

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: P301009

Luminaire Tested: **GAA-AF-09-LED-U-SL4-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301009
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24301)
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-SL4-7030-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 3000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V
Square Wide OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 32107.9 lumens
Efficiency: N/A
Efficacy: 110.7 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G5

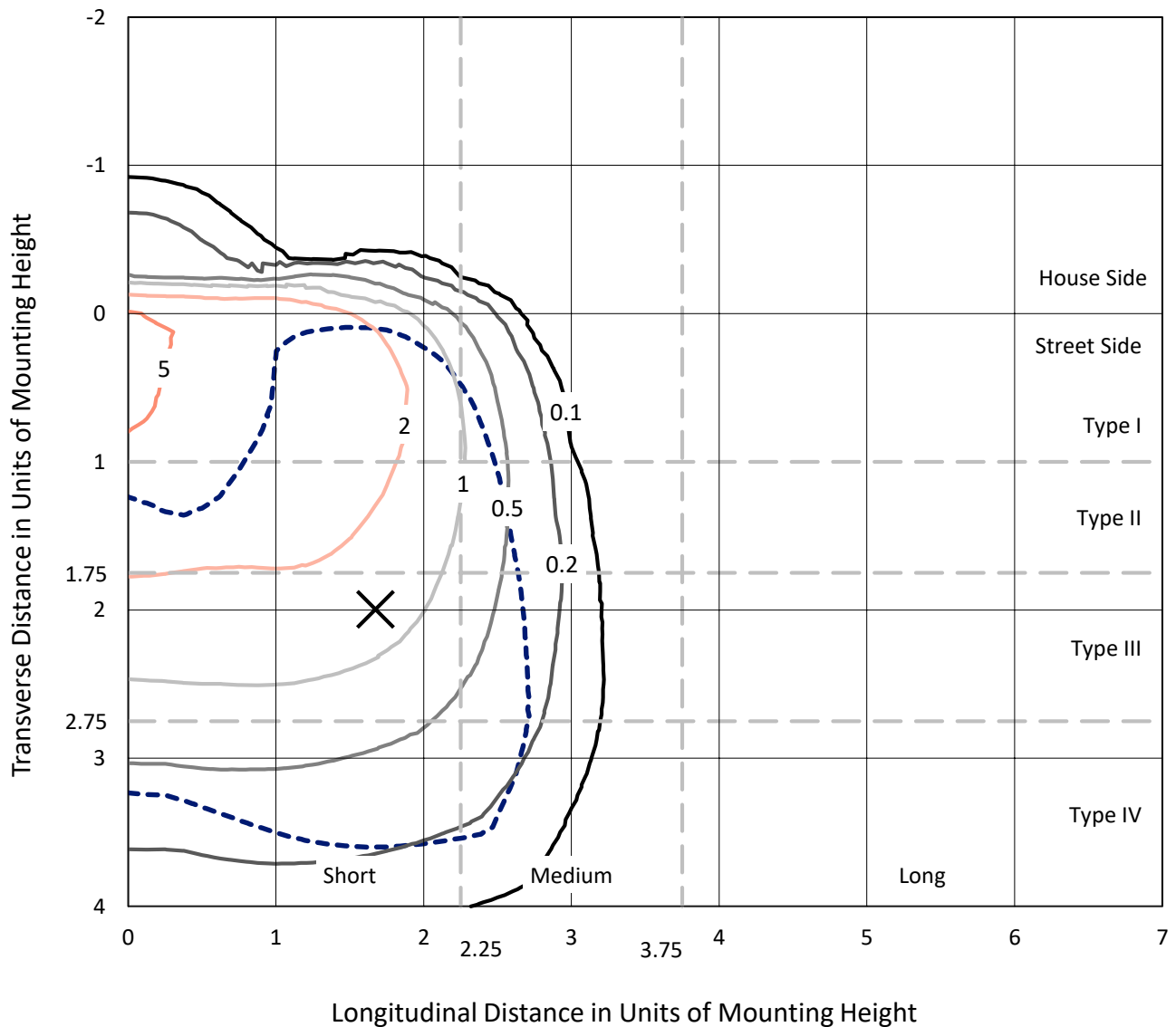
Input Watts (W): 290
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

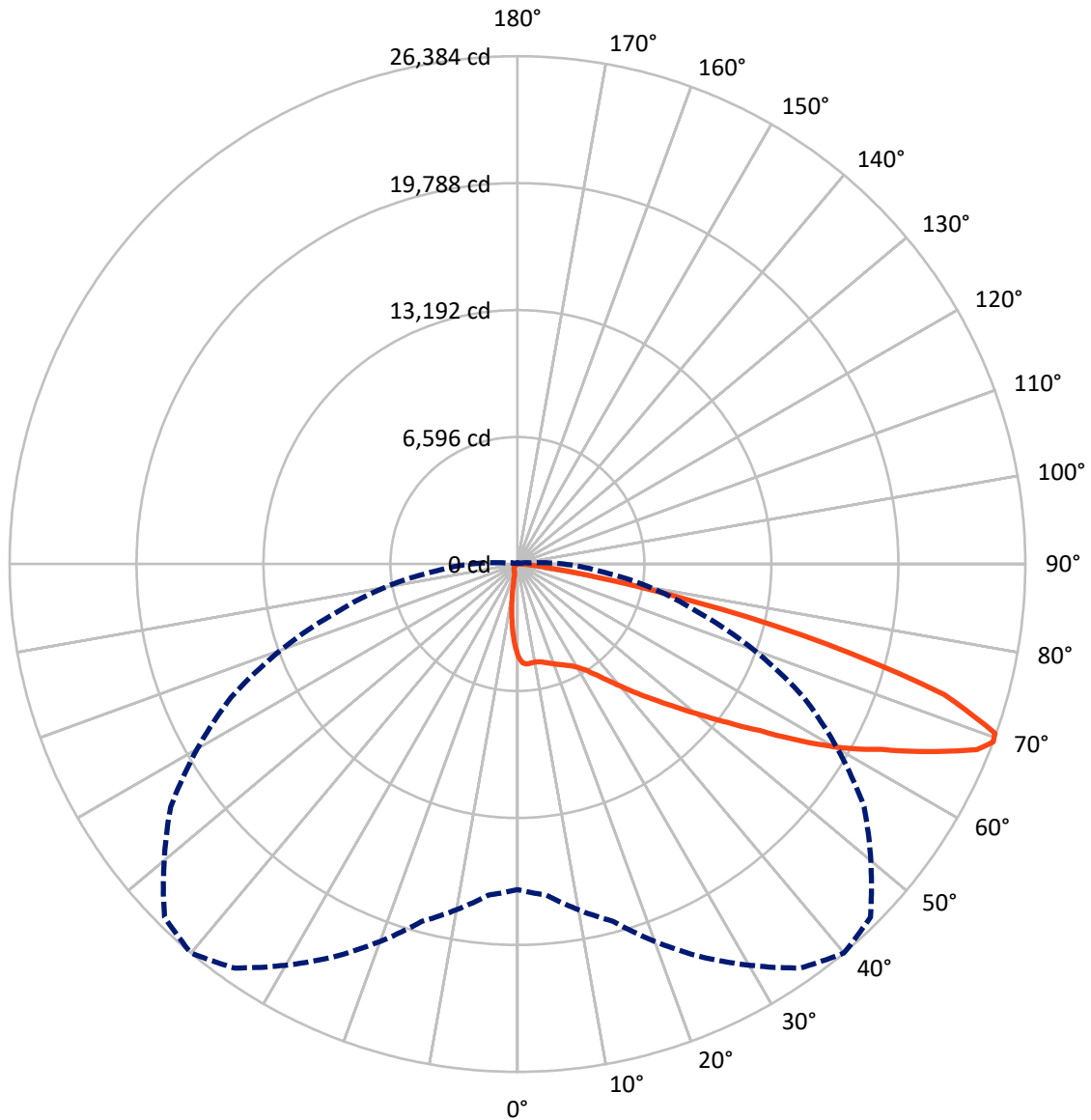
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.8 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical



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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 1878.5 | 0.0 | 1878.5 |
| | % Fixture | 5.9 | 0.0 | 5.9 |
| Street Side | Lumens | 30229.4 | 0.0 | 30229.4 |
| | % Fixture | 94.1 | 0.0 | 94.1 |
| Total | Lumens | 32107.9 | 0.0 | 32107.9 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 388.9 | 1.2 |
| 10°-20° | 956.5 | 3.0 |
| 20°-30° | 1611.1 | 5.0 |
| 30°-40° | 2637.4 | 8.2 |
| 40°-50° | 4566.5 | 14.2 |
| 50°-60° | 7192.7 | 22.4 |
| 60°-70° | 9393.4 | 29.3 |
| 70°-80° | 4838.0 | 15.1 |
| 80°-90° | 523.3 | 1.6 |
| 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° | 32107.9 | 100.0 |
| 0°-180° | 32107.9 | 100.0 |



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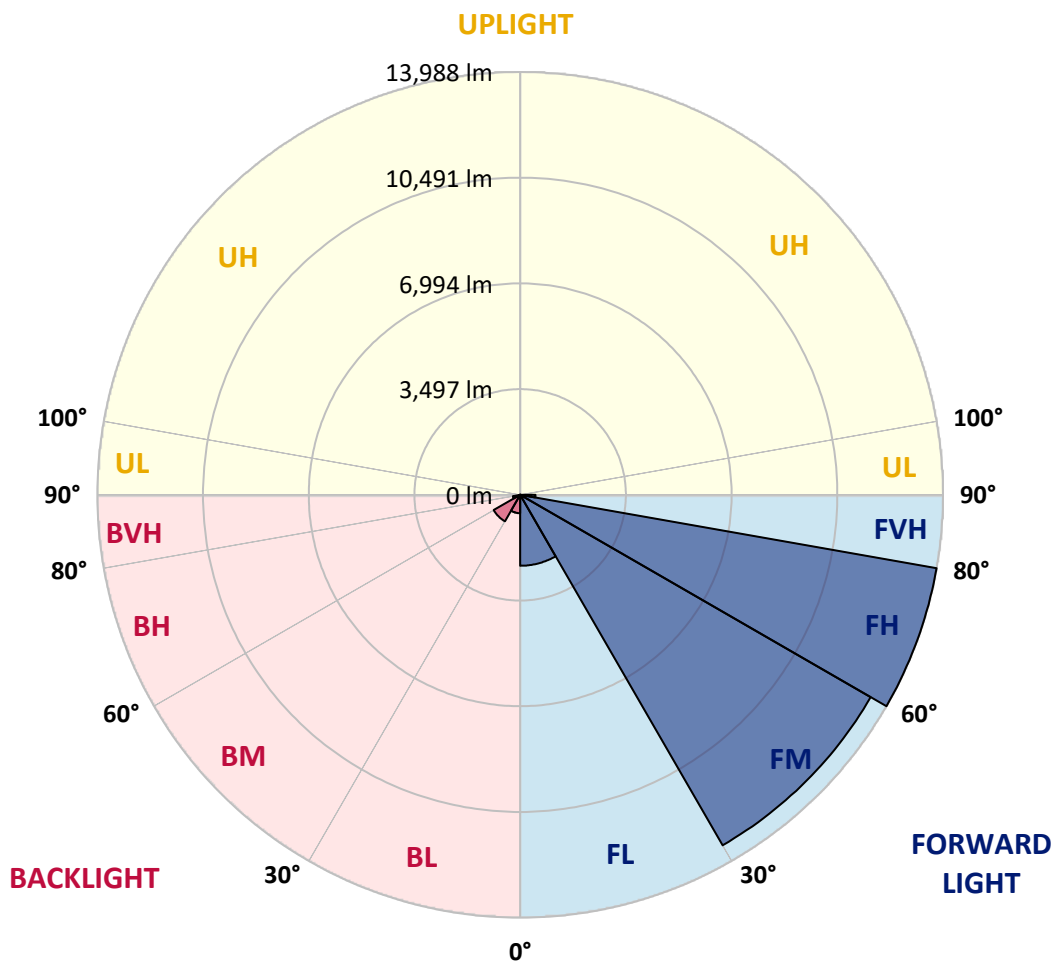
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|--------|
| | | | | B | U | G |
| FL | (0°-30°) | 2348.0 | 7.3 | | | |
| FM | (30°-60°) | 13387.0 | 41.7 | | | |
| FH | (60°-80°) | 13987.5 | 43.6 | | | G5 |
| FVH | (80°-90°) | 506.9 | 1.6 | | | G4/750 |
| BL | (0°-30°) | 608.5 | 1.9 | B2/1000 | | |
| BM | (30°-60°) | 1009.6 | 3.1 | B2/2500 | | |
| BH | (60°-80°) | 243.9 | 0.8 | B1/500 | | G1/500 |
| BVH | (80°-90°) | 16.4 | 0.1 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 40° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 4797.1 | 4797.1 | 4797.1 | 4797.1 | 4797.1 | 4797.1 | 4797.1 | 4797.1 | 4797.1 | 4797.1 | 4797.1 |
| 2.5° | 5267.2 | 5238.6 | 5221.4 | 5198.4 | 5169.8 | 5144.9 | 5135.4 | 5064.7 | 4997.8 | 4906.0 | 4800.9 |
| 5° | 5364.7 | 5355.2 | 5324.6 | 5294.0 | 5259.6 | 5221.4 | 5200.3 | 5116.3 | 5020.7 | 4886.9 | 4703.4 |
| 7.5° | 5374.3 | 5362.8 | 5324.6 | 5282.5 | 5234.8 | 5188.9 | 5152.6 | 5068.5 | 4980.6 | 4844.9 | 4621.3 |
| 10° | 5359.0 | 5345.6 | 5316.9 | 5271.1 | 5211.8 | 5167.9 | 5131.5 | 5051.3 | 4976.7 | 4854.4 | 4606.0 |
| 12.5° | 5341.8 | 5328.4 | 5315.0 | 5292.1 | 5240.5 | 5209.9 | 5179.3 | 5102.9 | 5036.0 | 4932.8 | 4661.4 |
| 15° | 5359.0 | 5351.3 | 5366.6 | 5357.1 | 5328.4 | 5301.6 | 5271.1 | 5202.3 | 5141.1 | 5055.1 | 4762.7 |
| 17.5° | 5431.6 | 5431.6 | 5479.4 | 5485.1 | 5458.4 | 5420.1 | 5376.2 | 5307.4 | 5255.8 | 5183.1 | 4883.1 |
| 20° | 5601.7 | 5596.0 | 5657.1 | 5668.6 | 5603.6 | 5544.4 | 5479.4 | 5395.3 | 5355.2 | 5309.3 | 5001.6 |
| 22.5° | 5894.1 | 5867.4 | 5903.7 | 5892.2 | 5764.2 | 5672.4 | 5592.1 | 5488.9 | 5467.9 | 5446.9 | 5133.5 |
| 25° | 6274.4 | 6259.1 | 6284.0 | 6171.2 | 5945.7 | 5821.5 | 5725.9 | 5609.3 | 5609.3 | 5630.4 | 5282.5 |
| 27.5° | 6826.8 | 6769.4 | 6685.3 | 6486.6 | 6148.3 | 5989.7 | 5886.5 | 5762.2 | 5794.7 | 5873.1 | 5479.4 |
| 30° | 7392.5 | 7329.4 | 7136.4 | 6830.6 | 6394.8 | 6228.6 | 6108.2 | 5978.2 | 6054.7 | 6198.0 | 5743.1 |
| 32.5° | 7950.6 | 7879.8 | 7606.5 | 7220.5 | 6748.4 | 6582.1 | 6465.6 | 6322.2 | 6450.3 | 6691.1 | 6129.2 |
| 35° | 8491.4 | 8428.4 | 8113.0 | 7658.1 | 7218.6 | 7081.0 | 6973.9 | 6849.7 | 7014.1 | 7350.4 | 6673.9 |
| 37.5° | 9099.2 | 9030.4 | 8646.2 | 8153.1 | 7790.0 | 7690.6 | 7612.3 | 7488.0 | 7774.7 | 8267.8 | 7432.6 |
| 40° | 9846.5 | 9729.9 | 9211.9 | 8720.8 | 8451.3 | 8403.5 | 8350.0 | 8332.8 | 8778.1 | 9460.4 | 8443.6 |
| 42.5° | 10702.7 | 10511.5 | 9804.4 | 9319.0 | 9177.5 | 9211.9 | 9198.6 | 9275.0 | 10033.8 | 10943.5 | 9674.4 |
| 45° | 11558.9 | 11312.3 | 10463.8 | 9957.3 | 9976.4 | 10096.8 | 10171.4 | 10477.1 | 11606.7 | 12644.4 | 10998.9 |
| 47.5° | 12285.1 | 12042.4 | 11096.4 | 10647.2 | 10876.6 | 11113.6 | 11316.2 | 11895.3 | 13223.5 | 14318.6 | 12029.0 |
| 50° | 12906.3 | 12676.9 | 11767.2 | 11406.0 | 11922.0 | 12304.2 | 12633.0 | 13491.1 | 14962.7 | 15593.4 | 12751.5 |
| 52.5° | 13414.6 | 13261.8 | 12462.9 | 12275.6 | 13116.5 | 13676.5 | 14158.1 | 15186.3 | 16503.1 | 16629.3 | 13313.4 |
| 55° | 13909.6 | 13800.7 | 13210.1 | 13309.5 | 14519.3 | 15281.9 | 15891.6 | 16984.8 | 17829.5 | 17493.1 | 13852.3 |
| 57.5° | 14479.2 | 14379.8 | 14062.5 | 14620.6 | 16363.6 | 17323.0 | 17988.1 | 18578.7 | 18997.2 | 18376.1 | 14360.7 |
| 60° | 15060.2 | 15002.8 | 15010.5 | 16076.9 | 18481.2 | 19402.4 | 19769.4 | 19922.3 | 20143.9 | 19207.5 | 14389.4 |
| 62.5° | 15614.4 | 15723.4 | 16094.1 | 17697.6 | 20509.0 | 21216.1 | 21401.5 | 21552.5 | 21292.6 | 19339.3 | 13294.2 |
| 65° | 16552.8 | 16730.6 | 17615.4 | 19866.8 | 22739.3 | 23496.2 | 23687.3 | 23169.4 | 21474.1 | 17634.6 | 10813.5 |
| 67.5° | 17011.5 | 17336.4 | 18915.1 | 21888.9 | 24902.8 | 25743.7 | 25673.0 | 23274.5 | 19270.5 | 13447.1 | 6939.5 |
| 69° | 16915.9 | 17261.9 | 19215.1 | 22508.1 | 25621.4 | 26384.0 | 25934.9 | 21988.2 | 16417.1 | 9741.3 | 4260.0 |
| 70° | 16537.5 | 16887.3 | 19060.3 | 22485.2 | 25713.2 | 26317.1 | 25449.4 | 20400.0 | 13881.0 | 7123.0 | 2664.2 |
| 72.5° | 13810.3 | 14112.2 | 16921.7 | 20323.6 | 23687.3 | 23196.1 | 21290.7 | 14133.3 | 6763.7 | 1939.9 | 600.1 |
| 75° | 8501.0 | 8669.2 | 12141.8 | 15310.5 | 17890.7 | 16629.3 | 14184.9 | 7031.3 | 2016.3 | 548.5 | 332.5 |
| 77.5° | 4491.3 | 4567.7 | 6647.1 | 9024.6 | 11341.0 | 9383.9 | 7270.2 | 2742.6 | 928.8 | 344.0 | 240.8 |
| 80° | 2654.6 | 2712.0 | 3579.7 | 4126.3 | 4907.9 | 4099.5 | 2906.9 | 1683.8 | 665.1 | 216.0 | 214.1 |
| 82.5° | 1519.4 | 1555.7 | 2595.4 | 2293.4 | 1934.1 | 1651.3 | 1446.8 | 1595.8 | 399.4 | 145.3 | 221.7 |
| 85° | 558.1 | 565.7 | 1460.1 | 1744.9 | 1150.5 | 684.2 | 718.6 | 1322.5 | 107.0 | 91.7 | 173.9 |
| 87.5° | 259.9 | 254.2 | 751.1 | 1068.4 | 672.7 | 433.8 | 560.0 | 290.5 | 42.0 | 59.2 | 47.8 |
| 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-SL4-7030-600

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 4797.1 | 4797.1 | 4797.1 | 4797.1 | 4797.1 | 4797.1 | 4797.1 | 4797.1 | 4797.1 | 4797.1 | 4797.1 |
| 2.5° | 4739.8 | 4669.0 | 4541.0 | 4409.1 | 4275.3 | 4172.1 | 4070.8 | 3990.6 | 3963.8 | 3914.1 | 3917.9 |
| 5° | 4594.5 | 4464.5 | 4197.0 | 3925.6 | 3642.7 | 3409.6 | 3189.8 | 3012.0 | 2926.0 | 2838.1 | 2838.1 |
| 7.5° | 4468.4 | 4279.2 | 3860.6 | 3419.1 | 2962.3 | 2578.2 | 2232.3 | 1972.3 | 1829.0 | 1714.3 | 1712.4 |
| 10° | 4420.6 | 4164.5 | 3579.7 | 2947.1 | 2310.6 | 1787.0 | 1376.1 | 1112.3 | 976.6 | 888.7 | 884.9 |
| 12.5° | 4441.6 | 4124.3 | 3363.7 | 2511.3 | 1712.4 | 1148.6 | 797.0 | 626.9 | 569.5 | 542.8 | 542.8 |
| 15° | 4502.8 | 4112.9 | 3147.7 | 2085.1 | 1209.8 | 718.6 | 529.4 | 483.5 | 479.7 | 479.7 | 479.7 |
| 17.5° | 4577.3 | 4116.7 | 2926.0 | 1670.4 | 823.7 | 514.1 | 456.8 | 451.0 | 454.9 | 454.9 | 454.9 |
| 20° | 4653.7 | 4118.6 | 2687.1 | 1286.2 | 581.0 | 447.2 | 430.0 | 428.1 | 431.9 | 431.9 | 433.8 |
| 22.5° | 4747.4 | 4128.2 | 2448.2 | 961.3 | 479.7 | 422.4 | 409.0 | 409.0 | 410.9 | 410.9 | 409.0 |
| 25° | 4854.4 | 4147.3 | 2199.8 | 712.9 | 437.7 | 405.2 | 393.7 | 391.8 | 393.7 | 391.8 | 389.9 |
| 27.5° | 4988.2 | 4174.0 | 1922.7 | 558.1 | 418.6 | 388.0 | 378.4 | 378.4 | 376.5 | 374.6 | 372.7 |
| 30° | 5156.4 | 4204.6 | 1611.1 | 474.0 | 399.4 | 372.7 | 363.1 | 361.2 | 359.3 | 355.5 | 355.5 |
| 32.5° | 5412.5 | 4271.5 | 1303.4 | 430.0 | 378.4 | 351.7 | 344.0 | 344.0 | 340.2 | 336.4 | 334.5 |
| 35° | 5806.2 | 4403.4 | 1028.2 | 403.3 | 355.5 | 328.7 | 319.2 | 319.2 | 315.3 | 313.4 | 311.5 |
| 37.5° | 6350.9 | 4604.1 | 798.9 | 378.4 | 332.5 | 303.9 | 294.3 | 292.4 | 288.6 | 284.8 | 282.9 |
| 40° | 7075.2 | 4852.5 | 628.8 | 355.5 | 309.6 | 279.0 | 271.4 | 267.6 | 259.9 | 254.2 | 254.2 |
| 42.5° | 7985.0 | 5135.4 | 510.3 | 330.6 | 282.9 | 256.1 | 250.4 | 244.6 | 231.3 | 225.5 | 223.6 |
| 45° | 8936.7 | 5389.6 | 431.9 | 302.0 | 256.1 | 233.2 | 229.3 | 219.8 | 202.6 | 196.9 | 196.9 |
| 47.5° | 9622.8 | 5448.8 | 380.3 | 275.2 | 231.3 | 208.3 | 206.4 | 189.2 | 173.9 | 170.1 | 168.2 |
| 50° | 10051.0 | 5332.2 | 338.3 | 248.5 | 208.3 | 185.4 | 179.7 | 158.6 | 149.1 | 145.3 | 143.3 |
| 52.5° | 10339.5 | 5123.9 | 303.9 | 225.5 | 187.3 | 164.4 | 151.0 | 135.7 | 128.0 | 124.2 | 124.2 |
| 55° | 10570.8 | 4829.6 | 269.5 | 204.5 | 170.1 | 147.2 | 128.0 | 116.6 | 108.9 | 105.1 | 105.1 |
| 57.5° | 10635.8 | 4430.1 | 235.1 | 187.3 | 152.9 | 130.0 | 108.9 | 101.3 | 91.7 | 89.8 | 89.8 |
| 60° | 10163.7 | 3709.6 | 208.3 | 166.3 | 137.6 | 112.8 | 95.6 | 86.0 | 76.4 | 74.5 | 72.6 |
| 62.5° | 8919.5 | 2870.6 | 183.5 | 147.2 | 120.4 | 97.5 | 82.2 | 70.7 | 63.1 | 63.1 | 63.1 |
| 65° | 6803.8 | 1924.6 | 160.5 | 128.0 | 105.1 | 82.2 | 70.7 | 57.3 | 53.5 | 53.5 | 55.4 |
| 67.5° | 4072.7 | 1047.3 | 137.6 | 108.9 | 89.8 | 68.8 | 59.2 | 49.7 | 47.8 | 49.7 | 49.7 |
| 69° | 2387.1 | 615.4 | 124.2 | 97.5 | 78.4 | 61.2 | 51.6 | 44.0 | 47.8 | 49.7 | 49.7 |
| 70° | 1473.5 | 414.7 | 114.7 | 87.9 | 70.7 | 55.4 | 47.8 | 42.0 | 45.9 | 47.8 | 47.8 |
| 72.5° | 410.9 | 214.1 | 91.7 | 68.8 | 57.3 | 45.9 | 38.2 | 38.2 | 44.0 | 45.9 | 45.9 |
| 75° | 267.6 | 158.6 | 70.7 | 51.6 | 44.0 | 36.3 | 32.5 | 36.3 | 42.0 | 44.0 | 44.0 |
| 77.5° | 221.7 | 130.0 | 57.3 | 42.0 | 36.3 | 34.4 | 30.6 | 32.5 | 38.2 | 40.1 | 40.1 |
| 80° | 202.6 | 91.7 | 45.9 | 38.2 | 32.5 | 30.6 | 28.7 | 26.8 | 34.4 | 36.3 | 36.3 |
| 82.5° | 193.0 | 72.6 | 40.1 | 34.4 | 30.6 | 26.8 | 24.8 | 26.8 | 30.6 | 32.5 | 34.4 |
| 85° | 120.4 | 47.8 | 36.3 | 32.5 | 26.8 | 24.8 | 24.8 | 24.8 | 28.7 | 30.6 | 30.6 |
| 87.5° | 44.0 | 38.2 | 32.5 | 26.8 | 22.9 | 22.9 | 22.9 | 22.9 | 24.8 | 28.7 | 28.7 |
| 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)