

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: P214599

Luminaire Tested: **ARCH-AF16-50-D-U-T2R-7050**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P214599  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29635)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: ARCH-AF16-50-D-U-T2R-7050  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 5000K, 980mA LIGHT ENGINE WITH 16 LEDS AND TYPE II ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6010 lumens  
Efficiency: N/A  
Efficacy: 113.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.75' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B1 - U0 - G1

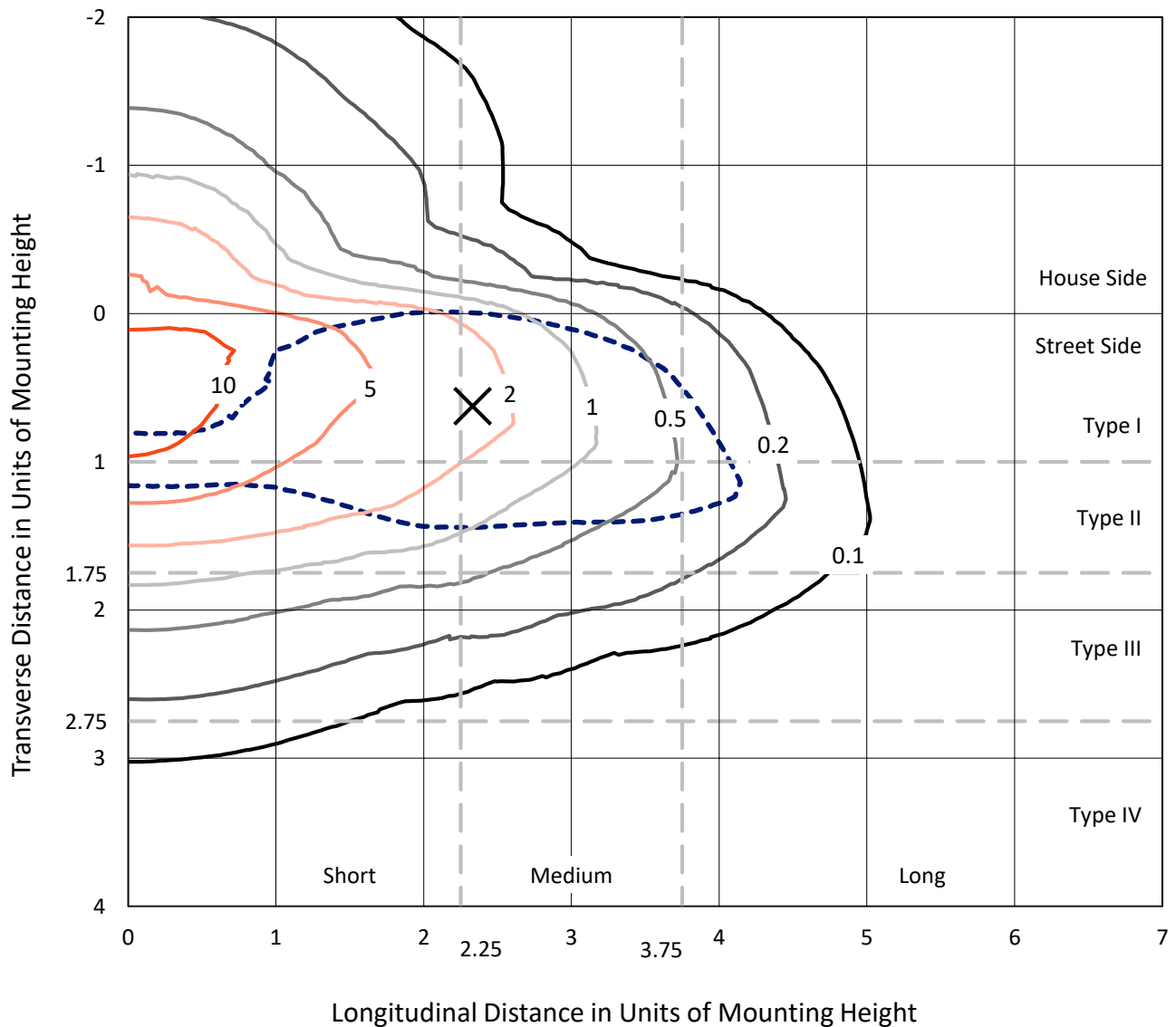
Input Watts (W): 53  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

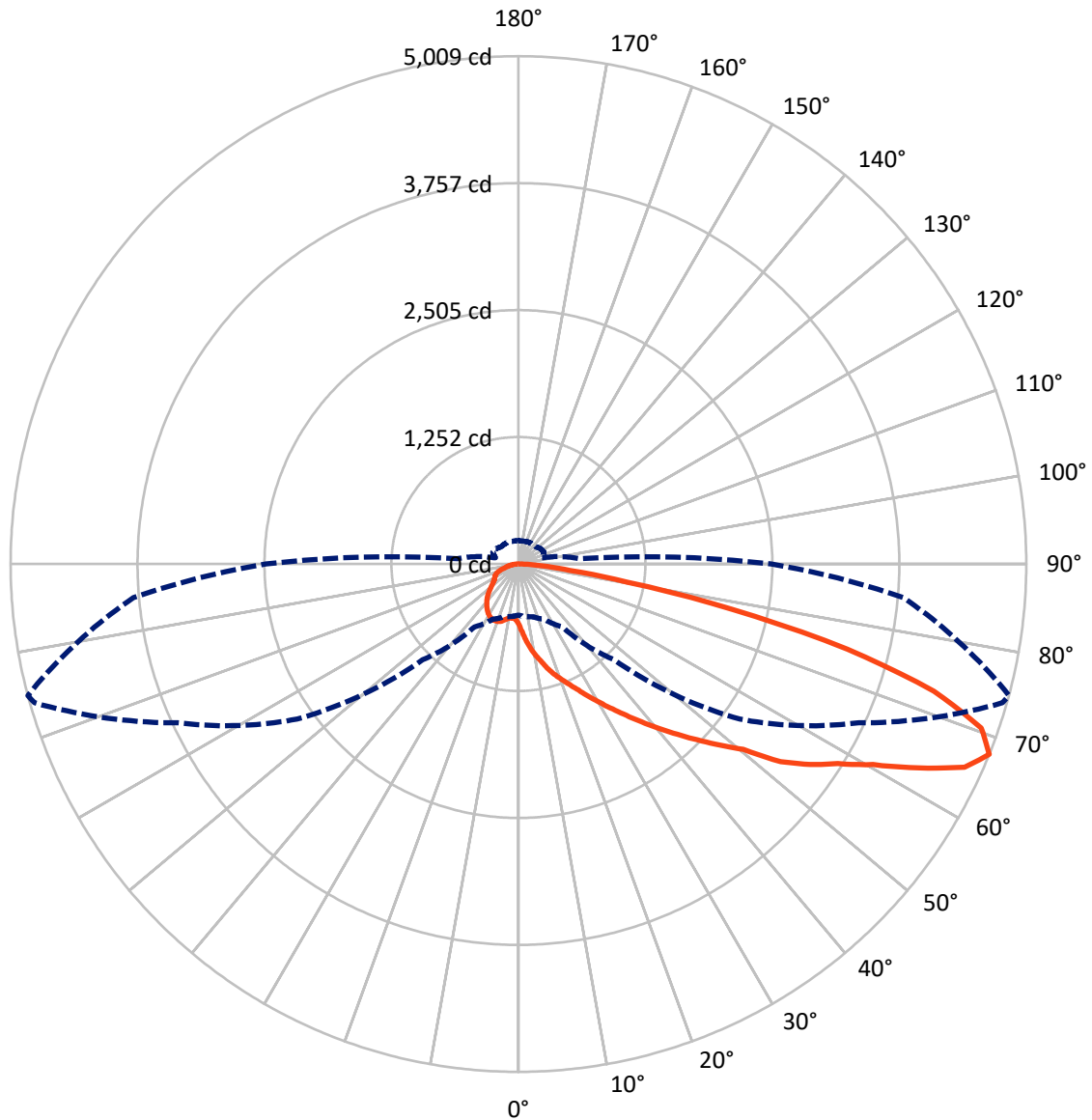
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.5 fc  
 Type II - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 1026.3   | 0.0    | 1026.3 |
|                    | % Fixture | 17.1     | 0.0    | 17.1   |
| <b>Street Side</b> | Lumens    | 4983.7   | 0.0    | 4983.7 |
|                    | % Fixture | 82.9     | 0.0    | 82.9   |
| <b>Total</b>       | Lumens    | 6010.0   | 0.0    | 6010.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 70.0   | 1.2       |
| 10°-20°   | 252.8  | 4.2       |
| 20°-30°   | 461.2  | 7.7       |
| 30°-40°   | 756.9  | 12.6      |
| 40°-50°   | 1094.6 | 18.2      |
| 50°-60°   | 1290.0 | 21.5      |
| 60°-70°   | 1253.6 | 20.9      |
| 70°-80°   | 696.8  | 11.6      |
| 80°-90°   | 134.0  | 2.2       |
| 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°    | 6010.0 | 100.0     |
| 0°-180°   | 6010.0 | 100.0     |



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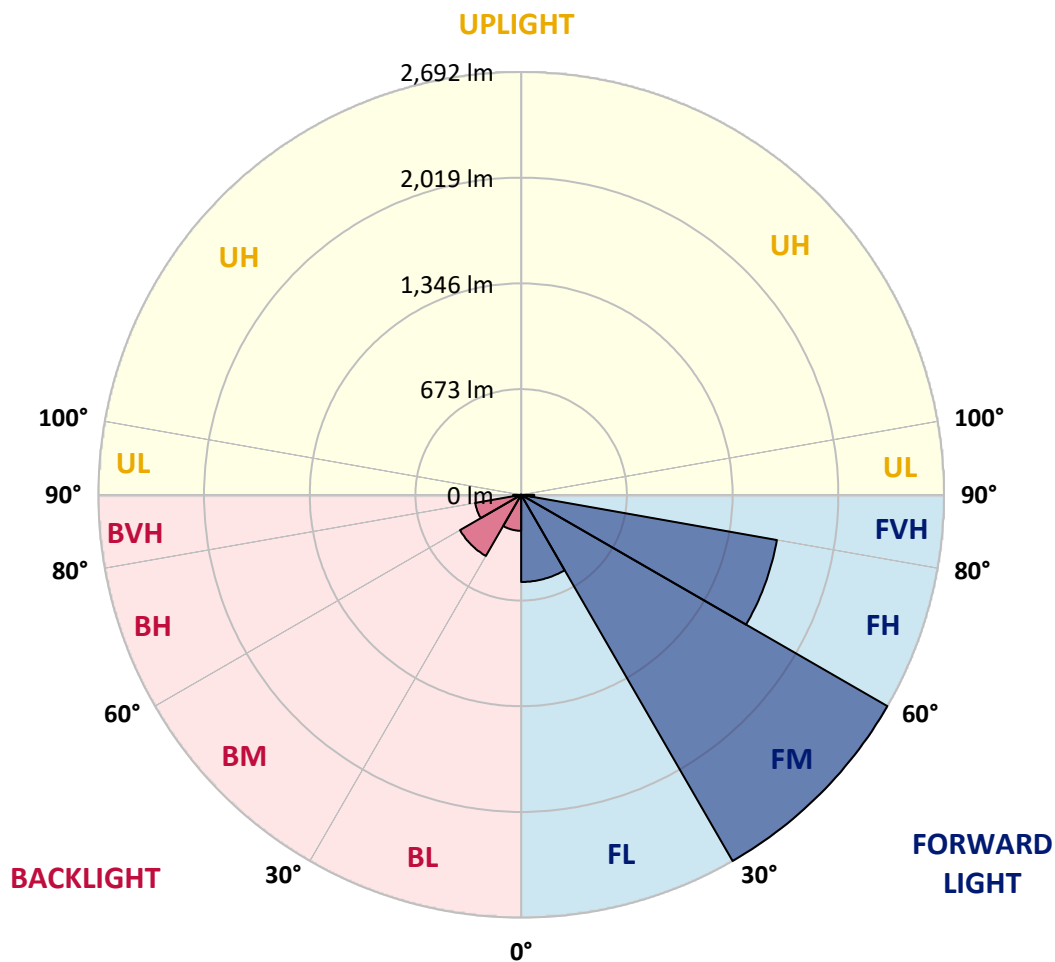
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 554.9  | 9.2       |                         |      |         |
| FM   | (30°-60°)   | 2692.2 | 44.8      |                         |      |         |
| FH   | (60°-80°)   | 1653.3 | 27.5      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 83.4   | 1.4       |                         |      | G1/100  |
| BL   | (0°-30°)    | 229.1  | 3.8       | B1/500                  |      |         |
| BM   | (30°-60°)   | 449.5  | 7.5       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 297.2  | 4.9       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 50.6   | 0.8       |                         |      | G1/100  |
| 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 Medium





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 74°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 595.5  | 595.5  | 595.5  | 595.5  | 595.5  | 595.5  | 595.5  | 595.5  | 595.5  | 595.5  | 595.5  |
| 2.5°  | 844.3  | 846.8  | 841.8  | 830.5  | 814.1  | 784.0  | 757.6  | 711.1  | 669.7  | 664.6  | 620.7  |
| 5°    | 992.6  | 995.1  | 988.8  | 975.0  | 957.4  | 924.7  | 888.3  | 828.0  | 761.4  | 748.8  | 655.8  |
| 7.5°  | 1094.3 | 1095.6 | 1088.0 | 1074.2 | 1060.4 | 1027.7 | 991.3  | 923.5  | 841.8  | 831.7  | 701.1  |
| 10°   | 1181.0 | 1183.5 | 1173.5 | 1164.7 | 1149.6 | 1116.9 | 1079.2 | 1007.6 | 923.5  | 909.6  | 747.6  |
| 12.5° | 1261.4 | 1263.9 | 1257.7 | 1250.1 | 1245.1 | 1214.9 | 1173.5 | 1088.0 | 997.6  | 982.5  | 802.8  |
| 15°   | 1315.4 | 1318.0 | 1319.2 | 1329.3 | 1335.5 | 1314.2 | 1272.7 | 1179.8 | 1078.0 | 1064.2 | 868.2  |
| 17.5° | 1300.4 | 1306.7 | 1325.5 | 1361.9 | 1400.9 | 1402.1 | 1368.2 | 1270.2 | 1157.1 | 1142.1 | 934.8  |
| 20°   | 1256.4 | 1261.4 | 1284.0 | 1339.3 | 1416.0 | 1459.9 | 1457.4 | 1361.9 | 1231.3 | 1214.9 | 996.3  |
| 22.5° | 1292.8 | 1299.1 | 1299.1 | 1333.0 | 1408.4 | 1490.1 | 1522.8 | 1452.4 | 1305.4 | 1290.3 | 1057.9 |
| 25°   | 1448.6 | 1452.4 | 1426.0 | 1412.2 | 1439.8 | 1515.2 | 1576.8 | 1550.4 | 1395.9 | 1378.3 | 1124.5 |
| 27.5° | 1666.0 | 1659.7 | 1627.0 | 1571.8 | 1541.6 | 1561.7 | 1624.5 | 1643.4 | 1500.1 | 1478.8 | 1193.6 |
| 30°   | 1882.1 | 1878.3 | 1840.6 | 1766.5 | 1698.6 | 1655.9 | 1677.3 | 1726.3 | 1613.2 | 1588.1 | 1260.2 |
| 32.5° | 2084.4 | 2078.1 | 2036.6 | 1949.9 | 1873.3 | 1794.1 | 1752.7 | 1801.7 | 1733.8 | 1704.9 | 1334.3 |
| 35°   | 2270.3 | 2254.0 | 2212.5 | 2122.1 | 2042.9 | 1967.5 | 1865.7 | 1873.3 | 1864.5 | 1834.3 | 1416.0 |
| 37.5° | 2421.1 | 2408.5 | 2363.3 | 2279.1 | 2194.9 | 2123.3 | 2016.5 | 1955.0 | 2005.2 | 1976.3 | 1510.2 |
| 40°   | 2554.3 | 2540.4 | 2493.9 | 2409.8 | 2331.9 | 2264.0 | 2179.8 | 2054.2 | 2163.5 | 2130.8 | 1615.7 |
| 42.5° | 2654.8 | 2644.7 | 2607.0 | 2524.1 | 2448.7 | 2387.2 | 2345.7 | 2179.8 | 2328.1 | 2296.7 | 1731.3 |
| 45°   | 2708.8 | 2698.7 | 2678.6 | 2612.0 | 2542.9 | 2495.2 | 2499.0 | 2329.4 | 2500.2 | 2473.8 | 1868.3 |
| 47.5° | 2642.2 | 2649.7 | 2667.3 | 2654.8 | 2612.0 | 2589.4 | 2635.9 | 2483.9 | 2692.5 | 2667.3 | 2016.5 |
| 50°   | 2463.8 | 2471.3 | 2541.7 | 2628.4 | 2643.5 | 2671.1 | 2759.0 | 2662.3 | 2896.0 | 2875.9 | 2200.0 |
| 52.5° | 2025.3 | 2066.8 | 2261.5 | 2468.8 | 2610.8 | 2725.1 | 2896.0 | 2927.4 | 3239.0 | 3239.0 | 2524.1 |
| 55°   | 1530.3 | 1566.7 | 1789.1 | 2151.0 | 2483.9 | 2730.2 | 2996.5 | 3107.1 | 3486.5 | 3491.5 | 2693.7 |
| 57.5° | 1240.1 | 1262.7 | 1372.0 | 1742.6 | 2217.5 | 2667.3 | 3115.9 | 3261.6 | 3692.6 | 3715.2 | 2912.3 |
| 60°   | 1006.4 | 1018.9 | 1090.6 | 1348.1 | 1849.4 | 2497.7 | 3201.3 | 3482.7 | 3986.5 | 4018.0 | 3191.2 |
| 62.5° | 809.1  | 821.7  | 869.4  | 1024.0 | 1451.1 | 2179.8 | 3186.2 | 3712.7 | 4378.5 | 4430.1 | 3556.9 |
| 65°   | 645.8  | 659.6  | 691.0  | 786.5  | 1075.5 | 1785.3 | 3031.7 | 3830.8 | 4784.4 | 4834.6 | 3799.3 |
| 67.5° | 503.8  | 516.4  | 537.7  | 600.6  | 757.6  | 1335.5 | 2666.1 | 3706.4 | 4966.5 | 5009.3 | 3811.9 |
| 70°   | 380.7  | 387.0  | 404.6  | 444.8  | 541.5  | 887.0  | 2086.9 | 3289.2 | 4803.2 | 4842.2 | 3560.6 |
| 72.5° | 295.3  | 294.0  | 304.0  | 324.2  | 378.2  | 610.6  | 1383.3 | 2674.9 | 4246.6 | 4286.8 | 3038.0 |
| 75°   | 241.2  | 240.0  | 246.3  | 252.5  | 273.9  | 409.6  | 816.7  | 2014.0 | 3427.5 | 3350.8 | 2279.1 |
| 77.5° | 203.5  | 202.3  | 208.6  | 209.8  | 218.6  | 282.7  | 464.9  | 1325.5 | 2286.6 | 2154.7 | 1284.0 |
| 80°   | 172.1  | 170.9  | 178.4  | 180.9  | 187.2  | 207.3  | 267.6  | 717.4  | 1148.3 | 1088.0 | 613.1  |
| 82.5° | 129.4  | 134.4  | 148.3  | 154.5  | 162.1  | 153.3  | 165.8  | 316.6  | 532.7  | 508.8  | 266.4  |
| 85°   | 62.8   | 74.1   | 111.8  | 124.4  | 133.2  | 96.7   | 113.1  | 149.5  | 240.0  | 228.7  | 108.1  |
| 87.5° | 21.4   | 18.8   | 66.6   | 79.2   | 86.7   | 44.0   | 62.8   | 82.9   | 99.3   | 90.5   | 33.9   |
| 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°    | 595.5  | 595.5 | 595.5 | 595.5 | 595.5 | 595.5 | 595.5 | 595.5 | 595.5 | 595.5 | 595.5 |
| 2.5°  | 601.8  | 583.0 | 555.3 | 534.0 | 520.1 | 508.8 | 503.8 | 502.6 | 500.0 | 498.8 | 498.8 |
| 5°    | 614.4  | 580.5 | 537.7 | 515.1 | 508.8 | 503.8 | 506.3 | 507.6 | 507.6 | 507.6 | 507.6 |
| 7.5°  | 633.2  | 585.5 | 534.0 | 518.9 | 517.6 | 517.6 | 525.2 | 528.9 | 531.5 | 531.5 | 531.5 |
| 10°   | 658.4  | 594.3 | 540.3 | 527.7 | 531.5 | 534.0 | 542.8 | 547.8 | 550.3 | 551.6 | 552.8 |
| 12.5° | 692.3  | 613.1 | 552.8 | 542.8 | 547.8 | 549.0 | 555.3 | 557.8 | 560.4 | 561.6 | 561.6 |
| 15°   | 737.5  | 640.8 | 572.9 | 560.4 | 561.6 | 560.4 | 560.4 | 557.8 | 556.6 | 556.6 | 559.1 |
| 17.5° | 784.0  | 667.1 | 590.5 | 572.9 | 567.9 | 557.8 | 550.3 | 544.0 | 540.3 | 537.7 | 539.0 |
| 20°   | 830.5  | 691.0 | 600.6 | 575.4 | 561.6 | 545.3 | 531.5 | 522.7 | 517.6 | 512.6 | 515.1 |
| 22.5° | 877.0  | 713.6 | 604.3 | 567.9 | 547.8 | 523.9 | 508.8 | 495.0 | 483.7 | 476.2 | 477.4 |
| 25°   | 928.5  | 738.8 | 604.3 | 559.1 | 528.9 | 503.8 | 485.0 | 462.4 | 446.0 | 439.7 | 442.3 |
| 27.5° | 980.0  | 760.1 | 598.0 | 542.8 | 507.6 | 482.5 | 454.8 | 428.4 | 418.4 | 414.6 | 415.9 |
| 30°   | 1031.5 | 776.5 | 584.2 | 522.7 | 485.0 | 457.3 | 420.9 | 403.3 | 390.7 | 380.7 | 381.9 |
| 32.5° | 1083.0 | 787.8 | 565.4 | 497.5 | 461.1 | 425.9 | 395.8 | 375.7 | 353.0 | 340.5 | 341.7 |
| 35°   | 1142.1 | 796.6 | 542.8 | 472.4 | 434.7 | 398.3 | 375.7 | 343.0 | 319.1 | 309.1 | 306.6 |
| 37.5° | 1203.6 | 802.8 | 518.9 | 444.8 | 408.3 | 378.2 | 355.6 | 315.4 | 292.7 | 278.9 | 277.7 |
| 40°   | 1270.2 | 805.4 | 490.0 | 415.9 | 383.2 | 365.6 | 329.2 | 299.0 | 260.1 | 251.3 | 251.3 |
| 42.5° | 1349.4 | 804.1 | 461.1 | 387.0 | 355.6 | 336.7 | 310.3 | 296.5 | 262.6 | 253.8 | 248.8 |
| 45°   | 1439.8 | 804.1 | 429.7 | 353.0 | 327.9 | 300.3 | 289.0 | 280.2 | 257.6 | 261.3 | 263.8 |
| 47.5° | 1542.9 | 801.6 | 392.0 | 325.4 | 305.3 | 281.4 | 275.2 | 256.3 | 247.5 | 250.0 | 252.5 |
| 50°   | 1684.8 | 805.4 | 358.1 | 302.8 | 289.0 | 268.9 | 261.3 | 251.3 | 247.5 | 248.8 | 247.5 |
| 52.5° | 1882.1 | 792.8 | 325.4 | 289.0 | 276.4 | 250.0 | 250.0 | 248.8 | 250.0 | 248.8 | 248.8 |
| 55°   | 1990.1 | 765.1 | 301.5 | 281.4 | 267.6 | 241.2 | 246.3 | 248.8 | 251.3 | 250.0 | 250.0 |
| 57.5° | 2143.4 | 746.3 | 282.7 | 276.4 | 262.6 | 238.7 | 243.7 | 248.8 | 250.0 | 248.8 | 248.8 |
| 60°   | 2324.3 | 733.7 | 270.1 | 277.7 | 258.8 | 238.7 | 245.0 | 248.8 | 247.5 | 246.3 | 246.3 |
| 62.5° | 2534.2 | 728.7 | 261.3 | 281.4 | 255.0 | 240.0 | 245.0 | 248.8 | 243.7 | 242.5 | 242.5 |
| 65°   | 2613.3 | 683.5 | 250.0 | 283.9 | 257.6 | 240.0 | 243.7 | 245.0 | 238.7 | 237.5 | 236.2 |
| 67.5° | 2491.4 | 605.6 | 233.7 | 278.9 | 265.1 | 240.0 | 240.0 | 238.7 | 231.2 | 229.9 | 227.4 |
| 70°   | 2218.8 | 502.6 | 208.6 | 262.6 | 270.1 | 241.2 | 234.9 | 228.7 | 221.1 | 221.1 | 216.1 |
| 72.5° | 1816.7 | 395.8 | 175.9 | 233.7 | 266.4 | 245.0 | 224.9 | 216.1 | 207.3 | 207.3 | 202.3 |
| 75°   | 1309.2 | 295.3 | 140.7 | 194.7 | 250.0 | 243.7 | 212.3 | 201.0 | 191.0 | 189.7 | 183.4 |
| 77.5° | 746.3  | 207.3 | 114.3 | 152.0 | 222.4 | 237.5 | 201.0 | 183.4 | 172.1 | 168.4 | 164.6 |
| 80°   | 383.2  | 139.5 | 93.0  | 119.4 | 184.7 | 219.9 | 192.2 | 163.3 | 150.8 | 144.5 | 138.2 |
| 82.5° | 182.2  | 93.0  | 71.6  | 87.9  | 139.5 | 192.2 | 180.9 | 140.7 | 126.9 | 119.4 | 111.8 |
| 85°   | 81.7   | 55.3  | 47.7  | 56.5  | 99.3  | 149.5 | 159.6 | 115.6 | 99.3  | 124.4 | 91.7  |
| 87.5° | 26.4   | 25.1  | 25.1  | 26.4  | 47.7  | 65.3  | 116.8 | 85.4  | 79.2  | 65.3  | 55.3  |
| 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)