

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: P301878

Luminaire Tested: **GAA-AF-04-LED-U-SL4-7027-800-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P301878  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24301)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: GAA-AF-04-LED-U-SL4-7027-800-HSS  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(4) 70 CRI, 2700K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV  
w/Spill Control WITH HOUSESIDE SHEILD OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12428.5 lumens  
Efficiency: N/A  
Efficacy: 72.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B1 - U0 - G3  
  
Input Watts (W): 171  
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

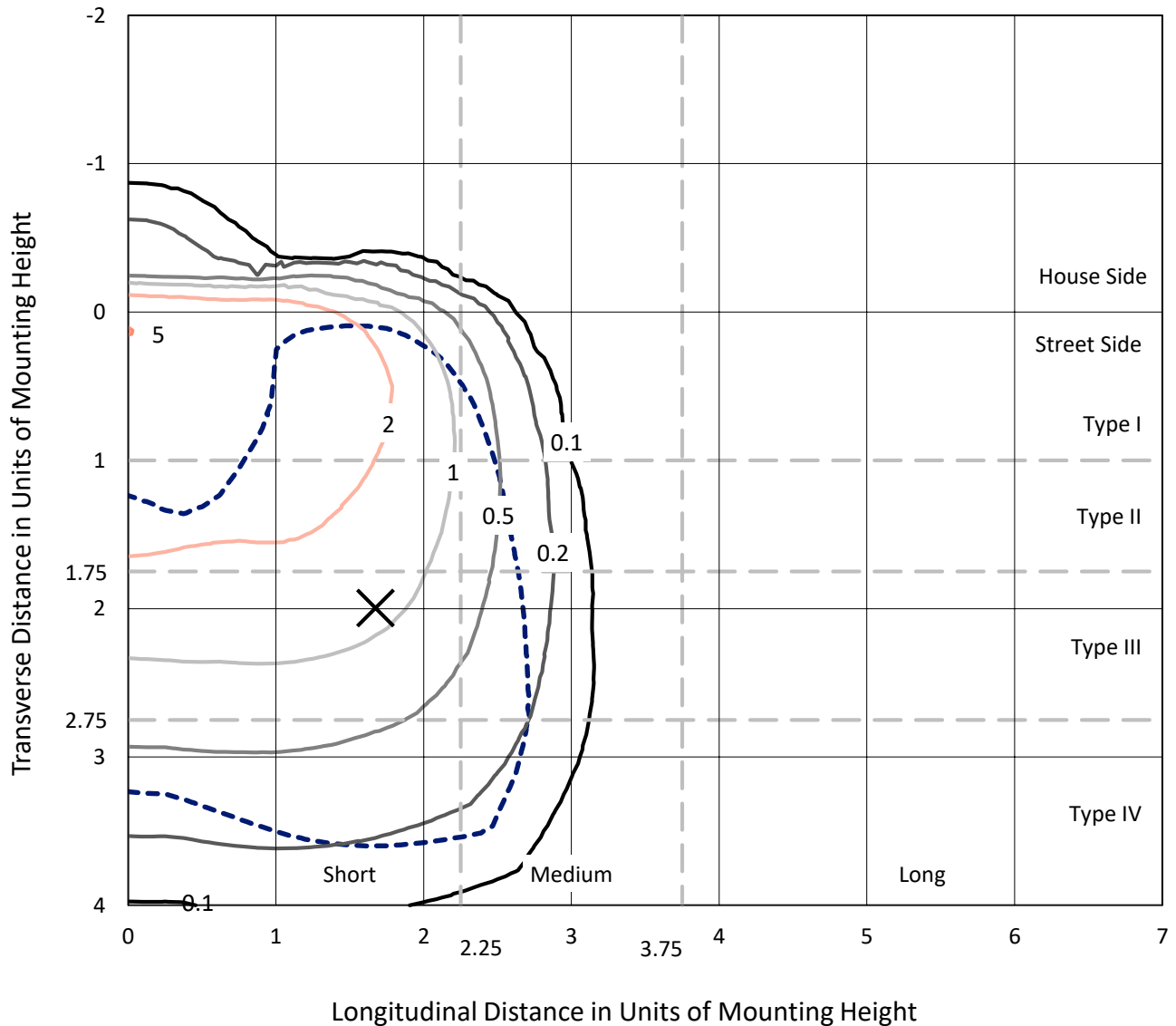


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

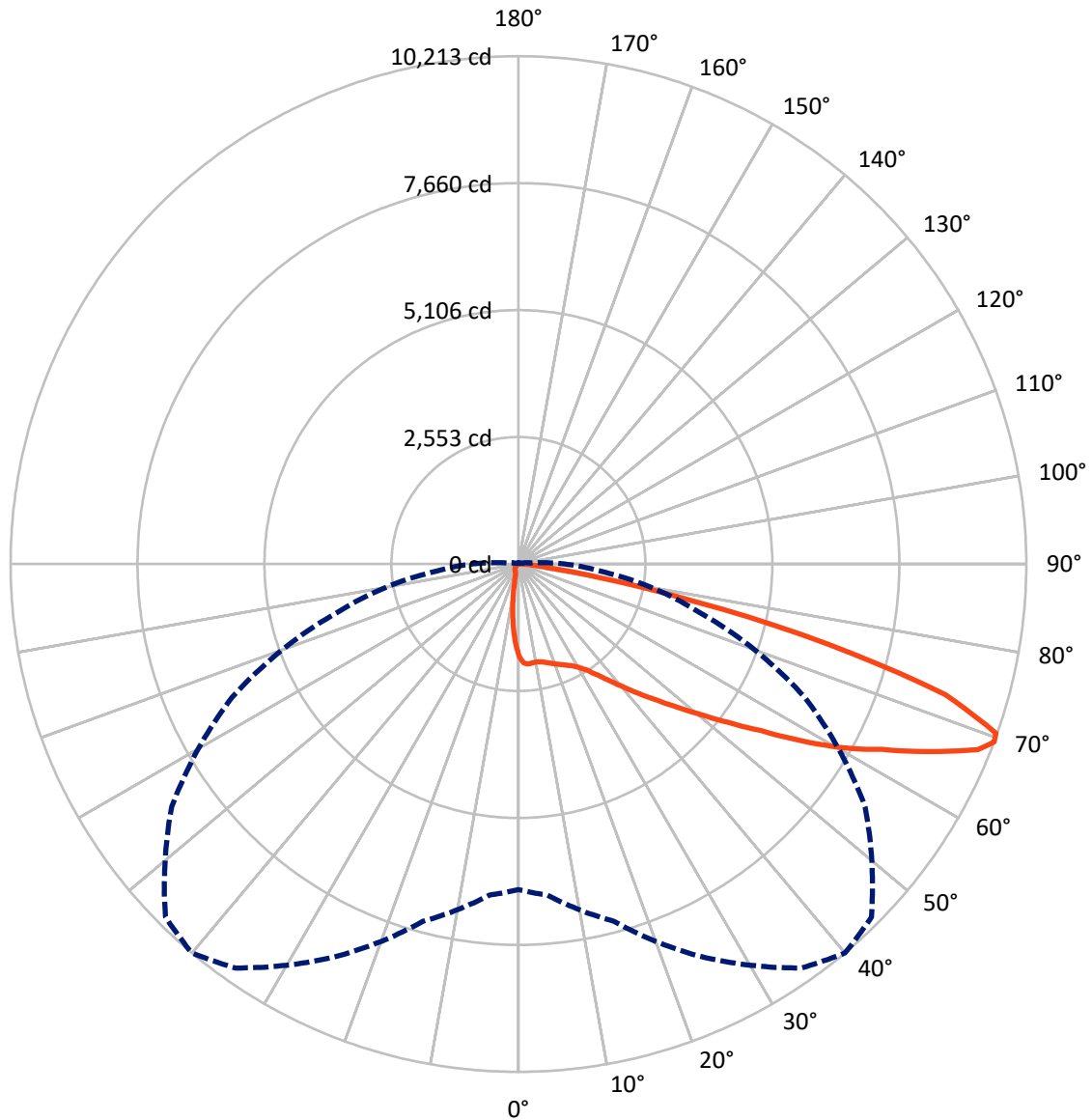


Based on 20 foot mounting height. Maximum calculated value = 5.1 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 727.1    | 0.0    | 727.1   |
|                    | % Fixture | 5.9      | 0.0    | 5.9     |
| <b>Street Side</b> | Lumens    | 11701.3  | 0.0    | 11701.3 |
|                    | % Fixture | 94.1     | 0.0    | 94.1    |
| <b>Total</b>       | Lumens    | 12428.5  | 0.0    | 12428.5 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 150.6   | 1.2       |
| 10°-20°   | 370.2   | 3.0       |
| 20°-30°   | 623.6   | 5.0       |
| 30°-40°   | 1020.9  | 8.2       |
| 40°-50°   | 1767.6  | 14.2      |
| 50°-60°   | 2784.2  | 22.4      |
| 60°-70°   | 3636.0  | 29.3      |
| 70°-80°   | 1872.7  | 15.1      |
| 80°-90°   | 202.6   | 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°    | 12428.5 | 100.0     |
| 0°-180°   | 12428.5 | 100.0     |

**Coefficient of Utilization**



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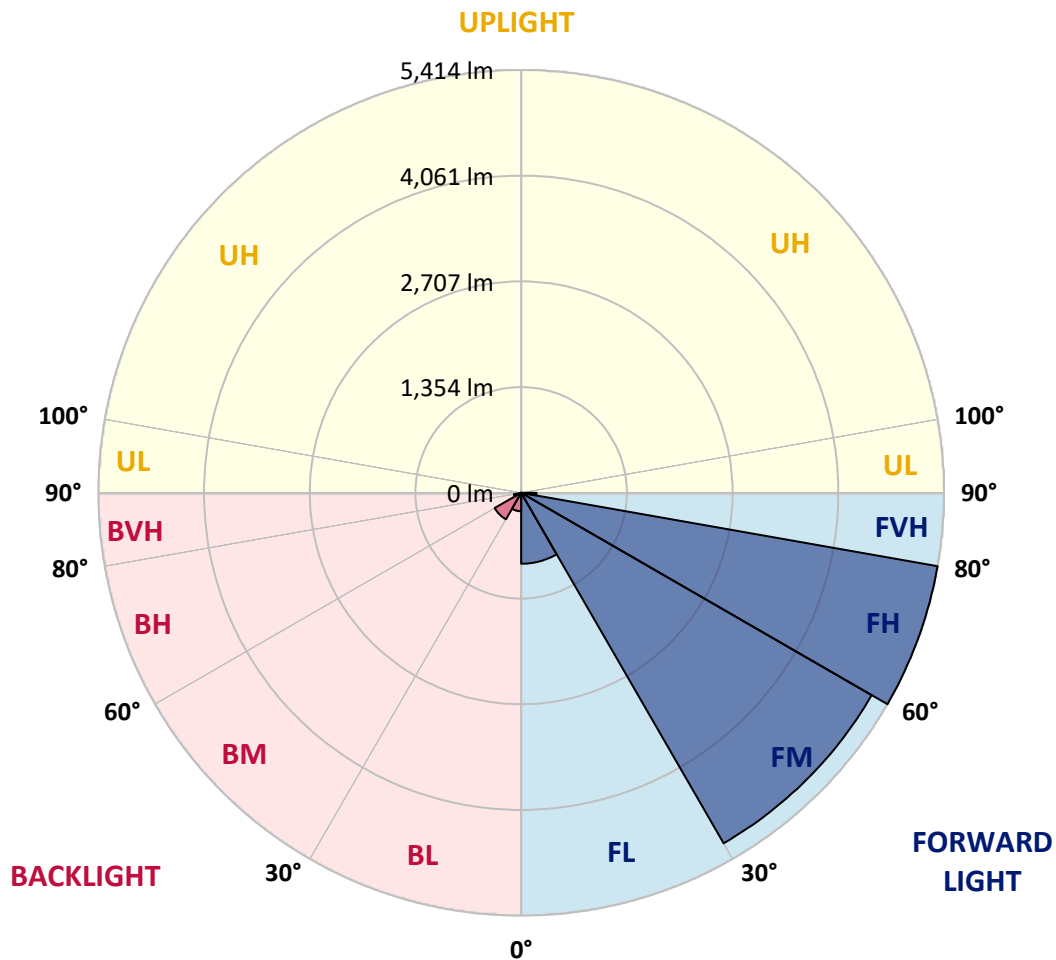
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 908.9  | 7.3       |                         |      |         |
| FM   | (30°-60°)   | 5181.9 | 41.7      |                         |      |         |
| FH   | (60°-80°)   | 5414.4 | 43.6      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 196.2  | 1.6       |                         |      | G2/225  |
| BL   | (0°-30°)    | 235.5  | 1.9       | B1/500                  |      |         |
| BM   | (30°-60°)   | 390.8  | 3.1       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 94.4   | 0.8       | B0/110                  |      | G0/110  |
| BVH  | (80°-90°)   | 6.4    | 0.1       |                         |      | G0/10   |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 40°     | 45°     | 55°    | 65°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|---------|---------|--------|--------|--------|--------|
| 0°    | 1856.9 | 1856.9 | 1856.9 | 1856.9 | 1856.9 | 1856.9  | 1856.9  | 1856.9 | 1856.9 | 1856.9 | 1856.9 |
| 2.5°  | 2038.9 | 2027.8 | 2021.1 | 2012.2 | 2001.1 | 1991.5  | 1987.8  | 1960.4 | 1934.6 | 1899.0 | 1858.4 |
| 5°    | 2076.6 | 2072.9 | 2061.1 | 2049.2 | 2035.9 | 2021.1  | 2013.0  | 1980.4 | 1943.4 | 1891.6 | 1820.6 |
| 7.5°  | 2080.3 | 2075.9 | 2061.1 | 2044.8 | 2026.3 | 2008.5  | 1994.5  | 1961.9 | 1927.9 | 1875.4 | 1788.8 |
| 10°   | 2074.4 | 2069.2 | 2058.1 | 2040.3 | 2017.4 | 2000.4  | 1986.3  | 1955.3 | 1926.4 | 1879.1 | 1782.9 |
| 12.5° | 2067.7 | 2062.5 | 2057.4 | 2048.5 | 2028.5 | 2016.7  | 2004.8  | 1975.2 | 1949.4 | 1909.4 | 1804.4 |
| 15°   | 2074.4 | 2071.4 | 2077.3 | 2073.6 | 2062.5 | 2052.2  | 2040.3  | 2013.7 | 1990.0 | 1956.7 | 1843.6 |
| 17.5° | 2102.5 | 2102.5 | 2121.0 | 2123.2 | 2112.8 | 2098.1  | 2081.0  | 2054.4 | 2034.4 | 2006.3 | 1890.2 |
| 20°   | 2168.3 | 2166.1 | 2189.8 | 2194.2 | 2169.1 | 2146.1  | 2121.0  | 2088.4 | 2072.9 | 2055.1 | 1936.0 |
| 22.5° | 2281.5 | 2271.2 | 2285.2 | 2280.8 | 2231.2 | 2195.7  | 2164.6  | 2124.7 | 2116.5 | 2108.4 | 1987.1 |
| 25°   | 2428.7 | 2422.8 | 2432.4 | 2388.8 | 2301.5 | 2253.4  | 2216.4  | 2171.3 | 2171.3 | 2179.4 | 2044.8 |
| 27.5° | 2642.5 | 2620.3 | 2587.8 | 2510.9 | 2379.9 | 2318.5  | 2278.6  | 2230.5 | 2243.0 | 2273.4 | 2121.0 |
| 30°   | 2861.5 | 2837.1 | 2762.4 | 2644.0 | 2475.3 | 2411.0  | 2364.4  | 2314.1 | 2343.7 | 2399.1 | 2223.1 |
| 32.5° | 3077.5 | 3050.2 | 2944.4 | 2794.9 | 2612.2 | 2547.8  | 2502.7  | 2447.2 | 2496.8 | 2590.0 | 2372.5 |
| 35°   | 3286.9 | 3262.5 | 3140.4 | 2964.3 | 2794.2 | 2740.9  | 2699.5  | 2651.4 | 2715.0 | 2845.2 | 2583.4 |
| 37.5° | 3522.1 | 3495.5 | 3346.8 | 3156.0 | 3015.4 | 2976.9  | 2946.6  | 2898.5 | 3009.5 | 3200.3 | 2877.1 |
| 40°   | 3811.4 | 3766.3 | 3565.8 | 3375.7 | 3271.4 | 3252.9  | 3232.2  | 3225.5 | 3397.9 | 3662.0 | 3268.4 |
| 42.5° | 4142.8 | 4068.9 | 3795.1 | 3607.2 | 3552.5 | 3565.8  | 3560.6  | 3590.2 | 3883.9 | 4236.0 | 3744.8 |
| 45°   | 4474.3 | 4378.8 | 4050.4 | 3854.3 | 3861.7 | 3908.3  | 3937.2  | 4055.5 | 4492.8 | 4894.5 | 4257.5 |
| 47.5° | 4755.4 | 4661.4 | 4295.2 | 4121.4 | 4210.2 | 4301.9  | 4380.3  | 4604.5 | 5118.6 | 5542.5 | 4656.3 |
| 50°   | 4995.8 | 4907.0 | 4554.9 | 4415.1 | 4614.8 | 4762.8  | 4890.0  | 5222.2 | 5791.8 | 6036.0 | 4935.9 |
| 52.5° | 5192.6 | 5133.4 | 4824.2 | 4751.7 | 5077.2 | 5294.0  | 5480.4  | 5878.4 | 6388.1 | 6436.9 | 5153.4 |
| 55°   | 5384.2 | 5342.0 | 5113.4 | 5151.9 | 5620.2 | 5915.4  | 6151.4  | 6574.5 | 6901.5 | 6771.3 | 5362.0 |
| 57.5° | 5604.7 | 5566.2 | 5443.4 | 5659.4 | 6334.1 | 6705.5  | 6962.9  | 7191.5 | 7353.5 | 7113.1 | 5558.8 |
| 60°   | 5829.6 | 5807.4 | 5810.3 | 6223.1 | 7153.8 | 7510.4  | 7652.4  | 7711.6 | 7797.4 | 7434.9 | 5569.9 |
| 62.5° | 6044.1 | 6086.3 | 6229.8 | 6850.5 | 7938.7 | 8212.4  | 8284.2  | 8342.6 | 8242.0 | 7486.0 | 5146.0 |
| 65°   | 6407.3 | 6476.1 | 6818.7 | 7690.1 | 8802.0 | 9095.0  | 9169.0  | 8968.5 | 8312.3 | 6826.1 | 4185.7 |
| 67.5° | 6584.9 | 6710.7 | 7321.7 | 8472.8 | 9639.5 | 9965.0  | 9937.6  | 9009.2 | 7459.3 | 5205.2 | 2686.2 |
| 69°   | 6547.9 | 6681.8 | 7437.9 | 8712.5 | 9917.7 | 10212.8 | 10039.0 | 8511.3 | 6354.8 | 3770.7 | 1649.0 |
| 70°   | 6401.4 | 6536.8 | 7377.9 | 8703.7 | 9953.2 | 10186.9 | 9851.1  | 7896.5 | 5373.1 | 2757.2 | 1031.3 |
| 72.5° | 5345.7 | 5462.6 | 6550.1 | 7866.9 | 9169.0 | 8978.9  | 8241.3  | 5470.8 | 2618.1 | 750.9  | 232.3  |
| 75°   | 3290.6 | 3355.7 | 4699.9 | 5926.5 | 6925.2 | 6436.9  | 5490.7  | 2721.7 | 780.5  | 212.3  | 128.7  |
| 77.5° | 1738.5 | 1768.1 | 2573.0 | 3493.3 | 4389.9 | 3632.4  | 2814.2  | 1061.6 | 359.5  | 133.2  | 93.2   |
| 80°   | 1027.6 | 1049.8 | 1385.6 | 1597.2 | 1899.8 | 1586.9  | 1125.2  | 651.8  | 257.4  | 83.6   | 82.9   |
| 82.5° | 588.1  | 602.2  | 1004.6 | 887.8  | 748.7  | 639.2   | 560.0   | 617.7  | 154.6  | 56.2   | 85.8   |
| 85°   | 216.0  | 219.0  | 565.2  | 675.4  | 445.4  | 264.8   | 278.2   | 511.9  | 41.4   | 35.5   | 67.3   |
| 87.5° | 100.6  | 98.4   | 290.7  | 413.5  | 260.4  | 167.9   | 216.8   | 112.4  | 16.3   | 22.9   | 18.5   |
| 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°    | 1856.9 | 1856.9 | 1856.9 | 1856.9 | 1856.9 | 1856.9 | 1856.9 | 1856.9 | 1856.9 | 1856.9 | 1856.9 |
| 2.5°  | 1834.7 | 1807.3 | 1757.7 | 1706.7 | 1654.9 | 1615.0 | 1575.8 | 1544.7 | 1534.3 | 1515.1 | 1516.6 |
| 5°    | 1778.5 | 1728.2 | 1624.6 | 1519.5 | 1410.0 | 1319.8 | 1234.7 | 1165.9 | 1132.6 | 1098.6 | 1098.6 |
| 7.5°  | 1729.6 | 1656.4 | 1494.4 | 1323.5 | 1146.7 | 998.0  | 864.1  | 763.5  | 708.0  | 663.6  | 662.9  |
| 10°   | 1711.1 | 1612.0 | 1385.6 | 1140.8 | 894.4  | 691.7  | 532.7  | 430.6  | 378.0  | 344.0  | 342.5  |
| 12.5° | 1719.3 | 1596.5 | 1302.0 | 972.1  | 662.9  | 444.6  | 308.5  | 242.7  | 220.5  | 210.1  | 210.1  |
| 15°   | 1743.0 | 1592.0 | 1218.4 | 807.1  | 468.3  | 278.2  | 204.9  | 187.2  | 185.7  | 185.7  | 185.7  |
| 17.5° | 1771.8 | 1593.5 | 1132.6 | 646.6  | 318.9  | 199.0  | 176.8  | 174.6  | 176.1  | 176.1  | 176.1  |
| 20°   | 1801.4 | 1594.3 | 1040.1 | 497.9  | 224.9  | 173.1  | 166.5  | 165.7  | 167.2  | 167.2  | 167.9  |
| 22.5° | 1837.6 | 1598.0 | 947.7  | 372.1  | 185.7  | 163.5  | 158.3  | 158.3  | 159.1  | 159.1  | 158.3  |
| 25°   | 1879.1 | 1605.3 | 851.5  | 275.9  | 169.4  | 156.8  | 152.4  | 151.7  | 152.4  | 151.7  | 150.9  |
| 27.5° | 1930.9 | 1615.7 | 744.2  | 216.0  | 162.0  | 150.2  | 146.5  | 146.5  | 145.7  | 145.0  | 144.3  |
| 30°   | 1996.0 | 1627.5 | 623.6  | 183.5  | 154.6  | 144.3  | 140.6  | 139.8  | 139.1  | 137.6  | 137.6  |
| 32.5° | 2095.1 | 1653.4 | 504.5  | 166.5  | 146.5  | 136.1  | 133.2  | 133.2  | 131.7  | 130.2  | 129.5  |
| 35°   | 2247.5 | 1704.5 | 398.0  | 156.1  | 137.6  | 127.2  | 123.5  | 123.5  | 122.1  | 121.3  | 120.6  |
| 37.5° | 2458.3 | 1782.2 | 309.2  | 146.5  | 128.7  | 117.6  | 113.9  | 113.2  | 111.7  | 110.2  | 109.5  |
| 40°   | 2738.7 | 1878.3 | 243.4  | 137.6  | 119.8  | 108.0  | 105.1  | 103.6  | 100.6  | 98.4   | 98.4   |
| 42.5° | 3090.9 | 1987.8 | 197.5  | 128.0  | 109.5  | 99.1   | 96.9   | 94.7   | 89.5   | 87.3   | 86.6   |
| 45°   | 3459.3 | 2086.2 | 167.2  | 116.9  | 99.1   | 90.3   | 88.8   | 85.1   | 78.4   | 76.2   | 76.2   |
| 47.5° | 3724.9 | 2109.1 | 147.2  | 106.5  | 89.5   | 80.6   | 79.9   | 73.2   | 67.3   | 65.8   | 65.1   |
| 50°   | 3890.6 | 2064.0 | 130.9  | 96.2   | 80.6   | 71.8   | 69.5   | 61.4   | 57.7   | 56.2   | 55.5   |
| 52.5° | 4002.3 | 1983.4 | 117.6  | 87.3   | 72.5   | 63.6   | 58.4   | 52.5   | 49.6   | 48.1   | 48.1   |
| 55°   | 4091.8 | 1869.5 | 104.3  | 79.2   | 65.8   | 57.0   | 49.6   | 45.1   | 42.2   | 40.7   | 40.7   |
| 57.5° | 4116.9 | 1714.8 | 91.0   | 72.5   | 59.2   | 50.3   | 42.2   | 39.2   | 35.5   | 34.8   | 34.8   |
| 60°   | 3934.2 | 1435.9 | 80.6   | 64.4   | 53.3   | 43.6   | 37.0   | 33.3   | 29.6   | 28.9   | 28.1   |
| 62.5° | 3452.6 | 1111.2 | 71.0   | 57.0   | 46.6   | 37.7   | 31.8   | 27.4   | 24.4   | 24.4   | 24.4   |
| 65°   | 2633.7 | 745.0  | 62.1   | 49.6   | 40.7   | 31.8   | 27.4   | 22.2   | 20.7   | 20.7   | 21.5   |
| 67.5° | 1576.5 | 405.4  | 53.3   | 42.2   | 34.8   | 26.6   | 22.9   | 19.2   | 18.5   | 19.2   | 19.2   |
| 69°   | 924.0  | 238.2  | 48.1   | 37.7   | 30.3   | 23.7   | 20.0   | 17.0   | 18.5   | 19.2   | 19.2   |
| 70°   | 570.4  | 160.5  | 44.4   | 34.0   | 27.4   | 21.5   | 18.5   | 16.3   | 17.8   | 18.5   | 18.5   |
| 72.5° | 159.1  | 82.9   | 35.5   | 26.6   | 22.2   | 17.8   | 14.8   | 14.8   | 17.0   | 17.8   | 17.8   |
| 75°   | 103.6  | 61.4   | 27.4   | 20.0   | 17.0   | 14.1   | 12.6   | 14.1   | 16.3   | 17.0   | 17.0   |
| 77.5° | 85.8   | 50.3   | 22.2   | 16.3   | 14.1   | 13.3   | 11.8   | 12.6   | 14.8   | 15.5   | 15.5   |
| 80°   | 78.4   | 35.5   | 17.8   | 14.8   | 12.6   | 11.8   | 11.1   | 10.4   | 13.3   | 14.1   | 14.1   |
| 82.5° | 74.7   | 28.1   | 15.5   | 13.3   | 11.8   | 10.4   | 9.6    | 10.4   | 11.8   | 12.6   | 13.3   |
| 85°   | 46.6   | 18.5   | 14.1   | 12.6   | 10.4   | 9.6    | 9.6    | 9.6    | 11.1   | 11.8   | 11.8   |
| 87.5° | 17.0   | 14.8   | 12.6   | 10.4   | 8.9    | 8.9    | 8.9    | 8.9    | 9.6    | 11.1   | 11.1   |
| 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)