

DESCRIPTION

The Archeon™ Large 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 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 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.



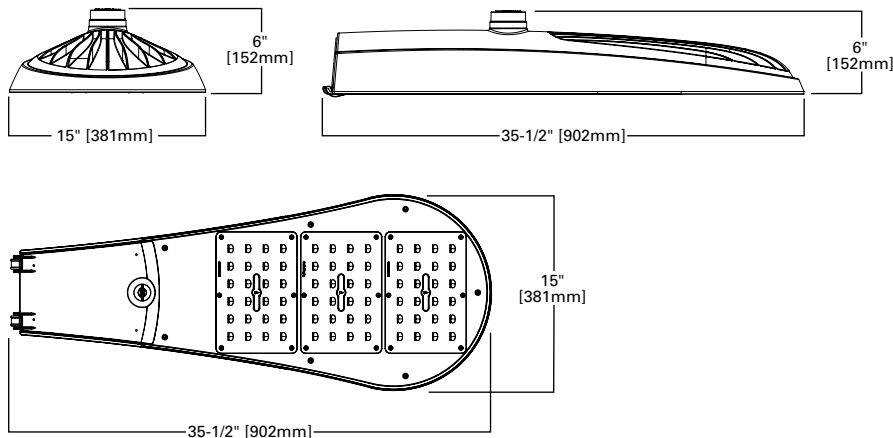
ARCH-L ARCHEON LARGE

LED

ROADWAY LUMINAIRE

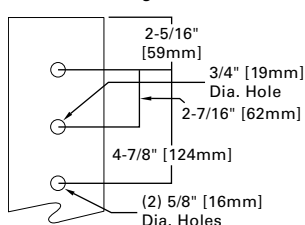


DIMENSIONS



OPTIONAL ARM

TYPE "M" - Drilling Pattern



15" Straight Arm



CERTIFICATION DATA

UL and cUL Wet Location Listed
IP66-Rated Optics
IP54-Rated Housing
3G Vibration Rated
ISO 9001
DesignLights Consortium® Qualified*
Dark Sky Approved (3000K CCT and warmer 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.): 0.86

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	13,468	14,502	15,852	17,085	18,313	19,483	20,641	21,606	22,642	23,183
	BUG Rating	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	B3-U0-G3
	3000K	12,734	13,711	14,987	16,154	17,314	18,421	19,516	20,427	21,407	21,919
	BUG Rating	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
T3	4000K/5000K	13,375	14,402	15,743	16,968	18,187	19,349	20,499	21,456	22,485	23,024
	BUG Rating	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G4
	3000K	12,646	13,617	14,884	16,043	17,195	18,294	19,382	20,286	21,260	21,768
	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-G3	B3-U0-G4	B3-U0-G4
T4W	4000K/5000K	13,320	14,343	15,678	16,898	18,111	19,269	20,414	21,367	22,392	22,928
	BUG Rating	B2-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	B3-U0-G4
	3000K	12,593	13,560	14,822	15,976	17,123	18,218	19,301	20,202	21,171	21,677
	BUG Rating	B2-U0-G3	B2-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
5WQ	4000K/5000K	13,790	14,849	16,231	17,495	18,751	19,950	21,135	22,122	23,183	23,738
	BUG Rating	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	B5-U0-G3
	3000K	13,038	14,040	15,346	16,541	17,728	18,861	19,983	20,916	21,919	22,443
	BUG Rating	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	B5-U0-G3
T2U	4000K/5000K	13,335	14,358	15,695	16,917	18,131	19,291	20,437	21,391	22,417	22,953
	3000K	12,607	13,575	14,838	15,993	17,143	18,239	19,323	20,225	21,194	21,701
	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

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	23,991	25,153	25,924	26,832	27,505	28,435	29,089	29,778	30,594	31,049
	BUG Rating	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	B3-U0-G4
	3000K	22,683	23,781	24,510	25,368	26,005	26,884	27,502	28,154	28,925	29,356
	BUG Rating	B3-U0-G3	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
T3	4000K/5000K	23,827	24,980	25,745	26,647	27,316	28,240	28,888	29,572	30,384	30,835
	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	22,527	23,618	24,341	25,194	25,826	26,700	27,313	27,959	28,727	29,154
	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	23,727	24,876	25,638	26,536	27,202	28,122	28,768	29,450	30,258	30,707
	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	22,433	23,520	24,420	25,089	25,719	26,588	27,199	27,844	28,607	29,032
	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-G5	B3-U0-G5	B3-U0-G5
5WQ	4000K/5000K	24,565	25,755	26,544	27,473	28,163	29,115	29,784	30,490	31,326	31,791
	BUG Rating	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	B5-U0-G4
	3000K	23,225	24,351	25,096	25,975	26,627	27,528	28,159	28,827	29,617	30,057
	BUG Rating	B5-U0-G3	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
T2U	4000K/5000K	23,753	24,904	25,667	26,565	27,232	28,153	28,800	29,482	30,291	30,741
	3000K	22,458	23,545	24,266	25,117	25,747	26,618	27,230	27,874	28,639	29,064
	BUG Rating	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-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

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.

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'.

Enlighted Wireless Control and Monitoring (LWR-LW and LWR-LN)

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 Enlighted product guides.

LumenSafe Integrated Network Security Camera (LD)

Cooper Lighting Solutions brings ease of camera deployment to a whole new level. No additional wiring is needed beyond providing line power to the luminaire. A variety of networking options allows security integrators to design the optimal solution for active surveillance. As the ideal solution to meet the needs for active surveillance, the LumenSafe integrated network camera is a streamlined, outdoor-ready fixed dome that provides HDTV 1080p video. This IP camera is optimally designed for deployment in the video management system or security software platform of choice.


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	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 Roadway T2U=Type II Urban T3=Type III T4W=Type IV Wide 5WQ=Type V Square Wide	AP=Grey (Standard) BZ=Bronze BK=Black DP=Dark Platinum GM=Graphite Metallic WH=White
Options (Add as Suffix)				Accessories (Order Separately)		
7027=70 CRI / 2700K ⁶ 7030=70 CRI / 3000K ⁶ 7050=70 CRI / 5000K ⁶ AMB=Amber 590nm ^{23,24} 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=Enlighted Wireless Sensor, Wide Lens for 8' - 16' Mounting Heights ^{4,9,10} LWR-LN=Enlighted 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 ASJS15=Adjustable slipfitter (Factory set at 15 degrees) ASJS25=Adjustable slipfitter (Factory set at 25 degrees) ASJS45=Adjustable slipfitter (Factory set at 45 degrees) ZD=DALI-enabled 4-PIN Twistlock Receptacle ^{17,18} ZW=WaveLinX-enabled 4-PIN Twistlock Receptacle ^{17,18} SWPD4XX=WaveLinX Wireless Sensor, 7' - 15' Mounting Height ^{19,20,21,22} SWPD5XX=WaveLinX Wireless Sensor, 15' - 40' Mounting Height ^{19,20,21,22}				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 ASJS15-XX=Adjustable slipfitter (Factory set at 15 degrees) ¹⁵ ASJS25-XX=Adjustable slipfitter (Factory set at 25 degrees) ¹⁵ ASJS45-XX=Adjustable slipfitter (Factory set at 45 degrees) ¹⁵ VGS-ARCH=Short Vertical Drop Shield VGL-ARCH=Long Vertical Drop Shield SWPD4-XX=WaveLinX Wireless Sensor, 7' - 15' Mounting Height ^{19,20,21,22} SWPD5-XX=WaveLinX Wireless Sensor, 15' - 40' Mounting Height ^{19,20,21,22}		

- 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 Lumen tables.
 - Only available in universal voltage.
 - 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-L Archeon 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.
 - Enlighted wireless system is not available with photocontrol receptacle (not required).
 - Enlighted wireless sensors are factory installed and require network components LWP-EM-1, LWP-GW-1, and LWP-PoE8 in appropriate quantities. See website for Enlighted application information.
 - HA option not available with the following configurations, 250W+, 210W+ if paired with HSS, or 5LTD 150W+.
 - HS-ARCH not available with 5WQ distribution, 5LTD 270W+.
 - Round pole adapter and mounting hardware included. "M" drill pattern.
 - Requires three 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 Cooper Lighting Solutions for more information.
 - Utilizes internal step-down transformer when 347V or 480V is selected.
 - Controls system is not available with photocontrol (BPC), photocontrol receptacle (PR or PR7), or other controls systems (MS, ZD, ZW, LWR, DALI, or DIM).
 - Requires 4-PIN twistlock receptacle (ZD or ZW) option.
 - Replace XX with sensor color (WH, BZ or BK).
 - Sensor passive infrared (PIR) may be overly sensitive with operating below -20°C (-4°F).
 - For this device to be field-configurable, requires WAC Gateway components WAC-PoE and WPOE-120 in appropriate quantities. Only compatible with WaveLinX system and software and requires system components to be installed for operation. See website for more WaveLinX application information.
 - Not available with HA option.
 - Amber 590nm +/-5nm for wildlife and observatory use. Supplied in AF72 90 wattage bucket only.

LumenSafe Integrated Network Security Camera Technology Options (Add as Suffix)

Product Family	Camera Type	Data Backhaul
L=LumenSafe Technology* 	D=Dome Camera, Standard H=Dome Camera, Hi-Res Z=Dome Camera, Remote PTZ	C=Cellular, Customer Installed SIM Card A=Cellular, Factory Installed AT&T SIM Card V=Cellular, Factory Installed Verizon SIM Card S=Cellular, Factory Installed Sprint SIM Card W=Wi-Fi Networking w/ Omni-Directional Antenna E=Ethernet Networking

*Consult LumenSafe system pages for additional details and compatibility.