

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: P299236

Luminaire Tested: **GLNA-AF-04-LED-E1-SL2-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299236  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24286)  
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-SL2-600  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(4) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V  
Narrow OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15442 lumens  
Efficiency: N/A  
Efficacy: 119.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short - Semi-Cutoff  
BUG Rating: B2 - U0 - G3

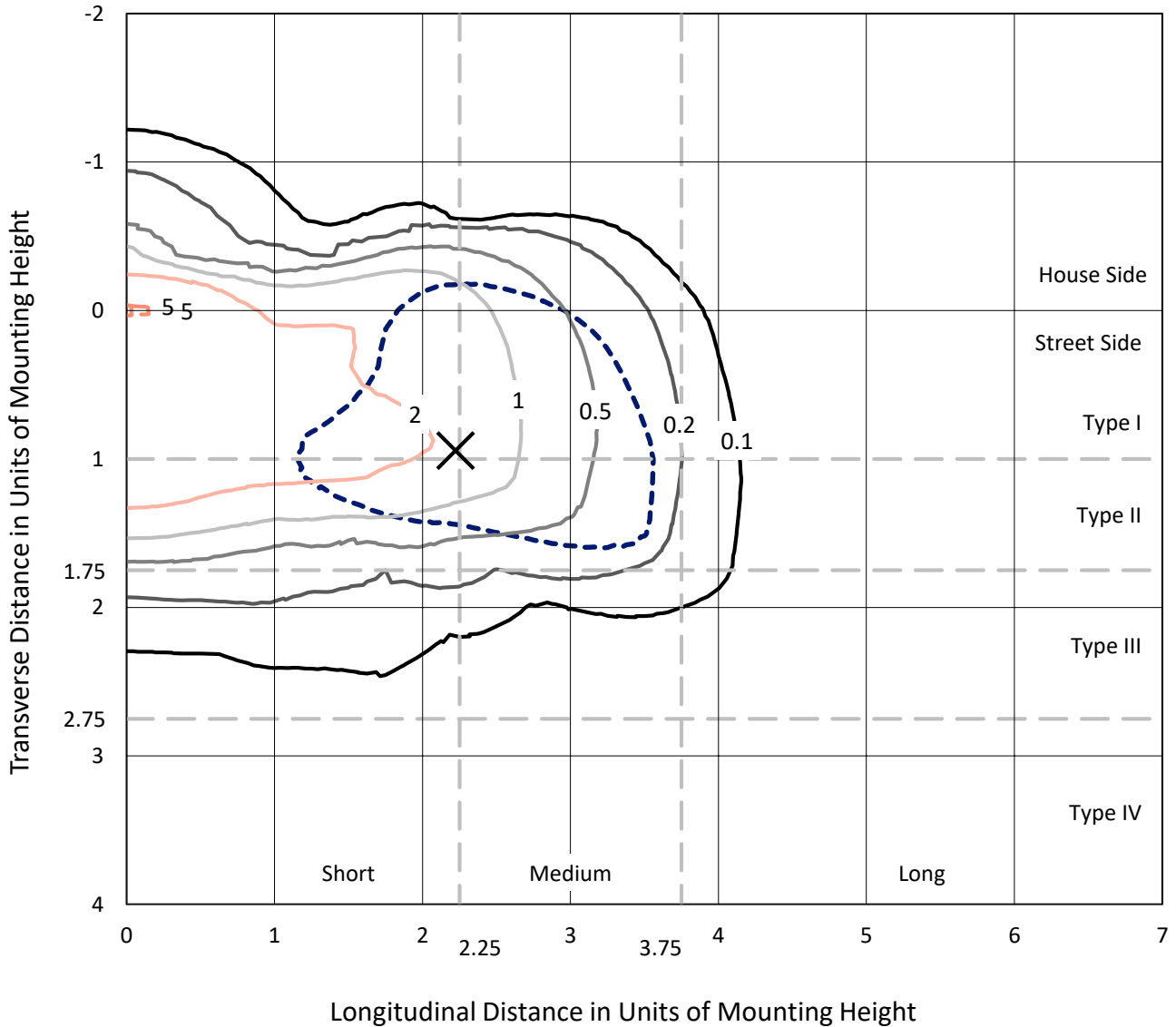
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

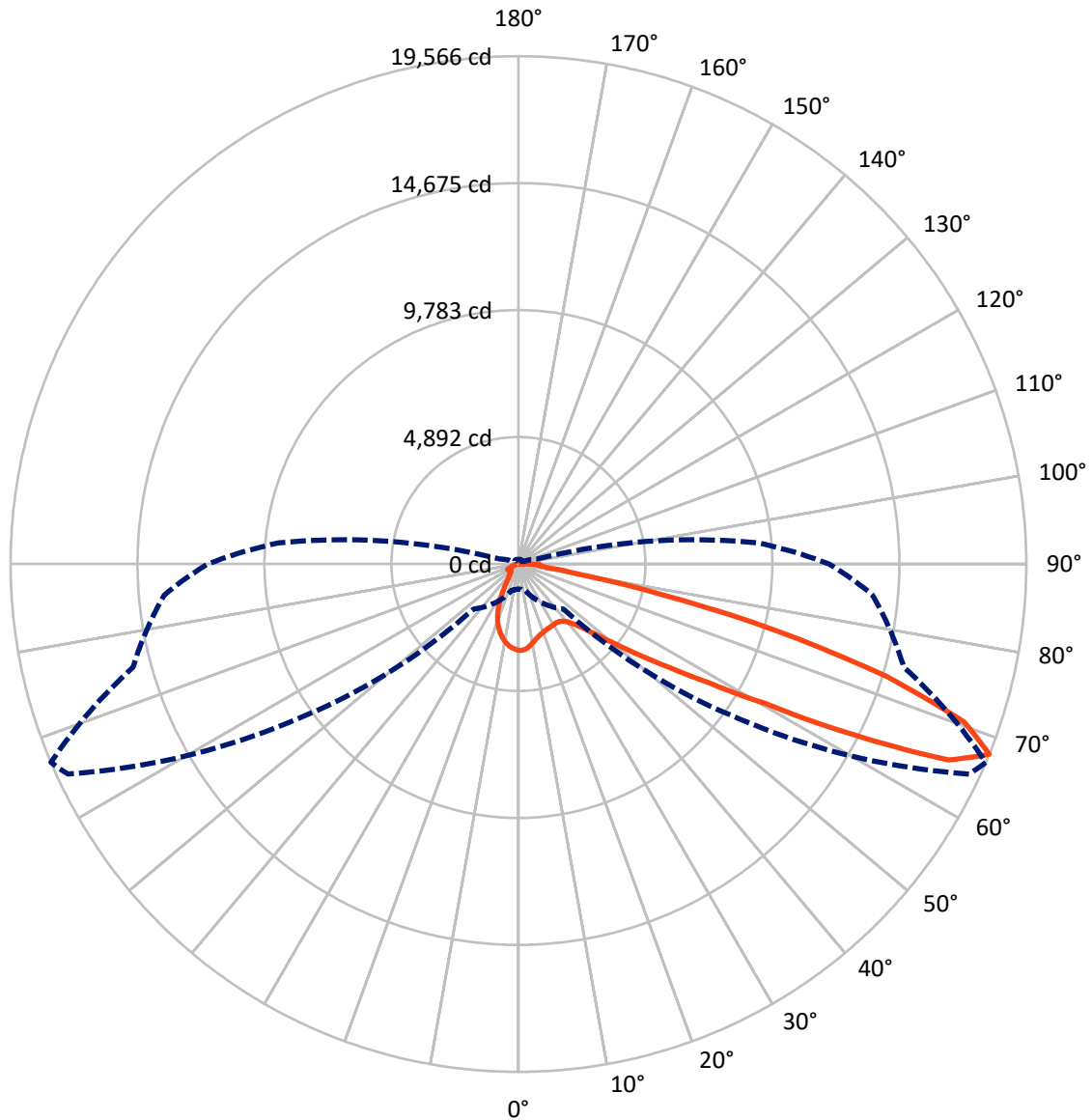
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.3 fc  
 Type II - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 2558.6   | 0.0    | 2558.6  |
|                    | % Fixture | 16.6     | 0.0    | 16.6    |
| <b>Street Side</b> | Lumens    | 12883.5  | 0.0    | 12883.5 |
|                    | % Fixture | 83.4     | 0.0    | 83.4    |
| <b>Total</b>       | Lumens    | 15442.0  | 0.0    | 15442.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 284.2   | 1.8       |
| 10°-20°   | 657.5   | 4.3       |
| 20°-30°   | 891.3   | 5.8       |
| 30°-40°   | 1267.0  | 8.2       |
| 40°-50°   | 2119.8  | 13.7      |
| 50°-60°   | 3353.5  | 21.7      |
| 60°-70°   | 4272.1  | 27.7      |
| 70°-80°   | 2237.7  | 14.5      |
| 80°-90°   | 358.9   | 2.3       |
| 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°    | 15442.0 | 100.0     |
| 0°-180°   | 15442.0 | 100.0     |

**Coefficient of Utilization**



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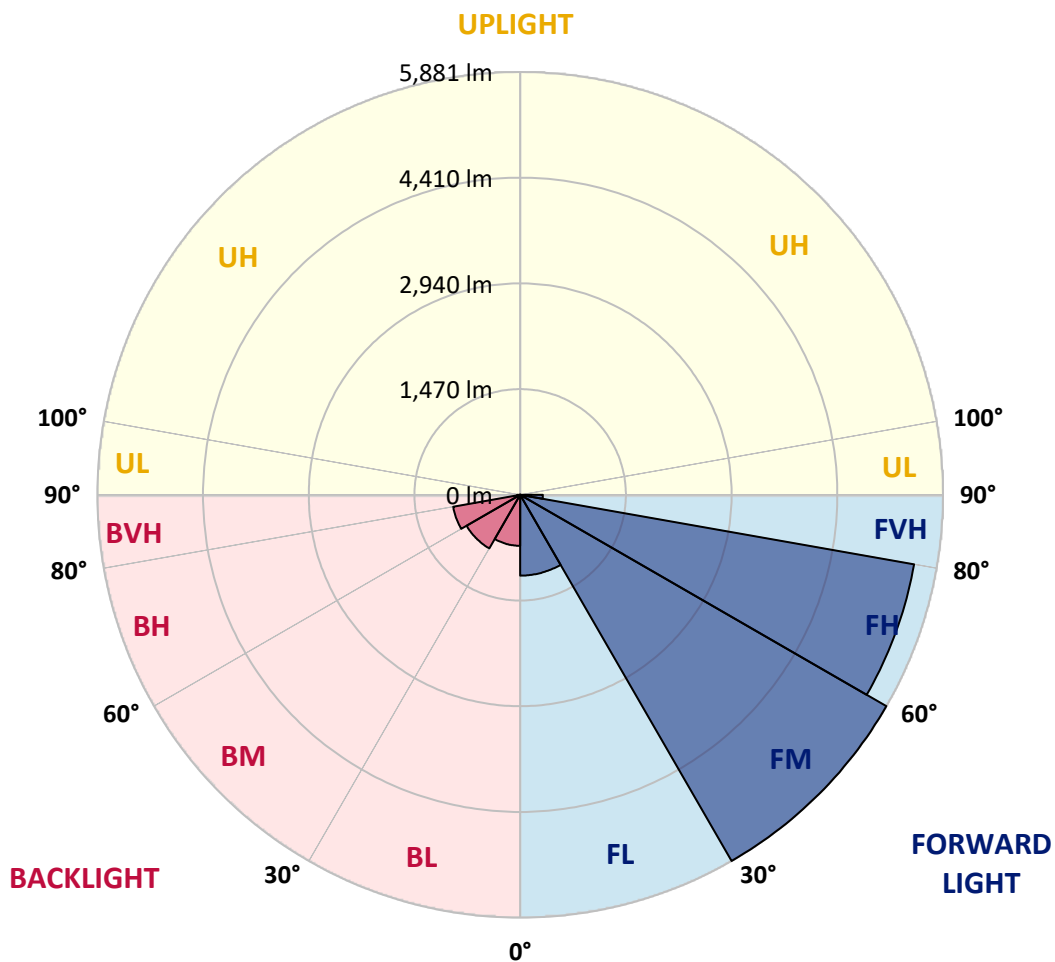
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 1123.8 | 7.3       |                         |      |         |
| FM   | (30°-60°)   | 5880.7 | 38.1      |                         |      |         |
| FH   | (60°-80°)   | 5563.4 | 36.0      |                         |      | G3/7500 |
| FVH  | (80°-90°)   | 315.6  | 2.0       |                         |      | G3/500  |
| BL   | (0°-30°)    | 709.2  | 4.6       | B2/1000                 |      |         |
| BM   | (30°-60°)   | 859.8  | 5.6       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 946.3  | 6.1       | B2/1000                 |      | G2/1000 |
| BVH  | (80°-90°)   | 43.3   | 0.3       |                         |      | G1/100  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B2-U0-G3**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°     | 65°     | 67°     | 75°     | 85°     |
|-------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|
| 0°    | 3330.8 | 3330.8 | 3330.8 | 3330.8 | 3330.8 | 3330.8 | 3330.8  | 3330.8  | 3330.8  | 3330.8  | 3330.8  |
| 2.5°  | 3193.7 | 3199.1 | 3215.8 | 3226.5 | 3274.5 | 3295.0 | 3309.5  | 3324.0  | 3326.2  | 3333.1  | 3326.2  |
| 5°    | 2858.7 | 2870.1 | 2901.3 | 2936.4 | 3029.3 | 3102.4 | 3179.3  | 3259.2  | 3273.7  | 3325.5  | 3339.9  |
| 7.5°  | 2599.0 | 2596.0 | 2621.9 | 2663.7 | 2758.9 | 2860.2 | 2995.0  | 3154.1  | 3185.4  | 3301.9  | 3358.2  |
| 10°   | 2409.4 | 2407.1 | 2434.5 | 2477.9 | 2568.5 | 2664.5 | 2816.8  | 3034.6  | 3078.8  | 3264.6  | 3375.7  |
| 12.5° | 2269.3 | 2270.0 | 2297.5 | 2345.4 | 2437.6 | 2534.3 | 2688.9  | 2918.8  | 2975.2  | 3221.2  | 3394.0  |
| 15°   | 2176.4 | 2182.5 | 2204.5 | 2255.6 | 2345.4 | 2442.1 | 2593.7  | 2832.0  | 2895.2  | 3186.9  | 3414.6  |
| 17.5° | 2145.2 | 2155.1 | 2162.7 | 2200.0 | 2276.9 | 2373.6 | 2522.1  | 2768.1  | 2835.1  | 3163.3  | 3432.9  |
| 20°   | 2174.1 | 2185.5 | 2171.0 | 2184.0 | 2232.7 | 2318.0 | 2465.7  | 2717.8  | 2786.3  | 3136.6  | 3435.1  |
| 22.5° | 2298.2 | 2308.9 | 2266.2 | 2228.9 | 2225.9 | 2277.7 | 2419.3  | 2678.2  | 2749.0  | 3116.8  | 3435.9  |
| 25°   | 2516.8 | 2523.6 | 2452.0 | 2365.2 | 2280.7 | 2263.2 | 2386.5  | 2650.8  | 2726.2  | 3099.3  | 3421.4  |
| 27.5° | 2784.8 | 2790.1 | 2707.9 | 2580.0 | 2410.2 | 2297.5 | 2375.1  | 2634.8  | 2713.2  | 3084.1  | 3397.1  |
| 30°   | 3110.7 | 3135.9 | 3025.4 | 2864.0 | 2616.5 | 2398.7 | 2398.0  | 2626.4  | 2698.8  | 3058.2  | 3349.1  |
| 32.5° | 3444.3 | 3454.9 | 3378.8 | 3215.1 | 2894.5 | 2576.9 | 2461.9  | 2632.5  | 2695.0  | 3027.0  | 3288.2  |
| 35°   | 3782.4 | 3796.1 | 3746.6 | 3614.9 | 3274.5 | 2838.1 | 2586.8  | 2668.3  | 2718.6  | 3016.3  | 3245.5  |
| 37.5° | 4220.2 | 4238.5 | 4170.0 | 4017.7 | 3736.7 | 3192.2 | 2794.7  | 2758.2  | 2790.9  | 3046.8  | 3232.6  |
| 40°   | 4912.5 | 4904.1 | 4703.8 | 4476.9 | 4242.3 | 3645.3 | 3091.7  | 2910.5  | 2929.5  | 3145.0  | 3272.2  |
| 42.5° | 5718.1 | 5697.6 | 5352.6 | 4996.2 | 4798.2 | 4193.6 | 3484.6  | 3174.7  | 3170.9  | 3338.4  | 3411.5  |
| 45°   | 6360.8 | 6344.1 | 6033.4 | 5594.0 | 5435.6 | 4818.0 | 3992.6  | 3568.4  | 3540.2  | 3645.3  | 3668.9  |
| 47.5° | 6708.8 | 6709.6 | 6530.6 | 6172.0 | 6168.2 | 5611.5 | 4645.2  | 4138.0  | 4089.3  | 4138.8  | 4113.6  |
| 50°   | 6587.0 | 6603.0 | 6583.9 | 6469.7 | 6836.8 | 6651.7 | 5497.3  | 4932.2  | 4834.0  | 4882.8  | 4786.0  |
| 52.5° | 5997.6 | 6018.2 | 6130.9 | 6306.0 | 7117.8 | 7909.0 | 6749.2  | 5919.2  | 5804.9  | 5787.4  | 5680.0  |
| 55°   | 4952.8 | 4977.9 | 5207.9 | 5683.9 | 6884.0 | 8753.5 | 8724.5  | 7177.2  | 6995.2  | 6829.9  | 6784.2  |
| 57.5° | 3413.8 | 3455.7 | 3825.8 | 4532.5 | 6127.8 | 9008.6 | 11076.8 | 8970.5  | 8600.4  | 8023.2  | 8033.8  |
| 60°   | 1924.3 | 1973.1 | 2409.4 | 3051.3 | 4601.8 | 8731.4 | 12866.3 | 11686.8 | 10905.5 | 9420.5  | 9499.7  |
| 62.5° | 1223.7 | 1276.3 | 1607.5 | 2120.0 | 2761.2 | 7238.8 | 13599.7 | 15463.1 | 14470.8 | 11143.1 | 11220.7 |
| 65°   | 990.7  | 1013.6 | 1169.7 | 1749.9 | 2005.0 | 4361.1 | 13043.0 | 18573.8 | 18203.7 | 13329.3 | 12966.9 |
| 67.5° | 967.1  | 974.7  | 1055.4 | 1468.9 | 1922.8 | 2451.3 | 10403.6 | 19155.6 | 19566.0 | 15370.9 | 13694.1 |
| 70°   | 955.7  | 982.3  | 1189.5 | 1401.9 | 1841.3 | 2067.5 | 6251.9  | 17561.0 | 18209.0 | 15904.7 | 12726.2 |
| 72.5° | 463.8  | 462.2  | 598.5  | 1267.9 | 2074.3 | 2144.4 | 3212.0  | 14208.9 | 14859.2 | 13779.4 | 10457.7 |
| 75°   | 373.9  | 341.9  | 326.7  | 464.5  | 1994.4 | 2214.4 | 2046.9  | 9776.9  | 10247.5 | 9238.5  | 6428.6  |
| 77.5° | 354.9  | 316.8  | 290.1  | 290.9  | 843.0  | 2348.5 | 1733.9  | 5411.2  | 5548.3  | 4173.0  | 1761.4  |
| 80°   | 293.9  | 258.9  | 239.9  | 270.3  | 408.2  | 2236.5 | 1874.8  | 2449.0  | 2247.2  | 1025.0  | 586.4   |
| 82.5° | 204.1  | 185.8  | 180.5  | 226.9  | 326.7  | 1593.8 | 2180.2  | 1315.9  | 1103.4  | 513.3   | 361.7   |
| 85°   | 130.2  | 111.2  | 123.4  | 165.2  | 254.3  | 735.6  | 2245.7  | 1025.7  | 815.6   | 325.9   | 204.1   |
| 87.5° | 60.2   | 48.7   | 60.9   | 91.4   | 166.0  | 253.6  | 2136.8  | 1152.2  | 839.9   | 172.1   | 128.7   |
| 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°    | 3330.8  | 3330.8 | 3330.8 | 3330.8 | 3330.8 | 3330.8 | 3330.8 | 3330.8 | 3330.8 | 3330.8 | 3330.8 |
| 2.5°  | 3332.3  | 3317.9 | 3306.4 | 3285.1 | 3261.5 | 3238.7 | 3218.1 | 3192.2 | 3184.6 | 3177.7 | 3188.4 |
| 5°    | 3343.0  | 3328.5 | 3286.6 | 3221.2 | 3148.8 | 3081.0 | 3013.3 | 2955.4 | 2919.6 | 2899.8 | 2911.2 |
| 7.5°  | 3359.0  | 3338.4 | 3251.6 | 3131.3 | 3001.1 | 2882.3 | 2759.7 | 2661.4 | 2589.1 | 2554.8 | 2564.7 |
| 10°   | 3373.5  | 3333.9 | 3192.2 | 3011.7 | 2821.4 | 2644.7 | 2451.3 | 2291.4 | 2172.6 | 2110.1 | 2125.4 |
| 12.5° | 3379.5  | 3316.3 | 3109.2 | 2862.5 | 2601.3 | 2342.4 | 2057.6 | 1818.5 | 1647.9 | 1585.4 | 1572.5 |
| 15°   | 3385.6  | 3296.5 | 3017.8 | 2692.7 | 2335.5 | 1969.2 | 1570.2 | 1283.9 | 1142.3 | 1111.0 | 1104.2 |
| 17.5° | 3387.2  | 3262.3 | 2914.3 | 2508.4 | 2024.1 | 1525.3 | 1073.7 | 891.7  | 892.5  | 942.7  | 948.8  |
| 20°   | 3371.2  | 3211.3 | 2788.6 | 2279.2 | 1650.9 | 1054.7 | 737.1  | 705.9  | 820.9  | 946.5  | 961.8  |
| 22.5° | 3334.6  | 3143.5 | 2646.2 | 2011.9 | 1223.7 | 694.5  | 570.4  | 604.6  | 753.1  | 906.9  | 924.5  |
| 25°   | 3288.2  | 3061.2 | 2477.9 | 1702.0 | 810.2  | 496.5  | 478.2  | 520.1  | 620.6  | 723.4  | 733.3  |
| 27.5° | 3225.0  | 2963.8 | 2289.1 | 1347.1 | 526.2  | 408.9  | 421.1  | 449.3  | 490.4  | 536.1  | 540.7  |
| 30°   | 3143.5  | 2847.3 | 2087.3 | 982.3  | 397.5  | 367.8  | 385.3  | 400.6  | 418.1  | 444.0  | 446.2  |
| 32.5° | 3049.8  | 2735.3 | 1880.1 | 678.5  | 352.6  | 346.5  | 360.2  | 367.8  | 381.5  | 397.5  | 399.0  |
| 35°   | 2971.4  | 2628.7 | 1665.4 | 479.7  | 333.5  | 330.5  | 339.6  | 342.7  | 355.6  | 373.1  | 374.7  |
| 37.5° | 2926.5  | 2541.9 | 1443.8 | 386.8  | 320.6  | 316.0  | 321.4  | 321.4  | 339.6  | 365.5  | 369.3  |
| 40°   | 2929.5  | 2493.9 | 1222.2 | 349.5  | 309.9  | 303.8  | 304.6  | 304.6  | 328.2  | 356.4  | 358.7  |
| 42.5° | 3012.5  | 2506.1 | 1025.7 | 335.1  | 301.6  | 294.7  | 290.9  | 293.2  | 313.0  | 331.3  | 332.8  |
| 45°   | 3207.4  | 2592.2 | 841.5  | 325.9  | 293.2  | 290.9  | 282.5  | 281.8  | 289.4  | 297.7  | 297.7  |
| 47.5° | 3527.3  | 2762.0 | 716.6  | 319.8  | 286.3  | 285.6  | 275.7  | 265.8  | 265.0  | 268.0  | 268.0  |
| 50°   | 4047.4  | 3054.4 | 632.8  | 313.0  | 281.8  | 275.7  | 264.2  | 249.0  | 243.7  | 246.0  | 246.0  |
| 52.5° | 4827.2  | 3576.0 | 600.8  | 303.8  | 271.9  | 262.0  | 249.0  | 233.8  | 229.2  | 230.0  | 230.0  |
| 55°   | 5849.9  | 4377.1 | 596.3  | 293.2  | 261.2  | 245.2  | 234.5  | 223.1  | 217.8  | 219.3  | 219.3  |
| 57.5° | 7099.5  | 5485.1 | 677.7  | 276.4  | 246.7  | 228.5  | 222.4  | 214.7  | 210.9  | 213.2  | 212.5  |
| 60°   | 8618.7  | 6935.0 | 1005.2 | 258.9  | 232.3  | 213.2  | 213.2  | 207.1  | 204.1  | 206.4  | 205.6  |
| 62.5° | 10368.6 | 8600.4 | 1413.3 | 246.0  | 217.0  | 201.0  | 204.1  | 201.0  | 198.0  | 199.5  | 198.8  |
| 65°   | 11920.6 | 9685.5 | 1323.5 | 236.1  | 201.8  | 189.6  | 194.9  | 193.4  | 191.1  | 192.7  | 191.9  |
| 67.5° | 11965.5 | 9283.5 | 743.2  | 225.4  | 187.3  | 178.2  | 185.8  | 185.0  | 183.5  | 185.0  | 184.3  |
| 70°   | 10678.5 | 7838.9 | 418.8  | 205.6  | 172.1  | 164.5  | 175.1  | 174.4  | 172.9  | 175.9  | 175.1  |
| 72.5° | 8555.5  | 5688.4 | 306.1  | 181.2  | 156.9  | 150.0  | 162.2  | 161.4  | 161.4  | 166.0  | 163.7  |
| 75°   | 4923.1  | 2927.2 | 244.4  | 155.3  | 140.9  | 135.5  | 146.2  | 147.0  | 148.5  | 154.6  | 150.0  |
| 77.5° | 1403.4  | 912.3  | 199.5  | 131.7  | 121.1  | 118.8  | 129.5  | 131.0  | 131.7  | 138.6  | 132.5  |
| 80°   | 521.6   | 420.3  | 164.5  | 110.4  | 99.0   | 99.8   | 109.7  | 111.9  | 112.7  | 119.6  | 111.9  |
| 82.5° | 332.8   | 277.2  | 133.3  | 85.3   | 77.7   | 76.9   | 89.1   | 92.1   | 92.1   | 92.9   | 88.3   |
| 85°   | 194.2   | 166.0  | 100.5  | 61.7   | 54.8   | 52.5   | 66.3   | 71.6   | 69.3   | 67.8   | 64.7   |
| 87.5° | 130.2   | 114.2  | 61.7   | 34.3   | 29.7   | 28.2   | 38.8   | 42.6   | 41.1   | 38.8   | 36.6   |
| 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)