

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: P966274

Luminaire Tested: **NAV-SB4B-827-U-T2R**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P966274
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-SB4B-827-U-T2R
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
ROADWAY OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20487.7 lumens
Efficiency: N/A
Efficacy: 139.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B3 - U0 - G3

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



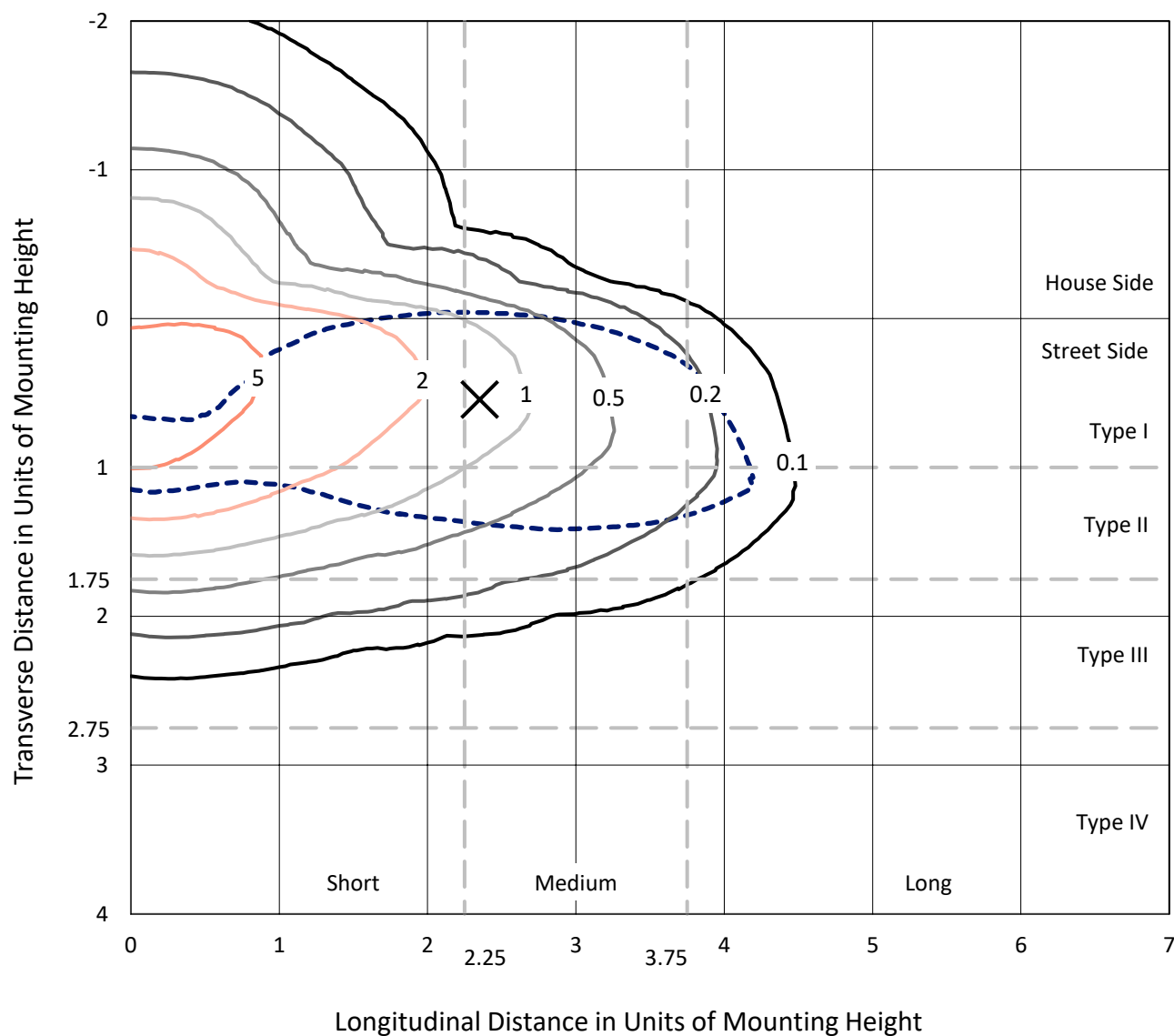
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

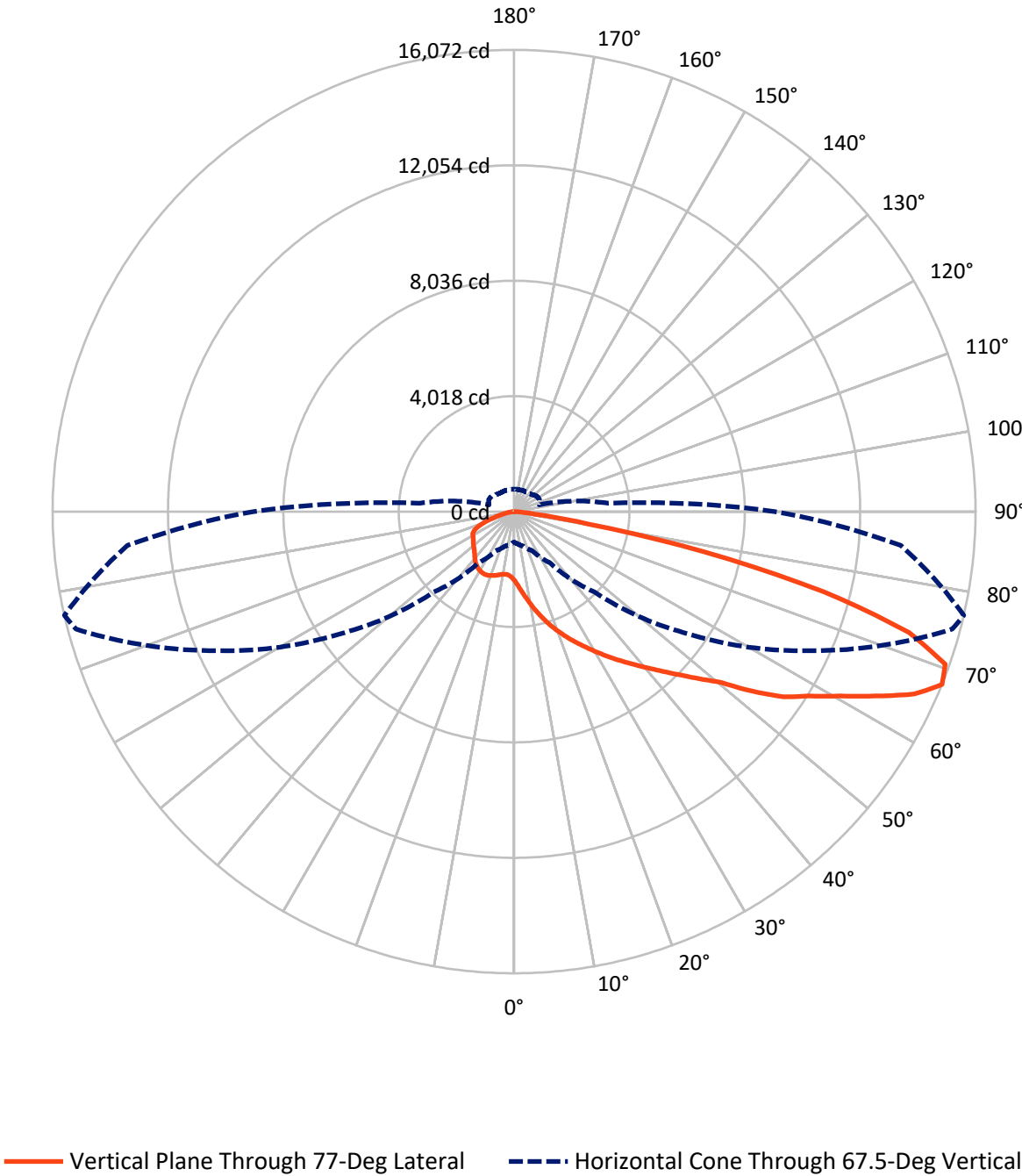
--- 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.5 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



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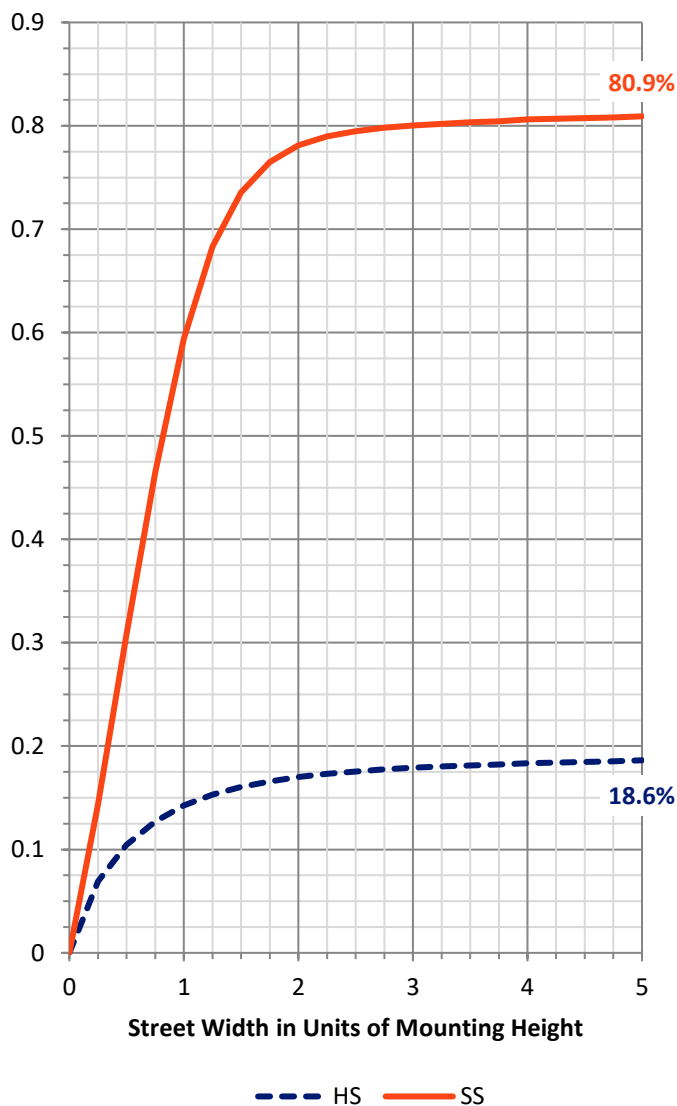
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3875.4	0.0	3875.4
	% Fixture	18.9	0.0	18.9
Street Side	Lumens	16612.2	0.0	16612.2
	% Fixture	81.1	0.0	81.1
Total	Lumens	20487.7	0.0	20487.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	257.7	1.3
10°-20°	925.7	4.5
20°-30°	1747.7	8.5
30°-40°	2815.6	13.7
40°-50°	3851.2	18.8
50°-60°	4344.2	21.2
60°-70°	4054.8	19.8
70°-80°	2222.7	10.8
80°-90°	268.1	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°	20487.7	100.0
0°-180°	20487.7	100.0

Coefficient of Utilization



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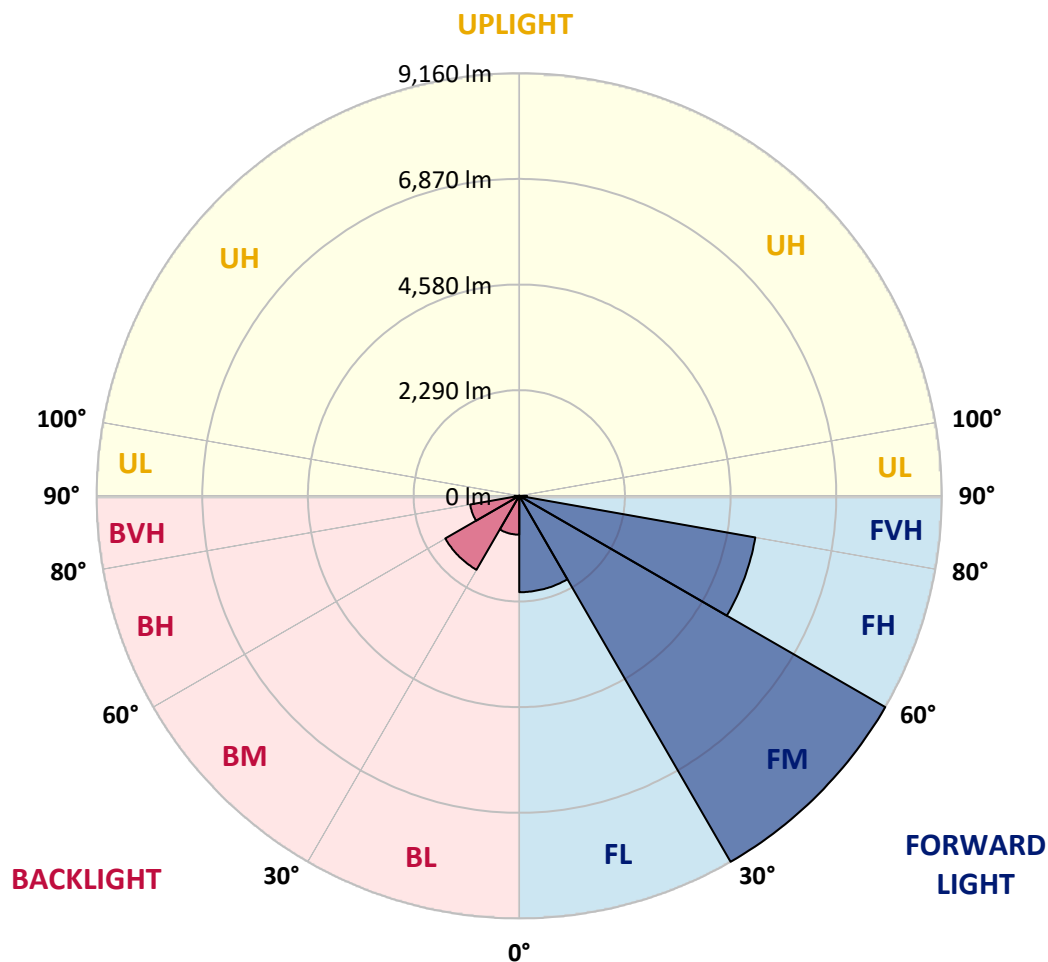
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2088.5	10.2			
FM	(30°-60°)	9159.8	44.7			
FH	(60°-80°)	5196.3	25.4			G3/7500
FVH	(80°-90°)	167.7	0.8			G2/225
BL	(0°-30°)	842.6	4.1	B2/1000		
BM	(30°-60°)	1851.2	9.0	B2/2500		
BH	(60°-80°)	1081.2	5.3	B3/2500		G3/2500
BVH	(80°-90°)	100.4	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-G3

Type II Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77°	85°
0°	2403.8	2403.8	2403.8	2403.8	2403.8	2403.8	2403.8	2403.8	2403.8	2403.8	2403.8
2.5°	3009.8	3031.0	3004.6	3004.6	2915.7	2869.2	2780.3	2712.7	2591.0	2569.9	2489.5
5°	3557.7	3584.1	3547.1	3531.2	3426.5	3330.2	3181.2	3034.1	2817.3	2795.2	2605.9
7.5°	3981.7	4015.5	3982.7	3965.8	3872.8	3764.9	3590.5	3385.3	3079.6	3036.3	2762.4
10°	4327.5	4332.9	4322.2	4328.6	4255.6	4166.8	3988.1	3749.0	3367.3	3308.1	2951.7
12.5°	4523.2	4547.5	4568.6	4606.8	4594.0	4539.1	4378.3	4092.8	3671.9	3595.7	3157.9
15°	4615.2	4657.5	4705.1	4792.9	4863.7	4877.5	4754.8	4461.8	3981.7	3889.8	3366.2
17.5°	4648.0	4688.1	4763.3	4890.2	5042.5	5145.1	5090.0	4820.4	4288.4	4182.7	3585.1
20°	4814.0	4825.7	4871.1	4991.8	5156.7	5326.9	5368.2	5165.2	4591.9	4472.5	3811.5
22.5°	5169.4	5146.1	5158.8	5213.8	5332.3	5497.2	5591.4	5469.7	4903.9	4766.5	4039.9
25°	5756.3	5688.6	5621.0	5557.5	5617.8	5710.9	5817.7	5774.3	5230.7	5056.2	4270.5
27.5°	6497.7	6415.2	6266.0	6057.7	5984.8	6017.6	6065.1	6056.6	5533.2	5356.5	4508.4
30°	7227.4	7131.1	6953.5	6652.0	6459.7	6372.8	6337.0	6312.6	5862.1	5673.8	4748.4
32.5°	7810.1	7733.9	7559.5	7222.2	6942.9	6794.8	6675.3	6588.6	6205.8	6017.6	5002.3
35°	8319.8	8249.0	8049.1	7681.0	7377.5	7220.0	7063.5	6878.4	6563.3	6372.8	5275.2
37.5°	8785.2	8714.3	8440.5	8057.6	7752.0	7643.0	7503.4	7189.4	6921.7	6741.9	5563.8
40°	9079.1	9063.4	8807.4	8373.8	8056.5	8002.6	7956.0	7549.9	7319.4	7152.3	5881.1
42.5°	9154.3	9189.2	8986.2	8629.7	8327.3	8283.9	8392.8	7958.2	7765.7	7606.0	6240.7
45°	8973.5	9073.9	8940.7	8698.5	8519.7	8496.4	8779.9	8404.5	8259.6	8113.6	6674.3
47.5°	8515.5	8685.7	8630.8	8597.0	8571.6	8672.0	9120.4	8878.2	8819.0	8692.1	7169.3
50°	7591.2	7913.7	8010.0	8223.6	8469.0	8808.4	9430.3	9395.4	9472.6	9344.6	7772.1
52.5°	5993.2	6437.4	6995.8	7530.9	8153.8	8762.9	9770.8	10137.8	10463.5	10393.7	8730.2
55°	4947.3	5147.1	5576.5	6558.0	7542.6	8571.6	9924.2	10737.5	11447.1	11384.7	9456.8
57.5°	4143.6	4322.2	4586.7	5406.3	6618.2	8136.9	10019.4	11103.4	12120.7	12114.4	10173.7
60°	3281.6	3471.0	3741.7	4322.2	5538.5	7386.0	9998.3	11520.1	12980.5	13033.4	11048.4
62.5°	2308.7	2517.0	2817.3	3358.8	4435.4	6413.1	9566.7	11821.4	13992.6	14136.5	12100.6
65°	1517.6	1655.1	1881.4	2348.9	3304.9	5162.0	8742.8	11860.6	15075.6	15318.8	13088.4
67.5°	1063.9	1116.7	1250.1	1503.9	2178.5	3958.4	7430.4	11455.5	15797.9	16071.8	13516.8
70°	830.1	856.6	924.3	1025.8	1368.5	2661.9	5694.0	10402.2	15643.4	15929.0	13069.4
72.5°	717.0	742.4	767.8	780.4	918.0	1643.5	3857.0	8697.4	14189.4	14382.9	11363.6
75°	650.4	656.7	677.9	673.6	700.1	1066.0	2226.2	6337.0	11195.4	11128.7	8388.6
77.5°	546.7	555.2	590.1	584.9	621.9	728.7	1155.9	4089.6	7258.0	6805.4	4669.2
80°	463.2	467.4	505.5	499.2	540.4	527.8	590.1	2084.4	3078.6	2607.9	1346.2
82.5°	160.7	198.8	386.0	397.6	412.5	319.4	340.5	850.2	940.1	720.2	282.4
85°	78.3	83.5	196.7	279.2	278.2	160.7	166.0	303.5	296.1	232.7	94.1
87.5°	12.7	15.9	23.3	109.0	86.7	42.3	57.1	59.2	61.3	52.9	21.1
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2403.8	2403.8	2403.8	2403.8	2403.8	2403.8	2403.8	2403.8	2403.8	2403.8	2403.8
2.5°	2430.3	2377.4	2266.4	2163.8	2083.4	2006.2	1962.9	1925.9	1904.7	1900.5	1900.5
5°	2495.9	2386.9	2184.9	2014.6	1903.6	1821.1	1777.8	1750.3	1736.6	1728.0	1727.0
7.5°	2590.0	2430.3	2142.7	1949.1	1832.8	1773.6	1751.3	1747.1	1746.1	1747.1	1750.3
10°	2720.0	2501.1	2138.4	1933.3	1836.0	1803.2	1802.1	1803.2	1807.4	1808.4	1809.5
12.5°	2860.7	2574.1	2155.3	1947.0	1876.2	1858.1	1854.9	1853.9	1857.1	1859.2	1860.3
15°	3014.0	2670.3	2183.9	1976.6	1920.5	1901.5	1898.3	1891.9	1890.9	1889.9	1888.8
17.5°	3171.7	2765.6	2215.6	2008.3	1949.1	1922.7	1911.0	1896.2	1884.6	1881.4	1884.6
20°	3331.4	2859.6	2237.8	2024.2	1951.2	1914.2	1890.9	1865.5	1845.4	1833.8	1838.0
22.5°	3501.6	2958.0	2251.5	2020.0	1932.1	1881.4	1839.1	1809.5	1778.8	1758.7	1759.8
25°	3667.7	3043.6	2250.5	1997.7	1895.1	1830.6	1776.7	1738.6	1696.4	1675.2	1675.2
27.5°	3827.3	3120.9	2224.0	1958.6	1842.2	1770.4	1705.8	1660.4	1619.1	1599.0	1598.0
30°	3992.3	3185.4	2182.8	1901.5	1779.9	1700.6	1629.7	1590.6	1553.6	1534.5	1533.5
32.5°	4156.3	3244.6	2124.6	1830.6	1708.0	1631.8	1562.0	1526.0	1503.9	1503.9	1504.9
35°	4329.7	3285.8	2047.4	1748.1	1631.8	1558.8	1503.9	1482.7	1480.6	1467.9	1464.7
37.5°	4512.7	3312.3	1953.3	1663.6	1556.8	1488.0	1471.1	1445.7	1424.5	1397.1	1392.8
40°	4705.1	3338.7	1840.2	1575.7	1477.4	1439.3	1431.9	1398.1	1337.8	1270.2	1260.6
42.5°	4938.9	3356.7	1722.8	1488.0	1393.9	1381.2	1391.7	1333.6	1237.4	1186.5	1187.7
45°	5209.6	3386.3	1614.9	1401.3	1308.2	1308.2	1352.6	1276.4	1197.2	1165.4	1170.8
47.5°	5560.6	3455.1	1514.4	1306.1	1228.9	1250.1	1265.9	1207.8	1163.3	1124.2	1123.1
50°	6068.3	3620.0	1410.8	1209.8	1168.6	1210.9	1188.7	1154.9	1103.0	1071.3	1068.2
52.5°	6698.6	3717.4	1318.8	1123.1	1116.7	1159.1	1127.4	1095.6	1056.5	1014.2	1005.7
55°	7128.0	3735.3	1241.6	1059.6	1081.9	1077.7	1066.0	1037.5	1016.3	960.2	961.3
57.5°	7608.2	3771.3	1178.1	1021.6	1059.6	1013.1	1008.9	984.6	957.1	919.0	906.3
60°	8182.4	3827.3	1123.1	1006.8	1040.7	970.9	949.7	940.1	912.7	893.6	898.9
62.5°	8808.4	3878.1	1067.1	1008.9	1018.4	929.6	897.9	894.7	877.8	871.5	871.5
65°	9235.7	3739.5	997.3	1006.8	983.5	887.3	847.1	846.0	832.3	830.1	829.1
67.5°	9086.6	3300.7	903.1	977.2	947.6	845.0	800.5	796.3	778.4	779.4	779.4
70°	8339.9	2674.5	773.1	904.3	903.1	806.9	751.9	738.2	713.8	718.1	722.3
72.5°	6939.8	1981.8	598.6	782.6	832.3	772.0	695.9	673.6	643.0	647.2	646.2
75°	5011.8	1347.4	435.7	595.4	724.5	730.8	640.9	602.8	565.8	572.2	574.3
77.5°	2564.5	763.5	320.4	410.3	569.0	664.2	591.2	540.4	532.0	591.2	582.7
80°	836.5	382.8	222.1	287.6	373.3	543.6	518.2	460.0	458.0	471.7	405.1
82.5°	249.6	161.8	142.8	189.3	206.2	416.7	447.3	348.0	299.3	315.2	325.7
85°	85.7	78.3	81.4	94.1	98.4	244.3	313.0	230.5	217.8	240.1	236.9
87.5°	20.1	27.5	23.3	21.1	21.1	59.2	121.7	96.2	133.2	88.9	85.7
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)