

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: P301890

Luminaire Tested: **GLNA-AF-06-LED-E1-SL4-7027-800-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P301890  
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-06-LED-E1-SL4-7027-800-HSS  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(6) 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: 18427.8 lumens  
Efficiency: N/A  
Efficacy: 74.0 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B1 - U0 - G4

Input Watts (W): 249  
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

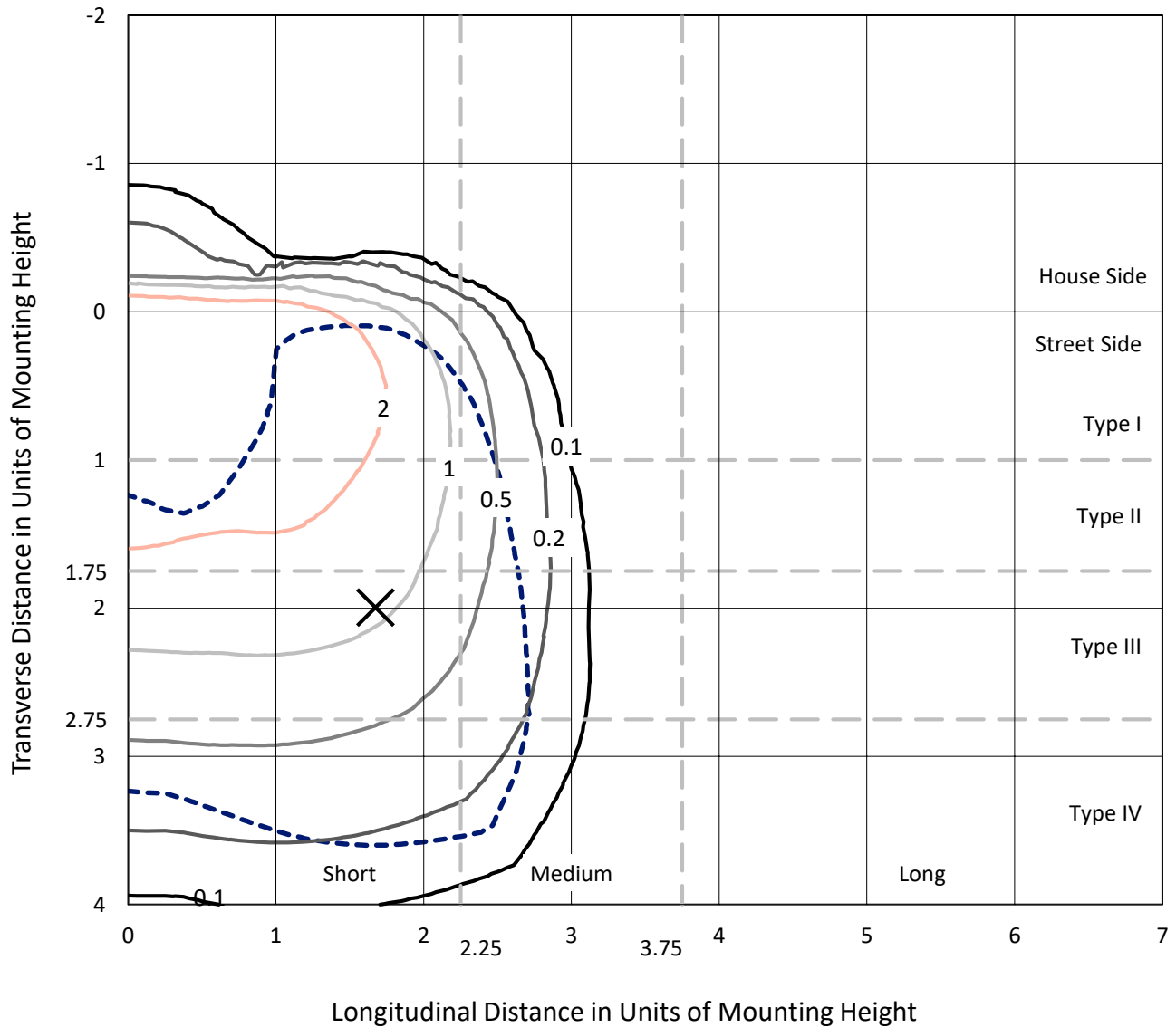


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

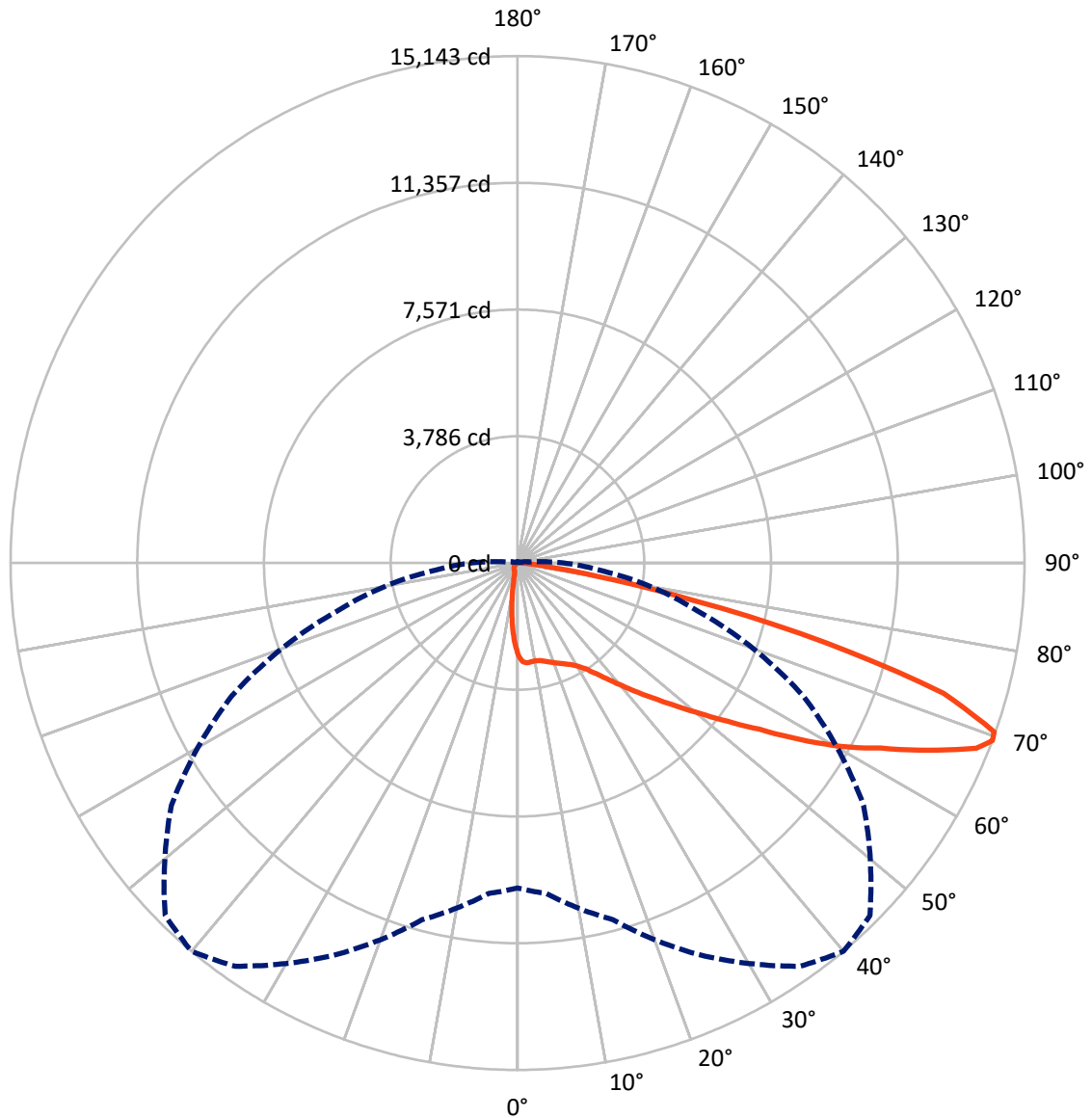


Based on 25 foot mounting height. Maximum calculated value = 4.8 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



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

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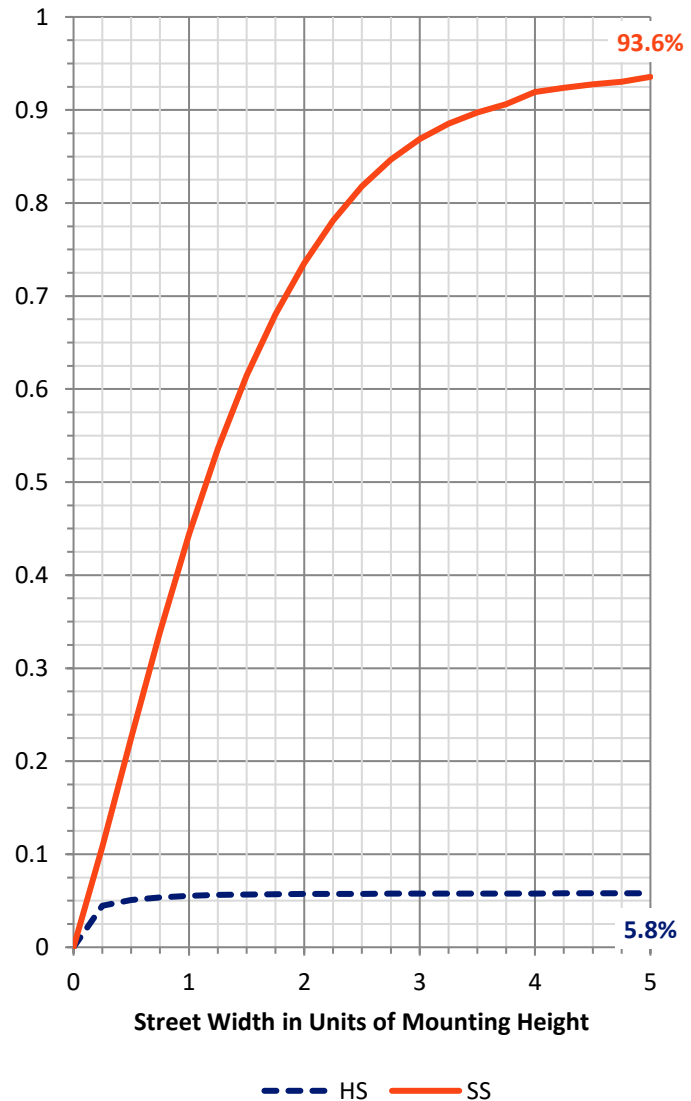
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 1078.1   | 0.0    | 1078.1  |
|                    | % Fixture | 5.9      | 0.0    | 5.9     |
| <b>Street Side</b> | Lumens    | 17349.6  | 0.0    | 17349.6 |
|                    | % Fixture | 94.1     | 0.0    | 94.1    |
| <b>Total</b>       | Lumens    | 18427.8  | 0.0    | 18427.8 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 223.2   | 1.2       |
| 10°-20°   | 549.0   | 3.0       |
| 20°-30°   | 924.6   | 5.0       |
| 30°-40°   | 1513.7  | 8.2       |
| 40°-50°   | 2620.9  | 14.2      |
| 50°-60°   | 4128.1  | 22.4      |
| 60°-70°   | 5391.2  | 29.3      |
| 70°-80°   | 2776.7  | 15.1      |
| 80°-90°   | 300.4   | 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°    | 18427.8 | 100.0     |
| 0°-180°   | 18427.8 | 100.0     |



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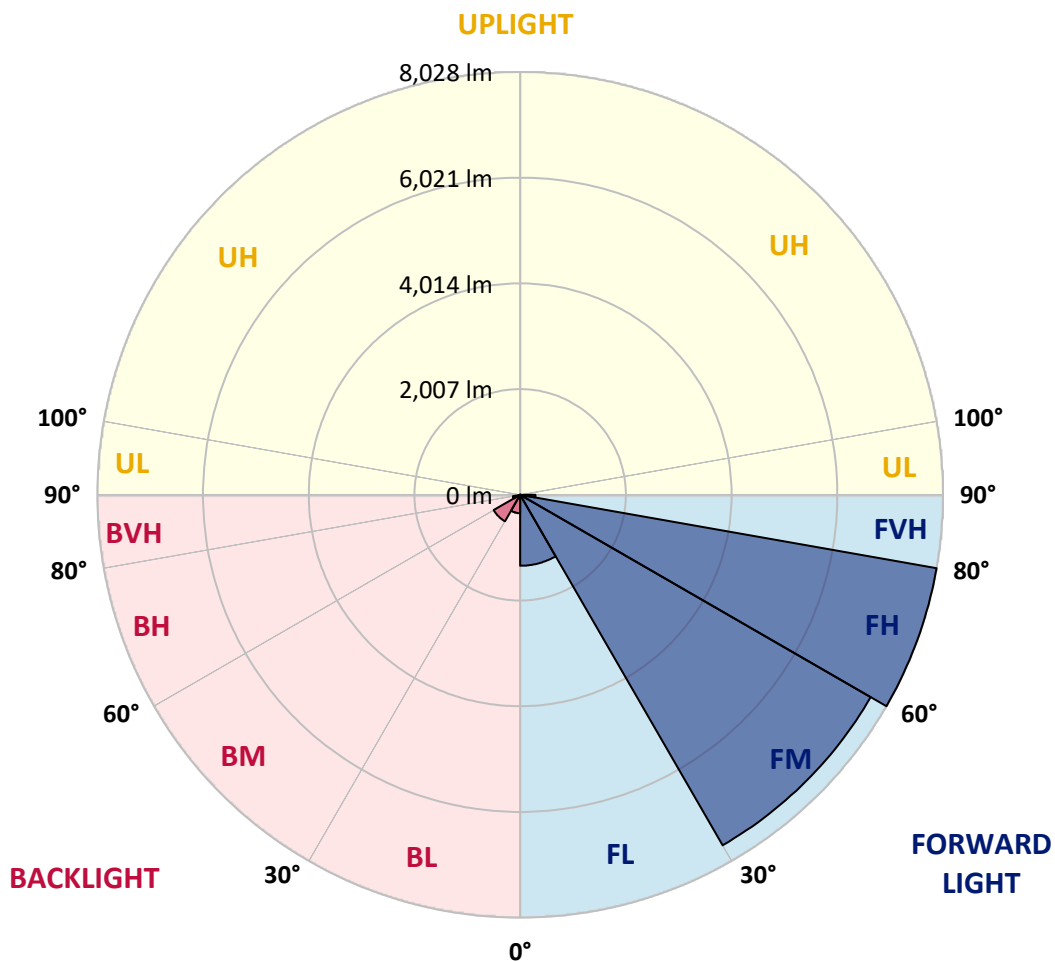
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |          |
|------|-------------|--------|-----------|-------------------------|------|----------|
|      |             |        |           | B                       | U    | G        |
| FL   | (0°-30°)    | 1347.6 | 7.3       |                         |      |          |
| FM   | (30°-60°)   | 7683.2 | 41.7      |                         |      |          |
| FH   | (60°-80°)   | 8027.9 | 43.6      |                         |      | G4/12000 |
| FVH  | (80°-90°)   | 290.9  | 1.6       |                         |      | G3/500   |
| BL   | (0°-30°)    | 349.2  | 1.9       | B1/500                  |      |          |
| BM   | (30°-60°)   | 579.5  | 3.1       | B1/1000                 |      |          |
| BH   | (60°-80°)   | 140.0  | 0.8       | B1/500                  |      | G1/500   |
| BVH  | (80°-90°)   | 9.4    | 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-G4**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°     | 25°     | 35°     | 40°     | 45°     | 55°     | 65°     | 75°     | 85°    |
|-------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|--------|
| 0°    | 2753.2 | 2753.2 | 2753.2  | 2753.2  | 2753.2  | 2753.2  | 2753.2  | 2753.2  | 2753.2  | 2753.2  | 2753.2 |
| 2.5°  | 3023.0 | 3006.6 | 2996.7  | 2983.6  | 2967.1  | 2952.8  | 2947.4  | 2906.8  | 2868.4  | 2815.7  | 2755.4 |
| 5°    | 3079.0 | 3073.5 | 3055.9  | 3038.4  | 3018.7  | 2996.7  | 2984.6  | 2936.4  | 2881.5  | 2804.8  | 2699.5 |
| 7.5°  | 3084.5 | 3077.9 | 3055.9  | 3031.8  | 3004.4  | 2978.1  | 2957.2  | 2909.0  | 2858.5  | 2780.6  | 2652.3 |
| 10°   | 3075.7 | 3068.0 | 3051.6  | 3025.2  | 2991.2  | 2966.0  | 2945.2  | 2899.1  | 2856.3  | 2786.1  | 2643.5 |
| 12.5° | 3065.8 | 3058.1 | 3050.5  | 3037.3  | 3007.7  | 2990.1  | 2972.6  | 2928.7  | 2890.3  | 2831.1  | 2675.3 |
| 15°   | 3075.7 | 3071.3 | 3080.1  | 3074.6  | 3058.1  | 3042.8  | 3025.2  | 2985.7  | 2950.6  | 2901.3  | 2733.5 |
| 17.5° | 3117.4 | 3117.4 | 3144.8  | 3148.1  | 3132.7  | 3110.8  | 3085.6  | 3046.1  | 3016.5  | 2974.8  | 2802.6 |
| 20°   | 3215.0 | 3211.7 | 3246.8  | 3253.4  | 3216.1  | 3182.1  | 3144.8  | 3096.5  | 3073.5  | 3047.2  | 2870.6 |
| 22.5° | 3382.8 | 3367.5 | 3388.3  | 3381.7  | 3308.2  | 3255.6  | 3209.5  | 3150.3  | 3138.2  | 3126.1  | 2946.3 |
| 25°   | 3601.1 | 3592.3 | 3606.6  | 3541.9  | 3412.4  | 3341.1  | 3286.3  | 3219.4  | 3219.4  | 3231.4  | 3031.8 |
| 27.5° | 3918.1 | 3885.2 | 3836.9  | 3722.9  | 3528.7  | 3437.7  | 3378.4  | 3307.1  | 3325.8  | 3370.8  | 3144.8 |
| 30°   | 4242.8 | 4206.6 | 4095.8  | 3920.3  | 3670.2  | 3574.8  | 3505.7  | 3431.1  | 3475.0  | 3557.2  | 3296.2 |
| 32.5° | 4563.1 | 4522.5 | 4365.6  | 4144.1  | 3873.1  | 3777.7  | 3710.8  | 3628.5  | 3702.0  | 3840.2  | 3517.7 |
| 35°   | 4873.5 | 4837.3 | 4656.3  | 4395.3  | 4143.0  | 4064.0  | 4002.6  | 3931.3  | 4025.6  | 4218.7  | 3830.4 |
| 37.5° | 5222.3 | 5182.8 | 4962.3  | 4679.4  | 4470.9  | 4413.9  | 4368.9  | 4297.6  | 4462.2  | 4745.2  | 4265.8 |
| 40°   | 5651.2 | 5584.3 | 5287.0  | 5005.1  | 4850.5  | 4823.0  | 4792.3  | 4782.5  | 5038.0  | 5429.6  | 4846.1 |
| 42.5° | 6142.6 | 6032.9 | 5627.1  | 5348.5  | 5267.3  | 5287.0  | 5279.4  | 5323.2  | 5758.7  | 6280.8  | 5552.5 |
| 45°   | 6634.0 | 6492.5 | 6005.5  | 5714.8  | 5725.8  | 5794.9  | 5837.7  | 6013.2  | 6661.4  | 7257.1  | 6312.6 |
| 47.5° | 7050.8 | 6911.5 | 6368.6  | 6110.8  | 6242.4  | 6378.4  | 6494.7  | 6827.1  | 7589.4  | 8217.9  | 6903.9 |
| 50°   | 7407.3 | 7275.7 | 6753.6  | 6546.3  | 6842.4  | 7061.8  | 7250.5  | 7743.0  | 8587.6  | 8949.6  | 7318.5 |
| 52.5° | 7699.1 | 7611.3 | 7152.8  | 7045.4  | 7528.0  | 7849.4  | 8125.8  | 8715.9  | 9471.7  | 9544.1  | 7641.0 |
| 55°   | 7983.2 | 7920.7 | 7581.7  | 7638.8  | 8333.1  | 8770.8  | 9120.7  | 9748.1  | 10232.9 | 10039.9 | 7950.3 |
| 57.5° | 8310.1 | 8253.0 | 8070.9  | 8391.2  | 9391.6  | 9942.2  | 10324.0 | 10662.9 | 10903.1 | 10546.6 | 8242.1 |
| 60°   | 8643.5 | 8610.6 | 8615.0  | 9227.1  | 10607.0 | 11135.7 | 11346.3 | 11434.0 | 11561.3 | 11023.8 | 8258.5 |
| 62.5° | 8961.6 | 9024.1 | 9236.9  | 10157.2 | 11770.8 | 12176.6 | 12283.0 | 12369.7 | 12220.5 | 11099.5 | 7630.0 |
| 65°   | 9500.2 | 9602.2 | 10110.1 | 11402.2 | 13050.8 | 13485.2 | 13594.9 | 13297.6 | 12324.7 | 10121.0 | 6206.2 |
| 67.5° | 9763.5 | 9949.9 | 10856.0 | 12562.7 | 14292.5 | 14775.2 | 14734.6 | 13358.0 | 11060.0 | 7717.7  | 3982.8 |
| 69°   | 9708.6 | 9907.1 | 11028.2 | 12918.1 | 14705.0 | 15142.6 | 14884.9 | 12619.8 | 9422.3  | 5590.9  | 2445.0 |
| 70°   | 9491.4 | 9692.2 | 10939.3 | 12905.0 | 14757.6 | 15104.2 | 14606.2 | 11708.2 | 7966.7  | 4088.1  | 1529.1 |
| 72.5° | 7926.2 | 8099.5 | 9711.9  | 11664.4 | 13594.9 | 13313.0 | 12219.4 | 8111.5  | 3881.9  | 1113.3  | 344.4  |
| 75°   | 4879.0 | 4975.5 | 6968.6  | 8787.2  | 10268.0 | 9544.1  | 8141.1  | 4035.5  | 1157.2  | 314.8   | 190.9  |
| 77.5° | 2577.7 | 2621.6 | 3815.0  | 5179.5  | 6509.0  | 5385.7  | 4172.6  | 1574.0  | 533.1   | 197.4   | 138.2  |
| 80°   | 1523.6 | 1556.5 | 2054.5  | 2368.2  | 2816.8  | 2352.8  | 1668.4  | 966.4   | 381.7   | 123.9   | 122.9  |
| 82.5° | 872.0  | 892.9  | 1489.6  | 1316.3  | 1110.1  | 947.7   | 830.3   | 915.9   | 229.3   | 83.4    | 127.2  |
| 85°   | 320.3  | 324.7  | 838.0   | 1001.5  | 660.3   | 392.7   | 412.4   | 759.1   | 61.4    | 52.7    | 99.8   |
| 87.5° | 149.2  | 145.9  | 431.1   | 613.2   | 386.1   | 249.0   | 321.4   | 166.7   | 24.1    | 34.0    | 27.4   |
| 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°    | 2753.2 | 2753.2 | 2753.2 | 2753.2 | 2753.2 | 2753.2 | 2753.2 | 2753.2 | 2753.2 | 2753.2 | 2753.2 |
| 2.5°  | 2720.3 | 2679.7 | 2606.2 | 2530.5 | 2453.8 | 2394.5 | 2336.4 | 2290.3 | 2275.0 | 2246.4 | 2248.6 |
| 5°    | 2636.9 | 2562.3 | 2408.8 | 2253.0 | 2090.7 | 1956.9 | 1830.7 | 1728.7 | 1679.3 | 1628.9 | 1628.9 |
| 7.5°  | 2564.5 | 2455.9 | 2215.7 | 1962.3 | 1700.2 | 1479.7 | 1281.2 | 1132.0 | 1049.7 | 983.9  | 982.8  |
| 10°   | 2537.1 | 2390.1 | 2054.5 | 1691.4 | 1326.1 | 1025.6 | 789.8  | 638.4  | 560.5  | 510.1  | 507.9  |
| 12.5° | 2549.2 | 2367.1 | 1930.5 | 1441.3 | 982.8  | 659.2  | 457.4  | 359.8  | 326.9  | 311.5  | 311.5  |
| 15°   | 2584.3 | 2360.5 | 1806.6 | 1196.7 | 694.3  | 412.4  | 303.8  | 277.5  | 275.3  | 275.3  | 275.3  |
| 17.5° | 2627.1 | 2362.7 | 1679.3 | 958.7  | 472.8  | 295.1  | 262.2  | 258.9  | 261.1  | 261.1  | 261.1  |
| 20°   | 2670.9 | 2363.8 | 1542.2 | 738.2  | 333.5  | 256.7  | 246.8  | 245.7  | 247.9  | 247.9  | 249.0  |
| 22.5° | 2724.7 | 2369.3 | 1405.1 | 551.7  | 275.3  | 242.4  | 234.7  | 234.7  | 235.8  | 235.8  | 234.7  |
| 25°   | 2786.1 | 2380.3 | 1262.5 | 409.1  | 251.2  | 232.5  | 226.0  | 224.9  | 226.0  | 224.9  | 223.8  |
| 27.5° | 2862.9 | 2395.6 | 1103.5 | 320.3  | 240.2  | 222.7  | 217.2  | 217.2  | 216.1  | 215.0  | 213.9  |
| 30°   | 2959.4 | 2413.2 | 924.7  | 272.0  | 229.3  | 213.9  | 208.4  | 207.3  | 206.2  | 204.0  | 204.0  |
| 32.5° | 3106.4 | 2451.6 | 748.1  | 246.8  | 217.2  | 201.8  | 197.4  | 197.4  | 195.2  | 193.1  | 192.0  |
| 35°   | 3332.4 | 2527.2 | 590.1  | 231.4  | 204.0  | 188.7  | 183.2  | 183.2  | 181.0  | 179.9  | 178.8  |
| 37.5° | 3645.0 | 2642.4 | 458.5  | 217.2  | 190.9  | 174.4  | 168.9  | 167.8  | 165.6  | 163.4  | 162.3  |
| 40°   | 4060.7 | 2785.0 | 360.9  | 204.0  | 177.7  | 160.1  | 155.8  | 153.6  | 149.2  | 145.9  | 145.9  |
| 42.5° | 4582.8 | 2947.4 | 292.9  | 189.8  | 162.3  | 147.0  | 143.7  | 140.4  | 132.7  | 129.4  | 128.3  |
| 45°   | 5129.1 | 3093.2 | 247.9  | 173.3  | 147.0  | 133.8  | 131.6  | 126.1  | 116.3  | 113.0  | 113.0  |
| 47.5° | 5522.9 | 3127.2 | 218.3  | 158.0  | 132.7  | 119.6  | 118.5  | 108.6  | 99.8   | 97.6   | 96.5   |
| 50°   | 5768.6 | 3060.3 | 194.2  | 142.6  | 119.6  | 106.4  | 103.1  | 91.0   | 85.6   | 83.4   | 82.3   |
| 52.5° | 5934.2 | 2940.8 | 174.4  | 129.4  | 107.5  | 94.3   | 86.7   | 77.9   | 73.5   | 71.3   | 71.3   |
| 55°   | 6066.9 | 2771.9 | 154.7  | 117.4  | 97.6   | 84.5   | 73.5   | 66.9   | 62.5   | 60.3   | 60.3   |
| 57.5° | 6104.2 | 2542.6 | 134.9  | 107.5  | 87.8   | 74.6   | 62.5   | 58.1   | 52.7   | 51.6   | 51.6   |
| 60°   | 5833.3 | 2129.1 | 119.6  | 95.4   | 79.0   | 64.7   | 54.8   | 49.4   | 43.9   | 42.8   | 41.7   |
| 62.5° | 5119.2 | 1647.5 | 105.3  | 84.5   | 69.1   | 55.9   | 47.2   | 40.6   | 36.2   | 36.2   | 36.2   |
| 65°   | 3904.9 | 1104.6 | 92.1   | 73.5   | 60.3   | 47.2   | 40.6   | 32.9   | 30.7   | 30.7   | 31.8   |
| 67.5° | 2337.5 | 601.1  | 79.0   | 62.5   | 51.6   | 39.5   | 34.0   | 28.5   | 27.4   | 28.5   | 28.5   |
| 69°   | 1370.0 | 353.2  | 71.3   | 55.9   | 45.0   | 35.1   | 29.6   | 25.2   | 27.4   | 28.5   | 28.5   |
| 70°   | 845.7  | 238.0  | 65.8   | 50.5   | 40.6   | 31.8   | 27.4   | 24.1   | 26.3   | 27.4   | 27.4   |
| 72.5° | 235.8  | 122.9  | 52.7   | 39.5   | 32.9   | 26.3   | 21.9   | 21.9   | 25.2   | 26.3   | 26.3   |
| 75°   | 153.6  | 91.0   | 40.6   | 29.6   | 25.2   | 20.8   | 18.6   | 20.8   | 24.1   | 25.2   | 25.2   |
| 77.5° | 127.2  | 74.6   | 32.9   | 24.1   | 20.8   | 19.7   | 17.6   | 18.6   | 21.9   | 23.0   | 23.0   |
| 80°   | 116.3  | 52.7   | 26.3   | 21.9   | 18.6   | 17.6   | 16.5   | 15.4   | 19.7   | 20.8   | 20.8   |
| 82.5° | 110.8  | 41.7   | 23.0   | 19.7   | 17.6   | 15.4   | 14.3   | 15.4   | 17.6   | 18.6   | 19.7   |
| 85°   | 69.1   | 27.4   | 20.8   | 18.6   | 15.4   | 14.3   | 14.3   | 14.3   | 16.5   | 17.6   | 17.6   |
| 87.5° | 25.2   | 21.9   | 18.6   | 15.4   | 13.2   | 13.2   | 13.2   | 13.2   | 14.3   | 16.5   | 16.5   |
| 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)