

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: P196118

Luminaire Tested: **NVN-AF-02-LED-U-SL3-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196118
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: NVN-AF-02-LED-U-SL3-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10577.3 lumens
Efficiency: N/A
Efficacy: 93.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G2

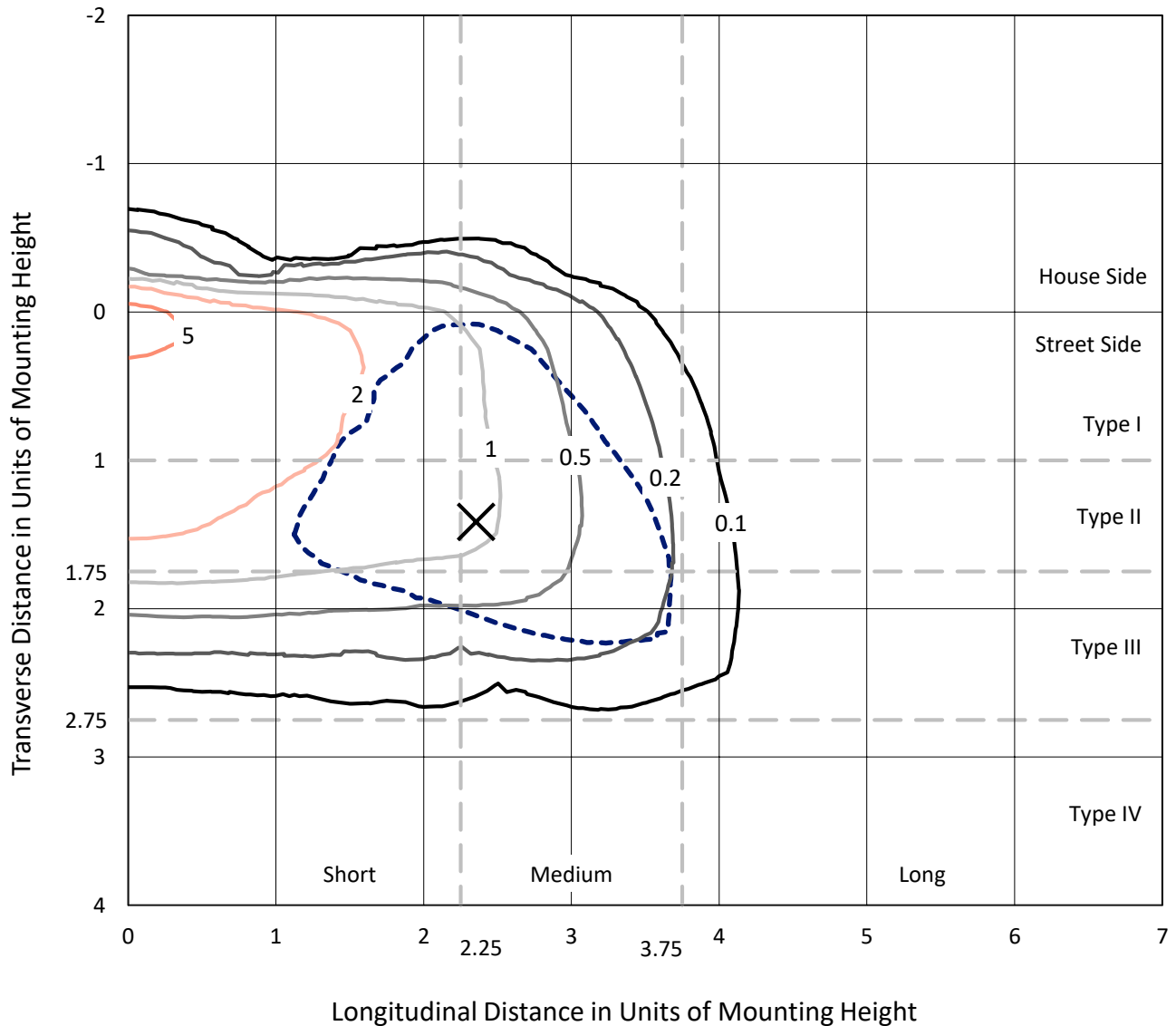
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P196118
 CATALOG NUMBER: NVN-AF-02-LED-U-SL3-HSS

Iso-Footcandle Lines of Horizontal Illumination

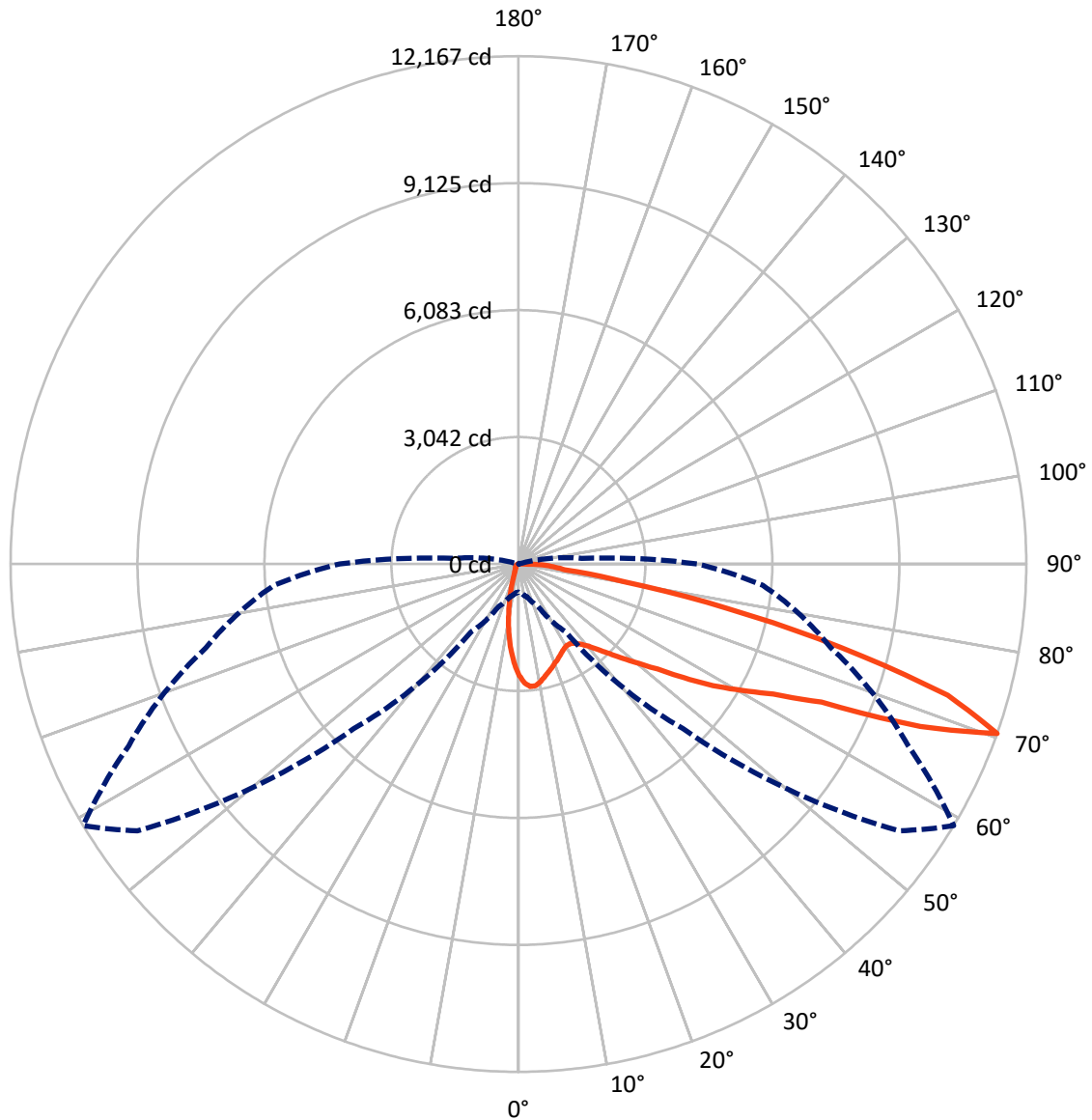
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 7.1 fc
 Type III - Medium - Non-Cutoff

REPORT NUMBER: P196118
CATALOG NUMBER: NVN-AF-02-LED-U-SL3-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P196118

CATALOG NUMBER: NVN-AF-02-LED-U-SL3-HSS

FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 813.1 | 0.0 | 813.1 |
| | % Fixture | 7.7 | 0.0 | 7.7 |
| Street Side | Lumens | 9764.2 | 0.0 | 9764.2 |
| | % Fixture | 92.3 | 0.0 | 92.3 |
| Total | Lumens | 10577.3 | 0.0 | 10577.3 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 219.9 | 2.1 |
| 10°-20° | 461.3 | 4.4 |
| 20°-30° | 624.4 | 5.9 |
| 30°-40° | 901.2 | 8.5 |
| 40°-50° | 1496.6 | 14.1 |
| 50°-60° | 2289.3 | 21.6 |
| 60°-70° | 2847.3 | 26.9 |
| 70°-80° | 1574.0 | 14.9 |
| 80°-90° | 163.2 | 1.5 |
| 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° | 10577.3 | 100.0 |
| 0°-180° | 10577.3 | 100.0 |



REPORT NUMBER: P196118

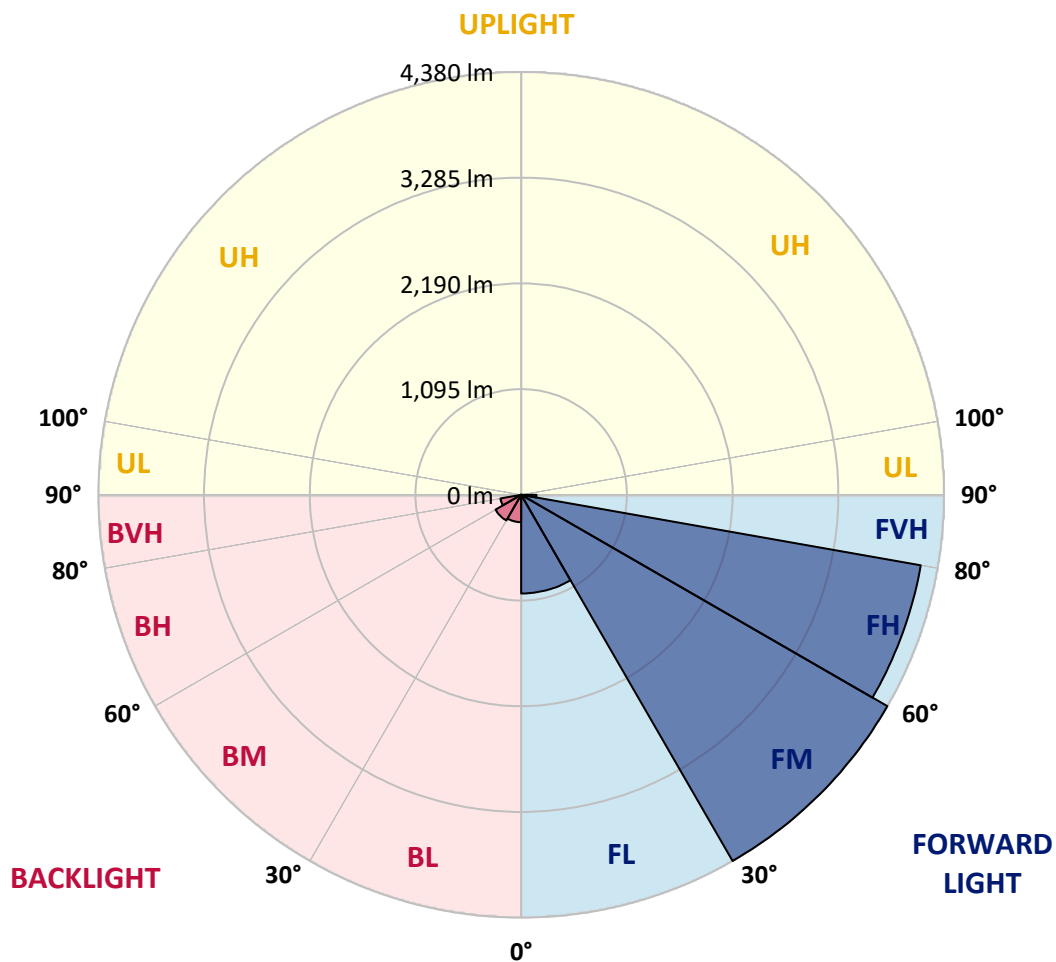
CATALOG NUMBER: NVN-AF-02-LED-U-SL3-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 1022.3 | 9.7 | | | |
| FM | (30°-60°) | 4380.2 | 41.4 | | | |
| FH | (60°-80°) | 4203.2 | 39.7 | | | G2/5000 |
| FVH | (80°-90°) | 158.5 | 1.5 | | | G2/225 |
| BL | (0°-30°) | 283.3 | 2.7 | B1/500 | | |
| BM | (30°-60°) | 306.9 | 2.9 | B1/1000 | | |
| BH | (60°-80°) | 218.1 | 2.1 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 4.7 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G2

Type III Medium





REPORT NUMBER: P196118

CATALOG NUMBER: NVN-AF-02-LED-U-SL3-HSS

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 59° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|---------|---------|---------|--------|--------|
| 0° | 2674.6 | 2674.6 | 2674.6 | 2674.6 | 2674.6 | 2674.6 | 2674.6 | 2674.6 | 2674.6 | 2674.6 | 2674.6 |
| 2.5° | 3023.3 | 3018.5 | 2998.6 | 2994.6 | 2972.3 | 2927.6 | 2875.7 | 2855.0 | 2812.7 | 2745.6 | 2671.4 |
| 5° | 3073.6 | 3076.0 | 3077.5 | 3068.8 | 3065.6 | 3028.9 | 2971.5 | 2946.7 | 2890.0 | 2780.0 | 2644.3 |
| 7.5° | 2885.2 | 2891.7 | 2911.6 | 2920.4 | 2958.7 | 2973.0 | 2961.0 | 2945.1 | 2900.5 | 2770.4 | 2579.7 |
| 10° | 2686.6 | 2698.5 | 2720.1 | 2734.4 | 2781.5 | 2819.9 | 2868.6 | 2872.5 | 2862.9 | 2738.4 | 2507.0 |
| 12.5° | 2515.8 | 2527.0 | 2550.9 | 2579.7 | 2627.6 | 2677.1 | 2749.6 | 2775.2 | 2807.1 | 2717.7 | 2455.2 |
| 15° | 2369.1 | 2372.2 | 2395.3 | 2431.2 | 2494.3 | 2562.1 | 2648.3 | 2685.8 | 2748.1 | 2709.7 | 2415.3 |
| 17.5° | 2240.6 | 2241.4 | 2256.5 | 2289.3 | 2365.8 | 2455.2 | 2555.7 | 2605.3 | 2684.2 | 2698.5 | 2380.2 |
| 20° | 2156.0 | 2155.2 | 2156.0 | 2173.6 | 2241.4 | 2347.5 | 2469.5 | 2521.5 | 2622.7 | 2685.0 | 2344.3 |
| 22.5° | 2127.2 | 2123.2 | 2104.9 | 2098.5 | 2141.6 | 2234.9 | 2381.0 | 2448.8 | 2567.7 | 2681.1 | 2317.9 |
| 25° | 2162.3 | 2160.0 | 2120.9 | 2084.2 | 2088.1 | 2146.4 | 2290.8 | 2373.8 | 2524.6 | 2695.4 | 2311.6 |
| 27.5° | 2275.7 | 2270.8 | 2211.0 | 2139.2 | 2093.8 | 2104.1 | 2223.8 | 2310.7 | 2490.3 | 2730.5 | 2320.4 |
| 30° | 2424.1 | 2424.9 | 2361.1 | 2274.0 | 2167.1 | 2108.1 | 2187.9 | 2270.0 | 2467.2 | 2783.1 | 2339.5 |
| 32.5° | 2589.3 | 2588.5 | 2543.0 | 2442.4 | 2305.9 | 2181.5 | 2203.8 | 2273.3 | 2470.3 | 2860.6 | 2376.2 |
| 35° | 2760.0 | 2751.2 | 2736.1 | 2647.5 | 2487.9 | 2309.9 | 2276.5 | 2327.5 | 2503.9 | 2962.7 | 2438.4 |
| 37.5° | 2957.0 | 2953.9 | 2969.0 | 2875.7 | 2713.0 | 2499.1 | 2404.1 | 2438.4 | 2588.5 | 3113.5 | 2539.0 |
| 40° | 3270.7 | 3253.1 | 3260.2 | 3133.4 | 2966.7 | 2753.6 | 2582.8 | 2591.6 | 2723.3 | 3312.9 | 2697.7 |
| 42.5° | 3868.3 | 3797.3 | 3664.0 | 3426.3 | 3245.9 | 3036.1 | 2816.7 | 2801.5 | 2914.0 | 3554.8 | 2906.8 |
| 45° | 4582.4 | 4501.1 | 4165.1 | 3749.4 | 3525.2 | 3339.3 | 3105.5 | 3064.8 | 3148.5 | 3842.8 | 3176.5 |
| 47.5° | 5178.5 | 5090.7 | 4645.5 | 4086.9 | 3809.3 | 3652.0 | 3425.5 | 3377.6 | 3429.4 | 4177.1 | 3500.4 |
| 50° | 5381.9 | 5333.3 | 4942.3 | 4367.8 | 4095.7 | 4003.1 | 3826.9 | 3747.1 | 3759.8 | 4537.8 | 3878.7 |
| 52.5° | 5288.6 | 5271.9 | 5010.1 | 4560.1 | 4360.6 | 4390.9 | 4266.4 | 4182.6 | 4168.3 | 4932.0 | 4296.8 |
| 55° | 5091.5 | 5083.6 | 4955.9 | 4667.0 | 4594.4 | 4746.0 | 4883.3 | 4810.6 | 4675.0 | 5350.9 | 4642.3 |
| 57.5° | 4809.8 | 4840.2 | 4932.0 | 4872.9 | 4881.6 | 5121.0 | 5456.1 | 5493.7 | 5291.0 | 5684.3 | 4898.4 |
| 60° | 4057.4 | 4138.8 | 4559.3 | 5093.9 | 5503.3 | 5745.0 | 6069.8 | 6140.0 | 5812.8 | 5912.6 | 5194.4 |
| 62.5° | 2999.4 | 3115.9 | 3715.2 | 4697.4 | 5845.6 | 6931.5 | 6886.0 | 6854.9 | 6310.7 | 6218.2 | 5733.0 |
| 65° | 1761.8 | 1898.3 | 2405.0 | 3670.4 | 5329.3 | 7694.3 | 8410.1 | 7979.2 | 7069.5 | 6853.4 | 6590.8 |
| 67.5° | 877.7 | 878.5 | 1107.5 | 1937.4 | 3938.6 | 7162.1 | 10634.7 | 10385.7 | 8682.9 | 7789.3 | 6929.2 |
| 70° | 675.0 | 693.4 | 819.5 | 1125.9 | 1991.6 | 5578.3 | 11144.5 | 12166.7 | 10304.3 | 7747.8 | 5879.1 |
| 72.5° | 572.1 | 584.1 | 729.3 | 979.9 | 1488.9 | 3062.4 | 9647.7 | 10754.4 | 9832.7 | 6546.2 | 4333.5 |
| 75° | 411.7 | 421.3 | 645.5 | 888.8 | 1370.9 | 1519.3 | 6618.0 | 7975.9 | 7377.5 | 4604.8 | 2385.0 |
| 77.5° | 102.1 | 101.4 | 225.0 | 721.3 | 1226.4 | 1265.5 | 3797.3 | 5114.7 | 4233.0 | 1885.5 | 612.8 |
| 80° | 45.5 | 43.9 | 51.0 | 151.6 | 1141.0 | 1194.5 | 1670.1 | 2582.8 | 1623.7 | 305.6 | 187.5 |
| 82.5° | 31.9 | 30.3 | 31.9 | 55.9 | 381.4 | 1108.3 | 1009.3 | 1119.5 | 594.4 | 104.5 | 79.8 |
| 85° | 10.3 | 9.6 | 17.6 | 47.1 | 106.9 | 639.1 | 984.6 | 836.3 | 442.0 | 44.7 | 53.5 |
| 87.5° | 1.6 | 1.6 | 6.3 | 25.6 | 31.1 | 213.1 | 577.7 | 579.3 | 198.7 | 26.3 | 23.9 |
| 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: P196118

CATALOG NUMBER: NVN-AF-02-LED-U-SL3-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2674.6 | 2674.6 | 2674.6 | 2674.6 | 2674.6 | 2674.6 | 2674.6 | 2674.6 | 2674.6 | 2674.6 | 2674.6 |
| 2.5° | 2633.9 | 2586.8 | 2520.7 | 2454.4 | 2394.5 | 2333.1 | 2283.6 | 2260.5 | 2250.1 | 2235.8 | 2204.7 |
| 5° | 2573.3 | 2487.9 | 2342.7 | 2199.9 | 2066.6 | 1938.9 | 1829.6 | 1767.4 | 1700.3 | 1697.2 | 1664.4 |
| 7.5° | 2476.0 | 2354.6 | 2125.7 | 1903.8 | 1700.3 | 1505.7 | 1338.1 | 1229.6 | 1155.4 | 1109.1 | 1077.2 |
| 10° | 2367.4 | 2211.8 | 1908.6 | 1596.6 | 1319.7 | 1059.7 | 844.2 | 703.8 | 618.4 | 575.3 | 550.6 |
| 12.5° | 2281.3 | 2085.8 | 1694.8 | 1302.2 | 955.1 | 656.7 | 456.4 | 354.2 | 308.8 | 291.2 | 283.3 |
| 15° | 2207.0 | 1970.1 | 1494.5 | 1038.9 | 637.5 | 377.4 | 264.1 | 230.6 | 223.4 | 223.4 | 222.6 |
| 17.5° | 2132.0 | 1858.4 | 1299.8 | 780.4 | 401.3 | 247.3 | 208.3 | 203.5 | 204.3 | 206.6 | 206.6 |
| 20° | 2061.0 | 1752.2 | 1112.3 | 556.2 | 263.3 | 197.8 | 189.1 | 187.5 | 189.9 | 193.1 | 192.3 |
| 22.5° | 2003.6 | 1658.9 | 936.7 | 382.2 | 202.6 | 179.5 | 173.9 | 171.5 | 173.2 | 175.5 | 174.7 |
| 25° | 1962.8 | 1579.1 | 775.6 | 266.5 | 176.4 | 163.6 | 157.2 | 154.0 | 152.4 | 154.0 | 153.2 |
| 27.5° | 1938.2 | 1512.0 | 624.0 | 200.3 | 157.9 | 147.6 | 139.6 | 133.3 | 129.3 | 129.3 | 127.7 |
| 30° | 1922.2 | 1449.0 | 489.1 | 165.9 | 142.8 | 131.7 | 120.5 | 111.7 | 105.4 | 103.7 | 102.9 |
| 32.5° | 1921.4 | 1394.8 | 365.4 | 146.8 | 128.5 | 115.7 | 102.1 | 90.9 | 83.8 | 82.1 | 81.4 |
| 35° | 1941.4 | 1350.9 | 268.9 | 132.5 | 115.7 | 100.6 | 85.4 | 73.4 | 67.0 | 67.0 | 66.2 |
| 37.5° | 1993.2 | 1325.3 | 203.5 | 121.3 | 105.4 | 87.8 | 71.8 | 60.7 | 55.0 | 56.7 | 56.7 |
| 40° | 2089.8 | 1320.5 | 165.9 | 112.5 | 96.6 | 76.6 | 58.2 | 49.5 | 47.1 | 49.5 | 49.5 |
| 42.5° | 2237.4 | 1346.1 | 147.6 | 106.1 | 88.6 | 65.5 | 48.7 | 42.2 | 41.5 | 43.9 | 43.9 |
| 45° | 2429.6 | 1396.3 | 137.3 | 100.6 | 79.8 | 54.2 | 40.7 | 36.7 | 35.9 | 39.1 | 39.1 |
| 47.5° | 2662.6 | 1464.1 | 127.7 | 94.1 | 71.0 | 44.7 | 34.3 | 31.1 | 31.1 | 34.3 | 35.1 |
| 50° | 2938.7 | 1555.9 | 118.0 | 87.8 | 63.8 | 37.5 | 28.7 | 26.3 | 27.1 | 30.3 | 31.1 |
| 52.5° | 3256.3 | 1668.4 | 109.4 | 82.1 | 55.9 | 30.3 | 23.9 | 22.3 | 23.1 | 26.3 | 27.1 |
| 55° | 3530.0 | 1766.6 | 98.9 | 76.6 | 45.5 | 24.8 | 19.9 | 19.1 | 19.9 | 23.9 | 23.9 |
| 57.5° | 3768.6 | 1860.7 | 89.4 | 67.8 | 35.9 | 19.9 | 16.0 | 16.0 | 17.6 | 21.6 | 22.3 |
| 60° | 4085.4 | 2009.2 | 81.4 | 57.5 | 27.1 | 15.1 | 12.8 | 13.6 | 16.0 | 19.1 | 19.9 |
| 62.5° | 4646.2 | 2261.3 | 71.0 | 47.9 | 19.9 | 12.0 | 10.3 | 11.2 | 14.3 | 18.3 | 19.1 |
| 65° | 5348.4 | 2499.9 | 59.0 | 39.9 | 15.1 | 8.8 | 8.0 | 10.3 | 14.3 | 18.3 | 19.1 |
| 67.5° | 5276.6 | 2174.3 | 46.2 | 31.9 | 11.2 | 7.2 | 6.3 | 9.6 | 13.6 | 18.3 | 19.1 |
| 70° | 4279.2 | 1524.0 | 34.3 | 21.6 | 8.8 | 6.3 | 6.3 | 9.6 | 13.6 | 17.6 | 18.3 |
| 72.5° | 2968.3 | 848.2 | 26.3 | 14.3 | 8.0 | 6.3 | 5.6 | 8.8 | 12.8 | 17.6 | 18.3 |
| 75° | 1412.3 | 260.1 | 20.8 | 10.3 | 7.2 | 5.6 | 4.8 | 8.8 | 12.8 | 17.6 | 18.3 |
| 77.5° | 271.3 | 66.2 | 16.8 | 8.8 | 6.3 | 5.6 | 4.8 | 8.0 | 12.8 | 16.8 | 17.6 |
| 80° | 91.8 | 29.6 | 13.6 | 8.0 | 6.3 | 5.6 | 4.8 | 8.0 | 12.0 | 16.0 | 16.8 |
| 82.5° | 50.2 | 16.8 | 12.0 | 7.2 | 6.3 | 4.8 | 4.0 | 7.2 | 11.2 | 16.0 | 16.8 |
| 85° | 39.1 | 12.0 | 9.6 | 7.2 | 6.3 | 4.8 | 4.0 | 7.2 | 11.2 | 15.1 | 16.0 |
| 87.5° | 19.9 | 8.8 | 8.0 | 7.2 | 6.3 | 4.8 | 4.0 | 6.3 | 10.3 | 14.3 | 16.0 |
| 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)