

DESCRIPTION

The Archeon™ Small LED roadway luminaire delivers all the performance benefits of the latest Cooper Lighting Solutions 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
Prepared by		

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 Cooper Lighting Solutions for a complete selection of standard colors.

Warranty

Standard five-year warranty. Optional ten-year warranty, please see your Cooper Lighting Solutions Streetworks sales representative for more information.

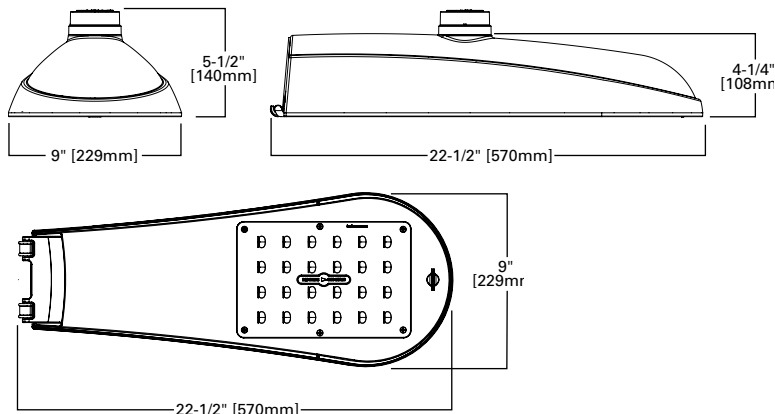


ARCH ARCHEON SMALL

LED

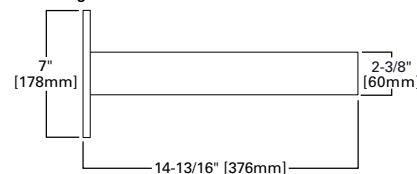
ROADWAY LUMINAIRE

DIMENSIONS

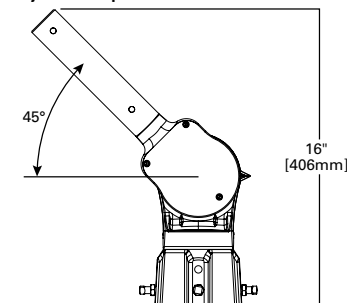


OPTIONAL ARM

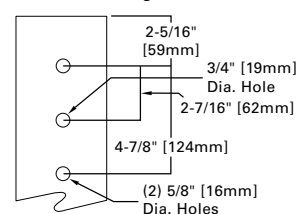
15" Straight Arm



Adjustable Slipfitter Offset Arm



TYPE "M" - Drilling Pattern



CERTIFICATION DATA

UL/cUL Wet Location Listed
IP66-Rated Optics
IP54-Rated Housing
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	0.21	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	3,065	3,890	4,894	6,148	6,900
	Bug Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2
	3000K Lumens	2,898	3,678	4,627	5,813	6,524
	Bug Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G1
T2U	4000K/5000K Lumens	3,046	3,867	4,865	6,111	6,859
	Bug Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2
	3000K Lumens	2,880	3,656	4,600	5,778	6,485
	Bug Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2
T3	4000K/5000K Lumens	3,050	3,872	4,871	6,119	6,867
	Bug Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2
	3000K Lumens	2,884	3,660	4,605	5,785	6,492
	Bug Rating	B1-U0-G1	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2
T4W	4000K/5000K Lumens	3,040	3,860	4,855	6,099	6,845
	Bug Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2
	3000K Lumens	2,875	3,649	4,590	5,767	6,471
	Bug Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2
5WQ	4000K/5000K Lumens	3,107	3,943	4,961	6,232	6,994
	Bug Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2
	3000K Lumens	2,937	3,728	4,690	5,892	6,612
	Bug Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	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	2,925	4,094	5,283	6,811	7,819	8,718	9,420	10,097	10,201
	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	2,914	4,080	5,263	6,787	7,793	8,687	9,388	10,062	10,166
	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	B3-U0-G3
	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	2,908	4,071	5,253	6,773	7,776	8,670	9,368	10,041	10,145
	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-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2
T4W	4000K/5000K Lumens	2,890	4,046	5,219	6,731	7,727	8,614	9,309	9,978	10,081
	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-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3
5WQ	4000K/5000K Lumens	2,972	4,160	5,367	6,921	7,946	8,859	9,573	10,260	10,367
	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
	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	B3-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	7027=70 CRI / 2700K ⁸ 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 ASJS15=Adjustable slipfitter (Factory set at 15 degrees) ASJS25=Adjustable slipfitter (Factory set at 25 degrees) ASJS45=Adjustable slipfitter (Factory set at 45 degrees)	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} ASJS15-XX=Adjustable slipfitter (Factory set at 15 degrees) ¹⁴ ASJS25-XX=Adjustable slipfitter (Factory set at 25 degrees) ¹⁴ ASJS45-XX=Adjustable slipfitter (Factory set at 45 degrees) ¹⁴				VGS-ARCH=Short Vertical Drop Shield VGL-ARCH=Long Vertical Drop Shield			

- 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 2700K, 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.



Cooper Lighting Solutions
 1121 Highway 74 South
 Peachtree City, GA 30269
 P: 770-486-4800
www.cooperlighting.com

Specifications and dimensions subject to change without notice.