

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: P963029

Luminaire Tested: **NAV-SB2D-740-U-T4W-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963029
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-740-U-T4W-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 70 CRI, 4000K, 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: 16998.6 lumens
Efficiency: N/A
Efficacy: 115.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G4

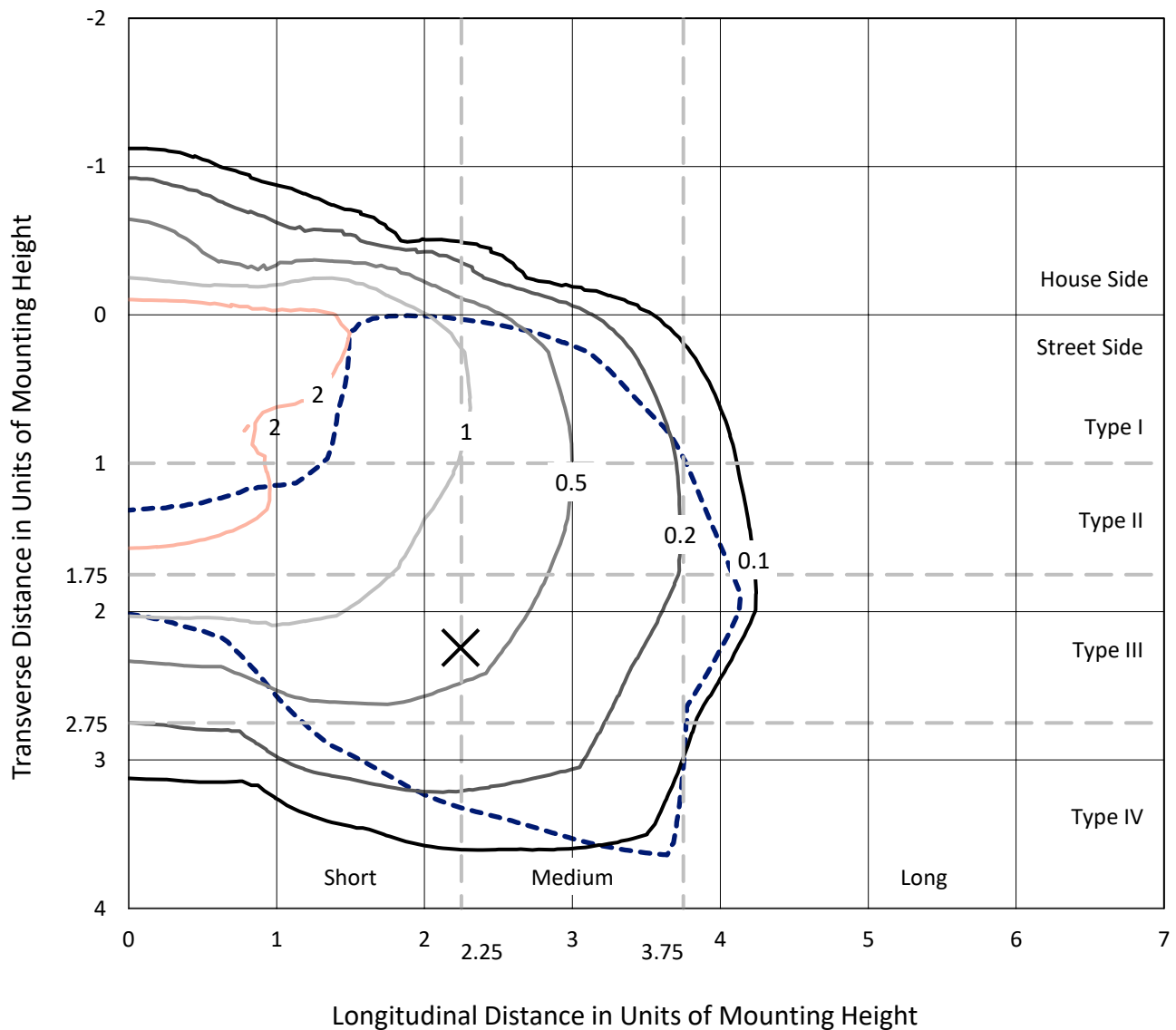
Input Watts (W): 147.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

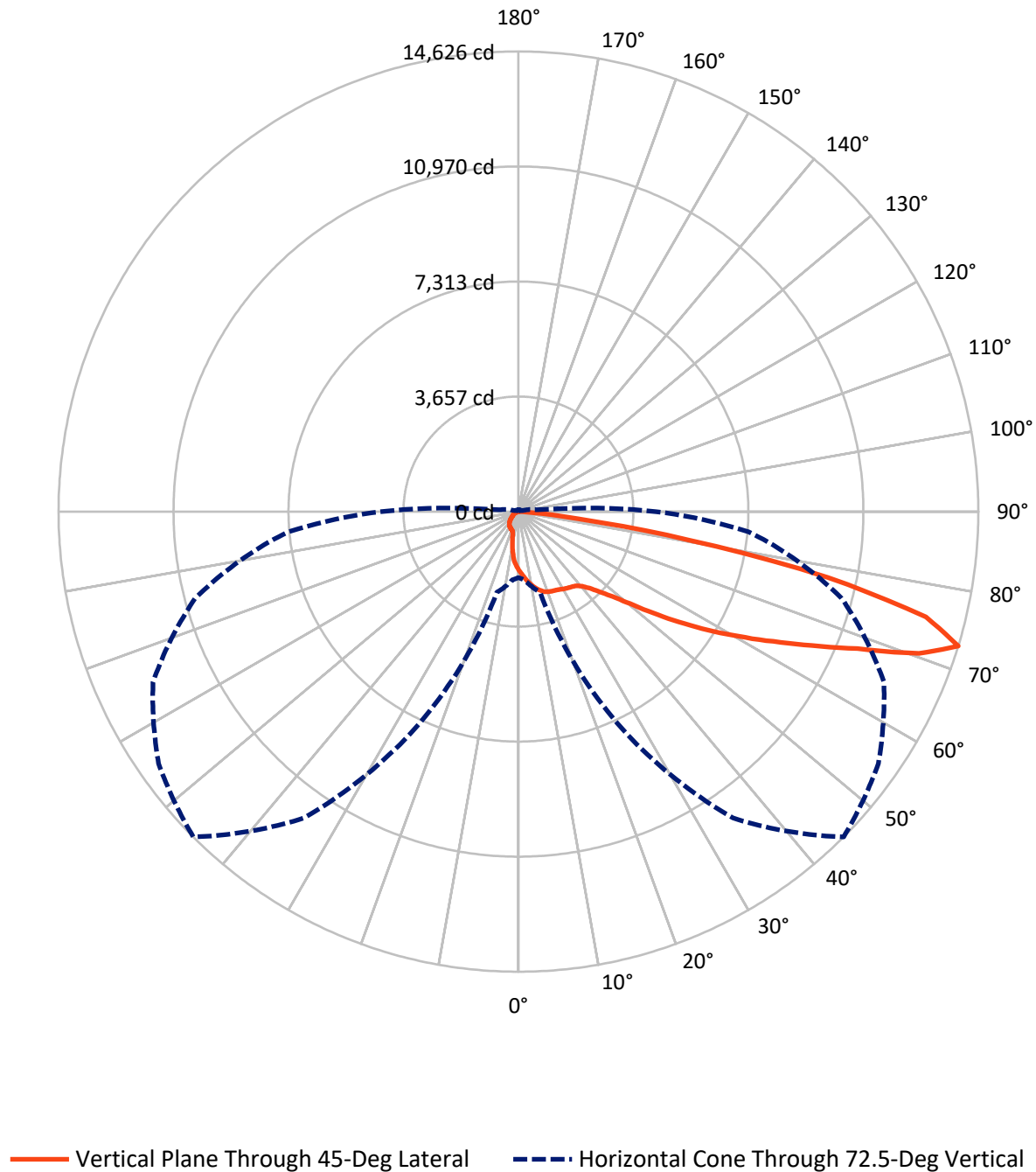
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.1 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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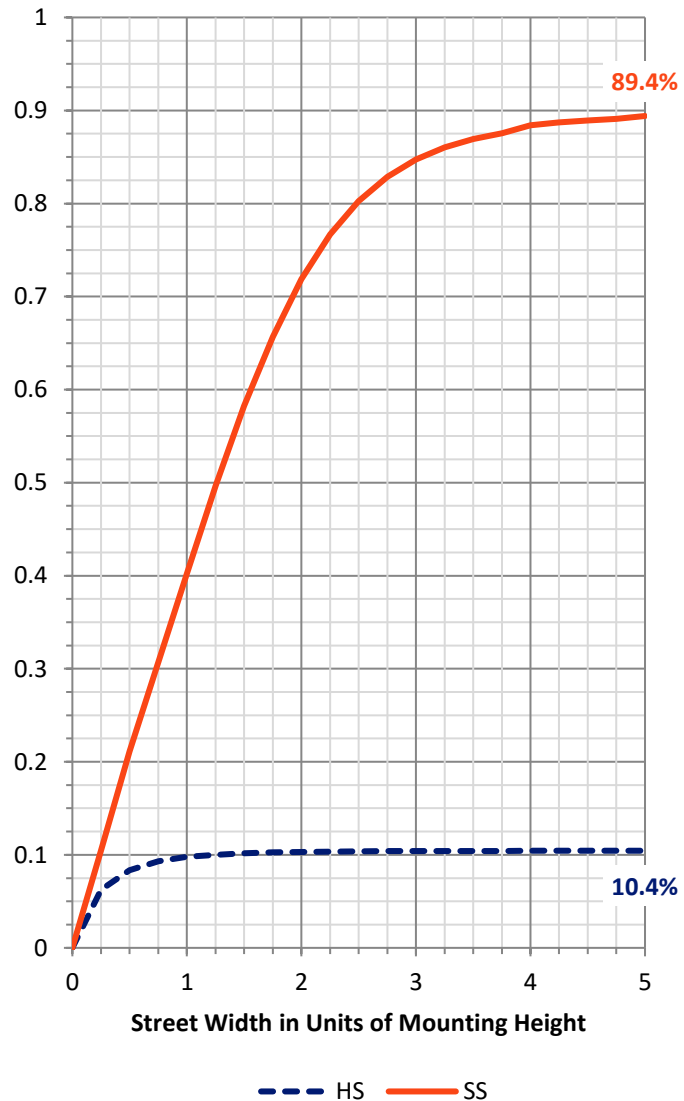
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1786.1	0.0	1786.1
	% Fixture	10.5	0.0	10.5
Street Side	Lumens	15212.5	0.0	15212.5
	% Fixture	89.5	0.0	89.5
Total	Lumens	16998.6	0.0	16998.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.5	1.0
10°-20°	512.8	3.0
20°-30°	842.1	5.0
30°-40°	1194.3	7.0
40°-50°	1974.0	11.6
50°-60°	3546.1	20.9
60°-70°	4924.0	29.0
70°-80°	3571.7	21.0
80°-90°	258.2	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°	16998.6	100.0
0°-180°	16998.6	100.0

Coefficient of Utilization



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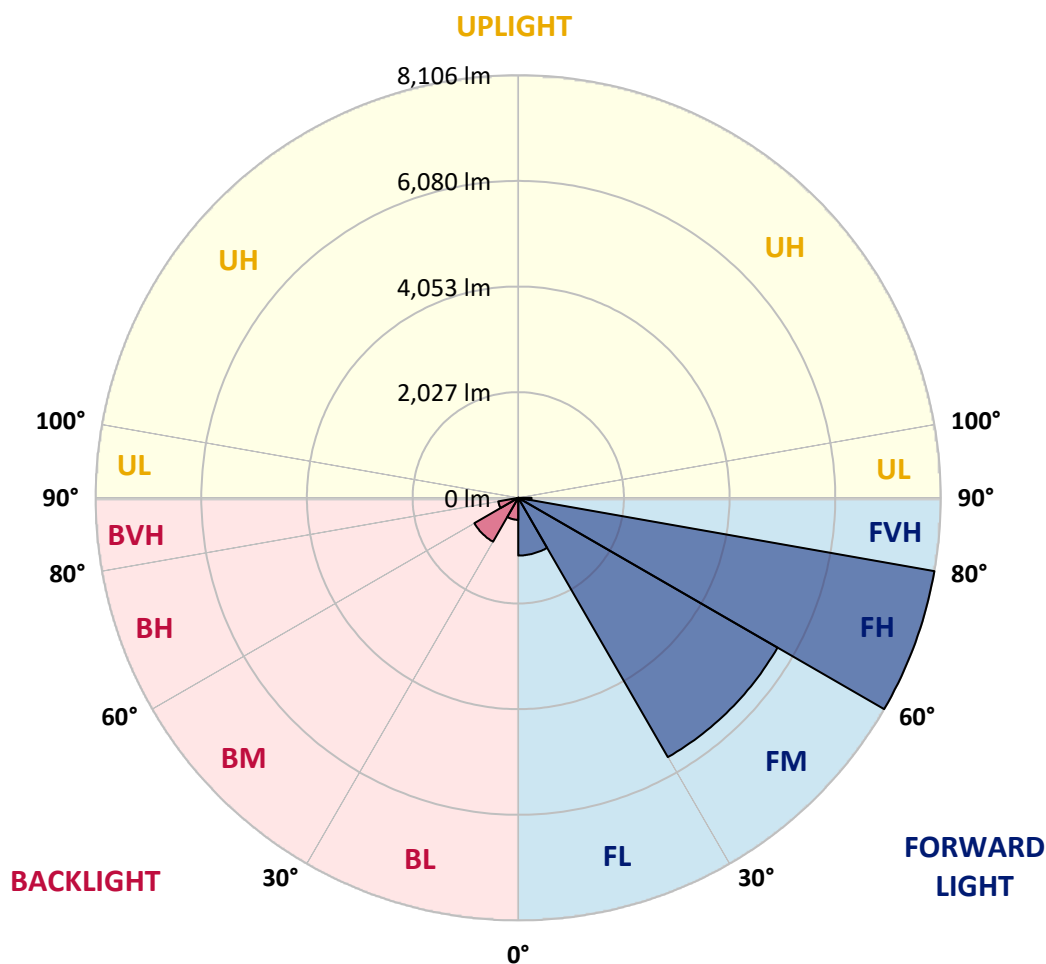
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1107.3	6.5			
FM	(30°-60°)	5743.0	33.8			
FH	(60°-80°)	8106.2	47.7			G4/12000
FVH	(80°-90°)	256.1	1.5			G3/500
BL	(0°-30°)	423.1	2.5	B1/500		
BM	(30°-60°)	971.4	5.7	B1/1000		
BH	(60°-80°)	389.5	2.3	B1/500		G1/500
BVH	(80°-90°)	2.2	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-G4

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	1862.2	1862.2	1862.2	1862.2	1862.2	1862.2	1862.2	1862.2	1862.2	1862.2	1862.2
2.5°	2033.9	2037.4	2035.1	2021.2	1998.0	1985.2	1978.2	1955.1	1940.0	1913.3	1885.5
5°	2220.8	2234.7	2226.6	2198.7	2154.7	2123.3	2114.1	2066.4	2023.6	1973.6	1915.6
7.5°	2419.2	2426.2	2411.0	2375.0	2315.9	2262.5	2254.4	2188.3	2119.8	2043.2	1964.3
10°	2590.9	2599.0	2575.8	2523.5	2456.3	2390.2	2378.5	2305.4	2224.2	2130.3	2029.3
12.5°	2734.8	2742.9	2712.7	2650.0	2575.8	2507.4	2495.8	2419.2	2329.8	2225.4	2100.1
15°	2843.9	2858.9	2818.3	2751.0	2670.9	2602.5	2596.6	2521.3	2434.3	2318.2	2184.8
17.5°	2907.6	2922.7	2884.5	2803.2	2734.8	2676.8	2669.8	2607.1	2525.9	2414.5	2267.2
20°	2918.1	2932.0	2891.4	2820.6	2763.8	2717.4	2713.9	2668.6	2609.4	2502.7	2356.5
22.5°	2886.7	2904.1	2867.0	2810.1	2770.7	2746.4	2741.7	2716.1	2682.5	2592.0	2440.0
25°	2854.2	2868.2	2840.4	2790.5	2769.5	2767.2	2770.7	2766.1	2759.1	2682.5	2537.5
27.5°	2852.0	2867.0	2835.7	2788.1	2776.5	2800.9	2804.4	2826.4	2832.2	2764.9	2631.5
30°	2871.6	2882.1	2852.0	2802.0	2796.2	2852.0	2853.1	2892.5	2901.9	2834.5	2724.3
32.5°	2914.6	2926.2	2896.0	2823.0	2814.9	2892.5	2896.0	2948.2	2963.4	2908.7	2821.8
35°	3015.5	3029.5	2994.6	2881.0	2852.0	2930.9	2941.2	3002.7	3033.0	2987.7	2922.7
37.5°	3267.3	3226.7	3179.1	2998.1	2936.6	2991.2	3008.6	3080.5	3133.9	3081.7	3043.4
40°	3892.7	3765.0	3616.6	3197.7	3085.1	3120.0	3133.9	3205.8	3278.9	3227.8	3209.3
42.5°	4831.3	4680.6	4441.5	3657.2	3309.1	3326.5	3336.9	3399.6	3502.8	3462.2	3466.9
45°	5667.9	5613.4	5369.8	4441.5	3727.9	3642.1	3654.8	3687.3	3839.3	3824.3	3854.4
47.5°	6310.7	6279.4	6091.4	5341.9	4435.7	4028.5	4064.4	4079.5	4298.8	4352.2	4433.4
50°	6805.0	6793.4	6625.2	6142.5	5360.4	4598.2	4611.0	4578.5	4906.8	5039.0	5193.4
52.5°	7271.5	7310.8	7186.7	6886.2	6347.8	5344.2	5341.9	5188.8	5632.0	5831.5	6094.9
55°	7692.6	7706.5	7719.3	7645.1	7341.0	6193.6	6171.5	5920.8	6473.2	6679.7	6965.1
57.5°	8088.3	8094.0	8207.8	8359.7	8374.9	7105.5	7064.9	6764.4	7392.1	7539.4	7714.7
60°	8354.0	8380.6	8620.8	9043.2	9227.7	8046.5	8024.4	7718.1	8327.3	8395.7	8363.2
62.5°	7971.0	8133.5	8739.2	9576.9	10032.8	9089.6	9079.1	8791.3	9311.2	9255.4	8977.1
65°	6452.3	6727.3	7792.4	9937.7	10823.0	10254.5	10269.6	9963.2	10321.8	10140.7	9475.9
67.5°	4513.5	4803.6	6063.6	9966.7	11705.9	11622.4	11709.4	11229.1	11395.0	10988.9	9594.3
70°	3121.1	3270.8	4091.1	9342.5	12394.0	13506.7	13504.4	12783.8	12462.5	11375.2	8990.9
72.5°	2098.9	2176.7	2657.0	7411.8	11888.2	14626.3	14559.1	13972.0	12822.1	10638.5	7345.7
75°	885.3	942.2	1229.9	4165.4	9405.2	13381.4	13199.2	12347.6	11392.7	8377.1	4583.1
77.5°	280.7	305.1	485.0	1491.0	5180.6	10058.4	9865.7	7711.2	7635.7	4202.5	1675.5
80°	133.5	155.5	272.6	598.7	2038.6	5470.6	5444.0	3498.2	3284.7	1134.8	336.5
82.5°	58.0	68.5	150.9	320.2	911.9	1951.6	1991.1	1190.4	985.0	430.5	103.2
85°	18.6	24.4	69.6	147.4	385.2	485.0	479.2	283.1	396.8	234.4	36.0
87.5°	0.0	0.0	23.2	33.6	39.5	27.9	31.4	24.4	110.2	65.0	12.8
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°	1862.2	1862.2	1862.2	1862.2	1862.2	1862.2	1862.2	1862.2	1862.2	1862.2	1862.2
2.5°	1871.5	1853.0	1820.5	1790.3	1763.6	1737.0	1720.7	1697.5	1695.1	1695.1	1701.0
5°	1884.3	1854.1	1796.1	1734.6	1663.8	1596.5	1529.2	1464.2	1443.4	1428.3	1435.2
7.5°	1921.4	1873.8	1782.2	1665.0	1530.4	1383.0	1279.8	1168.4	1125.4	1102.3	1105.8
10°	1974.8	1909.8	1770.6	1565.2	1347.1	1146.4	999.0	878.3	831.9	812.2	812.2
12.5°	2033.9	1953.9	1749.7	1441.0	1146.4	906.2	762.3	706.6	699.7	699.7	699.7
15°	2104.7	2007.3	1713.7	1294.9	936.3	717.1	666.0	668.3	675.3	679.9	679.9
17.5°	2177.8	2064.1	1656.9	1131.3	750.7	645.1	646.3	649.7	655.6	660.2	660.2
20°	2256.7	2120.9	1581.5	957.2	643.9	624.2	627.7	631.2	635.8	638.2	639.3
22.5°	2341.4	2174.3	1492.1	786.7	608.0	606.8	608.0	611.4	617.3	617.3	619.6
25°	2431.9	2233.5	1390.0	662.6	589.4	589.4	591.7	594.1	598.7	598.7	599.8
27.5°	2524.8	2288.0	1282.1	597.6	573.2	572.1	572.1	575.5	577.8	579.0	580.2
30°	2626.9	2351.9	1174.2	583.6	560.4	554.6	551.1	553.4	555.8	556.9	559.2
32.5°	2731.3	2413.4	1077.9	589.4	547.7	537.2	525.6	523.3	523.3	527.9	531.4
35°	2847.3	2480.7	1003.7	609.2	540.7	511.7	493.1	482.7	483.8	490.8	494.3
37.5°	2986.5	2561.9	949.1	626.6	536.1	482.7	452.5	439.7	431.6	439.7	437.5
40°	3168.7	2681.4	909.7	640.4	530.2	449.1	408.5	387.6	372.5	377.1	374.7
42.5°	3436.7	2869.4	894.5	641.6	517.5	409.6	363.2	335.3	313.2	314.5	309.8
45°	3812.7	3166.3	972.3	626.6	489.6	366.6	315.6	278.5	264.6	261.1	256.5
47.5°	4327.8	3599.2	1152.1	595.2	449.1	324.9	269.2	237.9	227.4	221.6	218.1
50°	5018.2	4154.9	1351.7	560.4	408.5	285.5	230.9	211.2	204.2	198.4	197.2
52.5°	5818.7	4718.8	1515.4	525.6	367.8	250.6	206.5	195.0	189.1	184.5	183.4
55°	6553.2	5107.5	1506.0	488.5	328.3	222.7	189.1	182.1	175.2	170.6	168.2
57.5°	7010.4	5162.0	1241.5	447.8	283.1	200.7	172.9	168.2	160.1	154.4	153.1
60°	7220.4	4851.1	870.2	394.5	237.9	179.9	155.5	153.1	142.7	134.6	132.2
62.5°	7258.6	4273.2	580.2	328.3	198.4	160.1	138.1	134.6	120.6	106.7	99.7
65°	7103.1	3447.2	401.5	256.5	169.4	139.2	118.4	111.4	96.4	82.4	77.7
67.5°	6611.2	2420.3	279.6	184.5	143.9	110.2	94.0	91.6	80.1	68.5	65.0
70°	5709.7	1379.5	186.8	138.1	113.7	75.4	74.2	76.6	65.0	55.7	51.0
72.5°	4377.7	631.2	116.0	101.0	77.7	51.0	59.1	60.4	49.9	41.8	37.1
75°	2577.0	270.3	73.1	65.0	39.5	33.6	42.9	44.1	33.6	26.6	23.2
77.5°	877.2	102.1	46.4	38.3	19.7	18.6	27.9	27.9	18.6	10.5	8.1
80°	199.6	38.3	23.2	15.1	9.3	8.1	9.3	8.1	4.6	1.1	0.0
82.5°	56.9	15.1	9.3	5.8	3.5	3.5	1.1	0.0	0.0	0.0	0.0
85°	16.2	7.0	2.4	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	7.0	1.1	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)