

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: P196265

Luminaire Tested: **NVN-AF-05-LED-U-T2**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196265  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24136)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: NVN-AF-05-LED-U-T2  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 30108.5 lumens  
Efficiency: N/A  
Efficacy: 107.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B3 - U0 - G4

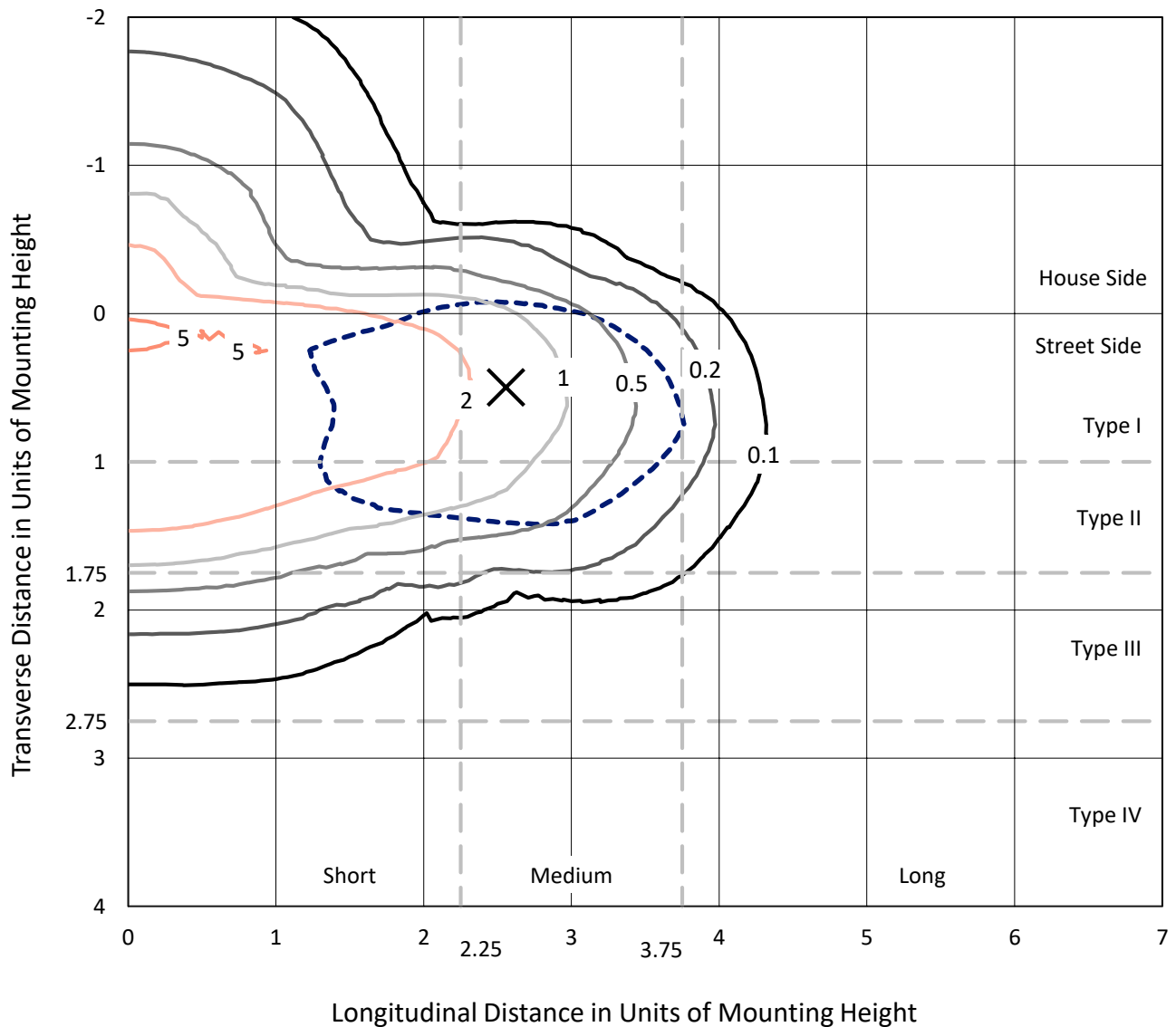
Input Watts (W): 279  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P196265  
 CATALOG NUMBER: NVN-AF-05-LED-U-T2

### Iso-Footcandle Lines of Horizontal Illumination

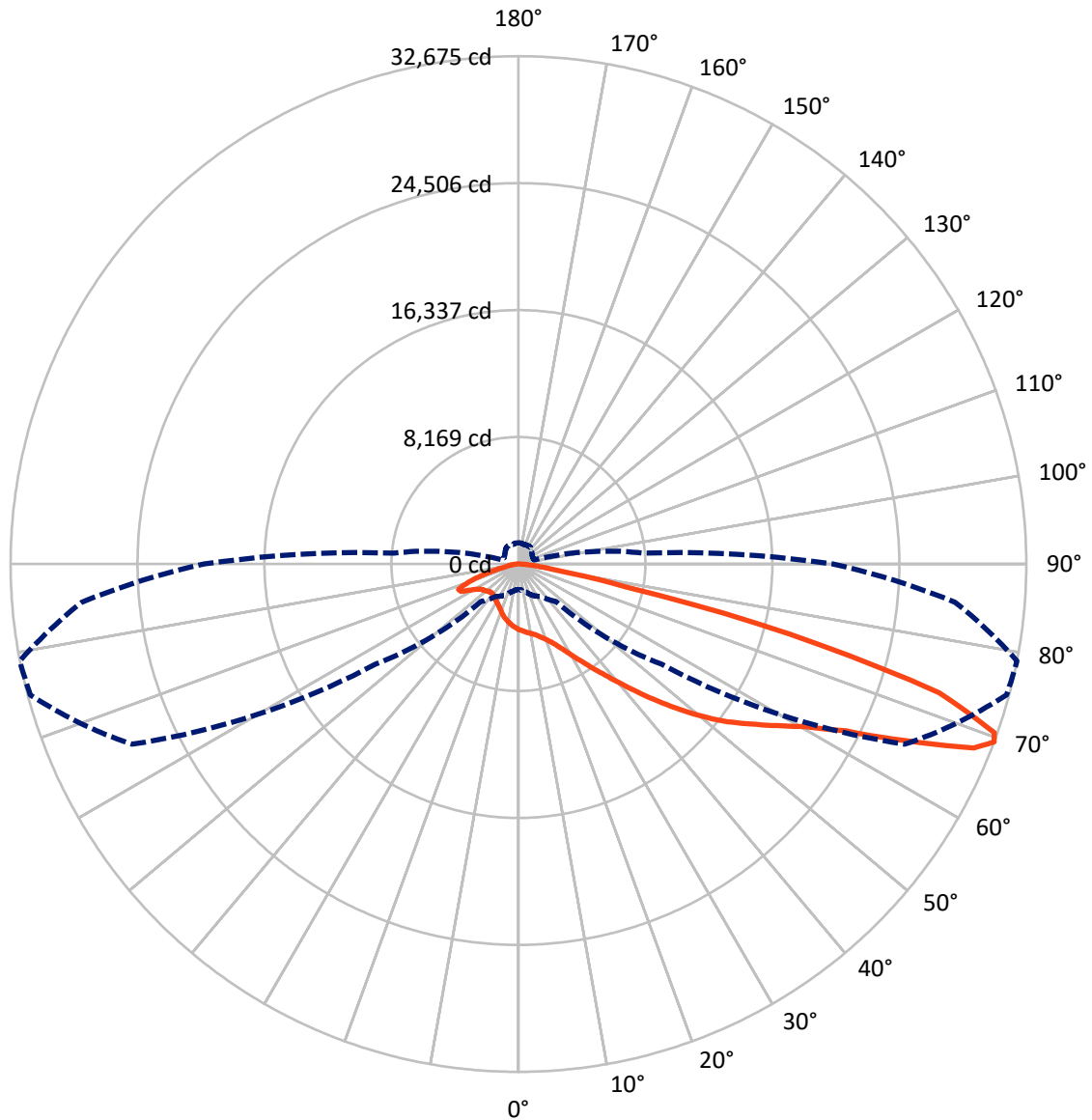
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.7 fc  
 Type II - Medium - Full Cutoff

REPORT NUMBER: P196265  
CATALOG NUMBER: NVN-AF-05-LED-U-T2

### Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

REPORT NUMBER: P196265

CATALOG NUMBER: NVN-AF-05-LED-U-T2

**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 5664.0   | 0.0    | 5664.0  |
|                    | % Fixture | 18.8     | 0.0    | 18.8    |
| <b>Street Side</b> | Lumens    | 24444.6  | 0.0    | 24444.6 |
|                    | % Fixture | 81.2     | 0.0    | 81.2    |
| <b>Total</b>       | Lumens    | 30108.5  | 0.0    | 30108.5 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**Coefficient of Utilization**

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 391.7   | 1.3       |
| 10°-20°   | 1123.0  | 3.7       |
| 20°-30°   | 1855.6  | 6.2       |
| 30°-40°   | 3004.8  | 10.0      |
| 40°-50°   | 4800.1  | 15.9      |
| 50°-60°   | 6874.2  | 22.8      |
| 60°-70°   | 7658.9  | 25.4      |
| 70°-80°   | 3831.6  | 12.7      |
| 80°-90°   | 568.6   | 1.9       |
| 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°    | 30108.5 | 100.0     |
| 0°-180°   | 30108.5 | 100.0     |



REPORT NUMBER: P196265

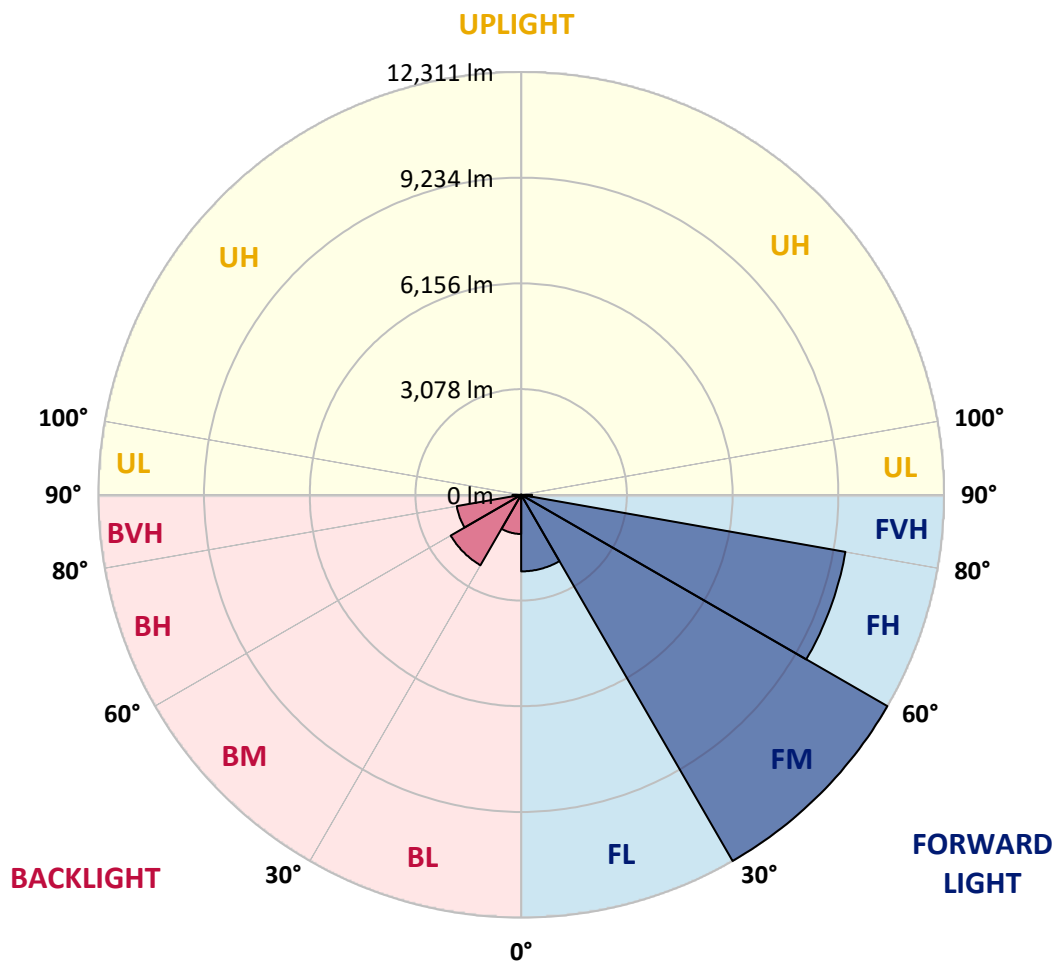
CATALOG NUMBER: NVN-AF-05-LED-U-T2

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

| Zone           | Lumens  | % Fixture | Zone Rating/Lumen Limit |      |          |
|----------------|---------|-----------|-------------------------|------|----------|
|                |         |           | B                       | U    | G        |
| FL (0°-30°)    | 2229.3  | 7.4       |                         |      |          |
| FM (30°-60°)   | 12311.4 | 40.9      |                         |      |          |
| FH (60°-80°)   | 9586.1  | 31.8      |                         |      | G4/12000 |
| FVH (80°-90°)  | 317.7   | 1.1       |                         |      | G3/500   |
| BL (0°-30°)    | 1141.0  | 3.8       | B3/2500                 |      |          |
| BM (30°-60°)   | 2367.6  | 7.9       | B2/2500                 |      |          |
| BH (60°-80°)   | 1904.4  | 6.3       | B3/2500                 |      | G3/2500  |
| BVH (80°-90°)  | 250.9   | 0.8       |                         |      | G3/500   |
| UL (90°-100°)  | 0.0     | 0.0       |                         | U0/0 |          |
| UH (100°-180°) | 0.0     | 0.0       |                         | U0/0 |          |

**BUG Rating: B3-U0-G4**

Type II Medium





REPORT NUMBER: P196265

CATALOG NUMBER: NVN-AF-05-LED-U-T2

**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 65°     | 75°     | 79°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 4225.2  | 4225.2  | 4225.2  | 4225.2  | 4225.2  | 4225.2  | 4225.2  | 4225.2  | 4225.2  | 4225.2  | 4225.2  |
| 2.5°  | 4638.9  | 4629.0  | 4627.0  | 4597.4  | 4581.7  | 4548.2  | 4469.5  | 4388.7  | 4313.8  | 4274.4  | 4233.1  |
| 5°    | 5026.9  | 5007.1  | 4997.3  | 4948.1  | 4904.7  | 4829.9  | 4705.8  | 4577.8  | 4443.8  | 4374.9  | 4292.1  |
| 7.5°  | 5261.2  | 5263.3  | 5263.3  | 5223.9  | 5180.5  | 5089.9  | 4932.4  | 4757.0  | 4558.1  | 4467.4  | 4337.4  |
| 10°   | 5281.0  | 5282.9  | 5312.5  | 5322.3  | 5332.2  | 5284.9  | 5139.2  | 4918.6  | 4662.5  | 4544.3  | 4374.9  |
| 12.5° | 5086.0  | 5099.7  | 5149.0  | 5219.9  | 5320.4  | 5371.6  | 5308.6  | 5091.8  | 4796.4  | 4652.6  | 4445.7  |
| 15°   | 4824.0  | 4837.7  | 4900.9  | 5009.2  | 5170.7  | 5342.1  | 5430.6  | 5290.8  | 4971.7  | 4802.3  | 4550.2  |
| 17.5° | 4696.0  | 4711.7  | 4755.1  | 4841.7  | 4999.3  | 5229.7  | 5495.7  | 5503.6  | 5178.6  | 4983.5  | 4674.3  |
| 20°   | 4634.9  | 4646.8  | 4701.9  | 4772.8  | 4893.0  | 5113.5  | 5501.6  | 5728.1  | 5424.8  | 5198.2  | 4826.0  |
| 22.5° | 4774.7  | 4778.7  | 4806.2  | 4845.6  | 4926.4  | 5095.8  | 5497.6  | 5960.5  | 5732.1  | 5468.1  | 5020.9  |
| 25°   | 5184.4  | 5158.8  | 5139.2  | 5089.9  | 5109.6  | 5229.7  | 5560.7  | 6208.7  | 6126.0  | 5822.6  | 5281.0  |
| 27.5° | 5669.0  | 5665.1  | 5613.9  | 5499.6  | 5426.8  | 5503.6  | 5740.0  | 6486.5  | 6608.6  | 6273.8  | 5621.7  |
| 30°   | 6208.7  | 6210.7  | 6157.6  | 6017.7  | 5869.9  | 5877.8  | 6025.6  | 6807.5  | 7185.7  | 6817.5  | 6041.3  |
| 32.5° | 6774.1  | 6809.5  | 6711.1  | 6571.2  | 6391.9  | 6334.8  | 6435.3  | 7195.6  | 7853.5  | 7459.6  | 6527.9  |
| 35°   | 7449.7  | 7455.6  | 7347.2  | 7142.4  | 6963.1  | 6872.6  | 6965.2  | 7680.2  | 8623.7  | 8214.0  | 7120.8  |
| 37.5° | 8151.0  | 8154.9  | 8042.6  | 7780.7  | 7554.1  | 7495.1  | 7597.5  | 8269.1  | 9439.2  | 9072.8  | 7818.0  |
| 40°   | 8724.1  | 8765.6  | 8676.9  | 8430.6  | 8202.1  | 8166.7  | 8314.4  | 8974.3  | 10481.2 | 10089.2 | 8647.3  |
| 42.5° | 9374.2  | 9421.5  | 9315.1  | 9059.0  | 8877.8  | 8866.0  | 9096.5  | 9778.0  | 11517.3 | 11265.1 | 9586.9  |
| 45°   | 10107.0 | 10173.9 | 10026.1 | 9738.6  | 9584.9  | 9845.0  | 9858.8  | 10668.4 | 12711.0 | 12581.0 | 10644.7 |
| 47.5° | 10906.7 | 10961.8 | 10841.6 | 10532.4 | 10364.9 | 10741.2 | 10605.3 | 11631.6 | 14001.2 | 13991.3 | 11789.1 |
| 50°   | 11523.2 | 11584.3 | 11596.1 | 11460.2 | 11284.9 | 11332.1 | 11424.7 | 12644.0 | 15287.5 | 15441.1 | 12973.0 |
| 52.5° | 11410.9 | 11470.0 | 11735.9 | 12092.5 | 12374.1 | 12252.0 | 12364.3 | 13719.5 | 16530.4 | 16855.4 | 14097.7 |
| 55°   | 10504.8 | 10536.4 | 11034.7 | 11881.7 | 13081.3 | 13664.4 | 13672.2 | 14889.6 | 17712.3 | 18167.3 | 15165.3 |
| 57.5° | 8871.8  | 8875.8  | 9523.9  | 10772.7 | 12669.7 | 14580.3 | 15736.6 | 16359.0 | 18945.4 | 19617.0 | 16489.0 |
| 60°   | 6277.6  | 6293.4  | 7047.8  | 8680.9  | 11194.3 | 14469.9 | 17956.5 | 18988.6 | 20373.4 | 21246.1 | 18194.8 |
| 62.5° | 3726.8  | 3762.3  | 4331.6  | 5641.5  | 8314.4  | 13051.7 | 19268.4 | 23666.9 | 22477.2 | 23635.4 | 20925.0 |
| 65°   | 2424.8  | 2454.4  | 2795.1  | 3453.1  | 4912.6  | 9496.3  | 18837.0 | 28197.4 | 26458.1 | 27393.7 | 24848.8 |
| 67.5° | 1867.4  | 1891.0  | 2158.8  | 2556.8  | 3013.7  | 5133.3  | 15060.9 | 29146.8 | 31303.7 | 31595.3 | 28160.0 |
| 69°   | 1640.8  | 1660.6  | 1857.5  | 2239.6  | 2537.1  | 3397.8  | 11223.8 | 27423.3 | 32515.1 | 32674.7 | 28201.3 |
| 70°   | 1520.7  | 1536.5  | 1721.6  | 2052.6  | 2330.3  | 2712.4  | 8590.2  | 25422.0 | 32072.0 | 32479.7 | 27387.8 |
| 72.5° | 1252.8  | 1266.6  | 1398.6  | 1652.7  | 1904.7  | 1932.4  | 3805.6  | 18563.2 | 27005.7 | 28309.7 | 23176.4 |
| 75°   | 1046.0  | 1053.8  | 1140.5  | 1325.6  | 1542.3  | 1538.4  | 1944.2  | 10514.7 | 16479.1 | 18033.3 | 14310.5 |
| 77.5° | 872.6   | 878.5   | 935.7   | 1049.9  | 1217.3  | 1211.4  | 1369.0  | 4538.3  | 7276.4  | 7020.3  | 4926.4  |
| 80°   | 770.2   | 774.2   | 803.6   | 833.2   | 939.6   | 933.6   | 1014.5  | 2084.1  | 2960.6  | 2736.0  | 1863.4  |
| 82.5° | 585.0   | 592.9   | 742.6   | 756.4   | 728.9   | 703.2   | 707.2   | 1213.4  | 1516.7  | 1380.8  | 1000.7  |
| 85°   | 330.9   | 332.9   | 476.7   | 557.4   | 634.2   | 476.7   | 459.0   | 626.4   | 748.5   | 655.9   | 437.3   |
| 87.5° | 147.7   | 153.6   | 228.5   | 263.9   | 342.8   | 279.7   | 262.0   | 266.0   | 323.0   | 267.9   | 173.4   |
| 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: P196265

CATALOG NUMBER: NVN-AF-05-LED-U-T2

**CANDELA DISTRIBUTION (continued):**

|       | 90°     | 95°    | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 4225.2  | 4225.2 | 4225.2 | 4225.2 | 4225.2 | 4225.2 | 4225.2 | 4225.2 | 4225.2 | 4225.2 | 4225.2 |
| 2.5°  | 4193.7  | 4160.1 | 4081.4 | 4000.7 | 3919.8 | 3868.6 | 3815.5 | 3766.2 | 3746.6 | 3744.5 | 3707.2 |
| 5°    | 4211.4  | 4132.6 | 3953.3 | 3756.4 | 3569.3 | 3423.5 | 3301.4 | 3222.6 | 3145.8 | 3132.0 | 3098.4 |
| 7.5°  | 4217.3  | 4089.2 | 3797.7 | 3482.5 | 3196.9 | 2996.0 | 2873.9 | 2820.7 | 2783.3 | 2773.4 | 2761.7 |
| 10°   | 4215.4  | 4034.1 | 3624.4 | 3193.0 | 2868.0 | 2716.3 | 2671.0 | 2682.8 | 2698.6 | 2706.5 | 2706.5 |
| 12.5° | 4246.9  | 4008.5 | 3451.0 | 2921.1 | 2655.3 | 2582.3 | 2617.8 | 2678.9 | 2726.2 | 2745.9 | 2749.8 |
| 15°   | 4304.0  | 3992.8 | 3259.9 | 2684.8 | 2505.5 | 2523.3 | 2610.0 | 2698.6 | 2765.5 | 2795.1 | 2803.0 |
| 17.5° | 4374.9  | 3971.1 | 3039.4 | 2489.8 | 2418.9 | 2479.9 | 2592.3 | 2704.5 | 2785.3 | 2822.7 | 2828.6 |
| 20°   | 4453.6  | 3939.6 | 2810.9 | 2344.0 | 2342.0 | 2418.9 | 2531.2 | 2657.2 | 2743.9 | 2785.3 | 2783.3 |
| 22.5° | 4560.0  | 3910.0 | 2598.1 | 2237.7 | 2257.3 | 2328.2 | 2420.8 | 2535.1 | 2615.9 | 2653.3 | 2645.5 |
| 25°   | 4701.9  | 3882.4 | 2407.1 | 2143.1 | 2160.9 | 2208.1 | 2273.1 | 2359.8 | 2416.9 | 2436.6 | 2422.9 |
| 27.5° | 4893.0  | 3860.7 | 2257.3 | 2056.4 | 2054.5 | 2076.2 | 2115.6 | 2162.8 | 2190.4 | 2184.5 | 2162.8 |
| 30°   | 5127.3  | 3839.1 | 2147.1 | 1979.6 | 1952.1 | 1950.1 | 1967.9 | 1995.4 | 2013.1 | 1977.7 | 1960.0 |
| 32.5° | 5389.3  | 3801.7 | 2048.6 | 1912.6 | 1863.4 | 1845.7 | 1853.6 | 1891.0 | 1963.9 | 1928.4 | 1914.7 |
| 35°   | 5698.6  | 3758.3 | 1950.1 | 1839.8 | 1802.3 | 1768.9 | 1774.8 | 1855.5 | 2076.2 | 2050.5 | 2036.8 |
| 37.5° | 6070.9  | 3718.9 | 1859.5 | 1761.0 | 1759.0 | 1717.6 | 1713.7 | 1810.2 | 2105.7 | 2050.5 | 2038.7 |
| 40°   | 6518.0  | 3711.1 | 1778.7 | 1674.3 | 1705.9 | 1690.1 | 1676.3 | 1735.3 | 1942.2 | 1830.0 | 1808.3 |
| 42.5° | 7057.7  | 3746.6 | 1719.6 | 1591.6 | 1644.8 | 1682.1 | 1656.6 | 1670.4 | 1755.1 | 1654.6 | 1636.9 |
| 45°   | 7688.1  | 3843.0 | 1676.3 | 1518.7 | 1579.7 | 1676.3 | 1646.7 | 1634.9 | 1648.7 | 1593.6 | 1581.7 |
| 47.5° | 8422.8  | 4014.4 | 1646.7 | 1457.6 | 1518.7 | 1660.6 | 1642.8 | 1619.1 | 1613.3 | 1581.7 | 1573.8 |
| 50°   | 9208.7  | 4244.8 | 1627.0 | 1402.5 | 1463.5 | 1632.9 | 1640.8 | 1607.4 | 1597.4 | 1583.7 | 1579.7 |
| 52.5° | 9988.7  | 4495.1 | 1603.4 | 1355.2 | 1418.2 | 1599.5 | 1642.8 | 1595.5 | 1581.7 | 1573.8 | 1569.9 |
| 55°   | 10764.8 | 4755.1 | 1560.1 | 1313.9 | 1384.8 | 1560.1 | 1640.8 | 1579.7 | 1564.0 | 1564.0 | 1564.0 |
| 57.5° | 11771.4 | 5151.0 | 1502.9 | 1280.3 | 1341.4 | 1508.9 | 1615.2 | 1562.0 | 1540.4 | 1542.3 | 1544.3 |
| 60°   | 13225.1 | 5814.8 | 1439.9 | 1242.9 | 1284.3 | 1449.7 | 1575.9 | 1530.5 | 1504.9 | 1512.7 | 1514.8 |
| 62.5° | 15653.8 | 6975.0 | 1353.3 | 1189.8 | 1225.2 | 1386.7 | 1524.6 | 1487.2 | 1463.5 | 1477.3 | 1479.3 |
| 65°   | 18892.2 | 8379.4 | 1239.0 | 1122.8 | 1164.1 | 1315.8 | 1459.6 | 1436.0 | 1410.3 | 1443.9 | 1441.8 |
| 67.5° | 20867.8 | 8791.1 | 1118.8 | 1051.9 | 1105.1 | 1240.9 | 1378.8 | 1369.0 | 1351.3 | 1410.3 | 1406.5 |
| 69°   | 20219.7 | 8046.5 | 1049.9 | 1006.6 | 1063.7 | 1189.8 | 1327.6 | 1323.7 | 1309.9 | 1367.1 | 1363.1 |
| 70°   | 19213.3 | 7351.2 | 1006.6 | 977.0  | 1042.0 | 1158.2 | 1294.1 | 1294.1 | 1280.3 | 1329.6 | 1319.7 |
| 72.5° | 15433.3 | 5452.3 | 906.1  | 902.1  | 967.2  | 1071.5 | 1203.5 | 1213.4 | 1205.5 | 1223.2 | 1213.4 |
| 75°   | 9061.0  | 3285.6 | 807.6  | 819.4  | 876.6  | 979.0  | 1103.0 | 1110.9 | 1103.0 | 1101.1 | 1103.0 |
| 77.5° | 3141.8  | 1473.4 | 713.1  | 730.8  | 780.0  | 884.4  | 992.8  | 1008.5 | 996.7  | 983.0  | 986.8  |
| 80°   | 1229.2  | 856.8  | 610.6  | 636.3  | 677.6  | 778.1  | 882.5  | 892.3  | 874.6  | 872.6  | 856.8  |
| 82.5° | 738.7   | 522.0  | 474.8  | 516.1  | 567.3  | 675.7  | 762.3  | 758.4  | 744.6  | 825.3  | 722.9  |
| 85°   | 321.1   | 289.6  | 346.7  | 388.0  | 413.7  | 506.3  | 644.2  | 626.4  | 592.9  | 522.0  | 510.1  |
| 87.5° | 130.0   | 149.7  | 191.1  | 230.5  | 248.2  | 326.9  | 441.2  | 425.4  | 431.4  | 354.6  | 352.6  |
| 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)