

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: P967219

Luminaire Tested: **NAV-SB4D-740-U-AFL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967219
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-15)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-740-U-AFL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 4000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND AUTOMOTIVE
FRONTLINE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 37708.7 lumens
Efficiency: N/A
Efficacy: 128.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G3

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

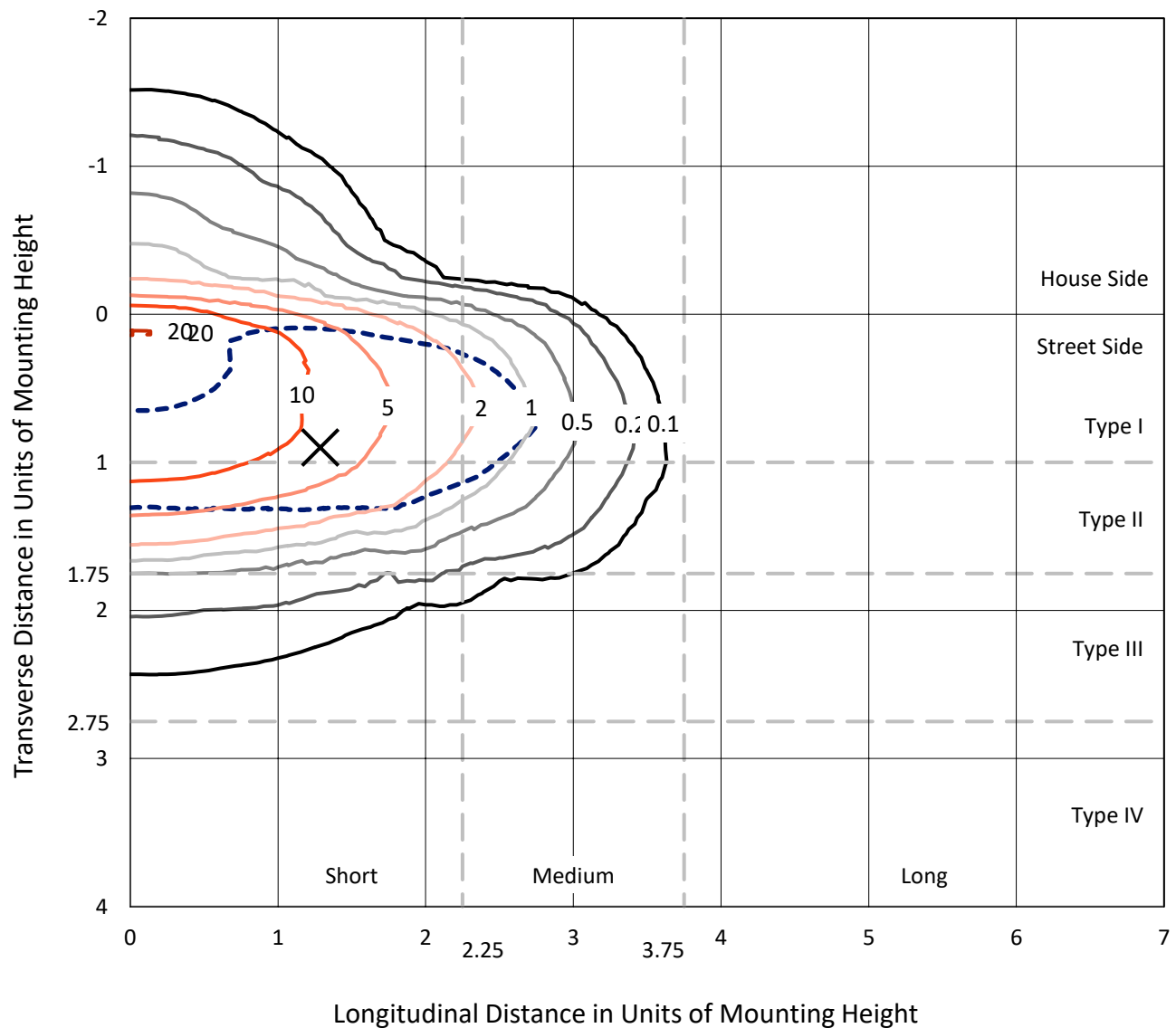


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Iso-Footcandle Lines of Horizontal Illumination

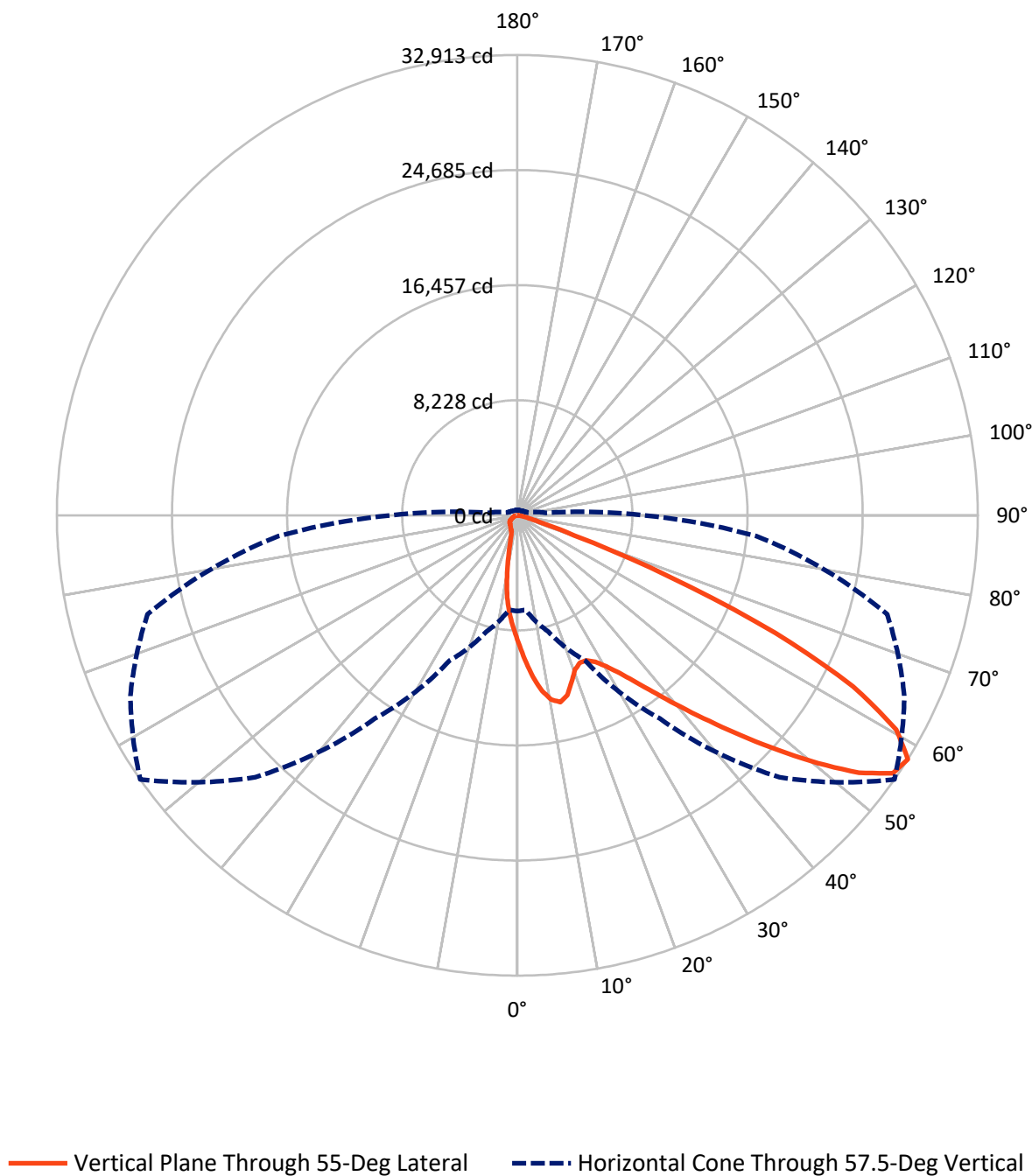
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 20.8 fc
Type II - Short - N/A

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Luminous Intensity Polar Plot



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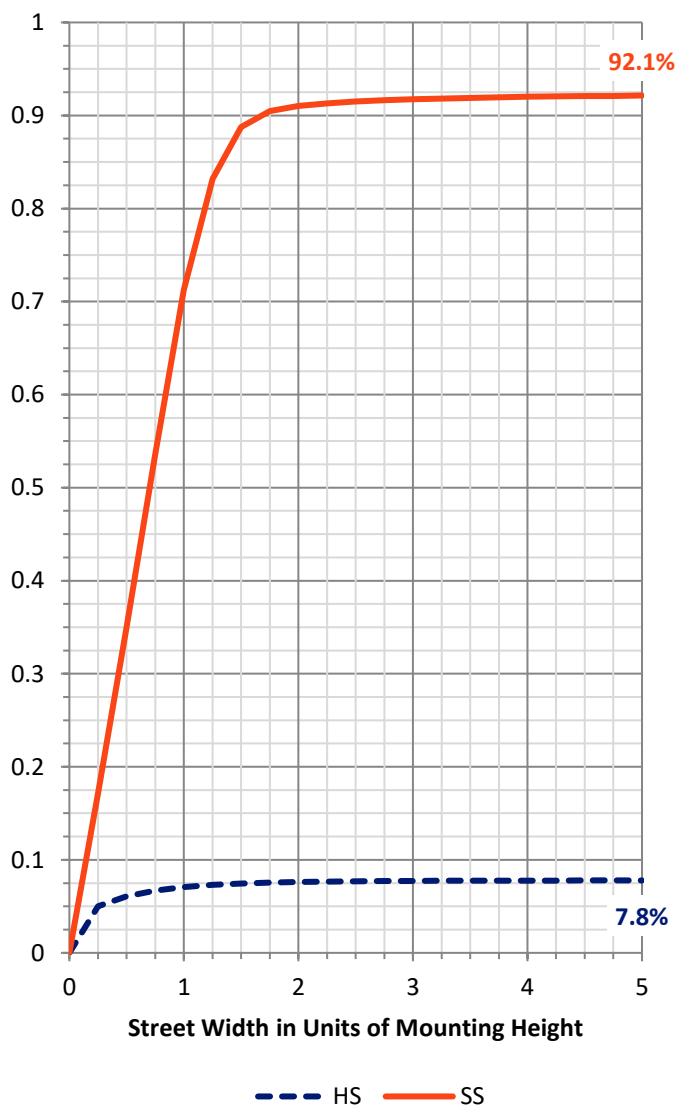
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2944.9	0.0	2944.9
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	34763.8	0.0	34763.8
	% Fixture	92.2	0.0	92.2
Total	Lumens	37708.7	0.0	37708.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	845.5	2.2
10°-20°	2042.3	5.4
20°-30°	3267.6	8.7
30°-40°	5530.6	14.7
40°-50°	9080.1	24.1
50°-60°	9979.7	26.5
60°-70°	5724.3	15.2
70°-80°	1169.7	3.1
80°-90°	69.0	0.2
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°	37708.7	100.0
0°-180°	37708.7	100.0

Coefficient of Utilization



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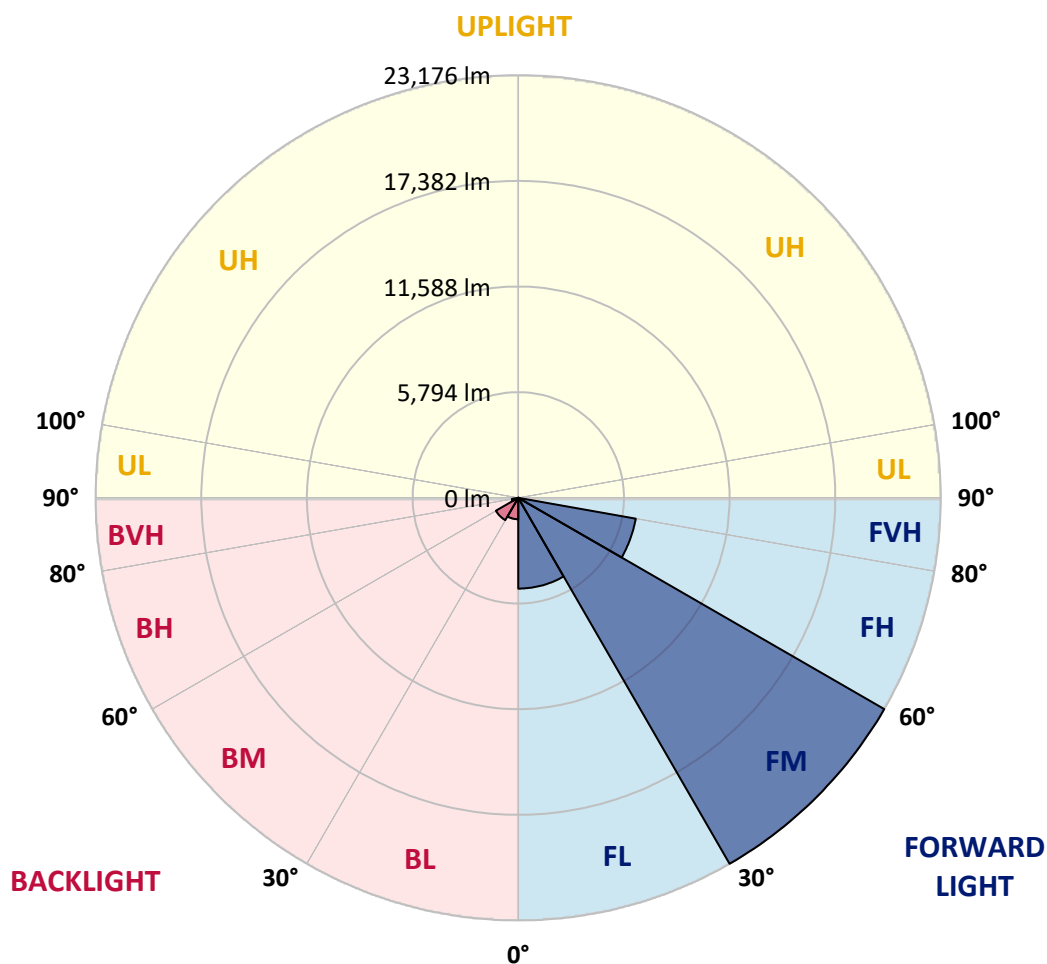
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4979.7	13.2			
FM	(30°-60°)	23176.1	61.5			
FH	(60°-80°)	6543.8	17.4			G3/7500
FVH	(80°-90°)	64.3	0.2			G1/100
BL	(0°-30°)	1175.7	3.1	B3/2500		
BM	(30°-60°)	1414.3	3.8	B2/2500		
BH	(60°-80°)	350.2	0.9	B1/500		G1/500
BVH	(80°-90°)	4.7	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	9086.8	9086.8	9086.8	9086.8	9086.8	9086.8	9086.8	9086.8	9086.8	9086.8	9086.8
2.5°	11274.9	11133.0	11112.1	11084.2	10814.5	10612.2	10319.2	9998.4	9638.0	9270.6	9107.8
5°	13025.8	12914.2	12893.3	12763.0	12456.1	12111.9	11591.1	10933.1	10261.1	9470.5	9131.0
7.5°	13365.3	13344.3	13439.6	13435.0	13393.2	13121.1	12681.6	11898.0	10888.9	9717.0	9191.5
10°	11851.6	11905.0	12188.7	12437.5	13109.4	13500.1	13404.7	12758.4	11535.3	9998.4	9258.9
12.5°	10472.7	10409.9	10612.2	10893.6	11674.9	12837.4	13704.8	13476.8	12274.7	10316.9	9359.0
15°	9607.7	9582.1	9696.1	9826.3	10421.6	11593.5	13356.0	14060.4	12986.2	10693.6	9510.1
17.5°	9331.0	9310.1	9344.9	9377.5	9763.5	10670.4	12525.8	14418.6	13667.6	11123.7	9677.4
20°	9556.6	9528.7	9524.0	9498.5	9658.9	10277.4	11774.8	14444.1	14279.1	11514.3	9821.7
22.5°	10214.6	10182.0	10068.1	9965.8	9979.7	10330.9	11439.9	14188.4	14739.4	11879.4	9912.4
25°	11407.4	11353.9	11116.7	10772.6	10554.1	10702.8	11491.2	13851.2	15178.9	12165.4	9868.2
27.5°	12900.2	12830.4	12525.8	12014.3	11514.3	11333.0	11860.8	13618.7	15543.9	12384.0	9772.8
30°	14362.7	14272.1	13972.1	13574.5	12844.4	12272.4	12528.2	13721.0	15978.7	12611.9	9647.2
32.5°	15941.5	15855.5	15457.9	14965.0	14360.5	13590.8	13442.0	14221.0	16511.2	12930.4	9558.8
35°	17938.9	17804.0	17239.1	16567.1	15925.3	15146.3	14679.0	15083.6	17220.4	13416.4	9607.7
37.5°	20212.9	20031.6	19422.4	18494.6	17657.6	16785.6	16185.7	16269.4	18259.8	14067.4	9758.8
40°	22356.8	22191.7	21629.0	20754.7	19703.7	18645.8	18006.4	17820.3	19694.5	14860.3	10023.9
42.5°	23642.6	23493.8	23256.6	22886.9	22001.0	20922.1	20115.3	19713.0	21391.9	15809.0	10347.2
45°	23714.7	23584.5	23903.0	24333.2	24158.8	23440.3	22456.7	21719.6	23096.2	16699.6	10681.9
47.5°	22561.4	22473.0	23440.3	24942.4	25691.1	25993.4	25086.6	23558.9	24502.9	17339.0	10819.2
50°	19417.7	19385.2	21375.6	24133.2	26274.7	28230.2	27860.5	25270.2	25593.4	17669.2	10688.9
52.5°	16836.8	16718.2	17878.5	21542.9	25426.0	29406.7	30571.8	26949.0	26356.1	17732.0	10384.4
55°	12770.0	12665.3	14120.9	17208.8	22689.3	28988.2	32555.1	28681.3	26902.6	17571.5	9837.9
57.5°	6850.1	6784.9	8624.1	11454.0	17736.6	26477.0	32913.2	30513.5	27362.9	17146.0	9072.9
60°	2667.0	2655.4	3343.7	5557.2	10779.6	21540.7	31106.5	31613.4	27651.2	16622.8	8433.5
62.5°	1613.7	1648.6	1760.1	2495.0	4762.0	13381.5	26942.0	30362.4	27844.2	16143.9	7905.7
65°	1334.7	1337.0	1350.9	1713.7	2281.0	5599.1	20282.7	26246.9	27367.6	15290.5	7157.0
67.5°	1144.0	1164.9	1218.4	1360.3	1609.0	2455.4	11677.1	20331.5	24468.1	13304.8	5989.7
70°	902.2	930.1	997.5	1118.4	1241.7	1537.0	4315.6	13528.1	18692.3	10028.6	4529.5
72.5°	760.3	758.0	792.9	909.2	985.8	1081.2	1660.2	7580.2	10863.4	4787.6	2241.5
75°	588.2	611.5	655.7	760.3	806.9	783.6	899.8	2769.3	3892.3	1450.9	762.7
77.5°	460.4	479.0	518.5	620.8	667.4	555.8	518.5	990.6	1250.9	520.8	344.1
80°	206.9	223.2	353.4	458.1	544.1	383.7	281.4	506.9	555.8	237.2	174.4
82.5°	37.2	62.7	206.9	241.8	279.0	248.8	146.5	262.7	272.0	95.3	60.5
85°	2.4	4.6	72.1	88.4	111.6	81.4	44.2	104.7	90.7	32.6	23.3
87.5°	0.0	0.0	0.0	2.4	2.4	11.6	13.9	18.6	13.9	11.6	9.3
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°	9086.8	9086.8	9086.8	9086.8	9086.8	9086.8	9086.8	9086.8	9086.8	9086.8
2.5°	8940.4	8610.2	8289.4	8026.6	7873.1	7612.7	7440.7	7412.7	7340.6	7403.5
5°	8768.4	8177.8	7580.2	7045.3	6605.9	6038.6	5615.4	5436.3	5280.5	5334.0
7.5°	8687.0	7754.5	6824.4	5910.7	4971.2	4064.4	3390.2	3108.8	2894.9	2925.1
10°	8577.6	7315.1	5857.2	4462.0	3204.1	2308.9	1843.9	1671.8	1576.4	1578.8
12.5°	8494.0	6789.6	4734.1	3025.1	1950.9	1474.2	1330.0	1288.1	1260.2	1262.6
15°	8452.0	6171.1	3625.0	2016.0	1395.1	1248.7	1213.7	1195.1	1176.6	1174.2
17.5°	8382.3	5482.8	2653.0	1471.9	1220.8	1169.5	1139.4	1118.4	1095.2	1090.5
20°	8277.7	4701.6	1939.2	1243.9	1144.0	1104.4	1062.6	1034.7	1006.9	1002.1
22.5°	8084.7	3876.1	1490.5	1151.0	1088.2	1044.1	992.8	960.3	932.4	927.7
25°	7726.7	3101.9	1255.6	1092.9	1039.4	985.8	930.1	885.9	860.3	855.7
27.5°	7273.2	2436.8	1139.4	1039.4	976.6	927.7	865.0	823.1	799.9	795.2
30°	6738.5	1876.5	1071.9	978.9	902.2	860.3	804.5	769.7	755.7	755.7
32.5°	6161.8	1499.8	1044.1	918.5	837.1	790.6	746.4	732.5	727.7	725.5
35°	5620.0	1302.2	1030.0	869.6	778.9	734.7	716.2	718.5	727.7	727.7
37.5°	5138.7	1239.3	1023.1	834.8	727.7	688.3	699.9	720.8	711.6	711.6
40°	4703.8	1246.3	1018.4	809.1	685.9	662.7	685.9	669.6	646.4	644.1
42.5°	4371.4	1304.4	1009.1	788.2	660.3	644.1	634.8	609.2	606.9	611.5
45°	4129.5	1355.6	1006.9	778.9	632.4	602.2	590.6	565.0	611.5	623.2
47.5°	3843.5	1355.6	1006.9	746.4	586.0	574.3	555.8	527.8	574.3	586.0
50°	3473.8	1269.6	967.3	709.2	548.8	541.8	509.2	474.4	465.0	472.0
52.5°	3006.5	1113.8	867.3	658.0	511.6	497.6	458.1	432.4	425.5	425.5
55°	2474.0	932.4	732.5	583.6	472.0	446.4	418.5	406.9	400.0	395.2
57.5°	2011.3	765.0	588.2	518.5	434.8	402.2	393.0	379.0	367.4	360.4
60°	1650.9	602.2	486.0	460.4	397.6	367.4	365.1	346.4	316.2	311.6
62.5°	1274.2	441.8	409.3	400.0	360.4	334.9	330.2	292.9	246.5	237.2
65°	899.8	344.1	330.2	351.1	320.9	297.7	286.0	230.2	181.3	174.4
67.5°	632.4	288.3	260.5	306.9	279.0	248.8	241.8	195.4	151.2	146.5
70°	451.1	234.8	213.9	262.7	223.2	218.5	204.6	162.8	123.2	118.6
72.5°	318.6	179.1	165.1	227.9	153.4	188.3	167.4	125.6	93.0	88.4
75°	234.8	127.9	116.2	132.5	111.6	141.9	118.6	83.7	58.1	55.8
77.5°	172.1	81.4	69.8	65.1	65.1	88.4	65.1	34.8	25.6	23.3
80°	121.0	37.2	32.6	27.9	25.6	20.9	9.3	4.6	2.4	2.4
82.5°	72.1	16.3	16.3	11.6	7.0	0.0	0.0	0.0	0.0	0.0
85°	16.3	7.0	7.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.4	2.4	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

(END OF REPORT)