

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: P960900

Luminaire Tested: **NAV-SB1D-740-U-SL3-HSS**

Issue Date: 1/21/2025

### Test Information

Test Method: LM-79-08  
Report Number: P960900  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-13)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/21/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB1D-740-U-SL3-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(1) 70 CRI, 4000K, 900mA LIGHTSQUARE WITH 26 LEDS AND TYPE III SPILL  
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: -

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 8889.8 lumens  
Efficiency: N/A  
Efficacy: 111.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B1 - U0 - G2

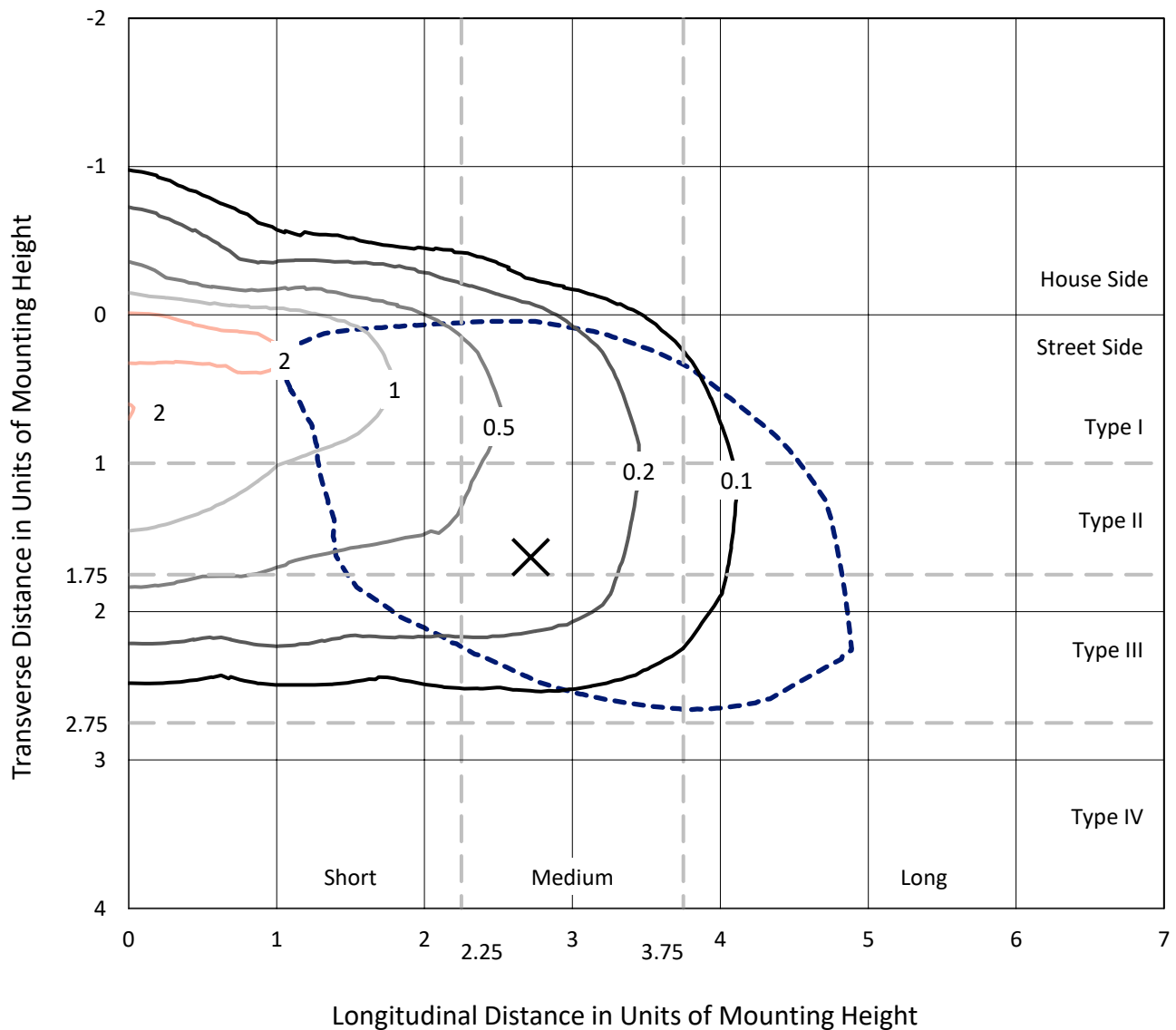
Input Watts (W): 79.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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## Iso-Footcandle Lines of Horizontal Illumination

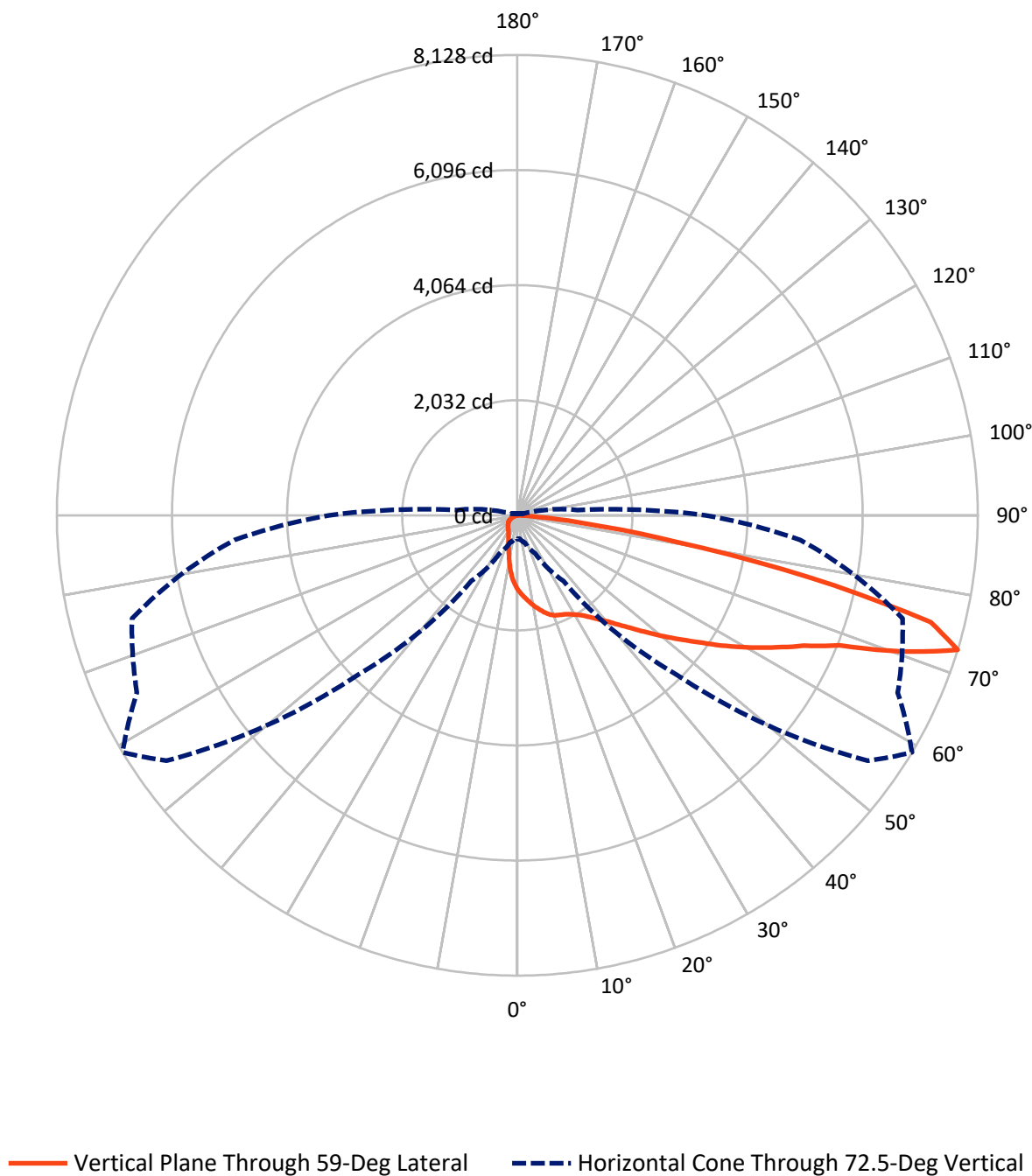
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.6 fc  
 Type III - Medium - N/A

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## Luminous Intensity Polar Plot



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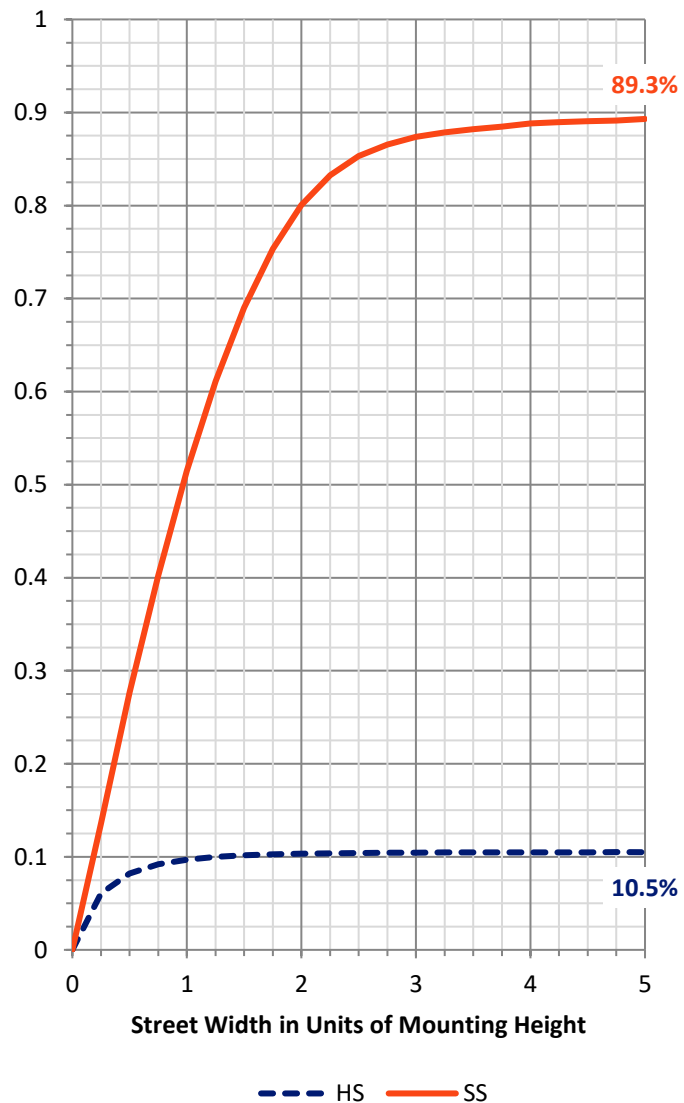
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 938.9    | 0.0    | 938.9  |
|                    | % Fixture | 10.6     | 0.0    | 10.6   |
| <b>Street Side</b> | Lumens    | 7950.9   | 0.0    | 7950.9 |
|                    | % Fixture | 89.4     | 0.0    | 89.4   |
| <b>Total</b>       | Lumens    | 8889.8   | 0.0    | 8889.8 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 118.9  | 1.3       |
| 10°-20°   | 315.9  | 3.6       |
| 20°-30°   | 500.7  | 5.6       |
| 30°-40°   | 803.5  | 9.0       |
| 40°-50°   | 1283.3 | 14.4      |
| 50°-60°   | 1858.1 | 20.9      |
| 60°-70°   | 2205.1 | 24.8      |
| 70°-80°   | 1637.0 | 18.4      |
| 80°-90°   | 167.4  | 1.9       |
| 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°    | 8889.8 | 100.0     |
| 0°-180°   | 8889.8 | 100.0     |

**Coefficient of Utilization**



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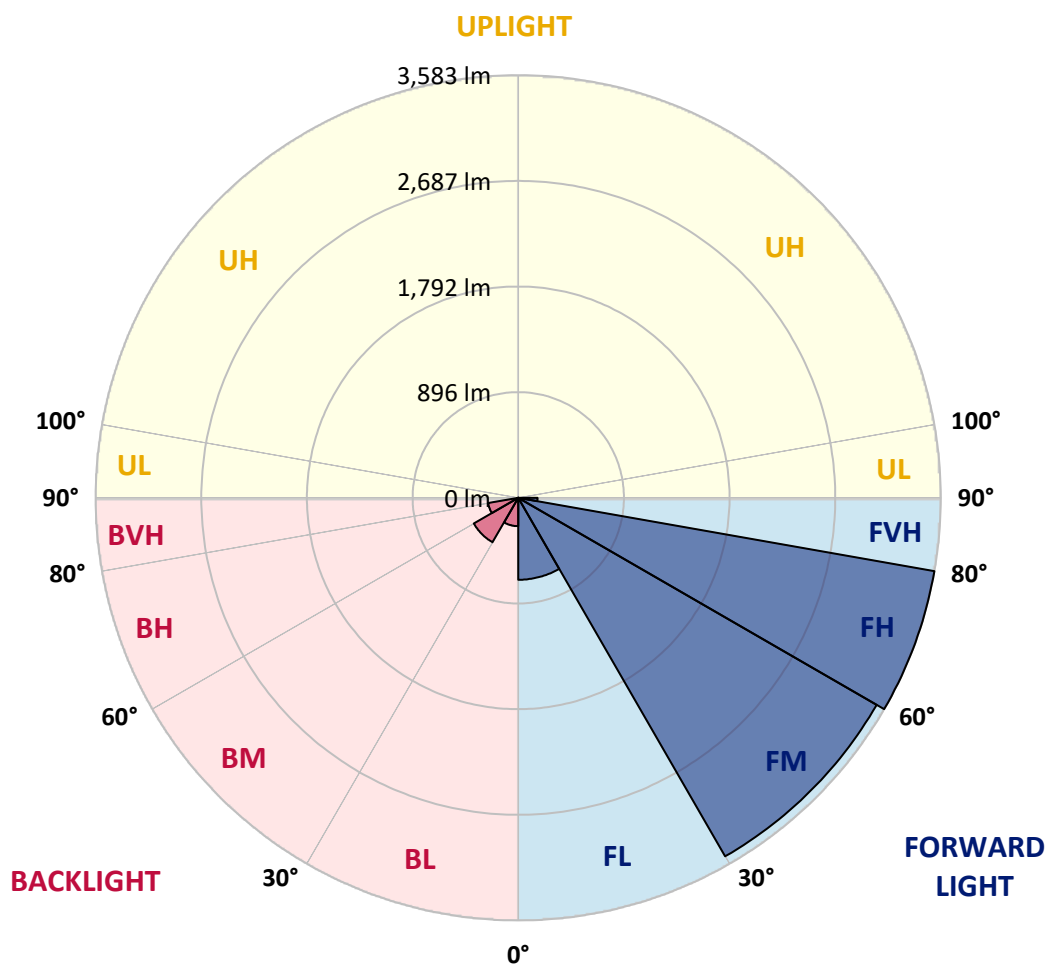
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 695.0  | 7.8       |                         |      |         |
| FM   | (30°-60°)   | 3509.6 | 39.5      |                         |      |         |
| FH   | (60°-80°)   | 3583.1 | 40.3      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 163.2  | 1.8       |                         |      | G2/225  |
| BL   | (0°-30°)    | 240.5  | 2.7       | B1/500                  |      |         |
| BM   | (30°-60°)   | 435.3  | 4.9       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 258.9  | 2.9       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 4.2    | 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-G2**

Type III Medium



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 59°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1314.6 | 1314.6 | 1314.6 | 1314.6 | 1314.6 | 1314.6 | 1314.6 | 1314.6 | 1314.6 | 1314.6 | 1314.6 |
| 2.5°  | 1458.6 | 1450.4 | 1451.6 | 1437.7 | 1427.7 | 1417.4 | 1397.0 | 1394.1 | 1379.5 | 1354.0 | 1328.0 |
| 5°    | 1585.7 | 1580.4 | 1575.7 | 1560.0 | 1539.8 | 1514.2 | 1480.0 | 1467.8 | 1441.1 | 1397.0 | 1345.9 |
| 7.5°  | 1678.5 | 1672.1 | 1674.4 | 1658.8 | 1642.6 | 1614.1 | 1567.0 | 1544.5 | 1509.0 | 1441.7 | 1364.5 |
| 10°   | 1696.5 | 1693.0 | 1708.1 | 1713.9 | 1713.9 | 1695.9 | 1650.0 | 1627.4 | 1575.7 | 1489.8 | 1383.6 |
| 12.5° | 1595.5 | 1596.1 | 1633.8 | 1679.1 | 1738.3 | 1755.1 | 1724.4 | 1700.0 | 1648.9 | 1541.0 | 1408.0 |
| 15°   | 1477.6 | 1478.3 | 1514.8 | 1572.9 | 1669.8 | 1766.7 | 1791.1 | 1775.4 | 1722.6 | 1596.1 | 1436.4 |
| 17.5° | 1406.9 | 1403.9 | 1428.3 | 1475.9 | 1577.5 | 1713.9 | 1831.7 | 1842.1 | 1799.2 | 1657.0 | 1467.8 |
| 20°   | 1397.0 | 1391.7 | 1404.6 | 1428.3 | 1500.9 | 1647.8 | 1836.4 | 1885.7 | 1878.1 | 1726.1 | 1503.8 |
| 22.5° | 1457.3 | 1449.2 | 1442.3 | 1443.4 | 1474.2 | 1592.6 | 1824.8 | 1910.1 | 1959.4 | 1809.1 | 1553.2 |
| 25°   | 1577.0 | 1564.1 | 1541.5 | 1512.5 | 1506.1 | 1581.0 | 1816.6 | 1936.7 | 2034.8 | 1915.3 | 1618.2 |
| 27.5° | 1723.2 | 1705.2 | 1661.6 | 1618.2 | 1581.0 | 1613.5 | 1833.4 | 1979.2 | 2120.2 | 2038.9 | 1693.6 |
| 30°   | 1884.0 | 1861.9 | 1818.4 | 1735.9 | 1676.8 | 1686.0 | 1873.5 | 2034.8 | 2229.3 | 2178.8 | 1788.2 |
| 32.5° | 2120.2 | 2069.1 | 1993.1 | 1867.1 | 1788.7 | 1764.4 | 1933.9 | 2105.7 | 2364.6 | 2365.1 | 1925.2 |
| 35°   | 2322.8 | 2294.3 | 2217.7 | 2061.0 | 1900.2 | 1868.3 | 2013.4 | 2205.5 | 2552.0 | 2611.8 | 2116.7 |
| 37.5° | 2455.7 | 2416.7 | 2349.4 | 2231.6 | 2073.2 | 1975.1 | 2119.6 | 2328.0 | 2750.5 | 2892.7 | 2352.9 |
| 40°   | 2604.2 | 2565.9 | 2476.5 | 2365.7 | 2274.0 | 2158.4 | 2253.7 | 2469.0 | 2968.1 | 3181.2 | 2622.8 |
| 42.5° | 2783.6 | 2733.7 | 2628.0 | 2508.5 | 2412.7 | 2399.9 | 2428.9 | 2644.8 | 3191.5 | 3494.5 | 2903.7 |
| 45°   | 2994.2 | 2947.3 | 2825.9 | 2675.0 | 2590.9 | 2568.2 | 2649.5 | 2849.7 | 3440.6 | 3838.1 | 3187.5 |
| 47.5° | 3191.5 | 3137.0 | 3006.4 | 2868.9 | 2775.5 | 2704.1 | 2883.9 | 3091.8 | 3722.7 | 4197.4 | 3455.7 |
| 50°   | 3359.3 | 3303.6 | 3184.1 | 3037.2 | 2973.9 | 2880.5 | 3114.4 | 3361.7 | 4002.4 | 4562.5 | 3700.6 |
| 52.5° | 3474.2 | 3424.9 | 3284.4 | 3184.7 | 3141.6 | 3094.7 | 3384.2 | 3647.8 | 4281.0 | 4896.8 | 3942.7 |
| 55°   | 3448.1 | 3404.0 | 3280.4 | 3273.4 | 3270.6 | 3319.9 | 3707.0 | 3972.2 | 4564.8 | 5213.2 | 4183.4 |
| 57.5° | 3365.2 | 3315.3 | 3160.8 | 3267.1 | 3369.8 | 3520.7 | 4056.3 | 4355.8 | 4875.9 | 5511.4 | 4415.6 |
| 60°   | 3120.8 | 3103.4 | 3009.3 | 3254.9 | 3411.5 | 3717.5 | 4455.7 | 4741.2 | 5212.5 | 5773.7 | 4621.7 |
| 62.5° | 2603.6 | 2618.8 | 2618.2 | 3280.4 | 3487.0 | 3941.4 | 4818.4 | 5131.3 | 5541.6 | 6026.3 | 4805.1 |
| 65°   | 1949.5 | 2001.8 | 2068.6 | 3050.5 | 3588.0 | 4341.4 | 5252.0 | 5554.4 | 5875.9 | 6319.9 | 4991.4 |
| 67.5° | 1309.9 | 1351.8 | 1397.0 | 2502.6 | 3287.4 | 4761.5 | 5972.3 | 6134.2 | 6276.4 | 6645.5 | 5201.0 |
| 70°   | 749.9  | 763.2  | 826.5  | 1563.0 | 2534.0 | 4645.5 | 7145.3 | 7203.9 | 6873.6 | 7046.6 | 5353.6 |
| 72.5° | 420.2  | 415.5  | 499.2  | 741.8  | 1416.1 | 3978.0 | 7556.2 | 8127.8 | 7408.2 | 7040.2 | 5012.9 |
| 75°   | 281.0  | 281.5  | 343.6  | 467.8  | 552.0  | 2784.7 | 6511.4 | 7536.4 | 7087.8 | 6242.8 | 4095.8 |
| 77.5° | 191.6  | 197.9  | 252.5  | 361.6  | 255.3  | 1358.7 | 4307.7 | 5279.3 | 5738.4 | 4820.8 | 2827.7 |
| 80°   | 83.0   | 83.5   | 166.6  | 259.4  | 172.4  | 432.3  | 2233.4 | 2828.3 | 3599.0 | 2706.9 | 1120.1 |
| 82.5° | 42.9   | 48.8   | 106.2  | 167.7  | 108.5  | 151.5  | 1055.1 | 1235.6 | 1510.2 | 794.6  | 229.8  |
| 85°   | 15.1   | 18.0   | 65.6   | 82.4   | 54.5   | 54.0   | 367.4  | 374.3  | 319.8  | 119.5  | 63.2   |
| 87.5° | 0.0    | 2.9    | 25.5   | 20.3   | 7.0    | 6.4    | 43.6   | 36.6   | 29.0   | 16.8   | 20.9   |
| 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°    | 1314.6 | 1314.6 | 1314.6 | 1314.6 | 1314.6 | 1314.6 | 1314.6 | 1314.6 | 1314.6 | 1314.6 | 1314.6 |
| 2.5°  | 1315.8 | 1300.1 | 1274.6 | 1243.2 | 1206.6 | 1186.9 | 1158.5 | 1141.0 | 1125.3 | 1126.0 | 1138.8 |
| 5°    | 1317.5 | 1291.4 | 1226.4 | 1157.3 | 1080.7 | 1024.4 | 961.8  | 917.6  | 884.0  | 875.9  | 888.0  |
| 7.5°  | 1322.8 | 1278.6 | 1172.4 | 1057.5 | 929.8  | 835.2  | 748.7  | 694.1  | 663.4  | 655.3  | 663.4  |
| 10°   | 1329.7 | 1264.6 | 1111.4 | 935.6  | 777.2  | 663.4  | 591.4  | 556.6  | 542.6  | 532.2  | 538.6  |
| 12.5° | 1335.5 | 1250.2 | 1034.8 | 809.6  | 641.3  | 552.6  | 497.9  | 468.9  | 456.7  | 449.3  | 453.3  |
| 15°   | 1345.3 | 1231.0 | 951.8  | 692.4  | 549.6  | 477.0  | 425.5  | 404.0  | 400.5  | 401.6  | 403.3  |
| 17.5° | 1355.3 | 1212.5 | 859.0  | 600.8  | 482.3  | 410.9  | 379.6  | 376.1  | 380.8  | 385.4  | 387.1  |
| 20°   | 1366.2 | 1185.7 | 765.0  | 531.7  | 420.2  | 365.1  | 356.9  | 359.3  | 361.6  | 369.7  | 372.1  |
| 22.5° | 1382.5 | 1152.1 | 682.5  | 473.0  | 368.6  | 343.0  | 339.0  | 340.7  | 342.5  | 350.5  | 352.9  |
| 25°   | 1405.7 | 1116.1 | 615.8  | 419.0  | 336.1  | 325.0  | 320.9  | 320.9  | 323.3  | 330.9  | 333.7  |
| 27.5° | 1430.1 | 1065.0 | 561.8  | 369.1  | 316.9  | 305.2  | 298.3  | 298.3  | 301.2  | 310.0  | 313.4  |
| 30°   | 1457.3 | 1018.5 | 519.5  | 332.0  | 300.6  | 285.6  | 276.2  | 274.0  | 277.5  | 288.4  | 291.4  |
| 32.5° | 1506.7 | 988.4  | 489.2  | 314.6  | 286.2  | 267.5  | 254.8  | 248.5  | 251.8  | 264.7  | 268.1  |
| 35°   | 1581.6 | 981.4  | 468.4  | 305.9  | 272.2  | 251.3  | 233.3  | 223.4  | 226.3  | 239.7  | 243.7  |
| 37.5° | 1669.2 | 996.0  | 448.0  | 294.3  | 258.8  | 235.6  | 211.9  | 199.1  | 203.7  | 215.9  | 219.4  |
| 40°   | 1795.2 | 1056.4 | 432.3  | 285.6  | 245.5  | 217.1  | 190.3  | 177.6  | 185.1  | 195.6  | 197.3  |
| 42.5° | 1947.2 | 1163.7 | 428.3  | 277.5  | 229.3  | 197.3  | 170.7  | 161.3  | 167.2  | 177.0  | 178.8  |
| 45°   | 2135.9 | 1300.6 | 446.9  | 267.0  | 211.3  | 178.1  | 155.0  | 149.8  | 151.5  | 161.3  | 165.9  |
| 47.5° | 2338.4 | 1441.1 | 497.9  | 257.7  | 195.6  | 162.5  | 142.8  | 138.2  | 136.9  | 146.3  | 152.1  |
| 50°   | 2543.3 | 1565.9 | 558.3  | 250.7  | 184.6  | 149.8  | 133.5  | 127.7  | 124.7  | 130.6  | 132.9  |
| 52.5° | 2745.9 | 1665.1 | 597.8  | 239.1  | 173.5  | 136.9  | 125.4  | 116.6  | 111.4  | 114.3  | 116.6  |
| 55°   | 2951.3 | 1752.2 | 600.1  | 221.7  | 163.1  | 128.8  | 117.3  | 107.4  | 101.0  | 101.0  | 102.2  |
| 57.5° | 3143.4 | 1828.8 | 565.9  | 198.5  | 148.6  | 121.3  | 106.2  | 98.1   | 91.1   | 88.8   | 89.4   |
| 60°   | 3313.5 | 1885.7 | 509.0  | 172.4  | 135.8  | 111.4  | 95.2   | 88.8   | 80.1   | 75.4   | 74.3   |
| 62.5° | 3464.9 | 1913.6 | 431.2  | 145.7  | 120.1  | 99.8   | 84.8   | 77.8   | 66.2   | 60.4   | 59.8   |
| 65°   | 3593.2 | 1885.1 | 349.9  | 120.7  | 106.8  | 87.0   | 72.6   | 65.6   | 52.8   | 45.8   | 45.8   |
| 67.5° | 3720.3 | 1755.1 | 264.7  | 101.6  | 92.9   | 73.1   | 59.8   | 53.4   | 44.1   | 38.3   | 38.3   |
| 70°   | 3736.5 | 1481.7 | 185.1  | 85.3   | 77.2   | 56.3   | 48.2   | 44.1   | 36.0   | 30.7   | 30.1   |
| 72.5° | 3326.2 | 1066.2 | 112.6  | 69.6   | 60.4   | 40.1   | 38.3   | 34.8   | 26.6   | 23.2   | 22.7   |
| 75°   | 2658.7 | 653.5  | 66.2   | 52.3   | 40.1   | 28.4   | 28.4   | 24.9   | 18.0   | 15.1   | 15.1   |
| 77.5° | 1837.5 | 341.8  | 38.8   | 33.6   | 23.8   | 16.8   | 18.6   | 15.1   | 8.7    | 7.0    | 7.0    |
| 80°   | 735.9  | 130.0  | 20.9   | 15.7   | 11.1   | 7.6    | 6.4    | 3.5    | 1.7    | 1.1    | 1.7    |
| 82.5° | 146.9  | 34.2   | 7.0    | 4.1    | 4.1    | 1.7    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 37.7   | 7.6    | 1.7    | 1.1    | 1.1    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 11.6   | 0.0    | 0.0    | 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    | 0.0    |

(END OF REPORT)