

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: P195137

Luminaire Tested: **NVN-AF-05-LED-U-SL2-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195137
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: NVN-AF-05-LED-U-SL2-7060
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 5700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29479 lumens
Efficiency: N/A
Efficacy: 105.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B3 - U0 - G4

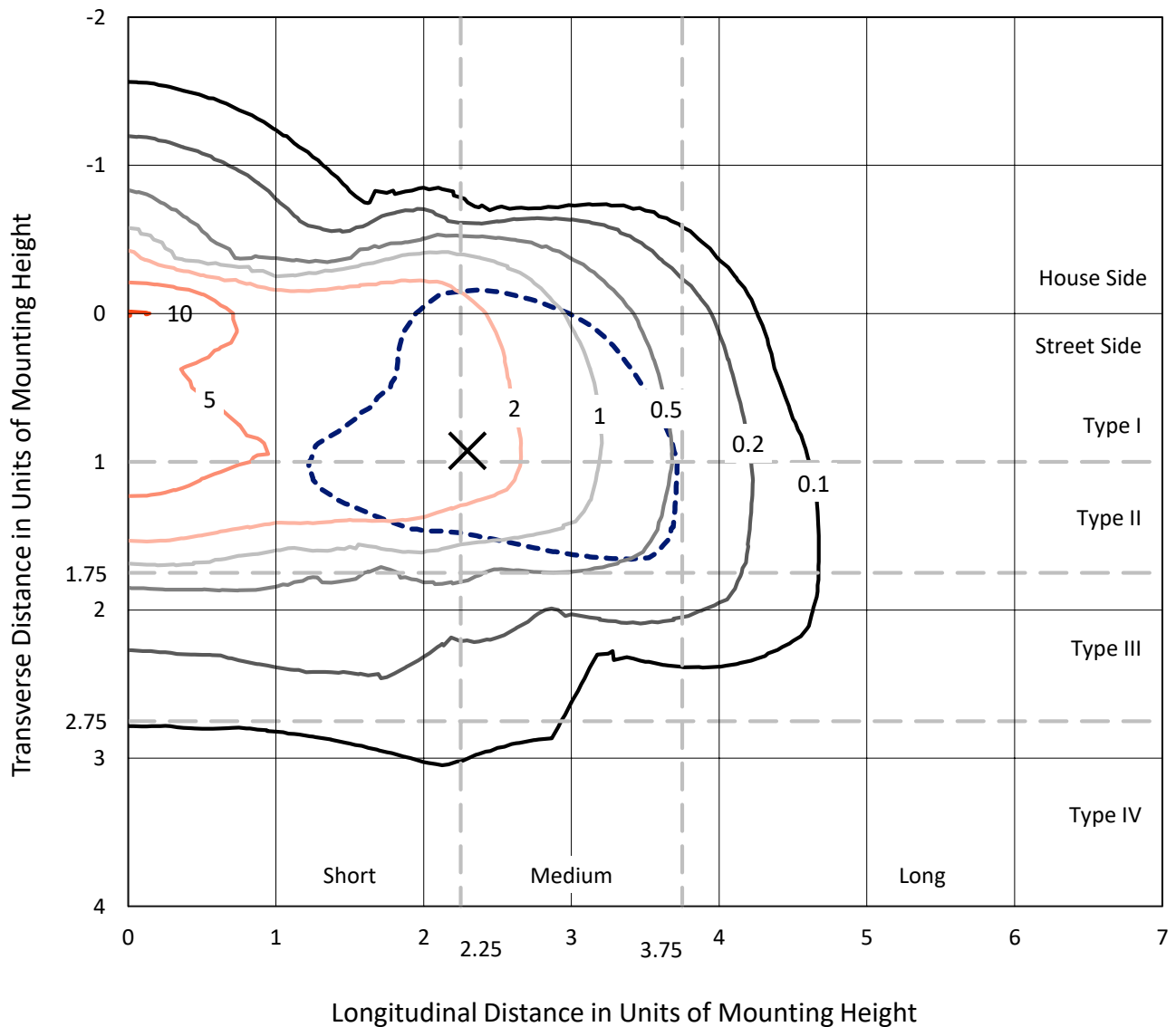
Input Watts (W): 279
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

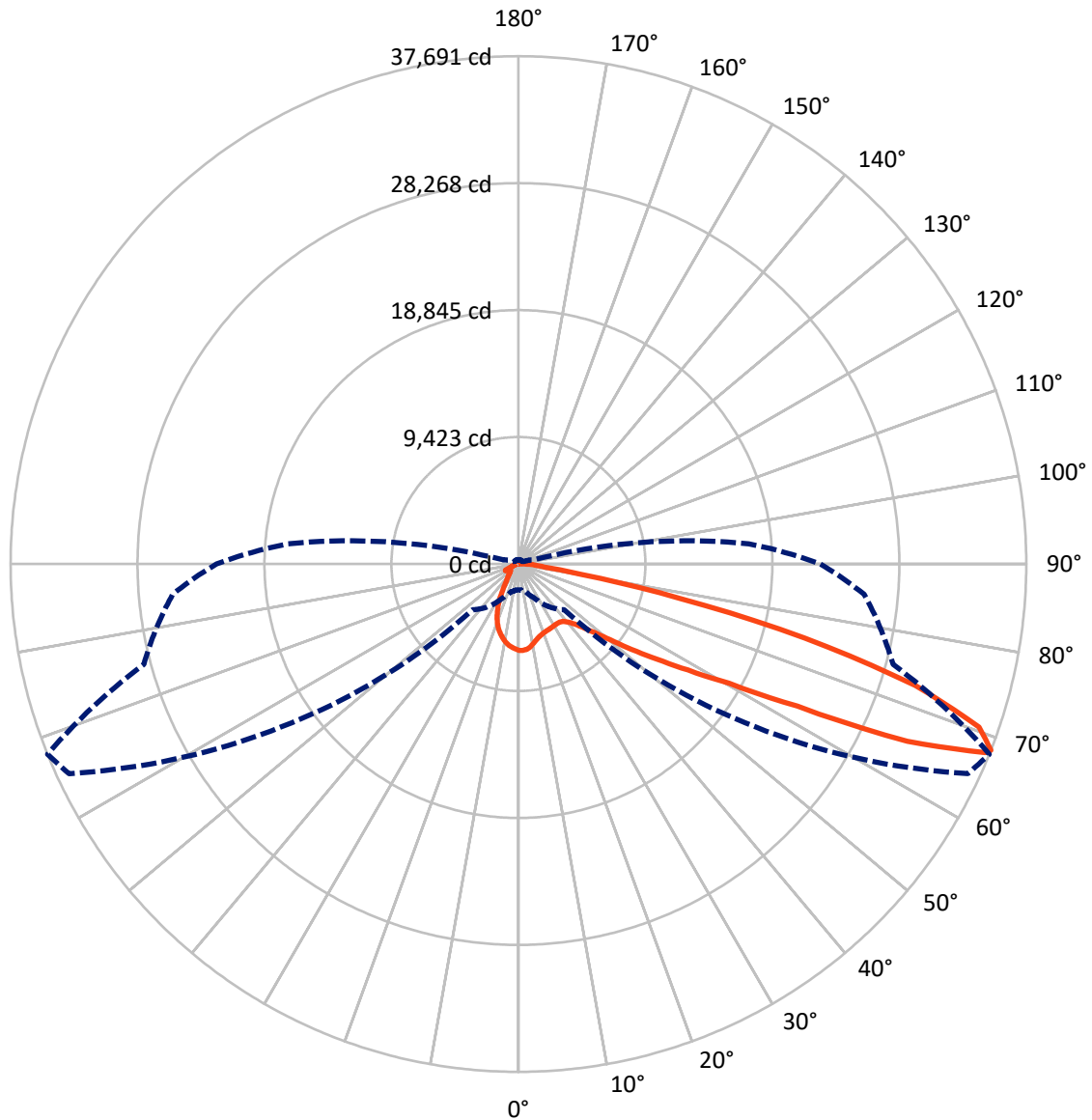
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.3 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 4822.8 | 0.0 | 4822.8 |
| | % Fixture | 16.4 | 0.0 | 16.4 |
| Street Side | Lumens | 24656.1 | 0.0 | 24656.1 |
| | % Fixture | 83.6 | 0.0 | 83.6 |
| Total | Lumens | 29479.0 | 0.0 | 29479.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 549.6 | 1.9 |
| 10°-20° | 1274.7 | 4.3 |
| 20°-30° | 1724.0 | 5.8 |
| 30°-40° | 2430.8 | 8.2 |
| 40°-50° | 3997.2 | 13.6 |
| 50°-60° | 6195.9 | 21.0 |
| 60°-70° | 8033.5 | 27.3 |
| 70°-80° | 4610.0 | 15.6 |
| 80°-90° | 663.3 | 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° | 29479.0 | 100.0 |
| 0°-180° | 29479.0 | 100.0 |

Coefficient of Utilization



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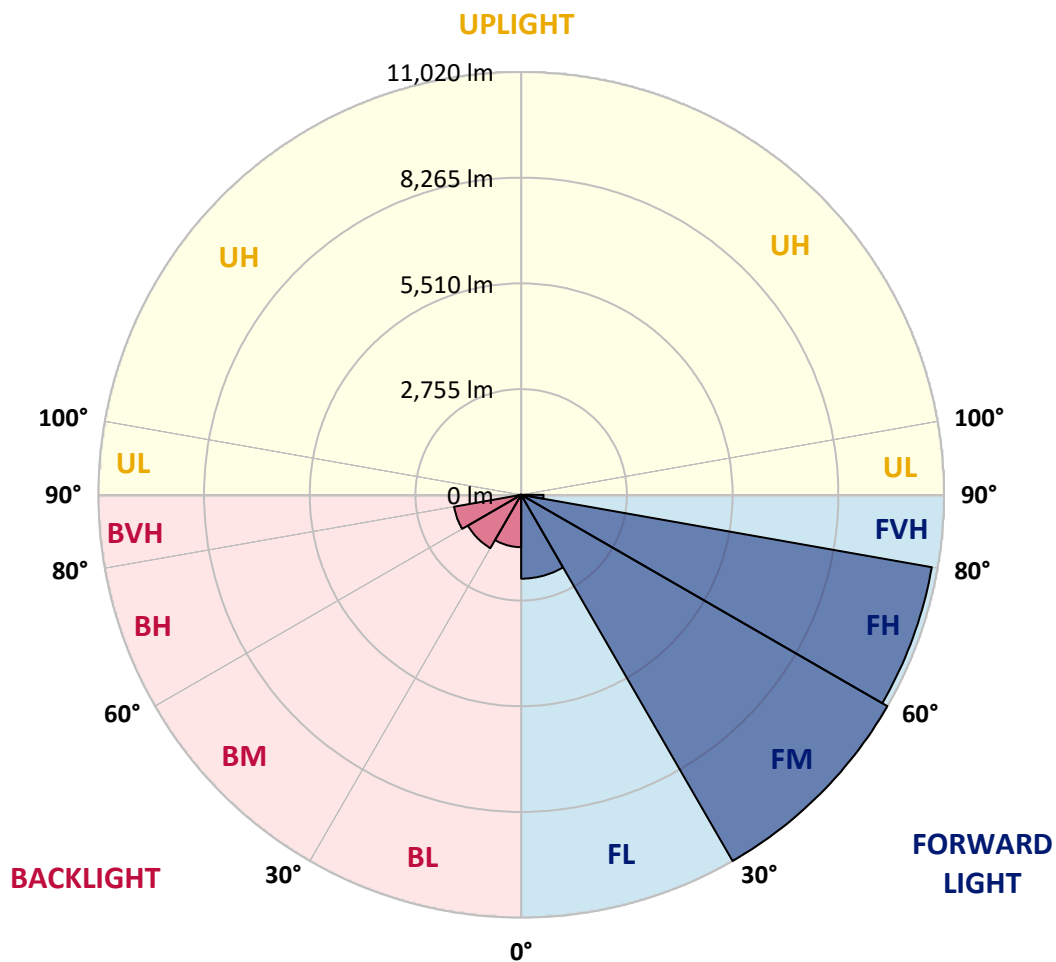
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 2184.9 | 7.4 | | | |
| FM (30°-60°) | 11019.7 | 37.4 | | | |
| FH (60°-80°) | 10867.3 | 36.9 | | | G4/12000 |
| FVH (80°-90°) | 584.2 | 2.0 | | | G4/750 |
| BL (0°-30°) | 1363.5 | 4.6 | B3/2500 | | |
| BM (30°-60°) | 1604.1 | 5.4 | B2/2500 | | |
| BH (60°-80°) | 1776.2 | 6.0 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 79.1 | 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-G4

Type II Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 68° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 6414.4 | 6414.4 | 6414.4 | 6414.4 | 6414.4 | 6414.4 | 6414.4 | 6414.4 | 6414.4 | 6414.4 | 6414.4 |
| 2.5° | 6243.0 | 6293.1 | 6293.1 | 6329.6 | 6362.4 | 6389.3 | 6412.4 | 6412.4 | 6412.4 | 6397.0 | 6383.6 |
| 5° | 5586.3 | 5653.7 | 5663.4 | 5755.8 | 5877.1 | 6025.4 | 6191.0 | 6337.3 | 6366.2 | 6420.1 | 6441.3 |
| 7.5° | 5130.0 | 5151.1 | 5187.7 | 5251.3 | 5374.5 | 5557.4 | 5817.4 | 6144.8 | 6223.7 | 6393.2 | 6481.8 |
| 10° | 4806.4 | 4823.8 | 4854.6 | 4918.1 | 5029.8 | 5195.4 | 5451.5 | 5877.1 | 6008.1 | 6308.5 | 6483.7 |
| 12.5° | 4569.6 | 4583.1 | 4612.0 | 4669.7 | 4783.3 | 4931.6 | 5193.5 | 5636.4 | 5798.2 | 6223.7 | 6510.7 |
| 15° | 4384.7 | 4407.8 | 4430.9 | 4486.8 | 4602.3 | 4744.8 | 5010.6 | 5461.2 | 5636.4 | 6156.3 | 6560.7 |
| 17.5° | 4311.5 | 4323.1 | 4327.0 | 4355.8 | 4459.8 | 4604.2 | 4870.0 | 5337.9 | 5518.9 | 6102.4 | 6599.2 |
| 20° | 4357.8 | 4359.7 | 4321.2 | 4301.9 | 4361.6 | 4494.5 | 4752.5 | 5245.5 | 5430.4 | 6054.3 | 6614.6 |
| 22.5° | 4560.0 | 4560.0 | 4459.8 | 4375.1 | 4334.7 | 4417.5 | 4673.6 | 5181.9 | 5382.2 | 6017.7 | 6614.6 |
| 25° | 4945.1 | 4927.8 | 4771.8 | 4604.2 | 4425.2 | 4390.5 | 4623.5 | 5141.5 | 5345.6 | 5998.4 | 6589.6 |
| 27.5° | 5451.5 | 5436.1 | 5237.8 | 4989.4 | 4665.9 | 4448.3 | 4606.2 | 5108.8 | 5309.0 | 5969.5 | 6535.7 |
| 30° | 6067.7 | 6054.3 | 5829.0 | 5503.5 | 5026.0 | 4631.2 | 4646.6 | 5085.7 | 5280.2 | 5921.4 | 6445.2 |
| 32.5° | 6682.0 | 6674.3 | 6495.2 | 6162.1 | 5522.8 | 4941.2 | 4752.5 | 5081.8 | 5264.7 | 5863.6 | 6335.4 |
| 35° | 7300.2 | 7300.2 | 7190.4 | 6909.3 | 6191.0 | 5407.2 | 4974.0 | 5153.1 | 5293.6 | 5832.8 | 6241.1 |
| 37.5° | 8212.9 | 8176.3 | 7972.2 | 7681.5 | 7032.5 | 6011.9 | 5332.1 | 5303.3 | 5405.3 | 5884.8 | 6210.2 |
| 40° | 9626.4 | 9520.5 | 9010.2 | 8521.0 | 7951.0 | 6786.0 | 5855.9 | 5594.0 | 5655.7 | 6062.0 | 6283.4 |
| 42.5° | 11105.3 | 10937.7 | 10261.8 | 9480.0 | 8900.4 | 7741.1 | 6543.4 | 6065.8 | 6063.9 | 6404.7 | 6516.4 |
| 45° | 12374.3 | 12287.6 | 11555.9 | 10564.2 | 9984.5 | 8815.7 | 7411.9 | 6766.8 | 6697.4 | 6936.2 | 6965.1 |
| 47.5° | 13111.8 | 13054.0 | 12613.1 | 11711.9 | 11270.9 | 10084.7 | 8513.3 | 7739.2 | 7608.3 | 7750.8 | 7706.5 |
| 50° | 12907.7 | 12963.5 | 12836.4 | 12376.2 | 12653.5 | 11867.8 | 9917.1 | 9071.8 | 8823.4 | 8965.9 | 8858.0 |
| 52.5° | 11833.2 | 11983.4 | 12097.0 | 12185.6 | 13448.8 | 14253.7 | 11681.0 | 10735.5 | 10529.5 | 10504.5 | 10400.5 |
| 55° | 9897.9 | 10136.7 | 10494.8 | 11145.7 | 13235.0 | 16169.8 | 14762.1 | 12747.9 | 12447.5 | 12289.6 | 12330.0 |
| 57.5° | 6736.0 | 7098.0 | 7870.2 | 9108.4 | 12123.9 | 16986.2 | 19318.2 | 15347.5 | 14839.1 | 14276.8 | 14407.8 |
| 60° | 3710.7 | 4013.1 | 4931.6 | 6179.4 | 9587.9 | 16864.9 | 23356.3 | 19572.4 | 17972.2 | 16481.7 | 16751.3 |
| 62.5° | 2401.3 | 2466.8 | 3150.4 | 4221.0 | 5884.8 | 14889.2 | 25599.7 | 26633.8 | 23242.7 | 19389.5 | 19768.8 |
| 65° | 1929.5 | 1975.7 | 2310.8 | 3404.6 | 4099.7 | 9578.2 | 25699.8 | 33959.0 | 31723.3 | 23340.9 | 23352.5 |
| 67.5° | 1885.2 | 1906.4 | 2100.9 | 2863.5 | 3845.5 | 5214.7 | 22214.4 | 36847.5 | 37365.5 | 28004.8 | 25749.9 |
| 68° | 1912.2 | 1937.2 | 2133.6 | 2774.9 | 3843.6 | 4806.4 | 20531.4 | 36803.2 | 37690.9 | 28784.7 | 25749.9 |
| 70° | 1686.9 | 1717.7 | 2176.0 | 2871.2 | 3679.9 | 4132.5 | 14059.2 | 34848.6 | 36277.5 | 30577.5 | 24432.8 |
| 72.5° | 882.0 | 856.9 | 1076.4 | 2266.5 | 4142.1 | 4305.8 | 7427.3 | 29114.0 | 30781.6 | 28318.7 | 21109.1 |
| 75° | 687.5 | 625.8 | 602.7 | 895.4 | 3643.3 | 4465.6 | 4313.5 | 20693.1 | 21952.5 | 20413.9 | 14109.3 |
| 77.5° | 647.0 | 571.9 | 527.6 | 529.6 | 1604.1 | 4646.6 | 3489.3 | 12177.9 | 12177.9 | 9738.1 | 4502.2 |
| 80° | 519.9 | 450.6 | 421.7 | 481.4 | 774.1 | 4282.7 | 3641.4 | 5549.7 | 4733.3 | 2516.8 | 1240.1 |
| 82.5° | 342.8 | 306.2 | 308.1 | 390.9 | 587.3 | 2859.6 | 4217.2 | 2740.2 | 2058.5 | 1115.0 | 729.8 |
| 85° | 217.6 | 186.8 | 208.0 | 273.4 | 439.1 | 1274.8 | 4174.8 | 1904.5 | 1363.4 | 625.8 | 363.9 |
| 87.5° | 109.8 | 84.7 | 104.0 | 142.5 | 267.7 | 365.9 | 3437.3 | 1700.4 | 1011.0 | 260.0 | 198.3 |
| 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-05-LED-U-SL2-7060

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 6414.4 | 6414.4 | 6414.4 | 6414.4 | 6414.4 | 6414.4 | 6414.4 | 6414.4 | 6414.4 | 6414.4 | 6414.4 |
| 2.5° | 6383.6 | 6341.2 | 6320.0 | 6285.3 | 6243.0 | 6200.6 | 6171.7 | 6158.3 | 6150.6 | 6154.4 | 6152.5 |
| 5° | 6429.8 | 6373.9 | 6283.4 | 6154.4 | 6021.5 | 5881.0 | 5773.1 | 5690.3 | 5638.3 | 5622.9 | 5619.1 |
| 7.5° | 6464.4 | 6383.6 | 6214.1 | 5979.2 | 5751.9 | 5505.5 | 5295.6 | 5128.0 | 5014.4 | 4962.4 | 4960.5 |
| 10° | 6458.7 | 6354.7 | 6087.0 | 5740.4 | 5407.2 | 5045.2 | 4715.9 | 4434.8 | 4230.7 | 4132.5 | 4128.6 |
| 12.5° | 6464.4 | 6321.9 | 5931.0 | 5461.2 | 4983.6 | 4465.6 | 3976.5 | 3539.4 | 3235.1 | 3090.7 | 3084.9 |
| 15° | 6487.5 | 6287.3 | 5771.2 | 5149.2 | 4488.7 | 3757.0 | 3057.9 | 2509.1 | 2231.8 | 2137.5 | 2137.5 |
| 17.5° | 6485.6 | 6229.5 | 5586.3 | 4787.2 | 3901.4 | 2921.2 | 2087.4 | 1748.5 | 1721.5 | 1808.2 | 1821.7 |
| 20° | 6447.1 | 6137.1 | 5347.6 | 4357.8 | 3212.0 | 2021.9 | 1415.4 | 1367.2 | 1582.9 | 1821.7 | 1848.6 |
| 22.5° | 6387.4 | 6017.7 | 5072.2 | 3859.0 | 2409.0 | 1317.2 | 1091.8 | 1165.0 | 1457.7 | 1754.3 | 1796.6 |
| 25° | 6304.6 | 5873.3 | 4756.4 | 3279.4 | 1602.1 | 947.4 | 910.8 | 1001.3 | 1207.4 | 1405.7 | 1436.5 |
| 27.5° | 6183.3 | 5690.3 | 4411.7 | 2651.6 | 1022.5 | 779.9 | 793.4 | 856.9 | 945.5 | 1030.2 | 1047.6 |
| 30° | 6031.2 | 5476.6 | 4036.2 | 1956.5 | 776.0 | 697.1 | 720.2 | 758.7 | 797.2 | 851.1 | 862.7 |
| 32.5° | 5877.1 | 5259.0 | 3645.3 | 1344.1 | 677.8 | 652.8 | 675.9 | 697.1 | 729.8 | 766.4 | 774.1 |
| 35° | 5738.5 | 5056.8 | 3242.8 | 937.8 | 635.5 | 623.9 | 635.5 | 648.9 | 681.7 | 718.3 | 722.1 |
| 37.5° | 5638.3 | 4891.2 | 2823.0 | 741.4 | 610.4 | 598.9 | 604.7 | 610.4 | 648.9 | 702.9 | 708.6 |
| 40° | 5624.8 | 4781.4 | 2397.4 | 666.3 | 591.2 | 575.8 | 571.9 | 575.8 | 625.8 | 687.5 | 693.2 |
| 42.5° | 5755.8 | 4787.2 | 1981.5 | 635.5 | 575.8 | 558.4 | 543.0 | 550.7 | 595.0 | 643.2 | 647.0 |
| 45° | 6065.8 | 4922.0 | 1621.4 | 622.0 | 562.3 | 548.8 | 525.7 | 529.6 | 550.7 | 575.8 | 579.6 |
| 47.5° | 6612.7 | 5216.6 | 1346.0 | 614.3 | 550.7 | 539.2 | 510.3 | 498.7 | 500.7 | 514.2 | 514.2 |
| 50° | 7487.0 | 5709.6 | 1178.5 | 606.6 | 541.1 | 519.9 | 487.2 | 464.1 | 458.3 | 466.0 | 467.9 |
| 52.5° | 8790.6 | 6554.9 | 1097.6 | 591.2 | 523.8 | 494.9 | 458.3 | 435.2 | 425.6 | 433.3 | 433.3 |
| 55° | 10552.6 | 7904.8 | 1059.1 | 570.0 | 502.6 | 464.1 | 431.3 | 412.1 | 404.4 | 410.2 | 410.2 |
| 57.5° | 12561.1 | 9659.1 | 1124.6 | 541.1 | 475.6 | 431.3 | 408.2 | 394.8 | 389.0 | 394.8 | 396.7 |
| 60° | 14947.0 | 11954.5 | 1575.2 | 504.5 | 446.8 | 402.5 | 389.0 | 381.3 | 377.4 | 383.2 | 383.2 |
| 62.5° | 18118.5 | 15008.6 | 2437.9 | 475.6 | 415.9 | 375.5 | 371.7 | 367.8 | 363.9 | 369.7 | 369.7 |
| 65° | 21542.3 | 17787.3 | 2509.1 | 458.3 | 389.0 | 352.4 | 354.3 | 354.3 | 350.5 | 356.2 | 356.2 |
| 67.5° | 22632.3 | 17546.6 | 1401.9 | 437.1 | 356.2 | 329.3 | 337.0 | 337.0 | 335.1 | 340.8 | 338.9 |
| 68° | 22401.2 | 17165.3 | 1220.9 | 431.3 | 350.5 | 323.5 | 331.2 | 333.1 | 331.2 | 337.0 | 335.1 |
| 70° | 20679.6 | 15070.2 | 803.0 | 398.6 | 325.4 | 304.3 | 315.8 | 317.7 | 315.8 | 323.5 | 321.6 |
| 72.5° | 17071.0 | 11303.6 | 593.1 | 348.5 | 294.6 | 279.2 | 290.8 | 292.7 | 294.6 | 302.3 | 300.4 |
| 75° | 10841.5 | 6243.0 | 467.9 | 296.6 | 263.8 | 250.3 | 261.9 | 267.7 | 271.5 | 283.1 | 277.3 |
| 77.5° | 2969.4 | 1894.8 | 379.4 | 252.3 | 227.2 | 221.5 | 229.2 | 236.9 | 240.7 | 254.2 | 244.6 |
| 80° | 1039.9 | 837.7 | 315.8 | 213.7 | 188.7 | 186.8 | 194.5 | 202.2 | 206.0 | 217.6 | 206.0 |
| 82.5° | 631.6 | 546.9 | 252.3 | 167.5 | 148.3 | 146.4 | 156.0 | 163.7 | 167.5 | 167.5 | 159.8 |
| 85° | 329.3 | 288.8 | 184.9 | 117.5 | 102.1 | 96.3 | 113.6 | 123.2 | 125.2 | 123.2 | 117.5 |
| 87.5° | 184.9 | 163.7 | 98.2 | 55.8 | 46.2 | 48.1 | 59.7 | 73.2 | 79.0 | 77.0 | 73.2 |
| 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)