



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CS-L20-835-XXX-DIM-UNV-ON-CS\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM 13257153.21  
 [TESTLAB] UL Verification Services Inc.  
 [ISSUEDATE] 04-22-2022  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
 [LUMCAT] 4CS-L20-835-xxx-DIM-UNV-ON-CS  
 [LUMINAIRE] Square housing, optics, and trim enclosure  
 [LAMP] One white LED  
 [\_SEARCH\_SOURCETYPE] LED  
 [\_SEARCH\_APPLICATION] Indoor, Downlight  
 [\_SEARCH\_MOUNTING] Surface, Suspended, Wall

### CHARACTERISTICS

|                                 |                 |
|---------------------------------|-----------------|
| Lumens Per Lamp                 | N.A. (absolute) |
| Total Lamp Lumens               | N.A. (absolute) |
| Luminaire Lumens                | 1488            |
| Total Luminaire Efficiency      | N.A.            |
| Luminaire Efficacy Rating (LER) | 58              |
| Total Luminaire Watts           | 25.6            |
| Ballast Factor                  | 1.00            |
| CIE Type                        | Direct          |
| Spacing Criterion (0-180)       | 0.74            |
| Spacing Criterion (90-270)      | 0.74            |
| Spacing Criterion (Diagonal)    | 0.78            |
| Basic Luminous Shape            | Rectangular     |
| Luminous Length (0-180)         | 0.21 ft         |
| Luminous Width (90-270)         | 0.21 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                  | 74882            | 68788             | 77882             |
| 55                  | 37791            | 38986             | 39100             |
| 65                  | 1236             | 8111              | 1313              |
| 75                  | 631              | 631               | 631               |
| 85                  | 374              | 374               | 374               |

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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  | 1883.311   | 1883.311    | 1883.311    | 1883.311    | 1883.311    |
| 0.5  | 1884.624   | 1884.624    | 1883.311    | 1881.998    | 1883.311    |
| 1.0  | 1883.311   | 1881.998    | 1880.684    | 1879.371    | 1880.684    |
| 1.5  | 1879.371   | 1879.371    | 1876.744    | 1876.744    | 1878.058    |
| 2.0  | 1875.431   | 1875.431    | 1872.804    | 1871.491    | 1872.804    |
| 2.5  | 1868.864   | 1868.864    | 1866.238    | 1864.924    | 1866.238    |
| 3.0  | 1859.671   | 1860.984    | 1858.358    | 1857.044    | 1858.358    |
| 3.5  | 1850.478   | 1851.791    | 1849.164    | 1849.164    | 1849.164    |
| 4.0  | 1839.971   | 1841.284    | 1838.658    | 1838.658    | 1838.658    |
| 4.5  | 1828.151   | 1829.464    | 1826.838    | 1826.838    | 1828.151    |
| 5.0  | 1816.331   | 1816.331    | 1815.018    | 1813.705    | 1815.018    |
| 5.5  | 1803.198   | 1803.198    | 1800.571    | 1800.571    | 1800.571    |
| 6.0  | 1788.751   | 1788.751    | 1787.438    | 1786.125    | 1786.125    |
| 6.5  | 1774.305   | 1772.991    | 1771.678    | 1770.365    | 1770.365    |
| 7.0  | 1757.231   | 1757.231    | 1755.918    | 1754.605    | 1754.605    |
| 7.5  | 1740.158   | 1741.472    | 1738.845    | 1737.532    | 1737.532    |
| 8.0  | 1723.085   | 1723.085    | 1721.772    | 1719.145    | 1719.145    |
| 8.5  | 1704.698   | 1706.012    | 1703.385    | 1702.072    | 1700.758    |
| 9.0  | 1684.998   | 1686.312    | 1684.998    | 1682.372    | 1681.059    |
| 9.5  | 1665.299   | 1666.612    | 1665.299    | 1662.672    | 1661.359    |
| 10.0 | 1644.285   | 1646.912    | 1645.599    | 1641.659    | 1640.345    |
| 10.5 | 1623.272   | 1624.585    | 1624.585    | 1620.645    | 1618.019    |
| 11.0 | 1599.632   | 1603.572    | 1603.572    | 1599.632    | 1597.006    |
| 11.5 | 1577.306   | 1581.246    | 1582.559    | 1577.306    | 1572.052    |
| 12.0 | 1552.352   | 1557.606    | 1560.232    | 1553.666    | 1548.412    |
| 12.5 | 1528.713   | 1533.966    | 1536.593    | 1530.026    | 1523.459    |
| 13.0 | 1503.759   | 1509.013    | 1514.266    | 1505.073    | 1498.506    |
| 13.5 | 1478.806   | 1484.059    | 1490.626    | 1481.433    | 1473.553    |
| 14.0 | 1453.853   | 1459.106    | 1465.673    | 1456.480    | 1448.600    |
| 14.5 | 1427.586   | 1434.153    | 1440.720    | 1431.526    | 1422.333    |
| 15.0 | 1401.320   | 1407.886    | 1415.766    | 1405.260    | 1397.380    |
| 15.5 | 1375.053   | 1381.620    | 1389.500    | 1378.993    | 1371.113    |
| 16.0 | 1348.787   | 1356.667    | 1364.547    | 1352.727    | 1344.847    |
| 16.5 | 1322.520   | 1330.400    | 1338.280    | 1327.774    | 1318.580    |
| 17.0 | 1295.597   | 1304.265    | 1311.882    | 1301.901    | 1292.182    |
| 17.5 | 1269.068   | 1277.998    | 1285.222    | 1275.634    | 1265.522    |
| 18.0 | 1242.276   | 1251.863    | 1258.561    | 1249.631    | 1239.124    |
| 18.5 | 1215.484   | 1225.991    | 1231.901    | 1222.839    | 1212.595    |
| 19.0 | 1189.218   | 1199.856    | 1205.109    | 1196.704    | 1185.672    |
| 19.5 | 1162.820   | 1173.326    | 1178.448    | 1170.306    | 1158.617    |
| 20.0 | 1135.765   | 1146.666    | 1151.525    | 1143.645    | 1131.825    |
| 20.5 | 1109.105   | 1120.005    | 1124.471    | 1116.722    | 1104.114    |
| 21.0 | 1081.919   | 1093.345    | 1096.891    | 1089.930    | 1076.797    |
| 21.5 | 1055.258   | 1066.553    | 1069.442    | 1062.482    | 1049.611    |
| 22.0 | 1029.386   | 1039.761    | 1042.388    | 1035.558    | 1023.344    |
| 22.5 | 1004.038   | 1014.151    | 1017.040    | 1010.211    | 997.078     |
| 23.0 | 977.903    | 989.329     | 990.774     | 983.813     | 969.892     |
| 23.5 | 953.344    | 963.325     | 965.689     | 958.729     | 945.201     |
| 24.0 | 926.683    | 937.715     | 939.554     | 932.331     | 918.016     |
| 24.5 | 899.892    | 911.055     | 913.025     | 905.539     | 890.961     |
| 25.0 | 873.100    | 884.526     | 886.627     | 879.010     | 864.038     |
| 25.5 | 846.177    | 858.259     | 860.754     | 852.612     | 837.377     |
| 26.0 | 819.253    | 832.255     | 835.276     | 826.608     | 810.848     |
| 26.5 | 792.199    | 806.251     | 810.191     | 800.735     | 784.319     |

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 4CS-L20-835-XXX-DIM-UNV-ON-CS\_.IES****CANDELA TABULATION - (Cont.)**

|      |         |         |         |         |         |
|------|---------|---------|---------|---------|---------|
| 27.0 | 765.144 | 780.248 | 785.370 | 775.126 | 758.052 |
| 27.5 | 738.221 | 754.638 | 761.073 | 749.647 | 732.311 |
| 28.0 | 711.429 | 729.290 | 736.908 | 724.562 | 706.833 |
| 28.5 | 685.557 | 704.206 | 713.399 | 699.609 | 681.748 |
| 29.0 | 660.209 | 679.384 | 690.416 | 675.444 | 657.451 |
| 29.5 | 635.519 | 654.956 | 667.958 | 651.542 | 633.812 |
| 30.0 | 611.616 | 630.791 | 645.500 | 627.902 | 610.566 |
| 30.5 | 588.239 | 607.151 | 623.436 | 604.787 | 588.239 |
| 31.0 | 565.781 | 584.036 | 601.898 | 582.198 | 566.569 |
| 31.5 | 544.111 | 561.579 | 580.622 | 560.265 | 545.687 |
| 32.0 | 523.492 | 539.909 | 559.740 | 539.252 | 525.725 |
| 32.5 | 503.924 | 519.027 | 539.646 | 518.895 | 506.550 |
| 33.0 | 485.143 | 498.670 | 519.683 | 499.327 | 488.426 |
| 33.5 | 467.150 | 479.233 | 500.378 | 480.415 | 470.959 |
| 34.0 | 450.208 | 460.584 | 481.466 | 462.422 | 454.280 |
| 34.5 | 434.055 | 442.723 | 463.079 | 444.955 | 438.389 |
| 35.0 | 418.689 | 425.649 | 445.218 | 428.539 | 423.548 |
| 35.5 | 404.242 | 409.364 | 427.751 | 412.779 | 409.364 |
| 36.0 | 390.189 | 393.867 | 410.940 | 397.675 | 395.837 |
| 36.5 | 376.794 | 378.895 | 394.261 | 382.966 | 382.703 |
| 37.0 | 364.054 | 364.711 | 378.107 | 369.045 | 370.227 |
| 37.5 | 351.709 | 351.052 | 362.478 | 355.780 | 358.276 |
| 38.0 | 339.758 | 338.050 | 347.244 | 343.041 | 346.850 |
| 38.5 | 328.463 | 325.574 | 332.666 | 330.958 | 335.686 |
| 39.0 | 317.562 | 313.622 | 318.613 | 319.270 | 325.180 |
| 39.5 | 306.925 | 302.197 | 305.086 | 307.975 | 314.804 |
| 40.0 | 296.681 | 291.165 | 292.215 | 297.206 | 304.823 |
| 40.5 | 286.699 | 280.658 | 280.001 | 286.962 | 295.236 |
| 41.0 | 277.243 | 270.677 | 268.313 | 276.981 | 286.043 |
| 41.5 | 268.181 | 260.958 | 257.412 | 267.525 | 276.981 |
| 42.0 | 259.382 | 251.765 | 247.037 | 258.463 | 268.313 |
| 42.5 | 250.977 | 242.965 | 237.318 | 249.663 | 259.907 |
| 43.0 | 242.834 | 234.560 | 227.994 | 241.258 | 251.896 |
| 43.5 | 234.954 | 226.418 | 219.194 | 233.247 | 244.016 |
| 44.0 | 227.337 | 218.538 | 210.920 | 225.498 | 236.399 |
| 44.5 | 219.982 | 211.052 | 203.040 | 217.881 | 228.782 |
| 45.0 | 213.022 | 203.828 | 195.686 | 210.658 | 221.558 |
| 45.5 | 206.061 | 196.736 | 188.594 | 203.566 | 214.466 |
| 46.0 | 199.232 | 189.907 | 181.764 | 196.736 | 207.374 |
| 46.5 | 192.534 | 183.209 | 175.329 | 190.038 | 200.282 |
| 47.0 | 185.967 | 176.642 | 169.025 | 183.340 | 193.322 |
| 47.5 | 179.400 | 170.339 | 162.984 | 177.036 | 186.492 |
| 48.0 | 172.965 | 164.166 | 157.205 | 170.733 | 179.532 |
| 48.5 | 166.661 | 158.125 | 151.689 | 164.560 | 172.834 |
| 49.0 | 160.226 | 152.215 | 146.305 | 158.519 | 166.005 |
| 49.5 | 153.922 | 146.436 | 141.051 | 152.609 | 159.307 |
| 50.0 | 147.749 | 140.920 | 135.929 | 146.961 | 152.740 |
| 50.5 | 141.577 | 135.535 | 131.070 | 141.314 | 146.173 |
| 51.0 | 135.010 | 130.151 | 126.079 | 135.798 | 139.738 |
| 51.5 | 128.969 | 125.029 | 121.483 | 130.413 | 133.171 |
| 52.0 | 122.796 | 119.907 | 116.886 | 125.029 | 126.736 |
| 52.5 | 116.492 | 114.916 | 112.289 | 119.907 | 120.432 |
| 53.0 | 110.582 | 110.057 | 107.693 | 114.916 | 114.128 |
| 53.5 | 104.541 | 105.197 | 103.227 | 109.663 | 107.955 |
| 54.0 | 98.762  | 100.207 | 98.894  | 104.803 | 101.783 |
| 54.5 | 92.852  | 95.479  | 94.297  | 99.813  | 96.004  |

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|      |        |        |        |        |        |
|------|--------|--------|--------|--------|--------|
| 55.0 | 87.205 | 90.751 | 89.963 | 95.085 | 90.226 |
| 55.5 | 81.820 | 86.154 | 85.629 | 90.226 | 84.578 |
| 56.0 | 76.304 | 81.558 | 81.295 | 85.498 | 78.931 |
| 56.5 | 71.051 | 76.961 | 76.961 | 80.638 | 73.415 |
| 57.0 | 65.929 | 72.364 | 72.758 | 75.910 | 67.899 |
| 57.5 | 60.807 | 67.899 | 68.556 | 71.314 | 62.777 |
| 58.0 | 55.948 | 63.565 | 64.484 | 66.586 | 57.392 |
| 58.5 | 50.957 | 59.231 | 60.282 | 61.858 | 52.139 |
| 59.0 | 46.229 | 54.766 | 56.210 | 57.261 | 46.754 |
| 59.5 | 41.238 | 50.300 | 52.139 | 52.533 | 41.238 |
| 60.0 | 36.248 | 45.966 | 48.330 | 47.936 | 35.854 |
| 60.5 | 31.126 | 41.501 | 44.390 | 43.208 | 30.732 |
| 61.0 | 26.135 | 37.167 | 40.582 | 38.349 | 25.873 |
| 61.5 | 21.407 | 32.702 | 36.904 | 33.490 | 21.276 |
| 62.0 | 17.336 | 28.105 | 33.227 | 28.631 | 16.417 |
| 62.5 | 13.790 | 23.640 | 29.681 | 23.903 | 11.689 |
| 63.0 | 10.638 | 19.306 | 26.135 | 19.569 | 9.193  |
| 63.5 | 5.516  | 15.366 | 22.852 | 15.497 | 7.486  |
| 64.0 | 2.758  | 11.820 | 19.700 | 11.426 | 5.779  |
| 64.5 | 2.364  | 8.537  | 16.679 | 8.143  | 3.283  |
| 65.0 | 2.101  | 5.910  | 13.790 | 6.304  | 2.233  |
| 65.5 | 1.970  | 3.940  | 11.163 | 4.859  | 2.101  |
| 66.0 | 1.839  | 2.364  | 8.931  | 3.283  | 1.970  |
| 66.5 | 1.707  | 1.707  | 6.961  | 1.970  | 1.839  |
| 67.0 | 1.707  | 1.576  | 5.385  | 1.707  | 1.707  |
| 67.5 | 1.576  | 1.445  | 4.203  | 1.576  | 1.707  |
| 68.0 | 1.445  | 1.445  | 3.283  | 1.445  | 1.576  |
| 68.5 | 1.445  | 1.313  | 2.495  | 1.313  | 1.445  |
| 69.0 | 1.313  | 1.182  | 1.970  | 1.313  | 1.313  |
| 69.5 | 1.182  | 1.182  | 1.707  | 1.182  | 1.313  |
| 70.0 | 1.182  | 1.051  | 1.445  | 1.182  | 1.182  |
| 70.5 | 1.051  | 1.051  | 1.182  | 1.051  | 1.182  |
| 71.0 | 1.051  | 0.919  | 1.051  | 1.051  | 1.051  |
| 71.5 | 0.919  | 0.919  | 0.919  | 0.919  | 1.051  |
| 72.0 | 0.919  | 0.919  | 0.919  | 0.919  | 0.919  |
| 72.5 | 0.919  | 0.788  | 0.788  | 0.788  | 0.919  |
| 73.0 | 0.788  | 0.788  | 0.788  | 0.788  | 0.788  |
| 73.5 | 0.788  | 0.657  | 0.788  | 0.788  | 0.788  |
| 74.0 | 0.657  | 0.657  | 0.657  | 0.657  | 0.788  |
| 74.5 | 0.657  | 0.657  | 0.657  | 0.657  | 0.657  |
| 75.0 | 0.657  | 0.657  | 0.657  | 0.657  | 0.657  |
| 75.5 | 0.525  | 0.525  | 0.525  | 0.525  | 0.657  |
| 76.0 | 0.525  | 0.525  | 0.525  | 0.525  | 0.525  |
| 76.5 | 0.525  | 0.525  | 0.525  | 0.525  | 0.525  |
| 77.0 | 0.525  | 0.394  | 0.525  | 0.525  | 0.525  |
| 77.5 | 0.525  | 0.394  | 0.394  | 0.394  | 0.525  |
| 78.0 | 0.394  | 0.394  | 0.394  | 0.394  | 0.394  |
| 78.5 | 0.394  | 0.394  | 0.394  | 0.394  | 0.394  |
| 79.0 | 0.394  | 0.394  | 0.394  | 0.394  | 0.394  |
| 79.5 | 0.394  | 0.394  | 0.394  | 0.394  | 0.394  |
| 80.0 | 0.263  | 0.263  | 0.263  | 0.263  | 0.394  |
| 80.5 | 0.263  | 0.263  | 0.263  | 0.263  | 0.263  |
| 81.0 | 0.263  | 0.263  | 0.263  | 0.263  | 0.263  |
| 81.5 | 0.263  | 0.263  | 0.263  | 0.263  | 0.263  |
| 82.0 | 0.263  | 0.263  | 0.263  | 0.263  | 0.263  |
| 82.5 | 0.263  | 0.263  | 0.263  | 0.263  | 0.263  |

**IES INDOOR REPORT**  
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**CANDELA TABULATION - (Cont.)**

|       |       |       |       |       |       |
|-------|-------|-------|-------|-------|-------|
| 83.0  | 0.263 | 0.263 | 0.263 | 0.263 | 0.263 |
| 83.5  | 0.131 | 0.131 | 0.131 | 0.131 | 0.131 |
| 84.0  | 0.131 | 0.131 | 0.131 | 0.131 | 0.131 |
| 84.5  | 0.131 | 0.131 | 0.131 | 0.131 | 0.131 |
| 85.0  | 0.131 | 0.131 | 0.131 | 0.131 | 0.131 |
| 85.5  | 0.131 | 0.131 | 0.131 | 0.131 | 0.131 |
| 86.0  | 0.131 | 0.131 | 0.131 | 0.131 | 0.131 |
| 86.5  | 0.131 | 0.131 | 0.131 | 0.131 | 0.131 |
| 87.0  | 0.131 | 0.131 | 0.131 | 0.131 | 0.131 |
| 87.5  | 0.131 | 0.131 | 0.131 | 0.131 | 0.131 |
| 88.0  | 0.131 | 0.000 | 0.000 | 0.131 | 0.131 |
| 88.5  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 89.0  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 89.5  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 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 : 4CS-L20-835-XXX-DIM-UNV-ON-CS\_.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 : 4CS-L20-835-XXX-DIM-UNV-ON-CS\_.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 : 4CS-L20-835-XXX-DIM-UNV-ON-CS\_.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 : 4CS-L20-835-XXX-DIM-UNV-ON-CS\_.IES**

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens  | %Lamp | %Fixt  |
|---------|---------|-------|--------|
| 0-20    | 557.68  | N.A.  | 37.50  |
| 0-30    | 958.14  | N.A.  | 64.40  |
| 0-40    | 1230.86 | N.A.  | 82.70  |
| 0-60    | 1474.31 | N.A.  | 99.10  |
| 0-80    | 1487.83 | N.A.  | 100.00 |
| 0-90    | 1488.00 | N.A.  | 100.00 |
| 10-90   | 1320.25 | N.A.  | 88.70  |
| 20-40   | 673.19  | N.A.  | 45.20  |
| 20-50   | 834.88  | N.A.  | 56.10  |
| 40-70   | 256.28  | N.A.  | 17.20  |
| 60-80   | 13.52   | N.A.  | 0.90   |
| 70-80   | 0.69    | N.A.  | 0.00   |
| 80-90   | 0.16    | N.A.  | 0.00   |
| 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   | 1488.00 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens |
|---------|--------|
| 0-10    | 167.75 |
| 10-20   | 389.93 |
| 20-30   | 400.47 |
| 30-40   | 272.72 |
| 40-50   | 161.69 |
| 50-60   | 81.76  |
| 60-70   | 12.83  |
| 70-80   | 0.69   |
| 80-90   | 0.16   |
| 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 : 4CS-L20-835-XXX-DIM-UNV-ON-CS\_.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  | 113 | 110 | 108 | 105 | 111 | 108 | 106 | 104 | 104 | 102 | 100 | 100 | 99  | 97  | 97  | 96  | 95  | 93  |
| 2  | 107 | 102 | 98  | 94  | 105 | 100 | 96  | 93  | 97  | 94  | 91  | 94  | 91  | 89  | 91  | 89  | 87  | 85  |
| 3  | 101 | 94  | 89  | 85  | 99  | 93  | 88  | 84  | 90  | 86  | 83  | 88  | 84  | 82  | 86  | 83  | 80  | 79  |
| 4  | 96  | 88  | 82  | 77  | 94  | 86  | 81  | 77  | 84  | 80  | 76  | 82  | 78  | 75  | 80  | 77  | 74  | 73  |
| 5  | 90  | 82  | 75  | 71  | 89  | 81  | 75  | 71  | 79  | 74  | 70  | 77  | 73  | 69  | 76  | 72  | 69  | 67  |
| 6  | 86  | 76  | 70  | 65  | 84  | 75  | 69  | 65  | 74  | 69  | 65  | 72  | 68  | 64  | 71  | 67  | 64  | 62  |
| 7  | 81  | 71  | 65  | 61  | 80  | 71  | 65  | 60  | 69  | 64  | 60  | 68  | 63  | 60  | 67  | 63  | 59  | 58  |
| 8  | 77  | 67  | 61  | 57  | 76  | 67  | 61  | 56  | 65  | 60  | 56  | 64  | 59  | 56  | 63  | 59  | 56  | 54  |
| 9  | 73  | 63  | 57  | 53  | 72  | 63  | 57  | 53  | 62  | 56  | 53  | 61  | 56  | 52  | 60  | 56  | 52  | 51  |
| 10 | 70  | 60  | 54  | 50  | 69  | 59  | 54  | 50  | 58  | 53  | 50  | 58  | 53  | 49  | 57  | 52  | 49  | 48  |

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4CS-L20-835-XXX-DIM-UNV-ON-CS\_.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

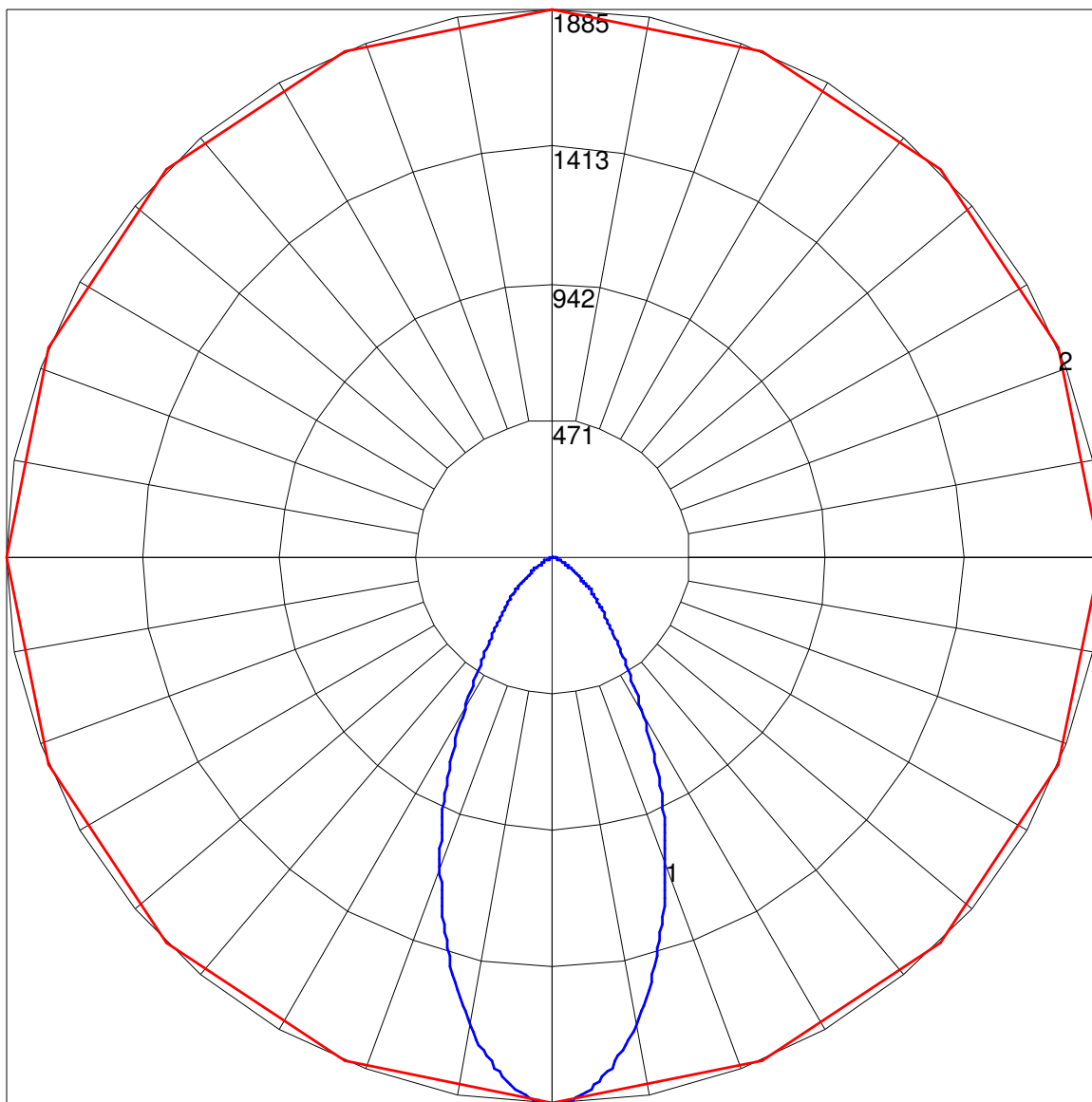
| X=2H | Y=2H | 20.1 | 21.2 | 20.4 | 21.5 | 21.8 | 20.4 | 21.5 | 20.7 | 21.8 | 22.1 |
|------|------|------|------|------|------|------|------|------|------|------|------|
|      | 3H   | 19.9 | 20.9 | 20.3 | 21.2 | 21.6 | 20.2 | 21.2 | 20.6 | 21.5 | 21.9 |
|      | 4H   | 19.8 | 20.7 | 20.2 | 21.1 | 21.5 | 20.1 | 21.0 | 20.5 | 21.4 | 21.8 |
|      | 6H   | 19.7 | 20.5 | 20.1 | 20.9 | 21.3 | 20.0 | 20.9 | 20.4 | 21.2 | 21.6 |
|      | 8H   | 19.7 | 20.4 | 20.1 | 20.8 | 21.2 | 20.0 | 20.8 | 20.4 | 21.1 | 21.6 |
|      | 12H  | 19.6 | 20.3 | 20.0 | 20.7 | 21.2 | 19.9 | 20.7 | 20.4 | 21.0 | 21.5 |

### UGR Viewed Endwise

|     |     |      |      |      |      |      |      |      |      |      |      |
|-----|-----|------|------|------|------|------|------|------|------|------|------|
| 4H  | 2H  | 19.9 | 20.8 | 20.3 | 21.2 | 21.5 | 20.2 | 21.1 | 20.6 | 21.5 | 21.8 |
|     | 3H  | 19.7 | 20.4 | 20.1 | 20.9 | 21.3 | 20.0 | 20.8 | 20.4 | 21.2 | 21.6 |
|     | 4H  | 19.6 | 20.3 | 20.0 | 20.7 | 21.1 | 19.9 | 20.6 | 20.3 | 21.0 | 21.4 |
|     | 6H  | 19.5 | 20.1 | 20.0 | 20.5 | 21.0 | 19.8 | 20.4 | 20.3 | 20.8 | 21.3 |
|     | 8H  | 19.5 | 20.0 | 19.9 | 20.4 | 20.9 | 19.8 | 20.3 | 20.2 | 20.7 | 21.2 |
|     | 12H | 19.4 | 19.8 | 19.9 | 20.3 | 20.8 | 19.7 | 20.1 | 20.2 | 20.6 | 21.1 |
| 8H  | 4H  | 19.5 | 20.0 | 19.9 | 20.4 | 20.9 | 19.8 | 20.3 | 20.2 | 20.7 | 21.2 |
|     | 6H  | 19.3 | 19.7 | 19.8 | 20.2 | 20.7 | 19.6 | 20.0 | 20.1 | 20.5 | 21.0 |
|     | 8H  | 19.3 | 19.6 | 19.8 | 20.1 | 20.6 | 19.6 | 19.9 | 20.1 | 20.4 | 20.9 |
|     | 12H | 19.2 | 19.5 | 19.7 | 20.0 | 20.6 | 19.5 | 19.8 | 20.0 | 20.3 | 20.9 |
| 12H | 4H  | 19.4 | 19.8 | 19.9 | 20.3 | 20.8 | 19.7 | 20.1 | 20.2 | 20.6 | 21.1 |
|     | 6H  | 19.3 | 19.6 | 19.8 | 20.1 | 20.6 | 19.6 | 19.9 | 20.1 | 20.4 | 21.0 |
|     | 8H  | 19.2 | 19.5 | 19.7 | 20.0 | 20.6 | 19.5 | 19.8 | 20.0 | 20.3 | 20.9 |

Maximum UGR = 22.1

POLAR GRAPH



Maximum Candela = 1884.624 Located At Horizontal Angle = 0, Vertical Angle = .5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (.5) (Through Max. Cd.)