

A2CO Series

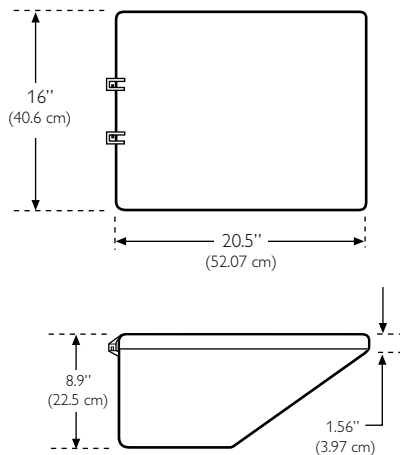
Akra II Cutoff Floodlight, 250-400W HID

Type:	Job:	Approvals:				
Catalog Number:						
Series/Source-Wattage	Distribution	Voltage	Mounting	Options (Factory Installed)	Finish	Accessories (Field Installed)

Date:
Page 1 of 6

Overall Dimensions

For Reference Only



Weight (maximum) 45 lbs (20.41 kgs)

EPA Effective Projected Area

1.2 Ft²

Specifications

Housing

The 250-400W Akra II floodlight features a die-cast aluminum housing and top with integral heavy-duty hinges. Fixture housing and top are sealed with closed-cell gasket. Standard unit constructed to IP54.

Distribution

Akra reflector system. High purity anodized aluminum reflectors assure maximum efficiency. A secondary internal reflector element reflects high angle rays back into the main beam to achieve high beam utilization. Meets IES definition of cutoff distribution.

Lamp Access

Removable top with integral support rod swings up for complete lamp and ballast access and is secured to housing with captive screws.

Lens

Tempered glass lens is secured to housing with formed-in-place high temperature gasket to provide positive weatherproof seal.

Socket

A porcelain 4KV pulse rated, grip-type mogul base (250-400W) socket shall be used to prevent lamp loosening and to maintain proper lamp positioning. Optional Stabilux lamp support may be specified for additional lamp protection from mechanical shock and vibration.

Ballast

High power factor ballast with reliable starting to -34°C (-30°F) for Pulse Start Metal Halide and -40°C (-40°F) for High Pressure Sodium. Ballast has Class H, 180°C (356°F) rated insulation. Crest factor does not exceed 1.8.

Aiming

Cutoff distribution achieved at 62.5° (2 times mounting height; top of housing in horizontal position). Aiming above 63° provides semi-cutoff and non-cutoff distribution.

Mounting

Die-cast mastfitter (MA2) is vertically adjustable, suitable for mounting to a 2-3/8" O.D. vertical tenon. Note vertical aiming above 50° requires WLV option. Die-cast surface arm mount (SA2 or SA2-15) allows fully adjustable mounting to straight square poles or pole mount adapter (PMA). Die-cast surface wall bracket (SWA2) allows fully adjustable mounting to walls or other flat surfaces. Mastfitter and any of the above mentioned adjustable mounting brackets feature cast-in aiming calibrations and an internal splice box with gasketed access cover. Fixed, non-adjustable arm (S7 or S1 I) is available, and allows mounting to square poles or pole mount adapter (PMA).

Finish

Standard finish shall be textured dark bronze UltraClad polyester powder coating, 2.5 mil nominal thickness, electrostatically applied and oven cured. All components shall be thoroughly cleaned by a 5 stage pre-treatment process including iron phosphate bath and non-chronic acid etching stages, ensuring optimum performance characteristics. Other colors may be specified.

Listings

ETL/cETL listed to the UL 1598 standard, suitable for Wet Locations. The quality systems of this facility have been registered by UL to the ISO 9001 Series Standards.

Warranty

5 year limited warranty. See philips.com/warranties for complete details and exclusions.



Some luminaires use fluorescent or high intensity discharge (HID) lamps that contain small amounts of mercury. Such lamps are labeled 'Contain Mercury' and/or with the symbol 'Hg'. Lamps that contain mercury must be disposed of in accordance with local requirements. Information regarding lamp recycle and disposal can be found at www.lamprecycle.org.

PHILIPS


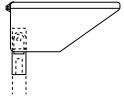
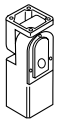
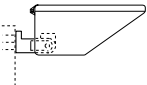
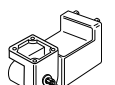
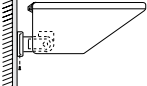
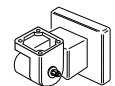
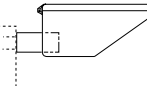
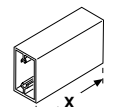


A2CO Series

Akra II Cutoff Floodlight, 250-400W HID

Type:	Job:	Page 2 of 6
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Series/Source-Wattage	Distribution	Voltage	Mounting
Pulse Start Metal Halide ^[2] <input type="checkbox"/> A2P-250 <input type="checkbox"/> A2P-400  High Pressure Sodium <input type="checkbox"/> A2S-250 <input type="checkbox"/> A2S-400	<input type="checkbox"/> A <input type="checkbox"/> C	<input type="checkbox"/> 120 <input type="checkbox"/> 208 <input type="checkbox"/> 240 <input type="checkbox"/> 277 <input type="checkbox"/> 347 <input type="checkbox"/> 480 <input type="checkbox"/> QV ^[3]	<input type="checkbox"/> MA2 Mastfitter (Standard)   <input type="checkbox"/> SA-15 Surface Arm 175W max (11" housing) <input type="checkbox"/> SA2 Surface Arm 400W max (16" housing)   <input type="checkbox"/> SWA2 Wall Bracket   <input type="checkbox"/> S(X) Fixed Arm (16" housing only) X = 7 for 1@90 or 2@180 11 for 2@90, 3@90 or 4@90  

1) 250-400W units require Mogul base E39 lamps.

2) For acceptable performance, note position orientation specific nature of Pulse Start lamps. Consult factory.

3) Allows field selection of 120/208/240/277 voltage. (No 480V). Certain options may require voltage selection as well.

Options (Factory Installed)	Finish
<input type="checkbox"/> BL Bi-Level dimming <input type="checkbox"/> CSR Hot Quartz Restrike <input type="checkbox"/> LQ Hot/Cold Quartz Restrike <input type="checkbox"/> LQ1 Separately Wired (120V) Quartz Restrike <input type="checkbox"/> F1 Single Fuse (120/277V) <input type="checkbox"/> F2 Double Fuse (208/240/480V) <input type="checkbox"/> 50HZ 50 Hz ballast operation <input type="checkbox"/> SS-A2 Stabilux Lamp Support Socket <input type="checkbox"/> TLR Twist Lock Receptacle (photocell by others) <input type="checkbox"/> AL-A2 Auxiliary Lens (polycarbonate) <input type="checkbox"/> EPXY-CTD-GR Gray Epoxy coated <input type="checkbox"/> EPXY-CTD-WHT White Epoxy coated	<input type="checkbox"/> TDB Textured Dark Bronze <input type="checkbox"/> TGR Textured Gray <input type="checkbox"/> TBK Textured Black <input type="checkbox"/> TWHT Textured White <input type="checkbox"/> TSA Textured Satin Aluminum <input type="checkbox"/> TGN Textured Green <input type="checkbox"/> RAL(*) Special Tiger Drylac powdercoat finish (*) = specify color (*) Specify RAL color number from RAL color chart. Consult factory for assistance in color selection.

Accessories (Ordered Separately)
<input type="checkbox"/> F1-KIT Single Fuse Kit (120/277/347V) <input type="checkbox"/> F2-KIT Double Fuse Kit (208/240/480V) <input type="checkbox"/> PCB-A2-(*) Photocell Button (specify voltage, 480V not available) <input type="checkbox"/> PTA-2180-16.5-(F) Pole Top Adapter, 2@180° (specify finish) <input type="checkbox"/> PTA-2090-16.5-(F) Pole Top Adapter, 2@90° (specify finish) <input type="checkbox"/> PTA-3090-16.5-(F) Pole Top Adapter, 3@90° (specify finish) <input type="checkbox"/> PTA-4090-16.5-(F) Pole Top Adapter, 4@90° (specify finish) <input type="checkbox"/> WMB-16.5-(F) Wall Mounting Bracket (specify finish) <input type="checkbox"/> FB-1 Flat Base mount <input type="checkbox"/> PX-1 Cross Arm bracket with 2-3/8" pipe stub <input type="checkbox"/> PM-1 Wood pole mounting kit for single fixture with one U-arm <input type="checkbox"/> PM-2 Wood pole mounting kit for two fixtures with two U-arms <input type="checkbox"/> PM-3 Wood pole mounting kit for three fixtures with three U-arms <input type="checkbox"/> PM-4 Wood pole mounting kit for four fixtures with four U-arms <input type="checkbox"/> PMA-190-(F) Pole Mount Adapter, 1@90° (specify finish) <input type="checkbox"/> PMA-2180-(F) Pole Mount Adapter, 2@180° (specify finish) <input type="checkbox"/> PMA-2090-(F) Pole Mount Adapter, 2@90° (specify finish) <input type="checkbox"/> PMA-3090-(F) Pole Mount Adapter, 3@90° (specify finish) <input type="checkbox"/> PMA-4090-(F) Pole Mount Adapter, 4@90° (specify finish)

A2CO Series

Aktra II Cutoff Floodlight, 250-400W HID

Type:	Job:	Page 3 of 6
-------	------	-------------

Distribution Guide & Ballast Data ^{1,4,5}

Source Type ⁽²⁾	Catalog Number	Housing Size	Lamp ⁽³⁾ Envelope	.ies File Name ⁽⁶⁾	Ballast Type ⁽⁷⁾	ANSI Code	Line Current 120 / 208 / 240 / 277 / 480	Line Watts
PS	A2P-250	16"	ED / BT28	a2p25(*).ies	CWA	M138 / M153	2.8 / 1.5 / 1.3 / 1.2 / 0.6	298
	A2P-400	16"	ED / BT37	a2p40(*).ies	CWA	M135 / M155	4.0 / 2.2 / 1.9 / 1.8 / 1.0	456
HPS	A2S-250	16"	ED18	a2s25(*).ies	CWA	S50	2.7 / 1.6 / 1.3 / 1.2 / 0.7	310
	A2S-400	16"	ED18	a2s40(*).ies	CWA	S51	4.1 / 2.5 / 2.1 / 1.9 / 1.1	467

1) The A2CO Series can accommodate a variety of other wattages and lamps. Consult factory.

2) PS = Pulse Start Metal Halide, HPS = High Pressure Sodium.

3) Horizontal burn clear lamps recommended.

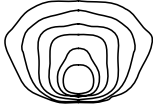
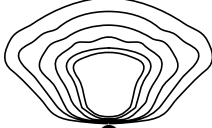

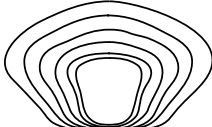
4) LER values and efficiencies are not published. See NEMA Standard LE-58.

5) Intended aiming and possible lamp orientation restrictions should be considered when selecting floodlight.

6) Replace (*) with Reflector: A or C.

7) CWA = Constant Wattage Autotransformer. HX-HPF = High Reactance High Power Factor..

Distribution Patterns Photometric data calculated at 50' mounting height.

BEAM PATTERNS Reflector Type	Source	Wattage	Max Candle Power	H x V NEMA	BEAM SPREADS Horizontal X Vertical	
					10% Field Angle	50% Beam Angle
A 	PS	400W	14,558	7 x 6	141° x 102°	95° x 29°
		250W	9,317	7 x 6	141° x 102°	95° x 29°
C 	HPS	400W	52,009	7 x 4	140° x 69°	91° x 15°
		250W	31,205	7 x 4	140° x 69°	91° x 15°
	PS	400W	52,009	7 x 6	143° x 104°	95° x 29°
		250W	31,205	7 x 6	143° x 104°	95° x 29°
	HPS	400W	33,202	7 x 5	131° x 83°	78° x 31°
		250W	19,921	7 x 5	131° x 83°	78° x 31°

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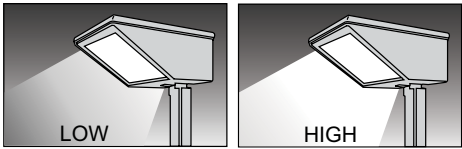
Type:	Job:	Page 4 of 6
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Option details (Factory Installed)

BL = Bi-Level

Note: Suitable for HPS in any aiming position. Consult factory when specifying dimming with Metal Halide.

Bi-Level provides high/low level of lamp output with 50% power consumption. Zero crossover network avoids strobing and lamp dropout.



CSR = Hot Quartz Restrike

CSR - Quartz restrike using a current sensing relay; extinguishes auxiliary lamp when main arc strikes.

LQ = Hot/Cold Quartz Restrike

LQ - Provides LiteMatic operation for fixtures with 120V or multi-tap ballasts.

LQ1 = Separately Wired (120V) Quartz Restrike

Note: Standard 150 watt (120V) double contact bayonet base socket. Combined Quartz wattage may not exceed HID lamp wattage.

LQ1 requires an Interlock (by others) to ensure HID and Quartz source are not operated at once.

LQ1 - Separately wired, externally controlled emergency lighting from a separate power source.

LiteMatic Operation



Normal Start: Main and Quartz lamps both energized.



Main Lamp Reaches Approximately 40% of Rated Output: Quartz lamp automatically extinguishes (combined lamp currents never exceed that of main lamp at 100% output).



When Arc Extinguished: Auxiliary quartz lamp automatically energized when power is restored.



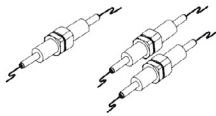
Main Lamp Reaches 40% of Rated Output: Quartz lamp automatically extinguishes

F1 = Single Fuse (120V/277V)

Consists of 1 or 2 fuse holders and 1 or 2 KTK/KLK 30 amp fuses.

F2 = Double Fuse (208V/240V/480V)

Specify voltage with QV ballast.



50 HZ = 50 Hz Ballast Operation
(Consult Factory)

Specified for applications (outside the United States) where 50 Hertz operation is standard.

SS-A2 = Stabilux Lamp Support Socket

Adjustable Stabilux Lamp Support, insulated with woven ceramic fabric. Specified where fixture will likely be subjected to mechanical vibration and shock, to provide additional protection against lamp breakage.

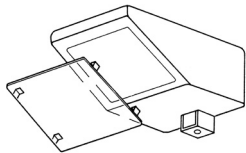
TLR = Twist-lock Photocell Receptacle

Receptacle only. Photocell by others.

AL-A2 = Polycarbonate Auxiliary Lens

1/4" polycarbonate auxiliary lens.

Specified as an option because fixture housing is factory machined to accept auxiliary lens.



EPXY-CTD-GR = Gray Epoxy Coated

Durable coating offers protection against mildly acidic and alkaline conditions.

EPXY-CTD-WHT = White Epoxy Coated

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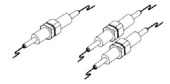
Type:	Job:	Page 5 of 6
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Accessory details continued (Field Installed - Shipped Separately)

F1 KIT = Single Fuse Kit (120V/277V)

F2 KIT = Double Fuse Kit (208V/240V/480V)

Consists of 1 or 2 fuse holders and
1 or 2 KTK 30 amp fuses.



PCB-A2-(*) = Photocontrol

Voltage must be specified. 480V not available.

Button-type photocell for field installation on
fixture mounting brackets or arms.

PTA-2180-16.5-(F) = Pole Top Adapter, 2@180°

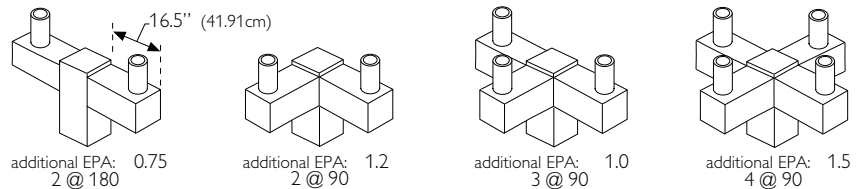
PTA-2090-16.5-(F) = Pole Top Adapter, 2@90°

PTA-3090-16.5-(F) = Pole Top Adapter, 3@90°

PTA-4090-16.5-(F) = Pole Top Adapter, 4@90°

F = Specify finish.

Permits installation of luminaires equipped with mastfitter (MA2) in any of the
configurations shown. Fits poles having a 2-3/8" OD x 4" vertical tenon.



Vertically mounted 2-3/8" OD tenons welded to extruded aluminum arms with
removeable end cap for wiring. Arms bolted to cast aluminum pole top bracket.
Components shipped separately. Field assembly required.

WMB-16.5-(F) = Wall Mounting Bracket

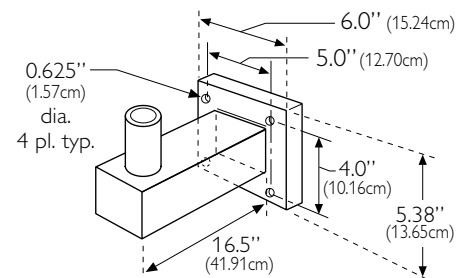
Suitable for mounting single unit only.

F = Specify finish.

2-3/8" OD vertical tenon
welded to extruded aluminum
arm with removeable end cap
for wiring.

Arm is bolted to a cast
aluminum plate that has four
5/8" diameter mounting holes.

Mounting hardware by others.

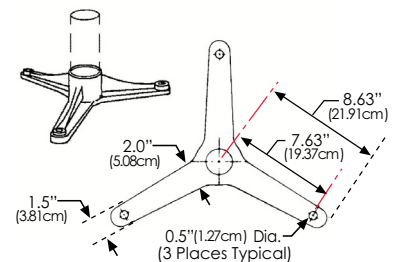


FB-1 = Flat Base Mount

Cast aluminum mounting
bracket for installing
floodlights on flat horizontal
surfaces.

For use with 2-3/8" OD pipe
tenon (by others).

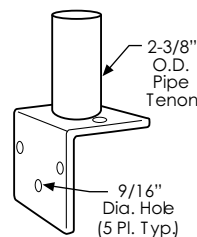
Limit height to 8.0"
(20.32 cm).



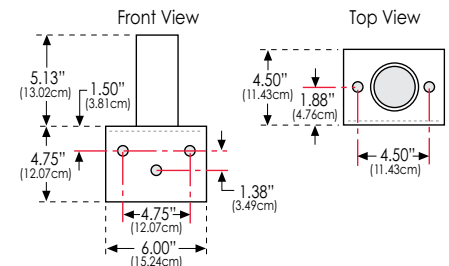
PX-1 = Cross-arm Bracket

For installing floodlights on wooden or
steel cross-arms.

Cast
aluminum
angle
bracket
with
2" pipe
stub.



"L" base.



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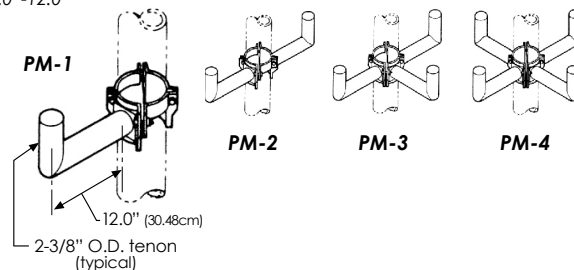
Akra II Cutoff Floodlight, 250-400W HID

Type:	Job:	Page 6 of 6
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Accessory details continued (Field Installed - Shipped Separately)

Wood pole mounting kits are suitable for mounting up to four luminaires with mastfitters to 6.0"-12.0" O.D. wood poles. Shipped as components for field assembly.

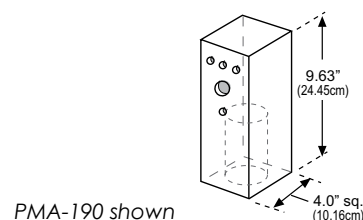
- PM-1** Wood pole mounting kit for single luminaire, with 1 U-arm
shipping weight: 6 lbs (2.7 kgs)
- PM-2** Wood pole mounting kit for two luminaires, with 2 U-arms
shipping weight: 9 lbs (4.05 kgs)
- PM-3** Wood pole mounting kit for three luminaires, with 3 U-arms
shipping weight: 12 lbs (5.4 kgs)
- PM-4** Wood pole mounting kit for four luminaires, with 4 U-arms
shipping weight: 15 lbs (6.8 kgs)



- PMA-190-(F)** = Pole Mount Adapter, 1@90°
- PMA-2180-(F)** = Pole Mount Adapter, 2@180°
- PMA-2090-(F)** = Pole Mount Adapter, 2@90°
- PMA-3090-(F)** = Pole Mount Adapter, 3@90°
- PMA-4090-(F)** = Pole Mount Adapter, 4@90°

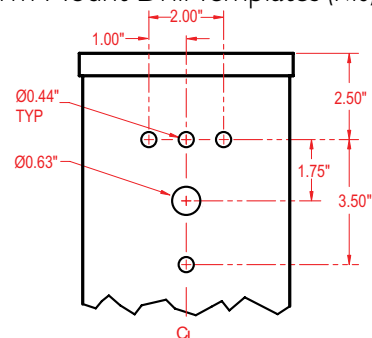
Permits installation of luminaires equipped with "S" (SA2 or SA2-15) surface mounting brackets, or S7 fixed arm brackets on poles having a 2-3/8" O.D. x 4" vertical tenon.

F = Specify finish.



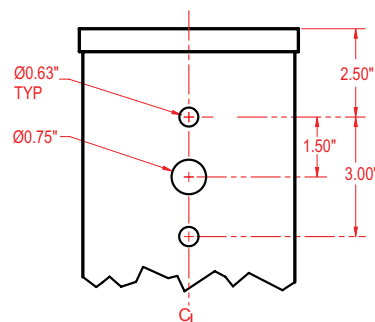
Notes

Arm Mount Drill Templates (NTS)



A2CO (A2 - 400W and below)

SA2 Adjustable Arm Mount to Square Pole
for 4" - 6" Square Pole
DRILL TEMPLATE NO. 1



A2CO (A2 - 400W and below)

S7 Arm Mount to Square Pole
for 4" - 6" Square Pole
DRILL TEMPLATE NO. 4



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