

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: P675302

Luminaire Tested: **CCW-SA-1D-827-U-T4W**

Issue Date: 04/25/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P675302  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 04/25/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: CCW-SA-1D-827-U-T4W  
Description: INVUE CLEAR CURVE Wall Pack MOUNT LIGHT SQUARE LUMINAIRE @800mA w/  
T4W distribution lens  
Light Source: (16) 2700K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4135.7 lumens  
Efficiency: N/A  
Efficacy: 94.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.5' x H: 0')  
IES Classification: Type IV - Medium  
BUG Rating: B1 - U0 - G2

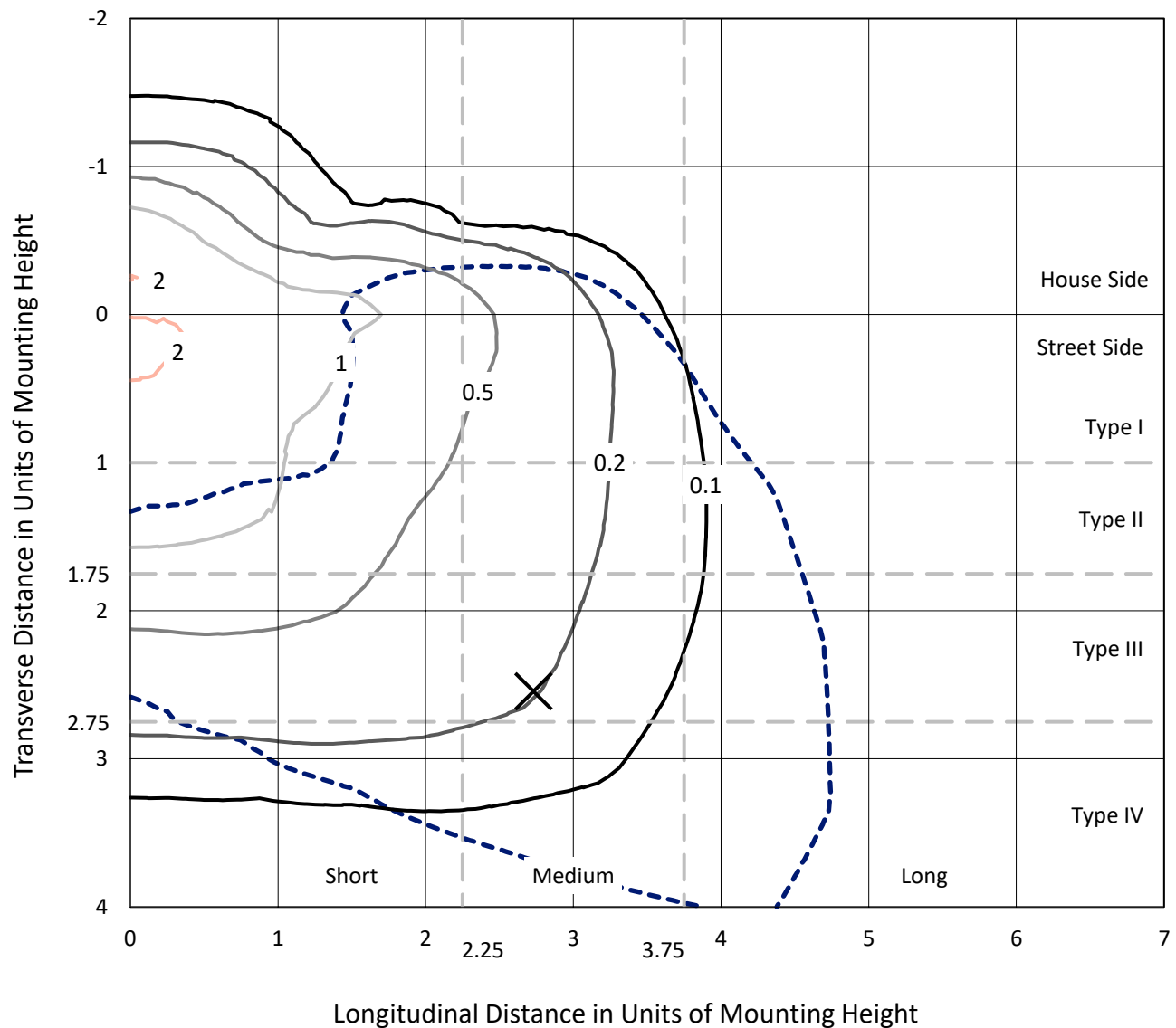
Input Watts (W): 44  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

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## Iso-Footcandle Lines of Horizontal Illumination

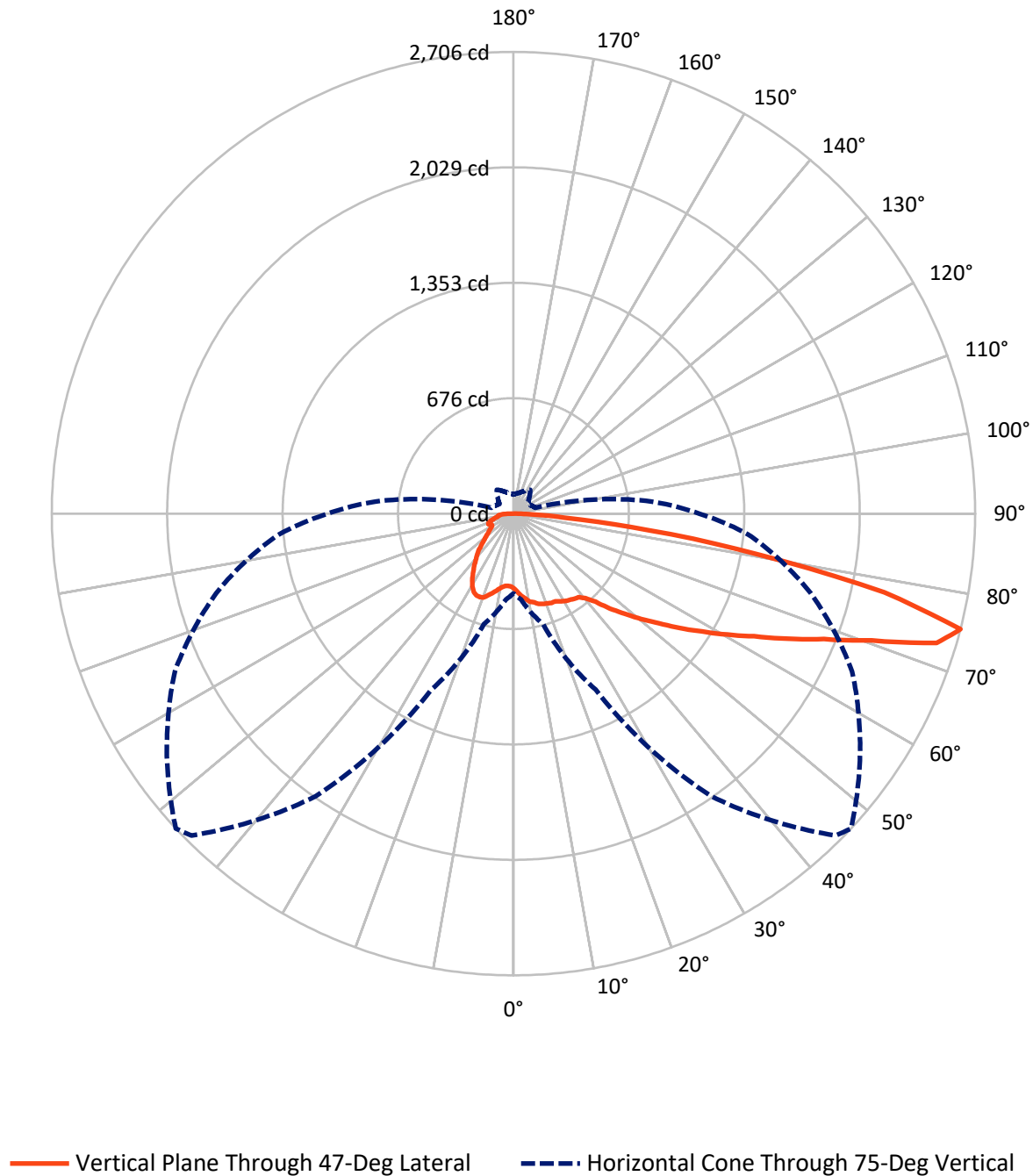
× Max cd  
 --- 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 2.5 fc  
 Type IV - Medium - N/A

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## Luminous Intensity Polar Plot



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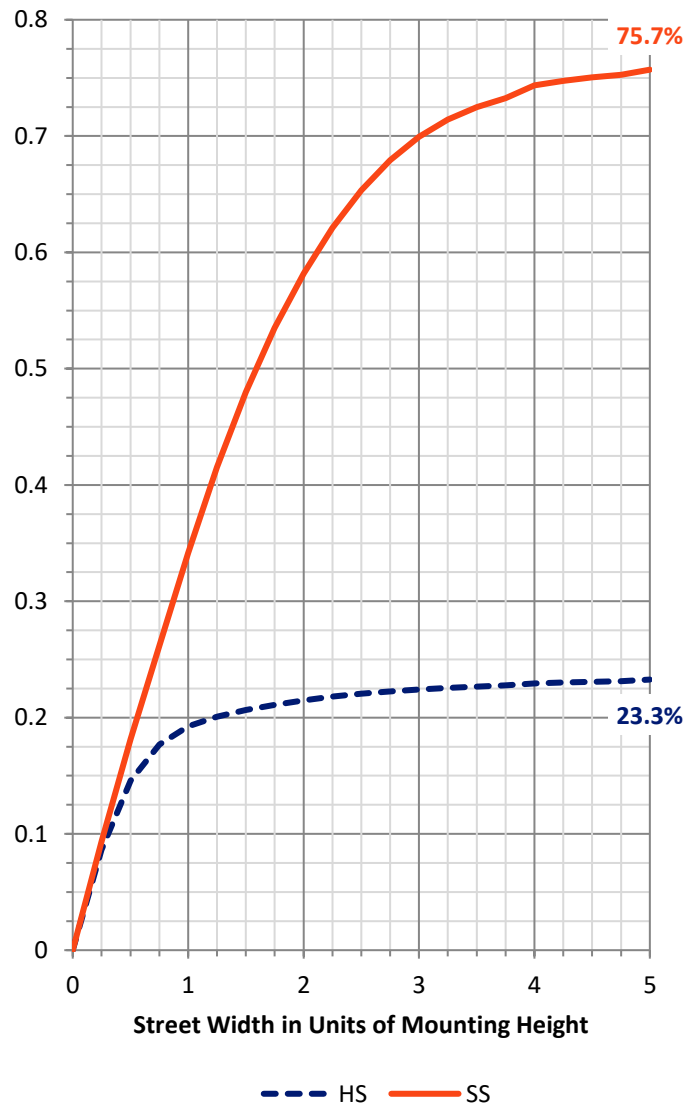
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 989.1    | 0.0    | 989.1  |
|                    | % Fixture | 23.9     | 0.0    | 23.9   |
| <b>Street Side</b> | Lumens    | 3146.7   | 0.0    | 3146.7 |
|                    | % Fixture | 76.1     | 0.0    | 76.1   |
| <b>Total</b>       | Lumens    | 4135.7   | 0.0    | 4135.7 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 44.4   | 1.1       |
| 10°-20°   | 147.4  | 3.6       |
| 20°-30°   | 252.5  | 6.1       |
| 30°-40°   | 353.3  | 8.5       |
| 40°-50°   | 492.6  | 11.9      |
| 50°-60°   | 736.3  | 17.8      |
| 60°-70°   | 1061.6 | 25.7      |
| 70°-80°   | 903.6  | 21.8      |
| 80°-90°   | 144.0  | 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°    | 4135.7 | 100.0     |
| 0°-180°   | 4135.7 | 100.0     |

**Coefficient of Utilization**



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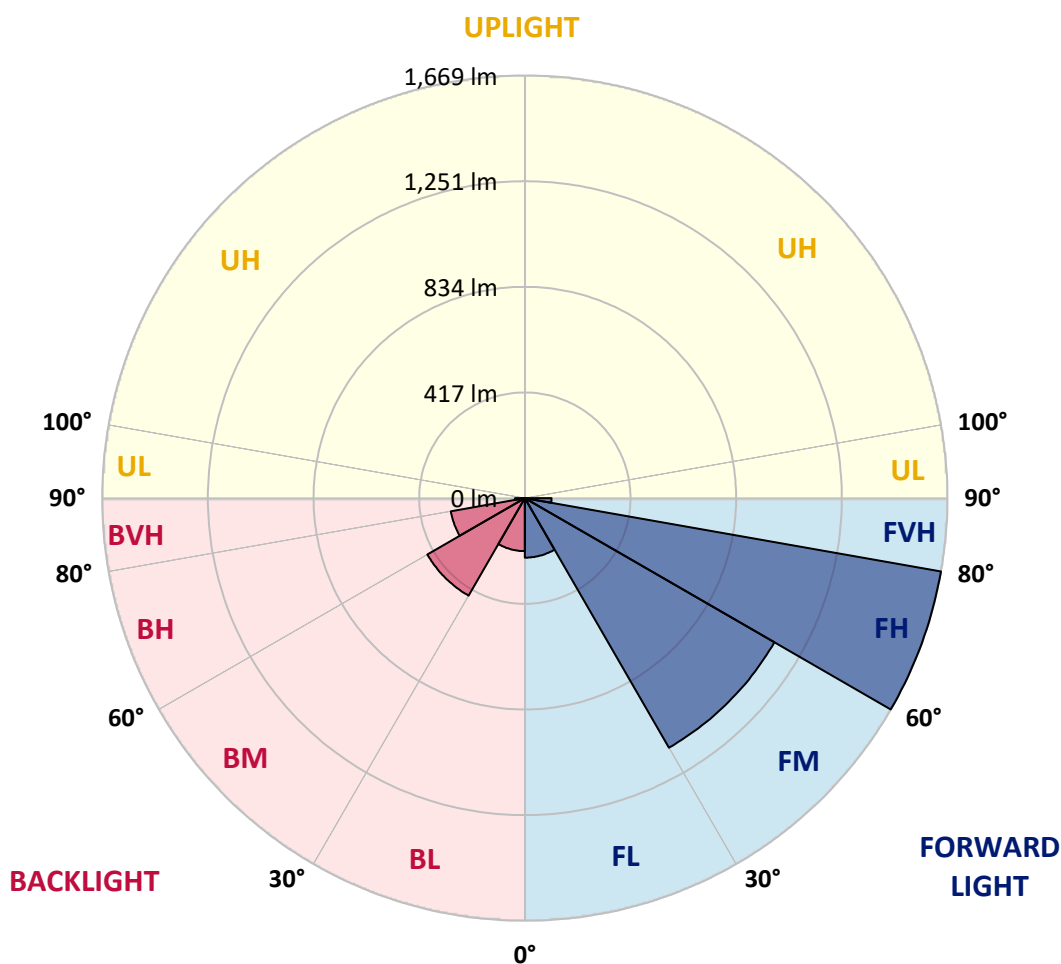
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 235.0  | 5.7       |                         |      |         |
| FM   | (30°-60°)   | 1137.7 | 27.5      |                         |      |         |
| FH   | (60°-80°)   | 1668.5 | 40.3      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 105.5  | 2.6       |                         |      | G2/225  |
| BL   | (0°-30°)    | 209.3  | 5.1       | B1/500                  |      |         |
| BM   | (30°-60°)   | 444.5  | 10.7      | B1/1000                 |      |         |
| BH   | (60°-80°)   | 296.7  | 7.2       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 38.5   | 0.9       |                         |      | 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 Medium





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 47°    | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 439.1  | 439.1  | 439.1  | 439.1  | 439.1  | 439.1  | 439.1  | 439.1  | 439.1  | 439.1  | 439.1  |
| 2.5°  | 470.8  | 472.3  | 472.3  | 469.3  | 466.3  | 460.3  | 460.3  | 454.2  | 451.2  | 443.7  | 440.6  |
| 5°    | 514.6  | 510.1  | 505.5  | 504.0  | 496.5  | 485.9  | 484.4  | 478.4  | 461.8  | 454.2  | 443.7  |
| 7.5°  | 546.3  | 544.8  | 543.3  | 537.2  | 523.6  | 507.0  | 502.5  | 493.5  | 476.9  | 461.8  | 449.7  |
| 10°   | 571.9  | 578.0  | 571.9  | 558.3  | 544.8  | 526.7  | 525.1  | 508.5  | 493.5  | 475.3  | 460.3  |
| 12.5° | 600.6  | 602.1  | 591.5  | 574.9  | 553.8  | 538.7  | 532.7  | 526.7  | 510.1  | 495.0  | 472.3  |
| 15°   | 620.2  | 617.2  | 609.6  | 587.0  | 562.9  | 547.8  | 549.3  | 541.7  | 523.6  | 513.1  | 488.9  |
| 17.5° | 620.2  | 620.2  | 608.1  | 591.5  | 570.4  | 556.8  | 556.8  | 552.3  | 540.2  | 525.1  | 508.5  |
| 20°   | 608.1  | 608.1  | 600.6  | 591.5  | 567.4  | 564.4  | 561.4  | 558.3  | 558.3  | 544.8  | 520.6  |
| 22.5° | 593.1  | 590.0  | 593.1  | 578.0  | 561.4  | 564.4  | 568.9  | 567.4  | 562.9  | 550.8  | 534.2  |
| 25°   | 578.0  | 579.5  | 582.5  | 571.9  | 556.8  | 570.4  | 568.9  | 576.5  | 573.4  | 564.4  | 550.8  |
| 27.5° | 576.5  | 579.5  | 581.0  | 570.4  | 564.4  | 576.5  | 582.5  | 590.0  | 591.5  | 582.5  | 565.9  |
| 30°   | 599.1  | 597.6  | 596.1  | 582.5  | 578.0  | 588.5  | 594.6  | 605.1  | 614.2  | 594.6  | 581.0  |
| 32.5° | 657.9  | 648.9  | 639.8  | 603.6  | 590.0  | 597.6  | 603.6  | 618.7  | 620.2  | 609.6  | 590.0  |
| 35°   | 751.5  | 745.5  | 715.3  | 651.9  | 614.2  | 606.6  | 612.7  | 623.2  | 626.2  | 618.7  | 603.6  |
| 37.5° | 858.6  | 855.6  | 813.4  | 736.4  | 664.0  | 627.8  | 621.7  | 636.8  | 648.9  | 632.3  | 611.2  |
| 40°   | 964.3  | 952.2  | 922.0  | 846.6  | 727.4  | 659.4  | 651.9  | 659.4  | 664.0  | 651.9  | 638.3  |
| 42.5° | 1059.3 | 1045.8 | 1038.2 | 962.8  | 810.4  | 712.3  | 706.2  | 688.1  | 701.7  | 686.6  | 668.5  |
| 45°   | 1139.3 | 1136.3 | 1133.3 | 1068.4 | 905.4  | 798.3  | 793.8  | 747.0  | 762.1  | 750.0  | 724.3  |
| 47.5° | 1196.7 | 1210.2 | 1205.7 | 1169.5 | 1014.1 | 890.3  | 876.7  | 816.4  | 839.0  | 827.0  | 801.3  |
| 50°   | 1264.6 | 1272.1 | 1267.6 | 1243.4 | 1115.2 | 996.0  | 970.3  | 908.4  | 934.1  | 932.6  | 919.0  |
| 52.5° | 1324.9 | 1347.6 | 1321.9 | 1320.4 | 1260.0 | 1110.6 | 1066.9 | 1008.0 | 1050.3 | 1066.9 | 1065.4 |
| 55°   | 1395.9 | 1414.0 | 1406.4 | 1403.4 | 1389.8 | 1222.3 | 1183.1 | 1112.2 | 1183.1 | 1207.2 | 1228.4 |
| 57.5° | 1456.2 | 1454.7 | 1483.4 | 1518.1 | 1534.7 | 1350.6 | 1303.8 | 1220.8 | 1327.9 | 1355.1 | 1414.0 |
| 60°   | 1483.4 | 1509.0 | 1557.3 | 1644.8 | 1691.6 | 1487.9 | 1439.6 | 1373.2 | 1474.3 | 1495.5 | 1604.1 |
| 62.5° | 1501.5 | 1524.1 | 1617.7 | 1765.6 | 1792.7 | 1628.2 | 1583.0 | 1516.6 | 1634.3 | 1649.4 | 1810.8 |
| 65°   | 1451.7 | 1472.8 | 1658.4 | 1810.8 | 1907.4 | 1779.2 | 1768.6 | 1699.2 | 1794.2 | 1803.3 | 2028.1 |
| 67.5° | 1394.3 | 1417.0 | 1623.7 | 1868.2 | 2059.8 | 1979.9 | 1963.3 | 1880.3 | 1952.7 | 1942.1 | 2194.1 |
| 70°   | 1293.2 | 1323.4 | 1534.7 | 1918.0 | 2228.8 | 2260.5 | 2227.3 | 2109.6 | 2117.2 | 2017.6 | 2201.7 |
| 72.5° | 985.4  | 1005.0 | 1201.2 | 1720.3 | 2307.3 | 2649.9 | 2592.5 | 2357.1 | 2271.1 | 2032.7 | 1943.6 |
| 75°   | 467.8  | 504.0  | 670.0  | 1137.8 | 2022.1 | 2668.0 | 2705.7 | 2479.3 | 2189.6 | 1803.3 | 1377.7 |
| 77.5° | 135.8  | 135.8  | 203.7  | 482.9  | 1267.6 | 2150.4 | 2221.3 | 2105.1 | 1806.3 | 1335.5 | 724.3  |
| 80°   | 73.9   | 78.5   | 107.1  | 170.5  | 556.8  | 1356.6 | 1459.2 | 1395.9 | 1063.9 | 528.2  | 187.1  |
| 82.5° | 42.3   | 43.8   | 70.9   | 102.6  | 253.5  | 737.9  | 798.3  | 724.3  | 404.4  | 160.0  | 87.5   |
| 85°   | 24.1   | 25.7   | 40.7   | 67.9   | 150.9  | 271.6  | 295.8  | 256.5  | 163.0  | 107.1  | 43.8   |
| 87.5° | 12.1   | 12.1   | 19.6   | 31.7   | 77.0   | 77.0   | 75.5   | 92.1   | 98.1   | 64.9   | 19.6   |
| 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°    | 439.1  | 439.1  | 439.1 | 439.1 | 439.1 | 439.1 | 439.1 | 439.1 | 439.1 | 439.1 | 439.1 |
| 2.5°  | 439.1  | 437.6  | 437.6 | 431.6 | 430.1 | 425.5 | 425.5 | 422.5 | 421.0 | 425.5 | 425.5 |
| 5°    | 440.6  | 433.1  | 431.6 | 425.5 | 427.1 | 424.0 | 430.1 | 427.1 | 425.5 | 425.5 | 424.0 |
| 7.5°  | 443.7  | 436.1  | 430.1 | 425.5 | 424.0 | 428.6 | 436.1 | 436.1 | 445.2 | 440.6 | 440.6 |
| 10°   | 451.2  | 446.7  | 439.1 | 436.1 | 436.1 | 440.6 | 449.7 | 455.7 | 463.3 | 463.3 | 458.7 |
| 12.5° | 469.3  | 461.8  | 452.7 | 448.2 | 454.2 | 458.7 | 467.8 | 473.8 | 482.9 | 485.9 | 482.9 |
| 15°   | 482.9  | 475.3  | 472.3 | 469.3 | 473.8 | 479.9 | 487.4 | 493.5 | 504.0 | 507.0 | 505.5 |
| 17.5° | 501.0  | 491.9  | 490.4 | 491.9 | 495.0 | 499.5 | 504.0 | 508.5 | 516.1 | 516.1 | 516.1 |
| 20°   | 510.1  | 507.0  | 505.5 | 510.1 | 516.1 | 522.1 | 519.1 | 516.1 | 514.6 | 517.6 | 516.1 |
| 22.5° | 526.7  | 523.6  | 525.1 | 529.7 | 529.7 | 526.7 | 522.1 | 511.6 | 508.5 | 511.6 | 508.5 |
| 25°   | 541.7  | 538.7  | 538.7 | 535.7 | 534.2 | 523.6 | 514.6 | 505.5 | 495.0 | 499.5 | 498.0 |
| 27.5° | 556.8  | 555.3  | 555.3 | 543.3 | 528.2 | 510.1 | 498.0 | 487.4 | 481.4 | 488.9 | 484.4 |
| 30°   | 574.9  | 576.5  | 568.9 | 540.2 | 504.0 | 484.4 | 470.8 | 469.3 | 467.8 | 472.3 | 470.8 |
| 32.5° | 591.5  | 593.1  | 581.0 | 535.7 | 485.9 | 448.2 | 434.6 | 436.1 | 443.7 | 451.2 | 458.7 |
| 35°   | 600.6  | 608.1  | 593.1 | 520.6 | 449.7 | 407.4 | 392.3 | 405.9 | 419.5 | 430.1 | 437.6 |
| 37.5° | 617.2  | 636.8  | 611.2 | 504.0 | 418.0 | 371.2 | 360.7 | 365.2 | 381.8 | 398.4 | 405.9 |
| 40°   | 641.3  | 664.0  | 615.7 | 472.3 | 375.7 | 335.0 | 329.0 | 330.5 | 336.5 | 347.1 | 354.6 |
| 42.5° | 683.6  | 707.7  | 620.2 | 431.6 | 333.5 | 312.4 | 295.8 | 291.2 | 286.7 | 286.7 | 285.2 |
| 45°   | 745.5  | 768.1  | 614.2 | 380.3 | 291.2 | 276.2 | 264.1 | 253.5 | 241.4 | 221.8 | 224.8 |
| 47.5° | 836.0  | 854.1  | 618.7 | 335.0 | 252.0 | 239.9 | 230.9 | 218.8 | 200.7 | 179.6 | 178.1 |
| 50°   | 973.3  | 946.2  | 612.7 | 288.2 | 223.3 | 212.8 | 205.2 | 188.6 | 167.5 | 152.4 | 150.9 |
| 52.5° | 1133.3 | 1079.0 | 606.6 | 249.0 | 199.2 | 190.1 | 184.1 | 166.0 | 146.4 | 138.8 | 137.3 |
| 55°   | 1326.4 | 1248.0 | 615.7 | 214.3 | 181.1 | 173.5 | 167.5 | 150.9 | 135.8 | 129.8 | 128.3 |
| 57.5° | 1554.3 | 1430.6 | 665.5 | 187.1 | 161.5 | 158.4 | 156.9 | 143.4 | 129.8 | 125.2 | 123.7 |
| 60°   | 1768.6 | 1605.6 | 698.7 | 167.5 | 143.4 | 146.4 | 149.4 | 143.4 | 128.3 | 125.2 | 125.2 |
| 62.5° | 1948.2 | 1750.5 | 645.9 | 150.9 | 134.3 | 143.4 | 156.9 | 152.4 | 146.4 | 149.4 | 146.4 |
| 65°   | 2106.6 | 1800.3 | 482.9 | 141.8 | 129.8 | 150.9 | 173.5 | 172.0 | 158.4 | 161.5 | 160.0 |
| 67.5° | 2133.8 | 1739.9 | 315.4 | 134.3 | 126.8 | 166.0 | 194.7 | 176.6 | 149.4 | 149.4 | 144.9 |
| 70°   | 2020.6 | 1578.4 | 211.3 | 126.8 | 125.2 | 166.0 | 199.2 | 166.0 | 140.3 | 140.3 | 134.3 |
| 72.5° | 1658.4 | 1261.6 | 163.0 | 119.2 | 114.7 | 147.9 | 188.6 | 156.9 | 131.3 | 128.3 | 117.7 |
| 75°   | 1089.5 | 813.4  | 132.8 | 113.2 | 99.6  | 129.8 | 170.5 | 144.9 | 125.2 | 116.2 | 111.7 |
| 77.5° | 534.2  | 365.2  | 111.7 | 99.6  | 86.0  | 113.2 | 155.4 | 137.3 | 117.7 | 108.7 | 105.6 |
| 80°   | 146.4  | 131.3  | 93.6  | 87.5  | 72.4  | 98.1  | 146.4 | 131.3 | 110.2 | 101.1 | 96.6  |
| 82.5° | 83.0   | 81.5   | 75.5  | 70.9  | 60.4  | 98.1  | 147.9 | 131.3 | 104.1 | 102.6 | 87.5  |
| 85°   | 45.3   | 48.3   | 54.3  | 52.8  | 46.8  | 87.5  | 140.3 | 114.7 | 84.5  | 70.9  | 70.9  |
| 87.5° | 18.1   | 22.6   | 27.2  | 30.2  | 31.7  | 64.9  | 105.6 | 87.5  | 64.9  | 54.3  | 54.3  |
| 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)