

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: P300463

Luminaire Tested: **GLNA-AF-09-LED-E1-AFL-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P300463
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24165)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-09-LED-E1-AFL-7027-600
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 2700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Automotive Frontline OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 31140.6 lumens
Efficiency: N/A
Efficacy: 107.4 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B3 - U0 - G3

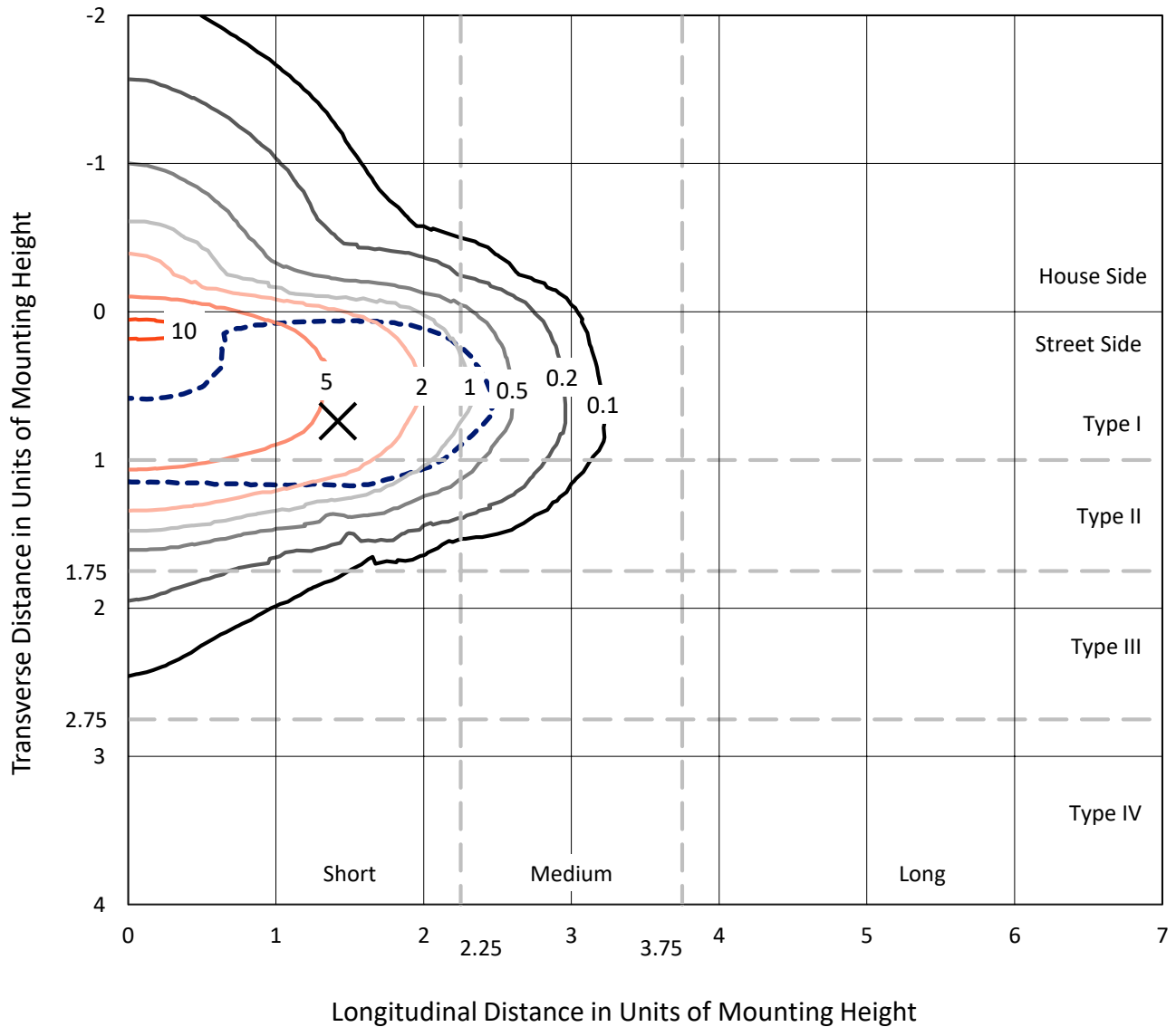
Input Watts (W): 290
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

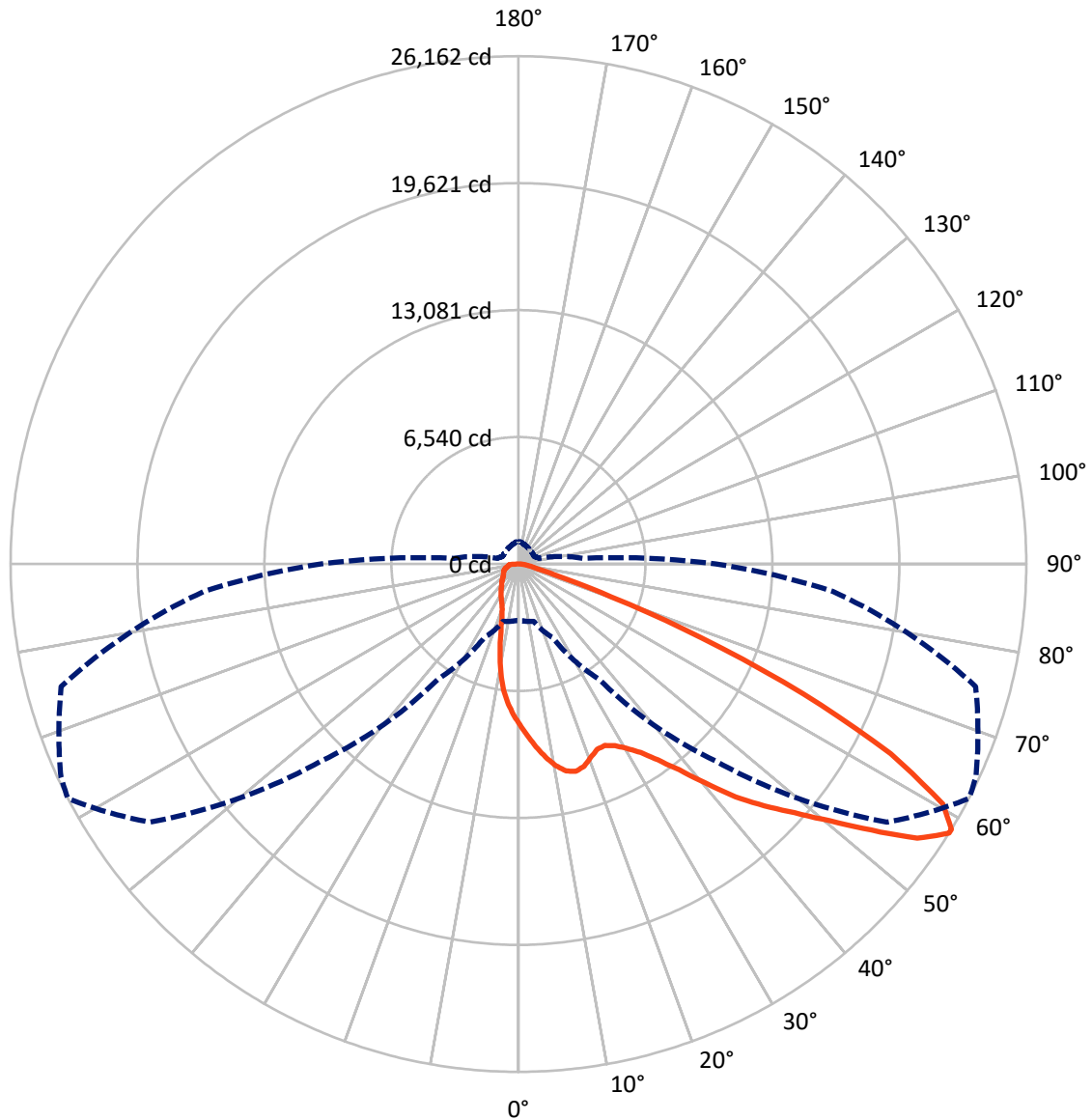
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 11.2 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral - - - Horizontal Cone Through 58-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 4749.1 | 0.0 | 4749.1 |
| | % Fixture | 15.3 | 0.0 | 15.3 |
| Street Side | Lumens | 26391.5 | 0.0 | 26391.5 |
| | % Fixture | 84.7 | 0.0 | 84.7 |
| Total | Lumens | 31140.6 | 0.0 | 31140.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 739.8 | 2.4 |
| 10°-20° | 1891.0 | 6.1 |
| 20°-30° | 3056.9 | 9.8 |
| 30°-40° | 4852.8 | 15.6 |
| 40°-50° | 7100.7 | 22.8 |
| 50°-60° | 7426.7 | 23.8 |
| 60°-70° | 4387.7 | 14.1 |
| 70°-80° | 1236.0 | 4.0 |
| 80°-90° | 448.8 | 1.4 |
| 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° | 31140.6 | 100.0 |
| 0°-180° | 31140.6 | 100.0 |



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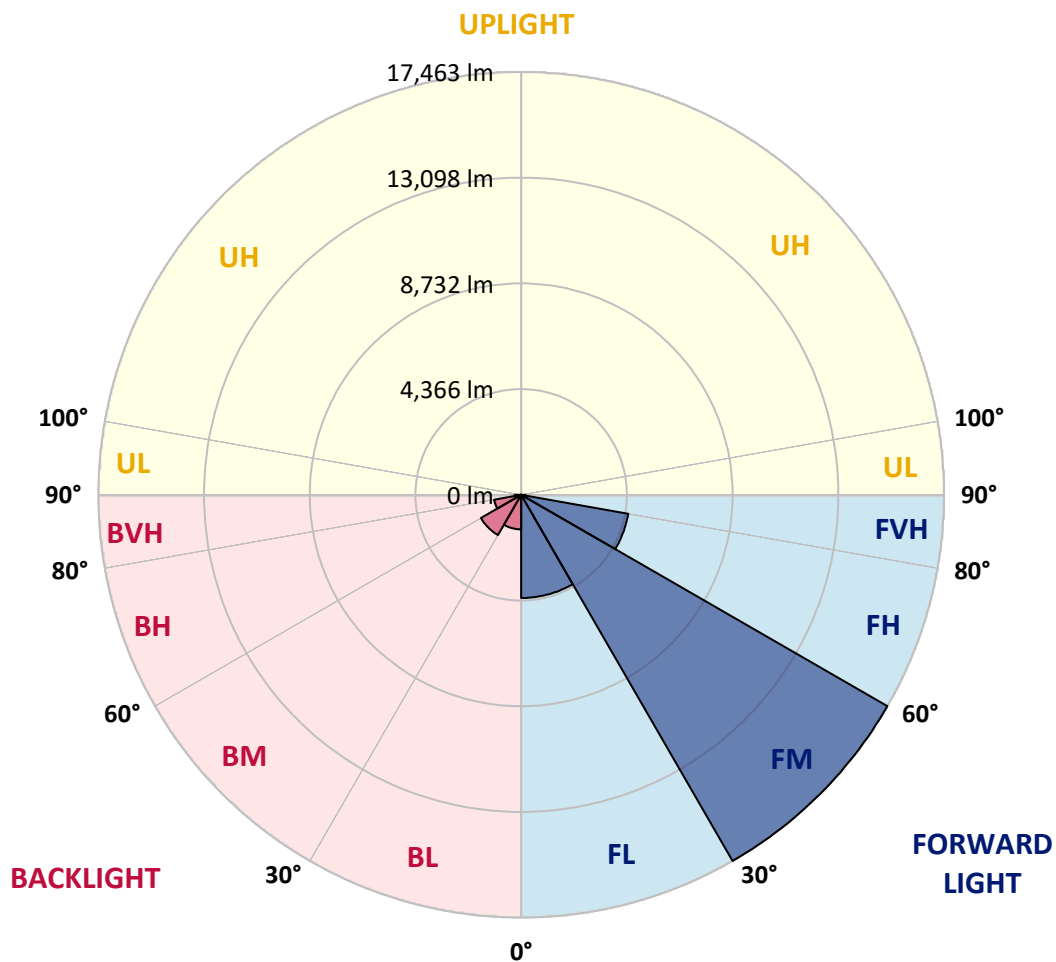
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 4260.4 | 13.7 | | | |
| FM (30°-60°) | 17463.5 | 56.1 | | | |
| FH (60°-80°) | 4490.6 | 14.4 | | | G2/5000 |
| FVH (80°-90°) | 177.0 | 0.6 | | | G2/225 |
| BL (0°-30°) | 1427.3 | 4.6 | B3/2500 | | |
| BM (30°-60°) | 1916.8 | 6.2 | B2/2500 | | |
| BH (60°-80°) | 1133.2 | 3.6 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 271.7 | 0.9 | | | G3/500 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G3

Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 62.5° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 8271.9 | 8271.9 | 8271.9 | 8271.9 | 8271.9 | 8271.9 | 8271.9 | 8271.9 | 8271.9 | 8271.9 | 8271.9 |
| 2.5° | 9452.3 | 9376.0 | 9327.6 | 9285.1 | 9229.4 | 9110.6 | 8950.8 | 8849.6 | 8798.3 | 8623.8 | 8417.0 |
| 5° | 10379.0 | 10311.6 | 10261.7 | 10204.5 | 10104.8 | 9918.6 | 9660.5 | 9455.2 | 9354.0 | 9005.0 | 8591.5 |
| 7.5° | 10162.0 | 10189.9 | 10276.4 | 10427.4 | 10556.5 | 10531.5 | 10301.3 | 10040.3 | 9906.9 | 9421.5 | 8793.9 |
| 10° | 8854.0 | 8902.4 | 9052.0 | 9405.4 | 9977.3 | 10563.8 | 10742.7 | 10562.3 | 10427.4 | 9833.6 | 9002.1 |
| 12.5° | 8591.5 | 8590.1 | 8601.8 | 8695.6 | 9035.8 | 9861.4 | 10757.4 | 10939.2 | 10858.6 | 10226.5 | 9214.7 |
| 15° | 8698.6 | 8701.5 | 8692.7 | 8732.3 | 8837.9 | 9164.9 | 10308.7 | 11084.4 | 11141.6 | 10622.5 | 9434.7 |
| 17.5° | 8980.1 | 8972.8 | 8939.1 | 8939.1 | 8977.2 | 9104.8 | 9780.8 | 10949.5 | 11213.4 | 10972.9 | 9628.3 |
| 20° | 9452.3 | 9418.6 | 9329.1 | 9247.0 | 9205.9 | 9274.9 | 9563.7 | 10638.6 | 11088.8 | 11279.4 | 9788.1 |
| 22.5° | 10024.2 | 9997.8 | 9852.6 | 9676.6 | 9534.4 | 9532.9 | 9675.2 | 10367.3 | 10873.2 | 11568.3 | 9923.0 |
| 25° | 10763.2 | 10720.7 | 10505.2 | 10223.6 | 9974.3 | 9879.0 | 9918.6 | 10354.1 | 10755.9 | 11882.1 | 10043.2 |
| 27.5° | 11631.3 | 11553.6 | 11298.5 | 10892.3 | 10525.7 | 10333.6 | 10276.4 | 10593.1 | 10863.0 | 12270.7 | 10210.4 |
| 30° | 12684.2 | 12594.7 | 12267.7 | 11738.4 | 11220.7 | 10905.5 | 10783.8 | 11016.9 | 11217.8 | 12744.3 | 10478.8 |
| 32.5° | 13882.2 | 13753.2 | 13374.9 | 12791.2 | 12110.8 | 11629.9 | 11431.9 | 11577.1 | 11736.9 | 13314.7 | 10814.6 |
| 35° | 15537.8 | 15383.8 | 14836.8 | 14031.8 | 13263.4 | 12602.1 | 12285.3 | 12390.9 | 12546.4 | 14165.2 | 11299.9 |
| 37.5° | 16666.9 | 16598.0 | 16234.3 | 15477.7 | 14641.8 | 13880.8 | 13391.0 | 13452.6 | 13540.6 | 15228.4 | 11921.7 |
| 40° | 16656.6 | 16684.5 | 16691.8 | 16699.1 | 16130.2 | 15401.4 | 14875.0 | 14810.4 | 14792.9 | 16395.6 | 12628.5 |
| 42.5° | 15822.3 | 15936.6 | 16306.2 | 17055.5 | 17401.5 | 17067.2 | 16584.8 | 16398.5 | 16306.2 | 17771.1 | 13377.8 |
| 45° | 14545.0 | 14606.6 | 15298.8 | 16762.2 | 18052.6 | 18716.9 | 18351.8 | 17765.2 | 17598.0 | 19035.1 | 13999.5 |
| 47.5° | 13886.6 | 13954.1 | 14389.6 | 15985.0 | 18045.3 | 20049.8 | 20261.0 | 19143.6 | 18844.5 | 20134.9 | 14536.2 |
| 50° | 12319.1 | 12459.8 | 13008.3 | 14633.0 | 17386.9 | 20662.8 | 22256.7 | 20786.0 | 20167.1 | 21205.3 | 15074.4 |
| 52.5° | 9440.6 | 9657.6 | 10272.0 | 12410.0 | 15716.7 | 20359.2 | 23853.6 | 22777.3 | 21903.3 | 22313.9 | 15536.3 |
| 55° | 5955.0 | 6116.3 | 6632.4 | 8764.6 | 12572.8 | 18779.9 | 24459.2 | 24931.4 | 24154.2 | 23363.8 | 15936.6 |
| 57.5° | 3237.8 | 3309.6 | 3503.2 | 4839.1 | 8178.0 | 15288.5 | 23576.5 | 26157.3 | 25834.7 | 24255.4 | 16238.7 |
| 58° | 2897.6 | 2946.0 | 3066.2 | 4193.8 | 7252.7 | 14333.9 | 23185.0 | 26161.7 | 26000.4 | 24385.9 | 16262.2 |
| 60° | 2149.7 | 2124.8 | 2017.7 | 2393.1 | 4036.9 | 9902.5 | 20818.2 | 25114.7 | 25588.3 | 24545.8 | 16147.8 |
| 62.5° | 1888.7 | 1828.6 | 1610.1 | 1585.2 | 1963.5 | 4561.9 | 15929.3 | 21513.3 | 22632.1 | 23633.7 | 15452.7 |
| 65° | 1774.3 | 1709.8 | 1428.3 | 1337.3 | 1416.5 | 1929.8 | 9383.4 | 16134.6 | 17537.9 | 20868.1 | 13675.5 |
| 67.5° | 1689.3 | 1605.7 | 1312.4 | 1187.8 | 1193.6 | 1275.8 | 3761.3 | 10162.0 | 11741.3 | 15844.2 | 10637.1 |
| 70° | 1607.2 | 1516.2 | 1214.2 | 1070.5 | 1036.7 | 1008.9 | 1495.7 | 5086.9 | 6519.5 | 10008.1 | 6782.0 |
| 72.5° | 1519.2 | 1429.7 | 1127.6 | 978.1 | 912.1 | 819.7 | 976.6 | 2080.8 | 2906.4 | 4734.9 | 3076.5 |
| 75° | 1391.6 | 1310.9 | 1041.1 | 896.0 | 802.1 | 678.9 | 737.6 | 1086.6 | 1303.6 | 1885.8 | 1482.5 |
| 77.5° | 1234.7 | 1168.7 | 944.3 | 828.5 | 711.2 | 551.4 | 567.5 | 753.7 | 835.8 | 1079.3 | 881.3 |
| 80° | 887.2 | 910.6 | 840.2 | 744.9 | 633.5 | 447.2 | 435.5 | 549.9 | 593.9 | 693.6 | 573.4 |
| 82.5° | 623.2 | 636.4 | 695.1 | 608.5 | 523.5 | 351.9 | 321.1 | 387.1 | 413.5 | 456.0 | 309.4 |
| 85° | 429.6 | 415.0 | 476.6 | 423.8 | 378.3 | 234.6 | 220.0 | 262.5 | 278.6 | 283.0 | 159.8 |
| 87.5° | 258.1 | 258.1 | 275.7 | 227.3 | 203.8 | 121.7 | 118.8 | 149.6 | 159.8 | 152.5 | 88.0 |
| 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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CATALOG NUMBER: GLNA-AF-09-LED-E1-AFL-7027-600

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 8271.9 | 8271.9 | 8271.9 | 8271.9 | 8271.9 | 8271.9 | 8271.9 | 8271.9 | 8271.9 | 8271.9 | 8271.9 |
| 2.5° | 8293.9 | 8189.7 | 7968.3 | 7790.9 | 7566.5 | 7333.4 | 7202.9 | 7063.6 | 6968.2 | 6899.3 | 7009.3 |
| 5° | 8356.9 | 8144.3 | 7686.8 | 7252.7 | 6773.2 | 6274.6 | 5896.3 | 5544.4 | 5299.5 | 5147.0 | 5290.7 |
| 7.5° | 8456.6 | 8129.6 | 7400.8 | 6658.8 | 5798.1 | 4968.1 | 4226.1 | 3761.3 | 3490.0 | 3356.5 | 3440.1 |
| 10° | 8571.0 | 8106.2 | 7065.0 | 5853.8 | 4622.0 | 3576.5 | 3022.2 | 2834.5 | 2772.9 | 2748.0 | 2759.7 |
| 12.5° | 8666.3 | 8056.3 | 6653.0 | 4880.1 | 3470.9 | 2824.2 | 2664.4 | 2660.0 | 2673.2 | 2676.1 | 2680.5 |
| 15° | 8733.8 | 7983.0 | 6041.5 | 3865.4 | 2775.9 | 2573.5 | 2564.7 | 2591.1 | 2616.0 | 2626.3 | 2632.2 |
| 17.5° | 8779.2 | 7831.9 | 5350.8 | 3055.9 | 2487.0 | 2451.8 | 2472.3 | 2506.0 | 2532.4 | 2539.8 | 2545.6 |
| 20° | 8774.8 | 7610.5 | 4528.2 | 2548.6 | 2330.1 | 2330.1 | 2365.3 | 2391.7 | 2393.1 | 2384.3 | 2388.7 |
| 22.5° | 8729.4 | 7307.0 | 3730.5 | 2278.8 | 2190.8 | 2215.7 | 2250.9 | 2226.0 | 2123.3 | 2055.9 | 2060.3 |
| 25° | 8653.1 | 6944.8 | 3047.1 | 2107.2 | 2061.7 | 2105.7 | 2095.5 | 1907.8 | 1761.1 | 1695.1 | 1695.1 |
| 27.5° | 8585.7 | 6516.6 | 2522.2 | 1957.6 | 1932.7 | 1986.9 | 1805.1 | 1635.0 | 1573.4 | 1542.6 | 1532.4 |
| 30° | 8537.3 | 6054.7 | 2171.7 | 1813.9 | 1811.0 | 1771.4 | 1566.1 | 1519.2 | 1508.9 | 1484.0 | 1475.2 |
| 32.5° | 8549.0 | 5586.9 | 1947.4 | 1687.8 | 1698.1 | 1516.2 | 1451.7 | 1462.0 | 1453.2 | 1426.8 | 1415.1 |
| 35° | 8645.8 | 5142.6 | 1800.7 | 1573.4 | 1542.6 | 1369.6 | 1384.3 | 1403.3 | 1400.4 | 1363.7 | 1352.0 |
| 37.5° | 8818.8 | 4721.7 | 1703.9 | 1478.1 | 1346.1 | 1296.3 | 1319.7 | 1349.1 | 1341.7 | 1316.8 | 1308.0 |
| 40° | 9000.6 | 4325.8 | 1624.8 | 1403.3 | 1230.3 | 1246.4 | 1267.0 | 1283.1 | 1290.4 | 1297.7 | 1291.9 |
| 42.5° | 9178.1 | 3912.3 | 1528.0 | 1327.1 | 1181.9 | 1199.5 | 1208.3 | 1224.4 | 1264.0 | 1291.9 | 1290.4 |
| 45° | 9283.7 | 3523.7 | 1428.3 | 1218.6 | 1143.8 | 1154.0 | 1148.2 | 1180.4 | 1228.8 | 1274.3 | 1275.8 |
| 47.5° | 9401.0 | 3221.6 | 1349.1 | 1118.8 | 1107.1 | 1114.4 | 1096.9 | 1129.1 | 1173.1 | 1228.8 | 1234.7 |
| 50° | 9543.2 | 3041.3 | 1286.0 | 1039.7 | 1057.3 | 1057.3 | 1052.9 | 1082.2 | 1143.8 | 1208.3 | 1220.0 |
| 52.5° | 9704.5 | 3006.1 | 1233.2 | 982.5 | 1007.4 | 1005.9 | 1010.3 | 1054.3 | 1121.8 | 1184.8 | 1195.1 |
| 55° | 9901.0 | 3101.4 | 1176.0 | 940.0 | 959.0 | 964.9 | 979.5 | 1029.4 | 1086.6 | 1158.4 | 1162.8 |
| 57.5° | 10129.8 | 3295.0 | 1130.6 | 906.2 | 915.0 | 934.1 | 957.5 | 1003.0 | 1064.6 | 1143.8 | 1148.2 |
| 58° | 10167.9 | 3336.0 | 1123.2 | 903.3 | 906.2 | 928.2 | 954.6 | 998.6 | 1060.2 | 1146.7 | 1151.1 |
| 60° | 10169.4 | 3472.4 | 1107.1 | 890.1 | 872.5 | 909.2 | 938.5 | 982.5 | 1052.9 | 1157.0 | 1167.2 |
| 62.5° | 9808.6 | 3470.9 | 1095.4 | 871.0 | 837.3 | 882.8 | 916.5 | 967.8 | 1045.5 | 1181.9 | 1202.4 |
| 65° | 8637.0 | 3154.2 | 1039.7 | 841.7 | 809.4 | 859.3 | 897.4 | 957.5 | 1066.1 | 1290.4 | 1303.6 |
| 67.5° | 6755.6 | 2585.2 | 935.6 | 800.6 | 772.8 | 835.8 | 885.7 | 956.1 | 1088.1 | 1315.3 | 1324.1 |
| 70° | 4466.6 | 1934.2 | 821.2 | 753.7 | 734.7 | 808.0 | 891.6 | 1005.9 | 1063.1 | 1262.6 | 1239.1 |
| 72.5° | 2318.3 | 1357.9 | 728.8 | 695.1 | 690.7 | 783.0 | 976.6 | 1000.1 | 1038.2 | 1187.8 | 1158.4 |
| 75° | 1217.1 | 942.9 | 648.1 | 630.5 | 637.9 | 777.2 | 1152.6 | 973.7 | 1005.9 | 1136.4 | 1192.2 |
| 77.5° | 744.9 | 761.1 | 579.2 | 571.9 | 586.6 | 759.6 | 1151.1 | 940.0 | 959.0 | 1045.5 | 1107.1 |
| 80° | 498.6 | 617.3 | 526.4 | 527.9 | 538.2 | 695.1 | 1033.8 | 887.2 | 901.8 | 988.3 | 1051.4 |
| 82.5° | 315.3 | 365.1 | 478.0 | 503.0 | 489.8 | 573.4 | 878.4 | 808.0 | 828.5 | 1130.6 | 1195.1 |
| 85° | 159.8 | 228.8 | 415.0 | 483.9 | 441.4 | 401.8 | 712.7 | 708.3 | 718.5 | 815.3 | 852.0 |
| 87.5° | 73.3 | 126.1 | 324.1 | 422.3 | 332.9 | 250.8 | 517.6 | 525.0 | 566.0 | 579.2 | 579.2 |
| 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)