

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : GS-4-L240-840-HA-HP-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] 14617179.01  
[TESTLAB] UL Verification Services Inc.  
[ISSUE DATE] 1/20/2025  
[TEST DATE] 1/6/2023  
[MANUFAC] WILLIAMS INDOOR  
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
[LUMCAT] GS-4-L240-840-HA-HP-DIM-UNV  
[LUMINAIRE] White aluminum housing, prismatic lense enclosure  
[LAMP] 448 White LEDs  
[BALLAST] 0-10V LED DRIVER

### CHARACTERISTICS

|                                 |                 |
|---------------------------------|-----------------|
| Lumens Per Lamp                 | N.A. (absolute) |
| Total Lamp Lumens               | N.A. (absolute) |
| Luminaire Lumens                | 25397           |
| Total Luminaire Efficiency      | N.A.            |
| Luminaire Efficacy Rating (LER) | 150             |
| Total Luminaire Watts           | 169             |
| Ballast Factor                  | 1.00            |
| CIE Type                        | Direct          |
| Spacing Criterion (0-180)       | 1.28            |
| Spacing Criterion (90-270)      | 1.30            |
| Spacing Criterion (Diagonal)    | 1.42            |
| Basic Luminous Shape            | Rectangular     |
| Luminous Length (0-180)         | 3.36 ft         |
| Luminous Width (90-270)         | 1.17 ft         |
| Luminous Height                 | 0.00 ft         |

### LUMINANCE DATA (cd/sq.m)

| Angle In<br>Degrees | Average<br>0-Deg | Average<br>45-Deg | Average<br>90-Deg |
|---------------------|------------------|-------------------|-------------------|
| 45                  | 25140            | 25918             | 26387             |
| 55                  | 24062            | 25031             | 18005             |
| 65                  | 21826            | 15266             | 4949              |
| 75                  | 17868            | 4912              | 4975              |
| 85                  | 7834             | 6733              | 6270              |

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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  | 9627.365   | 9627.365    | 9627.365    | 9627.365    | 9627.365    |
| 0.5  | 9508.434   | 9633.412    | 9654.578    | 9639.460    | 9658.610    |
| 1.0  | 9511.458   | 9634.420    | 9655.586    | 9639.460    | 9657.602    |
| 1.5  | 9515.489   | 9633.412    | 9656.594    | 9636.436    | 9654.578    |
| 2.0  | 9514.481   | 9635.428    | 9654.578    | 9637.444    | 9655.586    |
| 2.5  | 9512.466   | 9633.412    | 9655.586    | 9635.428    | 9652.562    |
| 3.0  | 9511.458   | 9629.381    | 9653.570    | 9636.436    | 9654.578    |
| 3.5  | 9508.434   | 9623.334    | 9652.562    | 9636.436    | 9654.578    |
| 4.0  | 9501.379   | 9620.310    | 9649.539    | 9640.468    | 9656.594    |
| 4.5  | 9492.308   | 9614.263    | 9645.507    | 9642.483    | 9658.610    |
| 5.0  | 9480.213   | 9607.207    | 9642.483    | 9640.468    | 9655.586    |
| 5.5  | 9471.142   | 9601.160    | 9638.452    | 9637.444    | 9651.555    |
| 6.0  | 9464.087   | 9595.113    | 9633.412    | 9630.389    | 9643.491    |
| 6.5  | 9454.008   | 9586.042    | 9628.373    | 9623.334    | 9632.405    |
| 7.0  | 9440.905   | 9575.963    | 9618.294    | 9613.255    | 9619.302    |
| 7.5  | 9429.819   | 9566.892    | 9609.223    | 9600.152    | 9605.192    |
| 8.0  | 9419.740   | 9555.805    | 9596.121    | 9586.042    | 9592.089    |
| 8.5  | 9414.700   | 9543.710    | 9584.026    | 9571.931    | 9582.010    |
| 9.0  | 9406.637   | 9530.608    | 9570.923    | 9557.821    | 9569.915    |
| 9.5  | 9395.550   | 9520.529    | 9559.837    | 9547.742    | 9560.844    |
| 10.0 | 9383.456   | 9511.458    | 9547.742    | 9535.647    | 9548.750    |
| 10.5 | 9372.369   | 9501.379    | 9533.631    | 9520.529    | 9534.639    |
| 11.0 | 9360.274   | 9491.300    | 9517.505    | 9503.395    | 9519.521    |
| 11.5 | 9350.195   | 9480.213    | 9501.379    | 9487.268    | 9496.339    |
| 12.0 | 9331.045   | 9466.103    | 9488.276    | 9466.103    | 9466.103    |
| 12.5 | 9309.880   | 9451.992    | 9470.134    | 9437.882    | 9441.913    |
| 13.0 | 9288.714   | 9435.866    | 9450.984    | 9409.661    | 9415.708    |
| 13.5 | 9266.541   | 9413.692    | 9431.834    | 9385.472    | 9386.479    |
| 14.0 | 9242.351   | 9392.527    | 9411.677    | 9358.259    | 9359.266    |
| 14.5 | 9210.099   | 9371.361    | 9387.487    | 9331.045    | 9336.085    |
| 15.0 | 9186.917   | 9350.195    | 9364.306    | 9303.832    | 9317.943    |
| 15.5 | 9173.815   | 9327.014    | 9337.093    | 9277.627    | 9299.801    |
| 16.0 | 9154.665   | 9300.809    | 9309.880    | 9254.446    | 9277.627    |
| 16.5 | 9134.507   | 9276.619    | 9277.627    | 9231.264    | 9257.470    |
| 17.0 | 9121.404   | 9251.422    | 9249.406    | 9208.083    | 9234.288    |
| 17.5 | 9100.239   | 9227.233    | 9219.170    | 9181.878    | 9212.114    |
| 18.0 | 9076.049   | 9199.012    | 9186.917    | 9157.688    | 9185.909    |
| 18.5 | 9049.844   | 9171.799    | 9158.696    | 9128.460    | 9151.641    |
| 19.0 | 9018.600   | 9145.594    | 9123.420    | 9098.223    | 9119.389    |
| 19.5 | 8984.331   | 9118.381    | 9090.160    | 9068.994    | 9093.183    |
| 20.0 | 8952.079   | 9091.168    | 9057.907    | 9037.750    | 9064.963    |
| 20.5 | 8920.834   | 9061.939    | 9028.678    | 9007.513    | 9036.742    |
| 21.0 | 8890.598   | 9030.694    | 8998.442    | 8979.292    | 9006.505    |
| 21.5 | 8855.321   | 8999.450    | 8967.197    | 8951.071    | 8973.245    |
| 22.0 | 8821.053   | 8968.205    | 8935.953    | 8920.834    | 8939.984    |
| 22.5 | 8791.824   | 8934.945    | 8902.692    | 8889.590    | 8909.747    |
| 23.0 | 8762.596   | 8900.676    | 8865.400    | 8853.306    | 8873.463    |
| 23.5 | 8733.367   | 8862.377    | 8829.116    | 8821.053    | 8841.211    |
| 24.0 | 8697.083   | 8828.108    | 8789.809    | 8788.801    | 8805.935    |
| 24.5 | 8665.838   | 8793.840    | 8749.493    | 8752.517    | 8772.674    |
| 25.0 | 8631.570   | 8751.509    | 8706.154    | 8719.256    | 8734.375    |
| 25.5 | 8592.262   | 8716.233    | 8667.854    | 8681.964    | 8698.091    |
| 26.0 | 8546.907   | 8680.956    | 8630.562    | 8644.672    | 8657.775    |
| 26.5 | 8497.520   | 8634.594    | 8594.278    | 8605.365    | 8618.467    |

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**CANDELA TABULATION - (Cont.)**

|      |          |          |          |          |          |
|------|----------|----------|----------|----------|----------|
| 27.0 | 8452.165 | 8589.238 | 8554.970 | 8567.065 | 8579.160 |
| 27.5 | 8407.818 | 8541.868 | 8518.686 | 8528.765 | 8540.860 |
| 28.0 | 8365.487 | 8494.497 | 8479.378 | 8492.481 | 8502.560 |
| 28.5 | 8329.203 | 8447.126 | 8438.055 | 8453.173 | 8461.236 |
| 29.0 | 8288.887 | 8400.763 | 8395.724 | 8406.810 | 8420.921 |
| 29.5 | 8248.572 | 8354.400 | 8353.392 | 8364.479 | 8384.637 |
| 30.0 | 8208.256 | 8302.998 | 8308.037 | 8320.132 | 8342.305 |
| 30.5 | 8167.940 | 8255.627 | 8266.714 | 8274.777 | 8304.006 |
| 31.0 | 8124.601 | 8203.217 | 8225.390 | 8232.445 | 8261.674 |
| 31.5 | 8076.222 | 8151.814 | 8182.051 | 8189.106 | 8219.343 |
| 32.0 | 8025.828 | 8105.451 | 8136.696 | 8144.759 | 8174.996 |
| 32.5 | 7973.418 | 8056.065 | 8093.357 | 8105.451 | 8128.633 |
| 33.0 | 7918.992 | 8007.686 | 8054.049 | 8062.112 | 8086.301 |
| 33.5 | 7866.581 | 7956.284 | 8008.694 | 8017.765 | 8048.002 |
| 34.0 | 7813.163 | 7901.857 | 7959.307 | 7971.402 | 8003.654 |
| 34.5 | 7762.769 | 7848.439 | 7908.913 | 7925.039 | 7957.291 |
| 35.0 | 7716.406 | 7793.005 | 7853.479 | 7879.684 | 7907.905 |
| 35.5 | 7673.066 | 7737.571 | 7789.982 | 7832.313 | 7863.558 |
| 36.0 | 7620.656 | 7678.106 | 7738.579 | 7784.942 | 7817.195 |
| 36.5 | 7566.230 | 7618.640 | 7689.193 | 7735.556 | 7767.808 |
| 37.0 | 7503.741 | 7559.175 | 7634.767 | 7687.177 | 7719.429 |
| 37.5 | 7436.212 | 7500.717 | 7579.333 | 7638.798 | 7668.027 |
| 38.0 | 7371.707 | 7443.268 | 7529.946 | 7588.404 | 7614.609 |
| 38.5 | 7306.195 | 7384.810 | 7482.575 | 7535.993 | 7556.151 |
| 39.0 | 7248.745 | 7326.352 | 7427.141 | 7479.552 | 7501.725 |
| 39.5 | 7194.319 | 7263.863 | 7365.660 | 7420.086 | 7448.307 |
| 40.0 | 7137.877 | 7198.350 | 7304.179 | 7363.644 | 7392.873 |
| 40.5 | 7079.419 | 7132.837 | 7245.721 | 7306.195 | 7340.463 |
| 41.0 | 7024.993 | 7067.325 | 7186.256 | 7243.705 | 7287.045 |
| 41.5 | 6958.472 | 7000.804 | 7122.759 | 7186.256 | 7225.563 |
| 42.0 | 6884.896 | 6935.291 | 7058.254 | 7124.774 | 7163.074 |
| 42.5 | 6805.273 | 6868.770 | 6992.741 | 7063.293 | 7101.593 |
| 43.0 | 6727.666 | 6801.242 | 6930.252 | 7001.812 | 7042.127 |
| 43.5 | 6655.098 | 6729.681 | 6865.747 | 6939.323 | 6983.670 |
| 44.0 | 6590.593 | 6662.153 | 6807.289 | 6878.849 | 6929.244 |
| 44.5 | 6537.174 | 6595.632 | 6744.800 | 6824.423 | 6870.786 |
| 45.0 | 6481.741 | 6525.080 | 6682.311 | 6767.981 | 6803.257 |
| 45.5 | 6421.267 | 6456.543 | 6614.782 | 6700.453 | 6741.776 |
| 46.0 | 6349.707 | 6385.991 | 6539.190 | 6625.869 | 6675.255 |
| 46.5 | 6276.131 | 6312.415 | 6459.567 | 6564.387 | 6611.758 |
| 47.0 | 6198.523 | 6241.863 | 6392.038 | 6500.890 | 6550.277 |
| 47.5 | 6128.979 | 6174.334 | 6324.510 | 6434.370 | 6484.764 |
| 48.0 | 6065.482 | 6108.821 | 6252.949 | 6370.873 | 6417.236 |
| 48.5 | 6002.993 | 6049.356 | 6182.397 | 6308.383 | 6336.604 |
| 49.0 | 5936.472 | 5967.717 | 6115.876 | 6243.878 | 6233.800 |
| 49.5 | 5864.912 | 5881.038 | 6050.364 | 6179.374 | 6114.869 |
| 50.0 | 5775.210 | 5808.470 | 5981.827 | 6109.829 | 5971.748 |
| 50.5 | 5693.571 | 5744.973 | 5908.251 | 6035.245 | 5797.383 |
| 51.0 | 5616.971 | 5669.381 | 5834.675 | 5944.535 | 5596.813 |
| 51.5 | 5550.450 | 5595.805 | 5758.075 | 5833.667 | 5404.306 |
| 52.0 | 5486.953 | 5516.182 | 5685.507 | 5704.657 | 5249.091 |
| 52.5 | 5414.385 | 5439.582 | 5611.931 | 5537.348 | 5101.939 |
| 53.0 | 5330.730 | 5356.935 | 5536.340 | 5345.848 | 4881.211 |
| 53.5 | 5245.059 | 5280.336 | 5463.772 | 5146.286 | 4583.884 |
| 54.0 | 5165.436 | 5210.791 | 5387.172 | 4977.969 | 4244.225 |
| 54.5 | 5098.915 | 5134.192 | 5309.564 | 4832.832 | 3963.023 |

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**CANDELA TABULATION - (Cont.)**

|      |          |          |          |          |          |
|------|----------|----------|----------|----------|----------|
| 55.0 | 5032.395 | 5044.489 | 5234.981 | 4651.412 | 3765.477 |
| 55.5 | 4947.732 | 4961.842 | 5158.381 | 4393.392 | 3615.301 |
| 56.0 | 4856.014 | 4895.322 | 5083.797 | 4071.876 | 3469.157 |
| 56.5 | 4779.414 | 4824.769 | 5008.205 | 3772.532 | 3286.729 |
| 57.0 | 4714.909 | 4746.154 | 4928.582 | 3560.875 | 3102.285 |
| 57.5 | 4642.341 | 4658.468 | 4840.896 | 3409.692 | 2949.086 |
| 58.0 | 4558.686 | 4572.797 | 4747.162 | 3286.729 | 2854.344 |
| 58.5 | 4464.953 | 4491.158 | 4632.262 | 3136.554 | 2794.879 |
| 59.0 | 4389.361 | 4411.534 | 4500.229 | 2930.944 | 2745.492 |
| 59.5 | 4315.785 | 4325.864 | 4350.053 | 2760.611 | 2675.948 |
| 60.0 | 4221.043 | 4236.162 | 4172.665 | 2659.822 | 2583.222 |
| 60.5 | 4130.333 | 4159.562 | 4013.418 | 2600.356 | 2465.299 |
| 61.0 | 4048.694 | 4075.907 | 3863.242 | 2549.962 | 2319.155 |
| 61.5 | 3977.134 | 3989.229 | 3688.877 | 2476.386 | 2164.948 |
| 62.0 | 3891.463 | 3897.511 | 3499.394 | 2381.644 | 2010.741 |
| 62.5 | 3785.635 | 3804.785 | 3254.477 | 2257.674 | 1806.139 |
| 63.0 | 3692.909 | 3725.161 | 2978.315 | 2103.466 | 1498.732 |
| 63.5 | 3619.333 | 3646.546 | 2754.563 | 1954.299 | 1250.791 |
| 64.0 | 3529.631 | 3554.828 | 2602.372 | 1805.131 | 1103.640 |
| 64.5 | 3443.960 | 3474.197 | 2486.465 | 1583.395 | 968.683  |
| 65.0 | 3363.329 | 3391.550 | 2352.415 | 1293.123 | 762.570  |
| 65.5 | 3256.493 | 3297.816 | 2184.098 | 1092.553 | 660.773  |
| 66.0 | 3165.782 | 3211.137 | 2042.993 | 970.094  | 637.994  |
| 66.5 | 3087.167 | 3132.522 | 1958.330 | 789.682  | 627.512  |
| 67.0 | 3001.496 | 3044.836 | 1891.810 | 661.781  | 618.341  |
| 67.5 | 2911.794 | 2958.157 | 1822.265 | 615.518  | 609.269  |
| 68.0 | 2819.068 | 2879.542 | 1732.563 | 602.819  | 600.803  |
| 68.5 | 2738.437 | 2786.816 | 1605.569 | 592.740  | 592.539  |
| 69.0 | 2659.822 | 2703.161 | 1460.433 | 583.367  | 584.274  |
| 69.5 | 2572.135 | 2617.490 | 1336.462 | 574.598  | 575.808  |
| 70.0 | 2486.465 | 2537.867 | 1166.129 | 566.233  | 567.442  |
| 70.5 | 2403.818 | 2447.157 | 947.618  | 557.666  | 559.379  |
| 71.0 | 2331.250 | 2352.415 | 806.816  | 549.703  | 551.316  |
| 71.5 | 2247.595 | 2253.642 | 700.584  | 541.741  | 542.245  |
| 72.0 | 2163.940 | 2148.821 | 579.033  | 532.771  | 533.476  |
| 72.5 | 2081.293 | 2014.772 | 518.963  | 524.204  | 524.103  |
| 73.0 | 2003.685 | 1874.675 | 503.340  | 515.536  | 513.923  |
| 73.5 | 1926.078 | 1754.736 | 492.959  | 506.263  | 503.643  |
| 74.0 | 1848.470 | 1627.742 | 482.779  | 496.285  | 492.354  |
| 74.5 | 1771.871 | 1488.654 | 473.204  | 485.501  | 481.167  |
| 75.0 | 1686.200 | 1311.265 | 463.529  | 474.515  | 469.475  |
| 75.5 | 1607.585 | 1187.294 | 454.256  | 463.226  | 457.280  |
| 76.0 | 1528.969 | 1096.584 | 445.286  | 451.535  | 444.883  |
| 76.5 | 1445.314 | 997.408  | 435.610  | 439.541  | 432.082  |
| 77.0 | 1361.659 | 892.184  | 425.934  | 427.245  | 419.383  |
| 77.5 | 1276.997 | 823.648  | 415.553  | 414.848  | 406.280  |
| 78.0 | 1182.255 | 740.094  | 404.769  | 402.047  | 393.178  |
| 78.5 | 1103.640 | 635.475  | 393.178  | 388.642  | 379.672  |
| 79.0 | 1034.095 | 554.743  | 381.486  | 375.540  | 366.469  |
| 79.5 | 961.930  | 437.928  | 369.492  | 362.437  | 352.963  |
| 80.0 | 889.060  | 376.447  | 357.095  | 348.932  | 339.155  |
| 80.5 | 816.089  | 318.896  | 344.698  | 335.023  | 325.548  |
| 81.0 | 742.009  | 299.343  | 331.797  | 321.215  | 313.252  |
| 81.5 | 668.937  | 287.148  | 318.292  | 307.608  | 301.460  |
| 82.0 | 603.121  | 274.448  | 304.181  | 293.800  | 285.737  |
| 82.5 | 544.361  | 261.648  | 290.071  | 280.093  | 271.828  |

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**CANDELA TABULATION - (Cont.)**

|       |         |         |         |         |         |
|-------|---------|---------|---------|---------|---------|
| 83.0  | 481.167 | 249.150 | 275.053 | 265.982 | 258.322 |
| 83.5  | 419.484 | 236.149 | 260.136 | 252.073 | 244.514 |
| 84.0  | 359.918 | 222.844 | 244.716 | 237.560 | 230.303 |
| 84.5  | 304.282 | 208.734 | 229.597 | 222.441 | 215.487 |
| 85.0  | 248.949 | 194.523 | 213.975 | 206.114 | 199.260 |
| 85.5  | 220.224 | 179.404 | 197.244 | 188.576 | 182.630 |
| 86.0  | 188.677 | 163.782 | 179.606 | 170.132 | 164.588 |
| 86.5  | 142.818 | 147.454 | 159.851 | 150.176 | 146.346 |
| 87.0  | 118.830 | 130.421 | 138.887 | 129.312 | 126.490 |
| 87.5  | 103.712 | 112.682 | 116.512 | 108.147 | 105.123 |
| 88.0  | 88.694  | 93.230  | 94.137  | 84.864  | 81.135  |
| 88.5  | 72.266  | 72.266  | 71.359  | 59.667  | 55.031  |
| 89.0  | 52.813  | 52.108  | 48.580  | 38.703  | 35.579  |
| 89.5  | 33.059  | 34.974  | 31.245  | 26.508  | 25.701  |
| 90.0  | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 90.5  | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 91.0  | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 91.5  | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 92.0  | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 92.5  | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 93.0  | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 93.5  | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 94.0  | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 94.5  | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 95.0  | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 95.5  | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 96.0  | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 96.5  | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 97.0  | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 97.5  | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 98.0  | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 98.5  | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 99.0  | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 99.5  | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 100.0 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 100.5 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 101.0 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 101.5 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 102.0 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 102.5 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 103.0 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 103.5 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 104.0 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 104.5 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 105.0 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 105.5 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 106.0 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 106.5 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 107.0 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 107.5 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 108.0 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 108.5 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 109.0 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 109.5 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 110.0 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 110.5 | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : GS-4-L240-840-HA-HP-DIM-UNV\_.IES

CANDELA TABULATION - (Cont.)

|       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|
| 111.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 111.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 112.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 112.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 113.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 113.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 114.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 114.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 115.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 115.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 116.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 116.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 117.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 117.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 118.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 118.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 119.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 119.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 120.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 120.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 121.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 121.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 122.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 122.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 123.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 123.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 124.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 124.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 125.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 125.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 126.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 126.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 127.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 127.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 128.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 128.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 129.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 129.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 130.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 130.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 131.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 131.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 132.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 132.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 133.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 133.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 134.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 134.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 135.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 135.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 136.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 136.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 137.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 137.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 138.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 138.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

IES INDOOR REPORT  
 PHOTOMETRIC FILENAME : GS-4-L240-840-HA-HP-DIM-UNV\_.IES

CANDELA TABULATION - (Cont.)

|       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|
| 139.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 139.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 140.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 140.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 141.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 141.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 142.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 142.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 143.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 143.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 144.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 144.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 145.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 145.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 146.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 146.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 147.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 147.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 148.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 148.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 149.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 149.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 150.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 150.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 151.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 151.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 152.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 152.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 153.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 153.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 154.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 154.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 155.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 155.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 156.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 156.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 157.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 157.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 158.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 158.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 159.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 159.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 160.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 160.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 161.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 161.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 162.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 162.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 163.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 163.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 164.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 164.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 165.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 165.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 166.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 166.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

IES INDOOR REPORT  
PHOTOMETRIC FILENAME : GS-4-L240-840-HA-HP-DIM-UNV\_.IES

CANDELA TABULATION - (Cont.)

|       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|
| 167.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 167.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 168.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 168.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 169.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 169.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 170.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 170.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 171.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 171.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 172.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 172.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 173.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 173.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 174.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 174.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 175.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 175.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 176.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 176.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 177.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 177.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 178.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 178.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 179.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 179.5 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 180.0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : GS-4-L240-840-HA-HP-DIM-UNV\_.IES**

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens   | %Lamp | %Fixt  |
|---------|----------|-------|--------|
| 0-20    | 3546.01  | N.A.  | 14.00  |
| 0-30    | 7563.02  | N.A.  | 29.80  |
| 0-40    | 12462.31 | N.A.  | 49.10  |
| 0-60    | 21884.68 | N.A.  | 86.20  |
| 0-80    | 25168.23 | N.A.  | 99.10  |
| 0-90    | 25396.85 | N.A.  | 100.00 |
| 10-90   | 24482.45 | N.A.  | 96.40  |
| 20-40   | 8916.3   | N.A.  | 35.10  |
| 20-50   | 14043.09 | N.A.  | 55.30  |
| 40-70   | 11792.46 | N.A.  | 46.40  |
| 60-80   | 3283.55  | N.A.  | 12.90  |
| 70-80   | 913.46   | N.A.  | 3.60   |
| 80-90   | 228.62   | N.A.  | 0.90   |
| 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   | 25396.85 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens  |
|---------|---------|
| 0-10    | 914.41  |
| 10-20   | 2631.6  |
| 20-30   | 4017.02 |
| 30-40   | 4899.29 |
| 40-50   | 5126.78 |
| 50-60   | 4295.59 |
| 60-70   | 2370.09 |
| 70-80   | 913.46  |
| 80-90   | 228.62  |
| 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    |

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : GS-4-L240-840-HA-HP-DIM-UNV\_.IES**

**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 | 98  | 107 | 103 | 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  | 57  | 50  | 62  | 55  | 50  | 61  | 54  | 49  | 59  | 53  | 49  | 47  |
| 6  | 72  | 59  | 51  | 44  | 70  | 58  | 50  | 44  | 57  | 49  | 44  | 55  | 48  | 43  | 53  | 48  | 43  | 41  |
| 7  | 67  | 54  | 45  | 39  | 65  | 53  | 45  | 39  | 51  | 44  | 39  | 50  | 43  | 39  | 49  | 43  | 38  | 36  |
| 8  | 62  | 49  | 41  | 35  | 61  | 48  | 40  | 35  | 47  | 40  | 35  | 46  | 39  | 35  | 45  | 39  | 34  | 32  |
| 9  | 58  | 45  | 37  | 32  | 57  | 44  | 37  | 31  | 43  | 36  | 31  | 42  | 36  | 31  | 41  | 35  | 31  | 29  |
| 10 | 54  | 41  | 34  | 29  | 53  | 41  | 34  | 29  | 40  | 33  | 28  | 39  | 33  | 28  | 38  | 32  | 28  | 26  |

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : GS-4-L240-840-HA-HP-DIM-UNV\_.IES**

**UGR TABLE - CORRECTED**

Reflectances

|                |    |    |    |    |    |    |    |    |    |    |
|----------------|----|----|----|----|----|----|----|----|----|----|
| Ceiling Cavity | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
| Walls          | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| Floor Cavity   | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |

Room Size      UGR Viewed Crosswise

|      |      |      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|------|------|
| X=2H | Y=2H | 23.6 | 25.2 | 24.0 | 25.5 | 25.8 | 21.2 | 22.8 | 21.6 | 23.1 | 23.4 |
|      | 3H   | 25.3 | 26.7 | 25.7 | 27.0 | 27.4 | 21.3 | 22.7 | 21.7 | 23.0 | 23.4 |
|      | 4H   | 25.8 | 27.1 | 26.2 | 27.5 | 27.9 | 21.4 | 22.7 | 21.8 | 23.1 | 23.4 |
|      | 6H   | 26.1 | 27.3 | 26.5 | 27.7 | 28.1 | 21.5 | 22.7 | 21.9 | 23.1 | 23.5 |
|      | 8H   | 26.2 | 27.3 | 26.6 | 27.7 | 28.1 | 21.6 | 22.7 | 22.0 | 23.1 | 23.5 |
|      | 12H  | 26.2 | 27.3 | 26.6 | 27.7 | 28.1 | 21.6 | 22.7 | 22.1 | 23.1 | 23.5 |

UGR Viewed Endwise

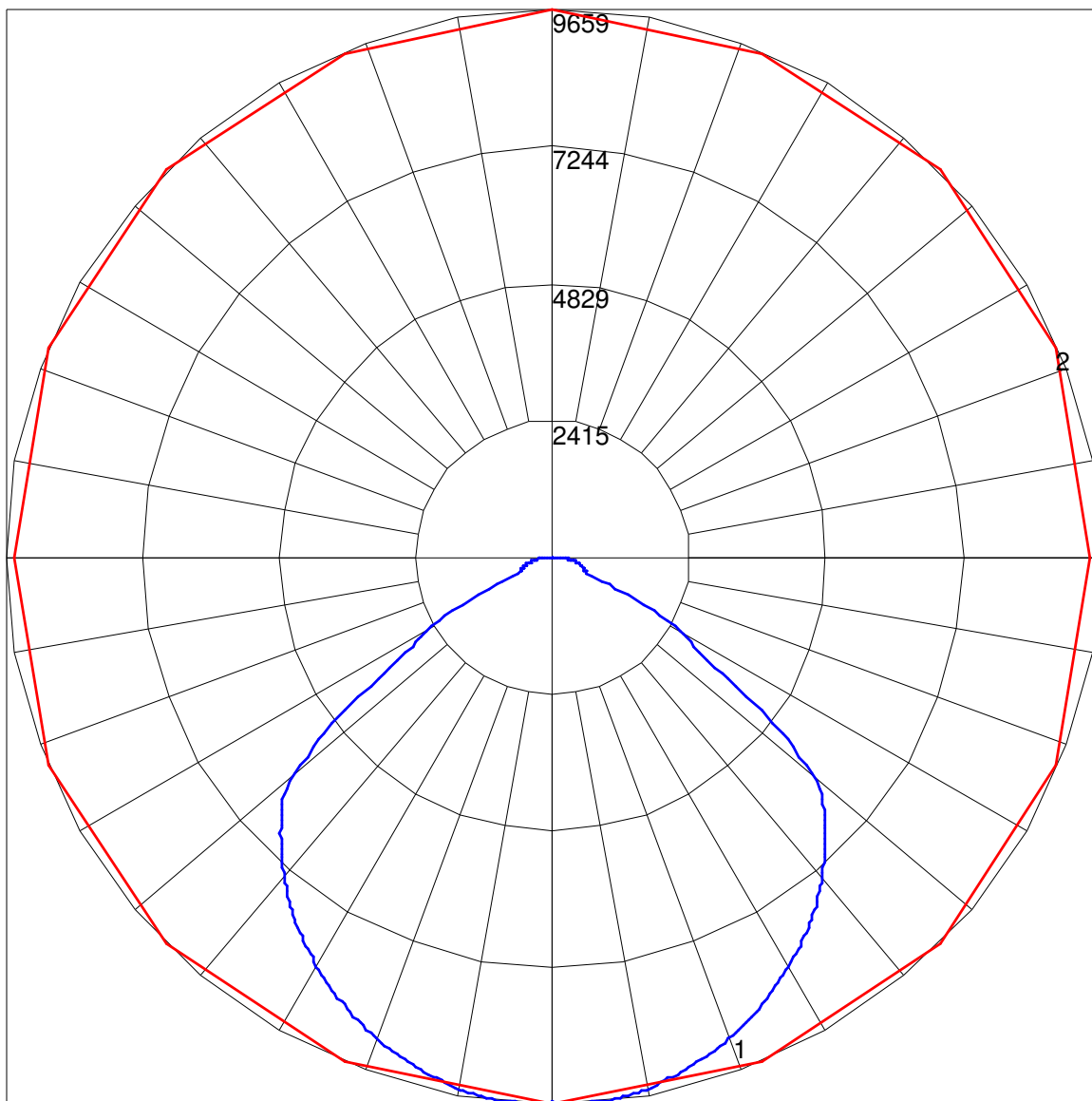
|    |     |      |      |      |      |      |      |      |      |      |      |
|----|-----|------|------|------|------|------|------|------|------|------|------|
| 4H | 2H  | 23.8 | 25.1 | 24.2 | 25.5 | 25.9 | 21.8 | 23.1 | 22.2 | 23.5 | 23.8 |
|    | 3H  | 25.7 | 26.8 | 26.1 | 27.2 | 27.6 | 22.0 | 23.1 | 22.4 | 23.5 | 23.9 |
|    | 4H  | 26.3 | 27.3 | 26.7 | 27.7 | 28.1 | 22.1 | 23.1 | 22.6 | 23.5 | 23.9 |
|    | 6H  | 26.6 | 27.5 | 27.1 | 27.9 | 28.4 | 22.3 | 23.2 | 22.8 | 23.6 | 24.1 |
|    | 8H  | 26.7 | 27.5 | 27.2 | 27.9 | 28.4 | 22.4 | 23.2 | 22.9 | 23.6 | 24.1 |
|    | 12H | 26.7 | 27.4 | 27.2 | 27.9 | 28.4 | 22.5 | 23.2 | 23.0 | 23.7 | 24.2 |

|    |     |      |      |      |      |      |      |      |      |      |      |
|----|-----|------|------|------|------|------|------|------|------|------|------|
| 8H | 4H  | 26.2 | 27.0 | 26.7 | 27.5 | 27.9 | 22.3 | 23.1 | 22.8 | 23.5 | 24.0 |
|    | 6H  | 26.6 | 27.2 | 27.1 | 27.7 | 28.2 | 22.6 | 23.2 | 23.1 | 23.7 | 24.2 |
|    | 8H  | 26.7 | 27.3 | 27.2 | 27.8 | 28.3 | 22.7 | 23.3 | 23.2 | 23.8 | 24.3 |
|    | 12H | 26.8 | 27.3 | 27.3 | 27.8 | 28.3 | 22.9 | 23.4 | 23.4 | 23.9 | 24.5 |

|     |    |      |      |      |      |      |      |      |      |      |      |
|-----|----|------|------|------|------|------|------|------|------|------|------|
| 12H | 4H | 26.2 | 26.9 | 26.7 | 27.4 | 27.9 | 22.3 | 23.0 | 22.8 | 23.5 | 24.0 |
|     | 6H | 26.6 | 27.2 | 27.1 | 27.6 | 28.2 | 22.6 | 23.2 | 23.1 | 23.6 | 24.2 |
|     | 8H | 26.7 | 27.2 | 27.2 | 27.7 | 28.2 | 22.8 | 23.3 | 23.3 | 23.8 | 24.4 |

Maximum UGR = 28.4

POLAR GRAPH



Maximum Candela = 9658.61 Located At Horizontal Angle = 90, Vertical Angle = .5  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (.5) (Through Max. Cd.)