

MEDMASTER™

Patient Room Luminaires

MAC SERIES with BIOS SkyBlue™

PRODUCT FEATURES:

- » Surface, recessed grid or recessed flange mount – 1'x4', 2'x2', 2'x4'
- » 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
- » Ingress Barrier Door provides consistent surface for cleanability



SPECIFICATIONS

HOUSING: 20-gauge CRS. one-piece construction Housing Flanges – 18-gauge CRS, standard 4-piece construction, spotwelded to housing. White TGIC polyester powder coat – 5-stage pre-treatment. Salt spray test 1,000 hours. Reflectance 92%. See Ordering Options for Antimicrobial Finish.

DOORFRAME: Heavy duty extruded aluminum with clear satin anodized finish. Doorframe supported to housing with aircraft cables (IB-AC) to provide NSF2 listing, or an optional continuous hinged doorframe (IB-HD). Select in ordering options below. Phillips head stainless steel fasteners secure door to housing – eight (8) with IB-AC (1x4, 2x2), ten (10) with IB-AC (2x4), two (2) with IB-HD (2x2) and three (3) with IB-HD (1x4, 2x4). Extruded closed cell gasket seals doorframe to housing. Outer lens sealed to doorframe with a vinyl gasket.

OPTICS: Extruded high-efficiency frosted DR acrylic inner diffuser. Clear impact-resistant acrylic outer lens.

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: **SURFACE MOUNT:** Four .312" diameter holes. **GRID MOUNT:** Designed for 1" and 1.5" grid. (Housing includes hanging brackets to secure housing with wire to super structure). **FLANGE MOUNT:** Yoke mounting hardware & brackets included. Install Frame and Plaster Frames both positively locates yoke brackets within ceiling opening assures alignment of fixture. Install frame has no need for drywall backing; backing is supplied on the frame brackets.

WARRANTY: Limited five (5) year warranty.

LISTINGS: Luminaire is certified to UL Standards by Intertek Testing Laboratory for Wet Location and non-IC recessed installation. ETL certified IP65 per IEC 60598. NSF2 Splash Zone (IB-AC only).



ORDERING INFORMATION (Ex: MAC22-G-FA-45B-35K8-DIM1-DV-IB-AC-LEL)

Model	Mounting	Diffuser	Lamp Power	Lamp Color	Driver Type	Voltage	Doorframe	Options	Accessories
						DV	IB-		
Model			Lamp Power				Doorframe		
MAC14 1'x4'			1x4				AC	Ingress Barrier w/Aircraft Cables	
MAC22 2'x2'			45B 45 Watt BIOS				HD	Ingress Barrier w/Continuous Piano Hinge (not NSF2 listed)	
MAC24 2'x4'									
			2'x2'						
			45B 45 Watt BIOS					Options	
Mounting Options								LEL	10W LED Emergency Battery Backup
F Flange								AMF	Antimicrobial Finish on exposed painted surfaces
S Surface			2'x4'					NLW^	2700K White LED Night Light
G Grid (1" and 1.5")			45B 45 Watt BIOS					NLA^	Amber LED Night Light
			67B 67 Watt BIOS					FS	Single Fuse & Holder
Diffuser Type			90B 90 Watt BIOS					LVC^	Low Voltage Controller (Click here for specifications)
FA Frosted Acrylic								LVCS^	Low Voltage Controller with Secondary Conduit Entry (Click here for specifications)
CAP^ Clear Acrylic with Perforated Insert			Lamp Color					LVCD^	Low Voltage Controller with Dimming (Click here for specifications)
			35K8 3500K SkyBlue / 80CRI min / R9 90+					LVCDS^	Low Voltage Controller with Dimming and Secondary Conduit Entry (Click here for specifications)
			40K8 4000K SkyBlue / 80CRI min / R9 90+						
			Driver Type					Accessories	
			DIM1	BIOS Biological Static with 0-10V Dimming to 1% with Dim-to-Dark Capabilities				IF†	Install Frame
			BIODIM1	BIOS Biological Dynamic with 0-10V Intensity Dimming to 1% and Dim-to-Dark Capabilities				PF†	Plaster Frame
			ATW	BIOS Biological Tunable White with 0-10V Control of Intensity and CCT independently on 2 separate channels					
			DTW	BIOS Biological Tunable White with DALI Control of Intensity and CCT independently on 2 separate channels					
			Input Voltage						
			DV	120-277 VAC, 50/60Hz					

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



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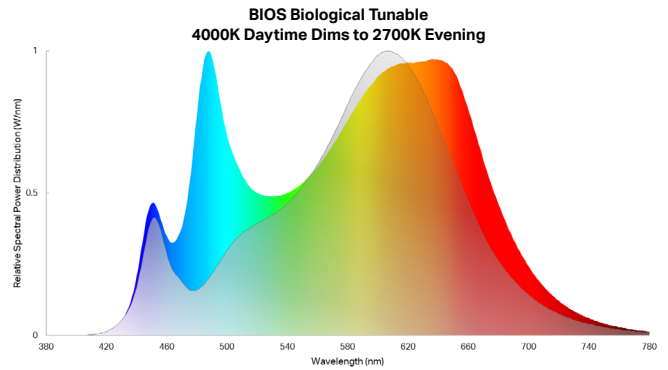
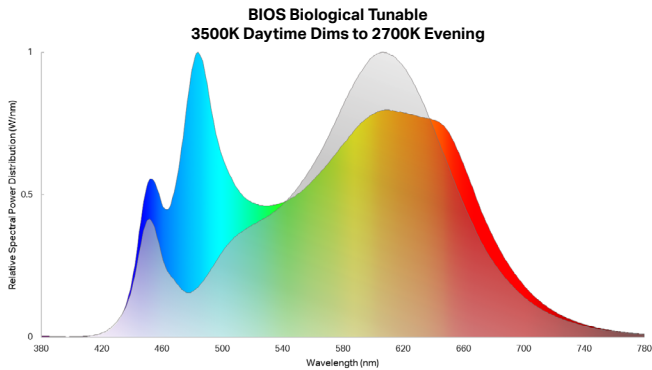
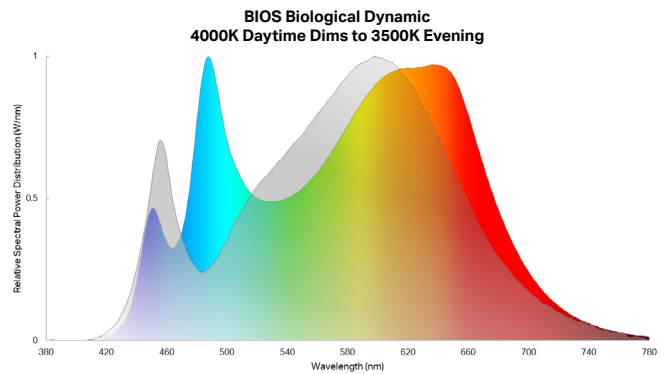
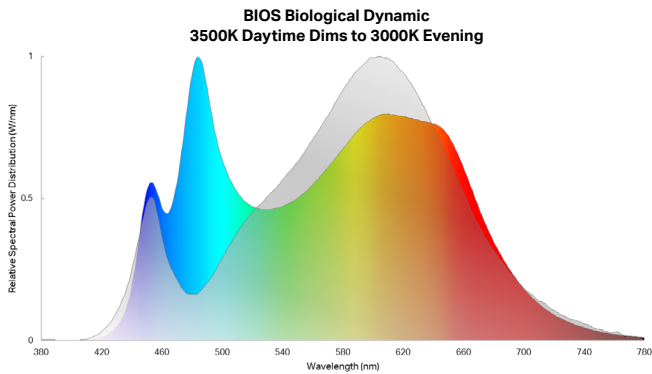
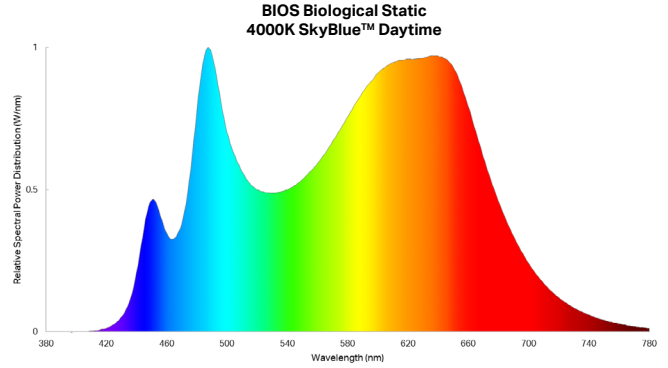
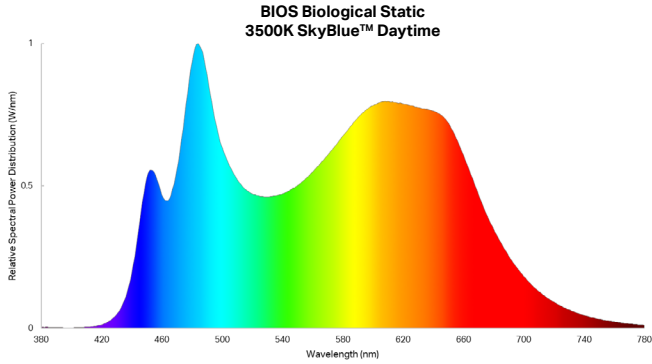
DELIVERED MELANOPIC RATIO OF 35K8 BIOS

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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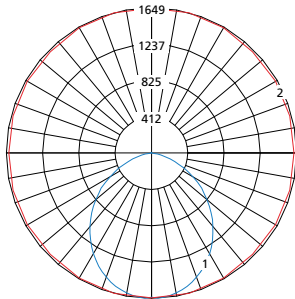
PERFORMANCE

Model	Lamp Type	Initial Delivered Lumens		Input Power (W)	Drive Current (mA)	Estd. L70 LED Life (Hrs)
		@ 25C (lm)	Efficacy (lm/W)			
MAC14	45B-35K8	3,760	77	49	100	80,000
	45B-40K8	4,083	83			
MAC22	45B-35K8	3,588	73	49	100	80,000
	45B-40K8	3,896	80			
MAC24	45B-35K8	4,109	84	49	100	80,000
	45B-40K8	4,462	91			
	67B-35K8	6,252	87	72	75	80,000
	67B-40K8	6,789	94			
	90B-35K8	8,034	83	97	100	80,000
	90B-40K8	8,723	90			

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

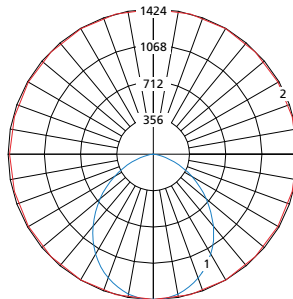
PERFORMANCE

Model: MAC14-z-FA-45B-35K8-DIM1-120-IB-AC



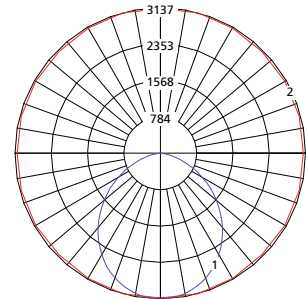
Maximum Candela = 1639 Located At Horizontal Angle = 75, Vertical Angle = 2.5
 1 - Vertical Plane Through Horizontal Angles (75-255) (Through Max. Cd.)
 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

Model: MAC22-z-FA-45B-35K8-DIM1-120-IB-AC



Maximum Candela = 1424 Located At Horizontal Angle = 90, Vertical Angle = 2.5
 1 - Vertical Plane Through Horizontal Angles (90-270) (Through Max. Cd.)
 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

Model: MAC24-z-FA-90B-35K8-DIM1-120-IB-AC



Maximum Candela = 3137 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.)



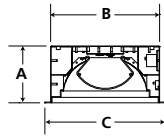
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DIMENSIONAL DATA

GRID DIMENSIONAL DATA (IN INCHES)

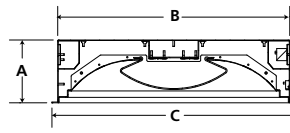
	A	B	C	D	E
1×4	5.56	10.60	11.75	46.60	47.75
2×2	6.10	22.60	23.75	22.60	23.75
2×4	6.10	22.60	23.75	46.60	47.75

CROSS SECTION



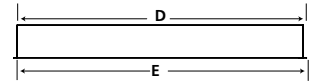
MAC14

GRID MOUNT



MAC22 & MAC24

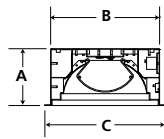
SIDE VIEW



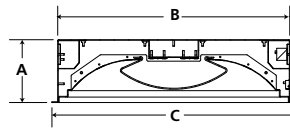
FLANGE DIMENSIONAL DATA (IN INCHES)

	A	B	C	D	E	F	G
1×4	5.56	10.60	11.75	46.60	47.75	30.00	5.25
Recommended Ceiling Cutout: 10.88" × 46.88"							
2×2	6.10	22.60	23.75	22.60	23.75	12.00	12.00
Recommended Ceiling Cutout: 22.88" × 22.88"							
2×4	6.10	22.60	23.75	46.60	47.75	30.00	12.00
Recommended Ceiling Cutout: 22.88" × 46.88"							

CROSS SECTION

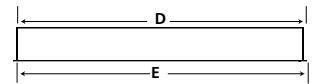


MAC14

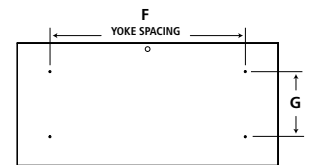


MAC22 & MAC24

SIDE VIEW



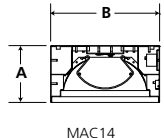
TOP VIEW



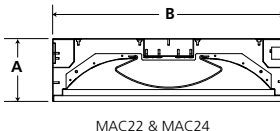
SURFACE DIMENSIONAL DATA (IN INCHES)

	A	B	C	D	E
1×4	5.56	10.60	30.00	5.25	46.60
2×2	6.13	22.60	12.00	12.00	22.60
2×4	6.13	22.60	30.00	12.00	46.60

CROSS SECTION



MAC14



MAC22 & MAC24

TOP VIEW

