

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: P967374

Luminaire Tested: **NAV-SB4D-835-U-AFL-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967374
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-835-U-AFL-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3500K, 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: 33059.3 lumens
Efficiency: N/A
Efficacy: 112.6 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

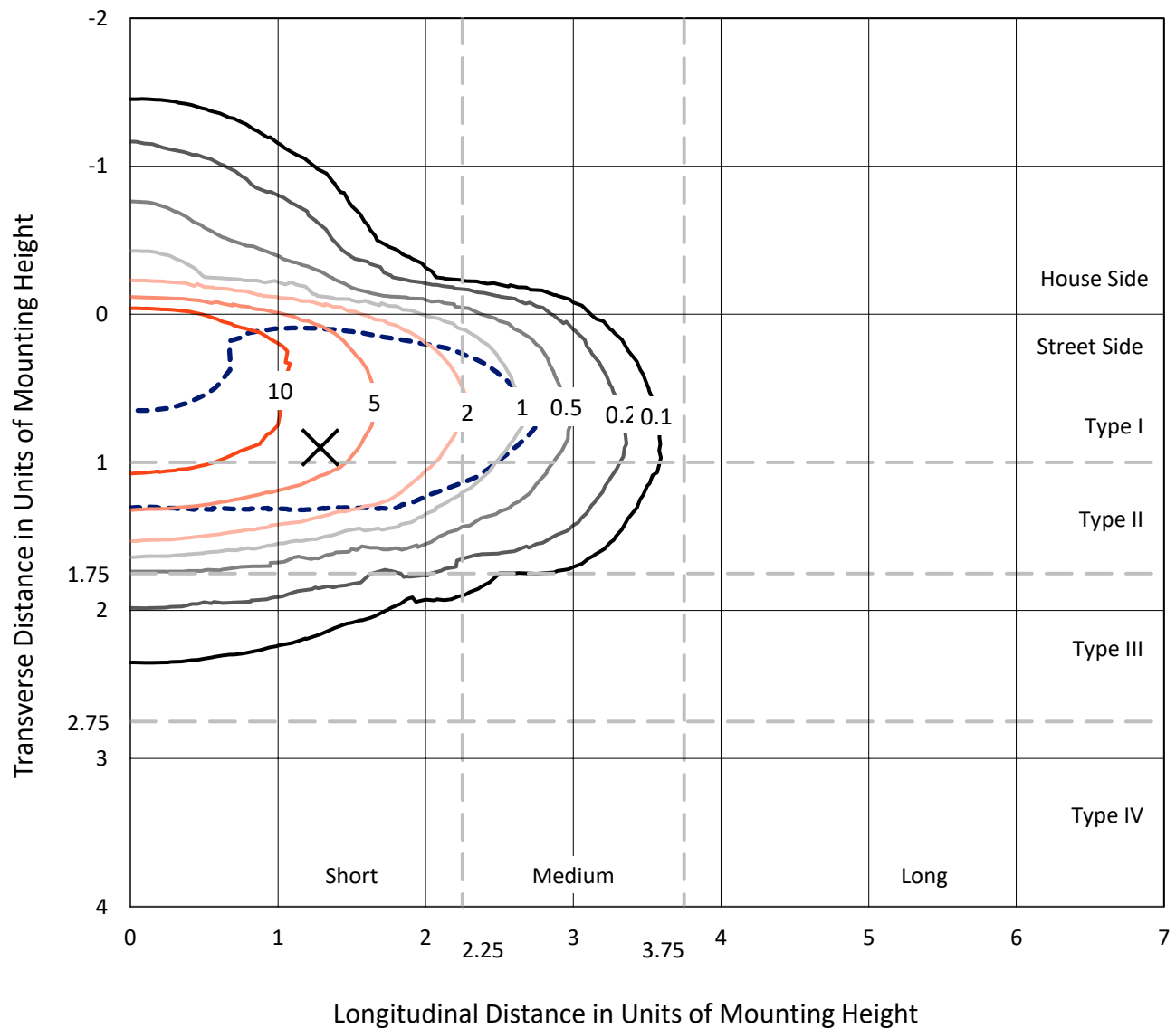


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
- - - 1/2 Max cd

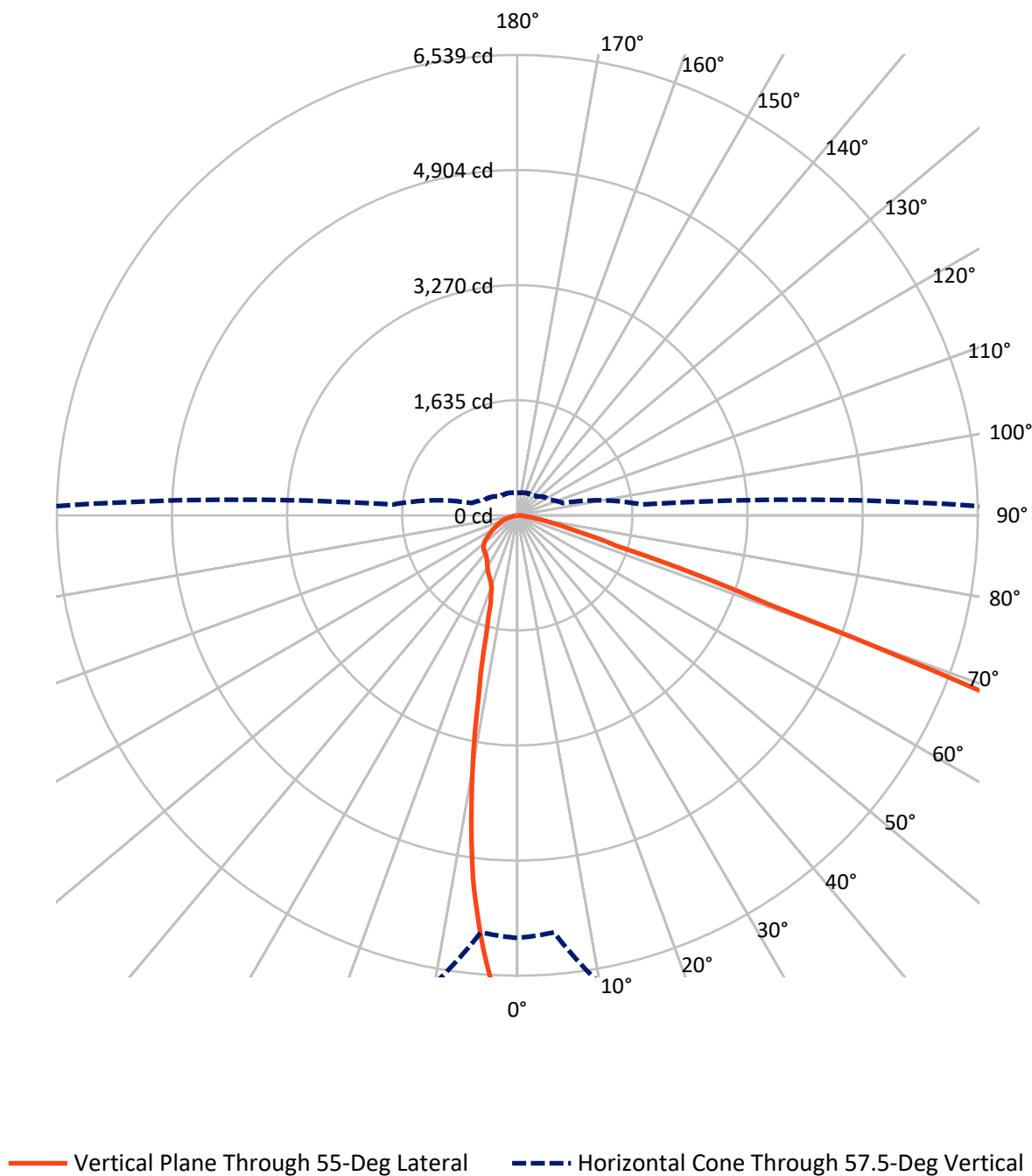


Based on 25 foot mounting height. Maximum calculated value = 18.2 fc

Type II - Short - N/A

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Luminous Intensity Polar Plot



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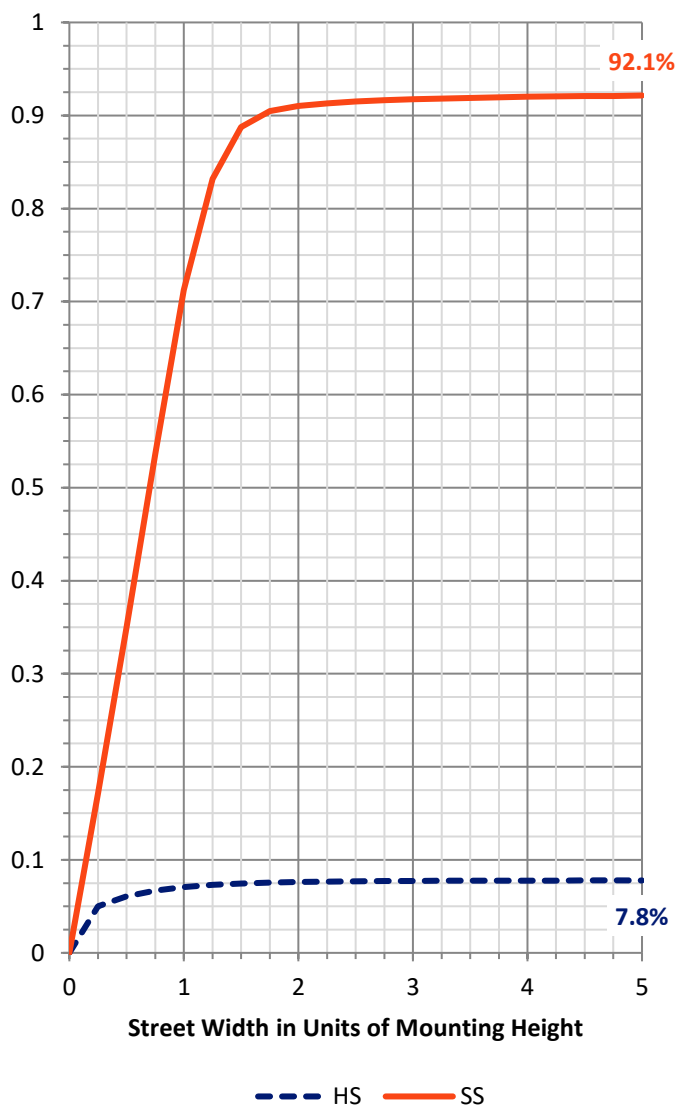
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2581.8	0.0	2581.8
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	30477.5	0.0	30477.5
	% Fixture	92.2	0.0	92.2
Total	Lumens	33059.3	0.0	33059.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	741.2	2.2
10°-20°	1790.5	5.4
20°-30°	2864.7	8.7
30°-40°	4848.7	14.7
40°-50°	7960.5	24.1
50°-60°	8749.2	26.5
60°-70°	5018.5	15.2
70°-80°	1025.4	3.1
80°-90°	60.5	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°	33059.3	100.0
0°-180°	33059.3	100.0

Coefficient of Utilization



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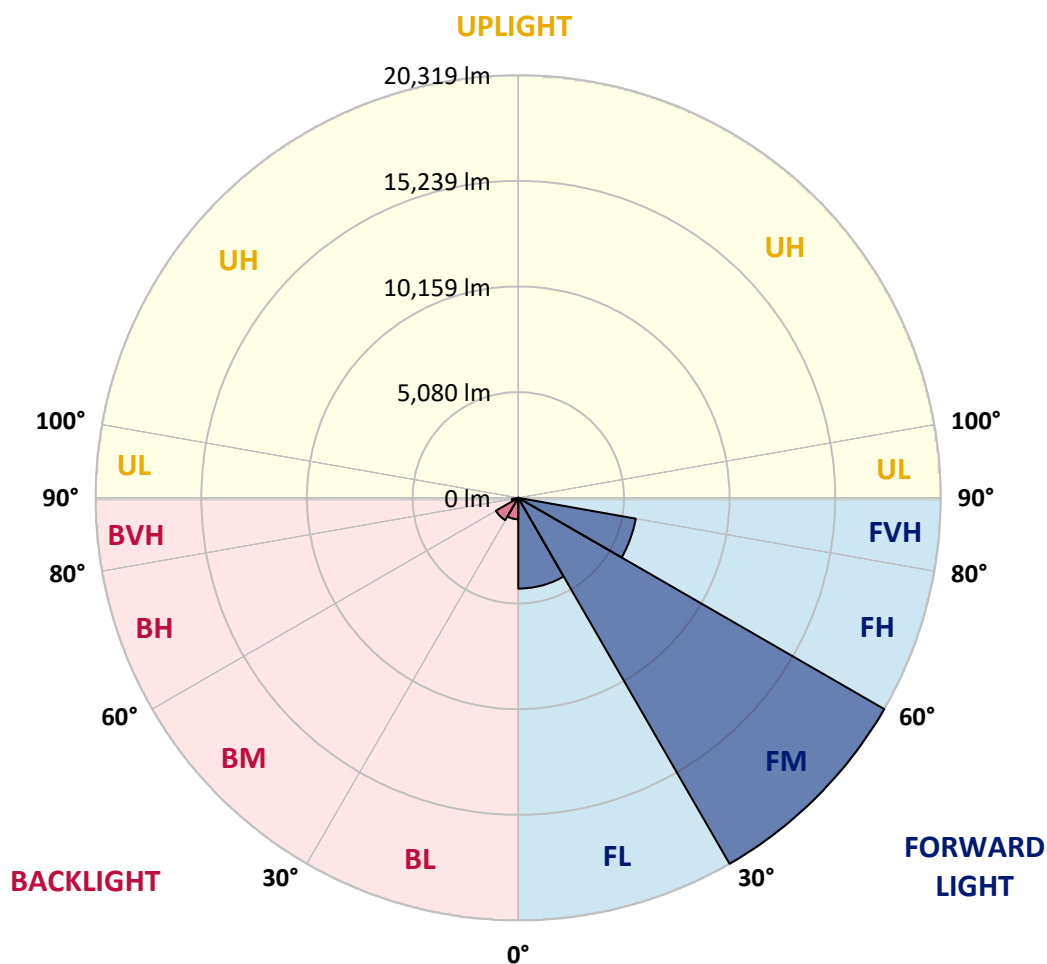
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4365.7	13.2			
FM	(30°-60°)	20318.5	61.5			
FH	(60°-80°)	5736.9	17.4			G3/7500
FVH	(80°-90°)	56.4	0.2			G1/100
BL	(0°-30°)	1030.7	3.1	B3/2500		
BM	(30°-60°)	1240.0	3.8	B2/2500		
BH	(60°-80°)	307.1	0.9	B1/500		G1/500
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: 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°	7966.5	7966.5	7966.5	7966.5	7966.5	7966.5	7966.5	7966.5	7966.5	7966.5	7966.5
2.5°	9884.7	9760.4	9742.0	9717.5	9481.0	9303.7	9046.9	8765.6	8449.6	8127.5	7984.9
5°	11419.7	11321.8	11303.5	11189.3	10920.2	10618.6	10162.0	9585.1	8995.9	8302.8	8005.2
7.5°	11717.3	11698.9	11782.6	11778.5	11741.8	11503.3	11118.0	10431.0	9546.3	8518.9	8058.2
10°	10390.2	10437.2	10685.8	10903.9	11493.1	11835.6	11752.0	11185.3	10113.1	8765.6	8117.3
12.5°	9181.4	9126.4	9303.7	9550.4	10235.3	11254.6	12014.9	11815.2	10761.3	9044.8	8205.0
15°	8423.1	8400.7	8500.5	8614.7	9136.5	10164.0	11709.2	12326.9	11385.1	9375.1	8337.5
17.5°	8180.5	8162.2	8192.7	8221.3	8559.7	9354.7	10981.4	12640.8	11982.4	9752.3	8484.2
20°	8378.2	8353.8	8349.8	8327.3	8467.9	9010.2	10323.0	12663.2	12518.4	10094.7	8610.6
22.5°	8955.1	8926.6	8826.7	8737.0	8749.3	9057.1	10029.4	12439.0	12922.1	10414.7	8690.2
25°	10000.9	9954.0	9746.1	9444.3	9252.8	9383.3	10074.3	12143.4	13307.4	10665.4	8651.4
27.5°	11309.6	11248.5	10981.4	10533.0	10094.7	9935.6	10398.4	11939.5	13627.4	10857.1	8567.9
30°	12591.8	12512.4	12249.4	11900.8	11260.8	10759.2	10983.5	12029.2	14008.6	11056.9	8457.8
32.5°	13976.0	13900.5	13552.0	13119.8	12589.8	11915.1	11784.6	12467.5	14475.5	11336.1	8380.3
35°	15727.1	15608.8	15113.5	14524.4	13961.7	13278.9	12869.1	13223.8	15097.2	11762.2	8423.1
37.5°	17720.7	17561.7	17027.6	16214.3	15480.4	14716.0	14190.0	14263.4	16008.3	12333.0	8555.6
40°	19600.3	19455.5	18962.2	18195.7	17274.3	16346.8	15786.2	15623.2	17266.1	13028.1	8788.0
42.5°	20727.6	20597.1	20389.1	20065.0	19288.3	18342.5	17635.1	17282.4	18754.2	13859.8	9071.4
45°	20790.7	20676.6	20955.8	21333.0	21180.1	20550.2	19687.9	19041.7	20248.5	14640.6	9364.9
47.5°	19779.6	19702.1	20550.2	21867.0	22523.5	22788.4	21993.4	20654.2	21481.7	15201.2	9485.1
50°	17023.6	16995.0	18740.0	21157.6	23035.1	24749.5	24425.3	22154.5	22437.9	15490.6	9371.1
52.5°	14760.8	14656.9	15674.1	18886.8	22291.1	25781.0	26802.3	23626.2	23106.5	15545.7	9103.9
55°	11195.5	11103.7	12379.8	15087.0	19891.8	25414.1	28541.1	25145.0	23585.6	15405.0	8625.0
57.5°	6005.5	5948.4	7560.8	10041.7	15549.8	23212.5	28855.1	26751.3	23989.1	15031.9	7954.2
60°	2338.1	2328.0	2931.4	4872.0	9450.5	18884.7	27271.2	27715.5	24242.0	14573.2	7393.6
62.5°	1414.7	1445.2	1543.1	2187.4	4174.8	11731.6	23620.2	26618.8	24411.1	14153.3	6930.9
65°	1170.1	1172.2	1184.4	1502.3	1999.8	4908.7	17781.9	23010.6	23993.2	13405.3	6274.5
67.5°	1003.0	1021.3	1068.2	1192.5	1410.6	2152.7	10237.4	17824.8	21451.2	11664.3	5251.2
70°	790.9	815.4	874.5	980.5	1088.6	1347.5	3783.5	11860.1	16387.6	8792.0	3971.1
72.5°	666.6	664.5	695.2	797.0	864.3	947.9	1455.5	6645.5	9523.9	4197.3	1965.1
75°	515.8	536.2	574.8	666.6	707.4	687.0	788.9	2427.8	3412.4	1272.0	668.6
77.5°	403.6	419.9	454.6	544.3	585.1	487.2	454.6	868.4	1096.8	456.6	301.7
80°	181.4	195.7	309.9	401.6	477.0	336.3	246.6	444.4	487.2	208.0	152.9
82.5°	32.6	55.0	181.4	212.0	244.7	218.1	128.4	230.3	238.5	83.5	53.0
85°	2.0	4.1	63.2	77.5	97.9	71.3	38.7	91.7	79.5	28.5	20.4
87.5°	0.0	0.0	0.0	2.0	2.0	10.1	12.2	16.3	12.2	10.1	8.2
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	7966.5	7966.5	7966.5	7966.5	7966.5	7966.5	7966.5	7966.5	7966.5	7966.5
2.5°	7838.1	7548.6	7267.2	7036.9	6902.4	6674.1	6523.2	6498.8	6435.6	6490.6
5°	7687.2	7169.5	6645.5	6176.6	5791.4	5294.0	4923.0	4766.0	4629.4	4676.4
7.5°	7615.9	6798.4	5983.0	5181.9	4358.3	3563.3	2972.2	2725.5	2537.9	2564.4
10°	7520.0	6413.1	5135.0	3911.9	2809.0	2024.3	1616.5	1465.6	1382.1	1384.2
12.5°	7446.6	5952.5	4150.4	2652.1	1710.3	1292.4	1166.0	1129.3	1104.8	1106.9
15°	7409.9	5410.2	3178.0	1767.4	1223.1	1094.7	1064.1	1047.8	1031.5	1029.4
17.5°	7348.8	4806.8	2325.9	1290.4	1070.2	1025.4	998.9	980.5	960.1	956.0
20°	7257.1	4121.8	1700.1	1090.6	1003.0	968.3	931.6	907.1	882.6	878.6
22.5°	7087.9	3398.2	1306.7	1009.0	954.1	915.3	870.4	841.9	817.4	813.3
25°	6773.9	2719.3	1100.7	958.1	911.2	864.3	815.4	776.6	754.3	750.2
27.5°	6376.4	2136.3	998.9	911.2	856.2	813.3	758.3	721.6	701.2	697.2
30°	5907.6	1645.1	939.7	858.2	790.9	754.3	705.3	674.8	662.6	662.6
32.5°	5402.1	1314.9	915.3	805.2	733.9	693.1	654.4	642.2	638.1	636.0
35°	4927.1	1141.5	903.0	762.4	682.9	644.2	627.8	629.9	638.1	638.1
37.5°	4505.1	1086.5	897.0	731.8	638.1	603.4	613.6	631.9	623.8	623.8
40°	4123.9	1092.6	892.9	709.4	601.4	581.0	601.4	587.1	566.7	564.7
42.5°	3832.4	1143.6	884.7	691.1	578.9	564.7	556.5	534.1	532.1	536.2
45°	3620.4	1188.5	882.6	682.9	554.4	528.0	517.8	495.4	536.2	546.3
47.5°	3369.7	1188.5	882.6	654.4	513.7	503.5	487.2	462.8	503.5	513.7
50°	3045.5	1113.0	848.0	621.8	481.1	475.0	446.4	415.8	407.7	413.8
52.5°	2635.8	976.4	760.3	576.9	448.4	436.2	401.6	379.1	373.0	373.0
55°	2169.0	817.4	642.2	511.7	413.8	391.3	367.0	356.7	350.7	346.6
57.5°	1763.3	670.7	515.8	454.6	381.2	352.7	344.5	332.3	322.1	316.0
60°	1447.3	528.0	426.1	403.6	348.6	322.1	320.0	303.7	277.3	273.2
62.5°	1117.1	387.3	358.7	350.7	316.0	293.6	289.5	256.9	216.1	208.0
65°	788.9	301.7	289.5	307.8	281.4	261.0	250.7	201.8	159.0	152.9
67.5°	554.4	252.8	228.3	269.1	244.7	218.1	212.0	171.3	132.5	128.4
70°	395.4	205.9	187.6	230.3	195.7	191.6	179.4	142.7	108.0	103.9
72.5°	279.3	156.9	144.7	199.8	134.6	165.1	146.8	110.1	81.6	77.5
75°	205.9	112.1	101.9	116.2	97.9	124.3	103.9	73.4	50.9	48.9
77.5°	150.9	71.3	61.2	57.1	57.1	77.5	57.1	30.5	22.4	20.4
80°	106.0	32.6	28.5	24.5	22.4	18.3	8.2	4.1	2.0	2.0
82.5°	63.2	14.2	14.2	10.1	6.1	0.0	0.0	0.0	0.0	0.0
85°	14.2	6.1	6.1	2.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.0	2.0	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

(END OF REPORT)