

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: P965758

Luminaire Tested: **NAV-SB4A-827-U-T4W**

Issue Date: 1/21/2025

### Test Information

Test Method: LM-79-08  
Report Number: P965758  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB4A-827-U-T4W  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 80 CRI, 2700K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: -

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 15992 lumens  
Efficiency: N/A  
Efficacy: 140.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B3 - U0 - G3

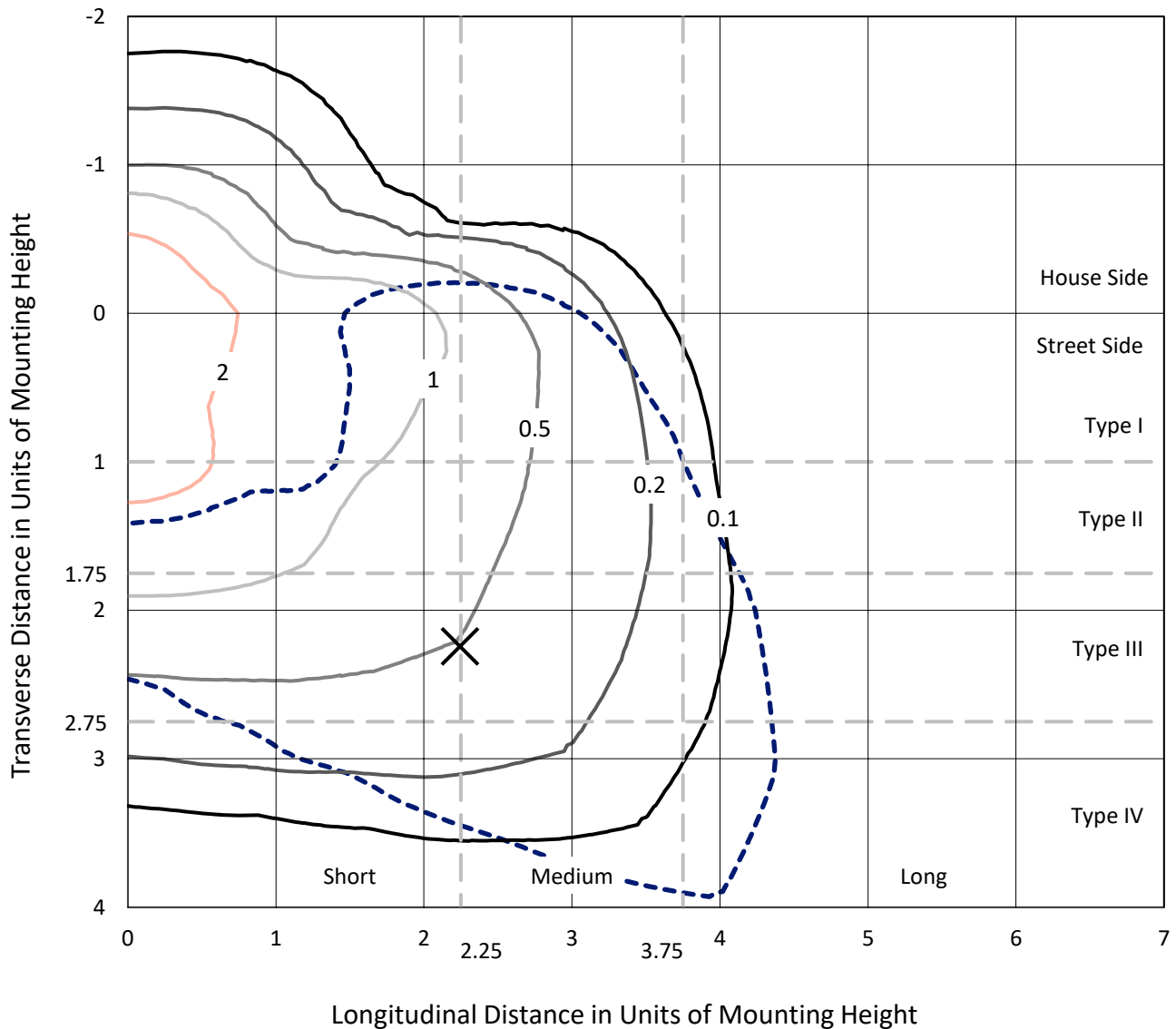
Input Watts (W): 114  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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## Iso-Footcandle Lines of Horizontal Illumination

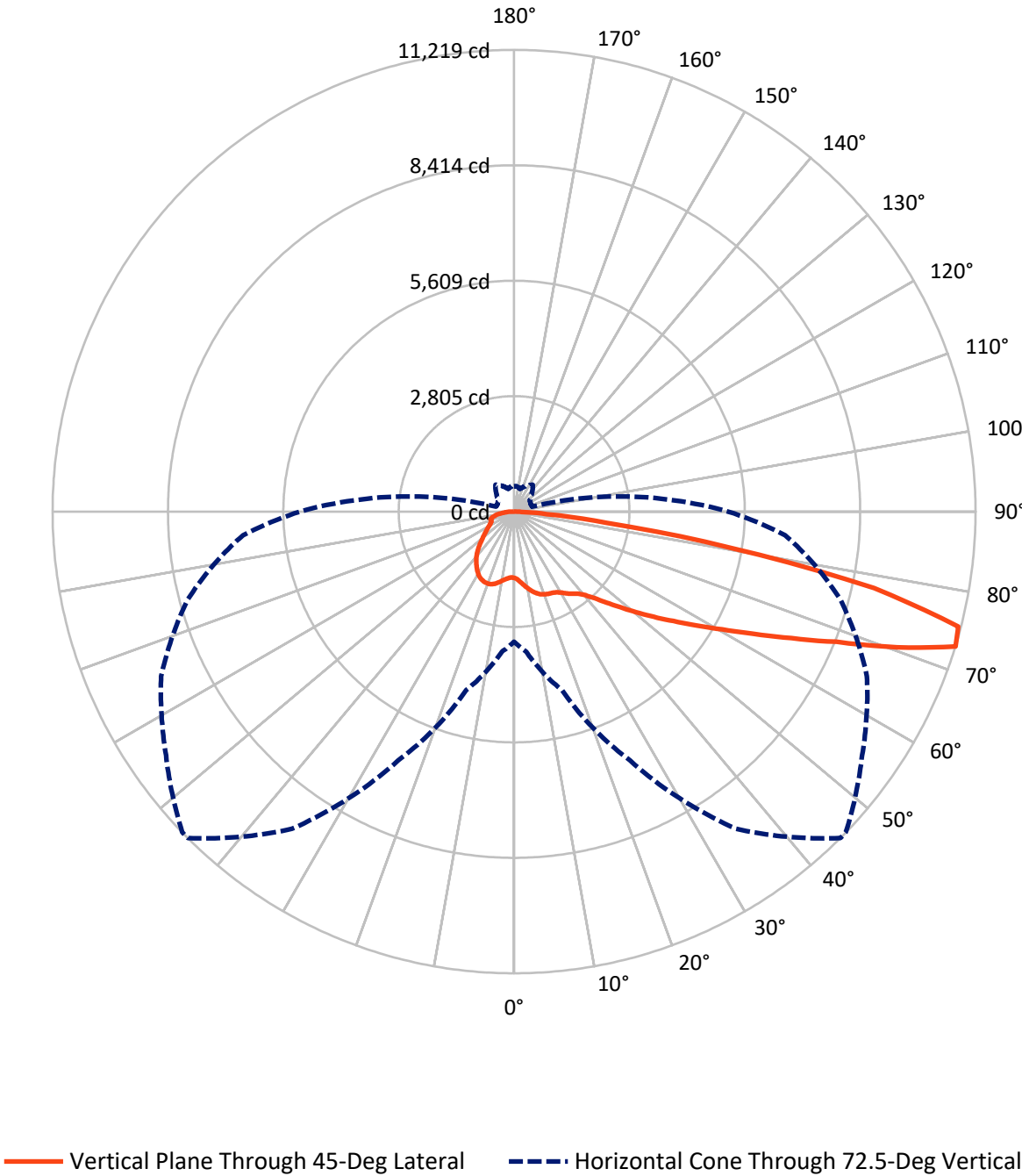
× Max cd  
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 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    | 3615.2   | 0.0    | 3615.2  |
|                    | % Fixture | 22.6     | 0.0    | 22.6    |
| <b>Street Side</b> | Lumens    | 12376.8  | 0.0    | 12376.8 |
|                    | % Fixture | 77.4     | 0.0    | 77.4    |
| <b>Total</b>       | Lumens    | 15992.0  | 0.0    | 15992.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 164.2   | 1.0       |
| 10°-20°   | 547.5   | 3.4       |
| 20°-30°   | 952.3   | 6.0       |
| 30°-40°   | 1365.2  | 8.5       |
| 40°-50°   | 1922.3  | 12.0      |
| 50°-60°   | 2944.5  | 18.4      |
| 60°-70°   | 4265.5  | 26.7      |
| 70°-80°   | 3406.3  | 21.3      |
| 80°-90°   | 424.2   | 2.7       |
| 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°    | 15992.0 | 100.0     |
| 0°-180°   | 15992.0 | 100.0     |

**Coefficient of Utilization**



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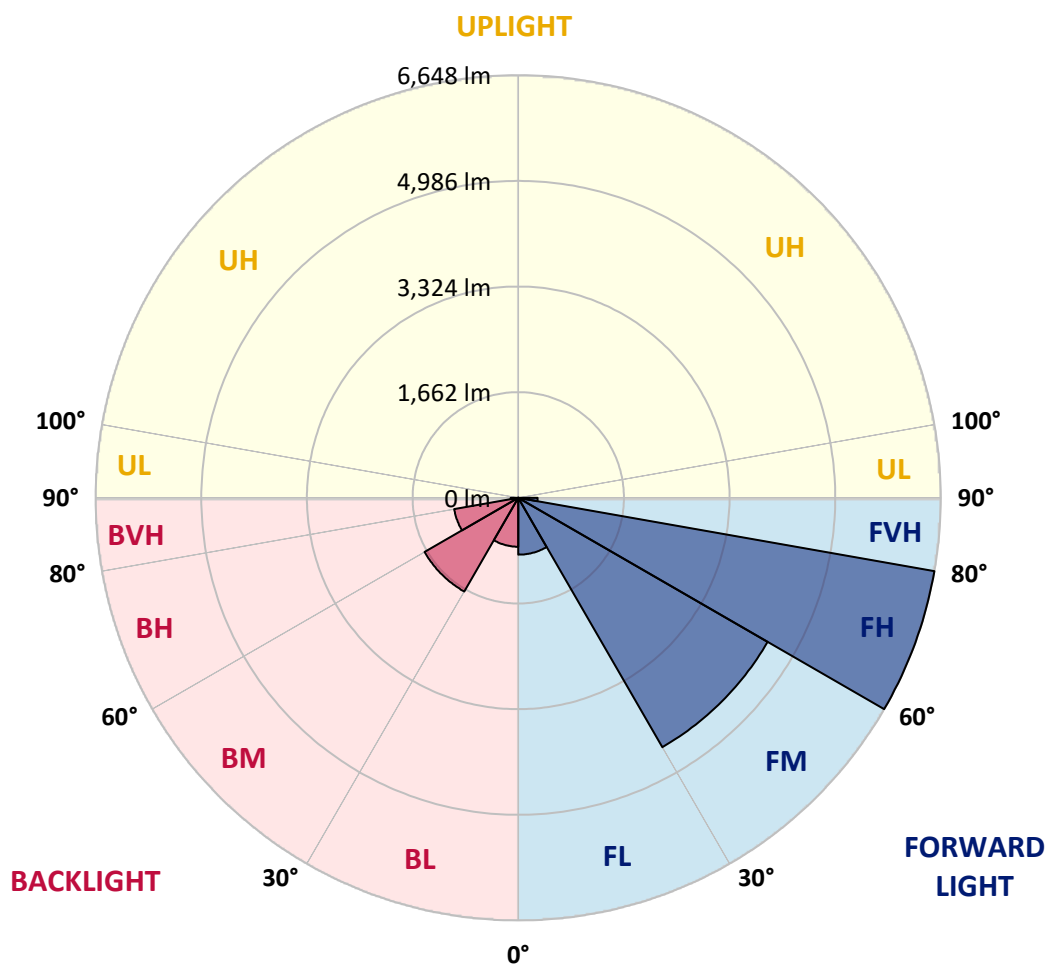
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 894.3  | 5.6       |                         |      |         |
| FM   | (30°-60°)   | 4529.8 | 28.3      |                         |      |         |
| FH   | (60°-80°)   | 6648.4 | 41.6      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 304.3  | 1.9       |                         |      | G3/500  |
| BL   | (0°-30°)    | 769.7  | 4.8       | B2/1000                 |      |         |
| BM   | (30°-60°)   | 1702.3 | 10.6      | B2/2500                 |      |         |
| BH   | (60°-80°)   | 1023.4 | 6.4       | B3/2500                 |      | G3/2500 |
| BVH  | (80°-90°)   | 119.9  | 0.7       |                         |      | G2/225  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B3-U0-G3**

Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°     | 46°     | 55°     | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|---------|---------|---------|--------|--------|--------|
| 0°    | 1613.2 | 1613.2 | 1613.2 | 1613.2 | 1613.2 | 1613.2  | 1613.2  | 1613.2  | 1613.2 | 1613.2 | 1613.2 |
| 2.5°  | 1676.5 | 1687.5 | 1677.3 | 1668.1 | 1663.9 | 1652.9  | 1652.0  | 1645.3  | 1641.1 | 1629.3 | 1626.0 |
| 5°    | 1793.5 | 1807.9 | 1791.1 | 1772.5 | 1755.6 | 1728.7  | 1725.4  | 1705.9  | 1684.1 | 1658.8 | 1644.4 |
| 7.5°  | 1925.9 | 1938.5 | 1919.1 | 1891.3 | 1861.8 | 1817.1  | 1816.3  | 1780.9  | 1746.4 | 1703.4 | 1679.0 |
| 10°   | 2041.3 | 2058.1 | 2032.0 | 1994.0 | 1957.0 | 1906.5  | 1900.6  | 1860.2  | 1816.3 | 1760.7 | 1723.6 |
| 12.5° | 2143.2 | 2155.0 | 2129.7 | 2083.4 | 2040.4 | 1989.8  | 1982.2  | 1937.7  | 1888.8 | 1825.6 | 1778.4 |
| 15°   | 2224.0 | 2239.2 | 2205.5 | 2155.8 | 2110.4 | 2060.7  | 2053.9  | 2013.4  | 1964.6 | 1898.0 | 1837.4 |
| 17.5° | 2277.1 | 2289.7 | 2255.2 | 2199.6 | 2155.8 | 2114.6  | 2109.4  | 2075.8  | 2032.8 | 1965.4 | 1900.6 |
| 20°   | 2297.3 | 2310.9 | 2274.6 | 2218.2 | 2177.7 | 2145.7  | 2143.2  | 2118.8  | 2089.3 | 2027.8 | 1962.1 |
| 22.5° | 2317.5 | 2330.2 | 2283.0 | 2224.0 | 2188.7 | 2168.5  | 2167.6  | 2151.6  | 2139.8 | 2089.3 | 2025.2 |
| 25°   | 2399.3 | 2402.7 | 2339.5 | 2254.4 | 2203.9 | 2186.1  | 2185.3  | 2184.5  | 2189.5 | 2149.9 | 2093.5 |
| 27.5° | 2470.0 | 2469.2 | 2415.3 | 2335.3 | 2256.9 | 2219.8  | 2219.0  | 2227.4  | 2243.4 | 2210.6 | 2164.3 |
| 30°   | 2573.7 | 2564.4 | 2500.4 | 2417.0 | 2345.4 | 2288.1  | 2283.0  | 2275.5  | 2288.1 | 2262.0 | 2235.0 |
| 32.5° | 2793.5 | 2764.1 | 2660.5 | 2512.2 | 2418.7 | 2374.8  | 2368.2  | 2320.9  | 2326.0 | 2309.9 | 2296.5 |
| 35°   | 3108.6 | 3069.9 | 2931.7 | 2692.5 | 2509.6 | 2447.3  | 2443.9  | 2384.1  | 2374.0 | 2359.7 | 2364.8 |
| 37.5° | 3483.6 | 3435.5 | 3274.6 | 2953.6 | 2666.3 | 2531.5  | 2526.5  | 2472.6  | 2431.3 | 2416.1 | 2444.8 |
| 40°   | 3860.0 | 3799.5 | 3666.3 | 3272.1 | 2897.2 | 2672.3  | 2656.3  | 2574.5  | 2527.3 | 2502.0 | 2562.7 |
| 42.5° | 4225.7 | 4175.1 | 4061.5 | 3629.2 | 3181.9 | 2877.8  | 2842.4  | 2702.6  | 2667.2 | 2643.6 | 2753.1 |
| 45°   | 4549.3 | 4503.7 | 4420.3 | 4010.9 | 3515.5 | 3157.5  | 3123.0  | 2894.6  | 2883.7 | 2883.7 | 3042.1 |
| 47.5° | 4812.1 | 4801.9 | 4713.5 | 4400.1 | 3908.9 | 3476.0  | 3416.1  | 3161.7  | 3191.2 | 3236.6 | 3452.3 |
| 50°   | 5103.6 | 5075.7 | 4981.4 | 4783.4 | 4371.4 | 3840.7  | 3791.9  | 3489.4  | 3599.8 | 3724.4 | 4045.5 |
| 52.5° | 5371.4 | 5386.6 | 5281.3 | 5182.7 | 4893.8 | 4247.6  | 4161.7  | 3876.1  | 4114.6 | 4320.9 | 4740.4 |
| 55°   | 5646.9 | 5647.7 | 5618.2 | 5604.8 | 5441.4 | 4697.5  | 4603.2  | 4341.1  | 4720.2 | 4976.4 | 5550.9 |
| 57.5° | 5905.5 | 5907.3 | 5951.0 | 6069.8 | 6076.6 | 5216.4  | 5109.4  | 4912.3  | 5393.3 | 5654.5 | 6386.6 |
| 60°   | 6136.4 | 6148.2 | 6267.8 | 6545.9 | 6635.1 | 5811.2  | 5710.1  | 5587.1  | 6089.2 | 6352.0 | 7265.3 |
| 62.5° | 6213.9 | 6256.8 | 6523.1 | 6918.1 | 7186.9 | 6540.7  | 6441.3  | 6368.0  | 6820.5 | 7064.8 | 7999.9 |
| 65°   | 6082.5 | 6181.1 | 6695.8 | 7225.6 | 7754.7 | 7407.7  | 7309.1  | 7229.0  | 7580.4 | 7810.3 | 8603.0 |
| 67.5° | 5759.8 | 5887.0 | 6685.7 | 7548.3 | 8443.8 | 8450.6  | 8358.8  | 8170.9  | 8395.0 | 8483.4 | 8799.3 |
| 70°   | 4909.8 | 5100.2 | 6096.8 | 7668.8 | 9234.9 | 9876.9  | 9788.4  | 9304.8  | 9208.0 | 8779.9 | 8246.7 |
| 72.5° | 3163.4 | 3419.5 | 4489.4 | 6677.3 | 9410.9 | 11218.8 | 11213.8 | 10328.4 | 9464.8 | 8203.8 | 6614.0 |
| 75°   | 1154.1 | 1310.9 | 2085.9 | 4191.2 | 7899.7 | 11150.7 | 11183.5 | 10153.1 | 8640.1 | 6336.9 | 4120.4 |
| 77.5° | 420.4  | 460.0  | 680.7  | 1610.8 | 4858.4 | 8946.8  | 9015.0  | 8117.0  | 6149.9 | 3180.3 | 1632.6 |
| 80°   | 220.7  | 242.6  | 348.8  | 625.0  | 2081.7 | 5313.3  | 5420.3  | 4823.9  | 2890.4 | 957.9  | 489.4  |
| 82.5° | 122.2  | 132.2  | 195.5  | 339.5  | 937.7  | 2272.1  | 2336.1  | 1905.6  | 1016.8 | 406.1  | 202.2  |
| 85°   | 65.7   | 69.9   | 91.8   | 185.3  | 458.3  | 787.7   | 805.3   | 569.5   | 405.2  | 238.4  | 97.7   |
| 87.5° | 19.4   | 23.6   | 30.3   | 58.9   | 179.5  | 176.9   | 181.1   | 112.9   | 160.1  | 120.4  | 32.0   |
| 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°    | 1613.2 | 1613.2 | 1613.2 | 1613.2 | 1613.2 | 1613.2 | 1613.2 | 1613.2 | 1613.2 | 1613.2 | 1613.2 |
| 2.5°  | 1620.8 | 1618.4 | 1609.0 | 1604.8 | 1599.8 | 1599.0 | 1603.2 | 1604.0 | 1604.8 | 1605.7 | 1609.0 |
| 5°    | 1636.0 | 1627.6 | 1619.2 | 1614.2 | 1615.8 | 1616.6 | 1625.0 | 1631.0 | 1635.2 | 1638.6 | 1640.2 |
| 7.5°  | 1665.5 | 1658.8 | 1644.4 | 1643.6 | 1646.2 | 1653.7 | 1664.7 | 1678.1 | 1685.7 | 1691.7 | 1693.3 |
| 10°   | 1709.3 | 1696.7 | 1679.9 | 1682.3 | 1687.5 | 1698.4 | 1721.1 | 1732.0 | 1744.8 | 1755.6 | 1753.2 |
| 12.5° | 1754.0 | 1743.0 | 1723.6 | 1725.4 | 1733.8 | 1753.2 | 1775.0 | 1788.5 | 1796.9 | 1805.3 | 1808.7 |
| 15°   | 1812.1 | 1792.7 | 1771.7 | 1771.7 | 1786.8 | 1807.9 | 1818.0 | 1828.9 | 1834.0 | 1843.3 | 1846.6 |
| 17.5° | 1872.0 | 1846.6 | 1818.9 | 1817.1 | 1835.7 | 1845.8 | 1851.7 | 1853.4 | 1855.0 | 1865.2 | 1868.6 |
| 20°   | 1931.7 | 1903.9 | 1864.4 | 1861.0 | 1865.2 | 1863.4 | 1862.6 | 1861.0 | 1863.4 | 1876.2 | 1881.2 |
| 22.5° | 1990.7 | 1958.7 | 1903.9 | 1888.8 | 1877.0 | 1861.0 | 1860.2 | 1859.2 | 1861.0 | 1873.6 | 1882.0 |
| 25°   | 2059.7 | 2021.0 | 1947.7 | 1902.2 | 1862.6 | 1840.8 | 1843.3 | 1844.1 | 1845.8 | 1855.9 | 1869.4 |
| 27.5° | 2134.8 | 2091.8 | 1988.2 | 1898.0 | 1826.4 | 1811.3 | 1807.1 | 1809.5 | 1815.5 | 1831.5 | 1847.5 |
| 30°   | 2209.7 | 2159.2 | 2025.2 | 1881.2 | 1780.9 | 1759.8 | 1746.4 | 1752.3 | 1770.8 | 1786.8 | 1804.5 |
| 32.5° | 2278.0 | 2227.4 | 2054.7 | 1844.1 | 1722.8 | 1689.9 | 1672.3 | 1679.9 | 1698.4 | 1704.3 | 1725.4 |
| 35°   | 2358.0 | 2300.7 | 2067.3 | 1785.1 | 1659.6 | 1609.0 | 1585.5 | 1574.5 | 1583.8 | 1577.9 | 1596.4 |
| 37.5° | 2447.3 | 2387.5 | 2065.7 | 1707.6 | 1585.5 | 1527.4 | 1494.6 | 1453.2 | 1433.9 | 1413.6 | 1426.3 |
| 40°   | 2579.6 | 2493.6 | 2045.5 | 1614.2 | 1493.6 | 1440.5 | 1381.6 | 1311.7 | 1267.9 | 1228.3 | 1230.8 |
| 42.5° | 2759.8 | 2641.1 | 2008.4 | 1511.4 | 1390.0 | 1340.3 | 1260.3 | 1178.5 | 1109.5 | 1043.8 | 1037.9 |
| 45°   | 3028.6 | 2834.0 | 1962.1 | 1401.8 | 1278.0 | 1229.2 | 1142.4 | 1050.5 | 972.2  | 888.0  | 877.8  |
| 47.5° | 3416.1 | 3093.4 | 1918.3 | 1277.1 | 1160.1 | 1115.4 | 1037.1 | 951.9  | 859.3  | 777.6  | 768.3  |
| 50°   | 3948.5 | 3465.8 | 1877.8 | 1155.8 | 1043.8 | 1010.1 | 947.7  | 861.0  | 767.5  | 701.7  | 697.5  |
| 52.5° | 4625.9 | 3972.2 | 1861.0 | 1038.7 | 935.1  | 922.5  | 872.8  | 791.9  | 703.5  | 647.8  | 643.6  |
| 55°   | 5403.5 | 4577.9 | 1861.0 | 926.7  | 839.9  | 844.1  | 809.5  | 734.6  | 657.9  | 608.2  | 603.2  |
| 57.5° | 6197.0 | 5191.1 | 1827.3 | 823.1  | 759.0  | 776.7  | 754.8  | 689.1  | 620.0  | 568.7  | 560.3  |
| 60°   | 6928.3 | 5705.0 | 1690.8 | 728.7  | 687.5  | 715.2  | 700.9  | 644.5  | 560.3  | 517.2  | 510.6  |
| 62.5° | 7490.2 | 5994.8 | 1427.9 | 653.7  | 628.4  | 660.5  | 652.9  | 585.5  | 549.3  | 531.6  | 525.7  |
| 65°   | 7771.6 | 5947.7 | 1091.8 | 587.2  | 578.7  | 628.4  | 612.4  | 610.0  | 581.3  | 561.1  | 554.3  |
| 67.5° | 7598.8 | 5541.7 | 791.9  | 538.3  | 550.1  | 599.0  | 660.5  | 670.6  | 617.6  | 577.9  | 571.1  |
| 70°   | 6841.5 | 4807.0 | 589.7  | 492.0  | 513.9  | 599.8  | 753.2  | 701.7  | 605.7  | 559.3  | 551.8  |
| 72.5° | 5204.6 | 3584.6 | 457.5  | 443.1  | 466.7  | 604.0  | 794.5  | 687.5  | 572.1  | 618.4  | 613.3  |
| 75°   | 2976.4 | 1968.0 | 367.3  | 383.3  | 407.7  | 564.5  | 773.4  | 650.4  | 545.9  | 567.8  | 567.8  |
| 77.5° | 1134.8 | 756.6  | 303.3  | 324.3  | 327.7  | 492.8  | 739.6  | 647.8  | 519.8  | 507.2  | 462.5  |
| 80°   | 393.4  | 295.7  | 251.0  | 257.8  | 253.6  | 438.1  | 709.3  | 563.6  | 425.5  | 380.8  | 368.2  |
| 82.5° | 160.9  | 147.4  | 198.8  | 190.3  | 180.3  | 340.3  | 572.9  | 460.8  | 347.9  | 307.5  | 304.1  |
| 85°   | 69.9   | 93.5   | 131.4  | 115.4  | 104.4  | 235.9  | 459.1  | 390.0  | 294.0  | 253.6  | 252.8  |
| 87.5° | 14.3   | 35.4   | 55.6   | 52.3   | 53.9   | 157.5  | 326.1  | 277.2  | 208.1  | 155.9  | 122.2  |
| 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)