

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: McGRAW-EDISON

Report Number: P459551

Luminaire Tested: **GALN-SA9D-735-U-T3R-HSS**

Issue Date: 1/4/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P459551  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/4/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GALN-SA9D-735-U-T3R-HSS  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(9) 70 CRI, 3500K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
ROADWAY OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 51149 lumens  
Efficiency: N/A  
Efficacy: 92.7 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B3 - U0 - G5

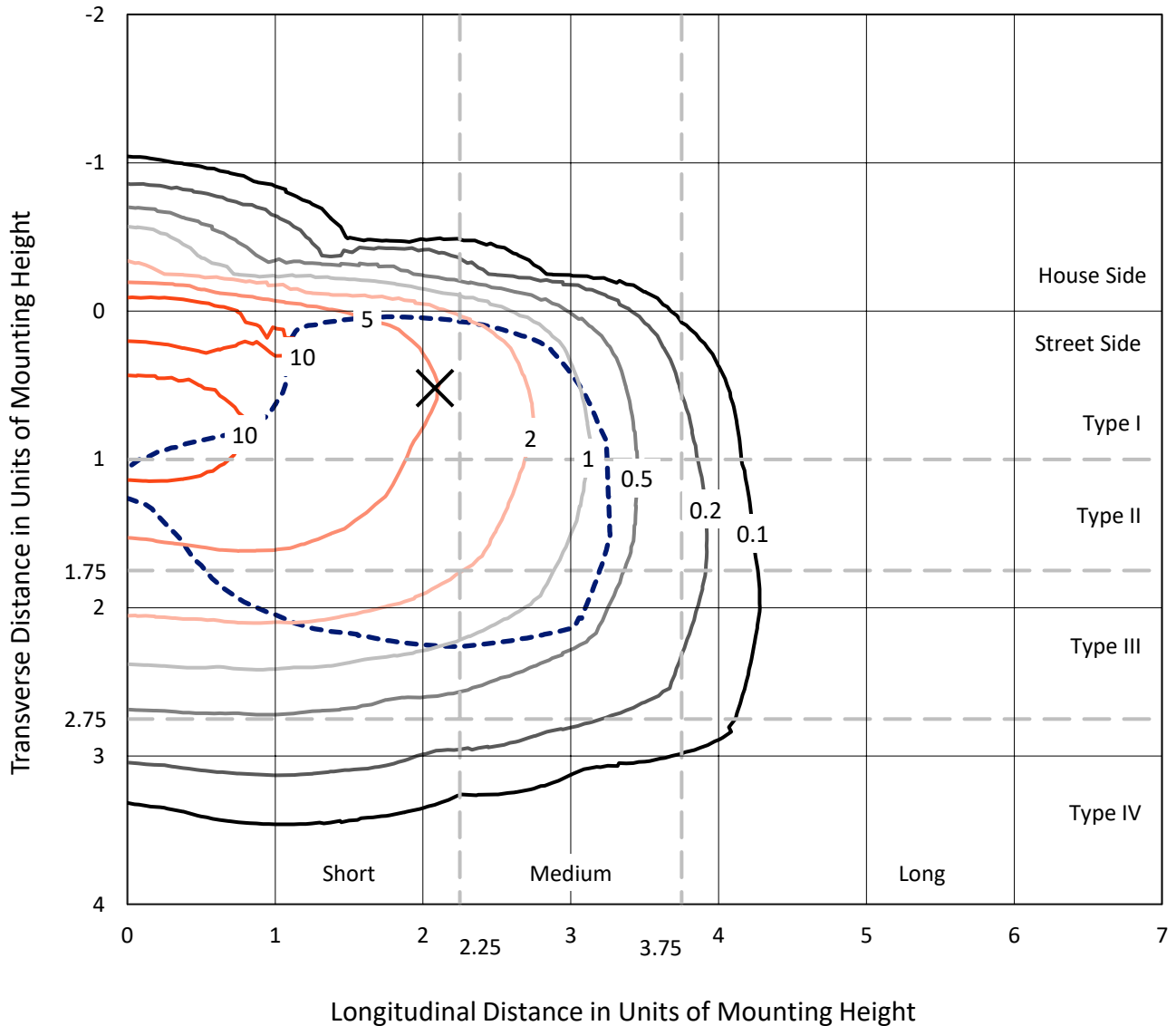
Input Watts (W): 552  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

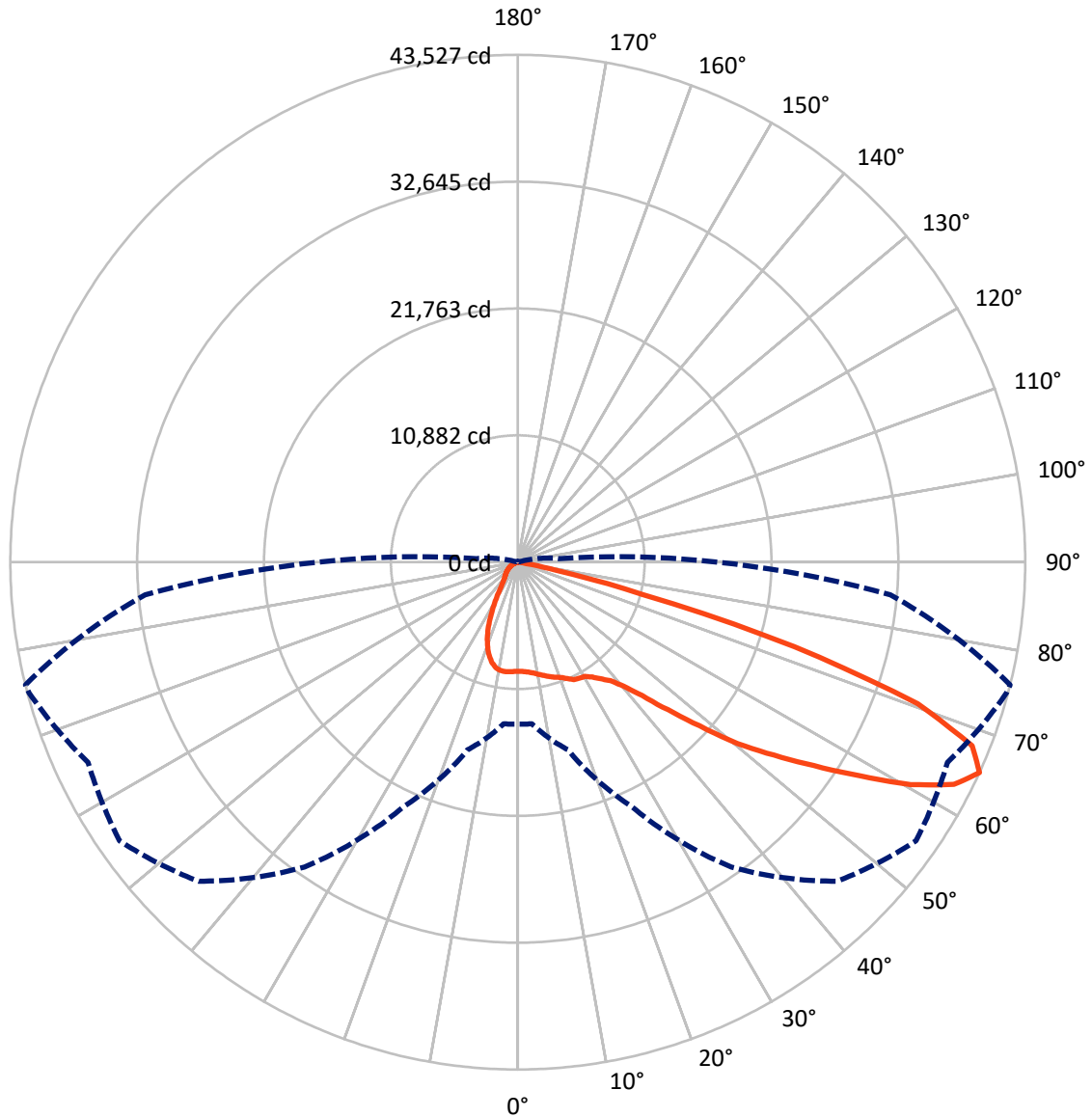
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 15.6 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 76-Deg Lateral    - - - Horizontal Cone Through 65-Deg Vertical

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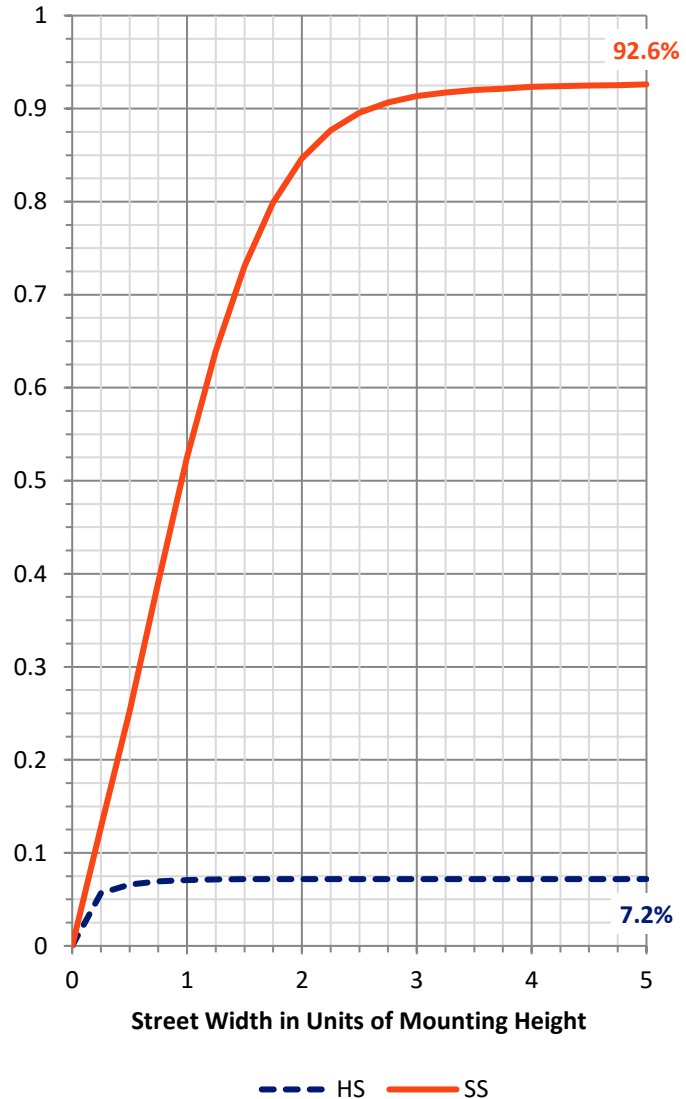
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 3694.0   | 0.0    | 3694.0  |
|                    | % Fixture | 7.2      | 0.0    | 7.2     |
| <b>Street Side</b> | Lumens    | 47455.0  | 0.0    | 47455.0 |
|                    | % Fixture | 92.8     | 0.0    | 92.8    |
| <b>Total</b>       | Lumens    | 51149.0  | 0.0    | 51149.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 770.8   | 1.5       |
| 10°-20°   | 1716.2  | 3.4       |
| 20°-30°   | 2765.5  | 5.4       |
| 30°-40°   | 4808.5  | 9.4       |
| 40°-50°   | 7945.8  | 15.5      |
| 50°-60°   | 12274.6 | 24.0      |
| 60°-70°   | 14989.0 | 29.3      |
| 70°-80°   | 5688.7  | 11.1      |
| 80°-90°   | 189.8   | 0.4       |
| 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°    | 51149.0 | 100.0     |
| 0°-180°   | 51149.0 | 100.0     |



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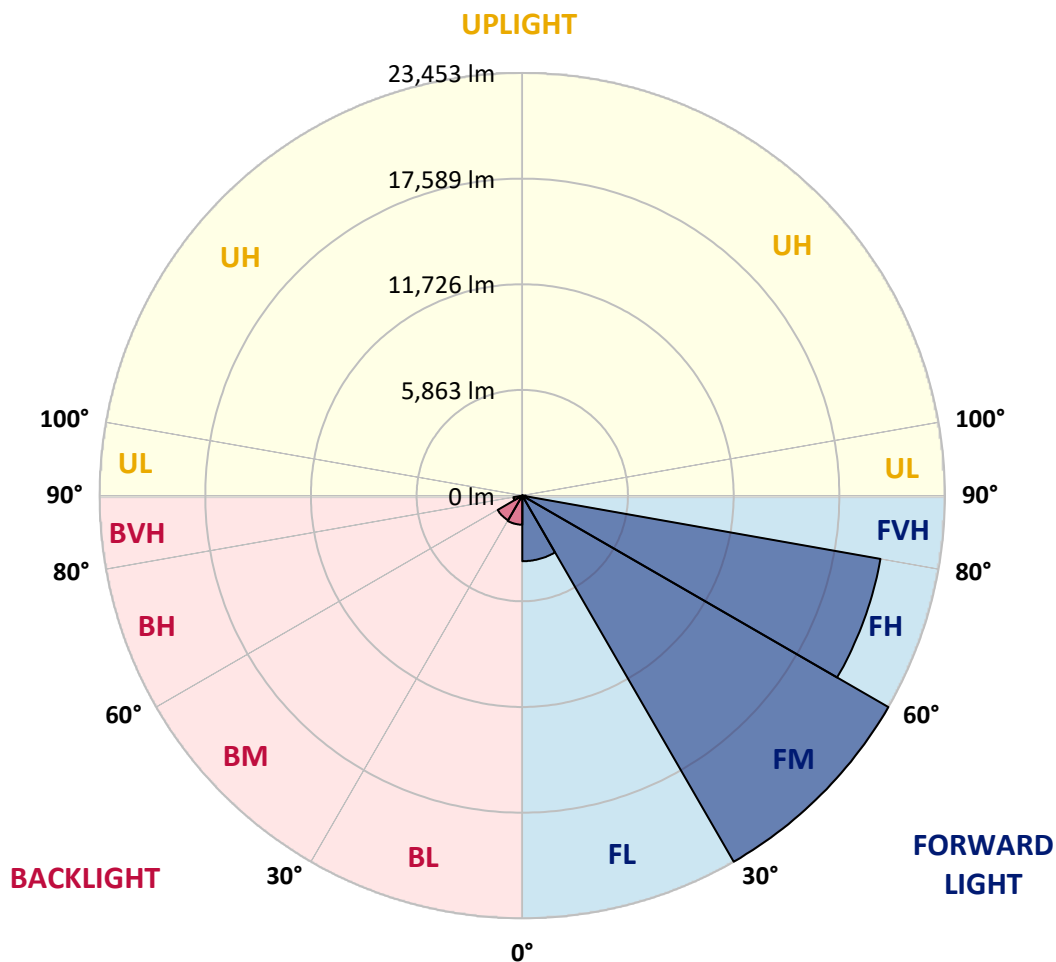
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|---------|-----------|-------------------------|------|---------|
|      |             |         |           | B                       | U    | G       |
| FL   | (0°-30°)    | 3638.6  | 7.1       |                         |      |         |
| FM   | (30°-60°)   | 23452.6 | 45.9      |                         |      |         |
| FH   | (60°-80°)   | 20176.6 | 39.4      |                         |      | G5      |
| FVH  | (80°-90°)   | 187.2   | 0.4       |                         |      | G2/225  |
| BL   | (0°-30°)    | 1613.8  | 3.2       | B3/2500                 |      |         |
| BM   | (30°-60°)   | 1576.3  | 3.1       | B2/2500                 |      |         |
| BH   | (60°-80°)   | 501.2   | 1.0       | B2/1000                 |      | G2/1000 |
| BVH  | (80°-90°)   | 2.6     | 0.0       |                         |      | G0/10   |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |         |

**BUG Rating: B3-U0-G5**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 75°     | 76°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 9356.8  | 9356.8  | 9356.8  | 9356.8  | 9356.8  | 9356.8  | 9356.8  | 9356.8  | 9356.8  | 9356.8  | 9356.8  |
| 2.5°  | 8941.5  | 8945.1  | 8966.8  | 9020.9  | 9104.0  | 9172.6  | 9230.4  | 9324.3  | 9389.3  | 9396.5  | 9418.2  |
| 5°    | 8324.0  | 8280.6  | 8324.0  | 8464.8  | 8591.2  | 8782.6  | 9017.3  | 9252.1  | 9461.5  | 9476.0  | 9577.1  |
| 7.5°  | 7630.6  | 7666.7  | 7735.3  | 7879.8  | 8118.1  | 8410.6  | 8750.1  | 9169.0  | 9566.2  | 9602.4  | 9801.0  |
| 10°   | 6926.4  | 7005.9  | 7117.8  | 7338.1  | 7670.3  | 8049.5  | 8511.7  | 9111.2  | 9732.4  | 9782.9  | 10126.0 |
| 12.5° | 6276.4  | 6312.5  | 6449.7  | 6745.8  | 7157.5  | 7692.0  | 8331.2  | 9078.7  | 9916.5  | 9977.9  | 10472.7 |
| 15°   | 5778.0  | 5825.0  | 5944.1  | 6211.4  | 6670.0  | 7356.1  | 8183.1  | 9067.9  | 10097.1 | 10183.8 | 10819.3 |
| 17.5° | 5684.1  | 5713.0  | 5763.6  | 5944.1  | 6345.0  | 7088.9  | 8049.5  | 9064.3  | 10270.4 | 10375.2 | 11140.7 |
| 20°   | 6070.5  | 6045.3  | 5994.7  | 5976.6  | 6196.9  | 6883.1  | 7952.0  | 9093.2  | 10436.6 | 10555.7 | 11480.2 |
| 22.5° | 7038.4  | 7070.9  | 6774.7  | 6424.4  | 6352.2  | 6850.6  | 7937.6  | 9230.4  | 10700.2 | 10841.0 | 11859.4 |
| 25°   | 9093.2  | 8844.0  | 8381.7  | 7543.9  | 6912.0  | 7049.2  | 8100.1  | 9555.4  | 11007.1 | 11162.4 | 12202.5 |
| 27.5° | 11364.6 | 11288.8 | 10570.2 | 9190.7  | 8013.4  | 7468.1  | 8389.0  | 9804.6  | 11108.2 | 11267.1 | 12397.5 |
| 30°   | 13596.4 | 13686.7 | 12863.3 | 11339.4 | 9613.2  | 8244.5  | 8659.8  | 9898.5  | 11198.5 | 11364.6 | 12646.6 |
| 32.5° | 15665.7 | 15774.0 | 15051.7 | 13542.2 | 11498.3 | 9587.9  | 9125.7  | 10263.2 | 11577.7 | 11747.4 | 13061.9 |
| 35°   | 17294.3 | 17308.8 | 16763.5 | 15560.9 | 13556.7 | 11220.2 | 10133.2 | 10902.4 | 12090.5 | 12289.1 | 13502.5 |
| 37.5° | 18789.4 | 18767.7 | 18128.5 | 17092.1 | 15272.0 | 12841.7 | 11400.8 | 11639.1 | 12675.5 | 12881.4 | 14138.1 |
| 40°   | 19898.1 | 19912.5 | 19706.7 | 18731.6 | 16871.8 | 14340.3 | 12404.7 | 12328.9 | 13657.8 | 13979.2 | 15062.6 |
| 42.5° | 20638.4 | 20772.0 | 20873.1 | 20378.4 | 18883.3 | 16185.7 | 13946.7 | 13805.9 | 15362.3 | 15629.5 | 16369.9 |
| 45°   | 21237.8 | 21476.2 | 21981.8 | 21956.5 | 20815.3 | 18449.9 | 16062.9 | 15774.0 | 17778.3 | 18063.5 | 18034.7 |
| 47.5° | 21674.8 | 21916.8 | 22754.6 | 23260.2 | 22631.8 | 20645.6 | 18724.4 | 18475.2 | 20663.7 | 20974.2 | 19872.8 |
| 50°   | 21898.7 | 22187.6 | 23256.5 | 24235.2 | 24051.0 | 22761.8 | 21757.9 | 21772.3 | 24148.5 | 24448.3 | 22003.4 |
| 52.5° | 21375.1 | 21750.6 | 23523.8 | 25286.1 | 25643.6 | 24787.7 | 24599.9 | 25076.6 | 27250.6 | 27507.0 | 23928.2 |
| 55°   | 19703.1 | 20176.1 | 23159.0 | 26181.7 | 27488.9 | 27178.4 | 27828.4 | 28554.3 | 30641.6 | 30807.7 | 25903.6 |
| 57.5° | 18645.0 | 19146.9 | 22082.9 | 26943.6 | 29706.3 | 30182.9 | 31212.2 | 31743.0 | 34140.9 | 34563.4 | 28171.5 |
| 60°   | 17753.0 | 18146.6 | 21198.1 | 27106.1 | 31959.7 | 33859.2 | 34859.5 | 35408.4 | 38460.0 | 38734.4 | 30666.9 |
| 62.5° | 16268.7 | 16720.2 | 19703.1 | 25972.2 | 33093.6 | 36802.4 | 38875.3 | 38629.7 | 41800.4 | 41991.8 | 32198.0 |
| 65°   | 13881.7 | 13921.4 | 16669.6 | 23122.9 | 31923.6 | 38712.7 | 41695.7 | 40666.4 | 43396.6 | 43526.6 | 32078.9 |
| 67.5° | 10360.7 | 10743.5 | 12823.6 | 18175.5 | 26965.3 | 37080.5 | 42609.3 | 40720.6 | 42389.0 | 42027.9 | 29532.9 |
| 70°   | 6673.6  | 6966.1  | 8692.3  | 12603.3 | 19443.0 | 30944.9 | 39579.5 | 37929.1 | 37203.2 | 36401.5 | 24173.8 |
| 72.5° | 3080.4  | 3456.0  | 5164.1  | 7200.9  | 11530.8 | 22043.2 | 32129.4 | 30814.9 | 26777.5 | 24798.5 | 15365.9 |
| 75°   | 1343.4  | 1437.3  | 2549.6  | 3799.0  | 5406.1  | 11657.2 | 21183.7 | 19128.9 | 12094.1 | 11046.9 | 6150.0  |
| 77.5° | 819.8   | 881.1   | 1336.2  | 2036.8  | 2123.4  | 4441.9  | 11411.6 | 8345.6  | 3737.7  | 3297.1  | 1668.4  |
| 80°   | 556.1   | 624.7   | 971.4   | 1065.3  | 725.9   | 1238.7  | 4283.0  | 2228.1  | 754.8   | 722.3   | 357.5   |
| 82.5° | 270.8   | 343.1   | 718.6   | 595.9   | 314.2   | 397.2   | 1245.9  | 476.7   | 220.3   | 205.8   | 126.4   |
| 85°   | 39.7    | 68.6    | 404.5   | 390.0   | 140.8   | 93.9    | 220.3   | 119.2   | 75.8    | 72.2    | 57.8    |
| 87.5° | 0.0     | 0.0     | 137.2   | 61.4    | 14.4    | 14.4    | 25.3    | 25.3    | 28.9    | 25.3    | 28.9    |
| 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°    | 9356.8  | 9356.8  | 9356.8 | 9356.8 | 9356.8 | 9356.8 | 9356.8 | 9356.8 | 9356.8 | 9356.8 | 9356.8 |
| 2.5°  | 9429.0  | 9447.1  | 9378.5 | 9280.9 | 9176.2 | 9071.5 | 8923.4 | 8789.8 | 8710.4 | 8757.3 | 8641.8 |
| 5°    | 9598.7  | 9584.3  | 9403.7 | 9107.6 | 8714.0 | 8240.9 | 7771.4 | 7370.6 | 7240.6 | 7045.6 | 7023.9 |
| 7.5°  | 9833.5  | 9793.7  | 9411.0 | 8732.0 | 7843.7 | 6955.3 | 6088.6 | 5514.4 | 5185.8 | 4907.7 | 4914.9 |
| 10°   | 10162.1 | 10046.5 | 9327.9 | 8071.2 | 6608.6 | 5268.8 | 4163.8 | 3405.4 | 3076.8 | 2972.1 | 2889.0 |
| 12.5° | 10501.6 | 10277.7 | 9096.8 | 7179.2 | 5146.1 | 3600.4 | 2531.5 | 2069.3 | 1867.0 | 1802.0 | 1794.8 |
| 15°   | 10804.9 | 10451.0 | 8692.3 | 6106.6 | 3741.3 | 2300.4 | 1726.2 | 1574.5 | 1549.2 | 1552.8 | 1549.2 |
| 17.5° | 11104.6 | 10588.2 | 8132.6 | 4969.1 | 2542.3 | 1650.3 | 1484.2 | 1448.1 | 1459.0 | 1473.4 | 1469.8 |
| 20°   | 11353.8 | 10617.1 | 7417.5 | 3791.8 | 1798.4 | 1448.1 | 1393.9 | 1386.7 | 1397.6 | 1408.4 | 1408.4 |
| 22.5° | 11624.7 | 10638.8 | 6568.9 | 2625.4 | 1469.8 | 1347.0 | 1318.1 | 1318.1 | 1332.6 | 1347.0 | 1350.6 |
| 25°   | 11826.9 | 10519.6 | 5554.1 | 1885.1 | 1296.4 | 1249.5 | 1235.1 | 1238.7 | 1253.1 | 1260.3 | 1256.7 |
| 27.5° | 11859.4 | 10183.8 | 4478.0 | 1444.5 | 1177.3 | 1130.3 | 1115.9 | 1130.3 | 1112.3 | 1123.1 | 1115.9 |
| 30°   | 11888.3 | 9757.6  | 3387.4 | 1217.0 | 1068.9 | 996.7  | 975.0  | 953.4  | 938.9  | 920.9  | 917.3  |
| 32.5° | 11978.6 | 9255.7  | 2473.7 | 1094.2 | 967.8  | 888.4  | 837.8  | 776.4  | 729.5  | 715.0  | 711.4  |
| 35°   | 12018.3 | 8652.6  | 1816.5 | 996.7  | 877.5  | 790.9  | 700.6  | 613.9  | 545.3  | 520.0  | 538.1  |
| 37.5° | 12170.0 | 8067.6  | 1408.4 | 924.5  | 798.1  | 689.8  | 574.2  | 465.9  | 400.9  | 386.4  | 393.6  |
| 40°   | 12480.5 | 7432.0  | 1180.9 | 863.1  | 729.5  | 595.9  | 455.0  | 350.3  | 307.0  | 292.5  | 288.9  |
| 42.5° | 12978.9 | 6800.0  | 1050.9 | 805.3  | 660.9  | 502.0  | 357.5  | 274.5  | 238.3  | 227.5  | 227.5  |
| 45°   | 13585.6 | 6193.3  | 960.6  | 743.9  | 588.6  | 404.5  | 281.7  | 220.3  | 198.6  | 191.4  | 191.4  |
| 47.5° | 14383.7 | 5662.5  | 884.8  | 682.5  | 509.2  | 321.4  | 227.5  | 191.4  | 177.0  | 180.6  | 184.2  |
| 50°   | 15192.6 | 5268.8  | 801.7  | 613.9  | 418.9  | 263.6  | 195.0  | 169.7  | 166.1  | 169.7  | 169.7  |
| 52.5° | 15802.9 | 5037.7  | 689.8  | 520.0  | 328.6  | 220.3  | 173.3  | 158.9  | 155.3  | 148.1  | 148.1  |
| 55°   | 16626.3 | 4987.2  | 548.9  | 422.5  | 260.0  | 184.2  | 155.3  | 144.5  | 133.6  | 126.4  | 122.8  |
| 57.5° | 17684.4 | 5044.9  | 422.5  | 328.6  | 202.2  | 151.7  | 137.2  | 119.2  | 104.7  | 90.3   | 90.3   |
| 60°   | 18341.6 | 4914.9  | 328.6  | 252.8  | 148.1  | 122.8  | 104.7  | 86.7   | 68.6   | 57.8   | 54.2   |
| 62.5° | 18132.2 | 4366.0  | 260.0  | 187.8  | 104.7  | 90.3   | 68.6   | 57.8   | 39.7   | 28.9   | 25.3   |
| 65°   | 17052.4 | 3524.6  | 209.5  | 130.0  | 75.8   | 54.2   | 36.1   | 36.1   | 18.1   | 3.6    | 0.0    |
| 67.5° | 14925.4 | 2610.9  | 166.1  | 86.7   | 43.3   | 25.3   | 18.1   | 10.8   | 0.0    | 0.0    | 0.0    |
| 70°   | 12148.3 | 1885.1  | 130.0  | 54.2   | 25.3   | 18.1   | 7.2    | 3.6    | 0.0    | 0.0    | 0.0    |
| 72.5° | 7713.7  | 1079.8  | 101.1  | 32.5   | 18.1   | 7.2    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 75°   | 2982.9  | 422.5   | 68.6   | 21.7   | 7.2    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 77.5° | 845.0   | 198.6   | 39.7   | 10.8   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 80°   | 220.3   | 86.7    | 21.7   | 3.6    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5° | 104.7   | 36.1    | 7.2    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 61.4    | 14.4    | 3.6    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 28.9    | 3.6     | 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)