

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: P963116

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

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963116
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-6)
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-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14224.9 lumens
Efficiency: N/A
Efficacy: 96.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - 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

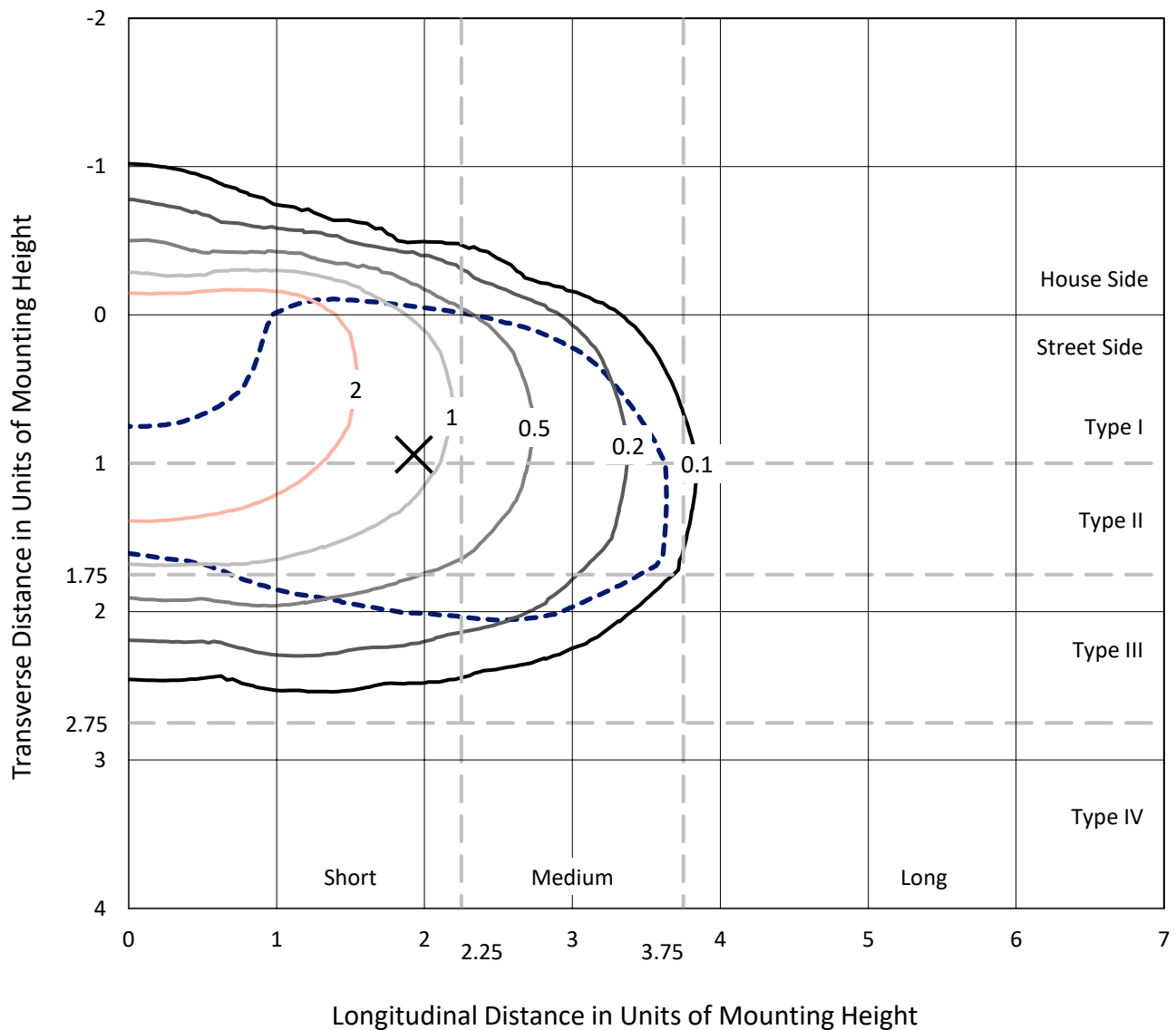


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
- - - 1/2 Max cd

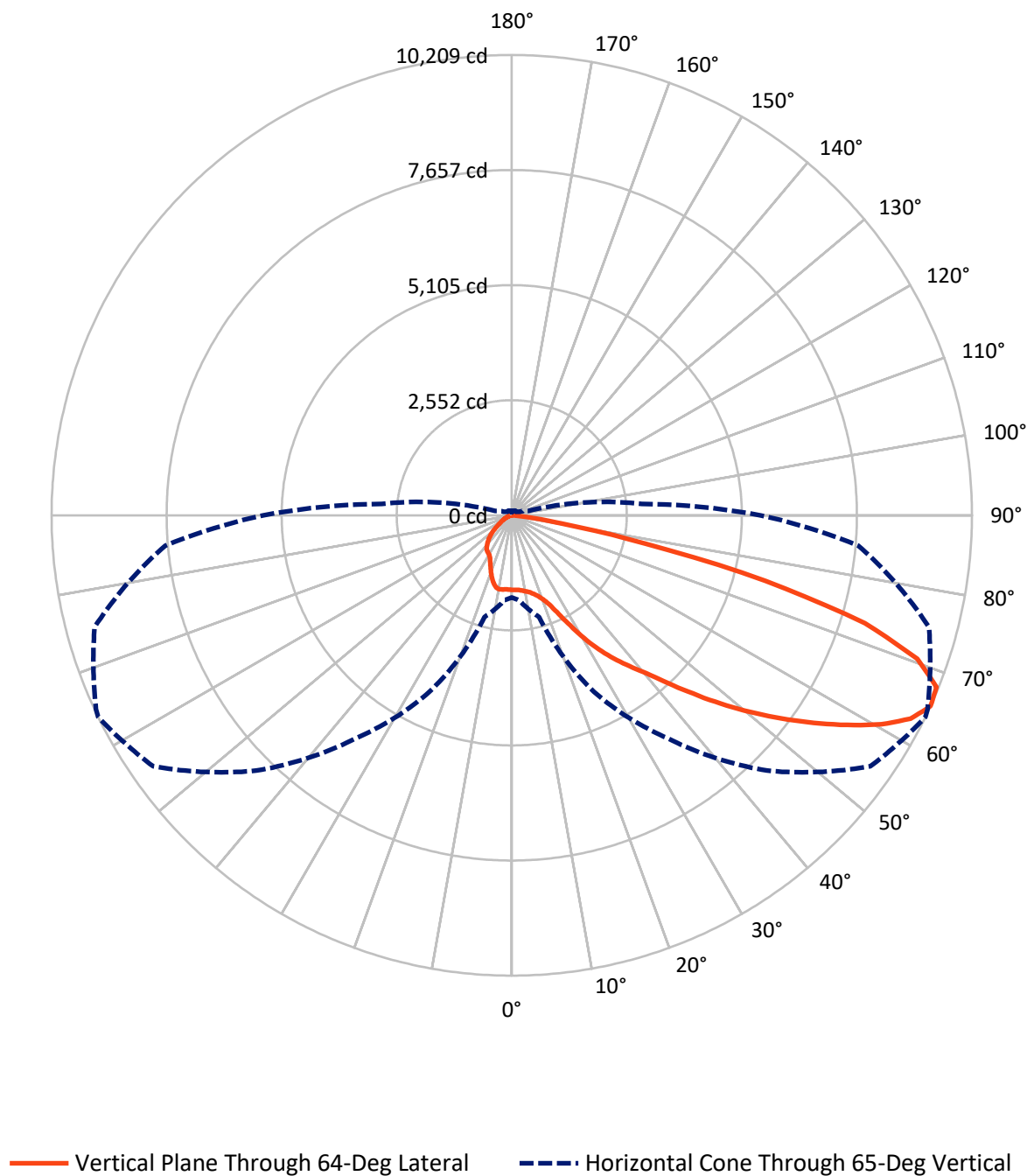


Based on 25 foot mounting height. Maximum calculated value = 4.2 fc
Type III - Short - N/A

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Luminous Intensity Polar Plot



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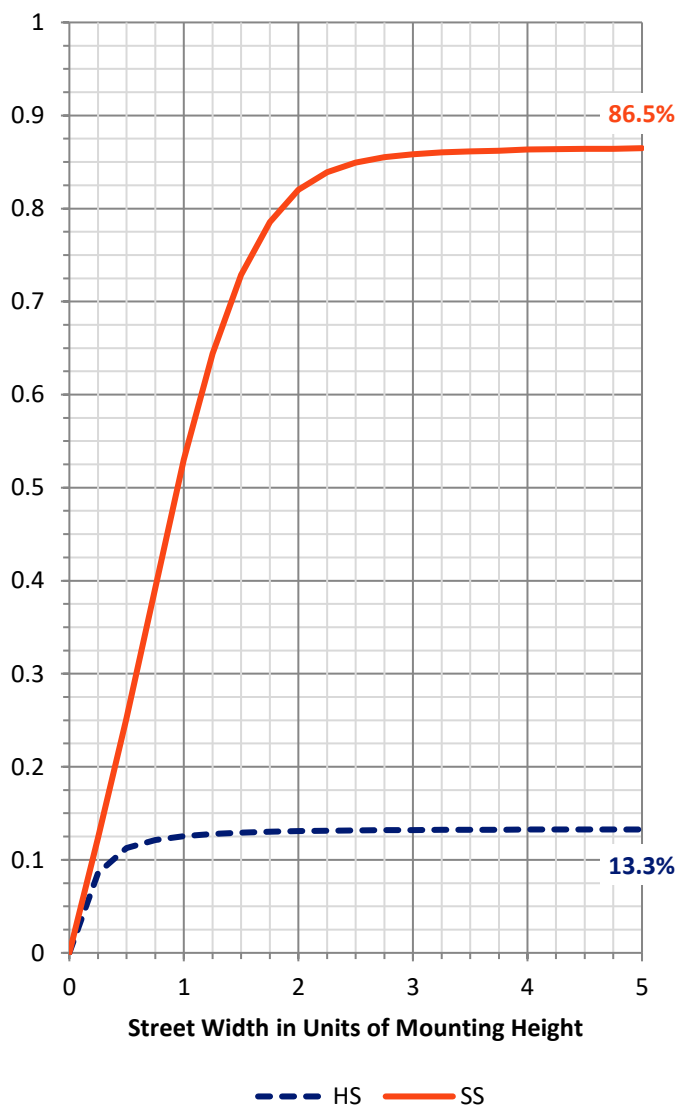
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1902.3	0.0	1902.3
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	12322.6	0.0	12322.6
	% Fixture	86.6	0.0	86.6
Total	Lumens	14224.9	0.0	14224.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.6	1.1
10°-20°	414.0	2.9
20°-30°	784.5	5.5
30°-40°	1587.5	11.2
40°-50°	2704.3	19.0
50°-60°	3677.7	25.9
60°-70°	3453.5	24.3
70°-80°	1383.6	9.7
80°-90°	67.0	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°	14224.9	100.0
0°-180°	14224.9	100.0

Coefficient of Utilization



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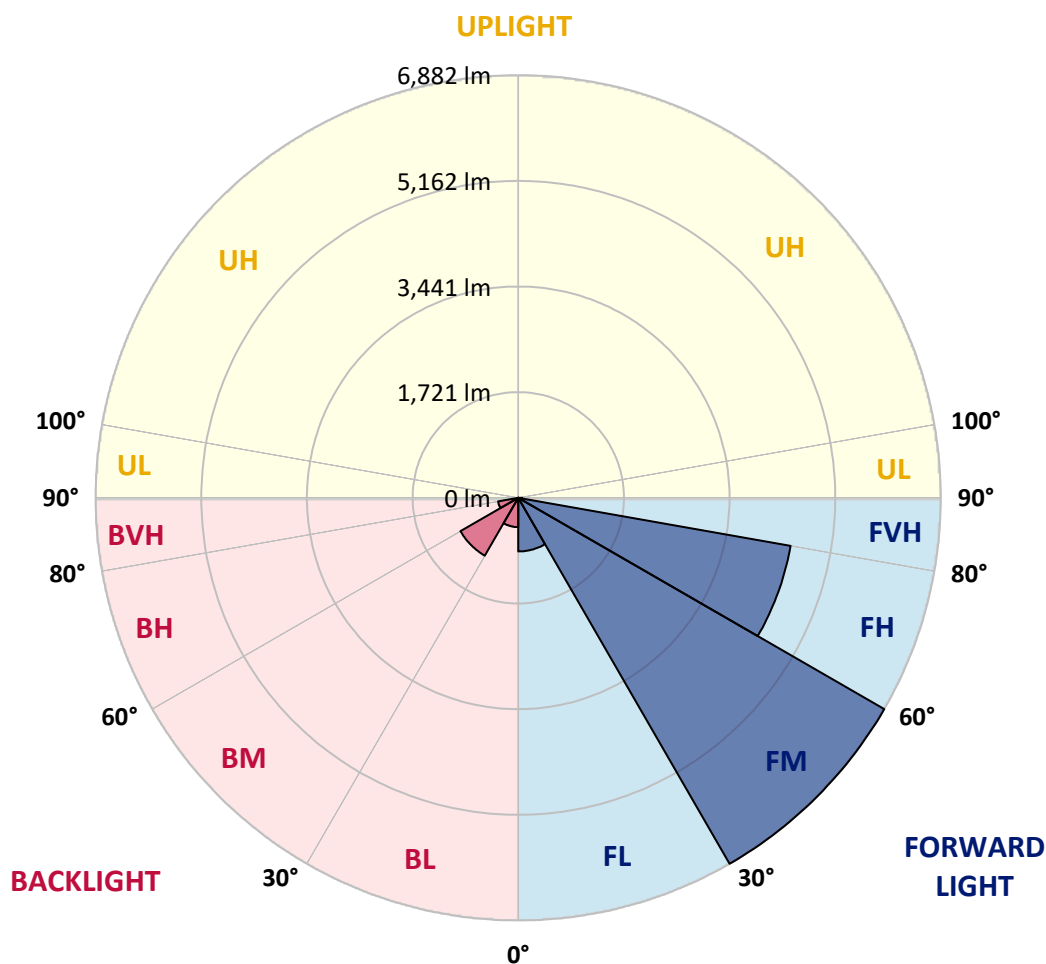
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	873.6	6.1			
FM	(30°-60°)	6882.0	48.4			
FH	(60°-80°)	4503.3	31.7			G2/5000
FVH	(80°-90°)	63.8	0.4			G1/100
BL	(0°-30°)	477.6	3.4	B1/500		
BM	(30°-60°)	1087.5	7.6	B2/2500		
BH	(60°-80°)	333.9	2.3	B1/500		G1/500
BVH	(80°-90°)	3.3	0.0			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 III Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	64°	65°	75°	85°
0°	1654.6	1654.6	1654.6	1654.6	1654.6	1654.6	1654.6	1654.6	1654.6	1654.6	1654.6
2.5°	1648.8	1660.2	1657.3	1654.6	1653.5	1655.5	1656.4	1655.5	1655.5	1655.5	1656.4
5°	1617.3	1626.9	1626.9	1633.5	1643.1	1654.6	1663.1	1665.0	1667.0	1669.7	1668.8
7.5°	1557.3	1564.9	1570.6	1592.5	1616.3	1646.9	1672.6	1686.0	1687.9	1698.4	1702.2
10°	1516.3	1525.8	1535.3	1558.2	1592.5	1638.3	1682.1	1714.6	1719.3	1744.1	1755.6
12.5°	1514.3	1523.9	1536.3	1561.1	1601.2	1649.7	1703.1	1749.9	1758.5	1794.7	1818.6
15°	1534.3	1545.8	1557.3	1587.7	1630.7	1689.8	1747.0	1805.2	1813.7	1865.3	1891.0
17.5°	1575.3	1590.6	1599.2	1629.7	1675.5	1741.3	1816.6	1883.3	1891.0	1951.1	1983.5
20°	1656.4	1674.5	1677.4	1702.2	1747.0	1817.5	1907.2	1990.1	1999.7	2068.3	2104.6
22.5°	1824.3	1850.0	1827.1	1839.5	1879.5	1950.2	2047.4	2152.3	2165.6	2243.8	2276.2
25°	2119.9	2156.1	2096.9	2076.0	2093.2	2166.6	2288.6	2421.3	2436.4	2499.4	2515.7
27.5°	2700.6	2653.9	2564.2	2476.5	2425.0	2467.0	2604.3	2768.3	2787.4	2848.5	2829.3
30°	3338.6	3297.5	3176.5	2981.9	2859.9	2853.2	2980.0	3163.1	3185.1	3243.2	3185.1
32.5°	3977.5	3938.4	3806.8	3567.4	3355.7	3250.9	3338.6	3541.7	3553.2	3590.4	3504.5
35°	4605.9	4565.9	4434.3	4189.2	3928.8	3690.5	3673.3	3902.2	3906.0	3945.1	3817.3
37.5°	5238.2	5204.7	5064.6	4824.3	4567.8	4238.8	4079.5	4243.6	4248.3	4286.4	4153.9
40°	5689.3	5703.5	5607.3	5421.2	5201.0	4841.5	4535.3	4606.9	4578.3	4642.1	4563.0
42.5°	6076.4	6105.0	6021.1	5927.6	5799.9	5483.2	5099.9	5087.5	5041.8	5076.0	4994.0
45°	6411.1	6435.0	6359.6	6337.7	6334.8	6112.6	5716.8	5642.5	5578.6	5571.9	5473.7
47.5°	6534.2	6579.9	6612.3	6685.8	6828.8	6735.4	6354.8	6239.5	6167.9	6115.5	5960.1
50°	6580.8	6629.5	6740.1	6953.7	7292.3	7332.3	6990.0	6860.2	6772.5	6677.2	6448.3
52.5°	6517.9	6604.7	6753.4	7113.0	7604.1	7811.0	7599.4	7485.8	7385.7	7230.2	6890.8
55°	6146.9	6233.7	6538.0	7111.0	7759.5	8146.7	8175.3	8124.8	8012.2	7767.1	7248.4
57.5°	5365.0	5493.7	5975.3	6868.8	7756.7	8435.6	8739.8	8776.0	8650.2	8299.2	7529.6
60°	4281.7	4456.2	5043.6	6331.9	7517.2	8592.0	9234.7	9416.0	9282.4	8823.7	7757.6
62.5°	2987.7	3189.8	3745.8	5490.8	6969.9	8479.5	9596.2	9930.9	9829.8	9293.0	7845.4
65°	1822.3	1887.2	2335.4	4320.8	6039.2	8008.4	9707.8	10209.3	10176.0	9580.0	7715.7
67.5°	1213.9	1268.3	1397.1	2962.9	4687.9	7067.2	9440.8	10160.7	10170.3	9533.2	7240.7
70°	731.4	778.2	862.0	1723.1	3038.2	5593.8	8613.9	9540.8	9596.2	8908.6	6340.5
72.5°	301.3	332.8	409.1	781.0	1573.5	3550.3	6859.3	8191.5	8320.2	7490.6	4866.3
75°	170.7	186.9	240.3	392.0	682.8	1654.6	4154.8	5815.1	6004.9	5162.8	2927.6
77.5°	113.5	121.2	155.4	253.7	384.3	564.6	1775.6	3029.6	3392.0	2819.8	1267.3
80°	76.3	82.9	106.8	169.7	249.9	242.2	565.5	1122.4	1380.8	968.8	308.9
82.5°	51.5	52.5	76.3	111.6	158.3	117.3	166.9	349.0	438.7	280.3	117.3
85°	29.5	28.6	56.3	64.9	70.5	48.6	50.5	104.9	137.4	118.3	66.7
87.5°	3.8	5.7	21.9	17.1	9.5	10.5	10.5	18.1	26.6	28.6	14.3
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°	1654.6	1654.6	1654.6	1654.6	1654.6	1654.6	1654.6	1654.6	1654.6	1654.6	1654.6
2.5°	1656.4	1655.5	1652.6	1649.7	1643.1	1639.3	1641.1	1639.3	1638.3	1639.3	1643.1
5°	1668.8	1665.9	1658.3	1648.8	1635.4	1619.2	1608.7	1593.5	1579.2	1570.6	1572.5
7.5°	1702.2	1699.3	1688.8	1662.1	1619.2	1551.5	1489.5	1435.2	1394.2	1370.3	1371.2
10°	1755.6	1750.8	1734.6	1675.5	1562.9	1415.1	1292.1	1190.1	1123.4	1091.8	1089.1
12.5°	1818.6	1812.8	1784.2	1663.1	1456.1	1225.4	1055.6	942.2	880.2	852.5	849.6
15°	1892.9	1885.3	1829.0	1603.9	1300.7	1015.6	860.2	775.3	735.2	710.4	711.3
17.5°	1985.4	1972.1	1862.4	1515.3	1131.9	855.4	740.0	676.1	640.8	616.9	615.1
20°	2105.6	2083.6	1889.1	1409.5	976.5	754.3	659.0	605.6	578.8	557.9	554.0
22.5°	2273.4	2242.0	1921.6	1295.0	866.8	684.7	598.9	559.8	537.8	514.0	510.1
25°	2481.3	2444.1	1961.5	1189.1	791.5	624.6	555.0	522.5	496.8	469.1	466.3
27.5°	2772.1	2705.4	2009.2	1102.4	726.6	573.1	515.0	478.7	449.2	426.3	421.5
30°	3096.3	2986.7	2051.2	1049.9	667.5	525.4	462.5	426.3	398.6	382.4	379.6
32.5°	3403.4	3254.7	2078.9	1027.0	614.1	471.1	405.3	366.2	345.2	340.4	343.3
35°	3693.3	3496.9	2076.0	1005.1	566.4	416.8	349.0	308.9	292.7	295.6	295.6
37.5°	4027.1	3755.3	2055.9	970.8	527.4	367.2	300.4	265.1	250.8	251.7	255.5
40°	4415.2	4053.8	2043.5	905.9	484.4	321.3	260.3	231.8	221.2	217.4	216.5
42.5°	4829.1	4342.7	2045.5	832.5	431.0	280.3	232.7	208.8	199.3	196.5	195.5
45°	5244.8	4618.3	2048.4	756.2	374.7	248.9	212.7	192.6	186.9	183.1	183.1
47.5°	5635.9	4852.9	1995.0	674.2	319.5	225.1	196.5	183.1	178.4	173.5	173.5
50°	6000.1	5009.3	1866.2	578.8	275.6	206.0	184.1	174.6	169.7	165.0	165.0
52.5°	6283.4	5034.1	1653.5	480.6	245.1	191.7	176.4	167.8	162.2	157.3	156.4
55°	6409.2	4878.7	1351.3	389.1	221.2	179.3	168.8	160.2	153.5	148.7	147.8
57.5°	6376.7	4551.6	1053.7	312.8	198.3	166.9	159.3	153.5	145.9	138.3	137.4
60°	6217.5	4113.8	794.4	260.3	177.3	153.5	148.7	144.0	133.5	122.1	120.1
62.5°	5941.9	3563.6	566.4	215.6	154.5	138.3	136.3	132.5	117.3	96.4	94.4
65°	5520.4	2895.1	381.4	179.3	132.5	121.2	122.1	115.4	95.3	71.5	69.6
67.5°	4904.4	2117.0	244.2	146.9	110.6	101.1	102.0	98.2	81.1	61.0	58.2
70°	4119.6	1401.8	159.3	111.6	88.7	78.2	83.9	84.9	68.7	49.6	47.7
72.5°	3020.1	827.7	111.6	82.9	64.9	54.3	68.7	70.5	55.4	37.2	35.3
75°	1721.3	392.9	83.9	60.1	40.1	38.1	53.4	53.4	38.1	24.8	22.9
77.5°	722.8	164.0	59.1	39.1	22.9	21.9	36.3	33.4	19.1	11.5	11.5
80°	208.8	73.4	31.5	19.1	9.5	8.6	14.3	10.5	4.8	1.9	1.9
82.5°	82.0	32.4	12.4	7.6	3.8	3.8	1.9	0.0	0.0	0.0	0.0
85°	48.6	13.3	5.7	2.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	12.4	2.9	1.9	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)