

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: P195441

Luminaire Tested: **NVN-AF-03-LED-U-5MQ-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195441
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-03-LED-U-5MQ-7050-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 5000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15586 lumens
Efficiency: N/A
Efficacy: 125.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B4 - U0 - G2

Input Watts (W): 124
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

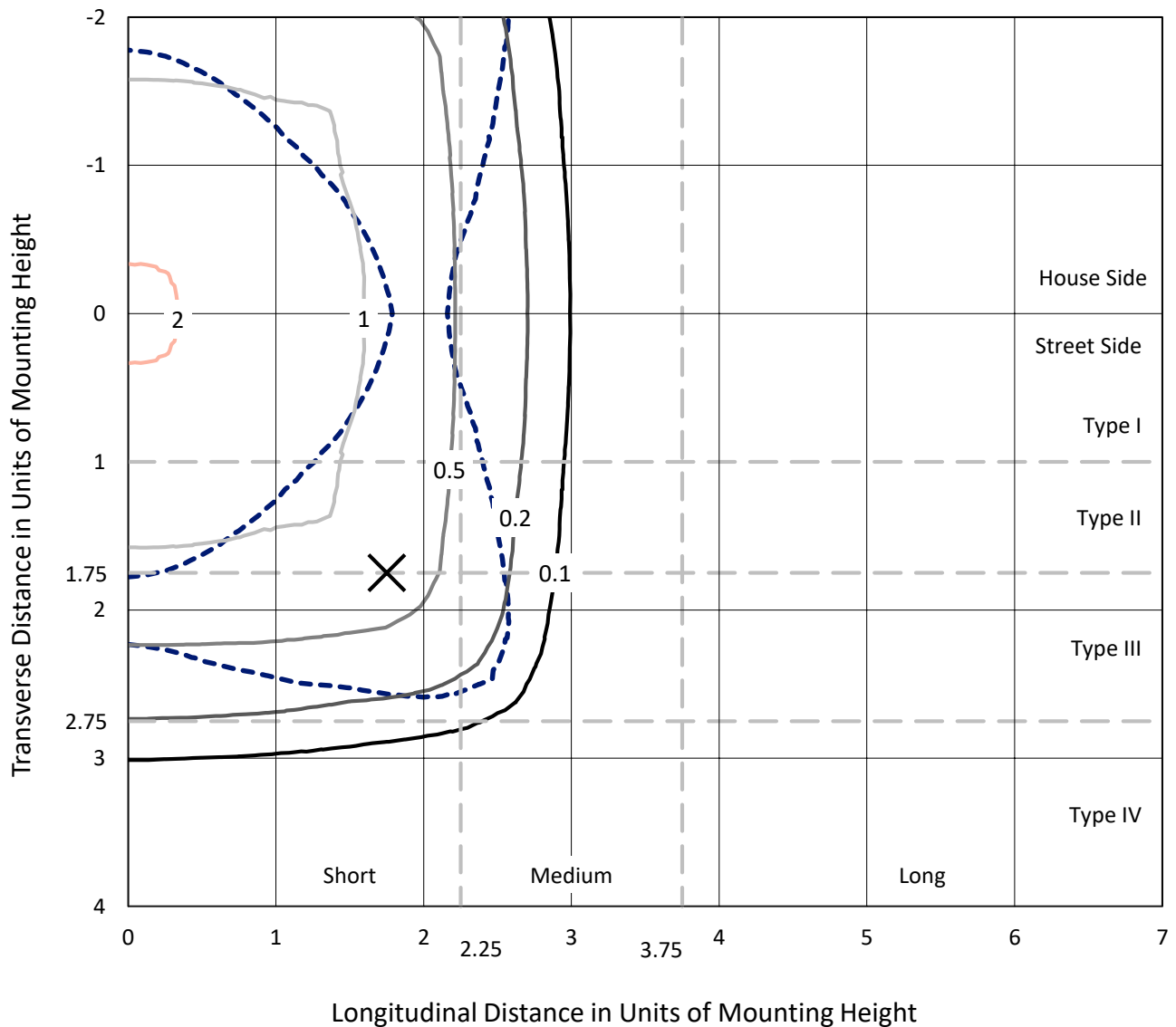


REPORT NUMBER: P195441

CATALOG NUMBER: NVN-AF-03-LED-U-5MQ-7050-800

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

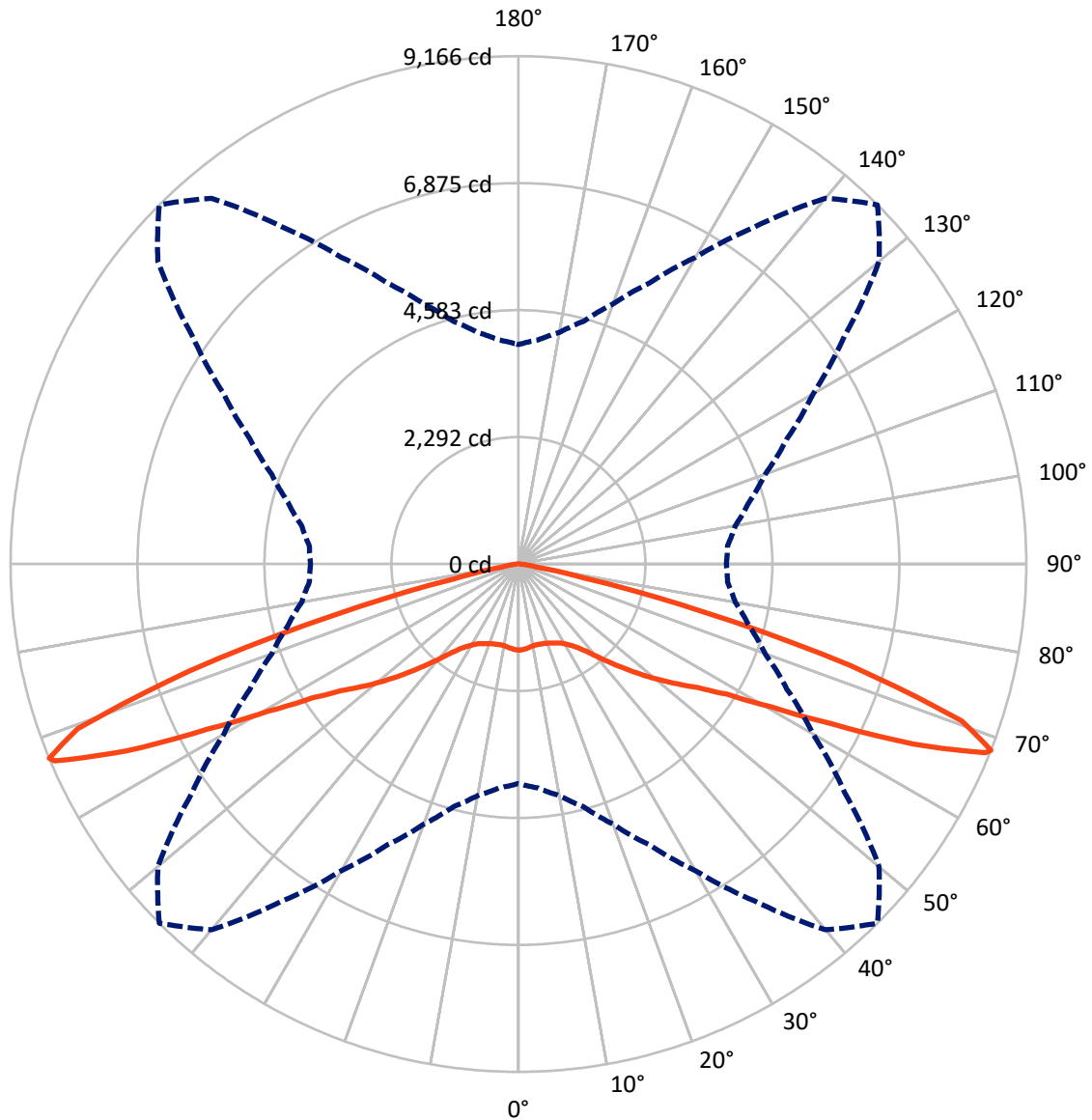


Based on 25 foot mounting height. Maximum calculated value = 2.5 fc
 Type V - Short - Full Cutoff

REPORT NUMBER: P195441

CATALOG NUMBER: NVN-AF-03-LED-U-5MQ-7050-800

Luminous Intensity Polar Plot



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

REPORT NUMBER: P195441

CATALOG NUMBER: NVN-AF-03-LED-U-5MQ-7050-800

FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 7793.0 | 0.0 | 7793.0 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 7793.0 | 0.0 | 7793.0 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 15586.0 | 0.0 | 15586.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 145.5 | 0.9 |
| 10°-20° | 421.9 | 2.7 |
| 20°-30° | 717.3 | 4.6 |
| 30°-40° | 1173.9 | 7.5 |
| 40°-50° | 2097.9 | 13.5 |
| 50°-60° | 3543.0 | 22.7 |
| 60°-70° | 5493.8 | 35.2 |
| 70°-80° | 1888.9 | 12.1 |
| 80°-90° | 103.8 | 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° | 15586.0 | 100.0 |
| 0°-180° | 15586.0 | 100.0 |



REPORT NUMBER: P195441

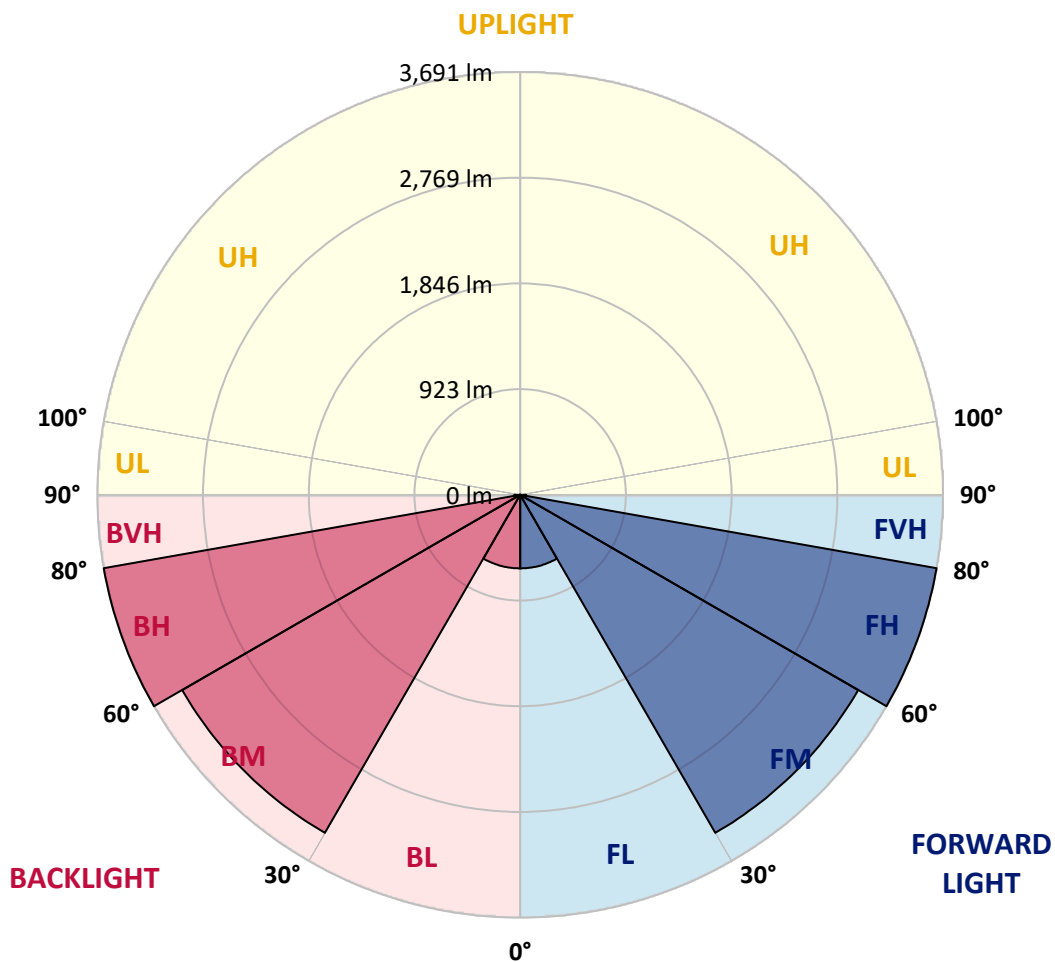
CATALOG NUMBER: NVN-AF-03-LED-U-5MQ-7050-800

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 642.4 | 4.1 | | | |
| FM | (30°-60°) | 3407.4 | 21.9 | | | |
| FH | (60°-80°) | 3691.4 | 23.7 | | | G2/5000 |
| FVH | (80°-90°) | 51.9 | 0.3 | | | G1/100 |
| BL | (0°-30°) | 642.4 | 4.1 | B2/1000 | | |
| BM | (30°-60°) | 3407.4 | 21.9 | B3/5000 | | |
| BH | (60°-80°) | 3691.4 | 23.7 | B4/5000 | | G2/5000 |
| BVH | (80°-90°) | 51.9 | 0.3 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B4-U0-G2

Type V Short





REPORT NUMBER: P195441

CATALOG NUMBER: NVN-AF-03-LED-U-5MQ-7050-800

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1554.7 | 1554.7 | 1554.7 | 1554.7 | 1554.7 | 1554.7 | 1554.7 | 1554.7 | 1554.7 | 1554.7 | 1554.7 |
| 2.5° | 1561.4 | 1561.4 | 1563.3 | 1562.4 | 1559.5 | 1556.7 | 1553.8 | 1550.9 | 1549.0 | 1547.1 | 1545.2 |
| 5° | 1545.2 | 1545.2 | 1548.1 | 1546.2 | 1544.3 | 1541.4 | 1539.5 | 1536.6 | 1534.7 | 1532.8 | 1533.8 |
| 7.5° | 1524.2 | 1526.1 | 1528.0 | 1527.1 | 1523.3 | 1522.3 | 1519.4 | 1518.5 | 1516.6 | 1513.7 | 1514.7 |
| 10° | 1506.1 | 1507.0 | 1508.9 | 1508.0 | 1507.0 | 1504.2 | 1503.2 | 1502.3 | 1501.3 | 1497.5 | 1496.5 |
| 12.5° | 1487.9 | 1489.8 | 1491.8 | 1492.7 | 1491.8 | 1492.7 | 1493.7 | 1494.6 | 1493.7 | 1491.8 | 1491.8 |
| 15° | 1473.6 | 1475.5 | 1478.4 | 1481.3 | 1482.2 | 1487.9 | 1491.8 | 1495.6 | 1498.4 | 1499.4 | 1496.5 |
| 17.5° | 1466.0 | 1468.9 | 1472.7 | 1478.4 | 1483.2 | 1489.8 | 1496.5 | 1502.3 | 1507.0 | 1508.0 | 1505.1 |
| 20° | 1465.0 | 1467.9 | 1473.6 | 1480.3 | 1488.9 | 1497.5 | 1508.0 | 1516.6 | 1521.3 | 1524.2 | 1521.3 |
| 22.5° | 1471.7 | 1475.5 | 1483.2 | 1491.8 | 1502.3 | 1513.7 | 1527.1 | 1536.6 | 1546.2 | 1550.0 | 1547.1 |
| 25° | 1490.8 | 1494.6 | 1503.2 | 1513.7 | 1525.2 | 1539.5 | 1552.8 | 1565.2 | 1574.8 | 1579.6 | 1575.7 |
| 27.5° | 1530.9 | 1531.8 | 1541.4 | 1552.8 | 1566.2 | 1578.6 | 1595.8 | 1601.5 | 1609.2 | 1613.9 | 1609.2 |
| 30° | 1587.2 | 1589.1 | 1597.7 | 1615.8 | 1628.2 | 1644.5 | 1654.0 | 1659.7 | 1668.3 | 1673.1 | 1667.4 |
| 32.5° | 1673.1 | 1675.0 | 1682.6 | 1699.8 | 1711.3 | 1723.7 | 1735.1 | 1739.0 | 1747.5 | 1753.3 | 1746.6 |
| 35° | 1794.3 | 1798.1 | 1804.8 | 1816.3 | 1825.8 | 1835.3 | 1843.9 | 1841.1 | 1846.8 | 1854.4 | 1847.8 |
| 37.5° | 1960.4 | 1959.4 | 1961.3 | 1969.9 | 1979.5 | 1985.2 | 1998.6 | 1991.9 | 1997.6 | 2004.3 | 2000.5 |
| 40° | 2154.1 | 2154.1 | 2153.2 | 2168.4 | 2172.3 | 2178.0 | 2192.3 | 2183.7 | 2191.3 | 2199.0 | 2192.3 |
| 42.5° | 2374.6 | 2378.4 | 2383.2 | 2395.6 | 2406.1 | 2408.0 | 2414.7 | 2410.9 | 2420.4 | 2427.1 | 2420.4 |
| 45° | 2628.5 | 2634.2 | 2639.9 | 2668.6 | 2673.3 | 2677.1 | 2681.9 | 2669.5 | 2680.0 | 2685.7 | 2683.8 |
| 47.5° | 2891.9 | 2902.4 | 2914.8 | 2944.4 | 2963.5 | 2972.1 | 2975.9 | 2961.6 | 2962.5 | 2971.1 | 2972.1 |
| 50° | 3189.7 | 3201.1 | 3213.5 | 3246.9 | 3265.1 | 3280.3 | 3285.1 | 3268.9 | 3270.8 | 3277.5 | 3279.4 |
| 52.5° | 3464.5 | 3477.9 | 3504.6 | 3549.5 | 3575.3 | 3602.0 | 3603.9 | 3583.8 | 3592.4 | 3597.2 | 3593.4 |
| 55° | 3723.2 | 3740.4 | 3775.7 | 3835.8 | 3882.6 | 3935.1 | 3958.9 | 3937.0 | 3937.0 | 3933.2 | 3931.3 |
| 57.5° | 4024.8 | 4043.9 | 4080.1 | 4149.8 | 4214.7 | 4290.1 | 4355.0 | 4377.0 | 4417.1 | 4430.4 | 4409.4 |
| 60° | 4479.1 | 4499.1 | 4536.4 | 4628.0 | 4710.1 | 4819.8 | 4926.7 | 5013.6 | 5154.8 | 5231.2 | 5162.5 |
| 62.5° | 4894.3 | 4924.8 | 5012.6 | 5173.0 | 5350.5 | 5553.8 | 5789.5 | 5957.5 | 6214.2 | 6342.1 | 6169.4 |
| 65° | 4799.8 | 4861.8 | 5033.6 | 5285.6 | 5652.1 | 6093.0 | 6573.1 | 7034.1 | 7564.7 | 7836.7 | 7485.5 |
| 67.5° | 4192.8 | 4245.3 | 4430.4 | 4723.4 | 5180.6 | 5788.6 | 6534.9 | 7489.3 | 8584.1 | 9093.7 | 8472.4 |
| 68° | 3960.8 | 4059.1 | 4243.4 | 4534.4 | 4995.4 | 5592.9 | 6389.8 | 7420.6 | 8615.5 | 9166.2 | 8495.3 |
| 70° | 3037.0 | 3072.3 | 3248.8 | 3510.4 | 4007.6 | 4593.6 | 5398.2 | 6573.1 | 7923.6 | 8490.5 | 7800.5 |
| 72.5° | 1443.1 | 1464.1 | 1578.6 | 1836.3 | 2152.2 | 2629.4 | 3339.5 | 4447.6 | 5664.5 | 6254.3 | 5566.2 |
| 75° | 528.7 | 533.5 | 560.2 | 621.3 | 739.7 | 919.1 | 1259.8 | 1948.9 | 2885.2 | 3440.7 | 2896.7 |
| 77.5° | 285.4 | 286.3 | 296.8 | 312.1 | 333.1 | 357.0 | 408.5 | 547.8 | 883.8 | 1202.6 | 933.4 |
| 80° | 179.4 | 178.5 | 189.0 | 201.4 | 215.7 | 227.2 | 231.9 | 248.1 | 279.6 | 327.4 | 300.6 |
| 82.5° | 91.6 | 100.2 | 124.1 | 137.4 | 158.4 | 162.3 | 157.5 | 156.5 | 166.1 | 179.4 | 185.2 |
| 85° | 50.6 | 44.9 | 65.9 | 87.8 | 95.4 | 98.3 | 99.3 | 93.5 | 91.6 | 89.7 | 94.5 |
| 87.5° | 25.8 | 23.9 | 28.6 | 43.9 | 46.8 | 38.2 | 39.1 | 33.4 | 22.9 | 22.9 | 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: P195441

CATALOG NUMBER: NVN-AF-03-LED-U-5MQ-7050-800

CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1554.7 | 1554.7 | 1554.7 | 1554.7 | 1554.7 | 1554.7 | 1554.7 | 1554.7 |
| 2.5° | 1543.3 | 1544.3 | 1542.3 | 1542.3 | 1542.3 | 1543.3 | 1542.3 | 1541.4 |
| 5° | 1530.9 | 1532.8 | 1532.8 | 1533.8 | 1534.7 | 1534.7 | 1534.7 | 1534.7 |
| 7.5° | 1512.8 | 1513.7 | 1515.6 | 1515.6 | 1515.6 | 1515.6 | 1515.6 | 1515.6 |
| 10° | 1495.6 | 1493.7 | 1492.7 | 1490.8 | 1490.8 | 1487.9 | 1488.9 | 1489.8 |
| 12.5° | 1487.0 | 1483.2 | 1481.3 | 1478.4 | 1476.5 | 1473.6 | 1473.6 | 1474.6 |
| 15° | 1490.8 | 1485.1 | 1479.4 | 1477.4 | 1475.5 | 1473.6 | 1471.7 | 1472.7 |
| 17.5° | 1498.4 | 1491.8 | 1485.1 | 1481.3 | 1477.4 | 1474.6 | 1473.6 | 1474.6 |
| 20° | 1514.7 | 1505.1 | 1494.6 | 1487.9 | 1480.3 | 1478.4 | 1475.5 | 1478.4 |
| 22.5° | 1536.6 | 1525.2 | 1511.8 | 1499.4 | 1490.8 | 1487.0 | 1483.2 | 1486.0 |
| 25° | 1563.3 | 1550.9 | 1537.6 | 1523.3 | 1513.7 | 1510.8 | 1506.1 | 1506.1 |
| 27.5° | 1600.6 | 1590.1 | 1578.6 | 1565.2 | 1555.7 | 1552.8 | 1545.2 | 1545.2 |
| 30° | 1659.7 | 1649.2 | 1638.7 | 1627.3 | 1617.7 | 1614.9 | 1605.3 | 1605.3 |
| 32.5° | 1738.0 | 1726.5 | 1719.9 | 1710.3 | 1702.7 | 1697.9 | 1686.5 | 1685.5 |
| 35° | 1843.0 | 1832.5 | 1831.5 | 1824.9 | 1817.2 | 1818.2 | 1806.7 | 1804.8 |
| 37.5° | 1993.8 | 1985.2 | 1988.1 | 1982.3 | 1975.6 | 1981.4 | 1974.7 | 1974.7 |
| 40° | 2186.6 | 2183.7 | 2186.6 | 2182.8 | 2183.7 | 2184.7 | 2178.9 | 2180.8 |
| 42.5° | 2419.5 | 2411.8 | 2429.0 | 2427.1 | 2424.2 | 2431.9 | 2418.5 | 2409.0 |
| 45° | 2687.6 | 2684.8 | 2702.0 | 2704.8 | 2699.1 | 2703.9 | 2680.0 | 2679.1 |
| 47.5° | 2978.7 | 2978.7 | 2994.0 | 2992.1 | 2986.4 | 2987.3 | 2958.7 | 2940.6 |
| 50° | 3282.2 | 3280.3 | 3295.6 | 3291.8 | 3284.2 | 3283.2 | 3253.6 | 3235.5 |
| 52.5° | 3598.2 | 3598.2 | 3620.1 | 3609.6 | 3591.5 | 3582.9 | 3546.6 | 3522.8 |
| 55° | 3947.5 | 3942.7 | 3949.4 | 3915.0 | 3879.7 | 3853.9 | 3809.1 | 3791.0 |
| 57.5° | 4389.4 | 4334.0 | 4286.3 | 4242.4 | 4192.8 | 4162.2 | 4109.7 | 4090.6 |
| 60° | 5016.4 | 4868.5 | 4804.5 | 4716.7 | 4634.7 | 4593.6 | 4523.9 | 4486.7 |
| 62.5° | 5885.0 | 5639.7 | 5466.0 | 5272.2 | 5085.1 | 4953.4 | 4847.5 | 4800.7 |
| 65° | 6889.0 | 6354.5 | 5912.6 | 5497.5 | 5145.3 | 4865.6 | 4710.1 | 4661.4 |
| 67.5° | 7270.8 | 6289.6 | 5527.0 | 4931.5 | 4503.9 | 4170.8 | 3984.7 | 3945.6 |
| 68° | 7189.6 | 6140.7 | 5348.6 | 4738.7 | 4309.2 | 3973.2 | 3788.1 | 3752.8 |
| 70° | 6342.1 | 5180.6 | 4344.5 | 3737.5 | 3336.7 | 3016.9 | 2886.2 | 2829.9 |
| 72.5° | 4323.5 | 3327.1 | 2552.1 | 2041.5 | 1741.8 | 1539.5 | 1419.2 | 1378.2 |
| 75° | 1990.0 | 1344.8 | 898.1 | 671.0 | 569.8 | 521.1 | 483.9 | 474.3 |
| 77.5° | 580.3 | 421.9 | 362.7 | 336.0 | 315.9 | 298.7 | 286.3 | 285.4 |
| 80° | 275.8 | 258.6 | 251.0 | 233.8 | 215.7 | 199.5 | 188.0 | 189.9 |
| 82.5° | 185.2 | 180.4 | 180.4 | 163.2 | 134.6 | 115.5 | 95.4 | 85.9 |
| 85° | 98.3 | 102.1 | 107.8 | 102.1 | 88.8 | 65.9 | 42.9 | 46.8 |
| 87.5° | 33.4 | 38.2 | 40.1 | 39.1 | 35.3 | 26.7 | 20.0 | 20.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)