

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: P299701

Luminaire Tested: **GLNA-AF-02-LED-E1-SL2-7027-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299701
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24287)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-02-LED-E1-SL2-7027-600-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(2) 70 CRI, 2700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
w/Spill Control WITH HOUSESIDE SHEILD OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5244.4 lumens
Efficiency: N/A
Efficacy: 79.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 66
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

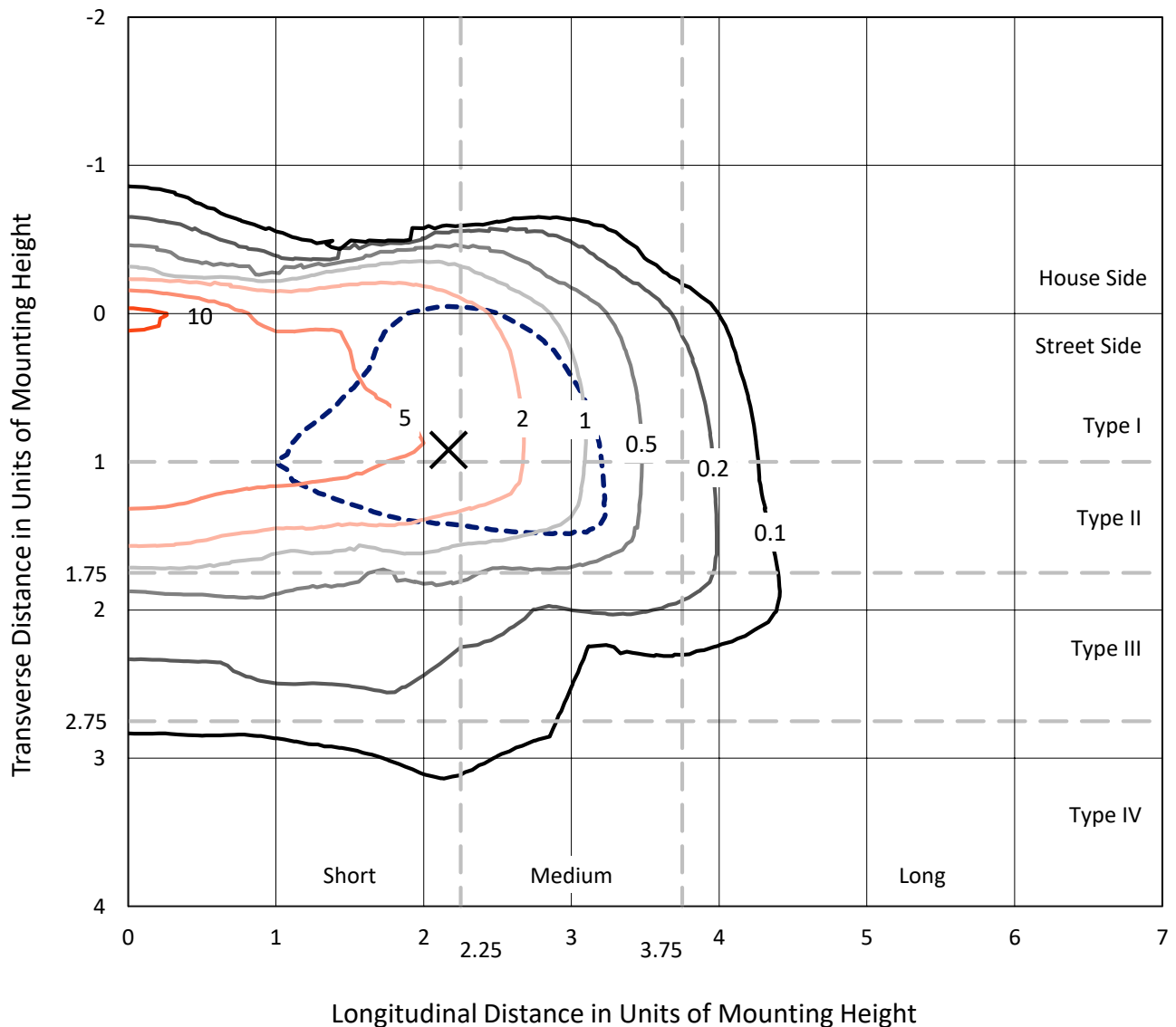


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

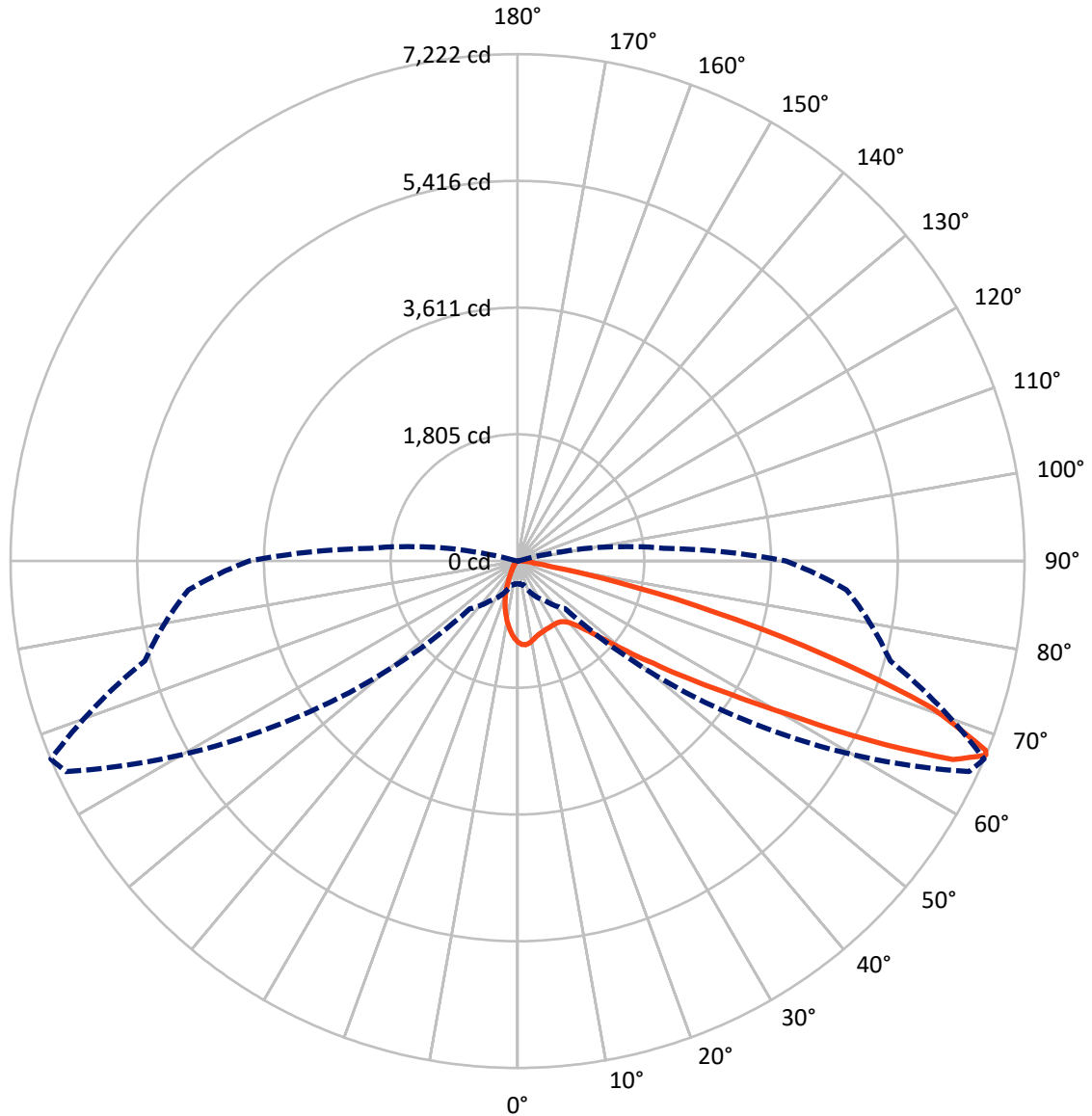


Based on 10 foot mounting height. Maximum calculated value = 11.6 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 544.5 | 0.0 | 544.5 |
| | % Fixture | 10.4 | 0.0 | 10.4 |
| Street Side | Lumens | 4699.9 | 0.0 | 4699.9 |
| | % Fixture | 89.6 | 0.0 | 89.6 |
| Total | Lumens | 5244.4 | 0.0 | 5244.4 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 94.1 | 1.8 |
| 10°-20° | 200.3 | 3.8 |
| 20°-30° | 291.2 | 5.6 |
| 30°-40° | 454.3 | 8.7 |
| 40°-50° | 804.8 | 15.3 |
| 50°-60° | 1273.5 | 24.3 |
| 60°-70° | 1458.6 | 27.8 |
| 70°-80° | 605.0 | 11.5 |
| 80°-90° | 62.5 | 1.2 |
| 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° | 5244.4 | 100.0 |
| 0°-180° | 5244.4 | 100.0 |

Coefficient of Utilization



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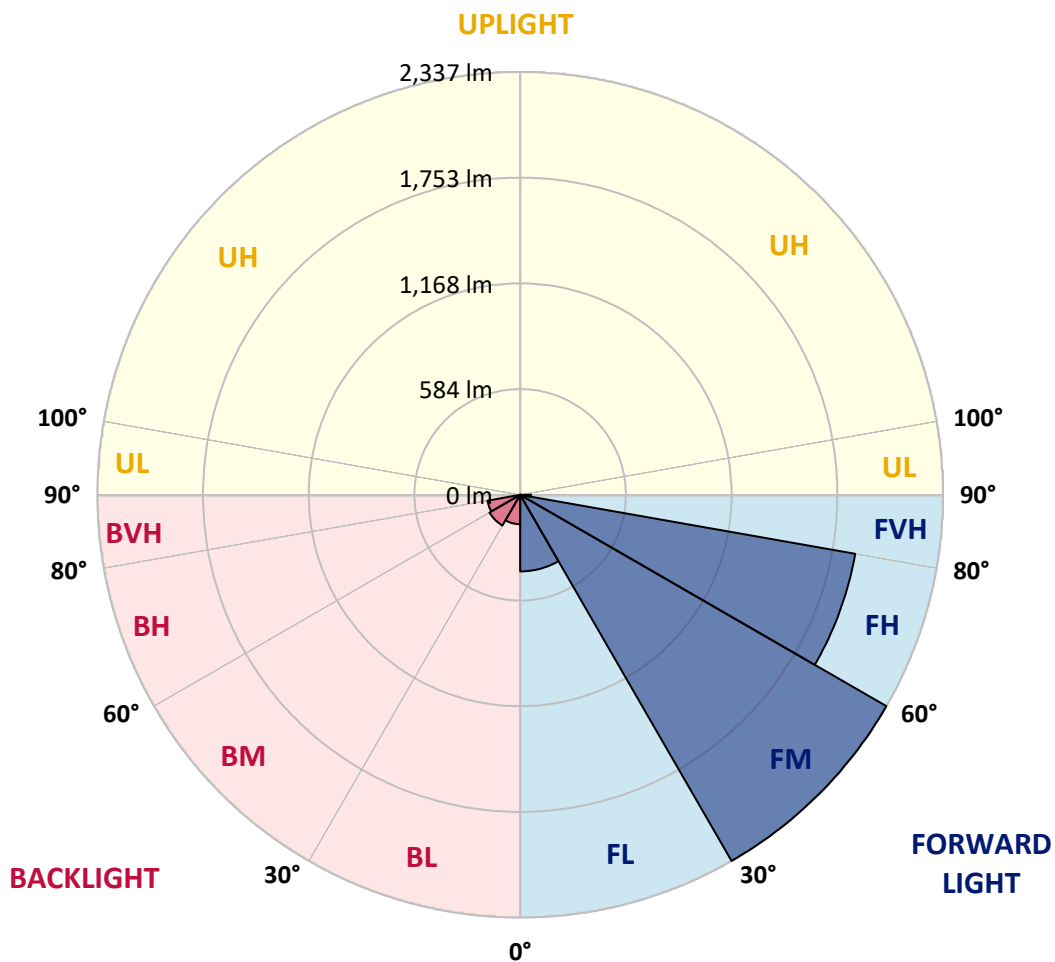
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 423.1 | 8.1 | | | |
| FM | (30°-60°) | 2336.9 | 44.6 | | | |
| FH | (60°-80°) | 1880.1 | 35.9 | | | G2/5000 |
| FVH | (80°-90°) | 59.7 | 1.1 | | | G1/100 |
| BL | (0°-30°) | 162.5 | 3.1 | B1/500 | | |
| BM | (30°-60°) | 195.7 | 3.7 | B0/220 | | |
| BH | (60°-80°) | 183.5 | 3.5 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 2.8 | 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-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 67° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1156.6 | 1156.6 | 1156.6 | 1156.6 | 1156.6 | 1156.6 | 1156.6 | 1156.6 | 1156.6 | 1156.6 | 1156.6 |
| 2.5° | 1195.7 | 1198.2 | 1197.9 | 1199.7 | 1204.0 | 1204.3 | 1200.0 | 1191.8 | 1189.9 | 1179.2 | 1160.6 |
| 5° | 1102.8 | 1109.8 | 1114.1 | 1131.5 | 1151.1 | 1174.6 | 1192.4 | 1198.8 | 1197.9 | 1190.2 | 1162.1 |
| 7.5° | 996.6 | 1003.6 | 1008.5 | 1029.0 | 1055.0 | 1095.4 | 1141.6 | 1179.5 | 1182.9 | 1191.2 | 1160.9 |
| 10° | 925.9 | 927.2 | 933.9 | 953.5 | 980.7 | 1022.0 | 1077.1 | 1143.4 | 1153.5 | 1183.8 | 1157.8 |
| 12.5° | 867.8 | 868.7 | 877.6 | 898.7 | 927.8 | 969.4 | 1027.2 | 1104.0 | 1119.6 | 1174.6 | 1157.2 |
| 15° | 826.5 | 829.9 | 837.8 | 859.9 | 890.8 | 932.1 | 991.4 | 1074.9 | 1093.6 | 1171.3 | 1162.7 |
| 17.5° | 812.8 | 816.4 | 818.9 | 834.8 | 862.9 | 903.3 | 964.2 | 1055.9 | 1077.1 | 1173.1 | 1173.4 |
| 20° | 827.1 | 829.9 | 824.4 | 828.4 | 845.8 | 881.9 | 941.2 | 1039.7 | 1064.8 | 1175.2 | 1187.2 |
| 22.5° | 880.7 | 881.9 | 866.9 | 849.5 | 846.4 | 866.3 | 923.2 | 1026.9 | 1053.8 | 1181.1 | 1203.4 |
| 25° | 972.4 | 970.3 | 945.8 | 908.2 | 872.7 | 863.5 | 912.5 | 1018.9 | 1048.3 | 1187.2 | 1220.2 |
| 27.5° | 1083.2 | 1086.2 | 1052.6 | 997.8 | 930.2 | 881.9 | 911.0 | 1015.6 | 1045.9 | 1191.5 | 1234.9 |
| 30° | 1217.8 | 1222.0 | 1183.5 | 1114.7 | 1017.7 | 927.2 | 925.0 | 1015.0 | 1044.3 | 1188.7 | 1236.1 |
| 32.5° | 1355.1 | 1360.3 | 1330.0 | 1259.1 | 1134.6 | 1003.0 | 956.8 | 1021.7 | 1047.4 | 1179.2 | 1229.1 |
| 35° | 1498.9 | 1506.2 | 1486.0 | 1425.2 | 1293.0 | 1112.5 | 1012.8 | 1042.2 | 1061.8 | 1178.3 | 1222.0 |
| 37.5° | 1697.4 | 1704.1 | 1666.2 | 1601.7 | 1484.8 | 1259.4 | 1102.8 | 1080.7 | 1095.7 | 1193.0 | 1223.9 |
| 40° | 1993.8 | 1992.9 | 1895.0 | 1796.2 | 1695.6 | 1446.0 | 1229.1 | 1150.5 | 1158.1 | 1237.3 | 1246.5 |
| 42.5° | 2316.8 | 2315.3 | 2170.6 | 2020.4 | 1929.6 | 1675.7 | 1395.2 | 1271.0 | 1265.8 | 1319.0 | 1305.3 |
| 45° | 2565.8 | 2565.5 | 2447.5 | 2278.3 | 2211.3 | 1939.4 | 1609.9 | 1438.6 | 1430.7 | 1451.8 | 1413.5 |
| 47.5° | 2672.0 | 2673.8 | 2614.5 | 2495.5 | 2523.6 | 2296.0 | 1880.6 | 1681.5 | 1669.6 | 1661.0 | 1602.9 |
| 50° | 2589.4 | 2593.1 | 2598.0 | 2574.7 | 2752.7 | 2775.4 | 2243.7 | 2023.8 | 2018.0 | 1979.8 | 1888.9 |
| 52.5° | 2319.6 | 2338.3 | 2395.8 | 2469.5 | 2832.3 | 3235.4 | 2813.0 | 2449.0 | 2417.8 | 2377.1 | 2277.1 |
| 55° | 1865.0 | 1885.5 | 1994.7 | 2173.7 | 2713.9 | 3537.7 | 3610.8 | 2997.2 | 2945.2 | 2823.7 | 2679.3 |
| 57.5° | 1234.3 | 1266.1 | 1424.6 | 1652.1 | 2370.1 | 3586.3 | 4406.7 | 3757.9 | 3576.8 | 3244.3 | 3081.6 |
| 60° | 680.0 | 710.6 | 882.5 | 1088.7 | 1711.8 | 3345.9 | 4942.0 | 4748.4 | 4428.4 | 3714.5 | 3570.1 |
| 62.5° | 418.8 | 435.3 | 562.2 | 754.0 | 1026.6 | 2640.8 | 5052.8 | 5993.1 | 5622.7 | 4319.8 | 4160.2 |
| 65° | 333.4 | 340.5 | 402.6 | 616.4 | 736.0 | 1570.8 | 4695.2 | 6942.0 | 6818.4 | 5052.8 | 4688.4 |
| 67° | 323.6 | 326.4 | 355.8 | 529.2 | 693.8 | 963.0 | 3933.5 | 7096.5 | 7221.9 | 5496.3 | 4705.0 |
| 67.5° | 325.8 | 328.8 | 356.7 | 505.0 | 692.5 | 885.0 | 3671.0 | 7035.6 | 7194.0 | 5531.5 | 4631.9 |
| 70° | 314.2 | 323.6 | 408.4 | 504.7 | 658.6 | 735.4 | 2198.5 | 6095.9 | 6260.7 | 5139.6 | 3930.1 |
| 72.5° | 111.3 | 112.0 | 176.5 | 408.4 | 716.1 | 743.3 | 1104.0 | 4468.8 | 4590.9 | 3931.7 | 2833.5 |
| 75° | 66.1 | 56.3 | 58.7 | 116.2 | 684.3 | 721.9 | 636.9 | 2855.5 | 2901.1 | 2252.9 | 1435.0 |
| 77.5° | 45.6 | 39.8 | 41.0 | 51.4 | 260.6 | 711.8 | 506.0 | 1489.1 | 1440.5 | 790.1 | 305.6 |
| 80° | 26.0 | 22.9 | 24.5 | 45.0 | 94.8 | 664.1 | 477.2 | 603.8 | 514.8 | 134.0 | 84.4 |
| 82.5° | 13.8 | 11.6 | 14.1 | 37.0 | 66.1 | 413.9 | 478.1 | 291.8 | 231.3 | 45.3 | 57.5 |
| 85° | 4.9 | 4.0 | 6.7 | 25.4 | 44.0 | 126.9 | 443.2 | 245.3 | 192.7 | 22.0 | 43.7 |
| 87.5° | 0.9 | 0.9 | 2.8 | 10.4 | 17.7 | 38.8 | 262.2 | 145.6 | 97.6 | 13.2 | 30.0 |
| 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° | 1156.6 | 1156.6 | 1156.6 | 1156.6 | 1156.6 | 1156.6 | 1156.6 | 1156.6 | 1156.6 | 1156.6 | 1156.6 |
| 2.5° | 1152.9 | 1139.8 | 1122.0 | 1100.3 | 1074.6 | 1052.0 | 1035.1 | 1017.7 | 1014.0 | 1007.9 | 1007.0 |
| 5° | 1145.3 | 1122.6 | 1078.6 | 1028.1 | 974.3 | 925.6 | 886.2 | 851.0 | 835.4 | 821.9 | 820.4 |
| 7.5° | 1134.0 | 1100.0 | 1025.1 | 943.7 | 859.6 | 783.1 | 718.2 | 672.4 | 630.1 | 610.0 | 606.9 |
| 10° | 1120.8 | 1072.2 | 964.8 | 851.9 | 735.7 | 627.7 | 531.3 | 450.6 | 401.6 | 372.6 | 368.9 |
| 12.5° | 1108.6 | 1044.9 | 903.3 | 756.8 | 602.3 | 457.9 | 334.0 | 257.0 | 205.6 | 184.8 | 182.3 |
| 15° | 1102.8 | 1022.9 | 845.8 | 659.5 | 462.8 | 291.5 | 182.6 | 141.3 | 124.5 | 119.6 | 119.3 |
| 17.5° | 1102.1 | 1004.3 | 789.5 | 558.9 | 324.2 | 169.5 | 119.0 | 108.6 | 105.2 | 104.0 | 104.0 |
| 20° | 1101.8 | 986.5 | 733.2 | 454.6 | 205.9 | 112.9 | 99.1 | 96.7 | 94.2 | 92.7 | 92.7 |
| 22.5° | 1105.2 | 970.6 | 674.5 | 348.1 | 129.7 | 91.5 | 87.2 | 84.7 | 81.7 | 79.5 | 79.2 |
| 25° | 1108.6 | 958.4 | 614.5 | 247.8 | 93.9 | 79.5 | 75.3 | 71.9 | 67.6 | 64.8 | 64.5 |
| 27.5° | 1109.2 | 943.1 | 550.3 | 165.8 | 78.6 | 69.4 | 63.9 | 58.7 | 53.8 | 51.1 | 50.8 |
| 30° | 1100.0 | 917.4 | 479.0 | 112.0 | 69.4 | 60.3 | 52.9 | 47.4 | 42.8 | 40.7 | 40.7 |
| 32.5° | 1081.9 | 885.6 | 400.7 | 84.4 | 61.8 | 51.7 | 43.7 | 38.5 | 35.5 | 34.6 | 34.3 |
| 35° | 1065.7 | 851.3 | 320.3 | 71.6 | 55.4 | 43.7 | 35.8 | 32.4 | 30.6 | 30.3 | 30.0 |
| 37.5° | 1056.3 | 823.8 | 244.7 | 64.8 | 49.2 | 36.7 | 30.3 | 27.8 | 26.9 | 26.3 | 26.6 |
| 40° | 1063.6 | 800.8 | 180.8 | 59.3 | 43.1 | 30.6 | 25.7 | 24.5 | 23.6 | 23.2 | 23.2 |
| 42.5° | 1095.7 | 796.9 | 134.3 | 54.4 | 37.3 | 25.4 | 22.3 | 21.4 | 20.8 | 20.5 | 20.8 |
| 45° | 1180.1 | 821.3 | 104.3 | 49.9 | 31.5 | 21.4 | 19.0 | 18.7 | 18.4 | 18.4 | 18.4 |
| 47.5° | 1307.1 | 871.8 | 86.9 | 44.7 | 26.3 | 18.4 | 16.5 | 16.2 | 15.9 | 16.2 | 16.2 |
| 50° | 1522.1 | 964.2 | 77.7 | 39.5 | 21.7 | 15.6 | 14.1 | 14.1 | 14.1 | 14.1 | 14.4 |
| 52.5° | 1849.1 | 1145.9 | 71.6 | 34.3 | 17.7 | 13.2 | 11.9 | 11.9 | 12.2 | 12.2 | 12.5 |
| 55° | 2213.5 | 1386.9 | 66.1 | 29.1 | 15.0 | 11.0 | 9.8 | 10.1 | 10.4 | 10.7 | 10.7 |
| 57.5° | 2608.7 | 1654.0 | 61.5 | 23.9 | 12.8 | 8.9 | 8.3 | 8.6 | 8.9 | 9.5 | 9.5 |
| 60° | 3085.6 | 1943.0 | 54.8 | 18.7 | 10.7 | 7.0 | 6.4 | 7.0 | 8.0 | 8.6 | 8.9 |
| 62.5° | 3609.3 | 2222.6 | 46.2 | 14.7 | 8.9 | 5.5 | 5.2 | 6.4 | 7.6 | 8.3 | 8.6 |
| 65° | 3967.1 | 2310.4 | 35.5 | 11.9 | 6.7 | 4.0 | 4.3 | 5.8 | 7.3 | 8.3 | 8.3 |
| 67° | 3822.2 | 2094.8 | 29.1 | 10.1 | 5.5 | 3.1 | 4.0 | 5.8 | 7.3 | 8.0 | 8.3 |
| 67.5° | 3721.5 | 2010.3 | 27.8 | 9.8 | 5.2 | 3.1 | 4.0 | 5.8 | 7.3 | 8.3 | 8.3 |
| 70° | 3028.1 | 1510.2 | 23.2 | 7.3 | 4.3 | 2.8 | 3.4 | 5.5 | 7.0 | 8.0 | 8.0 |
| 72.5° | 2103.9 | 931.1 | 20.8 | 5.2 | 3.7 | 2.4 | 3.1 | 5.2 | 6.7 | 7.6 | 8.0 |
| 75° | 1000.3 | 337.1 | 17.7 | 4.0 | 3.4 | 2.1 | 2.8 | 5.2 | 6.7 | 7.6 | 7.6 |
| 77.5° | 204.0 | 78.3 | 14.4 | 3.4 | 2.8 | 2.1 | 2.4 | 4.9 | 6.4 | 7.3 | 7.3 |
| 80° | 67.0 | 30.3 | 10.7 | 3.1 | 2.8 | 2.1 | 2.4 | 4.6 | 6.4 | 7.0 | 7.3 |
| 82.5° | 48.3 | 15.3 | 7.0 | 3.1 | 2.8 | 2.1 | 2.1 | 4.6 | 6.1 | 7.0 | 7.0 |
| 85° | 37.0 | 10.7 | 4.6 | 3.1 | 2.8 | 2.1 | 2.1 | 4.3 | 5.8 | 6.7 | 6.7 |
| 87.5° | 24.5 | 4.3 | 3.7 | 3.1 | 2.8 | 2.1 | 2.1 | 4.3 | 5.5 | 6.4 | 6.7 |
| 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)