

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: STREETWORKS

Report Number: P299027

Luminaire Tested: **GAA-AF-09-LED-U-T2-7050-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299027  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24139)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: GAA-AF-09-LED-U-T2-7050-600  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(9) 70 CRI, 5000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

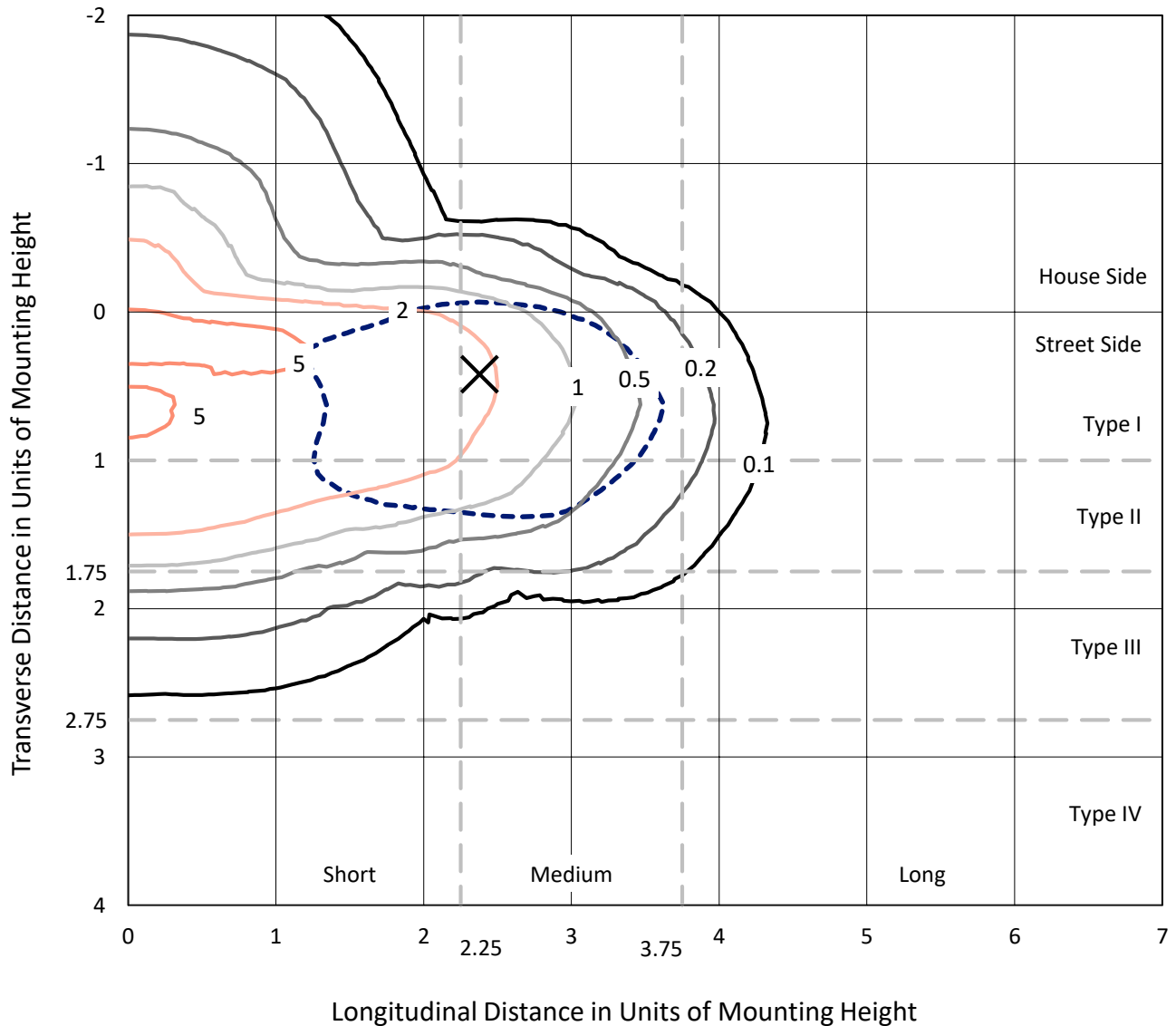
Lumens per Lamp: N/A  
Luminaire Lumens: 34283 lumens  
Efficiency: N/A  
Efficacy: 118.2 lumens/watt  
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B3 - U0 - G4  
  
Input Watts (W): 290  
Input Voltage (V): NR  
Input Current (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: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

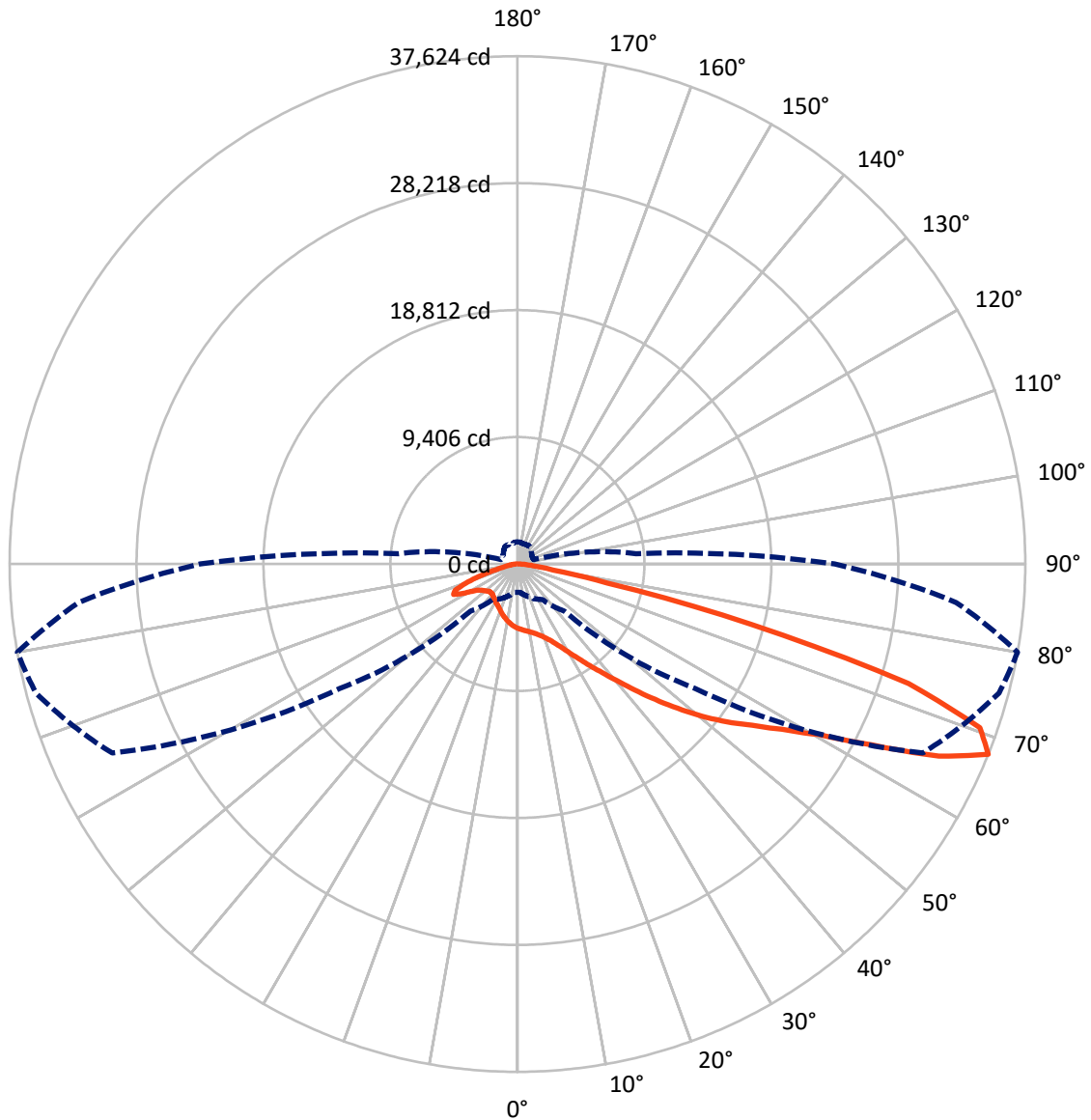
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6.4 fc  
 Type II - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 80-Deg Lateral      - - - Horizontal Cone Through 67.5-Deg Vertical



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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 6313.6   | 0.0    | 6313.6  |
|                    | % Fixture | 18.4     | 0.0    | 18.4    |
| <b>Street Side</b> | Lumens    | 27969.4  | 0.0    | 27969.4 |
|                    | % Fixture | 81.6     | 0.0    | 81.6    |
| <b>Total</b>       | Lumens    | 34283.0  | 0.0    | 34283.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 439.4   | 1.3       |
| 10°-20°   | 1265.7  | 3.7       |
| 20°-30°   | 2094.9  | 6.1       |
| 30°-40°   | 3426.8  | 10.0      |
| 40°-50°   | 5532.9  | 16.1      |
| 50°-60°   | 7987.9  | 23.3      |
| 60°-70°   | 8815.1  | 25.7      |
| 70°-80°   | 4063.2  | 11.9      |
| 80°-90°   | 657.2   | 1.9       |
| 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°    | 34283.0 | 100.0     |
| 0°-180°   | 34283.0 | 100.0     |



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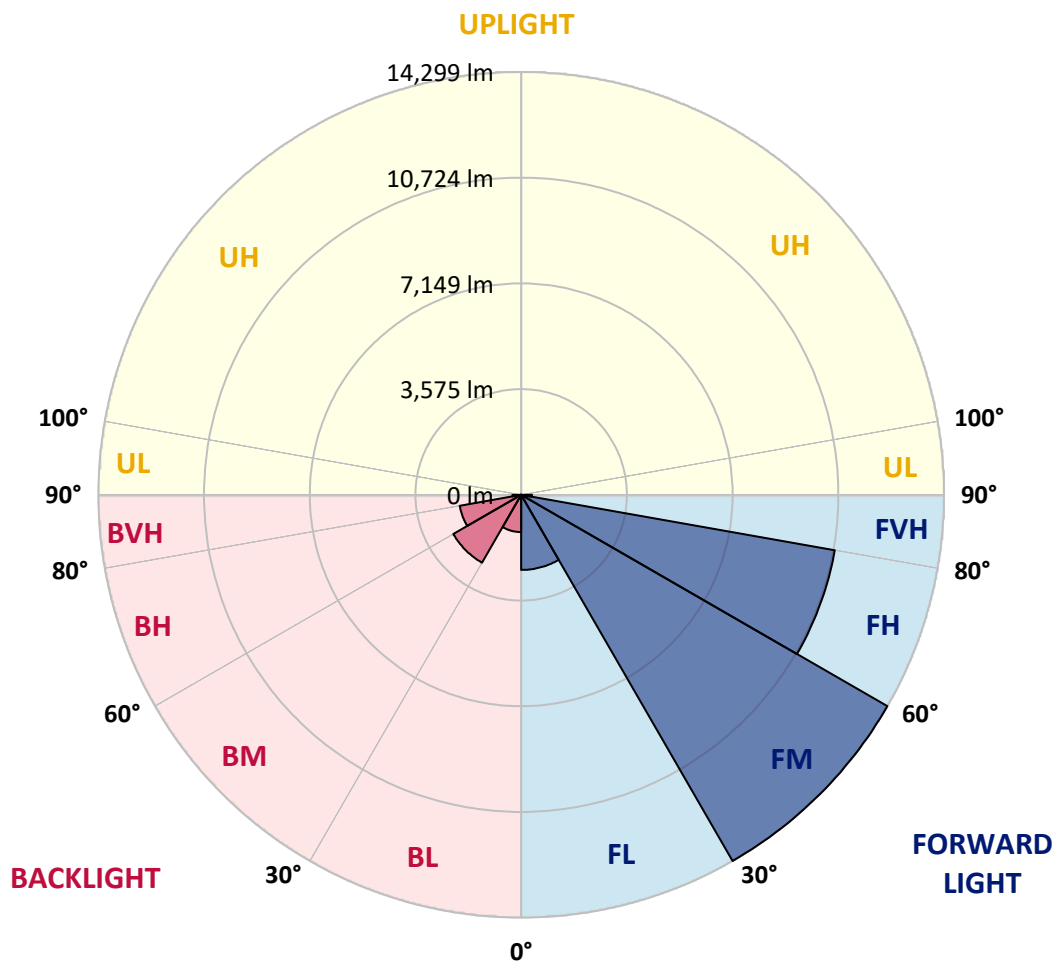
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |          |
|------|-------------|---------|-----------|-------------------------|------|----------|
|      |             |         |           | B                       | U    | G        |
| FL   | (0°-30°)    | 2540.3  | 7.4       |                         |      |          |
| FM   | (30°-60°)   | 14298.6 | 41.7      |                         |      |          |
| FH   | (60°-80°)   | 10769.2 | 31.4      |                         |      | G4/12000 |
| FVH  | (80°-90°)   | 361.3   | 1.1       |                         |      | G3/500   |
| BL   | (0°-30°)    | 1259.7  | 3.7       | B3/2500                 |      |          |
| BM   | (30°-60°)   | 2649.0  | 7.7       | B3/5000                 |      |          |
| BH   | (60°-80°)   | 2109.1  | 6.2       | B3/2500                 |      | G3/2500  |
| BVH  | (80°-90°)   | 295.9   | 0.9       |                         |      | G3/500   |
| UL   | (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |          |
| UH   | (100°-180°) | 0.0     | 0.0       |                         | U0/0 |          |

**BUG Rating: B3-U0-G4**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 75°     | 80°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 4762.9  | 4762.9  | 4762.9  | 4762.9  | 4762.9  | 4762.9  | 4762.9  | 4762.9  | 4762.9  | 4762.9  | 4762.9  |
| 2.5°  | 5210.2  | 5179.8  | 5184.9  | 5176.4  | 5151.1  | 5107.2  | 5060.0  | 4973.9  | 4884.4  | 4837.2  | 4800.0  |
| 5°    | 5645.6  | 5637.2  | 5625.4  | 5598.4  | 5534.2  | 5443.1  | 5330.0  | 5178.1  | 5014.4  | 4928.3  | 4845.6  |
| 7.5°  | 5971.4  | 5966.3  | 5951.1  | 5934.2  | 5871.8  | 5762.1  | 5591.6  | 5375.6  | 5137.6  | 5019.5  | 4891.2  |
| 10°   | 5998.4  | 6006.8  | 6018.6  | 6064.2  | 6072.6  | 6013.6  | 5839.7  | 5578.1  | 5265.9  | 5114.0  | 4950.3  |
| 12.5° | 5768.8  | 5787.4  | 5833.0  | 5949.4  | 6072.6  | 6145.2  | 6055.7  | 5790.8  | 5416.1  | 5232.1  | 5024.5  |
| 15°   | 5465.0  | 5475.2  | 5530.9  | 5691.2  | 5912.3  | 6136.8  | 6221.2  | 6025.4  | 5610.2  | 5384.0  | 5135.9  |
| 17.5° | 5335.1  | 5340.1  | 5379.0  | 5485.3  | 5691.2  | 6011.9  | 6314.0  | 6280.2  | 5848.2  | 5573.0  | 5272.6  |
| 20°   | 5269.2  | 5281.1  | 5336.8  | 5441.4  | 5571.4  | 5851.5  | 6327.5  | 6555.3  | 6131.7  | 5809.3  | 5444.8  |
| 22.5° | 5456.6  | 5451.5  | 5471.8  | 5524.1  | 5633.8  | 5802.6  | 6317.4  | 6838.9  | 6492.9  | 6113.1  | 5669.2  |
| 25°   | 5893.7  | 5912.3  | 5876.8  | 5817.8  | 5853.2  | 5971.4  | 6371.4  | 7146.1  | 6945.2  | 6503.0  | 5962.9  |
| 27.5° | 6516.5  | 6497.9  | 6445.6  | 6307.2  | 6234.7  | 6285.3  | 6550.3  | 7476.9  | 7507.2  | 7016.1  | 6351.1  |
| 30°   | 7137.6  | 7122.4  | 7071.8  | 6903.0  | 6754.5  | 6712.3  | 6898.0  | 7856.6  | 8177.3  | 7632.1  | 6827.1  |
| 32.5° | 7782.3  | 7765.5  | 7718.2  | 7549.4  | 7370.5  | 7272.6  | 7392.5  | 8295.4  | 8967.2  | 8368.0  | 7387.4  |
| 35°   | 8577.3  | 8545.2  | 8445.6  | 8211.0  | 8035.5  | 7959.6  | 8015.3  | 8847.3  | 9878.6  | 9238.9  | 8067.6  |
| 37.5° | 9325.0  | 9373.9  | 9272.7  | 8948.6  | 8720.8  | 8693.7  | 8756.2  | 9520.8  | 10860.9 | 10212.7 | 8849.0  |
| 40°   | 10076.0 | 10084.5 | 9993.3  | 9728.4  | 9493.8  | 9449.9  | 9606.8  | 10337.6 | 12020.4 | 11377.3 | 9799.2  |
| 42.5° | 10852.4 | 10869.3 | 10715.7 | 10471.0 | 10298.8 | 10307.3 | 10486.2 | 11294.6 | 13350.3 | 12749.5 | 10892.9 |
| 45°   | 11772.3 | 11797.6 | 11628.8 | 11308.1 | 11151.2 | 11466.8 | 11392.5 | 12368.0 | 14808.6 | 14309.0 | 12148.6 |
| 47.5° | 12734.3 | 12773.1 | 12644.8 | 12344.4 | 12148.6 | 12582.4 | 12298.8 | 13557.9 | 16378.2 | 15981.6 | 13527.5 |
| 50°   | 13259.2 | 13314.9 | 13439.8 | 13417.8 | 13375.6 | 13303.1 | 13309.8 | 14833.9 | 17996.8 | 17723.4 | 14945.3 |
| 52.5° | 12977.3 | 12975.6 | 13431.3 | 13984.9 | 14575.7 | 14619.5 | 14541.9 | 16179.0 | 19509.0 | 19426.3 | 16280.3 |
| 55°   | 11687.9 | 11775.6 | 12465.9 | 13537.7 | 15151.2 | 16158.8 | 16388.3 | 17720.0 | 20994.3 | 21090.5 | 17635.6 |
| 57.5° | 9541.0  | 9613.6  | 10545.2 | 12038.9 | 14374.8 | 17073.6 | 19014.5 | 19959.7 | 22655.1 | 23104.0 | 19439.8 |
| 60°   | 6470.9  | 6558.7  | 7546.1  | 9340.2  | 12285.3 | 16563.9 | 21514.1 | 23956.3 | 24643.3 | 25664.4 | 21971.5 |
| 62.5° | 3802.6  | 3881.9  | 4687.0  | 5892.0  | 8649.9  | 14195.9 | 22611.2 | 29642.5 | 27801.1 | 29527.7 | 25833.1 |
| 65°   | 2617.7  | 2671.8  | 3063.3  | 3667.5  | 4970.5  | 9561.3  | 21250.8 | 33568.2 | 32660.2 | 34314.2 | 30310.8 |
| 67.5° | 2106.3  | 2099.6  | 2410.1  | 2822.0  | 3200.0  | 4930.0  | 16069.3 | 33124.3 | 36933.7 | 37624.0 | 32634.9 |
| 70°   | 1735.0  | 1728.3  | 1939.3  | 2280.2  | 2557.0  | 2776.4  | 8752.8  | 27953.0 | 36062.8 | 36342.9 | 30494.8 |
| 72.5° | 1451.5  | 1458.2  | 1593.3  | 1846.4  | 2097.9  | 2091.2  | 3846.4  | 19664.3 | 28369.9 | 30307.4 | 24309.1 |
| 75°   | 1225.3  | 1228.7  | 1318.2  | 1497.1  | 1703.0  | 1684.4  | 2086.1  | 10653.3 | 16491.3 | 17839.8 | 13475.2 |
| 77.5° | 1043.0  | 1046.4  | 1103.8  | 1203.4  | 1350.2  | 1343.5  | 1522.4  | 4602.6  | 6879.4  | 6795.0  | 4609.3  |
| 80°   | 930.0   | 930.0   | 957.0   | 975.5   | 1056.5  | 1026.2  | 1129.1  | 2211.0  | 2908.0  | 2685.3  | 1839.7  |
| 82.5° | 729.1   | 732.5   | 897.9   | 891.1   | 832.1   | 793.3   | 793.3   | 1303.0  | 1540.9  | 1424.5  | 1076.8  |
| 85°   | 410.1   | 408.4   | 578.9   | 698.7   | 732.5   | 558.7   | 553.6   | 729.1   | 838.8   | 739.2   | 521.5   |
| 87.5° | 175.5   | 178.9   | 268.4   | 310.6   | 415.2   | 347.7   | 342.6   | 376.4   | 427.0   | 369.6   | 241.4   |
| 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°    | 4762.9  | 4762.9 | 4762.9 | 4762.9 | 4762.9 | 4762.9 | 4762.9 | 4762.9 | 4762.9 | 4762.9 | 4762.9 |
| 2.5°  | 4764.6  | 4720.7 | 4624.5 | 4504.7 | 4396.7 | 4325.8 | 4261.6 | 4168.8 | 4173.9 | 4109.7 | 4062.5 |
| 5°    | 4761.2  | 4670.1 | 4447.3 | 4182.3 | 3927.5 | 3743.5 | 3605.1 | 3480.2 | 3449.8 | 3390.7 | 3355.3 |
| 7.5°  | 4764.6  | 4616.1 | 4241.4 | 3817.8 | 3502.1 | 3269.2 | 3151.1 | 3085.3 | 3070.1 | 3049.8 | 3051.5 |
| 10°   | 4776.4  | 4567.1 | 4015.2 | 3476.8 | 3146.0 | 2992.4 | 2963.7 | 2984.0 | 3007.6 | 3014.4 | 3016.1 |
| 12.5° | 4803.4  | 4523.2 | 3767.1 | 3173.0 | 2923.2 | 2876.0 | 2924.9 | 2994.1 | 3039.7 | 3061.6 | 3059.9 |
| 15°   | 4864.2  | 4489.5 | 3529.1 | 2935.0 | 2800.0 | 2825.3 | 2916.5 | 3014.4 | 3080.2 | 3110.6 | 3112.3 |
| 17.5° | 4930.0  | 4440.5 | 3284.4 | 2752.8 | 2708.9 | 2773.0 | 2886.1 | 3000.9 | 3081.9 | 3115.6 | 3122.4 |
| 20°   | 5016.1  | 4379.8 | 3027.9 | 2616.1 | 2622.8 | 2695.4 | 2801.7 | 2916.5 | 3005.9 | 3034.6 | 3048.1 |
| 22.5° | 5129.2  | 4314.0 | 2803.4 | 2504.7 | 2524.9 | 2580.6 | 2663.3 | 2762.9 | 2840.5 | 2854.0 | 2865.8 |
| 25°   | 5281.1  | 4243.1 | 2624.5 | 2403.4 | 2411.8 | 2443.9 | 2499.6 | 2558.7 | 2612.7 | 2597.5 | 2609.3 |
| 27.5° | 5485.3  | 4182.3 | 2491.2 | 2310.6 | 2295.4 | 2302.1 | 2330.8 | 2349.4 | 2378.1 | 2335.9 | 2340.9 |
| 30°   | 5724.9  | 4116.5 | 2388.2 | 2229.6 | 2187.4 | 2175.5 | 2182.3 | 2192.4 | 2214.4 | 2157.0 | 2148.5 |
| 32.5° | 6003.4  | 4037.2 | 2292.0 | 2158.7 | 2099.6 | 2076.0 | 2079.3 | 2106.3 | 2190.7 | 2155.3 | 2136.7 |
| 35°   | 6327.5  | 3947.7 | 2190.7 | 2081.0 | 2040.5 | 2006.8 | 2003.4 | 2087.8 | 2339.3 | 2317.3 | 2300.4 |
| 37.5° | 6707.2  | 3858.3 | 2089.5 | 1993.3 | 1996.6 | 1959.5 | 1947.7 | 2043.9 | 2368.0 | 2281.9 | 2270.1 |
| 40°   | 7189.9  | 3811.0 | 2003.4 | 1900.4 | 1942.6 | 1937.6 | 1913.9 | 1962.9 | 2178.9 | 2022.0 | 2001.7 |
| 42.5° | 7787.4  | 3817.8 | 1939.3 | 1800.9 | 1878.5 | 1932.5 | 1895.4 | 1897.1 | 1974.7 | 1856.6 | 1838.0 |
| 45°   | 8525.0  | 3897.1 | 1893.7 | 1721.5 | 1805.9 | 1927.4 | 1888.6 | 1861.6 | 1868.4 | 1805.9 | 1795.8 |
| 47.5° | 9385.7  | 4060.8 | 1861.6 | 1655.7 | 1736.7 | 1908.9 | 1886.9 | 1851.5 | 1836.3 | 1802.5 | 1794.1 |
| 50°   | 10342.7 | 4298.8 | 1838.0 | 1593.3 | 1674.3 | 1878.5 | 1888.6 | 1841.4 | 1824.5 | 1811.0 | 1805.9 |
| 52.5° | 11282.8 | 4570.5 | 1802.5 | 1539.3 | 1625.3 | 1841.4 | 1893.7 | 1831.2 | 1812.7 | 1802.5 | 1797.5 |
| 55°   | 12330.9 | 4909.7 | 1748.5 | 1493.7 | 1584.8 | 1794.1 | 1893.7 | 1816.0 | 1795.8 | 1797.5 | 1795.8 |
| 57.5° | 13747.0 | 5458.3 | 1684.4 | 1454.9 | 1535.9 | 1736.7 | 1861.6 | 1799.2 | 1773.9 | 1775.5 | 1777.2 |
| 60°   | 15959.6 | 6425.4 | 1606.8 | 1416.0 | 1475.1 | 1669.2 | 1817.7 | 1762.0 | 1736.7 | 1743.5 | 1745.2 |
| 62.5° | 19213.7 | 7844.8 | 1505.5 | 1358.7 | 1411.0 | 1596.6 | 1757.0 | 1714.8 | 1689.5 | 1706.3 | 1706.3 |
| 65°   | 22596.0 | 9097.1 | 1380.6 | 1286.1 | 1343.5 | 1517.3 | 1681.0 | 1655.7 | 1630.4 | 1669.2 | 1667.5 |
| 67.5° | 23505.7 | 8817.0 | 1255.7 | 1206.8 | 1276.0 | 1429.5 | 1589.9 | 1576.4 | 1562.9 | 1630.4 | 1627.0 |
| 70°   | 20881.2 | 7078.5 | 1140.9 | 1125.7 | 1201.7 | 1335.0 | 1492.0 | 1492.0 | 1483.6 | 1534.2 | 1522.4 |
| 72.5° | 15909.0 | 5019.5 | 1031.2 | 1039.7 | 1117.3 | 1232.1 | 1385.7 | 1397.5 | 1384.0 | 1409.3 | 1399.2 |
| 75°   | 8516.5  | 2872.6 | 921.5  | 945.2  | 1012.7 | 1127.4 | 1267.5 | 1279.3 | 1270.9 | 1269.2 | 1274.3 |
| 77.5° | 2830.4  | 1404.2 | 806.8  | 843.9  | 903.0  | 1019.4 | 1144.3 | 1162.9 | 1142.6 | 1139.3 | 1137.6 |
| 80°   | 1260.8  | 882.7  | 680.2  | 729.1  | 781.4  | 896.2  | 1014.4 | 1029.5 | 1007.6 | 1038.0 | 999.2  |
| 82.5° | 810.1   | 580.6  | 545.2  | 599.2  | 649.8  | 773.0  | 884.4  | 887.8  | 867.5  | 1007.6 | 859.1  |
| 85°   | 393.3   | 359.5  | 410.1  | 459.1  | 503.0  | 607.6  | 732.5  | 734.2  | 683.6  | 622.8  | 600.8  |
| 87.5° | 195.8   | 209.3  | 273.4  | 317.3  | 339.2  | 416.9  | 533.3  | 523.2  | 501.3  | 455.7  | 420.3  |
| 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)