

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: P967220

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

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967220
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-14)
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
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 4000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND AUTOMOTIVE
FRONTLINE OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 44979 lumens
Efficiency: N/A
Efficacy: 153.2 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

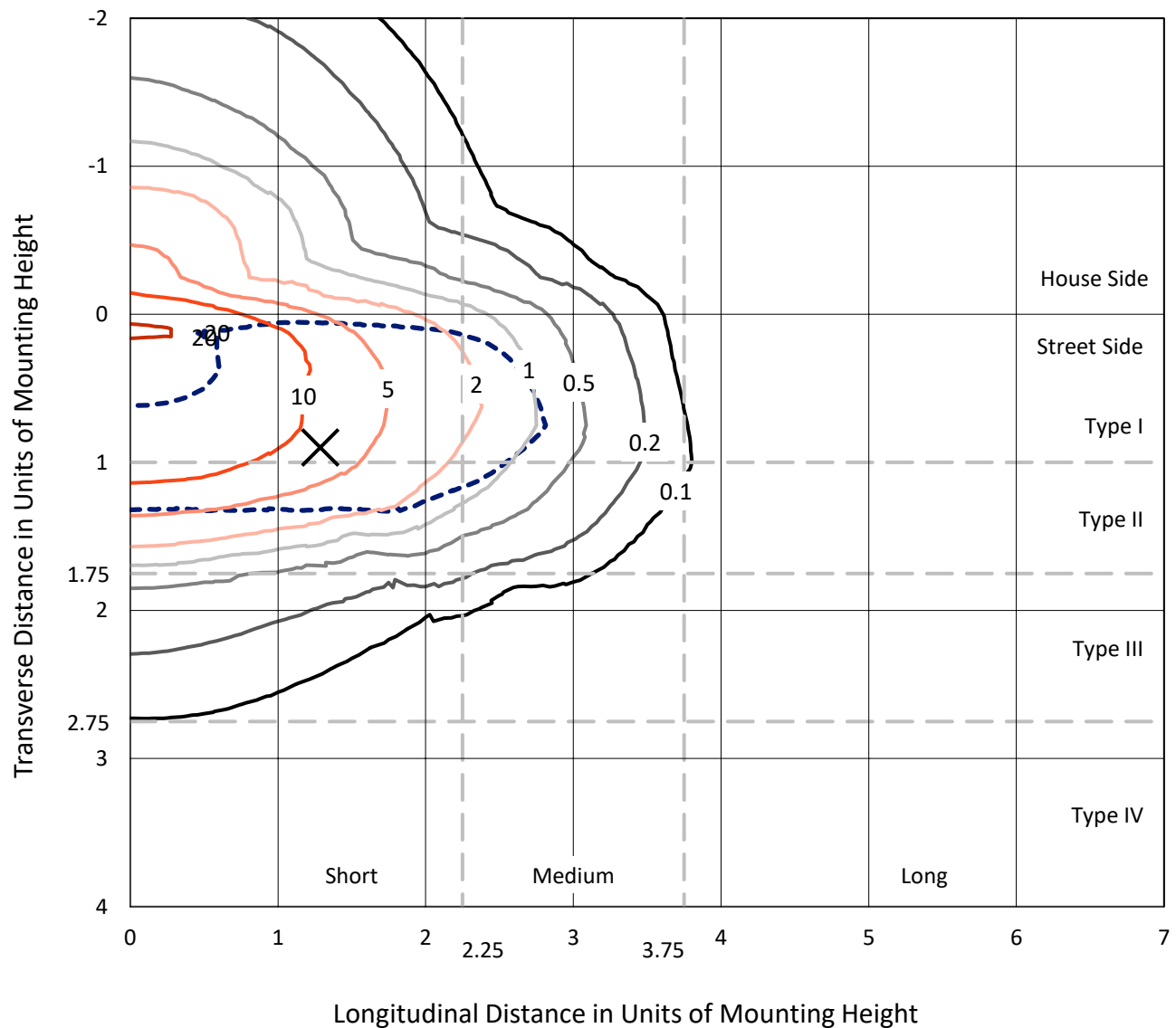


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Iso-Footcandle Lines of Horizontal Illumination

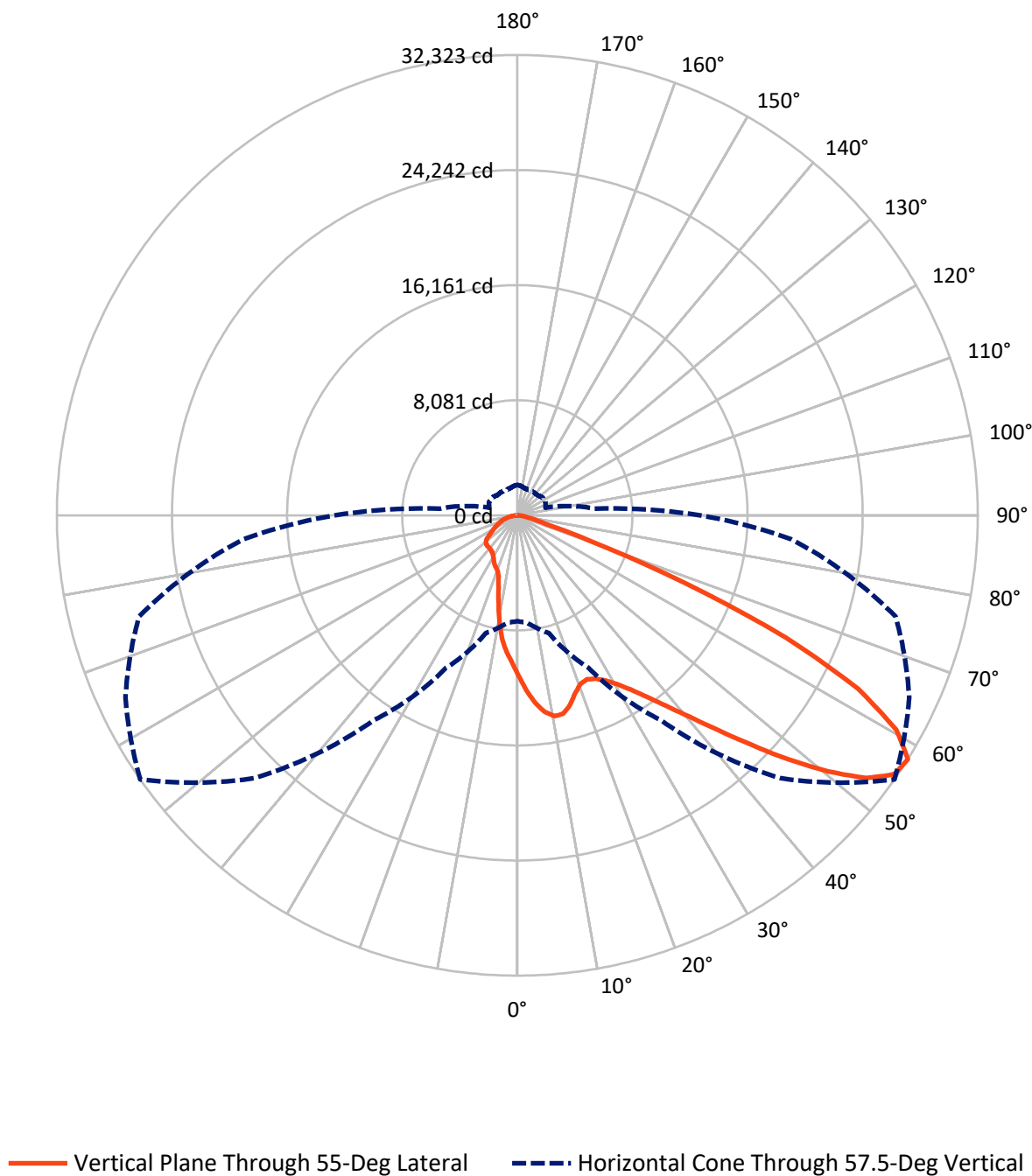
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 21.8 fc
Type II - Short - N/A

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Luminous Intensity Polar Plot



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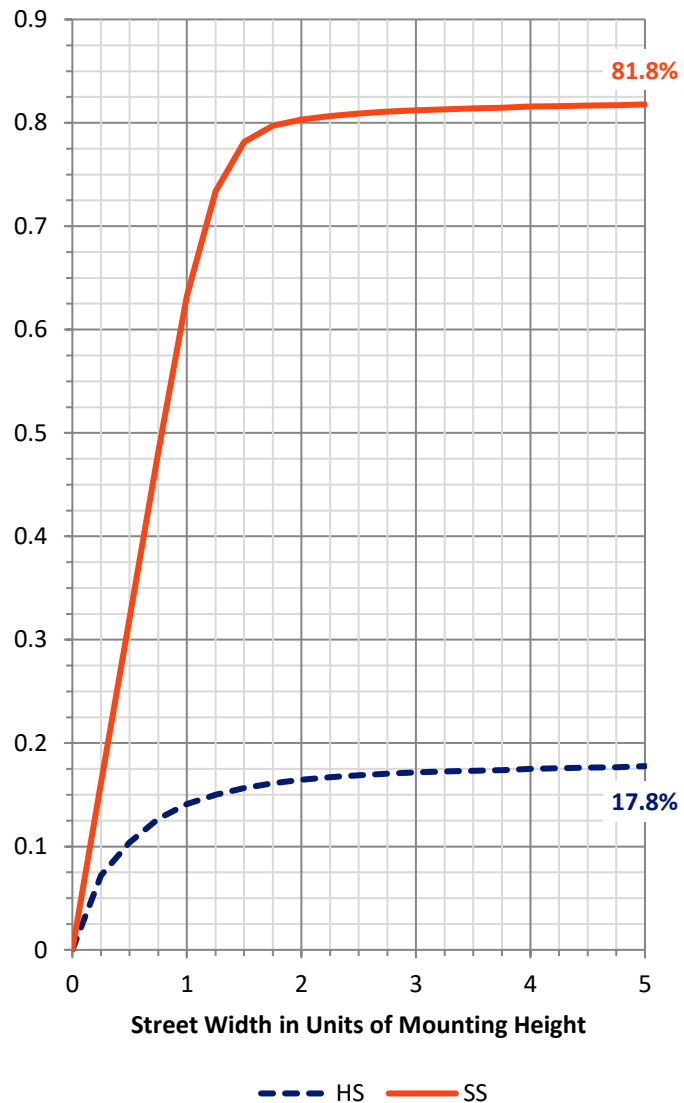
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8138.7	0.0	8138.7
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	36840.3	0.0	36840.3
	% Fixture	81.9	0.0	81.9
Total	Lumens	44979.0	0.0	44979.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1045.8	2.3
10°-20°	2639.7	5.9
20°-30°	4212.2	9.4
30°-40°	6668.9	14.8
40°-50°	10207.5	22.7
50°-60°	10933.2	24.3
60°-70°	6878.1	15.3
70°-80°	2034.0	4.5
80°-90°	359.6	0.8
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°	44979.0	100.0
0°-180°	44979.0	100.0

Coefficient of Utilization



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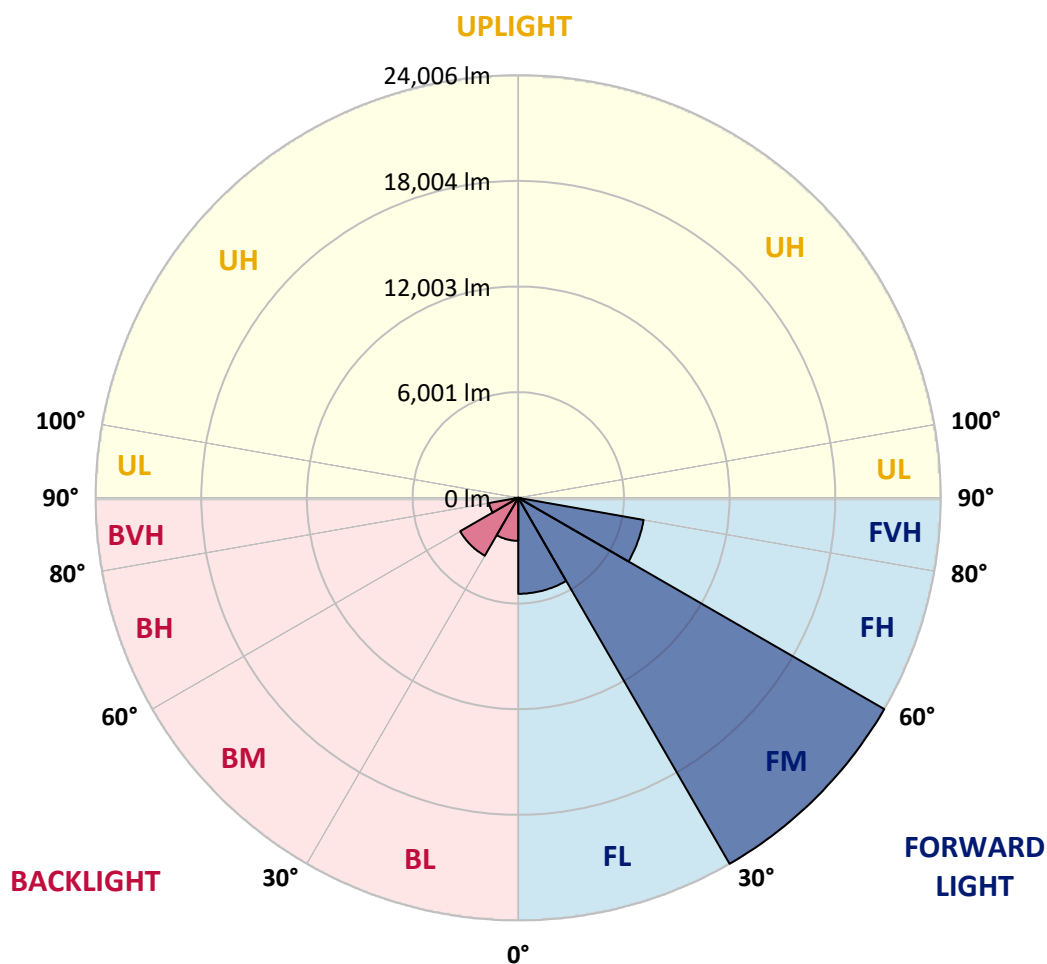
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	5451.5	12.1			
FM	(30°-60°)	24005.6	53.4			
FH	(60°-80°)	7231.3	16.1			G3/7500
FVH	(80°-90°)	151.9	0.3			G2/225
BL	(0°-30°)	2446.2	5.4	B3/2500		
BM	(30°-60°)	3804.0	8.5	B3/5000		
BH	(60°-80°)	1680.8	3.7	B3/2500		G3/2500
BVH	(80°-90°)	207.7	0.5			G2/225
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°	11270.3	11270.3	11270.3	11270.3	11270.3	11270.3	11270.3	11270.3	11270.3	11270.3	11270.3
2.5°	12930.5	12921.2	12972.3	12797.9	12679.4	12518.9	12307.4	12037.6	11746.9	11440.0	11307.5
5°	14095.4	14014.0	14067.5	13937.3	13807.1	13565.3	13251.4	12811.9	12274.8	11663.3	11337.7
7.5°	13911.7	13856.0	13993.1	14109.3	14207.0	14176.8	13946.6	13486.2	12793.3	11905.1	11433.1
10°	12430.6	12367.8	12560.8	12963.1	13553.7	14067.5	14346.5	14060.5	13323.5	12170.1	11526.0
12.5°	11123.8	11093.6	11221.5	11547.0	12202.7	13188.6	14295.4	14562.8	13874.5	12484.1	11651.6
15°	10565.8	10528.6	10610.0	10775.0	11193.5	12112.0	13830.3	14906.9	14416.3	12846.7	11851.6
17.5°	10442.5	10400.7	10435.5	10521.5	10791.3	11491.2	13128.1	15076.6	14981.3	13251.4	12019.0
20°	10670.4	10635.5	10640.1	10635.5	10823.9	11379.6	12639.8	15011.5	15474.2	13623.4	12181.8
22.5°	11221.5	11163.4	11165.6	11042.4	11144.7	11574.9	12512.0	14837.2	15913.7	13948.9	12305.0
25°	12119.0	12014.3	12035.2	11721.4	11693.5	12012.1	12711.9	14702.3	16350.9	14209.4	12328.3
27.5°	13346.7	13228.1	13165.3	12698.0	12474.8	12632.8	13118.9	14748.8	16764.8	14434.9	12270.2
30°	14881.4	14737.1	14609.3	13946.6	13542.0	13483.9	13751.3	15055.7	17253.0	14672.1	12170.1
32.5°	16762.4	16595.1	16362.5	15483.5	14913.9	14609.3	14569.8	15602.1	17825.1	14974.3	12119.0
35°	19001.7	18783.0	18452.9	17315.8	16595.1	15971.9	15648.7	16390.4	18608.7	15430.0	12177.1
37.5°	21308.2	21061.7	20759.4	19406.2	18520.3	17601.8	16964.8	17460.0	19652.6	16048.6	12330.5
40°	23435.8	23159.1	22877.7	21673.3	20722.2	19615.4	18576.1	18813.3	20929.2	16788.0	12591.0
42.5°	24691.4	24486.7	24379.8	23728.7	22994.0	21870.9	20580.5	20417.7	22363.9	17639.0	12888.7
45°	24635.6	24551.9	24882.1	25151.8	24977.4	24354.2	22928.8	22191.8	23803.2	18376.1	13163.0
47.5°	23319.6	23375.3	24112.4	25628.5	26295.8	26621.3	25602.9	23933.3	25054.2	18927.2	13286.3
50°	19738.7	19785.2	21491.9	24761.1	26635.2	28469.9	28256.0	25633.1	26023.7	19264.4	13258.4
52.5°	16904.3	16934.5	17666.9	22189.5	25514.5	29400.0	30646.3	27235.2	26732.9	19357.3	13102.6
55°	12732.9	12837.5	13658.3	17408.8	22598.7	28662.9	32101.9	28886.0	27181.7	19366.7	12939.8
57.5°	7438.3	7552.3	8566.0	11816.7	17564.6	26093.5	32322.8	30351.0	27486.3	19292.2	12842.1
60°	3643.6	3692.5	4134.2	6210.7	10830.9	21143.1	30546.2	31060.2	27656.0	19252.8	12837.5
62.5°	2455.4	2448.4	2467.1	3064.6	5336.4	13583.9	26844.5	29818.5	27565.3	19101.6	12791.0
65°	2111.3	2085.7	2016.0	2150.9	2764.6	6212.9	20740.9	26112.1	26874.8	18722.5	12472.4
67.5°	1825.3	1827.6	1829.9	1788.1	1974.2	2867.0	12674.7	20568.8	24396.1	16927.6	11244.8
70°	1511.4	1532.3	1541.6	1541.6	1609.0	1881.1	5410.8	14097.7	19243.5	13272.3	9056.7
72.5°	1376.6	1332.3	1337.0	1313.7	1313.7	1432.3	2178.7	7991.7	12123.6	7466.2	5527.0
75°	1123.1	1151.0	1155.6	1139.4	1085.9	1092.9	1292.8	3353.0	5187.5	3097.1	2732.1
77.5°	969.6	969.6	978.9	967.3	925.5	818.5	862.6	1299.8	1764.8	1269.6	1364.9
80°	778.9	776.6	816.1	839.4	774.3	604.5	551.0	718.5	783.6	558.0	709.2
82.5°	379.0	402.2	560.4	639.4	588.2	437.2	337.1	446.5	418.5	246.5	318.6
85°	220.9	209.3	251.1	355.8	337.1	241.8	162.8	232.5	218.5	125.6	127.9
87.5°	69.8	65.1	51.1	121.0	97.7	67.4	44.2	67.4	60.5	27.9	27.9
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°	11270.3	11270.3	11270.3	11270.3	11270.3	11270.3	11270.3	11270.3	11270.3	11270.3
2.5°	11142.4	10868.1	10595.9	10347.2	10196.1	10098.4	10000.7	9891.5	9849.6	9786.8
5°	11030.7	10500.6	10028.6	9621.7	9252.0	8961.4	8668.4	8431.2	8324.2	8396.3
7.5°	10965.7	10198.3	9470.6	8724.2	8005.7	7431.4	6931.5	6580.3	6422.2	6461.8
10°	10907.5	9856.6	8747.5	7568.6	6536.1	5824.7	5313.1	5045.7	4945.7	4966.6
12.5°	10854.0	9472.9	7875.5	6324.6	5227.1	4757.3	4610.9	4613.2	4631.8	4645.8
15°	10844.8	9010.2	6901.2	5236.4	4520.2	4490.0	4648.1	4748.1	4801.5	4817.8
17.5°	10830.9	8456.8	5908.4	4494.6	4348.2	4552.7	4699.2	4764.4	4806.2	4808.6
20°	10775.0	7754.5	4992.3	4141.2	4310.9	4487.7	4578.4	4629.5	4664.4	4675.9
22.5°	10602.9	6973.3	4278.3	3983.0	4162.1	4304.0	4410.9	4469.1	4490.0	4504.0
25°	10293.7	6099.1	3785.4	3832.0	3955.2	4134.2	4220.2	4231.9	4224.9	4245.9
27.5°	9889.1	5162.0	3478.5	3627.4	3785.4	3938.9	3985.4	3978.4	3964.5	3987.8
30°	9400.8	4320.3	3283.2	3397.2	3613.3	3752.9	3794.8	3778.5	3750.6	3776.1
32.5°	8884.6	3632.0	3122.8	3236.6	3471.6	3608.7	3650.5	3634.3	3613.3	3634.3
35°	8403.3	3150.6	2973.9	3129.7	3360.0	3494.8	3548.2	3550.6	3550.6	3576.1
37.5°	7961.5	2869.3	2850.7	3062.3	3283.2	3404.1	3480.8	3485.5	3385.5	3392.4
40°	7552.3	2750.7	2794.9	3018.1	3208.8	3325.1	3329.7	3069.3	2885.6	2881.0
42.5°	7217.4	2727.4	2811.2	3013.5	3155.4	3160.0	2832.1	2629.8	2578.7	2581.0
45°	6903.6	2720.5	2848.4	3013.5	3076.2	2729.8	2508.9	2455.4	2460.1	2478.7
47.5°	6552.4	2692.6	2855.3	2971.6	2848.4	2427.5	2362.4	2339.2	2329.8	2334.5
50°	6168.8	2592.6	2767.0	2887.9	2457.7	2297.3	2215.9	2209.0	2220.6	2227.5
52.5°	5764.2	2429.9	2615.9	2736.7	2278.7	2183.4	2092.6	2108.9	2160.1	2176.4
55°	5499.1	2239.2	2415.9	2434.5	2153.1	2076.4	1999.7	2036.9	2132.2	2162.4
57.5°	5429.3	2036.9	2188.1	2167.1	1992.7	1983.4	1936.9	1969.4	2090.4	2134.6
60°	5408.4	1855.6	1964.8	1948.5	1836.9	1881.1	1869.5	1885.8	1927.6	1941.6
62.5°	5245.6	1711.3	1764.8	1741.6	1697.4	1774.2	1802.1	1767.2	1799.7	1816.0
65°	4831.7	1595.1	1569.5	1553.3	1571.8	1641.6	1697.4	1627.6	1657.8	1704.4
67.5°	4148.2	1436.9	1367.2	1385.8	1443.9	1481.1	1553.3	1474.2	1499.8	1578.8
70°	3355.2	1237.0	1174.2	1227.7	1283.5	1360.3	1371.9	1318.4	1378.8	1467.2
72.5°	2374.0	1034.7	990.6	1099.8	1118.4	1218.4	1192.8	1167.3	1251.0	1281.1
75°	1646.3	834.8	809.1	892.9	960.3	1046.3	1027.8	1058.0	1234.7	1248.7
77.5°	1041.7	648.7	632.4	685.9	778.9	874.3	904.5	1248.7	2108.9	2192.7
80°	604.5	483.6	465.0	506.9	588.2	676.6	872.0	1532.3	1390.5	1374.2
82.5°	337.1	332.5	309.2	320.9	393.0	488.3	1232.4	1078.9	876.6	904.5
85°	158.2	195.4	167.4	160.4	220.9	572.1	823.1	616.2	409.3	400.0
87.5°	41.8	37.2	37.2	41.8	93.0	492.9	327.9	262.7	155.8	151.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)