

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: P962973

Luminaire Tested: **NAV-SB2D-735-U-AFL**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P962973
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-SB2D-735-U-AFL
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 70 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND AUTOMOTIVE
FRONTLINE OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21214.4 lumens
Efficiency: N/A
Efficacy: 143.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G2

Input Watts (W): 147.6
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

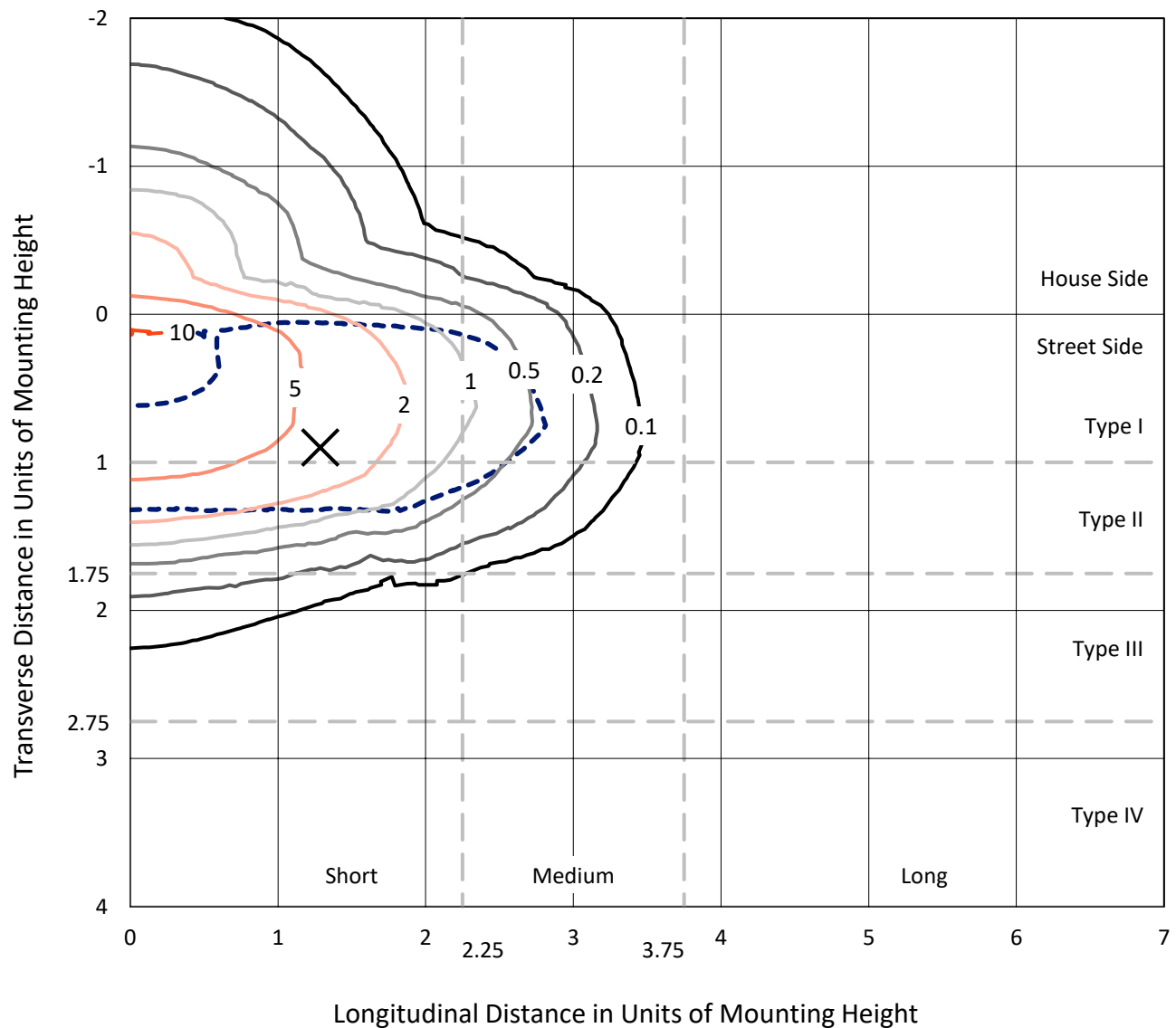


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Iso-Footcandle Lines of Horizontal Illumination

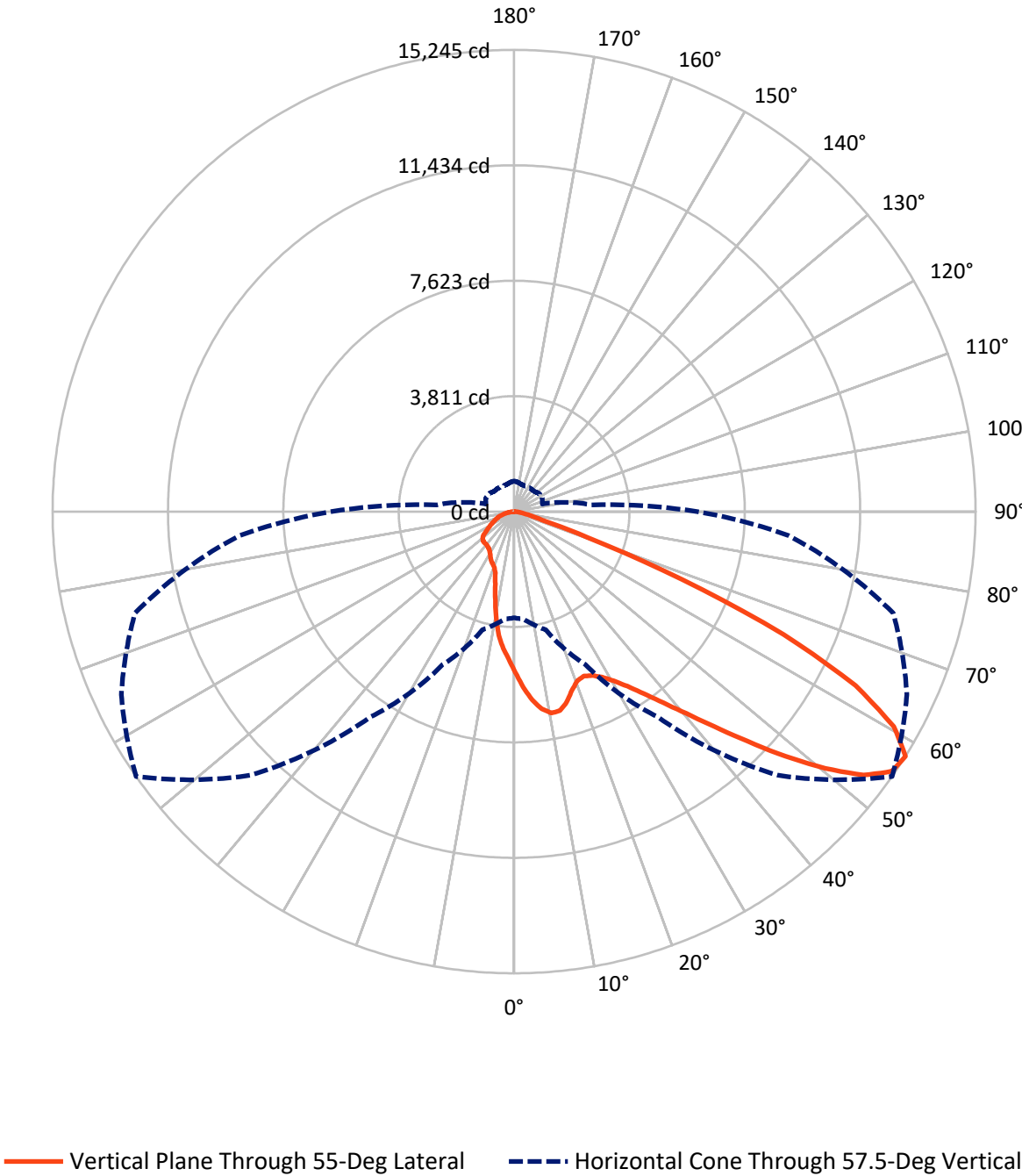
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.3 fc
Type II - Short - N/A

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Luminous Intensity Polar Plot



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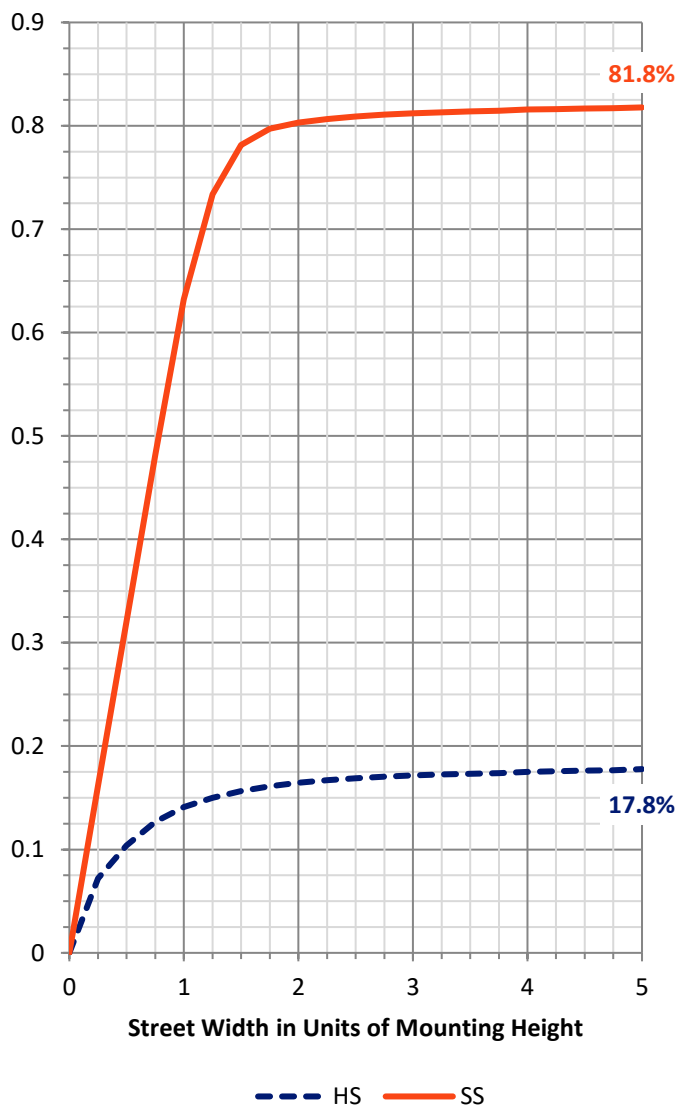
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3838.7	0.0	3838.7
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	17375.8	0.0	17375.8
	% Fixture	81.9	0.0	81.9
Total	Lumens	21214.4	0.0	21214.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	493.3	2.3
10°-20°	1245.0	5.9
20°-30°	1986.7	9.4
30°-40°	3145.4	14.8
40°-50°	4814.4	22.7
50°-60°	5156.7	24.3
60°-70°	3244.1	15.3
70°-80°	959.3	4.5
80°-90°	169.6	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°	21214.4	100.0
0°-180°	21214.4	100.0

Coefficient of Utilization



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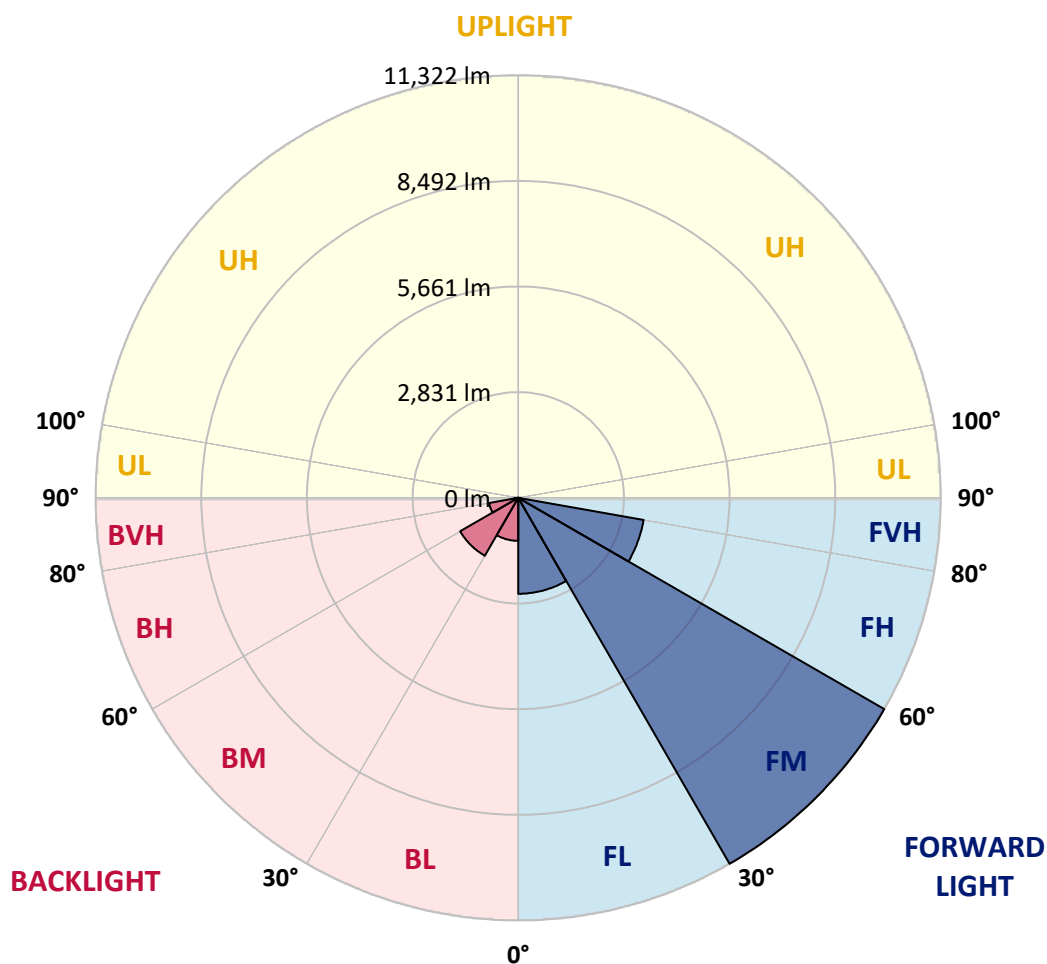
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2571.2	12.1			
FM	(30°-60°)	11322.3	53.4			
FH	(60°-80°)	3410.6	16.1			G2/5000
FVH	(80°-90°)	71.7	0.3			G1/100
BL	(0°-30°)	1153.8	5.4	B3/2500		
BM	(30°-60°)	1794.2	8.5	B2/2500		
BH	(60°-80°)	792.8	3.7	B2/1000		G2/1000
BVH	(80°-90°)	98.0	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G2

Type II Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	5315.6	5315.6	5315.6	5315.6	5315.6	5315.6	5315.6	5315.6	5315.6	5315.6	5315.6
2.5°	6098.6	6094.3	6118.4	6036.1	5980.3	5904.6	5804.8	5677.6	5540.4	5395.7	5333.2
5°	6648.2	6609.7	6634.9	6573.5	6512.1	6398.0	6250.0	6042.8	5789.4	5501.0	5347.4
7.5°	6561.4	6535.2	6599.9	6654.7	6700.7	6686.5	6577.9	6360.7	6034.0	5615.1	5392.4
10°	5862.9	5833.3	5924.3	6114.0	6392.6	6634.9	6766.5	6631.6	6284.1	5740.1	5436.3
12.5°	5246.6	5232.3	5292.6	5446.1	5755.4	6220.4	6742.4	6868.5	6543.9	5888.1	5495.5
15°	4983.3	4965.8	5004.2	5082.1	5279.5	5712.6	6523.1	7030.9	6799.4	6059.2	5589.8
17.5°	4925.2	4905.4	4921.9	4962.5	5089.7	5419.8	6191.9	7110.9	7065.9	6250.0	5668.8
20°	5032.8	5016.2	5018.4	5016.2	5105.1	5367.2	5961.6	7080.2	7298.4	6425.5	5745.5
22.5°	5292.6	5265.2	5266.2	5208.1	5256.4	5459.4	5901.2	6998.0	7505.8	6579.1	5803.7
25°	5715.9	5666.6	5676.4	5528.4	5515.2	5665.5	5995.6	6934.3	7711.9	6701.9	5814.6
27.5°	6295.0	6239.1	6209.4	5989.0	5883.7	5958.3	6187.5	6956.3	7907.2	6808.3	5787.3
30°	7018.8	6950.8	6890.5	6577.9	6387.1	6359.7	6485.8	7101.1	8137.5	6920.1	5740.1
32.5°	7906.0	7827.1	7717.4	7302.8	7034.2	6890.5	6871.8	7358.8	8407.3	7062.7	5715.9
35°	8962.1	8859.1	8703.3	8167.0	7827.1	7533.1	7380.7	7730.6	8776.8	7277.6	5743.4
37.5°	10050.0	9933.8	9791.2	9152.9	8735.2	8301.9	8001.5	8235.1	9269.2	7569.3	5815.7
40°	11053.5	10923.0	10790.3	10222.2	9773.7	9251.6	8761.4	8873.3	9871.3	7918.1	5938.5
42.5°	11645.7	11549.2	11498.8	11191.7	10845.1	10315.5	9706.8	9630.0	10548.0	8319.5	6079.0
45°	11619.4	11579.9	11735.6	11862.8	11780.6	11486.7	10814.5	10466.8	11226.8	8667.1	6208.3
47.5°	10998.7	11025.0	11372.7	12087.7	12402.4	12555.9	12075.6	11288.2	11816.8	8927.0	6266.4
50°	9309.8	9331.7	10136.7	11678.6	12562.6	13427.8	13326.9	12089.9	12274.2	9086.0	6253.3
52.5°	7973.0	7987.2	8332.6	10465.7	12033.9	13866.5	14454.3	12845.5	12608.6	9129.9	6179.8
55°	6005.5	6054.8	6441.9	8210.9	10658.7	13518.8	15140.9	13624.2	12820.3	9134.3	6103.1
57.5°	3508.3	3562.1	4040.2	5573.3	8284.4	12307.1	15245.0	14315.0	12964.0	9099.2	6057.0
60°	1718.5	1741.6	1950.0	2929.2	5108.4	9972.2	14407.2	14649.6	13044.0	9080.6	6054.8
62.5°	1158.1	1154.8	1163.6	1445.5	2516.9	6406.9	12661.3	14063.9	13001.2	9009.3	6032.8
65°	995.8	983.7	950.8	1014.4	1304.0	2930.4	9782.5	12315.8	12675.6	8830.6	5882.7
67.5°	860.9	862.0	863.0	843.4	931.1	1352.2	5978.0	9701.3	11506.4	7983.9	5303.6
70°	712.9	722.7	727.1	727.1	758.9	887.2	2551.9	6649.2	9076.2	6259.9	4271.6
72.5°	649.2	628.4	630.6	619.6	619.6	675.6	1027.6	3769.3	5718.2	3521.5	2606.8
75°	529.7	542.8	545.1	537.4	512.2	515.5	609.8	1581.5	2446.7	1460.8	1288.6
77.5°	457.4	457.4	461.7	456.2	436.4	386.0	406.8	613.1	832.4	598.8	643.8
80°	367.4	366.3	384.9	395.9	365.2	285.2	259.9	338.9	369.6	263.2	334.5
82.5°	178.8	189.7	264.3	301.6	277.5	206.1	159.0	210.5	197.4	116.2	150.3
85°	104.1	98.7	118.5	167.8	159.0	114.1	76.8	109.7	103.1	59.2	60.3
87.5°	32.9	30.7	24.1	57.0	46.0	31.8	20.8	31.8	28.5	13.1	13.1
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°	5315.6	5315.6	5315.6	5315.6	5315.6	5315.6	5315.6	5315.6	5315.6	5315.6
2.5°	5255.3	5125.9	4997.6	4880.2	4809.0	4762.9	4716.8	4665.3	4645.6	4616.0
5°	5202.7	4952.6	4730.0	4538.1	4363.7	4226.6	4088.4	3976.6	3926.2	3960.2
7.5°	5171.9	4810.1	4466.8	4114.8	3775.9	3505.0	3269.2	3103.6	3029.1	3047.7
10°	5144.6	4648.9	4125.7	3569.8	3082.8	2747.2	2505.9	2379.8	2332.7	2342.5
12.5°	5119.4	4467.9	3714.5	2983.0	2465.3	2243.8	2174.7	2175.9	2184.6	2191.1
15°	5115.0	4249.6	3255.0	2469.7	2132.0	2117.8	2192.3	2239.4	2264.6	2272.3
17.5°	5108.4	3988.7	2786.7	2119.9	2050.8	2147.3	2216.4	2247.1	2266.9	2267.9
20°	5082.1	3657.4	2354.6	1953.2	2033.3	2116.6	2159.4	2183.5	2200.0	2205.4
22.5°	5000.9	3288.9	2017.9	1878.6	1963.1	2030.0	2080.4	2107.8	2117.8	2124.3
25°	4855.0	2876.7	1785.4	1807.4	1865.5	1950.0	1990.4	1996.0	1992.7	2002.5
27.5°	4664.3	2434.7	1640.6	1710.8	1785.4	1857.8	1879.7	1876.5	1869.8	1880.8
30°	4433.9	2037.6	1548.6	1602.3	1704.3	1770.1	1789.8	1782.2	1768.9	1781.0
32.5°	4190.4	1713.0	1472.8	1526.6	1637.3	1702.0	1721.8	1714.1	1704.3	1714.1
35°	3963.5	1486.0	1402.7	1476.1	1584.8	1648.3	1673.5	1674.6	1674.6	1686.7
37.5°	3755.1	1353.3	1344.5	1444.3	1548.6	1605.6	1641.7	1643.9	1596.7	1600.0
40°	3562.1	1297.3	1318.3	1423.5	1513.4	1568.2	1570.5	1447.6	1361.0	1358.8
42.5°	3404.1	1286.4	1325.9	1421.3	1488.2	1490.4	1335.8	1240.4	1216.3	1217.3
45°	3256.1	1283.1	1343.5	1421.3	1450.9	1287.5	1183.4	1158.1	1160.3	1169.1
47.5°	3090.5	1270.0	1346.7	1401.6	1343.5	1144.9	1114.3	1103.3	1098.9	1101.1
50°	2909.5	1222.8	1305.0	1362.1	1159.2	1083.5	1045.2	1041.8	1047.3	1050.6
52.5°	2718.7	1146.1	1233.8	1290.8	1074.7	1029.8	987.0	994.7	1018.8	1026.5
55°	2593.7	1056.2	1139.5	1148.2	1015.6	979.4	943.1	960.7	1005.6	1019.9
57.5°	2560.8	960.7	1032.0	1022.1	939.8	935.5	913.6	928.9	985.9	1006.8
60°	2550.9	875.1	926.7	919.0	866.4	887.2	881.7	889.4	909.2	915.7
62.5°	2474.1	807.2	832.4	821.4	800.6	836.8	849.9	833.5	848.8	856.5
65°	2278.9	752.3	740.3	732.6	741.4	774.3	800.6	767.7	782.0	803.9
67.5°	1956.5	677.7	644.8	653.6	681.0	698.6	732.6	695.3	707.4	744.7
70°	1582.5	583.4	553.8	579.0	605.4	641.5	647.1	621.9	650.4	692.0
72.5°	1119.7	488.0	467.2	518.8	527.5	574.6	562.6	550.5	590.0	604.2
75°	776.4	393.7	381.6	421.2	452.9	493.5	484.7	499.0	582.3	589.0
77.5°	491.3	306.0	298.3	323.5	367.4	412.4	426.6	589.0	994.7	1034.2
80°	285.2	228.1	219.4	239.0	277.5	319.2	411.2	722.7	655.8	648.1
82.5°	159.0	156.8	145.9	151.4	185.3	230.3	581.3	508.9	413.5	426.6
85°	74.6	92.1	78.9	75.6	104.1	269.8	388.3	290.6	193.0	188.6
87.5°	19.8	17.5	17.5	19.8	43.9	232.5	154.7	123.9	73.5	71.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)