

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: P300320

Luminaire Tested: **GLNA-AF-05-LED-E1-T4FT-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P300320
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24295)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-05-LED-E1-T4FT-7027
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(5) 70 CRI, 2700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV Forward Throw OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 25915.8 lumens
Efficiency: N/A
Efficacy: 92.9 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G4

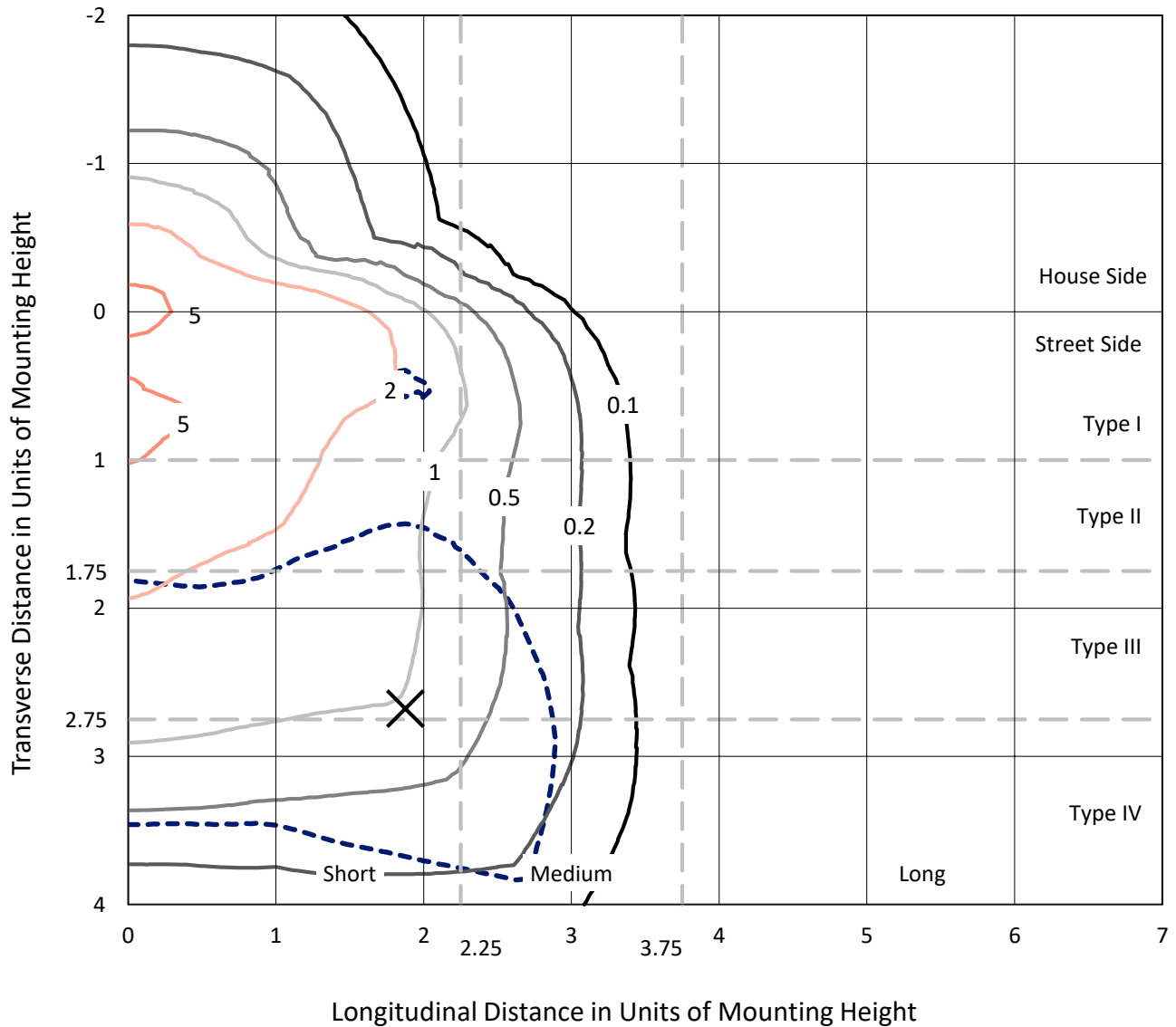
Input Watts (W): 279
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

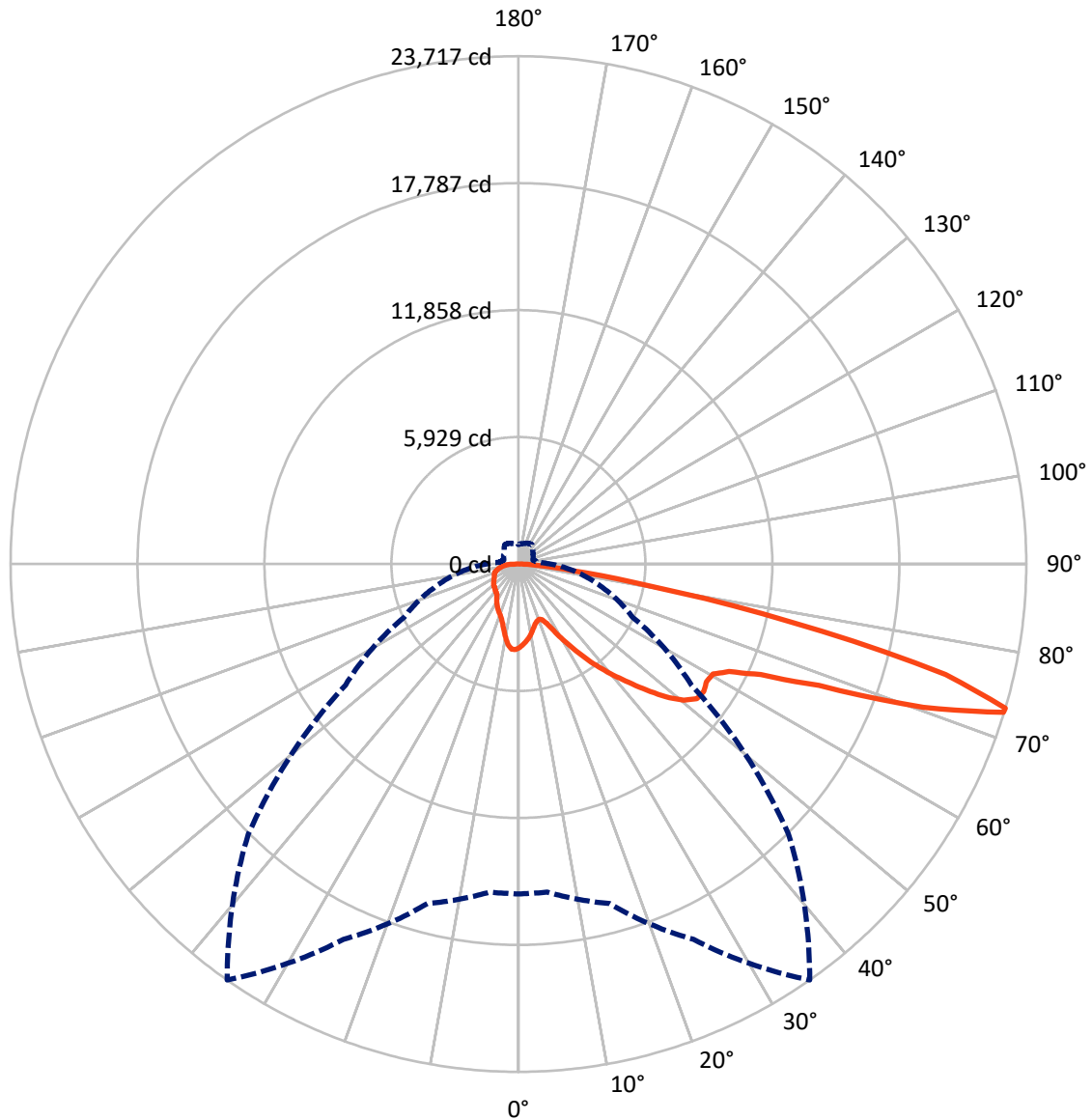
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.3 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 4942.9 | 0.0 | 4942.9 |
| | % Fixture | 19.1 | 0.0 | 19.1 |
| Street Side | Lumens | 20972.9 | 0.0 | 20972.9 |
| | % Fixture | 80.9 | 0.0 | 80.9 |
| Total | Lumens | 25915.8 | 0.0 | 25915.8 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 354.1 | 1.4 |
| 10°-20° | 883.8 | 3.4 |
| 20°-30° | 1428.8 | 5.5 |
| 30°-40° | 2395.8 | 9.2 |
| 40°-50° | 3693.1 | 14.3 |
| 50°-60° | 4954.7 | 19.1 |
| 60°-70° | 6600.6 | 25.5 |
| 70°-80° | 5034.3 | 19.4 |
| 80°-90° | 570.6 | 2.2 |
| 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° | 25915.8 | 100.0 |
| 0°-180° | 25915.8 | 100.0 |



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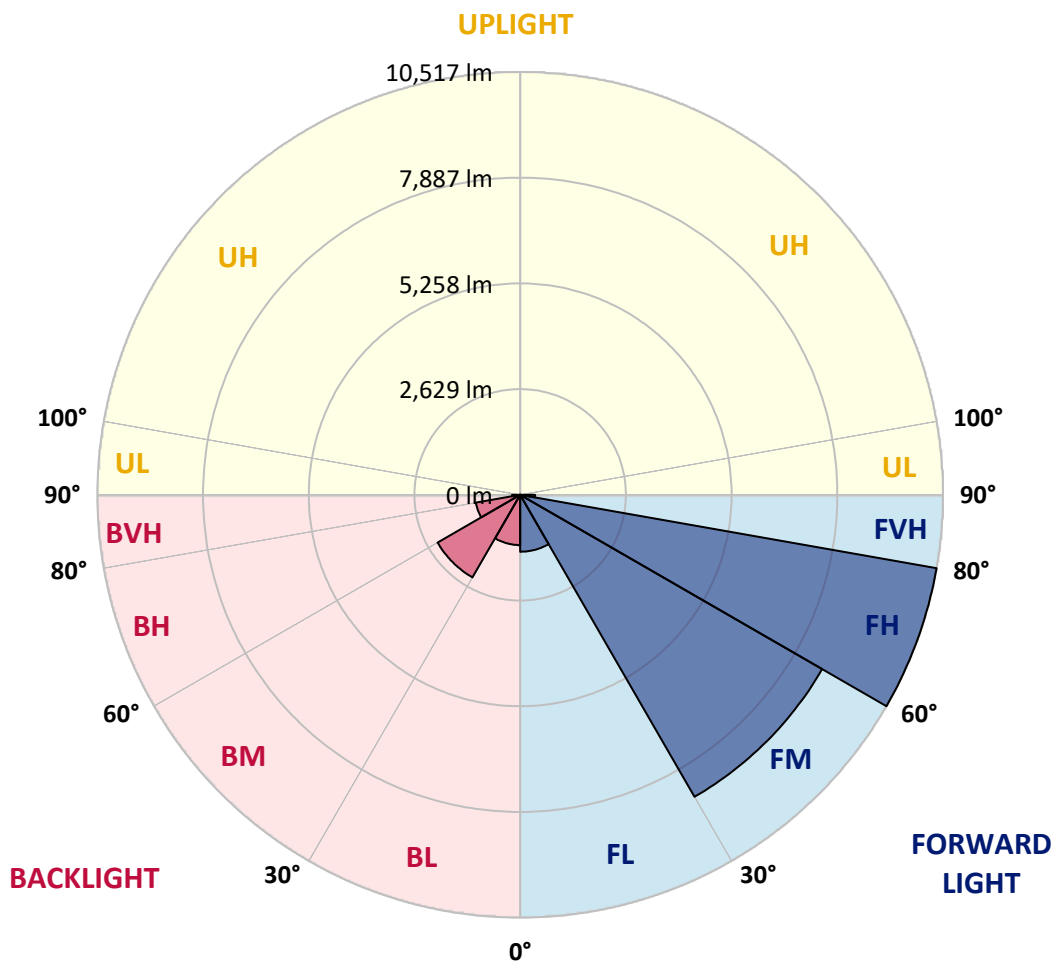
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|---------|-----------|-------------------------|------|----------|
| | | | | B | U | G |
| FL | (0°-30°) | 1415.9 | 5.5 | | | |
| FM | (30°-60°) | 8671.6 | 33.5 | | | |
| FH | (60°-80°) | 10516.6 | 40.6 | | | G4/12000 |
| FVH | (80°-90°) | 368.8 | 1.4 | | | G3/500 |
| BL | (0°-30°) | 1250.8 | 4.8 | B3/2500 | | |
| BM | (30°-60°) | 2372.0 | 9.2 | B2/2500 | | |
| BH | (60°-80°) | 1118.3 | 4.3 | B3/2500 | | G3/2500 |
| BVH | (80°-90°) | 201.8 | 0.8 | | | G2/225 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|
| 0° | 3911.5 | 3911.5 | 3911.5 | 3911.5 | 3911.5 | 3911.5 | 3911.5 | 3911.5 | 3911.5 | 3911.5 | 3911.5 |
| 2.5° | 3757.2 | 3764.6 | 3755.9 | 3767.1 | 3785.8 | 3805.7 | 3819.4 | 3839.3 | 3861.7 | 3892.8 | 3900.3 |
| 5° | 3580.5 | 3591.7 | 3591.7 | 3611.6 | 3647.7 | 3680.0 | 3709.9 | 3742.2 | 3789.5 | 3843.0 | 3864.2 |
| 7.5° | 3386.3 | 3392.5 | 3403.7 | 3433.6 | 3485.9 | 3531.9 | 3574.2 | 3626.5 | 3691.2 | 3762.2 | 3799.5 |
| 10° | 3152.3 | 3161.1 | 3178.5 | 3220.8 | 3291.7 | 3355.2 | 3416.2 | 3488.4 | 3570.5 | 3658.9 | 3706.1 |
| 12.5° | 2986.8 | 2984.3 | 2991.8 | 3022.9 | 3085.1 | 3162.3 | 3250.7 | 3342.8 | 3443.6 | 3546.9 | 3604.1 |
| 15° | 2930.8 | 2917.1 | 2888.5 | 2881.0 | 2914.6 | 2991.8 | 3093.8 | 3207.1 | 3327.8 | 3452.3 | 3523.2 |
| 17.5° | 2965.7 | 2942.0 | 2863.6 | 2806.4 | 2801.4 | 2859.9 | 2968.2 | 3095.1 | 3234.5 | 3386.3 | 3474.7 |
| 20° | 3184.7 | 3128.7 | 2935.8 | 2802.6 | 2756.6 | 2785.2 | 2879.8 | 3014.2 | 3178.5 | 3380.1 | 3493.3 |
| 22.5° | 3708.6 | 3626.5 | 3217.1 | 2969.4 | 2813.8 | 2779.0 | 2849.9 | 2993.0 | 3184.7 | 3457.2 | 3601.6 |
| 25° | 4471.5 | 4354.5 | 3699.9 | 3385.1 | 3064.0 | 2878.5 | 2894.7 | 3041.6 | 3273.1 | 3636.5 | 3810.7 |
| 27.5° | 5073.9 | 4997.9 | 4330.9 | 3971.2 | 3519.5 | 3147.4 | 3040.3 | 3163.5 | 3453.5 | 3930.2 | 4108.1 |
| 30° | 5432.3 | 5386.2 | 5005.4 | 4635.8 | 4100.7 | 3575.5 | 3319.1 | 3392.5 | 3736.0 | 4337.1 | 4484.0 |
| 32.5° | 5847.9 | 5820.6 | 5633.9 | 5294.1 | 4727.9 | 4138.0 | 3760.9 | 3734.8 | 4114.3 | 4826.2 | 4893.4 |
| 35° | 6278.5 | 6269.8 | 6160.3 | 5916.4 | 5401.2 | 4879.7 | 4347.1 | 4170.4 | 4526.3 | 5334.0 | 5291.7 |
| 37.5° | 6679.3 | 6664.3 | 6600.9 | 6459.0 | 6105.6 | 5676.2 | 4944.4 | 4617.1 | 4970.6 | 5819.3 | 5631.4 |
| 40° | 7417.3 | 7300.3 | 7082.5 | 6975.5 | 6817.4 | 6347.0 | 5418.6 | 5034.0 | 5431.0 | 6282.3 | 5925.1 |
| 42.5° | 8317.1 | 8126.6 | 7720.9 | 7574.1 | 7551.7 | 6875.9 | 5742.2 | 5438.5 | 5895.2 | 6741.5 | 6213.8 |
| 45° | 9025.2 | 8846.0 | 8496.3 | 8310.8 | 8393.0 | 7355.0 | 6067.0 | 5870.3 | 6373.1 | 7223.1 | 6511.3 |
| 47.5° | 9780.6 | 9499.3 | 9036.4 | 9092.4 | 9271.6 | 7808.1 | 6398.0 | 6334.6 | 6897.1 | 7762.0 | 6880.9 |
| 50° | 9808.0 | 9592.7 | 9389.8 | 9724.6 | 10003.4 | 8225.0 | 6812.4 | 6821.2 | 7538.0 | 8440.3 | 7372.5 |
| 52.5° | 9239.2 | 9193.2 | 9515.5 | 10041.9 | 10443.9 | 8554.8 | 7284.1 | 7323.9 | 8358.1 | 9219.3 | 7912.6 |
| 55° | 9040.1 | 8987.8 | 9360.0 | 9931.2 | 10503.7 | 8827.3 | 7795.6 | 7867.8 | 9350.0 | 10040.7 | 8439.0 |
| 57.5° | 9525.5 | 9409.7 | 9434.6 | 9878.9 | 10358.0 | 9126.0 | 8353.1 | 8498.8 | 10427.7 | 10758.8 | 8777.5 |
| 60° | 10882.0 | 10634.3 | 10163.9 | 10152.7 | 10436.5 | 9574.0 | 8997.8 | 9175.8 | 11547.8 | 11102.3 | 8645.6 |
| 62.5° | 12784.8 | 12537.2 | 11656.1 | 11082.4 | 11040.0 | 10313.2 | 9789.3 | 9836.6 | 12194.9 | 10636.8 | 7840.4 |
| 65° | 14844.5 | 14623.0 | 13638.6 | 12828.4 | 12437.6 | 11537.8 | 10709.0 | 10131.5 | 11983.4 | 9356.2 | 6431.6 |
| 67.5° | 17344.7 | 17107.0 | 16260.8 | 15512.8 | 15137.0 | 13514.1 | 11354.9 | 9849.0 | 10640.6 | 7248.0 | 4623.4 |
| 70° | 19093.3 | 18850.6 | 18517.1 | 19123.1 | 20042.8 | 16365.3 | 11438.3 | 8700.4 | 7947.4 | 4817.5 | 2782.7 |
| 72.5° | 16812.1 | 16698.8 | 17307.4 | 19859.9 | 23690.5 | 18095.2 | 10339.4 | 6334.6 | 4615.9 | 2557.5 | 1610.4 |
| 73° | 15403.3 | 15378.4 | 16416.3 | 19343.4 | 23716.6 | 17828.8 | 9857.8 | 5887.8 | 3958.8 | 2262.5 | 1472.3 |
| 75° | 6955.6 | 7155.9 | 9430.9 | 14774.8 | 20605.3 | 14691.4 | 6938.1 | 3377.6 | 2236.4 | 1563.1 | 1111.3 |
| 77.5° | 1671.4 | 1741.1 | 2950.7 | 7016.5 | 13012.6 | 8755.1 | 3143.6 | 1670.1 | 1429.9 | 1103.9 | 811.4 |
| 80° | 711.9 | 735.5 | 1136.2 | 2592.3 | 6126.7 | 3525.7 | 1448.6 | 1118.8 | 989.4 | 770.4 | 568.7 |
| 82.5° | 395.8 | 420.6 | 644.7 | 1176.1 | 2472.8 | 1202.2 | 883.6 | 779.1 | 650.9 | 464.2 | 369.6 |
| 85° | 224.0 | 237.7 | 377.1 | 657.1 | 1047.9 | 482.9 | 528.9 | 517.7 | 367.1 | 238.9 | 181.7 |
| 87.5° | 105.8 | 114.5 | 181.7 | 304.9 | 410.7 | 189.2 | 268.8 | 296.2 | 230.2 | 145.6 | 94.6 |
| 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: GLNA-AF-05-LED-E1-T4FT-7027

CANDELA DISTRIBUTION (continued):

| | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 3911.5 | 3911.5 | 3911.5 | 3911.5 | 3911.5 | 3911.5 | 3911.5 | 3911.5 | 3911.5 | 3911.5 |
| 2.5° | 3909.0 | 3931.4 | 3957.5 | 3971.2 | 3983.7 | 3998.6 | 4013.5 | 4013.5 | 4016.0 | 4017.3 |
| 5° | 3881.6 | 3927.7 | 3968.7 | 3986.2 | 3989.9 | 3989.9 | 3986.2 | 3966.3 | 3948.8 | 3956.3 |
| 7.5° | 3824.4 | 3891.6 | 3926.4 | 3920.2 | 3872.9 | 3818.2 | 3772.1 | 3716.1 | 3687.5 | 3682.5 |
| 10° | 3742.2 | 3819.4 | 3825.6 | 3763.4 | 3646.4 | 3529.4 | 3432.4 | 3337.8 | 3293.0 | 3281.8 |
| 12.5° | 3651.4 | 3722.3 | 3682.5 | 3554.3 | 3366.4 | 3195.9 | 3072.7 | 2976.9 | 2934.6 | 2923.4 |
| 15° | 3578.0 | 3626.5 | 3525.7 | 3324.1 | 3087.6 | 2907.2 | 2805.1 | 2734.2 | 2704.3 | 2695.6 |
| 17.5° | 3539.4 | 3549.3 | 3365.2 | 3092.6 | 2841.2 | 2690.6 | 2627.2 | 2593.6 | 2582.4 | 2576.1 |
| 20° | 3558.1 | 3488.4 | 3212.1 | 2877.3 | 2639.6 | 2533.8 | 2518.9 | 2510.2 | 2507.7 | 2504.0 |
| 22.5° | 3651.4 | 3469.7 | 3071.4 | 2673.2 | 2462.9 | 2416.8 | 2429.3 | 2428.0 | 2425.5 | 2423.1 |
| 25° | 3818.2 | 3485.9 | 2934.6 | 2479.1 | 2314.8 | 2304.8 | 2327.2 | 2327.2 | 2317.3 | 2317.3 |
| 27.5° | 4038.4 | 3519.5 | 2781.5 | 2294.9 | 2180.4 | 2181.6 | 2199.0 | 2194.1 | 2182.9 | 2175.4 |
| 30° | 4307.2 | 3540.6 | 2602.3 | 2129.4 | 2054.7 | 2049.7 | 2054.7 | 2033.5 | 1999.9 | 1997.4 |
| 32.5° | 4582.3 | 3514.5 | 2394.4 | 1982.5 | 1921.5 | 1910.3 | 1906.6 | 1876.7 | 1838.1 | 1826.9 |
| 35° | 4831.2 | 3418.7 | 2182.9 | 1865.5 | 1794.6 | 1769.7 | 1787.1 | 1777.2 | 1742.3 | 1733.6 |
| 37.5° | 5012.9 | 3240.7 | 1992.5 | 1762.2 | 1703.7 | 1697.5 | 1708.7 | 1712.4 | 1671.4 | 1662.7 |
| 40° | 5134.8 | 2999.3 | 1829.4 | 1675.1 | 1686.3 | 1662.7 | 1625.3 | 1599.2 | 1586.7 | 1583.0 |
| 42.5° | 5233.2 | 2747.9 | 1692.5 | 1634.0 | 1690.0 | 1621.6 | 1540.7 | 1498.4 | 1520.8 | 1530.7 |
| 45° | 5346.4 | 2502.7 | 1578.0 | 1583.0 | 1671.4 | 1574.3 | 1482.2 | 1441.1 | 1449.9 | 1452.3 |
| 47.5° | 5502.0 | 2204.0 | 1454.8 | 1500.9 | 1609.2 | 1541.9 | 1446.1 | 1387.6 | 1346.6 | 1327.9 |
| 50° | 5717.3 | 1850.6 | 1326.6 | 1408.8 | 1548.2 | 1518.3 | 1390.1 | 1327.9 | 1252.0 | 1234.6 |
| 52.5° | 5866.6 | 1520.8 | 1220.9 | 1331.6 | 1493.4 | 1471.0 | 1345.3 | 1264.4 | 1184.8 | 1169.8 |
| 55° | 5785.7 | 1263.2 | 1128.8 | 1245.8 | 1421.2 | 1412.5 | 1308.0 | 1199.7 | 1137.5 | 1125.0 |
| 57.5° | 5381.3 | 1100.1 | 1057.8 | 1164.9 | 1332.9 | 1362.7 | 1258.2 | 1144.9 | 1100.1 | 1091.4 |
| 60° | 4609.7 | 998.1 | 1013.0 | 1110.1 | 1260.7 | 1313.0 | 1208.4 | 1115.1 | 1085.2 | 1079.0 |
| 62.5° | 3576.7 | 929.6 | 979.4 | 1070.3 | 1204.7 | 1278.1 | 1181.0 | 1111.3 | 1100.1 | 1092.7 |
| 65° | 2562.4 | 874.9 | 943.3 | 1030.5 | 1153.7 | 1245.8 | 1171.1 | 1106.4 | 1108.9 | 1102.6 |
| 67.5° | 1741.1 | 826.4 | 899.8 | 985.7 | 1103.9 | 1217.1 | 1157.4 | 1088.9 | 1120.1 | 1112.6 |
| 70° | 1218.4 | 779.1 | 848.8 | 928.4 | 1041.7 | 1177.3 | 1132.5 | 1062.8 | 1060.3 | 1030.5 |
| 72.5° | 950.8 | 716.8 | 779.1 | 848.8 | 962.0 | 1121.3 | 1082.7 | 1004.3 | 963.3 | 932.1 |
| 73° | 907.2 | 701.9 | 761.6 | 831.3 | 944.6 | 1107.6 | 1069.0 | 988.1 | 942.1 | 913.5 |
| 75° | 750.4 | 637.2 | 691.9 | 754.2 | 869.9 | 1042.9 | 1001.8 | 914.7 | 856.2 | 838.8 |
| 77.5° | 589.9 | 545.1 | 597.4 | 653.4 | 766.6 | 948.3 | 902.3 | 818.9 | 786.5 | 771.6 |
| 80° | 436.8 | 451.8 | 497.8 | 547.6 | 664.6 | 847.5 | 806.4 | 723.1 | 867.4 | 831.3 |
| 82.5° | 307.4 | 342.2 | 384.6 | 429.4 | 557.5 | 749.2 | 699.4 | 613.5 | 634.7 | 527.7 |
| 85° | 181.7 | 224.0 | 263.8 | 302.4 | 402.0 | 621.0 | 577.5 | 489.1 | 400.7 | 382.1 |
| 87.5° | 105.8 | 124.5 | 135.7 | 175.5 | 276.3 | 467.9 | 407.0 | 362.2 | 207.8 | 140.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)