

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: P177353

Luminaire Tested: **VAL-F04-LED-E-U-WQ**

Issue Date: 3/3/2020

### Test Information

Test Method: LM-79-08  
Report Number: P177353  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33699)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: VAL-F04-LED-E-U-WQ  
Description: VALET TUNNEL LED LUMINAIRE  
(4) LIGHTBARS WITH AccuLED OPTICS - WIDE TYPE V SQUARE  
Light Source: (28) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 10210.4 lumens  
Efficiency: N/A  
Efficacy: 99.9 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 1' x H: 0.1')  
IES Classification: Type V - Short - Non-Cutoff  
BUG Rating: B4 - U0 - G3

Input Watts (W): 102.2  
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

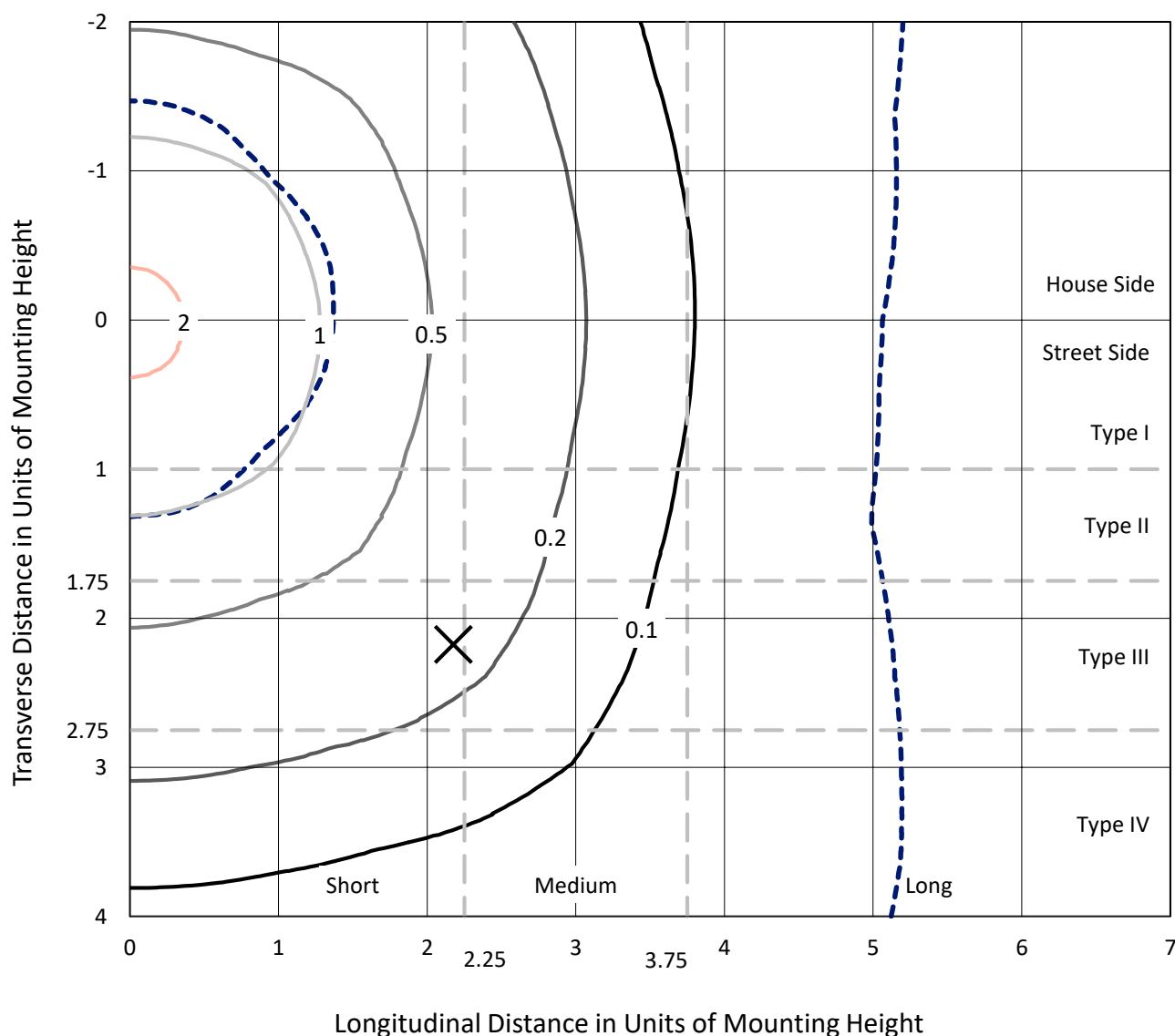


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## Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

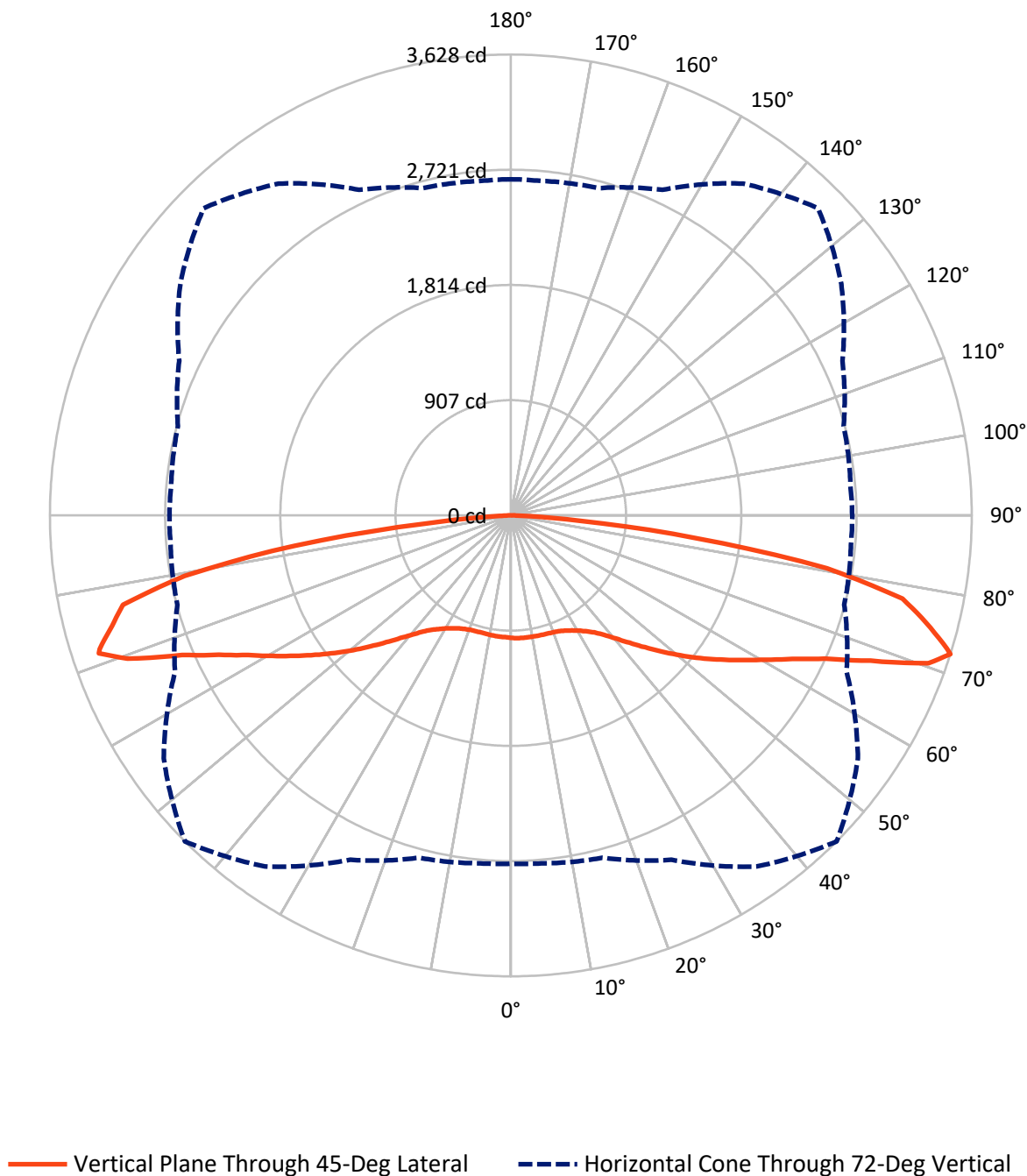


Based on 20 foot mounting height. Maximum calculated value = 2.4 fc  
 Type V - Short - Non-Cutoff

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## Luminous Intensity Polar Plot



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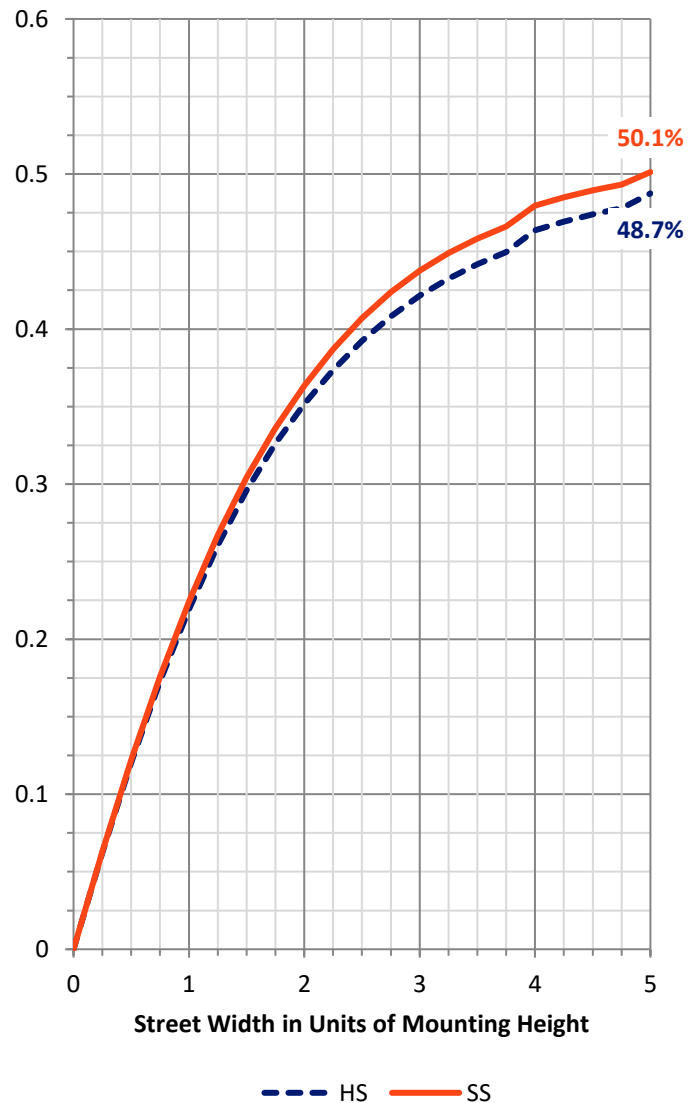
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 5035.2   | 0.0    | 5035.2  |
|                    | % Fixture | 49.3     | 0.0    | 49.3    |
| <b>Street Side</b> | Lumens    | 5175.2   | 0.0    | 5175.2  |
|                    | % Fixture | 50.7     | 0.0    | 50.7    |
| <b>Total</b>       | Lumens    | 10210.4  | 0.0    | 10210.4 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 92.0    | 0.9       |
| 10°-20°   | 273.4   | 2.7       |
| 20°-30°   | 459.2   | 4.5       |
| 30°-40°   | 698.9   | 6.8       |
| 40°-50°   | 1104.9  | 10.8      |
| 50°-60°   | 1687.5  | 16.5      |
| 60°-70°   | 2472.3  | 24.2      |
| 70°-80°   | 2808.7  | 27.5      |
| 80°-90°   | 613.5   | 6.0       |
| 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°    | 10210.4 | 100.0     |
| 0°-180°   | 10210.4 | 100.0     |

**Coefficient of Utilization**



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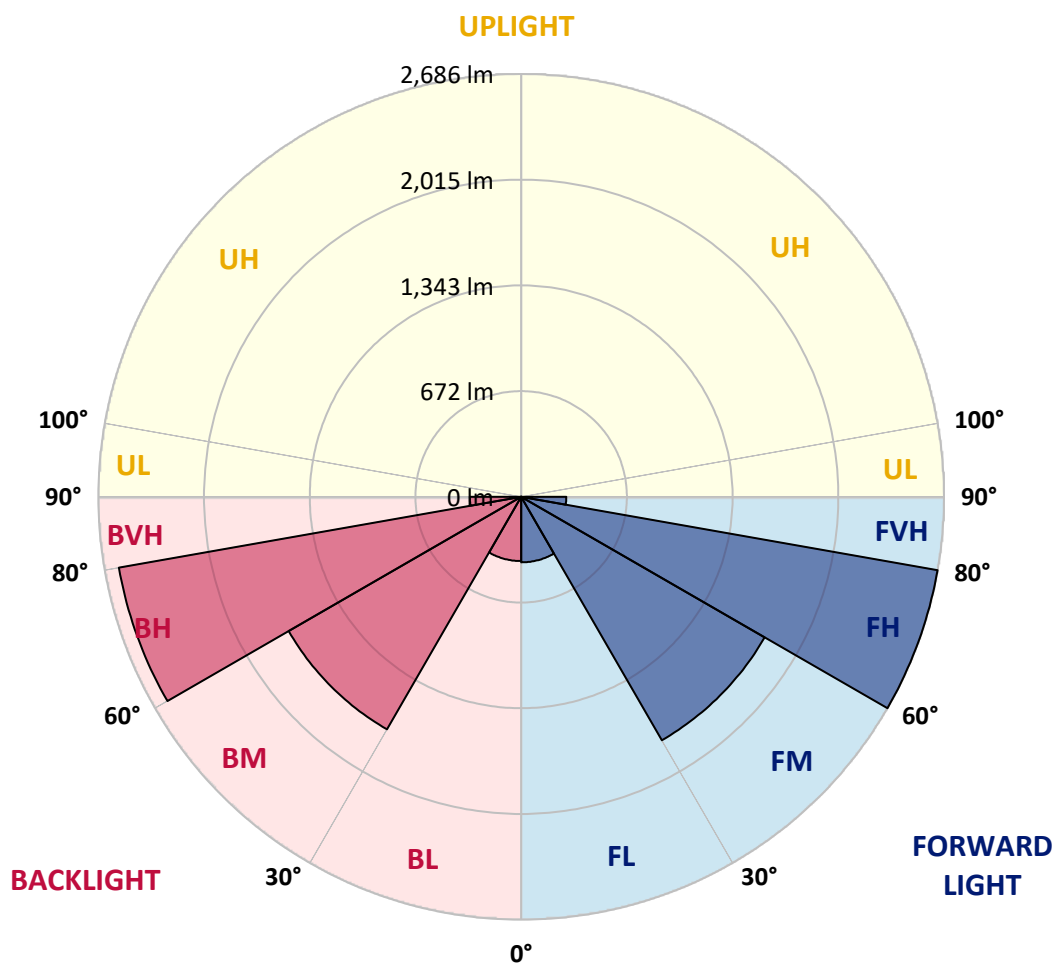
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 416.4  | 4.1       |                         |      |         |
| FM   | (30°-60°)   | 1785.8 | 17.5      |                         |      |         |
| FH   | (60°-80°)   | 2686.1 | 26.3      |                         |      | G2/5000 |
| FVH  | (80°-90°)   | 287.0  | 2.8       |                         |      | G3/500  |
| BL   | (0°-30°)    | 408.2  | 4.0       | B1/500                  |      |         |
| BM   | (30°-60°)   | 1705.5 | 16.7      | B2/2500                 |      |         |
| BH   | (60°-80°)   | 2594.9 | 25.4      | B4/5000                 |      | G2/5000 |
| BVH  | (80°-90°)   | 326.6  | 3.2       |                         |      | G3/500  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B4-U0-G3**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 75°    | 85°    | 90°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 964.2  | 964.2  | 964.2  | 964.2  | 964.2  | 964.2  | 964.2  | 964.2  | 964.2  | 964.2  | 964.2  |
| 2.5°  | 972.1  | 972.1  | 969.5  | 968.2  | 968.2  | 967.5  | 966.9  | 966.9  | 966.2  | 966.9  | 964.9  |
| 5°    | 973.5  | 973.5  | 970.8  | 969.5  | 968.8  | 968.2  | 968.2  | 966.9  | 966.2  | 966.9  | 964.9  |
| 7.5°  | 973.5  | 974.1  | 972.8  | 971.5  | 969.5  | 968.8  | 968.2  | 966.2  | 966.2  | 964.9  | 964.2  |
| 10°   | 976.1  | 978.1  | 975.4  | 973.5  | 970.8  | 969.5  | 967.5  | 966.2  | 965.5  | 964.2  | 964.2  |
| 12.5° | 978.1  | 980.1  | 977.4  | 975.4  | 972.8  | 970.8  | 968.2  | 966.2  | 964.9  | 962.9  | 963.6  |
| 15°   | 980.7  | 982.7  | 980.1  | 977.4  | 974.8  | 972.1  | 969.5  | 966.9  | 964.9  | 963.6  | 963.6  |
| 17.5° | 982.0  | 984.0  | 981.4  | 978.7  | 976.8  | 975.4  | 972.1  | 968.2  | 965.5  | 964.2  | 964.2  |
| 20°   | 984.0  | 986.0  | 984.0  | 982.7  | 980.7  | 980.1  | 976.8  | 972.1  | 968.8  | 966.9  | 966.2  |
| 22.5° | 988.6  | 990.0  | 989.3  | 989.3  | 989.3  | 988.6  | 986.0  | 978.7  | 974.8  | 971.5  | 970.8  |
| 25°   | 999.9  | 999.2  | 1000.5 | 1001.9 | 1002.5 | 1003.8 | 999.9  | 992.0  | 986.7  | 981.4  | 980.7  |
| 27.5° | 1018.4 | 1019.0 | 1019.7 | 1022.3 | 1025.0 | 1025.6 | 1021.7 | 1013.1 | 1005.2 | 997.9  | 997.2  |
| 30°   | 1039.5 | 1039.5 | 1042.1 | 1047.4 | 1050.1 | 1052.0 | 1048.1 | 1037.5 | 1027.6 | 1020.3 | 1019.0 |
| 32.5° | 1069.9 | 1072.5 | 1073.8 | 1079.8 | 1085.1 | 1087.1 | 1081.1 | 1069.9 | 1058.7 | 1049.4 | 1047.4 |
| 35°   | 1113.5 | 1117.4 | 1118.8 | 1124.0 | 1130.0 | 1130.6 | 1125.4 | 1112.8 | 1100.9 | 1088.4 | 1089.0 |
| 37.5° | 1174.9 | 1175.5 | 1178.8 | 1180.2 | 1191.4 | 1191.4 | 1182.8 | 1171.6 | 1159.7 | 1148.5 | 1145.2 |
| 40°   | 1256.8 | 1257.4 | 1258.8 | 1256.8 | 1270.0 | 1274.0 | 1262.7 | 1245.6 | 1234.3 | 1219.8 | 1217.8 |
| 42.5° | 1345.9 | 1352.5 | 1351.9 | 1348.6 | 1361.8 | 1370.4 | 1356.5 | 1336.7 | 1324.8 | 1309.6 | 1307.0 |
| 45°   | 1456.2 | 1454.9 | 1449.0 | 1456.2 | 1471.4 | 1480.7 | 1463.5 | 1438.4 | 1425.8 | 1406.7 | 1406.0 |
| 47.5° | 1563.2 | 1561.9 | 1552.6 | 1557.9 | 1586.3 | 1601.5 | 1576.4 | 1548.0 | 1531.5 | 1520.3 | 1511.7 |
| 50°   | 1664.9 | 1674.2 | 1662.3 | 1673.5 | 1710.5 | 1731.0 | 1707.8 | 1662.9 | 1643.1 | 1626.0 | 1621.3 |
| 52.5° | 1784.5 | 1789.7 | 1779.2 | 1797.0 | 1837.9 | 1867.7 | 1836.0 | 1777.9 | 1758.0 | 1738.9 | 1732.9 |
| 55°   | 1906.6 | 1904.0 | 1898.7 | 1918.5 | 1968.7 | 2003.7 | 1969.4 | 1899.4 | 1870.3 | 1855.8 | 1855.8 |
| 57.5° | 2026.8 | 2028.1 | 2015.6 | 2039.4 | 2102.8 | 2149.0 | 2106.1 | 2020.2 | 1984.6 | 1968.1 | 1973.3 |
| 60°   | 2155.6 | 2155.6 | 2136.5 | 2158.3 | 2246.7 | 2305.5 | 2240.8 | 2142.4 | 2103.4 | 2093.5 | 2094.2 |
| 62.5° | 2300.2 | 2295.0 | 2273.8 | 2300.9 | 2408.6 | 2486.5 | 2405.2 | 2282.4 | 2231.6 | 2231.6 | 2236.2 |
| 65°   | 2467.3 | 2458.7 | 2451.5 | 2482.5 | 2621.9 | 2717.0 | 2610.0 | 2454.8 | 2409.9 | 2404.6 | 2413.2 |
| 67.5° | 2707.7 | 2717.0 | 2698.5 | 2739.4 | 2929.6 | 3053.8 | 2891.3 | 2691.2 | 2643.7 | 2639.0 | 2660.2 |
| 70°   | 2924.3 | 2915.1 | 2938.9 | 3054.4 | 3313.3 | 3486.4 | 3260.5 | 2952.7 | 2816.7 | 2789.0 | 2797.5 |
| 72°   | 2742.1 | 2749.3 | 2789.6 | 2990.4 | 3374.1 | 3628.3 | 3335.1 | 2916.4 | 2717.0 | 2687.9 | 2687.2 |
| 72.5° | 2699.8 | 2705.1 | 2739.4 | 2932.3 | 3330.5 | 3590.7 | 3297.5 | 2870.2 | 2682.0 | 2656.9 | 2655.5 |
| 75°   | 2477.9 | 2488.5 | 2542.6 | 2730.2 | 3134.4 | 3379.4 | 3104.0 | 2704.4 | 2497.7 | 2450.2 | 2460.1 |
| 77.5° | 2110.7 | 2132.5 | 2187.3 | 2403.3 | 2877.4 | 3151.5 | 2857.0 | 2397.3 | 2165.5 | 2130.5 | 2119.3 |
| 80°   | 1548.7 | 1519.6 | 1618.7 | 1810.2 | 2147.7 | 2524.8 | 2178.7 | 1806.2 | 1565.9 | 1501.8 | 1517.6 |
| 82.5° | 527.0  | 539.6  | 696.1  | 929.2  | 1178.8 | 1474.1 | 1251.5 | 904.8  | 666.4  | 585.8  | 550.1  |
| 85°   | 64.1   | 69.3   | 108.3  | 197.5  | 371.2  | 536.3  | 379.1  | 200.8  | 124.8  | 76.6   | 67.4   |
| 87.5° | 31.0   | 33.0   | 46.2   | 49.5   | 61.4   | 52.2   | 62.1   | 39.6   | 37.6   | 23.1   | 19.2   |
| 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):**

|       | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 964.2  | 964.2  | 964.2  | 964.2  | 964.2  | 964.2  | 964.2  | 964.2  | 964.2  | 964.2  |
| 2.5°  | 964.2  | 962.9  | 962.2  | 960.9  | 959.6  | 959.6  | 959.6  | 959.6  | 959.6  | 960.3  |
| 5°    | 964.2  | 962.9  | 962.2  | 960.3  | 958.9  | 958.9  | 958.3  | 958.9  | 958.3  | 958.9  |
| 7.5°  | 964.2  | 962.2  | 960.3  | 958.3  | 956.9  | 957.6  | 956.3  | 955.6  | 956.3  | 956.3  |
| 10°   | 963.6  | 960.3  | 957.6  | 955.6  | 955.0  | 954.3  | 954.3  | 953.6  | 955.0  | 954.3  |
| 12.5° | 962.9  | 958.9  | 955.6  | 953.0  | 952.3  | 952.3  | 952.3  | 952.3  | 954.3  | 953.6  |
| 15°   | 962.2  | 958.3  | 955.0  | 951.7  | 951.0  | 952.3  | 952.3  | 953.6  | 955.0  | 955.0  |
| 17.5° | 962.9  | 958.3  | 954.3  | 951.7  | 951.7  | 953.0  | 953.6  | 955.6  | 957.6  | 956.3  |
| 20°   | 965.5  | 960.3  | 956.9  | 954.3  | 955.6  | 956.9  | 956.9  | 958.3  | 960.3  | 958.9  |
| 22.5° | 969.5  | 965.5  | 962.9  | 962.2  | 964.2  | 964.9  | 964.2  | 963.6  | 964.2  | 962.9  |
| 25°   | 978.7  | 974.8  | 972.8  | 975.4  | 977.4  | 976.8  | 974.1  | 971.5  | 970.2  | 969.5  |
| 27.5° | 995.9  | 992.6  | 992.0  | 995.3  | 997.2  | 993.9  | 989.3  | 985.3  | 984.0  | 982.0  |
| 30°   | 1017.0 | 1015.1 | 1017.0 | 1020.3 | 1021.0 | 1015.7 | 1009.1 | 1003.2 | 1001.2 | 1001.2 |
| 32.5° | 1044.8 | 1042.8 | 1047.4 | 1052.7 | 1054.0 | 1046.8 | 1036.2 | 1028.3 | 1023.0 | 1022.3 |
| 35°   | 1085.1 | 1083.7 | 1085.1 | 1091.7 | 1091.0 | 1083.7 | 1071.9 | 1062.6 | 1057.3 | 1057.3 |
| 37.5° | 1141.2 | 1139.9 | 1136.6 | 1143.2 | 1142.5 | 1132.6 | 1120.1 | 1112.1 | 1106.2 | 1106.9 |
| 40°   | 1214.5 | 1212.5 | 1208.6 | 1209.9 | 1215.2 | 1202.0 | 1186.1 | 1175.5 | 1174.9 | 1174.9 |
| 42.5° | 1302.3 | 1293.1 | 1294.4 | 1302.3 | 1298.4 | 1282.5 | 1268.0 | 1258.8 | 1258.8 | 1258.1 |
| 45°   | 1398.1 | 1394.8 | 1393.5 | 1396.1 | 1399.4 | 1386.9 | 1362.4 | 1351.9 | 1351.2 | 1351.2 |
| 47.5° | 1509.1 | 1492.5 | 1495.9 | 1502.5 | 1510.4 | 1494.5 | 1463.5 | 1450.9 | 1449.0 | 1449.6 |
| 50°   | 1617.4 | 1600.2 | 1603.5 | 1617.4 | 1632.6 | 1607.5 | 1569.2 | 1554.0 | 1551.3 | 1552.6 |
| 52.5° | 1729.6 | 1715.1 | 1715.1 | 1738.2 | 1758.0 | 1727.0 | 1678.8 | 1660.3 | 1660.3 | 1659.6 |
| 55°   | 1848.5 | 1828.7 | 1836.6 | 1866.3 | 1890.1 | 1852.5 | 1793.0 | 1778.5 | 1767.3 | 1771.9 |
| 57.5° | 1966.7 | 1946.9 | 1953.5 | 1999.1 | 2028.8 | 1983.9 | 1909.3 | 1878.9 | 1872.3 | 1871.0 |
| 60°   | 2087.6 | 2065.1 | 2073.1 | 2144.4 | 2179.4 | 2119.9 | 2010.3 | 1973.3 | 1967.4 | 1966.7 |
| 62.5° | 2221.7 | 2205.8 | 2217.7 | 2300.2 | 2340.5 | 2256.0 | 2118.0 | 2075.7 | 2077.7 | 2073.1 |
| 65°   | 2388.7 | 2376.2 | 2396.7 | 2497.7 | 2547.2 | 2423.1 | 2257.3 | 2208.4 | 2214.4 | 2213.7 |
| 67.5° | 2627.8 | 2612.6 | 2625.2 | 2766.5 | 2810.7 | 2651.6 | 2450.8 | 2402.6 | 2411.9 | 2427.0 |
| 70°   | 2777.7 | 2789.0 | 2901.9 | 3100.0 | 3221.5 | 3059.1 | 2793.6 | 2703.1 | 2707.7 | 2709.7 |
| 72°   | 2683.9 | 2712.3 | 2880.1 | 3176.0 | 3419.7 | 3188.5 | 2827.3 | 2666.8 | 2643.0 | 2645.6 |
| 72.5° | 2658.9 | 2680.6 | 2849.1 | 3144.3 | 3403.1 | 3160.8 | 2790.9 | 2639.0 | 2600.7 | 2602.1 |
| 75°   | 2470.0 | 2511.6 | 2673.4 | 2980.5 | 3257.9 | 3021.4 | 2650.9 | 2489.1 | 2459.4 | 2459.4 |
| 77.5° | 2144.4 | 2202.5 | 2368.3 | 2799.5 | 3132.4 | 2874.8 | 2473.3 | 2273.2 | 2242.8 | 2231.6 |
| 80°   | 1577.7 | 1662.9 | 1826.1 | 2252.0 | 2611.3 | 2376.2 | 2036.1 | 1830.0 | 1782.5 | 1765.3 |
| 82.5° | 621.5  | 694.8  | 968.8  | 1356.5 | 1721.1 | 1464.8 | 1107.5 | 923.9  | 776.7  | 760.8  |
| 85°   | 77.3   | 124.8  | 244.4  | 447.1  | 683.5  | 486.1  | 289.9  | 151.9  | 81.9   | 68.7   |
| 87.5° | 22.5   | 42.3   | 46.2   | 75.3   | 89.2   | 81.9   | 51.5   | 46.2   | 25.8   | 22.5   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)