

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: P965752

Luminaire Tested: **NAV-SB4A-827-U-T3R-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P965752
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-6)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4A-827-U-T3R-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 2700K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III
ROADWAY OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13340.4 lumens
Efficiency: N/A
Efficacy: 117.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B1 - 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

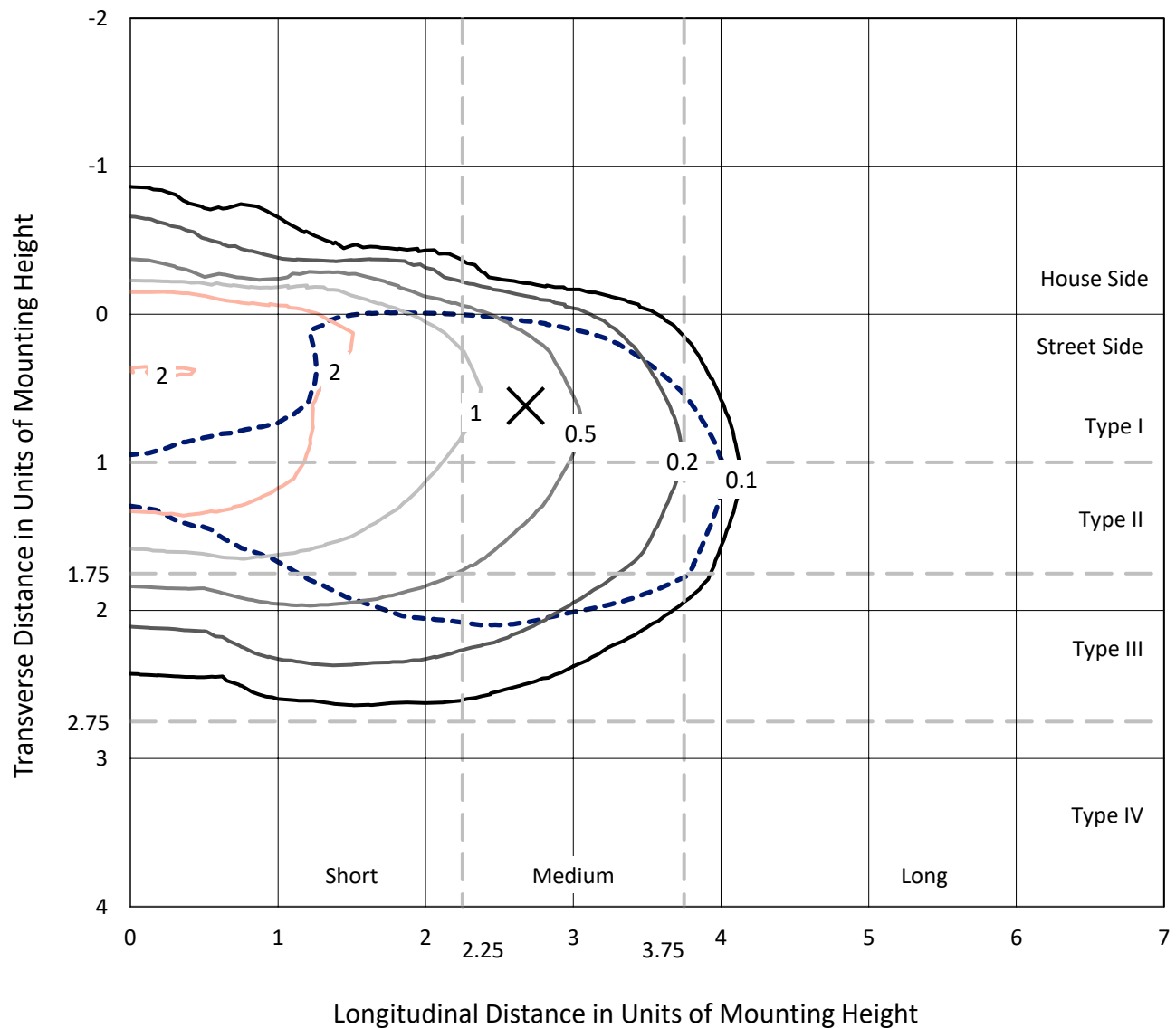


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Iso-Footcandle Lines of Horizontal Illumination

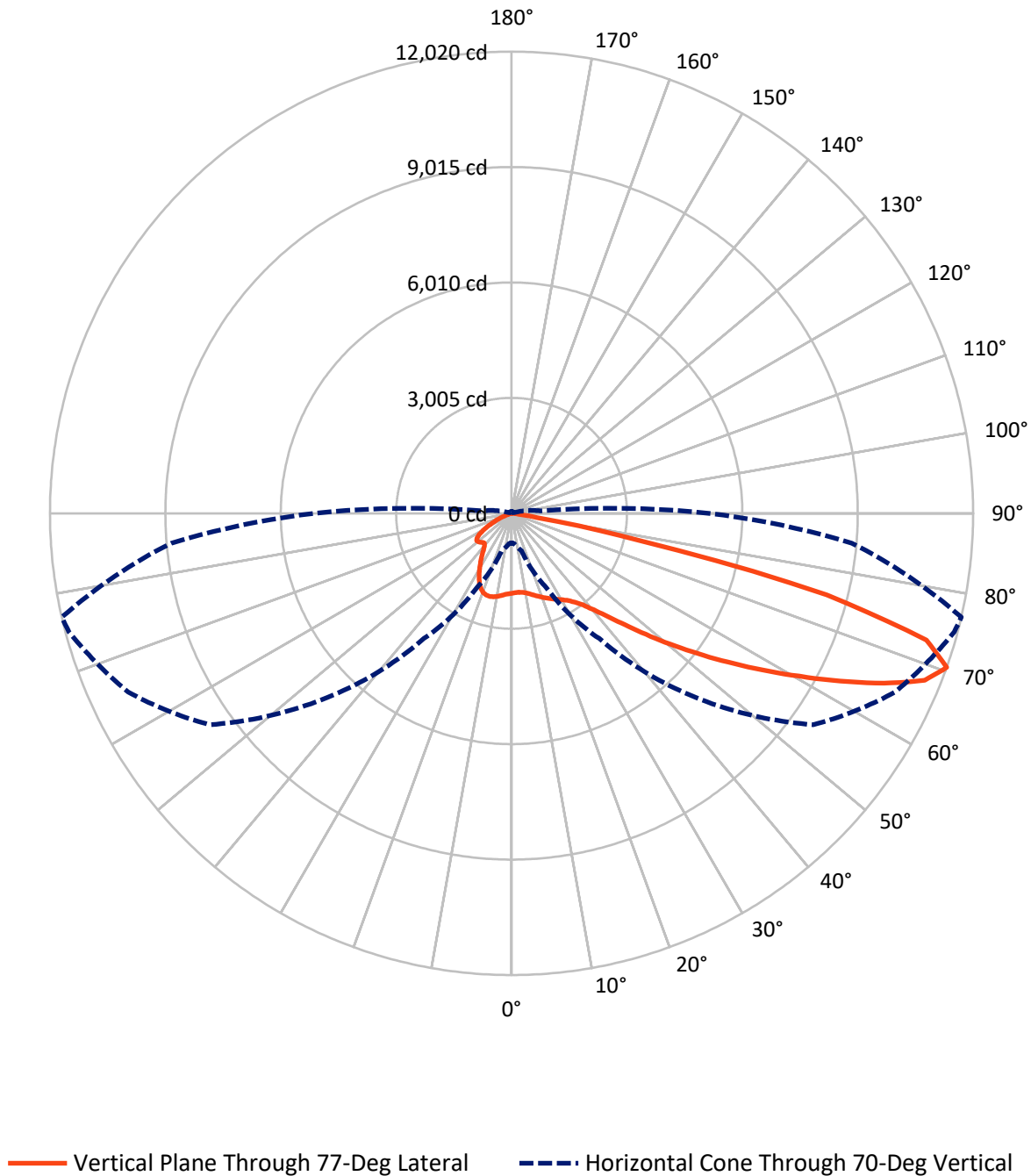
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.9 fc
Type III - Medium - N/A

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Luminous Intensity Polar Plot



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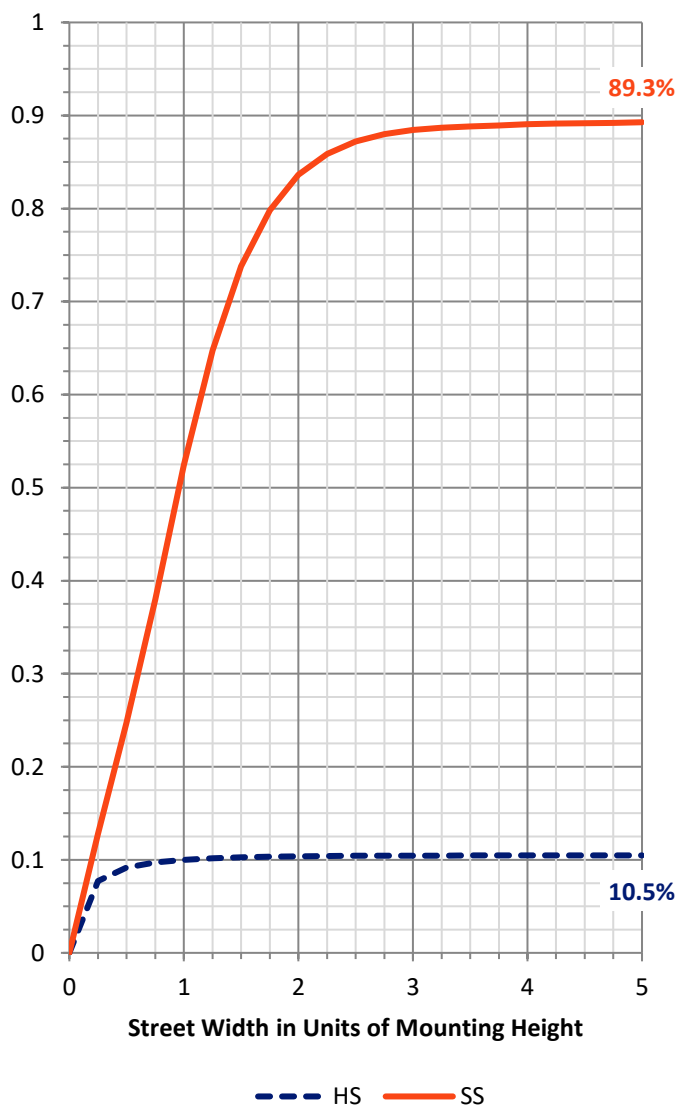
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1406.3	0.0	1406.3
	% Fixture	10.5	0.0	10.5
Street Side	Lumens	11934.1	0.0	11934.1
	% Fixture	89.5	0.0	89.5
Total	Lumens	13340.4	0.0	13340.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	179.3	1.3
10°-20°	425.7	3.2
20°-30°	658.5	4.9
30°-40°	1194.8	9.0
40°-50°	2255.4	16.9
50°-60°	3258.9	24.4
60°-70°	3469.0	26.0
70°-80°	1838.3	13.8
80°-90°	60.4	0.5
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°	13340.4	100.0
0°-180°	13340.4	100.0

Coefficient of Utilization



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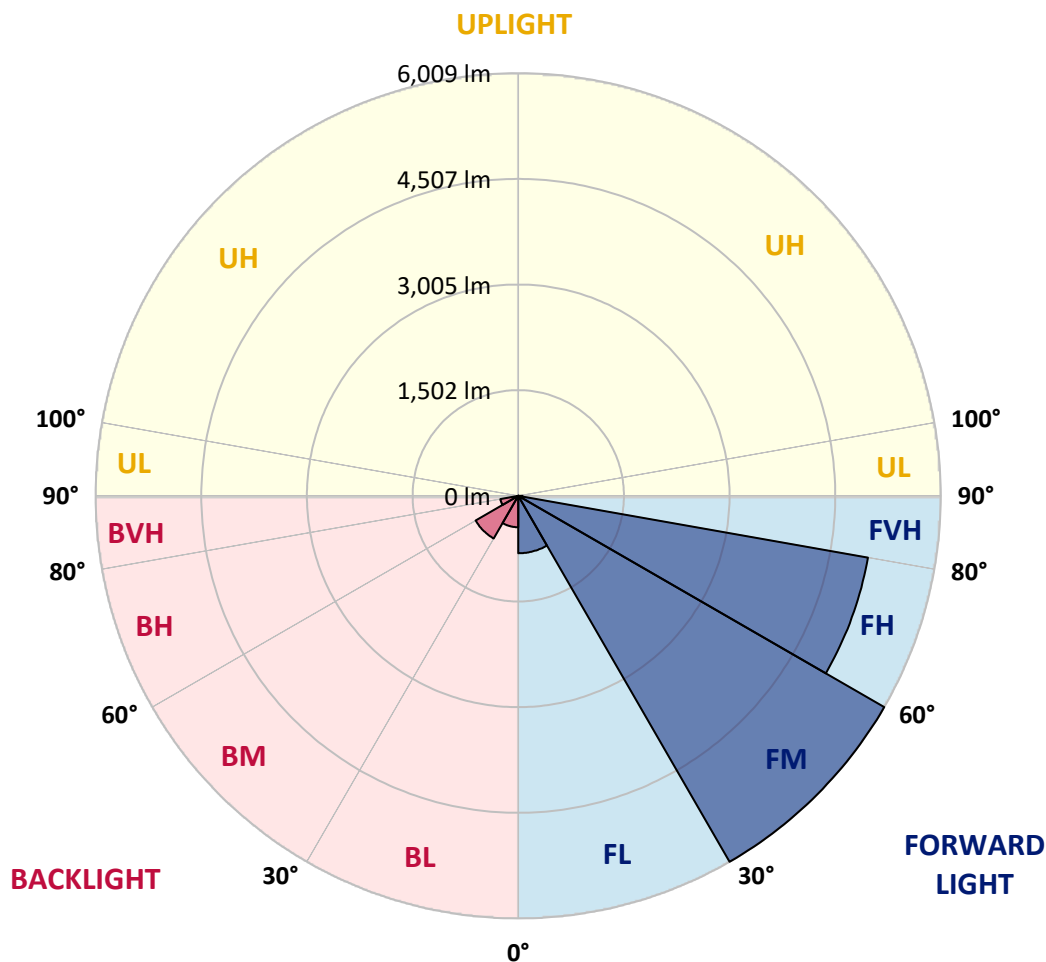
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	816.7	6.1			
FM	(30°-60°)	6009.1	45.0			
FH	(60°-80°)	5049.5	37.9			G3/7500
FVH	(80°-90°)	58.7	0.4			G1/100
BL	(0°-30°)	446.8	3.3	B1/500		
BM	(30°-60°)	700.0	5.2	B1/1000		
BH	(60°-80°)	257.8	1.9	B1/500		G1/500
BVH	(80°-90°)	1.6	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type III Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77°	85°
0°	2080.9	2080.9	2080.9	2080.9	2080.9	2080.9	2080.9	2080.9	2080.9	2080.9	2080.9
2.5°	1953.6	1971.4	1968.8	1980.6	1984.8	2001.6	2018.5	2041.3	2066.5	2065.7	2082.5
5°	1843.3	1861.0	1865.2	1881.2	1901.4	1927.5	1962.1	2007.6	2054.7	2062.3	2096.0
7.5°	1712.7	1731.2	1742.2	1774.2	1811.3	1865.2	1921.7	1988.2	2066.5	2077.5	2142.4
10°	1582.1	1599.0	1613.2	1658.8	1717.8	1797.7	1889.6	1985.6	2091.0	2107.0	2198.8
12.5°	1501.2	1517.3	1533.3	1572.9	1646.2	1743.8	1868.6	1997.4	2131.4	2154.1	2275.5
15°	1472.6	1487.0	1499.6	1534.9	1603.2	1714.4	1864.4	2021.9	2182.8	2213.1	2368.2
17.5°	1476.8	1484.4	1492.8	1519.8	1586.3	1700.9	1872.0	2064.0	2243.4	2270.4	2460.8
20°	1501.2	1505.4	1506.3	1524.8	1583.8	1699.2	1887.1	2104.4	2300.7	2337.0	2552.7
22.5°	1532.4	1534.1	1532.4	1545.1	1599.8	1711.9	1907.3	2153.3	2364.8	2398.5	2645.3
25°	1678.1	1646.2	1605.8	1581.3	1626.8	1736.2	1937.7	2219.0	2434.7	2467.6	2735.4
27.5°	2130.6	2038.7	1893.8	1731.2	1682.3	1771.7	1979.8	2285.5	2505.4	2534.9	2832.3
30°	2865.2	2744.7	2498.7	2132.2	1861.0	1845.8	2034.5	2352.2	2580.4	2612.4	2935.9
32.5°	3601.4	3572.0	3288.1	2780.9	2262.8	2010.9	2125.5	2442.3	2679.9	2705.1	3075.8
35°	4346.2	4286.4	4053.9	3552.6	2882.0	2347.0	2277.1	2560.2	2810.4	2839.0	3279.7
37.5°	4916.5	4880.3	4736.2	4323.4	3616.6	2866.0	2536.7	2743.0	3000.0	3032.0	3540.9
40°	5420.3	5403.5	5354.6	5082.6	4438.0	3545.1	2940.1	3026.1	3262.8	3300.7	3861.0
42.5°	5816.3	5855.9	5883.7	5807.9	5284.7	4320.1	3482.7	3423.7	3629.3	3668.1	4268.7
45°	6221.5	6235.0	6347.0	6456.6	6125.5	5130.5	4094.4	3889.6	4085.0	4133.1	4757.3
47.5°	6481.8	6535.7	6732.9	6925.8	6832.2	5934.2	4751.4	4439.7	4613.3	4703.4	5304.9
50°	6501.2	6603.2	6874.4	7210.6	7347.0	6699.2	5465.8	5066.5	5251.0	5350.4	5889.5
52.5°	6178.6	6337.0	6757.3	7249.3	7625.1	7347.0	6204.6	5693.3	5930.0	6059.8	6496.1
55°	4737.1	4944.4	6316.7	7038.7	7635.9	7838.2	6924.1	6346.2	6686.6	6833.2	7151.6
57.5°	4127.2	4231.6	4966.2	6673.1	7433.0	8036.2	7574.4	6968.0	7509.7	7691.6	7770.8
60°	3433.9	3571.2	4165.1	6075.0	7157.5	8055.6	8149.1	7769.9	8401.8	8606.5	8338.6
62.5°	2333.6	2482.8	3073.3	5047.1	6780.9	8046.2	8619.9	8595.5	9393.3	9613.3	8819.6
65°	1445.7	1539.1	1928.3	4121.3	6254.3	8056.4	9112.8	9598.1	10439.6	10662.9	9192.0
67.5°	1142.4	1185.3	1388.4	3164.3	5347.0	7828.9	9604.8	10540.8	11424.5	11601.5	9305.8
70°	767.5	793.6	1010.1	2121.3	3978.0	6779.2	9595.5	11014.2	11931.6	12020.1	8891.3
72.5°	404.4	424.6	590.6	982.3	2402.7	4818.8	8088.4	10448.1	11427.0	11294.0	7599.8
75°	202.2	235.9	397.6	498.8	1026.1	2687.4	5022.7	8237.5	8994.1	8478.5	4876.1
77.5°	153.3	185.3	328.5	328.5	357.2	904.8	2127.2	4492.8	4144.0	3450.7	1431.3
80°	97.7	126.4	287.3	248.6	149.1	230.0	554.3	1258.6	880.4	669.7	260.3
82.5°	57.3	82.5	239.2	164.3	83.4	85.1	156.7	267.9	228.3	177.7	80.1
85°	22.8	53.9	164.3	64.9	32.9	21.0	47.2	57.3	47.2	35.4	20.2
87.5°	0.0	12.6	28.6	0.0	2.6	1.6	3.4	4.2	4.2	3.4	6.8
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°	2080.9	2080.9	2080.9	2080.9	2080.9	2080.9	2080.9	2080.9	2080.9	2080.9	2080.9
2.5°	2090.1	2091.8	2096.8	2097.7	2085.9	2070.7	2064.9	2062.3	2052.3	2051.3	2053.1
5°	2115.4	2123.0	2115.4	2093.5	2041.3	1968.0	1912.3	1866.8	1825.6	1812.9	1805.3
7.5°	2165.9	2173.5	2150.8	2064.9	1933.5	1787.7	1656.3	1563.6	1480.2	1449.0	1436.3
10°	2238.4	2248.5	2176.9	2003.4	1770.8	1536.7	1314.3	1157.5	1035.4	985.6	964.6
12.5°	2329.4	2333.6	2191.2	1909.9	1559.3	1224.9	909.9	742.2	633.6	593.1	580.5
15°	2429.7	2423.7	2192.9	1782.7	1271.3	866.0	593.9	487.8	443.9	430.5	430.5
17.5°	2534.9	2510.5	2159.2	1599.0	955.3	592.2	440.6	415.3	407.7	404.4	403.5
20°	2638.6	2583.8	2097.7	1358.8	685.7	442.3	400.2	392.6	388.4	386.7	385.0
22.5°	2733.0	2639.4	1992.4	1080.0	497.8	390.9	378.2	371.6	364.0	360.6	359.8
25°	2824.7	2671.5	1844.1	819.7	398.5	365.6	355.5	342.9	332.8	328.5	326.9
27.5°	2914.1	2691.6	1658.8	606.6	355.5	342.0	323.5	305.9	298.3	296.5	294.9
30°	3009.2	2698.4	1448.2	452.4	329.4	312.5	285.6	265.4	261.2	262.0	262.0
32.5°	3125.5	2708.5	1235.8	370.6	307.5	277.2	245.2	224.1	220.7	224.1	223.2
35°	3264.5	2728.7	1031.1	341.2	288.1	241.0	206.4	188.7	185.3	187.9	187.1
37.5°	3453.2	2761.6	839.9	335.3	272.1	210.6	173.5	159.2	159.2	160.1	159.2
40°	3704.2	2849.2	668.9	331.1	263.7	187.9	146.6	140.7	143.2	144.9	144.9
42.5°	4010.1	3035.3	553.5	326.1	254.4	177.7	133.1	130.6	134.8	136.4	136.4
45°	4353.0	3271.3	513.0	317.6	246.0	184.5	127.2	123.8	128.9	129.8	130.6
47.5°	4707.6	3502.1	508.0	308.3	237.6	194.6	125.6	118.0	123.8	124.6	125.6
50°	5066.5	3652.9	513.0	294.0	224.1	194.6	126.4	112.0	117.1	119.6	120.4
52.5°	5427.9	3722.0	509.7	262.8	200.5	182.9	126.4	107.0	112.0	113.8	113.8
55°	5778.3	3708.4	458.3	216.5	170.1	161.7	123.0	102.8	106.2	107.0	107.0
57.5°	6055.6	3520.6	363.1	168.5	138.2	134.8	112.0	97.7	100.2	99.4	99.4
60°	6200.4	3107.8	259.4	129.8	108.6	106.2	98.6	91.0	92.7	88.5	87.6
62.5°	6202.2	2561.9	173.5	102.8	86.8	84.3	84.3	81.7	80.1	71.6	69.1
65°	6069.8	1956.2	115.4	81.7	69.9	65.7	70.7	69.9	64.1	52.3	50.5
67.5°	5769.9	1282.2	87.6	64.1	53.9	51.4	56.5	58.9	54.7	43.8	42.9
70°	5153.3	746.4	72.5	49.7	40.5	37.9	45.5	50.5	45.5	35.4	33.7
72.5°	4280.5	402.7	58.9	37.1	27.8	25.3	36.2	41.3	36.2	26.1	25.3
75°	2777.5	215.7	45.5	24.4	14.3	16.0	27.0	30.3	25.3	16.8	15.2
77.5°	932.5	95.2	28.6	11.8	6.8	6.8	16.0	18.6	11.8	5.9	5.0
80°	208.1	39.6	11.8	5.0	2.6	2.6	3.4	3.4	1.6	0.0	0.0
82.5°	68.3	16.0	5.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	26.1	5.9	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	10.1	0.8	0.0	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)