

SHOEBOX STYLE LED LUMINAIRE  
LEOTEK AR13-18M2-MV-WW-3-XX-530-FFA-RPAXX

FOR COLOR, CHANGE "XX" TO:  
BK FOR BLACK  
DB FOR BRONZE

ROUND TAPERED ALUMINUM POLE  
HAPCO RTA30D7B4-XX-D1

FOR COLOR, CHANGE "XX" TO:  
BA FOR BLACK  
BM FOR BRONZE

BOLT CIRCLE 10" TO 11"  
1" ANCHOR BOLTS

APPROVED LIGHT BASE FOUNDATION:  
CHANGE #C11242-QG4VP SCREW-IN  
ANCHOR BASE, OR MnDOT CONCRETE  
LIGHT FOUNDATION DESIGN E MOD  
(SEE PLAN FOR DETAIL)



CITY OF EDINA  
ENGINEERING  
& PUBLIC  
WORKS  
DEPTS.

### 30' SHOEBOS

*Chad A. Miller*  
APPROVED: CITY ENGINEER

REVISED:  
3-19

STANDARD  
PLATE

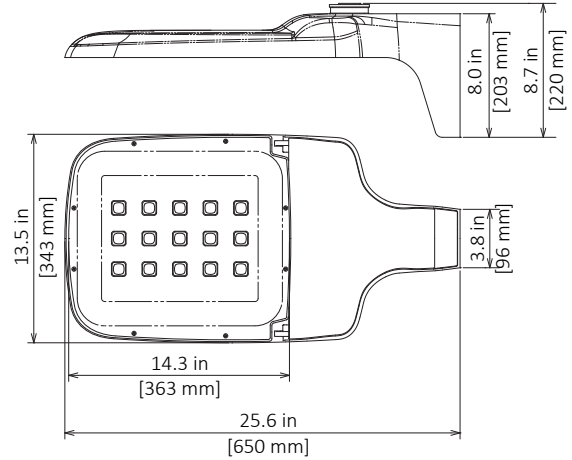
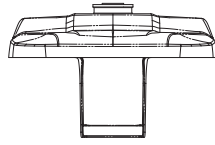
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# ARIETA™13 Architectural LED Area Luminaire

## AR13 M2 Series Specification Data Sheet

### Luminaire Data

**Weight** 15.4 lbs [7 kg]  
**EPA** 0.47 ft<sup>2</sup>



### Ordering Information

Sample Catalog No. AR13 6M2 MV NW 5 BK 700 MSL3

Product	LED Code	Voltage	Nominal Color Temperature	Distribution	Finish <sup>1</sup>	Drive Current Code <sup>2</sup>	Options
<b>AR13</b>	<b>4M2</b>	<b>MV</b> 120-277V	<b>WW</b> 3000K	<b>2</b> Type 2	<b>BK</b> Black	<b>350</b>	<b>HSS</b> <sup>3</sup> House Side Shield (Factory Installed)
	<b>6M2</b>	<b>HV</b> 347-480V	<b>NW</b> 4000K	<b>3</b> Type 3	<b>DB</b> Dark Bronze	<b>530</b>	<b>FDC</b> <sup>4</sup> Fixed Drive Current
	<b>10M2</b>		<b>CW</b> 5000K	<b>4</b> Type 4	<b>WH</b> White	<b>700</b>	<b>FFA</b> <sup>5</sup> Full Field Adjustability
	<b>15M2</b>			<b>5</b> Type 5	<b>GY</b> Gray		<b>PCR</b> <sup>6</sup> NEMA Photocontrol Receptacle
	<b>18M2</b>				<b>NA</b> Natural Aluminum		<b>PCR7</b> <sup>6</sup> ANSI 7-wire Photocontrol Receptacle
	<b>20M2</b>						<b>PCR7-CR</b> <sup>7</sup> Control Ready 7-wire Photocontrol Receptacle
							<b>MSL7</b> <sup>8</sup> Motion Sensor with L7 Lens
							<b>MSL3</b> <sup>8</sup> Motion Sensor with L3 Lens
							<b>PND1</b> <sup>9</sup> Part-Night Dimming
							<b>PND2</b> <sup>9</sup> Part-Night Dimming
							<b>PND3</b> <sup>9</sup> Part-Night Dimming
							<b>ORR</b> Optics Rotated Right
							<b>ORL</b> Optics Rotated Left
							<b>WL</b> Utility Wattage Label

#### Notes:

- Black, Dark Bronze, White, Gray, or Natural Aluminum standard. Consult factory for other finishes.
- Specified drive current code is the factory set maximum drive current. Field adjustable current selector enables standard dimming to lower wattage drive currents only. Consult factory if wattage limits require a special drive current.
- Flush mounted shield factory installed, also available for field installation. House Side Shield cuts light off at 1/2 mounting height behind luminaire.
- Non-field adjustable drive current. Specify 350mA, 530mA or 700mA setting.
- The FFA option enables full field adjustability from the specified drive current code to all drive currents available. This option is not DLC qualified.
- Field adjustable current selector included to enable standard dimming to lower wattage drive currents only. Field changeable connectors included to enable connection to PCR7 (wireless node dimming is disabled by default).
- Control-ready wired at factory for wireless node dimming. Supplied at maximum drive current. If lower drive current is required, consult factory.
- Motion Sensor available with MV. See L7 or L3 Lens coverage details on page 5. Consult factory for MS specified with ANSI 7-wire Photocontrol Receptacle. PCR option is required for On/Off control using light detection.
- For PND profile options see page 6. Only available with MV (120-277V).

<sup>10</sup> Specify Color (GY, DB, BK, WH, NA)

<sup>11</sup> Specify MV (120-277V) or HV (347V or 480V)

Accessories*	
<b>HSSAR13</b> <sup>3,10</sup>	House Side Shield
<b>RPA</b> <sup>10</sup>	Round Pole Adapter
<b>PTF1</b> <sup>10</sup>	Square Pole Top Fitter Single
<b>PTF2</b> <sup>10</sup>	Square Pole Top Fitter Twin at 180°
<b>PTF4</b> <sup>10</sup>	Square Pole Top Fitter Quad
<b>WM</b> <sup>10</sup>	Wall Mount
<b>BSK</b>	Bird Deterrent Spider Kit
<b>LLPC</b> <sup>11</sup>	Long-Life Twist Lock Photocontrol
<b>SC</b>	Twist Lock Shorting Cap
<b>FSIR100</b>	Motion Sensor Configuration Tool

\*Accessories are ordered separately and not to be included in the catalog number

### Luminaire Specifications

#### Housing

Die cast aluminum housing with universal mounting design allows for attachment to existing pole without redrilling for retrofit applications. Aluminum housing provides passive heat-sinking of the LEDs and has upper surfaces that shed precipitation. Mounting provisions meet 3G vibration per ANSI C136.31-2010 Normal Application, Bridge & Overpass. Electrical components are accessed without tools and are mounted on removable power door.

#### Light Emitting Diodes

Hi-flux/Hi-power white LEDs produce a minimum of 90% of initial intensity at 100,000 hours of life based on IES TM-21. LEDs are tested in accordance with IES LM-80 testing procedures. LEDs have correlated color temperature of 3000K (WW), 4000K (NW), or 5000K (CW) and 70 CRI minimum. LEDs are 100% mercury and lead free.

#### Field Adjustability

LED drive current can be changed in the field to adjust light output for local conditions (not available with PCR7-CR option). The specified drive current code will be the factory set maximum drive current and field adjustments can only be made to available lower wattage drive currents. Select the FFA option if full field adjustability to all available drive currents (700mA max) is desired. The FFA option is not DLC qualified.

#### Quality Control

Every luminaire is performance tested before and after a 2-hour burn-in period. Assembled in the USA.

#### Optical Systems

Micro-lens optical systems produce IESNA Type 2, Type 3, Type 4 or Type 5 distributions and are fully sealed to maintain an IP66 rating. Luminaire produces 0% total lumens above 90° (BUG Rating, U=0). Optional house side shield (HSS) cuts light off at 1/2 mounting height behind luminaire. Optics may be rotated right or left with options ORR/ORL, respectively.

#### Electrical

Rated life of electrical components is 100,000 hours. Uses isolated power supply that is 1-10V dimmable. Power supply is wired with quick-disconnect terminals. Power supply features a minimum power factor of .90 and <20% Total Harmonic Distortion (THD). EMC meets or exceeds FCC CFR Part 15. Terminal block accommodates 6 to 14 gauge wire. Surge protection complies with IEEE/ANSI C62.41 Category C High, 20kV/10kA and ANSI C136.2-2015, 20kV/10kA.

#### Controls

3-Wire photocontrol receptacle (PCR) is available. ANSI C136.41 7-wire (PCR7) photocontrol receptacles are available. All photocontrol receptacles have tool-less rotatable bases. Wireless control module is provided by others.

#### Finish

Housing receives a fade and abrasion resistant polyester powder coat finish with 3.0 mil nominal thickness. Finish tested to withstand 5000 hours in salt spray exposure per ASTM B117. Finish meets scribe creepage rating 8 per ASTM D1654. Finish tested 500 hours in UV exposure per ASTM G154 and meets ASTM D523 gloss retention.

#### Listings/Ratings/Labels

Luminaires are UL listed for use in wet locations in the United States and Canada. DesignLights Consortium™ qualified product. Consult DLC QPL for Standard and Premium Classification Listings. International Dark Sky Association listed. Luminaire is qualified to operate at ambient temperatures of -40°C to 40°C.

#### Photometry

Luminaires photometrics are tested by certified independent testing laboratories in accordance with IES LM-79 testing procedures.

#### Warranty

10-year limited warranty is standard on luminaire and components. 5-year limited warranty on luminaires and components with a motion sensor.

#### Standards

Luminaire complies with:

**ANSI:** C136.2, C136.3, C136.10, C136.13, C136.15, C136.22, C136.31, C136.35, C136.37, C136.41, C62.41, C78.377, C82.77

**Other:** FCC 47 CFR, IEC 60598, ROHS II, UL 1449, UL 1598

### Performance Data 3000K (WW)

All data nominal. IES files are available at leotek.com.

LED Code	Current Code	System Wattage (W)	Type 2, 3, 4		Type 5	
			Delivered Lumens (Lm) <sup>1</sup>	Efficacy (Lm/W)	Delivered Lumens (Lm) <sup>1</sup>	Efficacy (Lm/W)
4M2	350	20	2000	100	1930	96
	530	28	2720	97	2630	94
	700	36	3410	94	3300	91
6M2	350	29	2930	101	2750	95
	530	41	4110	99	3860	93
	700	54	5040	94	4950	92
10M2	350	41	4600	112	4500	109
	530	63	6700	106	6600	104
	700	87	8500	97	8400	96
15M2	350	63	7400	117	7300	116
	530	90	9600	107	9500	106
	700	124	12900	104	12700	102
18M2	350	81	9000	111	9100	112
	530	122	12800	105	13000	107
	700	160	16400	103	16700	104
20M2	350	84	10700	127	10800	129
	530	132	15300	116	15500	117
	700	172	18200	106	18500	108

Notes:

1 Normal tolerance ± 10% due to factors including distribution type, LED bin variance, driver variance, and ambient temperatures.

### Performance Data 4000K (NW) & 5000K (CW)

All data nominal. IES files are available at leotek.com.

LED Code	Current Code	System Wattage (W)	Type 2, 3, 4		Type 5	
			Delivered Lumens (Lm) <sup>1</sup>	Efficacy (Lm/W)	Delivered Lumens (Lm) <sup>1</sup>	Efficacy (Lm/W)
4M2	350	20	2330	116	2290	114
	530	28	3170	113	3110	111
	700	36	3990	111	3920	109
6M2	350	29	3490	120	3480	120
	530	41	4810	116	4850	117
	700	54	5980	111	5880	109
10M2	350	41	5400	132	5300	129
	530	63	7800	124	7700	122
	700	87	10000	115	9800	113
15M2	350	63	8400	133	8300	132
	530	90	11500	128	11300	126
	700	124	15000	121	14700	119
18M2	350	81	9600	119	9700	120
	530	122	13700	112	13900	114
	700	160	17500	109	17800	111
20M2	350	84	10600	126	10800	129
	530	132	15200	115	15500	117
	700	172	19500	114	19800	115

Notes:

1 Normal tolerance ± 10% due to factors including distribution type, LED bin variance, driver variance, and ambient temperatures.

### BUG Ratings: 3000K (WW)

All data nominal. IES files for all CCTs are available at leotek.com.

LED Code	Current Code	Type 2	Type 3	Type 4	Type 5
<b>4M2</b>	350	B1 U0 G1	B1 U0 G1	B1 U0 G0	B1 U0 G0
	530	B1 U0 G1	B1 U0 G1	B1 U0 G1	B2 U0 G0
	700	B1 U0 G1	B1 U0 G1	B1 U0 G1	B2 U0 G1
<b>6M2</b>	350	B1 U0 G1	B1 U0 G1	B1 U0 G1	B2 U0 G0
	530	B1 U0 G1	B1 U0 G1	B1 U0 G1	B2 U0 G1
	700	B1 U0 G1	B1 U0 G1	B1 U0 G1	B3 U0 G1
<b>10M2</b>	350	B1 U0 G1	B1 U0 G1	B1 U0 G1	B2 U0 G1
	530	B1 U0 G1	B1 U0 G1	B2 U0 G1	B3 U0 G1
	700	B2 U0 G2	B2 U0 G2	B2 U0 G2	B3 U0 G1
<b>15M2</b>	350	B1 U0 G1	B1 U0 G2	B2 U0 G2	B3 U0 G1
	530	B2 U0 G2	B2 U0 G2	B2 U0 G2	B3 U0 G2
	700	B2 U0 G2	B2 U0 G2	B3 U0 G2	B4 U0 G2
<b>18M2</b>	350	B2 U0 G2	B2 U0 G2	B2 U0 G2	B3 U0 G2
	<b>530</b>	B2 U0 G2	<b>B2 U0 G2</b>	B3 U0 G2	B4 U0 G2
	700	B2 U0 G2	B2 U0 G2	B3 U0 G2	B4 U0 G2
<b>20M2</b>	350	B2 U0 G2	B2 U0 G2	B2 U0 G2	B3 U0 G2
	530	B3 U0 G3	B2 U0 G2	B3 U0 G2	B4 U0 G2
	700	B3 U0 G3	B3 U0 G3	B3 U0 G2	B4 U0 G2

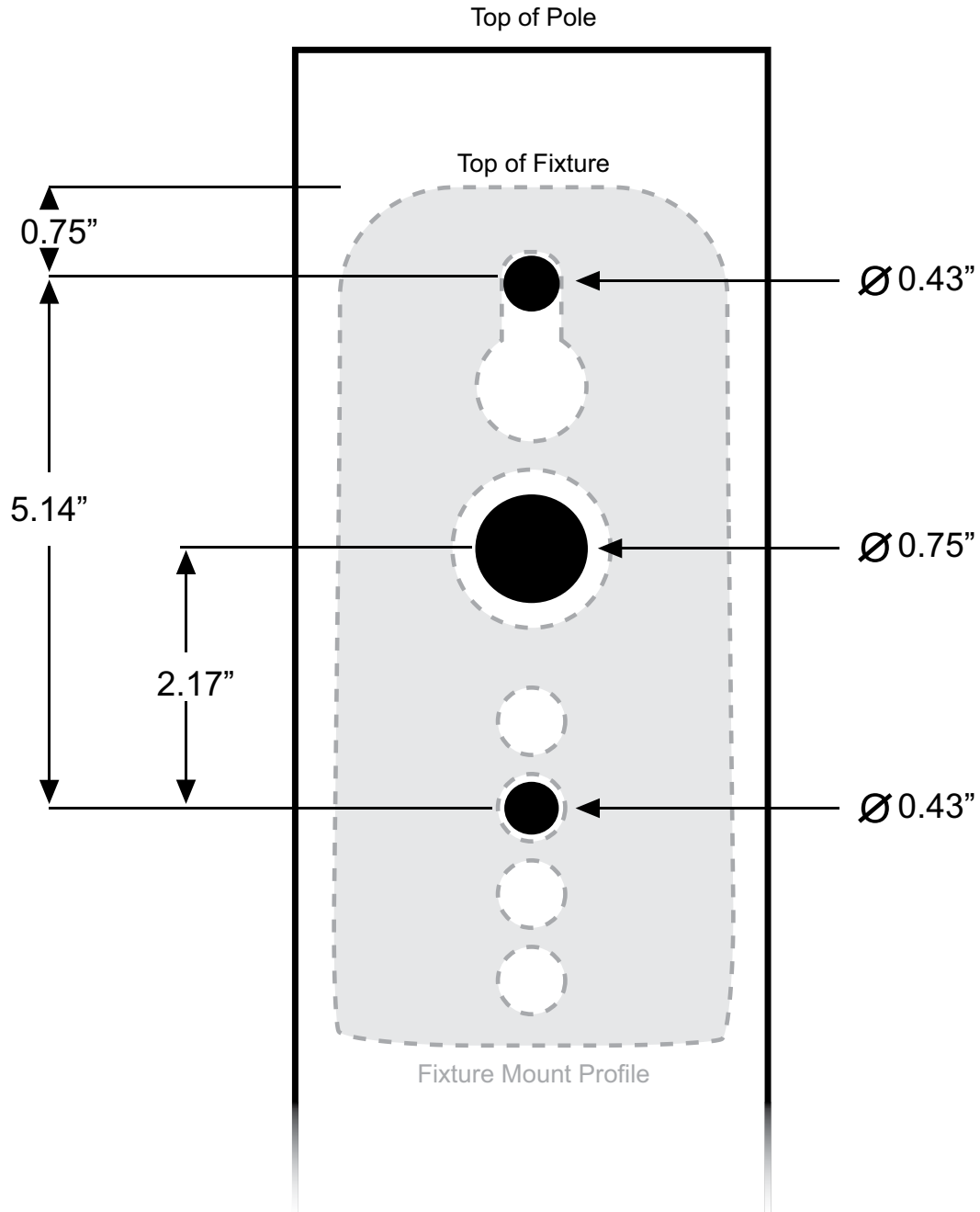
### BUG Ratings: 4000K (NW) & 5000K (CW)

All data nominal. IES files for all CCTs are available at leotek.com.

LED Code	Current Code	Type 2	Type 3	Type 4	Type 5
<b>4M2</b>	350	B1 U0 G1	B1 U0 G1	B1 U0 G0	B1 U0 G0
	530	B1 U0 G1	B1 U0 G1	B1 U0 G1	B2 U0 G0
	700	B1 U0 G1	B1 U0 G1	B1 U0 G1	B2 U0 G1
<b>6M2</b>	350	B1 U0 G1	B1 U0 G1	B1 U0 G1	B2 U0 G1
	530	B1 U0 G1	B1 U0 G1	B1 U0 G1	B3 U0 G1
	700	B1 U0 G1	B1 U0 G1	B1 U0 G1	B3 U0 G1
<b>10M2</b>	350	B1 U0 G1	B1 U0 G1	B1 U0 G1	B3 U0 G1
	530	B2 U0 G2	B2 U0 G2	B2 U0 G2	B3 U0 G1
	700	B2 U0 G2	B2 U0 G2	B2 U0 G2	B3 U0 G2
<b>15M2</b>	350	B2 U0 G2	B2 U0 G2	B2 U0 G2	B3 U0 G1
	530	B2 U0 G2	B2 U0 G2	B2 U0 G2	B3 U0 G2
	700	B2 U0 G2*	B2 U0 G2	B3 U0 G2	B4 U0 G2
<b>18M2</b>	350	B2 U0 G2	B2 U0 G2	B2 U0 G2	B3 U0 G2
	530	B2 U0 G2	B2 U0 G2	B3 U0 G2	B4 U0 G2
	700	B3 U0 G3	B3 U0 G2*	B3 U0 G2	B4 U0 G2
<b>20M2</b>	350	B2 U0 G2	B2 U0 G2	B2 U0 G2	B3 U0 G2
	530	B2 U0 G2*	B2 U0 G2	B3 U0 G2	B4 U0 G2
	700	B3 U0 G3	B3 U0 G3	B3 U0 G3	B4 U0 G2

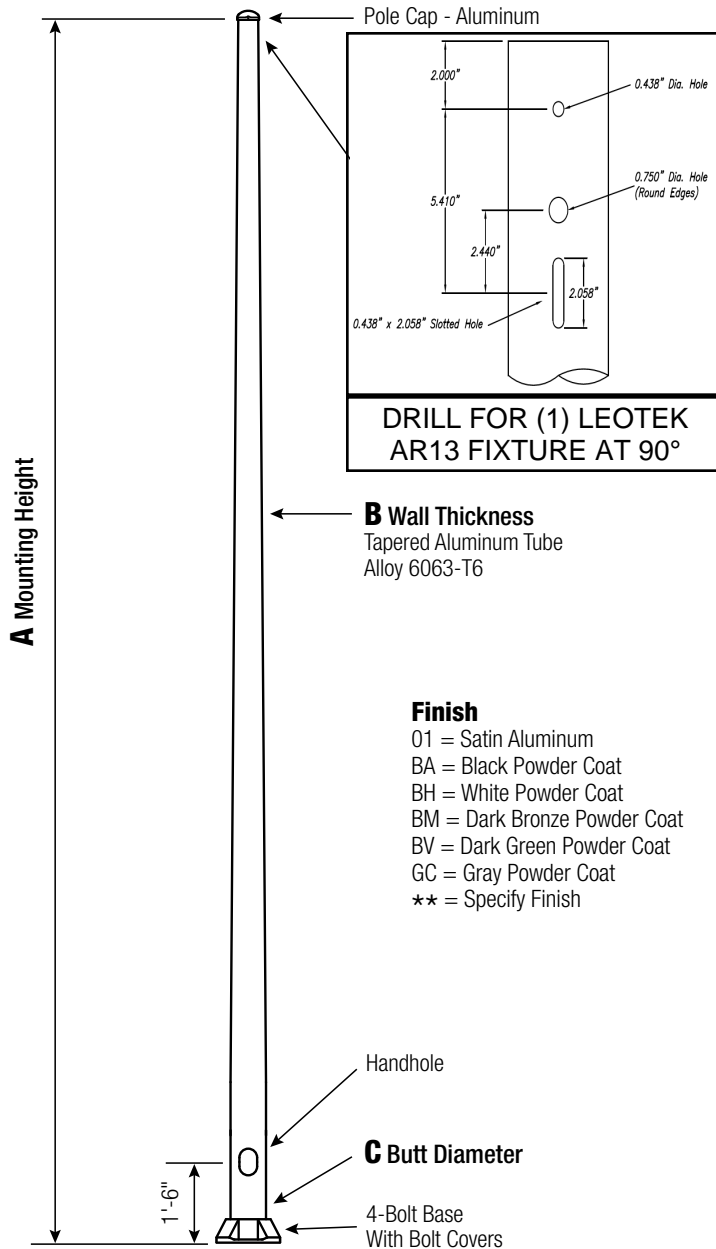
\* These BUG ratings are slightly different for 5000K (CW). Refer to IES files for actual CW rating.

**Pole Mount Drilling Specifications**



# RTA

## Round Tapered Aluminum Pole No Arm — 4-Bolt Base



**DRILL FOR (1) LEOTEK  
AR13 FIXTURE AT 90°**

**B Wall Thickness**  
Tapered Aluminum Tube  
Alloy 6063-T6

- Finish**
- O1 = Satin Aluminum
  - BA = Black Powder Coat
  - BH = White Powder Coat
  - BM = Dark Bronze Powder Coat
  - BV = Dark Green Powder Coat
  - GC = Gray Powder Coat
  - \*\* = Specify Finish

# RTA30D7B4

CATALOG NUMBER

FINISH

### Pole

The pole shaft will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

### Base Style

4-Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Aluminum Bolt Covers (Alloy 356-F) and Stainless Steel Hex Head Attaching Screws.



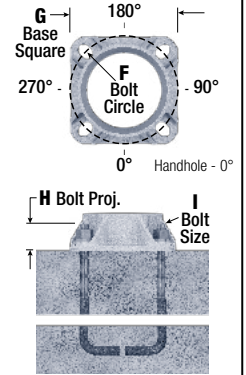
### Handhole

Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16NC Grounding Provision.

### Anchorage

Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10") of threaded end will be galvanized per ASTM A153.

Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.

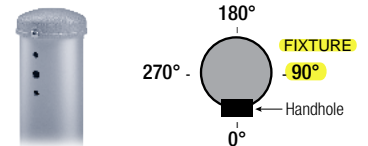


### Vibration Damper

When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

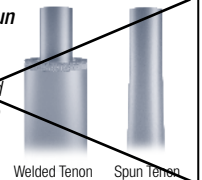
### Mounting Designation

**Side Drill Mount** - For Side Drill Mount applications specify luminaire type, quantity and orientation. A luminaire drilling template must be supplied at time of order.



### Tenon Mount - Welded or Spun

For Tenon Mount applications specify both Tenon diameter (2.375", 2.875", 3.5", etc.) and length (3", 4", etc.). Tenon style is factory option. Welded Tenon can be specified.



**EPA Notes:** Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.



26252 Hillman Highway  
Abingdon, VA 24210  
800.368.7171  
www.hapco.com

**WARNING:**  
Do not install light pole without luminaire.

Satin Aluminum or Powder Coated  
Finish per Customer Specification.

A Mtg. Hgt.	B WALL THICKNESS	C BUTT DIAMETER	TOTAL LUM. WEIGHT	MAXIMUM EPA					OLD CAT. NUMBER	CATALOG NUMBER
				90	100	110	120	130		
30	0.188"	7	90	11.0	8.0	7.2	5.6	4.6	51-125	RTA30D7B4-**

C BUTT DIA.	D TOP DIA.	F BOLT CIR. DIA.	G BASE SQ.	H BOLT PROJ.	I BOLT SIZE
7	4.5	10-11	10.5	2.75	1 x 36 x 4

Dimensions in Inches

<b>CUSTOMER NAME:</b>	
<b>PROJECT:</b>	<b>LOCATION:</b>
<b>NOTES:</b>	<b>QUANTITY:</b>