

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: McGRAW-EDISON

Report Number: P458043

Luminaire Tested: **GALN-SA9B-830-U-T3R-HSS**

Issue Date: 1/4/2021

Test Information

Test Method: LM-79-08
Report Number: P458043
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-9)
Test Lab: INNOVATION CENTER
Issue Date: 1/4/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GALN-SA9B-830-U-T3R-HSS
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(9) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 32094 lumens
Efficiency: N/A
Efficacy: 88.2 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G5

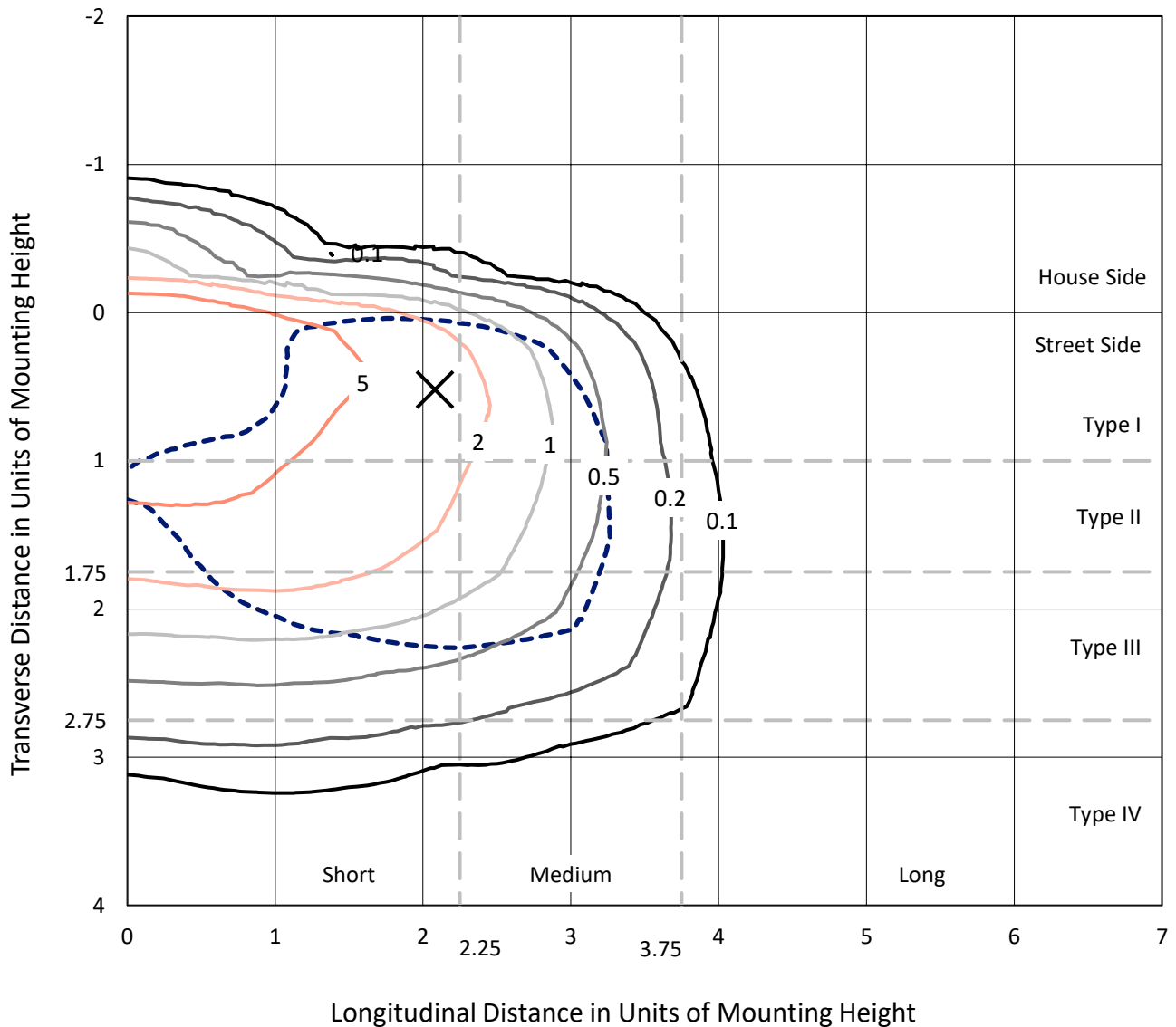
Input Watts (W): 364
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

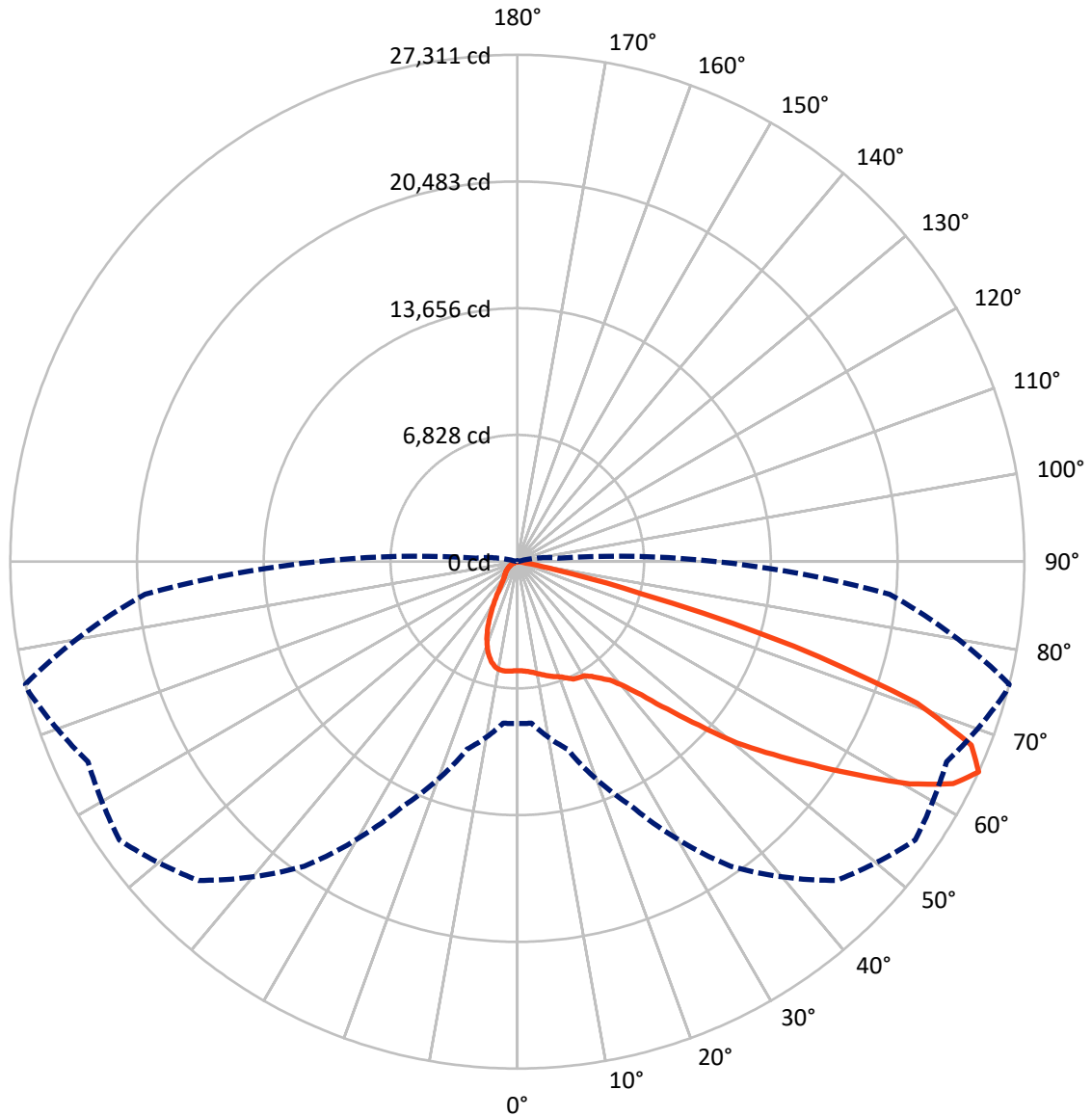
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.8 fc
 Type III - Short - N/A

REPORT NUMBER: P458043
CATALOG NUMBER: GALN-SA9B-830-U-T3R-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 76-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 2317.8 | 0.0 | 2317.8 |
| | % Fixture | 7.2 | 0.0 | 7.2 |
| Street Side | Lumens | 29776.2 | 0.0 | 29776.2 |
| | % Fixture | 92.8 | 0.0 | 92.8 |
| Total | Lumens | 32094.0 | 0.0 | 32094.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 483.6 | 1.5 |
| 10°-20° | 1076.8 | 3.4 |
| 20°-30° | 1735.2 | 5.4 |
| 30°-40° | 3017.2 | 9.4 |
| 40°-50° | 4985.7 | 15.5 |
| 50°-60° | 7701.8 | 24.0 |
| 60°-70° | 9405.0 | 29.3 |
| 70°-80° | 3569.5 | 11.1 |
| 80°-90° | 119.1 | 0.4 |
| 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° | 32094.0 | 100.0 |
| 0°-180° | 32094.0 | 100.0 |



REPORT NUMBER: P458043

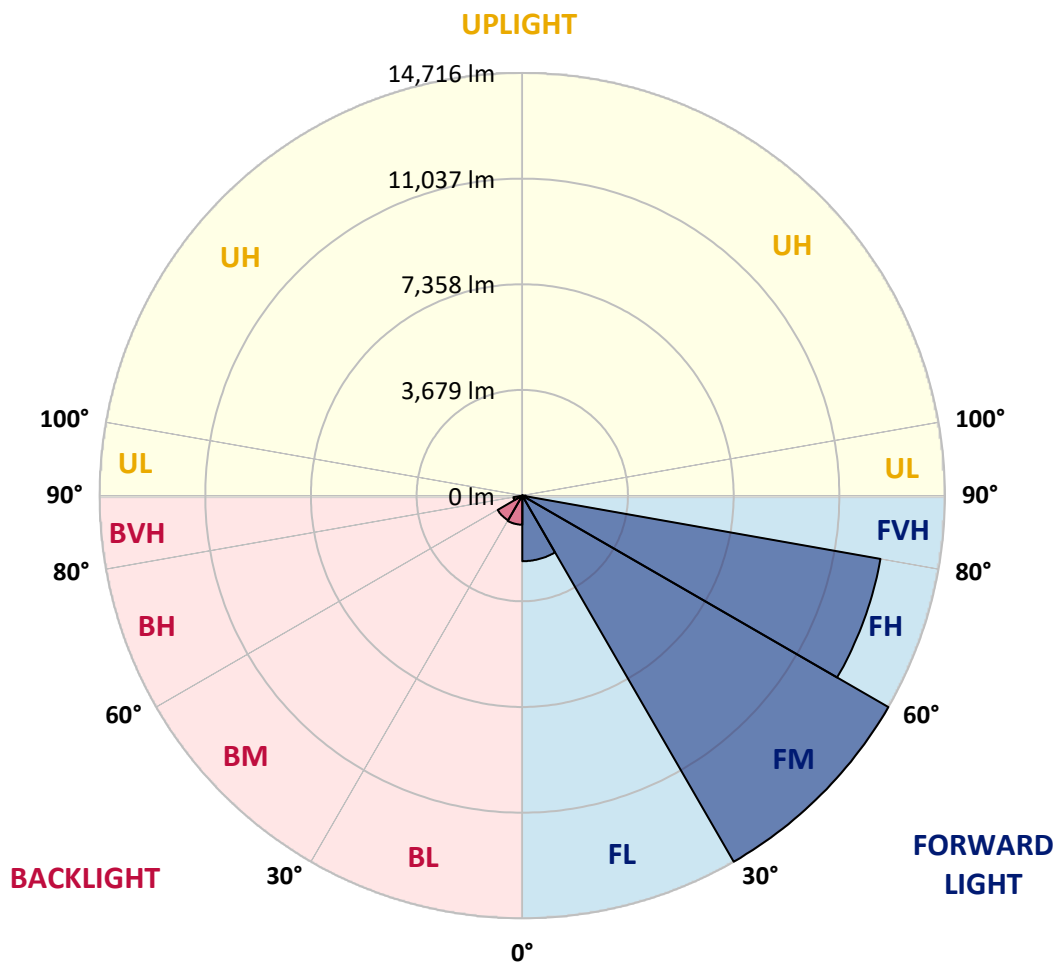
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|--------|
| | | | B | U | G |
| FL (0°-30°) | 2283.1 | 7.1 | | | |
| FM (30°-60°) | 14715.6 | 45.9 | | | |
| FH (60°-80°) | 12660.0 | 39.4 | | | G5 |
| FVH (80°-90°) | 117.5 | 0.4 | | | G2/225 |
| BL (0°-30°) | 1012.6 | 3.2 | B3/2500 | | |
| BM (30°-60°) | 989.1 | 3.1 | B1/1000 | | |
| BH (60°-80°) | 314.5 | 1.0 | B1/500 | | G1/500 |
| BVH (80°-90°) | 1.6 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G5

Type III Short





REPORT NUMBER: P458043

CATALOG NUMBER: GALN-SA9B-830-U-T3R-HSS

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 76° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 5871.0 | 5871.0 | 5871.0 | 5871.0 | 5871.0 | 5871.0 | 5871.0 | 5871.0 | 5871.0 | 5871.0 | 5871.0 |
| 2.5° | 5610.4 | 5612.7 | 5626.3 | 5660.3 | 5712.4 | 5755.5 | 5791.7 | 5850.6 | 5891.4 | 5895.9 | 5909.5 |
| 5° | 5223.0 | 5195.8 | 5223.0 | 5311.3 | 5390.6 | 5510.7 | 5658.0 | 5805.3 | 5936.7 | 5945.8 | 6009.2 |
| 7.5° | 4787.9 | 4810.6 | 4853.6 | 4944.3 | 5093.8 | 5277.3 | 5490.3 | 5753.2 | 6002.4 | 6025.1 | 6149.7 |
| 10° | 4346.0 | 4395.9 | 4466.1 | 4604.4 | 4812.8 | 5050.8 | 5340.8 | 5716.9 | 6106.7 | 6138.4 | 6353.7 |
| 12.5° | 3938.2 | 3960.8 | 4046.9 | 4232.8 | 4491.1 | 4826.4 | 5227.5 | 5696.5 | 6222.2 | 6260.8 | 6571.2 |
| 15° | 3625.5 | 3654.9 | 3729.7 | 3897.4 | 4185.2 | 4615.7 | 5134.6 | 5689.7 | 6335.5 | 6389.9 | 6788.7 |
| 17.5° | 3566.6 | 3584.7 | 3616.4 | 3729.7 | 3981.2 | 4448.0 | 5050.8 | 5687.5 | 6444.3 | 6510.0 | 6990.4 |
| 20° | 3809.0 | 3793.2 | 3761.4 | 3750.1 | 3888.3 | 4318.9 | 4989.6 | 5705.6 | 6548.5 | 6623.3 | 7203.4 |
| 22.5° | 4416.3 | 4436.7 | 4250.9 | 4031.1 | 3985.8 | 4298.5 | 4980.5 | 5791.7 | 6713.9 | 6802.3 | 7441.3 |
| 25° | 5705.6 | 5549.3 | 5259.2 | 4733.5 | 4337.0 | 4423.1 | 5082.5 | 5995.6 | 6906.5 | 7004.0 | 7656.6 |
| 27.5° | 7130.9 | 7083.3 | 6632.4 | 5766.8 | 5028.1 | 4685.9 | 5263.7 | 6152.0 | 6970.0 | 7069.7 | 7778.9 |
| 30° | 8531.2 | 8587.9 | 8071.2 | 7115.0 | 6031.9 | 5173.1 | 5433.7 | 6210.9 | 7026.6 | 7130.9 | 7935.3 |
| 32.5° | 9829.6 | 9897.6 | 9444.4 | 8497.2 | 7214.7 | 6016.0 | 5726.0 | 6439.8 | 7264.6 | 7371.1 | 8195.9 |
| 35° | 10851.5 | 10860.6 | 10518.4 | 9763.9 | 8506.3 | 7040.2 | 6358.2 | 6840.8 | 7586.3 | 7710.9 | 8472.3 |
| 37.5° | 11789.6 | 11776.0 | 11375.0 | 10724.6 | 9582.6 | 8057.6 | 7153.5 | 7303.1 | 7953.4 | 8082.6 | 8871.1 |
| 40° | 12485.3 | 12494.3 | 12365.2 | 11753.4 | 10586.4 | 8998.0 | 7783.5 | 7735.9 | 8569.7 | 8771.4 | 9451.2 |
| 42.5° | 12949.8 | 13033.6 | 13097.1 | 12786.6 | 11848.5 | 10155.9 | 8751.0 | 8662.6 | 9639.3 | 9806.9 | 10271.4 |
| 45° | 13325.9 | 13475.5 | 13792.7 | 13776.8 | 13060.8 | 11576.6 | 10078.8 | 9897.6 | 11155.2 | 11334.2 | 11316.0 |
| 47.5° | 13600.1 | 13751.9 | 14277.6 | 14594.8 | 14200.6 | 12954.3 | 11748.8 | 11592.5 | 12965.6 | 13160.5 | 12469.4 |
| 50° | 13740.6 | 13921.9 | 14592.6 | 15206.6 | 15091.1 | 14282.1 | 13652.2 | 13661.3 | 15152.3 | 15340.3 | 13806.3 |
| 52.5° | 13412.0 | 13647.7 | 14760.2 | 15866.0 | 16090.3 | 15553.3 | 15435.5 | 15734.6 | 17098.7 | 17259.6 | 15014.0 |
| 55° | 12362.9 | 12659.7 | 14531.4 | 16428.0 | 17248.2 | 17053.4 | 17461.2 | 17916.7 | 19226.4 | 19330.6 | 16253.5 |
| 57.5° | 11699.0 | 12013.9 | 13856.1 | 16906.1 | 18639.5 | 18938.6 | 19584.4 | 19917.5 | 21422.1 | 21687.2 | 17676.5 |
| 60° | 11139.3 | 11386.3 | 13301.0 | 17008.0 | 20053.5 | 21245.3 | 21873.0 | 22217.4 | 24132.1 | 24304.3 | 19242.3 |
| 62.5° | 10208.0 | 10491.2 | 12362.9 | 16296.5 | 20765.0 | 23092.1 | 24392.7 | 24238.6 | 26228.1 | 26348.2 | 20203.0 |
| 65° | 8710.2 | 8735.1 | 10459.5 | 14508.7 | 20030.8 | 24290.7 | 26162.4 | 25516.6 | 27229.6 | 27311.2 | 20128.2 |
| 67.5° | 6500.9 | 6741.1 | 8046.3 | 11404.4 | 16919.7 | 23266.5 | 26735.7 | 25550.6 | 26597.5 | 26370.9 | 18530.8 |
| 70° | 4187.4 | 4371.0 | 5454.1 | 7908.1 | 12199.8 | 19416.7 | 24834.6 | 23799.0 | 23343.6 | 22840.5 | 15168.1 |
| 72.5° | 1932.8 | 2168.5 | 3240.3 | 4518.3 | 7235.1 | 13831.2 | 20160.0 | 19335.2 | 16801.8 | 15560.1 | 9641.5 |
| 75° | 842.9 | 901.8 | 1599.7 | 2383.8 | 3392.1 | 7314.4 | 13291.9 | 12002.6 | 7588.6 | 6931.5 | 3858.9 |
| 77.5° | 514.4 | 552.9 | 838.4 | 1278.0 | 1332.4 | 2787.1 | 7160.3 | 5236.6 | 2345.2 | 2068.8 | 1046.9 |
| 80° | 349.0 | 392.0 | 609.5 | 668.4 | 455.5 | 777.2 | 2687.4 | 1398.1 | 473.6 | 453.2 | 224.3 |
| 82.5° | 169.9 | 215.3 | 450.9 | 373.9 | 197.1 | 249.3 | 781.7 | 299.1 | 138.2 | 129.2 | 79.3 |
| 85° | 24.9 | 43.1 | 253.8 | 244.7 | 88.4 | 58.9 | 138.2 | 74.8 | 47.6 | 45.3 | 36.3 |
| 87.5° | 0.0 | 0.0 | 86.1 | 38.5 | 9.1 | 9.1 | 15.9 | 15.9 | 18.1 | 15.9 | 18.1 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



REPORT NUMBER: P458043

CATALOG NUMBER: GALN-SA9B-830-U-T3R-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 5871.0 | 5871.0 | 5871.0 | 5871.0 | 5871.0 | 5871.0 | 5871.0 | 5871.0 | 5871.0 | 5871.0 | 5871.0 |
| 2.5° | 5916.3 | 5927.7 | 5884.6 | 5823.4 | 5757.7 | 5692.0 | 5599.1 | 5515.3 | 5465.4 | 5494.9 | 5422.4 |
| 5° | 6022.8 | 6013.8 | 5900.5 | 5714.7 | 5467.7 | 5170.8 | 4876.3 | 4624.8 | 4543.2 | 4420.8 | 4407.2 |
| 7.5° | 6170.1 | 6145.2 | 5905.0 | 5479.0 | 4921.6 | 4364.2 | 3820.4 | 3460.1 | 3253.9 | 3079.4 | 3083.9 |
| 10° | 6376.3 | 6303.8 | 5852.9 | 5064.3 | 4146.6 | 3306.0 | 2612.6 | 2136.8 | 1930.6 | 1864.9 | 1812.7 |
| 12.5° | 6589.3 | 6448.8 | 5707.9 | 4504.7 | 3228.9 | 2259.1 | 1588.4 | 1298.4 | 1171.5 | 1130.7 | 1126.2 |
| 15° | 6779.7 | 6557.6 | 5454.1 | 3831.7 | 2347.5 | 1443.4 | 1083.1 | 987.9 | 972.1 | 974.3 | 972.1 |
| 17.5° | 6967.7 | 6643.7 | 5102.9 | 3117.9 | 1595.2 | 1035.5 | 931.3 | 908.6 | 915.4 | 924.5 | 922.2 |
| 20° | 7124.1 | 6661.8 | 4654.2 | 2379.2 | 1128.4 | 908.6 | 874.6 | 870.1 | 876.9 | 883.7 | 883.7 |
| 22.5° | 7294.0 | 6675.4 | 4121.7 | 1647.3 | 922.2 | 845.2 | 827.1 | 827.1 | 836.1 | 845.2 | 847.5 |
| 25° | 7420.9 | 6600.6 | 3485.0 | 1182.8 | 813.5 | 784.0 | 774.9 | 777.2 | 786.3 | 790.8 | 788.5 |
| 27.5° | 7441.3 | 6389.9 | 2809.7 | 906.4 | 738.7 | 709.2 | 700.2 | 709.2 | 697.9 | 704.7 | 700.2 |
| 30° | 7459.4 | 6122.5 | 2125.4 | 763.6 | 670.7 | 625.4 | 611.8 | 598.2 | 589.1 | 577.8 | 575.5 |
| 32.5° | 7516.1 | 5807.6 | 1552.2 | 686.6 | 607.3 | 557.4 | 525.7 | 487.2 | 457.7 | 448.7 | 446.4 |
| 35° | 7541.0 | 5429.2 | 1139.8 | 625.4 | 550.6 | 496.2 | 439.6 | 385.2 | 342.2 | 326.3 | 337.6 |
| 37.5° | 7636.2 | 5062.1 | 883.7 | 580.1 | 500.8 | 432.8 | 360.3 | 292.3 | 251.5 | 242.5 | 247.0 |
| 40° | 7831.0 | 4663.3 | 741.0 | 541.6 | 457.7 | 373.9 | 285.5 | 219.8 | 192.6 | 183.5 | 181.3 |
| 42.5° | 8143.7 | 4266.7 | 659.4 | 505.3 | 414.7 | 315.0 | 224.3 | 172.2 | 149.6 | 142.8 | 142.8 |
| 45° | 8524.4 | 3886.1 | 602.7 | 466.8 | 369.3 | 253.8 | 176.7 | 138.2 | 124.6 | 120.1 | 120.1 |
| 47.5° | 9025.2 | 3553.0 | 555.2 | 428.3 | 319.5 | 201.7 | 142.8 | 120.1 | 111.0 | 113.3 | 115.6 |
| 50° | 9532.8 | 3306.0 | 503.0 | 385.2 | 262.8 | 165.4 | 122.4 | 106.5 | 104.2 | 106.5 | 106.5 |
| 52.5° | 9915.7 | 3161.0 | 432.8 | 326.3 | 206.2 | 138.2 | 108.8 | 99.7 | 97.4 | 92.9 | 92.9 |
| 55° | 10432.3 | 3129.2 | 344.4 | 265.1 | 163.1 | 115.6 | 97.4 | 90.6 | 83.8 | 79.3 | 77.0 |
| 57.5° | 11096.2 | 3165.5 | 265.1 | 206.2 | 126.9 | 95.2 | 86.1 | 74.8 | 65.7 | 56.6 | 56.6 |
| 60° | 11508.6 | 3083.9 | 206.2 | 158.6 | 92.9 | 77.0 | 65.7 | 54.4 | 43.1 | 36.3 | 34.0 |
| 62.5° | 11377.2 | 2739.5 | 163.1 | 117.8 | 65.7 | 56.6 | 43.1 | 36.3 | 24.9 | 18.1 | 15.9 |
| 65° | 10699.7 | 2211.5 | 131.4 | 81.6 | 47.6 | 34.0 | 22.7 | 22.7 | 11.3 | 2.3 | 0.0 |
| 67.5° | 9365.1 | 1638.3 | 104.2 | 54.4 | 27.2 | 15.9 | 11.3 | 6.8 | 0.0 | 0.0 | 0.0 |
| 70° | 7622.6 | 1182.8 | 81.6 | 34.0 | 15.9 | 11.3 | 4.5 | 2.3 | 0.0 | 0.0 | 0.0 |
| 72.5° | 4840.0 | 677.5 | 63.4 | 20.4 | 11.3 | 4.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 75° | 1871.7 | 265.1 | 43.1 | 13.6 | 4.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 530.2 | 124.6 | 24.9 | 6.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 138.2 | 54.4 | 13.6 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 65.7 | 22.7 | 4.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 38.5 | 9.1 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 18.1 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 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)