

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: P963174

Luminaire Tested: **NAV-SB2D-835-U-T2R**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963174
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-SB2D-835-U-T2R
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
ROADWAY OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19706.6 lumens
Efficiency: N/A
Efficacy: 133.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B3 - U0 - G3

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

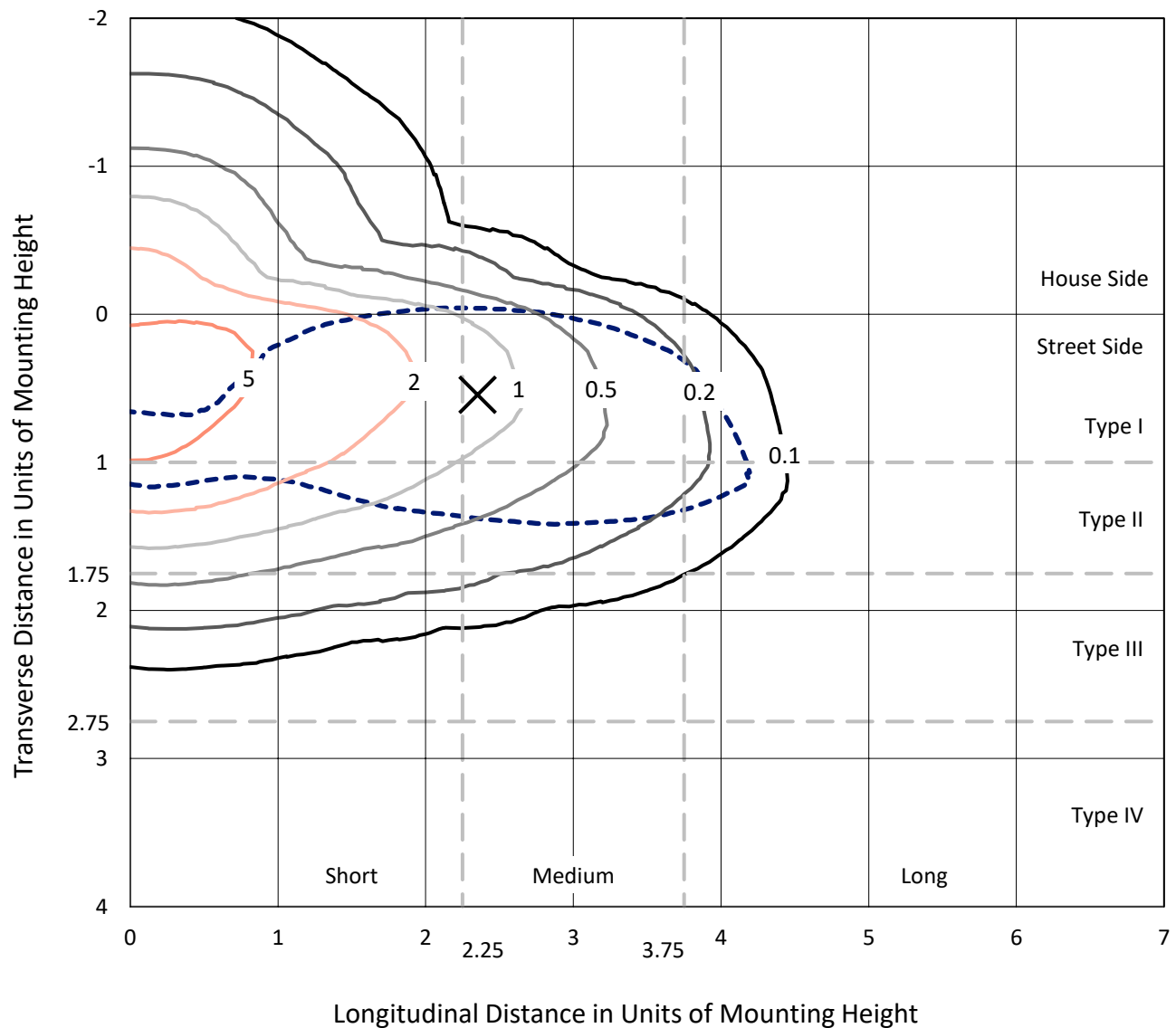


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

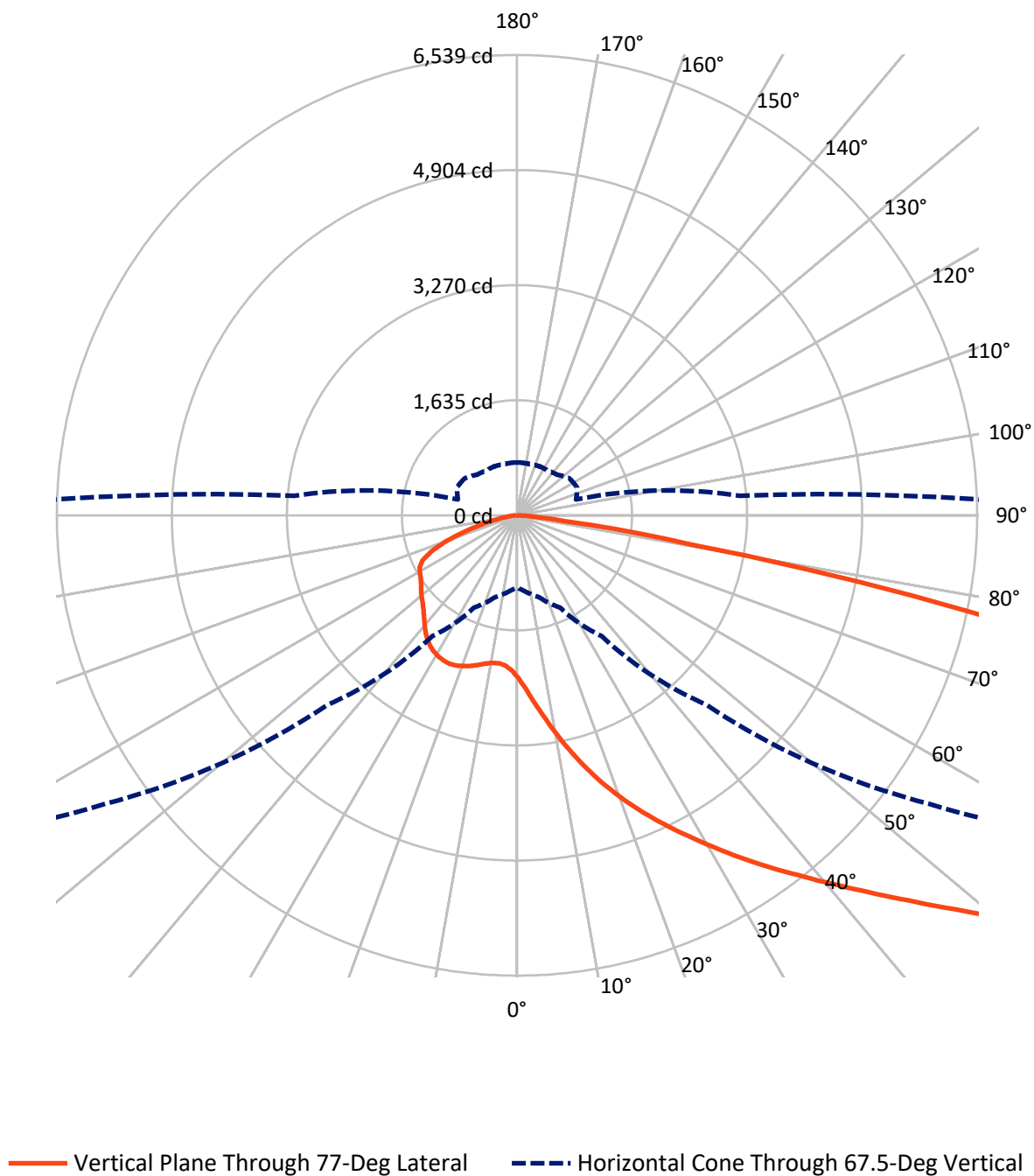


Based on 25 foot mounting height. Maximum calculated value = 7.2 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



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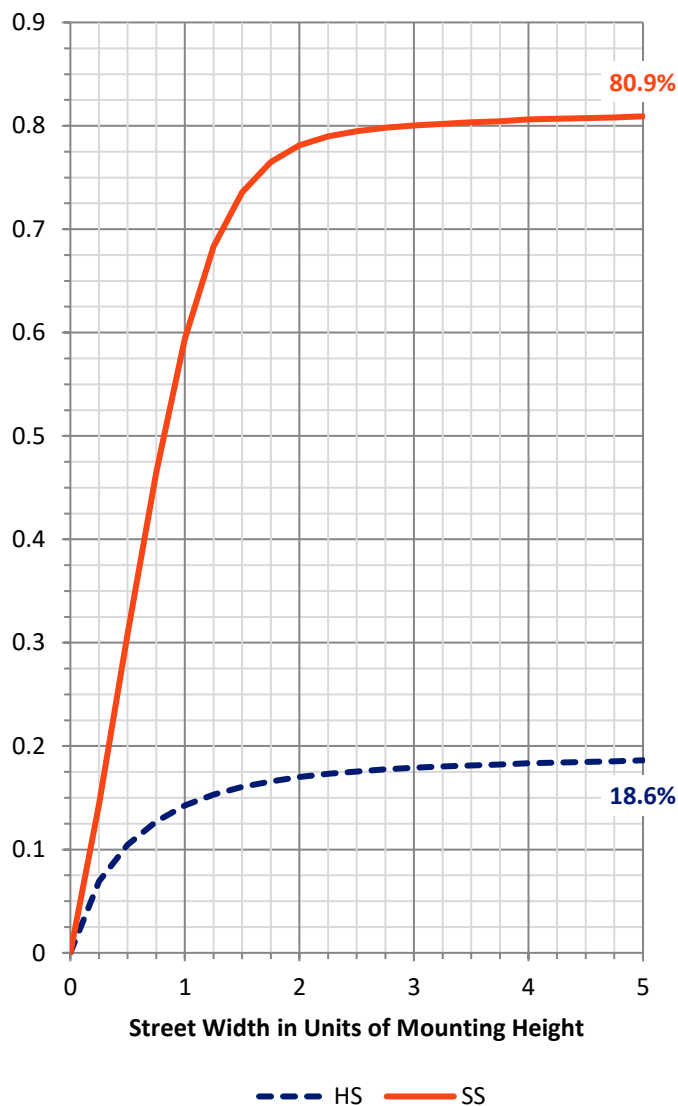
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3727.7	0.0	3727.7
	% Fixture	18.9	0.0	18.9
Street Side	Lumens	15979.0	0.0	15979.0
	% Fixture	81.1	0.0	81.1
Total	Lumens	19706.6	0.0	19706.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	247.8	1.3
10°-20°	890.4	4.5
20°-30°	1681.1	8.5
30°-40°	2708.3	13.7
40°-50°	3704.4	18.8
50°-60°	4178.6	21.2
60°-70°	3900.2	19.8
70°-80°	2138.0	10.8
80°-90°	257.9	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°	19706.6	100.0
0°-180°	19706.6	100.0

Coefficient of Utilization



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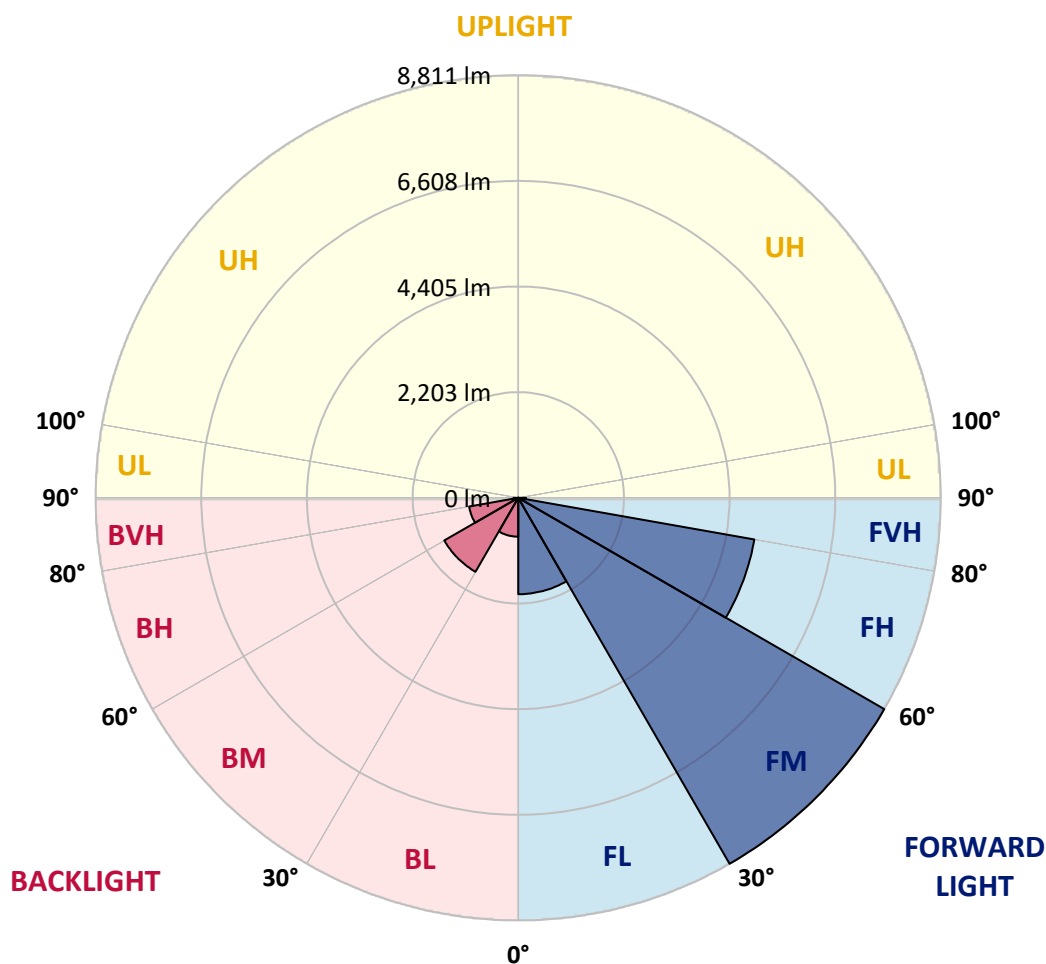
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2008.8	10.2			
FM	(30°-60°)	8810.6	44.7			
FH	(60°-80°)	4998.2	25.4			G2/5000
FVH	(80°-90°)	161.3	0.8			G2/225
BL	(0°-30°)	810.5	4.1	B2/1000		
BM	(30°-60°)	1780.6	9.0	B2/2500		
BH	(60°-80°)	1040.0	5.3	B3/2500		G3/2500
BVH	(80°-90°)	96.6	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-G3

Type II Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77°	85°
0°	2312.2	2312.2	2312.2	2312.2	2312.2	2312.2	2312.2	2312.2	2312.2	2312.2	2312.2
2.5°	2895.1	2915.4	2890.0	2890.0	2804.5	2759.8	2674.3	2609.2	2492.3	2471.9	2394.6
5°	3422.1	3447.5	3411.8	3396.5	3295.9	3203.3	3059.8	2918.5	2709.9	2688.6	2506.5
7.5°	3829.9	3862.5	3830.9	3814.6	3725.2	3621.4	3453.5	3256.2	2962.2	2920.5	2657.0
10°	4162.5	4167.6	4157.5	4163.5	4093.4	4008.0	3836.1	3606.2	3238.9	3181.9	2839.1
12.5°	4350.7	4374.2	4394.5	4431.2	4418.9	4366.0	4211.4	3936.7	3531.8	3458.7	3037.5
15°	4439.3	4480.0	4525.7	4610.1	4678.3	4691.5	4573.5	4291.8	3829.9	3741.5	3237.9
17.5°	4470.8	4509.5	4581.6	4703.7	4850.2	4948.9	4896.0	4636.6	4124.9	4023.2	3448.5
20°	4630.5	4641.7	4685.5	4801.4	4960.1	5123.9	5163.5	4968.3	4416.9	4301.9	3666.1
22.5°	4972.3	4949.9	4962.1	5015.0	5129.0	5287.7	5378.2	5261.2	4716.9	4584.7	3885.9
25°	5536.8	5471.8	5406.7	5345.7	5403.6	5493.2	5595.9	5554.2	5031.3	4863.4	4107.7
27.5°	6249.9	6170.6	6027.2	5826.8	5756.6	5788.2	5833.9	5825.8	5322.2	5152.4	4336.6
30°	6951.9	6859.3	6688.4	6398.5	6213.3	6129.9	6095.4	6072.0	5638.6	5457.5	4567.4
32.5°	7512.3	7439.1	7271.2	6946.7	6678.2	6535.8	6420.9	6337.5	5969.2	5788.2	4811.6
35°	8002.7	7934.5	7742.2	7388.3	7096.3	6944.8	6794.2	6616.2	6313.1	6129.9	5074.1
37.5°	8450.3	8382.1	8118.6	7750.4	7456.5	7351.6	7217.3	6915.3	6657.9	6485.0	5351.7
40°	8733.1	8717.8	8471.6	8054.6	7749.4	7697.5	7652.8	7262.1	7040.3	6879.6	5656.9
42.5°	8805.3	8838.9	8643.5	8300.8	8009.8	7968.1	8072.9	7654.8	7469.7	7316.0	6002.8
45°	8631.3	8728.0	8599.9	8366.9	8195.0	8172.5	8445.2	8084.1	7944.7	7804.4	6419.9
47.5°	8190.9	8354.7	8301.8	8269.2	8244.8	8341.4	8772.8	8539.8	8482.8	8360.7	6895.9
50°	7301.8	7612.1	7704.6	7910.1	8146.1	8472.6	9070.8	9037.2	9111.4	8988.4	7475.7
52.5°	5764.7	6192.0	6729.1	7243.8	7843.0	8428.9	9398.3	9751.3	10064.7	9997.5	8397.4
55°	4758.7	4951.0	5363.9	6308.0	7255.1	8244.8	9545.8	10328.1	11010.7	10950.7	9096.3
57.5°	3985.6	4157.5	4411.8	5200.1	6366.0	7826.7	9637.4	10680.1	11658.7	11652.6	9785.9
60°	3156.5	3338.6	3599.0	4157.5	5327.3	7104.5	9617.1	11080.9	12485.7	12536.6	10627.2
62.5°	2220.7	2421.0	2709.9	3230.8	4266.4	6168.6	9202.0	11370.7	13459.2	13597.5	11639.4
65°	1459.7	1592.0	1809.6	2259.3	3178.9	4965.2	8409.6	11408.5	14500.9	14734.8	12589.5
67.5°	1023.4	1074.2	1202.4	1446.5	2095.5	3807.6	7147.2	11018.9	15195.6	15459.2	13001.4
70°	798.6	824.0	889.1	986.8	1316.3	2560.4	5476.9	10005.6	15047.1	15321.8	12571.1
72.5°	689.7	714.1	738.5	750.7	882.9	1580.8	3709.9	8365.8	13648.4	13834.5	10930.3
75°	625.6	631.7	652.1	648.0	673.4	1025.4	2141.3	6095.4	10768.5	10704.5	8068.8
77.5°	525.9	534.0	567.6	562.5	598.2	700.9	1111.8	3933.7	6981.4	6546.0	4491.1
80°	445.6	449.7	486.3	480.1	519.8	507.6	567.6	2005.0	2961.2	2508.5	1295.0
82.5°	154.7	191.3	371.3	382.5	396.8	307.2	327.6	817.8	904.4	692.7	271.6
85°	75.2	80.4	189.2	268.5	267.5	154.7	159.7	291.9	284.8	223.8	90.5
87.5°	12.2	15.3	22.3	104.8	83.4	40.7	54.9	57.0	59.0	50.8	20.3
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°	2312.2	2312.2	2312.2	2312.2	2312.2	2312.2	2312.2	2312.2	2312.2	2312.2	2312.2
2.5°	2337.6	2286.8	2180.0	2081.3	2004.0	1929.8	1888.0	1852.4	1832.1	1828.0	1828.0
5°	2400.7	2295.9	2101.7	1937.9	1831.1	1751.7	1710.0	1683.6	1670.3	1662.1	1661.1
7.5°	2491.3	2337.6	2061.0	1874.8	1762.9	1705.9	1684.6	1680.5	1679.5	1680.5	1683.6
10°	2616.3	2405.8	2056.9	1859.6	1766.0	1734.4	1733.4	1734.4	1738.5	1739.5	1740.6
12.5°	2751.6	2476.0	2073.2	1872.8	1804.6	1787.3	1784.2	1783.2	1786.3	1788.3	1789.3
15°	2899.1	2568.5	2100.6	1901.3	1847.4	1829.0	1825.9	1819.9	1818.9	1817.8	1816.8
17.5°	3050.7	2660.1	2131.2	1931.7	1874.8	1849.3	1838.1	1823.9	1812.7	1809.6	1812.7
20°	3204.4	2750.6	2152.5	1947.0	1876.8	1841.2	1818.9	1794.5	1775.1	1763.9	1768.0
22.5°	3368.2	2845.2	2165.7	1943.0	1858.5	1809.6	1768.9	1740.6	1711.0	1691.7	1692.7
25°	3527.8	2927.6	2164.7	1921.6	1822.9	1760.8	1709.0	1672.4	1631.7	1611.3	1611.3
27.5°	3681.4	3001.9	2139.3	1884.0	1772.0	1702.8	1640.8	1597.1	1557.4	1538.1	1537.1
30°	3840.1	3063.9	2099.6	1829.0	1712.1	1635.7	1567.5	1529.9	1494.3	1476.0	1475.0
32.5°	3997.8	3120.9	2043.6	1760.8	1642.9	1569.6	1502.4	1467.9	1446.5	1446.5	1447.5
35°	4164.6	3160.6	1969.4	1681.5	1569.6	1499.5	1446.5	1426.2	1424.1	1411.9	1408.9
37.5°	4340.6	3186.0	1878.8	1600.1	1497.4	1431.3	1415.0	1390.6	1370.2	1343.8	1339.7
40°	4525.7	3211.4	1770.0	1515.7	1421.1	1384.5	1377.4	1344.8	1286.8	1221.7	1212.6
42.5°	4750.6	3228.7	1657.1	1431.3	1340.7	1328.5	1338.6	1282.8	1190.2	1141.3	1142.4
45°	5010.9	3257.2	1553.3	1347.9	1258.3	1258.3	1301.0	1227.8	1151.5	1121.0	1126.1
47.5°	5348.7	3323.4	1456.7	1256.3	1182.0	1202.4	1217.6	1161.7	1119.0	1081.4	1080.4
50°	5837.0	3482.0	1357.0	1163.7	1124.0	1164.7	1143.4	1110.8	1061.0	1030.4	1027.5
52.5°	6443.3	3575.6	1268.5	1080.4	1074.2	1114.9	1084.3	1053.9	1016.2	975.5	967.4
55°	6856.2	3592.9	1194.2	1019.3	1040.7	1036.6	1025.4	997.9	977.5	923.6	924.7
57.5°	7318.1	3627.5	1133.2	982.7	1019.3	974.6	970.5	947.1	920.7	884.0	871.8
60°	7870.5	3681.4	1080.4	968.4	1001.0	933.9	913.5	904.4	877.9	859.6	864.7
62.5°	8472.6	3730.3	1026.4	970.5	979.6	894.2	863.7	860.6	844.3	838.2	838.2
65°	8883.6	3597.0	959.3	968.4	946.1	853.5	814.8	813.7	800.5	798.6	797.6
67.5°	8740.2	3174.8	868.7	939.9	911.4	812.8	770.1	766.0	748.7	749.7	749.7
70°	8022.1	2572.6	743.6	869.7	868.7	776.1	723.2	710.0	686.6	690.7	694.7
72.5°	6675.2	1906.3	575.7	752.8	800.5	742.6	669.3	648.0	618.5	622.6	621.6
75°	4820.8	1296.0	419.1	572.7	696.8	702.9	616.4	579.8	544.3	550.3	552.4
77.5°	2466.9	734.4	308.2	394.7	547.2	638.8	568.7	519.8	511.7	568.7	560.5
80°	804.6	368.3	213.6	276.6	359.1	522.9	498.5	442.5	440.4	453.7	389.6
82.5°	240.1	155.6	137.4	182.0	198.3	400.8	430.3	334.7	287.9	303.1	313.3
85°	82.4	75.2	78.3	90.5	94.6	235.0	301.1	221.8	209.5	230.9	227.9
87.5°	19.4	26.4	22.3	20.3	20.3	57.0	117.0	92.6	128.1	85.5	82.4
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)