

Power vs. Light

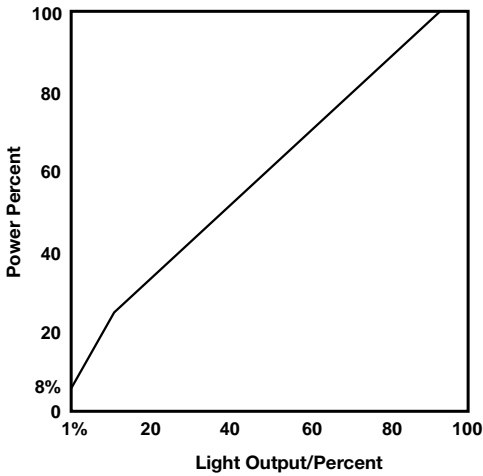
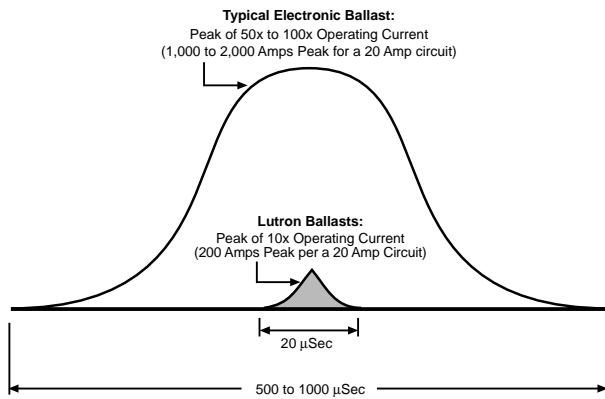


Figure from "Lighting Handbook," used with permission of Illuminating Engineering Society of North America.

Dimming fluorescent lights saves energy.

There is approximately a 1:1 correlation between energy savings and how far lights are dimmed. The chart to the left portrays the linear relationship between dimming fluorescent lights and power consumed.

Ballast Inrush Current



Ballast Inrush Wave Form

Inrush current occurs whenever electronic ballasts are switched on.

All electronic ballasts have large storage capacitors which supply high frequency power to lamps. When ballasts are energized (switched on), these capacitors charge or fill, creating an inrush of current. This sudden inrush of current can cause computer problems, false circuit breaker trips, or weld switch/relay contacts.

Lutron ballasts are designed with special added circuitry which internally limits inrush current to less than 10 times operating current, typically 3 amps at 277 volts and 7 amps at 120 volts.

The chart to the left compares a typical electronic ballast's inrush current with a Lutron electronic dimming ballast.

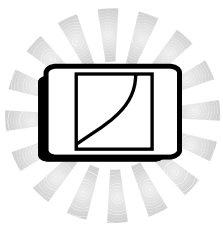
Ambient Operating Temperature

Lutron electronic fluorescent dimming ballasts are designed to operate with an ambient temperature that does not allow the specified point on the ballast label to exceed 75°C. Lutron ballast specifications and performance expectations are based on this maximum case temperature.

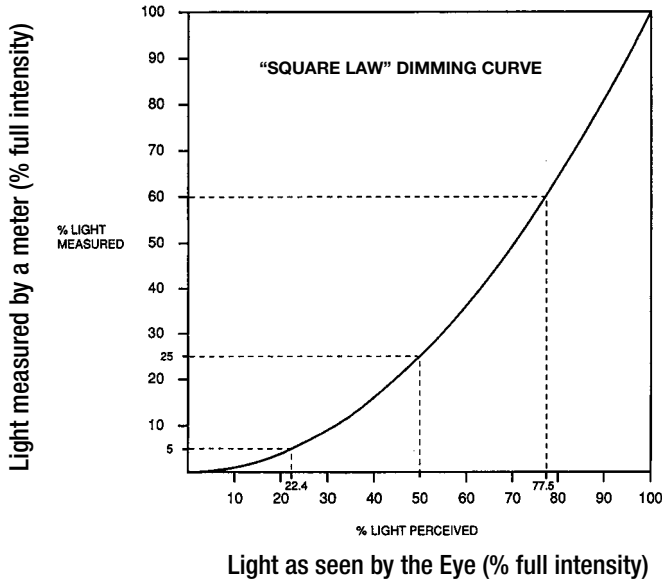
The relationship between the life expectancy of an electronic device, such as a ballast, and the ambient temperature in

which it operates is inversely proportional. Simply, an increase in temperature will decrease the life expectancy of the device. Generally, each 10°C decrease in ambient temperature will increase component life expectancy by a factor of two.

Typical Lutron ballast installations easily meet this 75°C temperature requirement.



Perceived vs. Measured Illuminance

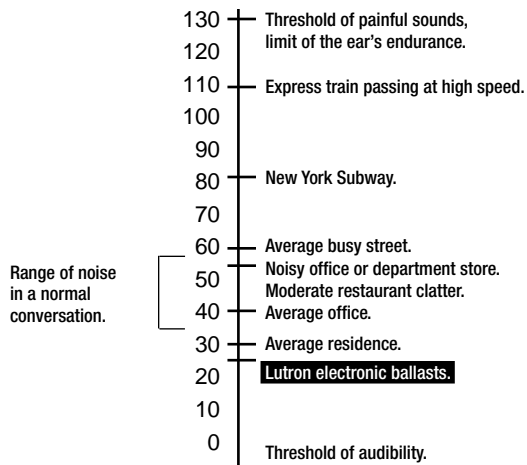


The human eye compensates for diminishing light by opening the pupil to let more light enter. When there is 25% light you see 50%, 10% light, 32%. At 1% light, you see 10%.

Figure from "Lighting Handbook," used with permission of Illuminating Engineering Society of North America.

Dimming Ballasts vs. Typical Sounds

Decibel Scale of Intensities



1 db = the smallest change in energy that the human ear can hear.

Lutron electronic fluorescent dimming ballasts are designed to be inaudible in a 27 db (decibel) room. A typical library is twice this loud.