

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: P967357

Luminaire Tested: **NAV-SB4D-830-U-T2-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P967357
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-4)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4D-830-U-T2-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 27429 lumens
Efficiency: N/A
Efficacy: 93.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B3 - U0 - G4

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

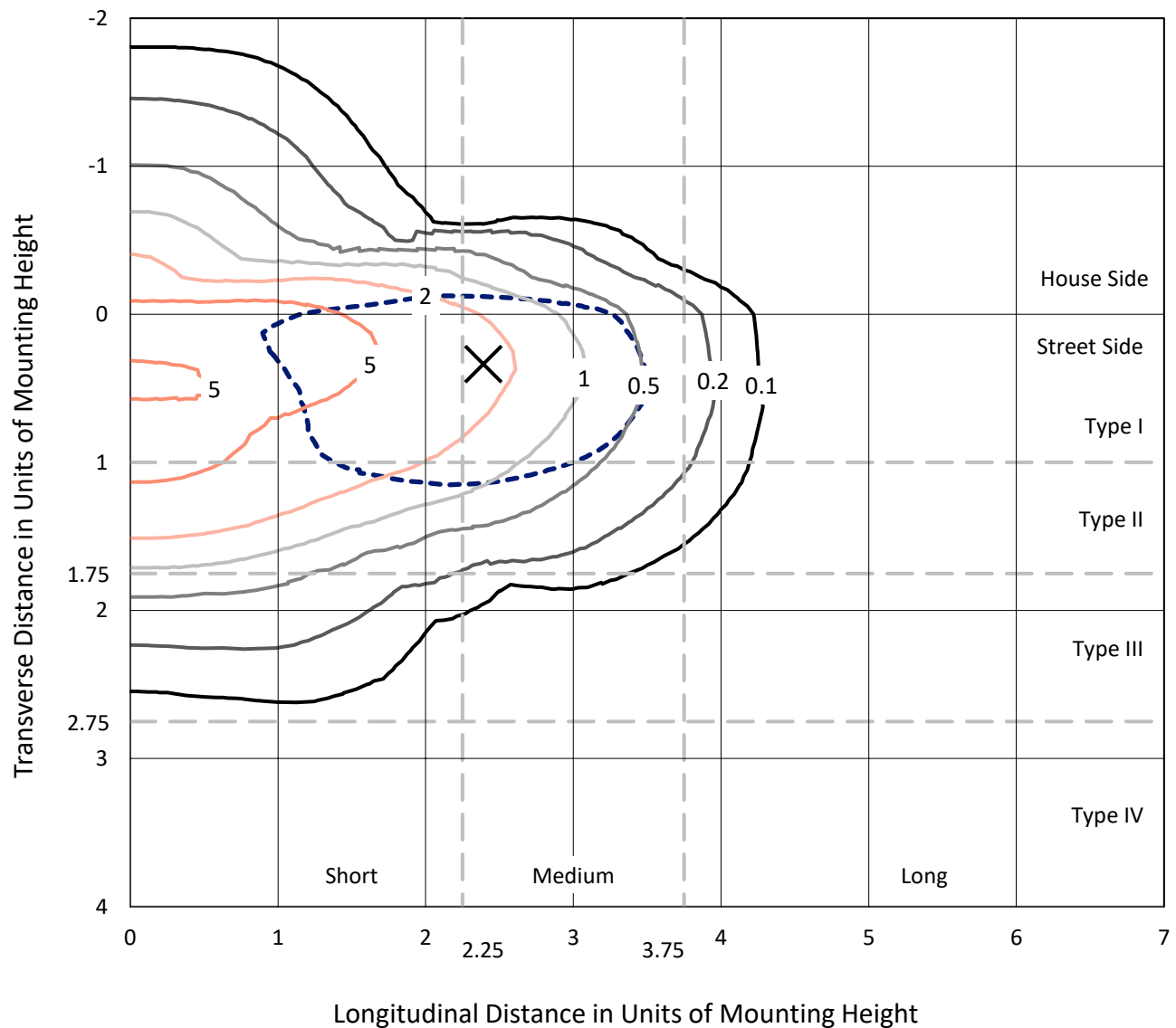


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
- - - 1/2 Max cd

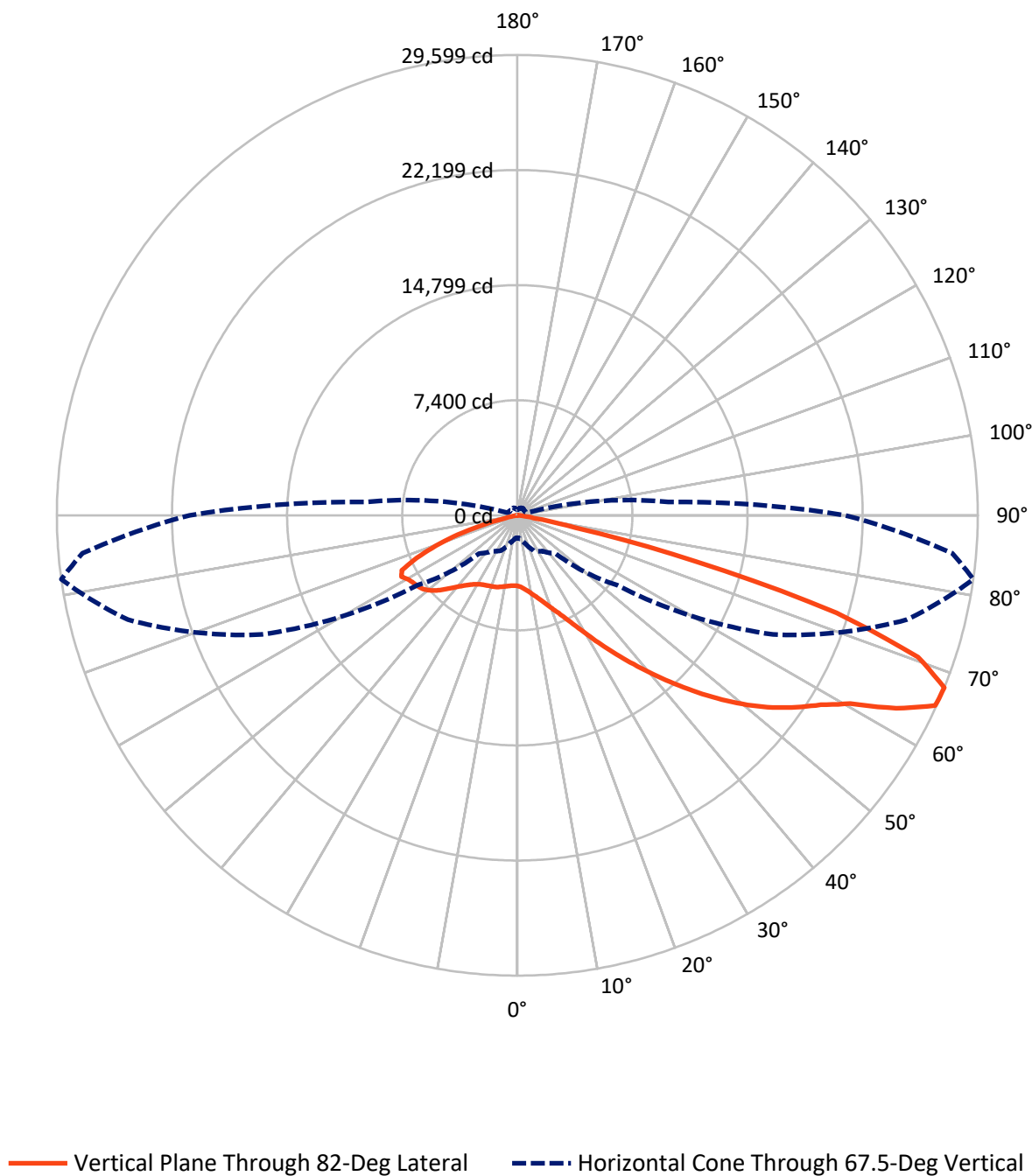


Based on 25 foot mounting height. Maximum calculated value = 9.6 fc
Type II - Medium - N/A

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Luminous Intensity Polar Plot



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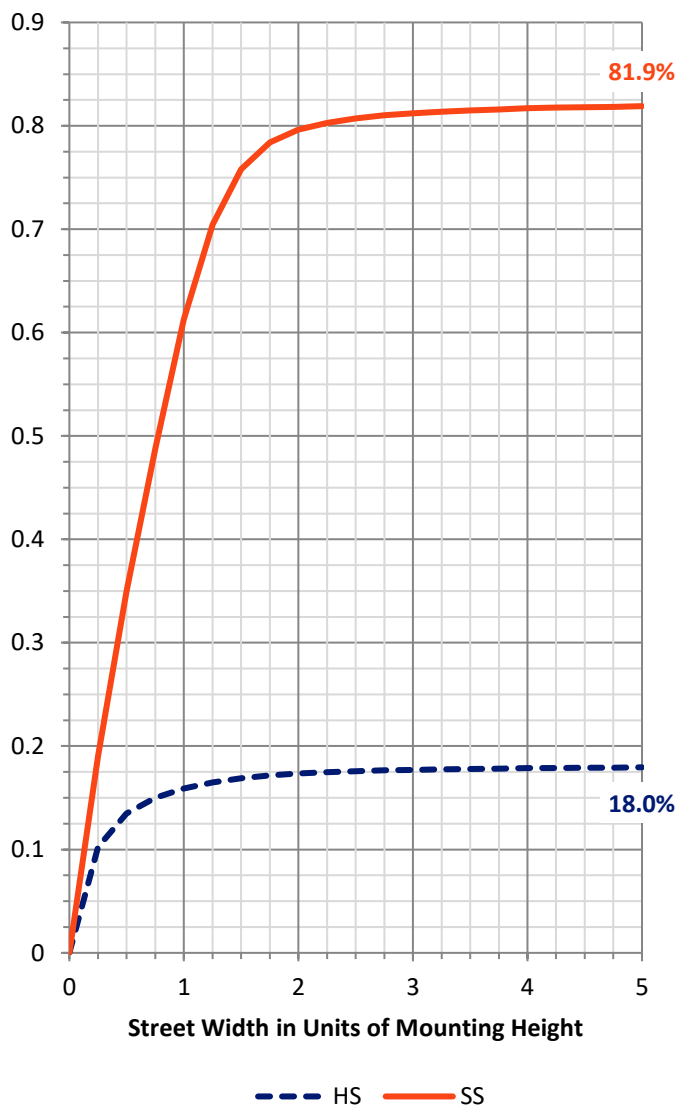
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4968.5	0.0	4968.5
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	22460.5	0.0	22460.5
	% Fixture	81.9	0.0	81.9
Total	Lumens	27429.0	0.0	27429.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	404.8	1.5
10°-20°	1052.0	3.8
20°-30°	1685.0	6.1
30°-40°	2979.6	10.9
40°-50°	5220.5	19.0
50°-60°	6962.7	25.4
60°-70°	6482.0	23.6
70°-80°	2487.8	9.1
80°-90°	154.5	0.6
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°	27429.0	100.0
0°-180°	27429.0	100.0

Coefficient of Utilization



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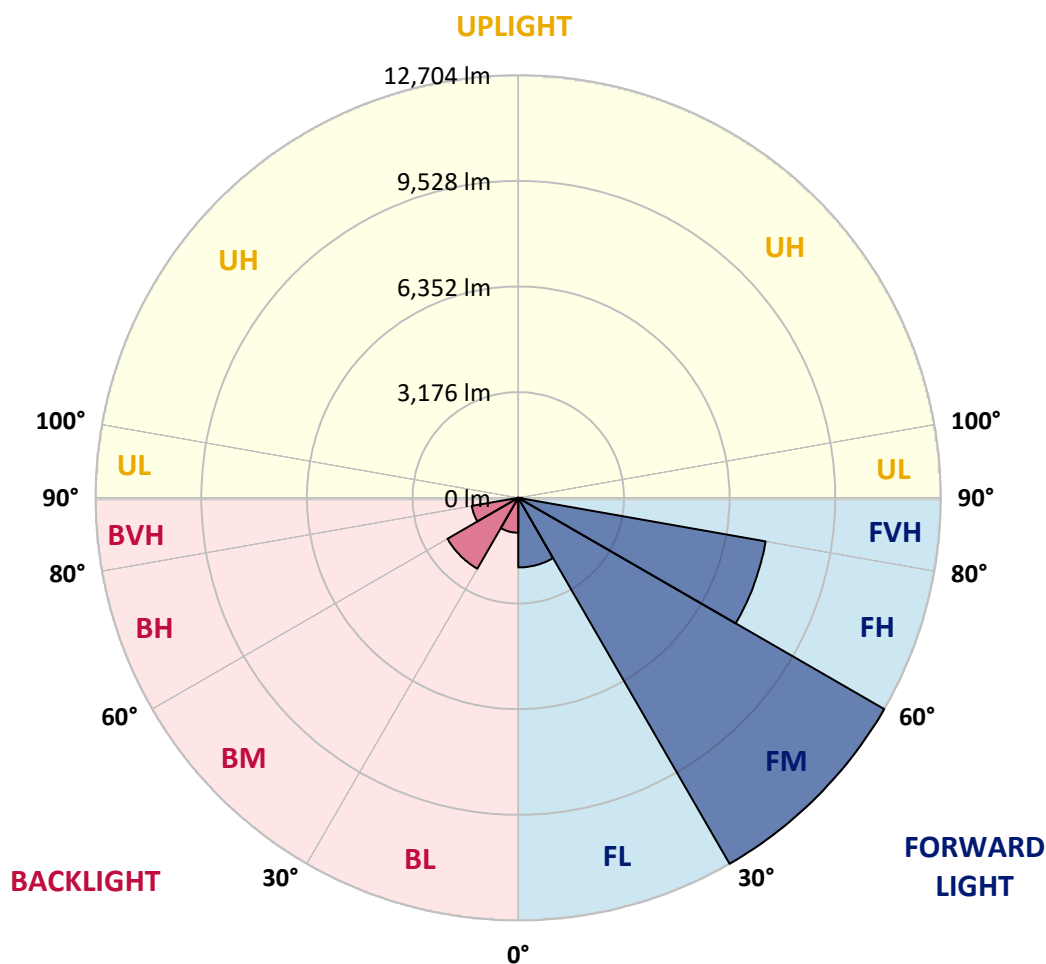
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2092.5	7.6			
FM	(30°-60°)	12704.0	46.3			
FH	(60°-80°)	7551.6	27.5			G4/12000
FVH	(80°-90°)	112.3	0.4			G2/225
BL	(0°-30°)	1049.3	3.8	B3/2500		
BM	(30°-60°)	2458.9	9.0	B2/2500		
BH	(60°-80°)	1418.1	5.2	B3/2500		G3/2500
BVH	(80°-90°)	42.2	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type II Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	82°	85°
0°	4544.0	4544.0	4544.0	4544.0	4544.0	4544.0	4544.0	4544.0	4544.0	4544.0	4544.0
2.5°	4802.7	4830.4	4814.6	4806.7	4792.9	4773.1	4757.3	4707.9	4656.6	4623.1	4611.2
5°	4899.5	4927.2	4925.2	4933.1	4943.0	4948.9	4944.9	4889.7	4816.6	4759.3	4725.8
7.5°	4816.6	4848.1	4873.9	4913.3	4982.4	5055.5	5091.1	5079.2	5004.2	4925.2	4883.7
10°	4581.5	4615.2	4676.4	4769.2	4915.3	5073.3	5205.7	5266.9	5219.4	5132.6	5075.3
12.5°	4151.0	4184.7	4305.1	4506.5	4751.4	5025.9	5278.6	5442.6	5454.4	5367.5	5300.4
15°	3667.2	3700.8	3829.2	4082.0	4455.2	4895.6	5318.2	5628.3	5732.9	5657.9	5576.9
17.5°	3367.0	3396.6	3493.4	3696.9	4085.9	4634.9	5304.4	5825.7	6064.6	6005.4	5908.6
20°	3276.2	3301.9	3347.3	3489.5	3813.4	4364.3	5213.6	6011.3	6422.1	6388.5	6280.0
22.5°	3373.0	3396.6	3410.5	3473.7	3677.1	4186.6	5099.0	6200.9	6836.9	6840.7	6708.4
25°	3596.1	3619.9	3604.0	3643.6	3732.4	4131.4	5055.5	6424.1	7358.2	7401.6	7251.6
27.5°	3963.5	3965.4	3927.9	3926.0	3939.8	4214.3	5100.9	6663.0	8015.8	8096.8	7911.2
30°	4700.0	4670.4	4526.3	4370.3	4299.2	4463.1	5227.3	6945.4	8791.9	8936.1	8703.1
32.5°	5835.6	5792.2	5527.5	5154.3	4779.1	4863.9	5454.4	7267.4	9637.2	9897.8	9613.4
35°	7067.9	7056.0	6779.6	6224.6	5569.0	5434.7	5823.7	7690.0	10559.3	10974.1	10636.3
37.5°	8213.2	8207.4	8049.3	7395.7	6597.8	6230.6	6416.2	8242.8	11546.7	12147.1	11748.2
40°	9260.0	9277.7	9119.7	8535.2	7731.4	7251.6	7221.9	8926.2	12644.8	13424.8	12950.9
42.5°	10164.4	10184.1	10024.2	9591.6	8851.2	8381.1	8211.3	9763.5	13717.1	14797.3	14236.4
45°	10778.6	10901.0	10877.3	10531.7	10000.5	9512.7	9400.2	10814.1	14939.5	16252.7	15595.2
47.5°	10952.3	11064.9	11242.6	11290.1	10966.2	10486.3	10620.5	12079.9	16175.7	17710.2	16961.7
50°	10523.8	10628.4	10997.7	11489.5	11714.6	11566.5	11807.5	13436.6	17441.6	19163.6	18302.6
52.5°	9678.6	9785.3	10251.3	11029.4	11947.6	12413.7	12998.2	14773.6	18667.9	20540.1	19572.4
55°	8456.1	8568.7	9167.1	10047.9	11503.3	12763.3	13991.6	16108.6	19791.6	21778.3	20717.8
57.5°	6793.4	6876.3	7498.4	8730.6	10385.6	12415.7	14724.2	17566.0	20850.1	22994.7	21853.3
60°	4427.6	4500.6	5223.4	6597.8	8533.2	11254.5	14870.4	19191.3	22256.2	24576.6	23383.8
62.5°	2944.4	2993.8	3422.4	4431.5	6009.4	9024.9	14015.2	20488.7	24317.9	27329.5	26008.4
65°	2020.3	2069.6	2498.1	3201.2	3882.5	5969.9	11556.7	20316.9	26186.1	29515.6	27953.6
67.5°	1441.7	1483.1	1846.4	2510.0	2810.1	3467.8	7834.1	18121.0	25917.5	29598.6	28058.2
70°	1032.8	1056.6	1356.7	1955.1	2233.5	2083.4	4356.5	13859.2	22692.7	27331.5	25921.4
72.5°	722.8	730.7	942.0	1489.0	1799.1	1520.6	2073.6	9240.2	17163.1	21452.4	20095.7
75°	489.7	499.6	634.0	1092.0	1443.6	1161.2	1098.0	4954.8	10075.5	11874.6	10644.3
77.5°	300.2	304.1	408.8	746.5	1080.2	884.7	706.9	2099.2	3898.3	3827.2	3262.4
80°	169.8	169.8	260.7	464.1	736.6	570.7	495.7	892.6	1234.3	1084.1	955.8
82.5°	94.8	96.8	189.6	288.3	487.8	337.7	272.5	412.8	533.2	472.0	410.7
85°	39.5	43.5	116.5	136.2	233.0	167.9	110.6	173.7	197.5	175.8	128.3
87.5°	4.0	5.9	35.6	25.6	27.7	33.6	15.8	33.6	27.7	27.7	19.8
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4544.0	4544.0	4544.0	4544.0	4544.0	4544.0	4544.0	4544.0	4544.0	4544.0	4544.0
2.5°	4573.7	4544.0	4469.0	4382.1	4267.6	4212.2	4137.2	4085.9	4042.5	4046.4	4006.9
5°	4662.5	4587.5	4419.6	4210.3	3949.6	3764.0	3566.5	3430.3	3319.7	3296.0	3242.7
7.5°	4785.0	4666.5	4372.2	3995.0	3554.7	3221.0	2922.7	2731.2	2594.9	2551.4	2508.0
10°	4943.0	4771.2	4311.0	3724.5	3090.6	2666.0	2346.1	2196.0	2103.2	2071.6	2047.8
12.5°	5126.6	4891.6	4230.1	3394.7	2612.7	2203.9	2000.5	1925.5	1895.8	1886.0	1880.1
15°	5357.7	5041.7	4107.6	3003.7	2207.8	1921.5	1834.6	1824.7	1828.7	1824.7	1822.8
17.5°	5632.2	5205.7	3908.1	2600.8	1935.3	1777.4	1745.8	1753.7	1763.5	1761.6	1757.6
20°	5932.4	5367.5	3653.4	2243.4	1749.7	1674.6	1656.9	1664.8	1672.7	1668.7	1666.8
22.5°	6274.0	5541.4	3371.0	1964.9	1625.2	1579.8	1560.2	1562.1	1562.1	1554.2	1550.2
25°	6682.8	5732.9	3074.8	1767.5	1530.5	1495.0	1471.3	1463.3	1451.5	1427.8	1423.8
27.5°	7170.6	5936.3	2790.5	1629.2	1455.4	1421.9	1394.2	1374.4	1344.9	1305.3	1301.4
30°	7719.6	6183.1	2549.5	1542.3	1396.2	1362.6	1331.1	1301.4	1258.0	1208.6	1204.7
32.5°	8365.3	6447.8	2373.7	1485.0	1342.9	1307.3	1269.8	1234.3	1186.8	1137.5	1139.5
35°	9135.5	6767.7	2271.0	1445.6	1301.4	1254.0	1212.6	1173.0	1137.5	1094.1	1090.1
37.5°	9970.9	7107.4	2239.4	1425.8	1273.8	1200.7	1153.3	1125.7	1121.7	1096.0	1094.1
40°	10885.2	7510.3	2263.1	1414.0	1244.1	1149.3	1098.0	1092.0	1102.0	1056.6	1058.5
42.5°	11852.9	7988.1	2302.7	1400.1	1202.6	1098.0	1048.7	1048.7	1040.7	977.5	977.5
45°	12899.5	8539.1	2342.1	1366.5	1153.3	1046.6	1009.1	995.3	961.8	900.6	898.5
47.5°	13954.0	9099.9	2371.7	1305.3	1094.1	1003.2	969.6	938.1	888.7	833.3	831.4
50°	14955.3	9603.5	2340.2	1214.5	1026.9	961.8	926.2	882.7	829.4	791.9	786.0
52.5°	15849.9	10040.0	2205.9	1107.9	955.8	918.3	886.7	841.3	797.9	758.3	754.4
55°	16628.0	10393.5	1968.9	1007.2	892.6	880.8	849.2	791.9	732.7	699.0	695.2
57.5°	17374.5	10662.0	1672.7	924.2	835.4	839.3	791.9	740.6	685.2	649.7	645.8
60°	18367.8	11021.4	1372.5	847.2	774.1	786.0	734.6	697.1	628.0	582.6	576.7
62.5°	19955.5	11580.3	1090.1	752.5	703.0	706.9	685.2	639.8	556.9	503.6	499.6
65°	21215.4	11374.9	859.1	649.7	622.1	628.0	628.0	578.6	489.7	428.6	422.6
67.5°	21073.3	9739.8	685.2	549.0	545.1	549.0	562.8	521.3	434.5	385.1	377.2
70°	19412.5	7747.3	549.0	456.2	474.0	464.1	503.6	475.9	391.0	341.6	335.7
72.5°	15840.0	5580.8	418.7	377.2	363.4	379.1	454.2	428.6	325.8	270.6	264.7
75°	9256.0	2978.0	312.0	298.2	262.6	316.0	402.8	365.3	248.9	199.5	193.5
77.5°	3013.6	1038.7	229.1	219.2	195.5	254.7	343.6	308.1	203.4	158.0	152.1
80°	807.7	314.0	156.0	144.1	126.4	189.6	272.5	244.9	146.2	102.7	100.8
82.5°	323.9	132.3	90.8	81.0	69.1	130.4	215.2	197.5	108.6	65.2	65.2
85°	104.7	43.5	33.6	25.6	31.6	81.0	128.3	134.3	77.0	33.6	25.6
87.5°	13.8	5.9	5.9	7.9	5.9	13.8	39.5	37.5	21.7	4.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)