

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: P596272

Luminaire Tested: **MSA-SA2C-722-U-T3**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596272  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-10)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2C-722-U-T3  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9055 lumens  
Efficiency: N/A  
Efficacy: 80.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G2

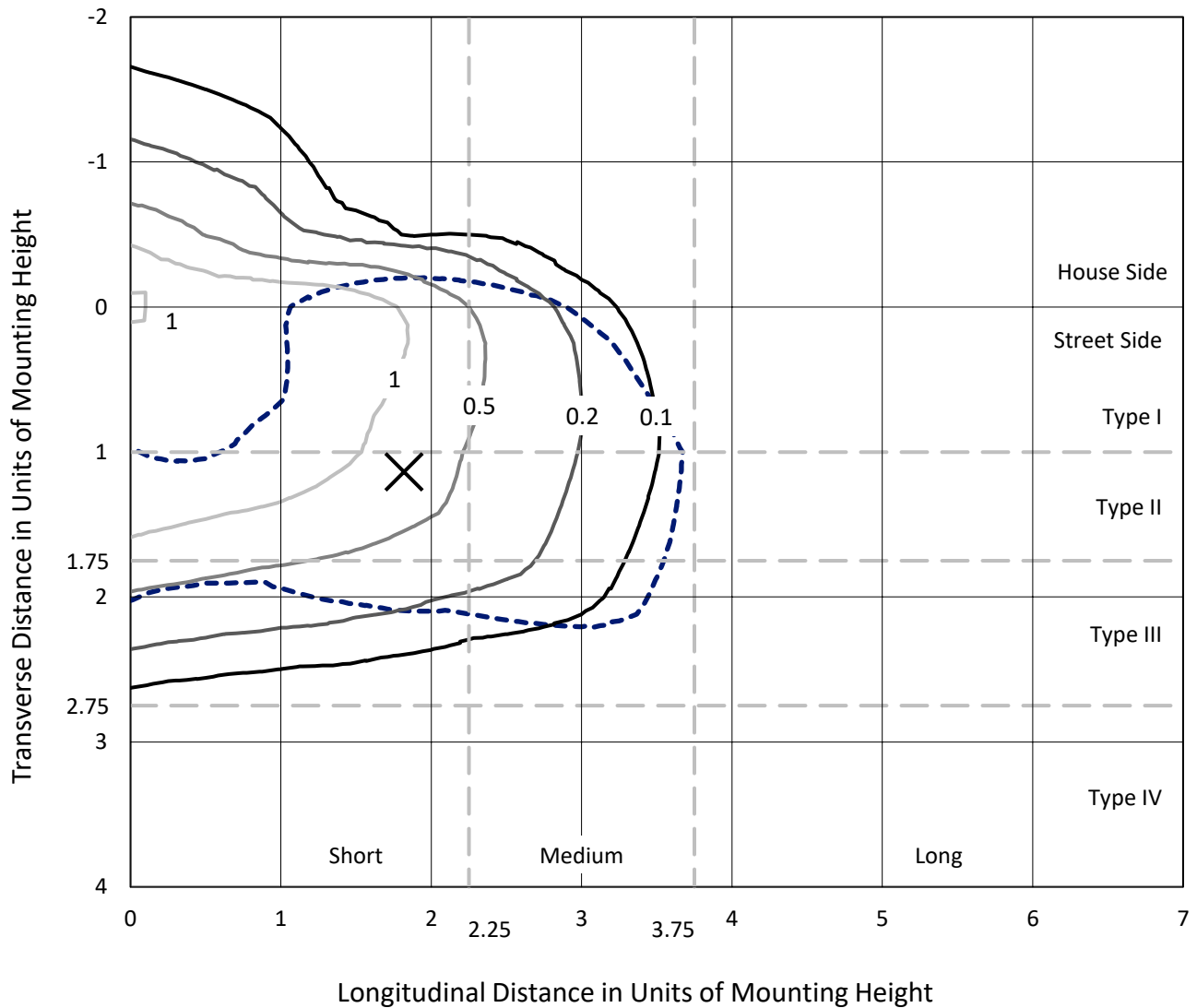
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

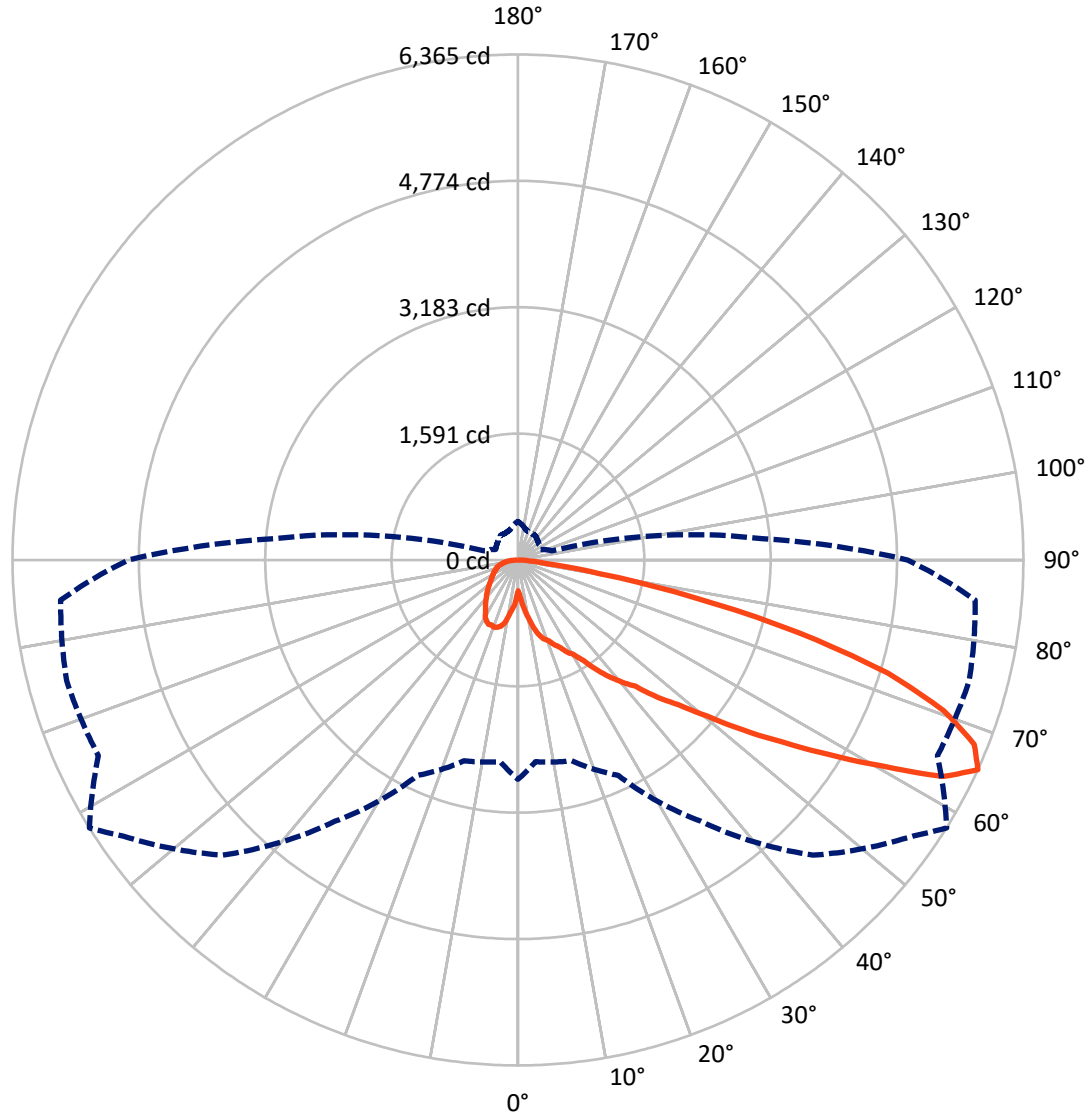
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral    - - - Horizontal Cone Through 65-Deg Vertical

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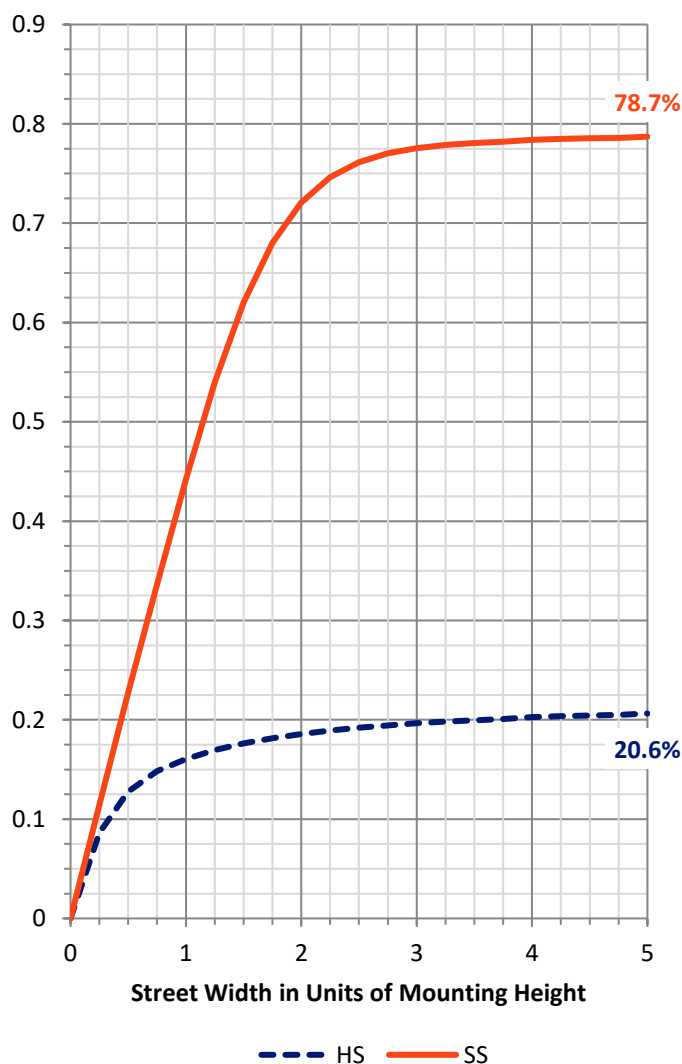
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total  |
|--------------------|-----------|----------|--------|--------|
| <b>House Side</b>  | Lumens    | 1907.3   | 0.0    | 1907.3 |
|                    | % Fixture | 21.1     | 0.0    | 21.1   |
| <b>Street Side</b> | Lumens    | 7147.7   | 0.0    | 7147.7 |
|                    | % Fixture | 78.9     | 0.0    | 78.9   |
| <b>Total</b>       | Lumens    | 9055.0   | 0.0    | 9055.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 59.2   | 0.7       |
| 10°-20°   | 258.4  | 2.9       |
| 20°-30°   | 495.9  | 5.5       |
| 30°-40°   | 818.6  | 9.0       |
| 40°-50°   | 1360.7 | 15.0      |
| 50°-60°   | 2247.2 | 24.8      |
| 60°-70°   | 2520.9 | 27.8      |
| 70°-80°   | 1146.2 | 12.7      |
| 80°-90°   | 147.8  | 1.6       |
| 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°    | 9055.0 | 100.0     |
| 0°-180°   | 9055.0 | 100.0     |

**Coefficient of Utilization**



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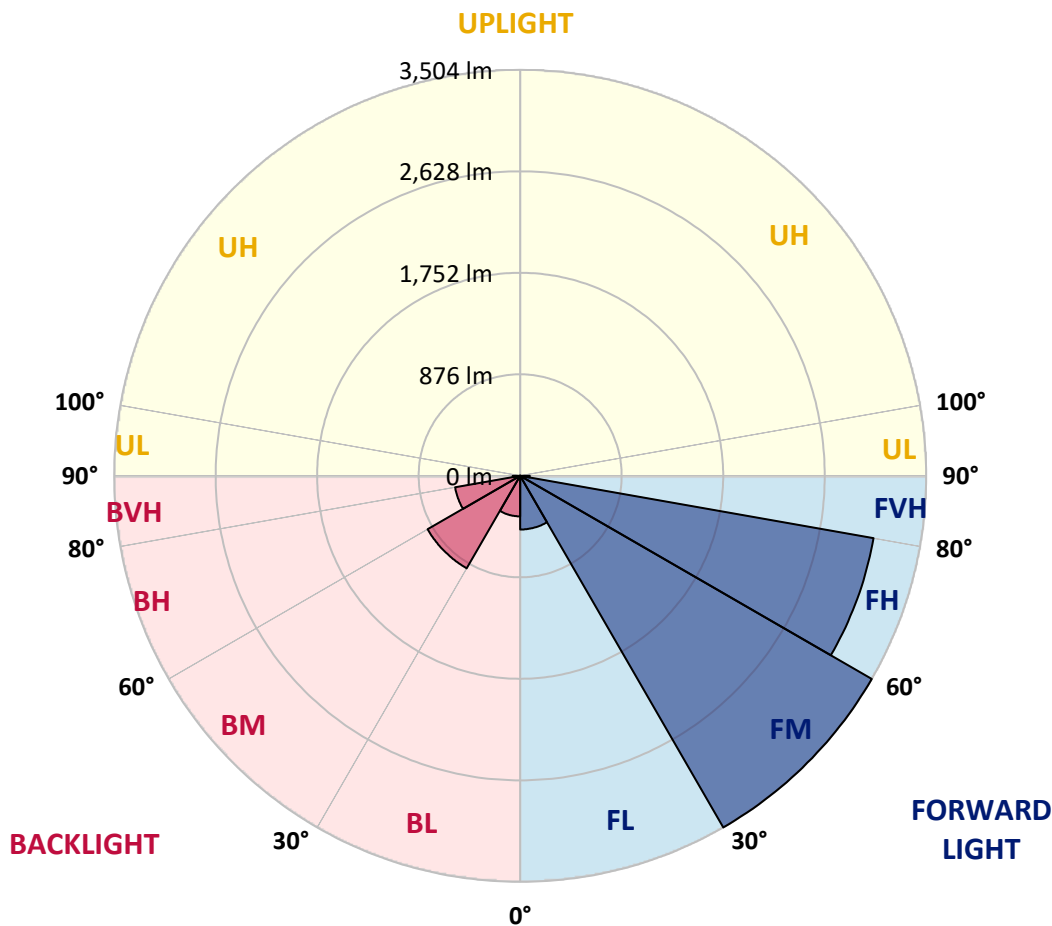
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 463.4  | 5.1       |                         |      |         |
| FM (30°-60°)   | 3504.1 | 38.7      |                         |      |         |
| FH (60°-80°)   | 3097.0 | 34.2      |                         |      | G2/5000 |
| FVH (80°-90°)  | 83.2   | 0.9       |                         |      | G1/100  |
| BL (0°-30°)    | 350.1  | 3.9       | B1/500                  |      |         |
| BM (30°-60°)   | 922.4  | 10.2      | B1/1000                 |      |         |
| BH (60°-80°)   | 570.1  | 6.3       | B2/1000                 |      | G2/1000 |
| BVH (80°-90°)  | 64.6   | 0.7       |                         |      | 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 III Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 58°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 388.8  | 388.8  | 388.8  | 388.8  | 388.8  | 388.8  | 388.8  | 388.8  | 388.8  | 388.8  | 388.8  |
| 2.5°  | 464.2  | 450.2  | 426.9  | 432.5  | 446.1  | 453.6  | 449.1  | 443.1  | 435.2  | 433.7  | 468.3  |
| 5°    | 601.1  | 574.3  | 563.4  | 558.8  | 542.3  | 532.5  | 549.4  | 547.2  | 556.2  | 572.8  | 606.7  |
| 7.5°  | 701.0  | 682.2  | 664.1  | 662.2  | 630.1  | 618.8  | 641.4  | 653.5  | 669.7  | 670.1  | 716.1  |
| 10°   | 754.6  | 738.3  | 738.0  | 721.0  | 718.4  | 739.9  | 740.2  | 749.3  | 751.2  | 770.4  | 761.3  |
| 12.5° | 812.6  | 811.5  | 832.2  | 831.9  | 856.0  | 891.4  | 873.7  | 873.7  | 879.0  | 855.6  | 884.3  |
| 15°   | 951.0  | 963.1  | 924.2  | 930.7  | 930.7  | 965.4  | 964.2  | 971.0  | 987.2  | 981.2  | 968.4  |
| 17.5° | 1095.1 | 1102.6 | 1059.6 | 1019.7 | 1022.7 | 1015.1 | 1042.3 | 1044.9 | 1029.5 | 1099.6 | 1084.1 |
| 20°   | 1187.8 | 1217.2 | 1126.7 | 1076.6 | 1086.4 | 1095.1 | 1096.2 | 1080.0 | 1072.1 | 1179.9 | 1158.8 |
| 22.5° | 1302.5 | 1277.6 | 1194.6 | 1139.2 | 1153.9 | 1142.2 | 1139.9 | 1152.4 | 1163.3 | 1204.1 | 1238.4 |
| 25°   | 1379.0 | 1377.1 | 1277.6 | 1216.9 | 1200.7 | 1197.3 | 1220.3 | 1215.4 | 1241.4 | 1315.3 | 1293.8 |
| 27.5° | 1490.3 | 1525.0 | 1348.5 | 1363.6 | 1292.3 | 1217.2 | 1291.2 | 1313.4 | 1360.2 | 1348.1 | 1396.0 |
| 30°   | 1706.0 | 1679.9 | 1495.5 | 1491.4 | 1410.7 | 1347.7 | 1399.0 | 1380.2 | 1464.2 | 1461.6 | 1497.0 |
| 32.5° | 1882.1 | 1900.2 | 1668.2 | 1624.9 | 1564.9 | 1489.1 | 1455.2 | 1507.6 | 1552.9 | 1627.1 | 1647.1 |
| 35°   | 2068.3 | 2064.2 | 1845.1 | 1757.6 | 1658.4 | 1627.1 | 1669.0 | 1690.9 | 1787.0 | 1855.3 | 1807.8 |
| 37.5° | 2357.9 | 2325.1 | 2074.4 | 1908.8 | 1834.5 | 1823.2 | 1894.9 | 1863.2 | 1967.3 | 1983.5 | 2010.3 |
| 40°   | 2627.2 | 2528.4 | 2284.0 | 2094.4 | 1976.3 | 2018.6 | 2020.8 | 2025.0 | 2080.8 | 2124.9 | 2257.3 |
| 42.5° | 2883.2 | 2813.9 | 2497.1 | 2354.6 | 2180.7 | 2139.6 | 2165.3 | 2173.9 | 2315.0 | 2405.1 | 2588.3 |
| 45°   | 3233.2 | 3047.3 | 2803.3 | 2657.0 | 2462.4 | 2410.0 | 2391.9 | 2466.5 | 2602.7 | 2807.8 | 2965.1 |
| 47.5° | 3529.2 | 3361.4 | 3128.7 | 2936.0 | 2718.4 | 2868.2 | 2765.6 | 2723.7 | 2906.6 | 3160.8 | 3411.2 |
| 50°   | 3774.7 | 3589.9 | 3361.8 | 3250.5 | 3215.8 | 3349.3 | 3083.1 | 3088.0 | 3255.4 | 3614.0 | 3901.0 |
| 52.5° | 3964.7 | 3767.5 | 3565.4 | 3508.8 | 3702.7 | 3779.6 | 3587.3 | 3558.2 | 3680.4 | 4104.3 | 4448.9 |
| 55°   | 4142.3 | 3933.1 | 3776.9 | 3892.3 | 4218.9 | 4227.6 | 4214.0 | 4053.0 | 4200.0 | 4629.5 | 5016.1 |
| 57.5° | 4188.0 | 3962.5 | 3858.8 | 4024.3 | 4465.9 | 4809.4 | 4944.4 | 4628.4 | 4778.1 | 5107.3 | 5501.8 |
| 60°   | 3953.0 | 3760.0 | 3718.5 | 3943.2 | 4599.4 | 5101.7 | 5454.2 | 5265.3 | 5209.1 | 5490.8 | 5841.9 |
| 62.5° | 3471.9 | 3247.9 | 3281.4 | 3593.7 | 4458.7 | 5217.4 | 5857.0 | 6004.4 | 5664.3 | 5795.9 | 5990.5 |
| 65°   | 2763.3 | 2549.5 | 2617.4 | 2993.0 | 4017.1 | 5255.9 | 6062.9 | 6365.3 | 5828.7 | 5882.2 | 5780.0 |
| 67.5° | 1948.8 | 1754.6 | 1840.2 | 2325.9 | 3341.8 | 4763.4 | 6098.3 | 6197.1 | 5653.7 | 5636.0 | 5205.4 |
| 70°   | 1104.1 | 982.3  | 1075.1 | 1480.1 | 2358.7 | 3794.7 | 5820.4 | 5690.3 | 5340.0 | 5088.8 | 4355.4 |
| 72.5° | 506.4  | 464.6  | 509.1  | 753.4  | 1357.9 | 2525.0 | 4751.7 | 4869.7 | 4601.3 | 4287.1 | 3313.5 |
| 75°   | 269.2  | 254.5  | 273.4  | 376.3  | 635.4  | 1373.7 | 3376.1 | 3641.6 | 3498.6 | 3251.7 | 2161.5 |
| 77.5° | 200.2  | 188.9  | 198.0  | 244.0  | 339.4  | 537.4  | 1918.3 | 2253.1 | 2307.4 | 2080.0 | 1200.3 |
| 80°   | 153.5  | 144.4  | 153.5  | 184.4  | 234.9  | 255.3  | 820.2  | 1050.2 | 1196.1 | 966.5  | 477.0  |
| 82.5° | 113.9  | 107.8  | 121.8  | 138.4  | 165.2  | 159.5  | 291.1  | 362.4  | 467.2  | 319.4  | 185.9  |
| 85°   | 90.5   | 83.0   | 88.2   | 93.9   | 105.6  | 87.5   | 133.1  | 149.0  | 157.6  | 132.0  | 68.6   |
| 87.5° | 35.4   | 32.8   | 64.1   | 50.5   | 43.0   | 26.4   | 40.0   | 45.3   | 46.4   | 44.5   | 20.0   |
| 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°    | 388.8  | 388.8  | 388.8  | 388.8 | 388.8 | 388.8 | 388.8 | 388.8 | 388.8 | 388.8 | 388.8 |
| 2.5°  | 472.1  | 468.3  | 446.1  | 453.3 | 465.0 | 467.2 | 472.1 | 458.5 | 451.8 | 476.6 | 477.8 |
| 5°    | 609.8  | 589.4  | 578.8  | 580.0 | 572.4 | 560.7 | 578.5 | 590.1 | 594.7 | 613.1 | 619.9 |
| 7.5°  | 716.5  | 692.0  | 674.2  | 653.9 | 625.2 | 606.7 | 637.7 | 660.3 | 672.4 | 710.8 | 725.9 |
| 10°   | 764.0  | 744.4  | 740.6  | 715.0 | 714.2 | 713.8 | 712.3 | 704.4 | 730.4 | 726.7 | 737.2 |
| 12.5° | 862.0  | 857.9  | 822.1  | 811.9 | 813.0 | 811.9 | 780.2 | 778.7 | 779.1 | 813.8 | 801.3 |
| 15°   | 953.3  | 954.0  | 921.2  | 884.3 | 851.1 | 840.9 | 828.5 | 822.8 | 831.1 | 850.7 | 838.6 |
| 17.5° | 1066.0 | 1069.8 | 975.9  | 917.5 | 873.7 | 872.6 | 842.8 | 807.7 | 858.3 | 870.3 | 857.1 |
| 20°   | 1138.8 | 1123.0 | 1007.6 | 909.5 | 897.1 | 863.2 | 826.2 | 777.9 | 821.7 | 851.1 | 859.4 |
| 22.5° | 1207.8 | 1180.3 | 1037.0 | 923.5 | 863.9 | 823.6 | 787.7 | 756.4 | 770.4 | 803.2 | 797.9 |
| 25°   | 1254.6 | 1247.0 | 1077.7 | 957.1 | 862.8 | 773.0 | 724.8 | 704.8 | 711.9 | 762.9 | 758.0 |
| 27.5° | 1366.2 | 1284.7 | 1070.6 | 965.7 | 826.6 | 704.0 | 679.9 | 658.4 | 651.2 | 706.3 | 721.4 |
| 30°   | 1440.9 | 1407.3 | 1118.5 | 952.2 | 781.0 | 647.5 | 612.0 | 607.5 | 609.8 | 672.4 | 676.5 |
| 32.5° | 1567.6 | 1480.5 | 1196.9 | 900.1 | 714.6 | 605.6 | 564.9 | 566.8 | 576.9 | 622.6 | 632.0 |
| 35°   | 1699.5 | 1647.5 | 1207.4 | 862.8 | 660.7 | 561.1 | 544.5 | 531.3 | 537.0 | 576.9 | 578.8 |
| 37.5° | 1944.7 | 1764.8 | 1272.3 | 805.1 | 621.1 | 544.1 | 512.5 | 500.8 | 503.8 | 526.4 | 542.6 |
| 40°   | 2160.4 | 2000.5 | 1242.1 | 749.3 | 572.0 | 521.5 | 481.9 | 473.2 | 464.2 | 486.4 | 496.6 |
| 42.5° | 2506.1 | 2168.6 | 1232.0 | 687.8 | 549.0 | 491.0 | 463.8 | 440.8 | 432.1 | 451.0 | 469.5 |
| 45°   | 2851.9 | 2347.0 | 1176.5 | 625.6 | 516.6 | 488.7 | 437.4 | 415.6 | 417.8 | 434.8 | 453.6 |
| 47.5° | 3237.3 | 2586.5 | 1082.6 | 565.3 | 481.2 | 477.8 | 411.0 | 401.6 | 408.4 | 427.2 | 446.1 |
| 50°   | 3692.8 | 2840.6 | 1004.9 | 511.0 | 455.9 | 445.0 | 407.6 | 396.3 | 402.7 | 425.0 | 443.5 |
| 52.5° | 4191.0 | 3119.3 | 948.4  | 460.8 | 427.2 | 418.9 | 412.2 | 401.2 | 408.8 | 428.0 | 447.2 |
| 55°   | 4686.1 | 3373.8 | 909.9  | 426.5 | 402.7 | 408.0 | 421.6 | 413.7 | 417.4 | 431.8 | 451.0 |
| 57.5° | 5053.4 | 3508.1 | 832.6  | 389.9 | 382.7 | 401.6 | 422.7 | 409.5 | 411.8 | 431.8 | 452.5 |
| 60°   | 5266.8 | 3533.7 | 705.5  | 360.1 | 366.9 | 388.8 | 411.0 | 394.1 | 392.6 | 425.4 | 451.4 |
| 62.5° | 5243.4 | 3384.8 | 559.6  | 333.0 | 348.8 | 369.5 | 393.3 | 377.1 | 381.2 | 426.1 | 453.6 |
| 65°   | 4908.6 | 3080.5 | 445.0  | 310.0 | 326.9 | 348.4 | 378.6 | 372.2 | 392.2 | 456.3 | 486.1 |
| 67.5° | 4320.3 | 2635.9 | 357.5  | 288.5 | 306.6 | 334.1 | 388.8 | 405.7 | 414.4 | 487.2 | 517.7 |
| 70°   | 3501.3 | 2048.0 | 297.9  | 269.6 | 290.4 | 340.9 | 418.2 | 414.8 | 407.6 | 472.5 | 496.6 |
| 72.5° | 2529.5 | 1403.9 | 262.1  | 251.1 | 270.4 | 320.5 | 418.9 | 400.8 | 391.8 | 431.4 | 448.7 |
| 75°   | 1582.6 | 837.5  | 228.9  | 227.8 | 239.8 | 287.3 | 400.1 | 383.9 | 359.4 | 379.0 | 401.6 |
| 77.5° | 903.9  | 428.8  | 192.7  | 202.9 | 210.0 | 249.3 | 358.2 | 343.5 | 321.7 | 330.0 | 352.2 |
| 80°   | 345.0  | 207.4  | 162.5  | 180.2 | 178.4 | 211.2 | 303.6 | 300.2 | 275.3 | 277.9 | 291.5 |
| 82.5° | 162.5  | 116.1  | 135.0  | 155.0 | 144.8 | 168.2 | 246.6 | 245.5 | 223.6 | 202.5 | 213.4 |
| 85°   | 60.3   | 61.8   | 98.8   | 118.0 | 100.7 | 108.6 | 178.4 | 173.5 | 152.3 | 128.6 | 142.2 |
| 87.5° | 13.6   | 22.2   | 48.6   | 61.5  | 35.1  | 33.6  | 72.0  | 62.6  | 60.3  | 35.8  | 37.7  |
| 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)