

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: P472272

Luminaire Tested: **CCW-VA-4-735-U-T4FT**

Issue Date: 01/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P472272  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: CCW-VA-4-735-U-T4FT  
Description: INVUE WALL PACK Wave Stream LUMINAIRE WITH T4FT DISTRIBUTION LENS  
Light Source: 3500K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6263.1 lumens  
Efficiency: N/A  
Efficacy: 97.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G2

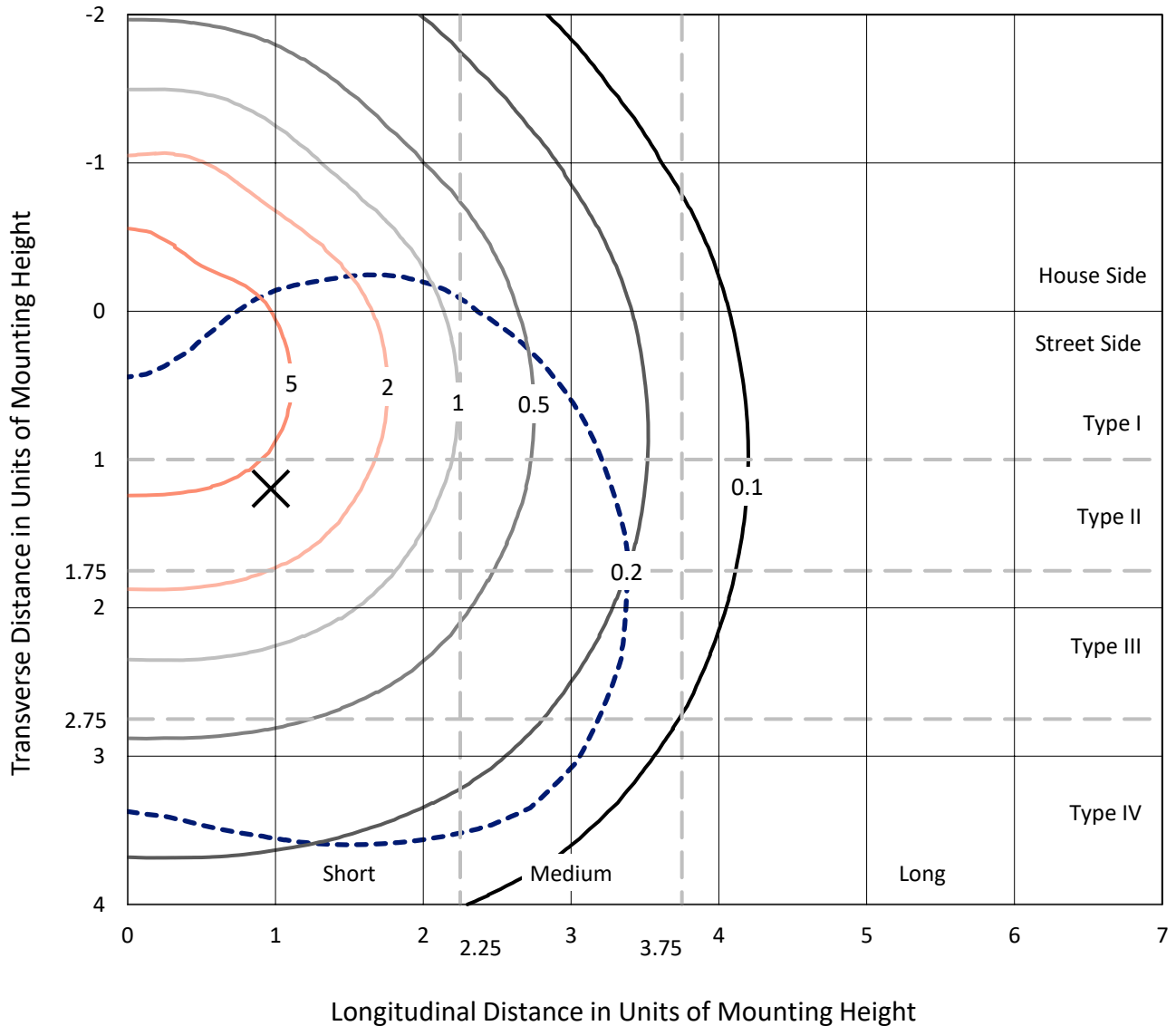
Input Watts (W): 64.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

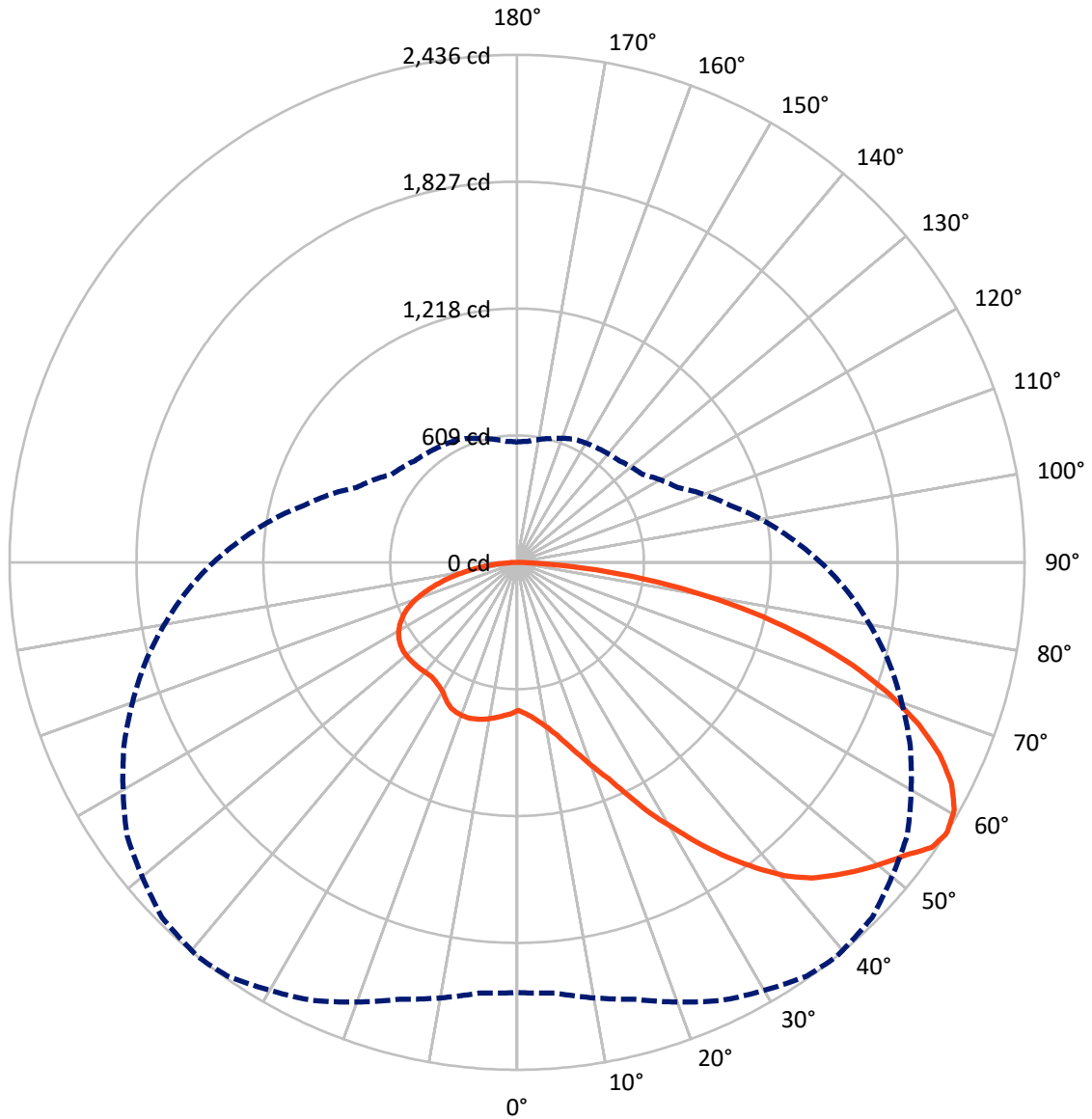
✕ Max cd  
 - - - 1/2 Max cd



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

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 1921.8   | 0.0    | 1921.8 |
|                    | % Fixture | 30.7     | 0.0    | 30.7   |
| <b>Street Side</b> | Lumens    | 4341.4   | 0.0    | 4341.4 |
|                    | % Fixture | 69.3     | 0.0    | 69.3   |
| <b>Total</b>       | Lumens    | 6263.1   | 0.0    | 6263.1 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 71.9   | 1.1       |
| 10°-20°   | 239.8  | 3.8       |
| 20°-30°   | 463.3  | 7.4       |
| 30°-40°   | 749.4  | 12.0      |
| 40°-50°   | 1052.8 | 16.8      |
| 50°-60°   | 1300.5 | 20.8      |
| 60°-70°   | 1292.6 | 20.6      |
| 70°-80°   | 874.6  | 14.0      |
| 80°-90°   | 218.3  | 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°    | 6263.1 | 100.0     |
| 0°-180°   | 6263.1 | 100.0     |

**Coefficient of Utilization**

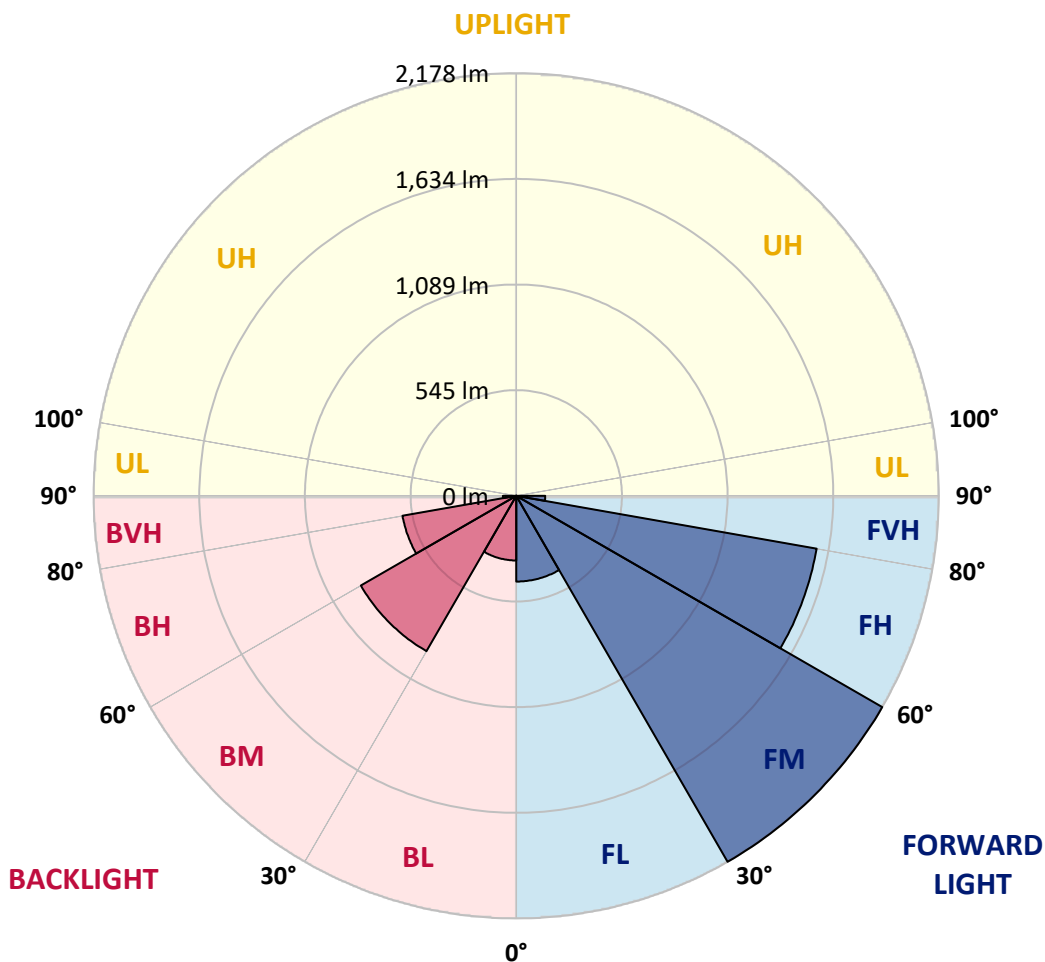


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 441.9  | 7.1       |                         |      |         |
| FM (30°-60°)   | 2178.0 | 34.8      |                         |      |         |
| FH (60°-80°)   | 1572.1 | 25.1      |                         |      | G1/1800 |
| FVH (80°-90°)  | 149.4  | 2.4       |                         |      | G2/225  |
| BL (0°-30°)    | 333.1  | 5.3       | B1/500                  |      |         |
| BM (30°-60°)   | 924.6  | 14.8      | B1/1000                 |      |         |
| BH (60°-80°)   | 595.1  | 9.5       | B2/1000                 |      | G2/1000 |
| BVH (80°-90°)  | 68.9   | 1.1       |                         |      | G1/100  |
| UL (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B2-U0-G2**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 39°    | 45°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 710.2  | 710.2  | 710.2  | 710.2  | 710.2  | 710.2  | 710.2  | 710.2  | 710.2  | 710.2  | 710.2  |
| 2.5°  | 731.3  | 730.4  | 729.4  | 729.4  | 727.5  | 725.6  | 724.6  | 722.7  | 723.6  | 725.6  | 726.5  |
| 5°    | 752.4  | 750.5  | 750.5  | 748.6  | 745.7  | 745.7  | 742.8  | 739.0  | 738.0  | 737.1  | 737.1  |
| 7.5°  | 785.1  | 782.2  | 783.2  | 780.3  | 777.4  | 773.6  | 768.8  | 764.0  | 762.0  | 755.3  | 749.6  |
| 10°   | 822.5  | 821.5  | 818.7  | 813.9  | 811.0  | 807.1  | 802.3  | 793.7  | 787.0  | 779.3  | 774.5  |
| 12.5° | 866.6  | 864.7  | 865.7  | 861.8  | 857.1  | 850.3  | 842.7  | 834.0  | 821.5  | 807.1  | 797.5  |
| 15°   | 924.2  | 920.4  | 920.4  | 919.4  | 909.8  | 907.9  | 900.2  | 881.0  | 863.8  | 844.6  | 822.5  |
| 17.5° | 994.3  | 993.3  | 989.5  | 985.7  | 979.9  | 973.2  | 965.5  | 944.4  | 918.5  | 888.7  | 859.0  |
| 20°   | 1069.2 | 1067.2 | 1070.1 | 1064.4 | 1052.8 | 1050.0 | 1037.5 | 1013.5 | 981.8  | 947.3  | 902.2  |
| 22.5° | 1150.7 | 1152.7 | 1152.7 | 1150.7 | 1141.1 | 1129.6 | 1119.1 | 1087.4 | 1050.9 | 1008.7 | 955.9  |
| 25°   | 1249.6 | 1250.5 | 1256.3 | 1262.1 | 1256.3 | 1238.1 | 1223.7 | 1174.7 | 1125.8 | 1072.0 | 1009.6 |
| 27.5° | 1360.9 | 1354.2 | 1370.5 | 1381.1 | 1370.5 | 1365.7 | 1334.0 | 1280.3 | 1213.1 | 1145.9 | 1068.2 |
| 30°   | 1468.4 | 1468.4 | 1481.8 | 1497.2 | 1490.5 | 1479.0 | 1453.1 | 1383.9 | 1307.2 | 1221.8 | 1127.7 |
| 32.5° | 1568.2 | 1579.7 | 1585.5 | 1621.0 | 1617.2 | 1611.4 | 1581.7 | 1490.5 | 1394.5 | 1297.6 | 1185.3 |
| 35°   | 1686.3 | 1682.4 | 1706.4 | 1728.5 | 1745.8 | 1738.1 | 1716.0 | 1623.9 | 1498.2 | 1377.2 | 1248.6 |
| 37.5° | 1775.5 | 1783.2 | 1804.3 | 1843.7 | 1856.1 | 1860.0 | 1832.1 | 1737.1 | 1594.1 | 1462.6 | 1318.7 |
| 40°   | 1843.7 | 1849.4 | 1889.7 | 1939.6 | 1965.6 | 1979.0 | 1951.2 | 1836.0 | 1684.3 | 1530.8 | 1373.4 |
| 42.5° | 1898.4 | 1902.2 | 1944.4 | 2015.5 | 2058.6 | 2072.1 | 2047.1 | 1925.2 | 1761.1 | 1585.5 | 1418.5 |
| 45°   | 1934.8 | 1941.6 | 1991.5 | 2064.4 | 2131.6 | 2141.2 | 2128.7 | 2003.9 | 1829.3 | 1637.3 | 1451.1 |
| 47.5° | 1966.5 | 1974.2 | 2029.9 | 2122.0 | 2196.9 | 2209.3 | 2197.8 | 2073.0 | 1894.5 | 1684.3 | 1479.0 |
| 50°   | 2008.7 | 2017.4 | 2073.0 | 2175.7 | 2258.3 | 2272.7 | 2268.8 | 2146.0 | 1956.0 | 1737.1 | 1507.8 |
| 52.5° | 2049.1 | 2055.8 | 2122.0 | 2236.2 | 2325.5 | 2335.1 | 2332.2 | 2214.1 | 2018.3 | 1793.8 | 1544.2 |
| 55°   | 2080.7 | 2088.4 | 2167.1 | 2308.2 | 2404.2 | 2414.7 | 2394.6 | 2266.9 | 2067.3 | 1835.0 | 1578.8 |
| 57°   | 2064.4 | 2075.0 | 2170.9 | 2320.7 | 2424.3 | 2435.8 | 2409.9 | 2286.1 | 2081.7 | 1846.5 | 1591.3 |
| 57.5° | 2059.6 | 2067.3 | 2167.1 | 2319.7 | 2425.3 | 2435.8 | 2409.9 | 2285.1 | 2080.7 | 1845.6 | 1591.3 |
| 60°   | 1989.5 | 2007.8 | 2120.1 | 2285.1 | 2397.4 | 2410.9 | 2385.9 | 2246.8 | 2056.7 | 1818.7 | 1565.3 |
| 62.5° | 1895.5 | 1920.4 | 2038.5 | 2203.6 | 2330.3 | 2339.9 | 2314.9 | 2182.5 | 2003.0 | 1762.1 | 1511.6 |
| 65°   | 1760.2 | 1798.6 | 1922.4 | 2081.7 | 2218.9 | 2230.4 | 2205.5 | 2075.0 | 1913.7 | 1675.7 | 1431.0 |
| 67.5° | 1627.7 | 1650.8 | 1783.2 | 1934.8 | 2062.5 | 2079.8 | 2058.6 | 1942.5 | 1790.9 | 1560.5 | 1323.5 |
| 70°   | 1477.0 | 1493.4 | 1602.8 | 1751.5 | 1880.1 | 1894.5 | 1876.3 | 1767.8 | 1624.8 | 1417.5 | 1197.8 |
| 72.5° | 1295.7 | 1312.9 | 1406.0 | 1543.3 | 1657.5 | 1680.5 | 1668.0 | 1555.7 | 1426.2 | 1246.7 | 1057.6 |
| 75°   | 1091.2 | 1110.4 | 1193.9 | 1303.3 | 1414.7 | 1428.1 | 1413.7 | 1331.2 | 1214.1 | 1051.9 | 886.8  |
| 77.5° | 884.9  | 897.4  | 957.8  | 1040.4 | 1126.7 | 1155.5 | 1151.7 | 1093.1 | 975.1  | 846.5  | 712.1  |
| 80°   | 662.2  | 664.1  | 695.8  | 764.0  | 833.1  | 854.2  | 859.0  | 806.2  | 728.4  | 631.5  | 533.6  |
| 82.5° | 418.4  | 425.2  | 442.4  | 493.3  | 526.9  | 555.7  | 562.4  | 531.7  | 482.8  | 422.3  | 361.8  |
| 85°   | 194.8  | 189.1  | 202.5  | 219.8  | 267.8  | 267.8  | 276.4  | 260.1  | 245.7  | 225.5  | 187.1  |
| 87.5° | 16.3   | 15.4   | 15.4   | 16.3   | 25.9   | 27.8   | 44.1   | 48.9   | 52.8   | 52.8   | 55.7   |
| 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°    | 710.2  | 710.2  | 710.2  | 710.2 | 710.2 | 710.2 | 710.2 | 710.2 | 710.2 | 710.2 | 710.2 |
| 2.5°  | 724.6  | 723.6  | 720.8  | 720.8 | 722.7 | 725.6 | 726.5 | 727.5 | 728.4 | 729.4 | 729.4 |
| 5°    | 736.1  | 735.2  | 733.2  | 731.3 | 733.2 | 734.2 | 737.1 | 739.0 | 739.0 | 740.9 | 740.0 |
| 7.5°  | 746.7  | 747.6  | 745.7  | 744.8 | 744.8 | 746.7 | 750.5 | 753.4 | 755.3 | 756.3 | 758.2 |
| 10°   | 770.7  | 764.9  | 757.2  | 753.4 | 753.4 | 757.2 | 761.1 | 764.9 | 768.8 | 770.7 | 770.7 |
| 12.5° | 791.8  | 785.1  | 770.7  | 764.9 | 764.0 | 767.8 | 772.6 | 778.4 | 781.2 | 784.1 | 784.1 |
| 15°   | 811.0  | 805.2  | 787.9  | 774.5 | 770.7 | 773.6 | 779.3 | 786.0 | 790.8 | 793.7 | 793.7 |
| 17.5° | 847.5  | 830.2  | 807.1  | 785.1 | 777.4 | 778.4 | 785.1 | 791.8 | 797.5 | 799.5 | 798.5 |
| 20°   | 882.0  | 859.9  | 825.4  | 793.7 | 781.2 | 777.4 | 784.1 | 792.7 | 797.5 | 800.4 | 800.4 |
| 22.5° | 921.4  | 897.4  | 843.6  | 802.3 | 779.3 | 773.6 | 779.3 | 787.0 | 792.7 | 794.7 | 796.6 |
| 25°   | 977.0  | 934.8  | 863.8  | 809.1 | 776.4 | 764.9 | 768.8 | 776.4 | 783.2 | 784.1 | 783.2 |
| 27.5° | 1026.9 | 978.9  | 890.6  | 815.8 | 769.7 | 748.6 | 744.8 | 750.5 | 761.1 | 767.8 | 769.7 |
| 30°   | 1070.1 | 1026.0 | 918.5  | 821.5 | 757.2 | 721.7 | 716.9 | 718.8 | 725.6 | 743.8 | 744.8 |
| 32.5° | 1134.4 | 1066.3 | 946.3  | 826.3 | 742.8 | 707.3 | 700.6 | 698.7 | 700.6 | 710.2 | 710.2 |
| 35°   | 1178.6 | 1111.4 | 974.1  | 835.0 | 732.3 | 695.8 | 689.1 | 686.2 | 684.3 | 674.7 | 671.8 |
| 37.5° | 1236.1 | 1161.3 | 1001.0 | 842.7 | 727.5 | 691.0 | 681.4 | 683.3 | 673.7 | 646.9 | 639.2 |
| 40°   | 1299.5 | 1206.4 | 1027.9 | 850.3 | 729.4 | 692.0 | 683.3 | 682.4 | 666.1 | 628.6 | 621.0 |
| 42.5° | 1330.2 | 1244.8 | 1055.7 | 860.9 | 737.1 | 694.9 | 687.2 | 684.3 | 664.1 | 621.9 | 611.4 |
| 45°   | 1360.0 | 1272.6 | 1075.9 | 869.5 | 744.8 | 698.7 | 689.1 | 686.2 | 663.2 | 616.2 | 608.5 |
| 47.5° | 1386.8 | 1289.9 | 1085.5 | 874.3 | 750.5 | 701.6 | 690.1 | 685.3 | 658.4 | 613.3 | 605.6 |
| 50°   | 1399.3 | 1299.5 | 1085.5 | 874.3 | 752.4 | 704.5 | 688.1 | 681.4 | 650.7 | 608.5 | 601.8 |
| 52.5° | 1418.5 | 1305.3 | 1076.8 | 868.6 | 749.6 | 704.5 | 684.3 | 673.7 | 641.1 | 601.8 | 596.0 |
| 55°   | 1447.3 | 1315.8 | 1065.3 | 859.9 | 742.8 | 698.7 | 677.6 | 663.2 | 627.7 | 592.2 | 587.4 |
| 57°   | 1456.9 | 1319.6 | 1057.6 | 849.4 | 735.2 | 691.0 | 669.9 | 651.7 | 615.2 | 582.6 | 577.8 |
| 57.5° | 1455.0 | 1317.7 | 1054.8 | 846.5 | 732.3 | 688.1 | 668.0 | 648.8 | 612.3 | 580.6 | 575.8 |
| 60°   | 1429.1 | 1299.5 | 1036.5 | 828.3 | 716.9 | 672.8 | 650.7 | 629.6 | 592.2 | 564.3 | 560.5 |
| 62.5° | 1386.8 | 1258.2 | 1003.9 | 804.3 | 695.8 | 651.7 | 628.6 | 604.6 | 567.2 | 543.2 | 541.3 |
| 65°   | 1314.8 | 1189.1 | 956.9  | 769.7 | 668.9 | 623.8 | 598.9 | 573.0 | 540.3 | 519.2 | 513.5 |
| 67.5° | 1194.9 | 1097.0 | 890.6  | 721.7 | 627.7 | 589.3 | 562.4 | 535.5 | 505.8 | 487.5 | 483.7 |
| 70°   | 1095.1 | 996.2  | 806.2  | 661.3 | 577.8 | 541.3 | 516.3 | 490.4 | 464.5 | 448.2 | 447.2 |
| 72.5° | 968.4  | 873.4  | 700.6  | 586.4 | 514.4 | 478.9 | 459.7 | 436.7 | 416.5 | 402.1 | 402.1 |
| 75°   | 814.8  | 740.0  | 591.2  | 497.1 | 438.6 | 412.7 | 396.4 | 378.1 | 360.9 | 351.3 | 353.2 |
| 77.5° | 647.8  | 591.2  | 482.8  | 402.1 | 358.9 | 341.7 | 326.3 | 315.8 | 305.2 | 296.6 | 297.5 |
| 80°   | 478.0  | 435.7  | 355.1  | 295.6 | 274.5 | 259.1 | 256.3 | 249.5 | 243.8 | 240.9 | 236.1 |
| 82.5° | 327.3  | 289.8  | 236.1  | 202.5 | 187.1 | 182.4 | 183.3 | 183.3 | 184.3 | 184.3 | 182.4 |
| 85°   | 169.9  | 155.5  | 120.0  | 108.5 | 106.5 | 111.3 | 117.1 | 120.9 | 120.0 | 120.0 | 117.1 |
| 87.5° | 48.9   | 44.1   | 38.4   | 34.6  | 36.5  | 39.3  | 34.6  | 33.6  | 32.6  | 31.7  | 31.7  |
| 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)