

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: P966297

Luminaire Tested: **NAV-SB4B-830-U-SL4**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966297
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-830-U-SL4
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 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: 20603.5 lumens
Efficiency: N/A
Efficacy: 140.2 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

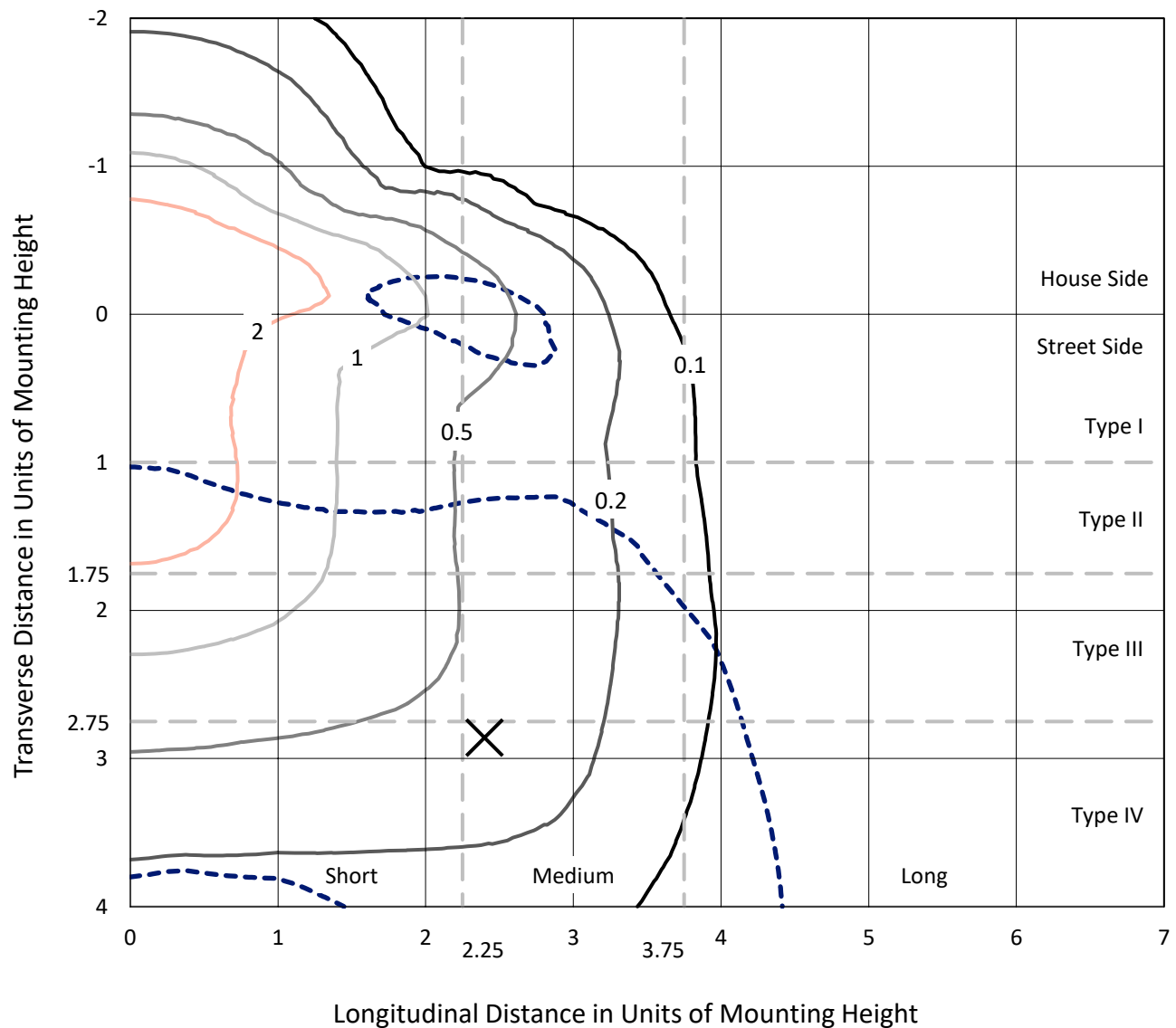


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Iso-Footcandle Lines of Horizontal Illumination

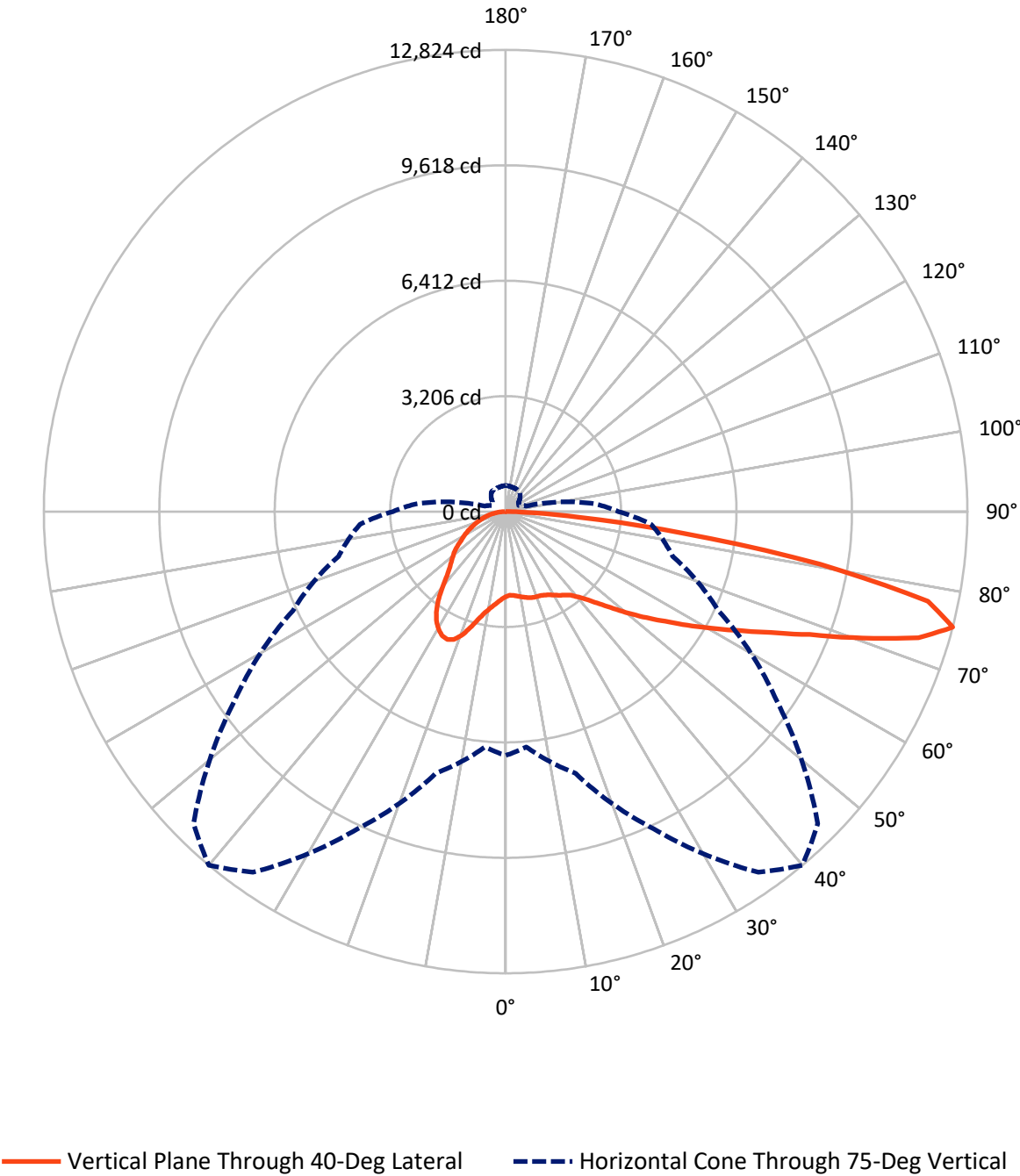
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.9 fc
Type IV - Medium - N/A

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Luminous Intensity Polar Plot



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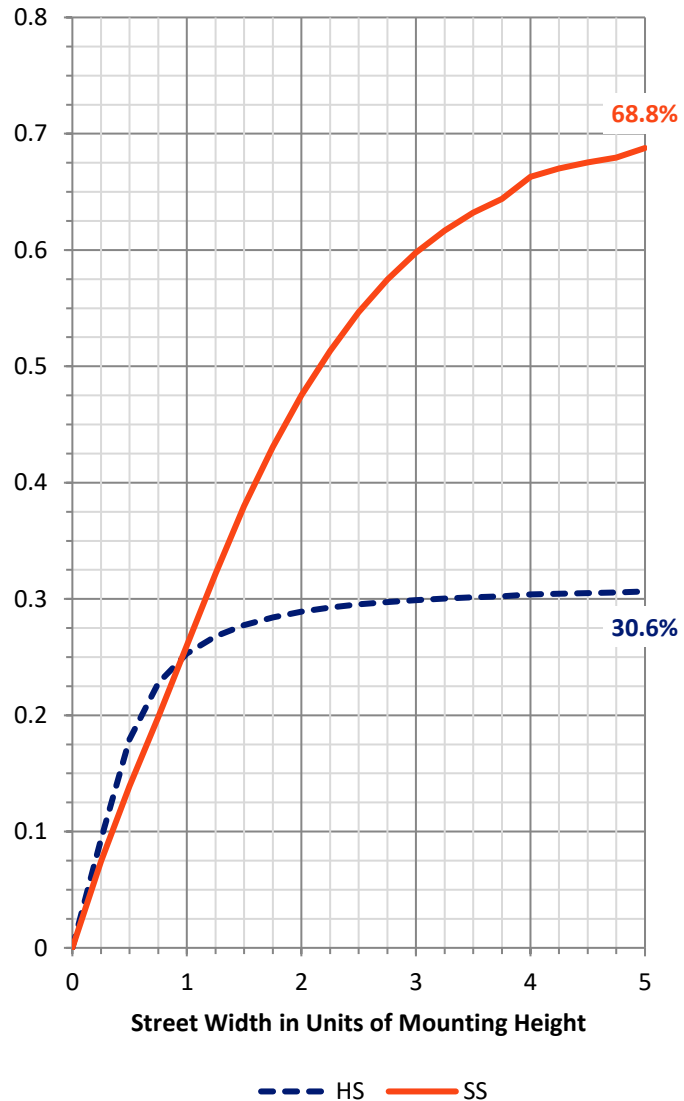
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6383.7	0.0	6383.7
	% Fixture	31.0	0.0	31.0
Street Side	Lumens	14219.9	0.0	14219.9
	% Fixture	69.0	0.0	69.0
Total	Lumens	20603.5	0.0	20603.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	235.2	1.1
10°-20°	789.6	3.8
20°-30°	1441.7	7.0
30°-40°	2044.8	9.9
40°-50°	2761.1	13.4
50°-60°	3714.4	18.0
60°-70°	4714.4	22.9
70°-80°	4278.6	20.8
80°-90°	623.7	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°	20603.5	100.0
0°-180°	20603.5	100.0

Coefficient of Utilization



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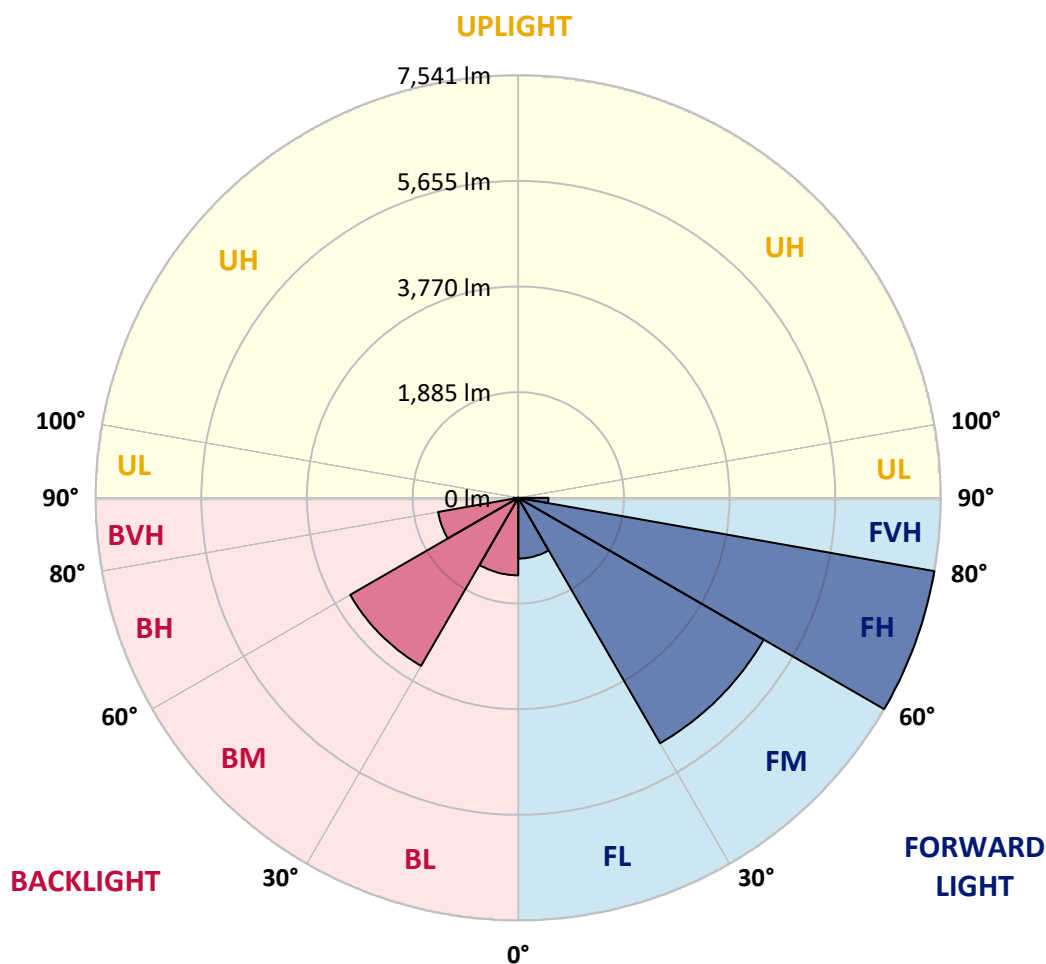
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1083.8	5.3			
FM	(30°-60°)	5057.7	24.5			
FH	(60°-80°)	7540.6	36.6			G4/12000
FVH	(80°-90°)	537.8	2.6			G4/750
BL	(0°-30°)	1382.8	6.7	B3/2500		
BM	(30°-60°)	3462.6	16.8	B3/5000		
BH	(60°-80°)	1452.5	7.0	B3/2500		G3/2500
BVH	(80°-90°)	85.9	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°	2356.1	2356.1	2356.1	2356.1	2356.1	2356.1	2356.1	2356.1	2356.1	2356.1	2356.1
2.5°	2320.0	2333.1	2329.8	2325.4	2325.4	2326.5	2325.4	2333.1	2340.8	2348.4	2360.4
5°	2344.0	2357.1	2350.5	2345.1	2340.8	2339.7	2336.4	2335.3	2339.7	2349.5	2365.9
7.5°	2391.0	2404.1	2394.3	2384.5	2375.7	2371.3	2366.9	2360.4	2357.1	2362.6	2385.6
10°	2443.5	2456.6	2444.5	2427.1	2412.8	2407.4	2403.0	2396.4	2392.1	2395.4	2420.5
12.5°	2495.9	2509.0	2492.6	2468.6	2450.1	2446.8	2441.2	2439.1	2438.0	2436.9	2462.0
15°	2545.1	2556.0	2535.2	2506.8	2487.2	2481.7	2476.3	2479.5	2485.0	2491.6	2520.0
17.5°	2583.3	2594.3	2563.6	2526.5	2508.0	2505.7	2502.4	2513.4	2528.7	2545.1	2580.0
20°	2618.3	2629.2	2589.9	2539.6	2517.8	2517.8	2518.8	2541.8	2563.6	2587.7	2635.8
22.5°	2667.5	2676.3	2628.1	2559.3	2527.6	2529.8	2538.5	2561.5	2588.8	2621.5	2688.3
25°	2740.7	2747.3	2688.3	2596.4	2560.3	2566.9	2574.6	2585.6	2611.8	2650.0	2739.6
27.5°	2858.7	2864.2	2786.6	2662.0	2607.4	2618.3	2629.2	2621.5	2633.6	2666.4	2781.1
30°	3024.8	3028.1	2929.8	2764.7	2687.1	2692.6	2694.8	2663.2	2640.2	2666.4	2810.7
32.5°	3221.6	3220.4	3103.5	2889.3	2777.9	2772.4	2753.8	2691.5	2637.9	2660.9	2836.9
35°	3526.4	3514.4	3363.5	3064.1	2880.6	2846.7	2803.0	2723.2	2648.9	2655.5	2859.9
37.5°	4031.3	3994.1	3785.4	3350.5	3033.6	2947.3	2882.8	2774.6	2673.0	2653.3	2887.1
40°	4600.6	4553.7	4324.2	3742.8	3263.1	3124.3	3020.5	2847.8	2712.3	2663.2	2927.6
42.5°	5276.0	5209.3	4962.3	4205.1	3553.8	3352.7	3196.4	2940.7	2770.2	2694.8	2982.2
45°	6105.4	6016.9	5667.1	4726.3	3919.8	3652.1	3443.4	3081.7	2858.7	2756.0	3064.1
47.5°	6943.6	6965.4	6468.2	5322.9	4359.1	4021.5	3752.6	3293.6	2987.7	2854.3	3196.4
50°	7834.2	7849.4	7264.8	5984.1	4857.4	4438.9	4100.1	3530.8	3166.8	2994.2	3394.2
52.5°	8529.1	8531.4	7988.2	6675.8	5376.5	4897.9	4474.9	3801.8	3374.5	3180.0	3657.5
55°	8964.1	8958.6	8495.3	7330.4	5973.2	5379.8	4890.2	4109.9	3628.1	3398.6	3988.7
57.5°	9279.9	9263.5	8845.0	7893.2	6609.2	5949.1	5360.1	4459.7	3927.5	3658.6	4424.7
60°	9400.1	9390.3	9082.1	8379.5	7277.9	6578.6	5902.2	4850.9	4267.3	3965.7	4985.3
62.5°	9446.0	9464.6	9314.9	8850.5	7993.7	7275.8	6497.7	5318.6	4649.8	4313.2	5576.5
65°	9607.7	9641.7	9611.0	9466.8	8802.4	8092.1	7287.7	5874.8	5067.2	4685.9	6193.9
67.5°	9927.9	9961.8	9974.9	10204.4	9790.3	9109.5	8273.5	6567.6	5555.7	5072.7	6658.3
70°	9920.3	9910.4	10142.2	10791.2	11027.3	10518.0	9602.3	7420.0	6138.2	5394.0	6717.3
72.5°	9029.6	8951.0	9498.5	10784.6	12056.7	11988.9	11225.1	8519.3	6640.9	5433.3	5828.9
75°	6774.1	6564.3	7531.5	9719.3	12228.2	12823.8	12256.6	9201.2	6521.8	4800.6	4056.4
77.5°	2897.0	2686.0	3825.8	7194.9	10944.2	11987.8	11310.3	8027.6	5206.0	3174.5	1992.2
80°	758.4	757.3	1156.2	3262.0	7442.9	8852.6	7766.4	5184.1	2974.5	1134.3	549.7
82.5°	313.6	306.0	425.1	1268.7	3636.8	4967.8	4054.2	2312.3	1074.2	307.1	182.4
85°	117.0	115.8	206.5	438.2	1282.9	2049.0	1482.9	591.2	267.7	149.8	82.0
87.5°	32.8	31.7	44.8	151.9	312.5	474.3	253.5	97.3	75.4	59.0	24.1
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°	2356.1	2356.1	2356.1	2356.1	2356.1	2356.1	2356.1	2356.1	2356.1	2356.1	2356.1
2.5°	2363.6	2369.2	2379.0	2386.6	2396.4	2407.4	2422.7	2432.5	2442.4	2448.9	2444.5
5°	2373.5	2385.6	2410.7	2435.8	2465.3	2492.6	2524.4	2547.2	2565.9	2571.3	2573.5
7.5°	2395.4	2415.0	2457.6	2500.3	2547.2	2592.1	2637.9	2677.3	2709.0	2721.1	2722.1
10°	2433.7	2459.9	2520.0	2580.0	2642.3	2711.2	2770.2	2827.1	2871.8	2890.4	2891.5
12.5°	2481.7	2514.5	2593.1	2676.3	2762.6	2857.6	2934.2	3004.1	3059.8	3084.9	3084.9
15°	2544.0	2586.6	2687.1	2798.7	2925.4	3057.6	3154.8	3232.4	3294.8	3325.3	3323.2
17.5°	2611.8	2668.6	2795.4	2963.6	3145.0	3318.7	3432.4	3489.3	3553.8	3583.2	3582.2
20°	2677.3	2747.3	2928.6	3173.4	3415.0	3599.6	3691.4	3706.7	3711.1	3714.4	3723.1
22.5°	2745.1	2839.0	3095.8	3437.8	3696.9	3824.8	3837.8	3772.3	3680.5	3637.8	3649.9
25°	2819.4	2944.0	3314.4	3729.7	3939.5	3954.8	3854.2	3694.7	3521.0	3441.1	3453.2
27.5°	2891.5	3065.3	3576.6	4008.4	4114.3	3979.9	3763.6	3537.4	3327.6	3243.4	3253.2
30°	2963.6	3204.0	3866.3	4252.0	4194.1	3917.7	3620.4	3367.9	3157.0	3068.5	3078.4
32.5°	3036.9	3365.8	4199.5	4428.0	4179.8	3785.4	3442.3	3177.8	2992.1	2899.1	2911.2
35°	3119.9	3564.6	4515.3	4524.1	4084.8	3590.9	3207.3	2950.6	2788.8	2714.5	2730.9
37.5°	3228.0	3817.1	4794.0	4548.1	3918.7	3305.6	2915.5	2681.7	2548.4	2514.5	2538.5
40°	3362.5	4120.9	5007.1	4509.9	3672.9	2959.3	2596.4	2409.6	2334.2	2341.8	2368.1
42.5°	3537.4	4460.7	5156.9	4411.6	3330.8	2602.0	2316.7	2233.7	2269.8	2300.3	2328.7
45°	3764.6	4813.7	5249.7	4244.3	2944.0	2299.2	2151.7	2171.4	2198.7	2202.0	2223.8
47.5°	4055.3	5171.0	5310.9	3992.0	2549.5	2086.1	2046.8	2051.1	2045.7	2022.7	2040.3
50°	4418.2	5518.6	5365.6	3657.5	2214.0	1952.8	1900.4	1885.1	1809.6	1735.3	1745.2
52.5°	4831.2	5837.7	5388.5	3242.3	1952.8	1841.3	1756.1	1660.0	1518.9	1496.0	1503.7
55°	5290.1	6132.7	5329.5	2731.9	1733.2	1698.2	1569.3	1453.4	1438.1	1418.4	1421.7
57.5°	5838.7	6450.7	5209.3	2162.6	1508.1	1530.9	1405.3	1418.4	1391.1	1360.5	1355.0
60°	6438.6	6779.7	4998.4	1643.6	1275.3	1322.2	1362.7	1361.6	1353.9	1328.8	1320.1
62.5°	6978.5	6996.0	4583.1	1258.9	1070.9	1160.5	1270.9	1269.8	1263.2	1249.1	1243.6
65°	7299.7	6963.2	3890.3	991.2	902.6	1027.3	1146.4	1155.1	1156.2	1155.1	1155.1
67.5°	7243.0	6579.7	2939.6	788.9	763.8	891.7	1022.8	1034.8	1043.7	1045.8	1048.0
70°	6600.4	5737.1	1916.7	629.5	640.4	772.6	905.9	917.9	925.6	934.3	938.7
72.5°	5144.8	4218.2	1097.2	509.2	532.2	669.8	790.1	804.3	808.6	825.0	831.6
75°	3135.2	2480.6	592.2	401.1	437.2	572.7	675.4	691.8	699.4	719.0	721.2
77.5°	1490.6	1074.2	337.6	312.5	351.9	467.7	570.4	589.0	568.3	579.1	570.4
80°	503.8	398.8	213.1	238.2	268.9	365.0	456.7	475.4	431.6	429.5	425.1
82.5°	175.9	161.7	135.5	158.5	173.7	261.2	345.3	369.4	321.2	320.2	304.9
85°	68.9	65.6	75.4	86.3	103.8	160.6	227.3	239.3	197.8	159.6	157.3
87.5°	14.2	15.3	18.6	19.7	31.7	55.8	82.0	100.6	79.7	67.8	62.3
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)