

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: P232725

Luminaire Tested: **CTN-10-8-D-E1-T4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P232725  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-20)  
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-T4  
Description: CELESTEON HIGH MAST LUMINAIRE  
(10) 70 CRI, 4000K LEDS AND TYPE IV OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 79591 lumens  
Efficiency: N/A  
Efficacy: 126.1 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B5 - U0 - G5

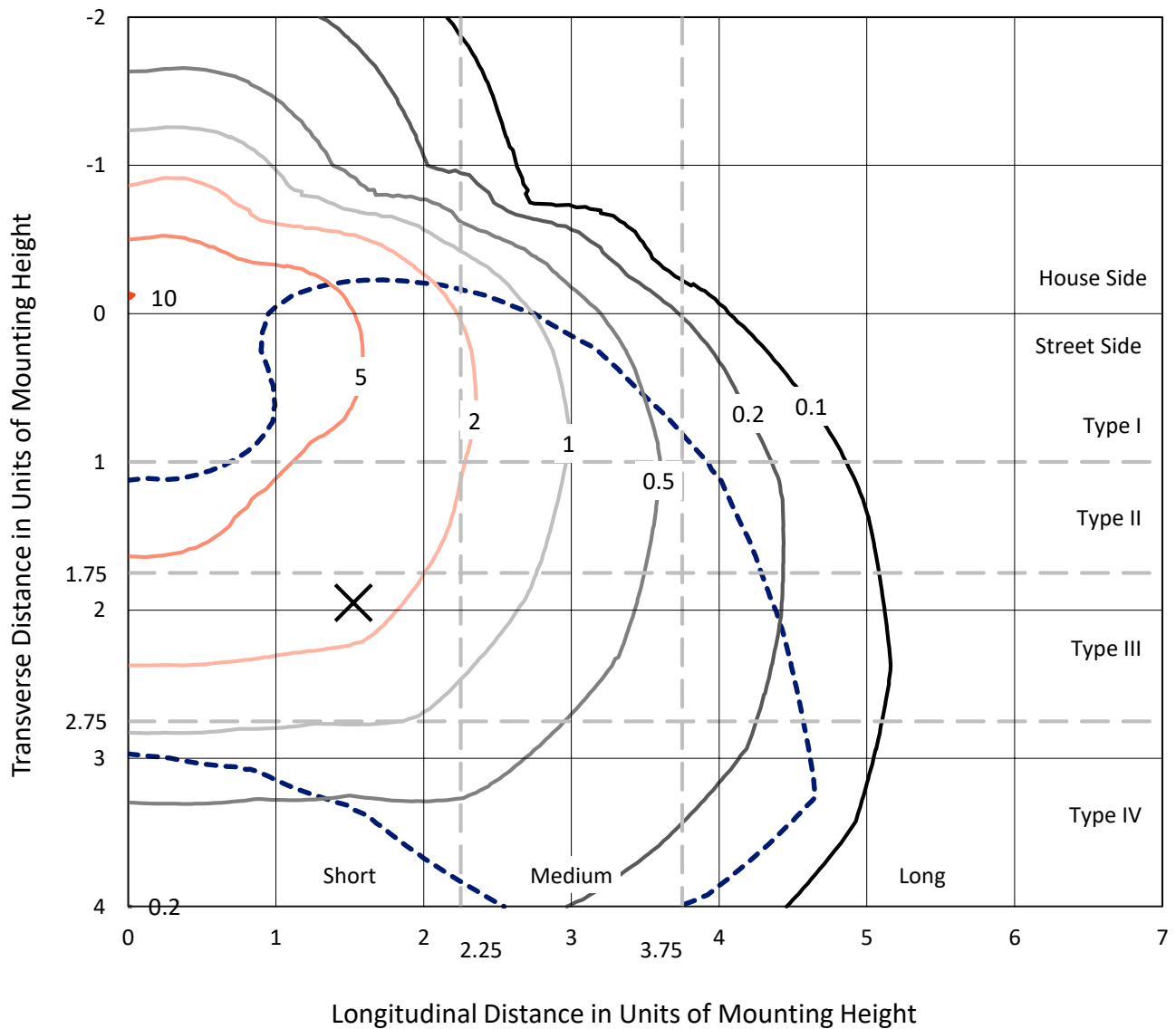
Input Watts (W): 631  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

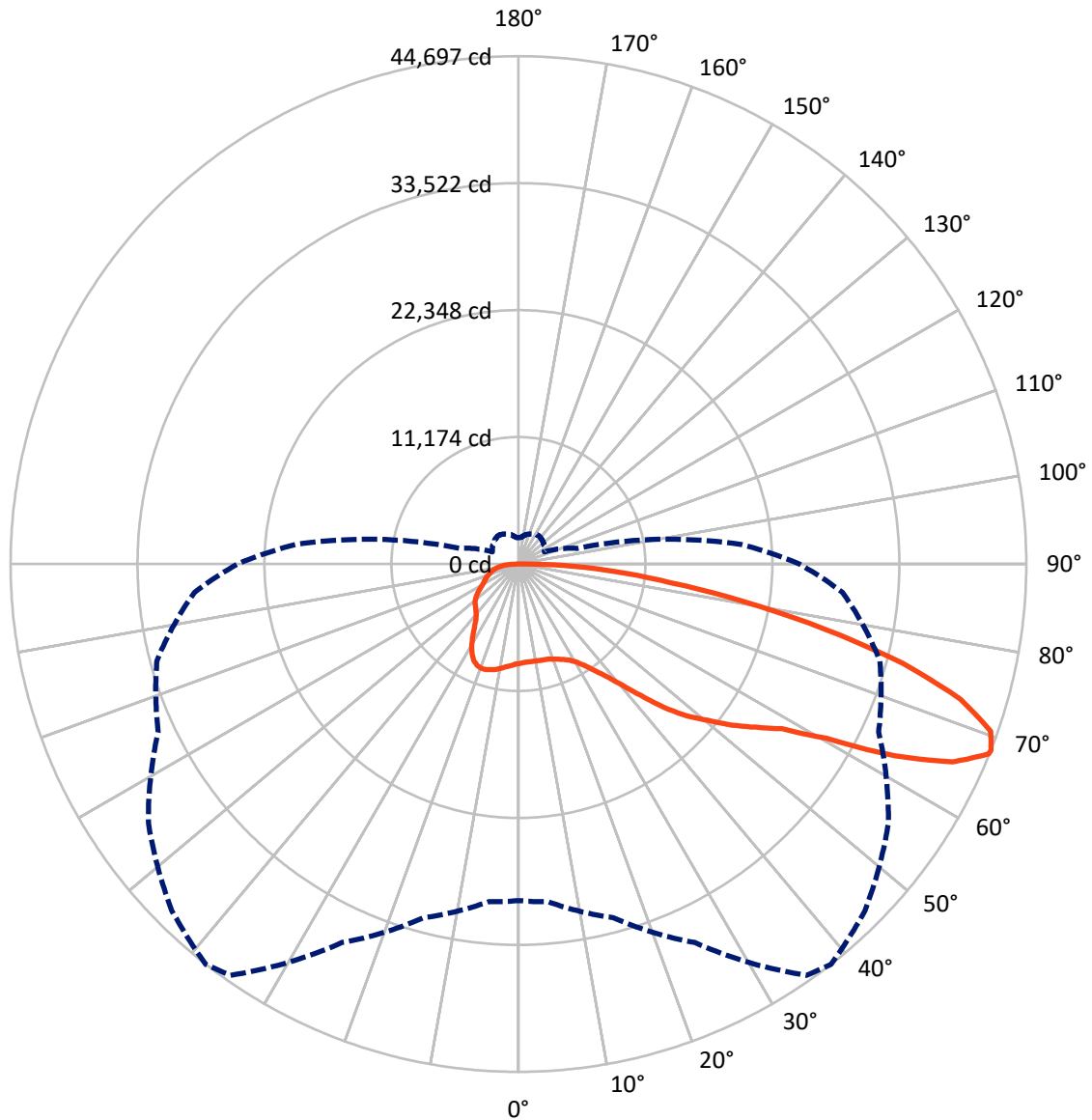
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 10.1 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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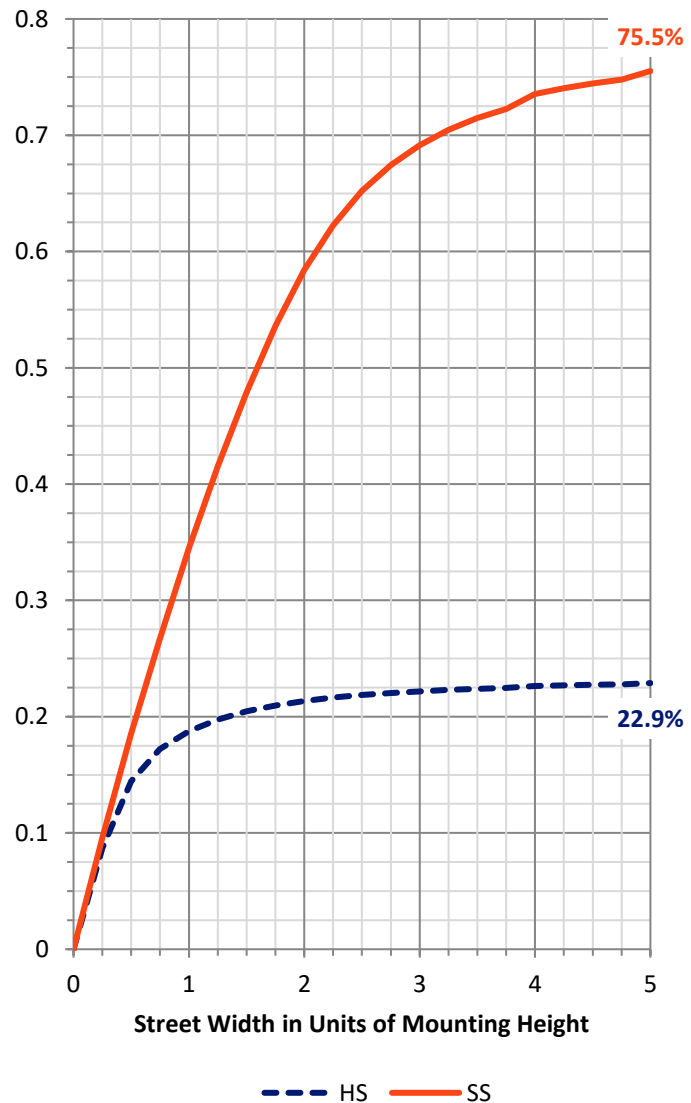
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	18574.8	0.0	18574.8
	% Fixture	23.3	0.0	23.3
<b>Street Side</b>	Lumens	61016.2	0.0	61016.2
	% Fixture	76.7	0.0	76.7
<b>Total</b>	Lumens	79591.0	0.0	79591.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	848.0	1.1
10°-20°	2617.5	3.3
20°-30°	4447.0	5.6
30°-40°	6734.3	8.5
40°-50°	11138.5	14.0
50°-60°	16044.4	20.2
60°-70°	20234.3	25.4
70°-80°	14401.1	18.1
80°-90°	3125.8	3.9
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°	79591.0	100.0
0°-180°	79591.0	100.0



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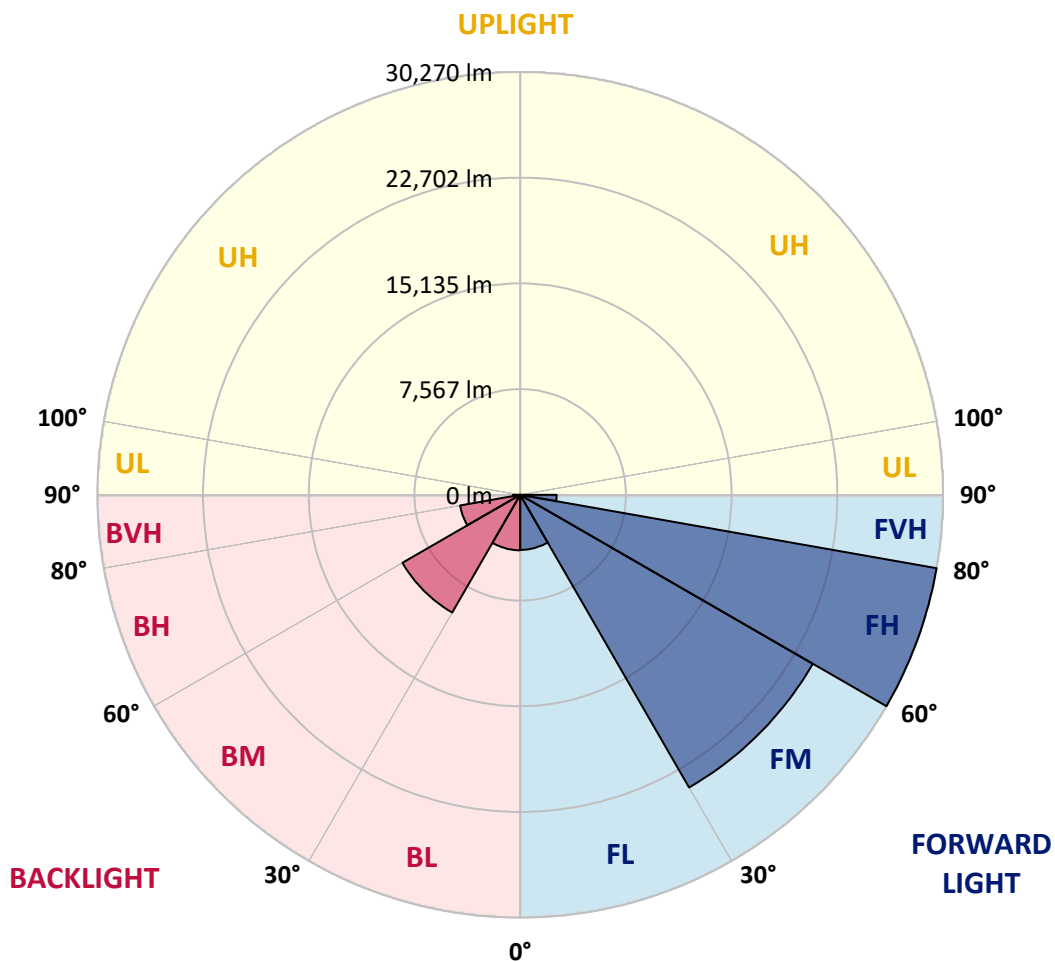
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3943.4	5.0			
FM	(30°-60°)	24190.2	30.4			
FH	(60°-80°)	30269.7	38.0			G5
FVH	(80°-90°)	2612.9	3.3			G5
BL	(0°-30°)	3969.2	5.0	B4/5000		
BM	(30°-60°)	9727.0	12.2	B5		
BH	(60°-80°)	4365.7	5.5	B4/5000		G4/5000
BVH	(80°-90°)	513.0	0.6			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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
0°	8768.1	8768.1	8768.1	8768.1	8768.1	8768.1	8768.1	8768.1	8768.1	8768.1	8768.1
2.5°	8737.1	8752.6	8742.3	8737.1	8669.9	8685.4	8711.2	8675.0	8763.0	8757.8	8809.5
5°	8654.4	8662.1	8664.7	8688.0	8623.3	8656.9	8688.0	8664.7	8757.8	8731.9	8804.3
7.5°	8631.1	8628.5	8631.1	8675.0	8605.2	8656.9	8693.1	8685.4	8786.2	8765.5	8853.5
10°	8571.6	8574.2	8582.0	8631.1	8594.9	8664.7	8729.3	8763.0	8897.4	8879.3	8980.2
12.5°	8468.2	8488.9	8517.3	8600.1	8607.8	8700.9	8796.6	8863.8	9039.6	9055.1	9181.8
15°	8377.7	8413.9	8463.0	8574.2	8620.7	8726.8	8848.3	8972.4	9202.5	9272.3	9432.7
17.5°	8406.1	8460.4	8525.1	8638.8	8672.5	8783.6	8920.7	9086.2	9370.6	9520.6	9727.4
20°	8582.0	8618.2	8672.5	8778.5	8822.4	8933.6	9044.8	9207.7	9577.5	9820.5	10076.5
22.5°	8801.7	8853.5	8889.7	8954.3	9006.0	9104.3	9220.6	9380.9	9817.9	10123.0	10474.7
25°	9037.0	9062.9	9114.6	9158.6	9223.2	9300.8	9432.7	9629.2	10092.0	10466.9	10958.2
27.5°	9254.2	9267.2	9365.4	9401.6	9528.3	9585.2	9688.6	9949.8	10448.8	10911.7	11516.7
30°	9572.3	9598.1	9673.1	9758.5	9944.6	10001.5	10107.5	10381.6	10924.6	11516.7	12243.3
32.5°	10174.8	10242.0	10231.6	10322.1	10541.9	10616.9	10761.7	11118.5	11710.7	12390.7	13254.3
35°	11395.2	11490.9	11371.9	11250.4	11366.8	11467.6	11690.0	12212.3	12944.0	14066.2	14919.5
37.5°	13394.0	13489.6	13065.6	12677.7	12424.3	12504.5	12807.0	13546.5	14666.1	16615.8	17567.3
40°	15728.9	15832.3	15242.7	14544.6	13973.2	13942.1	14035.2	14976.4	16592.5	19452.3	20194.4
42.5°	17763.8	18035.3	17264.8	16662.3	15922.8	15798.7	15573.7	16525.3	18630.0	22079.4	22498.2
45°	19741.9	20005.6	19398.0	18981.7	18226.6	18025.0	17598.3	18174.9	20628.8	24378.0	24396.1
47.5°	21557.0	21769.1	21063.2	20796.8	20052.2	19964.2	19527.3	19930.6	22480.1	26325.1	25957.9
50°	23586.8	23809.2	22684.4	22356.0	21756.1	21637.2	21495.0	21784.6	24603.0	28003.2	27284.4
52.5°	26069.1	25986.4	24597.8	23845.4	23527.3	23555.8	23395.5	23716.1	26855.2	29425.3	28329.0
55°	29040.1	28616.0	27090.5	25950.2	25218.4	25358.0	25148.6	25619.2	29081.4	30625.1	29084.0
57.5°	30728.5	30844.9	30700.1	29234.0	27372.3	27351.6	27020.6	27473.1	31025.9	31605.1	29544.3
60°	33190.1	33671.1	33854.7	33459.0	31788.7	31129.3	29471.9	29368.5	32667.8	32450.6	29779.6
62.5°	34746.7	34971.7	36075.8	36554.1	37092.0	37205.7	34573.5	31651.6	33880.5	32882.4	29877.8
65°	34002.0	34229.6	36293.0	38167.6	41358.4	41999.6	41161.9	35269.0	34700.2	32978.1	29549.5
67.5°	30185.5	30464.8	33234.1	37076.5	43938.9	44629.3	43277.0	39439.8	34969.1	32921.2	28835.8
68°	29627.0	29833.9	32223.1	36758.4	44197.5	44696.5	43137.3	39755.2	34984.6	32939.3	28616.0
70°	25334.8	25699.3	28215.2	33865.0	43781.2	44099.2	42266.0	39579.4	34633.0	32644.5	27007.7
72.5°	19747.0	20251.3	22164.7	28127.3	40437.9	40696.4	39160.5	37640.1	33570.2	30599.3	23149.8
75°	14306.7	14738.5	16579.6	21707.0	34043.4	34961.3	34702.8	34976.9	30092.5	25926.9	16765.7
77.5°	9880.0	10249.7	11966.7	16196.9	26397.5	27558.5	28900.4	29611.5	24727.1	19235.1	7969.1
80°	6329.8	6614.2	8075.2	11405.6	19036.0	20127.1	21572.6	22309.5	17588.0	9675.7	1414.4
82.5°	3720.8	3914.8	4912.8	7358.9	12830.3	13494.8	14192.9	12957.0	7059.0	1851.4	892.1
85°	1848.8	1978.1	2590.9	4163.0	7976.9	8587.1	8819.8	5528.2	1492.0	677.5	607.6
87.5°	827.4	863.6	1111.9	1874.6	3790.6	3994.9	3896.7	1719.5	299.9	253.4	217.2
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°	8768.1	8768.1	8768.1	8768.1	8768.1	8768.1	8768.1	8768.1	8768.1	8768.1	8768.1
2.5°	8814.7	8794.0	8788.8	8822.4	8786.2	8830.2	8817.3	8915.5	8928.4	8892.2	8951.7
5°	8827.6	8817.3	8825.0	8887.1	8874.1	8964.6	8987.9	9086.2	9086.2	9057.7	9119.8
7.5°	8887.1	8887.1	8910.3	9024.1	9024.1	9101.7	9127.5	9236.1	9233.6	9233.6	9290.4
10°	9037.0	9037.0	9086.2	9231.0	9194.8	9295.6	9308.5	9365.4	9352.5	9355.1	9414.6
12.5°	9259.4	9272.3	9357.7	9484.4	9461.1	9497.3	9471.4	9461.1	9368.0	9368.0	9406.8
15°	9515.4	9569.7	9686.1	9802.4	9724.8	9711.9	9564.5	9435.2	9236.1	9150.8	9194.8
17.5°	9849.0	9942.0	10076.5	10159.2	10011.9	9905.8	9639.5	9303.4	8980.2	8791.4	8796.6
20°	10218.7	10342.8	10508.3	10536.8	10319.6	10055.8	9611.1	9083.6	8527.7	8227.7	8207.0
22.5°	10629.8	10785.0	10976.3	10865.1	10510.9	10081.7	9445.6	8744.9	7997.6	7493.4	7485.6
25°	11131.5	11299.5	11421.1	11110.8	10554.9	9949.8	9158.6	8217.4	7294.3	6751.3	6715.1
27.5°	11770.1	11881.3	11790.8	11237.5	10423.0	9634.3	8672.5	7539.9	6562.5	6071.2	6016.9
30°	12527.7	12514.8	12023.5	11201.3	10156.7	9135.3	8010.5	6805.6	5962.6	5541.2	5492.0
32.5°	13448.3	13262.1	12248.5	11028.0	9727.4	8481.1	7224.5	6195.4	5528.2	5101.6	5049.9
35°	14916.9	14392.0	12540.7	10766.9	9130.1	7692.5	6482.4	5724.8	5192.1	4703.4	4602.6
37.5°	17195.0	16088.3	13026.8	10492.8	8444.9	6919.4	5929.0	5383.4	4928.4	4375.0	4256.1
40°	19537.6	18058.6	13766.3	10198.0	7803.7	6335.0	5616.2	5223.1	4768.0	4235.4	4116.4
42.5°	21572.6	19897.0	14653.2	9828.3	7146.9	5874.7	5455.8	5171.4	4716.3	4209.5	4095.8
45°	23369.6	21549.3	15578.9	9399.0	6459.1	5502.4	5318.8	5099.0	4638.8	4150.1	4046.6
47.5°	24866.7	22865.4	16393.4	8923.3	5784.2	5228.3	5184.3	4928.4	4491.4	4020.8	3932.9
50°	26025.1	23801.4	16939.0	8393.2	5207.6	5013.7	4990.4	4667.2	4243.1	3793.2	3705.3
52.5°	26847.4	24429.8	17257.0	8194.1	4755.1	4765.5	4726.7	4382.8	3971.6	3524.3	3454.5
55°	27369.7	24861.6	17179.4	7938.1	4297.4	4416.4	4421.6	4173.3	3811.3	3376.9	3320.0
57.5°	27568.8	24843.5	16721.8	6655.6	3852.7	3997.5	4067.3	4028.5	3707.9	3283.8	3237.3
60°	27460.2	24551.3	15747.0	4876.6	3392.4	3589.0	3759.6	3751.9	3480.4	3079.6	3030.4
62.5°	27279.2	23873.8	13836.1	3490.7	3046.0	3299.4	3506.2	3436.4	3177.8	2826.2	2792.6
65°	26630.2	22679.2	10697.1	2792.6	2901.2	3136.5	3307.1	3188.2	2934.8	2567.6	2549.5
67.5°	25195.1	20290.0	6244.5	2546.9	2795.1	2999.4	3120.9	2973.6	2738.3	2381.4	2350.4
68°	24709.0	19677.2	5311.0	2523.6	2774.5	2965.8	3077.0	2921.8	2691.7	2345.2	2314.2
70°	22255.2	15948.6	2534.0	2428.0	2684.0	2810.7	2875.3	2733.1	2508.1	2200.4	2179.8
72.5°	17321.7	9621.4	1693.6	2283.2	2508.1	2629.7	2645.2	2422.8	2210.8	1983.2	1970.3
75°	10234.2	3193.3	1574.7	2068.6	2265.1	2433.2	2477.1	2254.7	2019.4	1755.7	1750.5
77.5°	2492.6	1238.6	1486.8	1846.2	2053.1	2216.0	2249.6	2086.7	1879.8	1582.5	1572.1
80°	1026.5	1029.1	1385.9	1530.7	1760.9	1918.6	1967.7	1822.9	1636.8	1445.4	1424.7
82.5°	853.3	868.8	1176.5	1130.0	1409.2	1592.8	1641.9	1541.1	1476.4	1269.6	1248.9
85°	607.6	770.5	780.9	760.2	987.7	1135.1	1383.4	1334.2	1264.4	1088.6	985.2
87.5°	284.4	449.9	338.7	325.8	501.6	672.3	791.2	830.0	718.8	558.5	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

(END OF REPORT)