

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: P301216

Luminaire Tested: **GLNA-AF-03-LED-E1-T3R-7050-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301216
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194839)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-03-LED-E1-T3R-7050-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(3) 70 CRI, 5000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type III
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12196.9 lumens
Efficiency: N/A
Efficacy: 127.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

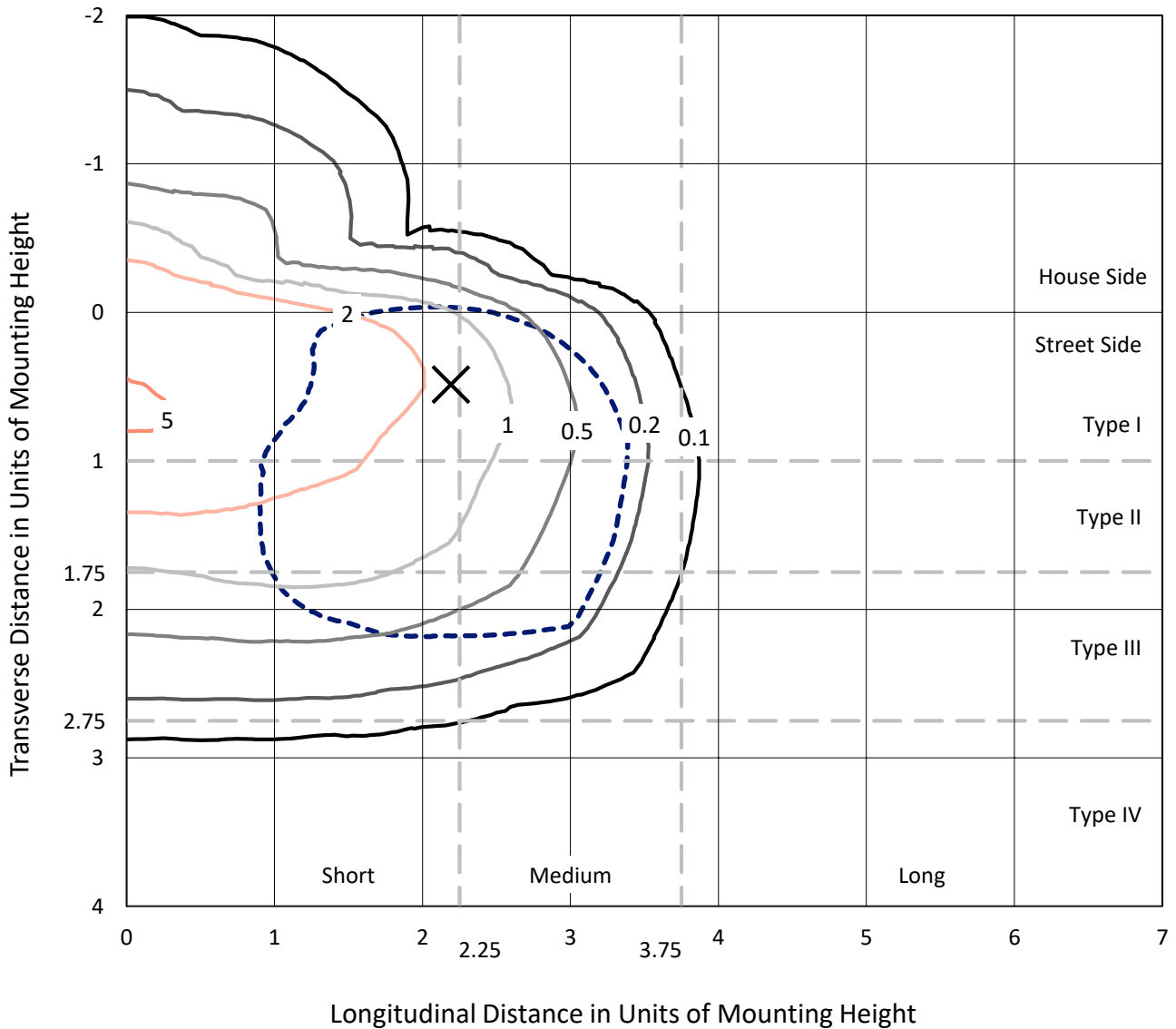
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

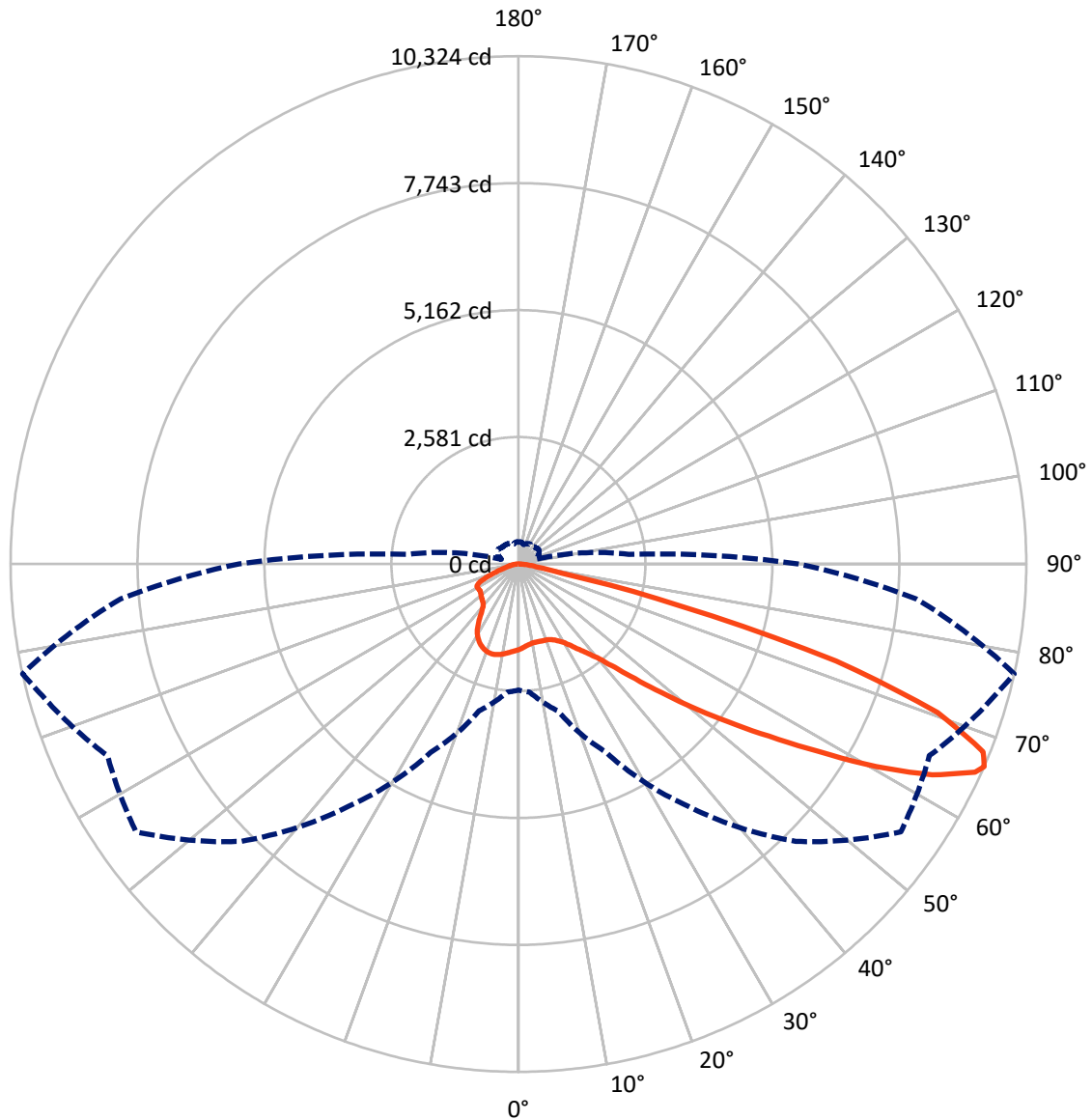
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.4 fc
 Type III - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 66-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 2083.8 | 0.0 | 2083.8 |
| | % Fixture | 17.1 | 0.0 | 17.1 |
| Street Side | Lumens | 10113.2 | 0.0 | 10113.2 |
| | % Fixture | 82.9 | 0.0 | 82.9 |
| Total | Lumens | 12196.9 | 0.0 | 12196.9 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 155.3 | 1.3 |
| 10°-20° | 438.1 | 3.6 |
| 20°-30° | 747.7 | 6.1 |
| 30°-40° | 1196.9 | 9.8 |
| 40°-50° | 1849.1 | 15.2 |
| 50°-60° | 2622.6 | 21.5 |
| 60°-70° | 3508.4 | 28.8 |
| 70°-80° | 1523.6 | 12.5 |
| 80°-90° | 155.4 | 1.3 |
| 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° | 12196.9 | 100.0 |
| 0°-180° | 12196.9 | 100.0 |



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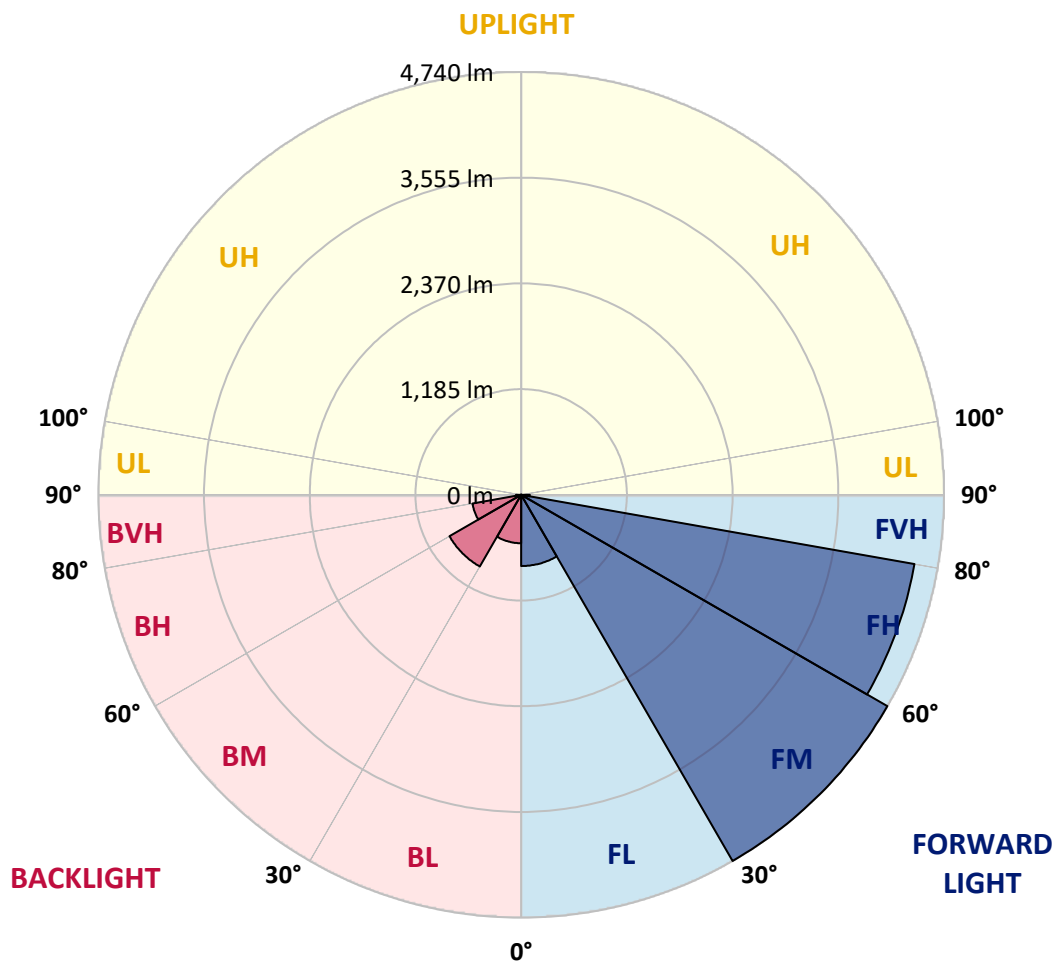
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 798.3 | 6.5 | | | |
| FM | (30°-60°) | 4740.4 | 38.9 | | | |
| FH | (60°-80°) | 4477.0 | 36.7 | | | G2/5000 |
| FVH | (80°-90°) | 97.4 | 0.8 | | | G1/100 |
| BL | (0°-30°) | 542.7 | 4.4 | B2/1000 | | |
| BM | (30°-60°) | 928.2 | 7.6 | B1/1000 | | |
| BH | (60°-80°) | 555.0 | 4.5 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 57.9 | 0.5 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 77.5° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|--------|
| 0° | 1738.1 | 1738.1 | 1738.1 | 1738.1 | 1738.1 | 1738.1 | 1738.1 | 1738.1 | 1738.1 | 1738.1 | 1738.1 |
| 2.5° | 1537.6 | 1547.9 | 1556.6 | 1564.7 | 1580.7 | 1607.2 | 1637.8 | 1662.5 | 1698.3 | 1705.3 | 1724.3 |
| 5° | 1396.4 | 1396.4 | 1403.3 | 1415.5 | 1437.3 | 1477.1 | 1518.6 | 1573.9 | 1651.7 | 1670.1 | 1720.8 |
| 7.5° | 1327.9 | 1328.4 | 1332.4 | 1342.7 | 1361.7 | 1398.0 | 1443.6 | 1508.8 | 1614.2 | 1644.8 | 1731.1 |
| 10° | 1353.2 | 1347.4 | 1338.7 | 1333.6 | 1336.4 | 1357.7 | 1401.0 | 1473.6 | 1591.2 | 1630.3 | 1754.3 |
| 12.5° | 1494.9 | 1484.0 | 1454.0 | 1414.2 | 1376.2 | 1360.7 | 1386.0 | 1456.8 | 1581.4 | 1627.0 | 1784.9 |
| 15° | 1726.6 | 1722.0 | 1666.0 | 1583.7 | 1491.5 | 1414.2 | 1397.0 | 1450.5 | 1582.5 | 1631.0 | 1821.2 |
| 17.5° | 2017.1 | 2010.7 | 1937.0 | 1817.1 | 1666.7 | 1516.3 | 1435.5 | 1455.8 | 1586.5 | 1637.8 | 1856.2 |
| 20° | 2310.4 | 2290.7 | 2211.3 | 2068.4 | 1875.3 | 1655.0 | 1499.6 | 1469.0 | 1591.7 | 1645.3 | 1893.2 |
| 22.5° | 2529.4 | 2513.2 | 2441.8 | 2302.9 | 2080.5 | 1815.9 | 1585.4 | 1492.1 | 1608.5 | 1667.3 | 1938.6 |
| 25° | 2721.9 | 2722.9 | 2652.1 | 2517.9 | 2287.9 | 1986.6 | 1696.1 | 1553.7 | 1651.0 | 1712.1 | 2000.9 |
| 27.5° | 2959.9 | 2946.1 | 2879.8 | 2746.7 | 2493.1 | 2158.8 | 1829.7 | 1638.5 | 1714.5 | 1776.1 | 2082.7 |
| 30° | 3244.5 | 3234.7 | 3158.1 | 3007.2 | 2720.7 | 2343.8 | 1982.4 | 1736.9 | 1796.4 | 1860.2 | 2189.9 |
| 32.5° | 3579.3 | 3574.8 | 3495.2 | 3301.0 | 2983.4 | 2561.7 | 2161.8 | 1867.2 | 1918.5 | 1984.8 | 2343.8 |
| 35° | 3972.5 | 3973.0 | 3879.1 | 3645.6 | 3271.0 | 2815.2 | 2365.0 | 2034.9 | 2067.2 | 2136.3 | 2527.2 |
| 37.5° | 4214.5 | 4243.8 | 4208.7 | 3970.7 | 3596.6 | 3098.8 | 2629.1 | 2257.4 | 2236.6 | 2306.4 | 2723.6 |
| 40° | 4266.3 | 4302.1 | 4413.2 | 4292.3 | 3960.9 | 3411.1 | 2863.0 | 2471.1 | 2445.3 | 2530.5 | 2976.6 |
| 42.5° | 4193.7 | 4243.3 | 4478.5 | 4563.6 | 4347.6 | 3796.0 | 3177.7 | 2788.7 | 2755.9 | 2870.5 | 3291.2 |
| 45° | 4150.4 | 4187.4 | 4459.5 | 4705.0 | 4683.0 | 4231.2 | 3578.3 | 3187.4 | 3175.4 | 3325.8 | 3654.4 |
| 47.5° | 4075.6 | 4109.1 | 4370.6 | 4737.8 | 4880.2 | 4629.9 | 4059.5 | 3675.1 | 3698.7 | 3895.9 | 4064.1 |
| 50° | 4115.9 | 4129.7 | 4271.5 | 4654.2 | 4937.2 | 4922.2 | 4597.1 | 4239.8 | 4320.6 | 4566.6 | 4528.0 |
| 52.5° | 4110.1 | 4145.9 | 4260.0 | 4517.0 | 4944.7 | 5102.6 | 5126.7 | 4869.7 | 5039.8 | 5322.1 | 5042.6 |
| 55° | 3323.0 | 3388.6 | 4124.6 | 4482.5 | 4971.1 | 5279.4 | 5598.2 | 5533.6 | 5850.5 | 6179.6 | 5623.5 |
| 57.5° | 3173.1 | 3214.6 | 3622.6 | 4555.1 | 5111.7 | 5617.2 | 6122.5 | 6264.4 | 6794.5 | 7176.6 | 6331.2 |
| 60° | 3143.6 | 3194.9 | 3617.4 | 4643.9 | 5397.0 | 6167.6 | 6900.1 | 7149.1 | 7943.2 | 8361.6 | 7151.9 |
| 62.5° | 3052.0 | 3107.3 | 3583.3 | 4632.2 | 5802.2 | 6928.9 | 7895.4 | 8089.6 | 9032.3 | 9439.3 | 7838.3 |
| 65° | 2761.7 | 2813.5 | 3306.3 | 4446.2 | 6075.4 | 7741.5 | 9073.2 | 8951.7 | 9892.2 | 10198.1 | 8180.5 |
| 66° | 2562.7 | 2613.5 | 3087.8 | 4227.2 | 6011.9 | 7972.0 | 9490.6 | 9218.5 | 10084.7 | 10324.4 | 8113.6 |
| 67.5° | 2199.1 | 2238.9 | 2663.6 | 3736.7 | 5674.8 | 8036.5 | 9841.5 | 9419.0 | 10104.8 | 10189.6 | 7731.7 |
| 70° | 1389.5 | 1401.0 | 1731.1 | 2579.5 | 4295.8 | 6969.7 | 9307.2 | 8921.2 | 9271.6 | 9042.1 | 6481.6 |
| 72.5° | 602.9 | 598.9 | 831.1 | 1312.2 | 2432.1 | 4676.7 | 7528.8 | 7361.1 | 7273.0 | 6749.7 | 4537.3 |
| 75° | 335.4 | 340.1 | 431.7 | 609.1 | 988.3 | 2297.2 | 4925.0 | 4713.0 | 3979.3 | 3395.6 | 2057.4 |
| 77.5° | 269.1 | 275.5 | 357.9 | 432.2 | 443.7 | 801.1 | 2304.7 | 1875.3 | 1129.0 | 906.0 | 571.6 |
| 80° | 212.7 | 224.2 | 312.3 | 336.6 | 299.1 | 330.1 | 744.6 | 595.4 | 446.7 | 409.7 | 296.3 |
| 82.5° | 168.2 | 176.4 | 268.0 | 254.8 | 209.2 | 222.5 | 356.7 | 347.6 | 290.5 | 264.5 | 171.2 |
| 85° | 121.1 | 135.9 | 220.2 | 191.9 | 137.1 | 149.9 | 236.8 | 227.0 | 166.5 | 135.9 | 75.6 |
| 87.5° | 49.6 | 64.6 | 155.6 | 127.4 | 76.6 | 69.8 | 118.1 | 111.2 | 78.9 | 57.6 | 37.5 |
| 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-03-LED-E1-T3R-7050-600

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1738.1 | 1738.1 | 1738.1 | 1738.1 | 1738.1 | 1738.1 | 1738.1 | 1738.1 | 1738.1 | 1738.1 | 1738.1 |
| 2.5° | 1736.4 | 1750.1 | 1768.1 | 1779.1 | 1784.9 | 1788.9 | 1795.2 | 1794.6 | 1796.4 | 1796.9 | 1799.2 |
| 5° | 1747.9 | 1770.9 | 1796.9 | 1803.9 | 1803.9 | 1797.4 | 1791.1 | 1780.7 | 1776.7 | 1775.6 | 1776.7 |
| 7.5° | 1777.9 | 1803.2 | 1825.7 | 1817.7 | 1800.4 | 1774.9 | 1742.1 | 1713.3 | 1697.8 | 1692.6 | 1691.5 |
| 10° | 1815.9 | 1846.5 | 1855.7 | 1825.2 | 1774.4 | 1713.3 | 1648.2 | 1601.0 | 1573.9 | 1566.4 | 1564.1 |
| 12.5° | 1862.0 | 1890.8 | 1878.2 | 1813.7 | 1719.6 | 1621.2 | 1531.2 | 1455.8 | 1399.2 | 1381.4 | 1380.2 |
| 15° | 1912.8 | 1935.3 | 1890.8 | 1777.9 | 1637.8 | 1492.6 | 1332.4 | 1202.2 | 1131.9 | 1109.4 | 1107.7 |
| 17.5° | 1960.1 | 1971.6 | 1883.3 | 1715.6 | 1517.4 | 1282.3 | 1069.6 | 969.3 | 945.2 | 951.0 | 952.0 |
| 20° | 2000.4 | 2000.4 | 1858.0 | 1626.3 | 1327.9 | 1005.1 | 870.7 | 869.1 | 886.4 | 903.7 | 907.2 |
| 22.5° | 2044.7 | 2018.2 | 1813.7 | 1500.1 | 1059.2 | 822.4 | 802.8 | 818.9 | 838.4 | 857.4 | 860.4 |
| 25° | 2099.5 | 2032.6 | 1751.9 | 1308.9 | 832.7 | 746.8 | 754.3 | 767.6 | 777.4 | 789.6 | 791.3 |
| 27.5° | 2160.5 | 2051.0 | 1670.7 | 1045.4 | 722.7 | 699.7 | 705.5 | 710.0 | 708.8 | 713.5 | 714.5 |
| 30° | 2233.7 | 2072.4 | 1559.4 | 817.1 | 677.2 | 659.2 | 648.9 | 644.9 | 644.9 | 652.4 | 655.2 |
| 32.5° | 2331.7 | 2104.0 | 1399.8 | 700.2 | 655.2 | 630.4 | 597.1 | 582.1 | 587.9 | 613.2 | 618.9 |
| 35° | 2439.6 | 2138.0 | 1183.7 | 660.4 | 650.7 | 617.2 | 565.4 | 537.6 | 538.3 | 561.9 | 569.4 |
| 37.5° | 2557.0 | 2181.3 | 946.8 | 652.9 | 661.0 | 617.9 | 548.6 | 510.6 | 495.0 | 495.0 | 498.0 |
| 40° | 2707.4 | 2225.6 | 766.5 | 658.2 | 683.0 | 624.7 | 540.0 | 489.3 | 445.5 | 446.7 | 449.0 |
| 42.5° | 2903.4 | 2263.7 | 669.7 | 669.0 | 709.5 | 633.9 | 539.4 | 461.0 | 423.0 | 449.0 | 472.5 |
| 45° | 3121.3 | 2282.7 | 626.9 | 678.9 | 730.8 | 639.7 | 530.3 | 456.5 | 425.9 | 503.1 | 548.1 |
| 47.5° | 3371.9 | 2271.7 | 603.4 | 682.3 | 736.0 | 639.7 | 519.8 | 467.5 | 446.0 | 582.6 | 635.1 |
| 50° | 3646.9 | 2240.1 | 580.4 | 675.5 | 734.3 | 638.5 | 529.6 | 478.3 | 453.5 | 596.4 | 632.7 |
| 52.5° | 3970.2 | 2213.6 | 556.1 | 660.4 | 722.0 | 632.2 | 541.1 | 473.7 | 429.9 | 542.3 | 567.6 |
| 55° | 4338.9 | 2221.1 | 529.1 | 639.2 | 703.0 | 620.1 | 537.1 | 455.2 | 405.2 | 477.8 | 493.3 |
| 57.5° | 4810.4 | 2310.4 | 496.8 | 612.1 | 677.2 | 599.9 | 522.8 | 446.7 | 397.7 | 433.4 | 442.7 |
| 60° | 5336.5 | 2465.9 | 456.5 | 584.9 | 644.9 | 567.6 | 511.8 | 450.7 | 401.2 | 429.9 | 434.5 |
| 62.5° | 5722.6 | 2556.5 | 421.9 | 545.1 | 601.1 | 531.8 | 498.0 | 455.8 | 410.4 | 442.0 | 440.9 |
| 65° | 5827.5 | 2407.8 | 378.6 | 487.0 | 541.8 | 494.5 | 480.5 | 461.5 | 414.4 | 451.8 | 446.7 |
| 66° | 5680.5 | 2247.6 | 359.6 | 460.0 | 511.8 | 476.0 | 472.0 | 461.0 | 412.7 | 453.0 | 444.3 |
| 67.5° | 5323.9 | 1919.0 | 326.8 | 420.2 | 464.0 | 448.4 | 458.2 | 455.8 | 408.0 | 451.8 | 439.7 |
| 70° | 4341.9 | 1309.4 | 279.5 | 349.9 | 386.1 | 394.7 | 431.7 | 437.4 | 393.0 | 431.7 | 405.2 |
| 72.5° | 3033.7 | 797.6 | 247.3 | 271.5 | 312.3 | 336.6 | 395.4 | 412.0 | 372.9 | 376.9 | 351.6 |
| 75° | 1466.1 | 423.7 | 224.2 | 210.4 | 242.5 | 281.3 | 351.6 | 377.4 | 341.1 | 315.3 | 306.1 |
| 77.5° | 457.0 | 258.8 | 190.2 | 169.4 | 190.2 | 227.0 | 293.8 | 330.8 | 303.8 | 264.0 | 260.5 |
| 80° | 245.5 | 190.2 | 146.4 | 135.9 | 150.4 | 178.2 | 231.0 | 276.0 | 261.0 | 236.8 | 211.5 |
| 82.5° | 161.9 | 123.4 | 108.4 | 105.4 | 114.6 | 135.9 | 171.7 | 228.8 | 228.8 | 202.9 | 147.6 |
| 85° | 83.6 | 75.6 | 74.3 | 74.3 | 80.1 | 90.6 | 116.9 | 176.4 | 187.9 | 107.1 | 88.8 |
| 87.5° | 41.5 | 43.3 | 40.3 | 42.1 | 45.0 | 44.3 | 55.8 | 88.8 | 106.1 | 65.1 | 54.1 |
| 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)