

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: P198813

Luminaire Tested: **XNV2-AF-02-LED-U-5NQ-7050-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P198813  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: XNV2-AF-02-LED-U-5NQ-7050-800  
Description: XNV2 ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 5000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10016 lumens  
Efficiency: N/A  
Efficacy: 117.8 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

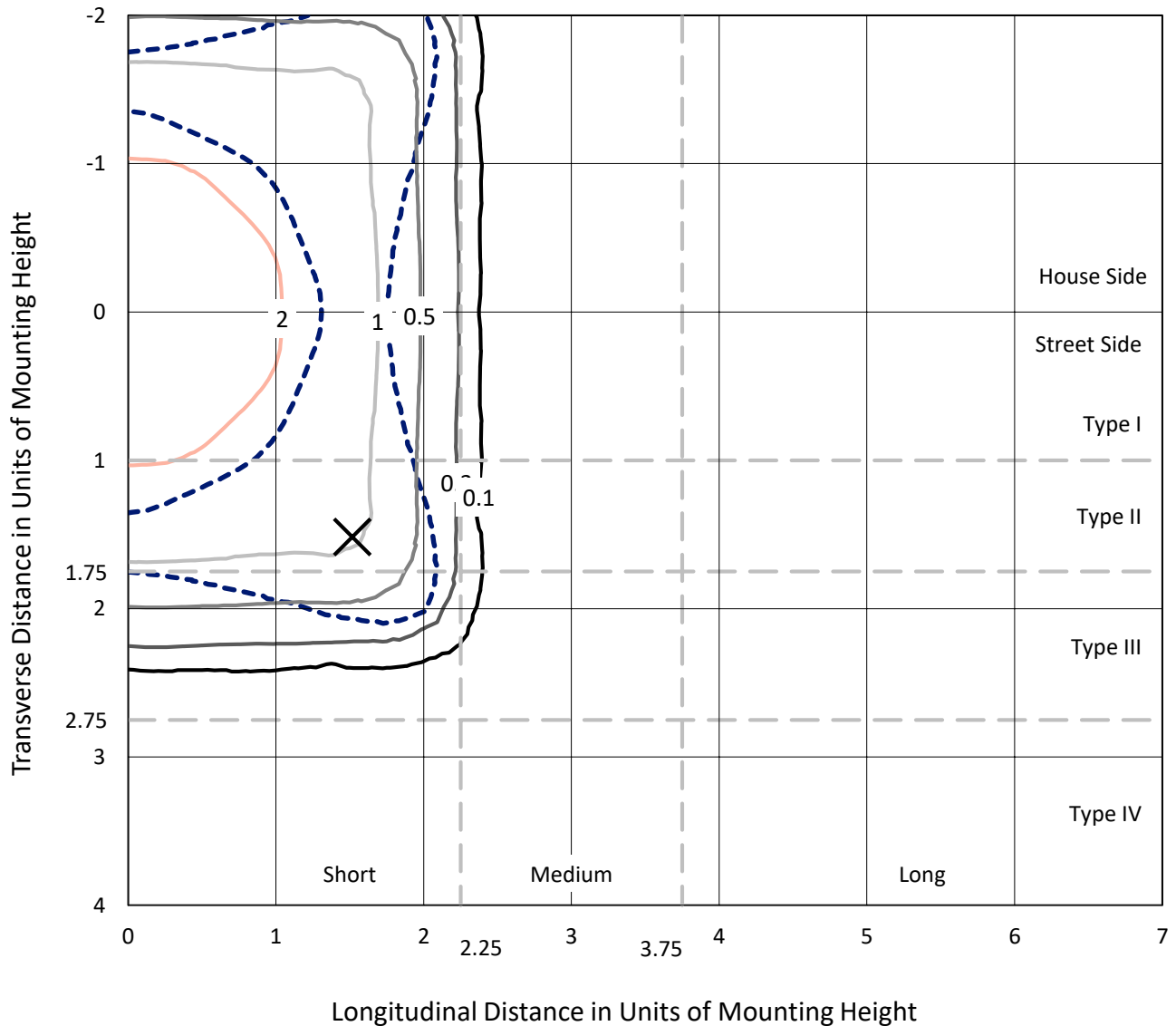


REPORT NUMBER: P198813

CATALOG NUMBER: XNV2-AF-02-LED-U-5NQ-7050-800

### Iso-Footcandle Lines of Horizontal Illumination

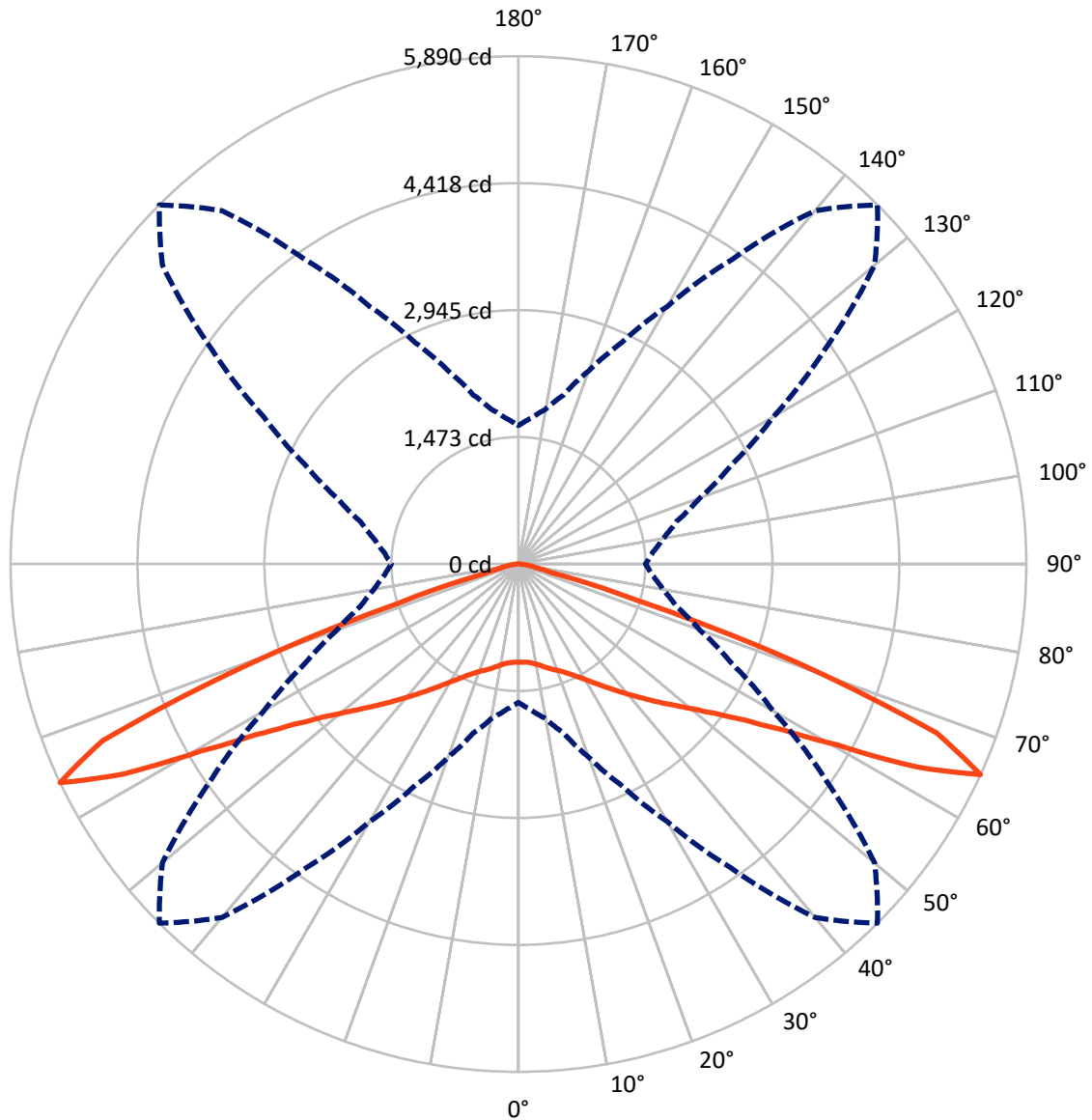
× Max cd  
 - - - 1/2 Max cd



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

REPORT NUMBER: P198813  
CATALOG NUMBER: XNV2-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: P198813

CATALOG NUMBER: XNV2-AF-02-LED-U-5NQ-7050-800

**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 5008.0   | 0.0    | 5008.0  |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Street Side</b> | Lumens    | 5008.0   | 0.0    | 5008.0  |
|                    | % Fixture | 50.0     | 0.0    | 50.0    |
| <b>Total</b>       | Lumens    | 10016.0  | 0.0    | 10016.0 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 110.9   | 1.1       |
| 10°-20°   | 355.6   | 3.6       |
| 20°-30°   | 663.3   | 6.6       |
| 30°-40°   | 1118.5  | 11.2      |
| 40°-50°   | 1816.8  | 18.1      |
| 50°-60°   | 2846.6  | 28.4      |
| 60°-70°   | 2687.0  | 26.8      |
| 70°-80°   | 362.1   | 3.6       |
| 80°-90°   | 55.2    | 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°    | 10016.0 | 100.0     |
| 0°-180°   | 10016.0 | 100.0     |



REPORT NUMBER: P198813

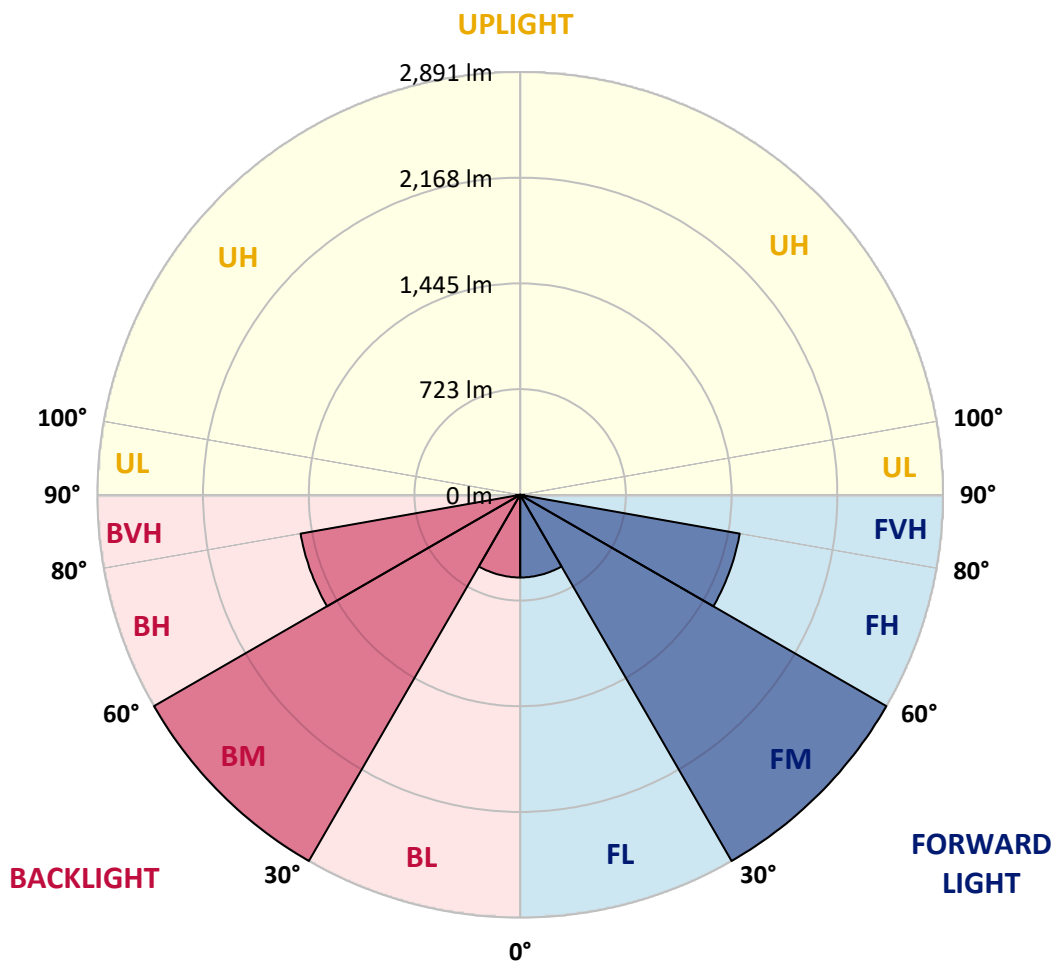
CATALOG NUMBER: XNV2-AF-02-LED-U-5NQ-7050-800

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

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |         |
|------|-------------|--------|-----------|-------------------------|------|---------|
|      |             |        |           | B                       | U    | G       |
| FL   | (0°-30°)    | 564.9  | 5.6       |                         |      |         |
| FM   | (30°-60°)   | 2890.9 | 28.9      |                         |      |         |
| FH   | (60°-80°)   | 1524.6 | 15.2      |                         |      | G1/1800 |
| FVH  | (80°-90°)   | 27.6   | 0.3       |                         |      | G1/100  |
| BL   | (0°-30°)    | 564.9  | 5.6       | B2/1000                 |      |         |
| BM   | (30°-60°)   | 2890.9 | 28.9      | B3/5000                 |      |         |
| BH   | (60°-80°)   | 1524.6 | 15.2      | B3/2500                 |      | G1/1800 |
| BVH  | (80°-90°)   | 27.6   | 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: P198813

CATALOG NUMBER: XNV2-AF-02-LED-U-5NQ-7050-800

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 10°    | 15°    | 20°    | 25°    | 30°    | 35°    | 40°    | 45°    | 50°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1139.3 | 1139.3 | 1139.3 | 1139.3 | 1139.3 | 1139.3 | 1139.3 | 1139.3 | 1139.3 | 1139.3 | 1139.3 |
| 2.5°  | 1148.7 | 1148.7 | 1150.5 | 1149.9 | 1147.4 | 1145.5 | 1143.7 | 1141.2 | 1139.9 | 1138.7 | 1138.1 |
| 5°    | 1154.9 | 1154.9 | 1156.8 | 1156.2 | 1154.3 | 1151.8 | 1150.5 | 1148.7 | 1146.8 | 1145.5 | 1146.2 |
| 7.5°  | 1170.5 | 1171.1 | 1171.8 | 1171.1 | 1169.3 | 1167.4 | 1164.9 | 1164.3 | 1161.8 | 1159.9 | 1161.1 |
| 10°   | 1194.2 | 1194.2 | 1194.8 | 1195.5 | 1194.2 | 1189.8 | 1189.8 | 1188.6 | 1186.1 | 1183.6 | 1184.2 |
| 12.5° | 1220.4 | 1220.4 | 1221.0 | 1221.0 | 1221.0 | 1218.5 | 1219.2 | 1218.5 | 1215.4 | 1214.2 | 1215.4 |
| 15°   | 1246.0 | 1246.6 | 1246.6 | 1247.9 | 1247.9 | 1248.5 | 1251.0 | 1251.0 | 1249.7 | 1249.1 | 1249.1 |
| 17.5° | 1276.0 | 1277.2 | 1277.8 | 1279.7 | 1280.3 | 1281.6 | 1284.1 | 1284.7 | 1285.3 | 1283.4 | 1284.1 |
| 20°   | 1315.9 | 1316.5 | 1318.4 | 1319.0 | 1321.5 | 1321.5 | 1322.7 | 1322.1 | 1320.9 | 1318.4 | 1318.4 |
| 22.5° | 1360.8 | 1362.1 | 1365.8 | 1365.8 | 1368.9 | 1367.0 | 1367.7 | 1365.8 | 1362.7 | 1361.4 | 1360.2 |
| 25°   | 1419.5 | 1421.3 | 1424.4 | 1423.2 | 1424.4 | 1421.3 | 1421.3 | 1421.3 | 1419.5 | 1417.6 | 1417.0 |
| 27.5° | 1493.7 | 1490.6 | 1493.7 | 1491.2 | 1490.6 | 1488.1 | 1488.7 | 1487.5 | 1485.6 | 1485.0 | 1482.5 |
| 30°   | 1571.1 | 1567.3 | 1569.2 | 1569.8 | 1568.6 | 1568.0 | 1565.5 | 1563.6 | 1560.5 | 1561.1 | 1559.2 |
| 32.5° | 1659.7 | 1655.9 | 1657.8 | 1658.4 | 1657.2 | 1658.4 | 1657.8 | 1653.4 | 1649.7 | 1652.2 | 1652.2 |
| 35°   | 1765.1 | 1762.6 | 1767.6 | 1769.5 | 1765.7 | 1763.9 | 1761.4 | 1756.4 | 1750.8 | 1754.5 | 1755.1 |
| 37.5° | 1891.8 | 1888.7 | 1892.4 | 1897.4 | 1890.5 | 1886.8 | 1876.8 | 1869.3 | 1865.6 | 1867.4 | 1869.9 |
| 40°   | 2023.4 | 2024.0 | 2034.7 | 2035.9 | 2028.4 | 2024.0 | 2014.1 | 2002.8 | 1992.2 | 1992.2 | 1995.3 |
| 42.5° | 2161.9 | 2163.8 | 2176.3 | 2180.7 | 2178.2 | 2170.1 | 2156.3 | 2142.6 | 2128.9 | 2131.4 | 2135.1 |
| 45°   | 2318.5 | 2316.1 | 2329.2 | 2339.8 | 2337.9 | 2335.4 | 2322.3 | 2297.3 | 2284.9 | 2284.2 | 2290.5 |
| 47.5° | 2483.3 | 2488.3 | 2502.0 | 2520.1 | 2519.5 | 2513.2 | 2496.4 | 2473.3 | 2450.2 | 2452.1 | 2459.6 |
| 50°   | 2675.4 | 2682.3 | 2705.4 | 2723.5 | 2726.0 | 2724.1 | 2704.1 | 2677.3 | 2644.9 | 2646.7 | 2656.7 |
| 52.5° | 2847.6 | 2857.6 | 2884.5 | 2921.9 | 2945.0 | 2955.6 | 2942.5 | 2917.5 | 2884.5 | 2886.3 | 2896.9 |
| 55°   | 3003.6 | 3019.2 | 3059.2 | 3110.3 | 3156.5 | 3199.5 | 3218.9 | 3218.3 | 3193.9 | 3199.5 | 3213.3 |
| 57.5° | 3101.6 | 3123.4 | 3183.9 | 3266.3 | 3358.0 | 3444.8 | 3519.6 | 3590.1 | 3605.7 | 3635.1 | 3635.1 |
| 60°   | 2969.9 | 3021.1 | 3101.6 | 3242.6 | 3422.9 | 3617.6 | 3828.5 | 4033.7 | 4166.0 | 4270.2 | 4214.1 |
| 62.5° | 2480.1 | 2555.6 | 2668.6 | 2854.5 | 3135.3 | 3482.8 | 3906.5 | 4383.8 | 4881.7 | 5186.2 | 4962.8 |
| 65°   | 1604.8 | 1699.6 | 1822.5 | 2031.5 | 2385.3 | 2832.7 | 3449.7 | 4307.7 | 5349.6 | 5890.0 | 5390.8 |
| 67.5° | 635.8  | 700.1  | 774.9  | 923.4  | 1230.4 | 1669.7 | 2362.2 | 3420.4 | 4723.8 | 5233.6 | 4673.9 |
| 70°   | 303.9  | 314.5  | 328.8  | 360.6  | 437.4  | 590.2  | 949.0  | 1685.3 | 2896.9 | 3434.1 | 2827.7 |
| 72.5° | 219.6  | 221.5  | 228.4  | 239.0  | 261.4  | 292.6  | 355.6  | 515.4  | 998.9  | 1452.5 | 1000.2 |
| 75°   | 166.6  | 169.1  | 172.8  | 178.4  | 190.3  | 205.3  | 229.0  | 274.5  | 341.9  | 394.3  | 341.3  |
| 77.5° | 126.7  | 129.2  | 132.3  | 137.9  | 144.1  | 154.7  | 163.5  | 181.6  | 210.3  | 221.5  | 220.2  |
| 80°   | 92.3   | 96.7   | 101.7  | 106.7  | 111.1  | 116.1  | 116.7  | 125.4  | 141.6  | 152.2  | 149.1  |
| 82.5° | 58.7   | 62.4   | 75.5   | 81.1   | 81.7   | 83.0   | 82.4   | 83.0   | 91.7   | 99.2   | 96.7   |
| 85°   | 37.4   | 39.9   | 46.8   | 53.0   | 51.8   | 54.3   | 54.3   | 53.0   | 49.3   | 42.4   | 50.5   |
| 87.5° | 18.7   | 19.3   | 22.5   | 28.1   | 26.8   | 23.7   | 23.1   | 23.1   | 16.8   | 14.4   | 15.6   |
| 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: P198813

CATALOG NUMBER: XNV2-AF-02-LED-U-5NQ-7050-800

**CANDELA DISTRIBUTION (continued):**

|       | 55°    | 60°    | 65°    | 70°    | 75°    | 80°    | 85°    | 90°    |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 1139.3 | 1139.3 | 1139.3 | 1139.3 | 1139.3 | 1139.3 | 1139.3 | 1139.3 |
| 2.5°  | 1136.2 | 1137.4 | 1135.6 | 1135.6 | 1134.9 | 1136.2 | 1134.3 | 1134.3 |
| 5°    | 1144.9 | 1146.8 | 1146.2 | 1146.2 | 1147.4 | 1148.7 | 1148.0 | 1147.4 |
| 7.5°  | 1160.5 | 1161.8 | 1163.0 | 1163.6 | 1164.9 | 1164.3 | 1165.5 | 1164.9 |
| 10°   | 1184.2 | 1183.0 | 1184.9 | 1183.0 | 1183.6 | 1182.4 | 1183.0 | 1183.0 |
| 12.5° | 1214.2 | 1212.3 | 1211.1 | 1209.8 | 1209.8 | 1207.3 | 1207.3 | 1207.9 |
| 15°   | 1248.5 | 1245.4 | 1242.9 | 1241.6 | 1240.4 | 1240.4 | 1238.5 | 1239.8 |
| 17.5° | 1282.2 | 1279.1 | 1274.7 | 1274.7 | 1272.8 | 1271.6 | 1270.3 | 1273.5 |
| 20°   | 1317.8 | 1314.6 | 1312.1 | 1311.5 | 1307.8 | 1306.5 | 1307.1 | 1310.9 |
| 22.5° | 1358.9 | 1357.1 | 1357.1 | 1355.8 | 1353.3 | 1351.4 | 1351.4 | 1355.8 |
| 25°   | 1414.5 | 1410.7 | 1411.3 | 1412.0 | 1410.7 | 1410.7 | 1409.5 | 1412.6 |
| 27.5° | 1482.5 | 1479.4 | 1481.2 | 1482.5 | 1481.2 | 1483.1 | 1481.2 | 1483.7 |
| 30°   | 1562.3 | 1560.5 | 1562.3 | 1564.2 | 1561.1 | 1561.1 | 1559.8 | 1561.7 |
| 32.5° | 1657.8 | 1655.3 | 1656.6 | 1656.6 | 1652.2 | 1648.4 | 1643.4 | 1647.2 |
| 35°   | 1762.6 | 1759.5 | 1762.0 | 1763.9 | 1758.9 | 1755.1 | 1747.6 | 1750.8 |
| 37.5° | 1878.0 | 1879.3 | 1882.4 | 1890.5 | 1889.3 | 1883.0 | 1877.4 | 1879.9 |
| 40°   | 2007.2 | 2013.4 | 2027.2 | 2032.8 | 2031.5 | 2025.3 | 2017.8 | 2019.1 |
| 42.5° | 2153.2 | 2161.3 | 2175.7 | 2185.0 | 2180.7 | 2171.9 | 2162.6 | 2166.3 |
| 45°   | 2312.3 | 2324.8 | 2343.5 | 2352.9 | 2347.2 | 2337.9 | 2324.8 | 2331.7 |
| 47.5° | 2480.8 | 2505.7 | 2530.7 | 2543.2 | 2541.3 | 2528.2 | 2511.3 | 2513.2 |
| 50°   | 2682.3 | 2715.4 | 2747.2 | 2759.7 | 2750.3 | 2730.3 | 2706.6 | 2706.0 |
| 52.5° | 2933.1 | 2968.7 | 2994.9 | 2991.8 | 2968.7 | 2937.5 | 2910.7 | 2909.4 |
| 55°   | 3246.3 | 3258.2 | 3254.5 | 3227.6 | 3187.1 | 3138.4 | 3104.1 | 3098.5 |
| 57.5° | 3625.1 | 3585.1 | 3526.5 | 3445.4 | 3354.3 | 3261.9 | 3199.5 | 3176.5 |
| 60°   | 4088.0 | 3907.7 | 3698.1 | 3477.2 | 3275.7 | 3124.7 | 3029.2 | 2971.2 |
| 62.5° | 4470.5 | 3948.3 | 3479.7 | 3096.0 | 2782.1 | 2595.6 | 2465.2 | 2384.7 |
| 65°   | 4339.5 | 3411.1 | 2732.2 | 2237.4 | 1894.9 | 1702.1 | 1564.2 | 1472.5 |
| 67.5° | 3352.4 | 2279.2 | 1586.0 | 1099.4 | 833.6  | 705.7  | 616.4  | 558.4  |
| 70°   | 1690.2 | 874.1  | 529.7  | 373.7  | 319.5  | 297.0  | 282.0  | 273.3  |
| 72.5° | 496.0  | 331.3  | 275.2  | 243.3  | 224.0  | 210.3  | 201.5  | 197.2  |
| 75°   | 274.5  | 224.0  | 197.8  | 179.7  | 167.2  | 157.9  | 152.2  | 148.5  |
| 77.5° | 189.1  | 162.8  | 149.7  | 137.9  | 127.9  | 121.0  | 116.7  | 112.9  |
| 80°   | 132.3  | 119.2  | 113.6  | 107.3  | 99.8   | 94.2   | 88.0   | 85.5   |
| 82.5° | 88.0   | 82.4   | 81.1   | 76.1   | 71.8   | 65.5   | 54.3   | 50.5   |
| 85°   | 51.8   | 51.2   | 51.2   | 49.3   | 46.2   | 40.6   | 32.4   | 32.4   |
| 87.5° | 18.1   | 18.7   | 19.3   | 20.6   | 20.0   | 16.8   | 13.7   | 13.1   |
| 90°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |

(END OF REPORT)