

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: P301821

Luminaire Tested: **GLNA-AF-04-LED-E1-SL4-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301821
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-04-LED-E1-SL4-HSS
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(4) 70 CRI, 4000K CCT 1050mA 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: 17706.4 lumens
Efficiency: N/A
Efficacy: 78.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G4

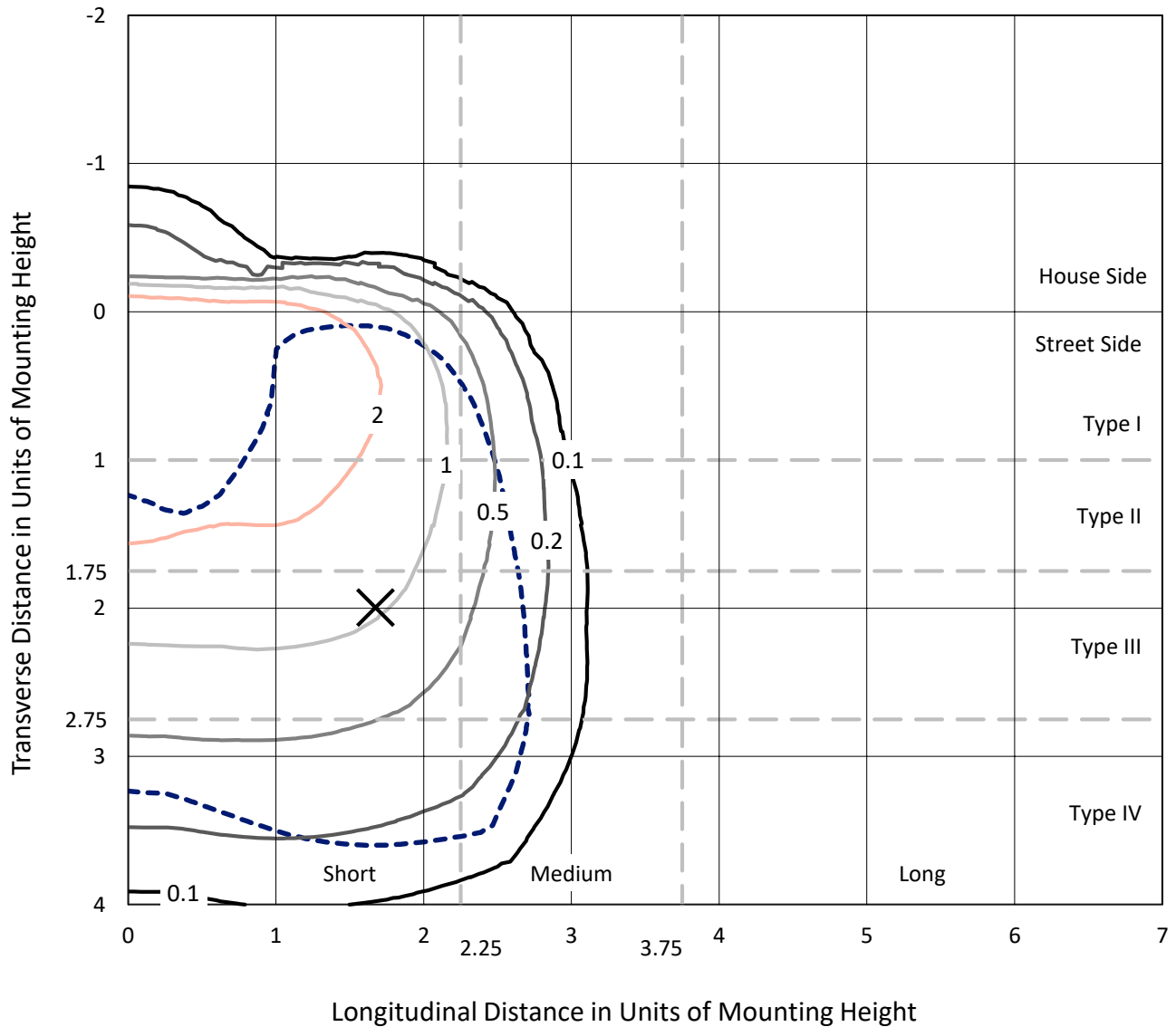
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

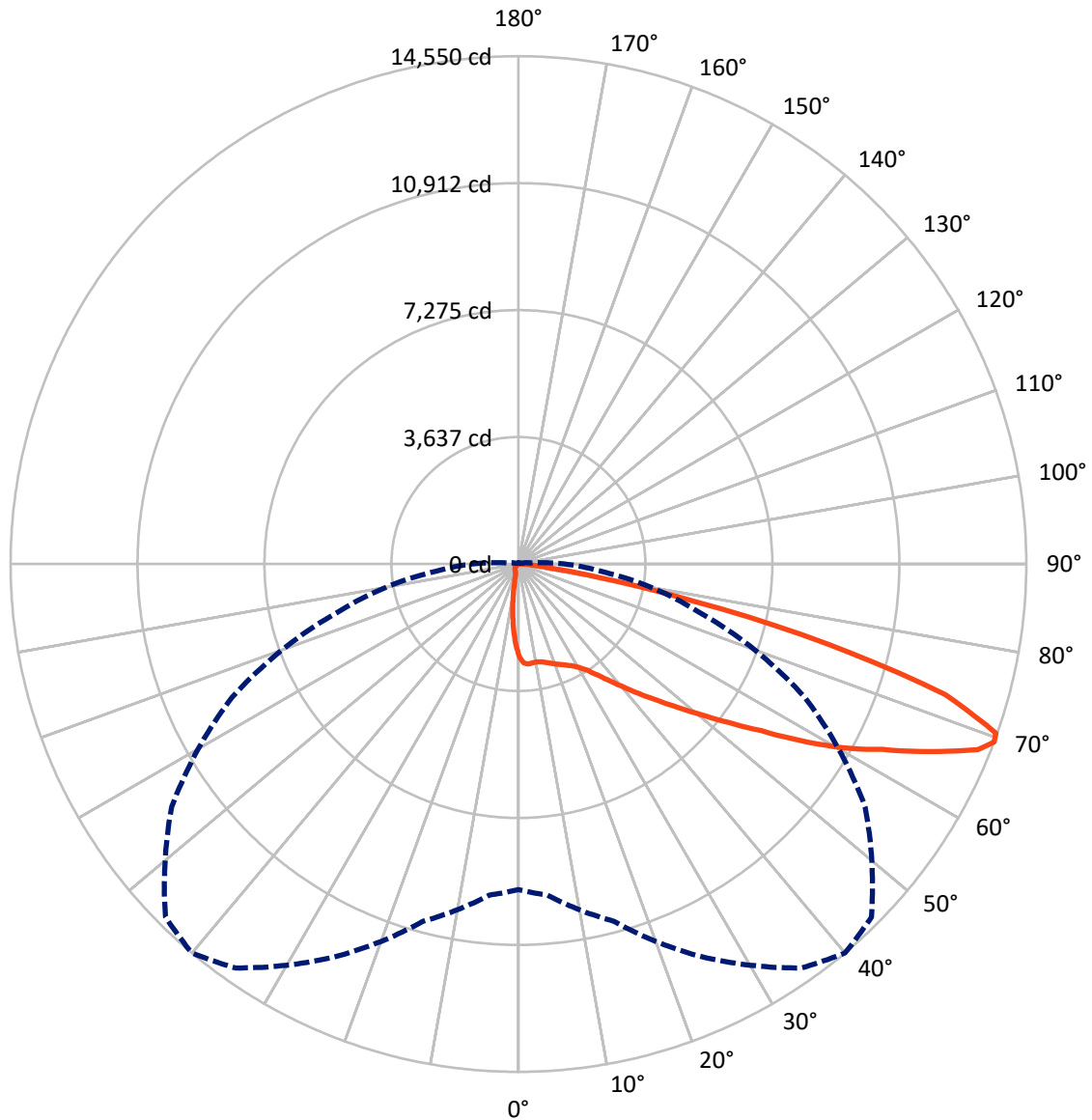
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.6 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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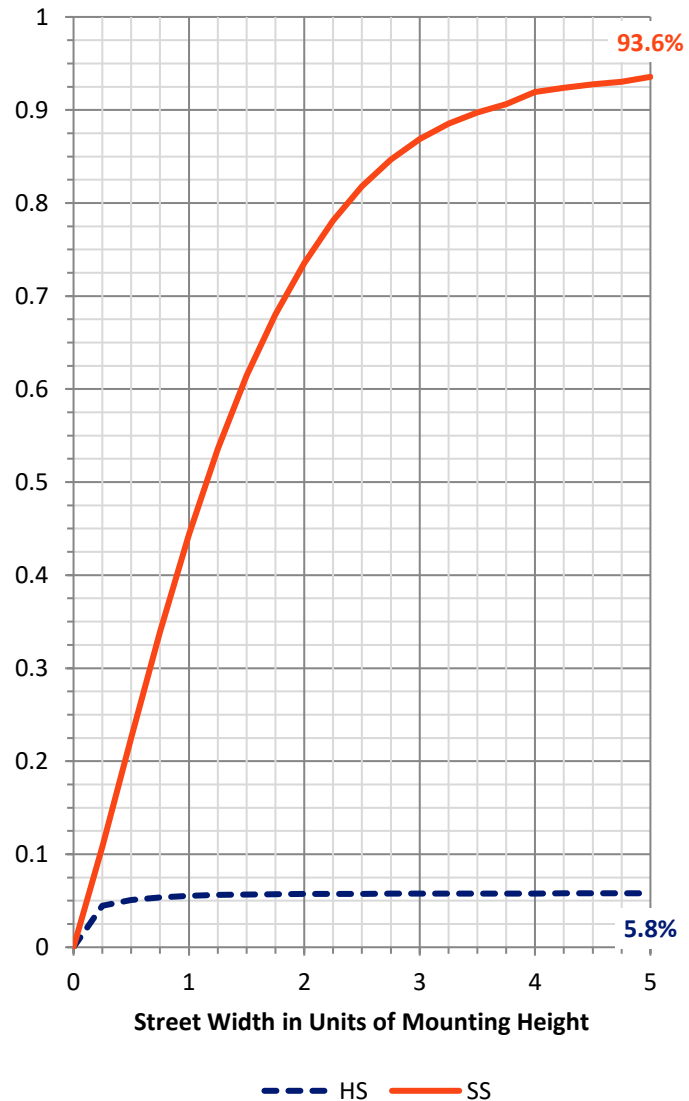
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1035.9	0.0	1035.9
	% Fixture	5.9	0.0	5.9
Street Side	Lumens	16670.5	0.0	16670.5
	% Fixture	94.1	0.0	94.1
Total	Lumens	17706.4	0.0	17706.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.5	1.2
10°-20°	527.5	3.0
20°-30°	888.5	5.0
30°-40°	1454.4	8.2
40°-50°	2518.3	14.2
50°-60°	3966.6	22.4
60°-70°	5180.2	29.3
70°-80°	2668.0	15.1
80°-90°	288.6	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°	17706.4	100.0
0°-180°	17706.4	100.0



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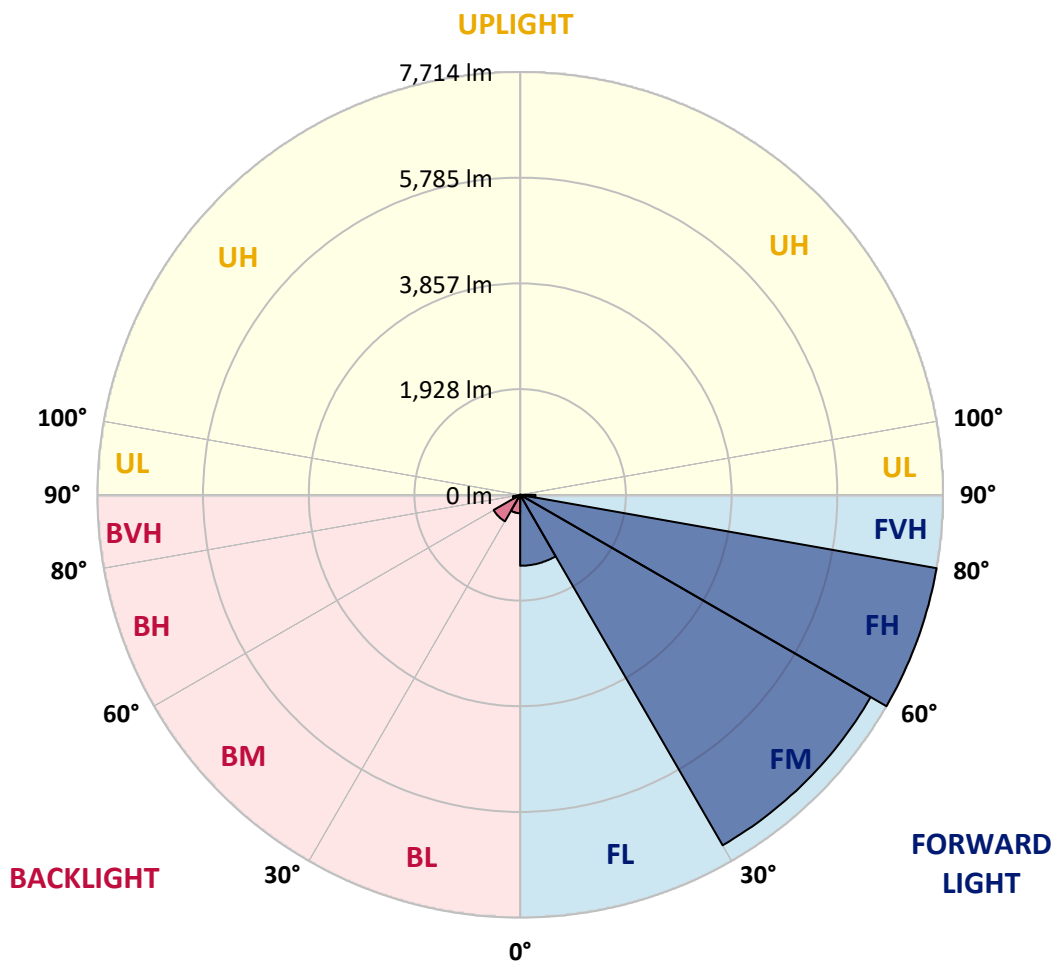
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1294.8	7.3			
FM	(30°-60°)	7382.5	41.7			
FH	(60°-80°)	7713.7	43.6			G4/12000
FVH	(80°-90°)	279.5	1.6			G3/500
BL	(0°-30°)	335.6	1.9	B1/500		
BM	(30°-60°)	556.8	3.1	B1/1000		
BH	(60°-80°)	134.5	0.8	B1/500		G1/500
BVH	(80°-90°)	9.1	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-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	2645.4	2645.4	2645.4	2645.4	2645.4	2645.4	2645.4	2645.4	2645.4	2645.4	2645.4
2.5°	2904.7	2888.9	2879.4	2866.8	2851.0	2837.3	2832.0	2793.0	2756.1	2705.5	2647.5
5°	2958.5	2953.2	2936.3	2919.5	2900.5	2879.4	2867.8	2821.4	2768.7	2695.0	2593.8
7.5°	2963.7	2957.4	2936.3	2913.1	2886.8	2861.5	2841.5	2795.1	2746.6	2671.8	2548.5
10°	2955.3	2947.9	2932.1	2906.8	2874.1	2849.9	2829.9	2785.6	2744.5	2677.1	2540.0
12.5°	2945.8	2938.4	2931.1	2918.4	2890.0	2873.1	2856.2	2814.1	2777.2	2720.3	2570.6
15°	2955.3	2951.1	2959.5	2954.2	2938.4	2923.7	2906.8	2868.9	2835.1	2787.7	2626.5
17.5°	2995.3	2995.3	3021.7	3024.9	3010.1	2989.0	2964.8	2926.8	2898.4	2858.3	2692.9
20°	3089.1	3086.0	3119.7	3126.0	3090.2	3057.5	3021.7	2975.3	2953.2	2927.9	2758.2
22.5°	3250.4	3235.6	3255.7	3249.4	3178.7	3128.1	3083.9	3027.0	3015.4	3003.8	2830.9
25°	3460.1	3451.7	3465.4	3403.2	3278.9	3210.4	3157.7	3093.4	3093.4	3105.0	2913.1
27.5°	3764.7	3733.1	3686.7	3577.1	3390.6	3303.1	3246.2	3177.7	3195.6	3238.8	3021.7
30°	4076.7	4041.9	3935.5	3766.8	3526.5	3434.8	3368.4	3296.8	3338.9	3418.0	3167.1
32.5°	4384.5	4345.5	4194.8	3981.9	3721.5	3629.8	3565.5	3486.5	3557.1	3689.9	3380.0
35°	4682.7	4648.0	4474.0	4223.2	3980.8	3904.9	3845.9	3777.4	3868.0	4053.5	3680.4
37.5°	5017.9	4979.9	4768.1	4496.2	4295.9	4241.1	4197.9	4129.4	4287.5	4559.4	4098.8
40°	5430.0	5365.7	5080.1	4809.2	4660.6	4634.3	4604.7	4595.3	4840.8	5217.1	4656.4
42.5°	5902.2	5796.8	5406.8	5139.1	5061.1	5080.1	5072.7	5114.9	5533.3	6035.0	5335.1
45°	6374.3	6238.4	5770.4	5491.1	5501.7	5568.1	5609.2	5777.8	6400.7	6973.0	6065.5
47.5°	6774.8	6641.0	6119.3	5871.6	5998.1	6128.8	6240.5	6559.8	7292.3	7896.2	6633.6
50°	7117.4	6990.9	6489.2	6290.0	6574.6	6785.4	6966.7	7439.9	8251.4	8599.2	7032.0
52.5°	7397.7	7313.4	6872.9	6769.6	7233.3	7542.1	7807.7	8374.7	9100.9	9170.5	7341.9
55°	7670.7	7610.6	7285.0	7339.8	8006.9	8427.4	8763.7	9366.5	9832.4	9646.9	7639.1
57.5°	7984.8	7930.0	7755.0	8062.8	9024.0	9553.1	9919.8	10245.5	10476.3	10133.8	7919.4
60°	8305.2	8273.6	8277.8	8865.9	10191.8	10699.8	10902.1	10986.5	11108.7	10592.3	7935.2
62.5°	8610.8	8670.9	8875.4	9759.6	11310.0	11700.0	11802.2	11885.5	11742.1	10665.0	7331.3
65°	9128.3	9226.3	9714.3	10955.9	12540.0	12957.4	13062.7	12777.1	11842.3	9724.9	5963.3
67.5°	9381.3	9560.4	10431.0	12071.0	13733.1	14196.8	14157.8	12835.1	10627.1	7415.6	3826.9
69°	9328.6	9519.3	10596.5	12412.5	14129.4	14549.9	14302.2	12125.8	9053.5	5372.0	2349.3
70°	9119.9	9312.8	10511.1	12399.8	14179.9	14513.0	14034.5	11249.9	7654.9	3928.1	1469.2
72.5°	7615.9	7782.4	9331.7	11207.8	13062.7	12791.9	11741.1	7794.0	3730.0	1069.8	330.9
75°	4688.0	4780.8	6695.8	8443.3	9866.1	9170.5	7822.5	3877.5	1111.9	302.5	183.4
77.5°	2476.8	2519.0	3665.7	4976.8	6254.2	5174.9	4009.3	1512.4	512.2	189.7	132.8
80°	1463.9	1495.6	1974.1	2275.5	2706.6	2260.7	1603.1	928.5	366.8	119.1	118.0
82.5°	837.9	857.9	1431.3	1264.7	1066.6	910.6	797.8	880.1	220.3	80.1	122.3
85°	307.8	312.0	805.2	962.3	634.5	377.3	396.3	729.3	59.0	50.6	95.9
87.5°	143.3	140.2	414.2	589.2	371.0	239.2	308.8	160.2	23.2	32.7	26.3
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°	2645.4	2645.4	2645.4	2645.4	2645.4	2645.4	2645.4	2645.4	2645.4	2645.4	2645.4
2.5°	2613.8	2574.8	2504.2	2431.5	2357.7	2300.8	2244.9	2200.7	2185.9	2158.5	2160.6
5°	2533.7	2462.0	2314.5	2164.8	2008.8	1880.3	1759.1	1661.0	1613.6	1565.1	1565.1
7.5°	2464.2	2359.8	2129.0	1885.5	1633.6	1421.8	1231.0	1087.7	1008.6	945.4	944.3
10°	2437.8	2296.6	1974.1	1625.2	1274.2	985.5	758.8	613.4	538.6	490.1	488.0
12.5°	2449.4	2274.4	1855.0	1384.9	944.3	633.4	439.5	345.7	314.1	299.3	299.3
15°	2483.1	2268.1	1735.9	1149.9	667.2	396.3	291.9	266.7	264.5	264.5	264.5
17.5°	2524.2	2270.2	1613.6	921.2	454.3	283.5	251.9	248.7	250.8	250.8	250.8
20°	2566.4	2271.3	1481.9	709.3	320.4	246.6	237.1	236.1	238.2	238.2	239.2
22.5°	2618.0	2276.5	1350.1	530.1	264.5	232.9	225.5	225.5	226.6	226.6	225.5
25°	2677.1	2287.1	1213.1	393.1	241.4	223.4	217.1	216.1	217.1	216.1	215.0
27.5°	2750.8	2301.8	1060.3	307.8	230.8	214.0	208.7	208.7	207.6	206.6	205.5
30°	2843.6	2318.7	888.5	261.4	220.3	205.5	200.3	199.2	198.1	196.0	196.0
32.5°	2984.8	2355.6	718.8	237.1	208.7	193.9	189.7	189.7	187.6	185.5	184.4
35°	3201.9	2428.3	567.0	222.4	196.0	181.3	176.0	176.0	173.9	172.8	171.8
37.5°	3502.3	2539.0	440.6	208.7	183.4	167.6	162.3	161.3	159.1	157.0	156.0
40°	3901.8	2676.0	346.8	196.0	170.7	153.9	149.7	147.6	143.3	140.2	140.2
42.5°	4403.4	2832.0	281.4	182.3	156.0	141.2	138.1	134.9	127.5	124.4	123.3
45°	4928.3	2972.2	238.2	166.5	141.2	128.6	126.5	121.2	111.7	108.6	108.6
47.5°	5306.7	3004.8	209.7	151.8	127.5	114.9	113.8	104.3	95.9	93.8	92.7
50°	5542.8	2940.5	186.6	137.0	114.9	102.2	99.1	87.5	82.2	80.1	79.0
52.5°	5701.9	2825.7	167.6	124.4	103.3	90.6	83.3	74.8	70.6	68.5	68.5
55°	5829.4	2663.4	148.6	112.8	93.8	81.2	70.6	64.3	60.1	58.0	58.0
57.5°	5865.3	2443.1	129.6	103.3	84.3	71.7	60.1	55.9	50.6	49.5	49.5
60°	5604.9	2045.7	114.9	91.7	75.9	62.2	52.7	47.4	42.2	41.1	40.1
62.5°	4918.8	1583.0	101.2	81.2	66.4	53.8	45.3	39.0	34.8	34.8	34.8
65°	3752.1	1061.3	88.5	70.6	58.0	45.3	39.0	31.6	29.5	29.5	30.6
67.5°	2246.0	577.6	75.9	60.1	49.5	37.9	32.7	27.4	26.3	27.4	27.4
69°	1316.4	339.4	68.5	53.8	43.2	33.7	28.5	24.2	26.3	27.4	27.4
70°	812.6	228.7	63.2	48.5	39.0	30.6	26.3	23.2	25.3	26.3	26.3
72.5°	226.6	118.0	50.6	37.9	31.6	25.3	21.1	21.1	24.2	25.3	25.3
75°	147.6	87.5	39.0	28.5	24.2	20.0	17.9	20.0	23.2	24.2	24.2
77.5°	122.3	71.7	31.6	23.2	20.0	19.0	16.9	17.9	21.1	22.1	22.1
80°	111.7	50.6	25.3	21.1	17.9	16.9	15.8	14.8	19.0	20.0	20.0
82.5°	106.4	40.1	22.1	19.0	16.9	14.8	13.7	14.8	16.9	17.9	19.0
85°	66.4	26.3	20.0	17.9	14.8	13.7	13.7	13.7	15.8	16.9	16.9
87.5°	24.2	21.1	17.9	14.8	12.6	12.6	12.6	12.6	13.7	15.8	15.8
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)