

DESCRIPTION

The Archeon™ Medium LED roadway luminaire delivers all the performance benefits of the latest Eaton LED platforms and technologies with a modern, yet familiar cobrahead form factor. This discrete LED solution with the patented, high-efficiency AccuLED Optics™ system, provides uniform and energy conscious illumination for municipal streets and highways. Our customer focused features include single latch tool-less entry, industry leading surge protection options and superior lumen maintenance and performance, all in an economical design. Available in 13 standard lumen packages per optic.

SPECIFICATION FEATURES

Construction

Heavy-duty die-cast aluminum housing and door. Tool-less entry, hinged removable door for easy access to terminal block, mounting bolts, and optional surge module. 3G vibration rated.

Optics

Choice of four patented, high-efficiency AccuLED Optics. Available in Type IIR, III, IV wide and V square wide the optics are precisely designed to shape the distribution maximizing efficiency and application spacing. Offered standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional 3000K, 5000K CCT. For the ultimate level of spill light control, an optional house side shield accessory is available and can be field or factory installed. The house side shield is designed to seamlessly integrate with the T2R,

T3, and T4W optics. Optics are IP66 enclosure rated.

Electrical

120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. Standard 0-10V dimming and 10kV/10kA common- and differential- mode surge protection available. Thermal management transfers heat away from the LED source for optimal efficiency, light output and lumen maintenance. Ambient operating temperature from -40°C to 40°C; 50°C HA, high ambient, capability available. Standard with three-position tunnel type compression terminal block. Greater than 90% lumen maintenance expected at 60,000 hours.

Mounting

Four-bolt/two-bracket slipfitter with cast-in pipe stop and 2.5° leveling steps. Fixed-in-place bird guard

Catalog #	ARCH-M-AF48-130-D-U-T3-4N7-10MSP-K-AP-WISDOT	Type
Project	WisDOT	LED C
Comments		Date
Prepared by	Bob Ebbert	11-9-2017

seals around 1-1/4" to 2" (1-5/8" to 2-3/8" O.D.) mounting arms. Optional 15" pole mount arm available with round pole adapter and mounting hardware included.

Finish

Housing and cast parts finished in five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Consult your lighting representative at Eaton for a complete selection of standard colors.

Warranty

Five-year warranty, ten-year optional.

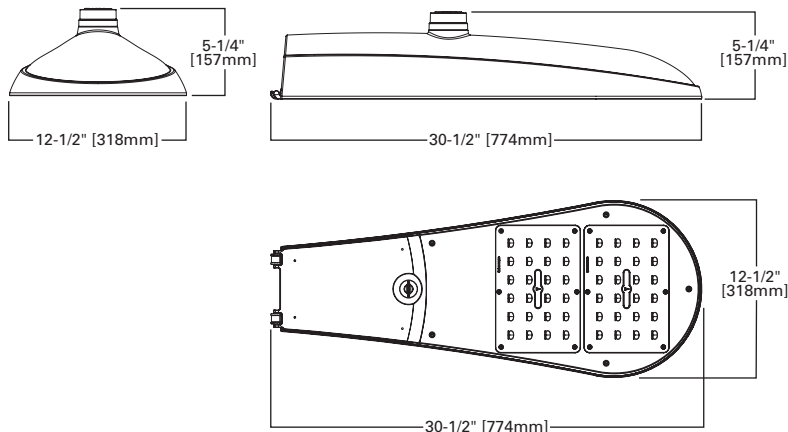


ARCH-M ARCHEON MEDIUM

LED

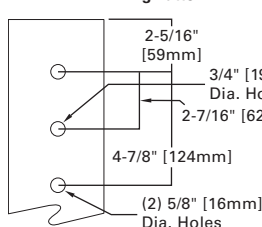
ROADWAY LUMINAIRE

DIMENSIONS

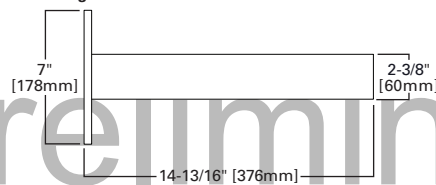


OPTIONAL ARM

TYPE "M" - Drilling Pattern



15" Straight Arm



CERTIFICATION DATA

UL and cUL Wet Location Listed
IP66-Rated Optics
3G Vibration Rated
ISO 9001

ENERGY DATA

Electronic LED Driver
0.9 Power Factor
<20% Total Harmonic Distortion
120-277V 50/60Hz
-40°C Minimum Temperature Rating
+40°C Ambient Temperature Rating

EPA

Effective Projected Area (Sq. Ft.): .71

SHIPPING DATA

Approximate Net Weight:
18 lbs. (8.16 kgs.)

POWER AND LUMENS

Light Engine - AF48*		AF48-40	AF48-50	AF48-60	AF48-70	AF48-80	AF48-90	AF48-100	AF48-110	AF48-120	AF48-130	AF48-140	AF48-150	AF48-160
Power (Watts)		38	48	63	73	83	92	101	111	122	131	141	151	161
Wattage Label		40	50	60	70	80	90	100	110	120	130	140	150	160
Current (A) @ 120V		0.318	0.399	0.527	0.609	0.693	0.768	0.846	0.925	1.020	1.100	1.180	1.260	1.340
Current (A) @ 277V		0.145	0.178	0.243	0.275	0.309	0.342	0.374	0.407	0.453	0.486	0.518	0.553	0.586
Current (A) @ 347V		0.130	0.157	0.188	0.216	0.245	0.271	0.298	0.325	0.371	0.400	0.428	0.458	0.487
Current (A) @ 480V		0.095	0.115	0.146	0.165	0.185	0.203	0.222	0.240	0.286	0.304	0.323	0.344	0.363
Optics														
T2R	4000K/5000K	5,461	6,785	8,780	10,007	11,192	12,383	13,401	14,334	15,382	16,251	17,098	17,944	18,673
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3
	3000K	4,835	6,006	7,772	8,858	9,907	10,961	11,862	12,689	13,616	14,385	15,135	15,884	16,529
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
T3	4000K/5000K	5,427	6,743	8,725	9,944	11,122	12,305	13,317	14,244	15,286	16,149	16,991	17,832	18,556
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
	3000K	4,804	5,969	7,723	8,803	9,845	10,893	11,788	12,609	13,531	14,295	15,041	15,785	16,426
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3
T4W	4000K/5000K	5,399	6,708	8,679	9,893	11,064	12,242	13,248	14,171	15,207	16,066	16,903	17,740	18,460
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4
	3000K	4,779	5,938	7,683	8,757	9,794	10,836	11,727	12,544	13,461	14,221	14,963	15,703	16,341
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
5WQ	4000K/5000K	5,570	6,920	8,954	10,206	11,414	12,629	13,667	14,619	15,688	16,574	17,438	18,301	19,044
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3
	3000K	4,931	6,126	7,926	9,034	10,104	11,179	12,098	12,941	13,887	14,671	15,436	16,200	16,858
	BUG Rating	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3

*Scaled from Archeon Small AF24 Light Engine, actual wattages and lumens will vary once official photometric testing is complete.

LUMEN MAINTENANCE

Wattage Bucket	40W	50W	60W	70W	80W	90W	100W	110W	120W	130W	140W	150W	160W
Ambient Temperature	Up to 50°C	0	0	0	0	Up to 40°C	0	0	0	Up to 40°C	0	0	0
TM-21 Lumen Maintenance (60,000 Hours)	>95%	0	0	0	0	>95%	0	0	0	>95%	0	0	0
Theoretical L70 (Hours)	416,000	0	0	0	0	416,000	0	0	0	416,000	0	0	0

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

Preliminary

ORDERING INFORMATION

Sample Number: ARCH-M-AF48-40-D-U-T2R-4N7-AP

Product Family ¹	Light Engine ²	Wattage Bucket ³	Driver	Voltage	Distribution	Options (Add as Suffix)	Color
ARCH-M=Archeon Medium	AF48	40=40W 50=50W 60=60W 70=70W 80=80W 90=90W 100=100W 110=110W 120=120W 130=130W 140=140W 150=150W 160=160W	D=Dimming (0-10V) 5LTD=DALI ⁴	U=Universal (120-277V) 8=480V ^{5,6} 9=347V ⁵	T2R=Type II T3=Type III T4W=Type IV Wide 5WQ=Type V Square Wide	7030=70 CRI / 3000K ⁷ 7050=70 CRI / 5000K ⁷ 4=NEMA 3-PIN Twistlock Photocontrol Receptacle ⁸ 4N7=NEMA 7-PIN Twistlock Photocontrol Receptacle 10K=10kV UL 1449 Surge Protective Device 10MSP=10kV MOV Surge Protective Device MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height ⁹ MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height ⁹ MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height ⁹ K=Level Indicator LWR-LW=LumaWatt Pro Wireless Sensor, Wide Lens for 8' - 16' Mounting Heights ^{10,11} LWR-LN=LumaWatt Pro Wireless Sensor, Narrow Lens for 16' - 40' Mounting Heights ^{10,11} HA=50°C High Ambient Temperature HS-ARCH=Factory Install ARCH House Side Shield ¹² A15=Arm Included (15" Straight Arm) ¹³ IP66=IP66 Housing	AP=Grey (Standard) BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White

Accessories (Order Separately)

OA/RA1013=Photocontrol Shorting Cap
OA1223=10kV Surge Module Replacement
HS-ARCH=Field Install ARCH House Side Shield ^{12, 14}
OA/RA1014=NEMA Photocontrol - 120V
OA/RA1016=NEMA Photocontrol - Multi-Tap
OA/RA1027=NEMA Photocontrol - 480V
OA/RA1201=NEMA Photocontrol - 347V
A15-XX=Arm (15" Straight Arm) ^{13, 15}
FSIR-100=Wireless Configuration Tool for Occupancy Sensor ¹⁶

WISDOT = With special WisDOT exterior label (which includes standard ANSI exterior label information) for type A fixture, safety cable on power door and OA/RA1013 shorting cap installed.

NOTES:

- Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
- Standard 4000K CCT and 70 CRI.
- Nominal wattage values will be labeled on fixture as per ANSI C136.15. For specific fixture wattage, refer to Power and Lumens table.
- Only available in universal voltage.
- Not available at 50W or 60W.
- Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
- Use dedicated IES files for 3000K and 5000K when performing layouts. These files are published on the Archeon medium luminaire product page on the website.
- If "4" selected, dimming functionality not available. Dimming leads will be capped.
- The FSIR-100 accessory is required to adjust parameters.
- LumaWatt Pro wireless system is not available with photocontrol receptacle (not required)
- LumaWatt Pro wireless sensors are factory installed and require network components LWP-EM-1, LWP-GW-1, and LWP-PoE8 in appropriate quantities. See website for LumaWatt Pro application information.
- HS-ARCH not available with 5WQ distribution.
- Round pole adapter and mounting hardware included. "M" drill pattern.
- Archeon Medium requires two house side shields.
- Replace XX with color designation.
- This tool enables adjustment of parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information.

Preliminary