

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: P963119

Luminaire Tested: **NAV-SB2D-827-U-T3**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963119
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-SB2D-827-U-T3
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III
OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18150.7 lumens
Efficiency: N/A
Efficacy: 123.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
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



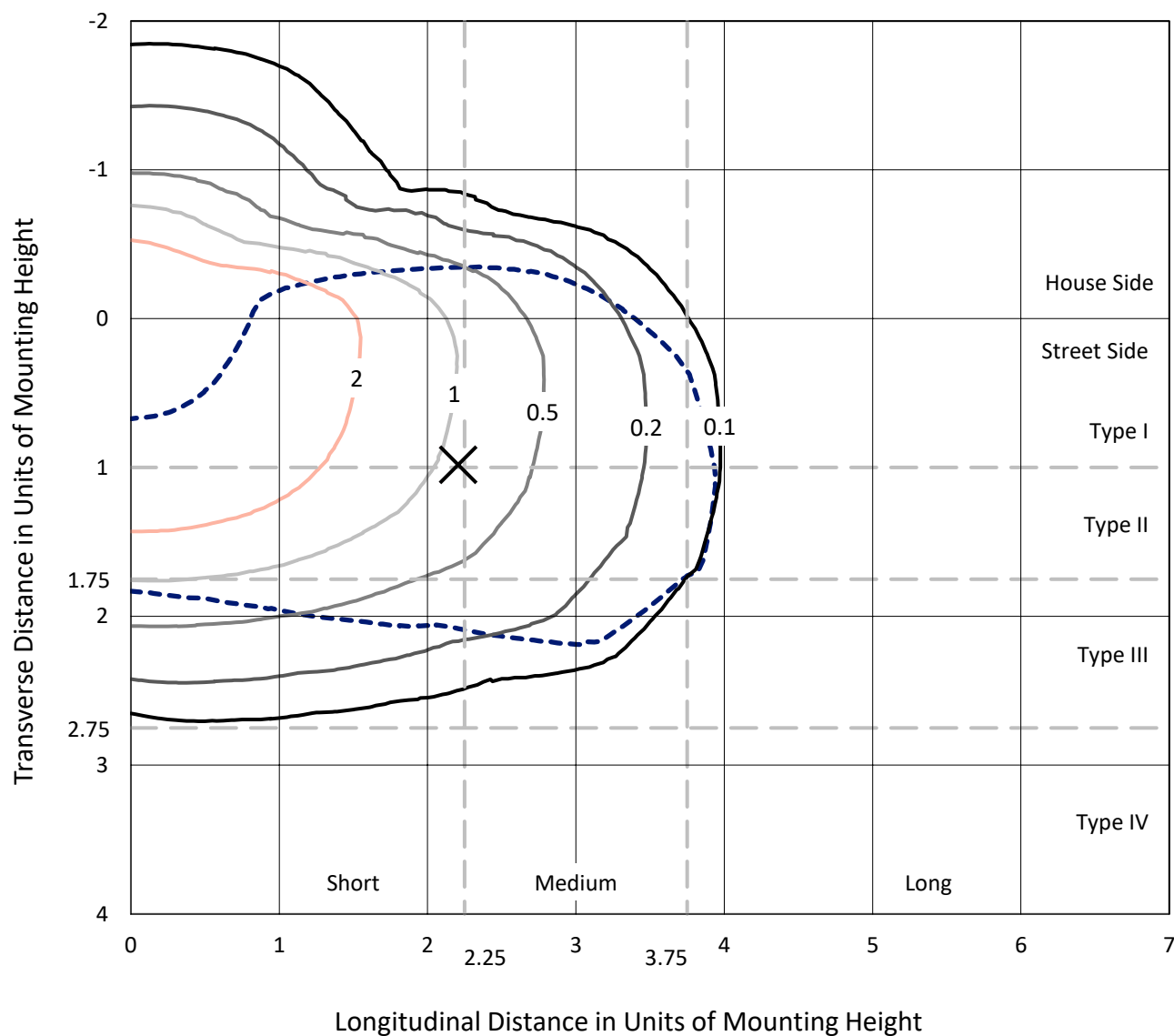
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

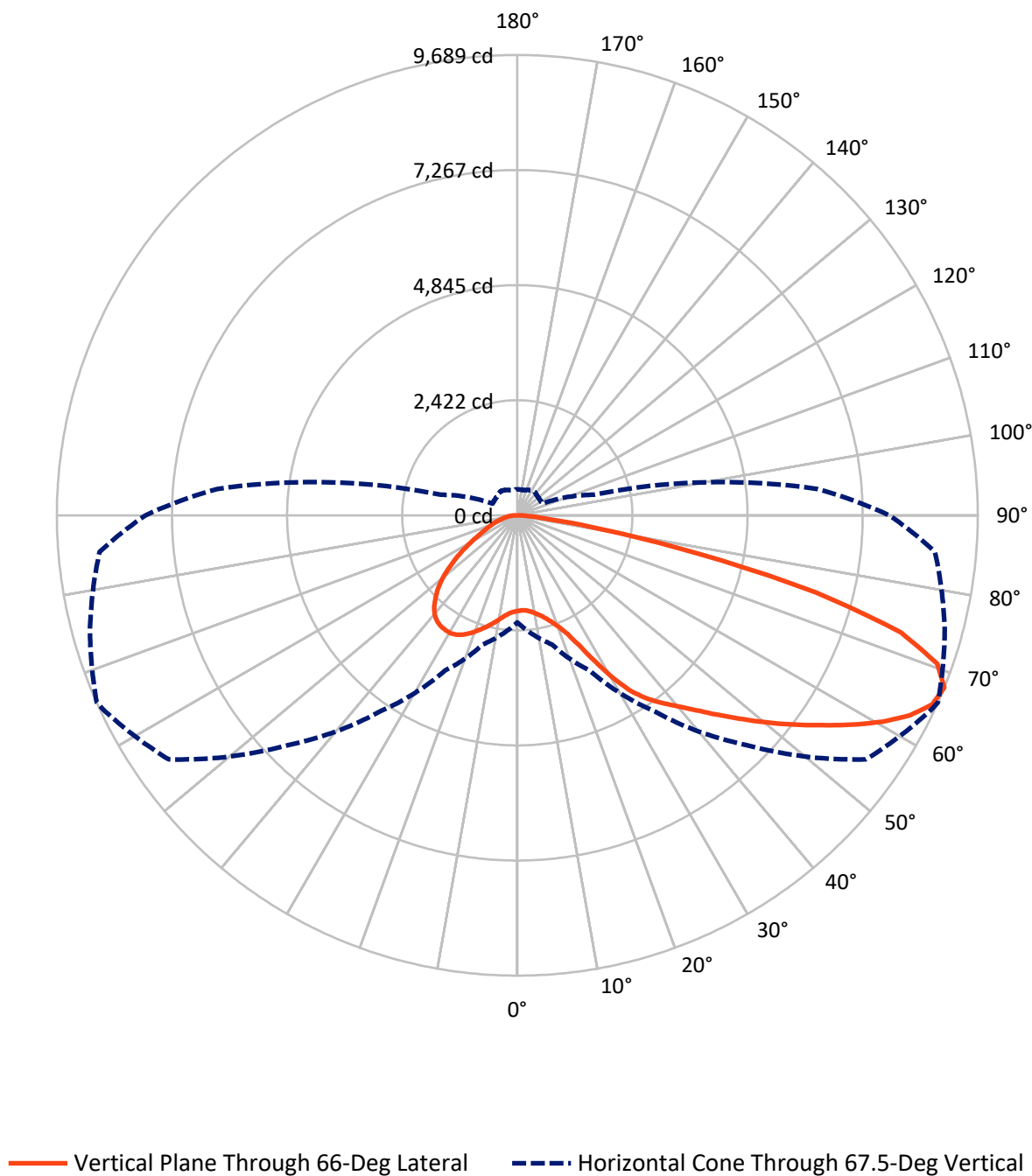


Based on 25 foot mounting height. Maximum calculated value = 4.6 fc

Type III - Short - N/A

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Luminous Intensity Polar Plot



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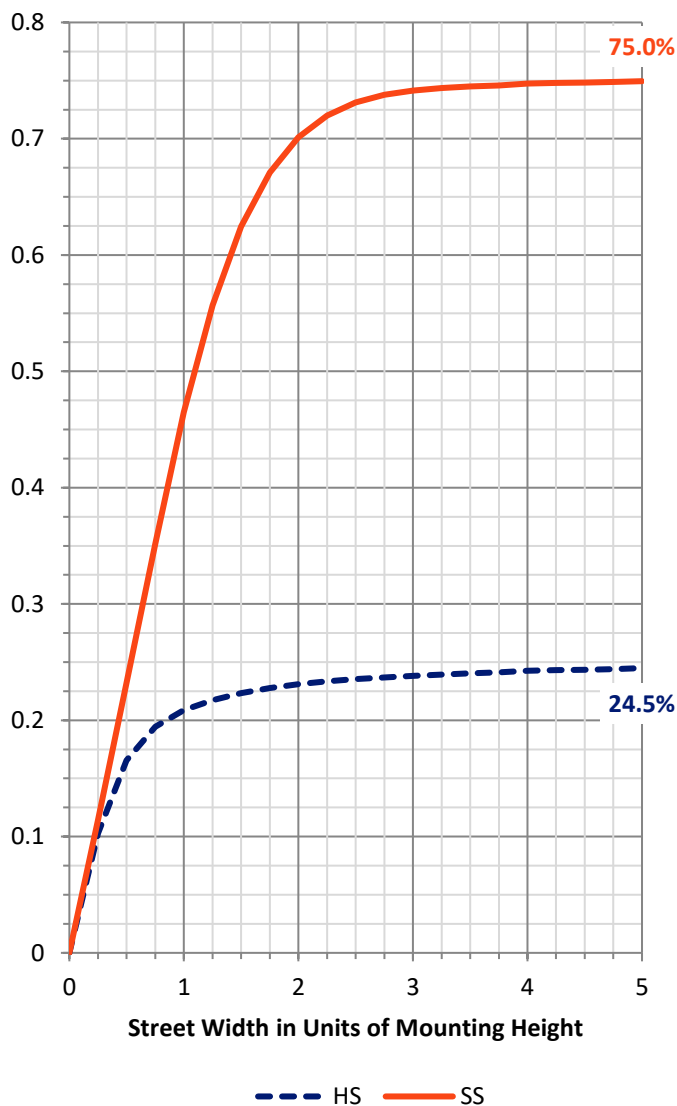
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4513.1	0.0	4513.1
	% Fixture	24.9	0.0	24.9
Street Side	Lumens	13637.6	0.0	13637.6
	% Fixture	75.1	0.0	75.1
Total	Lumens	18150.7	0.0	18150.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	199.6	1.1
10°-20°	659.4	3.6
20°-30°	1271.0	7.0
30°-40°	2228.6	12.3
40°-50°	3313.2	18.3
50°-60°	4199.8	23.1
60°-70°	4109.4	22.6
70°-80°	1960.2	10.8
80°-90°	209.5	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°	18150.7	100.0
0°-180°	18150.7	100.0

Coefficient of Utilization



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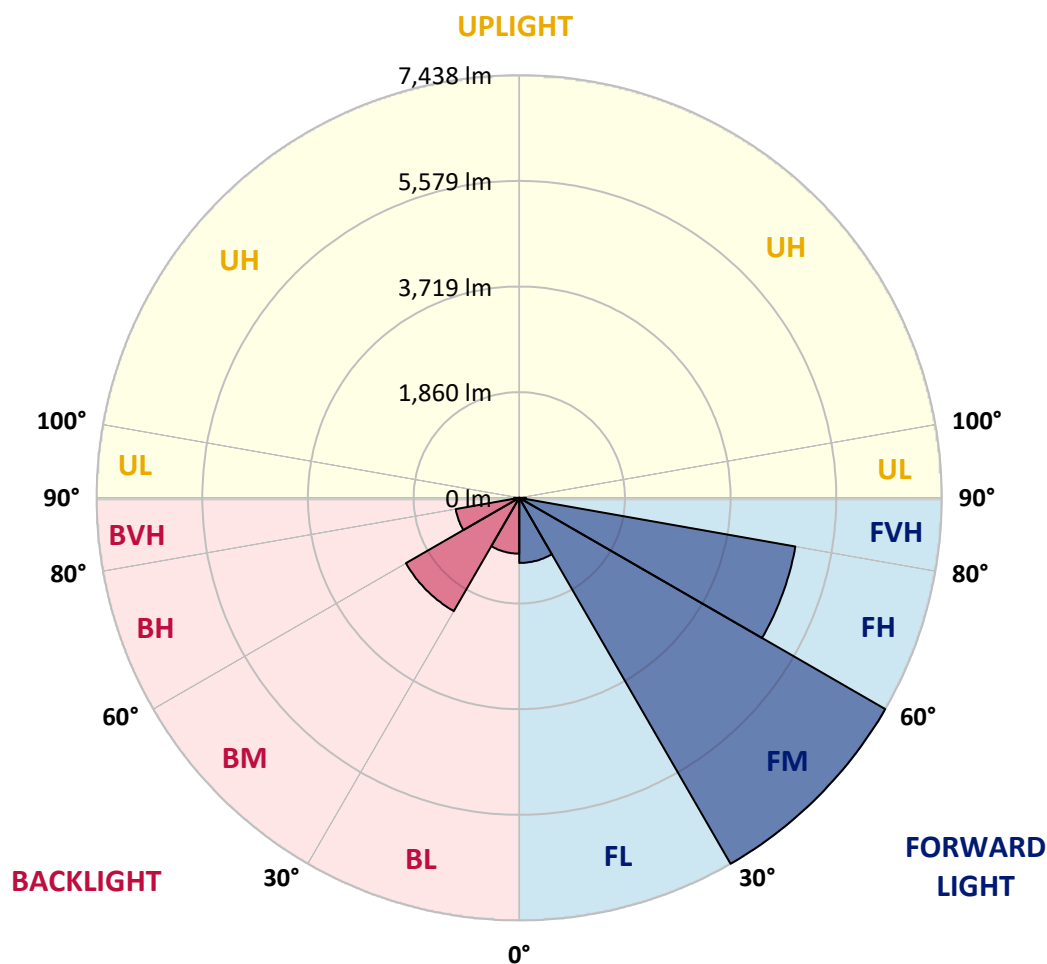
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1146.9	6.3			
FM	(30°-60°)	7438.0	41.0			
FH	(60°-80°)	4933.9	27.2			G2/5000
FVH	(80°-90°)	118.8	0.7			G2/225
BL	(0°-30°)	983.1	5.4	B2/1000		
BM	(30°-60°)	2303.5	12.7	B2/2500		
BH	(60°-80°)	1135.7	6.3	B3/2500		G3/2500
BVH	(80°-90°)	90.7	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°	2013.2	2013.2	2013.2	2013.2	2013.2	2013.2	2013.2	2013.2	2013.2	2013.2	2013.2
2.5°	1992.2	2003.6	2000.8	1996.0	1995.1	1996.9	1999.8	2002.6	2001.7	2006.4	2014.1
5°	1986.4	1997.9	1996.9	1996.9	2000.8	2008.4	2013.2	2017.9	2013.2	2018.8	2029.4
7.5°	1990.2	1998.9	2002.6	2006.4	2016.0	2030.3	2041.8	2052.3	2046.5	2053.2	2066.6
10°	2038.9	2045.6	2049.4	2049.4	2056.0	2072.2	2083.7	2102.8	2098.1	2108.5	2125.6
12.5°	2127.6	2134.3	2134.3	2130.5	2135.2	2145.7	2149.5	2170.5	2161.9	2179.0	2196.3
15°	2236.3	2249.7	2239.2	2232.4	2234.4	2244.9	2243.9	2260.1	2251.5	2265.9	2281.1
17.5°	2356.5	2373.6	2356.5	2355.6	2351.7	2363.1	2364.1	2378.4	2363.1	2373.6	2384.1
20°	2498.5	2522.4	2508.1	2512.9	2504.3	2509.1	2513.8	2534.8	2510.9	2518.6	2515.8
22.5°	2698.8	2727.4	2712.1	2730.3	2724.6	2720.8	2719.8	2757.0	2719.8	2722.7	2695.0
25°	2990.6	3025.0	2998.2	3023.0	3023.0	3035.4	3049.8	3097.4	3035.4	3017.4	2945.8
27.5°	3421.7	3456.0	3403.6	3418.8	3414.1	3444.6	3429.3	3547.5	3480.8	3451.3	3307.3
30°	3940.5	4001.5	3902.4	3898.5	3893.8	3942.4	3964.3	4042.5	3974.8	3945.2	3771.7
32.5°	4501.2	4565.1	4446.9	4412.5	4394.4	4424.0	4405.9	4468.8	4422.1	4376.3	4161.7
35°	5094.4	5157.3	5044.8	4978.0	4905.5	4843.5	4778.8	4795.0	4751.1	4681.5	4459.3
37.5°	5655.1	5770.5	5651.3	5579.8	5446.3	5325.2	5144.0	5068.6	5027.6	4963.8	4739.6
40°	6226.4	6292.2	6201.6	6140.6	5995.6	5805.8	5515.9	5356.6	5301.3	5239.4	5049.6
42.5°	6646.9	6709.9	6661.3	6619.2	6505.8	6285.5	5910.8	5711.4	5631.2	5561.6	5400.5
45°	6980.7	7027.4	6997.0	7012.2	6963.5	6749.9	6319.8	6091.9	6009.0	5924.1	5797.2
47.5°	7115.1	7164.7	7213.4	7303.9	7387.0	7229.6	6759.5	6503.9	6416.2	6329.4	6204.4
50°	7099.9	7150.5	7291.6	7484.2	7741.7	7689.2	7223.0	6942.5	6861.5	6762.3	6646.9
52.5°	6977.9	7035.1	7216.3	7536.7	7946.7	8033.5	7695.0	7395.6	7319.2	7201.0	7085.6
55°	6657.4	6691.7	6963.5	7417.5	7995.4	8273.9	8157.5	7878.0	7801.8	7636.9	7510.9
57.5°	6063.3	6112.9	6508.6	7096.1	7873.3	8437.0	8563.8	8385.4	8312.0	8074.5	7942.9
60°	5288.0	5367.1	5820.2	6556.3	7562.4	8436.0	8932.9	8884.2	8823.2	8505.6	8368.3
62.5°	4410.6	4502.2	4938.0	5793.4	7018.9	8196.6	9163.6	9301.9	9270.4	8903.3	8727.8
65°	3387.3	3450.3	3884.2	4806.4	6173.0	7682.6	9190.4	9587.0	9592.8	9205.5	8915.7
67.5°	2255.4	2436.5	2813.2	3606.7	5040.0	6842.4	8955.7	9633.8	9689.1	9309.6	8821.3
70°	1100.5	1339.0	1708.0	2344.1	3606.7	5554.1	8342.5	9250.4	9373.4	9006.3	8258.6
72.5°	456.8	534.0	735.2	1156.8	2070.4	3747.8	7110.4	8210.9	8438.8	7980.1	6943.6
75°	308.0	333.7	420.6	593.2	943.2	1848.2	5127.8	6122.4	6489.6	6027.1	4926.6
77.5°	237.5	253.7	306.2	414.8	560.8	699.0	2744.6	3689.7	3879.4	3591.4	2563.4
80°	187.0	199.4	228.9	302.3	397.7	373.8	935.5	1671.8	1781.4	1494.3	824.0
82.5°	162.2	166.9	164.0	205.0	264.1	218.4	307.1	617.0	680.9	493.9	269.0
85°	117.3	130.7	136.3	126.8	140.2	110.6	125.9	218.4	240.4	214.5	151.6
87.5°	47.7	70.5	86.8	82.0	51.5	31.5	39.1	63.9	73.4	80.2	49.6
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°	2013.2	2013.2	2013.2	2013.2	2013.2	2013.2	2013.2	2013.2	2013.2	2013.2	2013.2
2.5°	2015.0	2021.7	2026.5	2032.3	2036.1	2041.8	2053.2	2059.8	2060.9	2065.6	2064.7
5°	2033.2	2042.7	2053.2	2068.4	2085.7	2099.9	2121.9	2137.1	2142.9	2147.6	2146.7
7.5°	2072.2	2085.7	2104.7	2131.4	2156.2	2175.3	2202.0	2220.0	2238.2	2244.9	2245.9
10°	2130.5	2149.5	2177.2	2213.4	2240.1	2264.9	2292.6	2307.8	2325.9	2333.6	2337.4
12.5°	2202.9	2222.9	2259.2	2309.7	2334.5	2351.7	2361.2	2357.4	2361.2	2368.0	2369.8
15°	2285.9	2307.8	2348.8	2403.2	2420.3	2405.1	2384.1	2365.1	2362.2	2364.1	2370.7
17.5°	2384.1	2400.3	2448.0	2493.8	2481.4	2418.5	2372.7	2342.1	2326.9	2322.1	2328.8
20°	2521.4	2521.4	2560.6	2589.1	2506.2	2399.4	2327.9	2278.3	2246.8	2233.5	2230.6
22.5°	2688.4	2673.1	2697.9	2677.8	2501.4	2346.0	2246.8	2161.0	2113.2	2094.2	2091.3
25°	2900.0	2881.9	2875.2	2751.3	2467.1	2261.1	2099.9	1996.0	1954.1	1943.5	1945.4
27.5°	3219.5	3173.7	3087.0	2791.3	2404.1	2127.6	1928.2	1832.0	1808.1	1809.0	1811.9
30°	3644.8	3553.3	3340.7	2798.0	2301.1	1938.8	1752.9	1684.2	1672.7	1677.5	1693.7
32.5°	4038.7	3951.9	3600.0	2767.5	2142.9	1753.8	1595.4	1549.7	1532.5	1538.2	1545.9
35°	4347.6	4323.9	3840.4	2724.6	1948.3	1580.2	1454.3	1415.2	1381.8	1374.2	1380.0
37.5°	4639.5	4629.9	4020.6	2664.5	1755.6	1457.1	1340.8	1289.3	1240.7	1214.0	1214.9
40°	4960.0	4950.3	4138.8	2572.0	1585.0	1350.3	1238.8	1171.1	1111.0	1062.4	1067.1
42.5°	5320.4	5264.1	4195.1	2439.4	1440.0	1259.7	1155.8	1064.3	985.1	940.3	943.2
45°	5714.3	5587.4	4194.2	2270.7	1317.9	1176.8	1067.1	937.5	864.0	822.0	820.1
47.5°	6132.0	5896.4	4142.6	2083.7	1199.7	1085.3	929.8	830.7	782.0	756.2	750.5
50°	6563.0	6185.4	4054.9	1869.2	1078.6	981.3	844.0	776.2	739.1	715.2	706.6
52.5°	6968.4	6447.7	3949.0	1626.0	955.5	880.2	805.9	753.4	714.3	687.6	676.1
55°	7345.0	6673.7	3799.4	1377.1	855.5	812.5	787.7	743.8	699.0	667.6	655.2
57.5°	7679.7	6820.5	3540.9	1143.4	783.9	765.8	768.6	727.6	676.1	649.4	632.2
60°	7958.2	6928.3	3158.4	926.9	725.7	720.0	739.1	697.1	637.0	606.5	593.2
62.5°	8125.1	6926.3	2689.3	759.1	676.1	678.0	700.0	659.0	598.0	569.3	560.8
65°	8110.8	6756.6	2174.3	649.4	628.4	630.4	659.0	617.0	565.5	548.4	547.3
67.5°	7823.7	6342.7	1668.0	577.9	576.0	584.6	618.0	588.5	545.5	543.6	546.4
70°	7046.5	5483.4	1201.6	520.7	521.6	534.0	577.9	570.3	534.9	538.8	537.8
72.5°	5650.4	4180.8	806.8	460.6	461.6	481.5	539.8	556.0	524.5	575.0	582.7
75°	3763.1	2607.3	518.8	396.7	397.7	423.4	506.4	528.3	495.9	573.2	577.9
77.5°	1808.1	1172.0	375.8	333.7	333.7	357.6	437.7	473.0	422.5	445.4	408.2
80°	624.6	440.5	295.6	269.0	263.2	279.4	369.1	410.1	364.3	335.7	314.7
82.5°	246.0	228.9	237.5	208.9	189.7	200.3	287.0	338.6	267.9	242.2	241.3
85°	141.1	148.7	167.8	138.3	109.7	123.0	210.7	243.1	202.1	178.4	182.1
87.5°	38.1	52.5	77.3	71.5	49.6	52.5	100.1	134.5	116.3	89.7	92.5
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)