

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: McGRAW-EDISON

Report Number: P638492

Luminaire Tested: GWS-SA4E-830-U-T2R-W-GRSBK

Issue Date: 1/10/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P638492  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2209-782-12)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: McGRAW-EDISON  
Catalog Number: GWS-SA4E-830-U-T2R-W-GRSBK  
Description: GALLEON WALL SLIM LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II ROADWAY OPTICS W/ FACTORY INSTALLED GLARE SHIELD, BK  
Light Source: (64) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

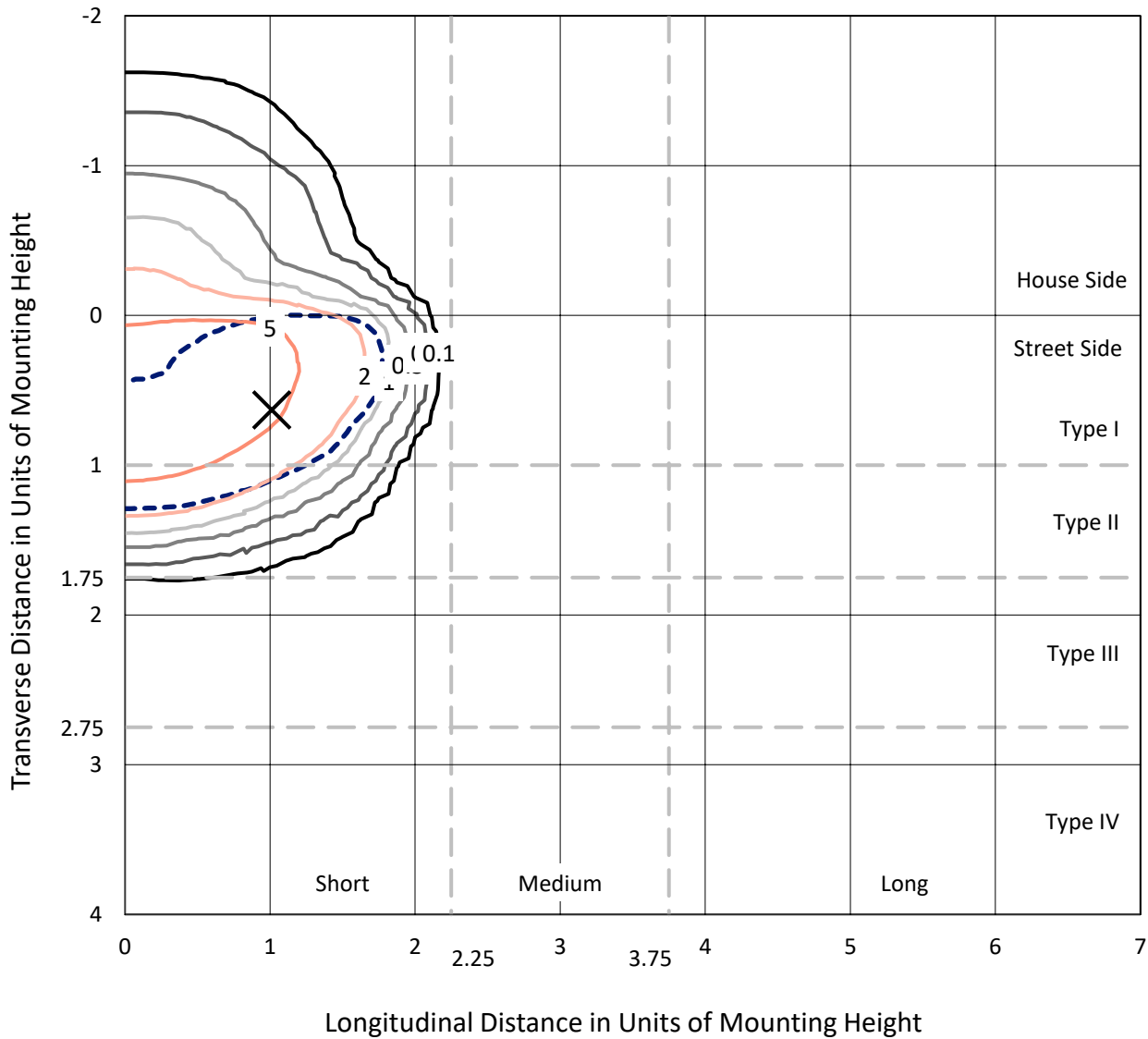
Lumens per Lamp: N/A  
Luminaire Lumens: 16296.4 lumens  
Efficiency: N/A  
Efficacy: 80.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B2 - U0 - G1  
  
Input Watts (W): 202.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 0  
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

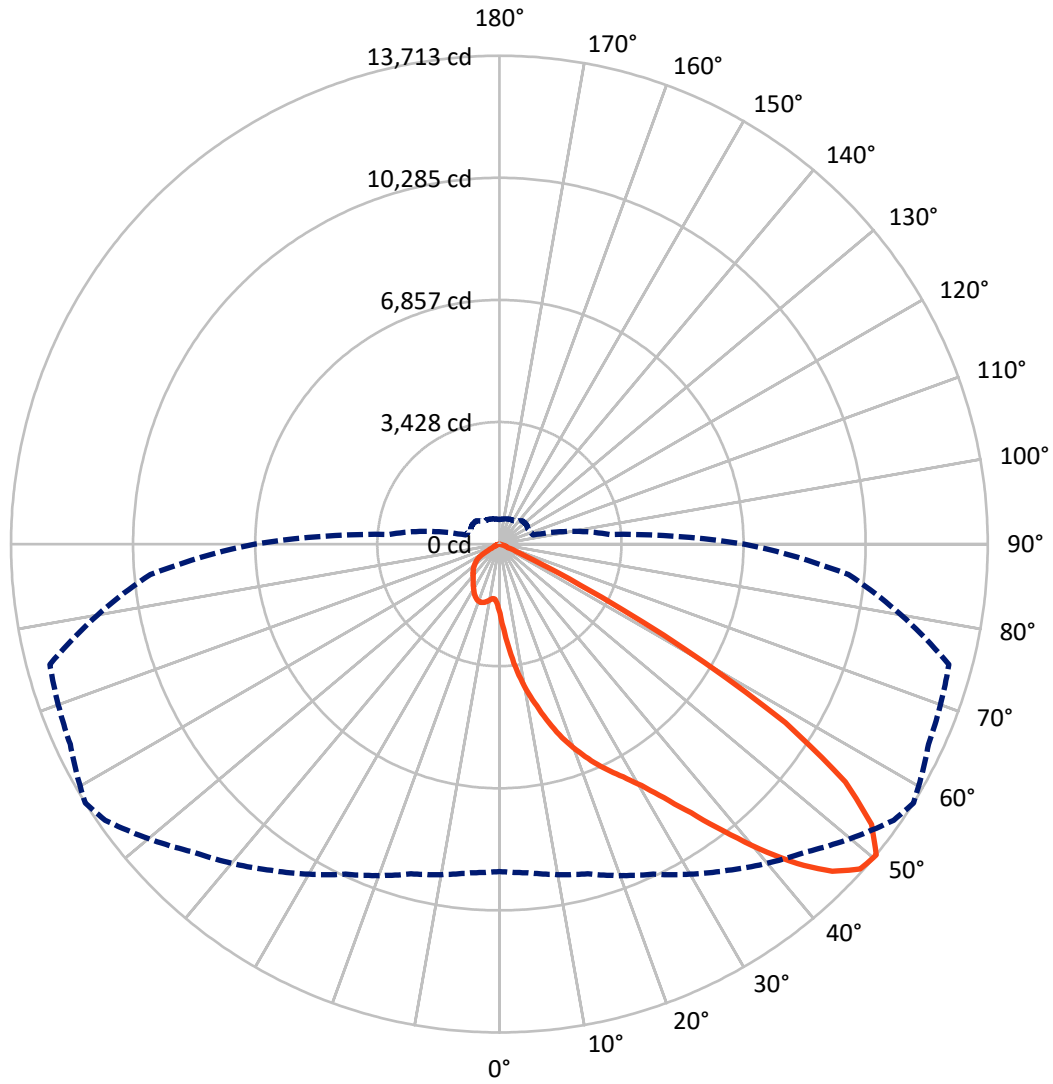
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.6 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral    - - - Horizontal Cone Through 50-Deg Vertical

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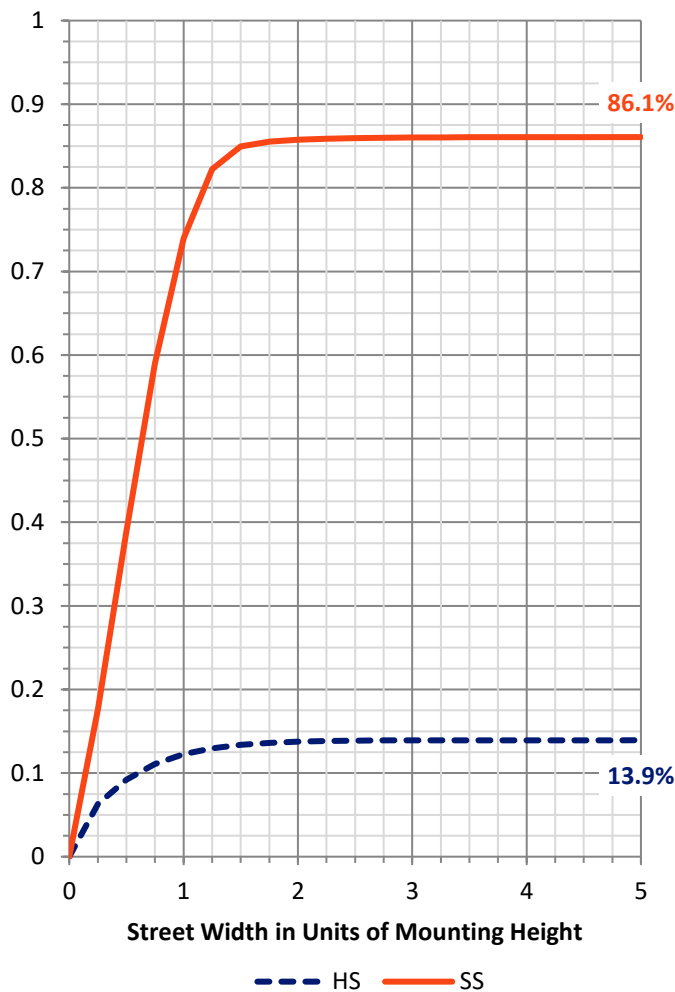
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 2282.5   | 0.0    | 2282.5  |
|                    | % Fixture | 14.0     | 0.0    | 14.0    |
| <b>Street Side</b> | Lumens    | 14013.9  | 0.0    | 14013.9 |
|                    | % Fixture | 86.0     | 0.0    | 86.0    |
| <b>Total</b>       | Lumens    | 16296.4  | 0.0    | 16296.4 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 241.2   | 1.5       |
| 10°-20°   | 954.6   | 5.9       |
| 20°-30°   | 1931.8  | 11.9      |
| 30°-40°   | 3417.5  | 21.0      |
| 40°-50°   | 4982.0  | 30.6      |
| 50°-60°   | 3993.2  | 24.5      |
| 60°-70°   | 719.4   | 4.4       |
| 70°-80°   | 56.7    | 0.3       |
| 80°-90°   | 0.0     | 0.0       |
| 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°    | 16296.4 | 100.0     |
| 0°-180°   | 16296.4 | 100.0     |

**Coefficient of Utilization**



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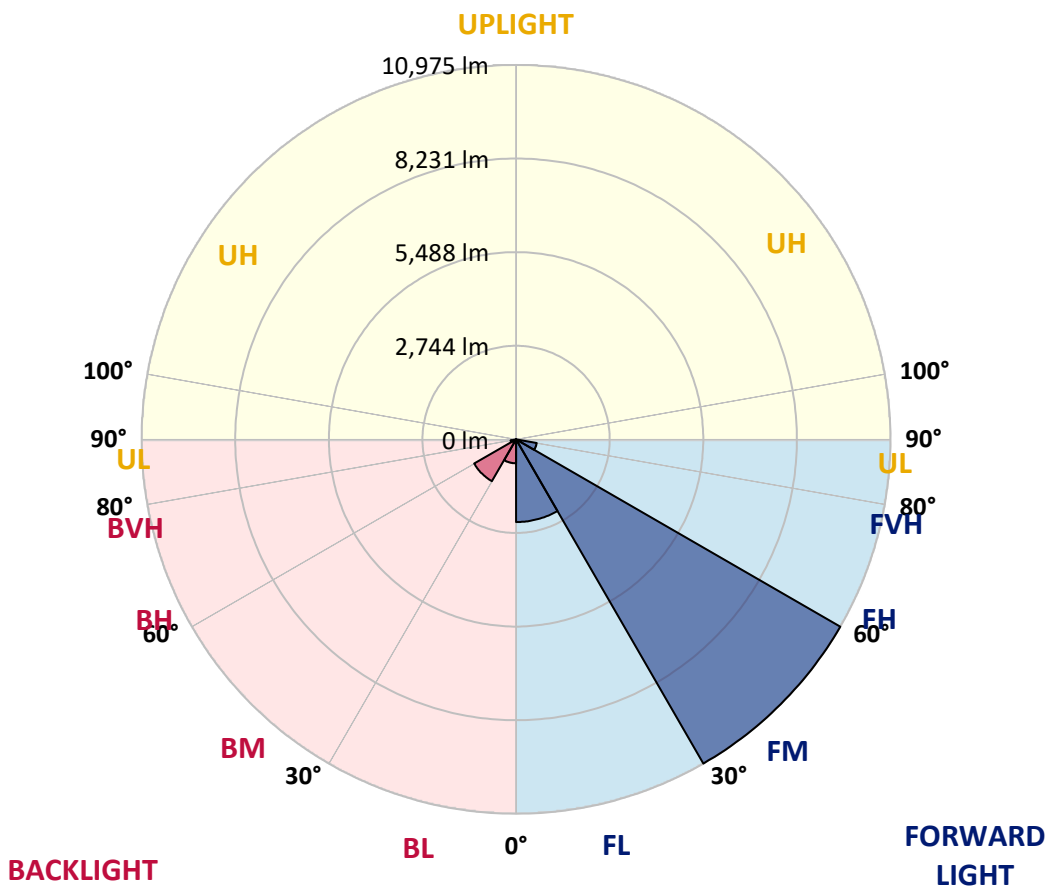
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |        |
|----------------|---------|-----------|-------------------------|------|--------|
|                |         |           | B                       | U    | G      |
| FL (0°-30°)    | 2424.9  | 14.9      |                         |      |        |
| FM (30°-60°)   | 10975.1 | 67.3      |                         |      |        |
| FH (60°-80°)   | 613.9   | 3.8       |                         |      | G0/660 |
| FVH (80°-90°)  | 0.0     | 0.0       |                         |      | G0/10  |
| BL (0°-30°)    | 702.7   | 4.3       | B2/1000                 |      |        |
| BM (30°-60°)   | 1417.6  | 8.7       | B2/2500                 |      |        |
| BH (60°-80°)   | 162.2   | 1.0       | B1/500                  |      | G1/500 |
| BVH (80°-90°)  | 0.0     | 0.0       |                         |      | G0/10  |
| UL (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |        |
| UH (100°-180°) | 0.0     | 0.0       |                         | U0/0 |        |

**BUG Rating: B2-U0-G1**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 58°     | 65°     | 75°     | 85°    |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|
| 0°    | 1946.6  | 1946.6  | 1946.6  | 1946.6  | 1946.6  | 1946.6  | 1946.6  | 1946.6  | 1946.6  | 1946.6  | 1946.6 |
| 2.5°  | 2880.7  | 2835.3  | 2809.2  | 2788.3  | 2695.9  | 2549.5  | 2453.7  | 2403.2  | 2319.5  | 2178.4  | 2056.4 |
| 5°    | 3759.0  | 3725.9  | 3664.9  | 3623.0  | 3504.5  | 3297.2  | 3082.8  | 2997.4  | 2807.5  | 2488.6  | 2202.8 |
| 7.5°  | 4341.0  | 4316.6  | 4294.0  | 4238.2  | 4126.7  | 3938.5  | 3701.5  | 3612.6  | 3319.8  | 2866.7  | 2397.9 |
| 10°   | 4788.9  | 4769.7  | 4743.6  | 4741.8  | 4654.7  | 4485.7  | 4253.9  | 4161.5  | 3844.4  | 3278.0  | 2628.0 |
| 12.5° | 5182.7  | 5167.1  | 5161.8  | 5210.6  | 5154.9  | 5029.4  | 4778.4  | 4663.4  | 4327.1  | 3698.0  | 2882.4 |
| 15°   | 5452.9  | 5449.4  | 5472.0  | 5567.9  | 5599.2  | 5541.7  | 5330.9  | 5207.1  | 4820.3  | 4119.7  | 3163.0 |
| 17.5° | 5576.6  | 5587.0  | 5630.6  | 5796.2  | 5935.6  | 5984.4  | 5822.3  | 5717.7  | 5310.0  | 4546.7  | 3462.7 |
| 20°   | 5787.5  | 5784.0  | 5810.1  | 5966.9  | 6137.7  | 6312.0  | 6263.2  | 6174.3  | 5804.9  | 4998.0  | 3795.6 |
| 22.5° | 6381.7  | 6331.2  | 6275.4  | 6299.8  | 6360.8  | 6564.7  | 6655.3  | 6610.0  | 6315.5  | 5461.6  | 4138.9 |
| 25°   | 7294.9  | 7242.6  | 7063.1  | 6888.8  | 6773.8  | 6866.2  | 6989.9  | 7012.6  | 6822.6  | 5937.3  | 4497.9 |
| 27.5° | 8263.8  | 8216.8  | 8014.6  | 7753.2  | 7423.8  | 7263.5  | 7355.9  | 7401.2  | 7321.0  | 6503.7  | 4879.5 |
| 30°   | 9171.7  | 9109.0  | 8887.7  | 8563.5  | 8181.9  | 7936.2  | 7831.6  | 7863.0  | 7910.0  | 7174.6  | 5327.4 |
| 32.5° | 9959.4  | 9912.4  | 9647.5  | 9305.9  | 8938.2  | 8682.0  | 8438.1  | 8490.4  | 8605.4  | 7995.4  | 5900.7 |
| 35°   | 10626.9 | 10602.5 | 10321.9 | 9982.1  | 9593.5  | 9462.8  | 9253.6  | 9264.1  | 9379.1  | 8987.0  | 6599.5 |
| 37.5° | 11207.2 | 11165.4 | 10910.9 | 10595.5 | 10287.1 | 10266.1 | 10208.6 | 10213.9 | 10273.1 | 10142.4 | 7402.9 |
| 40°   | 11573.2 | 11534.8 | 11353.6 | 11158.4 | 10938.8 | 10942.3 | 11240.3 | 11263.0 | 11195.0 | 11276.9 | 8251.6 |
| 42.5° | 11710.8 | 11682.9 | 11585.4 | 11587.1 | 11564.4 | 11667.3 | 12226.7 | 12268.5 | 12024.5 | 12167.4 | 8976.6 |
| 45°   | 11472.1 | 11459.9 | 11466.9 | 11717.8 | 11989.7 | 12306.8 | 13033.5 | 13106.7 | 12761.7 | 12758.2 | 9542.9 |
| 47.5° | 10701.8 | 10677.4 | 10881.3 | 11308.3 | 11937.4 | 12554.3 | 13521.5 | 13634.8 | 13277.5 | 13096.3 | 9898.4 |
| 50°   | 9192.7  | 9262.4  | 9584.8  | 10226.1 | 11182.8 | 12214.5 | 13516.2 | 13713.2 | 13296.7 | 13066.6 | 9839.2 |
| 52.5° | 6658.8  | 6644.9  | 7350.6  | 8232.4  | 9396.5  | 11127.0 | 12798.3 | 13085.8 | 12831.4 | 12775.6 | 9706.7 |
| 55°   | 3623.0  | 3750.3  | 4226.0  | 5393.6  | 6847.0  | 9068.9  | 11158.4 | 11785.8 | 12080.3 | 12669.3 | 9945.5 |
| 57.5° | 1331.4  | 1387.2  | 1685.2  | 2511.2  | 3624.8  | 5639.3  | 8523.5  | 9469.7  | 10379.4 | 12373.0 | 9905.4 |
| 60°   | 536.7   | 547.2   | 665.7   | 923.6   | 1523.1  | 2870.2  | 5113.0  | 5953.0  | 6810.4  | 9471.5  | 7601.6 |
| 62.5° | 390.4   | 404.3   | 451.4   | 540.2   | 770.3   | 1254.7  | 2204.5  | 2563.5  | 2802.2  | 4691.3  | 3745.0 |
| 65°   | 315.4   | 325.9   | 364.2   | 404.3   | 508.9   | 674.4   | 711.0   | 684.9   | 681.4   | 1212.9  | 859.1  |
| 67.5° | 261.4   | 271.9   | 299.7   | 327.6   | 366.0   | 336.3   | 244.0   | 256.2   | 209.1   | 207.4   | 169.0  |
| 70°   | 191.7   | 203.9   | 231.8   | 261.4   | 219.6   | 90.6    | 141.2   | 209.1   | 158.6   | 132.4   | 129.0  |
| 72.5° | 144.6   | 153.4   | 179.5   | 170.8   | 64.5    | 34.9    | 94.1    | 151.6   | 122.0   | 97.6    | 95.8   |
| 75°   | 108.0   | 113.3   | 90.6    | 27.9    | 7.0     | 8.7     | 34.9    | 62.7    | 68.0    | 55.8    | 55.8   |
| 77.5° | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 3.5     | 5.2     | 7.0     | 8.7     | 10.5   |
| 80°   | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0    |
| 82.5° | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0     | 0.0    |
| 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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**CANDELA DISTRIBUTION (continued):**

|       | 90°    | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1946.6 | 1946.6 | 1946.6 | 1946.6 | 1946.6 | 1946.6 | 1946.6 | 1946.6 | 1946.6 | 1946.6 | 1946.6 |
| 2.5°  | 1986.7 | 1913.5 | 1808.9 | 1721.8 | 1655.5 | 1591.1 | 1542.3 | 1493.5 | 1491.7 | 1467.3 | 1462.1 |
| 5°    | 2070.3 | 1937.9 | 1746.2 | 1608.5 | 1524.8 | 1474.3 | 1439.5 | 1422.0 | 1413.3 | 1404.6 | 1401.1 |
| 7.5°  | 2190.6 | 2000.6 | 1735.7 | 1589.3 | 1519.6 | 1486.5 | 1462.1 | 1451.7 | 1446.4 | 1439.5 | 1437.7 |
| 10°   | 2338.7 | 2091.2 | 1774.1 | 1625.9 | 1564.9 | 1533.6 | 1507.4 | 1491.7 | 1483.0 | 1470.8 | 1467.3 |
| 12.5° | 2516.4 | 2202.8 | 1835.0 | 1686.9 | 1622.4 | 1580.6 | 1545.8 | 1523.1 | 1510.9 | 1495.2 | 1491.7 |
| 15°   | 2708.1 | 2323.0 | 1903.0 | 1742.7 | 1666.0 | 1612.0 | 1568.4 | 1533.6 | 1510.9 | 1491.7 | 1486.5 |
| 17.5° | 2906.8 | 2445.0 | 1964.0 | 1781.0 | 1686.9 | 1622.4 | 1559.7 | 1512.6 | 1484.8 | 1460.4 | 1453.4 |
| 20°   | 3129.9 | 2570.5 | 2004.1 | 1788.0 | 1679.9 | 1594.6 | 1521.4 | 1462.1 | 1434.2 | 1401.1 | 1394.1 |
| 22.5° | 3363.4 | 2687.2 | 2021.5 | 1772.3 | 1641.6 | 1542.3 | 1463.9 | 1402.9 | 1362.8 | 1327.9 | 1317.5 |
| 25°   | 3589.9 | 2791.8 | 2012.8 | 1728.7 | 1584.1 | 1469.1 | 1388.9 | 1326.2 | 1282.6 | 1247.8 | 1239.0 |
| 27.5° | 3830.4 | 2878.9 | 1981.4 | 1664.3 | 1505.7 | 1388.9 | 1312.2 | 1258.2 | 1218.1 | 1179.8 | 1171.1 |
| 30°   | 4100.5 | 2959.1 | 1930.9 | 1585.8 | 1413.3 | 1307.0 | 1247.8 | 1211.2 | 1167.6 | 1127.5 | 1115.3 |
| 32.5° | 4426.4 | 3030.5 | 1857.7 | 1491.7 | 1331.4 | 1235.6 | 1202.5 | 1174.6 | 1124.0 | 1082.2 | 1073.5 |
| 35°   | 4799.3 | 3089.8 | 1765.3 | 1394.1 | 1251.2 | 1190.3 | 1183.3 | 1146.7 | 1080.5 | 1031.7 | 1021.2 |
| 37.5° | 5231.5 | 3147.3 | 1655.5 | 1298.3 | 1192.0 | 1169.3 | 1171.1 | 1108.3 | 1028.2 | 968.9  | 962.0  |
| 40°   | 5696.8 | 3204.8 | 1533.6 | 1214.7 | 1138.0 | 1157.1 | 1141.5 | 1052.6 | 921.9  | 864.4  | 857.4  |
| 42.5° | 6181.3 | 3267.5 | 1409.8 | 1136.2 | 1092.7 | 1110.1 | 1087.4 | 941.0  | 846.9  | 817.3  | 813.8  |
| 45°   | 6618.7 | 3342.5 | 1275.6 | 1057.8 | 1047.4 | 1042.1 | 1003.8 | 852.2  | 812.1  | 791.2  | 789.4  |
| 47.5° | 6934.1 | 3330.3 | 1132.7 | 982.9  | 998.6  | 981.1  | 864.4  | 810.3  | 777.2  | 749.4  | 742.4  |
| 50°   | 6876.6 | 3117.7 | 984.6  | 899.2  | 935.8  | 920.1  | 777.2  | 761.6  | 731.9  | 702.3  | 691.8  |
| 52.5° | 6730.2 | 2828.4 | 855.7  | 810.3  | 867.9  | 831.3  | 718.0  | 702.3  | 676.2  | 637.8  | 625.6  |
| 55°   | 6808.7 | 2556.5 | 754.6  | 738.9  | 798.1  | 688.4  | 651.8  | 627.4  | 599.5  | 557.7  | 552.4  |
| 57.5° | 6556.0 | 2086.0 | 606.5  | 616.9  | 705.8  | 587.3  | 571.6  | 533.3  | 486.2  | 458.3  | 454.8  |
| 60°   | 4537.9 | 1120.5 | 379.9  | 392.1  | 510.6  | 493.2  | 512.3  | 477.5  | 420.0  | 393.8  | 388.6  |
| 62.5° | 2084.2 | 449.6  | 207.4  | 198.7  | 268.4  | 334.6  | 439.2  | 435.7  | 364.2  | 322.4  | 318.9  |
| 65°   | 505.4  | 205.6  | 148.1  | 139.4  | 151.6  | 200.4  | 285.8  | 343.3  | 294.5  | 245.7  | 240.5  |
| 67.5° | 163.8  | 167.3  | 135.9  | 127.2  | 134.2  | 149.9  | 170.8  | 190.0  | 188.2  | 172.5  | 169.0  |
| 70°   | 130.7  | 151.6  | 125.5  | 115.0  | 115.0  | 120.2  | 115.0  | 92.4   | 80.2   | 87.1   | 90.6   |
| 72.5° | 97.6   | 115.0  | 99.3   | 88.9   | 85.4   | 83.6   | 71.5   | 52.3   | 36.6   | 33.1   | 31.4   |
| 75°   | 57.5   | 64.5   | 61.0   | 52.3   | 48.8   | 43.6   | 34.9   | 22.7   | 12.2   | 8.7    | 5.2    |
| 77.5° | 10.5   | 12.2   | 13.9   | 10.5   | 8.7    | 7.0    | 5.2    | 1.7    | 0.0    | 0.0    | 0.0    |
| 80°   | 0.0    | 1.7    | 1.7    | 1.7    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 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    |

(END OF REPORT)