

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: STREETWORKS

Report Number: P195230

Luminaire Tested: **NVN-AF-02-LED-U-SL4-7060**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195230  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24284)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: NVN-AF-02-LED-U-SL4-7060  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 5700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV  
SPILL LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11620 lumens  
Efficiency: N/A  
Efficacy: 102.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G3

Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: 28.75 FT

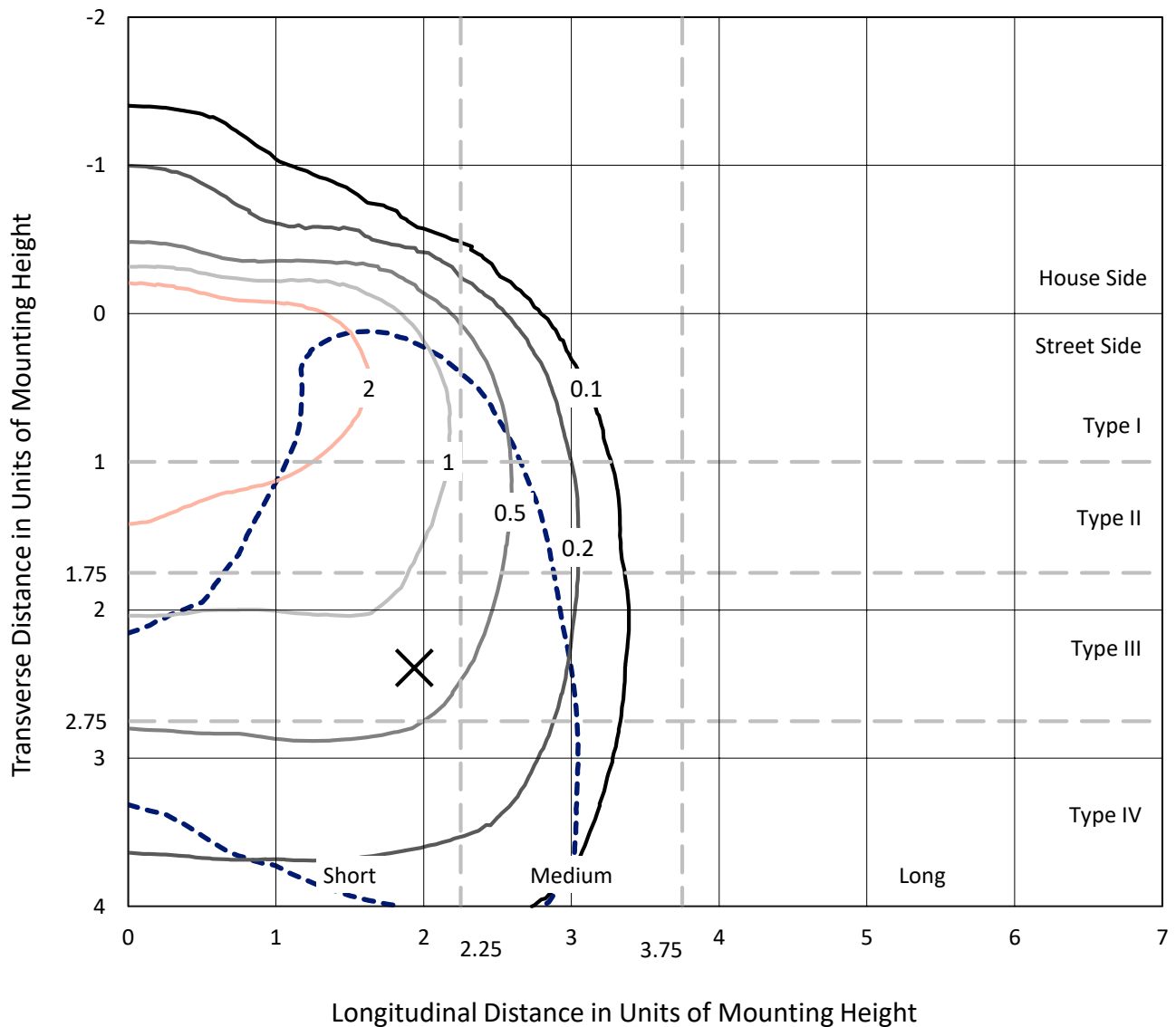


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### Iso-Footcandle Lines of Horizontal Illumination

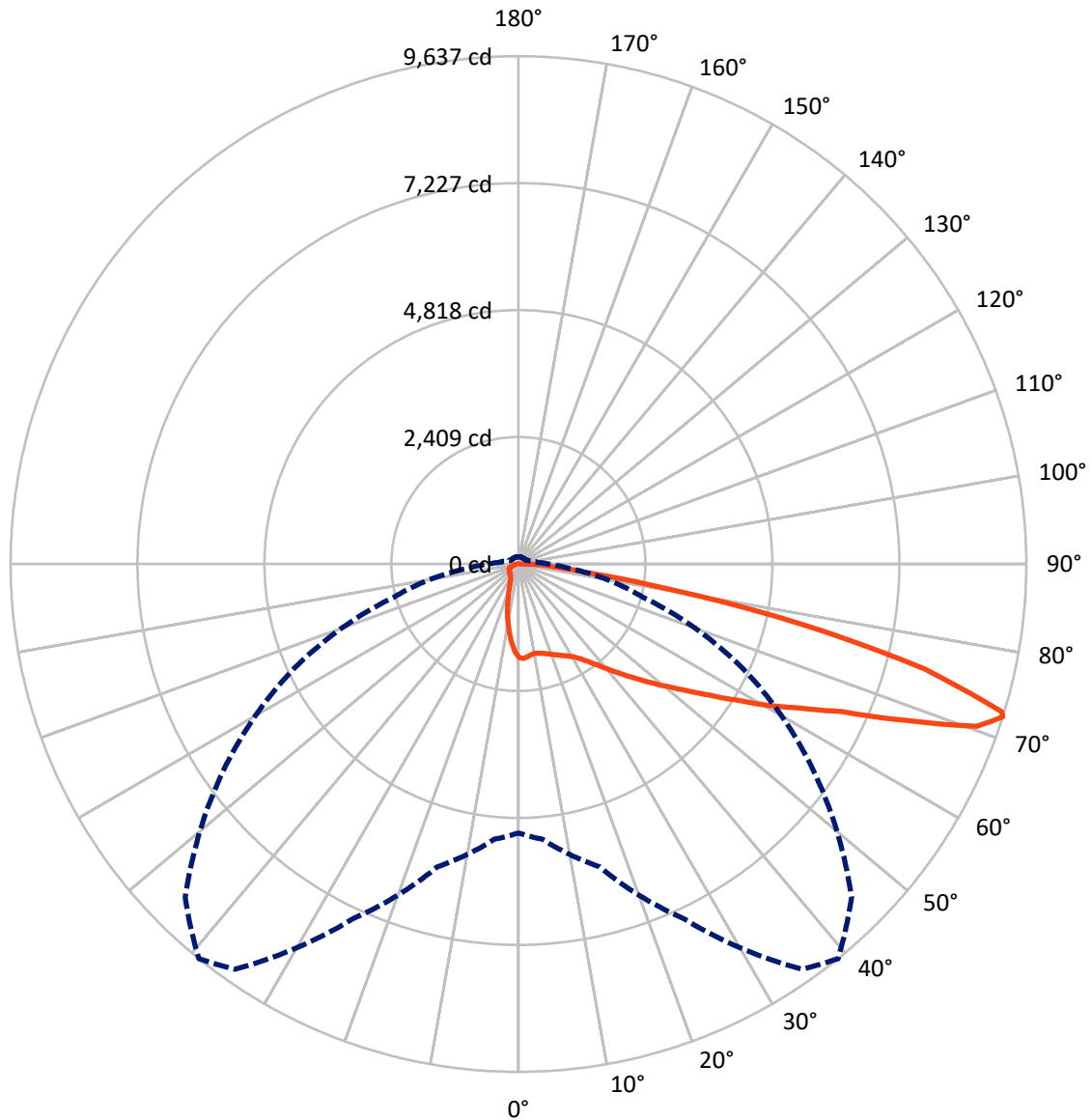
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.4 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral      - - - Horizontal Cone Through 72-Deg Vertical



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 1332.4   | 0.0    | 1332.4  |
|                    | % Fixture | 11.5     | 0.0    | 11.5    |
| <b>Street Side</b> | Lumens    | 10287.6  | 0.0    | 10287.6 |
|                    | % Fixture | 88.5     | 0.0    | 88.5    |
| <b>Total</b>       | Lumens    | 11620.0  | 0.0    | 11620.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 152.5   | 1.3       |
| 10°-20°   | 383.2   | 3.3       |
| 20°-30°   | 597.2   | 5.1       |
| 30°-40°   | 919.5   | 7.9       |
| 40°-50°   | 1498.9  | 12.9      |
| 50°-60°   | 2329.2  | 20.0      |
| 60°-70°   | 3117.5  | 26.8      |
| 70°-80°   | 2242.0  | 19.3      |
| 80°-90°   | 380.1   | 3.3       |
| 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°    | 11620.0 | 100.0     |
| 0°-180°   | 11620.0 | 100.0     |



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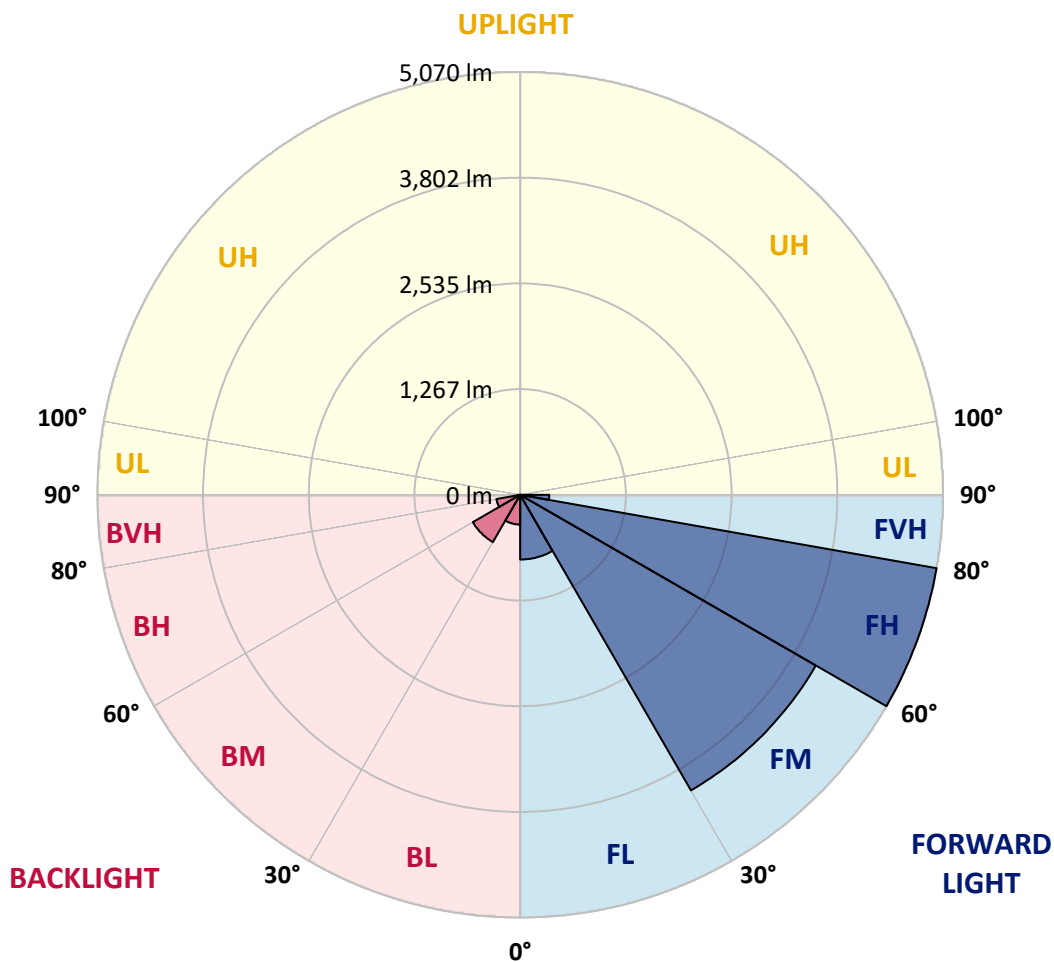
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 776.2  | 6.7       |                         |      |         |
| FM   | (30°-60°)   | 4092.8 | 35.2      |                         |      |         |
| FH   | (60°-80°)   | 5070.0 | 43.6      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 348.6  | 3.0       |                         |      | G3/500  |
| BL   | (0°-30°)    | 356.7  | 3.1       | B1/500                  |      |         |
| BM   | (30°-60°)   | 654.8  | 5.6       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 289.5  | 2.5       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 31.4   | 0.3       |                         |      | G1/100  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 39°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1774.6 | 1774.6 | 1774.6 | 1774.6 | 1774.6 | 1774.6 | 1774.6 | 1774.6 | 1774.6 | 1774.6 | 1774.6 |
| 2.5°  | 1812.8 | 1813.6 | 1811.2 | 1804.2 | 1798.0 | 1794.9 | 1789.4 | 1780.0 | 1767.6 | 1759.0 | 1752.0 |
| 5°    | 1795.6 | 1798.0 | 1796.4 | 1784.7 | 1773.8 | 1767.6 | 1759.0 | 1745.7 | 1729.3 | 1722.3 | 1705.9 |
| 7.5°  | 1782.4 | 1783.9 | 1779.3 | 1766.0 | 1744.9 | 1737.1 | 1721.5 | 1704.4 | 1689.6 | 1679.4 | 1659.9 |
| 10°   | 1773.0 | 1774.6 | 1770.7 | 1757.4 | 1734.0 | 1724.7 | 1705.9 | 1687.2 | 1667.7 | 1655.2 | 1633.4 |
| 12.5° | 1759.8 | 1762.9 | 1762.9 | 1756.6 | 1741.0 | 1734.8 | 1716.1 | 1695.8 | 1677.9 | 1664.6 | 1637.3 |
| 15°   | 1757.4 | 1761.3 | 1768.3 | 1767.6 | 1762.9 | 1758.2 | 1743.4 | 1723.1 | 1707.5 | 1691.9 | 1658.4 |
| 17.5° | 1776.9 | 1785.5 | 1799.5 | 1804.2 | 1801.1 | 1791.0 | 1773.8 | 1755.1 | 1737.9 | 1723.1 | 1681.8 |
| 20°   | 1826.1 | 1830.7 | 1851.8 | 1861.2 | 1845.6 | 1830.7 | 1808.1 | 1783.9 | 1768.3 | 1756.6 | 1703.6 |
| 22.5° | 1900.2 | 1906.4 | 1923.6 | 1924.3 | 1891.6 | 1873.6 | 1844.8 | 1815.1 | 1800.3 | 1795.6 | 1733.2 |
| 25°   | 2018.7 | 2017.2 | 2021.9 | 2002.4 | 1943.1 | 1922.0 | 1886.9 | 1852.6 | 1842.4 | 1851.8 | 1776.9 |
| 27.5° | 2160.7 | 2156.8 | 2142.0 | 2091.3 | 2001.6 | 1974.3 | 1932.1 | 1901.7 | 1901.7 | 1923.6 | 1836.2 |
| 30°   | 2324.5 | 2320.6 | 2272.2 | 2187.2 | 2071.0 | 2039.8 | 1995.3 | 1963.4 | 1979.7 | 2021.9 | 1916.5 |
| 32.5° | 2497.7 | 2483.6 | 2415.8 | 2301.9 | 2170.1 | 2135.7 | 2092.8 | 2060.1 | 2091.3 | 2163.0 | 2032.0 |
| 35°   | 2660.7 | 2652.9 | 2569.4 | 2434.5 | 2298.0 | 2269.1 | 2239.5 | 2198.9 | 2248.8 | 2360.4 | 2195.0 |
| 37.5° | 2829.2 | 2823.0 | 2720.8 | 2577.2 | 2454.0 | 2434.5 | 2409.5 | 2381.5 | 2461.8 | 2608.4 | 2415.8 |
| 40°   | 3017.2 | 3004.7 | 2876.0 | 2732.5 | 2635.7 | 2626.4 | 2613.1 | 2605.3 | 2734.8 | 2953.2 | 2695.0 |
| 42.5° | 3230.1 | 3205.9 | 3039.8 | 2903.3 | 2833.9 | 2841.7 | 2834.7 | 2865.9 | 3064.0 | 3351.0 | 3027.3 |
| 45°   | 3473.5 | 3425.1 | 3202.8 | 3085.0 | 3053.1 | 3084.3 | 3099.1 | 3178.6 | 3453.2 | 3810.5 | 3398.6 |
| 47.5° | 3701.3 | 3638.9 | 3381.5 | 3282.4 | 3300.3 | 3354.2 | 3396.3 | 3536.7 | 3879.9 | 4264.5 | 3777.7 |
| 50°   | 3911.1 | 3840.9 | 3572.6 | 3486.8 | 3574.1 | 3650.6 | 3737.9 | 3936.1 | 4333.9 | 4731.7 | 4125.6 |
| 52.5° | 4066.3 | 4015.6 | 3763.7 | 3709.9 | 3888.5 | 3989.9 | 4129.5 | 4379.9 | 4792.5 | 5177.1 | 4436.1 |
| 55°   | 4186.5 | 4159.2 | 3950.1 | 3965.7 | 4244.2 | 4389.3 | 4558.5 | 4846.4 | 5277.7 | 5576.5 | 4685.7 |
| 57.5° | 4325.3 | 4305.0 | 4163.1 | 4274.6 | 4685.7 | 4868.2 | 5067.9 | 5387.7 | 5739.5 | 5928.3 | 4881.5 |
| 60°   | 4471.9 | 4471.9 | 4400.2 | 4646.7 | 5237.9 | 5447.0 | 5645.9 | 5894.7 | 6199.7 | 6245.0 | 4961.0 |
| 62.5° | 4582.7 | 4611.6 | 4637.3 | 5042.9 | 5762.1 | 6021.9 | 6240.3 | 6479.0 | 6676.3 | 6401.0 | 4773.8 |
| 65°   | 4743.4 | 4805.0 | 4950.1 | 5500.8 | 6411.1 | 6751.2 | 7046.1 | 7246.5 | 7062.4 | 6277.0 | 4163.1 |
| 67.5° | 5019.5 | 5110.8 | 5419.7 | 6182.6 | 7404.9 | 7914.2 | 8200.5 | 7854.2 | 6986.8 | 5496.1 | 3188.8 |
| 70°   | 5268.4 | 5397.1 | 5925.2 | 7047.6 | 8696.6 | 9225.5 | 9093.7 | 7713.0 | 6085.1 | 4028.9 | 1961.8 |
| 72°   | 5103.0 | 5243.4 | 5948.6 | 7424.4 | 9387.0 | 9636.6 | 8941.6 | 6835.5 | 4702.1 | 2458.7 | 967.2  |
| 72.5° | 4994.6 | 5140.4 | 5872.9 | 7415.0 | 9405.7 | 9584.3 | 8730.2 | 6486.8 | 4268.4 | 2151.3 | 782.4  |
| 75°   | 4172.4 | 4297.2 | 5050.0 | 6571.8 | 8288.7 | 7961.1 | 6812.8 | 4198.2 | 1961.8 | 695.0  | 402.5  |
| 77.5° | 2724.7 | 2819.8 | 3482.1 | 4553.1 | 5805.8 | 5490.7 | 4146.7 | 1965.7 | 735.6  | 422.0  | 302.7  |
| 80°   | 1369.0 | 1436.8 | 1863.5 | 2393.9 | 3133.4 | 2883.0 | 1914.2 | 950.9  | 492.2  | 305.0  | 237.9  |
| 82.5° | 952.4  | 1014.8 | 1283.2 | 1222.3 | 1309.7 | 1267.6 | 900.2  | 793.3  | 368.2  | 192.7  | 124.8  |
| 85°   | 798.8  | 863.5  | 1061.6 | 871.3  | 713.0  | 649.8  | 645.1  | 749.6  | 243.4  | 95.2   | 105.3  |
| 87.5° | 696.6  | 794.9  | 876.0  | 636.5  | 489.1  | 431.4  | 475.0  | 687.2  | 77.2   | 52.3   | 32.0   |
| 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°    | 1774.6 | 1774.6 | 1774.6 | 1774.6 | 1774.6 | 1774.6 | 1774.6 | 1774.6 | 1774.6 | 1774.6 | 1774.6 |
| 2.5°  | 1740.3 | 1737.9 | 1726.2 | 1708.3 | 1695.0 | 1686.4 | 1670.1 | 1669.3 | 1670.8 | 1656.8 | 1662.3 |
| 5°    | 1691.1 | 1681.8 | 1651.3 | 1610.0 | 1576.5 | 1544.5 | 1509.4 | 1497.7 | 1487.5 | 1466.5 | 1468.8 |
| 7.5°  | 1639.6 | 1623.3 | 1570.2 | 1502.3 | 1437.6 | 1378.3 | 1319.8 | 1291.0 | 1269.1 | 1241.8 | 1241.8 |
| 10°   | 1609.2 | 1583.5 | 1502.3 | 1403.3 | 1300.3 | 1213.7 | 1126.4 | 1074.1 | 1035.9 | 1000.8 | 998.4  |
| 12.5° | 1607.7 | 1568.7 | 1455.5 | 1319.0 | 1177.9 | 1056.2 | 936.8  | 856.5  | 799.5  | 758.2  | 754.3  |
| 15°   | 1620.1 | 1565.5 | 1416.5 | 1240.3 | 1062.4 | 904.1  | 756.6  | 654.5  | 581.9  | 535.9  | 531.2  |
| 17.5° | 1631.1 | 1561.6 | 1374.4 | 1157.6 | 950.1  | 757.4  | 593.6  | 487.5  | 418.9  | 381.4  | 377.5  |
| 20°   | 1641.2 | 1553.1 | 1320.6 | 1070.2 | 826.1  | 620.1  | 464.1  | 378.3  | 333.1  | 312.0  | 309.7  |
| 22.5° | 1656.0 | 1545.3 | 1264.4 | 971.9  | 704.4  | 504.7  | 383.0  | 321.4  | 297.2  | 287.1  | 285.5  |
| 25°   | 1680.2 | 1546.0 | 1209.8 | 871.3  | 592.8  | 420.4  | 331.5  | 293.3  | 280.0  | 273.0  | 273.0  |
| 27.5° | 1715.3 | 1555.4 | 1156.0 | 769.1  | 498.4  | 362.7  | 301.1  | 278.5  | 269.9  | 264.4  | 262.9  |
| 30°   | 1766.8 | 1572.6 | 1099.1 | 672.4  | 423.6  | 322.9  | 283.2  | 269.1  | 262.1  | 257.4  | 256.6  |
| 32.5° | 1841.7 | 1603.0 | 1039.0 | 584.2  | 366.6  | 294.9  | 269.9  | 261.3  | 255.9  | 252.0  | 251.2  |
| 35°   | 1953.2 | 1656.8 | 980.5  | 509.4  | 326.1  | 274.6  | 259.0  | 252.0  | 248.8  | 247.3  | 246.5  |
| 37.5° | 2117.0 | 1743.4 | 925.1  | 450.9  | 299.5  | 261.3  | 248.1  | 244.2  | 242.6  | 242.6  | 242.6  |
| 40°   | 2322.9 | 1857.3 | 875.2  | 409.5  | 284.7  | 251.2  | 240.3  | 237.1  | 237.1  | 237.9  | 237.9  |
| 42.5° | 2573.3 | 2000.0 | 832.3  | 381.4  | 276.1  | 244.2  | 234.8  | 233.2  | 232.5  | 232.5  | 233.2  |
| 45°   | 2864.3 | 2168.5 | 805.8  | 359.6  | 269.9  | 240.3  | 230.9  | 230.1  | 227.0  | 225.4  | 225.4  |
| 47.5° | 3156.8 | 2348.7 | 804.2  | 347.1  | 262.1  | 235.6  | 227.0  | 227.0  | 220.8  | 217.6  | 218.4  |
| 50°   | 3429.8 | 2510.2 | 821.4  | 344.0  | 257.4  | 228.6  | 223.1  | 223.9  | 215.3  | 211.4  | 210.6  |
| 52.5° | 3649.8 | 2633.4 | 842.4  | 347.9  | 257.4  | 222.3  | 216.1  | 220.0  | 210.6  | 205.9  | 205.1  |
| 55°   | 3819.8 | 2719.2 | 850.2  | 356.5  | 260.5  | 216.9  | 209.8  | 216.1  | 209.0  | 202.8  | 202.8  |
| 57.5° | 3941.5 | 2746.5 | 816.7  | 360.4  | 265.2  | 216.1  | 203.6  | 215.3  | 211.4  | 203.6  | 203.6  |
| 60°   | 3897.1 | 2588.2 | 691.9  | 345.6  | 264.4  | 214.5  | 198.9  | 216.9  | 219.2  | 210.6  | 210.6  |
| 62.5° | 3549.9 | 2165.4 | 555.4  | 312.0  | 251.2  | 209.0  | 193.4  | 215.3  | 224.7  | 221.5  | 220.0  |
| 65°   | 2890.0 | 1588.2 | 430.6  | 272.2  | 228.6  | 197.3  | 181.7  | 201.2  | 212.2  | 215.3  | 216.1  |
| 67.5° | 2036.7 | 1005.5 | 334.6  | 231.7  | 200.5  | 180.2  | 168.5  | 177.8  | 181.7  | 183.3  | 186.4  |
| 70°   | 1113.9 | 544.5  | 266.0  | 195.0  | 171.6  | 163.0  | 154.4  | 155.2  | 153.7  | 152.1  | 153.7  |
| 72°   | 559.3  | 355.7  | 224.7  | 169.3  | 152.1  | 146.6  | 142.7  | 140.4  | 140.4  | 138.1  | 138.8  |
| 72.5° | 481.3  | 330.7  | 216.9  | 163.0  | 147.4  | 142.7  | 139.6  | 137.3  | 136.5  | 134.9  | 135.7  |
| 75°   | 320.6  | 262.1  | 181.0  | 136.5  | 125.6  | 122.5  | 124.0  | 121.7  | 122.5  | 120.9  | 121.7  |
| 77.5° | 259.0  | 225.4  | 153.7  | 115.4  | 107.6  | 103.0  | 106.1  | 106.9  | 108.4  | 106.9  | 106.1  |
| 80°   | 216.9  | 191.9  | 128.7  | 95.2   | 89.7   | 85.8   | 87.4   | 92.8   | 93.6   | 88.9   | 88.1   |
| 82.5° | 140.4  | 154.4  | 101.4  | 74.1   | 68.6   | 67.1   | 71.0   | 76.4   | 78.0   | 71.8   | 70.2   |
| 85°   | 117.8  | 124.0  | 73.3   | 50.7   | 45.2   | 43.7   | 51.5   | 56.9   | 60.8   | 54.6   | 53.0   |
| 87.5° | 32.8   | 60.8   | 35.9   | 24.2   | 20.3   | 20.3   | 25.0   | 29.6   | 35.1   | 35.9   | 35.9   |
| 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)