

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: P237509

Luminaire Tested: **CTN-10-9-D-E1-T4-7030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P237509
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-27)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: CTN-10-9-D-E1-T4-7030-HSS
Description: CELESTEON HIGH MAST LUMINAIRE
(10) 70 CRI, 3000K LEDS AND TYPE IV OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 79040 lumens
Efficiency: N/A
Efficacy: 104.0 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B4 - U0 - G5

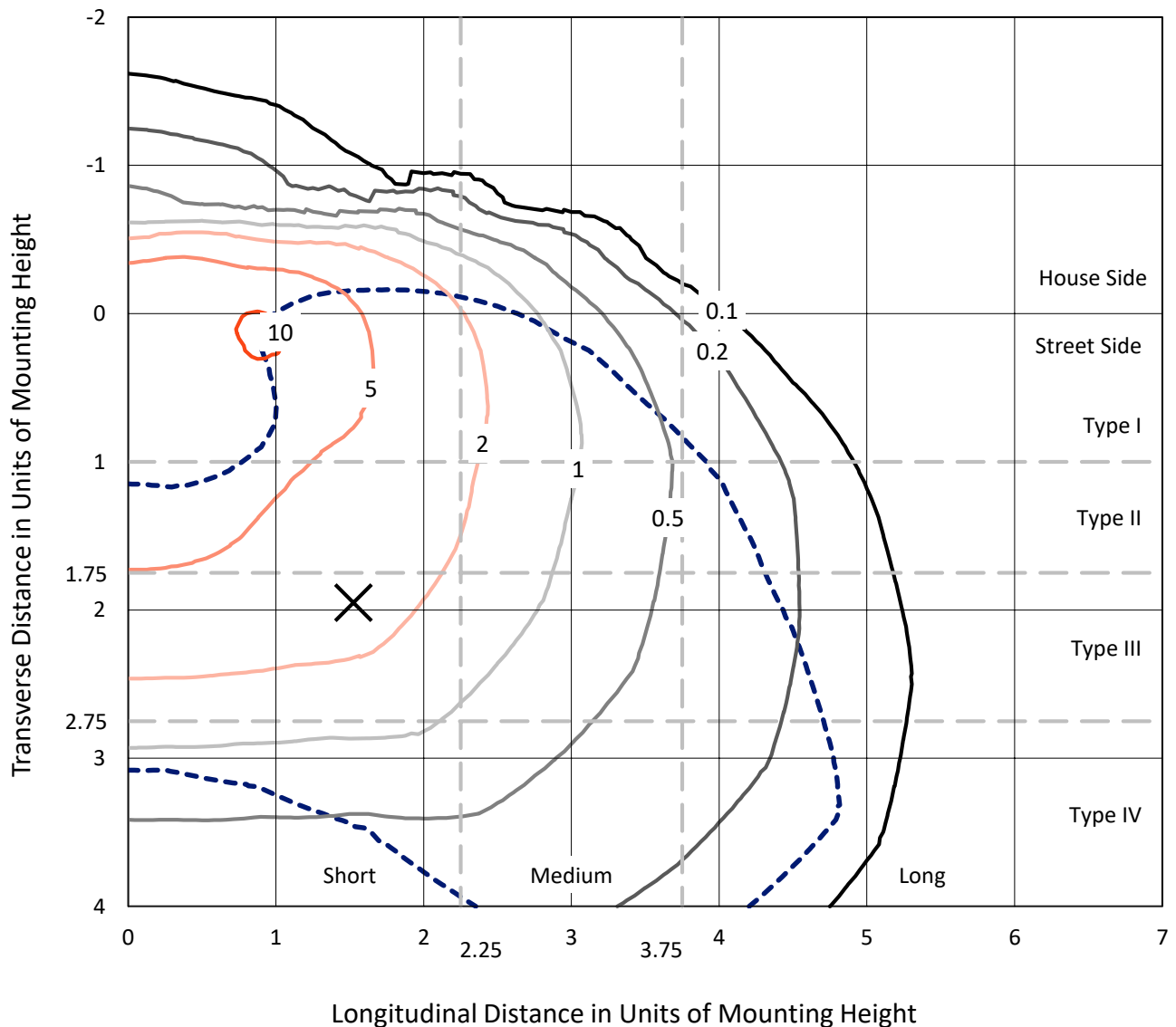
Input Watts (W): 760
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

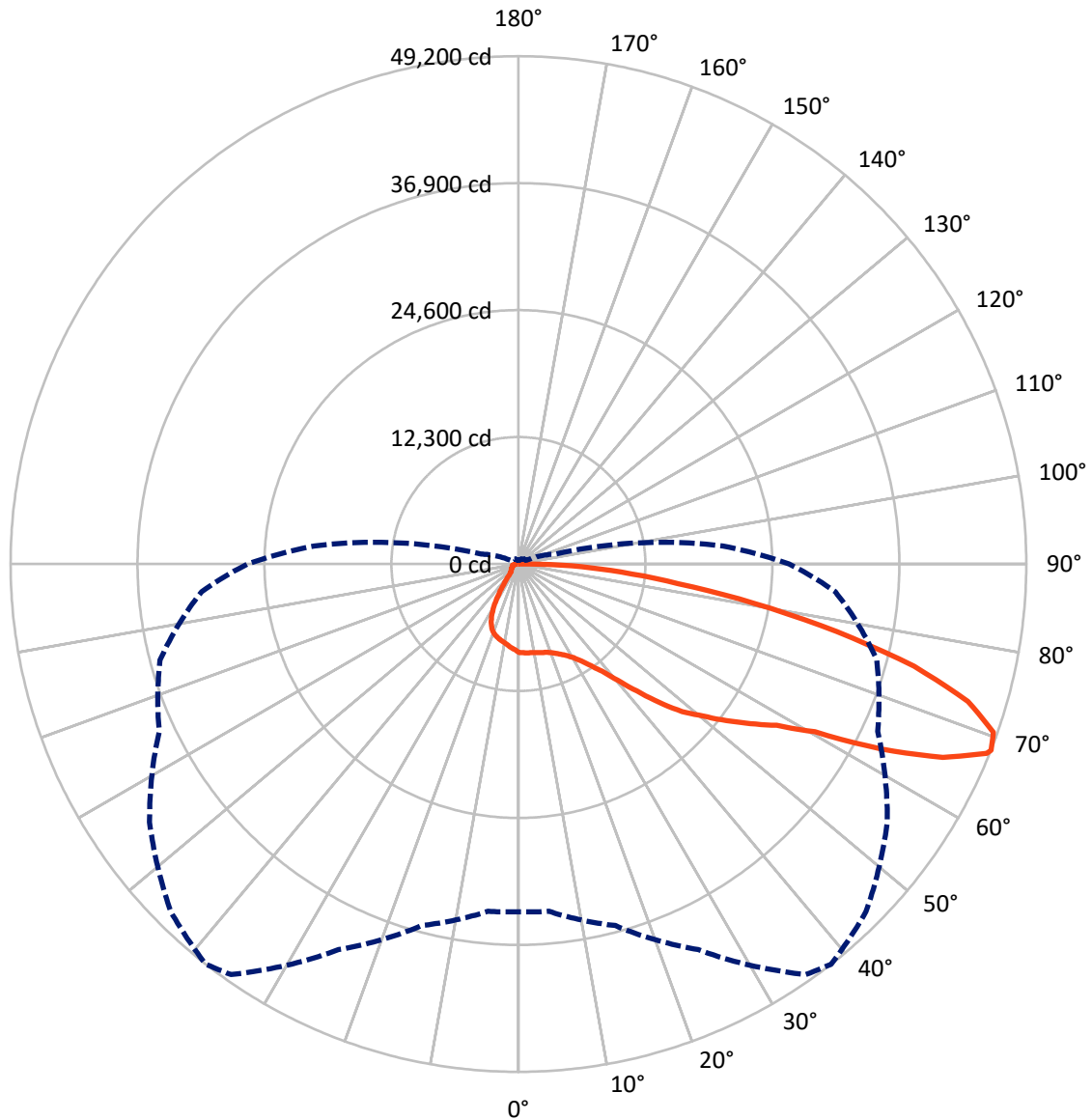
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 10.8 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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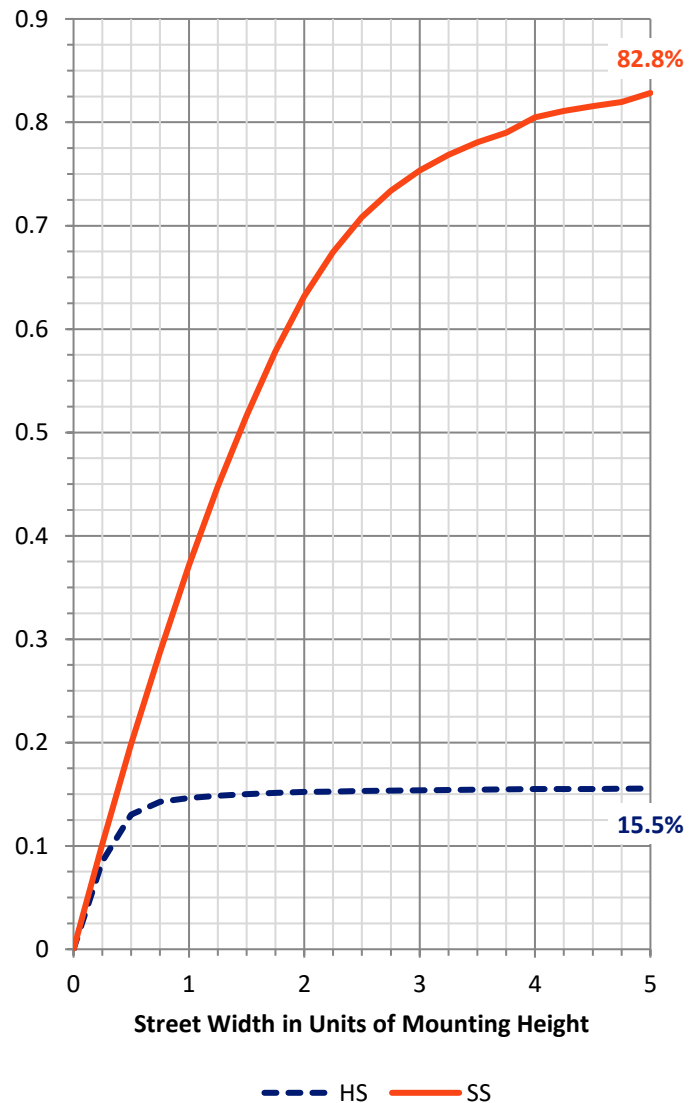
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	12466.9	0.0	12466.9
	% Fixture	15.8	0.0	15.8
Street Side	Lumens	66573.1	0.0	66573.1
	% Fixture	84.2	0.0	84.2
Total	Lumens	79040.0	0.0	79040.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	809.3	1.0
10°-20°	2403.5	3.0
20°-30°	4011.2	5.1
30°-40°	6152.5	7.8
40°-50°	10592.4	13.4
50°-60°	15741.7	19.9
60°-70°	20824.9	26.3
70°-80°	15294.1	19.3
80°-90°	3210.4	4.1
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°	79040.0	100.0
0°-180°	79040.0	100.0



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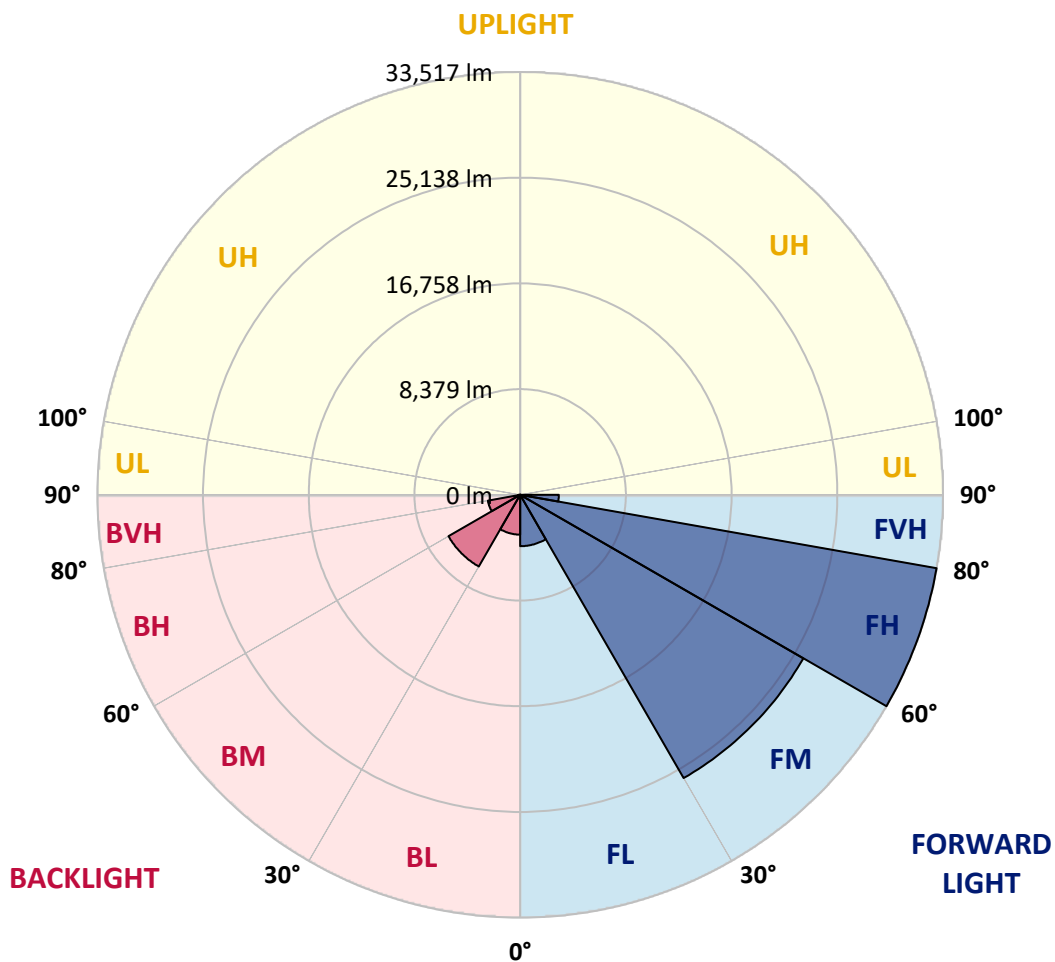
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4069.6	5.1			
FM	(30°-60°)	25923.8	32.8			
FH	(60°-80°)	33516.9	42.4			G5
FVH	(80°-90°)	3062.7	3.9			G5
BL	(0°-30°)	3154.3	4.0	B4/5000		
BM	(30°-60°)	6562.8	8.3	B4/8500		
BH	(60°-80°)	2602.1	3.3	B4/5000		G4/5000
BVH	(80°-90°)	147.7	0.2			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
0°	8583.8	8583.8	8583.8	8583.8	8583.8	8583.8	8583.8	8583.8	8583.8	8583.8	8583.8
2.5°	8765.8	8705.1	8716.7	8754.2	8601.1	8589.5	8638.7	8583.8	8656.0	8621.3	8624.2
5°	8788.9	8731.1	8754.2	8812.0	8667.6	8664.7	8719.6	8650.2	8705.1	8661.8	8650.2
7.5°	8768.7	8716.7	8734.0	8788.9	8664.7	8673.3	8745.6	8722.5	8803.3	8760.0	8728.2
10°	8760.0	8725.3	8728.2	8803.3	8705.1	8728.2	8820.7	8835.1	8965.1	8927.6	8913.1
12.5°	8682.0	8656.0	8682.0	8800.5	8768.7	8814.9	8939.1	9014.3	9167.4	9152.9	9181.8
15°	8635.8	8624.2	8644.4	8783.1	8820.7	8895.8	9060.5	9207.8	9392.7	9418.7	9485.2
17.5°	8690.7	8708.0	8745.6	8858.2	8910.2	8988.3	9173.2	9375.4	9638.3	9751.0	9829.0
20°	8921.8	8942.0	8976.7	9048.9	9106.7	9173.2	9337.8	9569.0	9918.6	10094.8	10219.1
22.5°	9257.0	9222.3	9271.4	9332.1	9349.4	9407.2	9574.8	9805.9	10201.7	10467.5	10640.9
25°	9517.0	9493.9	9543.0	9647.0	9644.1	9696.1	9860.8	10097.7	10525.3	10906.7	11212.9
27.5°	9788.6	9774.1	9794.3	9933.0	9987.9	10051.5	10195.9	10461.7	10944.2	11423.8	11906.3
30°	10181.5	10213.3	10178.6	10337.5	10456.0	10528.2	10675.5	11002.0	11519.2	12175.0	12784.6
32.5°	10791.1	10805.6	10747.8	10924.0	11094.5	11204.3	11345.8	11773.4	12339.7	13140.0	13925.9
35°	12091.2	12094.1	11857.2	11831.2	11926.6	12085.5	12293.5	12929.1	13772.7	15006.4	15896.3
37.5°	14061.7	13966.3	13741.0	13301.8	13160.2	13189.1	13486.7	14370.8	15650.7	17927.4	18779.7
40°	16321.0	16211.2	15815.4	15234.7	14818.6	14792.6	14893.8	15954.1	17826.3	21212.4	21642.9
42.5°	18759.5	18684.4	18043.0	17442.0	16910.4	16826.6	16598.4	17661.6	20224.3	24144.9	24142.0
45°	21010.2	20995.7	20212.7	19915.2	19351.8	19132.2	18860.6	19686.9	22688.8	26456.3	26178.9
47.5°	23122.2	23078.8	22246.7	21905.8	21475.3	21356.9	21036.2	21614.0	24795.0	28614.5	27924.0
50°	25364.2	25231.3	23994.7	23650.9	23226.2	23133.7	22966.1	23630.7	27089.0	30501.1	29357.0
52.5°	27970.2	27768.0	26080.7	25442.2	25138.8	25199.5	25092.6	25687.8	29654.6	32078.6	30530.0
55°	31053.0	30446.2	28834.1	27675.5	27002.3	27282.6	27074.6	27817.1	32116.2	33306.5	31385.2
57.5°	33315.2	33312.3	32656.5	31009.6	29484.1	29498.6	29079.7	29926.2	34106.8	34528.7	31885.1
60°	35903.9	36057.0	36282.4	35551.4	33751.5	32997.4	31523.9	32015.1	35707.4	35415.6	32107.5
62.5°	38154.6	38244.2	39240.9	39521.2	39659.9	39474.9	36198.6	34421.8	37016.3	35909.7	32171.1
65°	38073.7	38065.0	40220.4	42098.3	45016.4	45181.1	44236.3	37995.7	38030.4	35973.3	31841.7
67.5°	34358.2	34534.4	37417.8	41442.5	48402.5	48922.6	47619.6	43184.7	38405.9	35944.4	31055.9
68°	33693.7	33768.8	36262.2	41211.3	48547.0	49199.9	47625.3	43618.0	38394.4	35947.3	30813.2
70°	29461.0	29573.7	32480.2	38411.7	48587.4	48812.8	46911.7	43855.0	38013.0	35678.6	29062.3
72.5°	23257.9	23388.0	26037.3	32410.9	45559.6	45550.9	43713.4	41870.1	36721.6	33713.9	24653.4
75°	16849.7	17274.4	19591.6	25456.6	39001.1	39596.3	39359.4	38992.5	33046.5	28490.3	17398.7
77.5°	11813.9	12030.6	14211.9	19146.6	30648.5	31558.6	33156.3	33630.1	27548.4	21157.5	7835.5
80°	7451.2	7858.6	9664.3	13596.5	22327.6	23168.4	25104.1	25901.6	20334.1	10378.0	1372.4
82.5°	4342.4	4585.1	5914.2	8806.2	15012.2	15598.7	16867.1	15887.6	8242.8	1381.0	762.7
85°	2103.3	2325.8	3175.2	5009.8	9372.5	9964.8	10649.5	6928.3	1363.7	543.2	514.3
87.5°	852.3	875.4	1300.1	2224.7	4671.8	5180.3	5012.7	2273.8	355.4	196.5	161.8
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°	8583.8	8583.8	8583.8	8583.8	8583.8	8583.8	8583.8	8583.8	8583.8	8583.8	8583.8
2.5°	8638.7	8595.3	8543.3	8526.0	8404.6	8398.9	8297.7	8445.1	8401.8	8404.6	8439.3
5°	8644.4	8595.3	8494.2	8448.0	8318.0	8283.3	8115.7	8208.2	8109.9	8101.3	8159.1
7.5°	8705.1	8650.2	8505.8	8433.5	8190.8	8075.3	7916.4	7997.3	7847.0	7815.2	7826.8
10°	8866.9	8797.6	8621.3	8450.9	8150.4	7982.8	7670.8	7696.8	7563.9	7520.6	7558.1
12.5°	9112.5	9028.7	8817.8	8566.4	8185.1	7890.4	7509.0	7355.9	7153.6	7087.2	7107.4
15°	9447.6	9349.4	9072.0	8780.2	8260.2	7847.0	7327.0	7009.2	6616.2	6506.4	6466.0
17.5°	9814.6	9710.6	9389.9	9022.9	8393.1	7797.9	7119.0	6613.3	6047.1	5798.6	5784.2
20°	10245.1	10132.4	9797.2	9306.1	8500.0	7737.2	6858.9	6133.7	5397.0	4981.0	4952.1
22.5°	10739.1	10640.9	10262.4	9557.4	8554.9	7578.3	6466.0	5521.2	4599.6	4079.5	4053.5
25°	11319.8	11227.4	10695.8	9733.7	8494.2	7298.1	5928.6	4770.0	3660.6	3140.5	3117.4
27.5°	12013.2	11868.8	11036.7	9785.7	8315.1	6838.7	5255.4	3805.1	2704.3	2308.5	2288.2
30°	12802.0	12544.8	11357.4	9771.2	7997.3	6252.2	4328.0	2805.4	1921.3	1655.5	1646.8
32.5°	13795.9	13345.1	11663.6	9655.7	7543.7	5483.7	3293.7	1947.3	1381.0	1251.0	1248.1
35°	15454.3	14489.3	11998.8	9447.6	6928.3	4475.3	2282.5	1326.1	1123.9	1097.9	1097.9
37.5°	17927.4	16375.9	12475.5	9115.4	6130.9	3412.1	1502.4	1054.6	1057.4	1071.9	1074.8
40°	20467.0	18545.7	13166.0	8621.3	5200.5	2398.0	1092.1	979.4	1014.1	1037.2	1054.6
42.5°	22798.6	20510.3	13934.5	7945.3	4148.9	1583.3	976.5	941.9	959.2	976.5	993.9
45°	24754.5	22232.3	14659.7	7173.8	3074.1	1126.8	967.9	898.5	889.9	901.4	913.0
47.5°	26404.3	23633.5	15168.2	6304.2	2091.8	965.0	944.8	852.3	823.4	826.3	832.1
50°	27664.0	24624.5	15393.6	5347.9	1386.8	939.0	901.4	803.2	757.0	757.0	762.7
52.5°	28513.4	25245.7	15260.7	4270.2	996.8	924.5	866.8	751.2	696.3	705.0	710.7
55°	29143.2	25578.0	14737.7	3137.7	878.3	881.2	826.3	690.5	644.3	667.4	676.1
57.5°	29388.8	25569.3	13859.4	2166.9	872.5	814.8	768.5	638.5	601.0	632.7	647.2
60°	29299.2	25147.5	12582.4	1476.4	855.2	762.7	707.9	589.4	560.5	560.5	563.4
62.5°	29120.1	24555.2	10730.4	1095.0	814.8	725.2	661.6	548.9	514.3	496.9	491.2
65°	28311.1	23119.3	7878.8	944.8	774.3	705.0	618.3	511.4	465.2	436.3	430.5
67.5°	26710.5	20649.0	4403.1	872.5	745.4	693.4	589.4	476.7	424.7	390.0	387.2
68°	26219.4	19877.6	3732.8	866.8	751.2	693.4	586.5	468.0	418.9	381.4	378.5
70°	23312.8	16035.0	1542.8	814.8	791.6	696.3	572.1	442.0	395.8	358.3	355.4
72.5°	17632.7	9288.7	814.8	707.9	771.4	684.7	577.8	421.8	375.6	332.3	326.5
75°	9716.3	2660.9	725.2	574.9	713.6	722.3	589.4	418.9	364.0	309.1	297.6
77.5°	2158.2	866.8	676.1	502.7	615.4	664.5	546.1	398.7	369.8	283.1	271.6
80°	826.3	705.0	641.4	387.2	488.3	563.4	453.6	355.4	378.5	265.8	251.4
82.5°	690.5	618.3	589.4	300.5	338.0	413.2	364.0	303.4	349.6	245.6	234.0
85°	508.5	598.1	416.0	236.9	248.5	254.2	254.2	236.9	300.5	216.7	205.1
87.5°	205.1	288.9	176.2	109.8	127.1	118.5	104.0	127.1	173.4	153.1	153.1
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)