

## PLANT GROWTH ENVIRONMENTS (DATA)

If your group is growing plants under the light banks in the Plant Growth Laboratory, you should be aware of and specify in your report, the environmental conditions under which they were grown. Prior to visiting the Plant Growth Laboratory, consult the data below which apply to the several plant growth areas. Data were obtained at approximately plant level with the plants having been removed from beneath the lights in question:

FLUORESCENT LIGHT ENVIRONMENT (light bank in "potting and planting room"):

Temperature = 26 C

Photoperiod = 12.5-hour day/11.5-hour night

Light Intensity = 140 umoles of photons/meter<sup>2</sup>/second in 400-700 nm wavelength range

VERY HIGH OUTPUT (VHO) FLUORESCENT ENVIRONMENT (rear left side of growth room):

Temperature = 28 C

Photoperiod = 12.5-hour day/11.5-hour night

Light Intensity = 600 umoles of photons/meter<sup>2</sup>/second in 400-700 nm wavelength range

FILTERED LIGHT BOXES FOR SEED GERMINATION:

Blue Filter admits 1.4 umoles of photons/meter<sup>2</sup>/second

Red Filter admits 2.5 umoles of photons/meter<sup>2</sup>/second

METAL HALIDE/LUCALOX IN "SUNBRELLAS" (rear growth environment):

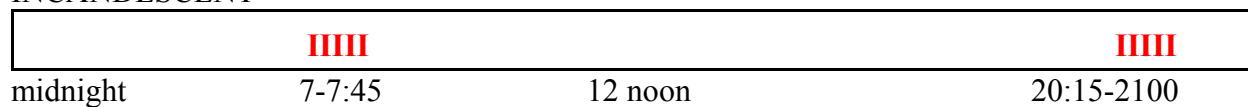
Temperature = 27 C

Photoperiod = (see graphic below) 14 hours with a gradual "step-up" from incandescent-only for 45 min beginning at 7am then addition of metal halide (7:45 to 20:15) and then finally high pressure sodium (GE Lucalox) (9:45 - 18:15) during mid-day hours; then "step down" in reverse ending in 45 min of incandescent (20:15-21:00).

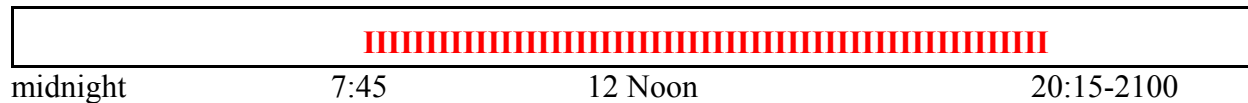
Light Intensity = 500 umoles of photons/meter<sup>2</sup>/second in 400-700 nm wavelength range

**Day/Night Cycles of the "Sunbrella" Systems:**

INCANDESCENT



METAL HALIDE



HI PRESSURE SODIUM (Lucalox)

