

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: P965756

Luminaire Tested: **NAV-SB4A-827-U-T4FT**

Issue Date: 1/21/2025

**Test Information**

Test Method: LM-79-08  
Report Number: P965756  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-24)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB4A-827-U-T4FT  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 80 CRI, 2700K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV  
FORWARD THROW OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15837.3 lumens  
Efficiency: N/A  
Efficacy: 138.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - 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

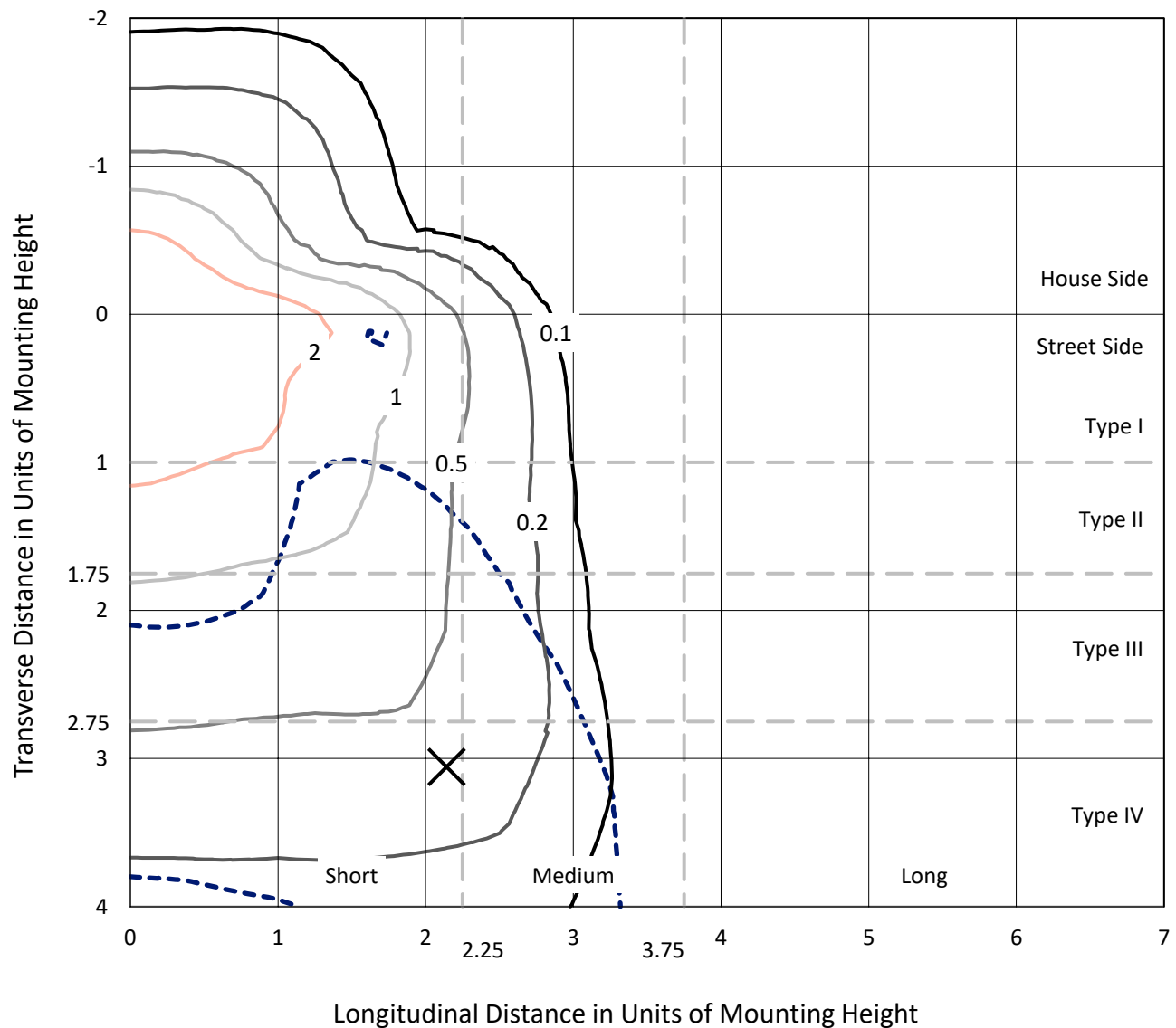


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## Iso-Footcandle Lines of Horizontal Illumination

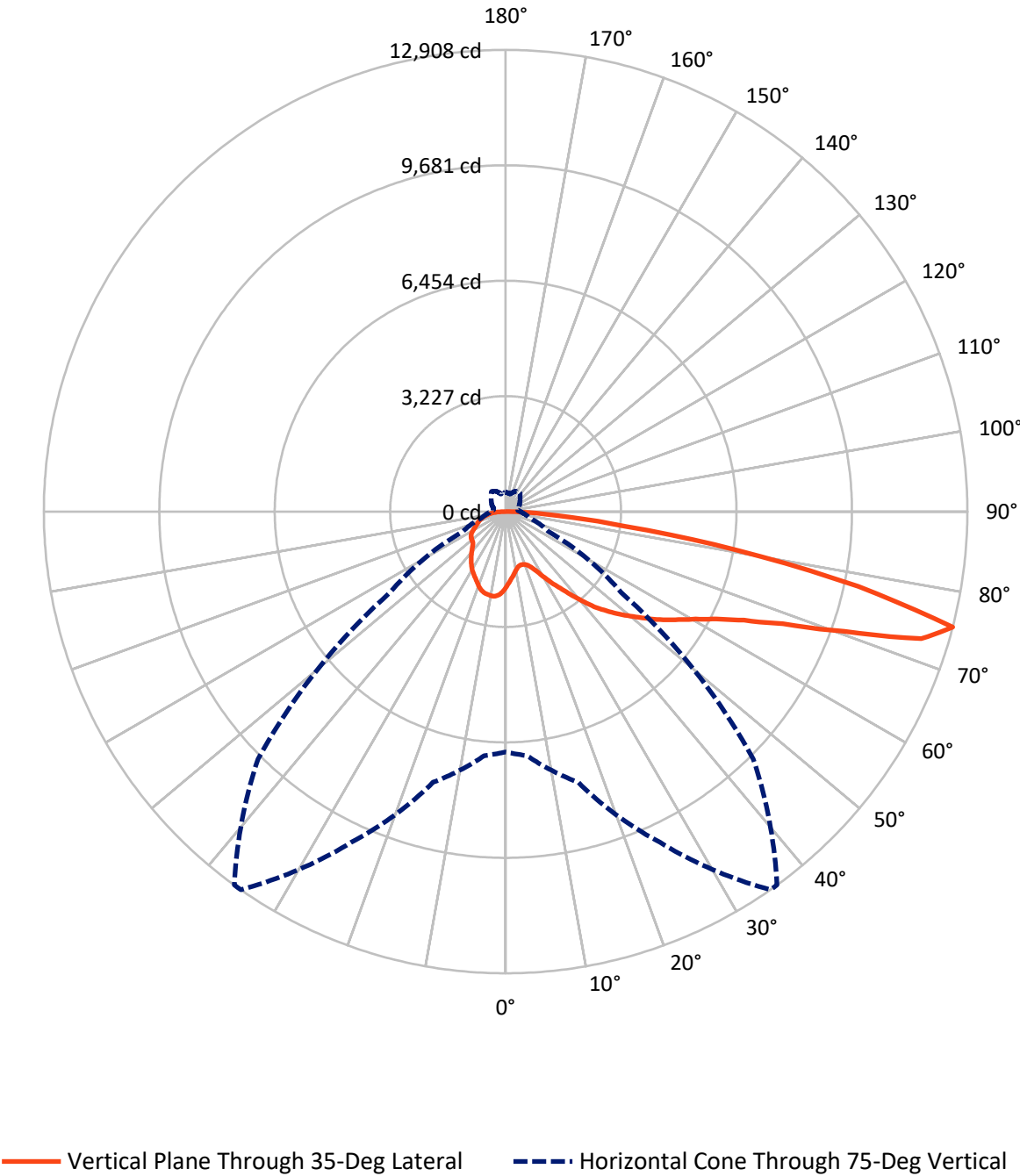
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.7 fc  
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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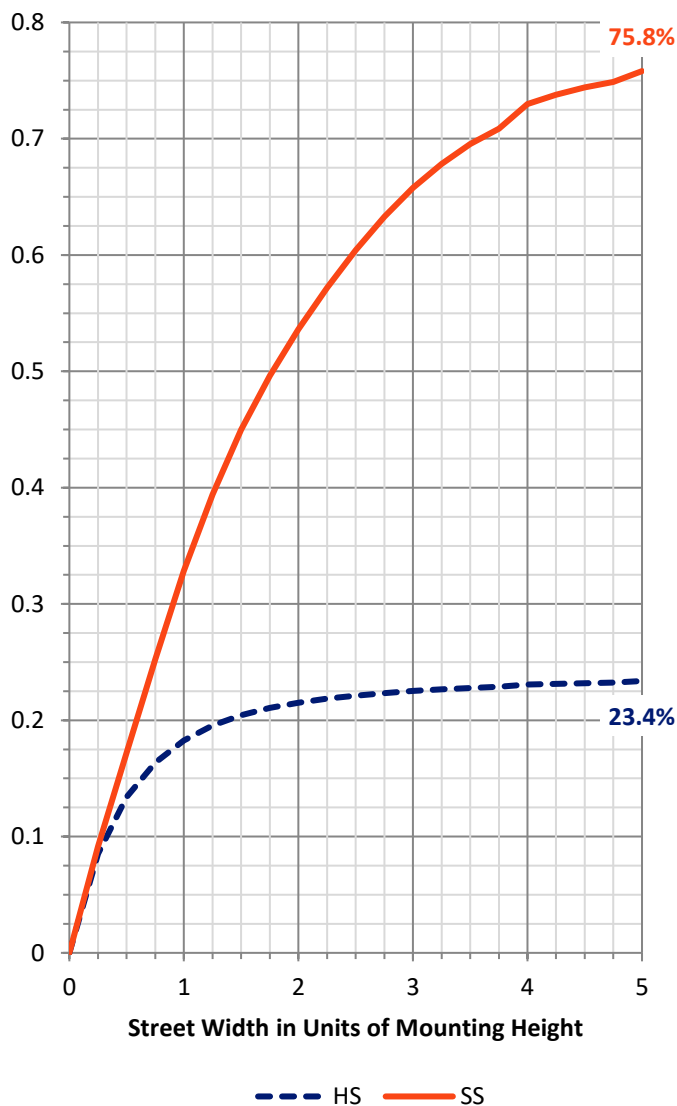
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 3768.9   | 0.0    | 3768.9  |
|                    | % Fixture | 23.8     | 0.0    | 23.8    |
| <b>Street Side</b> | Lumens    | 12068.4  | 0.0    | 12068.4 |
|                    | % Fixture | 76.2     | 0.0    | 76.2    |
| <b>Total</b>       | Lumens    | 15837.3  | 0.0    | 15837.3 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 199.8   | 1.3       |
| 10°-20°   | 576.4   | 3.6       |
| 20°-30°   | 967.8   | 6.1       |
| 30°-40°   | 1504.2  | 9.5       |
| 40°-50°   | 2232.6  | 14.1      |
| 50°-60°   | 3082.2  | 19.5      |
| 60°-70°   | 3739.4  | 23.6      |
| 70°-80°   | 3090.4  | 19.5      |
| 80°-90°   | 444.5   | 2.8       |
| 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°    | 15837.3 | 100.0     |
| 0°-180°   | 15837.3 | 100.0     |

**Coefficient of Utilization**



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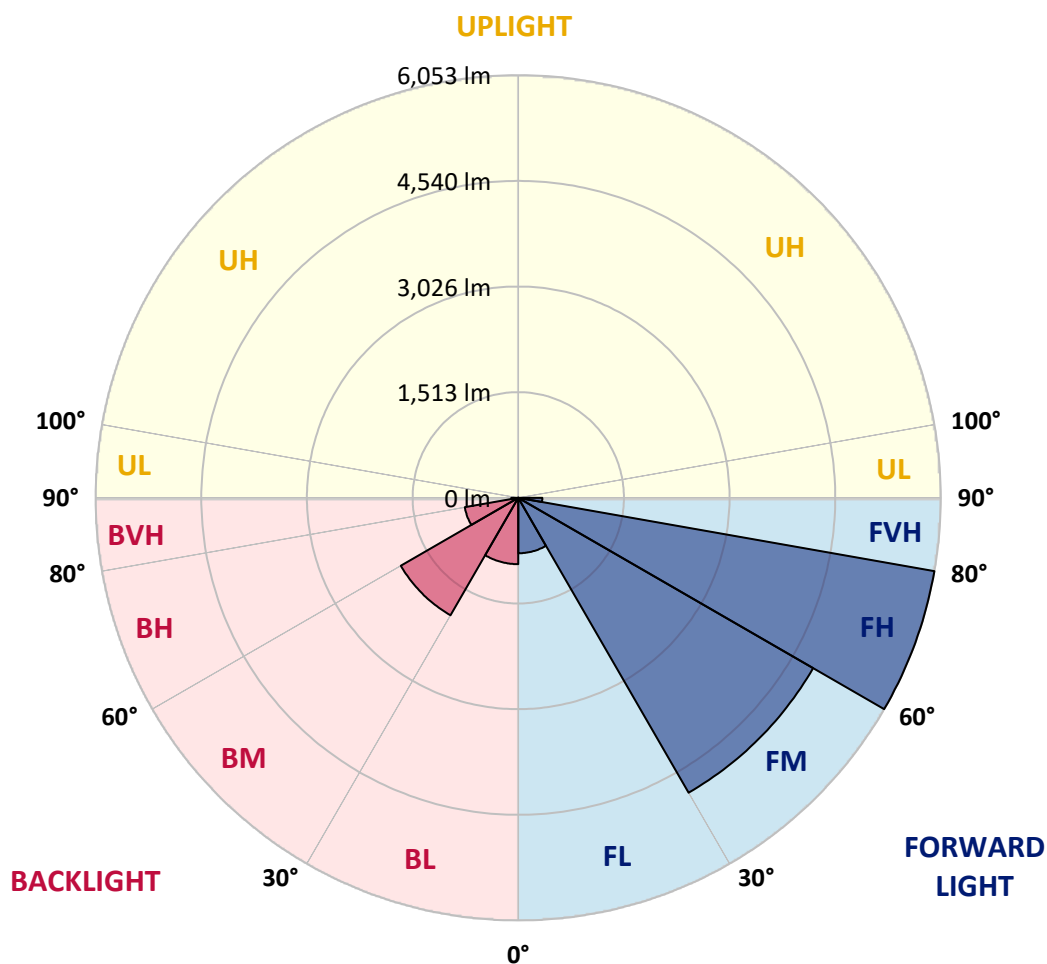
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 794.2  | 5.0       |                         |      |         |
| FM   | (30°-60°)   | 4877.0 | 30.8      |                         |      |         |
| FH   | (60°-80°)   | 6052.8 | 38.2      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 344.4  | 2.2       |                         |      | G3/500  |
| BL   | (0°-30°)    | 949.8  | 6.0       | B2/1000                 |      |         |
| BM   | (30°-60°)   | 1942.0 | 12.3      | B2/2500                 |      |         |
| BH   | (60°-80°)   | 777.0  | 4.9       | B2/1000                 |      | G2/1000 |
| BVH  | (80°-90°)   | 100.1  | 0.6       |                         |      | G2/225  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B2-U0-G3**

Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°     | 35°     | 36°     | 45°     | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|---------|---------|---------|---------|--------|--------|--------|--------|
| 0°    | 2110.5 | 2110.5 | 2110.5 | 2110.5  | 2110.5  | 2110.5  | 2110.5  | 2110.5 | 2110.5 | 2110.5 | 2110.5 |
| 2.5°  | 1946.1 | 1958.1 | 1963.2 | 1960.6  | 1973.4  | 1971.7  | 1989.7  | 2012.0 | 2042.8 | 2072.8 | 2116.4 |
| 5°    | 1796.2 | 1809.0 | 1820.2 | 1830.4  | 1855.2  | 1863.0  | 1891.2  | 1934.1 | 1990.5 | 2048.0 | 2119.8 |
| 7.5°  | 1656.7 | 1667.8 | 1684.9 | 1703.8  | 1745.7  | 1753.4  | 1800.5  | 1867.2 | 1946.1 | 2029.9 | 2129.2 |
| 10°   | 1542.8 | 1553.9 | 1571.9 | 1593.3  | 1645.5  | 1655.0  | 1714.9  | 1803.9 | 1906.7 | 2012.8 | 2139.5 |
| 12.5° | 1494.0 | 1497.4 | 1507.7 | 1529.1  | 1574.5  | 1580.4  | 1646.4  | 1748.2 | 1868.2 | 2000.0 | 2155.0 |
| 15°   | 1491.4 | 1498.2 | 1499.2 | 1510.2  | 1548.0  | 1550.5  | 1611.3  | 1712.3 | 1844.2 | 1997.4 | 2178.0 |
| 17.5° | 1517.1 | 1522.2 | 1514.5 | 1521.4  | 1553.1  | 1557.4  | 1605.3  | 1695.1 | 1836.5 | 2008.6 | 2217.5 |
| 20°   | 1585.6 | 1589.9 | 1566.8 | 1557.4  | 1580.4  | 1583.9  | 1631.0  | 1706.3 | 1844.2 | 2031.7 | 2271.4 |
| 22.5° | 1731.1 | 1733.7 | 1677.2 | 1638.7  | 1640.4  | 1642.2  | 1683.2  | 1751.7 | 1874.1 | 2073.6 | 2339.9 |
| 25°   | 1958.1 | 1956.3 | 1866.4 | 1791.9  | 1749.2  | 1739.7  | 1767.1  | 1825.3 | 1924.6 | 2129.2 | 2428.0 |
| 27.5° | 2223.4 | 2210.6 | 2120.7 | 2009.4  | 1916.0  | 1902.4  | 1896.4  | 1921.3 | 1996.6 | 2202.9 | 2536.0 |
| 30°   | 2523.1 | 2511.1 | 2414.4 | 2268.8  | 2139.5  | 2117.2  | 2060.8  | 2048.0 | 2103.6 | 2303.1 | 2685.8 |
| 32.5° | 2851.9 | 2844.2 | 2728.5 | 2552.2  | 2379.2  | 2353.6  | 2258.6  | 2224.2 | 2267.9 | 2454.6 | 2894.7 |
| 35°   | 3127.6 | 3120.7 | 3024.8 | 2843.2  | 2631.8  | 2600.1  | 2503.4  | 2464.9 | 2487.2 | 2648.9 | 3167.8 |
| 37.5° | 3376.7 | 3373.3 | 3291.1 | 3148.1  | 2929.8  | 2891.2  | 2782.5  | 2769.7 | 2765.3 | 2905.0 | 3499.1 |
| 40°   | 3607.8 | 3599.3 | 3513.7 | 3438.4  | 3276.5  | 3241.4  | 3145.5  | 3134.3 | 3101.9 | 3220.0 | 3874.1 |
| 42.5° | 3863.8 | 3841.6 | 3717.5 | 3682.3  | 3638.6  | 3609.5  | 3552.2  | 3553.9 | 3482.0 | 3575.3 | 4271.4 |
| 45°   | 4072.7 | 4059.9 | 3932.3 | 3911.8  | 3958.9  | 3946.9  | 3996.6  | 4009.4 | 3869.8 | 3947.7 | 4684.0 |
| 47.5° | 4297.0 | 4285.0 | 4177.2 | 4162.6  | 4290.2  | 4293.6  | 4469.1  | 4473.4 | 4248.2 | 4334.7 | 5097.5 |
| 50°   | 4573.5 | 4556.4 | 4449.4 | 4467.5  | 4610.4  | 4623.3  | 4944.3  | 4915.2 | 4596.7 | 4727.7 | 5507.6 |
| 52.5° | 4755.9 | 4766.2 | 4743.1 | 4772.2  | 4967.5  | 4979.4  | 5411.8  | 5337.3 | 4941.7 | 5115.6 | 5910.0 |
| 55°   | 4890.4 | 4910.9 | 4982.8 | 5049.6  | 5344.1  | 5356.1  | 5852.6  | 5738.8 | 5227.7 | 5475.1 | 6288.5 |
| 57.5° | 5063.3 | 5034.2 | 5168.6 | 5298.7  | 5702.0  | 5733.6  | 6281.6  | 6125.8 | 5481.1 | 5785.0 | 6547.9 |
| 60°   | 5311.5 | 5291.0 | 5395.5 | 5588.1  | 6102.6  | 6153.2  | 6735.4  | 6474.2 | 5666.9 | 6030.8 | 6598.4 |
| 62.5° | 5815.0 | 5763.7 | 5779.9 | 5950.3  | 6607.8  | 6674.6  | 7247.4  | 6778.2 | 5759.4 | 6126.6 | 6327.8 |
| 65°   | 6567.6 | 6479.4 | 6397.2 | 6515.3  | 7319.3  | 7385.2  | 7825.3  | 7017.0 | 5725.1 | 5940.9 | 5609.5 |
| 67.5° | 7515.3 | 7428.0 | 7327.0 | 7438.3  | 8367.2  | 8419.5  | 8538.5  | 7151.4 | 5455.5 | 5225.1 | 4339.8 |
| 70°   | 8297.0 | 8264.5 | 8385.2 | 8843.2  | 10041.0 | 10042.7 | 9452.9  | 7040.2 | 4716.5 | 3704.6 | 2511.1 |
| 72.5° | 8193.4 | 8173.8 | 8809.9 | 10225.9 | 12150.6 | 12105.1 | 10318.4 | 6197.7 | 3177.2 | 1671.3 | 941.0  |
| 75°   | 6721.6 | 6849.3 | 7834.7 | 10201.1 | 12908.2 | 12902.3 | 9788.4  | 3940.0 | 1314.2 | 692.6  | 486.3  |
| 77.5° | 3604.4 | 3806.4 | 5086.5 | 7531.6  | 10077.0 | 10228.5 | 6881.7  | 1378.4 | 564.2  | 443.5  | 336.5  |
| 80°   | 1175.5 | 1351.9 | 2027.3 | 3834.7  | 6547.9  | 6519.6  | 2949.4  | 541.1  | 386.1  | 314.2  | 232.9  |
| 82.5° | 499.2  | 519.7  | 905.8  | 1810.8  | 3360.5  | 3308.2  | 939.2   | 310.8  | 271.4  | 214.9  | 143.8  |
| 85°   | 195.2  | 218.3  | 399.9  | 837.3   | 1455.5  | 1423.8  | 339.1   | 154.1  | 173.8  | 140.4  | 85.6   |
| 87.5° | 64.2   | 77.9   | 143.0  | 286.8   | 452.9   | 436.6   | 83.0    | 53.1   | 75.3   | 64.2   | 30.9   |
| 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°    | 2110.5 | 2110.5 | 2110.5 | 2110.5 | 2110.5 | 2110.5 | 2110.5 | 2110.5 | 2110.5 | 2110.5 | 2110.5 |
| 2.5°  | 2128.4 | 2142.1 | 2158.3 | 2182.3 | 2202.9 | 2220.0 | 2238.0 | 2249.2 | 2253.4 | 2266.3 | 2265.4 |
| 5°    | 2143.8 | 2173.8 | 2214.0 | 2253.4 | 2291.9 | 2315.1 | 2335.6 | 2345.9 | 2355.2 | 2362.1 | 2363.9 |
| 7.5°  | 2169.5 | 2208.1 | 2271.4 | 2322.8 | 2355.2 | 2374.1 | 2387.8 | 2384.4 | 2387.8 | 2389.5 | 2392.1 |
| 10°   | 2191.8 | 2245.7 | 2321.0 | 2369.8 | 2394.7 | 2395.5 | 2392.1 | 2380.2 | 2374.1 | 2374.9 | 2376.7 |
| 12.5° | 2218.3 | 2278.3 | 2359.5 | 2400.7 | 2407.5 | 2388.7 | 2374.1 | 2353.6 | 2345.9 | 2342.4 | 2340.7 |
| 15°   | 2254.3 | 2322.8 | 2401.5 | 2417.0 | 2399.8 | 2375.8 | 2351.0 | 2317.6 | 2300.5 | 2286.8 | 2291.1 |
| 17.5° | 2297.9 | 2373.3 | 2434.1 | 2422.9 | 2386.1 | 2346.7 | 2306.5 | 2255.9 | 2220.9 | 2206.3 | 2207.1 |
| 20°   | 2358.7 | 2426.4 | 2458.9 | 2410.1 | 2354.4 | 2294.5 | 2226.0 | 2164.4 | 2131.8 | 2117.2 | 2115.6 |
| 22.5° | 2432.3 | 2497.4 | 2482.9 | 2387.8 | 2309.0 | 2213.2 | 2127.6 | 2082.2 | 2065.9 | 2055.6 | 2057.4 |
| 25°   | 2520.5 | 2576.1 | 2500.0 | 2355.2 | 2234.6 | 2105.2 | 2039.3 | 2024.8 | 2017.1 | 2009.4 | 2009.4 |
| 27.5° | 2635.3 | 2665.2 | 2512.8 | 2307.4 | 2118.2 | 1990.5 | 1966.6 | 1969.1 | 1966.6 | 1953.8 | 1956.3 |
| 30°   | 2786.8 | 2780.8 | 2524.8 | 2229.5 | 1984.6 | 1886.9 | 1888.7 | 1899.8 | 1901.5 | 1893.0 | 1897.3 |
| 32.5° | 2986.2 | 2925.5 | 2530.8 | 2128.4 | 1857.0 | 1796.2 | 1798.0 | 1809.9 | 1818.5 | 1803.9 | 1810.8 |
| 35°   | 3227.7 | 3094.2 | 2521.4 | 2001.7 | 1758.6 | 1709.7 | 1696.9 | 1700.4 | 1702.9 | 1689.2 | 1698.6 |
| 37.5° | 3509.4 | 3283.4 | 2479.5 | 1861.3 | 1677.2 | 1624.9 | 1597.6 | 1574.5 | 1560.8 | 1548.0 | 1556.5 |
| 40°   | 3818.4 | 3489.7 | 2402.4 | 1724.3 | 1586.5 | 1535.0 | 1494.0 | 1450.4 | 1404.0 | 1386.9 | 1394.7 |
| 42.5° | 4142.1 | 3702.0 | 2309.0 | 1593.3 | 1482.0 | 1440.0 | 1396.4 | 1333.0 | 1263.7 | 1228.6 | 1232.9 |
| 45°   | 4477.7 | 3919.5 | 2217.5 | 1464.0 | 1374.9 | 1357.0 | 1306.5 | 1230.3 | 1155.0 | 1110.5 | 1107.0 |
| 47.5° | 4806.4 | 4124.9 | 2083.0 | 1333.9 | 1274.8 | 1294.5 | 1255.1 | 1184.9 | 1101.1 | 1030.8 | 1023.2 |
| 50°   | 5120.7 | 4317.6 | 1863.0 | 1202.0 | 1193.5 | 1275.7 | 1238.0 | 1136.9 | 1041.1 | 951.2  | 943.5  |
| 52.5° | 5432.3 | 4473.4 | 1581.4 | 1082.2 | 1149.8 | 1270.5 | 1215.8 | 1104.4 | 987.2  | 893.0  | 882.7  |
| 55°   | 5696.8 | 4553.9 | 1309.9 | 979.5  | 1086.5 | 1226.8 | 1189.2 | 1065.9 | 910.9  | 810.8  | 802.3  |
| 57.5° | 5847.5 | 4488.8 | 1083.9 | 878.4  | 999.2  | 1155.0 | 1143.8 | 983.7  | 820.2  | 743.1  | 732.9  |
| 60°   | 5782.4 | 4225.2 | 898.9  | 790.3  | 916.0  | 1077.1 | 1065.1 | 902.4  | 750.8  | 678.0  | 667.8  |
| 62.5° | 5423.8 | 3722.6 | 752.6  | 713.2  | 840.7  | 997.4  | 986.3  | 839.9  | 697.7  | 627.6  | 616.4  |
| 65°   | 4701.2 | 3028.3 | 638.7  | 648.9  | 764.5  | 901.5  | 917.8  | 787.7  | 655.8  | 587.3  | 576.2  |
| 67.5° | 3585.6 | 2193.5 | 549.6  | 593.3  | 690.0  | 807.4  | 854.4  | 750.0  | 620.7  | 555.7  | 545.4  |
| 70°   | 2043.6 | 1245.7 | 474.3  | 539.4  | 624.1  | 720.1  | 805.6  | 720.1  | 583.0  | 529.1  | 522.2  |
| 72.5° | 774.8  | 571.9  | 410.1  | 485.4  | 560.8  | 646.4  | 751.7  | 672.9  | 539.4  | 499.2  | 492.3  |
| 75°   | 413.5  | 348.5  | 345.0  | 422.1  | 488.0  | 574.5  | 684.1  | 626.7  | 506.9  | 527.4  | 544.5  |
| 77.5° | 281.7  | 246.6  | 288.5  | 361.3  | 408.4  | 494.9  | 612.1  | 556.5  | 439.2  | 437.5  | 403.2  |
| 80°   | 195.2  | 174.7  | 234.6  | 291.1  | 315.9  | 416.0  | 534.2  | 477.8  | 357.8  | 333.9  | 319.4  |
| 82.5° | 117.3  | 113.9  | 175.5  | 217.5  | 223.4  | 321.0  | 442.6  | 400.7  | 292.8  | 255.1  | 256.9  |
| 85°   | 64.2   | 67.6   | 112.1  | 127.6  | 130.2  | 224.3  | 346.8  | 310.0  | 225.2  | 189.2  | 191.0  |
| 87.5° | 17.9   | 23.2   | 41.1   | 50.5   | 62.5   | 116.4  | 206.3  | 184.1  | 113.1  | 78.7   | 78.7   |
| 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)