

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: P882810

Luminaire Tested: **NAV-SB2D-835-U-T4FT-HSS**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P882810  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-25)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB2D-835-U-T4FT-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(2) 80 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV  
FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

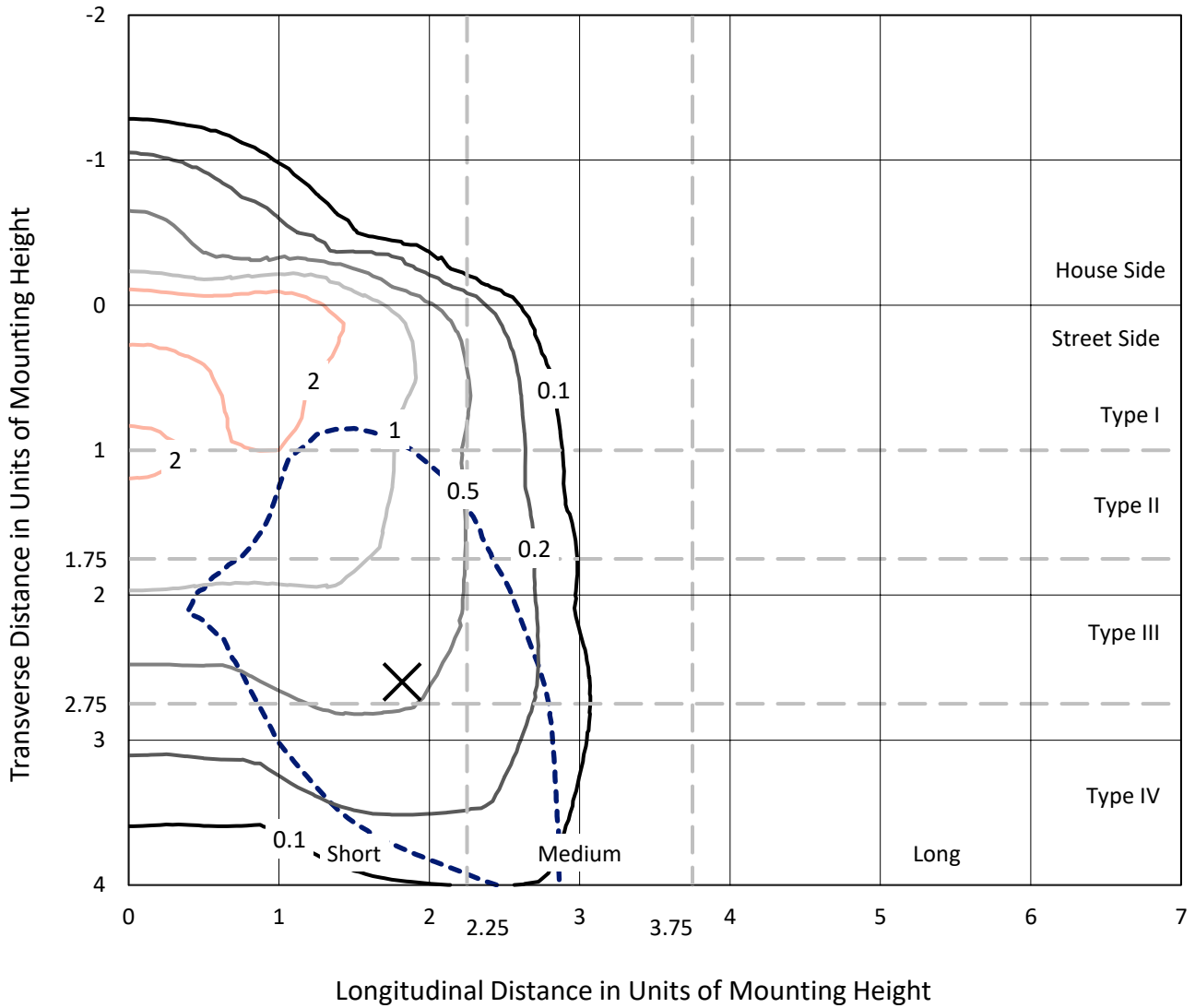
Lumens per Lamp: N/A  
Luminaire Lumens: 13249 lumens  
Efficiency: N/A  
Efficacy: 89.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G3  
  
Input Watts (W): 147.6  
Input Voltage (V): 120.0  
Input Current (Ain): 1.234  
Voltage Rise (V): NR  
Power Factor: 0.999  
Total Harmonic Distortion (THDi): 3.108  
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

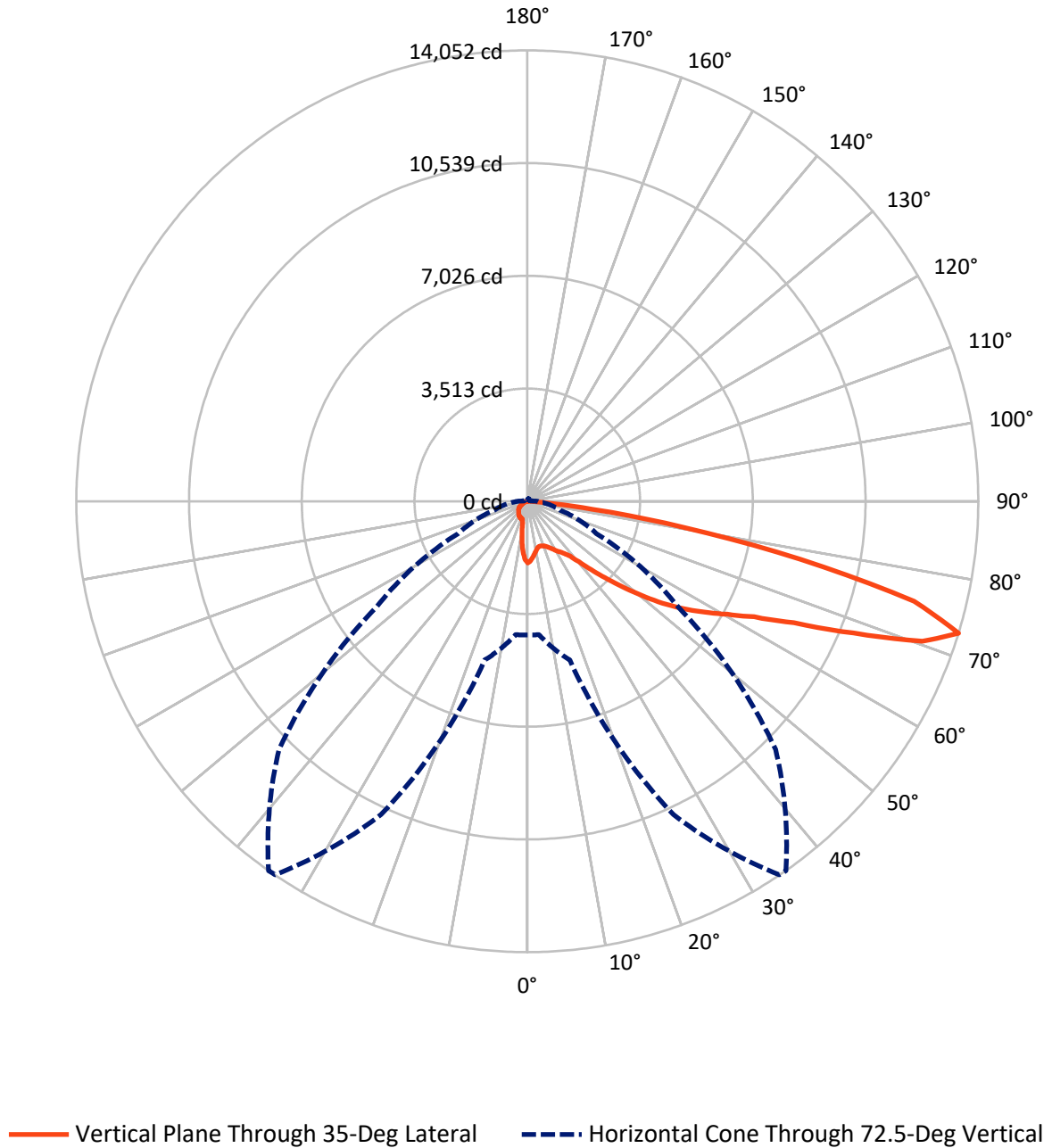
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



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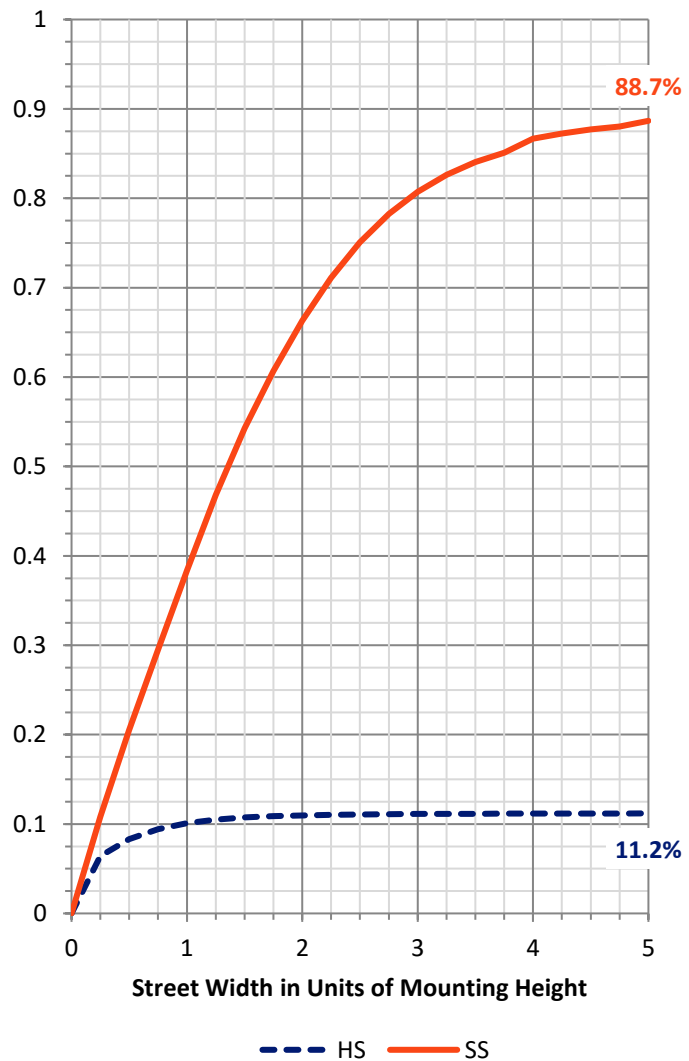
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1491.1	0.0	1491.1
	% Fixture	11.3	0.0	11.3
<b>Street Side</b>	Lumens	11757.9	0.0	11757.9
	% Fixture	88.7	0.0	88.7
<b>Total</b>	Lumens	13249.0	0.0	13249.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	157.8	1.2
10°-20°	369.1	2.8
20°-30°	599.6	4.5
30°-40°	1000.5	7.6
40°-50°	1893.0	14.3
50°-60°	3007.9	22.7
60°-70°	3721.0	28.1
70°-80°	2313.0	17.5
80°-90°	186.9	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°	13249.0	100.0
0°-180°	13249.0	100.0

**Coefficient of Utilization**



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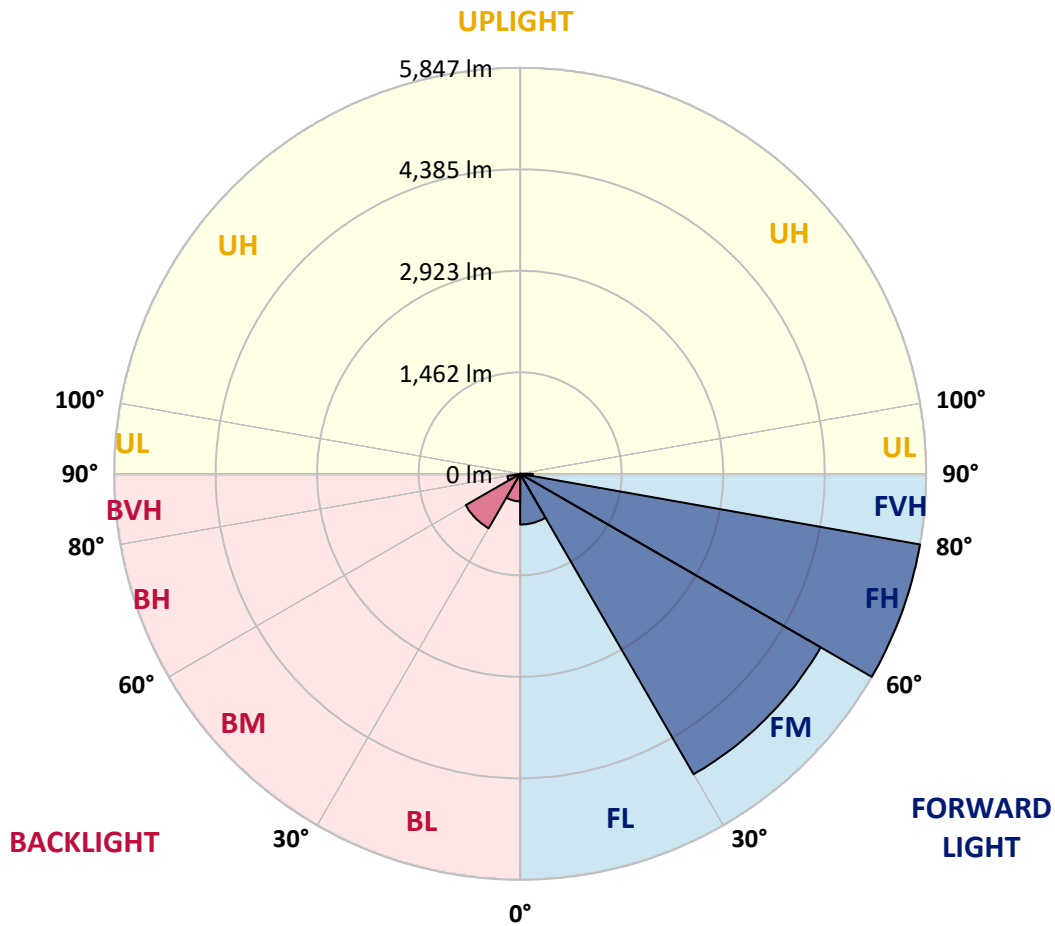
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	730.4	5.5			
FM (30°-60°)	4996.2	37.7			
FH (60°-80°)	5846.9	44.1			G3/7500
FVH (80°-90°)	184.4	1.4			G2/225
BL (0°-30°)	396.2	3.0	B1/500		
BM (30°-60°)	905.2	6.8	B1/1000		
BH (60°-80°)	187.1	1.4	B1/500		G1/500
BVH (80°-90°)	2.5	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°	1920.2	1920.2	1920.2	1920.2	1920.2	1920.2	1920.2	1920.2	1920.2	1920.2	1920.2
2.5°	1834.8	1850.3	1853.2	1858.1	1858.1	1863.9	1873.6	1887.2	1909.5	1921.2	1929.0
5°	1691.1	1702.8	1717.3	1729.0	1751.3	1754.2	1792.1	1829.0	1880.4	1919.3	1946.4
7.5°	1546.5	1560.1	1579.5	1607.6	1636.8	1645.5	1702.8	1764.9	1846.4	1919.3	1964.9
10°	1444.5	1445.5	1463.0	1491.1	1537.7	1548.4	1618.3	1706.7	1808.6	1907.6	1982.4
12.5°	1387.3	1394.1	1401.8	1423.2	1467.8	1474.6	1549.4	1653.3	1770.7	1900.8	2002.7
15°	1387.3	1392.1	1397.0	1407.6	1443.6	1449.4	1515.4	1619.3	1751.3	1903.7	2035.7
17.5°	1401.8	1409.6	1405.7	1418.3	1456.2	1460.1	1518.3	1609.6	1750.3	1922.2	2086.2
20°	1436.8	1442.6	1434.8	1442.6	1480.5	1488.2	1548.4	1628.0	1766.8	1954.2	2149.3
22.5°	1492.1	1495.0	1476.6	1482.4	1521.2	1530.9	1600.8	1680.4	1806.6	2005.7	2233.8
25°	1562.0	1567.8	1539.7	1546.5	1583.4	1595.0	1675.6	1759.1	1869.7	2076.5	2341.5
27.5°	1642.6	1645.5	1621.2	1620.2	1667.8	1684.3	1765.9	1856.2	1954.2	2165.8	2477.5
30°	1734.8	1743.5	1720.2	1716.4	1776.5	1790.1	1870.7	1975.6	2078.5	2299.8	2670.6
32.5°	1807.6	1814.4	1800.8	1810.5	1871.7	1882.4	1997.9	2144.5	2273.6	2490.1	2933.7
35°	1912.5	1916.3	1885.3	1902.8	1972.6	1999.8	2171.7	2381.3	2519.2	2728.9	3277.4
37.5°	2292.0	2292.0	2160.0	2073.6	2140.6	2164.9	2409.5	2679.4	2822.1	3049.3	3710.4
40°	2817.2	2808.5	2615.3	2438.6	2429.9	2477.5	2748.3	3055.1	3213.3	3433.7	4197.7
42.5°	3377.4	3363.8	3100.7	2926.0	2896.8	2913.3	3139.5	3518.1	3679.3	3902.6	4721.9
45°	3874.4	3870.5	3629.8	3394.9	3342.4	3394.9	3627.8	4059.8	4175.4	4410.3	5245.2
47.5°	4290.9	4290.9	4115.2	3961.8	3934.6	3965.7	4289.0	4660.8	4650.1	4951.0	5754.8
50°	4770.5	4766.6	4599.6	4533.6	4561.7	4605.4	5050.1	5293.7	5141.3	5482.1	6210.1
52.5°	5106.4	5129.7	5072.4	5061.7	5205.4	5281.1	5822.8	5913.1	5581.1	5985.9	6550.9
55°	5372.4	5399.5	5465.6	5540.3	5817.0	5916.0	6571.3	6500.4	5949.0	6422.8	6747.0
57.5°	5749.0	5710.2	5812.1	5959.7	6407.2	6526.6	7296.5	7054.7	6245.1	6777.1	6768.4
60°	6206.3	6212.1	6229.6	6416.0	6996.5	7149.9	8011.0	7579.0	6435.4	6994.5	6531.5
62.5°	6755.7	6764.5	6800.4	7086.8	7787.7	7932.3	8772.1	8008.1	6522.7	6933.4	5919.9
65°	6717.9	6754.8	7155.7	8135.2	8990.5	9133.2	9660.3	8309.0	6390.7	6374.2	4820.0
67.5°	6119.9	6180.1	6850.9	9387.5	10803.9	10963.1	10734.0	8368.2	5820.9	4956.9	3144.4
70°	5335.5	5356.8	6163.6	10513.7	12903.8	13064.9	11695.1	7716.8	4417.1	2764.8	1408.6
72.5°	4166.6	4171.5	5118.0	10774.8	14043.5	14052.2	10940.8	5728.6	2375.5	1062.0	489.3
75°	2976.4	2947.3	3427.9	8738.1	12355.3	12454.3	8202.2	2687.1	907.7	501.9	243.7
77.5°	1596.0	1628.0	1939.6	5182.1	8535.2	8704.1	4475.3	774.7	462.1	341.7	161.2
80°	493.2	520.3	795.1	2372.6	4834.5	4936.5	1659.1	344.6	322.3	243.7	105.8
82.5°	155.3	161.2	370.8	997.0	2006.6	2053.2	480.5	195.1	220.4	161.2	62.1
85°	44.7	45.6	165.0	371.8	496.1	505.8	134.9	75.7	126.2	100.0	32.0
87.5°	4.9	15.5	62.1	62.1	43.7	42.7	14.6	16.5	35.9	12.6	5.8
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°	1920.2	1920.2	1920.2	1920.2	1920.2	1920.2	1920.2	1920.2	1920.2	1920.2	1920.2
2.5°	1924.1	1925.1	1912.5	1891.1	1867.8	1848.4	1824.1	1804.7	1791.1	1787.2	1794.0
5°	1937.7	1930.9	1895.0	1829.9	1752.3	1685.3	1610.5	1551.3	1512.5	1496.0	1501.8
7.5°	1958.1	1938.7	1860.0	1731.9	1583.4	1451.3	1317.4	1213.5	1147.5	1114.5	1119.3
10°	1975.6	1936.7	1801.8	1590.2	1363.0	1163.0	982.4	857.2	787.3	754.3	755.3
12.5°	1992.1	1935.8	1726.1	1422.2	1114.5	869.8	701.9	639.8	620.3	613.5	611.6
15°	2023.1	1938.7	1630.9	1230.0	866.9	657.2	596.1	595.1	599.0	597.0	596.1
17.5°	2065.8	1941.6	1523.2	1026.1	668.9	579.6	576.6	585.4	591.2	588.3	587.3
20°	2121.2	1953.2	1408.6	824.2	574.7	560.1	566.9	574.7	579.6	574.7	573.7
22.5°	2198.8	1973.6	1283.4	662.1	544.6	548.5	554.3	563.1	567.9	561.1	560.1
25°	2294.0	2005.7	1160.1	575.7	530.1	534.9	543.6	553.4	559.2	552.4	551.4
27.5°	2417.3	2057.1	1046.5	556.3	515.5	518.4	531.0	545.6	553.4	544.6	544.6
30°	2595.9	2141.6	948.5	565.0	506.8	500.0	517.4	537.8	546.6	538.8	537.8
32.5°	2832.8	2261.0	888.3	578.6	502.9	478.6	495.1	521.3	535.9	531.0	531.0
35°	3143.4	2442.5	865.0	594.1	500.0	456.3	467.9	496.1	521.3	526.2	526.2
37.5°	3520.1	2694.9	871.8	600.9	491.2	437.8	443.7	467.9	500.9	516.5	520.3
40°	3948.2	2989.1	910.6	594.1	481.5	422.3	423.3	441.7	470.8	494.1	501.9
42.5°	4389.9	3332.7	982.4	568.9	472.8	408.7	405.8	418.4	437.8	454.3	461.1
45°	4810.3	3686.1	1053.3	533.9	462.1	395.1	388.3	393.2	397.1	403.8	407.7
47.5°	5177.2	3934.6	1032.9	501.9	447.5	379.6	367.9	366.0	354.3	353.4	352.4
50°	5430.6	3989.0	917.4	469.9	426.2	362.1	343.7	332.0	311.6	301.9	302.9
52.5°	5511.2	3774.4	749.5	437.8	391.2	338.8	312.6	294.1	268.9	260.2	259.2
55°	5404.4	3354.1	599.0	399.0	342.7	307.7	278.6	254.3	234.0	223.3	223.3
57.5°	5143.2	2819.2	473.7	353.4	291.2	272.8	243.7	219.4	201.9	191.2	189.3
60°	4710.3	2238.6	374.7	299.0	248.5	234.9	204.8	189.3	173.8	161.2	158.2
62.5°	4053.1	1597.9	294.1	236.9	207.7	192.2	174.7	163.1	144.6	127.2	124.3
65°	3162.8	977.6	227.2	173.8	167.0	159.2	148.5	137.9	115.5	98.0	95.1
67.5°	1995.0	463.1	162.1	131.1	132.0	128.1	123.3	114.6	98.0	82.5	80.6
70°	878.6	224.3	106.8	100.0	98.0	98.0	101.9	99.0	83.5	68.9	66.0
72.5°	299.0	120.4	79.6	75.7	70.9	69.9	85.4	82.5	67.0	53.4	50.5
75°	156.3	80.6	58.2	54.4	42.7	51.5	68.0	64.1	47.6	34.9	32.0
77.5°	101.9	57.3	39.8	34.9	24.3	34.0	50.5	44.7	28.2	17.5	15.5
80°	64.1	37.9	23.3	16.5	11.6	18.4	27.2	19.4	10.7	3.9	2.9
82.5°	34.0	19.4	8.7	5.8	4.9	5.8	6.8	4.9	1.9	0.0	0.0
85°	13.6	6.8	2.9	1.9	1.0	0.0	1.9	1.0	0.0	0.0	0.0
87.5°	4.9	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)