

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: P962997

Luminaire Tested: **NAV-SB2D-735-U-T4FT**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P962997
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-735-U-T4FT
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 70 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20616.8 lumens
Efficiency: N/A
Efficacy: 139.7 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



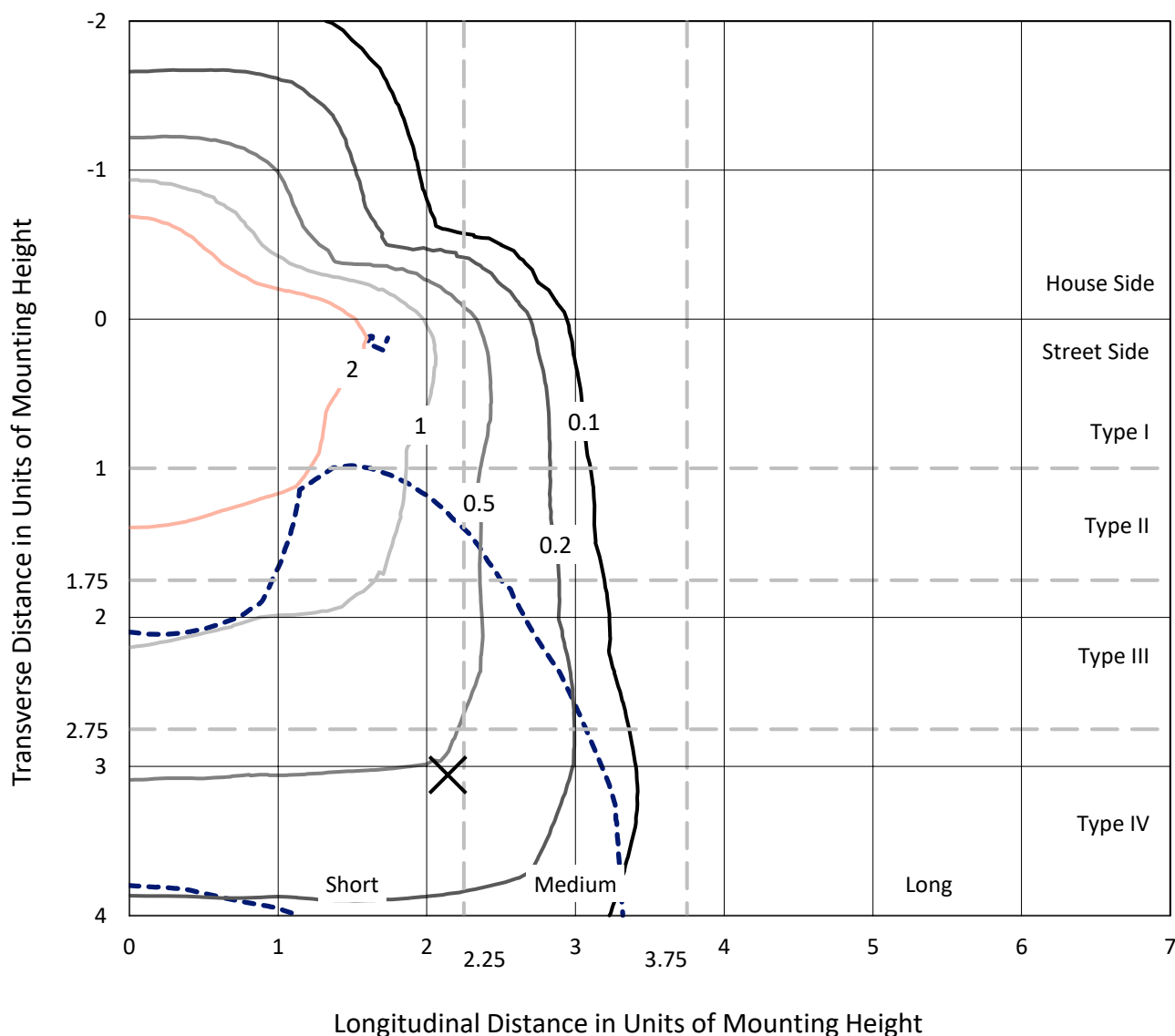
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

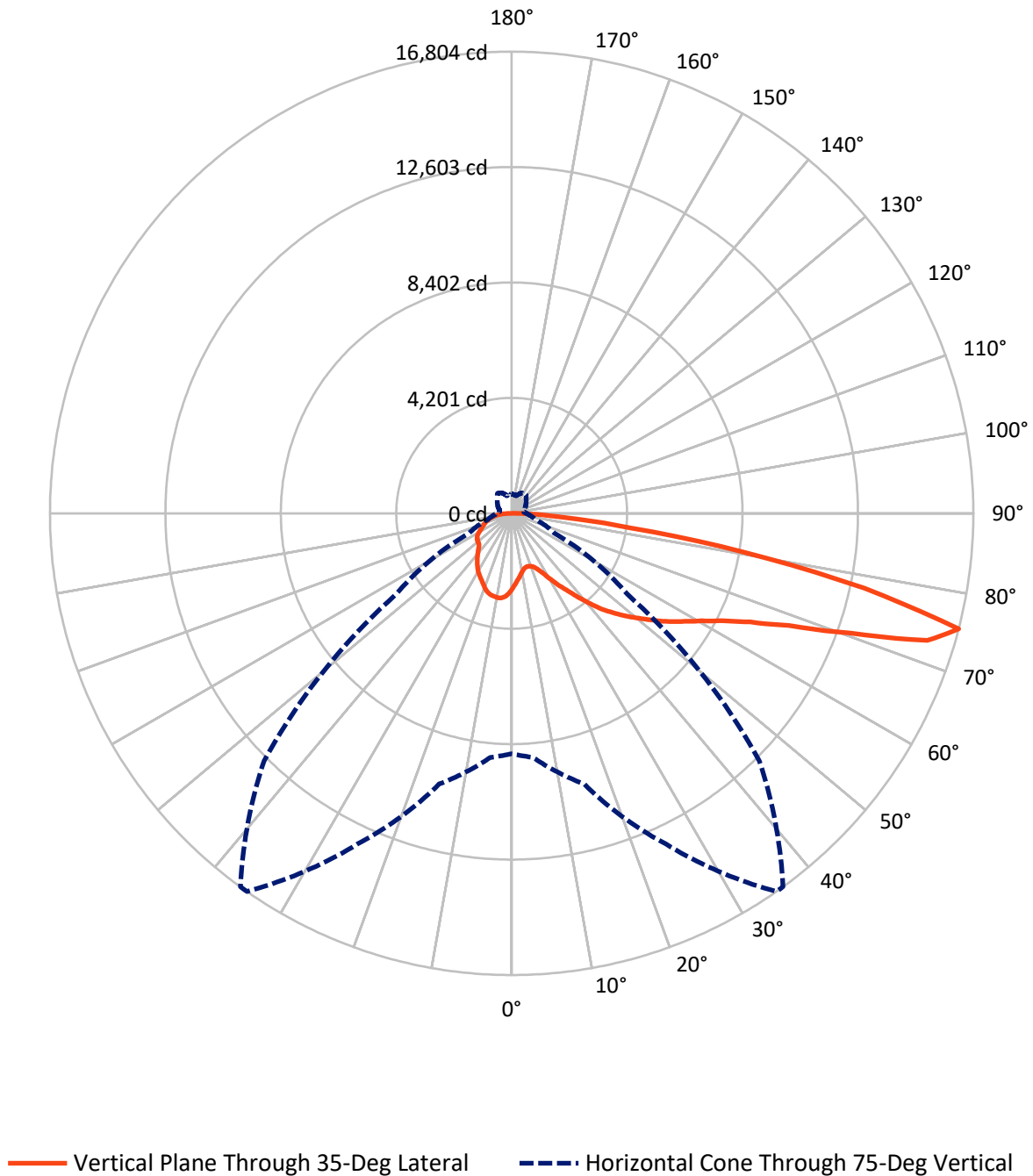


Based on 25 foot mounting height. Maximum calculated value = 4.9 fc

Type IV - Short - N/A

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Luminous Intensity Polar Plot



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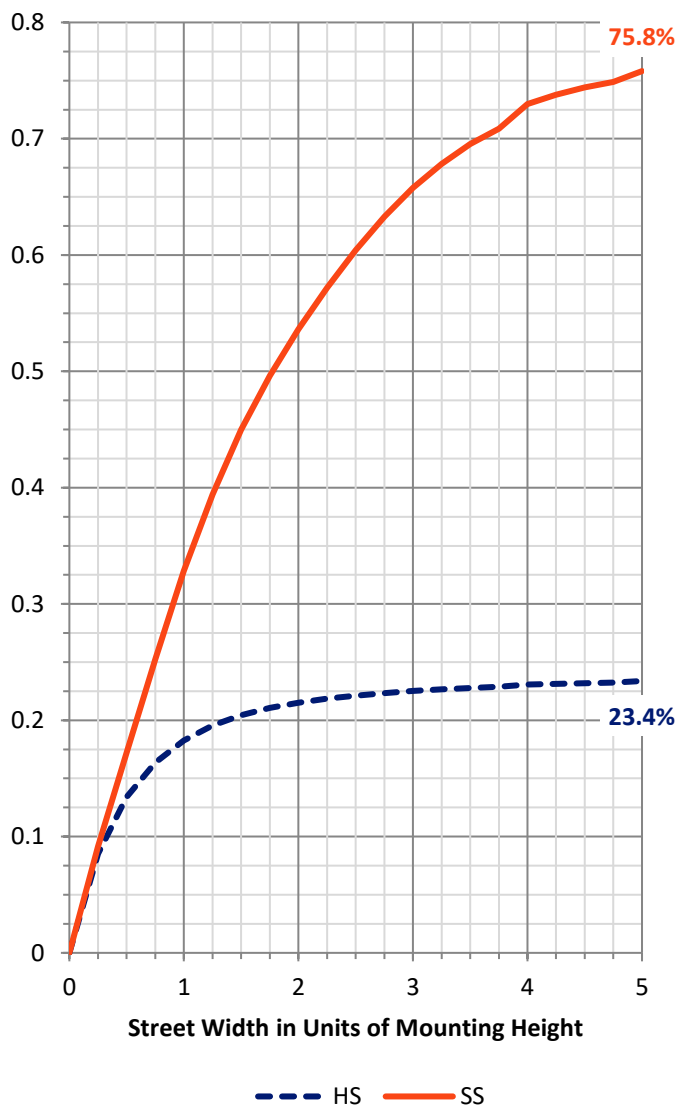
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4906.3	0.0	4906.3
	% Fixture	23.8	0.0	23.8
Street Side	Lumens	15710.5	0.0	15710.5
	% Fixture	76.2	0.0	76.2
Total	Lumens	20616.8	0.0	20616.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	260.1	1.3
10°-20°	750.3	3.6
20°-30°	1259.9	6.1
30°-40°	1958.1	9.5
40°-50°	2906.4	14.1
50°-60°	4012.4	19.5
60°-70°	4868.0	23.6
70°-80°	4023.0	19.5
80°-90°	578.6	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°	20616.8	100.0
0°-180°	20616.8	100.0

Coefficient of Utilization



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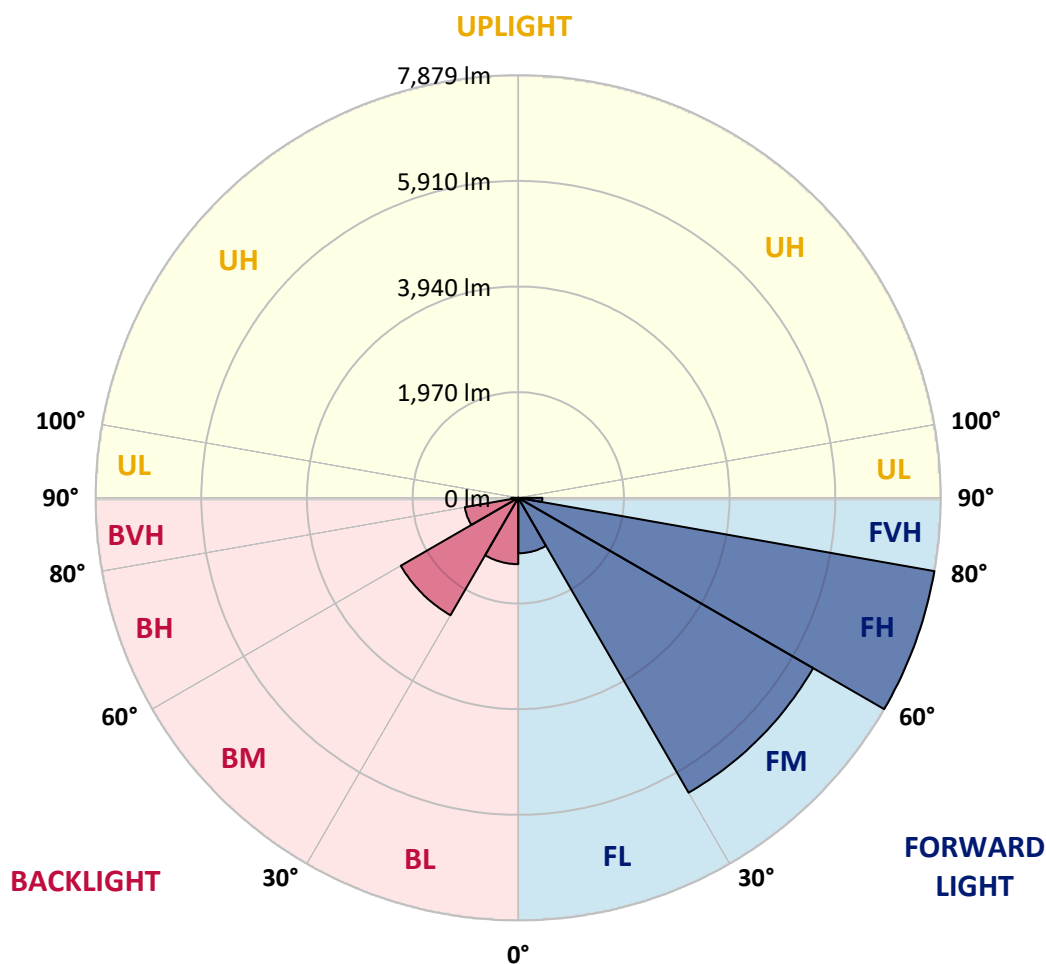
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1033.9	5.0			
FM	(30°-60°)	6348.9	30.8			
FH	(60°-80°)	7879.5	38.2			G4/12000
FVH	(80°-90°)	448.3	2.2			G3/500
BL	(0°-30°)	1236.4	6.0	B3/2500		
BM	(30°-60°)	2528.0	12.3	B3/5000		
BH	(60°-80°)	1011.5	4.9	B3/2500		G3/2500
BVH	(80°-90°)	130.3	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°	2747.3	2747.3	2747.3	2747.3	2747.3	2747.3	2747.3	2747.3	2747.3	2747.3	2747.3
2.5°	2533.4	2549.0	2555.6	2552.2	2569.0	2566.8	2590.2	2619.2	2659.3	2698.3	2755.1
5°	2338.3	2355.0	2369.5	2382.9	2415.2	2425.3	2462.0	2517.7	2591.3	2665.9	2759.6
7.5°	2156.6	2171.2	2193.4	2217.9	2272.5	2282.6	2343.9	2430.8	2533.4	2642.6	2771.8
10°	2008.4	2022.8	2046.3	2074.2	2142.1	2154.4	2232.4	2348.4	2482.0	2620.3	2785.2
12.5°	1944.8	1949.3	1962.7	1990.5	2049.6	2057.5	2143.3	2275.9	2431.9	2603.6	2805.3
15°	1941.6	1950.5	1951.6	1966.1	2015.0	2018.4	2097.6	2229.1	2400.8	2600.2	2835.4
17.5°	1975.0	1981.6	1971.6	1980.5	2021.8	2027.3	2089.8	2206.8	2390.7	2614.7	2886.6
20°	2064.1	2069.7	2039.6	2027.3	2057.5	2061.9	2123.2	2221.3	2400.8	2644.8	2956.8
22.5°	2253.6	2256.9	2183.4	2133.2	2135.5	2137.6	2191.1	2280.3	2439.7	2699.4	3046.0
25°	2549.0	2546.7	2429.7	2332.7	2277.0	2264.7	2300.4	2376.2	2505.5	2771.8	3160.8
27.5°	2894.5	2877.7	2760.7	2615.8	2494.3	2476.5	2468.7	2501.0	2599.1	2867.7	3301.2
30°	3284.5	3268.9	3143.0	2953.5	2785.2	2756.2	2682.7	2665.9	2738.4	2998.1	3496.3
32.5°	3712.6	3702.5	3552.0	3322.4	3097.3	3063.8	2940.1	2895.5	2952.4	3195.3	3768.2
35°	4071.4	4062.5	3937.6	3701.4	3426.1	3384.9	3258.9	3208.8	3237.8	3448.4	4123.8
37.5°	4395.7	4391.3	4284.3	4098.2	3813.9	3763.8	3622.2	3605.5	3600.0	3781.6	4555.1
40°	4696.7	4685.5	4574.1	4476.0	4265.3	4219.6	4094.8	4080.3	4038.0	4191.7	5043.3
42.5°	5029.9	5001.0	4839.3	4793.6	4736.8	4698.9	4624.2	4626.4	4532.9	4654.3	5560.4
45°	5301.8	5285.1	5119.1	5092.3	5153.6	5138.0	5202.7	5219.4	5037.7	5139.1	6097.6
47.5°	5593.8	5578.3	5437.8	5418.9	5584.9	5589.4	5817.9	5823.4	5530.3	5642.9	6636.0
50°	5953.8	5931.6	5792.3	5815.6	6001.8	6018.5	6436.5	6398.6	5984.0	6154.5	7169.8
52.5°	6191.2	6204.6	6174.5	6212.4	6466.5	6482.1	7045.0	6948.1	6433.1	6659.3	7693.6
55°	6366.3	6393.0	6486.6	6573.5	6957.0	6972.6	7618.9	7470.7	6805.4	7127.4	8186.3
57.5°	6591.4	6553.4	6728.5	6897.8	7422.8	7464.0	8177.3	7974.5	7135.2	7530.9	8524.0
60°	6914.5	6887.8	7023.8	7274.6	7944.5	8010.2	8768.1	8428.2	7377.1	7850.8	8589.7
62.5°	7569.9	7503.1	7524.2	7746.0	8602.0	8688.9	9434.5	8823.8	7497.5	7975.6	8237.5
65°	8549.6	8434.8	8327.8	8481.7	9528.2	9614.0	10186.9	9134.7	7452.9	7733.7	7302.4
67.5°	9783.4	9669.7	9538.2	9683.1	10892.4	10960.3	11115.3	9309.8	7101.8	6802.0	5649.6
70°	10800.9	10758.6	10915.7	11512.1	13071.3	13073.6	12305.6	9164.8	6140.0	4822.6	3268.9
72.5°	10666.2	10640.5	11468.6	13312.1	15817.5	15758.5	13432.4	8068.2	4136.1	2175.6	1224.9
75°	8750.2	8916.3	10199.2	13279.7	16803.8	16796.1	12742.5	5129.1	1710.8	901.7	633.0
77.5°	4692.2	4955.3	6621.5	9804.5	13118.2	13315.4	8958.6	1794.4	734.5	577.3	438.0
80°	1530.2	1759.8	2639.3	4992.1	8524.0	8487.2	3839.5	704.4	502.7	409.1	303.2
82.5°	649.7	676.5	1179.2	2357.3	4374.6	4306.5	1222.6	404.6	353.3	279.7	187.3
85°	254.1	284.2	520.5	1090.0	1894.7	1853.5	441.4	200.6	226.2	182.8	111.4
87.5°	83.6	101.4	186.1	373.4	589.6	568.5	108.1	69.1	98.1	83.6	40.1
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°	2747.3	2747.3	2747.3	2747.3	2747.3	2747.3	2747.3	2747.3	2747.3	2747.3	2747.3
2.5°	2770.8	2788.6	2809.7	2841.0	2867.7	2890.0	2913.4	2927.9	2933.4	2950.2	2949.0
5°	2790.8	2829.8	2882.2	2933.4	2983.6	3013.7	3040.5	3053.8	3066.1	3075.0	3077.3
7.5°	2824.3	2874.4	2956.8	3023.7	3066.1	3090.6	3108.4	3104.0	3108.4	3110.7	3114.1
10°	2853.2	2923.4	3021.5	3085.0	3117.3	3118.5	3114.1	3098.4	3090.6	3091.7	3094.0
12.5°	2887.7	2965.7	3071.6	3125.1	3134.0	3109.5	3090.6	3063.8	3053.8	3049.4	3047.1
15°	2934.6	3023.7	3126.2	3146.3	3124.1	3092.8	3060.5	3017.1	2994.7	2976.9	2982.5
17.5°	2991.5	3089.5	3168.6	3154.1	3106.3	3054.9	3002.5	2936.8	2891.1	2872.2	2873.3
20°	3070.6	3158.6	3201.0	3137.4	3065.0	2987.0	2897.8	2817.5	2775.2	2756.2	2754.1
22.5°	3166.4	3251.1	3232.1	3108.4	3005.9	2881.1	2769.7	2710.5	2689.4	2676.0	2678.2
25°	3281.2	3353.6	3254.5	3066.1	2909.0	2740.6	2654.9	2635.9	2625.8	2615.8	2615.8
27.5°	3430.6	3469.5	3271.2	3003.7	2757.4	2591.3	2560.1	2563.4	2560.1	2543.3	2546.7
30°	3627.8	3620.0	3286.8	2902.3	2583.5	2456.4	2458.7	2473.1	2475.4	2464.2	2469.8
32.5°	3887.5	3808.4	3294.6	2770.8	2417.5	2338.3	2340.5	2356.2	2367.2	2348.4	2357.3
35°	4201.8	4027.9	3282.4	2605.8	2289.2	2225.7	2209.0	2213.5	2216.8	2198.9	2211.2
37.5°	4568.5	4274.2	3227.7	2423.0	2183.4	2115.4	2079.7	2049.6	2031.8	2015.0	2026.2
40°	4970.8	4542.9	3127.4	2244.6	2065.3	1998.3	1944.8	1888.0	1827.9	1805.5	1815.6
42.5°	5392.1	4819.2	3005.9	2074.2	1929.3	1874.6	1817.8	1735.3	1645.0	1599.4	1604.9
45°	5829.1	5102.3	2886.6	1905.9	1790.0	1766.6	1700.8	1601.6	1503.5	1445.6	1441.0
47.5°	6257.0	5369.9	2711.6	1736.5	1659.6	1685.2	1634.0	1542.5	1433.3	1341.9	1331.9
50°	6666.1	5620.6	2425.3	1564.8	1553.7	1660.7	1611.6	1480.1	1355.3	1238.2	1228.3
52.5°	7071.8	5823.4	2058.5	1408.8	1496.8	1653.9	1582.6	1437.8	1285.0	1162.5	1149.1
55°	7416.2	5928.2	1705.3	1275.0	1414.4	1597.2	1548.1	1387.6	1185.8	1055.4	1044.4
57.5°	7612.3	5843.5	1411.0	1143.5	1300.6	1503.5	1489.0	1280.6	1067.7	967.4	954.1
60°	7527.6	5500.3	1170.2	1028.7	1192.6	1402.1	1386.5	1174.8	977.4	882.7	869.3
62.5°	7060.6	4846.0	979.7	928.4	1094.5	1298.5	1283.9	1093.4	908.4	816.9	802.5
65°	6120.0	3942.2	831.5	844.8	995.3	1173.6	1194.7	1025.4	853.7	764.5	750.1
67.5°	4667.6	2855.4	715.6	772.3	898.3	1051.0	1112.3	976.3	808.0	723.3	709.9
70°	2660.4	1621.7	617.5	702.1	812.5	937.4	1048.8	937.4	759.0	688.8	679.9
72.5°	1008.7	744.6	533.8	631.9	730.0	841.5	978.6	876.1	702.1	649.7	640.8
75°	538.3	453.7	449.2	549.5	635.3	747.8	890.5	815.8	659.8	686.5	708.9
77.5°	366.6	321.0	375.6	470.4	531.7	644.2	796.9	724.5	571.7	569.5	524.9
80°	254.1	227.3	305.3	378.9	411.2	541.7	695.5	621.9	465.9	434.7	415.7
82.5°	152.7	148.2	228.5	283.1	290.9	418.0	576.3	521.6	381.2	332.1	334.4
85°	83.6	88.0	146.0	166.0	169.4	292.0	451.4	403.4	293.2	246.3	248.6
87.5°	23.4	30.1	53.5	65.8	81.4	151.6	268.7	239.6	147.1	102.5	102.5
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)