

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: P591300

Luminaire Tested: **CTN-CA10-310-730-U-T1-SSS-HM-EX180**

Issue Date: 1/19/2022

Test Information

Test Method: LM-79-08
Report Number: P591300
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-3)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 1/19/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: CTN-CA10-310-730-U-T1-SSS-HM-EX180
Description: CELESTEON HIGH MAST LUMINAIRE, 180D FIELD INSTALLED SHIELD ON STREET SIDE
Light Source: (10) 3000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 30235 lumens
Efficiency: N/A
Efficacy: 96.8 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')
IES Classification: Type I - Short
BUG Rating: B5 - U0 - G5

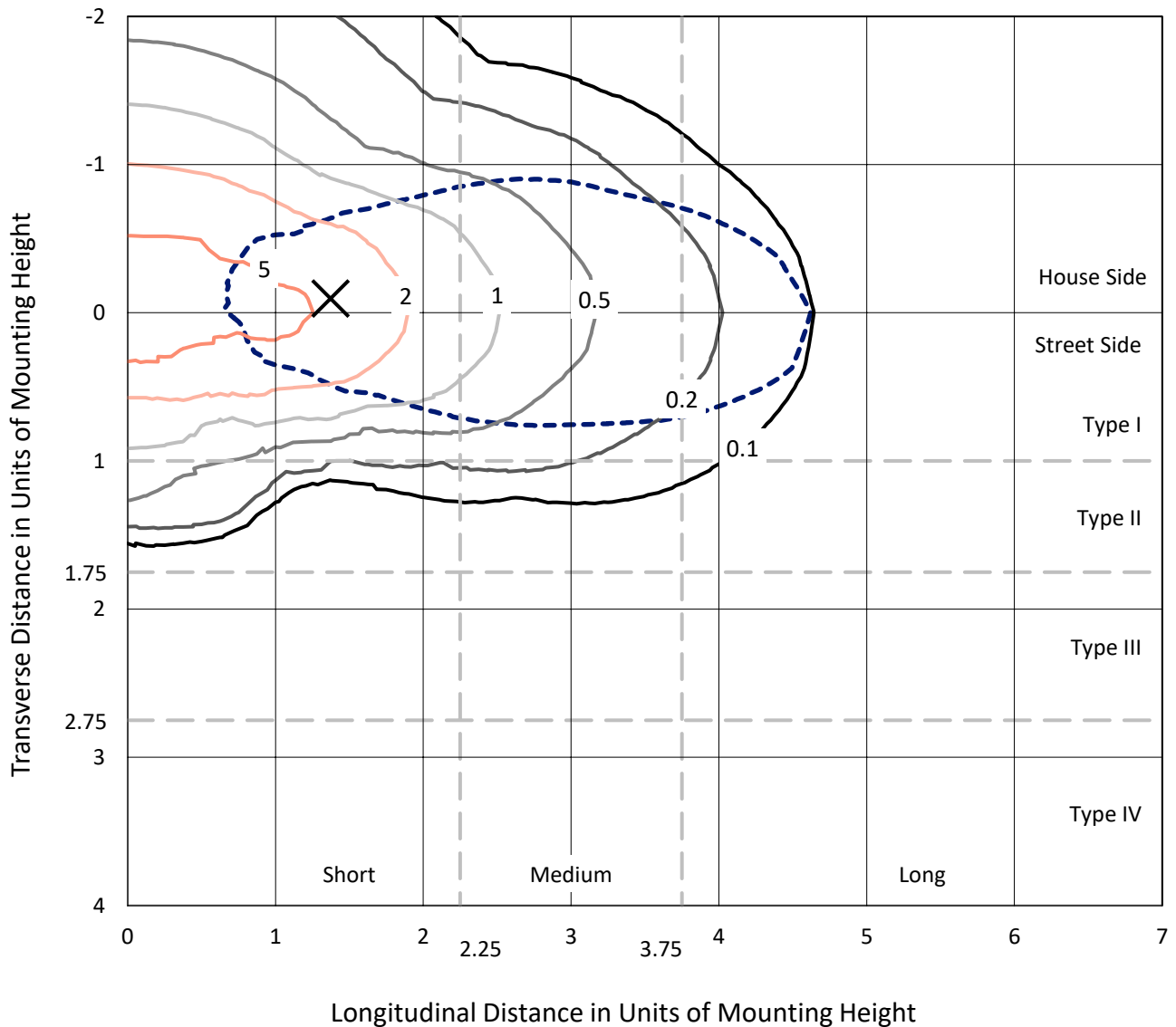
Input Watts (W): 312.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

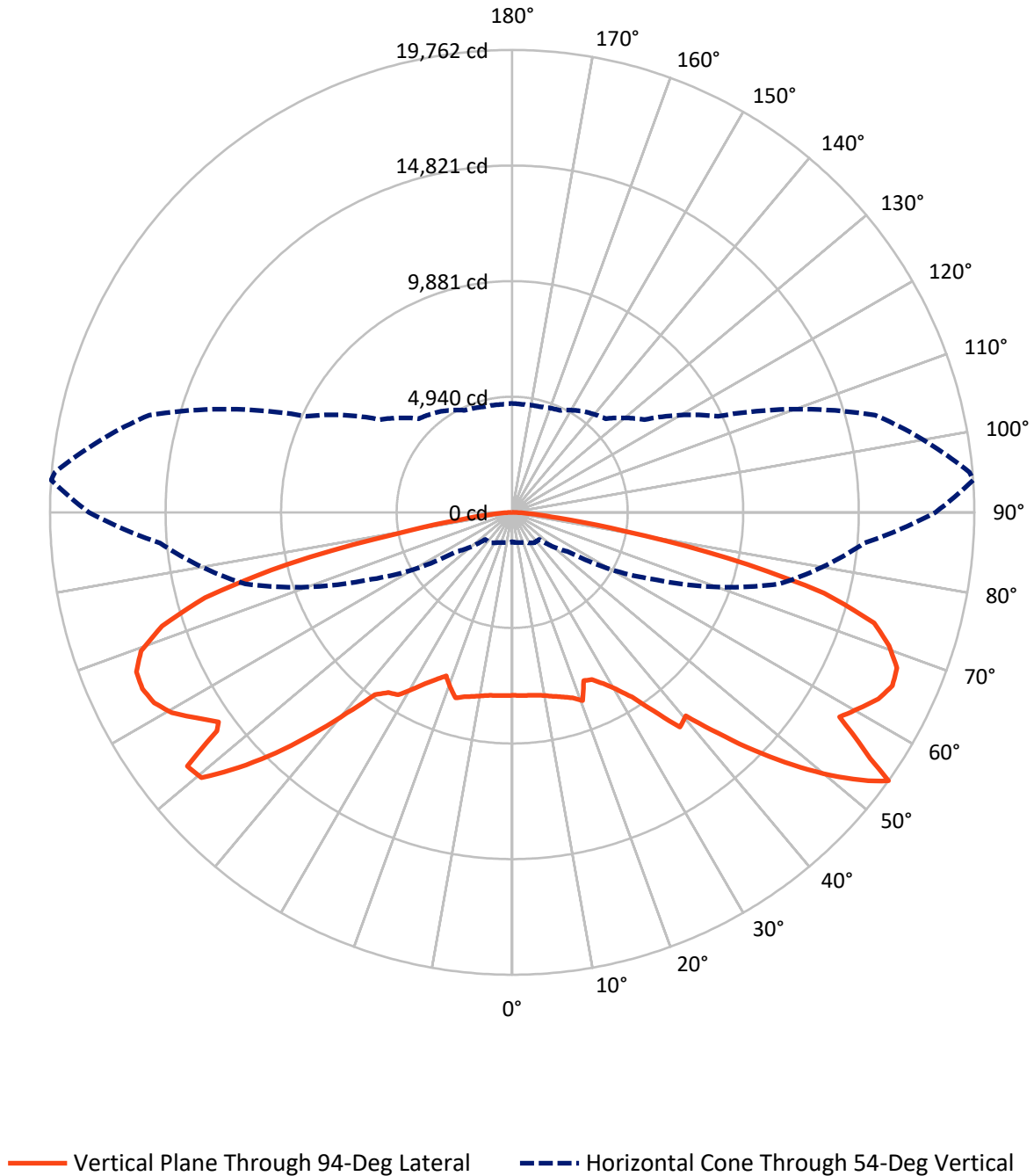
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 8.7 fc
 Type I - Short - N/A

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Luminous Intensity Polar Plot



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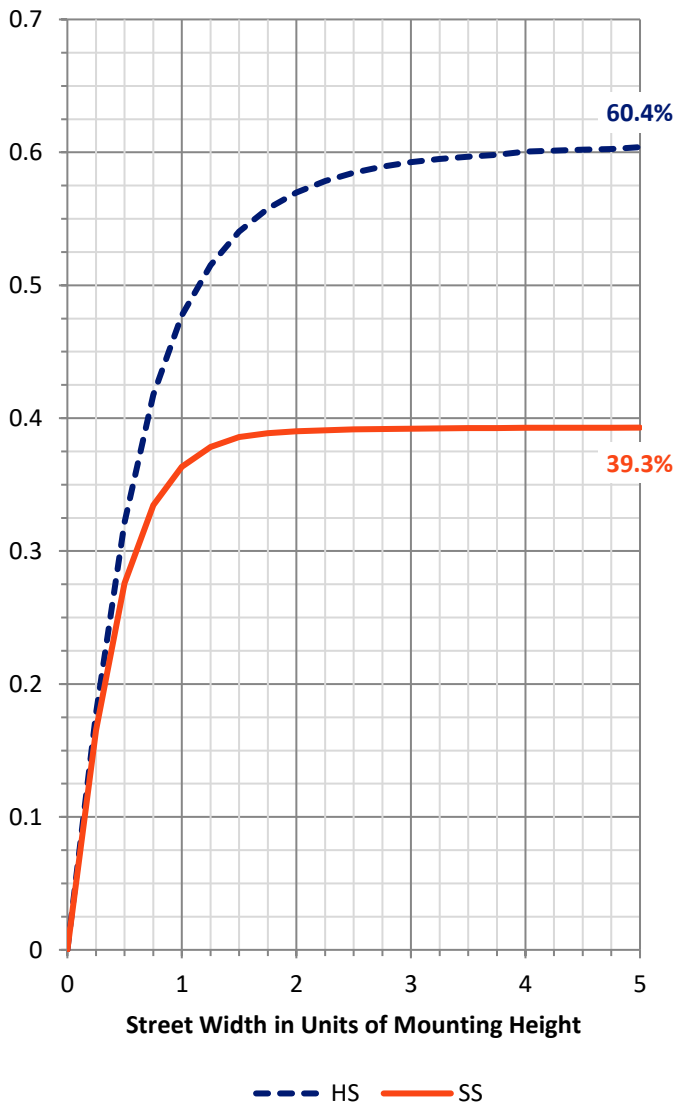
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	18415.6	0.0	18415.6
	% Fixture	60.9	0.0	60.9
Street Side	Lumens	11819.4	0.0	11819.4
	% Fixture	39.1	0.0	39.1
Total	Lumens	30235.0	0.0	30235.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	746.1	2.5
10°-20°	2134.8	7.1
20°-30°	3049.1	10.1
30°-40°	4034.4	13.3
40°-50°	5311.0	17.6
50°-60°	5859.5	19.4
60°-70°	5279.8	17.5
70°-80°	3339.1	11.0
80°-90°	481.2	1.6
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°	30235.0	100.0
0°-180°	30235.0	100.0

Coefficient of Utilization

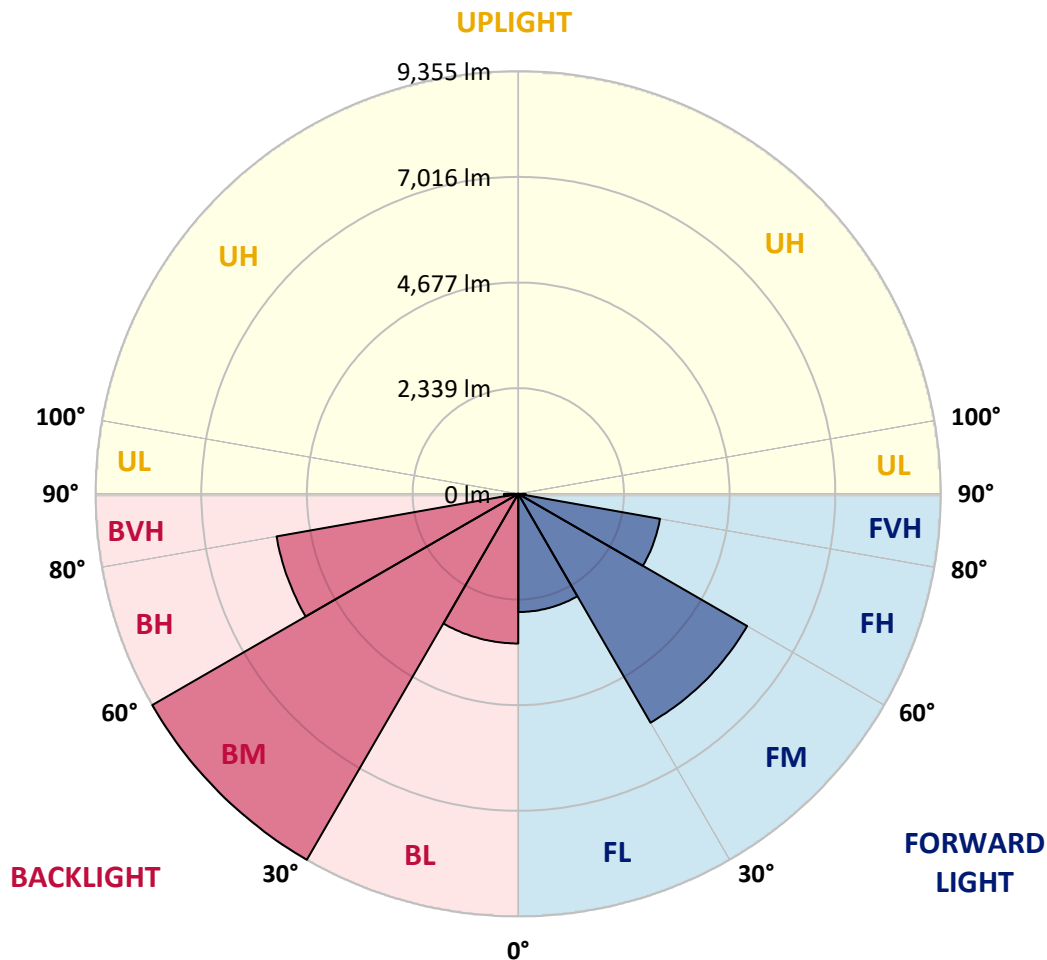


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2616.6	8.7			
FM (30°-60°)	5850.2	19.3			
FH (60°-80°)	3186.0	10.5			G2/5000
FVH (80°-90°)	166.6	0.6			G2/225
BL (0°-30°)	3313.5	11.0	B4/5000		
BM (30°-60°)	9354.6	30.9	B5		
BH (60°-80°)	5433.0	18.0	B5		G5
BVH (80°-90°)	314.6	1.0			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°	7818.0	7818.0	7818.0	7818.0	7818.0	7818.0	7818.0	7818.0	7818.0	7818.0	7818.0
2.5°	7832.7	7778.3	7785.6	7843.0	7721.0	7797.4	7762.1	7825.3	7800.4	7835.6	7862.1
5°	7763.6	7712.1	7725.4	7795.9	7698.9	7785.6	7735.7	7797.4	7806.2	7848.9	7873.9
7.5°	7706.2	7656.3	7665.1	7731.2	7669.5	7745.9	7716.5	7798.9	7800.4	7875.3	7894.5
10°	7648.9	7597.4	7609.2	7666.5	7626.8	7709.2	7728.3	7825.3	7847.4	7951.8	7953.3
12.5°	7526.9	7481.3	7487.2	7566.6	7568.0	7687.1	7725.4	7875.3	7920.9	8038.6	8050.3
15°	7046.0	7078.4	7201.9	7301.9	7394.5	7554.8	7685.7	7931.2	7993.0	8135.6	8169.4
17.5°	5881.5	5831.5	5562.4	5705.1	6150.6	6577.0	6803.4	7316.6	7891.5	8284.1	8328.2
20°	4124.4	4203.8	4625.8	4819.9	5137.5	5909.4	6618.2	6913.7	7100.5	7810.6	8365.0
22.5°	3271.6	3295.1	3899.4	4624.3	4862.5	5194.8	6035.9	7022.5	7315.1	7521.0	7612.1
25°	3045.2	3062.8	3159.8	4108.2	4758.1	5111.0	5480.1	6763.7	7568.0	7823.9	7932.7
27.5°	2855.5	2874.6	2970.2	3289.2	4662.6	5111.0	5530.1	6122.7	7813.6	8201.8	8294.4
30°	2714.3	2714.3	2812.8	3084.9	3908.3	5127.2	5634.5	6194.7	7431.3	8678.2	8760.5
32.5°	2584.9	2586.4	2693.7	2955.5	3386.3	5058.1	5781.5	6459.4	7134.3	9154.6	9367.8
35°	2468.8	2473.2	2570.2	2834.9	3253.9	4077.4	5944.7	6799.0	7704.8	9101.6	10291.2
37.5°	2370.2	2373.2	2457.0	2715.8	3142.2	2954.0	6050.6	7207.8	8470.8	9573.6	10483.8
40°	2299.7	2295.3	2355.5	2590.8	2979.0	2699.6	5121.3	7632.7	9381.0	11051.4	11389.5
42.5°	2229.1	2221.7	2282.0	2459.9	2037.9	2629.0	4744.9	8047.4	10429.4	12674.7	12976.1
45°	2146.8	2149.7	2208.5	2207.0	1929.1	2534.9	4786.1	7087.2	11551.3	14334.7	14718.5
47.5°	2102.6	2089.4	2118.8	1602.7	1839.4	2405.5	4768.4	6579.9	12540.9	15921.2	16302.1
50°	2020.3	2017.4	1485.1	1518.9	1749.7	2257.0	4492.0	6762.3	11316.0	17391.6	17776.9
52.5°	1896.8	1674.8	1377.7	1460.1	1660.1	2082.1	3208.4	6837.3	11285.1	17246.1	19151.7
54°	1260.1	1291.0	1333.6	1418.9	1595.4	1636.5	2934.9	6831.4	11821.8	15108.1	18100.3
55°	722.0	1011.6	1298.3	1385.1	1549.8	1145.4	2829.0	6800.5	12164.4	15200.8	16316.8
57.5°	624.9	627.9	714.6	1155.7	795.5	982.2	2529.0	6549.1	12805.5	16052.1	16371.2
60°	54.4	52.9	60.3	82.3	104.4	229.4	1273.3	4200.9	12357.1	16782.9	17278.4
62.5°	22.1	23.5	29.4	39.7	63.2	102.9	1052.8	3723.0	12546.7	17228.4	17771.0
65°	4.4	4.4	7.4	13.2	23.5	61.8	896.9	3315.7	12449.7	17374.0	18098.9
67.5°	0.0	0.0	4.4	10.3	19.1	50.0	776.4	3051.0	11895.4	17324.0	17976.8
70°	0.0	0.0	4.4	10.3	17.6	48.5	664.6	2815.8	10520.6	16800.5	17524.0
72.5°	0.0	0.0	4.4	8.8	16.2	44.1	569.0	2486.4	8917.8	15540.4	16525.6
75°	0.0	0.0	4.4	8.8	14.7	39.7	479.3	2133.5	7450.4	13393.7	14577.3
77.5°	0.0	0.0	4.4	8.8	13.2	35.3	376.4	1704.2	5850.6	9711.8	10347.0
80°	0.0	0.0	4.4	8.8	11.8	27.9	277.9	1076.3	3245.1	4925.8	5187.5
82.5°	0.0	0.0	2.9	7.4	10.3	17.6	132.3	407.3	1529.2	2255.6	2187.9
85°	0.0	0.0	2.9	7.4	8.8	13.2	57.3	102.9	508.8	748.4	697.0
87.5°	0.0	0.0	2.9	5.9	7.4	8.8	14.7	17.6	161.7	216.1	223.5
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):

	94°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	7818.0	7818.0	7818.0	7818.0	7818.0	7818.0	7818.0	7818.0	7818.0	7818.0	7818.0
2.5°	7844.5	7844.5	7843.0	7881.2	7832.7	7837.1	7791.5	7909.2	7895.9	7859.2	7903.3
5°	7853.3	7860.6	7859.2	7878.3	7840.1	7863.6	7800.4	7916.5	7897.4	7868.0	7913.6
7.5°	7890.0	7903.3	7893.0	7926.8	7850.3	7873.9	7809.2	7910.6	7891.5	7848.9	7897.4
10°	7969.4	7982.7	7962.1	7978.3	7897.4	7885.6	7806.2	7912.1	7870.9	7838.6	7898.9
12.5°	8072.4	8088.5	8047.4	8044.4	7941.5	7918.0	7803.3	7875.3	7815.1	7788.6	7843.0
15°	8187.1	8206.2	8157.7	8147.4	8034.1	7956.2	7791.5	7807.7	7721.0	7685.7	7743.0
17.5°	8337.0	8354.7	8317.9	8312.0	8165.0	8032.7	7775.4	7722.4	7600.4	7571.0	7601.9
20°	8588.5	8600.2	8551.7	8507.6	8291.5	8073.8	7748.9	7610.7	7423.9	7362.2	7397.5
22.5°	7816.5	7910.6	8864.9	8700.2	8385.6	8116.5	7682.7	7451.9	7190.1	7074.0	7097.5
25°	7918.0	7926.8	8288.5	8928.1	8488.5	8144.4	7604.8	7254.8	6894.6	6725.5	6754.9
27.5°	8285.6	8275.3	8132.7	8953.1	8610.5	8160.6	7507.7	7047.5	6602.0	6399.1	6406.4
30°	8762.0	8745.8	8529.7	8094.4	8785.5	8166.5	7422.5	6809.3	6341.7	6125.6	6119.7
32.5°	9413.4	9367.8	9032.5	8431.1	8045.9	8206.2	7301.9	6582.9	6093.2	5880.0	5863.9
35°	10413.2	10329.4	9719.2	8859.0	7918.0	8206.2	7137.2	6338.8	5863.9	5661.0	5649.2
37.5°	11652.7	11674.8	10597.0	9338.4	8115.0	7437.2	6940.2	6110.9	5665.4	5486.0	5486.0
40°	11430.7	11723.3	11616.0	9829.5	8317.9	7313.7	6728.4	5891.8	5500.7	5363.9	5381.6
42.5°	12896.7	12783.5	12798.2	10322.1	8460.6	7187.2	6499.1	5688.9	5355.1	5239.0	5252.2
45°	14522.9	14395.0	11716.0	10763.2	8526.7	6999.0	6266.7	5480.1	5194.8	5097.8	5133.1
47.5°	16128.6	16013.9	12865.8	10655.8	8465.0	6710.8	5980.0	5299.2	5025.8	4956.6	5009.6
50°	17682.8	17521.0	14105.3	9525.1	8245.9	6312.3	5687.4	5109.6	4878.7	4837.5	4877.2
52.5°	19069.3	18854.7	15361.0	9695.7	7203.4	5909.4	5427.2	4927.2	4744.9	4699.3	4739.0
54°	19761.9	19631.0	16062.4	9714.8	6904.9	5659.5	5271.3	4811.1	4669.9	4631.7	4653.7
55°	18582.6	18844.4	16478.5	9698.6	6688.7	5508.0	5168.4	4734.6	4617.0	4575.8	4597.9
57.5°	16502.0	16219.7	15406.6	9500.1	6100.6	5128.7	4866.9	4540.5	4459.7	4406.7	4437.6
60°	17025.5	16974.0	14064.2	9063.4	5458.0	4703.7	4569.9	4314.1	4259.7	4215.6	4256.7
62.5°	17572.5	17538.7	14278.8	8385.6	4818.4	4286.2	4228.8	4049.4	4017.1	3998.0	4008.2
65°	17868.0	17651.9	14273.0	7478.3	4231.7	3858.3	3849.4	3715.6	3730.3	3721.5	3764.2
67.5°	17743.0	17512.2	13642.2	6824.0	3680.4	3370.1	3398.0	3342.2	3396.6	3412.7	3445.1
70°	17090.2	17165.2	12267.4	6193.2	3131.9	2837.8	2926.1	2918.7	2998.1	3059.9	3111.3
72.5°	16187.4	15899.2	10282.4	5264.0	2292.3	2018.8	2171.7	2274.7	2362.9	2436.4	2484.9
75°	13777.4	13439.3	7591.6	4103.8	1660.1	1392.4	1433.6	1479.2	1536.5	1705.6	1805.6
77.5°	9445.7	9304.5	5459.5	3095.1	1057.2	839.6	999.9	1091.0	1139.5	1132.2	1149.8
80°	4843.4	4818.4	3231.9	1851.2	713.1	614.6	727.8	736.7	814.6	874.9	877.8
82.5°	1952.7	2049.7	1291.0	1014.6	495.5	464.6	513.2	577.9	644.0	679.3	688.1
85°	691.1	674.9	392.6	476.4	314.7	325.0	363.2	436.7	505.8	514.6	495.5
87.5°	185.3	192.6	83.8	175.0	172.0	188.2	208.8	238.2	288.2	302.9	288.2
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)