

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: P299870

Luminaire Tested: **GAA-AF-10-LED-U-5WQ-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299870
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24143)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: GAA-AF-10-LED-U-5WQ-7030
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(10) 70 CRI, 3000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 59817.7 lumens
Efficiency: N/A
Efficacy: 107.2 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B5 - U0 - G5

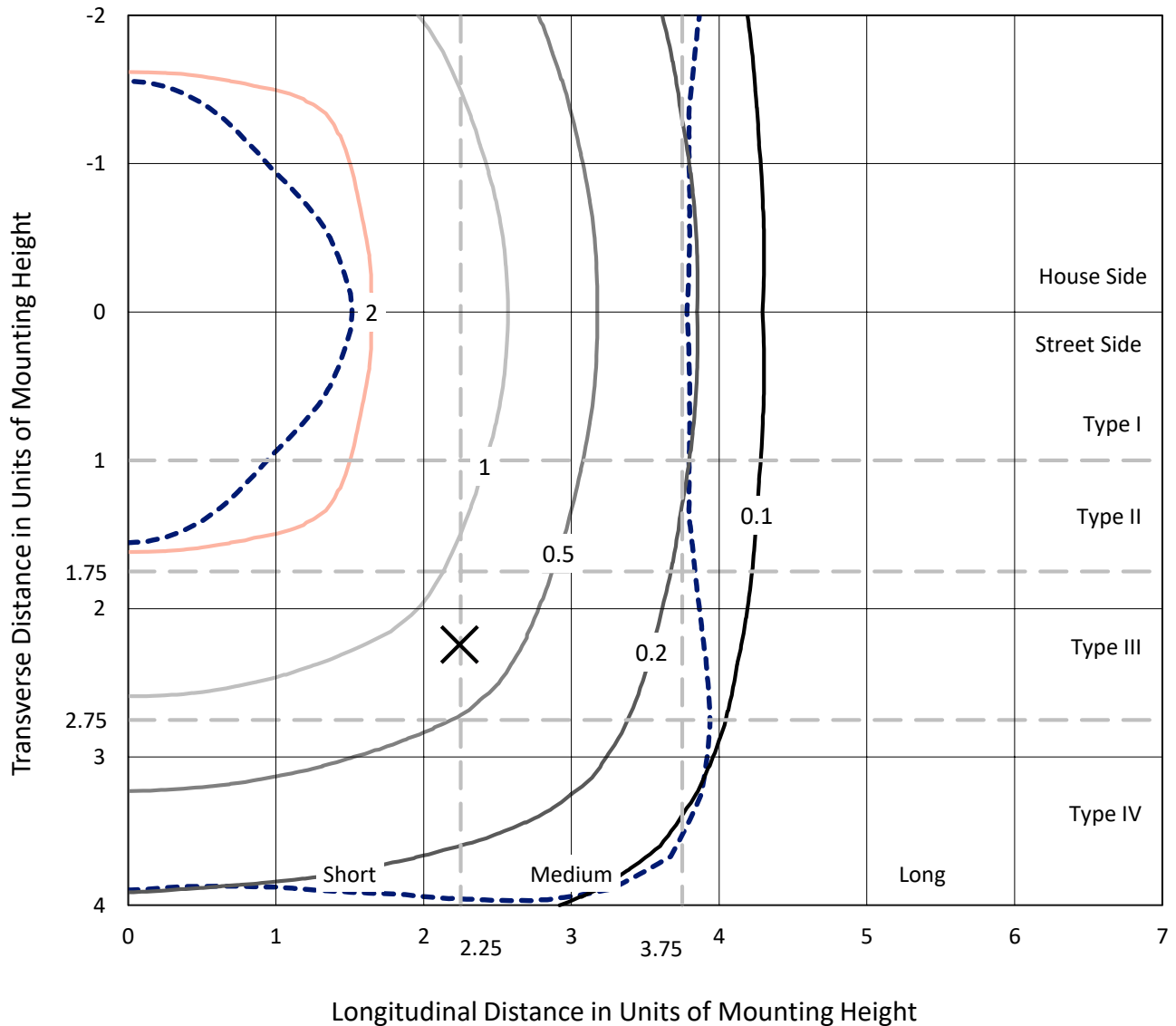
Input Watts (W): 558
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

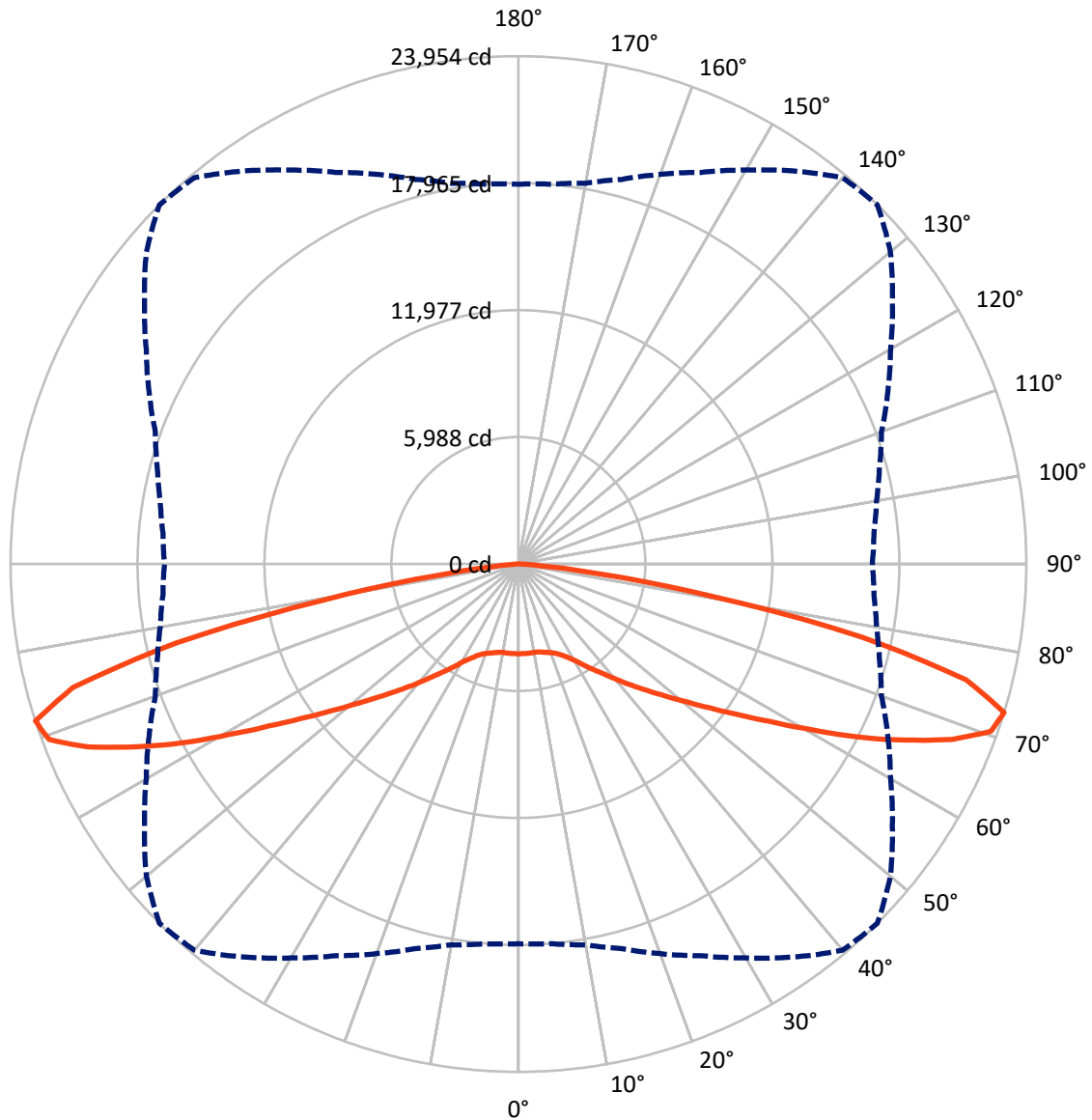
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.7 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 29908.8 | 0.0 | 29908.8 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 29908.8 | 0.0 | 29908.8 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 59817.7 | 0.0 | 59817.7 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 404.5 | 0.7 |
| 10°-20° | 1228.5 | 2.1 |
| 20°-30° | 2244.9 | 3.8 |
| 30°-40° | 3870.7 | 6.5 |
| 40°-50° | 6616.9 | 11.1 |
| 50°-60° | 10725.1 | 17.9 |
| 60°-70° | 17792.5 | 29.7 |
| 70°-80° | 15671.0 | 26.2 |
| 80°-90° | 1263.5 | 2.1 |
| 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° | 59817.7 | 100.0 |
| 0°-180° | 59817.7 | 100.0 |



REPORT NUMBER: P299870

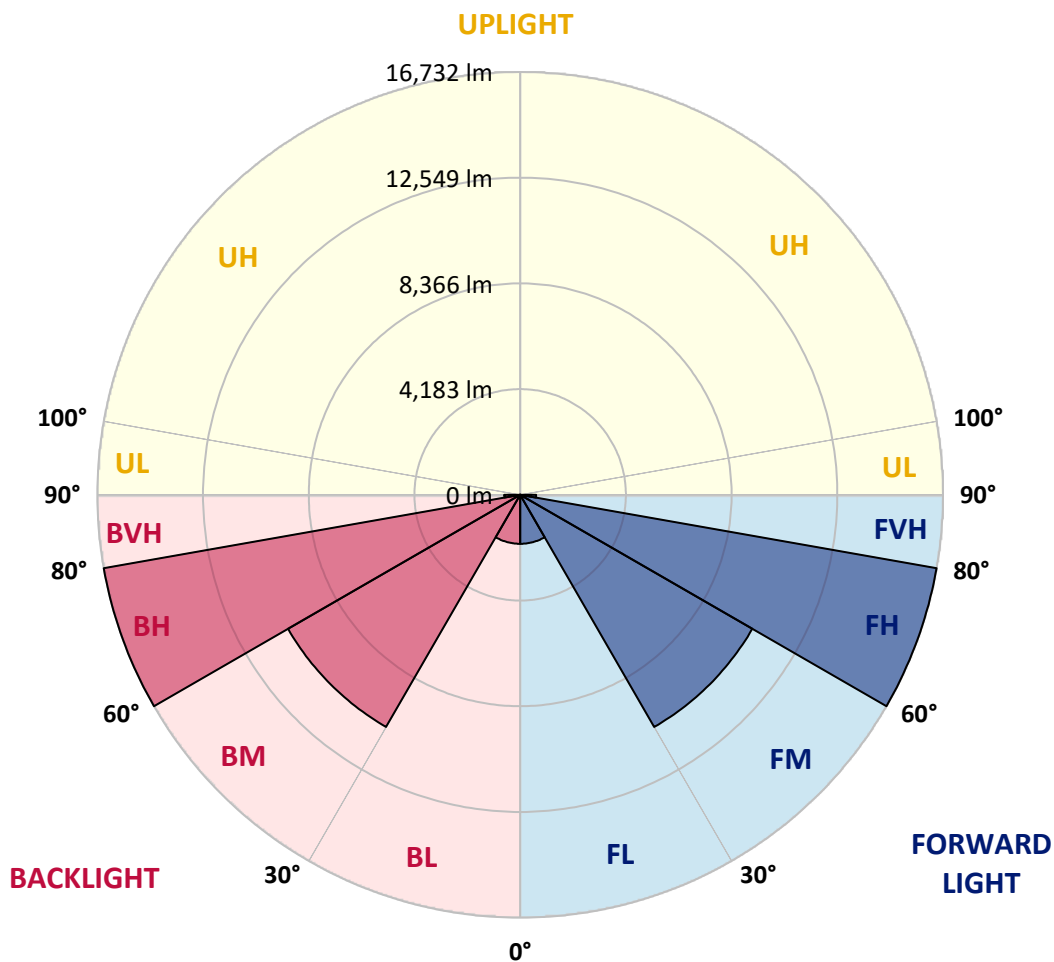
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|--------|
| | | | B | U | G |
| FL (0°-30°) | 1939.0 | 3.2 | | | |
| FM (30°-60°) | 10606.3 | 17.7 | | | |
| FH (60°-80°) | 16731.8 | 28.0 | | | G5 |
| FVH (80°-90°) | 631.8 | 1.1 | | | G4/750 |
| BL (0°-30°) | 1939.0 | 3.2 | B3/2500 | | |
| BM (30°-60°) | 10606.3 | 17.7 | B5 | | |
| BH (60°-80°) | 16731.8 | 28.0 | B5 | | G5 |
| BVH (80°-90°) | 631.8 | 1.1 | | | G4/750 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B5-U0-G5

Type V Short





REPORT NUMBER: P299870

CATALOG NUMBER: GAA-AF-10-LED-U-5WQ-7030

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 4236.0 | 4236.0 | 4236.0 | 4236.0 | 4236.0 | 4236.0 | 4236.0 | 4236.0 | 4236.0 | 4236.0 | 4236.0 |
| 2.5° | 4236.0 | 4238.8 | 4241.5 | 4238.8 | 4238.8 | 4236.0 | 4233.3 | 4236.0 | 4233.3 | 4227.8 | 4230.5 |
| 5° | 4249.7 | 4255.2 | 4255.2 | 4249.7 | 4252.5 | 4249.7 | 4244.3 | 4247.0 | 4241.5 | 4233.3 | 4233.3 |
| 7.5° | 4266.2 | 4268.9 | 4268.9 | 4263.5 | 4266.2 | 4260.7 | 4255.2 | 4252.5 | 4247.0 | 4236.0 | 4227.8 |
| 10° | 4290.9 | 4293.6 | 4290.9 | 4285.4 | 4285.4 | 4277.2 | 4263.5 | 4258.0 | 4247.0 | 4230.5 | 4222.3 |
| 12.5° | 4318.3 | 4321.1 | 4318.3 | 4312.8 | 4310.1 | 4296.4 | 4285.4 | 4277.2 | 4268.9 | 4255.2 | 4241.5 |
| 15° | 4356.7 | 4362.2 | 4356.7 | 4345.8 | 4337.5 | 4326.6 | 4321.1 | 4323.8 | 4326.6 | 4315.6 | 4301.9 |
| 17.5° | 4428.1 | 4430.8 | 4422.6 | 4397.9 | 4386.9 | 4375.9 | 4375.9 | 4381.4 | 4389.7 | 4384.2 | 4370.5 |
| 20° | 4559.8 | 4551.5 | 4532.3 | 4502.1 | 4488.4 | 4469.2 | 4466.5 | 4469.2 | 4469.2 | 4466.5 | 4455.5 |
| 22.5° | 4724.4 | 4718.9 | 4694.2 | 4655.8 | 4636.6 | 4625.6 | 4609.1 | 4595.4 | 4592.7 | 4584.4 | 4573.5 |
| 25° | 4921.9 | 4919.2 | 4889.0 | 4856.1 | 4842.3 | 4828.6 | 4814.9 | 4795.7 | 4779.2 | 4760.0 | 4749.1 |
| 27.5° | 5174.3 | 5163.3 | 5119.4 | 5103.0 | 5083.8 | 5075.5 | 5056.3 | 5034.4 | 5020.7 | 4996.0 | 4982.3 |
| 30° | 5451.4 | 5451.4 | 5415.7 | 5410.3 | 5410.3 | 5391.0 | 5369.1 | 5330.7 | 5306.0 | 5281.3 | 5273.1 |
| 32.5° | 5728.5 | 5731.2 | 5695.6 | 5706.6 | 5714.8 | 5728.5 | 5734.0 | 5720.3 | 5703.8 | 5701.1 | 5684.6 |
| 35° | 6129.1 | 6118.1 | 6082.4 | 6090.7 | 6087.9 | 6085.2 | 6085.2 | 6115.3 | 6120.8 | 6126.3 | 6093.4 |
| 37.5° | 6625.6 | 6625.6 | 6590.0 | 6590.0 | 6573.5 | 6557.1 | 6535.1 | 6554.3 | 6584.5 | 6592.7 | 6570.8 |
| 40° | 7193.6 | 7212.8 | 7168.9 | 7166.1 | 7171.6 | 7119.5 | 7094.8 | 7125.0 | 7144.2 | 7177.1 | 7152.4 |
| 42.5° | 7863.0 | 7849.3 | 7805.4 | 7799.9 | 7769.7 | 7753.2 | 7731.3 | 7756.0 | 7786.2 | 7808.1 | 7816.3 |
| 45° | 8505.0 | 8494.0 | 8444.6 | 8444.6 | 8414.4 | 8400.7 | 8411.7 | 8452.8 | 8466.6 | 8496.7 | 8526.9 |
| 47.5° | 9138.7 | 9125.0 | 9092.1 | 9105.8 | 9108.5 | 9133.2 | 9168.9 | 9207.3 | 9245.7 | 9286.9 | 9300.6 |
| 50° | 9786.2 | 9788.9 | 9753.3 | 9786.2 | 9827.3 | 9895.9 | 9992.0 | 10055.1 | 10134.6 | 10186.8 | 10203.2 |
| 52.5° | 10376.1 | 10387.0 | 10425.4 | 10502.3 | 10584.6 | 10719.0 | 10883.6 | 11037.2 | 11168.9 | 11256.7 | 11251.2 |
| 55° | 11083.9 | 11100.3 | 11193.6 | 11325.3 | 11459.8 | 11662.8 | 11906.9 | 12178.6 | 12398.0 | 12524.2 | 12444.7 |
| 57.5° | 11989.3 | 12024.9 | 12129.2 | 12307.5 | 12507.8 | 12771.2 | 13105.9 | 13514.7 | 13854.9 | 14025.0 | 13896.0 |
| 60° | 13232.1 | 13254.0 | 13380.2 | 13577.8 | 13819.2 | 14145.7 | 14592.9 | 15141.6 | 15621.7 | 15846.7 | 15698.5 |
| 62.5° | 14870.0 | 14911.1 | 15012.6 | 15212.9 | 15459.8 | 15830.2 | 16376.2 | 17062.1 | 17660.1 | 17972.9 | 17638.2 |
| 65° | 16826.1 | 16957.8 | 17042.8 | 17245.9 | 17476.3 | 17868.7 | 18439.3 | 19174.6 | 19816.6 | 20022.3 | 19635.5 |
| 67.5° | 18763.0 | 18878.3 | 19026.4 | 19259.6 | 19492.8 | 19934.5 | 20464.0 | 21177.4 | 21882.4 | 22069.0 | 21468.2 |
| 70° | 19610.8 | 19676.6 | 19907.1 | 20225.4 | 20672.5 | 21193.8 | 21805.6 | 22606.7 | 23479.2 | 23632.8 | 22870.1 |
| 72.5° | 17912.5 | 17978.4 | 18236.3 | 18776.8 | 19555.9 | 20384.5 | 21451.7 | 22628.7 | 23781.0 | 23953.8 | 22903.0 |
| 75° | 13547.6 | 13440.6 | 13821.9 | 14538.0 | 15588.8 | 16743.8 | 18236.3 | 19923.6 | 21588.9 | 21805.6 | 20551.8 |
| 77.5° | 7001.5 | 6987.8 | 7275.9 | 8164.8 | 9418.6 | 10732.7 | 12376.1 | 14282.9 | 15912.5 | 16571.0 | 15550.4 |
| 80° | 1972.6 | 1994.6 | 2131.7 | 2573.4 | 3306.0 | 4255.2 | 5539.2 | 7325.2 | 8658.6 | 9339.0 | 8768.3 |
| 82.5° | 773.7 | 834.0 | 886.2 | 968.5 | 1064.5 | 1204.4 | 1607.7 | 2392.4 | 3209.9 | 3835.5 | 3141.3 |
| 85° | 277.1 | 296.3 | 419.8 | 496.6 | 504.8 | 532.2 | 606.3 | 707.8 | 853.2 | 1017.9 | 836.8 |
| 87.5° | 104.3 | 115.2 | 134.4 | 222.2 | 219.5 | 200.3 | 244.2 | 255.1 | 192.0 | 175.6 | 216.7 |
| 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: GAA-AF-10-LED-U-5WQ-7030

CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 4236.0 | 4236.0 | 4236.0 | 4236.0 | 4236.0 | 4236.0 | 4236.0 | 4236.0 |
| 2.5° | 4225.0 | 4227.8 | 4227.8 | 4230.5 | 4233.3 | 4233.3 | 4238.8 | 4238.8 |
| 5° | 4227.8 | 4227.8 | 4222.3 | 4225.0 | 4222.3 | 4222.3 | 4225.0 | 4225.0 |
| 7.5° | 4222.3 | 4219.6 | 4214.1 | 4211.3 | 4205.8 | 4205.8 | 4205.8 | 4205.8 |
| 10° | 4214.1 | 4211.3 | 4205.8 | 4203.1 | 4200.4 | 4200.4 | 4200.4 | 4200.4 |
| 12.5° | 4236.0 | 4227.8 | 4222.3 | 4219.6 | 4219.6 | 4219.6 | 4219.6 | 4219.6 |
| 15° | 4293.6 | 4274.4 | 4260.7 | 4260.7 | 4263.5 | 4268.9 | 4268.9 | 4274.4 |
| 17.5° | 4365.0 | 4343.0 | 4329.3 | 4318.3 | 4323.8 | 4332.0 | 4337.5 | 4343.0 |
| 20° | 4450.0 | 4439.0 | 4419.8 | 4408.9 | 4408.9 | 4419.8 | 4425.3 | 4428.1 |
| 22.5° | 4568.0 | 4559.8 | 4551.5 | 4537.8 | 4537.8 | 4543.3 | 4554.3 | 4554.3 |
| 25° | 4743.6 | 4738.1 | 4732.6 | 4721.6 | 4718.9 | 4718.9 | 4724.4 | 4729.9 |
| 27.5° | 4963.1 | 4965.8 | 4960.3 | 4957.6 | 4949.3 | 4946.6 | 4954.8 | 4952.1 |
| 30° | 5256.6 | 5270.3 | 5284.1 | 5273.1 | 5259.4 | 5251.1 | 5242.9 | 5231.9 |
| 32.5° | 5654.4 | 5638.0 | 5627.0 | 5607.8 | 5583.1 | 5561.1 | 5544.7 | 5525.5 |
| 35° | 6030.3 | 6002.9 | 5991.9 | 6008.3 | 6005.6 | 5991.9 | 5972.7 | 5956.2 |
| 37.5° | 6491.2 | 6485.7 | 6491.2 | 6521.4 | 6515.9 | 6529.6 | 6491.2 | 6488.5 |
| 40° | 7072.8 | 7078.3 | 7116.7 | 7152.4 | 7171.6 | 7190.8 | 7168.9 | 7146.9 |
| 42.5° | 7747.7 | 7745.0 | 7758.7 | 7808.1 | 7841.0 | 7863.0 | 7816.3 | 7810.8 |
| 45° | 8461.1 | 8441.9 | 8452.8 | 8494.0 | 8526.9 | 8551.6 | 8499.5 | 8499.5 |
| 47.5° | 9245.7 | 9212.8 | 9177.1 | 9223.8 | 9243.0 | 9259.4 | 9218.3 | 9204.6 |
| 50° | 10120.9 | 10052.3 | 9975.5 | 9994.7 | 9994.7 | 9989.2 | 9937.1 | 9934.3 |
| 52.5° | 11125.0 | 10998.8 | 10858.9 | 10806.8 | 10776.6 | 10743.7 | 10653.2 | 10609.3 |
| 55° | 12280.1 | 12090.8 | 11871.3 | 11736.8 | 11665.5 | 11575.0 | 11424.1 | 11382.9 |
| 57.5° | 13629.9 | 13333.6 | 12955.0 | 12790.4 | 12631.2 | 12483.1 | 12315.7 | 12269.1 |
| 60° | 15229.4 | 14793.1 | 14291.1 | 13986.5 | 13813.7 | 13671.0 | 13498.2 | 13490.0 |
| 62.5° | 17012.7 | 16324.0 | 15756.1 | 15481.8 | 15355.6 | 15229.4 | 15064.8 | 15086.7 |
| 65° | 18826.1 | 18107.3 | 17575.1 | 17352.9 | 17234.9 | 17130.6 | 16966.0 | 16990.7 |
| 67.5° | 20614.9 | 19953.7 | 19369.4 | 19141.7 | 19010.0 | 18878.3 | 18730.1 | 18754.8 |
| 70° | 21898.9 | 21078.6 | 20420.1 | 19915.3 | 19599.8 | 19243.2 | 19012.7 | 18955.1 |
| 72.5° | 21531.3 | 20266.5 | 19221.2 | 18219.8 | 17632.7 | 17155.3 | 16831.6 | 16691.7 |
| 75° | 18634.1 | 16905.7 | 15561.3 | 14332.2 | 13640.9 | 13078.4 | 12669.7 | 12414.5 |
| 77.5° | 13838.4 | 11896.0 | 10307.5 | 8891.8 | 7772.4 | 7020.7 | 6491.2 | 6148.3 |
| 80° | 7574.9 | 5761.4 | 4211.3 | 2960.3 | 2175.6 | 1808.0 | 1596.7 | 1495.2 |
| 82.5° | 2359.4 | 1522.7 | 1122.1 | 968.5 | 899.9 | 861.5 | 798.4 | 696.9 |
| 85° | 751.7 | 658.4 | 611.8 | 584.4 | 556.9 | 485.6 | 334.7 | 304.5 |
| 87.5° | 290.8 | 299.0 | 296.3 | 279.8 | 285.3 | 205.8 | 164.6 | 145.4 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)