

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: P231012

Luminaire Tested: **ARCH-M-AF48-60-D-U-T2R-7030**

Issue Date: 3/3/2020

### Test Information

Test Method: LM-79-08  
Report Number: P231012  
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-M-AF48-60-D-U-T2R-7030  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 3000K, 405mA LIGHT ENGINES WITH 24 LEDS AND TYPE II ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 7772 lumens  
Efficiency: N/A  
Efficacy: 123.4 lumens/watt  
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B1 - U0 - G2

Input Watts (W): 63  
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

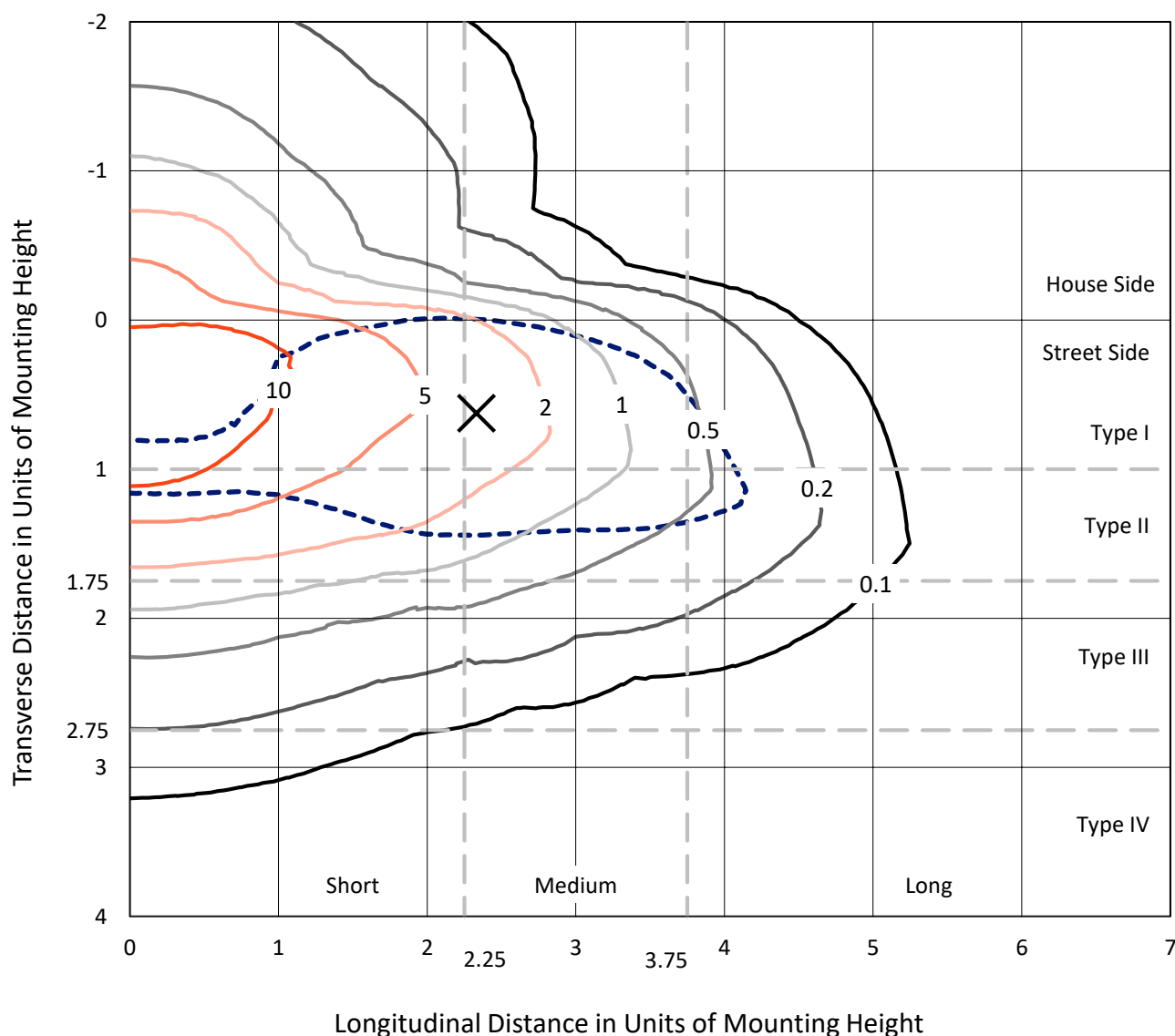


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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 --- 1/2 Max cd

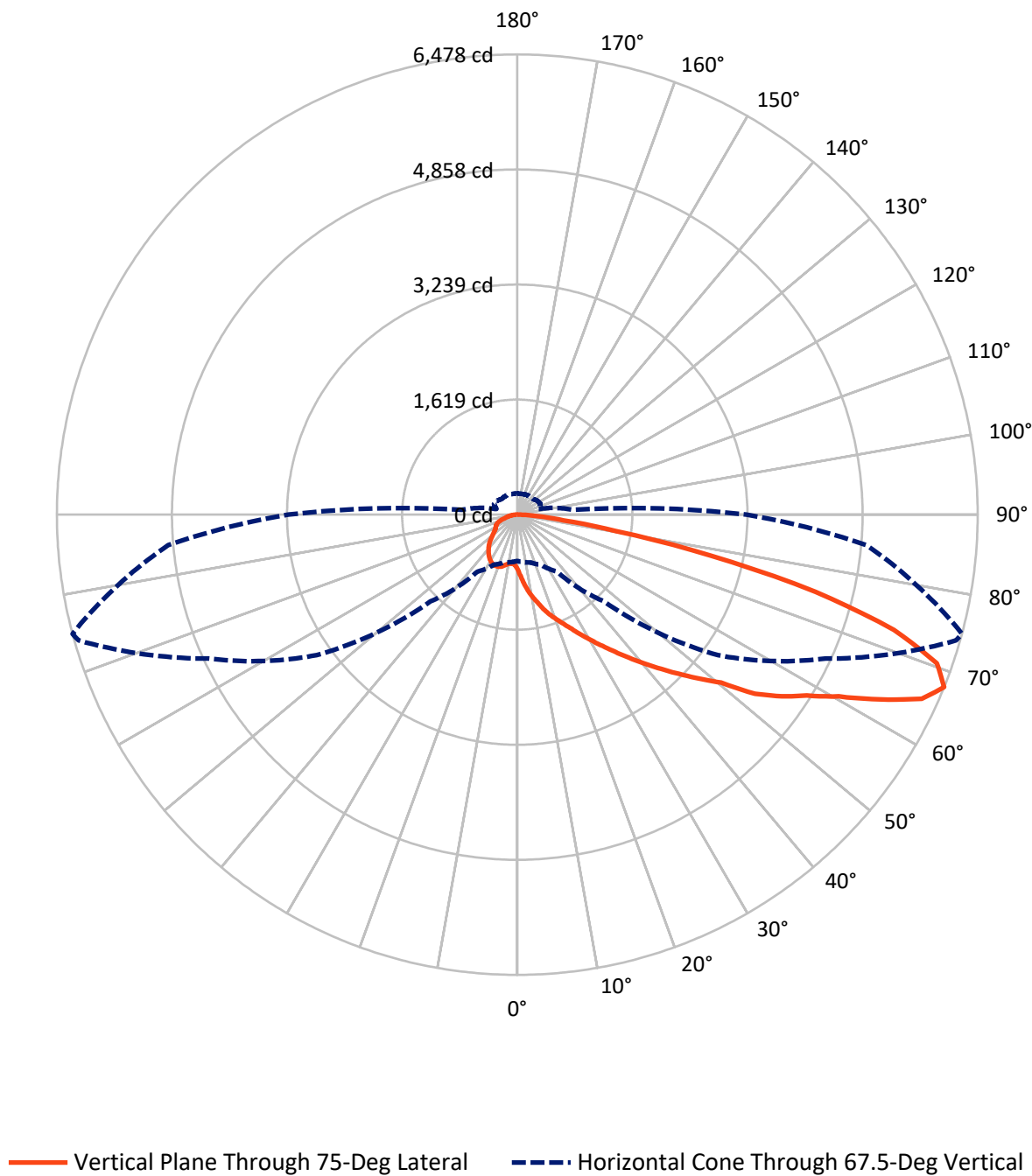


Based on 10 foot mounting height. Maximum calculated value = 16.1 fc  
 Type II - Medium - Semi-Cutoff

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## Luminous Intensity Polar Plot



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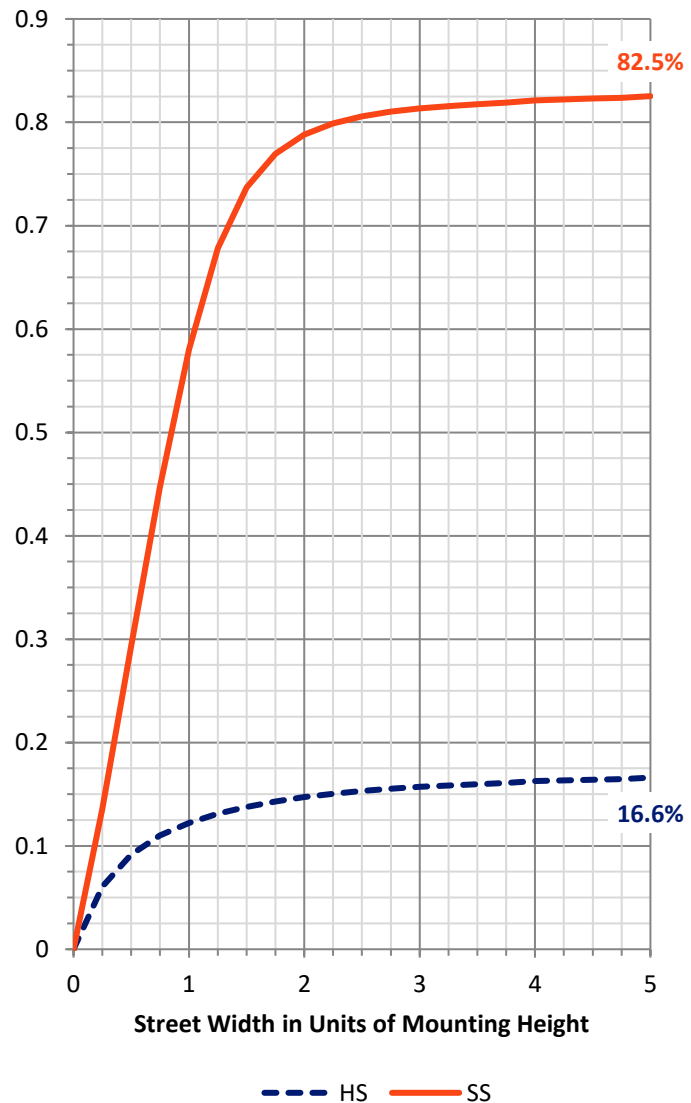
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 1327.2   | 0.0    | 1327.2 |
|                    | % Fixture | 17.1     | 0.0    | 17.1   |
| <b>Street Side</b> | Lumens    | 6444.8   | 0.0    | 6444.8 |
|                    | % Fixture | 82.9     | 0.0    | 82.9   |
| <b>Total</b>       | Lumens    | 7772.0   | 0.0    | 7772.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 90.5   | 1.2       |
| 10°-20°   | 327.0  | 4.2       |
| 20°-30°   | 596.4  | 7.7       |
| 30°-40°   | 978.9  | 12.6      |
| 40°-50°   | 1415.6 | 18.2      |
| 50°-60°   | 1668.3 | 21.5      |
| 60°-70°   | 1621.1 | 20.9      |
| 70°-80°   | 901.1  | 11.6      |
| 80°-90°   | 173.3  | 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°    | 7772.0 | 100.0     |
| 0°-180°   | 7772.0 | 100.0     |

**Coefficient of Utilization**



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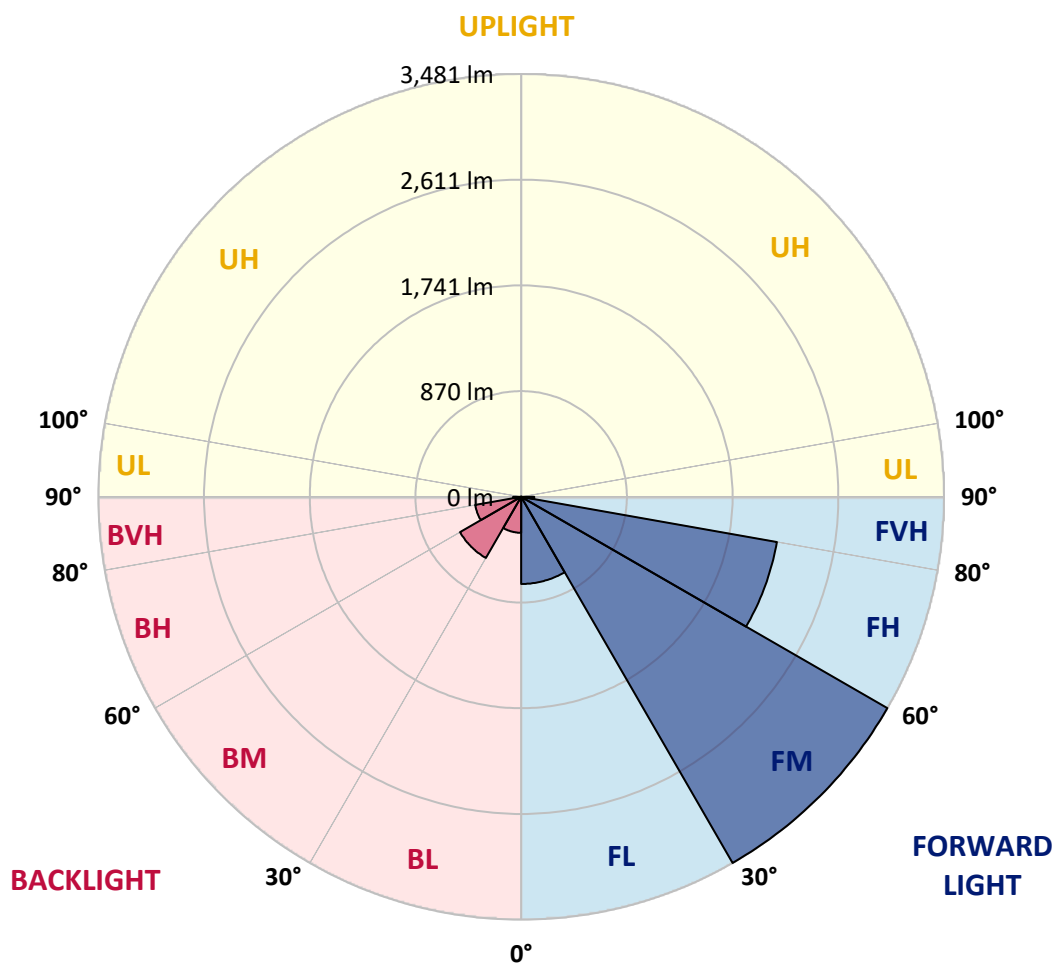
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 717.6  | 9.2       |                         |      |         |
| FM   | (30°-60°)   | 3481.4 | 44.8      |                         |      |         |
| FH   | (60°-80°)   | 2138.0 | 27.5      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 107.8  | 1.4       |                         |      | G2/225  |
| BL   | (0°-30°)    | 296.2  | 3.8       | B1/500                  |      |         |
| BM   | (30°-60°)   | 581.2  | 7.5       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 384.3  | 4.9       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 65.4   | 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-G2**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 74°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 770.1  | 770.1  | 770.1  | 770.1  | 770.1  | 770.1  | 770.1  | 770.1  | 770.1  | 770.1  | 770.1  |
| 2.5°  | 1091.8 | 1095.1 | 1088.6 | 1074.0 | 1052.8 | 1013.8 | 979.7  | 919.6  | 866.0  | 859.5  | 802.6  |
| 5°    | 1283.5 | 1286.8 | 1278.7 | 1260.8 | 1238.1 | 1195.8 | 1148.7 | 1070.7 | 984.6  | 968.3  | 848.1  |
| 7.5°  | 1415.2 | 1416.8 | 1407.0 | 1389.2 | 1371.3 | 1329.0 | 1281.9 | 1194.2 | 1088.6 | 1075.6 | 906.6  |
| 10°   | 1527.3 | 1530.5 | 1517.5 | 1506.1 | 1486.6 | 1444.4 | 1395.7 | 1303.0 | 1194.2 | 1176.3 | 966.7  |
| 12.5° | 1631.2 | 1634.5 | 1626.4 | 1616.6 | 1610.1 | 1571.1 | 1517.5 | 1407.0 | 1290.0 | 1270.6 | 1038.2 |
| 15°   | 1701.1 | 1704.4 | 1706.0 | 1719.0 | 1727.1 | 1699.5 | 1645.9 | 1525.6 | 1394.0 | 1376.2 | 1122.7 |
| 17.5° | 1681.6 | 1689.7 | 1714.1 | 1761.2 | 1811.6 | 1813.2 | 1769.3 | 1642.6 | 1496.4 | 1476.9 | 1208.8 |
| 20°   | 1624.7 | 1631.2 | 1660.5 | 1732.0 | 1831.1 | 1888.0 | 1884.7 | 1761.2 | 1592.2 | 1571.1 | 1288.4 |
| 22.5° | 1671.9 | 1680.0 | 1680.0 | 1723.9 | 1821.3 | 1926.9 | 1969.2 | 1878.2 | 1688.1 | 1668.6 | 1368.0 |
| 25°   | 1873.3 | 1878.2 | 1844.1 | 1826.2 | 1862.0 | 1959.4 | 2039.1 | 2004.9 | 1805.1 | 1782.3 | 1454.1 |
| 27.5° | 2154.4 | 2146.3 | 2104.0 | 2032.6 | 1993.6 | 2019.6 | 2100.8 | 2125.2 | 1939.9 | 1912.3 | 1543.5 |
| 30°   | 2433.9 | 2429.0 | 2380.3 | 2284.4 | 2196.7 | 2141.4 | 2169.0 | 2232.4 | 2086.2 | 2053.7 | 1629.6 |
| 32.5° | 2695.5 | 2687.3 | 2633.7 | 2521.6 | 2422.5 | 2320.1 | 2266.5 | 2329.9 | 2242.1 | 2204.8 | 1725.5 |
| 35°   | 2935.9 | 2914.8 | 2861.2 | 2744.2 | 2641.8 | 2544.4 | 2412.7 | 2422.5 | 2411.1 | 2372.1 | 1831.1 |
| 37.5° | 3130.9 | 3114.6 | 3056.1 | 2947.3 | 2838.4 | 2745.8 | 2607.7 | 2528.1 | 2593.1 | 2555.7 | 1952.9 |
| 40°   | 3303.1 | 3285.2 | 3225.1 | 3116.3 | 3015.5 | 2927.8 | 2818.9 | 2656.5 | 2797.8 | 2755.6 | 2089.4 |
| 42.5° | 3433.1 | 3420.1 | 3371.3 | 3264.1 | 3166.6 | 3087.0 | 3033.4 | 2818.9 | 3010.7 | 2970.0 | 2238.9 |
| 45°   | 3502.9 | 3490.0 | 3464.0 | 3377.8 | 3288.5 | 3226.7 | 3231.6 | 3012.3 | 3233.2 | 3199.1 | 2416.0 |
| 47.5° | 3416.8 | 3426.6 | 3449.3 | 3433.1 | 3377.8 | 3348.6 | 3408.7 | 3212.1 | 3481.8 | 3449.3 | 2607.7 |
| 50°   | 3186.1 | 3195.9 | 3286.9 | 3399.0 | 3418.5 | 3454.2 | 3567.9 | 3442.8 | 3745.0 | 3719.0 | 2844.9 |
| 52.5° | 2619.1 | 2672.7 | 2924.5 | 3192.6 | 3376.2 | 3524.1 | 3745.0 | 3785.7 | 4188.6 | 4188.6 | 3264.1 |
| 55°   | 1978.9 | 2026.1 | 2313.6 | 2781.6 | 3212.1 | 3530.6 | 3875.0 | 4018.0 | 4508.7 | 4515.2 | 3483.5 |
| 57.5° | 1603.6 | 1632.9 | 1774.2 | 2253.5 | 2867.7 | 3449.3 | 4029.4 | 4217.8 | 4775.1 | 4804.4 | 3766.2 |
| 60°   | 1301.4 | 1317.7 | 1410.3 | 1743.4 | 2391.6 | 3230.0 | 4139.8 | 4503.8 | 5155.3 | 5195.9 | 4126.9 |
| 62.5° | 1046.3 | 1062.6 | 1124.3 | 1324.2 | 1876.6 | 2818.9 | 4120.4 | 4801.1 | 5662.2 | 5728.9 | 4599.7 |
| 65°   | 835.1  | 853.0  | 893.6  | 1017.1 | 1390.8 | 2308.8 | 3920.5 | 4953.8 | 6187.0 | 6252.0 | 4913.2 |
| 67.5° | 651.5  | 667.8  | 695.4  | 776.6  | 979.7  | 1727.1 | 3447.7 | 4793.0 | 6422.6 | 6477.9 | 4929.5 |
| 70°   | 492.3  | 500.4  | 523.2  | 575.2  | 700.3  | 1147.1 | 2698.7 | 4253.6 | 6211.4 | 6261.8 | 4604.5 |
| 72.5° | 381.8  | 380.2  | 393.2  | 419.2  | 489.0  | 789.6  | 1788.8 | 3459.1 | 5491.6 | 5543.6 | 3928.6 |
| 75°   | 312.0  | 310.3  | 318.4  | 326.6  | 354.2  | 529.7  | 1056.1 | 2604.5 | 4432.3 | 4333.2 | 2947.3 |
| 77.5° | 263.2  | 261.6  | 269.7  | 271.3  | 282.7  | 365.6  | 601.2  | 1714.1 | 2957.0 | 2786.4 | 1660.5 |
| 80°   | 222.6  | 221.0  | 230.7  | 234.0  | 242.1  | 268.1  | 346.1  | 927.7  | 1485.0 | 1407.0 | 792.9  |
| 82.5° | 167.3  | 173.8  | 191.7  | 199.8  | 209.6  | 198.2  | 214.5  | 409.4  | 688.9  | 658.0  | 344.4  |
| 85°   | 81.2   | 95.9   | 144.6  | 160.8  | 172.2  | 125.1  | 146.2  | 193.3  | 310.3  | 295.7  | 139.7  |
| 87.5° | 27.6   | 24.4   | 86.1   | 102.4  | 112.1  | 56.9   | 81.2   | 107.2  | 128.4  | 117.0  | 43.9   |
| 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°    | 770.1  | 770.1  | 770.1 | 770.1 | 770.1 | 770.1 | 770.1 | 770.1 | 770.1 | 770.1 | 770.1 |
| 2.5°  | 778.3  | 753.9  | 718.1 | 690.5 | 672.6 | 658.0 | 651.5 | 649.9 | 646.6 | 645.0 | 645.0 |
| 5°    | 794.5  | 750.6  | 695.4 | 666.1 | 658.0 | 651.5 | 654.8 | 656.4 | 656.4 | 656.4 | 656.4 |
| 7.5°  | 818.9  | 757.1  | 690.5 | 671.0 | 669.4 | 669.4 | 679.1 | 684.0 | 687.3 | 687.3 | 687.3 |
| 10°   | 851.4  | 768.5  | 698.6 | 682.4 | 687.3 | 690.5 | 701.9 | 708.4 | 711.6 | 713.3 | 714.9 |
| 12.5° | 895.2  | 792.9  | 714.9 | 701.9 | 708.4 | 710.0 | 718.1 | 721.4 | 724.6 | 726.3 | 726.3 |
| 15°   | 953.7  | 828.6  | 740.9 | 724.6 | 726.3 | 724.6 | 724.6 | 721.4 | 719.8 | 719.8 | 723.0 |
| 17.5° | 1013.8 | 862.7  | 763.6 | 740.9 | 734.4 | 721.4 | 711.6 | 703.5 | 698.6 | 695.4 | 697.0 |
| 20°   | 1074.0 | 893.6  | 776.6 | 744.1 | 726.3 | 705.1 | 687.3 | 675.9 | 669.4 | 662.9 | 666.1 |
| 22.5° | 1134.1 | 922.9  | 781.5 | 734.4 | 708.4 | 677.5 | 658.0 | 640.1 | 625.5 | 615.8 | 617.4 |
| 25°   | 1200.7 | 955.3  | 781.5 | 723.0 | 684.0 | 651.5 | 627.2 | 597.9 | 576.8 | 568.7 | 571.9 |
| 27.5° | 1267.3 | 983.0  | 773.4 | 701.9 | 656.4 | 623.9 | 588.2 | 554.0 | 541.0 | 536.2 | 537.8 |
| 30°   | 1333.9 | 1004.1 | 755.5 | 675.9 | 627.2 | 591.4 | 544.3 | 521.5 | 505.3 | 492.3 | 493.9 |
| 32.5° | 1400.5 | 1018.7 | 731.1 | 643.4 | 596.3 | 550.8 | 511.8 | 485.8 | 456.6 | 440.3 | 441.9 |
| 35°   | 1476.9 | 1030.1 | 701.9 | 610.9 | 562.2 | 515.0 | 485.8 | 443.6 | 412.7 | 399.7 | 396.4 |
| 37.5° | 1556.5 | 1038.2 | 671.0 | 575.2 | 528.0 | 489.0 | 459.8 | 407.8 | 378.6 | 360.7 | 359.1 |
| 40°   | 1642.6 | 1041.5 | 633.7 | 537.8 | 495.5 | 472.8 | 425.7 | 386.7 | 336.3 | 324.9 | 324.9 |
| 42.5° | 1745.0 | 1039.8 | 596.3 | 500.4 | 459.8 | 435.4 | 401.3 | 383.4 | 339.6 | 328.2 | 321.7 |
| 45°   | 1862.0 | 1039.8 | 555.7 | 456.6 | 424.1 | 388.3 | 373.7 | 362.3 | 333.1 | 337.9 | 341.2 |
| 47.5° | 1995.2 | 1036.6 | 506.9 | 420.8 | 394.8 | 363.9 | 355.8 | 331.4 | 320.1 | 323.3 | 326.6 |
| 50°   | 2178.8 | 1041.5 | 463.1 | 391.6 | 373.7 | 347.7 | 337.9 | 324.9 | 320.1 | 321.7 | 320.1 |
| 52.5° | 2433.9 | 1025.2 | 420.8 | 373.7 | 357.4 | 323.3 | 323.3 | 321.7 | 323.3 | 321.7 | 321.7 |
| 55°   | 2573.6 | 989.5  | 389.9 | 363.9 | 346.1 | 312.0 | 318.4 | 321.7 | 324.9 | 323.3 | 323.3 |
| 57.5° | 2771.8 | 965.1  | 365.6 | 357.4 | 339.6 | 308.7 | 315.2 | 321.7 | 323.3 | 321.7 | 321.7 |
| 60°   | 3005.8 | 948.9  | 349.3 | 359.1 | 334.7 | 308.7 | 316.8 | 321.7 | 320.1 | 318.4 | 318.4 |
| 62.5° | 3277.1 | 942.4  | 337.9 | 363.9 | 329.8 | 310.3 | 316.8 | 321.7 | 315.2 | 313.6 | 313.6 |
| 65°   | 3379.5 | 883.9  | 323.3 | 367.2 | 333.1 | 310.3 | 315.2 | 316.8 | 308.7 | 307.1 | 305.5 |
| 67.5° | 3221.9 | 783.1  | 302.2 | 360.7 | 342.8 | 310.3 | 310.3 | 308.7 | 299.0 | 297.3 | 294.1 |
| 70°   | 2869.3 | 649.9  | 269.7 | 339.6 | 349.3 | 312.0 | 303.8 | 295.7 | 286.0 | 286.0 | 279.5 |
| 72.5° | 2349.4 | 511.8  | 227.5 | 302.2 | 344.4 | 316.8 | 290.8 | 279.5 | 268.1 | 268.1 | 261.6 |
| 75°   | 1693.0 | 381.8  | 182.0 | 251.8 | 323.3 | 315.2 | 274.6 | 260.0 | 247.0 | 245.3 | 237.2 |
| 77.5° | 965.1  | 268.1  | 147.9 | 196.6 | 287.6 | 307.1 | 260.0 | 237.2 | 222.6 | 217.7 | 212.8 |
| 80°   | 495.5  | 180.3  | 120.2 | 154.4 | 238.8 | 284.3 | 248.6 | 211.2 | 195.0 | 186.8 | 178.7 |
| 82.5° | 235.6  | 120.2  | 92.6  | 113.7 | 180.3 | 248.6 | 234.0 | 182.0 | 164.1 | 154.4 | 144.6 |
| 85°   | 105.6  | 71.5   | 61.7  | 73.1  | 128.4 | 193.3 | 206.3 | 149.5 | 128.4 | 160.8 | 118.6 |
| 87.5° | 34.1   | 32.5   | 32.5  | 34.1  | 61.7  | 84.5  | 151.1 | 110.5 | 102.4 | 84.5  | 71.5  |
| 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)