

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: P596221

Luminaire Tested: **MSA-SA2A-722-U-SLL-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596221
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-25)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2A-722-U-SLL-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS
EACH AND SPILL LIGHT ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4262 lumens
Efficiency: N/A
Efficacy: 64.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G1

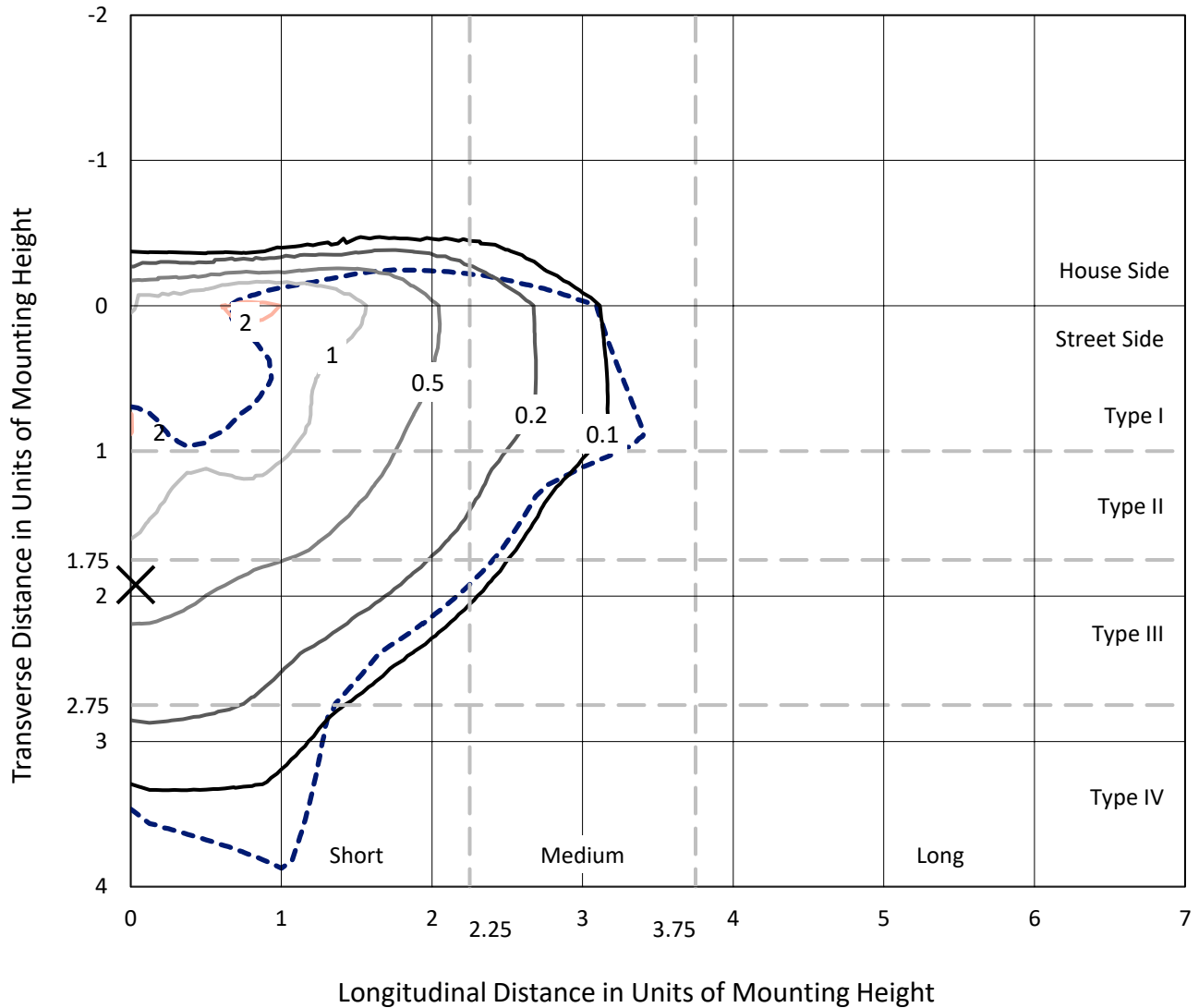
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

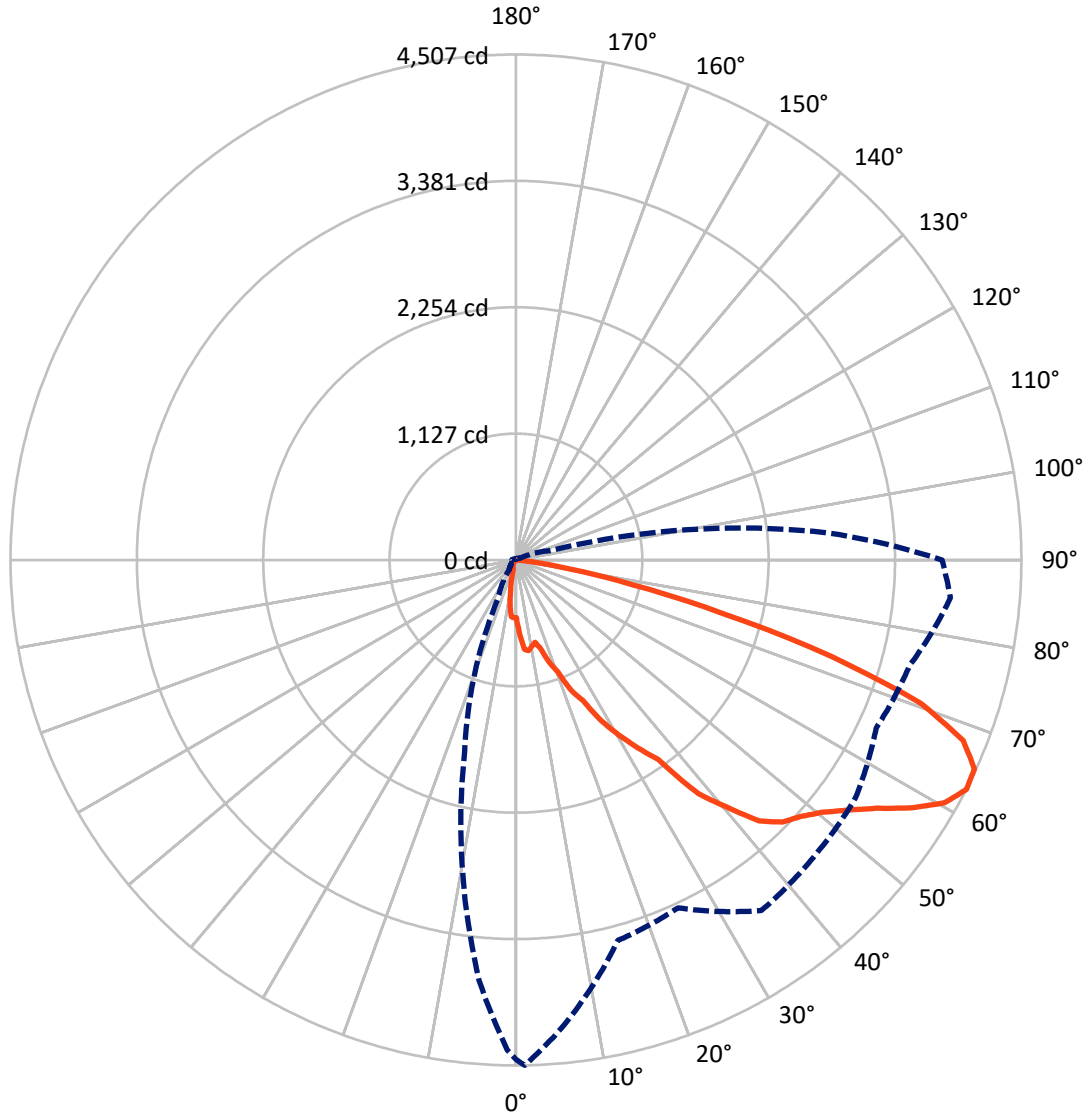
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.2 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 1-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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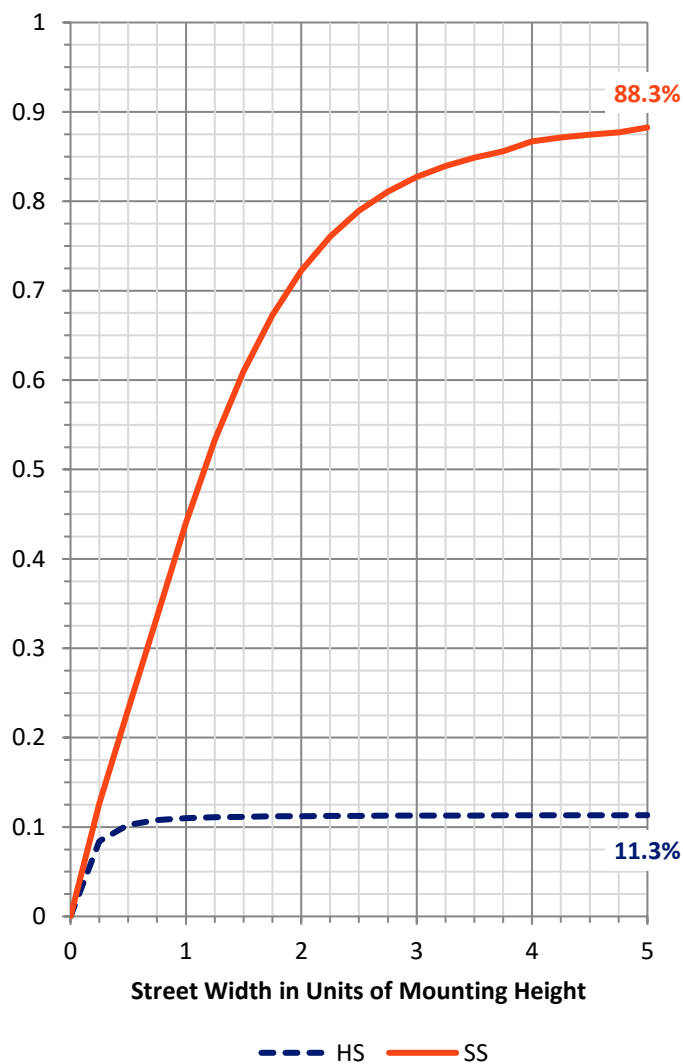
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 487.4 | 0.0 | 487.4 |
| | % Fixture | 11.4 | 0.0 | 11.4 |
| Street Side | Lumens | 3774.6 | 0.0 | 3774.6 |
| | % Fixture | 88.6 | 0.0 | 88.6 |
| Total | Lumens | 4262.0 | 0.0 | 4262.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 57.4 | 1.3 |
| 10°-20° | 149.8 | 3.5 |
| 20°-30° | 242.2 | 5.7 |
| 30°-40° | 405.7 | 9.5 |
| 40°-50° | 663.4 | 15.6 |
| 50°-60° | 982.0 | 23.0 |
| 60°-70° | 1127.4 | 26.5 |
| 70°-80° | 557.5 | 13.1 |
| 80°-90° | 76.5 | 1.8 |
| 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° | 4262.0 | 100.0 |
| 0°-180° | 4262.0 | 100.0 |

Coefficient of Utilization



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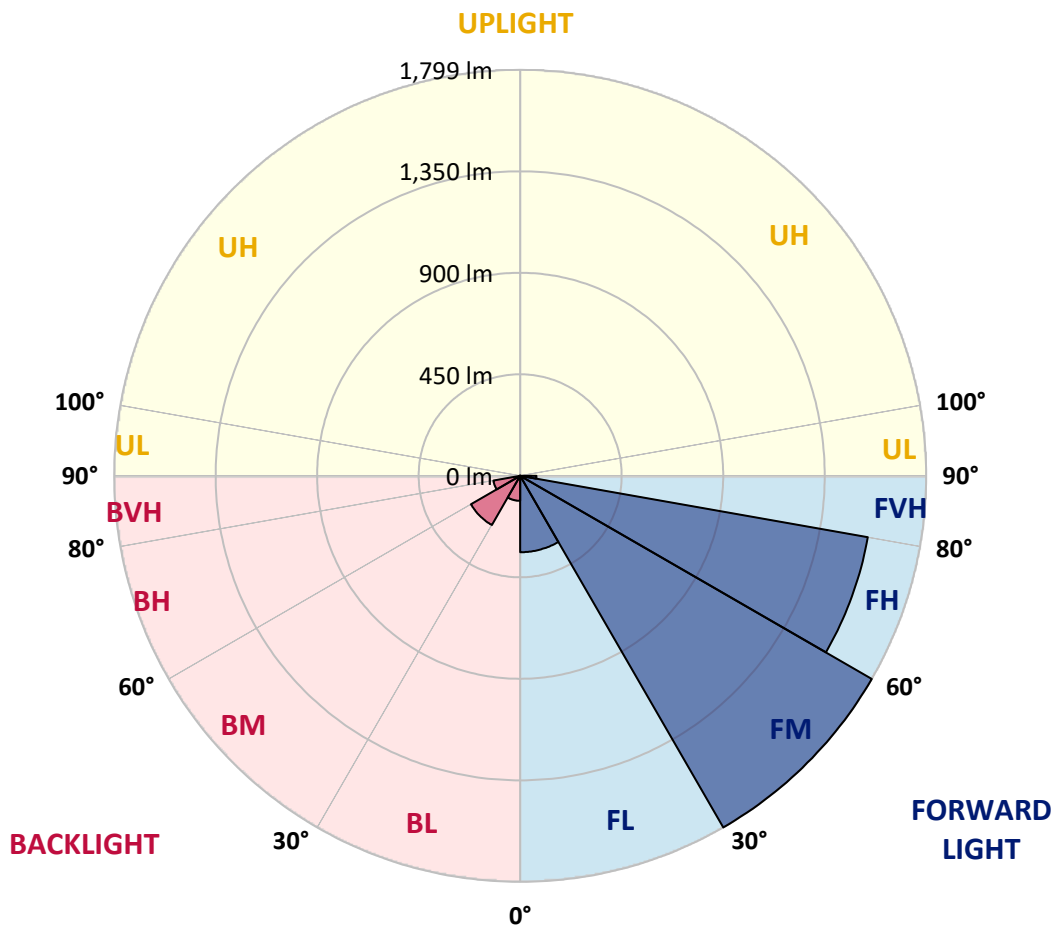
CATALOG NUMBER: MSA-SA2A-722-U-SLL-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 338.5 | 7.9 | | | |
| FM (30°-60°) | 1799.4 | 42.2 | | | |
| FH (60°-80°) | 1564.4 | 36.7 | | | G1/1800 |
| FVH (80°-90°) | 72.3 | 1.7 | | | G1/100 |
| BL (0°-30°) | 110.9 | 2.6 | B1/500 | | |
| BM (30°-60°) | 251.7 | 5.9 | B1/1000 | | |
| BH (60°-80°) | 120.5 | 2.8 | B1/500 | | G1/500 |
| BVH (80°-90°) | 4.2 | 0.1 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 1° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 |
| 2.5° | 662.1 | 665.2 | 650.4 | 648.5 | 614.0 | 657.0 | 658.2 | 663.3 | 631.7 | 570.5 | 656.0 |
| 5° | 792.2 | 801.0 | 789.6 | 840.3 | 854.9 | 886.2 | 828.7 | 880.2 | 858.3 | 864.4 | 876.8 |
| 7.5° | 807.8 | 816.8 | 840.8 | 925.8 | 1004.3 | 984.6 | 978.3 | 997.7 | 996.0 | 951.1 | 973.4 |
| 10° | 775.5 | 783.0 | 823.1 | 977.8 | 1012.0 | 1100.4 | 1122.1 | 1077.4 | 1059.2 | 960.8 | 917.8 |
| 12.5° | 740.3 | 752.9 | 803.9 | 989.5 | 1092.2 | 1181.6 | 1252.7 | 1189.1 | 1128.6 | 1023.9 | 984.6 |
| 15° | 807.8 | 814.8 | 895.0 | 1013.7 | 1103.6 | 1165.3 | 1223.6 | 1202.4 | 1193.2 | 1117.9 | 984.6 |
| 17.5° | 940.1 | 956.7 | 1014.7 | 1073.2 | 1144.2 | 1181.3 | 1167.5 | 1160.9 | 1137.4 | 1255.6 | 1117.7 |
| 20° | 1034.4 | 1065.2 | 1141.2 | 1166.5 | 1110.2 | 1144.9 | 1136.4 | 1130.6 | 1112.1 | 1332.1 | 1270.7 |
| 22.5° | 1238.4 | 1266.8 | 1268.3 | 1277.3 | 1146.1 | 1090.7 | 1076.6 | 1078.3 | 1162.1 | 1355.0 | 1461.1 |
| 25° | 1377.3 | 1387.0 | 1463.8 | 1399.7 | 1244.2 | 1107.2 | 1053.6 | 1077.6 | 1198.3 | 1519.1 | 1640.1 |
| 27.5° | 1604.6 | 1627.7 | 1675.6 | 1458.4 | 1303.0 | 1096.8 | 1011.3 | 1098.7 | 1293.5 | 1573.6 | 1839.0 |
| 30° | 1789.9 | 1812.0 | 1889.0 | 1538.8 | 1354.0 | 1148.5 | 1029.5 | 1141.2 | 1352.8 | 1685.5 | 2017.8 |
| 32.5° | 1940.3 | 1997.4 | 2084.8 | 1662.9 | 1352.1 | 1208.0 | 1122.5 | 1127.2 | 1425.6 | 1830.5 | 2194.6 |
| 35° | 2132.4 | 2185.6 | 2247.0 | 1748.4 | 1440.5 | 1227.2 | 1150.0 | 1265.6 | 1534.0 | 1982.1 | 2432.6 |
| 37.5° | 2565.4 | 2645.8 | 2524.4 | 1963.8 | 1543.4 | 1400.6 | 1258.3 | 1350.8 | 1647.4 | 2136.8 | 2759.7 |
| 40° | 2829.7 | 2897.4 | 2780.1 | 2073.9 | 1721.7 | 1488.1 | 1451.6 | 1499.0 | 1758.4 | 2216.7 | 3006.2 |
| 42.5° | 3090.0 | 3179.4 | 2983.4 | 2239.5 | 1891.0 | 1734.8 | 1635.2 | 1673.4 | 1918.9 | 2409.5 | 3283.6 |
| 45° | 3278.5 | 3333.9 | 3027.4 | 2326.2 | 2123.7 | 2016.1 | 1949.8 | 1892.9 | 2142.8 | 2533.4 | 3462.6 |
| 47.5° | 3373.2 | 3417.4 | 3114.1 | 2353.6 | 2262.1 | 2313.6 | 2458.8 | 2340.0 | 2341.0 | 2623.0 | 3559.0 |
| 50° | 3504.4 | 3535.2 | 3162.6 | 2386.4 | 2412.4 | 2777.2 | 2850.6 | 2597.7 | 2567.4 | 2712.9 | 3574.8 |
| 52.5° | 3688.7 | 3703.8 | 3256.9 | 2472.9 | 2637.6 | 3140.3 | 3166.8 | 3064.5 | 2794.0 | 2879.9 | 3609.8 |
| 55° | 3933.8 | 3907.3 | 3425.2 | 2654.6 | 2872.4 | 3406.2 | 3441.7 | 3352.6 | 3078.9 | 3046.8 | 3718.1 |
| 57.5° | 4198.0 | 4167.6 | 3674.6 | 2910.5 | 3127.2 | 3609.5 | 3630.7 | 3637.7 | 3268.1 | 3194.5 | 3902.2 |
| 60° | 4387.4 | 4393.0 | 3988.6 | 3204.2 | 3285.5 | 3804.1 | 3761.8 | 3697.7 | 3458.9 | 3410.9 | 3991.8 |
| 62.5° | 4453.7 | 4507.4 | 4233.2 | 3511.9 | 3422.0 | 3816.2 | 3750.6 | 3696.5 | 3544.4 | 3634.1 | 3889.1 |
| 65° | 4399.6 | 4493.3 | 4290.0 | 3782.2 | 3504.6 | 3663.9 | 3595.7 | 3561.0 | 3541.8 | 3725.1 | 3661.7 |
| 67.5° | 4184.4 | 4301.7 | 4127.3 | 3784.6 | 3204.4 | 3119.7 | 3200.3 | 3310.3 | 3246.7 | 3649.6 | 3343.3 |
| 70° | 3702.3 | 3830.8 | 3749.7 | 3562.7 | 2669.4 | 2454.4 | 2543.3 | 2709.7 | 2664.8 | 3246.0 | 2874.8 |
| 72.5° | 2777.7 | 2942.9 | 2958.9 | 3075.7 | 2119.0 | 1847.3 | 1860.1 | 1855.5 | 1933.0 | 2617.4 | 2243.4 |
| 75° | 1784.4 | 1912.8 | 2086.5 | 2481.9 | 1609.7 | 1348.7 | 1225.3 | 1195.2 | 1339.7 | 2045.2 | 1606.1 |
| 77.5° | 1035.8 | 1051.1 | 1131.3 | 1872.5 | 1152.9 | 971.7 | 887.7 | 930.7 | 981.2 | 1427.3 | 1064.5 |
| 80° | 495.5 | 503.2 | 536.3 | 963.5 | 801.0 | 841.1 | 776.2 | 824.5 | 673.7 | 820.4 | 604.0 |
| 82.5° | 157.1 | 158.8 | 164.4 | 473.4 | 497.4 | 557.1 | 357.0 | 478.7 | 416.5 | 495.9 | 402.2 |
| 85° | 26.2 | 44.7 | 55.1 | 136.7 | 280.8 | 188.0 | 77.5 | 170.7 | 232.4 | 312.8 | 182.6 |
| 87.5° | 0.0 | 0.0 | 0.0 | 2.4 | 22.8 | 10.7 | 1.7 | 9.7 | 35.7 | 69.7 | 8.3 |
| 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° | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 |
| 2.5° | 680.8 | 697.5 | 634.4 | 577.8 | 592.1 | 580.7 | 563.5 | 534.1 | 466.1 | 516.1 | 512.7 |
| 5° | 876.0 | 844.9 | 759.5 | 719.6 | 671.0 | 597.0 | 588.0 | 531.2 | 506.1 | 510.3 | 506.6 |
| 7.5° | 944.0 | 888.4 | 812.9 | 692.9 | 579.0 | 472.1 | 439.4 | 402.2 | 394.7 | 410.7 | 421.1 |
| 10° | 890.6 | 831.6 | 765.5 | 616.4 | 528.7 | 451.5 | 370.6 | 318.6 | 290.5 | 287.1 | 290.0 |
| 12.5° | 915.1 | 851.5 | 715.5 | 601.3 | 509.8 | 439.8 | 349.5 | 271.0 | 209.8 | 214.5 | 202.3 |
| 15° | 932.1 | 859.0 | 703.6 | 569.8 | 470.7 | 377.2 | 268.4 | 189.9 | 139.9 | 125.3 | 116.6 |
| 17.5° | 1032.0 | 927.5 | 688.5 | 533.3 | 416.0 | 293.6 | 168.6 | 110.0 | 93.7 | 88.6 | 84.5 |
| 20° | 1160.2 | 1011.8 | 688.3 | 495.0 | 335.4 | 183.6 | 105.2 | 79.7 | 75.8 | 78.7 | 75.5 |
| 22.5° | 1309.3 | 1124.0 | 725.0 | 447.1 | 240.7 | 115.8 | 81.8 | 70.7 | 66.8 | 69.2 | 69.5 |
| 25° | 1459.4 | 1292.3 | 754.8 | 401.7 | 167.6 | 88.9 | 72.9 | 65.1 | 60.7 | 62.9 | 61.7 |
| 27.5° | 1730.4 | 1431.7 | 748.0 | 343.7 | 123.4 | 78.2 | 67.8 | 61.0 | 54.4 | 57.8 | 57.6 |
| 30° | 1907.7 | 1677.7 | 774.5 | 262.3 | 97.9 | 68.5 | 63.1 | 55.6 | 48.6 | 52.5 | 52.2 |
| 32.5° | 2119.8 | 1783.4 | 803.2 | 201.3 | 81.4 | 64.8 | 56.8 | 49.5 | 45.4 | 47.8 | 47.4 |
| 35° | 2358.0 | 1992.3 | 750.5 | 167.6 | 70.7 | 58.5 | 50.3 | 44.7 | 41.0 | 42.3 | 42.3 |
| 37.5° | 2778.9 | 2166.9 | 718.9 | 136.5 | 65.8 | 52.9 | 47.1 | 40.3 | 38.1 | 38.1 | 39.3 |
| 40° | 3017.9 | 2433.6 | 624.7 | 108.1 | 67.3 | 48.8 | 44.0 | 36.9 | 34.0 | 33.8 | 35.0 |
| 42.5° | 3328.8 | 2587.3 | 565.6 | 87.4 | 61.0 | 47.6 | 40.3 | 33.5 | 30.1 | 29.9 | 31.1 |
| 45° | 3513.1 | 2673.3 | 482.6 | 68.7 | 54.6 | 55.4 | 37.4 | 30.8 | 25.7 | 24.8 | 27.0 |
| 47.5° | 3629.4 | 2787.2 | 435.5 | 54.6 | 47.6 | 55.1 | 36.4 | 26.7 | 21.6 | 20.4 | 22.3 |
| 50° | 3688.5 | 2843.5 | 426.2 | 46.9 | 41.3 | 49.3 | 41.8 | 22.3 | 18.5 | 16.8 | 18.5 |
| 52.5° | 3749.9 | 2935.1 | 429.6 | 43.2 | 36.4 | 39.6 | 39.6 | 19.2 | 16.3 | 14.3 | 15.5 |
| 55° | 3874.0 | 3070.4 | 422.1 | 41.0 | 33.5 | 30.1 | 25.5 | 17.0 | 14.8 | 12.6 | 13.8 |
| 57.5° | 4026.5 | 3167.5 | 422.1 | 39.1 | 31.1 | 25.7 | 20.4 | 15.8 | 13.6 | 10.9 | 11.9 |
| 60° | 3997.6 | 3065.3 | 401.2 | 37.2 | 29.1 | 24.0 | 18.5 | 14.6 | 12.6 | 10.0 | 10.7 |
| 62.5° | 3799.2 | 2787.2 | 325.0 | 34.2 | 27.4 | 22.8 | 16.8 | 13.8 | 11.9 | 8.7 | 9.5 |
| 65° | 3566.1 | 2491.8 | 225.9 | 31.1 | 25.5 | 20.6 | 15.1 | 13.1 | 10.9 | 7.8 | 8.3 |
| 67.5° | 3285.3 | 2139.9 | 125.3 | 27.9 | 23.6 | 18.0 | 13.8 | 12.9 | 10.4 | 7.0 | 7.5 |
| 70° | 2798.1 | 1615.6 | 67.3 | 25.5 | 22.1 | 16.5 | 13.1 | 12.9 | 10.4 | 6.8 | 7.0 |
| 72.5° | 2100.6 | 1017.4 | 39.3 | 23.3 | 20.2 | 15.3 | 12.4 | 13.1 | 10.2 | 6.6 | 6.6 |
| 75° | 1429.3 | 617.6 | 28.2 | 19.9 | 18.0 | 12.9 | 11.9 | 12.6 | 10.4 | 6.6 | 6.1 |
| 77.5° | 971.7 | 434.0 | 23.1 | 18.0 | 16.3 | 11.4 | 12.1 | 12.6 | 10.4 | 5.3 | 4.1 |
| 80° | 606.7 | 223.9 | 17.5 | 14.3 | 14.1 | 10.0 | 12.1 | 10.9 | 6.8 | 1.2 | 0.0 |
| 82.5° | 424.3 | 83.3 | 10.2 | 10.9 | 10.9 | 7.0 | 9.5 | 7.8 | 3.9 | 0.0 | 0.0 |
| 85° | 178.0 | 14.3 | 5.6 | 7.8 | 6.8 | 4.1 | 7.5 | 5.8 | 2.4 | 0.0 | 0.0 |
| 87.5° | 3.2 | 0.0 | 2.2 | 4.6 | 4.9 | 2.4 | 3.9 | 2.4 | 0.0 | 0.0 | 0.0 |
| 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):

| | 185° | 195° | 205° | 215° | 225° | 235° | 245° | 255° | 265° | 270° | 275° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 | 513.4 |
| 2.5° | 528.7 | 505.7 | 457.1 | 480.4 | 478.0 | 488.7 | 489.6 | 464.9 | 518.3 | 551.3 | 556.2 |
| 5° | 507.1 | 491.6 | 488.9 | 475.5 | 472.1 | 491.8 | 481.1 | 480.4 | 506.1 | 543.8 | 544.0 |
| 7.5° | 421.4 | 409.5 | 415.1 | 399.5 | 359.4 | 361.9 | 365.5 | 380.8 | 402.9 | 427.7 | 436.7 |
| 10° | 289.3 | 320.1 | 297.5 | 295.6 | 291.4 | 278.6 | 268.4 | 276.4 | 305.0 | 327.9 | 336.4 |
| 12.5° | 206.4 | 211.3 | 225.1 | 220.0 | 227.1 | 216.2 | 212.0 | 237.0 | 265.0 | 288.3 | 305.0 |
| 15° | 120.7 | 129.0 | 137.2 | 154.7 | 161.8 | 159.6 | 172.2 | 193.1 | 215.7 | 226.4 | 247.0 |
| 17.5° | 85.0 | 85.7 | 87.4 | 106.4 | 118.8 | 123.6 | 131.1 | 146.9 | 156.2 | 161.0 | 169.5 |
| 20° | 74.3 | 72.1 | 69.2 | 79.9 | 91.6 | 97.6 | 95.4 | 107.8 | 115.4 | 120.2 | 126.3 |
| 22.5° | 67.3 | 63.6 | 61.9 | 65.6 | 74.6 | 79.9 | 80.9 | 88.2 | 99.6 | 103.0 | 104.9 |
| 25° | 60.7 | 58.3 | 57.1 | 59.0 | 63.9 | 69.0 | 69.9 | 79.4 | 89.6 | 91.1 | 95.0 |
| 27.5° | 56.3 | 51.7 | 52.2 | 53.7 | 55.9 | 62.2 | 64.1 | 69.5 | 84.3 | 86.0 | 87.2 |
| 30° | 51.7 | 46.9 | 48.3 | 49.8 | 48.8 | 56.6 | 59.5 | 65.6 | 79.9 | 82.6 | 84.0 |
| 32.5° | 47.1 | 43.5 | 43.2 | 44.7 | 46.4 | 50.5 | 56.8 | 63.9 | 77.0 | 80.6 | 84.3 |
| 35° | 42.0 | 39.1 | 39.6 | 39.8 | 42.0 | 47.4 | 52.0 | 55.6 | 64.6 | 66.5 | 67.8 |
| 37.5° | 38.4 | 35.9 | 35.5 | 37.9 | 40.1 | 44.2 | 45.9 | 47.6 | 59.5 | 63.9 | 64.1 |
| 40° | 34.0 | 32.5 | 32.5 | 34.2 | 39.1 | 38.6 | 40.8 | 46.1 | 57.6 | 62.2 | 62.7 |
| 42.5° | 30.8 | 28.9 | 29.4 | 31.1 | 34.5 | 32.1 | 36.4 | 44.2 | 56.8 | 61.4 | 61.2 |
| 45° | 26.0 | 25.5 | 26.5 | 27.9 | 29.4 | 27.2 | 34.0 | 42.3 | 54.4 | 60.5 | 58.8 |
| 47.5° | 21.6 | 21.6 | 22.8 | 24.3 | 23.6 | 24.3 | 30.8 | 39.6 | 52.9 | 58.5 | 57.3 |
| 50° | 17.7 | 18.0 | 19.2 | 21.6 | 19.4 | 21.4 | 27.7 | 36.9 | 50.5 | 56.6 | 55.6 |
| 52.5° | 15.1 | 15.3 | 16.0 | 17.7 | 16.8 | 19.4 | 25.5 | 34.2 | 48.1 | 53.2 | 52.7 |
| 55° | 13.1 | 13.6 | 13.6 | 14.6 | 15.1 | 18.2 | 23.1 | 31.6 | 44.4 | 50.0 | 49.1 |
| 57.5° | 11.7 | 12.1 | 11.9 | 12.6 | 13.1 | 16.0 | 20.6 | 28.7 | 40.8 | 45.4 | 44.0 |
| 60° | 10.4 | 10.9 | 10.7 | 11.7 | 11.4 | 13.8 | 18.0 | 25.5 | 36.9 | 40.6 | 39.3 |
| 62.5° | 9.2 | 9.7 | 9.7 | 10.2 | 10.4 | 11.7 | 15.5 | 22.6 | 33.0 | 35.9 | 35.0 |
| 65° | 8.3 | 8.7 | 9.0 | 8.7 | 9.2 | 10.0 | 13.1 | 20.4 | 28.7 | 31.6 | 30.1 |
| 67.5° | 7.5 | 8.0 | 8.5 | 7.5 | 8.0 | 8.3 | 11.2 | 18.2 | 25.3 | 27.7 | 26.5 |
| 70° | 7.3 | 7.5 | 7.5 | 6.6 | 6.3 | 6.6 | 9.7 | 15.5 | 22.1 | 24.5 | 22.8 |
| 72.5° | 6.8 | 7.0 | 6.8 | 5.3 | 4.6 | 5.1 | 8.3 | 13.1 | 18.7 | 20.6 | 19.2 |
| 75° | 6.3 | 6.6 | 6.3 | 4.4 | 2.9 | 3.6 | 6.8 | 11.4 | 16.0 | 17.0 | 16.3 |
| 77.5° | 5.3 | 5.8 | 5.8 | 3.2 | 1.0 | 2.2 | 5.1 | 9.2 | 13.4 | 13.4 | 13.6 |
| 80° | 0.5 | 1.5 | 2.4 | 1.7 | 0.0 | 0.2 | 1.7 | 4.9 | 8.5 | 8.3 | 9.0 |
| 82.5° | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.9 | 2.2 | 2.4 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 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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| 27.5° | 82.8 | 91.6 | 104.4 | 137.0 | 251.4 | 471.9 | 819.4 | 1363.5 | 1576.7 | 1604.6 |
| 30° | 79.2 | 89.9 | 102.2 | 124.8 | 222.2 | 445.7 | 870.4 | 1537.8 | 1740.2 | 1789.9 |
| 32.5° | 85.5 | 89.1 | 95.2 | 114.4 | 199.6 | 418.0 | 960.1 | 1746.2 | 1875.4 | 1940.3 |
| 35° | 67.8 | 74.3 | 85.0 | 104.9 | 190.2 | 416.5 | 1010.8 | 1880.3 | 2092.3 | 2132.4 |
| 37.5° | 66.3 | 72.4 | 86.2 | 102.2 | 201.6 | 427.7 | 1086.1 | 2155.0 | 2483.3 | 2565.4 |
| 40° | 64.4 | 72.1 | 85.2 | 101.0 | 201.6 | 438.6 | 1134.2 | 2374.8 | 2746.4 | 2829.7 |
| 42.5° | 63.6 | 73.6 | 85.0 | 106.1 | 195.3 | 444.7 | 1206.8 | 2594.1 | 3024.2 | 3090.0 |
| 45° | 63.1 | 75.0 | 85.7 | 112.2 | 193.8 | 464.6 | 1247.9 | 2700.7 | 3203.0 | 3278.5 |
| 47.5° | 61.9 | 75.0 | 95.7 | 108.6 | 185.8 | 462.7 | 1301.1 | 2858.8 | 3309.6 | 3373.2 |
| 50° | 61.0 | 75.5 | 108.3 | 101.8 | 187.0 | 450.8 | 1373.2 | 3007.2 | 3458.9 | 3504.4 |
| 52.5° | 58.8 | 77.2 | 106.4 | 92.3 | 183.4 | 449.6 | 1480.8 | 3218.3 | 3655.4 | 3688.7 |
| 55° | 53.9 | 75.0 | 96.2 | 80.6 | 170.5 | 435.7 | 1623.3 | 3492.7 | 3927.9 | 3933.8 |
| 57.5° | 49.5 | 69.7 | 80.4 | 74.1 | 142.8 | 437.4 | 1746.2 | 3745.3 | 4170.8 | 4198.0 |
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| 62.5° | 41.0 | 66.8 | 53.2 | 63.4 | 105.4 | 377.4 | 1764.4 | 3764.2 | 4370.2 | 4453.7 |
| 65° | 36.4 | 46.4 | 44.9 | 56.8 | 106.6 | 336.9 | 1626.5 | 3536.7 | 4284.5 | 4399.6 |
| 67.5° | 31.3 | 36.4 | 39.6 | 49.1 | 114.1 | 302.1 | 1389.9 | 3171.4 | 4054.0 | 4184.4 |
| 70° | 27.4 | 32.8 | 34.5 | 43.0 | 118.8 | 279.3 | 1096.8 | 2664.5 | 3581.8 | 3702.3 |
| 72.5° | 22.8 | 30.4 | 30.8 | 37.6 | 114.4 | 256.7 | 781.6 | 1912.8 | 2719.9 | 2777.7 |
| 75° | 19.7 | 25.3 | 27.9 | 31.6 | 96.2 | 191.6 | 430.6 | 1184.0 | 1719.8 | 1784.4 |
| 77.5° | 17.7 | 19.2 | 21.1 | 21.9 | 40.8 | 99.8 | 148.2 | 730.1 | 963.0 | 1035.8 |
| 80° | 13.6 | 15.1 | 14.6 | 15.1 | 22.3 | 34.5 | 56.3 | 342.2 | 454.9 | 495.5 |
| 82.5° | 4.4 | 7.3 | 8.0 | 6.8 | 14.6 | 17.0 | 16.3 | 118.3 | 147.9 | 157.1 |
| 85° | 1.0 | 2.7 | 1.2 | 0.0 | 4.9 | 8.7 | 1.2 | 18.0 | 35.5 | 26.2 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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