

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: P196139

Luminaire Tested: **NVN-AF-05-LED-U-SL3-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196139  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)  
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-SL3-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 4000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
SPILL LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 24819.8 lumens  
Efficiency: N/A  
Efficacy: 118.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B3 - U0 - G4

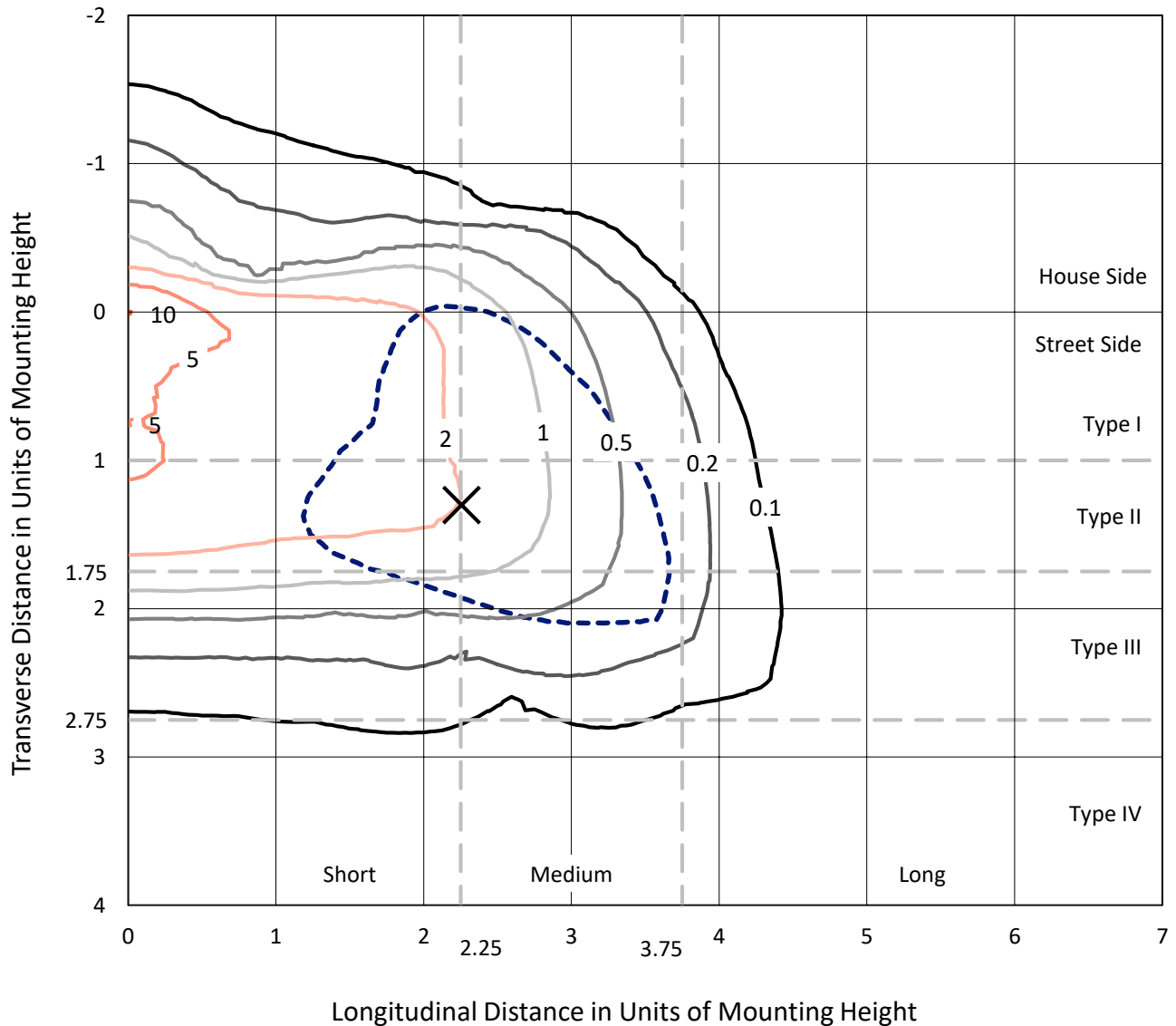
Input Watts (W): 210  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

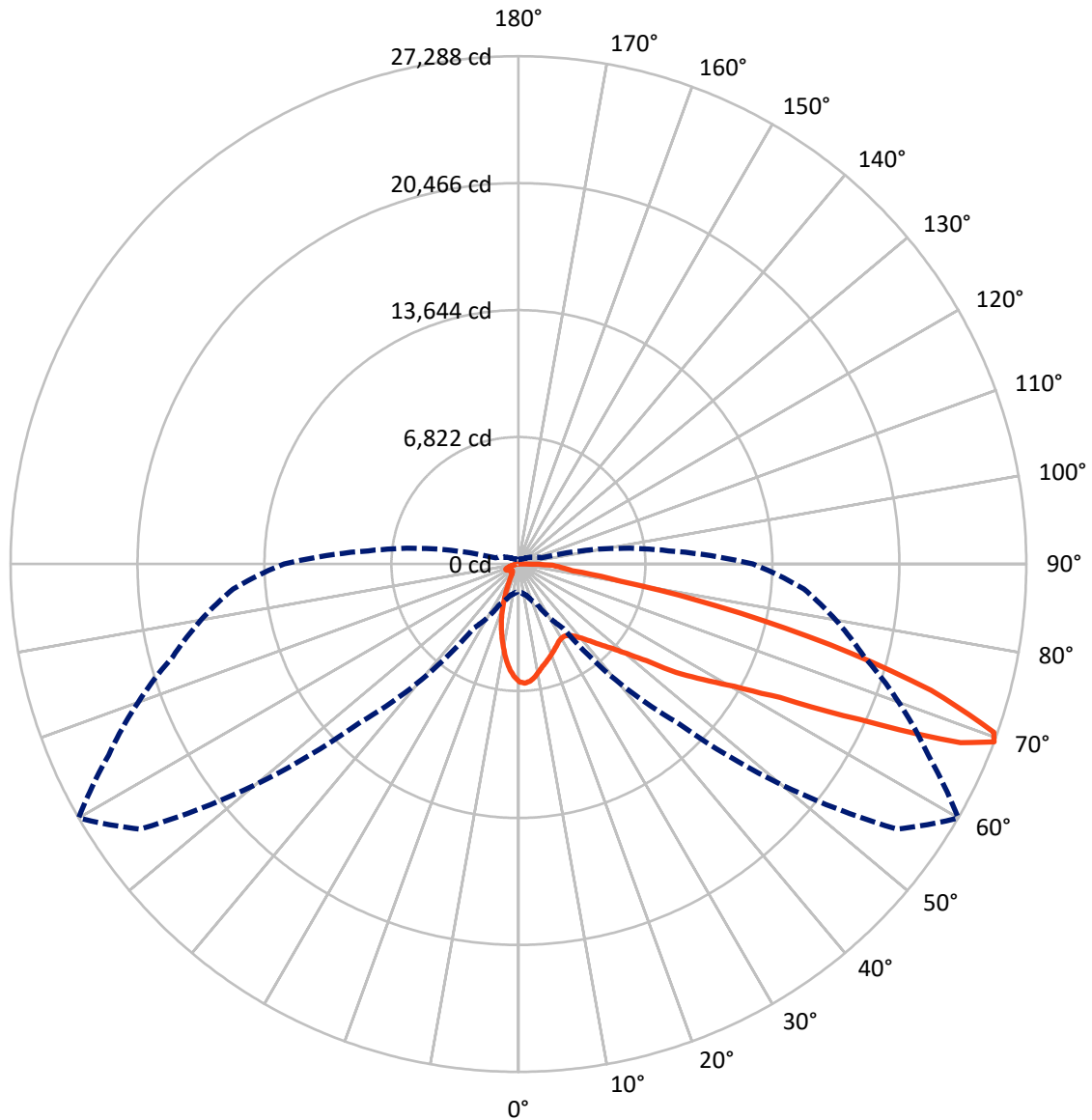
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.1 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

|                    |           | Downward | Upward | Total   |
|--------------------|-----------|----------|--------|---------|
| <b>House Side</b>  | Lumens    | 3540.1   | 0.0    | 3540.1  |
|                    | % Fixture | 14.3     | 0.0    | 14.3    |
| <b>Street Side</b> | Lumens    | 21279.7  | 0.0    | 21279.7 |
|                    | % Fixture | 85.7     | 0.0    | 85.7    |
| <b>Total</b>       | Lumens    | 24819.8  | 0.0    | 24819.8 |
|                    | % Fixture | 100.0    | 0.0    | 100.0   |

**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 537.2   | 2.2       |
| 10°-20°   | 1150.3  | 4.6       |
| 20°-30°   | 1467.4  | 5.9       |
| 30°-40°   | 2019.3  | 8.1       |
| 40°-50°   | 3270.9  | 13.2      |
| 50°-60°   | 5133.5  | 20.7      |
| 60°-70°   | 6843.9  | 27.6      |
| 70°-80°   | 3806.8  | 15.3      |
| 80°-90°   | 590.4   | 2.4       |
| 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°    | 24819.8 | 100.0     |
| 0°-180°   | 24819.8 | 100.0     |

**Coefficient of Utilization**



REPORT NUMBER: P196139

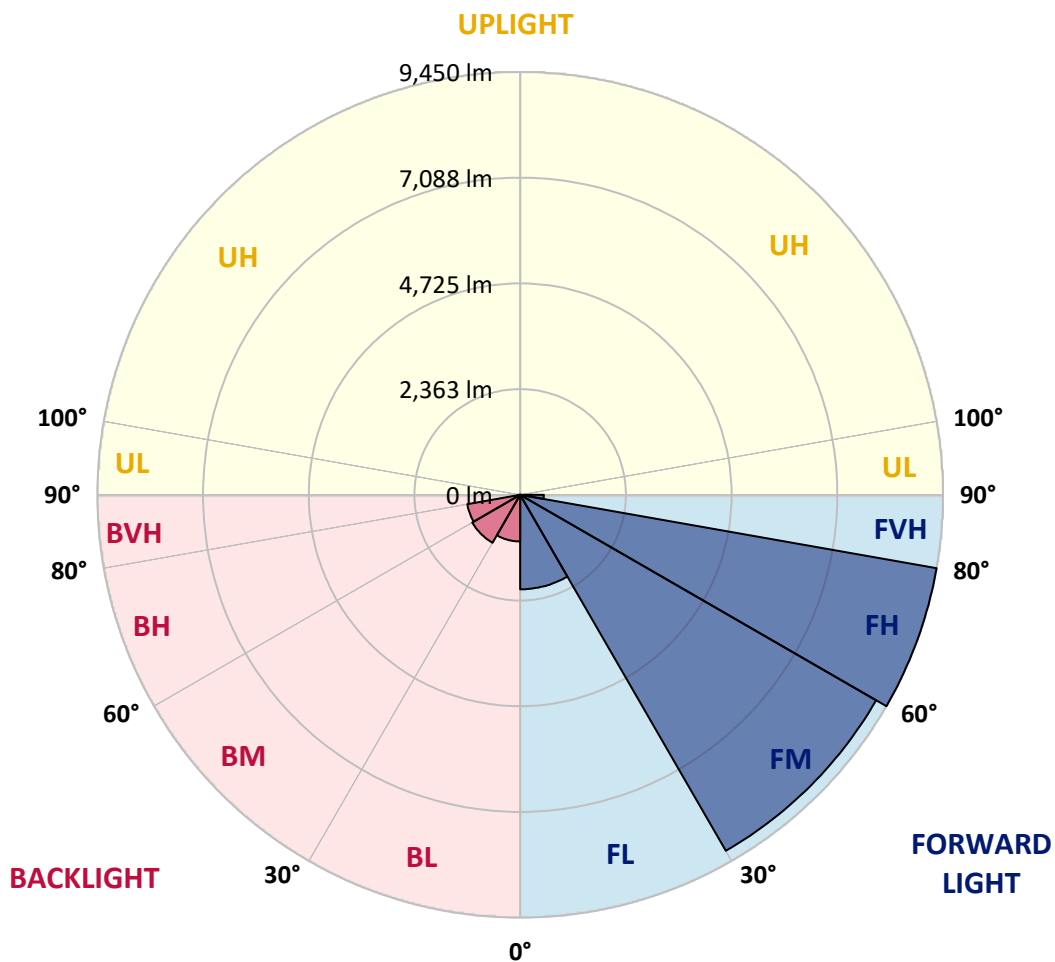
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

| Zone |             | Lumens | % Fixture | Zone Rating/Lumen Limit |      |          |
|------|-------------|--------|-----------|-------------------------|------|----------|
|      |             |        |           | B                       | U    | G        |
| FL   | (0°-30°)    | 2111.7 | 8.5       |                         |      |          |
| FM   | (30°-60°)   | 9187.0 | 37.0      |                         |      |          |
| FH   | (60°-80°)   | 9450.4 | 38.1      |                         |      | G4/12000 |
| FVH  | (80°-90°)   | 530.6  | 2.1       |                         |      | G4/750   |
| BL   | (0°-30°)    | 1043.3 | 4.2       | B3/2500                 |      |          |
| BM   | (30°-60°)   | 1236.7 | 5.0       | B2/2500                 |      |          |
| BH   | (60°-80°)   | 1200.3 | 4.8       | B3/2500                 |      | G3/2500  |
| BVH  | (80°-90°)   | 59.8   | 0.2       |                         |      | G1/100   |
| UL   | (90°-100°)  | 0.0    | 0.0       |                         | U0/0 |          |
| UH   | (100°-180°) | 0.0    | 0.0       |                         | U0/0 |          |

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

Type III Medium





REPORT NUMBER: P196139

CATALOG NUMBER: NVN-AF-05-LED-U-SL3-800

**CANDELA DISTRIBUTION (FULL):**

|       | 0°      | 5°      | 15°     | 25°     | 35°     | 45°     | 55°     | 60°     | 65°     | 75°     | 85°     |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0°    | 6332.9  | 6332.9  | 6332.9  | 6332.9  | 6332.9  | 6332.9  | 6332.9  | 6332.9  | 6332.9  | 6332.9  | 6332.9  |
| 2.5°  | 6501.6  | 6519.1  | 6519.1  | 6504.7  | 6496.8  | 6450.6  | 6423.6  | 6404.5  | 6371.0  | 6308.9  | 6253.3  |
| 5°    | 6269.2  | 6302.6  | 6316.9  | 6323.3  | 6364.7  | 6350.4  | 6352.0  | 6339.2  | 6310.6  | 6243.8  | 6153.0  |
| 7.5°  | 5842.7  | 5849.0  | 5874.5  | 5917.5  | 6017.7  | 6087.8  | 6145.1  | 6156.2  | 6149.9  | 6100.5  | 5973.2  |
| 10°   | 5422.5  | 5433.6  | 5463.9  | 5537.0  | 5632.6  | 5732.8  | 5857.0  | 5908.0  | 5946.1  | 5930.1  | 5769.4  |
| 12.5° | 5073.9  | 5075.5  | 5108.9  | 5193.3  | 5299.9  | 5425.6  | 5594.4  | 5674.0  | 5764.6  | 5801.3  | 5621.4  |
| 15°   | 4738.1  | 4760.4  | 4792.2  | 4894.1  | 5026.2  | 5185.3  | 5379.5  | 5489.4  | 5608.7  | 5713.8  | 5506.9  |
| 17.5° | 4483.5  | 4501.0  | 4520.1  | 4604.4  | 4757.2  | 4956.2  | 5196.5  | 5314.2  | 5471.9  | 5632.6  | 5389.1  |
| 20°   | 4343.4  | 4349.8  | 4335.5  | 4376.8  | 4505.7  | 4720.6  | 4999.2  | 5140.7  | 5328.6  | 5554.6  | 5268.1  |
| 22.5° | 4314.7  | 4314.7  | 4262.2  | 4254.2  | 4311.5  | 4493.0  | 4795.4  | 4968.9  | 5198.1  | 5500.5  | 5159.9  |
| 25°   | 4448.4  | 4438.9  | 4340.2  | 4249.5  | 4228.8  | 4321.1  | 4601.2  | 4814.5  | 5086.6  | 5498.9  | 5078.7  |
| 27.5° | 4701.5  | 4688.8  | 4566.2  | 4413.4  | 4281.4  | 4241.6  | 4451.7  | 4669.7  | 4999.2  | 5553.0  | 5037.3  |
| 30°   | 5016.7  | 5011.8  | 4887.8  | 4696.8  | 4478.7  | 4273.4  | 4392.8  | 4594.9  | 4940.2  | 5653.2  | 5035.8  |
| 32.5° | 5362.0  | 5339.7  | 5263.3  | 5072.3  | 4789.0  | 4450.0  | 4427.7  | 4598.1  | 4924.3  | 5799.7  | 5072.3  |
| 35°   | 5729.6  | 5713.8  | 5694.7  | 5502.0  | 5183.7  | 4761.9  | 4582.1  | 4707.8  | 5002.3  | 6003.4  | 5175.8  |
| 37.5° | 6197.5  | 6180.1  | 6211.9  | 6001.9  | 5653.2  | 5171.0  | 4843.2  | 4927.6  | 5161.5  | 6299.4  | 5368.3  |
| 40°   | 7029.9  | 6979.1  | 6889.9  | 6566.8  | 6200.7  | 5672.4  | 5220.3  | 5233.1  | 5433.6  | 6695.7  | 5677.2  |
| 42.5° | 8397.1  | 8233.2  | 7792.3  | 7198.7  | 6778.5  | 6254.8  | 5712.2  | 5651.7  | 5809.2  | 7219.4  | 6125.9  |
| 45°   | 9767.4  | 9582.9  | 8838.0  | 7887.9  | 7376.9  | 6880.4  | 6320.1  | 6175.3  | 6277.1  | 7828.9  | 6703.7  |
| 47.5° | 10652.4 | 10561.7 | 9721.3  | 8576.9  | 8004.0  | 7561.6  | 7015.6  | 6776.9  | 6850.1  | 8519.6  | 7416.7  |
| 50°   | 10911.8 | 10833.9 | 10173.3 | 9116.5  | 8596.1  | 8384.4  | 7876.7  | 7560.0  | 7572.7  | 9326.7  | 8271.4  |
| 52.5° | 10717.7 | 10685.8 | 10248.1 | 9450.7  | 9140.4  | 9251.8  | 9068.8  | 8627.9  | 8522.8  | 10211.5 | 9197.7  |
| 55°   | 10458.2 | 10469.4 | 10300.6 | 9786.6  | 9694.3  | 10060.3 | 10628.6 | 10273.6 | 9828.0  | 11133.1 | 10162.2 |
| 57.5° | 9641.7  | 9649.7  | 10092.1 | 10426.4 | 10751.1 | 11193.5 | 11842.9 | 11693.2 | 11174.4 | 12127.8 | 11242.8 |
| 60°   | 7763.7  | 7825.8  | 8811.0  | 10294.3 | 11959.1 | 13426.5 | 13585.7 | 13327.8 | 12606.8 | 13273.7 | 12648.2 |
| 62.5° | 5546.6  | 5602.3  | 6743.5  | 8936.7  | 11817.4 | 15953.9 | 16803.8 | 15778.8 | 14550.1 | 14987.9 | 14624.9 |
| 65°   | 2914.2  | 2904.7  | 3788.0  | 6175.3  | 9953.7  | 16539.6 | 21874.6 | 20130.2 | 17824.0 | 17344.9 | 16534.9 |
| 67.5° | 1628.1  | 1680.7  | 2022.9  | 3114.7  | 6487.2  | 14556.5 | 25113.4 | 25627.5 | 22375.9 | 19215.0 | 16452.1 |
| 69°   | 1505.6  | 1523.2  | 1752.3  | 2408.0  | 4228.8  | 12010.0 | 24834.9 | 27287.5 | 24295.4 | 19223.0 | 15392.1 |
| 70°   | 1462.6  | 1481.7  | 1690.2  | 2218.7  | 3552.4  | 9840.7  | 23821.0 | 27093.4 | 24761.6 | 18796.4 | 14427.6 |
| 72.5° | 1311.4  | 1336.9  | 1539.0  | 1994.2  | 2993.8  | 5072.3  | 19188.0 | 23189.2 | 22430.0 | 16428.2 | 11187.2 |
| 75°   | 1118.9  | 1161.9  | 1467.4  | 1979.9  | 2836.1  | 3224.5  | 12796.2 | 17276.5 | 16694.0 | 11749.0 | 6347.2  |
| 77.5° | 463.2   | 467.9   | 641.4   | 1449.9  | 2976.3  | 3086.0  | 6877.2  | 10943.6 | 9687.9  | 5151.9  | 1911.5  |
| 80°   | 323.0   | 316.7   | 319.9   | 423.4   | 2401.7  | 3106.7  | 3528.5  | 5565.8  | 4325.9  | 1359.2  | 894.5   |
| 82.5° | 272.2   | 268.9   | 281.7   | 265.8   | 813.2   | 3525.3  | 2950.8  | 2901.4  | 2037.2  | 732.1   | 426.6   |
| 85°   | 179.8   | 175.0   | 230.8   | 241.9   | 386.8   | 2799.6  | 3173.6  | 2280.8  | 1518.4  | 391.5   | 181.5   |
| 87.5° | 87.6    | 89.1    | 132.1   | 164.0   | 205.3   | 886.5   | 3039.9  | 1803.3  | 1173.0  | 170.3   | 73.2    |
| 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: P196139

CATALOG NUMBER: NVN-AF-05-LED-U-SL3-800

**CANDELA DISTRIBUTION (continued):**

|       | 90°     | 95°     | 105°   | 115°   | 125°   | 135°   | 145°   | 155°   | 165°   | 175°   | 180°   |
|-------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°    | 6332.9  | 6332.9  | 6332.9 | 6332.9 | 6332.9 | 6332.9 | 6332.9 | 6332.9 | 6332.9 | 6332.9 | 6332.9 |
| 2.5°  | 6231.0  | 6183.2  | 6140.3 | 6086.1 | 6044.8 | 6009.7 | 5962.1 | 5960.4 | 5952.4 | 5963.6 | 5966.8 |
| 5°    | 6092.5  | 6013.0  | 5892.0 | 5756.8 | 5661.2 | 5535.5 | 5412.9 | 5371.5 | 5325.4 | 5320.7 | 5335.0 |
| 7.5°  | 5884.0  | 5759.9  | 5553.0 | 5346.0 | 5139.2 | 4927.6 | 4727.0 | 4625.1 | 4526.5 | 4496.2 | 4510.5 |
| 10°   | 5651.7  | 5494.1  | 5177.4 | 4840.0 | 4548.8 | 4233.6 | 3928.0 | 3730.6 | 3550.8 | 3474.5 | 3493.5 |
| 12.5° | 5470.2  | 5269.7  | 4824.0 | 4386.4 | 3950.3 | 3498.3 | 3095.7 | 2705.7 | 2411.2 | 2279.1 | 2287.1 |
| 15°   | 5314.2  | 5058.0  | 4493.0 | 3910.5 | 3364.6 | 2745.5 | 2186.9 | 1734.8 | 1476.9 | 1381.5 | 1378.3 |
| 17.5° | 5145.5  | 4835.2  | 4147.7 | 3468.0 | 2759.8 | 1994.2 | 1464.3 | 1196.9 | 1095.0 | 1063.2 | 1063.2 |
| 20°   | 4965.7  | 4606.0  | 3786.4 | 2985.8 | 2123.1 | 1392.6 | 1101.4 | 997.9  | 959.7  | 950.2  | 948.6  |
| 22.5° | 4798.6  | 4381.6  | 3423.5 | 2471.8 | 1535.9 | 1056.8 | 937.4  | 897.6  | 891.3  | 899.3  | 899.3  |
| 25°   | 4666.5  | 4184.3  | 3055.9 | 1930.6 | 1117.3 | 885.0  | 834.0  | 829.2  | 853.0  | 881.7  | 886.5  |
| 27.5° | 4567.8  | 4007.6  | 2692.9 | 1410.1 | 878.5  | 770.3  | 752.8  | 773.5  | 829.2  | 886.5  | 897.6  |
| 30°   | 4499.3  | 3856.4  | 2258.5 | 1013.8 | 732.1  | 674.8  | 682.8  | 719.4  | 803.7  | 891.3  | 915.1  |
| 32.5° | 4469.2  | 3733.9  | 1820.8 | 778.3  | 625.5  | 593.6  | 614.4  | 662.1  | 749.6  | 837.2  | 865.8  |
| 35°   | 4497.8  | 3644.7  | 1416.5 | 646.2  | 547.5  | 523.6  | 547.5  | 596.8  | 654.2  | 697.1  | 714.6  |
| 37.5° | 4601.2  | 3612.9  | 1066.3 | 573.0  | 496.5  | 472.7  | 491.8  | 525.2  | 550.7  | 566.6  | 574.6  |
| 40°   | 4819.3  | 3646.3  | 835.5  | 534.8  | 467.9  | 440.9  | 445.6  | 461.6  | 479.0  | 491.8  | 493.4  |
| 42.5° | 5166.2  | 3756.1  | 743.3  | 520.5  | 450.4  | 415.4  | 407.4  | 418.6  | 437.7  | 455.2  | 458.4  |
| 45°   | 5627.8  | 3939.2  | 733.8  | 525.2  | 442.4  | 394.8  | 378.8  | 389.9  | 415.4  | 444.1  | 448.9  |
| 47.5° | 6224.7  | 4228.8  | 778.3  | 550.7  | 447.2  | 383.6  | 359.7  | 370.8  | 404.3  | 442.4  | 448.9  |
| 50°   | 6931.3  | 4629.9  | 861.0  | 588.9  | 469.5  | 383.6  | 351.7  | 361.3  | 396.3  | 439.3  | 445.6  |
| 52.5° | 7763.7  | 5188.5  | 946.9  | 627.1  | 501.3  | 397.9  | 355.0  | 353.3  | 385.1  | 424.9  | 432.9  |
| 55°   | 8682.0  | 5882.5  | 1029.7 | 660.5  | 518.8  | 417.0  | 362.8  | 343.8  | 369.3  | 401.1  | 407.4  |
| 57.5° | 9762.7  | 6832.6  | 1174.6 | 692.3  | 528.4  | 431.3  | 372.5  | 334.2  | 348.5  | 370.8  | 375.6  |
| 60°   | 11228.5 | 8228.4  | 1456.3 | 746.4  | 545.9  | 437.7  | 374.0  | 324.7  | 323.0  | 339.0  | 340.6  |
| 62.5° | 13140.0 | 9863.0  | 1725.3 | 810.1  | 580.9  | 439.3  | 367.6  | 318.3  | 302.4  | 307.2  | 307.2  |
| 65°   | 14499.2 | 10464.6 | 1647.3 | 864.2  | 612.7  | 437.7  | 361.3  | 313.5  | 286.5  | 278.5  | 278.5  |
| 67.5° | 13725.7 | 9243.9  | 1399.0 | 878.5  | 615.9  | 420.1  | 347.0  | 302.4  | 272.2  | 253.1  | 253.1  |
| 69°   | 12589.4 | 8102.7  | 1284.4 | 853.0  | 590.4  | 399.5  | 331.0  | 291.2  | 262.6  | 240.3  | 240.3  |
| 70°   | 11663.1 | 7238.5  | 1214.3 | 822.9  | 560.3  | 382.0  | 316.7  | 280.1  | 253.1  | 233.9  | 232.4  |
| 72.5° | 8707.5  | 4830.4  | 1037.7 | 709.8  | 459.9  | 323.0  | 276.9  | 249.9  | 227.6  | 214.8  | 214.8  |
| 75°   | 4594.9  | 2420.8  | 849.9  | 579.3  | 355.0  | 257.8  | 227.6  | 210.1  | 197.3  | 195.8  | 194.2  |
| 77.5° | 1505.6  | 1095.0  | 611.2  | 436.1  | 261.1  | 200.5  | 181.5  | 170.3  | 168.7  | 175.0  | 175.0  |
| 80°   | 813.2   | 654.2   | 393.1  | 294.4  | 181.5  | 149.7  | 140.0  | 138.5  | 143.2  | 152.8  | 152.8  |
| 82.5° | 394.8   | 323.0   | 233.9  | 181.5  | 124.2  | 109.9  | 109.9  | 111.4  | 117.7  | 128.9  | 128.9  |
| 85°   | 170.3   | 152.8   | 135.2  | 101.9  | 76.4   | 68.4   | 77.9   | 85.9   | 90.7   | 98.7   | 101.9  |
| 87.5° | 81.1    | 71.6    | 62.1   | 39.8   | 33.5   | 35.0   | 41.4   | 50.9   | 60.5   | 66.8   | 68.4   |
| 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)