

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P301947

Luminaire Tested: **GLNA-AF-05-LED-E1-SL4-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301947
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24301)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-05-LED-E1-SL4-600-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(5) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
w/Spill Control WITH HOUSESIDE SHEILD OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14452.4 lumens
Efficiency: N/A
Efficacy: 89.2 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G3

Input Watts (W): 162
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

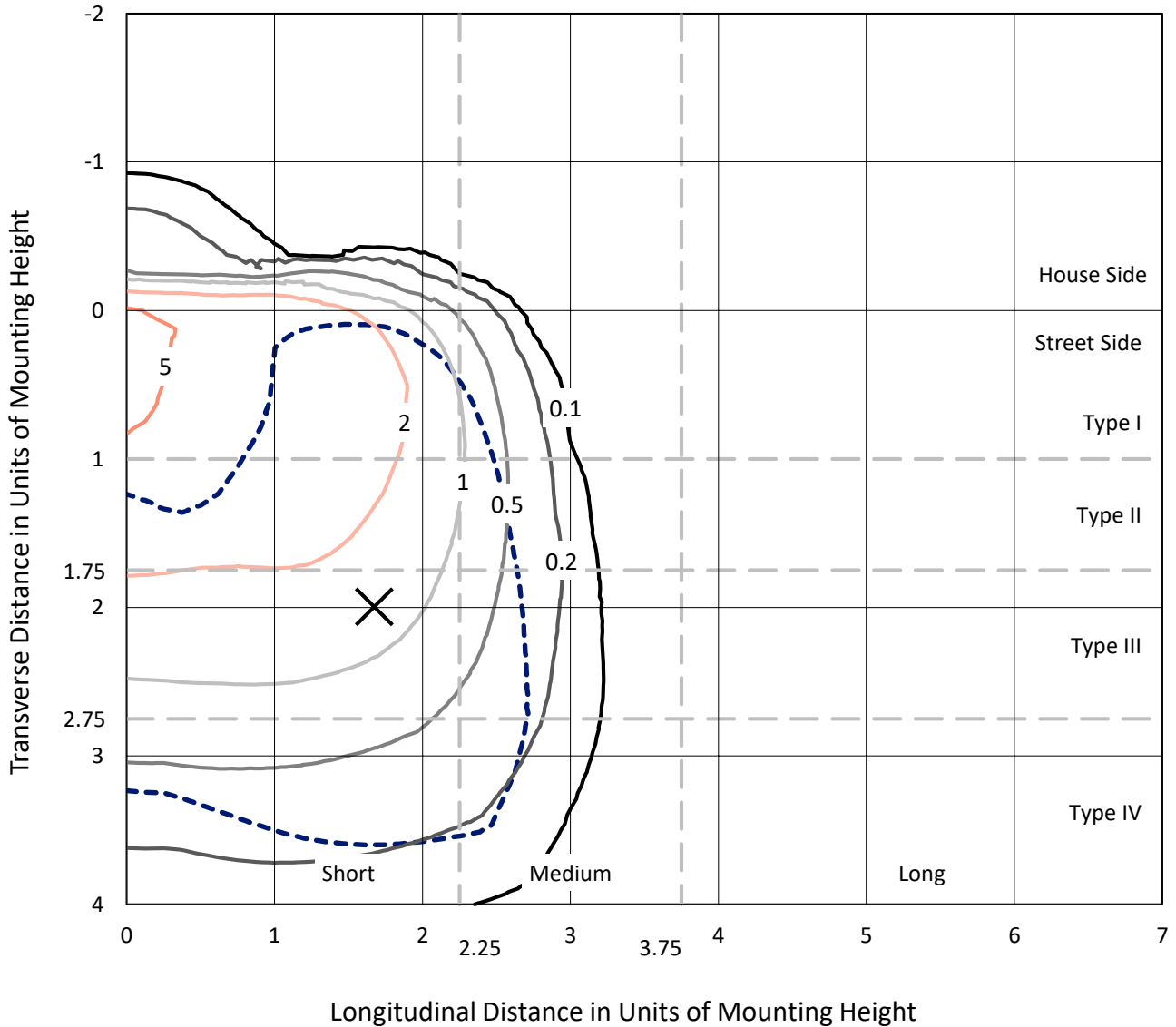


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

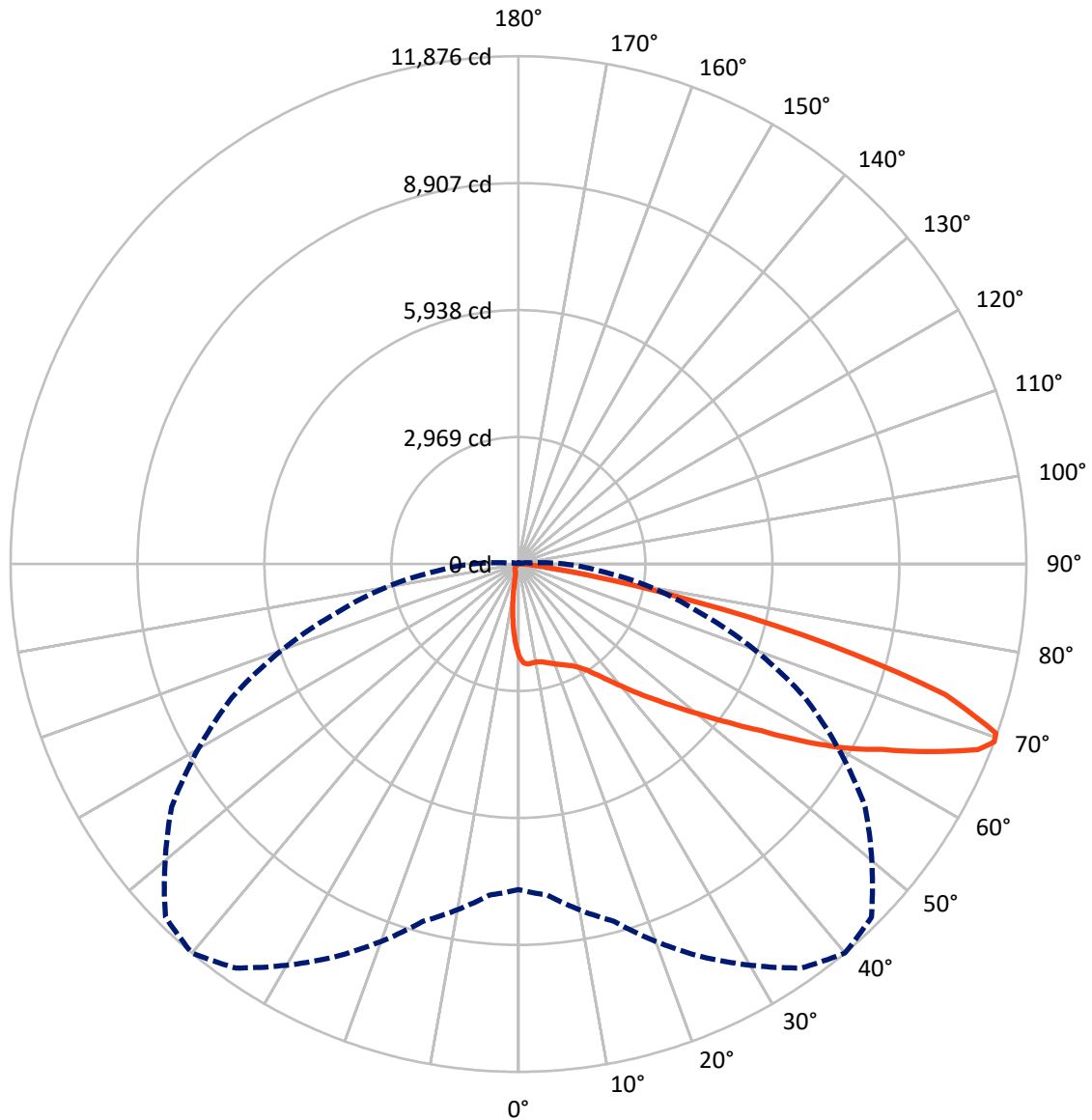


Based on 20 foot mounting height. Maximum calculated value = 5.9 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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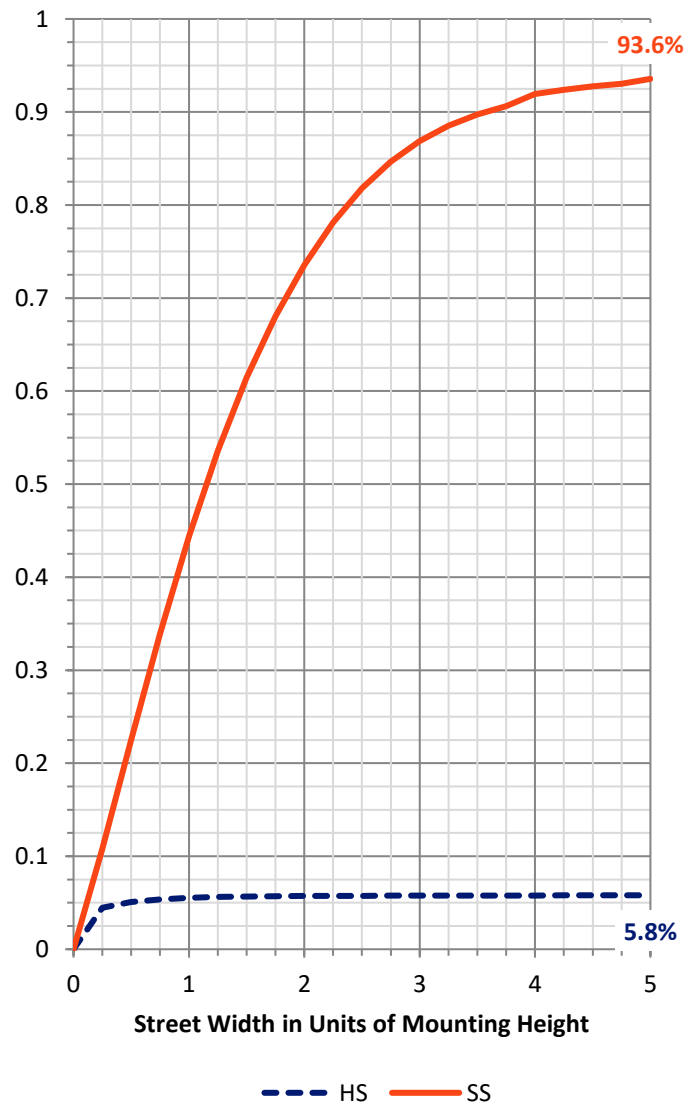
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	845.5	0.0	845.5
	% Fixture	5.9	0.0	5.9
Street Side	Lumens	13606.8	0.0	13606.8
	% Fixture	94.1	0.0	94.1
Total	Lumens	14452.4	0.0	14452.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.1	1.2
10°-20°	430.5	3.0
20°-30°	725.2	5.0
30°-40°	1187.1	8.2
40°-50°	2055.5	14.2
50°-60°	3237.6	22.4
60°-70°	4228.2	29.3
70°-80°	2177.7	15.1
80°-90°	235.6	1.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	14452.4	100.0
0°-180°	14452.4	100.0



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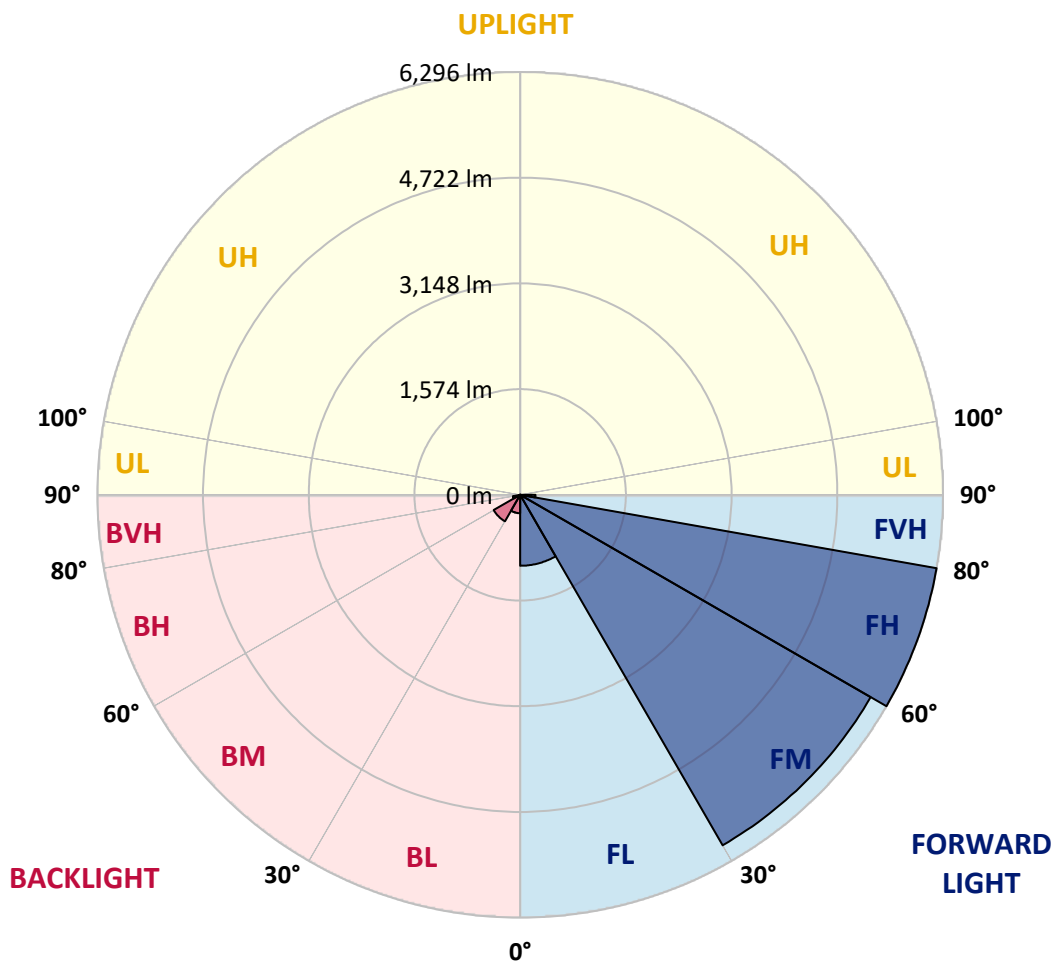
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1056.9	7.3			
FM	(30°-60°)	6025.7	41.7			
FH	(60°-80°)	6296.0	43.6			G3/7500
FVH	(80°-90°)	228.2	1.6			G3/500
BL	(0°-30°)	273.9	1.9	B1/500		
BM	(30°-60°)	454.5	3.1	B1/1000		
BH	(60°-80°)	109.8	0.8	B0/110		G0/110
BVH	(80°-90°)	7.4	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	2159.3	2159.3	2159.3	2159.3	2159.3	2159.3	2159.3	2159.3	2159.3	2159.3	2159.3
2.5°	2370.9	2358.0	2350.2	2339.9	2327.0	2315.8	2311.5	2279.7	2249.6	2208.3	2161.0
5°	2414.8	2410.5	2396.7	2382.9	2367.4	2350.2	2340.8	2302.9	2259.9	2199.7	2117.1
7.5°	2419.1	2413.9	2396.7	2377.8	2356.3	2335.6	2319.3	2281.4	2241.8	2180.8	2080.1
10°	2412.2	2406.2	2393.2	2372.6	2345.9	2326.1	2309.8	2273.7	2240.1	2185.1	2073.2
12.5°	2404.4	2398.4	2392.4	2382.1	2358.8	2345.1	2331.3	2296.9	2266.8	2220.3	2098.2
15°	2412.2	2408.7	2415.6	2411.3	2398.4	2386.4	2372.6	2341.6	2314.1	2275.4	2143.8
17.5°	2444.9	2444.9	2466.4	2469.0	2456.9	2439.7	2419.9	2388.9	2365.7	2333.0	2198.0
20°	2521.4	2518.8	2546.4	2551.5	2522.3	2495.6	2466.4	2428.5	2410.5	2389.8	2251.3
22.5°	2653.0	2641.0	2657.3	2652.2	2594.6	2553.3	2517.1	2470.7	2461.2	2451.7	2310.7
25°	2824.2	2817.4	2828.5	2777.8	2676.3	2620.4	2577.3	2524.9	2524.9	2534.3	2377.8
27.5°	3072.9	3047.0	3009.2	2919.7	2767.5	2696.1	2649.6	2593.7	2608.3	2643.6	2466.4
30°	3327.5	3299.1	3212.2	3074.6	2878.4	2803.6	2749.4	2690.9	2725.3	2789.8	2585.1
32.5°	3578.7	3546.9	3423.8	3250.1	3037.6	2962.7	2910.3	2845.7	2903.4	3011.8	2758.9
35°	3822.1	3793.8	3651.8	3447.1	3249.2	3187.3	3139.1	3083.2	3157.2	3308.6	3004.0
37.5°	4095.7	4064.7	3891.8	3669.9	3506.4	3461.7	3426.4	3370.5	3499.5	3721.5	3345.6
40°	4432.1	4379.6	4146.5	3925.4	3804.1	3782.6	3758.5	3750.7	3951.2	4258.3	3800.6
42.5°	4817.5	4731.4	4413.1	4194.6	4131.0	4146.5	4140.4	4174.9	4516.4	4925.9	4354.6
45°	5202.9	5091.9	4709.9	4482.0	4490.6	4544.8	4578.3	4716.0	5224.4	5691.5	4950.8
47.5°	5529.8	5420.5	4994.7	4792.5	4895.8	5002.4	5093.6	5354.3	5952.2	6445.1	5414.5
50°	5809.3	5706.1	5296.6	5134.0	5366.3	5538.4	5686.3	6072.6	6735.0	7018.9	5739.7
52.5°	6038.2	5969.4	5609.8	5525.5	5904.0	6156.0	6372.8	6835.6	7428.4	7485.1	5992.6
55°	6261.0	6212.0	5946.1	5990.9	6535.4	6878.7	7153.1	7645.1	8025.4	7874.0	6235.2
57.5°	6517.3	6472.6	6329.8	6581.0	7365.6	7797.4	8096.8	8362.6	8551.0	8271.4	6464.0
60°	6778.9	6753.1	6756.5	7236.5	8318.7	8733.4	8898.6	8967.4	9067.2	8645.6	6476.9
62.5°	7028.3	7077.4	7244.3	7966.0	9231.5	9549.8	9633.2	9701.2	9584.2	8705.0	5984.0
65°	7450.7	7530.7	7929.0	8942.4	10235.4	10576.1	10662.1	10429.0	9665.9	7937.6	4867.4
67.5°	7657.2	7803.4	8514.0	9852.6	11209.2	11587.7	11555.9	10476.3	8674.0	6052.8	3123.6
69°	7614.2	7769.9	8649.1	10131.3	11532.7	11875.9	11673.8	9897.3	7389.7	4384.8	1917.5
70°	7443.8	7601.3	8579.4	10121.0	11574.0	11845.8	11455.2	9182.4	6248.1	3206.2	1199.2
72.5°	6216.3	6352.2	7616.8	9148.0	10662.1	10441.0	9583.3	6361.6	3044.5	873.2	270.1
75°	3826.4	3902.1	5465.2	6891.6	8052.9	7485.1	6384.9	3164.9	907.6	246.9	149.7
77.5°	2021.6	2056.0	2992.0	4062.2	5104.8	4223.9	3272.4	1234.5	418.1	154.8	108.4
80°	1194.9	1220.7	1611.3	1857.3	2209.2	1845.3	1308.5	757.9	299.4	97.2	96.3
82.5°	683.9	700.3	1168.2	1032.3	870.6	743.3	651.2	718.3	179.8	65.4	99.8
85°	251.2	254.6	657.2	785.4	517.9	308.0	323.5	595.3	48.2	41.3	78.3
87.5°	117.0	114.4	338.1	480.9	302.8	195.3	252.1	130.8	18.9	26.7	21.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2159.3	2159.3	2159.3	2159.3	2159.3	2159.3	2159.3	2159.3	2159.3	2159.3	2159.3
2.5°	2133.4	2101.6	2044.0	1984.6	1924.4	1878.0	1832.4	1796.2	1784.2	1761.8	1763.5
5°	2068.1	2009.6	1889.1	1767.0	1639.7	1534.7	1435.8	1355.8	1317.1	1277.5	1277.5
7.5°	2011.3	1926.1	1737.7	1539.0	1333.4	1160.5	1004.8	887.8	823.3	771.7	770.8
10°	1989.8	1874.5	1611.3	1326.5	1040.1	804.3	619.4	500.7	439.6	400.0	398.3
12.5°	1999.2	1856.4	1514.1	1130.4	770.8	517.0	358.7	282.2	256.4	244.3	244.3
15°	2026.8	1851.3	1416.9	938.5	544.5	323.5	238.3	217.6	215.9	215.9	215.9
17.5°	2060.3	1853.0	1317.1	751.9	370.8	231.4	205.6	203.0	204.7	204.7	204.7
20°	2094.7	1853.9	1209.5	579.0	261.5	201.3	193.6	192.7	194.4	194.4	195.3
22.5°	2136.9	1858.2	1102.0	432.7	215.9	190.1	184.1	184.1	185.0	185.0	184.1
25°	2185.1	1866.8	990.2	320.9	197.0	182.4	177.2	176.4	177.2	176.4	175.5
27.5°	2245.3	1878.8	865.4	251.2	188.4	174.6	170.3	170.3	169.5	168.6	167.8
30°	2321.0	1892.6	725.2	213.3	179.8	167.8	163.4	162.6	161.7	160.0	160.0
32.5°	2436.3	1922.7	586.7	193.6	170.3	158.3	154.8	154.8	153.1	151.4	150.5
35°	2613.5	1982.0	462.8	181.5	160.0	148.0	143.7	143.7	141.9	141.1	140.2
37.5°	2858.7	2072.4	359.6	170.3	149.7	136.8	132.5	131.6	129.9	128.2	127.3
40°	3184.7	2184.2	283.0	160.0	139.4	125.6	122.2	120.4	117.0	114.4	114.4
42.5°	3594.2	2311.5	229.7	148.8	127.3	115.3	112.7	110.1	104.1	101.5	100.7
45°	4022.6	2425.9	194.4	135.9	115.3	105.0	103.2	98.9	91.2	88.6	88.6
47.5°	4331.4	2452.6	171.2	123.9	104.1	93.8	92.9	85.2	78.3	76.6	75.7
50°	4524.1	2400.1	152.3	111.8	93.8	83.4	80.9	71.4	67.1	65.4	64.5
52.5°	4654.0	2306.4	136.8	101.5	84.3	74.0	68.0	61.1	57.6	55.9	55.9
55°	4758.1	2173.9	121.3	92.0	76.6	66.2	57.6	52.5	49.0	47.3	47.3
57.5°	4787.4	1994.1	105.8	84.3	68.8	58.5	49.0	45.6	41.3	40.4	40.4
60°	4574.9	1669.8	93.8	74.8	61.9	50.8	43.0	38.7	34.4	33.6	32.7
62.5°	4014.8	1292.1	82.6	66.2	54.2	43.9	37.0	31.8	28.4	28.4	28.4
65°	3062.5	866.3	72.3	57.6	47.3	37.0	31.8	25.8	24.1	24.1	24.9
67.5°	1833.2	471.4	61.9	49.0	40.4	31.0	26.7	22.4	21.5	22.4	22.4
69°	1074.5	277.0	55.9	43.9	35.3	27.5	23.2	19.8	21.5	22.4	22.4
70°	663.3	186.7	51.6	39.6	31.8	24.9	21.5	18.9	20.6	21.5	21.5
72.5°	185.0	96.3	41.3	31.0	25.8	20.6	17.2	17.2	19.8	20.6	20.6
75°	120.4	71.4	31.8	23.2	19.8	16.3	14.6	16.3	18.9	19.8	19.8
77.5°	99.8	58.5	25.8	18.9	16.3	15.5	13.8	14.6	17.2	18.1	18.1
80°	91.2	41.3	20.6	17.2	14.6	13.8	12.9	12.0	15.5	16.3	16.3
82.5°	86.9	32.7	18.1	15.5	13.8	12.0	11.2	12.0	13.8	14.6	15.5
85°	54.2	21.5	16.3	14.6	12.0	11.2	11.2	11.2	12.9	13.8	13.8
87.5°	19.8	17.2	14.6	12.0	10.3	10.3	10.3	10.3	11.2	12.9	12.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)