

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: P966196

Luminaire Tested: **NAV-SB4B-750-U-AFL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966196
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-SB4B-750-U-AFL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 5000K, 450mA 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: 20865.9 lumens
Efficiency: N/A
Efficacy: 141.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B2 - U0 - G2

Input Watts (W): 147
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

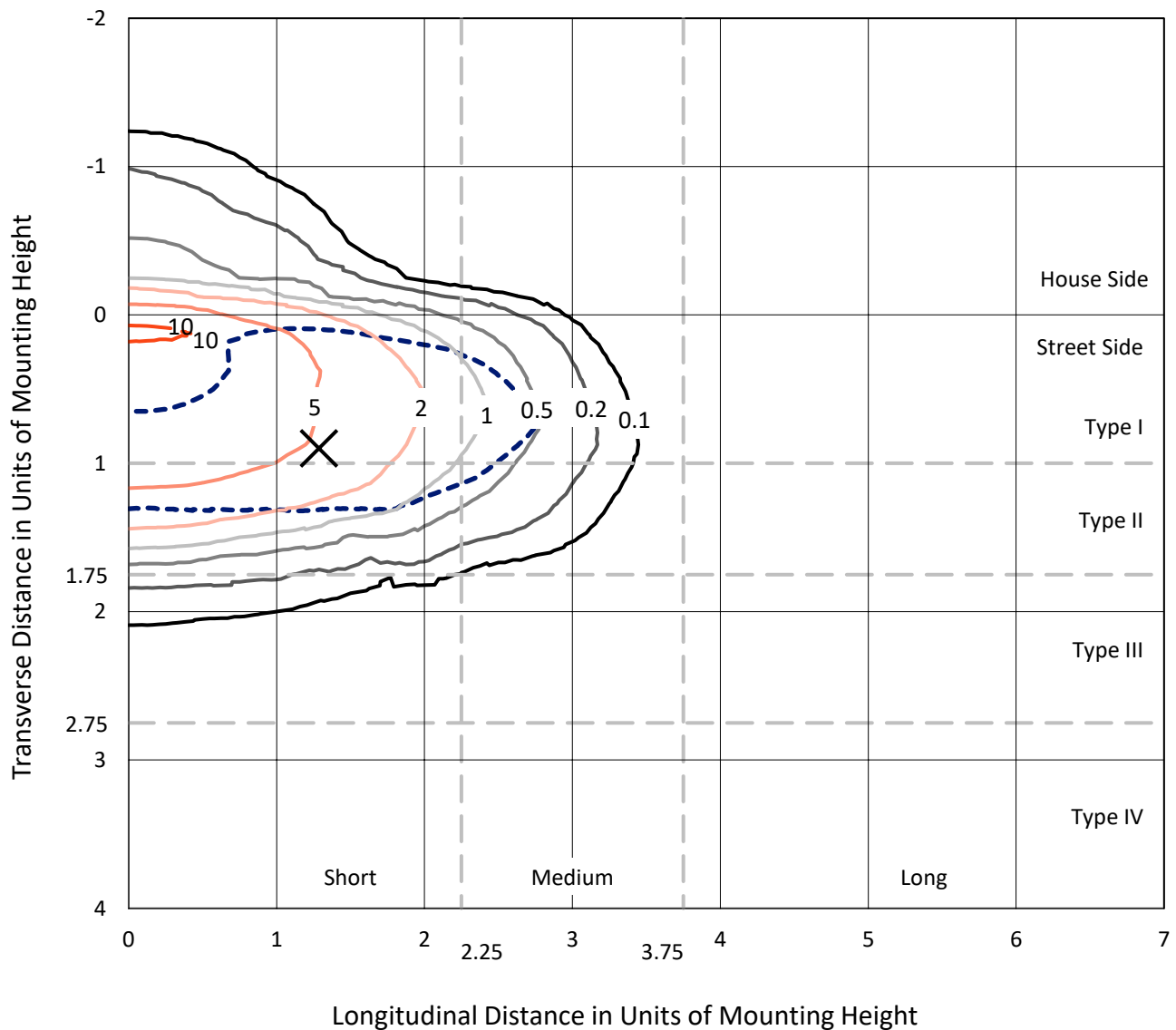


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Iso-Footcandle Lines of Horizontal Illumination

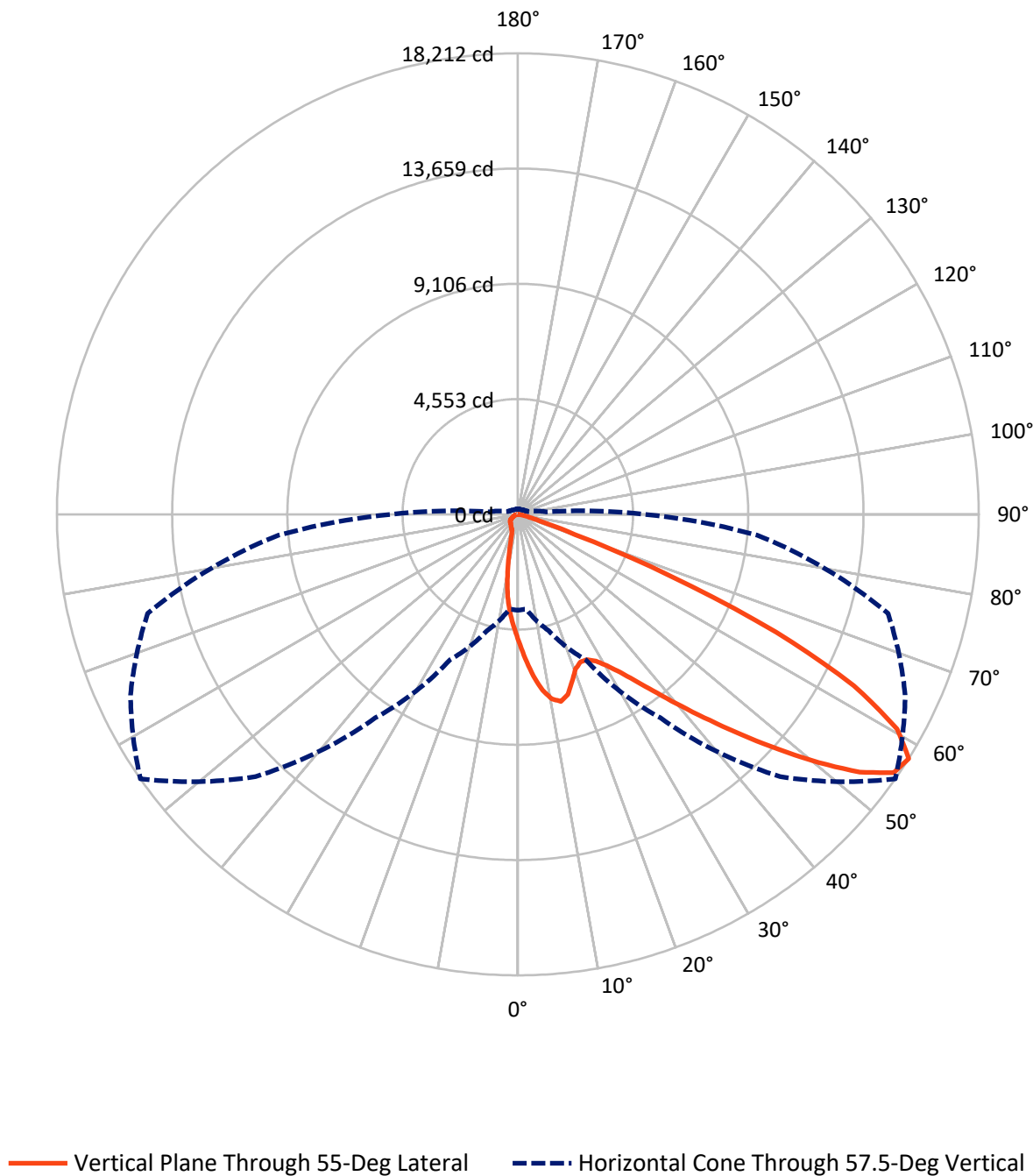
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 11.5 fc
Type II - Short - N/A

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Luminous Intensity Polar Plot



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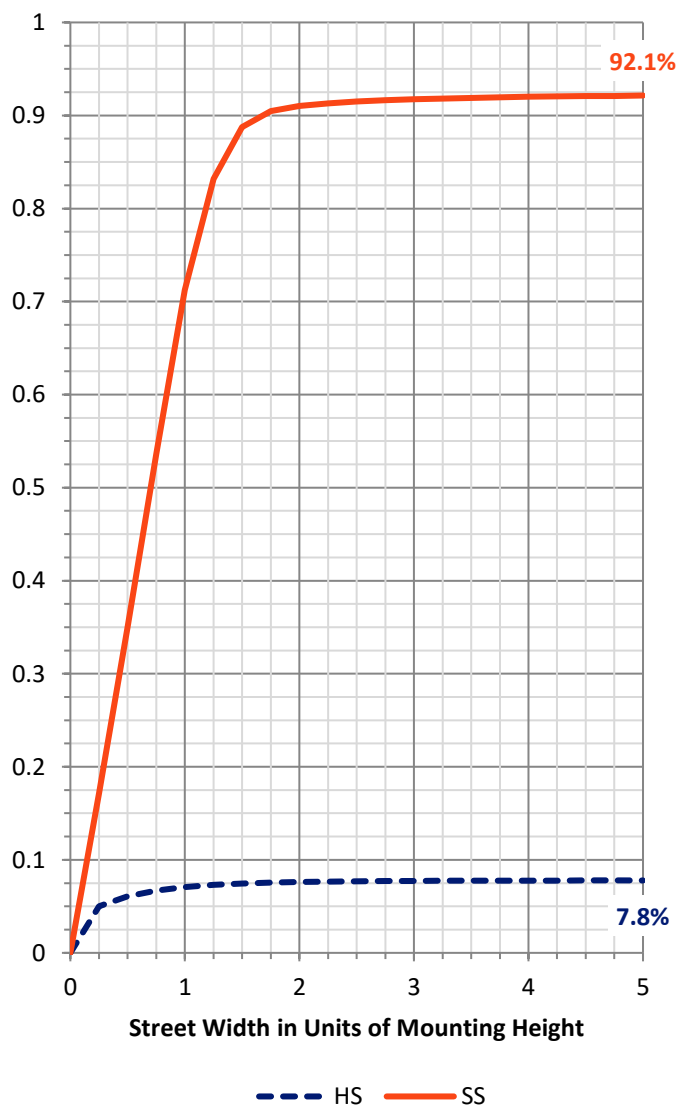
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1629.5	0.0	1629.5
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	19236.4	0.0	19236.4
	% Fixture	92.2	0.0	92.2
Total	Lumens	20865.9	0.0	20865.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	467.8	2.2
10°-20°	1130.1	5.4
20°-30°	1808.1	8.7
30°-40°	3060.3	14.7
40°-50°	5024.4	24.1
50°-60°	5522.2	26.5
60°-70°	3167.5	15.2
70°-80°	647.2	3.1
80°-90°	38.2	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°	20865.9	100.0
0°-180°	20865.9	100.0

Coefficient of Utilization



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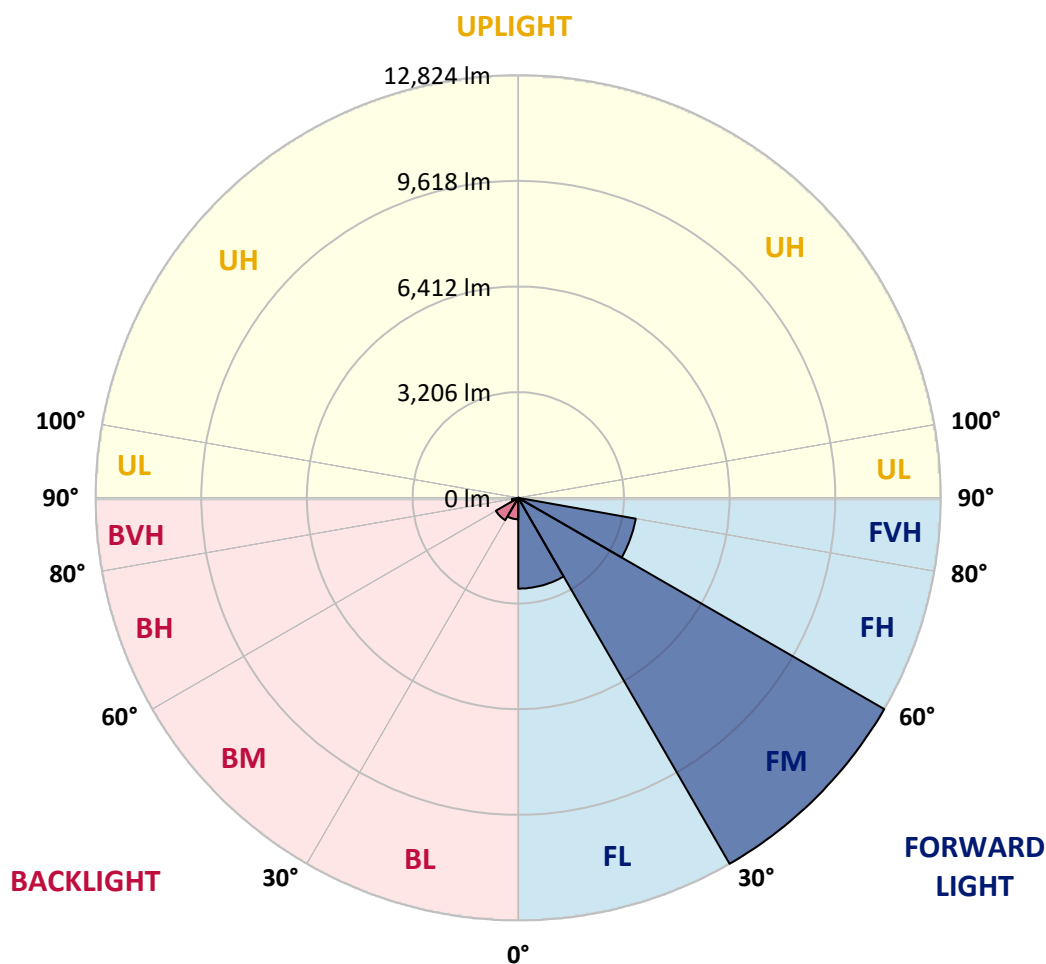
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2755.5	13.2			
FM	(30°-60°)	12824.3	61.5			
FH	(60°-80°)	3621.0	17.4			G2/5000
FVH	(80°-90°)	35.6	0.2			G1/100
BL	(0°-30°)	650.6	3.1	B2/1000		
BM	(30°-60°)	782.6	3.8	B1/1000		
BH	(60°-80°)	193.8	0.9	B1/500		G1/500
BVH	(80°-90°)	2.6	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-G2

Type II Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	5028.1	5028.1	5028.1	5028.1	5028.1	5028.1	5028.1	5028.1	5028.1	5028.1	5028.1
2.5°	6238.9	6160.5	6148.9	6133.4	5984.2	5872.2	5710.1	5532.5	5333.1	5129.8	5039.7
5°	7207.7	7146.0	7134.4	7062.4	6892.5	6702.1	6413.8	6049.8	5677.9	5240.5	5052.6
7.5°	7395.6	7384.0	7436.8	7434.2	7411.1	7260.5	7017.4	6583.7	6025.4	5376.8	5086.0
10°	6558.0	6587.6	6744.5	6882.3	7254.0	7470.2	7417.4	7059.8	6383.0	5532.5	5123.4
12.5°	5795.0	5760.3	5872.2	6027.9	6460.2	7103.6	7583.5	7457.4	6792.2	5708.8	5178.7
15°	5316.4	5302.2	5365.3	5437.3	5766.8	6415.2	7390.5	7780.3	7185.9	5917.2	5262.3
17.5°	5163.2	5151.6	5171.0	5189.0	5402.6	5904.4	6931.2	7978.4	7562.9	6155.2	5355.0
20°	5288.1	5272.6	5270.0	5255.9	5344.7	5686.9	6515.5	7992.5	7901.2	6371.4	5434.8
22.5°	5652.2	5634.2	5571.2	5514.5	5522.3	5716.5	6330.3	7851.1	8156.0	6573.4	5485.0
25°	6312.3	6282.6	6151.4	5961.0	5840.0	5922.3	6358.6	7664.5	8399.2	6731.7	5460.5
27.5°	7138.3	7099.7	6931.2	6648.0	6371.4	6271.1	6563.2	7535.8	8601.2	6852.6	5407.7
30°	7947.5	7897.4	7731.4	7511.4	7107.4	6790.8	6932.4	7592.5	8841.8	6978.7	5338.3
32.5°	8821.2	8773.6	8553.5	8280.8	7946.3	7520.4	7438.0	7869.0	9136.4	7155.0	5289.4
35°	9926.4	9851.8	9539.2	9167.3	8812.1	8381.1	8122.5	8346.4	9528.8	7423.9	5316.4
37.5°	11184.7	11084.3	10747.2	10233.9	9770.7	9288.2	8956.2	9002.6	10103.9	7784.2	5400.0
40°	12371.0	12279.7	11968.3	11484.5	10902.9	10317.5	9963.7	9860.8	10897.8	8222.9	5546.7
42.5°	13082.5	13000.2	12869.0	12664.4	12174.1	11577.2	11130.7	10908.0	11837.0	8747.9	5725.5
45°	13122.4	13050.3	13226.6	13464.6	13368.2	12970.6	12426.3	12018.4	12780.1	9240.6	5910.8
47.5°	12484.2	12435.3	12970.6	13801.7	14216.0	14383.3	13881.5	13036.2	13558.6	9594.4	5986.7
50°	10744.7	10726.7	11828.1	13354.0	14539.0	15621.0	15416.5	13983.2	14162.0	9777.2	5914.7
52.5°	9316.5	9250.9	9893.0	11920.6	14069.4	16272.1	16916.7	14912.1	14584.0	9811.9	5746.2
55°	7066.2	7008.3	7813.8	9522.4	12555.0	16040.5	18014.2	15870.7	14886.4	9723.2	5443.8
57.5°	3790.4	3754.4	4772.1	6338.0	9814.5	14650.9	18212.3	16884.5	15141.1	9487.6	5020.4
60°	1475.8	1469.3	1850.2	3075.1	5964.9	11919.4	17212.6	17493.1	15300.7	9198.1	4666.6
62.5°	892.9	912.2	974.0	1380.6	2635.1	7404.6	14908.2	16800.9	15407.5	8933.1	4374.6
65°	738.5	739.8	747.5	948.2	1262.2	3098.3	11223.3	14523.5	15143.7	8461.0	3960.3
67.5°	633.0	644.6	674.2	752.7	890.3	1358.6	6461.5	11250.3	13539.2	7362.2	3314.3
70°	499.2	514.7	552.0	618.9	687.1	850.4	2388.0	7485.7	10343.3	5549.2	2506.3
72.5°	420.8	419.4	438.7	503.1	545.5	598.3	918.7	4194.4	6011.1	2649.2	1240.4
75°	325.5	338.4	362.8	420.8	446.5	433.6	497.9	1532.4	2153.8	802.9	422.0
77.5°	254.7	265.1	286.9	343.6	369.3	307.5	286.9	548.1	692.2	288.2	190.4
80°	114.5	123.5	195.6	253.5	301.0	212.3	155.7	280.4	307.5	131.2	96.5
82.5°	20.6	34.7	114.5	133.8	154.4	137.7	81.1	145.3	150.6	52.8	33.4
85°	1.3	2.6	39.9	48.9	61.8	45.0	24.4	57.9	50.2	18.0	12.9
87.5°	0.0	0.0	0.0	1.3	1.3	6.5	7.7	10.2	7.7	6.5	5.1
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°	5028.1	5028.1	5028.1	5028.1	5028.1	5028.1	5028.1	5028.1	5028.1	5028.1
2.5°	4947.2	4764.4	4586.9	4441.4	4356.6	4212.4	4117.2	4101.8	4061.9	4096.6
5°	4851.9	4525.1	4194.4	3898.5	3655.4	3341.4	3107.2	3008.2	2922.0	2951.6
7.5°	4806.8	4291.0	3776.3	3270.7	2750.8	2249.1	1876.0	1720.3	1601.9	1618.6
10°	4746.4	4047.7	3241.0	2469.0	1772.9	1277.7	1020.3	925.1	872.4	873.6
12.5°	4700.0	3756.9	2619.6	1673.9	1079.5	815.7	735.9	712.8	697.3	698.6
15°	4677.0	3414.7	2005.8	1115.5	772.0	691.0	671.6	661.3	651.1	649.7
17.5°	4638.3	3033.9	1468.0	814.5	675.5	647.2	630.5	618.9	606.0	603.4
20°	4580.4	2601.6	1073.1	688.4	633.0	611.1	588.0	572.6	557.1	554.5
22.5°	4473.6	2144.8	824.7	636.9	602.2	577.7	549.4	531.4	516.0	513.3
25°	4275.5	1716.4	694.7	604.8	575.1	545.5	514.7	490.3	476.0	473.4
27.5°	4024.6	1348.4	630.5	575.1	540.4	513.3	478.7	455.5	442.6	440.0
30°	3728.6	1038.3	593.2	541.7	499.2	476.0	445.2	425.9	418.2	418.2
32.5°	3409.6	829.8	577.7	508.2	463.2	437.5	413.0	405.3	402.7	401.4
35°	3109.8	720.5	570.0	481.2	431.0	406.6	396.3	397.6	402.7	402.7
37.5°	2843.5	685.8	566.1	461.9	402.7	380.9	387.2	398.8	393.7	393.7
40°	2602.9	689.6	563.5	447.7	379.6	366.6	379.6	370.5	357.7	356.4
42.5°	2418.9	721.8	558.4	436.1	365.4	356.4	351.3	337.1	335.8	338.4
45°	2285.0	750.1	557.1	431.0	349.9	333.2	326.8	312.6	338.4	344.8
47.5°	2126.8	750.1	557.1	413.0	324.2	317.8	307.5	292.0	317.8	324.2
50°	1922.3	702.5	535.3	392.5	303.6	299.8	281.8	262.5	257.4	261.2
52.5°	1663.6	616.3	479.9	364.1	283.1	275.3	253.5	239.3	235.4	235.4
55°	1369.0	516.0	405.3	323.0	261.2	247.0	231.5	225.2	221.3	218.7
57.5°	1112.9	423.3	325.5	286.9	240.6	222.6	217.4	209.7	203.3	199.5
60°	913.5	333.2	268.9	254.7	220.0	203.3	202.0	191.7	175.0	172.4
62.5°	705.1	244.5	226.4	221.3	199.5	185.3	182.7	162.2	136.4	131.2
65°	497.9	190.4	182.7	194.2	177.5	164.7	158.3	127.4	100.3	96.5
67.5°	349.9	159.6	144.1	169.8	154.4	137.7	133.8	108.0	83.6	81.1
70°	249.6	130.0	118.4	145.3	123.5	121.0	113.3	90.1	68.2	65.6
72.5°	176.3	99.1	91.3	126.1	84.9	104.2	92.7	69.5	51.5	48.9
75°	130.0	70.7	64.4	73.3	61.8	78.5	65.6	46.3	32.2	30.9
77.5°	95.2	45.0	38.6	36.0	36.0	48.9	36.0	19.3	14.1	12.9
80°	66.9	20.6	18.0	15.5	14.1	11.6	5.1	2.6	1.3	1.3
82.5°	39.9	9.0	9.0	6.5	3.9	0.0	0.0	0.0	0.0	0.0
85°	9.0	3.9	3.9	1.3	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.3	1.3	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)