

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: P965747

Luminaire Tested: **NAV-SB4A-827-U-T2R**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P965747
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-3)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4A-827-U-T2R
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
ROADWAY OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16321.1 lumens
Efficiency: N/A
Efficacy: 143.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G2

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

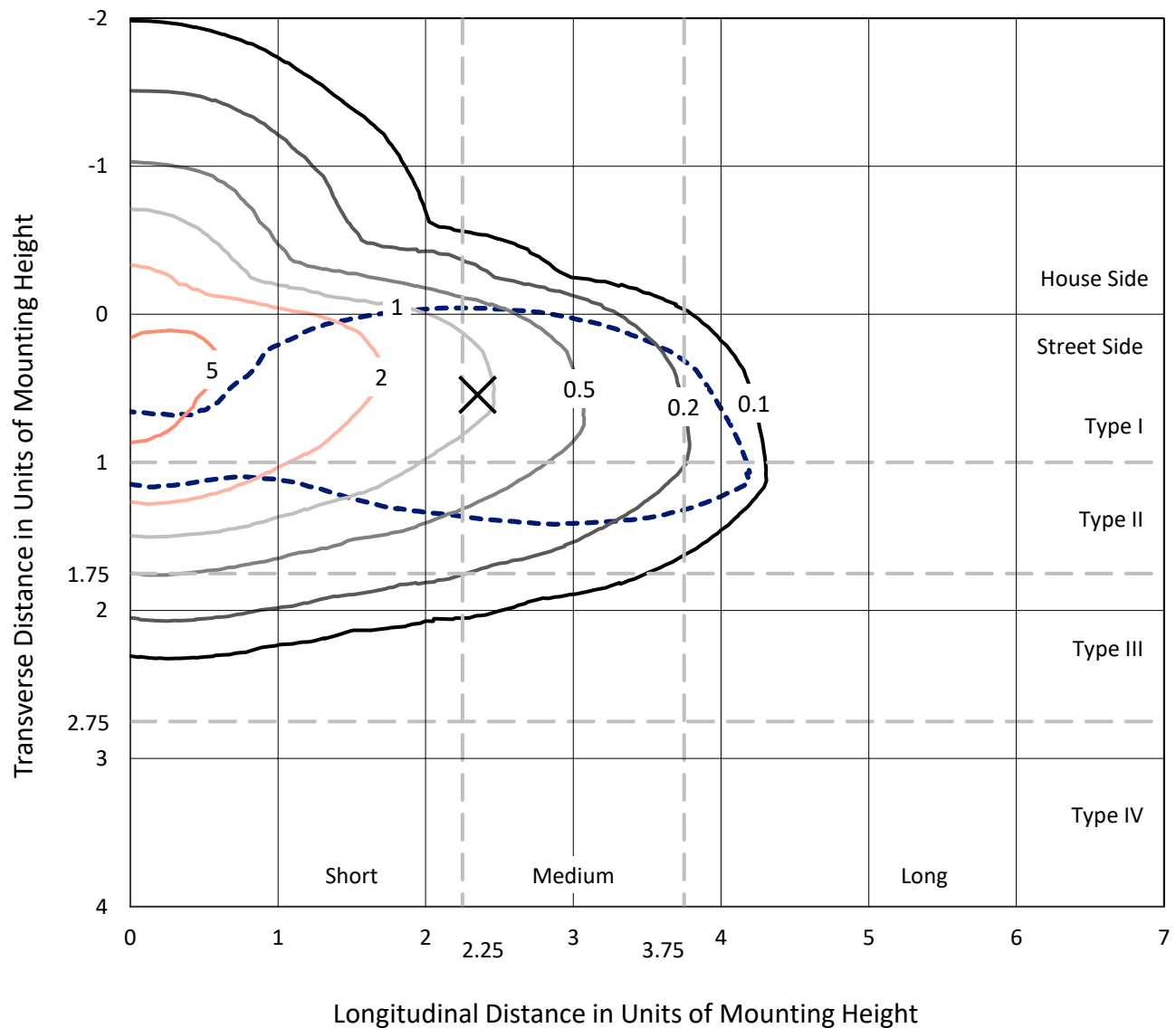


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Iso-Footcandle Lines of Horizontal Illumination

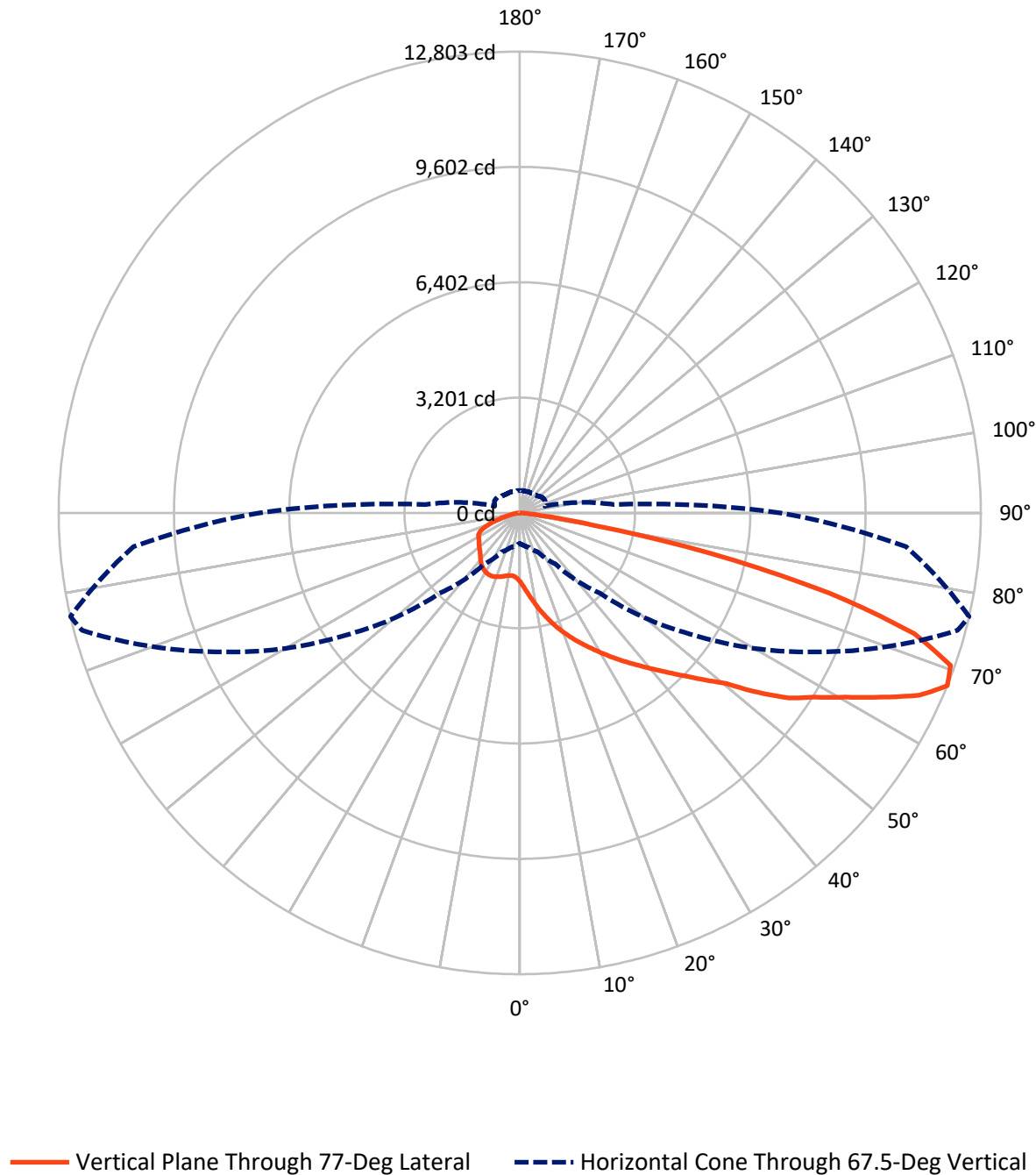
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6 fc
Type II - Medium - N/A

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Luminous Intensity Polar Plot



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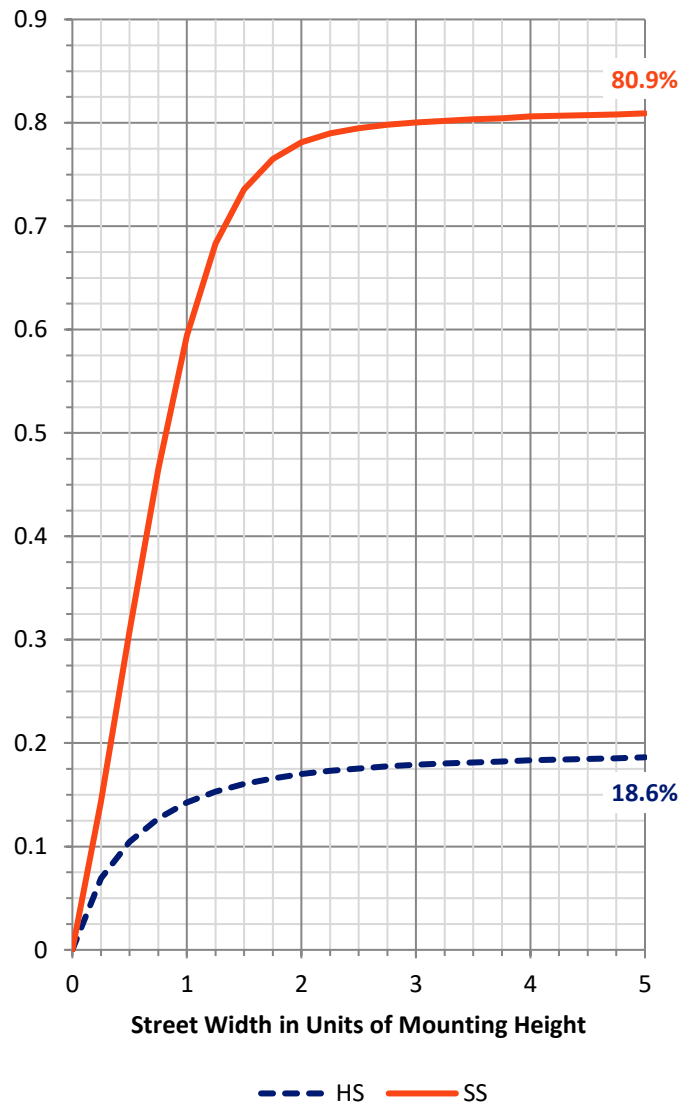
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3087.3	0.0	3087.3
	% Fixture	18.9	0.0	18.9
Street Side	Lumens	13233.8	0.0	13233.8
	% Fixture	81.1	0.0	81.1
Total	Lumens	16321.1	0.0	16321.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	205.3	1.3
10°-20°	737.4	4.5
20°-30°	1392.3	8.5
30°-40°	2243.0	13.7
40°-50°	3068.0	18.8
50°-60°	3460.7	21.2
60°-70°	3230.2	19.8
70°-80°	1770.7	10.8
80°-90°	213.6	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°	16321.1	100.0
0°-180°	16321.1	100.0

Coefficient of Utilization



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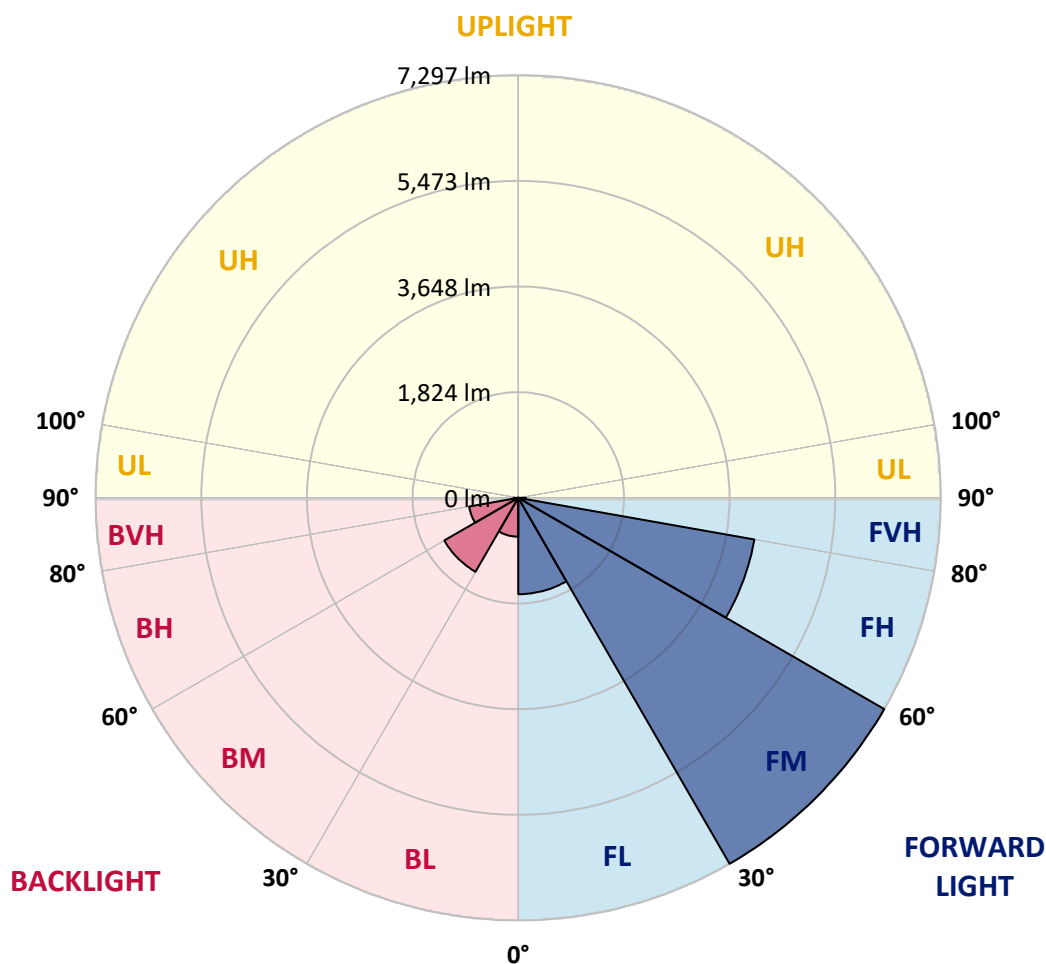
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1663.7	10.2			
FM	(30°-60°)	7297.0	44.7			
FH	(60°-80°)	4139.5	25.4			G2/5000
FVH	(80°-90°)	133.6	0.8			G2/225
BL	(0°-30°)	671.2	4.1	B2/1000		
BM	(30°-60°)	1474.7	9.0	B2/2500		
BH	(60°-80°)	861.3	5.3	B2/1000		G2/1000
BVH	(80°-90°)	80.0	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77°	85°
0°	1915.0	1915.0	1915.0	1915.0	1915.0	1915.0	1915.0	1915.0	1915.0	1915.0	1915.0
2.5°	2397.7	2414.6	2393.5	2393.5	2322.8	2285.6	2214.9	2161.0	2064.0	2047.2	1983.2
5°	2834.1	2855.1	2825.7	2813.0	2729.7	2653.0	2534.2	2417.1	2244.3	2226.7	2075.9
7.5°	3172.0	3198.9	3172.8	3159.4	3085.1	2999.3	2860.3	2696.8	2453.3	2418.8	2200.6
10°	3447.5	3451.7	3443.3	3448.3	3390.2	3319.4	3177.0	2986.6	2682.4	2635.3	2351.4
12.5°	3603.3	3622.7	3639.6	3669.9	3659.8	3616.0	3487.9	3260.4	2925.1	2864.5	2515.7
15°	3676.6	3710.3	3748.2	3818.1	3874.6	3885.6	3787.8	3554.5	3172.0	3098.7	2681.6
17.5°	3702.7	3734.7	3794.6	3895.6	4017.0	4098.7	4054.9	3840.1	3416.3	3332.1	2856.1
20°	3835.0	3844.3	3880.4	3976.5	4108.0	4243.6	4276.5	4114.7	3658.1	3562.9	3036.4
22.5°	4118.0	4099.5	4109.6	4153.4	4247.8	4379.2	4454.2	4357.4	3906.6	3797.1	3218.3
25°	4585.6	4531.7	4477.8	4427.3	4475.3	4549.5	4634.5	4600.0	4166.9	4027.9	3402.0
27.5°	5176.2	5110.5	4991.8	4825.8	4767.6	4793.7	4831.6	4824.9	4407.9	4267.2	3591.5
30°	5757.5	5680.9	5539.3	5299.2	5145.9	5076.8	5048.1	5028.8	4669.9	4519.9	3782.8
32.5°	6221.7	6161.1	6022.1	5753.3	5530.9	5412.9	5317.8	5248.7	4943.7	4793.7	3985.0
35°	6627.9	6571.4	6412.2	6118.9	5877.1	5751.7	5626.9	5479.5	5228.4	5076.8	4202.3
37.5°	6998.5	6942.1	6723.9	6418.9	6175.4	6088.6	5977.4	5727.2	5514.1	5370.8	4432.3
40°	7232.7	7220.1	7016.2	6670.8	6418.0	6375.1	6338.0	6014.5	5830.8	5697.8	4685.1
42.5°	7292.6	7320.3	7158.6	6874.7	6633.7	6599.2	6686.0	6339.7	6186.4	6059.2	4971.5
45°	7148.5	7228.5	7122.4	6929.4	6787.0	6768.5	6994.3	6695.2	6579.8	6463.5	5316.9
47.5°	6783.7	6919.4	6875.5	6848.5	6828.3	6908.4	7265.6	7072.7	7025.5	6924.4	5711.2
50°	6047.4	6304.4	6381.0	6551.2	6746.7	7017.0	7512.4	7484.7	7546.2	7444.2	6191.4
52.5°	4774.3	5128.2	5573.0	5999.3	6495.5	6980.9	7783.7	8076.1	8335.5	8279.9	6954.7
55°	3941.1	4100.4	4442.5	5224.2	6008.7	6828.3	7905.9	8553.7	9119.0	9069.4	7533.5
57.5°	3300.8	3443.3	3653.8	4306.7	5272.3	6482.1	7981.7	8845.2	9655.7	9650.7	8104.7
60°	2614.3	2765.0	2980.7	3443.3	4412.1	5883.9	7964.9	9177.2	10340.7	10382.8	8801.5
62.5°	1839.2	2005.1	2244.3	2675.8	3533.4	5108.8	7621.1	9417.3	11146.9	11261.5	9639.7
65°	1209.0	1318.5	1498.8	1871.1	2632.8	4112.2	6964.9	9448.4	12009.6	12203.4	10426.6
67.5°	847.6	889.7	995.8	1198.0	1735.5	3153.4	5919.3	9125.8	12585.1	12803.3	10767.8
70°	661.3	682.4	736.4	817.2	1090.2	2120.5	4535.9	8286.7	12462.1	12689.5	10411.4
72.5°	571.2	591.4	611.6	621.8	731.2	1309.2	3072.5	6928.6	11303.6	11457.8	9052.5
75°	518.1	523.2	540.1	536.7	557.7	849.2	1773.5	5048.1	8918.5	8865.4	6682.6
77.5°	435.5	442.3	470.1	465.9	495.4	580.5	920.9	3257.9	5782.0	5421.4	3719.6
80°	369.0	372.4	402.7	397.7	430.5	420.4	470.1	1660.5	2452.5	2077.6	1072.5
82.5°	128.0	158.4	307.5	316.7	328.6	254.4	271.3	677.3	749.0	573.7	225.0
85°	62.3	66.5	156.7	222.4	221.6	128.0	132.2	241.8	235.9	185.3	75.0
87.5°	10.1	12.6	18.6	86.8	69.1	33.7	45.5	47.2	48.9	42.1	16.8
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°	1915.0	1915.0	1915.0	1915.0	1915.0	1915.0	1915.0	1915.0	1915.0	1915.0	1915.0
2.5°	1936.0	1893.9	1805.4	1723.7	1659.7	1598.2	1563.6	1534.1	1517.3	1513.9	1513.9
5°	1988.3	1901.5	1740.6	1604.9	1516.5	1450.8	1416.2	1394.3	1383.3	1376.6	1375.8
7.5°	2063.2	1936.0	1706.8	1552.7	1460.0	1412.9	1395.1	1391.7	1390.9	1391.7	1394.3
10°	2166.8	1992.5	1703.6	1540.1	1462.6	1436.4	1435.6	1436.4	1439.8	1440.6	1441.5
12.5°	2278.9	2050.6	1717.0	1551.0	1494.6	1480.2	1477.7	1476.9	1479.4	1481.1	1481.9
15°	2401.1	2127.3	1739.7	1574.6	1529.9	1514.7	1512.3	1507.2	1506.3	1505.5	1504.7
17.5°	2526.6	2203.1	1765.0	1599.9	1552.7	1531.7	1522.3	1510.5	1501.3	1498.8	1501.3
20°	2653.8	2278.1	1782.7	1612.5	1554.4	1524.9	1506.3	1486.1	1470.2	1460.8	1464.2
22.5°	2789.4	2356.5	1793.6	1609.1	1539.2	1498.8	1465.0	1441.5	1417.1	1401.1	1401.9
25°	2921.8	2424.6	1792.8	1591.4	1509.7	1458.4	1415.4	1385.1	1351.4	1334.4	1334.4
27.5°	3049.0	2486.1	1771.7	1560.3	1467.6	1410.3	1358.9	1322.7	1289.9	1273.9	1272.9
30°	3180.4	2537.6	1738.9	1514.7	1417.9	1354.7	1298.3	1267.1	1237.6	1222.4	1221.6
32.5°	3311.0	2584.7	1692.6	1458.4	1360.6	1299.9	1244.4	1215.8	1198.0	1198.0	1198.8
35°	3449.1	2617.6	1631.1	1392.7	1299.9	1241.8	1198.0	1181.2	1179.5	1169.3	1166.9
37.5°	3594.9	2638.7	1556.1	1325.2	1240.1	1185.4	1171.9	1151.7	1134.8	1112.9	1109.6
40°	3748.2	2659.8	1466.0	1255.3	1176.9	1146.7	1140.7	1113.8	1065.8	1011.8	1004.2
42.5°	3934.4	2674.0	1372.4	1185.4	1110.4	1100.2	1108.7	1062.4	985.7	945.3	946.1
45°	4150.1	2697.6	1286.5	1116.3	1042.1	1042.1	1077.6	1016.9	953.7	928.4	932.6
47.5°	4429.7	2752.4	1206.4	1040.5	979.0	995.8	1008.5	962.2	926.7	895.5	894.7
50°	4834.2	2883.8	1123.9	963.8	930.9	964.6	947.0	920.0	878.7	853.4	851.0
52.5°	5336.3	2961.3	1050.6	894.7	889.7	923.3	898.1	872.8	841.6	807.9	801.2
55°	5678.4	2975.7	989.1	844.2	861.8	858.5	849.2	826.5	809.6	765.0	765.8
57.5°	6060.8	3004.3	938.5	813.8	844.2	807.1	803.7	784.3	762.5	732.2	722.0
60°	6518.3	3049.0	894.7	802.1	829.0	773.4	756.6	749.0	727.0	711.9	716.1
62.5°	7017.0	3089.4	850.0	803.7	811.3	740.6	715.2	712.8	699.3	694.2	694.2
65°	7357.4	2979.1	794.5	802.1	783.5	706.8	674.9	673.9	663.1	661.3	660.5
67.5°	7238.7	2629.4	719.4	778.5	754.9	673.1	637.8	634.4	620.0	620.9	620.9
70°	6643.8	2130.7	615.8	720.4	719.4	642.8	599.0	588.0	568.7	572.1	575.4
72.5°	5528.3	1578.8	476.8	623.4	663.1	615.0	554.3	536.7	512.2	515.6	514.8
75°	3992.6	1073.3	347.1	474.4	577.1	582.2	510.6	480.2	450.7	455.8	457.5
77.5°	2043.0	608.2	255.2	326.9	453.3	529.1	471.0	430.5	423.7	471.0	464.2
80°	666.5	304.9	176.9	229.2	297.4	433.1	412.8	366.4	364.8	375.8	322.7
82.5°	198.8	128.9	113.8	150.8	164.3	331.9	356.4	277.2	238.4	251.0	259.5
85°	68.3	62.3	64.9	75.0	78.3	194.6	249.4	183.7	173.5	191.3	188.7
87.5°	16.0	21.9	18.6	16.8	16.8	47.2	96.9	76.7	106.2	70.7	68.3
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)