

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: P299944

Luminaire Tested: **GLNA-AF-02-LED-E1-SL3-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299944
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24288)
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-SL3-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(2) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V
Square Medium OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7995.6 lumens
Efficiency: N/A
Efficacy: 121.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G2

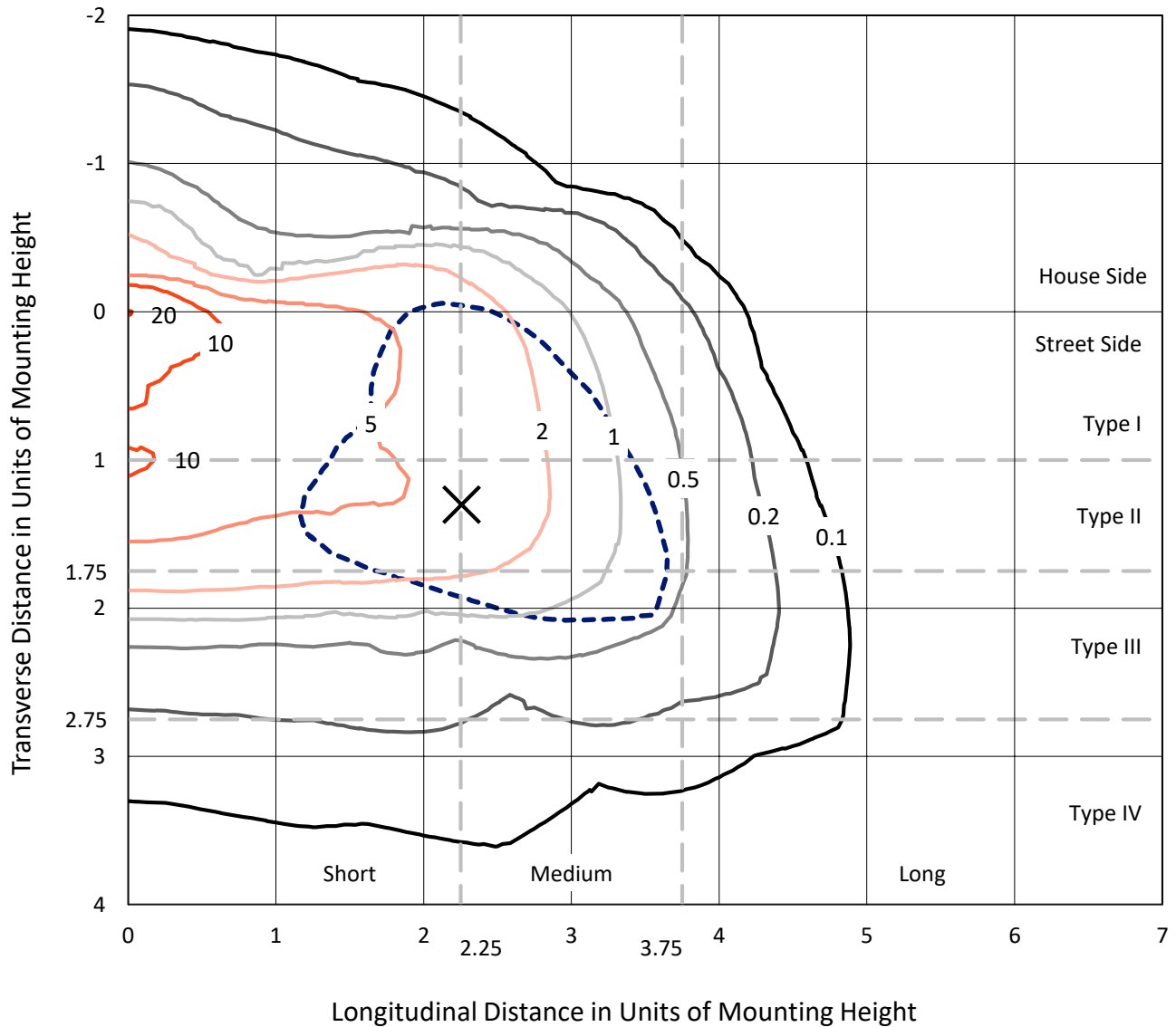
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

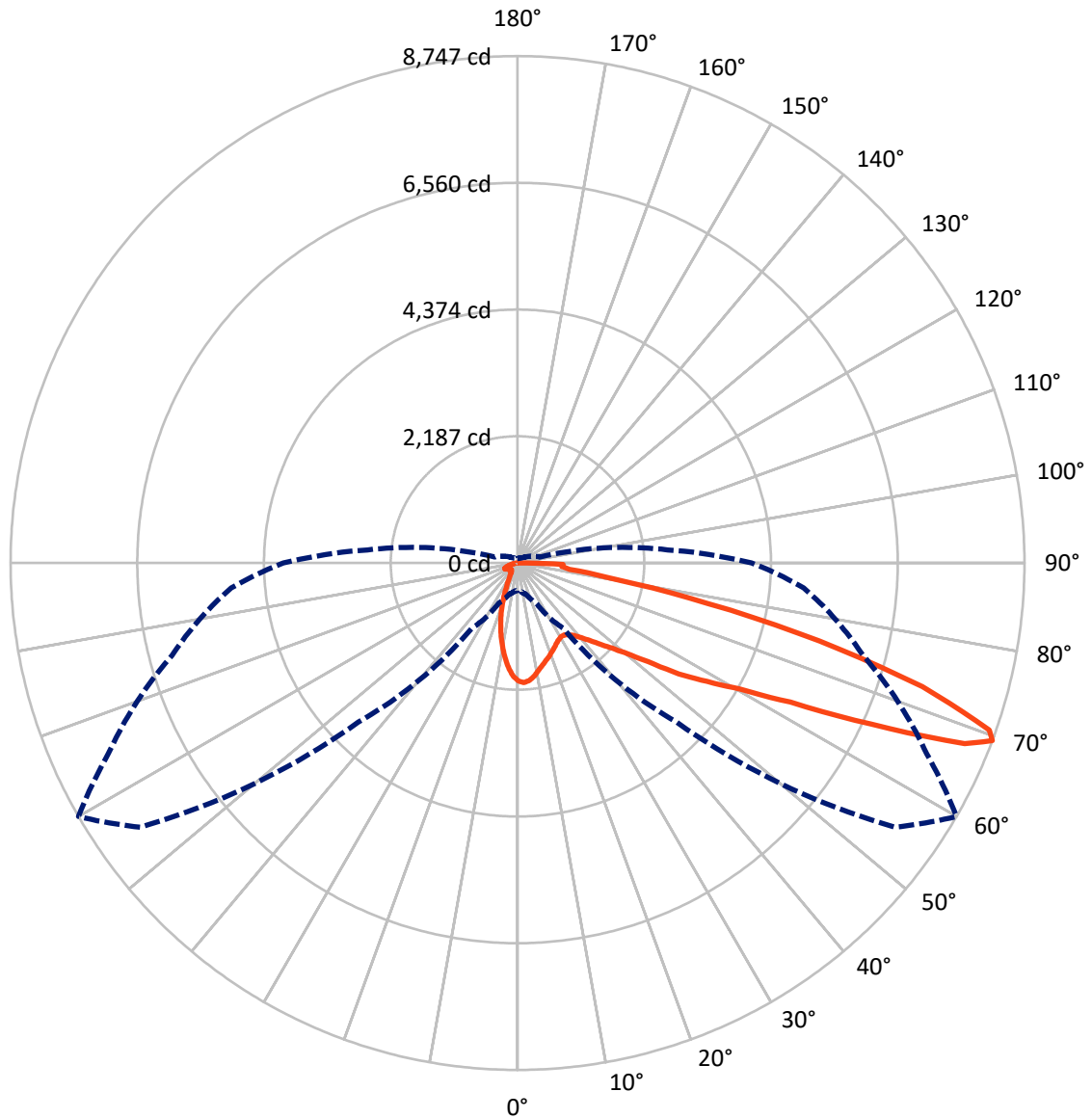
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 20.4 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1137.5 | 0.0 | 1137.5 |
| | % Fixture | 14.2 | 0.0 | 14.2 |
| Street Side | Lumens | 6858.1 | 0.0 | 6858.1 |
| | % Fixture | 85.8 | 0.0 | 85.8 |
| Total | Lumens | 7995.6 | 0.0 | 7995.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 172.3 | 2.2 |
| 10°-20° | 367.0 | 4.6 |
| 20°-30° | 467.7 | 5.8 |
| 30°-40° | 642.9 | 8.0 |
| 40°-50° | 1043.2 | 13.0 |
| 50°-60° | 1673.0 | 20.9 |
| 60°-70° | 2226.7 | 27.8 |
| 70°-80° | 1202.2 | 15.0 |
| 80°-90° | 200.6 | 2.5 |
| 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° | 7995.6 | 100.0 |
| 0°-180° | 7995.6 | 100.0 |

Coefficient of Utilization



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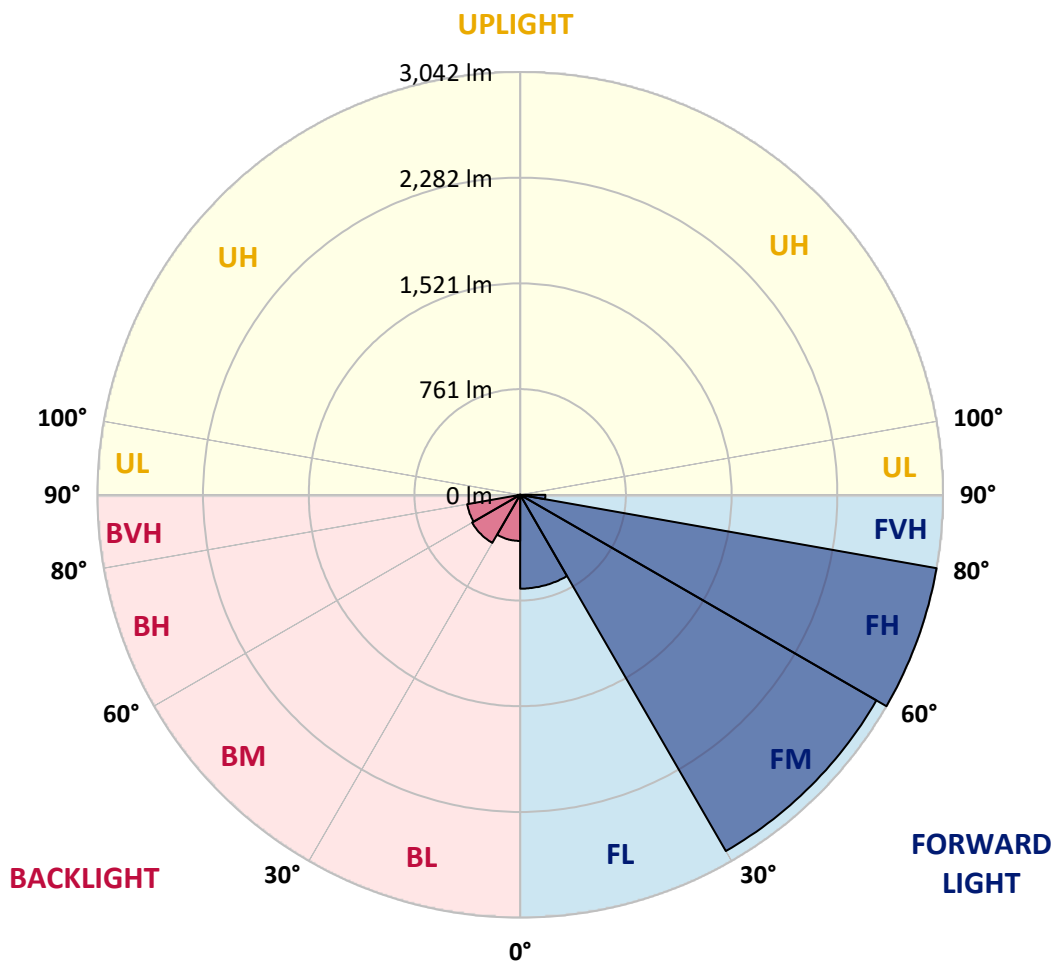
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 675.1 | 8.4 | | | |
| FM | (30°-60°) | 2959.5 | 37.0 | | | |
| FH | (60°-80°) | 3042.2 | 38.0 | | | G2/5000 |
| FVH | (80°-90°) | 181.3 | 2.3 | | | G2/225 |
| BL | (0°-30°) | 331.9 | 4.2 | B1/500 | | |
| BM | (30°-60°) | 399.6 | 5.0 | B1/1000 | | |
| BH | (60°-80°) | 386.7 | 4.8 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 19.3 | 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 III Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 60° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2037.4 | 2037.4 | 2037.4 | 2037.4 | 2037.4 | 2037.4 | 2037.4 | 2037.4 | 2037.4 | 2037.4 | 2037.4 |
| 2.5° | 2079.1 | 2083.7 | 2081.8 | 2080.7 | 2084.1 | 2078.7 | 2067.5 | 2064.0 | 2058.6 | 2045.9 | 2024.3 |
| 5° | 2001.1 | 2015.0 | 2014.2 | 2024.6 | 2042.0 | 2046.7 | 2041.6 | 2042.4 | 2032.4 | 2016.5 | 1980.6 |
| 7.5° | 1866.3 | 1872.1 | 1875.2 | 1898.0 | 1929.6 | 1955.1 | 1976.8 | 1983.7 | 1979.1 | 1965.6 | 1919.2 |
| 10° | 1727.2 | 1731.9 | 1739.2 | 1765.9 | 1806.0 | 1841.2 | 1882.1 | 1905.7 | 1915.7 | 1913.4 | 1861.7 |
| 12.5° | 1607.9 | 1612.5 | 1622.2 | 1652.3 | 1700.2 | 1743.5 | 1803.0 | 1832.3 | 1856.3 | 1870.5 | 1814.9 |
| 15° | 1500.9 | 1511.0 | 1520.2 | 1555.0 | 1608.7 | 1665.4 | 1732.7 | 1769.7 | 1806.8 | 1838.9 | 1773.6 |
| 17.5° | 1417.5 | 1427.5 | 1432.9 | 1464.6 | 1521.8 | 1591.3 | 1670.1 | 1713.7 | 1760.1 | 1812.6 | 1732.7 |
| 20° | 1369.2 | 1373.8 | 1371.5 | 1389.3 | 1440.7 | 1514.4 | 1607.9 | 1658.5 | 1714.5 | 1787.9 | 1691.7 |
| 22.5° | 1355.7 | 1356.1 | 1347.6 | 1345.6 | 1378.9 | 1441.0 | 1541.5 | 1602.9 | 1671.6 | 1771.7 | 1656.6 |
| 25° | 1388.5 | 1387.4 | 1364.2 | 1345.3 | 1348.7 | 1385.0 | 1477.4 | 1548.8 | 1635.7 | 1768.2 | 1629.5 |
| 27.5° | 1461.5 | 1465.0 | 1430.6 | 1395.1 | 1359.9 | 1358.8 | 1428.7 | 1504.0 | 1606.4 | 1784.0 | 1617.9 |
| 30° | 1563.9 | 1569.7 | 1533.0 | 1487.8 | 1421.7 | 1367.3 | 1409.8 | 1477.4 | 1588.2 | 1816.9 | 1616.0 |
| 32.5° | 1675.9 | 1682.1 | 1654.2 | 1606.7 | 1520.2 | 1419.8 | 1422.9 | 1479.7 | 1587.4 | 1862.8 | 1629.1 |
| 35° | 1795.2 | 1802.2 | 1787.9 | 1747.7 | 1651.5 | 1516.7 | 1473.1 | 1517.1 | 1612.5 | 1933.1 | 1664.3 |
| 37.5° | 1928.5 | 1939.3 | 1943.2 | 1904.9 | 1802.2 | 1644.6 | 1555.4 | 1588.2 | 1669.3 | 2030.8 | 1728.8 |
| 40° | 2120.4 | 2135.5 | 2134.3 | 2079.5 | 1974.8 | 1817.2 | 1682.4 | 1690.9 | 1757.8 | 2161.4 | 1831.9 |
| 42.5° | 2488.1 | 2491.2 | 2395.0 | 2275.7 | 2164.9 | 1998.8 | 1832.3 | 1825.4 | 1879.8 | 2326.7 | 1983.7 |
| 45° | 2955.9 | 2943.1 | 2729.1 | 2498.6 | 2363.4 | 2207.3 | 2027.4 | 1993.4 | 2034.7 | 2528.3 | 2173.7 |
| 47.5° | 3344.0 | 3314.7 | 3044.3 | 2726.1 | 2573.5 | 2434.1 | 2256.4 | 2196.9 | 2219.7 | 2757.0 | 2419.4 |
| 50° | 3478.8 | 3456.8 | 3232.8 | 2915.3 | 2772.4 | 2710.6 | 2538.3 | 2454.1 | 2460.3 | 3029.6 | 2707.1 |
| 52.5° | 3449.9 | 3446.8 | 3297.3 | 3040.1 | 2958.6 | 3001.1 | 2937.7 | 2823.8 | 2763.5 | 3332.4 | 3017.7 |
| 55° | 3381.5 | 3388.1 | 3334.0 | 3185.3 | 3171.4 | 3281.5 | 3459.5 | 3375.3 | 3188.0 | 3638.0 | 3338.6 |
| 57.5° | 3144.0 | 3161.0 | 3279.9 | 3368.0 | 3514.0 | 3677.7 | 3879.7 | 3855.8 | 3644.9 | 3968.2 | 3720.2 |
| 60° | 2532.9 | 2572.3 | 2891.4 | 3332.4 | 3866.6 | 4378.8 | 4469.1 | 4413.5 | 4116.1 | 4378.0 | 4224.3 |
| 62.5° | 1774.8 | 1815.7 | 2195.0 | 2885.2 | 3808.7 | 5170.5 | 5522.8 | 5282.9 | 4792.8 | 4981.7 | 4876.6 |
| 65° | 950.1 | 969.8 | 1259.5 | 2001.9 | 3215.4 | 5333.9 | 7062.7 | 6697.7 | 5864.2 | 5725.9 | 5434.7 |
| 67.5° | 524.1 | 534.9 | 645.8 | 1010.8 | 2059.4 | 4697.0 | 8043.8 | 8319.5 | 7203.3 | 6221.5 | 5333.1 |
| 69° | 473.9 | 484.0 | 556.6 | 765.5 | 1378.1 | 3883.6 | 7948.0 | 8747.1 | 7790.4 | 6172.4 | 4957.7 |
| 70° | 463.5 | 472.8 | 538.0 | 705.7 | 1115.4 | 3201.1 | 7627.0 | 8637.8 | 7930.2 | 5996.7 | 4630.2 |
| 72.5° | 417.1 | 427.2 | 490.5 | 633.8 | 953.2 | 1595.9 | 6041.5 | 7303.3 | 7199.8 | 5199.5 | 3512.0 |
| 75° | 388.9 | 398.2 | 505.6 | 620.7 | 912.7 | 1010.0 | 3982.9 | 5382.6 | 5292.6 | 3637.2 | 1893.7 |
| 77.5° | 166.5 | 165.7 | 234.4 | 525.3 | 926.2 | 977.9 | 2140.1 | 3362.6 | 3067.9 | 1554.6 | 543.8 |
| 80° | 111.2 | 109.3 | 111.2 | 154.5 | 849.3 | 983.4 | 1121.2 | 1706.8 | 1289.3 | 396.3 | 268.0 |
| 82.5° | 95.8 | 94.2 | 97.7 | 94.2 | 298.6 | 1122.4 | 953.2 | 907.7 | 613.0 | 225.2 | 132.9 |
| 85° | 64.5 | 61.8 | 84.2 | 84.6 | 141.0 | 997.3 | 1073.7 | 766.7 | 495.9 | 133.6 | 65.7 |
| 87.5° | 30.9 | 30.1 | 49.1 | 59.9 | 82.7 | 405.2 | 1204.7 | 785.6 | 500.2 | 68.4 | 31.3 |
| 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-02-LED-E1-SL3-600

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2037.4 | 2037.4 | 2037.4 | 2037.4 | 2037.4 | 2037.4 | 2037.4 | 2037.4 | 2037.4 | 2037.4 | 2037.4 |
| 2.5° | 2017.7 | 2001.9 | 1986.4 | 1967.9 | 1948.6 | 1926.9 | 1916.1 | 1905.3 | 1902.6 | 1899.5 | 1888.7 |
| 5° | 1962.1 | 1939.7 | 1901.1 | 1858.6 | 1813.8 | 1770.1 | 1736.9 | 1716.0 | 1700.2 | 1692.1 | 1677.8 |
| 7.5° | 1890.2 | 1857.4 | 1789.8 | 1716.4 | 1641.1 | 1572.4 | 1512.9 | 1475.4 | 1439.9 | 1423.3 | 1404.4 |
| 10° | 1821.9 | 1772.8 | 1667.8 | 1559.6 | 1451.5 | 1347.6 | 1249.9 | 1180.7 | 1119.3 | 1084.9 | 1060.6 |
| 12.5° | 1763.2 | 1696.0 | 1550.4 | 1404.0 | 1255.7 | 1107.7 | 961.3 | 846.2 | 750.1 | 699.5 | 673.6 |
| 15° | 1706.0 | 1624.9 | 1438.7 | 1252.9 | 1062.5 | 861.3 | 669.0 | 538.4 | 458.8 | 427.2 | 416.4 |
| 17.5° | 1654.2 | 1550.4 | 1326.7 | 1100.8 | 863.2 | 619.9 | 449.6 | 377.7 | 347.2 | 336.8 | 333.3 |
| 20° | 1598.2 | 1475.0 | 1210.5 | 941.6 | 655.4 | 433.4 | 351.1 | 319.4 | 307.1 | 304.0 | 302.4 |
| 22.5° | 1544.2 | 1400.9 | 1099.2 | 771.3 | 470.8 | 334.5 | 301.7 | 288.5 | 286.6 | 289.3 | 289.3 |
| 25° | 1498.2 | 1334.4 | 979.1 | 593.3 | 345.7 | 281.6 | 270.0 | 266.9 | 274.2 | 284.3 | 286.2 |
| 27.5° | 1463.8 | 1280.0 | 851.3 | 438.0 | 275.4 | 244.9 | 244.5 | 249.5 | 267.7 | 287.0 | 290.8 |
| 30° | 1440.3 | 1228.2 | 714.5 | 315.9 | 231.0 | 215.5 | 221.7 | 232.5 | 259.2 | 286.6 | 293.9 |
| 32.5° | 1428.3 | 1190.0 | 572.0 | 244.5 | 197.8 | 189.3 | 199.7 | 212.8 | 239.1 | 264.6 | 274.2 |
| 35° | 1437.6 | 1161.8 | 437.6 | 203.9 | 174.6 | 168.0 | 178.8 | 191.6 | 207.0 | 217.8 | 225.2 |
| 37.5° | 1472.3 | 1150.6 | 330.2 | 182.7 | 158.7 | 152.6 | 161.1 | 168.4 | 174.6 | 177.7 | 181.1 |
| 40° | 1547.3 | 1162.6 | 264.6 | 171.9 | 149.9 | 142.1 | 145.6 | 148.3 | 152.2 | 155.3 | 156.8 |
| 42.5° | 1657.7 | 1198.5 | 237.1 | 167.6 | 145.2 | 134.0 | 133.3 | 134.4 | 139.4 | 145.2 | 146.4 |
| 45° | 1812.2 | 1261.8 | 235.2 | 170.3 | 142.9 | 127.5 | 124.0 | 125.5 | 133.3 | 142.1 | 143.7 |
| 47.5° | 2009.6 | 1358.4 | 250.7 | 178.4 | 144.8 | 124.0 | 118.2 | 120.1 | 129.8 | 141.7 | 143.7 |
| 50° | 2248.7 | 1493.2 | 276.5 | 190.4 | 153.3 | 124.8 | 116.3 | 117.4 | 127.5 | 140.6 | 142.5 |
| 52.5° | 2531.0 | 1684.4 | 304.7 | 202.0 | 162.2 | 129.8 | 117.8 | 115.1 | 124.4 | 136.0 | 138.3 |
| 55° | 2845.0 | 1929.6 | 333.7 | 212.4 | 166.9 | 136.0 | 120.9 | 112.0 | 118.6 | 128.2 | 130.2 |
| 57.5° | 3230.5 | 2272.6 | 383.9 | 222.5 | 169.9 | 140.2 | 124.0 | 108.9 | 111.2 | 118.2 | 119.7 |
| 60° | 3752.3 | 2757.7 | 472.4 | 239.1 | 176.9 | 141.7 | 123.6 | 106.2 | 103.9 | 107.8 | 108.5 |
| 62.5° | 4377.6 | 3284.6 | 546.1 | 259.9 | 188.5 | 142.9 | 121.3 | 104.3 | 97.7 | 97.7 | 98.5 |
| 65° | 4748.8 | 3425.5 | 505.2 | 277.3 | 198.1 | 141.7 | 118.6 | 102.4 | 93.1 | 88.8 | 89.2 |
| 67.5° | 4434.0 | 3012.6 | 433.0 | 280.8 | 197.8 | 136.3 | 114.3 | 98.9 | 88.4 | 81.9 | 81.5 |
| 69° | 4039.6 | 2599.4 | 400.5 | 271.5 | 188.5 | 129.4 | 108.9 | 95.0 | 85.0 | 78.0 | 77.6 |
| 70° | 3721.8 | 2347.2 | 379.3 | 261.5 | 178.4 | 124.4 | 104.7 | 91.5 | 82.3 | 75.7 | 74.9 |
| 72.5° | 2706.0 | 1538.0 | 324.1 | 224.8 | 147.2 | 104.3 | 90.4 | 80.3 | 73.4 | 69.5 | 68.8 |
| 75° | 1352.2 | 733.5 | 263.0 | 182.3 | 112.8 | 83.4 | 74.2 | 67.2 | 63.7 | 63.0 | 62.6 |
| 77.5° | 444.2 | 336.0 | 188.1 | 136.0 | 83.8 | 65.3 | 59.9 | 54.8 | 54.1 | 56.4 | 55.6 |
| 80° | 244.1 | 195.4 | 119.3 | 90.0 | 57.2 | 47.9 | 47.1 | 44.4 | 45.6 | 49.4 | 48.7 |
| 82.5° | 124.4 | 101.6 | 73.8 | 54.1 | 38.6 | 34.4 | 37.5 | 35.9 | 37.5 | 40.9 | 40.6 |
| 85° | 61.4 | 55.6 | 46.7 | 32.8 | 25.5 | 22.0 | 26.7 | 27.8 | 28.6 | 31.3 | 31.3 |
| 87.5° | 35.5 | 32.8 | 24.7 | 15.4 | 12.7 | 11.6 | 15.4 | 15.1 | 17.8 | 19.3 | 18.9 |
| 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)