

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: P453159

Luminaire Tested: **GALN-SA4A-830-U-SL4**

Issue Date: 1/4/2021

Test Information

Test Method: LM-79-08
Report Number: P453159
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-18)
Test Lab: INNOVATION CENTER
Issue Date: 1/4/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GALN-SA4A-830-U-SL4
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(4) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14072 lumens
Efficiency: N/A
Efficacy: 116.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

Input Watts (W): 121
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

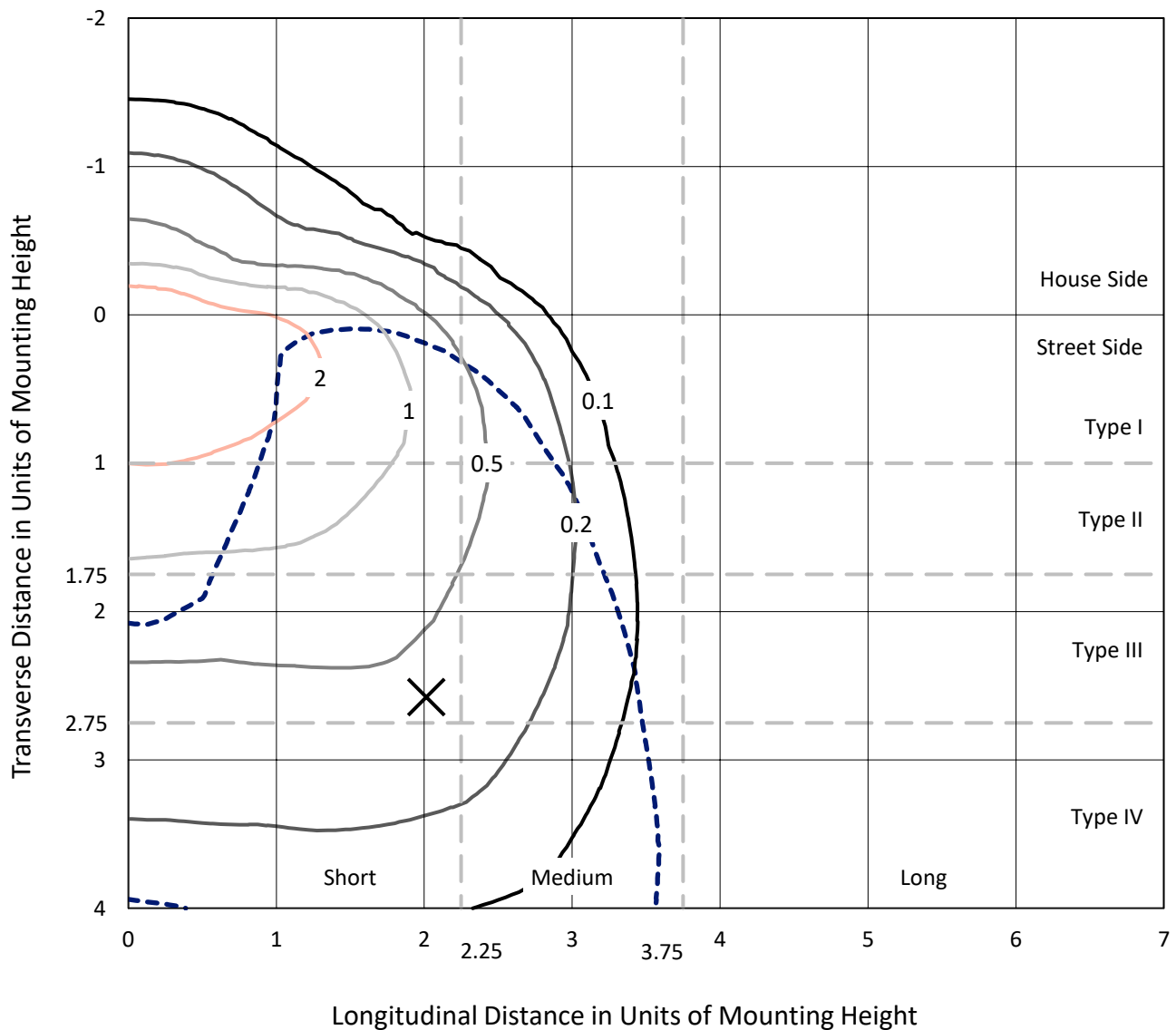


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
- - - 1/2 Max cd

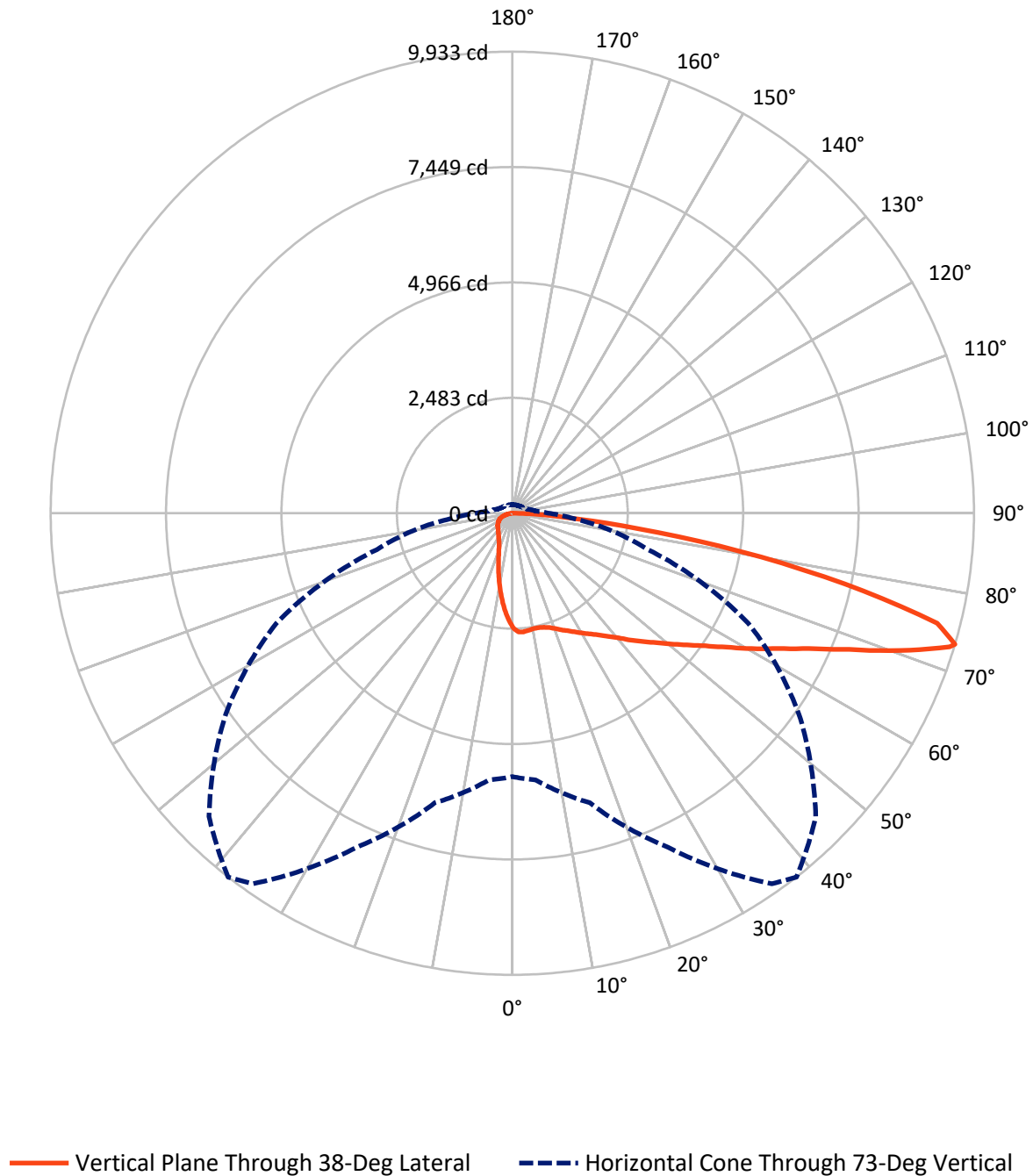


Based on 25 foot mounting height. Maximum calculated value = 4 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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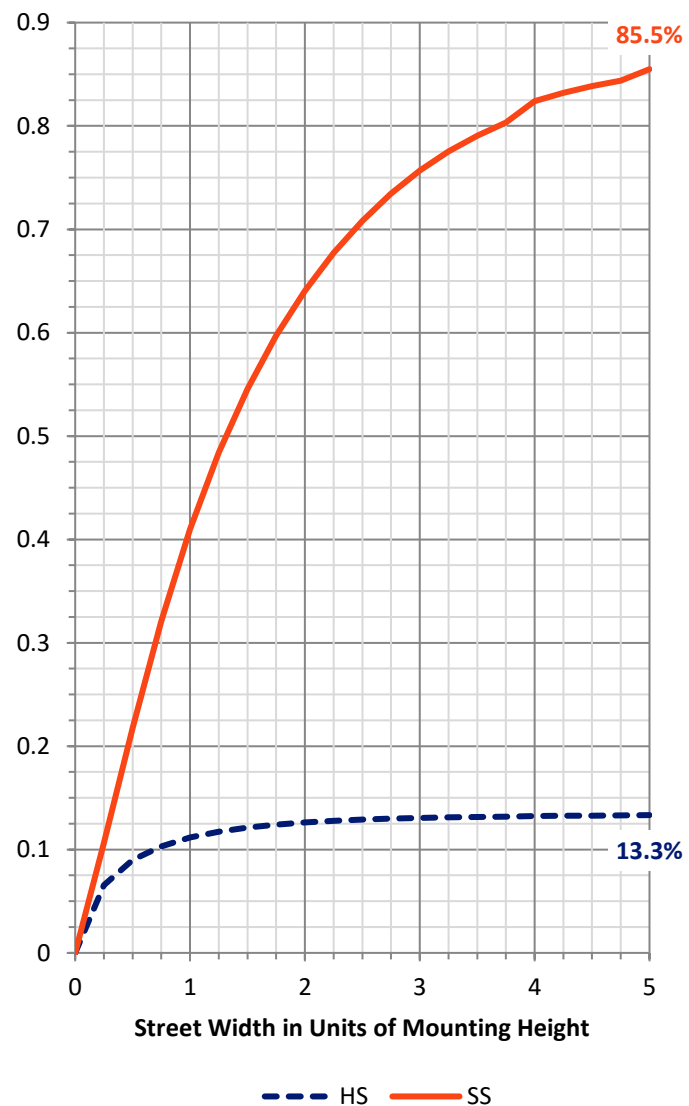
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1891.7	0.0	1891.7
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	12180.3	0.0	12180.3
	% Fixture	86.6	0.0	86.6
Total	Lumens	14072.0	0.0	14072.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	215.8	1.5
10°-20°	553.4	3.9
20°-30°	861.7	6.1
30°-40°	1263.9	9.0
40°-50°	1874.9	13.3
50°-60°	2656.4	18.9
60°-70°	3369.7	23.9
70°-80°	2805.0	19.9
80°-90°	471.3	3.3
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°	14072.0	100.0
0°-180°	14072.0	100.0

Coefficient of Utilization



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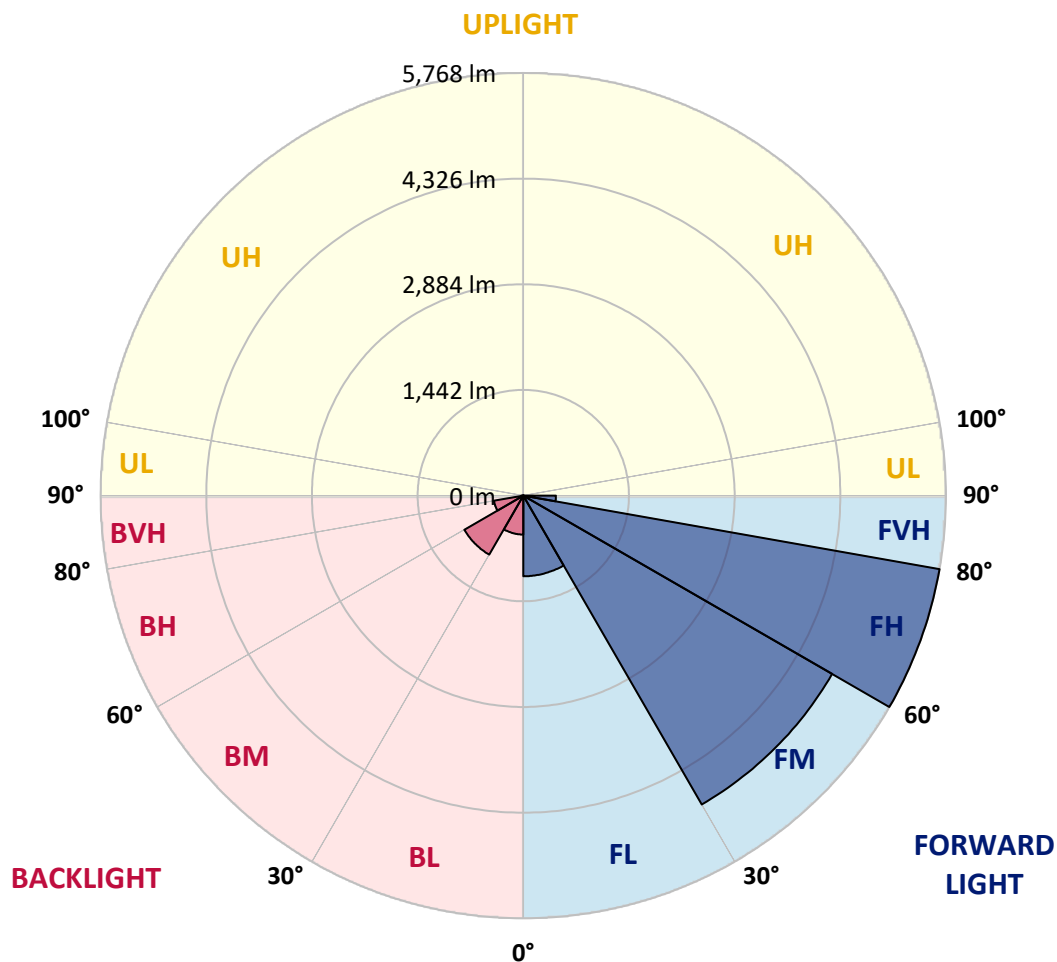
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1100.1	7.8			
FM	(30°-60°)	4866.5	34.6			
FH	(60°-80°)	5768.1	41.0			G3/7500
FVH	(80°-90°)	445.7	3.2			G3/500
BL	(0°-30°)	530.8	3.8	B2/1000		
BM	(30°-60°)	928.7	6.6	B1/1000		
BH	(60°-80°)	406.6	2.9	B1/500		G1/500
BVH	(80°-90°)	25.6	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
0°	2472.2	2472.2	2472.2	2472.2	2472.2	2472.2	2472.2	2472.2	2472.2	2472.2	2472.2
2.5°	2571.5	2584.3	2577.9	2569.2	2563.6	2558.0	2550.1	2527.0	2508.8	2488.9	2457.9
5°	2590.6	2598.6	2593.0	2581.9	2569.2	2563.6	2548.5	2518.3	2488.9	2455.5	2409.4
7.5°	2579.5	2582.7	2576.3	2562.8	2551.7	2541.3	2523.9	2490.5	2454.7	2414.2	2353.8
10°	2539.8	2551.7	2551.7	2540.6	2529.4	2523.9	2506.4	2474.6	2442.0	2395.9	2324.4
12.5°	2507.2	2519.9	2530.2	2527.0	2526.2	2526.2	2512.7	2488.9	2450.8	2407.0	2322.0
15°	2484.9	2500.0	2522.3	2535.0	2542.9	2545.3	2539.8	2519.1	2480.2	2429.3	2331.6
17.5°	2480.2	2498.4	2539.0	2566.8	2587.4	2586.6	2585.1	2556.4	2513.5	2461.1	2343.5
20°	2501.6	2525.5	2581.9	2625.6	2655.8	2650.2	2641.5	2604.1	2554.1	2495.3	2354.6
22.5°	2566.0	2590.6	2652.6	2700.3	2729.7	2729.7	2703.5	2654.2	2600.9	2535.0	2369.7
25°	2658.2	2685.2	2751.1	2799.6	2813.1	2802.8	2776.6	2717.0	2655.8	2592.2	2401.5
27.5°	2771.0	2803.6	2864.8	2905.3	2901.3	2893.4	2866.4	2790.1	2728.9	2670.9	2455.5
30°	2911.7	2935.5	2999.1	3008.6	2994.3	2992.7	2954.6	2878.3	2821.1	2776.6	2532.6
32.5°	3044.4	3065.8	3116.7	3120.7	3095.2	3098.4	3062.7	2992.7	2960.1	2944.2	2662.1
35°	3185.0	3196.2	3239.9	3235.1	3218.4	3216.0	3201.7	3135.0	3145.3	3173.9	2845.7
37.5°	3302.6	3324.9	3349.5	3353.5	3352.7	3360.7	3370.2	3338.4	3398.0	3487.8	3086.5
40°	3410.7	3429.8	3466.3	3479.1	3510.0	3525.9	3558.5	3559.3	3696.8	3844.6	3382.9
42.5°	3483.8	3516.4	3584.7	3607.8	3683.3	3731.0	3779.4	3831.1	4030.6	4220.5	3732.6
45°	3547.4	3590.3	3703.9	3775.5	3878.0	3936.0	4038.5	4146.6	4433.5	4682.2	4087.8
47.5°	3643.6	3681.7	3812.0	3938.4	4093.3	4160.1	4313.5	4474.8	4849.9	5122.4	4427.9
50°	3777.1	3800.1	3932.8	4138.6	4336.5	4422.3	4625.0	4857.8	5294.9	5557.1	4726.7
52.5°	3947.9	3957.4	4063.1	4337.3	4597.9	4704.4	4973.0	5244.8	5684.3	5934.6	4963.5
55°	4149.8	4133.9	4216.5	4547.9	4896.7	5035.8	5324.3	5636.6	6122.1	6239.7	5135.9
57.5°	4349.2	4324.6	4390.5	4803.8	5265.5	5433.1	5769.3	6040.3	6513.1	6525.0	5256.7
60°	4560.6	4542.3	4621.0	5104.2	5717.6	5916.3	6227.0	6459.1	6891.4	6723.7	5275.8
62.5°	4777.5	4748.1	4860.2	5441.9	6227.0	6407.4	6708.6	6904.1	7262.5	6797.6	5092.2
65°	4988.1	4974.6	5147.9	5843.2	6807.1	7012.1	7304.6	7437.3	7559.7	6686.3	4636.9
67.5°	5212.2	5239.2	5515.8	6378.8	7563.6	7821.1	8136.6	8011.8	7644.7	6159.5	3905.0
70°	5553.9	5571.4	5998.9	7080.5	8538.7	8849.4	9002.0	8216.1	7234.7	5159.0	2935.5
72.5°	5700.9	5778.0	6430.5	7817.1	9646.5	9836.4	9292.8	7760.7	6026.8	3504.5	1542.5
73°	5668.4	5760.5	6450.3	7929.2	9733.1	9932.6	9230.9	7526.3	5602.4	3018.1	1322.3
75°	5262.3	5375.9	6192.1	7835.4	9564.6	9445.4	8234.3	6414.6	3785.8	1372.4	602.4
77.5°	4152.1	4184.7	4906.3	6327.1	7531.9	7310.9	6162.6	4009.1	1546.4	510.2	341.7
80°	2082.8	2202.8	2765.4	3624.5	5036.6	4964.3	3889.9	1896.1	644.5	299.6	226.5
82.5°	1002.1	1087.1	1347.0	1767.3	2782.9	2717.0	1926.3	1036.2	409.3	174.8	133.5
85°	645.3	708.8	857.4	843.1	1144.3	1092.7	865.4	784.3	242.4	91.4	93.0
87.5°	425.9	466.5	559.4	447.4	416.4	376.7	382.2	441.8	47.7	35.0	12.7
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°	2472.2	2472.2	2472.2	2472.2	2472.2	2472.2	2472.2	2472.2	2472.2	2472.2	2472.2
2.5°	2445.2	2434.9	2400.7	2367.3	2335.5	2305.3	2285.5	2259.2	2241.8	2246.5	2253.7
5°	2384.0	2361.0	2300.6	2241.8	2186.1	2120.2	2066.9	2024.0	1991.4	1979.5	1977.1
7.5°	2319.6	2280.7	2194.1	2093.2	1998.6	1916.7	1822.2	1775.3	1720.5	1701.4	1695.0
10°	2280.7	2228.2	2106.7	1966.0	1823.8	1687.9	1585.4	1501.9	1426.4	1412.1	1405.0
12.5°	2269.6	2200.4	2036.7	1855.5	1666.4	1499.5	1347.8	1238.1	1165.0	1148.3	1123.7
15°	2263.2	2177.4	1971.6	1744.3	1504.3	1300.9	1141.1	1013.2	946.4	901.9	902.7
17.5°	2257.7	2151.2	1898.5	1622.7	1364.4	1130.0	953.6	838.4	777.2	753.3	751.0
20°	2249.7	2120.2	1814.2	1494.8	1204.7	974.3	814.5	728.7	687.4	667.5	666.7
22.5°	2246.5	2090.0	1731.6	1364.4	1063.3	854.3	722.4	662.0	635.7	622.2	622.2
25°	2254.5	2068.5	1645.0	1240.5	937.7	751.8	658.8	617.5	602.4	595.2	592.8
27.5°	2279.1	2059.0	1559.1	1116.5	822.5	681.8	615.9	587.3	576.1	570.6	571.4
30°	2326.0	2058.2	1474.9	994.1	736.7	628.6	581.7	561.8	553.1	549.9	549.1
32.5°	2401.5	2075.7	1392.3	893.2	664.3	584.1	549.9	535.6	531.6	529.2	528.5
35°	2529.4	2124.9	1310.4	801.0	608.7	544.3	519.7	512.6	507.0	509.4	510.2
37.5°	2701.9	2210.0	1232.5	728.7	566.6	514.9	494.3	487.9	484.7	487.1	489.5
40°	2933.1	2332.4	1167.4	670.7	536.4	490.3	472.0	466.5	463.3	467.3	468.1
42.5°	3188.2	2473.8	1113.3	625.4	511.8	469.6	452.2	445.8	443.4	445.8	446.6
45°	3450.4	2638.3	1085.5	592.8	491.1	454.6	436.3	429.1	423.6	422.0	424.4
47.5°	3708.7	2781.3	1084.7	573.0	474.4	441.0	421.2	413.2	406.1	402.1	401.3
50°	3919.3	2895.0	1103.8	564.2	460.1	425.9	406.1	398.1	388.6	380.6	382.2
52.5°	4078.2	2968.9	1112.5	560.2	452.2	410.0	390.2	383.0	371.9	361.6	361.6
55°	4180.7	2986.4	1091.1	556.3	445.8	393.4	371.9	365.5	354.4	344.1	344.1
57.5°	4215.7	2932.3	1014.0	546.7	439.5	379.1	353.6	348.1	339.3	329.0	327.4
60°	4134.7	2749.6	878.9	518.1	426.7	364.0	333.8	331.4	328.2	319.5	318.7
62.5°	3822.4	2361.8	731.9	480.8	405.3	348.1	315.5	319.5	321.8	317.1	316.3
65°	3302.6	1917.5	625.4	429.1	376.7	325.8	295.6	305.9	312.3	312.3	310.7
67.5°	2678.8	1472.5	526.9	384.6	340.9	295.6	273.4	281.3	286.1	284.5	288.5
70°	1904.0	997.3	429.1	333.8	295.6	261.4	244.8	244.8	241.6	240.0	240.0
72.5°	923.4	569.8	348.1	278.9	251.9	223.3	209.8	204.2	197.9	197.1	193.1
73°	771.6	511.0	332.2	268.6	241.6	217.7	202.6	193.9	189.9	186.7	186.0
75°	469.6	387.8	277.3	226.5	205.8	187.5	174.0	166.1	162.1	159.7	158.9
77.5°	309.1	289.3	215.4	173.2	157.3	146.2	140.7	132.7	130.3	127.1	127.1
80°	230.5	220.9	154.2	122.4	112.8	103.3	101.7	100.1	93.8	89.8	88.2
82.5°	148.6	157.3	104.9	81.9	71.5	63.6	64.4	66.8	60.4	54.8	53.2
85°	105.7	113.6	63.6	37.3	30.2	26.2	29.4	26.2	27.0	21.5	17.5
87.5°	17.5	30.2	11.1	4.8	2.4	1.6	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)