

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: P963184

Luminaire Tested: **NAV-SB2D-835-U-T4W-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963184
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-2)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-835-U-T4W-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV WIDE
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14903.5 lumens
Efficiency: N/A
Efficacy: 101.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

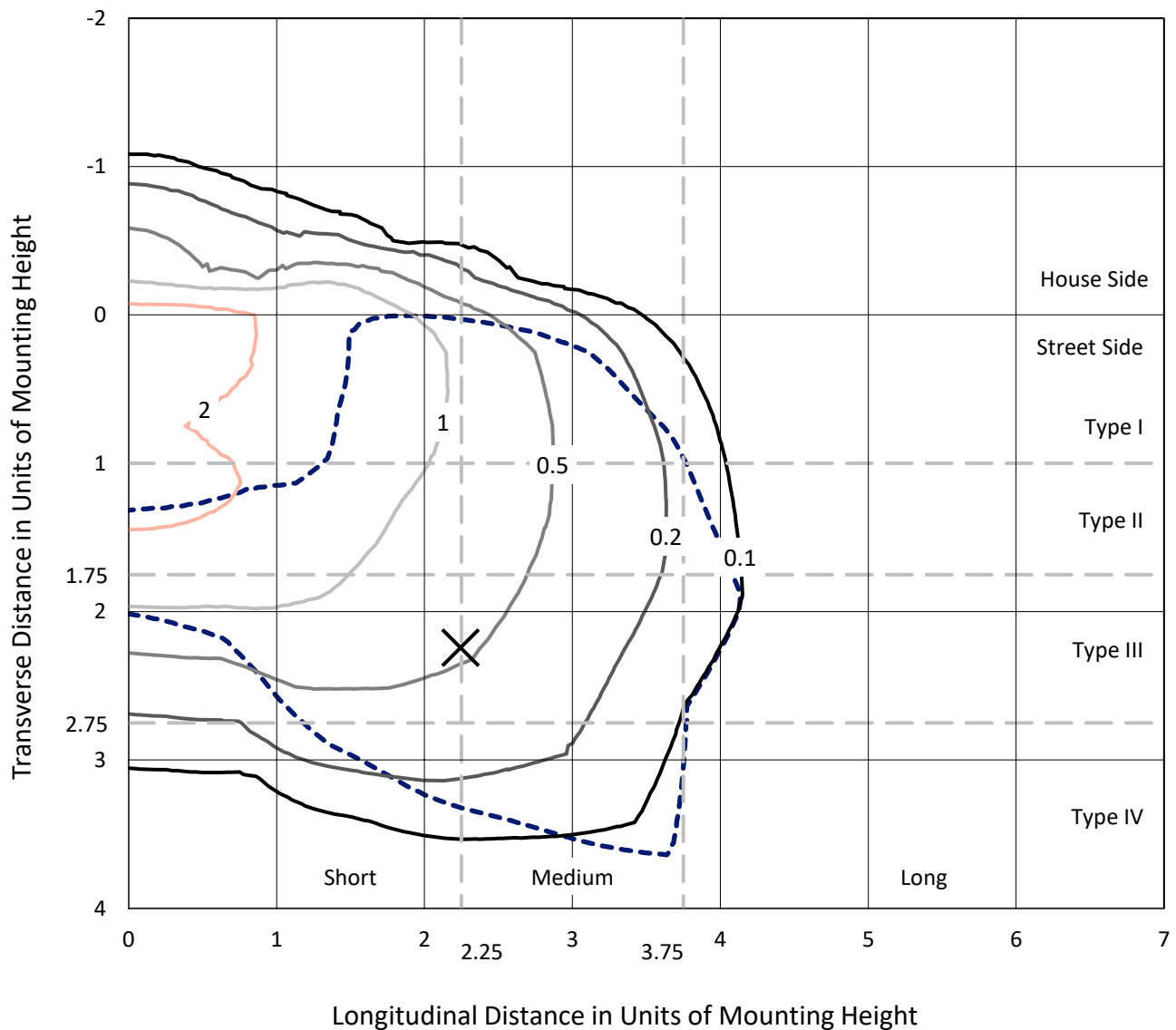
Input Watts (W): 147.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

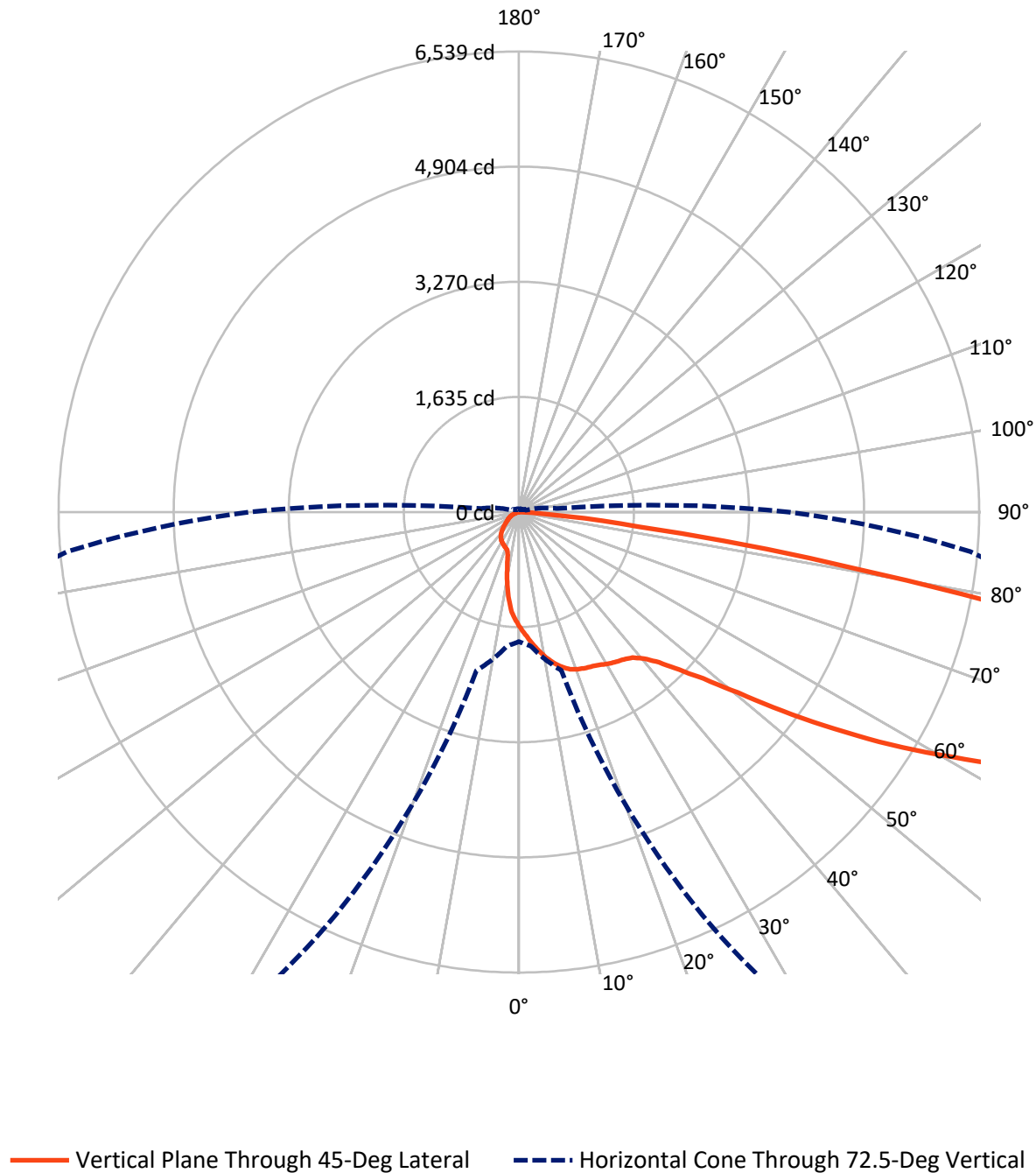
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.6 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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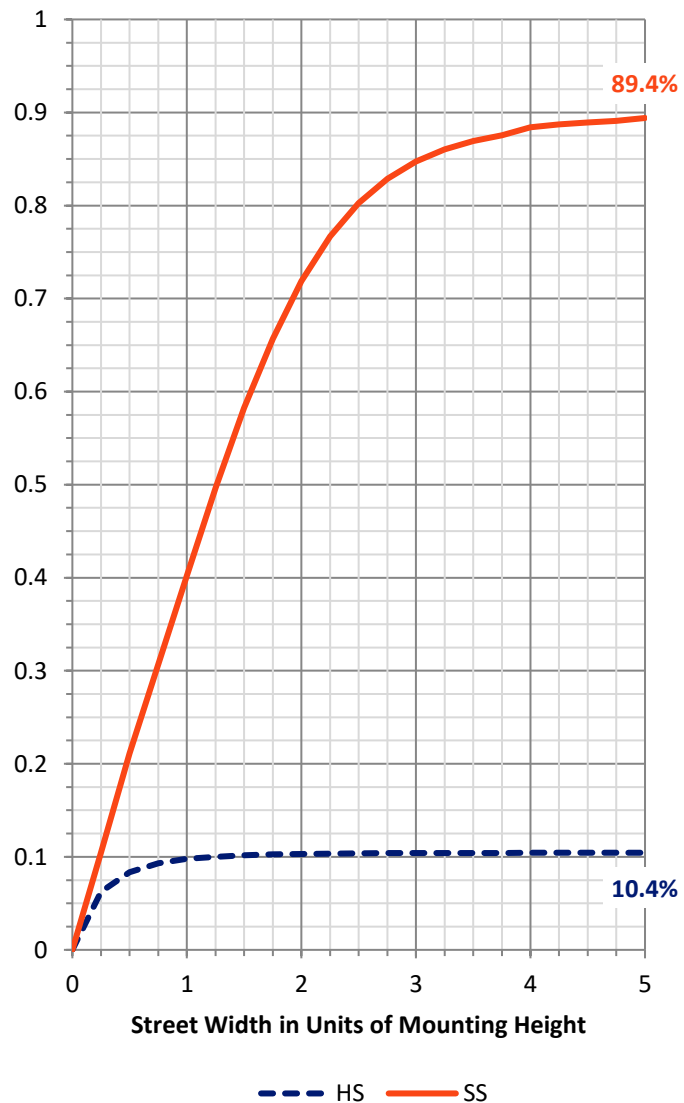
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1565.9	0.0	1565.9
	% Fixture	10.5	0.0	10.5
Street Side	Lumens	13337.5	0.0	13337.5
	% Fixture	89.5	0.0	89.5
Total	Lumens	14903.5	0.0	14903.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.8	1.0
10°-20°	449.6	3.0
20°-30°	738.3	5.0
30°-40°	1047.1	7.0
40°-50°	1730.7	11.6
50°-60°	3109.0	20.9
60°-70°	4317.1	29.0
70°-80°	3131.5	21.0
80°-90°	226.4	1.5
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°	14903.5	100.0
0°-180°	14903.5	100.0

Coefficient of Utilization



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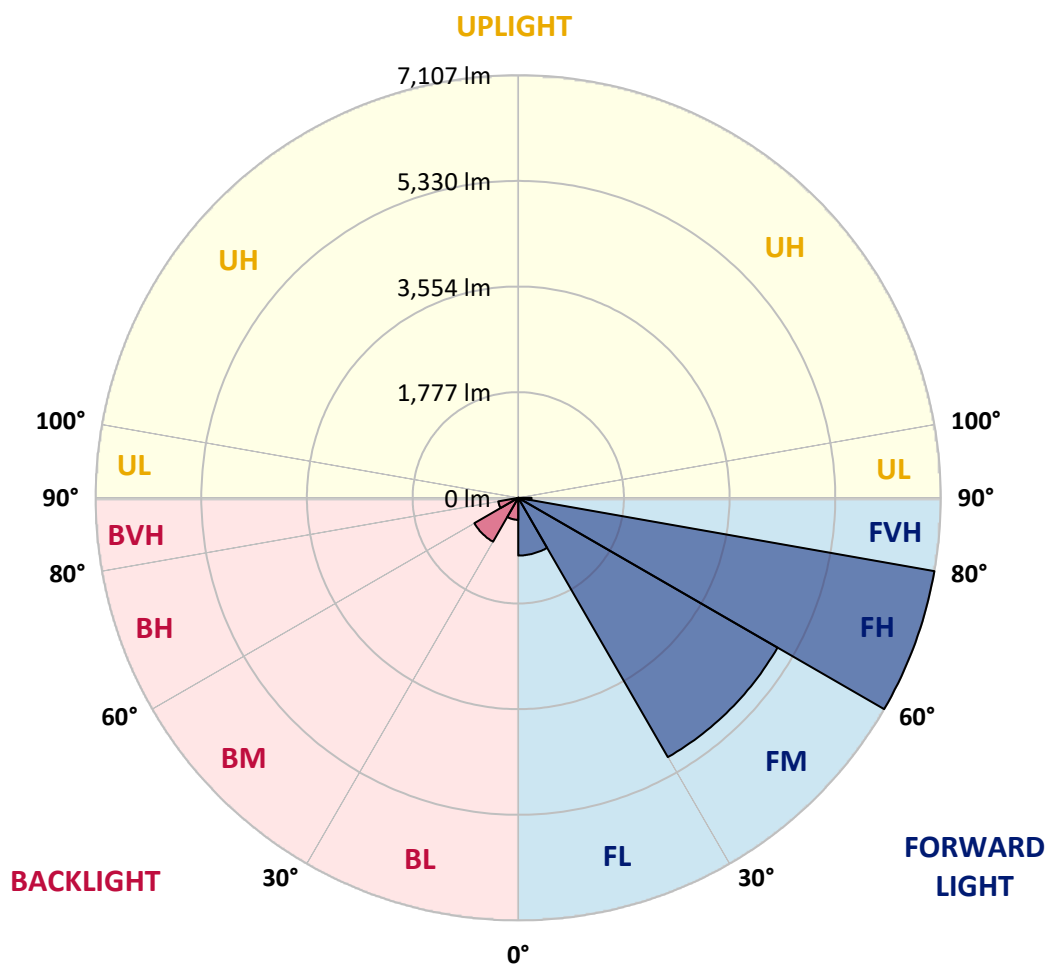
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	970.8	6.5			
FM	(30°-60°)	5035.2	33.8			
FH	(60°-80°)	7107.0	47.7			G3/7500
FVH	(80°-90°)	224.5	1.5			G2/225
BL	(0°-30°)	370.9	2.5	B1/500		
BM	(30°-60°)	851.6	5.7	B1/1000		
BH	(60°-80°)	341.5	2.3	B1/500		G1/500
BVH	(80°-90°)	1.9	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	1632.7	1632.7	1632.7	1632.7	1632.7	1632.7	1632.7	1632.7	1632.7	1632.7	1632.7
2.5°	1783.3	1786.3	1784.3	1772.1	1751.7	1740.6	1734.4	1714.1	1700.9	1677.5	1653.0
5°	1947.1	1959.3	1952.1	1927.7	1889.1	1861.6	1853.5	1811.8	1774.1	1730.4	1679.5
7.5°	2121.0	2127.1	2113.9	2082.4	2030.4	1983.7	1976.5	1918.6	1858.5	1791.4	1722.2
10°	2271.5	2278.7	2258.3	2212.6	2153.5	2095.6	2085.4	2021.3	1950.1	1867.7	1779.2
12.5°	2397.7	2404.9	2378.4	2323.5	2258.3	2198.3	2188.2	2121.0	2042.6	1951.1	1841.2
15°	2493.3	2506.5	2471.0	2411.9	2341.7	2281.8	2276.6	2210.5	2134.3	2032.5	1915.5
17.5°	2549.3	2562.5	2528.9	2457.7	2397.7	2346.8	2340.7	2285.8	2214.6	2116.9	1987.8
20°	2558.4	2570.6	2535.0	2473.0	2423.1	2382.4	2379.3	2339.7	2287.8	2194.2	2066.1
22.5°	2530.9	2546.2	2513.7	2463.8	2429.2	2407.8	2403.8	2381.4	2352.0	2272.5	2139.3
25°	2502.4	2514.6	2490.2	2446.6	2428.2	2426.2	2429.2	2425.1	2419.1	2352.0	2224.8
27.5°	2500.5	2513.7	2486.2	2444.5	2434.3	2455.7	2458.8	2478.0	2483.2	2424.1	2307.2
30°	2517.7	2526.9	2500.5	2456.7	2451.6	2500.5	2501.4	2536.1	2544.2	2485.2	2388.6
32.5°	2555.3	2565.6	2539.1	2475.0	2467.9	2536.1	2539.1	2584.8	2598.1	2550.3	2473.9
35°	2643.9	2656.1	2625.5	2525.9	2500.5	2569.6	2578.8	2632.7	2659.2	2619.5	2562.5
37.5°	2864.6	2829.0	2787.3	2628.6	2574.7	2622.5	2637.7	2700.9	2747.6	2701.9	2668.3
40°	3412.9	3301.0	3170.8	2803.6	2704.9	2735.4	2747.6	2810.7	2874.8	2830.0	2813.7
42.5°	4235.9	4103.7	3894.1	3206.4	2901.3	2916.5	2925.7	2980.6	3071.1	3035.5	3039.6
45°	4969.3	4921.5	4707.9	3894.1	3268.5	3193.2	3204.4	3232.8	3366.1	3352.9	3379.3
47.5°	5533.0	5505.5	5340.7	4683.5	3889.0	3531.9	3563.5	3576.7	3768.9	3815.8	3887.0
50°	5966.2	5956.1	5808.6	5385.3	4699.7	4031.4	4042.6	4014.1	4302.0	4418.0	4553.3
52.5°	6375.2	6409.7	6301.0	6037.5	5565.4	4685.5	4683.5	4549.3	4937.8	5112.8	5343.7
55°	6744.5	6756.7	6767.9	6702.8	6436.3	5430.1	5410.9	5191.1	5675.3	5856.4	6106.6
57.5°	7091.4	7096.5	7196.1	7329.4	7342.6	6229.7	6194.1	5930.6	6481.0	6610.2	6763.8
60°	7324.3	7347.7	7558.2	7928.6	8090.3	7054.8	7035.4	6766.8	7300.9	7360.9	7332.4
62.5°	6988.7	7131.0	7662.1	8396.5	8796.2	7969.3	7960.0	7707.8	8163.5	8114.7	7870.6
65°	5657.0	5898.1	6831.9	8712.9	9489.0	8990.6	9003.8	8735.3	9049.6	8890.8	8308.0
67.5°	3957.1	4211.5	5316.3	8738.3	10263.2	10189.9	10266.2	9845.1	9990.6	9634.5	8411.8
70°	2736.4	2867.6	3586.9	8191.0	10866.4	11842.0	11840.0	11208.3	10926.4	9973.2	7882.8
72.5°	1840.2	1908.3	2329.5	6498.3	10422.9	12823.7	12764.6	12249.9	11241.8	9327.3	6440.3
75°	776.1	826.0	1078.3	3652.0	8245.9	11732.2	11572.5	10825.7	9988.5	7344.6	4018.2
77.5°	246.2	267.5	425.2	1307.2	4542.1	8818.7	8649.8	6760.7	6694.6	3684.6	1468.9
80°	117.0	136.3	239.0	524.9	1787.3	4796.4	4773.0	3067.0	2879.8	994.9	295.0
82.5°	50.8	60.1	132.2	280.7	799.6	1711.0	1745.7	1043.8	863.7	377.4	90.5
85°	16.3	21.3	61.0	129.1	337.7	425.2	420.1	248.3	347.9	205.5	31.6
87.5°	0.0	0.0	20.3	29.5	34.5	24.4	27.5	21.3	96.7	57.0	11.2
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°	1632.7	1632.7	1632.7	1632.7	1632.7	1632.7	1632.7	1632.7	1632.7	1632.7	1632.7
2.5°	1640.8	1624.5	1596.1	1569.7	1546.2	1522.8	1508.6	1488.3	1486.2	1486.2	1491.3
5°	1652.0	1625.5	1574.7	1520.8	1458.8	1399.7	1340.8	1283.8	1265.5	1252.2	1258.4
7.5°	1684.6	1642.9	1562.5	1459.8	1341.7	1212.6	1122.1	1024.4	986.8	966.4	969.4
10°	1731.4	1674.4	1552.4	1372.3	1181.0	1005.0	875.9	770.1	729.4	712.1	712.1
12.5°	1783.3	1713.1	1534.0	1263.4	1005.0	794.5	668.3	619.5	613.4	613.4	613.4
15°	1845.3	1759.8	1502.5	1135.3	820.9	628.6	583.9	586.0	592.0	596.1	596.1
17.5°	1909.4	1809.7	1452.6	991.8	658.2	565.6	566.6	569.7	574.7	578.8	578.8
20°	1978.6	1859.6	1386.5	839.3	564.6	547.2	550.3	553.4	557.5	559.4	560.5
22.5°	2052.9	1906.4	1308.2	689.7	533.0	532.1	533.0	536.1	541.2	541.2	543.2
25°	2132.2	1958.3	1218.7	580.9	516.8	516.8	518.9	520.8	524.9	524.9	525.9
27.5°	2213.6	2006.0	1124.1	523.9	502.6	501.5	501.5	504.6	506.6	507.6	508.6
30°	2303.1	2062.0	1029.5	511.7	491.4	486.3	483.2	485.2	487.3	488.3	490.4
32.5°	2394.6	2115.9	945.0	516.8	480.1	471.0	460.8	458.8	458.8	462.9	465.9
35°	2496.4	2174.9	880.0	534.0	474.1	448.6	432.3	423.2	424.2	430.3	433.4
37.5°	2618.5	2246.1	832.1	549.3	470.0	423.2	396.8	385.5	378.4	385.5	383.6
40°	2778.2	2350.9	797.6	561.5	464.9	393.7	358.0	339.8	326.6	330.6	328.6
42.5°	3013.1	2515.7	784.3	562.5	453.7	359.1	318.4	294.0	274.7	275.7	271.6
45°	3342.7	2776.1	852.5	549.3	429.3	321.4	276.6	244.2	232.0	228.9	224.8
47.5°	3794.4	3155.6	1010.1	521.8	393.7	284.8	236.0	208.6	199.4	194.3	191.3
50°	4399.7	3642.8	1185.1	491.4	358.0	250.2	202.4	185.1	179.1	173.9	172.9
52.5°	5101.6	4137.2	1328.5	460.8	322.5	219.8	181.1	170.9	165.8	161.7	160.7
55°	5745.5	4478.0	1320.4	428.2	287.9	195.4	165.8	159.7	153.6	149.5	147.5
57.5°	6146.3	4525.8	1088.4	392.7	248.3	176.0	151.6	147.5	140.4	135.3	134.3
60°	6330.4	4253.1	762.9	345.8	208.6	157.6	136.3	134.3	125.2	118.0	115.9
62.5°	6364.0	3746.6	508.6	287.9	173.9	140.4	121.1	118.0	105.8	93.6	87.5
65°	6227.7	3022.3	352.0	224.8	148.5	122.1	103.7	97.7	84.5	72.3	68.2
67.5°	5796.4	2122.1	245.2	161.7	126.2	96.7	82.4	80.4	70.2	60.1	57.0
70°	5006.0	1209.5	163.8	121.1	99.7	66.1	65.1	67.1	57.0	48.8	44.8
72.5°	3838.1	553.4	101.7	88.5	68.2	44.8	51.9	52.9	43.8	36.6	32.6
75°	2259.3	237.0	64.1	57.0	34.5	29.5	37.6	38.6	29.5	23.4	20.3
77.5°	769.1	89.5	40.7	33.6	17.3	16.3	24.4	24.4	16.3	9.1	7.1
80°	175.0	33.6	20.3	13.2	8.1	7.1	8.1	7.1	4.1	1.0	0.0
82.5°	49.8	13.2	8.1	5.1	3.1	3.1	1.0	0.0	0.0	0.0	0.0
85°	14.2	6.1	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	6.1	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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)