

DESCRIPTION

The Archeon™ Large 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 20 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 #		Type	
Project			
Comments		Date	
Prepared by			

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 warranty optional.

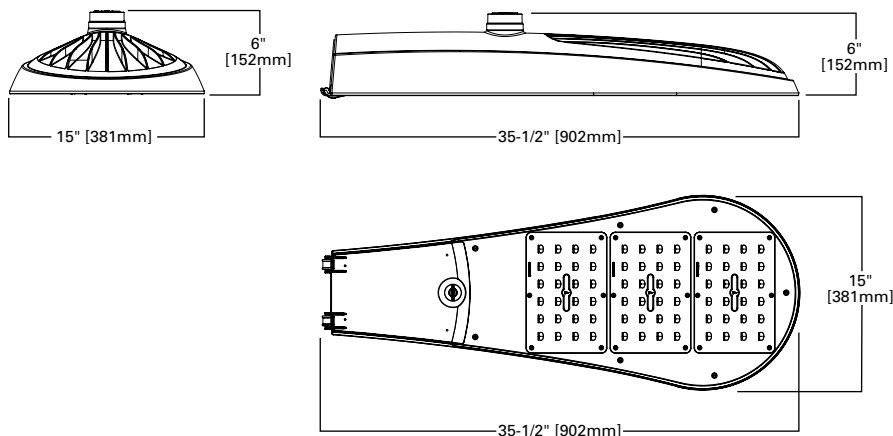


ARCH-L ARCHEON LARGE

LED

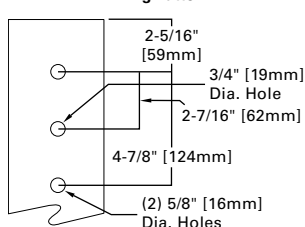
ROADWAY LUMINAIRE

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.): 0.86

SHIPPING DATA

Approximate Net Weight:
27 lbs. (12.2 kgs.)

POWER AND LUMENS

Light Engine	AF72-90	AF72-100	AF72-110	AF72-120	AF72-130	AF72-140	AF72-150	AF72-160	AF72-170	AF72-180	
Power (Watts)	93	102	113	123	133	143	153	162	173	181	
Wattage Label	90	100	110	120	130	140	150	160	170	180	
Current (A) @ 120V	0.78	0.85	0.94	1.03	1.11	1.19	1.28	1.35	1.44	1.51	
Current (A) @ 277V	0.34	0.39	0.42	0.45	0.49	0.53	0.56	0.59	0.62	0.68	
Current (A) @ 347V	0.27	0.31	0.34	0.37	0.39	0.42	0.45	0.48	0.51	0.55	
Current (A) @ 480V	0.24	0.24	0.26	0.28	0.30	0.32	0.34	0.36	0.38	0.43	
Optics											
T2R	4000K/5000K	13,166	14,177	15,496	16,702	17,902	19,046	20,178	21,121	22,134	22,663
	BUG Rating	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
	3000K	11,655	12,549	13,717	14,785	15,847	16,860	17,862	18,696	19,593	20,061
	BUG Rating	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
T3	4000K/5000K	13,075	14,079	15,390	16,587	17,779	18,915	20,039	20,975	21,981	22,507
	BUG Rating	B2-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
	3000K	11,574	12,463	13,623	14,683	15,738	16,744	17,739	18,567	19,458	19,923
	BUG Rating	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
T4W	4000K/5000K	13,021	14,021	15,326	16,519	17,705	18,837	19,956	20,888	21,890	22,414
	BUG Rating	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
	3000K	11,526	12,411	13,566	14,622	15,672	16,674	17,665	18,490	19,377	19,840
	BUG Rating	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4
5WQ	4000K/5000K	13,481	14,516	15,867	17,102	18,330	19,502	20,661	21,626	22,663	23,205
	BUG Rating	B4-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3
	3000K	11,933	12,850	14,045	15,139	16,226	17,263	18,289	19,143	20,061	20,541
	BUG Rating	B4-U0-G2	B4-U0-G2	B4-U0-G3	B4-U0-G3	B4-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3

Light Engine	AF72-190	AF72-200	AF72-210	AF72-220	AF72-230	AF72-240	AF72-250	AF72-260	AF72-270	AF72-280	
Power (Watts)	189	201	211	222	229	242	251	261	273	279	
Wattage Label	190	200	210	220	230	240	250	260	270	280	
Current (A) @ 120V	1.58	1.68	1.76	1.85	1.91	2.01	2.10	2.18	2.27	2.33	
Current (A) @ 277V	0.71	0.75	0.78	0.82	0.85	0.89	0.92	0.96	0.99	1.02	
Current (A) @ 347V	0.58	0.61	0.64	0.67	0.70	0.73	0.76	0.78	0.81	0.84	
Current (A) @ 480V	0.44	0.46	0.48	0.50	0.52	0.54	0.57	0.58	0.60	0.62	
Optics											
T2R	4000K/5000K	23,453	24,589	25,342	26,230	26,888	27,797	28,436	29,110	29,908	30,352
	BUG Rating	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
	3000K	20,761	21,766	22,433	23,218	23,801	24,606	25,171	25,768	26,474	26,868
	BUG Rating	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
T3	4000K/5000K	23,292	24,420	25,167	26,049	26,703	27,606	28,240	28,909	29,702	30,143
	BUG Rating	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
	3000K	20,618	21,616	22,278	23,059	23,637	24,437	24,998	25,590	26,292	26,683
	BUG Rating	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
T4W	4000K/5000K	23,195	24,318	25,063	25,941	26,592	27,491	28,123	28,789	29,579	30,018
	BUG Rating	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	3000K	20,532	21,527	22,186	22,963	23,539	24,335	24,894	25,484	26,183	26,572
	BUG Rating	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
5WQ	4000K/5000K	24,014	25,177	25,948	26,857	27,531	28,462	29,116	29,806	30,623	31,078
	BUG Rating	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	3000K	21,257	22,287	22,969	23,774	24,370	25,195	25,773	26,384	27,107	27,510
	BUG Rating	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4

LUMEN MAINTENANCE

Light Engine	Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Theoretical L70 (Hours)
AF72-90 to AF72-240	Up to 50°C	>95%	416,000
AF72-250 to AF72-280	Up to 40°C	>90%	205,000

LUMEN MULTIPLIER

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



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Specifications and dimensions subject to change without notice.

CONTROL OPTIONS

Photocontrol (4 and 4N7)

Photocontrol receptacles (4 and 4N7) provide a flexible solution to enable “dusk-to-dawn” lighting by sensing light levels. Advanced control systems compatible with ANSI C136.41 7-pin standards can be utilized with the 4N7 receptacle.

ConnectWorks (4N7)

The ConnectWorks™ Connected Lighting System powered by CIMCON features a 7-pin compatible “plug-and-play” wireless controller to provide intelligent ON/OFF switching, dimming control, GPS capabilities, utility-grade power metering, analog and digital sensor capabilities and real-time status and health monitoring of all lighting assets. Universal voltage (120-277V) luminaires with a 7-pin twistlock photocontrol receptacle are compatible with the iSLC-3100-7P intelligent wireless lighting controller (iSLC). 480V luminaires with 7-pin twistlock photocontrol receptacles are compatible with the iSLC-3100-7P-480 intelligent wireless lighting controller. Please consult your Eaton representative for ConnectWorks compatibility with 347V luminaires.

Dimming Occupancy Sensor (MS/DIM-LXX)

These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. These occupancy sensors include an integral photocell that can be activated with the FSIR-100 accessory for “dusk-to-dawn” control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters. A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8' - 40'.

LumaWatt Pro Wireless Control and Monitoring (LWR-LW and LWR-LN)

Eaton’s LumaWatt Pro powered by Enlighted is a connected lighting solution that combines a broad selection of energy-efficient LED luminaires with a powerful integrated wireless sensor system. The sensor controls the lighting system in compliance with the latest energy codes and collects valuable data about building performance and use. Software applications turn the granular data into information through energy dashboards and specialized apps that make it simple and help optimize the use of building resources, beyond lighting. For additional details, refer to the LumaWatt Pro product guides.

ORDERING INFORMATION

Sample Number: ARCH-L-AF72-90-D-U-T2R-4N7-AP

Product Family ¹	Light Engine ²	Wattage Bucket ³	Driver	Voltage	Distribution	Options (Add as Suffix)	Color
ARCH-L=Archeon Large	AF72	90=90W 100=100W 110=110W 120=120W 130=130W 140=140W 150=150W 160=160W 170=170W 180=180W 190=190W 200=200W 210=210W 220=220W 230=230W 240=240W 250=250W 260=260W 270=270W 280=280W	D=Dimming (0-10V) 5LTD=DALI ⁴	U=Universal (120-277V) 8=480V ⁵ 9=347V	T2R=Type II T3=Type III T4W=Type IV Wide 5WQ=Type V Square Wide	7030=70 CRI / 3000K ⁶ 7050=70 CRI / 5000K ⁶ 4=NEMA 3-PIN Twistlock Photocontrol Receptacle ⁷ 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 ^{4,8} MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height ^{4,8} MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height ^{4,8} K=Level Indicator LWR-LW=LumaWatt Pro Wireless Sensor, Wide Lens for 8' - 16' Mounting Heights ^{4,9,10} LWR-LN=LumaWatt Pro Wireless Sensor, Narrow Lens for 16' - 40' Mounting Heights ^{4,9,10} HA=50°C High Ambient Temperature ¹¹ HS-ARCH=Factory Install ARCH House Side Shield ¹² A15=Arm Included (15" Straight Arm) ¹³ IP66=IP66 Rated 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 Sensor¹⁶

- NOTES:**
1. 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.
 2. Standard 4000K CCT and 70 CRI.
 3. Nominal wattage values will be labeled on fixture as per ANSI C136.15. For specific fixture wattage, refer to Power and Lumen tables.
 4. Only available in universal voltage.
 5. 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).
 6. Use dedicated IES files for 3000K and 5000K when performing layouts. These files are published on the ARCH-L Archeon luminaire product page on the website.
 7. If "4" selected, dimming functionality not available, dimming leads will be capped.
 8. The FSIR-100 accessory is required to adjust parameters.
 9. LumaWatt Pro wireless system is not available with photocontrol receptacle (not required).
 10. 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.
 11. HA option not available with the following configurations, 250W+, 210W+ if paired with HSS, or 5LTD 150W+.
 12. HS-ARCH not available with 5WQ distribution, 5LTD 270W+.
 13. Round pole adapter and mounting hardware included. "M" drill pattern.
 14. Requires three house side shields.
 15. Replace XX with color designation.
 16. 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.