

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: P301879

Luminaire Tested: **GLNA-AF-04-LED-E1-SL4-7030-800-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P301879  
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: MCGRAW-EDISON  
Catalog Number: GLNA-AF-04-LED-E1-SL4-7030-800-HSS  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(4) 70 CRI, 3000K 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: 13836.6 lumens  
Efficiency: N/A  
Efficacy: 80.9 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: 25 FT

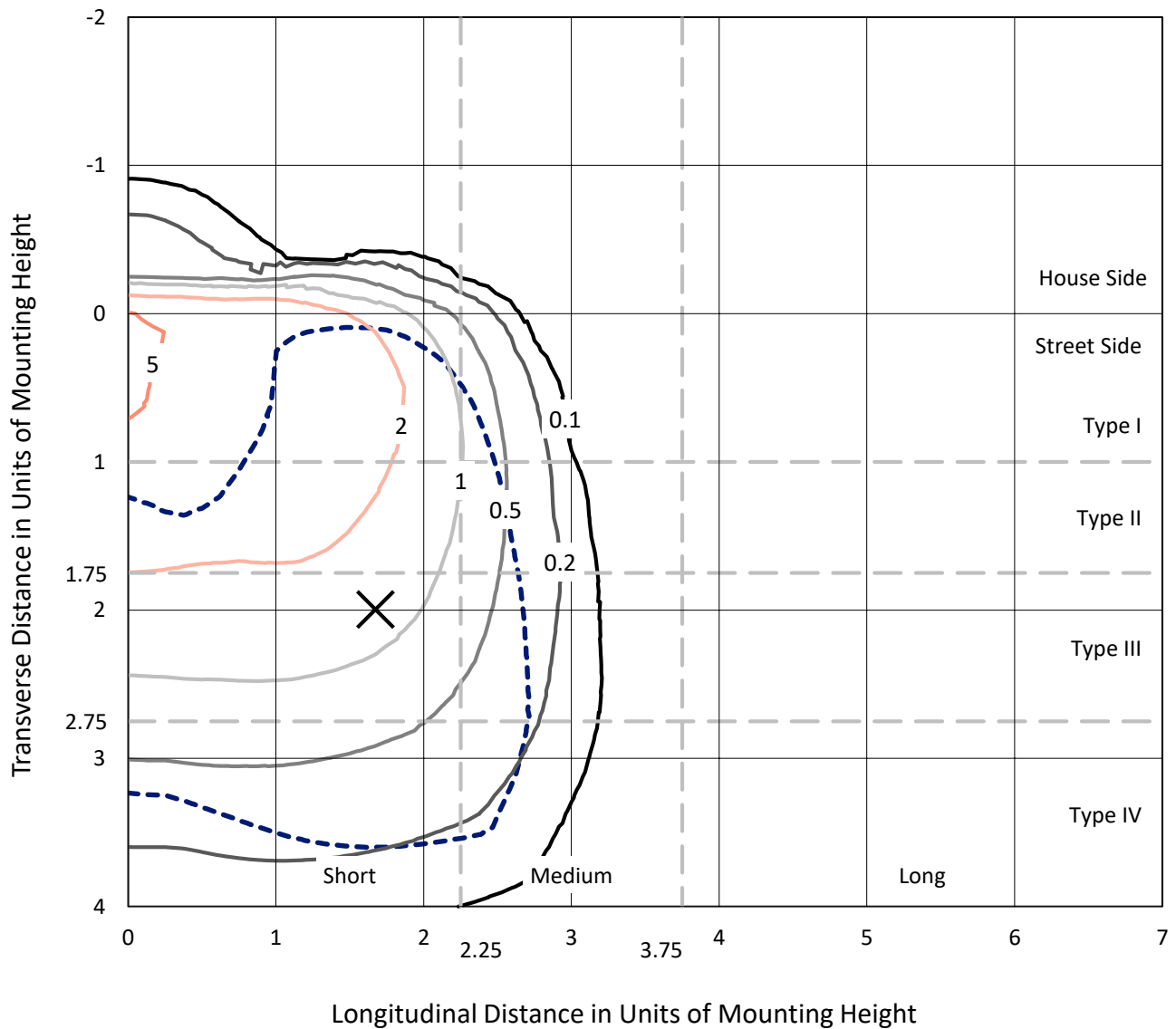


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

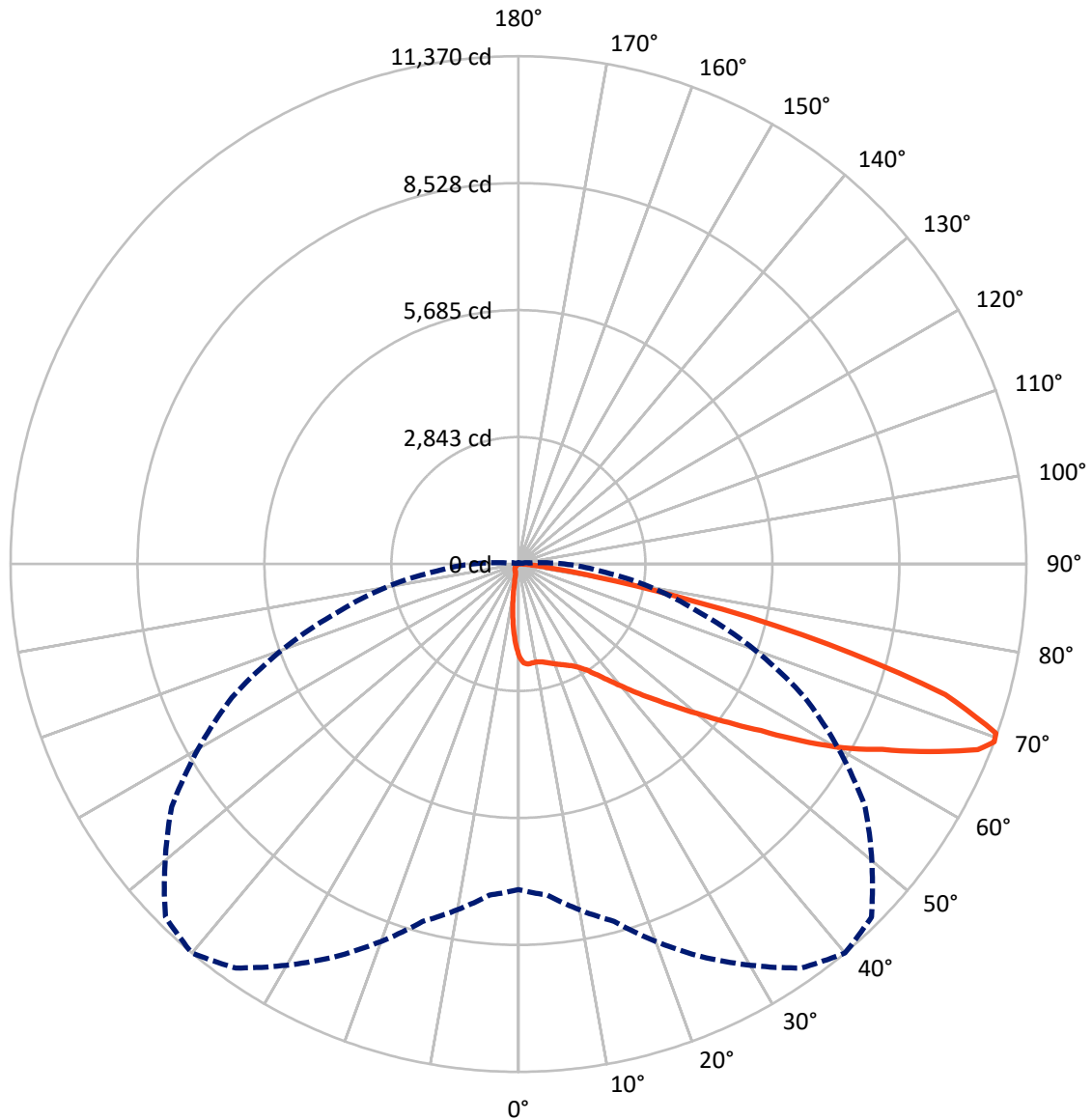


Based on 20 foot mounting height. Maximum calculated value = 5.7 fc  
 Type IV - Short - Semi-Cutoff

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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    | 809.5    | 0.0    | 809.5   |
|                    | % Fixture | 5.9      | 0.0    | 5.9     |
| <b>Street Side</b> | Lumens    | 13027.1  | 0.0    | 13027.1 |
|                    | % Fixture | 94.1     | 0.0    | 94.1    |
| <b>Total</b>       | Lumens    | 13836.6  | 0.0    | 13836.6 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 167.6   | 1.2       |
| 10°-20°   | 412.2   | 3.0       |
| 20°-30°   | 694.3   | 5.0       |
| 30°-40°   | 1136.6  | 8.2       |
| 40°-50°   | 1967.9  | 14.2      |
| 50°-60°   | 3099.6  | 22.4      |
| 60°-70°   | 4048.0  | 29.3      |
| 70°-80°   | 2084.9  | 15.1      |
| 80°-90°   | 225.5   | 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°    | 13836.6 | 100.0     |
| 0°-180°   | 13836.6 | 100.0     |



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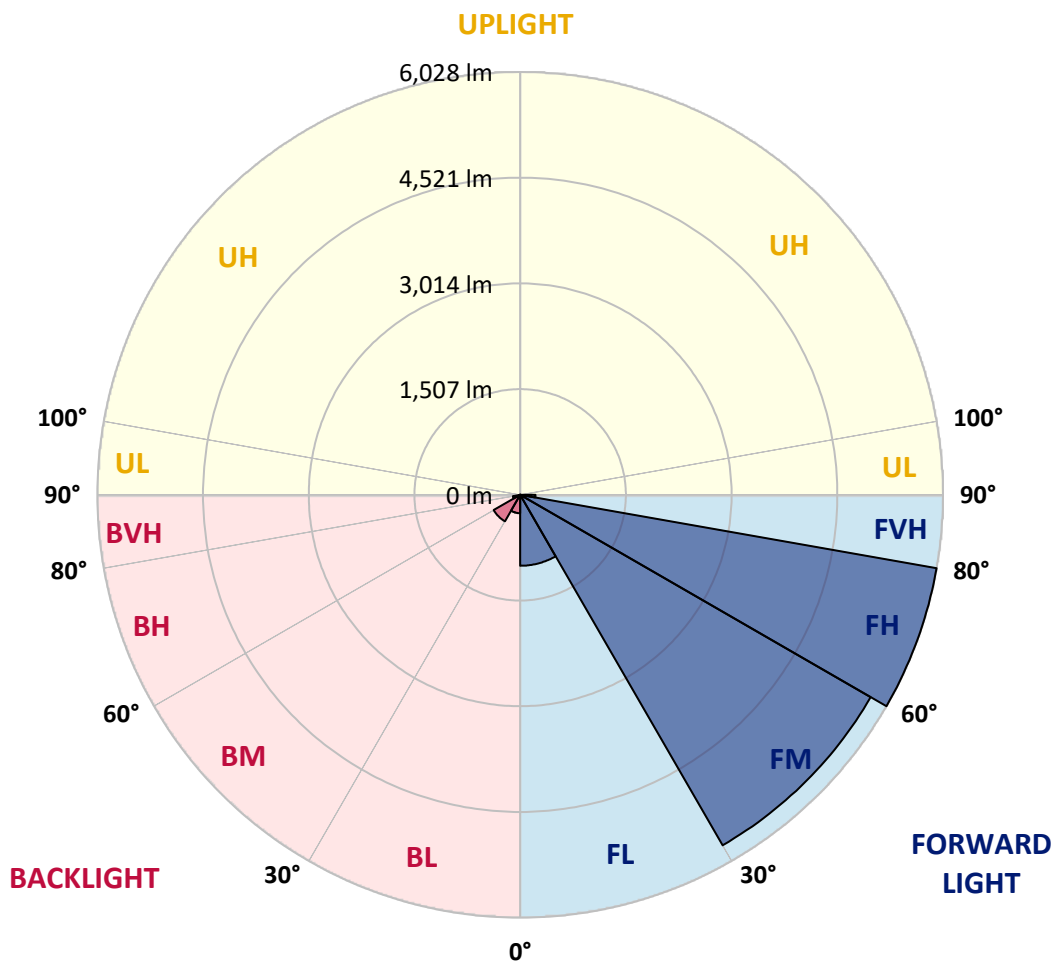
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 1011.9 | 7.3       |                         |      |         |
| FM   | (30°-60°)   | 5769.0 | 41.7      |                         |      |         |
| FH   | (60°-80°)   | 6027.8 | 43.6      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 218.4  | 1.6       |                         |      | G2/225  |
| BL   | (0°-30°)    | 262.2  | 1.9       | B1/500                  |      |         |
| BM   | (30°-60°)   | 435.1  | 3.1       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 105.1  | 0.8       | B0/110                  |      | G0/110  |
| BVH  | (80°-90°)   | 7.1    | 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°    | 2067.3 | 2067.3 | 2067.3 | 2067.3 | 2067.3  | 2067.3  | 2067.3  | 2067.3  | 2067.3 | 2067.3 | 2067.3 |
| 2.5°  | 2269.9 | 2257.5 | 2250.1 | 2240.2 | 2227.9  | 2217.2  | 2213.0  | 2182.6  | 2153.7 | 2114.2 | 2068.9 |
| 5°    | 2311.9 | 2307.8 | 2294.6 | 2281.4 | 2266.6  | 2250.1  | 2241.0  | 2204.8  | 2163.6 | 2106.0 | 2026.9 |
| 7.5°  | 2316.0 | 2311.1 | 2294.6 | 2276.5 | 2255.9  | 2236.1  | 2220.5  | 2184.2  | 2146.3 | 2087.9 | 1991.5 |
| 10°   | 2309.4 | 2303.6 | 2291.3 | 2271.5 | 2246.0  | 2227.0  | 2211.4  | 2176.8  | 2144.7 | 2092.0 | 1984.9 |
| 12.5° | 2302.0 | 2296.2 | 2290.5 | 2280.6 | 2258.3  | 2245.2  | 2232.0  | 2199.0  | 2170.2 | 2125.7 | 2008.8 |
| 15°   | 2309.4 | 2306.1 | 2312.7 | 2308.6 | 2296.2  | 2284.7  | 2271.5  | 2241.9  | 2215.5 | 2178.5 | 2052.4 |
| 17.5° | 2340.7 | 2340.7 | 2361.3 | 2363.8 | 2352.2  | 2335.8  | 2316.8  | 2287.2  | 2264.9 | 2233.6 | 2104.3 |
| 20°   | 2414.0 | 2411.5 | 2437.9 | 2442.8 | 2414.8  | 2389.3  | 2361.3  | 2325.1  | 2307.8 | 2288.0 | 2155.4 |
| 22.5° | 2540.0 | 2528.5 | 2544.1 | 2539.2 | 2484.0  | 2444.5  | 2409.9  | 2365.4  | 2356.4 | 2347.3 | 2212.2 |
| 25°   | 2703.9 | 2697.3 | 2708.0 | 2659.4 | 2562.3  | 2508.7  | 2467.5  | 2417.3  | 2417.3 | 2426.4 | 2276.5 |
| 27.5° | 2941.9 | 2917.2 | 2881.0 | 2795.3 | 2649.6  | 2581.2  | 2536.7  | 2483.2  | 2497.2 | 2531.0 | 2361.3 |
| 30°   | 3185.7 | 3158.5 | 3075.4 | 2943.6 | 2755.8  | 2684.1  | 2632.3  | 2576.3  | 2609.2 | 2671.0 | 2475.0 |
| 32.5° | 3426.2 | 3395.7 | 3278.0 | 3111.6 | 2908.2  | 2836.5  | 2786.3  | 2724.5  | 2779.7 | 2883.5 | 2641.3 |
| 35°   | 3659.3 | 3632.1 | 3496.2 | 3300.2 | 3110.8  | 3051.5  | 3005.4  | 2951.8  | 3022.7 | 3167.6 | 2876.1 |
| 37.5° | 3921.2 | 3891.6 | 3726.0 | 3513.5 | 3357.0  | 3314.2  | 3280.4  | 3226.9  | 3350.5 | 3562.9 | 3203.0 |
| 40°   | 4243.2 | 4193.0 | 3969.8 | 3758.1 | 3642.0  | 3621.4  | 3598.4  | 3590.9  | 3782.8 | 4076.9 | 3638.7 |
| 42.5° | 4612.2 | 4529.9 | 4225.1 | 4015.9 | 3955.0  | 3969.8  | 3964.0  | 3997.0  | 4324.0 | 4716.0 | 4169.1 |
| 45°   | 4981.2 | 4875.0 | 4509.3 | 4291.0 | 4299.3  | 4351.1  | 4383.3  | 4515.0  | 5001.8 | 5449.0 | 4739.9 |
| 47.5° | 5294.2 | 5189.6 | 4781.9 | 4588.3 | 4687.2  | 4789.3  | 4876.6  | 5126.2  | 5698.6 | 6170.5 | 5183.8 |
| 50°   | 5561.8 | 5463.0 | 5071.0 | 4915.3 | 5137.7  | 5302.4  | 5444.1  | 5813.9  | 6448.1 | 6719.8 | 5495.1 |
| 52.5° | 5780.9 | 5715.0 | 5370.8 | 5290.1 | 5652.4  | 5893.8  | 6101.3  | 6544.4  | 7111.9 | 7166.2 | 5737.3 |
| 55°   | 5994.2 | 5947.3 | 5692.8 | 5735.6 | 6257.0  | 6585.6  | 6848.3  | 7319.4  | 7683.5 | 7538.5 | 5969.5 |
| 57.5° | 6239.7 | 6196.9 | 6060.1 | 6300.6 | 7051.8  | 7465.2  | 7751.8  | 8006.3  | 8186.7 | 7919.0 | 6188.6 |
| 60°   | 6490.1 | 6465.3 | 6468.6 | 6928.2 | 7964.3  | 8361.3  | 8519.4  | 8585.3  | 8680.9 | 8277.3 | 6201.0 |
| 62.5° | 6728.9 | 6775.9 | 6935.6 | 7626.6 | 8838.2  | 9142.9  | 9222.8  | 9287.9  | 9175.9 | 8334.1 | 5729.0 |
| 65°   | 7133.3 | 7209.9 | 7591.2 | 8561.4 | 9799.3  | 10125.5 | 10207.8 | 9984.6  | 9254.1 | 7599.5 | 4660.0 |
| 67.5° | 7331.0 | 7471.0 | 8151.3 | 9432.8 | 10731.7 | 11094.0 | 11063.6 | 10029.9 | 8304.5 | 5794.9 | 2990.5 |
| 69°   | 7289.8 | 7438.9 | 8280.6 | 9699.7 | 11041.3 | 11370.0 | 11176.4 | 9475.6  | 7074.8 | 4197.9 | 1835.8 |
| 70°   | 7126.7 | 7277.4 | 8213.9 | 9689.8 | 11080.9 | 11341.1 | 10967.2 | 8791.2  | 5981.9 | 3069.6 | 1148.1 |
| 72.5° | 5951.4 | 6081.5 | 7292.3 | 8758.3 | 10207.8 | 9996.2  | 9175.0  | 6090.6  | 2914.8 | 836.0  | 258.6  |
| 75°   | 3663.4 | 3735.9 | 5232.4 | 6598.0 | 7709.8  | 7166.2  | 6112.8  | 3030.1  | 868.9  | 236.4  | 143.3  |
| 77.5° | 1935.5 | 1968.4 | 2864.5 | 3889.1 | 4887.3  | 4043.9  | 3133.0  | 1181.9  | 400.3  | 148.3  | 103.8  |
| 80°   | 1144.0 | 1168.7 | 1542.6 | 1778.2 | 2115.0  | 1766.6  | 1252.7  | 725.6   | 286.6  | 93.1   | 92.2   |
| 82.5° | 654.8  | 670.4  | 1118.5 | 988.3  | 833.5   | 711.6   | 623.5   | 687.7   | 172.1  | 62.6   | 95.5   |
| 85°   | 240.5  | 243.8  | 629.2  | 752.0  | 495.8   | 294.9   | 309.7   | 569.9   | 46.1   | 39.5   | 74.9   |
| 87.5° | 112.0  | 109.5  | 323.7  | 460.4  | 289.9   | 187.0   | 241.3   | 125.2   | 18.1   | 25.5   | 20.6   |
| 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°    | 2067.3 | 2067.3 | 2067.3 | 2067.3 | 2067.3 | 2067.3 | 2067.3 | 2067.3 | 2067.3 | 2067.3 | 2067.3 |
| 2.5°  | 2042.6 | 2012.1 | 1956.9 | 1900.1 | 1842.4 | 1797.9 | 1754.3 | 1719.7 | 1708.2 | 1686.8 | 1688.4 |
| 5°    | 1980.0 | 1924.0 | 1808.7 | 1691.7 | 1569.8 | 1469.3 | 1374.6 | 1298.0 | 1260.9 | 1223.1 | 1223.1 |
| 7.5°  | 1925.6 | 1844.1 | 1663.7 | 1473.4 | 1276.6 | 1111.1 | 962.0  | 850.0  | 788.2  | 738.8  | 738.0  |
| 10°   | 1905.0 | 1794.6 | 1542.6 | 1270.0 | 995.7  | 770.1  | 593.0  | 479.3  | 420.9  | 383.0  | 381.3  |
| 12.5° | 1914.1 | 1777.4 | 1449.6 | 1082.2 | 738.0  | 495.0  | 343.4  | 270.1  | 245.4  | 233.9  | 233.9  |
| 15°   | 1940.4 | 1772.4 | 1356.5 | 898.6  | 521.3  | 309.7  | 228.1  | 208.4  | 206.7  | 206.7  | 206.7  |
| 17.5° | 1972.5 | 1774.1 | 1260.9 | 719.8  | 355.0  | 221.6  | 196.8  | 194.4  | 196.0  | 196.0  | 196.0  |
| 20°   | 2005.5 | 1774.9 | 1158.0 | 554.3  | 250.4  | 192.7  | 185.3  | 184.5  | 186.1  | 186.1  | 187.0  |
| 22.5° | 2045.9 | 1779.0 | 1055.0 | 414.3  | 206.7  | 182.0  | 176.3  | 176.3  | 177.1  | 177.1  | 176.3  |
| 25°   | 2092.0 | 1787.2 | 948.0  | 307.2  | 188.6  | 174.6  | 169.7  | 168.8  | 169.7  | 168.8  | 168.0  |
| 27.5° | 2149.6 | 1798.8 | 828.6  | 240.5  | 180.4  | 167.2  | 163.1  | 163.1  | 162.3  | 161.4  | 160.6  |
| 30°   | 2222.1 | 1811.9 | 694.3  | 204.3  | 172.1  | 160.6  | 156.5  | 155.7  | 154.8  | 153.2  | 153.2  |
| 32.5° | 2332.5 | 1840.8 | 561.7  | 185.3  | 163.1  | 151.5  | 148.3  | 148.3  | 146.6  | 145.0  | 144.1  |
| 35°   | 2502.1 | 1897.6 | 443.1  | 173.8  | 153.2  | 141.7  | 137.5  | 137.5  | 135.9  | 135.1  | 134.2  |
| 37.5° | 2736.9 | 1984.1 | 344.3  | 163.1  | 143.3  | 131.0  | 126.8  | 126.0  | 124.4  | 122.7  | 121.9  |
| 40°   | 3049.0 | 2091.1 | 271.0  | 153.2  | 133.4  | 120.2  | 117.0  | 115.3  | 112.0  | 109.5  | 109.5  |
| 42.5° | 3441.0 | 2213.0 | 219.9  | 142.5  | 121.9  | 110.4  | 107.9  | 105.4  | 99.7   | 97.2   | 96.4   |
| 45°   | 3851.2 | 2322.6 | 186.1  | 130.1  | 110.4  | 100.5  | 98.8   | 94.7   | 87.3   | 84.8   | 84.8   |
| 47.5° | 4146.9 | 2348.1 | 163.9  | 118.6  | 99.7   | 89.8   | 89.0   | 81.5   | 74.9   | 73.3   | 72.5   |
| 50°   | 4331.4 | 2297.9 | 145.8  | 107.1  | 89.8   | 79.9   | 77.4   | 68.4   | 64.2   | 62.6   | 61.8   |
| 52.5° | 4455.7 | 2208.1 | 131.0  | 97.2   | 80.7   | 70.8   | 65.1   | 58.5   | 55.2   | 53.5   | 53.5   |
| 55°   | 4555.4 | 2081.3 | 116.1  | 88.1   | 73.3   | 63.4   | 55.2   | 50.2   | 46.9   | 45.3   | 45.3   |
| 57.5° | 4583.4 | 1909.1 | 101.3  | 80.7   | 65.9   | 56.0   | 46.9   | 43.7   | 39.5   | 38.7   | 38.7   |
| 60°   | 4380.0 | 1598.6 | 89.8   | 71.7   | 59.3   | 48.6   | 41.2   | 37.1   | 32.9   | 32.1   | 31.3   |
| 62.5° | 3843.8 | 1237.1 | 79.1   | 63.4   | 51.9   | 42.0   | 35.4   | 30.5   | 27.2   | 27.2   | 27.2   |
| 65°   | 2932.1 | 829.4  | 69.2   | 55.2   | 45.3   | 35.4   | 30.5   | 24.7   | 23.1   | 23.1   | 23.9   |
| 67.5° | 1755.1 | 451.3  | 59.3   | 46.9   | 38.7   | 29.7   | 25.5   | 21.4   | 20.6   | 21.4   | 21.4   |
| 69°   | 1028.7 | 265.2  | 53.5   | 42.0   | 33.8   | 26.4   | 22.2   | 18.9   | 20.6   | 21.4   | 21.4   |
| 70°   | 635.0  | 178.7  | 49.4   | 37.9   | 30.5   | 23.9   | 20.6   | 18.1   | 19.8   | 20.6   | 20.6   |
| 72.5° | 177.1  | 92.2   | 39.5   | 29.7   | 24.7   | 19.8   | 16.5   | 16.5   | 18.9   | 19.8   | 19.8   |
| 75°   | 115.3  | 68.4   | 30.5   | 22.2   | 18.9   | 15.6   | 14.0   | 15.6   | 18.1   | 18.9   | 18.9   |
| 77.5° | 95.5   | 56.0   | 24.7   | 18.1   | 15.6   | 14.8   | 13.2   | 14.0   | 16.5   | 17.3   | 17.3   |
| 80°   | 87.3   | 39.5   | 19.8   | 16.5   | 14.0   | 13.2   | 12.4   | 11.5   | 14.8   | 15.6   | 15.6   |
| 82.5° | 83.2   | 31.3   | 17.3   | 14.8   | 13.2   | 11.5   | 10.7   | 11.5   | 13.2   | 14.0   | 14.8   |
| 85°   | 51.9   | 20.6   | 15.6   | 14.0   | 11.5   | 10.7   | 10.7   | 10.7   | 12.4   | 13.2   | 13.2   |
| 87.5° | 18.9   | 16.5   | 14.0   | 11.5   | 9.9    | 9.9    | 9.9    | 9.9    | 10.7   | 12.4   | 12.4   |
| 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)