



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L13-8TW-DIM-UNV-AWW-OF-BL\_3000K.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST] GEN FROM 12316380.17  
 [TESTLAB] UL Verification Services Inc.  
 [ISSUEDATE] 01/04/2022  
 [MANUFAC] WILLIAMS INDOOR  
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.  
 [LUMCAT] 4DR-TL-L13-8TW-DIM-UNV-AWW-OF-BL 3000K  
 [LUMINAIRE] Black formed aluminum housing, white reflector, clear glas  
 [MORE] s patterned enclosure  
 [LAMP] One white LED  
 [\_SEARCH\_SOURCETYPE] LED  
 [\_SEARCH\_APPLICATION] Indoor, Classroom, Commercial, Corridor, Hotel, Industrial, Office, Downlight  
 [\_SEARCH\_MOUNTING] Recessed

### CHARACTERISTICS

|                                 |                    |
|---------------------------------|--------------------|
| Lumens Per Lamp                 | N.A. (absolute)    |
| Total Lamp Lumens               | N.A. (absolute)    |
| Luminaire Lumens                | 633                |
| Total Luminaire Efficiency      | N.A.               |
| Luminaire Efficacy Rating (LER) | 43                 |
| Total Luminaire Watts           | 14.6               |
| Ballast Factor                  | 1.00               |
| CIE Type                        | Direct             |
| Spacing Criterion (0-180)       | 0.88               |
| Spacing Criterion (90-270)      | 0.88               |
| Spacing Criterion (Diagonal)    | 0.82               |
| Basic Luminous Shape            | Circular           |
| Luminous Length (0-180)         | 0.35 ft (Diameter) |
| Luminous Width (90-270)         | 0.35 ft (Diameter) |
| 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                  | 21817            | 20296             | 17599             |
| 55                  | 21165            | 18713             | 14255             |
| 65                  | 17427            | 14367             | 9442              |
| 75                  | 13206            | 9504              | 4915              |
| 85                  | 7349             | 3174              | 1815              |

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**CANDELA TABULATION**

|      | <u>0.0</u> | <u>22.5</u> | <u>45.0</u> | <u>67.5</u> | <u>90.0</u> | <u>112.5</u> | <u>135.0</u> | <u>157.5</u> | <u>180.0</u> |
|------|------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|--------------|
| 0.0  | 536.163    | 536.163     | 536.163     | 536.163     | 536.163     | 536.163      | 536.163      | 536.163      | 536.163      |
| 0.5  | 538.081    | 539.381     | 537.091     | 535.358     | 534.306     | 534.306      | 535.048      | 536.596      | 535.667      |
| 1.0  | 538.453    | 540.434     | 538.019     | 535.791     | 534.182     | 533.563      | 533.810      | 534.863      | 533.996      |
| 1.5  | 538.948    | 540.929     | 538.515     | 536.224     | 534.367     | 532.634      | 532.511      | 533.006      | 531.706      |
| 2.0  | 540.124    | 541.362     | 539.134     | 536.472     | 534.244     | 531.953      | 530.901      | 530.901      | 529.044      |
| 2.5  | 540.248    | 542.105     | 539.567     | 536.720     | 534.120     | 531.458      | 529.539      | 528.797      | 526.383      |
| 3.0  | 540.805    | 542.538     | 540.124     | 536.967     | 534.120     | 530.530      | 527.806      | 526.568      | 523.288      |
| 3.5  | 541.176    | 542.662     | 540.248     | 537.710     | 533.687     | 529.416      | 526.011      | 524.216      | 520.564      |
| 4.0  | 540.557    | 542.971     | 540.557     | 537.834     | 533.749     | 528.735      | 524.340      | 522.112      | 518.026      |
| 4.5  | 540.619    | 542.848     | 540.991     | 538.081     | 533.872     | 528.178      | 522.669      | 520.069      | 515.303      |
| 5.0  | 541.919    | 543.033     | 541.486     | 538.453     | 533.625     | 527.559      | 521.431      | 518.398      | 512.765      |
| 5.5  | 542.600    | 543.281     | 541.610     | 539.010     | 533.687     | 527.249      | 520.255      | 516.850      | 510.846      |
| 6.0  | 543.838    | 543.343     | 541.671     | 539.134     | 533.934     | 526.816      | 518.955      | 515.427      | 508.927      |
| 6.5  | 544.086    | 543.528     | 541.610     | 538.762     | 533.749     | 526.321      | 517.841      | 513.941      | 507.627      |
| 7.0  | 544.147    | 543.281     | 541.486     | 538.762     | 533.749     | 525.826      | 516.788      | 512.765      | 506.204      |
| 7.5  | 545.014    | 542.848     | 541.424     | 538.453     | 533.315     | 525.083      | 515.984      | 511.837      | 505.028      |
| 8.0  | 545.695    | 542.414     | 541.052     | 537.958     | 532.820     | 524.402      | 514.993      | 510.599      | 503.728      |
| 8.5  | 546.004    | 541.981     | 540.929     | 537.834     | 532.511     | 523.783      | 514.436      | 509.422      | 502.428      |
| 9.0  | 545.757    | 541.548     | 540.434     | 537.524     | 531.830     | 523.288      | 514.003      | 508.680      | 501.314      |
| 9.5  | 545.881    | 541.176     | 539.938     | 537.091     | 531.087     | 522.793      | 513.384      | 508.061      | 500.571      |
| 10.0 | 545.385    | 540.124     | 539.629     | 536.472     | 530.530     | 522.050      | 512.641      | 507.442      | 499.766      |
| 10.5 | 544.333    | 538.824     | 538.577     | 535.544     | 529.292     | 520.997      | 512.022      | 506.451      | 499.085      |
| 11.0 | 543.219    | 537.153     | 537.029     | 534.677     | 527.992     | 520.007      | 511.341      | 505.523      | 498.157      |
| 11.5 | 542.414    | 534.615     | 535.420     | 533.191     | 526.568     | 518.893      | 510.227      | 504.347      | 497.043      |
| 12.0 | 540.681    | 532.139     | 533.315     | 531.273     | 524.835     | 517.284      | 509.237      | 503.295      | 495.681      |
| 12.5 | 538.577    | 529.230     | 530.406     | 529.106     | 522.731     | 515.489      | 507.256      | 501.623      | 493.700      |
| 13.0 | 536.163    | 525.702     | 527.249     | 526.383     | 519.945     | 512.889      | 505.213      | 499.766      | 490.977      |
| 13.5 | 533.315    | 521.802     | 523.473     | 523.164     | 516.665     | 510.041      | 502.985      | 497.105      | 487.201      |
| 14.0 | 530.158    | 517.284     | 519.326     | 519.141     | 513.198     | 506.513      | 500.014      | 493.886      | 482.621      |
| 14.5 | 526.011    | 512.394     | 514.622     | 514.312     | 509.299     | 502.799      | 496.362      | 489.986      | 477.359      |
| 15.0 | 521.431    | 506.637     | 509.361     | 509.732     | 504.594     | 498.467      | 492.153      | 485.592      | 472.036      |
| 15.5 | 516.788    | 500.447     | 503.542     | 504.533     | 499.643     | 493.886      | 487.634      | 480.887      | 465.970      |
| 16.0 | 511.837    | 493.329     | 497.600     | 498.776     | 494.381     | 488.748      | 482.435      | 475.564      | 459.780      |
| 16.5 | 505.956    | 486.087     | 490.729     | 492.648     | 488.810     | 483.611      | 476.926      | 469.746      | 453.405      |
| 17.0 | 499.519    | 478.535     | 483.673     | 486.273     | 482.621     | 477.792      | 471.293      | 463.803      | 446.905      |
| 17.5 | 492.277    | 469.746     | 476.059     | 479.092     | 476.183     | 471.726      | 465.227      | 457.552      | 440.468      |
| 18.0 | 484.292    | 460.585     | 467.827     | 471.107     | 469.436     | 465.165      | 458.852      | 451.300      | 434.464      |
| 18.5 | 475.502    | 450.929     | 458.790     | 462.937     | 462.318     | 458.418      | 451.919      | 444.801      | 427.964      |
| 19.0 | 464.980    | 439.911     | 448.948     | 454.147     | 454.395     | 451.362      | 444.739      | 437.992      | 421.527      |
| 19.5 | 453.343    | 428.521     | 438.363     | 444.801     | 445.791     | 443.501      | 437.373      | 431.431      | 414.532      |
| 20.0 | 441.396    | 416.018     | 426.726     | 434.959     | 436.568     | 435.145      | 429.636      | 424.251      | 407.662      |
| 20.5 | 428.583    | 403.081     | 414.718     | 424.312     | 426.788     | 426.417      | 421.713      | 416.823      | 400.543      |
| 21.0 | 414.904    | 389.402     | 402.153     | 413.171     | 416.451     | 417.318      | 413.418      | 409.333      | 392.868      |
| 21.5 | 404.381    | 374.794     | 388.473     | 401.101     | 405.372     | 407.414      | 404.629      | 401.472      | 384.883      |
| 22.0 | 390.083    | 360.310     | 374.484     | 388.226     | 393.673     | 396.891      | 395.344      | 393.178      | 376.775      |
| 22.5 | 375.351    | 345.516     | 359.814     | 374.856     | 381.046     | 386.059      | 385.502      | 384.759      | 368.233      |
| 23.0 | 360.433    | 330.722     | 344.835     | 360.805     | 368.171     | 374.361      | 375.041      | 375.908      | 359.134      |
| 23.5 | 345.268    | 316.114     | 329.794     | 346.506     | 354.739     | 362.290      | 364.271      | 366.995      | 349.849      |
| 24.0 | 329.980    | 301.321     | 315.062     | 331.898     | 341.245     | 349.725      | 353.253      | 357.524      | 340.069      |
| 24.5 | 314.814    | 287.579     | 300.268     | 316.795     | 327.442     | 336.541      | 341.926      | 348.054      | 330.041      |
| 25.0 | 299.649    | 274.023     | 285.784     | 301.940     | 313.453     | 323.480      | 330.351      | 338.150      | 319.457      |
| 25.5 | 284.546    | 261.025     | 271.919     | 287.579     | 299.464     | 309.986      | 318.714      | 327.937      | 308.872      |
| 26.0 | 269.753    | 249.079     | 258.735     | 273.590     | 285.413     | 296.493      | 306.830      | 317.290      | 297.978      |
| 26.5 | 255.887    | 237.689     | 246.417     | 259.849     | 271.733     | 283.556      | 294.883      | 306.272      | 286.589      |

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**CANDELA TABULATION - (Cont.)**

|      |         |         |         |         |         |         |         |         |         |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 27.0 | 243.260 | 227.476 | 234.780 | 247.160 | 258.487 | 270.681 | 282.875 | 294.945 | 274.519 |
| 27.5 | 231.995 | 217.944 | 223.886 | 235.090 | 245.674 | 258.425 | 271.114 | 283.061 | 262.201 |
| 28.0 | 221.719 | 209.030 | 213.858 | 223.762 | 233.728 | 246.417 | 259.539 | 271.300 | 249.759 |
| 28.5 | 212.868 | 201.417 | 204.697 | 213.549 | 222.524 | 235.151 | 248.274 | 259.292 | 237.008 |
| 29.0 | 205.193 | 194.422 | 196.774 | 204.078 | 212.187 | 224.629 | 237.442 | 247.531 | 224.691 |
| 29.5 | 198.631 | 188.356 | 189.471 | 195.475 | 202.841 | 214.787 | 227.290 | 235.956 | 212.620 |
| 30.0 | 192.813 | 183.095 | 183.157 | 187.737 | 194.299 | 205.440 | 217.387 | 224.505 | 200.798 |
| 30.5 | 187.861 | 178.267 | 177.648 | 180.929 | 186.376 | 196.898 | 207.978 | 213.735 | 189.471 |
| 31.0 | 183.281 | 174.058 | 172.448 | 174.863 | 179.443 | 188.913 | 199.250 | 203.212 | 178.824 |
| 31.5 | 179.133 | 170.282 | 168.054 | 169.477 | 173.253 | 181.609 | 190.956 | 193.184 | 169.292 |
| 32.0 | 175.420 | 166.940 | 164.216 | 164.649 | 167.806 | 175.048 | 183.281 | 183.900 | 160.688 |
| 32.5 | 171.891 | 163.907 | 160.812 | 160.502 | 162.978 | 168.982 | 175.977 | 175.296 | 153.198 |
| 33.0 | 168.920 | 161.121 | 157.841 | 156.664 | 158.645 | 163.535 | 169.292 | 167.435 | 146.389 |
| 33.5 | 166.135 | 158.769 | 155.179 | 153.631 | 154.931 | 158.459 | 163.040 | 160.193 | 140.571 |
| 34.0 | 163.535 | 156.541 | 152.827 | 150.722 | 151.527 | 153.879 | 157.160 | 153.446 | 135.186 |
| 34.5 | 161.307 | 154.684 | 150.784 | 148.246 | 148.494 | 149.732 | 151.713 | 147.503 | 130.420 |
| 35.0 | 159.264 | 152.889 | 148.865 | 145.956 | 145.832 | 145.956 | 146.761 | 142.118 | 125.963 |
| 35.5 | 157.469 | 151.279 | 147.256 | 143.913 | 143.233 | 142.490 | 141.933 | 137.043 | 122.063 |
| 36.0 | 155.798 | 149.918 | 145.708 | 142.056 | 140.942 | 139.395 | 137.600 | 132.524 | 118.349 |
| 36.5 | 154.250 | 148.680 | 144.470 | 140.447 | 138.714 | 136.609 | 133.391 | 128.501 | 115.564 |
| 37.0 | 152.889 | 147.565 | 143.233 | 139.023 | 136.733 | 134.010 | 129.553 | 124.663 | 112.283 |
| 37.5 | 151.651 | 146.637 | 142.118 | 137.662 | 134.938 | 131.658 | 126.396 | 121.011 | 109.188 |
| 38.0 | 150.660 | 145.770 | 141.190 | 136.486 | 133.205 | 129.367 | 123.116 | 117.483 | 106.279 |
| 38.5 | 149.546 | 144.904 | 140.261 | 135.310 | 131.534 | 127.139 | 120.021 | 114.264 | 103.494 |
| 39.0 | 148.741 | 144.037 | 139.395 | 134.133 | 129.924 | 125.282 | 117.235 | 111.169 | 100.894 |
| 39.5 | 147.937 | 143.294 | 138.652 | 133.143 | 128.377 | 123.301 | 114.512 | 108.446 | 98.356  |
| 40.0 | 147.256 | 142.614 | 137.971 | 132.215 | 126.829 | 121.197 | 111.850 | 105.660 | 95.942  |
| 40.5 | 146.575 | 142.118 | 137.414 | 131.348 | 125.406 | 119.154 | 109.498 | 102.999 | 93.528  |
| 41.0 | 145.894 | 141.561 | 136.919 | 130.543 | 124.415 | 117.235 | 107.270 | 100.399 | 91.238  |
| 41.5 | 145.089 | 141.066 | 136.300 | 129.739 | 123.177 | 115.255 | 104.918 | 97.861  | 89.010  |
| 42.0 | 144.347 | 140.571 | 135.743 | 128.996 | 121.940 | 113.336 | 102.565 | 95.447  | 86.843  |
| 42.5 | 143.852 | 140.014 | 135.124 | 128.067 | 120.763 | 111.417 | 100.337 | 93.095  | 84.739  |
| 43.0 | 143.480 | 139.519 | 134.505 | 127.201 | 119.464 | 109.560 | 98.047  | 90.681  | 82.572  |
| 43.5 | 142.923 | 138.900 | 133.762 | 126.211 | 118.164 | 107.703 | 95.818  | 88.391  | 80.344  |
| 44.0 | 142.304 | 138.281 | 132.957 | 125.282 | 116.740 | 105.598 | 93.528  | 86.100  | 78.301  |
| 44.5 | 141.809 | 137.600 | 132.277 | 124.168 | 115.316 | 103.494 | 91.300  | 83.934  | 76.259  |
| 45.0 | 141.190 | 136.857 | 131.348 | 123.177 | 113.893 | 101.451 | 89.133  | 81.768  | 74.154  |
| 45.5 | 140.571 | 135.990 | 130.481 | 122.063 | 112.407 | 99.347  | 87.029  | 79.601  | 72.173  |
| 46.0 | 139.890 | 135.062 | 129.429 | 120.949 | 111.045 | 97.180  | 84.986  | 77.497  | 70.254  |
| 46.5 | 139.023 | 134.010 | 128.439 | 120.144 | 109.684 | 95.076  | 82.944  | 75.454  | 68.274  |
| 47.0 | 138.157 | 132.834 | 127.201 | 118.845 | 107.951 | 92.971  | 80.901  | 73.349  | 66.355  |
| 47.5 | 137.043 | 131.534 | 125.839 | 117.359 | 106.217 | 90.867  | 78.858  | 71.369  | 64.498  |
| 48.0 | 135.929 | 130.172 | 124.415 | 115.874 | 104.360 | 88.762  | 76.816  | 69.388  | 62.641  |
| 48.5 | 134.567 | 128.625 | 122.868 | 114.326 | 102.442 | 86.719  | 74.773  | 67.469  | 60.840  |
| 49.0 | 133.205 | 126.953 | 121.506 | 112.655 | 100.461 | 84.677  | 72.792  | 65.550  | 59.082  |
| 49.5 | 131.781 | 125.282 | 120.083 | 110.984 | 98.418  | 82.634  | 70.812  | 63.693  | 57.355  |
| 50.0 | 130.234 | 123.549 | 118.349 | 109.560 | 96.437  | 80.653  | 68.893  | 61.898  | 55.659  |
| 50.5 | 128.686 | 121.816 | 116.492 | 107.703 | 94.333  | 78.673  | 66.974  | 60.122  | 53.981  |
| 51.0 | 126.891 | 120.144 | 114.636 | 105.846 | 92.166  | 76.692  | 65.055  | 58.351  | 52.323  |
| 51.5 | 125.096 | 118.102 | 112.717 | 103.865 | 90.062  | 74.649  | 63.198  | 56.618  | 50.688  |
| 52.0 | 123.116 | 116.121 | 110.736 | 101.884 | 87.895  | 72.669  | 61.310  | 54.904  | 49.073  |
| 52.5 | 121.135 | 114.078 | 109.065 | 99.842  | 85.729  | 70.688  | 59.490  | 53.214  | 47.464  |
| 53.0 | 119.092 | 111.974 | 107.022 | 97.799  | 83.563  | 68.707  | 57.702  | 51.561  | 45.891  |
| 53.5 | 117.359 | 110.179 | 104.856 | 95.633  | 81.396  | 66.788  | 55.931  | 49.909  | 44.313  |
| 54.0 | 115.626 | 108.012 | 102.689 | 93.466  | 79.168  | 64.807  | 54.192  | 48.293  | 42.753  |
| 54.5 | 113.398 | 105.784 | 100.461 | 91.238  | 77.001  | 62.827  | 52.471  | 46.696  | 41.243  |

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

|      |         |         |        |        |        |        |        |        |        |
|------|---------|---------|--------|--------|--------|--------|--------|--------|--------|
| 55.0 | 111.107 | 103.556 | 98.233 | 89.072 | 74.835 | 60.895 | 50.769 | 45.149 | 39.776 |
| 55.5 | 108.817 | 101.327 | 96.004 | 86.781 | 72.730 | 58.983 | 49.116 | 43.601 | 38.309 |
| 56.0 | 106.527 | 99.161  | 93.776 | 84.491 | 70.564 | 57.083 | 47.470 | 42.085 | 36.885 |
| 56.5 | 104.237 | 96.933  | 91.547 | 82.263 | 68.398 | 55.207 | 45.854 | 40.618 | 35.492 |
| 57.0 | 101.884 | 94.704  | 89.257 | 79.973 | 66.355 | 53.362 | 44.270 | 39.157 | 34.143 |
| 57.5 | 99.656  | 92.538  | 87.091 | 77.744 | 64.250 | 51.574 | 42.704 | 37.727 | 32.812 |
| 58.0 | 97.366  | 90.310  | 84.801 | 75.516 | 62.146 | 49.772 | 41.175 | 36.322 | 31.488 |
| 58.5 | 95.138  | 88.143  | 82.696 | 73.288 | 60.134 | 48.021 | 39.646 | 34.935 | 30.206 |
| 59.0 | 92.847  | 85.977  | 80.468 | 71.121 | 58.110 | 46.275 | 38.160 | 33.580 | 28.913 |
| 59.5 | 90.619  | 83.810  | 78.363 | 68.955 | 56.123 | 44.573 | 36.687 | 32.243 | 27.650 |
| 60.0 | 88.453  | 81.644  | 76.259 | 66.788 | 54.180 | 42.939 | 35.232 | 30.931 | 26.393 |
| 60.5 | 86.286  | 79.415  | 74.154 | 64.684 | 52.267 | 41.305 | 33.815 | 29.624 | 25.143 |
| 61.0 | 84.120  | 77.249  | 72.050 | 62.579 | 50.385 | 39.695 | 32.404 | 28.337 | 23.893 |
| 61.5 | 81.953  | 75.144  | 69.945 | 60.462 | 48.547 | 38.129 | 31.048 | 27.056 | 22.649 |
| 62.0 | 79.849  | 72.978  | 67.840 | 58.395 | 46.733 | 36.576 | 29.705 | 25.787 | 21.423 |
| 62.5 | 77.744  | 70.873  | 65.798 | 56.377 | 44.938 | 35.059 | 28.380 | 24.543 | 20.216 |
| 63.0 | 75.640  | 68.769  | 63.693 | 54.371 | 43.199 | 33.580 | 27.080 | 23.317 | 19.046 |
| 63.5 | 73.597  | 66.726  | 61.669 | 52.409 | 41.484 | 32.119 | 25.805 | 22.110 | 17.895 |
| 64.0 | 71.554  | 64.622  | 59.633 | 50.466 | 39.788 | 30.683 | 24.549 | 20.909 | 16.781 |
| 64.5 | 69.450  | 62.641  | 57.584 | 48.547 | 38.166 | 29.272 | 23.329 | 19.746 | 15.710 |
| 65.0 | 67.407  | 60.605  | 55.572 | 46.671 | 36.520 | 27.885 | 22.110 | 18.600 | 14.676 |
| 65.5 | 65.365  | 58.630  | 53.567 | 44.808 | 34.935 | 26.536 | 20.928 | 17.492 | 13.698 |
| 66.0 | 63.384  | 56.674  | 51.586 | 42.988 | 33.369 | 25.205 | 19.770 | 16.415 | 12.794 |
| 66.5 | 61.366  | 54.743  | 49.649 | 41.193 | 31.847 | 23.905 | 18.638 | 15.394 | 11.928 |
| 67.0 | 59.367  | 52.873  | 47.730 | 39.442 | 30.355 | 22.624 | 17.536 | 14.398 | 11.154 |
| 67.5 | 57.411  | 50.986  | 45.860 | 37.746 | 28.906 | 21.417 | 16.465 | 13.469 | 10.461 |
| 68.0 | 55.467  | 49.135  | 44.016 | 36.087 | 27.508 | 20.235 | 15.431 | 12.584 | 10.102 |
| 68.5 | 53.530  | 47.321  | 42.202 | 34.496 | 26.146 | 19.083 | 14.435 | 11.742 | 9.805  |
| 69.0 | 51.629  | 45.526  | 40.444 | 32.930 | 24.815 | 17.975 | 13.481 | 11.061 | 9.501  |
| 69.5 | 49.760  | 43.762  | 38.705 | 31.413 | 23.515 | 16.892 | 12.572 | 10.473 | 9.198  |
| 70.0 | 47.909  | 42.017  | 37.028 | 29.946 | 22.246 | 15.865 | 11.699 | 9.935  | 8.907  |
| 70.5 | 46.120  | 40.296  | 35.393 | 28.517 | 21.033 | 14.874 | 10.888 | 9.415  | 8.610  |
| 71.0 | 44.344  | 38.594  | 33.815 | 27.124 | 19.845 | 13.933 | 10.133 | 8.975  | 8.319  |
| 71.5 | 42.611  | 36.941  | 32.292 | 25.768 | 18.699 | 13.023 | 9.421  | 8.684  | 8.041  |
| 72.0 | 40.921  | 35.307  | 30.801 | 24.437 | 17.579 | 12.144 | 8.771  | 8.393  | 7.750  |
| 72.5 | 39.250  | 33.716  | 29.346 | 23.138 | 16.502 | 11.309 | 8.232  | 8.109  | 7.465  |
| 73.0 | 37.603  | 32.150  | 27.916 | 21.881 | 15.456 | 10.504 | 7.762  | 7.818  | 7.186  |
| 73.5 | 35.994  | 30.627  | 26.523 | 20.643 | 14.453 | 9.737  | 7.323  | 7.533  | 6.902  |
| 74.0 | 34.409  | 29.142  | 25.162 | 19.436 | 13.481 | 8.994  | 6.926  | 7.242  | 6.617  |
| 74.5 | 32.812  | 27.699  | 23.812 | 18.266 | 12.547 | 8.294  | 6.635  | 6.957  | 6.338  |
| 75.0 | 31.283  | 26.270  | 22.512 | 17.121 | 11.643 | 7.632  | 6.369  | 6.673  | 6.060  |
| 75.5 | 29.748  | 24.865  | 21.225 | 16.013 | 10.783 | 7.013  | 6.103  | 6.400  | 5.800  |
| 76.0 | 28.250  | 23.521  | 19.962 | 14.942 | 9.953  | 6.431  | 5.843  | 6.128  | 5.540  |
| 76.5 | 26.796  | 22.184  | 18.724 | 13.896 | 9.155  | 5.893  | 5.583  | 5.849  | 5.280  |
| 77.0 | 25.366  | 20.872  | 17.505 | 12.887 | 8.393  | 5.422  | 5.336  | 5.589  | 5.026  |
| 77.5 | 23.967  | 19.591  | 16.335 | 11.909 | 7.663  | 5.032  | 5.082  | 5.323  | 4.779  |
| 78.0 | 22.618  | 18.334  | 15.177 | 10.968 | 6.964  | 4.667  | 4.840  | 5.069  | 4.531  |
| 78.5 | 21.262  | 17.109  | 14.057 | 10.071 | 6.314  | 4.333  | 4.599  | 4.816  | 4.296  |
| 79.0 | 19.962  | 15.908  | 12.980 | 9.186  | 5.682  | 4.042  | 4.351  | 4.562  | 4.061  |
| 79.5 | 18.662  | 14.738  | 11.922 | 8.350  | 5.094  | 3.813  | 4.122  | 4.327  | 3.825  |
| 80.0 | 17.406  | 13.587  | 10.906 | 7.539  | 4.537  | 3.602  | 3.893  | 4.085  | 3.602  |
| 80.5 | 16.180  | 12.454  | 9.922  | 6.753  | 4.023  | 3.392  | 3.664  | 3.856  | 3.380  |
| 81.0 | 14.948  | 11.346  | 8.963  | 6.010  | 3.559  | 3.182  | 3.442  | 3.627  | 3.157  |
| 81.5 | 13.754  | 10.269  | 8.047  | 5.292  | 3.163  | 2.977  | 3.225  | 3.398  | 2.940  |
| 82.0 | 12.572  | 9.192   | 7.143  | 4.611  | 2.823  | 2.773  | 3.008  | 3.175  | 2.717  |
| 82.5 | 11.395  | 8.152   | 6.264  | 3.961  | 2.507  | 2.581  | 2.798  | 2.959  | 2.501  |

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : 4DR-TL-L13-8TW-DIM-UNV-AWW-OF-BL\_3000K.IES**

**CANDELA TABULATION - (Cont.)**

|       |        |       |       |       |       |       |       |       |       |
|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 83.0  | 10.269 | 7.131 | 5.422 | 3.373 | 2.210 | 2.389 | 2.581 | 2.742 | 2.290 |
| 83.5  | 9.124  | 6.128 | 4.605 | 2.829 | 1.968 | 2.191 | 2.383 | 2.532 | 2.086 |
| 84.0  | 8.016  | 5.150 | 3.838 | 2.389 | 1.783 | 2.006 | 2.185 | 2.321 | 1.869 |
| 84.5  | 6.933  | 4.221 | 3.120 | 2.006 | 1.609 | 1.826 | 1.987 | 2.111 | 1.671 |
| 85.0  | 5.862  | 3.355 | 2.532 | 1.659 | 1.448 | 1.640 | 1.795 | 1.906 | 1.479 |
| 85.5  | 4.853  | 2.624 | 2.074 | 1.349 | 1.287 | 1.467 | 1.609 | 1.715 | 1.294 |
| 86.0  | 3.844  | 2.080 | 1.646 | 1.071 | 1.133 | 1.294 | 1.424 | 1.517 | 1.102 |
| 86.5  | 2.884  | 1.585 | 1.257 | 0.860 | 0.984 | 1.127 | 1.244 | 1.331 | 0.928 |
| 87.0  | 1.987  | 1.127 | 0.898 | 0.712 | 0.836 | 0.966 | 1.071 | 1.145 | 0.749 |
| 87.5  | 1.201  | 0.724 | 0.588 | 0.582 | 0.693 | 0.811 | 0.904 | 0.959 | 0.582 |
| 88.0  | 0.625  | 0.396 | 0.409 | 0.464 | 0.557 | 0.656 | 0.743 | 0.792 | 0.421 |
| 88.5  | 0.446  | 0.297 | 0.340 | 0.390 | 0.458 | 0.526 | 0.588 | 0.625 | 0.279 |
| 89.0  | 0.347  | 0.248 | 0.285 | 0.322 | 0.384 | 0.433 | 0.470 | 0.477 | 0.124 |
| 89.5  | 0.254  | 0.192 | 0.229 | 0.260 | 0.309 | 0.353 | 0.384 | 0.378 | 0.050 |
| 90.0  | 0.155  | 0.142 | 0.173 | 0.204 | 0.248 | 0.285 | 0.303 | 0.297 | 0.056 |
| 90.5  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 91.0  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 91.5  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 92.0  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 92.5  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 93.0  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 93.5  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 94.0  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 94.5  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 95.0  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 95.5  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 96.0  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 96.5  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 97.0  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 97.5  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 98.0  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 98.5  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 99.0  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 99.5  | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 100.0 | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 100.5 | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 101.0 | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 101.5 | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 102.0 | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 102.5 | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 103.0 | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 103.5 | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 104.0 | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 104.5 | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 105.0 | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 105.5 | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 106.0 | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 106.5 | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 107.0 | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 107.5 | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 108.0 | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 108.5 | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 109.0 | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 109.5 | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 110.0 | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 110.5 | 0.000  | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : 4DR-TL-L13-8TW-DIM-UNV-AWW-OF-BL\_3000K.IES**

**CANDELA TABULATION - (Cont.)**

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

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : 4DR-TL-L13-8TW-DIM-UNV-AWW-OF-BL\_3000K.IES**

**CANDELA TABULATION - (Cont.)**

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

IES INDOOR REPORT  
 PHOTOMETRIC FILENAME : 4DR-TL-L13-8TW-DIM-UNV-AWW-OF-BL\_3000K.IES

CANDELA TABULATION - (Cont.)

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



**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 4DR-TL-L13-8TW-DIM-UNV-AWW-OF-BL\_3000K.IES****ZONAL LUMEN SUMMARY**

| Zone    | Lumens | %Lamp | %Fixt  |
|---------|--------|-------|--------|
| 0-20    | 188.76 | N.A.  | 29.80  |
| 0-30    | 329.25 | N.A.  | 52.00  |
| 0-40    | 423.51 | N.A.  | 66.90  |
| 0-60    | 575.29 | N.A.  | 90.90  |
| 0-80    | 629.78 | N.A.  | 99.50  |
| 0-90    | 632.80 | N.A.  | 100.00 |
| 10-90   | 582.21 | N.A.  | 92.00  |
| 20-40   | 234.76 | N.A.  | 37.10  |
| 20-50   | 319.81 | N.A.  | 50.50  |
| 40-70   | 190.41 | N.A.  | 30.10  |
| 60-80   | 54.49  | N.A.  | 8.60   |
| 70-80   | 15.86  | N.A.  | 2.50   |
| 80-90   | 3.02   | N.A.  | 0.50   |
| 90-110  | 0.01   | N.A.  | 0.00   |
| 90-120  | 0.01   | N.A.  | 0.00   |
| 90-130  | 0.01   | N.A.  | 0.00   |
| 90-150  | 0.01   | N.A.  | 0.00   |
| 90-180  | 0.01   | N.A.  | 0.00   |
| 110-180 | 0.00   | N.A.  | 0.00   |
| 0-180   | 632.81 | N.A.  | 100.00 |

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

| Zone    | Lumens |
|---------|--------|
| 0-10    | 50.59  |
| 10-20   | 138.17 |
| 20-30   | 140.50 |
| 30-40   | 94.26  |
| 40-50   | 85.05  |
| 50-60   | 66.73  |
| 60-70   | 38.63  |
| 70-80   | 15.86  |
| 80-90   | 3.02   |
| 90-100  | 0.01   |
| 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 : 4DR-TL-L13-8TW-DIM-UNV-AWW-OF-BL\_3000K.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  | 111 | 108 | 105 | 102 | 109 | 106 | 103 | 100 | 102 | 99  | 97  | 98  | 96  | 94  | 94  | 93  | 91  | 89  |
| 2  | 104 | 98  | 92  | 88  | 102 | 96  | 91  | 87  | 92  | 88  | 85  | 89  | 86  | 83  | 86  | 84  | 81  | 79  |
| 3  | 97  | 89  | 82  | 77  | 95  | 87  | 81  | 76  | 84  | 79  | 75  | 82  | 78  | 74  | 79  | 76  | 73  | 71  |
| 4  | 91  | 81  | 74  | 69  | 89  | 80  | 73  | 68  | 77  | 72  | 67  | 75  | 70  | 66  | 73  | 69  | 66  | 64  |
| 5  | 85  | 74  | 67  | 62  | 83  | 73  | 67  | 61  | 71  | 65  | 61  | 70  | 64  | 60  | 68  | 63  | 60  | 58  |
| 6  | 80  | 69  | 61  | 56  | 78  | 68  | 61  | 56  | 66  | 60  | 55  | 65  | 59  | 55  | 63  | 58  | 55  | 53  |
| 7  | 75  | 64  | 57  | 51  | 73  | 63  | 56  | 51  | 62  | 55  | 51  | 60  | 55  | 51  | 59  | 54  | 50  | 49  |
| 8  | 71  | 59  | 52  | 47  | 69  | 59  | 52  | 47  | 58  | 51  | 47  | 57  | 51  | 47  | 55  | 50  | 47  | 45  |
| 9  | 67  | 56  | 49  | 44  | 66  | 55  | 49  | 44  | 54  | 48  | 44  | 53  | 48  | 44  | 52  | 47  | 43  | 42  |
| 10 | 64  | 52  | 46  | 41  | 62  | 52  | 45  | 41  | 51  | 45  | 41  | 50  | 45  | 41  | 49  | 44  | 41  | 39  |

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L13-8TW-DIM-UNV-AWW-OF-BL\_3000K.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

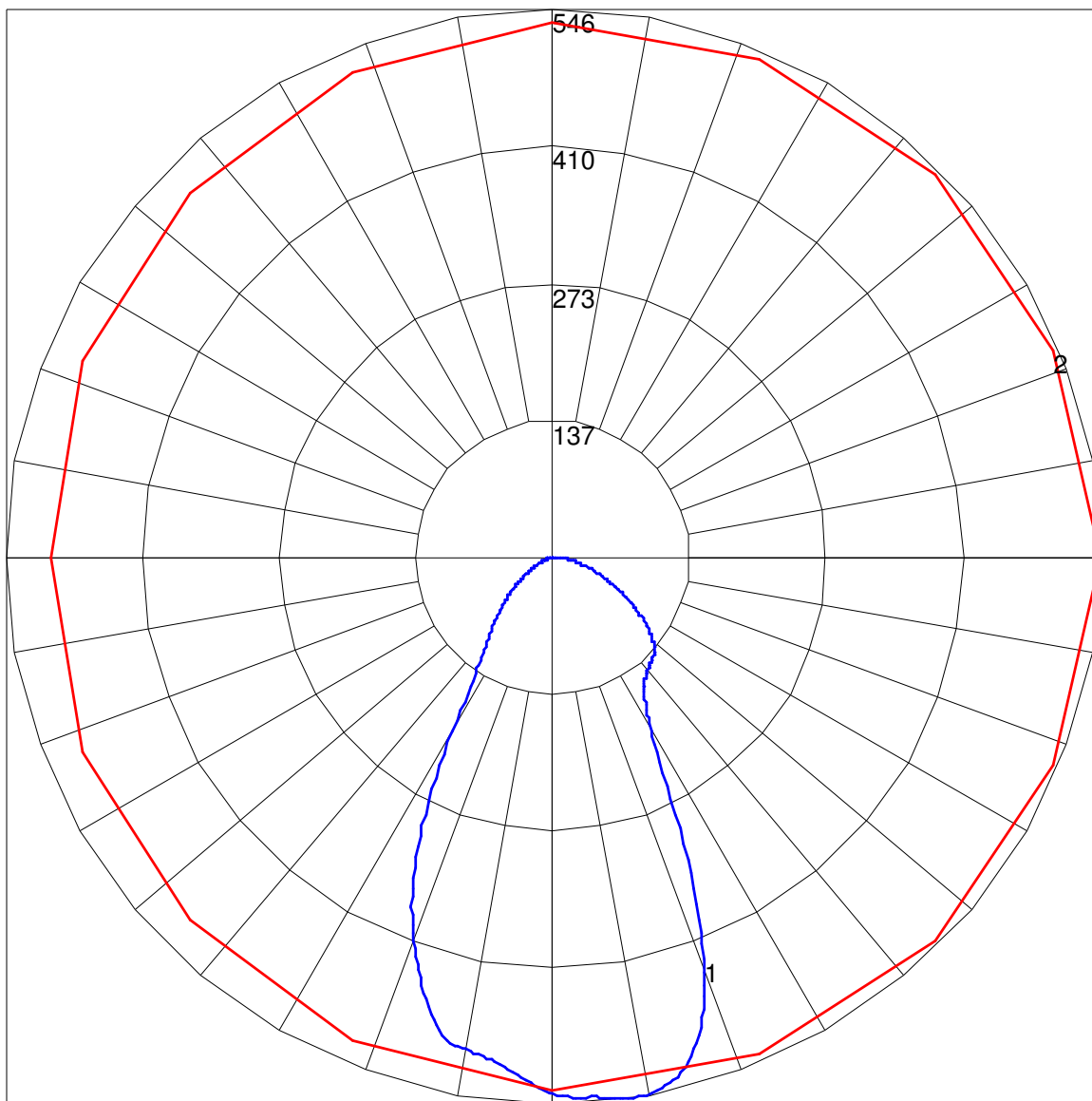
| X=2H | Y=2H | 21.6 | 22.9 | 21.9 | 23.2 | 23.5 | 19.0 | 20.4 | 19.4 | 20.7 | 21.0 |
|------|------|------|------|------|------|------|------|------|------|------|------|
|      | 3H   | 23.0 | 24.2 | 23.3 | 24.5 | 24.8 | 19.9 | 21.1 | 20.2 | 21.4 | 21.8 |
|      | 4H   | 23.4 | 24.5 | 23.8 | 24.9 | 25.3 | 20.0 | 21.2 | 20.4 | 21.5 | 21.9 |
|      | 6H   | 23.7 | 24.8 | 24.1 | 25.1 | 25.5 | 20.1 | 21.1 | 20.5 | 21.5 | 21.9 |
|      | 8H   | 23.8 | 24.8 | 24.2 | 25.2 | 25.6 | 20.0 | 21.0 | 20.5 | 21.4 | 21.8 |
|      | 12H  | 23.8 | 24.8 | 24.3 | 25.1 | 25.6 | 20.0 | 21.0 | 20.5 | 21.3 | 21.8 |

### UGR Viewed Endwise

|     |     |      |      |      |      |      |      |      |      |      |      |
|-----|-----|------|------|------|------|------|------|------|------|------|------|
| 4H  | 2H  | 21.9 | 23.0 | 22.3 | 23.3 | 23.7 | 19.5 | 20.6 | 19.9 | 20.9 | 21.3 |
|     | 3H  | 23.4 | 24.4 | 23.9 | 24.8 | 25.2 | 20.5 | 21.4 | 20.9 | 21.8 | 22.2 |
|     | 4H  | 24.0 | 24.8 | 24.4 | 25.2 | 25.7 | 20.7 | 21.5 | 21.1 | 21.9 | 22.4 |
|     | 6H  | 24.4 | 25.1 | 24.9 | 25.5 | 26.0 | 20.8 | 21.5 | 21.2 | 21.9 | 22.4 |
|     | 8H  | 24.5 | 25.2 | 25.0 | 25.6 | 26.1 | 20.8 | 21.4 | 21.2 | 21.9 | 22.3 |
|     | 12H | 24.5 | 25.1 | 25.0 | 25.6 | 26.1 | 20.7 | 21.3 | 21.2 | 21.8 | 22.3 |
| 8H  | 4H  | 24.1 | 24.7 | 24.5 | 25.2 | 25.6 | 20.9 | 21.5 | 21.3 | 21.9 | 22.4 |
|     | 6H  | 24.5 | 25.0 | 25.0 | 25.5 | 26.0 | 21.0 | 21.5 | 21.5 | 22.0 | 22.5 |
|     | 8H  | 24.7 | 25.1 | 25.2 | 25.6 | 26.1 | 21.0 | 21.4 | 21.5 | 22.0 | 22.5 |
|     | 12H | 24.7 | 25.1 | 25.2 | 25.6 | 26.2 | 20.9 | 21.4 | 21.5 | 21.9 | 22.4 |
| 12H | 4H  | 24.0 | 24.6 | 24.5 | 25.1 | 25.6 | 20.8 | 21.4 | 21.3 | 21.9 | 22.4 |
|     | 6H  | 24.5 | 25.0 | 25.0 | 25.4 | 26.0 | 21.0 | 21.5 | 21.5 | 21.9 | 22.5 |
|     | 8H  | 24.6 | 25.1 | 25.1 | 25.5 | 26.1 | 21.0 | 21.4 | 21.5 | 21.9 | 22.5 |

Maximum UGR = 26.2

POLAR GRAPH



Maximum Candela = 546.004 Located At Horizontal Angle = 0, Vertical Angle = 8.5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (8.5) (Through Max. Cd.)