

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: P960989

Luminaire Tested: **NAV-SB1D-827-U-AFL**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P960989
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-14)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB1D-827-U-AFL
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(1) 80 CRI, 2700K, 900mA LIGHTSQUARE WITH 26 LEDS AND AUTOMOTIVE
FRONTLINE OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9227 lumens
Efficiency: N/A
Efficacy: 115.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Short
BUG Rating: B2 - U0 - G1

Input Watts (W): 79.6
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

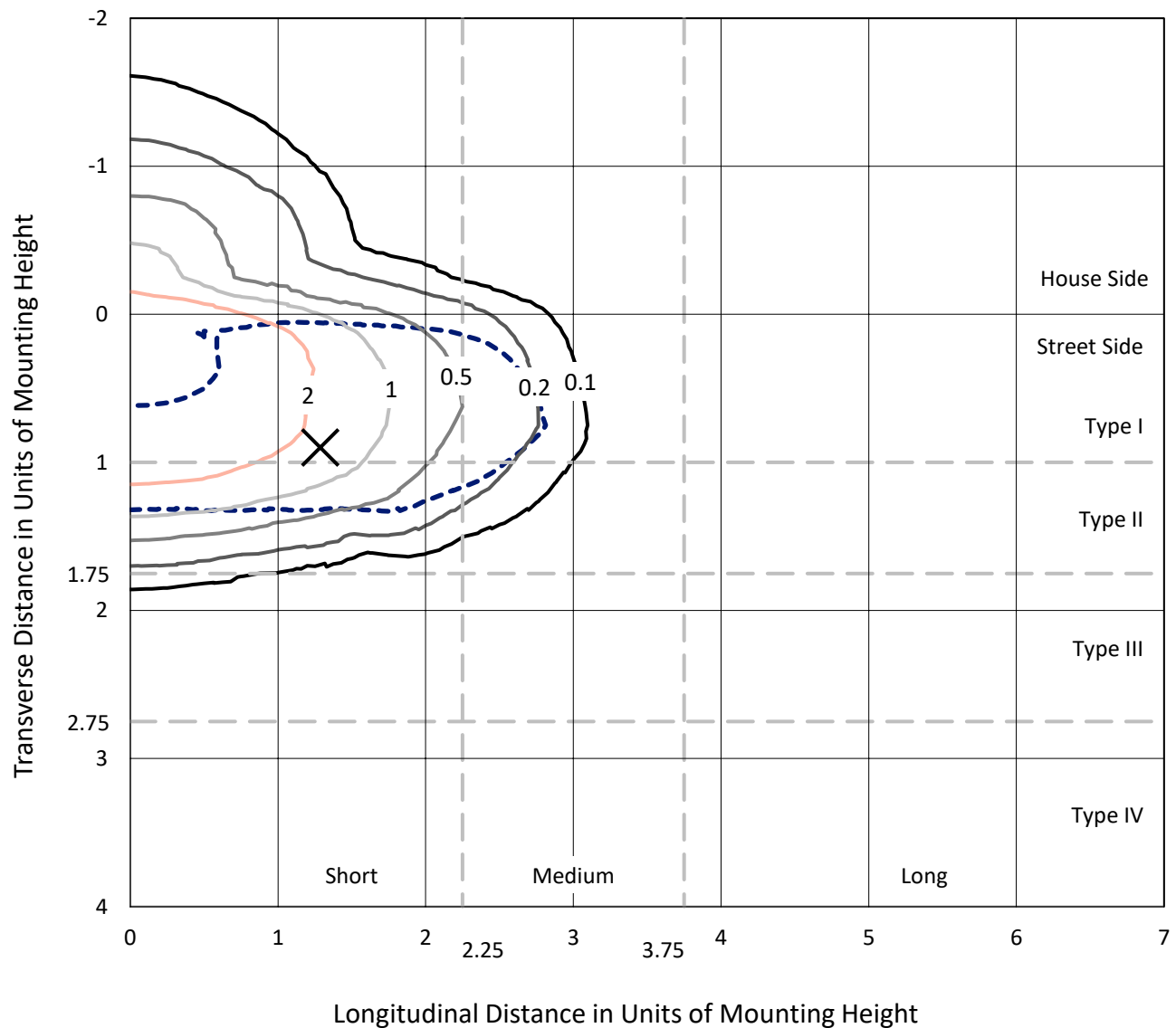


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Iso-Footcandle Lines of Horizontal Illumination

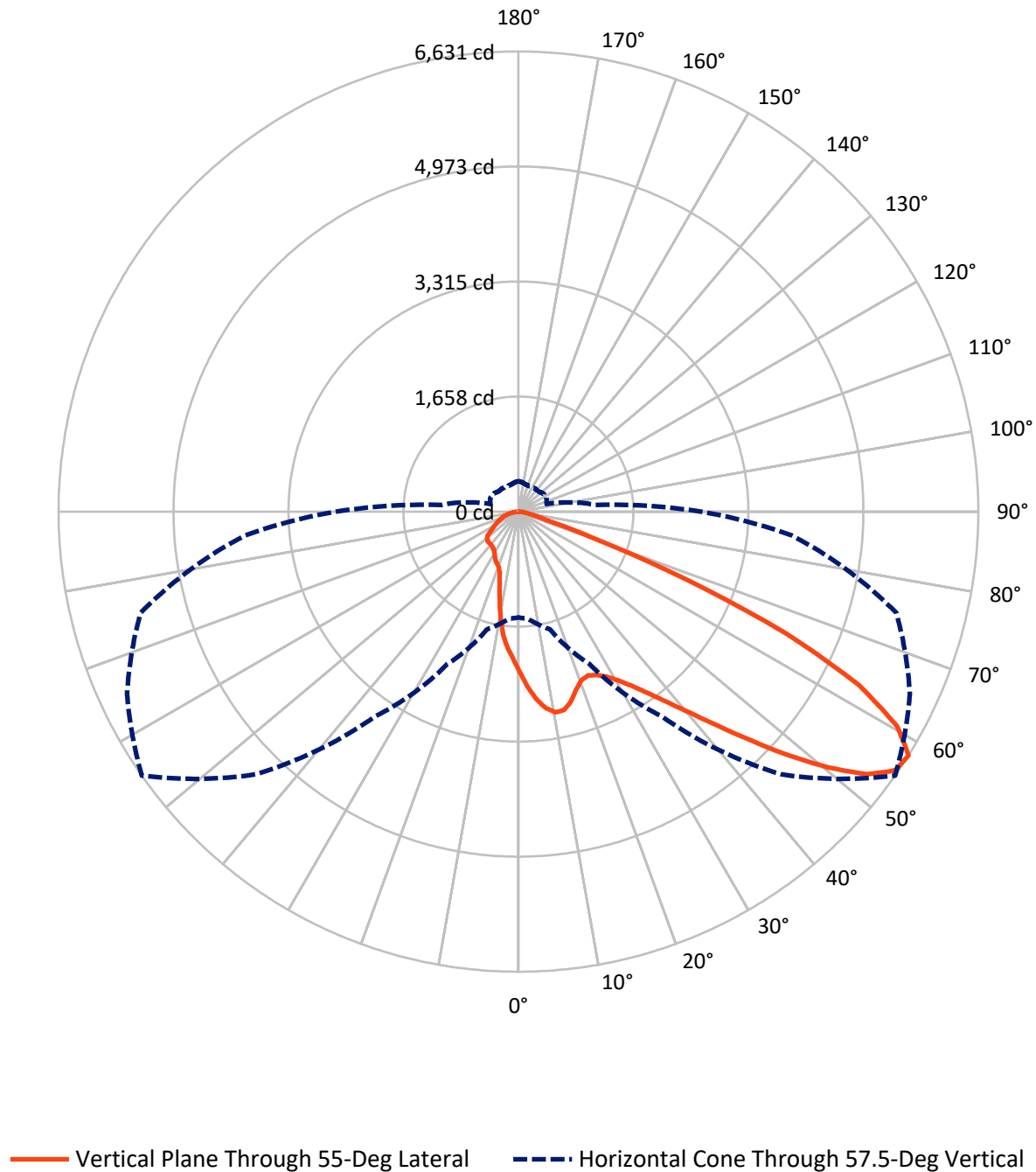
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.5 fc
Type II - Short - N/A

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Luminous Intensity Polar Plot



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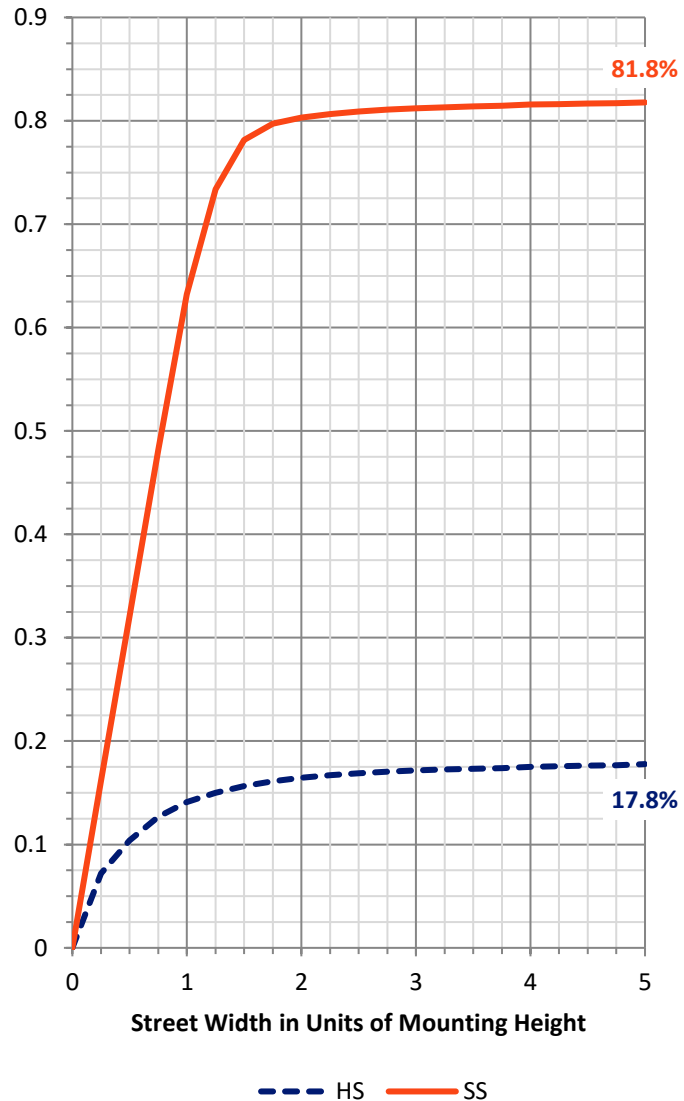
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1669.6	0.0	1669.6
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	7557.5	0.0	7557.5
	% Fixture	81.9	0.0	81.9
Total	Lumens	9227.0	0.0	9227.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.5	2.3
10°-20°	541.5	5.9
20°-30°	864.1	9.4
30°-40°	1368.1	14.8
40°-50°	2094.0	22.7
50°-60°	2242.8	24.3
60°-70°	1411.0	15.3
70°-80°	417.3	4.5
80°-90°	73.8	0.8
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°	9227.0	100.0
0°-180°	9227.0	100.0

Coefficient of Utilization



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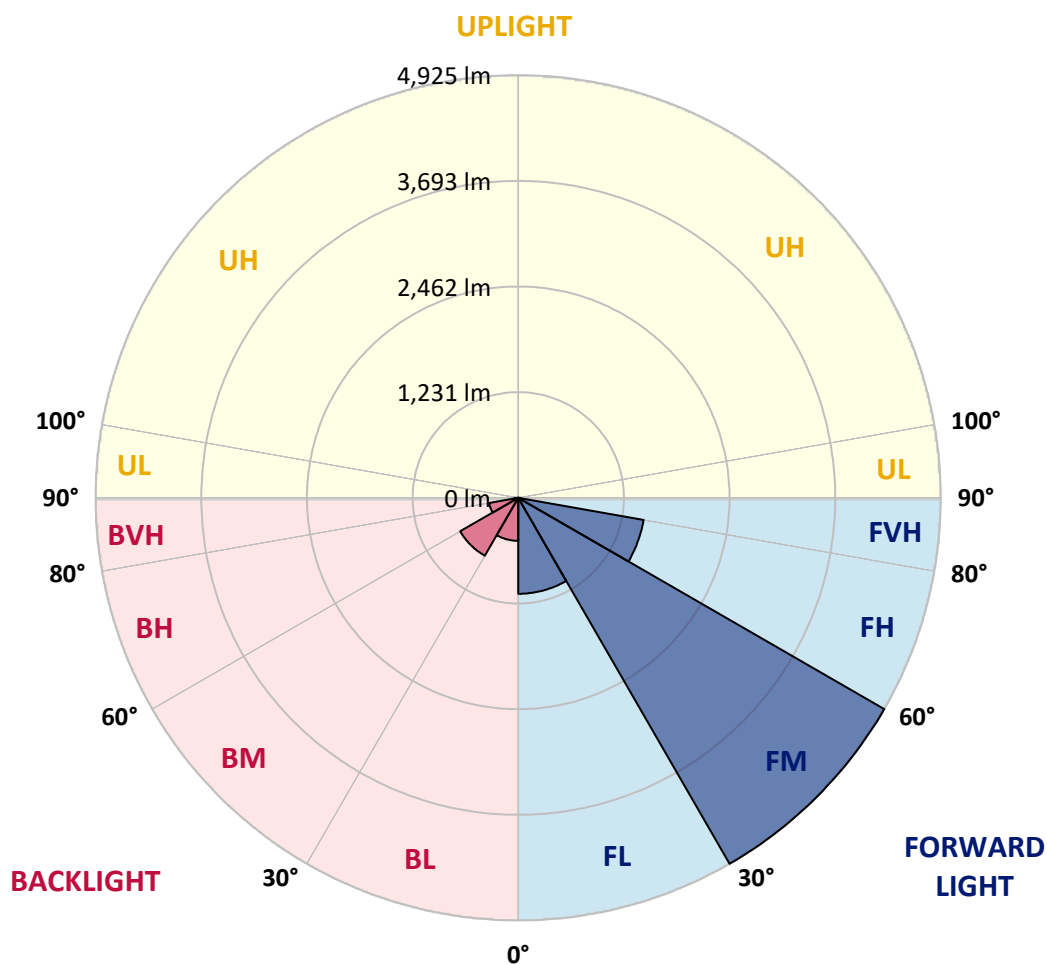
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1118.3	12.1			
FM	(30°-60°)	4924.5	53.4			
FH	(60°-80°)	1483.4	16.1			G1/1800
FVH	(80°-90°)	31.2	0.3			G1/100
BL	(0°-30°)	501.8	5.4	B2/1000		
BM	(30°-60°)	780.4	8.5	B1/1000		
BH	(60°-80°)	344.8	3.7	B1/500		G1/500
BVH	(80°-90°)	42.6	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G1

Type II Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2312.0	2312.0	2312.0	2312.0	2312.0	2312.0	2312.0	2312.0	2312.0	2312.0	2312.0
2.5°	2652.6	2650.6	2661.2	2625.4	2601.0	2568.1	2524.8	2469.4	2409.8	2346.8	2319.7
5°	2891.5	2874.8	2885.8	2859.1	2832.4	2782.8	2718.4	2628.2	2518.0	2392.7	2325.8
7.5°	2853.9	2842.4	2870.5	2894.4	2914.5	2908.2	2861.0	2766.6	2624.4	2442.3	2345.4
10°	2550.0	2537.2	2576.7	2659.3	2780.4	2885.8	2943.1	2884.4	2733.2	2496.6	2364.5
12.5°	2282.0	2275.7	2301.9	2368.8	2503.3	2705.5	2932.5	2987.5	2846.2	2561.0	2390.2
15°	2167.5	2159.9	2176.5	2210.4	2296.3	2484.7	2837.2	3058.0	2957.3	2635.4	2431.2
17.5°	2142.1	2133.6	2140.7	2158.4	2213.7	2357.3	2693.1	3092.8	3073.3	2718.4	2465.6
20°	2188.9	2181.8	2182.7	2181.8	2220.5	2334.4	2592.9	3079.5	3174.4	2794.8	2499.0
22.5°	2301.9	2290.1	2290.6	2265.2	2286.3	2374.5	2566.7	3043.7	3264.5	2861.5	2524.3
25°	2486.1	2464.6	2468.9	2404.5	2398.8	2464.2	2607.7	3016.1	3354.2	2914.9	2529.0
27.5°	2738.0	2713.6	2700.8	2604.8	2559.1	2591.5	2691.2	3025.6	3439.2	2961.2	2517.1
30°	3052.8	3023.2	2997.0	2861.0	2778.1	2766.1	2821.0	3088.5	3539.3	3009.8	2496.6
32.5°	3438.7	3404.3	3356.7	3176.3	3059.4	2997.0	2988.9	3200.7	3656.7	3071.8	2486.1
35°	3898.0	3853.2	3785.4	3552.1	3404.3	3276.5	3210.2	3362.3	3817.4	3165.3	2498.0
37.5°	4371.2	4320.6	4258.7	3981.0	3799.3	3610.9	3480.2	3581.8	4031.5	3292.2	2529.5
40°	4807.7	4750.9	4693.2	4446.0	4251.0	4023.9	3810.7	3859.3	4293.4	3443.9	2582.9
42.5°	5065.2	5023.2	5001.3	4867.7	4717.0	4486.6	4221.9	4188.5	4587.8	3618.5	2644.0
45°	5053.8	5036.6	5104.3	5159.6	5123.9	4996.1	4703.6	4552.4	4883.0	3769.7	2700.3
47.5°	4783.8	4795.3	4946.4	5257.4	5394.4	5461.1	5252.2	4909.8	5139.7	3882.7	2725.6
50°	4049.3	4058.8	4408.8	5079.5	5464.0	5840.3	5796.5	5258.4	5338.5	3951.9	2719.8
52.5°	3467.8	3473.9	3624.2	4551.9	5234.1	6031.1	6286.8	5587.1	5484.1	3971.0	2687.9
55°	2612.0	2633.5	2801.8	3571.3	4636.0	5879.9	6585.4	5925.7	5576.1	3972.9	2654.4
57.5°	1525.9	1549.3	1757.3	2424.1	3603.2	5352.9	6630.7	6226.3	5638.5	3957.6	2634.5
60°	747.4	757.5	848.1	1274.1	2221.9	4337.3	6266.3	6371.7	5673.4	3949.5	2633.5
62.5°	503.7	502.2	506.0	628.6	1094.7	2786.6	5506.9	6117.0	5654.8	3918.5	2624.0
65°	433.1	427.8	413.6	441.3	567.1	1274.5	4254.8	5356.6	5513.2	3840.8	2558.6
67.5°	374.4	374.9	375.4	366.8	405.0	588.1	2600.1	4219.5	5004.7	3472.5	2306.8
70°	310.1	314.4	316.2	316.2	330.0	385.9	1110.0	2892.0	3947.6	2722.7	1857.9
72.5°	282.4	273.4	274.3	269.5	269.5	293.9	446.9	1639.4	2487.1	1531.7	1133.9
75°	230.4	236.2	237.1	233.7	222.7	224.2	265.2	687.9	1064.2	635.4	560.5
77.5°	199.0	199.0	200.8	198.4	189.8	167.9	176.9	266.6	362.0	260.5	280.0
80°	159.8	159.3	167.4	172.2	158.9	124.0	113.1	147.4	160.7	114.5	145.4
82.5°	77.8	82.5	115.0	131.2	120.6	89.7	69.2	91.5	85.9	50.5	65.4
85°	45.3	42.9	51.6	73.0	69.2	49.6	33.4	47.7	44.8	25.7	26.2
87.5°	14.3	13.3	10.5	24.8	20.0	13.8	9.0	13.8	12.4	5.7	5.7
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2312.0	2312.0	2312.0	2312.0	2312.0	2312.0	2312.0	2312.0	2312.0	2312.0
2.5°	2285.8	2229.5	2173.7	2122.7	2091.6	2071.6	2051.5	2029.1	2020.6	2007.7
5°	2262.9	2154.1	2057.3	1973.8	1898.0	1838.3	1778.3	1729.6	1707.6	1722.4
7.5°	2249.5	2092.1	1942.8	1789.6	1642.3	1524.5	1421.9	1349.9	1317.4	1325.5
10°	2237.6	2022.0	1794.5	1552.7	1340.8	1194.8	1090.0	1035.0	1014.5	1018.8
12.5°	2226.6	1943.3	1615.6	1297.4	1072.3	975.9	945.9	946.4	950.2	953.0
15°	2224.7	1848.4	1415.7	1074.2	927.3	921.1	953.6	974.1	985.0	988.3
17.5°	2221.9	1734.8	1212.1	922.0	892.0	934.0	964.0	977.3	985.9	986.5
20°	2210.4	1590.8	1024.1	849.5	884.4	920.6	939.2	949.7	956.8	959.2
22.5°	2175.2	1430.5	877.7	817.1	853.8	882.9	904.9	916.8	921.1	923.9
25°	2111.7	1251.1	776.5	786.1	811.4	848.1	865.7	868.2	866.7	871.0
27.5°	2028.7	1058.9	713.6	744.2	776.5	808.0	817.5	816.1	813.2	818.1
30°	1928.5	886.2	673.5	696.9	741.3	769.9	778.5	775.1	769.4	774.6
32.5°	1822.6	745.1	640.6	664.0	712.2	740.3	748.9	745.6	741.3	745.6
35°	1723.8	646.4	610.1	642.1	689.2	716.9	727.9	728.4	728.4	733.6
37.5°	1633.2	588.7	584.8	628.2	673.5	698.3	714.0	715.0	694.5	696.0
40°	1549.3	564.3	573.4	619.1	658.3	682.1	683.1	629.7	591.9	591.0
42.5°	1480.6	559.5	576.7	618.2	647.3	648.2	581.0	539.5	529.0	529.5
45°	1416.2	558.1	584.4	618.2	631.1	560.0	514.7	503.7	504.7	508.5
47.5°	1344.2	552.4	585.8	609.6	584.4	497.9	484.6	479.9	478.0	478.9
50°	1265.5	531.9	567.6	592.4	504.2	471.3	454.6	453.2	455.5	456.9
52.5°	1182.4	498.5	536.6	561.4	467.5	447.9	429.3	432.7	443.1	446.5
55°	1128.1	459.3	495.6	499.4	441.7	426.0	410.2	417.9	437.4	443.6
57.5°	1113.8	417.9	448.8	444.5	408.8	406.9	397.3	404.1	428.9	437.9
60°	1109.5	380.7	403.0	399.7	376.8	385.9	383.6	386.8	395.4	398.3
62.5°	1076.1	351.1	362.0	357.3	348.2	364.0	369.7	362.5	369.2	372.5
65°	991.2	327.2	322.0	318.7	322.5	336.7	348.2	333.9	340.1	349.6
67.5°	851.0	294.8	280.4	284.3	296.2	303.8	318.7	302.4	307.7	323.9
70°	688.3	253.8	240.9	251.8	263.3	279.0	281.5	270.5	282.9	300.9
72.5°	487.0	212.3	203.2	225.6	229.4	249.9	244.7	239.4	256.7	262.8
75°	337.7	171.3	165.9	183.2	197.0	214.6	210.8	217.0	253.3	256.1
77.5°	213.7	133.0	129.8	140.7	159.8	179.4	185.5	256.1	432.7	449.8
80°	124.0	99.2	95.4	103.9	120.6	138.8	178.9	314.4	285.3	281.9
82.5°	69.2	68.2	63.4	65.8	80.6	100.1	252.8	221.3	179.8	185.5
85°	32.4	40.1	34.3	32.9	45.3	117.4	168.8	126.4	83.9	82.0
87.5°	8.6	7.6	7.6	8.6	19.1	101.2	67.2	53.9	32.0	31.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)