

# MEDMASTER™

## Patient Room Luminaires

### MAC SERIES – TUNABLE WHITE LED

#### PRODUCT FEATURES:

- » Surface, recessed grid or recessed flange mount – 1'×4', 2'×2', 2'×4'
- » High-output, high-CRI LED lamp sources with 2700K-6500K white tuning capability
- » Ingress Barrier Door provides consistent surface for cleanability



#### PROJECT INFORMATION

Job Name \_\_\_\_\_

Fixture Type \_\_\_\_\_

Catalog Number \_\_\_\_\_

Approved by \_\_\_\_\_

#### 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 (1×4, 2×2), ten (10) with IB-AC (2×4), two (2) with IB-HD (2×2) and three (3) with IB-HD (1×4, 2×4). 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 tunable-white, mid-power LED array provides 2700K through 6500K CCT range with a two-point path. Minimum 82 CRI standard (R9 >20) with optional minimum 90 CRI (R9 >50).

**DRIVER:** 120-277VAC, 50/60Hz electrical input (PF ≥ 0.9, THD < 20%). Minimum 85% electrical efficiency. Serviceable, constant-current multi-channel programmable driver with dual analog (0-10V) control inputs for intensity and CCT. Linear intensity and CCT adjustment profiles with 1-100% range and dim-to-dark capabilities on intensity. Optional DALI (Type 8) driver with 1-100% range and dim-to-dark intensity dimming with linear intensity and CCT adjustment profiles.

**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-45T-27/65K8-DTW-DV-IB-AC-LEL)

Model	Mounting	Diffuser	Lamp Power	Lamp Color	Driver Type	Voltage	Doorframe	Options	Accessories
<b>IB-</b>									
<b>Model</b>			<b>Lamp Power</b>			<b>Doorframe</b>			
MAC14 1'×4'			1×4			AC Ingress Barrier w/Aircraft Cables			
MAC22 2'×2'			45T 45 Watt Tunable White			HD Ingress Barrier w/Continuous Piano Hinge (not NSF2 listed)			
MAC24 2'×4'			2'×2'			<b>Options</b>			
<b>Mounting Options</b>			45T 45 Watt Tunable White			LEL* LED Emergency Battery Backup			
F Flange			2'×4'			AMF Antimicrobial Finish on exposed painted surfaces			
S Surface			45T 45 Watt Tunable White			DLN LED Night Light with 100%-20% Light Level Control (voltage-specific selection required; n/a 1×4 size)			
G Grid (1" and 1.5")			67T 67 Watt Tunable White			DLNA Amber LED Night Light with 100%-20% Light Level Control (voltage-specific selection required; n/a 1×4 size)			
<b>Diffuser Type</b>			90T 90 Watt Tunable White			FS Single Fuse & Holder			
FA Frosted Acrylic			<b>Lamp Color</b>			LVC▲ Low Voltage Controller (Click <a href="#">here</a> for specifications)			
CAP‡ Clear Acrylic with Perforated Insert			27/65K8 2700K-6500K CCT Range, 82 CRI			LVCS▲ Low Voltage Controller with Secondary Conduit Entry (Click <a href="#">here</a> for specifications)			
			27/65K9 2700K-6500K CCT Range, 92 CRI			LVCD▲ Low Voltage Controller with Dimming (Click <a href="#">here</a> for specifications)			
			<b>Driver Type</b>			LVCD▲ Low Voltage Controller with Dimming and Secondary Conduit Entry (Click <a href="#">here</a> for specifications)			
			ATW Analog (0-10V) Dimming Tunable White Driver			<b>Accessories</b>			
			DTW DALI Tunable White Driver			IF† Install Frame			
			DMX DMX Tunable White Driver (Consult Factory)			PF† Plaster Frame			
			<b>Input Voltage</b>						
			DV 120-277 Volts						
			120 120 Volts						
			277 277 Volts						

- \* Wired to cool-white LED circuit
- ▲ Low Voltage Controller compatible with bed controls; CCT on Ambient controlled separately; not compatible with DTW option. LVC wired to provide ON/OFF control to Ambient, Reading and Night Light function. LVCD wired to provide ON/OFF and dimming control to Ambient function; ON/OFF function capability for DLN/DLNA or LRL option when ordered in conjunction.
- † Add 0.375" to ceiling cutout dimensions. Flange mounting only.
- ‡ Selection results in significant reduction in lighting performance.

#### ACCESSORIES ORDERED SEPARATELY

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



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#### PERFORMANCE

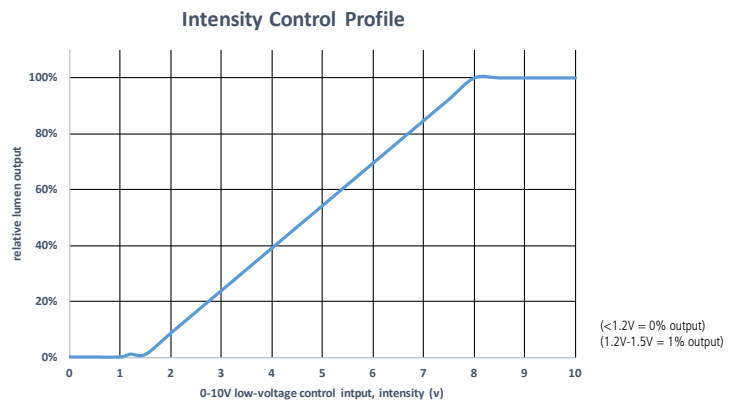
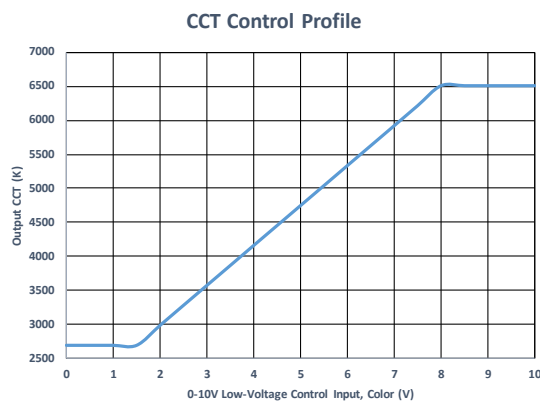
Model	Lamp Type	Performance at 4000K Tuning			
		Lumen Output (lm)	Efficacy (lm/W)	Input Power (W)	Estd. L70 LED Life (Hrs)
MAC14	45T-27/65K8	4,532	99	46	80,000
	45T-27/65K9	3,652	79	46	80,000
MAC22	45T-27/65K8	4,328	94	46	80,000
	45T-27/65K9	3,489	76	46	80,000
MAC24	45T-27/65K8	5,306	115	46	80,000
	45T-27/65K9	4,276	93	46	80,000
	67T-27/65K8	7,939	117	68	80,000
	67T-27/65K9	6,575	97	68	80,000
	90T-27/65K8	10,311	112	92	60,000
	90T-27/65K9	8,310	90	92	60,000

Displayed information is for type 'FA' diffuser. Photometry tested to the IESNA LM-79-08 standard by an ILAC/ISO17025 accredited laboratory. For photometric data, please go to [www.kenall.com](http://www.kenall.com)

#### PERFORMANCE SCALING, BY LAMP COLOR

CCT (K)	27/65K8					27/65K9				
	LUMEN SCALE FACTOR	Ra	R9	Rf	Rg	LUMEN SCALE FACTOR	Ra	R9	Rf	Rg
2700	0.97	83	10	83	97	0.98	92	57	89	98
3000	0.98	84	15	83	98	0.99	94	70	91	99
3500	0.99	86	23	84	98	0.99	95	77	92	99
4000	1.00	86	26	84	98	1.00	96	83	92	99
4600	1.01	86	28	84	98	1.01	96	90	92	100
5000	1.01	86	25	83	98	1.03	96	96	91	101
5700	1.02	85	23	82	98	1.02	96	96	91	100
6500	1.04	84	16	82	96	1.02	96	96	90	100

#### CCT AND INTENSITY ADJUSTMENT PROFILE - ATW DRIVER TYPE



NOTE: The provided information is the typical expected performance of a single luminaire. Additional luminaires on the same 0-10V line may result in different control profiles. Fine tuning of system performance should be completed after installation is complete. To avoid CCT shift between luminaires, care should be taken to minimize voltage drop on the CCT Control line. It is recommended to limit the load on the CCT control circuit to twenty (20) 45T or ten (10) 67T/90T luminaires or less.



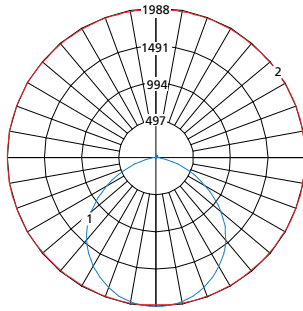
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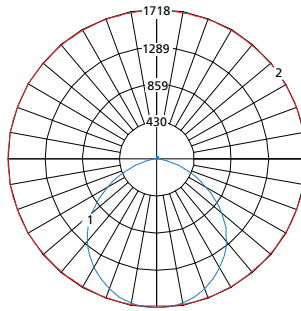
#### PERFORMANCE

Model: MAC14-G-FA-45T-27/65K8-ATW-DV-IB-AC



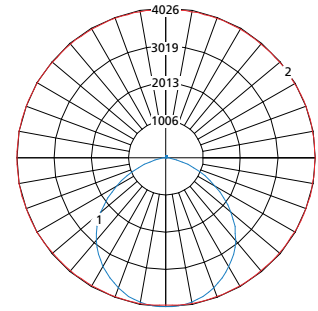
Maximum Candela = 1988 Located At Horizontal Angle = 75, Vertical Angle = 2.5  
 1 - Vertical Plane Through Horizontal Angles (75-255) (Through Max. Cd.)  
 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

Model: MAC22-G-FA-45T-27/65K8-ATW-DV-IB-AC



Maximum Candela = 1718 Located At Horizontal Angle = 210, 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: MAC24-G-FA-90T-27/65K8-ATW-DV-IB-AC



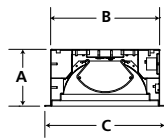
Maximum Candela = 4026 Located At Horizontal Angle = 75, Vertical Angle = 2.5  
 1 - Vertical Plane Through Horizontal Angles (75-255) (Through Max. Cd.)  
 2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)

#### DIMENSIONAL DATA

##### GRID DIMENSIONAL DATA (IN INCHES)

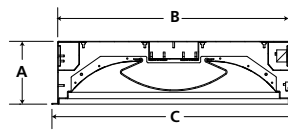
	A	B	C	D	E
1x4	5.56	10.60	11.75	46.60	47.75
2x2	6.10	22.60	23.75	22.60	23.75
2x4	6.10	22.60	23.75	46.60	47.75

##### CROSS SECTION



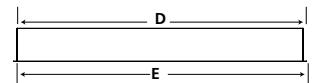
MAC14

##### GRID MOUNT



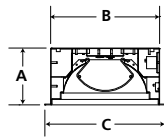
MAC22 & MAC24

##### SIDE VIEW

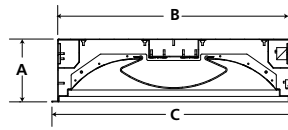


##### FLANGE MOUNT

##### CROSS SECTION

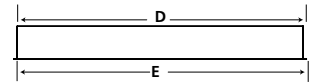


MAC14



MAC22 & MAC24

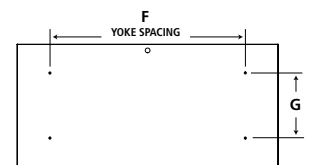
##### SIDE VIEW



##### FLANGE DIMENSIONAL DATA (IN INCHES)

	A	B	C	D	E	F	G
1x4	5.56	10.60	11.75	46.60	47.75	30.00	5.25
Recommended Ceiling Cutout: 10.88" x 46.88"							
2x2	6.10	22.60	23.75	22.60	23.75	12.00	12.00
Recommended Ceiling Cutout: 22.88" x 22.88"							
2x4	6.10	22.60	23.75	46.60	47.75	30.00	12.00
Recommended Ceiling Cutout: 22.88" x 46.88"							

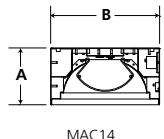
##### TOP VIEW



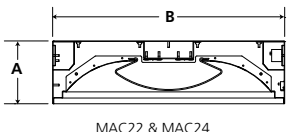
##### SURFACE DIMENSIONAL DATA (IN INCHES)

	A	B	C	D	E
1x4	5.56	10.60	30.00	5.25	46.60
2x2	6.13	22.60	12.00	12.00	22.60
2x4	6.13	22.60	30.00	12.00	46.60

##### CROSS SECTION



MAC14



MAC22 & MAC24

##### TOP VIEW

