



IES INDOOR REPORT
PHOTOMETRIC FILENAME : GA22-LED-SS-CW-P12.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]LED-4150A
[TESTLAB]LSI INDUSTRIES, INC
[ISSUE DATE]03/2/16
[TEST DATE]06/11/13
[MANUFACTURER]LSI INDUSTRIES, INC
[ABSOLUTE]NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.
[OTHER]SCALED FROM ORIGINAL TEST DATA
[OTHER]TEST PROCEDURE: IESNA LM-79-08
[SEARCH_SOURCETYPE] LED
[SEARCH_APPLICATION] Indoor
[LUMCAT]GA22-LED-SS-CW-P12

CHARACTERISTICS

| | |
|---------------------------------|-----------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 3423 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 122 |
| Total Luminaire Watts | 28 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.24 |
| Spacing Criterion (90-270) | 1.26 |
| Spacing Criterion (Diagonal) | 1.30 |
| Basic Luminous Shape | Rectangular |
| Luminous Length (0-180) | 2.00 ft |
| Luminous Width (90-270) | 2.00 ft |
| Luminous Height | 0.00 ft |

LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 3180 | 3171 | 3153 |
| 55 | 2479 | 2392 | 2191 |
| 65 | 1845 | 1601 | 1594 |
| 75 | 1470 | 1229 | 1591 |
| 85 | 2040 | 1968 | 2576 |

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CANDELA TABULATION

| | <u>0.0</u> | <u>22.5</u> | <u>45.0</u> | <u>67.5</u> | <u>90.0</u> |
|-------|------------|-------------|-------------|-------------|-------------|
| 0.0 | 1454.64 | 1454.64 | 1454.64 | 1454.64 | 1454.64 |
| 2.5 | 1448.84 | 1451.16 | 1455.80 | 1458.12 | 1456.96 |
| 5.0 | 1445.36 | 1447.68 | 1452.32 | 1454.64 | 1454.64 |
| 7.5 | 1438.40 | 1440.72 | 1444.20 | 1451.16 | 1451.16 |
| 10.0 | 1424.48 | 1429.12 | 1436.08 | 1441.88 | 1441.88 |
| 12.5 | 1409.40 | 1412.88 | 1422.16 | 1427.96 | 1427.96 |
| 15.0 | 1390.84 | 1395.48 | 1402.44 | 1409.40 | 1411.72 |
| 17.5 | 1367.64 | 1374.60 | 1381.56 | 1392.00 | 1396.64 |
| 20.0 | 1342.12 | 1349.08 | 1356.04 | 1371.12 | 1374.60 |
| 22.5 | 1314.28 | 1320.08 | 1328.20 | 1343.28 | 1346.76 |
| 25.0 | 1280.64 | 1286.44 | 1296.88 | 1308.48 | 1315.44 |
| 27.5 | 1243.52 | 1248.16 | 1258.60 | 1271.36 | 1279.48 |
| 30.0 | 1200.60 | 1204.08 | 1215.68 | 1230.76 | 1238.88 |
| 32.5 | 1153.04 | 1157.68 | 1166.96 | 1183.20 | 1194.80 |
| 35.0 | 1100.84 | 1104.32 | 1113.60 | 1128.68 | 1140.28 |
| 37.5 | 1042.84 | 1047.48 | 1052.12 | 1066.04 | 1075.32 |
| 40.0 | 979.04 | 982.52 | 983.68 | 992.96 | 998.76 |
| 42.5 | 910.60 | 911.76 | 910.60 | 911.76 | 916.40 |
| 45.0 | 836.36 | 837.52 | 834.04 | 829.40 | 829.40 |
| 47.5 | 758.64 | 758.64 | 754.00 | 741.24 | 734.28 |
| 50.0 | 679.76 | 680.92 | 675.12 | 646.12 | 635.68 |
| 52.5 | 602.04 | 603.20 | 592.76 | 555.64 | 545.20 |
| 55.0 | 528.96 | 526.64 | 510.40 | 474.44 | 467.48 |
| 57.5 | 460.52 | 452.40 | 432.68 | 404.84 | 397.88 |
| 60.0 | 396.72 | 383.96 | 368.88 | 350.32 | 344.52 |
| 62.5 | 343.36 | 325.96 | 306.24 | 298.12 | 292.32 |
| 65.0 | 290.00 | 272.60 | 251.72 | 254.04 | 250.56 |
| 67.5 | 243.60 | 226.20 | 206.48 | 219.24 | 216.92 |
| 70.0 | 204.16 | 187.92 | 168.20 | 191.40 | 190.24 |
| 72.5 | 170.52 | 157.76 | 139.20 | 168.20 | 169.36 |
| 75.0 | 141.52 | 133.40 | 118.32 | 148.48 | 153.12 |
| 77.5 | 116.00 | 116.00 | 112.52 | 128.76 | 138.04 |
| 80.0 | 106.72 | 102.08 | 98.60 | 117.16 | 119.48 |
| 82.5 | 87.00 | 81.20 | 83.52 | 100.92 | 110.20 |
| 85.0 | 66.12 | 61.48 | 63.80 | 81.20 | 83.52 |
| 87.5 | 40.60 | 39.44 | 40.60 | 52.20 | 49.88 |
| 90.0 | 13.92 | 13.92 | 11.60 | 12.76 | 11.60 |
| 92.5 | 2.32 | 2.32 | 2.32 | 2.32 | 2.32 |
| 95.0 | 2.32 | 2.32 | 2.32 | 2.32 | 2.32 |
| 97.5 | 2.32 | 2.32 | 2.32 | 2.32 | 2.32 |
| 100.0 | 2.32 | 2.32 | 2.32 | 2.32 | 2.32 |
| 102.5 | 2.32 | 2.32 | 2.32 | 2.32 | 2.32 |
| 105.0 | 2.32 | 2.32 | 2.32 | 2.32 | 2.32 |
| 107.5 | 2.32 | 2.32 | 2.32 | 2.32 | 2.32 |
| 110.0 | 2.32 | 2.32 | 2.32 | 2.32 | 2.32 |
| 112.5 | 2.32 | 2.32 | 2.32 | 2.32 | 2.32 |
| 115.0 | 2.32 | 2.32 | 2.32 | 2.32 | 2.32 |
| 117.5 | 2.32 | 2.32 | 2.32 | 2.32 | 2.32 |
| 120.0 | 2.32 | 2.32 | 2.32 | 2.32 | 2.32 |
| 122.5 | 2.32 | 2.32 | 2.32 | 2.32 | 2.32 |
| 125.0 | 2.32 | 2.32 | 2.32 | 2.32 | 2.32 |
| 127.5 | 2.32 | 2.32 | 2.32 | 2.32 | 2.32 |
| 130.0 | 2.32 | 2.32 | 2.32 | 2.32 | 2.32 |
| 132.5 | 3.48 | 2.32 | 2.32 | 3.48 | 2.32 |

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CANDELA TABULATION - (Cont.)

| | | | | | |
|-------|------|------|------|------|------|
| 135.0 | 3.48 | 3.48 | 3.48 | 3.48 | 3.48 |
| 137.5 | 3.48 | 3.48 | 3.48 | 3.48 | 3.48 |
| 140.0 | 3.48 | 3.48 | 3.48 | 3.48 | 2.32 |
| 142.5 | 3.48 | 3.48 | 3.48 | 3.48 | 2.32 |
| 145.0 | 3.48 | 3.48 | 3.48 | 3.48 | 2.32 |
| 147.5 | 3.48 | 3.48 | 3.48 | 3.48 | 3.48 |
| 150.0 | 3.48 | 3.48 | 3.48 | 3.48 | 3.48 |
| 152.5 | 3.48 | 3.48 | 3.48 | 3.48 | 3.48 |
| 155.0 | 3.48 | 3.48 | 3.48 | 3.48 | 3.48 |
| 157.5 | 3.48 | 3.48 | 3.48 | 3.48 | 3.48 |
| 160.0 | 3.48 | 3.48 | 3.48 | 3.48 | 3.48 |
| 162.5 | 3.48 | 3.48 | 3.48 | 3.48 | 3.48 |
| 165.0 | 3.48 | 3.48 | 3.48 | 3.48 | 3.48 |
| 167.5 | 3.48 | 3.48 | 3.48 | 3.48 | 3.48 |
| 170.0 | 3.48 | 3.48 | 3.48 | 3.48 | 3.48 |
| 172.5 | 3.48 | 3.48 | 3.48 | 3.48 | 3.48 |
| 175.0 | 3.48 | 3.48 | 3.48 | 3.48 | 3.48 |
| 177.5 | 3.48 | 3.48 | 3.48 | 3.48 | 3.48 |
| 180.0 | 3.48 | 3.48 | 3.48 | 3.48 | 3.48 |

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ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|-------|--------|
| 0-20 | 533.92 | N.A. | 15.60 |
| 0-30 | 1130.96 | N.A. | 33.00 |
| 0-40 | 1826.34 | N.A. | 53.40 |
| 0-60 | 2918.79 | N.A. | 85.30 |
| 0-80 | 3332.46 | N.A. | 97.40 |
| 0-90 | 3404.89 | N.A. | 99.50 |
| 10-90 | 3266.87 | N.A. | 95.40 |
| 20-40 | 1292.42 | N.A. | 37.80 |
| 20-50 | 1932.08 | N.A. | 56.40 |
| 40-70 | 1357.33 | N.A. | 39.70 |
| 60-80 | 413.66 | N.A. | 12.10 |
| 70-80 | 148.78 | N.A. | 4.30 |
| 80-90 | 72.44 | N.A. | 2.10 |
| 90-110 | 6.42 | N.A. | 0.20 |
| 90-120 | 8.72 | N.A. | 0.30 |
| 90-130 | 10.80 | N.A. | 0.30 |
| 90-150 | 15.34 | N.A. | 0.40 |
| 90-180 | 18.27 | N.A. | 0.50 |
| 110-180 | 11.86 | N.A. | 0.30 |
| 0-180 | 3423.16 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 138.02 |
| 10-20 | 395.90 |
| 20-30 | 597.04 |
| 30-40 | 695.39 |
| 40-50 | 639.66 |
| 50-60 | 452.79 |
| 60-70 | 264.88 |
| 70-80 | 148.78 |
| 80-90 | 72.44 |
| 90-100 | 3.96 |
| 100-110 | 2.45 |
| 110-120 | 2.30 |
| 120-130 | 2.08 |
| 130-140 | 2.42 |
| 140-150 | 2.13 |
| 150-160 | 1.61 |
| 160-170 | 0.99 |
| 170-180 | 0.33 |

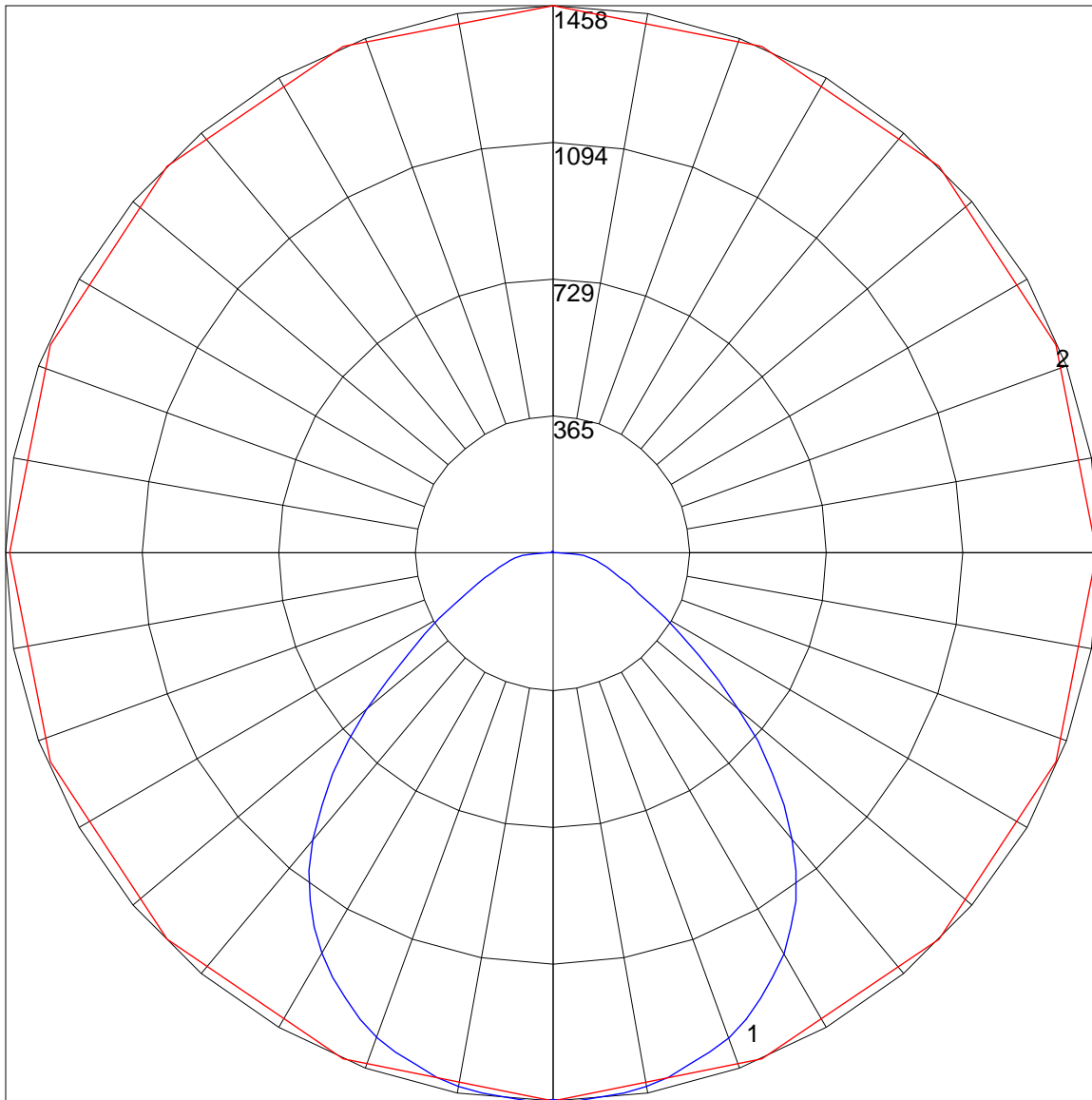
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

| RC | 80 | | | | 70 | | | | 50 | | | 30 | | | 10 | | | 0 |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| RW | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 99 |
| 1 | 110 | 105 | 101 | 98 | 107 | 103 | 99 | 96 | 99 | 96 | 93 | 95 | 92 | 90 | 91 | 89 | 87 | 85 |
| 2 | 101 | 93 | 87 | 82 | 98 | 91 | 86 | 81 | 88 | 83 | 79 | 84 | 80 | 77 | 81 | 78 | 75 | 73 |
| 3 | 93 | 83 | 75 | 69 | 90 | 81 | 74 | 69 | 78 | 72 | 67 | 76 | 71 | 66 | 73 | 69 | 65 | 63 |
| 4 | 85 | 74 | 66 | 60 | 83 | 73 | 65 | 59 | 70 | 64 | 59 | 68 | 62 | 58 | 66 | 61 | 57 | 55 |
| 5 | 79 | 67 | 59 | 52 | 77 | 66 | 58 | 52 | 64 | 57 | 51 | 62 | 56 | 51 | 60 | 55 | 50 | 48 |
| 6 | 73 | 61 | 52 | 46 | 71 | 60 | 52 | 46 | 58 | 51 | 46 | 56 | 50 | 45 | 55 | 49 | 45 | 43 |
| 7 | 68 | 55 | 47 | 41 | 66 | 54 | 47 | 41 | 53 | 46 | 41 | 51 | 45 | 40 | 50 | 44 | 40 | 38 |
| 8 | 64 | 51 | 43 | 37 | 62 | 50 | 42 | 37 | 49 | 42 | 37 | 47 | 41 | 36 | 46 | 40 | 36 | 34 |
| 9 | 60 | 47 | 39 | 34 | 58 | 46 | 39 | 33 | 45 | 38 | 33 | 44 | 38 | 33 | 43 | 37 | 33 | 31 |
| 10 | 56 | 43 | 36 | 31 | 55 | 43 | 35 | 30 | 42 | 35 | 30 | 41 | 35 | 30 | 40 | 34 | 30 | 28 |

POLAR GRAPH



Maximum Candela = 1458.12 Located At Horizontal Angle = 67.5, Vertical Angle = 2.5
1 - Vertical Plane Through Horizontal Angles (67.5 - 247.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (2.5) (Through Max. Cd.)