

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: P299110

Luminaire Tested: **GLNA-AF-03-LED-E1-SL2**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299110  
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-03-LED-E1-SL2  
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE  
(3) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V  
Narrow OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 17740.6 lumens  
Efficiency: N/A  
Efficacy: 106.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short - Semi-Cutoff  
BUG Rating: B3 - U0 - G3

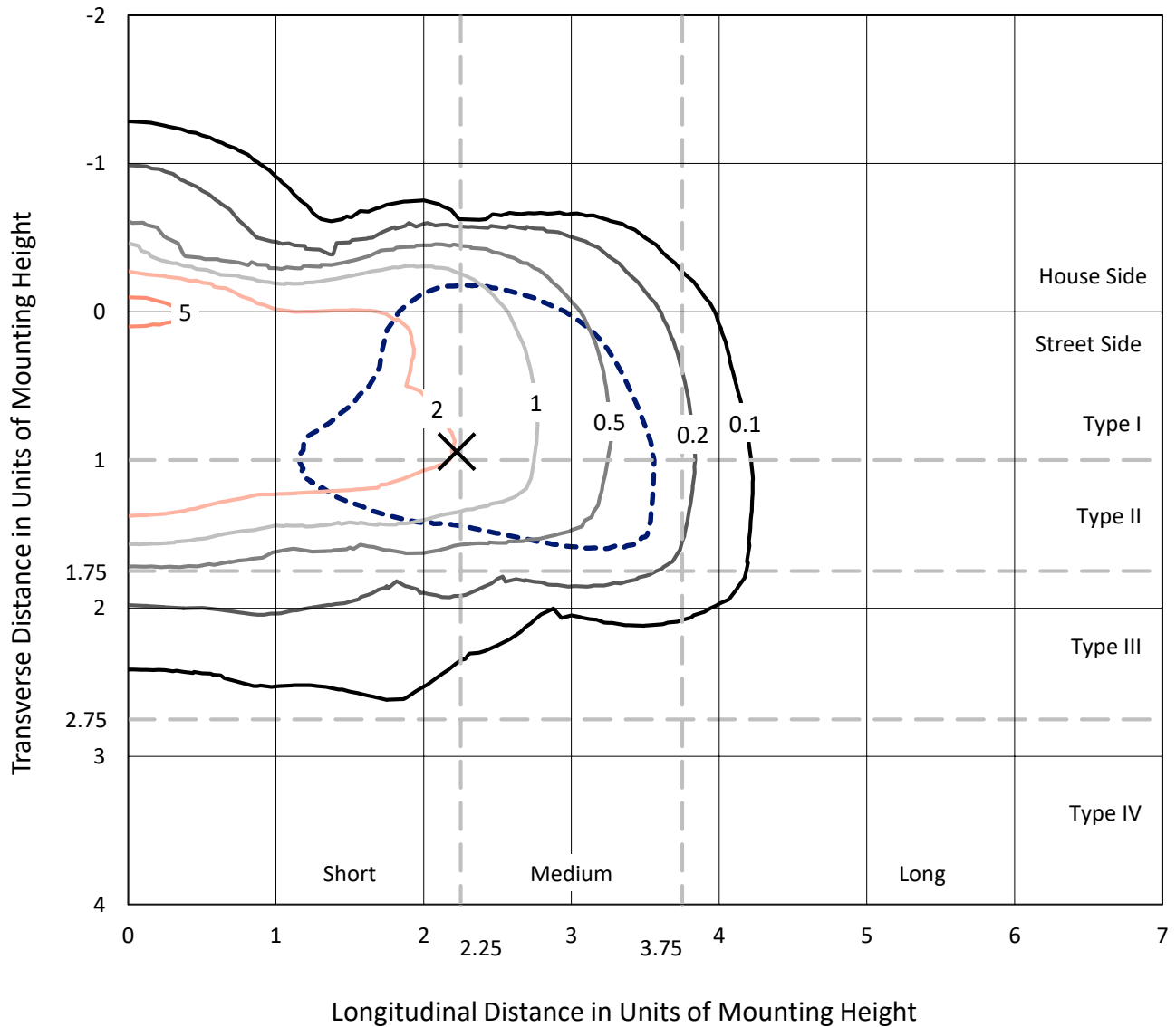
Input Watts (W): 166  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

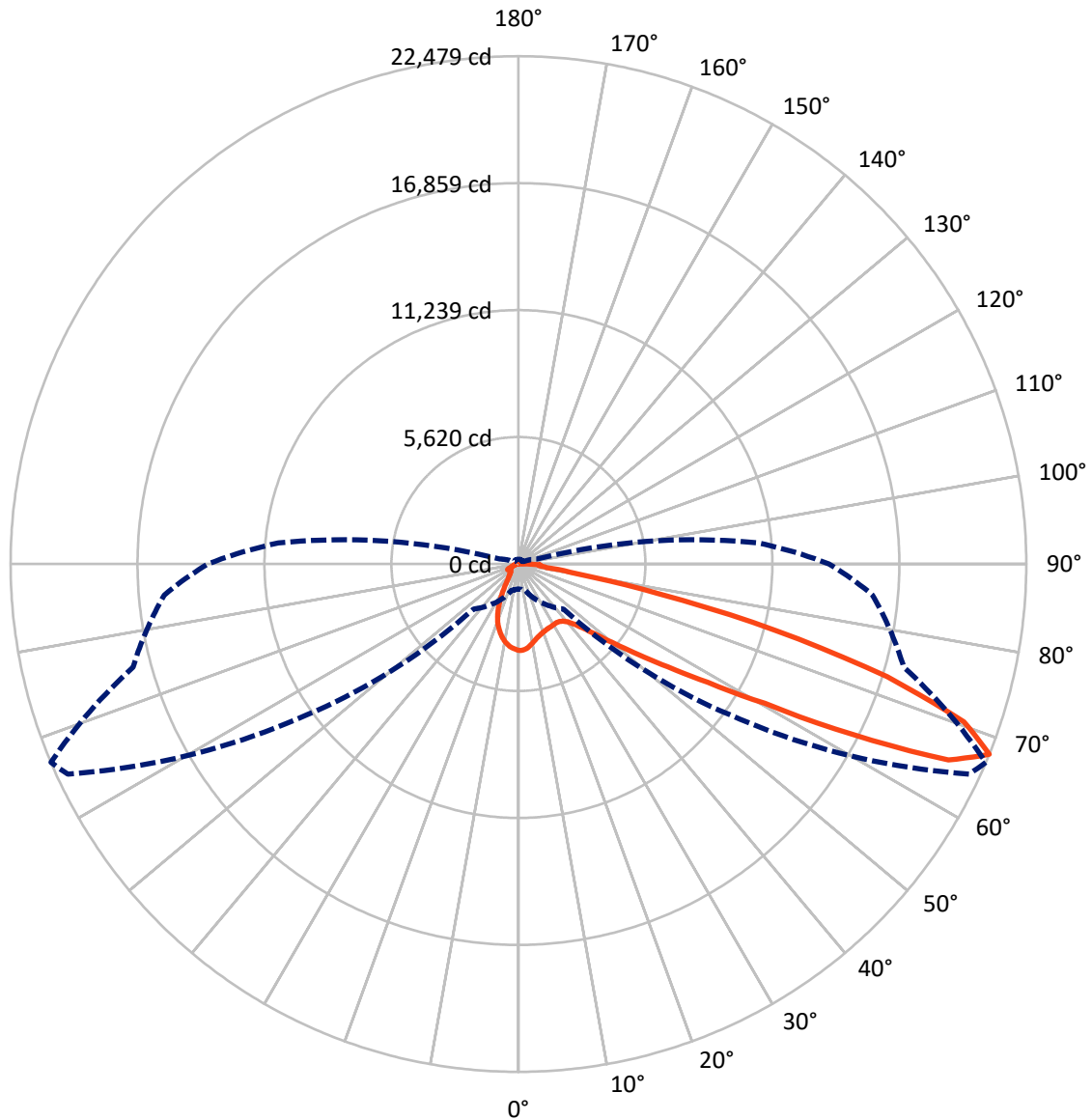


Based on 25 foot mounting height. Maximum calculated value = 6.1 fc  
 Type II - Short - Semi-Cutoff

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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    | 2939.4   | 0.0    | 2939.4  |
|                    | % Fixture | 16.6     | 0.0    | 16.6    |
| <b>Street Side</b> | Lumens    | 14801.2  | 0.0    | 14801.2 |
|                    | % Fixture | 83.4     | 0.0    | 83.4    |
| <b>Total</b>       | Lumens    | 17740.6  | 0.0    | 17740.6 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 326.5   | 1.8       |
| 10°-20°   | 755.4   | 4.3       |
| 20°-30°   | 1024.0  | 5.8       |
| 30°-40°   | 1455.7  | 8.2       |
| 40°-50°   | 2435.4  | 13.7      |
| 50°-60°   | 3852.7  | 21.7      |
| 60°-70°   | 4908.0  | 27.7      |
| 70°-80°   | 2570.8  | 14.5      |
| 80°-90°   | 412.3   | 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°    | 17740.6 | 100.0     |
| 0°-180°   | 17740.6 | 100.0     |

**Coefficient of Utilization**



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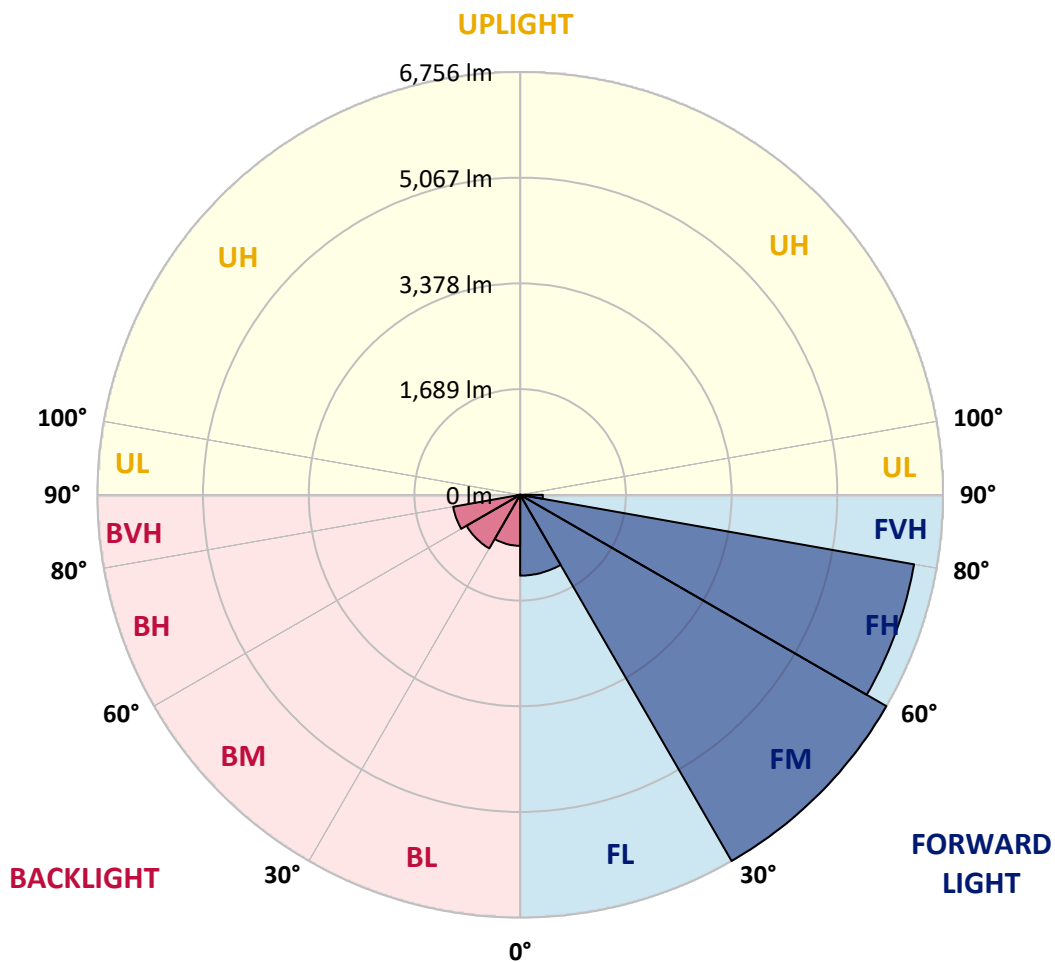
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 1291.1 | 7.3       |                         |      |         |
| FM (30°-60°)   | 6756.0 | 38.1      |                         |      |         |
| FH (60°-80°)   | 6391.6 | 36.0      |                         |      | G3/7500 |
| FVH (80°-90°)  | 362.5  | 2.0       |                         |      | G3/500  |
| BL (0°-30°)    | 814.7  | 4.6       | B2/1000                 |      |         |
| BM (30°-60°)   | 987.7  | 5.6       | B1/1000                 |      |         |
| BH (60°-80°)   | 1087.2 | 6.1       | B3/2500                 |      | G3/2500 |
| BVH (80°-90°)  | 49.8   | 0.3       |                         |      | G1/100  |
| UL (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B3-U0-G3**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°     | 55°     | 65°     | 67°     | 75°     | 85°     |
|-------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|
| 0°    | 3826.6 | 3826.6 | 3826.6 | 3826.6 | 3826.6 | 3826.6  | 3826.6  | 3826.6  | 3826.6  | 3826.6  | 3826.6  |
| 2.5°  | 3669.1 | 3675.3 | 3694.5 | 3706.8 | 3761.9 | 3785.5  | 3802.1  | 3818.7  | 3821.4  | 3829.2  | 3821.4  |
| 5°    | 3284.2 | 3297.3 | 3333.2 | 3373.4 | 3480.2 | 3564.2  | 3652.5  | 3744.4  | 3761.0  | 3820.5  | 3837.1  |
| 7.5°  | 2985.9 | 2982.4 | 3012.1 | 3060.2 | 3169.6 | 3285.9  | 3440.8  | 3623.6  | 3659.5  | 3793.4  | 3858.1  |
| 10°   | 2768.0 | 2765.4 | 2796.9 | 2846.8 | 2950.9 | 3061.1  | 3236.1  | 3486.3  | 3537.0  | 3750.5  | 3878.2  |
| 12.5° | 2607.1 | 2607.9 | 2639.4 | 2694.5 | 2800.4 | 2911.5  | 3089.1  | 3353.3  | 3418.1  | 3700.6  | 3899.2  |
| 15°   | 2500.3 | 2507.3 | 2532.7 | 2591.3 | 2694.5 | 2805.7  | 2979.7  | 3253.6  | 3326.2  | 3661.3  | 3922.8  |
| 17.5° | 2464.5 | 2475.8 | 2484.6 | 2527.5 | 2615.8 | 2726.9  | 2897.5  | 3180.1  | 3257.1  | 3634.1  | 3943.8  |
| 20°   | 2497.7 | 2510.8 | 2494.2 | 2509.1 | 2565.1 | 2663.1  | 2832.8  | 3122.4  | 3201.1  | 3603.5  | 3946.5  |
| 22.5° | 2640.3 | 2652.6 | 2603.6 | 2560.7 | 2557.2 | 2616.7  | 2779.4  | 3076.9  | 3158.2  | 3580.8  | 3947.3  |
| 25°   | 2891.4 | 2899.3 | 2817.0 | 2717.3 | 2620.2 | 2600.1  | 2741.8  | 3045.4  | 3132.0  | 3560.7  | 3930.7  |
| 27.5° | 3199.3 | 3205.5 | 3111.0 | 2964.0 | 2768.9 | 2639.4  | 2728.7  | 3027.0  | 3117.1  | 3543.2  | 3902.7  |
| 30°   | 3573.8 | 3602.6 | 3475.8 | 3290.3 | 3006.0 | 2755.8  | 2754.9  | 3017.4  | 3100.5  | 3513.4  | 3847.6  |
| 32.5° | 3957.0 | 3969.2 | 3881.7 | 3693.6 | 3325.3 | 2960.5  | 2828.4  | 3024.4  | 3096.1  | 3477.5  | 3777.6  |
| 35°   | 4345.4 | 4361.1 | 4304.3 | 4152.9 | 3761.9 | 3260.6  | 2971.9  | 3065.5  | 3123.2  | 3465.3  | 3728.6  |
| 37.5° | 4848.4 | 4869.4 | 4790.7 | 4615.7 | 4292.9 | 3667.4  | 3210.7  | 3168.7  | 3206.3  | 3500.3  | 3713.8  |
| 40°   | 5643.7 | 5634.1 | 5404.0 | 5143.3 | 4873.8 | 4187.9  | 3551.9  | 3343.7  | 3365.6  | 3613.1  | 3759.2  |
| 42.5° | 6569.3 | 6545.7 | 6149.3 | 5739.9 | 5512.4 | 4817.8  | 4003.3  | 3647.3  | 3642.9  | 3835.4  | 3919.3  |
| 45°   | 7307.6 | 7288.4 | 6931.5 | 6426.7 | 6244.7 | 5535.2  | 4586.9  | 4099.6  | 4067.2  | 4187.9  | 4215.0  |
| 47.5° | 7707.5 | 7708.3 | 7502.7 | 7090.7 | 7086.3 | 6446.8  | 5336.6  | 4754.0  | 4698.0  | 4754.8  | 4726.0  |
| 50°   | 7567.5 | 7585.9 | 7564.0 | 7432.8 | 7854.4 | 7641.8  | 6315.6  | 5666.4  | 5553.6  | 5609.6  | 5498.5  |
| 52.5° | 6890.3 | 6914.0 | 7043.4 | 7244.7 | 8177.3 | 9086.2  | 7753.8  | 6800.2  | 6669.0  | 6648.9  | 6525.5  |
| 55°   | 5690.0 | 5718.9 | 5983.1 | 6529.9 | 7908.7 | 10056.4 | 10023.2 | 8245.5  | 8036.4  | 7846.6  | 7794.1  |
| 57.5° | 3922.0 | 3970.1 | 4395.3 | 5207.1 | 7039.9 | 10349.5 | 12725.6 | 10305.8 | 9880.6  | 9217.5  | 9229.7  |
| 60°   | 2210.8 | 2266.7 | 2768.0 | 3505.5 | 5286.7 | 10031.1 | 14781.5 | 13426.4 | 12528.8 | 10822.8 | 10913.8 |
| 62.5° | 1405.9 | 1466.3 | 1846.8 | 2435.6 | 3172.2 | 8316.4  | 15624.0 | 17764.8 | 16624.8 | 12801.7 | 12891.0 |
| 65°   | 1138.2 | 1164.4 | 1343.8 | 2010.4 | 2303.5 | 5010.3  | 14984.5 | 21338.5 | 20913.4 | 15313.4 | 14897.0 |
| 67.5° | 1111.1 | 1119.8 | 1212.5 | 1687.6 | 2209.0 | 2816.2  | 11952.2 | 22006.9 | 22478.5 | 17658.9 | 15732.5 |
| 70°   | 1097.9 | 1128.6 | 1366.5 | 1610.6 | 2115.4 | 2375.2  | 7182.5  | 20175.0 | 20919.5 | 18272.2 | 14620.5 |
| 72.5° | 532.8  | 531.0  | 687.6  | 1456.6 | 2383.1 | 2463.6  | 3690.1  | 16323.9 | 17071.0 | 15830.5 | 12014.4 |
| 75°   | 429.6  | 392.8  | 375.3  | 533.7  | 2291.2 | 2544.1  | 2351.6  | 11232.2 | 11772.9 | 10613.7 | 7385.5  |
| 77.5° | 407.7  | 363.9  | 333.3  | 334.2  | 968.5  | 2698.0  | 1992.0  | 6216.7  | 6374.2  | 4794.2  | 2023.5  |
| 80°   | 337.7  | 297.5  | 275.6  | 310.6  | 468.9  | 2569.4  | 2153.9  | 2813.5  | 2581.7  | 1177.6  | 673.6   |
| 82.5° | 234.5  | 213.5  | 207.3  | 260.7  | 375.3  | 1831.1  | 2504.7  | 1511.7  | 1267.7  | 589.7   | 415.6   |
| 85°   | 149.6  | 127.7  | 141.7  | 189.8  | 292.2  | 845.1   | 2579.9  | 1178.4  | 937.0   | 374.4   | 234.5   |
| 87.5° | 69.1   | 56.0   | 70.0   | 105.0  | 190.7  | 291.3   | 2454.8  | 1323.7  | 965.0   | 197.7   | 147.9   |
| 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°    | 3826.6  | 3826.6  | 3826.6 | 3826.6 | 3826.6 | 3826.6 | 3826.6 | 3826.6 | 3826.6 | 3826.6 | 3826.6 |
| 2.5°  | 3828.4  | 3811.7  | 3798.6 | 3774.1 | 3747.0 | 3720.8 | 3697.1 | 3667.4 | 3658.6 | 3650.8 | 3663.0 |
| 5°    | 3840.6  | 3824.0  | 3775.9 | 3700.6 | 3617.5 | 3539.7 | 3461.8 | 3395.3 | 3354.2 | 3331.4 | 3344.6 |
| 7.5°  | 3859.0  | 3835.4  | 3735.6 | 3597.4 | 3447.8 | 3311.3 | 3170.5 | 3057.6 | 2974.5 | 2935.1 | 2946.5 |
| 10°   | 3875.6  | 3830.1  | 3667.4 | 3460.0 | 3241.3 | 3038.4 | 2816.2 | 2632.4 | 2496.0 | 2424.2 | 2441.7 |
| 12.5° | 3882.6  | 3810.0  | 3572.0 | 3288.6 | 2988.5 | 2691.0 | 2363.9 | 2089.1 | 1893.2 | 1821.4 | 1806.6 |
| 15°   | 3889.6  | 3787.2  | 3467.0 | 3093.5 | 2683.2 | 2262.4 | 1803.9 | 1475.0 | 1312.3 | 1276.4 | 1268.5 |
| 17.5° | 3891.3  | 3747.9  | 3348.1 | 2881.8 | 2325.4 | 1752.3 | 1233.5 | 1024.5 | 1025.3 | 1083.1 | 1090.1 |
| 20°   | 3873.0  | 3689.3  | 3203.7 | 2618.4 | 1896.7 | 1211.7 | 846.9  | 811.0  | 943.1  | 1087.4 | 1104.9 |
| 22.5° | 3831.0  | 3611.4  | 3040.1 | 2311.4 | 1405.9 | 797.9  | 655.3  | 694.6  | 865.2  | 1042.0 | 1062.1 |
| 25°   | 3777.6  | 3516.9  | 2846.8 | 1955.3 | 930.8  | 570.4  | 549.4  | 597.5  | 713.0  | 831.1  | 842.5  |
| 27.5° | 3705.0  | 3404.9  | 2629.8 | 1547.6 | 604.5  | 469.8  | 483.8  | 516.2  | 563.4  | 615.9  | 621.1  |
| 30°   | 3611.4  | 3271.1  | 2398.0 | 1128.6 | 456.7  | 422.6  | 442.7  | 460.2  | 480.3  | 510.0  | 512.7  |
| 32.5° | 3503.8  | 3142.5  | 2160.0 | 779.5  | 405.1  | 398.1  | 413.8  | 422.6  | 438.3  | 456.7  | 458.4  |
| 35°   | 3413.7  | 3020.0  | 1913.3 | 551.2  | 383.2  | 379.7  | 390.2  | 393.7  | 408.6  | 428.7  | 430.4  |
| 37.5° | 3362.1  | 2920.3  | 1658.7 | 444.4  | 368.3  | 363.1  | 369.2  | 369.2  | 390.2  | 419.9  | 424.3  |
| 40°   | 3365.6  | 2865.1  | 1404.1 | 401.6  | 356.1  | 349.1  | 349.9  | 349.9  | 377.1  | 409.4  | 412.1  |
| 42.5° | 3460.9  | 2879.1  | 1178.4 | 384.9  | 346.4  | 338.6  | 334.2  | 336.8  | 359.6  | 380.6  | 382.3  |
| 45°   | 3684.9  | 2978.0  | 966.7  | 374.4  | 336.8  | 334.2  | 324.6  | 323.7  | 332.4  | 342.1  | 342.1  |
| 47.5° | 4052.3  | 3173.1  | 823.2  | 367.4  | 328.9  | 328.1  | 316.7  | 305.3  | 304.4  | 307.9  | 307.9  |
| 50°   | 4649.8  | 3509.0  | 727.0  | 359.6  | 323.7  | 316.7  | 303.6  | 286.1  | 280.0  | 282.6  | 282.6  |
| 52.5° | 5545.7  | 4108.3  | 690.3  | 349.1  | 312.3  | 300.9  | 286.1  | 268.6  | 263.3  | 264.2  | 264.2  |
| 55°   | 6720.6  | 5028.7  | 685.0  | 336.8  | 300.1  | 281.7  | 269.5  | 256.3  | 250.2  | 252.0  | 252.0  |
| 57.5° | 8156.3  | 6301.6  | 778.6  | 317.6  | 283.5  | 262.5  | 255.5  | 246.7  | 242.3  | 245.0  | 244.1  |
| 60°   | 9901.6  | 7967.3  | 1154.8 | 297.5  | 266.8  | 245.0  | 245.0  | 238.0  | 234.5  | 237.1  | 236.2  |
| 62.5° | 11912.0 | 9880.6  | 1623.7 | 282.6  | 249.3  | 231.0  | 234.5  | 231.0  | 227.5  | 229.2  | 228.3  |
| 65°   | 13695.0 | 11127.3 | 1520.5 | 271.2  | 231.8  | 217.8  | 224.0  | 222.2  | 219.6  | 221.3  | 220.5  |
| 67.5° | 13746.6 | 10665.3 | 853.9  | 259.0  | 215.2  | 204.7  | 213.5  | 212.6  | 210.8  | 212.6  | 211.7  |
| 70°   | 12268.1 | 9005.7  | 481.2  | 236.2  | 197.7  | 189.0  | 201.2  | 200.3  | 198.6  | 202.1  | 201.2  |
| 72.5° | 9829.0  | 6535.2  | 351.7  | 208.2  | 180.2  | 172.3  | 186.3  | 185.5  | 185.5  | 190.7  | 188.1  |
| 75°   | 5655.9  | 3362.9  | 280.8  | 178.5  | 161.8  | 155.7  | 168.0  | 168.8  | 170.6  | 177.6  | 172.3  |
| 77.5° | 1612.4  | 1048.1  | 229.2  | 151.3  | 139.1  | 136.5  | 148.7  | 150.5  | 151.3  | 159.2  | 152.2  |
| 80°   | 599.3   | 482.9   | 189.0  | 126.9  | 113.7  | 114.6  | 126.0  | 128.6  | 129.5  | 137.4  | 128.6  |
| 82.5° | 382.3   | 318.4   | 153.1  | 98.0   | 89.2   | 88.4   | 102.4  | 105.9  | 105.9  | 106.7  | 101.5  |
| 85°   | 223.1   | 190.7   | 115.5  | 70.9   | 63.0   | 60.4   | 76.1   | 82.2   | 79.6   | 77.9   | 74.4   |
| 87.5° | 149.6   | 131.2   | 70.9   | 39.4   | 34.1   | 32.4   | 44.6   | 49.0   | 47.2   | 44.6   | 42.0   |
| 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)