

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: P963175

Luminaire Tested: **NAV-SB2D-835-U-T2U-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963175
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-17)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-835-U-T2U-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II U
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14786.6 lumens
Efficiency: N/A
Efficacy: 100.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B2 - U0 - G2

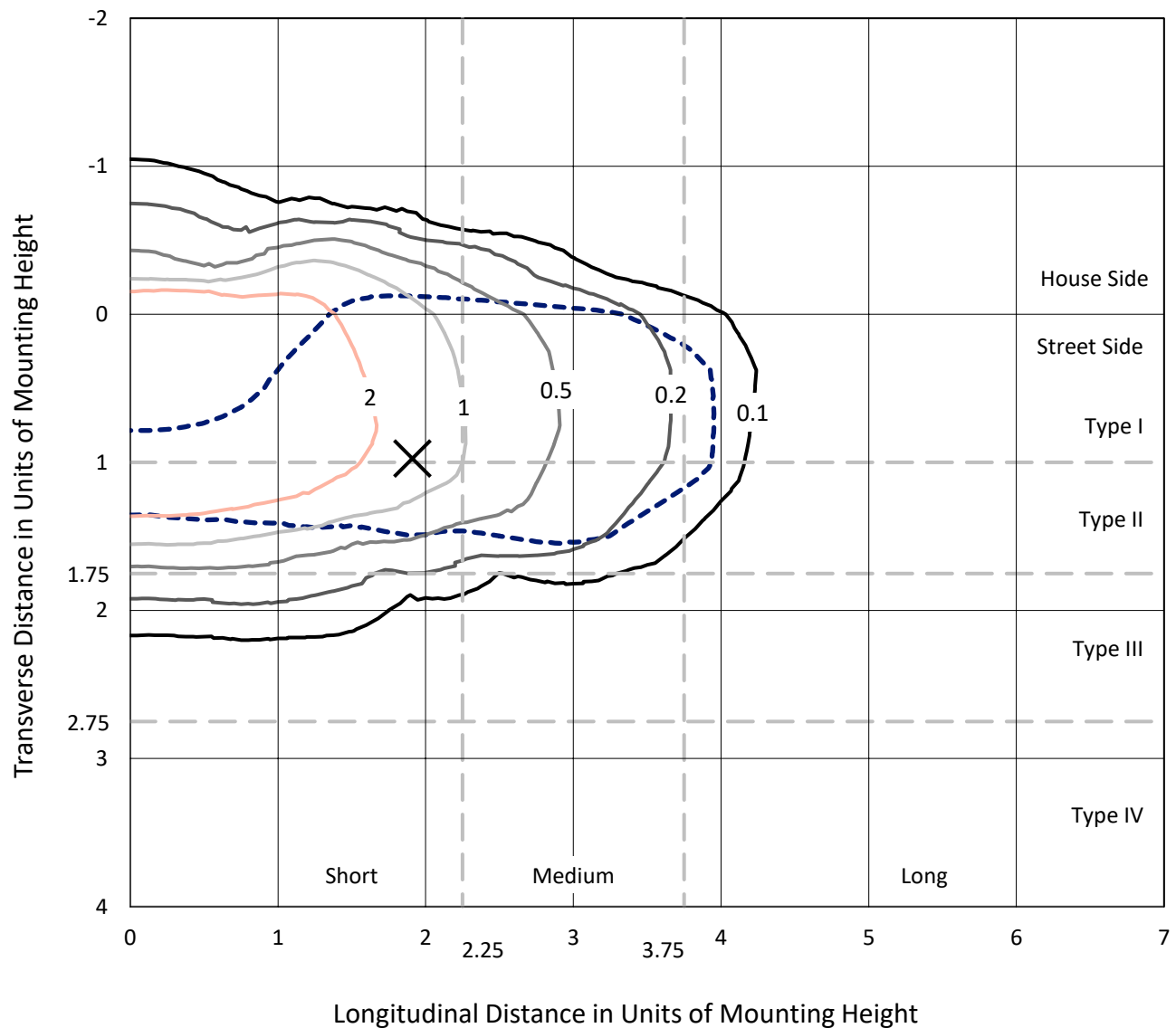
Input Watts (W): 147.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

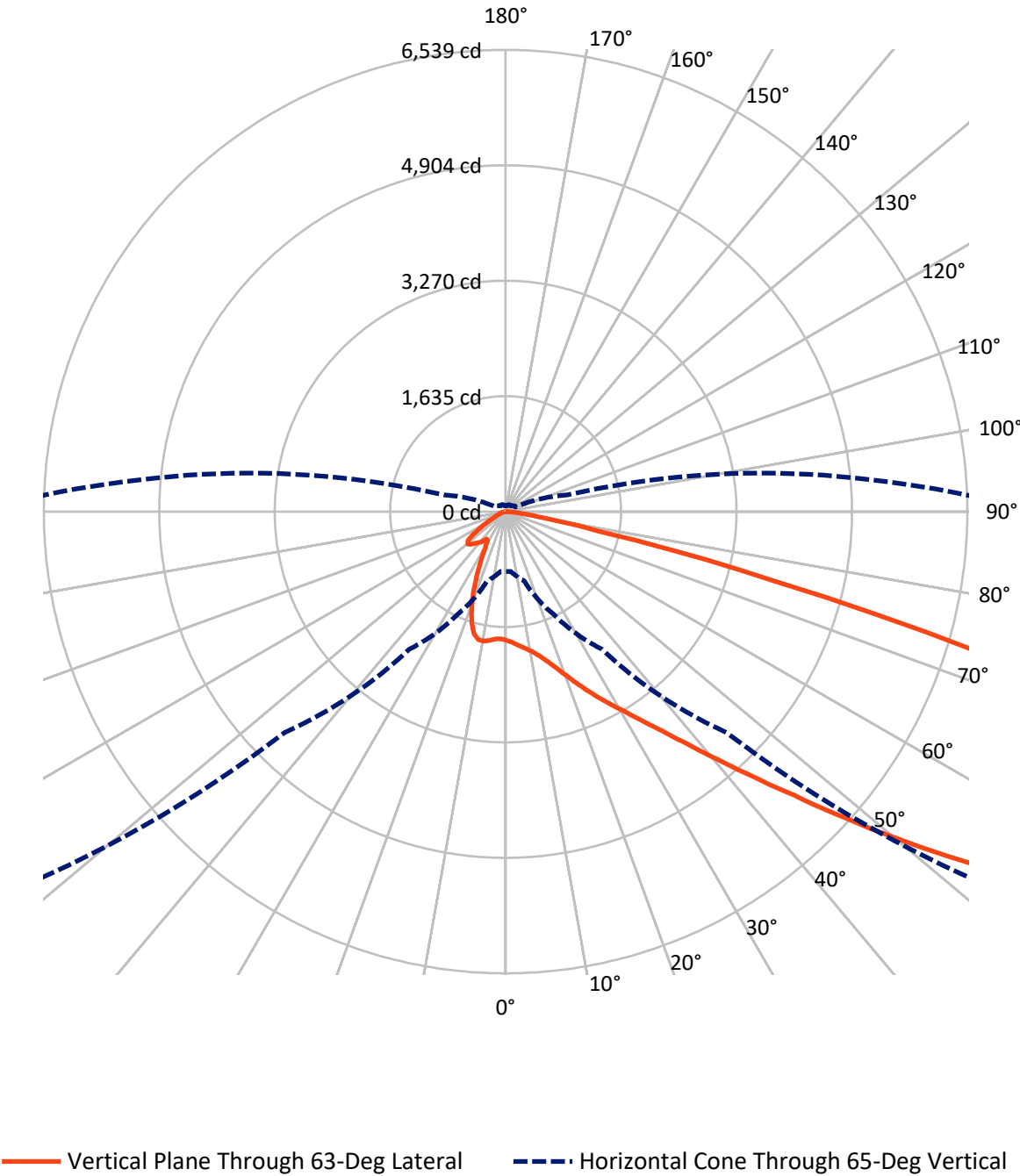
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5 fc
Type II - Short - N/A

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Luminous Intensity Polar Plot



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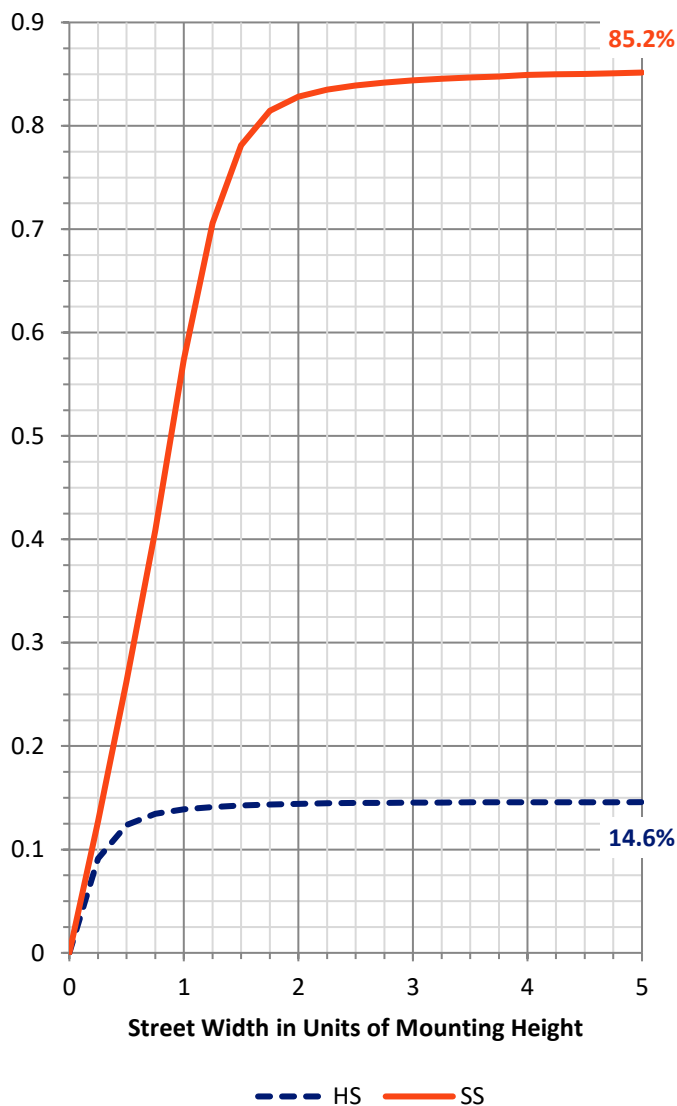
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2173.5	0.0	2173.5
	% Fixture	14.7	0.0	14.7
Street Side	Lumens	12613.1	0.0	12613.1
	% Fixture	85.3	0.0	85.3
Total	Lumens	14786.6	0.0	14786.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.9	1.2
10°-20°	477.1	3.2
20°-30°	830.7	5.6
30°-40°	1497.3	10.1
40°-50°	2969.6	20.1
50°-60°	4045.1	27.4
60°-70°	3228.8	21.8
70°-80°	1461.1	9.9
80°-90°	105.0	0.7
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°	14786.6	100.0
0°-180°	14786.6	100.0

Coefficient of Utilization



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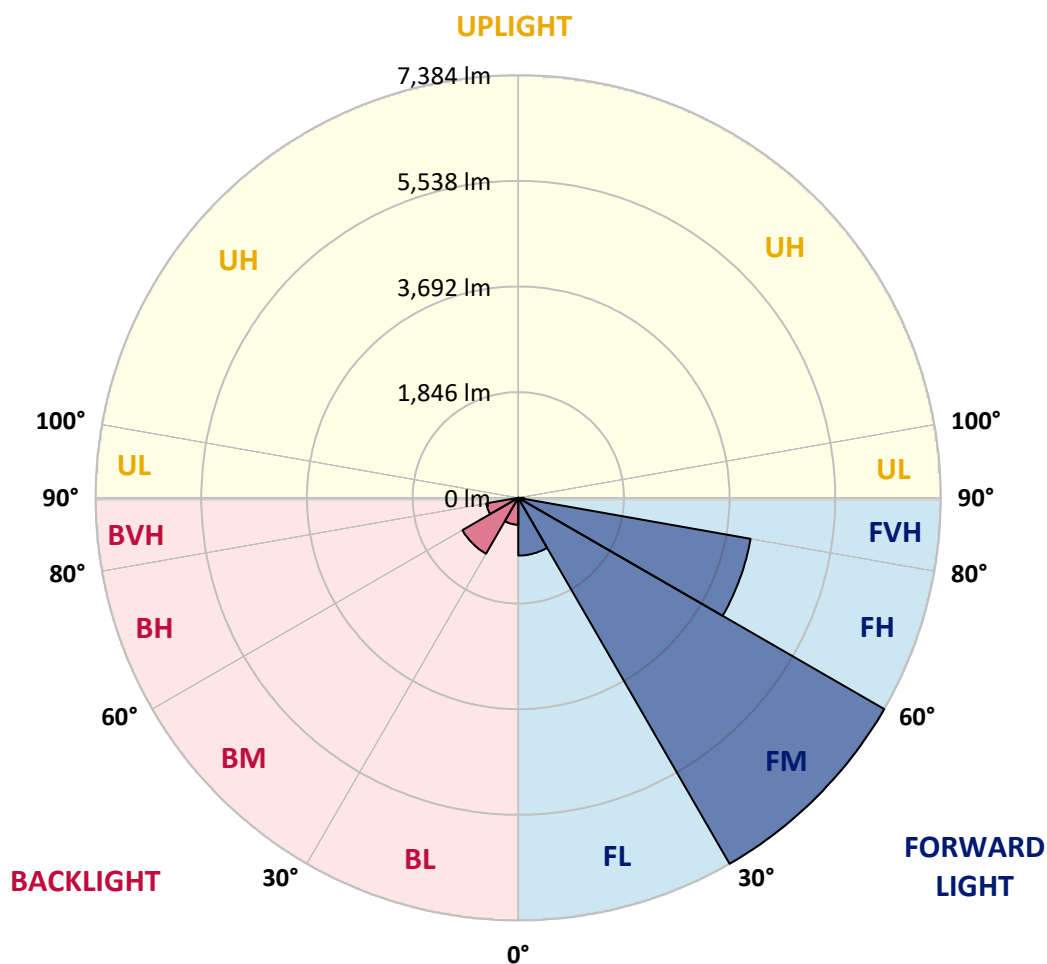
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1009.4	6.8			
FM	(30°-60°)	7384.1	49.9			
FH	(60°-80°)	4122.4	27.9			G2/5000
FVH	(80°-90°)	97.2	0.7			G1/100
BL	(0°-30°)	470.4	3.2	B1/500		
BM	(30°-60°)	1127.9	7.6	B2/2500		
BH	(60°-80°)	567.4	3.8	B2/1000		G2/1000
BVH	(80°-90°)	7.8	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	63°	65°	75°	85°
0°	1824.9	1824.9	1824.9	1824.9	1824.9	1824.9	1824.9	1824.9	1824.9	1824.9	1824.9
2.5°	1867.7	1862.6	1869.7	1866.6	1864.6	1860.6	1858.5	1856.5	1852.4	1849.4	1837.2
5°	1872.8	1869.7	1876.9	1882.9	1889.1	1895.1	1898.2	1902.3	1898.2	1890.1	1877.8
7.5°	1830.0	1828.0	1843.3	1861.6	1889.1	1912.4	1937.9	1952.1	1953.1	1950.1	1936.8
10°	1827.0	1821.9	1837.2	1859.6	1895.1	1936.8	1981.6	2012.2	2016.2	2029.4	2015.2
12.5°	1874.8	1869.7	1891.0	1915.5	1952.1	1995.9	2050.8	2093.5	2099.6	2118.0	2107.7
15°	1955.2	1948.0	1972.4	2004.0	2050.8	2100.6	2158.6	2197.3	2202.3	2224.8	2206.4
17.5°	2048.8	2041.6	2070.1	2103.7	2154.5	2222.7	2289.8	2332.6	2338.6	2352.9	2319.4
20°	2168.8	2159.7	2182.0	2212.6	2266.5	2347.9	2428.2	2489.2	2488.2	2488.2	2433.2
22.5°	2308.2	2294.0	2313.2	2337.6	2388.6	2487.2	2594.0	2666.2	2666.2	2637.7	2547.2
25°	2457.6	2443.4	2464.8	2487.2	2532.0	2643.9	2768.9	2858.5	2862.5	2813.7	2669.3
27.5°	2644.8	2626.6	2642.9	2669.3	2695.7	2809.6	2958.1	3062.0	3063.9	2988.7	2785.2
30°	3005.0	2953.1	2902.2	2873.7	2886.0	2998.8	3157.5	3272.5	3282.7	3178.9	2911.4
32.5°	3664.2	3654.0	3475.0	3240.9	3118.9	3202.3	3380.3	3518.7	3524.8	3391.5	3075.2
35°	4688.6	4676.4	4388.4	3942.9	3545.2	3475.0	3650.9	3814.7	3810.6	3660.1	3287.8
37.5°	5911.3	5900.1	5520.6	4924.5	4280.6	3886.9	3999.9	4171.8	4197.2	3999.9	3562.4
40°	6956.0	6914.2	6674.2	6099.5	5257.1	4570.5	4496.3	4610.1	4636.7	4402.7	3911.3
42.5°	7747.4	7711.8	7589.7	7230.7	6439.3	5581.6	5081.1	5124.9	5154.4	4873.7	4312.2
45°	8157.4	8149.3	8198.1	8164.4	7643.6	6822.7	5917.3	5735.3	5746.5	5395.5	4766.9
47.5°	8215.4	8211.3	8434.0	8749.4	8679.2	8222.4	6990.6	6496.1	6456.5	5984.5	5261.2
50°	7873.5	7865.4	8292.7	8883.7	9371.0	9398.4	8209.2	7353.8	7266.2	6593.8	5777.0
52.5°	6782.0	6780.0	7481.9	8465.6	9614.1	10427.8	9413.7	8295.7	8149.3	7238.8	6322.2
55°	5218.5	5256.1	6060.8	7223.5	9170.6	10923.2	10495.0	9341.4	9116.7	7887.8	6824.8
57.5°	3696.7	3751.6	4547.1	5582.7	7795.2	10630.3	11226.4	10389.2	10147.1	8534.8	7334.4
60°	1985.6	2034.5	2831.0	4067.0	5799.3	9537.7	11611.9	11298.7	11069.8	9149.2	7794.2
62.5°	1183.1	1199.4	1528.9	2625.5	3922.6	7286.6	11448.1	11991.4	11803.2	9664.9	8194.0
65°	849.4	852.5	1018.2	1603.2	2381.4	4427.1	10299.7	12323.0	12265.0	10053.5	8490.0
67.5°	715.1	713.1	782.3	1065.1	1622.5	2217.6	7893.9	11854.0	12100.2	10299.7	8657.9
70°	613.4	616.4	697.8	780.2	1219.6	1255.3	3924.5	10321.0	10845.9	10364.8	8647.6
72.5°	456.7	466.9	542.2	711.0	920.7	863.7	1354.9	7652.8	8601.9	9765.6	8199.1
75°	322.5	327.6	381.5	598.2	686.6	628.6	691.8	3956.1	5172.8	7487.0	6710.8
77.5°	248.3	257.4	288.9	418.1	676.5	441.5	423.2	1369.2	2103.7	4522.7	4601.0
80°	134.3	150.6	208.6	302.2	475.1	312.3	209.5	545.2	713.1	2114.9	1774.1
82.5°	69.2	77.3	145.4	217.7	270.6	272.6	103.7	226.8	294.0	653.0	243.1
85°	27.5	33.6	97.7	120.0	139.4	134.3	46.8	91.5	105.8	181.1	74.2
87.5°	6.1	10.1	35.6	27.5	26.4	28.5	11.2	21.3	20.3	21.3	13.2
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°	1824.9	1824.9	1824.9	1824.9	1824.9	1824.9	1824.9	1824.9	1824.9	1824.9	1824.9
2.5°	1836.2	1832.1	1820.9	1808.7	1794.5	1786.3	1781.2	1780.2	1773.0	1768.0	1773.0
5°	1866.6	1862.6	1841.2	1815.8	1788.3	1767.0	1746.6	1728.4	1701.9	1696.8	1694.7
7.5°	1927.7	1916.5	1881.9	1847.4	1795.5	1733.4	1658.1	1571.6	1494.3	1471.0	1459.8
10°	2003.0	1987.7	1944.0	1882.9	1768.0	1599.1	1417.1	1248.1	1113.9	1076.2	1062.0
12.5°	2088.4	2075.2	2017.2	1904.3	1653.0	1346.8	1068.2	858.5	728.4	695.8	686.6
15°	2190.1	2170.8	2090.5	1871.8	1447.5	1023.4	733.5	609.4	562.5	556.5	550.3
17.5°	2297.9	2266.5	2155.6	1754.8	1170.9	727.3	566.6	531.1	510.7	504.6	501.5
20°	2396.7	2356.0	2194.2	1577.8	874.8	566.6	507.6	484.2	465.9	458.8	454.7
22.5°	2495.4	2437.3	2194.2	1336.7	656.1	502.6	465.9	444.5	423.2	414.0	409.0
25°	2598.1	2520.8	2155.6	1068.2	528.0	460.8	426.2	402.8	384.5	373.3	369.3
27.5°	2697.8	2590.9	2067.0	813.8	470.0	424.1	389.6	367.3	349.9	341.8	341.8
30°	2792.4	2660.1	1943.0	617.5	432.3	388.6	356.1	336.7	319.4	311.3	312.3
32.5°	2920.5	2747.6	1810.7	506.6	399.7	355.1	325.5	307.2	291.9	285.9	285.9
35°	3098.6	2876.8	1696.8	497.4	372.3	327.6	298.1	280.7	265.5	260.5	260.5
37.5°	3350.8	3085.4	1636.7	558.5	349.9	303.1	275.7	257.4	243.1	239.0	238.0
40°	3662.1	3368.2	1669.3	619.5	334.7	281.8	255.3	237.0	224.8	219.8	218.7
42.5°	4031.3	3717.1	1849.4	666.2	324.5	263.4	236.0	215.7	207.6	205.5	205.5
45°	4455.6	4100.5	2125.0	716.2	308.2	246.2	216.7	201.4	195.3	194.3	193.3
47.5°	4937.7	4521.7	2444.4	778.2	291.9	229.9	201.4	191.3	186.1	184.1	184.1
50°	5415.9	4945.9	2773.0	812.8	278.7	214.6	189.2	181.1	177.0	176.0	176.0
52.5°	5916.3	5382.3	3038.5	780.2	267.5	202.4	179.1	172.9	168.8	167.9	167.9
55°	6393.4	5735.3	3084.3	662.3	245.2	190.2	167.9	164.8	159.7	159.7	158.7
57.5°	6804.4	5912.3	2760.8	486.3	222.7	171.9	156.6	153.6	149.5	148.5	147.5
60°	7181.8	5861.5	2131.2	327.6	198.3	153.6	142.4	140.4	136.3	131.2	130.2
62.5°	7394.5	5637.6	1457.8	213.6	173.9	134.3	126.2	125.2	115.9	105.8	103.7
65°	7474.8	5177.8	909.4	155.6	145.4	114.9	108.9	106.8	93.6	82.4	81.4
67.5°	7404.6	4421.0	458.8	123.1	114.9	95.6	89.5	89.5	80.4	70.2	69.2
70°	7123.9	3314.2	193.3	98.7	88.5	73.3	73.3	77.3	68.2	57.0	56.0
72.5°	6514.5	2229.8	102.7	75.2	66.1	51.9	60.1	63.0	53.9	42.7	42.7
75°	5178.8	1360.1	71.2	56.0	41.7	36.6	45.8	47.8	36.6	28.5	27.5
77.5°	3542.1	781.3	47.8	35.6	26.4	21.3	31.6	29.5	19.4	13.2	14.2
80°	1555.3	325.5	27.5	16.3	10.1	8.1	11.2	8.1	6.1	4.1	4.1
82.5°	182.0	76.3	10.1	6.1	4.1	2.0	1.0	0.0	0.0	0.0	0.0
85°	37.6	9.1	5.1	2.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	7.1	2.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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)