

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: P963028

Luminaire Tested: **NAV-SB2D-740-U-T4FT**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963028
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-24)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-740-U-T4FT
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 70 CRI, 4000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21812 lumens
Efficiency: N/A
Efficacy: 147.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
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



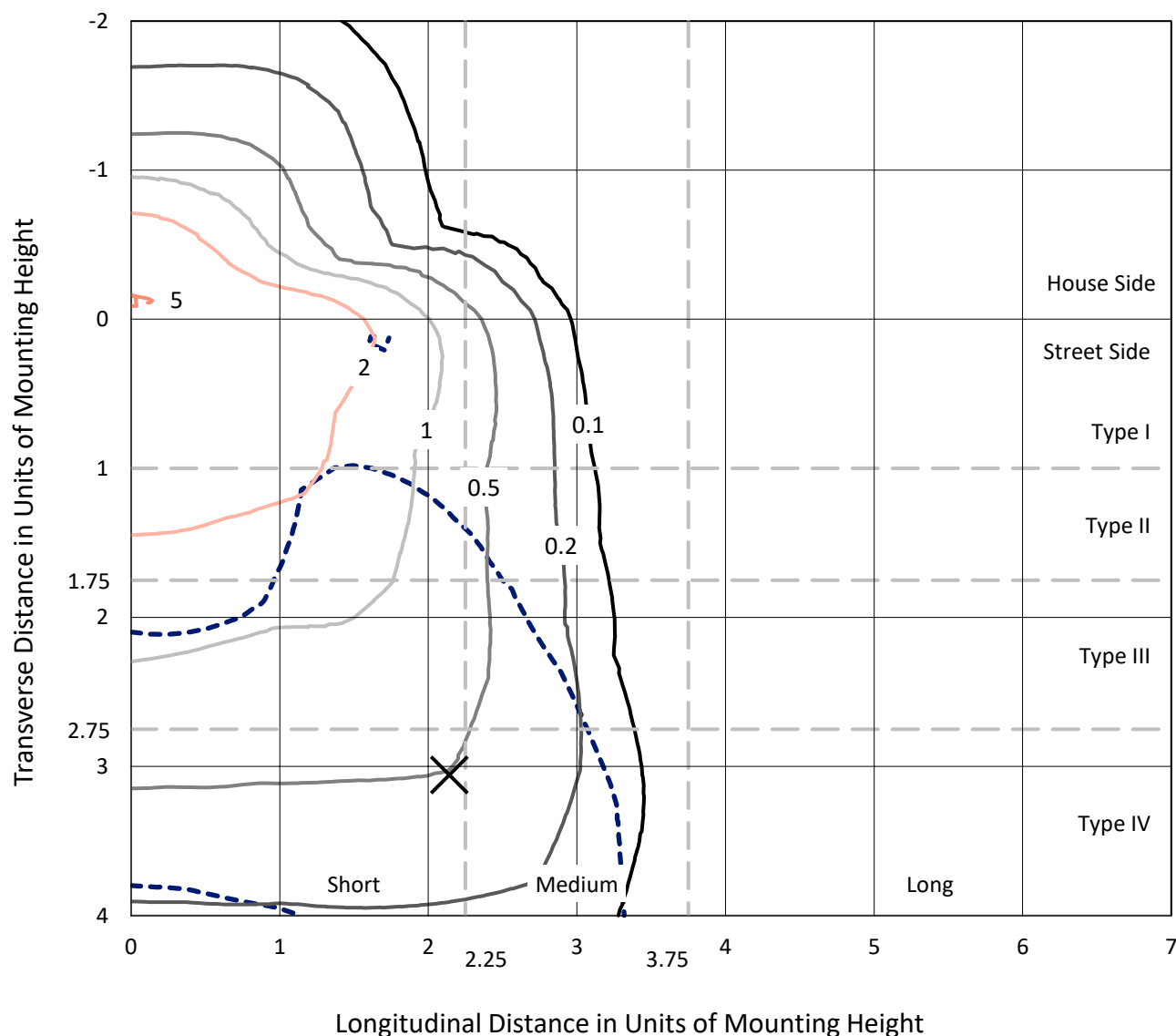
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

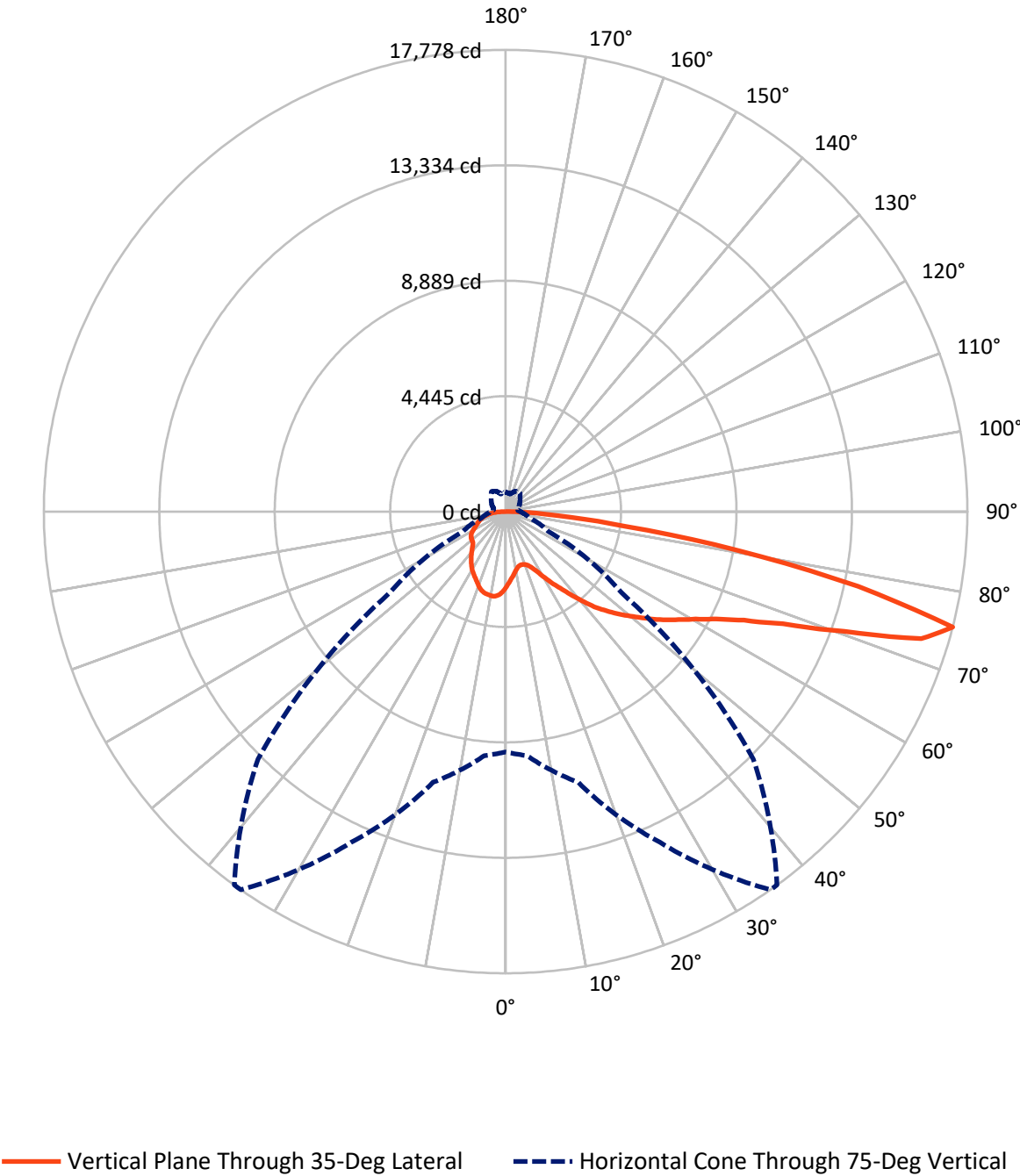


Based on 25 foot mounting height. Maximum calculated value = 5.1 fc

Type IV - Short - N/A

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Luminous Intensity Polar Plot



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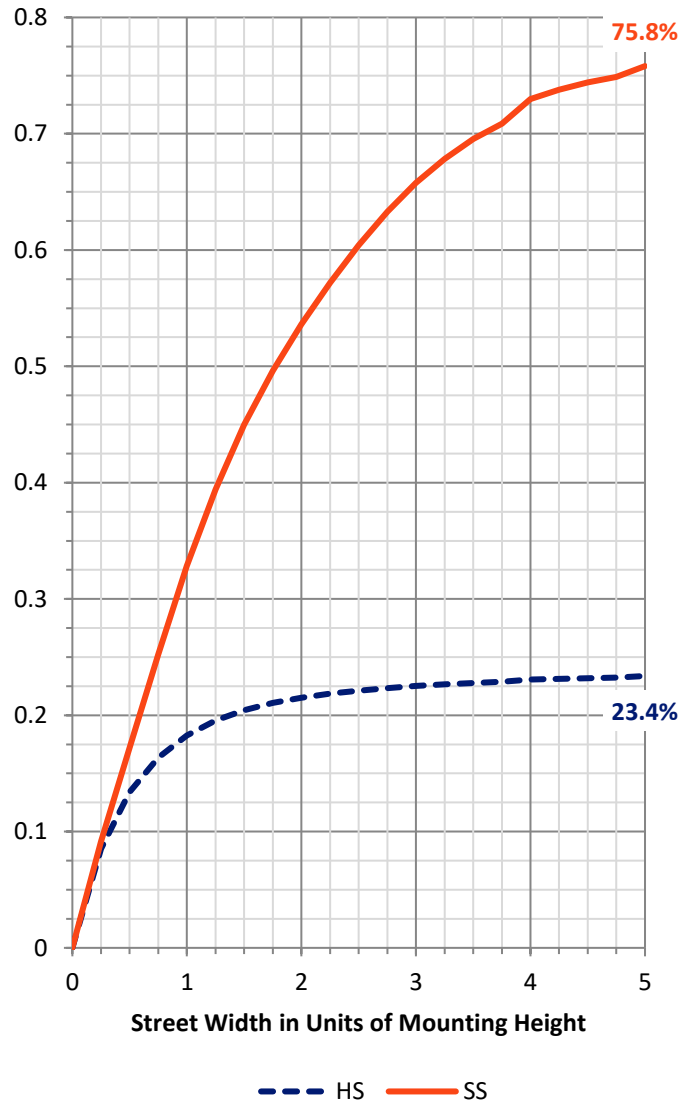
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5190.7	0.0	5190.7
	% Fixture	23.8	0.0	23.8
Street Side	Lumens	16621.3	0.0	16621.3
	% Fixture	76.2	0.0	76.2
Total	Lumens	21812.0	0.0	21812.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	275.2	1.3
10°-20°	793.8	3.6
20°-30°	1333.0	6.1
30°-40°	2071.6	9.5
40°-50°	3074.9	14.1
50°-60°	4245.0	19.5
60°-70°	5150.2	23.6
70°-80°	4256.2	19.5
80°-90°	612.2	2.8
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°	21812.0	100.0
0°-180°	21812.0	100.0

Coefficient of Utilization



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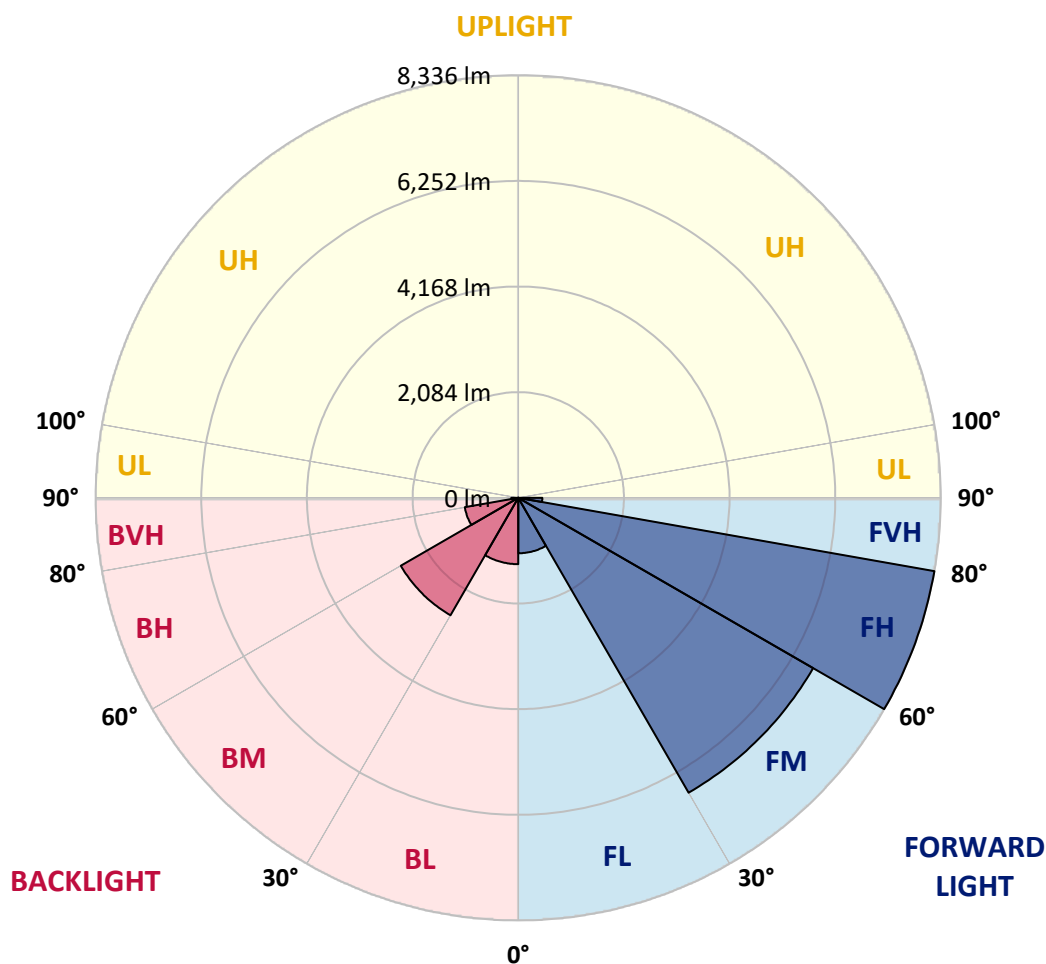
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1093.8	5.0			
FM	(30°-60°)	6716.9	30.8			
FH	(60°-80°)	8336.2	38.2			G4/12000
FVH	(80°-90°)	474.3	2.2			G3/500
BL	(0°-30°)	1308.1	6.0	B3/2500		
BM	(30°-60°)	2674.6	12.3	B3/5000		
BH	(60°-80°)	1070.2	4.9	B3/2500		G3/2500
BVH	(80°-90°)	137.8	0.6			G2/225
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 Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	2906.6	2906.6	2906.6	2906.6	2906.6	2906.6	2906.6	2906.6	2906.6	2906.6	2906.6
2.5°	2680.2	2696.7	2703.7	2700.3	2717.9	2715.5	2740.3	2771.0	2813.4	2854.7	2914.9
5°	2473.8	2491.6	2506.8	2521.0	2555.2	2565.8	2604.7	2663.7	2741.5	2820.5	2919.6
7.5°	2281.6	2297.0	2320.6	2346.5	2404.2	2414.9	2479.8	2571.7	2680.2	2795.8	2932.5
10°	2124.8	2140.2	2164.9	2194.4	2266.3	2279.3	2361.8	2484.5	2625.9	2772.2	2946.7
12.5°	2057.6	2062.3	2076.4	2106.0	2168.5	2176.7	2267.5	2407.8	2572.9	2754.5	2967.9
15°	2054.1	2063.5	2064.7	2080.0	2131.9	2135.5	2219.1	2358.3	2539.8	2751.0	2999.8
17.5°	2089.5	2096.5	2085.9	2095.3	2139.0	2144.9	2210.9	2334.7	2529.3	2766.3	3054.0
20°	2183.8	2189.7	2157.8	2144.9	2176.7	2181.4	2246.3	2350.0	2539.8	2798.1	3128.3
22.5°	2384.3	2387.7	2309.9	2256.8	2259.2	2261.6	2318.2	2412.5	2581.2	2855.9	3222.6
25°	2696.7	2694.3	2570.5	2468.0	2409.0	2396.0	2433.8	2513.9	2650.8	2932.5	3344.1
27.5°	3062.3	3044.6	2920.7	2767.5	2639.0	2620.1	2611.8	2646.0	2749.8	3033.9	3492.6
30°	3475.0	3458.5	3325.2	3124.7	2946.7	2916.0	2838.2	2820.5	2897.2	3171.9	3699.0
32.5°	3927.7	3917.1	3758.0	3515.0	3276.8	3241.5	3110.6	3063.4	3123.6	3380.7	3986.7
35°	4307.5	4298.0	4165.9	3915.9	3624.7	3581.0	3447.8	3394.8	3425.4	3648.3	4362.8
37.5°	4650.5	4645.8	4532.7	4335.8	4035.0	3982.0	3832.3	3814.5	3808.7	4000.9	4819.1
40°	4968.9	4957.1	4839.2	4735.5	4512.6	4464.3	4332.2	4316.9	4272.1	4434.8	5335.6
42.5°	5321.5	5290.8	5119.9	5071.5	5011.3	4971.2	4892.3	4894.7	4795.6	4924.1	5882.8
45°	5609.2	5591.5	5415.8	5387.5	5452.4	5435.9	5504.2	5522.0	5329.7	5437.0	6451.1
47.5°	5918.1	5901.6	5753.0	5733.0	5908.7	5913.4	6155.1	6161.1	5850.9	5970.0	7020.6
50°	6299.0	6275.5	6128.1	6152.8	6349.7	6367.4	6809.6	6769.5	6330.8	6511.2	7585.4
52.5°	6550.2	6564.3	6532.4	6572.6	6841.4	6858.0	7453.4	7350.8	6806.0	7045.4	8139.6
55°	6735.3	6763.6	6862.7	6954.6	7360.2	7376.7	8060.6	7903.8	7199.9	7540.6	8660.8
57.5°	6973.5	6933.4	7118.5	7297.7	7853.1	7896.7	8651.4	8436.8	7548.9	7967.5	9018.2
60°	7315.4	7287.1	7430.9	7696.3	8405.0	8474.5	9276.4	8916.7	7804.8	8305.9	9087.6
62.5°	8008.7	7938.0	7960.5	8195.1	9100.7	9192.6	9981.4	9335.3	7932.2	8438.0	8715.1
65°	9045.2	8923.8	8810.6	8973.3	10080.6	10171.3	10777.4	9664.3	7884.9	8182.1	7725.7
67.5°	10350.6	10230.3	10091.1	10244.5	11523.8	11595.7	11759.6	9849.4	7513.6	7196.3	5977.1
70°	11427.1	11382.3	11548.6	12179.4	13829.0	13831.4	13018.9	9696.1	6495.9	5102.1	3458.5
72.5°	11284.4	11257.3	12133.4	14083.7	16734.5	16671.9	14211.1	8535.9	4375.8	2301.7	1295.9
75°	9257.5	9433.2	10790.4	14049.6	17778.0	17769.7	13481.2	5426.5	1809.9	954.0	669.7
77.5°	4964.2	5242.5	7005.3	10373.0	13878.6	14087.3	9478.0	1898.4	777.1	610.8	463.4
80°	1619.0	1861.9	2792.2	5281.4	9018.2	8979.2	4062.2	745.2	531.8	432.8	320.7
82.5°	687.5	715.8	1247.5	2493.9	4628.2	4556.2	1293.6	428.0	373.8	295.9	198.1
85°	268.9	300.6	550.6	1153.2	2004.6	1960.9	467.0	212.3	239.3	193.4	117.9
87.5°	88.5	107.3	196.9	395.0	623.8	601.4	114.4	73.1	103.7	88.5	42.4
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°	2906.6	2906.6	2906.6	2906.6	2906.6	2906.6	2906.6	2906.6	2906.6	2906.6	2906.6
2.5°	2931.4	2950.3	2972.6	3005.6	3033.9	3057.6	3082.3	3097.7	3103.5	3121.2	3120.0
5°	2952.6	2993.8	3049.3	3103.5	3156.6	3188.4	3216.8	3230.9	3243.8	3253.2	3255.6
7.5°	2988.0	3041.0	3128.3	3199.0	3243.8	3269.7	3288.6	3283.9	3288.6	3291.0	3294.6
10°	3018.6	3092.9	3196.7	3263.9	3298.0	3299.3	3294.6	3278.1	3269.7	3271.0	3273.3
12.5°	3055.2	3137.7	3249.8	3306.3	3315.8	3289.8	3269.7	3241.5	3230.9	3226.2	3223.8
15°	3104.7	3199.0	3307.5	3328.7	3305.1	3272.1	3238.0	3192.0	3168.4	3149.5	3155.4
17.5°	3164.8	3268.6	3352.4	3337.0	3286.3	3232.0	3176.6	3107.1	3058.7	3038.6	3039.8
20°	3248.5	3341.7	3386.5	3319.3	3242.7	3160.1	3065.8	2980.9	2936.1	2916.0	2913.7
22.5°	3349.9	3439.6	3419.5	3288.6	3180.2	3048.1	2930.2	2867.6	2845.3	2831.2	2833.5
25°	3471.4	3548.0	3443.1	3243.8	3077.6	2899.5	2808.7	2788.7	2778.1	2767.5	2767.5
27.5°	3629.4	3670.7	3460.8	3177.8	2917.3	2741.5	2708.5	2712.0	2708.5	2690.8	2694.3
30°	3838.1	3829.9	3477.3	3070.5	2733.3	2598.9	2601.2	2616.5	2618.9	2607.1	2613.0
32.5°	4112.8	4029.2	3485.5	2931.4	2557.6	2473.8	2476.2	2492.7	2504.5	2484.5	2493.9
35°	4445.4	4261.4	3472.6	2756.8	2422.0	2354.7	2337.1	2341.8	2345.3	2326.4	2339.5
37.5°	4833.3	4522.0	3414.8	2563.4	2309.9	2238.0	2200.3	2168.5	2149.6	2131.9	2143.7
40°	5259.0	4806.2	3308.7	2374.8	2185.0	2114.2	2057.6	1997.5	1933.8	1910.2	1920.8
42.5°	5704.7	5098.7	3180.2	2194.4	2041.1	1983.4	1923.2	1836.0	1740.4	1692.1	1698.0
45°	6166.9	5398.2	3054.0	2016.4	1893.7	1869.0	1799.4	1694.4	1590.7	1529.4	1524.7
47.5°	6619.8	5681.2	2868.9	1837.1	1755.7	1782.9	1728.7	1631.9	1516.4	1419.7	1409.1
50°	7052.5	5946.4	2565.8	1655.5	1643.7	1757.0	1705.1	1565.9	1433.9	1310.1	1299.4
52.5°	7481.7	6161.1	2177.9	1490.5	1583.6	1749.9	1674.3	1521.1	1359.6	1229.9	1215.6
55°	7846.1	6271.9	1804.1	1348.9	1496.3	1689.7	1637.8	1468.0	1254.6	1116.6	1104.8
57.5°	8053.5	6182.3	1492.8	1209.8	1376.1	1590.7	1575.3	1354.8	1129.7	1023.5	1009.3
60°	7963.9	5819.1	1238.1	1088.3	1261.7	1483.4	1466.9	1242.8	1034.1	933.9	919.7
62.5°	7469.9	5126.9	1036.5	982.3	1157.9	1373.7	1358.3	1156.7	961.0	864.3	849.0
65°	6474.7	4170.6	879.7	893.8	1053.0	1241.7	1264.0	1084.9	903.2	808.9	793.6
67.5°	4938.2	3021.0	757.0	817.1	950.4	1111.9	1176.8	1032.9	854.8	765.3	751.1
70°	2814.6	1715.6	653.2	742.8	859.6	991.7	1109.6	991.7	803.0	728.7	719.2
72.5°	1067.1	787.7	564.8	668.6	772.3	890.2	1035.2	926.8	742.8	687.5	678.0
75°	569.5	479.9	475.2	581.3	672.1	791.2	942.2	863.2	698.0	726.3	749.9
77.5°	388.0	339.6	397.4	497.6	562.4	681.5	843.1	766.5	604.9	602.5	555.3
80°	268.9	240.6	323.1	400.9	435.1	573.1	735.7	657.9	492.9	459.9	439.8
82.5°	161.5	156.8	241.7	299.5	307.8	442.2	609.7	551.9	403.2	351.4	353.7
85°	88.5	93.2	154.5	175.7	179.3	308.9	477.5	426.8	310.2	260.6	262.9
87.5°	24.8	31.9	56.6	69.6	86.1	160.4	284.1	253.5	155.7	108.4	108.4
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)