

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: P271349

Luminaire Tested: **XNV2-AF-02-LED-U-T3R-7027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P271349  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: XNV2-AF-02-LED-U-T3R-7027  
Description: XNV2 ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10656 lumens  
Efficiency: N/A  
Efficacy: 96.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Medium - Full Cutoff  
BUG Rating: B1 - U0 - G2

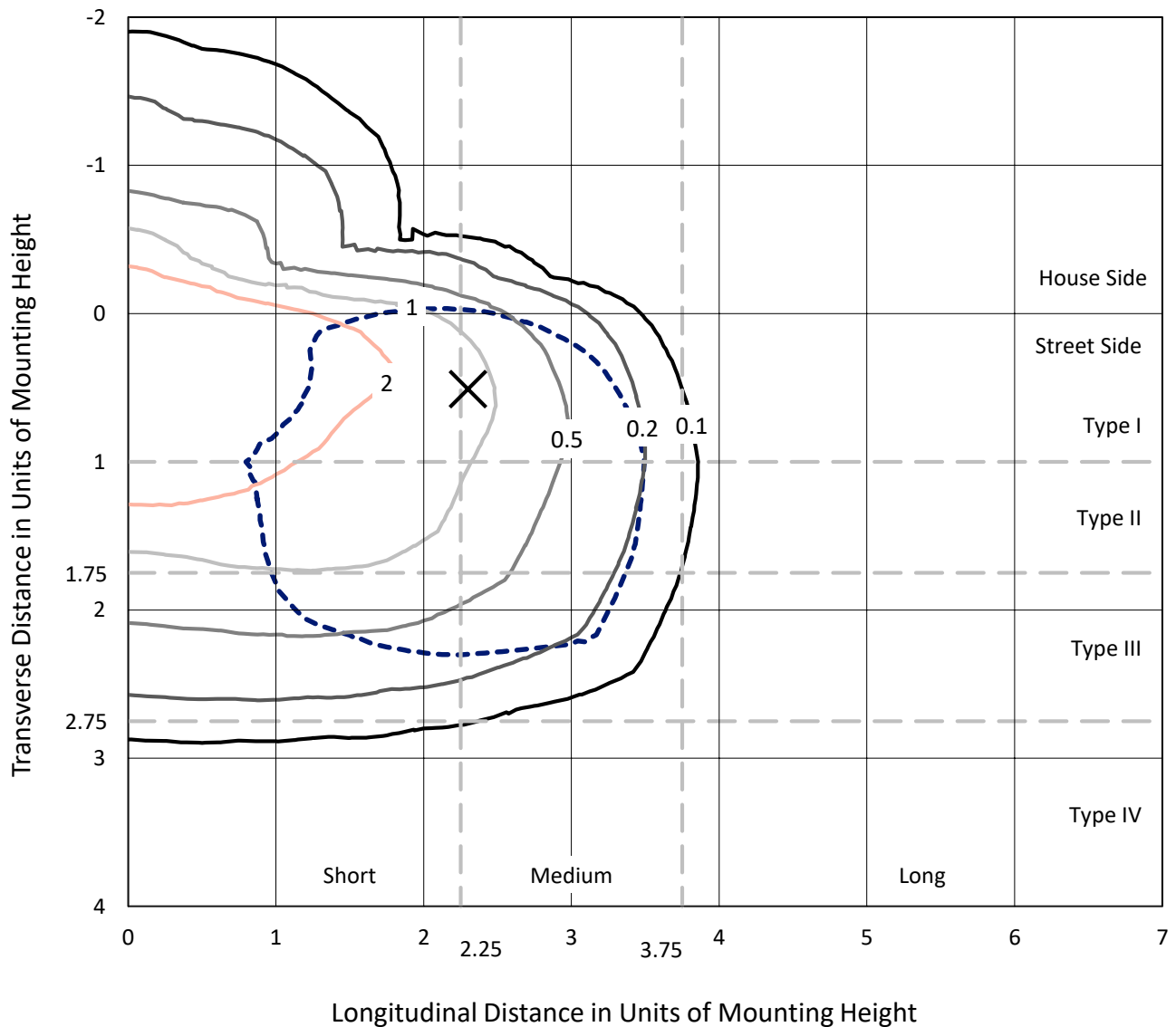
Input Watts (W): 111  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

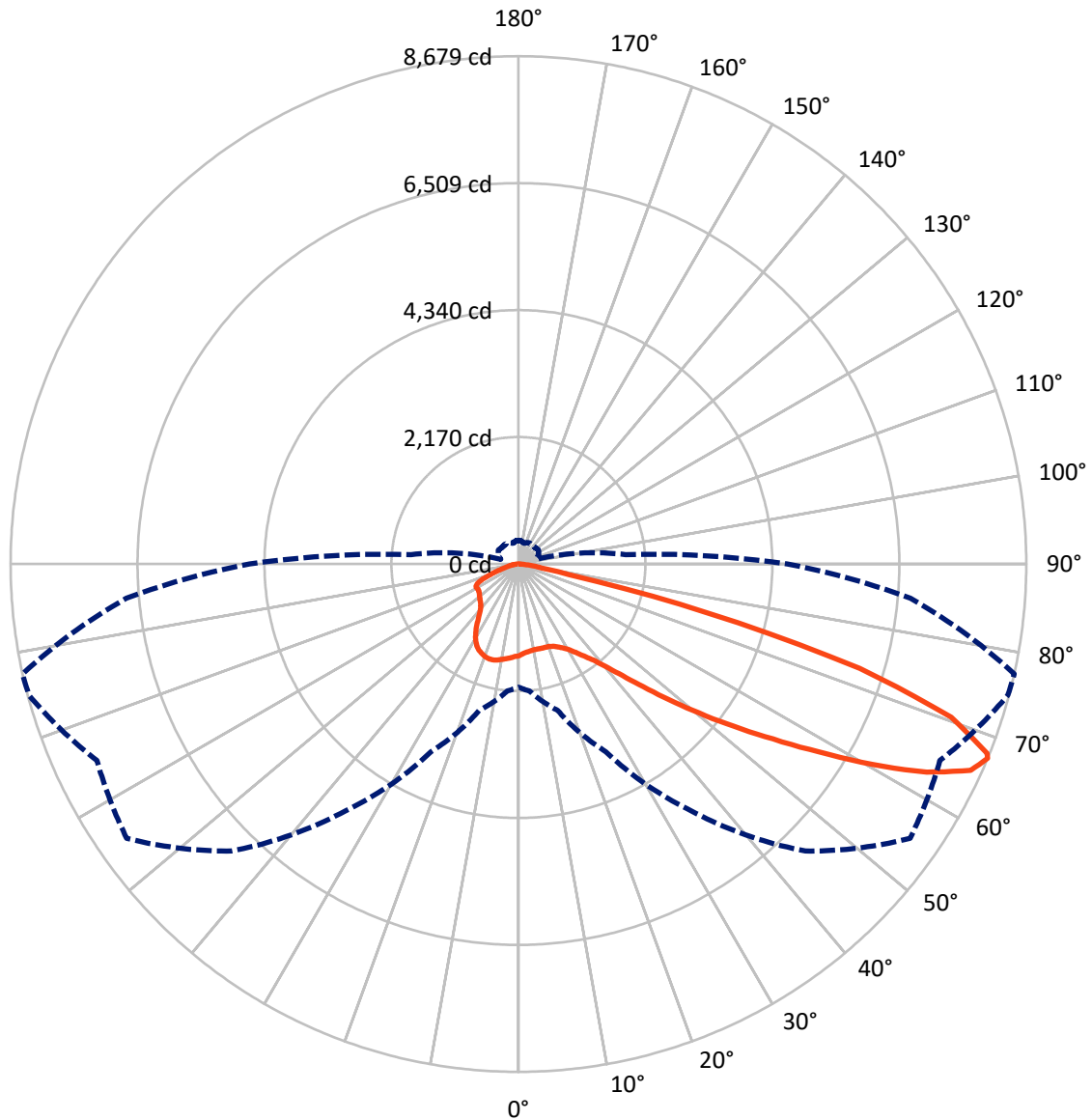
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.7 fc  
 Type III - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral    - - - Horizontal Cone Through 67-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 1831.2   | 0.0    | 1831.2  |
|                    | % Fixture | 17.2     | 0.0    | 17.2    |
| <b>Street Side</b> | Lumens    | 8824.7   | 0.0    | 8824.7  |
|                    | % Fixture | 82.8     | 0.0    | 82.8    |
| <b>Total</b>       | Lumens    | 10656.0  | 0.0    | 10656.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 139.7   | 1.3       |
| 10°-20°   | 386.8   | 3.6       |
| 20°-30°   | 657.2   | 6.2       |
| 30°-40°   | 1051.4  | 9.9       |
| 40°-50°   | 1618.7  | 15.2      |
| 50°-60°   | 2245.8  | 21.1      |
| 60°-70°   | 2995.7  | 28.1      |
| 70°-80°   | 1425.7  | 13.4      |
| 80°-90°   | 135.0   | 1.3       |
| 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°    | 10656.0 | 100.0     |
| 0°-180°   | 10656.0 | 100.0     |

**Coefficient of Utilization**



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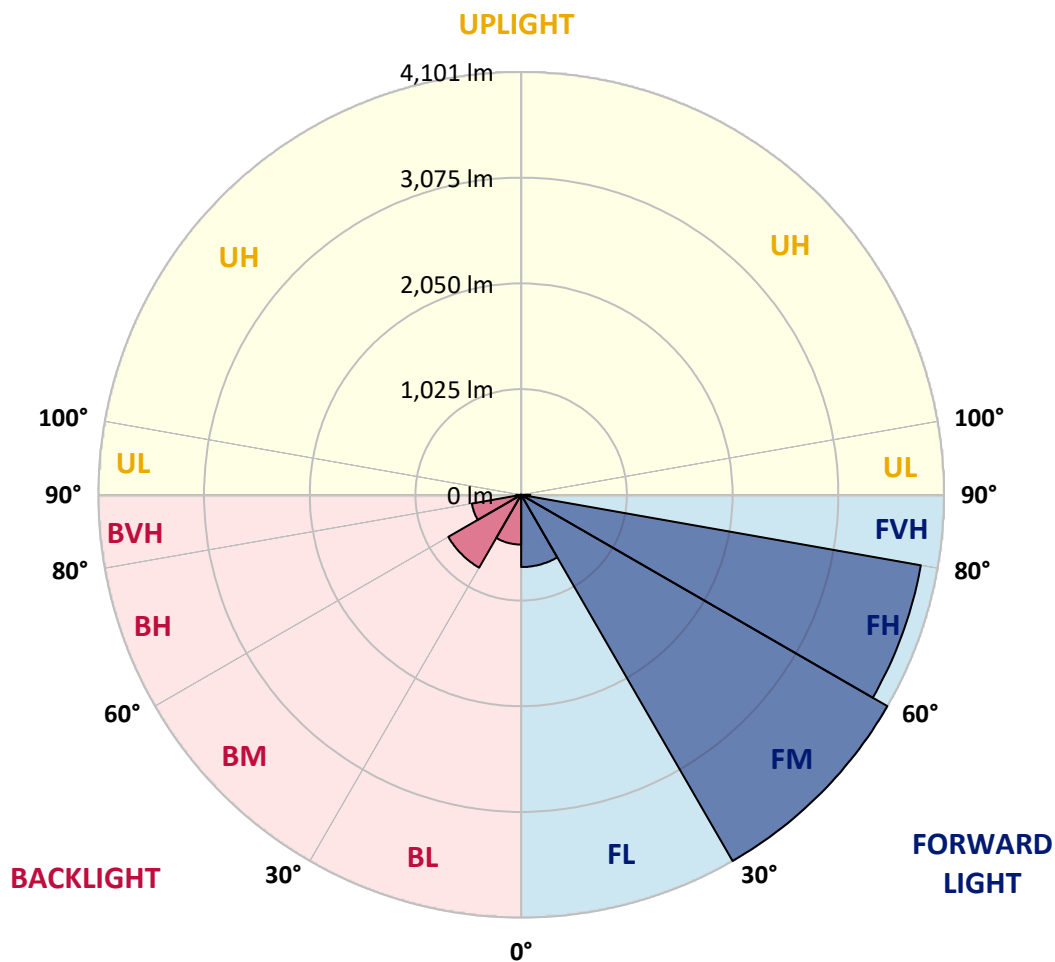
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 700.7  | 6.6       |                         |      |         |
| FM   | (30°-60°)   | 4100.5 | 38.5      |                         |      |         |
| FH   | (60°-80°)   | 3935.8 | 36.9      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 87.7   | 0.8       |                         |      | G1/100  |
| BL   | (0°-30°)    | 483.0  | 4.5       | B1/500                  |      |         |
| BM   | (30°-60°)   | 815.4  | 7.7       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 485.5  | 4.6       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 47.3   | 0.4       |                         |      | G1/100  |
| 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°    | 65°    | 75°    | 77.5°  | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1568.4 | 1568.4 | 1568.4 | 1568.4 | 1568.4 | 1568.4 | 1568.4 | 1568.4 | 1568.4 | 1568.4 | 1568.4 |
| 2.5°  | 1406.2 | 1412.9 | 1413.6 | 1432.5 | 1441.2 | 1462.9 | 1486.5 | 1507.6 | 1526.1 | 1532.7 | 1544.5 |
| 5°    | 1265.4 | 1265.4 | 1267.2 | 1279.7 | 1304.2 | 1339.1 | 1388.5 | 1442.5 | 1499.1 | 1512.9 | 1547.9 |
| 7.5°  | 1191.5 | 1192.8 | 1194.1 | 1206.7 | 1225.7 | 1256.6 | 1306.1 | 1379.8 | 1474.1 | 1497.1 | 1558.4 |
| 10°   | 1198.1 | 1196.2 | 1189.5 | 1186.9 | 1194.8 | 1214.6 | 1257.4 | 1333.2 | 1453.0 | 1488.6 | 1577.6 |
| 12.5° | 1301.6 | 1297.5 | 1275.9 | 1244.2 | 1215.2 | 1208.0 | 1237.7 | 1309.4 | 1443.1 | 1488.6 | 1609.8 |
| 15°   | 1478.7 | 1481.3 | 1438.5 | 1372.7 | 1297.0 | 1245.5 | 1241.5 | 1300.8 | 1439.9 | 1492.5 | 1647.3 |
| 17.5° | 1709.2 | 1710.6 | 1651.3 | 1555.8 | 1429.9 | 1323.9 | 1268.5 | 1300.8 | 1439.9 | 1496.4 | 1683.6 |
| 20°   | 1954.3 | 1945.0 | 1877.8 | 1758.0 | 1594.6 | 1432.5 | 1318.1 | 1308.8 | 1443.8 | 1502.4 | 1717.7 |
| 22.5° | 2164.3 | 2155.8 | 2085.3 | 1959.6 | 1772.4 | 1561.1 | 1384.5 | 1335.2 | 1465.6 | 1526.8 | 1765.9 |
| 25°   | 2348.1 | 2353.4 | 2284.8 | 2143.3 | 1949.6 | 1705.9 | 1484.0 | 1395.6 | 1510.9 | 1570.9 | 1825.1 |
| 27.5° | 2571.4 | 2561.5 | 2482.5 | 2347.5 | 2132.0 | 1856.1 | 1608.4 | 1472.1 | 1564.9 | 1624.2 | 1897.6 |
| 30°   | 2829.7 | 2825.0 | 2718.4 | 2579.4 | 2333.0 | 2024.2 | 1731.7 | 1554.4 | 1635.5 | 1697.3 | 1988.5 |
| 32.5° | 3143.1 | 3142.5 | 3027.8 | 2857.2 | 2558.9 | 2213.8 | 1877.2 | 1667.1 | 1738.2 | 1800.8 | 2109.0 |
| 35°   | 3498.2 | 3497.6 | 3379.0 | 3153.7 | 2819.2 | 2423.8 | 2048.4 | 1804.1 | 1865.3 | 1931.1 | 2252.6 |
| 37.5° | 3744.4 | 3740.5 | 3678.6 | 3459.9 | 3106.9 | 2668.2 | 2262.6 | 1988.5 | 2009.6 | 2083.3 | 2425.9 |
| 40°   | 3791.9 | 3815.6 | 3869.0 | 3739.9 | 3421.0 | 2939.7 | 2477.3 | 2186.7 | 2206.5 | 2301.4 | 2643.9 |
| 42.5° | 3740.5 | 3771.5 | 3948.7 | 3984.9 | 3735.3 | 3268.3 | 2745.9 | 2461.4 | 2486.5 | 2604.4 | 2900.1 |
| 45°   | 3695.7 | 3722.8 | 3944.7 | 4120.5 | 4045.4 | 3626.5 | 3081.2 | 2796.7 | 2844.2 | 2990.3 | 3192.5 |
| 47.5° | 3619.4 | 3644.3 | 3867.1 | 4145.0 | 4222.8 | 3971.8 | 3485.0 | 3199.9 | 3281.5 | 3458.7 | 3525.8 |
| 50°   | 3615.4 | 3626.5 | 3760.9 | 4063.4 | 4283.9 | 4233.9 | 3932.2 | 3671.5 | 3796.5 | 4000.7 | 3894.7 |
| 52.5° | 3515.2 | 3593.7 | 3715.5 | 3932.9 | 4285.3 | 4386.8 | 4372.9 | 4188.4 | 4381.5 | 4607.3 | 4299.1 |
| 55°   | 2902.8 | 2993.0 | 3564.0 | 3869.0 | 4277.4 | 4517.8 | 4775.3 | 4738.4 | 5040.1 | 5277.8 | 4752.3 |
| 57.5° | 2710.4 | 2748.6 | 3126.7 | 3888.0 | 4343.2 | 4734.4 | 5177.7 | 5329.3 | 5793.6 | 6053.0 | 5295.7 |
| 60°   | 2657.6 | 2697.9 | 3039.1 | 3897.2 | 4521.7 | 5129.1 | 5723.8 | 5996.5 | 6679.4 | 6954.8 | 5912.9 |
| 62.5° | 2599.1 | 2651.1 | 3045.7 | 3905.9 | 4835.2 | 5712.6 | 6448.4 | 6720.3 | 7589.2 | 7834.7 | 6491.2 |
| 65°   | 2427.8 | 2497.0 | 2923.9 | 3851.8 | 5178.4 | 6445.0 | 7405.9 | 7475.2 | 8340.7 | 8496.8 | 6840.2 |
| 67°   | 2103.1 | 2178.8 | 2589.3 | 3539.6 | 5146.7 | 6938.4 | 8172.1 | 7947.5 | 8660.1 | 8679.2 | 6726.9 |
| 67.5° | 2000.3 | 2078.8 | 2475.9 | 3409.8 | 5056.6 | 7002.8 | 8307.7 | 8012.6 | 8657.4 | 8636.3 | 6621.5 |
| 70°   | 1347.0 | 1435.2 | 1753.3 | 2503.5 | 4056.0 | 6517.5 | 8274.7 | 7811.8 | 8089.6 | 7848.0 | 5688.8 |
| 72.5° | 668.6  | 671.2  | 874.7  | 1371.4 | 2457.5 | 4674.5 | 6902.8 | 6682.9 | 6557.6 | 6101.2 | 4174.7 |
| 75°   | 322.1  | 328.1  | 413.0  | 605.9  | 1036.0 | 2413.3 | 4707.5 | 4509.2 | 3839.4 | 3324.3 | 2089.3 |
| 77.5° | 245.6  | 251.6  | 320.8  | 394.5  | 432.1  | 787.2  | 2331.7 | 1884.5 | 1112.6 | 888.6  | 588.8  |
| 80°   | 189.7  | 201.0  | 270.7  | 303.0  | 285.9  | 315.6  | 733.0  | 577.0  | 432.8  | 397.2  | 291.8  |
| 82.5° | 148.2  | 154.8  | 229.8  | 229.8  | 197.5  | 211.5  | 341.1  | 333.4  | 268.8  | 242.5  | 156.8  |
| 85°   | 104.7  | 117.9  | 185.1  | 171.2  | 129.7  | 131.1  | 204.2  | 195.7  | 138.2  | 111.3  | 61.3   |
| 87.5° | 46.7   | 59.9   | 131.7  | 112.0  | 69.2   | 53.4   | 83.6   | 71.8   | 54.6   | 42.1   | 28.3   |
| 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°    | 1568.4 | 1568.4 | 1568.4 | 1568.4 | 1568.4 | 1568.4 | 1568.4 | 1568.4 | 1568.4 | 1568.4 | 1568.4 |
| 2.5°  | 1557.8 | 1568.4 | 1584.7 | 1594.6 | 1607.7 | 1613.0 | 1618.3 | 1627.5 | 1634.7 | 1632.8 | 1629.5 |
| 5°    | 1572.3 | 1590.0 | 1610.4 | 1616.9 | 1616.9 | 1610.4 | 1606.4 | 1607.2 | 1605.1 | 1603.8 | 1599.9 |
| 7.5°  | 1593.4 | 1617.7 | 1632.2 | 1625.6 | 1605.1 | 1579.5 | 1555.1 | 1540.7 | 1526.8 | 1518.2 | 1520.8 |
| 10°   | 1623.0 | 1649.9 | 1650.6 | 1621.6 | 1572.9 | 1516.9 | 1468.8 | 1437.8 | 1408.3 | 1395.1 | 1399.0 |
| 12.5° | 1665.7 | 1692.8 | 1669.7 | 1607.2 | 1521.5 | 1434.0 | 1345.7 | 1281.7 | 1224.5 | 1210.6 | 1206.7 |
| 15°   | 1711.9 | 1732.9 | 1681.5 | 1576.2 | 1447.8 | 1303.5 | 1155.3 | 1059.8 | 996.0  | 984.7  | 980.8  |
| 17.5° | 1752.1 | 1763.9 | 1675.7 | 1520.8 | 1331.2 | 1103.8 | 931.4  | 866.9  | 853.6  | 860.1  | 860.1  |
| 20°   | 1787.5 | 1783.7 | 1649.9 | 1435.2 | 1147.3 | 882.7  | 782.6  | 781.9  | 799.6  | 816.1  | 817.4  |
| 22.5° | 1832.5 | 1801.5 | 1609.1 | 1308.1 | 928.0  | 736.4  | 719.3  | 736.4  | 756.2  | 774.6  | 776.6  |
| 25°   | 1885.7 | 1821.3 | 1554.4 | 1127.0 | 746.2  | 668.6  | 675.7  | 690.3  | 702.8  | 717.2  | 717.9  |
| 27.5° | 1939.1 | 1836.3 | 1477.4 | 914.2  | 647.5  | 625.1  | 632.9  | 639.0  | 642.2  | 651.5  | 651.5  |
| 30°   | 2001.1 | 1848.3 | 1366.1 | 732.5  | 602.0  | 586.9  | 582.2  | 579.6  | 582.2  | 594.8  | 595.4  |
| 32.5° | 2078.8 | 1869.4 | 1213.9 | 628.4  | 580.9  | 559.9  | 536.2  | 523.0  | 532.2  | 554.7  | 558.6  |
| 35°   | 2167.0 | 1894.3 | 1031.4 | 586.9  | 573.7  | 546.7  | 503.2  | 482.7  | 486.2  | 506.6  | 509.8  |
| 37.5° | 2277.7 | 1926.5 | 851.7  | 577.0  | 580.9  | 545.5  | 488.0  | 459.0  | 444.7  | 445.3  | 444.7  |
| 40°   | 2419.2 | 1958.8 | 709.4  | 579.6  | 596.7  | 548.7  | 480.9  | 435.4  | 405.0  | 406.5  | 409.0  |
| 42.5° | 2567.4 | 1980.0 | 619.1  | 587.5  | 615.9  | 553.3  | 478.2  | 412.3  | 386.0  | 408.4  | 428.9  |
| 45°   | 2740.6 | 1974.0 | 572.4  | 594.8  | 630.3  | 555.2  | 468.2  | 409.6  | 388.0  | 455.1  | 493.3  |
| 47.5° | 2939.7 | 1948.3 | 546.0  | 598.0  | 634.4  | 554.7  | 461.1  | 418.3  | 404.3  | 520.9  | 564.5  |
| 50°   | 3155.7 | 1908.1 | 525.0  | 592.8  | 632.2  | 552.0  | 468.9  | 428.9  | 411.1  | 535.5  | 569.0  |
| 52.5° | 3392.1 | 1871.3 | 503.2  | 580.9  | 622.4  | 544.1  | 478.8  | 424.2  | 392.6  | 493.3  | 519.0  |
| 55°   | 3672.0 | 1862.6 | 478.8  | 560.5  | 605.9  | 535.5  | 473.5  | 409.6  | 372.2  | 437.4  | 453.1  |
| 57.5° | 3992.2 | 1916.1 | 447.3  | 535.5  | 583.5  | 518.3  | 461.1  | 401.8  | 364.9  | 397.8  | 406.5  |
| 60°   | 4398.6 | 2033.9 | 413.6  | 509.2  | 556.0  | 492.7  | 450.0  | 403.8  | 366.9  | 391.9  | 393.8  |
| 62.5° | 4716.0 | 2140.0 | 383.3  | 476.9  | 519.0  | 461.6  | 438.1  | 405.8  | 372.7  | 399.8  | 396.5  |
| 65°   | 4831.3 | 2088.0 | 345.8  | 428.9  | 466.9  | 427.5  | 421.6  | 407.0  | 372.7  | 404.3  | 397.2  |
| 67°   | 4594.8 | 1839.6 | 310.3  | 380.7  | 417.6  | 397.2  | 405.8  | 401.8  | 366.1  | 403.8  | 391.2  |
| 67.5° | 4482.3 | 1752.1 | 301.0  | 372.7  | 404.3  | 388.0  | 401.8  | 399.1  | 364.3  | 402.4  | 388.0  |
| 70°   | 3696.4 | 1256.6 | 254.2  | 312.9  | 338.5  | 341.9  | 377.4  | 382.0  | 348.5  | 378.0  | 351.7  |
| 72.5° | 2630.1 | 786.5  | 219.4  | 242.5  | 273.4  | 292.5  | 344.5  | 359.0  | 327.3  | 328.7  | 307.0  |
| 75°   | 1301.6 | 422.3  | 195.7  | 187.0  | 212.8  | 243.7  | 300.4  | 327.3  | 296.4  | 274.1  | 266.7  |
| 77.5° | 439.4  | 239.0  | 165.3  | 150.8  | 165.3  | 195.7  | 249.0  | 285.9  | 261.4  | 231.9  | 227.2  |
| 80°   | 227.2  | 173.9  | 129.0  | 121.2  | 130.4  | 151.5  | 194.9  | 237.8  | 223.3  | 224.5  | 185.1  |
| 82.5° | 141.7  | 106.0  | 92.9   | 92.3   | 98.9   | 115.9  | 143.5  | 193.0  | 191.7  | 164.0  | 119.3  |
| 85°   | 65.8   | 61.3   | 59.3   | 61.3   | 63.2   | 65.8   | 93.6   | 137.7  | 145.5  | 88.3   | 78.4   |
| 87.5° | 27.7   | 26.9   | 23.7   | 25.7   | 28.3   | 27.7   | 37.5   | 58.6   | 81.7   | 55.3   | 50.8   |
| 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)