

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: P300850

Luminaire Tested: **GLNA-AF-02-LED-E1-SL4-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P300850
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24301)
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-SL4-7050
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(2) 70 CRI, 5000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V
Square Wide OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11531.6 lumens
Efficiency: N/A
Efficacy: 102.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G3

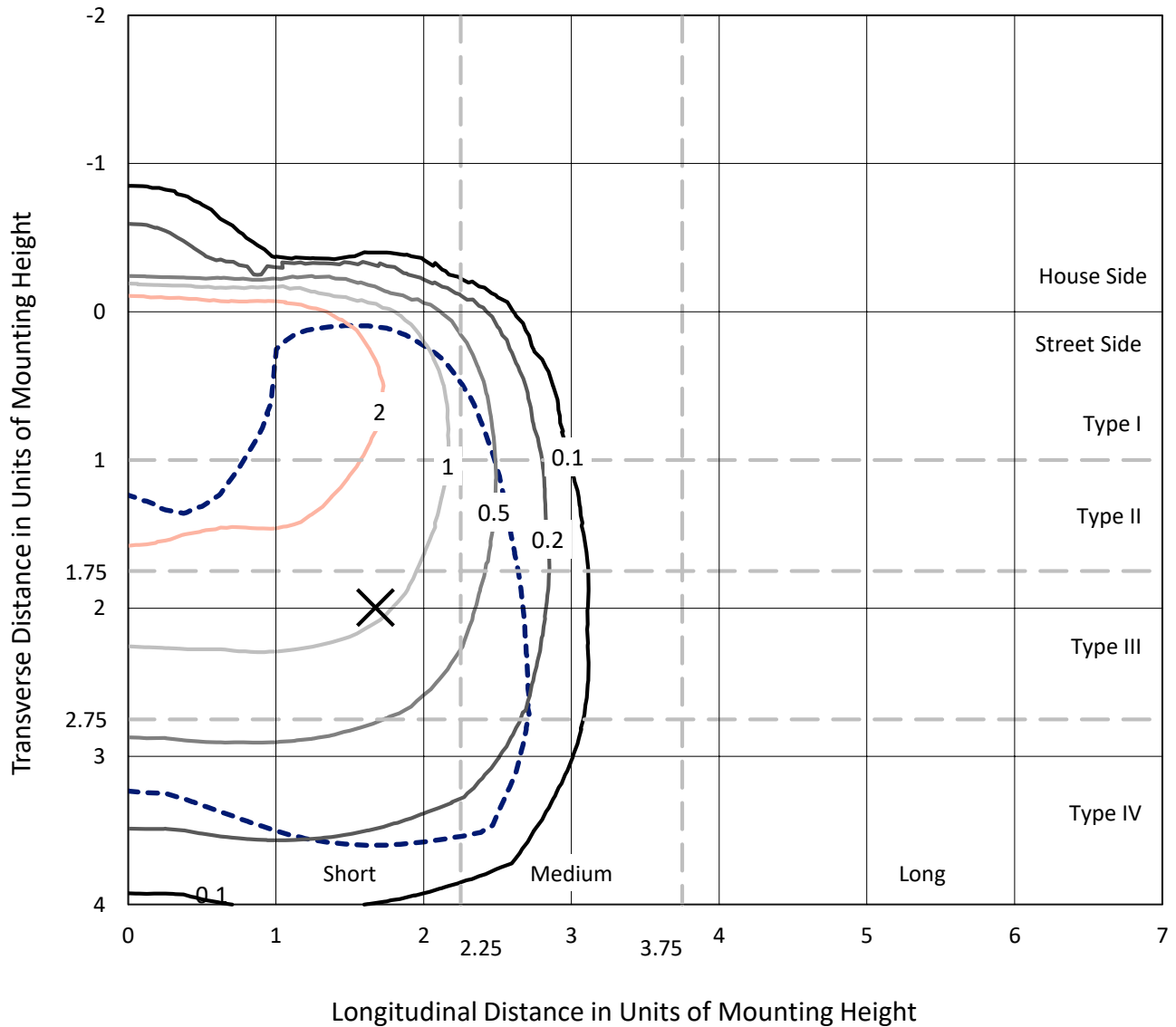
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

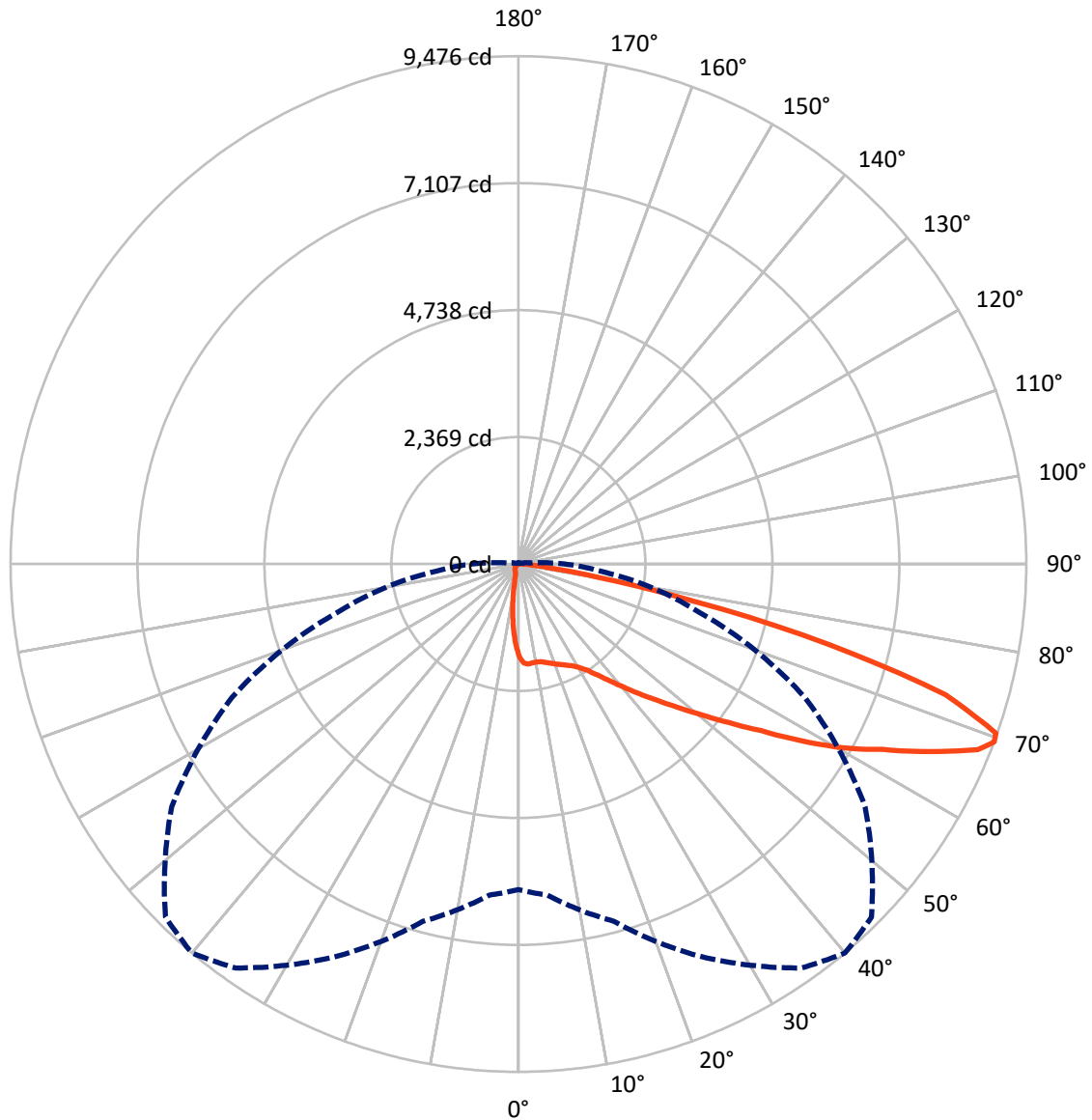
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.7 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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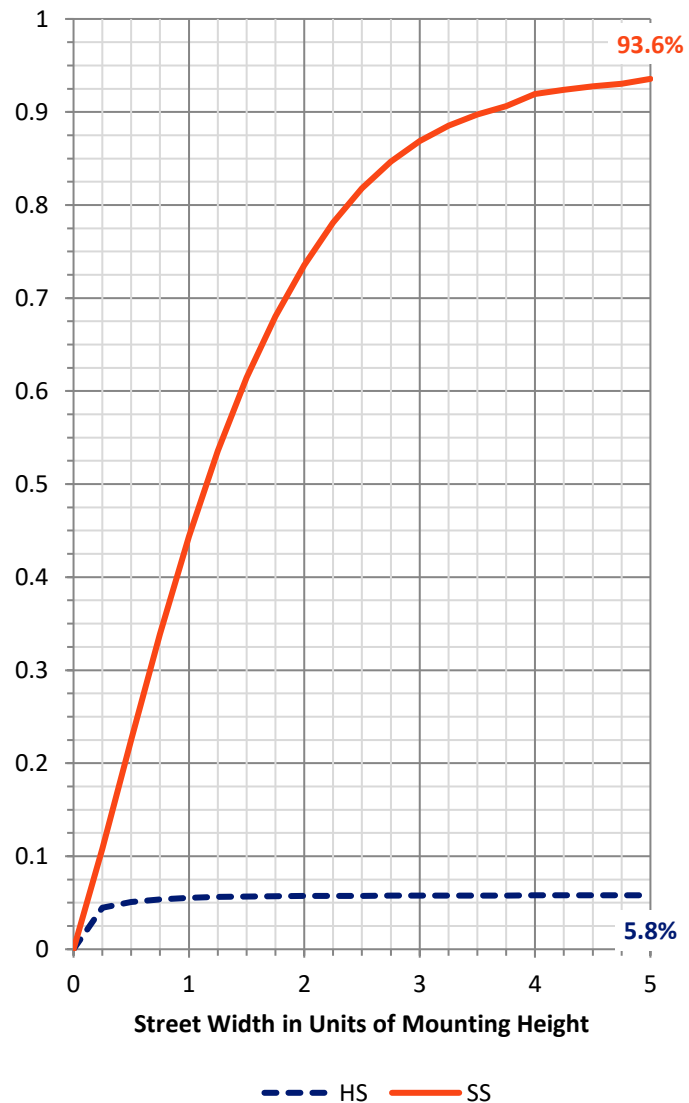
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 674.7 | 0.0 | 674.7 |
| | % Fixture | 5.9 | 0.0 | 5.9 |
| Street Side | Lumens | 10856.9 | 0.0 | 10856.9 |
| | % Fixture | 94.1 | 0.0 | 94.1 |
| Total | Lumens | 11531.6 | 0.0 | 11531.6 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 139.7 | 1.2 |
| 10°-20° | 343.5 | 3.0 |
| 20°-30° | 578.6 | 5.0 |
| 30°-40° | 947.2 | 8.2 |
| 40°-50° | 1640.1 | 14.2 |
| 50°-60° | 2583.3 | 22.4 |
| 60°-70° | 3373.7 | 29.3 |
| 70°-80° | 1737.6 | 15.1 |
| 80°-90° | 188.0 | 1.6 |
| 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° | 11531.6 | 100.0 |
| 0°-180° | 11531.6 | 100.0 |



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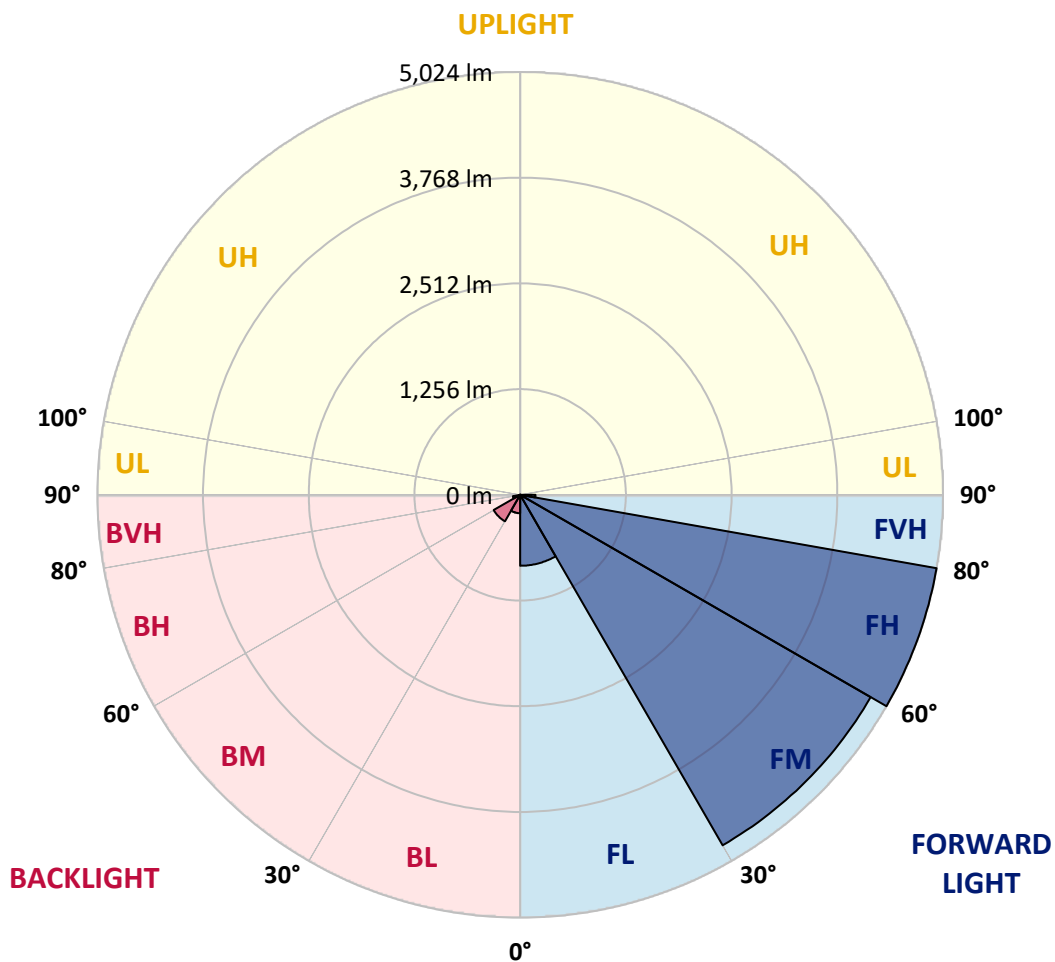
CATALOG NUMBER: GLNA-AF-02-LED-E1-SL4-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 843.3 | 7.3 | | | |
| FM | (30°-60°) | 4808.0 | 41.7 | | | |
| FH | (60°-80°) | 5023.6 | 43.6 | | | G3/7500 |
| FVH | (80°-90°) | 182.1 | 1.6 | | | G2/225 |
| BL | (0°-30°) | 218.5 | 1.9 | B1/500 | | |
| BM | (30°-60°) | 362.6 | 3.1 | B1/1000 | | |
| BH | (60°-80°) | 87.6 | 0.8 | B0/110 | | G0/110 |
| BVH | (80°-90°) | 5.9 | 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-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 40° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1722.9 | 1722.9 | 1722.9 | 1722.9 | 1722.9 | 1722.9 | 1722.9 | 1722.9 | 1722.9 | 1722.9 | 1722.9 |
| 2.5° | 1891.7 | 1881.4 | 1875.3 | 1867.0 | 1856.7 | 1847.8 | 1844.4 | 1819.0 | 1795.0 | 1762.0 | 1724.3 |
| 5° | 1926.7 | 1923.3 | 1912.3 | 1901.3 | 1889.0 | 1875.3 | 1867.7 | 1837.5 | 1803.2 | 1755.1 | 1689.2 |
| 7.5° | 1930.2 | 1926.1 | 1912.3 | 1897.2 | 1880.1 | 1863.6 | 1850.6 | 1820.4 | 1788.8 | 1740.0 | 1659.7 |
| 10° | 1924.7 | 1919.9 | 1909.6 | 1893.1 | 1871.8 | 1856.0 | 1843.0 | 1814.2 | 1787.4 | 1743.5 | 1654.2 |
| 12.5° | 1918.5 | 1913.7 | 1908.9 | 1900.7 | 1882.1 | 1871.1 | 1860.2 | 1832.7 | 1808.7 | 1771.6 | 1674.1 |
| 15° | 1924.7 | 1921.9 | 1927.4 | 1924.0 | 1913.7 | 1904.1 | 1893.1 | 1868.4 | 1846.4 | 1815.5 | 1710.5 |
| 17.5° | 1950.8 | 1950.8 | 1967.9 | 1970.0 | 1960.4 | 1946.6 | 1930.9 | 1906.2 | 1887.6 | 1861.5 | 1753.8 |
| 20° | 2011.9 | 2009.8 | 2031.8 | 2035.9 | 2012.5 | 1991.3 | 1967.9 | 1937.7 | 1923.3 | 1906.8 | 1796.3 |
| 22.5° | 2116.9 | 2107.3 | 2120.3 | 2116.2 | 2070.2 | 2037.3 | 2008.4 | 1971.4 | 1963.8 | 1956.3 | 1843.7 |
| 25° | 2253.5 | 2248.0 | 2256.9 | 2216.4 | 2135.4 | 2090.8 | 2056.5 | 2014.6 | 2014.6 | 2022.2 | 1897.2 |
| 27.5° | 2451.8 | 2431.3 | 2401.0 | 2329.7 | 2208.2 | 2151.2 | 2114.1 | 2069.5 | 2081.2 | 2109.3 | 1967.9 |
| 30° | 2655.0 | 2632.4 | 2563.0 | 2453.2 | 2296.7 | 2237.0 | 2193.8 | 2147.1 | 2174.5 | 2226.0 | 2062.7 |
| 32.5° | 2855.5 | 2830.1 | 2731.9 | 2593.2 | 2423.7 | 2364.0 | 2322.1 | 2270.6 | 2316.6 | 2403.1 | 2201.3 |
| 35° | 3049.7 | 3027.1 | 2913.8 | 2750.4 | 2592.6 | 2543.1 | 2504.7 | 2460.1 | 2519.1 | 2639.9 | 2396.9 |
| 37.5° | 3268.0 | 3243.3 | 3105.3 | 2928.2 | 2797.8 | 2762.1 | 2734.0 | 2689.3 | 2792.3 | 2969.4 | 2669.4 |
| 40° | 3536.4 | 3494.5 | 3308.5 | 3132.1 | 3035.3 | 3018.1 | 2998.9 | 2992.7 | 3152.7 | 3397.7 | 3032.5 |
| 42.5° | 3843.9 | 3775.2 | 3521.3 | 3346.9 | 3296.1 | 3308.5 | 3303.7 | 3331.1 | 3603.6 | 3930.4 | 3474.6 |
| 45° | 4151.4 | 4062.8 | 3758.1 | 3576.2 | 3583.0 | 3626.3 | 3653.1 | 3762.9 | 4168.5 | 4541.3 | 3950.3 |
| 47.5° | 4412.2 | 4325.0 | 3985.3 | 3824.0 | 3906.3 | 3991.5 | 4064.2 | 4272.2 | 4749.2 | 5142.6 | 4320.2 |
| 50° | 4635.3 | 4552.9 | 4226.2 | 4096.5 | 4281.8 | 4419.1 | 4537.1 | 4845.3 | 5373.9 | 5600.4 | 4579.7 |
| 52.5° | 4817.9 | 4763.0 | 4476.1 | 4408.8 | 4710.8 | 4911.9 | 5084.9 | 5454.2 | 5927.1 | 5972.4 | 4781.5 |
| 55° | 4995.7 | 4956.5 | 4744.4 | 4780.1 | 5214.6 | 5488.5 | 5707.5 | 6100.1 | 6403.5 | 6282.7 | 4975.1 |
| 57.5° | 5200.2 | 5164.5 | 5050.6 | 5251.0 | 5877.0 | 6221.6 | 6460.5 | 6672.6 | 6822.9 | 6599.8 | 5157.7 |
| 60° | 5408.9 | 5388.3 | 5391.0 | 5774.1 | 6637.6 | 6968.4 | 7100.2 | 7155.1 | 7234.7 | 6898.4 | 5168.0 |
| 62.5° | 5607.9 | 5647.1 | 5780.2 | 6356.1 | 7365.8 | 7619.8 | 7686.4 | 7740.6 | 7647.3 | 6945.7 | 4774.6 |
| 65° | 5945.0 | 6008.8 | 6326.6 | 7135.2 | 8166.9 | 8438.7 | 8507.3 | 8321.3 | 7712.5 | 6333.5 | 3883.7 |
| 67.5° | 6109.7 | 6226.4 | 6793.4 | 7861.4 | 8943.9 | 9245.9 | 9220.5 | 8359.1 | 6921.0 | 4829.6 | 2492.3 |
| 69° | 6075.4 | 6199.6 | 6901.1 | 8083.8 | 9202.0 | 9475.8 | 9314.5 | 7897.1 | 5896.2 | 3498.6 | 1530.0 |
| 70° | 5939.5 | 6065.1 | 6845.5 | 8075.6 | 9234.9 | 9451.8 | 9140.2 | 7326.7 | 4985.4 | 2558.2 | 956.9 |
| 72.5° | 4960.0 | 5068.4 | 6077.4 | 7299.2 | 8507.3 | 8330.9 | 7646.6 | 5076.0 | 2429.2 | 696.7 | 215.5 |
| 75° | 3053.1 | 3113.5 | 4360.7 | 5498.8 | 6425.5 | 5972.4 | 5094.5 | 2525.3 | 724.2 | 197.0 | 119.4 |
| 77.5° | 1613.1 | 1640.5 | 2387.3 | 3241.2 | 4073.1 | 3370.3 | 2611.1 | 985.0 | 333.6 | 123.6 | 86.5 |
| 80° | 953.4 | 974.0 | 1285.6 | 1482.0 | 1762.7 | 1472.3 | 1044.0 | 604.7 | 238.9 | 77.6 | 76.9 |
| 82.5° | 545.7 | 558.7 | 932.1 | 823.7 | 694.6 | 593.1 | 519.6 | 573.1 | 143.5 | 52.2 | 79.6 |
| 85° | 200.4 | 203.2 | 524.4 | 626.7 | 413.2 | 245.7 | 258.1 | 475.0 | 38.4 | 32.9 | 62.5 |
| 87.5° | 93.4 | 91.3 | 269.8 | 383.7 | 241.6 | 155.8 | 201.1 | 104.3 | 15.1 | 21.3 | 17.2 |
| 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-SL4-7050

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1722.9 | 1722.9 | 1722.9 | 1722.9 | 1722.9 | 1722.9 | 1722.9 | 1722.9 | 1722.9 | 1722.9 | 1722.9 |
| 2.5° | 1702.3 | 1676.9 | 1630.9 | 1583.5 | 1535.5 | 1498.4 | 1462.0 | 1433.2 | 1423.6 | 1405.8 | 1407.1 |
| 5° | 1650.1 | 1603.4 | 1507.3 | 1409.9 | 1308.3 | 1224.5 | 1145.6 | 1081.8 | 1050.9 | 1019.3 | 1019.3 |
| 7.5° | 1604.8 | 1536.9 | 1386.5 | 1228.0 | 1063.9 | 926.0 | 801.7 | 708.4 | 656.9 | 615.7 | 615.0 |
| 10° | 1587.7 | 1495.7 | 1285.6 | 1058.4 | 829.9 | 641.8 | 494.2 | 399.5 | 350.8 | 319.2 | 317.8 |
| 12.5° | 1595.2 | 1481.3 | 1208.1 | 901.9 | 615.0 | 412.5 | 286.2 | 225.1 | 204.5 | 194.9 | 194.9 |
| 15° | 1617.2 | 1477.1 | 1130.5 | 748.9 | 434.5 | 258.1 | 190.1 | 173.7 | 172.3 | 172.3 | 172.3 |
| 17.5° | 1643.9 | 1478.5 | 1050.9 | 599.9 | 295.8 | 184.6 | 164.1 | 162.0 | 163.4 | 163.4 | 163.4 |
| 20° | 1671.4 | 1479.2 | 965.1 | 462.0 | 208.7 | 160.6 | 154.4 | 153.8 | 155.1 | 155.1 | 155.8 |
| 22.5° | 1705.0 | 1482.6 | 879.3 | 345.3 | 172.3 | 151.7 | 146.9 | 146.9 | 147.6 | 147.6 | 146.9 |
| 25° | 1743.5 | 1489.5 | 790.1 | 256.0 | 157.2 | 145.5 | 141.4 | 140.7 | 141.4 | 140.7 | 140.0 |
| 27.5° | 1791.5 | 1499.1 | 690.5 | 200.4 | 150.3 | 139.3 | 135.9 | 135.9 | 135.2 | 134.5 | 133.8 |
| 30° | 1851.9 | 1510.1 | 578.6 | 170.2 | 143.5 | 133.8 | 130.4 | 129.7 | 129.0 | 127.7 | 127.7 |
| 32.5° | 1943.9 | 1534.1 | 468.1 | 154.4 | 135.9 | 126.3 | 123.6 | 123.6 | 122.2 | 120.8 | 120.1 |
| 35° | 2085.3 | 1581.5 | 369.3 | 144.8 | 127.7 | 118.1 | 114.6 | 114.6 | 113.3 | 112.6 | 111.9 |
| 37.5° | 2280.9 | 1653.6 | 286.9 | 135.9 | 119.4 | 109.1 | 105.7 | 105.0 | 103.6 | 102.3 | 101.6 |
| 40° | 2541.1 | 1742.8 | 225.8 | 127.7 | 111.2 | 100.2 | 97.5 | 96.1 | 93.4 | 91.3 | 91.3 |
| 42.5° | 2867.8 | 1844.4 | 183.3 | 118.7 | 101.6 | 92.0 | 89.9 | 87.9 | 83.1 | 81.0 | 80.3 |
| 45° | 3209.6 | 1935.7 | 155.1 | 108.5 | 92.0 | 83.7 | 82.4 | 78.9 | 72.8 | 70.7 | 70.7 |
| 47.5° | 3456.1 | 1956.9 | 136.6 | 98.8 | 83.1 | 74.8 | 74.1 | 68.0 | 62.5 | 61.1 | 60.4 |
| 50° | 3609.8 | 1915.1 | 121.5 | 89.2 | 74.8 | 66.6 | 64.5 | 57.0 | 53.5 | 52.2 | 51.5 |
| 52.5° | 3713.5 | 1840.3 | 109.1 | 81.0 | 67.3 | 59.0 | 54.2 | 48.7 | 46.0 | 44.6 | 44.6 |
| 55° | 3796.5 | 1734.5 | 96.8 | 73.4 | 61.1 | 52.9 | 46.0 | 41.9 | 39.1 | 37.8 | 37.8 |
| 57.5° | 3819.9 | 1591.1 | 84.4 | 67.3 | 54.9 | 46.7 | 39.1 | 36.4 | 32.9 | 32.3 | 32.3 |
| 60° | 3650.3 | 1332.3 | 74.8 | 59.7 | 49.4 | 40.5 | 34.3 | 30.9 | 27.5 | 26.8 | 26.1 |
| 62.5° | 3203.5 | 1031.0 | 65.9 | 52.9 | 43.2 | 35.0 | 29.5 | 25.4 | 22.7 | 22.7 | 22.7 |
| 65° | 2443.6 | 691.2 | 57.7 | 46.0 | 37.8 | 29.5 | 25.4 | 20.6 | 19.2 | 19.2 | 19.9 |
| 67.5° | 1462.7 | 376.2 | 49.4 | 39.1 | 32.3 | 24.7 | 21.3 | 17.8 | 17.2 | 17.8 | 17.8 |
| 69° | 857.3 | 221.0 | 44.6 | 35.0 | 28.1 | 22.0 | 18.5 | 15.8 | 17.2 | 17.8 | 17.8 |
| 70° | 529.2 | 149.0 | 41.2 | 31.6 | 25.4 | 19.9 | 17.2 | 15.1 | 16.5 | 17.2 | 17.2 |
| 72.5° | 147.6 | 76.9 | 32.9 | 24.7 | 20.6 | 16.5 | 13.7 | 13.7 | 15.8 | 16.5 | 16.5 |
| 75° | 96.1 | 57.0 | 25.4 | 18.5 | 15.8 | 13.0 | 11.7 | 13.0 | 15.1 | 15.8 | 15.8 |
| 77.5° | 79.6 | 46.7 | 20.6 | 15.1 | 13.0 | 12.4 | 11.0 | 11.7 | 13.7 | 14.4 | 14.4 |
| 80° | 72.8 | 32.9 | 16.5 | 13.7 | 11.7 | 11.0 | 10.3 | 9.6 | 12.4 | 13.0 | 13.0 |
| 82.5° | 69.3 | 26.1 | 14.4 | 12.4 | 11.0 | 9.6 | 8.9 | 9.6 | 11.0 | 11.7 | 12.4 |
| 85° | 43.2 | 17.2 | 13.0 | 11.7 | 9.6 | 8.9 | 8.9 | 8.9 | 10.3 | 11.0 | 11.0 |
| 87.5° | 15.8 | 13.7 | 11.7 | 9.6 | 8.2 | 8.2 | 8.2 | 8.2 | 8.9 | 10.3 | 10.3 |
| 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)