

DESCRIPTION

The Archeon™ Small 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 14 standard lumen packages per optic making it the ideal LED replacement for any application of 50W to 150W HPS cobraheads.

SPECIFICATION FEATURES

Construction

Heavy-duty die-cast aluminum housing and door. Tool-less entry, hinged removable door for easy maintenance. 3G vibration rated.

Optics

Choice of four patented, high-efficiency AccuLED Optics. Available in Type IIR, IIU, 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

Two-bolt/one-bracket slipfitter with cast-in pipe stop and 2.5° leveling steps. Fixed-in-place bird guard seals around 1-1/4" to 2" (1-5/8" to 2-3/8" O.D.) mounting arms. Optional 15" pole mount arm

Catalog #		Type
Project		
Comments		Date
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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.

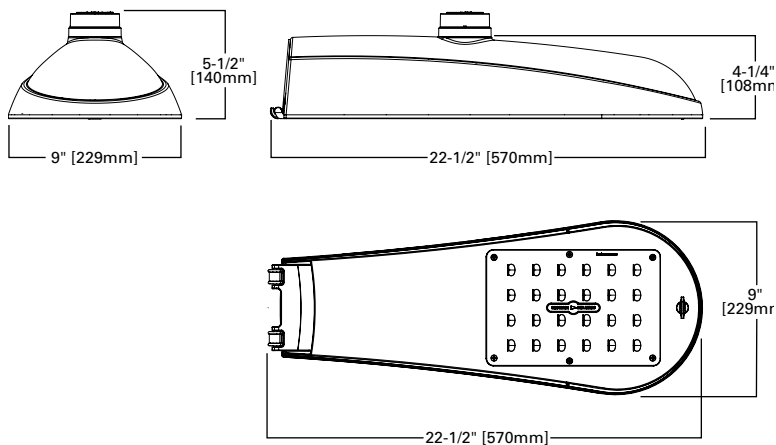


ARCH ARCHEON SMALL

LED

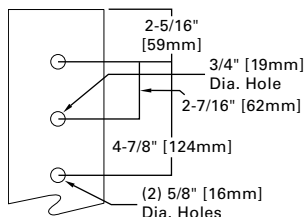
ROADWAY LUMINAIRE

DIMENSIONS

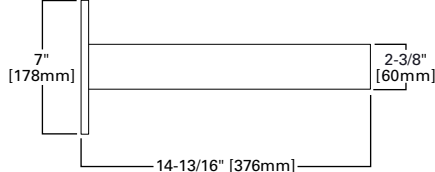


OPTIONAL ARM

TYPE "M" - Drilling Pattern



15" Straight Arm



CERTIFICATION DATA

UL/cUL Wet Location Listed
IP66-Rated Optics
3G Vibration Rated
ISO 9001
DesignLights Consortium® Qualified*
Dark Sky Approved (3000K and warmer CCTs only)

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.): 0.5

SHIPPING DATA

Approximate Net Weight:
12 lbs. (5.4 kgs.)

POWER AND LUMENS (AF16 LIGHT ENGINE)

Light Engine - AF16		AF16-20	AF16-30	AF16-40	AF16-50	AF16-60
Power (Watts)		24	32	42	53	63
Wattage Label		20	30	40	50	60
Input Current @ 120V (A)		0.202	0.266	0.346	0.446	0.529
Input Current @ 277V (A)		0.098	0.124	0.158	0.210	0.241
Input Current @ 347V(A)		-	0.101	0.128	0.159	0.187
Input Current @ 480V (A)		-	0.074	0.094	0.126	0.145
Optics						
T2R	4000K/5000K Lumens	2,996	3,803	4,784	6,010	6,745
	Bug Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2
	3000K Lumens	2,652	3,366	4,235	5,320	5,971
	Bug Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1
T2U	4000K/5000K Lumens	2,978	3,780	4,756	5,974	6,705
	Bug Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2
	3000K Lumens	2,636	3,346	4,210	5,288	5,935
	Bug Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2
T3	4000K/5000K Lumens	2,982	3,785	4,762	5,982	6,713
	Bug Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2
	3000K Lumens	2,640	3,350	4,215	5,295	5,942
	Bug Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2
T4W	4000K/5000K Lumens	2,972	3,773	4,746	5,962	6,691
	Bug Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2
	3000K Lumens	2,631	3,340	4,201	5,278	5,923
	Bug Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2
5WQ	4000K/5000K Lumens	3,037	3,855	4,850	6,092	6,837
	Bug Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2
	3000K Lumens	2,688	3,412	4,293	5,393	6,052
	Bug Rating	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2

POWER AND LUMENS (AF24 LIGHT ENGINE)

Light Engine - AF24		AF24-20	AF24-30	AF24-40	AF24-50	AF24-60	AF24-70	AF24-80	AF24-90	AF24-100
Power (Watts)		21	31	40	54	64	74	83	94	96
Wattage Label		20	30	40	50	60	70	80	90	100
Input Current @ 120V (A)		0.179	0.257	0.338	0.450	0.534	0.619	0.695	0.783	0.798
Input Current @ 277V (A)		-	0.122	0.155	0.212	0.244	0.279	0.312	0.347	0.354
Input Current @ 347V(A)		-	0.100	0.125	0.161	0.187	0.217	0.244	0.275	0.280
Input Current @ 480V (A)		-	0.073	0.094	0.127	0.145	0.165	0.184	0.205	0.209
Optics										
T2R	4000K/5000K Lumens	2,859	4,002	5,164	6,658	7,644	8,522	9,209	9,870	9,972
	Bug Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2
	3000K Lumens	2,531	3,543	4,571	5,894	6,766	7,544	8,152	8,737	8,827
	Bug Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2
T2U	4000K/5000K Lumens	2,849	3,988	5,145	6,635	7,618	8,492	9,177	9,836	9,938
	Bug Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2
	3000K Lumens	2,522	3,530	4,554	5,873	6,743	7,517	8,123	8,707	8,797
	Bug Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2
T3	4000K/5000K Lumens	2,843	3,980	5,135	6,621	7,602	8,475	9,158	9,816	9,917
	Bug Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2
	3000K Lumens	2,517	3,523	4,546	5,861	6,729	7,502	8,107	8,689	8,779
	Bug Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2
T4W	4000K/5000K Lumens	2,825	3,955	5,102	6,580	7,554	8,421	9,100	9,754	9,855
	Bug Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3
	3000K Lumens	2,501	3,501	4,516	5,825	6,687	7,454	8,055	8,634	8,724
	Bug Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3
5WQ	4000K/5000K Lumens	2,905	4,067	5,247	6,766	7,768	8,660	9,358	10,030	10,134
	Bug Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2
	3000K Lumens	2,572	3,600	4,645	5,989	6,876	7,666	8,284	8,879	8,971
	Bug Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2

LUMEN MAINTENANCE

Light Engine	Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Theoretical L70 (Hours)
AF16-20 to AF16-50 & AF24-20 to AF24-80	Up to 50°C	>95%	416,000
AF16-60 & AF24-90 & AF24-100	Up to 40°C	>90%	205,000

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

ORDERING INFORMATION

Sample Number: ARCH-AF16-40-D-U-T2R-4N7-AP

Product Family ^{1,2}	Light Engine ³	Wattage Bucket	Driver	Voltage	Distribution	Options (Add as Suffix)	Color
ARCH=Archeon Small	AF16	20 ⁴ 30 40 50 60	D=Dimming (0-10V)	U=Universal (120-277V) 2=120V ⁵ 8=480V ^{6,7} 9=347V ⁶	T2R=Type II Roadway T2U=Type II Urban T3=Type III T4W=Type IV Wide 5WQ=Type V Square Wide	8027=80 CRI / 2700K ^{8,9} 7030=70 CRI / 3000K ⁸ 7050=70 CRI / 5000K ⁸ 4=NEMA 3-PIN Twistlock Photocontrol Receptacle ¹⁰ 4N7=NEMA 7-PIN Twistlock Photocontrol Receptacle 10K=10kV UL 1449 Surge Protective Device 10MSP=10kV MOV Surge Protective Device K=Level Indicator HA=50°C High Ambient Temperature ¹¹ HS-ARCH-16=Factory Install ARCH House Side Shield for AF16 ¹² HS-ARCH-24=Factory Install ARCH House Side Shield for AF24 ¹² A15=Arm Included (15" Straight Arm) ¹³	AP=Grey (Standard) BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White
	AF24	20 ⁵ 30 40 50 60 70 80 90 100					

Accessories (Order Separately)

OA/RA1013=Photocontrol Shorting Cap
 OA1223=10kV Surge Module Replacement
 HS-ARCH-16=Field Install ARCH House Side Shield for AF16 ¹²
 HS-ARCH-24=Field Install ARCH House Side Shield for AF24 ¹²
 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, 14}

- 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.
 - DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
 - Standard 4000K CCT and 70 CRI.
 - AF16-20 only available in Universal (120V-277V).
 - AF24-20 only available in 120V.
 - Not available with AF16-20 or AF24-20.
 - 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 ARCH Archeon luminaire product page on the website.
 - Extended lead times may apply.
 - If "4" selected, dimming functionality not available, dimming leads will be capped.
 - Option not available with AF24-90 or AF24-100.
 - HS-ARCH not available with 5WQ and T2U distribution.
 - Round pole adapter and mounting hardware included. "M" drill pattern.
 - Replace XX with color designation.