

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: LUMARK

Report Number: P963166

Luminaire Tested: **NAV-SB2D-835-U-SL4**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963166
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-9)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-835-U-SL4
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19178.8 lumens
Efficiency: N/A
Efficacy: 129.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B3 - U0 - G4

Input Watts (W): 147.6
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

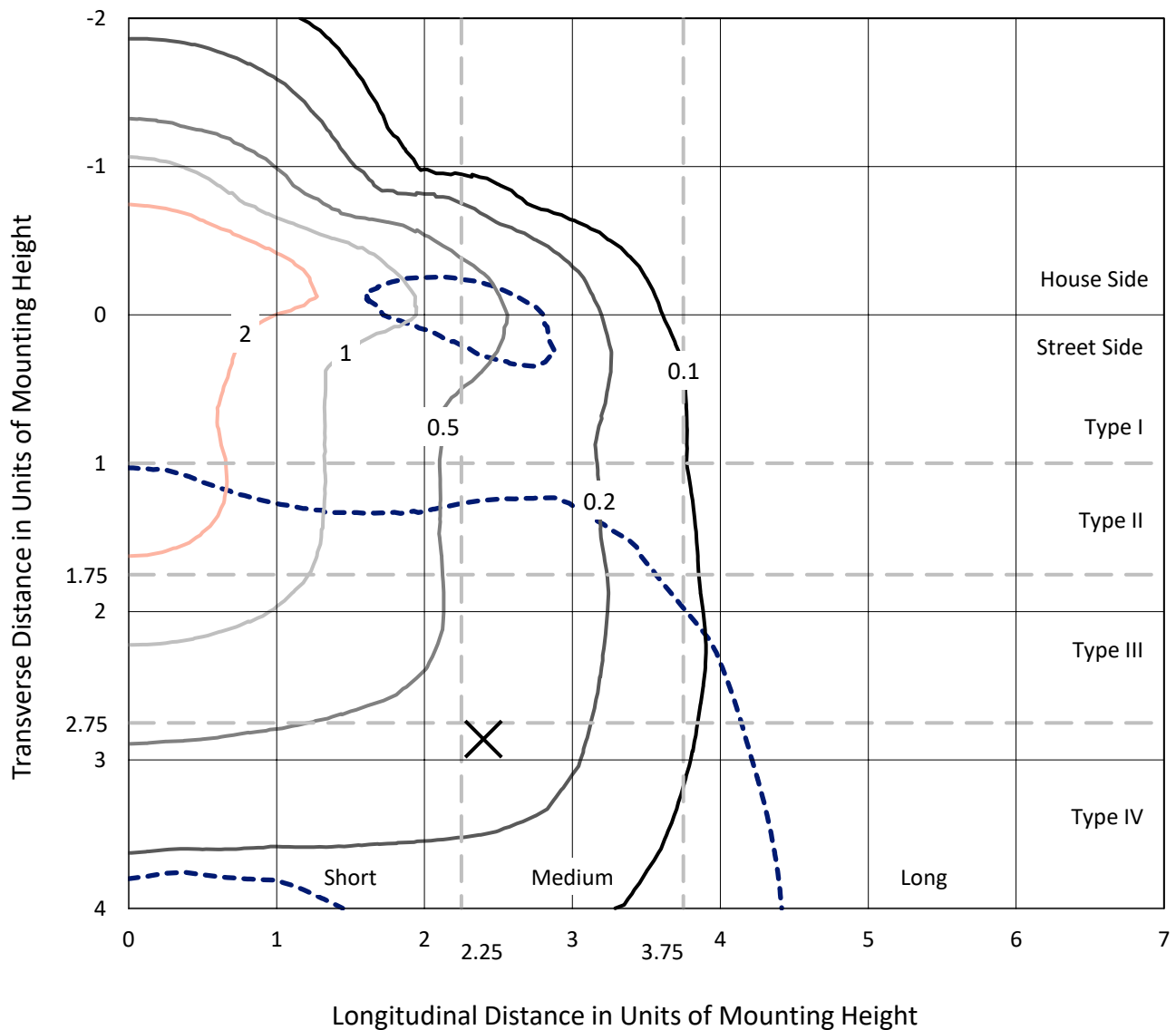


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Iso-Footcandle Lines of Horizontal Illumination

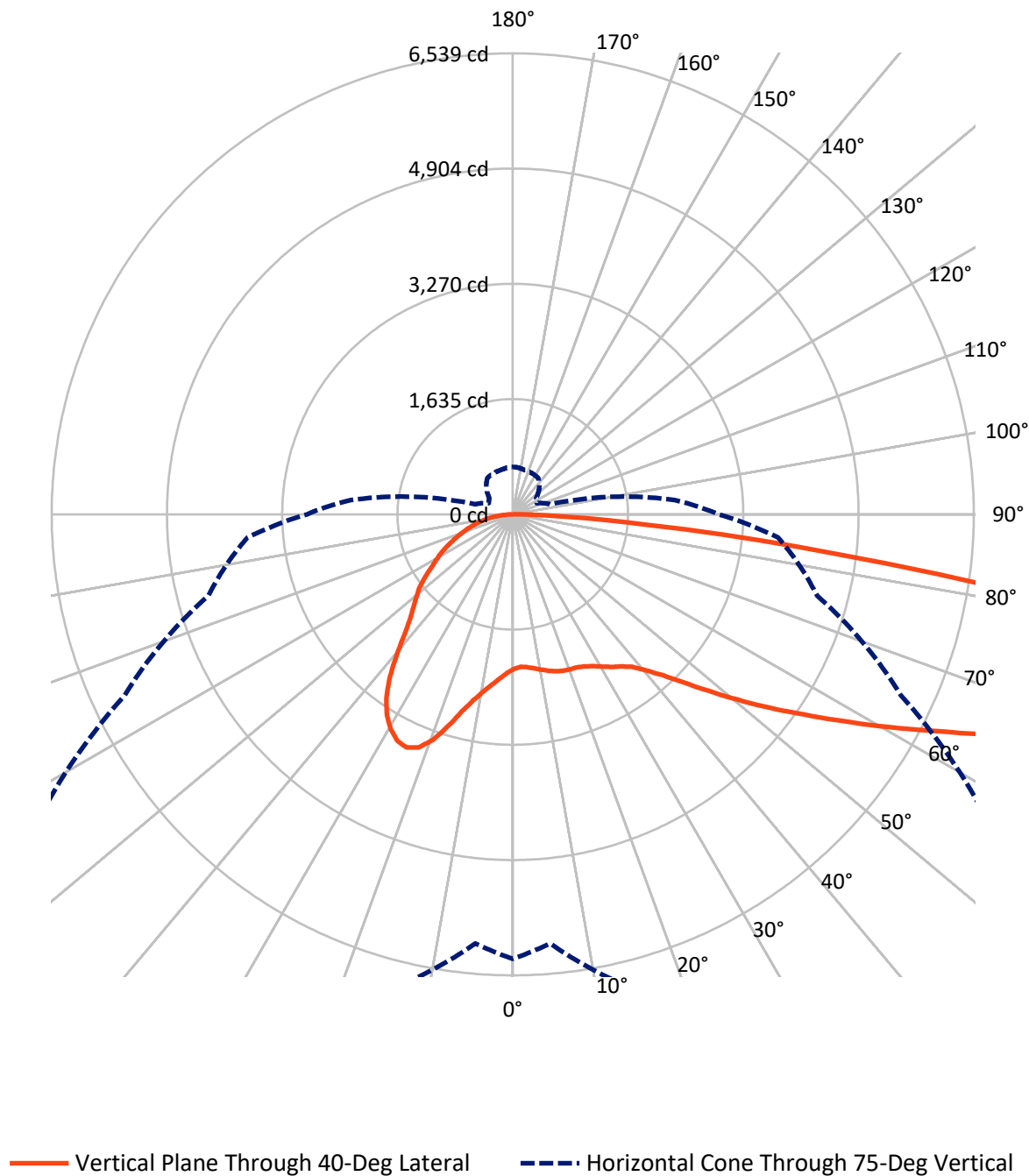
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.5 fc
Type IV - Medium - N/A

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Luminous Intensity Polar Plot



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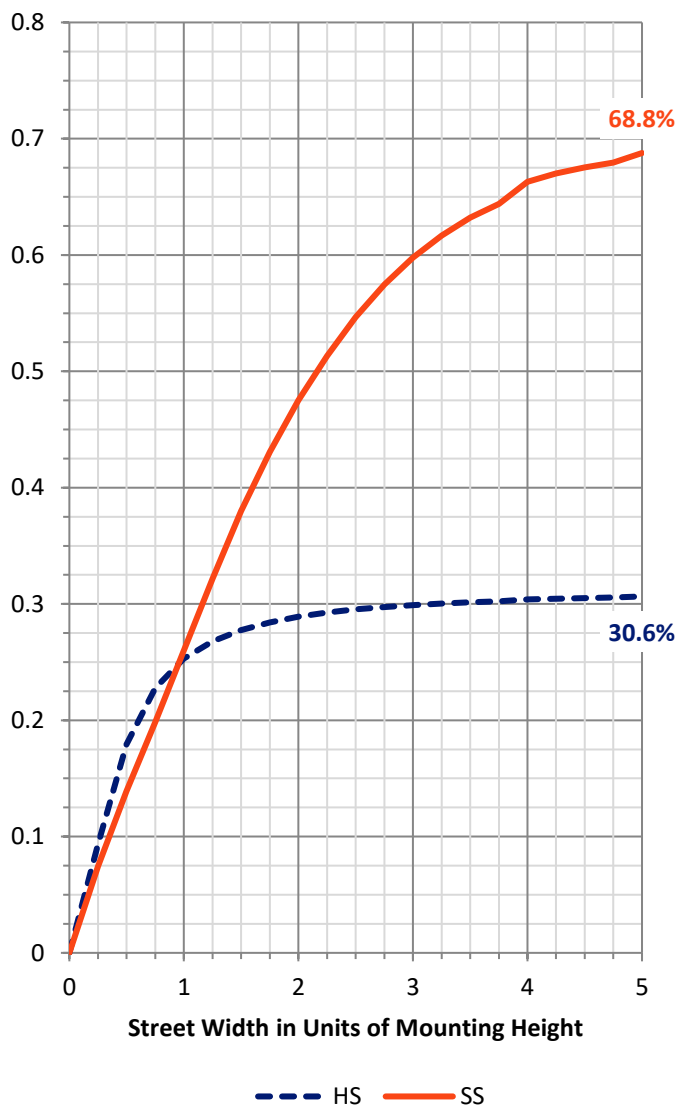
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5942.2	0.0	5942.2
	% Fixture	31.0	0.0	31.0
Street Side	Lumens	13236.6	0.0	13236.6
	% Fixture	69.0	0.0	69.0
Total	Lumens	19178.8	0.0	19178.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.9	1.1
10°-20°	735.0	3.8
20°-30°	1342.0	7.0
30°-40°	1903.4	9.9
40°-50°	2570.2	13.4
50°-60°	3457.5	18.0
60°-70°	4388.4	22.9
70°-80°	3982.8	20.8
80°-90°	580.6	3.0
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°	19178.8	100.0
0°-180°	19178.8	100.0

Coefficient of Utilization



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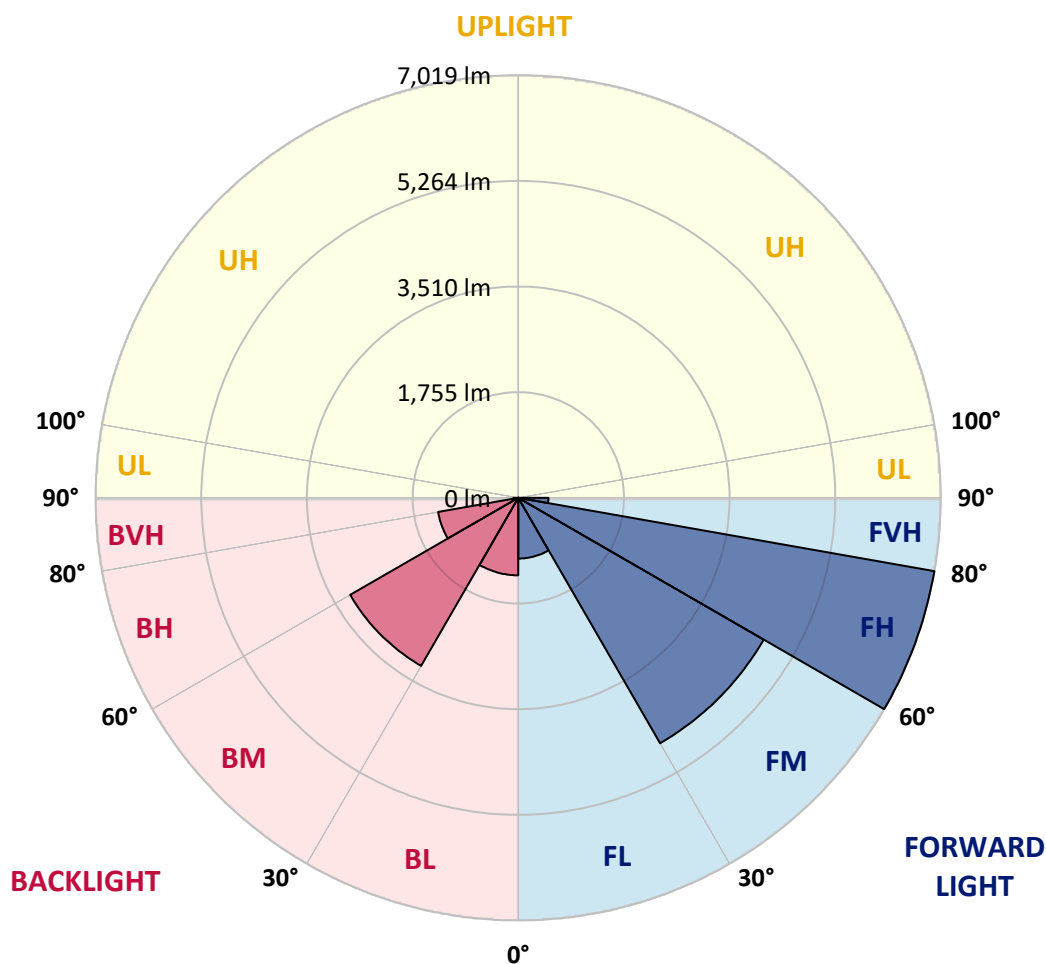
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1008.8	5.3			
FM	(30°-60°)	4708.0	24.5			
FH	(60°-80°)	7019.1	36.6			G3/7500
FVH	(80°-90°)	500.6	2.6			G4/750
BL	(0°-30°)	1287.1	6.7	B3/2500		
BM	(30°-60°)	3223.1	16.8	B3/5000		
BH	(60°-80°)	1352.0	7.0	B3/2500		G3/2500
BVH	(80°-90°)	79.9	0.4			G1/100
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°	40°	45°	55°	65°	75°	85°
0°	2193.1	2193.1	2193.1	2193.1	2193.1	2193.1	2193.1	2193.1	2193.1	2193.1	2193.1
2.5°	2159.6	2171.8	2168.7	2164.6	2164.6	2165.6	2164.6	2171.8	2178.8	2186.0	2197.2
5°	2181.9	2194.1	2188.1	2182.9	2178.8	2177.8	2174.8	2173.8	2177.8	2187.0	2202.3
7.5°	2225.7	2237.9	2228.8	2219.5	2211.4	2207.3	2203.3	2197.2	2194.1	2199.2	2220.6
10°	2274.5	2286.7	2275.5	2259.2	2246.0	2241.0	2236.9	2230.7	2226.7	2229.8	2253.2
12.5°	2323.4	2335.6	2320.3	2297.8	2280.6	2277.5	2272.4	2270.5	2269.5	2268.4	2291.8
15°	2369.1	2379.2	2360.0	2333.5	2315.2	2310.1	2305.0	2308.1	2313.1	2319.3	2345.7
17.5°	2404.6	2414.9	2386.4	2351.8	2334.5	2332.5	2329.4	2339.6	2353.8	2369.1	2401.7
20°	2437.2	2447.4	2410.8	2364.1	2343.7	2343.7	2344.7	2366.0	2386.4	2408.8	2453.5
22.5°	2483.1	2491.2	2446.4	2382.3	2352.8	2354.8	2363.0	2384.4	2409.8	2440.3	2502.3
25°	2551.2	2557.3	2502.3	2417.0	2383.3	2389.5	2396.6	2406.7	2431.2	2466.8	2550.2
27.5°	2661.0	2666.1	2593.9	2477.9	2427.1	2437.2	2447.4	2440.3	2451.5	2482.0	2588.8
30°	2815.7	2818.7	2727.1	2573.6	2501.3	2506.4	2508.5	2479.0	2457.6	2482.0	2616.3
32.5°	2998.7	2997.7	2888.9	2689.5	2585.8	2580.6	2563.4	2505.4	2455.6	2476.9	2640.7
35°	3282.6	3271.4	3131.0	2852.3	2681.4	2649.8	2609.1	2534.9	2465.7	2471.8	2662.0
37.5°	3752.5	3717.9	3523.6	3118.8	2823.8	2743.4	2683.4	2582.7	2488.1	2469.8	2687.4
40°	4282.4	4238.8	4025.2	3484.0	3037.4	2908.2	2811.6	2650.9	2524.8	2479.0	2725.2
42.5°	4911.1	4849.1	4619.2	3914.3	3308.0	3120.8	2975.4	2737.4	2578.6	2508.5	2776.0
45°	5683.2	5600.8	5275.3	4399.5	3648.8	3399.5	3205.3	2868.6	2661.0	2565.4	2852.3
47.5°	6463.3	6483.7	6021.0	4954.8	4057.7	3743.4	3493.1	3065.9	2781.0	2657.0	2975.4
50°	7292.5	7306.7	6762.4	5570.3	4521.5	4132.0	3816.6	3286.7	2947.9	2787.2	3159.5
52.5°	7939.3	7941.4	7435.9	6214.2	5004.7	4559.2	4165.5	3538.9	3141.2	2960.1	3404.6
55°	8344.2	8339.1	7907.9	6823.5	5560.1	5007.7	4552.0	3825.7	3377.2	3163.6	3712.9
57.5°	8638.2	8622.9	8233.3	7347.4	6152.2	5537.8	4989.5	4151.2	3655.9	3405.7	4118.8
60°	8750.1	8740.9	8454.1	7800.0	6774.6	6123.7	5494.0	4515.4	3972.2	3691.4	4640.6
62.5°	8792.9	8810.1	8670.8	8238.4	7441.0	6772.6	6048.3	4950.8	4328.3	4014.9	5190.8
65°	8943.3	8974.9	8946.4	8812.1	8193.6	7532.5	6783.9	5468.6	4716.8	4361.8	5765.6
67.5°	9241.4	9273.0	9285.2	9498.8	9113.3	8479.5	7701.3	6113.5	5171.5	4721.9	6197.9
70°	9234.3	9225.1	9440.8	10045.0	10264.8	9790.7	8938.3	6906.9	5713.7	5021.0	6252.8
72.5°	8405.3	8332.0	8841.6	10039.0	11222.9	11159.9	10448.8	7930.2	6181.7	5057.6	5425.8
75°	6305.7	6110.4	7010.7	9047.2	11382.6	11937.0	11409.1	8565.0	6070.8	4468.6	3775.9
77.5°	2696.7	2500.3	3561.3	6697.4	10187.4	11158.9	10528.2	7472.5	4846.0	2955.0	1854.4
80°	705.9	704.9	1076.2	3036.4	6928.3	8240.5	7229.3	4825.7	2768.8	1055.9	511.7
82.5°	291.9	284.8	395.6	1181.0	3385.3	4624.3	3773.8	2152.4	999.9	285.9	169.8
85°	108.9	107.8	192.3	408.0	1194.2	1907.3	1380.4	550.3	249.2	139.4	76.3
87.5°	30.5	29.5	41.7	141.3	290.9	441.5	236.0	90.5	70.2	54.9	22.3
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°	2193.1	2193.1	2193.1	2193.1	2193.1	2193.1	2193.1	2193.1	2193.1	2193.1	2193.1
2.5°	2200.3	2205.3	2214.5	2221.6	2230.7	2241.0	2255.2	2264.3	2273.4	2279.6	2275.5
5°	2209.4	2220.6	2243.9	2267.4	2294.9	2320.3	2349.8	2371.1	2388.5	2393.5	2395.5
7.5°	2229.8	2248.0	2287.7	2327.4	2371.1	2412.8	2455.6	2492.2	2521.7	2532.9	2533.9
10°	2265.4	2289.7	2345.7	2401.7	2459.6	2523.8	2578.6	2631.6	2673.2	2690.5	2691.5
12.5°	2310.1	2340.6	2413.9	2491.2	2571.5	2660.0	2731.2	2796.3	2848.2	2871.6	2871.6
15°	2368.1	2407.7	2501.3	2605.1	2723.1	2846.2	2936.7	3008.9	3066.9	3095.4	3093.3
17.5°	2431.2	2484.1	2602.1	2758.7	2927.5	3089.2	3195.0	3248.0	3308.0	3335.5	3334.4
20°	2492.2	2557.3	2726.1	2953.9	3178.8	3350.7	3436.1	3450.4	3454.5	3457.5	3465.6
22.5°	2555.2	2642.8	2881.8	3200.2	3441.2	3560.2	3572.4	3511.4	3426.0	3386.3	3397.5
25°	2624.4	2740.3	3085.2	3471.8	3667.0	3681.3	3587.7	3439.2	3277.4	3203.2	3214.4
27.5°	2691.5	2853.3	3329.3	3731.1	3829.8	3704.7	3503.2	3292.7	3097.4	3019.1	3028.3
30°	2758.7	2982.4	3598.9	3958.0	3904.1	3646.7	3370.0	3135.1	2938.8	2856.4	2865.5
32.5°	2826.8	3133.0	3909.1	4121.7	3890.9	3523.6	3204.3	2958.0	2785.1	2698.7	2709.9
35°	2904.1	3318.1	4203.1	4211.3	3802.3	3342.5	2985.5	2746.5	2595.9	2526.7	2542.0
37.5°	3004.9	3553.2	4462.5	4233.7	3647.8	3077.0	2713.9	2496.3	2372.2	2340.6	2363.0
40°	3129.9	3836.0	4660.9	4198.1	3418.9	2754.6	2417.0	2243.0	2172.8	2179.9	2204.3
42.5°	3292.7	4152.3	4800.3	4106.5	3100.5	2422.0	2156.5	2079.2	2112.7	2141.2	2167.7
45°	3504.3	4480.8	4886.7	3950.9	2740.3	2140.2	2002.8	2021.2	2046.6	2049.7	2070.0
47.5°	3774.9	4813.5	4943.7	3715.9	2373.2	1941.9	1905.3	1909.3	1904.2	1882.8	1899.1
50°	4112.6	5137.0	4994.5	3404.6	2060.9	1817.7	1768.9	1754.7	1684.5	1615.3	1624.5
52.5°	4497.1	5433.9	5015.9	3018.1	1817.7	1714.0	1634.7	1545.2	1413.9	1392.6	1399.7
55°	4924.3	5708.6	4961.0	2543.0	1613.4	1580.8	1460.7	1352.9	1338.6	1320.3	1323.4
57.5°	5435.0	6004.7	4849.1	2013.1	1403.7	1425.2	1308.1	1320.3	1294.9	1266.4	1261.4
60°	5993.5	6310.8	4652.8	1529.9	1187.1	1230.8	1268.4	1267.4	1260.3	1237.0	1228.8
62.5°	6495.9	6512.2	4266.3	1171.9	996.9	1080.2	1183.1	1182.0	1175.9	1162.7	1157.6
65°	6795.0	6481.7	3621.3	922.6	840.2	956.2	1067.0	1075.2	1076.2	1075.2	1075.2
67.5°	6742.1	6124.7	2736.3	734.4	711.0	830.0	952.1	963.3	971.4	973.4	975.5
70°	6144.0	5340.4	1784.2	585.9	596.1	719.1	843.3	854.4	861.6	869.7	873.8
72.5°	4789.0	3926.5	1021.3	474.1	495.4	623.5	735.4	748.7	752.8	768.0	774.1
75°	2918.4	2309.1	551.3	373.3	406.9	533.0	628.6	643.9	651.0	669.3	671.4
77.5°	1387.4	999.9	314.4	290.9	327.6	435.3	530.9	548.3	529.0	539.2	530.9
80°	468.9	371.3	198.3	221.7	250.2	339.8	425.2	442.5	401.8	399.7	395.6
82.5°	163.8	150.6	126.2	147.5	161.7	243.1	321.4	343.8	299.1	298.1	283.8
85°	64.1	61.0	70.2	80.4	96.7	149.5	211.6	222.7	184.1	148.5	146.5
87.5°	13.2	14.2	17.3	18.3	29.5	51.9	76.3	93.6	74.2	63.0	58.0
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)