

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: P966266

Luminaire Tested: **NAV-SB4B-827-U-SL4**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966266
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-SB4B-827-U-SL4
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19939.3 lumens
Efficiency: N/A
Efficacy: 135.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B3 - U0 - G4

Input Watts (W): 147
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

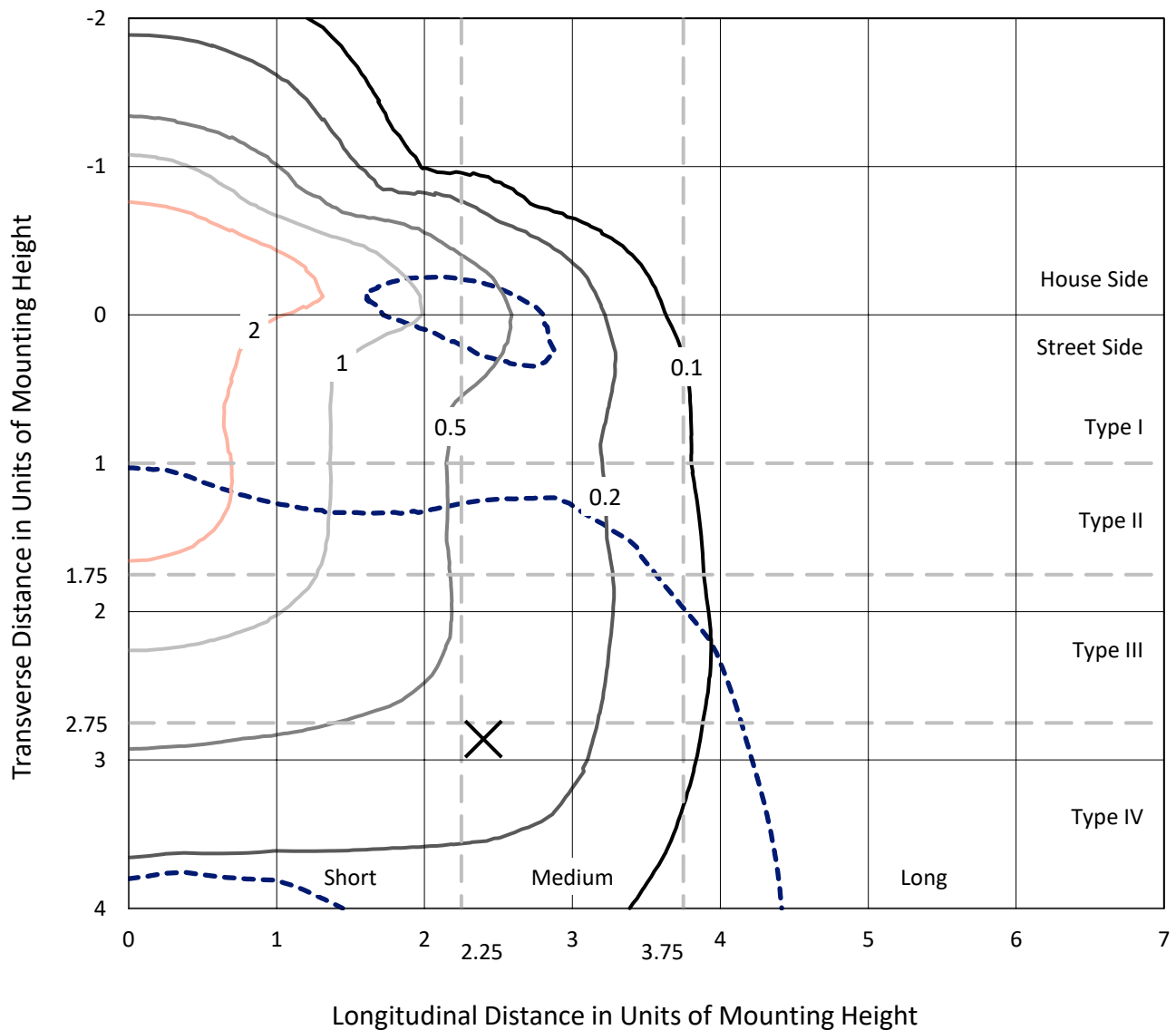


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Iso-Footcandle Lines of Horizontal Illumination

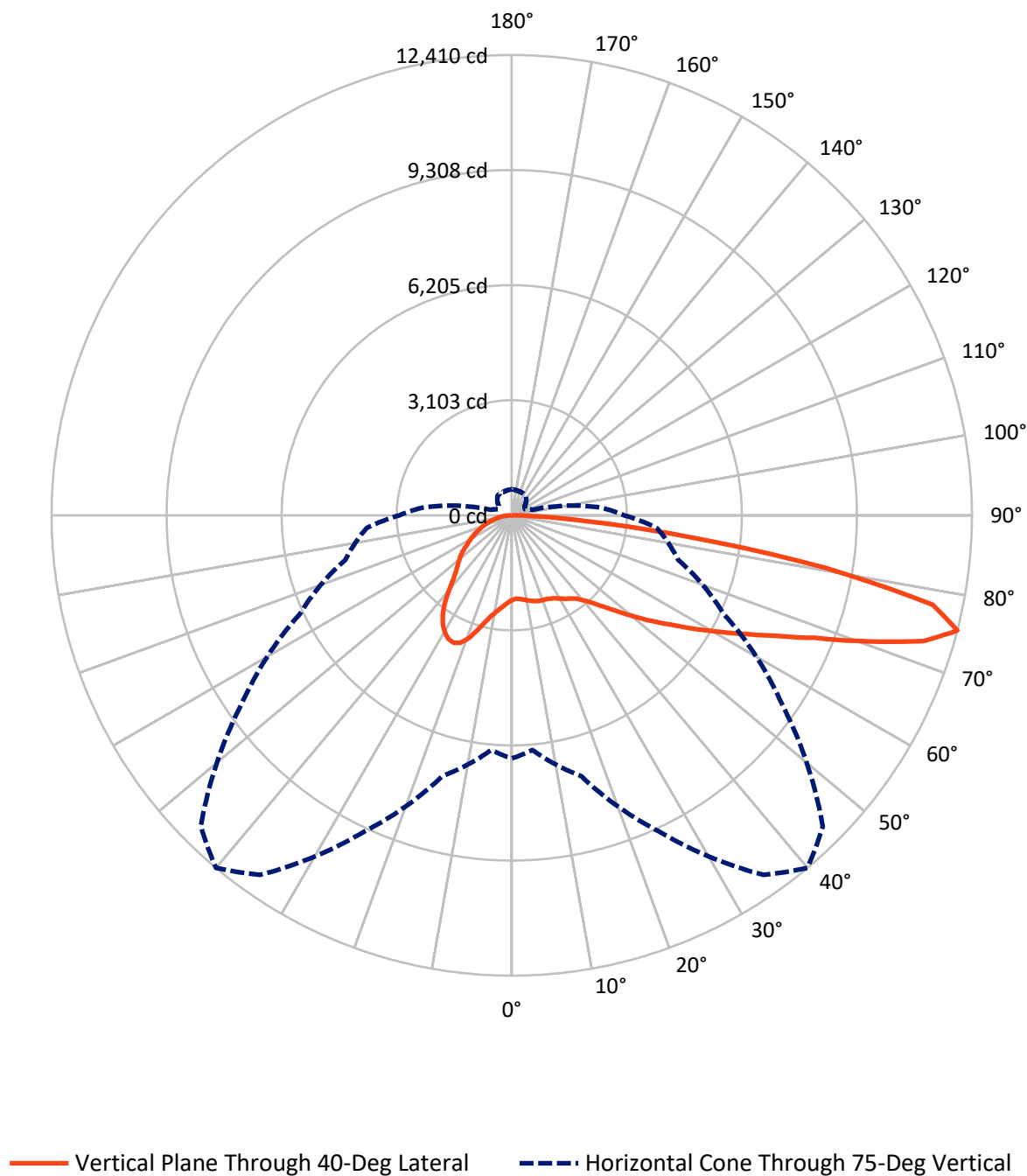
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.7 fc
Type IV - Medium - N/A

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Luminous Intensity Polar Plot



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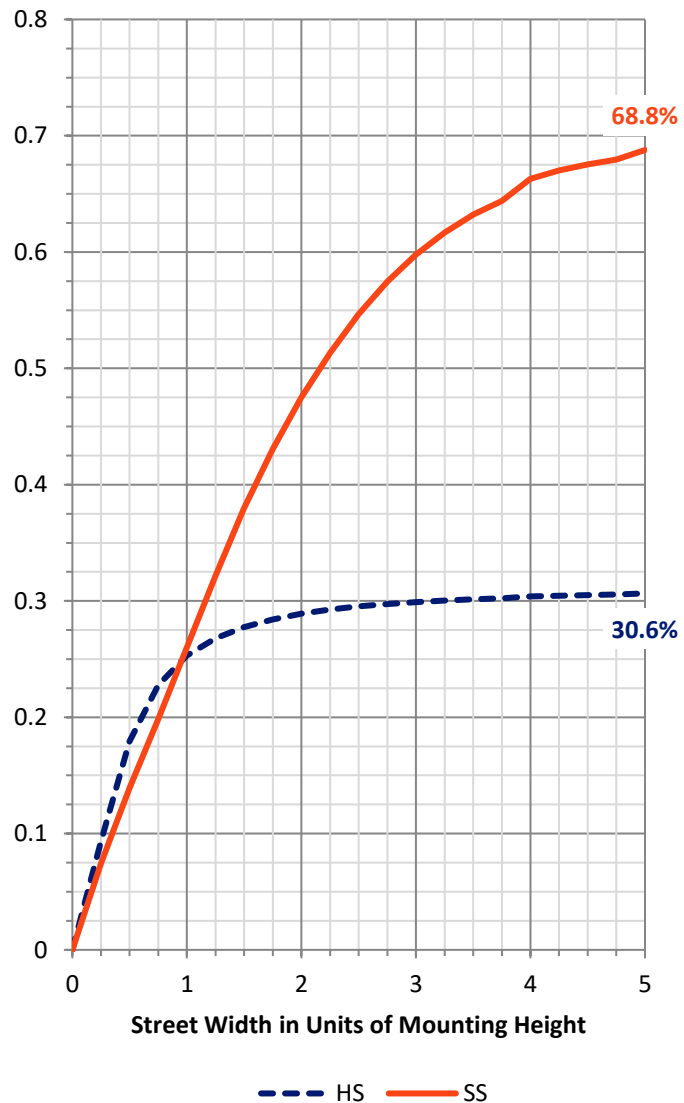
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6177.9	0.0	6177.9
	% Fixture	31.0	0.0	31.0
Street Side	Lumens	13761.5	0.0	13761.5
	% Fixture	69.0	0.0	69.0
Total	Lumens	19939.3	0.0	19939.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	227.6	1.1
10°-20°	764.1	3.8
20°-30°	1395.3	7.0
30°-40°	1978.9	9.9
40°-50°	2672.1	13.4
50°-60°	3594.6	18.0
60°-70°	4562.4	22.9
70°-80°	4140.7	20.8
80°-90°	603.6	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°	19939.3	100.0
0°-180°	19939.3	100.0

Coefficient of Utilization



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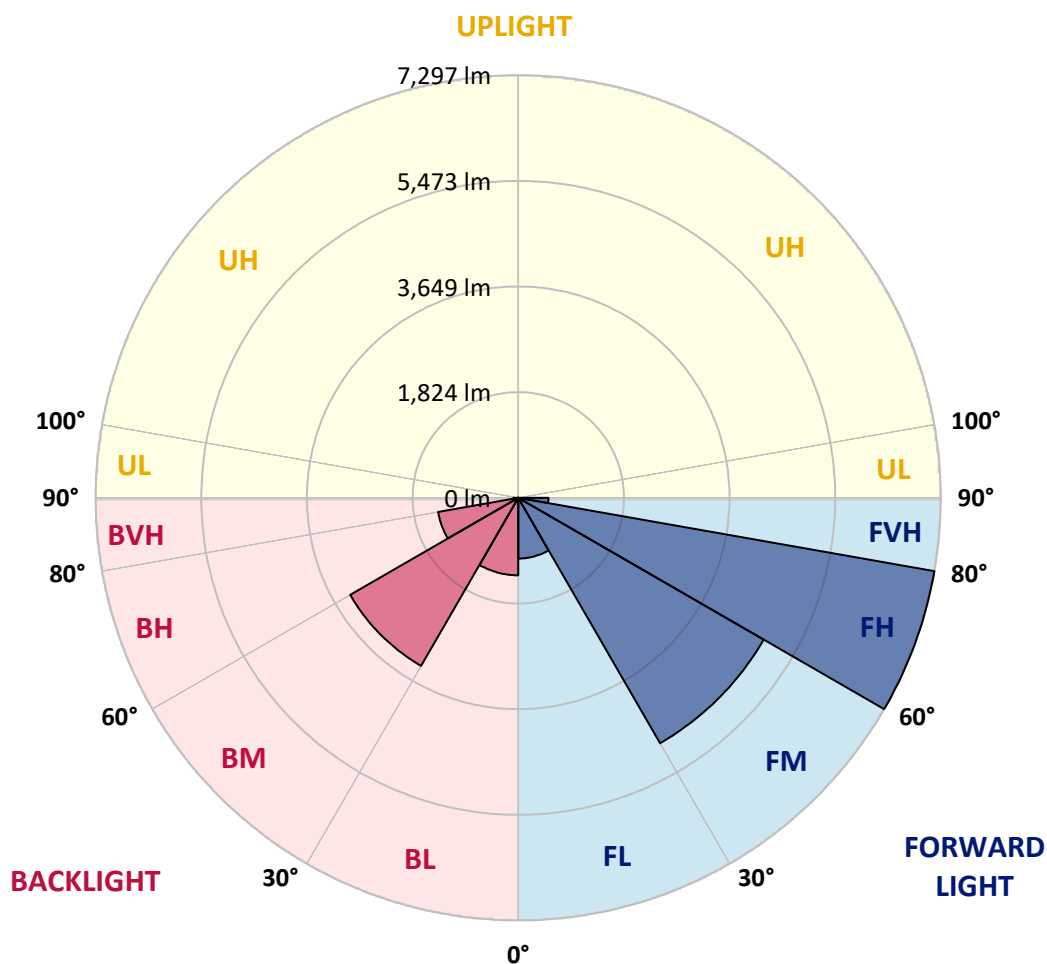
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1048.8	5.3			
FM	(30°-60°)	4894.7	24.5			
FH	(60°-80°)	7297.5	36.6			G3/7500
FVH	(80°-90°)	520.5	2.6			G4/750
BL	(0°-30°)	1338.2	6.7	B3/2500		
BM	(30°-60°)	3350.9	16.8	B3/5000		
BH	(60°-80°)	1405.6	7.0	B3/2500		G3/2500
BVH	(80°-90°)	83.1	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°	2280.1	2280.1	2280.1	2280.1	2280.1	2280.1	2280.1	2280.1	2280.1	2280.1	2280.1
2.5°	2245.2	2257.9	2254.7	2250.5	2250.5	2251.5	2250.5	2257.9	2265.2	2272.7	2284.3
5°	2268.4	2281.1	2274.8	2269.6	2265.2	2264.2	2261.0	2260.0	2264.2	2273.8	2289.6
7.5°	2313.9	2326.6	2317.1	2307.6	2299.1	2294.9	2290.7	2284.3	2281.1	2286.5	2308.6
10°	2364.7	2377.4	2365.7	2348.8	2335.1	2329.8	2325.5	2319.3	2315.0	2318.1	2342.5
12.5°	2415.4	2428.1	2412.2	2389.0	2371.0	2367.9	2362.6	2360.5	2359.4	2358.3	2382.7
15°	2463.1	2473.6	2453.5	2426.1	2407.0	2401.7	2396.4	2399.6	2404.9	2411.2	2438.7
17.5°	2500.1	2510.6	2481.0	2445.0	2427.1	2424.9	2421.8	2432.4	2447.2	2463.1	2496.9
20°	2533.9	2544.5	2506.4	2457.7	2436.6	2436.6	2437.7	2459.9	2481.0	2504.3	2550.8
22.5°	2581.5	2590.0	2543.4	2476.8	2446.2	2448.2	2456.7	2478.9	2505.3	2537.1	2601.6
25°	2652.4	2658.6	2601.6	2512.8	2477.8	2484.2	2491.6	2502.1	2527.5	2564.5	2651.3
27.5°	2766.6	2771.8	2696.8	2576.2	2523.3	2533.9	2544.5	2537.1	2548.7	2580.4	2691.4
30°	2927.3	2930.5	2835.4	2675.7	2600.5	2605.9	2607.9	2577.3	2555.0	2580.4	2720.0
32.5°	3117.6	3116.6	3003.5	2796.2	2688.3	2683.0	2665.0	2604.7	2553.0	2575.1	2745.5
35°	3412.7	3401.1	3255.2	2965.4	2787.7	2754.9	2712.7	2635.4	2563.5	2569.9	2767.6
37.5°	3901.4	3865.4	3663.4	3242.5	2935.8	2852.3	2789.8	2685.1	2586.8	2567.7	2794.0
40°	4452.3	4406.8	4184.8	3622.1	3157.8	3023.5	2923.1	2756.0	2624.8	2577.3	2833.2
42.5°	5105.8	5041.4	4802.3	4069.5	3439.2	3244.5	3093.3	2845.9	2680.9	2607.9	2886.1
45°	5908.5	5822.9	5484.5	4574.0	3793.4	3534.3	3332.4	2982.3	2766.6	2667.2	2965.4
47.5°	6719.7	6740.8	6259.7	5151.3	4218.6	3891.8	3631.7	3187.4	2891.3	2762.4	3093.3
50°	7581.6	7596.4	7030.6	5791.1	4700.9	4295.8	3968.0	3416.9	3064.7	2897.7	3284.7
52.5°	8254.2	8256.4	7730.8	6460.6	5203.2	4740.0	4330.7	3679.2	3265.8	3077.5	3539.6
55°	8675.1	8669.9	8221.4	7094.1	5780.6	5206.4	4732.5	3977.5	3511.0	3289.0	3860.0
57.5°	8980.7	8964.9	8559.9	7638.7	6396.1	5757.3	5187.3	4315.9	3800.8	3540.7	4282.0
60°	9097.1	9087.5	8789.4	8109.3	7043.3	6366.5	5711.8	4694.5	4129.7	3837.9	4824.6
62.5°	9141.5	9159.5	9014.6	8565.1	7736.0	7041.2	6288.3	5147.1	4499.9	4174.2	5396.7
65°	9298.0	9330.8	9301.2	9161.6	8518.6	7831.2	7052.8	5685.4	4903.9	4534.8	5994.2
67.5°	9607.8	9640.6	9653.3	9875.5	9474.6	8815.8	8006.8	6355.9	5376.6	4909.1	6443.7
70°	9600.5	9590.9	9815.2	10443.3	10671.8	10179.0	9292.8	7180.8	5940.3	5220.1	6500.8
72.5°	8738.5	8662.5	9192.3	10437.0	11668.0	11602.4	10863.2	8244.7	6426.7	5258.1	5641.0
75°	6555.8	6352.7	7288.7	9405.9	11834.0	12410.4	11861.5	8904.6	6311.4	4645.8	3925.6
77.5°	2803.6	2599.5	3702.5	6962.9	10591.4	11601.4	10945.7	7768.8	5038.2	3072.2	1927.9
80°	733.9	732.9	1118.9	3156.8	7203.0	8567.3	7516.0	5017.1	2878.7	1097.8	532.0
82.5°	303.5	296.1	411.4	1227.8	3519.5	4807.7	3923.5	2237.8	1039.6	297.1	176.6
85°	113.2	112.1	199.9	424.0	1241.6	1983.0	1435.1	572.2	259.1	144.9	79.3
87.5°	31.8	30.6	43.4	147.0	302.5	459.0	245.4	94.1	73.0	57.1	23.3
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°	2280.1	2280.1	2280.1	2280.1	2280.1	2280.1	2280.1	2280.1	2280.1	2280.1	2280.1
2.5°	2287.5	2292.8	2302.3	2309.7	2319.3	2329.8	2344.6	2354.1	2363.6	2370.0	2365.7
5°	2297.0	2308.6	2333.0	2357.3	2385.9	2412.2	2443.0	2465.1	2483.2	2488.4	2490.5
7.5°	2318.1	2337.2	2378.4	2419.7	2465.1	2508.5	2553.0	2591.0	2621.6	2633.3	2634.4
10°	2355.1	2380.6	2438.7	2496.9	2557.2	2623.8	2680.9	2735.9	2779.3	2797.2	2798.2
12.5°	2401.7	2433.5	2509.6	2590.0	2673.5	2765.6	2839.6	2907.2	2961.1	2985.5	2985.5
15°	2461.9	2503.3	2600.5	2708.4	2831.0	2959.1	3053.2	3128.2	3188.6	3218.1	3216.0
17.5°	2527.5	2582.6	2705.2	2868.1	3043.6	3211.8	3321.8	3376.8	3439.2	3467.7	3466.7
20°	2591.0	2658.6	2834.2	3071.1	3304.9	3483.6	3572.4	3587.2	3591.5	3594.7	3603.1
22.5°	2656.6	2747.5	2996.1	3327.0	3577.7	3701.5	3714.1	3650.6	3561.9	3520.6	3532.3
25°	2728.4	2849.1	3207.5	3609.4	3812.5	3827.2	3730.0	3575.6	3407.4	3330.2	3341.9
27.5°	2798.2	2966.5	3461.4	3879.1	3981.7	3851.6	3642.2	3423.3	3220.2	3138.9	3148.4
30°	2868.1	3100.7	3741.7	4115.0	4058.9	3791.4	3503.7	3259.4	3055.3	2969.6	2979.2
32.5°	2939.0	3257.2	4064.2	4285.2	4045.2	3663.4	3331.2	3075.4	2895.6	2805.7	2817.3
35°	3019.3	3449.7	4369.8	4378.3	3953.1	3475.2	3103.9	2855.4	2698.9	2627.0	2642.9
37.5°	3124.0	3694.0	4639.5	4401.6	3792.4	3199.1	2821.5	2595.2	2466.3	2433.5	2456.7
40°	3254.1	3988.1	4845.7	4364.6	3554.4	2863.8	2512.8	2331.9	2258.9	2266.4	2291.7
42.5°	3423.3	4316.9	4990.6	4269.3	3223.4	2518.0	2242.0	2161.6	2196.6	2226.2	2253.7
45°	3643.3	4658.5	5080.5	4107.6	2849.1	2225.1	2082.3	2101.4	2127.8	2131.0	2152.1
47.5°	3924.6	5004.4	5139.8	3863.2	2467.3	2018.8	1980.8	1985.0	1979.8	1957.5	1974.5
50°	4275.7	5340.7	5192.5	3539.6	2142.6	1889.9	1839.1	1824.3	1751.3	1679.4	1688.9
52.5°	4675.4	5649.5	5214.8	3137.7	1889.9	1782.0	1699.4	1606.4	1470.0	1447.8	1455.2
55°	5119.7	5935.0	5157.7	2643.9	1677.3	1643.5	1518.6	1406.5	1391.7	1372.7	1375.9
57.5°	5650.5	6242.8	5041.4	2092.9	1459.4	1481.6	1360.0	1372.7	1346.2	1316.6	1311.4
60°	6231.1	6561.0	4837.3	1590.6	1234.2	1279.6	1318.8	1317.7	1310.4	1286.0	1277.6
62.5°	6753.5	6770.4	4435.4	1218.3	1036.4	1123.1	1229.9	1228.9	1222.5	1208.8	1203.5
65°	7064.5	6738.8	3764.9	959.2	873.5	994.1	1109.4	1117.9	1118.9	1117.9	1117.9
67.5°	7009.5	6367.5	2844.8	763.5	739.2	862.9	989.8	1001.5	1009.9	1012.1	1014.2
70°	6387.6	5552.1	1854.9	609.2	619.7	747.7	876.7	888.4	895.7	904.3	908.5
72.5°	4978.9	4082.2	1061.8	492.8	515.1	648.3	764.6	778.4	782.6	798.5	804.8
75°	3034.1	2400.7	573.2	388.2	423.0	554.1	653.5	669.4	676.8	695.9	698.0
77.5°	1442.5	1039.6	326.8	302.5	340.5	452.6	552.1	570.0	549.9	560.5	552.1
80°	487.5	386.0	206.2	230.5	260.1	353.2	442.1	460.0	417.7	415.6	411.4
82.5°	170.3	156.5	131.1	153.3	168.1	252.8	334.2	357.4	310.9	309.9	295.1
85°	66.6	63.4	73.0	83.5	100.4	155.5	220.0	231.6	191.4	154.4	152.3
87.5°	13.7	14.8	17.9	19.1	30.6	53.9	79.3	97.3	77.2	65.6	60.3
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)