

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: P597008

Luminaire Tested: **MSA-SA3A-835-U-SL2**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P597008  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3A-835-U-SL2  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9607 lumens  
Efficiency: N/A  
Efficacy: 100.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B2 - U0 - G3

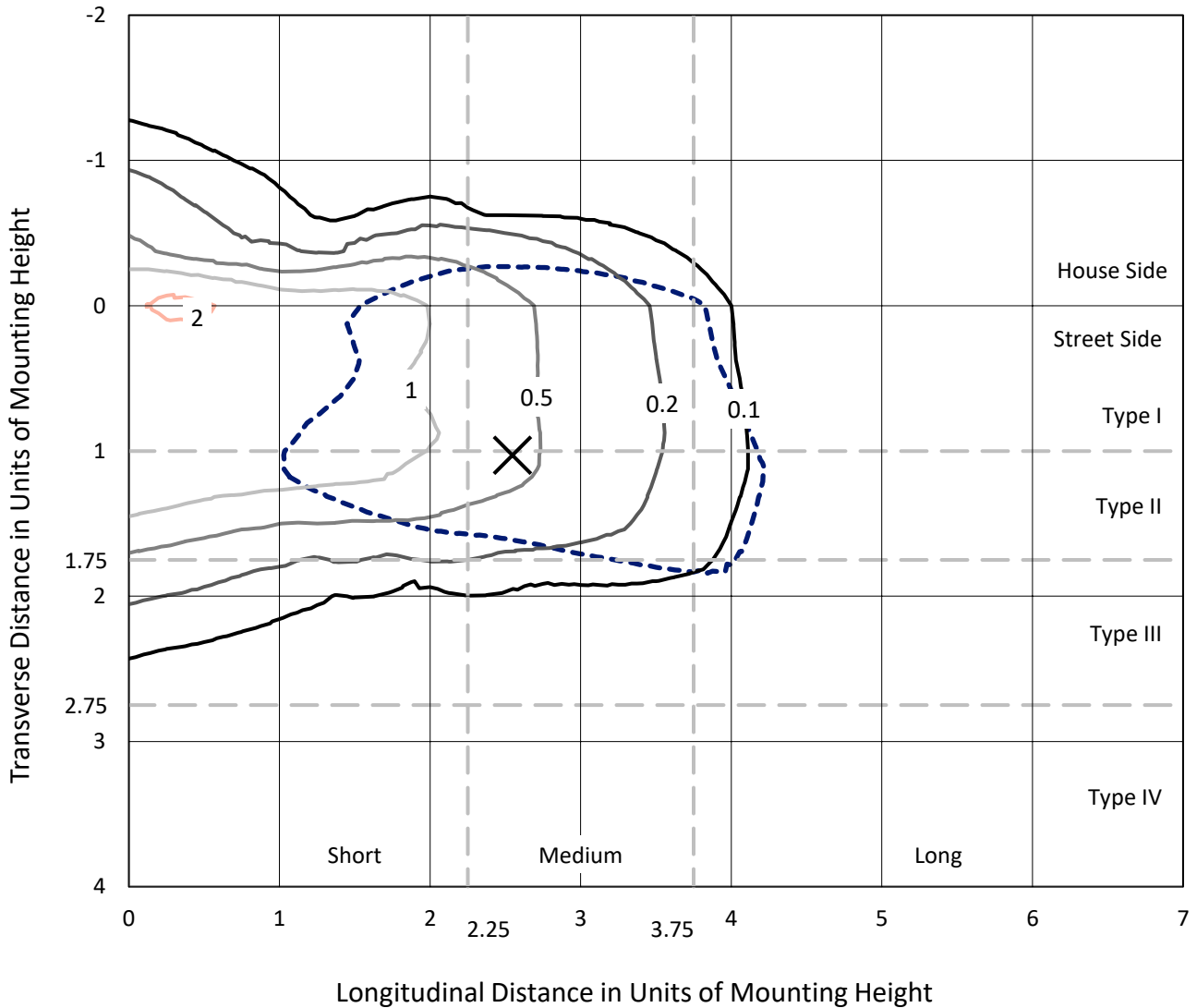
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

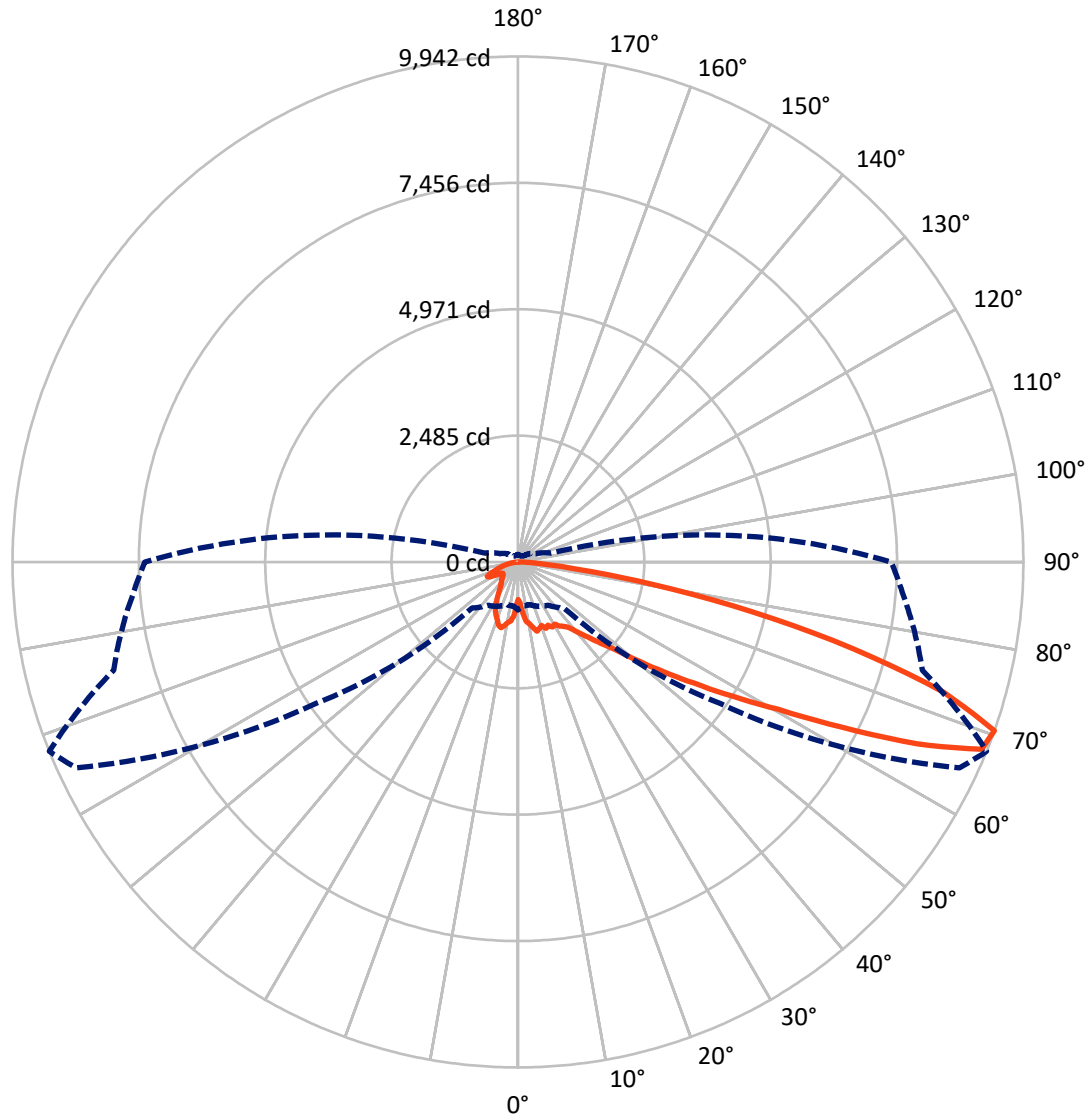
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.3 fc  
 Type III - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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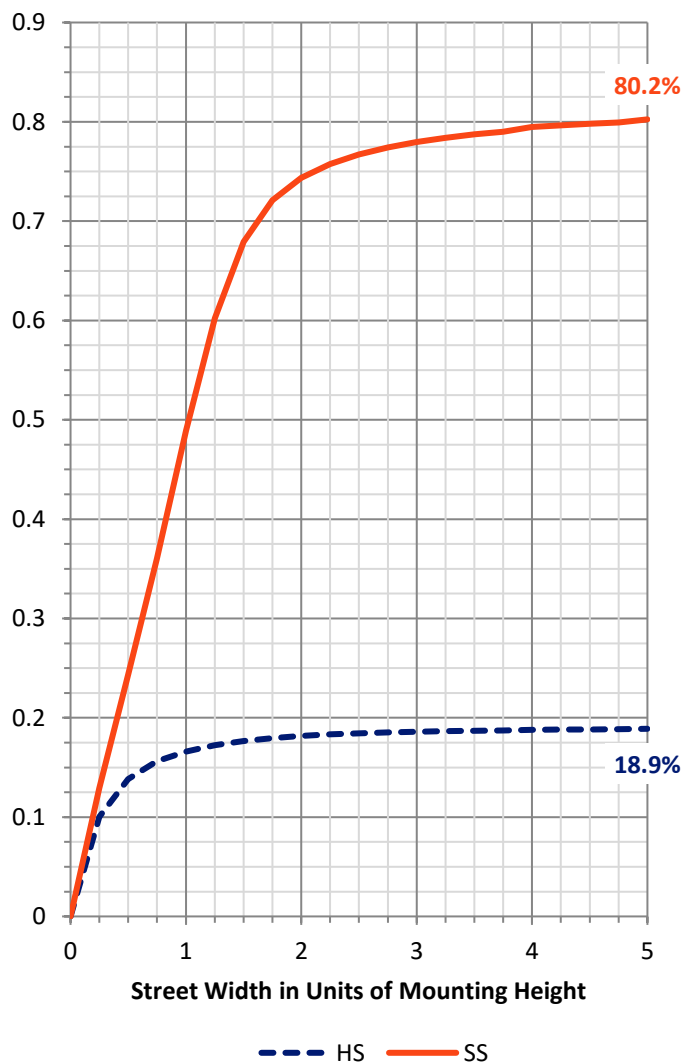
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 1834.2   | 0.0    | 1834.2 |
|                    | % Fixture | 19.1     | 0.0    | 19.1   |
| <b>Street Side</b> | Lumens    | 7772.8   | 0.0    | 7772.8 |
|                    | % Fixture | 80.9     | 0.0    | 80.9   |
| <b>Total</b>       | Lumens    | 9607.0   | 0.0    | 9607.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 98.4   | 1.0       |
| 10°-20°   | 320.6  | 3.3       |
| 20°-30°   | 487.8  | 5.1       |
| 30°-40°   | 745.0  | 7.8       |
| 40°-50°   | 1281.0 | 13.3      |
| 50°-60°   | 2120.4 | 22.1      |
| 60°-70°   | 2614.1 | 27.2      |
| 70°-80°   | 1679.3 | 17.5      |
| 80°-90°   | 260.5  | 2.7       |
| 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°    | 9607.0 | 100.0     |
| 0°-180°   | 9607.0 | 100.0     |

**Coefficient of Utilization**



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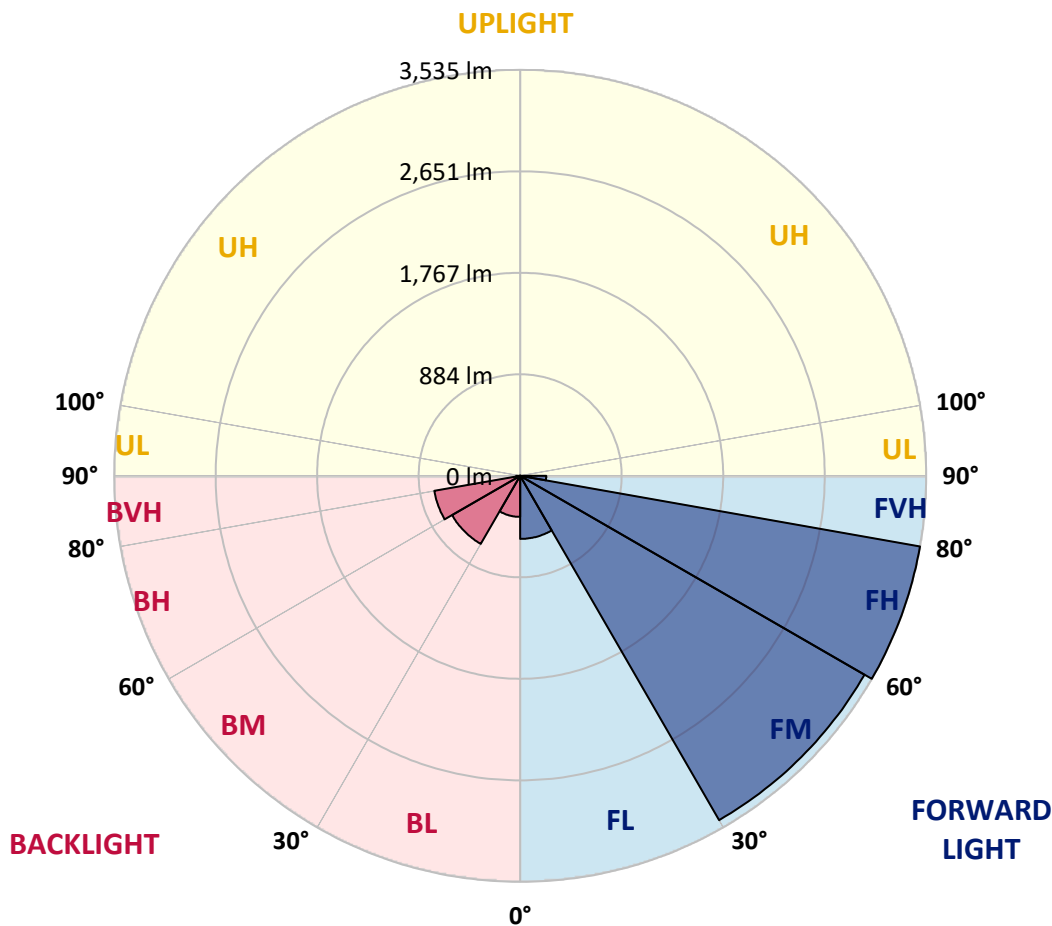
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 549.4  | 5.7       |                         |      |         |
| FM (30°-60°)   | 3461.8 | 36.0      |                         |      |         |
| FH (60°-80°)   | 3534.6 | 36.8      |                         |      | G2/5000 |
| FVH (80°-90°)  | 227.0  | 2.4       |                         |      | G3/500  |
| BL (0°-30°)    | 357.4  | 3.7       | B1/500                  |      |         |
| BM (30°-60°)   | 684.6  | 7.1       | B1/1000                 |      |         |
| BH (60°-80°)   | 758.7  | 7.9       | B2/1000                 |      | G2/1000 |
| BVH (80°-90°)  | 33.4   | 0.3       |                         |      | G1/100  |
| UL (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B2-U0-G3**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 68°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 736.6  | 736.6  | 736.6  | 736.6  | 736.6  | 736.6  | 736.6  | 736.6  | 736.6  | 736.6  | 736.6  |
| 2.5°  | 846.4  | 812.2  | 777.6  | 794.5  | 821.4  | 845.2  | 840.3  | 843.2  | 810.6  | 806.2  | 891.8  |
| 5°    | 997.1  | 938.4  | 937.2  | 938.0  | 940.5  | 913.1  | 979.9  | 1014.4 | 1022.1 | 1057.5 | 1141.5 |
| 7.5°  | 1049.4 | 1025.7 | 1001.6 | 1013.6 | 983.1  | 985.9  | 1067.9 | 1158.0 | 1179.3 | 1205.0 | 1320.0 |
| 10°   | 1038.6 | 1016.0 | 1023.3 | 1025.3 | 1030.9 | 1076.4 | 1129.0 | 1215.5 | 1233.6 | 1315.6 | 1345.3 |
| 12.5° | 1040.2 | 1036.1 | 1069.9 | 1071.1 | 1131.4 | 1213.1 | 1234.0 | 1313.6 | 1320.8 | 1381.1 | 1505.4 |
| 15°   | 1095.3 | 1123.0 | 1104.1 | 1114.2 | 1125.8 | 1223.5 | 1253.7 | 1367.9 | 1411.3 | 1488.9 | 1582.2 |
| 17.5° | 1202.6 | 1210.6 | 1154.0 | 1139.1 | 1177.3 | 1207.0 | 1275.8 | 1325.2 | 1370.7 | 1587.4 | 1716.1 |
| 20°   | 1227.5 | 1249.2 | 1181.7 | 1104.9 | 1185.7 | 1227.1 | 1275.0 | 1297.5 | 1332.9 | 1601.9 | 1784.4 |
| 22.5° | 1334.5 | 1289.5 | 1207.8 | 1141.1 | 1167.6 | 1207.8 | 1242.4 | 1327.3 | 1420.1 | 1560.5 | 1852.8 |
| 25°   | 1395.2 | 1369.1 | 1296.3 | 1224.7 | 1202.2 | 1203.4 | 1270.2 | 1346.1 | 1378.3 | 1621.2 | 1866.4 |
| 27.5° | 1542.0 | 1500.1 | 1336.5 | 1322.8 | 1238.0 | 1172.1 | 1274.6 | 1392.8 | 1449.1 | 1573.7 | 1933.2 |
| 30°   | 1725.7 | 1693.9 | 1479.2 | 1461.1 | 1331.7 | 1216.7 | 1330.9 | 1427.4 | 1419.3 | 1604.7 | 1979.4 |
| 32.5° | 1874.5 | 1927.6 | 1710.8 | 1568.1 | 1476.0 | 1365.9 | 1313.2 | 1421.3 | 1501.4 | 1676.7 | 2057.8 |
| 35°   | 2086.8 | 2136.6 | 1891.4 | 1794.9 | 1595.0 | 1435.0 | 1436.6 | 1504.2 | 1553.6 | 1760.7 | 2145.5 |
| 37.5° | 2454.3 | 2410.4 | 2213.0 | 2060.6 | 1932.8 | 1693.9 | 1622.4 | 1598.7 | 1638.5 | 1863.6 | 2317.2 |
| 40°   | 2719.2 | 2682.2 | 2449.8 | 2363.0 | 2114.1 | 1975.4 | 1779.2 | 1756.7 | 1827.0 | 1969.8 | 2457.5 |
| 42.5° | 3033.3 | 2967.3 | 2751.0 | 2679.4 | 2419.3 | 2169.2 | 1971.4 | 1984.2 | 2018.4 | 2170.0 | 2647.3 |
| 45°   | 3352.9 | 3192.9 | 3070.3 | 3064.6 | 2890.9 | 2545.5 | 2279.8 | 2269.3 | 2270.5 | 2464.7 | 2860.4 |
| 47.5° | 3606.6 | 3462.7 | 3322.4 | 3255.6 | 3168.0 | 3196.5 | 2727.7 | 2605.0 | 2568.1 | 2761.5 | 3180.0 |
| 50°   | 3778.3 | 3612.7 | 3453.8 | 3438.1 | 3672.2 | 3826.2 | 3148.3 | 3017.2 | 3040.1 | 3186.0 | 3606.2 |
| 52.5° | 3781.9 | 3585.3 | 3419.7 | 3529.4 | 4080.7 | 4301.0 | 3872.8 | 3506.5 | 3579.7 | 3679.0 | 4162.3 |
| 55°   | 3519.0 | 3315.1 | 3207.4 | 3457.4 | 4240.3 | 4864.3 | 4890.8 | 4290.6 | 4206.1 | 4242.7 | 4826.9 |
| 57.5° | 2964.5 | 2758.6 | 2695.9 | 2995.5 | 3937.5 | 5407.5 | 6120.4 | 5227.4 | 4979.7 | 4826.9 | 5508.0 |
| 60°   | 2231.5 | 2053.4 | 2014.4 | 2205.4 | 3264.5 | 5247.9 | 7115.9 | 6393.4 | 5888.8 | 5479.5 | 6191.2 |
| 62.5° | 1673.4 | 1545.6 | 1486.9 | 1514.2 | 2258.9 | 4728.8 | 7769.7 | 7866.6 | 7152.1 | 6192.0 | 6858.6 |
| 65°   | 1359.8 | 1256.5 | 1204.2 | 1168.8 | 1404.9 | 3656.5 | 7651.5 | 9106.6 | 8627.7 | 6940.2 | 7378.1 |
| 67.5° | 1135.9 | 1044.2 | 1020.1 | 1054.6 | 1110.5 | 2121.4 | 6726.7 | 9800.2 | 9832.8 | 7678.4 | 7681.7 |
| 70°   | 942.9  | 874.9  | 866.1  | 964.2  | 1037.8 | 1280.2 | 4858.7 | 9582.3 | 9941.7 | 8232.1 | 7610.5 |
| 72.5° | 728.6  | 692.0  | 690.8  | 844.8  | 1030.9 | 1091.2 | 2893.3 | 8277.9 | 8760.8 | 8055.2 | 6914.1 |
| 75°   | 505.4  | 480.1  | 499.4  | 694.4  | 1007.2 | 1106.9 | 1651.3 | 6447.7 | 6809.2 | 6854.6 | 5538.6 |
| 77.5° | 347.8  | 326.5  | 347.4  | 502.2  | 899.4  | 1133.5 | 1155.2 | 4662.1 | 4702.3 | 4596.5 | 3172.4 |
| 80°   | 242.0  | 227.2  | 243.3  | 355.4  | 700.0  | 1121.8 | 983.5  | 2935.2 | 2693.1 | 2051.4 | 1015.6 |
| 82.5° | 150.0  | 145.6  | 163.2  | 253.3  | 492.9  | 1020.5 | 932.0  | 1514.6 | 1156.4 | 566.1  | 362.7  |
| 85°   | 78.8   | 72.4   | 94.9   | 165.3  | 308.4  | 800.9  | 873.3  | 691.2  | 446.3  | 201.0  | 145.6  |
| 87.5° | 23.3   | 20.9   | 36.6   | 66.7   | 130.7  | 359.1  | 499.8  | 293.1  | 166.5  | 59.1   | 45.4   |
| 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°    | 736.6  | 736.6  | 736.6  | 736.6  | 736.6  | 736.6  | 736.6  | 736.6  | 736.6  | 736.6  | 736.6  |
| 2.5°  | 897.8  | 893.4  | 833.9  | 841.5  | 854.4  | 857.6  | 857.2  | 835.5  | 812.6  | 876.5  | 874.5  |
| 5°    | 1143.5 | 1103.7 | 1073.9 | 1067.5 | 1030.9 | 994.3  | 1007.2 | 1002.8 | 997.1  | 1026.1 | 1029.7 |
| 7.5°  | 1320.4 | 1265.3 | 1230.8 | 1141.9 | 1057.5 | 984.3  | 1007.6 | 1014.8 | 1000.4 | 1052.6 | 1068.3 |
| 10°   | 1367.1 | 1323.6 | 1286.2 | 1172.1 | 1125.4 | 1082.8 | 1019.7 | 947.7  | 938.0  | 907.9  | 911.5  |
| 12.5° | 1487.3 | 1481.2 | 1353.8 | 1253.3 | 1192.6 | 1107.7 | 971.4  | 884.2  | 809.4  | 813.0  | 791.3  |
| 15°   | 1582.2 | 1585.4 | 1432.2 | 1291.5 | 1128.6 | 999.2  | 838.7  | 730.2  | 653.4  | 638.1  | 622.4  |
| 17.5° | 1709.6 | 1703.2 | 1438.6 | 1245.6 | 1039.4 | 849.6  | 653.0  | 545.2  | 532.3  | 541.2  | 527.5  |
| 20°   | 1765.1 | 1708.4 | 1397.6 | 1131.8 | 899.8  | 645.3  | 493.3  | 436.3  | 461.2  | 496.6  | 497.4  |
| 22.5° | 1815.0 | 1718.1 | 1376.3 | 1040.2 | 714.1  | 469.2  | 396.0  | 385.6  | 414.9  | 462.8  | 466.8  |
| 25°   | 1813.0 | 1762.7 | 1338.1 | 947.7  | 553.7  | 366.3  | 344.2  | 351.8  | 386.8  | 436.7  | 439.5  |
| 27.5° | 1904.2 | 1728.5 | 1238.8 | 826.3  | 417.0  | 313.6  | 319.2  | 333.3  | 349.8  | 397.3  | 406.5  |
| 30°   | 1903.4 | 1792.1 | 1188.9 | 678.7  | 334.9  | 287.5  | 302.0  | 314.0  | 327.7  | 371.1  | 376.3  |
| 32.5° | 1948.5 | 1750.6 | 1158.8 | 527.9  | 300.4  | 281.1  | 284.7  | 296.7  | 316.4  | 345.8  | 349.4  |
| 35°   | 2002.7 | 1797.7 | 1062.3 | 419.4  | 287.5  | 275.4  | 278.2  | 285.1  | 303.2  | 330.1  | 333.7  |
| 37.5° | 2176.8 | 1806.5 | 1024.1 | 353.4  | 286.7  | 273.0  | 272.6  | 276.2  | 296.7  | 321.3  | 332.1  |
| 40°   | 2244.8 | 1887.3 | 912.7  | 330.1  | 283.9  | 273.0  | 267.4  | 269.4  | 286.3  | 317.6  | 326.1  |
| 42.5° | 2407.6 | 1914.3 | 830.3  | 322.1  | 283.9  | 268.2  | 259.3  | 262.6  | 282.3  | 310.0  | 323.3  |
| 45°   | 2575.3 | 1952.5 | 732.2  | 320.5  | 283.5  | 267.8  | 250.9  | 258.1  | 274.2  | 297.5  | 312.0  |
| 47.5° | 2814.1 | 2090.0 | 634.1  | 315.6  | 280.2  | 269.8  | 248.9  | 248.5  | 262.6  | 282.7  | 296.3  |
| 50°   | 3203.7 | 2304.7 | 558.1  | 309.6  | 280.6  | 268.2  | 244.9  | 239.2  | 248.5  | 266.2  | 279.4  |
| 52.5° | 3746.1 | 2670.6 | 528.3  | 306.4  | 277.4  | 261.8  | 238.0  | 229.2  | 234.4  | 248.5  | 261.3  |
| 55°   | 4375.8 | 3164.7 | 557.7  | 306.4  | 271.0  | 251.7  | 228.4  | 217.9  | 220.7  | 230.4  | 242.9  |
| 57.5° | 5111.6 | 3778.7 | 699.6  | 302.0  | 263.0  | 239.6  | 216.7  | 204.7  | 205.5  | 213.9  | 225.2  |
| 60°   | 5880.0 | 4464.6 | 1017.7 | 298.3  | 257.3  | 226.4  | 203.0  | 190.6  | 189.4  | 197.4  | 207.5  |
| 62.5° | 6649.5 | 5097.5 | 1352.2 | 306.8  | 255.7  | 215.1  | 188.6  | 176.1  | 175.7  | 182.9  | 191.4  |
| 65°   | 7261.5 | 5530.1 | 1435.4 | 341.0  | 266.2  | 202.2  | 173.7  | 162.0  | 161.2  | 167.3  | 176.5  |
| 67.5° | 7561.8 | 5592.9 | 1090.4 | 383.6  | 288.3  | 190.2  | 159.2  | 148.4  | 147.6  | 154.0  | 162.0  |
| 70°   | 7339.5 | 5164.3 | 673.1  | 388.0  | 287.1  | 176.1  | 144.3  | 135.1  | 133.5  | 140.3  | 146.4  |
| 72.5° | 6516.8 | 4517.3 | 511.4  | 343.4  | 248.5  | 156.0  | 129.5  | 121.4  | 119.0  | 125.0  | 130.7  |
| 75°   | 5230.6 | 3586.5 | 409.7  | 277.0  | 195.8  | 131.5  | 114.6  | 107.0  | 104.1  | 109.8  | 114.6  |
| 77.5° | 3046.9 | 2017.6 | 299.5  | 216.3  | 148.0  | 107.4  | 97.7   | 90.9   | 87.7   | 93.7   | 97.3   |
| 80°   | 990.7  | 672.3  | 188.2  | 155.2  | 108.2  | 84.0   | 79.2   | 74.4   | 71.2   | 75.2   | 76.4   |
| 82.5° | 355.8  | 250.1  | 104.1  | 95.3   | 72.0   | 60.3   | 59.9   | 57.1   | 53.1   | 54.7   | 54.7   |
| 85°   | 157.6  | 114.2  | 61.9   | 51.1   | 43.0   | 32.2   | 37.8   | 35.8   | 31.8   | 31.0   | 29.8   |
| 87.5° | 44.2   | 37.8   | 22.5   | 17.3   | 14.1   | 5.2    | 12.1   | 10.9   | 8.8    | 8.0    | 5.6    |
| 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)