

IES INDOOR REPORT
PHOTOMETRIC FILENAME : SGB8SQLEDGV-55W40KE1-AR0806-GW.IES
DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] 1309131053-001_M55W

[TESTLAB] Intertek

[ISSUE DATE] 9/26/2013

[UPDATE] 4/24/2014

[MANUFAC] SPECTRUM LIGHTING

[LUMCAT] SGB8SQLEDGV-55W-40K-E1/AR0806LEDGV-GW

[LUMINAIRE] LED RECESSED SQUARE APERTURE DOWNLIGHT

[LAMP] N/A

[LAMPCAT] N/A

[OTHER] Total Luminaire Wattage is approximate.

[OTHER] Output Multiplier for other Color Temperatures: 0.944 for 3500K, 3000K, and 2700K.

[OTHER] This report prepared by Spectrum Lighting, based on test 1309131053-001, factored for 55W.

CHARACTERISTICS

| | |
|---------------------------------|-----------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 4466 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 75 |
| Total Luminaire Watts | 59.3 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.18 |
| Spacing Criterion (90-270) | 1.18 |
| Spacing Criterion (Diagonal) | 1.20 |
| Basic Luminous Shape | Rectangular |
| Luminous Length (0-180) | 0.67 ft |
| Luminous Width (90-270) | 0.67 ft |
| Luminous Height | 0.00 ft |

LUMINANCE DATA (cd/sq.m)

| Angle In Degrees | Average 0-Deg | Average 45-Deg | Average 90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45 | 20589 | 24192 | 20824 |
| 55 | 20106 | 18822 | 20266 |
| 65 | 16499 | 16266 | 16583 |
| 75 | 12593 | 12701 | 12783 |
| 85 | 7641 | 6994 | 7277 |

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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 | 2414.760 | 2414.760 | 2414.760 | 2414.760 | 2414.760 | 2414.760 | 2414.760 | 2414.760 | 2414.760 | 2414.760 |
| 2.5 | 2415.789 | 2415.495 | 2414.171 | 2415.054 | 2413.583 | 2415.054 | 2414.171 | 2415.495 | 2415.789 | 2415.495 |
| 5.0 | 2427.261 | 2423.731 | 2419.760 | 2420.054 | 2421.819 | 2420.054 | 2419.760 | 2423.731 | 2427.261 | 2423.731 |
| 7.5 | 2460.648 | 2452.118 | 2436.086 | 2440.646 | 2446.676 | 2440.646 | 2436.086 | 2452.118 | 2460.648 | 2452.118 |
| 10.0 | 2481.975 | 2476.680 | 2463.443 | 2459.913 | 2468.591 | 2459.913 | 2463.443 | 2476.680 | 2481.975 | 2476.680 |
| 12.5 | 2498.448 | 2496.536 | 2499.625 | 2485.652 | 2488.741 | 2485.652 | 2499.625 | 2496.536 | 2498.448 | 2496.536 |
| 15.0 | 2518.304 | 2520.216 | 2546.249 | 2520.657 | 2511.097 | 2520.657 | 2546.249 | 2520.216 | 2518.304 | 2520.216 |
| 17.5 | 2523.157 | 2536.836 | 2585.961 | 2549.338 | 2517.716 | 2549.338 | 2585.961 | 2536.836 | 2523.157 | 2536.836 |
| 20.0 | 2505.067 | 2538.895 | 2604.787 | 2559.780 | 2507.420 | 2559.780 | 2604.787 | 2538.895 | 2505.067 | 2538.895 |
| 22.5 | 2477.563 | 2524.922 | 2606.846 | 2558.163 | 2479.181 | 2558.163 | 2606.846 | 2524.922 | 2477.563 | 2524.922 |
| 25.0 | 2402.993 | 2489.035 | 2586.255 | 2525.511 | 2386.373 | 2525.511 | 2586.255 | 2489.035 | 2402.993 | 2489.035 |
| 27.5 | 2185.021 | 2365.194 | 2544.925 | 2430.350 | 2172.666 | 2430.350 | 2544.925 | 2365.194 | 2185.021 | 2365.194 |
| 30.0 | 1902.333 | 2122.364 | 2490.064 | 2214.878 | 1886.595 | 2214.878 | 2490.064 | 2122.364 | 1902.333 | 2122.364 |
| 32.5 | 1566.108 | 1811.584 | 2370.194 | 1918.070 | 1554.489 | 1918.070 | 2370.194 | 1811.584 | 1566.108 | 1811.584 |
| 35.0 | 1230.177 | 1467.564 | 2092.801 | 1582.287 | 1214.293 | 1582.287 | 2092.801 | 1467.564 | 1230.177 | 1467.564 |
| 37.5 | 917.191 | 1131.192 | 1715.247 | 1240.032 | 910.131 | 1240.032 | 1715.247 | 1131.192 | 917.191 | 1131.192 |
| 40.0 | 675.833 | 836.444 | 1327.397 | 927.928 | 690.835 | 927.928 | 1327.397 | 836.444 | 675.833 | 836.444 |
| 42.5 | 624.355 | 646.122 | 987.789 | 694.953 | 632.003 | 694.953 | 987.789 | 646.122 | 624.355 | 646.122 |
| 45.0 | 607.735 | 619.648 | 714.073 | 620.678 | 614.647 | 620.678 | 714.073 | 619.648 | 607.735 | 619.648 |
| 47.5 | 591.262 | 596.704 | 560.816 | 592.438 | 598.321 | 592.438 | 560.816 | 596.704 | 591.262 | 596.704 |
| 50.0 | 572.435 | 573.318 | 520.663 | 562.434 | 578.466 | 562.434 | 520.663 | 573.318 | 572.435 | 573.318 |
| 52.5 | 535.224 | 536.107 | 486.541 | 525.370 | 540.960 | 525.370 | 486.541 | 536.107 | 535.224 | 536.107 |
| 55.0 | 481.393 | 486.099 | 450.653 | 480.805 | 485.217 | 480.805 | 450.653 | 486.099 | 481.393 | 486.099 |
| 57.5 | 432.415 | 431.974 | 412.412 | 432.415 | 435.210 | 432.415 | 412.412 | 431.974 | 432.415 | 431.974 |
| 60.0 | 384.614 | 383.438 | 371.083 | 383.585 | 384.908 | 383.585 | 371.083 | 383.438 | 384.614 | 383.438 |
| 62.5 | 336.519 | 335.784 | 327.988 | 335.048 | 338.431 | 335.048 | 327.988 | 335.784 | 336.519 | 335.784 |
| 65.0 | 291.071 | 290.777 | 286.953 | 289.159 | 292.542 | 289.159 | 286.953 | 290.777 | 291.071 | 290.777 |
| 67.5 | 247.830 | 247.977 | 245.329 | 246.065 | 249.301 | 246.065 | 245.329 | 247.977 | 247.830 | 247.977 |
| 70.0 | 208.559 | 208.412 | 207.383 | 206.794 | 209.589 | 206.794 | 207.383 | 208.412 | 208.559 | 208.412 |
| 72.5 | 171.495 | 171.495 | 171.054 | 171.054 | 172.966 | 171.054 | 171.054 | 171.495 | 171.495 | 171.495 |
| 75.0 | 136.049 | 136.637 | 137.226 | 137.667 | 138.108 | 137.667 | 137.226 | 136.637 | 136.049 | 136.637 |
| 77.5 | 102.368 | 104.574 | 106.045 | 106.486 | 105.751 | 106.486 | 106.045 | 104.574 | 102.368 | 104.574 |
| 80.0 | 75.011 | 75.746 | 76.776 | 78.247 | 76.482 | 78.247 | 76.776 | 75.746 | 75.011 | 75.746 |
| 82.5 | 50.007 | 50.007 | 50.154 | 51.625 | 50.301 | 51.625 | 50.154 | 50.007 | 50.007 | 50.007 |
| 85.0 | 27.798 | 26.180 | 25.445 | 28.092 | 26.474 | 28.092 | 25.445 | 26.180 | 27.798 | 26.180 |
| 87.5 | 7.207 | 4.707 | 4.118 | 6.324 | 5.148 | 6.324 | 4.118 | 4.707 | 7.207 | 4.707 |
| 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 | 2414.760 | 2414.760 | 2414.760 | 2414.760 | 2414.760 | 2414.760 | 2414.760 |
| 2.5 | 2414.171 | 2415.054 | 2413.583 | 2415.054 | 2414.171 | 2415.495 | 2415.789 |
| 5.0 | 2419.760 | 2420.054 | 2421.819 | 2420.054 | 2419.760 | 2423.731 | 2427.261 |
| 7.5 | 2436.086 | 2440.646 | 2446.676 | 2440.646 | 2436.086 | 2452.118 | 2460.648 |
| 10.0 | 2463.443 | 2459.913 | 2468.591 | 2459.913 | 2463.443 | 2476.680 | 2481.975 |
| 12.5 | 2499.625 | 2485.652 | 2488.741 | 2485.652 | 2499.625 | 2496.536 | 2498.448 |
| 15.0 | 2546.249 | 2520.657 | 2511.097 | 2520.657 | 2546.249 | 2520.216 | 2518.304 |
| 17.5 | 2585.961 | 2549.338 | 2517.716 | 2549.338 | 2585.961 | 2536.836 | 2523.157 |
| 20.0 | 2604.787 | 2559.780 | 2507.420 | 2559.780 | 2604.787 | 2538.895 | 2505.067 |
| 22.5 | 2606.846 | 2558.163 | 2479.181 | 2558.163 | 2606.846 | 2524.922 | 2477.563 |
| 25.0 | 2586.255 | 2525.511 | 2386.373 | 2525.511 | 2586.255 | 2489.035 | 2402.993 |
| 27.5 | 2544.925 | 2430.350 | 2172.666 | 2430.350 | 2544.925 | 2365.194 | 2185.021 |
| 30.0 | 2490.064 | 2214.878 | 1886.595 | 2214.878 | 2490.064 | 2122.364 | 1902.333 |

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CANDELA TABULATION - (Cont.)

| | | | | | | | |
|-------------|----------|----------|----------|----------|----------|----------|----------|
| 32.5 | 2370.194 | 1918.070 | 1554.489 | 1918.070 | 2370.194 | 1811.584 | 1566.108 |
| 35.0 | 2092.801 | 1582.287 | 1214.293 | 1582.287 | 2092.801 | 1467.564 | 1230.177 |
| 37.5 | 1715.247 | 1240.032 | 910.131 | 1240.032 | 1715.247 | 1131.192 | 917.191 |
| 40.0 | 1327.397 | 927.928 | 690.835 | 927.928 | 1327.397 | 836.444 | 675.833 |
| 42.5 | 987.789 | 694.953 | 632.003 | 694.953 | 987.789 | 646.122 | 624.355 |
| 45.0 | 714.073 | 620.678 | 614.647 | 620.678 | 714.073 | 619.648 | 607.735 |
| 47.5 | 560.816 | 592.438 | 598.321 | 592.438 | 560.816 | 596.704 | 591.262 |
| 50.0 | 520.663 | 562.434 | 578.466 | 562.434 | 520.663 | 573.318 | 572.435 |
| 52.5 | 486.541 | 525.370 | 540.960 | 525.370 | 486.541 | 536.107 | 535.224 |
| 55.0 | 450.653 | 480.805 | 485.217 | 480.805 | 450.653 | 486.099 | 481.393 |
| 57.5 | 412.412 | 432.415 | 435.210 | 432.415 | 412.412 | 431.974 | 432.415 |
| 60.0 | 371.083 | 383.585 | 384.908 | 383.585 | 371.083 | 383.438 | 384.614 |
| 62.5 | 327.988 | 335.048 | 338.431 | 335.048 | 327.988 | 335.784 | 336.519 |
| 65.0 | 286.953 | 289.159 | 292.542 | 289.159 | 286.953 | 290.777 | 291.071 |
| 67.5 | 245.329 | 246.065 | 249.301 | 246.065 | 245.329 | 247.977 | 247.830 |
| 70.0 | 207.383 | 206.794 | 209.589 | 206.794 | 207.383 | 208.412 | 208.559 |
| 72.5 | 171.054 | 171.054 | 172.966 | 171.054 | 171.054 | 171.495 | 171.495 |
| 75.0 | 137.226 | 137.667 | 138.108 | 137.667 | 137.226 | 136.637 | 136.049 |
| 77.5 | 106.045 | 106.486 | 105.751 | 106.486 | 106.045 | 104.574 | 102.368 |
| 80.0 | 76.776 | 78.247 | 76.482 | 78.247 | 76.776 | 75.746 | 75.011 |
| 82.5 | 50.154 | 51.625 | 50.301 | 51.625 | 50.154 | 50.007 | 50.007 |
| 85.0 | 25.445 | 28.092 | 26.474 | 28.092 | 25.445 | 26.180 | 27.798 |
| 87.5 | 4.118 | 6.324 | 5.148 | 6.324 | 4.118 | 4.707 | 7.207 |
| 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 | 948.46 | N.A. | 21.20 |
| 0-30 | 2076.23 | N.A. | 46.50 |
| 0-40 | 3052.95 | N.A. | 68.40 |
| 0-60 | 3998.56 | N.A. | 89.50 |
| 0-80 | 4433.17 | N.A. | 99.30 |
| 0-90 | 4466.02 | N.A. | 100.00 |
| 10-90 | 4233.11 | N.A. | 94.80 |
| 20-40 | 2104.49 | N.A. | 47.10 |
| 20-50 | 2626.91 | N.A. | 58.80 |
| 40-70 | 1233.63 | N.A. | 27.60 |
| 60-80 | 434.60 | N.A. | 9.70 |
| 70-80 | 146.59 | N.A. | 3.30 |
| 80-90 | 32.85 | N.A. | 0.70 |
| 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 | 4466.02 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|---------|
| 0-10 | 232.91 |
| 10-20 | 715.55 |
| 20-30 | 1127.77 |
| 30-40 | 976.71 |
| 40-50 | 522.42 |
| 50-60 | 423.19 |
| 60-70 | 288.02 |
| 70-80 | 146.59 |
| 80-90 | 32.85 |
| 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 |

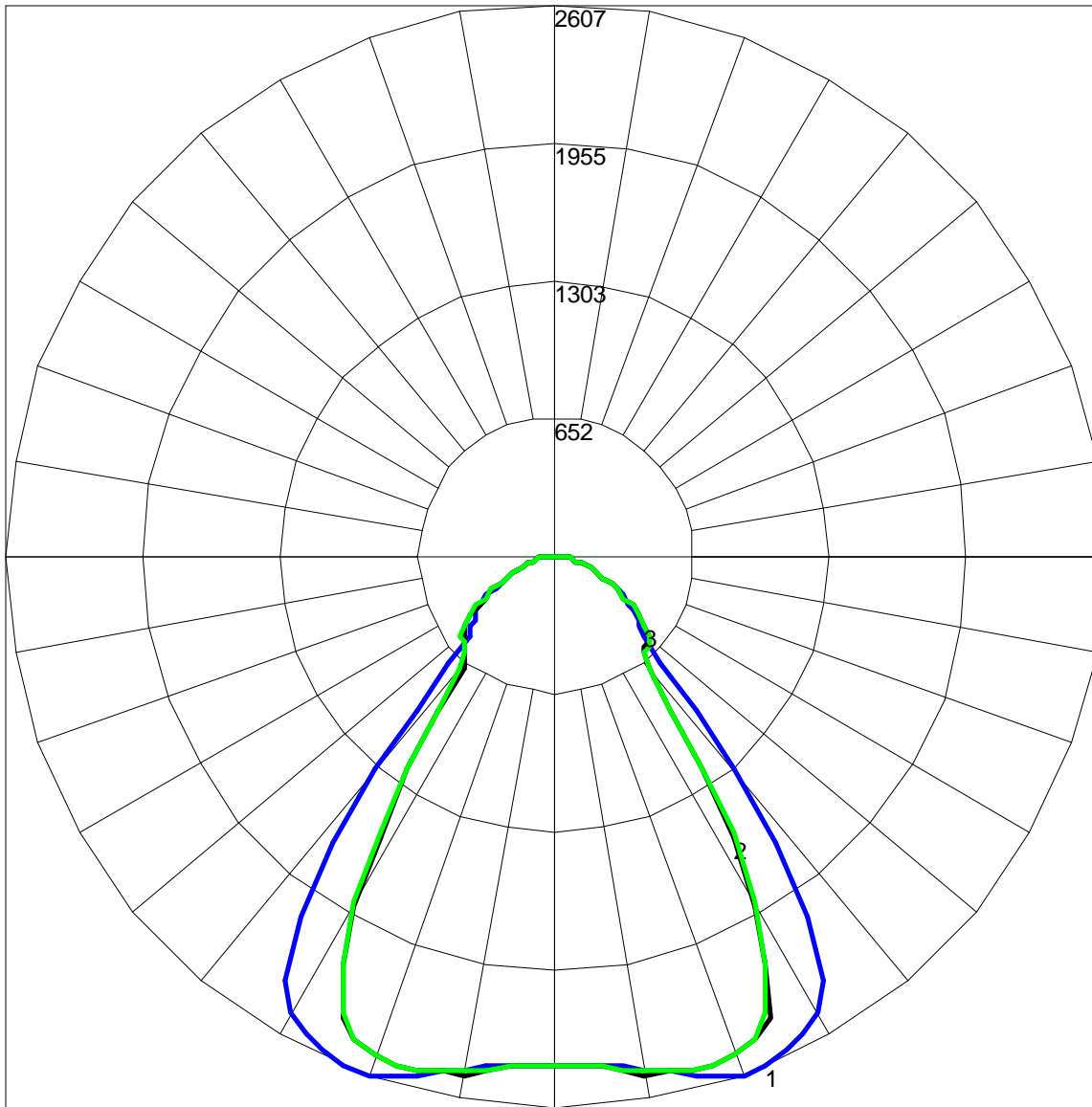
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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 | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 94 | 92 | 90 | 89 |
| 2 | 103 | 96 | 91 | 86 | 101 | 95 | 90 | 85 | 91 | 87 | 83 | 88 | 85 | 82 | 85 | 82 | 80 | 78 |
| 3 | 96 | 87 | 80 | 75 | 94 | 86 | 80 | 75 | 83 | 78 | 73 | 80 | 76 | 72 | 78 | 74 | 71 | 69 |
| 4 | 89 | 79 | 72 | 66 | 87 | 78 | 71 | 66 | 76 | 70 | 65 | 73 | 68 | 64 | 71 | 67 | 63 | 62 |
| 5 | 83 | 72 | 65 | 59 | 81 | 71 | 64 | 59 | 69 | 63 | 58 | 68 | 62 | 58 | 66 | 61 | 57 | 55 |
| 6 | 78 | 66 | 59 | 53 | 76 | 66 | 58 | 53 | 64 | 57 | 53 | 62 | 57 | 52 | 61 | 56 | 52 | 50 |
| 7 | 73 | 61 | 54 | 48 | 71 | 61 | 53 | 48 | 59 | 53 | 48 | 58 | 52 | 48 | 56 | 51 | 47 | 46 |
| 8 | 69 | 57 | 49 | 44 | 67 | 56 | 49 | 44 | 55 | 48 | 44 | 54 | 48 | 44 | 53 | 47 | 43 | 42 |
| 9 | 65 | 53 | 45 | 41 | 63 | 52 | 45 | 40 | 51 | 45 | 40 | 50 | 44 | 40 | 49 | 44 | 40 | 38 |
| 10 | 61 | 49 | 42 | 37 | 60 | 49 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 37 | 46 | 41 | 37 | 35 |

POLAR GRAPH



Maximum Candela = 2606.846 Located At Horizontal Angle = 45, Vertical Angle = 22.5
1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)
2 - Vertical Plane Through Horizontal Angles (0 - 180)
3 - Vertical Plane Through Horizontal Angles (90 - 270)