

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: P963114

Luminaire Tested: **NAV-SB2D-827-U-T2U**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963114
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-16)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-827-U-T2U
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II U OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18381.3 lumens
Efficiency: N/A
Efficacy: 124.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - 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

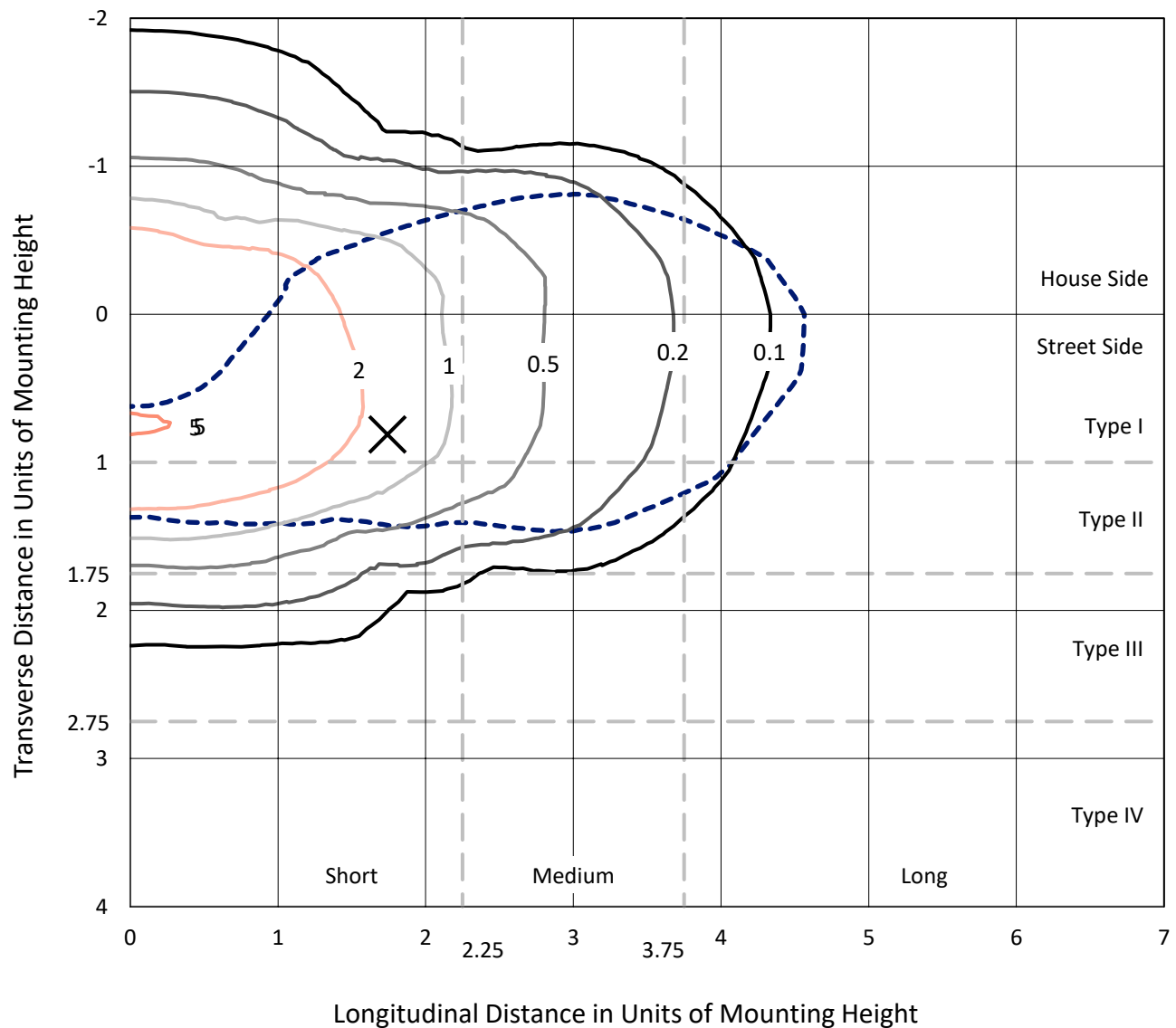


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Iso-Footcandle Lines of Horizontal Illumination

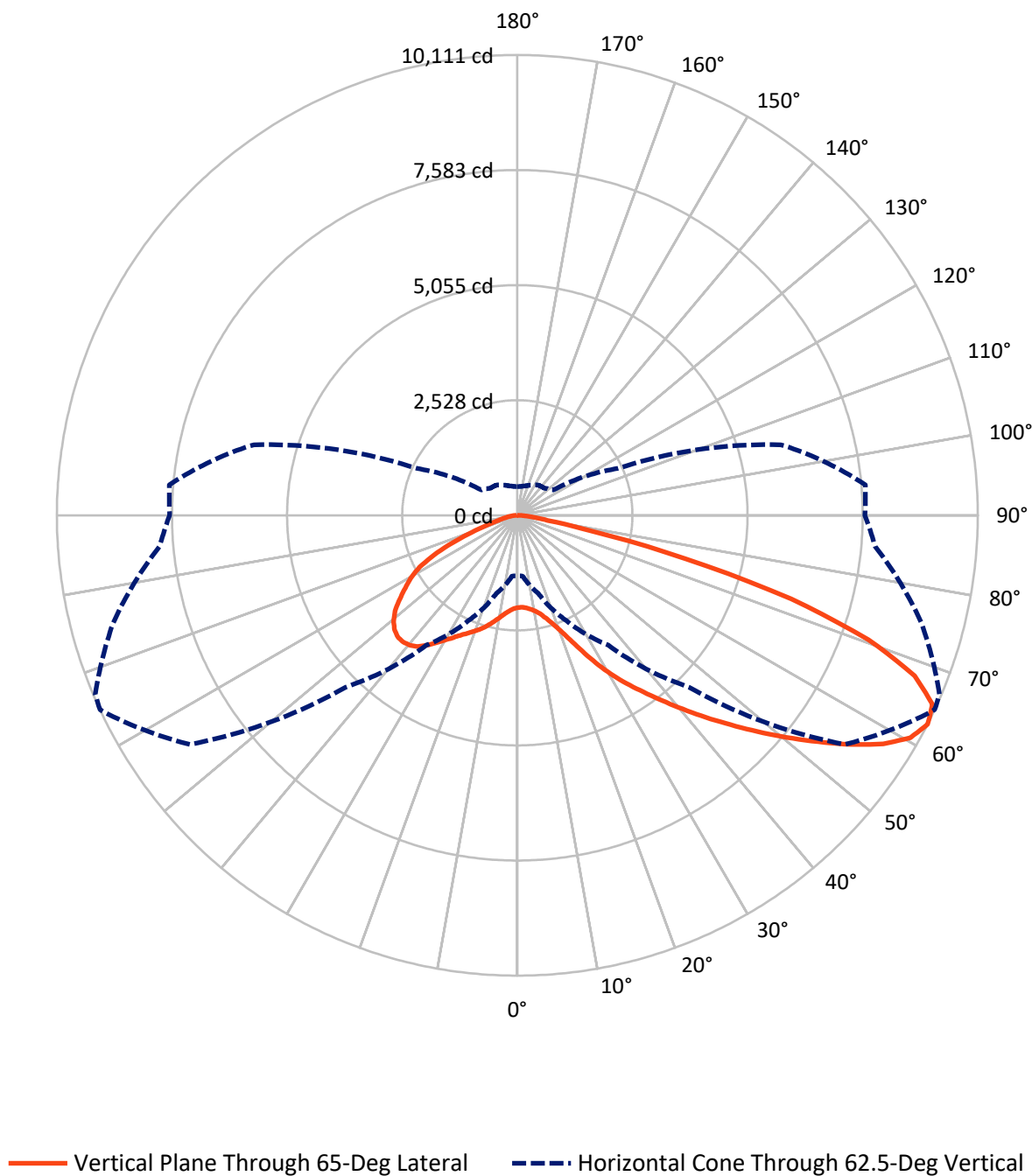
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.1 fc
Type II - Short - N/A

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Luminous Intensity Polar Plot



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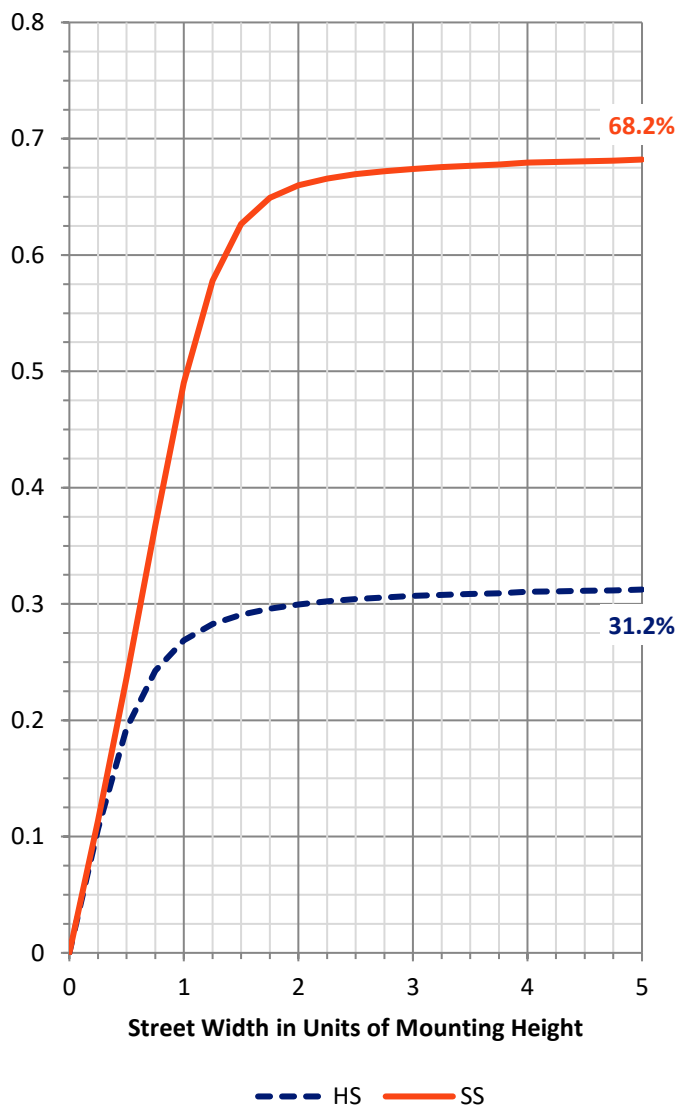
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5800.3	0.0	5800.3
	% Fixture	31.6	0.0	31.6
Street Side	Lumens	12581.0	0.0	12581.0
	% Fixture	68.4	0.0	68.4
Total	Lumens	18381.3	0.0	18381.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	201.9	1.1
10°-20°	684.8	3.7
20°-30°	1388.5	7.6
30°-40°	2402.8	13.1
40°-50°	3636.2	19.8
50°-60°	4263.2	23.2
60°-70°	3574.2	19.4
70°-80°	1973.2	10.7
80°-90°	256.3	1.4
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°	18381.3	100.0
0°-180°	18381.3	100.0

Coefficient of Utilization



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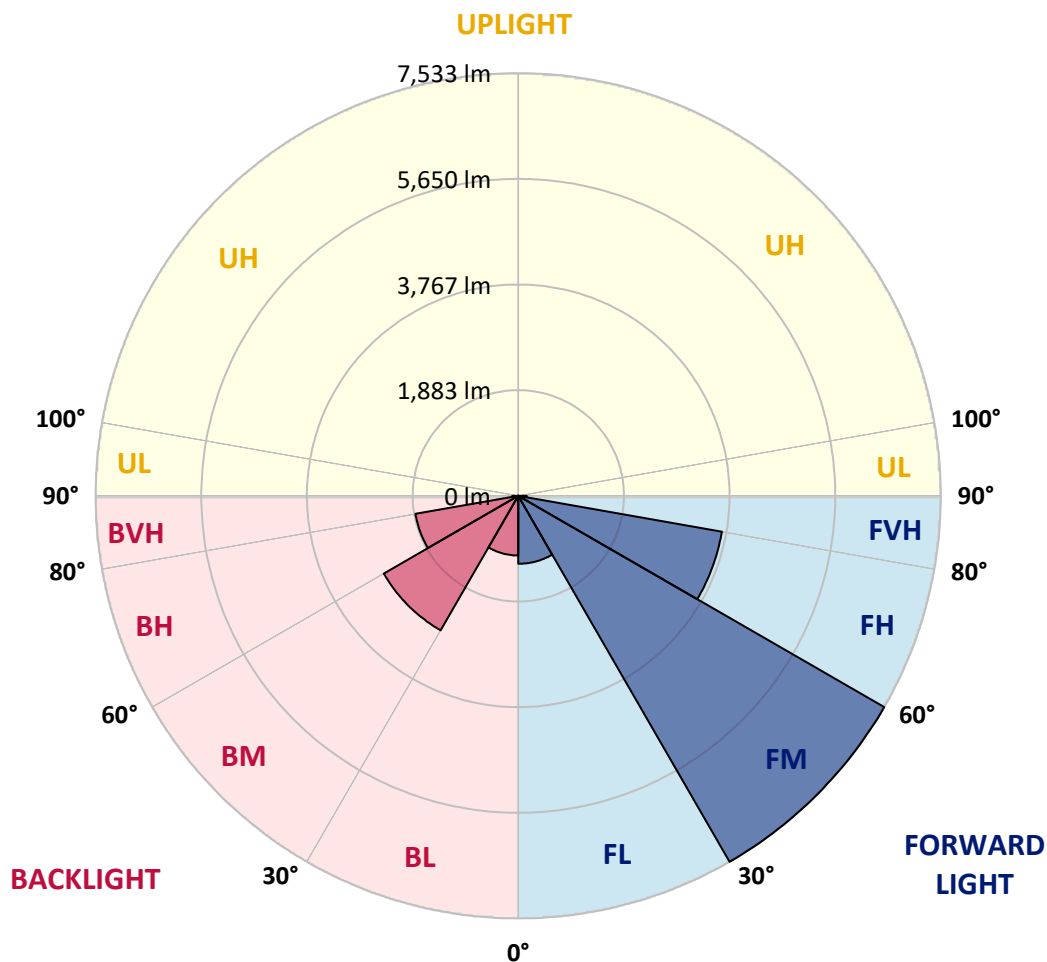
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1211.6	6.6			
FM	(30°-60°)	7533.3	41.0			
FH	(60°-80°)	3686.8	20.1			G2/5000
FVH	(80°-90°)	149.4	0.8			G2/225
BL	(0°-30°)	1063.7	5.8	B3/2500		
BM	(30°-60°)	2769.0	15.1	B3/5000		
BH	(60°-80°)	1860.7	10.1	B3/2500		G3/2500
BVH	(80°-90°)	106.9	0.6			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 Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	2025.5	2025.5	2025.5	2025.5	2025.5	2025.5	2025.5	2025.5	2025.5	2025.5	2025.5
2.5°	2012.2	2006.4	2011.3	2011.3	2013.1	2012.2	2018.8	2020.8	2023.7	2029.4	2029.4
5°	1992.2	1991.2	1999.8	2007.5	2015.0	2021.7	2030.3	2042.7	2044.6	2051.3	2059.8
7.5°	1985.5	1979.8	1993.1	2002.6	2020.8	2037.0	2059.8	2080.9	2089.5	2092.3	2108.5
10°	2037.0	2027.4	2039.9	2045.6	2060.9	2077.1	2103.7	2137.1	2146.7	2158.1	2176.2
12.5°	2124.7	2114.3	2132.3	2140.9	2155.3	2169.5	2187.7	2220.0	2224.9	2245.9	2263.0
15°	2244.9	2232.4	2243.9	2254.4	2278.3	2291.6	2309.7	2341.2	2341.2	2357.4	2369.8
17.5°	2407.9	2391.7	2400.3	2404.1	2419.4	2439.4	2469.9	2497.6	2511.9	2506.2	2489.0
20°	2651.2	2631.1	2631.1	2612.0	2606.3	2622.6	2662.5	2700.8	2715.9	2686.4	2644.5
22.5°	3016.4	2987.8	2971.6	2906.7	2881.0	2882.9	2922.9	2969.6	2982.0	2929.6	2835.1
25°	3480.8	3436.0	3414.1	3318.6	3260.5	3210.0	3241.5	3301.5	3318.6	3253.9	3101.2
27.5°	3945.2	3948.1	3927.1	3812.7	3716.3	3623.9	3607.6	3670.6	3688.7	3615.3	3426.5
30°	4596.6	4528.9	4488.8	4351.4	4214.2	4084.4	4017.7	4043.4	4048.2	3960.5	3741.1
32.5°	5158.3	5141.1	5055.3	4935.1	4758.7	4555.6	4444.0	4403.0	4395.3	4270.5	4010.1
35°	5798.1	5788.6	5698.1	5555.0	5364.2	5082.0	4880.7	4763.5	4754.0	4578.5	4276.1
37.5°	6448.6	6448.6	6359.8	6203.5	6006.1	5653.2	5347.1	5161.1	5130.6	4901.8	4547.0
40°	6967.3	6935.9	6952.1	6886.3	6660.2	6285.5	5864.9	5595.1	5554.1	5279.4	4835.0
42.5°	7262.0	7251.6	7348.8	7422.2	7329.7	7030.3	6435.2	6065.2	6007.9	5695.2	5166.8
45°	7327.8	7316.3	7489.9	7758.8	7888.5	7765.5	7055.1	6560.1	6490.5	6130.0	5522.6
47.5°	7176.2	7153.3	7407.9	7832.3	8248.1	8464.6	7726.4	7097.0	6995.9	6553.4	5887.8
50°	6720.3	6698.4	7083.7	7647.3	8369.2	8939.4	8455.0	7666.4	7511.8	7007.4	6256.9
52.5°	5729.5	5740.0	6343.6	7118.0	8209.9	9235.1	9082.5	8266.2	8080.3	7471.8	6603.0
55°	4463.1	4485.9	5227.9	6080.4	7572.9	9190.3	9510.7	8884.2	8699.2	7908.6	6960.7
57.5°	3195.6	3296.7	3992.0	4836.0	6349.4	8479.8	9604.1	9471.6	9292.3	8385.4	7310.6
60°	2071.3	2089.5	2804.7	3655.4	4835.0	7217.2	9414.4	9917.0	9776.8	8871.8	7603.4
62.5°	1327.5	1339.9	1775.7	2556.8	3479.9	5339.4	8775.4	10110.5	10067.7	9193.1	7884.7
65°	975.6	966.1	1193.0	1689.8	2344.1	3292.9	7534.8	10017.1	10102.0	9394.3	8117.4
67.5°	814.4	801.0	912.7	1170.1	1727.0	1870.1	5575.0	9409.6	9720.5	9371.5	8288.2
70°	741.9	730.5	798.2	868.8	1347.5	1252.1	2810.3	8180.3	8659.1	9111.1	8260.5
72.5°	628.4	608.4	700.9	771.5	1048.1	960.3	1161.5	6283.6	6867.2	8276.7	7871.4
75°	487.3	474.0	553.1	679.0	787.7	749.6	734.3	3815.6	4452.6	6400.8	6886.3
77.5°	386.2	368.1	440.5	529.3	708.6	565.5	534.9	1643.2	2274.5	4086.4	5152.6
80°	290.9	274.7	334.8	418.6	544.6	426.3	346.1	670.5	857.3	2070.4	2591.1
82.5°	206.9	192.6	233.6	307.1	366.2	382.4	212.7	375.8	422.5	798.2	578.8
85°	132.5	124.0	156.4	192.6	232.7	246.0	129.7	196.5	215.6	329.0	241.3
87.5°	72.5	59.1	83.9	89.7	107.7	98.2	62.0	71.5	77.3	119.2	102.1
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°	2025.5	2025.5	2025.5	2025.5	2025.5	2025.5	2025.5	2025.5	2025.5	2025.5	2025.5
2.5°	2033.2	2036.1	2045.6	2048.5	2055.1	2063.7	2069.4	2075.1	2075.1	2080.9	2080.9
5°	2060.9	2067.5	2087.5	2098.0	2115.2	2132.3	2142.9	2155.3	2162.9	2166.6	2168.6
7.5°	2114.3	2124.7	2153.3	2171.5	2201.0	2224.9	2241.1	2258.3	2262.1	2272.5	2268.7
10°	2186.7	2199.1	2231.5	2265.9	2301.1	2330.7	2345.9	2358.3	2363.1	2365.1	2360.3
12.5°	2269.7	2287.8	2329.7	2371.7	2409.0	2434.7	2438.5	2435.6	2422.3	2410.8	2410.8
15°	2371.7	2387.9	2434.7	2480.4	2516.7	2521.4	2497.6	2482.3	2466.1	2463.3	2463.3
17.5°	2493.8	2502.3	2545.3	2590.1	2592.9	2576.7	2541.5	2527.1	2511.9	2501.4	2502.3
20°	2635.9	2633.0	2663.6	2682.6	2662.5	2613.0	2559.6	2535.7	2520.5	2508.1	2509.0
22.5°	2805.6	2783.7	2779.9	2775.1	2721.7	2617.7	2545.3	2514.7	2491.0	2473.7	2479.5
25°	3052.7	2968.7	2910.5	2878.1	2758.0	2592.0	2499.5	2431.8	2387.0	2357.4	2368.9
27.5°	3361.6	3220.4	3073.6	2994.4	2758.0	2539.5	2388.9	2279.2	2205.8	2175.3	2190.5
30°	3656.3	3508.5	3292.0	3134.7	2751.3	2453.7	2210.5	2058.0	1972.1	1941.7	1959.7
32.5°	3908.0	3746.9	3523.7	3288.2	2735.0	2314.4	1989.3	1820.5	1737.6	1701.3	1719.4
35°	4141.7	3970.0	3756.4	3456.9	2692.2	2110.4	1746.1	1617.3	1524.9	1466.7	1485.7
37.5°	4381.1	4177.0	3976.7	3609.5	2614.9	1872.0	1559.2	1449.6	1340.8	1262.6	1283.6
40°	4641.4	4397.2	4212.2	3700.1	2488.1	1645.0	1414.3	1314.2	1198.7	1115.8	1132.0
42.5°	4945.6	4661.4	4474.5	3746.9	2314.4	1483.9	1319.9	1221.6	1112.9	1045.2	1058.5
45°	5263.2	4952.3	4713.9	3746.0	2120.9	1408.6	1289.3	1192.1	1071.9	1001.3	1012.8
47.5°	5596.0	5256.5	4920.8	3684.9	1953.0	1419.0	1272.1	1128.1	995.6	926.9	936.4
50°	5929.7	5589.3	5121.1	3570.5	1881.6	1396.2	1208.3	1038.5	882.1	820.1	824.0
52.5°	6260.7	5943.2	5293.7	3407.4	1809.0	1311.3	1126.3	922.2	835.4	792.5	792.5
55°	6593.5	6293.1	5481.6	3169.9	1627.9	1212.1	988.9	878.3	798.2	759.1	755.3
57.5°	6927.3	6697.5	5659.8	2932.4	1399.9	1090.0	913.6	824.9	761.0	727.6	721.9
60°	7274.4	7159.9	5843.9	2714.1	1174.9	933.6	858.2	782.0	717.1	680.0	677.1
62.5°	7632.0	7669.3	5987.9	2432.7	967.9	838.2	808.7	730.5	667.6	632.2	631.3
65°	7992.5	8160.3	6082.3	2042.7	784.8	747.6	755.3	674.2	610.3	579.8	578.8
67.5°	8264.3	8514.2	6055.6	1545.9	643.7	661.8	688.5	615.1	555.0	531.2	532.2
70°	8294.8	8472.1	5792.5	1058.5	538.8	577.9	614.2	556.9	495.0	477.8	478.8
72.5°	7888.5	7900.0	5059.1	691.4	455.8	507.4	536.0	497.8	437.7	420.6	419.6
75°	6823.3	6533.5	3714.5	455.8	381.5	435.8	462.5	435.8	377.6	381.5	368.1
77.5°	5169.7	4627.1	2255.4	324.2	318.5	366.2	402.4	383.3	333.7	374.7	329.9
80°	2663.6	2503.4	1006.1	242.2	251.7	292.7	330.9	306.2	264.1	251.7	229.8
82.5°	610.3	709.5	396.7	173.5	182.1	210.7	252.8	229.8	189.7	160.2	158.3
85°	213.6	233.6	175.5	108.8	106.8	131.6	171.7	153.5	128.7	103.0	108.8
87.5°	67.8	88.7	65.8	43.9	45.8	59.1	79.1	72.5	60.1	39.1	41.0
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)