

**Gardco Form 10 LED round arm mount luminaires** are cutoff area luminaires featuring Comfort optics are designed to enhance visual comfort by reducing glare. Type 1, 2, 3, and 5 optical distributions.

Project: \_\_\_\_\_  
 Location: \_\_\_\_\_  
 Cat.No: \_\_\_\_\_  
 Type: \_\_\_\_\_  
 Lamps: \_\_\_\_\_ Qty: \_\_\_\_\_  
 Notes: \_\_\_\_\_

### Ordering guide

example: CA17L-140L-450-NW-G3-AR1-2-120-BL-IMR13-BZ

Prefix	Number of LEDs	Drive Current	LED Color - Generation	Mounting <sup>1</sup>	Distr.	Voltage	Controls	Motion Sensing	Twist Lock Receptacle	Electrical	Finish
<b>CA17L</b> 17" Cylindrical Luminaire LED	<b>140L</b> 140 LEDs <sup>8</sup>	<b>450</b> 450mA	<b>NW-G3</b> Neutral White 4000K, 80CRI Generation 3	<b>Arm Mounts</b> <b>AR1</b> for 3"-4.5" round pole <sup>1</sup>	<b>1</b> Type 1	<b>120</b> 120V	<b>DD</b> 0-10V Dimming Driver <sup>2</sup>	<b>IMR13</b> Integral with #3 lens <sup>3</sup>	<b>TLRD5</b> Twist Lock Receptacle 5 Pin <sup>4</sup>	<b>Fusing</b> <b>F1</b> Single (120, 277, 347VAC) <sup>4</sup>	<b>BRA</b> Bronze Anodized
<b>MA17L</b> 17" Semi-Spherical Luminaire LED	<b>196L</b> 196 LEDs <sup>9</sup>	<b>650</b> 650mA	<b>WW-G3</b> Warm White 3000K, 80CRI Generation 3	<b>AR2</b> for 4.5"+ round pole <sup>1</sup>	<b>2</b> Type 2 <sup>6</sup>	<b>208</b> 208V	<b>BL</b> Bi-level functionality <sup>2</sup>		<b>TLRPC</b> Twist Lock Receptacle with Photocell <sup>4,5</sup>	<b>F2</b> Double (208, 240, 480VAC) <sup>4</sup>	<b>BLA</b> Black Anodized
		<b>1150</b> 1500mA	<b>CW-G3</b> Cool White 5000K, 70CRI Generation 3	<b>AR3</b> for square pole <sup>1</sup>	<b>3</b> Type 3 <sup>6</sup>	<b>240</b> 240V				<b>F3</b> Canadian Double Pull (208, 240, 480VAC) <sup>4</sup>	<b>NA</b> Natural Anodized
		<b>1675</b> 1675mA		<b>Wall Mount</b> <b>WM1</b> with arm <sup>1</sup>	<b>5</b> Type 5	<b>277</b> 277V				<b>Pole Mount Fusing</b> <b>FP1</b> Single (120, 277, 347VAC) <sup>4</sup>	<b>BK</b> Black paint
		<b>2100</b> 2100mA		<b>WM2</b> without arm <sup>1</sup>		<b>347</b> 347V				<b>FP2</b> Double (208, 240, 480VAC) <sup>4</sup>	<b>BZ</b> Bronze paint
				<b>Mast Arm Fitter</b>		<b>480</b> 480V				<b>FP3</b> Canadian Double Pull (208, 240, 480VAC) <sup>4</sup>	<b>WH</b> White paint
				<b>MA</b> Mounts to a 2-3/8" O.D. mast arm <sup>17</sup>		<b>UNV</b> 120-277V 50hz/60hz				<b>Surge Protection</b> <b>SP1</b> Standard 10KVA	<b>MGY</b> Medium Gray paint
						<b>HVU</b> 347-480V 50hz/60hz				<b>SP2</b> Increased 20KVA	<b>Customer specified</b> <b>RAL</b> Specify optional color (ex: RAL7024)
											<b>CC</b> Custom color (Must supply color chip for required factory quote)

- Ordered and shipped with the luminaire.
- Not available with other control options.
- Available only with BL option.
- Must specify input voltage.
- Works with 3-pin or 5-pin NEMA photocell/dimming device.
- 2100mA configurations are limited to 30°C ambient for type 2 and type 3.
- MA not available with MA17L or MA22L.
- Available in Amber only
- Not available in Amber

# CA/MA17L Form 10 LED luminaires

## Site & Area – Round Arm Mount with Comfort Optics

### Accessories<sup>1</sup> (order separately)

#### Pole top fitters (one per pole):

##### PTF2-(F)

Pole top fitter fits 2 3/8-2 1/2" OD x 4" depth tenon with 1, 2, 3 or 4 luminaires at 90°. Requires AR1.

##### PTF3-(F)

Pole top fitter fits 3-3 1/2" OD x 6" depth tenon with 1, 2, 3 or 4 luminaires at 90°. Requires AR2.

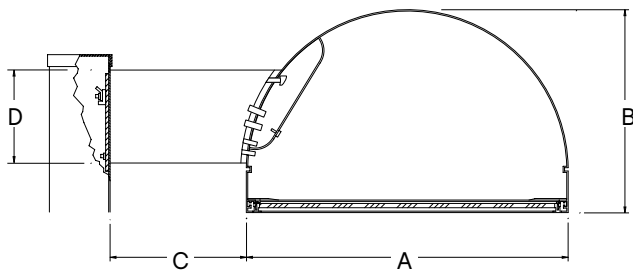
##### PTF4-(F)

Pole top fitter fits 3 1/2-4" OD x 6" depth tenon with 1, 2, 3 or 4 luminaires at 90°. Requires AR2.

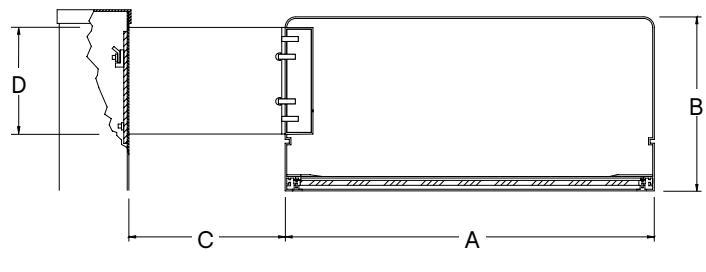
(F) Specify finish

1. Consult Signify to confirm whether specific accessories are BAA-compliant.

### Dimensions and EPA



MA style



CA style

Size	A	B	C	D	EPA's Single	EPA's Twin	EPA's Quad	Weight Single
MA17	17" 43.18cm	11" 27.94cm	5" 12.70cm	5" 12.70cm	.8ft <sup>2</sup> .07m <sup>2</sup>	1.6ft <sup>2</sup> .15m <sup>2</sup>	2.3ft <sup>2</sup> .21m <sup>2</sup>	27lbs. 12.25kg

Size	A	B	C	D	EPA's Single	EPA's Twin	EPA's Quad	Weight Single
CA17	17" 43.18cm	8" 20.32cm	5" 12.70cm	5" 12.70cm	.7ft <sup>2</sup> .07m <sup>2</sup>	1.5ft <sup>2</sup> .14m <sup>2</sup>	2.1ft <sup>2</sup> .20m <sup>2</sup>	27lbs. 12.25kg

### LED Wattage and Lumen Values - 4000K

Order Code	LED QTY	System Current (mA)	Color Temp (K)	Ave System Watts (W)	Type 1			Type 2			Type 3			Type 5		
					Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)
CA17L-140L-450-NW-G3-x-UNV	140	450	4000	22	2315	B1-U0-G1	105	1959	B1-U0-G1	89	2297	B1-U0-G1	104	2381	B1-U0-G1	108
CA17L-140L-650-NW-G3-x-UNV	140	650	4000	31	3095	B2-U0-G2	100	2619	B1-U0-G1	84	3071	B1-U0-G2	99	3184	B2-U0-G1	103
CA17L-140L-1150-NW-G3-x-UNV	140	1150	4000	52	5561	B2-U0-G2	107	4706	B2-U0-G2	91	5517	B2-U0-G2	106	5721	B3-U0-G2	110
CA17L-140L-1675-NW-G3-x-UNV	140	1675	4000	75	7719	B3-U0-G3	103	6532	B2-U0-G2	87	7659	B2-U0-G3	102	7942	B3-U0-G2	106
CA17L-140L-2100-NW-G3-x-UNV	140	2100	4000	94	9242	B3-U0-G3	98	7821	B3-U0-G3	83	9170	B3-U0-G3	98	9509	B3-U0-G2	101

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown.

Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout

NOTE: Some data may be scaled based on tests of similar (but not identical) luminaires. Contact factory for configurations not shown.

# CA/MA17L Form 10 LED luminaires

## Site & Area – Round Arm Mount with Comfort Optics

### LED Wattage and Lumen Values – 3000K

Order Code	LED QTY	System Current (mA)	Color Temp (K)	Ave System Watts (W)	Type 1			Type 2			Type 3			Type 5		
					Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)
CA17L-140L-450-WW-G3-x-UNV	140	450	3000	22	2315	B1-U0-G1	105	1959	B1-U0-G1	89	2297	B1-U0-G1	104	2381	B1-U0-G1	108
CA17L-140L-650-WW-G3-x-UNV	140	650	3000	31	3095	B2-U0-G2	100	2619	B1-U0-G1	84	3071	B1-U0-G2	99	3450	B2-U0-G1	111
CA17L-140L-1150-WW-G3-x-UNV	140	1150	3000	51	5561	B2-U0-G2	109	4706	B2-U0-G2	92	5517	B2-U0-G2	108	5721	B3-U0-G2	112
CA17L-140L-1675-WW-G3-x-UNV	140	1675	3000	75	7719	B3-U0-G3	103	6532	B2-U0-G2	87	7659	B2-U0-G3	102	7942	B3-U0-G2	106
CA17L-140L-2100-WW-G3-x-UNV	140	2100	3000	95	9242	B3-U0-G3	97	7821	B3-U0-G3	82	9170	B3-U0-G3	97	9509	B3-U0-G2	100

### LED Wattage and Lumen Values – 5000K

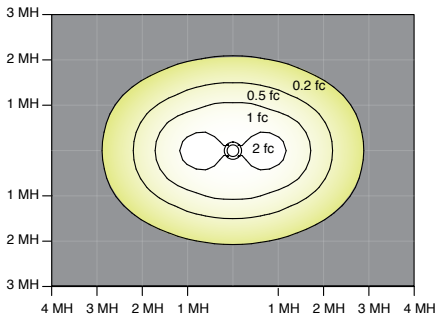
Order Code	LED QTY	System Current (mA)	Color Temp (K)	Ave System Watts (W)	Type 1			Type 2			Type 3			Type 5		
					Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)
CA17L-140L-450-CW-G3-x-UNV	140	450	5000	22	2315	B1-U0-G1	105	1959	B1-U0-G1	89	2297	B1-U0-G1	104	2381	B1-U0-G1	108
CA17L-140L-650-CW-G3-x-UNV	140	650	5000	31	3095	B2-U0-G2	100	2619	B1-U0-G1	84	3071	B1-U0-G2	99	3450	B2-U0-G1	111
CA17L-140L-1150-CW-G3-x-UNV	140	1150	5000	51	5561	B2-U0-G2	109	4706	B2-U0-G2	92	5517	B2-U0-G2	108	5721	B3-U0-G2	112
CA17L-140L-1675-CW-G3-x-UNV	140	1675	5000	75	7719	B3-U0-G3	103	6532	B2-U0-G2	87	7659	B2-U0-G3	102	7942	B3-U0-G2	106
CA17L-140L-2100-CW-G3-x-UNV	140	2100	5000	95	9242	B3-U0-G3	97	7821	B3-U0-G3	82	9170	B3-U0-G3	97	9509	B3-U0-G2	100

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown.

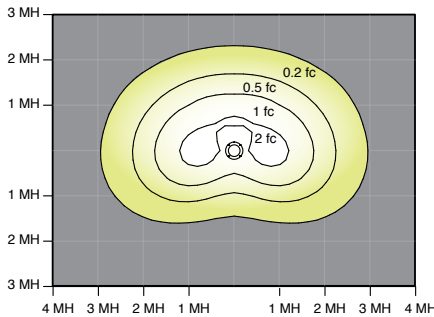
Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.

NOTE: Some data may be scaled based on tests of similar (but not identical) luminaires. Contact factory for configurations not shown.

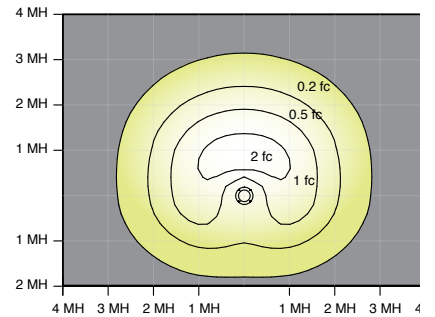
### Optical Distributions



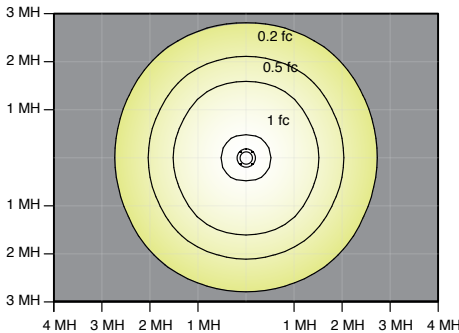
Comfort Type 1



Comfort Type 2



Comfort Type 3



Comfort Type 5

# CA/MA17L Form 10 LED luminaires

## Site & Area – Round Arm Mount with Comfort Optics

### Specifications

#### General Description

The Gardco Form 10 LED round products are cutoff luminaires featuring comfort optics. Form 10 LED round luminaires provide performance excellence and advanced Gardco LED thermal management technology. High performance Class 2 LED systems offer the potential for energy savings up to 50 % when compared to HID systems. Housings are one-piece seamless spun aluminum and finished with either Architectural Class 1 anodizing, electrostatically applied TGIC polyester powdercoat or polyurethane. Luminaires provide full cutoff performance.

#### Housing

Housing is one piece, .100" (.25cm) seamless aluminum with integral rolled circumferential reveal and lower section aperture incorporating a returned flange stiffener to protect against housing edge deformation.

#### Arm

Extruded aluminum arm is secured to prewired fixture by contractor. Assembly is suitable for mounting to pole without requiring access to luminaire. Internal extruded channels capture tie rods for proper luminaire to pole alignment.

#### Light Engine

Light guide technology provides low-glare, uniform illumination. Composed of 140 LEDs strategically positioned on the edge of the optical plate. Light engine luminous opening size optimized to best achieve a balance between lumen output and optical performance with the need to provide visual comfort. Light engine frame ensures contact with housing to provide heat conduction and sealing against the elements. Light engine is RoHS compliant. Standard color temperatures: 3000K +/- 130K, 4000K +/- 130K, 5000K +/- 225K. Minimum CRI of 70.

#### Energy Saving Benefits

System efficacy up to 110 lms/W with significant energy savings over Pulse Start Metal Halide luminaires. Optional control options provide added energy savings during unoccupied periods.

#### LED Optical System

The advanced LED comfort optical system provides Types 1, 2, 3, and 5. Composed of high performance UV-stabilized optical grade lens with molded micro-optics to achieve desired distribution optimized to get a exceptional lighting uniformity. Performance tested per LM-79 and TM-15 (IESNA) certifying its photometric performance. Luminaire designed with 0% uplight (U0 per IESNA TM-15).

#### Electrical

**Twist-Lock Receptacle (TLRD5/TLRPC):** Twist Lock Receptacle with 5 pins enabling dimming can be used with a twistlock photoelectric cell or a shorting cap. Dimming Receptacle

Type B (5-pin) in accordance to ANSI C136.41. Can be used with third-party control system. Receptacle located on top of luminaire housing. When specifying receptacle with twistlock photoelectric cell, voltage must be specified. When ordering Twist-lock receptacle (TLRD5), photocell or shorting cap is not included.

**Driver:** Driver efficiency (>90% standard). 120-480V available (restrictions apply). Open/short circuit protection. Optional 0-10V dimming to 10% power. RoHS compliant.

**Surge protection (SP1/SP2):** Surge protection device tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line Neutral and NeutralGround, and in accordance with DOE MSSLSC Model Specification for LED Roadway Luminaires Appendix D Electrical Immunity High test level 10kV/10kA. 20kV / 10kA surge protection device that provides extra protection beyond the SP1 10kV/10kA level.

#### Finish

Anodized housings are created with an Aluminum Association Architectural Class I anodizing process to achieve a bronze, black or natural aluminum finish. Painted units are finished with hardcoat, fade resistant, electrostatically applied TGIC polyester powdercoat or polyurethane.

#### Labels

UL/cUL listed to the UL 1598 standard, suitable for Wet Locations. Suitable for use in ambients from -40° to 40°C (-40° to 104°F). The quality systems of this facility have been registered by UL to the ISO 9001 series standards. Some Form 10 configurations are DesignLights Consortium® qualified. Consult DLC Qualified Products list for more details.

#### Limited Warranty

5 year limited warranty. See [signify.com/outdoorluminaires](http://signify.com/outdoorluminaires) for complete details and exclusions.

#### Predicted Lumen Depreciation Data

Ambient Temperature °C	System Current	Calculated L <sub>70</sub> hrs <sup>1,2</sup>	L <sub>70</sub> per TM21 <sup>2,3</sup>	Lumen Maintenance @ 60,000hrs
25 °C	up to 2100mA	>100,000	>60,000	89%

1. Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology.
2. Actual experience may vary due to field application conditions. L70 is the predicted time when LED performance depreciates to 70% of initial lumen output.
3. Calculated per IESNA TM21-11. Published L70 hours limited to 6 times actual LED test hours

#### Buy American Act of 1933 (BAA):

This product is manufactured in one of our US factories and, as of the date of this document, this product was considered a commercially available off-the-shelf (COTS) item meeting the requirements of the BAA. This BAA designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies. Prior to ordering, please visit [www.signify.com/baa](http://www.signify.com/baa) to view a current list of BAA-compliant products to confirm this product's current compliance.

