

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: P299881

Luminaire Tested: **GAA-AF-02-LED-U-5WQ-7027-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299881  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24143)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: GAA-AF-02-LED-U-5WQ-7027-800  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(2) 70 CRI, 2700K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV  
w/Spill Control OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8972.5 lumens  
Efficiency: N/A  
Efficacy: 105.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type V - Short - Semi-Cutoff  
BUG Rating: B4 - U0 - G2

Input Watts (W): 85  
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



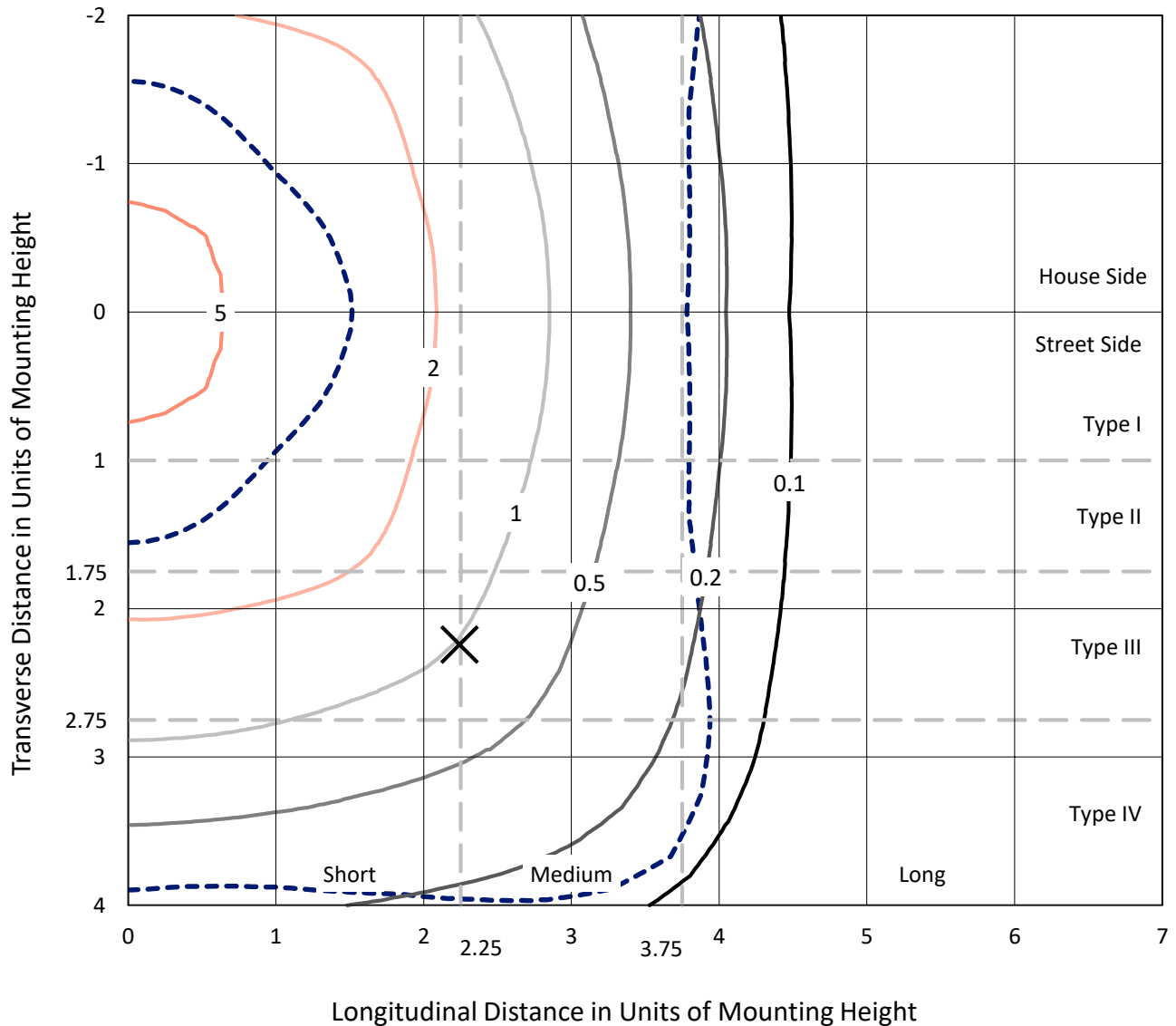


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

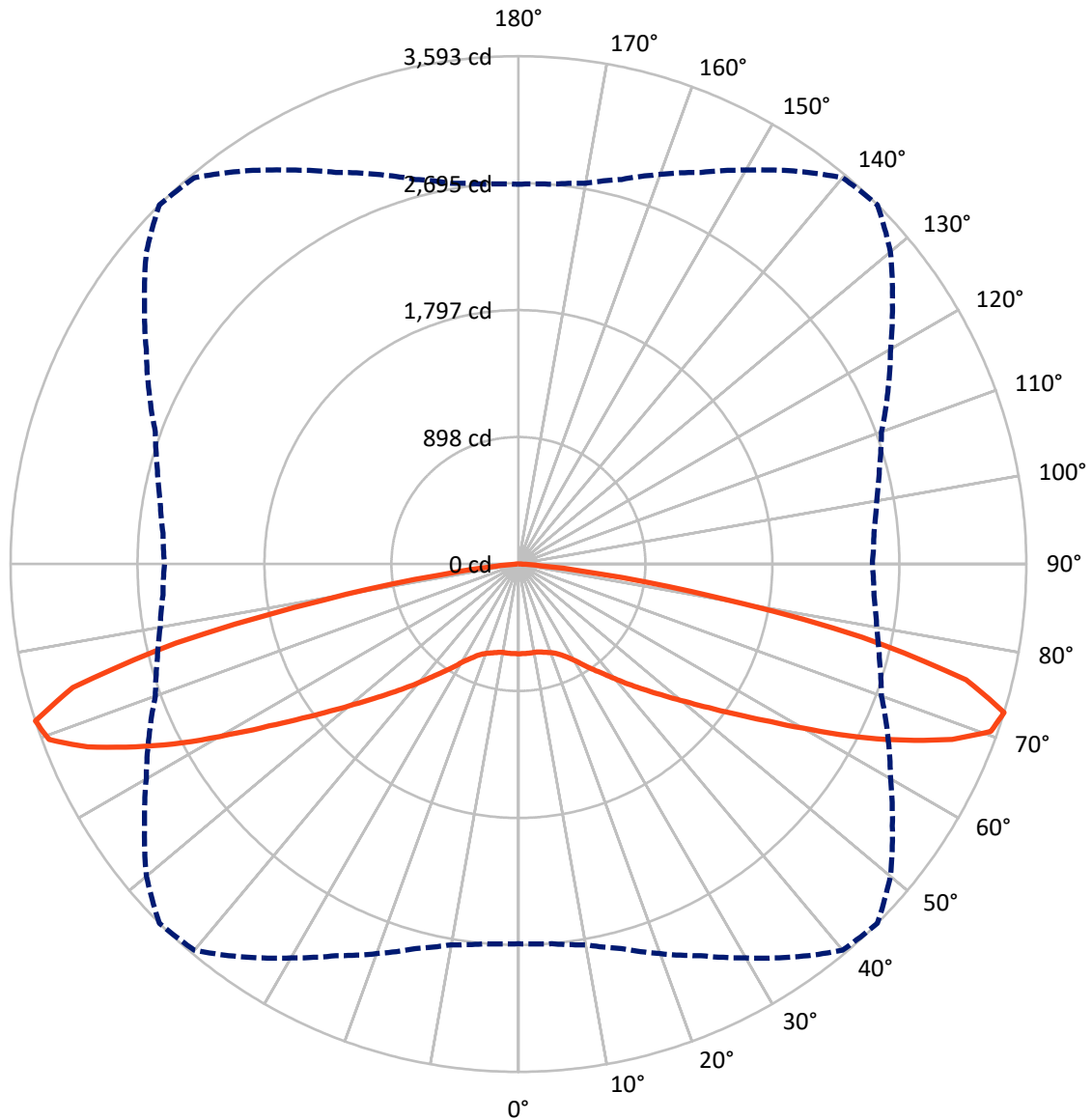


Based on 10 foot mounting height. Maximum calculated value = 6.4 fc  
 Type V - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 4486.2   | 0.0    | 4486.2 |
|                    | % Fixture | 50.0     | 0.0    | 50.0   |
| <b>Street Side</b> | Lumens    | 4486.2   | 0.0    | 4486.2 |
|                    | % Fixture | 50.0     | 0.0    | 50.0   |
| <b>Total</b>       | Lumens    | 8972.5   | 0.0    | 8972.5 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 60.7   | 0.7       |
| 10°-20°   | 184.3  | 2.1       |
| 20°-30°   | 336.7  | 3.8       |
| 30°-40°   | 580.6  | 6.5       |
| 40°-50°   | 992.5  | 11.1      |
| 50°-60°   | 1608.7 | 17.9      |
| 60°-70°   | 2668.8 | 29.7      |
| 70°-80°   | 2350.6 | 26.2      |
| 80°-90°   | 189.5  | 2.1       |
| 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°    | 8972.5 | 100.0     |
| 0°-180°   | 8972.5 | 100.0     |



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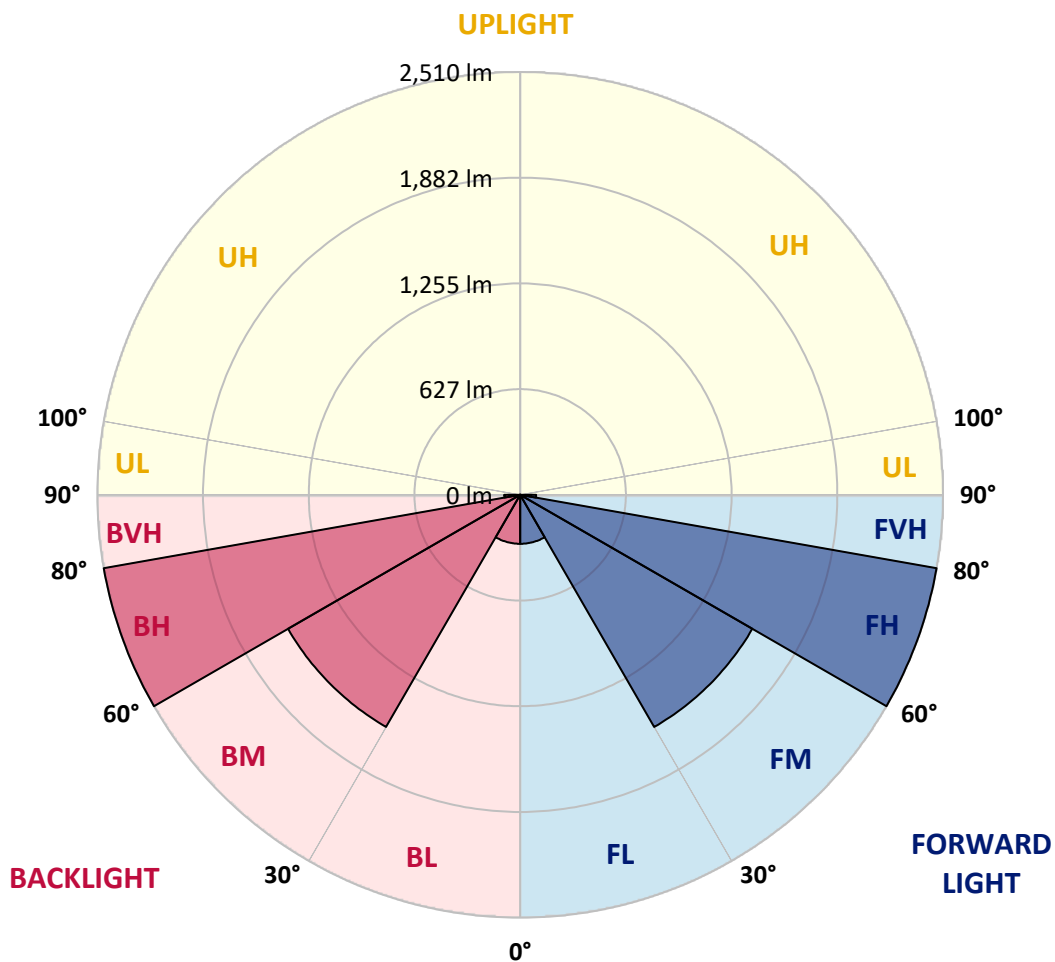
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 290.8  | 3.2       |                         |      |         |
| FM (30°-60°)   | 1590.9 | 17.7      |                         |      |         |
| FH (60°-80°)   | 2509.7 | 28.0      |                         |      | G2/5000 |
| FVH (80°-90°)  | 94.8   | 1.1       |                         |      | G1/100  |
| BL (0°-30°)    | 290.8  | 3.2       | B1/500                  |      |         |
| BM (30°-60°)   | 1590.9 | 17.7      | B2/2500                 |      |         |
| BH (60°-80°)   | 2509.7 | 28.0      | B4/5000                 |      | G2/5000 |
| BVH (80°-90°)  | 94.8   | 1.1       |                         |      | G1/100  |
| UL (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B4-U0-G2**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 10°    | 15°    | 20°    | 25°    | 30°    | 35°    | 40°    | 45°    | 50°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 635.4  | 635.4  | 635.4  | 635.4  | 635.4  | 635.4  | 635.4  | 635.4  | 635.4  | 635.4  | 635.4  |
| 2.5°  | 635.4  | 635.8  | 636.2  | 635.8  | 635.8  | 635.4  | 635.0  | 635.4  | 635.0  | 634.2  | 634.6  |
| 5°    | 637.4  | 638.3  | 638.3  | 637.4  | 637.9  | 637.4  | 636.6  | 637.0  | 636.2  | 635.0  | 635.0  |
| 7.5°  | 639.9  | 640.3  | 640.3  | 639.5  | 639.9  | 639.1  | 638.3  | 637.9  | 637.0  | 635.4  | 634.2  |
| 10°   | 643.6  | 644.0  | 643.6  | 642.8  | 642.8  | 641.6  | 639.5  | 638.7  | 637.0  | 634.6  | 633.3  |
| 12.5° | 647.7  | 648.1  | 647.7  | 646.9  | 646.5  | 644.4  | 642.8  | 641.6  | 640.3  | 638.3  | 636.2  |
| 15°   | 653.5  | 654.3  | 653.5  | 651.9  | 650.6  | 649.0  | 648.1  | 648.6  | 649.0  | 647.3  | 645.3  |
| 17.5° | 664.2  | 664.6  | 663.4  | 659.7  | 658.0  | 656.4  | 656.4  | 657.2  | 658.4  | 657.6  | 655.6  |
| 20°   | 684.0  | 682.7  | 679.8  | 675.3  | 673.3  | 670.4  | 670.0  | 670.4  | 670.4  | 670.0  | 668.3  |
| 22.5° | 708.6  | 707.8  | 704.1  | 698.4  | 695.5  | 693.8  | 691.4  | 689.3  | 688.9  | 687.7  | 686.0  |
| 25°   | 738.3  | 737.9  | 733.3  | 728.4  | 726.3  | 724.3  | 722.2  | 719.3  | 716.9  | 714.0  | 712.3  |
| 27.5° | 776.1  | 774.5  | 767.9  | 765.4  | 762.6  | 761.3  | 758.4  | 755.1  | 753.1  | 749.4  | 747.3  |
| 30°   | 817.7  | 817.7  | 812.3  | 811.5  | 811.5  | 808.6  | 805.4  | 799.6  | 795.9  | 792.2  | 790.9  |
| 32.5° | 859.3  | 859.7  | 854.3  | 856.0  | 857.2  | 859.3  | 860.1  | 858.0  | 855.6  | 855.1  | 852.7  |
| 35°   | 919.3  | 917.7  | 912.3  | 913.6  | 913.2  | 912.8  | 912.8  | 917.3  | 918.1  | 918.9  | 914.0  |
| 37.5° | 993.8  | 993.8  | 988.5  | 988.5  | 986.0  | 983.5  | 980.2  | 983.1  | 987.7  | 988.9  | 985.6  |
| 40°   | 1079.0 | 1081.9 | 1075.3 | 1074.9 | 1075.7 | 1067.9 | 1064.2 | 1068.7 | 1071.6 | 1076.5 | 1072.8 |
| 42.5° | 1179.4 | 1177.4 | 1170.8 | 1170.0 | 1165.4 | 1163.0 | 1159.7 | 1163.4 | 1167.9 | 1171.2 | 1172.4 |
| 45°   | 1275.7 | 1274.1 | 1266.7 | 1266.7 | 1262.1 | 1260.1 | 1261.7 | 1267.9 | 1270.0 | 1274.5 | 1279.0 |
| 47.5° | 1370.8 | 1368.7 | 1363.8 | 1365.8 | 1366.3 | 1370.0 | 1375.3 | 1381.1 | 1386.8 | 1393.0 | 1395.1 |
| 50°   | 1467.9 | 1468.3 | 1463.0 | 1467.9 | 1474.1 | 1484.4 | 1498.8 | 1508.2 | 1520.2 | 1528.0 | 1530.5 |
| 52.5° | 1556.4 | 1558.0 | 1563.8 | 1575.3 | 1587.7 | 1607.8 | 1632.5 | 1655.6 | 1675.3 | 1688.5 | 1687.7 |
| 55°   | 1662.6 | 1665.0 | 1679.0 | 1698.8 | 1718.9 | 1749.4 | 1786.0 | 1826.8 | 1859.7 | 1878.6 | 1866.7 |
| 57.5° | 1798.4 | 1803.7 | 1819.3 | 1846.1 | 1876.1 | 1915.6 | 1965.8 | 2027.2 | 2078.2 | 2103.7 | 2084.4 |
| 60°   | 1984.8 | 1988.1 | 2007.0 | 2036.6 | 2072.8 | 2121.8 | 2188.9 | 2271.2 | 2343.2 | 2377.0 | 2354.7 |
| 62.5° | 2230.5 | 2236.6 | 2251.9 | 2281.9 | 2318.9 | 2374.5 | 2456.4 | 2559.3 | 2649.0 | 2695.9 | 2645.7 |
| 65°   | 2523.9 | 2543.6 | 2556.4 | 2586.8 | 2621.4 | 2680.2 | 2765.8 | 2876.1 | 2972.4 | 3003.3 | 2945.3 |
| 67.5° | 2814.4 | 2831.7 | 2853.9 | 2888.9 | 2923.9 | 2990.1 | 3069.5 | 3176.5 | 3282.3 | 3310.3 | 3220.2 |
| 70°   | 2941.6 | 2951.4 | 2986.0 | 3033.7 | 3100.8 | 3179.0 | 3270.8 | 3390.9 | 3521.8 | 3544.9 | 3430.5 |
| 72.5° | 2686.8 | 2696.7 | 2735.4 | 2816.5 | 2933.3 | 3057.6 | 3217.7 | 3394.2 | 3567.1 | 3593.0 | 3435.4 |
| 75°   | 2032.1 | 2016.1 | 2073.3 | 2180.7 | 2338.3 | 2511.5 | 2735.4 | 2988.5 | 3238.3 | 3270.8 | 3082.7 |
| 77.5° | 1050.2 | 1048.1 | 1091.4 | 1224.7 | 1412.8 | 1609.9 | 1856.4 | 2142.4 | 2386.8 | 2485.6 | 2332.5 |
| 80°   | 295.9  | 299.2  | 319.8  | 386.0  | 495.9  | 638.3  | 830.9  | 1098.8 | 1298.8 | 1400.8 | 1315.2 |
| 82.5° | 116.0  | 125.1  | 132.9  | 145.3  | 159.7  | 180.7  | 241.2  | 358.8  | 481.5  | 575.3  | 471.2  |
| 85°   | 41.6   | 44.4   | 63.0   | 74.5   | 75.7   | 79.8   | 90.9   | 106.2  | 128.0  | 152.7  | 125.5  |
| 87.5° | 15.6   | 17.3   | 20.2   | 33.3   | 32.9   | 30.0   | 36.6   | 38.3   | 28.8   | 26.3   | 32.5   |
| 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):**

|       | 55°    | 60°    | 65°    | 70°    | 75°    | 80°    | 85°    | 90°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 635.4  | 635.4  | 635.4  | 635.4  | 635.4  | 635.4  | 635.4  | 635.4  |
| 2.5°  | 633.7  | 634.2  | 634.2  | 634.6  | 635.0  | 635.0  | 635.8  | 635.8  |
| 5°    | 634.2  | 634.2  | 633.3  | 633.7  | 633.3  | 633.3  | 633.7  | 633.7  |
| 7.5°  | 633.3  | 632.9  | 632.1  | 631.7  | 630.9  | 630.9  | 630.9  | 630.9  |
| 10°   | 632.1  | 631.7  | 630.9  | 630.5  | 630.0  | 630.0  | 630.0  | 630.0  |
| 12.5° | 635.4  | 634.2  | 633.3  | 632.9  | 632.9  | 632.9  | 632.9  | 632.9  |
| 15°   | 644.0  | 641.2  | 639.1  | 639.1  | 639.5  | 640.3  | 640.3  | 641.2  |
| 17.5° | 654.7  | 651.4  | 649.4  | 647.7  | 648.6  | 649.8  | 650.6  | 651.4  |
| 20°   | 667.5  | 665.8  | 663.0  | 661.3  | 661.3  | 663.0  | 663.8  | 664.2  |
| 22.5° | 685.2  | 684.0  | 682.7  | 680.7  | 680.7  | 681.5  | 683.1  | 683.1  |
| 25°   | 711.5  | 710.7  | 709.9  | 708.2  | 707.8  | 707.8  | 708.6  | 709.5  |
| 27.5° | 744.4  | 744.9  | 744.0  | 743.6  | 742.4  | 742.0  | 743.2  | 742.8  |
| 30°   | 788.5  | 790.5  | 792.6  | 790.9  | 788.9  | 787.7  | 786.4  | 784.8  |
| 32.5° | 848.1  | 845.7  | 844.0  | 841.2  | 837.4  | 834.2  | 831.7  | 828.8  |
| 35°   | 904.5  | 900.4  | 898.8  | 901.2  | 900.8  | 898.8  | 895.9  | 893.4  |
| 37.5° | 973.7  | 972.8  | 973.7  | 978.2  | 977.4  | 979.4  | 973.7  | 973.3  |
| 40°   | 1060.9 | 1061.7 | 1067.5 | 1072.8 | 1075.7 | 1078.6 | 1075.3 | 1072.0 |
| 42.5° | 1162.1 | 1161.7 | 1163.8 | 1171.2 | 1176.1 | 1179.4 | 1172.4 | 1171.6 |
| 45°   | 1269.1 | 1266.3 | 1267.9 | 1274.1 | 1279.0 | 1282.7 | 1274.9 | 1274.9 |
| 47.5° | 1386.8 | 1381.9 | 1376.5 | 1383.5 | 1386.4 | 1388.9 | 1382.7 | 1380.7 |
| 50°   | 1518.1 | 1507.8 | 1496.3 | 1499.2 | 1499.2 | 1498.4 | 1490.5 | 1490.1 |
| 52.5° | 1668.7 | 1649.8 | 1628.8 | 1621.0 | 1616.5 | 1611.5 | 1597.9 | 1591.4 |
| 55°   | 1842.0 | 1813.6 | 1780.7 | 1760.5 | 1749.8 | 1736.2 | 1713.6 | 1707.4 |
| 57.5° | 2044.4 | 2000.0 | 1943.2 | 1918.5 | 1894.7 | 1872.4 | 1847.3 | 1840.3 |
| 60°   | 2284.4 | 2218.9 | 2143.6 | 2097.9 | 2072.0 | 2050.6 | 2024.7 | 2023.5 |
| 62.5° | 2551.9 | 2448.6 | 2363.4 | 2322.2 | 2303.3 | 2284.4 | 2259.7 | 2263.0 |
| 65°   | 2823.9 | 2716.1 | 2636.2 | 2602.9 | 2585.2 | 2569.5 | 2544.9 | 2548.6 |
| 67.5° | 3092.2 | 2993.0 | 2905.4 | 2871.2 | 2851.4 | 2831.7 | 2809.5 | 2813.2 |
| 70°   | 3284.8 | 3161.7 | 3063.0 | 2987.2 | 2939.9 | 2886.4 | 2851.9 | 2843.2 |
| 72.5° | 3229.6 | 3039.9 | 2883.1 | 2732.9 | 2644.9 | 2573.3 | 2524.7 | 2503.7 |
| 75°   | 2795.1 | 2535.8 | 2334.2 | 2149.8 | 2046.1 | 1961.7 | 1900.4 | 1862.1 |
| 77.5° | 2075.7 | 1784.4 | 1546.1 | 1333.7 | 1165.8 | 1053.1 | 973.7  | 922.2  |
| 80°   | 1136.2 | 864.2  | 631.7  | 444.0  | 326.3  | 271.2  | 239.5  | 224.3  |
| 82.5° | 353.9  | 228.4  | 168.3  | 145.3  | 135.0  | 129.2  | 119.8  | 104.5  |
| 85°   | 112.8  | 98.8   | 91.8   | 87.7   | 83.5   | 72.8   | 50.2   | 45.7   |
| 87.5° | 43.6   | 44.9   | 44.4   | 42.0   | 42.8   | 30.9   | 24.7   | 21.8   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)