

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: P237554

Luminaire Tested: **CTN-10-4-D-E1-T2-7030-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P237554  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-25)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: CTN-10-4-D-E1-T2-7030-HSS  
Description: CELESTEON HIGH MAST LUMINAIRE  
(10) 70 CRI, 3000K LEDS AND TYPE II OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 37996 lumens  
Efficiency: N/A  
Efficacy: 123.4 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type II - Short - Non-Cutoff  
BUG Rating: B3 - U0 - G4

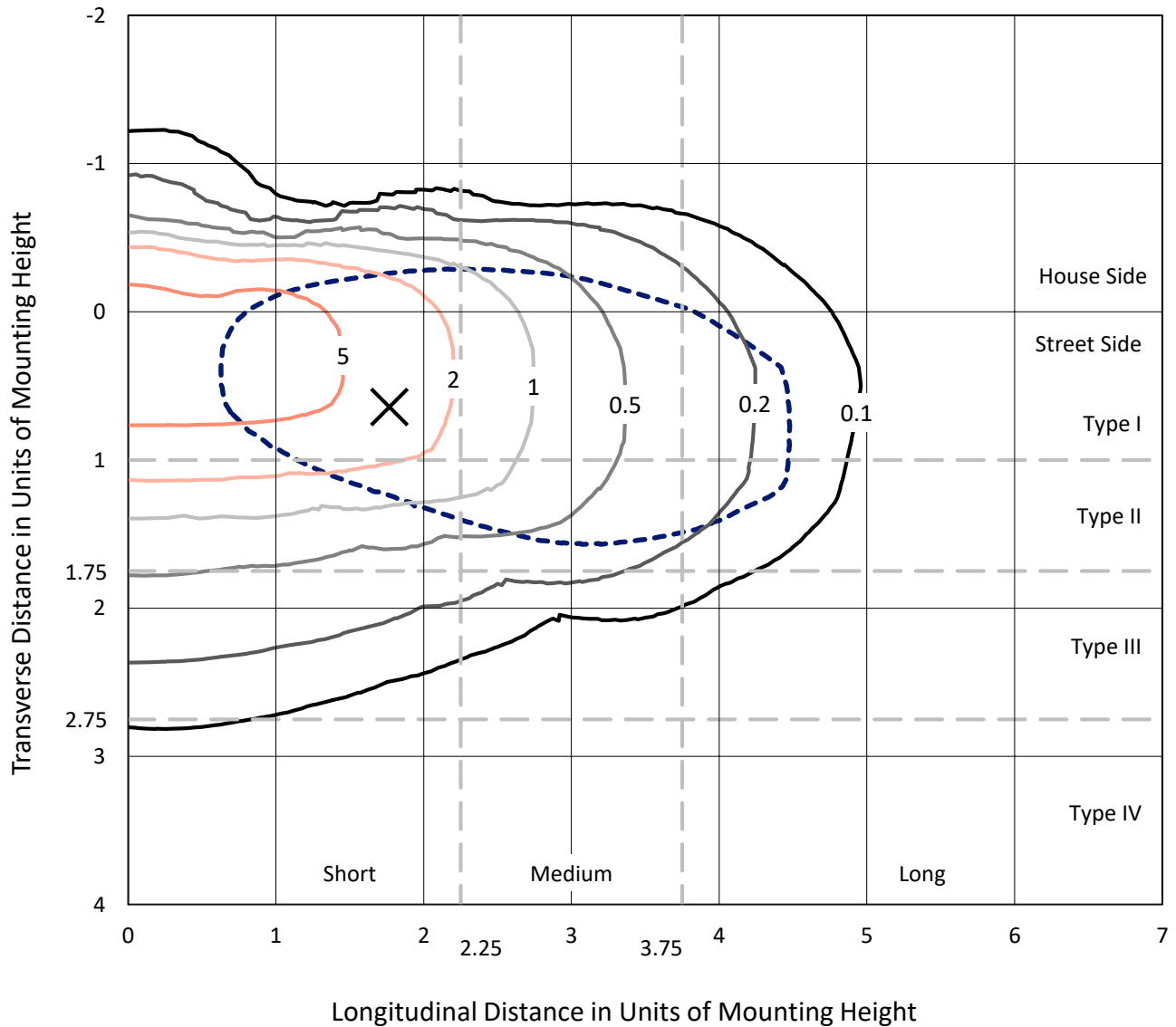
Input Watts (W): 308  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

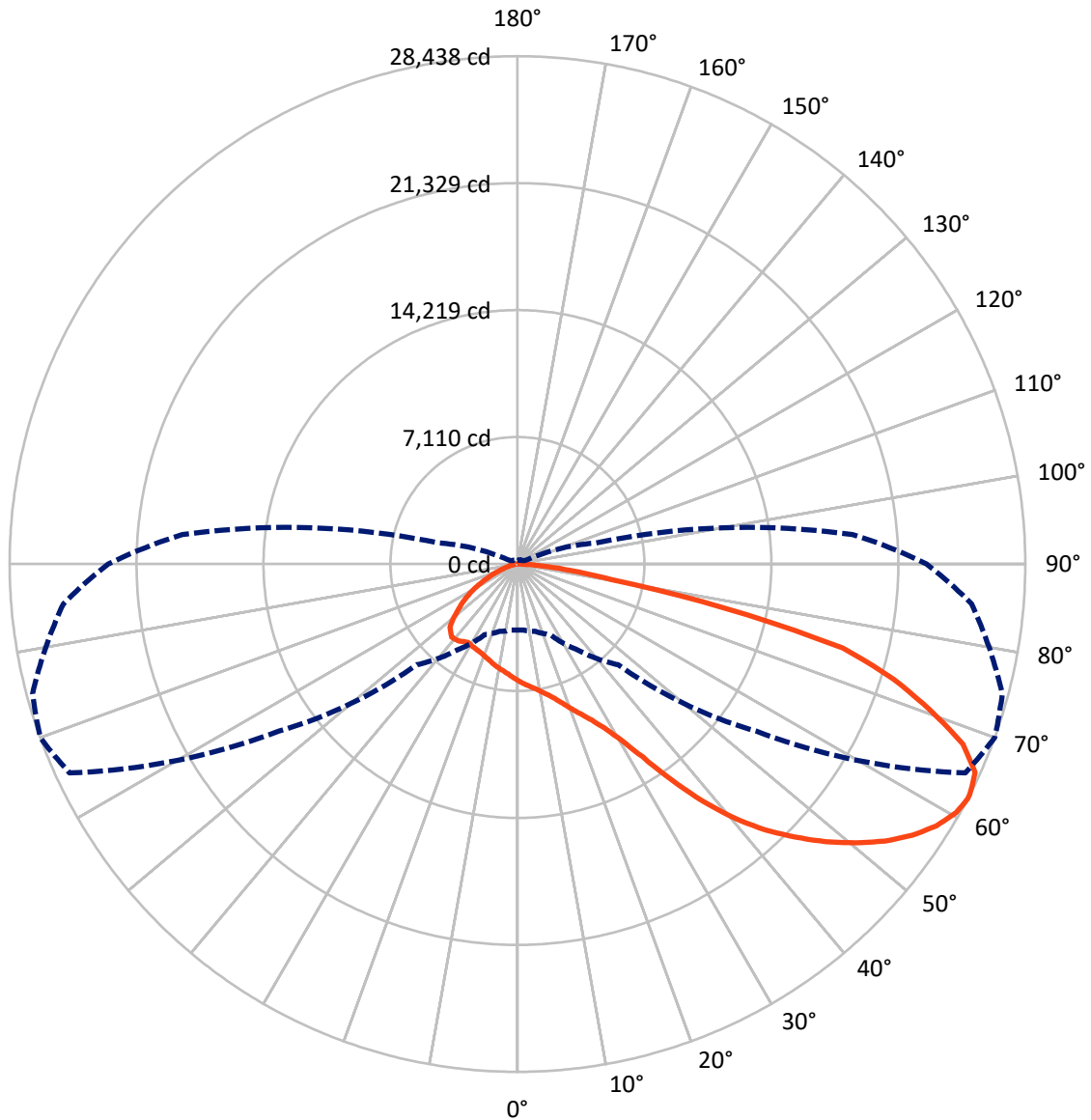
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 9.4 fc  
 Type II - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 70-Deg Lateral    - - - Horizontal Cone Through 62-Deg Vertical

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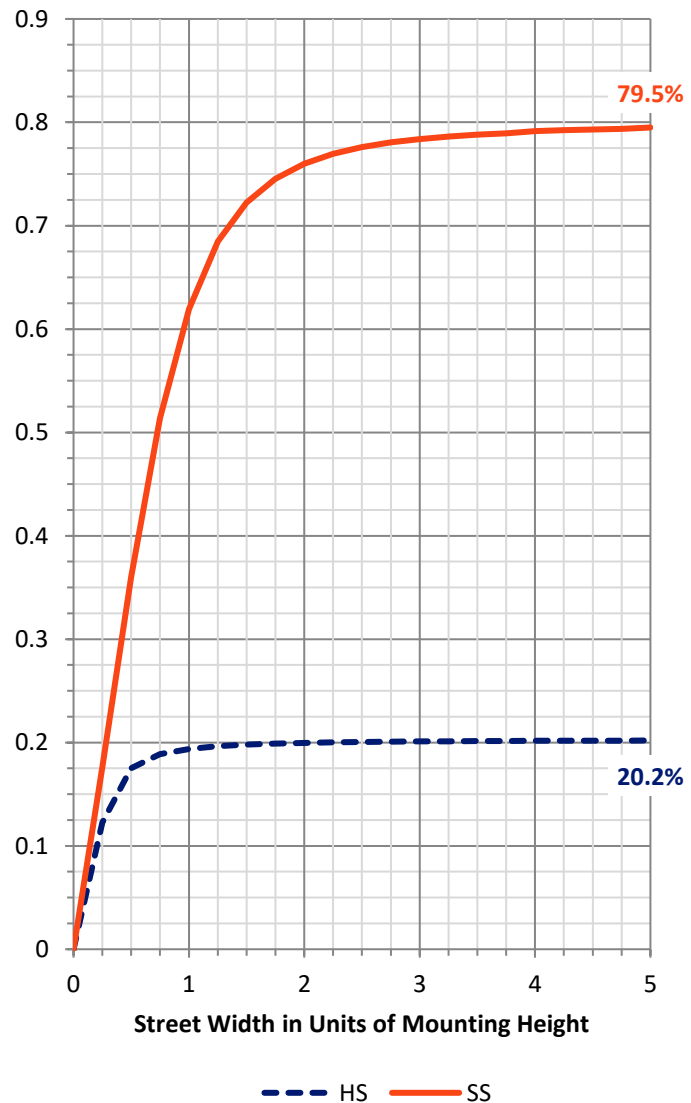
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	7772.4	0.0	7772.4
	% Fixture	20.5	0.0	20.5
<b>Street Side</b>	Lumens	30223.6	0.0	30223.6
	% Fixture	79.5	0.0	79.5
<b>Total</b>	Lumens	37996.0	0.0	37996.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	622.6	1.6
10°-20°	1894.4	5.0
20°-30°	3189.4	8.4
30°-40°	4815.9	12.7
40°-50°	6753.4	17.8
50°-60°	7893.2	20.8
60°-70°	7657.8	20.2
70°-80°	4476.7	11.8
80°-90°	692.5	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°	37996.0	100.0
0°-180°	37996.0	100.0



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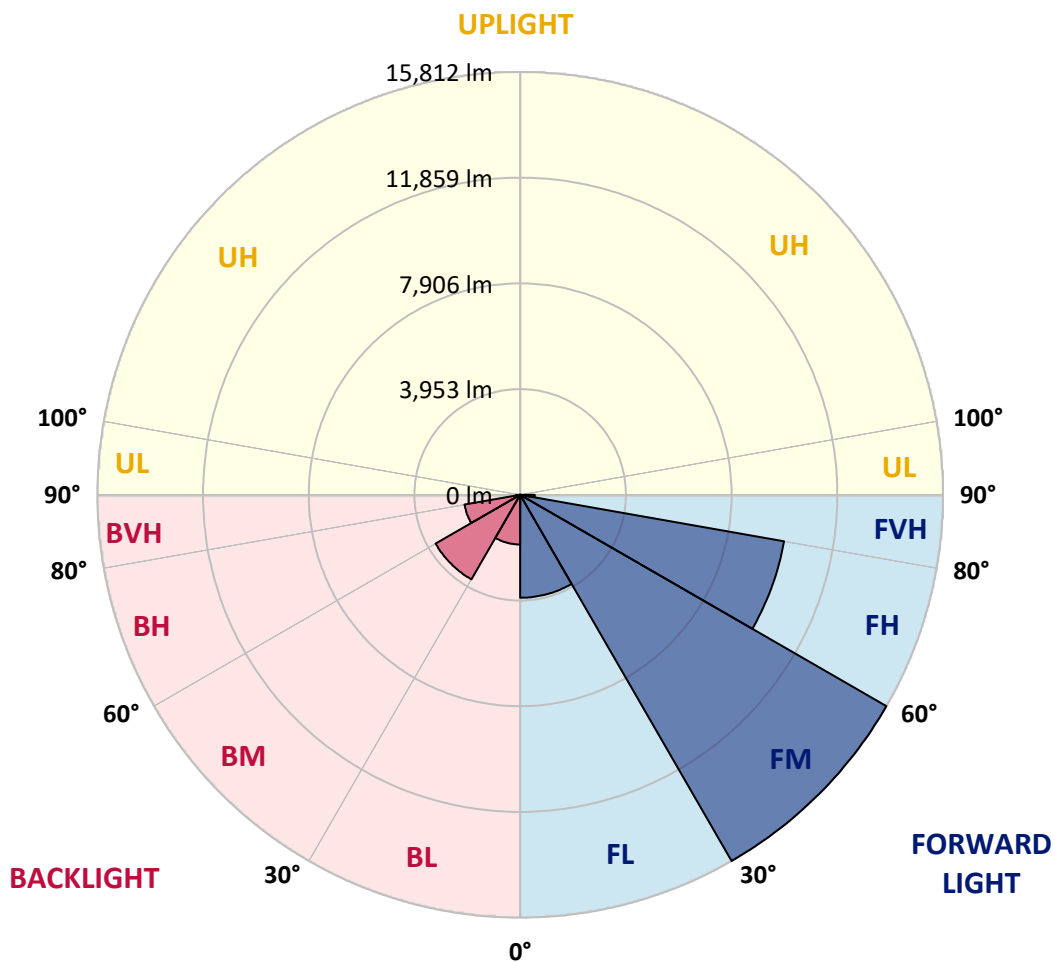
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3848.2	10.1			
FM	(30°-60°)	15811.5	41.6			
FH	(60°-80°)	10021.2	26.4			G4/12000
FVH	(80°-90°)	542.7	1.4			G4/750
BL	(0°-30°)	1858.3	4.9	B3/2500		
BM	(30°-60°)	3651.0	9.6	B3/5000		
BH	(60°-80°)	2113.4	5.6	B3/2500		G3/2500
BVH	(80°-90°)	149.8	0.4			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G4**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	85°
0°	6536.8	6536.8	6536.8	6536.8	6536.8	6536.8	6536.8	6536.8	6536.8	6536.8	6536.8
2.5°	7093.8	7046.8	7026.7	7056.2	6858.9	6862.9	6767.6	6752.9	6707.2	6642.8	6571.7
5°	7499.2	7444.1	7415.9	7433.4	7225.3	7189.1	7033.4	6956.9	6867.0	6786.4	6632.1
7.5°	7888.4	7832.0	7810.6	7801.2	7550.2	7495.1	7296.5	7160.9	7038.8	6935.4	6726.0
10°	8280.4	8222.6	8178.3	8190.4	7927.3	7829.4	7599.8	7413.3	7256.2	7122.0	6833.4
12.5°	8669.6	8599.8	8551.5	8551.5	8292.4	8197.1	7939.4	7700.5	7500.5	7331.4	6969.0
15°	9068.3	8977.0	8966.2	8966.2	8691.1	8575.6	8322.0	8057.5	7811.9	7594.5	7132.7
17.5°	9480.3	9364.9	9362.2	9379.7	9127.3	8997.1	8758.2	8511.2	8198.5	7923.3	7332.7
20°	9751.5	9648.1	9623.9	9676.3	9477.6	9393.1	9136.7	8963.6	8662.9	8335.4	7590.4
22.5°	9958.2	9895.1	9917.9	10003.8	9907.2	9834.7	9564.9	9409.2	9138.1	8802.5	7938.1
25°	10166.2	10124.6	10177.0	10328.6	10336.7	10356.8	10131.3	9932.7	9680.3	9381.0	8390.4
27.5°	10101.8	10089.7	10248.1	10560.8	10732.6	10823.9	10697.8	10628.0	10397.1	10081.7	8959.5
30°	10148.8	10119.2	10309.8	10705.8	11088.3	11352.8	11352.8	11511.2	11410.5	11093.7	9828.0
32.5°	10009.2	9954.1	10172.9	10740.7	11398.4	11912.5	12140.7	12701.7	12877.6	12763.5	11550.1
35°	9366.2	9407.8	9836.0	10601.1	11611.8	12460.1	13064.1	14266.8	14807.7	14936.6	13532.6
37.5°	8964.9	8982.4	9418.6	10372.9	11687.0	12998.4	14074.9	16073.5	16839.9	16919.1	15272.1
40°	8411.9	8477.7	8966.2	10066.9	11644.0	13453.4	15163.4	17854.6	18707.0	18641.2	16794.3
42.5°	7975.7	7994.5	8421.3	9581.0	11456.1	13815.8	16261.4	19472.1	20364.7	20180.8	18298.9
45°	7432.1	7466.9	7871.0	8977.0	11121.9	13999.7	17209.0	20988.8	21806.2	21576.7	19602.3
47.5°	6774.3	6927.4	7350.2	8326.0	10555.5	13980.9	18011.7	22301.5	23234.4	22881.4	20821.0
50°	5456.3	5642.8	6488.4	7739.4	9813.2	13717.8	18650.6	23747.1	24545.8	24190.1	21933.7
52.5°	4766.3	4802.6	5233.4	7080.4	8943.4	13129.9	19085.5	24941.7	25773.9	25399.4	23003.5
55°	4454.9	4492.5	4710.0	6013.3	8144.8	12088.3	19245.2	26081.3	26819.5	26390.0	23885.4
57.5°	4182.5	4194.5	4450.9	5085.8	7383.7	10716.5	18908.3	27031.6	27663.8	27079.9	24497.4
60°	3871.1	3919.4	4171.7	4642.9	6526.0	9123.3	17754.0	27639.7	28237.0	27717.5	25132.3
62°	3696.6	3708.6	3906.0	4367.7	5861.6	7971.6	16316.4	27674.6	28438.3	28109.4	25522.9
62.5°	3645.6	3653.6	3840.2	4297.9	5724.7	7743.5	15924.5	27646.4	28426.2	28177.9	25608.8
65°	3352.9	3371.7	3539.5	3967.7	5124.7	6853.5	14088.3	27186.0	28167.2	28062.5	25600.8
67.5°	2997.2	3002.6	3181.1	3566.4	4505.9	6017.3	11833.3	26305.5	26898.7	26763.2	24480.0
70°	2451.0	2548.9	2743.6	3083.2	3727.4	4991.8	9001.1	23563.2	24536.4	24670.6	22472.0
72.5°	1863.0	1856.3	1924.8	2161.0	2715.4	3834.8	6076.4	19743.2	21998.2	22724.3	20255.9
75°	1150.3	1194.6	1481.8	1671.1	1946.3	2704.6	3809.3	13743.3	18810.3	20065.3	17904.3
77.5°	893.9	902.0	1051.0	1378.5	1594.6	1916.7	2375.8	7488.4	11791.7	14912.4	13944.7
80°	680.5	695.3	793.3	864.4	1122.1	1167.8	1585.2	3873.7	5370.4	7522.0	9367.6
82.5°	410.7	433.5	524.8	566.4	618.8	585.2	852.3	2089.9	2977.1	3849.6	4770.4
85°	206.7	248.3	349.0	330.2	280.5	259.1	365.1	1010.7	1422.8	1883.2	2189.2
87.5°	52.3	63.1	81.9	98.0	83.2	68.5	99.3	273.8	281.9	269.8	755.7
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°	6536.8	6536.8	6536.8	6536.8	6536.8	6536.8	6536.8	6536.8	6536.8	6536.8	6536.8
2.5°	6547.5	6492.5	6391.8	6334.1	6190.5	6135.4	6032.1	6069.7	6046.8	6024.0	6025.4
5°	6558.2	6458.9	6267.0	6128.7	5920.7	5814.6	5679.1	5657.6	5598.5	5562.3	5566.3
7.5°	6581.1	6438.8	6167.6	5947.5	5654.9	5488.5	5307.3	5276.4	5187.8	5147.5	5152.9
10°	6638.8	6471.0	6103.2	5779.7	5449.5	5218.7	5006.6	4938.1	4853.6	4807.9	4805.3
12.5°	6727.4	6519.3	6011.9	5652.2	5250.9	4951.6	4707.3	4597.2	4476.4	4436.1	4440.2
15°	6868.3	6581.1	5935.4	5476.4	5010.6	4699.2	4397.2	4264.3	4136.8	4089.8	4085.8
17.5°	7040.1	6637.4	5881.7	5269.7	4802.6	4429.4	4163.7	3982.5	3767.7	3736.8	3703.3
20°	7210.6	6750.2	5833.4	5119.3	4555.6	4158.3	3810.7	3625.4	3318.0	3202.6	3161.0
22.5°	7458.9	6928.7	5826.7	4940.8	4307.3	3861.7	3393.2	3093.9	2755.6	2559.7	2516.7
25°	7790.4	7124.7	5844.2	4805.3	4029.4	3484.5	2852.3	2420.1	2097.9	1876.5	1830.8
27.5°	8221.3	7391.8	5896.5	4656.3	3777.1	3032.1	2245.6	1801.3	1528.8	1343.6	1300.6
30°	8856.2	7840.1	5978.4	4518.0	3409.3	2442.9	1651.0	1298.0	1085.9	971.8	970.4
32.5°	10338.0	8841.4	6025.4	4346.2	3067.0	1846.9	1187.9	939.6	770.5	727.5	763.7
35°	12037.3	10260.2	6387.8	4161.0	2531.5	1358.4	848.3	668.4	598.6	609.4	629.5
37.5°	13605.1	11623.9	6940.8	3860.3	2026.8	957.0	609.4	531.5	516.8	555.7	591.9
40°	14993.0	12802.4	7414.6	3530.1	1433.5	668.4	488.6	491.3	476.5	493.9	506.0
42.5°	16354.0	13895.0	7915.3	3085.8	955.7	493.9	441.6	465.8	448.3	451.0	433.5
45°	17707.0	15048.0	8131.4	2536.9	640.3	428.2	413.4	441.6	440.3	429.5	404.0
47.5°	18874.8	15842.6	8405.2	1914.1	476.5	389.3	393.3	413.4	426.8	408.0	396.0
50°	19878.8	16685.5	8194.4	1267.1	425.5	363.8	378.5	378.5	400.0	367.8	353.0
52.5°	20838.5	17524.4	7653.5	834.9	390.6	346.3	361.1	351.7	361.1	328.9	324.8
55°	21414.3	17958.0	6999.8	651.0	369.1	331.5	338.2	335.6	327.5	294.0	300.7
57.5°	22047.8	18457.3	6186.4	546.3	359.7	314.1	315.4	311.4	287.2	264.4	265.8
60°	22553.9	18830.5	5316.7	481.9	349.0	304.7	285.9	279.2	245.6	232.2	233.6
62°	22908.2	18847.9	4558.3	448.3	335.6	298.0	268.5	253.7	216.1	205.4	204.0
62.5°	22947.1	18782.1	4373.1	440.3	330.2	295.3	267.1	245.6	208.0	200.0	197.3
65°	22802.2	18050.6	3488.5	396.0	307.4	279.2	248.3	213.4	178.5	167.8	163.8
67.5°	21723.0	16740.6	2664.4	359.7	279.2	268.5	229.5	187.9	158.4	145.0	142.3
70°	19618.4	14967.5	1902.0	314.1	251.0	244.3	230.9	171.8	146.3	127.5	124.8
72.5°	17280.2	13080.2	1293.9	279.2	222.8	201.3	170.5	162.4	136.9	112.7	110.1
75°	14705.7	10417.2	920.8	240.3	191.9	170.5	143.6	150.3	128.9	100.7	98.0
77.5°	11283.0	7661.6	683.2	197.3	149.0	138.3	120.8	132.9	116.8	91.3	89.9
80°	7704.5	5291.2	485.9	149.0	98.0	98.0	102.0	114.1	103.4	81.9	80.5
82.5°	4331.4	2785.2	287.2	107.4	67.1	67.1	79.2	92.6	85.9	71.1	69.8
85°	1794.6	1008.0	151.7	67.1	44.3	45.6	56.4	68.5	67.1	56.4	55.0
87.5°	624.1	253.7	44.3	22.8	18.8	20.1	22.8	32.2	32.2	28.2	29.5
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)