

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: P301956

Luminaire Tested: **GLNA-AF-07-LED-E1-SL4-7027-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301956
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-07-LED-E1-SL4-7027-600-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(7) 70 CRI, 2700K 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: 17770.4 lumens
Efficiency: N/A
Efficacy: 78.6 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G4

Input Watts (W): 226
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

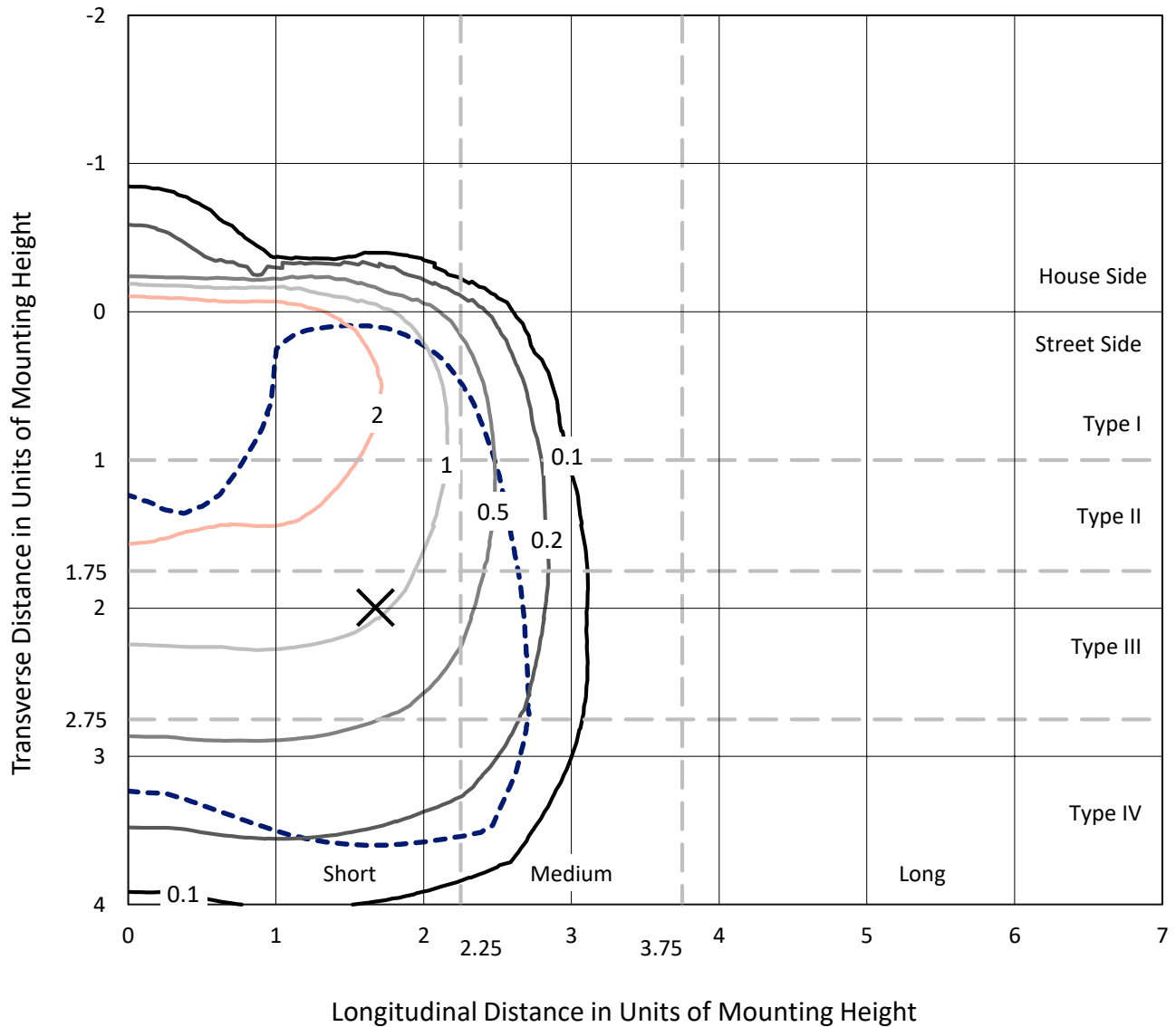


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

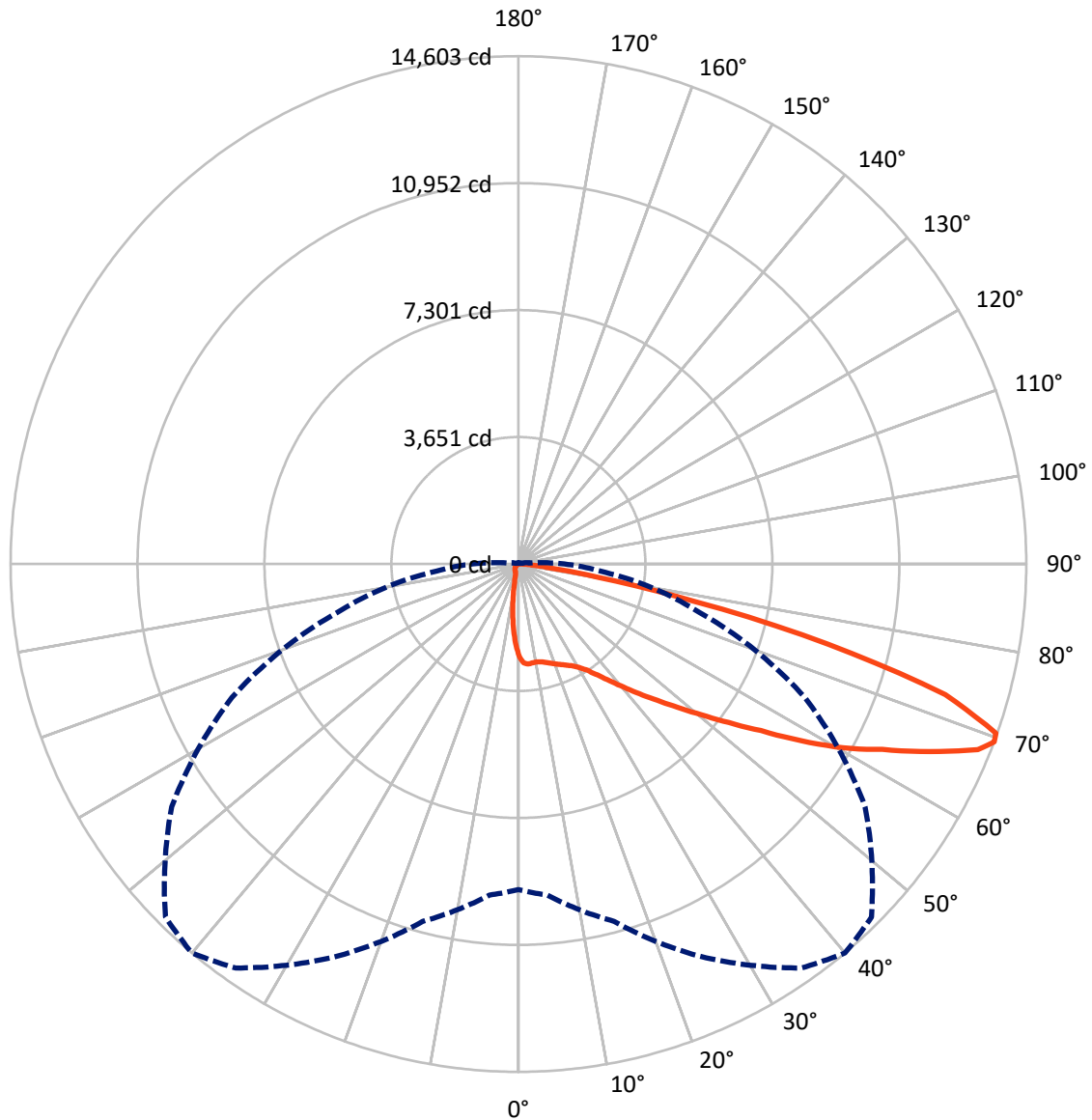


Based on 25 foot mounting height. Maximum calculated value = 4.6 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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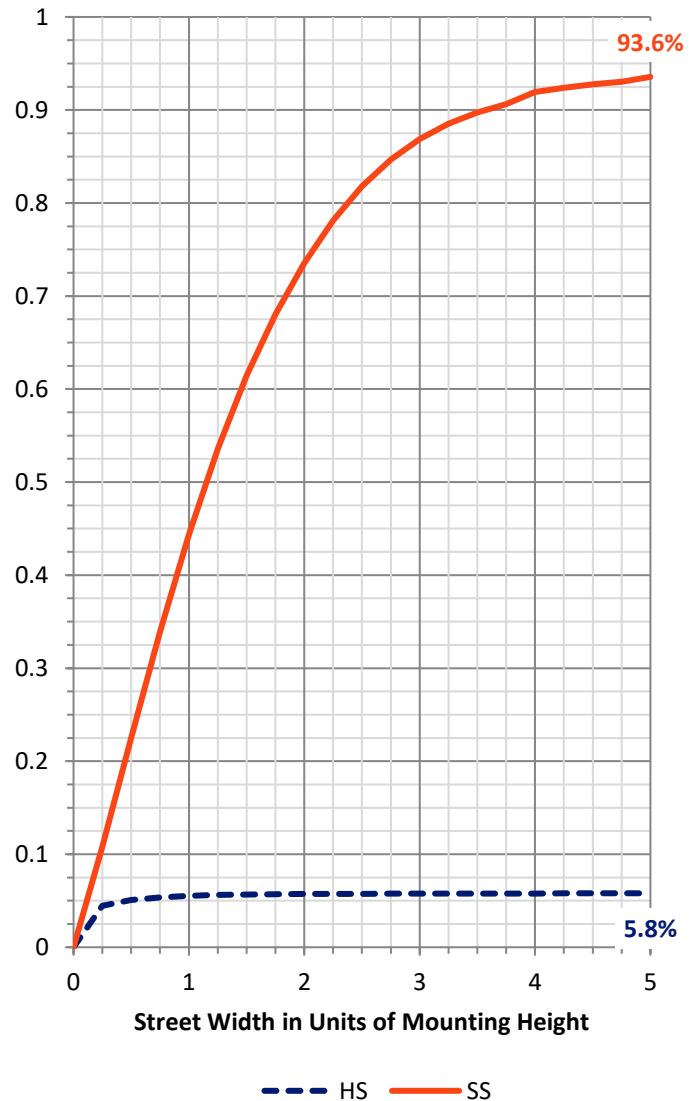
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1039.7	0.0	1039.7
	% Fixture	5.9	0.0	5.9
Street Side	Lumens	16730.8	0.0	16730.8
	% Fixture	94.1	0.0	94.1
Total	Lumens	17770.4	0.0	17770.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	215.3	1.2
10°-20°	529.4	3.0
20°-30°	891.7	5.0
30°-40°	1459.7	8.2
40°-50°	2527.4	14.2
50°-60°	3980.9	22.4
60°-70°	5198.9	29.3
70°-80°	2677.7	15.1
80°-90°	289.6	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°	17770.4	100.0
0°-180°	17770.4	100.0



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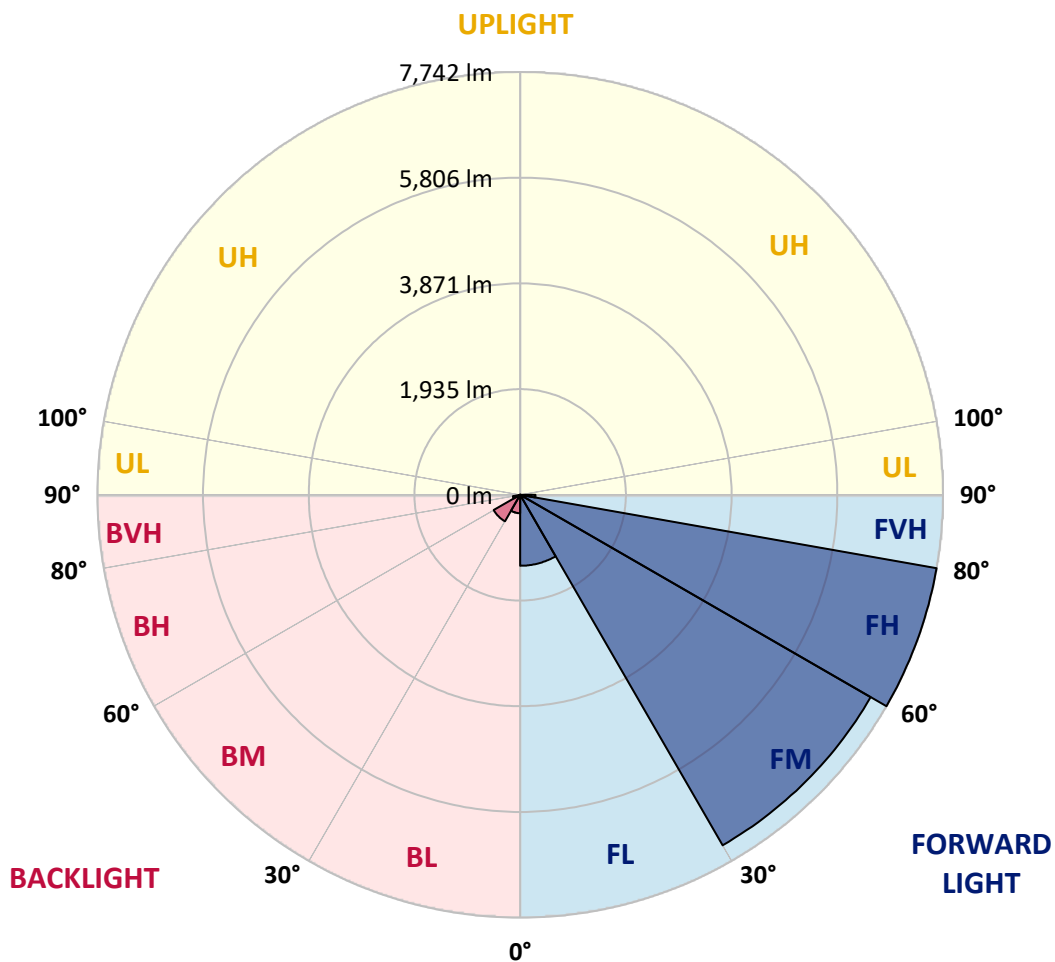
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1299.5	7.3			
FM	(30°-60°)	7409.2	41.7			
FH	(60°-80°)	7741.5	43.6			G4/12000
FVH	(80°-90°)	280.5	1.6			G3/500
BL	(0°-30°)	336.8	1.9	B1/500		
BM	(30°-60°)	558.8	3.1	B1/1000		
BH	(60°-80°)	135.0	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°	2655.0	2655.0	2655.0	2655.0	2655.0	2655.0	2655.0	2655.0	2655.0	2655.0	2655.0
2.5°	2915.2	2899.3	2889.8	2877.1	2861.3	2847.5	2842.2	2803.1	2766.1	2715.3	2657.1
5°	2969.2	2963.9	2946.9	2930.0	2911.0	2889.8	2878.2	2831.6	2778.8	2704.7	2603.2
7.5°	2974.4	2968.1	2946.9	2923.7	2897.2	2871.8	2851.7	2805.2	2756.5	2681.4	2557.7
10°	2966.0	2958.6	2942.7	2917.3	2884.5	2860.2	2840.1	2795.7	2754.4	2686.7	2549.2
12.5°	2956.5	2949.1	2941.7	2929.0	2900.4	2883.5	2866.6	2824.2	2787.2	2730.1	2579.9
15°	2966.0	2961.7	2970.2	2964.9	2949.1	2934.2	2917.3	2879.2	2845.4	2797.8	2636.0
17.5°	3006.2	3006.2	3032.6	3035.8	3021.0	2999.8	2975.5	2937.4	2908.9	2868.7	2702.6
20°	3100.3	3097.1	3131.0	3137.3	3101.4	3068.6	3032.6	2986.1	2963.9	2938.5	2768.2
22.5°	3262.2	3247.3	3267.4	3261.1	3190.2	3139.5	3095.0	3037.9	3026.3	3014.6	2841.2
25°	3472.7	3464.2	3477.9	3415.5	3290.7	3222.0	3169.1	3104.5	3104.5	3116.2	2923.7
27.5°	3778.3	3746.6	3700.1	3590.1	3402.8	3315.0	3257.9	3189.2	3207.2	3250.5	3032.6
30°	4091.4	4056.5	3949.7	3780.5	3539.3	3447.3	3380.6	3308.7	3351.0	3430.3	3178.6
32.5°	4400.3	4361.2	4209.9	3996.2	3735.0	3643.0	3578.4	3499.1	3570.0	3703.2	3392.3
35°	4699.7	4664.8	4490.2	4238.5	3995.2	3919.0	3859.8	3791.0	3882.0	4068.2	3693.7
37.5°	5036.0	4998.0	4785.3	4512.4	4311.5	4256.5	4213.1	4144.3	4303.0	4575.9	4113.7
40°	5449.6	5385.1	5098.4	4826.6	4677.4	4651.0	4621.4	4611.9	4858.3	5235.9	4673.2
42.5°	5923.5	5817.7	5426.3	5157.7	5079.4	5098.4	5091.0	5133.3	5553.3	6056.8	5354.4
45°	6397.4	6260.9	5791.3	5511.0	5521.5	5588.2	5629.4	5798.7	6423.8	6998.2	6087.5
47.5°	6799.3	6665.0	6141.4	5892.8	6019.8	6150.9	6263.0	6583.5	7318.7	7924.8	6657.6
50°	7143.1	7016.2	6512.7	6312.8	6598.4	6809.9	6991.8	7466.8	8281.3	8630.3	7057.4
52.5°	7424.5	7339.8	6897.7	6794.0	7259.5	7569.4	7835.9	8405.0	9133.8	9203.6	7368.4
55°	7698.4	7638.1	7311.3	7366.3	8035.9	8457.9	8795.3	9400.4	9867.9	9681.7	7666.7
57.5°	8013.6	7958.6	7783.1	8091.9	9056.6	9587.6	9955.7	10282.6	10514.2	10170.4	7948.1
60°	8335.2	8303.5	8307.7	8897.9	10228.6	10738.5	10941.5	11026.2	11148.9	10630.6	7963.9
62.5°	8642.0	8702.3	8907.5	9794.9	11350.9	11742.3	11844.9	11928.4	11784.6	10703.6	7357.8
65°	9161.3	9259.7	9749.4	10995.5	12585.3	13004.2	13110.0	12823.3	11885.1	9760.0	5984.8
67.5°	9415.2	9595.0	10468.7	12114.6	13782.7	14248.1	14209.0	12881.5	10665.5	7442.5	3840.8
69°	9362.3	9553.8	10634.8	12457.3	14180.4	14602.5	14353.9	12169.6	9086.2	5391.4	2357.8
70°	9152.9	9346.4	10549.1	12444.6	14231.2	14565.5	14085.2	11290.6	7682.6	3942.3	1474.5
72.5°	7643.4	7810.6	9365.5	11248.3	13110.0	12838.1	11783.5	7822.2	3743.4	1073.6	332.1
75°	4705.0	4798.0	6720.0	8473.8	9901.8	9203.6	7850.8	3891.5	1115.9	303.6	184.1
77.5°	2485.8	2528.1	3678.9	4994.8	6276.8	5193.6	4023.7	1517.9	514.1	190.4	133.3
80°	1469.2	1501.0	1981.2	2283.7	2716.3	2268.9	1608.9	931.9	368.1	119.5	118.5
82.5°	840.9	861.0	1436.4	1269.3	1070.5	913.9	800.7	883.2	221.1	80.4	122.7
85°	308.9	313.1	808.1	965.7	636.8	378.7	397.7	732.0	59.2	50.8	96.3
87.5°	143.9	140.7	415.7	591.3	372.3	240.1	309.9	160.8	23.3	32.8	26.4
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°	2655.0	2655.0	2655.0	2655.0	2655.0	2655.0	2655.0	2655.0	2655.0	2655.0	2655.0
2.5°	2623.3	2584.1	2513.3	2440.3	2366.2	2309.1	2253.0	2208.6	2193.8	2166.3	2168.4
5°	2542.9	2470.9	2322.9	2172.7	2016.1	1887.1	1765.4	1667.0	1619.4	1570.8	1570.8
7.5°	2473.1	2368.3	2136.7	1892.3	1639.5	1426.9	1235.5	1091.6	1012.3	948.8	947.8
10°	2446.6	2304.9	1981.2	1631.1	1278.8	989.0	761.6	615.6	540.5	491.9	489.7
12.5°	2458.3	2282.7	1861.7	1389.9	947.8	635.7	441.1	346.9	315.2	300.4	300.4
15°	2492.1	2276.3	1742.1	1154.0	669.6	397.7	293.0	267.6	265.5	265.5	265.5
17.5°	2533.4	2278.4	1619.4	924.5	455.9	284.5	252.8	249.6	251.7	251.7	251.7
20°	2575.7	2279.5	1487.2	711.9	321.6	247.5	238.0	236.9	239.1	239.1	240.1
22.5°	2627.5	2284.8	1355.0	532.1	265.5	233.8	226.4	226.4	227.4	227.4	226.4
25°	2686.7	2295.4	1217.5	394.5	242.2	224.2	217.9	216.8	217.9	216.8	215.8
27.5°	2760.8	2310.2	1064.1	308.9	231.7	214.7	209.4	209.4	208.4	207.3	206.3
30°	2853.9	2327.1	891.7	262.3	221.1	206.3	201.0	199.9	198.9	196.7	196.7
32.5°	2995.6	2364.1	721.4	238.0	209.4	194.6	190.4	190.4	188.3	186.2	185.1
35°	3213.5	2437.1	569.1	223.2	196.7	181.9	176.6	176.6	174.5	173.5	172.4
37.5°	3515.0	2548.2	442.1	209.4	184.1	168.2	162.9	161.8	159.7	157.6	156.5
40°	3915.9	2685.7	348.0	196.7	171.4	154.4	150.2	148.1	143.9	140.7	140.7
42.5°	4419.4	2842.2	282.4	183.0	156.5	141.7	138.6	135.4	128.0	124.8	123.8
45°	4946.1	2982.9	239.1	167.1	141.7	129.0	126.9	121.6	112.1	109.0	109.0
47.5°	5325.9	3015.7	210.5	152.3	128.0	115.3	114.2	104.7	96.3	94.1	93.1
50°	5562.8	2951.2	187.2	137.5	115.3	102.6	99.4	87.8	82.5	80.4	79.3
52.5°	5722.5	2835.9	168.2	124.8	103.7	91.0	83.6	75.1	70.9	68.8	68.8
55°	5850.5	2673.0	149.1	113.2	94.1	81.4	70.9	64.5	60.3	58.2	58.2
57.5°	5886.5	2451.9	130.1	103.7	84.6	71.9	60.3	56.1	50.8	49.7	49.7
60°	5625.2	2053.1	115.3	92.0	76.2	62.4	52.9	47.6	42.3	41.3	40.2
62.5°	4936.6	1588.8	101.5	81.4	66.6	53.9	45.5	39.1	34.9	34.9	34.9
65°	3765.7	1065.2	88.9	70.9	58.2	45.5	39.1	31.7	29.6	29.6	30.7
67.5°	2254.1	579.7	76.2	60.3	49.7	38.1	32.8	27.5	26.4	27.5	27.5
69°	1321.2	340.6	68.8	53.9	43.4	33.8	28.6	24.3	26.4	27.5	27.5
70°	815.5	229.5	63.5	48.7	39.1	30.7	26.4	23.3	25.4	26.4	26.4
72.5°	227.4	118.5	50.8	38.1	31.7	25.4	21.2	21.2	24.3	25.4	25.4
75°	148.1	87.8	39.1	28.6	24.3	20.1	18.0	20.1	23.3	24.3	24.3
77.5°	122.7	71.9	31.7	23.3	20.1	19.0	16.9	18.0	21.2	22.2	22.2
80°	112.1	50.8	25.4	21.2	18.0	16.9	15.9	14.8	19.0	20.1	20.1
82.5°	106.8	40.2	22.2	19.0	16.9	14.8	13.8	14.8	16.9	18.0	19.0
85°	66.6	26.4	20.1	18.0	14.8	13.8	13.8	13.8	15.9	16.9	16.9
87.5°	24.3	21.2	18.0	14.8	12.7	12.7	12.7	12.7	13.8	15.9	15.9
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)