

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: P195914

Luminaire Tested: **NVN-AF-02-LED-U-5MQ-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195914
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24129)
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-5MQ-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8743.2 lumens
Efficiency: N/A
Efficacy: 132.5 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 - G2

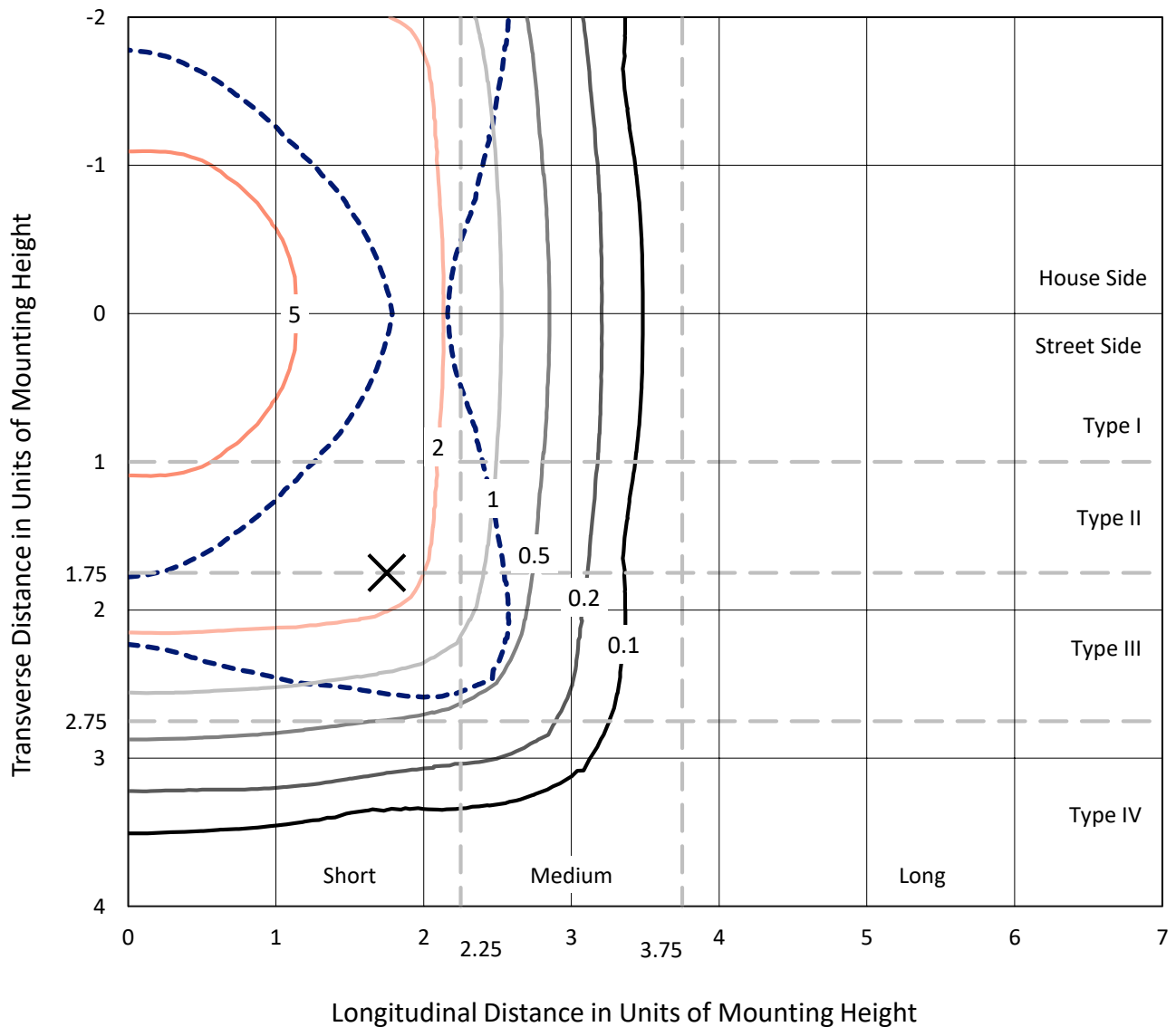
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

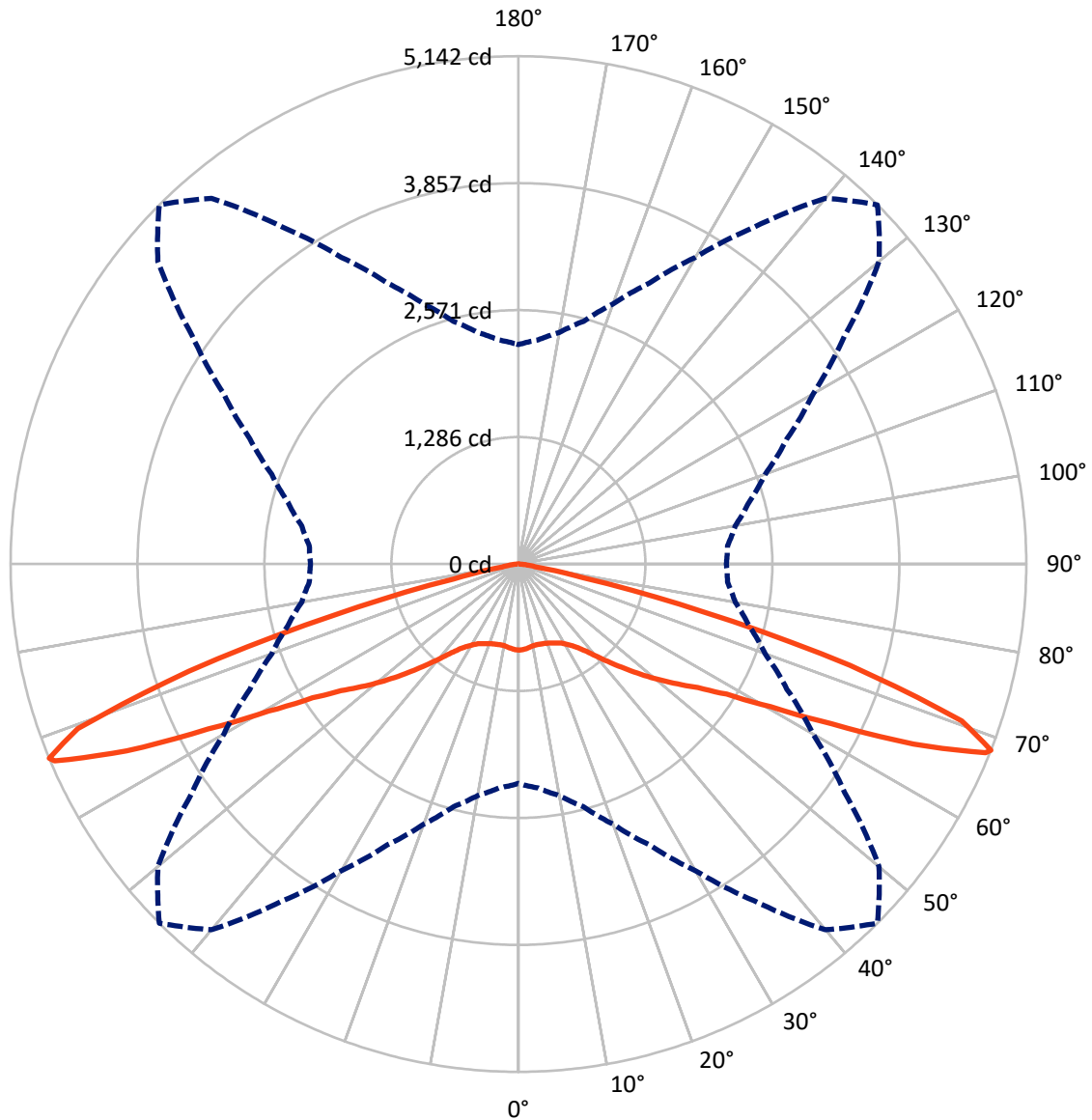
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.7 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 4371.6 | 0.0 | 4371.6 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 4371.6 | 0.0 | 4371.6 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 8743.2 | 0.0 | 8743.2 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 81.6 | 0.9 |
| 10°-20° | 236.7 | 2.7 |
| 20°-30° | 402.4 | 4.6 |
| 30°-40° | 658.5 | 7.5 |
| 40°-50° | 1176.8 | 13.5 |
| 50°-60° | 1987.5 | 22.7 |
| 60°-70° | 3081.8 | 35.2 |
| 70°-80° | 1059.6 | 12.1 |
| 80°-90° | 58.2 | 0.7 |
| 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° | 8743.2 | 100.0 |
| 0°-180° | 8743.2 | 100.0 |



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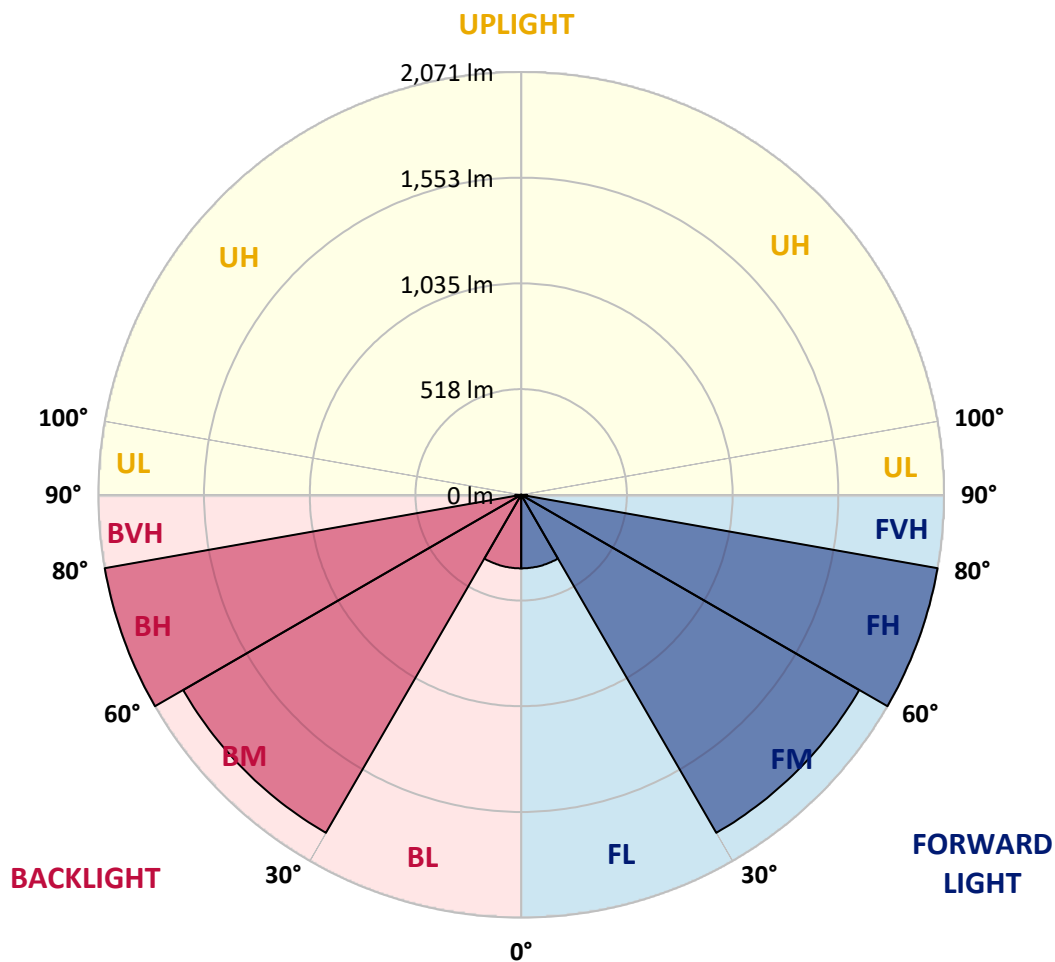
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 360.3 | 4.1 | | | |
| FM | (30°-60°) | 1911.4 | 21.9 | | | |
| FH | (60°-80°) | 2070.7 | 23.7 | | | G2/5000 |
| FVH | (80°-90°) | 29.1 | 0.3 | | | G1/100 |
| BL | (0°-30°) | 360.3 | 4.1 | B1/500 | | |
| BM | (30°-60°) | 1911.4 | 21.9 | B2/2500 | | |
| BH | (60°-80°) | 2070.7 | 23.7 | B3/2500 | | G2/5000 |
| BVH | (80°-90°) | 29.1 | 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-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 872.2 | 872.2 | 872.2 | 872.2 | 872.2 | 872.2 | 872.2 | 872.2 | 872.2 | 872.2 | 872.2 |
| 2.5° | 876.0 | 876.0 | 877.0 | 876.5 | 874.8 | 873.2 | 871.7 | 870.0 | 868.9 | 867.9 | 866.8 |
| 5° | 866.8 | 866.8 | 868.4 | 867.4 | 866.2 | 864.7 | 863.6 | 861.9 | 860.9 | 859.9 | 860.4 |
| 7.5° | 855.0 | 856.1 | 857.1 | 856.6 | 854.5 | 854.0 | 852.3 | 851.8 | 850.8 | 849.2 | 849.7 |
| 10° | 844.9 | 845.4 | 846.5 | 845.9 | 845.4 | 843.7 | 843.2 | 842.7 | 842.2 | 840.0 | 839.5 |
| 12.5° | 834.7 | 835.8 | 836.8 | 837.4 | 836.8 | 837.4 | 837.9 | 838.4 | 837.9 | 836.8 | 836.8 |
| 15° | 826.6 | 827.7 | 829.3 | 830.9 | 831.5 | 834.7 | 836.8 | 838.9 | 840.6 | 841.1 | 839.5 |
| 17.5° | 822.4 | 824.0 | 826.1 | 829.3 | 832.0 | 835.8 | 839.5 | 842.7 | 845.4 | 845.9 | 844.3 |
| 20° | 821.8 | 823.5 | 826.6 | 830.4 | 835.2 | 840.0 | 845.9 | 850.8 | 853.4 | 855.0 | 853.4 |
| 22.5° | 825.6 | 827.7 | 832.0 | 836.8 | 842.7 | 849.2 | 856.6 | 861.9 | 867.4 | 869.5 | 867.9 |
| 25° | 836.3 | 838.4 | 843.2 | 849.2 | 855.6 | 863.6 | 871.0 | 878.0 | 883.4 | 886.1 | 883.9 |
| 27.5° | 858.8 | 859.3 | 864.7 | 871.0 | 878.6 | 885.6 | 895.2 | 898.4 | 902.7 | 905.3 | 902.7 |
| 30° | 890.4 | 891.4 | 896.2 | 906.4 | 913.4 | 922.5 | 927.8 | 931.1 | 935.9 | 938.6 | 935.3 |
| 32.5° | 938.6 | 939.6 | 943.9 | 953.5 | 959.9 | 966.9 | 973.3 | 975.5 | 980.3 | 983.6 | 979.8 |
| 35° | 1006.6 | 1008.7 | 1012.4 | 1018.9 | 1024.2 | 1029.6 | 1034.4 | 1032.8 | 1035.9 | 1040.2 | 1036.6 |
| 37.5° | 1099.7 | 1099.2 | 1100.2 | 1105.1 | 1110.4 | 1113.6 | 1121.2 | 1117.4 | 1120.5 | 1124.3 | 1122.2 |
| 40° | 1208.4 | 1208.4 | 1207.8 | 1216.4 | 1218.5 | 1221.8 | 1229.8 | 1225.0 | 1229.3 | 1233.6 | 1229.8 |
| 42.5° | 1332.1 | 1334.2 | 1336.9 | 1343.9 | 1349.7 | 1350.8 | 1354.6 | 1352.4 | 1357.8 | 1361.5 | 1357.8 |
| 45° | 1474.5 | 1477.7 | 1480.9 | 1497.0 | 1499.6 | 1501.8 | 1504.5 | 1497.5 | 1503.4 | 1506.6 | 1505.5 |
| 47.5° | 1622.2 | 1628.1 | 1635.1 | 1651.7 | 1662.4 | 1667.2 | 1669.4 | 1661.4 | 1661.9 | 1666.7 | 1667.2 |
| 50° | 1789.2 | 1795.7 | 1802.6 | 1821.4 | 1831.6 | 1840.2 | 1842.8 | 1833.7 | 1834.8 | 1838.5 | 1839.6 |
| 52.5° | 1943.5 | 1951.0 | 1966.0 | 1991.2 | 2005.6 | 2020.5 | 2021.7 | 2010.4 | 2015.2 | 2017.9 | 2015.7 |
| 55° | 2088.6 | 2098.2 | 2118.0 | 2151.8 | 2178.0 | 2207.4 | 2220.8 | 2208.4 | 2208.4 | 2206.4 | 2205.3 |
| 57.5° | 2257.8 | 2268.5 | 2288.9 | 2327.9 | 2364.3 | 2406.6 | 2443.0 | 2455.3 | 2477.8 | 2485.3 | 2473.5 |
| 60° | 2512.6 | 2523.8 | 2544.7 | 2596.1 | 2642.2 | 2703.8 | 2763.7 | 2812.4 | 2891.7 | 2934.5 | 2896.0 |
| 62.5° | 2745.5 | 2762.6 | 2811.9 | 2901.8 | 3001.4 | 3115.5 | 3247.7 | 3341.9 | 3485.9 | 3557.7 | 3460.7 |
| 65° | 2692.5 | 2727.3 | 2823.7 | 2965.0 | 3170.6 | 3418.0 | 3687.2 | 3945.8 | 4243.5 | 4396.1 | 4199.1 |
| 67.5° | 2352.0 | 2381.4 | 2485.3 | 2649.6 | 2906.1 | 3247.2 | 3665.8 | 4201.3 | 4815.3 | 5101.3 | 4752.7 |
| 68° | 2221.8 | 2277.0 | 2380.4 | 2543.7 | 2802.3 | 3137.4 | 3584.4 | 4162.7 | 4833.0 | 5142.0 | 4765.5 |
| 70° | 1703.6 | 1723.5 | 1822.5 | 1969.2 | 2248.1 | 2576.8 | 3028.1 | 3687.2 | 4444.8 | 4762.9 | 4375.8 |
| 72.5° | 809.6 | 821.3 | 885.6 | 1030.1 | 1207.3 | 1475.0 | 1873.3 | 2495.0 | 3177.6 | 3508.4 | 3122.5 |
| 75° | 296.7 | 299.3 | 314.3 | 348.5 | 414.9 | 515.6 | 706.8 | 1093.2 | 1618.5 | 1930.1 | 1625.0 |
| 77.5° | 160.1 | 160.6 | 166.5 | 175.0 | 186.9 | 200.2 | 229.1 | 307.3 | 495.8 | 674.6 | 523.6 |
| 80° | 100.7 | 100.1 | 106.0 | 112.9 | 121.0 | 127.5 | 130.1 | 139.2 | 156.9 | 183.6 | 168.7 |
| 82.5° | 51.4 | 56.3 | 69.6 | 77.1 | 88.9 | 91.0 | 88.4 | 87.8 | 93.2 | 100.7 | 103.8 |
| 85° | 28.3 | 25.2 | 36.9 | 49.3 | 53.5 | 55.1 | 55.6 | 52.5 | 51.4 | 50.3 | 53.0 |
| 87.5° | 14.4 | 13.4 | 16.1 | 24.7 | 26.2 | 21.4 | 22.0 | 18.7 | 12.9 | 12.9 | 13.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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CATALOG NUMBER: NVN-AF-02-LED-U-5MQ-600

CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 872.2 | 872.2 | 872.2 | 872.2 | 872.2 | 872.2 | 872.2 | 872.2 |
| 2.5° | 865.7 | 866.2 | 865.2 | 865.2 | 865.2 | 865.7 | 865.2 | 864.7 |
| 5° | 858.8 | 859.9 | 859.9 | 860.4 | 860.9 | 860.9 | 860.9 | 860.9 |
| 7.5° | 848.6 | 849.2 | 850.2 | 850.2 | 850.2 | 850.2 | 850.2 | 850.2 |
| 10° | 838.9 | 837.9 | 837.4 | 836.3 | 836.3 | 834.7 | 835.2 | 835.8 |
| 12.5° | 834.1 | 832.0 | 830.9 | 829.3 | 828.3 | 826.6 | 826.6 | 827.2 |
| 15° | 836.3 | 833.1 | 829.8 | 828.8 | 827.7 | 826.6 | 825.6 | 826.1 |
| 17.5° | 840.6 | 836.8 | 833.1 | 830.9 | 828.8 | 827.2 | 826.6 | 827.2 |
| 20° | 849.7 | 844.3 | 838.4 | 834.7 | 830.4 | 829.3 | 827.7 | 829.3 |
| 22.5° | 861.9 | 855.6 | 848.0 | 841.1 | 836.3 | 834.1 | 832.0 | 833.6 |
| 25° | 877.0 | 870.0 | 862.6 | 854.5 | 849.2 | 847.5 | 844.9 | 844.9 |
| 27.5° | 897.8 | 892.0 | 885.6 | 878.0 | 872.7 | 871.0 | 866.8 | 866.8 |
| 30° | 931.1 | 925.2 | 919.2 | 912.9 | 907.5 | 905.9 | 900.5 | 900.5 |
| 32.5° | 975.0 | 968.5 | 964.7 | 959.4 | 955.1 | 952.5 | 946.0 | 945.5 |
| 35° | 1033.8 | 1028.0 | 1027.5 | 1023.7 | 1019.4 | 1019.9 | 1013.5 | 1012.4 |
| 37.5° | 1118.4 | 1113.6 | 1115.2 | 1112.0 | 1108.3 | 1111.4 | 1107.8 | 1107.8 |
| 40° | 1226.6 | 1225.0 | 1226.6 | 1224.5 | 1225.0 | 1225.5 | 1222.3 | 1223.3 |
| 42.5° | 1357.3 | 1353.0 | 1362.6 | 1361.5 | 1359.9 | 1364.2 | 1356.6 | 1351.3 |
| 45° | 1507.6 | 1506.1 | 1515.7 | 1517.3 | 1514.1 | 1516.7 | 1503.4 | 1502.8 |
| 47.5° | 1671.0 | 1671.0 | 1679.5 | 1678.5 | 1675.3 | 1675.8 | 1659.7 | 1649.5 |
| 50° | 1841.2 | 1840.2 | 1848.7 | 1846.5 | 1842.3 | 1841.7 | 1825.1 | 1815.0 |
| 52.5° | 2018.4 | 2018.4 | 2030.8 | 2024.8 | 2014.7 | 2009.9 | 1989.5 | 1976.1 |
| 55° | 2214.4 | 2211.7 | 2215.5 | 2196.2 | 2176.3 | 2161.9 | 2136.7 | 2126.6 |
| 57.5° | 2462.2 | 2431.2 | 2404.4 | 2379.8 | 2352.0 | 2334.9 | 2305.4 | 2294.7 |
| 60° | 2814.0 | 2731.1 | 2695.2 | 2646.0 | 2599.8 | 2576.8 | 2537.7 | 2516.9 |
| 62.5° | 3301.3 | 3163.7 | 3066.2 | 2957.6 | 2852.6 | 2778.7 | 2719.3 | 2693.0 |
| 65° | 3864.5 | 3564.7 | 3316.7 | 3083.9 | 2886.4 | 2729.4 | 2642.2 | 2614.9 |
| 67.5° | 4078.6 | 3528.3 | 3100.5 | 2766.4 | 2526.5 | 2339.7 | 2235.2 | 2213.4 |
| 68° | 4033.1 | 3444.7 | 3000.3 | 2658.2 | 2417.3 | 2228.8 | 2125.0 | 2105.1 |
| 70° | 3557.7 | 2906.1 | 2437.1 | 2096.6 | 1871.7 | 1692.4 | 1619.0 | 1587.4 |
| 72.5° | 2425.3 | 1866.4 | 1431.6 | 1145.2 | 977.1 | 863.6 | 796.2 | 773.1 |
| 75° | 1116.3 | 754.3 | 503.8 | 376.3 | 319.7 | 292.4 | 271.5 | 266.1 |
| 77.5° | 325.5 | 236.6 | 203.5 | 188.4 | 177.2 | 167.6 | 160.6 | 160.1 |
| 80° | 154.8 | 145.1 | 140.8 | 131.1 | 121.0 | 111.9 | 105.5 | 106.6 |
| 82.5° | 103.8 | 101.2 | 101.2 | 91.6 | 75.5 | 64.8 | 53.5 | 48.2 |
| 85° | 55.1 | 57.3 | 60.5 | 57.3 | 49.8 | 36.9 | 24.1 | 26.2 |
| 87.5° | 18.7 | 21.4 | 22.5 | 22.0 | 19.8 | 15.0 | 11.3 | 11.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)