

AIRO SERIES

LUMINAIRE POLE COMBO

Cat.#

Job

Type



HUBBELL
Outdoor Lighting

Approvals

LUMINAIRE AND POLE

SPECIFICATIONS

Construction:

- Stylish vertically finned die-cast and extruded aluminum for maximum heat dissipation
- Separate optical and electrical compartment for improved thermal management and optimum component operation
- EPA: 8L – .50ft²
16L – .62 ft²
24L – .74 ft²

Optics:

- Premium engineered individual acrylic lenses deliver IES Type III and IV distributions
- Lens distributions are field rotatable (in 90° increments) or exchangeable for job site fine-tuning
- 4000K or 5000K (70 CRI) CCT
- Zero uplight

Electrical:

- Configured with 8, 16, or 24 high current and high output LEDs to replace 150, 250 and 400W HID respectively
- Universal 120-277 VAC input voltage, 50/60 Hz
- Single driver, 2100mA drive current
- Ambient operating temperature -40° C to 40° C
- Drivers have greater than 90% power factor and less than 20% THD
- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- Field replaceable surge protection device provides 10KA and 10KV protection meeting ANSI/IEEE C62.41.2 Category C High and Surge Location Category C3; Automatically takes fixture off-line for protection when device is consumed

Controls:

- 0-10V dimming drivers standard option for occupancy
- 7-pin ANSI C136.41-2013 photocontrol receptacle option available for twist lock photocontrols or wireless control modules (control accessories sold separately)

Installation:

- Tool-less entry to wiring/driver compartment
- Universal mounting block works with #2 drill pattern (See page 3 illustration)
- Fixture ships with slotted mounting block to accommodate wide range of drill patterns for easy retrofit opportunities (See page 3 illustration for dimensions)

Finish:

- Dark Bronze (textured) TGIC thermoset polyester powder paint finish applied at nominal 2.5 mil thickness

Warranty:

Five year limited warranty (for more information visit: <http://www.hubbelloutdoor.com/resources/warranty/>)

Listings:

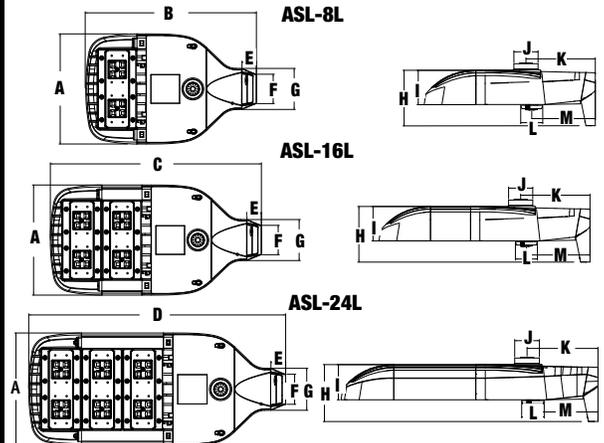
- DesignLights Consortium (DLC) qualified, consult DLC website for more details: <http://www.designlights.org/QPL>
- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations and 40°C ambient temperatures
- 3G rated for ANSI C136.31 high vibration applications
- IP65 optical assembly
- IDA approved

PRODUCT IMAGE(S)

ASL-24L



DIMENSIONS



A	B	C	D	E	F	G
11.7"	17.25"	22.4"	26.6"	1.5"	3.1"	4.3"
297 mm	438 mm	569 mm	675 mm	38 mm	78 mm	109 mm

H	I	J	K	L	M
5.9"	3.6"	2.5"	7.4"	2.3"	6.7"
150 mm	91 mm	63 mm	188 mm	58 mm	170 mm

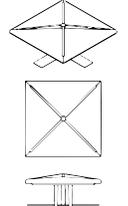
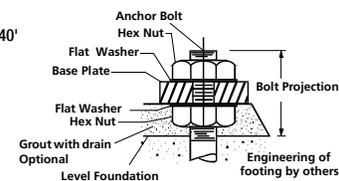
SHIPPING INFORMATION

Catalog Number	G.W(kg)/CTN	Carton Dimensions		
		Length Inch (cm)	Width Inch (cm)	Height Inch (cm)
ASL-8L	15 (6.8)	20.75 (52.7)	15.125 (38.4)	6.9375 (17.6)
ASL-16L	19 (8.6)	25 (63.5)	15.125 (38.4)	6.9375 (17.6)
ASL-24L	24 (10.8)	25 (63.5)	15.125 (38.4)	6.9375 (17.6)

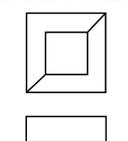
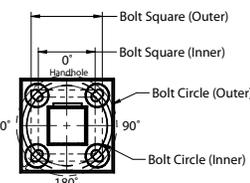
BASE DETAIL

POLE CAP

Overall Height 10' - 40'



BASE COVER



SSS-H POLE

APPLICATIONS

- Lighting installations for side mounting of luminaires with effective projected area (EPA) not exceeding maximum allowable loading of the specified pole in its installed geographic location

CONSTRUCTION

- SHAFT: One-piece straight steel with square cross section, flat sides and minimum 0.238" radius on all corners; Minimum yield of 46,000 psi (ASTM-A500, Grade B); Longitudinal weld seam to appear flush with shaft side wall; Steel base plate with axial bolt circle slots welded flush to pole shaft having minimum yield of 36,000 psi (ASTM A36)
- BASE COVER: Two-piece square aluminum base cover included standard
- POLE CAP: Pole shaft supplied with removable cover when applicable; Tenon and post-top configurations also available
- HAND HOLE: Rectangular 3x5 steel hand hole frame (2.38" x 4.38" opening); Mounting provisions for grounding lug located behind gasketed cover
- ANCHOR BOLTS: Four galvanized anchor bolts provided per pole with minimum yield of 55,000 psi (ASTM F1554). Galvanized hardware with two washers and two nuts per bolt for leveling

FINISH

- Dark Bronze (textured) TGIC thermoset polyester powder coat paint finish with nominal 3.0 mil thickness
- Powder paint prime applied over "white metal" steel substrate cleaned via mechanical shot blast method
- Decorative finish coat available in seven standard colors; Custom colors available; RAL number preferable; Internal protective coating available

All Single Head ASL Configurations paired with 25' poles include

VM2 - VIBRATION DAMPER 2ND MODE

Factory installed, internal damper designed to alter pole resonance to reduce movement and material fatigue caused by 2nd mode vibration.



CERTIFICATIONS/LISTINGS



MOUNTING ORIENTATION

SINGLE

DOUBLE @ 180°



Denotes handhole location



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ASLED-SPEC 11/16

ORDERING INFORMATION

Ordering Logic* - All Configurations Dark Bronze Finish (textured)



PRODUCT SERIES	LUMENS	LED CCT	DISTRIBUTION	7-PIN TWIST LOCK PC RECEPTACLE	POLE
A	6 6K Nominal (ASL 8L) 12 12K Nominal (ASL 16L) 18 18K Nominal (ASL 24L)	N 4000K C 5000K	T3 Type 3 T4 Type 4	- No Receptacle 7PR Includes Receptacle	S16 16' Square Straight Steel S20 20' Square Straight Steel S25¹ 25' Square Straight Steel

SINGLE OR DOUBLE HEAD CONFIGURATION @180 DEG.

- Single Head
- 2X** Double Head @180 Deg.

ANCHOR BOLTS

- With Anchor Bolts/Template
- LAB** Less Anchor Bolts/Template

SA US **DLC LISTED**

*25 piece max order size for 10-day shipment.

¹ Select configurations include a vibration damper. Refer to the Pronto Combo wind loading table for details.

ACCESSORIES - Order Separately

Catalog Number	Description
TAB30M38	3/4" x 30" x 3" anchor bolt set (four individual bolts)
93062959	SSS-H Series pole anchor bolt template
PTL-1	Photocontrol-twist-lock cell (120V) - requires 7PR option
PTL-8	Photocontrol-twist-lock cell (120V-277V) - requires 7PR option
PSC	Shorting-cap-twist-lock - requires 7PR option

ELECTRICAL DATA

# OF LEDS	DRIVE CURRENT (mA)	INPUT VOLTAGE (V)	SYSTEM POWER (w)	CURRENT (Amps)
8	1@(2100mA)	120	62	0.52
		208	62	0.30
		240	62	0.26
		277	62	0.22
16		120	123	1.03
		208	123	0.60
		240	123	0.52
		277	123	0.45
24		120	181	1.49
		208	181	0.86
		240	181	0.74
		277	181	0.64

LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

AMBIENT TEMPERATURE		LUMEN MULTIPLIER
0° C	32° F	1.06
10° C	50° F	1.03
20° C	68° F	1.01
25° C	77° F	1.00
30° C	86° F	0.99
40° C	104° F	0.97
50° C	122° F	0.94

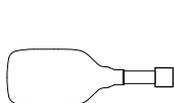
Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

PROJECTED LUMEN MAINTENANCE

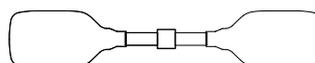
Ambient Temp.	OPERATING HOURS					L70 (hours)
	0	25,000	TM-21-11 ¹ L90 36,000	50,000	100,000	
25°C / 77°F	1.00	0.93	0.90	0.86	0.75	>125,000
40°C / 104°F	0.99	0.90	0.86	0.81	0.67	>88,000

1. Projected per IESNA TM-21-11 (* Cree XP-L, 2100mA, 105°C Ts, 6,000hrs)

EPA

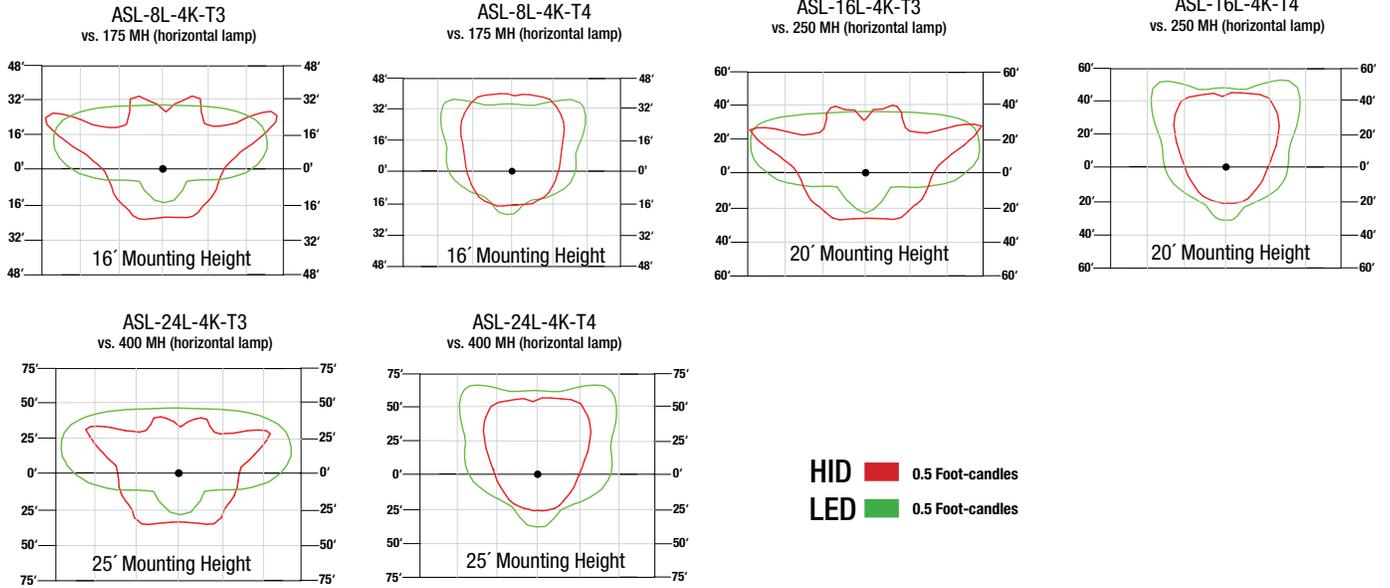


Config.	Luminaire	EPA
1 @ 90°	ASL8L	.50
	ASL8L	.62
	ASL24L	.74



Config.	Luminaire	EPA
2 @ 180°	ASL8L	1.00
	ASL8L	1.24
	ASL24L	1.48

PHOTOMETRICS



PERFORMANCE DATA

# OF LEDS	DRIVE CURRENT	SYSTEM WATTS	DIST. TYPE	5K (5000K nominal, 70 CRI)					4K (4000K nominal, 70 CRI)				
				LUMENS	LPW ¹	B	U	G	LUMENS	LPW ¹	B	U	G
8	2100	59	3	6455	109	1	0	1	6391	108	1	0	1
			4	6607	112	1	0	1	6542	111	1	0	1
16		115	3	12801	111	2	0	2	12674	110	2	0	2
			4	13104	114	2	0	2	12974	113	2	0	2
24		169	3	18781	111	3	0	3	18595	110	3	0	3
			4	19227	114	3	0	2	19036	113	3	0	2

¹ - Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment and application.

ARM/MOUNTING BLOCK

Fixture ships with universal mounting block for ease of installation. Compatible with #2 drill pattern.



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ASLLED-SPEC 11/16

Standard ASCE7-05 Wind Map																						
Pole Height (4" Sq x 0.125" wall thickness)	85 MPH Zone			90 MPH Zone			100 MPH Zone			105 MPH Zone (HI)			110 MPH Zone			120 MPH Zone			145 MPH Zone (PR)			
	16'	20'	25'	16'	20'	25'	16'	20'	25'	16'	20'	25'	16'	20'	25'	16'	20'	25'	16'	20'	25'	
Allowable EPAs (ft/sq)	19	12.7	7.3	16.7	10.9	5.9	13	7.9	3.8	11.5	6.9	2.9	7.9	4.2	0.8	7.9	4.2	0.8	4.1	1.3	NR	
ASL Series - Single																						NR
ASL Series - DBL @ 180 deg.																					NR	NO ASL 24

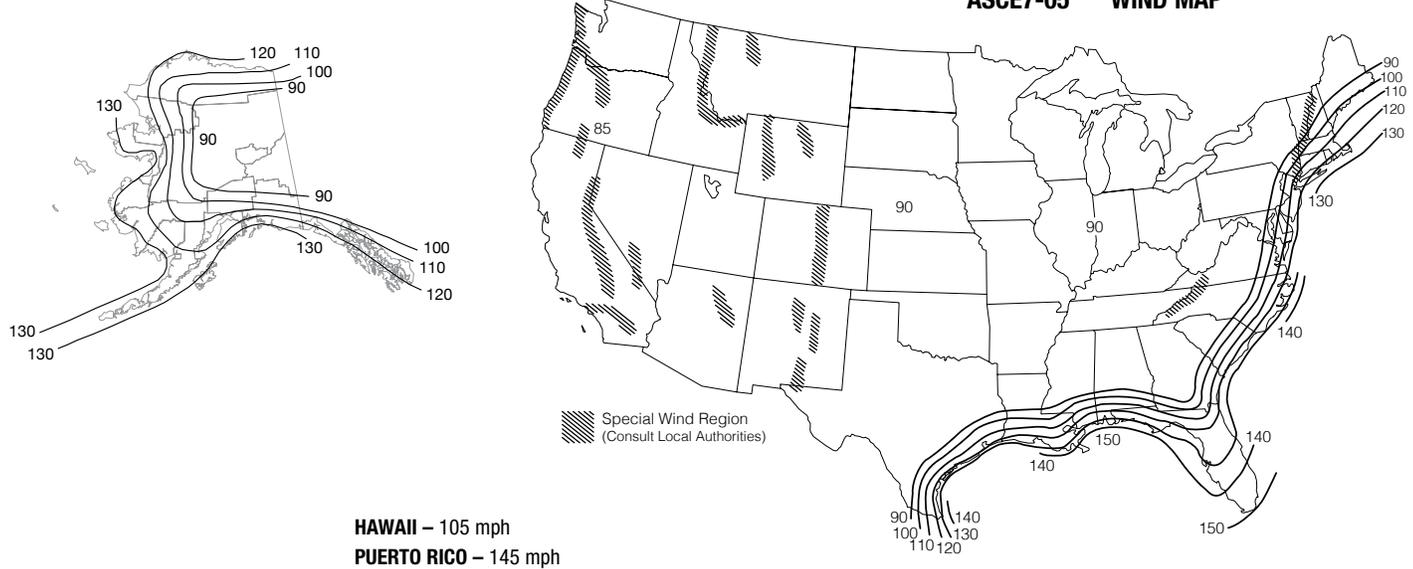
Florida Region Wind Map (2010 Building Code)																								
Pole Height (4" Sq x 0.125" wall thickness)	115 MPH Zone			120 MPH Zone			130 MPH Zone			140 MPH Zone			150 MPH Zone			160 MPH Zone			170 MPH Zone			180 MPH Zone		
	16'	20'	25'	16'	20'	25'	16'	20'	25'	16'	20'	25'	16'	20'	25'	16'	20'	25'	16'	20'	25'	16'	20'	25'
Allowable EPAs (ft/sq)	20.8	13.6	7.4	18.7	11.9	6.2	15.2	9.2	4.1	12.3	7.1	2.5	10.1	5.3	1.1	8.2	3.9	NR	6.7	2.7	NR	5.4	1.7	NR
ASL Series - Single																		NR			NR			NR
ASL Series - DBL @ 180 deg.																		NR			NR			NR

Acceptable	Includes Vibration Damper ¹	ASL-24 Exceeds Allowable Pole EPA	Not Recommended
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Florida Building Code utilizes a different calculation method than ASCE, which results in different allowable EPAs. Consult your local authorities to determine which standard to use for your project

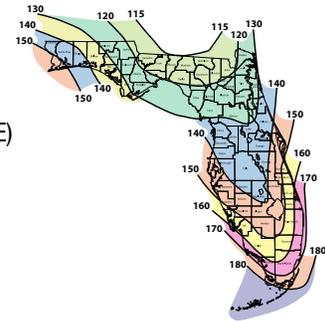
Notes: ¹ Pole used in program includes a vibration damper (VM2 style) due to low luminaire EPA and 25' mounting height. *Consult the complete list of pole notes on the pole specification sheets located on the Hubbell Lighting web site.

ASCE7-05 WIND MAP



FLORIDA REGION WIND MAP (2010 FLORIDA BUILDING CODE)

- Florida region wind map above is based upon 3-second gust winds and the 2010 Florida Building Code



NOTES

- Allowable EPA, to determine max pole loading weight, multiply allowable EPA by 30 lbs.
- The tables for allowable pole EPA are based on the ASCE 7-05 Wind Map or the Florida Region Wind Map for the 2010 Florida Building Code. The Wind Maps are intended only as a general guide and cannot be used in conjunction with other maps. Always consult local authorities to determine maximum wind velocities, gusting and unique wind conditions for each specific application
- Allowable pole EPA for jobsite wind conditions must be equal to or greater than the total EPA for fixtures, arms, and accessories to be assembled to the pole. Responsibility lies with the specifier for correct pole selection. Installation of poles without luminaires or attachment of any unauthorized accessories to poles is discouraged and shall void the manufacturer's warranty
- Wind speeds and listed EPAs are for ground mounted installations. Poles mounted on structures (such as bridges and buildings) must consider vibration and coefficient of height factors beyond this general guide; Consult local and federal standards
- Wind Induced Vibration brought on by steady, unidirectional winds and other unpredictable aerodynamic forces are not included in wind velocity ratings. Consult Hubbell Lighting's Pole Vibration Application Guide for environmental risk factors and design considerations. http://cdn.hubbelloutdoor.com/content/products/literature/literature_files/Pole_Wind_Induced_Flyer_HL010022.pdf
- Extreme Wind Events like, Hurricanes, Typhoons, Cyclones, or Tornadoes may expose poles to flying debris, wind shear or other detrimental effects not included in wind velocity ratings

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