

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: P967214

Luminaire Tested: **NAV-SB4D-735-U-T4W-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967214
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-SB4D-735-U-T4W-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 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: 32200.4 lumens
Efficiency: N/A
Efficacy: 109.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G5

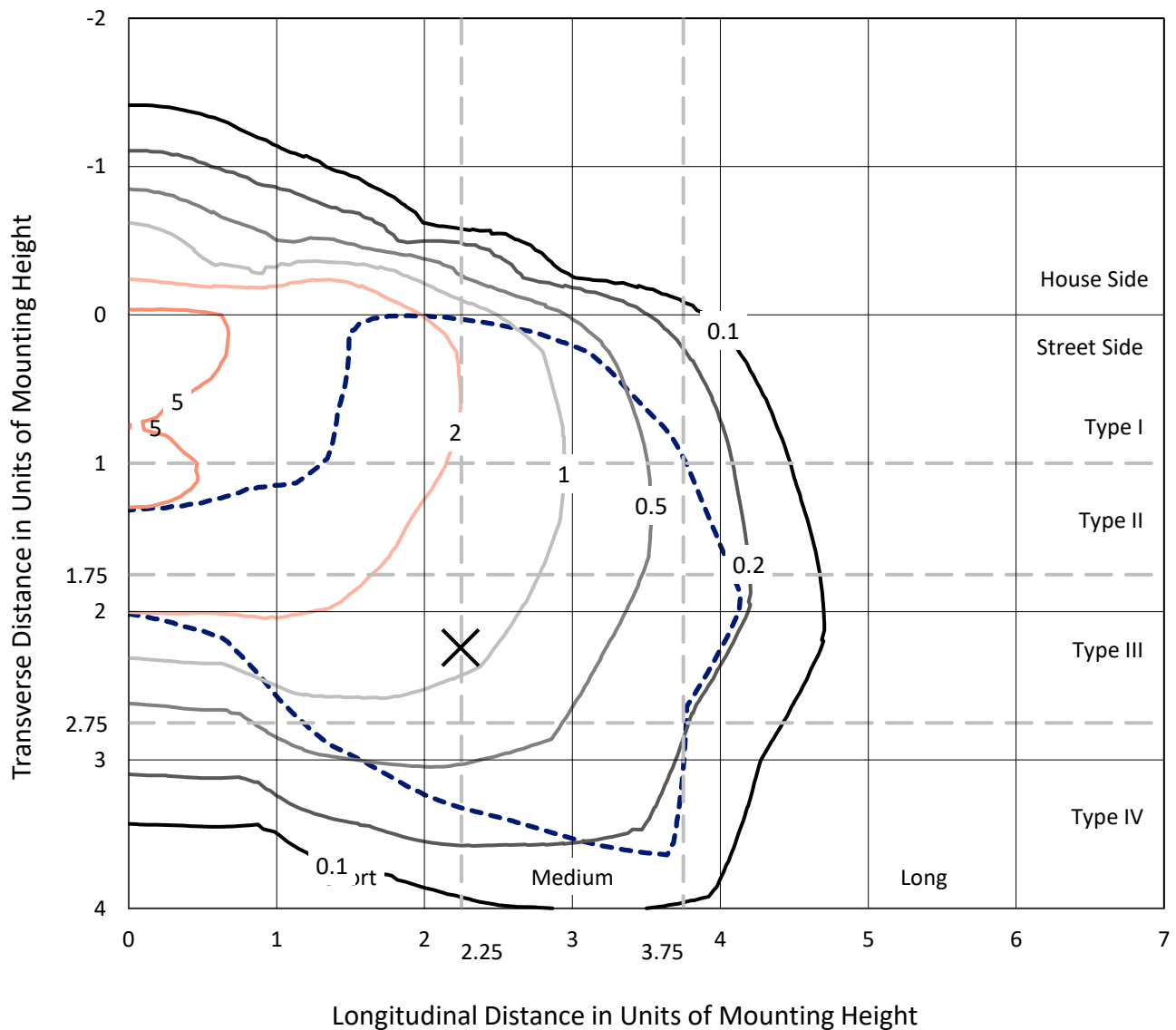
Input Watts (W): 293.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

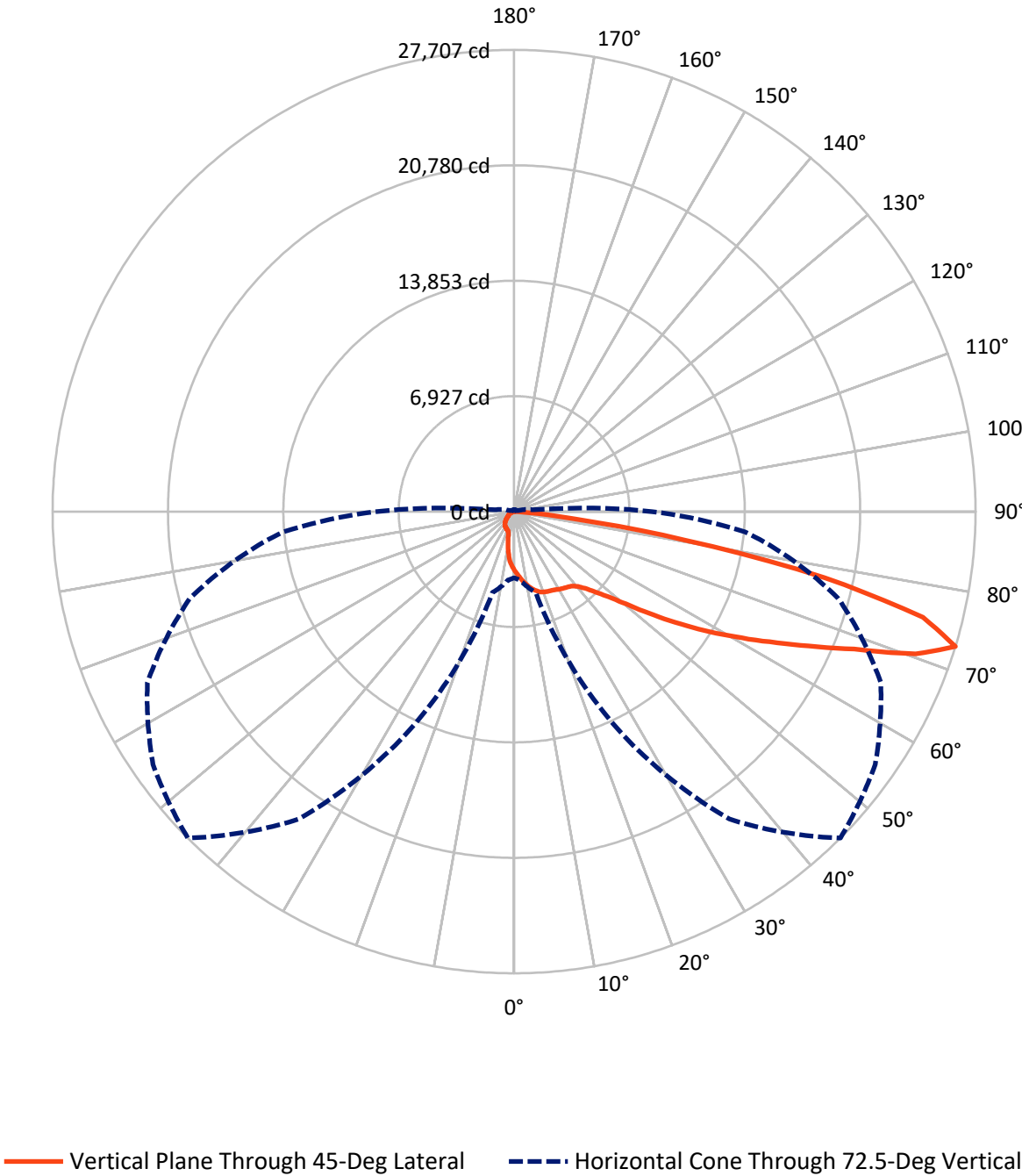
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.8 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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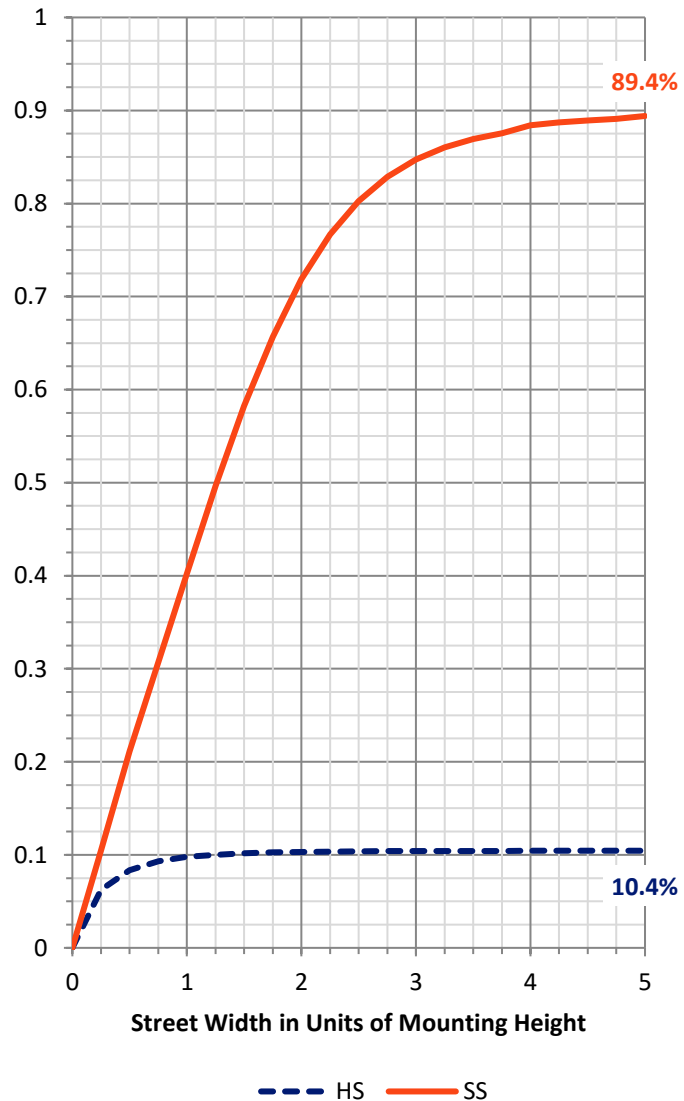
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3383.4	0.0	3383.4
	% Fixture	10.5	0.0	10.5
Street Side	Lumens	28817.0	0.0	28817.0
	% Fixture	89.5	0.0	89.5
Total	Lumens	32200.4	0.0	32200.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	332.4	1.0
10°-20°	971.4	3.0
20°-30°	1595.2	5.0
30°-40°	2262.3	7.0
40°-50°	3739.4	11.6
50°-60°	6717.4	20.9
60°-70°	9327.4	29.0
70°-80°	6765.8	21.0
80°-90°	489.1	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°	32200.4	100.0
0°-180°	32200.4	100.0

Coefficient of Utilization



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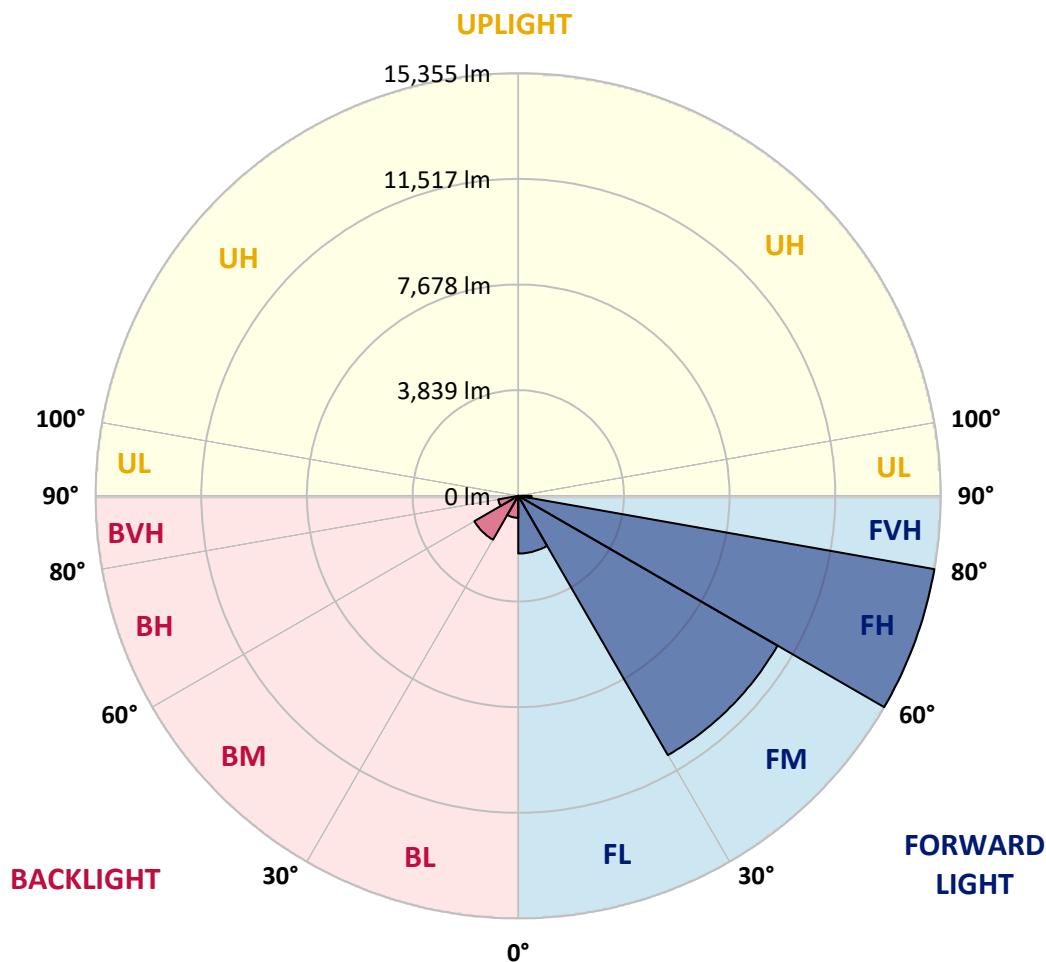
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2097.5	6.5			
FM	(30°-60°)	10879.0	33.8			
FH	(60°-80°)	15355.4	47.7			G5
FVH	(80°-90°)	485.0	1.5			G3/500
BL	(0°-30°)	801.4	2.5	B2/1000		
BM	(30°-60°)	1840.1	5.7	B2/2500		
BH	(60°-80°)	737.8	2.3	B2/1000		G2/1000
BVH	(80°-90°)	4.1	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G5

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	3527.6	3527.6	3527.6	3527.6	3527.6	3527.6	3527.6	3527.6	3527.6	3527.6	3527.6
2.5°	3852.9	3859.5	3855.1	3828.7	3784.8	3760.6	3747.4	3703.4	3674.8	3624.3	3571.6
5°	4206.8	4233.1	4217.8	4165.0	4081.4	4022.1	4004.6	3914.5	3833.1	3738.6	3628.7
7.5°	4582.6	4595.8	4567.2	4499.1	4387.0	4285.9	4270.5	4145.2	4015.5	3870.5	3721.1
10°	4907.9	4923.3	4879.3	4780.4	4653.0	4527.6	4505.7	4367.2	4213.4	4035.3	3844.2
12.5°	5180.5	5195.8	5138.6	5020.0	4879.3	4749.6	4727.7	4582.6	4413.3	4215.5	3978.2
15°	5387.0	5415.6	5338.7	5211.2	5059.5	4929.8	4918.9	4776.0	4611.2	4391.4	4138.6
17.5°	5507.9	5536.5	5464.0	5310.1	5180.5	5070.6	5057.3	4938.7	4784.8	4573.9	4294.6
20°	5527.7	5554.1	5477.2	5343.1	5235.4	5147.4	5140.9	5055.2	4943.1	4740.8	4463.9
22.5°	5468.4	5501.3	5431.0	5323.3	5248.6	5202.4	5193.6	5145.3	5081.5	4910.1	4622.1
25°	5406.8	5433.2	5380.4	5285.9	5246.4	5242.0	5248.6	5239.8	5226.6	5081.5	4806.8
27.5°	5402.5	5431.0	5371.6	5281.5	5259.6	5305.7	5312.3	5354.1	5365.1	5237.5	4984.8
30°	5439.8	5459.6	5402.5	5308.0	5296.9	5402.5	5404.6	5479.3	5497.0	5369.5	5160.7
32.5°	5521.1	5543.1	5485.9	5347.4	5332.0	5479.3	5485.9	5584.8	5613.4	5510.1	5345.3
35°	5712.3	5738.7	5672.8	5457.4	5402.5	5551.9	5571.7	5688.1	5745.3	5659.5	5536.5
37.5°	6189.3	6112.4	6022.2	5679.3	5562.9	5666.2	5699.1	5835.4	5936.5	5837.6	5765.1
40°	7374.0	7132.2	6850.8	6057.4	5844.2	5910.2	5936.5	6072.8	6211.3	6114.5	6079.4
42.5°	9152.0	8866.4	8413.5	6927.8	6268.4	6301.4	6321.2	6439.9	6635.4	6558.6	6567.3
45°	10736.7	10633.5	10171.9	8413.5	7061.8	6899.2	6923.4	6984.9	7272.8	7244.3	7301.4
47.5°	11954.4	11895.0	11538.9	10119.1	8402.5	7631.1	7699.2	7727.8	8143.2	8244.3	8398.1
50°	12890.6	12868.7	12550.0	11635.7	10154.3	8710.2	8734.4	8672.9	9294.9	9545.4	9837.7
52.5°	13774.2	13849.0	13613.7	13044.5	12024.7	10123.5	10119.1	9828.9	10668.6	11046.6	11545.5
55°	14572.0	14598.5	14622.5	14481.9	13906.1	11732.4	11690.6	11215.9	12262.1	12653.3	13194.0
57.5°	15321.5	15332.5	15547.9	15835.8	15864.4	13459.9	13383.0	12813.7	14002.8	14281.9	14613.8
60°	15824.9	15875.4	16330.3	17130.4	17479.8	15242.4	15200.6	14620.4	15774.2	15904.0	15842.4
62.5°	15099.5	15407.2	16554.6	18141.4	19005.1	17218.3	17198.5	16653.5	17638.1	17532.6	17005.1
65°	12222.5	12743.4	14761.0	18824.9	20501.9	19425.0	19453.6	18873.3	19552.5	19209.6	17950.2
67.5°	8549.8	9099.2	11486.2	18879.9	22174.5	22016.3	22181.1	21271.2	21585.5	20816.2	18174.4
70°	5912.3	6195.8	7749.8	17697.4	23477.9	25585.6	25581.3	24216.4	23607.6	21548.2	17031.5
72.5°	3976.0	4123.3	5033.2	14040.1	22519.7	27706.7	27579.2	26467.0	24288.9	20152.5	13914.9
75°	1677.0	1784.7	2329.7	7890.4	17816.1	25348.4	25003.2	23390.0	21581.2	15868.7	8681.6
77.5°	531.9	578.0	918.7	2824.3	9813.6	19053.5	18688.7	14607.2	14464.4	7960.8	3173.7
80°	252.8	294.5	516.5	1134.2	3861.7	10363.1	10312.5	6626.6	6222.3	2149.5	637.3
82.5°	109.9	129.7	285.8	606.6	1727.5	3696.9	3771.6	2255.0	1866.0	815.4	195.6
85°	35.2	46.1	131.9	279.1	729.7	918.7	907.7	536.3	751.6	443.9	68.2
87.5°	0.0	0.0	44.0	63.8	74.7	52.8	59.3	46.1	208.8	123.1	24.2
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°	3527.6	3527.6	3527.6	3527.6	3527.6	3527.6	3527.6	3527.6	3527.6	3527.6	3527.6
2.5°	3545.2	3510.0	3448.5	3391.3	3340.8	3290.2	3259.5	3215.5	3211.1	3211.1	3222.1
5°	3569.4	3512.3	3402.4	3285.8	3151.8	3024.3	2896.9	2773.8	2734.2	2705.6	2718.8
7.5°	3639.7	3549.6	3375.9	3154.0	2899.0	2619.9	2424.2	2213.3	2132.0	2088.0	2094.6
10°	3740.8	3617.7	3354.0	2964.9	2551.7	2171.6	1892.4	1663.8	1575.9	1538.5	1538.5
12.5°	3852.9	3701.3	3314.4	2729.8	2171.6	1716.6	1444.0	1338.5	1325.3	1325.3	1325.3
15°	3986.9	3802.3	3246.3	2452.8	1773.7	1358.3	1261.6	1266.0	1279.2	1288.0	1288.0
17.5°	4125.4	3910.1	3138.5	2143.0	1422.1	1222.0	1224.3	1230.8	1241.8	1250.6	1250.6
20°	4274.9	4017.8	2995.8	1813.2	1219.9	1182.4	1189.1	1195.7	1204.5	1208.9	1211.0
22.5°	4435.4	4118.9	2826.5	1490.1	1151.7	1149.5	1151.7	1158.2	1169.3	1169.3	1173.6
25°	4606.8	4231.0	2633.1	1255.0	1116.5	1116.5	1120.9	1125.3	1134.2	1134.2	1136.3
27.5°	4782.6	4334.2	2428.6	1131.9	1085.8	1083.5	1083.5	1090.2	1094.6	1096.8	1098.9
30°	4976.1	4455.2	2224.2	1105.6	1061.6	1050.6	1044.0	1048.4	1052.8	1055.0	1059.3
32.5°	5173.9	4571.6	2041.8	1116.5	1037.4	1017.6	995.7	991.3	991.3	1000.1	1006.7
35°	5393.7	4699.1	1901.2	1153.9	1024.2	969.2	934.1	914.3	916.6	929.7	936.3
37.5°	5657.4	4853.0	1797.8	1186.8	1015.5	914.3	857.2	833.0	817.6	833.0	828.6
40°	6002.4	5079.3	1723.1	1213.2	1004.4	850.5	773.7	734.1	705.5	714.3	709.9
42.5°	6510.2	5435.4	1694.5	1215.4	980.3	775.8	688.0	635.2	593.5	595.6	586.8
45°	7222.3	5998.1	1841.8	1186.8	927.5	694.5	597.8	527.5	501.1	494.6	485.7
47.5°	8198.2	6817.9	2182.5	1127.5	850.5	615.4	509.9	450.6	430.8	419.8	413.2
50°	9505.8	7870.7	2560.6	1061.6	773.7	540.7	437.4	400.1	386.8	375.9	373.6
52.5°	11022.4	8938.8	2870.4	995.7	696.7	474.8	391.2	369.2	358.2	349.4	347.3
55°	12413.7	9675.1	2852.9	925.3	622.0	422.0	358.2	345.1	331.9	323.1	318.7
57.5°	13279.7	9778.4	2351.8	848.4	536.3	380.3	327.5	318.7	303.3	292.3	290.1
60°	13677.5	9189.4	1648.4	747.3	450.6	340.7	294.5	290.1	270.3	254.9	250.5
62.5°	13750.1	8094.8	1098.9	622.0	375.9	303.3	261.6	254.9	228.6	202.2	189.0
65°	13455.5	6530.0	760.4	485.7	320.9	263.7	224.2	211.0	182.4	156.0	147.3
67.5°	12523.6	4584.8	529.7	349.4	272.5	208.8	178.0	173.6	151.7	129.7	123.1
70°	10815.8	2613.3	353.8	261.6	215.4	142.9	140.6	145.0	123.1	105.5	96.7
72.5°	8292.7	1195.7	219.8	191.3	147.3	96.7	112.1	114.3	94.5	79.1	70.3
75°	4881.6	512.1	138.5	123.1	74.7	63.8	81.3	83.5	63.8	50.5	44.0
77.5°	1661.6	193.4	87.9	72.6	37.4	35.2	52.8	52.8	35.2	19.8	15.4
80°	378.0	72.6	44.0	28.6	17.6	15.4	17.6	15.4	8.8	2.2	0.0
82.5°	107.7	28.6	17.6	11.0	6.6	6.6	2.2	0.0	0.0	0.0	0.0
85°	30.7	13.2	4.4	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	13.2	2.2	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)