

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: P195544

Luminaire Tested: **NVN-AF-04-LED-U-AFL-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195544
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24160)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: NVN-AF-04-LED-U-AFL-7050
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 5000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24998 lumens
Efficiency: N/A
Efficacy: 111.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B3 - U0 - G2

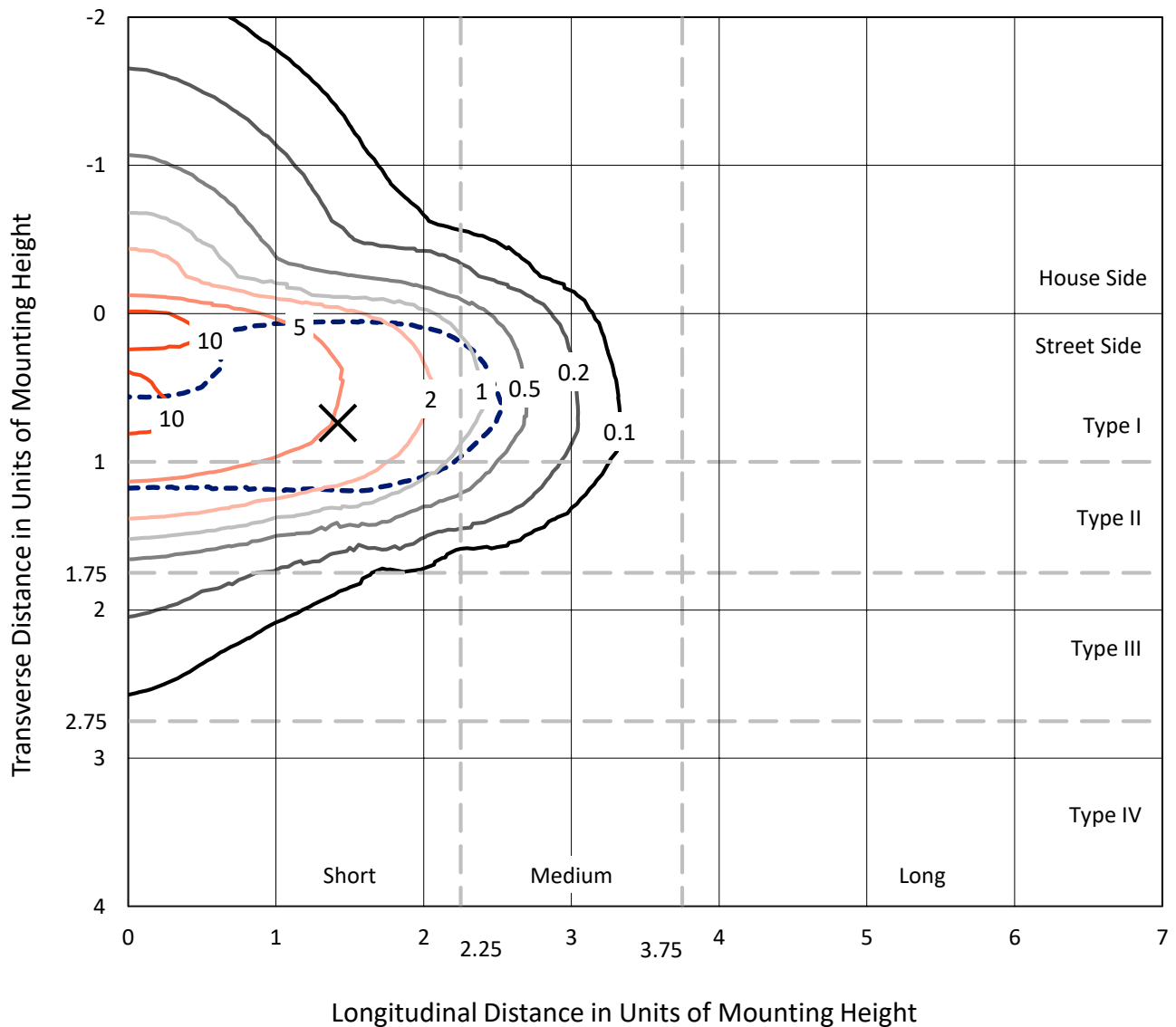
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

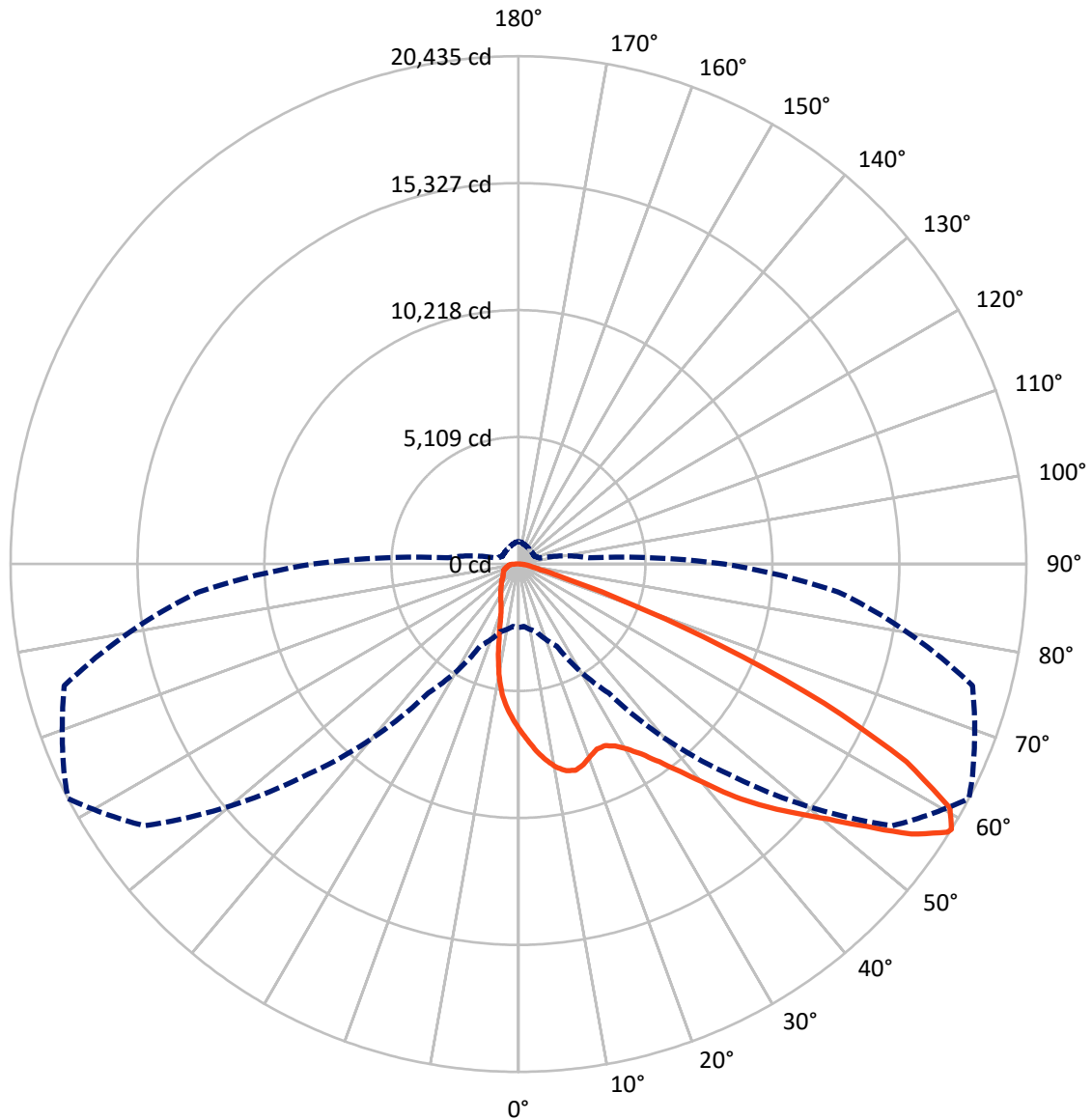
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 12.5 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral - - - Horizontal Cone Through 58-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 3838.1 | 0.0 | 3838.1 |
| | % Fixture | 15.4 | 0.0 | 15.4 |
| Street Side | Lumens | 21159.9 | 0.0 | 21159.9 |
| | % Fixture | 84.6 | 0.0 | 84.6 |
| Total | Lumens | 24998.0 | 0.0 | 24998.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 596.6 | 2.4 |
| 10°-20° | 1505.6 | 6.0 |
| 20°-30° | 2440.0 | 9.8 |
| 30°-40° | 3895.7 | 15.6 |
| 40°-50° | 5666.4 | 22.7 |
| 50°-60° | 5929.3 | 23.7 |
| 60°-70° | 3614.7 | 14.5 |
| 70°-80° | 1010.9 | 4.0 |
| 80°-90° | 338.9 | 1.4 |
| 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° | 24998.0 | 100.0 |
| 0°-180° | 24998.0 | 100.0 |



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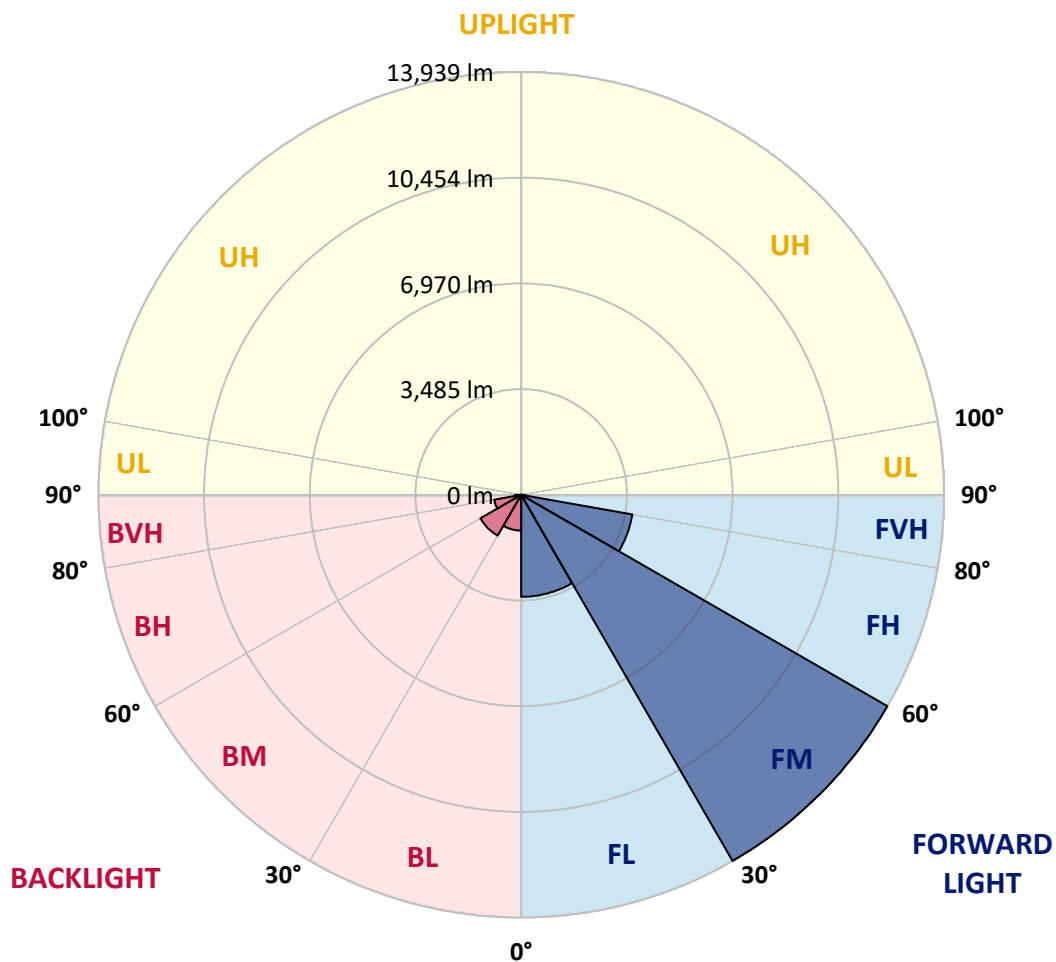
CATALOG NUMBER: NVN-AF-04-LED-U-AFL-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 3362.3 | 13.5 | | | |
| FM (30°-60°) | 13939.2 | 55.8 | | | |
| FH (60°-80°) | 3722.0 | 14.9 | | | G2/5000 |
| FVH (80°-90°) | 136.3 | 0.5 | | | G2/225 |
| BL (0°-30°) | 1179.9 | 4.7 | B3/2500 | | |
| BM (30°-60°) | 1552.2 | 6.2 | B2/2500 | | |
| BH (60°-80°) | 903.6 | 3.6 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 202.5 | 0.8 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 62.5° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 6674.3 | 6674.3 | 6674.3 | 6674.3 | 6674.3 | 6674.3 | 6674.3 | 6674.3 | 6674.3 | 6674.3 | 6674.3 |
| 2.5° | 7575.8 | 7571.1 | 7507.0 | 7464.8 | 7414.8 | 7299.2 | 7183.6 | 7097.7 | 7053.9 | 6886.8 | 6724.3 |
| 5° | 8202.3 | 8183.5 | 8147.6 | 8102.3 | 8036.7 | 7891.4 | 7708.6 | 7550.8 | 7488.3 | 7191.4 | 6893.0 |
| 7.5° | 7871.1 | 7900.7 | 8011.7 | 8136.6 | 8267.9 | 8277.3 | 8147.6 | 7960.1 | 7891.4 | 7494.5 | 7057.1 |
| 10° | 6954.0 | 6941.5 | 7080.5 | 7324.2 | 7757.0 | 8185.1 | 8399.1 | 8306.9 | 8235.1 | 7782.0 | 7221.1 |
| 12.5° | 6675.9 | 6672.7 | 6696.2 | 6758.7 | 7030.5 | 7618.0 | 8335.1 | 8535.0 | 8510.0 | 8086.7 | 7396.1 |
| 15° | 6760.2 | 6763.4 | 6761.8 | 6769.6 | 6844.6 | 7124.3 | 7977.3 | 8611.6 | 8689.7 | 8388.2 | 7574.2 |
| 17.5° | 7030.5 | 7019.6 | 6985.2 | 6947.7 | 6958.6 | 7058.6 | 7591.4 | 8480.4 | 8714.7 | 8656.9 | 7724.2 |
| 20° | 7447.7 | 7447.7 | 7355.5 | 7250.8 | 7182.1 | 7203.9 | 7430.5 | 8255.4 | 8599.1 | 8885.0 | 7836.7 |
| 22.5° | 7971.0 | 7978.9 | 7842.9 | 7652.3 | 7496.1 | 7436.7 | 7522.7 | 8088.2 | 8458.5 | 9095.9 | 7936.7 |
| 25° | 8621.0 | 8619.4 | 8421.0 | 8147.6 | 7900.7 | 7758.6 | 7757.0 | 8096.0 | 8414.7 | 9342.8 | 8041.3 |
| 27.5° | 9425.6 | 9352.1 | 9120.9 | 8731.9 | 8383.5 | 8166.3 | 8067.9 | 8292.9 | 8506.9 | 9645.9 | 8182.0 |
| 30° | 10333.3 | 10258.3 | 9955.2 | 9455.3 | 8983.4 | 8666.3 | 8503.8 | 8633.5 | 8788.1 | 10031.8 | 8394.4 |
| 32.5° | 11231.6 | 11248.8 | 10892.6 | 10328.6 | 9722.4 | 9275.6 | 9035.0 | 9114.7 | 9222.5 | 10503.6 | 8681.9 |
| 35° | 12547.1 | 12545.6 | 12080.0 | 11375.4 | 10655.1 | 10036.5 | 9731.8 | 9774.0 | 9872.4 | 11169.1 | 9085.0 |
| 37.5° | 13528.3 | 13512.6 | 13212.7 | 12589.3 | 11778.5 | 11036.3 | 10595.8 | 10602.0 | 10686.4 | 12005.0 | 9616.2 |
| 40° | 13628.3 | 13625.1 | 13623.6 | 13534.5 | 12979.9 | 12280.0 | 11728.5 | 11614.4 | 11648.8 | 12892.4 | 10180.2 |
| 42.5° | 12864.3 | 12978.3 | 13306.4 | 13809.5 | 13964.2 | 13597.0 | 13075.2 | 12820.5 | 12745.5 | 13911.0 | 10777.0 |
| 45° | 11775.3 | 11833.1 | 12408.1 | 13539.2 | 14459.4 | 14834.4 | 14442.2 | 13904.8 | 13776.7 | 14901.6 | 11262.9 |
| 47.5° | 11269.1 | 11244.1 | 11576.9 | 12809.6 | 14411.0 | 15818.7 | 15846.8 | 14965.6 | 14748.5 | 15756.2 | 11676.9 |
| 50° | 10183.3 | 10150.5 | 10570.8 | 11736.3 | 13882.9 | 16307.7 | 17288.8 | 16121.8 | 15720.2 | 16568.6 | 12051.9 |
| 52.5° | 8019.5 | 7988.2 | 8552.2 | 10053.6 | 12701.8 | 16124.9 | 18504.3 | 17540.4 | 16856.0 | 17351.3 | 12401.8 |
| 55° | 5218.2 | 5221.3 | 5758.8 | 7307.0 | 10278.6 | 15059.4 | 19074.6 | 19179.2 | 18412.1 | 18134.0 | 12684.6 |
| 57.5° | 2873.1 | 2846.6 | 3229.3 | 4180.8 | 7071.1 | 12639.3 | 18599.6 | 20360.4 | 19960.4 | 18805.8 | 12889.3 |
| 58° | 2554.4 | 2523.2 | 2818.5 | 3638.7 | 6340.0 | 11956.6 | 18360.6 | 20435.4 | 20158.8 | 18916.8 | 12919.0 |
| 60° | 1820.1 | 1767.0 | 1721.7 | 2051.3 | 3652.7 | 8621.0 | 16767.0 | 19949.5 | 20216.6 | 19138.6 | 12890.8 |
| 62.5° | 1534.2 | 1473.3 | 1310.8 | 1298.3 | 1720.1 | 4216.7 | 13259.6 | 17520.0 | 18268.4 | 18627.7 | 12437.8 |
| 65° | 1424.9 | 1363.9 | 1149.9 | 1073.3 | 1167.1 | 1820.1 | 8199.1 | 13528.3 | 14528.2 | 16851.4 | 11297.3 |
| 67.5° | 1346.7 | 1274.9 | 1045.2 | 945.2 | 964.0 | 1088.9 | 3479.3 | 8847.5 | 10006.8 | 13140.8 | 9063.1 |
| 70° | 1276.4 | 1196.7 | 962.4 | 846.8 | 831.2 | 828.0 | 1359.2 | 4619.8 | 5736.9 | 8599.1 | 6071.2 |
| 72.5° | 1196.7 | 1118.6 | 889.0 | 765.5 | 731.2 | 671.8 | 817.1 | 1909.2 | 2616.9 | 4215.2 | 2782.5 |
| 75° | 1081.1 | 1017.1 | 807.7 | 698.4 | 639.0 | 545.3 | 603.1 | 915.5 | 1128.0 | 1613.9 | 1292.1 |
| 77.5° | 951.5 | 899.9 | 724.9 | 642.1 | 562.4 | 445.3 | 460.9 | 620.2 | 696.8 | 909.3 | 748.4 |
| 80° | 673.4 | 692.1 | 632.7 | 565.6 | 495.3 | 359.3 | 354.7 | 454.6 | 499.9 | 610.9 | 503.1 |
| 82.5° | 464.0 | 478.1 | 515.6 | 446.8 | 400.0 | 279.7 | 260.9 | 315.6 | 339.0 | 368.7 | 243.7 |
| 85° | 331.2 | 321.8 | 357.8 | 320.3 | 293.7 | 178.1 | 167.2 | 200.0 | 214.0 | 225.0 | 117.2 |
| 87.5° | 201.5 | 200.0 | 206.2 | 165.6 | 153.1 | 90.6 | 82.8 | 95.3 | 101.6 | 98.4 | 56.2 |
| 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-04-LED-U-AFL-7050

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 6674.3 | 6674.3 | 6674.3 | 6674.3 | 6674.3 | 6674.3 | 6674.3 | 6674.3 | 6674.3 | 6674.3 | 6674.3 |
| 2.5° | 6663.4 | 6586.8 | 6419.6 | 6285.3 | 6140.0 | 6029.1 | 5918.1 | 5855.6 | 5786.9 | 5747.8 | 5743.1 |
| 5° | 6736.8 | 6580.6 | 6224.3 | 5893.1 | 5552.5 | 5246.3 | 4946.4 | 4724.5 | 4543.3 | 4440.2 | 4433.9 |
| 7.5° | 6818.0 | 6572.8 | 6022.8 | 5449.4 | 4843.2 | 4240.2 | 3707.4 | 3330.9 | 3088.7 | 2976.3 | 2968.4 |
| 10° | 6880.5 | 6539.9 | 5777.5 | 4885.4 | 3924.6 | 3127.8 | 2643.5 | 2421.6 | 2348.2 | 2329.4 | 2326.3 |
| 12.5° | 6955.5 | 6516.5 | 5468.2 | 4162.1 | 2999.7 | 2381.0 | 2234.1 | 2220.1 | 2235.7 | 2245.1 | 2246.6 |
| 15° | 7025.8 | 6471.2 | 5051.0 | 3360.6 | 2348.2 | 2127.9 | 2131.0 | 2160.7 | 2192.0 | 2206.0 | 2207.6 |
| 17.5° | 7058.6 | 6360.3 | 4502.7 | 2648.2 | 2054.5 | 2013.9 | 2049.8 | 2088.8 | 2117.0 | 2127.9 | 2127.9 |
| 20° | 7058.6 | 6182.2 | 3866.8 | 2145.1 | 1901.4 | 1909.2 | 1952.9 | 1982.6 | 1988.9 | 1979.5 | 1974.8 |
| 22.5° | 7029.0 | 5961.9 | 3248.1 | 1871.7 | 1776.4 | 1806.1 | 1840.4 | 1820.1 | 1746.7 | 1690.4 | 1679.5 |
| 25° | 7002.4 | 5701.0 | 2652.8 | 1704.5 | 1667.0 | 1706.1 | 1692.0 | 1553.0 | 1440.5 | 1382.7 | 1373.3 |
| 27.5° | 6958.6 | 5385.4 | 2156.0 | 1567.0 | 1560.8 | 1592.0 | 1453.0 | 1318.6 | 1262.4 | 1231.1 | 1224.9 |
| 30° | 6947.7 | 5043.2 | 1804.5 | 1445.2 | 1456.1 | 1412.4 | 1253.0 | 1209.2 | 1196.7 | 1179.6 | 1171.8 |
| 32.5° | 6983.6 | 4701.1 | 1584.2 | 1345.2 | 1356.1 | 1212.4 | 1151.4 | 1157.7 | 1156.1 | 1134.3 | 1126.4 |
| 35° | 7082.1 | 4368.3 | 1443.6 | 1254.6 | 1223.3 | 1085.8 | 1093.6 | 1112.4 | 1112.4 | 1085.8 | 1076.4 |
| 37.5° | 7253.9 | 4059.0 | 1354.5 | 1178.0 | 1070.2 | 1020.2 | 1040.5 | 1065.5 | 1065.5 | 1046.8 | 1039.0 |
| 40° | 7436.7 | 3757.4 | 1287.4 | 1117.1 | 973.3 | 974.9 | 995.2 | 1014.0 | 1021.8 | 1024.9 | 1018.6 |
| 42.5° | 7602.3 | 3445.0 | 1215.5 | 1051.5 | 929.6 | 940.5 | 949.9 | 964.0 | 996.8 | 1018.6 | 1015.5 |
| 45° | 7699.2 | 3130.9 | 1137.4 | 970.2 | 899.9 | 904.6 | 901.5 | 926.5 | 965.5 | 998.3 | 998.3 |
| 47.5° | 7788.2 | 2873.1 | 1073.3 | 889.0 | 870.2 | 870.2 | 860.8 | 885.8 | 921.8 | 960.8 | 964.0 |
| 50° | 7872.6 | 2706.0 | 1028.0 | 826.5 | 832.7 | 828.0 | 824.9 | 848.3 | 896.8 | 943.7 | 951.5 |
| 52.5° | 7958.5 | 2649.7 | 987.4 | 781.2 | 793.7 | 787.4 | 790.5 | 823.4 | 878.0 | 926.5 | 934.3 |
| 55° | 8078.8 | 2685.7 | 945.2 | 749.9 | 756.2 | 754.6 | 767.1 | 804.6 | 853.0 | 901.5 | 904.6 |
| 57.5° | 8227.3 | 2816.9 | 909.3 | 726.5 | 720.2 | 729.6 | 749.9 | 785.9 | 832.7 | 890.5 | 895.2 |
| 58° | 8256.9 | 2848.1 | 903.0 | 720.2 | 712.4 | 726.5 | 746.8 | 781.2 | 829.6 | 890.5 | 895.2 |
| 60° | 8302.3 | 2959.1 | 887.4 | 707.7 | 685.9 | 710.9 | 735.9 | 770.2 | 823.4 | 898.3 | 907.7 |
| 62.5° | 8083.5 | 2980.9 | 882.7 | 693.7 | 657.7 | 689.0 | 718.7 | 757.7 | 817.1 | 924.9 | 945.2 |
| 65° | 7325.8 | 2756.0 | 849.9 | 670.2 | 634.3 | 671.8 | 703.1 | 748.4 | 835.9 | 1004.6 | 1014.0 |
| 67.5° | 5880.6 | 2288.8 | 770.2 | 634.3 | 607.7 | 651.5 | 690.6 | 748.4 | 843.7 | 1017.1 | 1023.3 |
| 70° | 4043.3 | 1720.1 | 670.2 | 595.3 | 576.5 | 626.5 | 685.9 | 765.5 | 817.1 | 962.4 | 943.7 |
| 72.5° | 2112.3 | 1196.7 | 587.4 | 549.9 | 539.0 | 604.6 | 731.2 | 748.4 | 785.9 | 898.3 | 879.6 |
| 75° | 1064.0 | 814.0 | 517.1 | 498.4 | 496.8 | 596.8 | 818.7 | 720.2 | 753.0 | 845.2 | 885.8 |
| 77.5° | 628.1 | 637.4 | 460.9 | 450.0 | 457.8 | 582.8 | 820.2 | 692.1 | 715.6 | 778.0 | 821.8 |
| 80° | 429.6 | 526.5 | 417.1 | 414.0 | 420.3 | 535.9 | 756.2 | 657.7 | 671.8 | 735.9 | 782.7 |
| 82.5° | 242.2 | 290.6 | 365.6 | 385.9 | 382.8 | 439.0 | 653.1 | 598.4 | 615.6 | 870.2 | 920.2 |
| 85° | 117.2 | 175.0 | 306.2 | 360.9 | 326.5 | 292.2 | 531.2 | 531.2 | 535.9 | 623.4 | 631.2 |
| 87.5° | 43.7 | 78.1 | 206.2 | 285.9 | 228.1 | 175.0 | 360.9 | 376.5 | 418.7 | 431.2 | 440.6 |
| 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)