

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: P675671

Luminaire Tested: **CCW-SA-2A-727-U-SL4**

Issue Date: 04/25/2023

**Test Information**

Test Method: LM-79-08  
Report Number: P675671  
Test Lab: INNOVATION CENTER(G1)  
Issue Date: 04/25/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: CCW-SA-2A-727-U-SL4  
Description: INVUE CLEAR CURVE Wall Pack MOUNT LIGHT SQUARE LUMINAIRE @350mA w/  
SL4 distribution lens  
Light Source: (32) 2700K CCT, 70 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

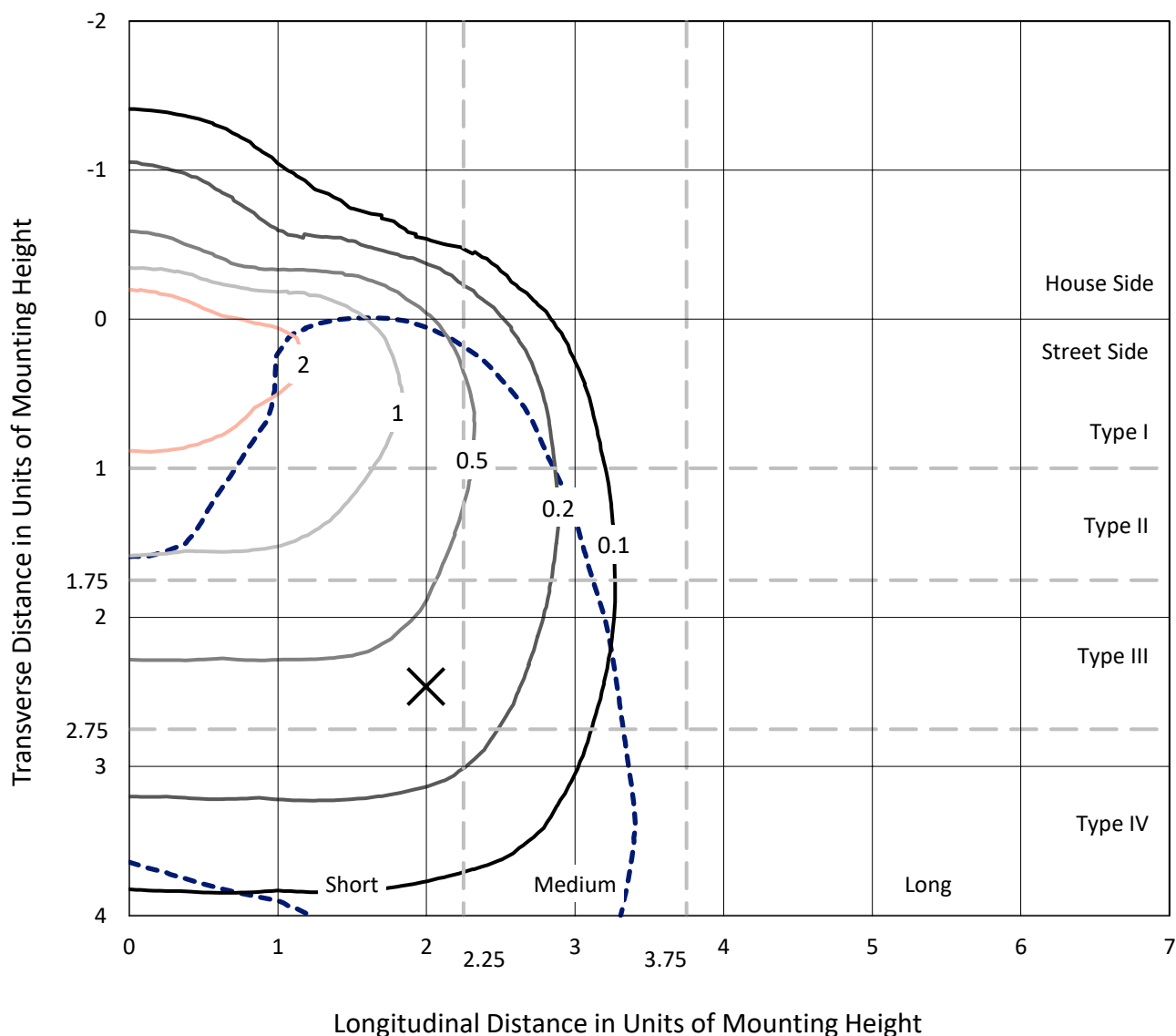
Lumens per Lamp: N/A  
Luminaire Lumens: 4484 lumens  
Efficiency: N/A  
Efficacy: 123.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

Input Watts (W): 36.2  
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

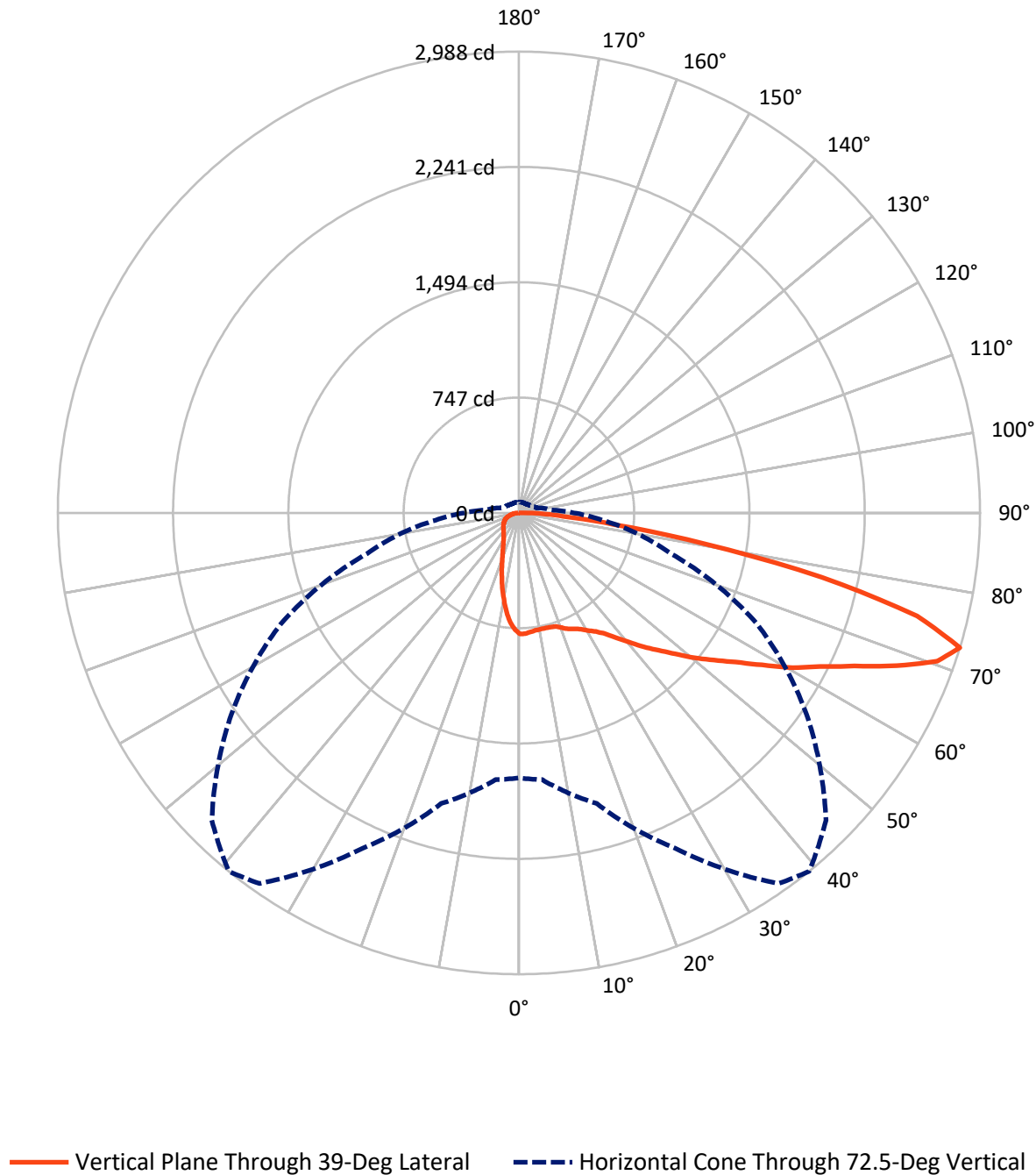
× Max cd  
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 3.5 fc  
 Type IV - Short - N/A

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## Luminous Intensity Polar Plot



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 666.4    | 0.0    | 666.4  |
|                    | % Fixture | 14.9     | 0.0    | 14.9   |
| <b>Street Side</b> | Lumens    | 3817.6   | 0.0    | 3817.6 |
|                    | % Fixture | 85.1     | 0.0    | 85.1   |
| <b>Total</b>       | Lumens    | 4484.0   | 0.0    | 4484.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 69.3   | 1.5       |
| 10°-20°   | 177.0  | 3.9       |
| 20°-30°   | 269.7  | 6.0       |
| 30°-40°   | 394.5  | 8.8       |
| 40°-50°   | 604.0  | 13.5      |
| 50°-60°   | 885.8  | 19.8      |
| 60°-70°   | 1129.7 | 25.2      |
| 70°-80°   | 816.3  | 18.2      |
| 80°-90°   | 137.7  | 3.1       |
| 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°    | 4484.0 | 100.0     |
| 0°-180°   | 4484.0 | 100.0     |

**Coefficient of Utilization**



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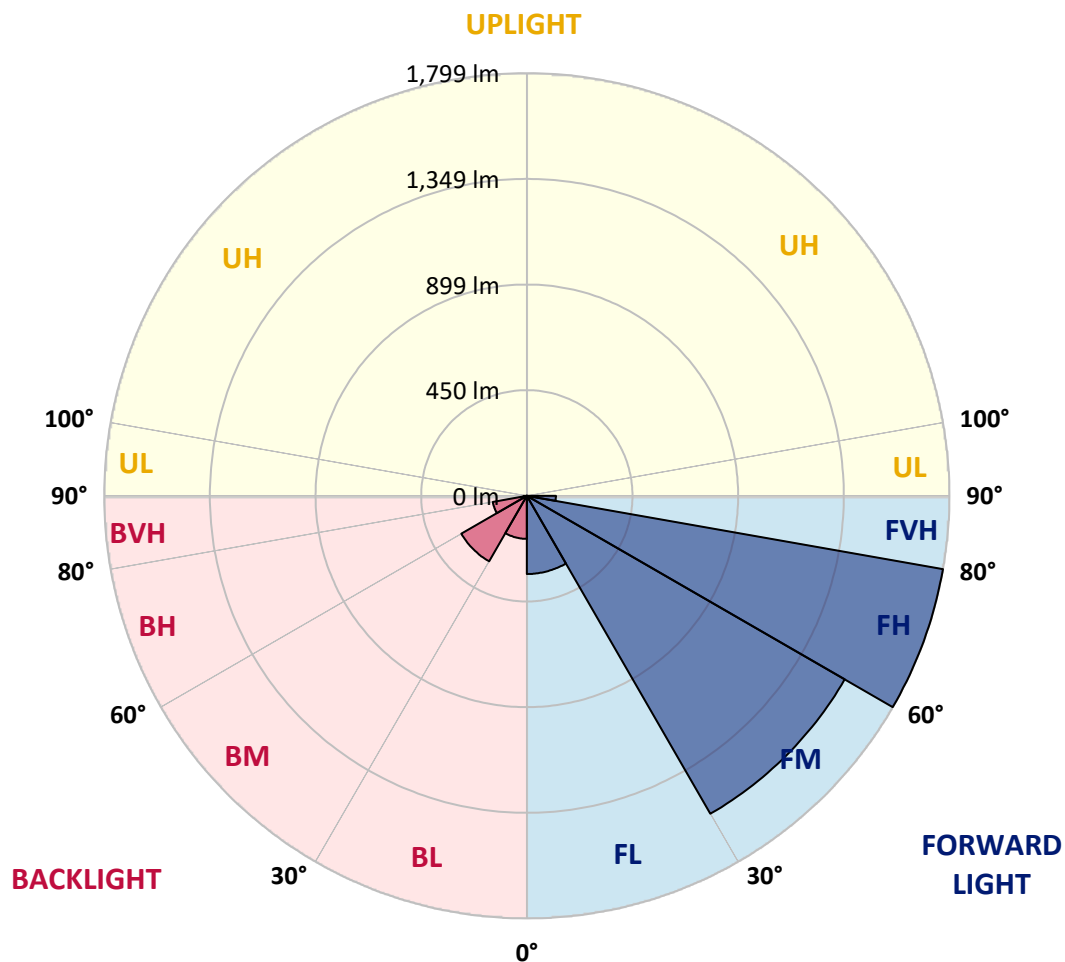
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 332.8  | 7.4       |                         |      |         |
| FM   | (30°-60°)   | 1562.3 | 34.8      |                         |      |         |
| FH   | (60°-80°)   | 1798.7 | 40.1      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 123.7  | 2.8       |                         |      | G2/225  |
| BL   | (0°-30°)    | 183.3  | 4.1       | B1/500                  |      |         |
| BM   | (30°-60°)   | 321.9  | 7.2       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 147.2  | 3.3       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 13.9   | 0.3       |                         |      | 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°    | 784.9  | 784.9  | 784.9  | 784.9  | 784.9  | 784.9  | 784.9  | 784.9  | 784.9  | 784.9  | 784.9  |
| 2.5°  | 796.7  | 798.4  | 795.0  | 791.6  | 790.0  | 783.2  | 790.0  | 786.6  | 783.2  | 783.2  | 783.2  |
| 5°    | 786.6  | 788.3  | 788.3  | 784.9  | 786.6  | 774.8  | 773.1  | 774.8  | 769.7  | 766.4  | 764.7  |
| 7.5°  | 771.4  | 774.8  | 781.5  | 779.9  | 773.1  | 768.1  | 769.7  | 768.1  | 759.6  | 754.6  | 741.1  |
| 10°   | 759.6  | 763.0  | 766.4  | 769.7  | 768.1  | 766.4  | 764.7  | 758.0  | 756.3  | 744.5  | 731.0  |
| 12.5° | 747.9  | 747.9  | 749.5  | 763.0  | 764.7  | 764.7  | 754.6  | 754.6  | 749.5  | 747.9  | 727.6  |
| 15°   | 736.1  | 741.1  | 754.6  | 758.0  | 764.7  | 768.1  | 763.0  | 763.0  | 754.6  | 742.8  | 727.6  |
| 17.5° | 739.4  | 747.9  | 761.3  | 769.7  | 773.1  | 773.1  | 779.9  | 774.8  | 763.0  | 756.3  | 741.1  |
| 20°   | 756.3  | 758.0  | 774.8  | 790.0  | 793.3  | 793.3  | 786.6  | 781.5  | 773.1  | 761.3  | 741.1  |
| 22.5° | 766.4  | 778.2  | 798.4  | 806.8  | 816.9  | 816.9  | 808.5  | 796.7  | 784.9  | 773.1  | 751.2  |
| 25°   | 810.2  | 811.9  | 820.3  | 833.8  | 838.8  | 832.1  | 823.6  | 810.2  | 795.0  | 783.2  | 763.0  |
| 27.5° | 840.5  | 848.9  | 859.0  | 865.8  | 857.3  | 852.3  | 845.5  | 830.4  | 818.6  | 808.5  | 779.9  |
| 30°   | 896.1  | 886.0  | 892.7  | 896.1  | 880.9  | 884.3  | 865.8  | 852.3  | 838.8  | 838.8  | 806.8  |
| 32.5° | 929.8  | 938.2  | 931.4  | 929.8  | 918.0  | 916.3  | 904.5  | 889.3  | 880.9  | 891.0  | 847.2  |
| 35°   | 988.7  | 983.7  | 983.7  | 982.0  | 968.5  | 960.1  | 960.1  | 933.1  | 941.6  | 963.4  | 909.5  |
| 37.5° | 1019.0 | 1017.3 | 1027.5 | 1035.9 | 1022.4 | 1027.5 | 1022.4 | 1010.6 | 1014.0 | 1052.7 | 987.0  |
| 40°   | 1049.3 | 1061.1 | 1081.4 | 1084.7 | 1093.1 | 1099.9 | 1096.5 | 1094.8 | 1108.3 | 1170.6 | 1091.5 |
| 42.5° | 1078.0 | 1088.1 | 1118.4 | 1145.4 | 1165.6 | 1187.5 | 1189.1 | 1189.1 | 1232.9 | 1322.2 | 1217.8 |
| 45°   | 1115.0 | 1123.5 | 1165.6 | 1219.5 | 1253.2 | 1268.3 | 1281.8 | 1296.9 | 1355.9 | 1462.0 | 1352.5 |
| 47.5° | 1165.6 | 1172.3 | 1222.8 | 1290.2 | 1355.9 | 1364.3 | 1391.3 | 1408.1 | 1497.4 | 1605.2 | 1490.6 |
| 50°   | 1238.0 | 1232.9 | 1273.4 | 1371.1 | 1435.1 | 1475.5 | 1514.2 | 1544.5 | 1632.1 | 1750.0 | 1598.4 |
| 52.5° | 1296.9 | 1296.9 | 1327.3 | 1457.0 | 1544.5 | 1583.3 | 1623.7 | 1665.8 | 1766.9 | 1894.9 | 1686.0 |
| 55°   | 1398.0 | 1387.9 | 1406.4 | 1541.2 | 1667.5 | 1704.6 | 1782.0 | 1817.4 | 1915.1 | 2002.7 | 1760.1 |
| 57.5° | 1467.1 | 1472.1 | 1494.0 | 1652.3 | 1812.4 | 1857.8 | 1935.3 | 1960.6 | 2046.5 | 2115.5 | 1814.0 |
| 60°   | 1558.0 | 1541.2 | 1588.3 | 1775.3 | 1972.4 | 2036.4 | 2100.4 | 2115.5 | 2179.5 | 2188.0 | 1839.3 |
| 62.5° | 1645.6 | 1642.2 | 1682.7 | 1898.3 | 2144.2 | 2189.7 | 2255.3 | 2272.2 | 2299.1 | 2245.2 | 1803.9 |
| 65°   | 1699.5 | 1721.4 | 1797.2 | 2033.0 | 2339.6 | 2390.1 | 2455.8 | 2422.1 | 2391.8 | 2194.7 | 1630.4 |
| 67.5° | 1773.6 | 1783.7 | 1899.9 | 2179.5 | 2565.3 | 2641.1 | 2698.3 | 2565.3 | 2339.6 | 1987.5 | 1372.7 |
| 70°   | 1790.5 | 1817.4 | 1969.0 | 2332.8 | 2797.7 | 2875.2 | 2878.6 | 2516.4 | 2149.2 | 1617.0 | 995.4  |
| 72.5° | 1716.4 | 1734.9 | 1948.8 | 2396.8 | 2930.8 | 2988.0 | 2814.5 | 2275.6 | 1702.9 | 1019.0 | 542.4  |
| 75°   | 1443.5 | 1495.7 | 1696.1 | 2199.8 | 2686.5 | 2664.6 | 2385.0 | 1736.6 | 1022.4 | 451.4  | 229.1  |
| 77.5° | 1005.6 | 1007.2 | 1216.1 | 1600.1 | 2011.1 | 2006.1 | 1701.2 | 1007.2 | 437.9  | 181.9  | 134.7  |
| 80°   | 446.4  | 478.4  | 604.7  | 862.4  | 1221.2 | 1221.2 | 992.1  | 500.3  | 219.0  | 117.9  | 92.6   |
| 82.5° | 262.8  | 272.9  | 323.4  | 402.6  | 594.6  | 626.6  | 475.0  | 333.5  | 149.9  | 74.1   | 57.3   |
| 85°   | 193.7  | 210.5  | 240.9  | 242.5  | 281.3  | 286.3  | 262.8  | 289.7  | 102.7  | 40.4   | 47.2   |
| 87.5° | 144.9  | 155.0  | 192.0  | 160.0  | 149.9  | 141.5  | 161.7  | 296.4  | 38.7   | 20.2   | 15.2   |
| 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):**

|       | 90°    | 95°    | 105°  | 115°  | 125°  | 135°  | 145°  | 155°  | 165°  | 175°  | 180°  |
|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 784.9  | 784.9  | 784.9 | 784.9 | 784.9 | 784.9 | 784.9 | 784.9 | 784.9 | 784.9 | 784.9 |
| 2.5°  | 776.5  | 776.5  | 773.1 | 766.4 | 766.4 | 752.9 | 756.3 | 759.6 | 751.2 | 751.2 | 752.9 |
| 5°    | 764.7  | 758.0  | 749.5 | 739.4 | 732.7 | 714.2 | 710.8 | 699.0 | 697.3 | 694.0 | 688.9 |
| 7.5°  | 741.1  | 731.0  | 715.8 | 700.7 | 678.8 | 661.9 | 641.7 | 624.9 | 618.2 | 613.1 | 611.4 |
| 10°   | 719.2  | 717.5  | 692.3 | 661.9 | 628.3 | 596.3 | 565.9 | 544.0 | 530.6 | 522.1 | 520.5 |
| 12.5° | 719.2  | 705.7  | 670.4 | 628.3 | 579.4 | 532.3 | 493.5 | 463.2 | 444.7 | 431.2 | 426.1 |
| 15°   | 715.8  | 702.4  | 655.2 | 591.2 | 535.6 | 471.6 | 417.7 | 385.7 | 358.8 | 345.3 | 347.0 |
| 17.5° | 719.2  | 699.0  | 633.3 | 564.3 | 486.8 | 417.7 | 353.7 | 315.0 | 288.0 | 277.9 | 276.2 |
| 20°   | 720.9  | 695.6  | 616.5 | 527.2 | 436.2 | 358.8 | 298.1 | 261.1 | 240.9 | 234.1 | 234.1 |
| 22.5° | 717.5  | 685.5  | 591.2 | 483.4 | 392.5 | 309.9 | 259.4 | 227.4 | 213.9 | 205.5 | 208.9 |
| 25°   | 732.7  | 683.8  | 567.6 | 446.4 | 341.9 | 269.5 | 230.8 | 207.2 | 198.8 | 193.7 | 195.4 |
| 27.5° | 736.1  | 683.8  | 549.1 | 404.2 | 298.1 | 239.2 | 208.9 | 193.7 | 187.0 | 183.6 | 181.9 |
| 30°   | 749.5  | 687.2  | 527.2 | 362.1 | 262.8 | 215.6 | 192.0 | 183.6 | 178.5 | 176.9 | 176.9 |
| 32.5° | 786.6  | 697.3  | 503.6 | 326.8 | 232.4 | 195.4 | 180.2 | 173.5 | 170.1 | 168.4 | 170.1 |
| 35°   | 830.4  | 724.3  | 478.4 | 289.7 | 210.5 | 181.9 | 170.1 | 165.1 | 163.4 | 163.4 | 163.4 |
| 37.5° | 897.8  | 764.7  | 456.5 | 259.4 | 192.0 | 168.4 | 160.0 | 158.3 | 156.6 | 158.3 | 158.3 |
| 40°   | 975.2  | 808.5  | 436.2 | 235.8 | 178.5 | 160.0 | 151.6 | 151.6 | 149.9 | 151.6 | 153.3 |
| 42.5° | 1064.5 | 862.4  | 416.0 | 212.2 | 166.8 | 153.3 | 146.5 | 144.9 | 143.2 | 146.5 | 148.2 |
| 45°   | 1187.5 | 936.5  | 402.6 | 198.8 | 158.3 | 146.5 | 139.8 | 139.8 | 138.1 | 138.1 | 141.5 |
| 47.5° | 1290.2 | 1007.2 | 402.6 | 185.3 | 153.3 | 141.5 | 134.7 | 134.7 | 131.4 | 133.1 | 133.1 |
| 50°   | 1376.1 | 1067.9 | 411.0 | 181.9 | 146.5 | 136.4 | 131.4 | 128.0 | 126.3 | 126.3 | 126.3 |
| 52.5° | 1433.4 | 1104.9 | 417.7 | 178.5 | 143.2 | 129.7 | 126.3 | 124.6 | 121.3 | 119.6 | 121.3 |
| 55°   | 1490.6 | 1130.2 | 419.4 | 178.5 | 138.1 | 123.0 | 119.6 | 119.6 | 116.2 | 114.5 | 114.5 |
| 57.5° | 1512.5 | 1120.1 | 395.8 | 175.2 | 134.7 | 117.9 | 114.5 | 112.9 | 111.2 | 109.5 | 109.5 |
| 60°   | 1502.4 | 1083.0 | 343.6 | 166.8 | 131.4 | 114.5 | 107.8 | 107.8 | 107.8 | 104.4 | 106.1 |
| 62.5° | 1433.4 | 956.7  | 276.2 | 153.3 | 126.3 | 107.8 | 101.1 | 104.4 | 104.4 | 102.7 | 102.7 |
| 65°   | 1251.5 | 790.0  | 224.0 | 141.5 | 119.6 | 102.7 | 96.0  | 101.1 | 102.7 | 101.1 | 99.4  |
| 67.5° | 1000.5 | 608.0  | 185.3 | 128.0 | 111.2 | 94.3  | 89.3  | 94.3  | 96.0  | 94.3  | 94.3  |
| 70°   | 687.2  | 392.5  | 149.9 | 114.5 | 99.4  | 85.9  | 80.8  | 84.2  | 84.2  | 85.9  | 85.9  |
| 72.5° | 355.4  | 212.2  | 123.0 | 97.7  | 85.9  | 77.5  | 72.4  | 72.4  | 70.7  | 70.7  | 70.7  |
| 75°   | 176.9  | 144.9  | 102.7 | 82.5  | 72.4  | 65.7  | 62.3  | 59.0  | 59.0  | 59.0  | 59.0  |
| 77.5° | 123.0  | 111.2  | 84.2  | 65.7  | 59.0  | 53.9  | 53.9  | 48.8  | 48.8  | 48.8  | 48.8  |
| 80°   | 92.6   | 87.6   | 64.0  | 50.5  | 45.5  | 42.1  | 42.1  | 40.4  | 40.4  | 38.7  | 38.7  |
| 82.5° | 65.7   | 70.7   | 48.8  | 37.1  | 33.7  | 32.0  | 32.0  | 30.3  | 30.3  | 26.9  | 26.9  |
| 85°   | 52.2   | 59.0   | 37.1  | 26.9  | 25.3  | 21.9  | 21.9  | 20.2  | 20.2  | 18.5  | 16.8  |
| 87.5° | 15.2   | 32.0   | 15.2  | 10.1  | 10.1  | 10.1  | 10.1  | 8.4   | 8.4   | 6.7   | 6.7   |
| 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)