

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: P967204

Luminaire Tested: **NAV-SB4D-735-U-T2R**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967204
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-3)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-735-U-T2R
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
ROADWAY OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 42578.5 lumens
Efficiency: N/A
Efficacy: 145.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B3 - U0 - G4

Input Watts (W): 293.6
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

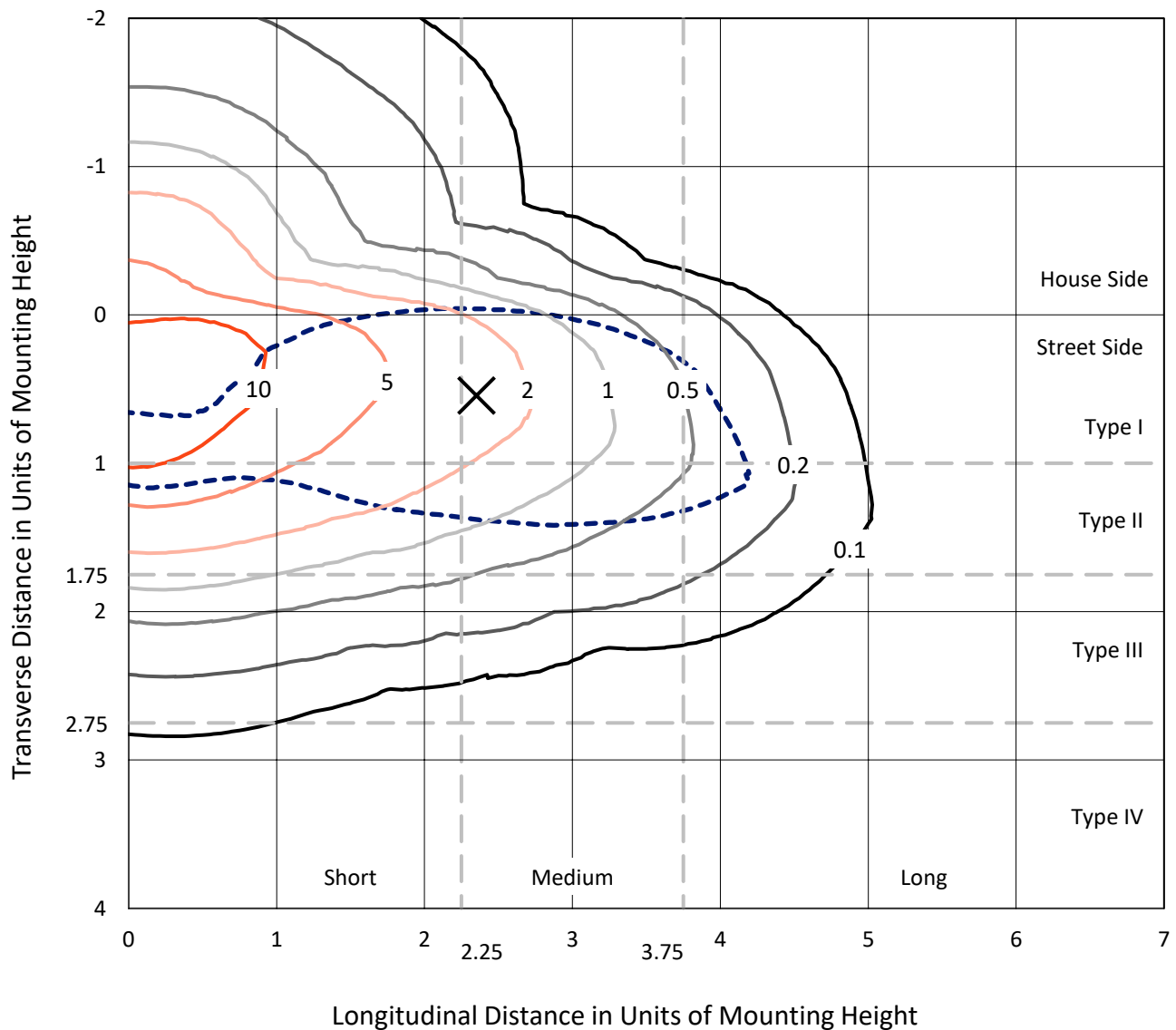


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Iso-Footcandle Lines of Horizontal Illumination

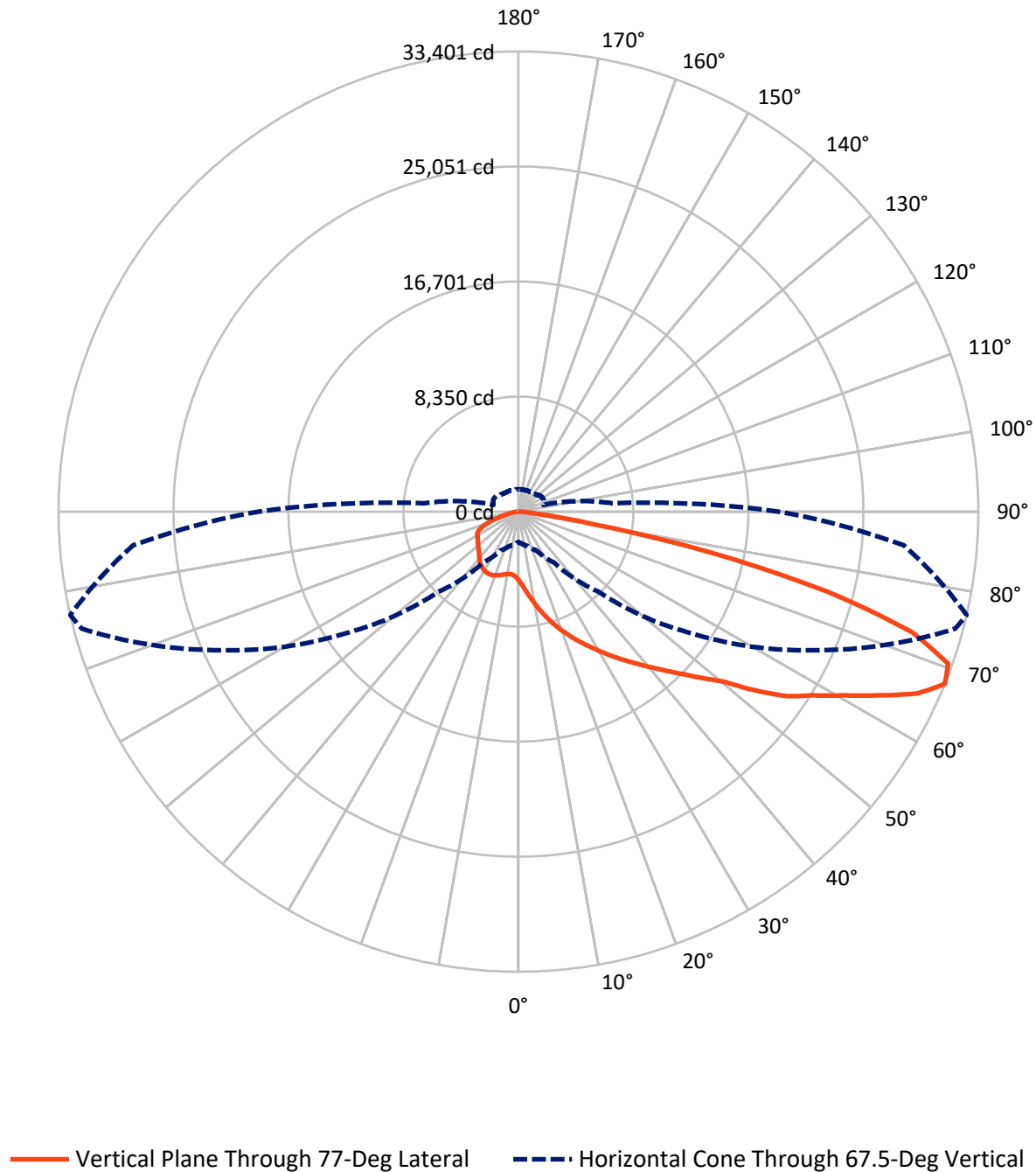
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 15.6 fc
Type II - Medium - N/A

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Luminous Intensity Polar Plot



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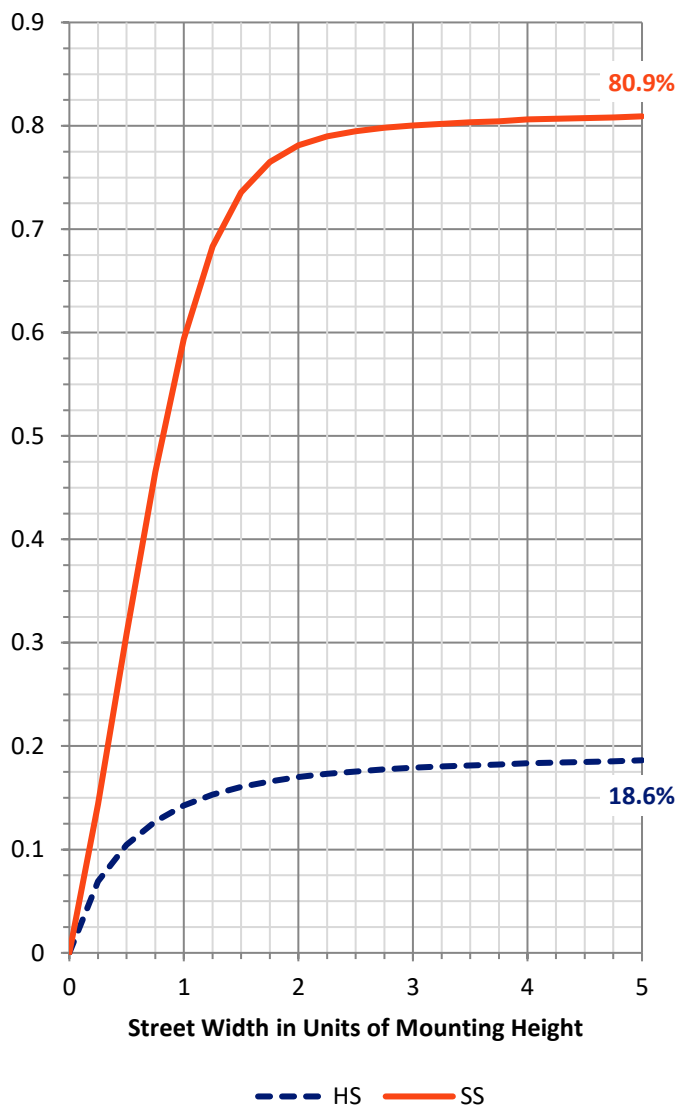
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8054.1	0.0	8054.1
	% Fixture	18.9	0.0	18.9
Street Side	Lumens	34524.4	0.0	34524.4
	% Fixture	81.1	0.0	81.1
Total	Lumens	42578.5	0.0	42578.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	535.5	1.3
10°-20°	1923.8	4.5
20°-30°	3632.3	8.5
30°-40°	5851.5	13.7
40°-50°	8003.8	18.8
50°-60°	9028.3	21.2
60°-70°	8426.8	19.8
70°-80°	4619.3	10.8
80°-90°	557.2	1.3
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°	42578.5	100.0
0°-180°	42578.5	100.0

Coefficient of Utilization



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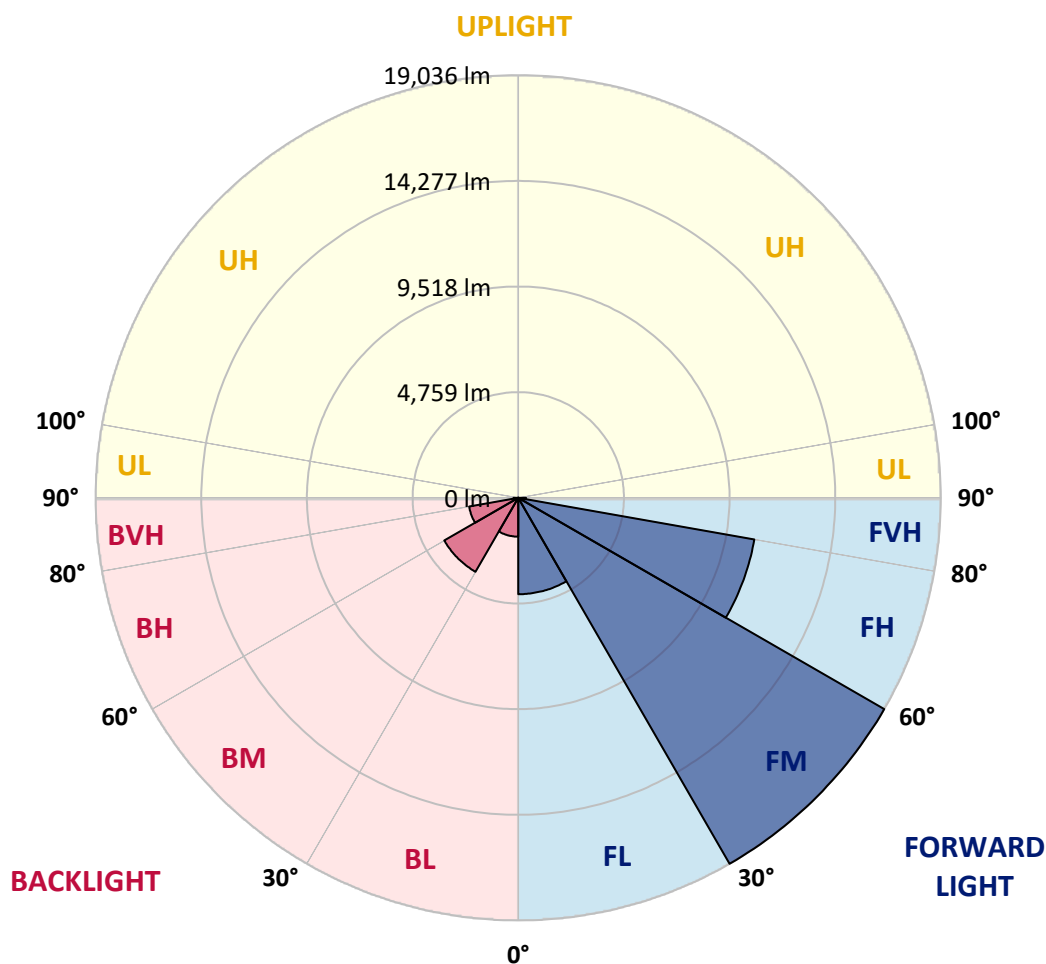
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4340.3	10.2			
FM	(30°-60°)	19036.4	44.7			
FH	(60°-80°)	10799.2	25.4			G4/12000
FVH	(80°-90°)	348.5	0.8			G3/500
BL	(0°-30°)	1751.2	4.1	B3/2500		
BM	(30°-60°)	3847.3	9.0	B3/5000		
BH	(60°-80°)	2247.0	5.3	B3/2500		G3/2500
BVH	(80°-90°)	208.7	0.5			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 II Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77°	85°
0°	4995.7	4995.7	4995.7	4995.7	4995.7	4995.7	4995.7	4995.7	4995.7	4995.7	4995.7
2.5°	6255.2	6299.1	6244.2	6244.2	6059.6	5962.8	5778.2	5637.6	5384.8	5340.9	5173.8
5°	7393.6	7448.6	7371.7	7338.7	7121.1	6921.1	6611.2	6305.7	5855.1	5809.0	5415.6
7.5°	8275.0	8345.3	8277.2	8242.0	8048.6	7824.4	7461.8	7035.4	6400.2	6310.1	5740.8
10°	8993.8	9004.7	8982.7	8995.9	8844.3	8659.6	8288.3	7791.4	6998.1	6875.0	6134.3
12.5°	9400.4	9450.9	9494.9	9574.0	9547.6	9433.3	9099.2	8505.8	7631.0	7472.8	6562.9
15°	9591.5	9679.5	9778.4	9960.7	10108.0	10136.6	9881.7	9272.9	8275.0	8083.8	6995.8
17.5°	9659.7	9743.2	9899.2	10163.0	10479.5	10692.7	10578.4	10017.9	8912.4	8692.6	7450.8
20°	10004.7	10028.9	10123.4	10374.0	10716.9	11070.7	11156.4	10734.4	9543.2	9294.8	7921.2
22.5°	10743.2	10694.8	10721.3	10835.6	11081.7	11424.5	11620.2	11367.5	10191.6	9905.8	8395.9
25°	11963.1	11822.3	11681.7	11549.9	11675.2	11868.6	12090.5	12000.4	10870.7	10508.1	8875.1
27.5°	13503.8	13332.4	13022.4	12589.5	12437.8	12505.9	12604.8	12587.3	11499.3	11132.2	9369.5
30°	15020.4	14820.3	14451.1	13824.7	13424.6	13244.4	13169.7	13119.2	12182.8	11791.6	9868.5
32.5°	16231.4	16073.1	15710.5	15009.3	14429.1	14121.4	13873.1	13692.8	12897.2	12505.9	10396.0
35°	17290.7	17143.4	16728.1	15963.2	15332.4	15005.0	14679.6	14295.1	13640.1	13244.4	10963.0
37.5°	18257.8	18110.5	17541.2	16745.6	16110.4	15884.1	15593.9	14941.2	14385.2	14011.4	11563.0
40°	18868.8	18835.8	18303.9	17402.9	16743.5	16631.3	16534.7	15690.7	15211.5	14864.2	12222.4
42.5°	19024.8	19097.4	18675.4	17934.7	17306.1	17216.0	17442.4	16539.1	16139.0	15807.1	12969.7
45°	18649.1	18857.8	18580.9	18077.5	17706.2	17657.8	18246.8	17466.5	17165.5	16862.2	13870.8
47.5°	17697.3	18051.2	17936.9	17866.6	17813.8	18022.6	18954.5	18451.2	18328.1	18064.4	14899.4
50°	15776.4	16446.7	16646.7	17090.7	17600.6	18306.1	19598.5	19525.9	19686.5	19420.5	16152.3
52.5°	12455.4	13378.5	14539.0	15651.1	16945.6	18211.6	20306.2	21068.9	21745.8	21600.7	18143.5
55°	10281.7	10697.1	11589.5	13629.0	15675.3	17813.8	20624.9	22315.1	23789.8	23660.2	19653.5
57.5°	8611.3	8982.7	9532.2	11235.5	13754.4	16910.4	20822.7	23075.5	25189.9	25176.7	21143.6
60°	6820.0	7213.4	7776.1	8982.7	11510.3	15350.0	20778.8	23941.5	26976.8	27086.6	22961.2
62.5°	4797.9	5231.0	5855.1	6980.5	9217.9	13328.0	19882.0	24567.9	29080.2	29379.1	25148.2
65°	3153.9	3439.7	3910.1	4881.5	6868.4	10727.9	18169.9	24649.2	31330.8	31836.3	27200.9
67.5°	2211.0	2321.0	2597.9	3125.4	4527.6	8226.6	15442.3	23807.5	32832.0	33401.2	28091.2
70°	1725.4	1780.3	1921.0	2131.9	2844.1	5532.0	11833.4	21618.4	32511.1	33104.4	27161.4
72.5°	1490.1	1542.9	1595.6	1622.1	1907.7	3415.5	8015.7	18075.4	29488.9	29891.2	23616.2
75°	1351.7	1364.9	1408.9	1400.0	1455.0	2215.4	4626.5	13169.7	23266.8	23128.3	17433.6
77.5°	1136.3	1153.8	1226.4	1215.4	1292.3	1514.3	2402.3	8499.2	15084.0	14143.4	9703.7
80°	962.7	971.5	1050.6	1037.4	1123.1	1096.8	1226.4	4332.1	6398.0	5420.0	2797.9
82.5°	334.0	413.2	802.3	826.4	857.2	663.8	707.8	1767.1	1954.0	1496.7	586.8
85°	162.7	173.6	408.8	580.3	578.0	334.0	345.1	630.8	615.4	483.5	195.6
87.5°	26.3	33.0	48.4	226.4	180.2	87.9	118.7	123.1	127.5	109.9	44.0
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°	4995.7	4995.7	4995.7	4995.7	4995.7	4995.7	4995.7	4995.7	4995.7	4995.7	4995.7
2.5°	5050.7	4940.8	4710.1	4496.9	4329.8	4169.4	4079.3	4002.3	3958.3	3949.6	3949.6
5°	5187.0	4960.6	4540.9	4186.9	3956.2	3784.7	3694.6	3637.5	3608.9	3591.3	3589.1
7.5°	5382.6	5050.7	4452.9	4050.7	3808.9	3685.8	3639.7	3630.9	3628.7	3630.9	3637.5
10°	5653.0	5198.0	4444.1	4017.7	3815.6	3747.4	3745.1	3747.4	3756.2	3758.4	3760.6
12.5°	5945.3	5349.7	4479.2	4046.3	3899.0	3861.7	3855.1	3852.9	3859.4	3863.8	3866.1
15°	6264.0	5549.7	4538.6	4107.8	3991.3	3951.8	3945.2	3932.0	3929.8	3927.6	3925.4
17.5°	6591.5	5747.5	4604.6	4173.8	4050.7	3995.8	3971.6	3940.8	3916.6	3910.1	3916.6
20°	6923.4	5943.1	4650.7	4206.7	4055.1	3978.1	3929.8	3877.1	3835.3	3811.2	3819.9
22.5°	7277.2	6147.4	4679.3	4198.0	4015.5	3910.1	3822.1	3760.6	3696.9	3655.0	3657.3
25°	7622.2	6325.5	4677.1	4151.8	3938.6	3804.5	3692.5	3613.3	3525.4	3481.4	3481.4
27.5°	7954.1	6485.9	4622.1	4070.5	3828.7	3679.2	3545.2	3450.7	3365.0	3323.2	3321.0
30°	8297.0	6620.1	4536.4	3951.8	3699.0	3534.2	3386.9	3305.6	3228.6	3189.1	3186.9
32.5°	8637.7	6743.1	4415.5	3804.5	3549.6	3391.3	3246.3	3171.6	3125.4	3125.4	3127.6
35°	8998.2	6828.9	4255.1	3633.1	3391.3	3239.7	3125.4	3081.5	3077.0	3050.7	3044.0
37.5°	9378.3	6883.8	4059.5	3457.2	3235.3	3092.4	3057.3	3004.5	2960.5	2903.4	2894.6
40°	9778.4	6938.7	3824.3	3274.9	3070.4	2991.4	2975.9	2905.6	2780.3	2639.7	2619.9
42.5°	10264.1	6976.0	3580.3	3092.4	2896.9	2870.4	2892.4	2771.5	2571.5	2466.0	2468.2
45°	10826.8	7037.6	3356.2	2912.2	2718.8	2718.8	2811.1	2652.8	2488.0	2422.1	2433.0
47.5°	11556.5	7180.4	3147.4	2714.4	2553.9	2597.9	2630.9	2510.0	2417.7	2336.4	2334.1
50°	12611.4	7523.3	2932.0	2514.3	2428.6	2516.6	2470.5	2400.0	2292.4	2226.4	2219.8
52.5°	13921.3	7725.5	2740.7	2334.1	2321.0	2408.9	2342.9	2277.0	2195.7	2107.8	2090.2
55°	14813.7	7762.9	2580.3	2202.3	2248.4	2239.6	2215.4	2156.1	2112.1	1995.7	1997.8
57.5°	15811.5	7837.7	2448.4	2123.2	2202.3	2105.6	2096.7	2046.2	1989.1	1910.0	1883.5
60°	17005.0	7954.1	2334.1	2092.3	2162.8	2017.6	1973.7	1954.0	1896.8	1857.2	1868.2
62.5°	18306.1	8059.6	2217.7	2096.7	2116.5	1931.9	1866.0	1859.5	1824.2	1811.1	1811.1
65°	19194.0	7771.7	2072.5	2092.3	2044.1	1844.0	1760.5	1758.3	1729.7	1725.4	1723.1
67.5°	18884.2	6859.6	1877.0	2030.8	1969.3	1756.1	1663.8	1655.0	1617.7	1619.8	1619.8
70°	17332.4	5558.5	1606.7	1879.2	1877.0	1677.0	1562.7	1534.1	1483.6	1492.4	1501.1
72.5°	14422.5	4118.9	1244.0	1626.5	1729.7	1604.4	1446.2	1400.0	1336.3	1345.1	1343.0
75°	10415.7	2800.1	905.5	1237.4	1505.5	1518.7	1331.9	1252.8	1175.9	1189.1	1193.4
77.5°	5329.9	1586.9	665.9	852.8	1182.4	1380.3	1228.6	1123.1	1105.6	1228.6	1211.0
80°	1738.5	795.6	461.6	597.8	775.8	1129.8	1077.0	956.1	951.7	980.2	841.8
82.5°	518.6	336.3	296.7	393.4	428.6	865.9	929.7	723.1	622.0	655.0	676.9
85°	178.0	162.7	169.2	195.6	204.4	507.7	650.6	479.2	452.7	498.9	492.3
87.5°	41.7	57.2	48.4	44.0	44.0	123.1	252.8	200.0	277.0	184.6	178.0
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)