

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: P963102

Luminaire Tested: **NAV-SB2D-827-U-SL3**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963102
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-12)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-827-U-SL3
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17727.4 lumens
Efficiency: N/A
Efficacy: 120.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B2 - U0 - G3

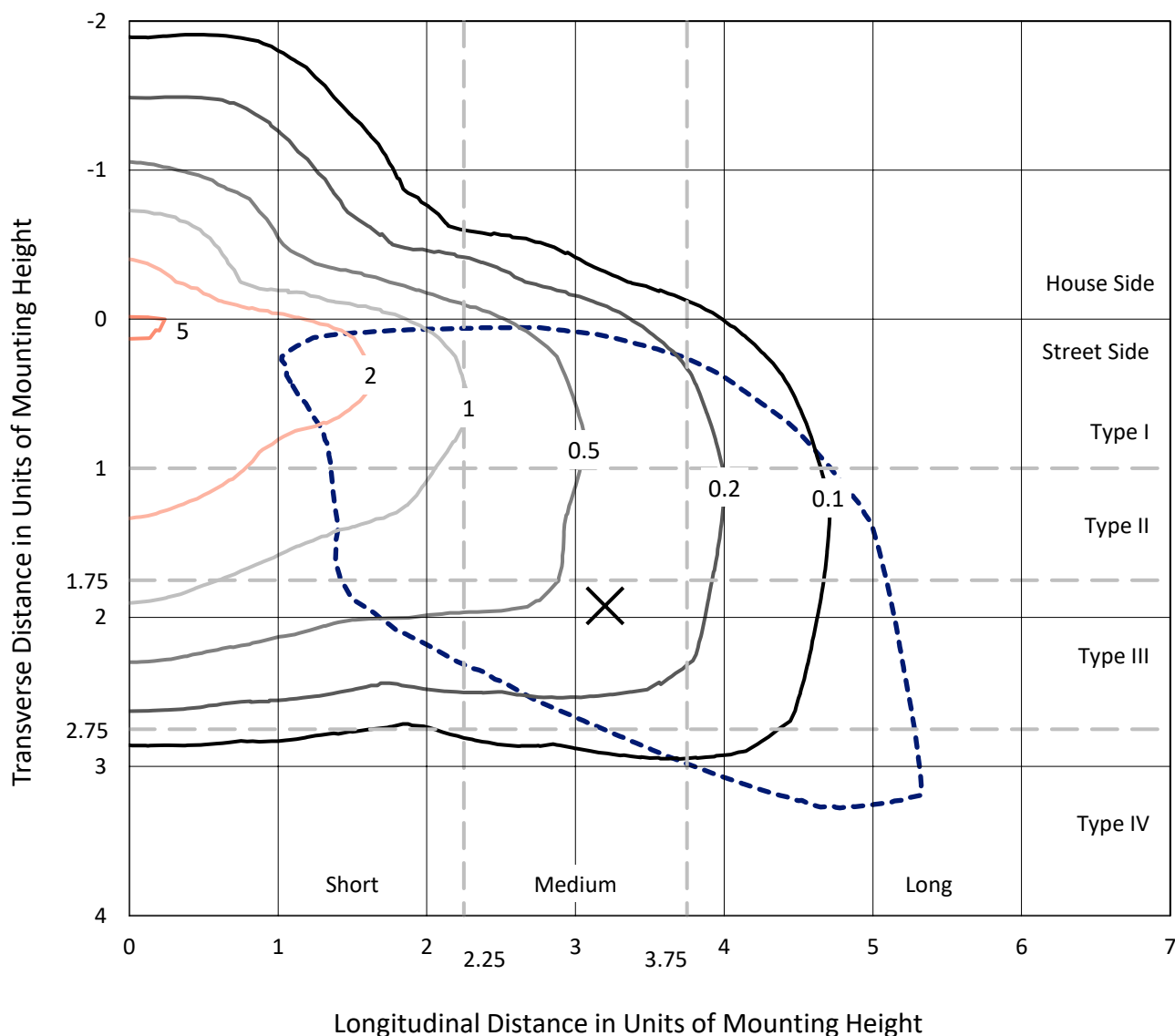
Input Watts (W): 147.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

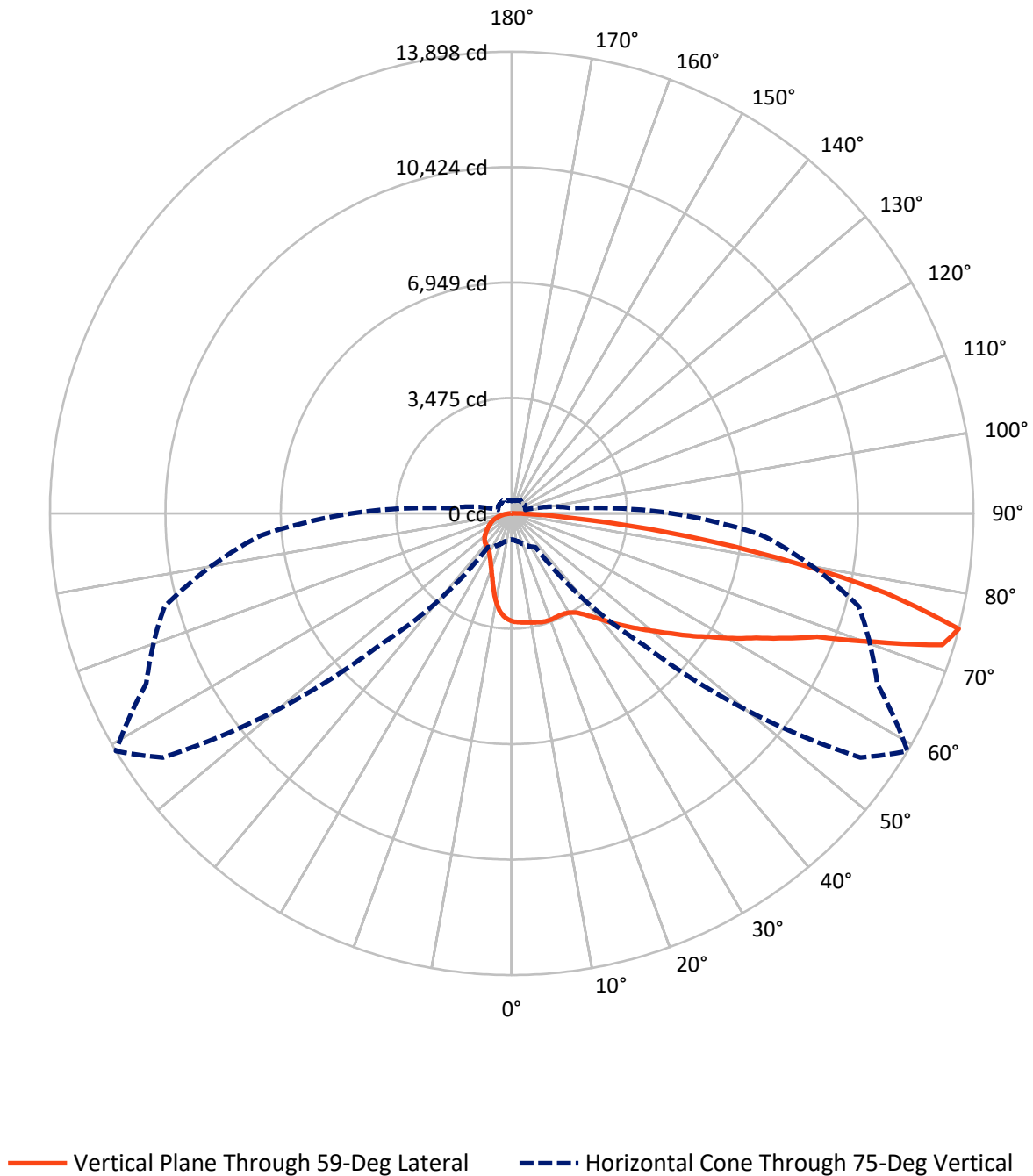
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.2 fc
 Type IV - Medium - N/A

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Luminous Intensity Polar Plot



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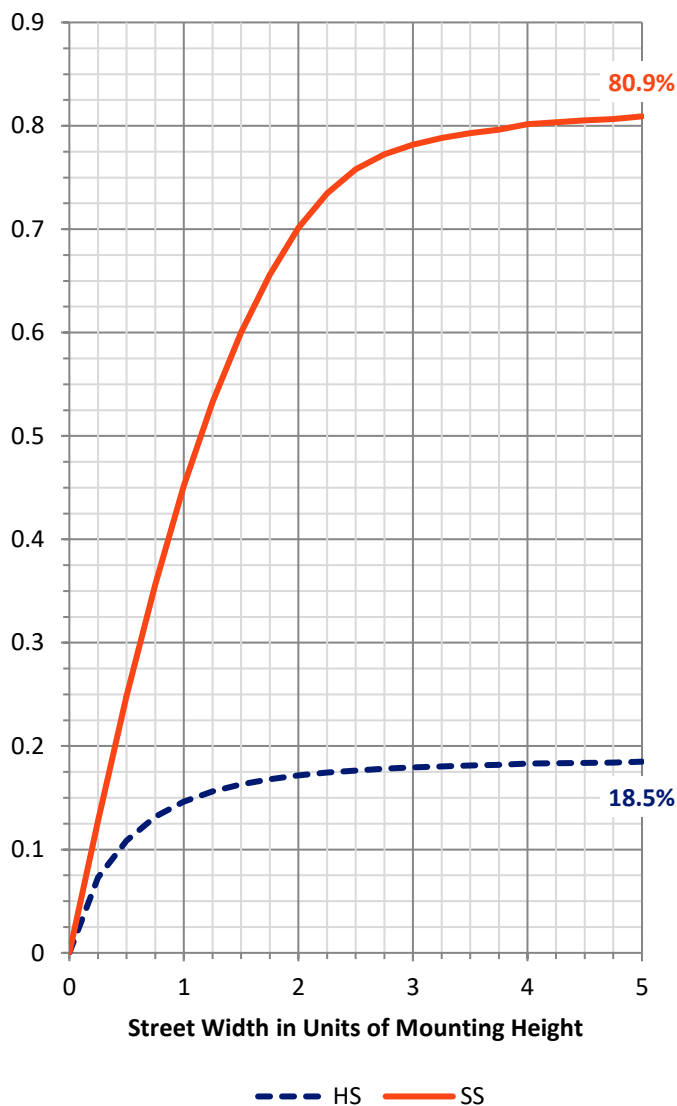
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3324.9	0.0	3324.9
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	14402.5	0.0	14402.5
	% Fixture	81.2	0.0	81.2
Total	Lumens	17727.4	0.0	17727.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	291.8	1.6
10°-20°	745.7	4.2
20°-30°	1132.7	6.4
30°-40°	1683.8	9.5
40°-50°	2504.1	14.1
50°-60°	3399.0	19.2
60°-70°	4149.6	23.4
70°-80°	3256.6	18.4
80°-90°	564.1	3.2
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°	17727.4	100.0
0°-180°	17727.4	100.0

Coefficient of Utilization



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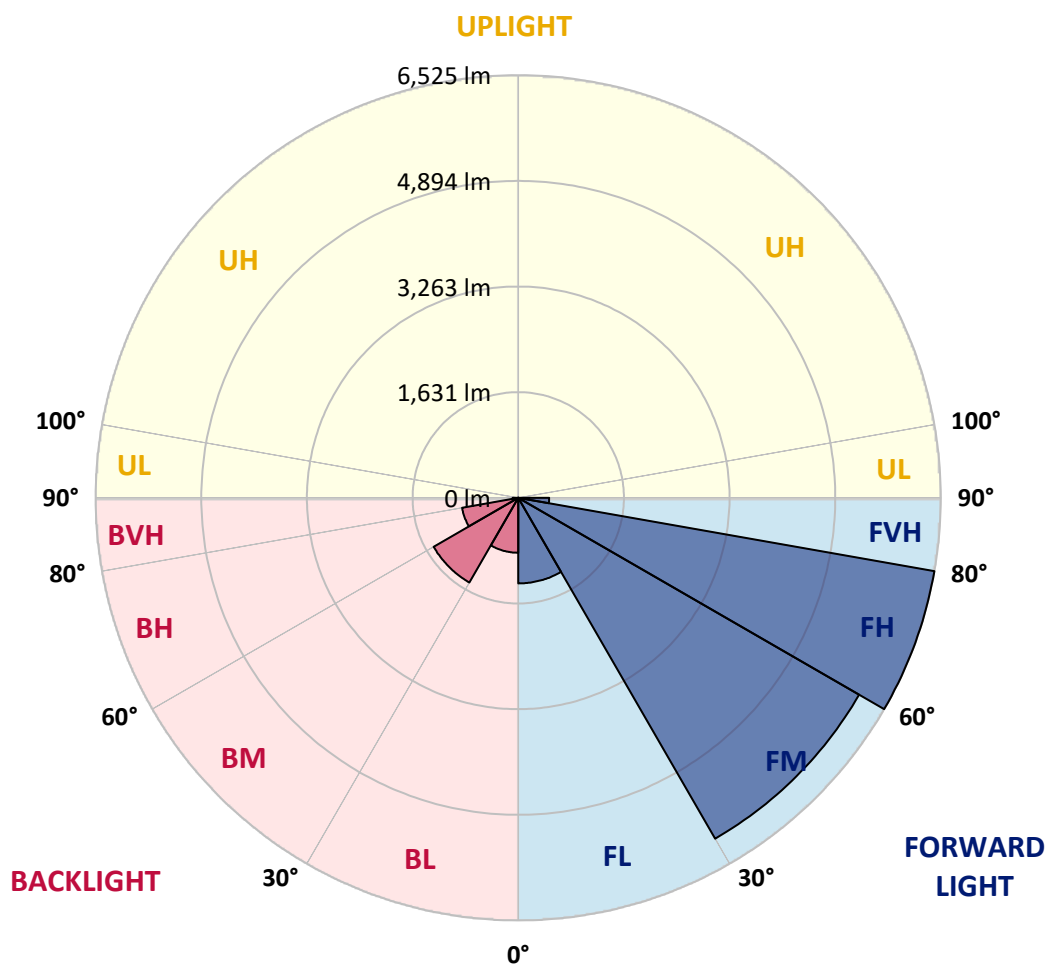
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1321.8	7.5			
FM	(30°-60°)	6077.7	34.3			
FH	(60°-80°)	6525.3	36.8			G3/7500
FVH	(80°-90°)	477.8	2.7			G3/500
BL	(0°-30°)	848.5	4.8	B2/1000		
BM	(30°-60°)	1509.2	8.5	B2/2500		
BH	(60°-80°)	880.9	5.0	B2/1000		G2/1000
BVH	(80°-90°)	86.4	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-G3

Type IV Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	3253.9	3253.9	3253.9	3253.9	3253.9	3253.9	3253.9	3253.9	3253.9	3253.9	3253.9
2.5°	3281.4	3270.1	3281.4	3276.7	3274.8	3271.0	3271.9	3278.6	3274.8	3279.6	3263.4
5°	3259.5	3252.8	3264.3	3261.4	3273.8	3275.8	3288.2	3295.8	3300.5	3301.5	3289.1
7.5°	3223.3	3216.7	3232.8	3246.2	3272.9	3280.5	3306.2	3318.6	3325.3	3336.8	3318.6
10°	3090.8	3087.9	3127.9	3178.5	3241.5	3280.5	3319.7	3340.6	3351.1	3381.6	3360.7
12.5°	2856.2	2860.0	2912.4	3009.7	3135.6	3261.4	3334.8	3365.4	3381.6	3419.7	3410.2
15°	2632.1	2631.1	2688.3	2792.3	2968.7	3177.5	3342.5	3395.0	3422.6	3478.8	3471.3
17.5°	2502.3	2498.5	2538.6	2617.7	2781.7	3048.8	3323.5	3411.2	3470.3	3540.9	3534.2
20°	2478.6	2470.9	2491.9	2530.9	2647.3	2907.6	3273.8	3411.2	3508.5	3600.0	3596.2
22.5°	2565.3	2552.9	2544.4	2539.5	2591.0	2791.3	3217.6	3399.7	3564.7	3684.9	3678.2
25°	2739.8	2720.8	2676.9	2633.9	2618.7	2738.9	3168.0	3396.8	3648.6	3799.3	3774.5
27.5°	3022.1	2998.2	2909.6	2806.6	2714.1	2765.6	3146.0	3414.1	3741.1	3920.4	3870.8
30°	3372.0	3346.3	3234.8	3076.4	2910.5	2864.8	3173.7	3464.6	3859.4	4081.6	3984.3
32.5°	3685.8	3657.2	3561.9	3400.6	3176.6	3036.4	3261.4	3560.8	4045.4	4305.7	4155.0
35°	3964.3	3930.9	3845.1	3696.4	3502.7	3277.6	3419.7	3731.6	4309.5	4670.0	4386.8
37.5°	4237.0	4197.9	4104.5	3947.1	3811.7	3599.1	3638.1	3951.0	4660.5	5112.5	4693.8
40°	4542.2	4485.9	4372.4	4217.0	4085.4	3975.8	3925.1	4219.8	5017.1	5606.4	5077.1
42.5°	4837.8	4784.4	4649.0	4516.5	4351.4	4320.0	4258.0	4534.6	5407.2	6149.1	5466.2
45°	5156.4	5092.4	4928.4	4760.6	4656.6	4548.8	4580.3	4849.3	5789.5	6702.2	5874.4
47.5°	5454.8	5383.3	5189.7	5002.8	4945.6	4741.5	4875.9	5195.4	6187.2	7262.9	6278.7
50°	5616.0	5545.5	5384.2	5215.5	5170.6	4978.9	5196.3	5575.9	6604.0	7821.8	6666.9
52.5°	5750.5	5674.2	5463.5	5370.0	5356.5	5237.4	5591.2	6010.8	7020.7	8315.7	7041.6
55°	5893.5	5808.6	5539.7	5455.8	5516.9	5527.3	6059.4	6503.8	7461.3	8797.4	7395.5
57.5°	6058.5	5950.7	5613.1	5528.2	5673.2	5866.8	6597.3	7015.0	7894.2	9243.7	7710.2
60°	6214.0	6105.2	5754.2	5643.6	5842.0	6260.6	7214.3	7633.9	8384.4	9641.3	8007.7
62.5°	6244.4	6154.8	5866.8	5865.9	6070.9	6720.3	7944.8	8258.5	8812.5	10034.2	8274.7
65°	5716.1	5659.8	5489.2	5857.3	6399.0	7382.2	8758.2	9057.7	9357.1	10377.5	8509.3
67.5°	4350.5	4358.1	4345.7	5056.2	6133.8	8332.9	9935.9	9913.1	10029.4	10762.8	8779.2
70°	1989.3	2034.1	2325.9	3490.3	4914.2	8442.6	11883.3	11586.7	10873.4	11261.6	9012.8
72.5°	1074.7	1109.0	1228.3	1690.8	2954.4	7506.1	13338.5	13549.3	11995.9	11597.3	8756.4
75°	788.6	807.7	890.7	1074.7	1240.7	5578.8	12816.9	13898.4	12136.0	10814.3	7561.4
77.5°	590.3	598.9	666.6	851.6	635.1	2941.0	10241.2	11510.4	10389.0	8885.1	5585.4
80°	428.1	437.7	488.3	639.0	445.4	1075.7	7032.1	8079.3	7115.1	5663.6	2783.7
82.5°	295.6	299.4	321.3	434.9	310.9	417.7	3990.0	4737.7	3971.9	1987.4	751.4
85°	178.4	183.1	192.6	253.7	176.4	198.3	1722.3	1781.4	1187.3	474.9	233.6
87.5°	73.4	78.2	85.8	106.8	69.6	55.4	284.2	356.7	222.2	139.2	72.5
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°	3253.9	3253.9	3253.9	3253.9	3253.9	3253.9	3253.9	3253.9	3253.9	3253.9	3253.9
2.5°	3258.6	3251.9	3233.8	3209.0	3186.1	3157.5	3145.1	3134.7	3125.1	3107.0	3098.4
5°	3278.6	3260.5	3211.8	3148.9	3077.4	2999.1	2922.9	2870.4	2825.6	2792.3	2764.6
7.5°	3309.1	3274.8	3186.1	3057.4	2893.4	2725.5	2573.9	2466.1	2385.1	2355.4	2304.0
10°	3340.6	3299.6	3145.1	2918.2	2634.9	2376.5	2175.3	2064.7	1999.8	1978.8	1946.4
12.5°	3377.8	3317.7	3081.3	2724.6	2345.9	2062.7	1887.2	1822.4	1789.0	1777.6	1780.4
15°	3432.1	3333.0	2984.9	2482.3	2070.4	1833.8	1720.4	1675.6	1658.3	1657.4	1661.2
17.5°	3473.1	3335.9	2835.1	2222.9	1858.6	1695.6	1602.1	1585.0	1596.4	1613.6	1620.2
20°	3518.9	3310.1	2638.8	1986.4	1709.9	1574.5	1535.3	1546.8	1574.5	1599.2	1607.8
22.5°	3551.3	3263.4	2401.3	1802.4	1581.2	1504.8	1503.0	1526.7	1542.0	1554.4	1561.1
25°	3579.9	3184.2	2149.5	1647.9	1475.3	1462.9	1483.9	1476.2	1465.7	1476.2	1482.9
27.5°	3600.9	3059.3	1924.4	1512.5	1400.9	1434.3	1421.9	1404.8	1403.7	1409.5	1419.0
30°	3594.3	2892.3	1739.4	1383.7	1348.5	1380.9	1351.3	1348.5	1345.6	1348.5	1358.9
32.5°	3594.3	2702.6	1597.4	1295.1	1315.1	1302.7	1299.8	1293.1	1281.7	1280.7	1293.1
35°	3614.3	2512.9	1475.3	1247.3	1287.4	1257.9	1259.7	1243.5	1219.8	1208.3	1219.8
37.5°	3655.3	2360.3	1354.1	1224.5	1238.8	1237.8	1230.2	1202.5	1160.6	1124.3	1136.7
40°	3754.5	2315.5	1271.2	1214.0	1215.9	1227.3	1207.3	1153.9	1058.5	999.4	1007.1
42.5°	3910.0	2390.8	1253.1	1188.3	1200.6	1212.1	1173.0	1049.0	981.3	946.0	946.0
45°	4107.3	2522.4	1292.2	1151.1	1164.4	1184.4	1068.0	1008.9	978.5	979.4	984.2
47.5°	4357.2	2660.7	1364.7	1118.6	1111.9	1123.4	998.5	962.3	920.2	930.8	957.5
50°	4646.1	2800.8	1433.4	1074.7	1053.8	1016.6	953.7	919.3	865.9	841.1	847.8
52.5°	4959.0	2936.2	1460.9	1021.3	990.9	947.9	923.1	881.2	816.3	775.3	774.4
55°	5255.5	3059.3	1430.5	957.5	927.9	894.5	890.7	865.0	795.3	738.1	738.1
57.5°	5535.9	3162.2	1354.1	892.6	864.0	844.0	869.7	857.3	769.6	696.2	692.4
60°	5773.3	3232.8	1243.5	826.8	806.8	796.3	835.4	831.6	733.4	651.3	648.5
62.5°	5962.1	3260.5	1121.5	763.8	759.1	740.0	787.7	787.7	687.6	607.5	604.6
65°	6109.9	3233.8	997.5	701.9	711.5	682.9	729.5	723.9	639.0	568.4	564.6
67.5°	6240.6	3146.0	860.2	640.8	662.8	626.6	668.5	655.2	585.6	529.3	525.4
70°	6298.8	2942.0	703.8	579.8	606.5	571.2	607.5	582.7	525.4	487.3	479.7
72.5°	5831.5	2445.1	554.1	515.9	538.8	510.2	541.7	513.0	460.6	443.4	429.2
75°	4824.5	1834.9	426.3	446.3	463.5	441.6	462.5	441.6	393.8	406.2	370.9
77.5°	3503.7	1238.8	326.2	372.9	380.5	369.1	387.1	363.4	320.4	317.5	303.3
80°	1742.3	725.7	255.5	294.7	291.8	284.2	305.1	293.8	257.5	272.8	269.9
82.5°	504.5	310.9	185.9	206.9	201.2	203.2	218.4	224.1	335.7	332.8	340.4
85°	158.3	122.1	111.6	115.4	109.7	112.5	128.7	255.5	236.5	138.3	149.8
87.5°	41.0	41.9	27.7	29.5	30.5	36.3	41.0	155.5	74.4	48.6	51.5
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)