

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: P321073

Luminaire Tested: **GLEON-SA9A-827-U-AFL**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P321073  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-29)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: GLEON-SA9A-827-U-AFL  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(9) 80 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE  
FRONTLINE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 31420 lumens  
Efficiency: N/A  
Efficacy: 108.3 lumens/watt  
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G3

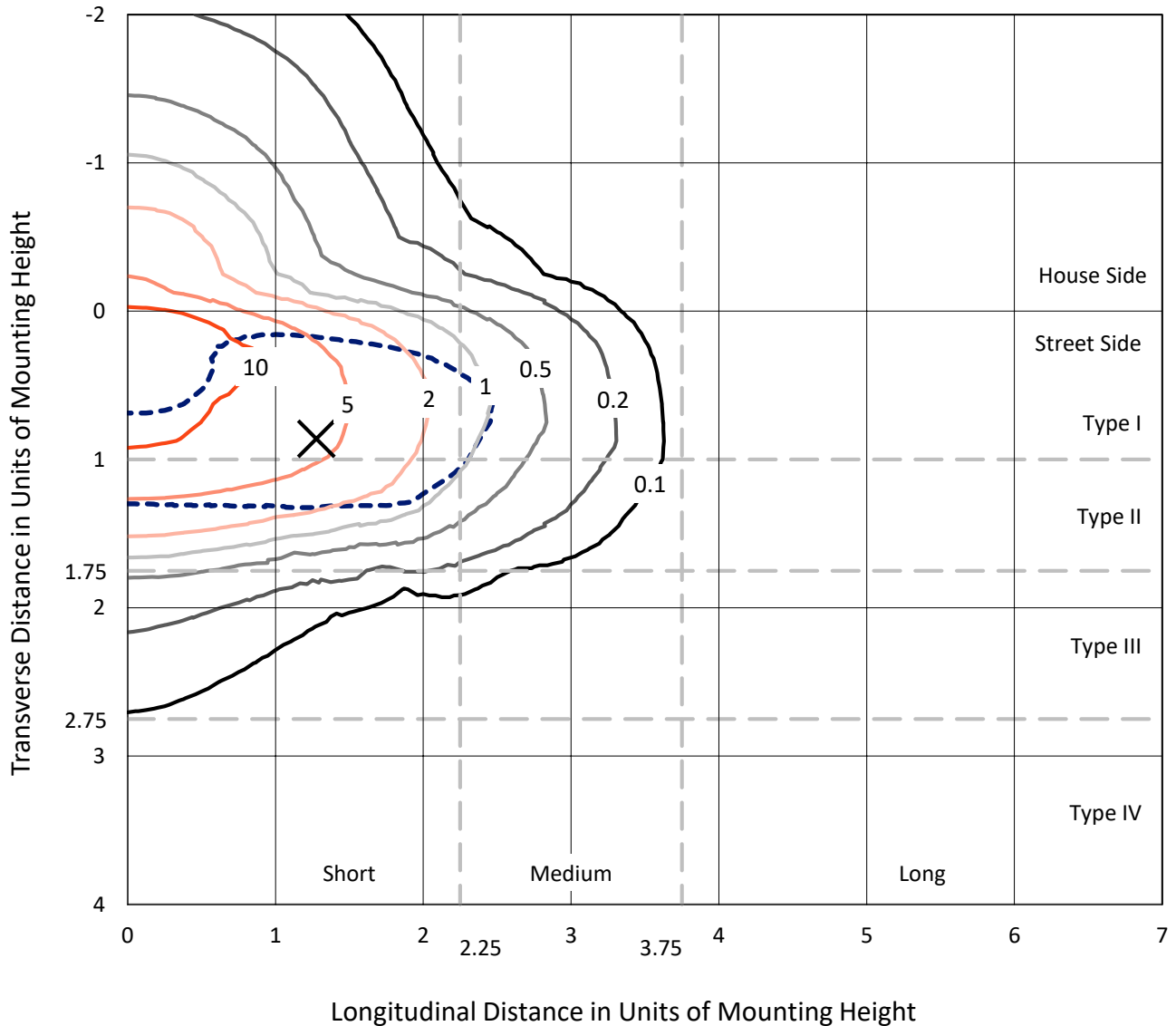
Input Watts (W): 290  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

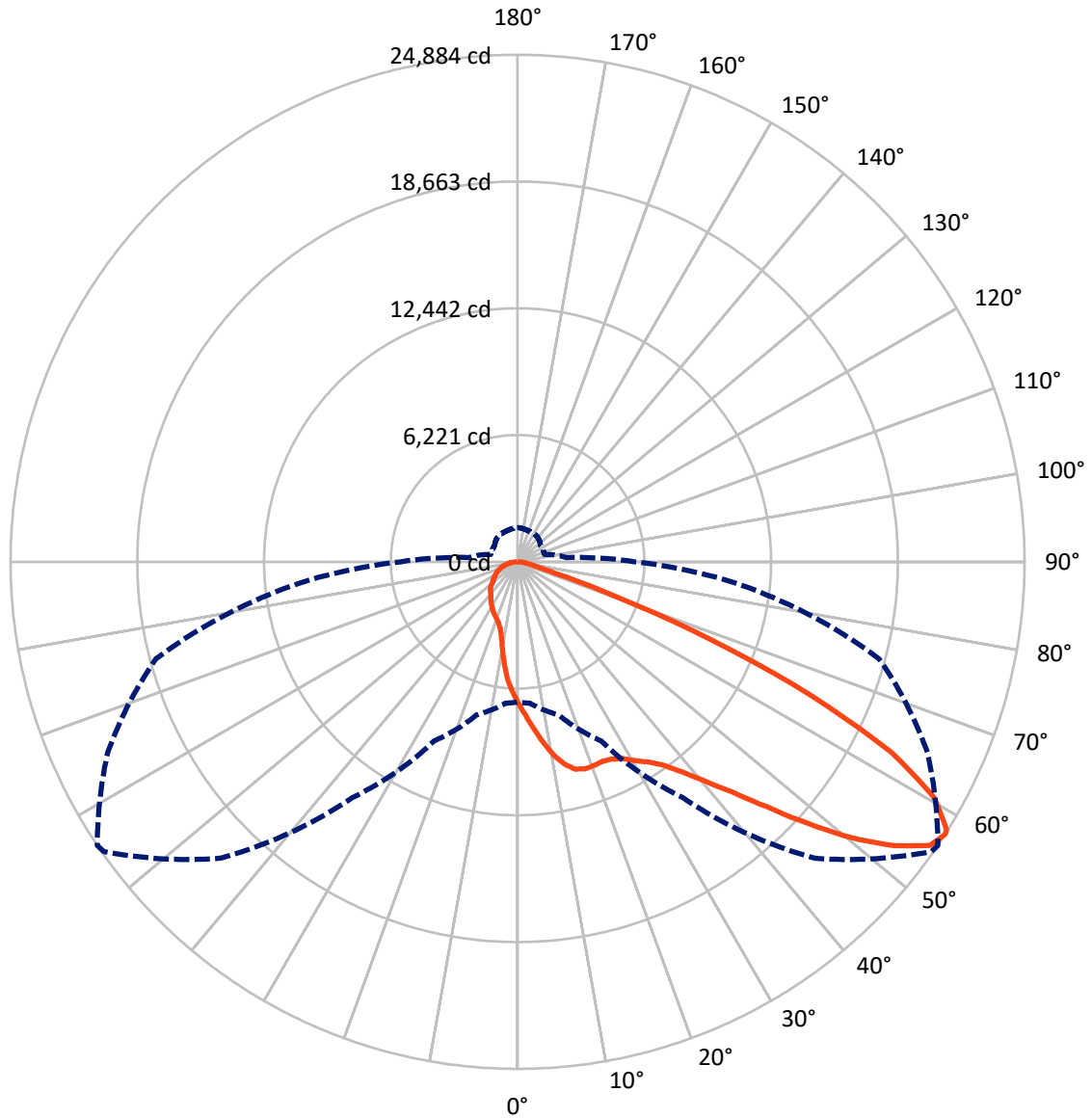
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 15.4 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 56-Deg Lateral      - - - Horizontal Cone Through 57-Deg Vertical

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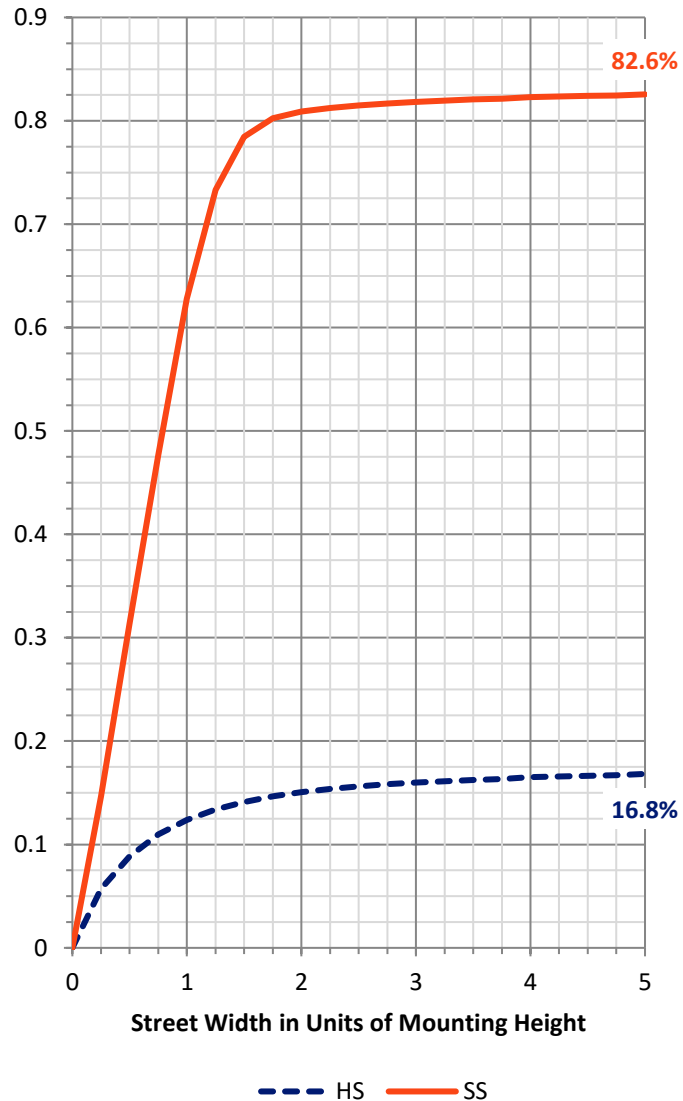
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 5416.1   | 0.0    | 5416.1  |
|                    | % Fixture | 17.2     | 0.0    | 17.2    |
| <b>Street Side</b> | Lumens    | 26003.9  | 0.0    | 26003.9 |
|                    | % Fixture | 82.8     | 0.0    | 82.8    |
| <b>Total</b>       | Lumens    | 31420.0  | 0.0    | 31420.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 665.7   | 2.1       |
| 10°-20°   | 1882.1  | 6.0       |
| 20°-30°   | 3065.6  | 9.8       |
| 30°-40°   | 4582.8  | 14.6      |
| 40°-50°   | 6951.1  | 22.1      |
| 50°-60°   | 7790.9  | 24.8      |
| 60°-70°   | 4601.6  | 14.6      |
| 70°-80°   | 1507.7  | 4.8       |
| 80°-90°   | 372.5   | 1.2       |
| 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°    | 31420.0 | 100.0     |
| 0°-180°   | 31420.0 | 100.0     |

**Coefficient of Utilization**

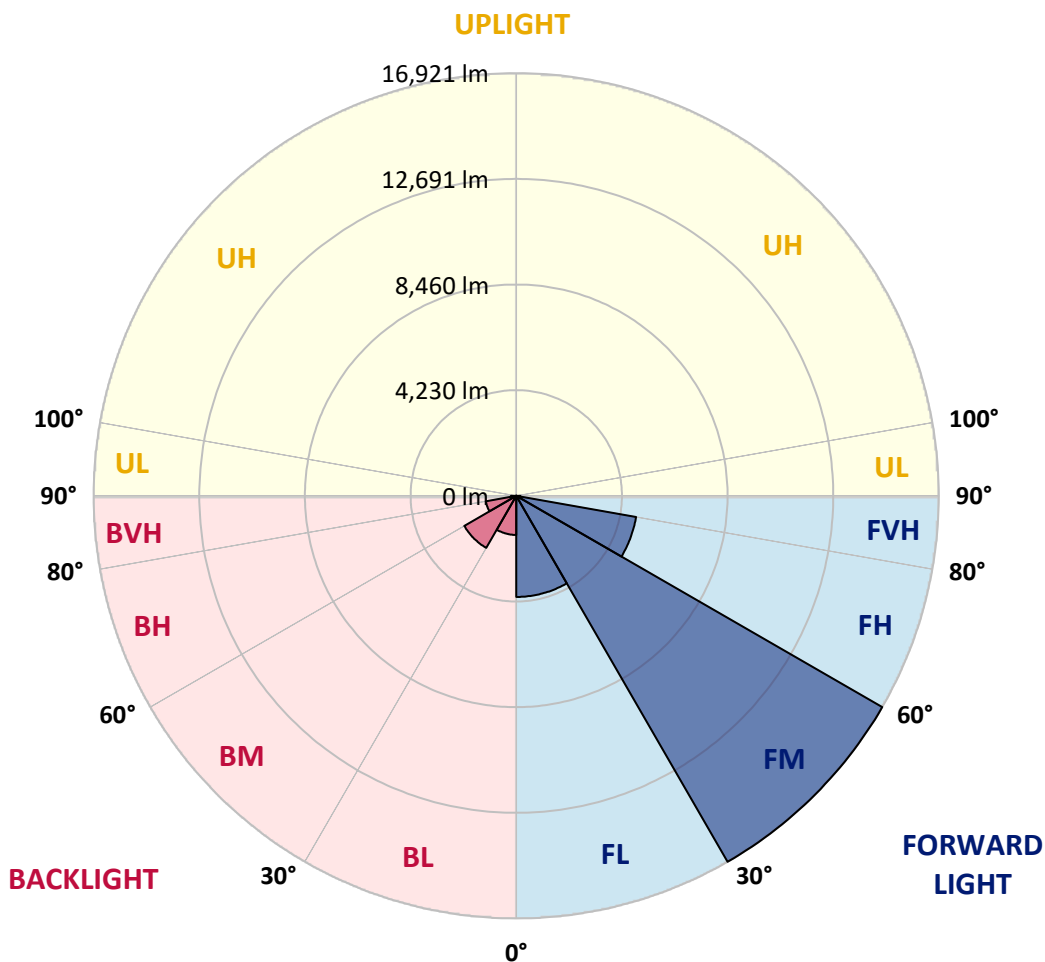


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|---------|-----------|-------------------------|------|---------|
|                |         |           | B                       | U    | G       |
| FL (0°-30°)    | 4047.4  | 12.9      |                         |      |         |
| FM (30°-60°)   | 16920.7 | 53.9      |                         |      |         |
| FH (60°-80°)   | 4871.8  | 15.5      |                         |      | G2/5000 |
| FVH (80°-90°)  | 164.0   | 0.5       |                         |      | G2/225  |
| BL (0°-30°)    | 1566.1  | 5.0       | B3/2500                 |      |         |
| BM (30°-60°)   | 2404.0  | 7.7       | B2/2500                 |      |         |
| BH (60°-80°)   | 1237.5  | 3.9       | B3/2500                 |      | G3/2500 |
| BVH (80°-90°)  | 208.5   | 0.7       |                         |      | 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°     | 56°     | 65°     | 75°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 6969.0  | 6969.0  | 6969.0  | 6969.0  | 6969.0  | 6969.0  | 6969.0  | 6969.0  | 6969.0  | 6969.0  | 6969.0  |
| 2.5°  | 8002.3  | 8075.8  | 8043.4  | 7931.1  | 7844.7  | 7722.7  | 7586.6  | 7545.6  | 7402.0  | 7241.1  | 7047.8  |
| 5°    | 9268.9  | 9232.2  | 9179.3  | 9004.4  | 8819.7  | 8604.9  | 8263.7  | 8209.7  | 7890.0  | 7526.2  | 7141.8  |
| 7.5°  | 9990.2  | 9987.0  | 9955.7  | 9853.1  | 9684.7  | 9403.9  | 8992.5  | 8928.8  | 8446.1  | 7860.9  | 7264.8  |
| 10°   | 9885.5  | 9877.9  | 9929.8  | 10036.7 | 10087.4 | 10029.1 | 9682.5  | 9618.8  | 9026.0  | 8231.3  | 7407.4  |
| 12.5° | 9290.5  | 9294.9  | 9378.0  | 9602.6  | 9908.2  | 10275.3 | 10219.2 | 10187.8 | 9627.4  | 8650.2  | 7580.1  |
| 15°   | 8827.3  | 8837.0  | 8902.9  | 9098.3  | 9459.0  | 10125.2 | 10545.3 | 10556.1 | 10209.4 | 9112.4  | 7782.1  |
| 17.5° | 8624.3  | 8644.8  | 8675.1  | 8812.2  | 9142.6  | 9826.1  | 10623.0 | 10681.3 | 10719.1 | 9591.8  | 7976.4  |
| 20°   | 8689.1  | 8708.5  | 8717.2  | 8804.6  | 9075.7  | 9644.7  | 10569.0 | 10673.8 | 11110.0 | 10043.2 | 8170.8  |
| 22.5° | 8979.6  | 8991.4  | 8996.8  | 9019.5  | 9230.1  | 9696.5  | 10533.4 | 10643.5 | 11392.9 | 10448.1 | 8317.6  |
| 25°   | 9461.1  | 9452.5  | 9418.0  | 9388.8  | 9530.3  | 9901.7  | 10615.4 | 10720.2 | 11622.9 | 10815.2 | 8413.7  |
| 27.5° | 10037.8 | 10027.0 | 9960.0  | 9880.1  | 9961.1  | 10221.3 | 10851.9 | 10935.1 | 11829.1 | 11158.6 | 8462.3  |
| 30°   | 10729.9 | 10701.8 | 10575.5 | 10480.5 | 10511.8 | 10700.7 | 11241.7 | 11317.3 | 12147.7 | 11548.4 | 8509.8  |
| 32.5° | 11530.0 | 11499.8 | 11317.3 | 11159.7 | 11159.7 | 11317.3 | 11643.4 | 11706.0 | 12417.6 | 11988.9 | 8586.5  |
| 35°   | 12532.1 | 12494.3 | 12256.7 | 11992.2 | 11917.7 | 11997.6 | 12190.9 | 12235.1 | 12903.5 | 12544.0 | 8725.8  |
| 37.5° | 13713.4 | 13662.6 | 13354.9 | 13000.7 | 12837.7 | 12833.3 | 12972.6 | 13063.3 | 13679.9 | 13272.8 | 8962.3  |
| 40°   | 14897.9 | 14862.3 | 14593.4 | 14314.8 | 13995.2 | 13892.6 | 14107.5 | 14135.6 | 14694.9 | 14177.7 | 9264.6  |
| 42.5° | 15813.6 | 15807.1 | 15757.4 | 15794.1 | 15467.0 | 15259.6 | 15428.1 | 15450.8 | 15934.5 | 15157.1 | 9586.4  |
| 45°   | 16297.3 | 16308.1 | 16548.9 | 17082.3 | 17203.3 | 17052.1 | 17135.2 | 17141.7 | 17351.2 | 16145.1 | 9881.2  |
| 47.5° | 15909.7 | 15965.8 | 16574.8 | 17768.0 | 18758.2 | 19260.3 | 19122.1 | 19202.0 | 18724.7 | 16993.8 | 10112.3 |
| 50°   | 14399.0 | 14468.1 | 15504.7 | 17462.4 | 19483.8 | 21397.2 | 21324.8 | 21306.5 | 19832.6 | 17615.7 | 10237.5 |
| 52.5° | 12527.8 | 12581.7 | 13436.9 | 15874.0 | 18951.4 | 22578.5 | 23242.5 | 23147.5 | 20817.3 | 18081.1 | 10261.3 |
| 55°   | 9678.2  | 9762.4  | 10582.0 | 12703.8 | 16798.3 | 22127.1 | 24652.8 | 24567.5 | 21714.6 | 18325.2 | 10233.2 |
| 57°   | 6880.4  | 6969.0  | 7783.1  | 9695.5  | 14131.3 | 20564.7 | 24793.1 | 24883.8 | 22199.5 | 18366.2 | 10264.5 |
| 57.5° | 6139.7  | 6230.4  | 7037.0  | 8894.3  | 13299.8 | 19999.9 | 24672.2 | 24823.4 | 22286.9 | 18359.7 | 10281.8 |
| 60°   | 3091.4  | 3126.0  | 3640.0  | 4964.9  | 8407.3  | 16168.8 | 23094.6 | 23484.4 | 22365.8 | 18042.3 | 10356.3 |
| 62.5° | 1922.0  | 1897.2  | 1881.0  | 2287.0  | 4090.3  | 10722.3 | 19839.0 | 20589.5 | 20857.3 | 17273.5 | 10176.0 |
| 65°   | 1689.9  | 1643.4  | 1465.3  | 1432.9  | 1806.5  | 5207.8  | 14940.0 | 15874.0 | 17634.1 | 16061.9 | 9746.2  |
| 67.5° | 1587.3  | 1541.9  | 1341.1  | 1220.2  | 1221.2  | 2064.6  | 9275.4  | 10327.1 | 13737.1 | 14013.6 | 8732.3  |
| 70°   | 1481.5  | 1440.4  | 1252.6  | 1110.0  | 1039.8  | 1143.5  | 4267.3  | 5065.3  | 8954.7  | 11015.0 | 7298.3  |
| 72.5° | 1345.4  | 1317.3  | 1139.2  | 992.3   | 917.8   | 856.3   | 1633.7  | 1929.6  | 5184.1  | 7397.7  | 5068.5  |
| 75°   | 1202.9  | 1177.0  | 1024.7  | 884.4   | 793.6   | 673.8   | 920.0   | 991.3   | 2633.6  | 3784.7  | 2495.4  |
| 77.5° | 1046.3  | 1031.2  | 911.3   | 781.8   | 709.4   | 558.3   | 651.1   | 685.7   | 1129.5  | 1622.9  | 1251.5  |
| 80°   | 832.5   | 861.7   | 796.9   | 696.5   | 629.5   | 447.0   | 461.1   | 483.7   | 657.6   | 792.6   | 710.5   |
| 82.5° | 542.1   | 592.8   | 624.1   | 565.8   | 518.3   | 352.0   | 331.5   | 341.2   | 428.7   | 483.7   | 308.8   |
| 85°   | 225.7   | 253.8   | 410.3   | 370.4   | 344.5   | 257.0   | 222.4   | 226.8   | 265.6   | 275.3   | 126.3   |
| 87.5° | 100.4   | 106.9   | 180.3   | 169.5   | 145.8   | 88.5    | 95.0    | 103.7   | 141.5   | 133.9   | 48.6    |
| 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°    | 6969.0 | 6969.0 | 6969.0 | 6969.0 | 6969.0 | 6969.0 | 6969.0 | 6969.0 | 6969.0 | 6969.0 | 6969.0 |
| 2.5°  | 6975.5 | 6884.8 | 6729.3 | 6557.6 | 6417.2 | 6304.9 | 6191.5 | 6113.8 | 6023.1 | 5974.5 | 5949.7 |
| 5°    | 6980.9 | 6802.7 | 6475.5 | 6139.7 | 5839.5 | 5565.3 | 5303.9 | 5103.1 | 4915.2 | 4813.7 | 4785.6 |
| 7.5°  | 7003.5 | 6735.7 | 6206.7 | 5653.8 | 5120.4 | 4633.4 | 4257.6 | 4022.2 | 3852.7 | 3777.1 | 3755.5 |
| 10°   | 7021.9 | 6656.9 | 5874.1 | 5055.6 | 4330.0 | 3836.5 | 3545.0 | 3413.2 | 3354.9 | 3345.2 | 3335.5 |
| 12.5° | 7065.1 | 6575.9 | 5524.2 | 4431.5 | 3715.6 | 3374.4 | 3272.9 | 3264.2 | 3280.4 | 3304.2 | 3304.2 |
| 15°   | 7133.1 | 6496.0 | 5124.7 | 3895.9 | 3324.7 | 3204.8 | 3225.3 | 3272.9 | 3317.1 | 3353.8 | 3359.2 |
| 17.5° | 7182.8 | 6397.8 | 4694.9 | 3467.2 | 3116.3 | 3148.7 | 3222.1 | 3289.0 | 3334.4 | 3370.0 | 3373.3 |
| 20°   | 7218.4 | 6245.5 | 4236.0 | 3140.0 | 2996.4 | 3096.8 | 3188.6 | 3248.0 | 3279.3 | 3315.0 | 3320.4 |
| 22.5° | 7200.1 | 6041.4 | 3828.9 | 2905.7 | 2899.2 | 3021.3 | 3108.7 | 3180.0 | 3156.2 | 3121.7 | 3144.4 |
| 25°   | 7111.5 | 5760.7 | 3410.0 | 2730.8 | 2796.7 | 2919.8 | 3027.7 | 2980.2 | 2900.3 | 2885.2 | 2893.8 |
| 27.5° | 6953.9 | 5402.2 | 3022.3 | 2568.8 | 2677.9 | 2825.8 | 2819.3 | 2771.8 | 2743.8 | 2724.3 | 2736.2 |
| 30°   | 6784.3 | 5013.5 | 2683.3 | 2427.4 | 2546.2 | 2668.2 | 2643.3 | 2642.3 | 2614.2 | 2582.9 | 2598.0 |
| 32.5° | 6617.0 | 4622.6 | 2414.4 | 2310.8 | 2446.8 | 2463.0 | 2517.0 | 2533.2 | 2478.1 | 2412.3 | 2407.9 |
| 35°   | 6471.2 | 4253.3 | 2210.3 | 2204.9 | 2327.0 | 2329.1 | 2407.9 | 2385.3 | 2248.1 | 2180.1 | 2180.1 |
| 37.5° | 6362.1 | 3885.1 | 2054.8 | 2109.9 | 2169.3 | 2225.5 | 2265.4 | 2171.5 | 2148.8 | 2111.0 | 2109.9 |
| 40°   | 6314.6 | 3561.2 | 1957.7 | 2037.6 | 2058.1 | 2129.4 | 2026.8 | 2063.5 | 2074.3 | 2054.8 | 2054.8 |
| 42.5° | 6265.0 | 3279.3 | 1873.4 | 1982.5 | 1979.3 | 1969.5 | 1917.7 | 1965.2 | 2008.4 | 2009.5 | 2006.3 |
| 45°   | 6215.3 | 3036.4 | 1798.9 | 1864.8 | 1910.2 | 1805.4 | 1815.1 | 1865.9 | 1926.4 | 1947.9 | 1947.9 |
| 47.5° | 6160.2 | 2844.2 | 1730.9 | 1740.6 | 1810.8 | 1740.6 | 1733.1 | 1771.9 | 1843.2 | 1877.8 | 1885.3 |
| 50°   | 6039.3 | 2671.4 | 1653.2 | 1631.6 | 1651.0 | 1674.8 | 1681.2 | 1699.6 | 1778.4 | 1833.5 | 1846.4 |
| 52.5° | 5871.9 | 2517.0 | 1553.8 | 1531.1 | 1531.1 | 1620.8 | 1651.0 | 1656.4 | 1723.3 | 1789.2 | 1802.2 |
| 55°   | 5732.6 | 2418.7 | 1451.2 | 1446.9 | 1442.6 | 1563.5 | 1615.4 | 1624.0 | 1670.4 | 1722.3 | 1728.7 |
| 57°   | 5742.3 | 2411.2 | 1372.4 | 1376.7 | 1375.7 | 1505.2 | 1581.9 | 1600.3 | 1624.0 | 1668.3 | 1675.8 |
| 57.5° | 5747.7 | 2416.6 | 1355.1 | 1357.3 | 1356.2 | 1489.0 | 1572.2 | 1592.7 | 1611.1 | 1657.5 | 1665.0 |
| 60°   | 5828.7 | 2430.6 | 1285.0 | 1261.2 | 1266.6 | 1402.7 | 1517.1 | 1543.0 | 1554.9 | 1616.5 | 1626.2 |
| 62.5° | 5708.9 | 2368.0 | 1228.8 | 1171.6 | 1171.6 | 1311.9 | 1440.4 | 1481.5 | 1499.8 | 1583.0 | 1599.2 |
| 65°   | 5361.2 | 2192.0 | 1162.9 | 1070.1 | 1080.9 | 1221.2 | 1348.7 | 1415.6 | 1443.7 | 1547.3 | 1564.6 |
| 67.5° | 4824.5 | 1987.9 | 1092.8 | 979.4  | 990.2  | 1126.2 | 1253.6 | 1326.0 | 1370.3 | 1508.5 | 1522.5 |
| 70°   | 4125.9 | 1738.5 | 997.7  | 883.3  | 896.2  | 1022.6 | 1141.3 | 1223.4 | 1289.3 | 1471.8 | 1476.1 |
| 72.5° | 3041.8 | 1425.3 | 864.9  | 777.5  | 791.5  | 901.6  | 1028.0 | 1123.0 | 1211.5 | 1380.0 | 1377.8 |
| 75°   | 1808.7 | 1114.3 | 718.1  | 670.6  | 680.3  | 782.8  | 925.4  | 1040.9 | 1173.7 | 1344.3 | 1364.9 |
| 77.5° | 1097.1 | 839.0  | 585.2  | 561.5  | 573.4  | 678.1  | 852.0  | 975.1  | 1157.5 | 1267.7 | 1261.2 |
| 80°   | 663.0  | 599.3  | 467.6  | 452.4  | 464.3  | 579.8  | 788.2  | 925.4  | 1011.8 | 1083.0 | 1083.0 |
| 82.5° | 346.6  | 366.0  | 343.4  | 331.5  | 347.7  | 470.8  | 717.0  | 807.7  | 894.1  | 767.7  | 717.0  |
| 85°   | 141.5  | 191.1  | 208.4  | 207.3  | 217.0  | 326.1  | 618.7  | 691.1  | 576.6  | 547.5  | 560.4  |
| 87.5° | 47.5   | 81.0   | 101.5  | 87.5   | 91.8   | 205.2  | 428.7  | 333.7  | 396.3  | 276.4  | 262.4  |
| 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)