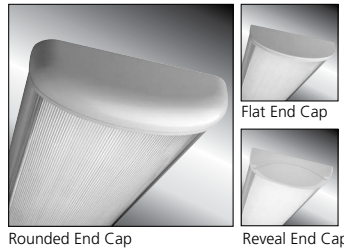


MILLENNIUM STRETCH™

MLHA12 SERIES - TUNABLE WHITE LED

PRODUCT FEATURES:

- » High-output, high CRI LED lamp sources with 2700K-6500K white tuning capability
- » Extruded and die-cast aluminum construction
- » Peace of Mind Guarantee™ against breakage



PROJECT INFORMATION

Job Name _____

Fixture Type _____

Catalog Number _____

Approved by _____

SPECIFICATIONS

HOUSING: Marine grade aluminum. Extruded body with die-cast end caps. Housing, with end caps, post assembly TGIC polyester powder coat finished – 5-step pre-treatment. See Ordering Information for available finishes.

END CAPS: Marine grade die-cast aluminum. Three styles available: Flat, Rounded and Reveal. Conduit and "Wiremold™" ready" knockouts visible only from interior of end cap (Flat and Rounded styles only).

OPTIC: UV-stabilized, high-impact extruded pearlescent polycarbonate. Smooth exterior, linear prismatic interior. Nominal thickness .156". Lens securely positioned in body channels and end caps. Lens locked in place with four (4) tamper-resistant stainless steel Torx® with center pin fasteners and sealed with closed cell gaskets. Full reflector/wire cover with 92% reflectivity.

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: Standard six-point mounting required for Peace of Mind Guarantee®. Suitable for installation into -30°C to 40°C ambient environments, unless otherwise noted.

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 ten (10) year warranty for LED Lamps.

LISTINGS: Luminaire is certified to UL Standards by Intertek Testing Laboratory for Wet Location – covered ceiling mount. ETL certified IP64 per IEC 60598. Corner, horizontal wall and pendant mount installation are Damp Location only. ADA compliant.



ORDERING INFORMATION (Ex: MLHA12-48-F-MW-R-PP-90T-27/65K8-ATW-DV-FS)

Model	Length	End Cap	Finish	Lens	Lamp Power	Lamp Color	Driver Type	Voltage	Options	Accessories
MLHA12	48			PP						
	Length				Lamp Power			Input Voltage		
	48 4'				45T 45W Tunable White			DV 120-277 Volts, 50/60Hz		
	End Caps				67T 67W Tunable White			Options		
	F Flat				90T 90W Tunable White			LEL Integral 8.4W Emergency Battery Backup (45T lamp max, 0°C minimum operating temperature)		
	R Rounded				Lamp Color			CDF Captive Diffuser Fasteners		
	RV Reveal				27/65K8 2700-6500K CCT Range (82 CRI min)			DL Damp Location (Interior use NO gasketing)		
	Finish				27/65K9 2700-6500K CCT Range (92 CRI min)			FS Single Fuse & Holder (one per circuit)		
	LG Light Gray				Driver Type			PH Phillips Head Fasteners		
	MB Matte Black				ATW Analog (0-10V) Dimming Tunable White Driver			PM§ Pendant Mount (stems by others; damp only)		
	MW Matte White				DTW DALI Tunable White Driver			Accessories		
	CC Custom Color (Consult Factory)							CMB§ Corner Mount Bracket (Must be ordered with DL Option)		
	Lens Type							9500 Torx® Screwdriver		
	PP Pearlescent Polycarbonate							D-0552 Torx Driver Bit (Required for CMB Option)		

§ PM and CMB not available in conjunction



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This product complies with the Buy American Act: manufactured in the United States with more than 50% of the component cost of US origin. It may be covered by patents found at www.kenall.com/patents. Content of specification sheets is subject to change; please consult www.kenall.com for current product details. ©2019 Kenall Mfg. Co.

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MLHA12-TW-100918

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MLHA12 SERIES - TUNABLE WHITE LED

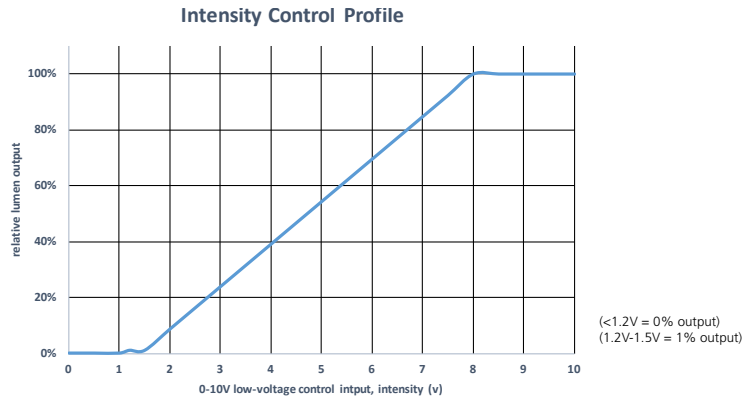
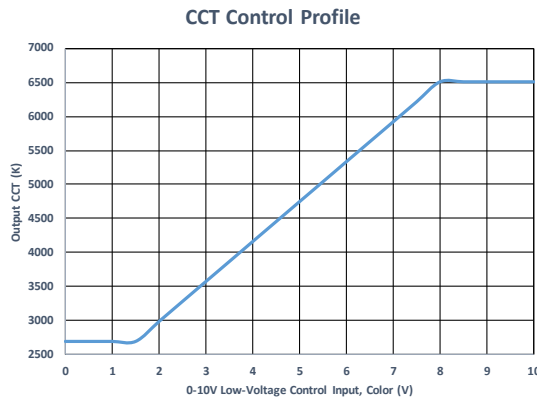
Lamp Type	Performance at 4000K Tuning			
	Lumen Output (lm)	Efficacy (lm/W)	Input Power (W)	Estd. L70 LED Life (Hrs)
45T-27/65K8	5,129	111	46	80,000
45T-27/65K9	4,133	90	46	80,000
67T-27/65K8	7,673	113	68	80,000
67T-27/65K9	6,356	93	68	80,000
90T-27/65K8	9,966	108	92	60,000
90T-27/65K9	8,032	87	92	60,000

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

PERFORMANCE SCALING, BY LAMP COLOR

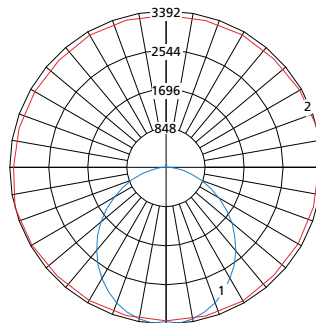
CCT (K)	27/65K8					27/65K9				
	LUMEN SCALE FACTOR	Ra	R9	Rf	Rg	LUMEN SCALE FACTOR	Ra	R9	Rf	Rg
2700	0.97	83	10	83	97	0.98	92	57	89	98
3000	0.98	84	15	83	98	0.99	94	70	91	99
3500	0.99	86	23	84	98	0.99	95	77	92	99
4000	1.00	86	26	84	98	1.00	96	83	92	99
4600	1.01	86	28	84	98	1.01	96	90	92	100
5000	1.01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

Model: MLHA12-48-F-MW-PP-90T-27/65K8-ATW-DV



Maximum Candela = 3392 Located At Horizontal Angle = 15, Vertical Angle = 5

- 1 - Vertical Plane Through Horizontal Angles (15-195) (Through Max. Cd.)
- 2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)



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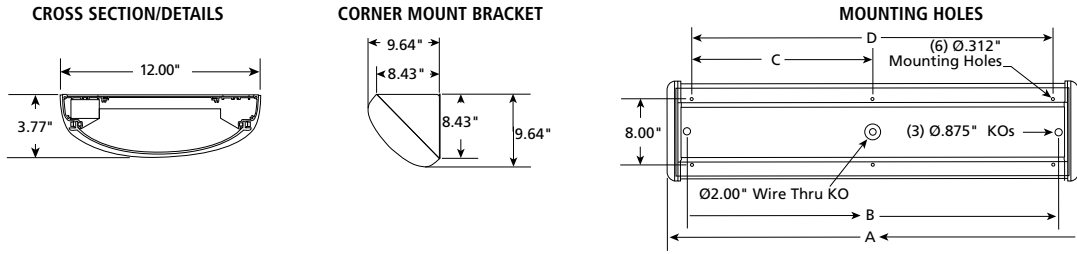
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DIMENSIONAL DATA



Nominal Four Foot Fixture Legend

End Cap	A	B	C	D
R	51.13	46.31	22.50	45.00
F	49.31	46.31	22.50	45.00
RV	53.84	46.31	22.50	45.00



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