

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: P451100

Luminaire Tested: **GALN-SA2A-722-U-SL4**

Issue Date: 1/4/2021

Test Information

Test Method: LM-79-08
Report Number: P451100
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-18)
Test Lab: INNOVATION CENTER
Issue Date: 1/4/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GALN-SA2A-722-U-SL4
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(2) 70 CRI, 2200K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6617 lumens
Efficiency: N/A
Efficacy: 105.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

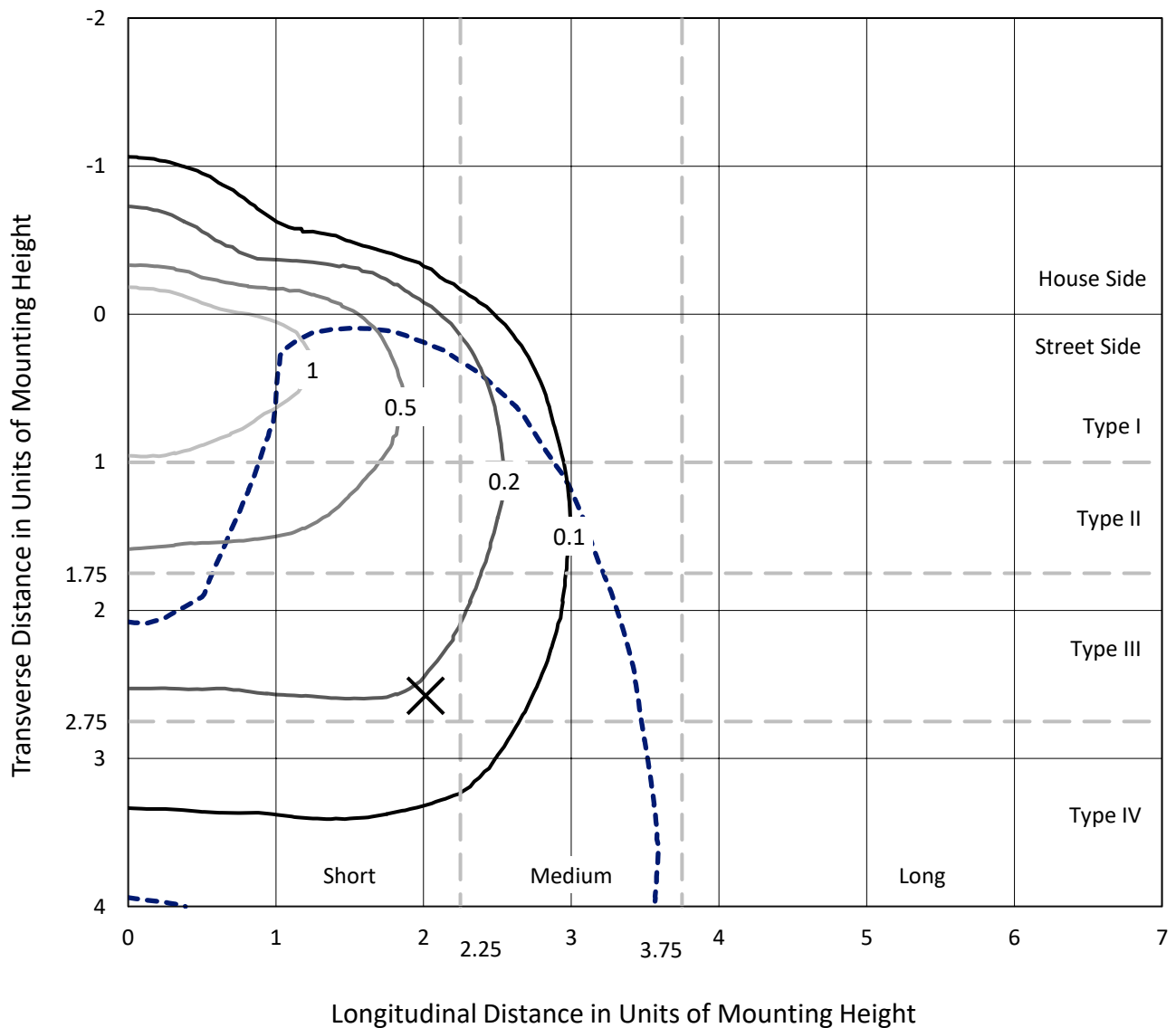
Input Watts (W): 63
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

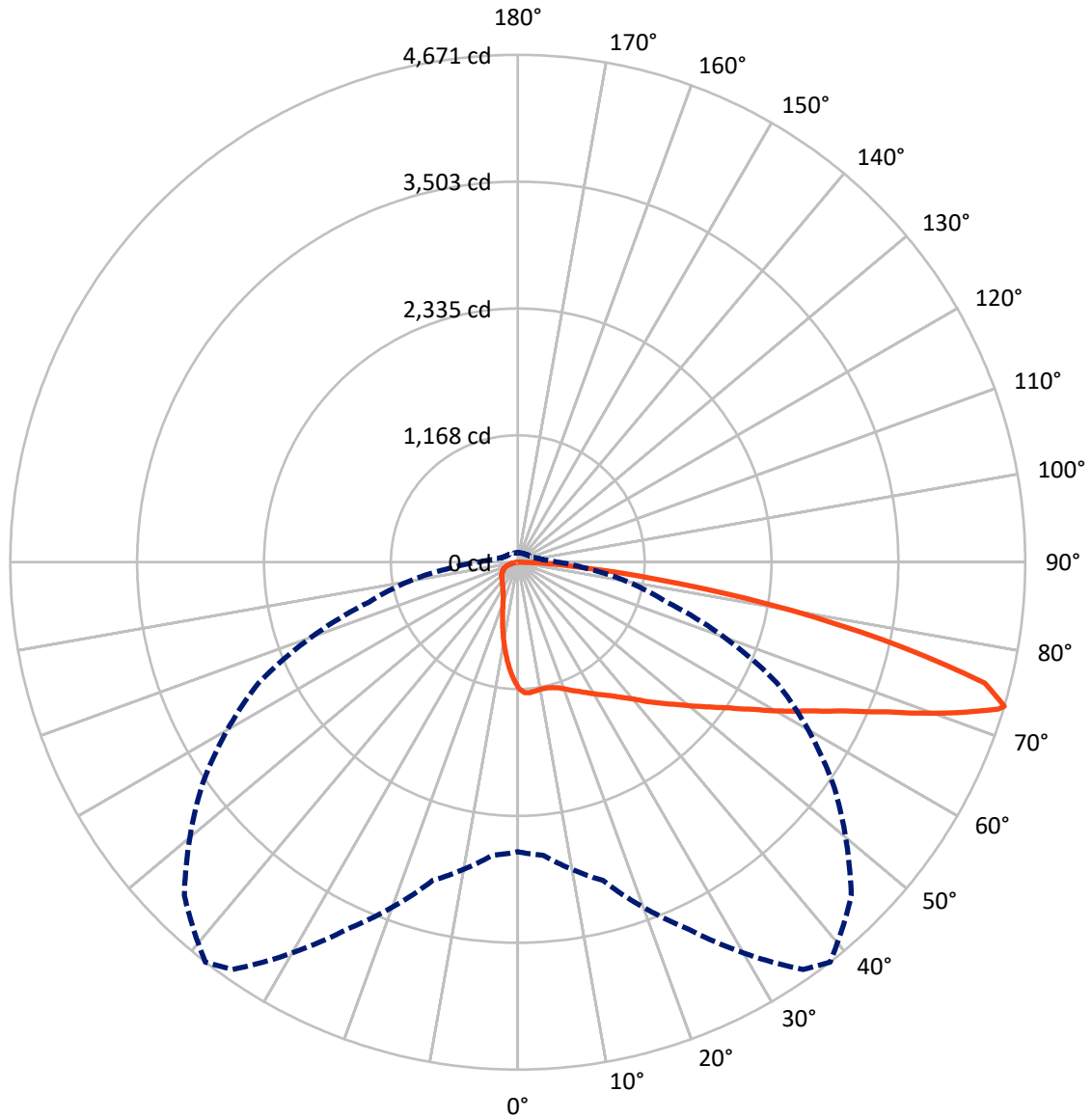
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 889.5 | 0.0 | 889.5 |
| | % Fixture | 13.4 | 0.0 | 13.4 |
| Street Side | Lumens | 5727.5 | 0.0 | 5727.5 |
| | % Fixture | 86.6 | 0.0 | 86.6 |
| Total | Lumens | 6617.0 | 0.0 | 6617.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 101.5 | 1.5 |
| 10°-20° | 260.2 | 3.9 |
| 20°-30° | 405.2 | 6.1 |
| 30°-40° | 594.3 | 9.0 |
| 40°-50° | 881.6 | 13.3 |
| 50°-60° | 1249.1 | 18.9 |
| 60°-70° | 1584.5 | 23.9 |
| 70°-80° | 1319.0 | 19.9 |
| 80°-90° | 221.6 | 3.3 |
| 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° | 6617.0 | 100.0 |
| 0°-180° | 6617.0 | 100.0 |

Coefficient of Utilization



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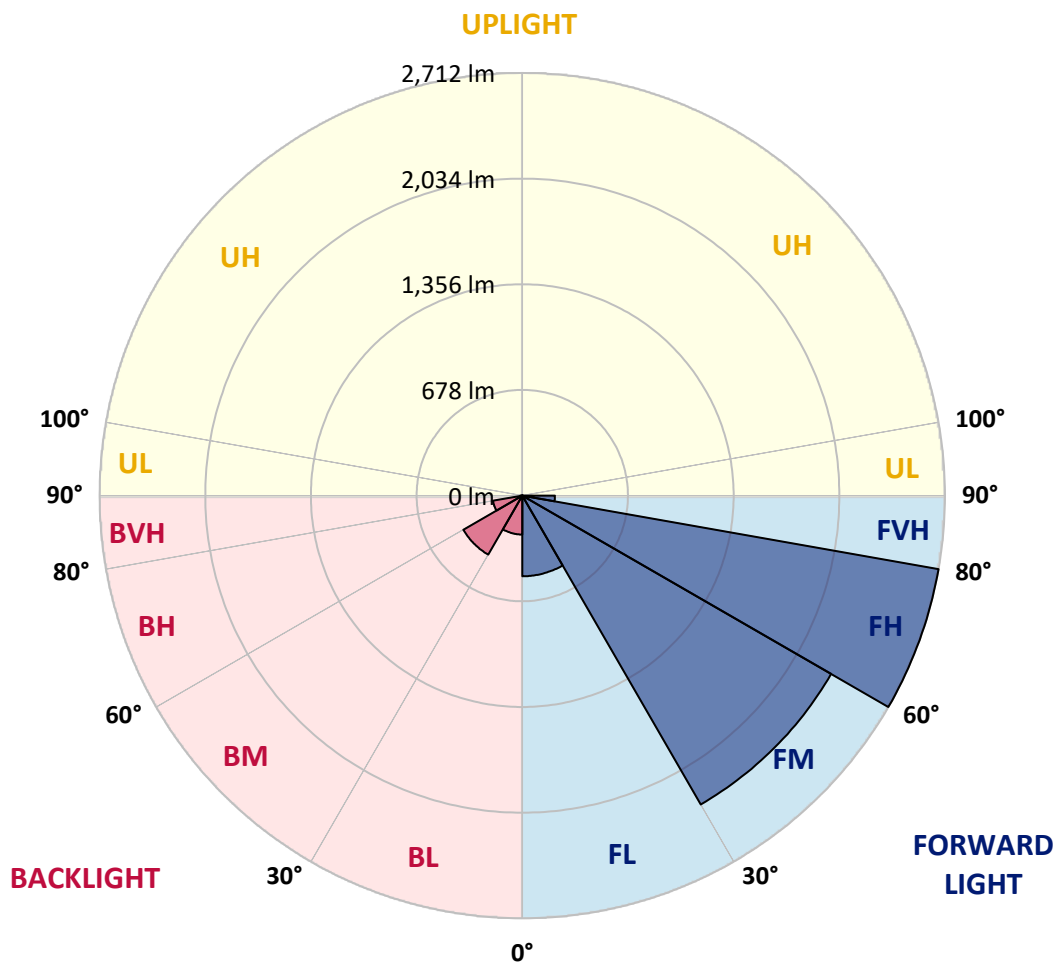
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 517.3 | 7.8 | | | |
| FM (30°-60°) | 2288.3 | 34.6 | | | |
| FH (60°-80°) | 2712.3 | 41.0 | | | G2/5000 |
| FVH (80°-90°) | 209.6 | 3.2 | | | G2/225 |
| BL (0°-30°) | 249.6 | 3.8 | B1/500 | | |
| BM (30°-60°) | 436.7 | 6.6 | B1/1000 | | |
| BH (60°-80°) | 191.2 | 2.9 | B1/500 | | G1/500 |
| BVH (80°-90°) | 12.0 | 0.2 | | | 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 IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 38° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1162.5 | 1162.5 | 1162.5 | 1162.5 | 1162.5 | 1162.5 | 1162.5 | 1162.5 | 1162.5 | 1162.5 | 1162.5 |
| 2.5° | 1209.2 | 1215.2 | 1212.2 | 1208.1 | 1205.5 | 1202.9 | 1199.1 | 1188.3 | 1179.7 | 1170.3 | 1155.8 |
| 5° | 1218.2 | 1221.9 | 1219.3 | 1214.1 | 1208.1 | 1205.5 | 1198.4 | 1184.2 | 1170.3 | 1154.6 | 1133.0 |
| 7.5° | 1212.9 | 1214.4 | 1211.4 | 1205.1 | 1199.9 | 1195.0 | 1186.8 | 1171.1 | 1154.3 | 1135.2 | 1106.8 |
| 10° | 1194.3 | 1199.9 | 1199.9 | 1194.6 | 1189.4 | 1186.8 | 1178.6 | 1163.6 | 1148.3 | 1126.6 | 1093.0 |
| 12.5° | 1178.9 | 1184.9 | 1189.8 | 1188.3 | 1187.9 | 1187.9 | 1181.6 | 1170.3 | 1152.4 | 1131.9 | 1091.9 |
| 15° | 1168.5 | 1175.6 | 1186.0 | 1192.0 | 1195.8 | 1196.9 | 1194.3 | 1184.5 | 1166.2 | 1142.3 | 1096.4 |
| 17.5° | 1166.2 | 1174.8 | 1193.9 | 1207.0 | 1216.7 | 1216.3 | 1215.6 | 1202.1 | 1181.9 | 1157.3 | 1102.0 |
| 20° | 1176.3 | 1187.5 | 1214.1 | 1234.6 | 1248.8 | 1246.2 | 1242.1 | 1224.5 | 1201.0 | 1173.3 | 1107.2 |
| 22.5° | 1206.6 | 1218.2 | 1247.3 | 1269.7 | 1283.6 | 1283.6 | 1271.2 | 1248.1 | 1223.0 | 1192.0 | 1114.3 |
| 25° | 1249.9 | 1262.6 | 1293.7 | 1316.4 | 1322.8 | 1317.9 | 1305.6 | 1277.6 | 1248.8 | 1218.9 | 1129.2 |
| 27.5° | 1303.0 | 1318.3 | 1347.1 | 1366.1 | 1364.3 | 1360.5 | 1347.8 | 1312.0 | 1283.2 | 1255.9 | 1154.6 |
| 30° | 1369.1 | 1380.3 | 1410.2 | 1414.7 | 1408.0 | 1407.3 | 1389.3 | 1353.4 | 1326.5 | 1305.6 | 1190.9 |
| 32.5° | 1431.5 | 1441.6 | 1465.5 | 1467.4 | 1455.5 | 1456.9 | 1440.1 | 1407.3 | 1391.9 | 1384.5 | 1251.8 |
| 35° | 1497.7 | 1502.9 | 1523.5 | 1521.2 | 1513.4 | 1512.3 | 1505.5 | 1474.1 | 1479.0 | 1492.4 | 1338.1 |
| 37.5° | 1553.0 | 1563.4 | 1575.0 | 1576.9 | 1576.5 | 1580.3 | 1584.7 | 1569.8 | 1597.8 | 1640.0 | 1451.3 |
| 40° | 1603.8 | 1612.8 | 1630.0 | 1635.9 | 1650.5 | 1658.0 | 1673.3 | 1673.7 | 1738.3 | 1807.8 | 1590.7 |
| 42.5° | 1638.2 | 1653.5 | 1685.6 | 1696.5 | 1732.0 | 1754.4 | 1777.2 | 1801.5 | 1895.3 | 1984.6 | 1755.1 |
| 45° | 1668.1 | 1688.3 | 1741.7 | 1775.3 | 1823.5 | 1850.8 | 1899.0 | 1949.8 | 2084.7 | 2201.7 | 1922.2 |
| 47.5° | 1713.3 | 1731.2 | 1792.5 | 1851.9 | 1924.8 | 1956.2 | 2028.3 | 2104.1 | 2280.5 | 2408.7 | 2082.1 |
| 50° | 1776.1 | 1786.9 | 1849.3 | 1946.1 | 2039.1 | 2079.5 | 2174.8 | 2284.3 | 2489.8 | 2613.1 | 2222.6 |
| 52.5° | 1856.4 | 1860.9 | 1910.6 | 2039.5 | 2162.1 | 2212.1 | 2338.4 | 2466.2 | 2672.9 | 2790.6 | 2334.0 |
| 55° | 1951.3 | 1943.8 | 1982.7 | 2138.5 | 2302.6 | 2368.0 | 2503.6 | 2650.5 | 2878.8 | 2934.1 | 2415.0 |
| 57.5° | 2045.1 | 2033.5 | 2064.5 | 2258.8 | 2476.0 | 2554.8 | 2712.9 | 2840.3 | 3062.6 | 3068.2 | 2471.8 |
| 60° | 2144.5 | 2135.9 | 2172.9 | 2400.1 | 2688.6 | 2782.0 | 2928.1 | 3037.2 | 3240.5 | 3161.6 | 2480.8 |
| 62.5° | 2246.5 | 2232.7 | 2285.4 | 2558.9 | 2928.1 | 3012.9 | 3154.5 | 3246.5 | 3415.0 | 3196.4 | 2394.5 |
| 65° | 2345.5 | 2339.2 | 2420.6 | 2747.6 | 3200.9 | 3297.3 | 3434.8 | 3497.2 | 3554.7 | 3144.1 | 2180.4 |
| 67.5° | 2450.9 | 2463.6 | 2593.7 | 2999.5 | 3556.6 | 3677.7 | 3826.0 | 3767.4 | 3594.7 | 2896.3 | 1836.2 |
| 70° | 2611.6 | 2619.8 | 2820.9 | 3329.4 | 4015.1 | 4161.2 | 4233.0 | 3863.4 | 3401.9 | 2425.9 | 1380.3 |
| 72.5° | 2680.7 | 2717.0 | 3023.8 | 3675.8 | 4536.0 | 4625.3 | 4369.7 | 3649.3 | 2833.9 | 1647.9 | 725.3 |
| 73° | 2665.4 | 2708.8 | 3033.1 | 3728.5 | 4576.7 | 4670.5 | 4340.6 | 3539.1 | 2634.4 | 1419.2 | 621.8 |
| 75° | 2474.5 | 2527.9 | 2911.7 | 3684.4 | 4497.5 | 4441.5 | 3872.0 | 3016.3 | 1780.2 | 645.3 | 283.2 |
| 77.5° | 1952.4 | 1967.8 | 2307.1 | 2975.2 | 3541.7 | 3437.8 | 2897.8 | 1885.2 | 727.2 | 239.9 | 160.7 |
| 80° | 979.4 | 1035.8 | 1300.4 | 1704.3 | 2368.3 | 2334.3 | 1829.1 | 891.6 | 303.0 | 140.9 | 106.5 |
| 82.5° | 471.2 | 511.2 | 633.4 | 831.0 | 1308.6 | 1277.6 | 905.8 | 487.3 | 192.4 | 82.2 | 62.8 |
| 85° | 303.4 | 333.3 | 403.2 | 396.5 | 538.1 | 513.8 | 406.9 | 368.8 | 114.0 | 43.0 | 43.7 |
| 87.5° | 200.3 | 219.3 | 263.1 | 210.4 | 195.8 | 177.1 | 179.7 | 207.8 | 22.4 | 16.4 | 6.0 |
| 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° | 1162.5 | 1162.5 | 1162.5 | 1162.5 | 1162.5 | 1162.5 | 1162.5 | 1162.5 | 1162.5 | 1162.5 | 1162.5 |
| 2.5° | 1149.8 | 1144.9 | 1128.9 | 1113.2 | 1098.2 | 1084.0 | 1074.7 | 1062.4 | 1054.1 | 1056.4 | 1059.7 |
| 5° | 1121.0 | 1110.2 | 1081.8 | 1054.1 | 1028.0 | 997.0 | 971.9 | 951.7 | 936.4 | 930.8 | 929.7 |
| 7.5° | 1090.7 | 1072.4 | 1031.7 | 984.3 | 939.8 | 901.3 | 856.8 | 834.8 | 809.0 | 800.0 | 797.0 |
| 10° | 1072.4 | 1047.8 | 990.6 | 924.5 | 857.6 | 793.7 | 745.5 | 706.2 | 670.7 | 664.0 | 660.7 |
| 12.5° | 1067.2 | 1034.7 | 957.7 | 872.5 | 783.6 | 705.1 | 633.7 | 582.2 | 547.8 | 540.0 | 528.4 |
| 15° | 1064.2 | 1023.9 | 927.1 | 820.2 | 707.4 | 611.7 | 536.6 | 476.4 | 445.0 | 424.1 | 424.5 |
| 17.5° | 1061.6 | 1011.5 | 892.7 | 763.0 | 641.6 | 531.4 | 448.4 | 394.2 | 365.5 | 354.2 | 353.1 |
| 20° | 1057.9 | 997.0 | 853.1 | 702.9 | 566.5 | 458.1 | 383.0 | 342.7 | 323.2 | 313.9 | 313.5 |
| 22.5° | 1056.4 | 982.8 | 814.2 | 641.6 | 500.0 | 401.7 | 339.7 | 311.3 | 298.9 | 292.6 | 292.6 |
| 25° | 1060.1 | 972.7 | 773.5 | 583.3 | 440.9 | 353.5 | 309.8 | 290.3 | 283.2 | 279.9 | 278.8 |
| 27.5° | 1071.7 | 968.2 | 733.1 | 525.0 | 386.8 | 320.6 | 289.6 | 276.1 | 270.9 | 268.3 | 268.7 |
| 30° | 1093.7 | 967.8 | 693.5 | 467.5 | 346.4 | 295.6 | 273.5 | 264.2 | 260.1 | 258.6 | 258.2 |
| 32.5° | 1129.2 | 976.0 | 654.7 | 420.0 | 312.4 | 274.6 | 258.6 | 251.9 | 250.0 | 248.9 | 248.5 |
| 35° | 1189.4 | 999.2 | 616.2 | 376.7 | 286.2 | 256.0 | 244.4 | 241.0 | 238.4 | 239.5 | 239.9 |
| 37.5° | 1270.5 | 1039.2 | 579.6 | 342.7 | 266.4 | 242.1 | 232.4 | 229.4 | 227.9 | 229.1 | 230.2 |
| 40° | 1379.2 | 1096.7 | 548.9 | 315.4 | 252.2 | 230.6 | 222.0 | 219.3 | 217.9 | 219.7 | 220.1 |
| 42.5° | 1499.2 | 1163.2 | 523.5 | 294.1 | 240.6 | 220.8 | 212.6 | 209.6 | 208.5 | 209.6 | 210.0 |
| 45° | 1622.5 | 1240.6 | 510.4 | 278.8 | 230.9 | 213.7 | 205.1 | 201.8 | 199.2 | 198.4 | 199.5 |
| 47.5° | 1743.9 | 1307.9 | 510.1 | 269.4 | 223.1 | 207.4 | 198.0 | 194.3 | 190.9 | 189.1 | 188.7 |
| 50° | 1843.0 | 1361.3 | 519.0 | 265.3 | 216.4 | 200.3 | 190.9 | 187.2 | 182.7 | 179.0 | 179.7 |
| 52.5° | 1917.7 | 1396.0 | 523.1 | 263.4 | 212.6 | 192.8 | 183.5 | 180.1 | 174.9 | 170.0 | 170.0 |
| 55° | 1965.9 | 1404.3 | 513.1 | 261.6 | 209.6 | 185.0 | 174.9 | 171.9 | 166.7 | 161.8 | 161.8 |
| 57.5° | 1982.3 | 1378.9 | 476.8 | 257.1 | 206.6 | 178.2 | 166.3 | 163.7 | 159.6 | 154.7 | 154.0 |
| 60° | 1944.2 | 1292.9 | 413.3 | 243.6 | 200.7 | 171.1 | 156.9 | 155.8 | 154.3 | 150.2 | 149.8 |
| 62.5° | 1797.4 | 1110.6 | 344.2 | 226.1 | 190.6 | 163.7 | 148.3 | 150.2 | 151.3 | 149.1 | 148.7 |
| 65° | 1553.0 | 901.7 | 294.1 | 201.8 | 177.1 | 153.2 | 139.0 | 143.9 | 146.9 | 146.9 | 146.1 |
| 67.5° | 1259.6 | 692.4 | 247.7 | 180.9 | 160.3 | 139.0 | 128.5 | 132.3 | 134.5 | 133.8 | 135.6 |
| 70° | 895.3 | 469.0 | 201.8 | 156.9 | 139.0 | 122.9 | 115.1 | 115.1 | 113.6 | 112.8 | 112.8 |
| 72.5° | 434.2 | 267.9 | 163.7 | 131.2 | 118.5 | 105.0 | 98.6 | 96.0 | 93.0 | 92.7 | 90.8 |
| 73° | 362.8 | 240.3 | 156.2 | 126.3 | 113.6 | 102.4 | 95.3 | 91.2 | 89.3 | 87.8 | 87.4 |
| 75° | 220.8 | 182.4 | 130.4 | 106.5 | 96.8 | 88.2 | 81.8 | 78.1 | 76.2 | 75.1 | 74.7 |
| 77.5° | 145.4 | 136.0 | 101.3 | 81.5 | 74.0 | 68.8 | 66.1 | 62.4 | 61.3 | 59.8 | 59.8 |
| 80° | 108.4 | 103.9 | 72.5 | 57.5 | 53.1 | 48.6 | 47.8 | 47.1 | 44.1 | 42.2 | 41.5 |
| 82.5° | 69.9 | 74.0 | 49.3 | 38.5 | 33.6 | 29.9 | 30.3 | 31.4 | 28.4 | 25.8 | 25.0 |
| 85° | 49.7 | 53.4 | 29.9 | 17.6 | 14.2 | 12.3 | 13.8 | 12.3 | 12.7 | 10.1 | 8.2 |
| 87.5° | 8.2 | 14.2 | 5.2 | 2.2 | 1.1 | 0.7 | 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)