

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: P299506

Luminaire Tested: **GAA-AF-09-LED-U-5NQ-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299506
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24141)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: GAA-AF-09-LED-U-5NQ-600
Description: GALLEONAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 36036.4 lumens
Efficiency: N/A
Efficacy: 124.3 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B5 - U0 - G3

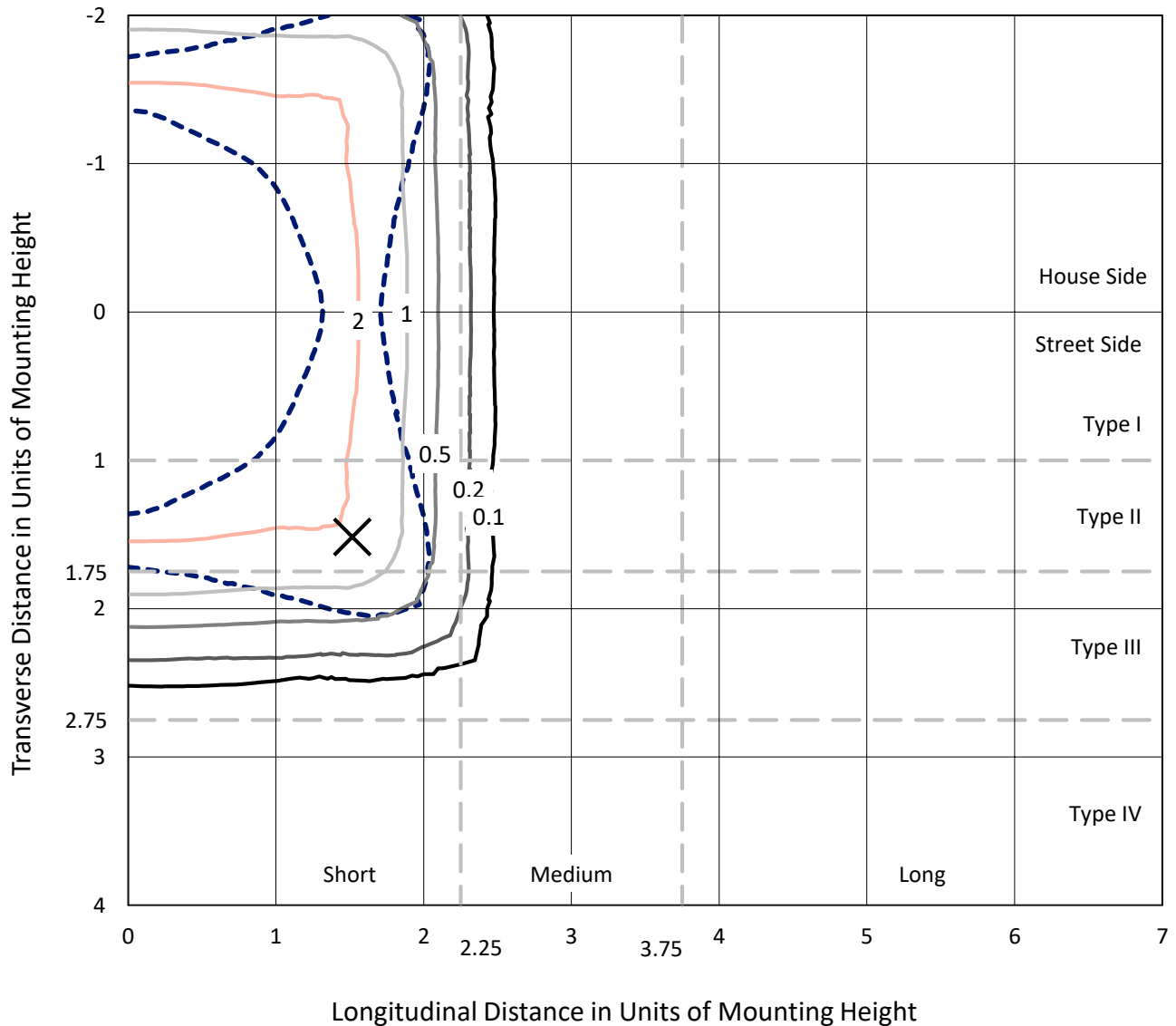
Input Watts (W): 290
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

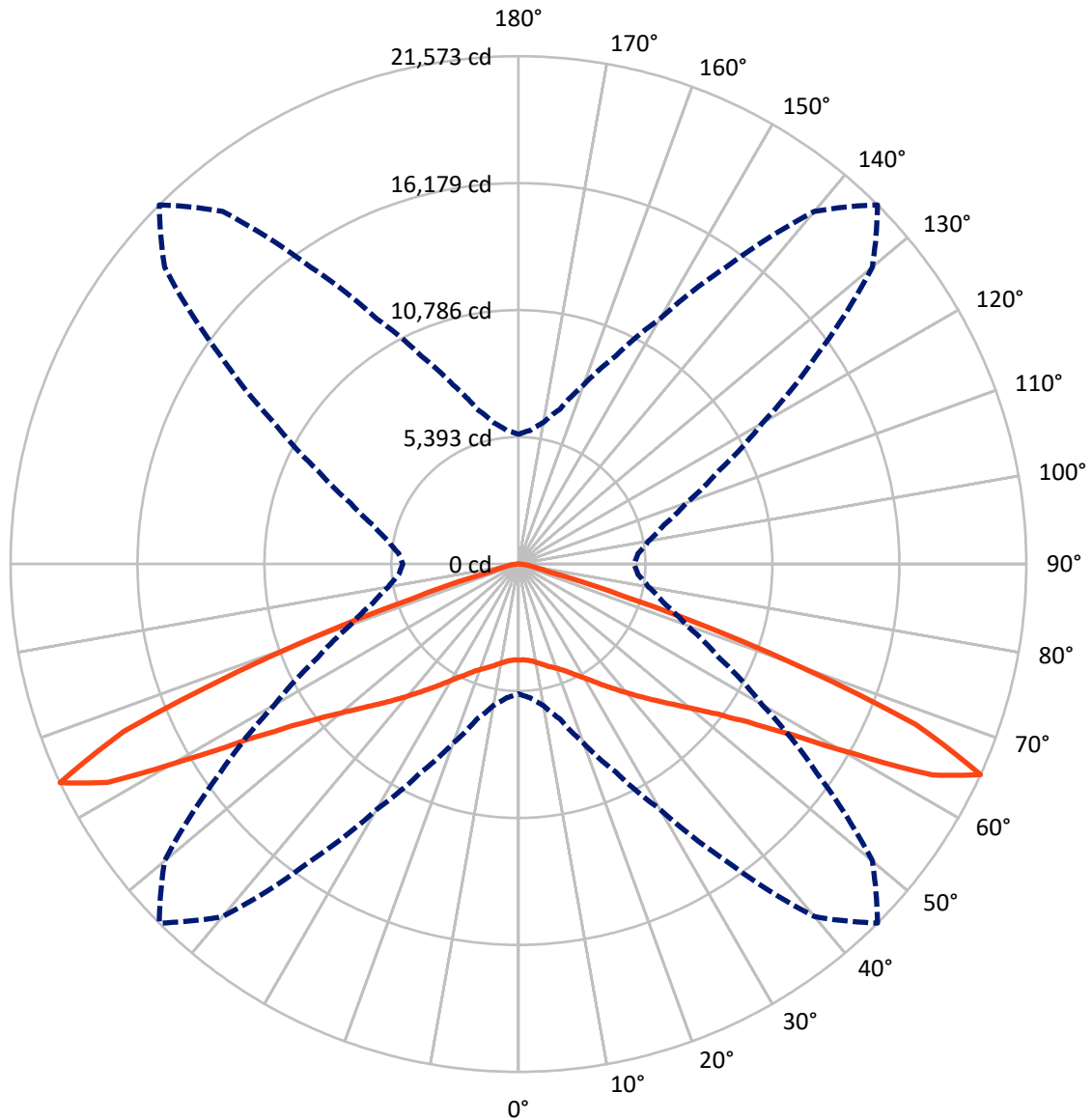
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.5 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 18018.2 | 0.0 | 18018.2 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 18018.2 | 0.0 | 18018.2 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 36036.4 | 0.0 | 36036.4 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 397.4 | 1.1 |
| 10°-20° | 1274.6 | 3.5 |
| 20°-30° | 2383.3 | 6.6 |
| 30°-40° | 4030.8 | 11.2 |
| 40°-50° | 6590.9 | 18.3 |
| 50°-60° | 10480.5 | 29.1 |
| 60°-70° | 9473.7 | 26.3 |
| 70°-80° | 1198.9 | 3.3 |
| 80°-90° | 206.2 | 0.6 |
| 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° | 36036.4 | 100.0 |
| 0°-180° | 36036.4 | 100.0 |



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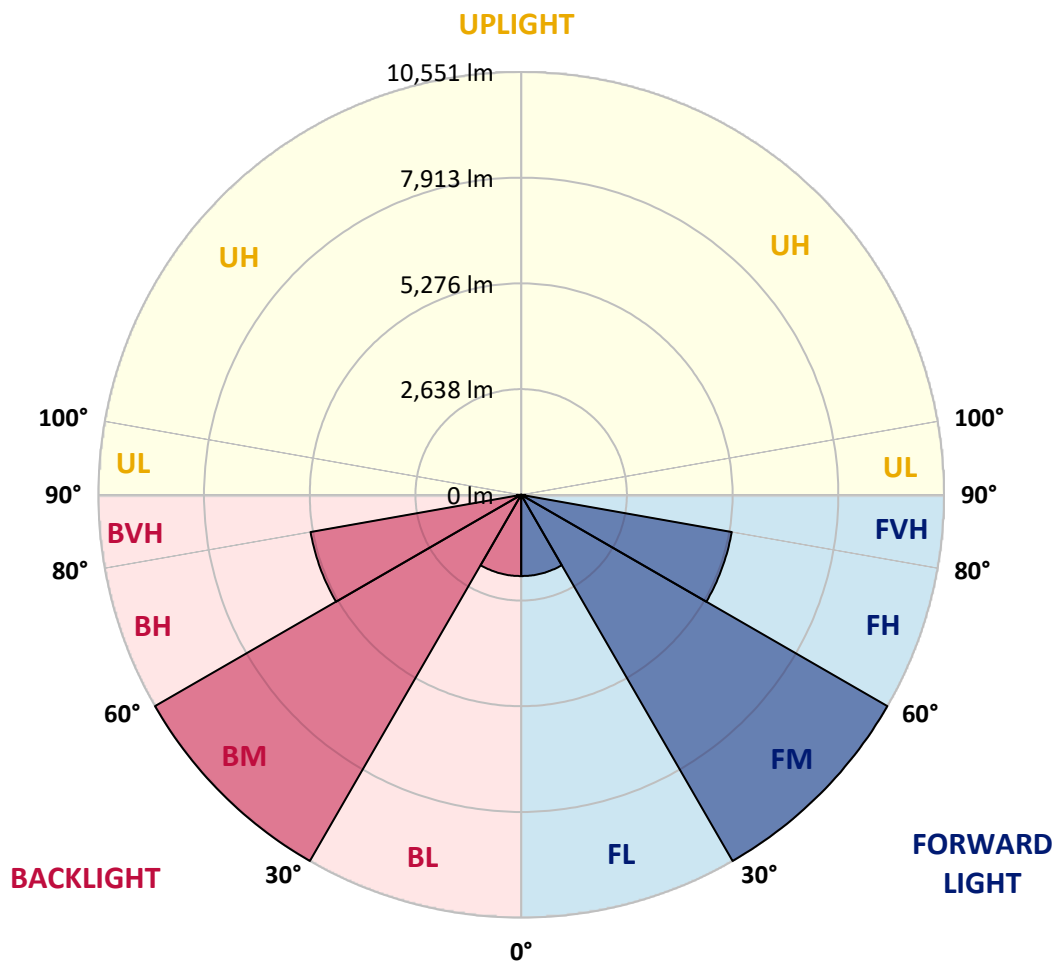
CATALOG NUMBER: GAA-AF-09-LED-U-5NQ-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 2027.7 | 5.6 | | | |
| FM (30°-60°) | 10551.1 | 29.3 | | | |
| FH (60°-80°) | 5336.3 | 14.8 | | | G3/7500 |
| FVH (80°-90°) | 103.1 | 0.3 | | | G2/225 |
| BL (0°-30°) | 2027.7 | 5.6 | B3/2500 | | |
| BM (30°-60°) | 10551.1 | 29.3 | B5 | | |
| BH (60°-80°) | 5336.3 | 14.8 | B5 | | G3/7500 |
| BVH (80°-90°) | 103.1 | 0.3 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B5-U0-G3

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 4077.5 | 4077.5 | 4077.5 | 4077.5 | 4077.5 | 4077.5 | 4077.5 | 4077.5 | 4077.5 | 4077.5 | 4077.5 |
| 2.5° | 4080.9 | 4084.3 | 4087.7 | 4084.3 | 4087.7 | 4082.6 | 4079.2 | 4084.3 | 4079.2 | 4074.2 | 4077.5 |
| 5° | 4116.4 | 4118.0 | 4118.0 | 4113.0 | 4118.0 | 4114.7 | 4109.6 | 4116.4 | 4111.3 | 4106.2 | 4109.6 |
| 7.5° | 4175.4 | 4182.2 | 4177.1 | 4172.1 | 4175.4 | 4172.1 | 4168.7 | 4170.4 | 4168.7 | 4163.6 | 4165.3 |
| 10° | 4254.7 | 4259.8 | 4256.4 | 4254.7 | 4258.1 | 4256.4 | 4253.1 | 4251.4 | 4253.1 | 4248.0 | 4248.0 |
| 12.5° | 4350.9 | 4349.3 | 4347.6 | 4349.3 | 4354.3 | 4354.3 | 4352.6 | 4354.3 | 4357.7 | 4359.4 | 4356.0 |
| 15° | 4445.5 | 4448.8 | 4448.8 | 4448.8 | 4459.0 | 4467.4 | 4472.5 | 4475.8 | 4482.6 | 4484.3 | 4477.5 |
| 17.5° | 4563.6 | 4563.6 | 4561.9 | 4563.6 | 4573.7 | 4587.2 | 4592.3 | 4599.0 | 4605.8 | 4610.9 | 4602.4 |
| 20° | 4695.2 | 4698.6 | 4698.6 | 4702.0 | 4715.5 | 4730.7 | 4730.7 | 4734.1 | 4730.7 | 4734.1 | 4729.0 |
| 22.5° | 4855.6 | 4865.7 | 4865.7 | 4867.4 | 4880.9 | 4899.5 | 4894.4 | 4899.5 | 4891.0 | 4897.8 | 4891.0 |
| 25° | 5064.9 | 5080.0 | 5076.7 | 5076.7 | 5086.8 | 5098.6 | 5100.3 | 5110.4 | 5108.7 | 5117.2 | 5112.1 |
| 27.5° | 5301.1 | 5324.8 | 5331.5 | 5329.8 | 5336.6 | 5348.4 | 5351.8 | 5363.6 | 5356.8 | 5363.6 | 5360.2 |
| 30° | 5584.7 | 5594.8 | 5608.3 | 5613.4 | 5621.8 | 5633.6 | 5633.6 | 5635.3 | 5626.9 | 5637.0 | 5642.1 |
| 32.5° | 5878.3 | 5896.9 | 5910.4 | 5940.8 | 5956.0 | 5964.4 | 5962.7 | 5966.1 | 5957.7 | 5971.2 | 5981.3 |
| 35° | 6266.5 | 6280.0 | 6302.0 | 6325.6 | 6345.8 | 6344.2 | 6339.1 | 6340.8 | 6340.8 | 6352.6 | 6362.7 |
| 37.5° | 6734.0 | 6737.4 | 6766.1 | 6799.8 | 6810.0 | 6799.8 | 6769.5 | 6762.7 | 6747.5 | 6762.7 | 6779.6 |
| 40° | 7228.5 | 7240.3 | 7297.7 | 7319.7 | 7324.7 | 7306.2 | 7262.3 | 7237.0 | 7203.2 | 7221.8 | 7245.4 |
| 42.5° | 7746.6 | 7770.3 | 7822.6 | 7861.4 | 7878.3 | 7866.5 | 7805.7 | 7766.9 | 7723.0 | 7733.1 | 7756.8 |
| 45° | 8320.5 | 8349.2 | 8423.4 | 8460.6 | 8492.6 | 8474.1 | 8415.0 | 8355.9 | 8286.7 | 8291.8 | 8328.9 |
| 47.5° | 8961.8 | 8990.5 | 9086.7 | 9149.1 | 9166.0 | 9162.6 | 9096.8 | 9015.8 | 8921.3 | 8917.9 | 8950.0 |
| 50° | 9680.8 | 9709.5 | 9829.3 | 9925.5 | 9974.4 | 9969.4 | 9891.7 | 9777.0 | 9662.2 | 9663.9 | 9704.4 |
| 52.5° | 10382.9 | 10418.3 | 10543.2 | 10708.6 | 10804.8 | 10874.0 | 10826.7 | 10718.7 | 10578.6 | 10582.0 | 10619.2 |
| 55° | 11041.1 | 11100.2 | 11243.6 | 11468.1 | 11647.0 | 11841.1 | 11896.8 | 11893.4 | 11809.0 | 11832.6 | 11869.8 |
| 57.5° | 11360.1 | 11447.8 | 11668.9 | 12023.3 | 12387.9 | 12782.8 | 13117.0 | 13366.8 | 13473.1 | 13633.4 | 13596.3 |
| 60° | 10755.9 | 10895.9 | 11221.7 | 11743.2 | 12463.8 | 13287.4 | 14170.1 | 15032.5 | 15768.4 | 16323.7 | 16004.7 |
| 62.5° | 8806.5 | 8988.8 | 9383.7 | 10052.1 | 11142.3 | 12460.5 | 14149.9 | 16188.6 | 18409.7 | 19749.7 | 18792.8 |
| 65° | 5510.4 | 5699.4 | 6101.1 | 6816.7 | 8092.6 | 9731.4 | 12023.3 | 15402.2 | 19552.3 | 21572.5 | 19624.8 |
| 67.5° | 2148.5 | 2251.4 | 2469.1 | 2926.5 | 3885.1 | 5343.3 | 7643.7 | 11478.2 | 16441.8 | 18212.2 | 16136.3 |
| 70° | 1076.8 | 1086.9 | 1127.4 | 1211.8 | 1417.7 | 1841.3 | 2801.6 | 5321.4 | 9429.3 | 11388.8 | 9090.1 |
| 72.5° | 778.0 | 779.7 | 800.0 | 837.1 | 902.9 | 997.4 | 1179.7 | 1628.7 | 3066.6 | 4686.8 | 2874.2 |
| 75° | 595.8 | 602.5 | 614.3 | 634.6 | 670.0 | 717.3 | 783.1 | 938.4 | 1162.8 | 1348.5 | 1134.1 |
| 77.5° | 459.1 | 472.6 | 481.0 | 499.6 | 521.5 | 553.6 | 572.1 | 631.2 | 734.2 | 773.0 | 761.2 |
| 80° | 349.4 | 361.2 | 379.7 | 394.9 | 410.1 | 425.3 | 418.6 | 445.6 | 499.6 | 531.6 | 514.8 |
| 82.5° | 222.8 | 236.3 | 290.3 | 303.8 | 310.5 | 320.7 | 308.9 | 310.5 | 334.2 | 354.4 | 334.2 |
| 85° | 143.5 | 151.9 | 184.0 | 200.8 | 202.5 | 209.3 | 204.2 | 192.4 | 192.4 | 175.5 | 197.5 |
| 87.5° | 65.8 | 67.5 | 82.7 | 97.9 | 101.3 | 91.1 | 89.4 | 86.1 | 69.2 | 65.8 | 70.9 |
| 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: GAA-AF-09-LED-U-5NQ-600

CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 4077.5 | 4077.5 | 4077.5 | 4077.5 | 4077.5 | 4077.5 | 4077.5 | 4077.5 |
| 2.5° | 4075.9 | 4079.2 | 4080.9 | 4086.0 | 4087.7 | 4087.7 | 4089.4 | 4092.7 |
| 5° | 4107.9 | 4113.0 | 4114.7 | 4121.4 | 4123.1 | 4121.4 | 4124.8 | 4126.5 |
| 7.5° | 4165.3 | 4173.7 | 4177.1 | 4183.9 | 4178.8 | 4185.6 | 4187.2 | 4187.2 |
| 10° | 4249.7 | 4258.1 | 4259.8 | 4266.6 | 4263.2 | 4266.6 | 4266.6 | 4263.2 |
| 12.5° | 4361.1 | 4362.8 | 4357.7 | 4362.8 | 4356.0 | 4359.4 | 4354.3 | 4350.9 |
| 15° | 4484.3 | 4479.2 | 4467.4 | 4467.4 | 4457.3 | 4459.0 | 4457.3 | 4455.6 |
| 17.5° | 4604.1 | 4594.0 | 4585.5 | 4582.2 | 4573.7 | 4572.0 | 4567.0 | 4567.0 |
| 20° | 4735.8 | 4730.7 | 4725.6 | 4718.9 | 4710.4 | 4702.0 | 4700.3 | 4703.7 |
| 22.5° | 4894.4 | 4892.7 | 4892.7 | 4889.3 | 4877.5 | 4869.1 | 4864.0 | 4864.0 |
| 25° | 5107.0 | 5091.9 | 5091.9 | 5090.2 | 5085.1 | 5080.0 | 5069.9 | 5075.0 |
| 27.5° | 5346.7 | 5338.3 | 5345.0 | 5343.3 | 5338.3 | 5338.3 | 5331.5 | 5331.5 |
| 30° | 5642.1 | 5638.7 | 5648.8 | 5640.4 | 5623.5 | 5621.8 | 5615.1 | 5606.6 |
| 32.5° | 5983.0 | 5979.6 | 5994.8 | 5984.7 | 5957.7 | 5942.5 | 5929.0 | 5922.2 |
| 35° | 6362.7 | 6364.4 | 6383.0 | 6376.2 | 6345.8 | 6335.7 | 6312.1 | 6308.7 |
| 37.5° | 6777.9 | 6804.9 | 6837.0 | 6843.7 | 6818.4 | 6811.6 | 6786.3 | 6772.8 |
| 40° | 7265.6 | 7301.1 | 7350.0 | 7361.8 | 7334.8 | 7329.8 | 7294.3 | 7275.8 |
| 42.5° | 7785.5 | 7846.2 | 7907.0 | 7917.1 | 7890.1 | 7863.1 | 7829.3 | 7815.8 |
| 45° | 8366.0 | 8438.6 | 8517.9 | 8538.2 | 8497.7 | 8465.6 | 8421.7 | 8421.7 |
| 47.5° | 9017.5 | 9108.6 | 9198.1 | 9253.8 | 9216.7 | 9182.9 | 9130.6 | 9096.8 |
| 50° | 9787.1 | 9912.0 | 10028.4 | 10085.8 | 10026.8 | 9962.6 | 9871.5 | 9841.1 |
| 52.5° | 10752.5 | 10887.5 | 10988.8 | 10958.4 | 10867.2 | 10777.8 | 10678.2 | 10637.7 |
| 55° | 11984.5 | 12030.1 | 12030.1 | 11915.3 | 11733.0 | 11582.8 | 11425.9 | 11373.6 |
| 57.5° | 13525.4 | 13349.9 | 13079.9 | 12737.2 | 12306.9 | 11932.2 | 11679.0 | 11559.2 |
| 60° | 15336.3 | 14492.5 | 13538.9 | 12602.2 | 11832.6 | 11198.0 | 10821.7 | 10649.5 |
| 62.5° | 16543.1 | 14335.5 | 12425.0 | 10921.3 | 9814.1 | 9049.6 | 8529.8 | 8327.2 |
| 65° | 15461.2 | 11955.8 | 9397.2 | 7598.1 | 6391.4 | 5613.4 | 5098.6 | 4909.6 |
| 67.5° | 11324.6 | 7491.8 | 5004.1 | 3586.4 | 2627.8 | 2096.2 | 1885.2 | 1797.4 |
| 70° | 5083.4 | 2637.9 | 1616.8 | 1262.4 | 1088.6 | 999.1 | 960.3 | 946.8 |
| 72.5° | 1532.5 | 1108.8 | 935.0 | 843.9 | 774.7 | 730.8 | 698.7 | 695.3 |
| 75° | 924.9 | 769.6 | 683.5 | 629.5 | 585.6 | 550.2 | 533.3 | 528.3 |
| 77.5° | 646.4 | 565.4 | 524.9 | 486.1 | 452.3 | 425.3 | 410.1 | 398.3 |
| 80° | 454.0 | 415.2 | 396.6 | 374.7 | 352.7 | 327.4 | 305.5 | 295.4 |
| 82.5° | 303.8 | 295.4 | 295.4 | 281.8 | 263.3 | 239.7 | 195.8 | 185.6 |
| 85° | 195.8 | 194.1 | 197.5 | 192.4 | 178.9 | 153.6 | 126.6 | 119.8 |
| 87.5° | 91.1 | 92.8 | 103.0 | 101.3 | 97.9 | 81.0 | 64.1 | 60.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)