

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: P963120

Luminaire Tested: **NAV-SB2D-827-U-T4FT-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963120
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-25)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-827-U-T4FT-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13733 lumens
Efficiency: N/A
Efficacy: 93.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

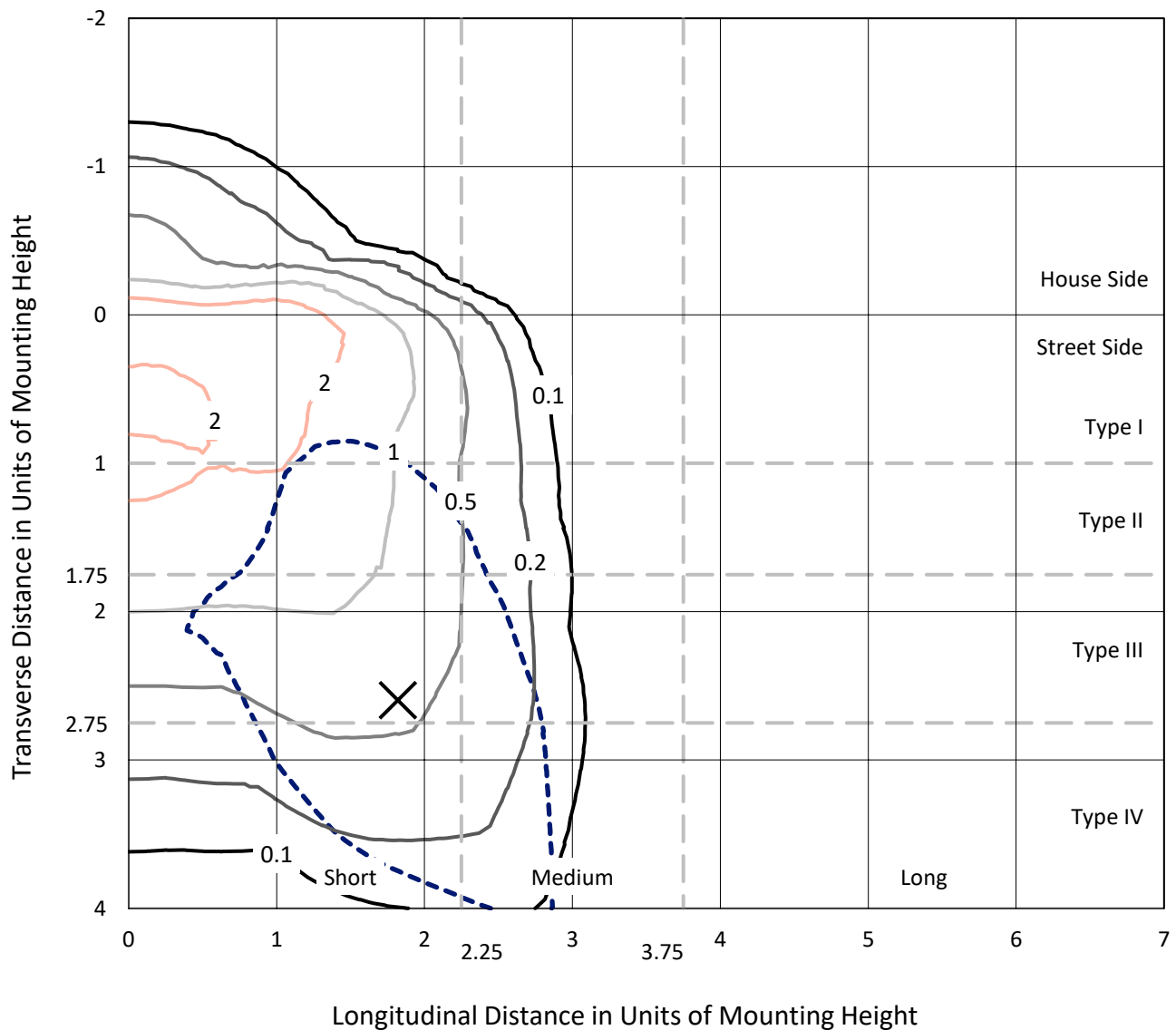
Input Watts (W): 147.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

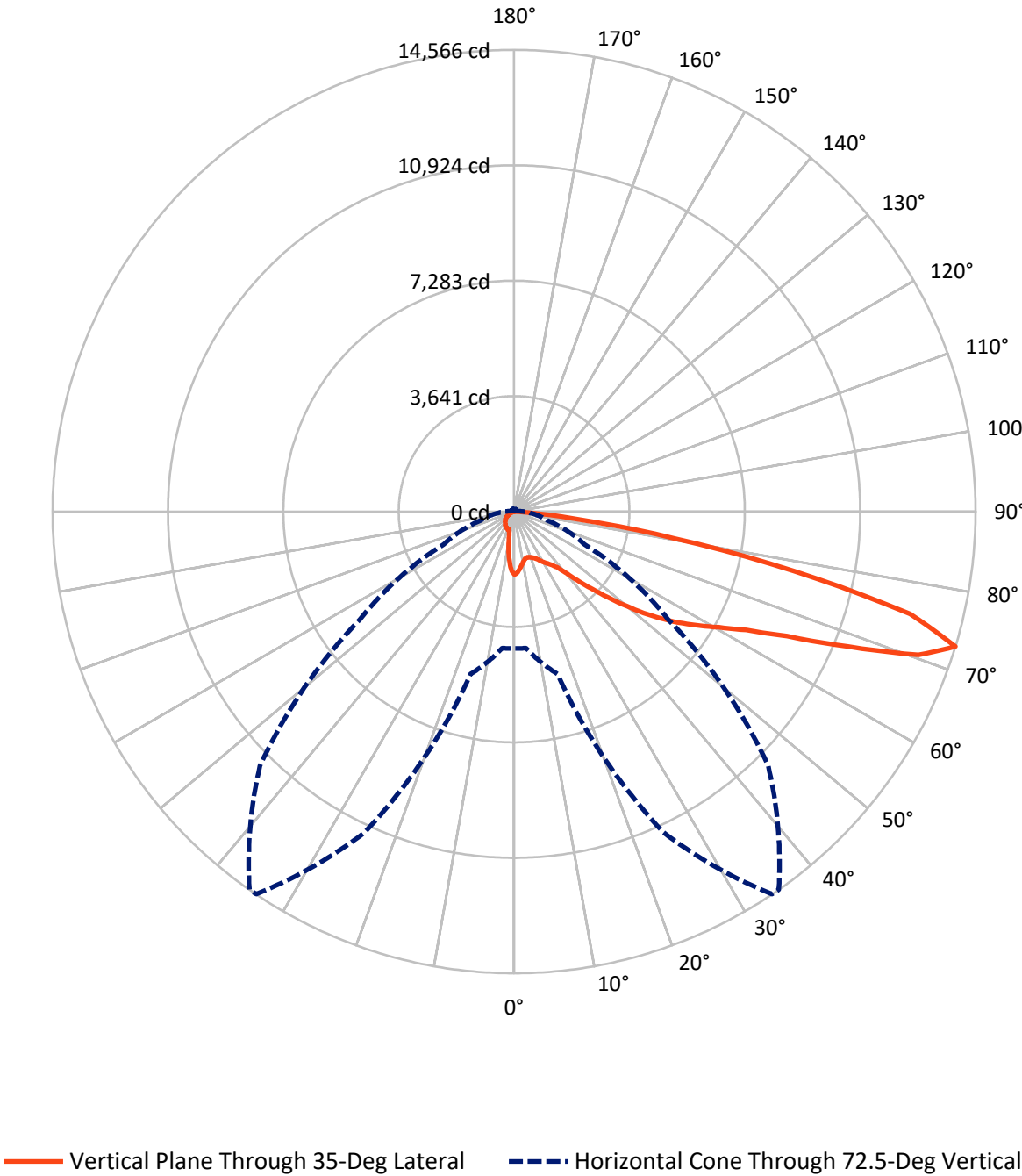
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 fc
Type IV - Short - N/A

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Luminous Intensity Polar Plot



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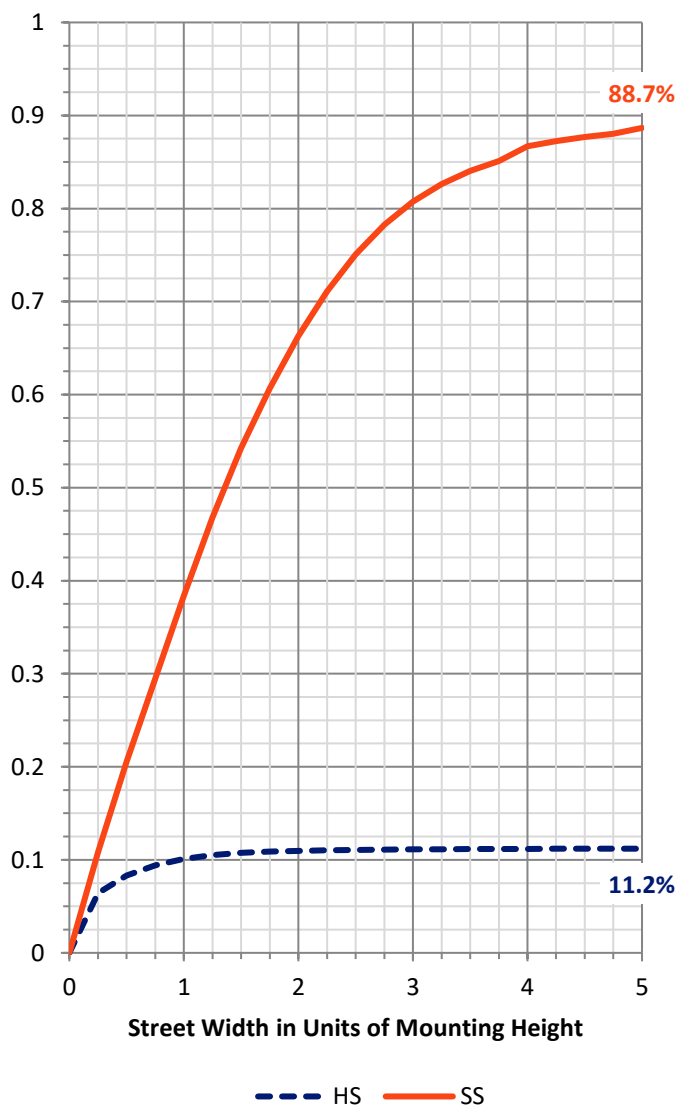
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1545.6	0.0	1545.6
	% Fixture	11.3	0.0	11.3
Street Side	Lumens	12187.4	0.0	12187.4
	% Fixture	88.7	0.0	88.7
Total	Lumens	13733.0	0.0	13733.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.6	1.2
10°-20°	382.6	2.8
20°-30°	621.6	4.5
30°-40°	1037.1	7.6
40°-50°	1962.1	14.3
50°-60°	3117.8	22.7
60°-70°	3857.0	28.1
70°-80°	2397.5	17.5
80°-90°	193.8	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°	13733.0	100.0
0°-180°	13733.0	100.0

Coefficient of Utilization



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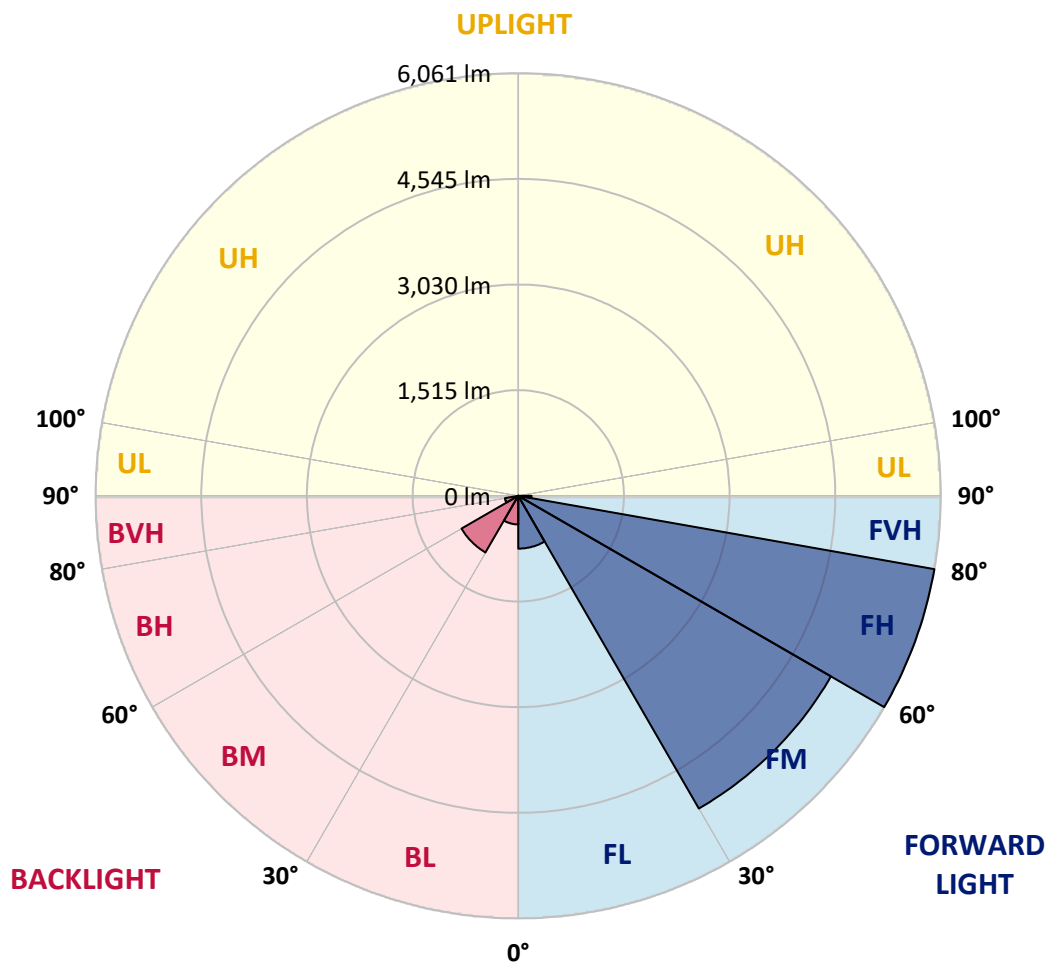
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	757.0	5.5			
FM	(30°-60°)	5178.7	37.7			
FH	(60°-80°)	6060.5	44.1			G3/7500
FVH	(80°-90°)	191.1	1.4			G2/225
BL	(0°-30°)	410.7	3.0	B1/500		
BM	(30°-60°)	938.3	6.8	B1/1000		
BH	(60°-80°)	193.9	1.4	B1/500		G1/500
BVH	(80°-90°)	2.6	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 IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	1990.3	1990.3	1990.3	1990.3	1990.3	1990.3	1990.3	1990.3	1990.3	1990.3	1990.3
2.5°	1901.8	1917.9	1921.0	1926.0	1926.0	1932.0	1942.1	1956.1	1979.3	1991.4	1999.5
5°	1752.9	1764.9	1780.0	1792.1	1815.3	1818.2	1857.5	1895.7	1949.1	1989.3	2017.5
7.5°	1603.0	1617.0	1637.1	1666.3	1696.6	1705.6	1764.9	1829.3	1913.9	1989.3	2036.7
10°	1497.3	1498.3	1516.4	1545.6	1593.9	1604.9	1677.4	1768.9	1874.6	1977.3	2054.7
12.5°	1438.0	1444.9	1453.0	1475.2	1521.4	1528.5	1606.0	1713.6	1835.4	1970.3	2075.9
15°	1438.0	1443.0	1448.0	1459.1	1496.3	1502.3	1570.7	1678.4	1815.3	1973.2	2110.1
17.5°	1453.0	1461.0	1457.0	1470.2	1509.4	1513.4	1573.8	1668.4	1814.2	1992.4	2162.4
20°	1489.2	1495.3	1487.3	1495.3	1534.5	1542.6	1604.9	1687.5	1831.4	2025.6	2227.8
22.5°	1546.6	1549.6	1530.5	1536.6	1576.8	1586.9	1659.3	1741.8	1872.7	2078.9	2315.4
25°	1619.1	1625.1	1595.9	1603.0	1641.2	1653.2	1736.8	1823.4	1938.1	2152.4	2427.1
27.5°	1702.6	1705.6	1680.5	1679.5	1728.8	1745.9	1830.3	1923.9	2025.6	2245.0	2567.9
30°	1798.2	1807.2	1783.1	1779.1	1841.4	1855.6	1939.1	2047.7	2154.3	2383.8	2768.2
32.5°	1873.6	1880.7	1866.6	1876.7	1940.0	1951.1	2070.9	2222.8	2356.7	2581.1	3040.9
35°	1982.4	1986.3	1954.2	1972.2	2044.7	2072.9	2251.0	2468.3	2611.2	2828.6	3397.1
37.5°	2375.7	2375.7	2238.9	2149.3	2218.8	2243.9	2497.5	2777.2	2925.1	3160.6	3845.9
40°	2920.1	2911.1	2710.8	2527.8	2518.6	2567.9	2848.7	3166.6	3330.7	3559.1	4351.0
42.5°	3500.8	3486.6	3214.0	3032.9	3002.6	3019.8	3254.2	3646.6	3813.7	4045.2	4894.4
45°	4016.0	4012.0	3762.4	3518.8	3464.5	3518.8	3760.3	4208.1	4327.9	4571.4	5436.8
47.5°	4447.7	4447.7	4265.5	4106.6	4078.4	4110.6	4445.6	4831.0	4820.0	5131.9	5965.1
50°	4944.7	4940.7	4767.6	4699.2	4728.3	4773.6	5234.5	5487.1	5329.1	5682.3	6437.0
52.5°	5292.9	5317.0	5257.6	5246.6	5395.5	5474.0	6035.5	6129.1	5784.9	6204.5	6790.2
55°	5568.6	5596.8	5665.2	5742.7	6029.5	6132.1	6811.3	6737.8	6166.3	6657.4	6993.5
57.5°	5959.0	5918.8	6024.4	6177.4	6641.3	6765.0	7563.0	7312.5	6473.2	7024.6	7015.6
60°	6433.0	6439.0	6457.1	6650.3	7252.1	7411.1	8303.6	7855.8	6670.4	7250.0	6770.0
62.5°	7002.5	7011.5	7048.8	7345.7	8072.2	8222.0	9092.5	8300.6	6761.0	7186.7	6136.2
65°	6963.2	7001.5	7417.1	8432.4	9318.9	9466.8	10013.2	8612.5	6624.2	6607.0	4996.1
67.5°	6343.4	6405.8	7101.1	9730.4	11198.5	11363.6	11126.2	8673.9	6033.5	5137.9	3259.3
70°	5530.4	5552.5	6388.7	10897.7	13375.1	13542.1	12122.3	7998.7	4578.5	2865.8	1460.1
72.5°	4318.8	4323.9	5305.0	11168.4	14556.4	14565.5	11340.5	5937.9	2462.3	1100.8	507.2
75°	3085.1	3055.0	3553.1	9057.3	12806.6	12909.2	8501.9	2785.3	940.8	520.2	252.6
77.5°	1654.2	1687.5	2010.5	5371.4	8847.0	9022.0	4638.8	803.0	479.0	354.2	167.1
80°	511.2	539.4	824.1	2459.3	5011.1	5116.8	1719.6	357.2	334.0	252.6	109.7
82.5°	161.0	167.1	384.4	1033.4	2079.9	2128.2	498.0	202.2	228.4	167.1	64.4
85°	46.3	47.3	171.1	385.4	514.2	524.3	139.9	78.5	130.8	103.6	33.2
87.5°	5.0	16.1	64.4	64.4	45.3	44.3	15.1	17.1	37.2	13.1	6.0
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°	1990.3	1990.3	1990.3	1990.3	1990.3	1990.3	1990.3	1990.3	1990.3	1990.3	1990.3
2.5°	1994.3	1995.4	1982.4	1960.2	1936.0	1915.9	1890.7	1870.6	1856.6	1852.5	1859.6
5°	2008.5	2001.4	1964.2	1896.8	1816.3	1746.8	1669.4	1608.0	1567.7	1550.6	1556.7
7.5°	2029.6	2009.5	1928.0	1795.2	1641.2	1504.4	1365.5	1257.8	1189.4	1155.2	1160.2
10°	2047.7	2007.5	1867.7	1648.2	1412.8	1205.5	1018.3	888.5	816.1	781.9	782.9
12.5°	2064.9	2006.4	1789.1	1474.2	1155.2	901.6	727.5	663.1	643.0	635.9	634.0
15°	2097.0	2009.5	1690.5	1274.9	898.6	681.2	617.9	616.8	620.8	618.9	617.9
17.5°	2141.3	2012.5	1578.8	1063.6	693.3	600.8	597.7	606.8	612.8	609.8	608.7
20°	2198.6	2024.6	1460.1	854.3	595.7	580.6	587.6	595.7	600.8	595.7	594.7
22.5°	2279.2	2045.7	1330.2	686.2	564.5	568.6	574.6	583.6	588.7	581.6	580.6
25°	2377.8	2078.9	1202.4	596.8	549.4	554.4	563.5	573.6	579.6	572.6	571.5
27.5°	2505.6	2132.2	1084.8	576.6	534.3	537.3	550.4	565.5	573.6	564.5	564.5
30°	2690.7	2219.7	983.1	585.7	525.3	518.2	536.4	557.5	566.5	558.4	557.5
32.5°	2936.2	2343.6	920.8	599.7	521.2	496.1	513.2	540.4	555.4	550.4	550.4
35°	3258.3	2531.8	896.6	615.8	518.2	472.9	485.0	514.2	540.4	545.4	545.4
37.5°	3648.7	2793.3	903.6	622.9	509.1	453.9	459.8	485.0	519.3	535.4	539.4
40°	4092.4	3098.3	943.8	615.8	499.1	437.7	438.7	457.9	488.0	512.2	520.2
42.5°	4550.3	3454.5	1018.3	589.7	490.1	423.6	420.7	433.7	453.9	470.9	478.0
45°	4986.0	3820.7	1091.8	553.4	479.0	409.6	402.5	407.5	411.5	418.6	422.6
47.5°	5366.4	4078.4	1070.6	520.2	463.9	393.4	381.4	379.4	367.3	366.2	365.3
50°	5629.0	4134.6	950.9	487.0	441.8	375.4	356.2	344.1	323.0	312.9	314.0
52.5°	5712.5	3912.3	776.8	453.9	405.5	351.2	324.0	304.9	278.7	269.7	268.7
55°	5601.8	3476.6	620.8	413.6	355.2	319.0	288.8	263.6	242.5	231.4	231.4
57.5°	5331.1	2922.2	491.1	366.2	301.9	282.8	252.6	227.4	209.3	198.2	196.2
60°	4882.3	2320.4	388.4	310.0	257.6	243.5	212.3	196.2	180.1	167.1	164.0
62.5°	4201.1	1656.3	304.9	245.5	215.4	199.3	181.1	169.0	150.0	131.8	128.8
65°	3278.4	1013.3	235.4	180.1	173.1	165.0	154.0	142.9	119.7	101.7	98.6
67.5°	2067.8	480.0	168.0	135.8	136.8	132.8	127.8	118.7	101.7	85.5	83.5
70°	910.6	232.5	110.7	103.6	101.7	101.7	105.7	102.6	86.5	71.4	68.5
72.5°	310.0	124.7	82.5	78.5	73.5	72.5	88.6	85.5	69.4	55.4	52.3
75°	162.1	83.5	60.4	56.4	44.3	53.3	70.4	66.4	49.3	36.2	33.2
77.5°	105.7	59.3	41.3	36.2	25.1	35.3	52.3	46.3	29.2	18.1	16.1
80°	66.4	39.3	24.2	17.1	12.1	19.2	28.2	20.1	11.1	4.0	3.0
82.5°	35.3	20.1	9.0	6.0	5.0	6.0	7.1	5.0	2.0	0.0	0.0
85°	14.0	7.1	3.0	2.0	1.0	0.0	2.0	1.0	0.0	0.0	0.0
87.5°	5.0	1.0	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)