

# SIMPLESEAL® CLEANSLOT™

## Luminaires for Cleanrooms

### CRS4 SERIES with BIOS SkyBlue™

#### PRODUCT FEATURES:

- » 4" recessed linear slot luminaire in multiple lengths
- » Designed for use in ISO 3-9 rated cleanrooms where ceiling space is limited
- » No visible room-side fasteners for clean aesthetic
- » Features BIOS SkyBlue Technology to benefit daytime alertness, cognition, mood and circadian rhythms



#### SPECIFICATIONS

**HOUSING:** Extruded 6063-T5 aluminum construction with gasketed aluminum endcaps. Low-gloss anti-microbial white TGIC polyester powder-coat finish with five-stage pre-treatment.

**OPTIC:** Symmetric (Lambertian) or 15° asymmetric distribution option. Snap-in, one-piece extruded frosted DR acrylic diffuser.

**LED MODULE:** Serviceable static, dynamic or tunable mid-power Gen 2 BIOS Biological LED modules, Biological Static, Biological Dynamic, and Biological Tunable LED source with blue spectrum peak at 490nm and higher melanopic ratio. CRI 80+ with R9 > 90. Dynamic features 500K downward CCT shift when dimmed for evening applications requiring lower melanopic ratio. Tunable features 2700K CCT for evening applications. Refer to table for specific melanopic values.

**DRIVER/CONTROL:** 120-277VAC, 50/60Hz electrical input (PF ≥ 0.9, THD < 20%). **Biological Static:** Serviceable, constant-current single channel driver with single analog (0-10V) control input for intensity. 1-100% range with dim to dark capabilities and a linear dimming curve. **Biological Dynamic:** Serviceable constant-current driver with the BIOS Dynamic Bio-Dimming™ module keeps light output constant while reducing melanopic lux. Single analog (0-10V) control input. 1-100% dimming range with dim-to-dark capabilities and a linear dimming curve. Dimming from 100-75% reduces CCT by 500K, dimming below 75% reduces light level. **Biological Tunable:** Serviceable, constant-current multi-channel programmable driver with dual analog (0-10V) control inputs for intensity and CCT. Optional DALI (Type 8) driver. Logarithmic intensity profile with 0.1-100% range, with dim-to-dark capabilities. Linear profile on CCT adjustment.

**INSTALLATION:** Suitable for Type-IC recessed ceiling installation into 9/16" and 15/16" lay-in grid and flanged drywall (5/8" max). See Ordering Information for selection. Suitable for 0°C - 40°C ambient temperature environments. Suitable for applications requiring USP 797 and USP 800 compliance.

**PHOTOMETRICS:** Photometry tested to the IESNA LM-79-08 standard by an ILAC/ISO17025 accredited laboratory. For detailed photometric information, please visit [www.kenall.com](http://www.kenall.com).

**WARRANTY:** Limited five (5) year warranty.

**LISTINGS:** Luminaire is certified to UL standards by Intertek Testing Laboratories for Type-IC and Wet Location installations. IP65 rating per IEC60598. Suitable for biosafety labs rated BSL 1 and 2. Meets FED-STD-209E/Class 1 (ISO 3) Cleanrooms. NSF2 Splash/Non-Food Zone rated. Standard CCEA compliance.



#### ORDERING INFORMATION (Ex: CRS4-48-G-SYM-1000LFB-35K8-DIM1-DV-LEL)

Model	Length	Ceiling Configuration	Optical Distribution	Lumen Output	Lamp Color	Driver Type	Voltage	Options
<b>CRS4</b>			<b>SYM</b>				<b>DV</b>	
	<b>Nominal Length</b>		<b>Lamp Color</b>			<b>Input Voltage</b>		
	24 2'		35K8 3500K SkyBlue / 80CRI min / R9 90+			DV 120-277VAC, 50/60Hz		
	48 4''		40K8 4000K SkyBlue / 80CRI min / R9 90+			<b>Options</b>		
	<b>Ceiling Configuration</b>		<b>Driver Type</b>			LEL* 10W Integral Emergency Battery Backup with Remote Test Button		
	G 9/16" and 15/16" Lay-In Grid		DIM1 BIOS Biological Static with 0-10V Dimming to 1% with Dim-to-Dark Capabilities			FS Fuse & Holder		
	FL Flange		BIODIM1 BIOS Biological Dynamic with 0-10V Intensity Dimming to 1% and Dim-to-Dark Capabilities			* n/a with BIODIM1 Driver Type		
	<b>Optical Distribution</b>		ATW BIOS Biological Tunable White with 0-10V Control of Intensity and CCT independently on 2 separate channels					
	SYM Symmetric		DTW BIOS Biological Tunable White with DALI Control of Intensity and CCT independently on 2 separate channels					
	<b>Lumen Output</b>							
	400LFB 400 lumens/ft							
	600LFB 600 lumens/ft							
	1000LFB 1000 lumens/ft							



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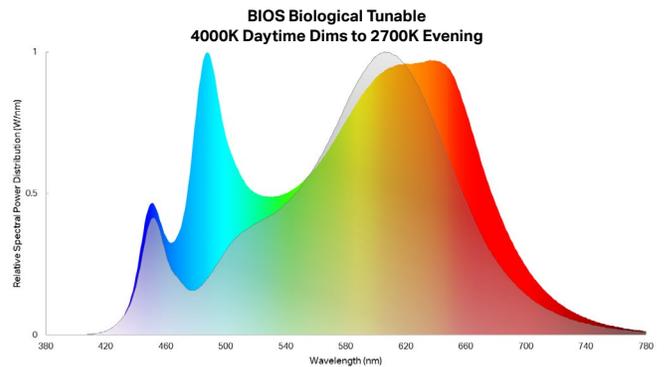
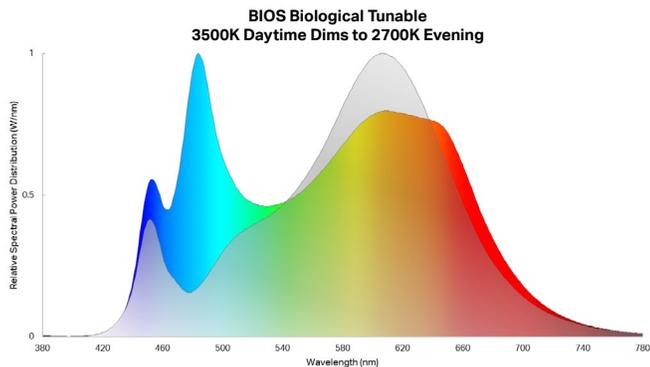
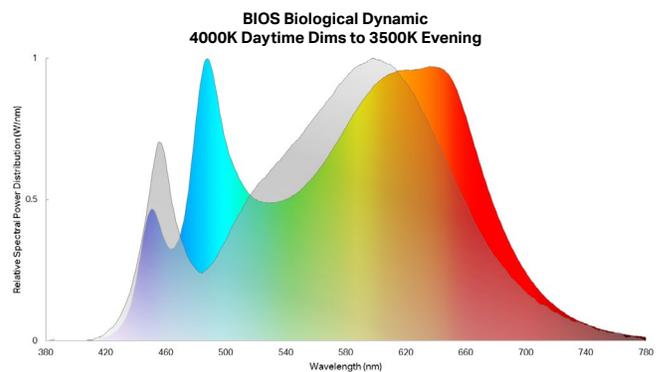
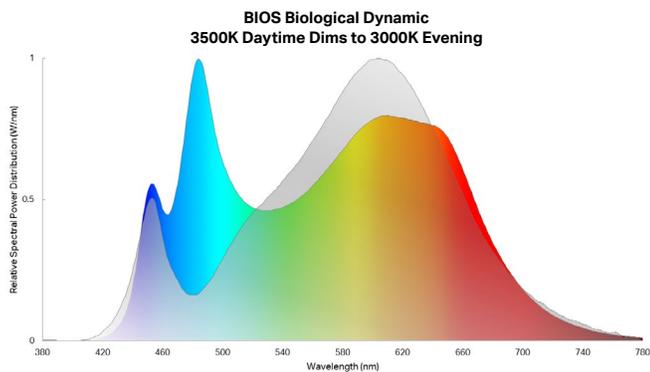
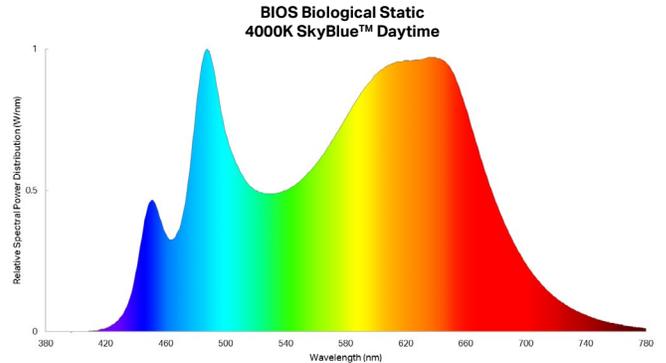
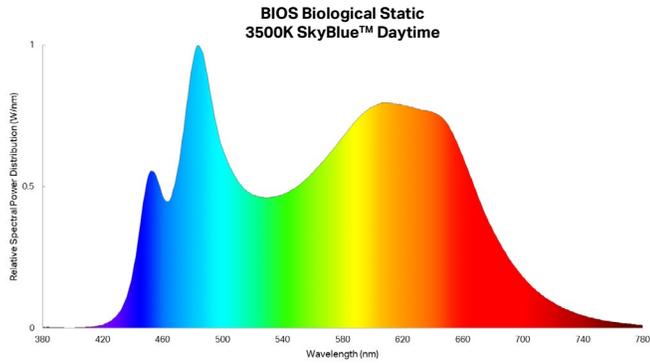
### DELIVERED MELANOPIC RATIO OF 35K8 BIOS

BIOS Type	Spectral Mode	Nominal CCT	Melanopic Ratio*	
			m-EER	m-DER
Biological Static	Daytime	3500K	≥0.80	≥0.72
Biological Dynamic	Daytime	3500K	≥0.80	≥0.72
	Evening	3000K	≤0.49	≤0.44
Biological Tunable	Daytime	3500K	≥0.80	≥0.72
	Evening	2700K	≤0.47	≤0.42

### DELIVERED MELANOPIC RATIO OF 40K8 BIOS

BIOS Type	Spectral Mode	Nominal CCT	Melanopic Ratio*	
			m-EER	m-DER
Biological Static	Daytime	4000K	≥0.90	≥0.81
Biological Dynamic	Daytime	4000K	≥0.90	≥0.81
	Evening	3500K	≤0.57	≤0.51
Biological Tunable	Daytime	4000K	≥0.90	≥0.81
	Evening	2700K	≤0.47	≤0.42

\*Melanopic ratios are provided in two forms: (m-EER) which is calculated using the WELL v2 methodology and the corresponding CIE melanopic Daylight Equivalent Ratio, (m-DER).



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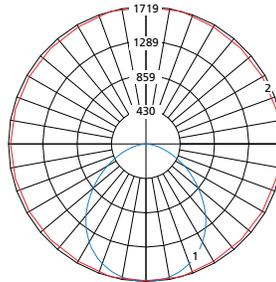
## PERFORMANCE

Initial Delivered Lumens per Foot, by CCT

Length	Distribution Type	Nominal Lumen Output	Initial Delivered Lumens per Foot, by CCT		Efficacy (lm/W)	Unit Input Power (W/ft)	Estd. L <sub>70</sub> LED Life (Hrs)
			35K8	40K8			
24", 48"	SYM	400LFB	390	424	99 - 107	4	85,000
		600LFB	583	633	99 - 107	6	
		1000LFB	938	1,018	93 - 101	10	

NOTE: Nominal Lumen Output values based on 40K8 lamp color. Information subject to change without notice. Visit [www.kenall.com](http://www.kenall.com) for IES files and additional

Model: CRS4-48-yy-SYM-1000LFB-35K8-DIM1-zzz

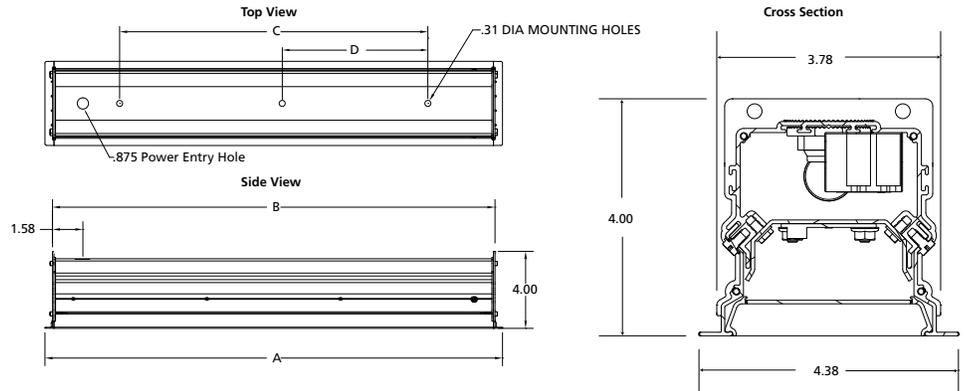


Maximum Candela = 1719 Located At Horizontal Angle = 75, Vertical Angle = 2.5

- 1 - Vertical Plane Through Horizontal Angles (75-255) (Through Max. Cd.)
- 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

## DIMENSIONAL DATA

### FLANGE



Nominal Length	Ceiling Configuration	A	B	C	D	Ceiling Cut-Out
24	FLANGE	23.75"	22.97"	16.00"	----	3.875" × 23.25"
48	FLANGE	47.75"	46.97"	40.00"	----	3.875" × 47.25"



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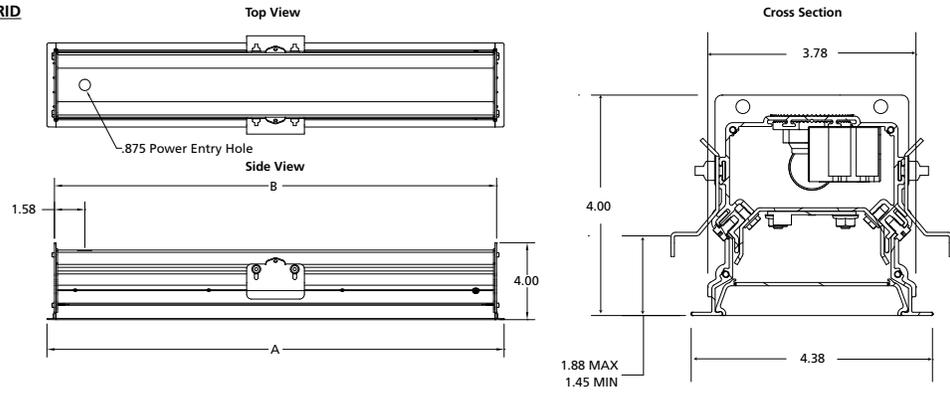
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## LAY-IN GRID



Nominal Length	Ceiling Configuration	A	B
24	LAY-IN GRID	23.75"	22.97"
48	LAY-IN GRID	47.75"	46.97"



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