

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: P965753

Luminaire Tested: **NAV-SB4A-827-U-T3R**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P965753
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-5)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4A-827-U-T3R
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16450.2 lumens
Efficiency: N/A
Efficacy: 144.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B2 - U0 - G3

Input Watts (W): 114
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

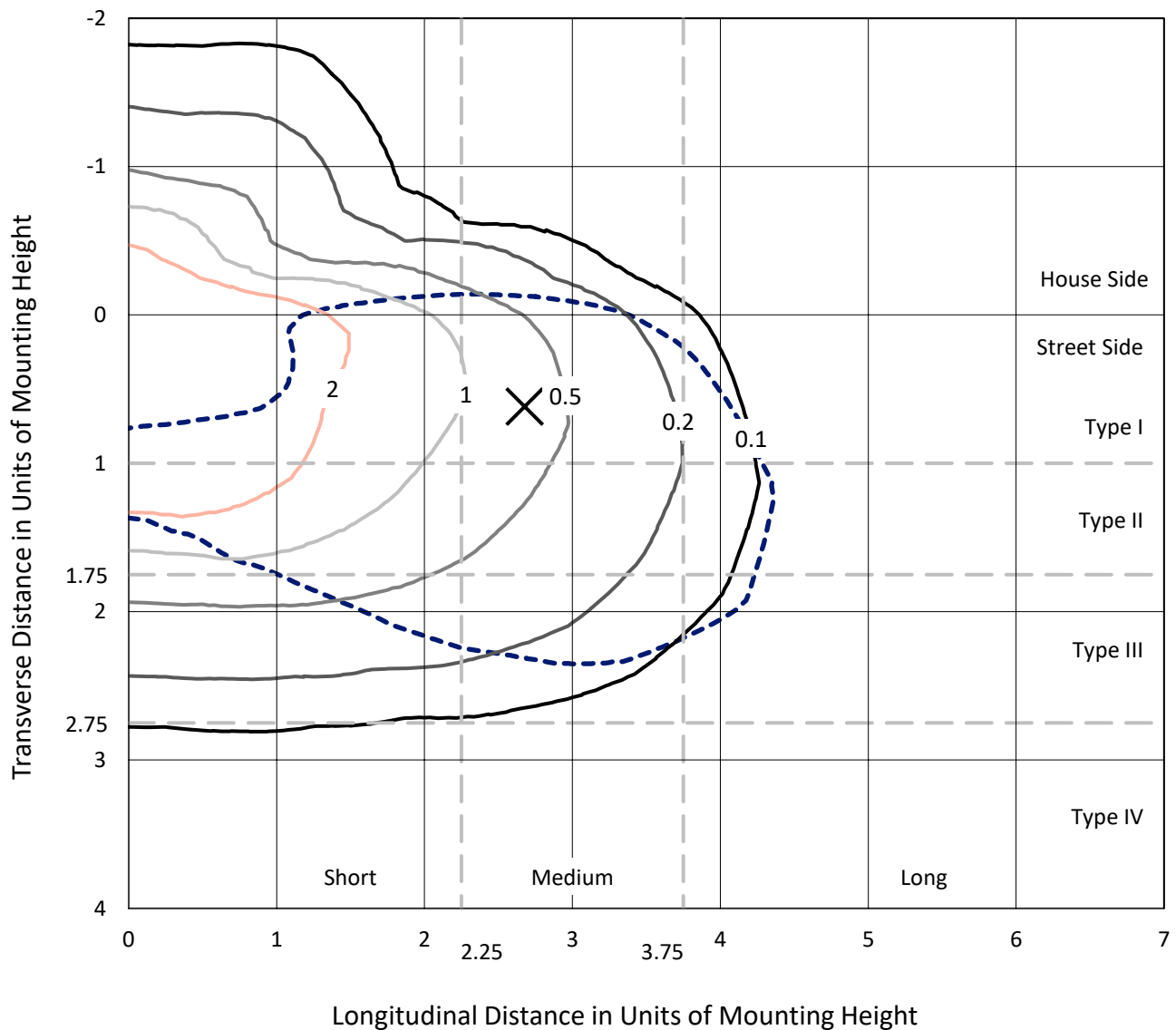


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Iso-Footcandle Lines of Horizontal Illumination

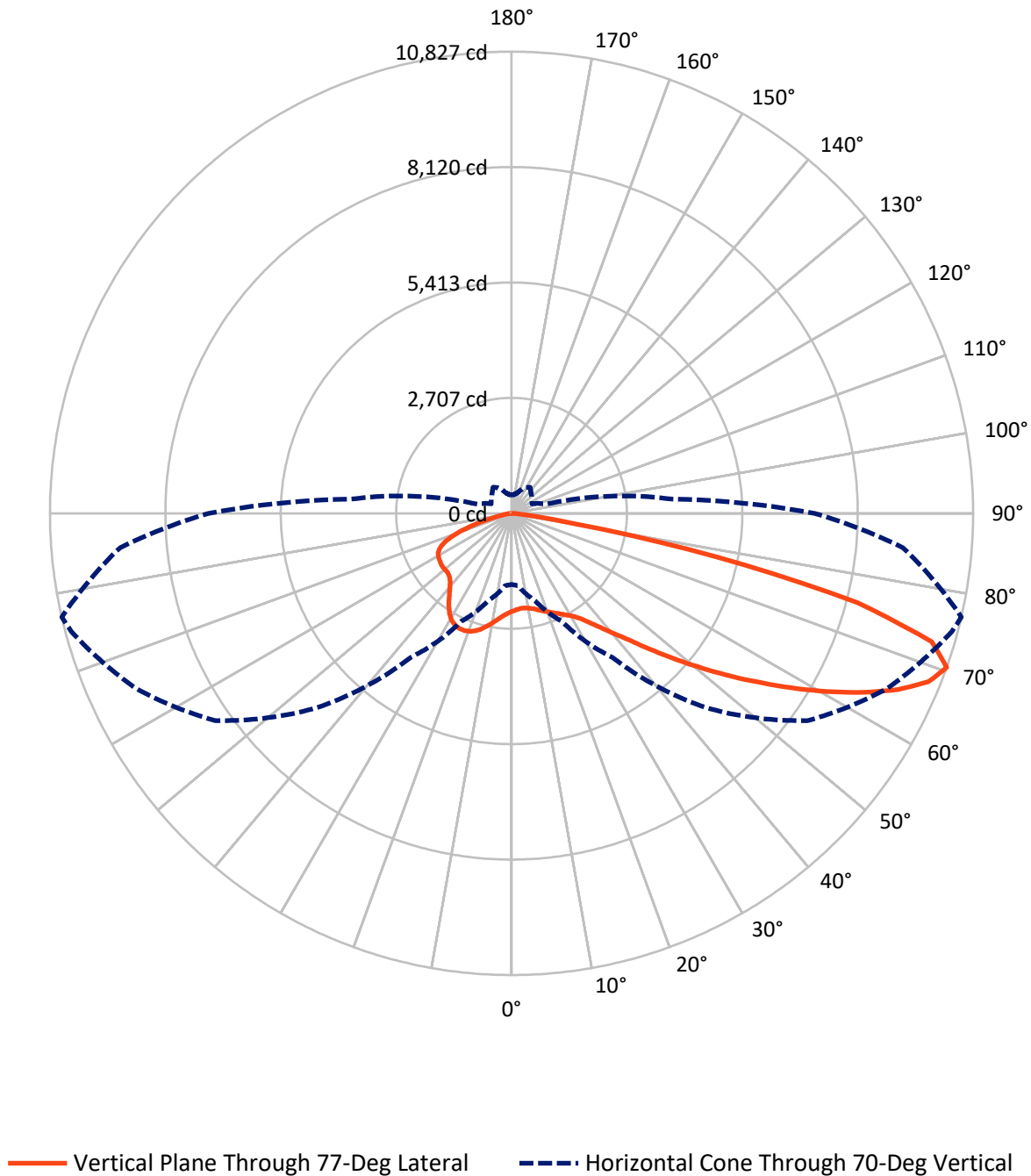
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.4 fc
Type III - Medium - N/A

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Luminous Intensity Polar Plot



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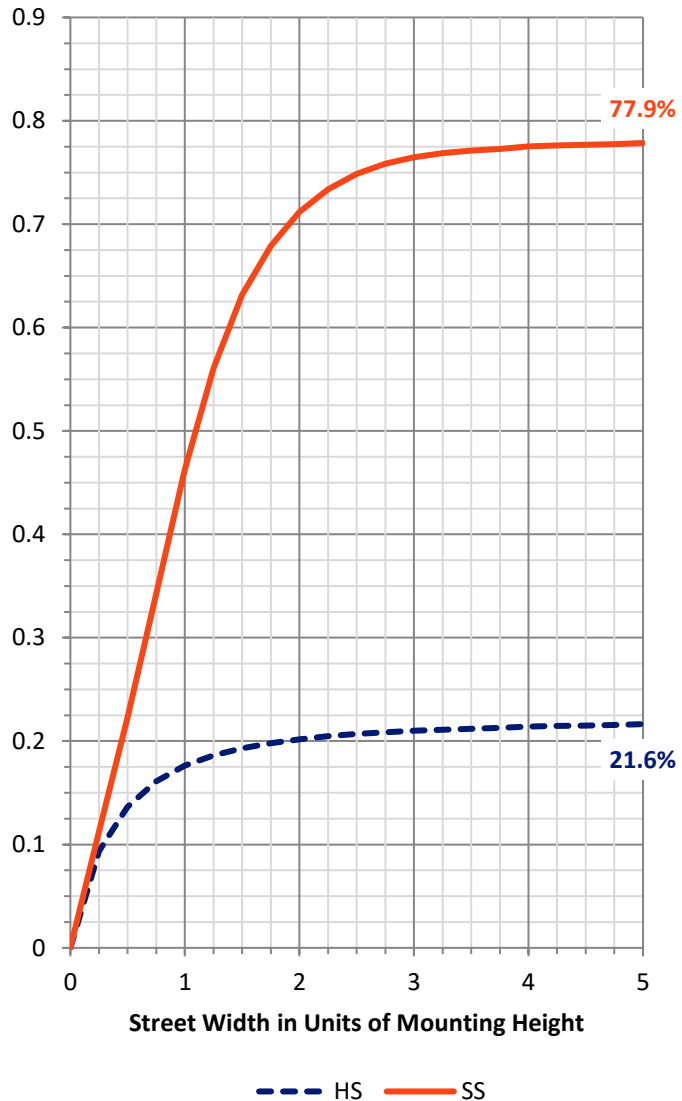
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3602.3	0.0	3602.3
	% Fixture	21.9	0.0	21.9
Street Side	Lumens	12847.9	0.0	12847.9
	% Fixture	78.1	0.0	78.1
Total	Lumens	16450.2	0.0	16450.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.9	1.3
10°-20°	631.7	3.8
20°-30°	1080.3	6.6
30°-40°	1737.2	10.6
40°-50°	2712.3	16.5
50°-60°	3622.9	22.0
60°-70°	3861.5	23.5
70°-80°	2377.1	14.5
80°-90°	208.3	1.3
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°	16450.2	100.0
0°-180°	16450.2	100.0

Coefficient of Utilization



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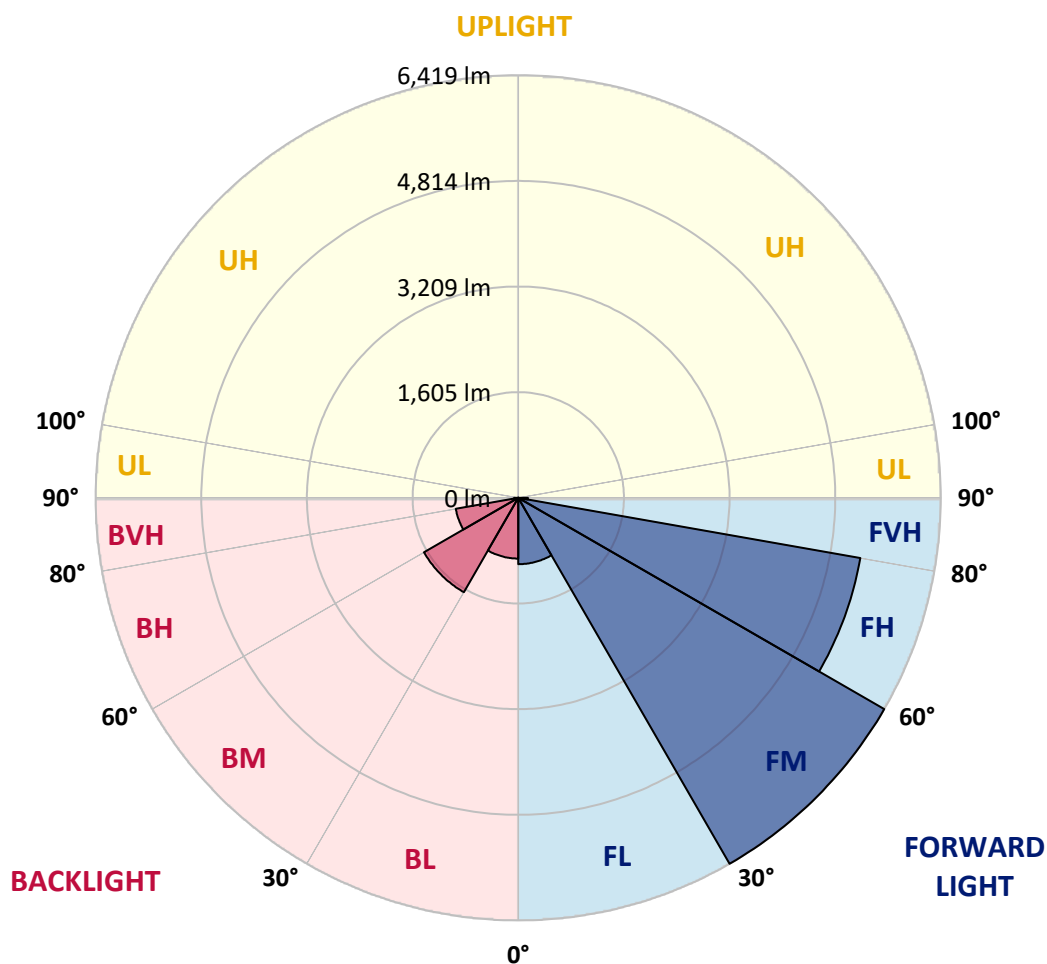
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1007.8	6.1			
FM	(30°-60°)	6418.5	39.0			
FH	(60°-80°)	5275.9	32.1			G3/7500
FVH	(80°-90°)	145.7	0.9			G2/225
BL	(0°-30°)	923.0	5.6	B2/1000		
BM	(30°-60°)	1653.9	10.1	B2/2500		
BH	(60°-80°)	962.8	5.9	B2/1000		G2/1000
BVH	(80°-90°)	62.6	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type III Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77°	85°
0°	2295.0	2295.0	2295.0	2295.0	2295.0	2295.0	2295.0	2295.0	2295.0	2295.0	2295.0
2.5°	2115.5	2114.7	2125.6	2129.0	2149.2	2163.6	2190.5	2219.1	2256.2	2260.4	2283.2
5°	1993.3	1993.3	2006.0	2019.5	2045.6	2074.2	2115.5	2165.2	2229.3	2239.3	2295.8
7.5°	1889.7	1896.5	1907.4	1933.6	1963.9	2005.1	2068.3	2139.1	2223.3	2239.3	2330.3
10°	1806.4	1813.9	1827.4	1848.5	1893.9	1951.2	2033.8	2124.7	2237.7	2262.9	2380.9
12.5°	1780.2	1787.8	1795.4	1811.4	1853.5	1920.8	2019.5	2131.5	2272.2	2297.4	2450.0
15°	1840.9	1850.1	1844.2	1840.0	1861.9	1923.4	2026.2	2156.0	2315.2	2351.5	2535.0
17.5°	1980.7	1984.1	1970.6	1931.0	1927.6	1960.5	2058.2	2189.6	2369.1	2408.6	2621.0
20°	2206.5	2200.6	2172.8	2094.5	2049.8	2043.0	2112.9	2240.2	2424.7	2466.9	2713.7
22.5°	2513.2	2506.4	2450.8	2327.0	2227.5	2161.8	2192.2	2305.9	2487.1	2534.2	2803.8
25°	2895.6	2886.4	2804.7	2636.2	2482.0	2319.4	2300.0	2392.7	2563.7	2607.5	2898.2
27.5°	3342.2	3334.6	3246.2	3023.7	2801.3	2535.0	2434.0	2494.6	2643.8	2693.5	3004.4
30°	3822.4	3844.3	3687.6	3448.3	3166.9	2816.5	2614.3	2620.2	2747.4	2792.0	3133.2
32.5°	4386.9	4424.8	4236.0	3932.7	3548.6	3122.3	2841.7	2795.4	2898.2	2935.3	3295.9
35°	4946.2	4989.3	4832.6	4497.2	4054.9	3482.8	3079.3	2996.8	3098.7	3139.2	3511.5
37.5°	5429.8	5487.1	5406.3	5114.8	4596.6	3917.7	3389.4	3233.5	3345.5	3396.1	3801.3
40°	5811.5	5899.2	5893.2	5711.3	5235.3	4445.0	3782.8	3525.8	3652.2	3707.0	4152.7
42.5°	6121.6	6197.4	6263.1	6253.8	5901.6	5044.0	4245.3	3905.8	4001.8	4065.0	4547.8
45°	6335.5	6416.4	6558.0	6710.5	6542.8	5685.2	4775.3	4356.6	4444.2	4539.3	5018.7
47.5°	6526.8	6618.6	6802.3	7044.1	7087.1	6328.9	5355.7	4881.5	4961.4	5060.0	5491.3
50°	6543.7	6622.8	6907.6	7250.5	7473.8	6947.2	5979.2	5470.3	5545.4	5650.6	5997.7
52.5°	6136.8	6261.4	6758.5	7244.6	7651.5	7464.5	6598.4	6082.9	6167.0	6293.4	6521.8
55°	4763.5	4946.2	6321.3	7018.8	7588.4	7799.0	7187.3	6734.0	6841.9	6974.2	7049.1
57.5°	4103.0	4183.0	5017.9	6607.7	7300.3	7885.7	7684.4	7392.1	7565.6	7710.6	7606.9
60°	3687.6	3754.2	4247.9	5968.3	6921.1	7748.4	8068.6	8005.4	8305.3	8478.0	8177.2
62.5°	3242.8	3305.9	3755.0	4983.3	6435.8	7520.1	8311.2	8571.6	9063.6	9252.3	8714.8
65°	2801.3	2855.2	3285.7	4187.2	5819.1	7291.7	8436.8	9061.0	9765.4	9960.8	9161.2
67.5°	2309.3	2353.9	2760.8	3532.6	5069.3	6979.2	8499.1	9446.1	10376.2	10543.9	9382.0
70°	1666.4	1701.0	2121.4	2793.7	4128.2	6441.7	8473.8	9719.0	10692.9	10826.9	9215.2
72.5°	787.7	818.9	1312.6	1813.9	2915.9	5395.3	7962.4	9502.5	10371.2	10304.5	8194.2
75°	420.5	447.4	754.0	995.0	1540.1	3698.5	6515.8	8185.6	8708.9	8385.3	6055.9
77.5°	284.7	305.9	466.8	597.4	703.5	1755.7	4188.0	5667.4	5452.6	4918.5	3033.0
80°	225.8	247.7	382.5	404.4	340.4	634.4	1730.5	2623.5	1884.7	1507.3	862.7
82.5°	173.5	198.0	321.8	293.2	185.3	260.3	503.8	829.8	482.8	367.4	208.9
85°	106.2	132.2	252.8	187.1	104.4	118.8	171.1	230.8	147.4	123.0	75.0
87.5°	53.9	75.8	128.0	68.3	47.2	27.8	45.5	45.5	38.7	33.7	19.4
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°	2295.0	2295.0	2295.0	2295.0	2295.0	2295.0	2295.0	2295.0	2295.0	2295.0	2295.0
2.5°	2303.4	2320.2	2348.9	2375.8	2396.9	2417.2	2437.3	2448.3	2451.7	2465.1	2472.7
5°	2330.3	2361.5	2417.2	2469.3	2502.2	2522.4	2536.8	2545.2	2546.8	2551.1	2557.8
7.5°	2380.0	2429.8	2507.3	2559.5	2583.9	2582.3	2576.3	2555.3	2546.8	2539.2	2541.0
10°	2450.0	2515.7	2610.9	2647.2	2632.0	2591.5	2539.2	2477.7	2449.1	2421.4	2413.0
12.5°	2536.8	2620.2	2713.7	2711.9	2637.0	2533.4	2412.0	2317.7	2257.9	2214.9	2204.8
15°	2642.0	2738.1	2809.7	2752.4	2588.1	2402.0	2224.1	2101.1	2047.2	2000.1	1995.1
17.5°	2750.8	2853.5	2886.4	2739.8	2465.1	2207.3	2006.0	1909.1	1856.0	1830.8	1838.3
20°	2856.9	2958.9	2931.9	2667.4	2278.1	1986.6	1807.2	1754.1	1743.1	1749.1	1746.5
22.5°	2968.9	3059.9	2941.1	2527.4	2039.6	1760.8	1662.2	1663.9	1688.4	1706.0	1710.3
25°	3083.5	3145.0	2916.7	2325.3	1783.6	1594.8	1570.4	1597.4	1645.4	1680.0	1689.2
27.5°	3193.9	3220.9	2863.6	2075.1	1563.6	1476.1	1480.3	1535.9	1608.3	1656.3	1668.2
30°	3318.5	3288.3	2761.7	1793.6	1411.2	1374.1	1409.5	1474.4	1546.8	1589.8	1599.9
32.5°	3459.3	3346.4	2599.9	1533.3	1303.4	1292.4	1350.5	1392.7	1424.6	1437.3	1444.0
35°	3634.5	3428.1	2392.7	1350.5	1206.4	1232.6	1288.2	1267.1	1254.5	1247.7	1254.5
37.5°	3862.0	3538.5	2150.0	1231.7	1128.1	1189.6	1212.4	1146.7	1097.0	1072.5	1078.4
40°	4135.8	3700.2	1916.6	1139.9	1078.4	1152.5	1112.9	1033.7	970.6	936.0	938.5
42.5°	4440.0	3869.6	1720.4	1070.8	1050.6	1122.2	1039.7	945.3	843.4	832.4	843.4
45°	4759.3	4043.9	1586.4	1017.7	1037.1	1096.1	997.5	845.0	772.5	817.2	840.8
47.5°	5078.6	4204.0	1505.5	978.2	1030.3	1066.6	960.4	789.5	738.0	802.9	833.2
50°	5434.1	4347.2	1469.3	949.5	1022.7	1054.8	904.9	775.1	701.8	744.8	776.7
52.5°	5787.0	4458.4	1442.4	920.9	1011.9	1045.5	877.9	758.3	657.9	660.5	678.2
55°	6139.2	4530.9	1412.9	882.9	987.4	1025.3	875.4	739.7	625.1	613.4	621.8
57.5°	6515.0	4572.2	1376.7	840.8	945.3	974.0	872.8	725.4	615.0	595.6	598.2
60°	6897.5	4632.9	1329.4	789.5	888.9	912.5	866.9	720.4	609.2	576.3	578.8
62.5°	7240.4	4653.9	1273.0	740.6	816.4	851.8	854.3	716.2	593.2	536.7	536.7
65°	7465.4	4563.0	1174.4	684.9	738.0	789.5	829.8	701.8	564.5	508.0	508.0
67.5°	7456.1	4303.5	1020.3	613.4	662.2	720.4	794.5	677.3	529.9	472.6	475.2
70°	7109.0	3791.3	824.8	529.9	578.8	646.2	749.0	641.1	488.6	433.9	438.9
72.5°	6097.1	2967.3	599.0	432.2	482.0	569.5	690.0	597.4	446.5	399.3	396.8
75°	4355.7	1877.9	406.1	331.9	374.9	482.8	616.7	545.9	407.7	401.0	378.3
77.5°	2225.1	897.3	268.8	242.6	261.2	380.8	518.1	487.8	413.7	331.1	294.9
80°	723.8	331.1	169.3	165.1	173.5	253.6	401.0	400.2	313.4	225.0	198.8
82.5°	230.8	142.4	110.4	106.2	102.0	159.2	279.7	316.8	211.5	142.4	141.6
85°	91.8	85.1	64.9	59.9	42.9	75.0	146.6	210.6	157.5	102.8	105.3
87.5°	33.7	33.7	17.7	12.6	9.2	25.3	39.6	63.1	90.1	53.1	52.3
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)