



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : GS-4-L480-840-HE-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
[TEST] 14617179.01  
[TESTLAB] UL Verification Services Inc.  
[ISSUE DATE] 2023-03-14  
[TEST DATE] 1/6/2023  
[MANUFAC] WILLIAMS INDOOR  
[OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
[LUMCAT] GS-4-L480-840-HE-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                | 50793           |
| Total Luminaire Efficiency      | N.A.            |
| Luminaire Efficacy Rating (LER) | 150             |
| Total Luminaire Watts           | 338             |
| 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                  | 50278            | 51834             | 52772             |
| 55                  | 48124            | 50061             | 36008             |
| 65                  | 43651            | 30531             | 9897              |
| 75                  | 35734            | 9823              | 9949              |
| 85                  | 15667            | 13466             | 12540             |

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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  | 19254.329  | 19254.329   | 19254.329   | 19254.329   | 19254.329   |
| 0.5  | 19016.472  | 19266.424   | 19308.754   | 19278.518   | 19316.817   |
| 1.0  | 19022.520  | 19268.440   | 19310.770   | 19278.518   | 19314.802   |
| 1.5  | 19030.583  | 19266.424   | 19312.786   | 19272.471   | 19308.754   |
| 2.0  | 19028.567  | 19270.455   | 19308.754   | 19274.487   | 19310.770   |
| 2.5  | 19024.535  | 19266.424   | 19310.770   | 19270.455   | 19304.723   |
| 3.0  | 19022.520  | 19258.361   | 19306.739   | 19272.471   | 19308.754   |
| 3.5  | 19016.472  | 19246.267   | 19304.723   | 19272.471   | 19308.754   |
| 4.0  | 19002.362  | 19240.219   | 19298.676   | 19280.534   | 19312.786   |
| 4.5  | 18984.221  | 19228.125   | 19290.613   | 19284.566   | 19316.817   |
| 5.0  | 18960.032  | 19214.015   | 19284.566   | 19280.534   | 19310.770   |
| 5.5  | 18941.890  | 19201.920   | 19276.503   | 19274.487   | 19302.707   |
| 6.0  | 18927.780  | 19189.826   | 19266.424   | 19260.377   | 19286.581   |
| 6.5  | 18907.623  | 19171.684   | 19256.345   | 19246.267   | 19264.408   |
| 7.0  | 18881.418  | 19151.527   | 19236.188   | 19226.109   | 19238.204   |
| 7.5  | 18859.245  | 19133.385   | 19218.046   | 19199.905   | 19209.983   |
| 8.0  | 18839.087  | 19111.212   | 19191.842   | 19171.684   | 19183.779   |
| 8.5  | 18829.009  | 19087.023   | 19167.653   | 19143.464   | 19163.621   |
| 9.0  | 18812.883  | 19060.819   | 19141.448   | 19115.244   | 19139.432   |
| 9.5  | 18790.710  | 19040.661   | 19119.275   | 19095.086   | 19121.291   |
| 10.0 | 18766.521  | 19022.520   | 19095.086   | 19070.897   | 19097.102   |
| 10.5 | 18744.348  | 19002.362   | 19066.866   | 19040.661   | 19068.882   |
| 11.0 | 18720.159  | 18982.205   | 19034.614   | 19006.394   | 19038.646   |
| 11.5 | 18700.002  | 18960.032   | 19002.362   | 18974.142   | 18992.284   |
| 12.0 | 18661.703  | 18931.811   | 18976.158   | 18931.811   | 18931.811   |
| 12.5 | 18619.372  | 18903.591   | 18939.874   | 18875.371   | 18883.434   |
| 13.0 | 18577.042  | 18871.339   | 18901.575   | 18818.930   | 18831.024   |
| 13.5 | 18532.695  | 18826.993   | 18863.276   | 18770.552   | 18772.568   |
| 14.0 | 18484.318  | 18784.663   | 18822.962   | 18716.127   | 18718.143   |
| 14.5 | 18419.814  | 18742.332   | 18774.584   | 18661.703   | 18671.781   |
| 15.0 | 18373.452  | 18700.002   | 18728.222   | 18607.278   | 18635.498   |
| 15.5 | 18347.247  | 18653.640   | 18673.797   | 18554.868   | 18599.215   |
| 16.0 | 18308.948  | 18601.230   | 18619.372   | 18508.506   | 18554.868   |
| 16.5 | 18268.634  | 18552.853   | 18554.868   | 18462.144   | 18514.554   |
| 17.0 | 18242.429  | 18502.459   | 18498.428   | 18415.782   | 18468.192   |
| 17.5 | 18200.098  | 18454.081   | 18437.956   | 18363.373   | 18423.845   |
| 18.0 | 18151.721  | 18397.641   | 18373.452   | 18314.996   | 18371.436   |
| 18.5 | 18099.312  | 18343.216   | 18317.011   | 18256.539   | 18302.901   |
| 19.0 | 18036.824  | 18290.807   | 18246.460   | 18196.067   | 18238.398   |
| 19.5 | 17968.289  | 18236.382   | 18179.941   | 18137.611   | 18185.988   |
| 20.0 | 17903.785  | 18181.957   | 18115.437   | 18075.123   | 18129.548   |
| 20.5 | 17841.297  | 18123.500   | 18056.981   | 18014.651   | 18073.107   |
| 21.0 | 17780.825  | 18061.013   | 17996.509   | 17958.210   | 18012.635   |
| 21.5 | 17710.274  | 17998.525   | 17934.021   | 17901.769   | 17946.116   |
| 22.0 | 17641.739  | 17936.037   | 17871.533   | 17841.297   | 17879.596   |
| 22.5 | 17583.283  | 17869.517   | 17805.014   | 17778.809   | 17819.124   |
| 23.0 | 17524.826  | 17800.982   | 17730.432   | 17706.243   | 17746.557   |
| 23.5 | 17466.370  | 17724.384   | 17657.865   | 17641.739   | 17682.054   |
| 24.0 | 17393.803  | 17655.849   | 17579.251   | 17577.235   | 17611.503   |
| 24.5 | 17331.315  | 17587.314   | 17498.622   | 17504.669   | 17544.984   |
| 25.0 | 17262.780  | 17502.653   | 17411.945   | 17438.150   | 17468.386   |
| 25.5 | 17184.167  | 17432.102   | 17335.347   | 17363.567   | 17395.819   |
| 26.0 | 17093.458  | 17361.551   | 17260.765   | 17288.985   | 17315.190   |
| 26.5 | 16994.687  | 17268.828   | 17188.198   | 17210.371   | 17236.576   |

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**CANDELA TABULATION - (Cont.)**

|      |   |
|------|---|
| 27.0 | 16903.97917178.11917109.58417133.77317157.962 |
| 27.5 | 16815.28617083.38017037.01817057.17517081.364 |
| 28.0 | 16730.62516988.64016958.40416984.60817004.766 |
| 28.5 | 16658.05916893.90016875.75916905.99516922.121 |
| 29.0 | 16577.42916801.17616791.09816813.27116841.491 |
| 29.5 | 16496.80016708.45216706.43716728.61016768.925 |
| 30.0 | 16416.17016605.65016615.72816639.91716684.264 |
| 30.5 | 16335.54116510.91016533.08316549.20916607.665 |
| 31.0 | 16248.86416406.09216450.43816464.54816523.004 |
| 31.5 | 16152.10916303.28916363.76116377.87116438.343 |
| 32.0 | 16051.32216210.56516273.05316289.17916349.651 |
| 32.5 | 15946.50316111.79416186.37616210.56516256.927 |
| 33.0 | 15837.65416015.03816107.76216123.88816172.266 |
| 33.5 | 15732.83515912.23616017.05416035.19616095.668 |
| 34.0 | 15626.00115803.38615918.28315942.47216006.976 |
| 34.5 | 15525.21415696.55215817.49615849.74815914.252 |
| 35.0 | 15432.49015585.68615706.63115759.04015815.480 |
| 35.5 | 15345.81315474.82115579.63915664.30015726.788 |
| 36.0 | 15240.99515355.89215476.83615569.56015634.064 |
| 36.5 | 15132.14515236.96415378.06515470.78915535.293 |
| 37.0 | 15007.16915118.03515269.21515374.03415438.537 |
| 37.5 | 14872.11515001.12215158.35015277.27815335.735 |
| 38.0 | 14743.10814886.22515059.57915176.49115228.901 |
| 38.5 | 14612.08514769.31214964.83915071.67315111.988 |
| 39.0 | 14497.18814652.40014853.97314958.79215003.138 |
| 39.5 | 14388.33814527.42414731.01314839.86314896.304 |
| 40.0 | 14275.45714396.40114608.05314726.98214785.438 |
| 40.5 | 14158.54414265.37814491.14114612.08514680.620 |
| 41.0 | 14049.69414134.35514372.21214487.10914573.786 |
| 41.5 | 13916.65514001.31614245.22114372.21214450.826 |
| 42.0 | 13769.50613870.29314116.21314249.25214325.850 |
| 42.5 | 13610.26313737.25513985.19014126.29214202.890 |
| 43.0 | 13455.05113602.20013860.21514003.33214083.961 |
| 43.5 | 13309.91813459.08313731.20713878.35613967.049 |
| 44.0 | 13180.91113324.02813614.29513757.41213858.199 |
| 44.5 | 13074.07713190.99013489.31913648.56213741.286 |
| 45.0 | 12963.21113049.88813364.34313535.68113606.232 |
| 45.5 | 12842.26712912.81813229.28913400.62613483.272 |
| 46.0 | 12699.14912771.71613078.10813251.46213350.233 |
| 46.5 | 12552.00112624.56712918.86513128.50213223.241 |
| 47.0 | 12396.78912483.46512783.81013001.51013100.281 |
| 47.5 | 12257.70312348.41112648.75612868.47112969.258 |
| 48.0 | 12130.71112217.38812505.63912741.48012834.204 |
| 48.5 | 12005.73612098.46012364.53712616.50412672.945 |
| 49.0 | 11872.69711935.18512231.49812487.49712467.340 |
| 49.5 | 11729.57911761.83112100.47512358.49012229.483 |
| 50.0 | 11550.17911616.69811963.40512219.40411943.248 |
| 50.5 | 11386.90411489.70711816.25612070.23911594.525 |
| 51.0 | 11233.70811338.52611669.10711888.82311193.393 |
| 51.5 | 11100.66911191.37711515.91111667.09210808.387 |
| 52.0 | 10973.67811032.13411370.77811409.07710497.964 |
| 52.5 | 10828.54510878.93811223.62911074.46510203.666 |
| 53.0 | 10661.23810713.64811072.44910691.4749762.219  |
| 53.5 | 10489.90110560.45110927.31610292.3589167.576  |
| 54.0 | 10330.65710421.36610774.1209955.730 8488.273  |
| 54.5 | 10197.61910268.16910618.9089665.464 7925.882  |

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**CANDELA TABULATION - (Cont.)**

|      |                                     |          |
|------|-------------------------------------|----------|
| 55.0 | 10064.58010088.76910469.7439302.631 | 7530.797 |
| 55.5 | 9895.258 9923.478 10316.5478786.602 | 7230.452 |
| 56.0 | 9711.826 9790.440 10167.3838143.582 | 6938.170 |
| 56.5 | 9558.630 9649.338 10016.2027544.907 | 6573.322 |
| 57.0 | 9429.622 9492.110 9856.959 7121.602 | 6204.442 |
| 57.5 | 9284.489 9316.741 9681.590 6819.242 | 5898.049 |
| 58.0 | 9117.183 9145.403 9494.126 6573.322 | 5708.570 |
| 58.5 | 8929.719 8982.129 9264.332 6272.977 | 5589.642 |
| 59.0 | 8778.539 8822.885 9000.270 5861.766 | 5490.870 |
| 59.5 | 8631.390 8651.548 8699.925 5521.106 | 5351.784 |
| 60.0 | 8441.911 8472.147 8345.155 5319.533 | 5166.337 |
| 60.5 | 8260.494 8318.951 8026.669 5200.604 | 4930.495 |
| 61.0 | 8097.220 8151.645 7726.324 5099.817 | 4638.213 |
| 61.5 | 7954.102 7978.291 7377.601 4952.668 | 4329.805 |
| 62.0 | 7782.764 7794.859 6998.642 4763.189 | 4021.397 |
| 62.5 | 7571.112 7609.411 6508.818 4515.253 | 3612.203 |
| 63.0 | 7385.664 7450.168 5956.506 4206.845 | 2997.402 |
| 63.5 | 7238.515 7292.940 5509.012 3908.516 | 2501.531 |
| 64.0 | 7059.115 7109.508 5204.636 3610.187 | 2207.233 |
| 64.5 | 6887.777 6948.249 4972.826 3166.724 | 1937.326 |
| 65.0 | 6726.518 6782.958 4704.733 2586.192 | 1525.107 |
| 65.5 | 6512.850 6595.495 4368.104 2185.060 | 1321.518 |
| 66.0 | 6331.433 6422.141 4085.901 1940.148 | 1275.962 |
| 66.5 | 6174.206 6264.914 3916.579 1579.331 | 1254.998 |
| 67.0 | 6002.868 6089.545 3783.540 1323.534 | 1236.655 |
| 67.5 | 5823.467 5916.191 3644.454 1231.011 | 1218.514 |
| 68.0 | 5638.019 5758.963 3465.054 1205.613 | 1201.581 |
| 68.5 | 5476.760 5573.516 3211.071 1185.456 | 1185.052 |
| 69.0 | 5319.533 5406.209 2920.804 1166.709 | 1168.523 |
| 69.5 | 5144.163 5234.872 2672.869 1149.172 | 1151.591 |
| 70.0 | 4972.826 5075.628 2332.209 1132.442 | 1134.860 |
| 70.5 | 4807.535 4894.212 1895.197 1115.308 | 1118.735 |
| 71.0 | 4662.402 4704.733 1613.598 1099.384 | 1102.609 |
| 71.5 | 4495.096 4507.190 1401.139 1083.459 | 1084.467 |
| 72.0 | 4327.790 4297.553 1158.041 1065.519 | 1066.930 |
| 72.5 | 4162.499 4029.460 1037.904 1048.385 | 1048.184 |
| 73.0 | 4007.287 3749.273 1006.660 1031.050 | 1027.825 |
| 73.5 | 3852.075 3509.400 985.897 1012.505  | 1007.264 |
| 74.0 | 3696.864 3255.417 965.539 992.549   | 984.688  |
| 74.5 | 3543.667 2977.245 946.389 970.981   | 962.313  |
| 75.0 | 3372.330 2622.475 927.038 949.009   | 938.931  |
| 75.5 | 3215.102 2374.539 908.493 926.433   | 914.540  |
| 76.0 | 3057.875 2193.123 890.553 903.051   | 889.747  |
| 76.5 | 2890.568 1994.774 871.202 879.063   | 864.147  |
| 77.0 | 2723.262 1784.331 851.851 854.471   | 838.749  |
| 77.5 | 2553.940 1647.261 831.089 829.678   | 812.544  |
| 78.0 | 2364.461 1480.156 809.520 804.078   | 786.339  |
| 78.5 | 2207.233 1270.923 786.339 777.269   | 759.329  |
| 79.0 | 2068.147 1109.462 762.957 751.064   | 732.922  |
| 79.5 | 1923.820 875.838 738.970 724.859    | 705.911  |
| 80.0 | 1778.082 752.878 714.176 697.848    | 678.296  |
| 80.5 | 1632.143 637.780 689.382 670.031    | 651.083  |
| 81.0 | 1483.986 598.674 663.581 642.416    | 626.491  |
| 81.5 | 1337.845 574.284 636.570 615.203    | 602.907  |
| 82.0 | 1206.218 548.885 608.350 587.588    | 571.462  |
| 82.5 | 1088.700 523.286 580.129 560.174    | 543.645  |

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**CANDELA TABULATION - (Cont.)**

|       |         |         |         |         |         |
|-------|---------|---------|---------|---------|---------|
| 83.0  | 962.313 | 498.290 | 550.095 | 531.953 | 516.634 |
| 83.5  | 838.950 | 472.287 | 520.262 | 504.136 | 489.018 |
| 84.0  | 719.820 | 445.680 | 489.421 | 475.109 | 460.596 |
| 84.5  | 608.551 | 417.459 | 459.185 | 444.873 | 430.965 |
| 85.0  | 497.887 | 389.037 | 427.941 | 412.218 | 398.511 |
| 85.5  | 440.439 | 358.801 | 394.480 | 377.145 | 365.252 |
| 86.0  | 377.346 | 327.557 | 359.205 | 340.257 | 329.170 |
| 86.5  | 285.630 | 294.902 | 319.696 | 300.345 | 292.685 |
| 87.0  | 237.656 | 260.836 | 277.769 | 258.619 | 252.975 |
| 87.5  | 207.419 | 225.360 | 233.019 | 216.289 | 210.241 |
| 88.0  | 177.385 | 186.456 | 188.270 | 169.725 | 162.267 |
| 88.5  | 144.528 | 144.528 | 142.714 | 119.332 | 110.059 |
| 89.0  | 105.625 | 104.214 | 97.159  | 77.404  | 71.156  |
| 89.5  | 66.116  | 69.946  | 62.488  | 53.014  | 51.401  |
| 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   |

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 PHOTOMETRIC FILENAME : GS-4-L480-840-HE-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-L480-840-HE-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-L480-840-HE-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-L480-840-HE-DIM-UNV\_.IES**

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens   | %Lamp | %Fixt  |
|---------|----------|-------|--------|
| 0-20    | 7091.86  | N.A.  | 14.00  |
| 0-30    | 15125.73 | N.A.  | 29.80  |
| 0-40    | 24924.1  | N.A.  | 49.10  |
| 0-60    | 43768.46 | N.A.  | 86.20  |
| 0-80    | 50335.41 | N.A.  | 99.10  |
| 0-90    | 50792.65 | N.A.  | 100.00 |
| 10-90   | 48963.88 | N.A.  | 96.40  |
| 20-40   | 17832.24 | N.A.  | 35.10  |
| 20-50   | 28085.59 | N.A.  | 55.30  |
| 40-70   | 23584.43 | N.A.  | 46.40  |
| 60-80   | 6566.96  | N.A.  | 12.90  |
| 70-80   | 1826.88  | N.A.  | 3.60   |
| 80-90   | 457.23   | 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   | 50792.65 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens   |
|---------|----------|
| 0-10    | 1828.77  |
| 10-20   | 5263.09  |
| 20-30   | 8033.87  |
| 30-40   | 9798.37  |
| 40-50   | 10253.35 |
| 50-60   | 8591.01  |
| 60-70   | 4740.08  |
| 70-80   | 1826.88  |
| 80-90   | 457.23   |
| 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-L480-840-HE-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-L480-840-HE-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 | 26.0 | 27.6 | 26.4 | 27.9 | 28.2 | 23.6 | 25.2 | 24.0 | 25.5 | 25.8 |
|      | 3H   | 27.7 | 29.1 | 28.1 | 29.4 | 29.8 | 23.7 | 25.1 | 24.1 | 25.4 | 25.8 |
|      | 4H   | 28.2 | 29.5 | 28.6 | 29.9 | 30.3 | 23.8 | 25.1 | 24.2 | 25.5 | 25.8 |
|      | 6H   | 28.5 | 29.7 | 28.9 | 30.1 | 30.5 | 23.9 | 25.1 | 24.3 | 25.5 | 25.9 |
|      | 8H   | 28.6 | 29.7 | 29.0 | 30.1 | 30.5 | 24.0 | 25.1 | 24.4 | 25.5 | 25.9 |
|      | 12H  | 28.6 | 29.7 | 29.0 | 30.1 | 30.5 | 24.0 | 25.1 | 24.5 | 25.5 | 25.9 |

UGR Viewed Endwise

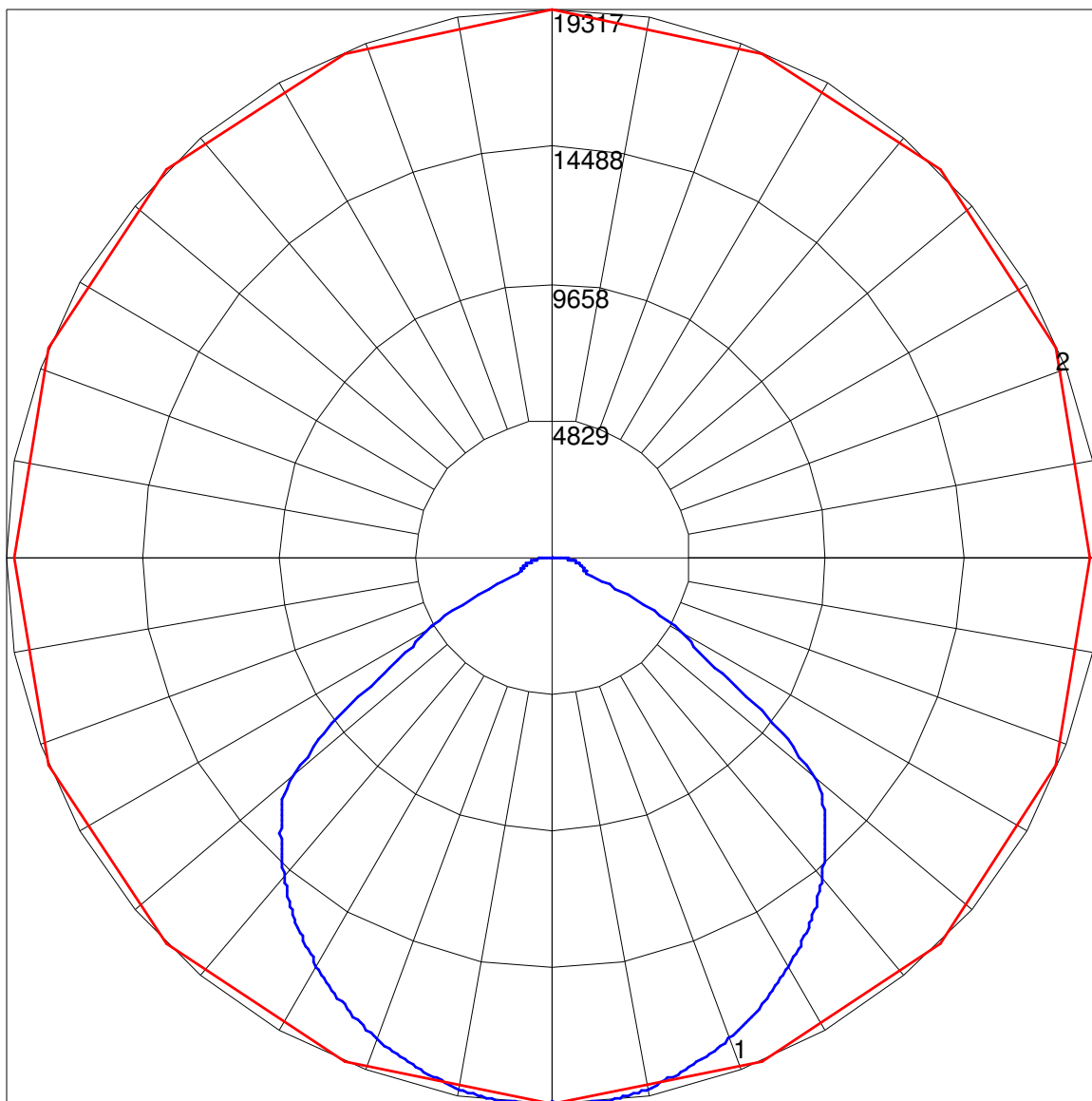
|    |     |      |      |      |      |      |      |      |      |      |      |
|----|-----|------|------|------|------|------|------|------|------|------|------|
| 4H | 2H  | 26.2 | 27.5 | 26.6 | 27.9 | 28.3 | 24.2 | 25.5 | 24.6 | 25.9 | 26.2 |
|    | 3H  | 28.1 | 29.2 | 28.5 | 29.6 | 30.0 | 24.4 | 25.5 | 24.8 | 25.9 | 26.3 |
|    | 4H  | 28.7 | 29.7 | 29.1 | 30.1 | 30.5 | 24.5 | 25.5 | 25.0 | 25.9 | 26.3 |
|    | 6H  | 29.0 | 29.9 | 29.5 | 30.3 | 30.8 | 24.7 | 25.6 | 25.2 | 26.0 | 26.5 |
|    | 8H  | 29.1 | 29.9 | 29.6 | 30.3 | 30.8 | 24.8 | 25.6 | 25.3 | 26.0 | 26.5 |
|    | 12H | 29.1 | 29.8 | 29.6 | 30.3 | 30.8 | 24.9 | 25.6 | 25.4 | 26.1 | 26.6 |

|    |     |      |      |      |      |      |      |      |      |      |      |
|----|-----|------|------|------|------|------|------|------|------|------|------|
| 8H | 4H  | 28.6 | 29.4 | 29.1 | 29.9 | 30.3 | 24.7 | 25.5 | 25.2 | 25.9 | 26.4 |
|    | 6H  | 29.0 | 29.6 | 29.5 | 30.1 | 30.6 | 25.0 | 25.6 | 25.5 | 26.1 | 26.6 |
|    | 8H  | 29.1 | 29.7 | 29.6 | 30.2 | 30.7 | 25.1 | 25.7 | 25.6 | 26.2 | 26.7 |
|    | 12H | 29.2 | 29.7 | 29.7 | 30.2 | 30.7 | 25.3 | 25.8 | 25.8 | 26.3 | 26.9 |

|     |    |      |      |      |      |      |      |      |      |      |      |
|-----|----|------|------|------|------|------|------|------|------|------|------|
| 12H | 4H | 28.6 | 29.3 | 29.1 | 29.8 | 30.3 | 24.7 | 25.4 | 25.2 | 25.9 | 26.4 |
|     | 6H | 29.0 | 29.6 | 29.5 | 30.0 | 30.6 | 25.0 | 25.6 | 25.5 | 26.0 | 26.6 |
|     | 8H | 29.1 | 29.6 | 29.6 | 30.1 | 30.6 | 25.2 | 25.7 | 25.7 | 26.2 | 26.8 |

Maximum UGR = 30.8

POLAR GRAPH



Maximum Candela = 19316.817 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.)