

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: P966197

Luminaire Tested: **NAV-SB4B-750-U-AFL**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966197
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-SB4B-750-U-AFL
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 5000K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND AUTOMOTIVE
FRONTLINE OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24890.1 lumens
Efficiency: N/A
Efficacy: 169.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B3 - U0 - G2

Input Watts (W): 147
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



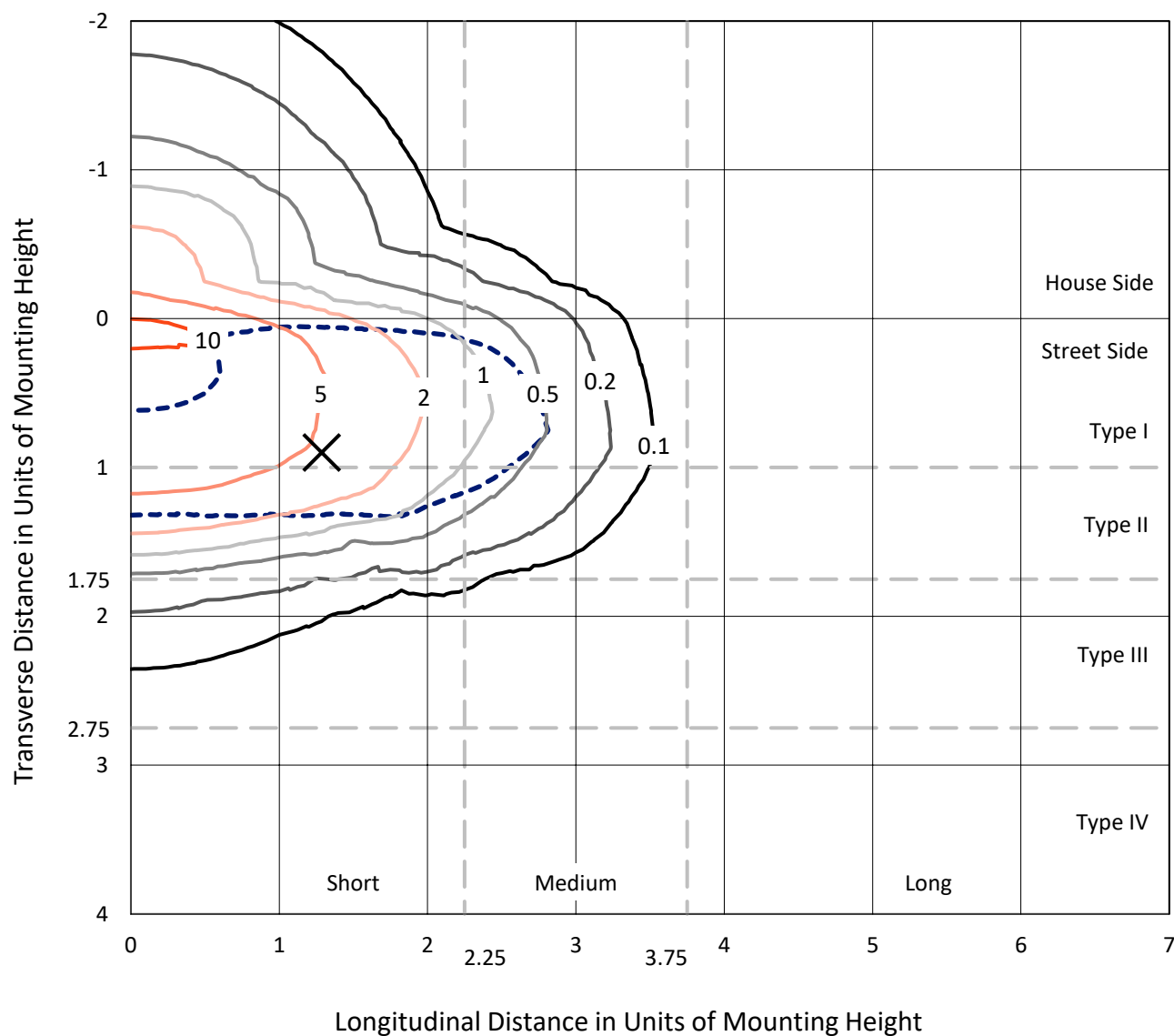
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

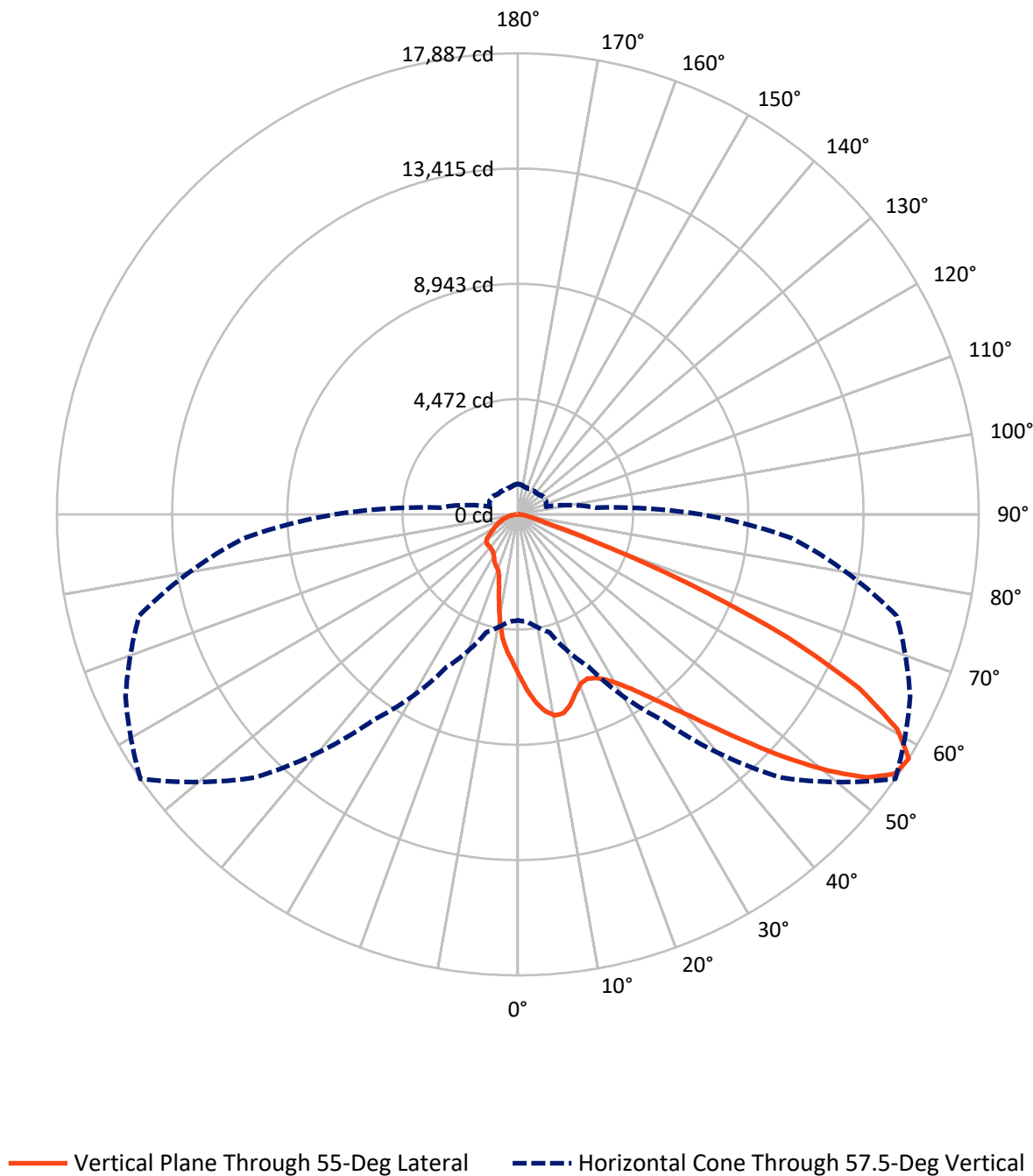


Based on 25 foot mounting height. Maximum calculated value = 12.1 fc

Type II - Short - N/A

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Luminous Intensity Polar Plot



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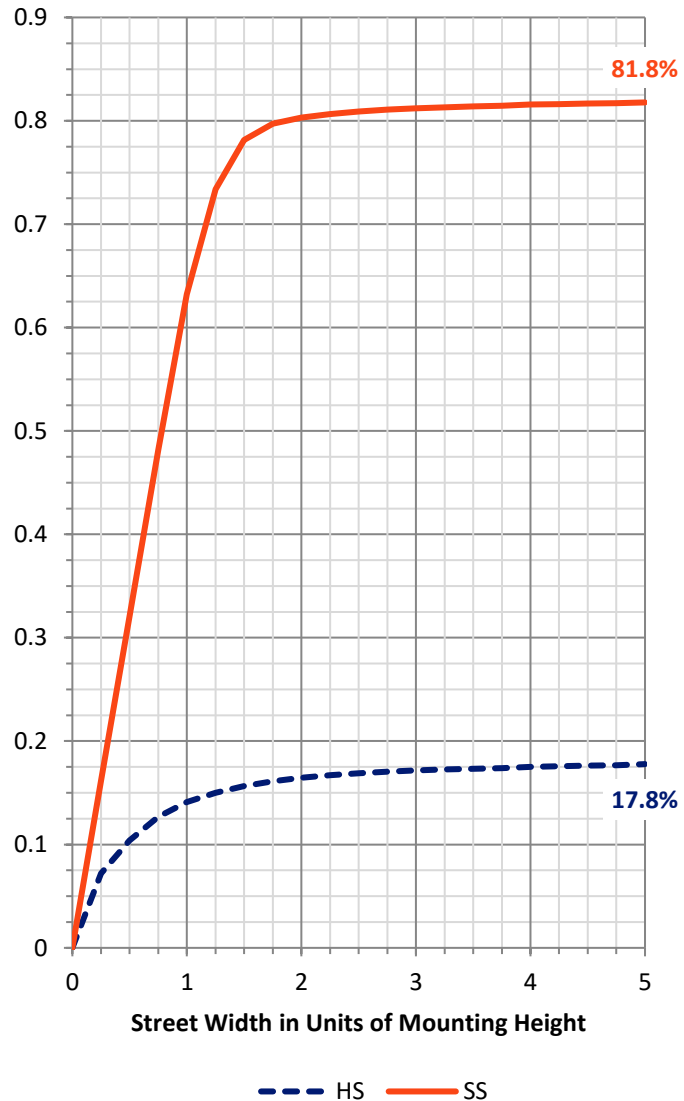
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4503.7	0.0	4503.7
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	20386.3	0.0	20386.3
	% Fixture	81.9	0.0	81.9
Total	Lumens	24890.1	0.0	24890.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	578.7	2.3
10°-20°	1460.7	5.9
20°-30°	2330.9	9.4
30°-40°	3690.4	14.8
40°-50°	5648.5	22.7
50°-60°	6050.1	24.3
60°-70°	3806.1	15.3
70°-80°	1125.6	4.5
80°-90°	199.0	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°	24890.1	100.0
0°-180°	24890.1	100.0

Coefficient of Utilization



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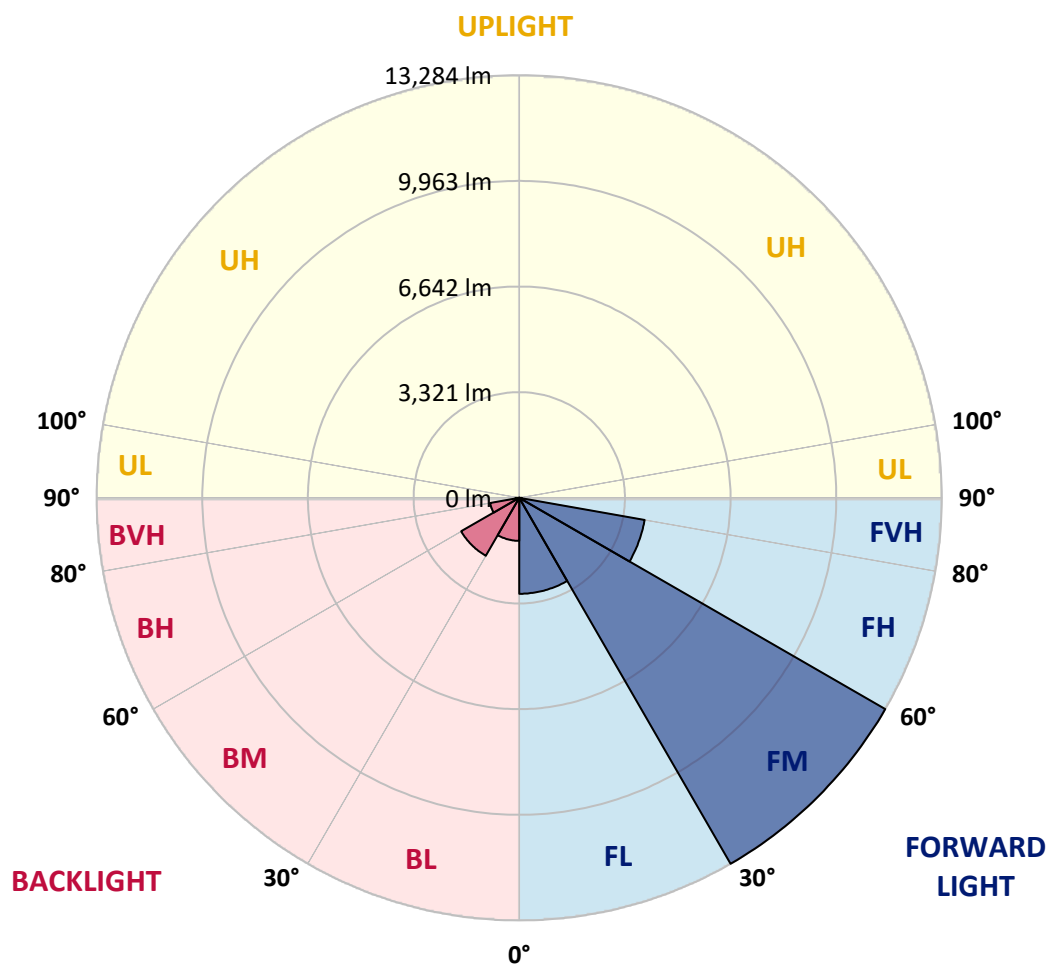
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3016.7	12.1			
FM	(30°-60°)	13284.0	53.4			
FH	(60°-80°)	4001.6	16.1			G2/5000
FVH	(80°-90°)	84.1	0.3			G1/100
BL	(0°-30°)	1353.7	5.4	B3/2500		
BM	(30°-60°)	2105.0	8.5	B2/2500		
BH	(60°-80°)	930.1	3.7	B2/1000		G2/1000
BVH	(80°-90°)	114.9	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-G2

Type II Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	6236.6	6236.6	6236.6	6236.6	6236.6	6236.6	6236.6	6236.6	6236.6	6236.6	6236.6
2.5°	7155.3	7150.2	7178.5	7082.0	7016.4	6927.6	6810.5	6661.3	6500.4	6330.6	6257.2
5°	7799.9	7754.9	7784.6	7712.5	7640.5	7506.6	7333.0	7089.7	6792.5	6454.1	6273.9
7.5°	7698.4	7667.4	7743.4	7807.7	7861.7	7845.0	7717.6	7462.9	7079.5	6587.9	6326.7
10°	6878.7	6843.9	6950.7	7173.4	7500.2	7784.6	7938.9	7780.7	7372.8	6734.6	6378.2
12.5°	6155.5	6138.8	6209.7	6389.7	6752.6	7298.2	7910.6	8058.7	7677.8	6908.3	6447.7
15°	5846.8	5826.2	5871.2	5962.5	6194.2	6702.5	7653.3	8249.1	7977.6	7109.0	6558.4
17.5°	5778.5	5755.4	5774.7	5822.3	5971.5	6358.9	7264.7	8343.0	8290.2	7333.0	6650.9
20°	5904.7	5885.3	5887.9	5885.3	5989.6	6297.1	6994.5	8306.9	8563.0	7538.8	6741.0
22.5°	6209.7	6177.5	6178.7	6110.5	6167.1	6405.2	6923.8	8210.5	8806.2	7719.0	6809.2
25°	6706.3	6648.4	6659.9	6486.3	6470.8	6647.1	7034.4	8135.8	9048.1	7863.1	6822.1
27.5°	7385.6	7320.0	7285.3	7026.7	6903.2	6990.6	7259.6	8161.6	9277.2	7987.8	6789.9
30°	8234.8	8155.1	8084.4	7717.6	7493.8	7461.6	7609.6	8331.4	9547.4	8119.1	6734.6
32.5°	9275.8	9183.2	9054.5	8568.2	8252.9	8084.4	8062.4	8633.8	9863.9	8286.4	6706.3
35°	10515.0	10394.0	10211.3	9582.1	9183.2	8838.4	8659.5	9069.9	10297.5	8538.6	6738.5
37.5°	11791.3	11655.0	11487.7	10738.8	10248.6	9740.4	9387.8	9661.9	10875.2	8880.8	6823.4
40°	12968.7	12815.6	12659.9	11993.3	11467.1	10854.6	10279.4	10410.7	11581.6	9290.0	6967.5
42.5°	13663.5	13550.3	13491.0	13130.8	12724.2	12102.7	11388.6	11298.6	12375.5	9761.0	7132.2
45°	13632.6	13586.3	13769.0	13918.3	13821.7	13476.9	12688.2	12280.3	13172.0	10168.8	7284.1
47.5°	12904.3	12935.2	13343.1	14182.0	14551.3	14731.4	14167.9	13244.0	13864.3	10473.8	7352.2
50°	10922.8	10948.5	11893.0	13702.1	14739.2	15754.4	15636.0	14184.6	14400.7	10660.3	7336.7
52.5°	9354.4	9371.1	9776.3	12279.0	14119.0	16269.1	16958.7	15071.2	14793.2	10711.8	7250.5
55°	7046.0	7103.9	7558.0	9633.6	12505.4	15861.2	17764.2	15984.7	15041.6	10717.0	7160.5
57.5°	4116.2	4179.2	4740.2	6539.0	9719.8	14439.4	17886.5	16795.3	15210.1	10675.8	7106.4
60°	2016.3	2043.2	2287.8	3436.8	5993.5	11700.0	16903.4	17187.8	15304.1	10653.8	7103.9
62.5°	1358.7	1354.9	1365.2	1695.9	2953.0	7516.9	14855.0	16500.7	15253.8	10570.2	7078.1
65°	1168.3	1154.1	1115.6	1190.2	1529.9	3438.1	11477.3	14449.6	14871.7	10360.5	6901.8
67.5°	1010.0	1011.4	1012.6	989.4	1092.4	1586.5	7013.8	11382.2	13500.1	9367.2	6222.5
70°	836.4	848.0	853.1	853.1	890.4	1041.0	2994.1	7801.3	10648.7	7344.5	5011.7
72.5°	761.7	737.3	739.8	727.0	727.0	792.6	1205.6	4422.4	6708.8	4131.6	3058.5
75°	621.5	636.9	639.5	630.5	600.9	604.8	715.4	1855.5	2870.6	1713.9	1511.9
77.5°	536.6	536.6	541.7	535.3	512.1	452.9	477.3	719.2	976.6	702.5	755.3
80°	431.0	429.8	451.6	464.5	428.4	334.6	304.9	397.6	433.6	308.8	392.5
82.5°	209.7	222.6	310.1	353.8	325.5	241.9	186.5	247.0	231.6	136.4	176.3
85°	122.3	115.8	139.0	196.9	186.5	133.9	90.1	128.6	121.0	69.5	70.7
87.5°	38.6	36.0	28.3	66.9	54.0	37.3	24.5	37.3	33.4	15.5	15.5
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°	6236.6	6236.6	6236.6	6236.6	6236.6	6236.6	6236.6	6236.6	6236.6	6236.6
2.5°	6165.9	6014.1	5863.5	5725.9	5642.2	5588.2	5534.1	5473.6	5450.4	5415.7
5°	6104.1	5810.7	5549.6	5324.4	5119.8	4959.0	4796.8	4665.6	4606.3	4646.3
7.5°	6068.1	5643.4	5240.7	4827.8	4430.2	4112.3	3835.7	3641.4	3553.9	3575.7
10°	6035.9	5454.3	4840.6	4188.3	3616.9	3223.2	2940.1	2792.1	2736.9	2748.4
12.5°	6006.3	5242.1	4358.1	3499.9	2892.5	2632.6	2551.5	2552.9	2563.1	2570.8
15°	6001.2	4986.0	3818.9	2897.7	2501.3	2484.6	2572.1	2627.5	2657.0	2666.0
17.5°	5993.5	4679.7	3269.5	2487.2	2406.1	2519.3	2600.4	2636.4	2659.6	2660.9
20°	5962.5	4291.2	2762.6	2291.6	2385.6	2483.4	2533.5	2561.8	2581.2	2587.5
22.5°	5867.4	3858.8	2367.5	2204.2	2303.2	2381.7	2440.8	2473.0	2484.6	2492.4
25°	5696.2	3375.0	2094.8	2120.5	2188.7	2287.8	2335.4	2341.8	2337.9	2349.5
27.5°	5472.4	2856.5	1925.0	2007.3	2094.8	2179.7	2205.4	2201.6	2193.8	2206.7
30°	5202.2	2390.7	1816.8	1879.8	1999.6	2076.8	2099.9	2090.9	2075.4	2089.6
32.5°	4916.5	2009.8	1728.0	1791.1	1921.1	1997.0	2020.2	2011.2	1999.6	2011.2
35°	4650.1	1743.5	1645.7	1731.9	1859.2	1933.9	1963.5	1964.8	1964.8	1979.0
37.5°	4405.7	1587.8	1577.5	1694.6	1816.8	1883.7	1926.2	1928.7	1873.4	1877.3
40°	4179.2	1522.1	1546.6	1670.1	1775.6	1840.0	1842.5	1698.4	1596.8	1594.2
42.5°	3993.9	1509.3	1555.6	1667.6	1746.1	1748.6	1567.2	1455.3	1426.9	1428.2
45°	3820.2	1505.4	1576.2	1667.6	1702.3	1510.5	1388.4	1358.7	1361.3	1371.7
47.5°	3625.9	1490.0	1580.0	1644.4	1576.2	1343.4	1307.3	1294.5	1289.2	1291.8
50°	3413.7	1434.7	1531.1	1598.1	1360.1	1271.3	1226.2	1222.4	1228.8	1232.7
52.5°	3189.7	1344.6	1447.5	1514.4	1261.0	1208.2	1158.0	1167.1	1195.4	1204.4
55°	3043.0	1239.1	1336.9	1347.2	1191.5	1149.0	1106.6	1127.2	1179.9	1196.6
57.5°	3004.5	1127.2	1210.8	1199.2	1102.7	1097.6	1071.8	1089.9	1156.7	1181.2
60°	2992.9	1026.7	1087.2	1078.3	1016.5	1041.0	1034.5	1043.6	1066.7	1074.4
62.5°	2902.8	947.0	976.6	963.7	939.3	981.7	997.2	977.8	995.9	1004.9
65°	2673.8	882.6	868.5	859.6	869.8	908.5	939.3	900.7	917.4	943.1
67.5°	2295.5	795.2	756.6	766.9	799.1	819.6	859.6	815.8	829.9	873.7
70°	1856.7	684.5	649.7	679.4	710.2	752.8	759.1	729.6	763.0	811.9
72.5°	1313.7	572.6	548.2	608.6	618.9	674.2	660.1	646.0	692.3	709.0
75°	911.0	462.0	447.8	494.0	531.4	579.0	568.8	585.5	683.3	691.0
77.5°	576.5	359.0	349.9	379.6	431.0	483.8	500.5	691.0	1167.1	1213.4
80°	334.6	267.6	257.4	280.5	325.5	374.4	482.5	848.0	769.5	760.4
82.5°	186.5	184.0	171.2	177.5	217.4	270.2	681.9	597.1	485.1	500.5
85°	87.5	108.0	92.7	88.8	122.3	316.5	455.5	341.0	226.4	221.3
87.5°	23.2	20.6	20.6	23.2	51.5	272.8	181.4	145.4	86.2	83.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)