

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: P301218

Luminaire Tested: **GLNA-AF-04-LED-E1-T3R-7027-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P301218  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194839)  
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-T3R-7027-600  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(4) 70 CRI, 2700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III  
Roadway OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

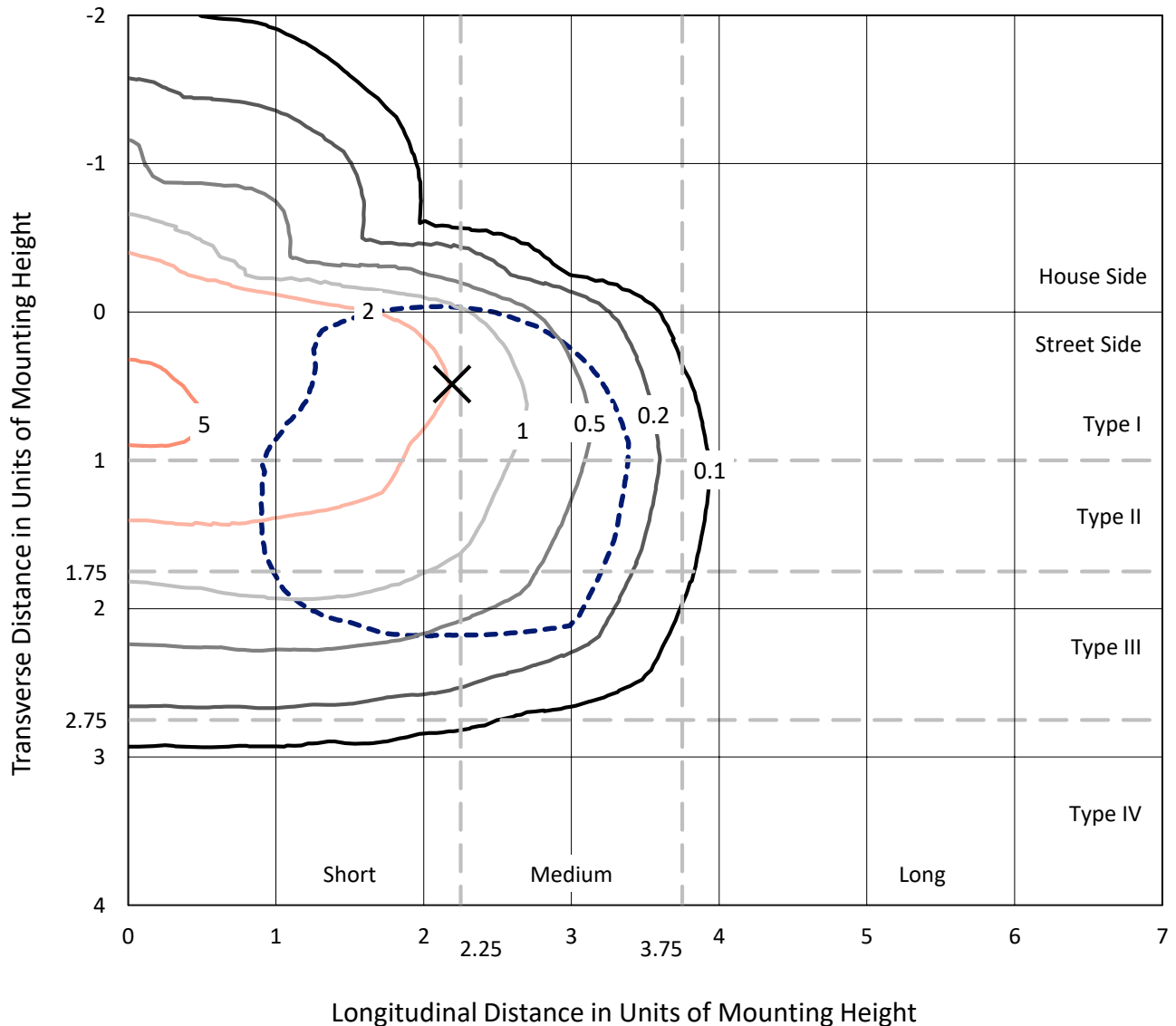
Lumens per Lamp: N/A  
Luminaire Lumens: 14002.2 lumens  
Efficiency: N/A  
Efficacy: 108.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short - Full Cutoff  
BUG Rating: B2 - U0 - G3  
  
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (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

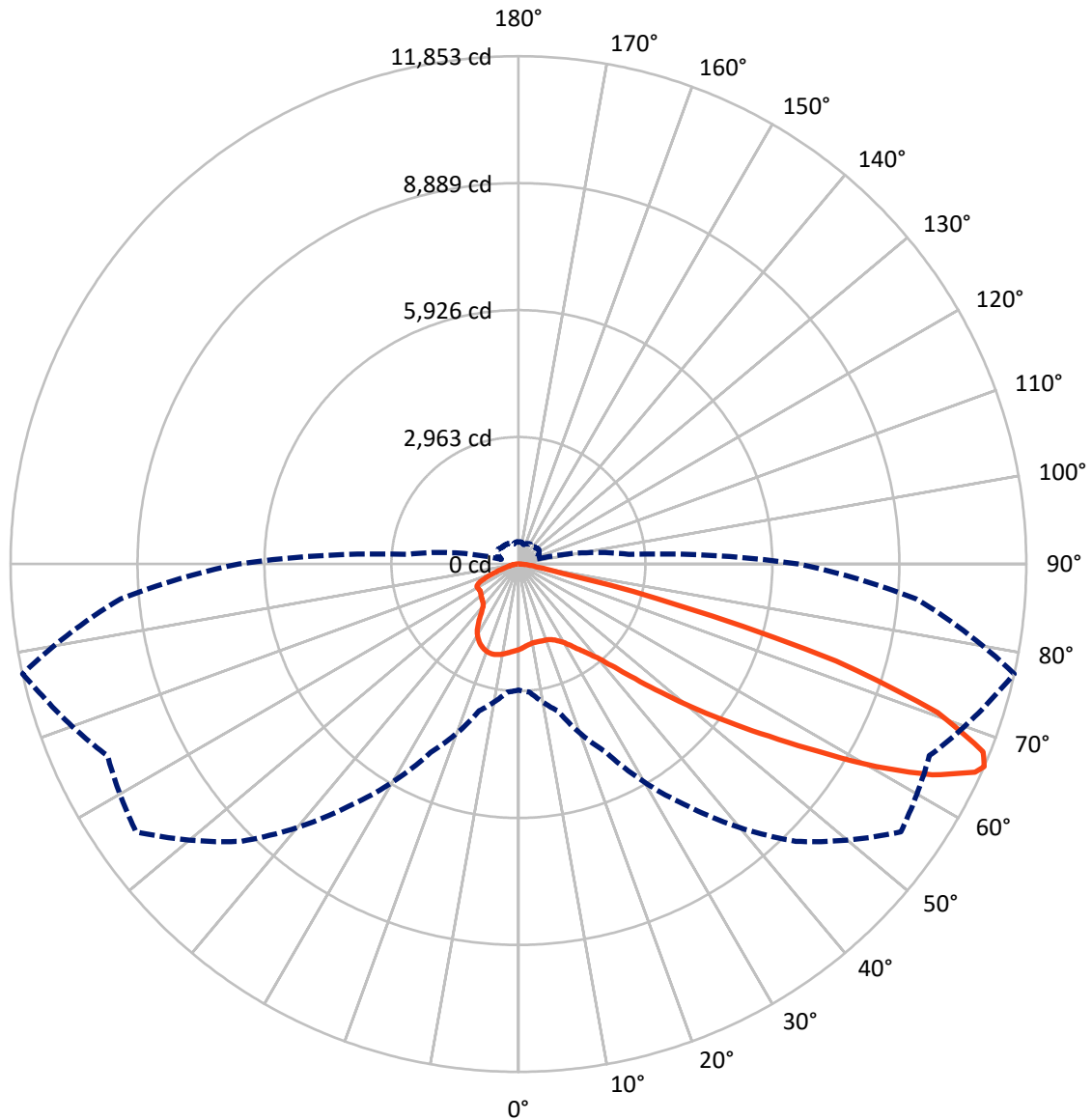
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 6.1 fc  
 Type III - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral    - - - Horizontal Cone Through 66-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 2392.2   | 0.0    | 2392.2  |
|                    | % Fixture | 17.1     | 0.0    | 17.1    |
| <b>Street Side</b> | Lumens    | 11610.0  | 0.0    | 11610.0 |
|                    | % Fixture | 82.9     | 0.0    | 82.9    |
| <b>Total</b>       | Lumens    | 14002.2  | 0.0    | 14002.2 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 178.3   | 1.3       |
| 10°-20°   | 502.9   | 3.6       |
| 20°-30°   | 858.3   | 6.1       |
| 30°-40°   | 1374.0  | 9.8       |
| 40°-50°   | 2122.7  | 15.2      |
| 50°-60°   | 3010.8  | 21.5      |
| 60°-70°   | 4027.6  | 28.8      |
| 70°-80°   | 1749.1  | 12.5      |
| 80°-90°   | 178.3   | 1.3       |
| 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°    | 14002.2 | 100.0     |
| 0°-180°   | 14002.2 | 100.0     |



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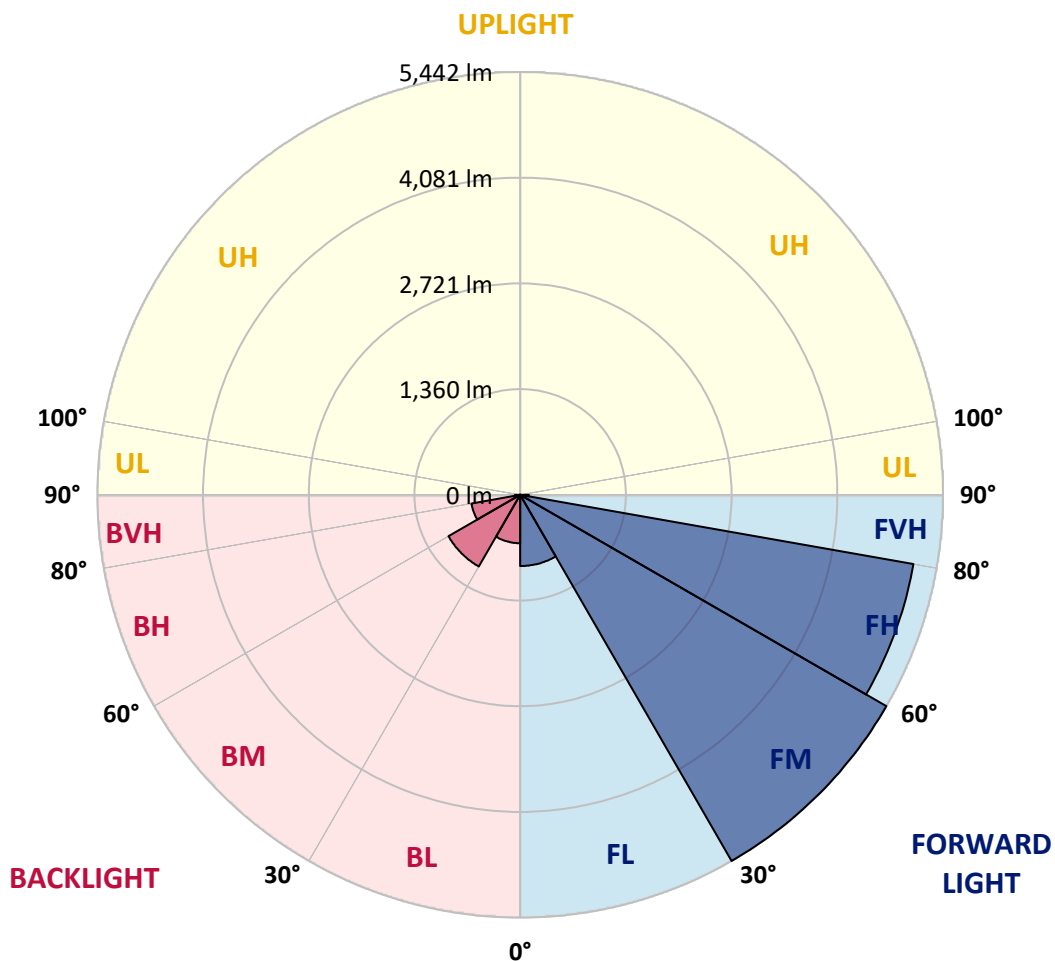
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone           | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|----------------|--------|-----------|-------------------------|------|---------|
|                |        |           | B                       | U    | G       |
| FL (0°-30°)    | 916.5  | 6.5       |                         |      |         |
| FM (30°-60°)   | 5442.0 | 38.9      |                         |      |         |
| FH (60°-80°)   | 5139.7 | 36.7      |                         |      | G3/7500 |
| FVH (80°-90°)  | 111.9  | 0.8       |                         |      | G2/225  |
| BL (0°-30°)    | 623.0  | 4.4       | B2/1000                 |      |         |
| BM (30°-60°)   | 1065.6 | 7.6       | B2/2500                 |      |         |
| BH (60°-80°)   | 637.1  | 4.5       | B2/1000                 |      | G2/1000 |
| BVH (80°-90°)  | 66.5   | 0.5       |                         |      | 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 III Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°     | 65°     | 75°     | 77.5°   | 85°    |
|-------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|--------|
| 0°    | 1995.4 | 1995.4 | 1995.4 | 1995.4 | 1995.4 | 1995.4 | 1995.4  | 1995.4  | 1995.4  | 1995.4  | 1995.4 |
| 2.5°  | 1765.2 | 1777.0 | 1787.0 | 1796.2 | 1814.7 | 1845.1 | 1880.2  | 1908.6  | 1949.7  | 1957.7  | 1979.5 |
| 5°    | 1603.1 | 1603.1 | 1610.9 | 1625.0 | 1650.0 | 1695.7 | 1743.4  | 1806.9  | 1896.2  | 1917.2  | 1975.5 |
| 7.5°  | 1524.4 | 1525.0 | 1529.6 | 1541.4 | 1563.3 | 1604.9 | 1657.2  | 1732.1  | 1853.1  | 1888.2  | 1987.3 |
| 10°   | 1553.5 | 1546.8 | 1536.8 | 1531.0 | 1534.2 | 1558.7 | 1608.3  | 1691.7  | 1826.7  | 1871.6  | 2014.0 |
| 12.5° | 1716.1 | 1703.7 | 1669.2 | 1623.6 | 1579.9 | 1562.1 | 1591.1  | 1672.4  | 1815.5  | 1867.8  | 2049.0 |
| 15°   | 1982.1 | 1976.9 | 1912.6 | 1818.1 | 1712.3 | 1623.6 | 1603.7  | 1665.2  | 1816.7  | 1872.4  | 2090.7 |
| 17.5° | 2315.7 | 2308.3 | 2223.7 | 2086.1 | 1913.4 | 1740.8 | 1648.0  | 1671.2  | 1821.3  | 1880.2  | 2131.0 |
| 20°   | 2652.4 | 2629.8 | 2538.6 | 2374.6 | 2152.8 | 1900.0 | 1721.5  | 1686.5  | 1827.3  | 1888.8  | 2173.4 |
| 22.5° | 2903.8 | 2885.2 | 2803.2 | 2643.8 | 2388.4 | 2084.7 | 1820.1  | 1712.9  | 1846.5  | 1914.0  | 2225.5 |
| 25°   | 3124.7 | 3125.9 | 3044.6 | 2890.6 | 2626.6 | 2280.6 | 1947.1  | 1783.6  | 1895.4  | 1965.5  | 2297.0 |
| 27.5° | 3398.0 | 3382.2 | 3306.0 | 3153.2 | 2862.1 | 2478.3 | 2100.5  | 1881.0  | 1968.3  | 2039.0  | 2391.0 |
| 30°   | 3724.7 | 3713.5 | 3625.5 | 3452.3 | 3123.3 | 2690.7 | 2275.8  | 1994.0  | 2062.3  | 2135.6  | 2514.0 |
| 32.5° | 4109.1 | 4103.9 | 4012.6 | 3789.6 | 3425.0 | 2940.9 | 2481.7  | 2143.6  | 2202.5  | 2278.6  | 2690.7 |
| 35°   | 4560.4 | 4561.0 | 4453.2 | 4185.2 | 3755.1 | 3231.9 | 2715.1  | 2336.1  | 2373.2  | 2452.5  | 2901.2 |
| 37.5° | 4838.3 | 4871.9 | 4831.6 | 4558.4 | 4128.9 | 3557.4 | 3018.2  | 2591.5  | 2567.7  | 2647.8  | 3126.7 |
| 40°   | 4897.8 | 4938.8 | 5066.4 | 4927.6 | 4547.2 | 3916.0 | 3286.8  | 2836.9  | 2807.2  | 2905.0  | 3417.2 |
| 42.5° | 4814.4 | 4871.3 | 5141.3 | 5239.1 | 4991.1 | 4357.9 | 3648.0  | 3201.5  | 3163.8  | 3295.4  | 3778.4 |
| 45°   | 4764.7 | 4807.2 | 5119.5 | 5401.3 | 5376.1 | 4857.5 | 4107.9  | 3659.2  | 3645.4  | 3818.0  | 4195.2 |
| 47.5° | 4678.8 | 4717.3 | 5017.5 | 5439.0 | 5602.5 | 5315.2 | 4660.4  | 4219.1  | 4246.1  | 4472.5  | 4665.6 |
| 50°   | 4725.1 | 4740.9 | 4903.8 | 5343.1 | 5668.0 | 5650.7 | 5277.6  | 4867.3  | 4960.1  | 5242.5  | 5198.2 |
| 52.5° | 4718.5 | 4759.5 | 4890.5 | 5185.6 | 5676.6 | 5857.9 | 5885.5  | 5590.4  | 5785.8  | 6109.9  | 5789.0 |
| 55°   | 3814.8 | 3890.2 | 4735.1 | 5145.9 | 5706.8 | 6060.8 | 6426.8  | 6352.7  | 6716.4  | 7094.2  | 6455.8 |
| 57.5° | 3642.8 | 3690.4 | 4158.8 | 5229.3 | 5868.3 | 6448.6 | 7028.7  | 7191.6  | 7800.1  | 8238.8  | 7268.3 |
| 60°   | 3608.9 | 3667.8 | 4152.8 | 5331.2 | 6195.8 | 7080.4 | 7921.3  | 8207.2  | 9118.8  | 9599.2  | 8210.4 |
| 62.5° | 3503.7 | 3567.2 | 4113.7 | 5317.8 | 6660.9 | 7954.4 | 9063.9  | 9286.9  | 10369.2 | 10836.4 | 8998.4 |
| 65°   | 3170.4 | 3229.9 | 3795.6 | 5104.3 | 6974.6 | 8887.3 | 10416.1 | 10276.7 | 11356.4 | 11707.5 | 9391.3 |
| 66°   | 2942.1 | 3000.3 | 3544.8 | 4852.9 | 6901.7 | 9151.9 | 10895.2 | 10583.0 | 11577.3 | 11852.6 | 9314.5 |
| 67.5° | 2524.6 | 2570.3 | 3057.8 | 4289.8 | 6514.7 | 9226.0 | 11298.1 | 10813.1 | 11600.4 | 11697.7 | 8876.0 |
| 70°   | 1595.1 | 1608.3 | 1987.3 | 2961.3 | 4931.6 | 8001.3 | 10684.7 | 10241.6 | 10643.8 | 10380.4 | 7441.0 |
| 72.5° | 692.1  | 687.5  | 954.1  | 1506.4 | 2792.0 | 5368.9 | 8643.1  | 8450.6  | 8349.4  | 7748.7  | 5208.8 |
| 75°   | 385.0  | 390.4  | 495.6  | 699.3  | 1134.6 | 2637.2 | 5653.9  | 5410.6  | 4568.2  | 3898.2  | 2361.9 |
| 77.5° | 308.9  | 316.3  | 410.9  | 496.2  | 509.4  | 919.7  | 2645.8  | 2152.8  | 1296.1  | 1040.0  | 656.2  |
| 80°   | 244.2  | 257.4  | 358.6  | 386.4  | 343.3  | 379.0  | 854.8   | 683.5   | 512.8   | 470.3   | 340.1  |
| 82.5° | 193.1  | 202.5  | 307.7  | 292.5  | 240.2  | 255.4  | 409.4   | 399.0   | 333.5   | 303.7   | 196.5  |
| 85°   | 139.0  | 156.0  | 252.8  | 220.3  | 157.4  | 172.1  | 271.8   | 260.6   | 191.1   | 156.0   | 86.7   |
| 87.5° | 56.9   | 74.1   | 178.7  | 146.2  | 87.9   | 80.1   | 135.6   | 127.6   | 90.5    | 66.1    | 43.1   |
| 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°    | 1995.4 | 1995.4 | 1995.4 | 1995.4 | 1995.4 | 1995.4 | 1995.4 | 1995.4 | 1995.4 | 1995.4 | 1995.4 |
| 2.5°  | 1993.4 | 2009.2 | 2029.8 | 2042.4 | 2049.0 | 2053.7 | 2060.9 | 2060.3 | 2062.3 | 2062.9 | 2065.5 |
| 5°    | 2006.6 | 2033.0 | 2062.9 | 2070.9 | 2070.9 | 2063.5 | 2056.3 | 2044.2 | 2039.6 | 2038.4 | 2039.6 |
| 7.5°  | 2041.0 | 2070.1 | 2095.9 | 2086.7 | 2066.9 | 2037.6 | 2000.0 | 1966.9 | 1949.1 | 1943.1 | 1941.9 |
| 10°   | 2084.7 | 2119.8 | 2130.4 | 2095.3 | 2037.0 | 1966.9 | 1892.2 | 1837.9 | 1806.9 | 1798.2 | 1795.6 |
| 12.5° | 2137.6 | 2170.6 | 2156.2 | 2082.1 | 1974.1 | 1861.1 | 1757.8 | 1671.2 | 1606.3 | 1585.9 | 1584.5 |
| 15°   | 2195.9 | 2221.7 | 2170.6 | 2041.0 | 1880.2 | 1713.5 | 1529.6 | 1380.2 | 1299.5 | 1273.6 | 1271.6 |
| 17.5° | 2250.2 | 2263.4 | 2162.0 | 1969.5 | 1742.0 | 1472.1 | 1227.9 | 1112.8 | 1085.1 | 1091.7 | 1092.9 |
| 20°   | 2296.4 | 2296.4 | 2133.0 | 1867.0 | 1524.4 | 1153.8 | 999.6  | 997.8  | 1017.6 | 1037.4 | 1041.4 |
| 22.5° | 2347.3 | 2316.9 | 2082.1 | 1722.1 | 1215.9 | 944.1  | 921.7  | 940.1  | 962.5  | 984.4  | 987.8  |
| 25°   | 2410.2 | 2333.5 | 2011.2 | 1502.6 | 955.9  | 857.4  | 866.0  | 881.2  | 892.4  | 906.4  | 908.4  |
| 27.5° | 2480.3 | 2354.5 | 1918.0 | 1200.1 | 829.7  | 803.3  | 809.9  | 815.1  | 813.7  | 819.1  | 820.3  |
| 30°   | 2564.3 | 2379.2 | 1790.2 | 938.1  | 777.4  | 756.8  | 745.0  | 740.4  | 740.4  | 749.0  | 752.2  |
| 32.5° | 2676.8 | 2415.4 | 1606.9 | 803.9  | 752.2  | 723.7  | 685.5  | 668.3  | 674.9  | 703.9  | 710.5  |
| 35°   | 2800.6 | 2454.5 | 1359.0 | 758.2  | 747.0  | 708.5  | 649.0  | 617.2  | 618.0  | 645.0  | 653.6  |
| 37.5° | 2935.4 | 2504.2 | 1086.9 | 749.6  | 758.8  | 709.3  | 629.8  | 586.1  | 568.3  | 568.3  | 571.7  |
| 40°   | 3108.1 | 2555.0 | 880.0  | 755.6  | 784.0  | 717.1  | 620.0  | 561.7  | 511.4  | 512.8  | 515.4  |
| 42.5° | 3333.1 | 2598.7 | 768.8  | 768.0  | 814.5  | 727.8  | 619.2  | 529.2  | 485.6  | 515.4  | 542.5  |
| 45°   | 3583.3 | 2620.5 | 719.7  | 779.4  | 838.9  | 734.4  | 608.8  | 524.0  | 489.0  | 577.5  | 629.2  |
| 47.5° | 3870.9 | 2607.9 | 692.7  | 783.2  | 844.9  | 734.4  | 596.7  | 536.6  | 512.0  | 668.9  | 729.2  |
| 50°   | 4186.6 | 2571.7 | 666.3  | 775.4  | 842.9  | 733.0  | 608.0  | 549.1  | 520.6  | 684.7  | 726.3  |
| 52.5° | 4557.8 | 2541.2 | 638.4  | 758.2  | 828.9  | 725.7  | 621.2  | 543.9  | 493.6  | 622.6  | 651.6  |
| 55°   | 4981.1 | 2549.8 | 607.4  | 733.8  | 807.1  | 711.9  | 616.6  | 522.6  | 465.1  | 548.5  | 566.3  |
| 57.5° | 5522.3 | 2652.4 | 570.3  | 702.7  | 777.4  | 688.7  | 600.1  | 512.8  | 456.5  | 497.6  | 508.2  |
| 60°   | 6126.3 | 2830.9 | 524.0  | 671.5  | 740.4  | 651.6  | 587.5  | 517.4  | 460.5  | 493.6  | 498.8  |
| 62.5° | 6569.6 | 2934.8 | 484.4  | 625.8  | 690.1  | 610.6  | 571.7  | 523.2  | 471.1  | 507.4  | 506.2  |
| 65°   | 6690.0 | 2764.2 | 434.7  | 559.1  | 622.0  | 567.7  | 551.7  | 529.8  | 475.8  | 518.6  | 512.8  |
| 66°   | 6521.3 | 2580.3 | 412.9  | 528.0  | 587.5  | 546.5  | 541.9  | 529.2  | 473.7  | 520.0  | 510.0  |
| 67.5° | 6111.9 | 2203.1 | 375.2  | 482.4  | 532.6  | 514.8  | 526.0  | 523.2  | 468.3  | 518.6  | 504.8  |
| 70°   | 4984.5 | 1503.2 | 320.9  | 401.6  | 443.3  | 453.1  | 495.6  | 502.2  | 451.1  | 495.6  | 465.1  |
| 72.5° | 3482.7 | 915.6  | 283.8  | 311.7  | 358.6  | 386.4  | 453.9  | 472.9  | 428.1  | 432.7  | 403.6  |
| 75°   | 1683.1 | 486.4  | 257.4  | 241.6  | 278.4  | 322.9  | 403.6  | 433.3  | 391.6  | 362.0  | 351.4  |
| 77.5° | 524.6  | 297.1  | 218.3  | 194.5  | 218.3  | 260.6  | 337.3  | 379.8  | 348.8  | 303.1  | 299.1  |
| 80°   | 281.8  | 218.3  | 168.1  | 156.0  | 172.7  | 204.5  | 265.2  | 316.9  | 299.7  | 271.8  | 242.8  |
| 82.5° | 185.9  | 141.6  | 124.4  | 121.0  | 131.6  | 156.0  | 197.1  | 262.6  | 262.6  | 233.0  | 169.5  |
| 85°   | 96.0   | 86.7   | 85.3   | 85.3   | 91.9   | 104.0  | 134.2  | 202.5  | 215.7  | 123.0  | 102.0  |
| 87.5° | 47.7   | 49.7   | 46.3   | 48.3   | 51.7   | 50.9   | 64.1   | 102.0  | 121.8  | 74.7   | 62.1   |
| 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)