

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: P591109

Luminaire Tested: **CTN-CA10-310-722-U-T1-SSS-HM-EX90**

Issue Date: 1/19/2022

Test Information

Test Method: LM-79-08
Report Number: P591109
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-CA10-310-722-U-T1-SSS-HM-EX90
Description: CELESTEON HIGH MAST LUMINAIRE, 90D FIELD INSTALLED SHIELD ON STREET SIDE
Light Source: (10) 2200K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 33564 lumens
Efficiency: N/A
Efficacy: 107.4 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')
IES Classification: Type I - Short
BUG Rating: B5 - U0 - G5

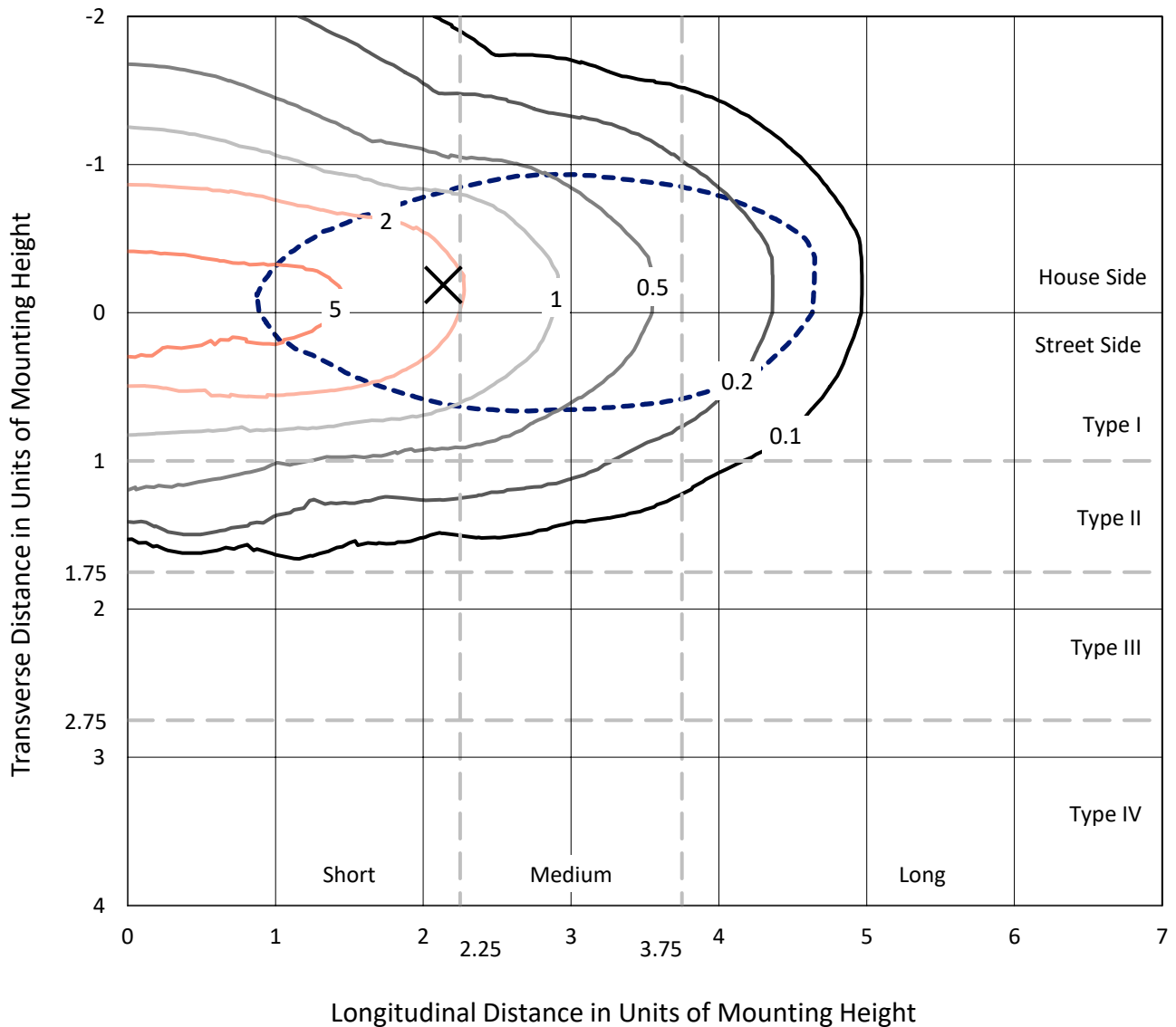
Input Watts (W): 312.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

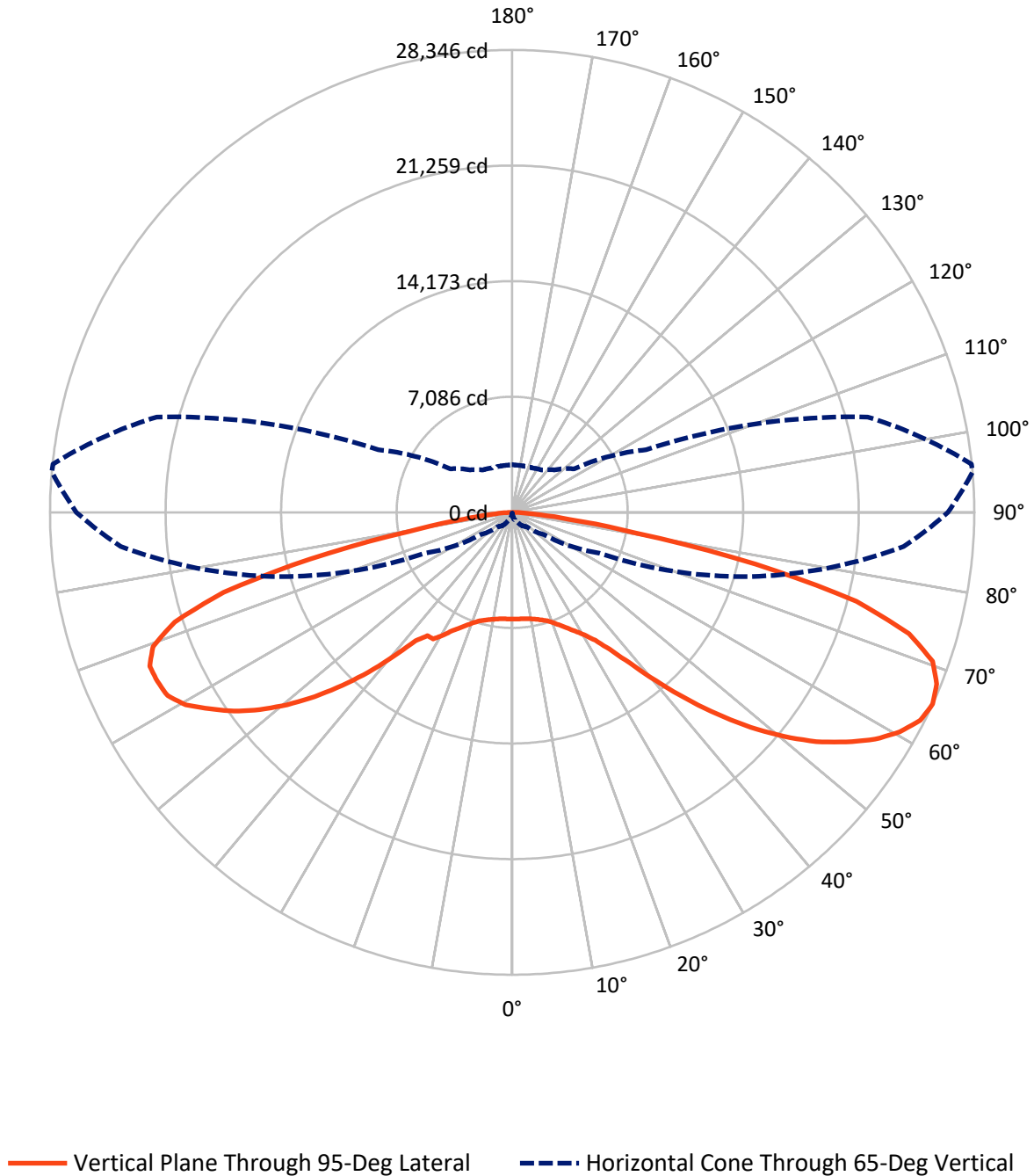
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 7.3 fc
 Type I - Short - N/A

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Luminous Intensity Polar Plot



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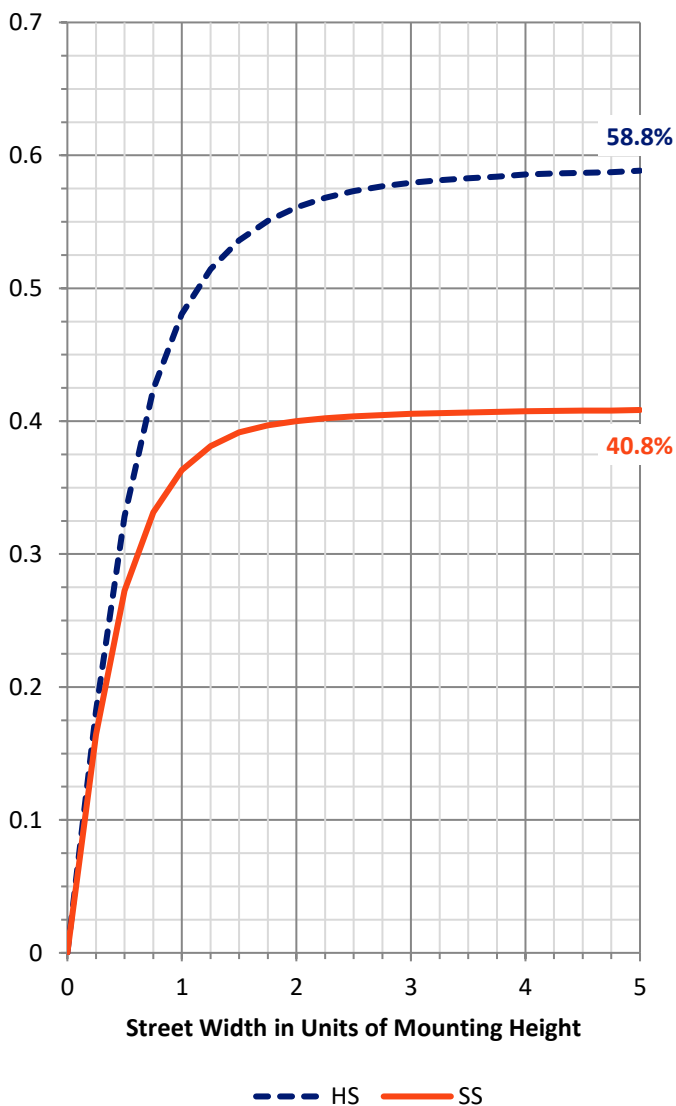
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	19901.5	0.0	19901.5
	% Fixture	59.3	0.0	59.3
Street Side	Lumens	13662.5	0.0	13662.5
	% Fixture	40.7	0.0	40.7
Total	Lumens	33564.0	0.0	33564.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	622.7	1.9
10°-20°	1793.3	5.3
20°-30°	2695.3	8.0
30°-40°	3758.0	11.2
40°-50°	5395.3	16.1
50°-60°	6877.6	20.5
60°-70°	7161.0	21.3
70°-80°	4611.3	13.7
80°-90°	649.4	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°	33564.0	100.0
0°-180°	33564.0	100.0

Coefficient of Utilization

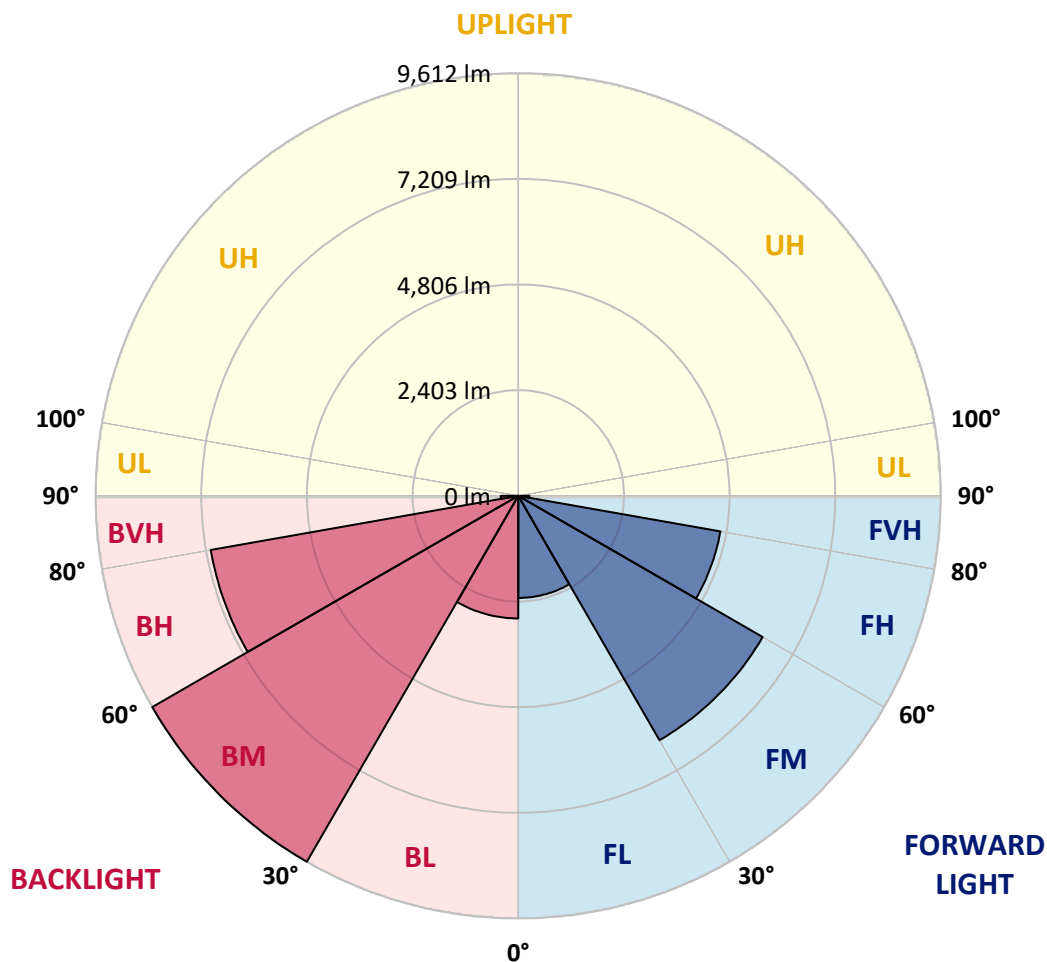


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2322.6	6.9			
FM (30°-60°)	6418.7	19.1			
FH (60°-80°)	4668.7	13.9			G2/5000
FVH (80°-90°)	252.5	0.8			G3/500
BL (0°-30°)	2788.7	8.3	B4/5000		
BM (30°-60°)	9612.2	28.6	B5		
BH (60°-80°)	7103.7	21.2	B5		G5
BVH (80°-90°)	396.9	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°	6541.5	6541.5	6541.5	6541.5	6541.5	6541.5	6541.5	6541.5	6541.5	6541.5	6541.5
2.5°	6561.0	6507.3	6518.3	6570.8	6474.4	6526.8	6487.8	6551.3	6535.4	6540.3	6570.8
5°	6506.1	6451.2	6471.9	6536.6	6446.3	6509.8	6480.5	6532.9	6528.1	6546.4	6565.9
7.5°	6456.1	6397.5	6424.3	6471.9	6423.1	6478.0	6462.2	6528.1	6525.6	6579.3	6592.7
10°	6399.9	6346.2	6369.4	6428.0	6387.7	6453.6	6467.0	6545.2	6570.8	6644.0	6650.1
12.5°	6301.1	6248.6	6259.6	6334.0	6340.1	6440.2	6486.6	6609.8	6636.7	6720.9	6724.6
15°	5947.1	5934.9	6038.7	6158.3	6207.1	6356.0	6511.0	6679.4	6719.7	6825.8	6836.8
17.5°	4951.3	4829.2	4646.2	4791.4	5111.1	5522.4	6452.4	6783.1	6857.6	6963.8	6996.7
20°	3320.8	3431.8	3845.6	4031.1	4315.4	5008.6	6437.8	6895.4	7056.5	7184.7	7246.9
22.5°	2743.5	2737.4	3232.9	3857.8	4081.1	4399.6	5917.9	7028.4	7295.7	7462.9	7541.0
25°	2548.3	2550.7	2641.0	3430.6	3983.5	4320.3	5435.8	6853.9	7558.1	7797.3	7890.1
27.5°	2393.3	2403.0	2479.9	2747.2	3900.5	4303.2	5449.2	6354.8	7835.1	8154.9	8262.3
30°	2270.0	2265.1	2357.9	2581.2	3246.3	4309.3	5512.7	6454.8	7577.6	8662.6	8722.4
32.5°	2167.5	2154.1	2248.0	2472.6	2835.1	4261.7	5607.9	6735.5	7395.8	9150.8	9383.9
35°	2068.6	2063.7	2146.7	2367.6	2737.4	3539.2	5718.9	7083.4	7986.5	9166.6	10291.9
37.5°	1991.7	1988.1	2054.0	2262.7	2649.5	3224.4	5810.5	7521.5	8755.3	9844.0	11043.6
40°	1929.5	1919.7	1972.2	2169.9	2549.5	3171.9	5061.1	7979.2	9693.9	11424.4	12864.5
42.5°	1877.0	1863.6	1914.9	2078.4	2453.1	3113.3	4699.9	8440.5	10797.1	13184.3	14635.4
45°	1805.0	1803.8	1856.3	2008.8	2350.5	3027.9	4734.0	7670.4	12037.1	14868.5	16495.3
47.5°	1768.4	1759.9	1798.9	1944.1	2254.1	2898.5	4701.1	7340.9	12986.6	16558.8	18307.6
50°	1711.0	1703.7	1741.5	1869.7	2158.9	2735.0	4581.5	7543.5	12204.3	18160.0	20011.3
52.5°	1608.5	1324.2	1685.4	1807.5	2056.4	2558.0	4354.5	7655.7	12508.2	19644.0	21597.9
55°	632.2	848.2	1613.4	1729.3	1951.5	2392.0	4010.3	7624.0	13513.8	20973.0	22964.8
57.5°	550.4	552.9	1071.5	1443.8	1827.0	2218.7	3590.5	7443.4	14401.0	22110.5	24296.3
60°	78.1	79.3	543.1	607.8	1198.5	1576.8	3163.3	7120.0	14927.0	23247.9	25444.7
62.5°	52.5	54.9	494.3	551.6	1093.5	1398.6	2766.7	6545.2	15180.9	23938.7	26272.1
65°	37.8	39.1	447.9	499.2	973.9	1241.2	2398.1	5920.3	15204.1	24098.6	26726.1
67.5°	35.4	36.6	412.5	460.1	886.0	1102.0	2079.6	5369.9	14563.4	24146.1	26707.8
70°	36.6	36.6	375.9	416.2	786.0	955.6	1725.7	4821.9	12947.5	23523.7	26107.4
72.5°	36.6	37.8	328.3	366.1	677.3	809.1	1414.5	3920.0	10485.9	21761.4	24657.5
75°	36.6	37.8	258.7	302.7	562.6	649.3	1160.6	3160.9	8075.6	18365.0	21573.5
77.5°	37.8	37.8	190.4	231.9	434.5	488.2	881.1	2428.6	5950.8	12730.3	15019.8
80°	37.8	40.3	134.2	170.9	321.0	352.7	639.5	1549.9	3204.8	6456.1	7456.8
82.5°	39.1	40.3	100.1	128.1	222.1	253.8	390.5	762.8	1481.6	2987.6	3384.2
85°	36.6	37.8	81.8	89.1	126.9	152.6	242.9	378.3	521.1	1175.3	1221.6
87.5°	25.6	24.4	25.6	29.3	41.5	67.1	114.7	128.1	125.7	316.1	367.3
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°	6541.5	6541.5	6541.5	6541.5	6541.5	6541.5	6541.5	6541.5	6541.5	6541.5	6541.5
2.5°	6552.5	6554.9	6545.2	6583.0	6545.2	6565.9	6511.0	6596.4	6587.9	6564.7	6594.0
5°	6551.3	6557.4	6554.9	6589.1	6541.5	6558.6	6503.7	6594.0	6563.5	6542.7	6578.1
7.5°	6580.5	6589.1	6585.4	6608.6	6553.7	6552.5	6498.8	6565.9	6536.6	6492.7	6536.6
10°	6645.2	6645.2	6634.2	6647.7	6568.3	6559.8	6469.5	6546.4	6496.3	6457.3	6511.0
12.5°	6728.2	6735.5	6707.5	6705.0	6595.2	6569.6	6456.1	6493.9	6421.9	6385.3	6437.8
15°	6850.3	6855.1	6818.5	6795.3	6661.1	6605.0	6421.9	6414.6	6314.5	6279.1	6316.9
17.5°	6991.8	6990.6	6939.3	6929.6	6772.1	6641.6	6393.8	6318.2	6190.0	6149.7	6182.7
20°	7218.8	7205.4	7149.3	7093.1	6863.7	6664.8	6353.5	6194.9	6016.7	5959.3	5986.2
22.5°	7523.9	7519.1	7431.2	7268.9	6961.3	6686.7	6285.2	6044.8	5808.0	5704.3	5721.4
25°	7858.3	7854.7	7729.0	7486.1	7046.7	6702.6	6205.9	5876.4	5556.6	5399.2	5395.5
27.5°	8246.4	8236.7	8067.0	7720.4	7165.1	6707.5	6120.4	5698.2	5307.6	5111.1	5119.7
30°	8718.7	8701.6	8469.8	7980.4	7315.2	6722.1	6047.2	5498.0	5075.8	4867.1	4862.2
32.5°	9344.8	9320.4	8960.4	8322.1	7509.3	6758.7	5959.3	5300.3	4859.7	4649.8	4631.5
35°	10298.0	10247.9	9652.4	8759.0	7725.3	6783.1	5819.0	5112.4	4651.0	4453.3	4438.7
37.5°	11708.8	11624.6	10523.7	9217.9	7940.1	6778.3	5659.1	4909.8	4481.4	4289.8	4286.1
40°	13568.7	13436.9	11569.6	9709.7	8146.4	6751.4	5487.0	4729.2	4339.8	4175.1	4187.3
42.5°	15603.2	15464.0	12809.6	10210.1	8301.3	6668.4	5302.8	4558.3	4209.3	4077.4	4078.7
45°	17653.5	17524.1	14236.3	10681.2	8378.2	6512.2	5111.1	4396.0	4071.3	3956.6	3970.0
47.5°	19695.3	19600.1	15649.5	11079.0	8340.4	6266.9	4880.5	4242.2	3934.7	3840.7	3871.2
50°	21594.2	21492.9	17155.5	11408.6	8150.0	5925.2	4643.7	4090.9	3823.6	3741.8	3767.5
52.5°	23354.1	23218.6	18768.9	11598.9	7807.1	5565.1	4435.0	3957.8	3716.2	3634.4	3661.3
55°	24849.1	24843.0	20245.7	11614.8	7271.3	5196.6	4233.7	3804.1	3611.2	3544.1	3550.2
57.5°	26248.9	26303.9	21516.1	11422.0	6636.7	4854.9	4003.0	3645.4	3490.4	3420.9	3427.0
60°	27318.0	27386.4	22377.8	10860.6	5960.6	4477.7	3755.3	3477.0	3340.3	3274.4	3293.9
62.5°	28085.7	27997.8	22834.2	10055.1	5283.2	4072.6	3486.8	3262.2	3153.6	3113.3	3114.5
65°	28345.6	28317.6	22566.9	9062.9	4643.7	3673.5	3169.4	2994.9	2927.8	2899.7	2920.5
67.5°	28079.6	28096.7	21525.9	8219.6	4036.0	3223.1	2813.1	2700.8	2666.6	2665.4	2687.4
70°	27351.0	27216.7	19367.0	7545.9	3466.0	2722.8	2429.9	2376.2	2365.2	2392.0	2410.3
72.5°	25447.1	25251.9	16060.8	6473.1	2660.5	2002.7	1840.4	1913.6	1911.2	1925.8	1942.9
75°	21800.5	21286.7	12580.2	5153.9	1971.0	1416.9	1227.7	1225.3	1221.6	1346.1	1391.3
77.5°	15279.7	14936.8	9287.5	3924.9	1310.7	848.2	842.1	908.0	919.0	837.2	853.1
80°	7665.5	7815.6	5360.1	2425.0	871.4	598.0	627.3	617.5	626.1	635.8	641.9
82.5°	3533.1	3608.8	2565.3	1181.4	561.4	454.0	429.6	467.4	484.5	483.3	479.6
85°	1253.4	1260.7	811.6	506.5	344.2	295.3	300.2	349.0	368.6	351.5	342.9
87.5°	363.7	345.4	166.0	150.1	158.7	157.4	162.3	172.1	185.5	183.1	169.6
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)