

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: STREETWORKS

Report Number: P299405

Luminaire Tested: **GAA-AF-02-LED-U-5NQ-7050-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P299405  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24141)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: GAA-AF-02-LED-U-5NQ-7050-800  
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE  
(2) 70 CRI, 5000K CCT 800mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II  
w/Spill Control OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10113.9 lumens  
Efficiency: N/A  
Efficacy: 119.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B3 - U0 - G1  
  
Input Watts (W): 85  
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: 28.75 FT

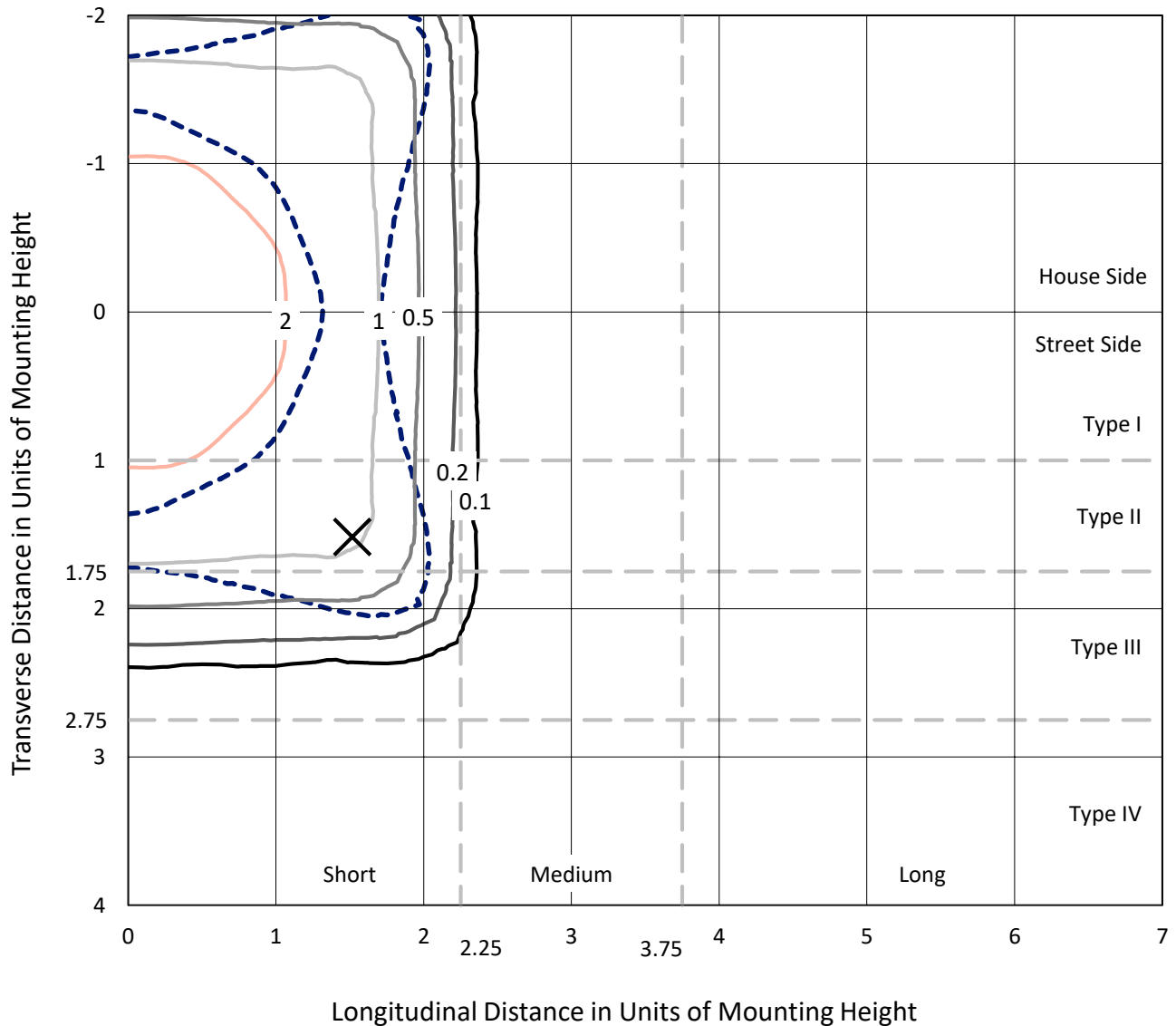


REPORT NUMBER: P299405

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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

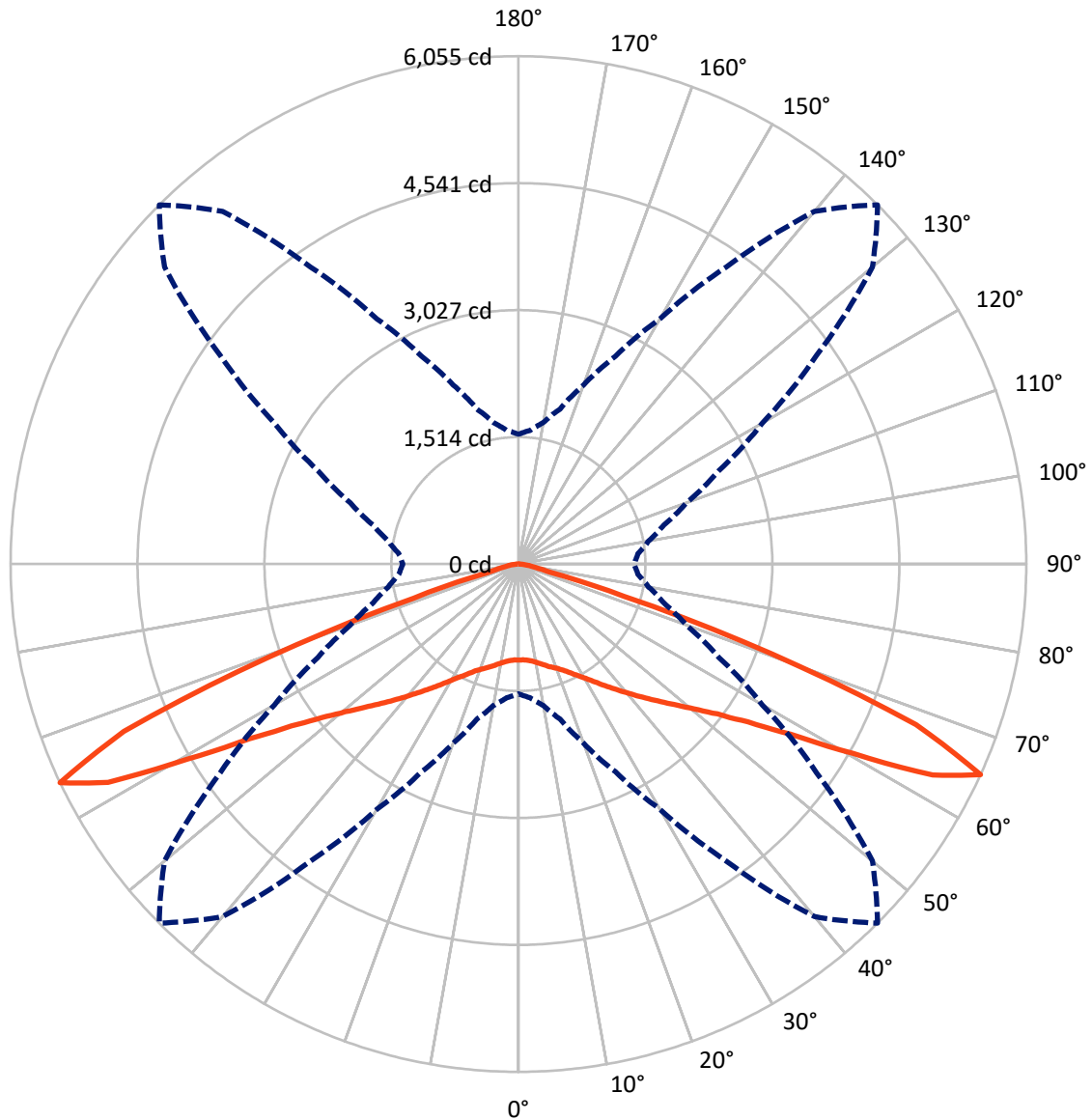


Based on 20 foot mounting height. Maximum calculated value = 2.9 fc  
 Type V - Short - Full Cutoff

REPORT NUMBER: P299405

CATALOG NUMBER: GAA-AF-02-LED-U-5NQ-7050-800

### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

REPORT NUMBER: P299405

CATALOG NUMBER: GAA-AF-02-LED-U-5NQ-7050-800

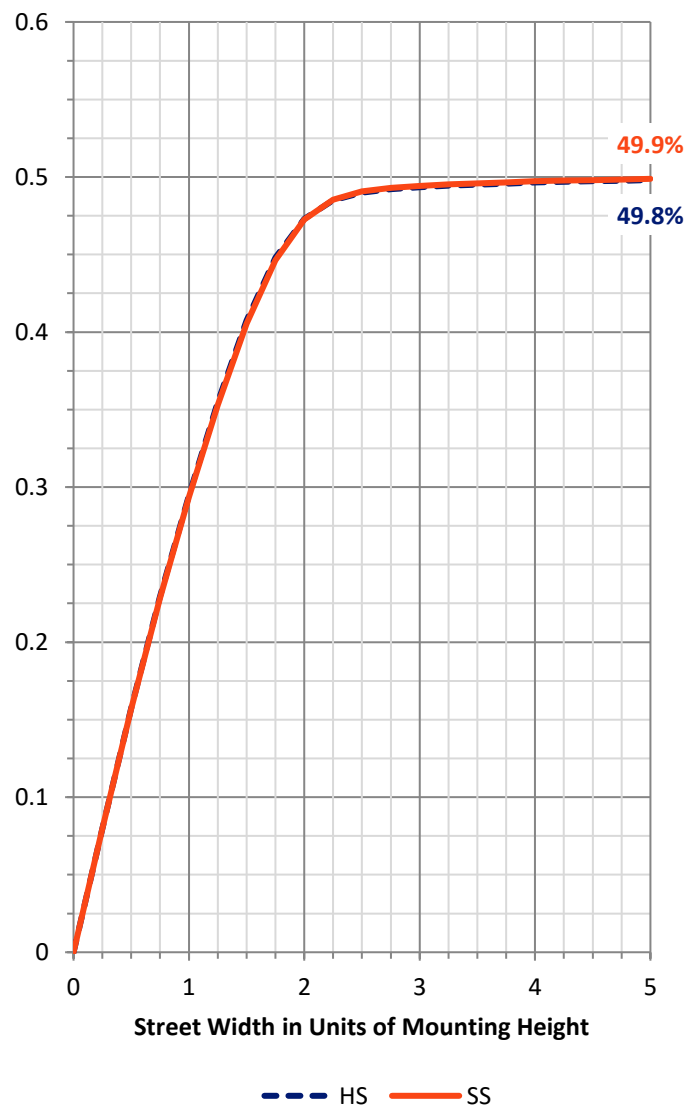
**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 5056.9   | 0.0    | 5056.9  |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Street Side</b> | Lumens    | 5056.9   | 0.0    | 5056.9  |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Total</b>       | Lumens    | 10113.9  | 0.0    | 10113.9 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 111.5   | 1.1       |
| 10°-20°   | 357.7   | 3.5       |
| 20°-30°   | 668.9   | 6.6       |
| 30°-40°   | 1131.3  | 11.2      |
| 40°-50°   | 1849.8  | 18.3      |
| 50°-60°   | 2941.4  | 29.1      |
| 60°-70°   | 2658.9  | 26.3      |
| 70°-80°   | 336.5   | 3.3       |
| 80°-90°   | 57.9    | 0.6       |
| 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°    | 10113.9 | 100.0     |
| 0°-180°   | 10113.9 | 100.0     |

**Coefficient of Utilization**



REPORT NUMBER: P299405

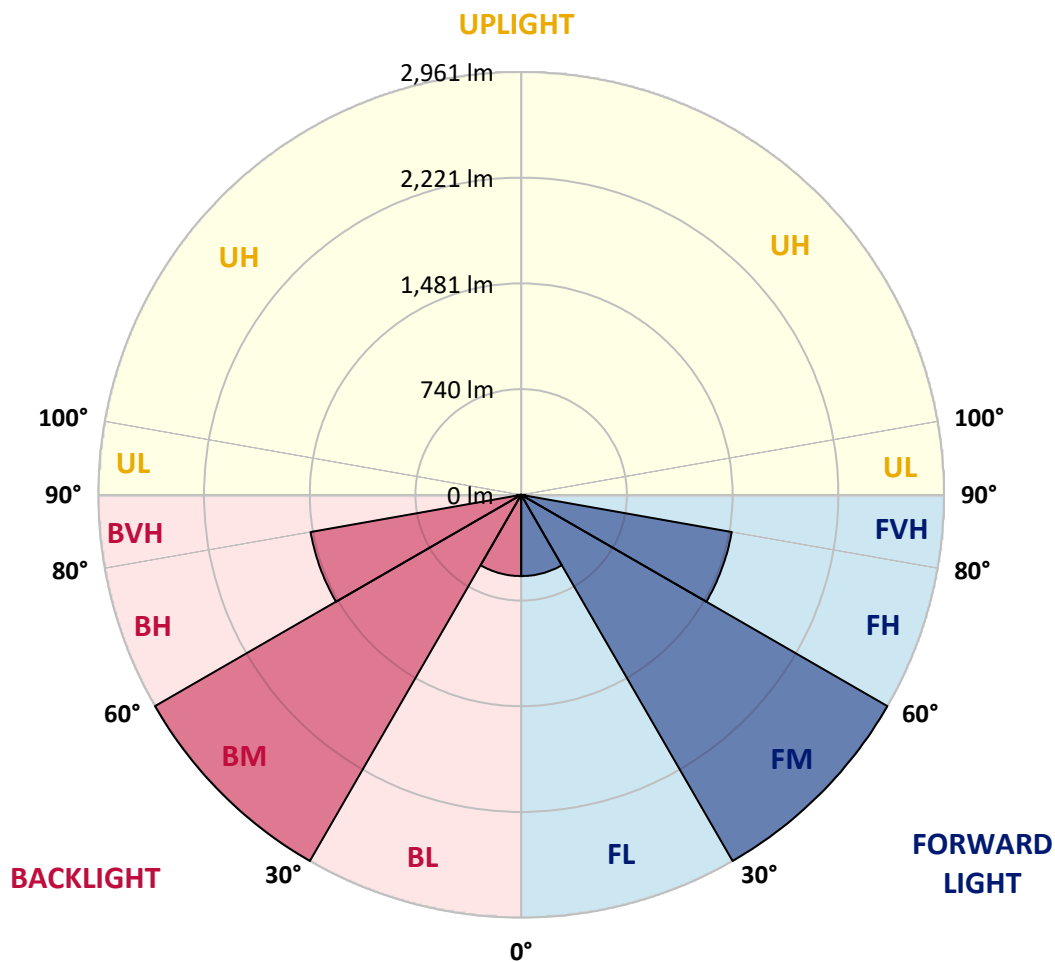
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 569.1  | 5.6       |                         |      |         |
| FM   | (30°-60°)   | 2961.2 | 29.3      |                         |      |         |
| FH   | (60°-80°)   | 1497.7 | 14.8      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 28.9   | 0.3       |                         |      | G1/100  |
| BL   | (0°-30°)    | 569.1  | 5.6       | B2/1000                 |      |         |
| BM   | (30°-60°)   | 2961.2 | 29.3      | B3/5000                 |      |         |
| BH   | (60°-80°)   | 1497.7 | 14.8      | B3/2500                 |      | G1/1800 |
| BVH  | (80°-90°)   | 28.9   | 0.3       |                         |      | G1/100  |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |         |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |         |

**BUG Rating: B3-U0-G1**

Type V Short





REPORT NUMBER: P299405

CATALOG NUMBER: GAA-AF-02-LED-U-5NQ-7050-800

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 10°    | 15°    | 20°    | 25°    | 30°    | 35°    | 40°    | 45°    | 50°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1144.4 | 1144.4 | 1144.4 | 1144.4 | 1144.4 | 1144.4 | 1144.4 | 1144.4 | 1144.4 | 1144.4 | 1144.4 |
| 2.5°  | 1145.3 | 1146.3 | 1147.2 | 1146.3 | 1147.2 | 1145.8 | 1144.9 | 1146.3 | 1144.9 | 1143.4 | 1144.4 |
| 5°    | 1155.3 | 1155.8 | 1155.8 | 1154.3 | 1155.8 | 1154.8 | 1153.4 | 1155.3 | 1153.9 | 1152.4 | 1153.4 |
| 7.5°  | 1171.9 | 1173.8 | 1172.3 | 1170.9 | 1171.9 | 1170.9 | 1170.0 | 1170.4 | 1170.0 | 1168.5 | 1169.0 |
| 10°   | 1194.1 | 1195.5 | 1194.6 | 1194.1 | 1195.1 | 1194.6 | 1193.7 | 1193.2 | 1193.7 | 1192.2 | 1192.2 |
| 12.5° | 1221.1 | 1220.7 | 1220.2 | 1220.7 | 1222.1 | 1222.1 | 1221.6 | 1222.1 | 1223.0 | 1223.5 | 1222.5 |
| 15°   | 1247.7 | 1248.6 | 1248.6 | 1248.6 | 1251.4 | 1253.8 | 1255.2 | 1256.2 | 1258.1 | 1258.5 | 1256.7 |
| 17.5° | 1280.8 | 1280.8 | 1280.3 | 1280.8 | 1283.7 | 1287.4 | 1288.9 | 1290.8 | 1292.7 | 1294.1 | 1291.7 |
| 20°   | 1317.8 | 1318.7 | 1318.7 | 1319.7 | 1323.4 | 1327.7 | 1327.7 | 1328.7 | 1327.7 | 1328.7 | 1327.2 |
| 22.5° | 1362.8 | 1365.6 | 1365.6 | 1366.1 | 1369.9 | 1375.1 | 1373.6 | 1375.1 | 1372.7 | 1374.6 | 1372.7 |
| 25°   | 1421.5 | 1425.8 | 1424.8 | 1424.8 | 1427.6 | 1431.0 | 1431.4 | 1434.3 | 1433.8 | 1436.2 | 1434.8 |
| 27.5° | 1487.8 | 1494.4 | 1496.3 | 1495.9 | 1497.8 | 1501.1 | 1502.0 | 1505.3 | 1503.4 | 1505.3 | 1504.4 |
| 30°   | 1567.4 | 1570.2 | 1574.0 | 1575.4 | 1577.8 | 1581.1 | 1581.1 | 1581.6 | 1579.2 | 1582.1 | 1583.5 |
| 32.5° | 1649.8 | 1655.0 | 1658.8 | 1667.3 | 1671.6 | 1674.0 | 1673.5 | 1674.4 | 1672.1 | 1675.9 | 1678.7 |
| 35°   | 1758.7 | 1762.5 | 1768.7 | 1775.3 | 1781.0 | 1780.5 | 1779.1 | 1779.6 | 1779.6 | 1782.9 | 1785.7 |
| 37.5° | 1890.0 | 1890.9 | 1899.0 | 1908.4 | 1911.3 | 1908.4 | 1899.9 | 1898.0 | 1893.7 | 1898.0 | 1902.7 |
| 40°   | 2028.7 | 2032.1 | 2048.2 | 2054.3 | 2055.7 | 2050.5 | 2038.2 | 2031.1 | 2021.6 | 2026.8 | 2033.5 |
| 42.5° | 2174.2 | 2180.8 | 2195.5 | 2206.4 | 2211.1 | 2207.8 | 2190.7 | 2179.8 | 2167.5 | 2170.4 | 2177.0 |
| 45°   | 2335.2 | 2343.3 | 2364.1 | 2374.5 | 2383.5 | 2378.3 | 2361.7 | 2345.2 | 2325.7 | 2327.2 | 2337.6 |
| 47.5° | 2515.2 | 2523.3 | 2550.3 | 2567.8 | 2572.5 | 2571.6 | 2553.1 | 2530.4 | 2503.8 | 2502.9 | 2511.9 |
| 50°   | 2717.0 | 2725.0 | 2758.7 | 2785.7 | 2799.4 | 2798.0 | 2776.2 | 2744.0 | 2711.8 | 2712.2 | 2723.6 |
| 52.5° | 2914.0 | 2924.0 | 2959.0 | 3005.4 | 3032.4 | 3051.9 | 3038.6 | 3008.3 | 2969.0 | 2969.9 | 2980.3 |
| 55°   | 3098.8 | 3115.3 | 3155.6 | 3218.6 | 3268.8 | 3323.3 | 3338.9 | 3338.0 | 3314.3 | 3320.9 | 3331.3 |
| 57.5° | 3188.3 | 3212.9 | 3275.0 | 3374.4 | 3476.8 | 3587.6 | 3681.4 | 3751.5 | 3781.3 | 3826.3 | 3815.9 |
| 60°   | 3018.7 | 3058.0 | 3149.4 | 3295.8 | 3498.1 | 3729.2 | 3977.0 | 4219.0 | 4425.5 | 4581.4 | 4491.8 |
| 62.5° | 2471.6 | 2522.8 | 2633.6 | 2821.2 | 3127.2 | 3497.1 | 3971.3 | 4543.5 | 5166.8 | 5542.9 | 5274.3 |
| 65°   | 1546.5 | 1599.6 | 1712.3 | 1913.2 | 2271.3 | 2731.2 | 3374.4 | 4322.7 | 5487.5 | 6054.5 | 5507.9 |
| 67.5° | 603.0  | 631.9  | 693.0  | 821.3  | 1090.4 | 1499.6 | 2145.3 | 3221.4 | 4614.5 | 5111.4 | 4528.8 |
| 70°   | 302.2  | 305.0  | 316.4  | 340.1  | 397.9  | 516.8  | 786.3  | 1493.5 | 2646.4 | 3196.3 | 2551.2 |
| 72.5° | 218.4  | 218.8  | 224.5  | 234.9  | 253.4  | 279.9  | 331.1  | 457.1  | 860.7  | 1315.4 | 806.7  |
| 75°   | 167.2  | 169.1  | 172.4  | 178.1  | 188.0  | 201.3  | 219.8  | 263.4  | 326.4  | 378.5  | 318.3  |
| 77.5° | 128.8  | 132.6  | 135.0  | 140.2  | 146.4  | 155.4  | 160.6  | 177.2  | 206.0  | 216.9  | 213.6  |
| 80°   | 98.1   | 101.4  | 106.6  | 110.8  | 115.1  | 119.4  | 117.5  | 125.0  | 140.2  | 149.2  | 144.5  |
| 82.5° | 62.5   | 66.3   | 81.5   | 85.3   | 87.2   | 90.0   | 86.7   | 87.2   | 93.8   | 99.5   | 93.8   |
| 85°   | 40.3   | 42.6   | 51.6   | 56.4   | 56.8   | 58.7   | 57.3   | 54.0   | 54.0   | 49.3   | 55.4   |
| 87.5° | 18.5   | 18.9   | 23.2   | 27.5   | 28.4   | 25.6   | 25.1   | 24.2   | 19.4   | 18.5   | 19.9   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |



REPORT NUMBER: P299405

CATALOG NUMBER: GAA-AF-02-LED-U-5NQ-7050-800

**CANDELA DISTRIBUTION (continued):**

|       | 55°    | 60°    | 65°    | 70°    | 75°    | 80°    | 85°    | 90°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1144.4 | 1144.4 | 1144.4 | 1144.4 | 1144.4 | 1144.4 | 1144.4 | 1144.4 |
| 2.5°  | 1143.9 | 1144.9 | 1145.3 | 1146.8 | 1147.2 | 1147.2 | 1147.7 | 1148.7 |
| 5°    | 1152.9 | 1154.3 | 1154.8 | 1156.7 | 1157.2 | 1156.7 | 1157.7 | 1158.1 |
| 7.5°  | 1169.0 | 1171.4 | 1172.3 | 1174.2 | 1172.8 | 1174.7 | 1175.2 | 1175.2 |
| 10°   | 1192.7 | 1195.1 | 1195.5 | 1197.4 | 1196.5 | 1197.4 | 1197.4 | 1196.5 |
| 12.5° | 1224.0 | 1224.4 | 1223.0 | 1224.4 | 1222.5 | 1223.5 | 1222.1 | 1221.1 |
| 15°   | 1258.5 | 1257.1 | 1253.8 | 1253.8 | 1251.0 | 1251.4 | 1251.0 | 1250.5 |
| 17.5° | 1292.2 | 1289.3 | 1287.0 | 1286.0 | 1283.7 | 1283.2 | 1281.8 | 1281.8 |
| 20°   | 1329.1 | 1327.7 | 1326.3 | 1324.4 | 1322.0 | 1319.7 | 1319.2 | 1320.1 |
| 22.5° | 1373.6 | 1373.2 | 1373.2 | 1372.2 | 1368.9 | 1366.5 | 1365.1 | 1365.1 |
| 25°   | 1433.3 | 1429.1 | 1429.1 | 1428.6 | 1427.2 | 1425.8 | 1422.9 | 1424.3 |
| 27.5° | 1500.6 | 1498.2 | 1500.1 | 1499.6 | 1498.2 | 1498.2 | 1496.3 | 1496.3 |
| 30°   | 1583.5 | 1582.5 | 1585.4 | 1583.0 | 1578.3 | 1577.8 | 1575.9 | 1573.5 |
| 32.5° | 1679.2 | 1678.2 | 1682.5 | 1679.6 | 1672.1 | 1667.8 | 1664.0 | 1662.1 |
| 35°   | 1785.7 | 1786.2 | 1791.4 | 1789.5 | 1781.0 | 1778.2 | 1771.5 | 1770.6 |
| 37.5° | 1902.3 | 1909.8 | 1918.8 | 1920.7 | 1913.6 | 1911.7 | 1904.6 | 1900.8 |
| 40°   | 2039.2 | 2049.1 | 2062.8 | 2066.2 | 2058.6 | 2057.2 | 2047.2 | 2042.0 |
| 42.5° | 2185.0 | 2202.1 | 2219.2 | 2222.0 | 2214.4 | 2206.8 | 2197.4 | 2193.6 |
| 45°   | 2348.0 | 2368.4 | 2390.6 | 2396.3 | 2384.9 | 2375.9 | 2363.6 | 2363.6 |
| 47.5° | 2530.8 | 2556.4 | 2581.5 | 2597.1 | 2586.7 | 2577.2 | 2562.6 | 2553.1 |
| 50°   | 2746.8 | 2781.9 | 2814.6 | 2830.7 | 2814.1 | 2796.1 | 2770.5 | 2762.0 |
| 52.5° | 3017.8 | 3055.7 | 3084.1 | 3075.6 | 3050.0 | 3024.9 | 2996.9 | 2985.6 |
| 55°   | 3363.5 | 3376.3 | 3376.3 | 3344.1 | 3293.0 | 3250.8 | 3206.8 | 3192.1 |
| 57.5° | 3796.0 | 3746.7 | 3671.0 | 3574.8 | 3454.0 | 3348.9 | 3277.8 | 3244.2 |
| 60°   | 4304.3 | 4067.4 | 3799.8 | 3536.9 | 3320.9 | 3142.8 | 3037.2 | 2988.9 |
| 62.5° | 4642.9 | 4023.4 | 3487.2 | 3065.1 | 2754.4 | 2539.8 | 2393.9 | 2337.1 |
| 65°   | 4339.3 | 3355.5 | 2637.4 | 2132.5 | 1793.8 | 1575.4 | 1431.0 | 1377.9 |
| 67.5° | 3178.3 | 2102.6 | 1404.4 | 1006.6 | 737.5  | 588.3  | 529.1  | 504.5  |
| 70°   | 1426.7 | 740.3  | 453.8  | 354.3  | 305.5  | 280.4  | 269.5  | 265.7  |
| 72.5° | 430.1  | 311.2  | 262.4  | 236.8  | 217.4  | 205.1  | 196.1  | 195.2  |
| 75°   | 259.6  | 216.0  | 191.8  | 176.7  | 164.4  | 154.4  | 149.7  | 148.3  |
| 77.5° | 181.4  | 158.7  | 147.3  | 136.4  | 126.9  | 119.4  | 115.1  | 111.8  |
| 80°   | 127.4  | 116.5  | 111.3  | 105.2  | 99.0   | 91.9   | 85.7   | 82.9   |
| 82.5° | 85.3   | 82.9   | 82.9   | 79.1   | 73.9   | 67.3   | 54.9   | 52.1   |
| 85°   | 54.9   | 54.5   | 55.4   | 54.0   | 50.2   | 43.1   | 35.5   | 33.6   |
| 87.5° | 25.6   | 26.1   | 28.9   | 28.4   | 27.5   | 22.7   | 18.0   | 17.1   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)