

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: P453826

Luminaire Tested: **GALN-SA4D-827-U-SL4**

Issue Date: 1/4/2021

Test Information

Test Method: LM-79-08
Report Number: P453826
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2011-042-18)
Test Lab: INNOVATION CENTER
Issue Date: 1/4/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GALN-SA4D-827-U-SL4
Description: GALLEON AREA AND ROADWAY LUMINAIRE
(4) 80 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 22021 lumens
Efficiency: N/A
Efficacy: 89.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G4

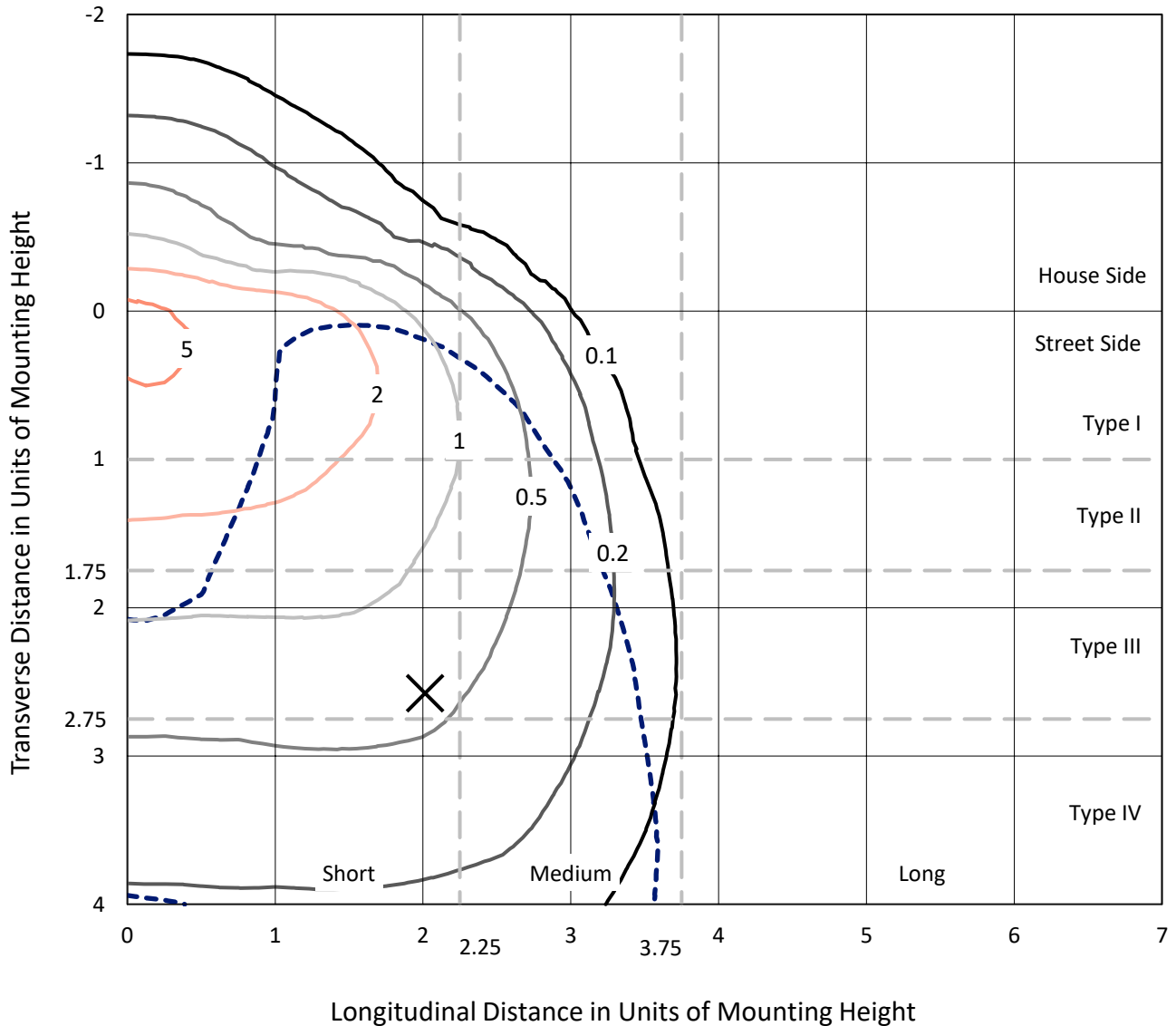
Input Watts (W): 245
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P453826
 CATALOG NUMBER: GALN-SA4D-827-U-SL4

Iso-Footcandle Lines of Horizontal Illumination

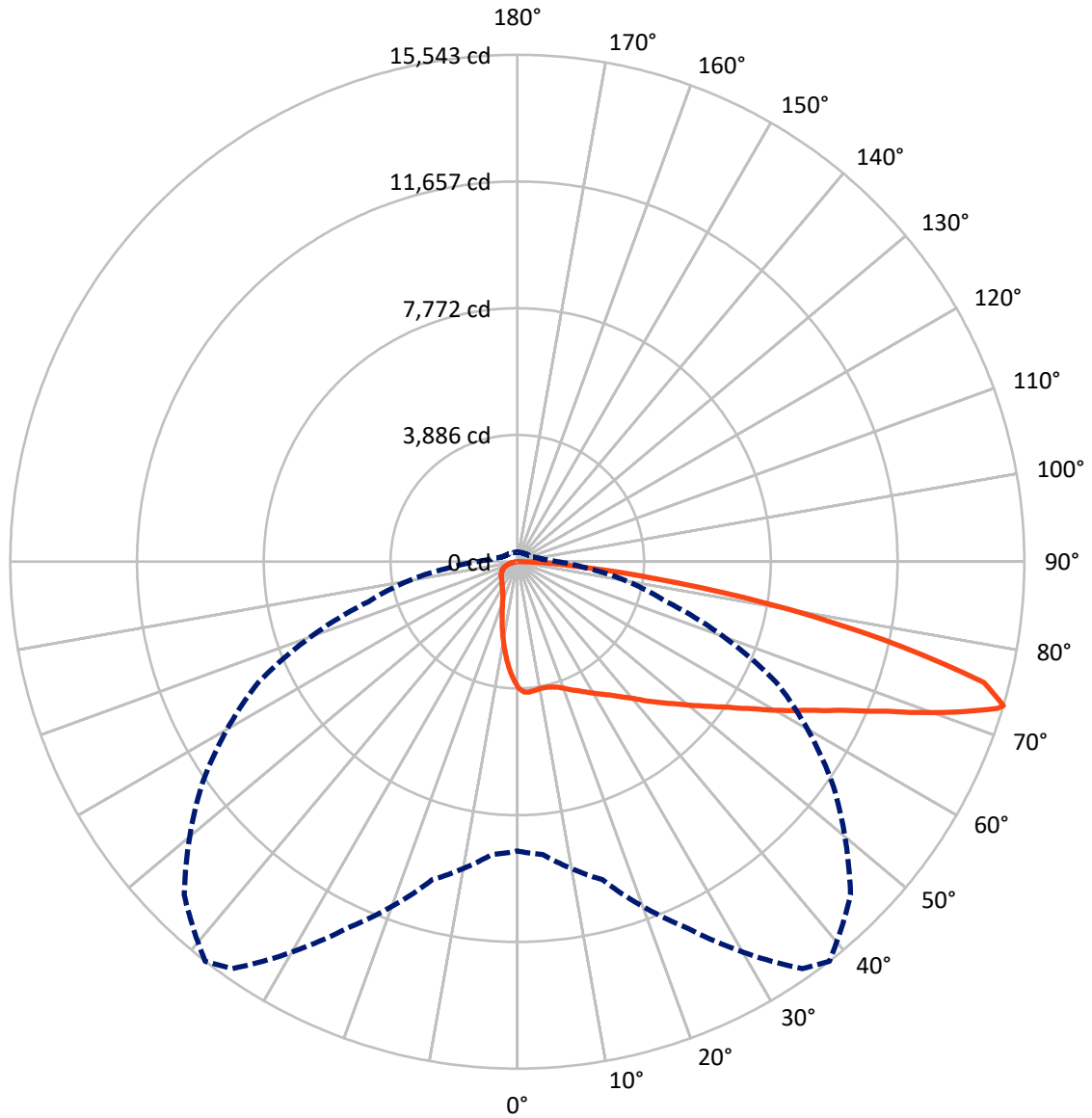
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.3 fc
 Type IV - Short - N/A

REPORT NUMBER: P453826
CATALOG NUMBER: GALN-SA4D-827-U-SL4

Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

REPORT NUMBER: P453826

CATALOG NUMBER: GALN-SA4D-827-U-SL4

FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 2960.3 | 0.0 | 2960.3 |
| | % Fixture | 13.4 | 0.0 | 13.4 |
| Street Side | Lumens | 19060.7 | 0.0 | 19060.7 |
| | % Fixture | 86.6 | 0.0 | 86.6 |
| Total | Lumens | 22021.0 | 0.0 | 22021.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 337.7 | 1.5 |
| 10°-20° | 866.0 | 3.9 |
| 20°-30° | 1348.5 | 6.1 |
| 30°-40° | 1977.9 | 9.0 |
| 40°-50° | 2934.0 | 13.3 |
| 50°-60° | 4156.9 | 18.9 |
| 60°-70° | 5273.1 | 23.9 |
| 70°-80° | 4389.5 | 19.9 |
| 80°-90° | 737.5 | 3.3 |
| 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° | 22021.0 | 100.0 |
| 0°-180° | 22021.0 | 100.0 |

Coefficient of Utilization



REPORT NUMBER: P453826

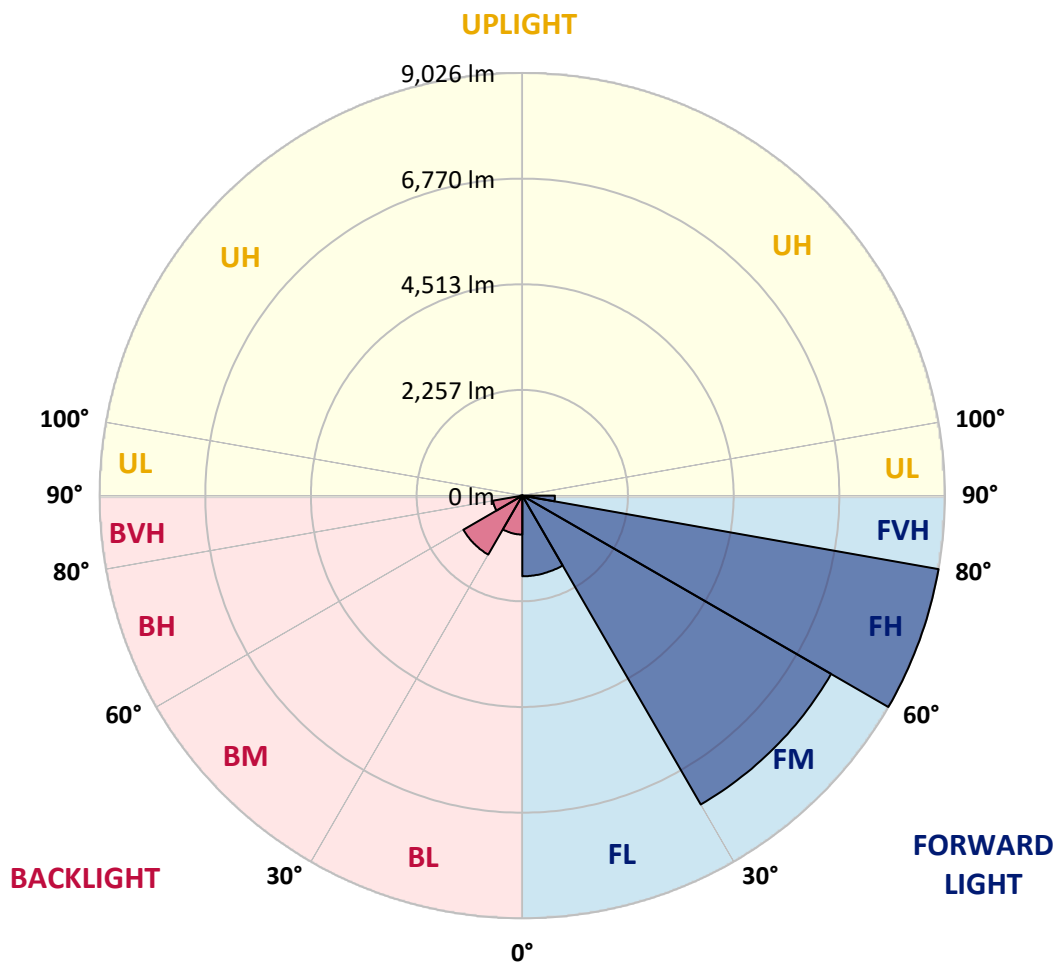
CATALOG NUMBER: GALN-SA4D-827-U-SL4

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 1721.4 | 7.8 | | | |
| FM | (30°-60°) | 7615.5 | 34.6 | | | |
| FH | (60°-80°) | 9026.3 | 41.0 | | | G4/12000 |
| FVH | (80°-90°) | 697.5 | 3.2 | | | G4/750 |
| BL | (0°-30°) | 830.7 | 3.8 | B2/1000 | | |
| BM | (30°-60°) | 1453.3 | 6.6 | B2/2500 | | |
| BH | (60°-80°) | 636.3 | 2.9 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 40.0 | 0.2 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G4

Type IV Short





REPORT NUMBER: P453826

CATALOG NUMBER: GALN-SA4D-827-U-SL4

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 38° | 45° | 55° | 65° | 75° | 85° |
|-------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|--------|
| 0° | 3868.7 | 3868.7 | 3868.7 | 3868.7 | 3868.7 | 3868.7 | 3868.7 | 3868.7 | 3868.7 | 3868.7 | 3868.7 |
| 2.5° | 4024.2 | 4044.1 | 4034.1 | 4020.4 | 4011.7 | 4003.0 | 3990.6 | 3954.5 | 3925.9 | 3894.8 | 3846.3 |
| 5° | 4054.0 | 4066.4 | 4057.7 | 4040.3 | 4020.4 | 4011.7 | 3988.1 | 3940.8 | 3894.8 | 3842.6 | 3770.5 |
| 7.5° | 4036.6 | 4041.6 | 4031.6 | 4010.5 | 3993.1 | 3976.9 | 3949.5 | 3897.3 | 3841.4 | 3777.9 | 3683.4 |
| 10° | 3974.4 | 3993.1 | 3993.1 | 3975.7 | 3958.3 | 3949.5 | 3922.2 | 3872.4 | 3821.5 | 3749.3 | 3637.4 |
| 12.5° | 3923.4 | 3943.3 | 3959.5 | 3954.5 | 3953.3 | 3953.3 | 3932.1 | 3894.8 | 3835.1 | 3766.7 | 3633.7 |
| 15° | 3888.6 | 3912.2 | 3947.1 | 3967.0 | 3979.4 | 3983.1 | 3974.4 | 3942.1 | 3881.2 | 3801.6 | 3648.6 |
| 17.5° | 3881.2 | 3909.8 | 3973.2 | 4016.7 | 4049.0 | 4047.8 | 4045.3 | 4000.5 | 3933.4 | 3851.3 | 3667.3 |
| 20° | 3914.7 | 3952.0 | 4040.3 | 4108.7 | 4156.0 | 4147.3 | 4133.6 | 4075.1 | 3996.8 | 3904.8 | 3684.7 |
| 22.5° | 4015.5 | 4054.0 | 4151.0 | 4225.6 | 4271.6 | 4271.6 | 4230.6 | 4153.5 | 4070.2 | 3967.0 | 3708.3 |
| 25° | 4159.7 | 4202.0 | 4305.2 | 4381.1 | 4402.2 | 4386.0 | 4345.0 | 4251.7 | 4156.0 | 4056.5 | 3758.0 |
| 27.5° | 4336.3 | 4387.3 | 4483.0 | 4546.5 | 4540.2 | 4527.8 | 4485.5 | 4366.1 | 4270.4 | 4179.6 | 3842.6 |
| 30° | 4556.4 | 4593.7 | 4693.2 | 4708.1 | 4685.7 | 4683.2 | 4623.6 | 4504.2 | 4414.6 | 4345.0 | 3963.2 |
| 32.5° | 4764.1 | 4797.7 | 4877.2 | 4883.5 | 4843.7 | 4848.6 | 4792.7 | 4683.2 | 4632.3 | 4607.4 | 4165.9 |
| 35° | 4984.2 | 5001.6 | 5070.0 | 5062.5 | 5036.4 | 5032.7 | 5010.3 | 4905.8 | 4922.0 | 4966.8 | 4453.2 |
| 37.5° | 5168.2 | 5203.1 | 5241.6 | 5247.8 | 5246.6 | 5259.0 | 5273.9 | 5224.2 | 5317.5 | 5458.0 | 4830.0 |
| 40° | 5337.4 | 5367.2 | 5424.4 | 5444.3 | 5492.8 | 5517.7 | 5568.7 | 5569.9 | 5785.0 | 6016.3 | 5293.8 |
| 42.5° | 5451.8 | 5502.8 | 5609.7 | 5645.8 | 5763.9 | 5838.5 | 5914.4 | 5995.2 | 6307.3 | 6604.5 | 5841.0 |
| 45° | 5551.3 | 5618.4 | 5796.2 | 5908.2 | 6068.6 | 6159.4 | 6319.8 | 6488.9 | 6937.8 | 7327.1 | 6396.9 |
| 47.5° | 5701.7 | 5761.4 | 5965.4 | 6163.1 | 6405.6 | 6510.0 | 6750.0 | 7002.5 | 7589.4 | 8016.0 | 6929.1 |
| 50° | 5910.6 | 5946.7 | 6154.4 | 6476.5 | 6786.1 | 6920.4 | 7237.5 | 7601.9 | 8285.8 | 8696.2 | 7396.7 |
| 52.5° | 6178.0 | 6192.9 | 6358.3 | 6787.4 | 7195.2 | 7361.9 | 7782.2 | 8207.5 | 8895.2 | 9286.9 | 7767.3 |
| 55° | 6493.9 | 6469.0 | 6598.3 | 7116.9 | 7662.8 | 7880.4 | 8331.9 | 8820.6 | 9580.4 | 9764.4 | 8037.1 |
| 57.5° | 6806.0 | 6767.5 | 6870.7 | 7517.3 | 8239.8 | 8502.2 | 9028.2 | 9452.3 | 10192.2 | 10210.9 | 8226.2 |
| 60° | 7136.8 | 7108.2 | 7231.3 | 7987.4 | 8947.4 | 9258.3 | 9744.5 | 10107.7 | 10784.2 | 10521.8 | 8256.0 |
| 62.5° | 7476.3 | 7430.3 | 7605.6 | 8515.9 | 9744.5 | 10026.8 | 10498.1 | 10804.1 | 11364.9 | 10637.4 | 7968.7 |
| 65° | 7805.8 | 7784.7 | 8055.8 | 9143.9 | 10652.3 | 10973.2 | 11430.8 | 11638.5 | 11830.0 | 10463.3 | 7256.2 |
| 67.5° | 8156.5 | 8198.8 | 8631.6 | 9982.1 | 11836.2 | 12239.1 | 12732.8 | 12537.6 | 11963.1 | 9638.8 | 6110.9 |
| 70° | 8691.2 | 8718.6 | 9387.6 | 11080.1 | 13362.1 | 13848.3 | 14087.1 | 12857.2 | 11321.4 | 8073.2 | 4593.7 |
| 72.5° | 8921.3 | 9041.9 | 10062.9 | 12232.9 | 15095.6 | 15392.8 | 14542.2 | 12144.6 | 9431.2 | 5484.1 | 2413.8 |
| 73° | 8870.3 | 9014.6 | 10094.0 | 12408.2 | 15231.1 | 15543.3 | 14445.2 | 11777.8 | 8767.1 | 4723.0 | 2069.3 |
| 75° | 8234.9 | 8412.7 | 9689.8 | 12261.5 | 14967.5 | 14781.0 | 12885.8 | 10038.0 | 5924.3 | 2147.6 | 942.6 |
| 77.5° | 6497.6 | 6548.6 | 7677.7 | 9901.2 | 11786.5 | 11440.8 | 9643.8 | 6273.8 | 2420.0 | 798.4 | 534.7 |
| 80° | 3259.4 | 3447.1 | 4327.6 | 5671.9 | 7881.7 | 7768.5 | 6087.2 | 2967.1 | 1008.5 | 468.8 | 354.4 |
| 82.5° | 1568.1 | 1701.2 | 2107.8 | 2765.7 | 4354.9 | 4251.7 | 3014.4 | 1621.6 | 640.4 | 273.6 | 208.9 |
| 85° | 1009.8 | 1109.3 | 1341.8 | 1319.4 | 1790.7 | 1709.9 | 1354.2 | 1227.4 | 379.3 | 143.0 | 145.5 |
| 87.5° | 666.5 | 730.0 | 875.5 | 700.1 | 651.6 | 589.4 | 598.2 | 691.4 | 74.6 | 54.7 | 19.9 |
| 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: P453826

CATALOG NUMBER: GALN-SA4D-827-U-SL4

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3868.7 | 3868.7 | 3868.7 | 3868.7 | 3868.7 | 3868.7 | 3868.7 | 3868.7 | 3868.7 | 3868.7 | 3868.7 |
| 2.5° | 3826.4 | 3810.3 | 3756.8 | 3704.6 | 3654.8 | 3607.6 | 3576.5 | 3535.4 | 3508.1 | 3515.5 | 3526.7 |
| 5° | 3730.7 | 3694.6 | 3600.1 | 3508.1 | 3421.0 | 3317.8 | 3234.5 | 3167.3 | 3116.4 | 3097.7 | 3094.0 |
| 7.5° | 3630.0 | 3569.0 | 3433.5 | 3275.5 | 3127.6 | 2999.5 | 2851.5 | 2778.1 | 2692.3 | 2662.5 | 2652.5 |
| 10° | 3569.0 | 3486.9 | 3296.7 | 3076.6 | 2854.0 | 2641.3 | 2480.9 | 2350.3 | 2232.2 | 2209.8 | 2198.6 |
| 12.5° | 3551.6 | 3443.4 | 3187.2 | 2903.7 | 2607.7 | 2346.6 | 2109.1 | 1937.5 | 1823.1 | 1796.9 | 1758.4 |
| 15° | 3541.7 | 3407.4 | 3085.3 | 2729.6 | 2354.1 | 2035.7 | 1785.8 | 1585.5 | 1481.1 | 1411.4 | 1412.7 |
| 17.5° | 3533.0 | 3366.3 | 2970.9 | 2539.4 | 2135.2 | 1768.3 | 1492.3 | 1312.0 | 1216.2 | 1178.9 | 1175.2 |
| 20° | 3520.5 | 3317.8 | 2839.0 | 2339.1 | 1885.2 | 1524.6 | 1274.6 | 1140.3 | 1075.7 | 1044.6 | 1043.3 |
| 22.5° | 3515.5 | 3270.6 | 2709.7 | 2135.2 | 1663.9 | 1336.8 | 1130.4 | 1035.9 | 994.8 | 973.7 | 973.7 |
| 25° | 3528.0 | 3237.0 | 2574.2 | 1941.2 | 1467.4 | 1176.4 | 1030.9 | 966.2 | 942.6 | 931.4 | 927.7 |
| 27.5° | 3566.5 | 3222.1 | 2439.9 | 1747.2 | 1287.1 | 1067.0 | 963.8 | 919.0 | 901.6 | 892.9 | 894.1 |
| 30° | 3639.9 | 3220.8 | 2308.0 | 1555.7 | 1152.8 | 983.7 | 910.3 | 879.2 | 865.5 | 860.5 | 859.3 |
| 32.5° | 3758.0 | 3248.2 | 2178.7 | 1397.8 | 1039.6 | 914.0 | 860.5 | 838.2 | 831.9 | 828.2 | 827.0 |
| 35° | 3958.3 | 3325.3 | 2050.6 | 1253.5 | 952.6 | 851.8 | 813.3 | 802.1 | 793.4 | 797.1 | 798.4 |
| 37.5° | 4228.1 | 3458.3 | 1928.8 | 1140.3 | 886.7 | 805.8 | 773.5 | 763.5 | 758.6 | 762.3 | 766.0 |
| 40° | 4590.0 | 3649.8 | 1826.8 | 1049.6 | 839.4 | 767.3 | 738.7 | 730.0 | 725.0 | 731.2 | 732.5 |
| 42.5° | 4989.2 | 3871.2 | 1742.2 | 978.7 | 800.9 | 734.9 | 707.6 | 697.6 | 693.9 | 697.6 | 698.9 |
| 45° | 5399.5 | 4128.6 | 1698.7 | 927.7 | 768.5 | 711.3 | 682.7 | 671.5 | 662.8 | 660.3 | 664.1 |
| 47.5° | 5803.7 | 4352.5 | 1697.5 | 896.6 | 742.4 | 690.2 | 659.1 | 646.7 | 635.5 | 629.2 | 628.0 |
| 50° | 6133.2 | 4530.3 | 1727.3 | 882.9 | 720.0 | 666.5 | 635.5 | 623.0 | 608.1 | 595.7 | 598.2 |
| 52.5° | 6382.0 | 4645.9 | 1741.0 | 876.7 | 707.6 | 641.7 | 610.6 | 599.4 | 582.0 | 565.8 | 565.8 |
| 55° | 6542.4 | 4673.3 | 1707.4 | 870.5 | 697.6 | 615.6 | 582.0 | 572.0 | 554.6 | 538.5 | 538.5 |
| 57.5° | 6597.1 | 4588.7 | 1586.8 | 855.6 | 687.7 | 593.2 | 553.4 | 544.7 | 531.0 | 514.8 | 512.3 |
| 60° | 6470.2 | 4302.7 | 1375.4 | 810.8 | 667.8 | 569.6 | 522.3 | 518.6 | 513.6 | 499.9 | 498.7 |
| 62.5° | 5981.5 | 3695.9 | 1145.3 | 752.4 | 634.2 | 544.7 | 493.7 | 499.9 | 503.6 | 496.2 | 494.9 |
| 65° | 5168.2 | 3000.7 | 978.7 | 671.5 | 589.4 | 509.9 | 462.6 | 478.8 | 488.7 | 488.7 | 486.2 |
| 67.5° | 4192.0 | 2304.3 | 824.5 | 601.9 | 533.5 | 462.6 | 427.8 | 440.2 | 447.7 | 445.2 | 451.4 |
| 70° | 2979.6 | 1560.7 | 671.5 | 522.3 | 462.6 | 409.1 | 383.0 | 383.0 | 378.0 | 375.6 | 375.6 |
| 72.5° | 1445.0 | 891.6 | 544.7 | 436.5 | 394.2 | 349.4 | 328.3 | 319.6 | 309.6 | 308.4 | 302.2 |
| 73° | 1207.5 | 799.6 | 519.8 | 420.3 | 378.0 | 340.7 | 317.1 | 303.4 | 297.2 | 292.2 | 291.0 |
| 75° | 734.9 | 606.9 | 434.0 | 354.4 | 322.1 | 293.5 | 272.3 | 259.9 | 253.7 | 250.0 | 248.7 |
| 77.5° | 483.7 | 452.7 | 337.0 | 271.1 | 246.2 | 228.8 | 220.1 | 207.7 | 203.9 | 199.0 | 199.0 |
| 80° | 360.6 | 345.7 | 241.3 | 191.5 | 176.6 | 161.7 | 159.2 | 156.7 | 146.7 | 140.5 | 138.0 |
| 82.5° | 232.5 | 246.2 | 164.1 | 128.1 | 111.9 | 99.5 | 100.7 | 104.5 | 94.5 | 85.8 | 83.3 |
| 85° | 165.4 | 177.8 | 99.5 | 58.4 | 47.3 | 41.0 | 46.0 | 41.0 | 42.3 | 33.6 | 27.4 |
| 87.5° | 27.4 | 47.3 | 17.4 | 7.5 | 3.7 | 2.5 | 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)