

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: P472295

Luminaire Tested: **CCW-VA-3-835-U-T4FT**

Issue Date: 01/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P472295  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: CCW-VA-3-835-U-T4FT  
Description: INVUE WALL PACK Wave Stream LUMINAIRE WITH T4FT DISTRIBUTION LENS  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4886 lumens  
Efficiency: N/A  
Efficacy: 99.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

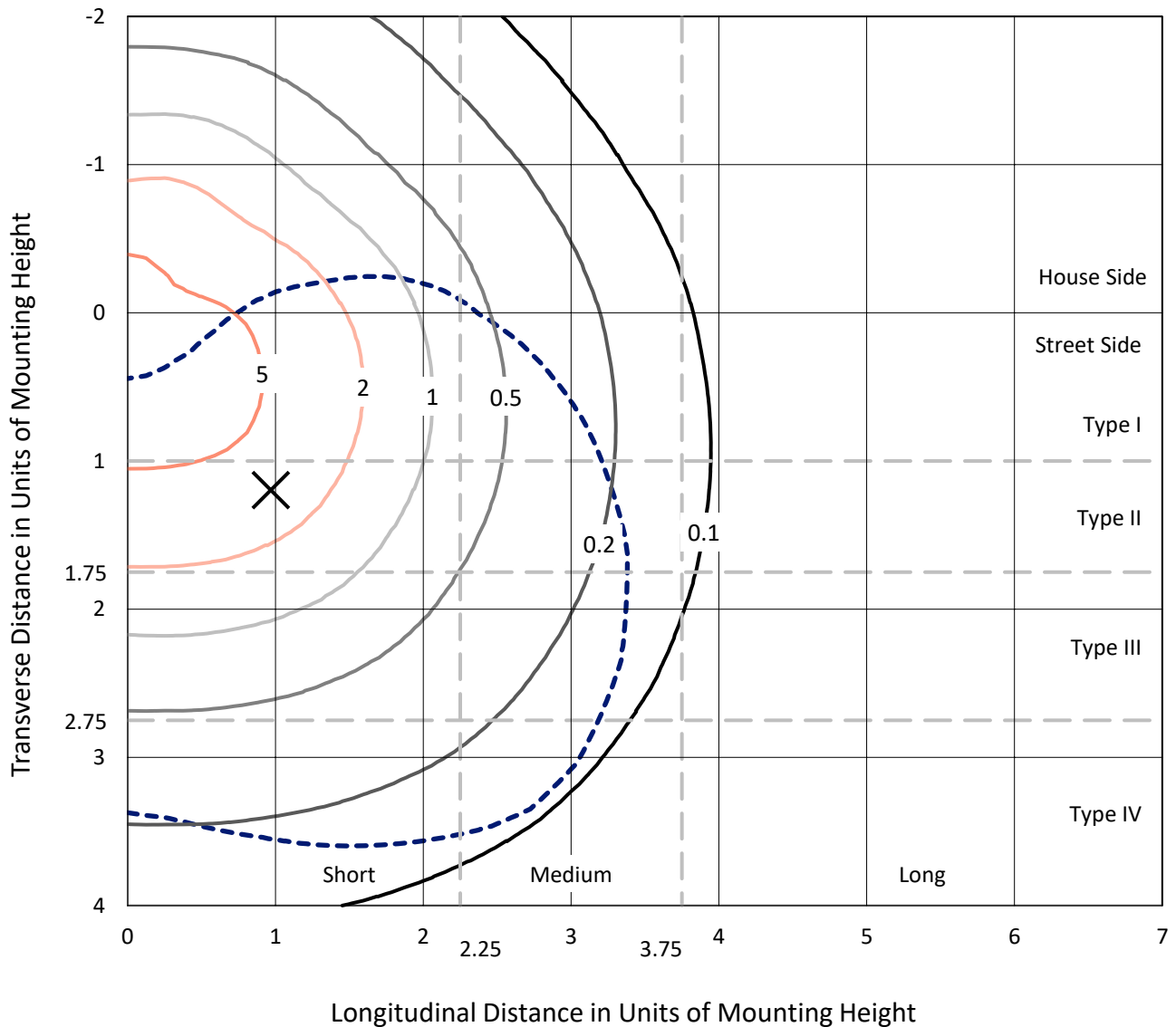
Input Watts (W): 49.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

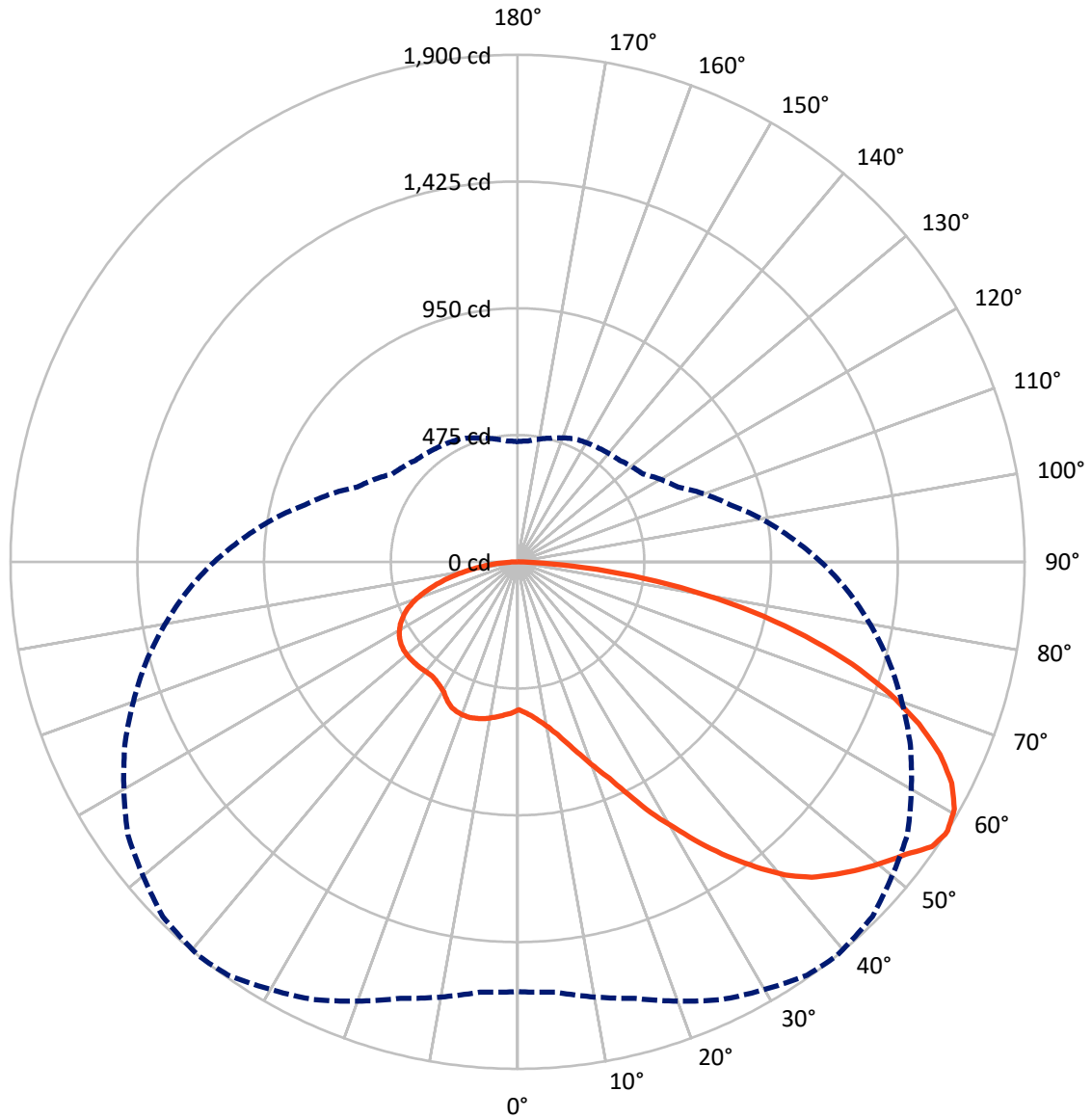
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.6 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral      - - - Horizontal Cone Through 57-Deg Vertical

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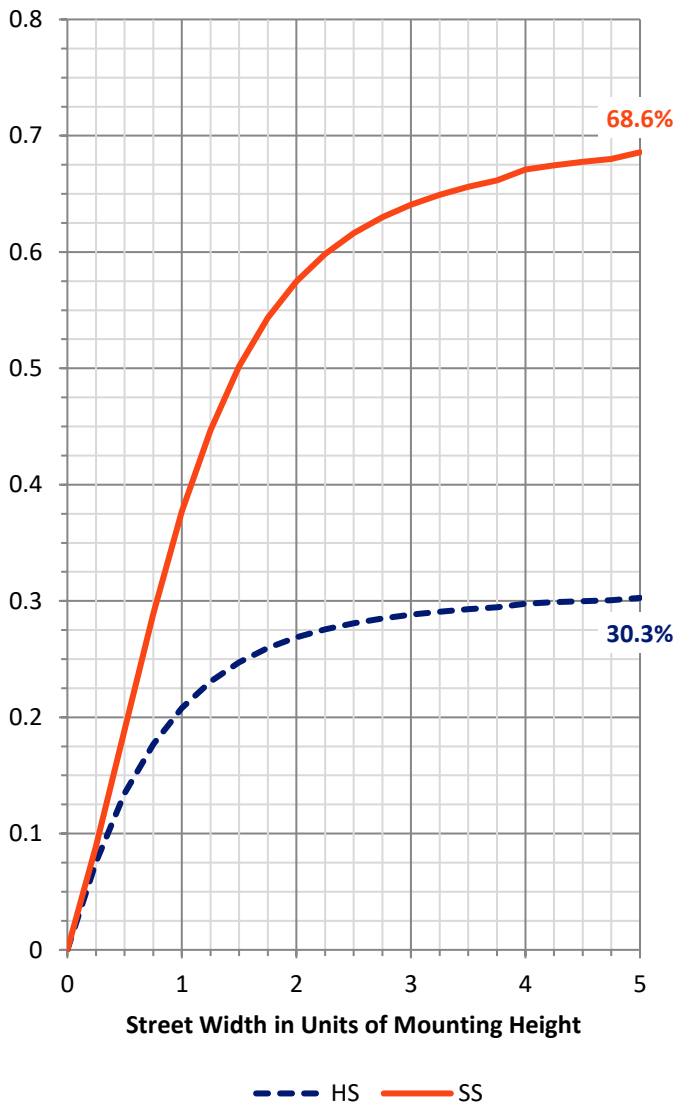
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 1499.2   | 0.0    | 1499.2 |
|                    | % Fixture | 30.7     | 0.0    | 30.7   |
| <b>Street Side</b> | Lumens    | 3386.8   | 0.0    | 3386.8 |
|                    | % Fixture | 69.3     | 0.0    | 69.3   |
| <b>Total</b>       | Lumens    | 4886.0   | 0.0    | 4886.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 56.1   | 1.1       |
| 10°-20°   | 187.1  | 3.8       |
| 20°-30°   | 361.4  | 7.4       |
| 30°-40°   | 584.6  | 12.0      |
| 40°-50°   | 821.3  | 16.8      |
| 50°-60°   | 1014.5 | 20.8      |
| 60°-70°   | 1008.4 | 20.6      |
| 70°-80°   | 682.3  | 14.0      |
| 80°-90°   | 170.3  | 3.5       |
| 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°    | 4886.0 | 100.0     |
| 0°-180°   | 4886.0 | 100.0     |



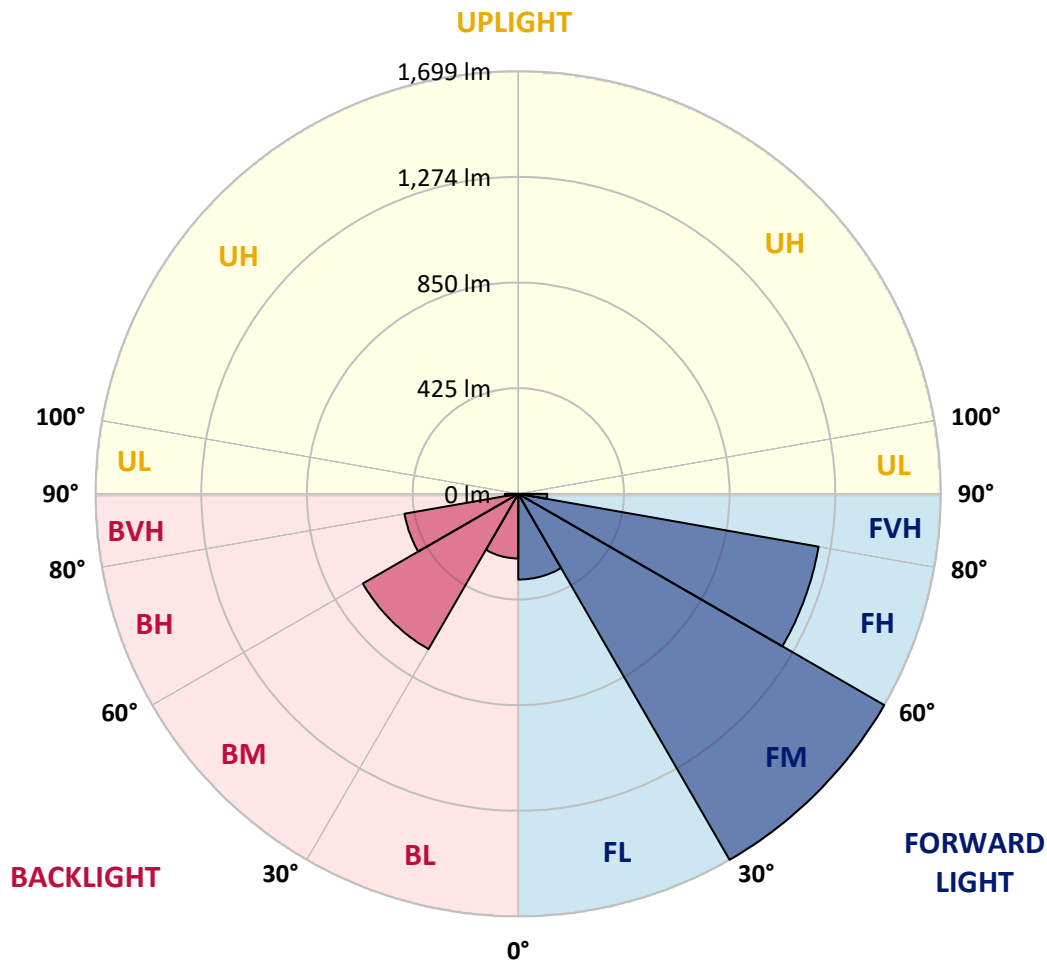
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 344.8  | 7.1       |                         |      |         |
| FM (30°-60°)   | 1699.1 | 34.8      |                         |      |         |
| FH (60°-80°)   | 1226.4 | 25.1      |                         |      | G1/1800 |
| FVH (80°-90°)  | 116.5  | 2.4       |                         |      | G2/225  |
| BL (0°-30°)    | 259.8  | 5.3       | B1/500                  |      |         |
| BM (30°-60°)   | 721.3  | 14.8      | B1/1000                 |      |         |
| BH (60°-80°)   | 464.3  | 9.5       | B1/500                  |      | G1/500  |
| BVH (80°-90°)  | 53.8   | 1.1       |                         |      | G1/100  |
| UL (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G2**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 39°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 554.0  | 554.0  | 554.0  | 554.0  | 554.0  | 554.0  | 554.0  | 554.0  | 554.0  | 554.0  | 554.0  |
| 2.5°  | 570.5  | 569.8  | 569.0  | 569.0  | 567.5  | 566.0  | 565.3  | 563.8  | 564.5  | 566.0  | 566.8  |
| 5°    | 587.0  | 585.5  | 585.5  | 584.0  | 581.8  | 581.8  | 579.5  | 576.5  | 575.8  | 575.0  | 575.0  |
| 7.5°  | 612.4  | 610.2  | 611.0  | 608.7  | 606.5  | 603.5  | 599.7  | 596.0  | 594.5  | 589.2  | 584.7  |
| 10°   | 641.6  | 640.9  | 638.7  | 634.9  | 632.7  | 629.7  | 625.9  | 619.2  | 613.9  | 608.0  | 604.2  |
| 12.5° | 676.1  | 674.6  | 675.3  | 672.3  | 668.6  | 663.4  | 657.4  | 650.6  | 640.9  | 629.7  | 622.2  |
| 15°   | 721.0  | 718.0  | 718.0  | 717.3  | 709.8  | 708.3  | 702.3  | 687.3  | 673.8  | 658.9  | 641.6  |
| 17.5° | 775.7  | 774.9  | 771.9  | 768.9  | 764.4  | 759.2  | 753.2  | 736.7  | 716.5  | 693.3  | 670.1  |
| 20°   | 834.1  | 832.6  | 834.8  | 830.3  | 821.3  | 819.1  | 809.4  | 790.6  | 765.9  | 739.0  | 703.8  |
| 22.5° | 897.7  | 899.2  | 899.2  | 897.7  | 890.2  | 881.2  | 873.0  | 848.3  | 819.8  | 786.9  | 745.7  |
| 25°   | 974.8  | 975.6  | 980.1  | 984.6  | 980.1  | 965.8  | 954.6  | 916.4  | 878.2  | 836.3  | 787.6  |
| 27.5° | 1061.7 | 1056.4 | 1069.2 | 1077.4 | 1069.2 | 1065.4 | 1040.7 | 998.8  | 946.4  | 894.0  | 833.3  |
| 30°   | 1145.5 | 1145.5 | 1156.0 | 1168.0 | 1162.8 | 1153.8 | 1133.6 | 1079.6 | 1019.7 | 953.1  | 879.7  |
| 32.5° | 1223.4 | 1232.4 | 1236.9 | 1264.6 | 1261.6 | 1257.1 | 1233.9 | 1162.8 | 1087.9 | 1012.3 | 924.7  |
| 35°   | 1315.5 | 1312.5 | 1331.2 | 1348.4 | 1361.9 | 1355.9 | 1338.7 | 1266.8 | 1168.7 | 1074.4 | 974.1  |
| 37.5° | 1385.1 | 1391.1 | 1407.6 | 1438.3 | 1448.0 | 1451.0 | 1429.3 | 1355.2 | 1243.6 | 1141.0 | 1028.7 |
| 40°   | 1438.3 | 1442.8 | 1474.2 | 1513.1 | 1533.4 | 1543.8 | 1522.1 | 1432.3 | 1314.0 | 1194.2 | 1071.4 |
| 42.5° | 1481.0 | 1483.9 | 1516.9 | 1572.3 | 1606.0 | 1616.5 | 1597.0 | 1501.9 | 1373.9 | 1236.9 | 1106.6 |
| 45°   | 1509.4 | 1514.6 | 1553.6 | 1610.5 | 1662.9 | 1670.4 | 1660.6 | 1563.3 | 1427.0 | 1277.3 | 1132.1 |
| 47.5° | 1534.1 | 1540.1 | 1583.5 | 1655.4 | 1713.8 | 1723.5 | 1714.6 | 1617.2 | 1478.0 | 1314.0 | 1153.8 |
| 50°   | 1567.1 | 1573.8 | 1617.2 | 1697.3 | 1761.7 | 1773.0 | 1770.0 | 1674.1 | 1525.9 | 1355.2 | 1176.2 |
| 52.5° | 1598.5 | 1603.7 | 1655.4 | 1744.5 | 1814.1 | 1821.6 | 1819.4 | 1727.3 | 1574.5 | 1399.3 | 1204.7 |
| 55°   | 1623.2 | 1629.2 | 1690.6 | 1800.7 | 1875.5 | 1883.8 | 1868.0 | 1768.5 | 1612.7 | 1431.5 | 1231.6 |
| 57°   | 1610.5 | 1618.7 | 1693.6 | 1810.4 | 1891.3 | 1900.2 | 1880.0 | 1783.4 | 1624.0 | 1440.5 | 1241.4 |
| 57.5° | 1606.7 | 1612.7 | 1690.6 | 1809.6 | 1892.0 | 1900.2 | 1880.0 | 1782.7 | 1623.2 | 1439.8 | 1241.4 |
| 60°   | 1552.1 | 1566.3 | 1653.9 | 1782.7 | 1870.3 | 1880.8 | 1861.3 | 1752.7 | 1604.5 | 1418.8 | 1221.2 |
| 62.5° | 1478.7 | 1498.2 | 1590.3 | 1719.0 | 1817.9 | 1825.4 | 1805.9 | 1702.6 | 1562.6 | 1374.6 | 1179.2 |
| 65°   | 1373.1 | 1403.1 | 1499.7 | 1624.0 | 1731.0 | 1740.0 | 1720.5 | 1618.7 | 1492.9 | 1307.3 | 1116.3 |
| 67.5° | 1269.8 | 1287.8 | 1391.1 | 1509.4 | 1609.0 | 1622.5 | 1606.0 | 1515.4 | 1397.1 | 1217.4 | 1032.5 |
| 70°   | 1152.3 | 1165.0 | 1250.4 | 1366.4 | 1466.7 | 1478.0 | 1463.7 | 1379.1 | 1267.6 | 1105.8 | 934.4  |
| 72.5° | 1010.8 | 1024.2 | 1096.9 | 1203.9 | 1293.0 | 1311.0 | 1301.3 | 1213.7 | 1112.6 | 972.6  | 825.1  |
| 75°   | 851.3  | 866.3  | 931.4  | 1016.8 | 1103.6 | 1114.1 | 1102.9 | 1038.5 | 947.1  | 820.6  | 691.8  |
| 77.5° | 690.3  | 700.0  | 747.2  | 811.6  | 879.0  | 901.5  | 898.5  | 852.8  | 760.7  | 660.4  | 555.5  |
| 80°   | 516.6  | 518.1  | 542.8  | 596.0  | 649.9  | 666.4  | 670.1  | 628.9  | 568.3  | 492.7  | 416.3  |
| 82.5° | 326.4  | 331.7  | 345.2  | 384.8  | 411.0  | 433.5  | 438.7  | 414.8  | 376.6  | 329.4  | 282.3  |
| 85°   | 152.0  | 147.5  | 158.0  | 171.5  | 208.9  | 208.9  | 215.6  | 202.9  | 191.7  | 175.9  | 146.0  |
| 87.5° | 12.7   | 12.0   | 12.0   | 12.7   | 20.2   | 21.7   | 34.4   | 38.2   | 41.2   | 41.2   | 43.4   |
| 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°    | 554.0  | 554.0  | 554.0 | 554.0 | 554.0 | 554.0 | 554.0 | 554.0 | 554.0 | 554.0 | 554.0 |
| 2.5°  | 565.3  | 564.5  | 562.3 | 562.3 | 563.8 | 566.0 | 566.8 | 567.5 | 568.3 | 569.0 | 569.0 |
| 5°    | 574.3  | 573.5  | 572.0 | 570.5 | 572.0 | 572.8 | 575.0 | 576.5 | 576.5 | 578.0 | 577.3 |
| 7.5°  | 582.5  | 583.2  | 581.8 | 581.0 | 581.0 | 582.5 | 585.5 | 587.7 | 589.2 | 590.0 | 591.5 |
| 10°   | 601.2  | 596.7  | 590.7 | 587.7 | 587.7 | 590.7 | 593.7 | 596.7 | 599.7 | 601.2 | 601.2 |
| 12.5° | 617.7  | 612.4  | 601.2 | 596.7 | 596.0 | 599.0 | 602.7 | 607.2 | 609.5 | 611.7 | 611.7 |
| 15°   | 632.7  | 628.2  | 614.7 | 604.2 | 601.2 | 603.5 | 608.0 | 613.2 | 616.9 | 619.2 | 619.2 |
| 17.5° | 661.1  | 647.6  | 629.7 | 612.4 | 606.5 | 607.2 | 612.4 | 617.7 | 622.2 | 623.7 | 622.9 |
| 20°   | 688.1  | 670.8  | 643.9 | 619.2 | 609.5 | 606.5 | 611.7 | 618.4 | 622.2 | 624.4 | 624.4 |
| 22.5° | 718.8  | 700.0  | 658.1 | 625.9 | 608.0 | 603.5 | 608.0 | 613.9 | 618.4 | 619.9 | 621.4 |
| 25°   | 762.2  | 729.2  | 673.8 | 631.2 | 605.7 | 596.7 | 599.7 | 605.7 | 611.0 | 611.7 | 611.0 |
| 27.5° | 801.1  | 763.7  | 694.8 | 636.4 | 600.5 | 584.0 | 581.0 | 585.5 | 593.7 | 599.0 | 600.5 |
| 30°   | 834.8  | 800.4  | 716.5 | 640.9 | 590.7 | 563.0 | 559.3 | 560.8 | 566.0 | 580.3 | 581.0 |
| 32.5° | 885.0  | 831.8  | 738.2 | 644.6 | 579.5 | 551.8 | 546.6 | 545.1 | 546.6 | 554.0 | 554.0 |
| 35°   | 919.4  | 867.0  | 759.9 | 651.4 | 571.3 | 542.8 | 537.6 | 535.3 | 533.8 | 526.3 | 524.1 |
| 37.5° | 964.3  | 905.9  | 780.9 | 657.4 | 567.5 | 539.1 | 531.6 | 533.1 | 525.6 | 504.6 | 498.6 |
| 40°   | 1013.8 | 941.1  | 801.9 | 663.4 | 569.0 | 539.8 | 533.1 | 532.3 | 519.6 | 490.4 | 484.4 |
| 42.5° | 1037.7 | 971.1  | 823.6 | 671.6 | 575.0 | 542.1 | 536.1 | 533.8 | 518.1 | 485.2 | 476.9 |
| 45°   | 1060.9 | 992.8  | 839.3 | 678.3 | 581.0 | 545.1 | 537.6 | 535.3 | 517.4 | 480.7 | 474.7 |
| 47.5° | 1081.9 | 1006.3 | 846.8 | 682.1 | 585.5 | 547.3 | 538.3 | 534.6 | 513.6 | 478.4 | 472.4 |
| 50°   | 1091.6 | 1013.8 | 846.8 | 682.1 | 587.0 | 549.6 | 536.8 | 531.6 | 507.6 | 474.7 | 469.4 |
| 52.5° | 1106.6 | 1018.3 | 840.1 | 677.6 | 584.7 | 549.6 | 533.8 | 525.6 | 500.1 | 469.4 | 465.0 |
| 55°   | 1129.1 | 1026.5 | 831.1 | 670.8 | 579.5 | 545.1 | 528.6 | 517.4 | 489.7 | 462.0 | 458.2 |
| 57°   | 1136.5 | 1029.5 | 825.1 | 662.6 | 573.5 | 539.1 | 522.6 | 508.4 | 479.9 | 454.5 | 450.7 |
| 57.5° | 1135.0 | 1028.0 | 822.8 | 660.4 | 571.3 | 536.8 | 521.1 | 506.1 | 477.7 | 453.0 | 449.2 |
| 60°   | 1114.8 | 1013.8 | 808.6 | 646.1 | 559.3 | 524.8 | 507.6 | 491.2 | 462.0 | 440.2 | 437.2 |
| 62.5° | 1081.9 | 981.6  | 783.2 | 627.4 | 542.8 | 508.4 | 490.4 | 471.7 | 442.5 | 423.8 | 422.3 |
| 65°   | 1025.7 | 927.7  | 746.5 | 600.5 | 521.9 | 486.7 | 467.2 | 447.0 | 421.5 | 405.1 | 400.6 |
| 67.5° | 932.1  | 855.8  | 694.8 | 563.0 | 489.7 | 459.7 | 438.7 | 417.8 | 394.6 | 380.3 | 377.4 |
| 70°   | 854.3  | 777.2  | 628.9 | 515.9 | 450.7 | 422.3 | 402.8 | 382.6 | 362.4 | 349.6 | 348.9 |
| 72.5° | 755.5  | 681.3  | 546.6 | 457.5 | 401.3 | 373.6 | 358.6 | 340.7 | 324.9 | 313.7 | 313.7 |
| 75°   | 635.7  | 577.3  | 461.2 | 387.8 | 342.2 | 321.9 | 309.2 | 295.0 | 281.5 | 274.0 | 275.5 |
| 77.5° | 505.4  | 461.2  | 376.6 | 313.7 | 280.0 | 266.5 | 254.6 | 246.3 | 238.1 | 231.4 | 232.1 |
| 80°   | 372.9  | 339.9  | 277.0 | 230.6 | 214.1 | 202.2 | 199.9 | 194.7 | 190.2 | 187.9 | 184.2 |
| 82.5° | 255.3  | 226.1  | 184.2 | 158.0 | 146.0 | 142.3 | 143.0 | 143.0 | 143.8 | 143.8 | 142.3 |
| 85°   | 132.5  | 121.3  | 93.6  | 84.6  | 83.1  | 86.9  | 91.3  | 94.3  | 93.6  | 93.6  | 91.3  |
| 87.5° | 38.2   | 34.4   | 29.9  | 27.0  | 28.5  | 30.7  | 27.0  | 26.2  | 25.5  | 24.7  | 24.7  |
| 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)