

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: P961546

Luminaire Tested: **NAV-SB2A-830-U-AFL-HSS**

Issue Date: 1/21/2025

### Test Information

Test Method: LM-79-08  
Report Number: P961546  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-15)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB2A-830-U-AFL-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(2) 80 CRI, 3000K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND AUTOMOTIVE  
FRONTLINE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: -

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 7044.8 lumens  
Efficiency: N/A  
Efficacy: 122.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G1

Input Watts (W): 57.3  
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

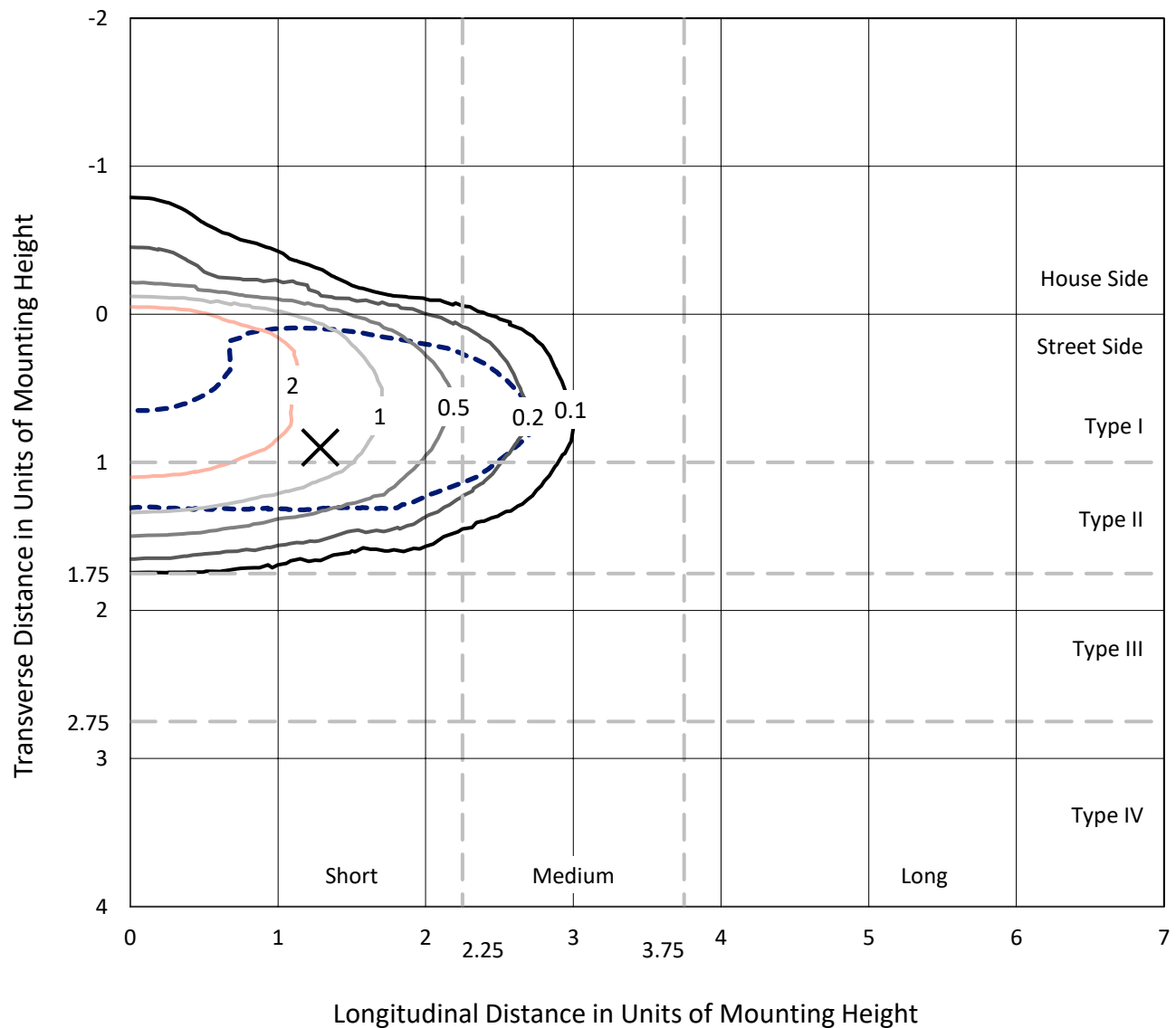


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## Iso-Footcandle Lines of Horizontal Illumination

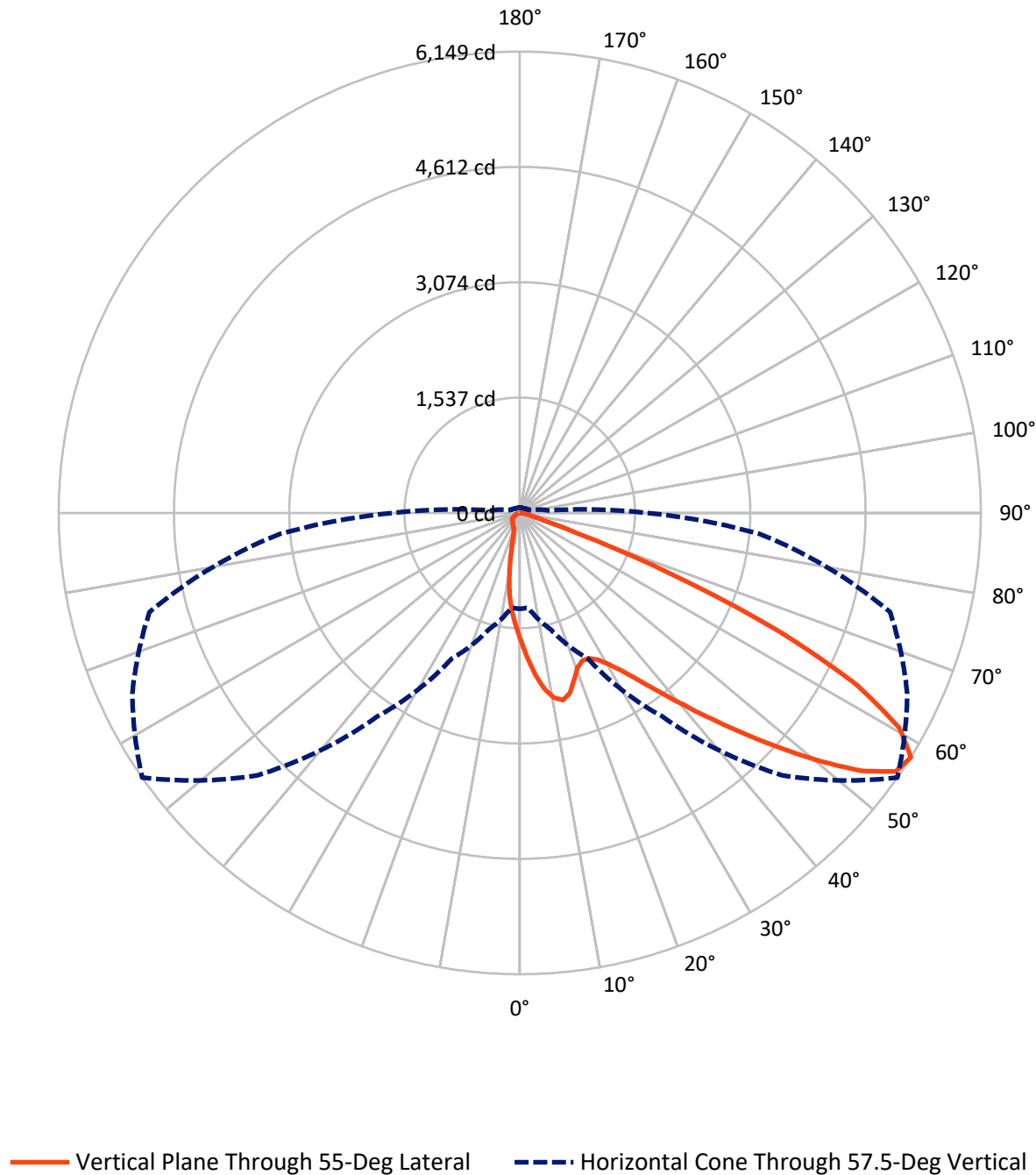
× Max cd  
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.9 fc  
Type II - Short - N/A

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## Luminous Intensity Polar Plot



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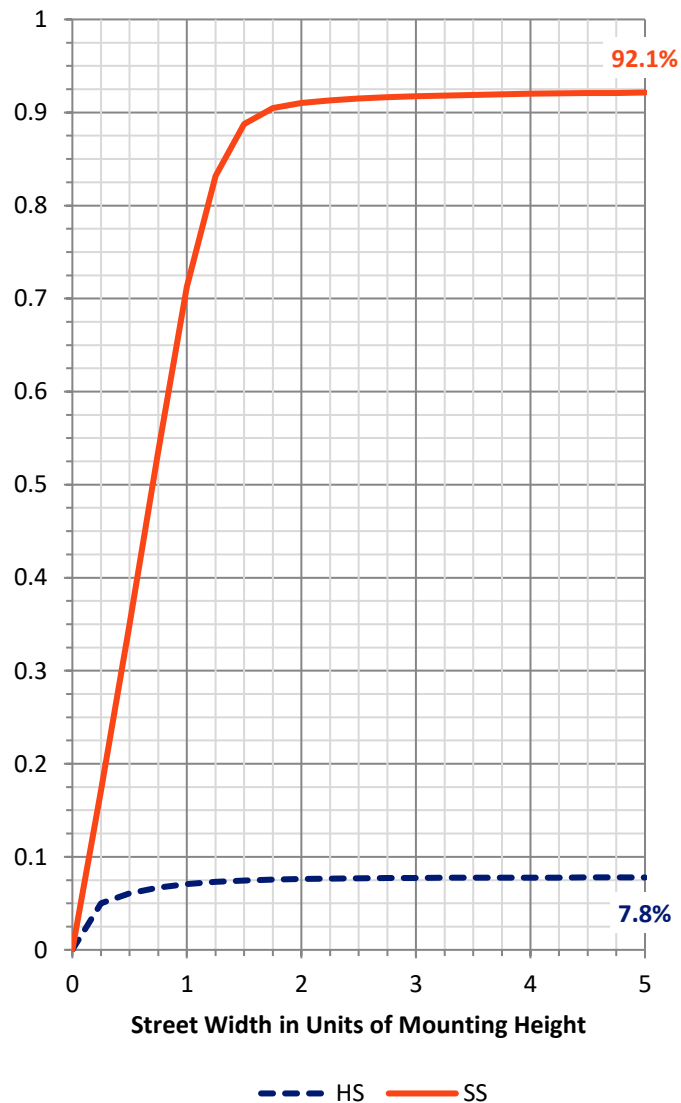
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 550.2    | 0.0    | 550.2  |
|                    | % Fixture | 7.8      | 0.0    | 7.8    |
| <b>Street Side</b> | Lumens    | 6494.6   | 0.0    | 6494.6 |
|                    | % Fixture | 92.2     | 0.0    | 92.2   |
| <b>Total</b>       | Lumens    | 7044.8   | 0.0    | 7044.8 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 158.0  | 2.2       |
| 10°-20°   | 381.5  | 5.4       |
| 20°-30°   | 610.5  | 8.7       |
| 30°-40°   | 1033.2 | 14.7      |
| 40°-50°   | 1696.4 | 24.1      |
| 50°-60°   | 1864.4 | 26.5      |
| 60°-70°   | 1069.4 | 15.2      |
| 70°-80°   | 218.5  | 3.1       |
| 80°-90°   | 12.9   | 0.2       |
| 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°    | 7044.8 | 100.0     |
| 0°-180°   | 7044.8 | 100.0     |

**Coefficient of Utilization**



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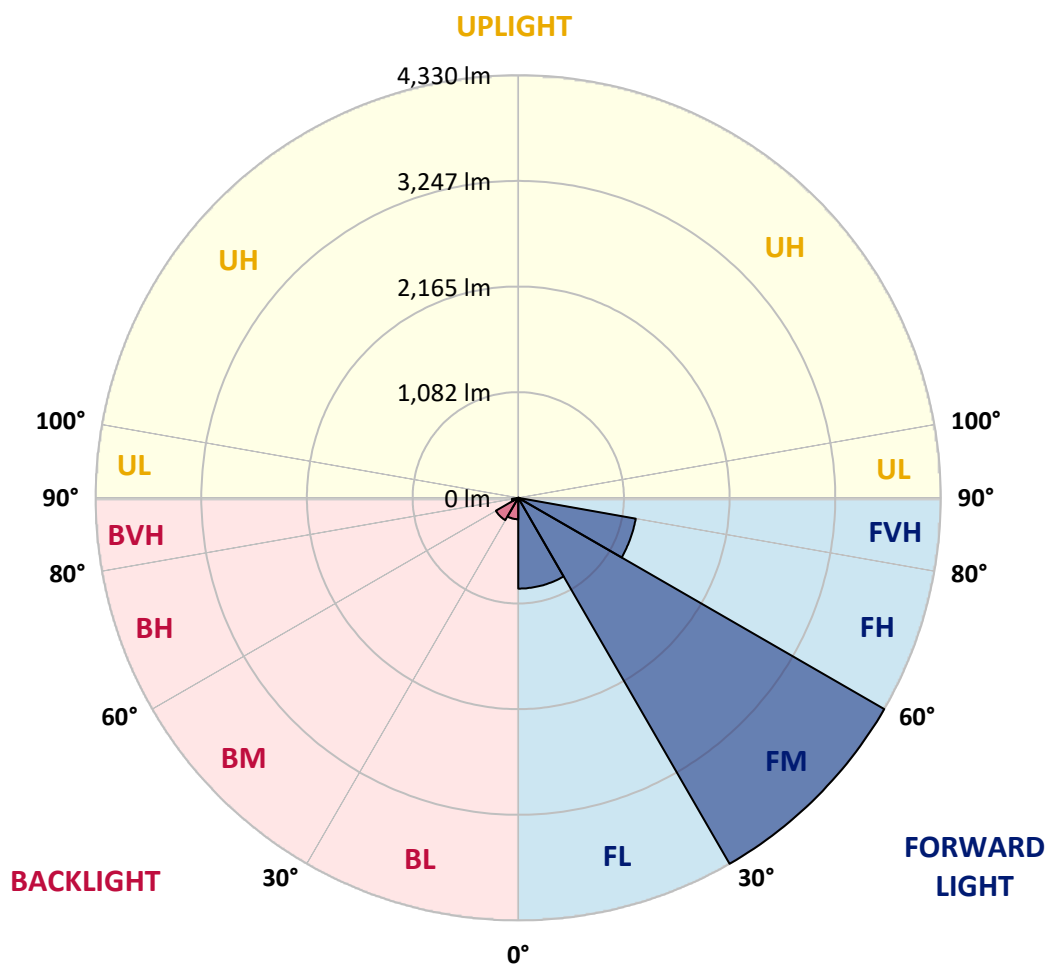
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 930.3  | 13.2      |                         |      |         |
| FM   | (30°-60°)   | 4329.8 | 61.5      |                         |      |         |
| FH   | (60°-80°)   | 1222.5 | 17.4      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 12.0   | 0.2       |                         |      | G1/100  |
| BL   | (0°-30°)    | 219.6  | 3.1       | B1/500                  |      |         |
| BM   | (30°-60°)   | 264.2  | 3.8       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 65.4   | 0.9       | B0/110                  |      | G0/110  |
| BVH  | (80°-90°)   | 0.9    | 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-G1**

Type II Short



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 85°    | 90°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1697.6 | 1697.6 | 1697.6 | 1697.6 | 1697.6 | 1697.6 | 1697.6 | 1697.6 | 1697.6 | 1697.6 | 1697.6 |
| 2.5°  | 2106.4 | 2079.9 | 2076.0 | 2070.8 | 2020.4 | 1982.6 | 1927.8 | 1868.0 | 1800.6 | 1731.9 | 1701.5 |
| 5°    | 2433.5 | 2412.6 | 2408.8 | 2384.5 | 2327.1 | 2262.8 | 2165.5 | 2042.5 | 1917.0 | 1769.4 | 1705.9 |
| 7.5°  | 2496.9 | 2493.0 | 2510.8 | 2509.9 | 2502.1 | 2451.3 | 2369.2 | 2222.8 | 2034.3 | 1815.4 | 1717.2 |
| 10°   | 2214.1 | 2224.1 | 2277.1 | 2323.6 | 2449.1 | 2522.1 | 2504.3 | 2383.5 | 2155.1 | 1868.0 | 1729.8 |
| 12.5° | 1956.5 | 1944.8 | 1982.6 | 2035.1 | 2181.1 | 2398.3 | 2560.3 | 2517.8 | 2293.2 | 1927.4 | 1748.4 |
| 15°   | 1795.0 | 1790.2 | 1811.5 | 1835.8 | 1947.0 | 2165.9 | 2495.2 | 2626.8 | 2426.1 | 1997.8 | 1776.7 |
| 17.5° | 1743.2 | 1739.3 | 1745.9 | 1751.9 | 1824.1 | 1993.4 | 2340.1 | 2693.7 | 2553.4 | 2078.2 | 1808.0 |
| 20°   | 1785.3 | 1780.1 | 1779.3 | 1774.5 | 1804.5 | 1920.0 | 2199.8 | 2698.5 | 2667.7 | 2151.2 | 1834.9 |
| 22.5° | 1908.3 | 1902.2 | 1881.0 | 1861.8 | 1864.5 | 1930.1 | 2137.2 | 2650.6 | 2753.7 | 2219.3 | 1851.9 |
| 25°   | 2131.2 | 2121.1 | 2076.9 | 2012.6 | 1971.7 | 1999.6 | 2146.8 | 2587.7 | 2835.8 | 2272.7 | 1843.6 |
| 27.5° | 2410.1 | 2397.0 | 2340.1 | 2244.5 | 2151.2 | 2117.2 | 2215.8 | 2544.3 | 2903.9 | 2313.6 | 1825.7 |
| 30°   | 2683.2 | 2666.3 | 2610.3 | 2536.1 | 2399.6 | 2292.7 | 2340.6 | 2563.4 | 2985.2 | 2356.2 | 1802.4 |
| 32.5° | 2978.2 | 2962.1 | 2887.8 | 2795.8 | 2682.8 | 2539.0 | 2511.2 | 2656.8 | 3084.6 | 2415.7 | 1785.9 |
| 35°   | 3351.3 | 3326.2 | 3220.7 | 3095.1 | 2975.2 | 2829.7 | 2742.4 | 2817.9 | 3217.2 | 2506.4 | 1795.0 |
| 37.5° | 3776.2 | 3742.4 | 3628.5 | 3455.2 | 3298.9 | 3135.9 | 3023.9 | 3039.5 | 3411.3 | 2628.1 | 1823.2 |
| 40°   | 4176.8 | 4145.9 | 4040.8 | 3877.5 | 3681.1 | 3483.5 | 3363.9 | 3329.2 | 3679.3 | 2776.2 | 1872.7 |
| 42.5° | 4416.9 | 4389.2 | 4344.9 | 4275.8 | 4110.2 | 3908.7 | 3758.0 | 3682.8 | 3996.5 | 2953.4 | 1933.0 |
| 45°   | 4430.5 | 4406.1 | 4465.6 | 4546.0 | 4513.4 | 4379.2 | 4195.4 | 4057.7 | 4314.8 | 3119.9 | 1995.7 |
| 47.5° | 4215.0 | 4198.5 | 4379.2 | 4659.8 | 4799.7 | 4856.1 | 4686.7 | 4401.3 | 4577.6 | 3239.3 | 2021.3 |
| 50°   | 3627.7 | 3621.5 | 3993.4 | 4508.7 | 4908.7 | 5274.0 | 5205.0 | 4721.0 | 4781.4 | 3301.0 | 1996.9 |
| 52.5° | 3145.5 | 3123.3 | 3340.1 | 4024.7 | 4750.2 | 5493.8 | 5711.5 | 5034.7 | 4923.9 | 3312.7 | 1940.0 |
| 55°   | 2385.7 | 2366.2 | 2638.1 | 3215.0 | 4238.9 | 5415.7 | 6082.0 | 5358.3 | 5026.0 | 3282.8 | 1837.9 |
| 57.5° | 1279.7 | 1267.6 | 1611.2 | 2139.9 | 3313.6 | 4946.4 | 6148.9 | 5700.6 | 5112.0 | 3203.2 | 1695.0 |
| 60°   | 498.3  | 496.1  | 624.6  | 1038.2 | 2013.9 | 4024.3 | 5811.3 | 5906.0 | 5165.9 | 3105.5 | 1575.5 |
| 62.5° | 301.5  | 308.0  | 328.8  | 466.1  | 889.6  | 2500.0 | 5033.4 | 5672.3 | 5201.9 | 3016.1 | 1476.9 |
| 65°   | 249.4  | 249.8  | 252.4  | 320.1  | 426.2  | 1046.0 | 3789.2 | 4903.5 | 5112.9 | 2856.6 | 1337.1 |
| 67.5° | 213.7  | 217.6  | 227.7  | 254.1  | 300.6  | 458.7  | 2181.5 | 3798.3 | 4571.2 | 2485.6 | 1119.0 |
| 70°   | 168.5  | 173.7  | 186.3  | 208.9  | 232.0  | 287.1  | 806.3  | 2527.3 | 3492.2 | 1873.6 | 846.2  |
| 72.5° | 142.1  | 141.7  | 148.1  | 169.8  | 184.2  | 202.0  | 310.2  | 1416.1 | 2029.5 | 894.4  | 418.7  |
| 75°   | 109.9  | 114.3  | 122.5  | 142.1  | 150.8  | 146.4  | 168.1  | 517.3  | 727.1  | 271.1  | 142.5  |
| 77.5° | 86.0   | 89.5   | 96.9   | 116.0  | 124.6  | 103.8  | 96.9   | 185.0  | 233.7  | 97.3   | 64.3   |
| 80°   | 38.6   | 41.7   | 66.0   | 85.6   | 101.7  | 71.6   | 52.6   | 94.7   | 103.8  | 44.3   | 32.6   |
| 82.5° | 7.0    | 11.7   | 38.6   | 45.2   | 52.2   | 46.4   | 27.4   | 49.1   | 50.8   | 17.8   | 11.3   |
| 85°   | 0.4    | 0.8    | 13.4   | 16.5   | 20.8   | 15.2   | 8.3    | 19.6   | 16.9   | 6.0    | 4.3    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.4    | 0.4    | 2.2    | 2.6    | 3.5    | 2.6    | 2.2    | 1.7    |
| 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):**

|       | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1697.6 | 1697.6 | 1697.6 | 1697.6 | 1697.6 | 1697.6 | 1697.6 | 1697.6 | 1697.6 | 1697.6 |
| 2.5°  | 1670.2 | 1608.5 | 1548.7 | 1499.6 | 1470.9 | 1422.2 | 1390.1 | 1384.9 | 1371.3 | 1383.1 |
| 5°    | 1638.2 | 1527.8 | 1416.1 | 1316.2 | 1234.1 | 1128.1 | 1049.1 | 1015.7 | 986.6  | 996.5  |
| 7.5°  | 1622.9 | 1448.7 | 1275.0 | 1104.2 | 928.8  | 759.3  | 633.3  | 580.8  | 540.8  | 546.4  |
| 10°   | 1602.5 | 1366.6 | 1094.3 | 833.6  | 598.6  | 431.3  | 344.5  | 312.3  | 294.5  | 295.0  |
| 12.5° | 1586.9 | 1268.4 | 884.5  | 565.2  | 364.5  | 275.4  | 248.5  | 240.7  | 235.4  | 235.9  |
| 15°   | 1579.0 | 1152.9 | 677.2  | 376.6  | 260.7  | 233.3  | 226.7  | 223.2  | 219.8  | 219.4  |
| 17.5° | 1566.0 | 1024.3 | 495.7  | 275.0  | 228.1  | 218.5  | 212.9  | 208.9  | 204.6  | 203.8  |
| 20°   | 1546.4 | 878.3  | 362.3  | 232.4  | 213.7  | 206.3  | 198.5  | 193.3  | 188.1  | 187.3  |
| 22.5° | 1510.4 | 724.2  | 278.5  | 215.0  | 203.3  | 195.1  | 185.5  | 179.4  | 174.1  | 173.3  |
| 25°   | 1443.5 | 579.5  | 234.6  | 204.2  | 194.1  | 184.2  | 173.7  | 165.5  | 160.7  | 159.9  |
| 27.5° | 1358.8 | 455.2  | 212.9  | 194.1  | 182.4  | 173.3  | 161.6  | 153.8  | 149.4  | 148.5  |
| 30°   | 1258.9 | 350.5  | 200.3  | 182.9  | 168.5  | 160.7  | 150.3  | 143.8  | 141.1  | 141.1  |
| 32.5° | 1151.2 | 280.2  | 195.1  | 171.6  | 156.4  | 147.7  | 139.4  | 136.8  | 136.0  | 135.5  |
| 35°   | 1049.9 | 243.2  | 192.4  | 162.5  | 145.5  | 137.2  | 133.8  | 134.3  | 136.0  | 136.0  |
| 37.5° | 960.0  | 231.5  | 191.2  | 155.9  | 136.0  | 128.5  | 130.8  | 134.7  | 132.9  | 132.9  |
| 40°   | 878.8  | 232.9  | 190.2  | 151.2  | 128.1  | 123.8  | 128.1  | 125.2  | 120.7  | 120.3  |
| 42.5° | 816.7  | 243.7  | 188.5  | 147.3  | 123.4  | 120.3  | 118.6  | 113.8  | 113.4  | 114.3  |
| 45°   | 771.5  | 253.3  | 188.1  | 145.5  | 118.2  | 112.5  | 110.3  | 105.6  | 114.3  | 116.4  |
| 47.5° | 718.0  | 253.3  | 188.1  | 139.4  | 109.5  | 107.3  | 103.8  | 98.6   | 107.3  | 109.5  |
| 50°   | 649.0  | 237.2  | 180.7  | 132.5  | 102.5  | 101.2  | 95.1   | 88.7   | 86.9   | 88.1   |
| 52.5° | 561.7  | 208.1  | 162.1  | 122.9  | 95.5   | 93.0   | 85.6   | 80.8   | 79.5   | 79.5   |
| 55°   | 462.2  | 174.1  | 136.8  | 109.1  | 88.1   | 83.4   | 78.2   | 76.1   | 74.7   | 73.8   |
| 57.5° | 375.8  | 142.9  | 109.9  | 96.9   | 81.3   | 75.1   | 73.4   | 70.8   | 68.7   | 67.3   |
| 60°   | 308.4  | 112.5  | 90.8   | 86.0   | 74.3   | 68.7   | 68.2   | 64.7   | 59.0   | 58.2   |
| 62.5° | 238.0  | 82.5   | 76.5   | 74.7   | 67.3   | 62.5   | 61.7   | 54.7   | 46.0   | 44.3   |
| 65°   | 168.1  | 64.3   | 61.7   | 65.6   | 60.0   | 55.6   | 53.4   | 43.0   | 33.9   | 32.6   |
| 67.5° | 118.2  | 53.9   | 48.7   | 57.3   | 52.2   | 46.4   | 45.2   | 36.5   | 28.2   | 27.4   |
| 70°   | 84.3   | 43.9   | 40.0   | 49.1   | 41.7   | 40.8   | 38.2   | 30.4   | 23.1   | 22.1   |
| 72.5° | 59.6   | 33.4   | 30.9   | 42.5   | 28.7   | 35.2   | 31.3   | 23.5   | 17.4   | 16.5   |
| 75°   | 43.9   | 23.9   | 21.7   | 24.8   | 20.8   | 26.5   | 22.1   | 15.7   | 10.9   | 10.5   |
| 77.5° | 32.2   | 15.2   | 13.0   | 12.2   | 12.2   | 16.5   | 12.2   | 6.6    | 4.8    | 4.3    |
| 80°   | 22.5   | 7.0    | 6.0    | 5.2    | 4.8    | 3.9    | 1.7    | 0.8    | 0.4    | 0.4    |
| 82.5° | 13.4   | 3.1    | 3.1    | 2.2    | 1.3    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 3.1    | 1.3    | 1.3    | 0.4    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 0.4    | 0.4    | 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    |

(END OF REPORT)