PROJECT	Job Name	Catalog Number	
INFORMATION	Fixture Type	 Approved by	

Luminaires for Patient/Exam Rooms

MRS4 SERIES with BIOS SkyBlue™

PRODUCT FEATURES:

- » 4" recessed linear slot luminaire in multiple lengths
- » Single-function luminaire provides ambient lighting within the patient room
- » No visible room-side fasteners for clean aesthetic
- » 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 gasketed aluminum endcaps. Low-gloss anti-microbial white TGIC polyester powder-coat finish with five-stage pre-treatment.

OPTIC: Symmetric (Lambertian) distribution. Snap-in, one-piece extruded frost 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 and tegular grid ceilings, flanged drywall ceilings and trimless mud-in installations with 5/8" drywall. See Ordering Information for selection. Suitable for 0°C - 40°C ambient temperature environments.

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.

WARRANTY: Limited five (5) year warranty.

IP64

LISTINGS: Luminaire is certified to UL standards by Intertek Testing Laboratories for Type-IC and Wet Location installations. IP64 rating per IEC60598. NSF2 Splash/Non-Food Zone rated. Standard CCEA compliance.









ORDERING INFORMATION (Ex: MRS4-48-G-SYM-1000LFB-35K8-DIM1-DV-LVC/M-FS)

Low-Voltage LVC Master / Model Ceiling Optical Distribution Lamp Power Lamp Color Driver Type Voltage Options Length Controller Satellite Configuration MRS4

Nominal Length

35K8 24 48

Ceiling Configuration

9/16" and 15/16" Lay-In Grid 9/16" and 15/16" Tegular Grid TG FI Flange

TM

Trimless Mud-In for 5/8" Drywall

Optical Distribution SYM Symmetric

Lumen Output

400LFB 400 lumens/ft 600LFB 600 lumens/ft 1000LFB 1000 lumens/ft

Lamp Color

SYM

3500K SkyBlue / 80CRI min / R9 90+ 4000K SkyBlue / 80CRI min / R9 90+ 40K8

Driver Type

ATW

DTW

BIOS Biological Static with 0-10V Dimming DIM1 to 1% with Dim-to-Dark Capabilities

BIOS Biological Dynamic with 0-10V BIODIM1 Intensity Dimming to 1% and Dim-to-Dark

Capabilities

BIOS Biological Tunable White with 0-10V Control of Intensity and CCT independently

on 2 separate channels

BIOS Biological Tunable White with DALI Control of Intensity and CCT independently

on 2 separate channels

DV Input Voltage

120-277VAC, 50/60Hz

Low-Voltage Controller (Optional)

Low Voltage Controller (click <u>here</u> for specifications)

LVCD* Low Voltage Controller with Dimming (click here for specifications)

LVC Master/Satellite for Paired Installations^

Paired 'Master-Control' Luminaire M S Paired 'Satellite-Control' Luminaire

Options

Integral Emergency Battery Backup with Remote Test Button LEL* FS

Fuse & Holder

- * N/A with BIODIM1 in 2' length
- ^ N/A for products not configured with an LVC option. Paired installations shall be ordered with equal quantities of Type 'M' and 'S' units. AC power feed required to both. Lamp control originates from LVC located in the Master unit. Control wiring method between luminaires supplied
- · LÉL only available in Satellite unit when ordered in conjunction with an LVC or LVCD controller. Not available with DTW Driver Type.

ACCESSORIES ORDERED SEPARATELY

Low Voltage Wall Switch (Click here for Specifications)



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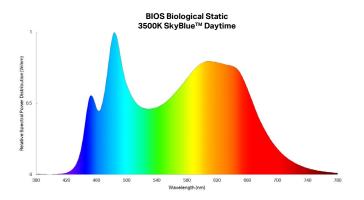
DELIVERED MELANOPIC RATIO OF 35K8 BIOS

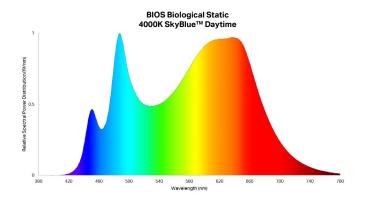
BIOS Type	Spectral	Nominal	Melanopic Ratio*			
ыоз туре	Mode	ССТ	m-EER	m-DER		
Biological Static	Daytime	3500K	≥0.80	≥0.72		
Biological Dynamic	Daytime	3500K	≥0.80	≥0.72		
Biological Dynamic	Evening	3000K	≤0.49	≤0.44		
Dialogical Typoble	Daytime	3500K	≥0.80	≥0.72		
Biological Tunable	Evening	2700K	≤0.47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

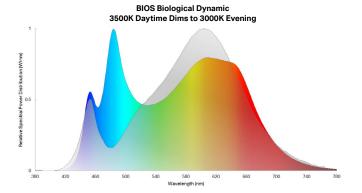
DELIVERED MELANOPIC RATIO OF 40K8 BIOS

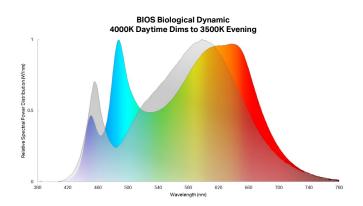
BIOS Type	Spectral	Nominal	Melanopic Ratio*			
вюз туре	Mode	ССТ	m-EER	m-DER		
Biological Static	Daytime	4000K	≥0.90	≥0.81		
Biological Dynamic	Daytime	4000K	≥0.90	≥0.81		
Biological Dynamic	Evening	3500K	≤0.57	≤0.51		
Biological Tunable	Daytime	4000K	≥0.90	≥0.81		
Biological Turiable	Evening	2700K	≤0.47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

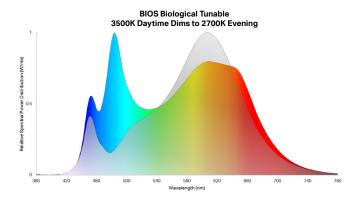
^{*}Melanopic ratios are provided in two forms: (m-EER) which is calculated using the WELL v2 methodology and the corresponding CIE melanopic Daylight Equivalent Ratio, (m-DER).

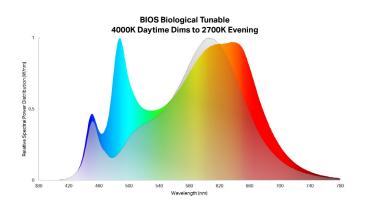














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MRS4 SERIES with BIOS SkyBlue™

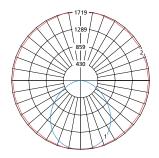
P	F	R	F	O	R	N	1	Δ	N	c	F

	n !! !			
Initial	Delivered	Lumens	per Foot.	by CCT

Length	Distribution Type	Nominal Lumen Output	35K8	40K8	Efficacy (lm/W)	Unit Input Power (W/ft)	Estd. L ₇₀ LED Life (Hrs)
		400LFB	390	424	99 - 107	4	
24", 48"	SYM	600LFB	583	633	99 - 107	6	85,000
		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 for IES files and additional

Model: MRS4-48-yy-SYM-1000LFB-35K8-DIM1-zzz



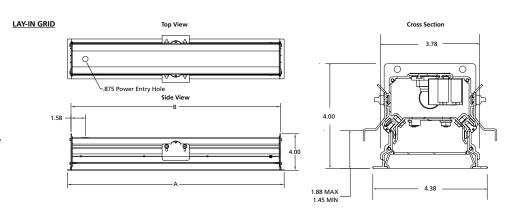
Maximum Candela = 1719 Located At Horizontal Angle = 75, Vertical Angle = 2.5

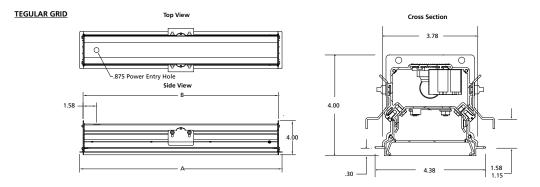
- 1 Vertical Plane Through Horizontal Angles (75-255) (Through Max. Cd.)
 2 Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

DIMENSIONAL DATA

Nominal Length	Ceiling Configuration	А	В	
24	LAY-IN GRID	23.75"	22.97"	
	TEGULAR	23.75"	22.97"	
48	LAY-IN GRID	47.75"	46.97"	
40	TEGULAR	47.75"	46.97"	

NOTE: Standard (non-LVC) and LVC Satellite units supplied with one (1) 0.875" hole on back of housing. When ordered with the LVC or LVCD option, the Master unit is provided with two (2) 0.875" holes.







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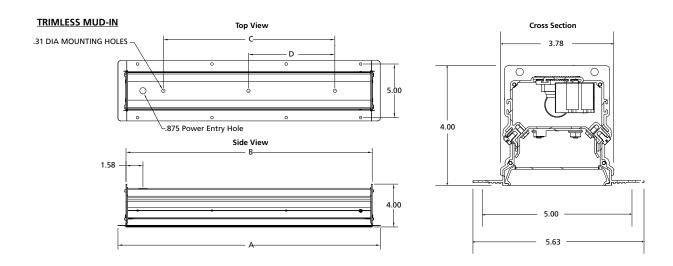
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DIMENSIONAL DATA

Top View Cross Section 3.78 875 Power Entry Hole Side View 1.58 4.00 4.38



Nominal Length	Ceiling Configuration	А	В	С	D	Ceiling Cut-Out
24	FLANGE	23.75"	22.97"	16.00"		3.875" × 23.25"
	TRIMLESS	24.47"	22.97"	16.00"		
40	FLANGE	47.75"	46.97"	40.00"		3.875" × 47.25"
48	TRIMLESS	48.47"	46.97"	40.00"		3.0/3 × 4/.23

NOTE: Standard (non-LVC) and LVC Satellite units supplied with one (1) 0.875" hole on back of housing. When ordered with the LVC or LVCD option, the Master unit is provided with two (2) 0.875" holes.

