

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: P964175

Luminaire Tested: **NAV-SB3B-827-U-T4FT**

Issue Date: 1/21/2025

**Test Information**

Test Method: LM-79-08  
Report Number: P964175  
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-SB3B-827-U-T4FT  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(3) 80 CRI, 2700K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV  
FORWARD THROW OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14884 lumens  
Efficiency: N/A  
Efficacy: 136.3 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): 109.2  
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



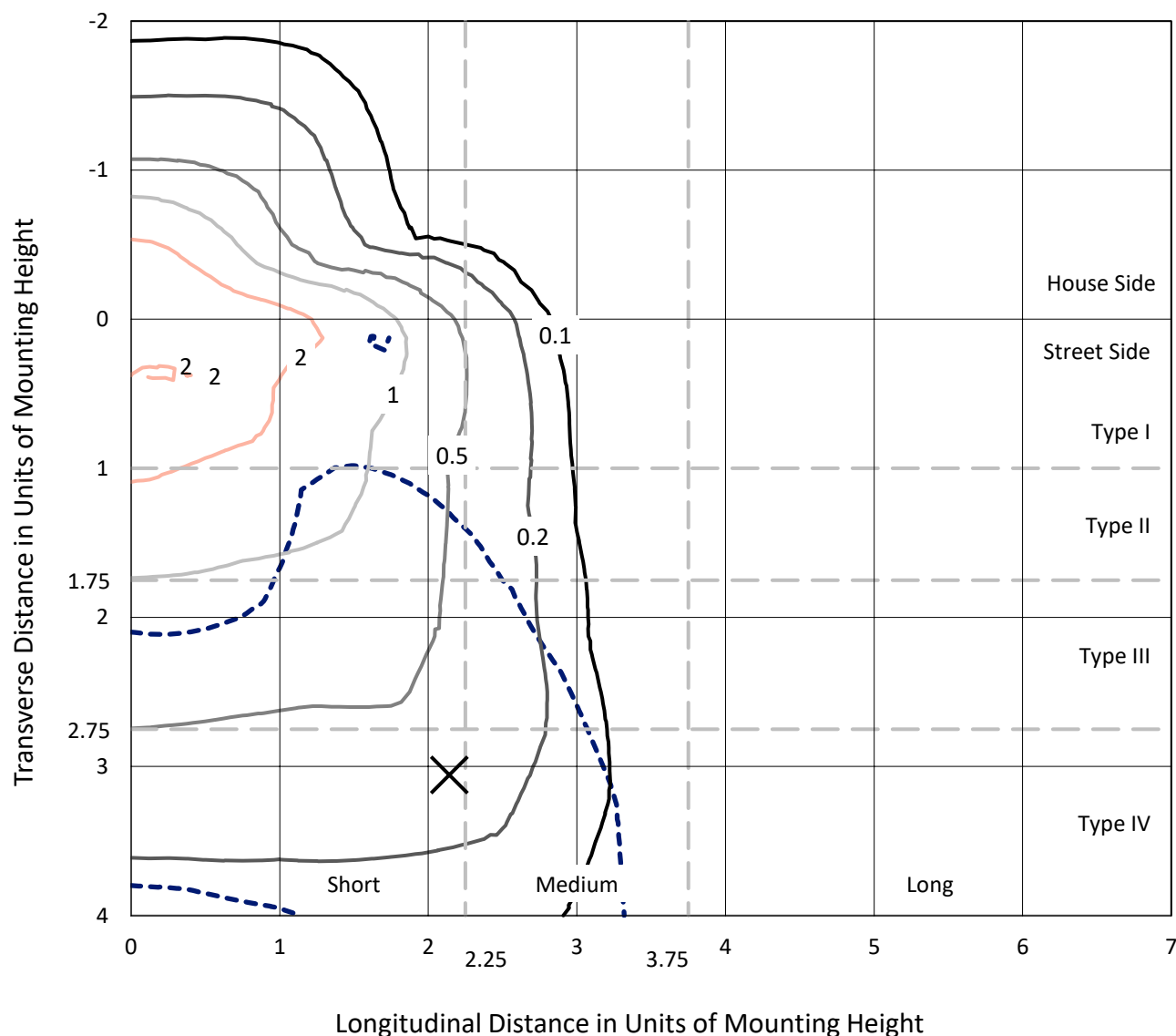
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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

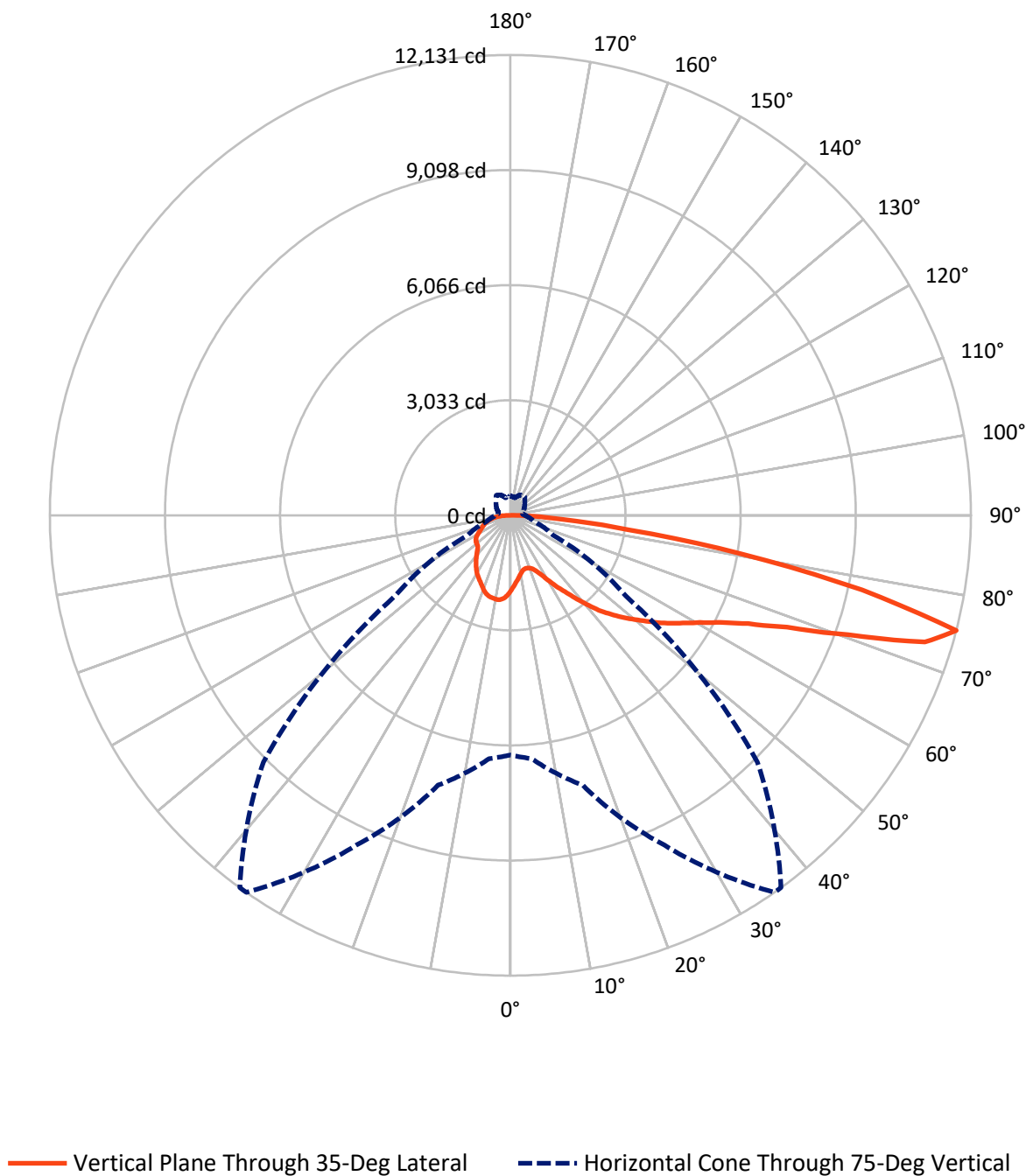


Based on 25 foot mounting height. Maximum calculated value = 3.5 fc

Type IV - Short - N/A

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## Luminous Intensity Polar Plot



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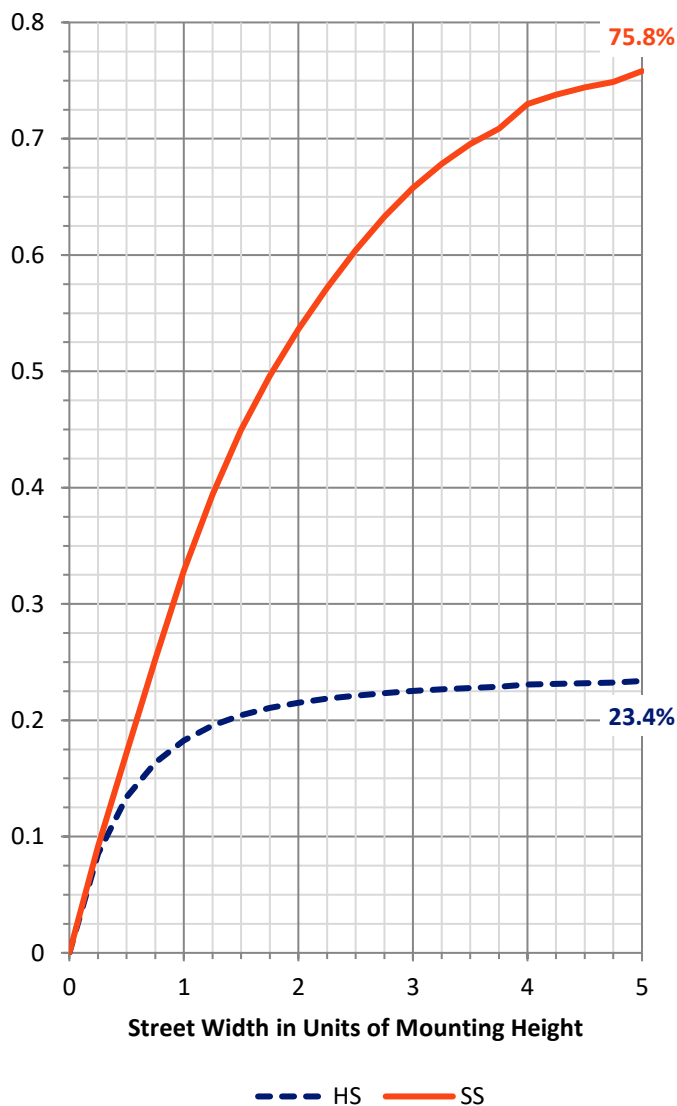
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 3542.0   | 0.0    | 3542.0  |
|                    | % Fixture | 23.8     | 0.0    | 23.8    |
| <b>Street Side</b> | Lumens    | 11342.0  | 0.0    | 11342.0 |
|                    | % Fixture | 76.2     | 0.0    | 76.2    |
| <b>Total</b>       | Lumens    | 14884.0  | 0.0    | 14884.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 187.8   | 1.3       |
| 10°-20°   | 541.7   | 3.6       |
| 20°-30°   | 909.6   | 6.1       |
| 30°-40°   | 1413.6  | 9.5       |
| 40°-50°   | 2098.2  | 14.1      |
| 50°-60°   | 2896.7  | 19.5      |
| 60°-70°   | 3514.4  | 23.6      |
| 70°-80°   | 2904.3  | 19.5      |
| 80°-90°   | 417.7   | 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°    | 14884.0 | 100.0     |
| 0°-180°   | 14884.0 | 100.0     |

**Coefficient of Utilization**



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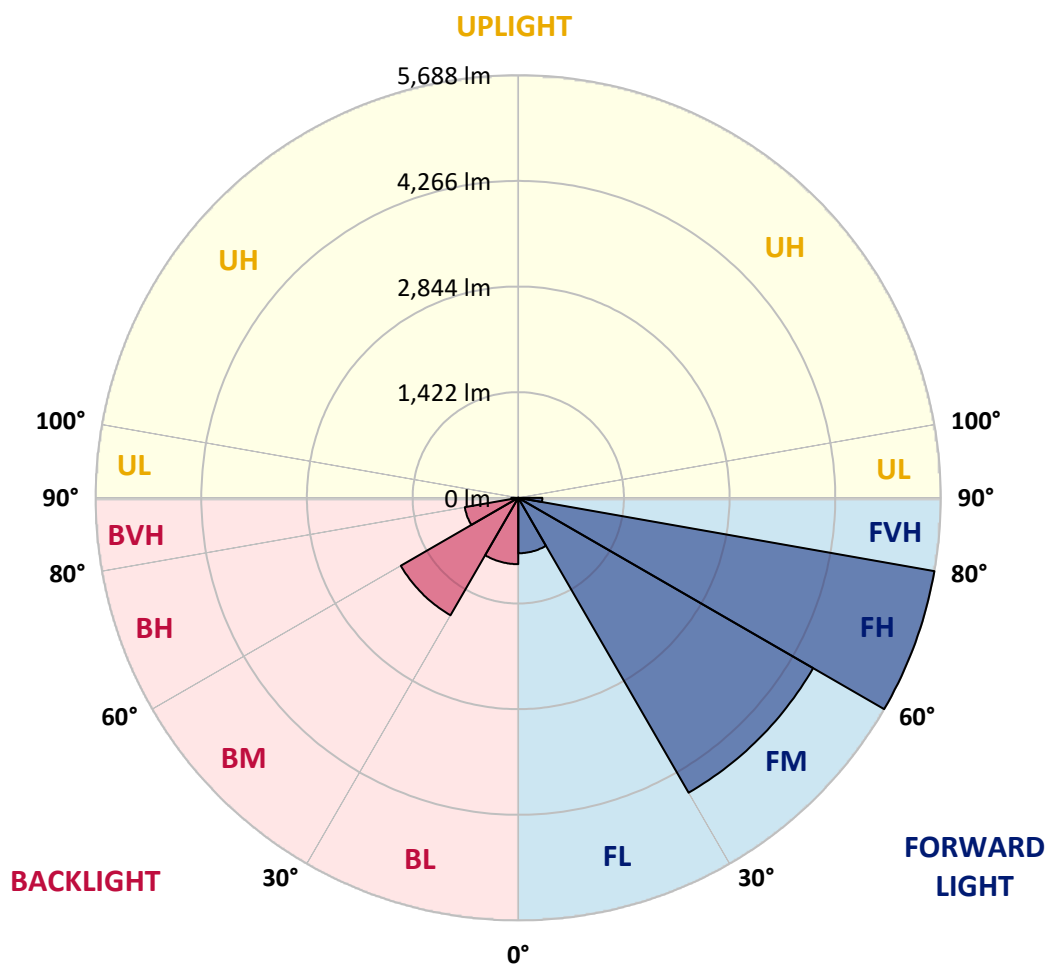
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 746.4  | 5.0       |                         |      |         |
| FM   | (30°-60°)   | 4583.5 | 30.8      |                         |      |         |
| FH   | (60°-80°)   | 5688.4 | 38.2      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 323.7  | 2.2       |                         |      | G3/500  |
| BL   | (0°-30°)    | 892.6  | 6.0       | B2/1000                 |      |         |
| BM   | (30°-60°)   | 1825.1 | 12.3      | B2/2500                 |      |         |
| BH   | (60°-80°)   | 730.3  | 4.9       | B2/1000                 |      | G2/1000 |
| BVH  | (80°-90°)   | 94.1   | 0.6       |                         |      | G1/100  |
| 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°    | 1983.4 | 1983.4 | 1983.4 | 1983.4 | 1983.4  | 1983.4  | 1983.4 | 1983.4 | 1983.4 | 1983.4 | 1983.4 |
| 2.5°  | 1828.9 | 1840.2 | 1845.0 | 1842.5 | 1854.6  | 1853.1  | 1869.9 | 1890.8 | 1919.8 | 1948.0 | 1989.0 |
| 5°    | 1688.1 | 1700.2 | 1710.6 | 1720.3 | 1743.6  | 1750.9  | 1777.5 | 1817.6 | 1870.7 | 1924.6 | 1992.3 |
| 7.5°  | 1557.0 | 1567.4 | 1583.5 | 1601.2 | 1640.6  | 1647.9  | 1692.2 | 1754.9 | 1828.9 | 1907.7 | 2001.1 |
| 10°   | 1450.0 | 1460.4 | 1477.3 | 1497.4 | 1546.5  | 1555.3  | 1611.7 | 1695.4 | 1791.9 | 1891.6 | 2010.7 |
| 12.5° | 1404.0 | 1407.3 | 1417.0 | 1437.0 | 1479.7  | 1485.3  | 1547.3 | 1643.1 | 1755.7 | 1879.6 | 2025.2 |
| 15°   | 1401.7 | 1408.0 | 1408.9 | 1419.3 | 1454.8  | 1457.1  | 1514.3 | 1609.2 | 1733.2 | 1877.2 | 2046.9 |
| 17.5° | 1425.8 | 1430.6 | 1423.4 | 1429.8 | 1459.6  | 1463.6  | 1508.7 | 1593.2 | 1725.9 | 1887.6 | 2083.9 |
| 20°   | 1490.1 | 1494.1 | 1472.4 | 1463.6 | 1485.3  | 1488.5  | 1532.8 | 1603.6 | 1733.2 | 1909.4 | 2134.7 |
| 22.5° | 1627.0 | 1629.3 | 1576.2 | 1540.1 | 1541.7  | 1543.2  | 1581.9 | 1646.3 | 1761.4 | 1948.8 | 2199.0 |
| 25°   | 1840.2 | 1838.5 | 1754.1 | 1684.1 | 1643.9  | 1635.0  | 1660.7 | 1715.4 | 1808.8 | 2001.1 | 2282.0 |
| 27.5° | 2089.6 | 2077.6 | 1993.0 | 1888.5 | 1800.7  | 1787.9  | 1782.3 | 1805.5 | 1876.4 | 2070.3 | 2383.3 |
| 30°   | 2371.2 | 2360.0 | 2269.0 | 2132.2 | 2010.7  | 1989.8  | 1936.7 | 1924.6 | 1976.9 | 2164.4 | 2524.1 |
| 32.5° | 2680.2 | 2673.0 | 2564.3 | 2398.6 | 2236.0  | 2212.0  | 2122.6 | 2090.4 | 2131.5 | 2306.9 | 2720.5 |
| 35°   | 2939.3 | 2932.8 | 2842.7 | 2672.2 | 2473.4  | 2443.6  | 2352.7 | 2316.5 | 2337.4 | 2489.5 | 2977.1 |
| 37.5° | 3173.4 | 3170.2 | 3092.9 | 2958.6 | 2753.5  | 2717.2  | 2615.0 | 2603.0 | 2598.9 | 2730.1 | 3288.5 |
| 40°   | 3390.7 | 3382.6 | 3302.1 | 3231.4 | 3079.3  | 3046.3  | 2956.2 | 2945.7 | 2915.1 | 3026.2 | 3640.9 |
| 42.5° | 3631.3 | 3610.4 | 3493.7 | 3460.7 | 3419.6  | 3392.3  | 3338.4 | 3340.0 | 3272.4 | 3360.2 | 4014.3 |
| 45°   | 3827.6 | 3815.6 | 3695.6 | 3676.4 | 3720.5  | 3709.3  | 3756.0 | 3768.0 | 3636.9 | 3710.1 | 4402.1 |
| 47.5° | 4038.4 | 4027.1 | 3925.7 | 3912.1 | 4031.9  | 4035.2  | 4200.1 | 4204.1 | 3992.6 | 4073.8 | 4790.7 |
| 50°   | 4298.3 | 4282.2 | 4181.6 | 4198.5 | 4332.9  | 4345.0  | 4646.7 | 4619.4 | 4320.1 | 4443.2 | 5176.1 |
| 52.5° | 4469.7 | 4479.4 | 4457.6 | 4485.0 | 4668.5  | 4679.7  | 5086.0 | 5016.0 | 4644.3 | 4807.7 | 5554.3 |
| 55°   | 4596.0 | 4615.4 | 4682.9 | 4745.6 | 5022.5  | 5033.8  | 5500.5 | 5393.3 | 4913.0 | 5145.6 | 5909.9 |
| 57.5° | 4758.6 | 4731.2 | 4857.5 | 4979.9 | 5358.8  | 5388.5  | 5903.5 | 5757.1 | 5151.2 | 5436.8 | 6153.8 |
| 60°   | 4991.9 | 4972.6 | 5070.8 | 5251.8 | 5735.4  | 5782.8  | 6330.0 | 6084.6 | 5325.8 | 5667.7 | 6201.2 |
| 62.5° | 5465.0 | 5416.7 | 5432.0 | 5592.1 | 6210.1  | 6272.8  | 6811.1 | 6370.2 | 5412.7 | 5757.8 | 5946.9 |
| 65°   | 6172.2 | 6089.4 | 6012.1 | 6123.1 | 6878.8  | 6940.7  | 7354.3 | 6594.6 | 5380.5 | 5583.3 | 5271.9 |
| 67.5° | 7063.0 | 6980.9 | 6886.0 | 6990.6 | 7863.6  | 7912.7  | 8024.5 | 6721.0 | 5127.0 | 4910.6 | 4078.7 |
| 70°   | 7797.6 | 7767.0 | 7880.5 | 8311.0 | 9436.7  | 9438.2  | 8883.9 | 6616.4 | 4432.7 | 3481.6 | 2360.0 |
| 72.5° | 7700.2 | 7681.8 | 8279.5 | 9610.4 | 11419.2 | 11376.6 | 9697.3 | 5824.7 | 2985.9 | 1570.6 | 884.3  |
| 75°   | 6317.1 | 6437.0 | 7363.1 | 9587.1 | 12131.3 | 12125.6 | 9199.3 | 3702.9 | 1235.1 | 651.0  | 457.0  |
| 77.5° | 3387.4 | 3577.4 | 4780.3 | 7078.2 | 9470.4  | 9612.9  | 6467.5 | 1295.4 | 530.2  | 416.8  | 316.2  |
| 80°   | 1104.7 | 1270.5 | 1905.4 | 3603.9 | 6153.8  | 6127.2  | 2771.9 | 508.5  | 362.8  | 295.3  | 218.8  |
| 82.5° | 469.1  | 488.4  | 851.3  | 1701.8 | 3158.1  | 3109.0  | 882.6  | 292.1  | 255.0  | 201.9  | 135.2  |
| 85°   | 183.5  | 205.2  | 375.8  | 786.9  | 1367.9  | 1338.1  | 318.7  | 144.8  | 163.4  | 131.9  | 80.5   |
| 87.5° | 60.4   | 73.2   | 134.4  | 269.6  | 425.7   | 410.3   | 78.0   | 49.9   | 70.8   | 60.4   | 29.0   |
| 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°    | 1983.4 | 1983.4 | 1983.4 | 1983.4 | 1983.4 | 1983.4 | 1983.4 | 1983.4 | 1983.4 | 1983.4 | 1983.4 |
| 2.5°  | 2000.3 | 2013.2 | 2028.5 | 2051.0 | 2070.3 | 2086.4 | 2103.3 | 2113.8 | 2117.8 | 2129.8 | 2129.0 |
| 5°    | 2014.7 | 2042.9 | 2080.8 | 2117.8 | 2153.9 | 2175.7 | 2195.0 | 2204.7 | 2213.5 | 2219.9 | 2221.6 |
| 7.5°  | 2038.9 | 2075.1 | 2134.7 | 2182.9 | 2213.5 | 2231.2 | 2244.1 | 2240.9 | 2244.1 | 2245.7 | 2248.1 |
| 10°   | 2059.8 | 2110.6 | 2181.3 | 2227.2 | 2250.5 | 2251.3 | 2248.1 | 2236.9 | 2231.2 | 2232.0 | 2233.7 |
| 12.5° | 2084.7 | 2141.1 | 2217.6 | 2256.1 | 2262.6 | 2244.9 | 2231.2 | 2212.0 | 2204.7 | 2201.5 | 2199.9 |
| 15°   | 2118.6 | 2182.9 | 2256.9 | 2271.5 | 2255.4 | 2232.9 | 2209.5 | 2178.1 | 2162.0 | 2149.1 | 2153.2 |
| 17.5° | 2159.6 | 2230.4 | 2287.6 | 2277.0 | 2242.5 | 2205.5 | 2167.7 | 2120.2 | 2087.2 | 2073.5 | 2074.3 |
| 20°   | 2216.8 | 2280.3 | 2310.9 | 2265.0 | 2212.7 | 2156.4 | 2092.0 | 2034.1 | 2003.5 | 1989.8 | 1988.2 |
| 22.5° | 2286.0 | 2347.0 | 2333.4 | 2244.1 | 2170.0 | 2079.9 | 1999.5 | 1956.8 | 1941.6 | 1931.9 | 1933.6 |
| 25°   | 2368.8 | 2421.2 | 2349.5 | 2213.5 | 2100.0 | 1978.6 | 1916.6 | 1902.9 | 1895.7 | 1888.5 | 1888.5 |
| 27.5° | 2476.6 | 2504.8 | 2361.6 | 2168.5 | 1990.7 | 1870.7 | 1848.2 | 1850.6 | 1848.2 | 1836.2 | 1838.5 |
| 30°   | 2619.1 | 2613.4 | 2372.9 | 2095.2 | 1865.1 | 1773.4 | 1775.0 | 1785.4 | 1787.1 | 1779.0 | 1783.1 |
| 32.5° | 2806.6 | 2749.4 | 2378.5 | 2000.3 | 1745.3 | 1688.1 | 1689.7 | 1701.0 | 1709.0 | 1695.4 | 1701.8 |
| 35°   | 3033.4 | 2907.9 | 2369.6 | 1881.2 | 1652.7 | 1606.8 | 1594.8 | 1598.0 | 1600.4 | 1587.5 | 1596.3 |
| 37.5° | 3298.1 | 3085.8 | 2330.2 | 1749.3 | 1576.2 | 1527.1 | 1501.4 | 1479.7 | 1466.9 | 1454.8 | 1462.8 |
| 40°   | 3588.6 | 3279.7 | 2257.8 | 1620.5 | 1491.0 | 1442.7 | 1404.0 | 1363.0 | 1319.6 | 1303.5 | 1310.8 |
| 42.5° | 3892.7 | 3479.2 | 2170.0 | 1497.4 | 1392.8 | 1353.4 | 1312.3 | 1252.8 | 1187.7 | 1154.7 | 1158.7 |
| 45°   | 4208.1 | 3683.5 | 2083.9 | 1375.9 | 1292.2 | 1275.3 | 1227.8 | 1156.2 | 1085.5 | 1043.6 | 1040.4 |
| 47.5° | 4517.2 | 3876.7 | 1957.6 | 1253.6 | 1198.1 | 1216.6 | 1179.6 | 1113.6 | 1034.7 | 968.7  | 961.6  |
| 50°   | 4812.5 | 4057.7 | 1750.9 | 1129.7 | 1121.7 | 1198.8 | 1163.5 | 1068.6 | 978.5  | 893.9  | 886.7  |
| 52.5° | 5105.3 | 4204.1 | 1486.1 | 1017.0 | 1080.7 | 1194.0 | 1142.6 | 1037.9 | 927.7  | 839.3  | 829.5  |
| 55°   | 5354.0 | 4279.8 | 1231.0 | 920.4  | 1021.1 | 1153.0 | 1117.7 | 1001.7 | 856.1  | 762.0  | 753.9  |
| 57.5° | 5495.5 | 4218.6 | 1018.6 | 825.5  | 939.0  | 1085.5 | 1075.0 | 924.6  | 770.8  | 698.4  | 688.8  |
| 60°   | 5434.4 | 3970.8 | 844.8  | 742.7  | 860.9  | 1012.2 | 1000.9 | 848.1  | 705.6  | 637.2  | 627.6  |
| 62.5° | 5097.3 | 3498.5 | 707.2  | 670.2  | 790.2  | 937.4  | 926.9  | 789.4  | 655.8  | 589.8  | 579.3  |
| 65°   | 4418.2 | 2845.9 | 600.2  | 609.9  | 718.5  | 847.3  | 862.5  | 740.3  | 616.3  | 552.0  | 541.5  |
| 67.5° | 3369.8 | 2061.5 | 516.6  | 557.6  | 648.5  | 758.8  | 803.0  | 704.9  | 583.3  | 522.2  | 512.5  |
| 70°   | 1920.6 | 1170.8 | 445.8  | 506.9  | 586.6  | 676.7  | 757.2  | 676.7  | 548.0  | 497.2  | 490.8  |
| 72.5° | 728.2  | 537.5  | 385.4  | 456.2  | 527.1  | 607.5  | 706.4  | 632.4  | 506.9  | 469.1  | 462.7  |
| 75°   | 388.7  | 327.5  | 324.3  | 396.7  | 458.6  | 539.9  | 642.9  | 589.0  | 476.3  | 495.7  | 511.8  |
| 77.5° | 264.8  | 231.8  | 271.1  | 339.6  | 383.8  | 465.0  | 575.3  | 523.0  | 412.8  | 411.1  | 378.9  |
| 80°   | 183.5  | 164.1  | 220.5  | 273.6  | 296.9  | 391.0  | 502.0  | 449.0  | 336.3  | 313.8  | 300.1  |
| 82.5° | 110.2  | 107.0  | 164.9  | 204.4  | 210.0  | 301.8  | 415.9  | 376.6  | 275.2  | 239.7  | 241.4  |
| 85°   | 60.4   | 63.6   | 105.4  | 119.9  | 122.3  | 210.8  | 325.8  | 291.3  | 211.7  | 177.8  | 179.5  |
| 87.5° | 16.9   | 21.7   | 38.6   | 47.5   | 58.7   | 109.5  | 193.9  | 173.0  | 106.2  | 74.0   | 74.0   |
| 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)