	-1.0249	-1.0108	-0.9765
27	-0.9384	-0.9334	-0.9330	-0.9306	-0.9260	-0.9262	-0.9013	-0.8452
28	-0.7591	-0.7538	-0.7506	-0.7452	-0.7406	-0.7335	-0.6994	-0.6399
29	-0.5815	-0.5780	-0.5717	-0.5689	-0.5633	-0.5546	-0.5186	-0.4695
30	-0.4568	-0.4526	-0.4481	-0.4402	-0.4351	-0.4263	-0.3931	-0.3500
31	-0.3326	-0.3280	-0.3195	-0.3074	-0.2923	-0.2787	-0.2428	-0.2280
32	-0.1826	-0.1773	-0.1694	-0.1543	-0.1436	-0.1383	-0.1416	-0.1668
33	-0.0004	-0.0021	-0.0085	-0.0286	-0.0516	-0.0702	-0.1135	-0.1641
34	0.0363	0.0311	0.0214	-0.0075	-0.0347	-0.0593	-0.1058	-0.1604

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 67,68 R= 10.1 MILLION M= 0.12 DELTA F= 12.5 DEG.

ORIFICE	-1.72	-1.47	-0.98	0.02	1.02	2.01	4.02	6.00
101	0.9283	0.9837	0.9435	0.7779	0.5117	0.1528	-0.8340	-2.1036
102	0.6256	0.6691	0.7533	0.9011	0.9861	1.0103	0.8956	0.5803
103	0.4735	0.5120	0.5969	0.7579	0.8770	0.9604	1.0073	0.9235
104	0.3966	0.4331	0.5082	0.6606	0.7674	0.8828	0.9926	0.9998
105	0.3457	0.3788	0.4499	0.5942	0.7169	0.8176	0.9539	1.0035
106	0.3068	0.3370	0.4039	0.5404	0.6621	0.7635	0.9117	0.9842
107	0.2766	0.3058	0.3683	0.4985	0.6165	0.7167	0.8707	0.9597
108	0.2334	0.2598	0.3153	0.4351	0.5447	0.6429	0.7995	0.9048
109	0.2027	0.2272	0.2786	0.3890	0.4918	0.5856	0.7394	0.8522
110	0.1747	0.1972	0.2454	0.3497	0.4469	0.5370	0.6890	0.8044
111	0.1447	0.1651	0.2087	0.3053	0.3954	0.4797	0.6268	0.7424
112	0.1058	0.1241	0.1621	0.2474	0.3290	0.4062	0.5440	0.6559
113	0.0627	0.0763	0.1074	0.1783	0.2471	0.3122	0.4330	0.5341
114	0.0342	0.0451	0.0720	0.1333	0.1929	0.2499	0.3578	0.4490
115	0.0144	0.0240	0.0472	0.1003	0.1525	0.2036	0.3007	0.3835
116	0.0013	0.0087	0.0289	0.0764	0.1229	0.1685	0.2561	0.3299
117	-0.0111	-0.0043	0.0129	0.0547	0.0964	0.1380	0.2174	0.2852
118	-0.0193	-0.0125	0.0024	0.0399	0.0771	0.1140	0.1864	0.2475
119	-0.0190	-0.0142	-0.0014	0.0314	0.0649	0.0978	0.1625	0.2181
120	-0.0177	-0.0140	-0.0034	0.0261	0.0548	0.0846	0.1425	0.1901
121	-0.0208	-0.0169	-0.0083	0.0173	0.0429	0.0688	0.1198	0.1626
122	-0.0138	-0.0148	-0.0061	0.0149	0.0367	0.0597	0.1041	0.1406
123	-0.0044	-0.0096	-0.0057	0.0150	0.0347	0.0563	0.0976	0.1299
124	0.0015	0.0012	-0.0021	0.0167	0.0355	0.0545	0.0922	0.1218
125	0.0155	0.0169	0.0141	0.0255	0.0427	0.0606	0.0964	0.1219
126	0.0318	0.0315	0.0361	0.0363	0.0566	0.0754	0.1118	0.1326
127	0.1570	0.1560	0.1573	0.1715	0.1794	0.1705	0.1247	0.1519
128	0.2904	0.2905	0.2922	0.3034	0.3135	0.3239	0.3477	0.3673
129	0.3552	0.3555	0.3573	0.3651	0.3719	0.3755	0.3929	0.4047
130	0.4003	0.3995	0.4005	0.4063	0.4111	0.4168	0.4266	0.4350
131	0.4925	0.4930	0.4944	0.4971	0.4996	0.5023	0.5079	0.5119
132	0.5009	0.5001	0.4998	0.4990	0.4985	0.4984	0.4977	0.4978
133	0.3593	0.3559	0.3509	0.3439	0.3381	0.3340	0.3253	0.3136
134	0.2965	0.2935	0.2872	0.2762	0.2662	0.2591	0.2445	0.2254

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX I. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 67,68 R= 10.1 MILLION M= 0.12 DELTA F= 12.5 DEG.

ORIFICE	8.01	10.02	12.01	14.02	15.99	16.98	17.82
1	-3.5938	-5.3148	-7.2172	-9.1373	-10.8638	-11.6810	-11.7885
2	-6.1319	-7.6296	-9.2420	-10.6674	-11.8582	-12.6209	-12.4128
3	-5.7416	-7.0444	-8.3547	-9.3964	-10.2460	-10.8470	-10.6020
4	-4.9754	-5.7793	-6.7971	-7.7694	-8.5696	-8.9442	-9.0745
5	-4.2735	-5.1306	-5.9899	-6.7858	-7.3986	-7.7088	-7.7620
6	-3.9666	-4.6837	-5.4110	-6.1176	-6.6400	-6.5770	-6.9755
7	-3.6507	-4.2882	-4.9461	-5.5689	-6.0360	-6.2669	-6.2537
8	-3.2417	-3.7863	-4.3202	-4.8327	-5.2044	-5.3557	-5.3244
9	-2.9874	-3.4548	-3.9116	-4.3449	-4.6434	-4.7752	-4.7336
10	-2.7660	-3.1890	-3.5946	-3.9649	-4.2074	-4.3326	-4.3242
11	-2.5297	-2.8256	-3.2360	-3.5329	-3.7245	-3.8585	-3.8174
12	-2.2368	-2.5336	-2.8079	-3.0413	-3.2149	-3.2755	-3.2826
13	-1.8946	-2.1014	-2.2944	-2.4528	-2.5613	-2.5706	-2.5289
14	-1.7190	-1.8731	-2.0188	-2.1289	-2.1825	-2.1863	-2.0986
15	-1.6001	-1.7264	-1.8384	-1.9169	-1.9321	-1.9100	-1.8396
16	-1.5030	-1.6033	-1.6806	-1.7314	-1.7134	-1.6721	-1.6515
17	-1.4248	-1.4958	-1.5522	-1.5785	-1.5424	-1.4819	-1.4373
18	-1.3513	-1.4083	-1.4422	-1.4433	-1.3879	-1.3172	-1.2856
19	-1.2897	-1.3189	-1.3431	-1.3210	-1.2369	-1.0502	-1.0514
20	-1.2275	-1.2475	-1.2418	-1.2066	-1.1190	-0.9160	-0.8688
21	-1.1830	-1.1704	-1.1522	-1.0831	-0.9662	-0.8085	-0.7652
22	-1.1122	-1.0813	-1.0340	-0.9677	-0.8184	-0.6651	-0.7204
23	-1.0758	-1.0117	-0.9914	-0.8975	-0.7623	-0.5881	-0.7221
24	-1.0196	-0.9239	-0.9201	-0.8003	-0.6429	-0.5729	-0.9901
25	-0.9813	-0.8723	-0.8167	-0.7159	-0.5842	-0.5572	-0.6937
26	-0.8889	-0.8054	-0.7510	-0.6332	-0.5525	-0.5699	-0.6592
27	-0.7001	-0.6641	-0.5963	-0.5515	-0.5359	-0.5674	-0.7073
28	-0.5671	-0.4555	-0.4519	-0.4734	-0.5203	-0.5901	-0.9494
29	-0.4066	-0.3716	-0.3798	-0.4602	-0.5551	-0.5850	-0.7329
30	-0.3258	-0.3299	-0.3663	-0.4510	-0.5504	-0.5989	-0.8502
31	-0.2547	-0.3062	-0.3466	-0.4527	-0.5594	-0.6314	-0.7418
32	-0.2530	-0.2993	-0.3404	-0.4344	-0.5790	-0.5991	-0.7454
33	-0.2282	-0.3040	-0.3619	-0.4396	-0.5443	-0.5872	-0.7691
34	-0.2366	-0.3073	-0.3650	-0.4458	-0.5398	-0.6074	-0.6792

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUNS 67,68 R= 10.1 MILLION M= 0.12 DELTA F= 12.5 DEG.

ORIFICE	8.01	10.02	12.01	14.02	15.99	16.98	17.82
101	-3.5938	-5.3148	-7.2172	-9.1373	-10.5638	-11.6810	-11.7885
102	0.0972	-0.5249	-1.2881	-2.0457	-2.8082	-3.2016	-3.1901
103	0.7264	0.4286	0.0539	-0.3811	-0.7606	-1.0189	-0.9669
104	0.8229	0.7736	0.5601	0.3122	0.0834	-0.0673	-0.1066
105	0.9887	0.9128	0.7855	0.6215	0.4572	0.3664	0.3356
106	1.0078	0.9749	0.8966	0.7908	0.6753	0.5973	0.5831
107	1.0026	0.9995	0.9578	0.8860	0.8034	0.7568	0.7507
108	0.9727	1.0021	1.0007	0.9734	0.9337	0.9094	0.9092
109	0.9335	0.9814	1.0007	1.0024	0.9864	0.9711	0.9732
110	0.8904	0.9507	0.9888	1.0028	1.0026	0.9971	0.9982
111	0.8326	0.9022	0.9504	0.9828	0.9953	0.9994	1.0001
112	0.7476	0.8244	0.8823	0.9267	0.9552	0.9670	0.9658
113	0.6223	0.6986	0.7627	0.8127	0.8498	0.8676	0.8611
114	0.5295	0.6012	0.6636	0.7176	0.7514	0.7732	0.7696
115	0.4558	0.5227	0.5823	0.6323	0.6697	0.6889	0.6814
116	0.3971	0.4569	0.5135	0.5610	0.5922	0.6083	0.6085
117	0.3451	0.4021	0.4520	0.4952	0.5224	0.5389	0.5324
118	0.3014	0.3513	0.3979	0.4349	0.4580	0.4769	0.4643
119	0.2656	0.3101	0.3515	0.3852	0.4065	0.4168	0.4132
120	0.2328	0.2745	0.3092	0.3379	0.3576	0.3622	0.3511
121	0.1985	0.2329	0.2635	0.2884	0.3000	0.3016	0.2845
122	0.1697	0.1981	0.2251	0.2440	0.2502	0.2549	0.2257
123	0.1571	0.1808	0.2044	0.2221	0.2256	0.2262	0.2087
124	0.1446	0.1648	0.1857	0.2001	0.2021	0.1976	0.1825
125	0.1402	0.1601	0.1770	0.1854	0.1838	0.1796	0.1578
126	0.1457	0.1608	0.1724	0.1768	0.1676	0.1712	0.1351
127	0.1685	0.1871	0.2014	0.2108	0.2065	0.2029	0.1611
128	0.3746	0.3792	0.3830	0.3815	0.3735	0.3682	0.3292
129	0.4064	0.4110	0.4120	0.4100	0.3997	0.3916	0.3644
130	0.4358	0.4357	0.4366	0.4323	0.4210	0.4098	0.3874
131	0.5071	0.5035	0.4992	0.4907	0.4775	0.4699	0.4524
132	0.4916	0.4821	0.4794	0.4689	0.4485	0.4371	0.4100
133	0.2981	0.2765	0.2658	0.2422	0.2092	0.1832	0.1350
134	0.1591	0.1753	0.1564	0.1210	0.0750	0.0448	-0.0089

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 69 RE= 4.1 MILLION M= 0.07 DELTA E= 12.5 DEG.

ORIFICE	-4.48	-4.00	-3.48	-2.51	-1.98	-1.52	-0.99	-0.50
1	0.7597	0.6631	0.9458	1.0062	0.9938	0.9637	0.9178	0.8674
2	0.5778	0.4503	0.2871	-0.0829	-0.2939	-0.4853	-0.6594	-0.7929
3	0.2550	0.3129	-0.0859	-0.4344	-0.6402	-0.8266	-0.9867	-1.1103
4	0.1025	-0.0595	-0.2199	-0.5366	-0.7225	-0.8844	-1.0293	-1.1369
5	-0.0073	-0.1305	-0.2783	-0.5651	-0.7267	-0.8765	-1.0025	-1.0979
6	-0.0749	-0.1913	-0.3293	-0.5963	-0.7439	-0.8791	-0.9560	-1.0837
7	-0.1184	-0.2279	-0.3572	-0.6050	-0.7439	-0.8587	-0.9750	-1.0581
8	-0.1881	-0.2808	-0.4068	-0.6270	-0.7505	-0.8612	-0.9524	-1.0225
9	-0.2513	-0.3449	-0.4530	-0.6549	-0.7654	-0.8701	-0.9511	-1.0144
10	-0.2933	-0.3799	-0.4807	-0.6639	-0.7733	-0.8652	-0.9393	-1.0009
11	-0.3414	-0.4511	-0.5161	-0.6623	-0.7773	-0.8597	-0.9300	-0.9802
12	-0.3946	-0.4648	-0.5470	-0.6916	-0.7742	-0.8446	-0.9031	-0.9488
13	-0.4605	-0.5204	-0.5874	-0.7046	-0.7719	-0.8319	-0.8741	-0.9111
14	-0.5305	-0.5825	-0.6422	-0.7431	-0.7819	-0.8513	-0.8897	-0.9020
15	-0.5901	-0.6346	-0.6887	-0.7789	-0.8312	-0.8722	-0.8933	-0.9145
16	-0.6372	-0.6802	-0.7287	-0.8080	-0.8526	-0.8926	-0.9068	-0.9248
17	-0.6792	-0.7175	-0.7601	-0.8321	-0.8726	-0.9066	-0.9175	-0.9355
18	-0.7155	-0.7522	-0.7889	-0.8577	-0.8930	-0.9248	-0.9291	-0.9456
19	-0.7498	-0.7842	-0.8191	-0.8807	-0.9119	-0.9413	-0.9451	-0.9519
20	-0.7898	-0.8198	-0.8549	-0.9068	-0.9364	-0.9629	-0.9637	-0.9658
21	-0.8291	-0.8556	-0.8877	-0.9343	-0.9612	-0.9834	-0.9811	-0.9862
22	-0.8666	-0.8930	-0.9209	-0.9629	-0.9885	-1.0023	-0.9986	-0.9921
23	-0.8859	-0.9091	-0.9309	-0.9786	-0.9995	-1.0167	-1.0102	-0.9908
24	-0.9066	-0.9277	-0.9489	-0.9915	-1.0128	-1.0258	-1.0183	-0.9960
25	-0.9270	-0.9477	-0.9681	-1.0084	-1.0282	-1.0450	-1.0229	-1.0001
26	-0.9349	-0.9513	-0.9700	-1.0044	-1.0277	-1.0446	-1.0159	-0.9889
27	-0.8797	-0.9009	-0.9185	-0.9540	-0.9759	-0.9794	-0.9377	-0.9070
28	-0.8604	-0.8811	-0.9015	-0.9481	-0.9148	-0.7897	-0.7568	-0.7274
29	-0.4833	-0.4931	-0.5064	-0.5350	-0.5609	-0.5985	-0.5798	-0.5566
30	-0.3922	-0.4054	-0.4145	-0.4321	-0.4453	-0.4673	-0.4534	-0.4306
31	-0.3072	-0.3156	-0.3244	-0.3357	-0.3411	-0.3527	-0.3245	-0.2984
32	-0.2128	-0.2181	-0.2246	-0.2293	-0.2337	-0.2285	-0.1699	-0.1515
33	0.0459	0.0418	0.0371	0.0358	0.0334	0.0238	-0.0120	-0.0293
34	0.1080	0.1045	0.1010	0.0990	0.0988	0.0838	0.0191	-0.0056

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 69 R= 6.1 MILLION M= 0.07 DELTA F= 12.5 DEG.

ORIFICE	-4.48	-4.00	-3.48	-2.51	-1.98	-1.52	-0.99	-0.50
101	0.7697	0.8831	0.9456	1.0062	0.9938	0.9637	0.9178	0.8674
102	-0.2968	-0.0978	0.1245	0.4497	0.5527	0.6945	0.7715	0.8212
103	-0.3108	-0.1420	0.0334	0.3123	0.4418	0.5402	0.6144	0.6672
104	-0.2763	-0.1339	0.0136	0.2539	0.3703	0.4561	0.5281	0.5764
105	-0.2537	-0.1309	0.0008	0.2159	0.3194	0.4021	0.4662	0.5133
106	-0.2412	-0.1301	-0.0116	0.1861	0.2823	0.3593	0.4199	0.4645
107	-0.2301	-0.1283	-0.0198	0.1643	0.2548	0.3267	0.3831	0.4278
108	-0.2131	-0.1256	-0.0295	0.1338	0.2142	0.2785	0.3297	0.3690
109	-0.2005	-0.1212	-0.0354	0.1117	0.1860	0.2455	0.2912	0.3279
110	-0.1970	-0.1241	-0.0464	0.0907	0.1597	0.2146	0.2588	0.2914
111	-0.1890	-0.1248	-0.0553	0.0692	0.1316	0.1822	0.2208	0.2525
112	-0.1835	-0.1280	-0.0680	0.0407	0.0952	0.1396	0.1733	0.2010
113	-0.1707	-0.1272	-0.0787	0.0098	0.0547	0.0908	0.1177	0.1387
114	-0.1634	-0.1258	-0.0858	-0.0098	0.0293	0.0598	0.0815	0.0992
115	-0.1537	-0.1252	-0.0896	-0.0235	0.0108	0.0381	0.0563	0.0706
116	-0.1460	-0.1223	-0.0919	-0.0317	-0.0011	0.0225	0.0375	0.0488
117	-0.1406	-0.1202	-0.0924	-0.0386	-0.0123	0.0091	0.0224	0.0302
118	-0.1320	-0.1159	-0.0914	-0.0420	-0.0183	0.0012	0.0109	0.0178
119	-0.1192	-0.1077	-0.0842	-0.0402	-0.0180	-0.0004	0.0070	0.0122
120	-0.1062	-0.0862	-0.0751	-0.0352	-0.0160	-0.0004	0.0061	0.0083
121	-0.0971	-0.0783	-0.0724	-0.0352	-0.0166	-0.0027	0.0006	0.0015
122	-0.0814	-0.0659	-0.0517	-0.0280	-0.0111	0.0015	0.0028	0.0015
123	-0.0711	-0.0589	-0.0416	-0.0232	-0.0073	0.0043	0.0054	0.0022
124	-0.0581	-0.0486	-0.0337	-0.0168	-0.0006	0.0103	0.0104	0.0058
125	-0.0336	-0.0276	-0.0155	-0.0061	0.0113	0.0226	0.0227	0.0177
126	0.0024	0.0015	0.0071	0.0189	0.0272	0.0396	0.0407	0.0378
127	0.1289	0.1305	0.1363	0.1553	0.1632	0.1657	0.1296	0.0787
128	0.2503	0.2603	0.2716	0.2932	0.3051	0.3128	0.3101	0.3067
129	0.3146	0.3284	0.3407	0.3597	0.3684	0.3735	0.3678	0.3612
130	0.3618	0.3764	0.3889	0.4045	0.4122	0.4158	0.4078	0.4008
131	0.4365	0.4634	0.4819	0.5006	0.5066	0.5078	0.4991	0.4922
132	0.4553	0.4782	0.4937	0.5083	0.5127	0.5126	0.4997	0.4902
133	0.3678	0.3703	0.3730	0.3795	0.3813	0.3792	0.3550	0.3385
134	0.3228	0.3237	0.3262	0.3312	0.3340	0.3280	0.2910	0.2724

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 65 RE= 0.1 MILLION M= 0.07 DELTA F= 12.5 DEG.

ORIFICE	0.02	2.01	4.00	6.00	7.98	10.00	12.02	14.00
1	0.7910	0.2256	-0.1752	-1.5476	-3.2098	-4.5961	-6.8599	-8.8433
2	-0.5907	-1.5737	-3.1019	-4.3588	-5.7114	-7.2412	-8.7549	-10.2426
3	-1.2965	-2.1770	-3.1695	-4.2446	-5.3679	-6.6448	-7.9855	-9.4045
4	-1.2979	-2.1571	-2.9549	-3.9315	-4.9323	-6.0949	-6.3465	-7.3309
5	-1.2397	-1.9035	-2.6729	-3.4406	-3.9415	-4.5309	-5.7181	-6.5062
6	-1.2111	-1.5091	-2.3069	-3.0171	-3.7345	-4.4657	-5.2149	-5.8879
7	-1.1735	-1.7263	-2.1959	-2.8445	-3.4586	-4.1042	-4.7680	-5.3482
8	-1.1251	-1.6050	-2.1568	-2.5689	-3.0776	-3.6305	-4.1702	-4.6639
9	-1.1082	-1.4700	-1.9452	-2.3911	-2.8412	-3.3261	-3.7820	-4.2058
10	-1.0922	-1.4243	-1.8394	-2.2381	-2.6367	-3.0547	-3.4745	-3.8282
11	-1.0546	-1.3621	-1.7252	-2.0758	-2.4142	-2.7712	-3.1221	-3.4389
12	-1.0148	-1.2741	-1.5781	-1.8665	-2.1384	-2.4334	-2.7133	-2.9445
13	-0.9452	-1.1592	-1.3929	-1.6063	-1.8096	-2.0307	-2.2298	-2.3812
14	-0.9435	-1.1235	-1.3150	-1.4877	-1.6409	-1.8100	-1.9546	-2.0747
15	-0.9510	-1.1046	-1.2613	-1.4020	-1.5291	-1.6564	-1.7731	-1.8490
16	-0.9558	-1.0877	-1.2216	-1.3365	-1.4385	-1.5439	-1.6250	-1.6712
17	-0.9624	-1.0726	-1.1870	-1.2790	-1.3590	-1.4408	-1.4979	-1.5288
18	-0.9661	-1.0610	-1.1563	-1.2317	-1.2902	-1.3481	-1.3963	-1.3862
19	-0.9706	-1.0472	-1.1316	-1.1843	-1.2214	-1.2594	-1.2803	-1.2601
20	-0.9787	-1.0422	-1.1043	-1.1415	-1.1514	-1.1820	-1.1783	-1.1408
21	-0.9895	-1.0350	-1.0855	-1.0896	-1.0796	-1.0864	-1.0783	-1.0261
22	-0.9926	-1.0280	-1.0560	-1.0386	-1.0018	-0.9740	-0.9678	-0.8855
23	-0.9931	-1.0226	-1.0336	-1.0044	-0.9325	-0.9113	-0.8810	-0.8263
24	-0.9539	-1.0161	-1.0130	-0.9689	-0.8430	-0.8342	-0.8108	-0.7290
25	-0.9546	-1.0016	-0.9882	-0.8987	-0.7697	-0.7482	-0.7148	-0.6442
26	-0.8799	-0.9705	-0.9375	-0.8331	-0.7029	-0.6307	-0.7386	-0.5674
27	-0.8940	-0.8677	-0.8202	-0.6074	-0.4456	-0.4514	-0.4561	-0.5062
28	-0.7997	-0.6796	-0.6241	-0.4437	-0.3551	-0.3890	-0.3880	-0.4636
29	-0.5406	-0.5087	-0.4590	-0.3257	-0.3271	-0.3363	-0.3618	-0.4573
30	-0.4172	-0.3975	-0.3475	-0.2900	-0.3097	-0.3374	-0.3765	-0.4592
31	-0.3923	-0.2447	-0.2218	-0.2431	-0.2870	-0.3339	-0.3673	-0.4760
32	-0.1419	-0.1770	-0.1635	-0.2199	-0.2782	-0.3238	-0.3714	-0.4461
33	-0.0494	-0.1021	-0.1501	-0.2226	-0.2816	-0.3325	-0.3765	-0.4763
34	-0.0340	-0.0971	-0.1541	-0.2323	-0.2924	-0.3423	-0.3845	-0.4748

ORIGINAL PAGE IS
OF POOR QUALITY

APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 65 R= 6.1 MILLION M= 0.07 DELTA F= 12.5 DEG.

ORIFICE	0.02	2.01	4.00	6.00	7.98	10.00	12.02	14.00
101	0.7910	0.2250	-0.6752	-1.8476	-3.2898	-4.9961	-6.8599	-8.8433
102	0.8817	1.0017	0.9164	0.6410	0.1946	-0.4368	-1.1714	-1.9846
103	0.7353	0.9383	1.0002	0.9393	0.7663	0.4750	0.0985	-0.3550
104	0.6406	0.8597	0.9765	0.9958	0.9349	0.7972	0.5845	0.3242
105	0.5740	0.7947	0.9332	0.9911	0.9885	0.9209	0.7993	0.6339
106	0.5235	0.7377	0.8853	0.9699	0.9973	0.9699	0.9004	0.7913
107	0.4818	0.6922	0.8444	0.9426	0.9889	0.9937	0.9518	0.8866
108	0.4194	0.6173	0.7743	0.8848	0.9523	0.9907	0.9932	0.9681
109	0.3747	0.5611	0.7140	0.8279	0.9114	0.9658	0.9893	0.9922
110	0.3356	0.5123	0.6620	0.7809	0.8632	0.9329	0.9719	0.9925
111	0.2922	0.4572	0.6004	0.7158	0.8120	0.8810	0.9364	0.9695
112	0.2353	0.3847	0.5176	0.6299	0.7232	0.8035	0.8661	0.9135
113	0.1676	0.2940	0.4096	0.5096	0.5975	0.6772	0.7461	0.7991
114	0.1227	0.2325	0.3360	0.4245	0.5055	0.5808	0.6437	0.7031
115	0.0902	0.1877	0.2782	0.3601	0.4333	0.5035	0.5643	0.6168
116	0.0668	0.1521	0.2346	0.3078	0.3741	0.4383	0.4970	0.5457
117	0.0459	0.1226	0.1968	0.2625	0.3239	0.3812	0.4358	0.4807
118	0.0308	0.0995	0.1657	0.2246	0.2794	0.3333	0.3809	0.4236
119	0.0225	0.0830	0.1425	0.1942	0.2441	0.2914	0.3344	0.3709
120	0.0167	0.0703	0.1223	0.1670	0.2115	0.2552	0.2932	0.3248
121	0.0079	0.0549	0.0996	0.1384	0.1768	0.2144	0.2461	0.2773
122	0.0066	0.0456	0.0843	0.1166	0.1478	0.1792	0.2075	0.2320
123	0.0067	0.0430	0.0772	0.1058	0.1345	0.1646	0.1887	0.2080
124	0.0091	0.0424	0.0727	0.0973	0.1222	0.1501	0.1702	0.1889
125	0.0208	0.0514	0.0784	0.0985	0.1195	0.1420	0.1599	0.1738
126	0.0421	0.0752	0.0992	0.1158	0.1328	0.1513	0.1633	0.1723
127	0.0469	0.0843	0.1122	0.1331	0.1536	0.1740	0.1894	0.2038
128	0.3095	0.3427	0.3642	0.3721	0.3799	0.3900	0.3965	0.4010
129	0.3596	0.3726	0.3823	0.3862	0.3897	0.3972	0.4025	0.4008
130	0.3983	0.4051	0.4104	0.4105	0.4135	0.4184	0.4222	0.4221
131	0.4884	0.4877	0.4883	0.4852	0.4850	0.4858	0.4849	0.4830
132	0.4837	0.4807	0.4783	0.4705	0.4638	0.4614	0.4603	0.4498
133	0.3279	0.3135	0.2986	0.2740	0.2610	0.2540	0.2429	0.2245
134	0.2585	0.2357	0.2130	0.1840	0.1591	0.1460	0.1329	0.1038

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APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 65 R= 6.1 MILLION M= 3.07 DELTA F= 12.5 DEG.

ORIFICE	16.00	16.86	17.83
1	-10.6480	-11.2384	-12.2034
2	-11.6852	-12.1290	-12.7151
3	-10.7175	-11.1471	-11.0075
4	-8.2837	-8.5573	-8.7735
5	-7.1468	-7.3463	-7.6693
6	-6.4467	-6.6567	-6.7603
7	-5.9380	-6.0447	-6.1637
8	-5.0896	-5.1740	-5.3097
9	-4.5599	-4.6428	-4.6455
10	-4.1197	-4.2451	-4.3024
11	-3.6836	-3.7435	-3.7694
12	-3.1211	-3.1887	-3.1878
13	-2.5028	-2.4894	-2.4244
14	-2.1299	-2.1133	-2.0595
15	-1.8874	-1.8340	-1.7716
16	-1.6637	-1.5957	-1.5225
17	-1.4770	-1.3670	-1.2450
18	-1.3234	-1.1728	-1.0226
19	-1.1916	-1.0170	-0.8518
20	-1.0029	-0.7708	-0.6798
21	-0.8583	-0.6682	-0.6081
22	-0.7472	-0.5927	-0.5900
23	-0.6504	-0.5656	-0.5872
24	-0.5879	-0.5471	-0.5939
25	-0.5509	-0.5432	-0.5930
26	-0.5503	-0.5643	-0.5833
27	-0.5584	-0.5641	-0.5968
28	-0.5423	-0.5754	-0.6082
29	-0.5525	-0.5708	-0.6003
30	-0.5798	-0.5556	-0.5993
31	-0.5994	-0.5684	-0.6099
32	-0.5793	-0.5683	-0.6008
33	-0.5687	-0.5634	-0.6009
34	-0.5159	-0.5504	-0.5993

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APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 65 R= 6.1 MILLION M= 0.07 DELTA F= 12.5 DEG.

ORIFICE	16.00	16.96	17.83
101	-10.5480	-11.2384	-12.2034
102	-2.5442	-3.1467	-3.5214
103	-0.7909	-0.9664	-1.1064
104	0.0481	-0.0569	-0.1526
105	0.4605	0.3842	0.2962
106	0.6667	0.6126	0.5705
107	0.7914	0.7557	0.7136
108	0.8262	0.8100	0.8846
109	0.5760	0.9674	0.9583
110	0.9918	0.9909	0.9837
111	0.9881	0.9904	0.9924
112	0.9441	0.9535	0.9604
113	0.8396	0.8530	0.8669
114	0.7450	0.7598	0.7701
115	0.6598	0.6797	0.6870
116	0.5852	0.5968	0.6064
117	0.5135	0.5332	0.5443
118	0.4546	0.4674	0.4751
119	0.3996	0.4126	0.4173
120	0.3484	0.3574	0.3521
121	0.3027	0.3003	0.2998
122	0.2466	0.2499	0.2471
123	0.2187	0.2232	0.2243
124	0.1941	0.1958	0.1909
125	0.1782	0.1769	0.1727
126	0.1762	0.1734	0.1624
127	0.2049	0.2031	0.1907
128	0.3042	0.3016	0.3826
129	0.3942	0.3935	0.3810
130	0.4143	0.4051	0.3975
131	0.4686	0.4646	0.4560
132	0.4375	0.4285	0.4200
133	0.1951	0.1751	0.1570
134	0.0593	0.0395	0.0254

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APPENDIX B. -

UPPER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 70 R= 3.0 MILLION M= 0.07 DELTA F= 12.5 DEG.

ORIFICE	11.99	14.00	14.99	16.00	17.01	17.82
1	-6.4433	-8.3177	-9.5421	-10.2779	-10.7621	-11.4009
2	-8.3226	-9.7928	-10.5227	-11.1922	-11.2279	-12.0871
3	-7.5390	-8.9204	-9.4856	-10.2206	-10.3682	-10.6808
4	-7.3628	-7.5079	-7.9335	-7.6369	-7.6165	-8.4799
5	-5.3048	-6.1905	-6.6578	-6.9547	-7.0443	-7.0362
6	-5.0113	-5.5669	-5.5762	-6.3153	-6.4699	-6.7946
7	-4.6223	-5.0469	-5.4638	-5.8088	-6.0320	-5.9533
8	-4.0359	-4.4081	-4.7583	-4.9421	-4.9960	-5.1688
9	-3.6551	-3.9793	-4.2240	-4.4739	-4.4085	-4.5176
10	-3.3659	-3.6570	-3.9841	-4.1107	-4.1486	-4.2371
11	-3.0364	-3.2907	-3.4269	-3.7554	-3.6538	-3.6161
12	-2.6342	-2.8061	-3.0201	-3.1899	-3.1330	-2.9007
13	-2.1368	-2.2744	-2.3742	-2.4639	-2.4489	-2.4076
14	-1.8772	-1.5933	-2.0633	-2.1599	-2.1030	-2.0580
15	-1.7059	-1.8005	-1.8234	-1.9030	-1.7175	-1.7375
16	-1.5690	-1.6327	-1.6362	-1.6614	-1.5746	-1.3529
17	-1.4430	-1.4197	-1.4789	-1.5176	-1.3278	-1.3474
18	-1.3266	-1.2758	-1.3270	-1.3114	-1.0727	-0.9580
19	-1.2053	-1.1547	-1.1620	-1.1884	-0.8832	-0.8143
20	-1.1027	-0.9868	-1.0267	-0.9989	-0.7684	-0.6907
21	-0.9786	-0.8062	-0.8577	-0.7100	-0.6677	-0.6401
22	-0.7923	-0.6669	-0.6825	-0.6098	-0.5896	-0.6958
23	-0.6975	-0.5608	-0.5293	-0.5084	-0.5749	-0.5637
24	-0.5927	-0.4734	-0.5066	-0.4824	-0.6168	-0.6291
25	-0.5323	-0.4549	-0.5087	-0.4718	-0.6162	-0.6216
26	-0.4733	-0.4306	-0.5009	-0.4641	-0.6021	-0.5875
27	-0.4210	-0.4023	-0.4822	-0.4710	-0.5975	-0.6691
28	-0.3786	-0.4537	-0.5020	-0.4661	-0.5294	-0.5724
29	-0.3814	-0.4638	-0.4770	-0.4736	-0.5282	-0.6258
30	-0.3881	-0.4760	-0.4913	-0.4789	-0.5694	-0.6239
31	-0.3767	-0.4561	-0.4870	-0.4866	-0.5905	-0.6633
32	-0.3910	-0.4474	-0.4947	-0.5170	-0.5944	-0.6384
33	-0.3916	-0.4444	-0.5131	-0.5138	-0.6001	-0.6315
34	-0.3947	-0.4442	-0.4947	-0.5105	-0.5353	-0.6307

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APPENDIX B. -

LOWER SURFACE PRESSURE COEFFICIENTS FOR VARIOUS ALPHAS

RUN 70 R= 3.0 MILLION M= 0.07 DELTA F= 12.5 DEG.

ORIFICE	11.99	14.00	14.99	16.00	17.01	17.82
101	-6.4433	-8.3177	-9.5421	-10.2779	-10.7621	-11.4005
102	-0.9912	-1.8053	-2.3660	-2.6321	-2.6919	-3.2088
103	0.2913	-0.2383	-0.4132	-0.6737	-0.7310	-0.8508
104	0.6429	0.3850	0.2743	0.1082	0.0876	-0.1154
105	0.8422	0.6732	0.5879	0.4893	0.4601	0.4361
106	0.9256	0.8263	0.7743	0.6993	0.6539	0.5940
107	0.9723	0.9143	0.8717	0.8175	0.7511	0.7594
108	0.9933	0.9822	0.9713	0.9439	0.9327	0.9088
109	0.9870	0.9934	0.9980	0.9864	0.9899	0.9724
110	0.9714	0.9904	0.9974	1.0024	0.9963	0.9927
111	0.9323	0.9672	0.9849	0.9911	0.9926	0.9954
112	0.8570	0.9036	0.9290	0.9446	0.9478	0.9482
113	0.7276	0.7863	0.8043	0.8367	0.8633	0.8595
114	0.6325	0.6850	0.7109	0.7396	0.7518	0.7671
115	0.5507	0.6088	0.6232	0.6571	0.6689	0.6602
116	0.4789	0.5278	0.5470	0.5759	0.5574	0.5877
117	0.4196	0.4650	0.4825	0.5046	0.5213	0.5257
118	0.3642	0.4095	0.4211	0.4479	0.4507	0.4463
119	0.3183	0.3556	0.3748	0.3867	0.3964	0.3737
120	0.2684	0.3044	0.3145	0.3128	0.3404	0.3355
121	0.2269	0.2633	0.2592	0.2675	0.2880	0.2804
122	0.1869	0.2222	0.2103	0.2118	0.2145	0.2275
123	0.1711	0.2051	0.1966	0.1792	0.2121	0.1834
124	0.1559	0.1781	0.1690	0.1661	0.1762	0.1836
125	0.1502	0.1688	0.1547	0.1466	0.1480	0.1458
126	0.1635	0.1807	0.1651	0.1523	0.1504	0.1353
127	0.1835	0.2063	0.1973	0.1809	0.1821	0.2028
128	0.1851	0.2068	0.1961	0.1839	0.1844	0.1772
129	0.4199	0.4276	0.4169	0.4070	0.3965	0.3838
130	0.4205	0.4261	0.4137	0.4018	0.4011	0.3861
131	0.4763	0.4829	0.4709	0.4647	0.4593	0.4409
132	0.4503	0.4487	0.4418	0.4256	0.4145	0.3950
133	0.2197	0.2074	0.2014	0.1760	0.1763	0.1546
134	0.1128	0.1001	0.0584	0.0511	0.0500	-0.0106

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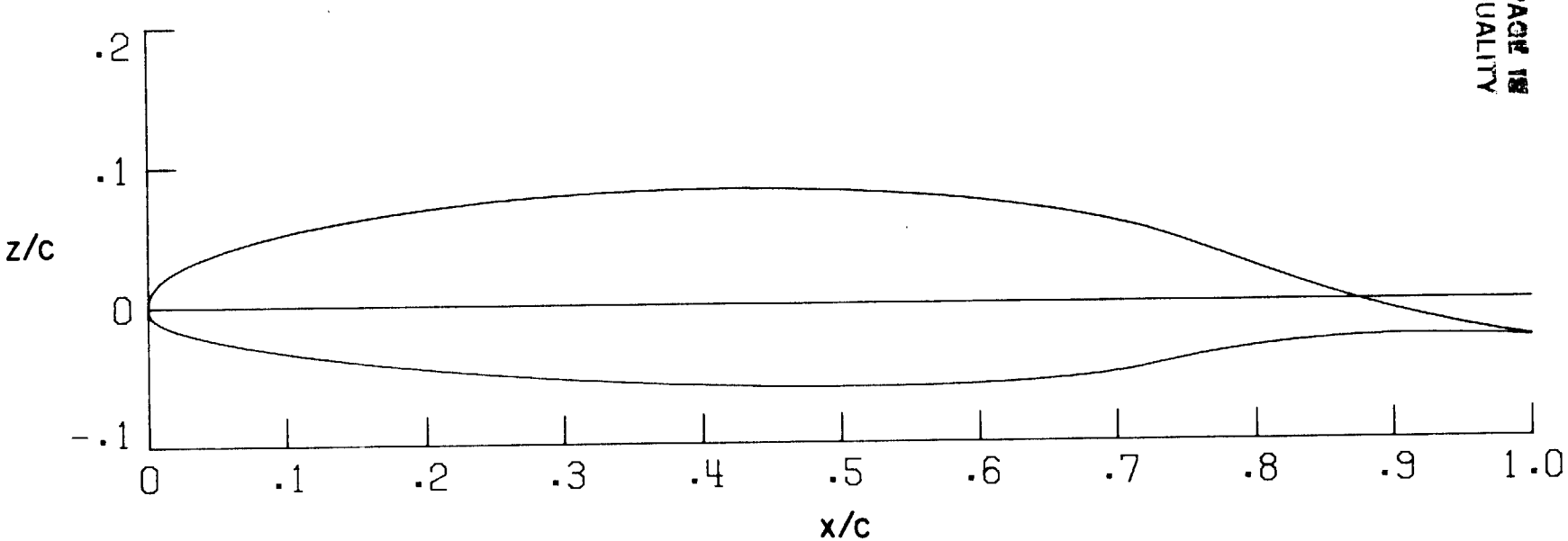

Figure 1. - Section shape for NLF(1)-0414F airfoil.

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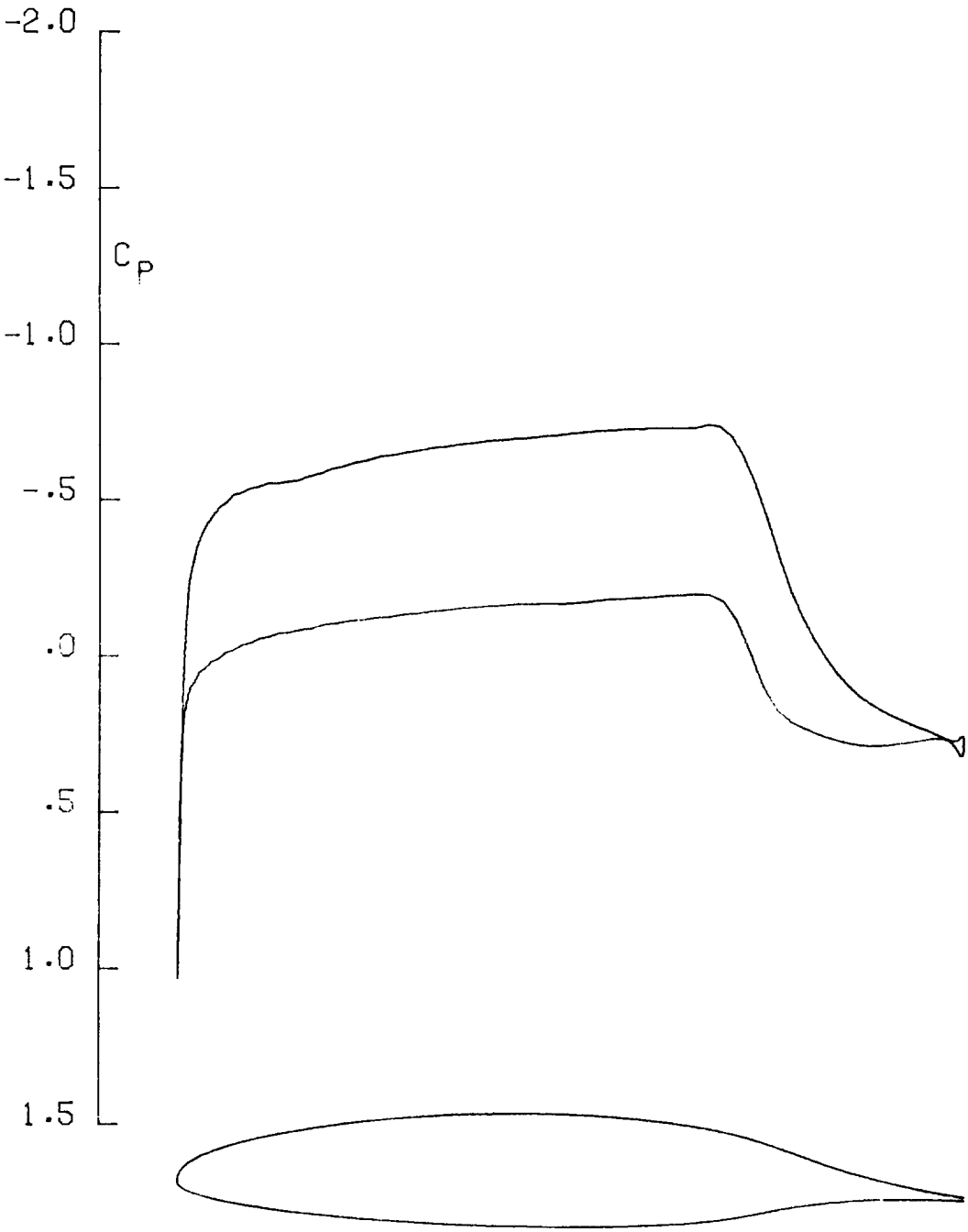

Figure 2. - Calculated pressure distribution for NLF(1)-0414F airfoil at design conditions. $c_\ell = 0.43$; $M = 0.40$; $R = 10.0 \times 10^6$.

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Figure 3.- Photograph of NLF(1)-0414F airfoil model.

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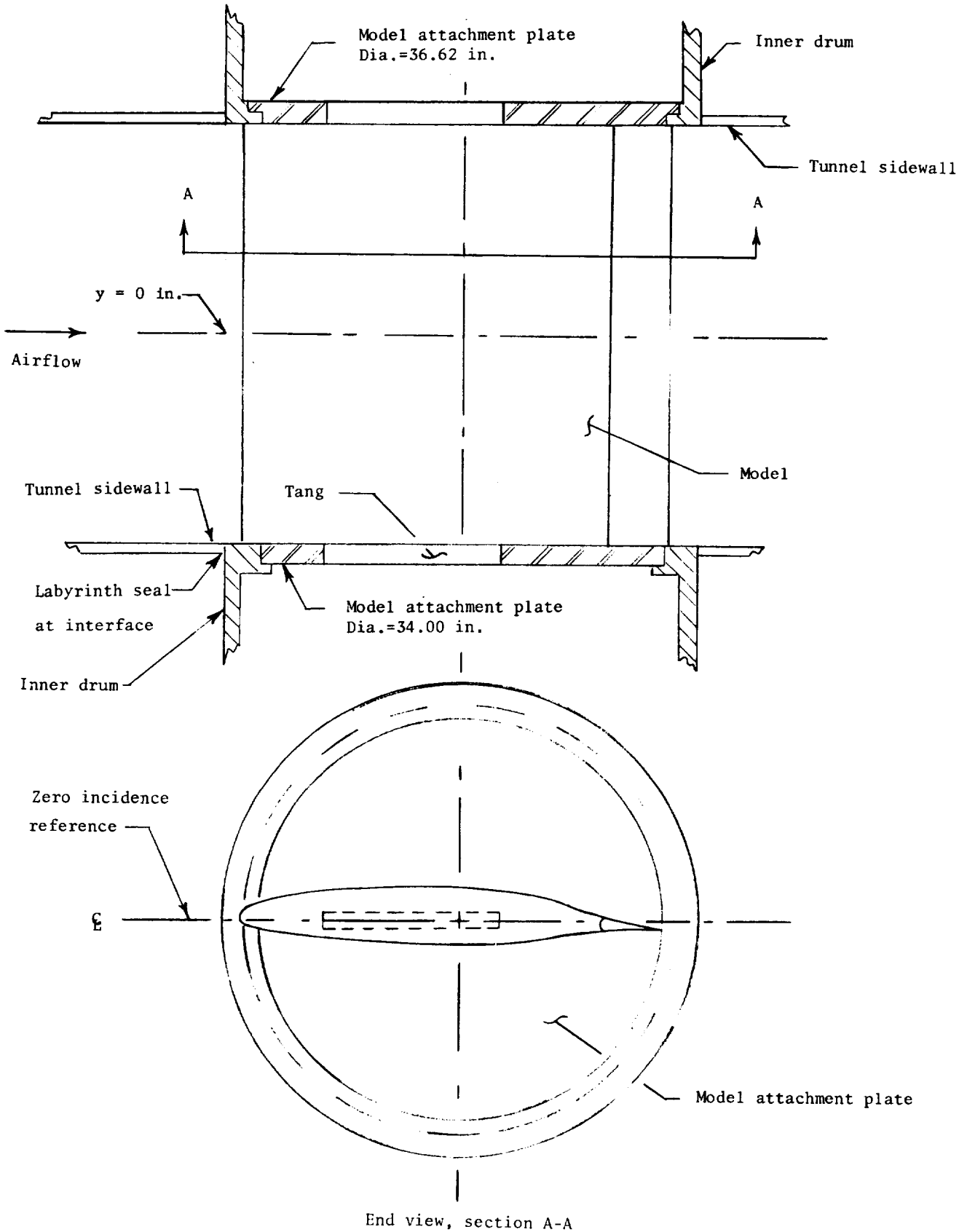

Figure 4.- Airfoil model mounted in wind tunnel.

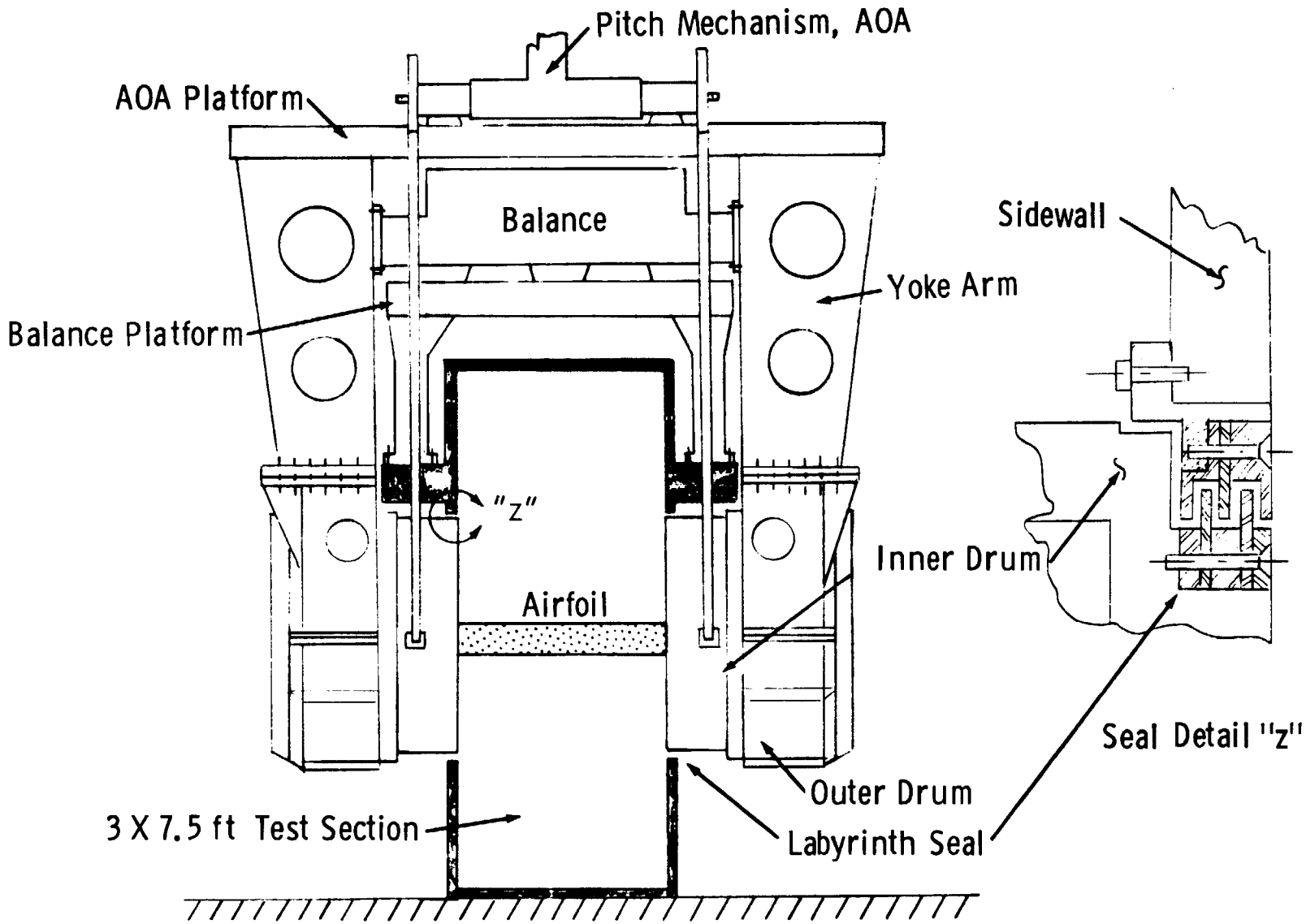

Figure 5.- Model support and force balance system for the Langley Low-Turbulence Pressure Tunnel (looking upstream).

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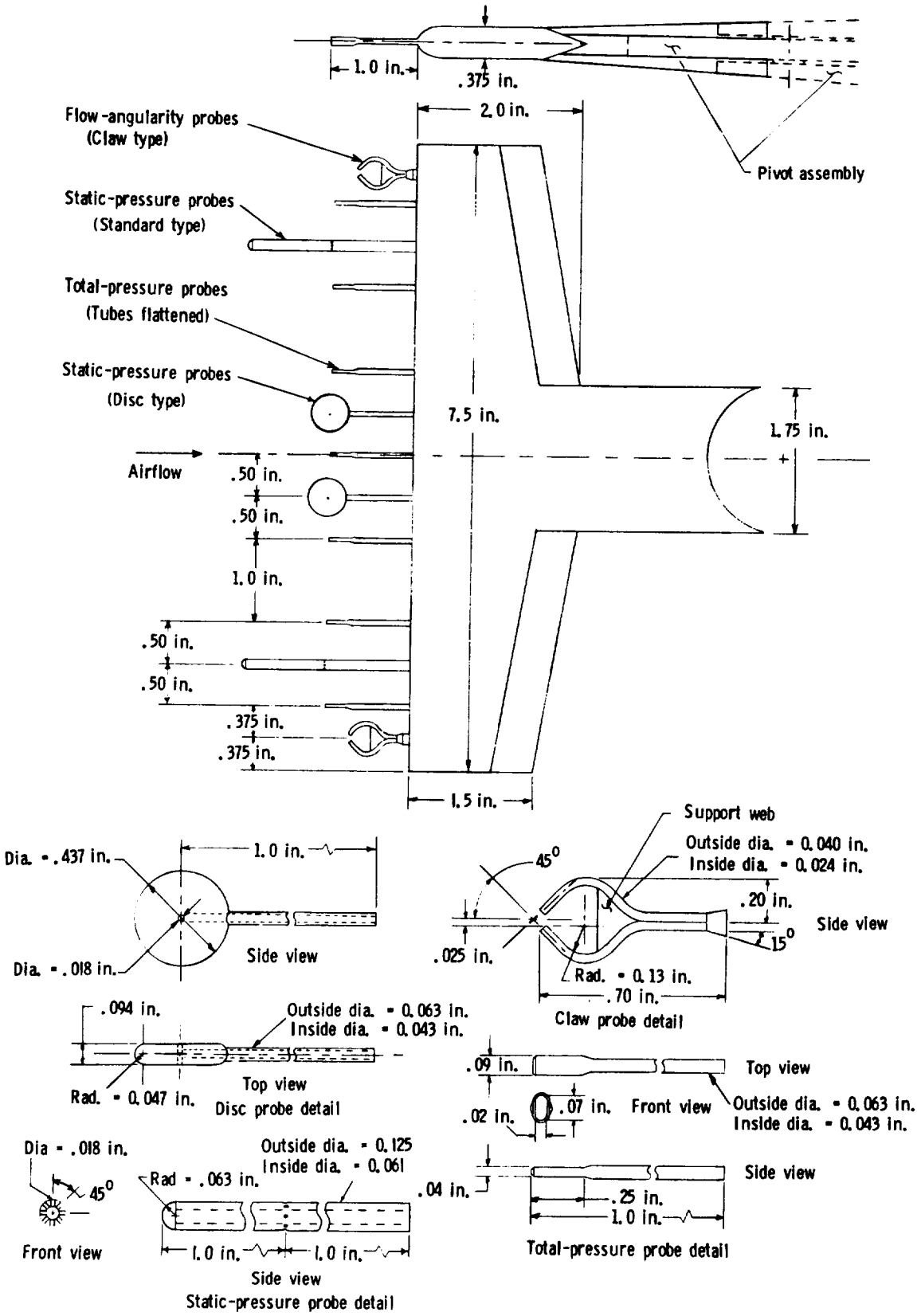

Figure 6.- Wake survey rake.

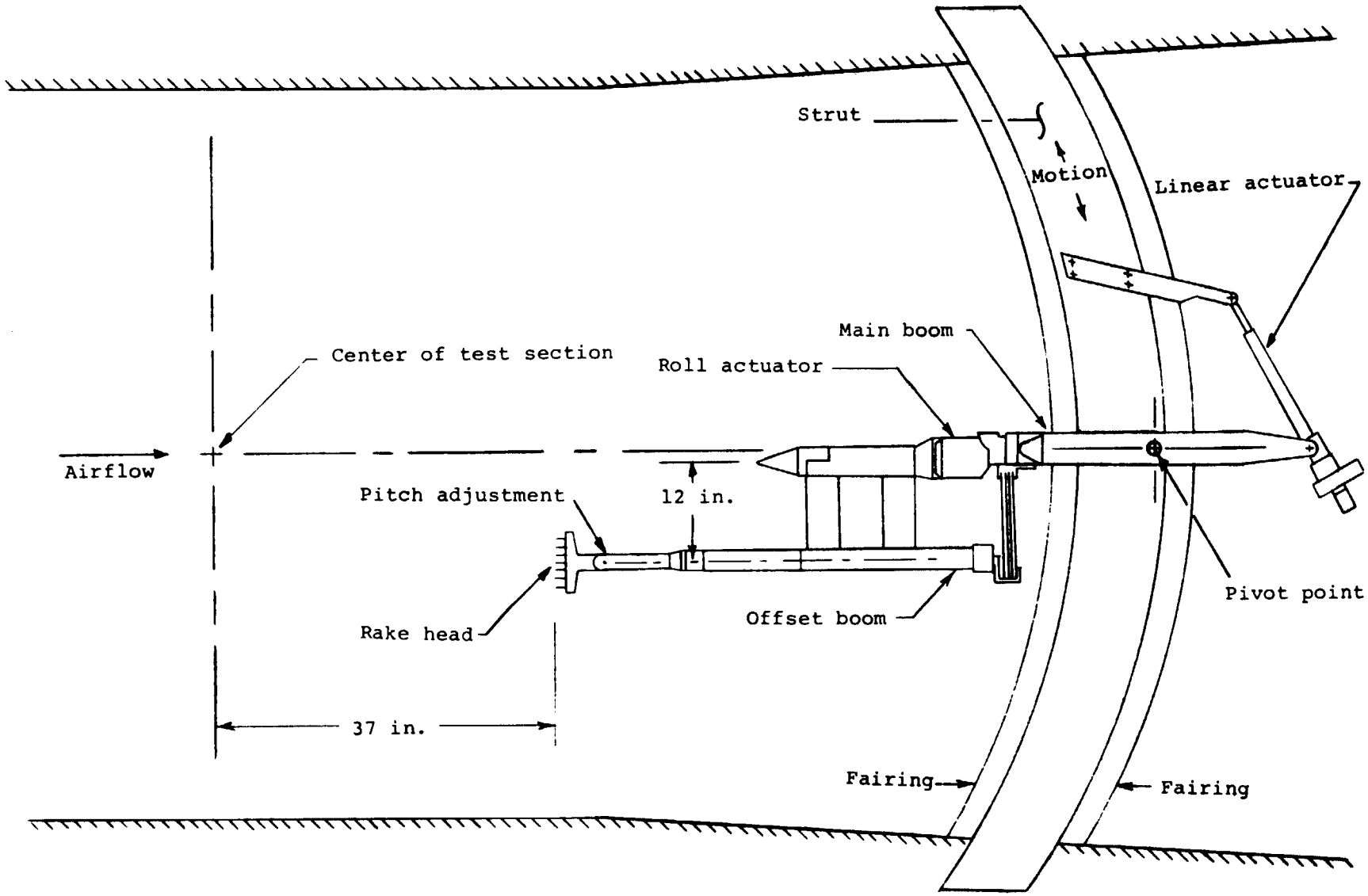

Figure 7.- Sketch of remote controlled survey apparatus for the Langley Low-Turbulence Pressure Tunnel.

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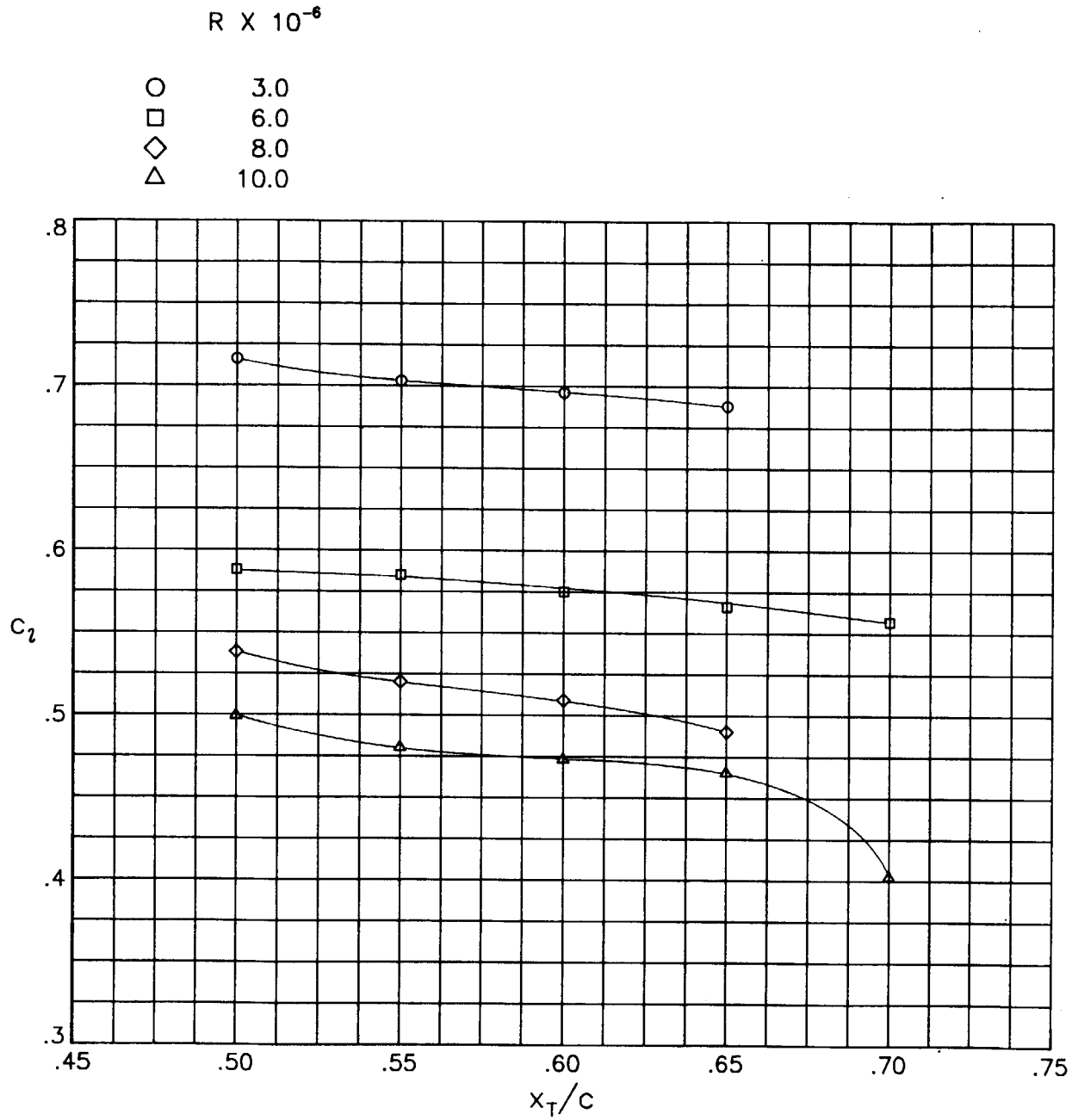

Figure 8. - Transition location as determined from hot-film data.

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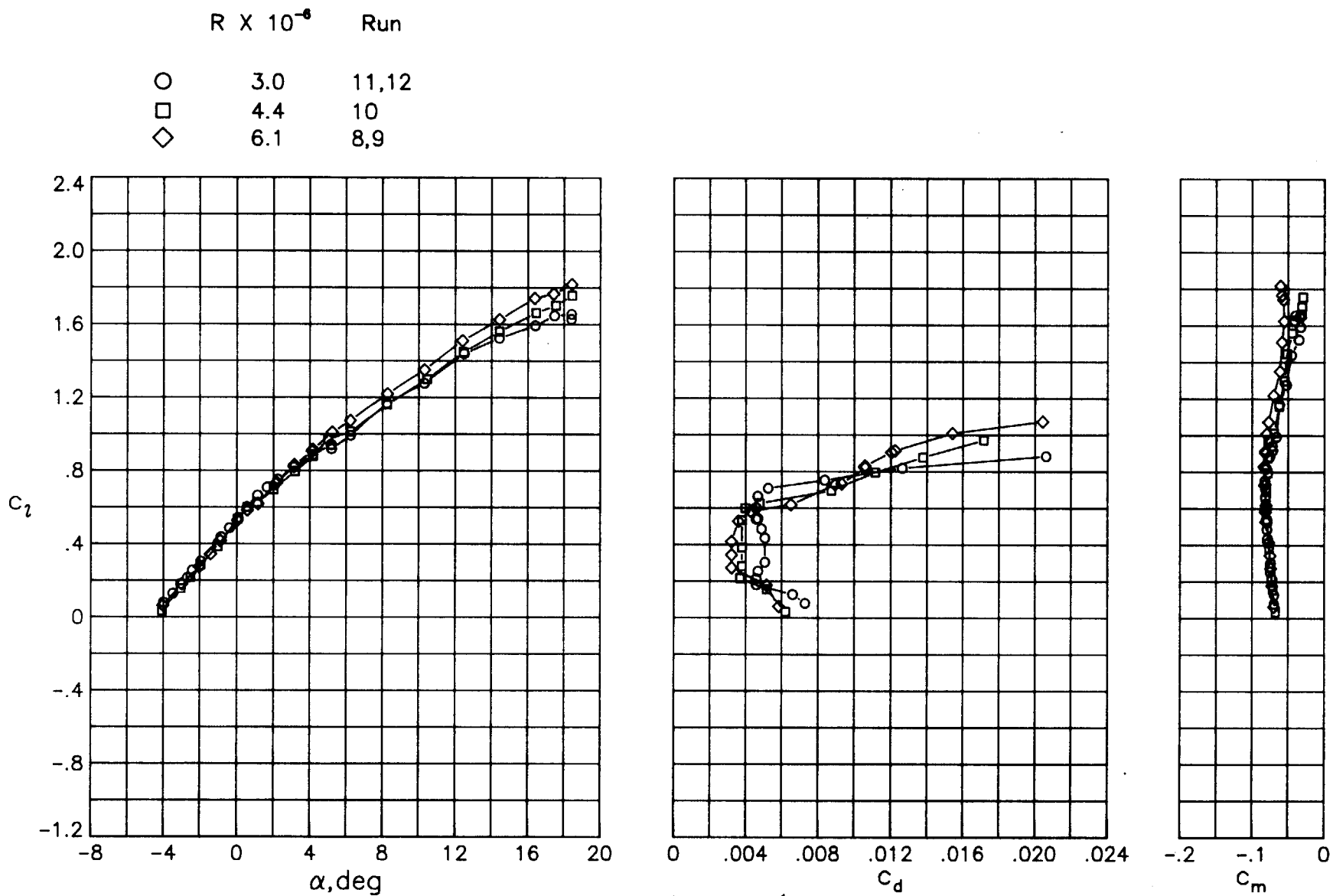

(a) R from 3.0×10^6 to 6.1×10^6.

Figure 9. - Effect of Reynolds number on section characteristics.

Model smooth; $M \leq 0.12$; $\delta_f = 0^\circ$.

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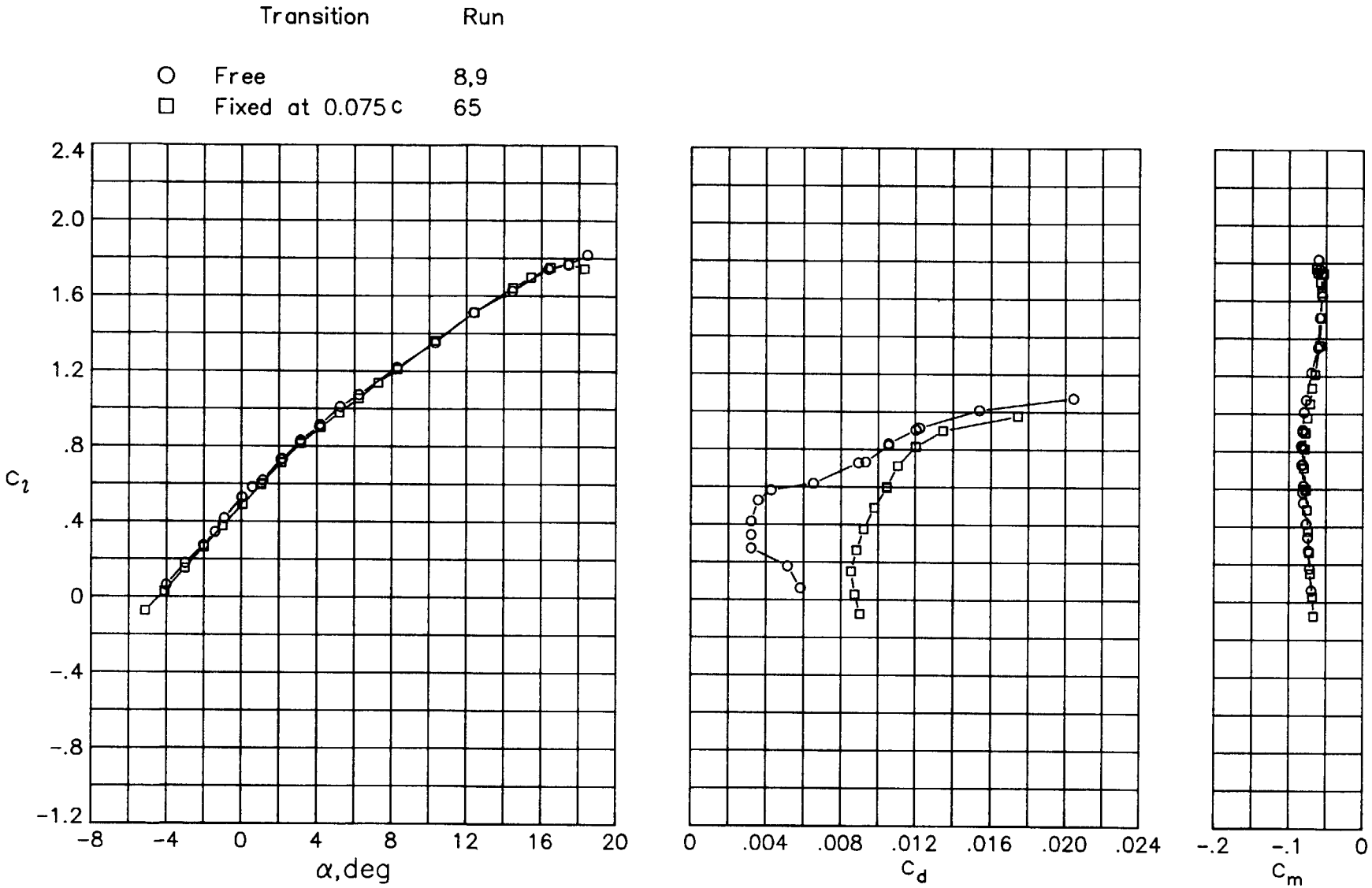

(a) R = 6.0 x 10^6.

Figure 11. - Effect of roughness on section characteristics.

M ≤ 0.12; $\delta_f = 0^0$.

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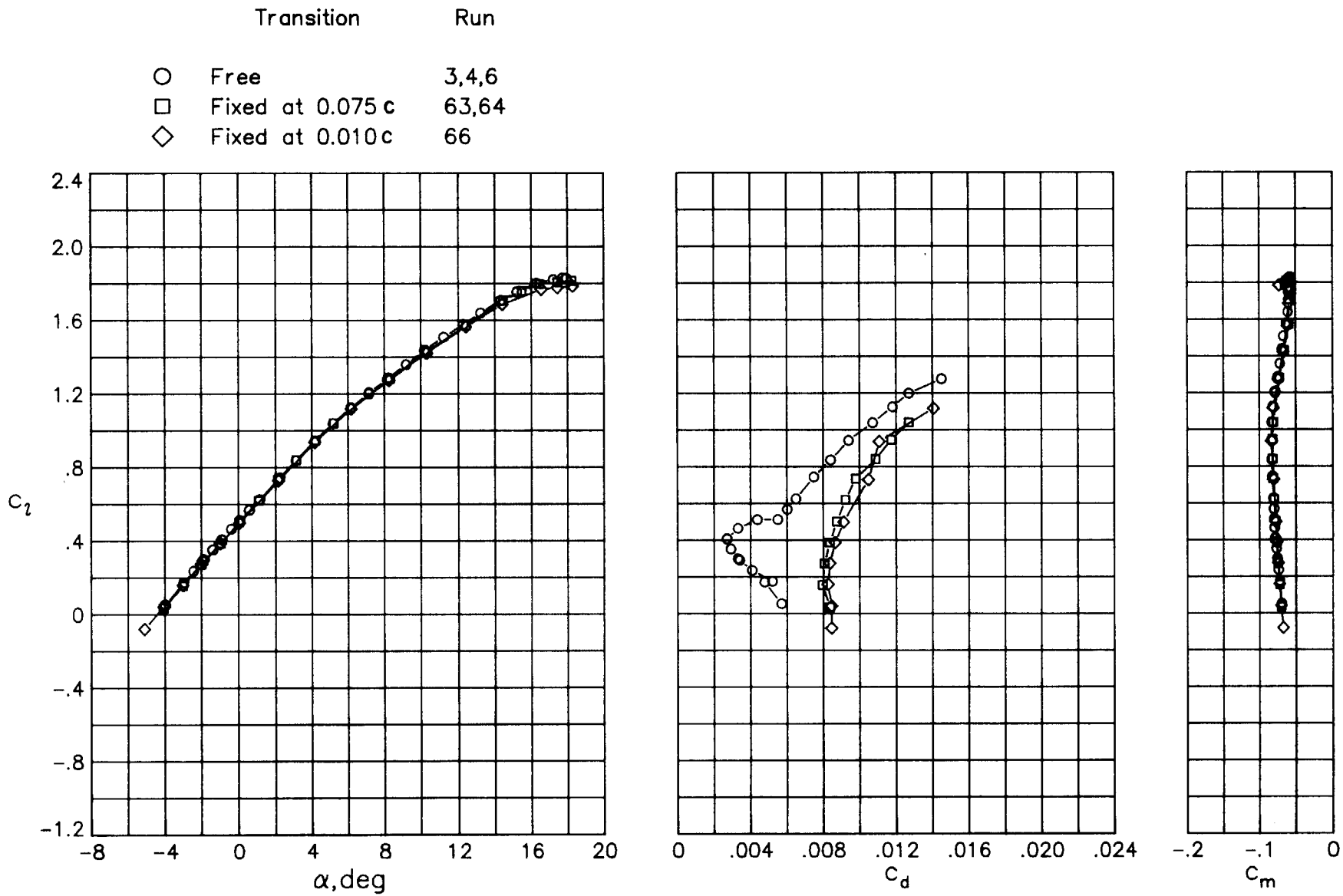

(b) R = 10.0 x 10^6.

Figure 11. - Concluded.

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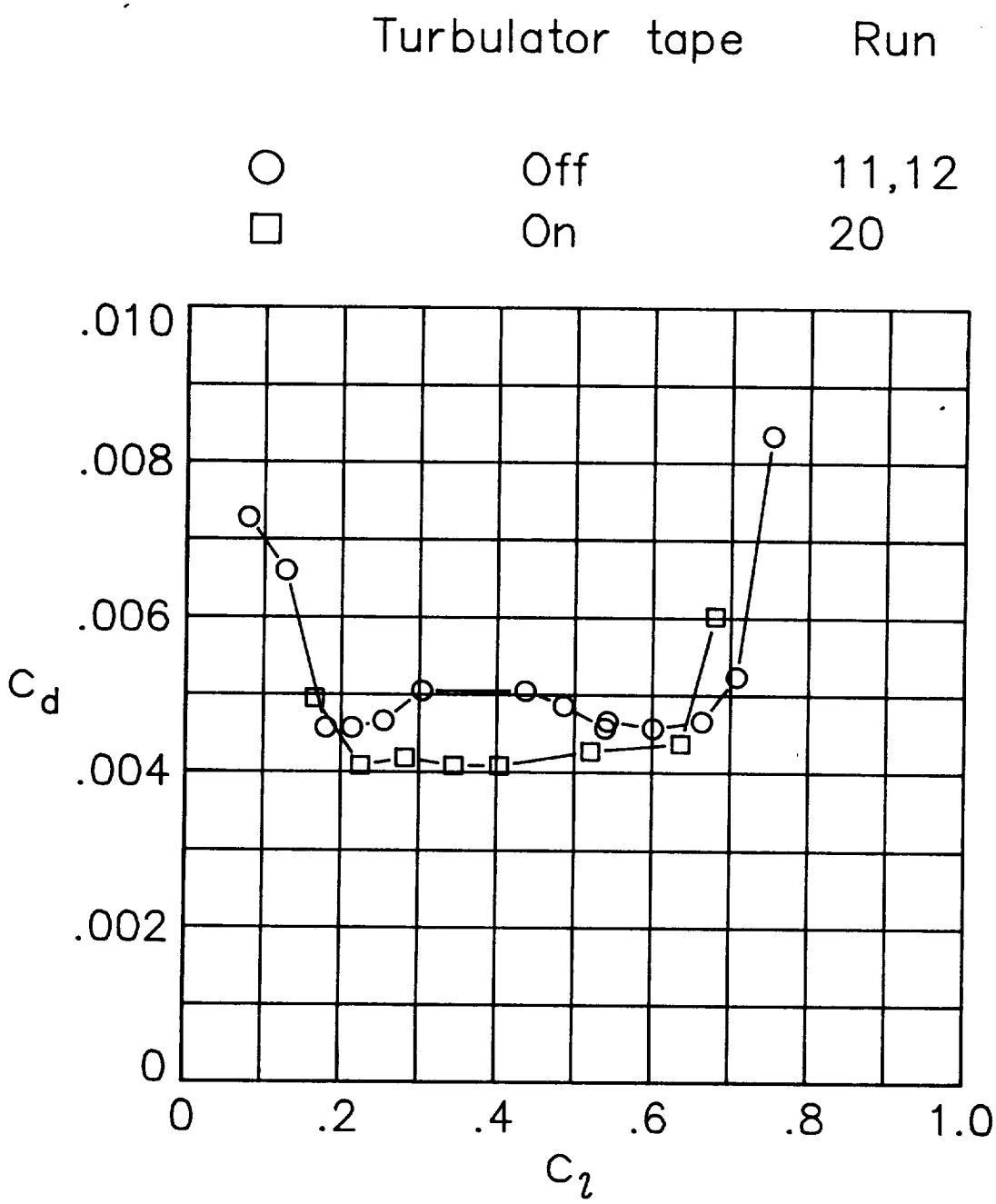

(a) R = 3.0 x 10^6.

Figure 12. - Effect of turbulator tape on section characteristics.

$M \leq 0.20$; $\delta_f = 0^0$.

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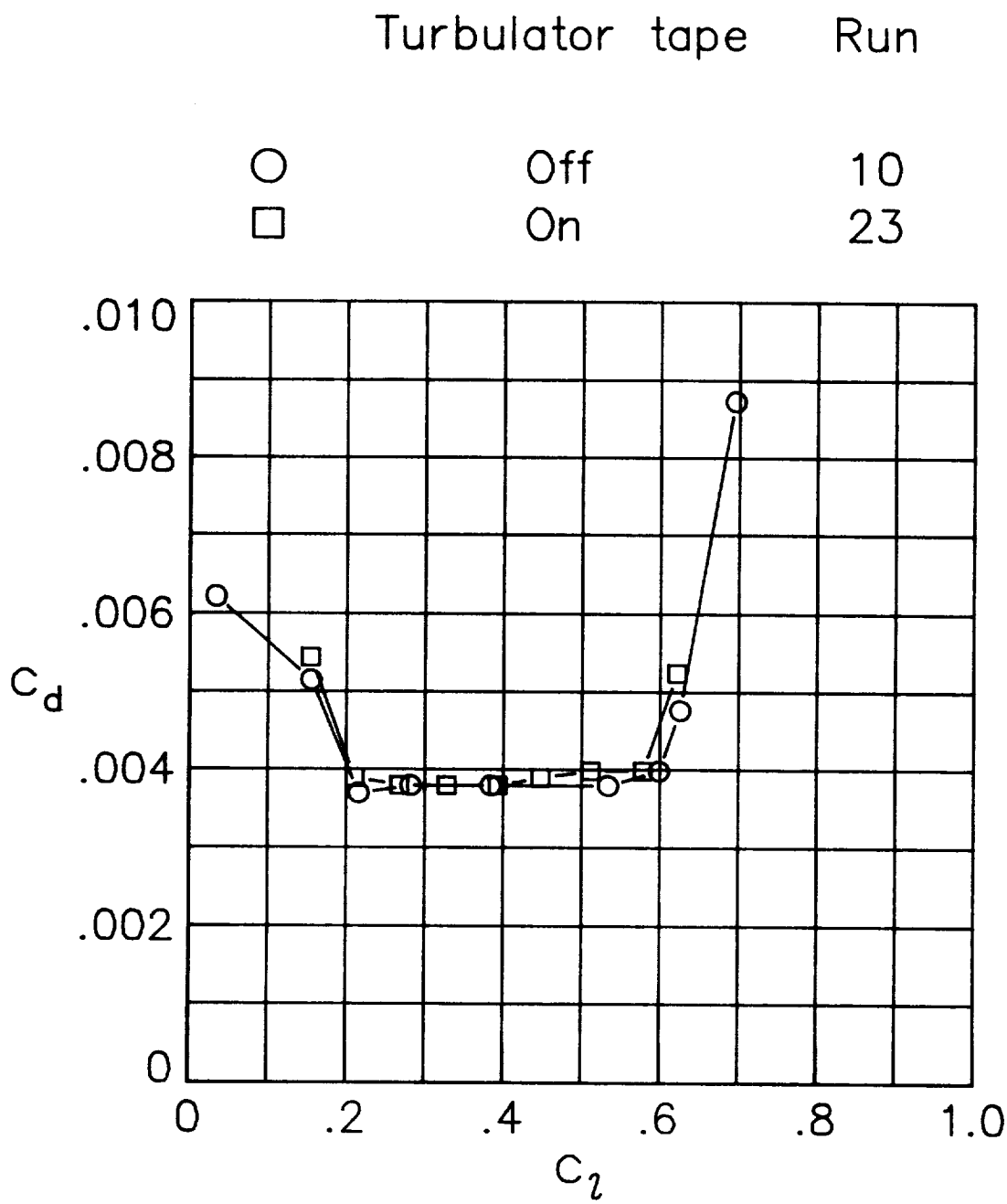

(b) R = 4.0 x 10^6.

Figure 12. - Continued.

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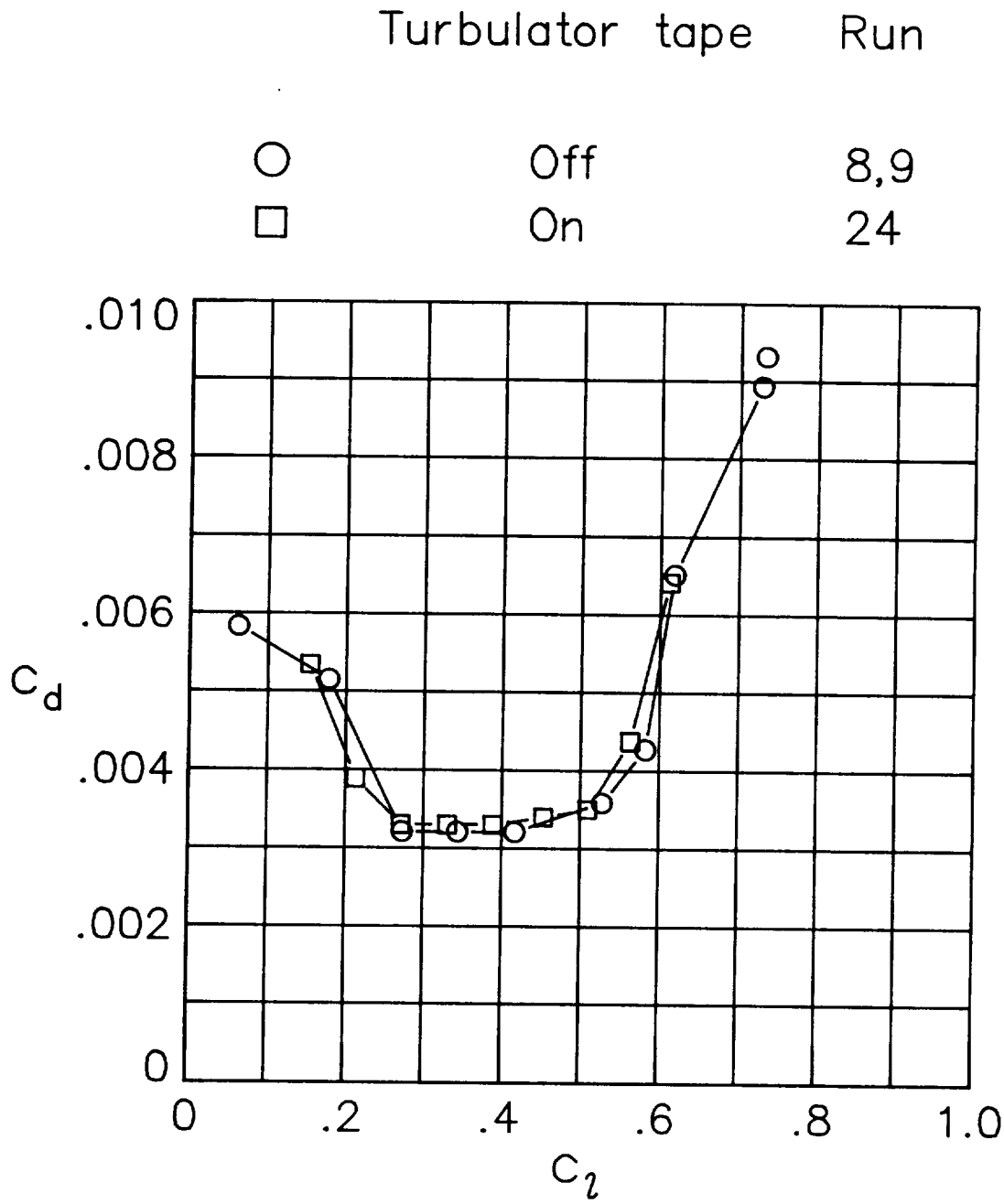

(c) R = 6.0 x 10^6.

Figure 12. - Continued.

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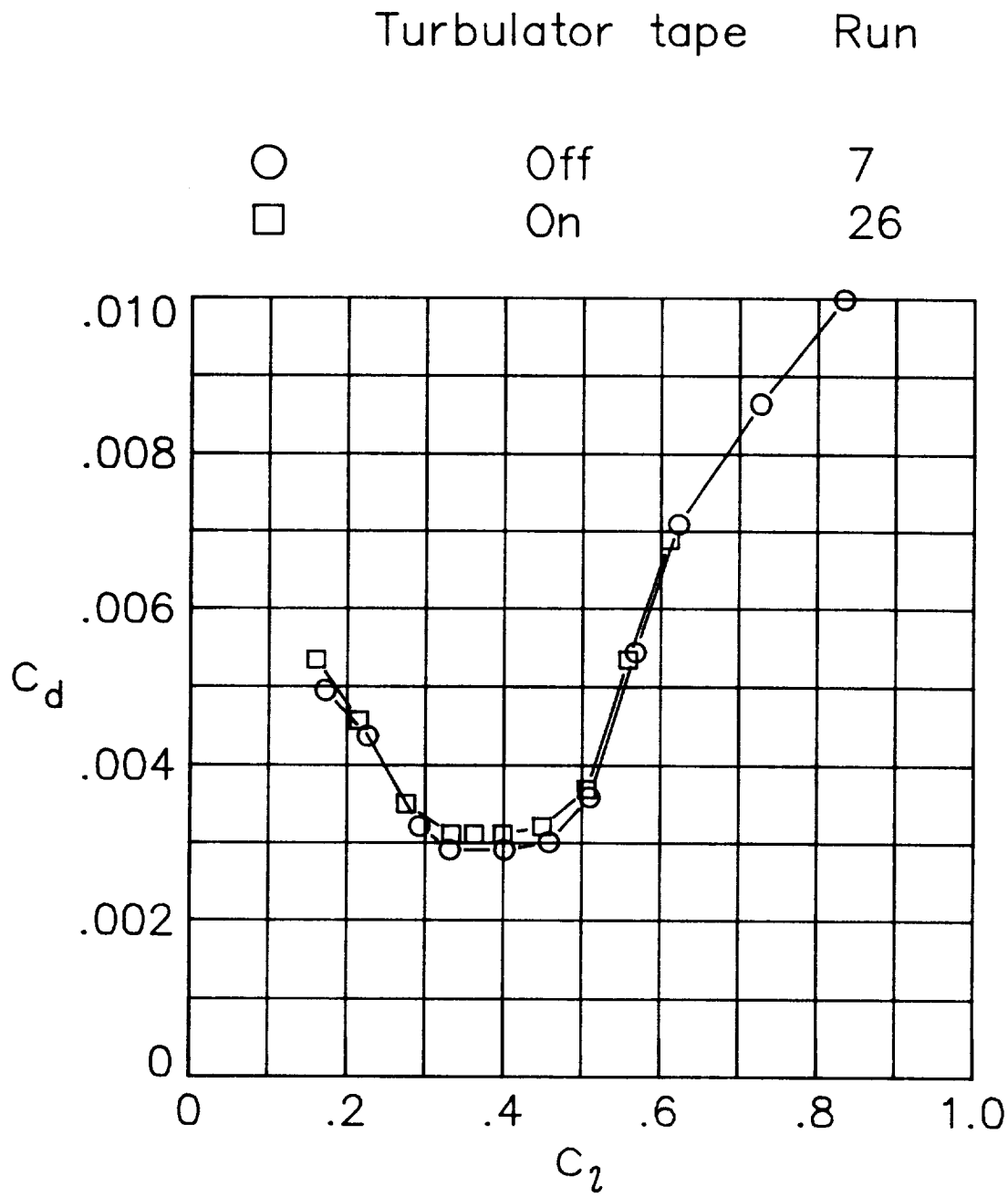

(d) R = 8.0 x 10^6.

Figure 12. - Continued.

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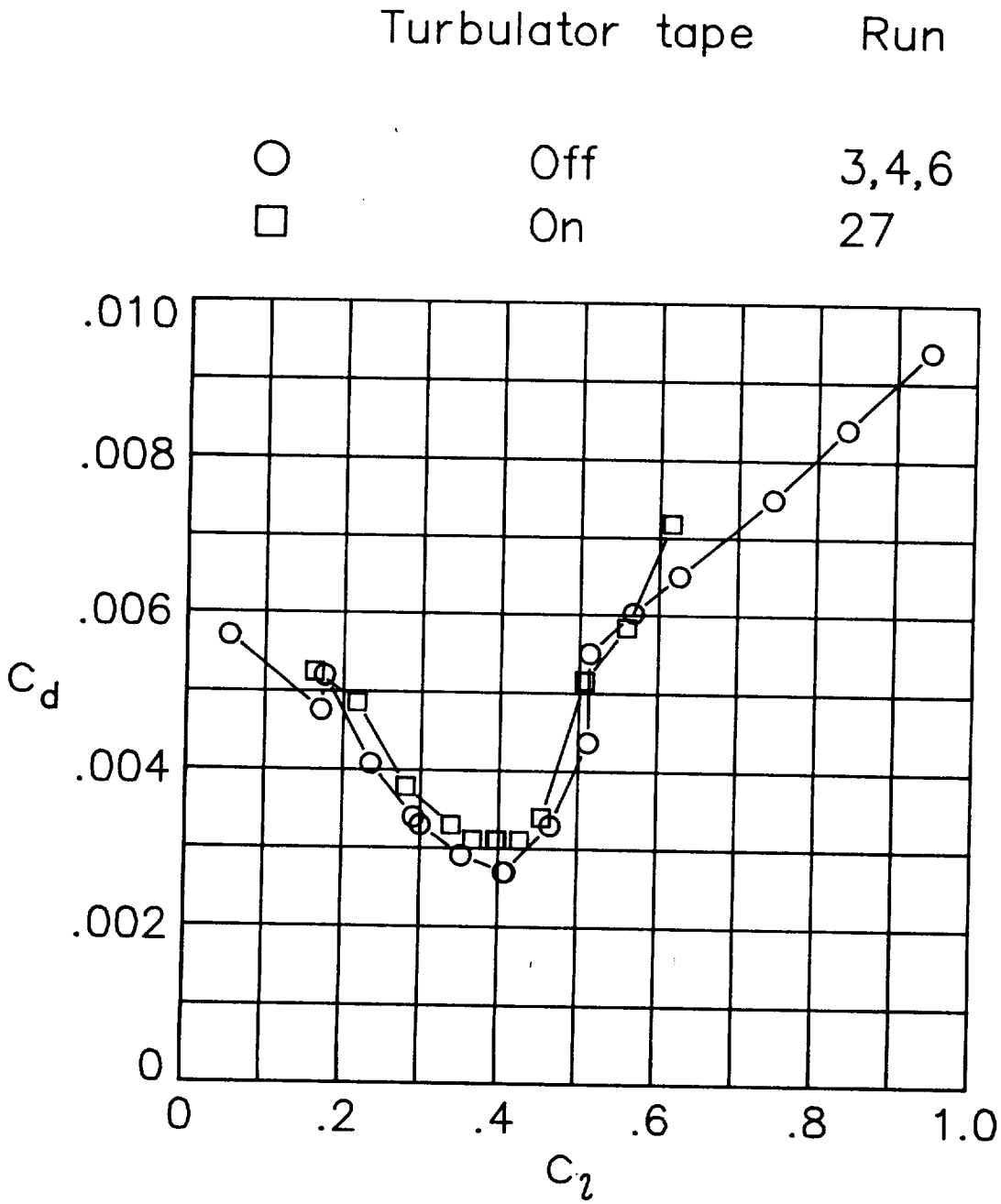
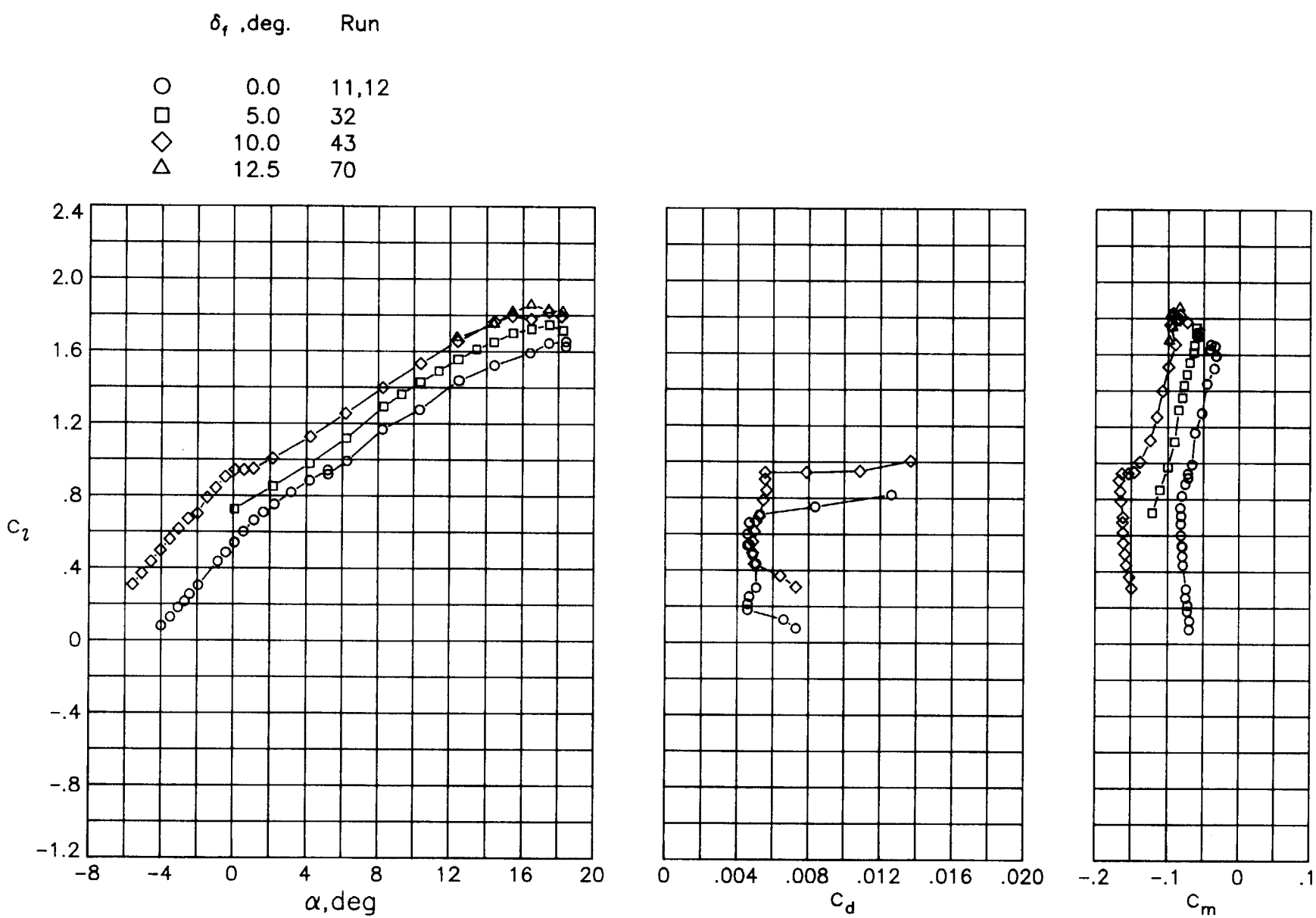


(e) R = 10.0 x 10^6.

Figure 12. - Concluded.



(a) R = 3.0 x 10^6.

Figure 13. - Effect of flap deflection on section characteristics.

Model smooth; M ≤ 0.12.

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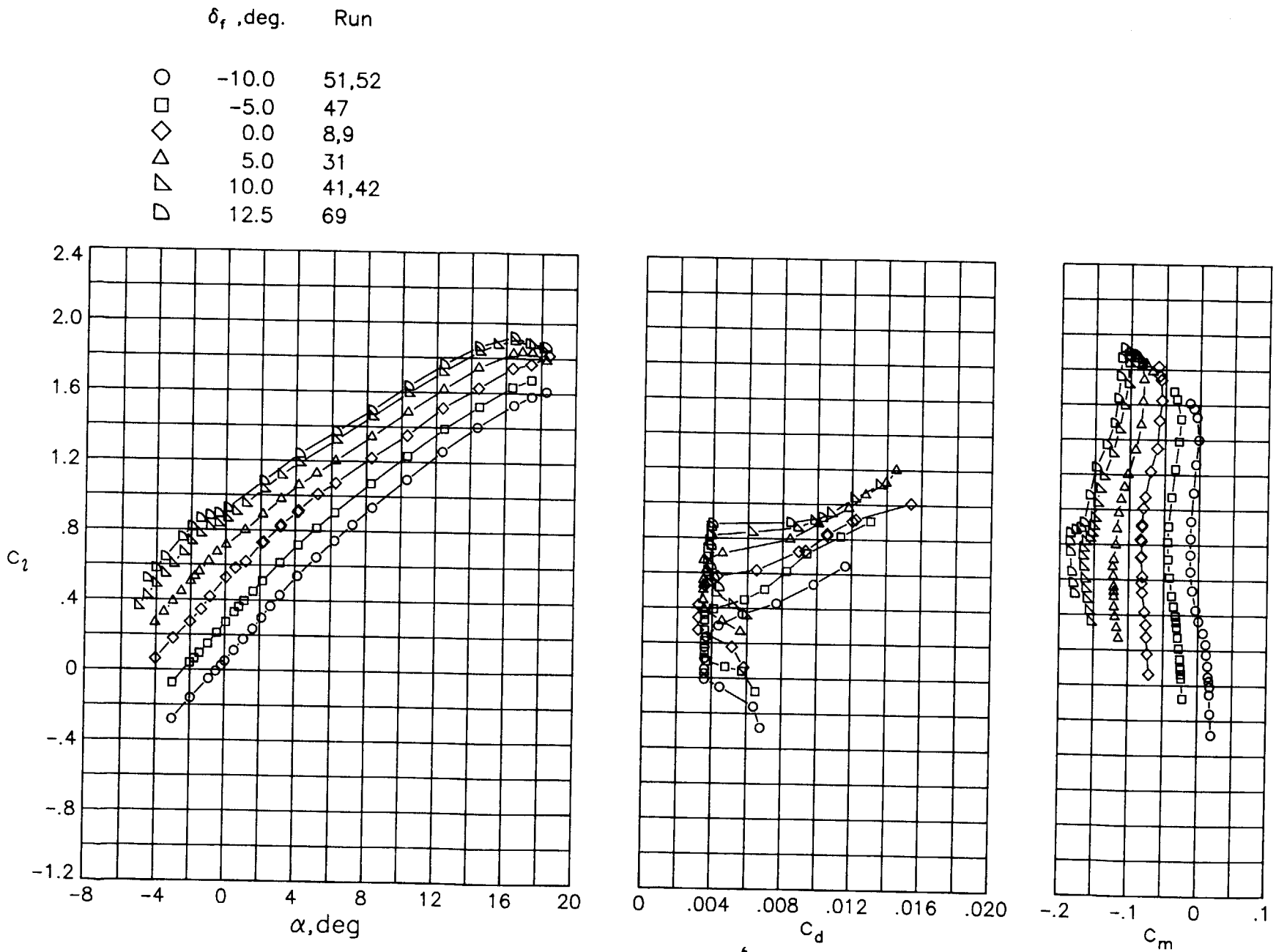

(b) R = 6.0 x 10^6.

Figure 13. - Continued.

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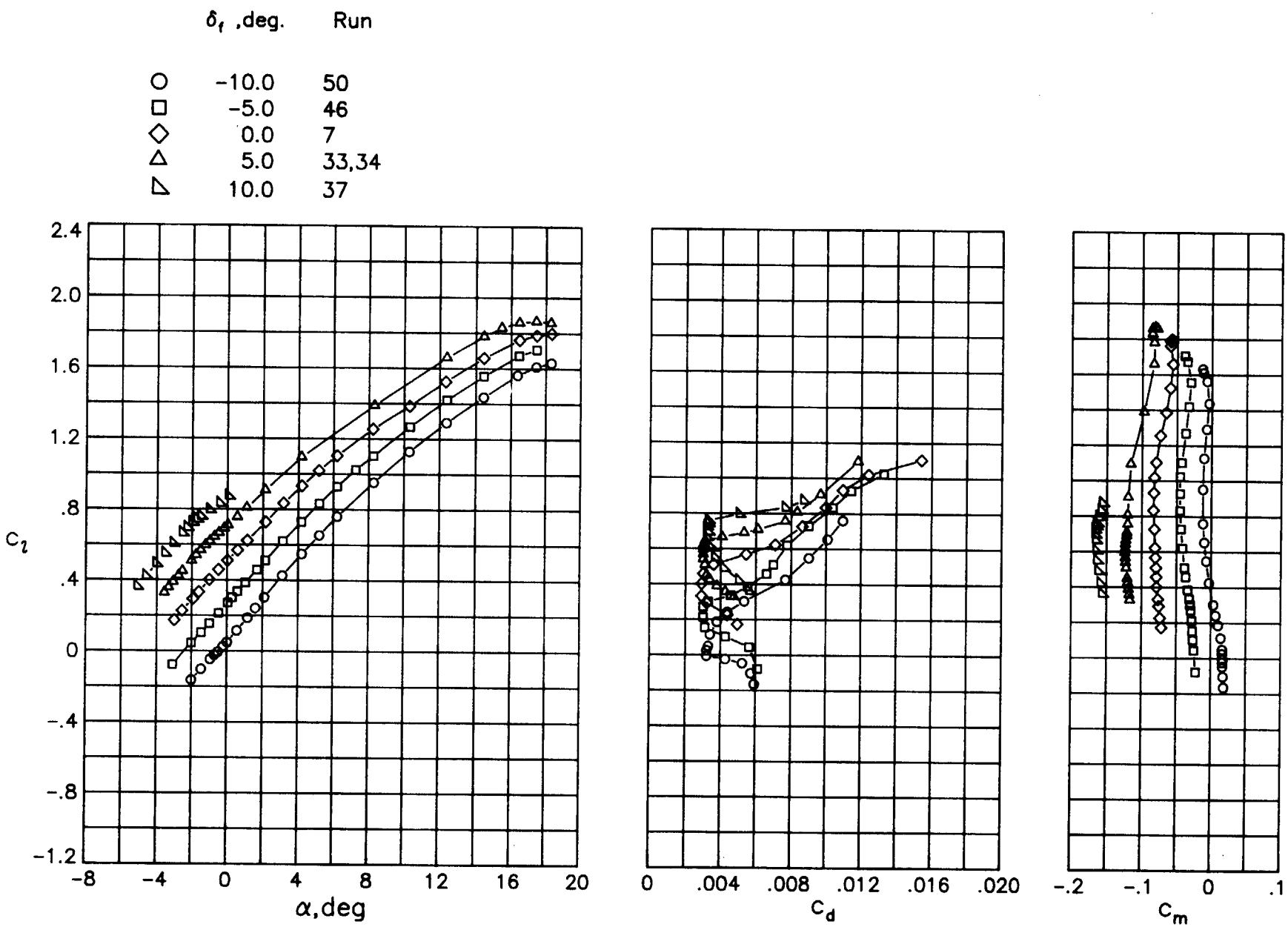

(c) R = 8.0 x 10^6.

Figure 13. - Continued.

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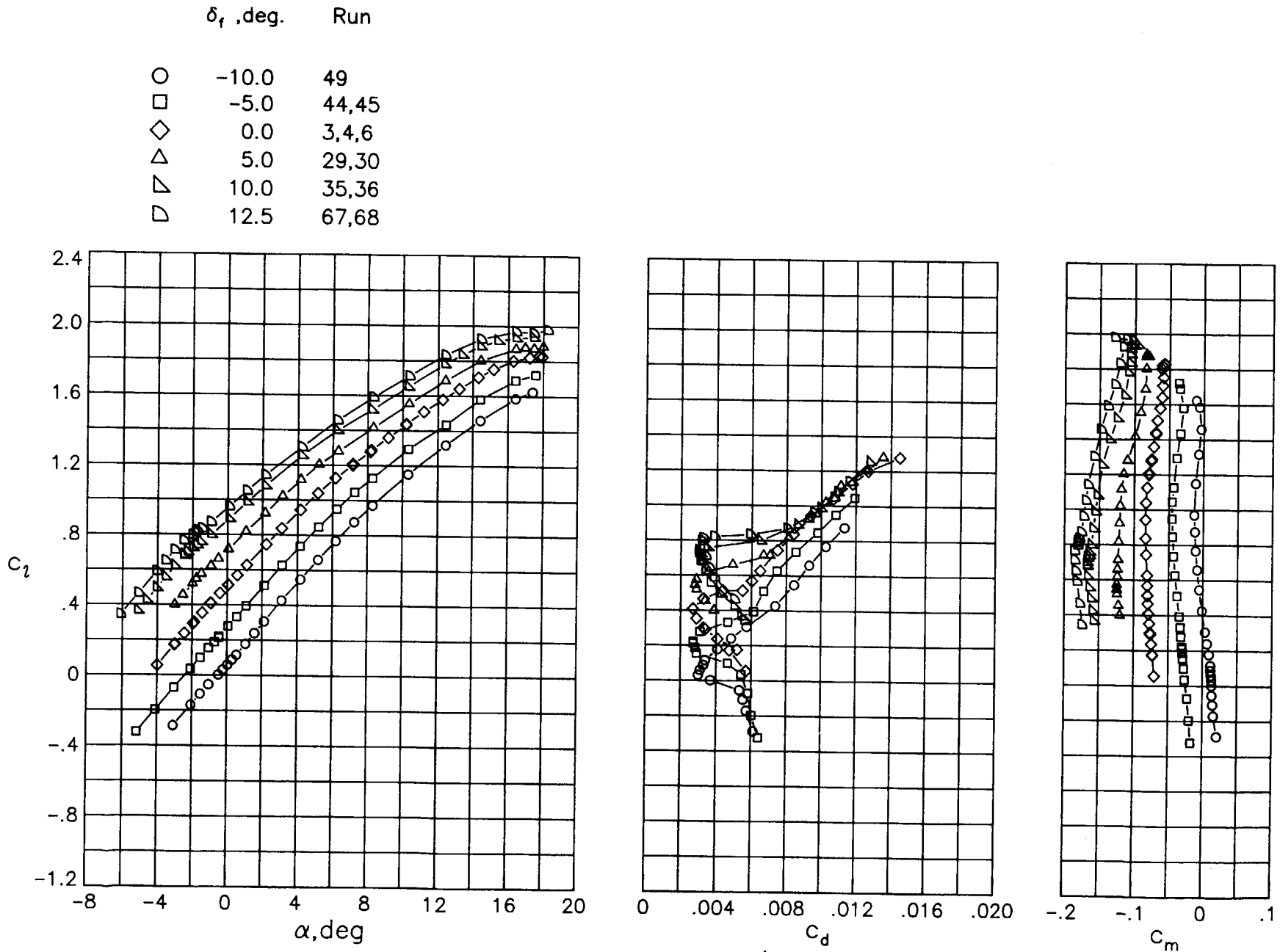

(d) R = 10.0 x 10^6.

Figure 13. - Concluded.

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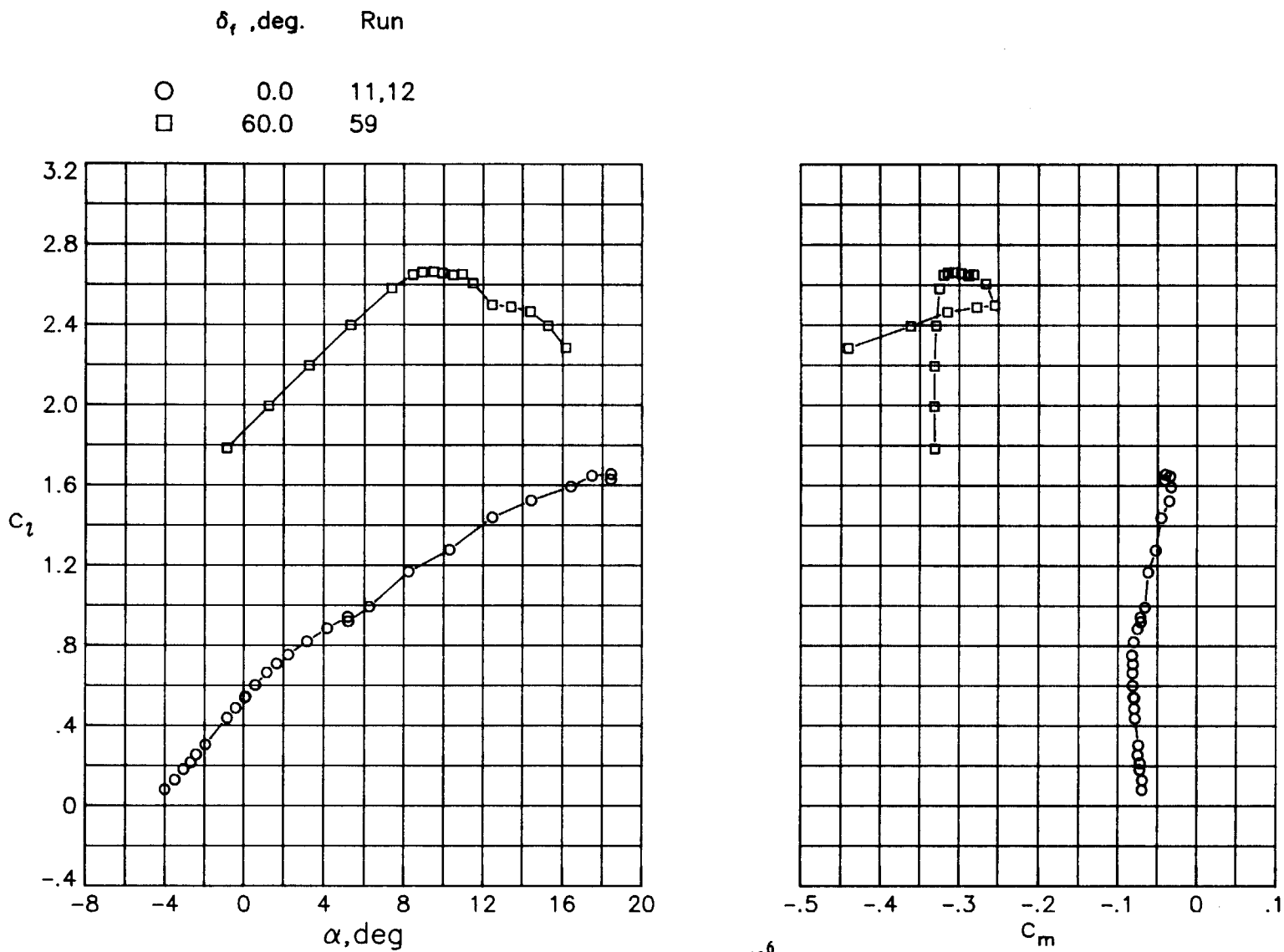

(a) R = 3.0 x 10^6.

Figure 14. - Section characteristics for 0.20c split flap deflected 60^0. Model smooth; M ≤ 0.15.

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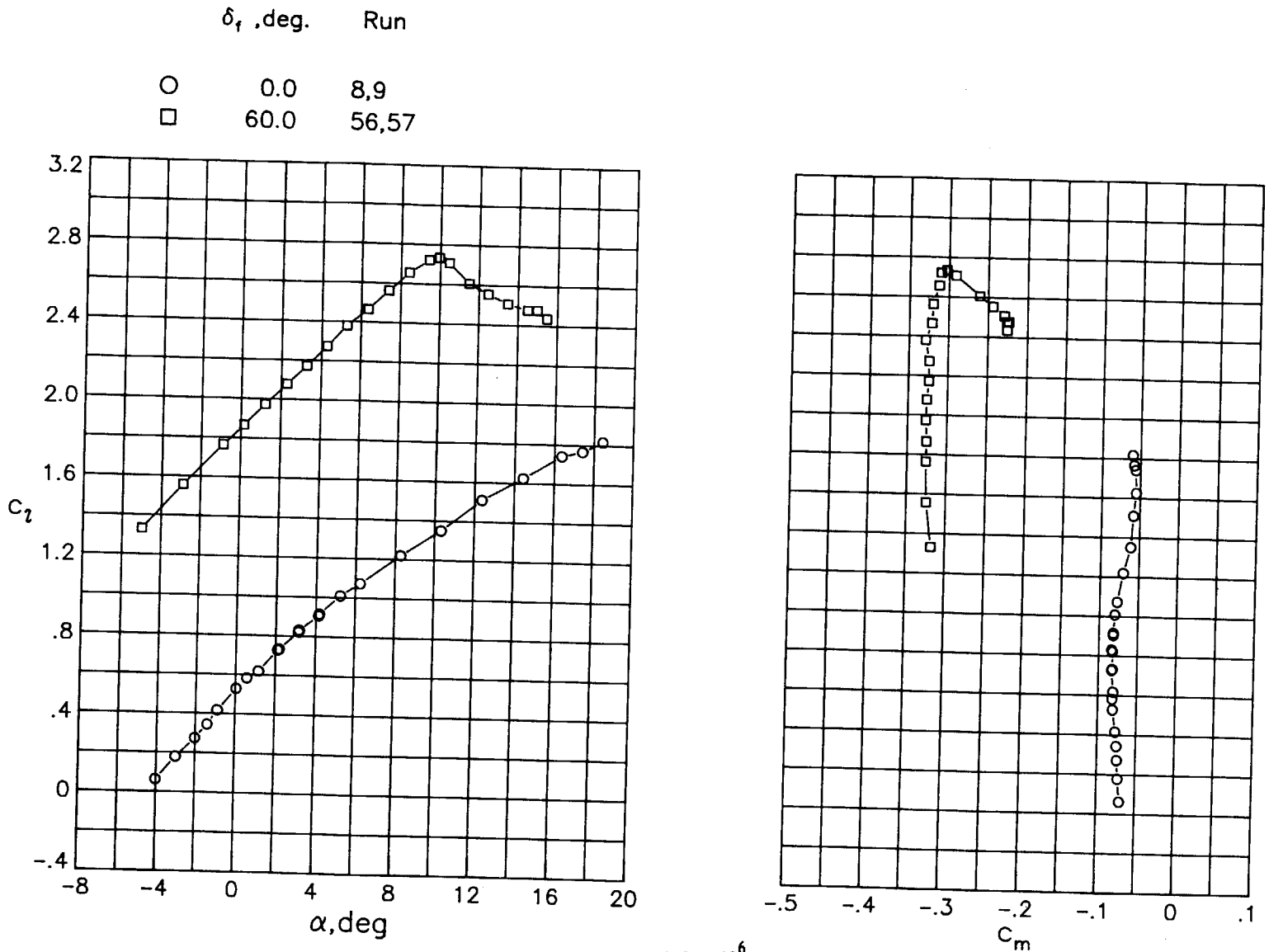

(b) R = 6.0 x 10^6.

Figure 14. - Concluded.

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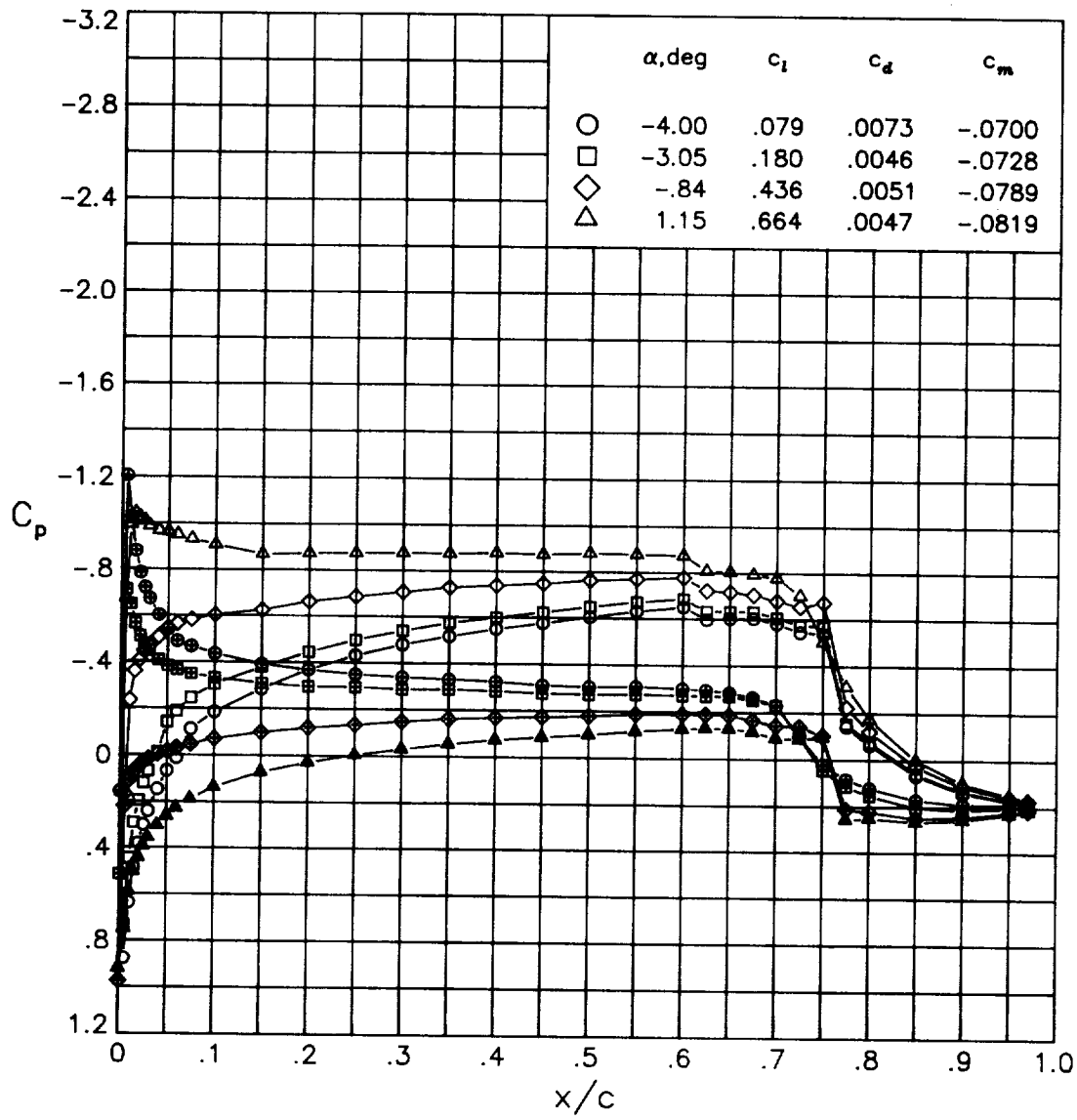

(a) R = 3.0 x 10^6.

Figure 15. - Effect of angle of attack and Reynolds number on chordwise pressure distributions. Model smooth; M ≤ 0.12; $\delta_f = 0^\circ$. (centered symbol designates lower surface)

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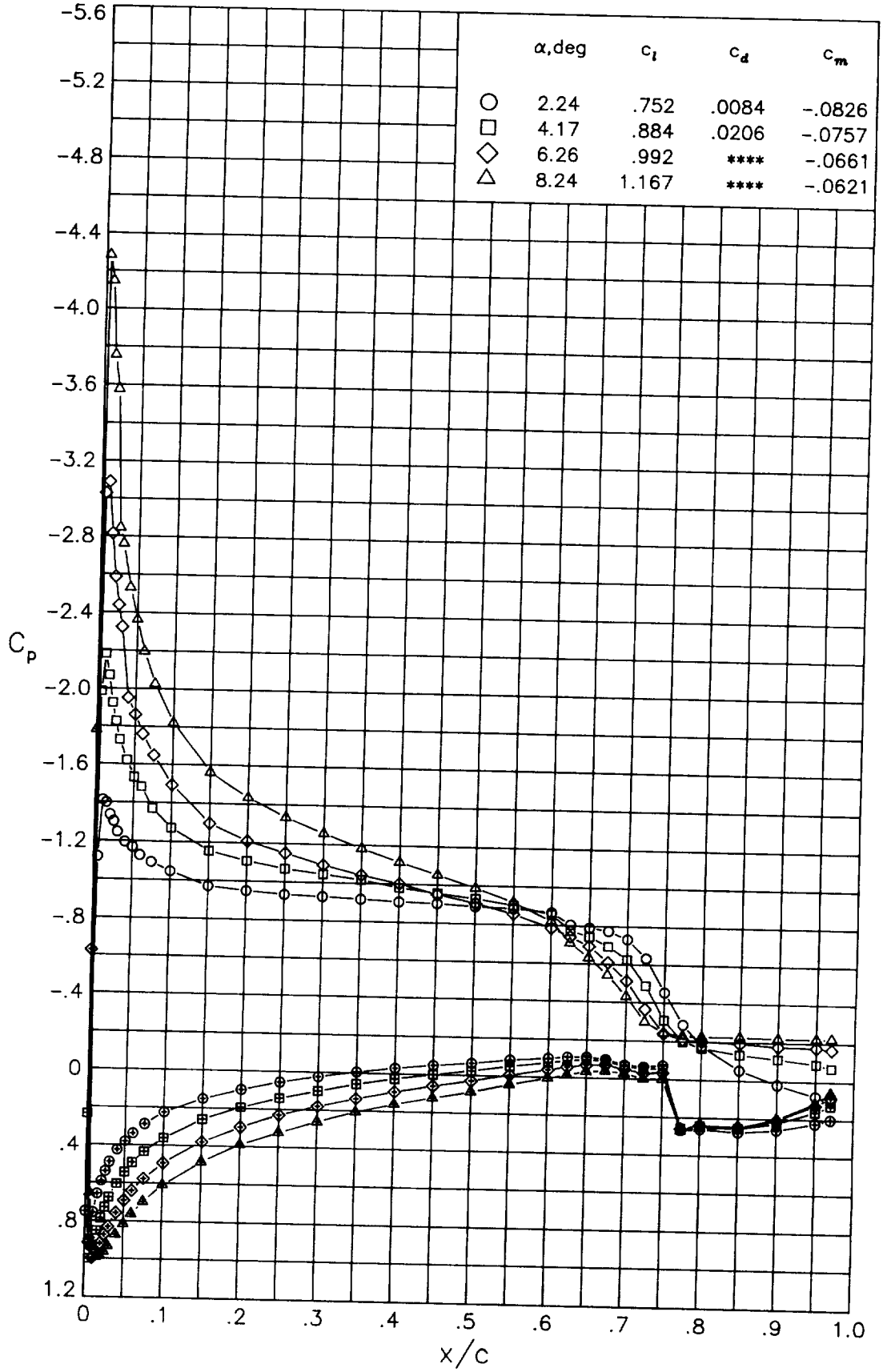

(a) R = 3.0 x 10^6. Continued.

Figure 15. - Continued.

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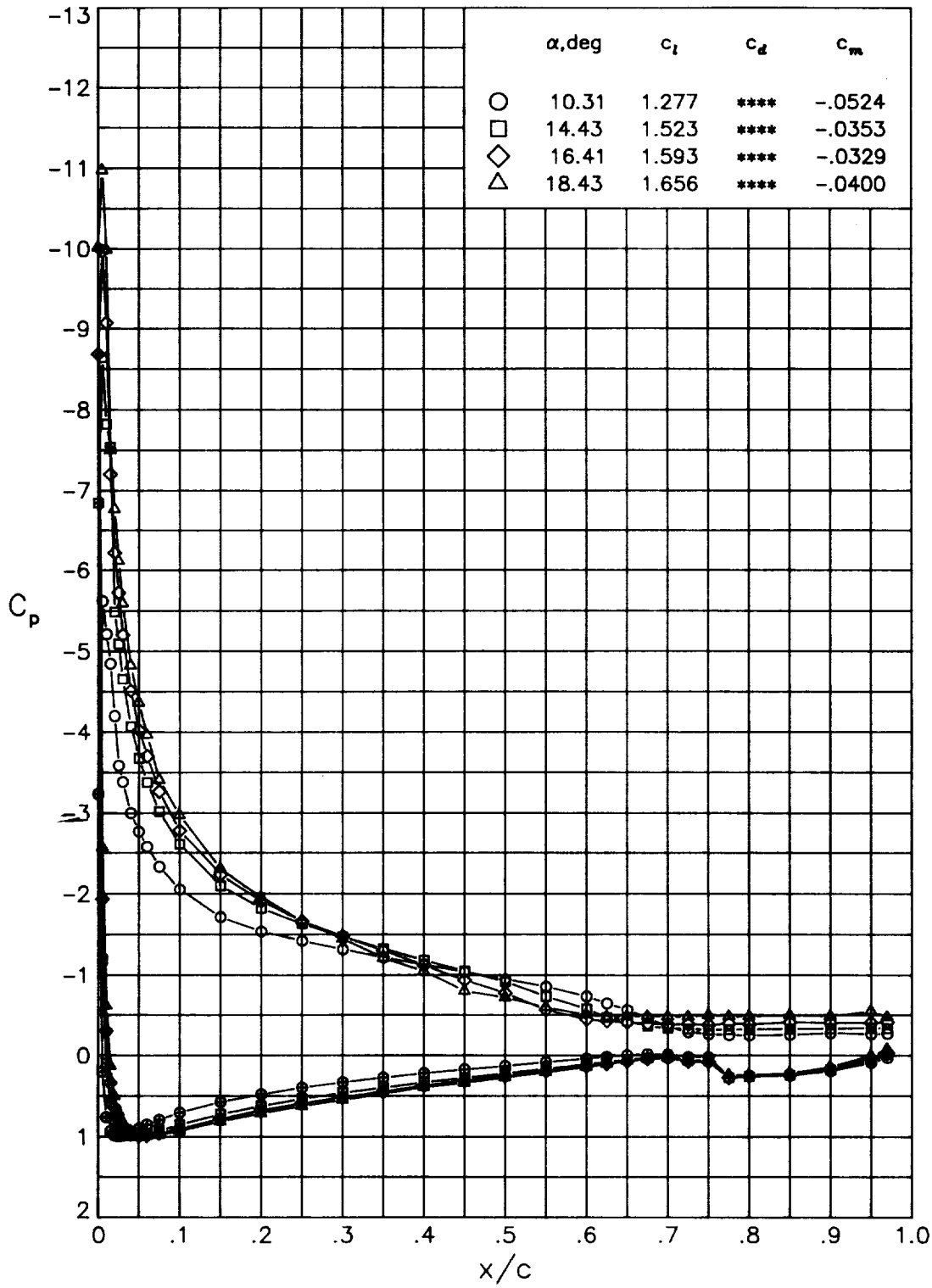

(a) R = 3.0 x 10^6. Concluded.

Figure 15. - Continued.

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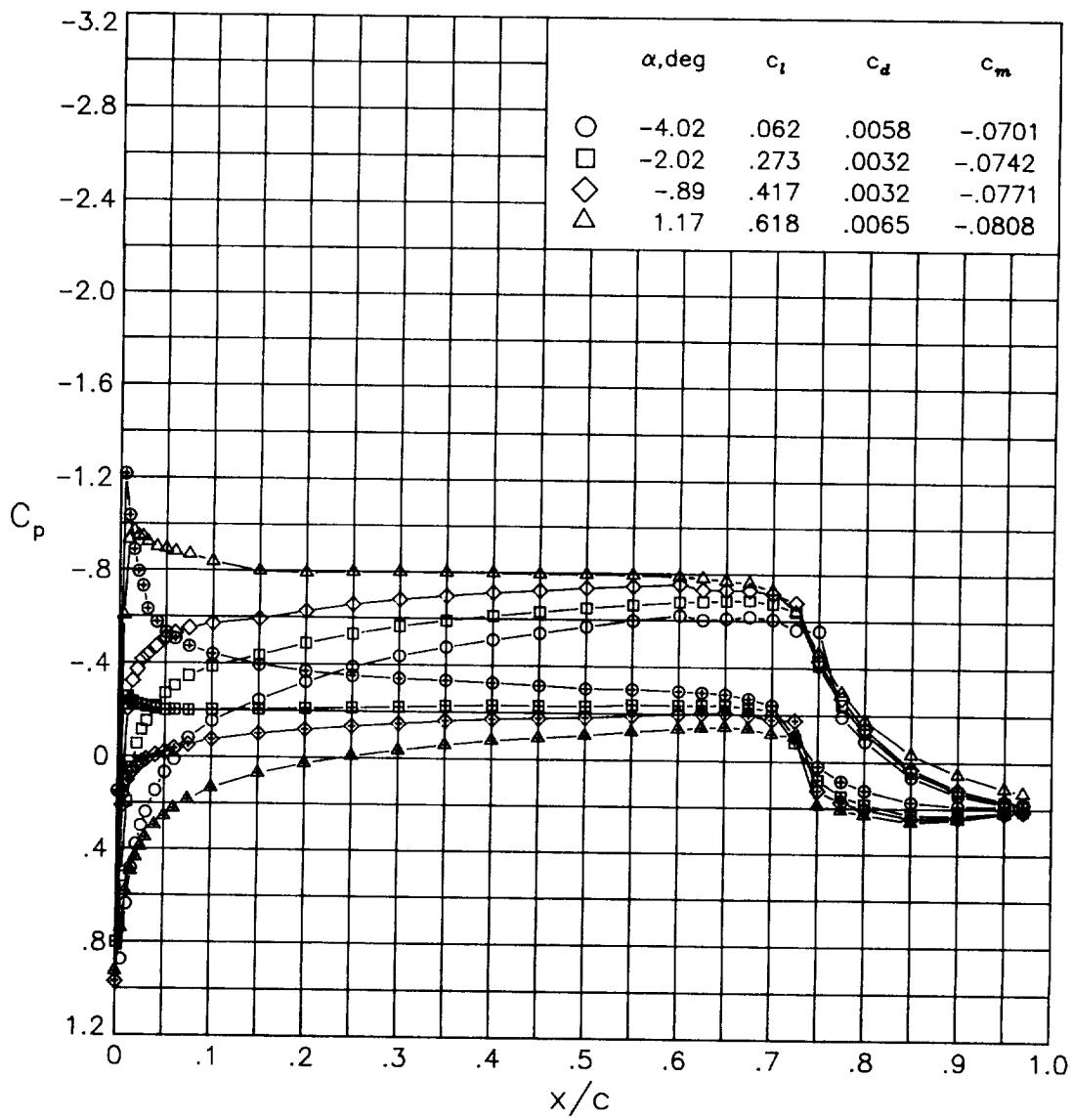
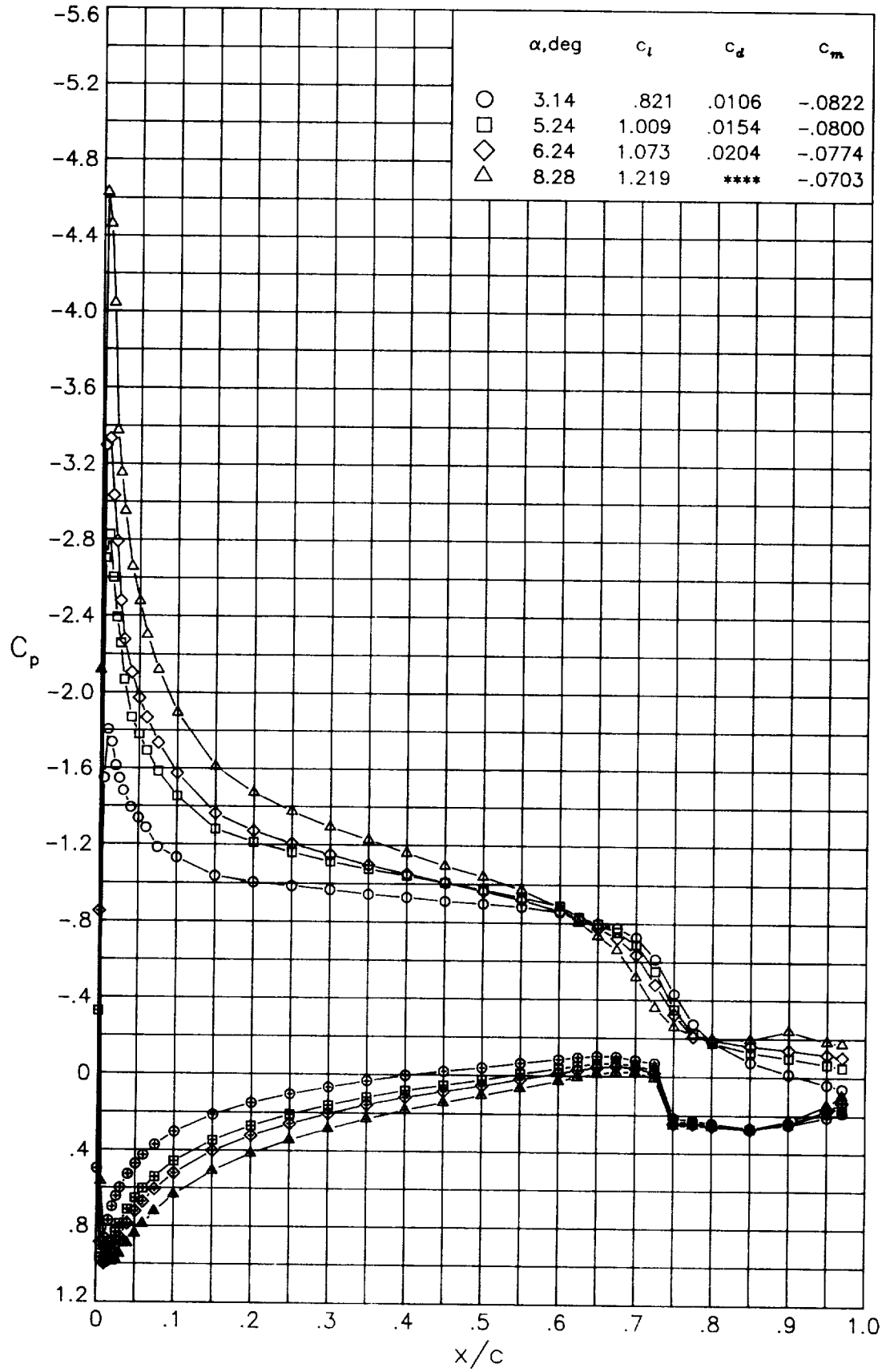


(b) R = 6.0 x 10^6.

Figure 15. - Continued.



(b) R = 6.0 x 10^6. Continued.

Figure 15. - Continued.

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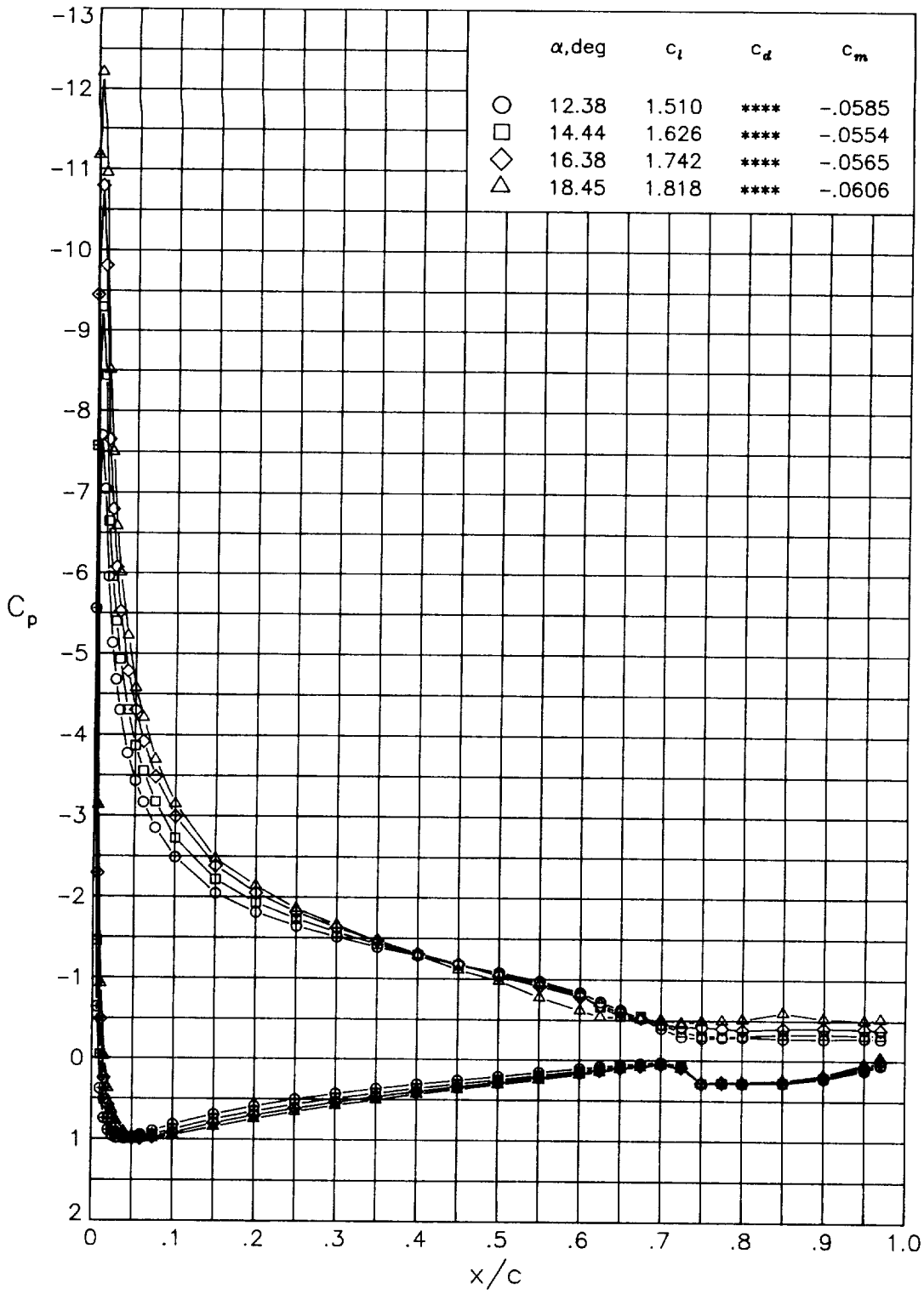

(b) R = 6.0 x 10^6 . Concluded.

Figure 15. - Continued.

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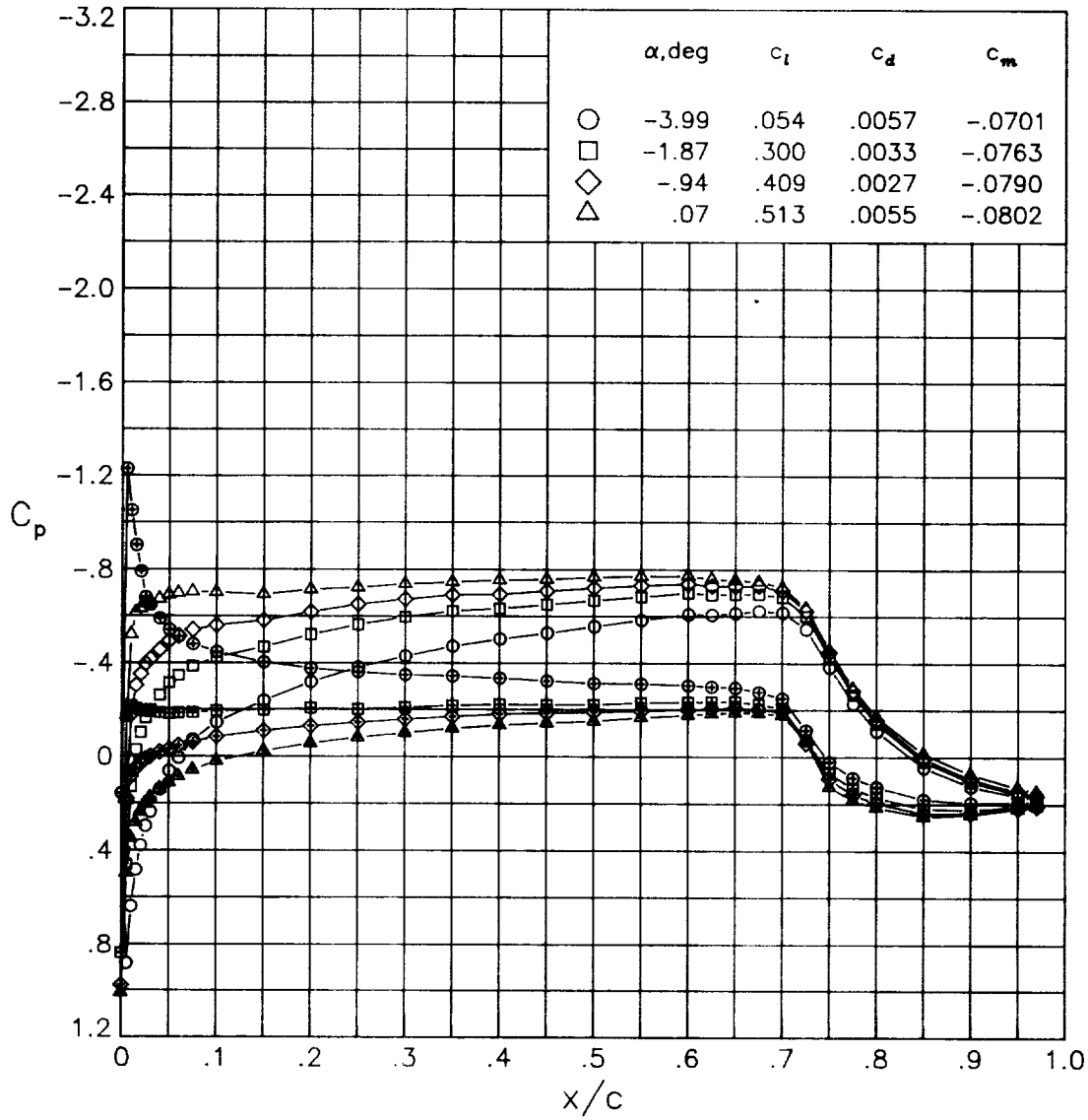

(c) R = 10.0 x 10^6.

Figure 15. - Continued.

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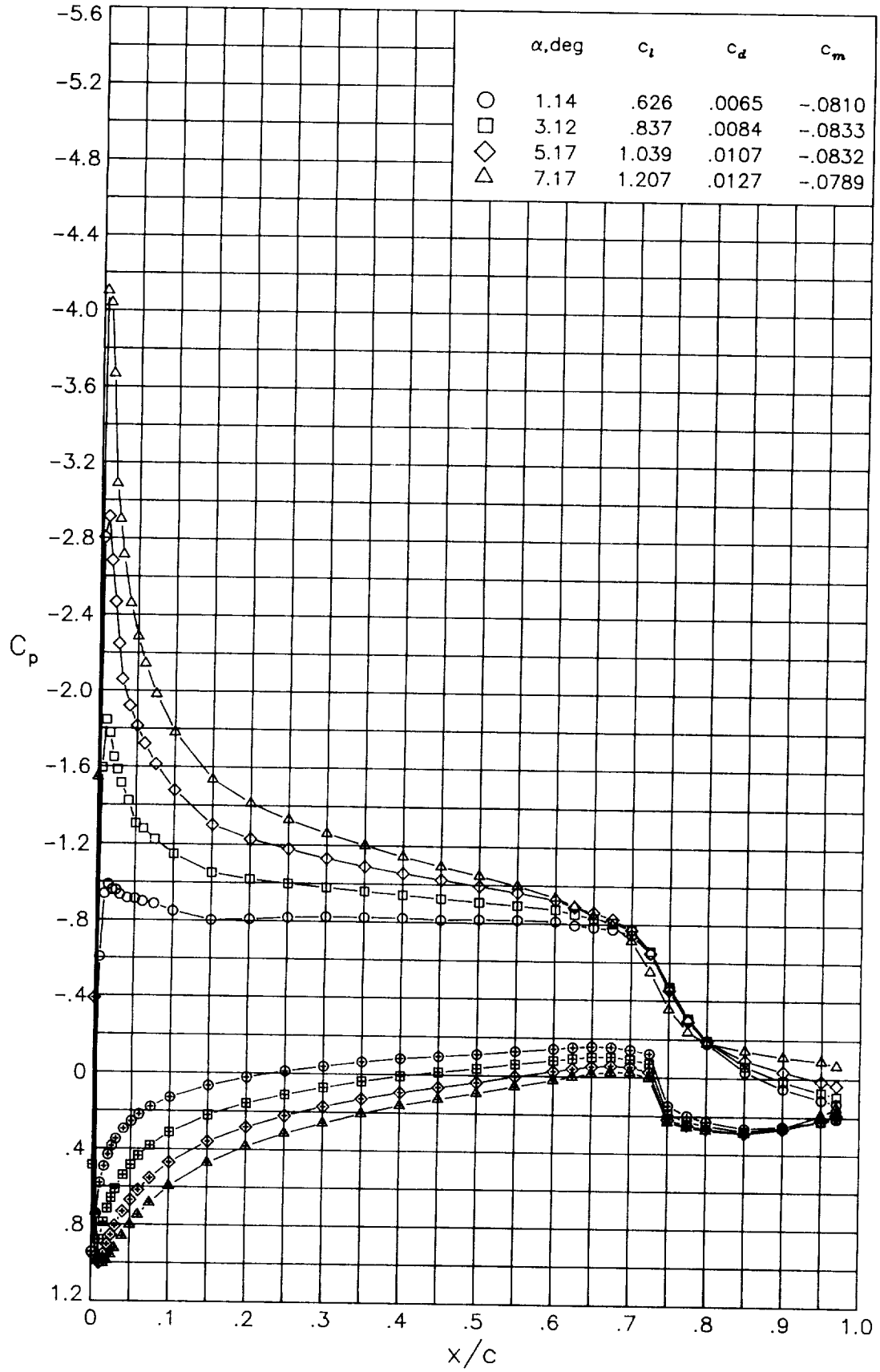
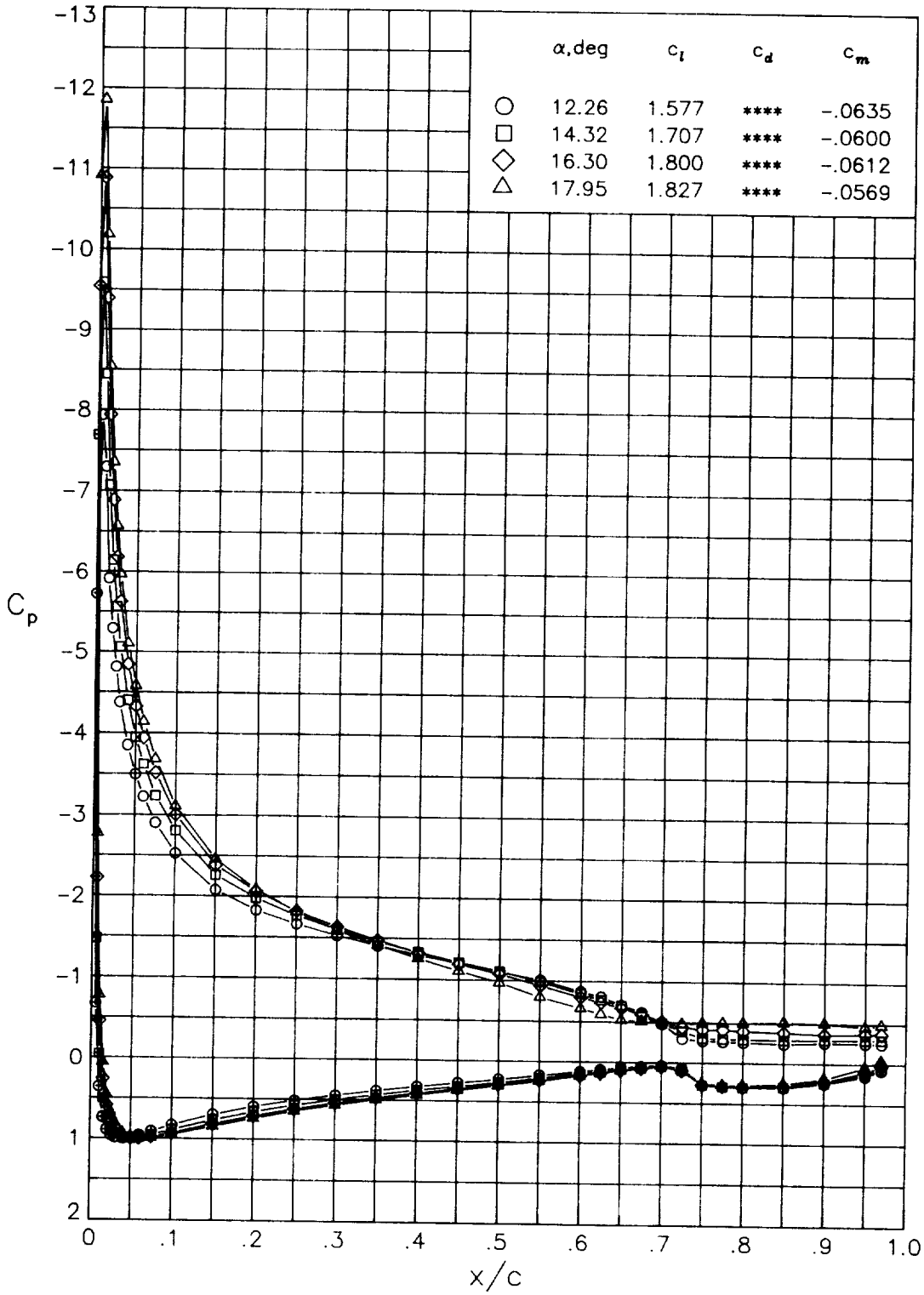


(c) R = 10.0 x 10^6. Continued.

Figure 15. - Continued.



(c) R = 10.0 x 10^6. Concluded.

Figure 15. - Concluded.

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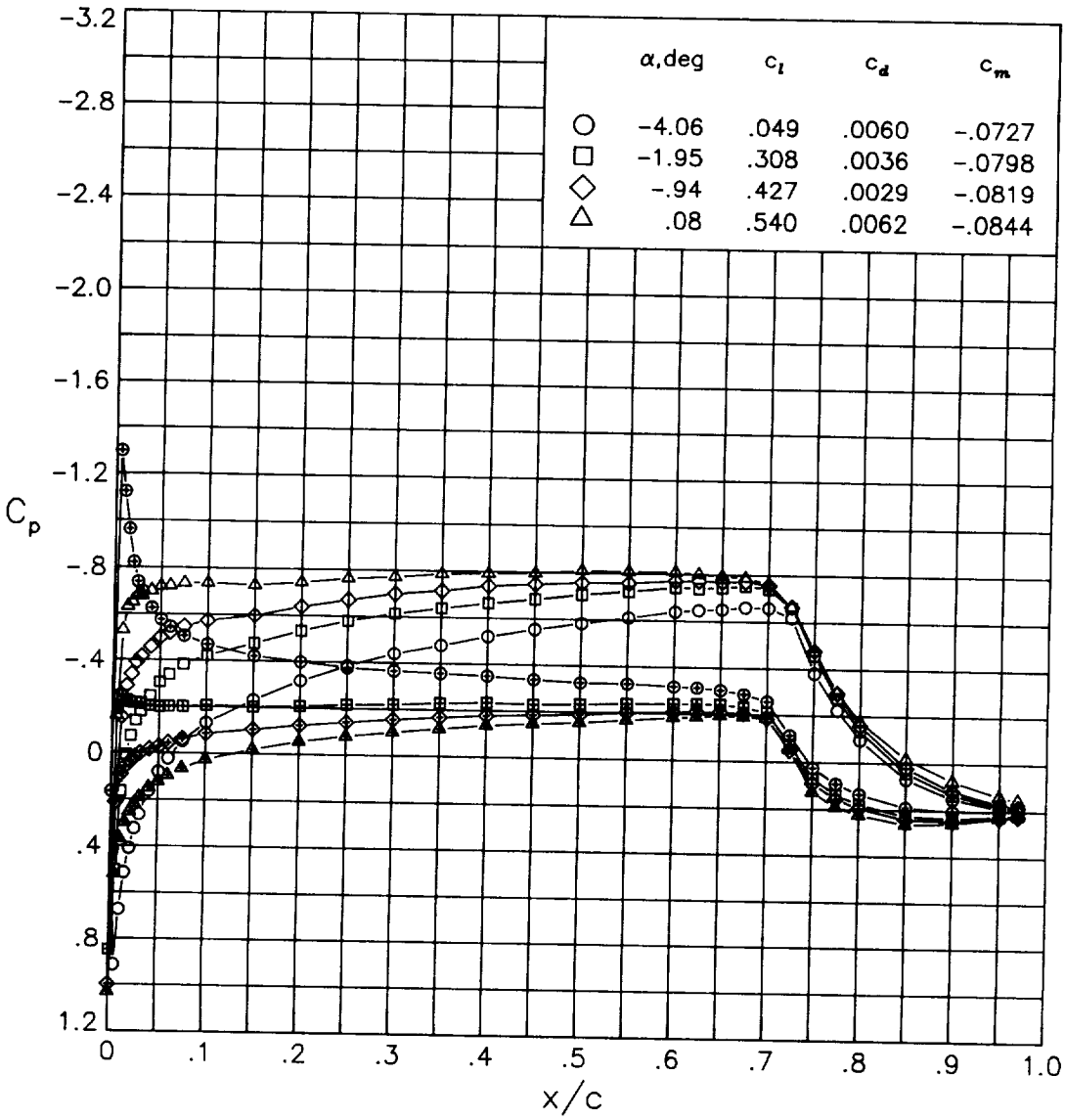
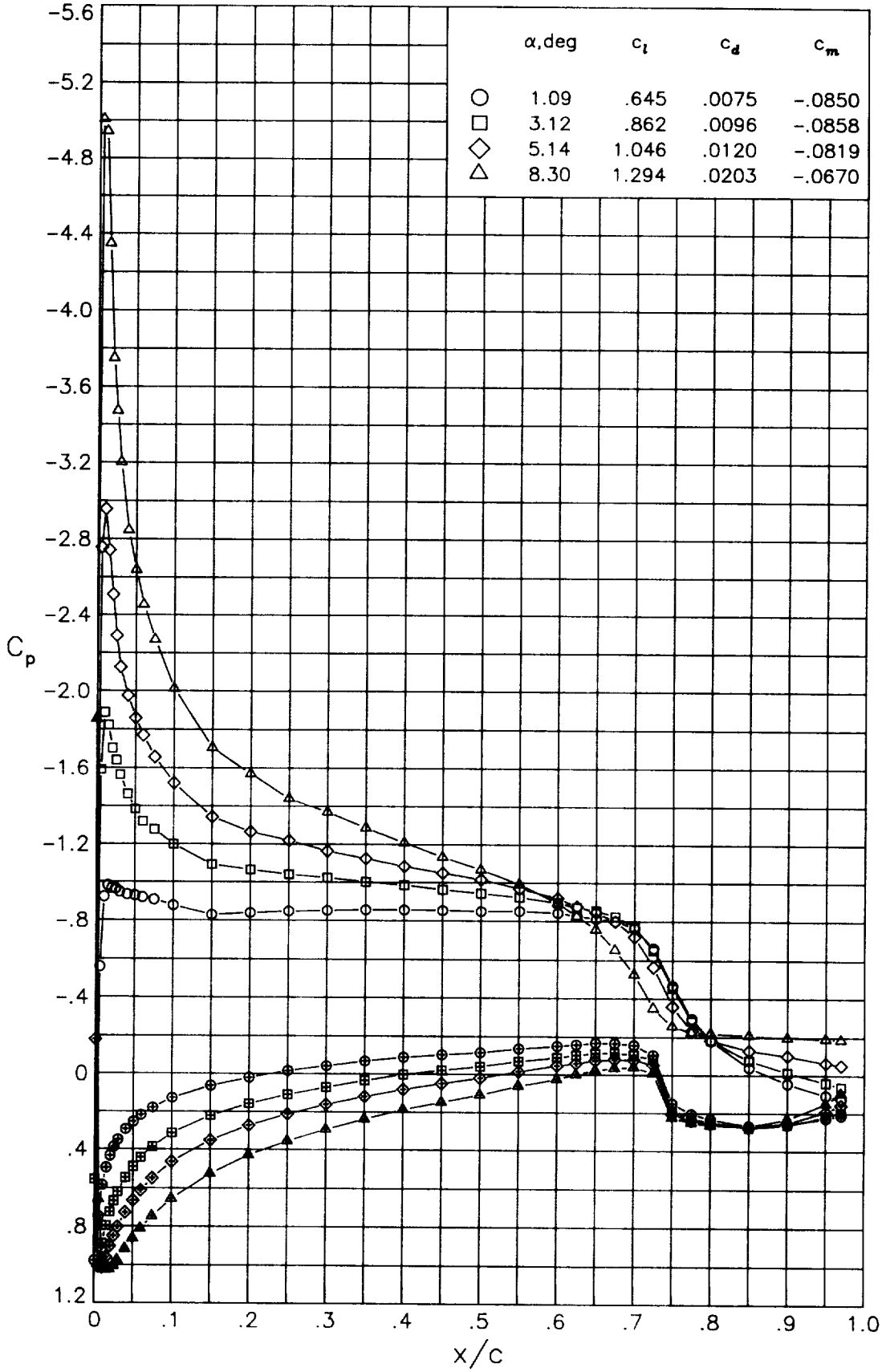


(a) Low-lift range.

Figure 16. - Effect of angle of attack on chordwise pressure distributions for a Mach number of 0.30. R = 10.0 x 10^6; δ_f = 0^0; model smooth. (centered symbol designates lower surface)



(b) Mid-lift range.

Figure 16. - Continued.

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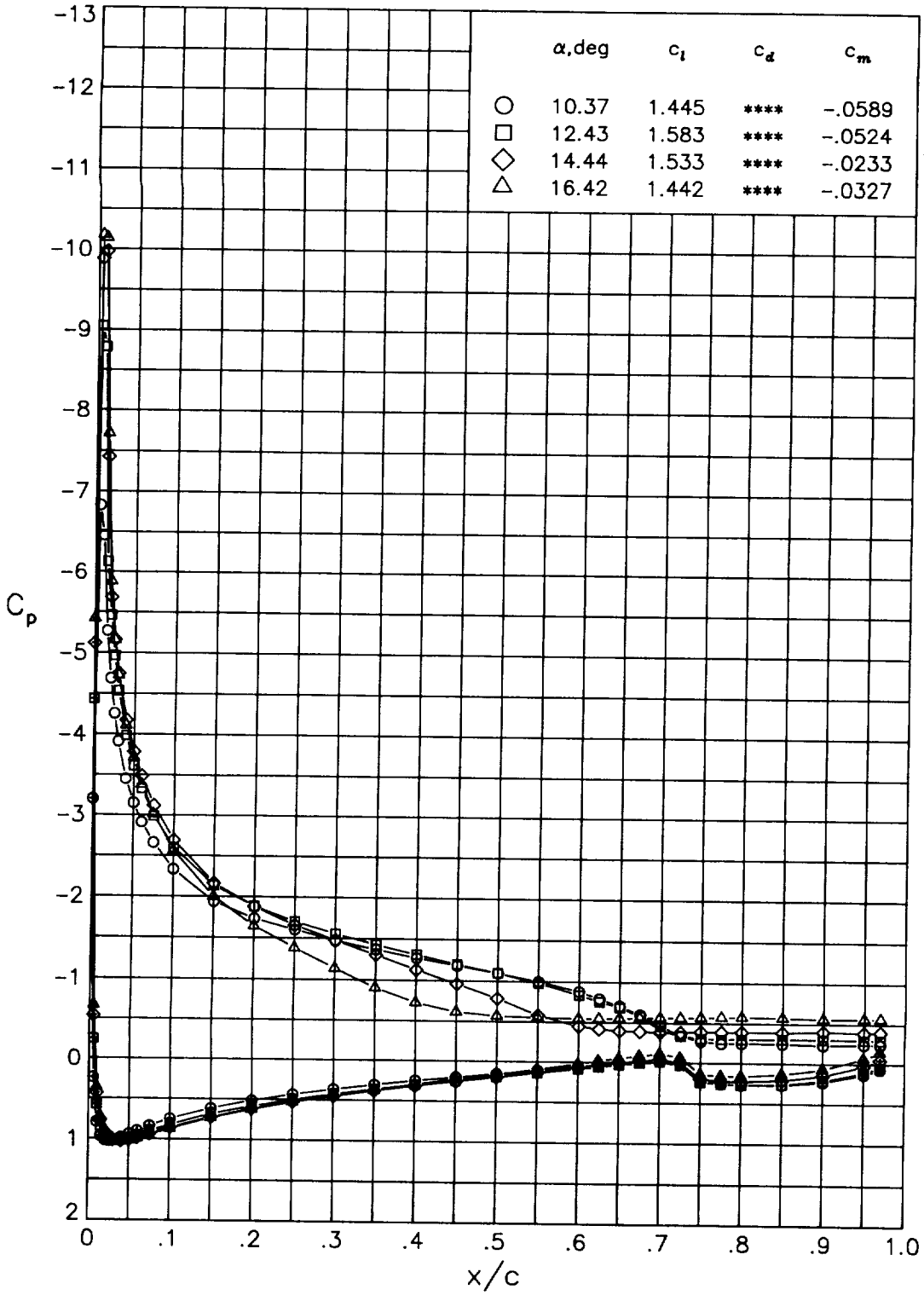

(c) High-lift range.

Figure 16. - Concluded.

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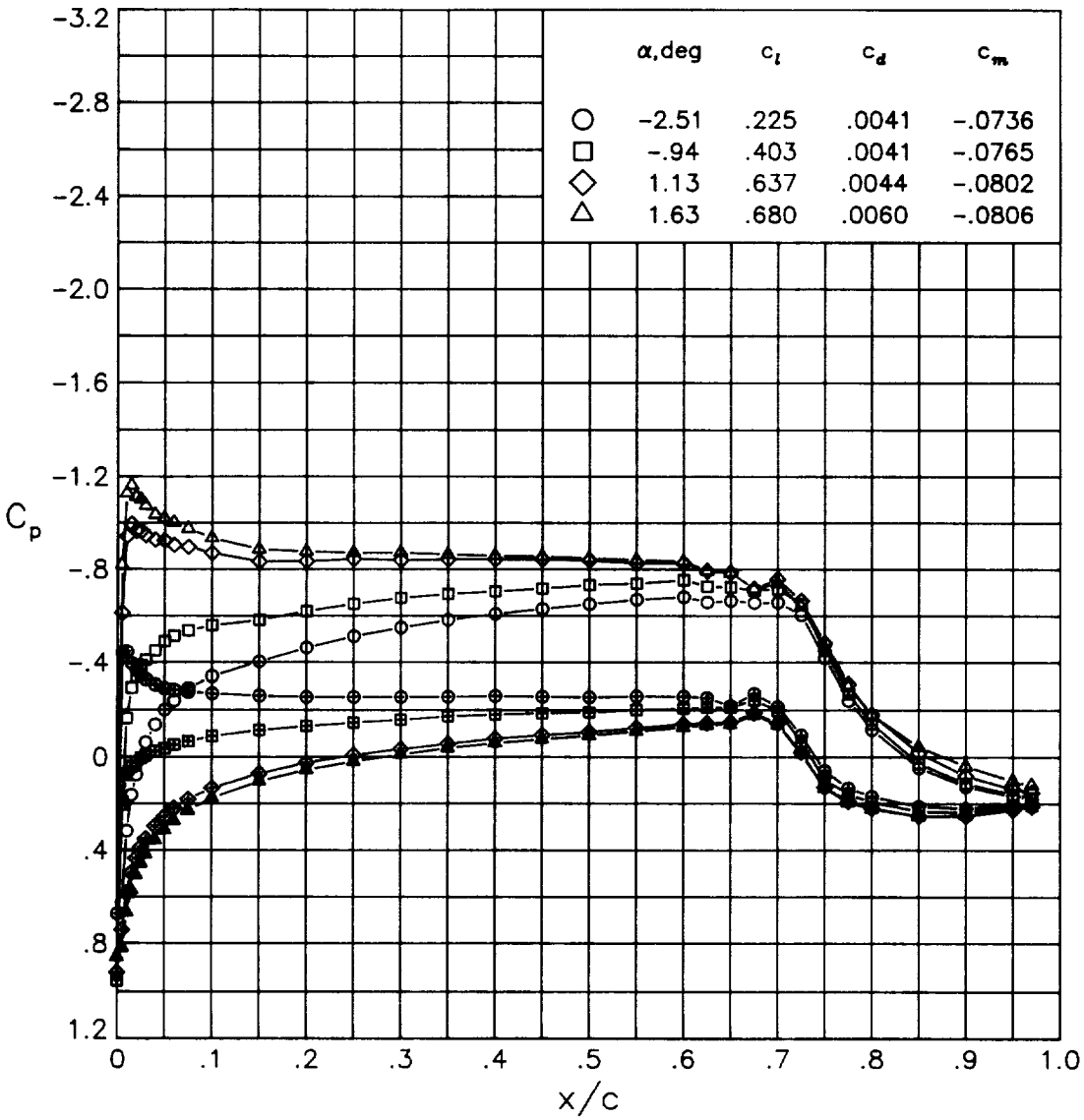

Figure 17. - Effect of turbulator tape on chordwise pressure distributions.

$M = 0.15$; $R = 3.0 \times 10^6$; $\delta_f = 0^\circ$. (centered symbol designates lower surface)

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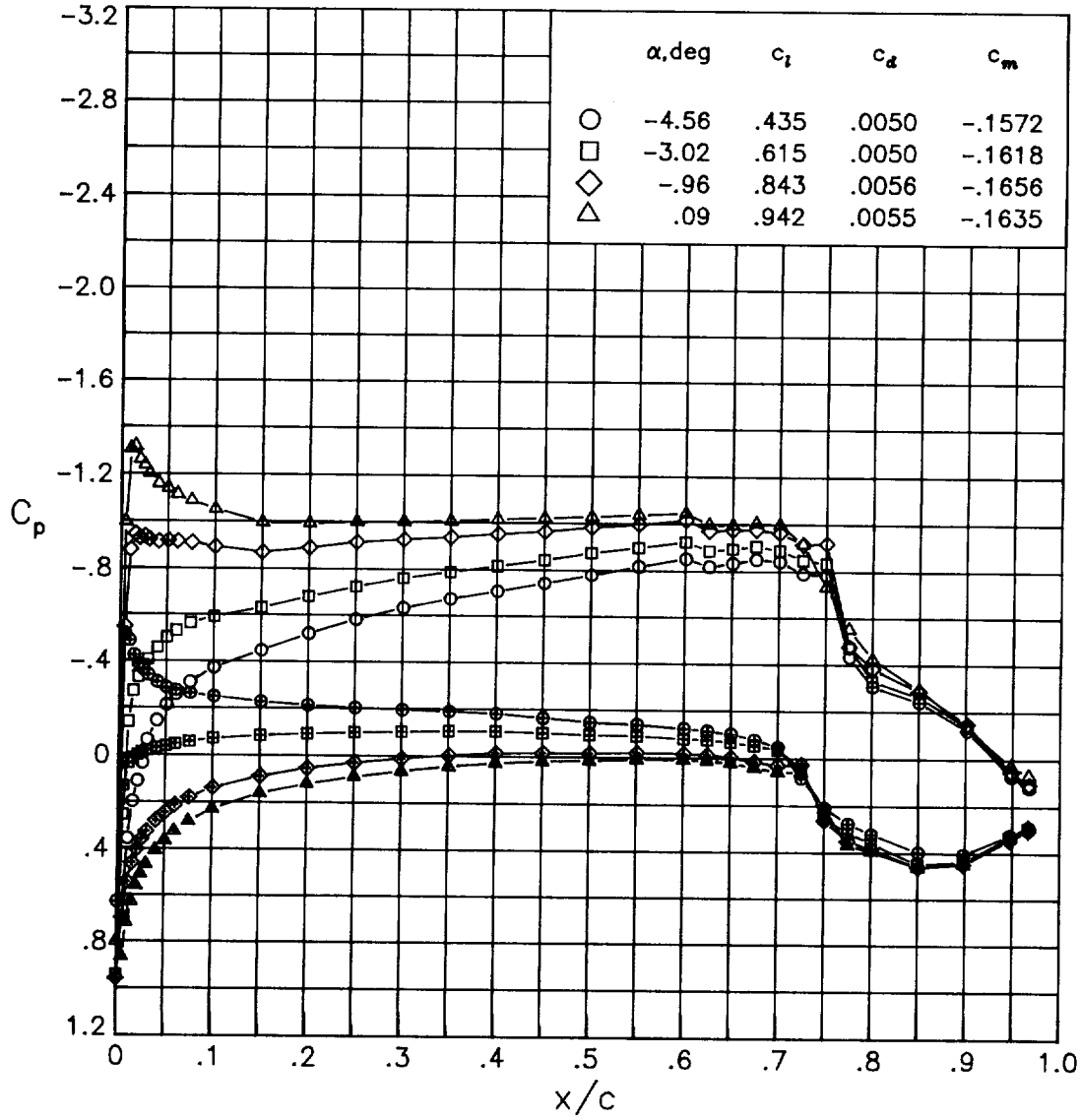

(a) $\delta_f = +10^0$. $R = 3.0 \times 10^6$.

Figure 18. - Effect of flap deflection and Reynolds number on chordwise pressure distributions. $M \leq 0.12$; model smooth. (Centered symbol designates lower surface)

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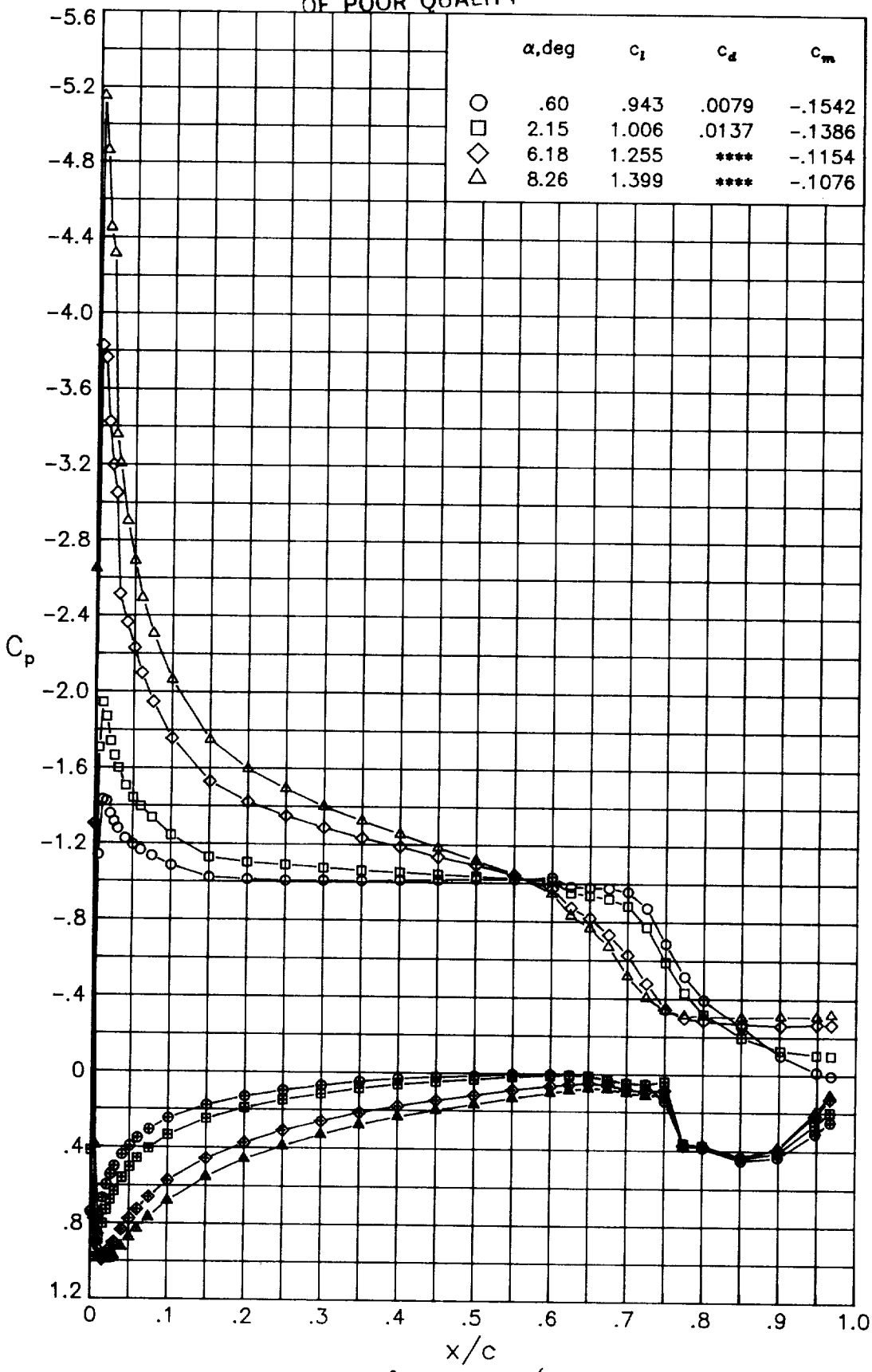

(a) $\delta_f = +10^0$. R = 3.0 x 10^6. Continued.

Figure 18. - Continued.

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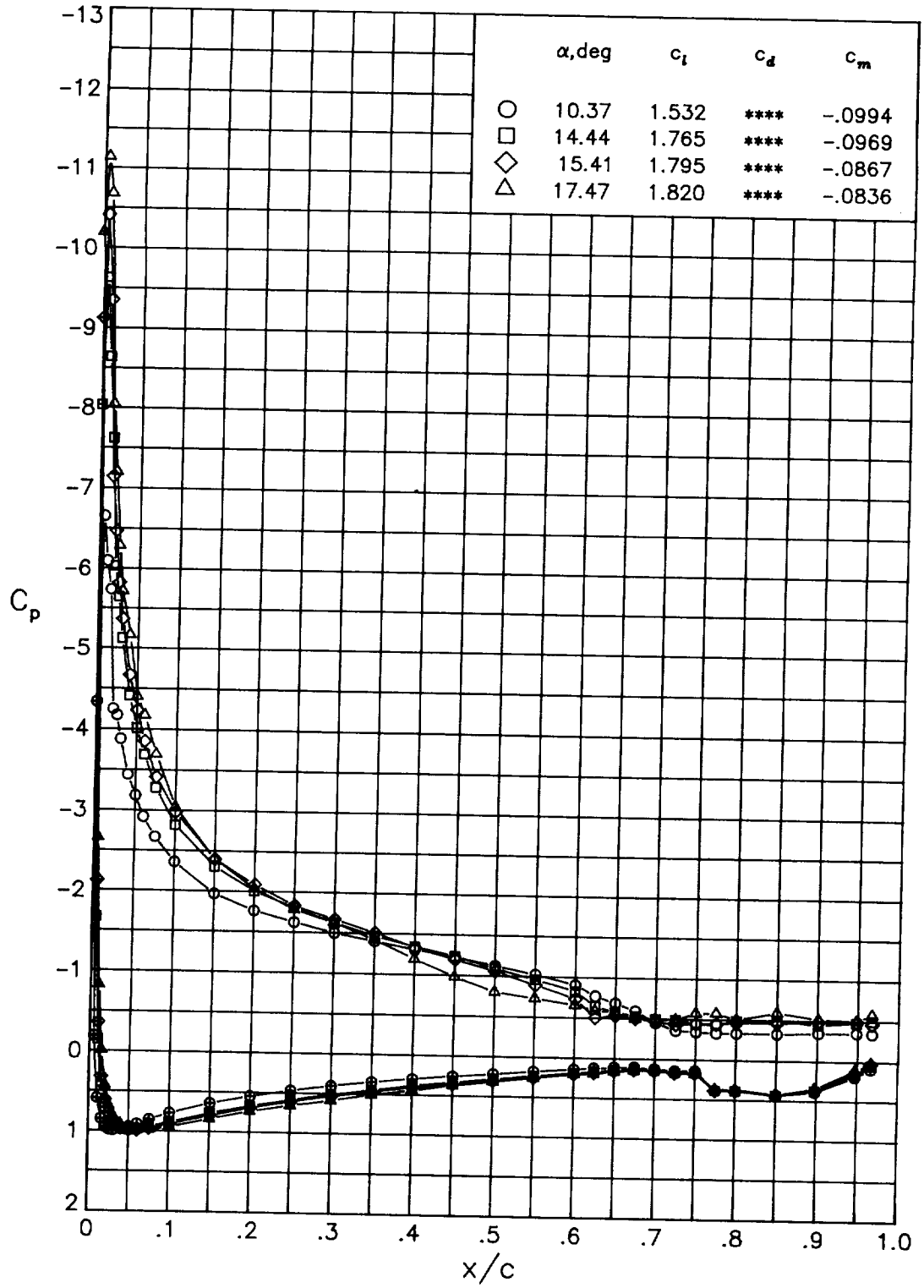

(a) $\delta_f = +10^0$. $R = 3.0 \times 10^6$. Concluded.

Figure 18. - Continued.

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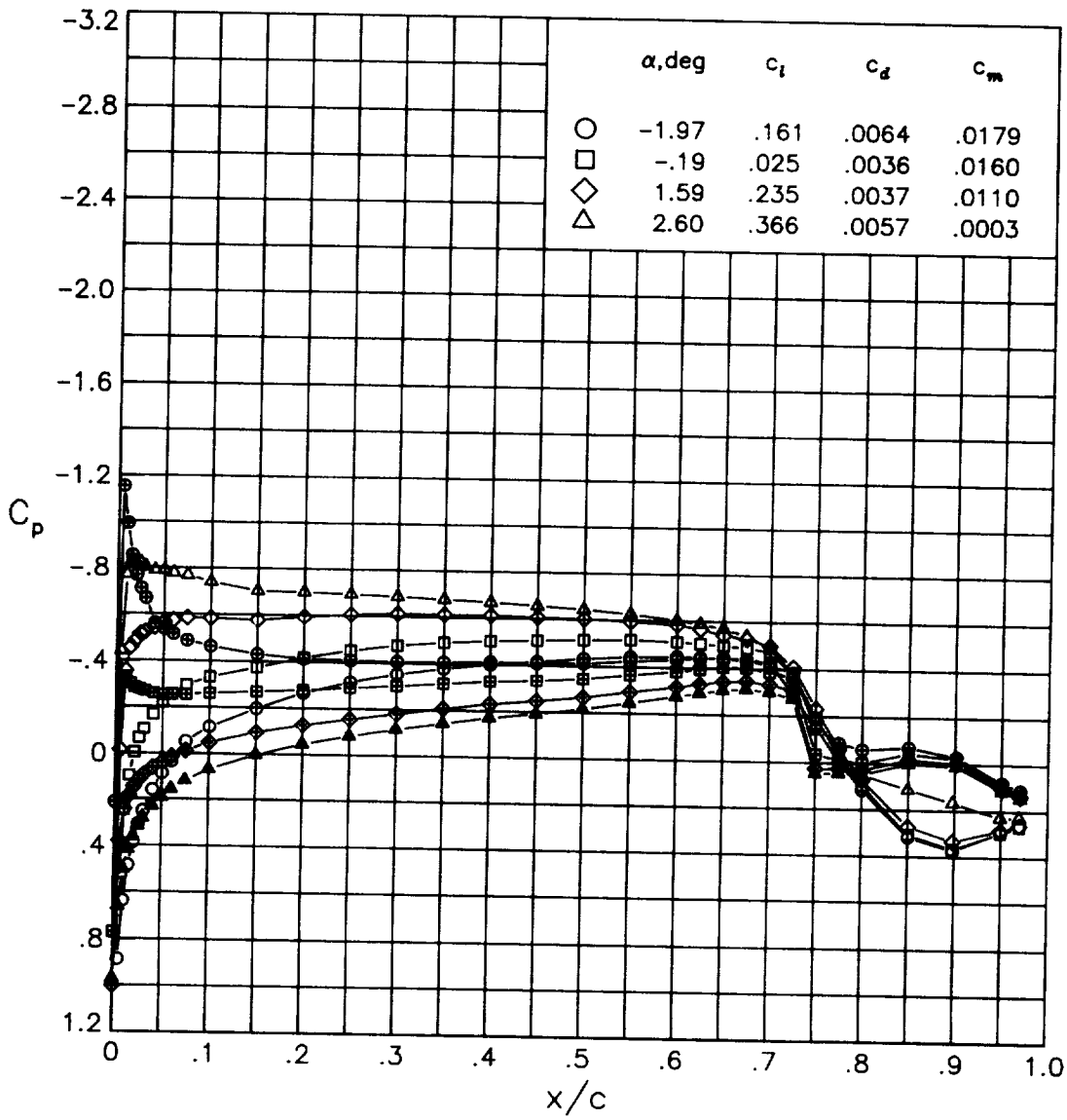

(b) $\delta_f = -10^0$. $R = 6.0 \times 10^6$.

Figure 18. - Continued.

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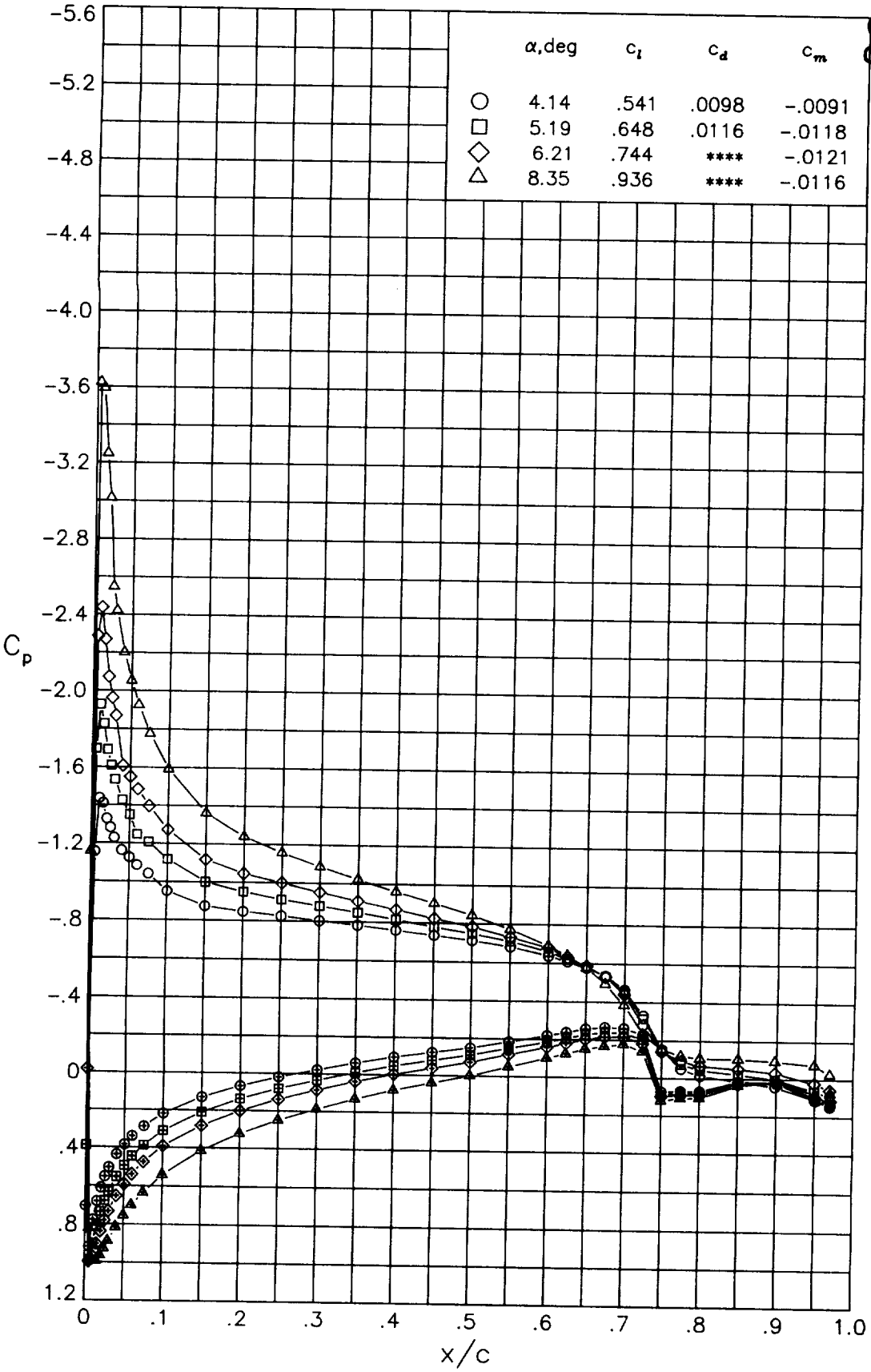
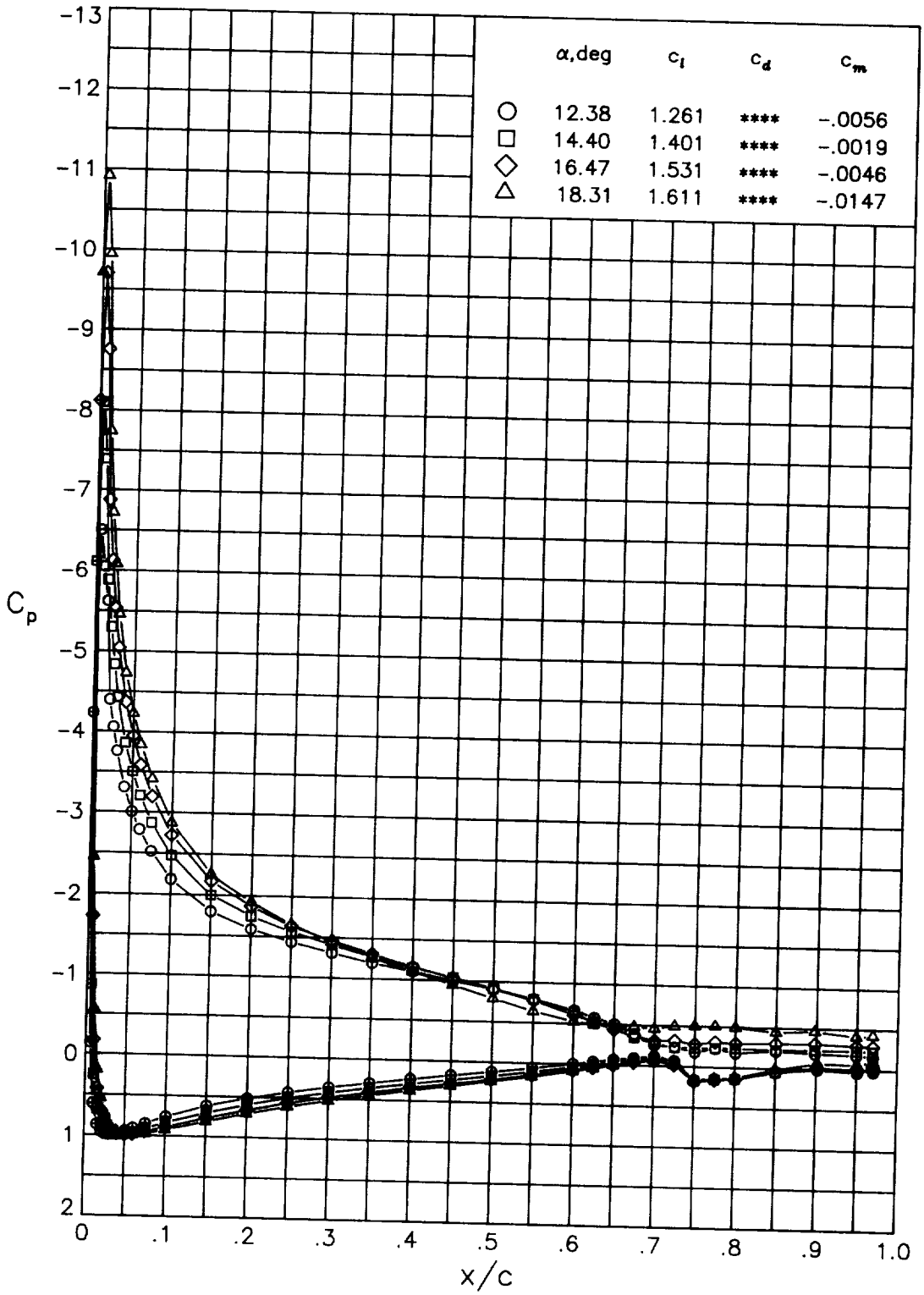


(b) $\delta_f = -10^0$. $R = 6.0 \times 10^6$. Continued.

Figure 18. - Continued.



(b) $\delta_f = -10^0$. $R = 6.0 \times 10^6$. Concluded.

Figure 18. - Continued.

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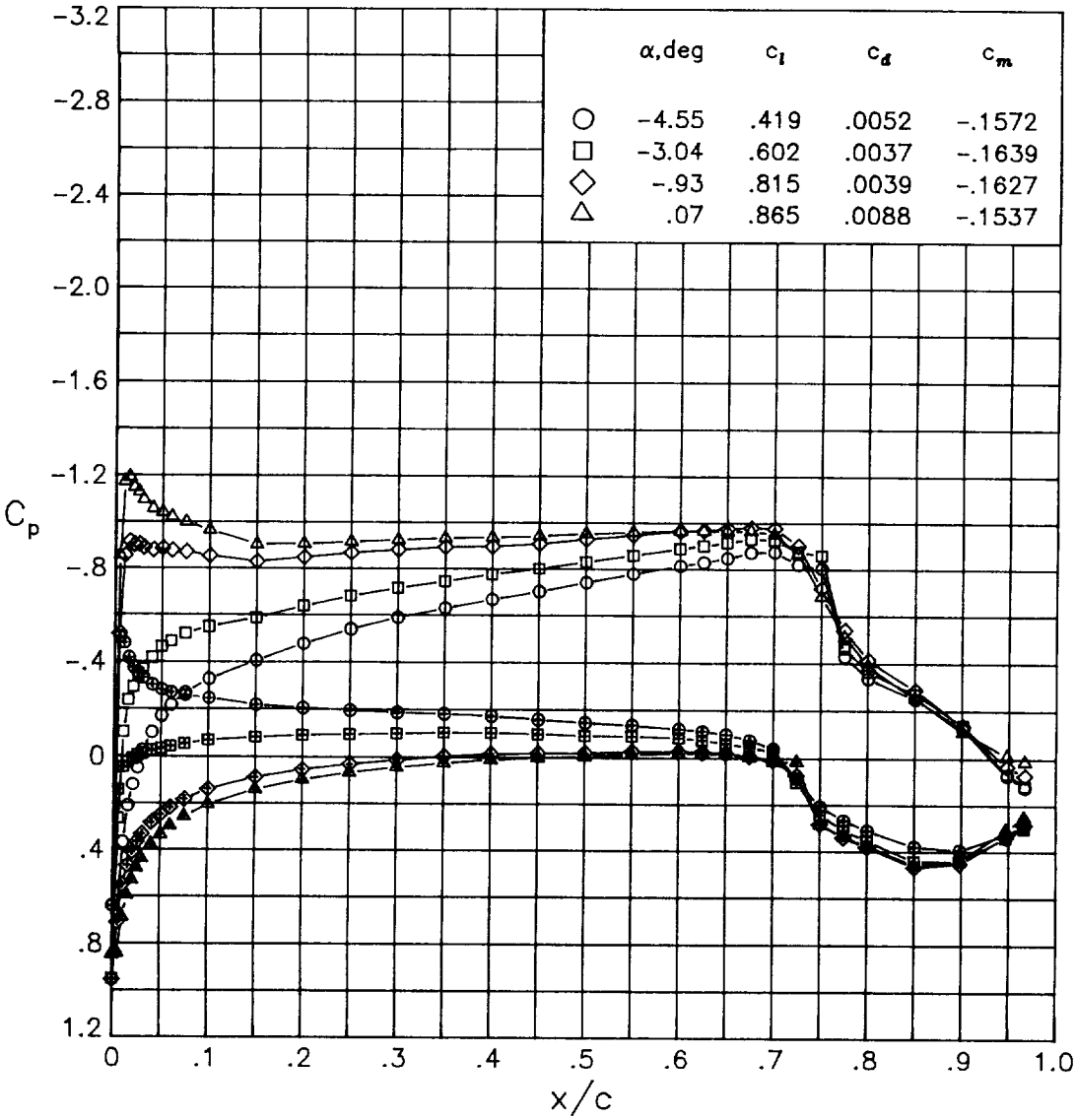

(c) $\delta_f = 10^0$. $R = 6.0 \times 10^6$.

Figure 18. - Continued.

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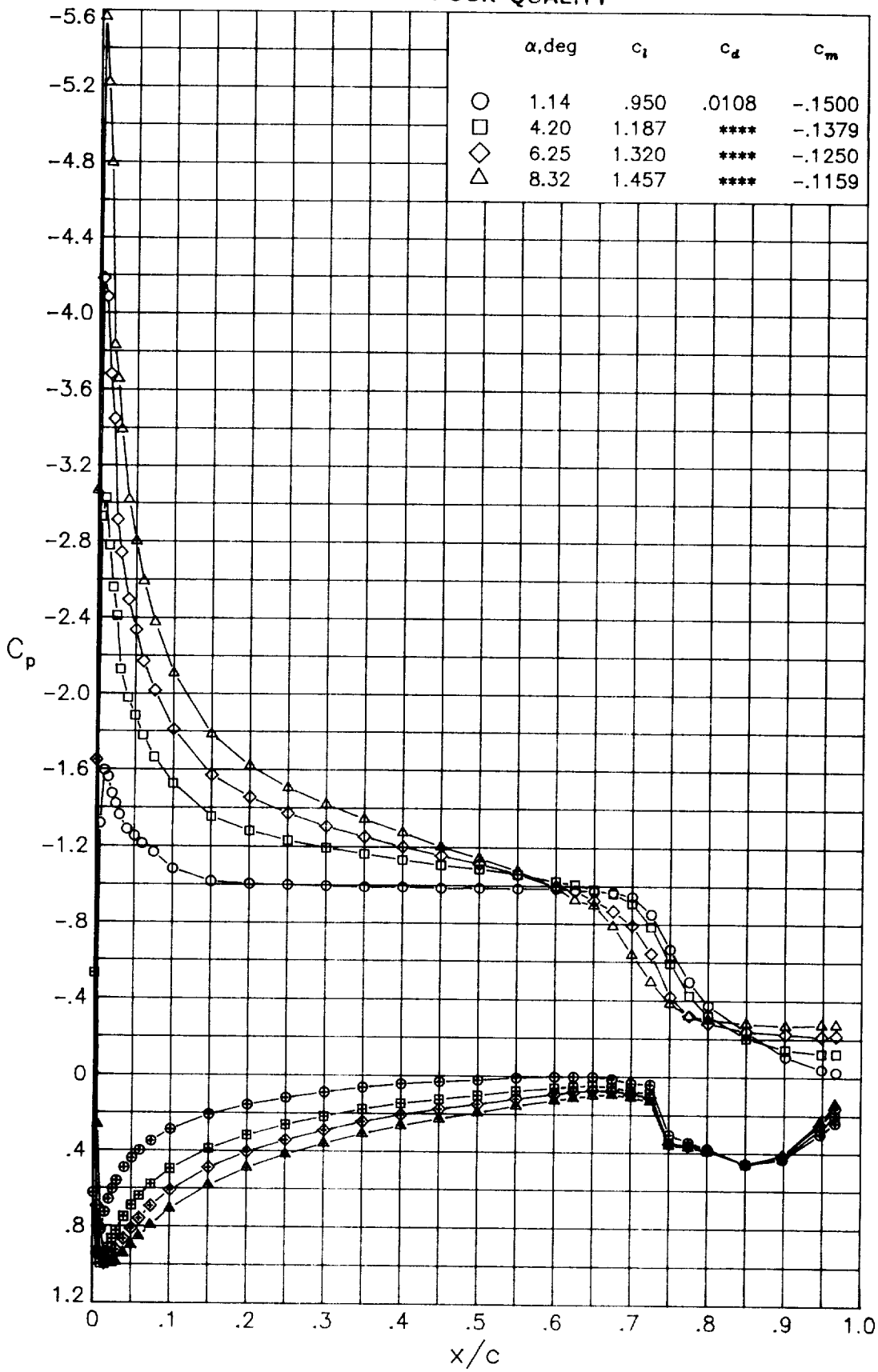

(c) $\delta_f = 10^0$. $R = 6.0 \times 10^6$. Continued.

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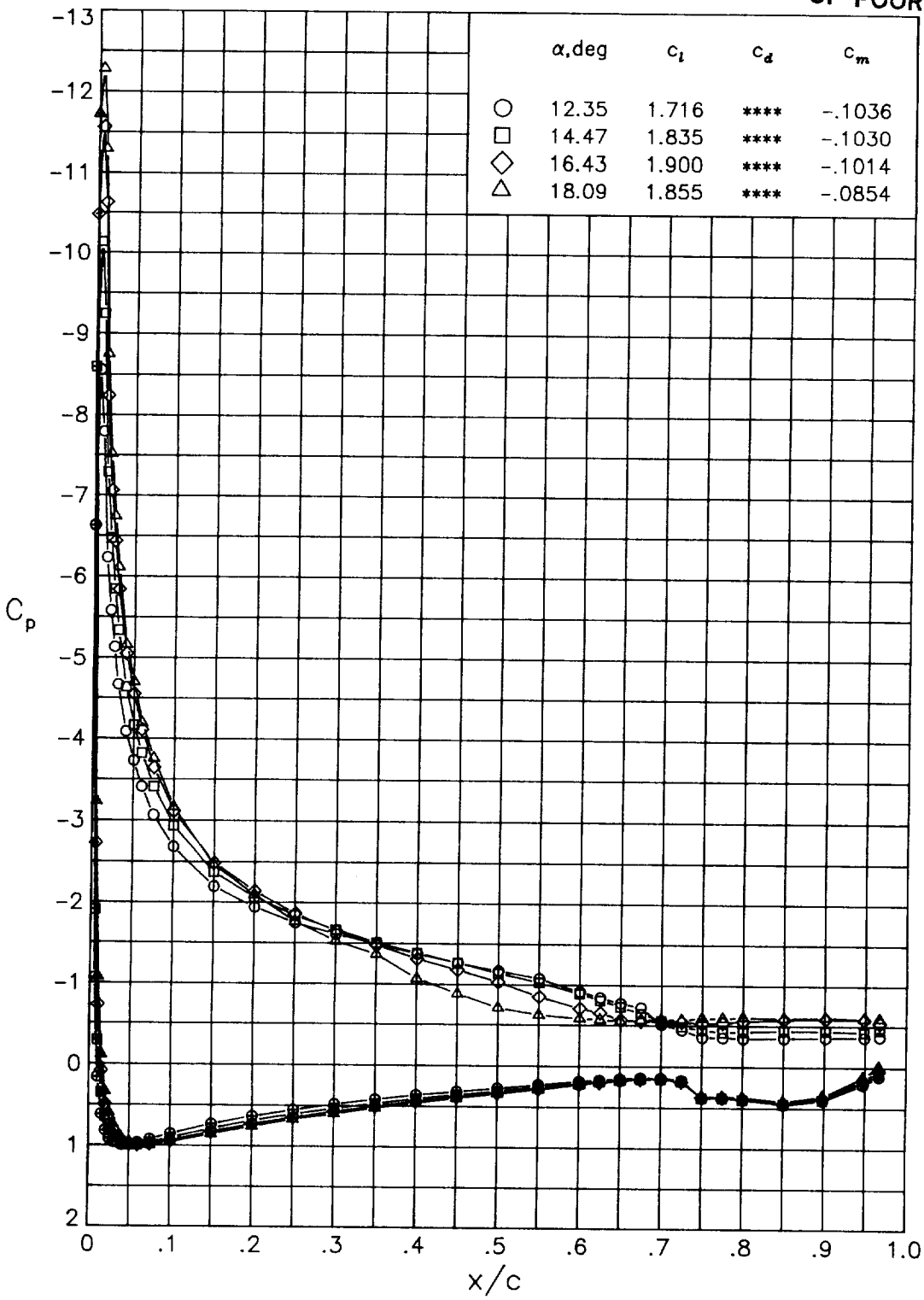

(c) $\delta_f = 10^0$. R = 6.0 x 10^6. Concluded.

Figure 18. - Continued.

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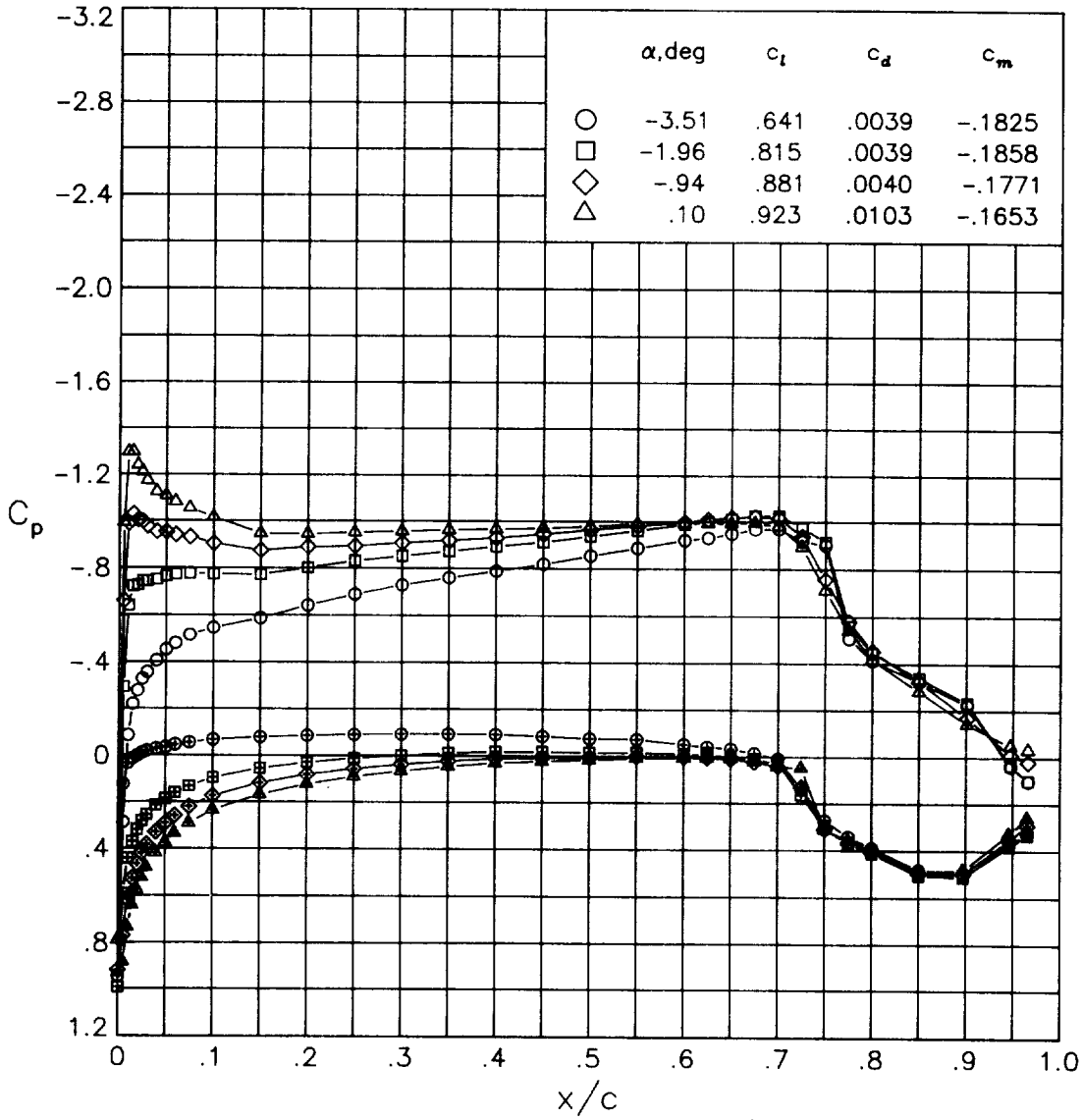

(d) δ_f = 12.5°. R = 6.0 x 10^6.

Figure 18. - Continued.

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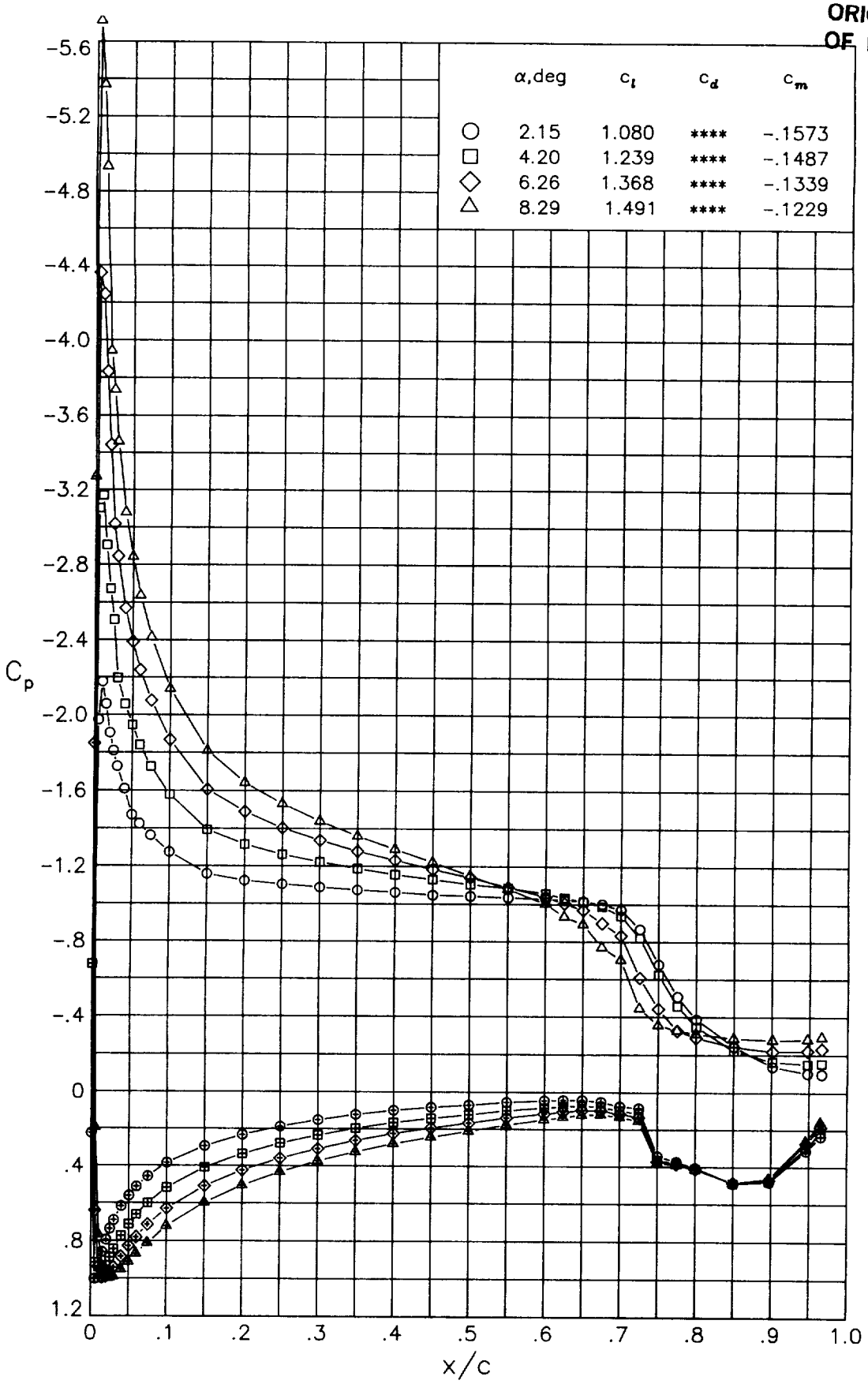

(d) δ_f = 12.5°. R = 6.0 x 10^6. Continued.

Figure 18. - Continued.

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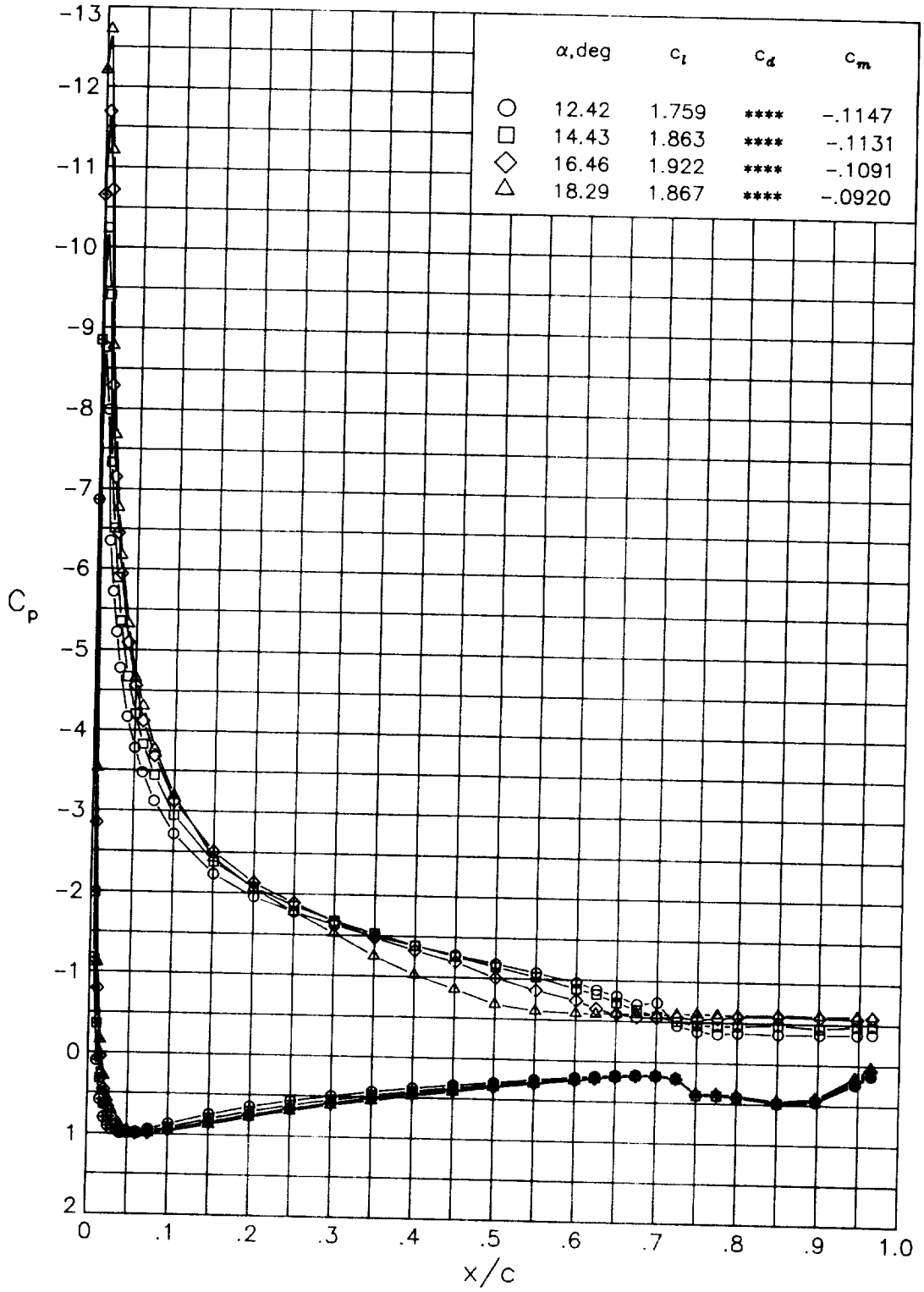

(d) $\delta_f = 12.5^0$. $R = 6.0 \times 10^6$. Concluded.

Figure 18. - Continued.

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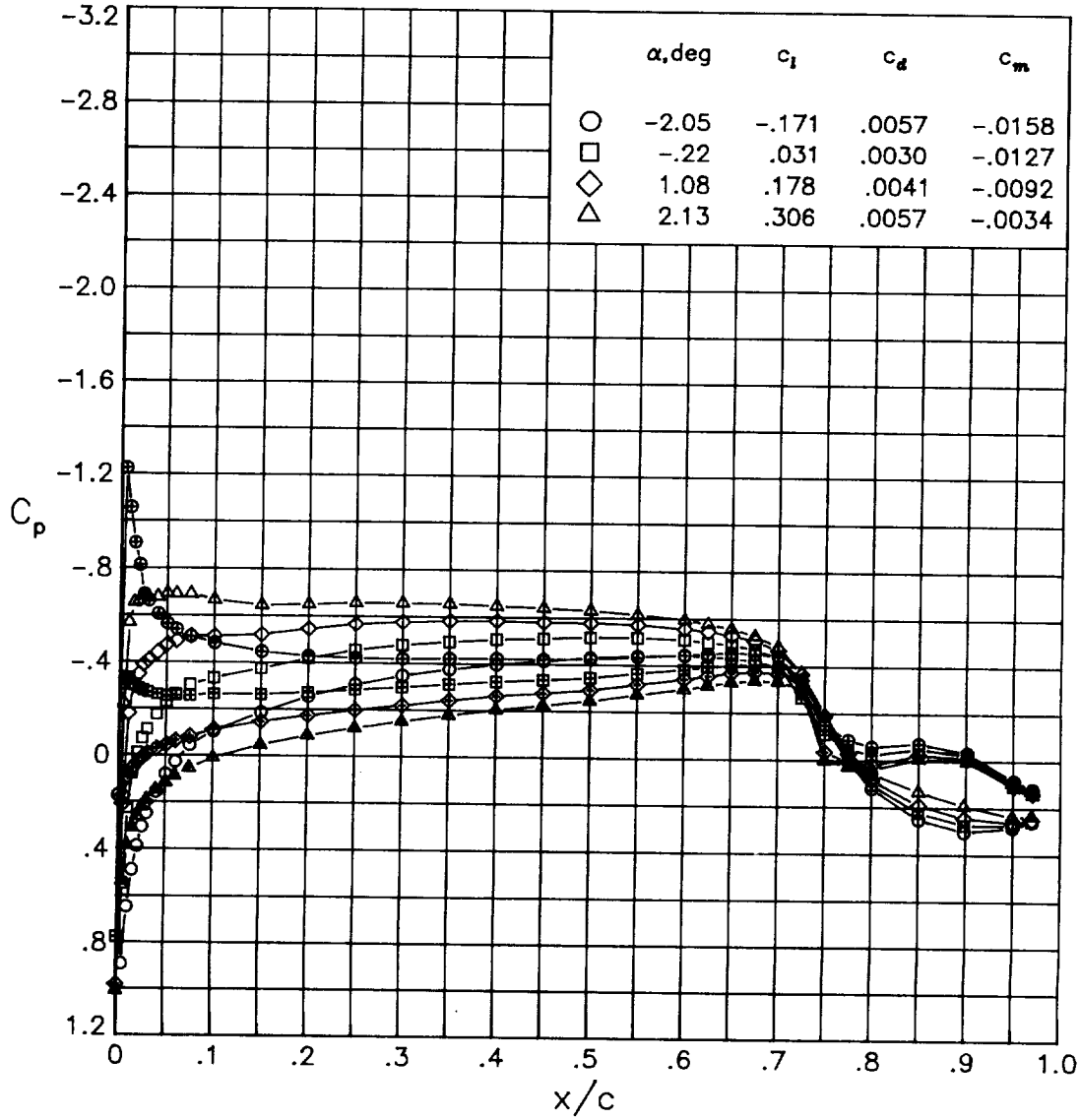

(e) $\delta_f = -10^0$. $R = 10.0 \times 10^6$.

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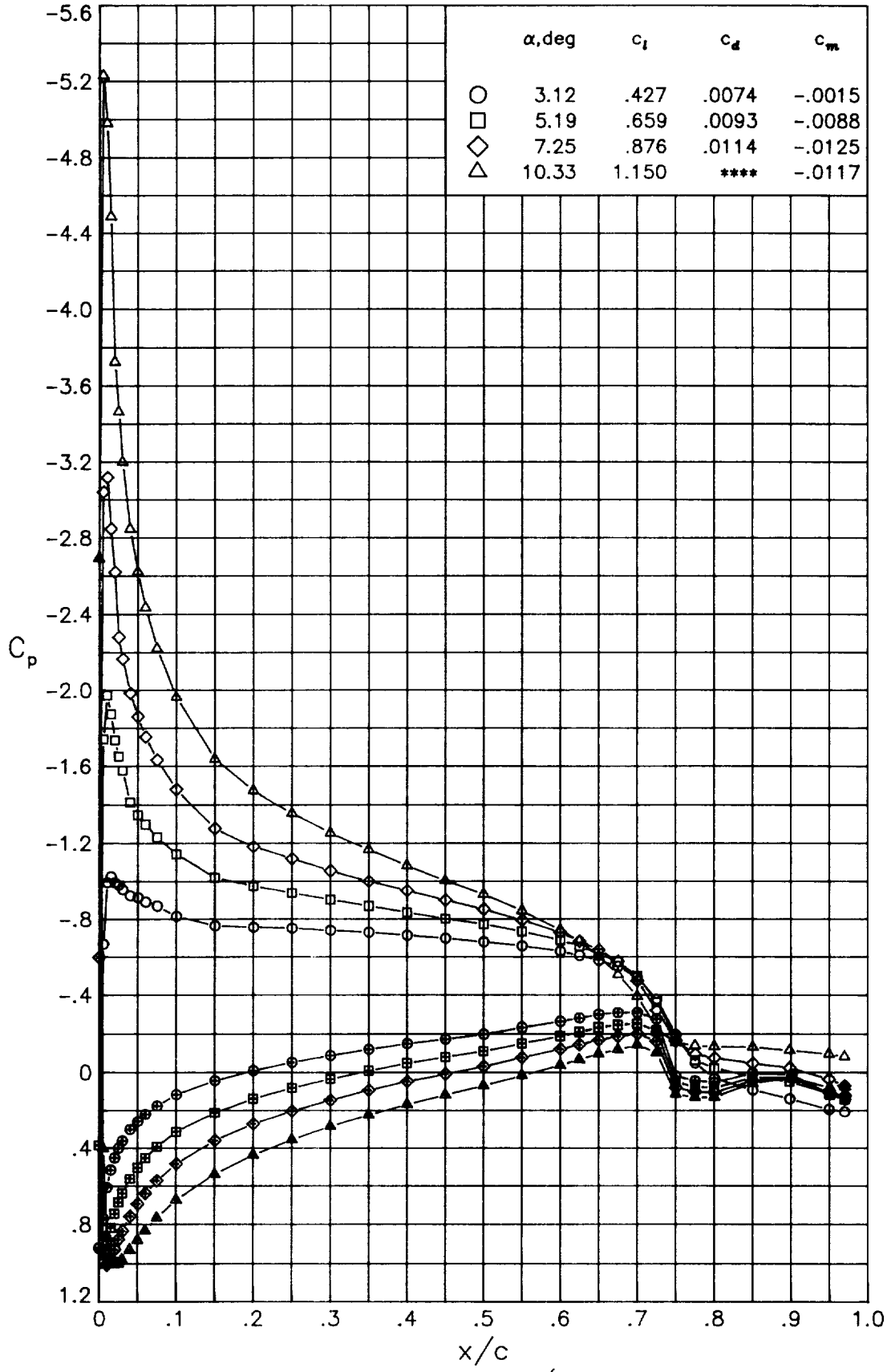

(e) δ_f = -10°. R = 10.0 x 10^6. Continued.

Figure 18. - Continued.

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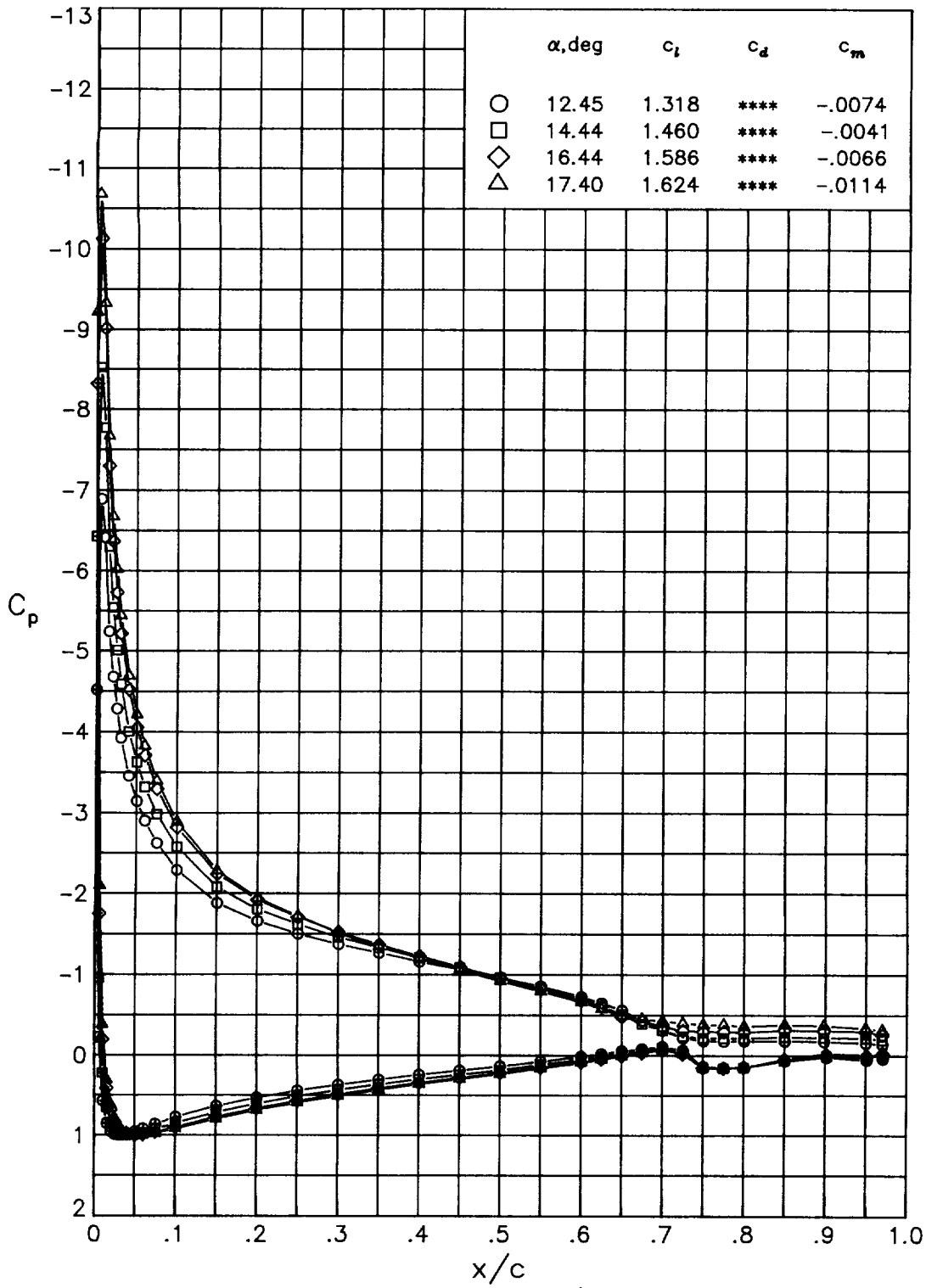

(e) $\delta_f = -10^0$. R = 10.0 x 10^6. Concluded.

Figure 18. - Continued.

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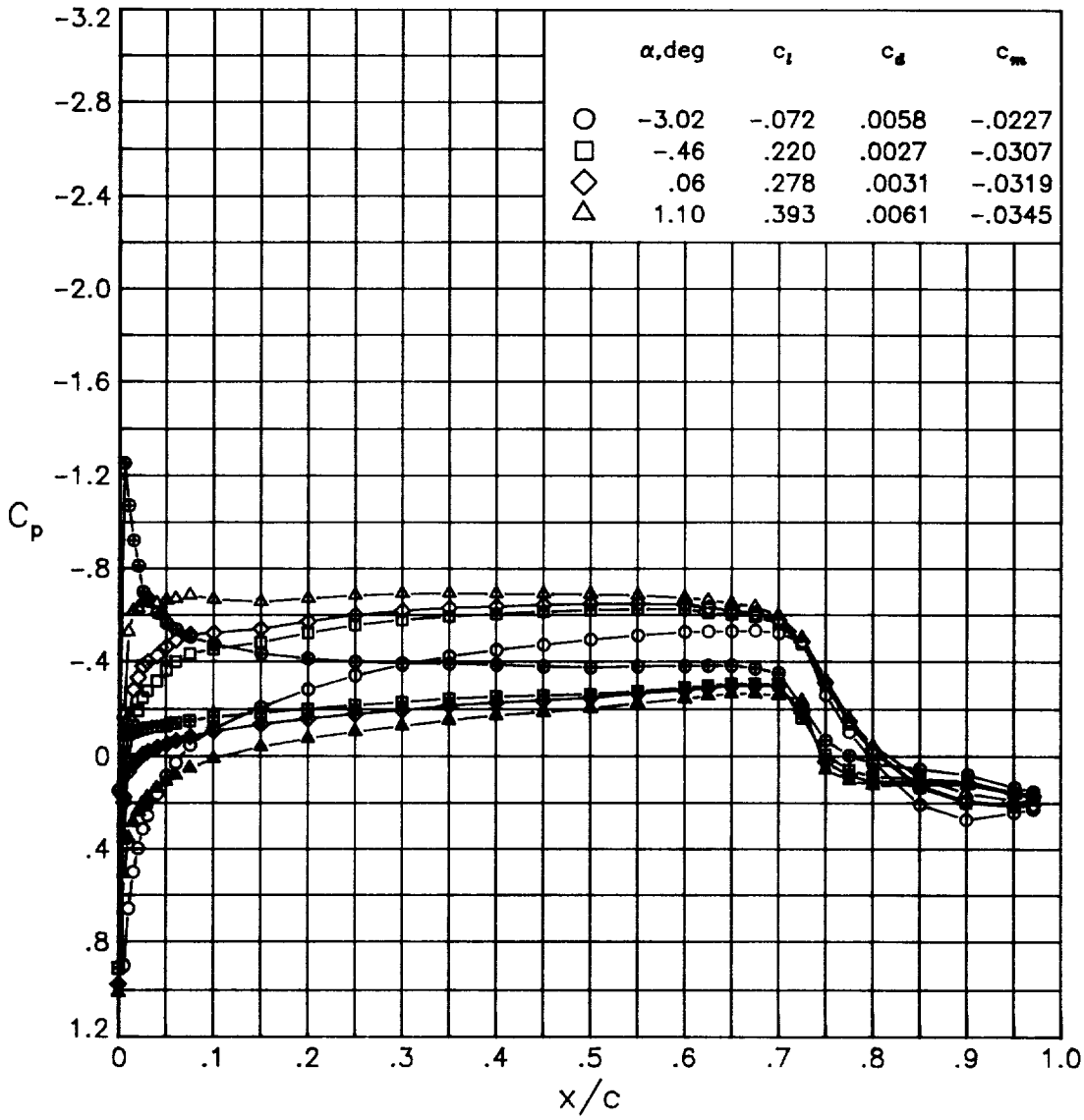

(f) δ_f = -5°. R = 10.0 x 10^6.

Figure 18. - Continued.

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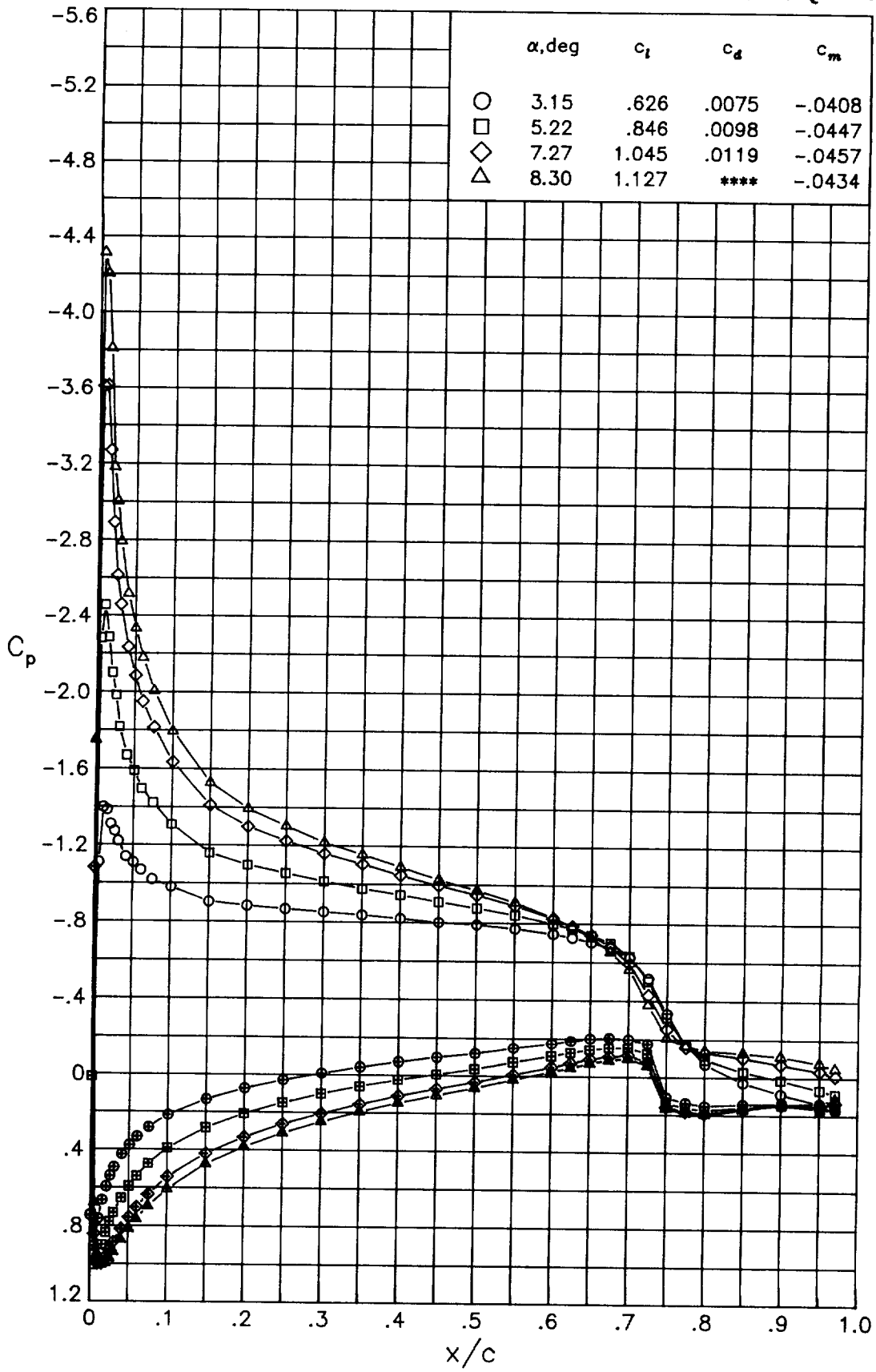

(f) δ_f = -5°. R = 10.0 x 10^6. Continued.

Figure 18. - Continued.

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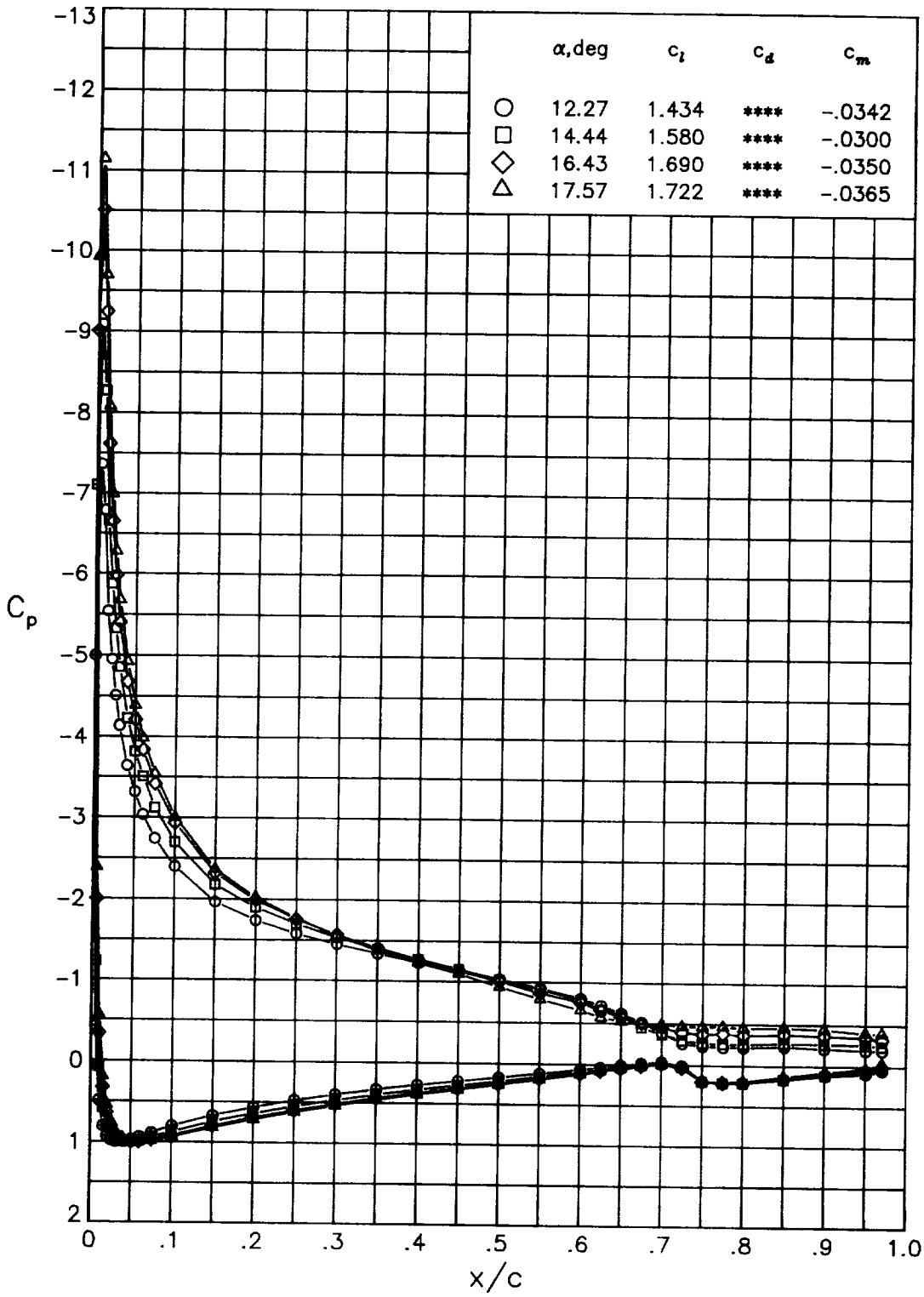

(f) δ_f = -5°. R = 10.0 x 10^6. Concluded.

Figure 18. - Continued.

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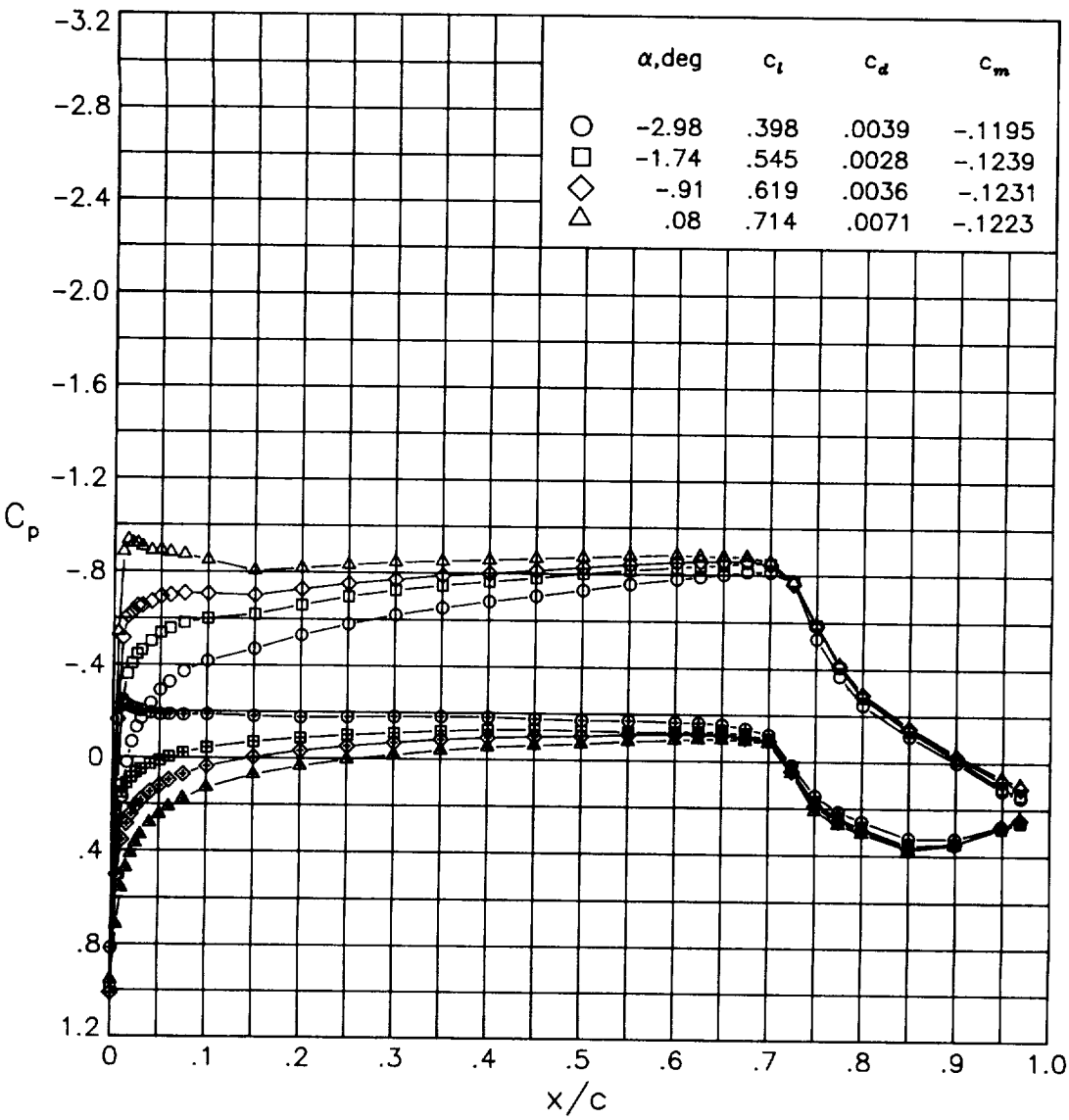

(g) $\delta_f = 5^0$. $R = 10.0 \times 10^6$.

Figure 18. - Continued.

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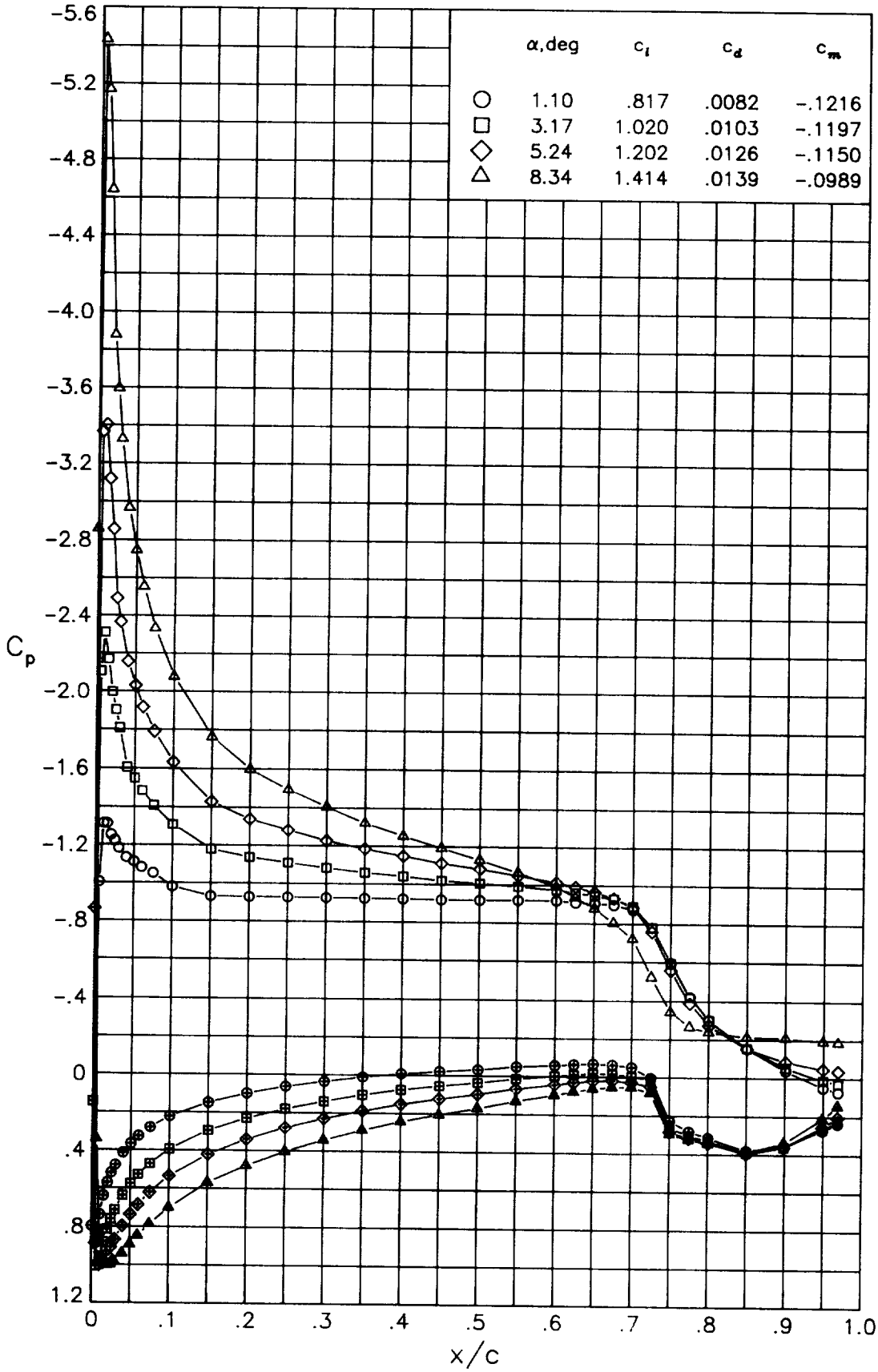

(g) $\delta_f = 5^0$. R = 10.0 x 10^6. Continued.

Figure 18. - Continued.

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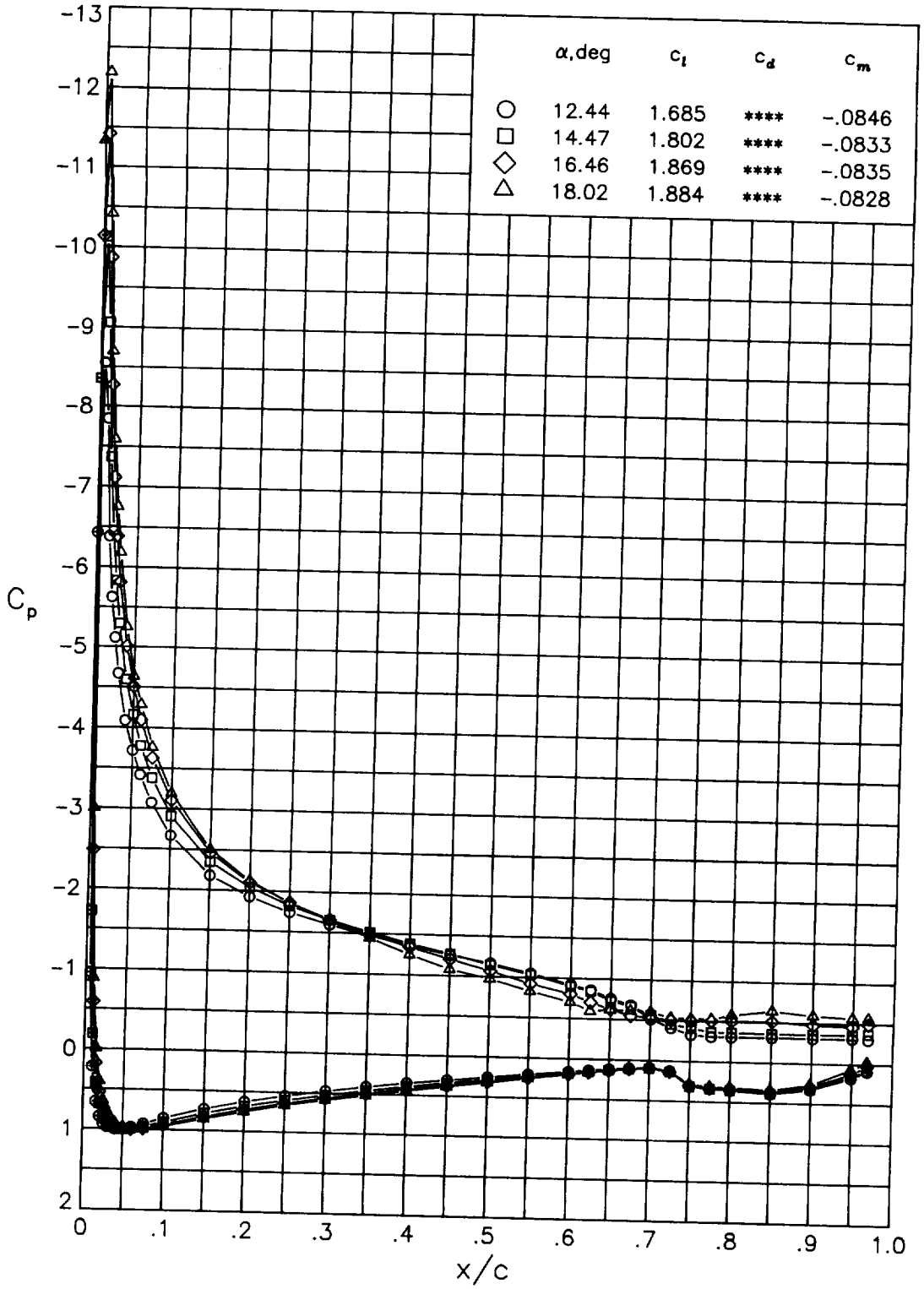

(g) $\delta_f = 5^0$. R = 10.0 x 10^6. Concluded.

Figure 18. - Continued.

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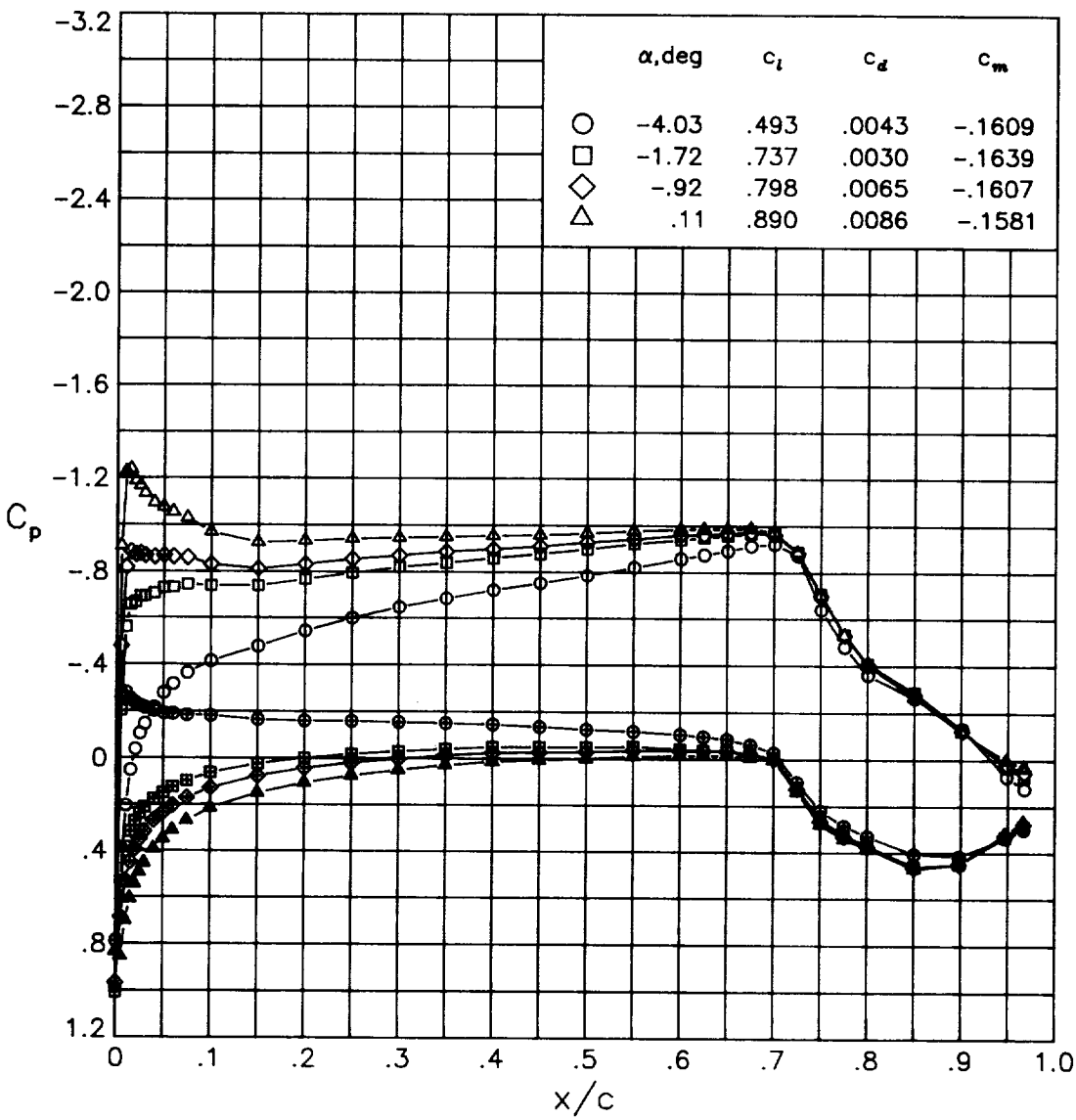

(h) $\delta_f = 10^0$. $R = 10.0 \times 10^6$.

Figure 18. - Continued.

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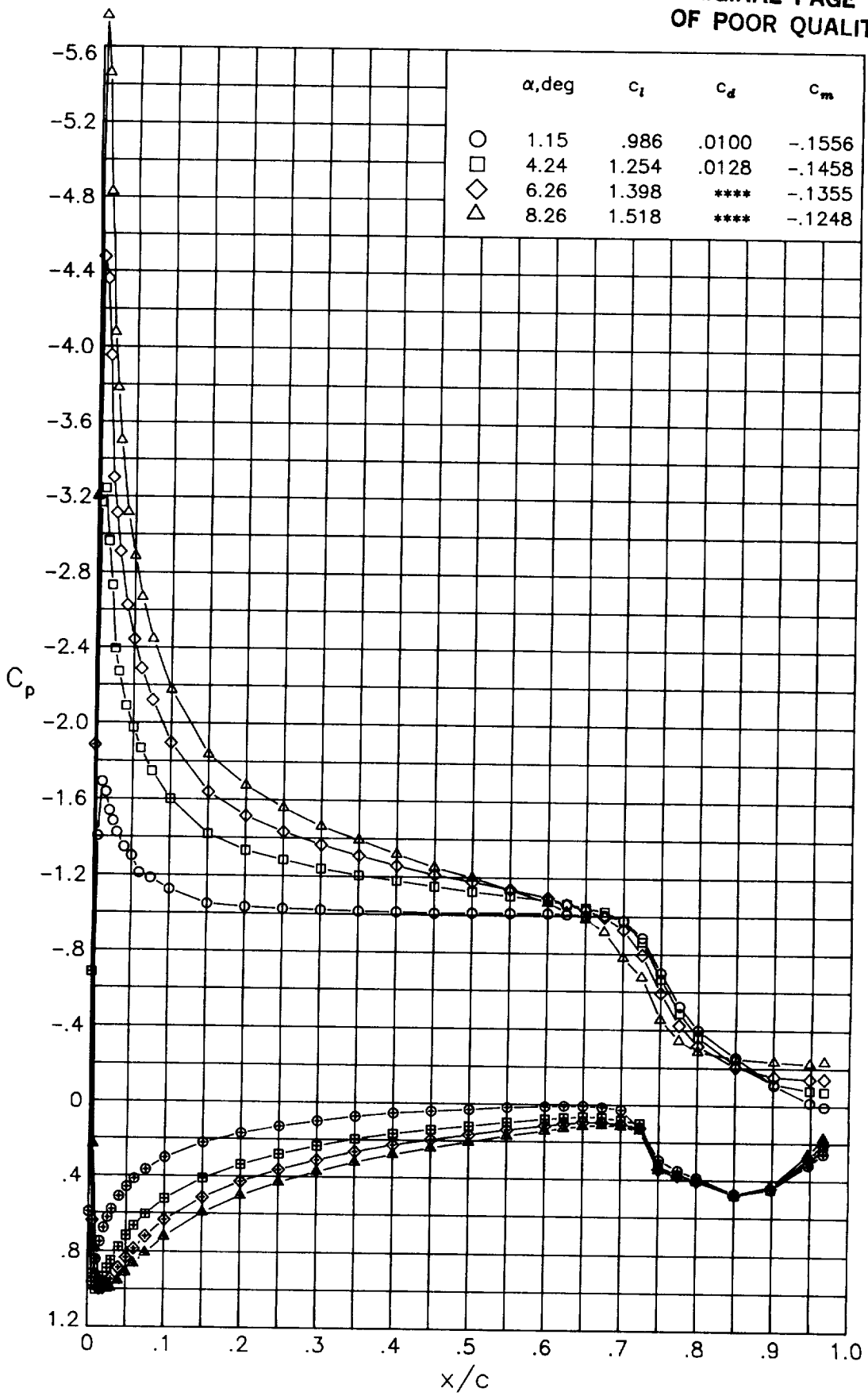

(h) $\delta_f = 10^0$. R = 10.0 x 10^6. Continued.

Figure 18. - Continued.

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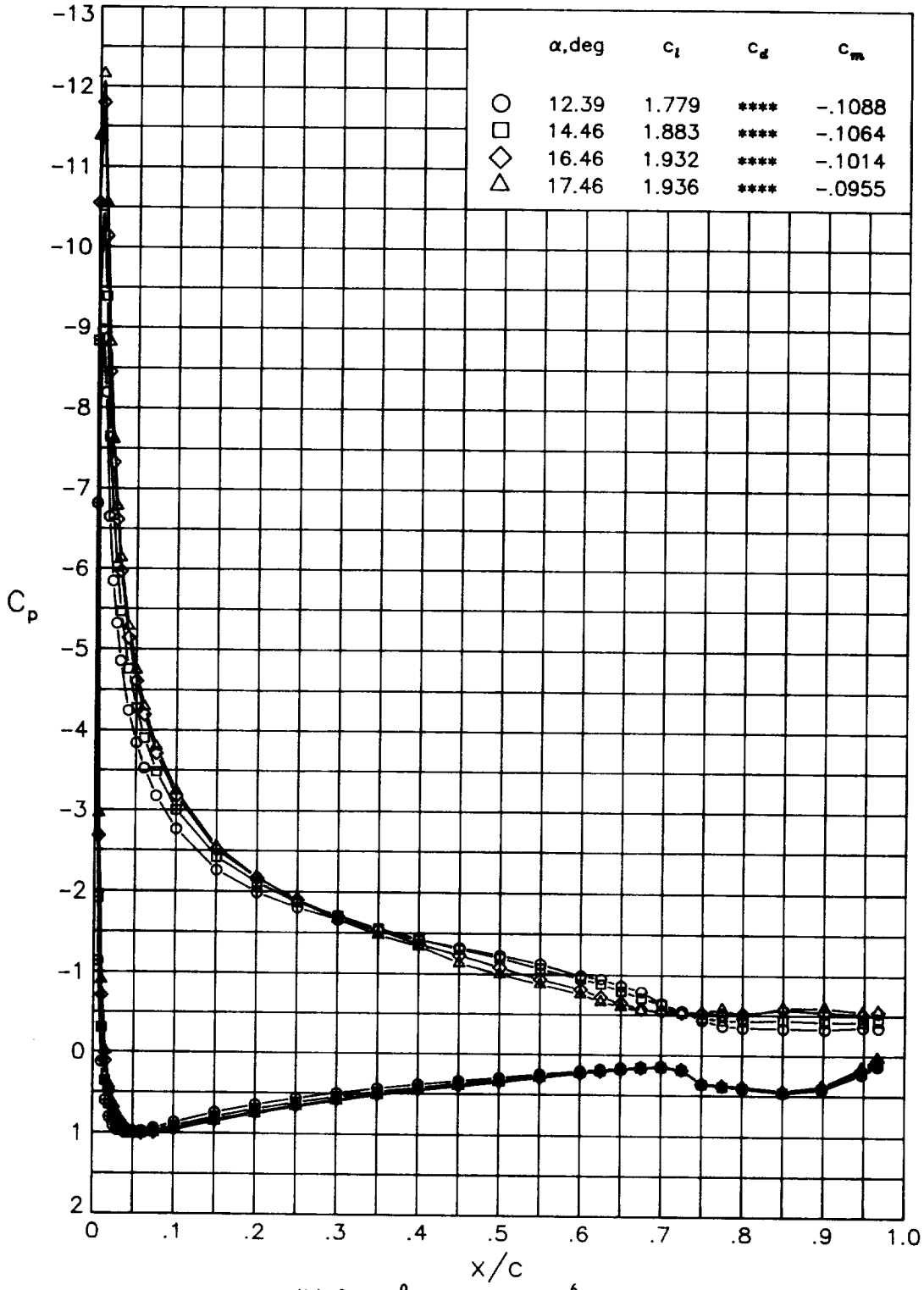

(h) $\delta_f = 10^0$. $R = 10.0 \times 10^6$. Concluded.

Figure 18. - Continued.

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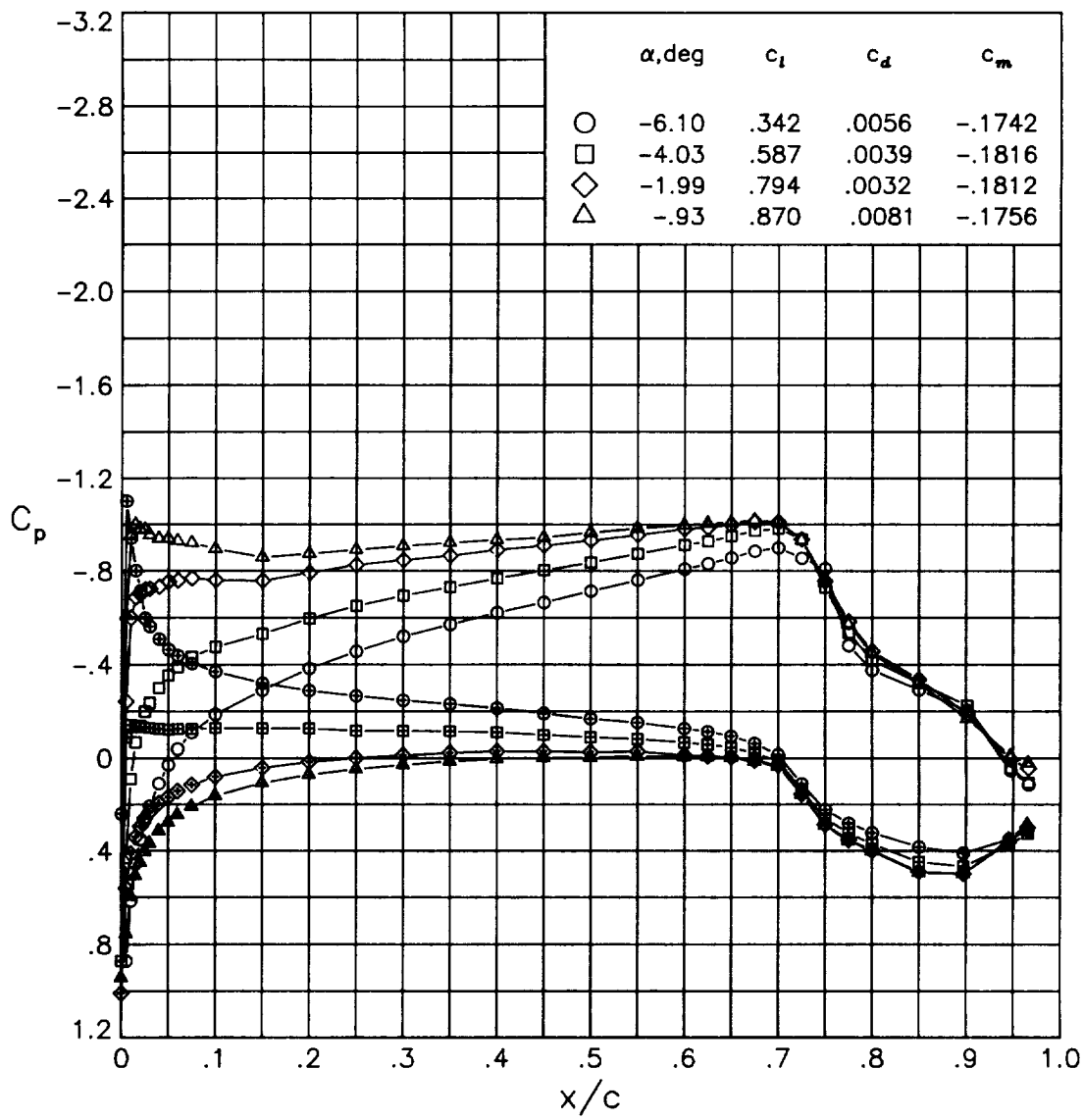

(l) δ_f = 12.5°. R = 10.0 x 10^6.

Figure 18. - Continued.

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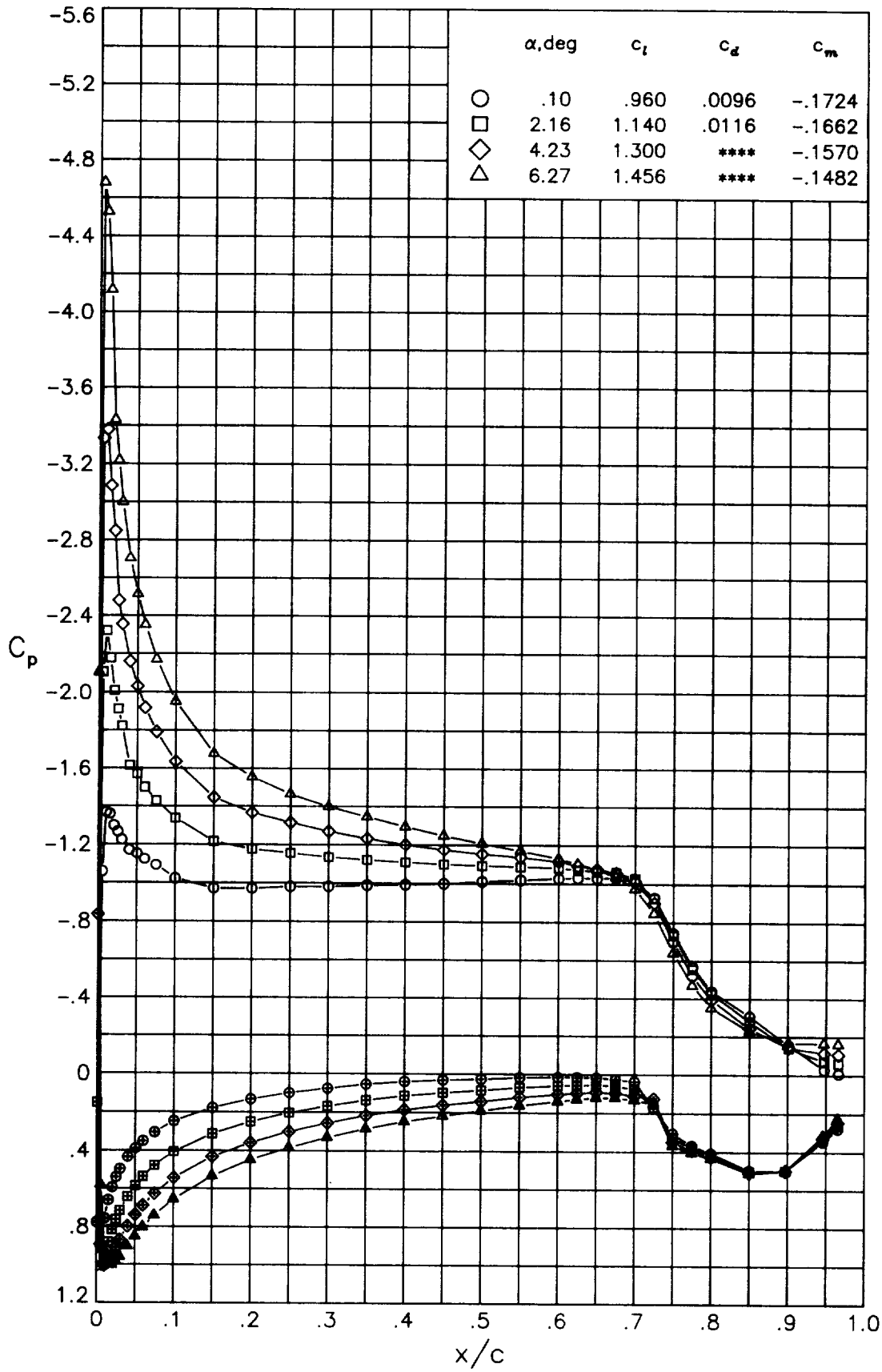

(i) δ_f = 12.5°. R = 10.0 x 10^6. Continued.

Figure 18. - Continued.

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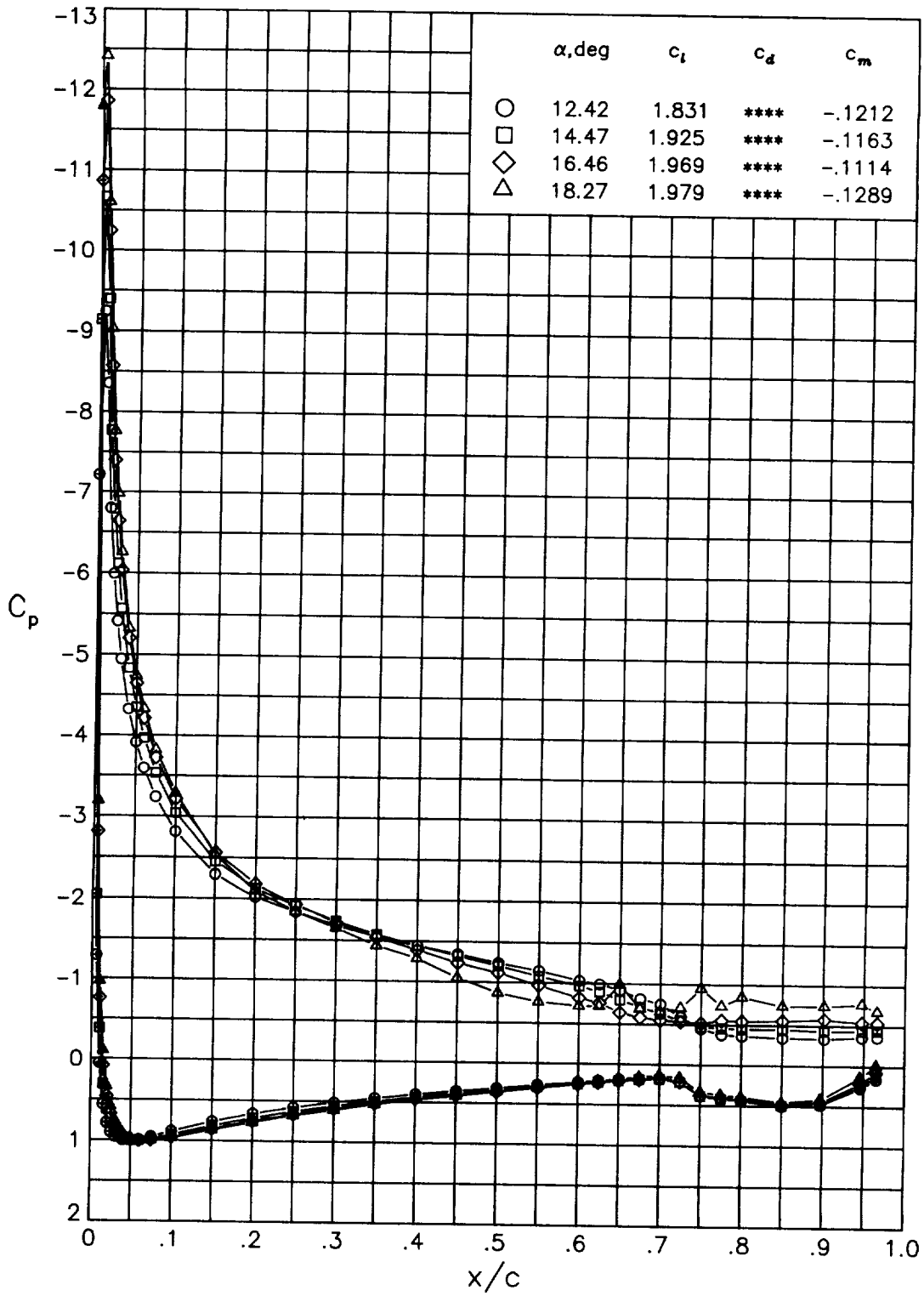

(i) δ_f = 12.5°. R = 10.0 x 10^6. Concluded.

Figure 18. - Concluded.

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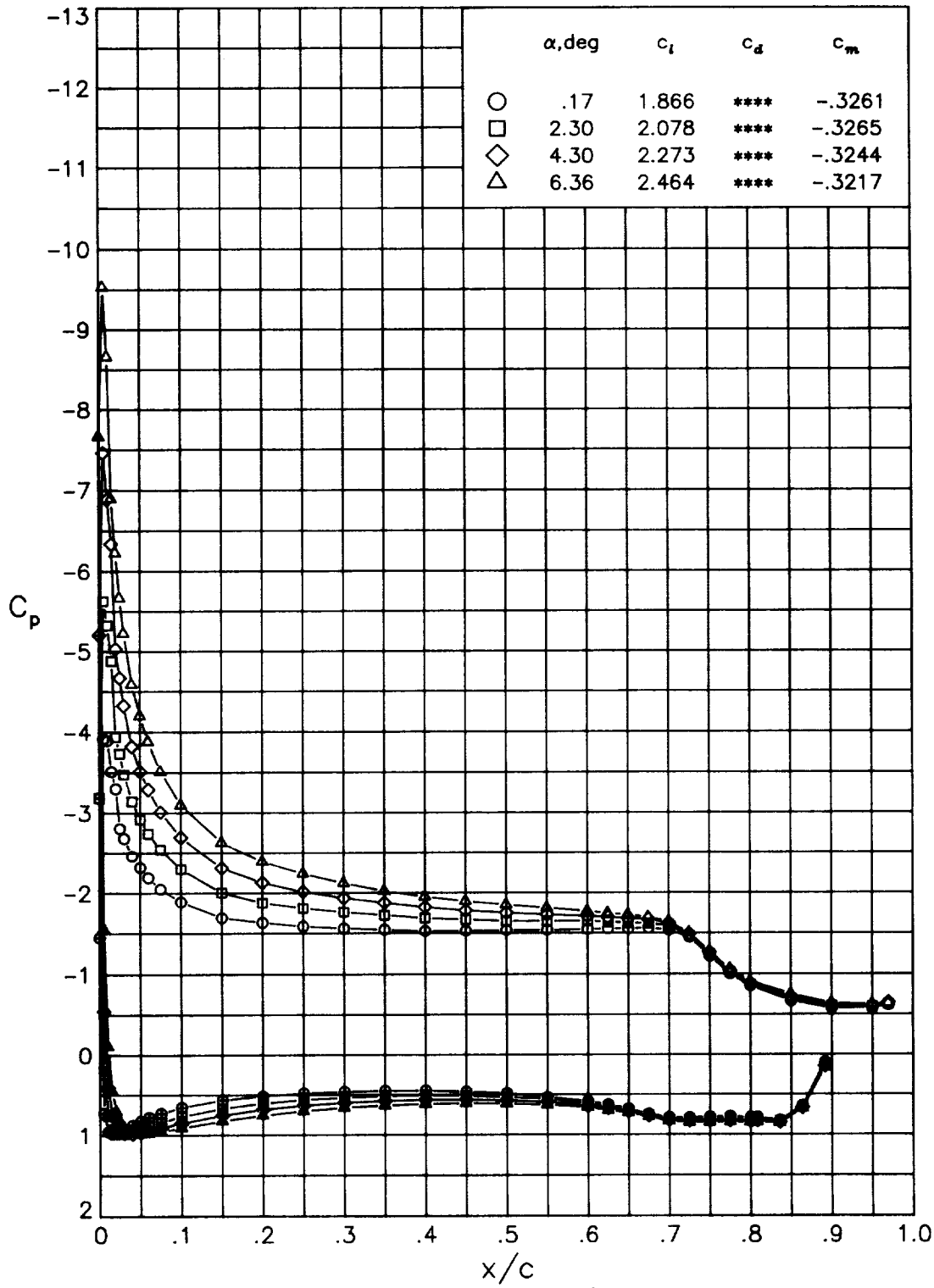

(a) α less than 7°.

Figure 19. - Effect of angle of attack on chordwise pressure distributions for 0.20c split flap deflected 60°. M = 0.07; R = 6.0 x 10^6; Model smooth. (centered symbol designates lower surface)

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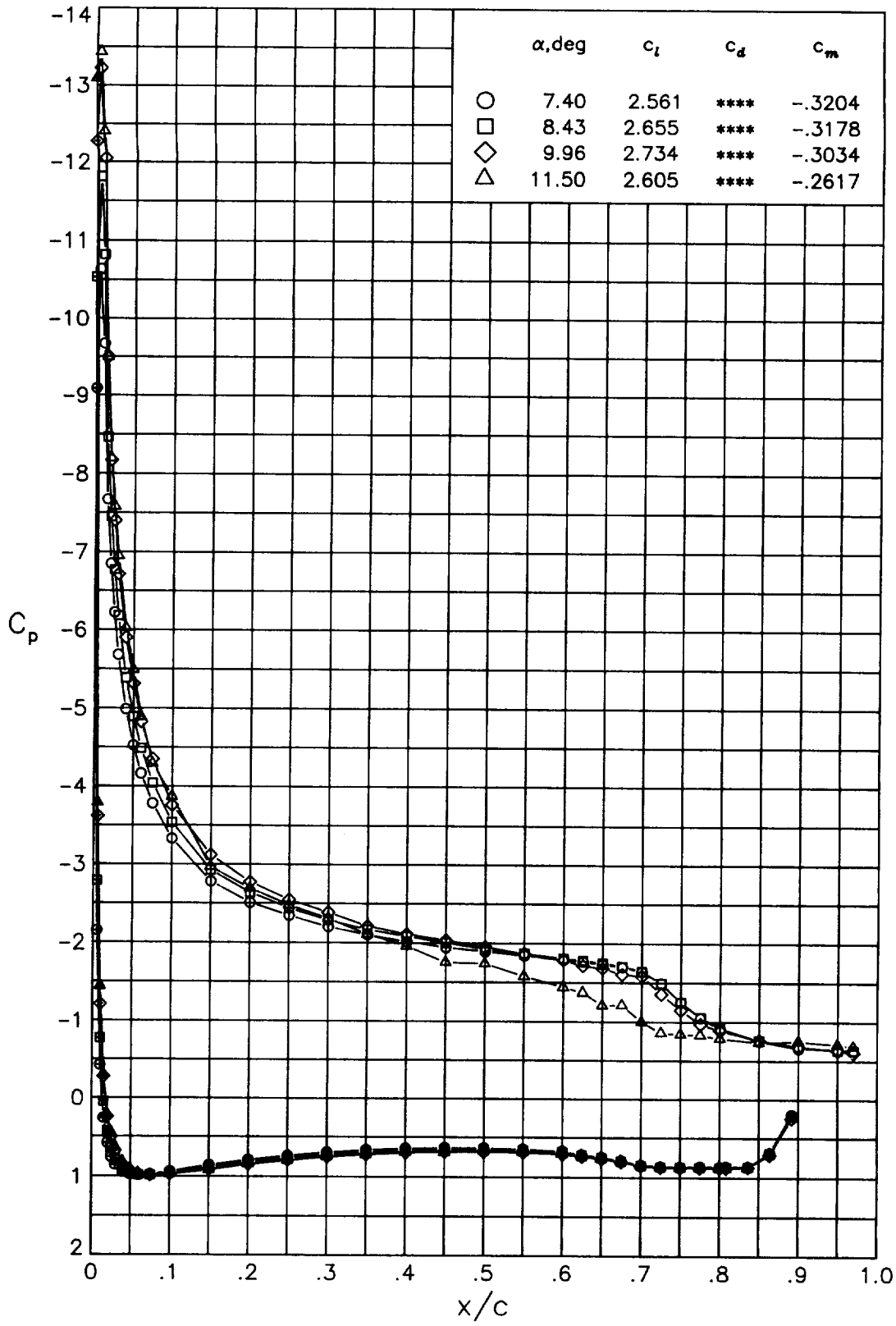

(b) α greater than 7°.

Figure 19. - Concluded.

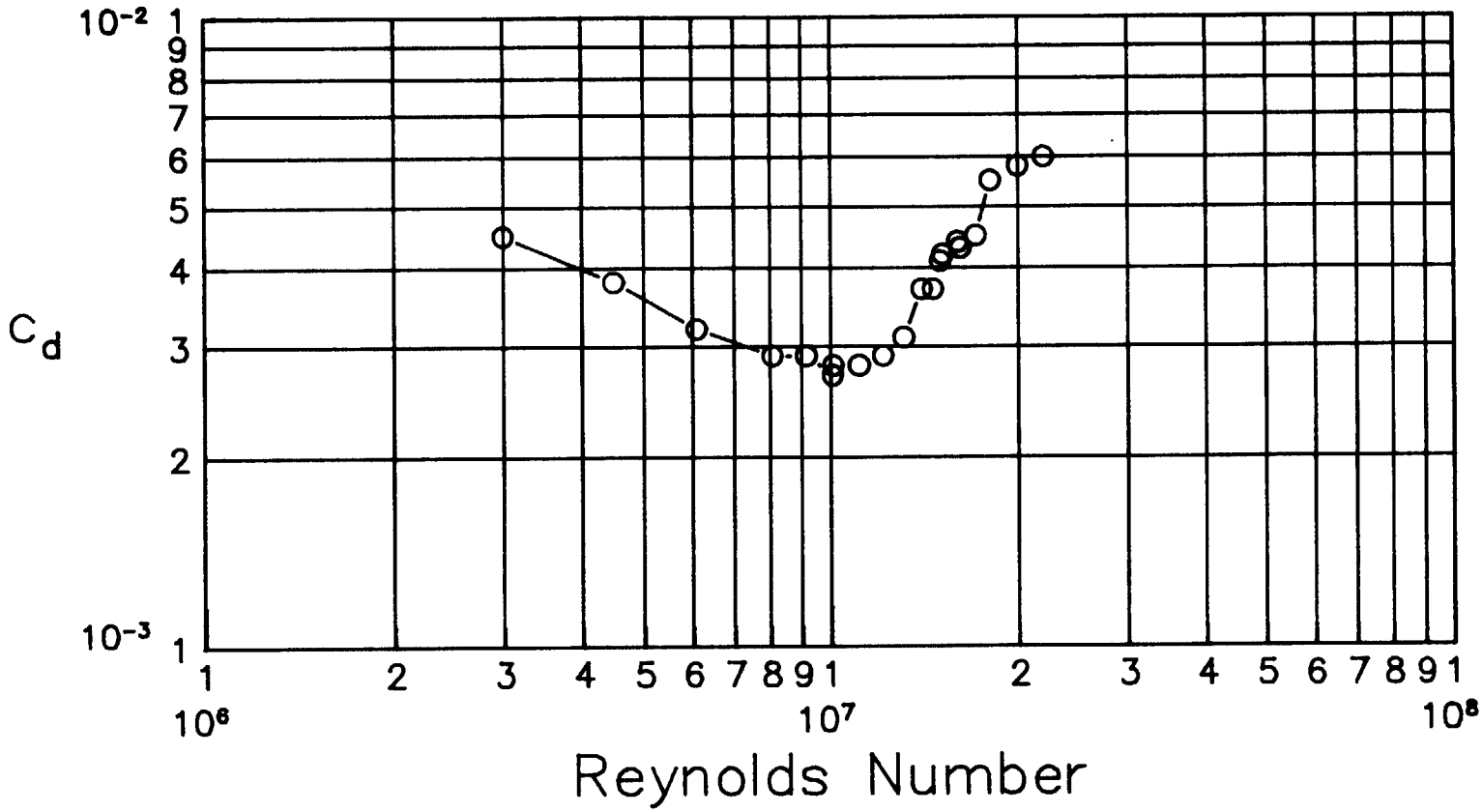

Figure 20. - Variation of drag coefficient with Reynolds number for NLF(1)-0414F airfoil at $\alpha = -1^0$. Model smooth; $M \leq 0.14$; $\delta_f = 0^0$.

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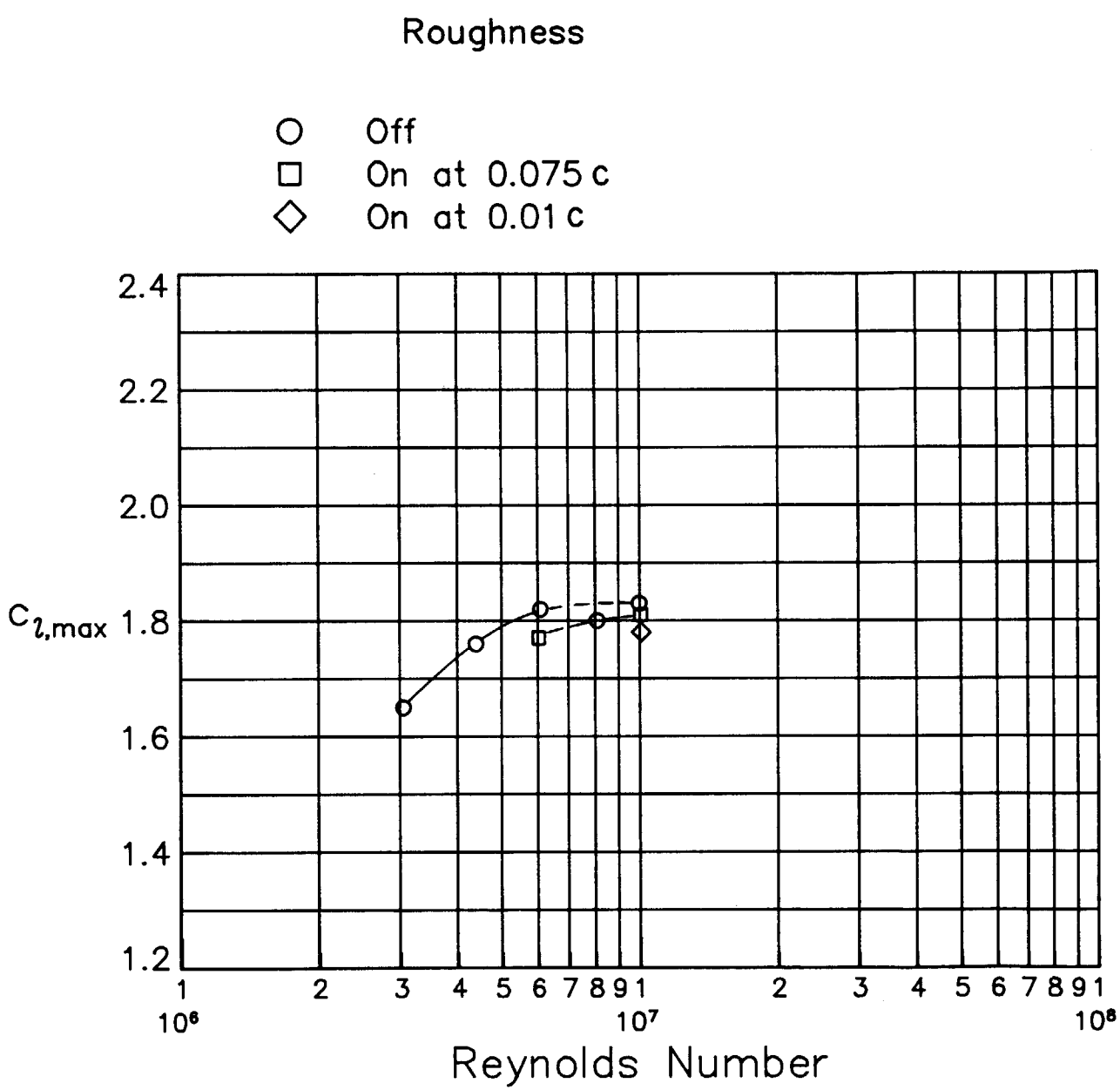

Figure 21. - Variation of maximum lift coefficient with Reynolds number for NLF(1)-0414F airfoil. $M \leq 0.12$; $\delta_f = 0^0$.

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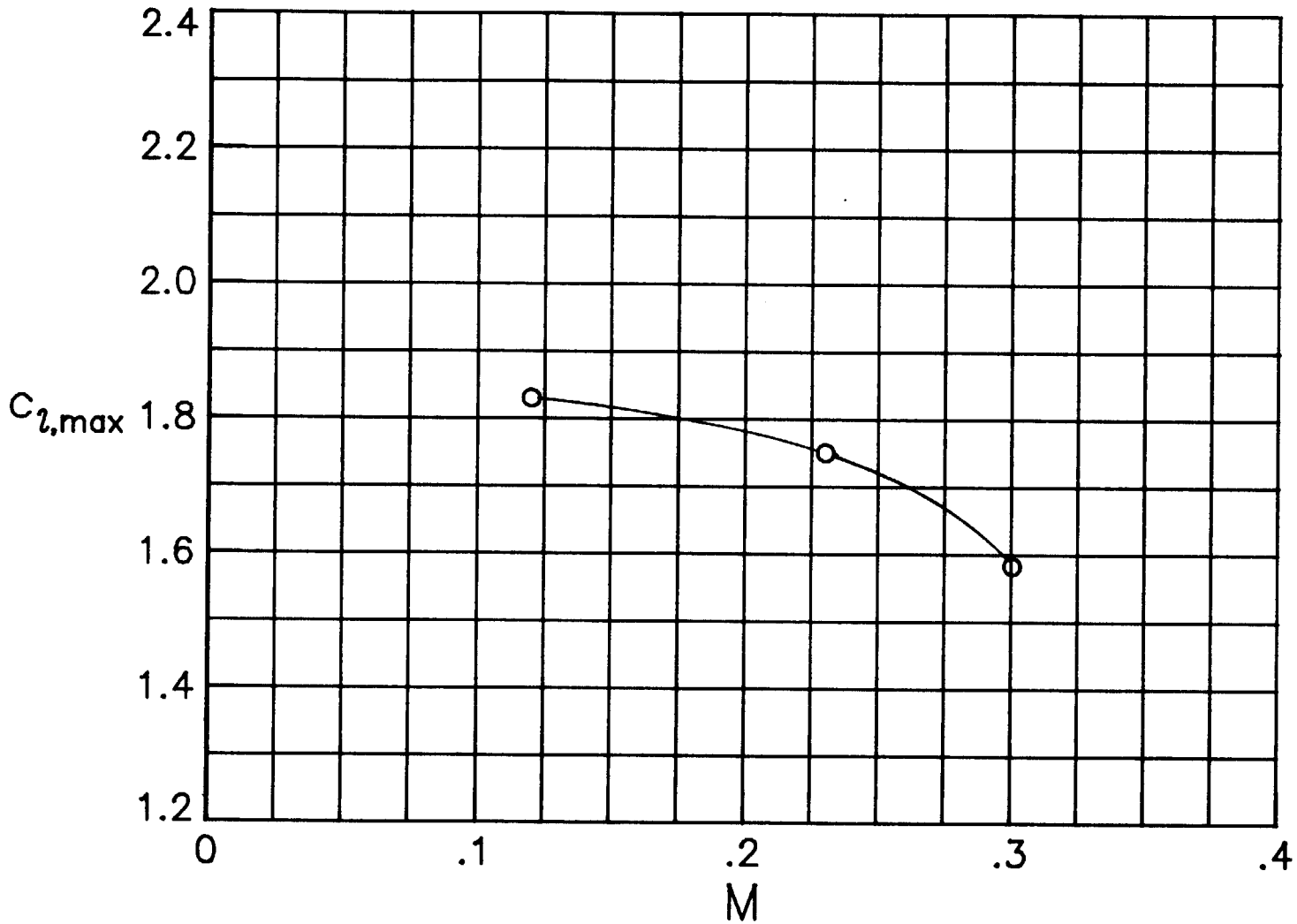

Figure 22. - Variation of maximum lift coefficient with Mach number for NLF(1)-0414F airfoil. Model smooth; $R = 10.0 \times 10^6$; $\delta_f = 0^\circ$.

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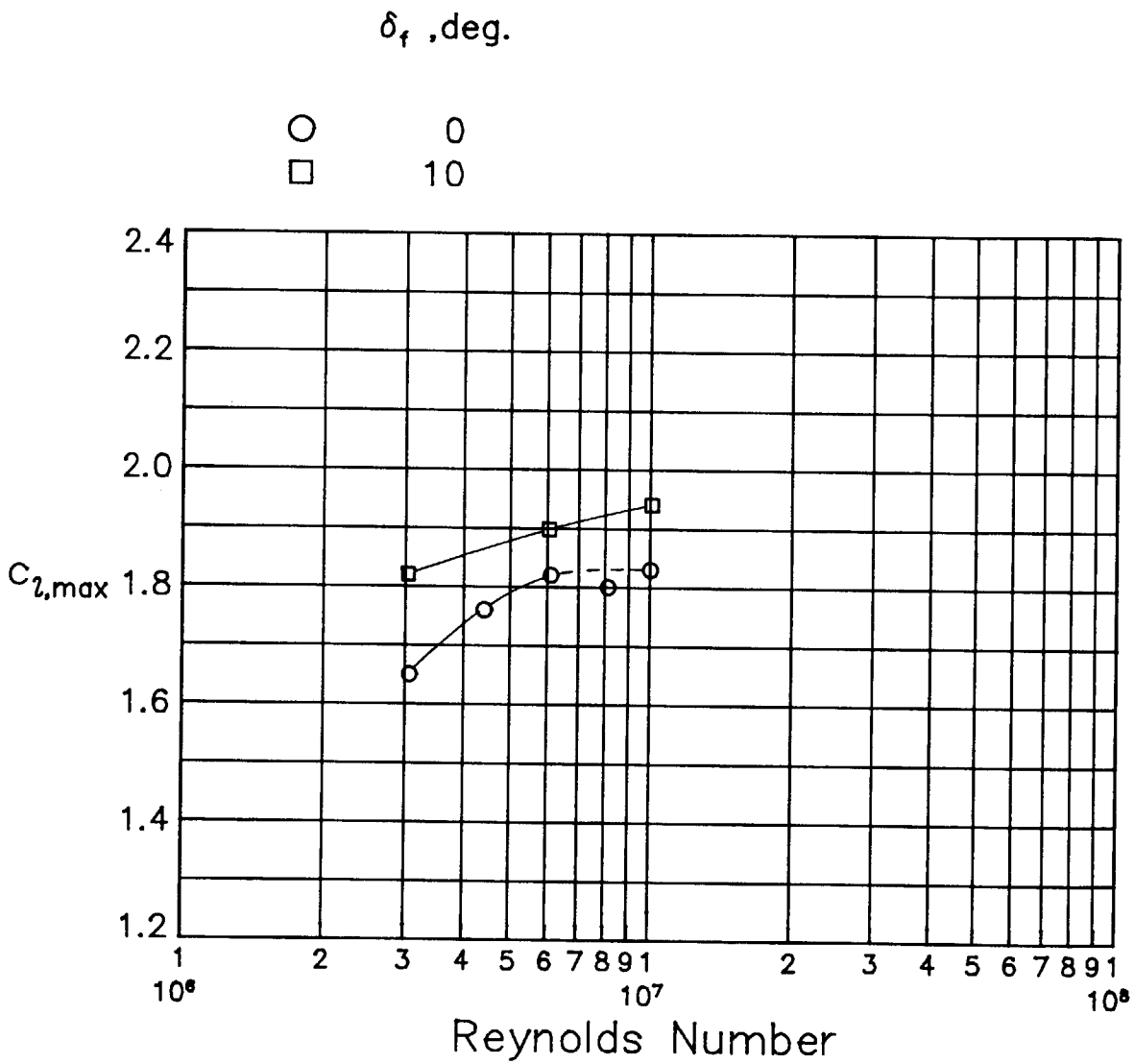

Figure 23. - Variation of maximum lift coefficient with Reynolds number for flap deflections of 0^0 and 10^0 for NLF(1)-0414F airfoil. $M \leq 0.12$; model smooth.

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16. Abstract

Experimental results have been obtained for a flapped natural-laminar-flow airfoil, NLF(1)-0414F, in the Langley Low-Turbulence Pressure Tunnel. The tests were conducted over a Mach number range from 0.05 to 0.40 and a chord Reynolds number range from about 3.0×10^6 to 22.0×10^6. The airfoil was designed for 0.70 chord laminar flow on both surfaces at a lift coefficient of 0.40, a Reynolds number of 10.0×10^6, and a Mach number of 0.40. A 0.125 chord simple flap was incorporated in the design to increase the low-drag, lift-coefficient range. Results were also obtained for a 0.20 chord split-flap deflected 60°.

17. Key Words (Suggested by Author(s))
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