

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: P232701

Luminaire Tested: **CTN-10-8-D-E1-T3**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P232701  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-19)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: CTN-10-8-D-E1-T3  
Description: CELESTEON HIGH MAST LUMINAIRE  
(10) 70 CRI, 4000K LEDS AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 80781 lumens  
Efficiency: N/A  
Efficacy: 128.0 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type III - Medium - Semi-Cutoff  
BUG Rating: B5 - U0 - G5

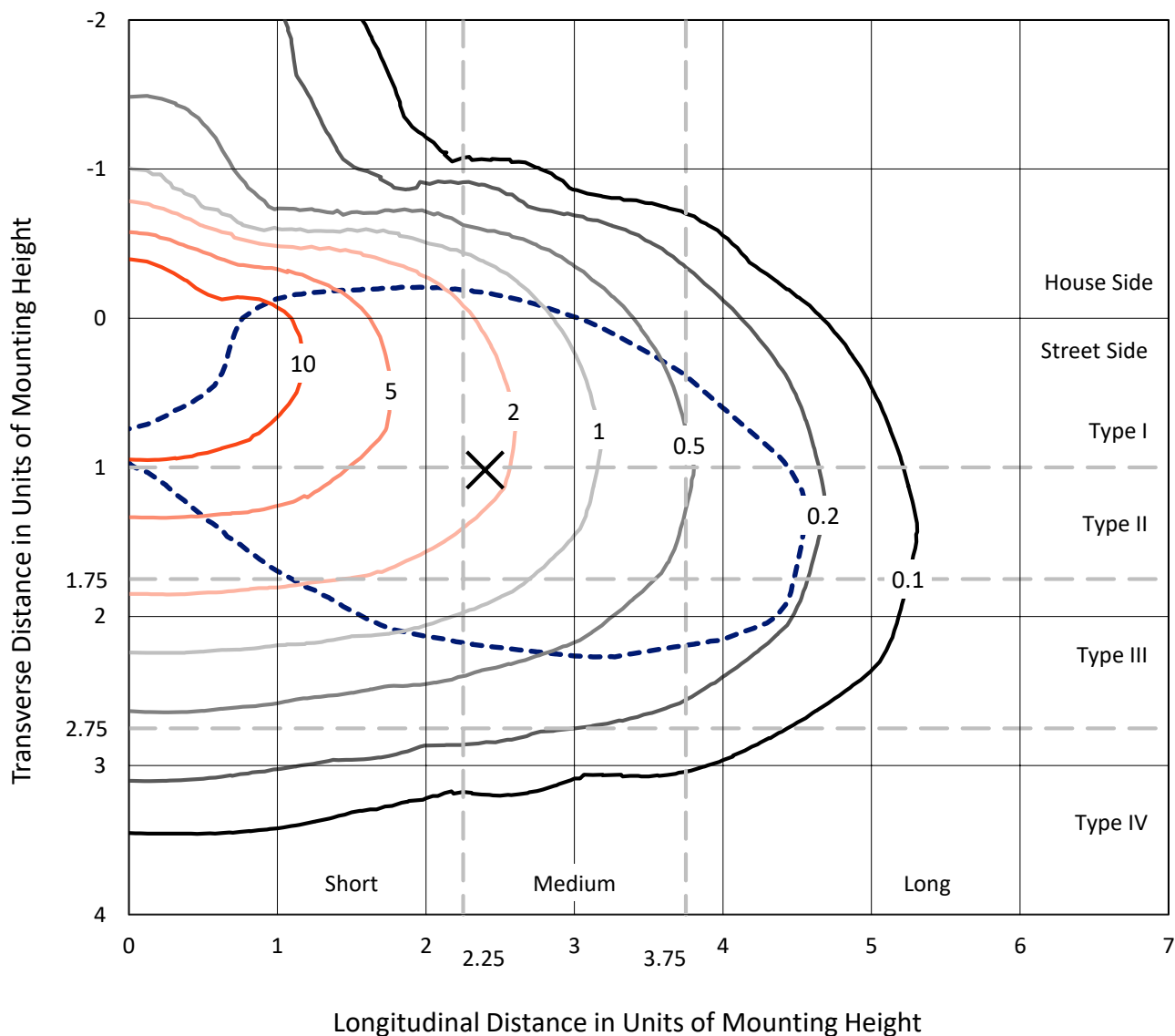
Input Watts (W): 631  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

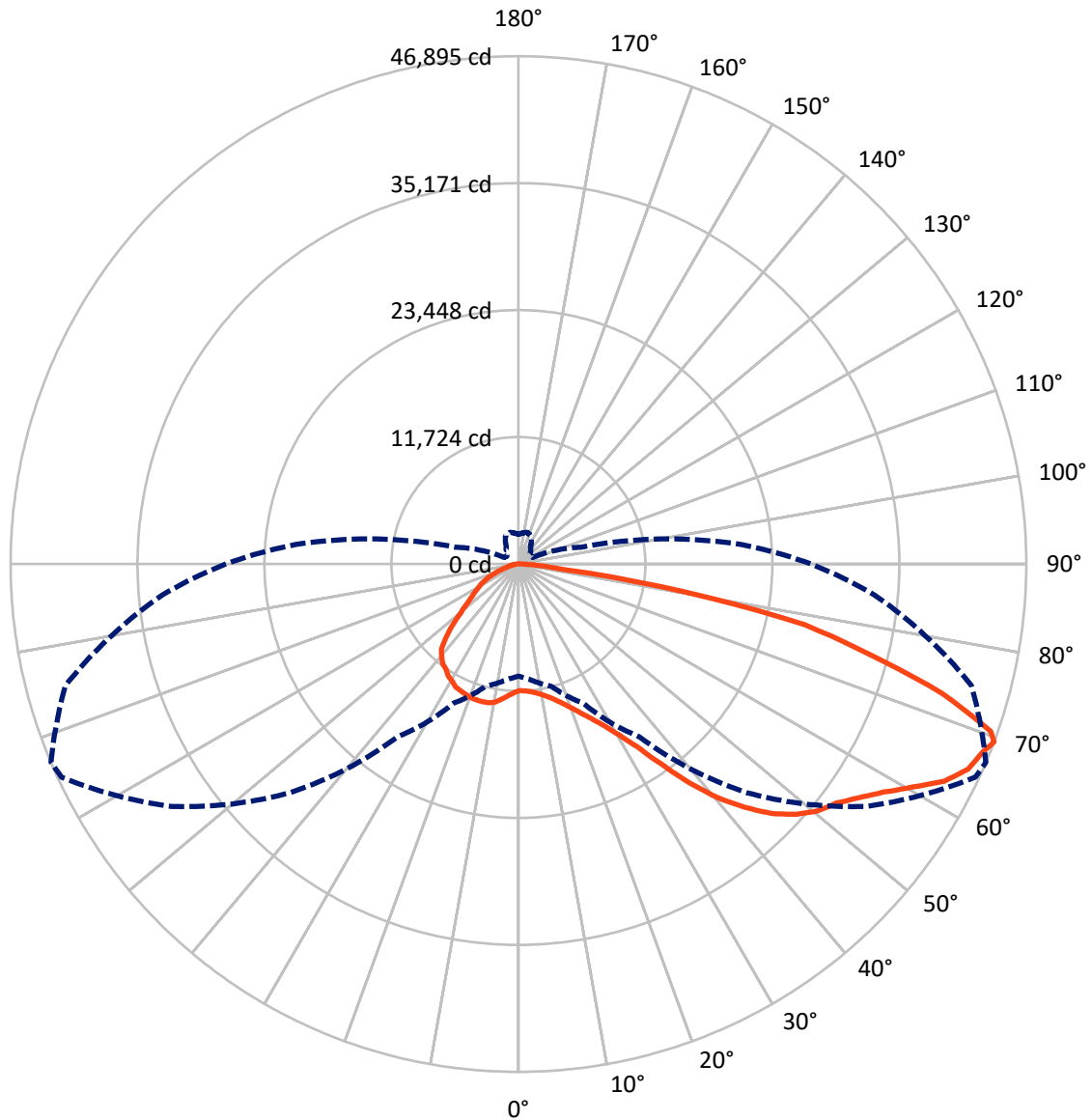
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 15.4 fc  
 Type III - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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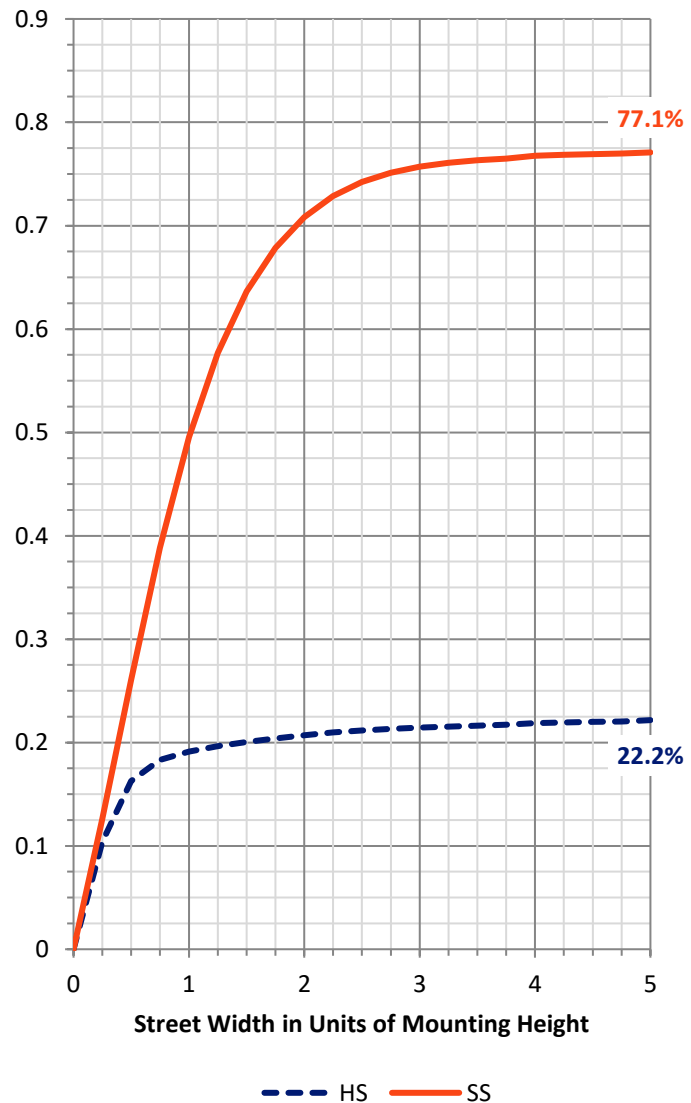
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	18376.0	0.0	18376.0
	% Fixture	22.7	0.0	22.7
<b>Street Side</b>	Lumens	62405.1	0.0	62405.1
	% Fixture	77.3	0.0	77.3
<b>Total</b>	Lumens	80781.0	0.0	80781.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1186.7	1.5
10°-20°	3811.3	4.7
20°-30°	6627.9	8.2
30°-40°	9984.1	12.4
40°-50°	13789.0	17.1
50°-60°	16457.2	20.4
60°-70°	17332.5	21.5
70°-80°	10167.4	12.6
80°-90°	1425.0	1.8
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°	80781.0	100.0
0°-180°	80781.0	100.0



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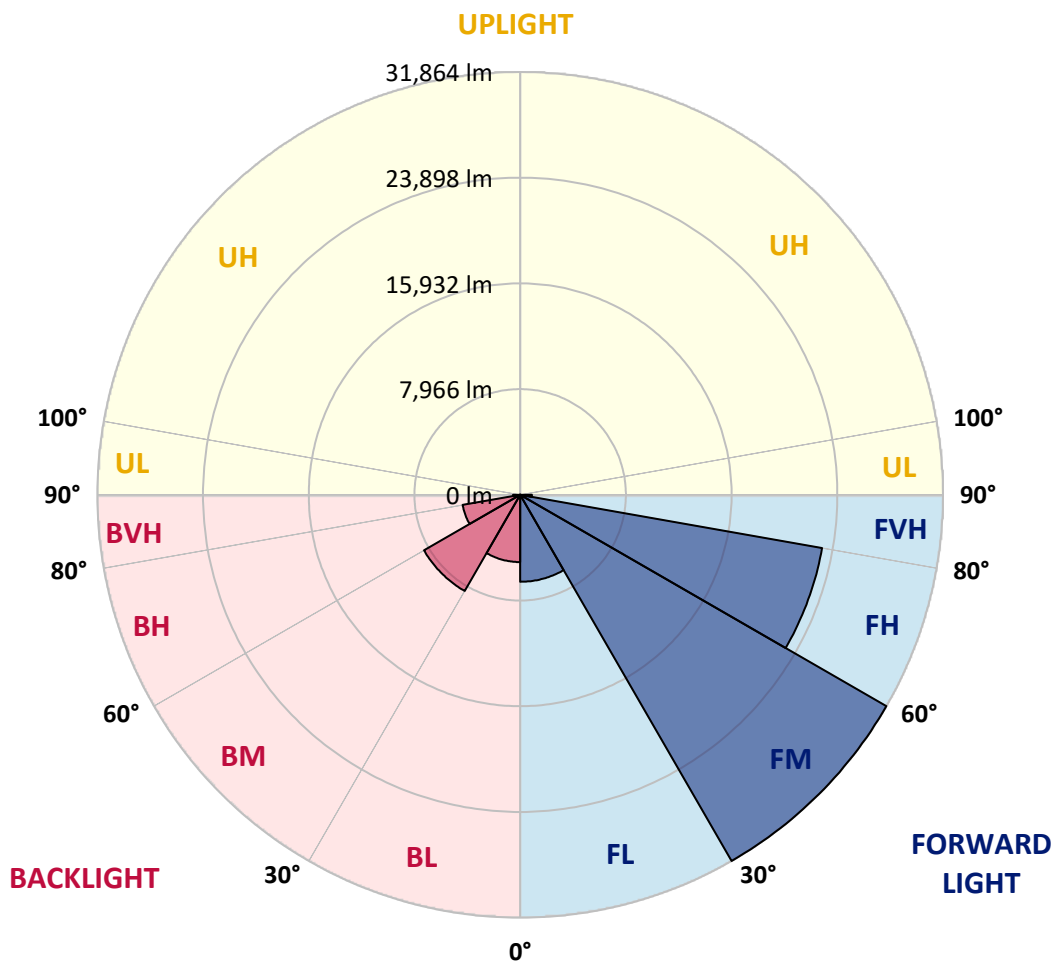
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	6555.3	8.1			
FM	(30°-60°)	31864.3	39.4			
FH	(60°-80°)	23099.9	28.6			G5
FVH	(80°-90°)	885.6	1.1			G5
BL	(0°-30°)	5070.6	6.3	B5		
BM	(30°-60°)	8366.0	10.4	B4/8500		
BH	(60°-80°)	4399.9	5.4	B4/5000		G4/5000
BVH	(80°-90°)	539.4	0.7			G4/750
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B5-U0-G5**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	11690.2	11690.2	11690.2	11690.2	11690.2	11690.2	11690.2	11690.2	11690.2	11690.2	11690.2
2.5°	11739.3	11754.8	11739.3	11713.4	11628.1	11666.9	11633.3	11741.9	11734.1	11692.8	11767.7
5°	12013.4	12031.5	11997.9	11977.2	11845.3	11863.4	11791.0	11850.5	11829.8	11760.0	11876.3
7.5°	12460.7	12478.8	12437.5	12409.0	12222.8	12181.5	12049.6	12067.7	12028.9	11917.7	12052.2
10°	13063.2	13078.7	13008.9	12939.1	12701.2	12600.4	12380.6	12344.4	12287.5	12178.9	12315.9
12.5°	13712.2	13735.5	13650.2	13559.7	13283.0	13117.5	12804.6	12693.4	12623.6	12491.8	12641.7
15°	14407.8	14436.2	14348.3	14244.9	13939.8	13683.8	13293.3	13125.3	13058.0	12892.5	12985.6
17.5°	15320.6	15312.8	15240.4	15098.2	14733.6	14358.7	13877.7	13626.9	13580.4	13420.0	13443.3
20°	16378.1	16341.9	16274.7	16078.2	15682.6	15217.1	14588.8	14270.7	14224.2	14089.7	13947.5
22.5°	17526.2	17490.0	17425.4	17174.5	16784.1	16173.9	15421.4	15046.5	14984.4	14816.3	14578.4
25°	18656.2	18617.4	18581.2	18343.3	17963.2	17270.2	16365.2	15886.8	15858.4	15687.7	15250.7
27.5°	19830.1	19806.8	19817.2	19612.9	19232.8	18514.0	17487.4	16967.7	16918.6	16701.3	16106.6
30°	21037.6	21042.8	21141.1	20923.9	20574.8	19850.8	18832.0	18301.9	18309.7	18115.8	17246.9
32.5°	22118.5	22123.7	22343.5	22234.9	22043.5	21322.1	20386.0	20013.7	20088.7	20073.2	19183.7
35°	22899.4	22933.0	23424.3	23571.7	23499.3	22870.9	22307.3	22397.8	22635.6	23307.9	22374.5
37.5°	23633.7	23646.7	24275.0	24616.3	24885.2	24507.7	24394.0	25252.4	25627.4	26558.2	25177.4
40°	23845.8	24024.2	24818.0	25293.8	25919.5	26105.7	26682.3	27951.9	28394.1	28955.2	27065.0
42.5°	23651.8	23905.2	24900.8	26030.7	26899.5	27822.7	28880.2	30317.9	30718.7	31065.2	28872.5
45°	23245.9	23439.8	24474.1	26165.2	27739.9	29570.6	30791.1	32513.2	32875.2	32650.2	30284.3
47.5°	22705.5	22852.8	24006.1	25950.6	28412.2	31137.6	32541.6	34274.1	34537.8	34012.9	31243.6
50°	21955.6	22131.4	23419.1	25655.8	28906.1	32448.6	33948.3	35598.0	35820.4	34861.1	32184.8
52.5°	21029.9	21249.7	22746.8	25154.2	29275.8	33426.0	34930.9	36479.7	36704.7	36081.5	32929.5
55°	19980.1	20285.2	21826.3	24543.9	29301.7	33945.7	35543.7	37772.6	38093.2	37421.0	33581.1
57.5°	18914.8	19111.3	20742.9	23610.5	28815.6	34119.0	36278.1	39277.5	39745.5	38719.0	34292.2
60°	17614.1	17802.9	19419.0	22361.6	27845.9	34385.3	37746.8	41431.4	41803.8	40231.7	34897.3
62.5°	16075.6	16290.2	17756.3	20652.4	26410.8	34493.9	39243.9	43722.4	44149.1	41607.3	35246.3
65°	14120.8	14358.7	15695.5	18583.8	24360.3	33723.3	39890.3	45416.1	45635.9	42662.3	35096.4
67.5°	11984.9	12181.5	13246.8	16011.0	21523.8	31714.2	39551.6	46041.8	46264.2	43378.5	34199.1
69°	10350.8	10653.3	11677.2	14177.7	19483.6	29875.7	39034.5	46556.4	46895.1	43298.4	33020.0
70°	9042.4	9381.1	10306.8	12561.6	17751.2	27967.5	38072.6	46166.0	46261.6	42525.2	31957.3
72.5°	5714.5	5825.7	6247.2	7746.9	12489.2	21741.0	33317.4	40984.1	40958.3	37940.7	27897.6
75°	2823.6	2968.4	3767.4	4349.2	6154.1	13983.7	26224.7	33661.3	33666.4	32021.9	22935.6
77.5°	1696.3	1758.3	1962.6	2803.0	3516.6	6275.6	17800.3	26648.7	27057.3	26061.8	16504.8
80°	1168.8	1137.7	1197.2	1378.2	1892.8	3299.4	7317.7	15064.6	15506.7	14301.8	7030.7
82.5°	920.5	894.7	912.8	959.3	902.4	1528.2	3095.1	4504.4	4372.5	3855.4	2702.1
85°	643.9	592.1	625.8	607.7	537.8	897.3	1504.9	1872.1	1859.2	1921.2	1471.3
87.5°	204.3	181.0	186.2	181.0	150.0	318.0	540.4	729.2	672.3	682.6	517.1
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°	11690.2	11690.2	11690.2	11690.2	11690.2	11690.2	11690.2	11690.2	11690.2	11690.2	11690.2
2.5°	11785.8	11765.2	11788.4	11910.0	11881.5	11987.5	12013.4	12186.6	12194.4	12178.9	12256.4
5°	11930.6	11951.3	12039.2	12233.2	12297.8	12525.4	12628.8	12840.8	12861.5	12869.3	12944.3
7.5°	12140.1	12176.3	12365.0	12618.5	12740.0	13037.3	13192.5	13453.6	13471.7	13500.2	13585.5
10°	12450.4	12502.1	12652.1	12998.6	13037.3	13272.6	13414.9	13639.8	13624.3	13663.1	13740.7
12.5°	12763.3	12791.7	12905.5	13143.4	13117.5	13347.6	13409.7	13557.1	13546.7	13544.2	13601.0
15°	13099.4	13050.3	13065.8	13156.3	13060.6	13202.8	13158.9	13267.5	13125.3	13068.4	13107.2
17.5°	13456.2	13337.3	13184.7	13117.5	12936.5	12913.2	12763.3	12711.5	12613.3	12582.3	12613.3
20°	13880.3	13626.9	13257.1	13063.2	12667.6	12463.3	12176.3	12008.2	11780.7	11798.8	11842.7
22.5°	14312.1	13955.3	13396.8	12877.0	12318.5	11904.8	11333.3	11180.8	10883.4	10795.5	10883.4
25°	14842.2	14363.8	13466.6	12711.5	11791.0	11054.1	10474.9	9934.4	9709.5	9489.7	9572.4
27.5°	15537.8	14891.3	13720.0	12507.3	11193.7	10211.1	9290.6	8592.4	8313.2	8077.9	8093.4
30°	16440.2	15597.2	13815.7	12078.0	10474.9	9055.3	7896.9	7121.2	6772.1	6676.4	6635.0
32.5°	18108.0	16735.0	13986.3	11765.2	9580.2	7798.6	6376.5	5543.8	5324.1	5365.4	5499.9
35°	21063.5	19116.4	14503.5	11111.0	8592.4	6428.2	4954.3	4310.4	4346.6	4421.6	4406.1
37.5°	23613.1	21265.2	15364.5	10650.7	7384.9	4869.0	3741.6	3400.3	3617.5	3764.8	3759.7
40°	25345.5	22832.2	16491.9	9789.6	5859.3	3470.1	2753.8	2565.1	2841.7	3157.2	3211.5
42.5°	27065.0	24256.9	17037.5	9026.8	4113.9	2448.7	1993.6	2042.7	2397.0	2694.3	2748.7
45°	28301.0	25291.2	17278.0	7666.7	2627.1	1874.7	1740.2	1921.2	2303.9	2539.2	2565.1
47.5°	29208.6	26069.5	17016.8	6203.2	1934.1	1714.4	1716.9	1947.1	2332.3	2598.7	2609.0
50°	30010.2	26617.7	15964.4	4837.9	1740.2	1660.1	1750.6	2022.1	2415.1	2684.0	2676.2
52.5°	30558.4	26778.0	14687.1	3964.0	1685.9	1629.0	1779.0	2091.9	2440.9	2621.9	2606.4
55°	30923.0	26537.5	13704.5	3263.2	1639.4	1626.4	1825.5	2179.8	2466.8	2539.2	2503.0
57.5°	31147.9	26051.4	12874.4	2805.5	1600.6	1626.4	1877.3	2213.4	2562.5	2694.3	2653.0
60°	31080.7	25834.2	11749.6	2430.6	1546.3	1631.6	1905.7	2262.5	2947.8	3258.0	3265.8
62.5°	30946.2	25410.2	10650.7	2133.2	1481.6	1662.6	1941.9	2547.0	3620.0	3622.6	3493.3
65°	30307.6	24132.8	9052.7	1864.3	1414.4	1670.4	1949.7	3015.0	4059.6	3718.3	3550.2
67.5°	28549.2	22263.3	7183.2	1613.5	1339.4	1623.9	1941.9	2950.3	3278.7	2934.8	2849.5
69°	27015.9	20642.0	6001.5	1463.5	1285.1	1577.3	1949.7	2828.8	3035.7	2831.4	2753.8
70°	25898.9	19328.5	5099.1	1373.0	1236.0	1554.0	1949.7	2784.9	3002.1	2808.1	2733.1
72.5°	22229.7	15183.5	3056.4	1145.5	1093.8	1463.5	1931.6	2717.6	3027.9	2862.4	2764.2
75°	17029.7	11043.7	1779.0	941.2	920.5	1313.6	1835.9	2676.2	3115.8	2865.0	2650.4
77.5°	10911.9	5096.5	1326.5	765.4	747.3	1137.7	1714.4	2541.8	3201.2	3004.6	2733.1
80°	3790.7	2311.7	990.3	605.1	579.2	930.9	1502.3	2291.0	3048.6	3069.3	2865.0
82.5°	2078.9	1523.0	700.7	449.9	426.6	584.4	1168.8	1975.5	2821.1	3038.3	3053.8
85°	1142.9	858.5	460.3	289.6	325.8	501.6	809.3	1535.9	2270.3	2640.0	2756.4
87.5°	462.8	310.3	181.0	113.8	134.5	199.1	274.1	786.1	1370.4	1768.7	1947.1
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)