

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: P591222

Luminaire Tested: **CTN-CA10-630-727-U-T3-SSS-HM-EX180**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591222  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-9)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/19/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA10-630-727-U-T3-SSS-HM-EX180  
Description: CELESTEON HIGH MAST LUMINAIRE, 180D FIELD INSTALLED SHIELD ON STREET SIDE  
Light Source: (10) 2700K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 40350 lumens  
Efficiency: N/A  
Efficacy: 63.9 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type II - Short  
BUG Rating: B4 - U0 - G4

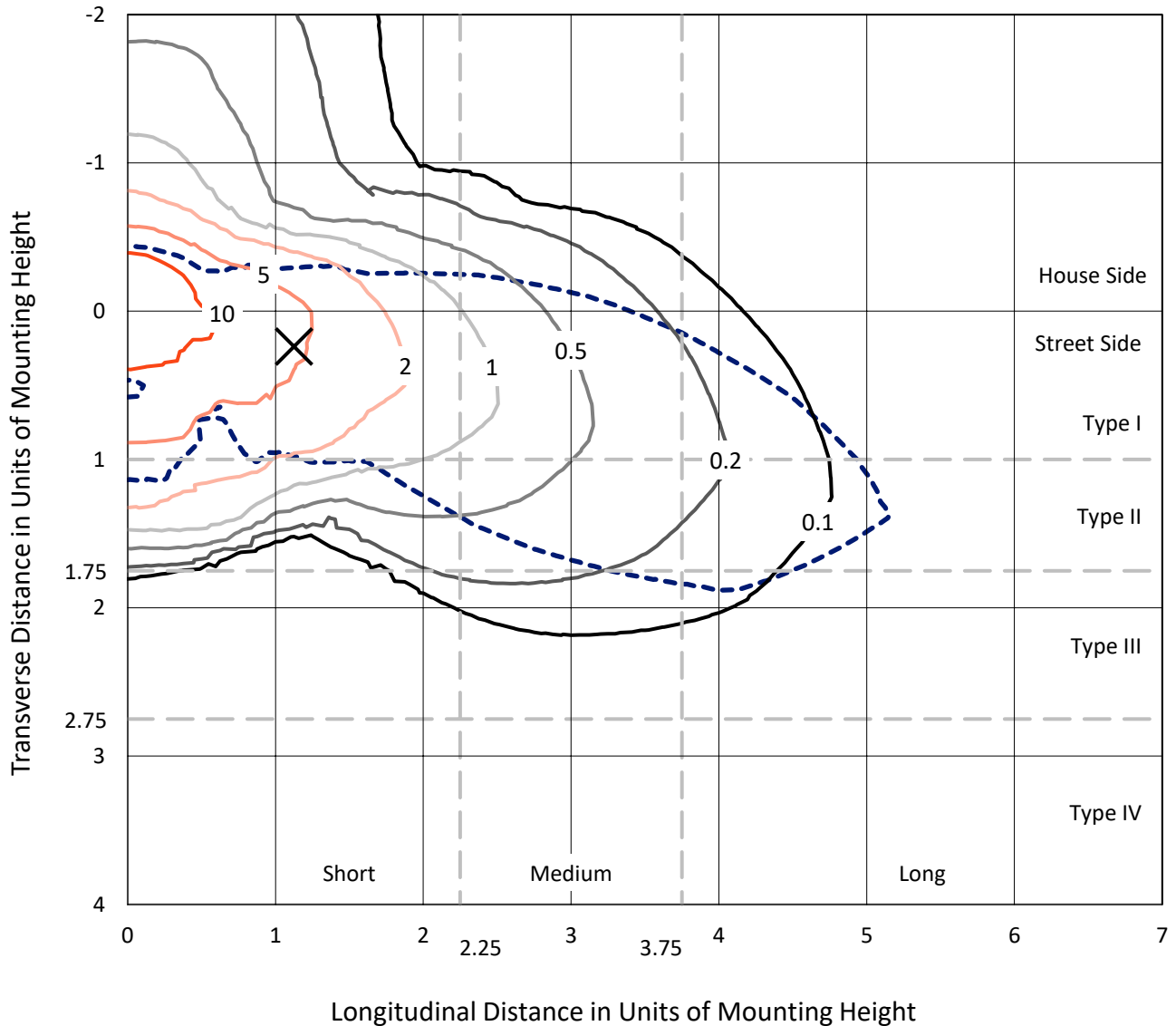
Input Watts (W): 631.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

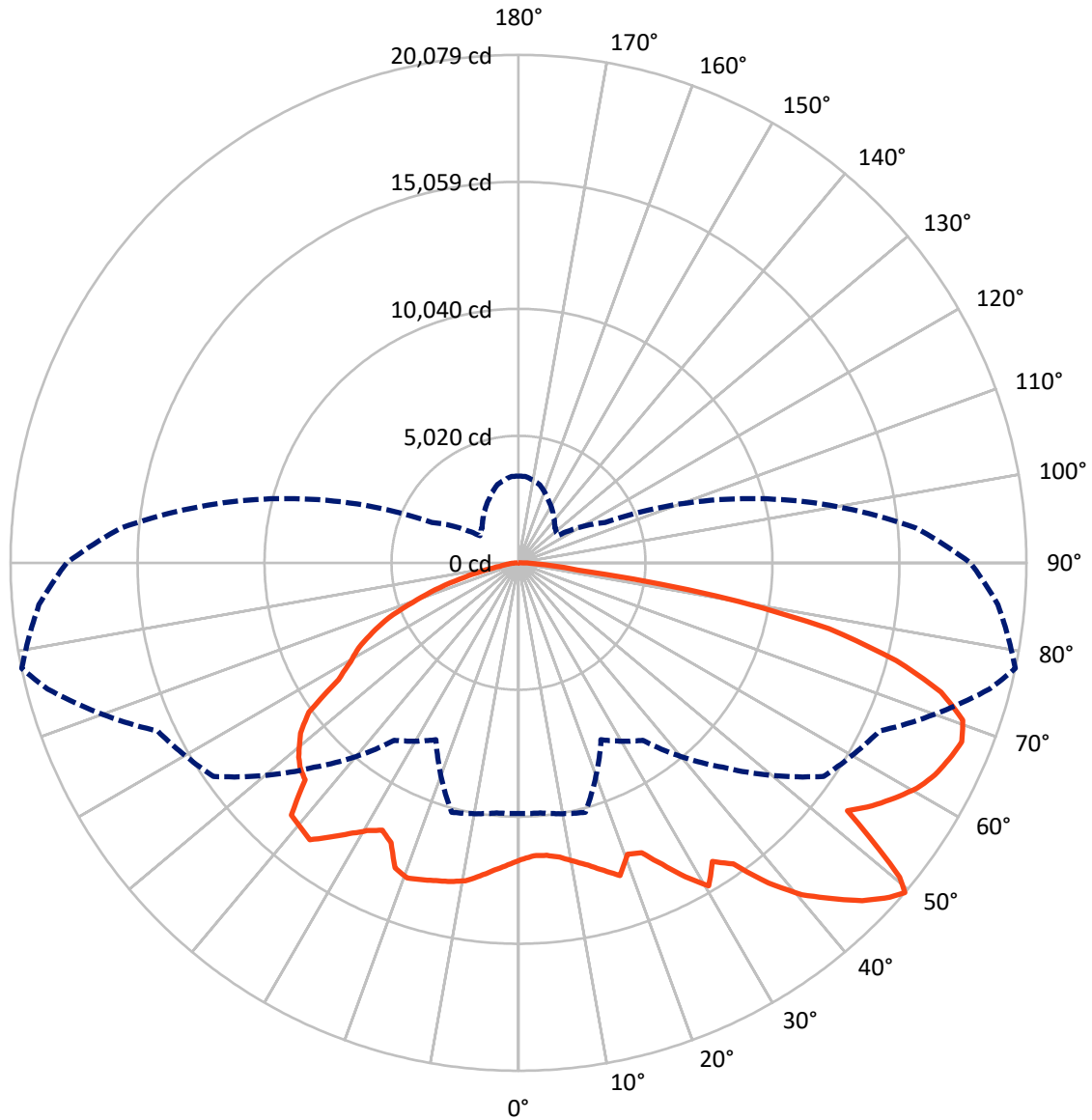
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 14.7 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral      - - - Horizontal Cone Through 49-Deg Vertical

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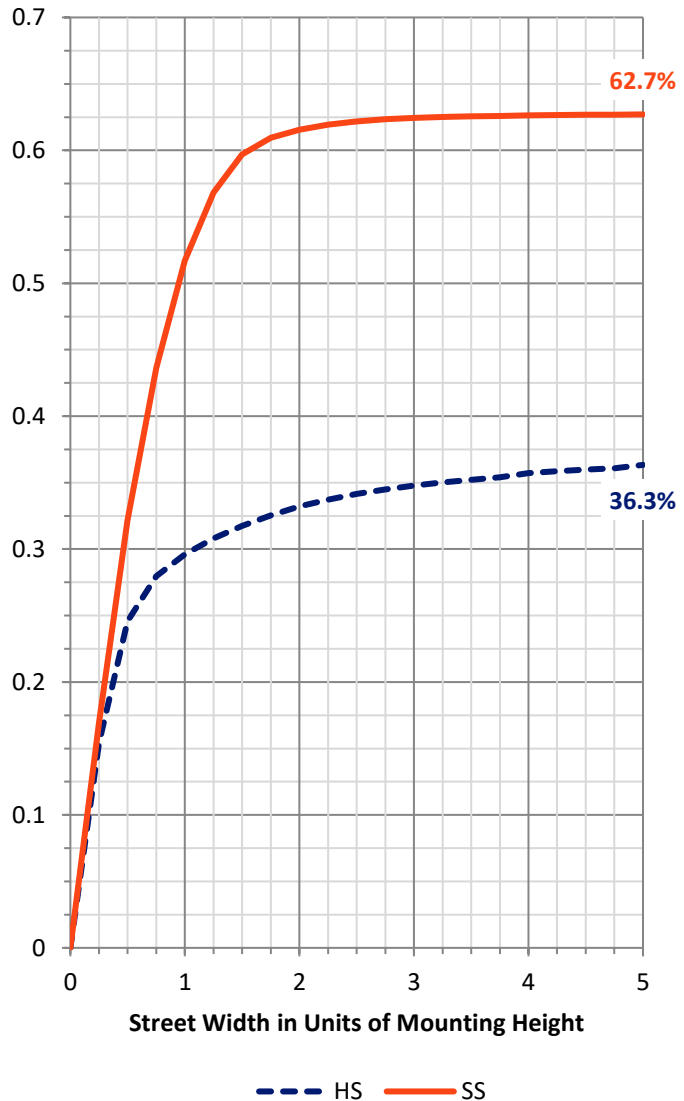
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	15091.8	0.0	15091.8
	% Fixture	37.4	0.0	37.4
<b>Street Side</b>	Lumens	25258.2	0.0	25258.2
	% Fixture	62.6	0.0	62.6
<b>Total</b>	Lumens	40350.0	0.0	40350.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1174.5	2.9
10°-20°	3605.2	8.9
20°-30°	5224.4	12.9
30°-40°	6419.6	15.9
40°-50°	7245.6	18.0
50°-60°	6885.1	17.1
60°-70°	5142.2	12.7
70°-80°	3818.9	9.5
80°-90°	834.5	2.1
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°	40350.0	100.0
0°-180°	40350.0	100.0

**Coefficient of Utilization**



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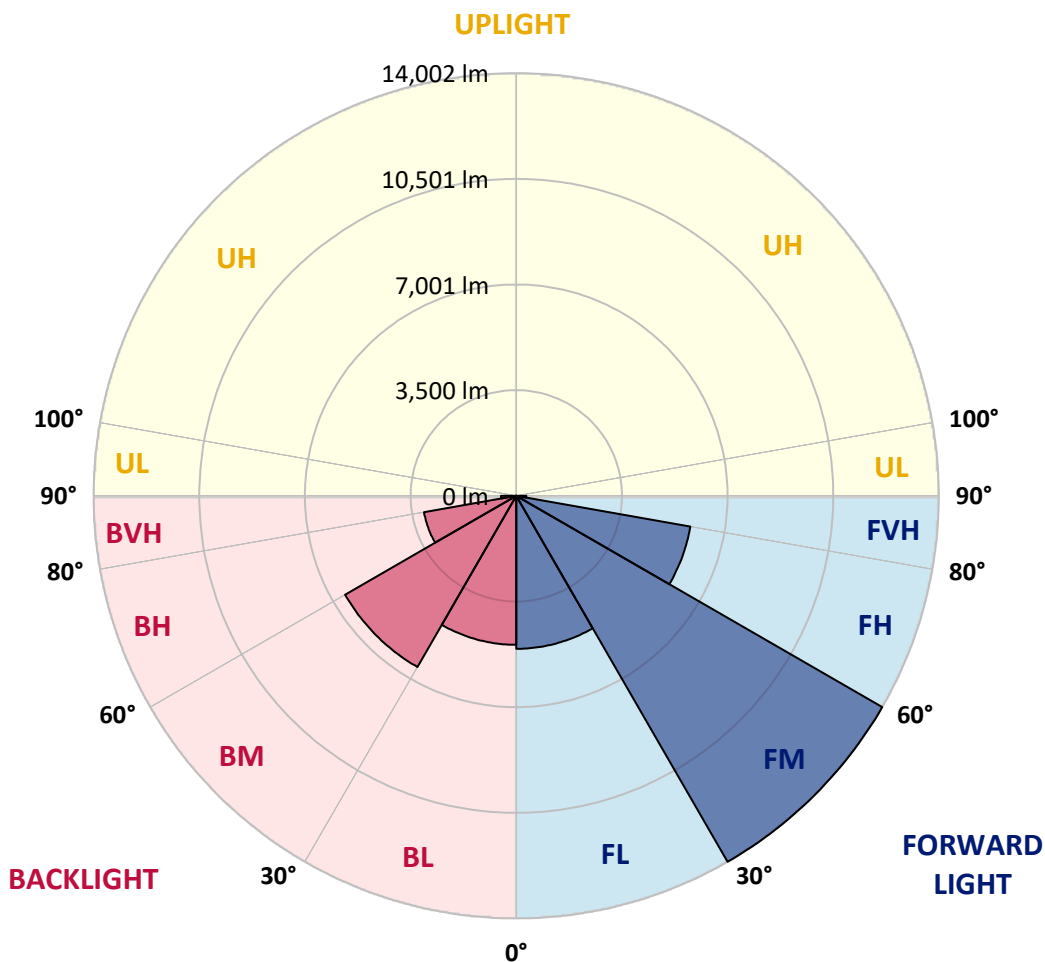
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	5068.2	12.6			
FM (30°-60°)	14001.6	34.7			
FH (60°-80°)	5858.5	14.5			G3/7500
FVH (80°-90°)	329.9	0.8			G3/500
BL (0°-30°)	4935.9	12.2	B4/5000		
BM (30°-60°)	6548.7	16.2	B4/8500		
BH (60°-80°)	3102.6	7.7	B4/5000		G4/5000
BVH (80°-90°)	504.6	1.3			G4/750
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G4**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	11733.6	11733.6	11733.6	11733.6	11733.6	11733.6	11733.6	11733.6	11733.6	11733.6	11733.6
2.5°	11480.0	11417.2	11434.1	11530.7	11344.8	11480.0	11424.5	11554.9	11598.3	11593.5	11781.9
5°	11574.2	11492.1	11516.2	11581.4	11378.6	11482.4	11439.0	11579.0	11615.2	11617.7	11873.6
7.5°	11919.5	11825.3	11801.2	11806.0	11615.2	11692.5	11581.4	11690.1	11755.3	11748.1	12033.0
10°	12421.8	12318.0	12264.8	12247.9	12016.1	11982.3	11847.1	11885.7	11982.3	11994.4	12284.1
12.5°	12938.6	12856.5	12779.2	12740.5	12421.8	12346.9	12148.9	12182.7	12255.2	12269.7	12571.5
15°	13395.0	13317.7	13305.6	13262.1	12938.6	12793.7	12554.6	12518.4	12573.9	12619.8	12883.0
17.5°	12948.2	12849.2	12786.4	12800.9	12636.7	12269.7	12122.4	12371.1	12834.7	12996.5	13245.2
20°	11687.7	11808.4	11757.7	11562.1	11385.8	11979.9	11854.3	11801.2	12088.5	12296.2	12897.5
22.5°	10267.8	10267.8	10750.7	11088.8	11156.4	11489.7	12175.5	12414.5	12445.9	12445.9	12272.1
25°	9144.9	9463.6	10282.3	11566.9	11574.2	11506.6	11697.3	13008.6	13225.9	13201.8	12909.6
27.5°	9579.6	9526.4	10077.0	10970.5	12233.4	12156.2	11784.3	12375.9	14167.7	14056.6	13682.3
30°	9963.5	9910.4	10009.4	11117.8	12421.8	12861.3	12542.5	12366.2	14218.4	14822.1	14597.5
32.5°	10323.3	10262.9	10376.4	10545.5	11820.5	13561.6	13337.0	13221.1	13494.0	14080.8	15633.5
35°	10613.1	10622.8	10753.2	11001.9	11586.3	13324.9	14133.9	14177.4	14655.5	14619.3	15404.1
37.5°	10828.0	10847.3	10960.8	11255.4	11472.8	11006.7	14892.1	15394.4	16130.9	16058.5	15481.4
40°	10840.1	10883.6	11110.5	11472.8	11728.7	9801.7	14752.1	16737.1	17466.3	17253.8	16536.6
42.5°	10615.5	10637.2	11016.4	11629.7	8901.0	10195.3	13679.9	18074.9	18400.9	18140.1	17343.2
45°	10415.1	10410.2	10815.9	11366.5	8410.8	10656.6	13650.9	17686.1	19260.5	19057.7	18041.1
47.5°	10132.5	10130.1	10526.2	8553.3	8517.0	11154.0	14370.5	15336.5	19972.9	19755.6	18676.1
49°	9905.6	9929.7	10209.8	7715.3	8565.3	11431.7	14720.7	15737.3	19275.0	20079.2	19028.7
50°	9782.4	9806.5	9123.2	7630.8	8579.8	11591.1	14904.2	16031.9	17348.0	19531.0	19255.7
52.5°	9222.2	9009.7	7073.0	7454.5	8584.7	11779.4	12815.4	16657.4	16534.2	16280.7	18231.8
55°	5556.5	6288.2	6404.1	7254.1	8507.4	8555.7	12518.4	17384.2	17331.1	16961.6	15698.7
57.5°	3368.7	3334.9	4945.5	6696.3	5696.5	7174.4	13008.6	18345.3	18031.4	17538.8	15966.7
60°	1188.1	1050.4	1060.1	1142.2	2120.2	5368.1	10376.4	13815.1	18176.3	18099.0	16210.6
62.5°	94.2	89.3	89.3	94.2	135.2	2016.4	8227.3	13858.6	18678.6	18478.1	16266.2
65°	12.1	12.1	12.1	26.6	70.0	1823.2	8239.3	14083.2	19052.9	18710.0	16118.9
67.5°	0.0	0.0	7.2	19.3	55.5	1613.1	7997.9	14216.0	19388.5	18903.1	15983.6
70°	0.0	0.0	4.8	16.9	48.3	1335.4	7703.2	14331.9	19231.6	18630.3	15302.7
72.5°	0.0	0.0	4.8	14.5	41.1	881.4	6829.1	13474.6	18113.5	17461.5	13904.5
75°	0.0	0.0	4.8	12.1	38.6	502.3	5595.1	11905.0	16118.9	15428.2	11716.7
77.5°	0.0	0.0	2.4	9.7	33.8	275.3	3866.1	9854.8	13315.3	12557.0	8777.8
80°	0.0	0.0	2.4	9.7	31.4	188.4	1758.0	6401.7	8874.4	7925.4	4810.3
82.5°	0.0	0.0	2.4	9.7	24.1	128.0	710.0	1794.2	2745.6	2347.2	1531.0
85°	0.0	0.0	2.4	7.2	16.9	82.1	350.1	736.5	1108.4	1064.9	775.2
87.5°	0.0	0.0	2.4	7.2	12.1	24.1	103.8	241.5	432.3	439.5	330.8
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°	11733.6	11733.6	11733.6	11733.6	11733.6	11733.6	11733.6	11733.6	11733.6	11733.6	11733.6
2.5°	11871.2	11892.9	11965.4	12074.1	12091.0	12238.3	12214.1	12489.4	12516.0	12581.2	12653.6
5°	11996.8	12071.6	12235.8	12484.6	12665.7	12887.8	12866.1	13177.6	13209.0	13192.1	13303.2
7.5°	12180.3	12291.4	12547.4	12883.0	12943.4	13218.7	13182.5	13452.9	13457.7	13421.5	13530.2
10°	12448.4	12578.8	12815.4	13006.2	13151.1	13317.7	13293.5	13535.0	13510.9	13469.8	13583.3
12.5°	12706.7	12779.2	12924.1	13148.6	13175.2	13242.8	13201.8	13426.3	13402.2	13344.2	13450.5
15°	12938.6	12974.8	12977.2	13088.3	13027.9	13078.6	12969.9	13131.7	13076.2	13054.5	13129.3
17.5°	13235.6	13168.0	13069.0	13061.7	12856.5	12786.4	12612.6	12656.0	12540.1	12530.5	12571.5
20°	13274.2	13414.3	13129.3	12834.7	12489.4	12313.1	11984.7	11987.1	11856.7	11806.0	11830.2
22.5°	12216.5	12561.8	13199.4	12636.7	12049.9	11653.9	11231.3	11103.3	10857.0	10753.2	10712.1
25°	12629.5	12180.3	12132.0	12303.5	11480.0	10876.3	10262.9	9886.2	9594.0	9357.4	9374.3
27.5°	13269.4	12685.0	11504.2	11574.2	10762.8	9915.2	8990.3	8459.1	8162.1	7932.7	7906.1
30°	14117.0	13382.9	11639.4	10031.1	9939.4	8707.8	7572.8	6986.0	6684.2	6602.1	6551.4
32.5°	15169.8	14213.6	11943.7	9678.6	8224.8	7401.4	6128.8	5655.5	5513.0	5505.8	5447.8
35°	16420.7	15312.3	12223.8	9210.1	7092.3	6027.4	4897.2	4585.7	4607.5	4609.9	4658.2
37.5°	15621.4	16350.7	12573.9	8765.8	5988.7	4479.5	3938.6	3743.0	3805.7	3907.2	3955.5
40°	15633.5	14884.9	12982.0	8024.4	4653.3	3417.0	3081.3	3037.8	3305.9	3511.1	3561.8
42.5°	16261.3	14788.3	12832.3	7179.2	3407.3	2598.3	2566.9	2801.2	3187.6	3417.0	3458.0
45°	16935.1	15247.1	10659.0	5981.5	2470.4	2197.5	2439.0	2765.0	3185.1	3429.0	3453.2
47.5°	17575.0	15536.9	10217.1	4675.1	1985.0	2071.9	2400.3	2765.0	3202.0	3450.8	3465.3
49°	17859.9	15771.1	9806.5	3781.6	1861.8	2023.6	2378.6	2769.8	3206.9	3419.4	3426.6
50°	18029.0	15903.9	9475.7	3506.3	1801.4	1992.2	2368.9	2777.0	3199.6	3383.2	3390.4
52.5°	18292.2	16118.9	8715.1	2793.9	1688.0	1919.8	2354.4	2806.0	3173.1	3281.7	3276.9
55°	15085.3	15066.0	8080.0	2344.8	1601.0	1854.6	2349.6	2830.2	3185.1	3296.2	3291.4
57.5°	14457.5	12371.1	6807.4	1917.4	1528.6	1799.0	2354.4	2866.4	3402.5	3595.7	3571.5
60°	14503.4	12182.7	5793.1	1663.8	1444.1	1753.2	2368.9	3028.2	3931.3	4126.9	4066.5
62.5°	14344.0	11721.5	5184.6	1494.8	1354.7	1712.1	2378.6	3252.8	3998.9	4015.8	3912.0
65°	13964.9	11141.9	4366.0	1308.8	1260.5	1673.5	2376.2	3334.9	3689.8	3552.2	3518.4
67.5°	13262.1	10526.2	3455.6	1147.0	1159.1	1615.5	2431.7	3192.4	3491.8	3380.7	3330.0
70°	12429.0	9212.5	2436.5	997.3	1067.3	1550.3	2424.5	3158.6	3388.0	3223.8	3153.7
72.5°	10946.3	7744.3	1639.7	859.7	951.4	1475.4	2301.3	3057.2	3320.4	3211.7	3115.1
75°	8700.6	5795.5	951.4	741.3	837.9	1366.8	2180.6	2994.4	3356.6	3148.9	2948.5
77.5°	5947.7	3301.0	710.0	620.6	722.0	1226.7	1977.7	2784.3	3245.5	3066.8	2798.8
80°	2666.0	1192.9	543.3	504.7	606.1	994.9	1704.9	2463.1	3074.1	3074.1	2885.7
82.5°	1060.1	751.0	376.7	396.0	495.0	758.3	1349.9	2125.0	2709.4	2832.6	3028.2
85°	598.9	439.5	241.5	287.4	379.1	586.8	982.8	1651.7	2207.1	2446.2	2651.5
87.5°	236.7	166.6	96.6	161.8	219.7	301.9	429.8	809.0	1188.1	1463.4	1617.9
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)