

Project:	Catalogue #:	Type:
Notes:		

Product Description

A BIOS-enabled commercial-grade, recessed, lay-in T-Bar troffer with modern styling and high visual comfort featuring a single shallow semi-round lens. This technology is targeted for circadian lighting for indoor applications where low-glare, high-quality and ease of installation are required. This IC-rated luminaire's low-profile design makes it ideal for shallow or obstructed plenum applications.

This fixture is equipped with BIOS SkyBlue® circadian LED technology, specifically for increased melanopic lux and circadian stimulus for daytime applications. This luminaire can be configured with either BIOS Static for applications where a constant level SkyBlue® content is desired, or BIOS Dynamic for applications requiring variable SkyBlue® content based on time of day. Provides minimum melanopic (M/P) ratio of >0.7 at 3000K, CRI 80+, R9>90; and cyanosis observation index (COI) less than or equal to 5.4.



Applications

Office Areas, Hospitals, Retail Stores, Nursing Homes, Classrooms, Factories.

Features

- Shallow design
- Extruded acrylic lens
- Standard low voltage dimming (0-10v)
- 80+ CRI
- Available in 1x4, 2x2, and 2x4 configurations
- Type IC suitable for use in insulated ceilings
- Room side access for driver compartment

Featured Options

- Emergency lighting battery pack
- Optional basket/lenses (see ordering key)

Optical System

Round linear ribbed frosted acrylic diffuser, offers high levels of efficiency and visual comfort. Indirect reflectors are precision formed and contoured to provide soft, lowglare, indirect illumination, while maintaining high-efficiency and a wide, uniform light distribution. Other lens options available (See ordering key on page 2).

Mounting

This luminaire has been specifically designed for T-Bar applications. Holes provided for chain-mounting support to building structure with integral earthquake clips.

Construction

Die-formed, code gauge steel housing. Precision-formed steel reflector.

Finish

White, polyester powder painted housing.

Electrical

Long life LEDs coupled with high efficiency drivers provide quality illumination. Rated to deliver L80 performance > 50,000 hours.

Warranty

5 year limited warranty. For complete warranty, click here: 

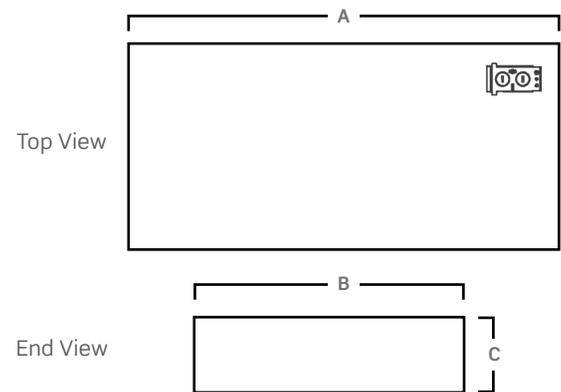
Approvals

- Approved to CSA/UL standards. UL listed for insulated ceilings.
- Tested in accordance to IESNA LM-79.
- Suitable for damp locations

DesignLights Consortium® Qualified, check www.designlights.org/QPL for qualified configurations.



Dimensions



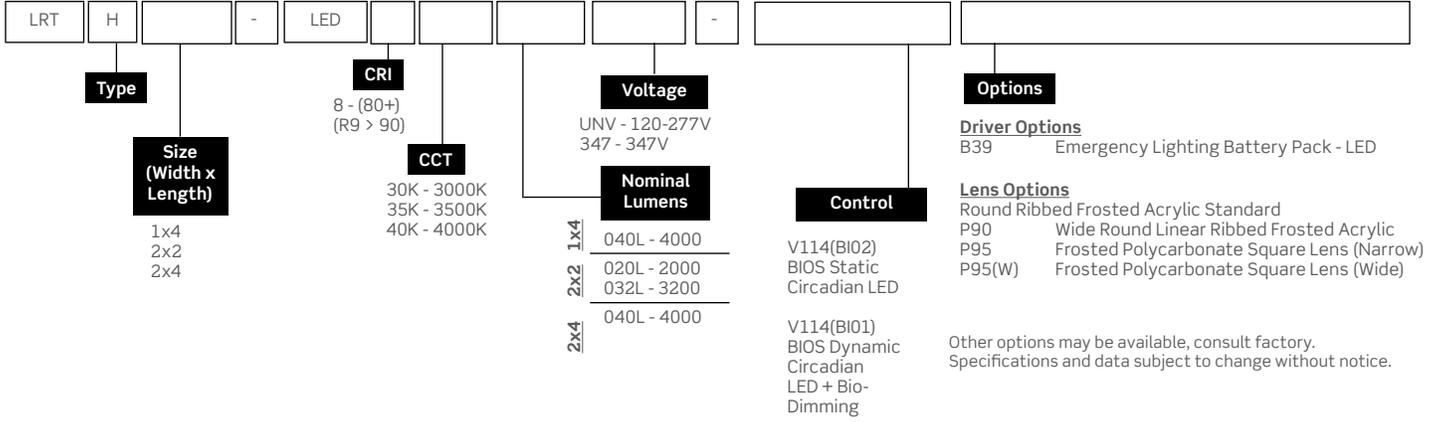
Size	A	B	C
1x4	47 3/4"	11 3/4"	2 1/2"
2x2	23 3/4"	23 3/4"	2 1/2"
2x4	47 3/4"	23 3/4"	2 1/2"

Consult installation guide for exact dimensions.

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Order Key

EXAMPLE: LRTH2x4-LED840K040LUNV-V114(BI01)



Performance Data

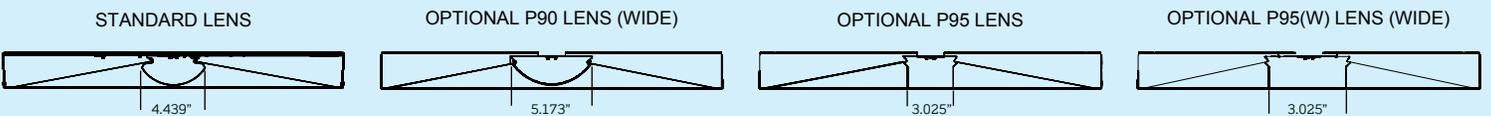
LED Performance Data				
Size	Nominal Lumens	Delivered Lumens	Watts	Lumens per Watt
1x4	4000	3968	28	143
2x2	2000	2047	13	156
	3200	3178	21	151
2x4	4000	4135	28	149

Flange Kits for hard ceiling installation (Ordered Separately)	
Size (Width x Length)	Item No.
1x4	KIT00136
2x2	KIT00137
2x4	KIT00138

Ordering Key Example

LRTH2x2-LED840K032LUNV-V114(BI02)	<ul style="list-style-type: none"> Static CCT (4000K) fixture, output dimmable to 1% SkyBlue™ is always present
LRTH2x2-LED840K032LUNV-V114(BI03)	<ul style="list-style-type: none"> 2-Channel Tunable (4000K - 2700K) fixture dimmable to 1% SkyBlue™ is always present from 4000k-3000k
LRTH2x2-LED840K032LUNV-V114(BI01)	<ul style="list-style-type: none"> Single-Channel Bio-Dimming from 4000K with SkyBlue™ to >2700K At 2700K, dim total output to 1% At 2700K, SkyBlue™ no longer present

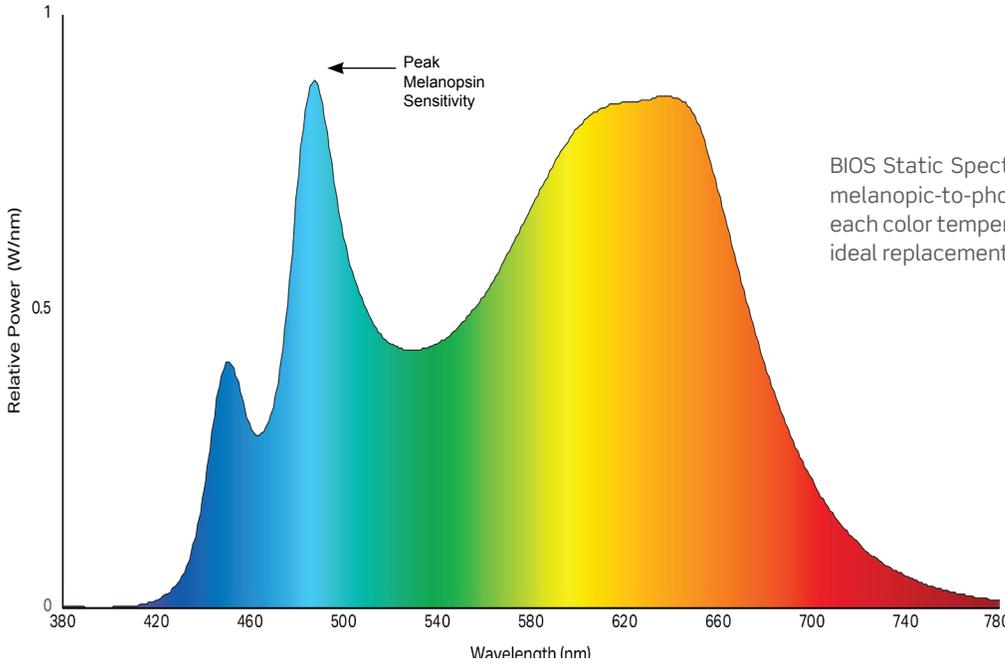
Lens Options



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BIOS Static Circadian LED Solution - V114 (BI02)

BIOS SkyBlue® Spectrum lighting solutions support proper daytime circadian stimulus, communicating directly with human circadian biology through a non-visual photo receptor in the eye.



BIOS Static Spectrum Light Engine delivers the industry’s best melanopic-to-photopic (M/P) ratio, with R9 greater than 90 at each color temperature. BIOS Static Spectrum Light Engine is the ideal replacement for static color light fixtures.

Static Engine Spectral Power Distribution (3500K)

Nominal Performance

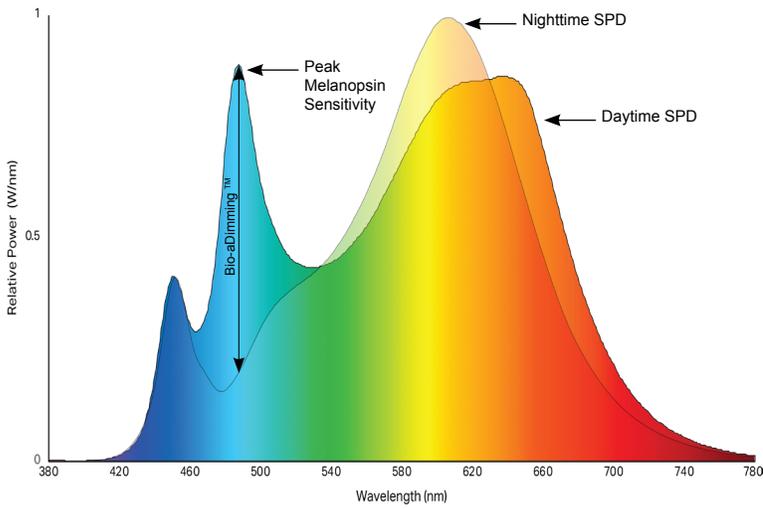
CCT	Melanopic Ratio (M/P) ¹	CRI	R9	COI ²
3000K	0.74	81	90	5.4
3500K	0.83	84	96	3.3
4000K	0.92	84	95	1.5

¹ M/P is a ratio that describes the relative melanopic lux (M) versus the photopic lux (P)
² COI - Cyanosis Observation Index

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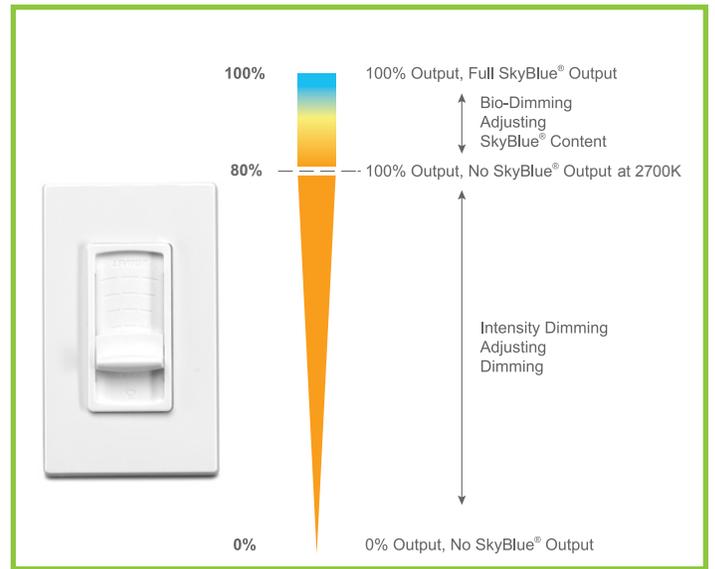
BIOS Dynamic Circadian LED Solution - V114 (BI01)

BIOS SkyBlue® Dynamic Light Engine provides full daytime circadian stimulus and can be dynamically adjusted via the Bio-Dimming™ module. Using a standard single channel 0-10V dimmer reducing melanopic lux while keeping light and CCT constant³. When the SkyBlue® content has been removed (at 2700K), the light level can be adjusted. The Bio-Dimming™ module also detects the preferred light levels over time and will adjust the high end trim of the system to those preferences.



Dynamic Engine Spectral Power Distribution (3500K)

BIOS Dynamic Circadian LED + Bio-Dimming™



Nominal Performance

CCT		Melanopic Ratio (M/P) ¹		CRI	R9	COI ²
Daytime	Night-time	Daytime	Nitght-time			
3000K	2700K	0.74	0.47	81	90	5.4
3500K	2700K	0.83	0.47	84	96	3.3
4000K	2700K	0.92	0.47	84	95	1.5

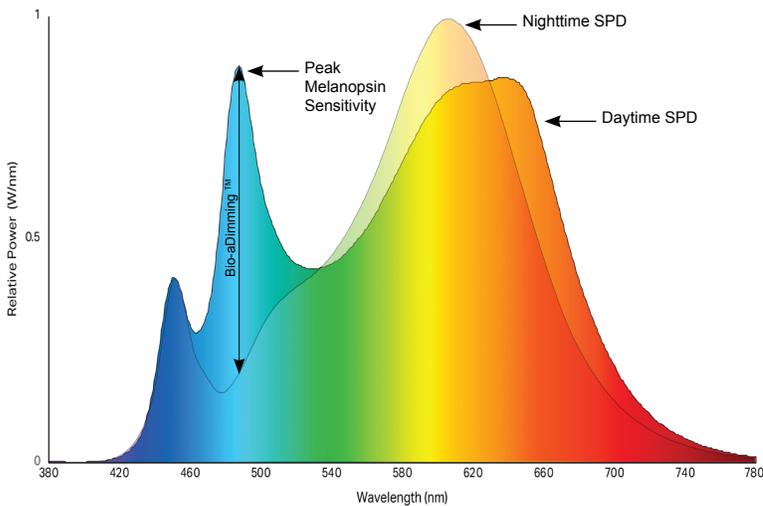
³CCT may vary by up to 500K

⁴Value as shown represents COI provided by daytime LED Spectrum.

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BIOS Dynamic Circadian LED Solution - V114 (BI03)

BIOS SkyBlue® Dynamic Light Engine provides full daytime circadian stimulus and can be dynamically adjusted via tunable circadian LED module. Using a standard two channel 0-10V dimmer reducing melanopic lux and adjusting the output light level while keep CCT constant³. The SkyBlue® below 3000K no longer present. The tunable module also detects the preferred light levels over time and will adjust the high end trim of the system to those preferences.



Dynamic Engine Spectral Power Distribution (3500K)

BIOS Dynamic Tunable Circadian LED (tunable to 2700K)

Nominal Performance

CCT		Melanopic Ratio (M/P) ¹		CRI	R9	COI ²
Daytime	Night-time	Daytime	Nitght-time			
3000K	2700K	0.74	0.47	81	90	5.4
3500K	2700K	0.83	0.47	84	96	3.3
4000K	2700K	0.92	0.47	84	95	1.5

³CCT may vary by up to 500K

⁴Value as shown represents COI provided by daytime LED Spectrum.