

MEDMASTER® Luminaires for Behavioral Health Applications

BHH SERIES with BIOS SkyBlue™

PRODUCT FEATURES:

- » Wall-mounted luminaire with bi-directional (up/down) illumination
- » Multi-function luminaire provides Ambient and Examination lighting within the patient room
- » Durable, die-cast and extruded aluminum construction and tamper-resistant fasteners
- » Diffused polycarbonate lenses with continuous lens retention
- » Features BIOS SkyBlue Technology to benefit daytime alertness, cognition, mood and circadian rhythms
- » High R9 value and High CRI provide biologically optimized LED spectrum for early detection of cyanosis



SPECIFICATIONS

HOUSING: Extruded 6063-T5 aluminum construction with die-cast aluminum end caps. Low-gloss anti-microbial white TGIC polyester powder-coat finish with five-stage pre-treatment. Formed 14-gauge CRS baseplate secures the housing assembly to the mounting surface.

OPTIC: Diffused polycarbonate lens for up-light and down-light lambing. Isolated optical compartments prevent light-bleed between lambing functions. 3/16" nominal lens thickness with continuous lens retention.

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.

LED 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.

CONTROLS: Optional integral low-voltage controller with and without dimming (LVCD and LVC, respectively) capability through a compatible wall, bed or pillow speaker controller. When ordered in conjunction with the night light option, the low-voltage controller powers and controls the night light. Refer to hyperlinks within the Ordering Information for further details. See 'Accessories' for available low-voltage wall control switches.

INSTALLATION: Surface wall-mount installation over a recessed junction box. Internal mounting holes (hardware provided by others). Housing assembly attaches to baseplate via countersunk temper-resistant Torx fasteners. Suitable for 0°C to 25°C ambient temperature environments.

PHOTOMETRICS: Photometry tested to the IESNA LM-79-08 standard by an ILAC/ISO17025 accredited laboratory. For additional photometric data, please go to www.kenall.com.

WARRANTY: Limited five (5) year warranty.

LISTINGS/CERTIFICATIONS: Luminaire is certified to UL Standards by Intertek Testing Laboratory for Damp Location installations. Dust-tight to IP6x per IEC 60598 standard. NSF2 Splash/Non-Food Zone.



ORDERING INFORMATION (Ex: BHH-48-MW-27/27B-40K8-DIM1-S-DV)

Model	Length	Finish	Lamp Power	Lamp Color	Driver Type	Lamp Controls	Voltage	Options
BHH							DV	
Nominal Length			Lamp Color			Input Voltage		
24	24" Nominal		35K8	3500K SkyBlue / 80CRI min / R9 90+		DV	120-277VAC, 50/60Hz	
48	48" Nominal		40K8	4000K SkyBlue / 80CRI min / R9 90+				
Finish			Driver Type			Options		
MW	Anti-Microbial Matte White		DIM1	BIOS Biological Static with 0-10V Dimming to 1% with Dim-to-Dark Capabilities		LEL	Integral 6W Emergency Battery Backup (n/a 24")	
WS	Warm Satin Painted Anodized		BIODIM1†	BIOS Biological Dynamic with 0-10V Intensity Dimming to 1% and Dim-to-Dark Capabilities		FS	Fuse	
CS	Cool Satin Painted Anodized		ATW+	BIOS Biological Tunable White with 0-10V Control of Intensity and CCT independently on 2 separate channels		NLW	2700K White LED Night Light	
BR	Bronze		DTW+	BIOS Biological Tunable White with DALI Control of Intensity and CCT independently on 2 separate channels		NLA	Amber LED Night Light	
BE	Beige					LVC*	Low-Voltage Controller (Click here for specifications)	
Lamp Power			Lamp Control			LVCD*		
22/22B	22W LED Up / 22W LED Down (24")		S^	Single Circuit Power and Control Wiring (Lamping Operates Together)		Low-Voltage Controller w/Dimming (Click here for specifications)		
27/27B	27W LED Up / 27W LED Down (48")		D	Dual Circuit Power and Control Wiring (Lamping Operates Individually)				
45/45B	45W LED Up / 45W LED Down (48")							

ACCESSORIES ORDERED SEPARATELY
MPWS Low Voltage Wall Switch (Click [here](#) for Specifications)



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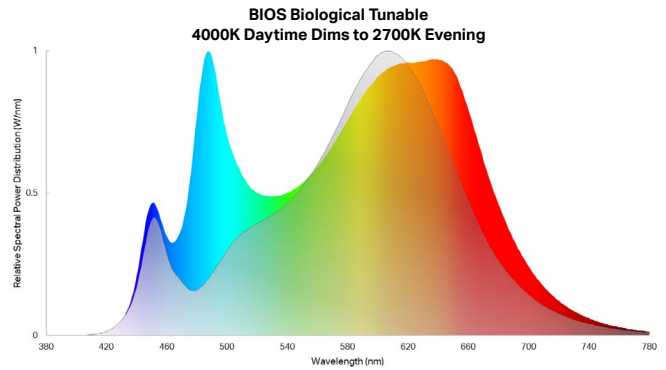
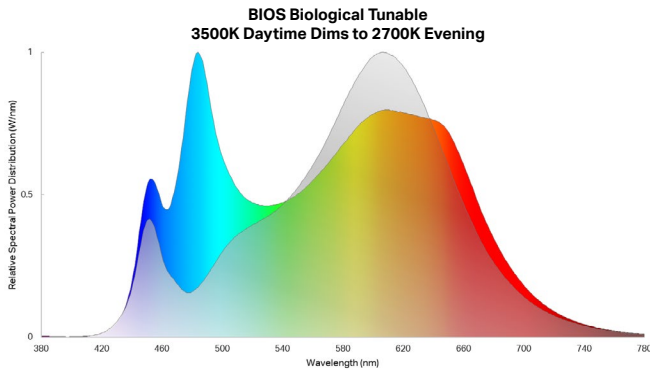
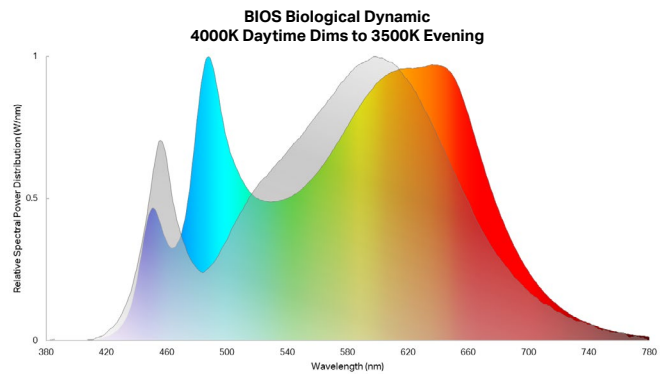
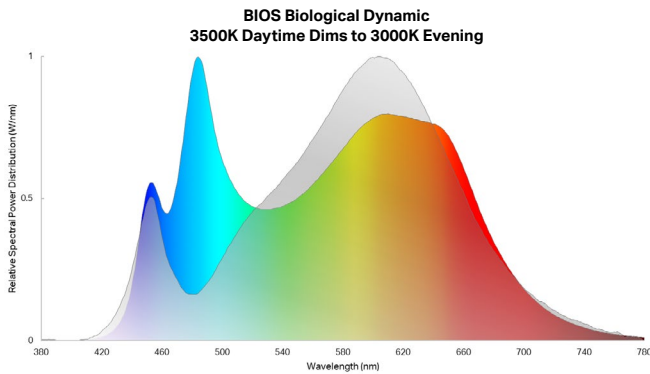
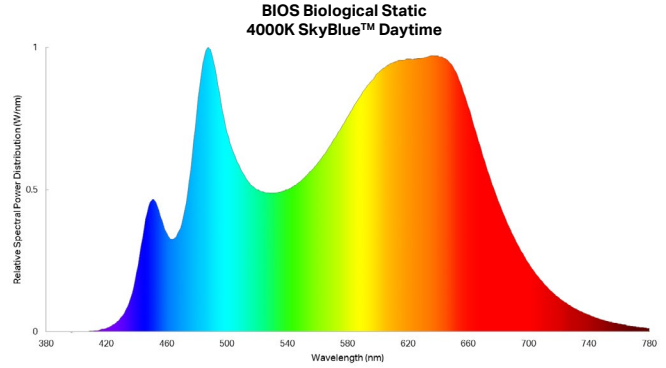
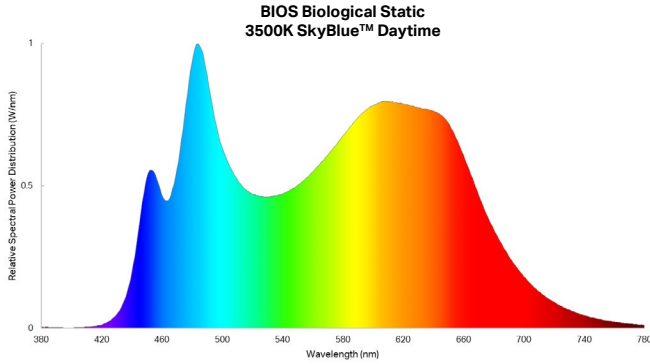
DELIVERED MELANOPIC RATIO OF 35K8 BIOS

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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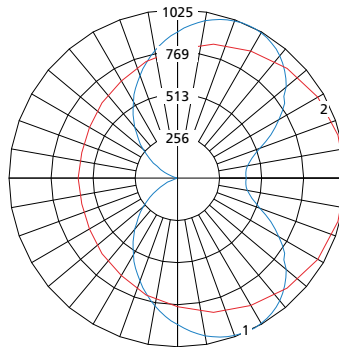
For additional photometry, go to www.kenall.com

PERFORMANCE

Length	Lamp Power	Mode	Initial Delivered Lumens, by CCT (lm)		Efficacy (lm/W)	Input Power (W)	Estd. L70 LED Life (Hrs)
			35K8	40K8			
24	22/22B	Up Only	1,278	1,556	54 - 66	24	80,000
		Down Only	1,239	1,509	53 - 64	24	
		Up & Down	2,513	3,061	54 - 66	47	
48	27/27B	Up Only	1,833	2,233	61 - 74	30	95,000
		Down Only	1,777	2,165	59 - 72	30	
		Up & Down	3,606	4,393	61 - 74	59	
	45/45B	Up Only	2,719	3,312	60 - 73	46	80,000
		Down Only	2,636	3,211	58 - 71	45	
		Up & Down	5,349	6,516	59 - 72	90	
All	NLW	Down Only	25		n/a	1	100,000
	NLA		20			1	100,000

Information subject to change without notice. Visit www.kenall.com for IES files and additional information.

Model: BHH-48-ww-45/45B-35K8-DIM1-x-yyy-zzz



Maximum Candela = 1025 Located At Horizontal Angle = 0, Vertical Angle = 25

- 1 - Vertical Plane Through Horizontal Angles (0-180) (Through Max. Cd.)
- 2 - Horizontal Cone Through Vertical Angle (25) (Through Max. Cd.)



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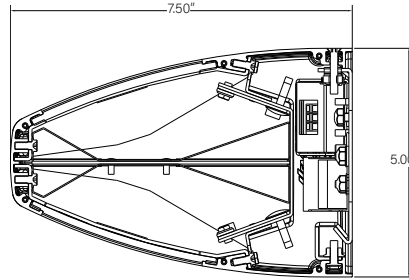
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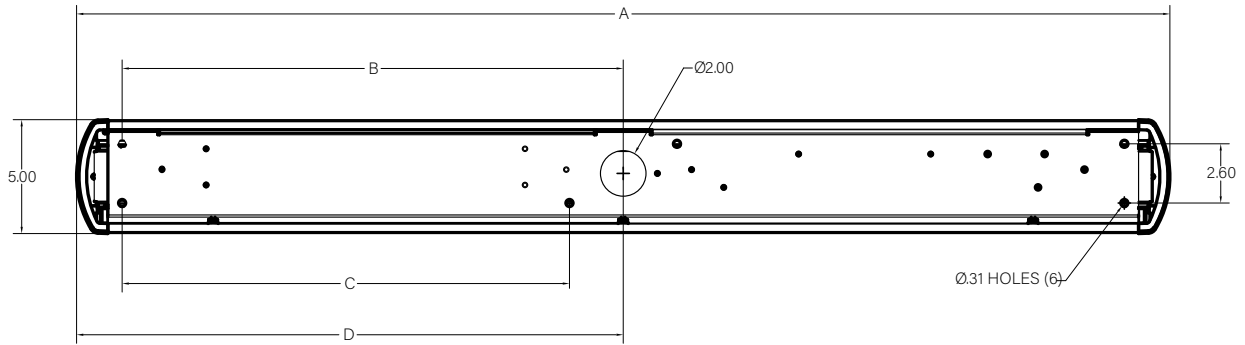
DIMENSIONAL DATA

DIMENSIONAL DATA (IN INCHES)					
	A	B	C	D	Weight (lbs)
24"	24.00	10.00	7.64	12.00	14.2
48"	48.00	22.00	19.64	24.00	27.2

CROSS SECTION



BACK VIEW



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