



## IES INDOOR REPORT

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

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] 14617179.01  
[TESTLAB] UL Verification Services Inc.  
[ISSUEDATE] 2023-03-14  
[TESTDATE] 1/6/2023  
[MANUFAC] WILLIAMS INDOOR  
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
[LUMCAT] GS-4-L240-840-HA-CA-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                | 24420           |
| Total Luminaire Efficiency      | N.A.            |
| Luminaire Efficacy Rating (LER) | 144             |
| 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                  | 24173            | 24921             | 25372             |
| 55                  | 23137            | 24068             | 17312             |
| 65                  | 20987            | 14679             | 4758              |
| 75                  | 17180            | 4723              | 4783              |
| 85                  | 7532             | 6474              | 6029              |

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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  | 9257.078   | 9257.078    | 9257.078    | 9257.078    | 9257.078    |
| 0.5  | 9142.722   | 9262.893    | 9283.245    | 9268.708    | 9287.121    |
| 1.0  | 9145.629   | 9263.862    | 9284.214    | 9268.708    | 9286.152    |
| 1.5  | 9149.505   | 9262.893    | 9285.183    | 9265.800    | 9283.245    |
| 2.0  | 9148.536   | 9264.831    | 9283.245    | 9266.770    | 9284.214    |
| 2.5  | 9146.598   | 9262.893    | 9284.214    | 9264.831    | 9281.306    |
| 3.0  | 9145.629   | 9259.017    | 9282.276    | 9265.800    | 9283.245    |
| 3.5  | 9142.722   | 9253.202    | 9281.306    | 9265.800    | 9283.245    |
| 4.0  | 9135.938   | 9250.294    | 9278.399    | 9269.677    | 9285.183    |
| 4.5  | 9127.216   | 9244.480    | 9274.523    | 9271.615    | 9287.121    |
| 5.0  | 9115.586   | 9237.696    | 9271.615    | 9269.677    | 9284.214    |
| 5.5  | 9106.864   | 9231.881    | 9267.739    | 9266.770    | 9280.337    |
| 6.0  | 9100.080   | 9226.066    | 9262.893    | 9259.986    | 9272.584    |
| 6.5  | 9090.389   | 9217.344    | 9258.047    | 9253.202    | 9261.924    |
| 7.0  | 9077.790   | 9207.653    | 9248.356    | 9243.511    | 9249.325    |
| 7.5  | 9067.130   | 9198.931    | 9239.634    | 9230.912    | 9235.758    |
| 8.0  | 9057.439   | 9188.270    | 9227.035    | 9217.344    | 9223.159    |
| 8.5  | 9052.593   | 9176.641    | 9215.406    | 9203.776    | 9213.468    |
| 9.0  | 9044.840   | 9164.042    | 9202.807    | 9190.209    | 9201.838    |
| 9.5  | 9034.180   | 9154.351    | 9192.147    | 9180.517    | 9193.116    |
| 10.0 | 9022.550   | 9145.629    | 9180.517    | 9168.888    | 9181.487    |
| 10.5 | 9011.890   | 9135.938    | 9166.950    | 9154.351    | 9167.919    |
| 11.0 | 9000.260   | 9126.247    | 9151.444    | 9137.876    | 9153.382    |
| 11.5 | 8990.569   | 9115.586    | 9135.938    | 9122.370    | 9131.092    |
| 12.0 | 8972.156   | 9102.018    | 9123.339    | 9102.018    | 9102.018    |
| 12.5 | 8951.804   | 9088.451    | 9105.895    | 9074.883    | 9078.759    |
| 13.0 | 8931.452   | 9072.945    | 9087.482    | 9047.747    | 9053.562    |
| 13.5 | 8910.132   | 9051.624    | 9069.068    | 9024.488    | 9025.458    |
| 14.0 | 8886.873   | 9031.272    | 9049.686    | 8998.322    | 8999.291    |
| 14.5 | 8855.861   | 9010.921    | 9026.427    | 8972.156    | 8977.001    |
| 15.0 | 8833.571   | 8990.569    | 9004.137    | 8945.989    | 8959.557    |
| 15.5 | 8820.972   | 8968.279    | 8977.970    | 8920.792    | 8942.113    |
| 16.0 | 8802.559   | 8943.082    | 8951.804    | 8898.502    | 8920.792    |
| 16.5 | 8783.176   | 8919.823    | 8920.792    | 8876.212    | 8901.410    |
| 17.0 | 8770.578   | 8895.595    | 8893.657    | 8853.922    | 8879.120    |
| 17.5 | 8750.226   | 8872.336    | 8864.583    | 8828.725    | 8857.799    |
| 18.0 | 8726.967   | 8845.200    | 8833.571    | 8805.466    | 8832.602    |
| 18.5 | 8701.770   | 8819.034    | 8806.435    | 8777.362    | 8799.652    |
| 19.0 | 8671.727   | 8793.837    | 8772.516    | 8748.288    | 8768.640    |
| 19.5 | 8638.777   | 8767.670    | 8740.535    | 8720.183    | 8743.442    |
| 20.0 | 8607.765   | 8741.504    | 8709.523    | 8690.140    | 8716.307    |
| 20.5 | 8577.722   | 8713.399    | 8681.418    | 8661.067    | 8689.171    |
| 21.0 | 8548.648   | 8683.357    | 8652.345    | 8633.931    | 8660.098    |
| 21.5 | 8514.729   | 8653.314    | 8622.302    | 8606.796    | 8628.116    |
| 22.0 | 8481.779   | 8623.271    | 8592.259    | 8577.722    | 8596.135    |
| 22.5 | 8453.674   | 8591.290    | 8560.278    | 8547.679    | 8567.062    |
| 23.0 | 8425.569   | 8558.339    | 8524.420    | 8512.791    | 8532.173    |
| 23.5 | 8397.465   | 8521.513    | 8489.532    | 8481.779    | 8501.161    |
| 24.0 | 8362.576   | 8488.563    | 8451.736    | 8450.767    | 8467.242    |
| 24.5 | 8332.533   | 8455.612    | 8412.971    | 8415.878    | 8435.261    |
| 25.0 | 8299.583   | 8414.909    | 8371.298    | 8383.897    | 8398.434    |
| 25.5 | 8261.787   | 8380.990    | 8334.472    | 8348.039    | 8363.545    |
| 26.0 | 8218.177   | 8347.070    | 8298.614    | 8312.182    | 8324.780    |
| 26.5 | 8170.690   | 8302.491    | 8263.726    | 8274.386    | 8286.985    |

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**CANDELA TABULATION - (Cont.)**

|      |          |          |          |          |          |
|------|----------|----------|----------|----------|----------|
| 27.0 | 8127.079 | 8258.880 | 8225.930 | 8237.559 | 8249.189 |
| 27.5 | 8084.438 | 8213.331 | 8191.041 | 8200.732 | 8212.362 |
| 28.0 | 8043.734 | 8167.782 | 8153.245 | 8165.844 | 8175.535 |
| 28.5 | 8008.846 | 8122.233 | 8113.511 | 8128.048 | 8135.801 |
| 29.0 | 7970.081 | 8077.654 | 8072.808 | 8083.468 | 8097.036 |
| 29.5 | 7931.316 | 8033.074 | 8032.105 | 8042.765 | 8062.148 |
| 30.0 | 7892.551 | 7983.649 | 7988.494 | 8000.124 | 8021.444 |
| 30.5 | 7853.786 | 7938.100 | 7948.760 | 7956.513 | 7984.618 |
| 31.0 | 7812.114 | 7887.705 | 7909.026 | 7915.810 | 7943.914 |
| 31.5 | 7765.596 | 7838.280 | 7867.354 | 7874.137 | 7903.211 |
| 32.0 | 7717.139 | 7793.700 | 7823.743 | 7831.496 | 7860.570 |
| 32.5 | 7666.745 | 7746.213 | 7782.071 | 7793.700 | 7815.990 |
| 33.0 | 7614.412 | 7699.695 | 7744.275 | 7752.028 | 7775.287 |
| 33.5 | 7564.018 | 7650.270 | 7700.664 | 7709.386 | 7738.460 |
| 34.0 | 7512.654 | 7597.937 | 7653.177 | 7664.807 | 7695.819 |
| 34.5 | 7464.198 | 7546.573 | 7604.721 | 7620.227 | 7651.239 |
| 35.0 | 7419.618 | 7493.272 | 7551.419 | 7576.616 | 7603.752 |
| 35.5 | 7377.946 | 7439.970 | 7490.364 | 7531.067 | 7561.110 |
| 36.0 | 7327.551 | 7382.791 | 7440.939 | 7485.519 | 7516.531 |
| 36.5 | 7275.218 | 7325.613 | 7393.452 | 7438.031 | 7469.043 |
| 37.0 | 7215.133 | 7268.435 | 7341.119 | 7391.513 | 7422.525 |
| 37.5 | 7150.201 | 7212.225 | 7287.817 | 7344.995 | 7373.100 |
| 38.0 | 7088.177 | 7156.985 | 7240.330 | 7296.539 | 7321.736 |
| 38.5 | 7025.184 | 7100.776 | 7194.781 | 7246.145 | 7265.527 |
| 39.0 | 6969.944 | 7044.567 | 7141.479 | 7191.874 | 7213.195 |
| 39.5 | 6917.612 | 6984.481 | 7082.363 | 7134.695 | 7161.831 |
| 40.0 | 6863.341 | 6921.488 | 7023.246 | 7080.424 | 7108.529 |
| 40.5 | 6807.131 | 6858.495 | 6967.037 | 7025.184 | 7058.135 |
| 41.0 | 6754.799 | 6795.502 | 6909.859 | 6965.099 | 7006.771 |
| 41.5 | 6690.836 | 6731.540 | 6848.804 | 6909.859 | 6947.654 |
| 42.0 | 6620.090 | 6668.546 | 6786.780 | 6850.742 | 6887.569 |
| 42.5 | 6543.529 | 6604.584 | 6723.787 | 6791.625 | 6828.452 |
| 43.0 | 6468.907 | 6539.653 | 6663.701 | 6732.509 | 6771.274 |
| 43.5 | 6399.130 | 6470.845 | 6601.677 | 6672.423 | 6715.064 |
| 44.0 | 6337.106 | 6405.914 | 6545.468 | 6614.275 | 6662.732 |
| 44.5 | 6285.742 | 6341.951 | 6485.382 | 6561.943 | 6606.523 |
| 45.0 | 6232.440 | 6274.113 | 6425.296 | 6507.672 | 6541.591 |
| 45.5 | 6174.293 | 6208.212 | 6360.365 | 6442.740 | 6482.475 |
| 46.0 | 6105.485 | 6140.374 | 6287.681 | 6371.025 | 6418.512 |
| 46.5 | 6034.739 | 6069.627 | 6211.120 | 6311.909 | 6357.457 |
| 47.0 | 5960.116 | 6001.789 | 6146.188 | 6250.854 | 6298.341 |
| 47.5 | 5893.247 | 5936.857 | 6081.257 | 6186.892 | 6235.348 |
| 48.0 | 5832.192 | 5873.864 | 6012.449 | 6125.837 | 6170.416 |
| 48.5 | 5772.106 | 5816.686 | 5944.610 | 6065.751 | 6092.886 |
| 49.0 | 5708.144 | 5738.187 | 5880.648 | 6003.727 | 5994.036 |
| 49.5 | 5639.336 | 5654.842 | 5817.655 | 5941.703 | 5879.679 |
| 50.0 | 5553.084 | 5585.065 | 5751.755 | 5874.833 | 5742.063 |
| 50.5 | 5474.585 | 5524.010 | 5681.008 | 5803.118 | 5574.405 |
| 51.0 | 5400.931 | 5451.326 | 5610.262 | 5715.897 | 5381.549 |
| 51.5 | 5336.969 | 5380.580 | 5536.609 | 5609.293 | 5196.446 |
| 52.0 | 5275.914 | 5304.019 | 5466.832 | 5485.245 | 5047.201 |
| 52.5 | 5206.137 | 5230.366 | 5396.086 | 5324.371 | 4905.709 |
| 53.0 | 5125.700 | 5150.897 | 5323.402 | 5140.237 | 4693.471 |
| 53.5 | 5043.324 | 5077.244 | 5253.625 | 4948.350 | 4407.579 |
| 54.0 | 4966.764 | 5010.374 | 5179.971 | 4786.506 | 4080.984 |
| 54.5 | 4902.801 | 4936.721 | 5105.348 | 4646.953 | 3810.598 |

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**CANDELA TABULATION - (Cont.)**

|      |          |          |          |          |          |
|------|----------|----------|----------|----------|----------|
| 55.0 | 4838.839 | 4850.469 | 5033.633 | 4472.510 | 3620.650 |
| 55.5 | 4757.433 | 4771.000 | 4959.980 | 4224.414 | 3476.250 |
| 56.0 | 4669.242 | 4707.038 | 4888.265 | 3915.263 | 3335.727 |
| 56.5 | 4595.589 | 4639.200 | 4815.580 | 3627.433 | 3160.315 |
| 57.0 | 4533.565 | 4563.608 | 4739.019 | 3423.917 | 2982.966 |
| 57.5 | 4463.788 | 4479.294 | 4654.706 | 3278.549 | 2835.659 |
| 58.0 | 4383.351 | 4396.918 | 4564.577 | 3160.315 | 2744.561 |
| 58.5 | 4293.222 | 4318.419 | 4454.097 | 3015.916 | 2687.383 |
| 59.0 | 4220.538 | 4241.858 | 4327.141 | 2818.214 | 2639.895 |
| 59.5 | 4149.792 | 4159.483 | 4182.742 | 2654.432 | 2573.026 |
| 60.0 | 4058.694 | 4073.231 | 4012.176 | 2557.520 | 2483.866 |
| 60.5 | 3971.473 | 3999.577 | 3859.054 | 2500.342 | 2370.479 |
| 61.0 | 3892.974 | 3919.140 | 3714.655 | 2451.885 | 2229.956 |
| 61.5 | 3824.166 | 3835.795 | 3546.996 | 2381.139 | 2081.680 |
| 62.0 | 3741.790 | 3747.605 | 3364.801 | 2290.041 | 1933.404 |
| 62.5 | 3640.032 | 3658.445 | 3129.303 | 2170.839 | 1736.671 |
| 63.0 | 3550.873 | 3581.885 | 2863.763 | 2022.563 | 1441.088 |
| 63.5 | 3480.126 | 3506.293 | 2648.618 | 1879.133 | 1202.684 |
| 64.0 | 3393.874 | 3418.103 | 2502.280 | 1735.702 | 1061.191 |
| 64.5 | 3311.499 | 3340.573 | 2390.830 | 1522.495 | 931.426  |
| 65.0 | 3233.969 | 3261.104 | 2261.937 | 1243.387 | 733.240  |
| 65.5 | 3131.242 | 3170.976 | 2100.093 | 1050.531 | 635.358  |
| 66.0 | 3044.020 | 3087.631 | 1964.416 | 932.782  | 613.456  |
| 66.5 | 2968.429 | 3012.039 | 1883.009 | 759.309  | 603.377  |
| 67.0 | 2886.053 | 2927.725 | 1819.047 | 636.327  | 594.558  |
| 67.5 | 2799.801 | 2844.381 | 1752.177 | 591.844  | 585.836  |
| 68.0 | 2710.642 | 2768.789 | 1665.925 | 579.633  | 577.695  |
| 68.5 | 2633.112 | 2679.630 | 1543.816 | 569.942  | 569.748  |
| 69.0 | 2557.520 | 2599.192 | 1404.262 | 560.929  | 561.802  |
| 69.5 | 2473.206 | 2516.817 | 1285.059 | 552.498  | 553.661  |
| 70.0 | 2390.830 | 2440.256 | 1121.277 | 544.454  | 545.617  |
| 70.5 | 2311.362 | 2353.035 | 911.171  | 536.217  | 537.864  |
| 71.0 | 2241.585 | 2261.937 | 775.784  | 528.561  | 530.111  |
| 71.5 | 2161.148 | 2166.963 | 673.639  | 520.904  | 521.389  |
| 72.0 | 2080.711 | 2066.174 | 556.762  | 512.279  | 512.958  |
| 72.5 | 2001.242 | 1937.280 | 499.002  | 504.042  | 503.945  |
| 73.0 | 1926.620 | 1802.572 | 483.981  | 495.707  | 494.157  |
| 73.5 | 1851.997 | 1687.246 | 473.999  | 486.791  | 484.272  |
| 74.0 | 1777.375 | 1565.136 | 464.211  | 477.197  | 473.417  |
| 74.5 | 1703.721 | 1431.397 | 455.004  | 466.827  | 462.660  |
| 75.0 | 1621.345 | 1260.831 | 445.700  | 456.264  | 451.418  |
| 75.5 | 1545.754 | 1141.629 | 436.784  | 445.410  | 439.692  |
| 76.0 | 1470.162 | 1054.408 | 428.159  | 434.168  | 427.772  |
| 76.5 | 1389.725 | 959.046  | 418.856  | 422.635  | 415.464  |
| 77.0 | 1309.287 | 857.869  | 409.552  | 410.812  | 403.253  |
| 77.5 | 1227.881 | 791.969  | 399.570  | 398.892  | 390.654  |
| 78.0 | 1136.783 | 711.628  | 389.200  | 386.584  | 378.056  |
| 78.5 | 1061.191 | 611.033  | 378.056  | 373.694  | 365.069  |
| 79.0 | 994.322  | 533.406  | 366.814  | 361.096  | 352.374  |
| 79.5 | 924.933  | 421.085  | 355.281  | 348.497  | 339.387  |
| 80.0 | 854.865  | 361.968  | 343.361  | 335.511  | 326.110  |
| 80.5 | 784.700  | 306.631  | 331.441  | 322.137  | 313.027  |
| 81.0 | 713.470  | 287.830  | 319.036  | 308.860  | 301.204  |
| 81.5 | 643.208  | 276.104  | 306.050  | 295.777  | 289.865  |
| 82.0 | 579.924  | 263.893  | 292.482  | 282.500  | 274.747  |
| 82.5 | 523.424  | 251.585  | 278.914  | 269.320  | 261.373  |

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**CANDELA TABULATION - (Cont.)**

|       |         |         |         |         |         |
|-------|---------|---------|---------|---------|---------|
| 83.0  | 462.660 | 239.568 | 264.474 | 255.752 | 248.387 |
| 83.5  | 403.350 | 227.066 | 250.131 | 242.378 | 235.110 |
| 84.0  | 346.074 | 214.273 | 235.303 | 228.423 | 221.445 |
| 84.5  | 292.579 | 200.706 | 220.767 | 213.886 | 207.199 |
| 85.0  | 239.374 | 187.041 | 205.745 | 198.186 | 191.596 |
| 85.5  | 211.754 | 172.504 | 189.658 | 181.323 | 175.605 |
| 86.0  | 181.420 | 157.483 | 172.698 | 163.588 | 158.258 |
| 86.5  | 137.325 | 141.783 | 153.703 | 144.400 | 140.717 |
| 87.0  | 114.260 | 125.405 | 133.545 | 124.339 | 121.625 |
| 87.5  | 99.723  | 108.348 | 112.031 | 103.987 | 101.080 |
| 88.0  | 85.283  | 89.644  | 90.516  | 81.600  | 78.015  |
| 88.5  | 69.486  | 69.486  | 68.614  | 57.372  | 52.914  |
| 89.0  | 50.782  | 50.104  | 46.712  | 37.214  | 34.210  |
| 89.5  | 31.787  | 33.629  | 30.043  | 25.488  | 24.713  |
| 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-CA-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-CA-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-CA-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-CA-DIM-UNV\_.IES**

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens   | %Lamp | %Fixt  |
|---------|----------|-------|--------|
| 0-20    | 3409.62  | N.A.  | 14.00  |
| 0-30    | 7272.13  | N.A.  | 29.80  |
| 0-40    | 11982.98 | N.A.  | 49.10  |
| 0-60    | 21042.96 | N.A.  | 86.20  |
| 0-80    | 24200.21 | N.A.  | 99.10  |
| 0-90    | 24420.04 | N.A.  | 100.00 |
| 10-90   | 23540.8  | N.A.  | 96.40  |
| 20-40   | 8573.37  | N.A.  | 35.10  |
| 20-50   | 13502.96 | N.A.  | 55.30  |
| 40-70   | 11338.9  | N.A.  | 46.40  |
| 60-80   | 3157.26  | N.A.  | 12.90  |
| 70-80   | 878.33   | N.A.  | 3.60   |
| 80-90   | 219.83   | 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   | 24420.04 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens  |
|---------|---------|
| 0-10    | 879.24  |
| 10-20   | 2530.38 |
| 20-30   | 3862.52 |
| 30-40   | 4710.85 |
| 40-50   | 4929.6  |
| 50-60   | 4130.38 |
| 60-70   | 2278.93 |
| 70-80   | 878.33  |
| 80-90   | 219.83  |
| 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-CA-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-CA-DIM-UNV\_.IES**

**UGR TABLE - CORRECTED**

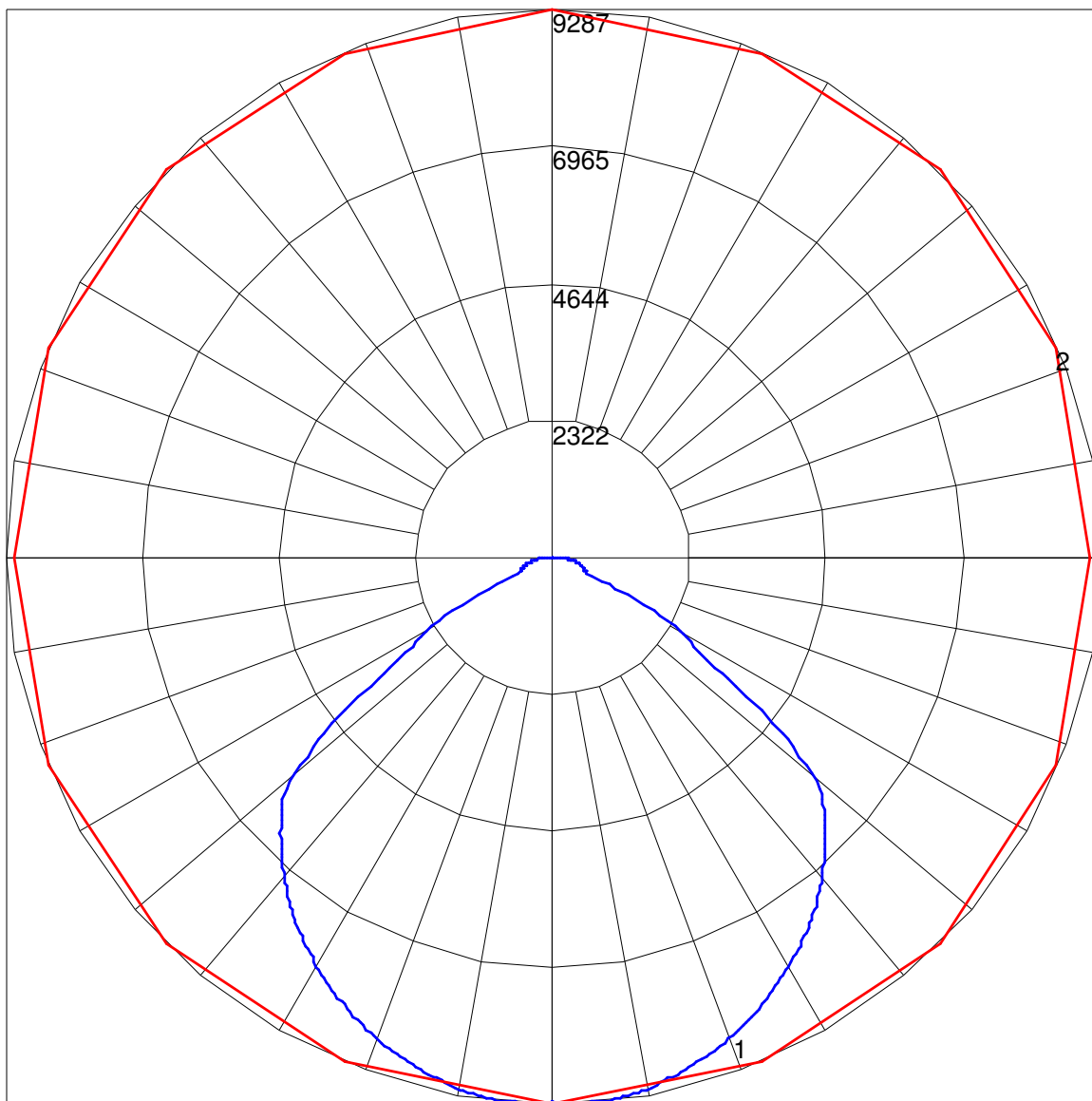
Reflectances

|                |    |    |    |    |    |    |    |    |    |    |
|----------------|----|----|----|----|----|----|----|----|----|----|
| 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 |      |      |      |      | UGR Viewed Endwise |      |      |      |      |
|-----------|------|----------------------|------|------|------|------|--------------------|------|------|------|------|
| X=2H      | Y=2H | 23.5                 | 25.1 | 23.9 | 25.4 | 25.7 | 21.1               | 22.7 | 21.5 | 23.0 | 23.3 |
|           | 3H   | 25.2                 | 26.6 | 25.6 | 26.9 | 27.3 | 21.2               | 22.6 | 21.6 | 22.9 | 23.3 |
|           | 4H   | 25.7                 | 27.0 | 26.1 | 27.4 | 27.8 | 21.3               | 22.6 | 21.7 | 23.0 | 23.3 |
|           | 6H   | 26.0                 | 27.2 | 26.4 | 27.6 | 28.0 | 21.4               | 22.6 | 21.8 | 23.0 | 23.4 |
|           | 8H   | 26.1                 | 27.2 | 26.5 | 27.6 | 28.0 | 21.5               | 22.6 | 21.9 | 23.0 | 23.4 |
|           | 12H  | 26.1                 | 27.2 | 26.5 | 27.6 | 28.0 | 21.5               | 22.6 | 22.0 | 23.0 | 23.4 |
| 4H        | 2H   | 23.7                 | 25.0 | 24.1 | 25.4 | 25.8 | 21.7               | 23.0 | 22.1 | 23.4 | 23.7 |
|           | 3H   | 25.6                 | 26.7 | 26.0 | 27.1 | 27.5 | 21.9               | 23.0 | 22.3 | 23.4 | 23.8 |
|           | 4H   | 26.2                 | 27.2 | 26.6 | 27.6 | 28.0 | 22.0               | 23.0 | 22.5 | 23.4 | 23.8 |
|           | 6H   | 26.5                 | 27.4 | 27.0 | 27.8 | 28.3 | 22.2               | 23.1 | 22.7 | 23.5 | 24.0 |
|           | 8H   | 26.6                 | 27.4 | 27.1 | 27.8 | 28.3 | 22.3               | 23.1 | 22.8 | 23.5 | 24.0 |
|           | 12H  | 26.6                 | 27.3 | 27.1 | 27.8 | 28.3 | 22.4               | 23.1 | 22.9 | 23.6 | 24.1 |
| 8H        | 4H   | 26.1                 | 26.9 | 26.6 | 27.4 | 27.8 | 22.2               | 23.0 | 22.7 | 23.4 | 23.9 |
|           | 6H   | 26.5                 | 27.1 | 27.0 | 27.6 | 28.1 | 22.5               | 23.1 | 23.0 | 23.6 | 24.1 |
|           | 8H   | 26.6                 | 27.2 | 27.1 | 27.7 | 28.2 | 22.6               | 23.2 | 23.1 | 23.7 | 24.2 |
|           | 12H  | 26.7                 | 27.2 | 27.2 | 27.7 | 28.2 | 22.8               | 23.3 | 23.3 | 23.8 | 24.4 |
| 12H       | 4H   | 26.1                 | 26.8 | 26.6 | 27.3 | 27.8 | 22.2               | 22.9 | 22.7 | 23.4 | 23.9 |
|           | 6H   | 26.5                 | 27.1 | 27.0 | 27.5 | 28.1 | 22.5               | 23.1 | 23.0 | 23.5 | 24.1 |
|           | 8H   | 26.6                 | 27.1 | 27.1 | 27.6 | 28.1 | 22.7               | 23.2 | 23.2 | 23.7 | 24.3 |

Maximum UGR = 28.3

POLAR GRAPH



Maximum Candela = 9287.121 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.)