

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: P591253

Luminaire Tested: **CTN-CA8-230-727-U-T1-SSS-HM-EX90**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591253  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-1)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/19/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA8-230-727-U-T1-SSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE, 90D FIELD INSTALLED SHIELD ON STREET SIDE  
Light Source: (8) 2700K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 25800 lumens  
Efficiency: N/A  
Efficacy: 113.0 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type I - Short  
BUG Rating: B5 - U0 - G5

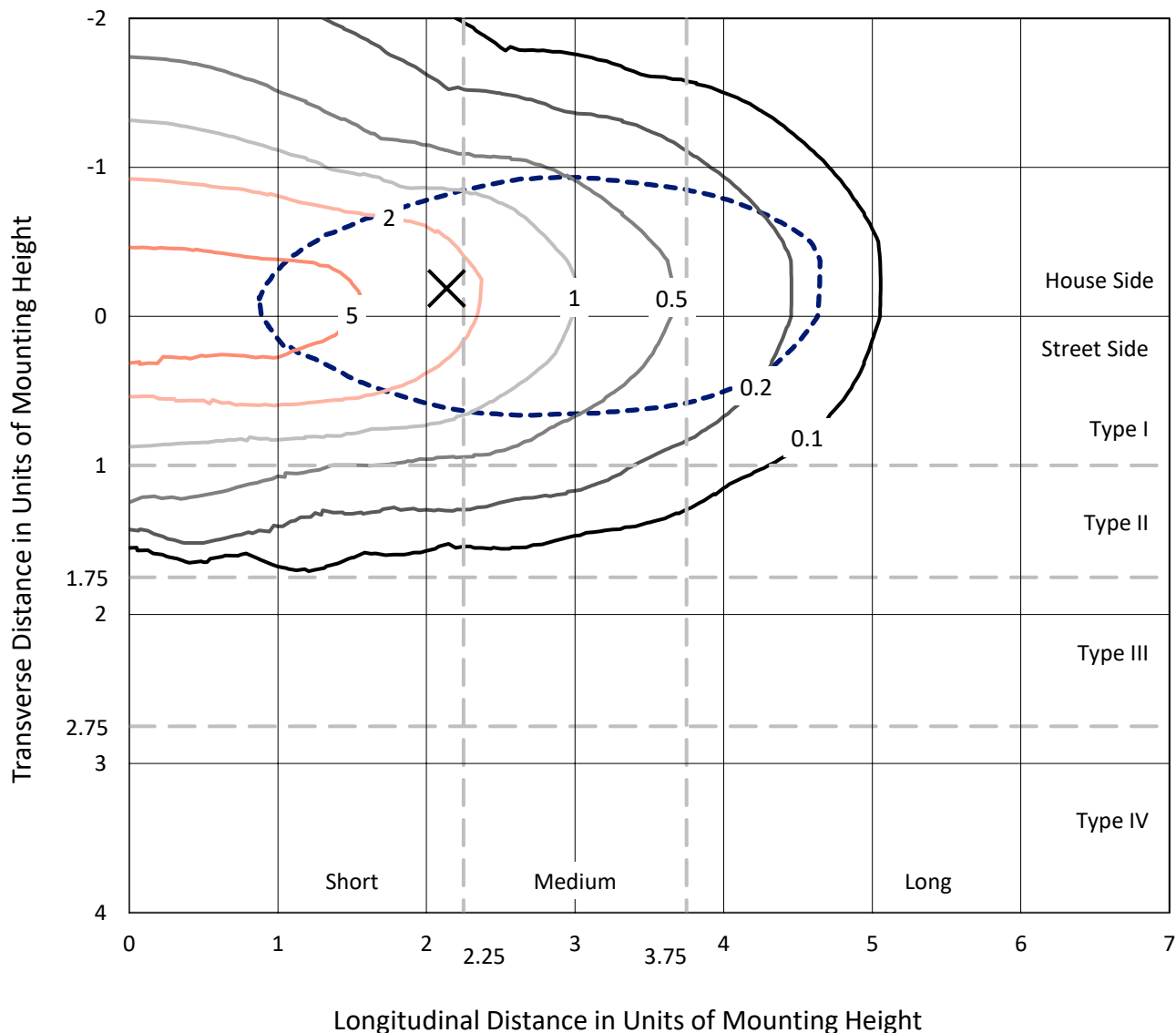
Input Watts (W): 228.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

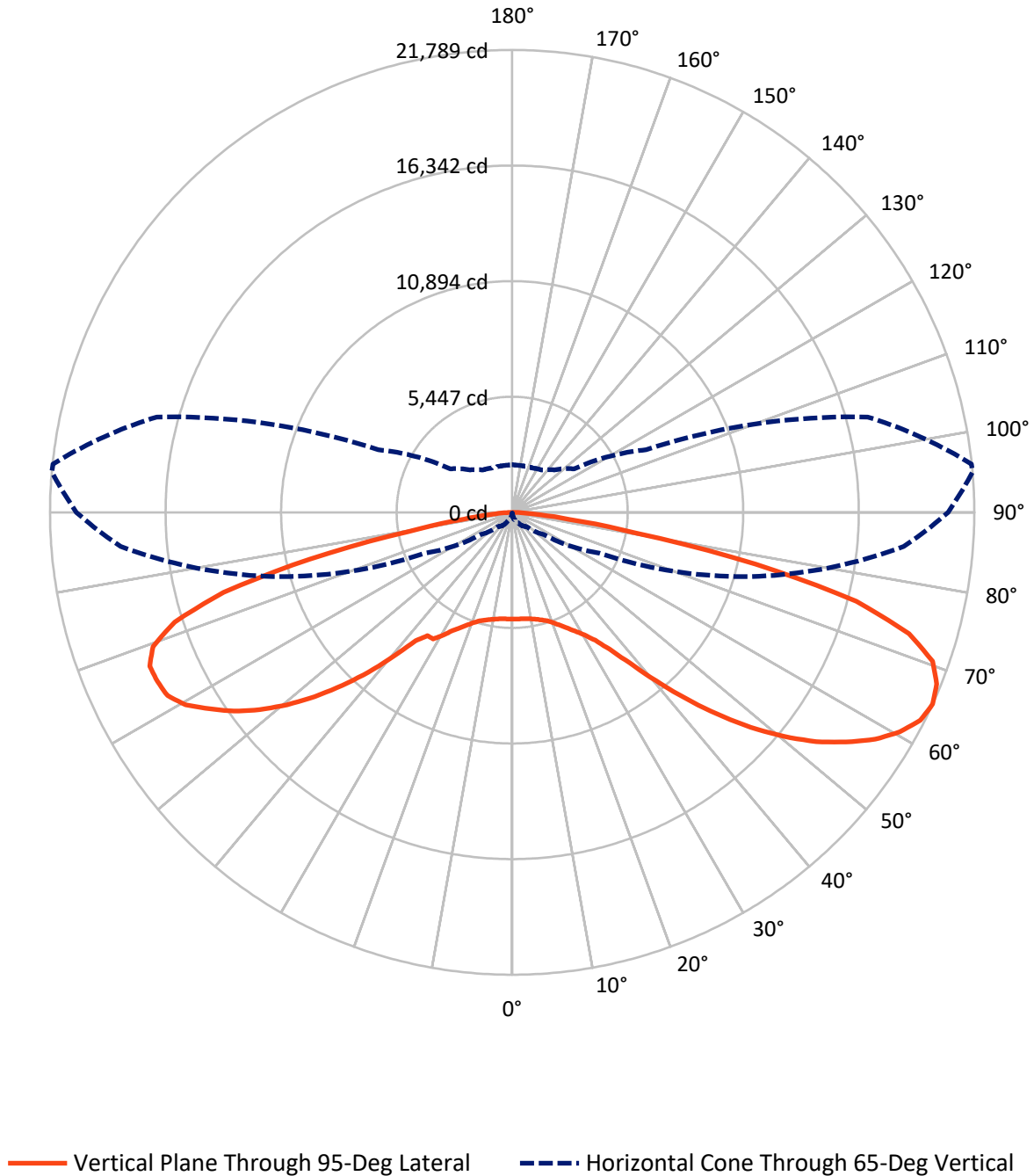
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8 fc  
 Type I - Short - N/A

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### Luminous Intensity Polar Plot



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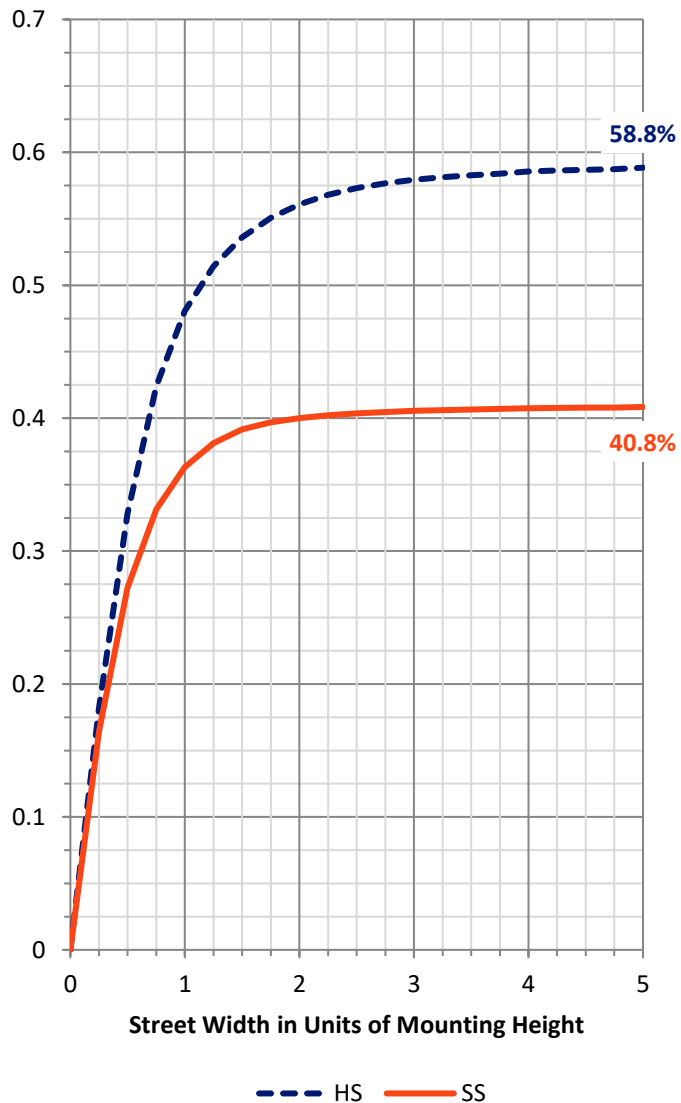
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	15297.9	0.0	15297.9
	% Fixture	59.3	0.0	59.3
<b>Street Side</b>	Lumens	10502.1	0.0	10502.1
	% Fixture	40.7	0.0	40.7
<b>Total</b>	Lumens	25800.0	0.0	25800.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	478.7	1.9
10°-20°	1378.5	5.3
20°-30°	2071.8	8.0
30°-40°	2888.7	11.2
40°-50°	4147.3	16.1
50°-60°	5286.7	20.5
60°-70°	5504.6	21.3
70°-80°	3544.6	13.7
80°-90°	499.2	1.9
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°	25800.0	100.0
0°-180°	25800.0	100.0

**Coefficient of Utilization**

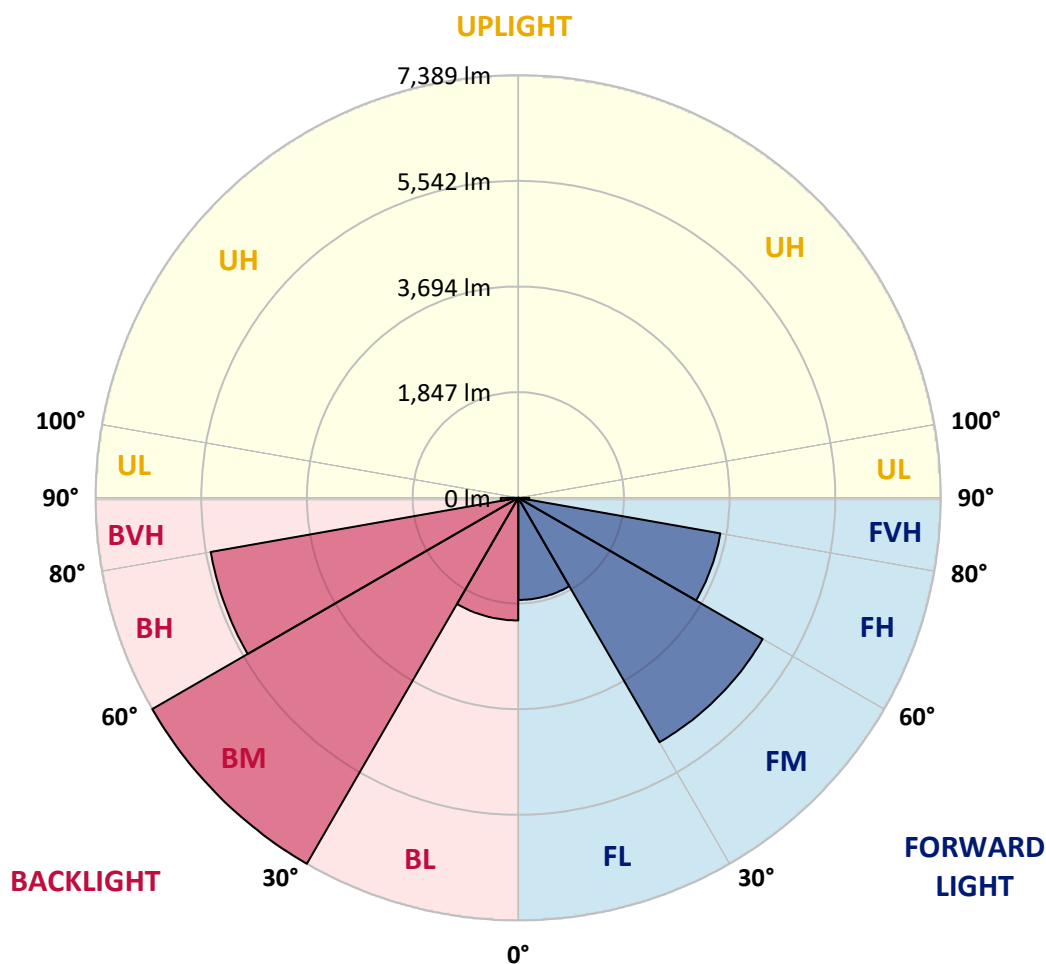


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1785.4	6.9			
FM (30°-60°)	4933.9	19.1			
FH (60°-80°)	3588.7	13.9			G2/5000
FVH (80°-90°)	194.1	0.8			G2/225
BL (0°-30°)	2143.6	8.3	B3/2500		
BM (30°-60°)	7388.7	28.6	B4/8500		
BH (60°-80°)	5460.5	21.2	B5		G5
BVH (80°-90°)	305.1	1.2			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B5-U0-G5**  
 Type I Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	5028.3	5028.3	5028.3	5028.3	5028.3	5028.3	5028.3	5028.3	5028.3	5028.3	5028.3
2.5°	5043.3	5002.0	5010.5	5050.8	4976.7	5017.1	4987.0	5035.8	5023.6	5027.4	5050.8
5°	5001.1	4958.9	4974.8	5024.6	4955.1	5003.9	4981.4	5021.7	5018.0	5032.1	5047.1
7.5°	4962.6	4917.6	4938.3	4974.8	4937.3	4979.5	4967.3	5018.0	5016.1	5057.4	5067.7
10°	4919.5	4878.2	4896.0	4941.1	4910.1	4960.8	4971.1	5031.1	5050.8	5107.1	5111.8
12.5°	4843.5	4803.2	4811.6	4868.8	4873.5	4950.5	4986.1	5080.9	5101.5	5166.2	5169.0
15°	4571.5	4562.1	4641.8	4733.7	4771.3	4885.7	5004.9	5134.3	5165.3	5246.9	5255.3
17.5°	3805.9	3712.1	3571.4	3683.1	3928.8	4245.0	4959.8	5214.1	5271.3	5352.9	5378.2
20°	2552.6	2638.0	2956.0	3098.6	3317.2	3850.0	4948.6	5300.4	5424.2	5522.7	5570.5
22.5°	2108.9	2104.2	2485.1	2965.4	3137.1	3381.9	4548.9	5402.6	5608.1	5736.6	5796.6
25°	1958.8	1960.7	2030.1	2637.1	3062.0	3320.9	4178.4	5268.5	5809.8	5993.6	6064.9
27.5°	1839.7	1847.2	1906.3	2111.7	2998.2	3307.8	4188.7	4884.8	6022.7	6268.5	6351.1
30°	1744.9	1741.1	1812.4	1984.1	2495.4	3312.5	4237.5	4961.7	5824.8	6658.8	6704.7
32.5°	1666.1	1655.8	1728.0	1900.6	2179.2	3275.9	4310.7	5177.5	5685.0	7034.0	7213.2
35°	1590.1	1586.4	1650.2	1820.0	2104.2	2720.5	4396.0	5444.8	6139.0	7046.2	7911.2
37.5°	1531.0	1528.2	1578.9	1739.3	2036.7	2478.5	4466.4	5781.6	6730.1	7566.9	8489.0
40°	1483.2	1475.7	1516.0	1668.0	1959.7	2438.2	3890.4	6133.4	7451.5	8781.7	9888.7
42.5°	1442.8	1432.5	1471.9	1597.6	1885.6	2393.1	3612.7	6488.0	8299.5	10134.5	11249.9
45°	1387.5	1386.5	1426.9	1544.1	1806.8	2327.5	3639.0	5896.1	9252.7	11429.1	12679.6
47.5°	1359.3	1352.8	1382.8	1494.4	1732.7	2228.0	3613.6	5642.8	9982.5	12728.4	14072.7
50°	1315.2	1309.6	1338.7	1437.2	1659.5	2102.3	3521.7	5798.5	9381.2	13959.2	15382.3
52.5°	1236.4	1017.9	1295.5	1389.4	1580.7	1966.3	3347.2	5884.8	9614.8	15100.0	16601.9
55°	485.9	652.0	1240.2	1329.3	1500.1	1838.7	3082.7	5860.4	10387.8	16121.6	17652.6
57.5°	423.1	425.0	823.7	1109.8	1404.4	1705.5	2759.9	5721.6	11069.8	16995.9	18676.1
60°	60.0	61.0	417.5	467.2	921.2	1212.0	2431.6	5473.0	11474.1	17870.2	19558.8
62.5°	40.3	42.2	379.9	424.0	840.6	1075.1	2126.7	5031.1	11669.3	18401.2	20194.9
65°	29.1	30.0	344.3	383.7	748.6	954.1	1843.4	4550.8	11687.1	18524.1	20543.9
67.5°	27.2	28.1	317.1	353.7	681.1	847.1	1598.6	4127.7	11194.6	18560.7	20529.8
70°	28.1	28.1	288.9	319.9	604.1	734.5	1326.5	3706.5	9952.5	18082.2	20068.2
72.5°	28.1	29.1	252.4	281.4	520.7	622.0	1087.3	3013.2	8060.3	16727.6	18953.8
75°	28.1	29.1	198.9	232.7	432.5	499.1	892.2	2429.7	6207.5	14116.8	16583.1
77.5°	29.1	29.1	146.3	178.2	334.0	375.2	677.3	1866.9	4574.3	9785.5	11545.4
80°	29.1	31.0	103.2	131.3	246.7	271.1	491.6	1191.4	2463.5	4962.6	5731.9
82.5°	30.0	31.0	76.9	98.5	170.7	195.1	300.2	586.3	1138.9	2296.5	2601.4
85°	28.1	29.1	62.9	68.5	97.6	117.3	186.7	290.8	400.6	903.4	939.1
87.5°	19.7	18.8	19.7	22.5	31.9	51.6	88.2	98.5	96.6	243.0	282.4
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):**

	95°	96°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5028.3	5028.3	5028.3	5028.3	5028.3	5028.3	5028.3	5028.3	5028.3	5028.3	5028.3
2.5°	5036.8	5038.6	5031.1	5060.2	5031.1	5047.1	5004.9	5070.5	5064.0	5046.1	5068.7
5°	5035.8	5040.5	5038.6	5064.9	5028.3	5041.5	4999.2	5068.7	5045.2	5029.3	5056.5
7.5°	5058.3	5064.9	5062.1	5079.9	5037.7	5036.8	4995.5	5047.1	5024.6	4990.8	5024.6
10°	5108.1	5108.1	5099.6	5109.9	5049.0	5042.4	4973.0	5032.1	4993.6	4963.6	5004.9
12.5°	5171.8	5177.5	5155.9	5154.0	5069.6	5049.9	4962.6	4991.7	4936.4	4908.2	4948.6
15°	5265.7	5269.4	5241.3	5223.4	5120.3	5077.1	4936.4	4930.8	4853.8	4826.6	4855.7
17.5°	5374.5	5373.5	5334.1	5326.6	5205.6	5105.2	4914.8	4856.6	4758.1	4727.2	4752.5
20°	5549.0	5538.7	5495.5	5452.3	5276.0	5123.1	4883.8	4761.9	4624.9	4580.8	4601.5
22.5°	5783.5	5779.7	5712.2	5587.4	5351.0	5140.0	4831.3	4646.5	4464.5	4384.8	4397.9
25°	6040.5	6037.7	5941.1	5754.4	5416.7	5152.1	4770.3	4517.0	4271.3	4150.2	4147.4
27.5°	6338.9	6331.4	6201.0	5934.5	5507.7	5155.9	4704.7	4380.1	4079.9	3928.8	3935.4
30°	6701.9	6688.8	6510.5	6134.4	5623.1	5167.2	4648.4	4226.2	3901.6	3741.2	3737.5
32.5°	7183.2	7164.4	6887.7	6397.0	5772.2	5195.3	4580.8	4074.2	3735.6	3574.2	3560.2
35°	7915.8	7877.4	7419.6	6732.9	5938.3	5214.1	4473.0	3929.8	3575.2	3423.2	3411.9
37.5°	9000.3	8935.6	8089.4	7085.6	6103.4	5210.3	4350.1	3774.1	3444.8	3297.5	3294.7
40°	10430.0	10328.7	8893.4	7463.7	6261.9	5189.7	4217.8	3635.2	3336.0	3209.3	3218.7
42.5°	11993.8	11886.9	9846.5	7848.3	6381.1	5125.9	4076.1	3503.9	3235.6	3134.3	3135.2
45°	13569.9	13470.4	10943.2	8210.4	6440.2	5005.8	3928.8	3379.1	3129.6	3041.4	3051.7
47.5°	15139.4	15066.2	12029.5	8516.2	6411.1	4817.2	3751.5	3260.9	3024.5	2952.3	2975.7
50°	16599.1	16521.2	13187.1	8769.5	6264.8	4554.6	3569.5	3144.6	2939.1	2876.3	2896.0
52.5°	17951.8	17847.7	14427.3	8915.9	6001.1	4277.8	3409.1	3042.3	2856.6	2793.7	2814.4
55°	19101.0	19096.3	15562.5	8928.1	5589.3	3994.5	3254.3	2924.1	2775.9	2724.3	2729.0
57.5°	20177.1	20219.3	16539.0	8779.9	5101.5	3731.8	3077.0	2802.2	2683.0	2629.5	2634.2
60°	20998.9	21051.4	17201.3	8348.3	4581.8	3442.0	2886.6	2672.7	2567.6	2517.0	2532.0
62.5°	21588.9	21521.4	17552.2	7729.2	4061.1	3130.5	2680.2	2507.6	2424.1	2393.1	2394.1
65°	21788.7	21767.2	17346.8	6966.5	3569.5	2823.7	2436.3	2302.1	2250.5	2229.0	2244.9
67.5°	21584.2	21597.4	16546.5	6318.2	3102.4	2477.6	2162.4	2076.1	2049.8	2048.9	2065.7
70°	21024.2	20921.0	14887.0	5800.4	2664.3	2092.9	1867.8	1826.5	1818.1	1838.7	1852.8
72.5°	19560.7	19410.6	12345.6	4975.8	2045.1	1539.5	1414.7	1471.0	1469.1	1480.4	1493.5
75°	16757.6	16362.7	9670.1	3961.7	1515.1	1089.2	943.7	941.9	939.1	1034.7	1069.5
77.5°	11745.2	11481.6	7139.1	3017.0	1007.5	652.0	647.3	698.0	706.4	643.5	655.7
80°	5892.3	6007.7	4120.2	1864.0	669.8	459.7	482.2	474.7	481.3	488.8	493.5
82.5°	2715.9	2774.0	1971.9	908.1	431.5	349.0	330.2	359.3	372.4	371.5	368.7
85°	963.4	969.1	623.8	389.3	264.5	227.0	230.8	268.3	283.3	270.2	263.6
87.5°	279.6	265.5	127.6	115.4	122.0	121.0	124.8	132.3	142.6	140.7	130.4
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)