

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: P190912

Luminaire Tested: **GLEON-AF-04-LED-E1-AFL-600-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P190912  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24297)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: GLEON-AF-04-LED-E1-AFL-600-HSS  
Description: GALLEON AREA AND ROADWAY LUMINAIRE  
(4) 70 CRI, 4000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13248.2 lumens  
Efficiency: N/A  
Efficacy: 102.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B1 - U0 - G2

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

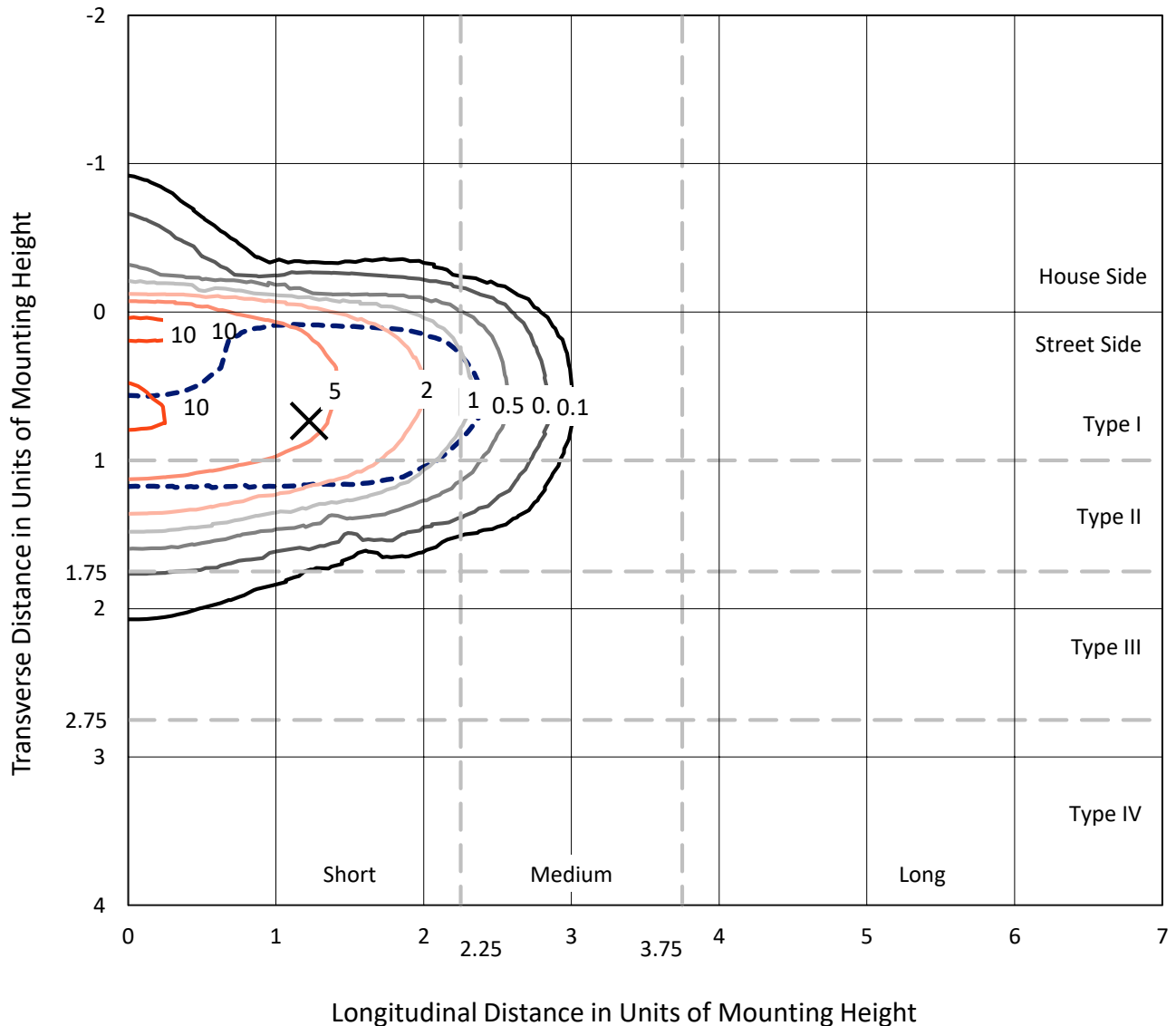


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### Iso-Footcandle Lines of Horizontal Illumination

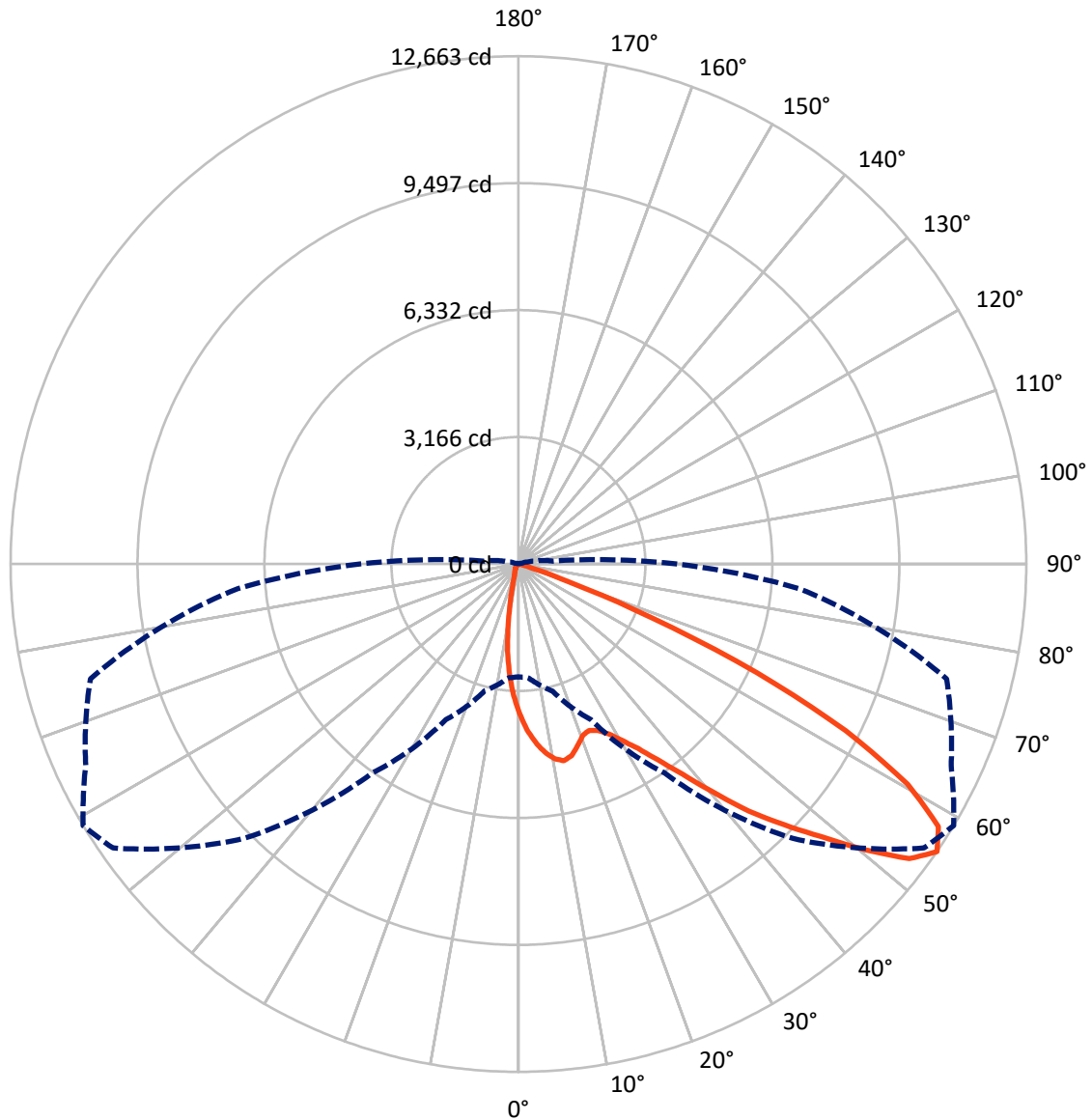
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 11.6 fc  
 Type II - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral    - - - Horizontal Cone Through 55-Deg Vertical

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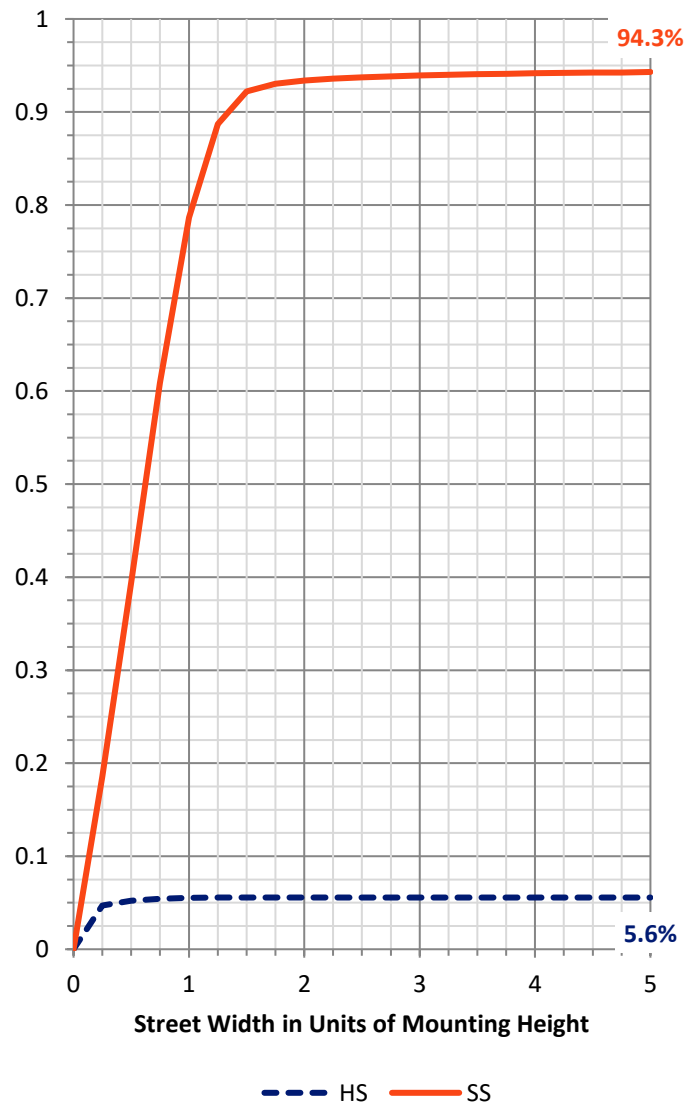
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 740.0    | 0.0    | 740.0   |
|                    | % Fixture | 5.6      | 0.0    | 5.6     |
| <b>Street Side</b> | Lumens    | 12508.2  | 0.0    | 12508.2 |
|                    | % Fixture | 94.4     | 0.0    | 94.4    |
| <b>Total</b>       | Lumens    | 13248.2  | 0.0    | 13248.2 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 312.4   | 2.4       |
| 10°-20°   | 747.9   | 5.6       |
| 20°-30°   | 1272.6  | 9.6       |
| 30°-40°   | 2188.7  | 16.5      |
| 40°-50°   | 3379.1  | 25.5      |
| 50°-60°   | 3397.0  | 25.6      |
| 60°-70°   | 1742.0  | 13.1      |
| 70°-80°   | 188.8   | 1.4       |
| 80°-90°   | 19.7    | 0.1       |
| 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°    | 13248.2 | 100.0     |
| 0°-180°   | 13248.2 | 100.0     |

**Coefficient of Utilization**



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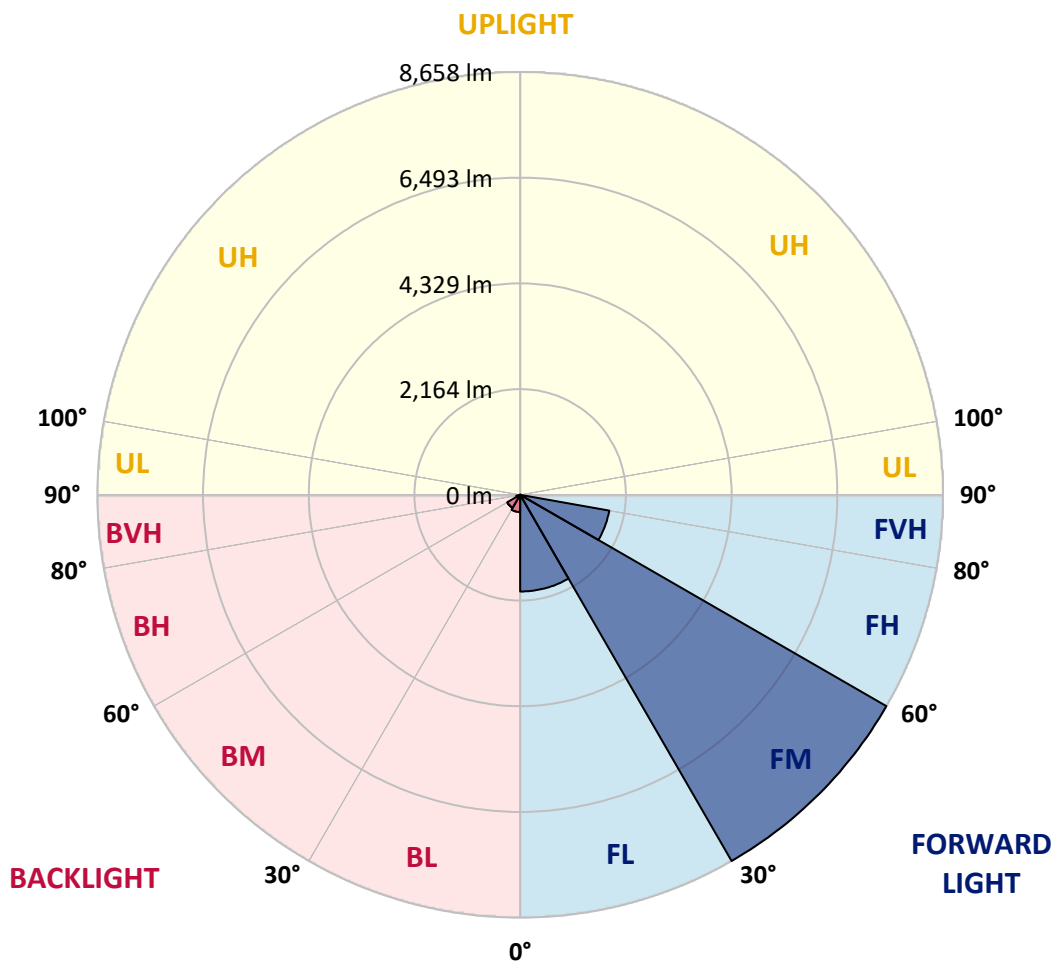
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 1979.7 | 14.9      |                         |      |         |
| FM (30°-60°)   | 8657.7 | 65.3      |                         |      |         |
| FH (60°-80°)   | 1851.5 | 14.0      |                         |      | G2/5000 |
| FVH (80°-90°)  | 19.3   | 0.1       |                         |      | G1/100  |
| BL (0°-30°)    | 353.2  | 2.7       | B1/500                  |      |         |
| BM (30°-60°)   | 307.1  | 2.3       | B1/1000                 |      |         |
| BH (60°-80°)   | 79.3   | 0.6       | B0/110                  |      | G0/110  |
| BVH (80°-90°)  | 0.4    | 0.0       |                         |      | G0/10   |
| UL (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B1-U0-G2**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°     | 55°     | 59°     | 65°     | 75°     | 85°    |
|-------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|--------|
| 0°    | 3729.4 | 3729.4 | 3729.4 | 3729.4 | 3729.4 | 3729.4  | 3729.4  | 3729.4  | 3729.4  | 3729.4  | 3729.4 |
| 2.5°  | 4412.6 | 4365.7 | 4351.6 | 4342.3 | 4299.3 | 4245.3  | 4171.8  | 4137.4  | 4067.0  | 3953.7  | 3814.6 |
| 5°    | 4816.9 | 4808.3 | 4777.0 | 4759.8 | 4713.7 | 4637.0  | 4519.8  | 4463.4  | 4351.6  | 4160.9  | 3911.5 |
| 7.5°  | 4640.2 | 4694.1 | 4737.1 | 4809.0 | 4899.7 | 4896.6  | 4798.0  | 4739.4  | 4614.3  | 4362.6  | 4019.4 |
| 10°   | 3957.6 | 4001.4 | 4071.8 | 4235.2 | 4568.2 | 4862.2  | 4977.9  | 4935.7  | 4835.6  | 4547.9  | 4123.4 |
| 12.5° | 3823.9 | 3819.3 | 3831.8 | 3879.4 | 4053.7 | 4472.9  | 4947.4  | 5032.6  | 5012.4  | 4717.5  | 4221.9 |
| 15°   | 3895.1 | 3889.6 | 3888.0 | 3904.5 | 3946.6 | 4123.4  | 4718.4  | 4963.1  | 5120.2  | 4874.7  | 4305.5 |
| 17.5° | 4094.5 | 4071.0 | 4058.5 | 4045.2 | 4032.7 | 4076.5  | 4443.2  | 4768.4  | 5136.6  | 5012.4  | 4375.2 |
| 20°   | 4436.1 | 4397.1 | 4350.9 | 4275.8 | 4205.5 | 4183.6  | 4327.4  | 4568.2  | 5078.0  | 5117.1  | 4420.5 |
| 22.5° | 4865.4 | 4815.3 | 4735.5 | 4598.7 | 4455.7 | 4372.8  | 4384.5  | 4504.9  | 4990.5  | 5231.3  | 4441.6 |
| 25°   | 5347.7 | 5283.6 | 5177.3 | 4987.3 | 4777.0 | 4630.0  | 4553.4  | 4595.6  | 4950.6  | 5365.0  | 4465.8 |
| 27.5° | 5864.5 | 5793.4 | 5654.2 | 5395.5 | 5157.0 | 4958.3  | 4802.0  | 4796.5  | 5018.6  | 5540.1  | 4504.9 |
| 30°   | 6376.6 | 6365.6 | 6184.2 | 5910.6 | 5594.8 | 5353.2  | 5128.1  | 5099.1  | 5208.6  | 5782.4  | 4582.3 |
| 32.5° | 7059.9 | 6977.9 | 6755.8 | 6474.4 | 6110.0 | 5820.0  | 5553.3  | 5486.1  | 5500.2  | 6064.7  | 4701.9 |
| 35°   | 7921.5 | 7831.6 | 7518.9 | 7130.3 | 6722.9 | 6380.6  | 6085.7  | 5994.3  | 5959.9  | 6526.7  | 4903.6 |
| 37.5° | 8478.2 | 8476.6 | 8280.4 | 7884.8 | 7447.7 | 7070.1  | 6749.5  | 6642.4  | 6572.9  | 7085.0  | 5216.3 |
| 40°   | 8493.0 | 8529.8 | 8555.6 | 8551.7 | 8240.5 | 7892.6  | 7608.0  | 7475.8  | 7314.0  | 7830.8  | 5620.6 |
| 42.5° | 8037.2 | 8131.8 | 8359.3 | 8745.5 | 8930.1 | 8791.6  | 8551.7  | 8421.9  | 8181.0  | 8629.1  | 6113.2 |
| 45°   | 7421.1 | 7486.8 | 7884.8 | 8596.3 | 9303.7 | 9682.9  | 9500.0  | 9267.8  | 8950.4  | 9461.7  | 6554.9 |
| 47.5° | 7145.1 | 7156.9 | 7414.1 | 8195.2 | 9332.0 | 10413.2 | 10524.2 | 10146.5 | 9649.4  | 10132.5 | 6900.4 |
| 50°   | 6320.3 | 6341.5 | 6696.3 | 7500.1 | 9002.0 | 10758.0 | 11553.1 | 11195.1 | 10411.6 | 10649.3 | 7026.3 |
| 52.5° | 4763.7 | 4793.4 | 5243.7 | 6357.8 | 8095.1 | 10611.0 | 12289.6 | 12202.8 | 11246.6 | 10901.8 | 7033.3 |
| 55°   | 2810.7 | 2849.7 | 3279.8 | 4279.7 | 6367.3 | 9675.9  | 12344.4 | 12663.3 | 11905.7 | 11051.1 | 7022.4 |
| 57.5° | 1312.7 | 1340.1 | 1586.3 | 2204.8 | 3959.9 | 7647.1  | 11520.3 | 12347.4 | 12269.3 | 11130.1 | 7099.8 |
| 60°   | 697.3  | 705.2  | 764.7  | 954.6  | 1789.7 | 4848.9  | 9912.1  | 11149.7 | 11937.7 | 11239.6 | 7194.4 |
| 62.5° | 533.2  | 535.5  | 532.4  | 555.1  | 752.1  | 2152.4  | 7492.3  | 9166.2  | 10603.2 | 11157.5 | 7089.7 |
| 65°   | 462.1  | 466.0  | 444.1  | 438.6  | 482.4  | 767.7   | 4451.0  | 6533.8  | 8331.9  | 10049.7 | 6375.8 |
| 67.5° | 414.4  | 415.9  | 389.3  | 366.7  | 374.5  | 415.1   | 1756.0  | 3576.8  | 5515.0  | 7366.4  | 4621.4 |
| 70°   | 381.6  | 379.9  | 351.1  | 315.1  | 304.9  | 283.8   | 558.2   | 1311.1  | 2635.5  | 3735.6  | 2149.2 |
| 72.5° | 337.8  | 338.5  | 324.5  | 277.5  | 253.3  | 198.6   | 258.8   | 382.3   | 786.5   | 1017.9  | 503.5  |
| 75°   | 299.4  | 295.5  | 278.3  | 248.6  | 208.8  | 130.5   | 128.2   | 170.4   | 242.3   | 240.8   | 108.6  |
| 77.5° | 216.6  | 212.7  | 218.1  | 204.1  | 160.3  | 84.4    | 64.1    | 82.1    | 98.5    | 95.3    | 30.5   |
| 80°   | 158.8  | 156.4  | 140.8  | 169.7  | 141.5  | 57.9    | 39.9    | 43.8    | 50.8    | 43.0    | 9.4    |
| 82.5° | 108.6  | 107.9  | 99.3   | 93.8   | 80.5   | 35.2    | 25.1    | 27.4    | 32.8    | 24.2    | 4.7    |
| 85°   | 17.2   | 19.5   | 71.9   | 57.1   | 47.7   | 15.7    | 17.2    | 18.7    | 21.9    | 13.3    | 1.5    |
| 87.5° | 0.0    | 0.0    | 33.7   | 29.7   | 9.4    | 6.2     | 10.1    | 10.9    | 10.9    | 7.1     | 0.0    |
| 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°    | 3729.4 | 3729.4 | 3729.4 | 3729.4 | 3729.4 | 3729.4 | 3729.4 | 3729.4 | 3729.4 | 3729.4 | 3729.4 |
| 2.5°  | 3743.4 | 3665.2 | 3520.6 | 3371.2 | 3232.8 | 3067.9 | 2954.5 | 2869.3 | 2770.8 | 2744.3 | 2802.1 |
| 5°    | 3769.2 | 3621.5 | 3310.3 | 2971.8 | 2653.5 | 2300.9 | 2031.2 | 1817.8 | 1624.7 | 1559.0 | 1618.4 |
| 7.5°  | 3809.9 | 3590.1 | 3082.8 | 2525.4 | 1971.7 | 1421.4 | 1044.5 | 796.7  | 638.7  | 591.9  | 616.8  |
| 10°   | 3850.5 | 3544.8 | 2819.3 | 1996.8 | 1240.0 | 691.9  | 450.3  | 359.7  | 326.0  | 319.0  | 322.9  |
| 12.5° | 3884.1 | 3483.9 | 2497.9 | 1419.8 | 663.0  | 370.6  | 294.7  | 279.9  | 275.2  | 275.2  | 276.8  |
| 15°   | 3904.5 | 3391.6 | 2117.2 | 903.1  | 381.6  | 279.9  | 257.3  | 252.6  | 252.6  | 253.3  | 254.9  |
| 17.5° | 3902.1 | 3274.3 | 1700.5 | 546.5  | 285.4  | 247.9  | 234.6  | 230.7  | 229.9  | 231.4  | 232.2  |
| 20°   | 3873.2 | 3121.0 | 1282.2 | 360.4  | 248.6  | 226.0  | 212.7  | 205.6  | 204.8  | 206.4  | 208.0  |
| 22.5° | 3818.5 | 2931.9 | 917.1  | 277.5  | 224.4  | 204.8  | 188.4  | 182.2  | 182.2  | 183.7  | 185.3  |
| 25°   | 3752.0 | 2700.5 | 627.1  | 235.4  | 202.5  | 182.2  | 166.5  | 161.0  | 162.6  | 166.5  | 167.4  |
| 27.5° | 3669.1 | 2440.0 | 426.1  | 201.7  | 175.9  | 159.5  | 147.8  | 143.8  | 147.8  | 153.2  | 154.8  |
| 30°   | 3598.0 | 2168.8 | 304.1  | 174.3  | 149.4  | 137.6  | 130.5  | 130.5  | 136.1  | 146.2  | 148.5  |
| 32.5° | 3543.3 | 1906.1 | 234.6  | 154.1  | 129.8  | 119.6  | 115.7  | 119.6  | 128.2  | 138.4  | 140.8  |
| 35°   | 3536.2 | 1689.5 | 198.6  | 137.6  | 115.7  | 105.6  | 104.0  | 111.0  | 119.6  | 127.5  | 129.0  |
| 37.5° | 3590.1 | 1489.4 | 179.0  | 124.3  | 103.2  | 93.8   | 92.3   | 100.9  | 109.5  | 118.9  | 121.2  |
| 40°   | 3692.5 | 1332.2 | 165.0  | 111.8  | 93.1   | 82.9   | 79.8   | 86.0   | 97.7   | 110.3  | 113.3  |
| 42.5° | 3825.5 | 1202.5 | 149.4  | 99.3   | 82.9   | 68.8   | 64.9   | 71.9   | 84.4   | 97.7   | 101.7  |
| 45°   | 3952.2 | 1090.7 | 132.2  | 85.2   | 69.6   | 53.2   | 51.6   | 61.0   | 67.2   | 80.5   | 83.7   |
| 47.5° | 4021.7 | 992.2  | 117.2  | 69.6   | 53.9   | 43.0   | 43.0   | 45.3   | 51.6   | 67.2   | 70.4   |
| 50°   | 3998.3 | 913.2  | 101.7  | 51.6   | 37.5   | 32.8   | 32.8   | 32.0   | 41.4   | 53.9   | 56.3   |
| 52.5° | 3951.4 | 867.9  | 87.6   | 39.9   | 25.8   | 23.4   | 21.1   | 23.4   | 28.9   | 34.4   | 35.2   |
| 55°   | 3944.3 | 860.0  | 73.4   | 32.0   | 18.0   | 15.7   | 11.8   | 11.8   | 11.8   | 10.9   | 9.4    |
| 57.5° | 3999.0 | 872.5  | 61.8   | 25.8   | 13.3   | 10.1   | 6.2    | 0.0    | 0.0    | 0.0    | 0.0    |
| 60°   | 4055.4 | 885.8  | 53.2   | 18.0   | 9.4    | 5.5    | 0.8    | 0.0    | 0.0    | 0.0    | 0.0    |
| 62.5° | 3961.6 | 856.1  | 44.6   | 10.9   | 7.1    | 2.4    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 65°   | 3480.0 | 728.6  | 35.2   | 7.8    | 4.7    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 67.5° | 2475.2 | 487.8  | 23.4   | 4.7    | 0.8    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 70°   | 1129.7 | 204.1  | 14.8   | 1.5    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 72.5° | 241.6  | 63.3   | 10.1   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 75°   | 49.3   | 46.1   | 3.9    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 77.5° | 15.7   | 72.7   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 80°   | 9.4    | 52.4   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 82.5° | 1.5    | 7.8    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 85°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 87.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 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)