

SPECTRA



ARCHITECTURAL AREA LIGHTING



Energy Efficiency

The Spectra is designed to use electrical energy in the most efficient possible way. The reflectors are designed to direct the illumination on the ground with no stray light which translates into wasted energy.

The result is more light with less energy consumption.

Light Pollution

The Spectra offers full cutoff optical options to emit light above 90 degrees horizontal.

Longevity

We manufacture all our products to have a life span as long as the building or space they illuminate. The primary material used for both our luminaire and pole products is aluminum to resist corrosion and the need for maintenance. Aluminum will not need the periodic refinishing required of steel products that will eventually rust and corrode. All our internal parts and fasteners are made of aluminum or stainless steel. Our reflector enclosures are kept dust free and dry with the use of silicone gaskets to prevent light degradation from contaminants.

Sustainability

Our products are developed with recycling and resource management in mind. We recycle all incoming packaging materials. Our products are shipped in easy to recycle packaging materials. Our state of the art finishing system uses eco friendly cleansing and preparation chemicals that are harmless enough to send to the drain without further processing. Our powder coating process eliminates the release of volatile chemicals into the atmosphere. The Spectra, like all AAL products is produced with renewable materials such as aluminum and stainless steel, and made in the USA.

AAL is a registered continuing education provider.



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AAL is a registered continuing education provider.

The Spectra™ is a registered and protected by numerous patents granted by the United States patent office.
U.S. Patents D427,349; D427,350; D427,351; D427,705

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The Spectra is a complete family of outdoor site lighting with three sizes of fixtures for post or wall mounting, and a matching bollard. Multipost poles complete the palette.

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3 SCALES

The Spectra is a fixture program allowing you to configure a look in harmony with your architecture. The SP1 and SP2 offers you the freedom to specify the size, finish and optics to compliment your design. The SP10 is a high wattage fixture designed to illuminate parking areas of the site using taller poles and wider spacing.



LARGE SCALE

MOUNTING OPTIONS

- Post top
- Post mounted arm
- Wall mounted arm

LAMP OPTIONS

- 50-175 watt metal halide
- 50-150 high pressure sodium



SMALL SCALE

MOUNTING OPTIONS

- Post top
- Wall mounted arm

LAMP OPTIONS

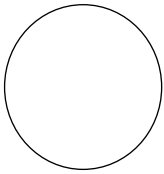
- 42 watt CF
- 50-100 watt metal halide
- 50-100 high pressure sodium

SP1 + SP2 Configured by you

SPECTRA

Hood Material

PAINTED TO
MATCH BODY



COP
NATURAL COPPER
WILL PATINA
OVER TIME



STS
BRUSHED STAINLESS
STEEL



Hood Selection



Optics



SPECTRA



SPB



SP1 IND5 PR4 BC6-4

SP1 DBL IND5 3P10





SP2 ANG GLA AWM2

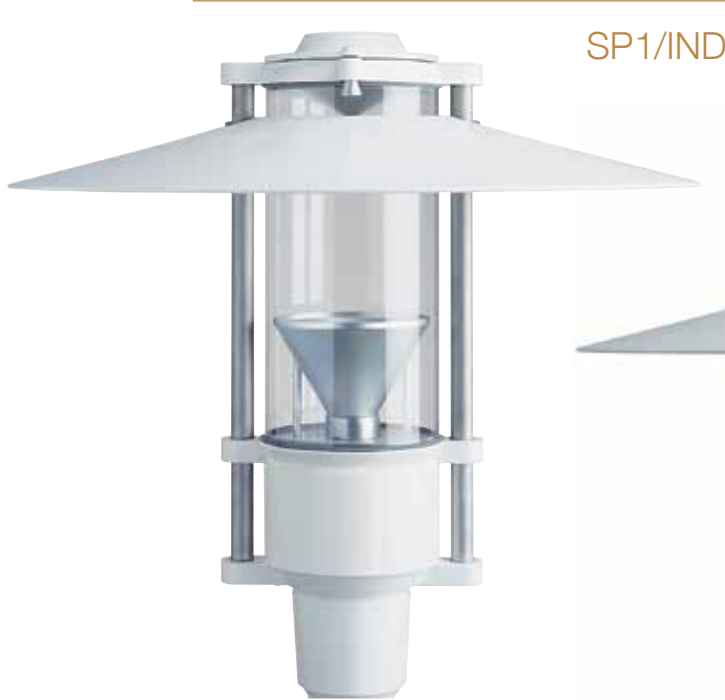
SP1 FLR GLA STS PR4



SPECTRA

Indirect

The Spectra Indirect has a concealed light source for smooth, glare free illumination. A perfect solution for pathways, gardens and interior applications. The enclosed optical module eliminates the problem of light deterioration common on open lens indirect fixtures. A small amount of spill light softly illuminates the top of the shade.

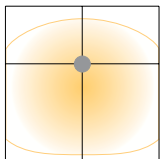


SP1/IND

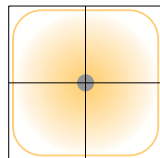


SP2/IND

Available in a symmetric or asymmetric distribution



TYPE 3
Asymmetric



TYPE 5
Symmetric

The Spectra Indirect has a newly redesigned optional upper lens shield in the area above the shade to achieve IES cutoff classification.



Indirect

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SP2 STR GR3 PR3 with SP2 STR GR3 AWM2



SP2

SP1 DBL GR3 2P12





The versatility of the Spectra series allows the exterior lighting theme to be carried into an indoor setting.

INDIRECT OPTICAL SYSTEM WITH COPPER HOOD ^{SP2}



SPECTRA

Arm Options–Pole

Pole mounted arms are for the SP1 and SP2. The cast aluminum fitter slips over a 4"/100mm o.d. pole. The horizontal bars are stainless steel to compliment the vertical struts of the fixture.



2-SP1 DBL LDL STS TAP1 BLK



SP1 IND5 SAP1 WHT

Arm Options–Wall

SPECTRA



SP2 FLR LDL AWM2

Wall mounted arm brackets are available for both the SP1 and SP2. The brackets are scaled for each fixture size.

SP1 IND5 AWM1



Created with the finest materials



All castings are marine grade aluminum for corrosion resistance. The struts and all fasteners are stainless steel.



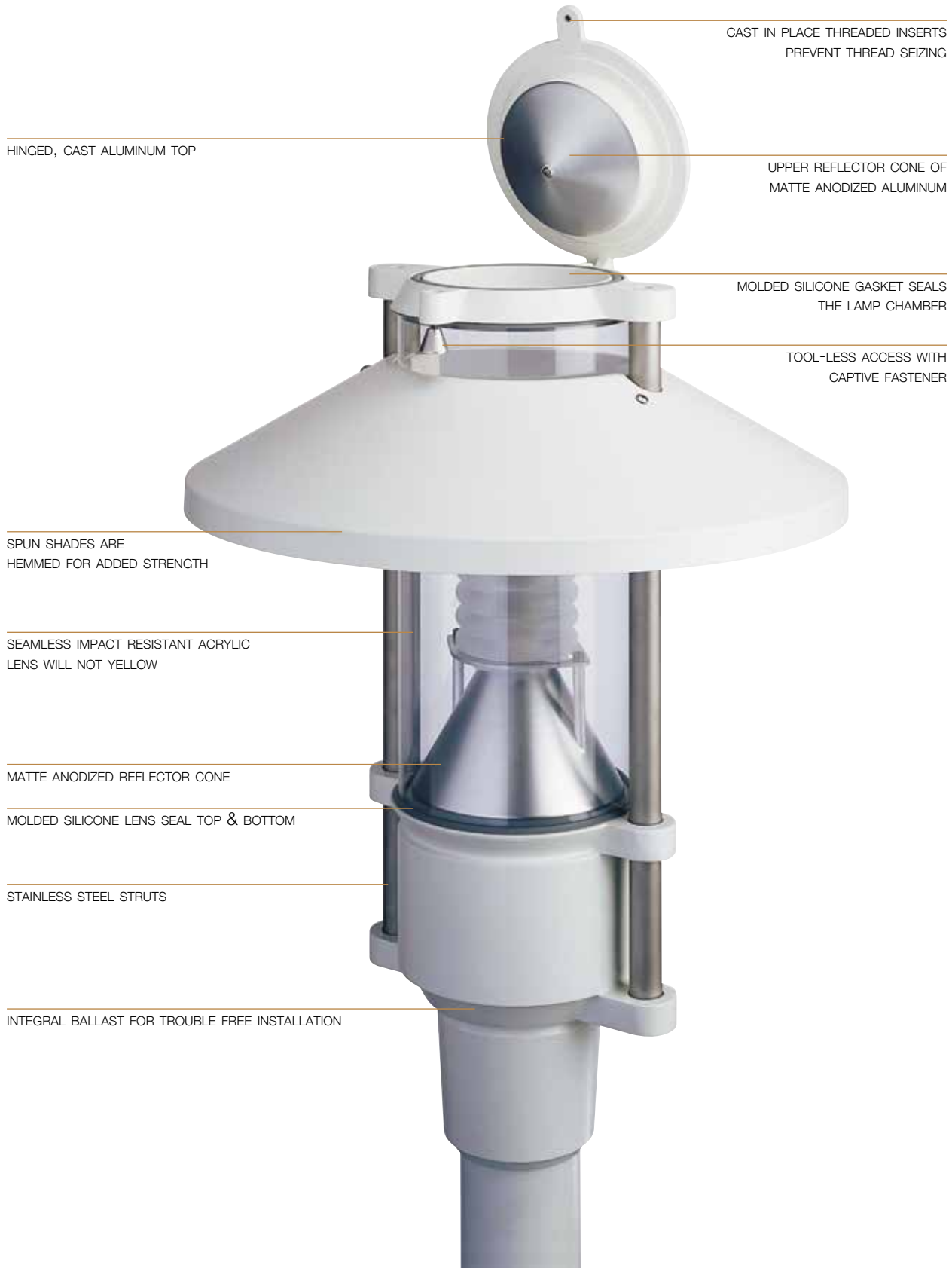
The ballast tray is accessible by loosening two bolts and lifting off the upper fixture section.



Every AAL product receives our state of the art finishing process which includes a five stage impingement chemical cleaning and sealing cycle, followed by a thermoset, super TGIC polyester powder finish coat.

Designed for lasting performance

SPECTRA



SPECTRA



SP1 STR GR3 AWM1



SP1 IND3 PR4



SP1 STR GR3 AWM1

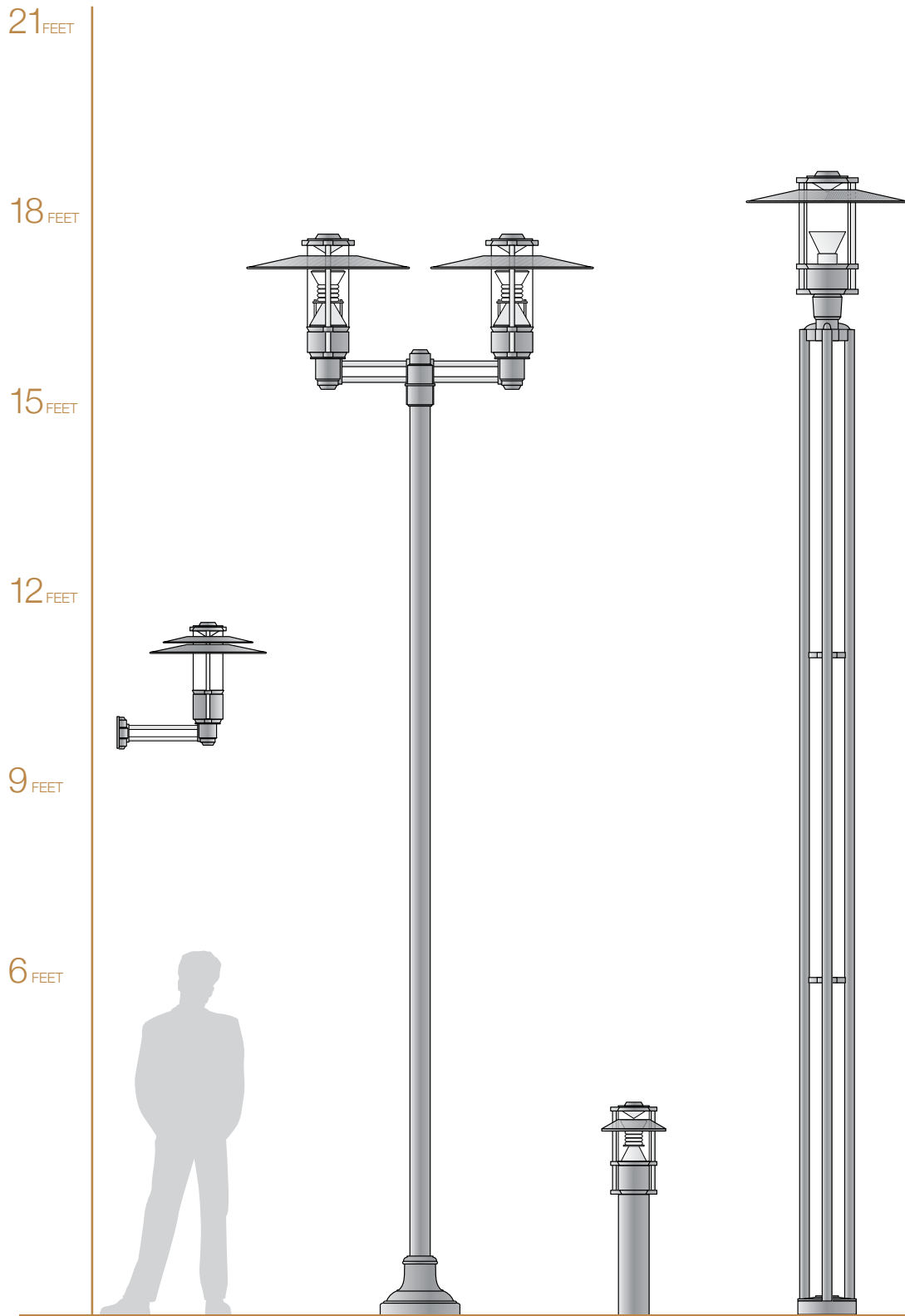


SP2 IND5 TA PR4

SP1 IND3 PR4

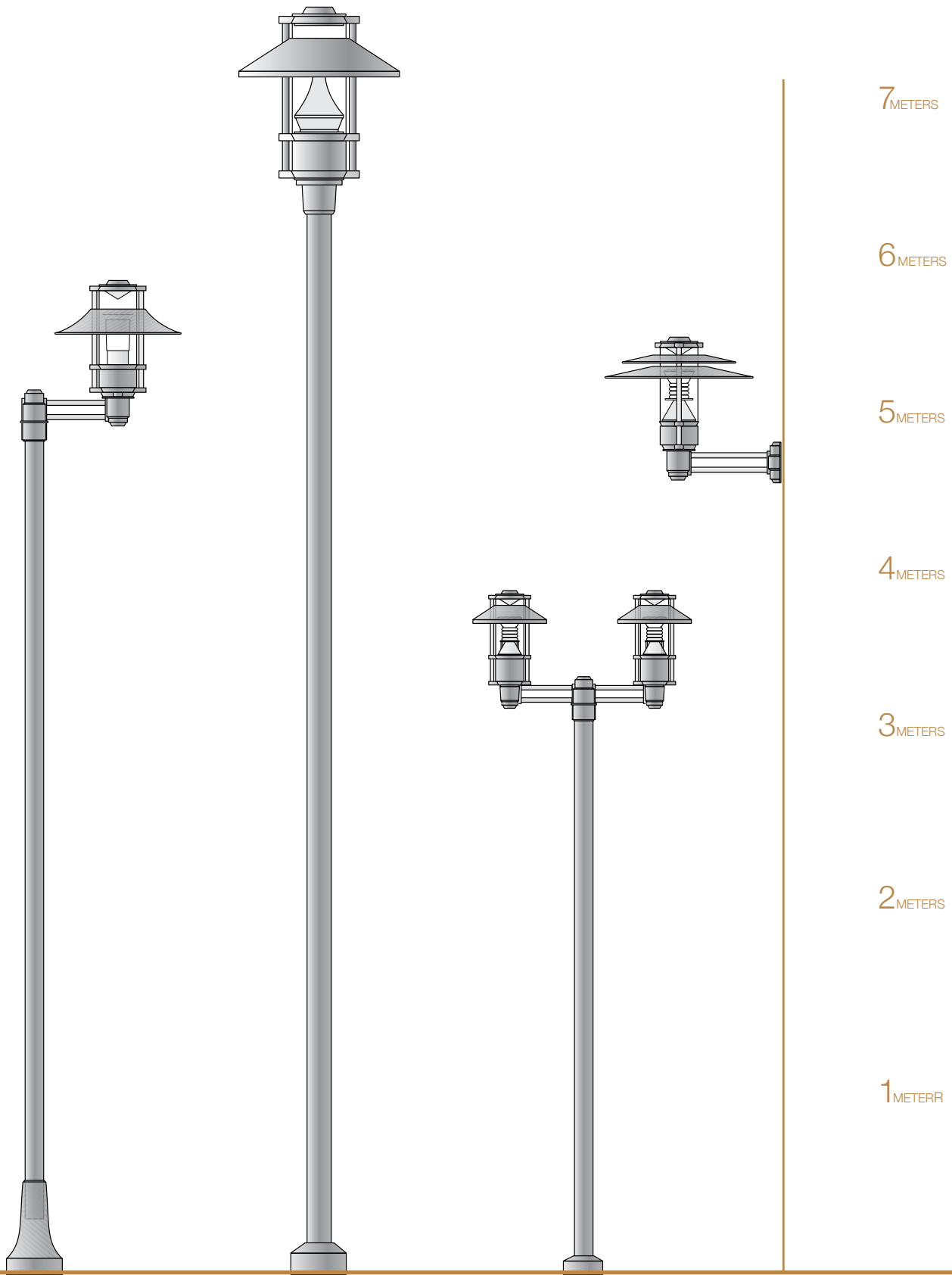


SPECTRA



FIXTURE	SP2	2-SP1	SPB	SP1
HOOD	DBL	STR	•	IND5
LENS	LDL	GLA	•	•
OPTIONS	AWM2	TAP1	•	•
POLE	•	PR4-4R16	•	3P16

SPECTRA



7 METERS
 6 METERS
 5 METERS
 4 METERS
 3 METERS
 2 METERS
 1 METERR

SP1	SP10	2-SP2	SP1
FLR	ANG	ANG	DBL
GR5	•	GLA	GLA
SAP1	•	TAP2	AWM1
PR4-4R14	PR5-5R19	PR4-4R10	•

SP1/SP2 Ordering Information

SPECTRA

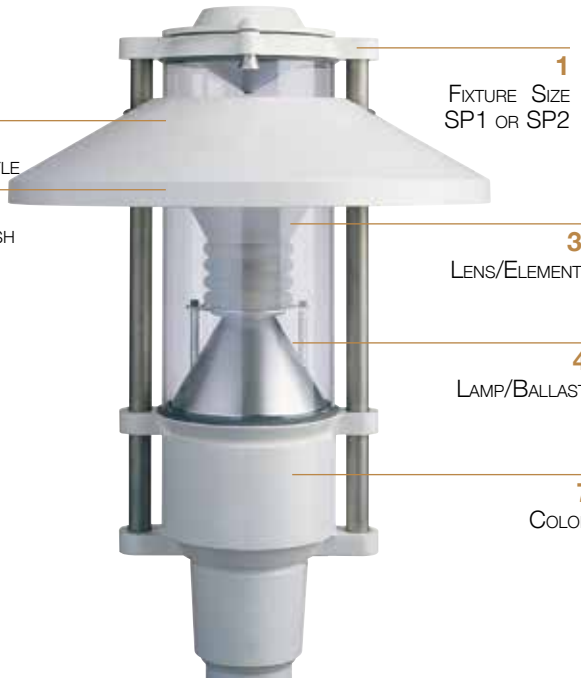
1 Fixture Size

SP1

HEIGHT=29.2"/ 740 mm EPA= 2.27
WEIGHT=46 lbs. IP = 65
Slips over a 4" O.D. pole

SP2

HEIGHT=23.3"/ 610 mm EPA=1.43
WEIGHT=35 lbs. IP = 65
Slips over a 3" O.D. pole



2 HOOD STYLE

5 HOOD FINISH

1
FIXTURE SIZE
SP1 OR SP2

3
LENS/ELEMENT

4
LAMP/BALLAST

7
COLOR

To order your Spectra fixture, follow this simple step by step guide.

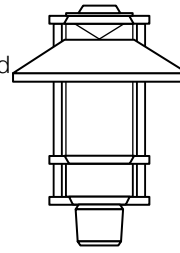
- 1 Specify the fixture size, the SP1 or SP2.
- 2 Select the hood style or indirect.
- 3 Choose the lens/element module or indirect type 3 or 5.
- 4 Select a lamp/ballast.
- 5 Select a hood finish. Painted, copper or stainless steel
- 6 Specify a standard AAL color, RAL color or custom matched color (please provide sample color chip).

2 Hood Style

ANG

angled hood

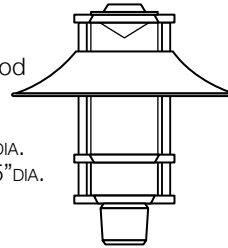
SP1=22"DIA.
SP2=16"DIA.



FLR

flared hood

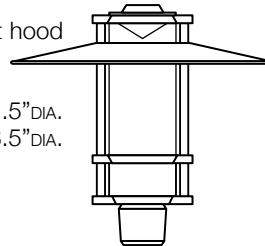
SP1=27"DIA.
SP2=22.5"DIA.



STR

straight hood

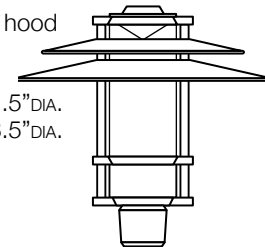
SP1=31.5"DIA.
SP2=23.5"DIA.



DBL

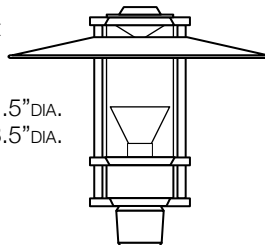
double hood

SP1=31.5"DIA.
SP2=23.5"DIA.



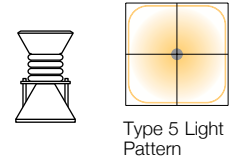
IND indirect

SP1=31.5"DIA.
SP2=23.5"DIA.

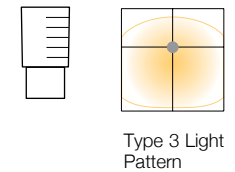


3 Lens/Element

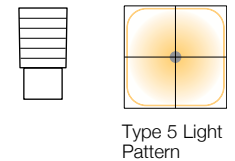
GLA frosted glass diffuser



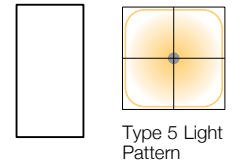
GR3 glass refractor



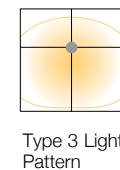
GR5 glass refractor



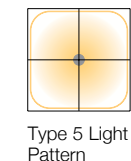
LDL lightly diffused lens



-3 indirect type 3



-5 indirect type 5



SP1/SP2 Ordering Information

4 Lamp/Ballast

SP1

55LED-BW	42 LED array. (53.8 total input watts). Bright white (5100K). 120 thru 277 volt. Type 3 distribution.
CF	120 thru 277 electronic ballast for use with 4-pin, 26, 32 or 42 watt T-4 compact fluorescent lamp.
50MH	50 watt metal halide 120/277 volt ballast. Use medium base, ED-17 lamp.
50MHEB	50 watt electronic metal halide 120 thru 277 volt ballast. Use medium base, ED-17 lamp.
70MH	70 watt metal halide 120/208/240/277 volt ballast. 120/208/240/277.
70MHEB	70 watt electronic metal halide 120/208/240/277 volt ballast. Use medium base, ED-17 lamp.
70MHT6	70 watt metal halide 120/277/347 volt ballast. Use G12 base, T-6 ceramic lamp.
70MHT6EB	70 watt electronic metal halide 120 thru 277 volt ballast. Uses a G12 base, T-6 ceramic lamp.
100MH	100 watt metal halide 120/208/240/277 volt ballast. Use medium base, ED-17 lamp
100MHEB	100 watt electronic metal halide 120 thru 277 volt ballast. Use medium base, ED-17 lamp.
150MHEB	150 watt electronic metal halide 120 or 277 volt ballast. Use medium base, ED-17 lamp.
150PSMH	Pulse start 150 watt metal halide 120/208/240/277 volt ballast. Use medium base. T-6 ceramic lamp.
150PSMHT6	Pulse start 150 watt metal halide 120/208/240/277 volt ballast. Use G12 base. ED-17 lamp.
50HPS	50 watt high pressure sodium 120/277 volt ballast. Use medium base, ED-17 lamp.
70HPS	70 watt high pressure sodium 120/208/240/277 volt ballast. Use medium base, ED-17 lamp.
100HPS	100 watt high pressure sodium 120/208/240/277 volt ballast. Use medium base, ED-17 lamp.
150HPS	150 watt high pressure sodium 120/208/240/277 volt ballast. Use medium base, ED-17 lamp.

SP2

18LED-WW	18 LED array. (20.9 total input watts). Warm white (3500K). 120 thru 277 volt. Symmetric distribution.
18LED-BW	18 LED array. (20.9 total input watts). Bright white (5100K). 120 thru 277 volt. Symmetric distribution.
9LED-WW	9 LED array. (12.2 total input watts). Warm white (3500K). 120 thru 277 volt. Asymmetric distribution.
9LED-WW	9 LED array. (12.2 total input watts). Bright white (5100K). 120 thru 277 volt. Asymmetric distribution.
CF	120 thru 277 electronic ballast for use with 4-pin, 26, 32 or 42 watt T-4 compact fluorescent lamp.
50MH	50 watt metal halide 120/277 volt ballast. Use medium base, ED-17 lamp.
50MHEB	50 watt electronic metal halide 120 thru 277 volt ballast. Use medium base, ED-17 lamp.
70MH	70 watt metal halide 120/208/240/277 volt ballast. 120/208/240/277.
70MHEB	70 watt electronic metal halide 120/208/240/277 volt ballast. Use medium base, ED-17 lamp.
70MHT6	70 watt metal halide 120/277/347 volt ballast. Use G12 base, T-6 ceramic lamp.
70MHT6EB	70 watt electronic metal halide 120 thru 277 volt ballast. Uses a G12 base, T-6 ceramic lamp.
100MH	100 watt metal halide 120/208/240/277 volt ballast. Use medium base, ED-17 lamp
100MHEB	100 watt electronic metal halide 120 thru 277 volt ballast. Use medium base, ED-17 lamp.
50HPS	50 watt high pressure sodium 120/277 volt ballast. Use medium base, ED-17 lamp.
70HPS	70 watt high pressure sodium 120/208/240/277 volt ballast. Use medium base, ED-17 lamp.
100HPS	100 watt high pressure sodium 120/208/240/277 volt ballast. Use medium base, ED-17 lamp.

All fixtures prewired for 277 volts, unless specified. Lamps not included.

Examples

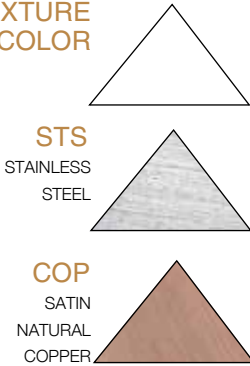
FIXTURE	HOOD STYLE	LENS/ELEMENT	LAMP/BALLAST	OPTIONS	HOOD FINISH	COLOR	MOUNTING
SP1	ANG	GLA	100MH	•	•	MAL	•
SP1	IND5	•	100HPS	COP	•	CTR	AWM1
SP2	DBL	GR3	50MH	STS	ULS	MTB	AWM2

SP1/SP2 Ordering Information

5 Hood Finish

All styles of reflector hoods are available in the matching fixture color, stainless steel or natural copper finishes. The natural copper and stainless steel hoods are unfinished, including the underside of the hood, to develop a patina over time. This allows the rich metal color to be seen from lower viewing angles without compromising light output when illuminated. Painted hoods have the underside finished in high reflectance white. All indirect fixtures (IND) have the underside of the reflector hood painted white, whether painted, stainless or copper to insure proper light output.

FIXTURE COLOR



6 Color

All standard and premium AAL colors available.

For RAL and custom colors, please submit a 4-digit RAL number or color chip for custom colors.

7 Options

- 347** 347 volt ballast 120/227/347. **Not available with electronic ballast.**

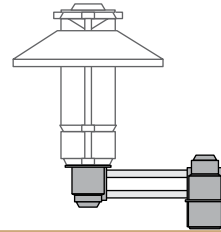
- AD4** Adaptor for SP2. Designed to slip over a 4"/100mm P.D. pole. **SP2 only.**

- AD5** Adaptor for SP1. Designed to slip over a 5"/127mm P.D. pole. **SP1 only.**

- ULS** Upper lens shield in the upper lens area. Provides cutoff optics (1.2% uplight). For indirect models only. **Not available with FCO hood style.**

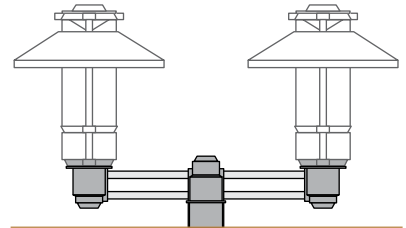


8 Mounting



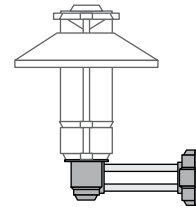
SAP1 ARM MOUNT FOR SP1
Designed to slip over a 4"/100mm diameter pole.

SAP2 ARM MOUNT FOR SP2
Designed to slip over a 4"/100mm diameter pole.



TAP1 TWIN ARM MOUNT FOR SP1
Designed to slip over a 4"/100mm diameter pole.

TAP2 TWIN ARM MOUNT FOR SP2
Designed to slip over a 4"/100mm diameter pole.



AWM1 wall mounted arm for SP1

AWM2 wall mounted arm for SP2



SP2 FLR GLA COP WHT



SP1 DBL GR5 COP WHT



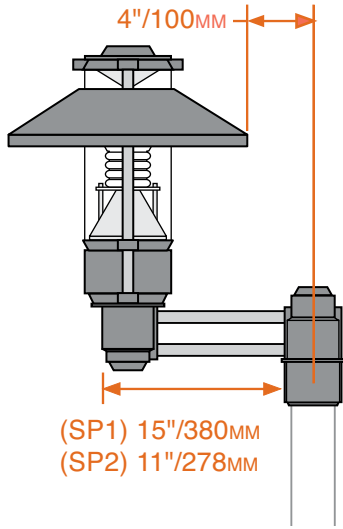
SP1 FLR GLA STS BLK



SP1 STR GLA BLK

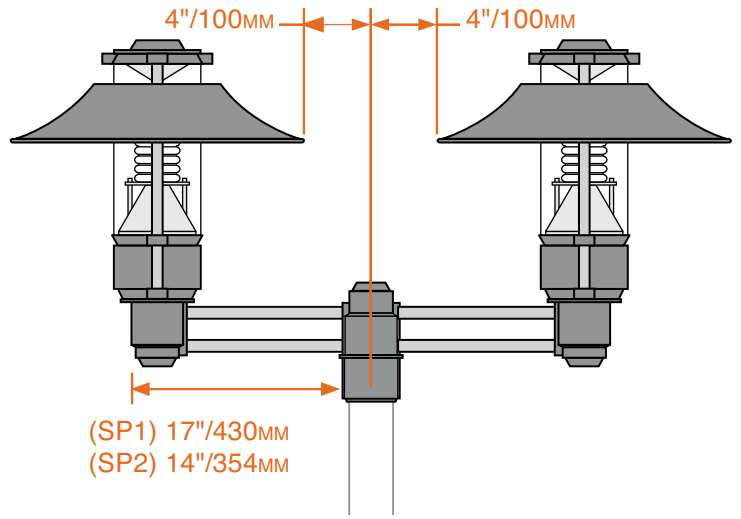
SPECTRA

Arm Details



SAP1 & SAP2

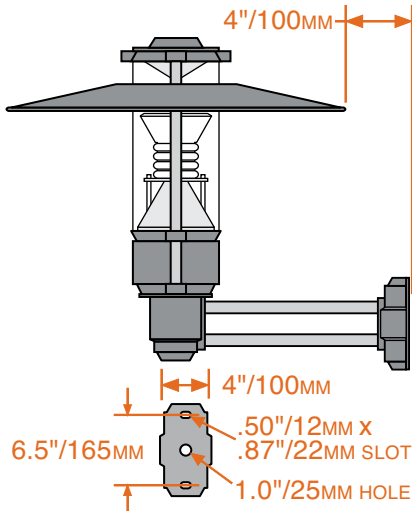
SAP1 & SAP2 slips over a 4"/100mm pole. SAP1 is for SP1 & SAP2 is for SP2.
WEIGHT=9LBS. EPA=.63



TAP1 & TAP2

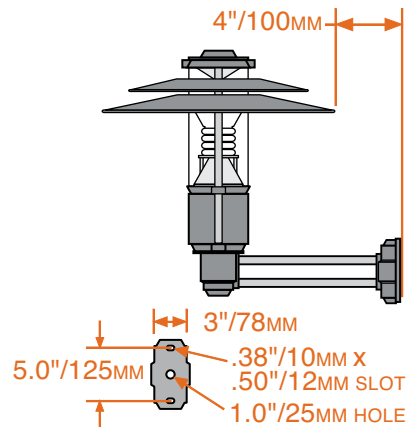
TAP1 & TAP2 slips over a 4"/100mm pole. TAP1 is for SP1 & TAP2 is for SP2.
WEIGHT=12 LBS. EPA=.83

All arms regardless of hood diameter, have a 4"/100MM distance from the edge of the shade to the pole centerline or face of the wall.



AWM1

Wall mounted arm for SP1.
Wall plate is 8.5"/216mm x 4.75"/120mm
WEIGHT=8LBS.



AWM2

Wall mounted arm for SP2.
Wall plate is 6.375"/162mm x 3.5"/89mm
WEIGHT=5LBS.

SP2 DBL GR5 AWM2



SP1 ANG GR3 PR4



SP2 STR GR3 PR3



SPECTRA

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The Spectra Bollard (SPB) features a cast aluminum hood and tamper resistant hardware. A borosilicate glass element, Type 5 distribution shields the lamp. An upper reflector improves lighting performance and illuminates the hood.



SPB Information

1 Fixture

SPB Bollard

2 Lamp/Ballast

12LED-BW 12 LED array. (14.8 total input watts). Bright white (5100K). 120 thru 277 volt. Symmetric distribution.

12LED-WW 12 LED array. (14.8 total input watts). Warm white (3500K). 120 thru 277 volt. Symmetric distribution.

6LED-BW 6 LED array. (8.0 total input watts). Bright white (5100K). 120 thru 277 volt. Asymmetric distribution.

6LED-WW 6 LED array. (8.0 total input watts). Warm white (3500K). 120 thru 277 volt. Asymmetric distribution.

CF Compact fluorescent, electronic ballast 120 thru 277 volt. -18°C starting temp. Use 4 pin 26, 32, or 42 watt lamp.

50MH 50 watt metal halide 120/208/240/277 volt ballast. Use medium base, ED-17 lamp.

70MH 70 watt metal halide 120/208/240/277 volt ballast. Use medium base, ED-17 lamp.

70MHT6 70 watt metal halide 120/277 volt ballast. Use G12 base, T-6 ceramic lamp.

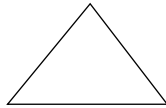
50HPS 50 watt high pressure sodium 120/277 volt ballast. Use medium base, ED-17 lamp.

70HPS 70 watt high pressure sodium 120/208/240/277 volt ballast. Use medium base, ED-17 lamp.

All fixtures prewired for 277 volts. Lamps not included, except IL options.

3 Hood Finish

FIXTURE
COLOR



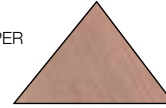
STS

STAINLESS STEEL



COP

NATURAL COPPER



4 Color

All standard and premium AAL colors available.

For RAL and custom colors, please submit a 4-digit RAL number or color chip for custom colors.

5 Options

347 120/227/347 volt ballast

BBU Battery backup powers a compact fluorescent lamp for up to ninety minutes during a power failure. Output of the 32 watt lamp will be 575 lumens. Output from the 42 watt lamp will be 750 lumens. Battery pack is 9.375" x 2.375" x 1.5". Test monitor plate with indicator light and test switch are included. not recommended for climates with temperatures below 50°C

Multi-Post Poles

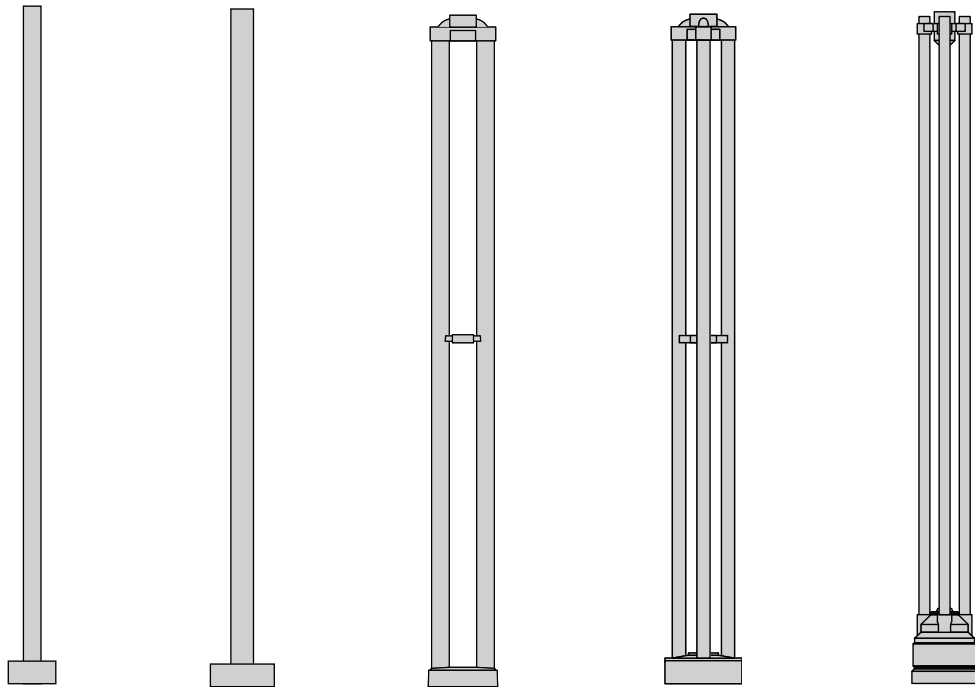


2-SP2 DBL GR5 STS TAP2 2P12



SP1 DBL GLA STS 3P10

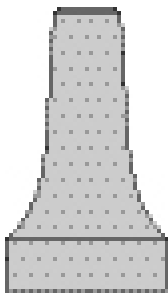
Poles



SPECTRA

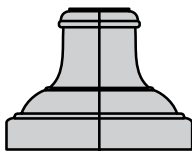
CATALOG NUMBER	PR3	PR4	2P	3P	C4P
POLE DIAMETER	3"/75MM	4"/100MM	(2) 3"/75MM	(3) 2"/50MM	(4) 2"/50MM
FITTER DIAMETER	3"/75MM	4"/100MM	4"/100MM	4"/100MM	4"/100MM

Accessories



BC5-4 Two piece cast bast cover for PR4 poles.

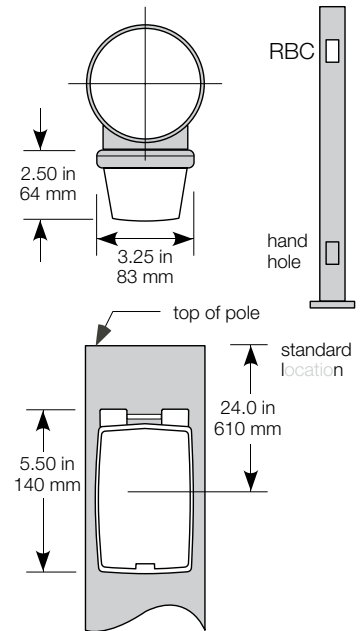
BC5-5 Two piece cast bast cover for PR5 poles.
 • 14"/355mm x 24"/610mm



BC6-4 Two piece cast bast cover for PR4 poles.
 • 13"/330mm x 17"/430mm



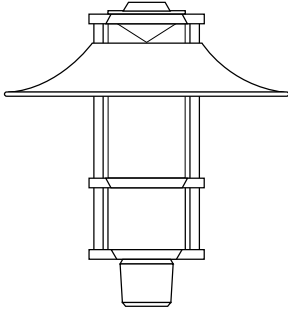
PCA-C
 Rotatable photocell housing. The photocell can be aimed away from stray light sources for an accurate setting. The photocell is also shielded from light emissions from the fixture. The housing slips over a 4"/100mm o.d. pole. a fixture or arm slips over the 4"/100mm o.d. tenon. Includes an internal twist lock receptacle, and an access cover with integral lens. Adds 8.0"/200mm to the overall height of the pole/fixture assembly. Photocell by others. For SP1 only.



RBC
 Cast aluminum receptacle housing, integrally welded to the pole. Includes a NEC approved clear cover. Does not include a receptacle or internal wiring. For PR3 and PR4 poles only.

Specifications

SP1/SP2



SP1
29.2"/740mm HT
WT: 46 lbs
EPA: 2.27 IP: 65

SP1
29.2"/740mm HT
WT: 46 lbs
EPA: 2.27 IP: 65

HOUSING

The fixture housing shall be all cast aluminum, A356 alloy, free of any porosity, foreign materials, or cosmetic fillers. The ballast shall be mounted internally and accessed by loosening two captive bolts and lifting off the top of the fixture. The top cover shall be hinged and secured with one captive tool-less fastener for relamping. The top shall seal with a molded silicone gasket. The upper reflector cone shall be matte finished anodized aluminum. The lens shall be clear seamless acrylic sealed to the housing with a molded silicone gasket on the top and bottom. The vertical struts shall be 316 stainless steel tubing. All internal and external hardware shall be stainless steel. All female threads on the aluminum parts shall be cast-in-place brass inserts to ensure no thread seizure.

HOOD

The hoods shall be spun from 6061 T-6 aluminum, 316 stainless steel or 110 copper. The shade shall have hemmed or beaded edges for added strength. The underside of the painted shades and all indirect shades (of aluminum, stainless steel or copper) shall be painted a high reflectance white. Stainless steel and copper shade shall be unfinished on both sides, except for the indirect (IND) models. Stainless steel hood not available with FCO model

LENSES/ELEMENTS

All lenses shall be molded, seamless high impact lighting grade acrylic.

The GLA element shall be frosted borosilicate glass with a twist on connection to the lower cone assembly. The cone shall be matte finished anodized aluminum.

The GR3 and GR5 shall be precision molded borosilicate glass refractors with the Type 3 or Type 5 distribution. The refractors shall be mounted to a gasketed aluminum holder with an internal pressure plate.

The LDL lens shall be acrylic with a lightly diffused internal finish.

The IND indirect fixtures shall have a clear acrylic lens with a lower reflector cone and an upper diffusing cone.

The one-piece hood and lens shield provides IES full cutoff classification meaning there is zero light emitted above 90° horizontal. The lens shield is aluminum and painted to match the fixture color (IND-FCO only.)

ELECTRICAL

The ballast shall be integral to the fixture, mounted on a prewired module with a quick disconnect plug. The ballast module shall have keyhole slots and be removable by loosening two screws. Sockets shall be pulse rated porcelain. HID ballasts shall be high power factor, rate for -30°C starting. The compact fluorescent ballast shall be electronic for use with 4 pin lamps (GX24q-4 socket) rated for -18°C starting temperature.

FINISH

Fixture finish shall consist of a five stage retreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance.

ARM and POLE MOUNTING

The pole mounted arm for a single fixture (SAP) and pole mounted arm for two fixtures at 180° (TAP) shall have a cast aluminum post top and fixture fitter with two round horizontal stainless steel bars. The post fitter shall slip over a 4"/100 mm pole and be secured with six stainless steel set screws.

The wall mounted arms for a SP2 fixture shall have a cast aluminum wall plate, cover and fixture fitter with two round horizontal stainless steel bars. The cover shall secure to the wall plate with four stainless steel set screws

CERTIFICATION

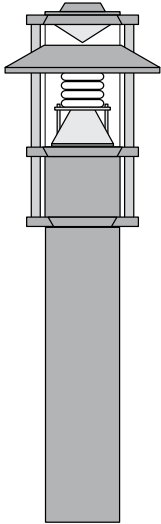
Fixtures shall be listed with ETL for outdoor, wet location use, UL1598 and Canadian CSA Std. C22.2 no.250. IP=65.

WARRANTY

Spectra LED, including housing, LEDs and electrical components, is warranted for five years. Non LED fixture is warranted for three years. Ballast components carry the ballast manufacturer's limited warranty. Any unauthorized return, repair, replacement or modification of the Product(s) shall void this warranty. This warranty applies only to the use of the Product(s) as intended by AAL and does not cover any misapplication or misuse of said Product(s), or installation in hazardous or corrosive environments.

Specifications

SPB



OAH: 42"/1070mm
Hood Diameter: 12.75"/319mm
Bolts: 0.5"/12mm
WT: 37 lbs
IP: 65

HOUSING

The fixture housing shall be all cast aluminum, A356 alloy, free of any porosity, foreign materials, or cosmetic fillers. The ballast shall be mounted internally and accessed by loosening two captive bolts and lifting off the top of the fixture. The top cover shall be hinged and secured with one captive tool-less fastener for relamping. The top shall seal with a molded silicone gasket. The upper reflector cone shall be matte finished anodized aluminum. The lens shall be clear seamless acrylic sealed to the housing with a molded silicone gasket on the top and bottom. The vertical struts shall be 316 stainless steel tubing. All internal and external hardware shall be stainless steel. All female threads on the aluminum parts shall be cast-in-place brass inserts to ensure no thread seizure.

LENSES/ELEMENTS

The GLA element shall be frosted borosilicate glass with a twist on connection to the lower cone assembly. The cone shall be matte finished anodized aluminum.

ELECTRICAL

The ballast shall be integral to the fixture, mounted on a prewired module with a quick disconnect plug. The ballast module shall have keyhole slots and be removable by loosening two screws. Sockets shall be pulse rated porcelain. HID ballasts shall be high power factor, rate for -30°C starting. The compact fluorescent ballast shall be electronic for use with 4 pin lamps (GX24q-4 socket) rated for -18°C starting temperature. Ballasts are multitap, wired at the factory for 277 volts, unless specified. Driver will accept 120 thru 277 volts input.

FINISH

Fixture finish shall consist of a five stage pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance.

CERTIFICATION

Fixtures shall be listed with ETL for outdoor, wet location use, UL1598 and Canadian CSA Std. C22.2 no.250. IP=65.

WARRANTY

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Photometry

LAMP TYPE	LUMENS	CONVERSION
		FACTOR
42 PL-T GX24q-4 4-pin	3200	.38
50 MH, CLEAR E-17	3200	.38
70 MH, CLEAR E-17	5200	.61
100 MH, CLEAR E-17	8500	1.00
150 MH, CLEAR E-17	12500	1.47
175 MH, CLEAR E-17	14000	1.65
50 HPS, CLEAR E-17	3600	.42
70 HPS, CLEAR E-17	6300	.75
100 HPS, CLEAR E-17	9500	1.12
150 HPS, CLEAR E-17	16000	1.88

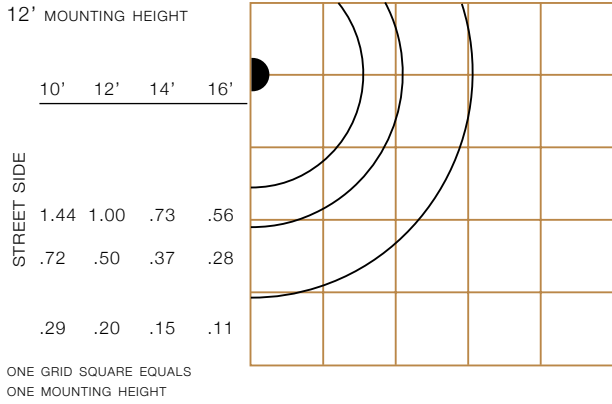
NOTE: If using a lamp with different lumen output than listed above, consult AAL for conversion factor.

The values below are in initial footcandles. Discount values to account for light losses due to voltage, temperature and atmospheric variations which affect light output.

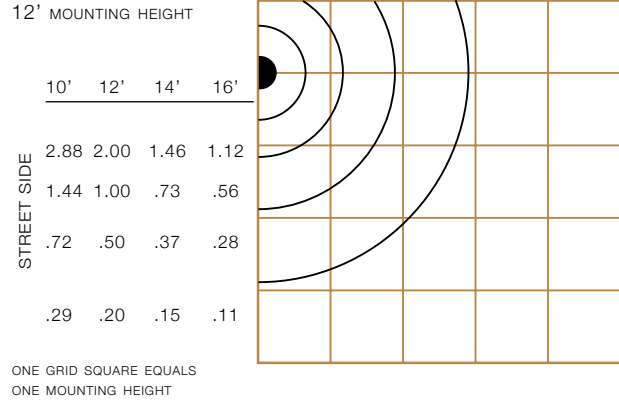
To substitute another lamp in the isocandle charts below, multiply the chart values by the lamp conversion factor on the right. Mounting height is to the lamp center.

All testing performed by a certified independent laboratory. Photometry is available in IES formatted files on CD Rom & Website. Call your local AAL representative for a copy.

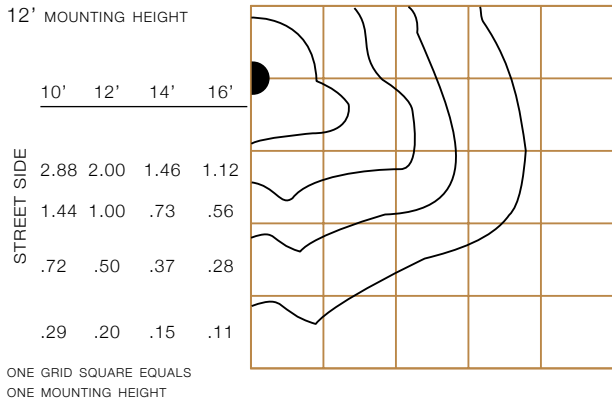
SP1 ANG GLA WHT 100MH



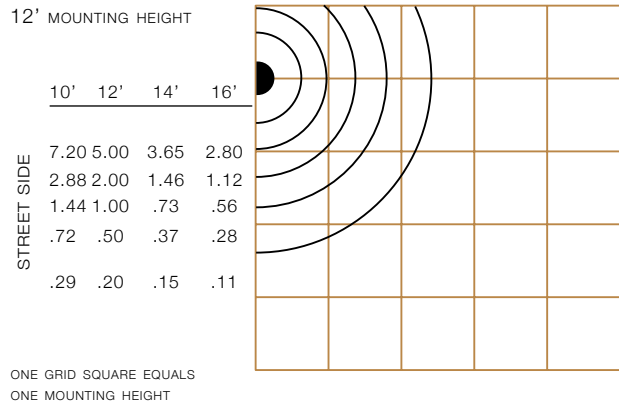
SP1 ANG GLA COP(COPPER HOOD)100MH



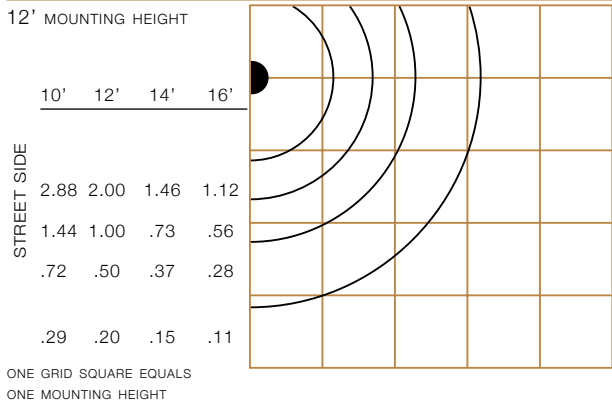
SP1 ANG GR3 WHT 100MH



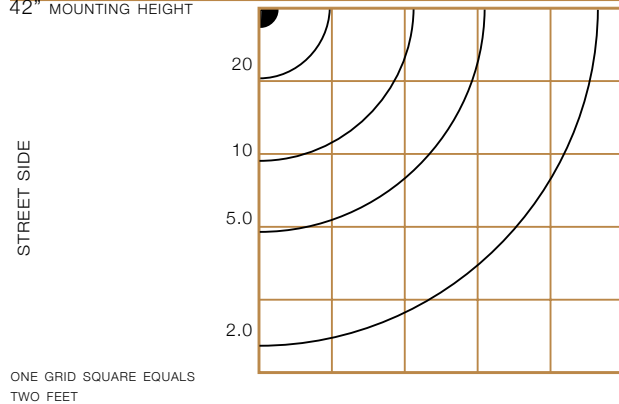
SP1 IND WHT 100MH



SP1 ANG LDL WHT 100MH



SPB 70MH



SPECTRA



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