

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: P317553

Luminaire Tested: **GAN-SA9A-827-U-T2R**

Issue Date: 3/3/2020

### Test Information

Test Method: LM-79-08  
Report Number: P317553  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1903-205-8)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: GAN-SA9A-827-U-T2R  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(9) 80 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II  
ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

### Summary

Lumens per Lamp: N/A  
Luminaire Lumens: 31907 lumens  
Efficiency: N/A  
Efficacy: 110.0 lumens/watt  
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B3 - U0 - G4

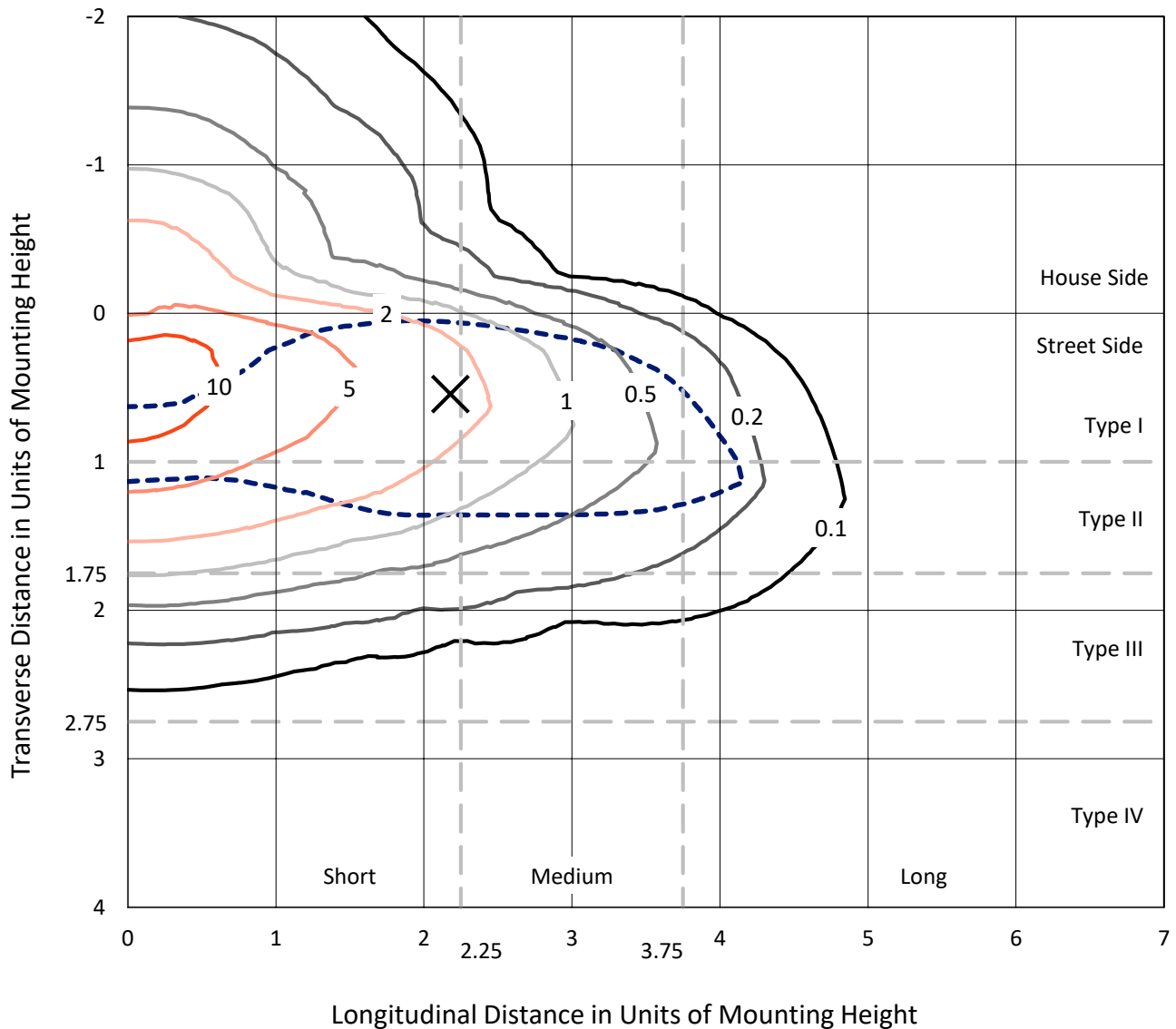
Input Watts (W): 290  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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## Iso-Footcandle Lines of Horizontal Illumination

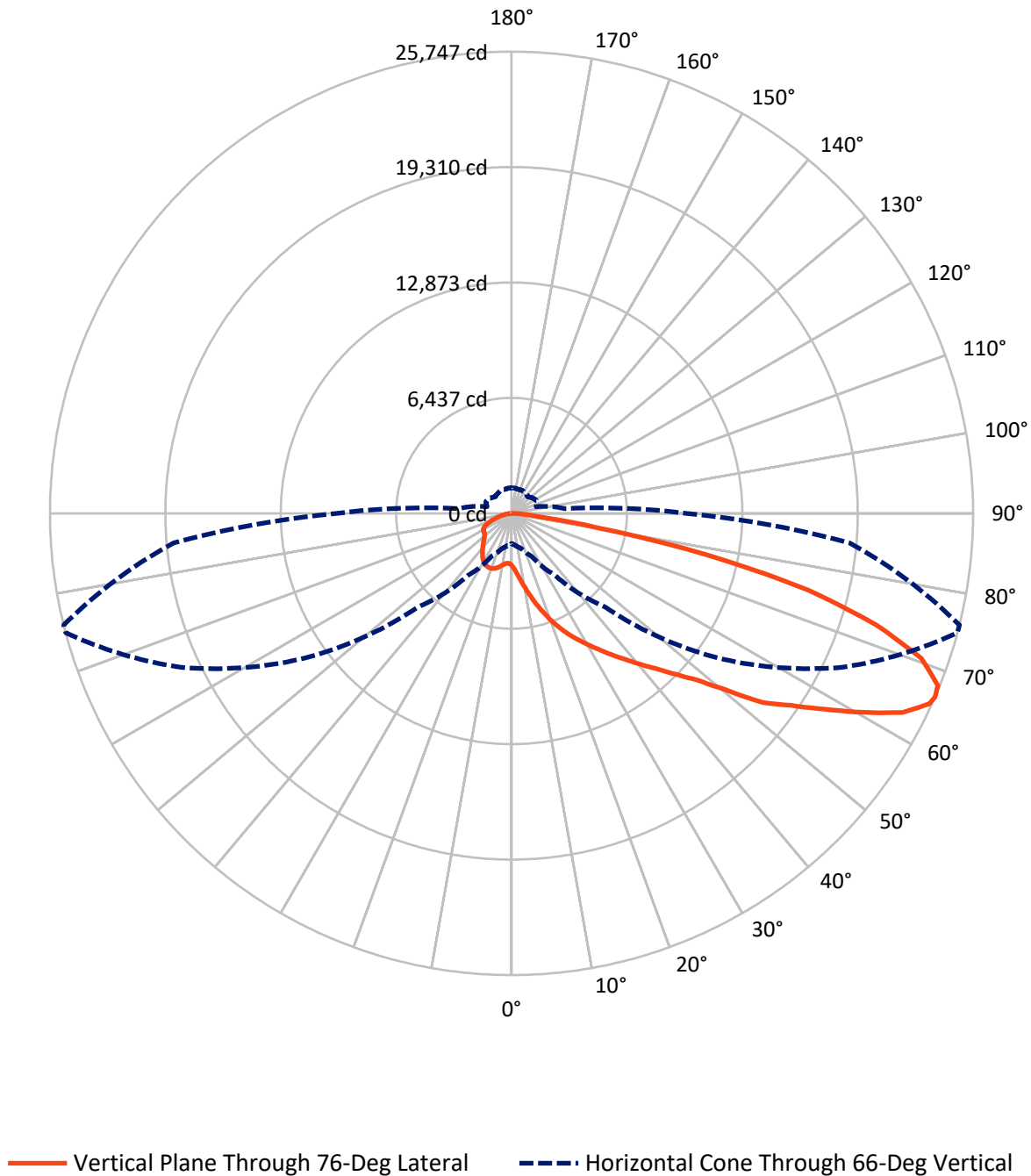
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 12.4 fc  
 Type II - Short - N/A

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## Luminous Intensity Polar Plot



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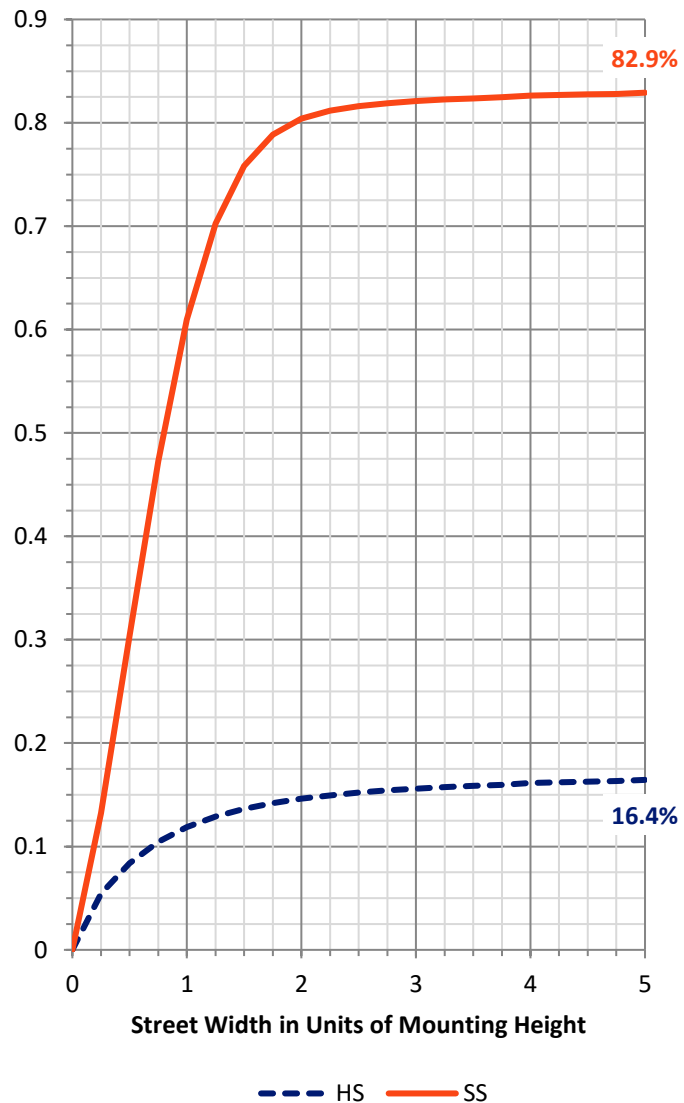
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 5368.9   | 0.0    | 5368.9  |
|                    | % Fixture | 16.8     | 0.0    | 16.8    |
| <b>Street Side</b> | Lumens    | 26538.1  | 0.0    | 26538.1 |
|                    | % Fixture | 83.2     | 0.0    | 83.2    |
| <b>Total</b>       | Lumens    | 31907.0  | 0.0    | 31907.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 352.4   | 1.1       |
| 10°-20°   | 1391.5  | 4.4       |
| 20°-30°   | 2703.9  | 8.5       |
| 30°-40°   | 4413.4  | 13.8      |
| 40°-50°   | 6029.8  | 18.9      |
| 50°-60°   | 7023.5  | 22.0      |
| 60°-70°   | 6296.7  | 19.7      |
| 70°-80°   | 3182.1  | 10.0      |
| 80°-90°   | 513.9   | 1.6       |
| 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°    | 31907.0 | 100.0     |
| 0°-180°   | 31907.0 | 100.0     |

**Coefficient of Utilization**



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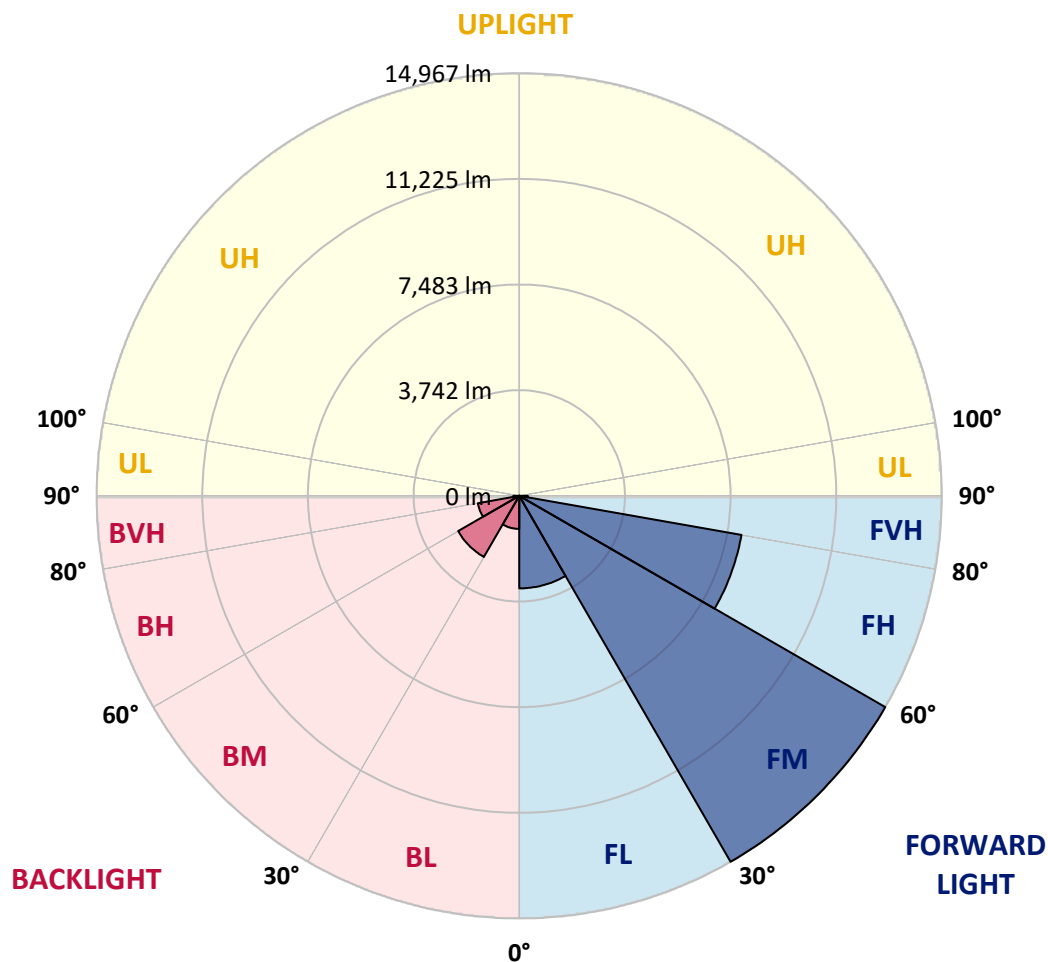
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |          |
|------|-------------|---------|-----------|-------------------------|------|----------|
|      |             |         |           | B                       | U    | G        |
| FL   | (0°-30°)    | 3276.8  | 10.3      |                         |      |          |
| FM   | (30°-60°)   | 14966.6 | 46.9      |                         |      |          |
| FH   | (60°-80°)   | 7991.3  | 25.0      |                         |      | G4/12000 |
| FVH  | (80°-90°)   | 303.5   | 1.0       |                         |      | G3/500   |
| BL   | (0°-30°)    | 1171.0  | 3.7       | B3/2500                 |      |          |
| BM   | (30°-60°)   | 2500.1  | 7.8       | B3/5000                 |      |          |
| BH   | (60°-80°)   | 1487.4  | 4.7       | B3/2500                 |      | G3/2500  |
| BVH  | (80°-90°)   | 210.4   | 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-G4**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 75°     | 76°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 2913.8  | 2913.8  | 2913.8  | 2913.8  | 2913.8  | 2913.8  | 2913.8  | 2913.8  | 2913.8  | 2913.8  | 2913.8  |
| 2.5°  | 3868.1  | 3809.6  | 3804.2  | 3718.7  | 3699.2  | 3535.6  | 3415.4  | 3289.7  | 3146.7  | 3118.6  | 3005.9  |
| 5°    | 4968.7  | 4963.3  | 4888.5  | 4748.8  | 4639.4  | 4359.9  | 4083.7  | 3791.2  | 3470.6  | 3418.6  | 3165.1  |
| 7.5°  | 5958.7  | 5950.1  | 5892.6  | 5742.1  | 5583.9  | 5240.6  | 4846.3  | 4397.8  | 3877.9  | 3801.0  | 3380.7  |
| 10°   | 6710.5  | 6707.2  | 6687.7  | 6577.2  | 6442.9  | 6113.6  | 5678.2  | 5066.2  | 4351.2  | 4246.2  | 3650.4  |
| 12.5° | 7291.1  | 7297.6  | 7310.6  | 7271.6  | 7207.7  | 6927.1  | 6480.8  | 5774.6  | 4856.0  | 4752.0  | 3950.5  |
| 15°   | 7684.3  | 7703.8  | 7770.9  | 7826.2  | 7859.8  | 7687.5  | 7255.3  | 6499.2  | 5421.5  | 5296.9  | 4283.0  |
| 17.5° | 7882.5  | 7904.2  | 8020.1  | 8186.9  | 8340.7  | 8323.4  | 7980.0  | 7190.3  | 5964.1  | 5843.9  | 4640.5  |
| 20°   | 8053.6  | 8069.9  | 8199.9  | 8400.3  | 8672.2  | 8792.4  | 8599.6  | 7855.4  | 6558.8  | 6415.8  | 5019.6  |
| 22.5° | 8549.8  | 8570.3  | 8609.3  | 8723.1  | 8963.5  | 9184.5  | 9091.4  | 8484.8  | 7103.7  | 6970.4  | 5379.2  |
| 25°   | 9507.3  | 9532.2  | 9447.7  | 9351.3  | 9396.8  | 9550.6  | 9568.0  | 9058.9  | 7656.1  | 7505.5  | 5765.9  |
| 27.5° | 10660.9 | 10696.7 | 10552.6 | 10304.6 | 10087.9 | 10028.3 | 10007.8 | 9529.0  | 8183.6  | 8009.2  | 6148.3  |
| 30°   | 11790.7 | 11852.5 | 11665.1 | 11343.4 | 10945.8 | 10666.3 | 10459.5 | 9989.3  | 8703.6  | 8536.8  | 6509.0  |
| 32.5° | 12894.5 | 12869.6 | 12597.7 | 12283.6 | 11817.8 | 11467.9 | 10967.5 | 10483.3 | 9288.5  | 9096.8  | 6867.5  |
| 35°   | 13650.6 | 13659.2 | 13406.9 | 13034.2 | 12590.1 | 12321.5 | 11647.7 | 11016.2 | 9885.4  | 9708.8  | 7274.8  |
| 37.5° | 14294.0 | 14253.9 | 13968.0 | 13620.3 | 13237.9 | 13123.1 | 12443.9 | 11603.3 | 10532.0 | 10339.2 | 7708.1  |
| 40°   | 14508.5 | 14461.9 | 14274.5 | 14024.3 | 13717.7 | 13708.0 | 13322.4 | 12268.4 | 11263.2 | 11072.5 | 8196.6  |
| 42.5° | 14378.5 | 14318.9 | 14242.0 | 14173.8 | 14079.5 | 14122.9 | 14147.8 | 13048.3 | 12066.9 | 11853.5 | 8762.1  |
| 45°   | 13898.6 | 13808.7 | 13862.9 | 14011.3 | 14216.0 | 14460.8 | 14893.0 | 13911.6 | 12967.1 | 12788.4 | 9426.1  |
| 47.5° | 13161.0 | 13079.7 | 13248.7 | 13566.1 | 14122.9 | 14742.5 | 15598.2 | 14864.9 | 14041.6 | 13864.0 | 10371.7 |
| 50°   | 12123.3 | 12147.1 | 12388.6 | 12966.0 | 13807.6 | 14872.4 | 16466.9 | 16126.8 | 15603.6 | 15437.9 | 11661.8 |
| 52.5° | 10420.5 | 10424.8 | 11105.0 | 12052.9 | 13248.7 | 14805.3 | 16949.0 | 17739.7 | 17736.4 | 17536.0 | 12890.2 |
| 55°   | 8839.0  | 8935.4  | 9473.7  | 10733.5 | 12343.2 | 14536.6 | 17285.8 | 18523.9 | 19137.0 | 18902.0 | 14035.1 |
| 57.5° | 7294.3  | 7350.6  | 7860.8  | 9126.0  | 11050.9 | 13820.6 | 17631.4 | 19465.2 | 20751.0 | 20602.6 | 15458.5 |
| 60°   | 5537.4  | 5624.0  | 6151.5  | 7320.3  | 9397.9  | 12550.0 | 17663.9 | 20447.7 | 22680.2 | 22530.7 | 17047.5 |
| 62.5° | 3594.1  | 3743.6  | 4237.5  | 5332.6  | 7398.3  | 10722.7 | 16910.0 | 21090.1 | 24508.7 | 24455.6 | 18457.9 |
| 65°   | 2065.7  | 2178.3  | 2521.7  | 3366.6  | 5104.1  | 8428.4  | 15117.2 | 20843.1 | 25634.1 | 25603.8 | 18985.4 |
| 66°   | 1687.6  | 1758.0  | 2021.3  | 2631.1  | 4211.5  | 7401.6  | 14075.2 | 20322.1 | 25745.7 | 25746.8 | 18924.7 |
| 67.5° | 1349.7  | 1381.1  | 1499.2  | 1883.7  | 3107.7  | 5866.7  | 12213.2 | 19172.8 | 25607.0 | 25644.9 | 18533.7 |
| 70°   | 1116.8  | 1133.0  | 1169.9  | 1263.0  | 1696.3  | 3537.8  | 8668.9  | 16186.4 | 24215.1 | 24244.4 | 17007.4 |
| 72.5° | 1002.0  | 1011.7  | 1025.8  | 1038.8  | 1196.9  | 1976.9  | 5294.7  | 12948.7 | 21230.9 | 21268.8 | 14681.8 |
| 75°   | 907.7   | 913.1   | 911.0   | 912.1   | 1004.1  | 1259.8  | 2736.2  | 9667.6  | 17166.7 | 17090.9 | 11246.9 |
| 77.5° | 797.2   | 802.7   | 791.8   | 794.0   | 888.2   | 968.4   | 1361.6  | 6767.9  | 11584.9 | 11049.8 | 6336.8  |
| 80°   | 673.8   | 678.1   | 673.8   | 681.3   | 773.4   | 731.2   | 791.8   | 3807.5  | 5122.5  | 4845.2  | 2253.1  |
| 82.5° | 509.1   | 527.5   | 540.5   | 570.9   | 636.9   | 519.9   | 529.7   | 1482.9  | 1559.8  | 1485.1  | 691.1   |
| 85°   | 223.1   | 271.9   | 407.3   | 436.5   | 478.8   | 312.0   | 347.7   | 604.4   | 634.8   | 615.3   | 251.3   |
| 87.5° | 58.5    | 63.9    | 201.5   | 253.5   | 265.4   | 140.8   | 180.9   | 275.1   | 290.3   | 275.1   | 83.4    |
| 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°    | 2913.8  | 2913.8 | 2913.8 | 2913.8 | 2913.8 | 2913.8 | 2913.8 | 2913.8 | 2913.8 | 2913.8 | 2913.8 |
| 2.5°  | 2946.3  | 2893.2 | 2797.9 | 2713.4 | 2649.5 | 2606.2 | 2562.9 | 2541.2 | 2528.2 | 2515.2 | 2517.4 |
| 5°    | 3040.6  | 2933.3 | 2769.8 | 2653.9 | 2588.9 | 2547.7 | 2526.0 | 2517.4 | 2512.0 | 2499.0 | 2499.0 |
| 7.5°  | 3182.5  | 3030.8 | 2805.5 | 2686.4 | 2635.4 | 2604.0 | 2591.0 | 2586.7 | 2580.2 | 2565.0 | 2567.2 |
| 10°   | 3361.2  | 3148.9 | 2880.2 | 2764.3 | 2717.8 | 2683.1 | 2664.7 | 2658.2 | 2646.3 | 2628.9 | 2631.1 |
| 12.5° | 3571.3  | 3295.1 | 2978.8 | 2857.5 | 2801.2 | 2754.6 | 2724.3 | 2705.9 | 2685.3 | 2662.5 | 2663.6 |
| 15°   | 3801.0  | 3454.3 | 3085.0 | 2940.9 | 2864.0 | 2799.0 | 2750.3 | 2718.9 | 2686.4 | 2658.2 | 2657.1 |
| 17.5° | 4033.9  | 3608.2 | 3166.2 | 2986.4 | 2882.4 | 2796.8 | 2730.8 | 2682.0 | 2641.9 | 2607.3 | 2604.0 |
| 20°   | 4285.2  | 3746.8 | 3211.7 | 2982.1 | 2847.8 | 2745.9 | 2658.2 | 2597.5 | 2553.1 | 2518.5 | 2513.0 |
| 22.5° | 4540.8  | 3876.8 | 3219.3 | 2937.7 | 2770.8 | 2646.3 | 2554.2 | 2487.0 | 2441.6 | 2405.8 | 2392.8 |
| 25°   | 4774.8  | 3977.5 | 3187.9 | 2852.1 | 2663.6 | 2529.3 | 2439.4 | 2371.1 | 2334.3 | 2292.1 | 2279.1 |
| 27.5° | 4988.2  | 4047.9 | 3125.1 | 2742.7 | 2543.4 | 2411.2 | 2326.7 | 2268.2 | 2228.2 | 2195.7 | 2184.8 |
| 30°   | 5179.9  | 4085.9 | 3022.1 | 2612.7 | 2419.9 | 2299.6 | 2228.2 | 2188.1 | 2153.4 | 2112.3 | 2104.7 |
| 32.5° | 5361.9  | 4085.9 | 2890.0 | 2470.8 | 2297.5 | 2201.1 | 2158.8 | 2133.9 | 2094.9 | 2054.8 | 2044.0 |
| 35°   | 5543.9  | 4060.9 | 2734.0 | 2322.4 | 2184.8 | 2130.7 | 2128.5 | 2099.3 | 2039.7 | 1985.5 | 1971.4 |
| 37.5° | 5735.6  | 4010.0 | 2558.5 | 2183.7 | 2092.8 | 2099.3 | 2117.7 | 2052.7 | 1968.2 | 1891.3 | 1870.7 |
| 40°   | 5952.2  | 3939.6 | 2376.6 | 2063.5 | 2015.8 | 2085.2 | 2088.4 | 1985.5 | 1820.9 | 1750.5 | 1732.0 |
| 42.5° | 6206.8  | 3869.2 | 2207.6 | 1957.4 | 1955.2 | 2042.9 | 2033.2 | 1840.4 | 1741.8 | 1706.1 | 1696.3 |
| 45°   | 6541.5  | 3829.1 | 2047.3 | 1856.6 | 1907.5 | 1974.7 | 1938.9 | 1760.2 | 1719.1 | 1698.5 | 1689.8 |
| 47.5° | 7069.0  | 3849.7 | 1899.9 | 1776.5 | 1859.9 | 1906.4 | 1763.5 | 1727.7 | 1698.5 | 1673.6 | 1664.9 |
| 50°   | 7729.8  | 3837.8 | 1780.8 | 1721.2 | 1805.7 | 1835.0 | 1684.4 | 1685.5 | 1670.3 | 1642.1 | 1629.1 |
| 52.5° | 8227.0  | 3744.6 | 1703.9 | 1689.8 | 1758.0 | 1708.2 | 1634.6 | 1644.3 | 1636.7 | 1595.6 | 1581.5 |
| 55°   | 8706.8  | 3664.5 | 1664.9 | 1677.9 | 1723.4 | 1550.1 | 1576.1 | 1599.9 | 1592.3 | 1552.2 | 1545.7 |
| 57.5° | 9303.7  | 3649.3 | 1641.1 | 1681.1 | 1694.1 | 1471.0 | 1519.7 | 1551.2 | 1545.7 | 1528.4 | 1525.2 |
| 60°   | 10034.8 | 3653.7 | 1619.4 | 1686.6 | 1661.6 | 1412.5 | 1466.7 | 1506.7 | 1510.0 | 1506.7 | 1504.6 |
| 62.5° | 10436.7 | 3535.6 | 1565.2 | 1671.4 | 1604.2 | 1361.6 | 1411.4 | 1469.9 | 1471.0 | 1477.5 | 1476.4 |
| 65°   | 10095.5 | 3182.5 | 1464.5 | 1618.3 | 1507.8 | 1319.3 | 1363.8 | 1427.7 | 1411.4 | 1440.7 | 1440.7 |
| 66°   | 9764.0  | 2978.8 | 1414.7 | 1583.6 | 1466.7 | 1303.1 | 1348.6 | 1406.0 | 1385.4 | 1425.5 | 1425.5 |
| 67.5° | 9087.0  | 2635.4 | 1324.8 | 1510.0 | 1408.2 | 1280.4 | 1331.3 | 1370.3 | 1342.1 | 1401.7 | 1397.3 |
| 70°   | 7850.0  | 2038.6 | 1143.9 | 1343.2 | 1311.8 | 1246.8 | 1307.4 | 1298.8 | 1257.6 | 1348.6 | 1331.3 |
| 72.5° | 6618.4  | 1549.0 | 918.6  | 1124.4 | 1165.5 | 1204.5 | 1273.9 | 1207.8 | 1155.8 | 1219.7 | 1181.8 |
| 75°   | 5135.5  | 1164.4 | 725.7  | 874.1  | 984.6  | 1138.5 | 1233.8 | 1102.7 | 1028.0 | 1021.5 | 1000.9 |
| 77.5° | 2776.3  | 799.4  | 575.2  | 667.3  | 782.1  | 1056.1 | 1206.7 | 990.1  | 877.4  | 851.4  | 835.2  |
| 80°   | 1099.5  | 519.9  | 418.1  | 505.9  | 547.0  | 937.0  | 1141.7 | 859.0  | 723.6  | 697.6  | 672.7  |
| 82.5° | 453.9   | 307.6  | 269.7  | 339.0  | 356.4  | 801.6  | 1024.7 | 704.1  | 558.9  | 773.4  | 821.1  |
| 85°   | 195.0   | 169.0  | 160.3  | 175.5  | 201.5  | 562.2  | 815.7  | 537.3  | 603.3  | 538.4  | 427.9  |
| 87.5° | 58.5    | 71.5   | 68.2   | 67.2   | 73.7   | 134.3  | 434.4  | 299.0  | 443.0  | 167.9  | 125.7  |
| 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)