

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: P197224

Luminaire Tested: **NVN-AF-04-LED-U-T2-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197224
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24136)
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-T2-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19487 lumens
Efficiency: N/A
Efficacy: 86.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B3 - U0 - G3

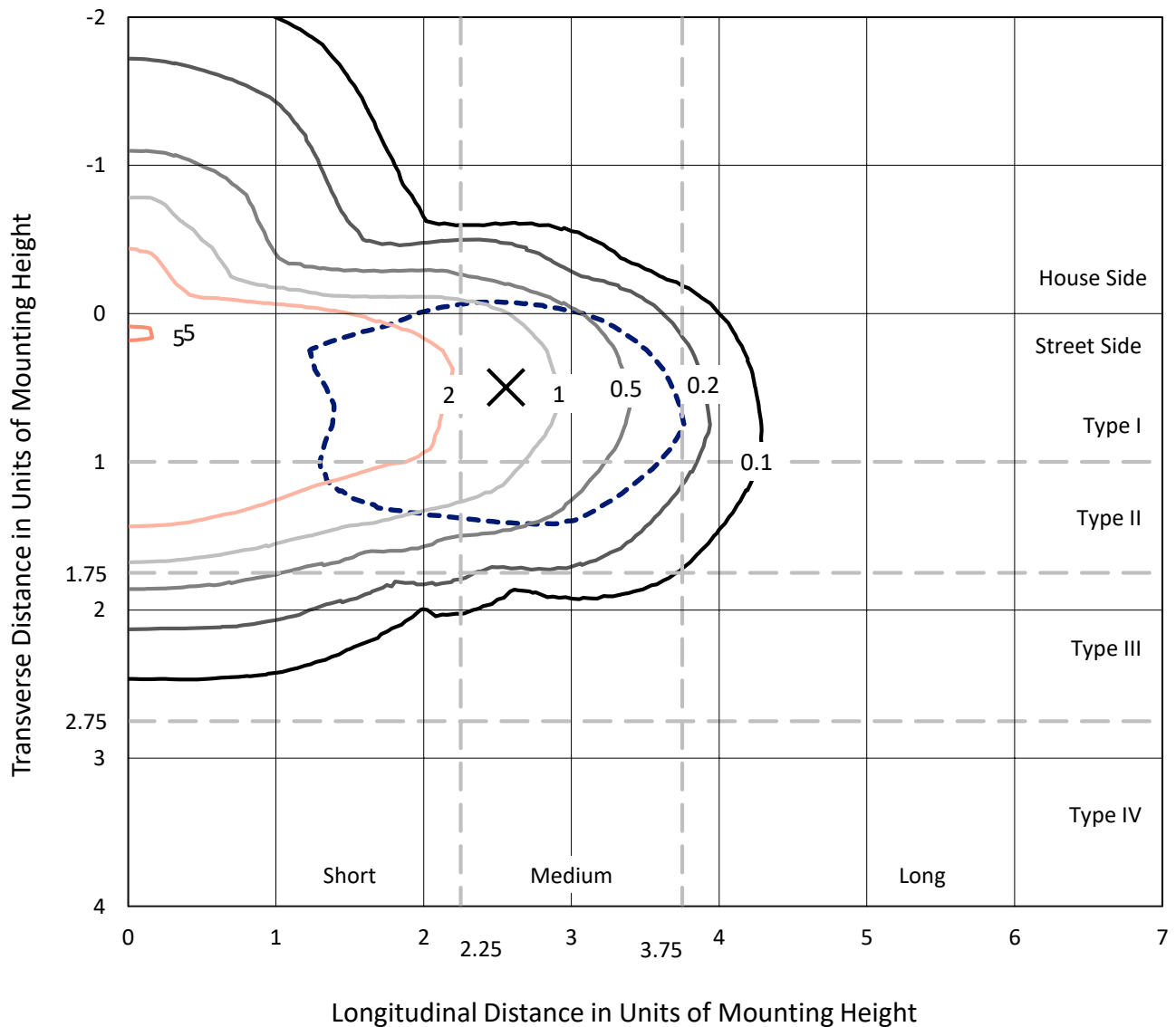
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

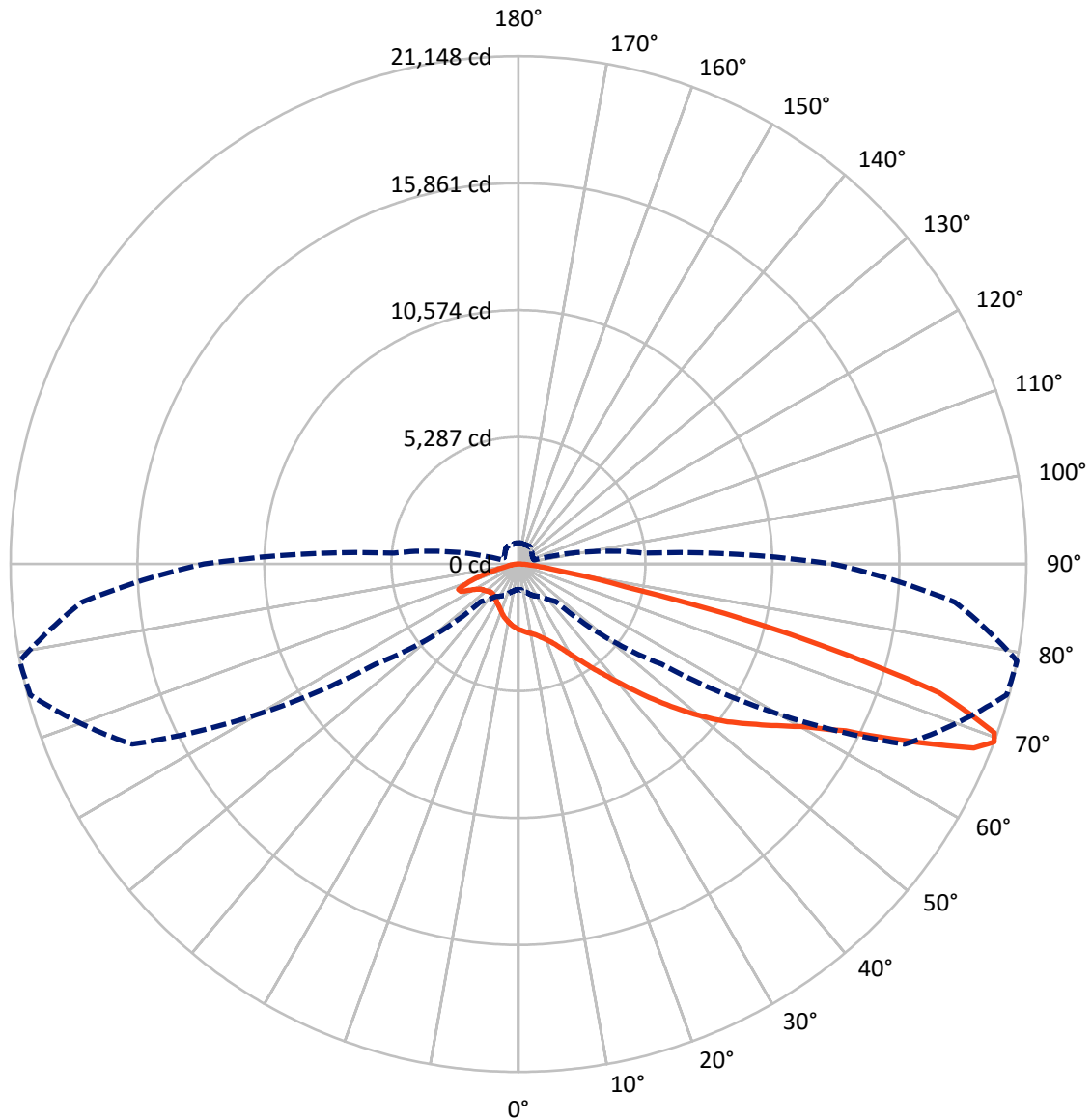
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.3 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical



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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 3665.9 | 0.0 | 3665.9 |
| | % Fixture | 18.8 | 0.0 | 18.8 |
| Street Side | Lumens | 15821.1 | 0.0 | 15821.1 |
| | % Fixture | 81.2 | 0.0 | 81.2 |
| Total | Lumens | 19487.0 | 0.0 | 19487.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 253.5 | 1.3 |
| 10°-20° | 726.8 | 3.7 |
| 20°-30° | 1201.0 | 6.2 |
| 30°-40° | 1944.8 | 10.0 |
| 40°-50° | 3106.7 | 15.9 |
| 50°-60° | 4449.2 | 22.8 |
| 60°-70° | 4957.0 | 25.4 |
| 70°-80° | 2479.9 | 12.7 |
| 80°-90° | 368.0 | 1.9 |
| 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° | 19487.0 | 100.0 |
| 0°-180° | 19487.0 | 100.0 |

Coefficient of Utilization



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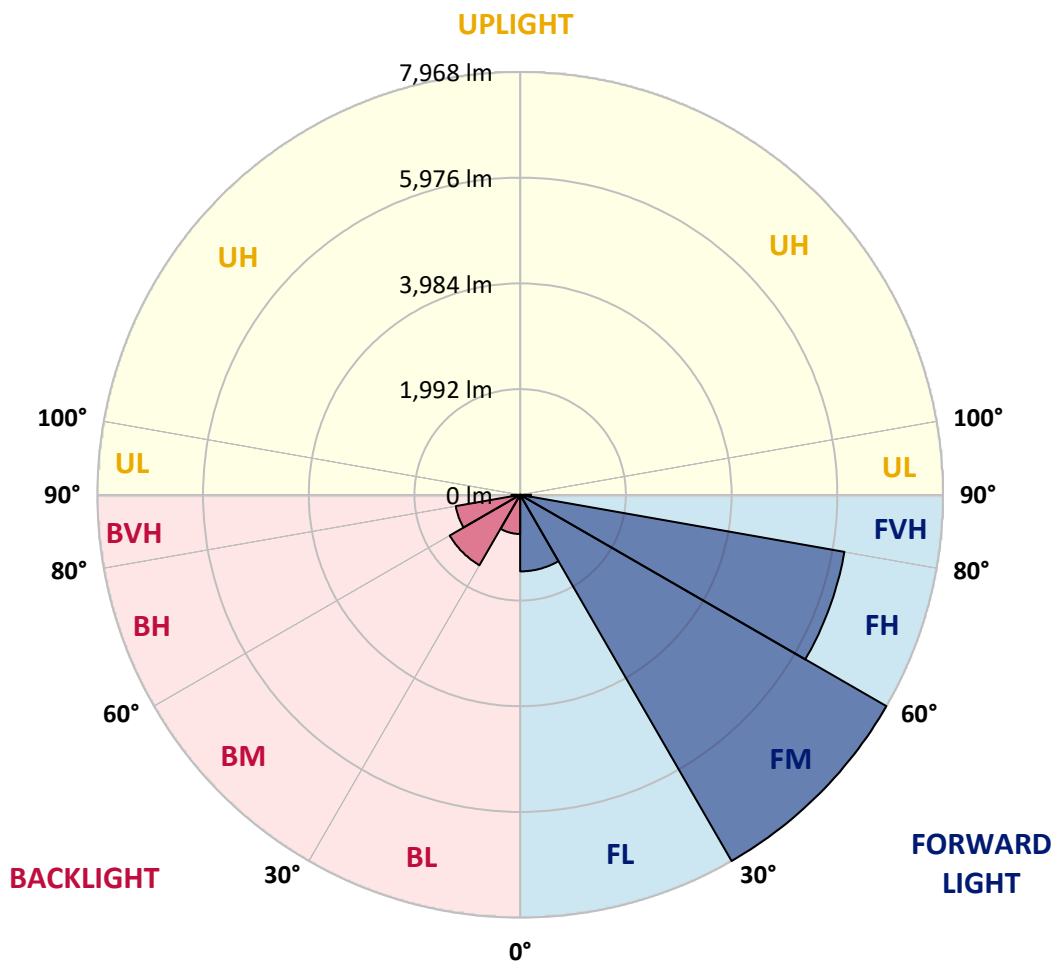
CATALOG NUMBER: NVN-AF-04-LED-U-T2-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1442.8 | 7.4 | | | |
| FM (30°-60°) | 7968.3 | 40.9 | | | |
| FH (60°-80°) | 6204.4 | 31.8 | | | G3/7500 |
| FVH (80°-90°) | 205.6 | 1.1 | | | G2/225 |
| BL (0°-30°) | 738.5 | 3.8 | B2/1000 | | |
| BM (30°-60°) | 1532.4 | 7.9 | B2/2500 | | |
| BH (60°-80°) | 1232.6 | 6.3 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 162.4 | 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-G3

Type II Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 79° | 85° |
|-------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|
| 0° | 2734.6 | 2734.6 | 2734.6 | 2734.6 | 2734.6 | 2734.6 | 2734.6 | 2734.6 | 2734.6 | 2734.6 | 2734.6 |
| 2.5° | 3002.4 | 2996.0 | 2994.7 | 2975.6 | 2965.4 | 2943.7 | 2892.7 | 2840.5 | 2792.0 | 2766.5 | 2739.7 |
| 5° | 3253.5 | 3240.8 | 3234.4 | 3202.5 | 3174.5 | 3126.0 | 3045.7 | 2962.8 | 2876.2 | 2831.5 | 2778.0 |
| 7.5° | 3405.2 | 3406.5 | 3406.5 | 3381.0 | 3353.0 | 3294.3 | 3192.3 | 3078.9 | 2950.1 | 2891.5 | 2807.3 |
| 10° | 3418.0 | 3419.3 | 3438.4 | 3444.8 | 3451.1 | 3420.5 | 3326.2 | 3183.4 | 3017.7 | 2941.2 | 2831.5 |
| 12.5° | 3291.8 | 3300.7 | 3332.6 | 3378.5 | 3443.5 | 3476.6 | 3435.8 | 3295.6 | 3104.4 | 3011.3 | 2877.4 |
| 15° | 3122.2 | 3131.1 | 3171.9 | 3242.0 | 3346.6 | 3457.5 | 3514.9 | 3424.4 | 3217.8 | 3108.2 | 2945.0 |
| 17.5° | 3039.3 | 3049.5 | 3077.6 | 3133.7 | 3235.7 | 3384.8 | 3556.9 | 3562.0 | 3351.7 | 3225.5 | 3025.3 |
| 20° | 2999.8 | 3007.5 | 3043.2 | 3089.1 | 3166.8 | 3309.6 | 3560.8 | 3707.4 | 3511.1 | 3364.4 | 3123.5 |
| 22.5° | 3090.3 | 3092.9 | 3110.7 | 3136.2 | 3188.5 | 3298.1 | 3558.2 | 3857.8 | 3709.9 | 3539.1 | 3249.7 |
| 25° | 3355.5 | 3338.9 | 3326.2 | 3294.3 | 3307.1 | 3384.8 | 3599.0 | 4018.5 | 3964.9 | 3768.6 | 3418.0 |
| 27.5° | 3669.1 | 3666.6 | 3633.4 | 3559.5 | 3512.3 | 3562.0 | 3715.0 | 4198.2 | 4277.3 | 4060.5 | 3638.5 |
| 30° | 4018.5 | 4019.7 | 3985.3 | 3894.8 | 3799.2 | 3804.3 | 3899.9 | 4406.0 | 4650.8 | 4412.4 | 3910.1 |
| 32.5° | 4384.4 | 4407.3 | 4343.6 | 4253.0 | 4137.0 | 4100.1 | 4165.1 | 4657.2 | 5083.0 | 4828.0 | 4225.0 |
| 35° | 4821.6 | 4825.5 | 4755.3 | 4622.8 | 4506.7 | 4448.1 | 4508.0 | 4970.8 | 5581.5 | 5316.3 | 4608.7 |
| 37.5° | 5275.5 | 5278.1 | 5205.4 | 5035.8 | 4889.2 | 4851.0 | 4917.3 | 5352.0 | 6109.3 | 5872.1 | 5060.0 |
| 40° | 5646.5 | 5673.3 | 5615.9 | 5456.5 | 5308.6 | 5285.7 | 5381.3 | 5808.4 | 6783.7 | 6530.0 | 5596.8 |
| 42.5° | 6067.2 | 6097.8 | 6029.0 | 5863.2 | 5745.9 | 5738.3 | 5887.4 | 6328.6 | 7454.3 | 7291.1 | 6204.9 |
| 45° | 6541.5 | 6584.8 | 6489.2 | 6303.1 | 6203.6 | 6371.9 | 6380.8 | 6904.8 | 8226.9 | 8142.7 | 6889.5 |
| 47.5° | 7059.1 | 7094.8 | 7017.0 | 6816.8 | 6708.5 | 6952.0 | 6864.0 | 7528.2 | 9061.9 | 9055.6 | 7630.2 |
| 50° | 7458.1 | 7497.6 | 7505.3 | 7417.3 | 7303.9 | 7334.4 | 7394.4 | 8183.5 | 9894.4 | 9993.9 | 8396.4 |
| 52.5° | 7385.4 | 7423.7 | 7595.8 | 7826.6 | 8008.9 | 7929.8 | 8002.5 | 8879.6 | 10698.9 | 10909.2 | 9124.4 |
| 55° | 6799.0 | 6819.4 | 7141.9 | 7690.1 | 8466.6 | 8843.9 | 8849.0 | 9636.9 | 11463.8 | 11758.3 | 9815.4 |
| 57.5° | 5742.1 | 5744.7 | 6164.1 | 6972.4 | 8200.1 | 9436.7 | 10185.1 | 10588.0 | 12261.9 | 12696.6 | 10672.1 |
| 60° | 4063.1 | 4073.3 | 4561.6 | 5618.4 | 7245.2 | 9365.4 | 11621.9 | 12290.0 | 13186.2 | 13751.0 | 11776.2 |
| 62.5° | 2412.1 | 2435.0 | 2803.5 | 3651.3 | 5381.3 | 8447.4 | 12471.0 | 15317.8 | 14547.8 | 15297.4 | 13543.2 |
| 65° | 1569.4 | 1588.5 | 1809.1 | 2234.9 | 3179.6 | 6146.3 | 12191.8 | 18250.1 | 17124.3 | 17729.9 | 16082.8 |
| 67.5° | 1208.6 | 1223.9 | 1397.3 | 1654.8 | 1950.6 | 3322.4 | 9747.8 | 18864.6 | 20260.6 | 20449.3 | 18225.8 |
| 69° | 1062.0 | 1074.7 | 1202.2 | 1449.6 | 1642.1 | 2199.2 | 7264.3 | 17749.0 | 21044.6 | 21147.9 | 18252.6 |
| 70° | 984.2 | 994.4 | 1114.3 | 1328.4 | 1508.2 | 1755.5 | 5559.8 | 16453.7 | 20757.8 | 21021.7 | 17726.1 |
| 72.5° | 810.8 | 819.8 | 905.2 | 1069.6 | 1232.8 | 1250.7 | 2463.1 | 12014.6 | 17478.8 | 18322.7 | 15000.4 |
| 75° | 677.0 | 682.1 | 738.2 | 858.0 | 998.2 | 995.7 | 1258.3 | 6805.4 | 10665.7 | 11671.6 | 9262.1 |
| 77.5° | 564.8 | 568.6 | 605.6 | 679.5 | 787.9 | 784.1 | 886.0 | 2937.3 | 4709.4 | 4543.7 | 3188.5 |
| 80° | 498.5 | 501.0 | 520.2 | 539.3 | 608.1 | 604.3 | 656.6 | 1348.8 | 1916.2 | 1770.8 | 1206.0 |
| 82.5° | 378.6 | 383.7 | 480.6 | 489.6 | 471.7 | 455.1 | 457.7 | 785.3 | 981.7 | 893.7 | 647.6 |
| 85° | 214.2 | 215.5 | 308.5 | 360.8 | 410.5 | 308.5 | 297.0 | 405.4 | 484.5 | 424.5 | 283.0 |
| 87.5° | 95.6 | 99.4 | 147.9 | 170.8 | 221.8 | 181.0 | 169.6 | 172.1 | 209.1 | 173.4 | 112.2 |
| 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-T2-8030

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2734.6 | 2734.6 | 2734.6 | 2734.6 | 2734.6 | 2734.6 | 2734.6 | 2734.6 | 2734.6 | 2734.6 | 2734.6 |
| 2.5° | 2714.2 | 2692.6 | 2641.6 | 2589.3 | 2537.0 | 2503.9 | 2469.5 | 2437.6 | 2424.8 | 2423.6 | 2399.3 |
| 5° | 2725.7 | 2674.7 | 2558.7 | 2431.2 | 2310.1 | 2215.8 | 2136.7 | 2085.7 | 2036.0 | 2027.1 | 2005.4 |
| 7.5° | 2729.5 | 2646.7 | 2458.0 | 2254.0 | 2069.1 | 1939.1 | 1860.1 | 1825.6 | 1801.4 | 1795.0 | 1787.4 |
| 10° | 2728.3 | 2611.0 | 2345.8 | 2066.6 | 1856.2 | 1758.1 | 1728.8 | 1736.4 | 1746.6 | 1751.7 | 1751.7 |
| 12.5° | 2748.7 | 2594.4 | 2233.6 | 1890.7 | 1718.6 | 1671.4 | 1694.3 | 1733.9 | 1764.4 | 1777.2 | 1779.7 |
| 15° | 2785.6 | 2584.2 | 2109.9 | 1737.7 | 1621.7 | 1633.1 | 1689.2 | 1746.6 | 1789.9 | 1809.1 | 1814.2 |
| 17.5° | 2831.5 | 2570.2 | 1967.2 | 1611.5 | 1565.6 | 1605.1 | 1677.8 | 1750.4 | 1802.7 | 1826.9 | 1830.7 |
| 20° | 2882.5 | 2549.8 | 1819.3 | 1517.1 | 1515.8 | 1565.6 | 1638.2 | 1719.8 | 1775.9 | 1802.7 | 1801.4 |
| 22.5° | 2951.4 | 2530.7 | 1681.6 | 1448.3 | 1461.0 | 1506.9 | 1566.8 | 1640.8 | 1693.1 | 1717.3 | 1712.2 |
| 25° | 3043.2 | 2512.8 | 1557.9 | 1387.1 | 1398.6 | 1429.2 | 1471.2 | 1527.3 | 1564.3 | 1577.0 | 1568.1 |
| 27.5° | 3166.8 | 2498.8 | 1461.0 | 1331.0 | 1329.7 | 1343.7 | 1369.2 | 1399.8 | 1417.7 | 1413.9 | 1399.8 |
| 30° | 3318.5 | 2484.8 | 1389.6 | 1281.3 | 1263.4 | 1262.1 | 1273.6 | 1291.5 | 1302.9 | 1280.0 | 1268.5 |
| 32.5° | 3488.1 | 2460.5 | 1325.9 | 1237.9 | 1206.0 | 1194.6 | 1199.7 | 1223.9 | 1271.1 | 1248.1 | 1239.2 |
| 35° | 3688.3 | 2432.5 | 1262.1 | 1190.7 | 1166.5 | 1144.9 | 1148.7 | 1200.9 | 1343.7 | 1327.2 | 1318.2 |
| 37.5° | 3929.2 | 2407.0 | 1203.5 | 1139.8 | 1138.5 | 1111.7 | 1109.2 | 1171.6 | 1362.9 | 1327.2 | 1319.5 |
| 40° | 4218.6 | 2401.9 | 1151.2 | 1083.7 | 1104.1 | 1093.9 | 1084.9 | 1123.2 | 1257.0 | 1184.4 | 1170.4 |
| 42.5° | 4567.9 | 2424.8 | 1113.0 | 1030.1 | 1064.5 | 1088.8 | 1072.2 | 1081.1 | 1135.9 | 1070.9 | 1059.4 |
| 45° | 4975.9 | 2487.3 | 1084.9 | 982.9 | 1022.5 | 1084.9 | 1065.8 | 1058.2 | 1067.1 | 1031.4 | 1023.7 |
| 47.5° | 5451.4 | 2598.2 | 1065.8 | 943.4 | 982.9 | 1074.7 | 1063.3 | 1048.0 | 1044.1 | 1023.7 | 1018.6 |
| 50° | 5960.1 | 2747.4 | 1053.1 | 907.7 | 947.2 | 1056.9 | 1062.0 | 1040.3 | 1033.9 | 1025.0 | 1022.5 |
| 52.5° | 6465.0 | 2909.3 | 1037.8 | 877.1 | 917.9 | 1035.2 | 1063.3 | 1032.7 | 1023.7 | 1018.6 | 1016.1 |
| 55° | 6967.3 | 3077.6 | 1009.7 | 850.4 | 896.2 | 1009.7 | 1062.0 | 1022.5 | 1012.3 | 1012.3 | 1012.3 |
| 57.5° | 7618.8 | 3333.8 | 972.7 | 828.7 | 868.2 | 976.6 | 1045.4 | 1011.0 | 997.0 | 998.2 | 999.5 |
| 60° | 8559.6 | 3763.5 | 931.9 | 804.5 | 831.2 | 938.3 | 1019.9 | 990.6 | 974.0 | 979.1 | 980.4 |
| 62.5° | 10131.6 | 4514.4 | 875.9 | 770.0 | 793.0 | 897.5 | 986.8 | 962.5 | 947.2 | 956.2 | 957.4 |
| 65° | 12227.5 | 5423.4 | 801.9 | 726.7 | 753.5 | 851.6 | 944.7 | 929.4 | 912.8 | 934.5 | 933.2 |
| 67.5° | 13506.2 | 5689.8 | 724.1 | 680.8 | 715.2 | 803.2 | 892.4 | 886.0 | 874.6 | 912.8 | 910.3 |
| 69° | 13086.8 | 5207.9 | 679.5 | 651.5 | 688.4 | 770.0 | 859.3 | 856.7 | 847.8 | 884.8 | 882.2 |
| 70° | 12435.3 | 4757.9 | 651.5 | 632.3 | 674.4 | 749.6 | 837.6 | 837.6 | 828.7 | 860.6 | 854.2 |
| 72.5° | 9988.8 | 3528.9 | 586.5 | 583.9 | 626.0 | 693.5 | 779.0 | 785.3 | 780.2 | 791.7 | 785.3 |
| 75° | 5864.5 | 2126.5 | 522.7 | 530.4 | 567.3 | 633.6 | 713.9 | 719.0 | 713.9 | 712.7 | 713.9 |
| 77.5° | 2033.5 | 953.6 | 461.5 | 473.0 | 504.9 | 572.4 | 642.5 | 652.7 | 645.1 | 636.2 | 638.7 |
| 80° | 795.5 | 554.6 | 395.2 | 411.8 | 438.6 | 503.6 | 571.2 | 577.5 | 566.1 | 564.8 | 554.6 |
| 82.5° | 478.1 | 337.8 | 307.2 | 334.0 | 367.2 | 437.3 | 493.4 | 490.8 | 481.9 | 534.2 | 467.9 |
| 85° | 207.8 | 187.4 | 224.4 | 251.2 | 267.7 | 327.6 | 416.9 | 405.4 | 383.7 | 337.8 | 330.2 |
| 87.5° | 84.1 | 96.9 | 123.7 | 149.2 | 160.6 | 211.6 | 285.6 | 275.4 | 279.2 | 229.5 | 228.2 |
| 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)