

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: P454153

Luminaire Tested: **GALN-SA5B-727-U-T2R-HSS**

Issue Date: 1/4/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P454153  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/4/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GALN-SA5B-727-U-T2R-HSS  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(5) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II  
ROADWAY OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 19080 lumens  
Efficiency: N/A  
Efficacy: 93.5 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G2

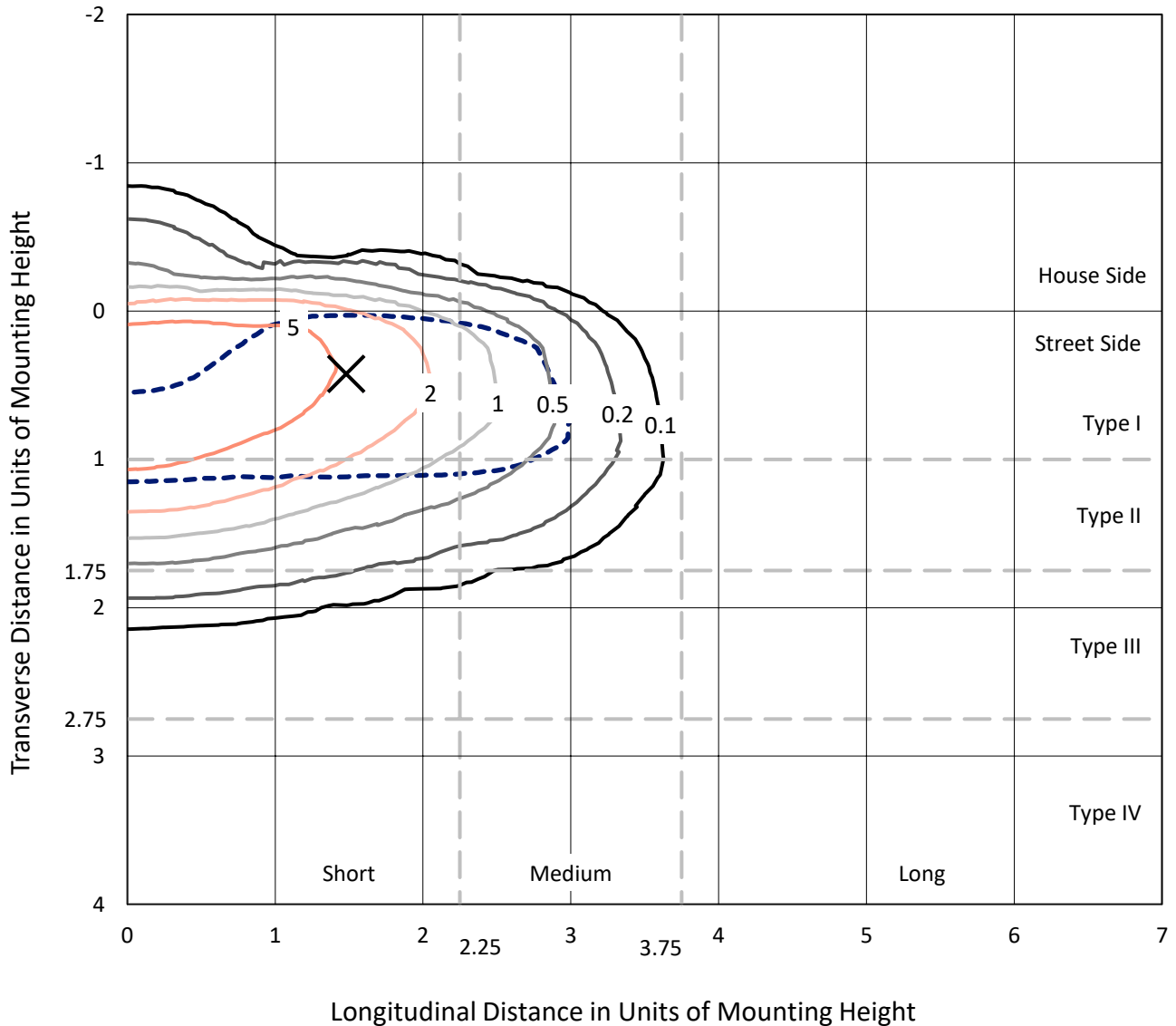
Input Watts (W): 204  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

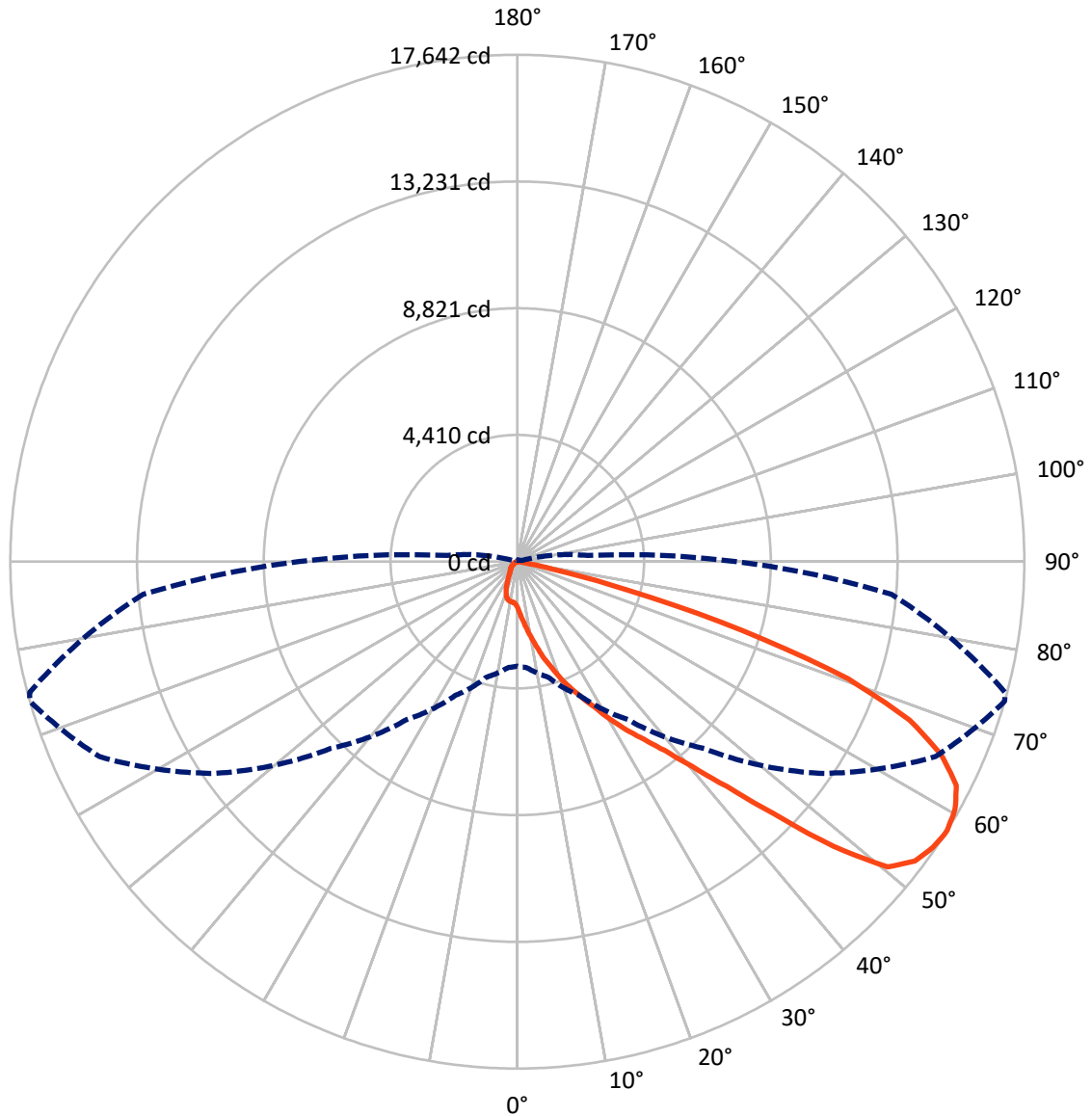
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.7 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 74-Deg Lateral    - - - Horizontal Cone Through 57-Deg Vertical

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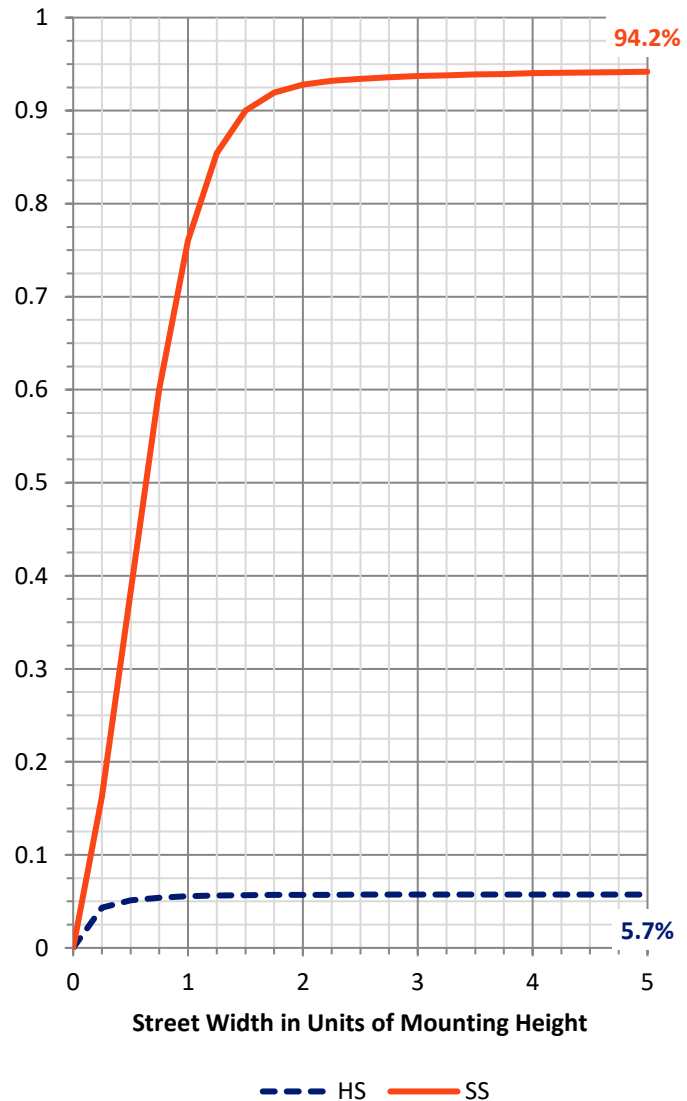
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 1100.5   | 0.0    | 1100.5  |
|                    | % Fixture | 5.8      | 0.0    | 5.8     |
| <b>Street Side</b> | Lumens    | 17979.5  | 0.0    | 17979.5 |
|                    | % Fixture | 94.2     | 0.0    | 94.2    |
| <b>Total</b>       | Lumens    | 19080.0  | 0.0    | 19080.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 192.9   | 1.0       |
| 10°-20°   | 760.2   | 4.0       |
| 20°-30°   | 1626.7  | 8.5       |
| 30°-40°   | 2989.9  | 15.7      |
| 40°-50°   | 4583.5  | 24.0      |
| 50°-60°   | 4848.7  | 25.4      |
| 60°-70°   | 3166.4  | 16.6      |
| 70°-80°   | 865.2   | 4.5       |
| 80°-90°   | 46.6    | 0.2       |
| 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°    | 19080.0 | 100.0     |
| 0°-180°   | 19080.0 | 100.0     |



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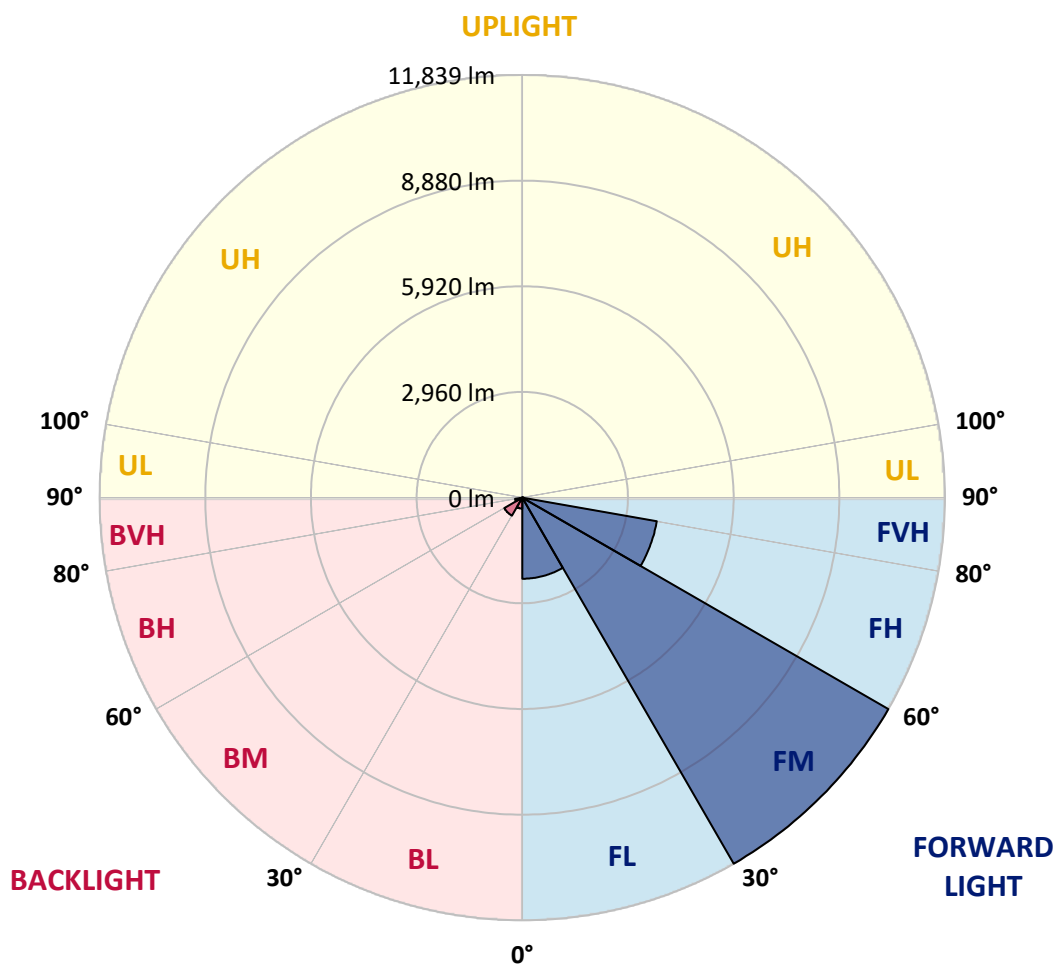
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|---------|-----------|-------------------------|------|---------|
|                |         |           | B                       | U    | G       |
| FL (0°-30°)    | 2272.4  | 11.9      |                         |      |         |
| FM (30°-60°)   | 11839.5 | 62.1      |                         |      |         |
| FH (60°-80°)   | 3824.9  | 20.0      |                         |      | G2/5000 |
| FVH (80°-90°)  | 42.7    | 0.2       |                         |      | G1/100  |
| BL (0°-30°)    | 307.4   | 1.6       | B1/500                  |      |         |
| BM (30°-60°)   | 582.6   | 3.1       | B1/1000                 |      |         |
| BH (60°-80°)   | 206.6   | 1.1       | B1/500                  |      | G1/500  |
| BVH (80°-90°)  | 3.8     | 0.0       |                         |      | G0/10   |
| UL (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0     | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G2**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 74°     | 75°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 1597.9  | 1597.9  | 1597.9  | 1597.9  | 1597.9  | 1597.9  | 1597.9  | 1597.9  | 1597.9  | 1597.9  | 1597.9  |
| 2.5°  | 2338.3  | 2317.2  | 2275.0  | 2260.5  | 2198.6  | 2102.5  | 2018.2  | 1904.9  | 1815.3  | 1806.1  | 1698.0  |
| 5°    | 3131.3  | 3083.9  | 3064.1  | 2969.3  | 2820.4  | 2680.8  | 2441.0  | 2259.2  | 2049.8  | 2034.0  | 1816.6  |
| 7.5°  | 3895.4  | 3829.5  | 3809.7  | 3720.1  | 3546.3  | 3326.3  | 3015.4  | 2684.7  | 2352.8  | 2322.5  | 1976.0  |
| 10°   | 4448.6  | 4457.9  | 4422.3  | 4363.0  | 4222.1  | 3998.1  | 3614.8  | 3162.9  | 2690.0  | 2651.8  | 2155.2  |
| 12.5° | 4845.2  | 4843.8  | 4850.4  | 4849.1  | 4774.0  | 4604.1  | 4201.0  | 3680.6  | 3061.5  | 2986.4  | 2360.7  |
| 15°   | 5103.3  | 5107.3  | 5127.1  | 5195.6  | 5203.5  | 5098.1  | 4762.2  | 4175.9  | 3492.3  | 3398.7  | 2583.3  |
| 17.5° | 5364.2  | 5391.8  | 5423.5  | 5488.0  | 5546.0  | 5503.8  | 5266.7  | 4692.3  | 3882.2  | 3812.4  | 2821.7  |
| 20°   | 5794.9  | 5833.2  | 5814.7  | 5854.2  | 5884.5  | 5888.5  | 5705.4  | 5169.2  | 4355.1  | 4237.9  | 3094.4  |
| 22.5° | 6483.9  | 6482.6  | 6435.2  | 6364.0  | 6304.8  | 6302.1  | 6136.1  | 5659.3  | 4784.6  | 4671.3  | 3368.4  |
| 25°   | 7354.7  | 7358.6  | 7266.4  | 7063.5  | 6916.0  | 6735.5  | 6544.5  | 6088.7  | 5244.3  | 5104.7  | 3656.9  |
| 27.5° | 8353.2  | 8328.2  | 8188.5  | 7909.3  | 7616.8  | 7308.6  | 7033.2  | 6588.0  | 5731.7  | 5615.8  | 3987.6  |
| 30°   | 9250.3  | 9241.1  | 9077.7  | 8736.6  | 8351.9  | 8042.3  | 7643.2  | 7213.7  | 6362.7  | 6220.4  | 4357.7  |
| 32.5° | 10085.5 | 10098.7 | 9872.1  | 9519.0  | 9147.6  | 8790.6  | 8369.0  | 7811.8  | 6981.9  | 6780.3  | 4760.8  |
| 35°   | 10737.6 | 10750.8 | 10516.3 | 10222.5 | 9840.5  | 9544.1  | 9142.3  | 8449.4  | 7593.1  | 7423.2  | 5224.5  |
| 37.5° | 11085.4 | 11102.5 | 10966.8 | 10745.5 | 10507.0 | 10358.2 | 9984.1  | 9270.1  | 8336.1  | 8233.3  | 5772.6  |
| 40°   | 11151.2 | 11171.0 | 11111.7 | 11052.4 | 11039.3 | 11146.0 | 11036.6 | 10237.0 | 9366.2  | 9205.5  | 6589.3  |
| 42.5° | 10953.6 | 10980.0 | 11006.3 | 11138.1 | 11406.8 | 11798.0 | 12178.7 | 11549.1 | 10692.8 | 10476.8 | 7587.8  |
| 45°   | 10434.6 | 10432.0 | 10536.0 | 10877.2 | 11479.2 | 12314.4 | 13372.2 | 13191.8 | 12500.2 | 12243.3 | 8998.7  |
| 47.5° | 9546.7  | 9533.5  | 9758.8  | 10244.9 | 11182.8 | 12409.3 | 14345.8 | 15186.2 | 14806.8 | 14569.7 | 10515.0 |
| 50°   | 8193.8  | 8258.4  | 8612.7  | 9291.2  | 10446.5 | 12122.1 | 14646.1 | 16494.3 | 16699.8 | 16448.2 | 11740.1 |
| 52.5° | 6609.1  | 6606.4  | 7162.3  | 8083.2  | 9355.7  | 11489.8 | 14436.7 | 16731.4 | 17315.0 | 17122.7 | 12343.4 |
| 55°   | 4891.3  | 4925.5  | 5503.8  | 6432.5  | 7939.6  | 10335.8 | 13753.0 | 16487.7 | 17549.5 | 17413.8 | 12741.2 |
| 57°   | 3638.5  | 3699.1  | 4162.8  | 5145.5  | 6706.5  | 9193.7  | 12842.7 | 16051.7 | 17641.7 | 17568.0 | 13071.9 |
| 57.5° | 3396.1  | 3398.7  | 3850.6  | 4743.7  | 6345.6  | 8755.0  | 12581.8 | 15869.9 | 17639.1 | 17598.3 | 13125.9 |
| 60°   | 2090.6  | 2156.5  | 2468.7  | 3206.4  | 4644.9  | 6833.0  | 10833.7 | 14825.3 | 17502.1 | 17561.4 | 13356.4 |
| 62.5° | 1251.5  | 1279.1  | 1482.0  | 1932.5  | 2994.3  | 4987.4  | 8865.7  | 13488.2 | 17145.1 | 17325.6 | 13340.6 |
| 65°   | 804.9   | 811.5   | 903.7   | 1169.8  | 1871.9  | 3371.1  | 6831.7  | 11721.6 | 16221.6 | 16553.6 | 12819.0 |
| 67.5° | 621.8   | 632.3   | 669.2   | 768.0   | 1085.5  | 2099.8  | 4832.0  | 9836.5  | 14727.8 | 15155.9 | 11554.3 |
| 70°   | 552.0   | 557.2   | 570.4   | 602.0   | 717.9   | 1185.6  | 3006.2  | 7684.0  | 12213.0 | 12334.2 | 9042.2  |
| 72.5° | 450.5   | 465.0   | 505.9   | 516.4   | 569.1   | 740.3   | 1673.0  | 5157.4  | 8205.7  | 8236.0  | 5058.6  |
| 75°   | 349.1   | 351.7   | 412.3   | 442.6   | 479.5   | 509.8   | 746.9   | 2600.4  | 3941.5  | 3730.7  | 1949.7  |
| 77.5° | 260.8   | 272.7   | 300.4   | 338.6   | 391.2   | 364.9   | 334.6   | 980.1   | 1223.8  | 1201.4  | 566.5   |
| 80°   | 167.3   | 173.9   | 209.5   | 254.2   | 304.3   | 238.4   | 188.4   | 287.2   | 268.7   | 276.6   | 135.7   |
| 82.5° | 84.3    | 85.6    | 134.4   | 206.8   | 193.6   | 119.9   | 118.6   | 117.2   | 100.1   | 98.8    | 63.2    |
| 85°   | 9.2     | 19.8    | 86.9    | 118.6   | 86.9    | 39.5    | 55.3    | 54.0    | 52.7    | 54.0    | 36.9    |
| 87.5° | 1.3     | 1.3     | 14.5    | 17.1    | 11.9    | 13.2    | 15.8    | 17.1    | 21.1    | 19.8    | 15.8    |
| 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°    | 1597.9 | 1597.9 | 1597.9 | 1597.9 | 1597.9 | 1597.9 | 1597.9 | 1597.9 | 1597.9 | 1597.9 | 1597.9 |
| 2.5°  | 1645.3 | 1592.7 | 1495.2 | 1401.6 | 1331.8 | 1287.0 | 1229.1 | 1208.0 | 1177.7 | 1173.7 | 1159.3 |
| 5°    | 1716.5 | 1616.4 | 1446.4 | 1312.1 | 1204.0 | 1122.4 | 1051.2 | 992.0  | 944.5  | 934.0  | 939.3  |
| 7.5°  | 1817.9 | 1669.1 | 1431.9 | 1248.8 | 1098.7 | 959.0  | 845.7  | 775.9  | 725.9  | 707.4  | 710.0  |
| 10°   | 1932.5 | 1738.9 | 1429.3 | 1181.6 | 952.4  | 781.2  | 657.3  | 595.4  | 566.5  | 555.9  | 544.1  |
| 12.5° | 2068.2 | 1819.2 | 1422.7 | 1077.6 | 791.7  | 623.1  | 534.8  | 498.0  | 470.3  | 462.4  | 462.4  |
| 15°   | 2221.0 | 1904.9 | 1391.1 | 948.5  | 642.9  | 515.1  | 455.8  | 426.8  | 417.6  | 409.7  | 409.7  |
| 17.5° | 2380.4 | 1989.2 | 1325.2 | 789.1  | 533.5  | 441.3  | 404.4  | 387.3  | 374.1  | 364.9  | 364.9  |
| 20°   | 2562.2 | 2072.2 | 1219.9 | 648.1  | 450.5  | 393.9  | 364.9  | 345.1  | 334.6  | 326.7  | 324.1  |
| 22.5° | 2734.8 | 2139.3 | 1085.5 | 532.2  | 392.6  | 354.4  | 328.0  | 306.9  | 296.4  | 292.4  | 292.4  |
| 25°   | 2913.9 | 2180.2 | 923.5  | 440.0  | 358.3  | 321.4  | 292.4  | 275.3  | 266.1  | 263.5  | 262.1  |
| 27.5° | 3087.8 | 2203.9 | 781.2  | 384.7  | 326.7  | 291.1  | 263.5  | 250.3  | 241.1  | 238.4  | 239.8  |
| 30°   | 3298.6 | 2207.9 | 642.9  | 345.1  | 299.0  | 262.1  | 237.1  | 225.3  | 220.0  | 217.4  | 216.0  |
| 32.5° | 3512.0 | 2202.6 | 540.1  | 321.4  | 272.7  | 237.1  | 216.0  | 206.8  | 202.9  | 198.9  | 198.9  |
| 35°   | 3751.8 | 2174.9 | 459.7  | 297.7  | 247.7  | 216.0  | 197.6  | 189.7  | 184.4  | 180.5  | 179.2  |
| 37.5° | 4049.5 | 2160.4 | 413.6  | 271.4  | 225.3  | 196.3  | 179.2  | 171.3  | 167.3  | 162.0  | 160.7  |
| 40°   | 4518.5 | 2225.0 | 399.2  | 247.7  | 202.9  | 177.8  | 162.0  | 152.8  | 147.5  | 142.3  | 141.0  |
| 42.5° | 5103.3 | 2338.3 | 375.4  | 223.9  | 183.1  | 160.7  | 144.9  | 134.4  | 125.1  | 118.6  | 115.9  |
| 45°   | 5860.8 | 2487.1 | 338.6  | 198.9  | 166.0  | 142.3  | 127.8  | 114.6  | 102.8  | 97.5   | 96.2   |
| 47.5° | 6655.2 | 2630.7 | 305.6  | 179.2  | 147.5  | 126.5  | 110.7  | 96.2   | 85.6   | 81.7   | 80.4   |
| 50°   | 7142.6 | 2659.7 | 284.5  | 156.8  | 129.1  | 109.3  | 93.5   | 80.4   | 73.8   | 69.8   | 69.8   |
| 52.5° | 7365.2 | 2613.6 | 255.6  | 137.0  | 112.0  | 96.2   | 80.4   | 69.8   | 65.9   | 63.2   | 61.9   |
| 55°   | 7520.7 | 2542.5 | 217.4  | 118.6  | 96.2   | 81.7   | 71.1   | 63.2   | 58.0   | 55.3   | 54.0   |
| 57°   | 7611.6 | 2446.3 | 188.4  | 104.1  | 83.0   | 71.1   | 63.2   | 56.6   | 51.4   | 46.1   | 46.1   |
| 57.5° | 7615.5 | 2409.4 | 180.5  | 102.8  | 79.0   | 68.5   | 61.9   | 55.3   | 48.7   | 43.5   | 42.2   |
| 60°   | 7498.3 | 2156.5 | 144.9  | 86.9   | 63.2   | 58.0   | 51.4   | 43.5   | 34.3   | 29.0   | 27.7   |
| 62.5° | 7121.5 | 1835.0 | 119.9  | 73.8   | 51.4   | 44.8   | 36.9   | 32.9   | 23.7   | 17.1   | 17.1   |
| 65°   | 6551.1 | 1488.6 | 102.8  | 59.3   | 42.2   | 32.9   | 25.0   | 23.7   | 14.5   | 7.9    | 6.6    |
| 67.5° | 5726.4 | 1159.3 | 86.9   | 48.7   | 35.6   | 23.7   | 17.1   | 15.8   | 7.9    | 2.6    | 0.0    |
| 70°   | 4363.0 | 790.4  | 72.5   | 39.5   | 26.3   | 17.1   | 11.9   | 9.2    | 5.3    | 1.3    | 0.0    |
| 72.5° | 2514.8 | 434.7  | 60.6   | 30.3   | 19.8   | 13.2   | 9.2    | 5.3    | 5.3    | 0.0    | 0.0    |
| 75°   | 898.4  | 187.1  | 46.1   | 22.4   | 15.8   | 10.5   | 6.6    | 2.6    | 4.0    | 1.3    | 0.0    |
| 77.5° | 285.9  | 100.1  | 30.3   | 17.1   | 13.2   | 7.9    | 5.3    | 2.6    | 2.6    | 1.3    | 0.0    |
| 80°   | 84.3   | 52.7   | 18.4   | 14.5   | 9.2    | 6.6    | 4.0    | 1.3    | 2.6    | 1.3    | 0.0    |
| 82.5° | 46.1   | 26.3   | 14.5   | 10.5   | 9.2    | 5.3    | 4.0    | 1.3    | 1.3    | 1.3    | 0.0    |
| 85°   | 23.7   | 15.8   | 11.9   | 10.5   | 9.2    | 5.3    | 4.0    | 1.3    | 0.0    | 1.3    | 1.3    |
| 87.5° | 13.2   | 11.9   | 11.9   | 10.5   | 9.2    | 6.6    | 4.0    | 1.3    | 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)