

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: P967343

Luminaire Tested: **NAV-SB4D-830-U-AFL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967343
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-830-U-AFL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 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: 32026.1 lumens
Efficiency: N/A
Efficacy: 109.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B2 - 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



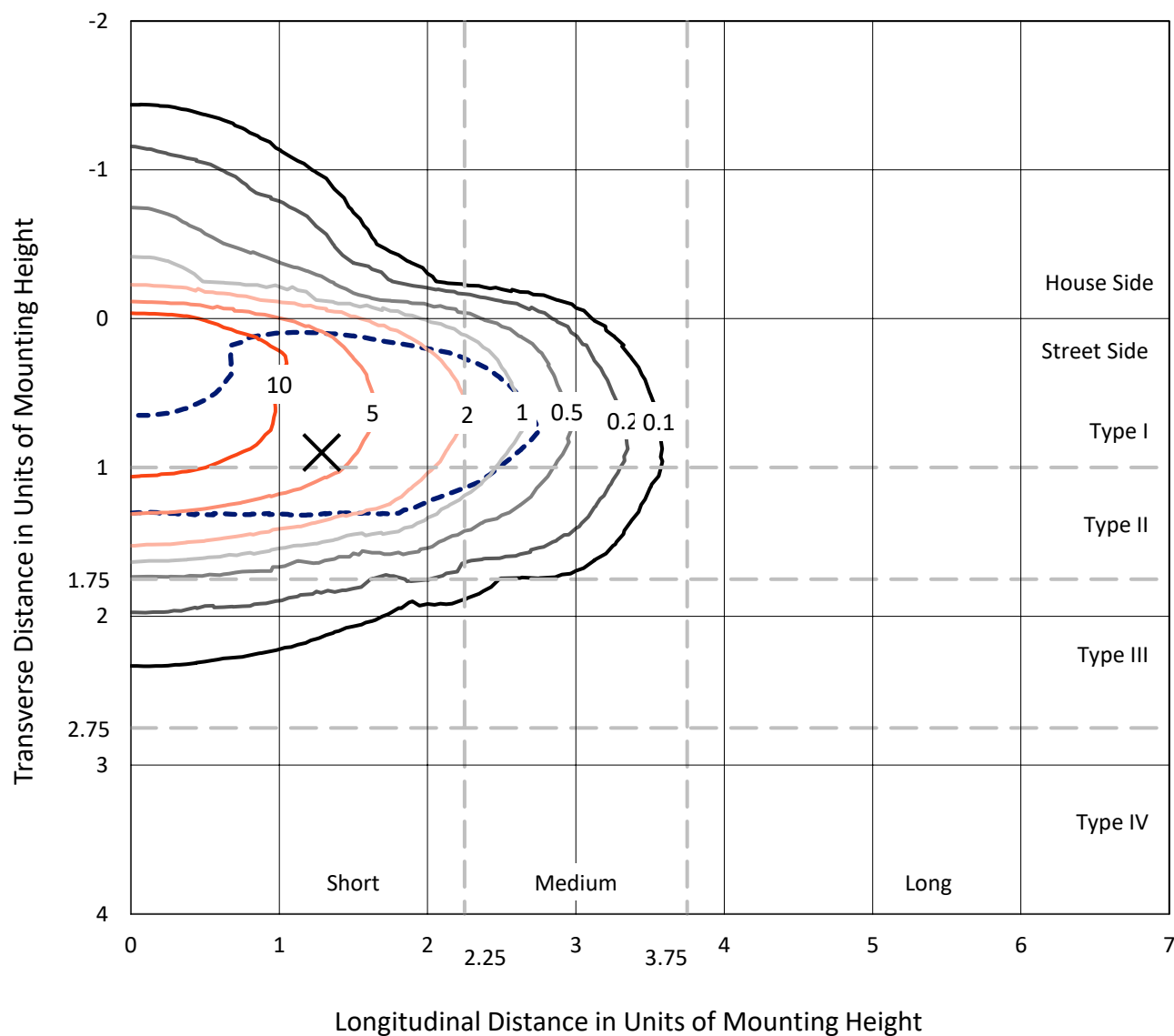
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

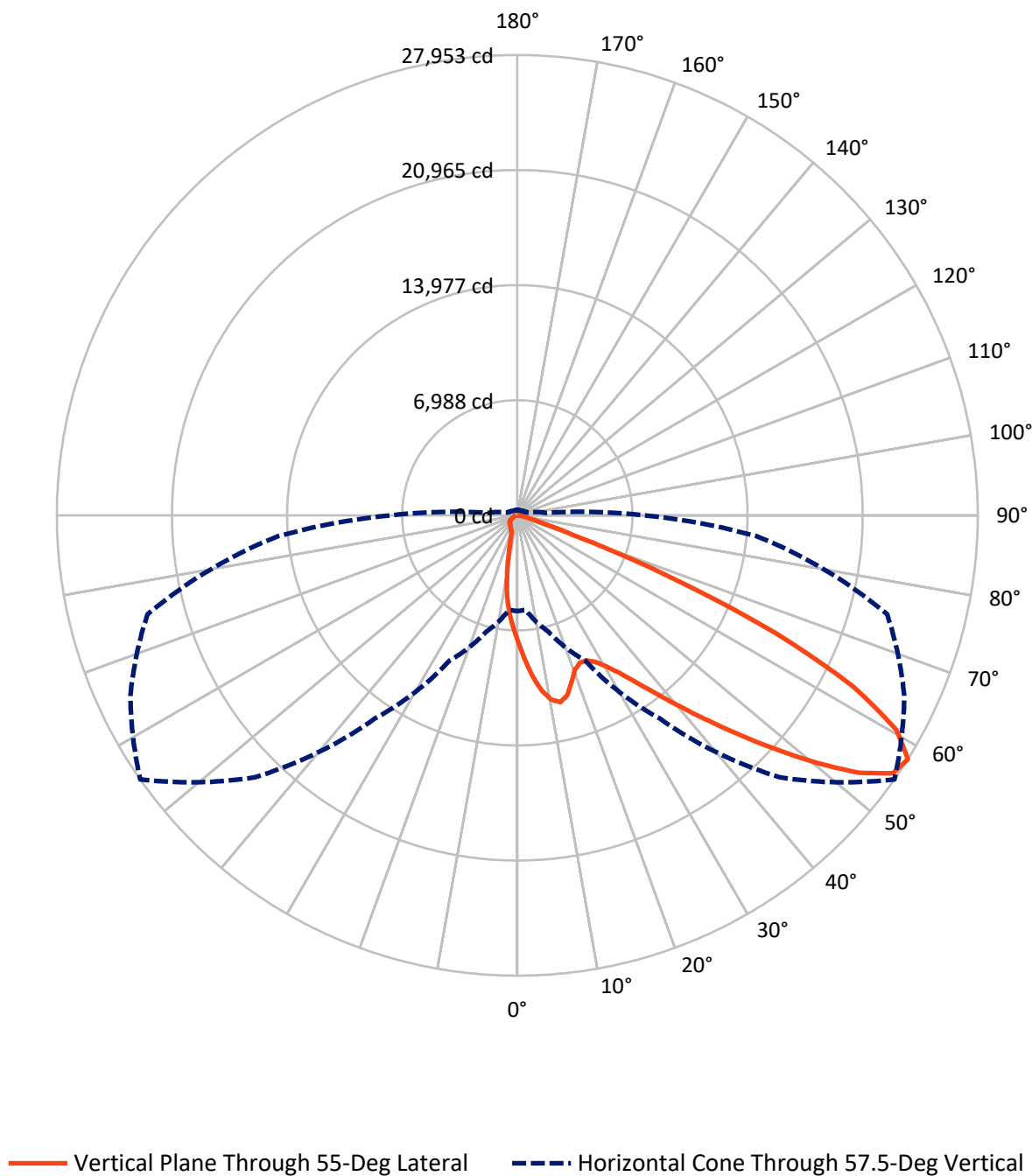


Based on 25 foot mounting height. Maximum calculated value = 17.7 fc

Type II - Short - N/A

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Luminous Intensity Polar Plot



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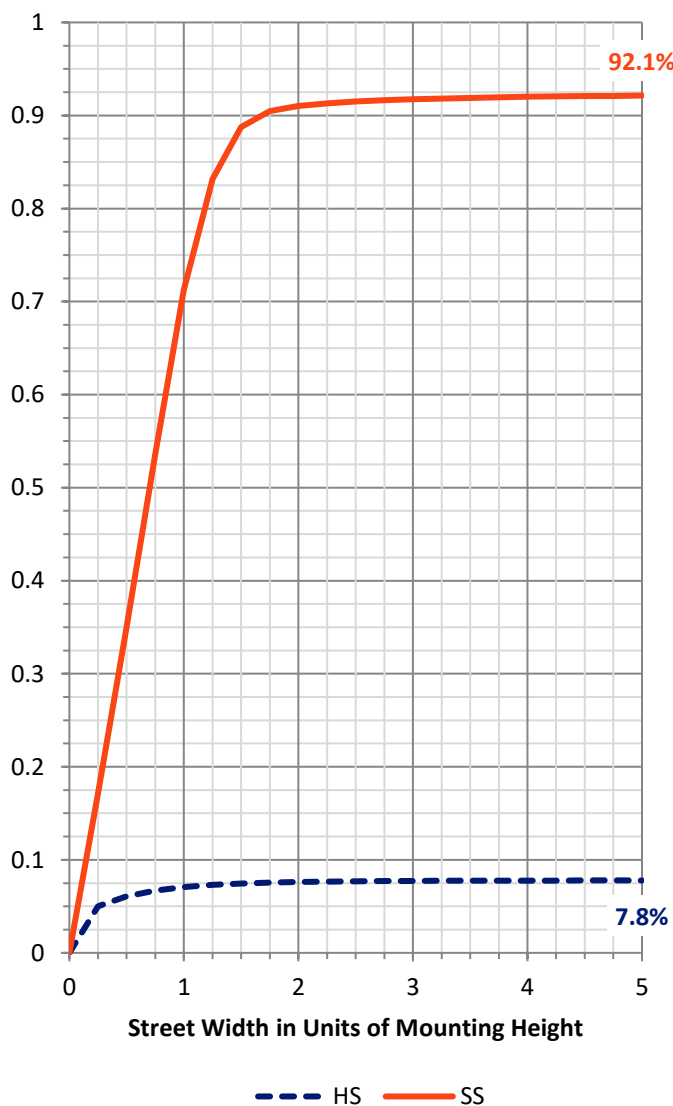
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2501.1	0.0	2501.1
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	29525.0	0.0	29525.0
	% Fixture	92.2	0.0	92.2
Total	Lumens	32026.1	0.0	32026.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	718.1	2.2
10°-20°	1734.5	5.4
20°-30°	2775.2	8.7
30°-40°	4697.2	14.7
40°-50°	7711.8	24.1
50°-60°	8475.8	26.5
60°-70°	4861.7	15.2
70°-80°	993.4	3.1
80°-90°	58.6	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°	32026.1	100.0
0°-180°	32026.1	100.0

Coefficient of Utilization



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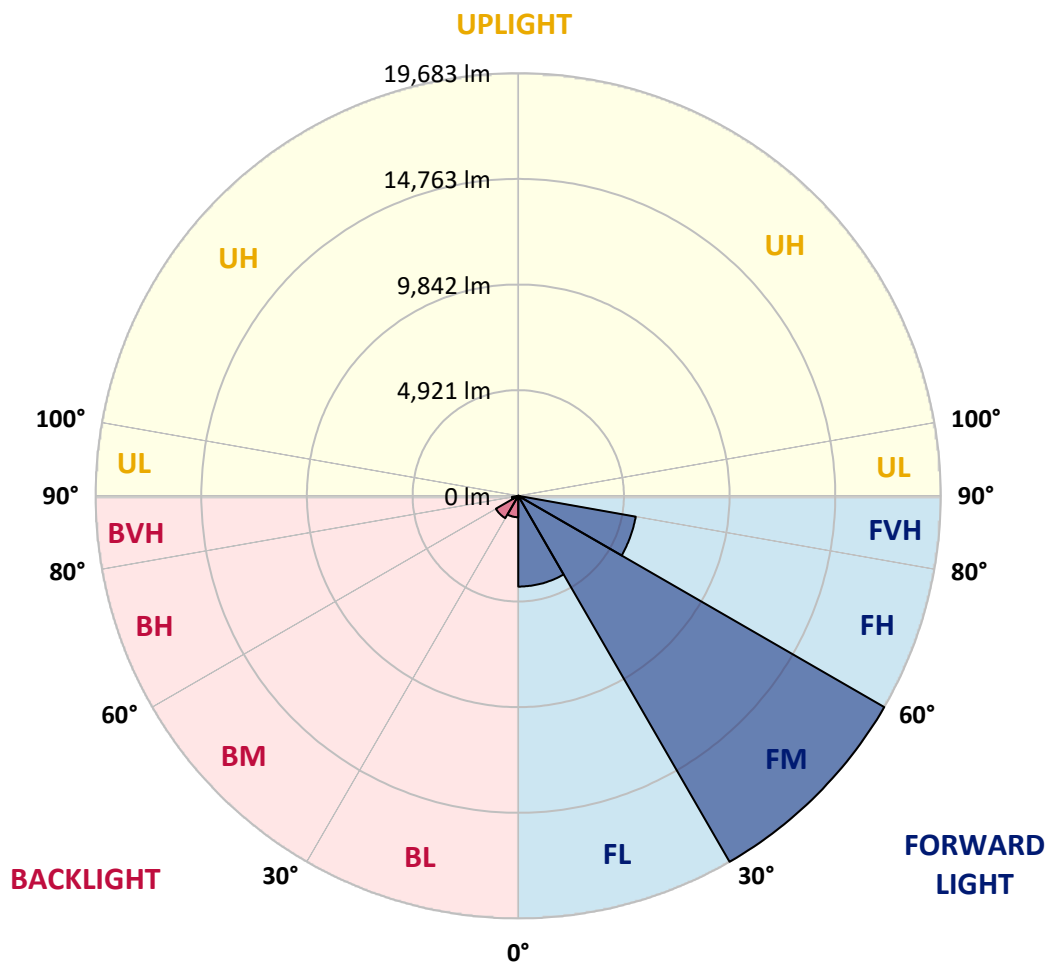
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4229.2	13.2			
FM	(30°-60°)	19683.5	61.5			
FH	(60°-80°)	5557.6	17.4			G3/7500
FVH	(80°-90°)	54.6	0.2			G1/100
BL	(0°-30°)	998.5	3.1	B2/1000		
BM	(30°-60°)	1201.2	3.8	B2/2500		
BH	(60°-80°)	297.4	0.9	B1/500		G1/500
BVH	(80°-90°)	3.9	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-G3

Type II Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	7717.5	7717.5	7717.5	7717.5	7717.5	7717.5	7717.5	7717.5	7717.5	7717.5	7717.5
2.5°	9575.8	9455.3	9437.6	9413.9	9184.8	9012.9	8764.2	8491.6	8185.5	7873.5	7735.3
5°	11062.8	10968.0	10950.3	10839.7	10579.0	10286.7	9844.4	9285.5	8714.8	8043.4	7755.0
7.5°	11351.2	11333.3	11414.3	11410.4	11374.8	11143.8	10770.5	10105.1	9248.0	8252.7	7806.4
10°	10065.5	10111.0	10351.9	10563.2	11133.9	11465.6	11384.7	10835.7	9796.9	8491.6	7863.6
12.5°	8894.4	8841.1	9012.9	9252.0	9915.4	10902.8	11639.5	11446.0	10425.0	8762.2	7948.6
15°	8159.8	8138.1	8235.0	8345.4	8851.1	9846.4	11343.3	11941.6	11029.2	9082.1	8076.9
17.5°	7924.9	7907.1	7936.7	7964.4	8292.1	9062.3	10638.3	12245.7	11607.8	9447.4	8219.1
20°	8116.5	8092.7	8088.8	8067.1	8203.3	8728.6	10000.4	12267.4	12127.2	9779.2	8341.6
22.5°	8675.3	8647.6	8550.9	8463.9	8475.8	8774.0	9716.0	12050.2	12518.2	10089.3	8418.5
25°	9688.4	9642.9	9441.5	9149.3	8963.6	9090.0	9759.4	11763.8	12891.4	10332.1	8381.0
27.5°	10956.2	10897.0	10638.3	10203.8	9779.2	9625.2	10073.4	11566.4	13201.5	10517.7	8300.0
30°	12198.3	12121.3	11866.5	11528.9	10908.8	10423.0	10640.2	11653.3	13570.8	10711.2	8193.4
32.5°	13539.2	13466.1	13128.4	12709.8	12196.4	11542.7	11416.3	12077.9	14023.0	10981.8	8118.4
35°	15235.6	15121.0	14641.1	14070.4	13525.4	12863.9	12466.9	12810.6	14625.3	11394.6	8159.8
37.5°	17166.9	17012.8	16495.5	15707.5	14996.6	14256.1	13746.6	13817.6	15508.0	11947.5	8288.3
40°	18987.7	18847.5	18369.5	17627.0	16734.5	15835.9	15292.8	15134.8	16726.6	12620.9	8513.3
42.5°	20079.8	19953.4	19752.0	19437.9	18685.5	17769.2	17084.0	16742.4	18168.1	13426.7	8787.8
45°	20140.9	20030.3	20300.9	20666.3	20518.1	19908.0	19072.6	18446.6	19615.6	14183.0	9072.2
47.5°	19161.5	19086.4	19908.0	21183.7	21819.5	22076.2	21306.1	20008.6	20810.4	14726.1	9188.7
50°	16491.5	16463.9	18154.3	20496.4	22315.2	23976.0	23662.0	21462.1	21736.6	15006.5	9078.1
52.5°	14299.5	14198.8	15184.2	18296.5	21594.4	24975.3	25964.6	22887.9	22384.4	15059.8	8819.4
55°	10845.6	10756.8	11992.9	14615.5	19270.1	24619.8	27649.2	24359.1	22848.4	14923.6	8355.4
57.5°	5817.8	5762.4	7324.5	9727.9	15063.7	22487.1	27953.3	25915.3	23239.4	14562.2	7705.6
60°	2265.0	2255.2	2839.8	4719.7	9155.2	18294.5	26418.9	26849.4	23484.3	14117.8	7162.6
62.5°	1370.5	1400.1	1495.0	2119.0	4044.3	11365.0	22882.0	25786.9	23648.2	13711.0	6714.3
65°	1133.5	1135.5	1147.4	1455.4	1937.2	4755.3	17226.1	22291.5	23243.3	12986.2	6078.5
67.5°	971.6	989.3	1034.8	1155.3	1366.5	2085.4	9917.4	17267.7	20780.7	11299.8	5087.1
70°	766.2	790.0	847.2	949.9	1054.5	1305.3	3665.2	11489.3	15875.4	8517.3	3846.9
72.5°	645.8	643.8	673.4	772.1	837.3	918.3	1410.0	6437.8	9226.2	4066.1	1903.7
75°	499.6	519.4	556.9	645.8	685.2	665.5	764.2	2352.0	3305.8	1232.3	647.7
77.5°	391.0	406.8	440.3	527.3	566.7	472.0	440.3	841.2	1062.4	442.4	292.2
80°	175.8	189.6	300.1	389.0	462.1	325.8	238.9	430.5	472.0	201.4	148.1
82.5°	31.6	53.3	175.8	205.4	237.0	211.3	124.4	223.1	231.0	81.0	51.4
85°	1.9	4.0	61.2	75.0	94.8	69.1	37.5	88.9	77.0	27.7	19.8
87.5°	0.0	0.0	0.0	1.9	1.9	9.8	11.9	15.8	11.9	9.8	7.9
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°	7717.5	7717.5	7717.5	7717.5	7717.5	7717.5	7717.5	7717.5	7717.5	7717.5
2.5°	7593.1	7312.7	7040.1	6817.0	6686.7	6465.5	6319.3	6295.7	6234.5	6287.8
5°	7446.9	6945.4	6437.8	5983.6	5610.4	5128.6	4769.1	4617.1	4484.8	4530.2
7.5°	7377.8	6585.9	5796.1	5019.9	4222.1	3452.0	2879.2	2640.3	2458.7	2484.3
10°	7285.0	6212.7	4974.5	3789.6	2721.3	1960.9	1566.0	1419.8	1339.0	1340.9
12.5°	7214.0	5766.4	4020.7	2569.2	1656.8	1252.0	1129.6	1094.1	1070.3	1072.4
15°	7178.4	5241.1	3078.7	1712.2	1184.9	1060.5	1030.8	1015.1	999.3	997.2
17.5°	7119.1	4656.6	2253.3	1250.1	1036.8	993.3	967.6	949.9	930.1	926.2
20°	7030.3	3993.0	1647.0	1056.5	971.6	938.0	902.5	878.8	855.1	851.2
22.5°	6866.4	3292.0	1265.9	977.5	924.2	886.7	843.3	815.6	791.9	787.9
25°	6562.3	2634.4	1066.4	928.1	882.7	837.3	790.0	752.3	730.7	726.7
27.5°	6177.2	2069.6	967.6	882.7	829.4	787.9	734.6	699.0	679.4	675.4
30°	5723.0	1593.7	910.4	831.4	766.2	730.7	683.3	653.6	641.9	641.9
32.5°	5233.2	1273.8	886.7	780.0	710.9	671.5	633.9	622.1	618.1	616.1
35°	4773.1	1105.9	874.8	738.6	661.5	624.0	608.2	610.2	618.1	618.1
37.5°	4364.3	1052.6	868.9	709.0	618.1	584.6	594.4	612.2	604.2	604.2
40°	3995.0	1058.5	865.0	687.3	582.6	562.8	582.6	568.8	549.0	547.0
42.5°	3712.7	1107.8	857.1	669.4	560.9	547.0	539.2	517.4	515.5	519.4
45°	3507.2	1151.3	855.1	661.5	537.1	511.5	501.6	479.9	519.4	529.2
47.5°	3264.3	1151.3	855.1	633.9	497.6	487.8	472.0	448.2	487.8	497.6
50°	2950.4	1078.2	821.5	602.3	466.1	460.1	432.4	402.8	394.9	400.9
52.5°	2553.4	946.0	736.6	558.8	434.5	422.6	389.0	367.4	361.4	361.4
55°	2101.1	791.9	622.1	495.7	400.9	379.1	355.5	345.6	339.7	335.7
57.5°	1708.2	649.7	499.6	440.3	369.3	341.6	333.7	321.8	312.0	306.1
60°	1402.1	511.5	412.8	391.0	337.7	312.0	310.1	294.3	268.5	264.7
62.5°	1082.2	375.3	347.6	339.7	306.1	284.3	280.4	248.9	209.3	201.4
65°	764.2	292.2	280.4	298.2	272.5	252.8	242.9	195.5	154.1	148.1
67.5°	537.1	244.9	221.2	260.7	237.0	211.3	205.4	165.8	128.3	124.4
70°	383.1	199.5	181.7	223.1	189.6	185.6	173.7	138.3	104.7	100.8
72.5°	270.5	152.1	140.2	193.5	130.4	160.0	142.2	106.6	79.0	75.0
75°	199.5	108.6	98.7	112.5	94.8	120.4	100.8	71.1	49.4	47.4
77.5°	146.2	69.1	59.2	55.2	55.2	75.0	55.2	29.6	21.7	19.8
80°	102.7	31.6	27.7	23.7	21.7	17.7	7.9	4.0	1.9	1.9
82.5°	61.2	13.8	13.8	9.8	5.9	0.0	0.0	0.0	0.0	0.0
85°	13.8	5.9	5.9	1.9	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.9	1.9	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)