

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: P966343

Luminaire Tested: **NAV-SB4B-835-U-T3**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966343
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-5)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4B-835-U-T3
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3500K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III
OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21470.7 lumens
Efficiency: N/A
Efficacy: 146.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

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



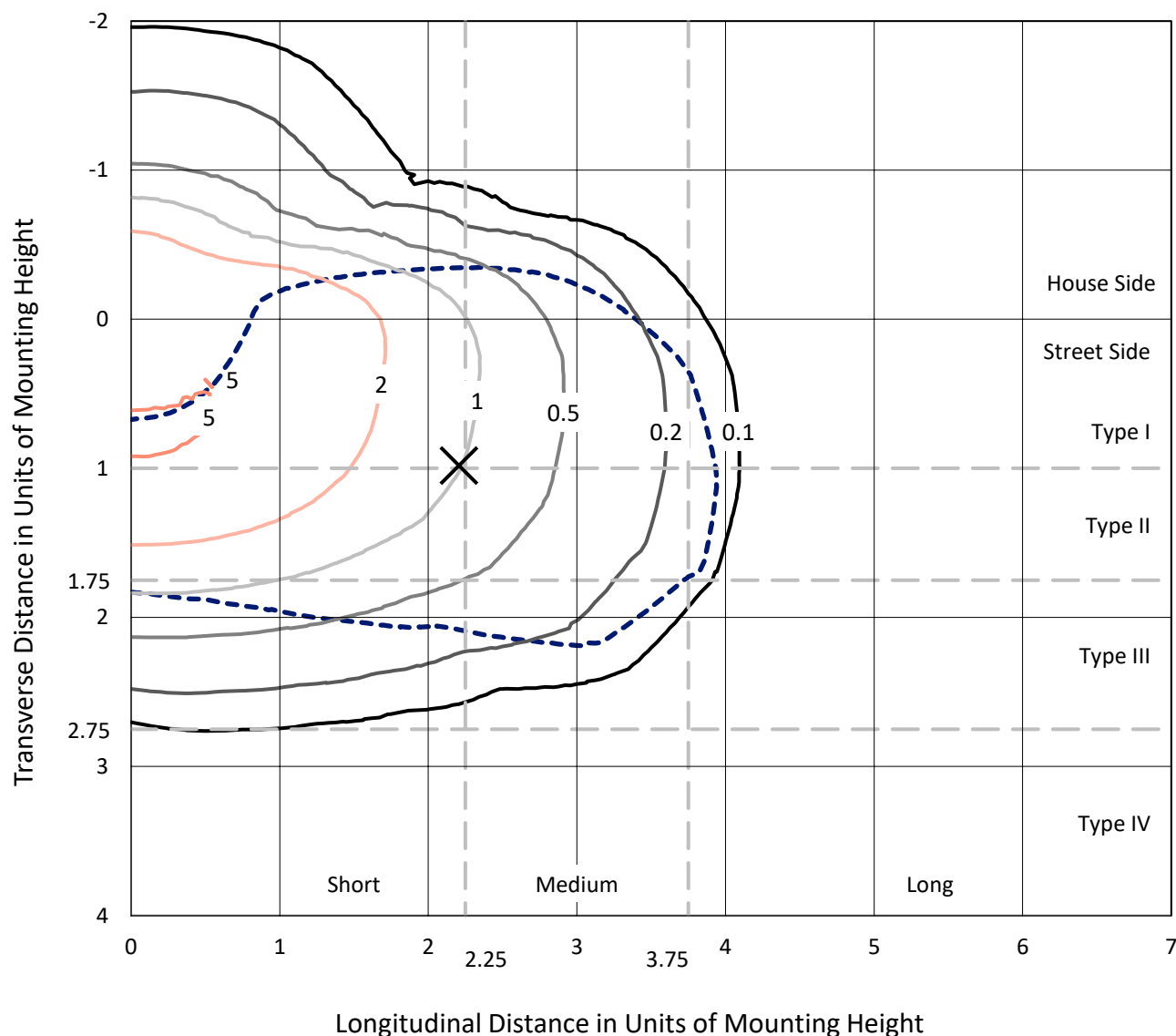
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

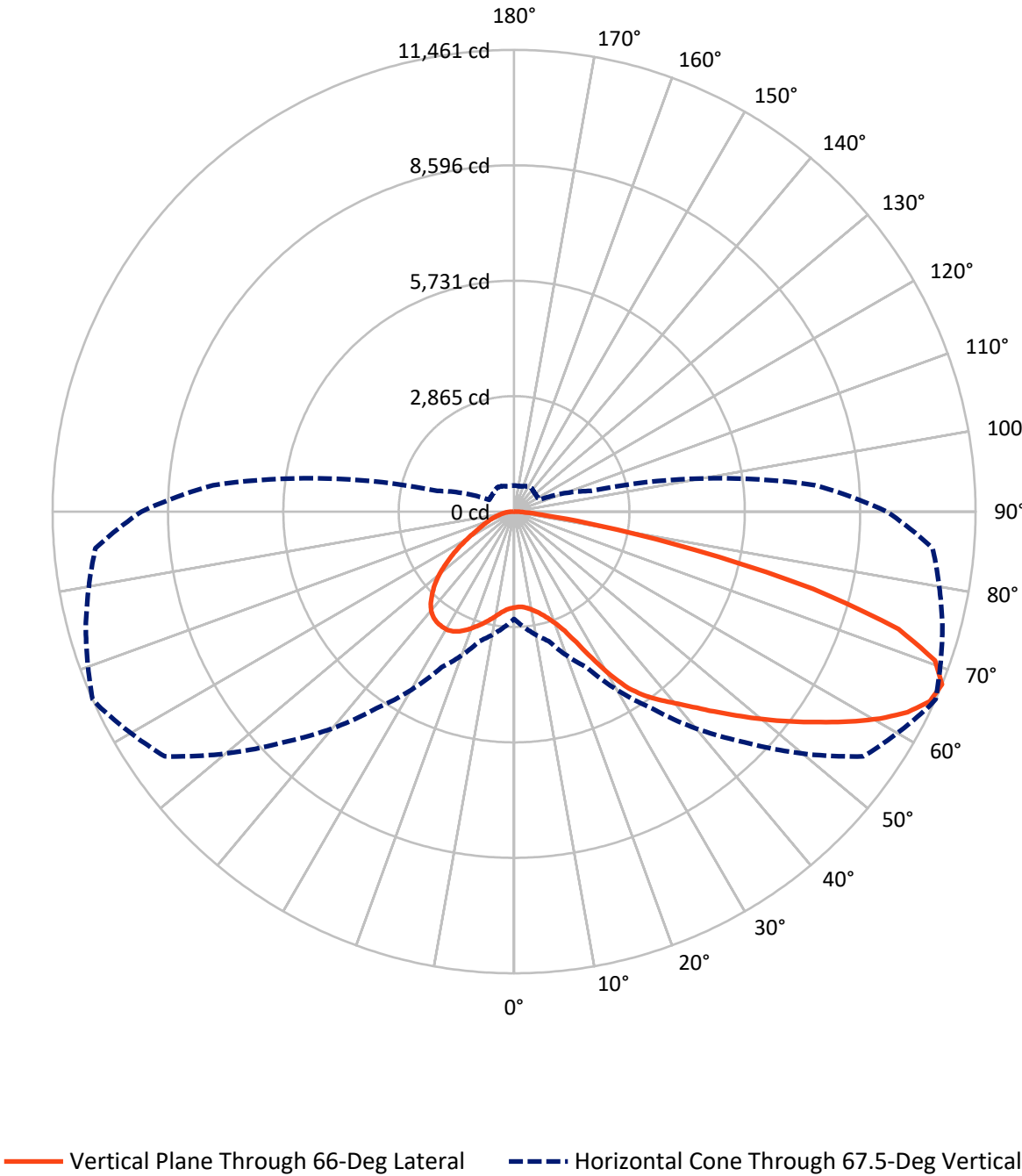


Based on 25 foot mounting height. Maximum calculated value = 5.4 fc

Type III - Short - N/A

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Luminous Intensity Polar Plot



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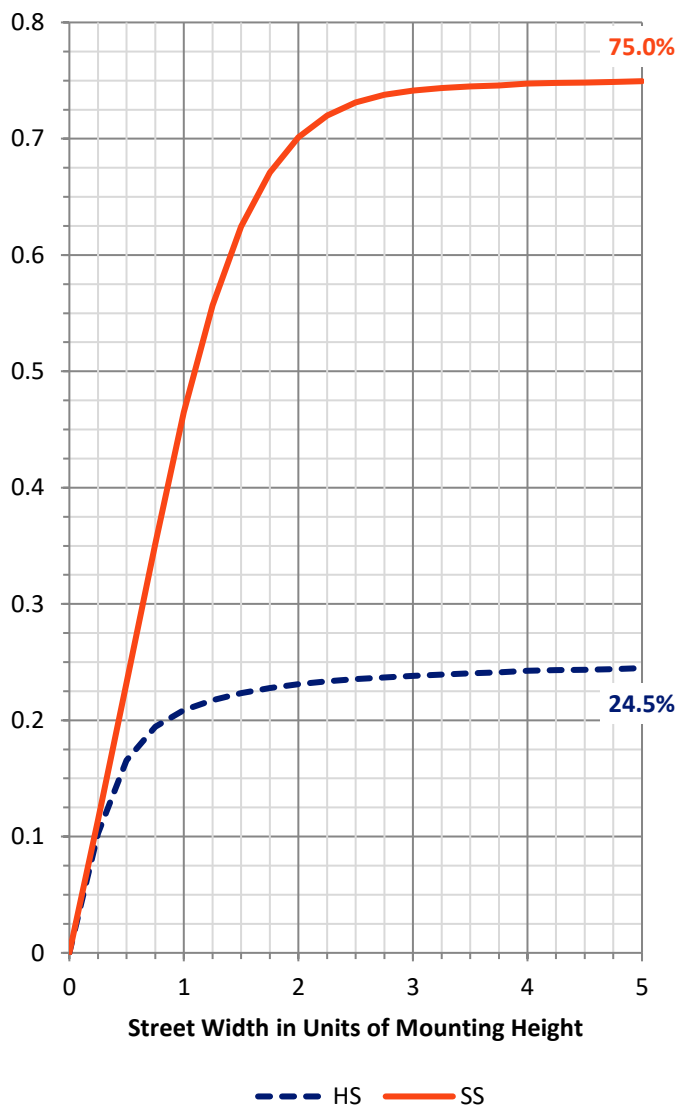
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5338.6	0.0	5338.6
	% Fixture	24.9	0.0	24.9
Street Side	Lumens	16132.0	0.0	16132.0
	% Fixture	75.1	0.0	75.1
Total	Lumens	21470.7	0.0	21470.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	236.1	1.1
10°-20°	780.1	3.6
20°-30°	1503.5	7.0
30°-40°	2636.2	12.3
40°-50°	3919.2	18.3
50°-60°	4968.0	23.1
60°-70°	4861.0	22.6
70°-80°	2318.7	10.8
80°-90°	247.8	1.2
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°	21470.7	100.0
0°-180°	21470.7	100.0

Coefficient of Utilization



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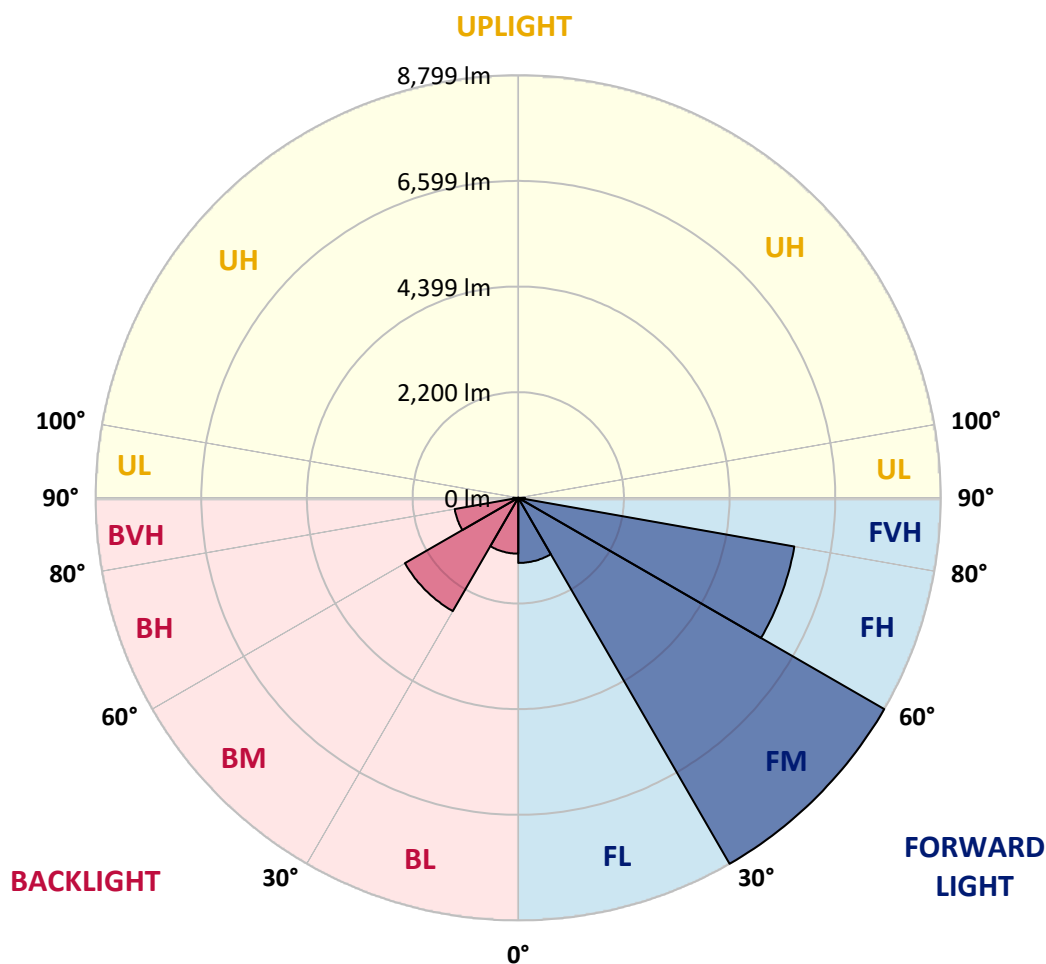
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1356.7	6.3			
FM	(30°-60°)	8798.5	41.0			
FH	(60°-80°)	5836.3	27.2			G3/7500
FVH	(80°-90°)	140.5	0.7			G2/225
BL	(0°-30°)	1162.9	5.4	B3/2500		
BM	(30°-60°)	2724.9	12.7	B3/5000		
BH	(60°-80°)	1343.5	6.3	B3/2500		G3/2500
BVH	(80°-90°)	107.3	0.5			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type III Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	2381.4	2381.4	2381.4	2381.4	2381.4	2381.4	2381.4	2381.4	2381.4	2381.4	2381.4
2.5°	2356.6	2370.1	2366.7	2361.1	2360.0	2362.2	2365.6	2369.0	2367.9	2373.5	2382.5
5°	2349.8	2363.3	2362.2	2362.2	2366.7	2375.7	2381.4	2387.0	2381.4	2388.1	2400.5
7.5°	2354.3	2364.5	2369.0	2373.5	2384.8	2401.7	2415.2	2427.6	2420.8	2428.7	2444.5
10°	2411.8	2419.7	2424.2	2424.2	2432.1	2451.3	2464.8	2487.5	2481.7	2494.2	2514.5
12.5°	2516.8	2524.7	2524.7	2520.2	2525.8	2538.2	2542.7	2567.5	2557.4	2577.7	2598.0
15°	2645.3	2661.1	2648.7	2640.8	2643.1	2655.5	2654.3	2673.5	2663.4	2680.3	2698.4
17.5°	2787.5	2807.8	2787.5	2786.4	2781.8	2795.4	2796.5	2813.4	2795.4	2807.8	2820.2
20°	2955.6	2983.8	2966.9	2972.5	2962.4	2968.0	2973.6	2998.4	2970.2	2979.3	2975.9
22.5°	3192.5	3226.3	3208.2	3229.7	3222.9	3218.4	3217.3	3261.2	3217.3	3220.7	3188.0
25°	3537.7	3578.3	3546.7	3576.0	3576.0	3590.7	3607.6	3664.0	3590.7	3569.3	3484.7
27.5°	4047.5	4088.2	4026.1	4044.1	4038.5	4074.7	4056.5	4196.5	4117.5	4082.6	3912.2
30°	4661.2	4733.4	4616.1	4611.6	4605.9	4663.4	4689.5	4781.9	4701.9	4666.8	4461.5
32.5°	5324.6	5400.1	5260.2	5219.6	5198.2	5233.1	5211.7	5286.2	5230.9	5176.8	4923.0
35°	6026.2	6100.7	5967.5	5888.6	5802.8	5729.5	5652.8	5672.0	5620.1	5537.8	5275.0
37.5°	6689.6	6826.0	6685.0	6600.4	6442.4	6299.2	6084.9	5995.7	5947.3	5871.7	5606.5
40°	7365.2	7443.0	7335.9	7263.8	7092.3	6867.8	6524.8	6336.4	6271.1	6197.7	5973.2
42.5°	7862.8	7937.2	7879.7	7830.0	7695.8	7435.1	6991.8	6756.1	6661.4	6579.0	6388.3
45°	8257.6	8312.9	8276.8	8294.8	8237.2	7984.5	7475.8	7206.2	7108.1	7007.6	6857.7
47.5°	8416.6	8475.3	8532.8	8640.0	8738.1	8552.0	7995.8	7693.5	7589.7	7487.1	7339.3
50°	8398.5	8458.4	8625.3	8853.2	9157.8	9095.7	8544.1	8212.4	8116.6	7999.2	7862.8
52.5°	8254.2	8321.9	8536.2	8915.2	9400.3	9503.0	9102.5	8748.3	8658.1	8518.2	8381.6
55°	7875.2	7915.8	8237.2	8774.2	9457.9	9787.2	9649.7	9319.1	9228.8	9033.6	8884.8
57.5°	7172.3	7231.0	7699.2	8394.0	9313.5	9980.1	10130.2	9919.2	9832.4	9551.5	9395.8
60°	6255.2	6348.8	6884.7	7755.6	8945.7	9979.0	10566.7	10509.2	10437.1	10061.4	9898.9
62.5°	5217.4	5325.7	5841.2	6853.2	8302.7	9695.9	10839.8	11003.3	10966.1	10531.8	10324.2
65°	4006.9	4081.4	4594.7	5685.6	7302.1	9087.9	10871.4	11340.6	11347.4	10889.4	10546.4
67.5°	2667.9	2882.3	3327.9	4266.4	5961.9	8094.0	10593.8	11395.8	11461.3	11012.3	10434.8
70°	1301.9	1583.8	2020.4	2772.8	4266.4	6569.9	9868.5	10942.4	11087.9	10653.6	9769.2
72.5°	540.4	631.7	869.7	1368.4	2449.0	4433.3	8410.9	9712.8	9982.4	9439.8	8213.5
75°	364.4	394.8	497.5	701.7	1115.7	2186.2	6065.7	7242.2	7676.6	7129.5	5827.6
77.5°	280.8	300.1	362.1	490.7	663.3	826.9	3246.6	4364.6	4589.0	4248.3	3032.3
80°	221.1	235.7	270.7	357.6	470.4	442.2	1106.7	1977.5	2107.3	1767.7	974.7
82.5°	191.8	197.4	194.0	242.5	312.5	258.3	363.3	729.9	805.4	584.4	318.2
85°	138.8	154.6	161.3	150.1	165.8	130.9	148.9	258.3	284.2	253.8	179.4
87.5°	56.4	83.4	102.7	97.0	60.9	37.2	46.2	75.5	86.8	94.7	58.6
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°	2381.4	2381.4	2381.4	2381.4	2381.4	2381.4	2381.4	2381.4	2381.4	2381.4	2381.4
2.5°	2383.6	2391.5	2397.2	2403.9	2408.4	2415.2	2428.7	2436.6	2437.8	2443.4	2442.3
5°	2405.1	2416.3	2428.7	2446.8	2467.1	2484.1	2510.0	2528.1	2534.8	2540.5	2539.3
7.5°	2451.3	2467.1	2489.7	2521.3	2550.6	2573.2	2604.7	2626.2	2647.6	2655.5	2656.6
10°	2520.2	2542.7	2575.4	2618.3	2649.8	2679.1	2711.9	2730.0	2751.4	2760.4	2764.9
12.5°	2605.9	2629.5	2672.4	2732.2	2761.6	2781.8	2793.1	2788.6	2793.1	2801.0	2803.3
15°	2704.1	2730.0	2778.5	2842.7	2863.0	2845.0	2820.2	2797.6	2794.3	2796.5	2804.4
17.5°	2820.2	2839.4	2895.8	2950.0	2935.3	2860.8	2806.7	2770.6	2752.5	2746.9	2754.8
20°	2982.6	2982.6	3028.9	3062.7	2964.6	2838.2	2753.7	2695.0	2657.7	2641.9	2638.6
22.5°	3180.1	3162.0	3191.3	3167.7	2959.0	2775.1	2657.7	2556.2	2499.9	2477.2	2473.8
25°	3430.5	3409.0	3401.2	3254.5	2918.4	2674.6	2484.1	2361.1	2311.5	2299.1	2301.3
27.5°	3808.4	3754.3	3651.6	3301.9	2843.9	2516.8	2280.9	2167.1	2138.9	2140.0	2143.4
30°	4311.6	4203.2	3951.7	3309.8	2722.1	2293.4	2073.4	1992.2	1978.7	1984.3	2003.5
32.5°	4777.4	4674.8	4258.5	3273.6	2534.8	2074.5	1887.3	1833.1	1812.8	1819.6	1828.6
35°	5142.9	5114.8	4542.8	3222.9	2304.7	1869.2	1720.4	1674.0	1634.6	1625.5	1632.3
37.5°	5488.2	5476.9	4756.0	3151.9	2076.8	1723.7	1586.1	1525.2	1467.6	1436.0	1437.2
40°	5867.2	5855.8	4895.9	3042.4	1874.8	1597.4	1465.3	1385.3	1314.3	1256.6	1262.3
42.5°	6293.6	6227.0	4962.4	2885.7	1703.4	1490.2	1367.2	1258.9	1165.3	1112.3	1115.7
45°	6759.5	6609.4	4961.3	2686.0	1559.0	1392.1	1262.3	1108.9	1022.0	972.4	970.2
47.5°	7253.6	6974.9	4900.4	2464.8	1419.1	1283.7	1099.9	982.6	925.1	894.6	887.8
50°	7763.5	7316.8	4796.6	2211.0	1275.8	1160.8	998.4	918.3	874.2	846.0	835.9
52.5°	8242.9	7626.9	4671.4	1923.4	1130.4	1041.2	953.2	891.1	844.9	813.3	799.8
55°	8688.5	7894.3	4494.3	1628.9	1011.9	961.1	931.8	879.9	826.9	789.7	775.0
57.5°	9084.5	8068.1	4188.6	1352.6	927.3	905.9	909.3	860.7	799.8	768.2	747.9
60°	9413.8	8195.5	3736.2	1096.5	858.4	851.7	874.2	824.6	753.6	717.5	701.7
62.5°	9611.2	8193.2	3181.2	898.0	799.8	802.1	828.0	779.5	707.4	673.4	663.3
65°	9594.3	7992.4	2572.0	768.2	743.4	745.7	779.5	729.9	668.9	648.6	647.5
67.5°	9254.8	7502.9	1973.0	683.6	681.3	691.5	731.0	696.1	645.2	643.0	646.4
70°	8335.4	6486.5	1421.4	615.9	617.0	631.7	683.6	674.6	632.8	637.3	636.2
72.5°	6683.9	4945.5	954.4	544.9	546.0	569.7	638.5	657.6	620.4	680.2	689.2
75°	4451.4	3084.2	613.7	469.2	470.4	500.9	599.0	624.9	586.6	677.9	683.6
77.5°	2138.9	1386.4	444.4	394.8	394.8	423.0	517.8	559.5	499.8	526.8	482.8
80°	738.9	521.2	349.7	318.2	311.4	330.6	436.5	485.0	430.9	397.1	372.3
82.5°	291.0	270.7	280.8	247.0	224.5	236.9	339.6	400.5	317.0	286.5	285.4
85°	167.0	176.0	198.5	163.6	129.8	145.5	249.3	287.6	239.1	210.9	215.5
87.5°	45.1	62.0	91.3	84.6	58.6	62.0	118.5	159.1	137.7	106.1	109.5
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)