

Circadian Cleanroom TL Vivarium Troffers

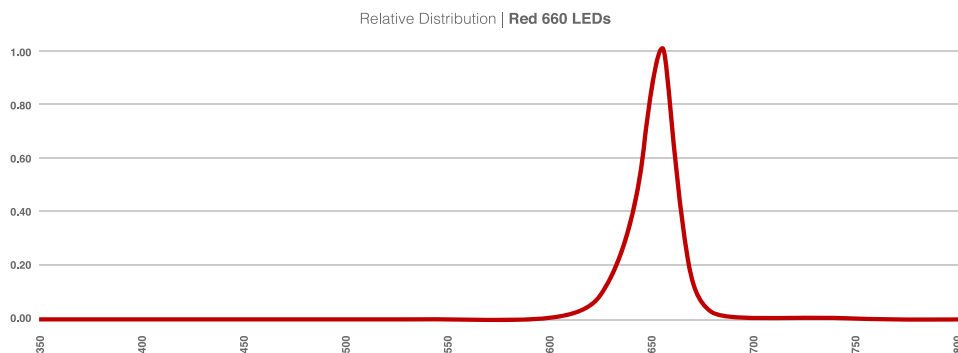
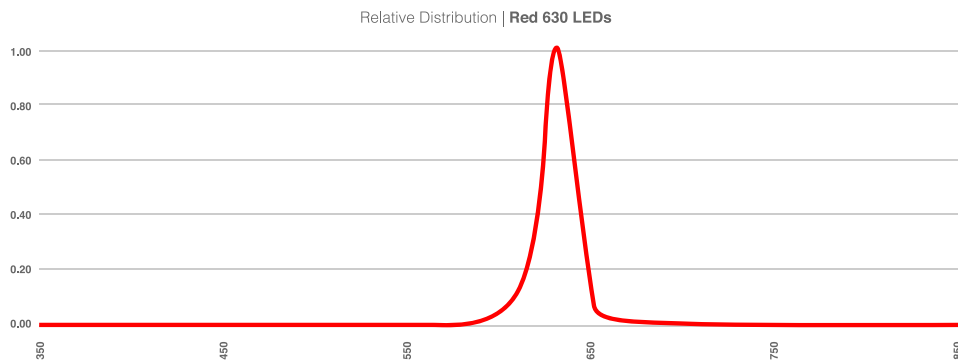
1x4, 2x2 and 2x4 Red/BIOS® LED Luminaires.

ENERGY DATA - COLOR LED

INSET-FGRS-RED LED TROFFER								
ENCLOSURE SIZE	LED SELECTION	630nm (RED)			660nm (RED)			MAX AMBIENT TEMP ³
		LUMENS	WATTS	EFFICACY	LUMENS	WATTS	EFFICACY	
1X4	1RLED	1,105	27	41	1,149	44.5	25.8	40°C (104°F)
1X4	2RLED	2,048	53	39	2,298	88.9	25.8	40°C (104°F)
2X2	1RLED	540	14	39	558	22.2	25.1	40°C (104°F)
2X2	2RLED	1001	27	37	1,116	44.5	25.1	40°C (104°F)
2X2	3RLED	1541	41	38	1,674	66.7	25.1	40°C (104°F)
2X2	4RLED	2002	53	38	2,232	88.9	25.1	40°C (104°F)
2X4	1RLED	1228	27	45	1,261	44.5	28.3	40°C (104°F)
2X4	2RLED	2275	53	43	2,522	89	28.3	40°C (104°F)
2X4	3RLED	3503	80	44	3,783	133.5	28.3	40°C (104°F)
2X4	4RLED	4550	106	43	5,044	178	28.3	40°C (104°F)

* View previous page for energy data notes.

COLOR LED RELATIVE DISTRIBUTION



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1x4, 2x2 and 2x4 Red/BIOS® LED Luminaires.

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.

**Blue Spectrum
Peak Emission
at 490nm**




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.