

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: P965780

Luminaire Tested: **NAV-SB4A-830-U-T2U**

Issue Date: 1/21/2025

### Test Information

Test Method: LM-79-08  
Report Number: P965780  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-16)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB4A-830-U-T2U  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(4) 80 CRI, 3000K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II U OPTICS  
Light Source: -  
Ballast/Driver: -

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 16780.3 lumens  
Efficiency: N/A  
Efficacy: 147.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - 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



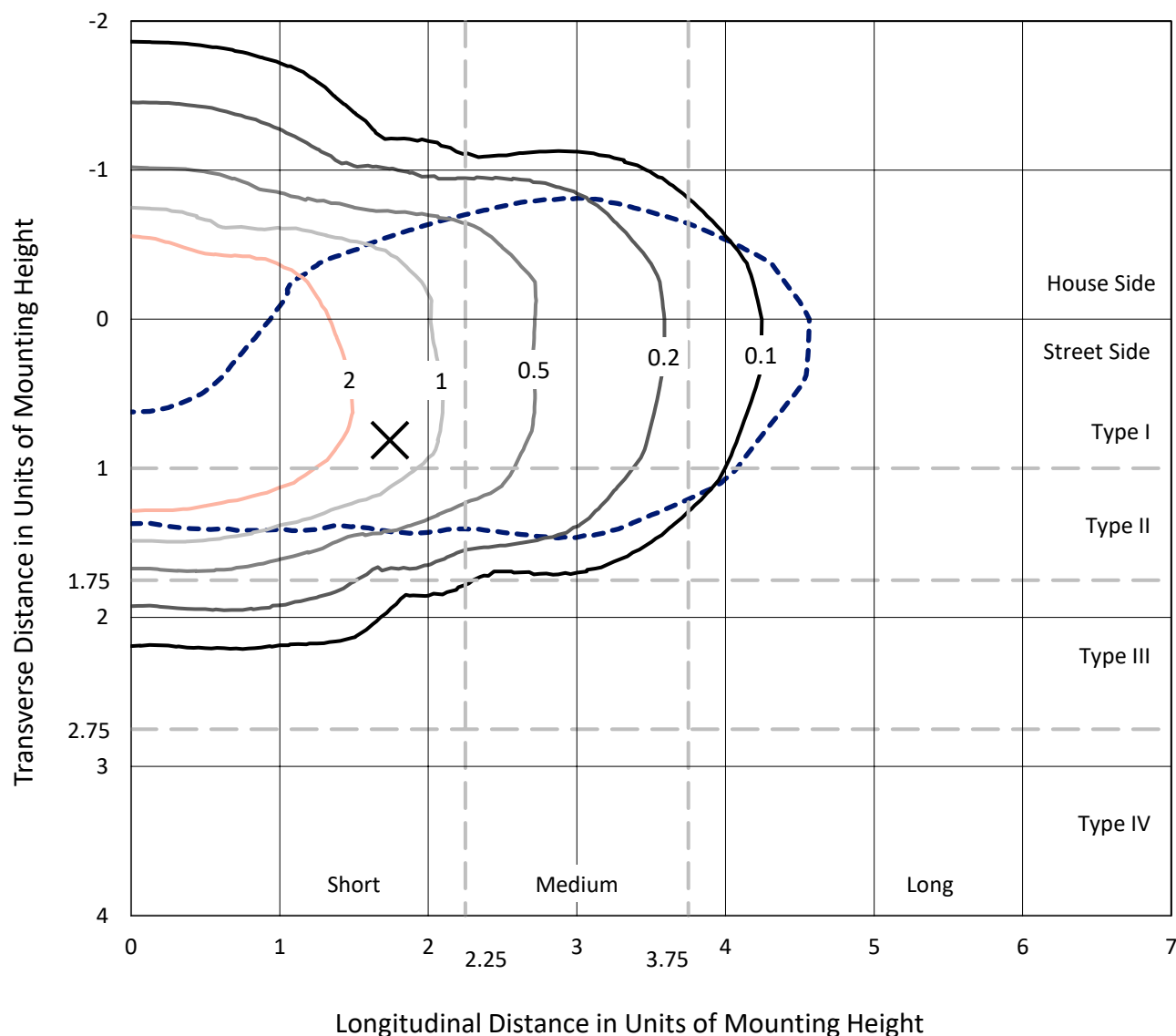
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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

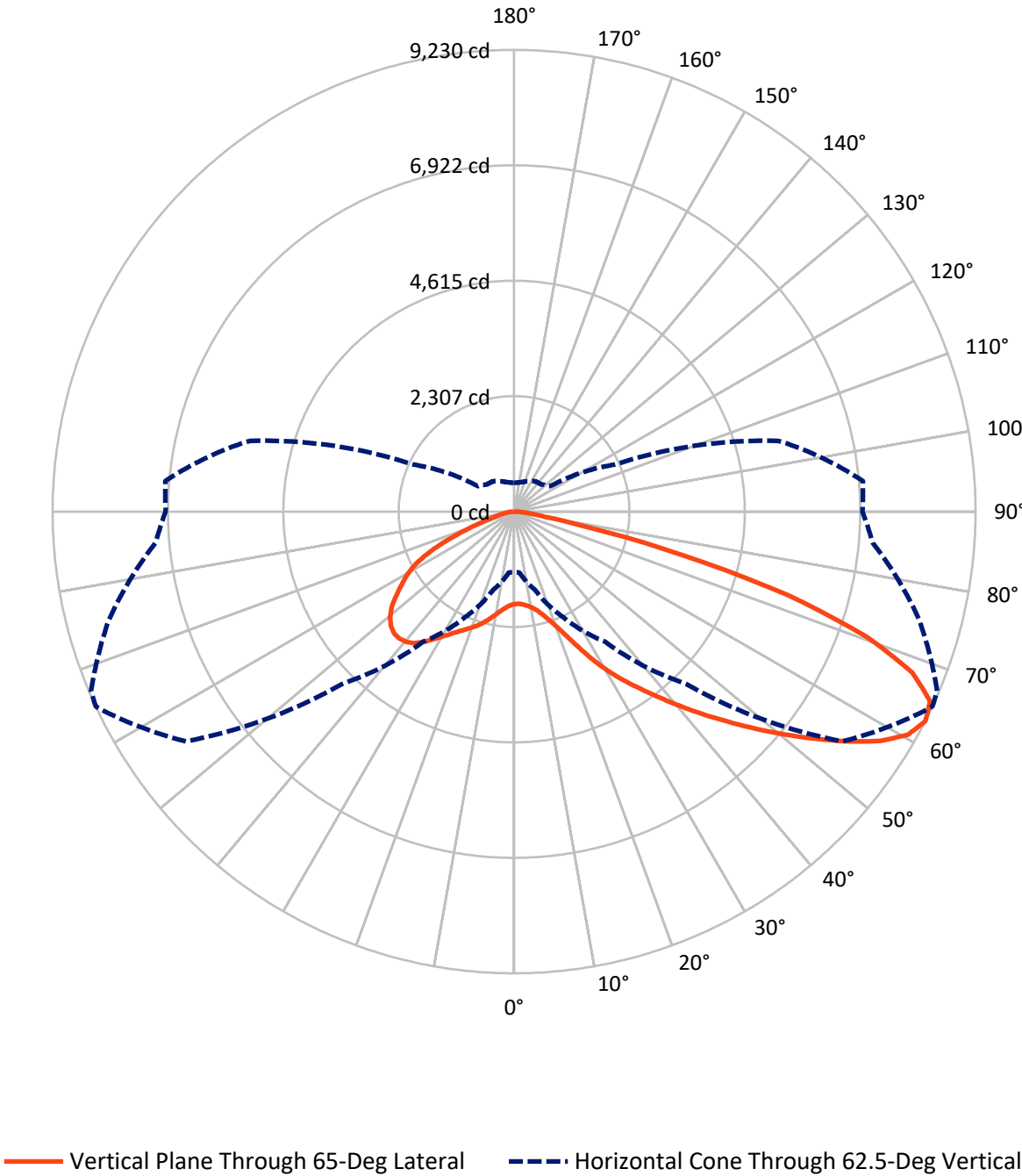


Based on 25 foot mounting height. Maximum calculated value = 4.7 fc

Type II - 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    | 5295.1   | 0.0    | 5295.1  |
|                    | % Fixture | 31.6     | 0.0    | 31.6    |
| <b>Street Side</b> | Lumens    | 11485.2  | 0.0    | 11485.2 |
|                    | % Fixture | 68.4     | 0.0    | 68.4    |
| <b>Total</b>       | Lumens    | 16780.3  | 0.0    | 16780.3 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 184.4   | 1.1       |
| 10°-20°   | 625.2   | 3.7       |
| 20°-30°   | 1267.6  | 7.6       |
| 30°-40°   | 2193.5  | 13.1      |
| 40°-50°   | 3319.5  | 19.8      |
| 50°-60°   | 3891.9  | 23.2      |
| 60°-70°   | 3262.9  | 19.4      |
| 70°-80°   | 1801.4  | 10.7      |
| 80°-90°   | 234.0   | 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°    | 16780.3 | 100.0     |
| 0°-180°   | 16780.3 | 100.0     |

**Coefficient of Utilization**



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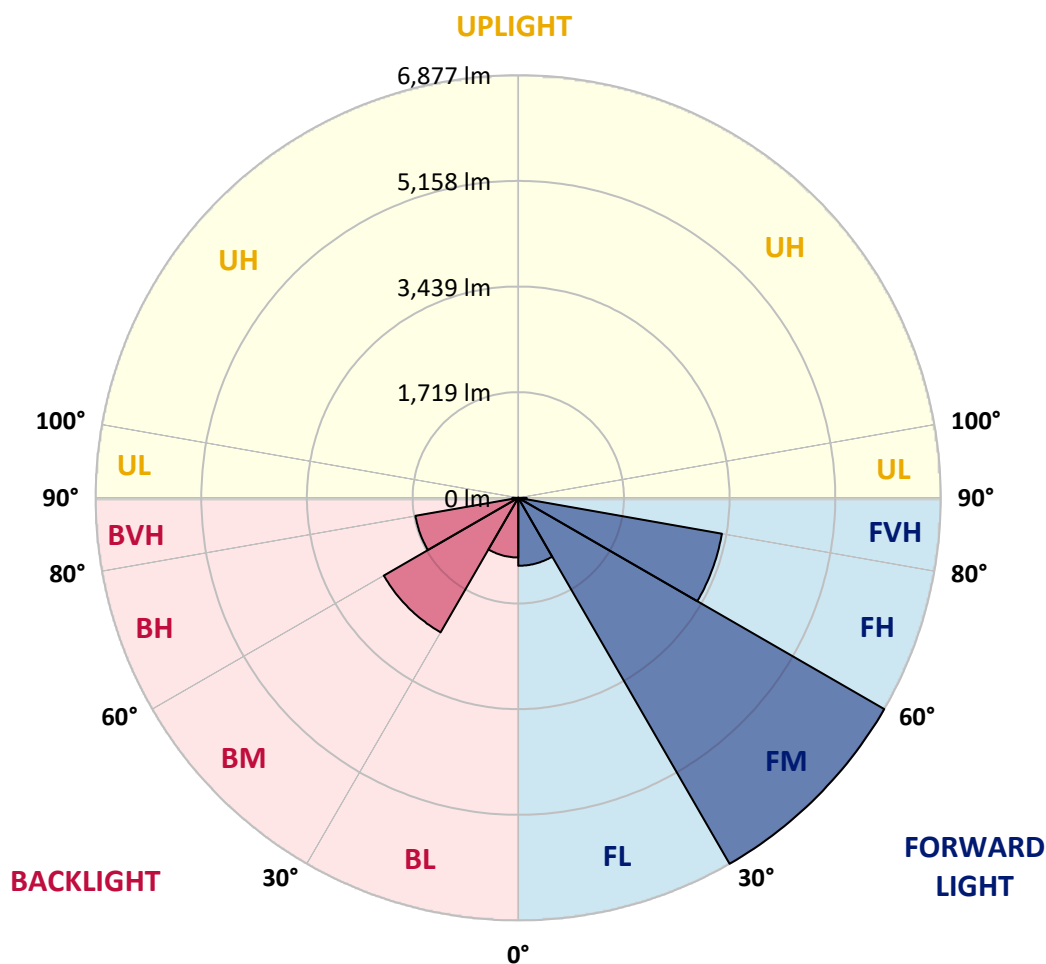
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 1106.0 | 6.6       |                         |      |         |
| FM   | (30°-60°)   | 6877.1 | 41.0      |                         |      |         |
| FH   | (60°-80°)   | 3365.6 | 20.1      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 136.4  | 0.8       |                         |      | G2/225  |
| BL   | (0°-30°)    | 971.1  | 5.8       | B2/1000                 |      |         |
| BM   | (30°-60°)   | 2527.8 | 15.1      | B3/5000                 |      |         |
| BH   | (60°-80°)   | 1698.6 | 10.1      | B3/2500                 |      | G3/2500 |
| BVH  | (80°-90°)   | 97.6   | 0.6       |                         |      | G1/100  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

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

Type II Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 67°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1849.1 | 1849.1 | 1849.1 | 1849.1 | 1849.1 | 1849.1 | 1849.1 | 1849.1 | 1849.1 | 1849.1 | 1849.1 |
| 2.5°  | 1836.9 | 1831.7 | 1836.1 | 1836.1 | 1837.8 | 1836.9 | 1843.1 | 1844.8 | 1847.4 | 1852.6 | 1852.6 |
| 5°    | 1818.7 | 1817.7 | 1825.6 | 1832.6 | 1839.6 | 1845.6 | 1853.5 | 1864.8 | 1866.5 | 1872.6 | 1880.5 |
| 7.5°  | 1812.5 | 1807.3 | 1819.5 | 1828.2 | 1844.8 | 1859.6 | 1880.5 | 1899.6 | 1907.4 | 1910.1 | 1924.8 |
| 10°   | 1859.6 | 1850.8 | 1862.2 | 1867.3 | 1881.3 | 1896.1 | 1920.5 | 1951.0 | 1959.7 | 1970.2 | 1986.7 |
| 12.5° | 1939.6 | 1930.1 | 1946.6 | 1954.5 | 1967.5 | 1980.6 | 1997.1 | 2026.7 | 2031.0 | 2050.2 | 2065.9 |
| 15°   | 2049.4 | 2038.0 | 2048.5 | 2058.1 | 2079.8 | 2092.0 | 2108.5 | 2137.2 | 2137.2 | 2152.1 | 2163.4 |
| 17.5° | 2198.2 | 2183.5 | 2191.2 | 2194.7 | 2208.7 | 2226.9 | 2254.8 | 2280.0 | 2293.1 | 2287.9 | 2272.2 |
| 20°   | 2420.2 | 2401.9 | 2401.9 | 2384.6 | 2379.3 | 2394.1 | 2430.7 | 2465.5 | 2479.4 | 2452.4 | 2414.1 |
| 22.5° | 2753.7 | 2727.5 | 2712.8 | 2653.5 | 2630.0 | 2631.8 | 2668.3 | 2711.0 | 2722.3 | 2674.4 | 2588.2 |
| 25°   | 3177.6 | 3136.7 | 3116.7 | 3029.6 | 2976.5 | 2930.4 | 2959.1 | 3013.9 | 3029.6 | 2970.4 | 2831.2 |
| 27.5° | 3601.5 | 3604.2 | 3585.0 | 3480.6 | 3392.6 | 3308.2 | 3293.4 | 3350.8 | 3367.4 | 3300.4 | 3128.0 |
| 30°   | 4196.2 | 4134.3 | 4097.8 | 3972.5 | 3847.1 | 3728.7 | 3667.8 | 3691.2 | 3695.6 | 3615.5 | 3415.3 |
| 32.5° | 4709.0 | 4693.3 | 4615.0 | 4505.3 | 4344.2 | 4158.7 | 4057.0 | 4019.4 | 4012.5 | 3898.5 | 3660.8 |
| 35°   | 5293.1 | 5284.4 | 5201.7 | 5071.1 | 4897.0 | 4639.4 | 4455.7 | 4348.6 | 4339.8 | 4179.6 | 3903.7 |
| 37.5° | 5886.9 | 5886.9 | 5805.9 | 5663.1 | 5482.9 | 5160.8 | 4881.4 | 4711.6 | 4683.7 | 4474.7 | 4150.9 |
| 40°   | 6360.4 | 6331.7 | 6346.5 | 6286.4 | 6080.1 | 5738.0 | 5354.1 | 5107.7 | 5070.3 | 4819.5 | 4413.9 |
| 42.5° | 6629.5 | 6619.9 | 6708.7 | 6775.8 | 6691.3 | 6417.9 | 5874.7 | 5536.8 | 5484.7 | 5199.1 | 4716.8 |
| 45°   | 6689.6 | 6679.1 | 6837.6 | 7083.1 | 7201.4 | 7089.1 | 6440.6 | 5988.8 | 5925.2 | 5596.1 | 5041.6 |
| 47.5° | 6551.1 | 6530.3 | 6762.6 | 7150.1 | 7529.6 | 7727.3 | 7053.4 | 6478.8 | 6386.6 | 5982.6 | 5375.0 |
| 50°   | 6134.9 | 6114.9 | 6466.7 | 6981.2 | 7640.2 | 8160.8 | 7718.6 | 6998.6 | 6857.6 | 6397.0 | 5711.9 |
| 52.5° | 5230.5 | 5240.0 | 5791.1 | 6498.0 | 7494.8 | 8430.7 | 8291.4 | 7546.2 | 7376.4 | 6821.0 | 6027.9 |
| 55°   | 4074.3 | 4095.2 | 4772.5 | 5550.8 | 6913.3 | 8389.8 | 8682.3 | 8110.3 | 7941.4 | 7219.7 | 6354.4 |
| 57.5° | 2917.4 | 3009.6 | 3644.3 | 4414.7 | 5796.4 | 7741.2 | 8767.6 | 8646.6 | 8482.9 | 7655.0 | 6673.9 |
| 60°   | 1890.9 | 1907.4 | 2560.3 | 3336.9 | 4413.9 | 6588.6 | 8594.4 | 9053.2 | 8925.2 | 8099.0 | 6941.1 |
| 62.5° | 1211.9 | 1223.1 | 1621.0 | 2334.0 | 3176.8 | 4874.4 | 8011.1 | 9229.9 | 9190.8 | 8392.4 | 7198.0 |
| 65°   | 890.6  | 881.9  | 1089.1 | 1542.6 | 2139.9 | 3006.1 | 6878.5 | 9144.5 | 9222.0 | 8576.1 | 7410.3 |
| 67.5° | 743.4  | 731.3  | 833.1  | 1068.2 | 1576.7 | 1707.2 | 5089.4 | 8590.0 | 8873.8 | 8555.2 | 7566.2 |
| 70°   | 677.3  | 666.9  | 728.7  | 793.1  | 1230.1 | 1143.1 | 2565.6 | 7467.8 | 7904.9 | 8317.6 | 7540.9 |
| 72.5° | 573.7  | 555.4  | 639.9  | 704.3  | 956.7  | 876.7  | 1060.4 | 5736.2 | 6269.0 | 7555.8 | 7185.8 |
| 75°   | 444.8  | 432.7  | 504.9  | 619.8  | 719.1  | 684.3  | 670.3  | 3483.2 | 4064.7 | 5843.3 | 6286.4 |
| 77.5° | 352.6  | 336.0  | 402.2  | 483.2  | 646.9  | 516.3  | 488.4  | 1500.0 | 2076.3 | 3730.5 | 4703.7 |
| 80°   | 265.6  | 250.7  | 305.6  | 382.2  | 497.1  | 389.2  | 316.0  | 612.0  | 782.7  | 1890.0 | 2365.4 |
| 82.5° | 188.9  | 175.9  | 213.3  | 280.3  | 334.3  | 349.1  | 194.1  | 343.0  | 385.7  | 728.7  | 528.5  |
| 85°   | 121.1  | 113.2  | 142.8  | 175.9  | 212.4  | 224.6  | 118.4  | 179.4  | 196.8  | 300.3  | 220.3  |
| 87.5° | 66.2   | 54.0   | 76.6   | 81.8   | 98.4   | 89.7   | 56.6   | 65.3   | 70.5   | 108.9  | 93.2   |
| 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°    | 1849.1 | 1849.1 | 1849.1 | 1849.1 | 1849.1 | 1849.1 | 1849.1 | 1849.1 | 1849.1 | 1849.1 | 1849.1 |
| 2.5°  | 1856.1 | 1858.7 | 1867.3 | 1870.0 | 1876.1 | 1884.0 | 1889.2 | 1894.4 | 1894.4 | 1899.6 | 1899.6 |
| 5°    | 1881.3 | 1887.4 | 1905.7 | 1915.3 | 1931.0 | 1946.6 | 1956.2 | 1967.5 | 1974.5 | 1977.9 | 1979.7 |
| 7.5°  | 1930.1 | 1939.6 | 1965.7 | 1982.4 | 2009.3 | 2031.0 | 2045.9 | 2061.6 | 2065.1 | 2074.6 | 2071.1 |
| 10°   | 1996.3 | 2007.6 | 2037.2 | 2068.4 | 2100.7 | 2127.7 | 2141.6 | 2152.9 | 2157.3 | 2159.1 | 2154.7 |
| 12.5° | 2071.9 | 2088.5 | 2126.9 | 2165.1 | 2199.1 | 2222.6 | 2226.1 | 2223.4 | 2211.2 | 2200.8 | 2200.8 |
| 15°   | 2165.1 | 2180.0 | 2222.6 | 2264.4 | 2297.4 | 2301.8 | 2280.0 | 2266.2 | 2251.3 | 2248.7 | 2248.7 |
| 17.5° | 2276.5 | 2284.4 | 2323.6 | 2364.5 | 2367.1 | 2352.3 | 2320.1 | 2307.1 | 2293.1 | 2283.5 | 2284.4 |
| 20°   | 2406.3 | 2403.6 | 2431.5 | 2448.9 | 2430.7 | 2385.4 | 2336.6 | 2314.9 | 2300.9 | 2289.6 | 2290.5 |
| 22.5° | 2561.3 | 2541.2 | 2537.7 | 2533.4 | 2484.6 | 2389.8 | 2323.6 | 2295.7 | 2274.0 | 2258.3 | 2263.5 |
| 25°   | 2786.8 | 2710.1 | 2657.0 | 2627.4 | 2517.7 | 2366.2 | 2281.8 | 2219.9 | 2179.0 | 2152.1 | 2162.5 |
| 27.5° | 3068.7 | 2939.9 | 2805.8 | 2733.6 | 2517.7 | 2318.3 | 2180.8 | 2080.6 | 2013.6 | 1985.8 | 1999.8 |
| 30°   | 3337.8 | 3202.8 | 3005.2 | 2861.6 | 2511.7 | 2240.0 | 2018.0 | 1878.7 | 1800.3 | 1772.5 | 1789.0 |
| 32.5° | 3567.6 | 3420.5 | 3216.8 | 3001.7 | 2496.8 | 2112.9 | 1816.0 | 1661.9 | 1586.2 | 1553.1 | 1569.7 |
| 35°   | 3780.9 | 3624.2 | 3429.2 | 3155.9 | 2457.6 | 1926.6 | 1594.1 | 1476.5 | 1392.1 | 1339.0 | 1356.4 |
| 37.5° | 3999.4 | 3813.1 | 3630.3 | 3295.2 | 2387.1 | 1709.0 | 1423.4 | 1323.3 | 1224.1 | 1152.6 | 1171.8 |
| 40°   | 4237.1 | 4014.2 | 3845.4 | 3377.9 | 2271.3 | 1501.7 | 1291.1 | 1199.7 | 1094.3 | 1018.5 | 1033.4 |
| 42.5° | 4514.8 | 4255.4 | 4084.7 | 3420.5 | 2112.9 | 1354.6 | 1204.9 | 1115.2 | 1016.0 | 954.2  | 966.4  |
| 45°   | 4804.7 | 4521.0 | 4303.3 | 3419.6 | 1936.1 | 1285.9 | 1177.0 | 1088.2 | 978.6  | 914.1  | 924.6  |
| 47.5° | 5108.6 | 4798.6 | 4492.2 | 3363.9 | 1783.0 | 1295.4 | 1161.3 | 1029.9 | 908.9  | 846.2  | 855.0  |
| 50°   | 5413.2 | 5102.4 | 4675.0 | 3259.5 | 1717.7 | 1274.5 | 1103.0 | 948.0  | 805.2  | 748.7  | 752.1  |
| 52.5° | 5715.4 | 5425.4 | 4832.6 | 3110.6 | 1651.5 | 1197.1 | 1028.2 | 841.8  | 762.6  | 723.4  | 723.4  |
| 55°   | 6019.2 | 5744.9 | 5004.0 | 2893.8 | 1486.0 | 1106.5 | 902.8  | 801.8  | 728.7  | 693.0  | 689.5  |
| 57.5° | 6323.9 | 6114.1 | 5166.9 | 2677.0 | 1278.0 | 995.1  | 834.0  | 753.1  | 694.7  | 664.3  | 659.1  |
| 60°   | 6640.8 | 6536.3 | 5334.9 | 2477.6 | 1072.6 | 852.3  | 783.5  | 713.9  | 654.7  | 620.7  | 618.1  |
| 62.5° | 6967.2 | 7001.2 | 5466.4 | 2220.9 | 883.7  | 765.3  | 738.2  | 666.9  | 609.4  | 577.2  | 576.4  |
| 65°   | 7296.4 | 7449.6 | 5552.5 | 1864.8 | 716.5  | 682.5  | 689.5  | 615.5  | 557.2  | 529.3  | 528.5  |
| 67.5° | 7544.4 | 7772.6 | 5528.2 | 1411.2 | 587.6  | 604.1  | 628.5  | 561.5  | 506.7  | 484.9  | 485.7  |
| 70°   | 7572.3 | 7734.2 | 5287.9 | 966.4  | 491.9  | 527.6  | 560.7  | 508.4  | 451.8  | 436.1  | 437.1  |
| 72.5° | 7201.4 | 7211.9 | 4618.4 | 631.2  | 416.2  | 463.2  | 489.2  | 454.5  | 399.6  | 384.0  | 383.0  |
| 75°   | 6229.0 | 5964.4 | 3390.9 | 416.2  | 348.2  | 397.9  | 422.2  | 397.9  | 344.7  | 348.2  | 336.0  |
| 77.5° | 4719.4 | 4224.0 | 2058.9 | 296.0  | 290.8  | 334.3  | 367.4  | 349.9  | 304.7  | 342.1  | 301.2  |
| 80°   | 2431.5 | 2285.2 | 918.5  | 221.1  | 229.8  | 267.2  | 302.1  | 279.4  | 241.2  | 229.8  | 209.8  |
| 82.5° | 557.2  | 647.7  | 362.1  | 158.5  | 166.3  | 192.4  | 230.7  | 209.8  | 173.2  | 146.3  | 144.5  |
| 85°   | 195.1  | 213.3  | 160.2  | 99.2   | 97.5   | 120.1  | 156.7  | 140.1  | 117.6  | 94.0   | 99.2   |
| 87.5° | 61.8   | 81.0   | 60.1   | 40.1   | 41.8   | 54.0   | 72.3   | 66.2   | 54.8   | 35.7   | 37.4   |
| 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)