Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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: P965754

Luminaire Tested: **NAV-SB4A-827-U-T3**

Issue Date: 1/21/2025

Report Generated By 670246001

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Test Information

Test Method:	LM-79-08
Report Number:	P965754
	TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-5)
Test Lab:	INNOVATION CENTER
Issue Date:	1/21/2025
Manufacturer:	COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line:	LUMARK
Catalog Number:	NAV-SB4A-827-U-T3
Description:	NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE (4) 80 CRI, 2700K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III OPTICS
Light Source:	-
Ballast/Driver:	-

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	16035.1 lumens
Efficiency:	N/A
Efficacy:	140.7 lumens/watt
Luminous Opening:	Rectangular (W 1' x L: 1' x H: 0')
IES Classification:	Type III - Short
BUG Rating:	B3 - 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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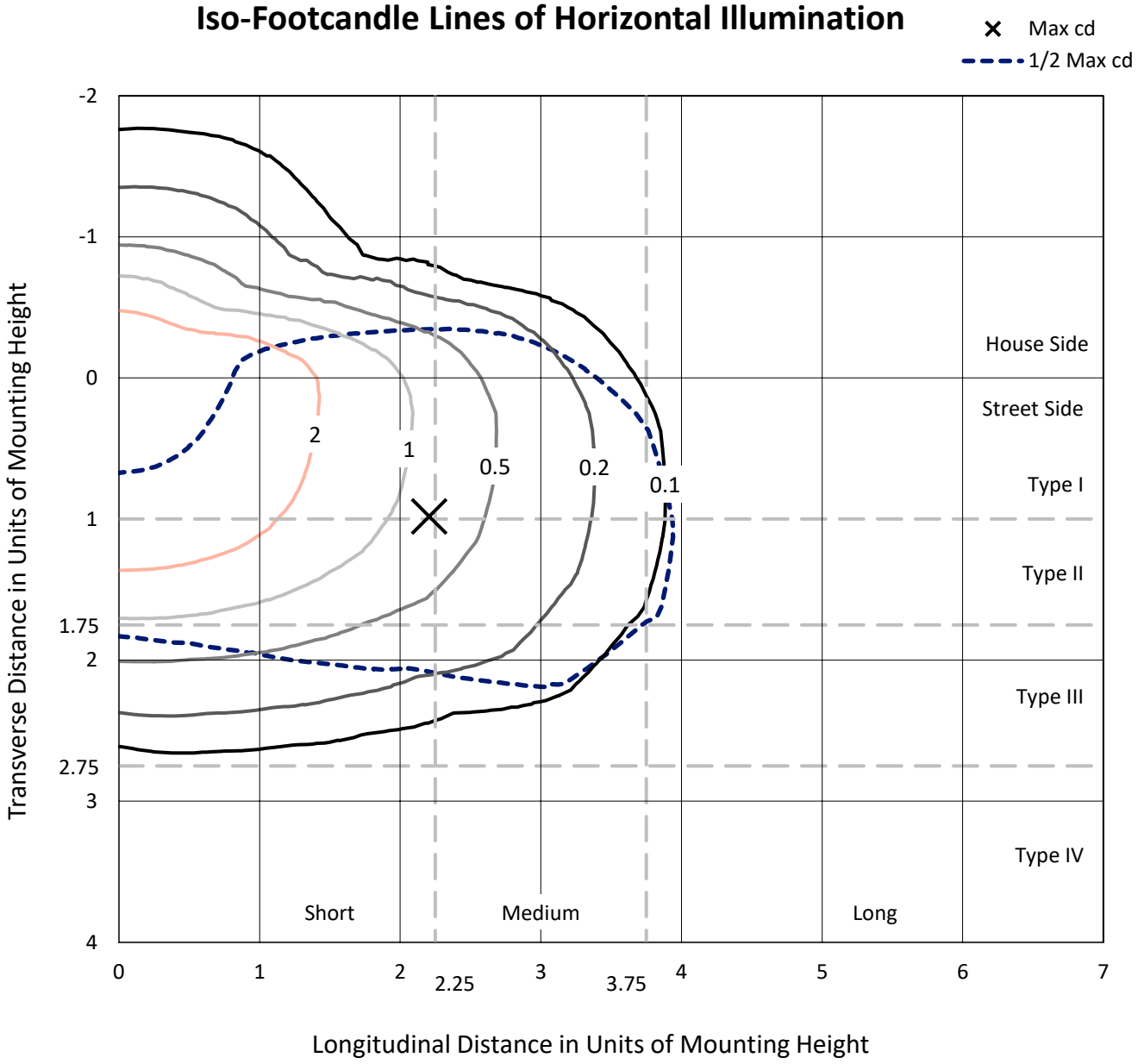
Iso-Footcandle Lines of Horizontal Illumination



Based on 25 foot mounting height. Maximum calculated value = 4 fc
Type III - Short - N/A

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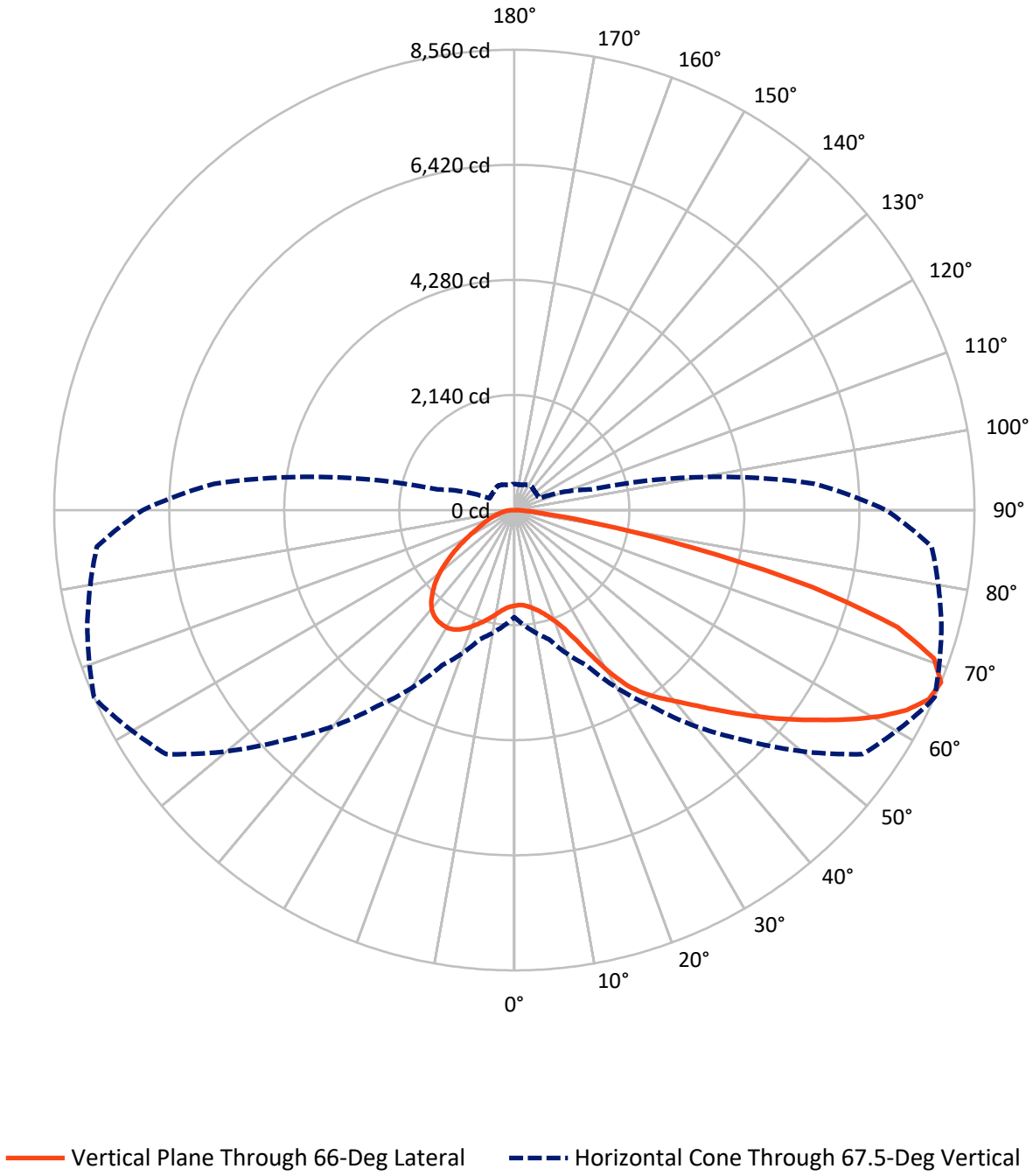
Luminous Intensity Polar Plot



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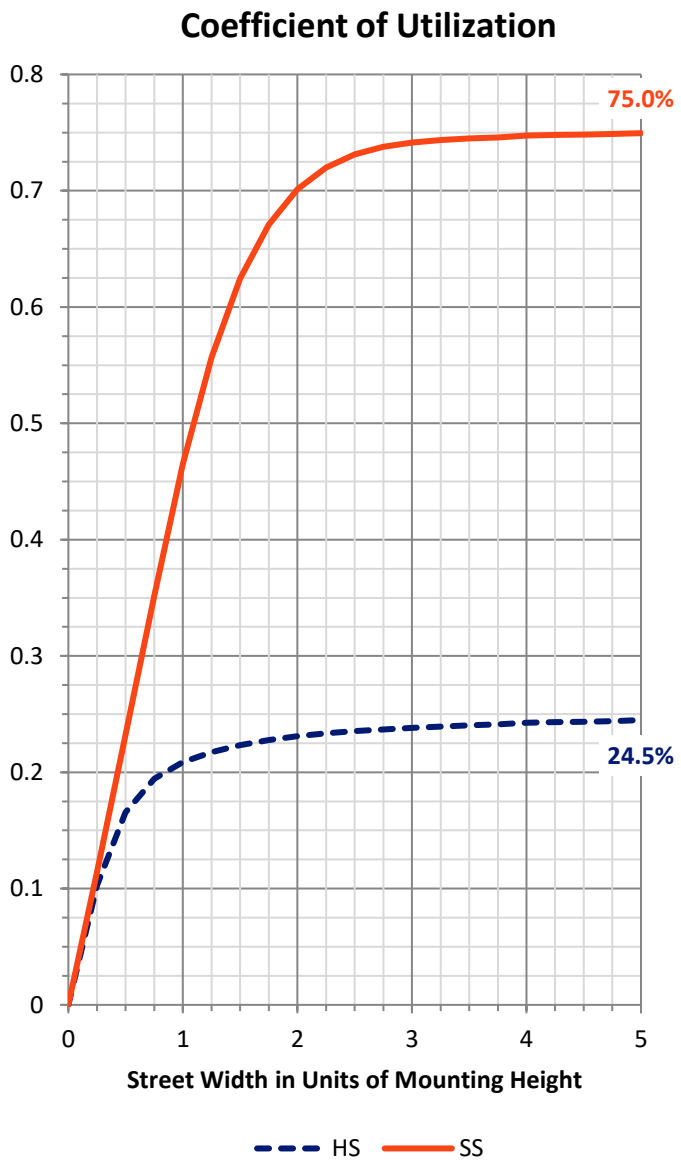
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3987.1	0.0	3987.1
	% Fixture	24.9	0.0	24.9
Street Side	Lumens	12048.0	0.0	12048.0
	% Fixture	75.1	0.0	75.1
Total	Lumens	16035.1	0.0	16035.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.3	1.1
10°-20°	582.6	3.6
20°-30°	1122.9	7.0
30°-40°	1968.8	12.3
40°-50°	2927.0	18.3
50°-60°	3710.3	23.1
60°-70°	3630.4	22.6
70°-80°	1731.7	10.8
80°-90°	185.1	1.2
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°	16035.1	100.0
0°-180°	16035.1	100.0



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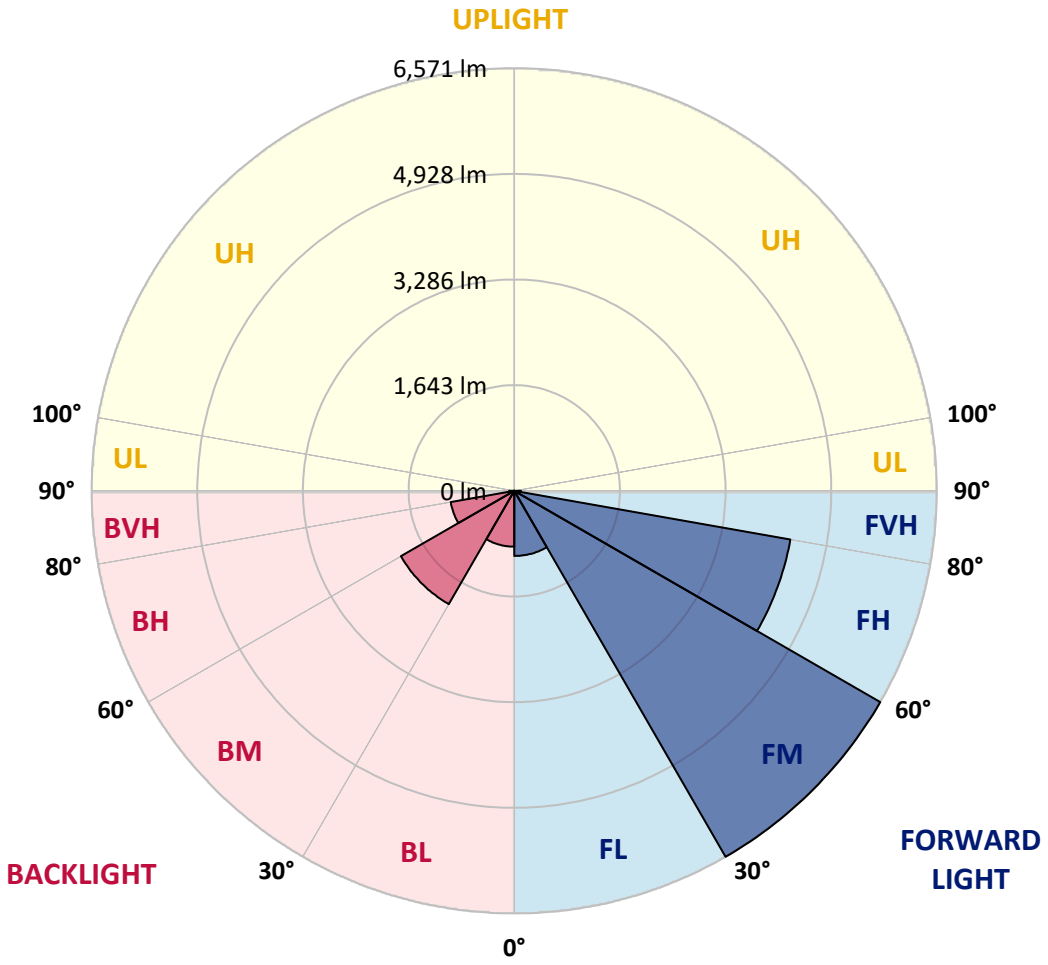
LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit B	U	G
FL	(0°-30°)	1013.3	6.3			
FM	(30°-60°)	6571.0	41.0			
FH	(60°-80°)	4358.8	27.2			G2/5000
FVH	(80°-90°)	104.9	0.7			G2/225
BL	(0°-30°)	868.5	5.4	B2/1000		
BM	(30°-60°)	2035.1	12.7	B2/2500		
BH	(60°-80°)	1003.4	6.3	B3/2500		G3/2500
BVH	(80°-90°)	80.1	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 III Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	1778.5	1778.5	1778.5	1778.5	1778.5	1778.5	1778.5	1778.5	*1778.5*	1778.5	1778.5
2.5°	1759.9	1770.1	1767.5	1763.3	1762.5	1764.2	1766.7	1769.3	*1768.4*	1772.6	1779.3
5°	1754.9	1765.0	1764.2	1764.2	1767.5	1774.3	1778.5	1782.7	*1778.5*	1783.6	1792.8
7.5°	1758.3	1765.9	1769.3	1772.6	1781.0	1793.6	1803.8	1813.0	*1808.0*	1813.8	1825.7
10°	1801.2	1807.2	1810.6	1810.6	1816.4	1830.8	1840.9	1857.7	*1853.5*	1862.7	1877.9
12.5°	1879.6	1885.5	1885.5	1882.1	1886.3	1895.6	1899.0	1917.5	*1909.9*	1925.1	1940.2
15°	1975.7	1987.5	1978.1	1972.3	1973.9	1983.3	1982.4	1996.7	*1989.1*	2001.7	2015.3
17.5°	2081.8	2096.9	2081.8	2081.0	2077.6	2087.7	2088.5	2101.1	*2087.7*	2096.9	2106.3
20°	2207.3	2228.4	2215.7	2219.9	2212.4	2216.6	2220.8	2239.3	*2218.3*	2225.1	2222.5
22.5°	2384.3	2409.6	2396.0	2412.0	2407.0	2403.6	2402.8	2435.6	*2402.8*	2405.4	2380.9
25°	2642.0	2672.4	2648.8	2670.7	2670.7	2681.7	2694.3	2736.4	*2681.7*	2665.6	2602.5
27.5°	3022.8	3053.2	3006.8	3020.4	3016.2	3043.1	3029.6	3134.0	*3075.1*	3049.0	2921.8
30°	3481.2	3535.1	3447.5	3444.1	3439.9	3482.8	3502.2	3571.3	*3511.5*	3485.4	3332.1
32.5°	3976.6	4033.1	3928.5	3898.2	3882.2	3908.3	3892.3	3947.9	*3906.7*	3866.2	3676.7
35°	4500.6	4556.2	4456.8	4397.9	4333.8	4279.1	4221.8	4236.0	*4197.3*	4135.8	3939.5
37.5°	4996.0	5097.9	4992.6	4929.4	4811.5	4704.4	4544.4	4477.8	*4441.6*	4385.2	4187.2
40°	5500.7	5558.8	5478.7	5424.8	5296.8	5129.1	4873.0	4732.3	*4683.4*	4628.7	4461.0
42.5°	5872.2	5927.8	5884.8	5847.7	5747.5	5552.8	5221.8	5045.7	*4974.9*	4913.4	4771.1
45°	6167.0	6208.3	6181.4	6194.9	6151.8	5963.1	5583.2	5381.9	*5308.6*	5233.5	5121.5
47.5°	6285.8	6329.7	6372.6	6452.7	6526.0	6387.0	5971.5	5745.8	*5668.2*	5591.7	5481.3
50°	6272.4	6317.0	6441.7	6611.9	6839.4	6793.0	6381.0	6133.4	*6061.7*	5974.1	5872.2
52.5°	6164.6	6215.1	6375.2	6658.2	7020.5	7097.2	6798.1	6533.6	*6466.1*	6361.7	6259.8
55°	5881.4	5911.8	6151.8	6552.9	7063.5	7309.5	7206.7	6959.9	*6892.4*	6746.7	6635.4
57.5°	5356.5	5400.4	5750.0	6269.0	6955.6	7453.5	7565.6	7408.1	*7343.2*	7133.4	7017.2
60°	4671.6	4741.5	5141.7	5792.2	6681.0	7452.7	7891.7	7848.6	*7794.7*	7514.2	7392.9
62.5°	3896.5	3977.4	4362.4	5118.1	6200.7	7241.2	8095.6	8217.7	*8189.9*	7865.5	7710.5
65°	2992.5	3048.1	3431.5	4246.2	5453.5	6787.1	8119.1	8469.6	*8474.6*	8132.6	7876.5
67.5°	*1992.5*	*2152.6*	*2485.3*	*3186.3*	*4452.6*	*6044.9*	*7911.9*	*8510.9*	*8559.8*	*8224.4*	*7793.1*
70°	972.2	1182.8	1508.9	2070.8	3186.3	4906.7	7370.2	8172.2	*8280.9*	7956.6	7296.0
72.5°	403.5	471.8	649.5	1021.9	1829.0	3311.0	6281.6	7253.8	*7455.2*	7050.0	6134.2
75°	272.1	294.9	371.6	524.0	833.2	1632.7	4530.1	5408.8	*5733.1*	5324.6	4352.4
77.5°	209.8	224.1	270.4	366.4	495.4	617.6	2424.7	3259.6	*3427.3*	3172.8	2264.6
80°	165.1	176.1	202.2	267.1	351.4	330.3	826.5	1476.9	*1573.8*	1320.2	728.0
82.5°	143.2	147.4	144.9	181.1	233.4	192.9	271.3	545.1	*601.6*	436.4	237.6
85°	103.6	115.4	120.4	112.0	123.8	97.7	111.2	192.9	*212.3*	189.5	134.0
87.5°	42.1	62.3	76.7	72.5	45.5	27.8	34.5	56.5	*64.9*	70.7	43.8
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°	1778.5	1778.5	1778.5	1778.5	1778.5	1778.5	1778.5	1778.5	1778.5	1778.5	1778.5
2.5°	1780.2	1786.1	1790.3	1795.4	1798.8	1803.8	1813.8	1819.8	1820.6	1824.8	1824.0
5°	1796.2	1804.6	1813.8	1827.4	1842.5	1855.1	1874.5	1888.0	1893.1	1897.3	1896.5
7.5°	1830.8	1842.5	1859.4	1882.9	1904.9	1921.8	1945.3	1961.3	1977.3	1983.3	1984.1
10°	1882.1	1899.0	1923.4	1955.4	1979.0	2000.9	2025.4	2038.8	2054.8	2061.6	2065.0
12.5°	1946.2	1963.9	1995.9	2040.6	2062.4	2077.6	2086.0	2082.6	2086.0	2091.9	2093.6
15°	2019.5	2038.8	2075.1	2123.1	2138.3	2124.7	2106.3	2089.4	2086.9	2088.5	2094.5
17.5°	2106.3	2120.5	2162.6	2203.1	2192.2	2136.6	2096.1	2069.2	2055.6	2051.4	2057.4
20°	2227.5	2227.5	2262.1	2287.4	2214.1	2119.7	2056.6	2012.7	1984.9	1973.1	1970.6
22.5°	2375.0	2361.5	2383.4	2365.7	2209.9	2072.5	1984.9	1909.1	1866.9	1850.1	1847.6
25°	2562.0	2546.0	2540.2	2430.6	2179.6	1997.5	1855.1	1763.3	1726.3	1717.0	1718.7
27.5°	2844.3	2803.8	2727.1	2465.9	2123.9	1879.6	1703.6	1618.5	1597.4	1598.2	1600.7
30°	3220.0	3139.2	2951.3	2471.9	2033.0	1712.8	1548.5	1487.9	1477.7	1481.9	1496.3
32.5°	3567.9	3491.3	3180.4	2444.9	1893.1	1549.4	1409.5	1369.1	1353.9	1358.9	1365.7
35°	3840.9	3819.9	3392.7	2407.0	1721.2	1396.0	1284.8	1250.3	1220.8	1214.0	1219.1
37.5°	4098.8	4090.3	3551.9	2353.9	1551.0	1287.3	1184.6	1139.1	1096.1	1072.5	1073.4
40°	4381.8	4373.4	3656.4	2272.2	1400.3	1193.0	1094.4	1034.5	981.5	938.5	942.8
42.5°	4700.2	4650.5	3706.1	2155.1	1272.1	1112.9	1021.1	940.2	870.3	830.7	833.2
45°	5048.2	4936.2	3705.3	2006.0	1164.3	1039.7	942.8	828.2	763.3	726.2	724.6
47.5°	5417.2	5209.2	3659.8	1840.9	1059.8	958.8	821.4	733.8	690.8	668.1	663.1
50°	5798.0	5464.4	3582.3	1651.3	952.8	866.9	745.6	685.8	652.9	631.9	624.3
52.5°	6156.2	5696.1	3488.8	1436.4	844.2	777.7	711.9	665.5	631.0	607.4	597.4
55°	6488.9	5895.8	3356.5	1216.6	755.7	717.8	695.9	657.1	617.6	589.8	578.8
57.5°	6784.6	6025.6	3128.2	1010.1	692.5	676.5	679.1	642.8	597.4	573.7	558.5
60°	7030.6	6120.7	2790.4	818.9	641.1	636.1	652.9	615.8	562.8	535.9	524.0
62.5°	7178.1	6119.0	2375.8	670.7	597.4	599.0	618.4	582.2	528.3	503.0	495.4
65°	7165.4	5969.1	1920.8	573.7	555.2	556.9	582.2	545.1	499.6	484.4	483.6
67.5°	*6911.8*	*5603.5*	*1473.5*	*510.6*	*508.9*	*516.5*	*545.9*	*519.8*	*482.0*	*480.2*	*482.8*
70°	6225.2	4844.4	1061.6	460.0	460.8	471.8	510.6	503.8	472.6	476.0	475.2
72.5°	4991.8	3693.5	712.8	406.9	407.7	425.5	476.8	491.2	463.4	508.0	514.8
75°	3324.5	2303.4	458.3	350.4	351.4	374.0	447.4	466.8	438.1	506.4	510.6
77.5°	1597.4	1035.5	331.9	294.9	294.9	315.9	386.7	417.9	373.2	393.4	360.6
80°	551.9	389.2	261.2	237.6	232.6	246.8	326.1	362.2	321.8	296.5	278.0
82.5°	217.4	202.2	209.8	184.5	167.7	176.9	253.6	299.1	236.8	214.0	213.2
85°	124.6	131.4	148.3	122.2	96.9	108.6	186.1	214.8	178.7	157.5	160.9
87.5°	33.7	46.3	68.3	63.1	43.8	46.3	88.5	118.8	102.8	79.2	81.7
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)