GULLWING

AREA LIGHTING

GARDCO
LIGHTING

SCONCE

THIRTEEN

EIGHTEEN

FORM

FUNCTION

PERFORMANCE

An inspiration born of classic forms and thirty years practical experience, Gullwing is equal parts architecture, engineering and performance. These are luminaires where the lines between form, function and performance are indistinguishable. Thirteen and eighteen inch luminaires and their companion sconces, all featuring an exceptionally sleek contoured form, provide the opportunity to stylishly illuminate pedestrian and access areas, as well as large sites. With Gardco Form Ten X optics and lamps to 1000 watts, Gullwing is the new shape of high performance lighting.

FORM

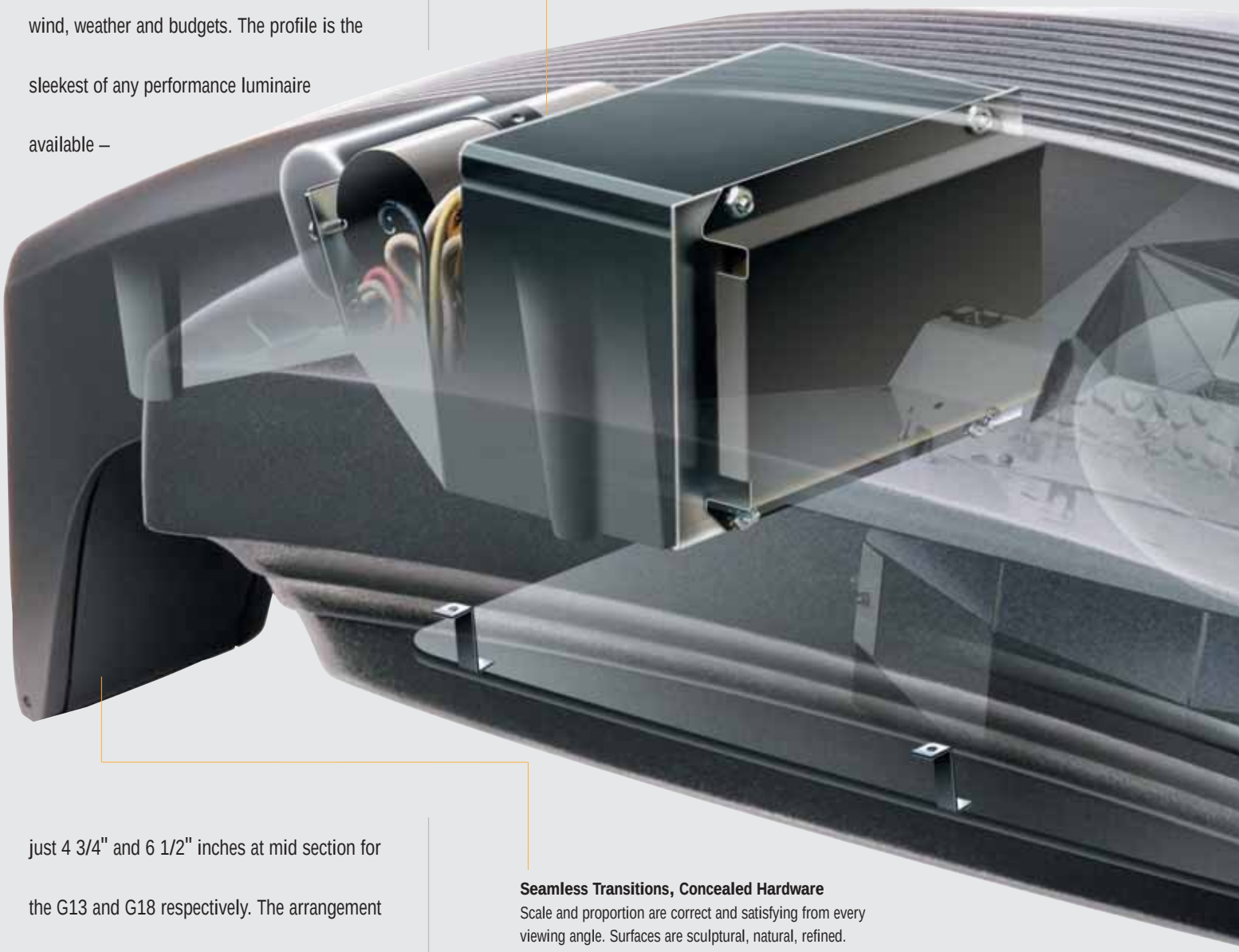
Aesthetically, the Gardco Gullwing draws strength from simplicity of form that makes them a natural complement to any architectural vocabulary. The subtle elimination of the mounting arm allows Gullwing an uninterrupted transition from luminaire to pole. The striking effect is that the luminaire and arm become one. But this design serves practical purposes as well – minimizing wind load and strengthening the assembly.

The Gullwing 107 sconce adds considerable versatility to the series application as forward, wide and medium throw optics to 175 watts are available. Of course, like all Gardco performance optics, illumination is glare-free with sharp cutoff.

FUNCTION

Gullwing is a model of efficiency – an elegant response to the inherent obstacles of heat, wind, weather and budgets. The profile is the sleekest of any performance luminaire available –

Separate ballast and lamp compartments serve to reduce the effects of temperature extremes, maximizing component life.



just 4 3/4" and 6 1/2" inches at mid section for the G13 and G18 respectively. The arrangement of components, hardware, hinging mechanisms and material transitions all speak to the integrity of the design and construction program. Every aspect of this luminaire exhibits a thoughtful, practical and highly refined approach to initial and long term performance.

Seamless Transitions, Concealed Hardware
Scale and proportion are correct and satisfying from every viewing angle. Surfaces are sculptural, natural, refined. There are no visible transitions between luminaire door frame and the supporting arm. There is no visible hardware.

Long Lasting Finishes
The finish is a fade and abrasion resistant, electrostatically applied, thermally cured TGIC powder coat. Gullwing housings are thoroughly cleaned and chromate acid treated prior to paint application. Standard colors feature the lightly textured Gardco finish. Custom colors may vary in texture, so please consult factory.

Wind Cheating Aerodynamics
Gullwing cheats the wind three ways. First, the slippery silhouette yields an exceptionally low coefficient of drag and correspondingly low EPA values (G18 EPA 1.2 [including 1000 watt MH] G13 EPA 0.8). The immediate benefit is the ability to reduce pole gauge and diameter. Because poles are such a significant portion of total project cost, savings can be substantial.

Gullwing harnesses the wind across fins that are cast into the top of the luminaire. This design acts as a heat sink to cool the lamp and ballast compartments. The combination of large surface area and the heat sink effectively lowers operating temperatures within the luminaire, further extending ballast and lamp life.

Tooless Access
The integral, extruded, click-lock latch smoothly integrates into the face of the luminaire. The mechanical closing mechanism assures that the gasket seals tightly and continuously.

Weather-Protected Construction
Gullwing is completely sealed at all points of material transition to exclude the intrusion of rain, insects and dust. Because the upper and lower housing are single die castings, the only points of entry are the door frame and lens. When the door frame is closed, the 1/8" gasketing is compressed, forming a continuous, positive seal. The lens is EPDM sealed to the frame. Heavy duty galvanized steel retainers secure the lens.

SERVICE

Tooless access for installation and service is a Gardco trademark. Gullwing improves on the tradition with a quick entry door handle providing complete access to optical, electrical and mounting hardware systems. The latch firmly engages as the door is closed, creating a weather-tight seal by compressing the perimeter gasketing.

For safety and ease of relamping, a heavy gauge lanyard on the G18 and G13 secures the door frame in a semi-open position. A quick release is provided to allow the door to swing down, so that the optical assembly can be lowered.

All Gullwing luminaires feature factory pre-wired electrical components with quick disconnect plugs. The ballast assembly is a unitized, pre-wired component, which hinges on stainless steel mounting brackets. It is removable without tools.

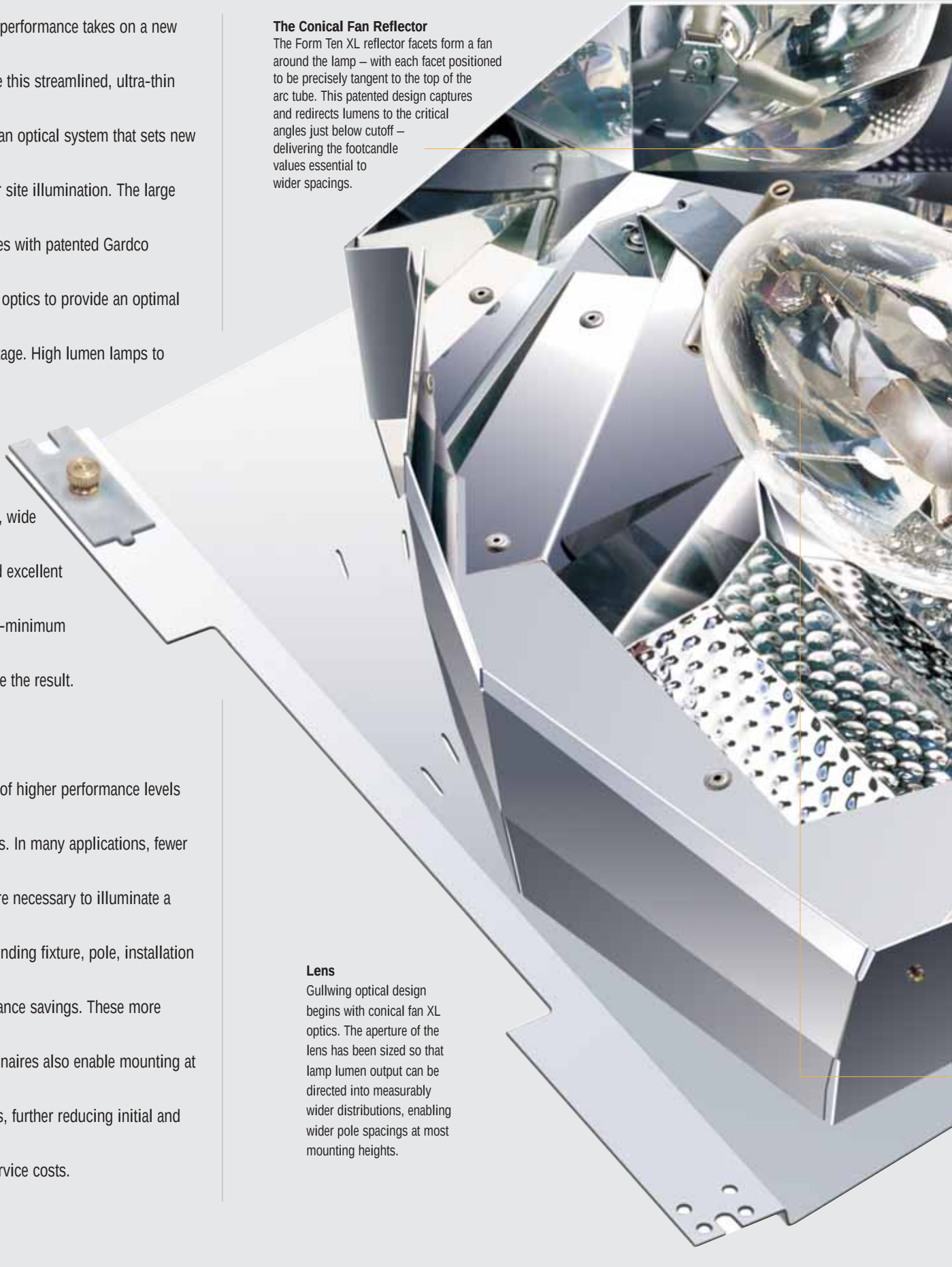
The G18 is pictured at left, G13 above.

PERFORMANCE

In Gullwing, performance takes on a new shape. Inside this streamlined, ultra-thin luminaire is an optical system that sets new standards for site illumination. The large lens combines with patented Gardco conical "XL" optics to provide an optimal lighting package. High lumen lamps to 1000W MH, sharp cutoff glare control, wide spacings and excellent maximum-to-minimum uniformity are the result.

The benefits of higher performance levels are numerous. In many applications, fewer luminaires are necessary to illuminate a site, compounding fixture, pole, installation and maintenance savings. These more efficient luminaires also enable mounting at lower heights, further reducing initial and long term service costs.

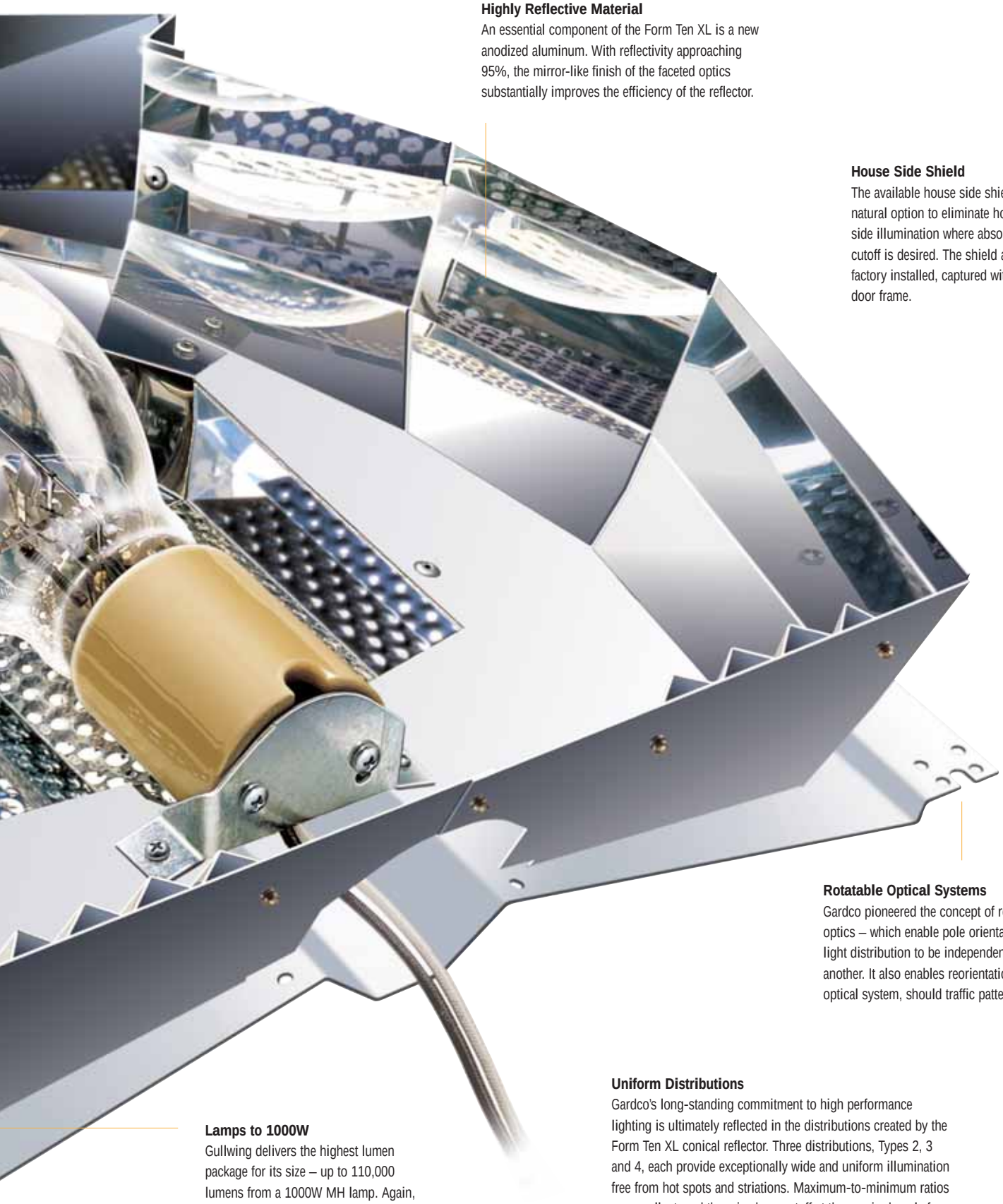
The Conical Fan Reflector
The Form Ten XL reflector facets form a fan around the lamp – with each facet positioned to be precisely tangent to the top of the arc tube. This patented design captures and redirects lumens to the critical angles just below cutoff – delivering the footcandle values essential to wider spacings.



Lens
Gullwing optical design begins with conical fan XL optics. The aperture of the lens has been sized so that lamp lumen output can be directed into measurably wider distributions, enabling wider pole spacings at most mounting heights.

Highly Reflective Material
An essential component of the Form Ten XL is a new anodized aluminum. With reflectivity approaching 95%, the mirror-like finish of the faceted optics substantially improves the efficiency of the reflector.

House Side Shield
The available house side shield is a natural option to eliminate house side illumination where absolute cutoff is desired. The shield arrives factory installed, captured within the door frame.

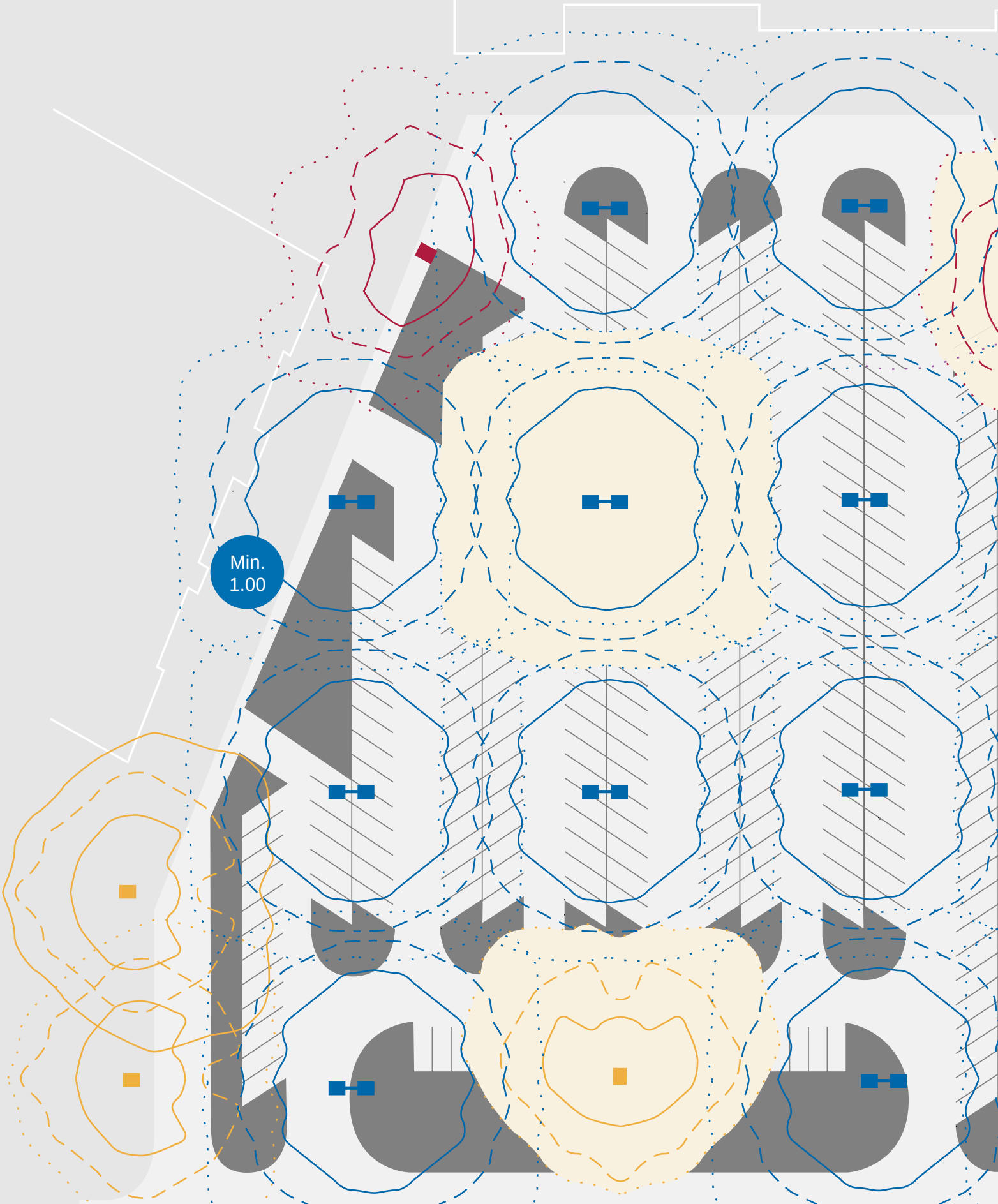


Rotatable Optical Systems
Gardco pioneered the concept of rotatable optics – which enable pole orientation and light distribution to be independent of one another. It also enables reorientation of the optical system, should traffic patterns change.

Lamps to 1000W
Gullwing delivers the highest lumen package for its size – up to 110,000 lumens from a 1000W MH lamp. Again, the result is better performance, wider spacings and lower overall project cost.

Uniform Distributions
Gardco's long-standing commitment to high performance lighting is ultimately reflected in the distributions created by the Form Ten XL conical reflector. Three distributions, Types 2, 3 and 4, each provide exceptionally wide and uniform illumination free from hot spots and striations. Maximum-to-minimum ratios are excellent, and there is sharp cutoff at the required angle for each distribution. Gullwing G18 also includes Type 1 and Q (Type V) optics in the original Form Ten reflector design.

PERFORMANCE



SITE SPECIFICS

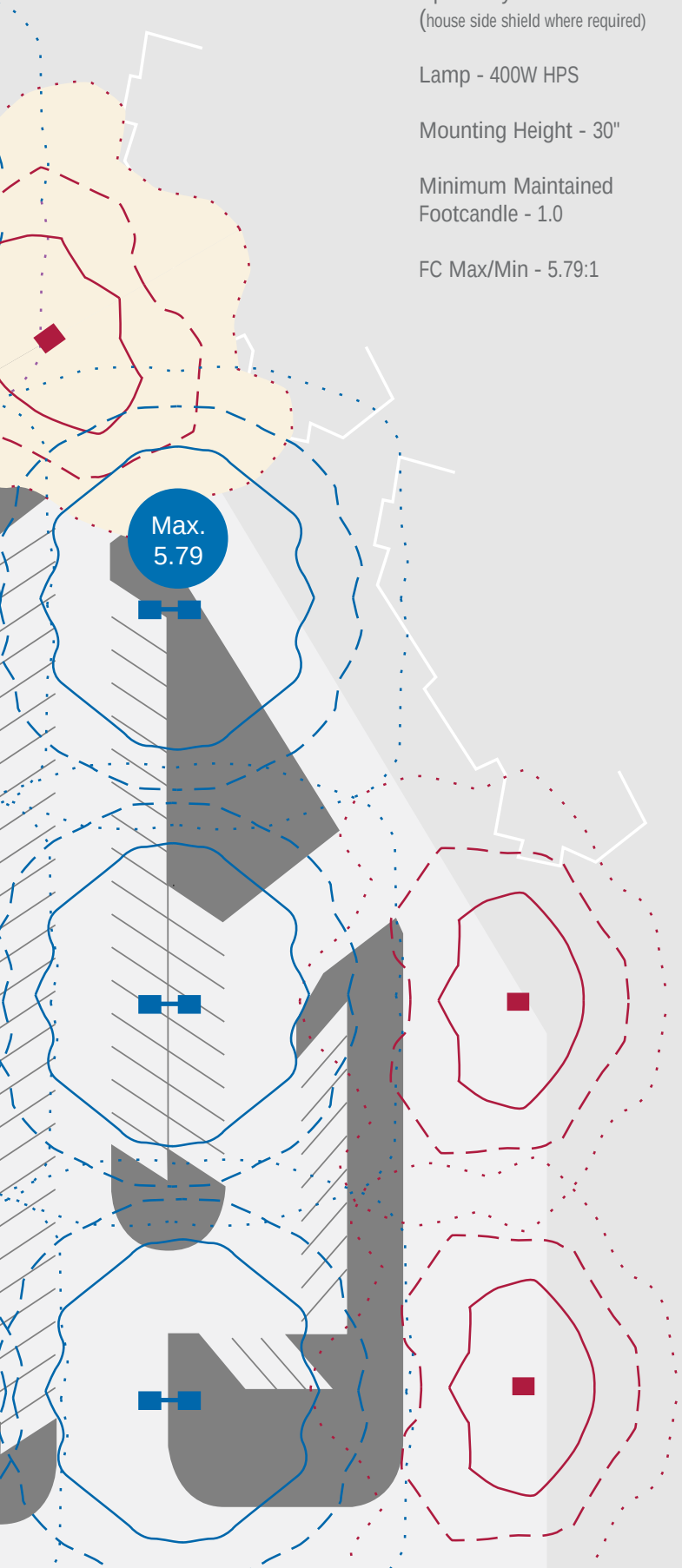
Optical Systems - 4XL
(house side shield where required)

Lamp - 400W HPS

Mounting Height - 30"

Minimum Maintained
Footcandle - 1.0

FC Max/Min - 5.79:1



Closer inspection of a typical lighting plan demonstrates how the Gullwing conical fan XL optics deliver uniform illumination free from hot spots and striations – even with wide pole spacing. Maximum pavement illumination is 7.01, yielding a maximum to minimum ratio of 5.79 : 1.

Although five optical systems are available, this site is illuminated using just one. In the center of the parking area, 4XL optics are mounted back-to-back in twin luminaires creating an efficient square distribution. Note how the addition of the factory-installed house side shield completely eliminates backside trespass at the perimeter — in this instance where traffic lanes abut office and residential areas.

A comprehensive Gullwing Applications Guide and the expert services of Gardco's Applications Engineering Department stand ready to assist with site lighting analysis and development. Photometric data is available in hard copy and disk format.

APPLICATION

Of particular interest is the extended forward throw of the 4XL optical system, which enables exceptionally wide illumination patterns. Even at a mounting height of 24', Gullwing eliminates the need for cobra heads and unsightly mast arm extensions.

Unifying the lighting plan with companion sconces elevates performance and aesthetics.

Sleek, sophisticated – a natural compliment to today's architecture.

Gullwing's precision optics make it possible to tailor mounting locations, pole heights and lamps to unique site geometries, continuing the Gardco tradition of providing glare free illumination and absolute sharp cutoff.

Here, Gullwing pole mount luminaires are paired with companion sconces. Sconces with forward throw optics are available with a 5° uptilt option which extends the effective illumination pattern out and away from buildings.

G13 ORDERING

PREFIX	CONFIGURATION	DISTRIBUTION	WATTAGE	VOLTAGE	FINISH	OPTIONS
Example: G13	1	2XL	100MH	208	BRP	POLY

G13	1	2XL	50 HPS[1]	120	BRP	F
	2	3XL	70 HPS	208	BLP	LF
	3	4XL	100 HPS	240	WP	PC
	4	MTS[5]	150 HPS	277	NP	PCR
	W		50 MH[1]	347 (70W and above)	OC	POLY (100W Max)
	WS		70 MH	480	SC	HS
			100 MH			QS (100W Quartz Max)
			150 MH[3]			PTF
			175 MH			SPA
			(2) 60 CF[6]			
			(3) 42 TRF[7]			

All lamps are medium base.
1. Available in 120V or 277V only.
2. Not available with 480V.
3. ANSI #M102
4. Pulse Start Metal Halide Lamp.
5. Fluorescent only.
6. 120V through 277V only. 50/60 HZ starting temperature is -22˚F.
7. 120V through 277V and 347V only. Starting temperature is 0˚F.

SPA is required for square poles.

G18 ORDERING

PREFIX	CONFIGURATION	DISTRIBUTION	WATTAGE	VOLTAGE	FINISH	OPTIONS
Example: G18	1	2XL	400MH	208	BRP	POLY

G18	1	1[1]	150 HPS	120	BRP	F
	2	2XL	250 HPS	208	BLP	LF
	3	3XL	400 HPS	240	WP	PC
	4	4XL	600 HPS	277	NP	PCR
	W	Q[1]	750 HPS[2]	347	OC	POLY (250W Max)
	WS		100 MH[3]	480	SC	HS
			150 MH[3]			QS (150W Quartz Max.
			175 MH			RPA1 N/A above 400W HID)
			250 MH			RPA2
			250 PSMH*			PTF2
			320 PSMH*			PTF3
			350 PSMH*			PTF4
			400 MH			SQPTF
			400 PSMH*			SG
			750 PSMH[2,4]*			
			1000 MH[2,5]			
			1000 PSMH[5]*			

1. Types 1 and Q are not available above 400W.
2. Furnished with sag glass lens only.
3. Venture mogul base lamps required.
4. M149 only. Requires MS750/PS/BU-HOR/BT37 lamp.

NOTE: 400MH requires ED-28 or BT28 reduced jacket lamp.

RPA is required for round poles.

*Pulse Start Metal Halide

Note 5

For 1000 Metal Halide use:

Brand	Product Code	Catalog Number
Venture	53702	MS1000W/HOR/BT37/3K
G.E.	18205	MVR1000/U/BT37
Venture	15332	MH1000W/U/BT37

For 1000 Pulse Start use:

Brand	Product Code	Catalog Number
G.E.	10389	MVR1000/U/BT37/PA
Venture	49111	MS1000W/HOR/T25/PS

WARNING: Use of other lamps voids warranty.

CONFIGURATION

- 1 Single Fixture Assembly
- 2 Twin (Specify 90˚ or 180˚ Degrees)
- 3 Triple Assembly
- 4 Quad Assembly
- W Wall Mount, Recessed J-Box
- WS Wall Mount, Surface Conduit (splice compartment within wall canopy)

DISTRIBUTION

- 1 Type I
- 2XL Type II
- 3XL Type III
- 4XL Type IV
- Q Type V
- MTS Medium Throw with Solite® Lens (G13 only)

RPA1 is used for 3" o.d. poles or tapered round poles where top o.d. is less than 4". RPA2 is used for 4" to 5" round poles.

FINISH

- BRP Bronze Paint
- BLP Black Paint
- WP White Paint
- NP Natural Paint
- OC Optional Color Paint
  Specify RAL designation ex: OC-RAL7024
- SC Special Color Paint (must supply color chip)

OPTIONS

- F Fusing
- LF In-Pole Fusing
- PC Receptacle and Photocontrol
- PCR Photocontrol (Receptacle Only)
- POLY Polycarbonate Sag Lens (250W Max-G18 & 100W Max-G13)
- HS Houseside Shield
- QS Quartz Standby (Max 100W Quartz G13, 150W Quartz G18)
- PTF2 Pole Top Fitter (2 3/8" Dia. Tenon)
- PTF3 Pole Top Fitter (3-3½" Dia. Tenon)
- PTF4 Pole Top Fitter (3½"-4" Dia. Tenon)
- SQPTF Square Pole Top Fitter
- SPA Square Pole Adaptor (G13 only)
- RPA 1 Round Pole Adaptor 1 (G18 only)
- RPA 2 Round Pole Adaptor 2 (G18 only)
- SG Sag Glass Lens (G18 only. Supplied standard on 750W and 1000W)

107 SCONCE ORDERING

Lamp/Voltage Chart – 107

E17 Voltage:	120	208	240	277	347	480
50MH		•			•	
70MH		•	•	•	•	
100MH	•	•	•	•	•	•
150MH	•	•	•	•	•	
175MH	•	•	•	•	•	•
35HPS	•					
50HPS	•			•		
70HPS	•	•	•	•	•	•
100HPS	•	•	•	•	•	•
150HPS	•	•	•	•	•	
50CMHE	•			•		
70CMHE	•			•		
100CMHE	•			•		
Fluorescent						
26QF[1]	•	•	•	•	•	
226QF[1]	•	•	•	•	•	
32TRF[1]	•	•	•	•	•	
42TRF[1]	•	•	•	•	•	
242TRF[1]	•	•	•	•		

PREFIX	DISTRIBUTION	FINISH	OPTIONS
Example: 107	WT	BRP	PCB
107	FT Forward Throw[2]	BRP Bronze	F Fusing (120V, 277V)
107EM	WT Wide Throw[2]	BLP Black	QS Quartz Standby
107EMR	MT Medium Throw	WP White	PCB Button Type Photocontrol
		NP Natural Aluminum	SL Solite® Diffusing Lens
		BGP Beige	Solite is a registered trademark of AFG Industries
		OC Optional Color *Specify RAL designation. ex. OC-RAL7024*	UT 5° Uptilt
		SC Special Color *Color chip required*	WS Wall Mounted Box for Surface Conduit
			WG Wire Guard

Configuration Chart – 107EM

Distribution	Distribution			Voltage					
107EM	FT	WT	MT	120	208	240	277	347	480
226QF[1]			•	•			•		
42TRF[1]			•	•			•		

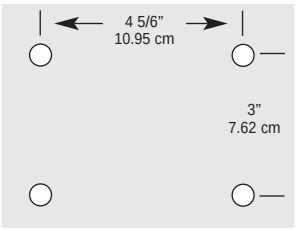
Configuration Chart – 107EMR

	Distribution			Voltage					
107EMR	FT	WT	MT	120	208	240	277	347	480
226QF[1]			•	•			•		
42TRF[1]			•	•			•		
242TRF[1]			•	•			•		

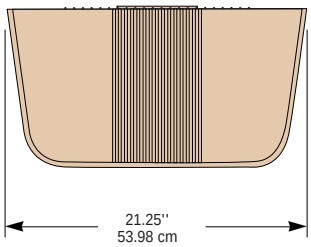
Combinations marked with a dot are available for ordering.
MH – Metal Halide, CMHE – Ceramic Metal Halide with Electronic Ballast, HPS – High Pressure Sodium, QF – Quad Fluorecent, TRF – Triple Tube Fluorescent.

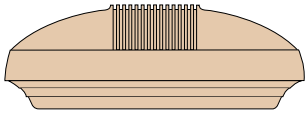
1. 26QF, 32TRF and 42TRF types feature an electronic fluorescent ballast that accepts 12V through 277V, 50hz or 60hz input.
2. Not available in fluorescent.

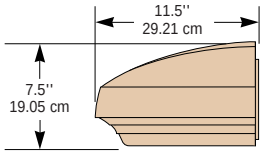
DIMENSIONS



Mounting Bracket Pattern







PERFORMANCE

VERSATILITY – The 107 Gullwing Sconce is available in a forward throw distribution for small parking areas and a wide or medium distribution for pedestrian areas. Forward throw units are available with a 5˚ uptilt option which extends the effective illumination pattern out and away from buildings. Medium throw units offer performance similar to interior downlights, allowing for illumination of interior spaces. All are suitable for damp location uplighting in lobbies, atriums and beneath canopies.



Forward Throw

Wide Throw

Medium Throw



SPECIFICATIONS

HOUSING: A one-piece die cast aluminum housing mounts directly to a pole or wall without the need for a support arm. The low profile rounded form generates wind loading requirements of 1.2 EPA-G18 and 0.8-G13.

LENS ASSEMBLY: A single-piece die cast aluminum lens frame hinges down from the housing and is secured by a stainless steel lanyard and hinge pin.

An optically clear, heat and impact resistant tempered flat glass lens is mechanically secured with eight retainers (six on G13) (G18 1000W MH utilizes a slightly convex lens). The electrical and optical chambers are thoroughly sealed with a one-piece memory retentive hollow core EPDM gasket to prevent intrusion by rain, dust and insects.

OPTICAL SYSTEMS: The segmented optical systems are manufactured from homogenous sheet aluminum which has been electrochemically brightened, anodized and sealed. The multifaceted arc image duplicating systems are designed to produce IES Types I (1), II (2XL), III (3XL), IV (4XL), and V (Q). With the 2XL, 3XL and 4XL luminaires, the reflector facets form a conical fan around the arc tube with each facet positioned to be precisely tangent to the top of the arc tube.

Sconce optics provide for forward throw, wide and medium distributions. For the G18 a mogul base lampholder is glazed porcelain with a nickel plated screw shell. Position-oriented sockets are supplied standard to accept super metal halide lamps. All G18 units feature lamp stabilizers except 150 HPS. Lampholder for the G13 and 107 Gullwing Sconce is medium base.

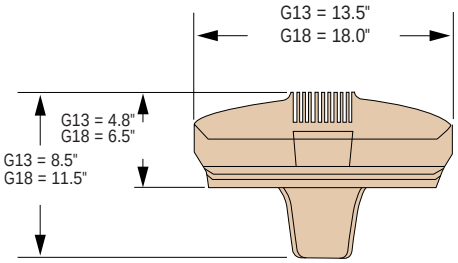
ELECTRICAL: All electrical components are UL recognized, factory tested, and mounted on a unitized plate with quick electrical disconnects. Each high power factor ballast is the separate component type capable of providing reliable lamp starting down to -20°F.

FINISH: Luminaires are finished with a fade and abrasion resistant, electrostatically applied, thermally cured textured TGIC powder coat. Units are thoroughly cleaned and provided with a patented chromate acid pretreatment. Optical and special colors may vary. Contact factory.

LABELS: All fixtures bear UL or CUL (where applicable) Wet Location labels.

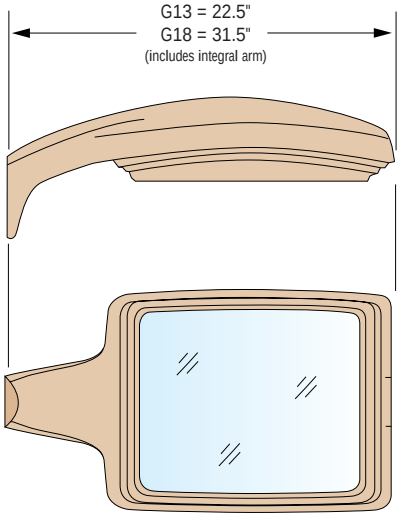
As part of continuing quality improvement programs, Gardco Lighting reserves the right to change materials or modify the design of its product without notification.

DIMENSIONS



E.P.A. (SQ.FT.)

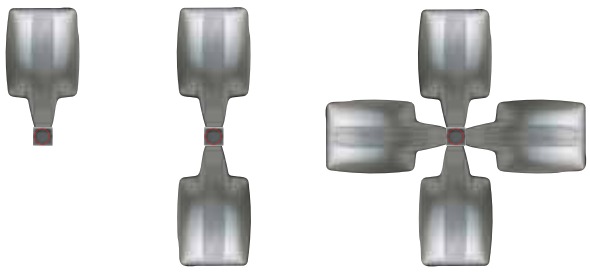
G13	G18
1-way – .8	1-way – 1.2
2-way – 1.6	2-way – 2.4
3-way – 2.2	3-way – 3.2
4-way – 2.2	4-way – 3.2



CONFIGURATIONS

For wall-mounted applications, the the design allows mounting to both a j-box and surface conduit. For surface conduit, the splice is made inside the wall canopy. Splice box volume is 50.5 (G18) and 26 (G13) cubic inches.

Gullwing is UL approved for through wiring.



1 2 4

Fascia Plates

Form 10 Round

100 Line Sconces

Bollards

GARDCO
LIGHTING

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