

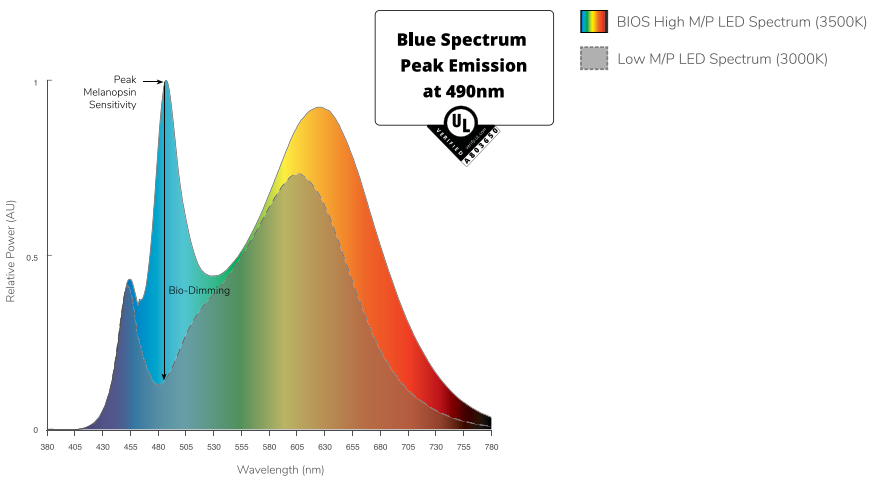
Circadian Cleanroom TL Amber Troffers

1x4, 2x2 and 2x4 Amber/BIOS® LED Luminaires

ENERGY DATA - WHITE LED

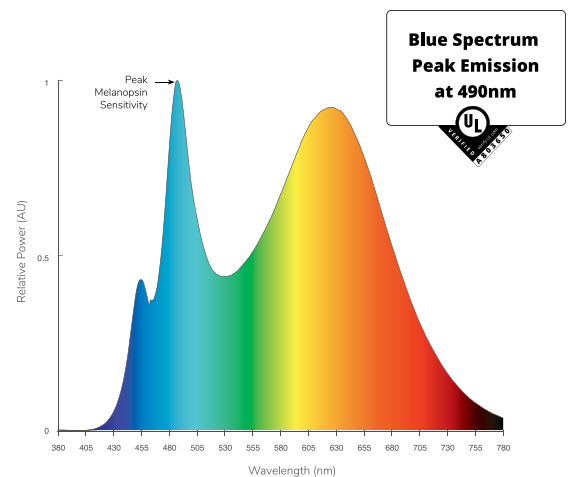
Energy Data Pending

PHOTOMETRICS - DYNAMIC



Dynamic Board Spectral Power Distribution (3500K)

PHOTOMETRICS - STATIC



Static Board Spectral Power Distribution (3500K)

Circadian Cleanroom TL Amber Troffers

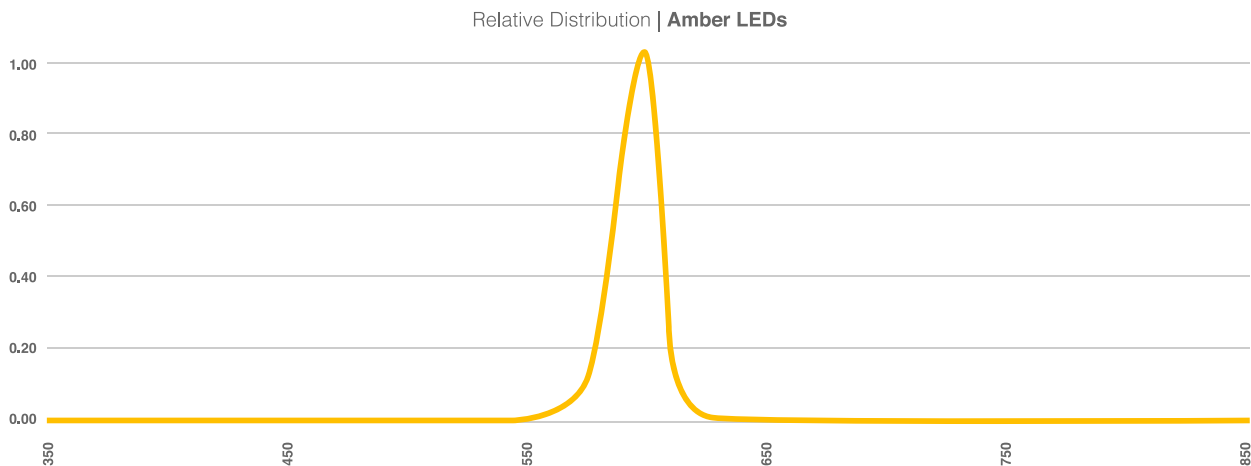
1x4, 2x2 and 2x4 Amber/BIOS® LED Luminaires

ENERGY DATA - COLOR LED

| INSET-FGRS-AMBER LED TROFFER | | | | | |
|------------------------------|---------------|---------------|-------|----------|-------------------------------|
| ENCLOSURE SIZE | LED SELECTION | 590nm (Amber) | | | MAX AMBIENT TEMP ³ |
| | | LUMENS | WATTS | EFFICACY | |
| 1X4 | 1YLED | 1,885 | 43 | 44 | 40°C (104°F) |
| 1X4 | 2YLED | 3,770 | 86 | 44 | 40°C (104°F) |
| 2X2 | 1YLED | 1,066 | 22 | 48 | 40°C (104°F) |
| 2X2 | 2YLED | 2,132 | 43 | 50 | 40°C (104°F) |
| 2X2 | 3YLED | 3,197 | 65 | 49 | 40°C (104°F) |
| 2X2 | 4YLED | 4,263 | 86 | 50 | 40°C (104°F) |
| 2X4 | 1YLED | 2,390 | 44 | 54 | 40°C (104°F) |
| 2X4 | 2YLED | 4,779 | 87 | 55 | 40°C (104°F) |
| 2X4 | 3YLED | 7,169 | 130 | 55 | 40°C (104°F) |
| 2X4 | 4YLED | 9,558 | 173 | 55 | 40°C (104°F) |

* View previous page for energy data notes.

COLOR LED RELATIVE DISTRIBUTION

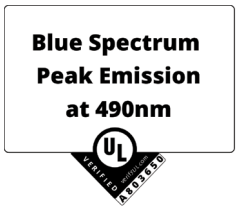


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HOW BIOS® WORKS

Production of melatonin, the hormone that helps us to sleep, is regulated by the ipRGC, a non-visual photoreceptor in the human eye. The wavelength of blue sky light at 490nm, present in sunlight, prevents melatonin production during the day. These signals are crucial in allowing humans to distinguish between day and night, promoting better sleep, health and well-being.



DYNAMIC LIGHT ENGINE

The SkyBlue® Dynamic Light Engine automatically calibrates the light level, reducing melanopic lux while keeping photopic lux at a constant. Dynamic light engines are paired with the current sensing smart BIOS® Bio-Dimming module allowing it operate using any single channel CC LED driver, using any dimming interface. Available in 3500K (dim to 3000K), and 4000K (dim to 3500K).

STATIC LIGHT ENGINE

The SkyBlue® Static Spectrum Light Engine delivers the industry’s best melanopic-to-photopic (m/p) ratio, with R9 greater than 90 at each color temperature. Easily integrated into existing LED fixtures and compatible with all LED drivers, the SkyBlue® Static Spectrum Light Engine is the ideal replacement for static color light fixtures. Static light engines have the full output of BIOS® SkyBlue® all the time and the peak cannot be adjusted.

DIMMER SETTINGS WITH BIOS® DYNAMIC DIMMING TECHNOLOGY

| | DIMMER SETTING | BIOS® SKYBLUE® | LIGHT OUTPUT |
|--|----------------|----------------|----------------|
| | 100% (full on) | 100% | 100% |
| | 99%-51% | 100%-0% | 100%-90% |
| | 50% | No BIOS® | ~90% |
| | 49%-0% | No BIOS® | Linear Dimming |

BIOS® SkyBlue® operates at 100% when the light output is at 100%, for maximum circadian impact. As the light is dimmed, BIOS® SkyBlue® dims until 50% is reached when the BIOS® SkyBlue® is no longer present.