

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-196L-450-NW-G3-AR1-2-120-BL-IMR13-BZ

Prefix	Number of LEDs	Drive Current	LED Color - Generation	Mounting ¹	Distr.	Voltage	Controls	Motion Sensing	Twist Lock Receptacle	Electrical	Finish
CA17L 17" Cylindrical Luminaire LED	196L 196 LEDs	450 450mA	NW-G3 Neutral White 4000K, 80CRI Generation 3	Arm Mounts AR1 for 3"-4.5" round pole ¹	1 Type 1	120 120V	DD 0-10V Dimming Driver ²	IMR13 Integral with #3 lens ³	TLRD5 Twist Lock Receptacle 5 Pin ⁴	Fusing F1 Single (120, 277, 347VAC) ⁴	BRA Bronze Anodized
MA17L 17" Semi-Spherical Luminaire LED	1150 1500mA	650 650mA	WW-G3 Warm White 3000K, 80CRI Generation 3	AR2 for 4.5"+ round pole ¹	2 Type 2 ⁶	208 208V	BL Bi-level functionality ²		TLRPC Twist Lock Receptacle with Photocell ^{4,5}	F2 Double (208, 240, 480VAC) ⁴	BLA Black Anodized
	1675 1675mA	1150 1500mA	CW-G3 Cool White 5000K, 70CRI Generation 3	AR3 for square pole ¹	3 Type 3 ⁶	240 240V				F3 Canadian Double Pull (208, 240, 480VAC) ⁴	NA Natural Anodized
	2100 2100mA			Wall Mount WM1 with arm ¹	5 Type 5	277 277V				Pole Mount Fusing FP1 Single (120, 277, 347VAC) ⁴	BK Black paint
				WM2 without arm ¹		347 347V				FP2 Double (208, 240, 480VAC) ⁴	BZ Bronze paint
				Mast Arm Fitter		480 480V				FP3 Canadian Double Pull (208, 240, 480VAC) ⁴	WH White paint
				MA Mounts to a 2-3/8" O.D. mast arm ^{1,7}		UNV 120-277V 50hz/60hz				Surge Protection SP1 Standard 10KVA	MGY Medium Gray paint
						HVU 347-480V 50hz/60hz				SP2 Increased 20KVA	Customer specified RAL Specify optional color (ex: RAL7024)
											CC Custom color (Must supply color chip for required factory quote)

1. Ordered and shipped with the luminaire.
2. Not available with other control options.
3. Available only with BL option.
4. Must specify input voltage.
5. Works with 3-pin or 5-pin NEMA photocell/dimming device.
6. 2100mA configurations are limited to 30°C ambient for type 2 and type 3.
7. MA not available with MA17L or MA22L.

CA/MA17L Form 10 LED luminaires

Site & Area – Round Arm Mount with Comfort Optics

Accessories¹ (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.

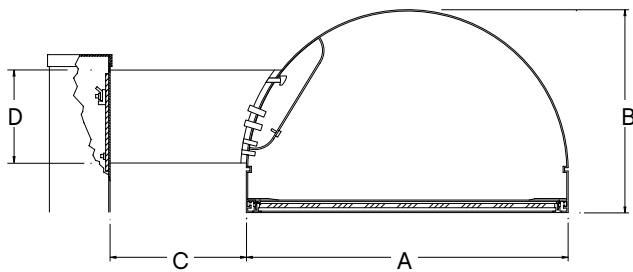
PTF4-(F)

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

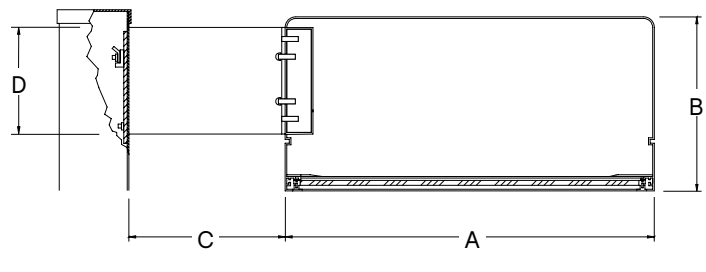
(F) Specify finish

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 ² .07m ²	1.6ft ² .15m ²	2.3ft ² .21m ²	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 ² .07m ²	1.5ft ² .14m ²	2.1ft ² .20m ²	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-196L-450-NW-G3-x-UNV	196	450	4000	21	2528	B1-U0-G1	121	2174	B1-U0-G1	104	2427	B1-U0-G1	116	2361	B1-U0-G1	113
CA17L-196L-650-NW-G3-x-UNV	196	650	4000	30	3643	B2-U0-G2	121	3132	B1-U0-G1	104	3498	B2-U0-G2	117	3402	B2-U0-G1	113
CA17L-196L-1150-NW-G3-x-UNV	196	1150	4000	51	6228	B3-U0-G3	122	5354	B2-U0-G2	105	5979	B2-U0-G2	117	5815	B3-U0-G2	114
CA17L-196L-1675-NW-G3-x-UNV	196	1675	4000	74	8691	B3-U0-G3	118	7472	B3-U0-G3	101	8345	B3-U0-G3	113	8116	B3-U0-G2	110
CA17L-196L-2100-NW-G3-x-UNV	196	2100	4000	93	10400	B3-U0-G3	112	8942	B3-U0-G3	96	9985	B3-U0-G3	107	9712	B3-U0-G2	104

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-196L-450-WW-G3-x-UNV	196	450	3000	21	2431	B1-U0-G1	116	2090	B1-U0-G1	100	2334	B1-U0-G1	112	2270	B1-U0-G1	109
CA17L-196L-650-WW-G3-x-UNV	196	650	3000	30	3503	B2-U0-G2	117	3012	B1-U0-G1	100	3363	B2-U0-G2	112	3271	B2-U0-G1	109
CA17L-196L-1150-WW-G3-x-UNV	196	1150	3000	51	5988	B3-U0-G3	117	5148	B2-U0-G2	101	5749	B2-U0-G2	113	5591	B3-U0-G2	110
CA17L-196L-1675-WW-G3-x-UNV	196	1675	3000	74	8357	B3-U0-G3	113	7185	B3-U0-G3	97	8024	B3-U0-G3	109	7804	B3-U0-G2	106
CA17L-196L-2100-WW-G3-x-UNV	196	2100	3000	93	10000	B3-U0-G3	107	8598	B3-U0-G3	92	9601	B3-U0-G3	103	9338	B3-U0-G2	100

LED Wattage and Lumen Values – 5000K

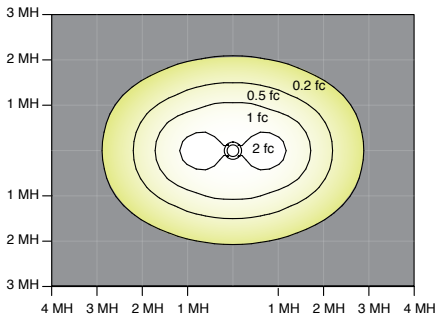
Order Code	LED QTY	System Current (mA)	Color Temp (K)	Ave System Watts (W)	Type 1			Type 2			Type 3			Type 5		
					Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)	Lumen Output	BUG Rating	Efficacy (lm/W)
CA17L-196L-450-CW-G3-x-UNV	196	450	5000	21	2654	B1-U0-G1	127	2282	B1-U0-G1	109	2549	B1-U0-G1	122	2479	B1-U0-G1	119
CA17L-196L-650-CW-G3-x-UNV	196	650	5000	30	3825	B2-U0-G2	128	3289	B1-U0-G1	110	3673	B2-U0-G2	122	3572	B2-U0-G1	119
CA17L-196L-1150-CW-G3-x-UNV	196	1150	5000	51	6539	B3-U0-G3	128	5621	B2-U0-G2	110	6278	B2-U0-G2	123	6105	B3-U0-G2	120
CA17L-196L-1675-CW-G3-x-UNV	196	1675	5000	74	9126	B3-U0-G3	124	7846	B3-U0-G3	106	8762	B3-U0-G3	119	8522	B3-U0-G2	116
CA17L-196L-2100-CW-G3-x-UNV	196	2100	5000	93	10920	B3-U0-G3	117	9389	B3-U0-G3	101	10485	B3-U0-G3	113	10197	B3-U0-G2	110

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

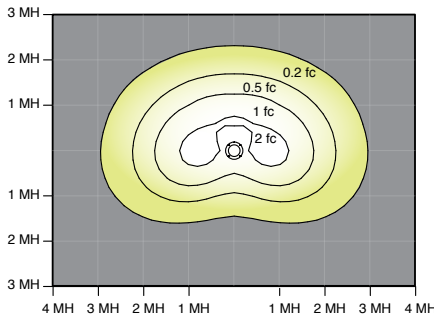
Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout

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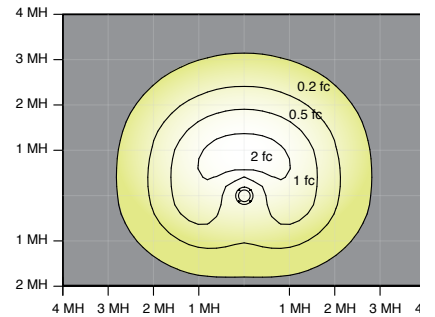
Optical Distributions



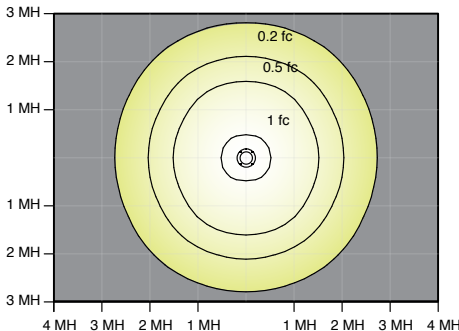
Comfort Type 1



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 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 for complete details and exclusions.

Predicted Lumen Depreciation Data

Ambient Temperature °C	System Current	Calculated L ₇₀ hrs ^{1,2}	L ₇₀ per TM21 ^{2,3}	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 to view a current list of BAA-compliant products to confirm this product's current compliance.

