

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: P299158

Luminaire Tested: **GLNA-AF-01-LED-E1-SL2-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299158  
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-01-LED-E1-SL2-800  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(1) 70 CRI, 4000K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V  
Narrow OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

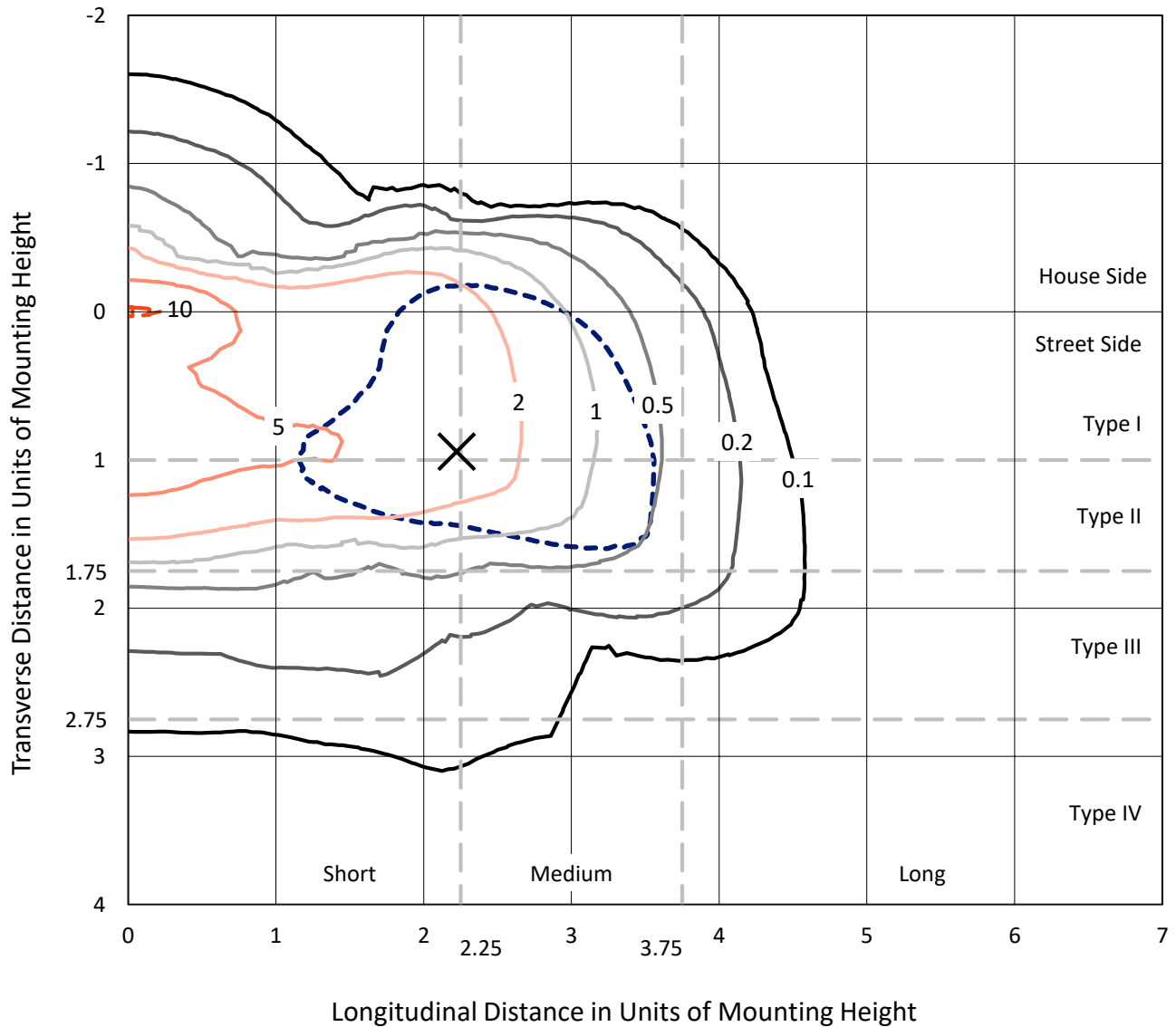
Lumens per Lamp: N/A  
Luminaire Lumens: 4915.4 lumens  
Efficiency: N/A  
Efficacy: 111.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Short - Semi-Cutoff  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (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

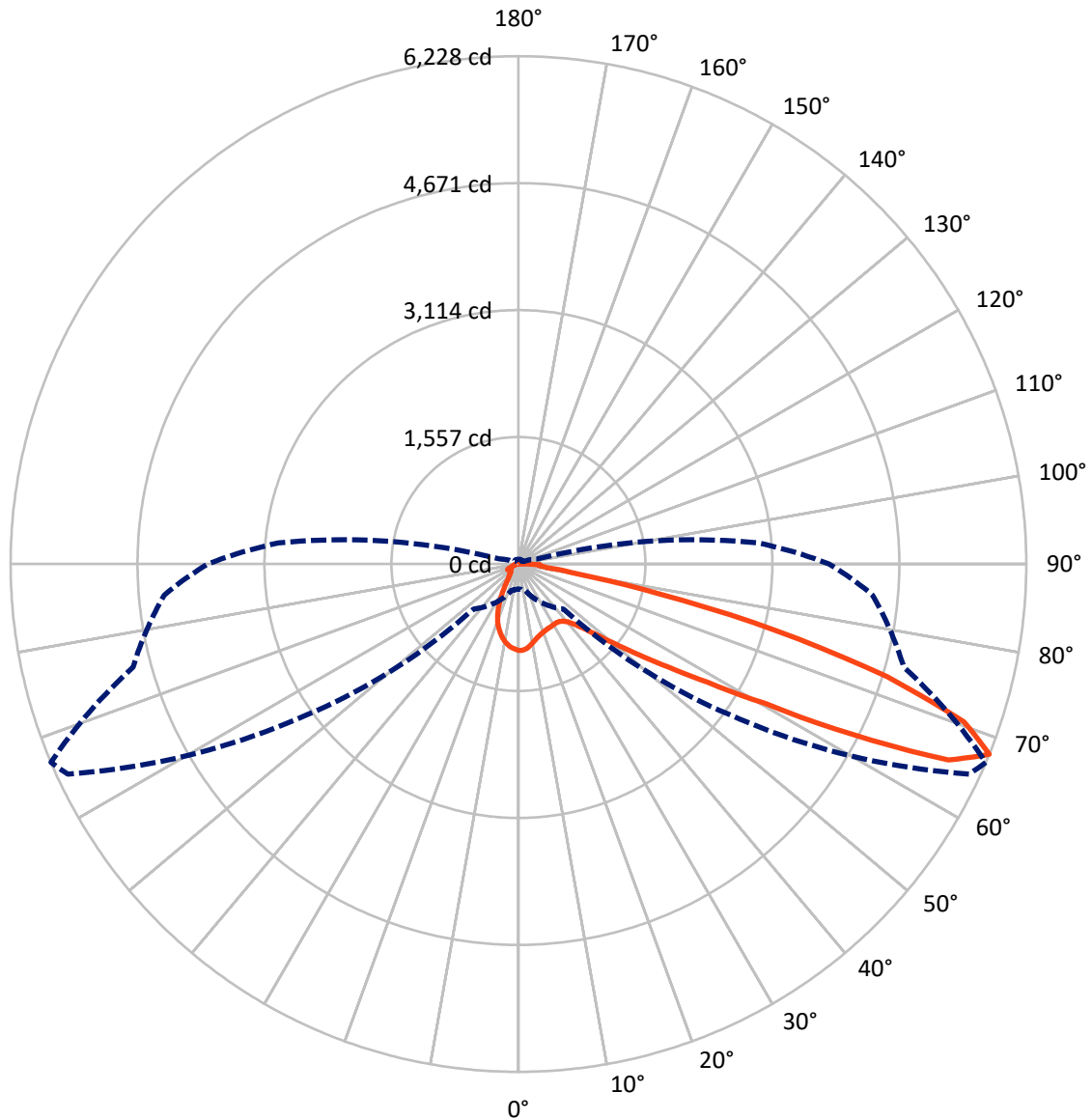
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.6 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    | 814.4    | 0.0    | 814.4  |
|                    | % Fixture | 16.6     | 0.0    | 16.6   |
| <b>Street Side</b> | Lumens    | 4101.0   | 0.0    | 4101.0 |
|                    | % Fixture | 83.4     | 0.0    | 83.4   |
| <b>Total</b>       | Lumens    | 4915.4   | 0.0    | 4915.4 |
|                    | % Fixture | 100.0    | 0.0    | 100.0  |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 90.5   | 1.8       |
| 10°-20°   | 209.3  | 4.3       |
| 20°-30°   | 283.7  | 5.8       |
| 30°-40°   | 403.3  | 8.2       |
| 40°-50°   | 674.8  | 13.7      |
| 50°-60°   | 1067.5 | 21.7      |
| 60°-70°   | 1359.9 | 27.7      |
| 70°-80°   | 712.3  | 14.5      |
| 80°-90°   | 114.2  | 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°    | 4915.4 | 100.0     |
| 0°-180°   | 4915.4 | 100.0     |



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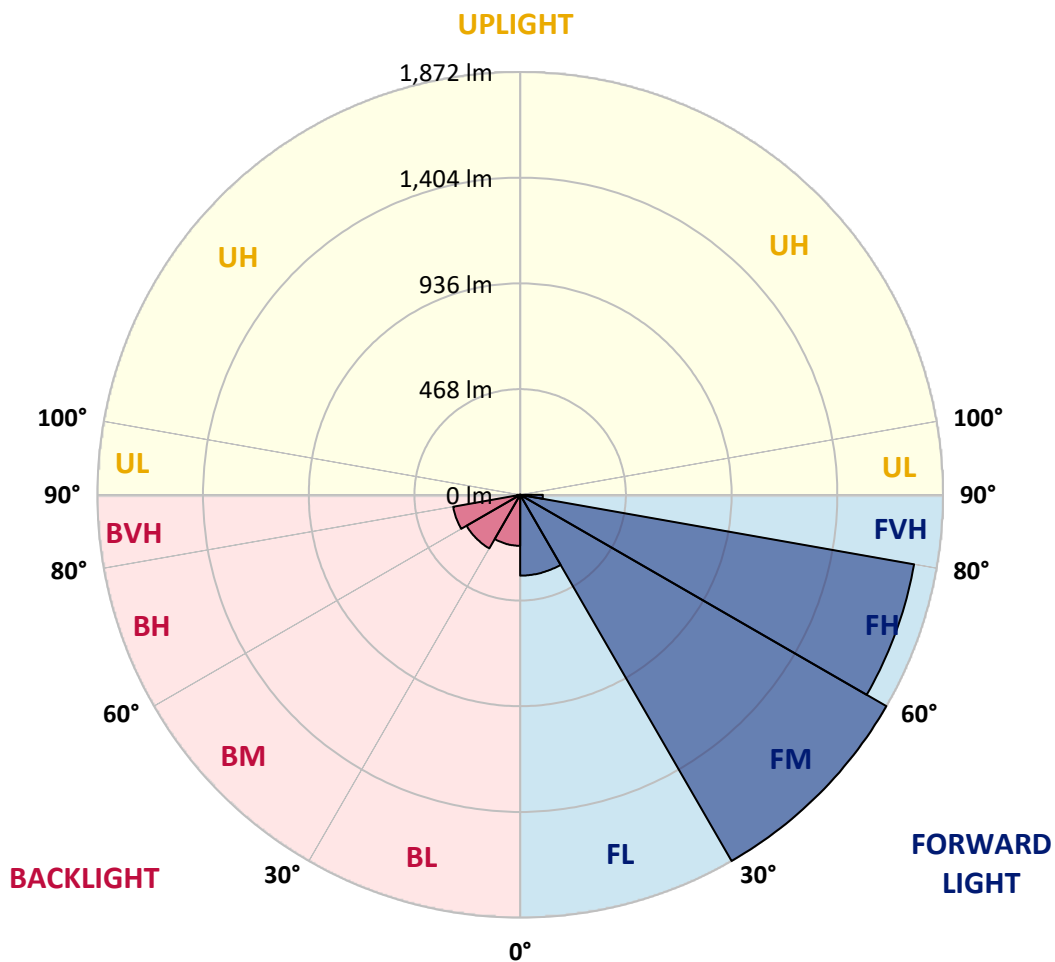
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 357.7  | 7.3       |                         |      |         |
| FM   | (30°-60°)   | 1871.9 | 38.1      |                         |      |         |
| FH   | (60°-80°)   | 1770.9 | 36.0      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 100.4  | 2.0       |                         |      | G2/225  |
| BL   | (0°-30°)    | 225.7  | 4.6       | B1/500                  |      |         |
| BM   | (30°-60°)   | 273.7  | 5.6       | B1/1000                 |      |         |
| BH   | (60°-80°)   | 301.2  | 6.1       | B1/500                  |      | G1/500  |
| BVH  | (80°-90°)   | 13.8   | 0.3       |                         |      | G1/100  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

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

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°    | 65°    | 67°    | 75°    | 85°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1060.2 | 1060.2 | 1060.2 | 1060.2 | 1060.2 | 1060.2 | 1060.2 | 1060.2 | 1060.2 | 1060.2 | 1060.2 |
| 2.5°  | 1016.6 | 1018.3 | 1023.6 | 1027.0 | 1042.3 | 1048.8 | 1053.5 | 1058.1 | 1058.8 | 1061.0 | 1058.8 |
| 5°    | 910.0  | 913.6  | 923.5  | 934.7  | 964.3  | 987.5  | 1012.0 | 1037.5 | 1042.1 | 1058.5 | 1063.1 |
| 7.5°  | 827.3  | 826.3  | 834.6  | 847.9  | 878.2  | 910.4  | 953.3  | 1004.0 | 1013.9 | 1051.0 | 1069.0 |
| 10°   | 766.9  | 766.2  | 774.9  | 788.8  | 817.6  | 848.1  | 896.6  | 965.9  | 980.0  | 1039.2 | 1074.5 |
| 12.5° | 722.3  | 722.6  | 731.3  | 746.6  | 775.9  | 806.7  | 855.9  | 929.1  | 947.0  | 1025.3 | 1080.4 |
| 15°   | 692.8  | 694.7  | 701.7  | 718.0  | 746.6  | 777.4  | 825.6  | 901.5  | 921.6  | 1014.4 | 1086.9 |
| 17.5° | 682.8  | 686.0  | 688.4  | 700.3  | 724.8  | 755.5  | 802.8  | 881.1  | 902.4  | 1006.9 | 1092.7 |
| 20°   | 692.0  | 695.7  | 691.1  | 695.2  | 710.7  | 737.9  | 784.9  | 865.1  | 886.9  | 998.4  | 1093.4 |
| 22.5° | 731.6  | 734.9  | 721.4  | 709.5  | 708.5  | 725.0  | 770.1  | 852.5  | 875.0  | 992.1  | 1093.7 |
| 25°   | 801.1  | 803.3  | 780.5  | 752.9  | 726.0  | 720.4  | 759.7  | 843.8  | 867.8  | 986.6  | 1089.1 |
| 27.5° | 886.4  | 888.1  | 862.0  | 821.2  | 767.2  | 731.3  | 756.0  | 838.7  | 863.7  | 981.7  | 1081.3 |
| 30°   | 990.2  | 998.2  | 963.0  | 911.7  | 832.9  | 763.5  | 763.3  | 836.0  | 859.1  | 973.5  | 1066.1 |
| 32.5° | 1096.4 | 1099.8 | 1075.5 | 1023.4 | 921.3  | 820.3  | 783.7  | 838.0  | 857.8  | 963.5  | 1046.7 |
| 35°   | 1204.0 | 1208.3 | 1192.6 | 1150.7 | 1042.3 | 903.4  | 823.4  | 849.4  | 865.4  | 960.1  | 1033.1 |
| 37.5° | 1343.4 | 1349.2 | 1327.4 | 1278.9 | 1189.4 | 1016.1 | 889.6  | 878.0  | 888.4  | 969.8  | 1029.0 |
| 40°   | 1563.7 | 1561.0 | 1497.3 | 1425.0 | 1350.4 | 1160.4 | 984.1  | 926.4  | 932.5  | 1001.1 | 1041.6 |
| 42.5° | 1820.2 | 1813.6 | 1703.8 | 1590.4 | 1527.3 | 1334.9 | 1109.2 | 1010.5 | 1009.3 | 1062.7 | 1085.9 |
| 45°   | 2024.7 | 2019.4 | 1920.5 | 1780.6 | 1730.2 | 1533.6 | 1270.9 | 1135.9 | 1126.9 | 1160.4 | 1167.9 |
| 47.5° | 2135.5 | 2135.8 | 2078.8 | 1964.6 | 1963.4 | 1786.2 | 1478.6 | 1317.2 | 1301.7 | 1317.4 | 1309.4 |
| 50°   | 2096.7 | 2101.8 | 2095.8 | 2059.4 | 2176.2 | 2117.3 | 1749.9 | 1570.0 | 1538.7 | 1554.2 | 1523.5 |
| 52.5° | 1909.1 | 1915.7 | 1951.5 | 2007.3 | 2265.7 | 2517.5 | 2148.4 | 1884.1 | 1847.8 | 1842.2 | 1808.0 |
| 55°   | 1576.5 | 1584.5 | 1657.7 | 1809.2 | 2191.3 | 2786.3 | 2777.1 | 2284.6 | 2226.7 | 2174.1 | 2159.5 |
| 57.5° | 1086.7 | 1100.0 | 1217.8 | 1442.7 | 1950.6 | 2867.5 | 3525.9 | 2855.4 | 2737.6 | 2553.9 | 2557.3 |
| 60°   | 612.5  | 628.0  | 766.9  | 971.3  | 1464.8 | 2779.3 | 4095.5 | 3720.1 | 3471.4 | 2998.7 | 3023.9 |
| 62.5° | 389.5  | 406.3  | 511.7  | 674.8  | 878.9  | 2304.2 | 4329.0 | 4922.1 | 4606.3 | 3547.0 | 3571.7 |
| 65°   | 315.4  | 322.6  | 372.3  | 557.0  | 638.2  | 1388.2 | 4151.8 | 5912.3 | 5794.5 | 4242.9 | 4127.5 |
| 67.5° | 307.8  | 310.3  | 336.0  | 467.6  | 612.1  | 780.3  | 3311.6 | 6097.5 | 6228.1 | 4892.8 | 4359.0 |
| 70°   | 304.2  | 312.7  | 378.6  | 446.3  | 586.1  | 658.1  | 1990.1 | 5589.9 | 5796.2 | 5062.7 | 4050.9 |
| 72.5° | 147.6  | 147.1  | 190.5  | 403.6  | 660.3  | 682.6  | 1022.4 | 4522.9 | 4729.9 | 4386.2 | 3328.8 |
| 75°   | 119.0  | 108.8  | 104.0  | 147.9  | 634.8  | 704.9  | 651.6  | 3112.1 | 3261.9 | 2940.7 | 2046.3 |
| 77.5° | 113.0  | 100.8  | 92.4   | 92.6   | 268.3  | 747.5  | 551.9  | 1722.5 | 1766.1 | 1328.3 | 560.7  |
| 80°   | 93.6   | 82.4   | 76.4   | 86.1   | 129.9  | 711.9  | 596.8  | 779.5  | 715.3  | 326.3  | 186.6  |
| 82.5° | 65.0   | 59.1   | 57.4   | 72.2   | 104.0  | 507.3  | 694.0  | 418.9  | 351.2  | 163.4  | 115.1  |
| 85°   | 41.4   | 35.4   | 39.3   | 52.6   | 81.0   | 234.2  | 714.8  | 326.5  | 259.6  | 103.7  | 65.0   |
| 87.5° | 19.1   | 15.5   | 19.4   | 29.1   | 52.8   | 80.7   | 680.2  | 366.7  | 267.4  | 54.8   | 41.0   |
| 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°    | 1060.2 | 1060.2 | 1060.2 | 1060.2 | 1060.2 | 1060.2 | 1060.2 | 1060.2 | 1060.2 | 1060.2 | 1060.2 |
| 2.5°  | 1060.7 | 1056.1 | 1052.5 | 1045.7 | 1038.2 | 1030.9 | 1024.4 | 1016.1 | 1013.7 | 1011.5 | 1014.9 |
| 5°    | 1064.1 | 1059.5 | 1046.2 | 1025.3 | 1002.3 | 980.7  | 959.2  | 940.7  | 929.3  | 923.0  | 926.7  |
| 7.5°  | 1069.2 | 1062.7 | 1035.0 | 996.7  | 955.3  | 917.5  | 878.4  | 847.2  | 824.1  | 813.2  | 816.4  |
| 10°   | 1073.8 | 1061.2 | 1016.1 | 958.7  | 898.1  | 841.8  | 780.3  | 729.4  | 691.6  | 671.7  | 676.5  |
| 12.5° | 1075.8 | 1055.6 | 989.7  | 911.2  | 828.0  | 745.6  | 655.0  | 578.8  | 524.5  | 504.7  | 500.5  |
| 15°   | 1077.7 | 1049.3 | 960.6  | 857.1  | 743.4  | 626.8  | 499.8  | 408.7  | 363.6  | 353.7  | 351.5  |
| 17.5° | 1078.2 | 1038.4 | 927.6  | 798.5  | 644.3  | 485.5  | 341.8  | 283.8  | 284.1  | 300.1  | 302.0  |
| 20°   | 1073.1 | 1022.2 | 887.7  | 725.5  | 525.5  | 335.7  | 234.6  | 224.7  | 261.3  | 301.3  | 306.1  |
| 22.5° | 1061.5 | 1000.6 | 842.3  | 640.4  | 389.5  | 221.1  | 181.6  | 192.5  | 239.7  | 288.7  | 294.3  |
| 25°   | 1046.7 | 974.4  | 788.8  | 541.8  | 257.9  | 158.0  | 152.2  | 165.6  | 197.6  | 230.3  | 233.4  |
| 27.5° | 1026.5 | 943.4  | 728.6  | 428.8  | 167.5  | 130.2  | 134.0  | 143.0  | 156.1  | 170.6  | 172.1  |
| 30°   | 1000.6 | 906.3  | 664.4  | 312.7  | 126.5  | 117.1  | 122.7  | 127.5  | 133.1  | 141.3  | 142.0  |
| 32.5° | 970.8  | 870.7  | 598.5  | 216.0  | 112.2  | 110.3  | 114.7  | 117.1  | 121.4  | 126.5  | 127.0  |
| 35°   | 945.8  | 836.8  | 530.1  | 152.7  | 106.2  | 105.2  | 108.1  | 109.1  | 113.2  | 118.8  | 119.3  |
| 37.5° | 931.5  | 809.1  | 459.6  | 123.1  | 102.0  | 100.6  | 102.3  | 102.3  | 108.1  | 116.4  | 117.6  |
| 40°   | 932.5  | 793.8  | 389.0  | 111.3  | 98.7   | 96.7   | 97.0   | 97.0   | 104.5  | 113.4  | 114.2  |
| 42.5° | 958.9  | 797.7  | 326.5  | 106.7  | 96.0   | 93.8   | 92.6   | 93.3   | 99.6   | 105.4  | 105.9  |
| 45°   | 1021.0 | 825.1  | 267.8  | 103.7  | 93.3   | 92.6   | 89.9   | 89.7   | 92.1   | 94.8   | 94.8   |
| 47.5° | 1122.8 | 879.2  | 228.1  | 101.8  | 91.1   | 90.9   | 87.7   | 84.6   | 84.4   | 85.3   | 85.3   |
| 50°   | 1288.3 | 972.3  | 201.4  | 99.6   | 89.7   | 87.7   | 84.1   | 79.3   | 77.6   | 78.3   | 78.3   |
| 52.5° | 1536.5 | 1138.3 | 191.3  | 96.7   | 86.5   | 83.4   | 79.3   | 74.4   | 73.0   | 73.2   | 73.2   |
| 55°   | 1862.1 | 1393.3 | 189.8  | 93.3   | 83.1   | 78.1   | 74.7   | 71.0   | 69.3   | 69.8   | 69.8   |
| 57.5° | 2259.9 | 1746.0 | 215.7  | 88.0   | 78.5   | 72.7   | 70.8   | 68.4   | 67.1   | 67.9   | 67.6   |
| 60°   | 2743.4 | 2207.5 | 320.0  | 82.4   | 73.9   | 67.9   | 67.9   | 65.9   | 65.0   | 65.7   | 65.4   |
| 62.5° | 3300.5 | 2737.6 | 449.9  | 78.3   | 69.1   | 64.0   | 65.0   | 64.0   | 63.0   | 63.5   | 63.3   |
| 65°   | 3794.5 | 3083.0 | 421.3  | 75.1   | 64.2   | 60.4   | 62.1   | 61.6   | 60.8   | 61.3   | 61.1   |
| 67.5° | 3808.8 | 2955.1 | 236.6  | 71.7   | 59.6   | 56.7   | 59.1   | 58.9   | 58.4   | 58.9   | 58.7   |
| 70°   | 3399.1 | 2495.2 | 133.3  | 65.4   | 54.8   | 52.4   | 55.8   | 55.5   | 55.0   | 56.0   | 55.8   |
| 72.5° | 2723.3 | 1810.7 | 97.4   | 57.7   | 49.9   | 47.8   | 51.6   | 51.4   | 51.4   | 52.8   | 52.1   |
| 75°   | 1567.1 | 931.8  | 77.8   | 49.4   | 44.8   | 43.1   | 46.5   | 46.8   | 47.3   | 49.2   | 47.8   |
| 77.5° | 446.7  | 290.4  | 63.5   | 41.9   | 38.5   | 37.8   | 41.2   | 41.7   | 41.9   | 44.1   | 42.2   |
| 80°   | 166.0  | 133.8  | 52.4   | 35.1   | 31.5   | 31.8   | 34.9   | 35.6   | 35.9   | 38.1   | 35.6   |
| 82.5° | 105.9  | 88.2   | 42.4   | 27.1   | 24.7   | 24.5   | 28.4   | 29.3   | 29.3   | 29.6   | 28.1   |
| 85°   | 61.8   | 52.8   | 32.0   | 19.6   | 17.5   | 16.7   | 21.1   | 22.8   | 22.1   | 21.6   | 20.6   |
| 87.5° | 41.4   | 36.4   | 19.6   | 10.9   | 9.5    | 9.0    | 12.4   | 13.6   | 13.1   | 12.4   | 11.6   |
| 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)