SHORT REPORT

OSCILLATING LAMP FIXTURE FOR GROWING AREAS

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BEAMFLICKER REPORT

The Oscillating Parabolic Mirror of "Beamflicker" was designed by Dr. Richard W. Tinus, Supervisory Plant Physiologist, USDA Forest Service, Rocky Mountain Forest and Range Experimental Station, Flagstaff, Arizona. With his idea, an economic greenhouse lighting system was developed and patented. Patent #5095414.

The Beamflicker uses a stationary 400 watt high pressure sodium arc bulb. The parabolic mirror rotates 180 degrees around the bulb to produce intermittent lighting every minute throughout the night. This one bulb can replace up to 88 incandescent bulbs in a 40 x 100 foot greenhouse over different sections of a growing area.

The lighting intensity of the Beamflicker varies greatly depending on the distance from the bulb. The light intensity varies from 1.3 μmol m^2s^{-1} 50 feet from the bulb to 52.5 μmol $m^{25}s^{-1}$ directly beneath the bulb. A year long study involving light intensity and many species will be concluded in July 1994. These research results should be published within the next year.

NASCO Machine of Flagstaff Arizona is the licensed manufacturer of the Beamflicker. For more information contact Harvey Hiatt, (602) 774-4501. FAX (602) 779-5662.