

IES INDOOR REPORT**PHOTOMETRIC FILENAME : SGE8LEDOS-45L35KEX-AR8223OSSGSO.IES****DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002
[TEST] 102560753CRT-006_M-45L
[TESTLAB] Intertek
[ISSUE DATE] 09/19/2016
[UPDATE] 1/4/2017
[LAB-REF LUMCAT] CRT1609071034-003_M-45L
[MANUFAC] Spectrum Lighting
[LUMCAT] SGE8LEDOS-45L-35K-EX-AR8223OS-SG-SO
[LUMINAIRE] 8" DIAM. LED DOWNLIGHT SEMI-DIFFUSE CLEAR ANODIZED CONE
[OTHER] REGRESSED, INTEGRAL SOLITE GLASS LENS
[OTHER] 79 DEGREE BEAM ANGLE
[LAMP] N/A
[LAMPCAT] N/A
[OTHER] TOTAL LUMINAIRE WATTS IS APPROXIMATE
[OTHER] PHOTOMETRIC MEASUREMENTS TAKEN AT 120VAC
[OTHER] CCT OUTPUT MULTIPLIERS: 40K x 1.0, 30K x 1.0, 27K x 0.945
[OTHER] THIS REPORT UPDATED BY SPECTRUM LIGHTING, SCALED FROM 30L

CHARACTERISTICS

| | |
|---------------------------------|--------------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 3728 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 91 |
| Total Luminaire Watts | 41.1 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.16 |
| Spacing Criterion (90-270) | 1.16 |
| Spacing Criterion (Diagonal) | 1.14 |
| Basic Luminous Shape | Circular |
| Luminous Length (0-180) | 0.62 ft (Diameter) |
| Luminous Width (90-270) | 0.62 ft (Diameter) |
| Luminous Height | 0.00 ft |

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LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 29762 | 30052 | 29941 |
| 55 | 5680 | 5662 | 5469 |
| 65 | 187 | 200 | 137 |
| 75 | 0 | 0 | 0 |
| 85 | 0 | 0 | 0 |

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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> | <u>112.5</u> | <u>135.0</u> | <u>157.5</u> | <u>180.0</u> | <u>202.5</u> |
|------|------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|--------------|
| 0.0 | 2720.832 | 2720.832 | 2720.832 | 2720.832 | 2720.832 | 2720.832 | 2720.832 | 2720.832 | 2720.832 | 2720.832 |
| 2.5 | 2706.180 | 2728.380 | 2715.060 | 2729.860 | 2709.880 | 2729.860 | 2715.060 | 2728.380 | 2706.180 | 2728.380 |
| 5.0 | 2696.116 | 2688.568 | 2702.776 | 2712.100 | 2698.780 | 2712.100 | 2702.776 | 2688.568 | 2696.116 | 2688.568 |
| 7.5 | 2673.324 | 2667.404 | 2682.648 | 2682.204 | 2674.952 | 2682.204 | 2682.648 | 2667.404 | 2673.324 | 2667.404 |
| 10.0 | 2660.300 | 2673.176 | 2656.452 | 2666.960 | 2667.552 | 2666.960 | 2656.452 | 2673.176 | 2660.300 | 2673.176 |
| 12.5 | 2640.912 | 2640.172 | 2631.440 | 2621.228 | 2637.508 | 2621.228 | 2631.440 | 2640.172 | 2640.912 | 2640.172 |
| 15.0 | 2595.032 | 2588.668 | 2577.716 | 2594.884 | 2597.252 | 2594.884 | 2577.716 | 2588.668 | 2595.032 | 2588.668 |
| 17.5 | 2539.236 | 2542.640 | 2537.460 | 2557.144 | 2545.600 | 2557.144 | 2537.460 | 2542.640 | 2539.236 | 2542.640 |
| 20.0 | 2480.184 | 2482.404 | 2475.892 | 2501.644 | 2490.248 | 2501.644 | 2475.892 | 2482.404 | 2480.184 | 2482.404 |
| 22.5 | 2402.928 | 2410.624 | 2415.952 | 2401.004 | 2414.472 | 2401.004 | 2415.952 | 2410.624 | 2402.928 | 2410.624 |
| 25.0 | 2333.072 | 2331.888 | 2337.512 | 2326.708 | 2321.676 | 2326.708 | 2337.512 | 2331.888 | 2333.072 | 2331.888 |
| 27.5 | 2212.008 | 2204.460 | 2223.700 | 2213.340 | 2192.176 | 2213.340 | 2223.700 | 2204.460 | 2212.008 | 2204.460 |
| 30.0 | 2096.124 | 2088.132 | 2090.056 | 2071.260 | 2090.204 | 2071.260 | 2090.056 | 2088.132 | 2096.124 | 2088.132 |
| 32.5 | 1933.324 | 1925.628 | 1936.284 | 1933.028 | 1917.784 | 1933.028 | 1936.284 | 1925.628 | 1933.324 | 1925.628 |
| 35.0 | 1784.880 | 1734.116 | 1755.576 | 1742.404 | 1750.100 | 1742.404 | 1755.576 | 1734.116 | 1784.880 | 1734.116 |
| 37.5 | 1550.004 | 1545.860 | 1539.644 | 1532.984 | 1536.536 | 1532.984 | 1539.644 | 1545.860 | 1550.004 | 1545.860 |
| 40.0 | 1312.168 | 1298.404 | 1292.928 | 1302.104 | 1305.804 | 1302.104 | 1292.928 | 1298.404 | 1312.168 | 1298.404 |
| 42.5 | 952.972 | 952.380 | 943.056 | 944.832 | 943.352 | 944.832 | 943.056 | 952.380 | 952.972 | 952.380 |
| 45.0 | 590.816 | 600.436 | 596.588 | 599.696 | 594.368 | 599.696 | 596.588 | 600.436 | 590.816 | 600.436 |
| 47.5 | 339.660 | 345.876 | 349.724 | 350.612 | 341.880 | 350.612 | 349.724 | 345.876 | 339.660 | 345.876 |
| 50.0 | 209.568 | 211.048 | 211.936 | 212.824 | 209.568 | 212.824 | 211.936 | 211.048 | 209.568 | 211.048 |
| 52.5 | 137.788 | 138.084 | 137.936 | 137.196 | 134.828 | 137.196 | 137.936 | 138.084 | 137.788 | 138.084 |
| 55.0 | 91.464 | 92.352 | 91.168 | 90.428 | 88.060 | 90.428 | 91.168 | 92.352 | 91.464 | 92.352 |
| 57.5 | 61.864 | 62.308 | 61.568 | 60.532 | 59.792 | 60.532 | 61.568 | 62.308 | 61.864 | 62.308 |
| 60.0 | 39.960 | 39.664 | 39.220 | 38.332 | 37.148 | 38.332 | 39.220 | 39.664 | 39.960 | 39.664 |
| 62.5 | 18.648 | 19.388 | 18.648 | 17.908 | 16.724 | 17.908 | 18.648 | 19.388 | 18.648 | 19.388 |
| 65.0 | 2.220 | 2.072 | 2.368 | 2.220 | 1.628 | 2.220 | 2.368 | 2.072 | 2.220 | 2.072 |
| 67.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 70.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 72.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 75.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 77.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 80.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 82.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 85.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 87.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 90.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

Vert. Angles **Horizontal Angles**

| | <u>225.0</u> | <u>247.5</u> | <u>270.0</u> | <u>292.5</u> | <u>315.0</u> | <u>337.5</u> | <u>360.0</u> |
|------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 0.0 | 2720.832 | 2720.832 | 2720.832 | 2720.832 | 2720.832 | 2720.832 | 2720.832 |
| 2.5 | 2715.060 | 2729.860 | 2709.880 | 2729.860 | 2715.060 | 2728.380 | 2706.180 |
| 5.0 | 2702.776 | 2712.100 | 2698.780 | 2712.100 | 2702.776 | 2688.568 | 2696.116 |
| 7.5 | 2682.648 | 2682.204 | 2674.952 | 2682.204 | 2682.648 | 2667.404 | 2673.324 |
| 10.0 | 2656.452 | 2666.960 | 2667.552 | 2666.960 | 2656.452 | 2673.176 | 2660.300 |
| 12.5 | 2631.440 | 2621.228 | 2637.508 | 2621.228 | 2631.440 | 2640.172 | 2640.912 |
| 15.0 | 2577.716 | 2594.884 | 2597.252 | 2594.884 | 2577.716 | 2588.668 | 2595.032 |
| 17.5 | 2537.460 | 2557.144 | 2545.600 | 2557.144 | 2537.460 | 2542.640 | 2539.236 |
| 20.0 | 2475.892 | 2501.644 | 2490.248 | 2501.644 | 2475.892 | 2482.404 | 2480.184 |
| 22.5 | 2415.952 | 2401.004 | 2414.472 | 2401.004 | 2415.952 | 2410.624 | 2402.928 |
| 25.0 | 2337.512 | 2326.708 | 2321.676 | 2326.708 | 2337.512 | 2331.888 | 2333.072 |
| 27.5 | 2223.700 | 2213.340 | 2192.176 | 2213.340 | 2223.700 | 2204.460 | 2212.008 |
| 30.0 | 2090.056 | 2071.260 | 2090.204 | 2071.260 | 2090.056 | 2088.132 | 2096.124 |

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CANDELA TABULATION - (Cont.)

| | | | | | | | |
|-------------|----------|----------|----------|----------|----------|----------|----------|
| 32.5 | 1936.284 | 1933.028 | 1917.784 | 1933.028 | 1936.284 | 1925.628 | 1933.324 |
| 35.0 | 1755.576 | 1742.404 | 1750.100 | 1742.404 | 1755.576 | 1734.116 | 1784.880 |
| 37.5 | 1539.644 | 1532.984 | 1536.536 | 1532.984 | 1539.644 | 1545.860 | 1550.004 |
| 40.0 | 1292.928 | 1302.104 | 1305.804 | 1302.104 | 1292.928 | 1298.404 | 1312.168 |
| 42.5 | 943.056 | 944.832 | 943.352 | 944.832 | 943.056 | 952.380 | 952.972 |
| 45.0 | 596.588 | 599.696 | 594.368 | 599.696 | 596.588 | 600.436 | 590.816 |
| 47.5 | 349.724 | 350.612 | 341.880 | 350.612 | 349.724 | 345.876 | 339.660 |
| 50.0 | 211.936 | 212.824 | 209.568 | 212.824 | 211.936 | 211.048 | 209.568 |
| 52.5 | 137.936 | 137.196 | 134.828 | 137.196 | 137.936 | 138.084 | 137.788 |
| 55.0 | 91.168 | 90.428 | 88.060 | 90.428 | 91.168 | 92.352 | 91.464 |
| 57.5 | 61.568 | 60.532 | 59.792 | 60.532 | 61.568 | 62.308 | 61.864 |
| 60.0 | 39.220 | 38.332 | 37.148 | 38.332 | 39.220 | 39.664 | 39.960 |
| 62.5 | 18.648 | 17.908 | 16.724 | 17.908 | 18.648 | 19.388 | 18.648 |
| 65.0 | 2.368 | 2.220 | 1.628 | 2.220 | 2.368 | 2.072 | 2.220 |
| 67.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 70.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 72.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 75.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 77.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 80.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 82.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 85.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 87.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 90.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|-------|--------|
| 0-20 | 986.89 | N.A. | 26.50 |
| 0-30 | 2050.34 | N.A. | 55.00 |
| 0-40 | 3126.54 | N.A. | 83.90 |
| 0-60 | 3718.66 | N.A. | 99.70 |
| 0-80 | 3728.35 | N.A. | 100.00 |
| 0-90 | 3728.35 | N.A. | 100.00 |
| 10-90 | 3471.87 | N.A. | 93.10 |
| 20-40 | 2139.66 | N.A. | 57.40 |
| 20-50 | 2640.17 | N.A. | 70.80 |
| 40-70 | 601.81 | N.A. | 16.10 |
| 60-80 | 9.69 | N.A. | 0.30 |
| 70-80 | 0.00 | N.A. | 0.00 |
| 80-90 | 0.00 | N.A. | 0.00 |
| 90-110 | 0.00 | N.A. | 0.00 |
| 90-120 | 0.00 | N.A. | 0.00 |
| 90-130 | 0.00 | N.A. | 0.00 |
| 90-150 | 0.00 | N.A. | 0.00 |
| 90-180 | 0.00 | N.A. | 0.00 |
| 110-180 | 0.00 | N.A. | 0.00 |
| 0-180 | 3728.35 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|---------|
| 0-10 | 256.48 |
| 10-20 | 730.41 |
| 20-30 | 1063.45 |
| 30-40 | 1076.2 |
| 40-50 | 500.51 |
| 50-60 | 91.61 |
| 60-70 | 9.69 |
| 70-80 | 0.00 |
| 80-90 | 0.00 |
| 90-100 | 0.00 |
| 100-110 | 0.00 |
| 110-120 | 0.00 |
| 120-130 | 0.00 |
| 130-140 | 0.00 |
| 140-150 | 0.00 |
| 150-160 | 0.00 |
| 160-170 | 0.00 |
| 170-180 | 0.00 |

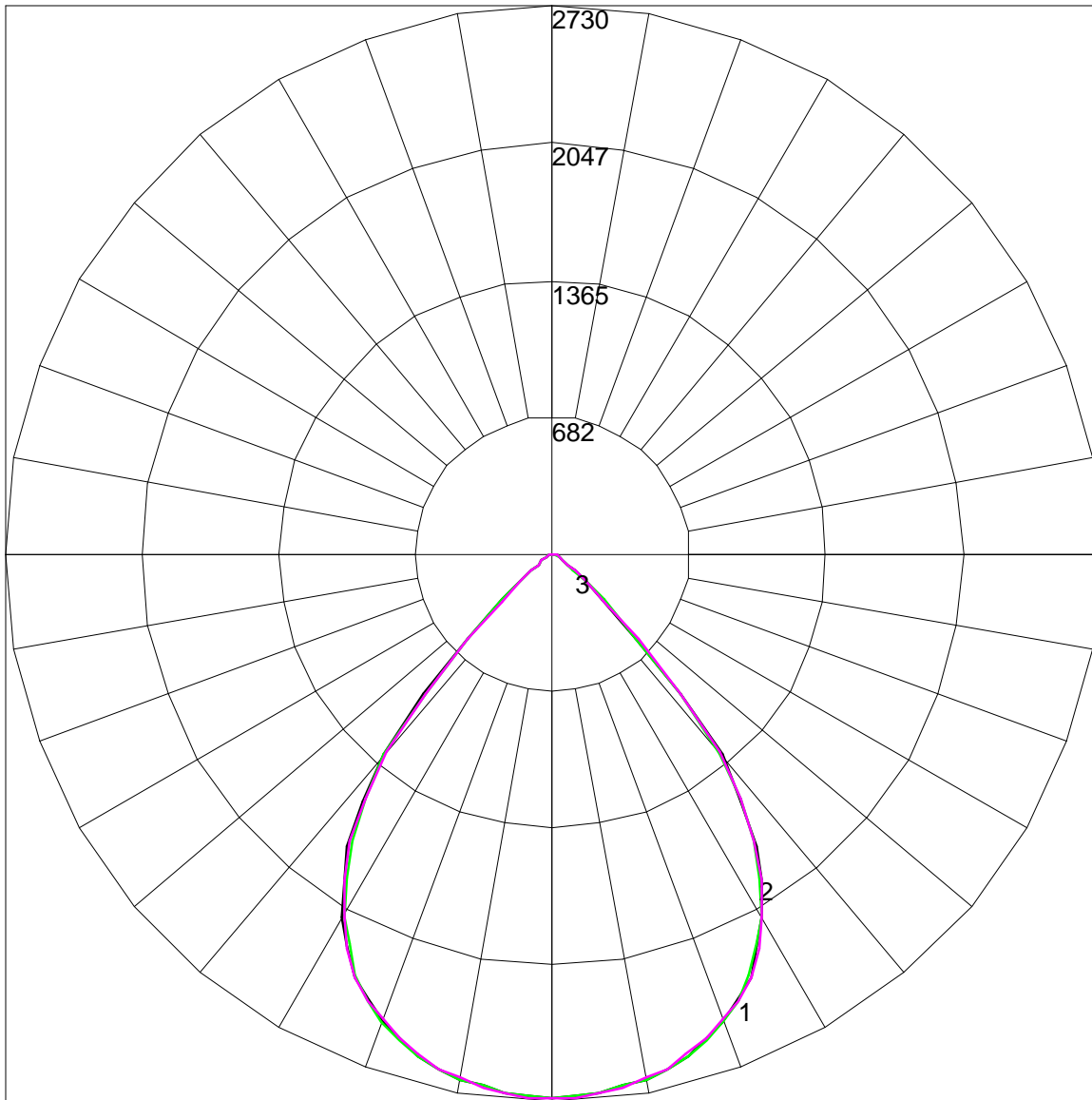
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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 | 100 |
| 1 | 113 | 110 | 107 | 105 | 110 | 108 | 105 | 103 | 104 | 102 | 100 | 100 | 98 | 97 | 97 | 95 | 94 | 92 |
| 2 | 107 | 101 | 97 | 93 | 104 | 99 | 95 | 92 | 96 | 93 | 90 | 93 | 90 | 88 | 90 | 88 | 86 | 84 |
| 3 | 100 | 93 | 88 | 83 | 98 | 92 | 87 | 83 | 89 | 85 | 81 | 87 | 83 | 80 | 84 | 81 | 79 | 77 |
| 4 | 94 | 86 | 80 | 75 | 93 | 85 | 79 | 75 | 83 | 78 | 74 | 81 | 76 | 73 | 79 | 75 | 72 | 70 |
| 5 | 89 | 79 | 73 | 68 | 87 | 79 | 72 | 68 | 77 | 71 | 67 | 75 | 70 | 67 | 73 | 69 | 66 | 64 |
| 6 | 84 | 74 | 67 | 62 | 82 | 73 | 67 | 62 | 71 | 66 | 61 | 70 | 65 | 61 | 68 | 64 | 61 | 59 |
| 7 | 79 | 68 | 62 | 57 | 77 | 68 | 61 | 57 | 66 | 61 | 56 | 65 | 60 | 56 | 64 | 59 | 56 | 54 |
| 8 | 74 | 64 | 57 | 52 | 73 | 63 | 57 | 52 | 62 | 56 | 52 | 61 | 56 | 52 | 60 | 55 | 52 | 50 |
| 9 | 70 | 59 | 53 | 48 | 69 | 59 | 53 | 48 | 58 | 52 | 48 | 57 | 52 | 48 | 56 | 51 | 48 | 46 |
| 10 | 66 | 55 | 49 | 45 | 65 | 55 | 49 | 45 | 54 | 48 | 45 | 53 | 48 | 44 | 53 | 48 | 44 | 43 |

POLAR GRAPH



Maximum Candela = 2729.86 Located At Horizontal Angle = 67.5, Vertical Angle = 2.5

1 - Vertical Plane Through Horizontal Angles (0 - 180)

2 - Vertical Plane Through Horizontal Angles (90 - 270)

3 - Vertical Plane Through Horizontal Angles (45 - 225)