

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: P454796

Luminaire Tested: **GALN-SA5D-830-U-T3R**

Issue Date: 1/4/2021

Test Information

Test Method: LM-79-08
Report Number: P454796
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-8)
Test Lab: INNOVATION CENTER
Issue Date: 1/4/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GALN-SA5D-830-U-T3R
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(5) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 31503 lumens
Efficiency: N/A
Efficacy: 102.0 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B3 - U0 - G4

Input Watts (W): 309
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: 24 FT

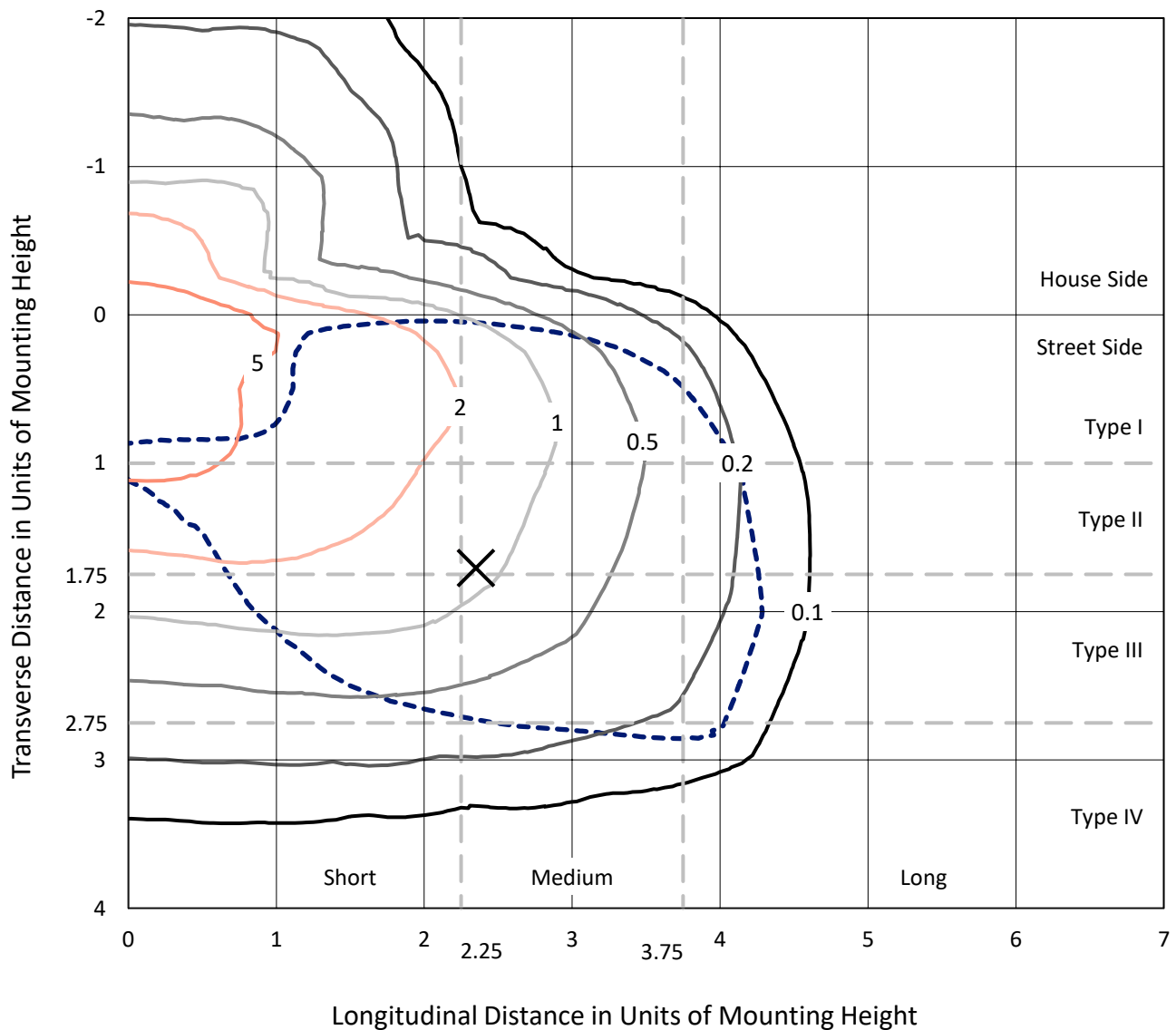


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

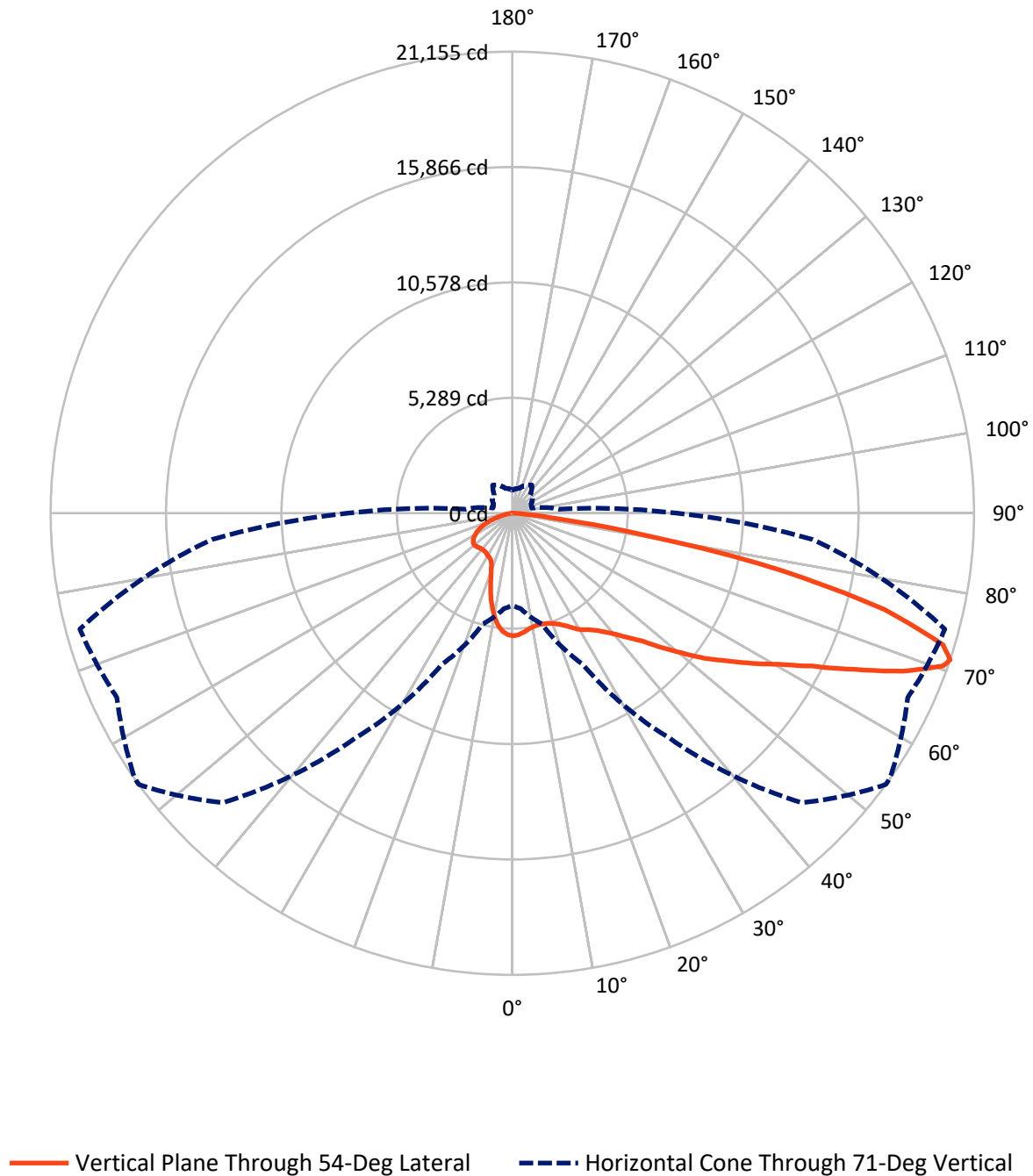


Based on 25 foot mounting height. Maximum calculated value = 9.1 fc
 Type IV - Medium - N/A

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Luminous Intensity Polar Plot



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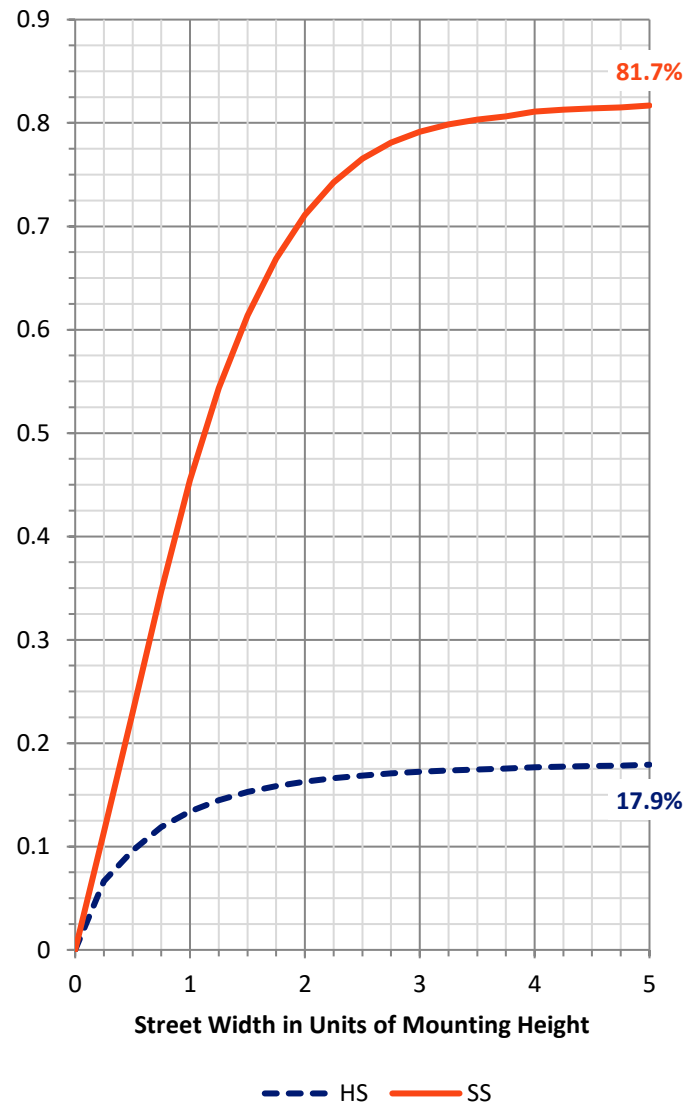
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5687.7	0.0	5687.7
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	25815.3	0.0	25815.3
	% Fixture	81.9	0.0	81.9
Total	Lumens	31503.0	0.0	31503.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	500.9	1.6
10°-20°	1322.6	4.2
20°-30°	2202.1	7.0
30°-40°	3256.2	10.3
40°-50°	4586.5	14.6
50°-60°	6141.6	19.5
60°-70°	7741.0	24.6
70°-80°	5287.1	16.8
80°-90°	465.0	1.5
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°	31503.0	100.0
0°-180°	31503.0	100.0

Coefficient of Utilization



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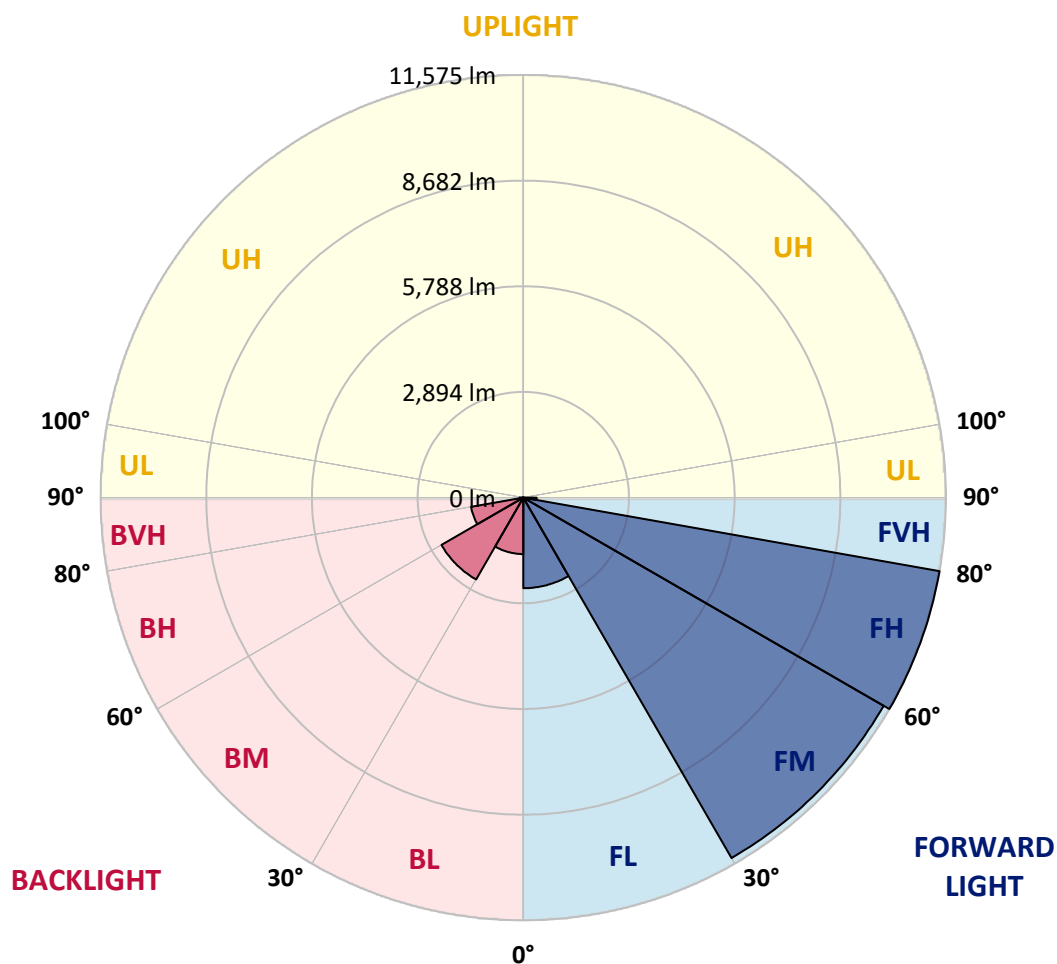
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2479.8	7.9			
FM	(30°-60°)	11396.6	36.2			
FH	(60°-80°)	11575.4	36.7			G4/12000
FVH	(80°-90°)	363.4	1.2			G3/500
BL	(0°-30°)	1545.8	4.9	B3/2500		
BM	(30°-60°)	2587.7	8.2	B3/5000		
BH	(60°-80°)	1452.6	4.6	B3/2500		G3/2500
BVH	(80°-90°)	101.5	0.3			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type IV Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	54°	55°	65°	75°	85°
0°	5620.6	5620.6	5620.6	5620.6	5620.6	5620.6	5620.6	5620.6	5620.6	5620.6	5620.6
2.5°	5430.0	5455.5	5462.3	5479.4	5515.1	5544.0	5573.0	5569.6	5610.4	5627.4	5642.7
5°	5188.4	5195.2	5220.7	5254.7	5317.7	5397.7	5476.0	5477.7	5578.1	5658.0	5697.2
7.5°	5011.4	5033.5	5050.5	5086.3	5152.6	5239.4	5363.7	5373.9	5552.5	5710.8	5794.2
10°	4895.7	4921.2	4939.9	4984.2	5050.5	5147.5	5282.0	5300.7	5533.8	5794.2	5940.5
12.5°	4790.2	4815.7	4832.7	4890.6	4977.4	5096.5	5247.9	5270.1	5540.6	5891.2	6100.5
15°	4854.9	4875.3	4868.5	4885.5	4943.3	5079.5	5261.6	5283.7	5566.1	5984.8	6258.7
17.5°	5142.4	5159.5	5103.3	5038.6	5011.4	5111.8	5304.1	5327.9	5617.2	6081.8	6420.4
20°	5566.1	5612.1	5489.6	5344.9	5213.9	5227.5	5392.6	5418.1	5688.7	6178.7	6585.4
22.5°	6117.5	6151.5	6001.8	5763.5	5521.9	5397.7	5525.3	5540.6	5795.9	6304.7	6765.8
25°	6765.8	6786.2	6578.6	6272.3	5923.5	5688.7	5707.4	5734.6	5972.8	6447.6	6925.8
27.5°	7395.4	7460.1	7220.2	6845.8	6386.4	5995.0	5957.5	5974.5	6165.1	6527.6	7036.4
30°	8142.5	8137.4	7883.8	7449.9	6861.1	6328.5	6194.1	6190.7	6268.9	6566.7	7116.4
32.5°	8738.1	8807.8	8559.4	8086.3	7403.9	6673.9	6357.4	6350.6	6348.9	6634.8	7235.5
35°	9415.3	9425.5	9197.5	8721.0	7991.0	7107.9	6585.4	6551.4	6512.3	6781.1	7397.1
37.5°	10021.1	10068.8	9859.5	9325.1	8567.9	7558.8	6898.6	6876.4	6757.3	7034.7	7655.8
40°	10494.2	10529.9	10404.0	9895.2	9136.2	8045.5	7296.7	7255.9	7111.3	7449.9	8001.2
42.5°	10649.0	10722.2	10771.5	10521.4	9789.7	8622.3	7786.8	7735.8	7625.2	8079.5	8399.4
45°	10660.9	10776.6	11037.0	11048.9	10446.5	9313.2	8358.6	8322.8	8314.3	8886.1	8959.3
47.5°	10570.7	10688.2	11125.5	11362.0	11031.9	10010.9	9183.9	9127.7	9132.8	9883.3	9587.2
50°	10352.9	10492.5	11023.4	11562.8	11489.6	10735.8	10055.1	10036.4	10141.9	11021.7	10238.9
52.5°	9942.8	10111.3	10917.9	11688.7	11830.0	11360.3	11045.5	10992.8	11259.9	12257.1	10951.9
55°	8807.8	9061.4	10531.6	11758.5	12153.3	11957.6	11937.2	12032.5	12386.4	13604.8	11736.4
57.5°	8215.6	8406.2	9692.7	11770.4	12561.7	12651.9	12978.6	13002.4	13621.8	15035.9	12623.0
60°	7892.3	8060.8	9233.2	11692.1	13131.8	13511.2	14043.8	14128.9	14828.3	16586.1	13541.9
62.5°	7609.8	7754.5	8957.6	11421.6	13775.0	14785.8	15423.9	15464.7	16198.2	18298.0	14448.8
65°	6944.5	7109.6	8402.8	11151.0	14329.7	16378.5	17254.9	17207.2	17656.5	19775.1	15017.2
67.5°	6047.7	6257.0	7366.5	10216.8	14603.7	18119.3	19317.3	19257.8	19096.1	20743.3	15180.6
70°	4902.5	5014.8	6040.9	8601.9	13509.5	19033.1	20945.8	20882.8	19987.8	20870.9	14408.0
71°	4218.4	4393.7	5259.8	7640.5	12599.1	18754.1	21155.1	21138.1	19989.5	20518.7	13826.0
72.5°	3292.7	3399.9	4165.7	5920.1	10708.6	17168.1	20637.8	20702.5	19555.5	19540.2	12626.4
75°	2082.8	2130.5	2613.8	3485.0	5875.9	12158.4	17617.3	17792.6	17363.8	15994.0	9389.8
77.5°	1209.9	1271.1	1565.5	2053.9	2538.9	6599.1	12605.9	12796.5	12064.8	8806.1	3844.1
80°	704.5	772.6	1031.2	1192.9	1165.6	2448.7	6418.7	6743.7	5224.1	2224.1	1078.9
82.5°	391.4	437.3	724.9	726.6	621.1	799.8	2019.9	2113.5	1490.7	896.8	440.7
85°	284.2	321.6	468.0	423.7	297.8	343.7	702.8	736.8	602.4	377.8	142.9
87.5°	100.4	142.9	257.0	204.2	81.7	71.5	202.5	165.1	153.1	105.5	32.3
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5620.6	5620.6	5620.6	5620.6	5620.6	5620.6	5620.6	5620.6	5620.6	5620.6	5620.6
2.5°	5651.2	5654.6	5637.6	5607.0	5576.4	5537.2	5493.0	5458.9	5443.6	5441.9	5440.2
5°	5712.5	5721.0	5656.3	5561.0	5455.5	5326.2	5215.6	5089.7	5057.4	5006.3	5021.6
7.5°	5811.2	5806.1	5678.5	5476.0	5229.2	4955.3	4723.8	4589.4	4449.9	4410.7	4412.4
10°	5952.4	5920.1	5678.5	5302.4	4890.6	4483.9	4160.6	3956.4	3845.8	3753.9	3719.8
12.5°	6102.2	6020.5	5624.0	5059.1	4455.0	3956.4	3609.2	3333.6	3262.1	3187.2	3188.9
15°	6245.1	6109.0	5516.8	4717.0	3985.3	3393.1	3056.2	2891.1	2869.0	2877.5	2875.8
17.5°	6374.4	6171.9	5353.4	4335.8	3437.4	2909.8	2731.2	2743.1	2802.6	2845.2	2850.3
20°	6505.5	6209.4	5110.1	3825.3	2920.1	2617.2	2624.0	2717.6	2807.7	2865.6	2874.1
22.5°	6629.7	6226.4	4824.2	3331.9	2545.7	2492.9	2593.3	2693.7	2782.2	2838.4	2846.9
25°	6711.4	6187.3	4419.2	2816.3	2361.9	2448.7	2554.2	2639.3	2714.2	2772.0	2785.6
27.5°	6733.5	6061.3	3917.2	2399.3	2276.8	2406.2	2503.2	2566.1	2624.0	2678.4	2688.6
30°	6721.6	5875.9	3365.9	2154.3	2227.5	2356.8	2431.7	2477.6	2547.4	2589.9	2598.4
32.5°	6702.9	5659.7	2790.7	2023.3	2186.6	2310.9	2355.1	2395.9	2394.2	2377.2	2389.1
35°	6709.7	5401.1	2324.5	1945.0	2150.9	2276.8	2314.3	2263.2	2116.9	2110.1	2103.3
37.5°	6745.4	5145.8	1985.8	1890.6	2132.2	2271.7	2292.1	2057.3	1928.0	1868.4	1853.1
40°	6837.3	4848.0	1762.9	1849.7	2130.5	2310.9	2191.7	1953.5	1705.1	1589.4	1580.8
42.5°	6959.8	4555.4	1626.8	1824.2	2150.9	2370.4	2150.9	1807.2	1536.6	1468.5	1458.3
45°	7141.9	4220.1	1551.9	1812.3	2181.5	2392.5	2137.3	1700.0	1468.5	1414.1	1414.1
47.5°	7347.8	3900.2	1511.1	1803.8	2220.7	2377.2	2016.5	1665.9	1436.2	1443.0	1475.3
50°	7552.0	3622.8	1480.4	1785.0	2254.7	2368.7	1967.1	1664.2	1444.7	1531.5	1589.4
52.5°	7788.5	3427.2	1443.0	1754.4	2254.7	2314.3	1951.8	1698.3	1468.5	1494.1	1519.6
55°	8074.4	3365.9	1395.4	1688.1	2213.9	2178.1	1943.3	1747.6	1485.6	1426.0	1436.2
57.5°	8452.2	3464.6	1349.4	1604.7	2120.3	2036.9	1939.9	1761.2	1446.4	1397.1	1386.9
60°	8891.2	3660.3	1335.8	1519.6	1992.7	1916.1	1919.5	1722.1	1392.0	1340.9	1349.4
62.5°	9199.2	3777.7	1327.3	1454.9	1853.1	1783.3	1870.1	1674.4	1368.1	1323.9	1332.4
65°	9199.2	3634.8	1249.0	1356.2	1672.7	1623.4	1810.6	1614.9	1337.5	1286.5	1278.0
67.5°	8850.4	3217.8	1129.9	1208.2	1473.6	1441.3	1727.2	1543.4	1291.6	1252.4	1232.0
70°	7941.7	2440.2	980.2	1034.6	1221.8	1250.7	1620.0	1446.4	1215.0	1167.3	1136.7
71°	7541.8	2125.4	917.2	946.1	1124.8	1167.3	1568.9	1405.6	1181.0	1112.9	1058.4
72.5°	6770.9	1790.2	821.9	833.8	961.4	1038.0	1461.7	1327.3	1116.3	1019.3	958.0
75°	5144.1	1306.9	661.9	655.1	711.3	823.6	1237.1	1182.7	978.5	847.4	811.7
77.5°	2222.4	711.3	495.2	500.3	483.3	624.5	973.4	1015.9	838.9	689.2	656.8
80°	673.9	410.1	338.6	345.4	323.3	418.6	685.8	796.4	673.9	536.0	491.8
82.5°	345.4	245.0	231.4	228.0	205.9	236.5	415.2	544.5	481.6	335.2	296.1
85°	149.7	131.0	114.0	110.6	97.0	85.1	148.0	272.3	255.2	187.2	178.7
87.5°	37.4	34.0	22.1	20.4	11.9	1.7	0.0	0.0	0.0	0.0	0.0
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)