

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: P647404

Luminaire Tested: **GALN-SA4D-835-U-T2R**

Issue Date: 1/4/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P647404  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/4/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: GALN-SA4D-835-U-T2R  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(4) 80 CRI, 3500K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II  
ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 24420.2 lumens  
Efficiency: N/A  
Efficacy: 99.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G3

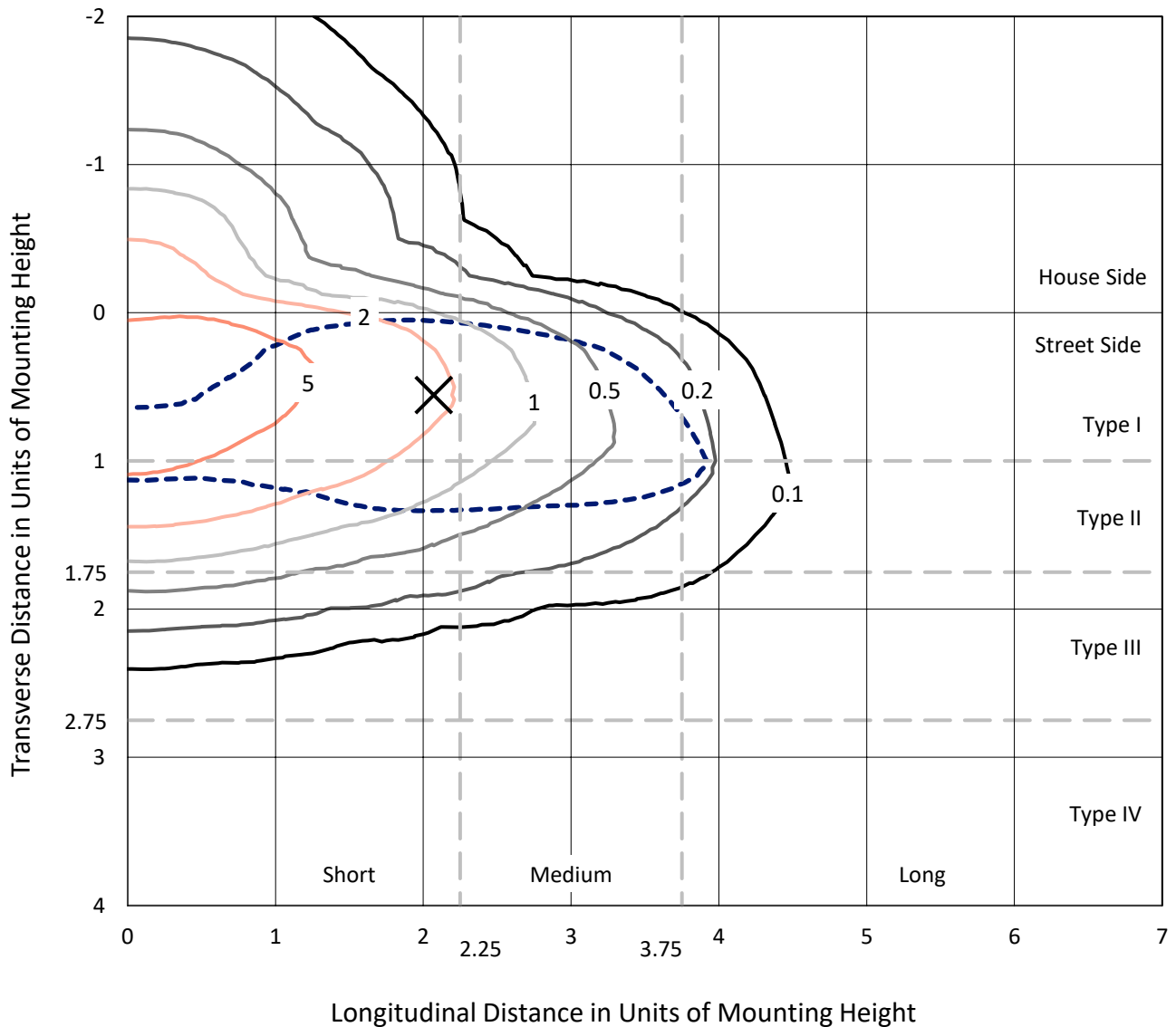
Input Watts (W): 245  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

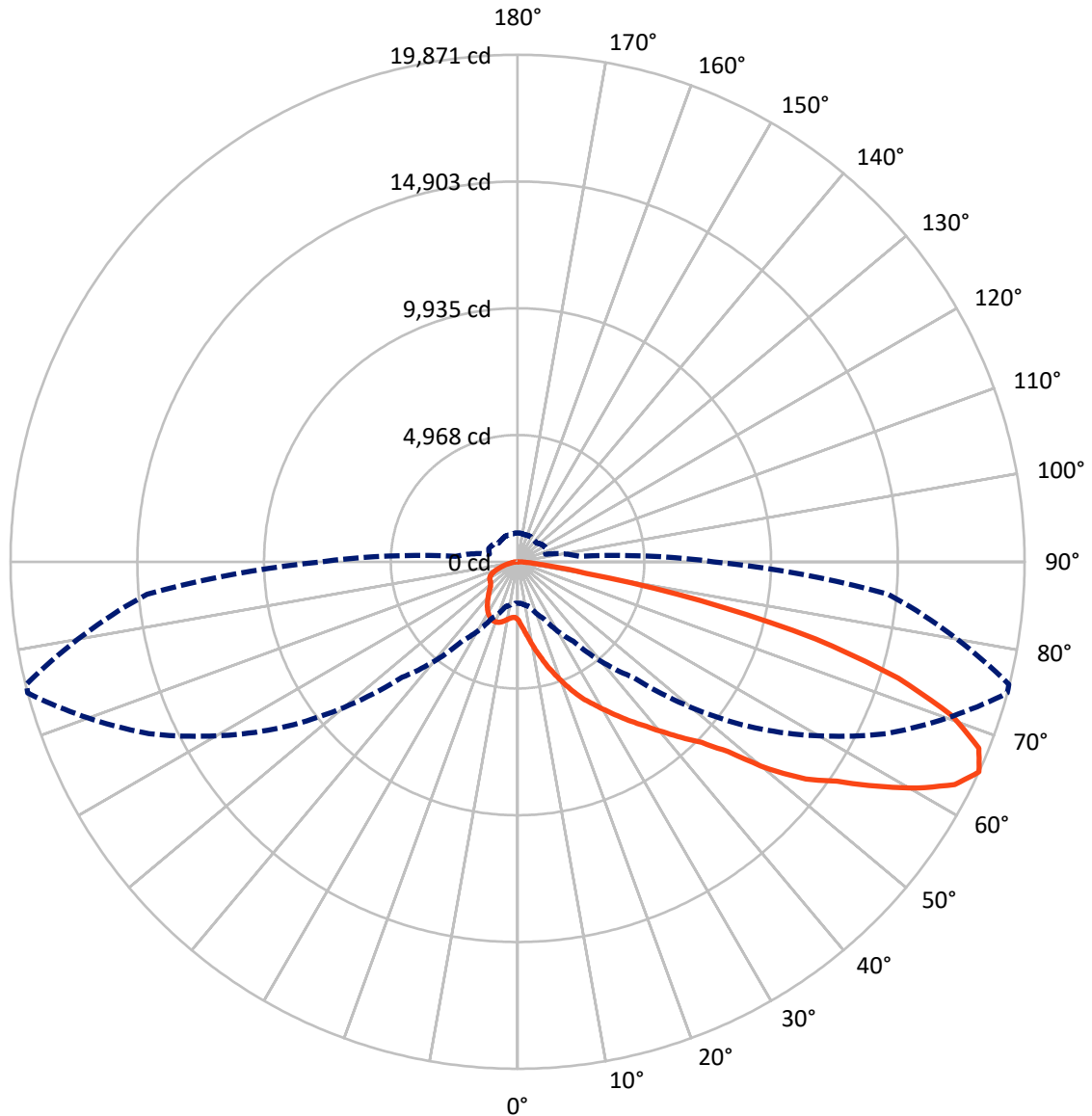
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.4 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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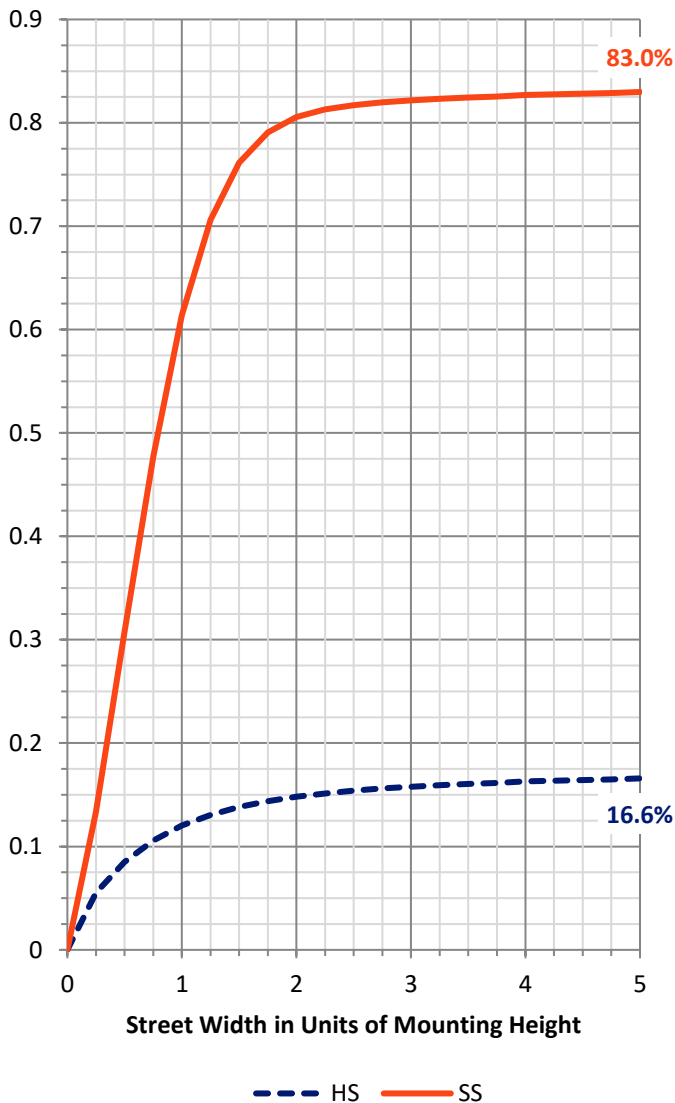
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 4105.4   | 0.0    | 4105.4  |
|                    | % Fixture | 16.8     | 0.0    | 16.8    |
| <b>Street Side</b> | Lumens    | 20314.8  | 0.0    | 20314.8 |
|                    | % Fixture | 83.2     | 0.0    | 83.2    |
| <b>Total</b>       | Lumens    | 24420.2  | 0.0    | 24420.2 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 275.7   | 1.1       |
| 10°-20°   | 1079.8  | 4.4       |
| 20°-30°   | 2085.7  | 8.5       |
| 30°-40°   | 3387.9  | 13.9      |
| 40°-50°   | 4660.3  | 19.1      |
| 50°-60°   | 5502.2  | 22.5      |
| 60°-70°   | 4820.9  | 19.7      |
| 70°-80°   | 2301.5  | 9.4       |
| 80°-90°   | 306.3   | 1.3       |
| 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°    | 24420.2 | 100.0     |
| 0°-180°   | 24420.2 | 100.0     |

**Coefficient of Utilization**



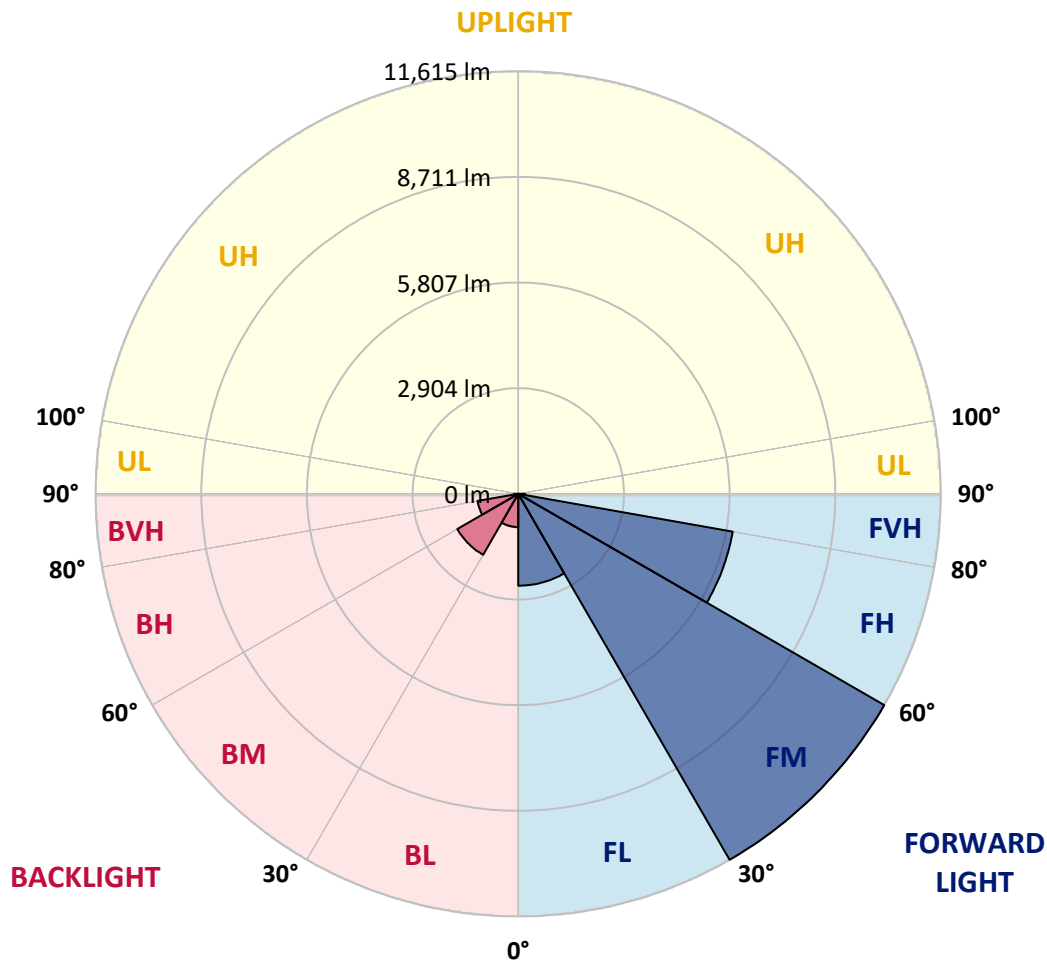
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|---------|-----------|-------------------------|------|---------|
|                |         |           | B                       | U    | G       |
| FL (0°-30°)    | 2524.7  | 10.3      |                         |      |         |
| FM (30°-60°)   | 11614.8 | 47.6      |                         |      |         |
| FH (60°-80°)   | 5984.0  | 24.5      |                         |      | G3/7500 |
| FVH (80°-90°)  | 191.4   | 0.8       |                         |      | G2/225  |
| BL (0°-30°)    | 916.5   | 3.8       | B2/1000                 |      |         |
| BM (30°-60°)   | 1935.6  | 7.9       | B2/2500                 |      |         |
| BH (60°-80°)   | 1138.3  | 4.7       | B3/2500                 |      | G3/2500 |
| BVH (80°-90°)  | 114.9   | 0.5       |                         |      | G2/225  |
| UL (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0     | 0.0       |                         | U0/0 |         |

**BUG Rating: B3-U0-G3**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 75°     | 76°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 2269.0  | 2269.0  | 2269.0  | 2269.0  | 2269.0  | 2269.0  | 2269.0  | 2269.0  | 2269.0  | 2269.0  | 2269.0  |
| 2.5°  | 3014.6  | 2994.8  | 2973.6  | 2915.3  | 2853.1  | 2782.9  | 2682.2  | 2585.5  | 2457.1  | 2453.1  | 2357.7  |
| 5°    | 3850.5  | 3837.2  | 3743.1  | 3688.9  | 3544.5  | 3352.4  | 3189.5  | 2936.5  | 2702.1  | 2674.3  | 2488.8  |
| 7.5°  | 4618.7  | 4567.0  | 4531.3  | 4433.3  | 4290.2  | 4043.8  | 3728.6  | 3386.9  | 2994.8  | 2957.7  | 2650.4  |
| 10°   | 5197.5  | 5192.2  | 5173.7  | 5088.9  | 4981.6  | 4736.6  | 4386.9  | 3896.8  | 3365.6  | 3292.8  | 2846.4  |
| 12.5° | 5630.6  | 5634.6  | 5632.0  | 5630.6  | 5553.8  | 5345.9  | 4967.0  | 4450.5  | 3740.5  | 3688.9  | 3073.0  |
| 15°   | 5915.4  | 5955.2  | 5971.1  | 6037.2  | 6043.9  | 5904.8  | 5579.0  | 4985.6  | 4163.1  | 4086.2  | 3316.6  |
| 17.5° | 6103.5  | 6123.4  | 6197.5  | 6310.1  | 6401.5  | 6376.4  | 6086.3  | 5481.0  | 4594.9  | 4466.4  | 3569.6  |
| 20°   | 6283.7  | 6318.1  | 6375.0  | 6528.7  | 6690.3  | 6764.4  | 6560.4  | 5988.3  | 5022.7  | 4940.6  | 3849.1  |
| 22.5° | 6658.5  | 6707.5  | 6727.4  | 6805.5  | 6943.3  | 7074.4  | 6981.7  | 6474.4  | 5491.6  | 5380.3  | 4145.8  |
| 25°   | 7292.9  | 7344.6  | 7288.9  | 7270.4  | 7315.5  | 7380.4  | 7360.5  | 6932.7  | 5934.0  | 5775.0  | 4426.6  |
| 27.5° | 8119.5  | 8126.1  | 8017.5  | 7914.2  | 7802.9  | 7769.8  | 7708.9  | 7339.3  | 6318.1  | 6185.6  | 4708.7  |
| 30°   | 9006.9  | 8975.1  | 8795.0  | 8608.2  | 8420.1  | 8234.7  | 8059.9  | 7731.3  | 6745.9  | 6593.6  | 4985.6  |
| 32.5° | 9830.8  | 9813.6  | 9613.5  | 9323.5  | 9005.6  | 8830.8  | 8477.1  | 8127.4  | 7204.2  | 7057.2  | 5270.4  |
| 35°   | 10448.0 | 10473.2 | 10253.3 | 9936.7  | 9589.7  | 9434.8  | 8988.4  | 8543.3  | 7678.4  | 7518.1  | 5580.3  |
| 37.5° | 10886.4 | 10873.2 | 10678.5 | 10404.3 | 10099.7 | 9964.5  | 9585.7  | 8997.6  | 8188.3  | 8034.7  | 5919.4  |
| 40°   | 11042.7 | 11034.8 | 10890.4 | 10690.4 | 10497.1 | 10449.4 | 10210.9 | 9487.7  | 8772.5  | 8592.3  | 6327.3  |
| 42.5° | 10943.4 | 10960.6 | 10865.2 | 10811.0 | 10775.2 | 10809.6 | 10832.1 | 10130.1 | 9409.5  | 9244.0  | 6769.7  |
| 45°   | 10638.8 | 10629.5 | 10616.2 | 10704.9 | 10906.3 | 11132.8 | 11446.8 | 10736.7 | 10102.3 | 9969.9  | 7363.2  |
| 47.5° | 10094.4 | 10160.6 | 10193.7 | 10438.7 | 10878.5 | 11415.0 | 12154.0 | 11550.0 | 11107.6 | 10992.4 | 8267.8  |
| 50°   | 9332.7  | 9385.7  | 9581.7  | 10017.5 | 10673.2 | 11520.9 | 12845.4 | 12879.9 | 12784.5 | 12568.6 | 9250.6  |
| 52.5° | 8143.3  | 8225.4  | 8629.4  | 9428.1  | 10252.0 | 11477.2 | 13264.0 | 14020.3 | 14146.1 | 13984.5 | 10218.9 |
| 55°   | 6812.1  | 6927.4  | 7353.9  | 8401.6  | 9671.9  | 11238.8 | 13552.7 | 14681.2 | 15183.2 | 15033.6 | 11151.3 |
| 57.5° | 5508.8  | 5630.6  | 6069.0  | 7083.6  | 8659.9  | 10711.6 | 13742.1 | 15417.7 | 16595.2 | 16400.5 | 12311.7 |
| 60°   | 4128.6  | 4255.8  | 4631.9  | 5677.0  | 7218.8  | 9681.1  | 13613.7 | 16056.1 | 18005.9 | 17922.4 | 13473.2 |
| 62.5° | 2663.7  | 2804.1  | 3131.2  | 3996.1  | 5548.5  | 8273.1  | 12926.2 | 16408.5 | 19227.1 | 19126.4 | 14321.0 |
| 65°   | 1622.5  | 1638.4  | 1818.6  | 2480.9  | 3797.5  | 6405.5  | 11354.0 | 15940.9 | 19870.8 | 19840.4 | 14579.3 |
| 67.5° | 1049.1  | 1074.2  | 1156.3  | 1486.1  | 2276.9  | 4449.2  | 9078.4  | 14397.8 | 19494.7 | 19484.1 | 14045.5 |
| 70°   | 886.1   | 894.0   | 931.1   | 1002.7  | 1323.2  | 2698.1  | 6375.0  | 11938.1 | 18065.5 | 18065.5 | 12762.0 |
| 72.5° | 792.1   | 802.7   | 815.9   | 838.4   | 944.4   | 1528.5  | 3804.1  | 9293.0  | 15597.8 | 15701.2 | 10862.6 |
| 75°   | 719.3   | 716.6   | 724.5   | 728.5   | 805.3   | 998.7   | 1967.0  | 6873.1  | 12066.6 | 11859.9 | 7866.5  |
| 77.5° | 615.9   | 619.9   | 615.9   | 633.1   | 711.3   | 760.3   | 998.7   | 4612.0  | 7312.8  | 7045.3  | 3948.4  |
| 80°   | 506.0   | 512.6   | 519.2   | 529.9   | 608.0   | 577.5   | 600.0   | 2102.0  | 2704.7  | 2647.8  | 1219.9  |
| 82.5° | 380.1   | 389.4   | 400.0   | 425.2   | 478.2   | 381.5   | 378.8   | 898.0   | 976.2   | 894.0   | 449.1   |
| 85°   | 153.6   | 181.5   | 274.2   | 299.3   | 300.7   | 209.3   | 233.1   | 374.8   | 398.7   | 389.4   | 176.2   |
| 87.5° | 35.8    | 42.4    | 88.7    | 133.8   | 123.2   | 78.1    | 86.1    | 121.8   | 139.1   | 128.5   | 59.6    |
| 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°    | 2269.0 | 2269.0 | 2269.0 | 2269.0 | 2269.0 | 2269.0 | 2269.0 | 2269.0 | 2269.0 | 2269.0 | 2269.0 |
| 2.5°  | 2314.0 | 2267.6 | 2188.2 | 2127.3 | 2083.5 | 2045.1 | 2021.2 | 2006.7 | 2001.4 | 2000.1 | 2001.4 |
| 5°    | 2392.1 | 2310.0 | 2184.2 | 2104.7 | 2061.0 | 2035.8 | 2021.2 | 2019.9 | 2021.2 | 2022.6 | 2018.6 |
| 7.5°  | 2499.4 | 2381.5 | 2217.3 | 2143.1 | 2110.0 | 2091.5 | 2084.8 | 2082.2 | 2083.5 | 2082.2 | 2082.2 |
| 10°   | 2642.5 | 2480.9 | 2282.2 | 2205.4 | 2177.5 | 2156.4 | 2145.7 | 2139.2 | 2133.8 | 2128.5 | 2125.9 |
| 12.5° | 2800.1 | 2590.8 | 2352.4 | 2278.2 | 2238.5 | 2205.4 | 2181.5 | 2164.3 | 2152.4 | 2140.5 | 2137.8 |
| 15°   | 2976.3 | 2707.4 | 2430.5 | 2327.2 | 2270.3 | 2221.3 | 2180.2 | 2152.4 | 2131.2 | 2113.9 | 2112.6 |
| 17.5° | 3144.4 | 2817.3 | 2483.5 | 2349.7 | 2266.3 | 2197.4 | 2143.1 | 2104.7 | 2078.2 | 2055.7 | 2053.0 |
| 20°   | 3324.6 | 2921.9 | 2507.4 | 2335.1 | 2226.5 | 2143.1 | 2071.6 | 2025.2 | 1994.8 | 1969.6 | 1965.6 |
| 22.5° | 3506.0 | 3010.7 | 2504.7 | 2288.8 | 2157.7 | 2059.7 | 1984.2 | 1935.2 | 1899.4 | 1874.3 | 1864.9 |
| 25°   | 3679.6 | 3082.2 | 2471.6 | 2214.6 | 2062.3 | 1960.3 | 1883.5 | 1838.5 | 1806.7 | 1776.2 | 1776.2 |
| 27.5° | 3835.9 | 3124.6 | 2409.4 | 2124.6 | 1964.3 | 1857.0 | 1796.0 | 1755.0 | 1725.9 | 1706.0 | 1694.1 |
| 30°   | 3989.5 | 3144.4 | 2324.6 | 2010.7 | 1861.0 | 1769.6 | 1720.6 | 1696.8 | 1670.2 | 1647.7 | 1645.1 |
| 32.5° | 4127.3 | 3140.5 | 2218.6 | 1899.4 | 1763.0 | 1698.1 | 1678.2 | 1659.6 | 1631.9 | 1600.1 | 1592.1 |
| 35°   | 4261.1 | 3114.0 | 2092.8 | 1777.6 | 1680.9 | 1655.7 | 1661.0 | 1634.5 | 1584.2 | 1544.4 | 1537.8 |
| 37.5° | 4406.7 | 3066.3 | 1955.0 | 1678.2 | 1612.0 | 1635.8 | 1649.1 | 1590.7 | 1508.7 | 1446.4 | 1431.9 |
| 40°   | 4575.0 | 3012.0 | 1811.9 | 1578.8 | 1557.7 | 1617.3 | 1617.3 | 1510.0 | 1397.4 | 1359.0 | 1348.4 |
| 42.5° | 4772.3 | 2966.9 | 1692.8 | 1495.4 | 1512.6 | 1572.3 | 1565.6 | 1402.7 | 1356.3 | 1336.5 | 1331.2 |
| 45°   | 5085.0 | 2951.0 | 1569.6 | 1422.6 | 1475.6 | 1519.3 | 1464.9 | 1365.6 | 1339.1 | 1323.2 | 1317.9 |
| 47.5° | 5579.0 | 2969.6 | 1461.0 | 1368.3 | 1433.1 | 1466.2 | 1352.4 | 1340.4 | 1321.9 | 1299.4 | 1296.7 |
| 50°   | 6037.2 | 2952.4 | 1384.2 | 1337.8 | 1396.1 | 1402.7 | 1306.0 | 1310.0 | 1299.4 | 1274.2 | 1268.9 |
| 52.5° | 6412.1 | 2898.1 | 1335.2 | 1321.9 | 1364.3 | 1291.4 | 1262.3 | 1276.8 | 1272.9 | 1241.1 | 1235.8 |
| 55°   | 6824.1 | 2865.0 | 1311.3 | 1321.9 | 1343.1 | 1194.7 | 1221.2 | 1242.4 | 1237.1 | 1214.6 | 1213.3 |
| 57.5° | 7323.4 | 2871.6 | 1294.1 | 1325.9 | 1321.9 | 1145.8 | 1180.1 | 1205.4 | 1204.0 | 1197.4 | 1197.4 |
| 60°   | 7834.7 | 2874.2 | 1267.6 | 1324.5 | 1296.7 | 1107.3 | 1137.8 | 1173.6 | 1176.2 | 1180.1 | 1180.1 |
| 62.5° | 8004.2 | 2759.1 | 1215.9 | 1300.7 | 1241.1 | 1070.2 | 1098.1 | 1147.1 | 1144.4 | 1155.0 | 1156.3 |
| 65°   | 7687.7 | 2439.8 | 1139.1 | 1246.4 | 1169.6 | 1043.7 | 1067.6 | 1112.6 | 1098.1 | 1125.9 | 1131.2 |
| 67.5° | 6997.6 | 2018.6 | 1019.9 | 1148.3 | 1090.1 | 1015.9 | 1047.7 | 1065.0 | 1038.4 | 1092.8 | 1094.1 |
| 70°   | 6047.9 | 1576.2 | 868.9  | 1009.3 | 1000.0 | 986.8  | 1031.8 | 1005.3 | 968.3  | 1034.5 | 1021.2 |
| 72.5° | 5057.1 | 1204.0 | 694.1  | 825.2  | 879.5  | 943.0  | 1004.0 | 928.5  | 876.9  | 896.7  | 872.9  |
| 75°   | 3798.8 | 890.1  | 557.7  | 646.4  | 732.5  | 880.8  | 978.8  | 835.8  | 756.3  | 737.7  | 732.5  |
| 77.5° | 1936.5 | 581.5  | 417.3  | 483.4  | 549.7  | 796.1  | 944.4  | 727.2  | 626.5  | 597.4  | 584.1  |
| 80°   | 691.4  | 361.6  | 294.0  | 333.8  | 370.9  | 684.8  | 825.2  | 601.3  | 486.1  | 480.8  | 486.1  |
| 82.5° | 320.6  | 233.1  | 197.4  | 218.5  | 219.9  | 457.0  | 629.1  | 449.1  | 369.6  | 561.6  | 474.2  |
| 85°   | 137.7  | 116.6  | 111.3  | 108.6  | 100.7  | 204.0  | 353.7  | 241.1  | 376.2  | 168.2  | 155.0  |
| 87.5° | 41.0   | 46.4   | 41.0   | 30.5   | 22.6   | 22.6   | 35.8   | 13.2   | 9.2    | 6.7    | 6.7    |
| 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)