

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: P196110

Luminaire Tested: **NVN-AF-06-LED-U-SL3-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196110
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: NVN-AF-06-LED-U-SL3-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 4000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20609.4 lumens
Efficiency: N/A
Efficacy: 106.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B2 - U0 - G4

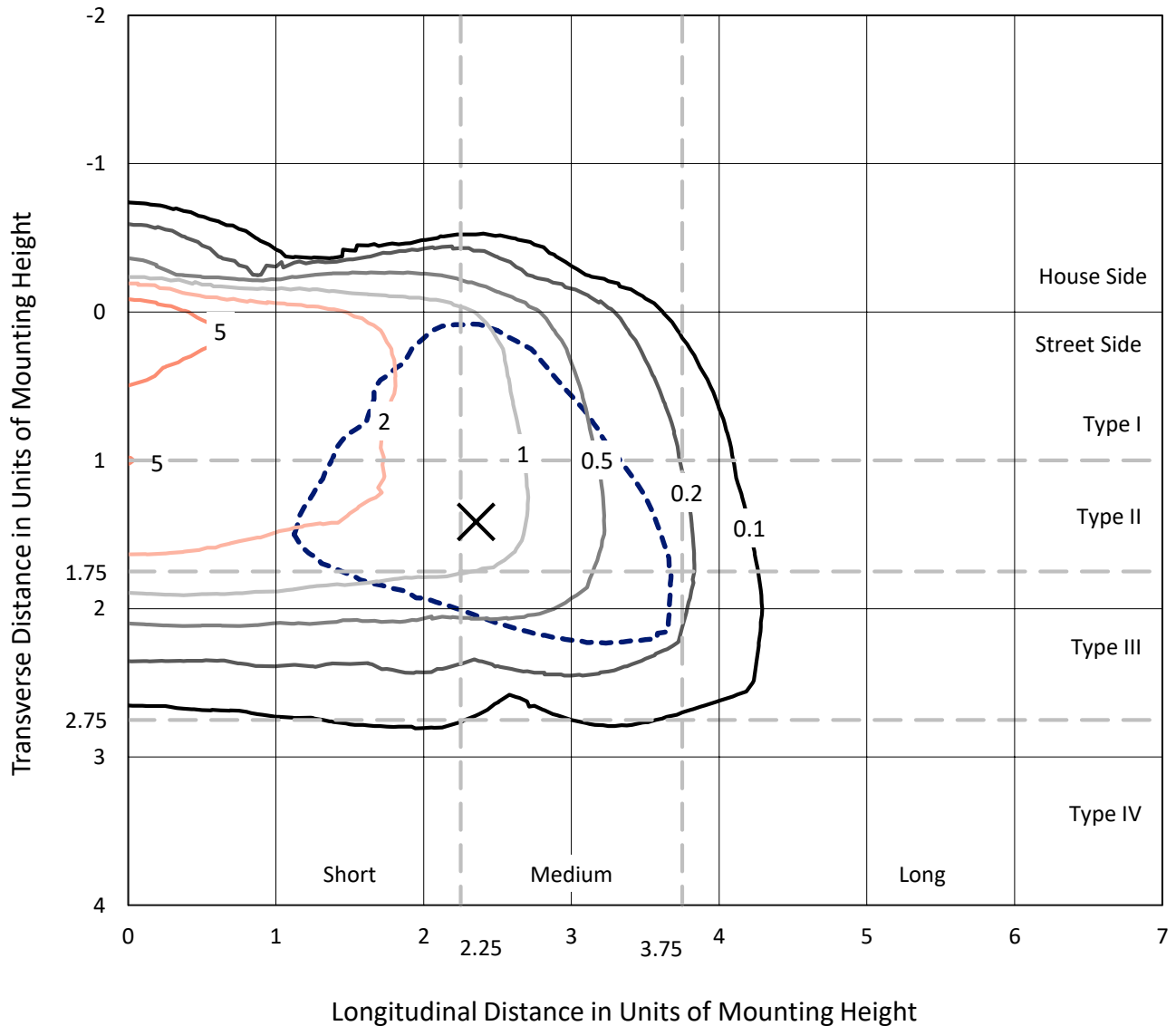
Input Watts (W): 193
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

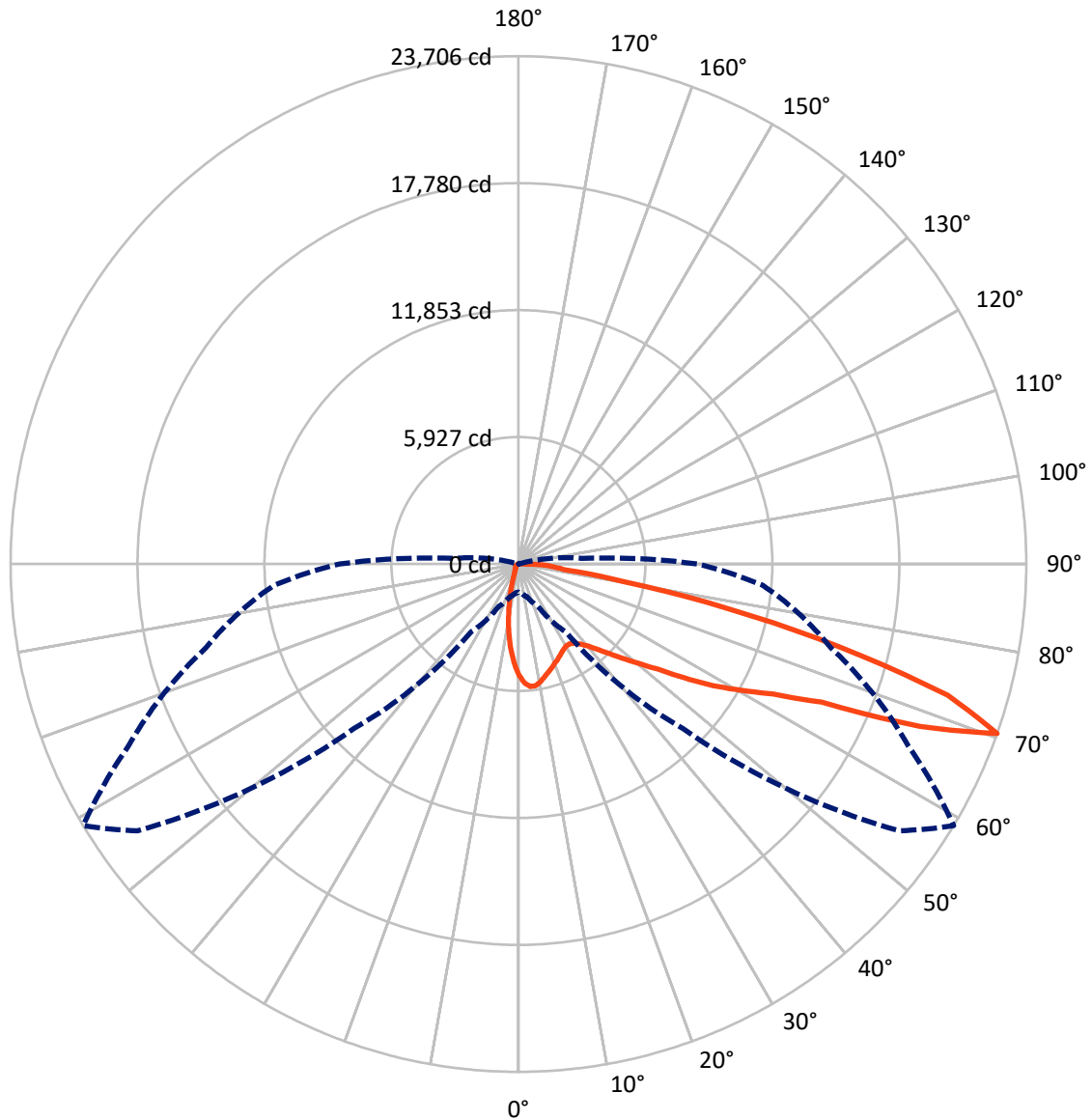
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.9 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical



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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 1584.3 | 0.0 | 1584.3 |
| | % Fixture | 7.7 | 0.0 | 7.7 |
| Street Side | Lumens | 19025.1 | 0.0 | 19025.1 |
| | % Fixture | 92.3 | 0.0 | 92.3 |
| Total | Lumens | 20609.4 | 0.0 | 20609.4 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 428.5 | 2.1 |
| 10°-20° | 898.8 | 4.4 |
| 20°-30° | 1216.7 | 5.9 |
| 30°-40° | 1755.9 | 8.5 |
| 40°-50° | 2916.1 | 14.1 |
| 50°-60° | 4460.6 | 21.6 |
| 60°-70° | 5547.9 | 26.9 |
| 70°-80° | 3066.8 | 14.9 |
| 80°-90° | 318.0 | 1.5 |
| 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° | 20609.4 | 100.0 |
| 0°-180° | 20609.4 | 100.0 |

Coefficient of Utilization



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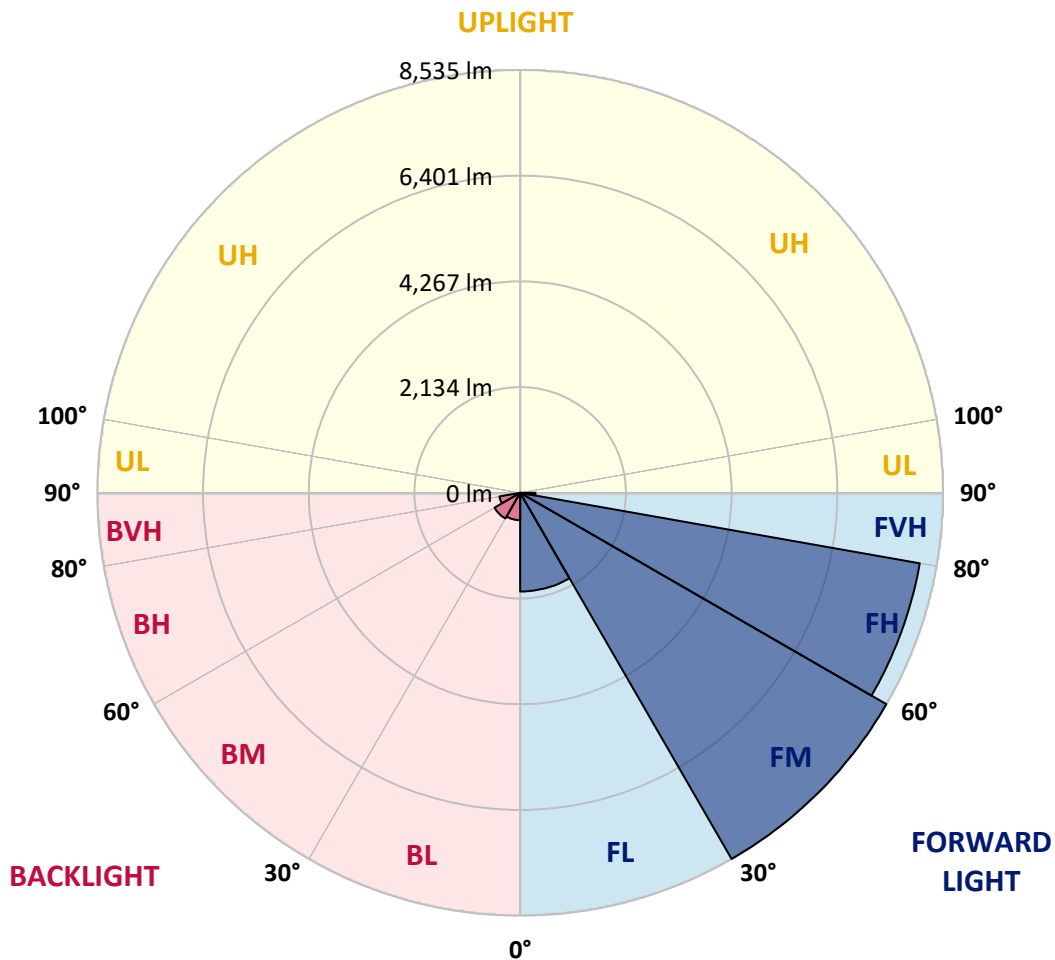
CATALOG NUMBER: NVN-AF-06-LED-U-SL3-600-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 1992.0 | 9.7 | | | |
| FM | (30°-60°) | 8534.6 | 41.4 | | | |
| FH | (60°-80°) | 8189.7 | 39.7 | | | G4/12000 |
| FVH | (80°-90°) | 308.8 | 1.5 | | | G3/500 |
| BL | (0°-30°) | 552.1 | 2.7 | B2/1000 | | |
| BM | (30°-60°) | 598.0 | 2.9 | B1/1000 | | |
| BH | (60°-80°) | 425.0 | 2.1 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 9.2 | 0.0 | | | G0/10 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G4

Type III Medium





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 59° | 65° | 75° | 85° |
|-------|---------|---------|--------|--------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 5211.4 | 5211.4 | 5211.4 | 5211.4 | 5211.4 | 5211.4 | 5211.4 | 5211.4 | 5211.4 | 5211.4 | 5211.4 |
| 2.5° | 5890.8 | 5881.5 | 5842.6 | 5834.8 | 5791.2 | 5704.2 | 5603.1 | 5562.7 | 5480.4 | 5349.7 | 5205.2 |
| 5° | 5988.8 | 5993.4 | 5996.5 | 5979.4 | 5973.2 | 5901.7 | 5789.7 | 5741.5 | 5631.1 | 5416.6 | 5152.3 |
| 7.5° | 5621.8 | 5634.2 | 5673.1 | 5690.3 | 5764.8 | 5792.9 | 5769.5 | 5738.4 | 5651.4 | 5397.9 | 5026.4 |
| 10° | 5234.6 | 5258.0 | 5300.0 | 5327.9 | 5419.7 | 5494.4 | 5589.2 | 5597.0 | 5578.3 | 5335.7 | 4884.9 |
| 12.5° | 4902.0 | 4923.8 | 4970.4 | 5026.4 | 5119.7 | 5216.0 | 5357.5 | 5407.2 | 5469.4 | 5295.3 | 4783.8 |
| 15° | 4616.0 | 4622.1 | 4667.2 | 4737.2 | 4860.0 | 4992.2 | 5160.1 | 5233.1 | 5354.4 | 5279.8 | 4706.1 |
| 17.5° | 4365.6 | 4367.2 | 4396.7 | 4460.5 | 4609.7 | 4783.8 | 4979.7 | 5076.1 | 5230.0 | 5258.0 | 4637.6 |
| 20° | 4200.8 | 4199.2 | 4200.8 | 4235.0 | 4367.2 | 4573.9 | 4811.9 | 4912.8 | 5110.4 | 5231.6 | 4567.7 |
| 22.5° | 4144.9 | 4137.1 | 4101.3 | 4088.8 | 4172.8 | 4354.7 | 4639.3 | 4771.3 | 5003.0 | 5223.8 | 4516.4 |
| 25° | 4213.2 | 4208.6 | 4132.4 | 4060.9 | 4068.7 | 4182.1 | 4463.5 | 4625.3 | 4919.1 | 5251.8 | 4504.0 |
| 27.5° | 4434.0 | 4424.7 | 4308.1 | 4168.1 | 4079.5 | 4099.8 | 4333.0 | 4502.4 | 4852.3 | 5320.2 | 4521.0 |
| 30° | 4723.2 | 4724.7 | 4600.4 | 4430.9 | 4222.5 | 4107.6 | 4263.0 | 4423.1 | 4807.2 | 5422.8 | 4558.4 |
| 32.5° | 5045.0 | 5043.5 | 4954.9 | 4759.0 | 4493.1 | 4250.6 | 4294.1 | 4429.4 | 4813.4 | 5573.6 | 4629.9 |
| 35° | 5377.8 | 5360.7 | 5331.1 | 5158.5 | 4847.6 | 4500.9 | 4435.6 | 4535.0 | 4878.7 | 5772.6 | 4751.2 |
| 37.5° | 5761.8 | 5755.5 | 5785.1 | 5603.1 | 5286.0 | 4869.3 | 4684.3 | 4751.2 | 5043.5 | 6066.5 | 4947.1 |
| 40° | 6372.8 | 6338.5 | 6352.5 | 6105.4 | 5780.4 | 5365.3 | 5032.6 | 5049.7 | 5306.3 | 6455.1 | 5256.4 |
| 42.5° | 7537.2 | 7398.8 | 7139.2 | 6675.9 | 6324.5 | 5915.6 | 5488.1 | 5458.6 | 5677.8 | 6926.2 | 5663.8 |
| 45° | 8928.7 | 8770.1 | 8115.6 | 7305.6 | 6868.7 | 6506.5 | 6051.0 | 5971.6 | 6134.8 | 7487.5 | 6189.3 |
| 47.5° | 10090.1 | 9919.0 | 9051.5 | 7963.2 | 7422.1 | 7115.9 | 6674.3 | 6581.1 | 6682.1 | 8138.9 | 6820.5 |
| 50° | 10486.5 | 10391.6 | 9629.9 | 8510.4 | 7980.3 | 7800.0 | 7456.4 | 7300.9 | 7325.8 | 8841.6 | 7557.5 |
| 52.5° | 10304.6 | 10272.0 | 9762.0 | 8885.1 | 8496.4 | 8555.6 | 8313.0 | 8149.7 | 8121.8 | 9609.6 | 8372.1 |
| 55° | 9920.6 | 9905.0 | 9656.2 | 9093.5 | 8951.9 | 9247.4 | 9514.8 | 9373.3 | 9109.1 | 10425.8 | 9045.2 |
| 57.5° | 9371.8 | 9430.9 | 9609.6 | 9494.6 | 9511.7 | 9978.1 | 10631.1 | 10704.2 | 10309.3 | 11075.7 | 9544.3 |
| 60° | 7905.7 | 8064.2 | 8883.6 | 9925.3 | 10722.8 | 11193.8 | 11826.6 | 11963.4 | 11326.0 | 11520.4 | 10121.2 |
| 62.5° | 5844.1 | 6071.1 | 7238.7 | 9152.5 | 11389.7 | 13505.7 | 13417.1 | 13356.5 | 12296.2 | 12115.8 | 11170.5 |
| 65° | 3432.8 | 3698.7 | 4685.9 | 7151.7 | 10383.9 | 14992.1 | 16386.5 | 15547.0 | 13774.6 | 13353.4 | 12841.8 |
| 67.5° | 1710.2 | 1711.7 | 2157.9 | 3774.8 | 7674.1 | 13955.0 | 20721.1 | 20236.0 | 16918.3 | 15177.0 | 13501.1 |
| 70° | 1315.3 | 1351.0 | 1596.7 | 2193.7 | 3880.6 | 10869.0 | 21714.6 | 23706.2 | 20077.5 | 15096.2 | 11455.1 |
| 72.5° | 1114.7 | 1138.0 | 1421.0 | 1909.1 | 2901.1 | 5967.0 | 18797.9 | 20954.3 | 19158.6 | 12754.8 | 8443.6 |
| 75° | 802.2 | 820.9 | 1257.7 | 1732.0 | 2671.0 | 2960.1 | 12894.7 | 15540.9 | 14374.8 | 8972.2 | 4647.1 |
| 77.5° | 199.0 | 197.4 | 438.4 | 1405.4 | 2389.6 | 2465.7 | 7398.8 | 9965.7 | 8247.7 | 3673.7 | 1194.0 |
| 80° | 88.6 | 85.5 | 99.5 | 295.4 | 2223.2 | 2327.4 | 3254.0 | 5032.6 | 3163.8 | 595.5 | 365.4 |
| 82.5° | 62.2 | 59.1 | 62.2 | 108.8 | 743.2 | 2159.4 | 1966.7 | 2181.2 | 1158.3 | 203.7 | 155.5 |
| 85° | 20.3 | 18.6 | 34.2 | 91.8 | 208.4 | 1245.3 | 1918.5 | 1629.4 | 861.3 | 87.1 | 104.1 |
| 87.5° | 3.1 | 3.1 | 12.5 | 49.7 | 60.7 | 415.1 | 1125.7 | 1128.7 | 387.1 | 51.4 | 46.6 |
| 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-06-LED-U-SL3-600-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 5211.4 | 5211.4 | 5211.4 | 5211.4 | 5211.4 | 5211.4 | 5211.4 | 5211.4 | 5211.4 | 5211.4 | 5211.4 |
| 2.5° | 5132.0 | 5040.4 | 4911.3 | 4782.3 | 4665.7 | 4546.0 | 4449.5 | 4404.5 | 4384.3 | 4356.2 | 4295.7 |
| 5° | 5013.9 | 4847.6 | 4564.6 | 4286.4 | 4026.6 | 3778.0 | 3565.0 | 3443.7 | 3313.0 | 3306.9 | 3243.2 |
| 7.5° | 4824.2 | 4587.9 | 4141.7 | 3709.5 | 3313.0 | 2933.7 | 2607.2 | 2395.8 | 2251.2 | 2161.1 | 2098.9 |
| 10° | 4612.8 | 4309.7 | 3718.8 | 3111.0 | 2571.5 | 2064.6 | 1644.9 | 1371.3 | 1204.9 | 1120.9 | 1072.8 |
| 12.5° | 4444.9 | 4064.0 | 3302.2 | 2537.3 | 1861.0 | 1279.5 | 889.3 | 690.3 | 601.7 | 567.4 | 551.9 |
| 15° | 4300.3 | 3838.5 | 2911.9 | 2024.2 | 1242.2 | 735.4 | 514.6 | 449.3 | 435.4 | 435.4 | 433.7 |
| 17.5° | 4154.2 | 3620.9 | 2532.6 | 1520.5 | 782.0 | 481.9 | 405.8 | 396.5 | 398.0 | 402.6 | 402.6 |
| 20° | 4015.8 | 3414.1 | 2167.2 | 1083.6 | 513.0 | 385.6 | 368.5 | 365.4 | 370.0 | 376.2 | 374.7 |
| 22.5° | 3903.9 | 3232.2 | 1825.3 | 744.7 | 394.9 | 349.8 | 338.9 | 334.3 | 337.4 | 342.1 | 340.4 |
| 25° | 3824.6 | 3076.7 | 1511.2 | 519.2 | 343.6 | 318.8 | 306.3 | 300.0 | 297.0 | 300.0 | 298.5 |
| 27.5° | 3776.4 | 2946.2 | 1215.8 | 390.3 | 307.8 | 287.7 | 272.1 | 259.6 | 251.9 | 251.9 | 248.8 |
| 30° | 3745.3 | 2823.3 | 953.1 | 323.4 | 278.2 | 256.6 | 234.8 | 217.7 | 205.2 | 202.1 | 200.6 |
| 32.5° | 3743.7 | 2717.7 | 712.1 | 286.0 | 250.3 | 225.5 | 199.0 | 177.3 | 163.3 | 160.1 | 158.6 |
| 35° | 3782.6 | 2632.2 | 524.0 | 258.1 | 225.5 | 195.9 | 166.3 | 143.0 | 130.6 | 130.6 | 129.0 |
| 37.5° | 3883.6 | 2582.3 | 396.5 | 236.3 | 205.2 | 171.0 | 139.9 | 118.2 | 107.3 | 110.4 | 110.4 |
| 40° | 4071.8 | 2573.0 | 323.4 | 219.2 | 188.1 | 149.2 | 113.4 | 96.4 | 91.8 | 96.4 | 96.4 |
| 42.5° | 4359.4 | 2622.7 | 287.7 | 206.7 | 172.6 | 127.5 | 94.8 | 82.4 | 80.8 | 85.5 | 85.5 |
| 45° | 4734.1 | 2720.7 | 267.4 | 195.9 | 155.5 | 105.7 | 79.3 | 71.5 | 70.0 | 76.2 | 76.2 |
| 47.5° | 5188.1 | 2852.9 | 248.8 | 183.4 | 138.4 | 87.1 | 66.9 | 60.7 | 60.7 | 66.9 | 68.4 |
| 50° | 5726.0 | 3031.7 | 230.1 | 171.0 | 124.4 | 73.0 | 56.0 | 51.4 | 52.9 | 59.1 | 60.7 |
| 52.5° | 6344.8 | 3250.9 | 213.0 | 160.1 | 108.8 | 59.1 | 46.6 | 43.6 | 45.1 | 51.4 | 52.9 |
| 55° | 6878.0 | 3442.1 | 192.8 | 149.2 | 88.6 | 48.2 | 38.9 | 37.3 | 38.9 | 46.6 | 46.6 |
| 57.5° | 7342.8 | 3625.5 | 174.1 | 132.2 | 70.0 | 38.9 | 31.1 | 31.1 | 34.2 | 41.9 | 43.6 |
| 60° | 7960.1 | 3914.7 | 158.6 | 111.9 | 52.9 | 29.6 | 24.9 | 26.4 | 31.1 | 37.3 | 38.9 |
| 62.5° | 9053.0 | 4406.1 | 138.4 | 93.3 | 38.9 | 23.3 | 20.3 | 21.8 | 28.0 | 35.8 | 37.3 |
| 65° | 10421.2 | 4870.9 | 115.1 | 77.7 | 29.6 | 17.1 | 15.5 | 20.3 | 28.0 | 35.8 | 37.3 |
| 67.5° | 10281.3 | 4236.6 | 90.1 | 62.2 | 21.8 | 14.0 | 12.5 | 18.6 | 26.4 | 35.8 | 37.3 |
| 70° | 8337.9 | 2969.5 | 66.9 | 41.9 | 17.1 | 12.5 | 12.5 | 18.6 | 26.4 | 34.2 | 35.8 |
| 72.5° | 5783.5 | 1652.7 | 51.4 | 28.0 | 15.5 | 12.5 | 10.8 | 17.1 | 24.9 | 34.2 | 35.8 |
| 75° | 2751.8 | 506.9 | 40.4 | 20.3 | 14.0 | 10.8 | 9.3 | 17.1 | 24.9 | 34.2 | 35.8 |
| 77.5° | 528.6 | 129.0 | 32.6 | 17.1 | 12.5 | 10.8 | 9.3 | 15.5 | 24.9 | 32.6 | 34.2 |
| 80° | 178.8 | 57.5 | 26.4 | 15.5 | 12.5 | 10.8 | 9.3 | 15.5 | 23.3 | 31.1 | 32.6 |
| 82.5° | 97.9 | 32.6 | 23.3 | 14.0 | 12.5 | 9.3 | 7.8 | 14.0 | 21.8 | 31.1 | 32.6 |
| 85° | 76.2 | 23.3 | 18.6 | 14.0 | 12.5 | 9.3 | 7.8 | 14.0 | 21.8 | 29.6 | 31.1 |
| 87.5° | 38.9 | 17.1 | 15.5 | 14.0 | 12.5 | 9.3 | 7.8 | 12.5 | 20.3 | 28.0 | 31.1 |
| 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)