

Ashbery 360 Solar

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Specification Sheet | AP401



Ashbery for 360 Solar brings together advanced solar technology and beautiful design, crafted as an homage to traditional lantern-style luminaires that have a special place in the American lexicon. The line includes lens heights from 12' up to 16', matching Ashbery's performance specifically for the pedestrian scale or beyond in use cases like parking lots, streetscapes, transit and other environments with a wide range of illumination requirements.

Ashbery for 360 Solar is International DarkSky Approved.

Housing & Materials

Cast Aluminum construction. Factory sealed and replaceable light engine cartridge with UV stable, impact modified clear acrylic lens. All hardware is magni-coated for optimum corrosion and 'anti-seize' protection. Assembly is IP66 rated.

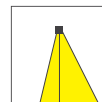
360 Solar - System Components

System consists of: Solar modules (1-2 units), pre-wired with MPPT controllers and required connectors. Each Solar module is home-run connected to the control unit housed within the pole. Control unit (IP67 rated enclosure) contains solar control electronics, LED driver and Lithium-NMC battery. System ships with all required cables and connectors-overmolded and labeled for use. Each 360 control unit is programmed with voltage and drive current parameters pre-configured at the factory to match its designated luminaire and performance specification.

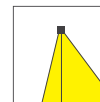
Light Engine

High output light engine features efficacy up to 191lm/W and 6300lm delivered through a selection of roadway distribution types. High power LEDs on a RoHS compliant circuit board with secondary optics in Roadway distribution types. All configurations are available in 2700K, 3000K, and 4000K, >80CRI across all available color temperatures. Other CCT's available on request. Luminaires meet TM21 L70: >60,000hrs. L90: >60,000hrs (at maximum operating current).

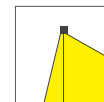
Distributions



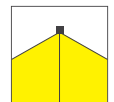
TII



TIII



TIV



TV

Warranty

Luminaire is warranted for six years. 360 Solar technology warranted for three years.

Certification

UL Listed for Wet Location (Luminaire only), CE, International DarkSky Approved, RoHS Compliant



Designed by FlexSol Lighting Solutions & Robert A.M. Stern Architects

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360 Solar Technology Specifications

Solar Module	
Solar technology	Monocrystalline silicon solar cells
Qty of solar modules	Variable, from 1 up to 3. 4 available on request
Cell efficiency	> 24%
Module power	> 110 Wp
Total system power	110 - 440 Wp
Number of cells per module	32
Number of strings per module	4 strings
Number of MPPT channels	4 per solar module
Cylinder Material	Borosilicate glass - toughened
Solar module color	Black
Dimensions per module	Ø 8.0 x 43.7 inches
Weight per module	~ 19 lbs

Control Unit	
Control Unit Location	In pole, rail mounted
Control Unit Material	Marine grade aluminum EN AW 6060-T66
Finishing	Anodized
Ingress protection	IP67
Security	Security screw-fixed handhole, with provisions for additional internal padlock protection (client-provided)
Control Unit Weight	850 Wh ~ 18 lbs 1275 Wh ~ 22 lbs
Battery technology	Lithium (NMC)
Battery capacity	850 Wh or 1275 Wh
Battery voltage	14.9 Vdc (850 Wh) 22.3 Vdc (1275 Wh)
Battery State of Charge window	10 ~ 95%
Service life	~10 years
Battery Operating temperature	-5 to 140 °F

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360 Solar Technology Specifications

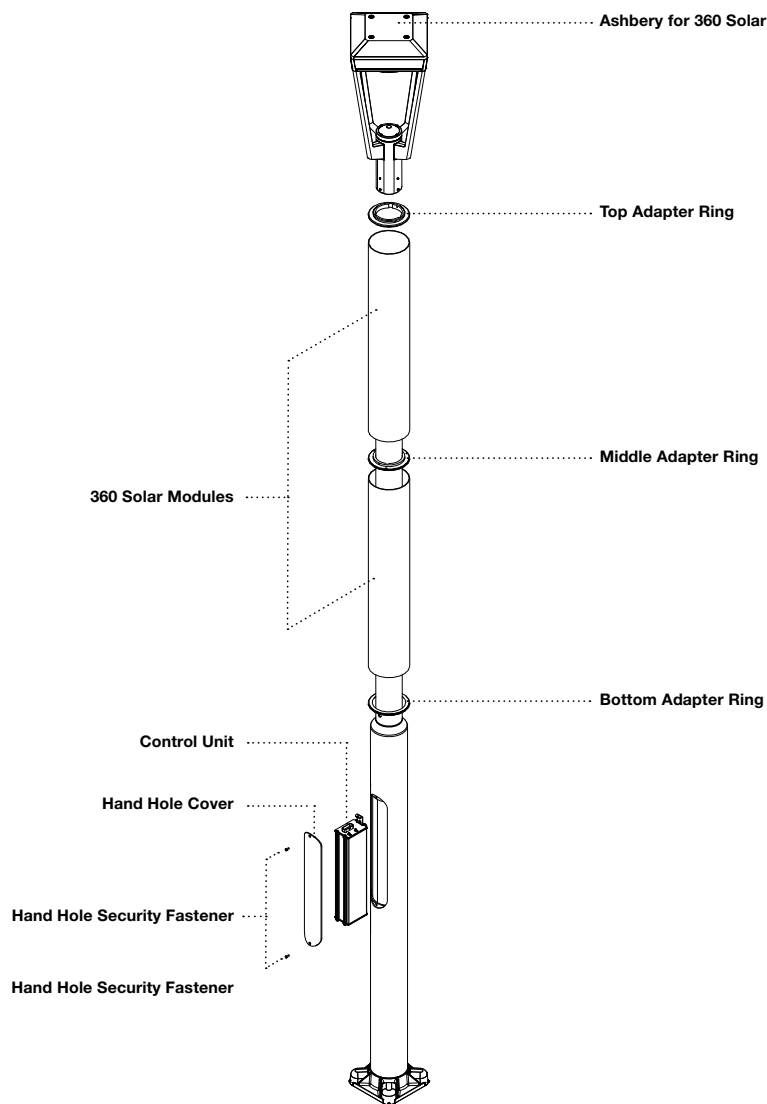
Control Electronics	
Battery Management System (BMS)	Integrated 6-cell monitoring and balancing
Control electronics temperature and humidity monitoring	Integrated temperature sensor built-in lithium pack Integrated temperature sensor built-in electronics Integrated humidity sensor built-in electronics
LED driver type	Integrated high-efficiency (>97%) DC LED driver
Max. drive voltage	75 Vdc (limited to 36V dc)
Max. drive current	1850 mA
Max. power	80 W
SIM card	Global M2M eSIM (inc.), NanoSIM (opt.)
GNSS	GPS, BeiDou, Galileo, GLONASS, QZSS
Over-the-Cable updateable	Yes (USB-programming device optional)
Over-the-Air updateable	Yes
Remote monitoring and configuring	Available - Contact Factory
Time and date	Astronomical clock
Lighting scheme	Automatic adaptation to sunset and sunrise
Dimming scheme	HelioSync™ algorithmic, off-hours dimming scheme included. Other profiles available - contact factory.
Smart city ready	Yes
Service plan	5 years included. 10 year plans and extended features available - contact factory.

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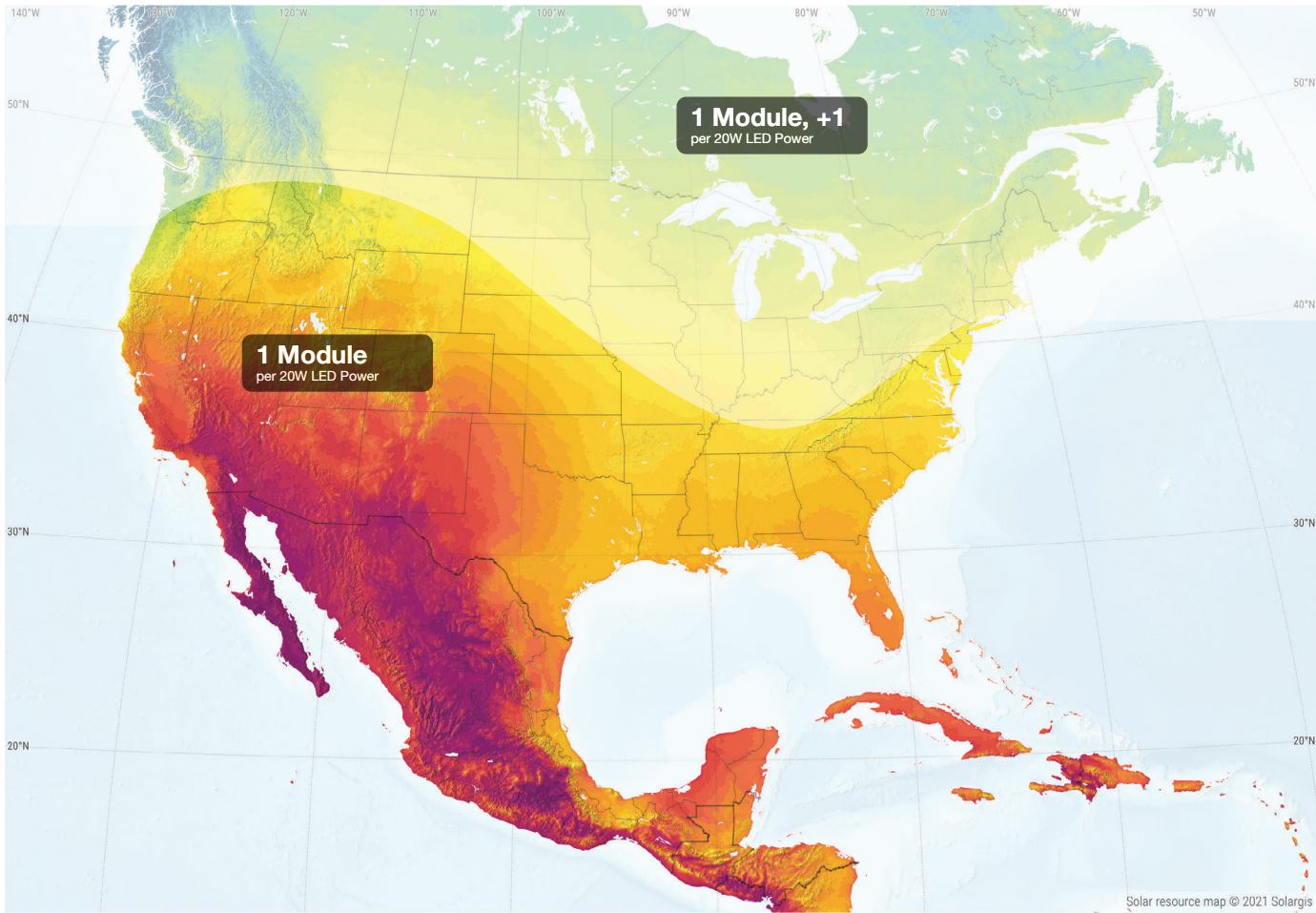
360 Solar - System Components



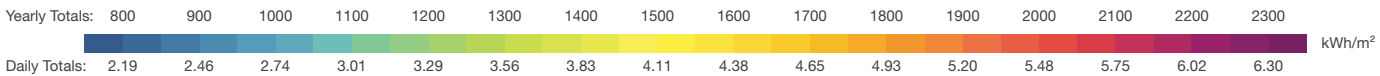
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Will it Work Here?



GHI: Long-term average of global horizontal irradiation, period 1999-2020



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Global Horizontal Irradiation - North America

This chart provides guidance on the recommended number of solar modules required to support 20W increments of rated LED power (Watts). This provides a baseline for reliable performance based on latitude. Further site-specific considerations may be required. Refer to FAQ document for additional information or contact factory.

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Specification

Luminaire #1 _____

Pole _____

(May include arms, collector, battery, etc..)

Luminaire

Product Ashbery Solar	LED Configuration	Light Engine Power*	Color Temp	Distribution	Lens	Powdercoat
AP401 (Single Luminaire)	36 (36 LEDs)	16W 20W 30W 40W	27K (3000K) 30K (3000K) 40K (4000K)	T2 (Type II) T3 (Type III) T4 (Type IV) T5 (Type V)	CLR (Clear)	See powdercoat color options on the Material / Colors Sheet.

* Refer to the Global Horizontal Irradiation Map.
Example: AP401-36-20W-30K-T3-CLR-MBK

360 Solar - Luminaire and Pole Configuration, Modules and Battery

Product Solar Pole For Ashbery	Lens Height/ Configuration	Solar Module	Battery Size	Base Cover	Powdercoat
APS (360 Solar Pole)	13-A (Single 13') 15-A (Single 15') 17-A (Single 17')	1 (Single) 2^^ (Double)	85* (850Wh Battery) 128 (1277Wh Battery)	NUT (Nut Cover)	See powdercoat color options on the Material / Colors Sheet.

*Available with single solar module only.
^^17' lens height required
Example: APS-17-A-2-128-NUT-MBK

Pole Modifications

Part Number	Modification	Description
CAM	Camera	
SPE	Speaker	
WAP	WiFi Access Point	
BAN	Banner Arms	
VIB	Vibration Dampener	
CPH	Custom Pole Height	
CLH	Custom Lens Height	
CPC	Custom Powdercoat Color	
--	Other	

Modifications listed are the most common changes/additions requested. If your requirements aren't shown here, select 'other' and write in the modification needed. Please provide as much detail as possible to streamline the quoting process. All modifications to standard products will require evaluation and quoting approved by Landscape Forms prior to order placement.

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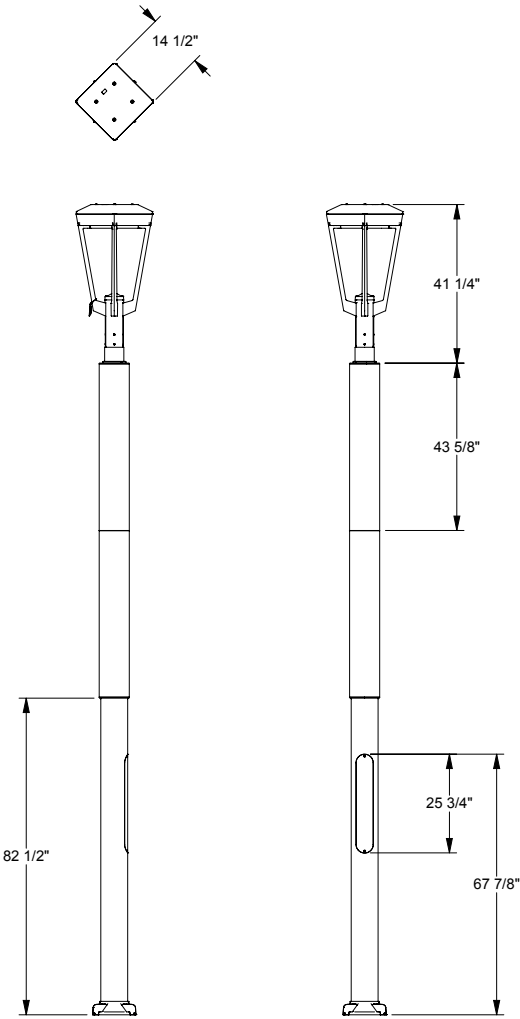
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Luminaire Dimensions, weights and EPA's

Single Luminaire Arm Mount

Weight: 50.2 lbs

EPA: 1.450 ft²

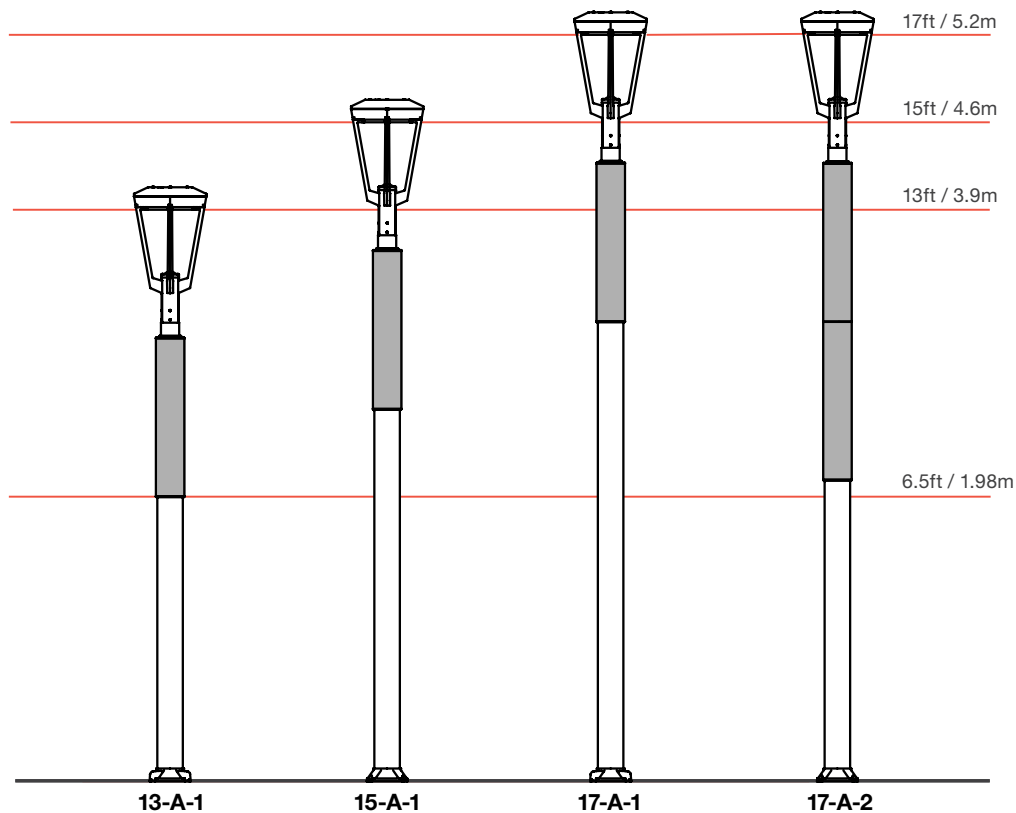


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Lens Height and Pole Configuration Selection Guide



Pole & Base

Poles are manufactured from seamless aluminum alloy with a flush mounted, oversized and lockable hand hole cover. Poles are pre-drilled to suit the specified mounting conditions prior to powdercoating, and include flush top pole cap. Pole base plate is cast aluminum and includes four cast aluminum nut covers. Mounting template and anchor hardware included. Anchor bolts conform to ASTM F1554 Grade 55 and are provided with two hex nuts and two flat washers. Bolts have an "L" bend on one end and are galvanized a minimum of 12" on the threaded end.

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Wind Load Chart

Part Number	Pole Description	Luminaire		Max EPA (ft ²)					Max Wind Speed (MPH)		
		Total Weight (lbs)	Total EPA (ft ²)	90 MPH	100 MPH	110 MPH	120 MPH	130 MPH	Max Wind Speed (MPH)	Base Overturning (ft-lbf)	Base Shear (lbf)
APS-13-A-1	13' Pole, 1 Solar Module, 1 Luminaire	50.20	1.450	27.5	22.2	18.2	15.2	12.8	284	8543	1011
APS-15-A-1	15' Pole, 1 Solar Module, 1 Luminaire	50.20	1.450	23.2	18.6	15.2	12.6	10.7	253	8512	894
APS-17-A-1	17' Pole, 1 Solar Module, 1 Luminaire	50.20	1.450	19.5	15.6	12.7	10.5	8.8	228	8502	803
APS-17-A-2	17' Pole, 2 Solar Module, 1 Luminaire	50.20	1.450	19.5	15.6	12.7	10.5	8.8	228	8502	803

Generic weight adder for max EPA calcs: 50lbs
Default Wall thickness 0.188"

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Luminaire Performance Data - 3000K

Wattage	Distribution Type	Lumen Output	Efficacy	Input Power (W)	BUG Rating
16W	T2	3125	191	16.4	B1 - U0 - G1
	T3	2701	165	16.4	B1 - U0 - G1
	T4	2380	145	16.4	B1 - U0 - G1
	T5	2241	137	16.4	B1 - U0 - G0
20W	T2	2564	126	20.4	B1 - U0 - G1
	T3	3292	161	20.4	B1 - U0 - G1
	T4	2901	142	20.4	B1 - U0 - G1
	T5	2732	134	20.4	B1 - U0 - G0
30W	T2	4529	148	30.5	B2 - U0 - G2
	T3	4770	156	30.5	B2 - U0 - G2
	T4	4204	138	30.5	B1 - U0 - G1
	T5	3959	130	30.5	B2 - U0 - G1
40W	T2	6002	146	41.1	B2 - U0 - G2
	T3	6322	154	41.1	B2 - U0 - G2
	T4	5571	136	41.1	B2 - U0 - G2
	T5	5247	128	41.1	B2 - U0 - G1

Lumen output scaling factors: 2700K (0.947), 3500K (1.046), 4000K (1.053)

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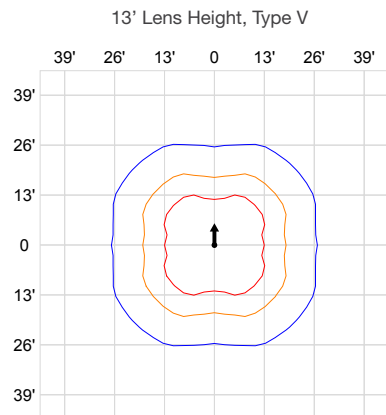
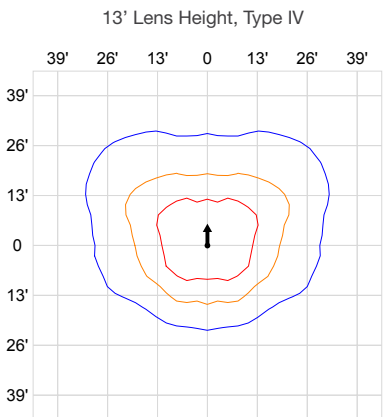
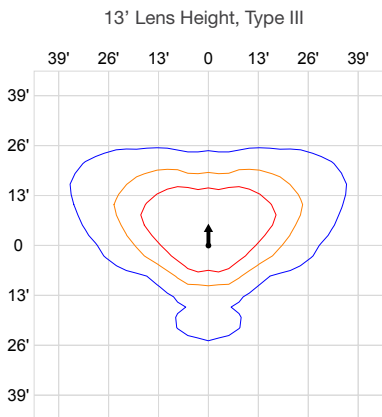
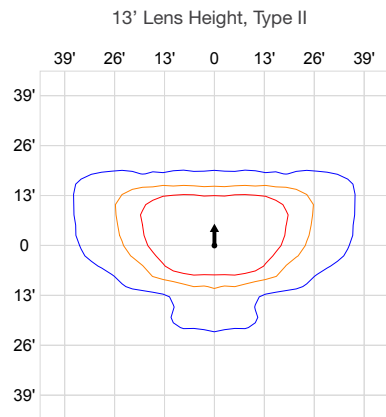
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400 Series - 36 LED 16W at 13'

Performance light engine @ 3000K

1.0fc 0.5fc 0.2fc



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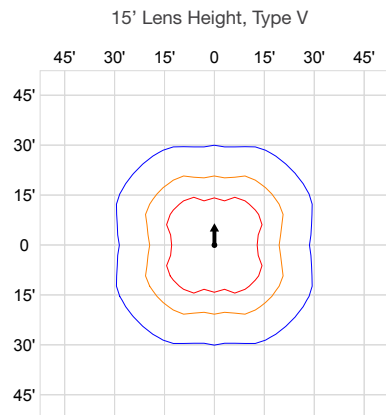
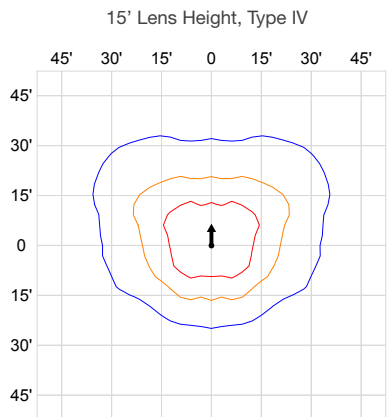
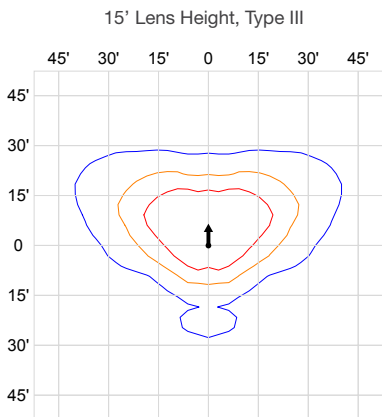
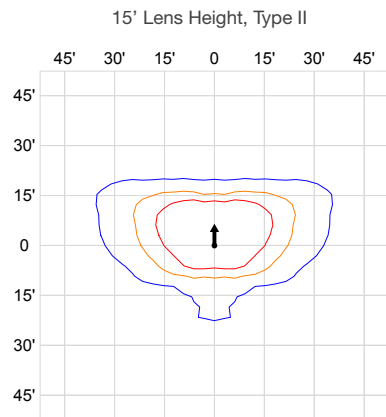
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400 Series - 36 LED 20W at 15'

Performance light engine @ 3000K

1.0fc 0.5fc 0.2fc



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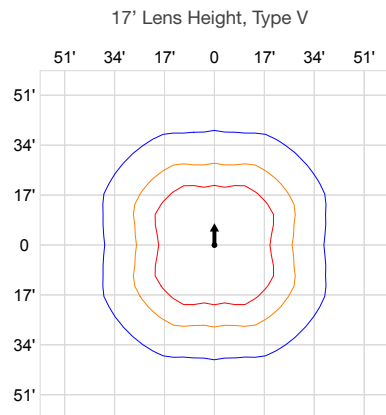
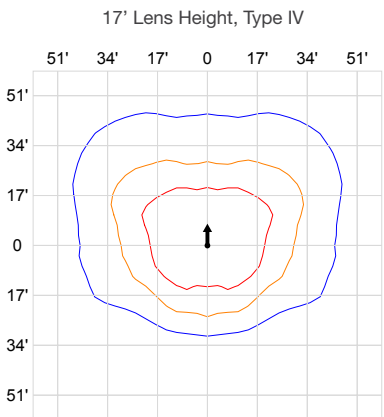
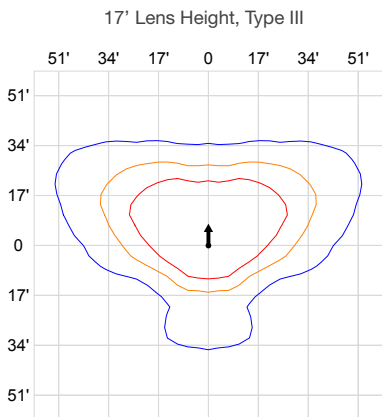
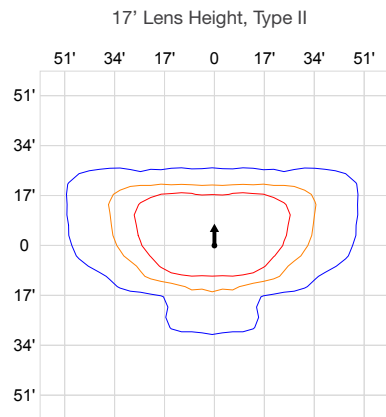
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400 Series - 36 LED 40W at 17'

Performance light engine @ 3000K

1.0fc 0.5fc 0.2fc



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Architectural Series - Powdercoated Metal* (Fine Texture)

					
FOG (Fog)	OBD (Obsidian)	MBK (Matte Black)	TER (Terra)	NMG (Nutmeg)	ONX (Onyx)
					
SAG (Sage)	BLA (Blue Ash)	DSK (Dusk)			

Neutral Series - Powdercoated Metal*

				
SIL (Silver Metallic)	MER (Mercury Metallic)	STL (Steel Metallic)	BRZ (Bronze Metallic)	TNM (Titanium Metallic)
				
BLK (Gloss Black)	WHT (Gloss White)			

Vivid Series - Powdercoated Metal* (Fine Texture)

					
CLY (Clay)	LMN (Lemon)	MNG (Mango)	STG (Loll Sunset Orange)	CHL (Chili)	APR (Loll Apple Red)
					
LFG (Loll Leaf Green)	MSS (Moss)	FOR (Forest)	NVY (Loll Navy Blue)		

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Powdercoated Metal

Powdercoated Metal Pangard II® Polyester Powdercoat is a hard, yet flexible, finish that resists rusting, chipping, peeling and fading. In addition to colors shown, a wide selection of optional and custom colors may be specified for an upcharge.

* All colors and patterns shown are approximate and may vary from sample and final.

Visit landscapeforms.com for more information.

Specifications are subject to change without notice.

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