

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: P196345

Luminaire Tested: **NVN-AF-01-LED-U-T4FT-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196345
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24256)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: NVN-AF-01-LED-U-T4FT-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4150.1 lumens
Efficiency: N/A
Efficacy: 122.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G1

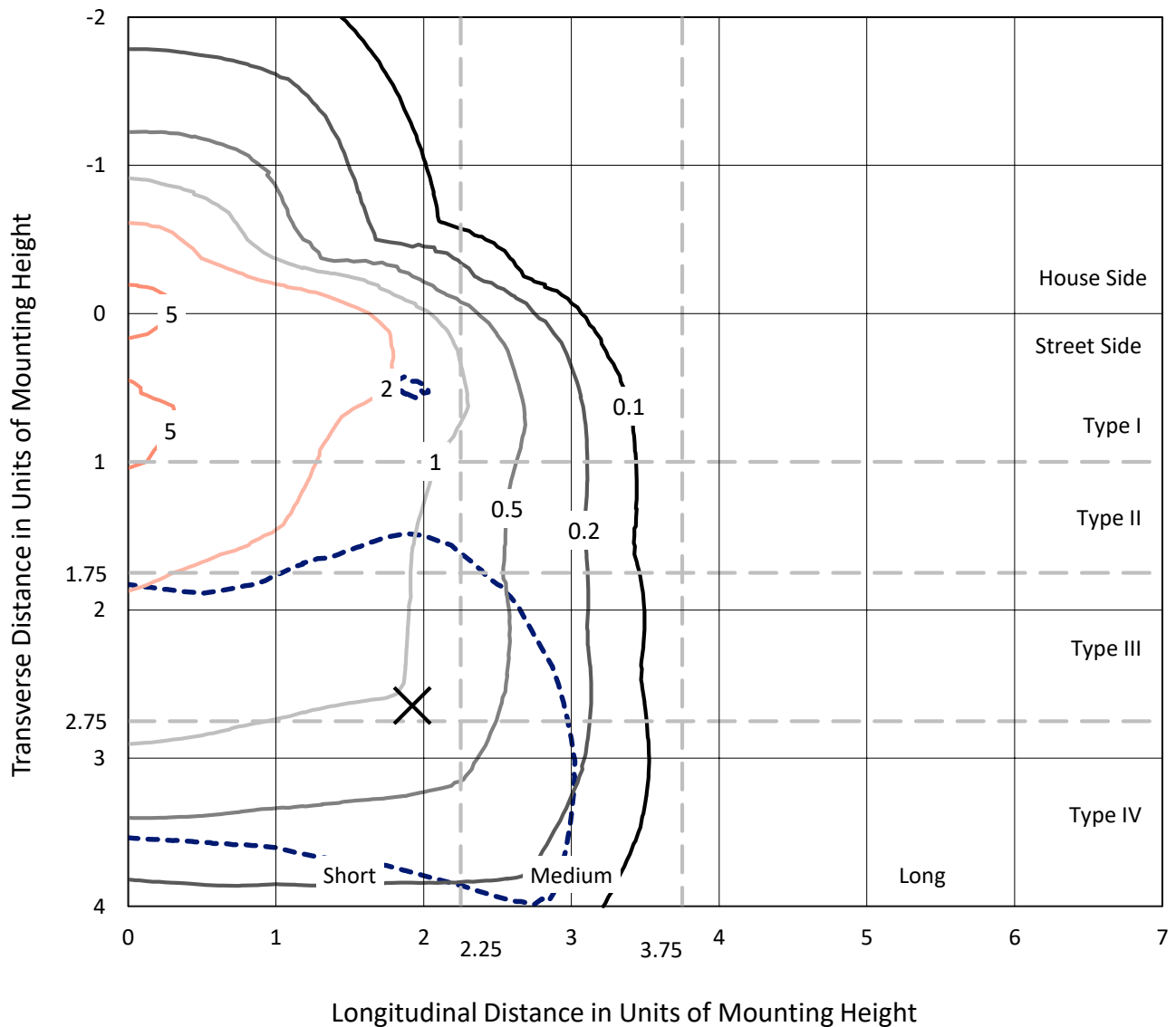
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

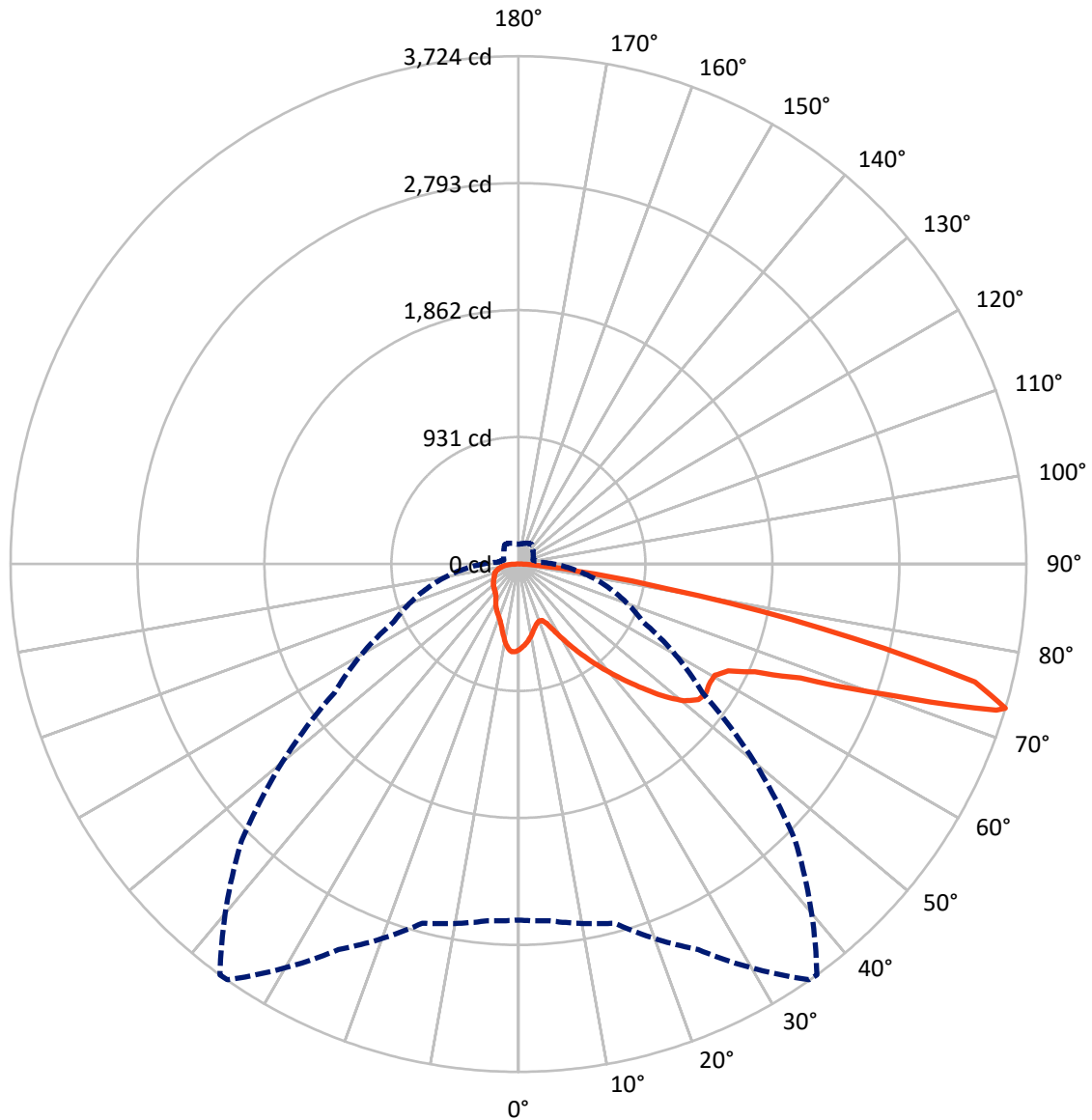
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.3 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 800.3 | 0.0 | 800.3 |
| | % Fixture | 19.3 | 0.0 | 19.3 |
| Street Side | Lumens | 3349.9 | 0.0 | 3349.9 |
| | % Fixture | 80.7 | 0.0 | 80.7 |
| Total | Lumens | 4150.1 | 0.0 | 4150.1 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 57.1 | 1.4 |
| 10°-20° | 143.4 | 3.5 |
| 20°-30° | 229.9 | 5.5 |
| 30°-40° | 380.3 | 9.2 |
| 40°-50° | 588.4 | 14.2 |
| 50°-60° | 787.8 | 19.0 |
| 60°-70° | 1029.1 | 24.8 |
| 70°-80° | 840.6 | 20.3 |
| 80°-90° | 93.6 | 2.3 |
| 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° | 4150.1 | 100.0 |
| 0°-180° | 4150.1 | 100.0 |



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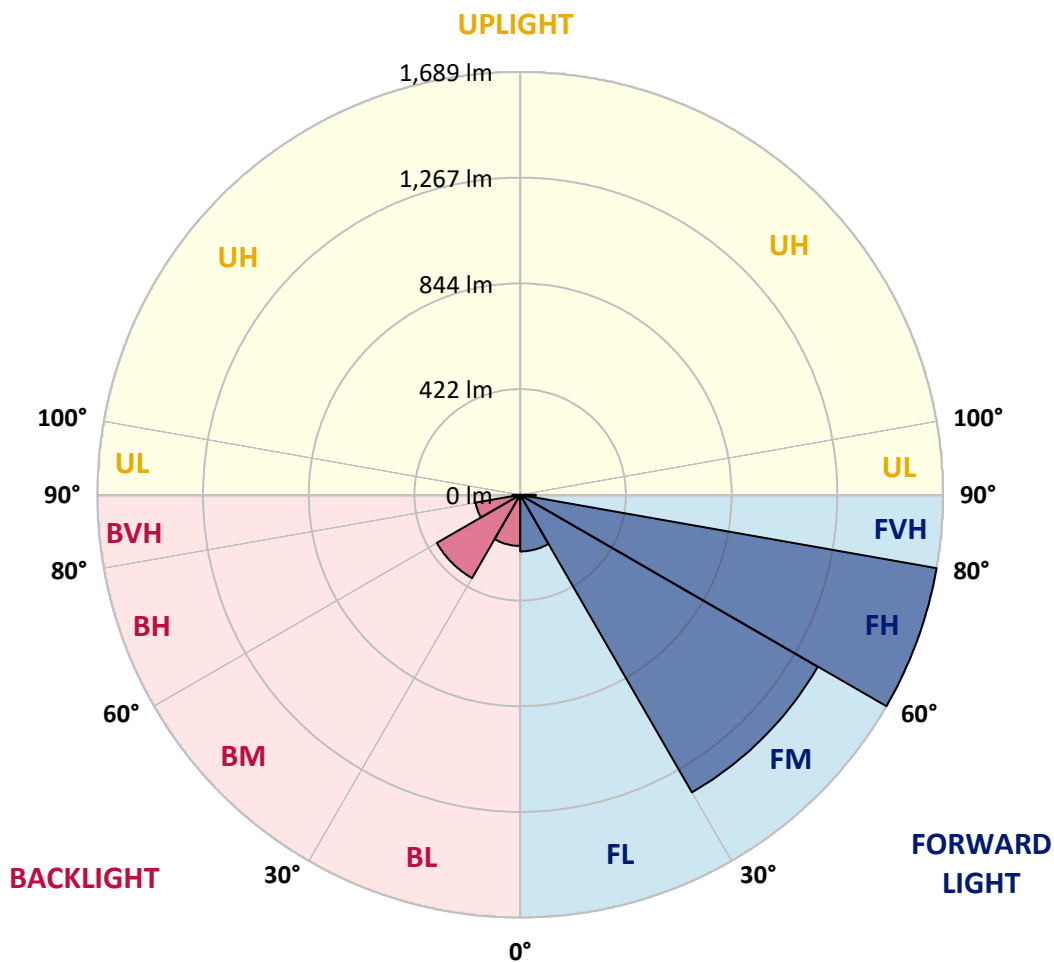
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 226.1 | 5.4 | | | |
| FM | (30°-60°) | 1372.2 | 33.1 | | | |
| FH | (60°-80°) | 1688.8 | 40.7 | | | G1/1800 |
| FVH | (80°-90°) | 62.8 | 1.5 | | | G1/100 |
| BL | (0°-30°) | 204.3 | 4.9 | B1/500 | | |
| BM | (30°-60°) | 384.3 | 9.3 | B1/1000 | | |
| BH | (60°-80°) | 180.8 | 4.4 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 30.8 | 0.7 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 36° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 628.6 | 628.6 | 628.6 | 628.6 | 628.6 | 628.6 | 628.6 | 628.6 | 628.6 | 628.6 | 628.6 |
| 2.5° | 604.7 | 606.2 | 606.5 | 608.3 | 608.3 | 608.0 | 608.9 | 612.0 | 613.6 | 617.2 | 620.4 |
| 5° | 574.8 | 576.6 | 577.5 | 580.6 | 584.6 | 584.8 | 587.8 | 593.8 | 599.7 | 607.8 | 614.7 |
| 7.5° | 541.3 | 543.5 | 545.5 | 552.2 | 557.9 | 558.5 | 564.1 | 573.8 | 581.4 | 591.5 | 603.8 |
| 10° | 508.9 | 509.4 | 511.6 | 520.0 | 527.6 | 528.5 | 536.3 | 547.4 | 557.7 | 571.6 | 585.6 |
| 12.5° | 482.3 | 483.9 | 483.3 | 489.7 | 496.2 | 496.7 | 507.3 | 521.3 | 536.3 | 552.2 | 568.8 |
| 15° | 473.0 | 472.8 | 467.3 | 467.0 | 469.8 | 470.5 | 480.7 | 497.1 | 513.9 | 533.5 | 554.7 |
| 17.5° | 479.4 | 477.3 | 462.8 | 453.8 | 451.9 | 452.5 | 460.1 | 478.0 | 496.0 | 518.4 | 544.0 |
| 20° | 514.1 | 506.1 | 472.0 | 450.4 | 444.3 | 444.3 | 448.8 | 463.3 | 483.0 | 509.1 | 541.3 |
| 22.5° | 596.7 | 584.1 | 511.6 | 473.0 | 451.7 | 449.6 | 446.1 | 457.3 | 479.2 | 510.5 | 552.2 |
| 25° | 700.6 | 694.6 | 584.1 | 533.5 | 489.4 | 482.5 | 459.8 | 463.8 | 487.3 | 524.8 | 581.6 |
| 27.5° | 796.9 | 786.3 | 679.2 | 621.2 | 559.0 | 548.5 | 500.4 | 484.4 | 506.8 | 551.1 | 624.4 |
| 30° | 853.0 | 845.9 | 777.0 | 721.7 | 647.6 | 634.1 | 565.4 | 525.0 | 541.7 | 594.6 | 685.1 |
| 32.5° | 914.2 | 910.0 | 875.1 | 824.8 | 743.6 | 728.0 | 649.2 | 591.2 | 594.8 | 652.3 | 758.1 |
| 35° | 973.5 | 979.1 | 959.3 | 922.4 | 846.9 | 832.5 | 761.8 | 677.7 | 660.5 | 717.2 | 836.2 |
| 37.5° | 1044.7 | 1046.1 | 1033.6 | 1009.7 | 955.5 | 943.7 | 885.5 | 770.0 | 732.0 | 786.3 | 911.6 |
| 40° | 1186.8 | 1166.0 | 1117.5 | 1098.5 | 1066.3 | 1059.0 | 992.5 | 854.6 | 798.4 | 857.2 | 982.7 |
| 42.5° | 1340.6 | 1308.1 | 1232.1 | 1201.0 | 1188.2 | 1181.3 | 1081.7 | 911.0 | 860.7 | 928.1 | 1052.6 |
| 45° | 1464.5 | 1438.2 | 1363.8 | 1325.2 | 1326.9 | 1315.8 | 1159.4 | 961.4 | 928.1 | 999.3 | 1130.7 |
| 47.5° | 1586.6 | 1542.5 | 1459.2 | 1453.7 | 1472.1 | 1455.8 | 1233.8 | 1011.8 | 998.6 | 1076.9 | 1208.7 |
| 50° | 1594.5 | 1554.4 | 1520.6 | 1564.9 | 1596.6 | 1576.3 | 1301.3 | 1077.7 | 1071.6 | 1170.8 | 1309.5 |
| 52.5° | 1498.2 | 1492.5 | 1543.8 | 1618.5 | 1671.0 | 1652.8 | 1356.4 | 1145.4 | 1146.2 | 1288.1 | 1432.0 |
| 55° | 1463.2 | 1455.8 | 1517.5 | 1609.3 | 1680.2 | 1669.4 | 1397.6 | 1221.9 | 1229.1 | 1430.5 | 1563.7 |
| 57.5° | 1522.3 | 1503.7 | 1515.9 | 1591.8 | 1658.6 | 1652.3 | 1440.2 | 1306.8 | 1319.7 | 1594.5 | 1685.2 |
| 60° | 1705.5 | 1667.8 | 1603.5 | 1617.7 | 1659.3 | 1655.6 | 1501.4 | 1401.4 | 1423.1 | 1765.4 | 1762.2 |
| 62.5° | 1980.0 | 1937.3 | 1806.2 | 1742.9 | 1733.7 | 1726.6 | 1602.5 | 1517.8 | 1528.6 | 1888.8 | 1717.3 |
| 65° | 2281.1 | 2235.2 | 2079.5 | 1975.8 | 1921.5 | 1906.2 | 1765.4 | 1658.0 | 1590.3 | 1888.5 | 1542.8 |
| 67.5° | 2619.2 | 2570.7 | 2415.3 | 2316.5 | 2257.7 | 2231.6 | 2029.8 | 1771.4 | 1570.2 | 1728.7 | 1234.6 |
| 70° | 2965.4 | 2919.2 | 2848.0 | 2882.6 | 2908.5 | 2868.7 | 2446.5 | 1809.1 | 1426.3 | 1355.3 | 829.0 |
| 72.5° | 2781.6 | 2777.9 | 2831.9 | 3159.5 | 3657.6 | 3665.4 | 2862.5 | 1702.6 | 1101.9 | 805.6 | 441.9 |
| 73° | 2611.0 | 2626.5 | 2726.8 | 3118.6 | 3721.6 | 3724.3 | 2870.7 | 1647.5 | 1011.8 | 694.0 | 388.1 |
| 75° | 1352.6 | 1458.2 | 1830.0 | 2528.7 | 3446.1 | 3458.5 | 2530.6 | 1247.2 | 603.0 | 385.6 | 261.6 |
| 77.5° | 362.3 | 357.5 | 589.6 | 1231.9 | 2297.4 | 2281.1 | 1599.0 | 603.8 | 289.0 | 241.8 | 183.5 |
| 80° | 124.2 | 125.8 | 200.7 | 450.6 | 1072.4 | 1110.6 | 694.0 | 263.4 | 190.2 | 168.5 | 130.0 |
| 82.5° | 63.3 | 65.4 | 105.0 | 191.7 | 448.6 | 439.1 | 223.3 | 155.1 | 127.4 | 102.3 | 72.7 |
| 85° | 33.8 | 34.8 | 57.8 | 99.4 | 164.5 | 166.4 | 78.6 | 82.8 | 80.9 | 58.0 | 35.9 |
| 87.5° | 16.6 | 17.2 | 27.7 | 43.8 | 60.9 | 58.8 | 27.4 | 35.9 | 39.8 | 32.7 | 19.7 |
| 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-01-LED-U-T4FT-600

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 628.6 | 628.6 | 628.6 | 628.6 | 628.6 | 628.6 | 628.6 | 628.6 | 628.6 | 628.6 | 628.6 |
| 2.5° | 624.4 | 624.4 | 627.8 | 633.6 | 637.8 | 641.8 | 644.5 | 648.7 | 651.0 | 650.8 | 650.5 |
| 5° | 620.2 | 622.8 | 629.6 | 636.8 | 641.5 | 644.7 | 644.7 | 646.5 | 646.5 | 645.8 | 644.7 |
| 7.5° | 610.4 | 614.9 | 624.9 | 631.3 | 632.6 | 629.1 | 622.3 | 617.0 | 610.4 | 607.0 | 605.7 |
| 10° | 594.8 | 600.7 | 613.4 | 616.2 | 609.4 | 597.2 | 580.6 | 566.4 | 553.7 | 547.9 | 546.1 |
| 12.5° | 579.6 | 587.2 | 599.0 | 594.6 | 578.3 | 554.5 | 529.0 | 509.4 | 495.2 | 489.7 | 487.8 |
| 15° | 566.9 | 576.1 | 585.3 | 571.4 | 542.9 | 509.9 | 481.7 | 463.6 | 452.8 | 448.6 | 447.4 |
| 17.5° | 558.5 | 569.3 | 572.4 | 546.4 | 506.8 | 469.8 | 444.9 | 433.0 | 428.2 | 426.4 | 425.9 |
| 20° | 559.0 | 571.1 | 563.4 | 522.1 | 472.0 | 434.9 | 418.2 | 414.8 | 414.8 | 414.8 | 414.5 |
| 22.5° | 573.5 | 584.1 | 559.8 | 499.4 | 438.5 | 405.3 | 398.1 | 401.1 | 403.1 | 403.1 | 402.9 |
| 25° | 603.5 | 609.4 | 562.4 | 477.5 | 407.1 | 379.7 | 379.9 | 385.6 | 387.4 | 387.4 | 386.8 |
| 27.5° | 649.5 | 644.7 | 567.2 | 453.3 | 376.2 | 356.5 | 360.2 | 365.2 | 366.5 | 365.7 | 365.5 |
| 30° | 707.0 | 687.9 | 571.1 | 424.8 | 347.3 | 334.9 | 338.1 | 340.9 | 339.9 | 338.1 | 337.8 |
| 32.5° | 771.3 | 732.0 | 568.8 | 392.9 | 321.7 | 312.5 | 314.4 | 315.9 | 314.4 | 309.9 | 309.9 |
| 35° | 835.0 | 771.8 | 555.9 | 358.0 | 301.4 | 290.8 | 290.6 | 295.6 | 295.3 | 290.0 | 290.3 |
| 37.5° | 891.0 | 803.2 | 530.8 | 326.2 | 284.0 | 275.1 | 276.1 | 279.3 | 280.8 | 273.7 | 272.9 |
| 40° | 939.8 | 824.8 | 495.4 | 299.0 | 270.1 | 270.6 | 267.6 | 262.6 | 260.8 | 257.6 | 257.1 |
| 42.5° | 985.6 | 839.8 | 458.0 | 276.3 | 262.9 | 268.9 | 259.2 | 247.3 | 242.3 | 245.2 | 247.0 |
| 45° | 1030.7 | 856.7 | 421.9 | 257.6 | 253.9 | 264.2 | 250.7 | 237.5 | 231.8 | 233.1 | 235.0 |
| 47.5° | 1085.9 | 880.1 | 378.4 | 237.5 | 240.2 | 255.5 | 245.5 | 231.3 | 222.6 | 217.3 | 215.7 |
| 50° | 1158.4 | 914.2 | 321.9 | 215.9 | 225.7 | 246.0 | 241.0 | 222.0 | 212.6 | 201.9 | 199.4 |
| 52.5° | 1249.0 | 946.3 | 265.0 | 198.6 | 213.8 | 237.8 | 233.6 | 214.1 | 202.5 | 189.9 | 187.7 |
| 55° | 1339.6 | 950.8 | 215.9 | 183.5 | 200.4 | 226.8 | 224.6 | 207.8 | 191.4 | 181.2 | 179.0 |
| 57.5° | 1402.8 | 908.4 | 183.0 | 170.8 | 187.5 | 213.1 | 216.5 | 200.1 | 182.2 | 174.3 | 173.0 |
| 60° | 1403.9 | 806.9 | 163.0 | 162.4 | 177.7 | 201.2 | 208.1 | 191.2 | 176.4 | 171.1 | 170.1 |
| 62.5° | 1292.3 | 650.3 | 150.1 | 156.1 | 170.6 | 191.4 | 201.7 | 186.2 | 175.1 | 173.0 | 172.0 |
| 65° | 1083.2 | 480.5 | 139.7 | 150.3 | 164.0 | 183.2 | 196.4 | 184.5 | 174.5 | 173.8 | 173.0 |
| 67.5° | 799.7 | 329.4 | 131.0 | 142.9 | 156.6 | 174.8 | 191.4 | 182.2 | 171.3 | 174.5 | 173.5 |
| 70° | 503.1 | 219.9 | 122.9 | 134.5 | 146.9 | 165.1 | 184.8 | 178.0 | 167.5 | 165.6 | 162.1 |
| 72.5° | 284.0 | 159.0 | 113.1 | 123.7 | 134.2 | 152.1 | 175.8 | 170.8 | 158.5 | 151.1 | 147.6 |
| 73° | 256.6 | 150.6 | 110.8 | 121.0 | 131.3 | 149.6 | 173.8 | 168.8 | 155.8 | 147.6 | 144.5 |
| 75° | 187.7 | 123.2 | 99.9 | 110.2 | 119.2 | 137.4 | 163.8 | 158.3 | 144.2 | 134.5 | 132.4 |
| 77.5° | 136.1 | 94.9 | 85.9 | 95.2 | 103.1 | 120.5 | 148.7 | 142.4 | 128.7 | 123.4 | 121.3 |
| 80° | 98.1 | 72.0 | 71.2 | 80.2 | 87.1 | 104.6 | 132.7 | 126.0 | 112.8 | 128.4 | 125.0 |
| 82.5° | 58.5 | 46.1 | 52.2 | 62.2 | 69.4 | 87.8 | 115.2 | 107.6 | 94.9 | 96.0 | 81.7 |
| 85° | 27.9 | 26.1 | 32.4 | 40.9 | 45.9 | 60.1 | 96.0 | 89.9 | 75.9 | 62.2 | 60.9 |
| 87.5° | 12.4 | 11.9 | 15.5 | 18.2 | 24.6 | 36.1 | 65.7 | 58.3 | 55.1 | 32.9 | 25.9 |
| 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)