

C·R·S



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#PAGES 10 (Including Cover)

PROJECT : UMC North Alabama
Conference

DATE: January 27, 2004

Center at BSC

TO: Mike Davenport – Brice Building
(918-1850)

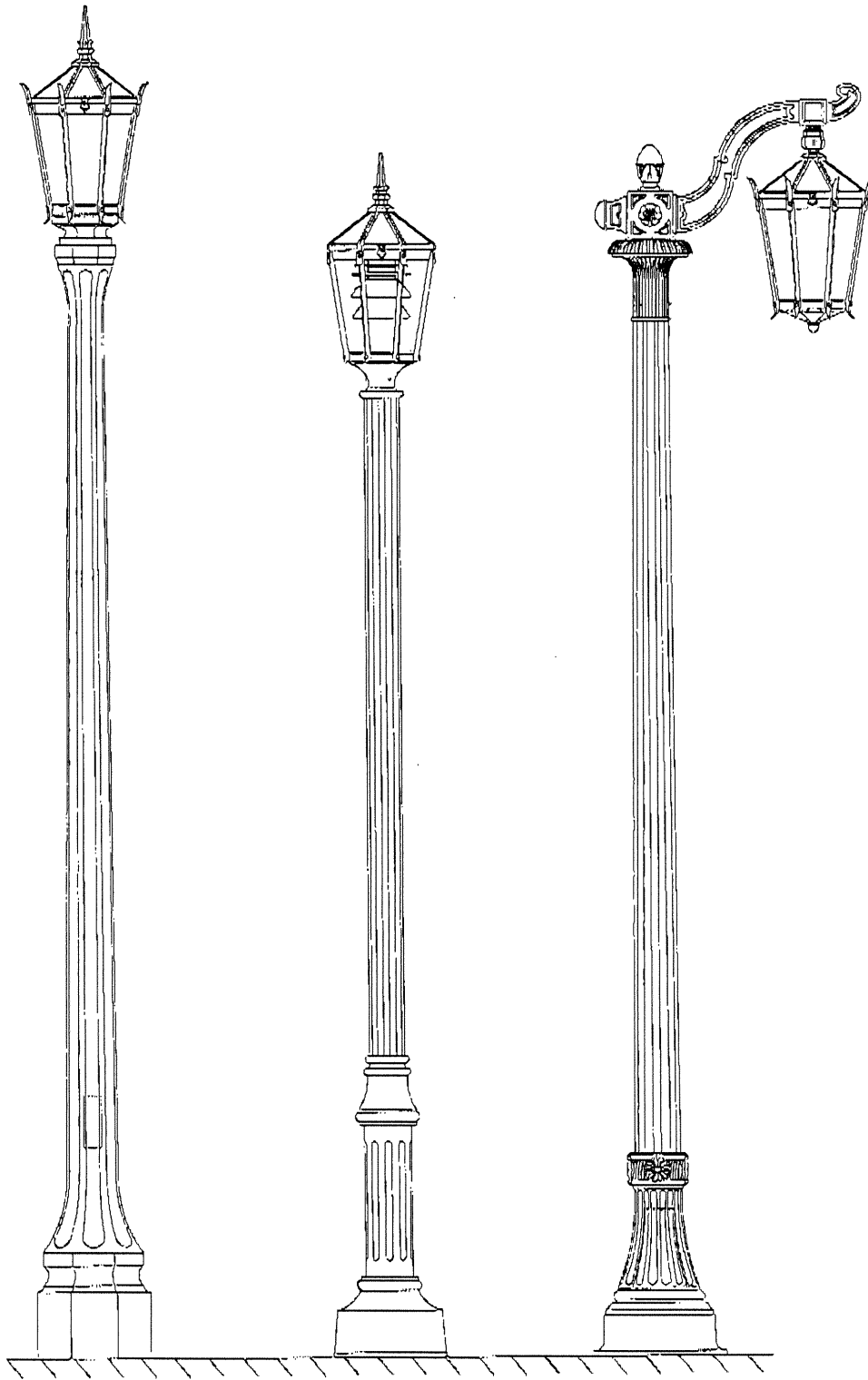
PROJECT# : 03167

FROM: Robert Mills

SUBJECT: Fixtures

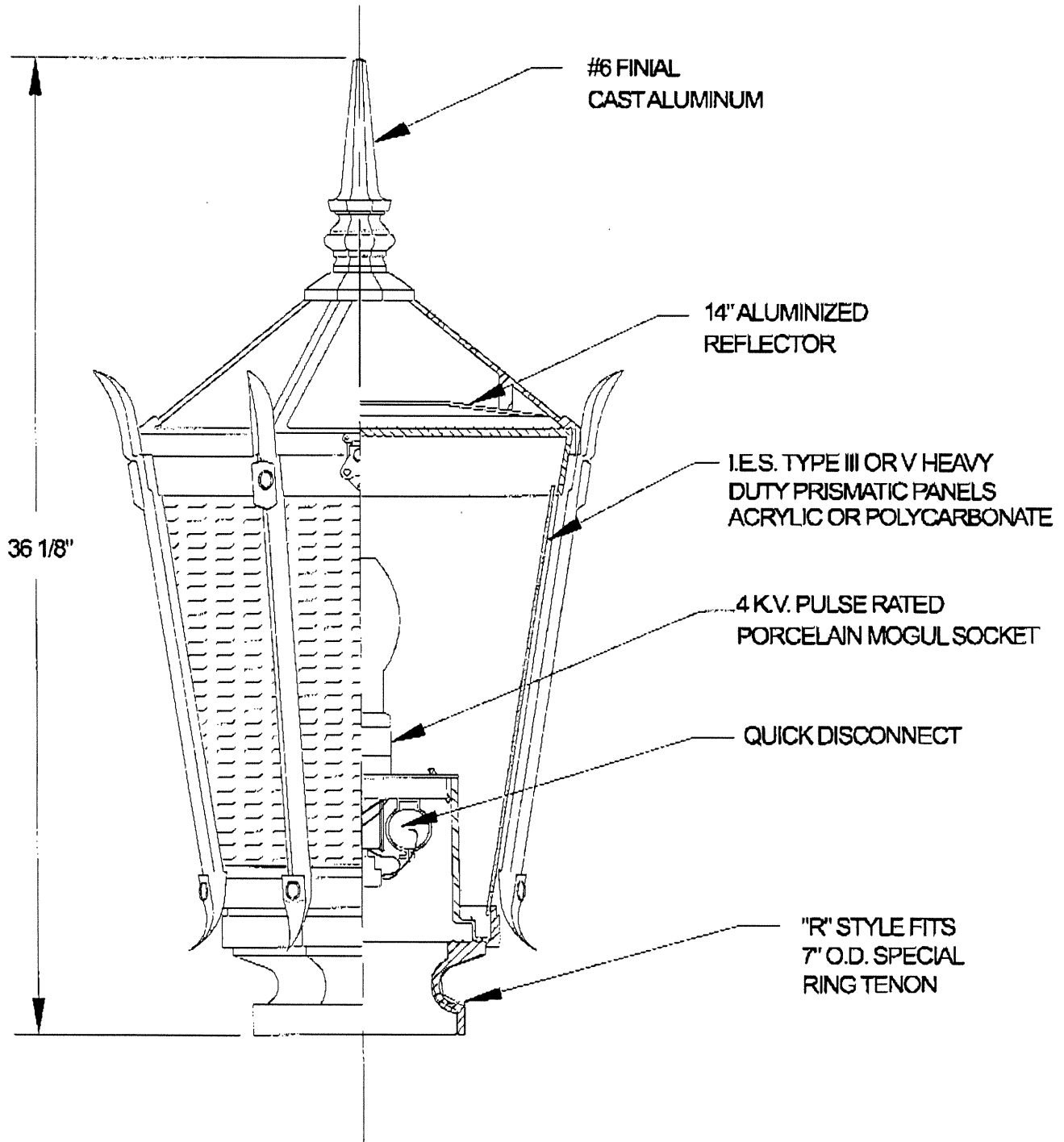
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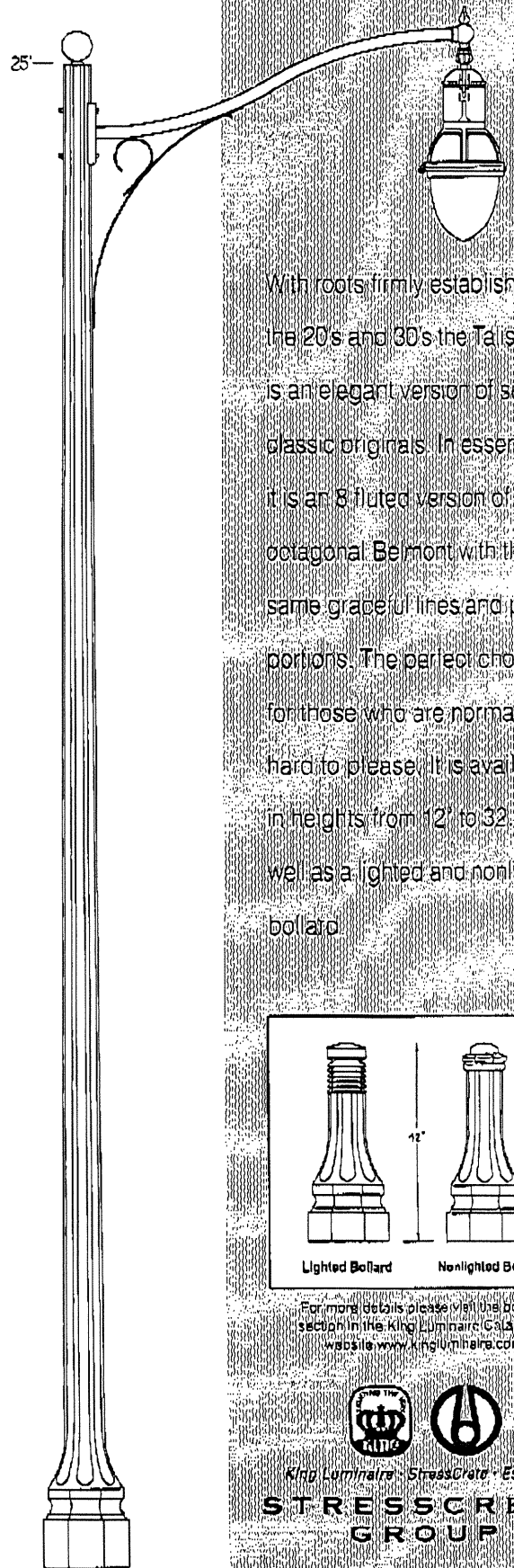
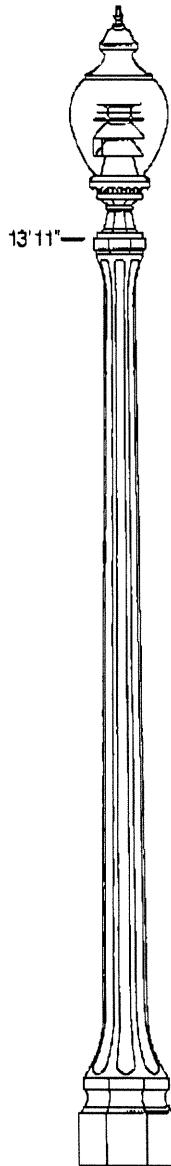
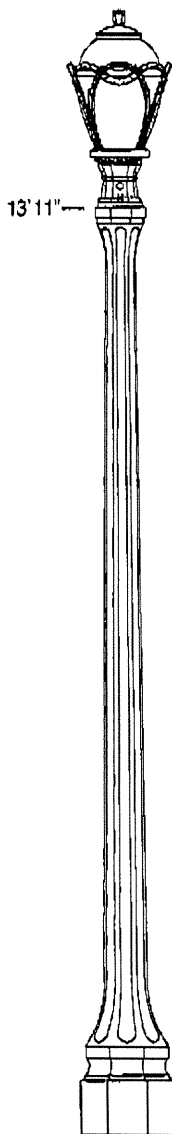
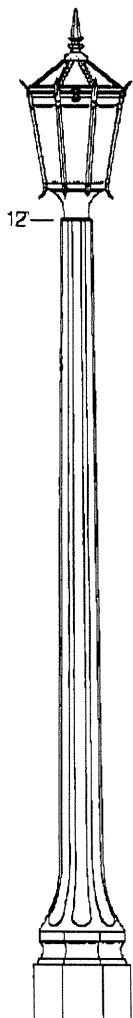




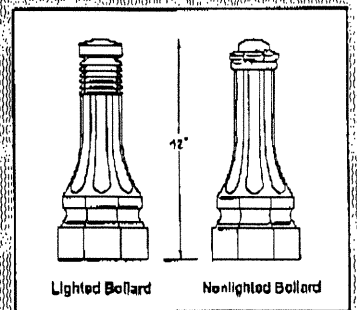
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THE TALISMAN

Family of Poles



With roots firmly established in the 20's and 30's the Talisman is an elegant version of several classic originals. In essence it is an 8 fluted version of the octagonal Belmont with the same graceful lines and proportions. The perfect choice for those who are normally hard to please. It is available in heights from 12' to 32.5' as well as a lighted and nonlighted bollard.



For more details please visit the bollard section in the King Luminaire Catalog or website www.kingluminaire.com



King Luminaire • Stresscrete • Est. 1953

STRESSCRETE GROUP

How to Catalog*

Description	Catalog Number	"A" Pole Height Above Grade	"D" Tip Dimension	"E" Flars	"B" Direct Bural Length & "F" Dia.	Pole Weight Direct Bural	Pole Weight Base Plate
Talisman 10' 6" Flared Top	KT105	10' 6"	9"	18"	4' 6" x 9 1/2"	1200 lbs	1000 lbs
Talisman 12' 0" Non-Flared Top	KT12	12' 0"	5 1/2"	18"	4' 6" x 9 1/2"	1800 lbs	100 lbs
Talisman 14' Flared Top	KT14	13' 11"	9"	18"	4' 6" x 9 1/2"	1370 lbs	1170 lbs
Talisman 20' Flared Top	KT125	20' 0"	5 3/4"	18"	5' 0" x 9 1/2"	1600 lbs	1000 lbs
Talisman 25' Flared Top	KTH25	25' 0"	5 3/8"	18"	5' 0" x 9 1/2"	1800 lbs	1600 lbs
Talisman 20' Flared Top	KTT20	20' 0"	7 3/8"	21"	5' 0" x 12"	2270 lbs	2000 lbs
Talisman 25' Flared Top	KTT25	25' 0"	6 1/4"	21"	5' 0" x 12"	2470 lbs	2200 lbs
Talisman 30' Flared Top	KTT30	30' 0"	5 7/8"	21"	5' 0" x 12"	2630 lbs	2360 lbs
Talisman 33' Flared Top	KTT32.5	32' 6"	5 1/2"	21"	6' 0" x 12"	2720 lbs	2450 lbs

* For bollard catalog information please see the bollard section in the King Luminaire catalog or visit our website at www.kingluminaire.com

Options

■ **Color Selection:** Listed below are a few suggested color options. Other standard or custom colors are available in etched (sand blasted) finish only.

Finish Description	Color Catalog Number	Color of Pole Matrix
Pearl Gray	E40	Gray
Black	E11	Black
Aztec Jade	E51	Green
Vintage Brown	E50	Brown

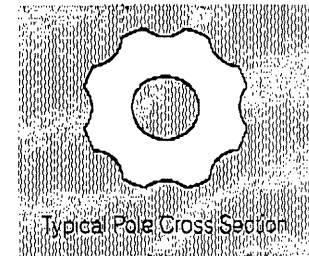
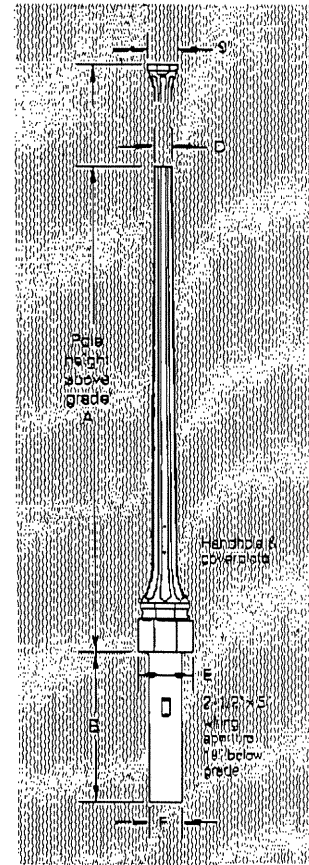
■ **Base Plate Mounting:** Two options available (see details below). Specify "FBP" for Option 1 or "SBP" for Option 2 (e.g. KT14-FBP). Unless otherwise specified, pole will be supplied as direct burred. Anchor bolts are optional. Please specify "AB" if required.

■ **Electrical Receptacle:** Specify "DR" for 2 outlet, "GFI" for Ground Fault 2 outlet or "SR" for 1 outlet.

■ **Ladder Rest:** Specify "LRN"

■ For Mounting Accessories see Arms & Capitals in King catalog or at www.kingluminaire.com.

■ For Standard Arms and Post Top Mounting, see Pole Accessories in StressCrete catalog or at www.stresscrete.com.



Example of Typical Pole Specification

KT14 E11 SBP DR 140 30/30

Talisman 14' Collapse Baseplate Duplex 276 c.c. x 3" long

Etched Finish Option 2 Receptacle Tenon Mount

Note: as SBP is not catalog pole will come with base plate. Anchor Bolts are optional. Please specify "AB" if required.

Footing Details

Direct Embedment
(Simple and Cost Effective)

1. Auger the setting hole.
2. Set pole in hole and plumb straight.
3. Backfill with required backfill tamping every 4" to 8".

Baseplate Option 1: FBP

- 2" drop-in galvanized baseplate (KT14, KT12, KT105, KT125, KTH25, KTT20, KTT25, KTT30, KTT32.5)
- Wind access from KT14 (top) or KT125 (side)
- Directly backfilled
- KT14 (4' x 9 1/2" x 21" pole) or KT125 (5' x 9 1/2" x 21" pole)
- KT14 (4' x 9 1/2" x 21" pole) or KT125 (5' x 9 1/2" x 21" pole)
- 2" x 2" x 5" min. gap for 2" anchor bolts
- Anchor Head (30,000 lb min. yield) for KT14 (2" x 2" x 5") or KT125 (2" x 2" x 5")
- Sand minimum 4' embedment
- Concrete minimum 4' embedment

Baseplate Option 2: SBP

- 1 1/2" x 1 1/2" x 2 1/2" Slots for 1 1/2" B.C. Pole Access Hole
- 2" x 2" x 5" min. gap for 2" anchor bolts
- Anchor Head (30,000 lb min. yield) for KT14 (2" x 2" x 5") or KT125 (2" x 2" x 5")
- Sand minimum 4' embedment
- Concrete minimum 4' embedment

* Generally, the excavated material can be used for backfill. In some situations better backfill may be required.

King Luminaire • StressCrete • Est. 1953

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HA1N & HA2N

FORM 10 SQUARE

EH/H/HT ARM MOUNT

GENERAL DESCRIPTION: The Gardco arm mounted Square Form 10 products are sharp cutoff luminaires for high intensity discharge lamps up to 1000 watts. The EH units are manufactured from mitered extruded aluminum and finished in an Architectural Class 1 anodizing. The H and HT style luminaires are dieformed aluminum with a thermoset polyester finish. Both products can accept one of eight (8) interchangeable and rotatable precision segmented optical systems.

ORDERING

	PREFIX	SIZE	CONFIGURATION	DISTRIBUTION	WATTAGE	VOLTAGE	FINISH	OPTIONS
	EH	19	1	4X	400MH	277	BRA	PC
Extruded	EH	14"	1	<i>Horizontal Lamp</i>	SEE TABLE	120	<i>EH and H26</i>	CD MU
Fabricated	H	14"	Single Assembly	1 Type I	BELOW	208	BLA	HS UB
			2	3 Type III		240	BRA	F AP
Extruded	EH	19"	Tw'n @ 180°	4X Type IV (19"HT19" only)		277	NA	LF AT
Fabricated	H	19"	2@90	FM Type IV		347	OC	MF SG
			Tw'n @ 90°	Q Type V		480	SC	PC PTF2
Fabricated	H	T19"	3	<i>Vertical Lamp</i>	QUAD			PCR PTF3
			Triple @ 90°	VS Type V	120/208/240/277		<i>HHT Style</i>	POLY PTF4
Fabricated	H	26"	3@120	14" and 18" Supplied with acrylic sag lens	factory fixed to 277V		BRP	QS
			Triple @ 120°	26" supplied with sag glass lens			BLP	
			4	Medium base, 200W max on 14" units			OC	
			Quad Assembly	FC3V* Full Cutoff Type III			SC	
				FCVS* Full Cutoff Type V				
				*19" 320PSMH only. Supplied w/MS320BLUED26LLC/PS lamp				

WATTAGE:				FINISH:		OPTIONS:	
14"	19"	T19"	26"	BLA	Black Anodized	CD	Clear Drop Diffuser (EH Style only)
100MH ¹	250MH	1000MH ¹	1000MH	BRA	Bronze Anodized	HS	Internal Household Shield (Supplied standard with FM optics)
150MH ¹	400MH			NA	Natural Anodized	F	Fusing (In Head)
179MH		750PSMH	750PSMH	(Anodized finishes available on EH and H26 units only)		LF	In-Line/In-Pole Fusing
200MH	250PSMH ¹	1000PSMH	1000PSMH	BRP	Bronze Paint	MF	Meat Arm Filter
250MH ¹	320PSMH ¹			BLP	Black Paint	PC	Photocontrol and Receptacle (NA with 480V, 1000w maximum combined luminaire wattage)
	350PSMH	750HPS	750HPS	OC	Optional Color Paint	PCR	Photocontrol Receptacle only (1000w maximum combined luminaire wattage)
175PSMH ^{1*}	400PSMH ¹		1000HPS	Specify RAL designation as shown in Color Selection Guide, ex. OC-RAL7024		POLY	Polycarbonate Sag Lens (In lieu of flat glass. NA with 4X optics. 450W maximum)
	450PSMH ¹			SC	Special Color Paint (Must supply color chip)	QS	Quartz Standby
100HPS						MU	10" Uplink Bracket
150HPS ²	250HPS					UB	Quick Disconnect for Ballast Tray
	400HPS					AP	Adjustable Knuckle - Pole Mount (Only available with 1 and 2 @ 180° mounting)
MH	Metal Halide					AT	Adjustable Knuckle - Tenon Mount (Fits 2 3/8" tenon. NA with 14" units)
PSMH	Pulse Start Metal Halide					SG	Sag Glass Lens (In lieu of flat glass) (Supplied standard with 4X optics and 26"/3)
HPS	High Pressure Sodium					PTF2	Pole Top Filter - 2 3/8" Diameter Tenon
						PTF3	Pole Top Filter - 3-3 1/2" Diameter Tenon
						PTF4	Pole Top Filter - 3 1/2-4" Diameter Tenon

TYPE	PREFIX / SIZE	CONFIGURATION	DISTRIBUTION	WATTAGE	VOLTAGE	FINISH	OPTIONS

Gardco Lighting reserves the right to change materials or modify the design of its product without notification as part of the company's continuing product improvement program. The 4X optical system is protected by U.S. patent number 5690422.

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Gerdyle Thomas Group LLC



FORM 10 SQUARE

EH/H/HT ARM MOUNT

SPECIFICATIONS

GENERAL: Each Gardco Square Form Ten arm mount is a sharp cutoff luminaire for high intensity discharge lamps. Units are designed with half-cube proportions. Internal components are totally enclosed, rain-tight, dust-tight and corrosion resistant. No venting of optical system or electrical components is required or permitted. Luminaires are completely assembled with no disassembly required for installation. Lamping requires no lifting or hinging of the luminaire housing, disturbing wiring or exposing uninsulated live parts.

HOUSING: Extruded housings (EH style) are offered in 14" and 19" sizes and are composed of precisely mitered anodized aluminum extrusions. Fabricated (H style) units are available in 14", 19", T19" and 26" sizes and are one piece, multi-formed aluminum with an integral reinforcing spline and a single concealed joint. All units feature a press formed aluminum top which is welded to the housing sides. Pressure injected silicone provides a continuous weathertight seal at all miters and points of material transition.

ARM: Extruded aluminum arm is prewired and secured to fixture by contractor. Assembly is suitable for mounting to pole without requiring access to luminaire.

LENS: Mitered, extruded anodized aluminum door frame retains the optically clear, heat and impact resistant tempered flat glass in a sealed manner using hollow section, high compliance, memory retentive extruded silicone rubber. Luminaires with Type 4X optics and 26" VS units feature a sag glass lens and VS unit employs sag acrylic lens. Concealed stainless steel latch and hinge permit easy toolless access to the luminaire.

OPTICAL SYSTEMS: The segmented Form Ten optical system is homogeneous sheet aluminum, electrochemically brightened, anodized and sealed. The segmented reflectors are set in faceted arc tube image duplicator patterns to achieve IES Types I (1), III (3), IV (FM), and V (Q - horizontal lamp and VS - vertical lamp) distributions. The mogul lampholder is glazed porcelain with a nickel plated screw shell with lamp grip - all securely attached to the reflector assembly. 100MH units have medium base lampholder. All Metal Halide units in the 19" and 26" housings have lamp stabilizers ensuring precise arc tube positioning.

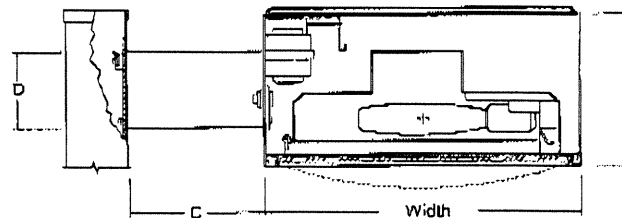
ELECTRICAL: Each high power factor ballast is the separate component type, capable of providing reliable lamp starting down to -20° F. The ballast is mounted on a unitized tray and secured within the luminaire, above the reflector system. Component-to-component wiring within the luminaire will carry no more than 80% of rated current and is listed by UL for use at 600 VAC at 150°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 15A or higher.

FINISH: Extruded housings (EH style) are standard with natural, bronze, or black Aluminum Association Architectural Class I anodized finish. Special color polyester finishes are available.

Formed housings (H style) are standard with a chromatic acid pretreatment and an epoxy undercoat. The finish coat is a thermosetting polyester baked at 450° F to achieve an H-2H hardness measure. 26" H style units are also offered with optional Architectural Class I anodized finish.

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

DIMENSIONS



Size	Width	B	C 1-2 way	C 3-4 way	D
14	14"	7"	2"	6"	5"
	35.58 cm	17.78 cm	5.08 cm	15.24 cm	12.70 cm
19	19"	10"	2"	9"	5"
	48.26 cm	25.40 cm	5.08 cm	22.86 cm	12.70 cm
T19	19"	12"	2"	9"	5"
	48.26 cm	30.48 cm	5.08 cm	22.86 cm	12.70 cm
26	26"	12"	12"	12"	8"
	66.04 cm	30.48 cm	30.48 cm	30.48 cm	20.32 cm

Size	EPA's (A ²)			Approximate Weight (lbs)		
	Single	Twin	3/4	Single	Twin	Quad
14	1.1	2.3	2.9	30	60	120
19	2.1	4.0	5.5	55	110	220
T19	2.2	4.3	6.4	65	130	260
26	3.5	7.0	8.9	95	190	380

Gardco Lighting reserves the right to change materials or modify the design of its product without notification as part of the company's continuing product improvement program. The 4X optical system is protected by U.S. patent number 5690422.

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Genlyte Thomas Group LLC



79115-43/803

POLES

5" STRAIGHT SQUARE ALUMINUM

GENERAL DESCRIPTION: The Gardco/Emco Lighting SSA5 straight aluminum pole consists of a one-piece 5" square extruded aluminum lighting standard mounted to a structural quality carbon galvanized steel base tenon. This construction offers the corrosion resistance and flexibility of aluminum with the strength and integrity of steel. The poles are finished with either Architectural Class 1 anodizing or electrostatically applied TGIC polyester powdercoat. All poles include anchor bolts, full base cover, hand hole, ground lug and top cap.

ORDERING

POLE	HEIGHT	DRILLING	FINISH	OPTIONS
SSA5	12	D1	BRA	GFCI
SSA5	12' 15' 18' 20' 25' L,M,H* 28' H*	D1 1 Way D2 2 Way D3 3 Way D4 4 Way T2 2 3/8" OD Tenon T4 4" OD Tenon	BRA Bronze Anodized NA Natural Anodized BLA Black Anodized BRP Bronze Paint NP Natural Paint BLP Black Paint WP White Paint OC Optional Color <i>(Specify RAL designation as shown in Color Selection Guide)</i> SC Special Color <i>(Must supply color chip)</i>	GFCI Ground Fault Receptacle DR Duplex Receptacle

*Refers to steel base tenon size (length and thickness) based on wind load factors.
L = Light; M = Medium; H = Heavy.

CATALOG NUMBER	POLE SIZE	MAXIMUM LUMINAIRE LOADING*					ANCHOR BOLT DATA**		
		ACTUAL HEIGHT	BASE TENON HEIGHT (ft.)	WALL THICKNESS (Inches)	100 MPH EPA-FT ²	90 MPH EPA-FT ²	80 MPH EPA-FT ²	BOLT CIRCLE (inches)	BOLT SIZE (Inches)
SSA5-12	11' 9"	2.5	.130	13.9	17.9	23.6	9.0	5/8 x 18 x 3	3.5
SSA5-15	14' 9"	2.5	.130	7.7	9.6	13.2	9.0	5/8 x 18 x 3	3.5
SSA5-18	17' 9"	2.5	.130	4.9	6.5	9.5	9.0	5/8 x 18 x 3	3.5
SSA5-20	19' 9"	2.5	.130	3.4	4.4	6.9	9.0	5/8 x 18 x 3	3.5
SSA5-25L	24' 9"	2.5	.130	-	-	2.7	9.0	5/8 x 18 x 3	3.5
SSA5-25M	24' 9"	4	.130	2.1	2.7	5.3	9.0	3/4 x 17 x 3	3.5
SSA5-25H	24' 9"	7	.130	2.2	3.1	5.7	9.0	3/4 x 17 x 3	3.5
SSA5-28H	27' 9"	7	.130	-	-	3.4	9.0	3/4 x 17 x 3	3.5

*Warning: Additional wind loading, in terms of EPA, from banners, cameras, floodlights and other accessories attached to the pole, must be added to the luminaire(s) EPA before selecting the pole with the appropriate wind load capability.

**Factory supplied template must be used when setting anchor bolts.
Gardco/Emco Lighting will not honor any claim for incorrect anchorage placement resulting from failure to use factory supplied templates.

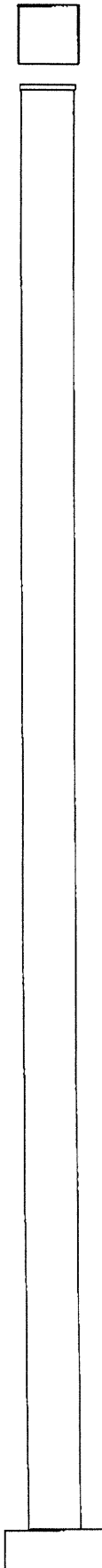
TYPE	POLE	HEIGHT	DRILLING	FINISH	OPTIONS

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Genlyte Thomas Group LLC



POLES 5" STRAIGHT SQUARE ALUMINUM

SPECIFICATIONS

POLE SHAFT: The pole shaft is a one-piece, 5" square, seamless 6000 series extruded aluminum tubing and is heat treated to achieve a T8 temper with a guaranteed minimum yield strength of 31 KSI. Pole wall thickness is .130".

BASE TENON ASSEMBLY: The tenon anchor base assembly consists of structural quality A53 carbon steel tubing welded to an A36 structural steel base with a guaranteed minimum yield strength of 36 KSI. The base plate telescopes the pole shaft and is circumferentially welded on both top and bottom. The base is provided with slotted bolt holes to accommodate a $\pm .5"$ variation in the rotational flexibility. The entire assembly is hot-dipped galvanized. Four (4) mechanically galvanized fasteners secure the aluminum pole shaft to the base tenon assembly.

ANCHOR BOLTS: Anchor bolts are fabricated from a commercial quality hot rolled carbon steel bar that meets or exceeds a minimum guaranteed yield strength of 50,000 psi. Bolts have an "L" bend on one end and threaded on the opposite end. Anchor bolts are completely hot dipped galvanized. Four (4) properly sized bolts, each furnished with two (2) regular hex nuts, two (2) flat washers and one (1) lock washer are provided per pole, unless otherwise specified.

BASE COVER: A two-piece, fabricated aluminum cover completely conceals the entire base plate and anchorage. The base cover is secured to the base assembly with four (4) stainless steel fasteners.

HANDHOLE: The handhole has a nominal rectangular 2 5/8" X 5" inside opening in the pole shaft and tenon assembly. Included is an

aluminum cover plate with attachment screws. The handhole is located 20" above the base and 180° clockwise with respect to the luminaire arm when viewed from the top of the pole for one arm. For two arms the handhole is located directly under one arm.

POLE TOP CAP: Each pole assembly is provided with a removable cast aluminum pole top cap. The pole top cap is secured with two (2) stainless steel allen head set screws.

FINISH: Poles are available with bronze, natural or black Aluminum Association Architectural Class 1 anodized finish. Electrostatically applied, thermally cured TGIC polyester powdercoat finish is also available.

DESIGN: The poles as charted are designed to withstand dead loads and predicted dynamic loads developed by variable wind speeds with an additional 30% gust factor under the following conditions:

The charted weights include luminaire(s) and/or mounting bracket(s).

The wind velocities are based on 10 mph increments from 80 mph through 100 mph. Poles to be located in areas of known abnormal conditions may require special consideration. For example: coastal areas, airports and areas of special winds.

Poles are designed for ground mounted applications. Poles mounted on structures (such as buildings and bridges) may also necessitate special consideration requiring Gardco/Emco Lighting's recommendation.

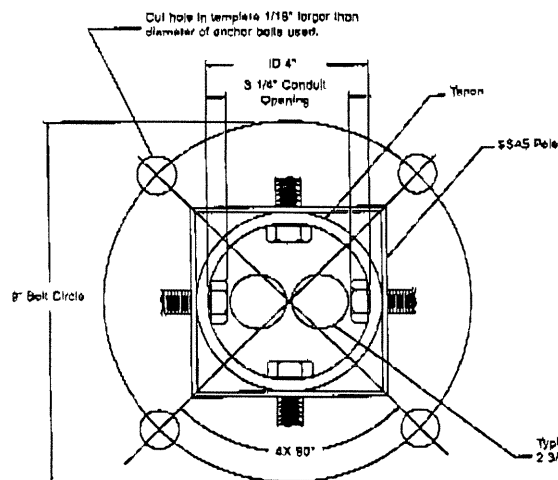
Height correction factors and drag coefficients are applied to the entire structure. An appropriate safety factor is maintained based on the minimum yield strength of the material incorporated in the pole.

WARNING: This design information is intended as a general guideline only. The customer is solely responsible for proper selection of pole, luminaire, accessory and foundation under the given site conditions and intended usage. The addition of any items to the pole, in addition to the luminaire, will dramatically impact the EPA load on that pole. It is strongly recommended that a qualified professional be consulted to analyze the loads given the user's specific needs to ensure proper selection of the pole, luminaire, accessories, and foundation. Gardco/Emco Lighting and Genlyte Thomas Group, LLC assume no responsibility for such proper analysis or product selections. Failure to insure proper site analysis, pole selection, loads and installation can result in pole failure, leading to serious injury or property damage.

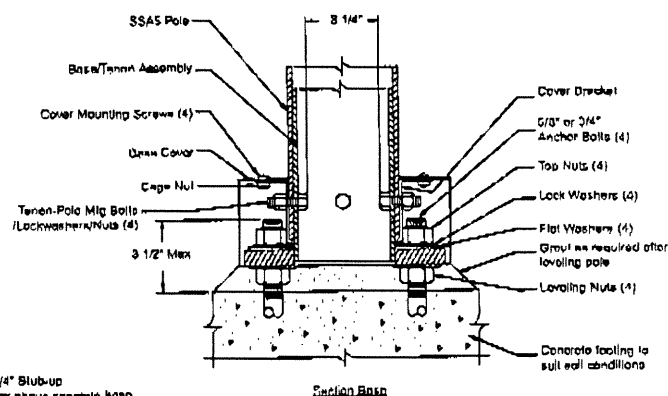
GENERAL INFORMATION: Mounting height is the vertical distance from the base of the lighting pole to the center of the luminaire arm at the point of luminaire attachment.

Two arms as charted are oriented at 180° with respect to each other. For applications of two (2) arms at 90° or other multiple arm applications, consult the factory.

NOTE: Factory supplied template must be used when setting anchor bolts. Gardco Lighting will not honor any claim for incorrect anchorage placement from failure to use factory supplied templates.



NOTE: Internal clearance of tenon/pole mounting bolts dictates allowable area for stub-ups.



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