

IES INDOOR REPORT**PHOTOMETRIC FILENAME : SP-00642 ~ WS1611GV-15L35K-EXTF2-WMI.IES****DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002

[TEST] SP-00642_M-15L

[TESTLAB] VLS-245-981

[MANUFAC] Spectrum Lighting

[ISSUEDATE] 1/31/2018

[UPDATE] 2/19/2018

[LUMDAT] WS1611GV-15L-35K-EX-TF2-MWI

[LUMINAIRE] Warehouse Shade 16" Nom. Diam x 11" H

[OTHER] Regressed, partially obscuring, shallow dome diffuser

[OTHER] Reflector: Matte White interior finish

[LAMP] N/A, Gen3

[LAMPCAT] N/A

[OTHER] Total Luminaire Watts is approximate

[OTHER] CCT Multipliers: 27K x 0.971, 30K x 0.985, 40K x 1.03, 50K x 1.06

[OTHER] This report generated by Spectrum Lighting

CHARACTERISTICS

| | |
|---------------------------------|--------------------|
| Lumens Per Lamp | N.A. (absolute) |
| Total Lamp Lumens | N.A. (absolute) |
| Luminaire Lumens | 1166 |
| Total Luminaire Efficiency | N.A. |
| Luminaire Efficacy Rating (LER) | 117 |
| Total Luminaire Watts | 10 |
| Ballast Factor | 1.00 |
| CIE Type | Direct |
| Spacing Criterion (0-180) | 1.22 |
| Spacing Criterion (90-270) | 1.20 |
| Spacing Criterion (Diagonal) | 1.36 |
| Basic Luminous Shape | Circular |
| Luminous Length (0-180) | 1.33 ft (Diameter) |
| Luminous Width (90-270) | 1.33 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 | 3233 | 3228 | 3205 |
| 55 | 3147 | 3180 | 3157 |
| 65 | 2020 | 2093 | 2221 |
| 75 | 905 | 943 | 1006 |
| 85 | 463 | 512 | 576 |

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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 | 460.909 | 460.909 | 460.909 | 460.909 | 460.909 | 460.909 | 460.909 | 460.909 | 460.909 | 460.909 |
| 5 | 458.467 | 457.067 | 455.949 | 454.947 | 454.598 | 454.267 | 454.249 | 456.328 | 456.863 | 458.849 |
| 10 | 450.485 | 447.055 | 444.895 | 443.179 | 443.476 | 442.973 | 442.408 | 445.207 | 446.899 | 450.386 |
| 15 | 436.686 | 432.395 | 429.925 | 427.846 | 428.096 | 426.664 | 426.073 | 428.294 | 431.462 | 436.470 |
| 20 | 418.557 | 413.807 | 411.259 | 409.481 | 409.608 | 407.451 | 405.948 | 408.279 | 411.951 | 417.799 |
| 25 | 396.865 | 392.180 | 389.886 | 388.545 | 388.546 | 386.594 | 384.494 | 386.567 | 390.309 | 395.899 |
| 30 | 372.903 | 368.900 | 367.812 | 366.927 | 366.546 | 364.002 | 362.532 | 364.046 | 367.960 | 372.305 |
| 35 | 348.168 | 345.824 | 345.365 | 344.391 | 343.475 | 340.346 | 339.022 | 340.678 | 344.539 | 348.160 |
| 40 | 322.995 | 322.347 | 321.794 | 320.778 | 319.148 | 316.143 | 314.170 | 316.748 | 319.576 | 323.259 |
| 45 | 296.631 | 296.845 | 296.250 | 295.339 | 294.062 | 290.861 | 288.824 | 290.589 | 293.512 | 296.228 |
| 50 | 267.660 | 268.812 | 268.791 | 267.699 | 266.273 | 263.446 | 261.971 | 262.685 | 265.579 | 267.744 |
| 55 | 234.246 | 236.049 | 236.695 | 236.304 | 235.003 | 232.852 | 231.388 | 231.736 | 233.993 | 236.079 |
| 60 | 182.327 | 186.371 | 185.930 | 188.816 | 189.937 | 188.193 | 187.398 | 188.196 | 188.896 | 190.641 |
| 65 | 110.760 | 109.956 | 114.810 | 115.446 | 121.809 | 121.647 | 115.879 | 119.211 | 119.367 | 122.144 |
| 70 | 57.148 | 56.400 | 59.730 | 60.028 | 63.273 | 64.188 | 61.291 | 62.062 | 62.192 | 63.175 |
| 75 | 30.408 | 30.421 | 31.673 | 31.647 | 33.804 | 35.082 | 33.818 | 34.510 | 33.800 | 34.603 |
| 80 | 14.192 | 13.781 | 14.330 | 14.771 | 15.443 | 17.581 | 16.883 | 16.857 | 17.476 | 16.831 |
| 85 | 5.233 | 4.898 | 5.792 | 5.545 | 6.510 | 9.270 | 8.085 | 8.884 | 8.581 | 8.845 |
| 90 | 0.000 | 0.000 | 0.000 | 0.000 | 0.610 | 1.876 | 1.107 | 1.798 | 1.734 | 2.256 |
| 95 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 100 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 105 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 110 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 115 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 120 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 125 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 130 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 135 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 140 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 145 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 150 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 155 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 160 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 165 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 170 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 175 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 180 | 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 | 460.909 | 460.909 | 460.909 | 460.909 | 460.909 | 460.909 | 460.909 |
| 5 | 460.648 | 461.312 | 462.271 | 462.014 | 461.444 | 460.454 | 458.467 |
| 10 | 453.821 | 456.221 | 456.865 | 457.210 | 456.551 | 453.686 | 450.485 |
| 15 | 441.307 | 444.993 | 446.171 | 446.609 | 445.894 | 440.958 | 436.686 |
| 20 | 423.731 | 428.461 | 430.942 | 431.234 | 430.111 | 423.393 | 418.557 |
| 25 | 403.062 | 407.875 | 410.999 | 411.547 | 409.153 | 401.934 | 396.865 |
| 30 | 379.650 | 384.354 | 387.121 | 387.865 | 385.177 | 378.255 | 372.903 |
| 35 | 353.798 | 358.445 | 360.139 | 360.839 | 359.020 | 352.615 | 348.168 |
| 40 | 327.130 | 330.394 | 332.049 | 332.329 | 330.437 | 325.326 | 322.995 |
| 45 | 299.191 | 301.188 | 302.192 | 301.817 | 299.576 | 297.051 | 296.631 |

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CANDELA TABULATION - (Cont.)

| | | | | | | | |
|-----|---------|---------|---------|---------|---------|---------|---------|
| 50 | 269.332 | 270.332 | 269.689 | 268.533 | 267.002 | 266.102 | 267.660 |
| 55 | 236.394 | 236.757 | 235.195 | 232.957 | 231.428 | 231.749 | 234.246 |
| 60 | 191.556 | 187.623 | 185.533 | 183.400 | 181.760 | 185.502 | 182.327 |
| 65 | 118.388 | 117.086 | 111.298 | 109.554 | 113.679 | 107.025 | 110.760 |
| 70 | 62.248 | 60.758 | 58.135 | 56.757 | 58.935 | 55.050 | 57.148 |
| 75 | 33.335 | 32.883 | 31.405 | 29.662 | 30.943 | 29.941 | 30.408 |
| 80 | 16.968 | 16.136 | 15.885 | 13.555 | 14.326 | 13.809 | 14.192 |
| 85 | 8.468 | 8.342 | 7.794 | 5.572 | 6.064 | 5.423 | 5.233 |
| 90 | 1.990 | 1.854 | 0.000 | 0.000 | 0.492 | 0.000 | 0.000 |
| 95 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 100 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 105 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 110 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 115 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 120 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 125 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 130 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 135 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 140 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 145 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 150 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 155 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 160 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 165 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 170 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 175 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 180 | 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 | 166.27 | N.A. | 14.30 |
| 0-30 | 349.11 | N.A. | 29.90 |
| 0-40 | 567.71 | N.A. | 48.70 |
| 0-60 | 1002.64 | N.A. | 86.00 |
| 0-80 | 1157.63 | N.A. | 99.30 |
| 0-90 | 1165.95 | N.A. | 100.00 |
| 10-90 | 1122.5 | N.A. | 96.30 |
| 20-40 | 401.44 | N.A. | 34.40 |
| 20-50 | 629.99 | N.A. | 54.00 |
| 40-70 | 552.93 | N.A. | 47.40 |
| 60-80 | 154.99 | N.A. | 13.30 |
| 70-80 | 36.99 | N.A. | 3.20 |
| 80-90 | 8.32 | N.A. | 0.70 |
| 90-110 | 0.23 | N.A. | 0.00 |
| 90-120 | 0.23 | N.A. | 0.00 |
| 90-130 | 0.23 | N.A. | 0.00 |
| 90-150 | 0.23 | N.A. | 0.00 |
| 90-180 | 0.23 | N.A. | 0.00 |
| 110-180 | 0.00 | N.A. | 0.00 |
| 0-180 | 1166.19 | N.A. | 100.00 |

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

| Zone | Lumens |
|---------|--------|
| 0-10 | 43.45 |
| 10-20 | 122.82 |
| 20-30 | 182.84 |
| 30-40 | 218.60 |
| 40-50 | 228.55 |
| 50-60 | 206.38 |
| 60-70 | 118.00 |
| 70-80 | 36.99 |
| 80-90 | 8.32 |
| 90-100 | 0.23 |
| 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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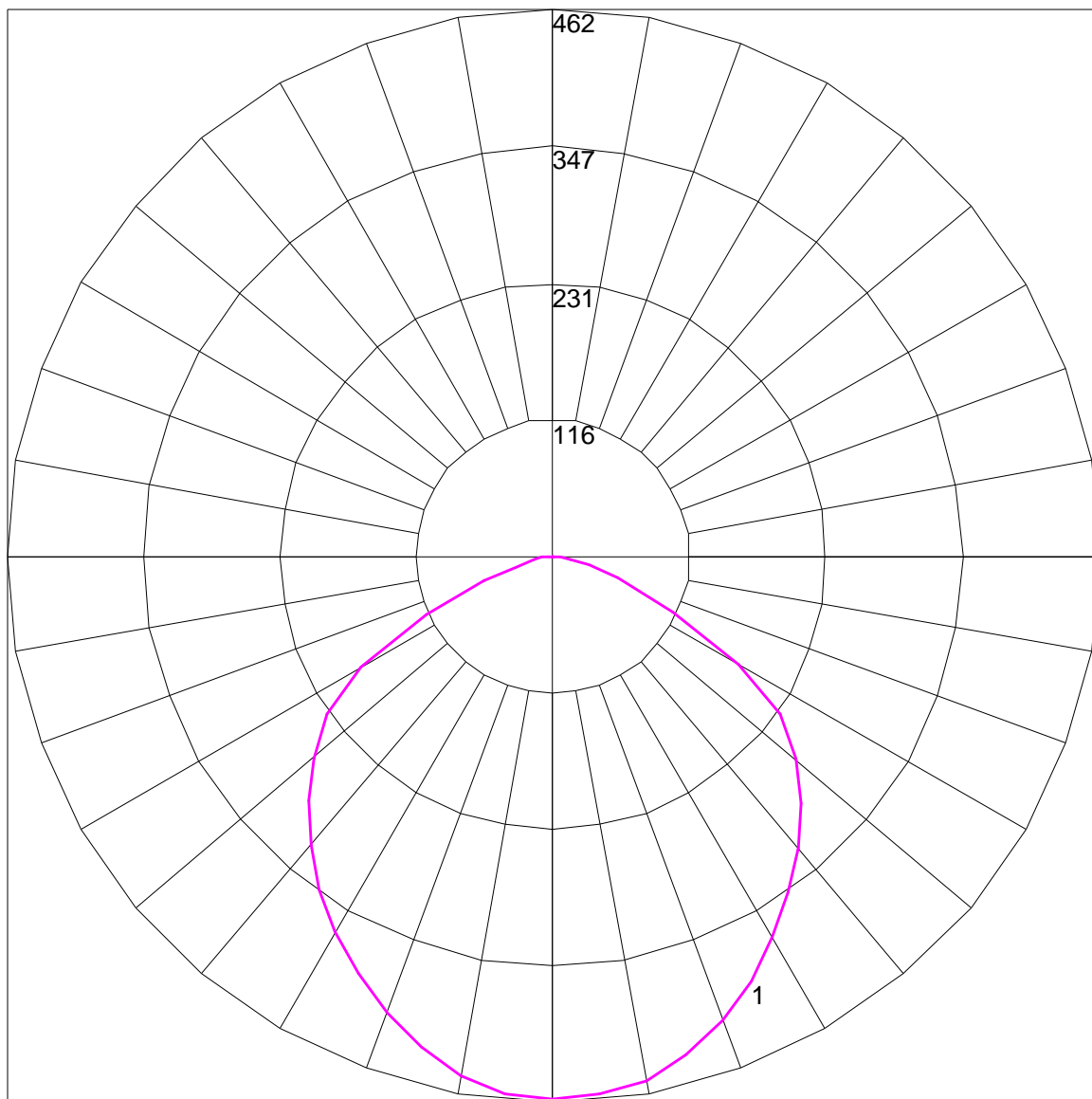
COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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 | 110 | 106 | 102 | 99 | 107 | 104 | 100 | 97 | 99 | 96 | 94 | 95 | 93 | 91 | 92 | 90 | 88 | 86 |
| 2 | 101 | 93 | 87 | 82 | 98 | 91 | 86 | 81 | 88 | 83 | 79 | 85 | 81 | 77 | 82 | 78 | 75 | 73 |
| 3 | 92 | 82 | 75 | 69 | 90 | 81 | 74 | 68 | 78 | 72 | 67 | 75 | 70 | 66 | 73 | 68 | 65 | 63 |
| 4 | 85 | 73 | 65 | 59 | 82 | 72 | 64 | 58 | 70 | 63 | 57 | 67 | 61 | 57 | 65 | 60 | 56 | 54 |
| 5 | 78 | 66 | 57 | 51 | 76 | 65 | 56 | 50 | 62 | 55 | 50 | 60 | 54 | 49 | 59 | 53 | 49 | 47 |
| 6 | 72 | 59 | 51 | 44 | 70 | 58 | 50 | 44 | 56 | 49 | 44 | 55 | 48 | 43 | 53 | 47 | 43 | 41 |
| 7 | 67 | 54 | 45 | 39 | 65 | 53 | 45 | 39 | 51 | 44 | 39 | 50 | 43 | 38 | 49 | 43 | 38 | 36 |
| 8 | 62 | 49 | 41 | 35 | 61 | 48 | 40 | 35 | 47 | 40 | 35 | 46 | 39 | 34 | 45 | 39 | 34 | 32 |
| 9 | 58 | 45 | 37 | 31 | 57 | 44 | 37 | 31 | 43 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 31 | 29 |
| 10 | 54 | 41 | 34 | 29 | 53 | 41 | 34 | 28 | 40 | 33 | 28 | 39 | 33 | 28 | 38 | 32 | 28 | 26 |

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POLAR GRAPH



Maximum Candela = 462.271 Located At Horizontal Angle = 270, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (0 - 180)