

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: P232715

Luminaire Tested: **CTN-10-4-D-E1-T4-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P232715  
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-10-4-D-E1-T4-7030  
Description: CELESTEON HIGH MAST LUMINAIRE  
(10) 70 CRI, 3000K LEDS AND TYPE IV OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 41316 lumens  
Efficiency: N/A  
Efficacy: 134.1 lumens/watt  
Luminous Opening: Circular (Dia: 2.08' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B4 - U0 - G5

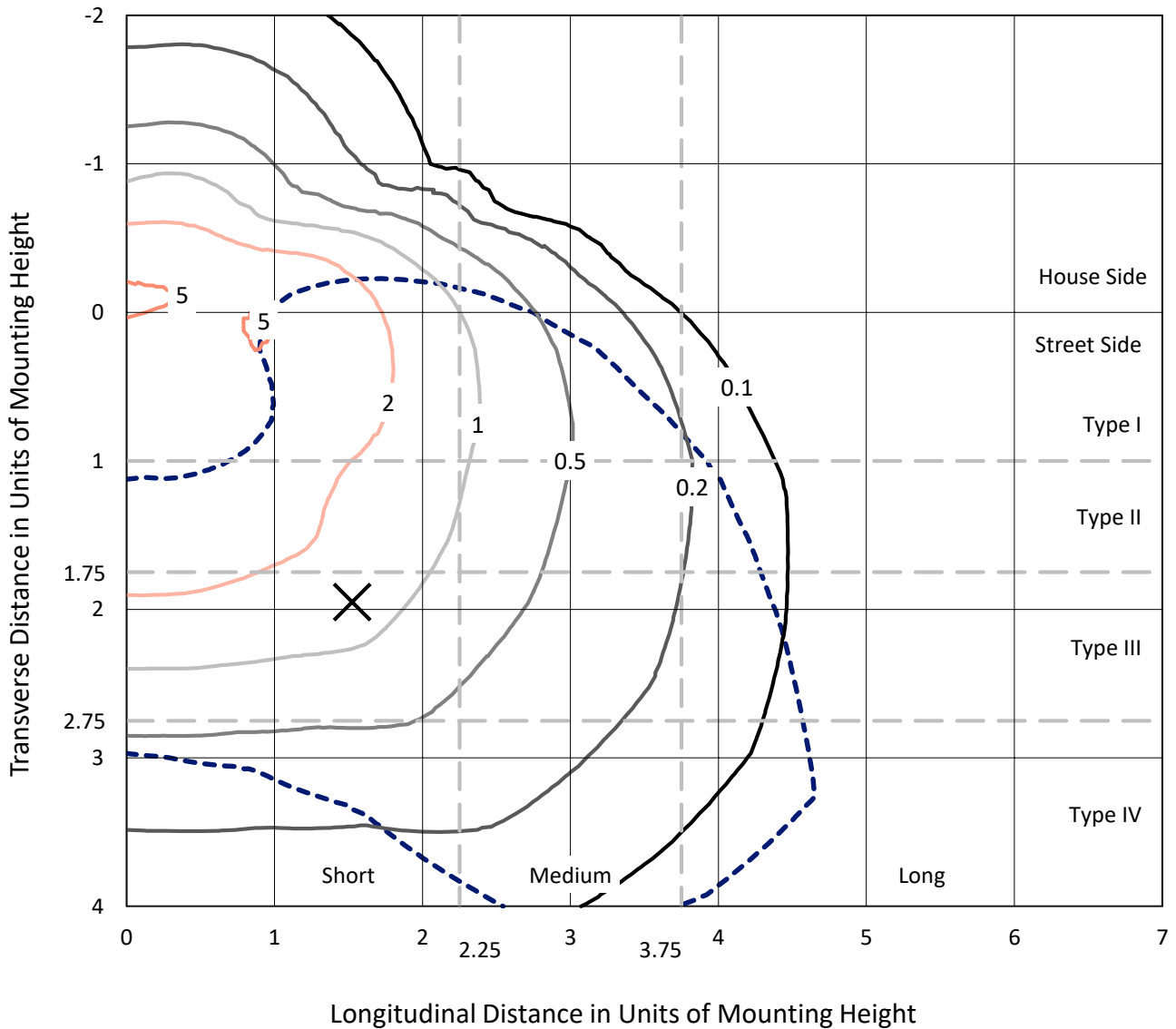
Input Watts (W): 308  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

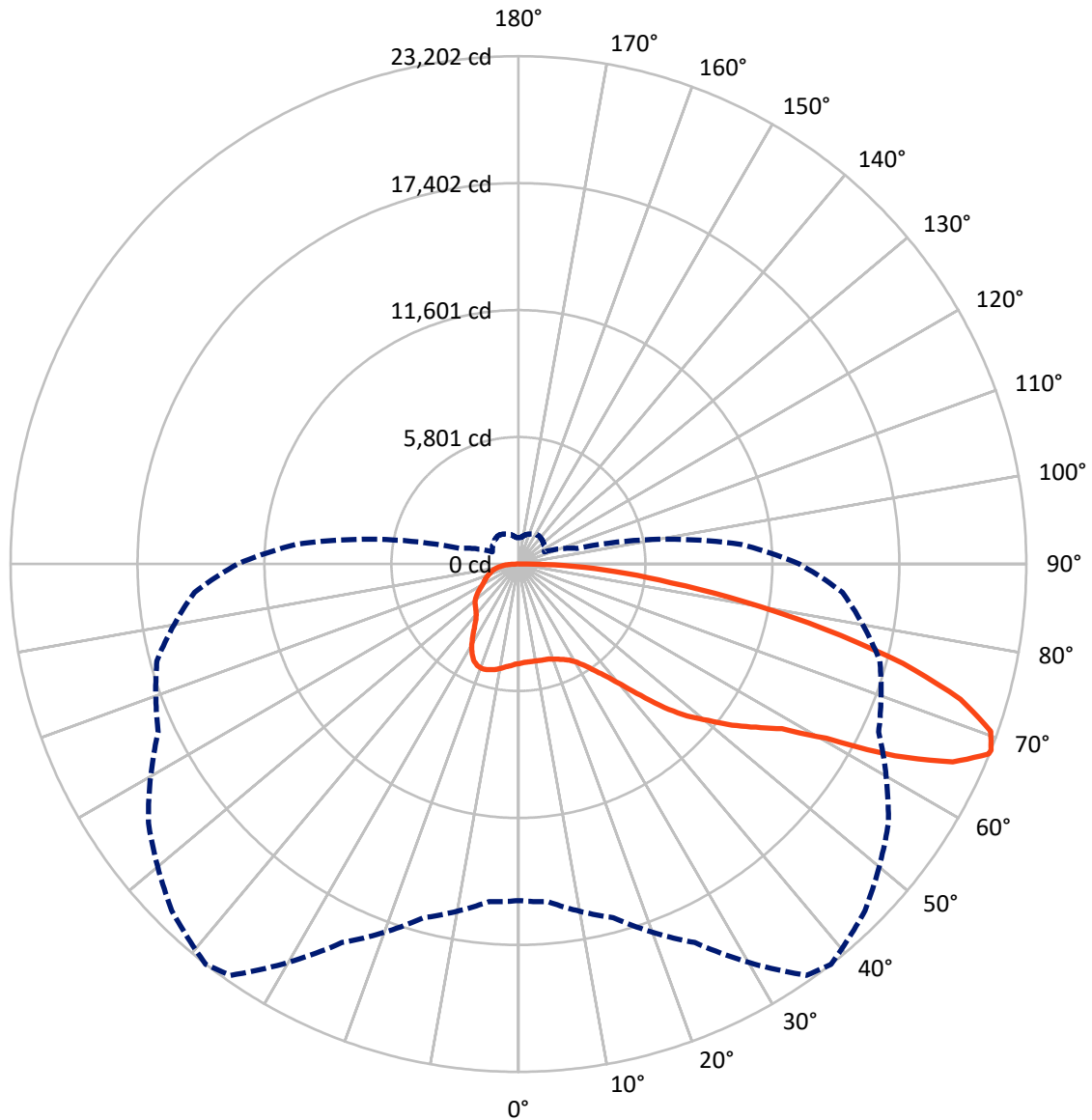
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.2 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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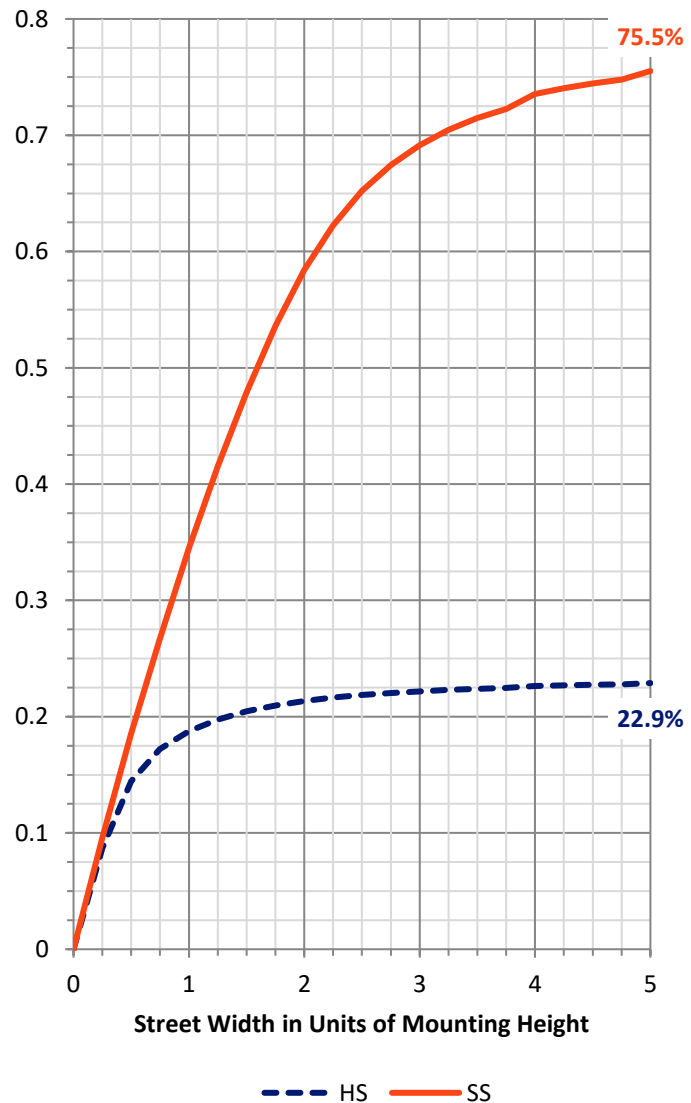
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	9642.2	0.0	9642.2
	% Fixture	23.3	0.0	23.3
<b>Street Side</b>	Lumens	31673.7	0.0	31673.7
	% Fixture	76.7	0.0	76.7
<b>Total</b>	Lumens	41316.0	0.0	41316.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	440.2	1.1
10°-20°	1358.8	3.3
20°-30°	2308.5	5.6
30°-40°	3495.8	8.5
40°-50°	5782.0	14.0
50°-60°	8328.7	20.2
60°-70°	10503.7	25.4
70°-80°	7475.7	18.1
80°-90°	1622.6	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°	41316.0	100.0
0°-180°	41316.0	100.0



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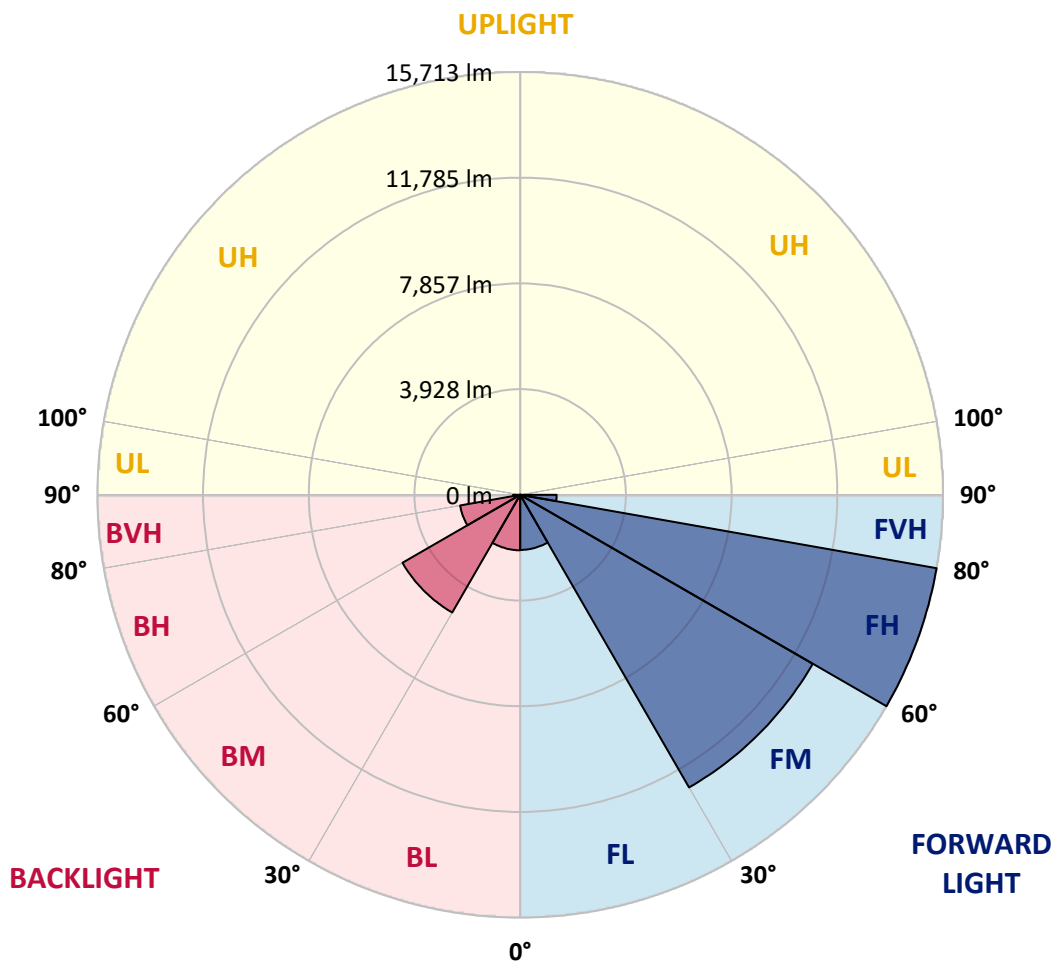
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2047.0	5.0			
FM	(30°-60°)	12557.2	30.4			
FH	(60°-80°)	15713.1	38.0			G5
FVH	(80°-90°)	1356.4	3.3			G5
BL	(0°-30°)	2060.4	5.0	B3/2500		
BM	(30°-60°)	5049.3	12.2	B4/8500		
BH	(60°-80°)	2266.2	5.5	B3/2500		G3/2500
BVH	(80°-90°)	266.3	0.6			G3/500
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°	4551.6	4551.6	4551.6	4551.6	4551.6	4551.6	4551.6	4551.6	4551.6	4551.6	4551.6
2.5°	4535.5	4543.5	4538.1	4535.5	4500.6	4508.6	4522.0	4503.3	4548.9	4546.2	4573.0
5°	4492.5	4496.5	4497.9	4510.0	4476.4	4493.9	4510.0	4497.9	4546.2	4532.8	4570.4
7.5°	4480.4	4479.1	4480.4	4503.3	4467.0	4493.9	4512.6	4508.6	4561.0	4550.2	4595.9
10°	4449.6	4450.9	4454.9	4480.4	4461.6	4497.9	4531.4	4548.9	4618.7	4609.3	4661.6
12.5°	4395.9	4406.6	4421.4	4464.3	4468.4	4516.7	4566.3	4601.2	4692.5	4700.6	4766.3
15°	4348.9	4367.7	4393.2	4450.9	4475.1	4530.1	4593.2	4657.6	4777.1	4813.3	4896.5
17.5°	4363.7	4391.8	4425.4	4484.5	4501.9	4559.6	4630.8	4716.7	4864.3	4942.2	5049.5
20°	4454.9	4473.7	4501.9	4556.9	4579.8	4637.5	4695.2	4779.8	4971.7	5097.9	5230.8
22.5°	4569.0	4595.9	4614.7	4648.2	4675.1	4726.1	4786.5	4869.7	5096.5	5254.9	5437.5
25°	4691.2	4704.6	4731.4	4754.3	4787.8	4828.1	4896.5	4998.5	5238.8	5433.4	5688.5
27.5°	4803.9	4810.6	4861.6	4880.4	4946.2	4975.7	5029.4	5165.0	5424.0	5664.3	5978.4
30°	4969.0	4982.4	5021.4	5065.7	5162.3	5191.8	5246.9	5389.1	5671.0	5978.4	6355.6
32.5°	5281.8	5316.7	5311.3	5358.3	5472.4	5511.3	5586.4	5771.7	6079.1	6432.1	6880.4
35°	5915.3	5965.0	5903.2	5840.1	5900.5	5952.9	6068.3	6339.4	6719.3	7301.8	7744.8
37.5°	6952.9	7002.5	6782.4	6581.1	6449.5	6491.1	6648.2	7032.1	7613.2	8625.3	9119.3
40°	8164.9	8218.6	7912.6	7550.2	7253.5	7237.4	7285.7	7774.3	8613.2	10097.8	10483.0
42.5°	9221.3	9362.2	8962.2	8649.5	8265.6	8201.2	8084.4	8578.3	9670.9	11461.5	11678.9
45°	10248.1	10385.0	10069.6	9853.5	9461.5	9356.8	9135.4	9434.7	10708.5	12654.7	12664.1
47.5°	11190.3	11300.4	10934.0	10795.7	10409.2	10363.5	10136.7	10346.1	11669.5	13665.5	13474.9
50°	12244.0	12359.4	11775.6	11605.1	11293.7	11232.0	11158.1	11308.5	12771.5	14536.6	14163.4
52.5°	13532.6	13489.6	12768.8	12378.2	12213.1	12227.9	12144.7	12311.1	13940.6	15274.8	14705.7
55°	15074.8	14854.7	14062.8	13470.8	13091.0	13163.5	13054.7	13299.0	15096.3	15897.6	15097.6
57.5°	15951.3	16011.7	15936.5	15175.5	14209.1	14198.3	14026.5	14261.4	16105.7	16406.3	15336.6
60°	17229.1	17478.8	17574.1	17368.7	16501.6	16159.4	15299.0	15245.3	16958.0	16845.2	15458.7
62.5°	18037.2	18153.9	18727.1	18975.4	19254.6	19313.6	17947.2	16430.5	17587.5	17069.4	15509.7
65°	17650.6	17768.7	18839.8	19813.0	21469.3	21802.2	21367.3	18308.3	18013.0	17119.1	15339.2
67.5°	15669.4	15814.4	17251.9	19246.5	22808.9	23167.2	22465.2	20473.3	18152.6	17089.5	14968.8
68°	15379.5	15486.9	16727.1	19081.4	22943.1	23202.1	22392.8	20637.1	18160.7	17098.9	14854.7
70°	13151.4	13340.6	14646.6	17579.5	22727.0	22892.1	21940.4	20545.8	17978.1	16945.9	14019.8
72.5°	10250.8	10512.5	11505.8	14601.0	20991.5	21125.7	20328.4	19539.1	17426.4	15884.2	12017.2
75°	7426.7	7650.8	8606.5	11268.2	17672.1	18148.6	18014.3	18156.6	15621.1	13458.7	8703.2
77.5°	5128.7	5320.7	6211.9	8407.9	13703.0	14305.7	15002.3	15371.5	12835.9	9985.0	4136.8
80°	3285.8	3433.5	4191.8	5920.7	9881.6	10448.1	11198.4	11580.9	9130.0	5022.7	734.2
82.5°	1931.5	2032.2	2550.3	3820.0	6660.2	7005.2	7367.6	6726.0	3664.3	961.1	463.1
85°	959.7	1026.8	1344.9	2161.0	4140.8	4457.6	4578.4	2869.7	774.5	351.7	315.4
87.5°	429.5	448.3	577.2	973.1	1967.7	2073.8	2022.8	892.6	155.7	131.5	112.7
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°	4551.6	4551.6	4551.6	4551.6	4551.6	4551.6	4551.6	4551.6	4551.6	4551.6	4551.6
2.5°	4575.7	4565.0	4562.3	4579.8	4561.0	4583.8	4577.1	4628.1	4634.8	4616.0	4646.9
5°	4582.4	4577.1	4581.1	4613.3	4606.6	4653.6	4665.7	4716.7	4716.7	4701.9	4734.1
7.5°	4613.3	4613.3	4625.4	4684.5	4684.5	4724.7	4738.1	4794.5	4793.2	4793.2	4822.7
10°	4691.2	4691.2	4716.7	4791.8	4773.0	4825.4	4832.1	4861.6	4854.9	4856.3	4887.1
12.5°	4806.6	4813.3	4857.6	4923.4	4911.3	4930.1	4916.7	4911.3	4863.0	4863.0	4883.1
15°	4939.5	4967.7	5028.1	5088.5	5048.2	5041.5	4965.0	4897.9	4794.5	4750.2	4773.0
17.5°	5112.6	5161.0	5230.8	5273.7	5197.2	5142.2	5003.9	4829.4	4661.6	4563.7	4566.3
20°	5304.6	5369.0	5454.9	5469.7	5356.9	5220.0	4989.1	4715.3	4426.7	4271.0	4260.3
22.5°	5518.0	5598.5	5697.9	5640.1	5456.2	5233.4	4903.2	4539.5	4151.6	3889.8	3885.8
25°	5778.4	5865.6	5928.7	5767.7	5479.1	5165.0	4754.3	4265.7	3786.5	3504.6	3485.8
27.5°	6109.9	6167.6	6120.7	5833.4	5410.6	5001.2	4501.9	3914.0	3406.6	3151.6	3123.4
30°	6503.2	6496.5	6241.5	5814.6	5272.4	4742.2	4158.3	3532.8	3095.2	2876.4	2850.9
32.5°	6981.0	6884.4	6358.2	5724.7	5049.5	4402.6	3750.2	3216.0	2869.7	2648.3	2621.4
35°	7743.4	7471.0	6509.9	5589.1	4739.5	3993.2	3365.0	2971.7	2695.2	2441.6	2389.2
37.5°	8926.0	8351.5	6762.3	5446.9	4383.8	3591.9	3077.8	2794.6	2558.3	2271.1	2209.3
40°	10142.0	9374.3	7146.1	5293.8	4050.9	3288.5	2915.4	2711.3	2475.1	2198.6	2136.9
42.5°	11198.4	10328.6	7606.5	5101.9	3710.0	3049.6	2832.1	2684.5	2448.3	2185.2	2126.1
45°	12131.3	11186.3	8087.1	4879.1	3352.9	2856.3	2761.0	2646.9	2408.0	2154.3	2100.6
47.5°	12908.4	11869.5	8509.9	4632.1	3002.6	2714.0	2691.2	2558.3	2331.5	2087.2	2041.6
50°	13509.8	12355.4	8793.1	4356.9	2703.3	2602.6	2590.5	2422.8	2202.6	1969.1	1923.4
52.5°	13936.6	12681.6	8958.2	4253.6	2468.4	2473.8	2453.6	2275.1	2061.7	1829.5	1793.2
55°	14207.7	12905.7	8917.9	4120.7	2230.8	2292.6	2295.2	2166.4	1978.5	1753.0	1723.4
57.5°	14311.1	12896.3	8680.3	3455.0	2000.0	2075.1	2111.4	2091.2	1924.8	1704.7	1680.5
60°	14254.7	12744.7	8174.3	2531.5	1761.0	1863.0	1951.6	1947.6	1806.7	1598.6	1573.1
62.5°	14160.7	12393.0	7182.4	1812.0	1581.2	1712.7	1820.1	1783.9	1649.6	1467.1	1449.6
65°	13823.8	11772.9	5552.9	1449.6	1506.0	1628.1	1716.7	1655.0	1523.5	1332.9	1323.5
67.5°	13078.9	10532.6	3241.5	1322.1	1451.0	1557.0	1620.1	1543.6	1421.4	1236.2	1220.1
68°	12826.5	10214.5	2757.0	1310.0	1440.2	1539.6	1597.3	1516.7	1397.3	1217.4	1201.3
70°	11552.8	8279.0	1315.4	1260.4	1393.3	1459.0	1492.6	1418.8	1302.0	1142.3	1131.5
72.5°	8991.7	4994.5	879.2	1185.2	1302.0	1365.1	1373.1	1257.7	1147.6	1029.5	1022.8
75°	5312.6	1657.7	817.4	1073.8	1175.8	1263.1	1285.9	1170.4	1048.3	911.4	908.7
77.5°	1293.9	642.9	771.8	958.4	1065.7	1150.3	1167.8	1083.2	975.8	821.5	816.1
80°	532.9	534.2	719.4	794.6	914.1	995.9	1021.5	946.3	849.6	750.3	739.6
82.5°	442.9	451.0	610.7	586.6	731.5	826.8	852.3	800.0	766.4	659.0	648.3
85°	315.4	400.0	405.4	394.6	512.7	589.2	718.1	692.6	656.4	565.1	511.4
87.5°	147.6	233.6	175.8	169.1	260.4	349.0	410.7	430.9	373.1	289.9	268.5
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)