

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: INVUE

Report Number: P472169

Luminaire Tested: **CCW-VA-5-750-U-T4W**

Issue Date: 01/27/2021

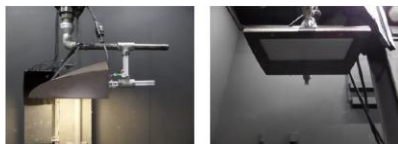
Test Information

Test Method: LM-79-08
Report Number: P472169
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: CCW-VA-5-750-U-T4W
Description: INVUE WALL PACK Wave Stream LUMINAIRE WITH T4W DISTRIBUTION LENS
Light Source: 5000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7960.7 lumens
Efficiency: N/A
Efficacy: 107.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 0.54' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G3

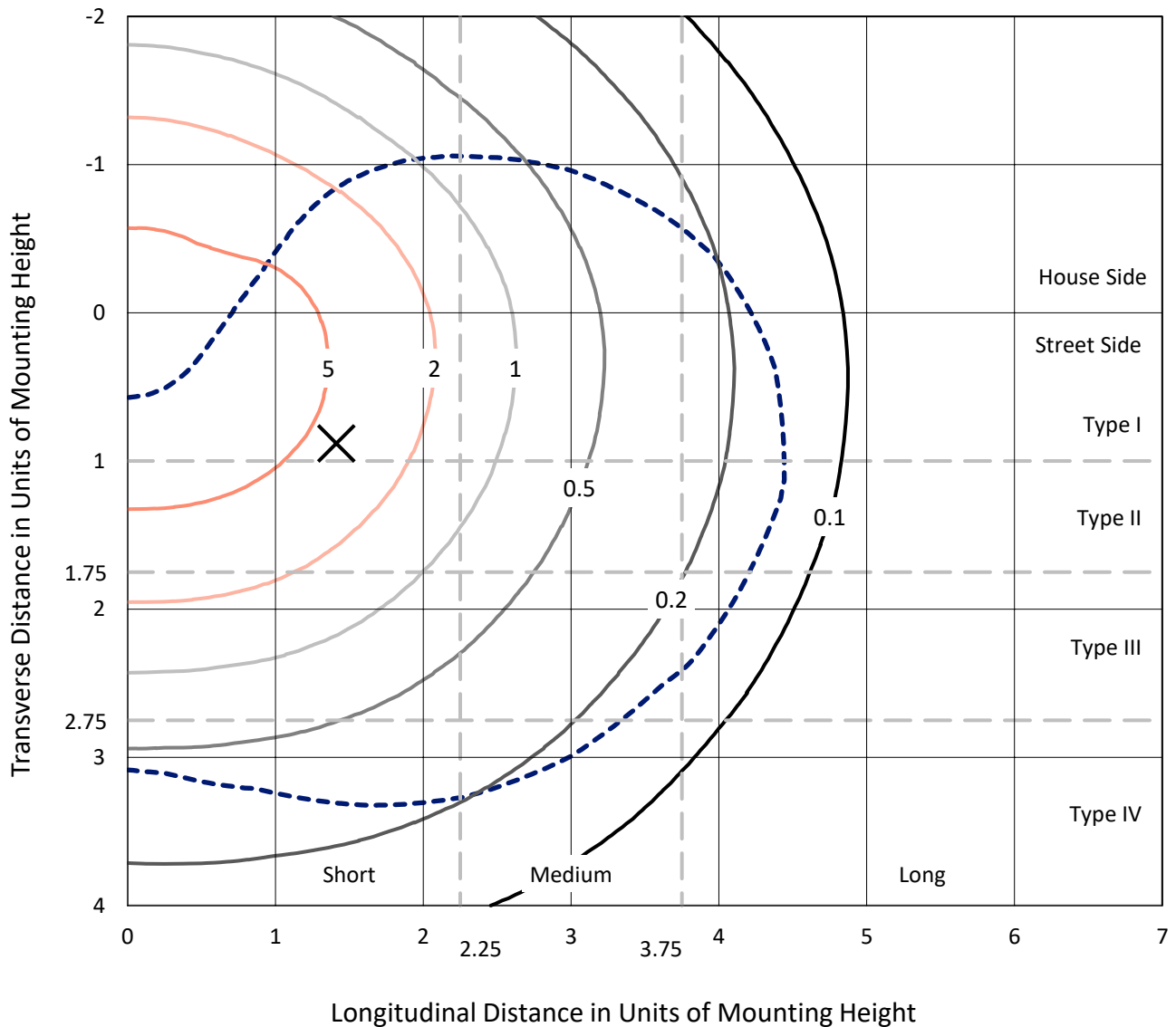
Input Watts (W): 74.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

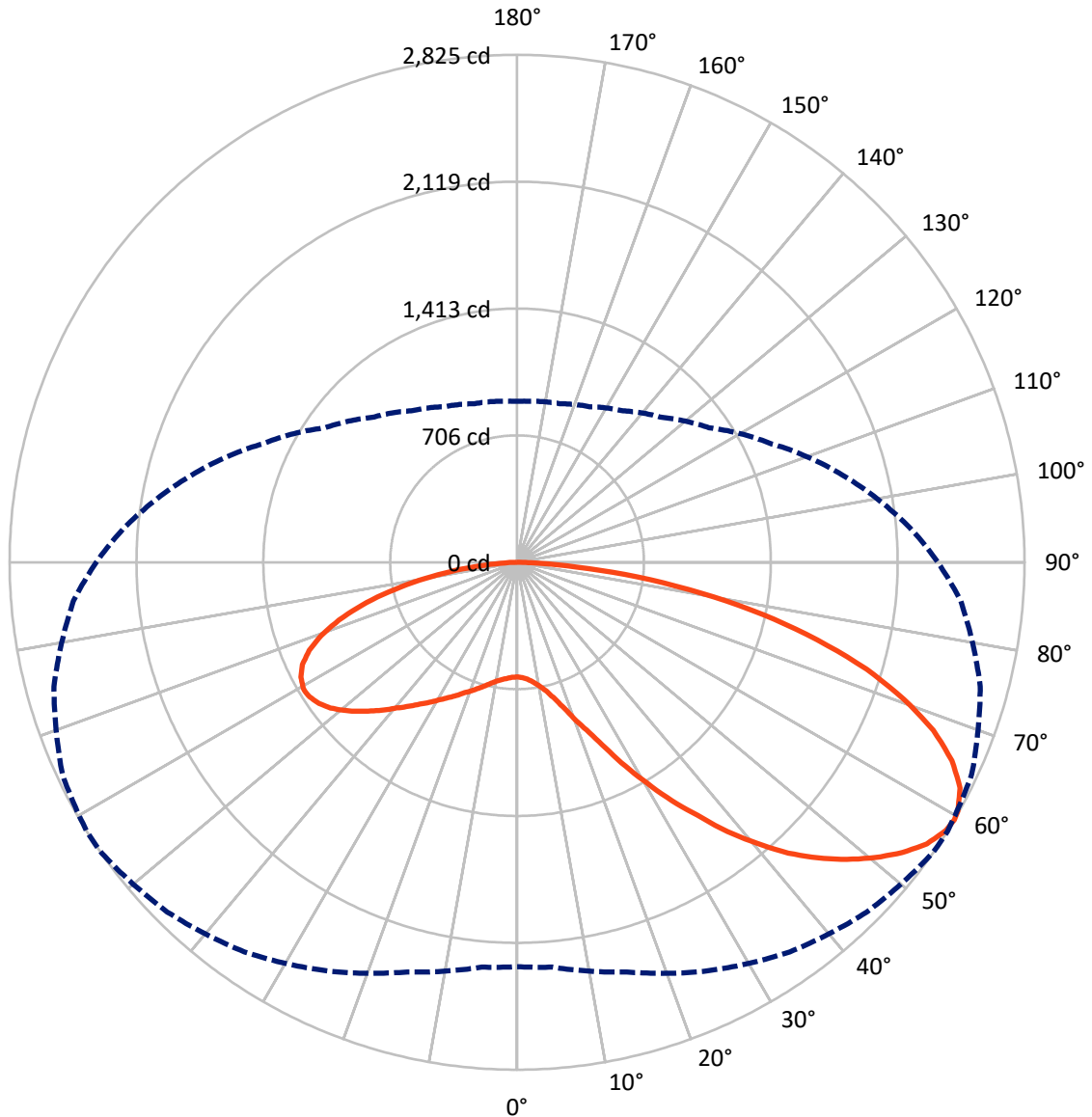
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.7 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 59-Deg Vertical

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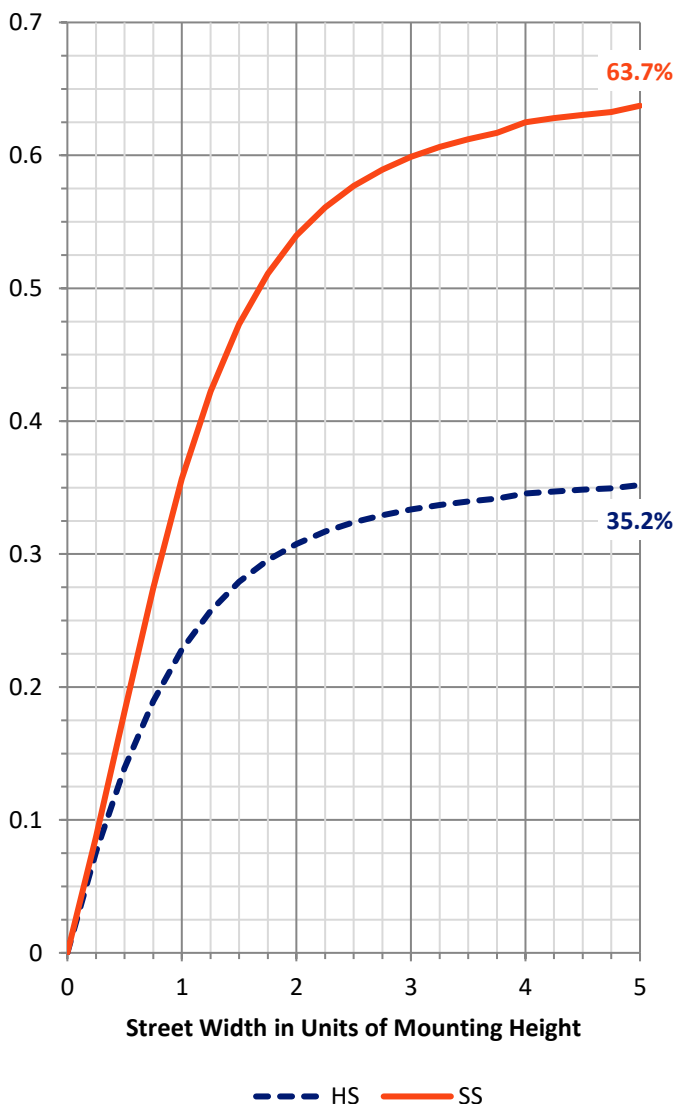
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 2839.1 | 0.0 | 2839.1 |
| | % Fixture | 35.7 | 0.0 | 35.7 |
| Street Side | Lumens | 5121.6 | 0.0 | 5121.6 |
| | % Fixture | 64.3 | 0.0 | 64.3 |
| Total | Lumens | 7960.7 | 0.0 | 7960.7 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 63.3 | 0.8 |
| 10°-20° | 215.9 | 2.7 |
| 20°-30° | 455.8 | 5.7 |
| 30°-40° | 838.8 | 10.5 |
| 40°-50° | 1307.4 | 16.4 |
| 50°-60° | 1717.9 | 21.6 |
| 60°-70° | 1800.1 | 22.6 |
| 70°-80° | 1248.1 | 15.7 |
| 80°-90° | 313.4 | 3.9 |
| 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° | 7960.7 | 100.0 |
| 0°-180° | 7960.7 | 100.0 |



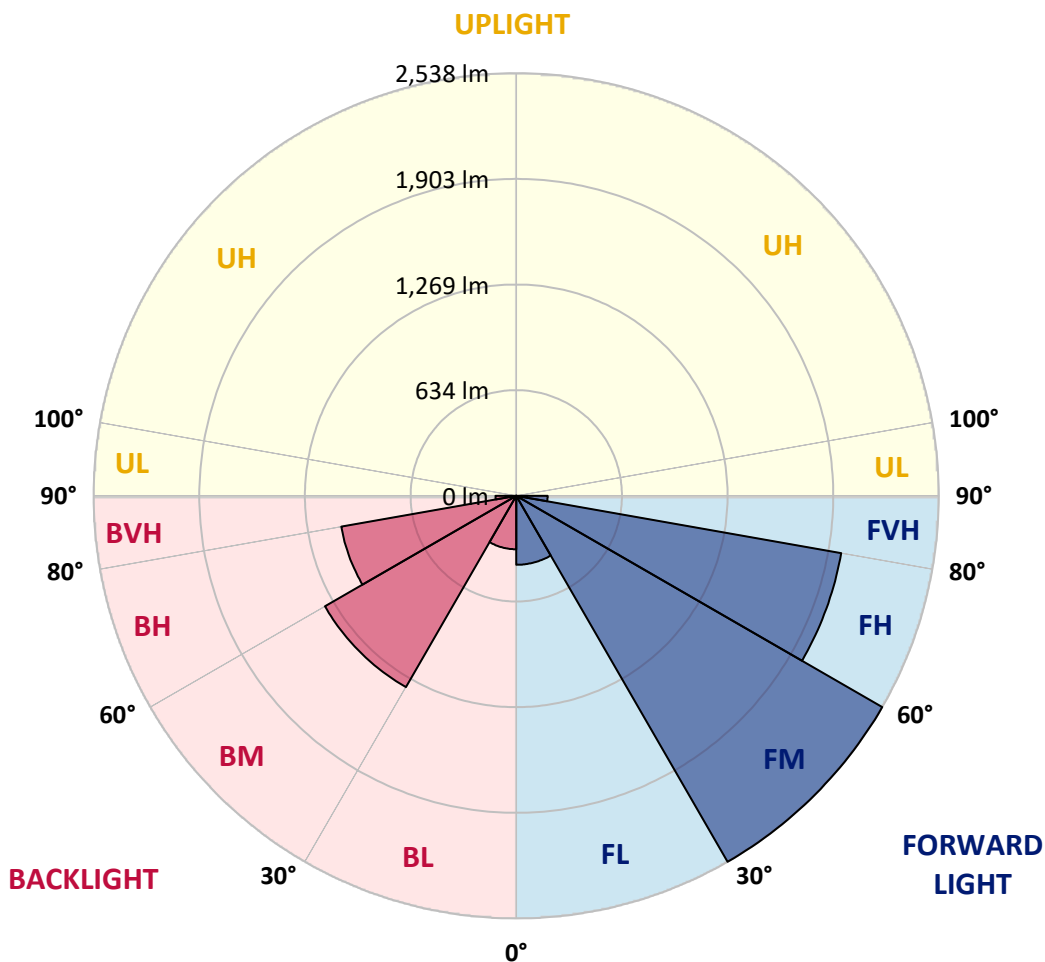
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 414.1 | 5.2 | | | |
| FM (30°-60°) | 2537.7 | 31.9 | | | |
| FH (60°-80°) | 1981.4 | 24.9 | | | G2/5000 |
| FVH (80°-90°) | 188.3 | 2.4 | | | G2/225 |
| BL (0°-30°) | 320.9 | 4.0 | B1/500 | | |
| BM (30°-60°) | 1326.4 | 16.7 | B2/2500 | | |
| BH (60°-80°) | 1066.7 | 13.4 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 125.1 | 1.6 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 58° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 638.2 | 638.2 | 638.2 | 638.2 | 638.2 | 638.2 | 638.2 | 638.2 | 638.2 | 638.2 | 638.2 |
| 2.5° | 647.1 | 647.1 | 647.1 | 645.3 | 645.3 | 645.3 | 643.5 | 643.5 | 643.5 | 641.8 | 640.0 |
| 5° | 661.5 | 661.5 | 659.7 | 661.5 | 659.7 | 657.9 | 656.1 | 656.1 | 656.1 | 654.3 | 652.5 |
| 7.5° | 681.2 | 683.0 | 681.2 | 683.0 | 681.2 | 679.4 | 675.8 | 675.8 | 674.0 | 670.4 | 666.9 |
| 10° | 711.7 | 711.7 | 711.7 | 709.9 | 708.1 | 706.3 | 704.5 | 702.7 | 700.9 | 695.5 | 690.2 |
| 12.5° | 749.3 | 749.3 | 749.3 | 745.7 | 745.7 | 742.1 | 740.3 | 738.6 | 735.0 | 727.8 | 720.6 |
| 15° | 795.9 | 794.1 | 799.5 | 799.5 | 797.7 | 797.7 | 792.3 | 788.8 | 785.2 | 774.4 | 758.3 |
| 17.5° | 858.7 | 856.9 | 862.2 | 865.8 | 865.8 | 867.6 | 858.7 | 855.1 | 842.5 | 828.2 | 806.7 |
| 20° | 942.9 | 939.3 | 944.7 | 948.3 | 944.7 | 948.3 | 939.3 | 941.1 | 923.2 | 898.1 | 864.0 |
| 22.5° | 1034.3 | 1034.3 | 1039.7 | 1039.7 | 1041.5 | 1045.1 | 1034.3 | 1029.0 | 1014.6 | 978.8 | 935.7 |
| 25° | 1147.3 | 1156.2 | 1156.2 | 1156.2 | 1163.4 | 1165.2 | 1154.4 | 1145.5 | 1125.8 | 1077.4 | 1018.2 |
| 27.5° | 1285.3 | 1283.5 | 1281.7 | 1292.5 | 1292.5 | 1296.1 | 1288.9 | 1285.3 | 1262.0 | 1202.8 | 1113.2 |
| 30° | 1432.3 | 1421.5 | 1428.7 | 1432.3 | 1439.5 | 1444.8 | 1437.7 | 1426.9 | 1398.2 | 1333.7 | 1222.6 |
| 32.5° | 1566.7 | 1573.9 | 1584.7 | 1588.3 | 1599.0 | 1600.8 | 1582.9 | 1582.9 | 1554.2 | 1471.7 | 1357.0 |
| 35° | 1719.1 | 1719.1 | 1747.8 | 1760.3 | 1760.3 | 1771.1 | 1744.2 | 1729.9 | 1710.2 | 1624.1 | 1478.9 |
| 37.5° | 1851.8 | 1855.4 | 1878.7 | 1907.3 | 1910.9 | 1927.1 | 1907.3 | 1902.0 | 1866.1 | 1778.3 | 1616.9 |
| 40° | 1975.5 | 1979.0 | 2007.7 | 2041.8 | 2061.5 | 2086.6 | 2066.9 | 2057.9 | 2020.3 | 1919.9 | 1755.0 |
| 42.5° | 2072.3 | 2079.4 | 2115.3 | 2165.5 | 2197.7 | 2228.2 | 2219.3 | 2213.9 | 2161.9 | 2056.1 | 1882.2 |
| 45° | 2145.8 | 2158.3 | 2208.5 | 2267.7 | 2312.5 | 2357.3 | 2359.1 | 2348.3 | 2299.9 | 2181.6 | 2005.9 |
| 47.5° | 2204.9 | 2219.3 | 2274.8 | 2350.1 | 2418.2 | 2473.8 | 2484.6 | 2472.0 | 2427.2 | 2303.5 | 2117.1 |
| 50° | 2253.3 | 2260.5 | 2323.2 | 2420.0 | 2504.3 | 2574.2 | 2595.7 | 2584.9 | 2545.5 | 2405.7 | 2213.9 |
| 52.5° | 2278.4 | 2289.2 | 2360.9 | 2472.0 | 2574.2 | 2658.4 | 2690.7 | 2685.3 | 2638.7 | 2498.9 | 2299.9 |
| 55° | 2291.0 | 2301.7 | 2386.0 | 2513.2 | 2628.0 | 2726.6 | 2766.0 | 2767.8 | 2723.0 | 2583.2 | 2380.6 |
| 57.5° | 2276.6 | 2291.0 | 2382.4 | 2524.0 | 2651.3 | 2757.0 | 2818.0 | 2816.2 | 2780.3 | 2647.7 | 2448.7 |
| 59° | 2251.5 | 2262.3 | 2360.9 | 2509.7 | 2647.7 | 2753.5 | 2823.4 | 2825.2 | 2792.9 | 2669.2 | 2479.2 |
| 60° | 2222.8 | 2235.4 | 2335.8 | 2491.7 | 2633.4 | 2740.9 | 2814.4 | 2818.0 | 2791.1 | 2674.6 | 2491.7 |
| 62.5° | 2124.2 | 2140.4 | 2251.5 | 2418.2 | 2572.4 | 2674.6 | 2762.4 | 2767.8 | 2753.5 | 2660.2 | 2500.7 |
| 65° | 1986.2 | 2000.6 | 2120.7 | 2298.1 | 2459.5 | 2565.2 | 2647.7 | 2660.2 | 2658.4 | 2595.7 | 2464.8 |
| 67.5° | 1817.7 | 1819.5 | 1932.4 | 2126.0 | 2294.5 | 2398.5 | 2477.4 | 2498.9 | 2515.0 | 2473.8 | 2359.1 |
| 70° | 1615.1 | 1613.4 | 1722.7 | 1914.5 | 2083.0 | 2192.4 | 2271.2 | 2285.6 | 2326.8 | 2294.5 | 2201.3 |
| 72.5° | 1364.2 | 1385.7 | 1487.9 | 1649.2 | 1815.9 | 1937.8 | 2007.7 | 2034.6 | 2057.9 | 2065.1 | 1988.0 |
| 75° | 1127.6 | 1150.9 | 1231.5 | 1382.1 | 1525.5 | 1638.4 | 1713.7 | 1726.3 | 1769.3 | 1780.1 | 1708.4 |
| 77.5° | 901.7 | 903.5 | 962.6 | 1082.7 | 1213.6 | 1306.8 | 1367.8 | 1400.0 | 1423.3 | 1444.8 | 1369.6 |
| 80° | 632.8 | 641.8 | 683.0 | 769.0 | 871.2 | 969.8 | 1020.0 | 1041.5 | 1057.6 | 1072.0 | 1046.9 |
| 82.5° | 396.2 | 399.8 | 426.6 | 478.6 | 548.5 | 604.1 | 656.1 | 674.0 | 677.6 | 709.9 | 706.3 |
| 85° | 188.2 | 190.0 | 207.9 | 233.0 | 263.5 | 308.3 | 328.0 | 328.0 | 353.1 | 376.4 | 376.4 |
| 87.5° | 25.1 | 25.1 | 30.5 | 34.1 | 43.0 | 55.6 | 77.1 | 78.9 | 93.2 | 104.0 | 112.9 |
| 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° | 638.2 | 638.2 | 638.2 | 638.2 | 638.2 | 638.2 | 638.2 | 638.2 | 638.2 | 638.2 | 638.2 |
| 2.5° | 640.0 | 640.0 | 640.0 | 640.0 | 640.0 | 638.2 | 640.0 | 640.0 | 640.0 | 640.0 | 640.0 |
| 5° | 652.5 | 650.7 | 648.9 | 647.1 | 647.1 | 645.3 | 645.3 | 645.3 | 645.3 | 645.3 | 645.3 |
| 7.5° | 665.1 | 663.3 | 661.5 | 657.9 | 656.1 | 654.3 | 654.3 | 652.5 | 652.5 | 652.5 | 652.5 |
| 10° | 686.6 | 684.8 | 677.6 | 672.2 | 668.6 | 666.9 | 665.1 | 663.3 | 661.5 | 661.5 | 661.5 |
| 12.5° | 715.3 | 711.7 | 699.1 | 691.9 | 686.6 | 683.0 | 679.4 | 677.6 | 675.8 | 674.0 | 674.0 |
| 15° | 751.1 | 742.1 | 726.0 | 715.3 | 708.1 | 702.7 | 697.3 | 693.7 | 691.9 | 690.2 | 690.2 |
| 17.5° | 794.1 | 783.4 | 761.9 | 742.1 | 729.6 | 720.6 | 713.5 | 708.1 | 706.3 | 706.3 | 706.3 |
| 20° | 847.9 | 830.0 | 799.5 | 772.6 | 752.9 | 740.3 | 729.6 | 724.2 | 722.4 | 720.6 | 718.8 |
| 22.5° | 910.6 | 887.3 | 842.5 | 801.3 | 776.2 | 758.3 | 745.7 | 738.6 | 733.2 | 731.4 | 731.4 |
| 25° | 982.4 | 948.3 | 889.1 | 838.9 | 804.9 | 779.8 | 763.7 | 754.7 | 745.7 | 742.1 | 742.1 |
| 27.5° | 1068.4 | 1023.6 | 944.7 | 878.4 | 831.8 | 801.3 | 783.4 | 770.8 | 761.9 | 754.7 | 751.1 |
| 30° | 1161.6 | 1111.4 | 1005.7 | 921.4 | 862.2 | 828.2 | 806.7 | 792.3 | 779.8 | 767.2 | 765.4 |
| 32.5° | 1279.9 | 1208.2 | 1079.2 | 969.8 | 898.1 | 855.1 | 830.0 | 812.1 | 795.9 | 783.4 | 779.8 |
| 35° | 1400.0 | 1314.0 | 1156.2 | 1020.0 | 932.2 | 880.2 | 849.7 | 830.0 | 813.8 | 799.5 | 797.7 |
| 37.5° | 1523.7 | 1432.3 | 1240.5 | 1079.2 | 971.6 | 908.9 | 871.2 | 849.7 | 830.0 | 815.6 | 813.8 |
| 40° | 1652.8 | 1545.2 | 1326.5 | 1140.1 | 1012.8 | 937.5 | 894.5 | 867.6 | 846.1 | 833.6 | 831.8 |
| 42.5° | 1774.7 | 1658.2 | 1419.8 | 1211.8 | 1061.2 | 968.0 | 917.8 | 889.1 | 862.2 | 849.7 | 847.9 |
| 45° | 1891.2 | 1765.7 | 1513.0 | 1278.1 | 1109.6 | 1000.3 | 941.1 | 907.1 | 878.4 | 865.8 | 864.0 |
| 47.5° | 1997.0 | 1871.5 | 1599.0 | 1349.8 | 1159.8 | 1036.1 | 966.2 | 925.0 | 892.7 | 880.2 | 880.2 |
| 50° | 2092.0 | 1961.1 | 1683.3 | 1416.2 | 1206.4 | 1072.0 | 987.7 | 941.1 | 908.9 | 896.3 | 894.5 |
| 52.5° | 2181.6 | 2040.0 | 1756.8 | 1473.5 | 1251.2 | 1104.3 | 1009.2 | 953.7 | 919.6 | 905.3 | 903.5 |
| 55° | 2253.3 | 2111.7 | 1817.7 | 1520.1 | 1281.7 | 1125.8 | 1023.6 | 960.8 | 923.2 | 910.6 | 908.9 |
| 57.5° | 2316.1 | 2170.9 | 1860.7 | 1552.4 | 1301.4 | 1138.3 | 1030.8 | 960.8 | 921.4 | 907.1 | 905.3 |
| 59° | 2342.9 | 2196.0 | 1875.1 | 1561.4 | 1305.0 | 1140.1 | 1029.0 | 955.5 | 914.2 | 899.9 | 896.3 |
| 60° | 2357.3 | 2206.7 | 1880.5 | 1563.2 | 1303.2 | 1136.5 | 1027.2 | 950.1 | 907.1 | 890.9 | 890.9 |
| 62.5° | 2371.6 | 2215.7 | 1873.3 | 1548.8 | 1283.5 | 1116.8 | 1009.2 | 928.6 | 880.2 | 862.2 | 862.2 |
| 65° | 2341.2 | 2183.4 | 1832.1 | 1509.4 | 1244.1 | 1082.7 | 975.2 | 892.7 | 838.9 | 821.0 | 821.0 |
| 67.5° | 2251.5 | 2104.5 | 1756.8 | 1435.9 | 1179.5 | 1023.6 | 919.6 | 835.4 | 785.2 | 765.4 | 760.1 |
| 70° | 2099.2 | 1975.5 | 1638.4 | 1330.1 | 1091.7 | 948.3 | 849.7 | 769.0 | 717.0 | 697.3 | 690.2 |
| 72.5° | 1894.8 | 1772.9 | 1480.7 | 1201.1 | 975.2 | 849.7 | 763.7 | 686.6 | 629.2 | 609.5 | 611.3 |
| 75° | 1613.4 | 1527.3 | 1276.3 | 1037.9 | 840.7 | 724.2 | 652.5 | 588.0 | 539.6 | 523.4 | 525.2 |
| 77.5° | 1308.6 | 1236.9 | 1034.3 | 846.1 | 686.6 | 596.9 | 536.0 | 484.0 | 451.7 | 442.8 | 437.4 |
| 80° | 1002.1 | 932.2 | 776.2 | 631.0 | 521.7 | 458.9 | 417.7 | 381.8 | 356.7 | 344.2 | 347.8 |
| 82.5° | 672.2 | 629.2 | 514.5 | 417.7 | 354.9 | 310.1 | 295.8 | 272.5 | 263.5 | 256.3 | 261.7 |
| 85° | 362.1 | 324.5 | 268.9 | 224.1 | 195.4 | 182.8 | 186.4 | 184.6 | 177.5 | 175.7 | 181.1 |
| 87.5° | 118.3 | 102.2 | 78.9 | 66.3 | 68.1 | 60.9 | 60.9 | 57.4 | 52.0 | 50.2 | 53.8 |
| 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)