

|                 |   |                                |              |   |          |
|-----------------|---|--------------------------------|--------------|---|----------|
| Report No       | : |                                | Voltage      | : | V        |
| Test No         | : | A2401351A001-40K               | Current      | : | A        |
| LumCAT          | : | LIT by CARDI                   | Power        | : | 28.000 W |
| Luminaire       | : | 0028320197 28W 4000K 3920lm PF |              | : |          |
| LampCAT         | : |                                | Ballast type | : |          |
| Lamp flux       | : | 3920.0 lm                      | Width        | : | 595 mm   |
| Number of Lamps | : | 1                              | Length       | : | 595 mm   |
| Phm Type        | : | C                              | Height       | : | 0 mm     |

### Photometric Results

|                                          |   |                                        |                            |   |                       |
|------------------------------------------|---|----------------------------------------|----------------------------|---|-----------------------|
| Lumens(lm)                               | : | 3920.00                                | Central intensity(cd)      | : | 2406.921              |
| Efficiency(%)                            | : | 100.00%                                | Maximum intensity(cd)      | : | 2519.199              |
| Luminous Efficacy(lm/W)                  | : | 140.00                                 | Angle of maximum intensity | : | C=30.0 $\gamma$ =19.0 |
| Beam Angle(50%Imax)                      | : | [C0/180]Total=78.7 [C90/270]Total=78.9 |                            |   |                       |
| Field angle(10%Imax)                     | : | [C0/180]Total=99.6 [C90/270]Total=99.5 |                            |   |                       |
| Maximum s/h(1/2)                         | : | C0_180=1.22 C90_270=1.25               |                            |   |                       |
| Maximum s/h(1/4)                         | : | C0_180=1.13 C90_270=1.14               |                            |   |                       |
| Up flux rate of lamp(%)                  | : | 0.00%                                  |                            |   |                       |
| Down flux rate of lamp(%)                | : | 100.00%                                |                            |   |                       |
| Up flux rate of LUM(%)                   | : | --                                     |                            |   |                       |
| Down flux rate of LUM(%)                 | : | 100.00%                                |                            |   |                       |
| CIE Type                                 | : | Direct lighting                        |                            |   |                       |
| Output flux ratio in $\pi$ solid angle : | : | 98.349%                                |                            |   |                       |

## Zonal flux distribution table

Appendix Page: 2 Total:21

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0                | 2406.921      | 0.000       | 0         | 0.00%       | 0.00%      |
| 0.5                | 2407.420      | 0.576       | 0.576     | 0.01%       | 0.01%      |
| 1.0                | 2407.045      | 1.728       | 2.304     | 0.04%       | 0.06%      |
| 1.5                | 2406.367      | 2.879       | 5.182     | 0.07%       | 0.13%      |
| 2.0                | 2405.539      | 4.029       | 9.211     | 0.10%       | 0.23%      |
| 2.5                | 2404.915      | 5.178       | 14.389    | 0.13%       | 0.37%      |
| 3.0                | 2404.439      | 6.326       | 20.715    | 0.16%       | 0.53%      |
| 3.5                | 2403.596      | 7.473       | 28.188    | 0.19%       | 0.72%      |
| 4.0                | 2402.878      | 8.618       | 36.806    | 0.22%       | 0.94%      |
| 4.5                | 2401.973      | 9.762       | 46.568    | 0.25%       | 1.19%      |
| 5.0                | 2401.255      | 10.904      | 57.472    | 0.28%       | 1.47%      |
| 5.5                | 2401.372      | 12.048      | 69.52     | 0.31%       | 1.77%      |
| 6.0                | 2401.434      | 13.192      | 82.712    | 0.34%       | 2.11%      |
| 6.5                | 2402.410      | 14.338      | 97.05     | 0.37%       | 2.48%      |
| 7.0                | 2403.706      | 15.487      | 112.537   | 0.40%       | 2.87%      |
| 7.5                | 2405.360      | 16.638      | 129.175   | 0.42%       | 3.30%      |
| 8.0                | 2407.311      | 17.792      | 146.968   | 0.45%       | 3.75%      |
| 8.5                | 2409.675      | 18.950      | 165.917   | 0.48%       | 4.23%      |
| 9.0                | 2412.266      | 20.110      | 186.027   | 0.51%       | 4.75%      |
| 9.5                | 2414.810      | 21.272      | 207.299   | 0.54%       | 5.29%      |
| 10.0               | 2417.229      | 22.434      | 229.734   | 0.57%       | 5.86%      |
| 10.5               | 2419.898      | 23.597      | 253.331   | 0.60%       | 6.46%      |
| 11.0               | 2423.012      | 24.765      | 278.096   | 0.63%       | 7.09%      |
| 11.5               | 2425.696      | 25.933      | 304.029   | 0.66%       | 7.76%      |
| 12.0               | 2428.474      | 27.101      | 331.13    | 0.69%       | 8.45%      |
| 12.5               | 2431.057      | 28.268      | 359.397   | 0.72%       | 9.17%      |
| 13.0               | 2433.453      | 29.433      | 388.83    | 0.75%       | 9.92%      |
| 13.5               | 2435.583      | 30.595      | 419.426   | 0.78%       | 10.70%     |
| 14.0               | 2437.620      | 31.755      | 451.181   | 0.81%       | 11.51%     |
| 14.5               | 2439.126      | 32.910      | 484.091   | 0.84%       | 12.35%     |
| 15.0               | 2440.024      | 34.057      | 518.148   | 0.87%       | 13.22%     |
| 15.5               | 2440.851      | 35.197      | 553.344   | 0.90%       | 14.12%     |
| 16.0               | 2441.491      | 36.333      | 589.677   | 0.93%       | 15.04%     |
| 16.5               | 2441.865      | 37.463      | 627.14    | 0.96%       | 16.00%     |
| 17.0               | 2441.974      | 38.587      | 665.728   | 0.98%       | 16.98%     |
| 17.5               | 2441.397      | 39.701      | 705.429   | 1.01%       | 18.00%     |
| 18.0               | 2439.922      | 40.798      | 746.227   | 1.04%       | 19.04%     |
| 18.5               | 2438.471      | 41.884      | 788.11    | 1.07%       | 20.10%     |

Equipment: GMS1800  
Temperature( $^{\circ}\text{C}$ ): 25

Date:  
Humidity(%): 55%

Operator: CWR

## Zonal flux distribution table

Appendix Page: 3 Total:21

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 19.0               | 2436.730      | 42.962      | 831.073   | 1.10%       | 21.20%     |
| 19.5               | 2433.905      | 44.024      | 875.097   | 1.12%       | 22.32%     |
| 20.0               | 2431.057      | 45.070      | 920.166   | 1.15%       | 23.47%     |
| 20.5               | 2427.460      | 46.102      | 966.269   | 1.18%       | 24.65%     |
| 21.0               | 2423.589      | 47.119      | 1013.387  | 1.20%       | 25.85%     |
| 21.5               | 2419.609      | 48.124      | 1061.511  | 1.23%       | 27.08%     |
| 22.0               | 2414.755      | 49.112      | 1110.624  | 1.25%       | 28.33%     |
| 22.5               | 2409.769      | 50.083      | 1160.706  | 1.28%       | 29.61%     |
| 23.0               | 2403.822      | 51.033      | 1211.739  | 1.30%       | 30.91%     |
| 23.5               | 2397.525      | 51.961      | 1263.7    | 1.33%       | 32.24%     |
| 24.0               | 2390.408      | 52.866      | 1316.566  | 1.35%       | 33.59%     |
| 24.5               | 2382.862      | 53.747      | 1370.313  | 1.37%       | 34.96%     |
| 25.0               | 2373.872      | 54.597      | 1424.91   | 1.39%       | 36.35%     |
| 25.5               | 2363.868      | 55.406      | 1480.316  | 1.41%       | 37.76%     |
| 26.0               | 2353.200      | 56.183      | 1536.498  | 1.43%       | 39.20%     |
| 26.5               | 2341.175      | 56.922      | 1593.42   | 1.45%       | 40.65%     |
| 27.0               | 2328.244      | 57.619      | 1651.039  | 1.47%       | 42.12%     |
| 27.5               | 2313.823      | 58.271      | 1709.31   | 1.49%       | 43.60%     |
| 28.0               | 2297.474      | 58.863      | 1768.174  | 1.50%       | 45.11%     |
| 28.5               | 2280.150      | 59.401      | 1827.574  | 1.52%       | 46.62%     |
| 29.0               | 2260.688      | 59.878      | 1887.452  | 1.53%       | 48.15%     |
| 29.5               | 2239.501      | 60.284      | 1947.736  | 1.54%       | 49.69%     |
| 30.0               | 2215.334      | 60.604      | 2008.34   | 1.55%       | 51.23%     |
| 30.5               | 2189.800      | 60.840      | 2069.18   | 1.55%       | 52.79%     |
| 31.0               | 2161.707      | 60.997      | 2130.176  | 1.56%       | 54.34%     |
| 31.5               | 2131.000      | 61.053      | 2191.229  | 1.56%       | 55.90%     |
| 32.0               | 2097.608      | 61.004      | 2252.233  | 1.56%       | 57.45%     |
| 32.5               | 2061.625      | 60.847      | 2313.079  | 1.55%       | 59.01%     |
| 33.0               | 2023.255      | 60.583      | 2373.662  | 1.55%       | 60.55%     |
| 33.5               | 1982.067      | 60.207      | 2433.869  | 1.54%       | 62.09%     |
| 34.0               | 1938.601      | 59.717      | 2493.586  | 1.52%       | 63.61%     |
| 34.5               | 1892.841      | 59.117      | 2552.703  | 1.51%       | 65.12%     |
| 35.0               | 1844.209      | 58.398      | 2611.101  | 1.49%       | 66.61%     |
| 35.5               | 1793.680      | 57.561      | 2668.663  | 1.47%       | 68.08%     |
| 36.0               | 1741.591      | 56.626      | 2725.289  | 1.44%       | 69.52%     |
| 36.5               | 1687.972      | 55.597      | 2780.885  | 1.42%       | 70.94%     |
| 37.0               | 1632.496      | 54.467      | 2835.352  | 1.39%       | 72.33%     |
| 37.5               | 1576.224      | 53.247      | 2888.599  | 1.36%       | 73.69%     |

Equipment: GMS1800  
Temperature( $^{\circ}\text{C}$ ): 25

Date:  
Humidity(%): 55%

Operator: CWR

## Zonal flux distribution table

Appendix Page: 4 Total:21

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0               | 1520.490      | 51.976      | 2940.575  | 1.33%       | 75.01%     |
| 38.5               | 1462.619      | 50.632      | 2991.207  | 1.29%       | 76.31%     |
| 39.0               | 1405.067      | 49.209      | 3040.416  | 1.26%       | 77.56%     |
| 39.5               | 1346.774      | 47.733      | 3088.149  | 1.22%       | 78.78%     |
| 40.0               | 1288.910      | 46.205      | 3134.354  | 1.18%       | 79.96%     |
| 40.5               | 1232.396      | 44.662      | 3179.016  | 1.14%       | 81.10%     |
| 41.0               | 1176.444      | 43.108      | 3222.124  | 1.10%       | 82.20%     |
| 41.5               | 1119.821      | 41.508      | 3263.632  | 1.06%       | 83.26%     |
| 42.0               | 1064.947      | 39.884      | 3303.516  | 1.02%       | 84.27%     |
| 42.5               | 1010.587      | 38.259      | 3341.775  | 0.98%       | 85.25%     |
| 43.0               | 956.290       | 36.603      | 3378.378  | 0.93%       | 86.18%     |
| 43.5               | 901.895       | 34.905      | 3413.283  | 0.89%       | 87.07%     |
| 44.0               | 848.043       | 33.176      | 3446.459  | 0.85%       | 87.92%     |
| 44.5               | 794.465       | 31.422      | 3477.88   | 0.80%       | 88.72%     |
| 45.0               | 742.917       | 29.673      | 3507.553  | 0.76%       | 89.48%     |
| 45.5               | 693.069       | 27.959      | 3535.512  | 0.71%       | 90.19%     |
| 46.0               | 645.636       | 26.289      | 3561.801  | 0.67%       | 90.86%     |
| 46.5               | 601.664       | 24.701      | 3586.503  | 0.63%       | 91.49%     |
| 47.0               | 558.511       | 23.167      | 3609.67   | 0.59%       | 92.08%     |
| 47.5               | 517.473       | 21.661      | 3631.331  | 0.55%       | 92.64%     |
| 48.0               | 477.162       | 20.185      | 3651.516  | 0.51%       | 93.15%     |
| 48.5               | 437.169       | 18.701      | 3670.217  | 0.48%       | 93.63%     |
| 49.0               | 398.989       | 17.235      | 3687.452  | 0.44%       | 94.07%     |
| 49.5               | 363.076       | 15.827      | 3703.279  | 0.40%       | 94.47%     |
| 50.0               | 330.629       | 14.515      | 3717.795  | 0.37%       | 94.84%     |
| 50.5               | 301.011       | 13.314      | 3731.108  | 0.34%       | 95.18%     |
| 51.0               | 274.522       | 12.219      | 3743.327  | 0.31%       | 95.49%     |
| 51.5               | 251.246       | 11.241      | 3754.569  | 0.29%       | 95.78%     |
| 52.0               | 230.825       | 10.379      | 3764.947  | 0.26%       | 96.04%     |
| 52.5               | 212.537       | 9.611       | 3774.558  | 0.25%       | 96.29%     |
| 53.0               | 195.577       | 8.906       | 3783.464  | 0.23%       | 96.52%     |
| 53.5               | 179.658       | 8.243       | 3791.707  | 0.21%       | 96.73%     |
| 54.0               | 164.933       | 7.619       | 3799.326  | 0.19%       | 96.92%     |
| 54.5               | 151.177       | 7.033       | 3806.359  | 0.18%       | 97.10%     |
| 55.0               | 138.293       | 6.481       | 3812.84   | 0.17%       | 97.27%     |
| 55.5               | 126.245       | 5.959       | 3818.799  | 0.15%       | 97.42%     |
| 56.0               | 115.157       | 5.470       | 3824.269  | 0.14%       | 97.56%     |
| 56.5               | 105.130       | 5.021       | 3829.291  | 0.13%       | 97.69%     |

Equipment: GMS1800  
Temperature( $^{\circ}\text{C}$ ): 25

Date:  
Humidity(%): 55%

Operator: CWR

## Zonal flux distribution table

Appendix Page: 5 Total:21

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 57.0               | 96.051        | 4.613       | 3833.903  | 0.12%       | 97.80%     |
| 57.5               | 87.879        | 4.241       | 3838.144  | 0.11%       | 97.91%     |
| 58.0               | 80.884        | 3.913       | 3842.057  | 0.10%       | 98.01%     |
| 58.5               | 74.946        | 3.633       | 3845.69   | 0.09%       | 98.10%     |
| 59.0               | 69.883        | 3.394       | 3849.085  | 0.09%       | 98.19%     |
| 59.5               | 65.499        | 3.190       | 3852.274  | 0.08%       | 98.27%     |
| 60.0               | 61.727        | 3.013       | 3855.287  | 0.08%       | 98.35%     |
| 60.5               | 58.538        | 2.863       | 3858.15   | 0.07%       | 98.42%     |
| 61.0               | 55.643        | 2.731       | 3860.881  | 0.07%       | 98.49%     |
| 61.5               | 53.031        | 2.612       | 3863.493  | 0.07%       | 98.56%     |
| 62.0               | 50.669        | 2.504       | 3865.997  | 0.06%       | 98.62%     |
| 62.5               | 48.471        | 2.405       | 3868.403  | 0.06%       | 98.68%     |
| 63.0               | 46.408        | 2.312       | 3870.715  | 0.06%       | 98.74%     |
| 63.5               | 44.475        | 2.225       | 3872.94   | 0.06%       | 98.80%     |
| 64.0               | 42.663        | 2.143       | 3875.083  | 0.05%       | 98.85%     |
| 64.5               | 40.996        | 2.066       | 3877.149  | 0.05%       | 98.91%     |
| 65.0               | 39.514        | 1.996       | 3879.145  | 0.05%       | 98.96%     |
| 65.5               | 38.223        | 1.935       | 3881.08   | 0.05%       | 99.01%     |
| 66.0               | 37.080        | 1.882       | 3882.963  | 0.05%       | 99.06%     |
| 66.5               | 35.994        | 1.834       | 3884.796  | 0.05%       | 99.10%     |
| 67.0               | 34.966        | 1.787       | 3886.584  | 0.05%       | 99.15%     |
| 67.5               | 33.952        | 1.742       | 3888.326  | 0.04%       | 99.19%     |
| 68.0               | 32.940        | 1.697       | 3890.023  | 0.04%       | 99.24%     |
| 68.5               | 31.928        | 1.652       | 3891.675  | 0.04%       | 99.28%     |
| 69.0               | 30.911        | 1.606       | 3893.281  | 0.04%       | 99.32%     |
| 69.5               | 29.879        | 1.558       | 3894.839  | 0.04%       | 99.36%     |
| 70.0               | 28.844        | 1.510       | 3896.35   | 0.04%       | 99.40%     |
| 70.5               | 27.826        | 1.462       | 3897.812  | 0.04%       | 99.43%     |
| 71.0               | 26.777        | 1.413       | 3899.225  | 0.04%       | 99.47%     |
| 71.5               | 25.690        | 1.362       | 3900.587  | 0.03%       | 99.50%     |
| 72.0               | 24.604        | 1.309       | 3901.897  | 0.03%       | 99.54%     |
| 72.5               | 23.521        | 1.257       | 3903.153  | 0.03%       | 99.57%     |
| 73.0               | 22.438        | 1.203       | 3904.357  | 0.03%       | 99.60%     |
| 73.5               | 21.378        | 1.150       | 3905.507  | 0.03%       | 99.63%     |
| 74.0               | 20.332        | 1.098       | 3906.605  | 0.03%       | 99.66%     |
| 74.5               | 19.303        | 1.046       | 3907.651  | 0.03%       | 99.68%     |
| 75.0               | 18.285        | 0.994       | 3908.645  | 0.03%       | 99.71%     |
| 75.5               | 17.302        | 0.943       | 3909.588  | 0.02%       | 99.73%     |

Equipment: GMS1800  
Temperature( $^{\circ}\text{C}$ ): 25

Date:  
Humidity(%): 55%

Operator: CWR

## Zonal flux distribution table

Appendix Page: 6 Total:21

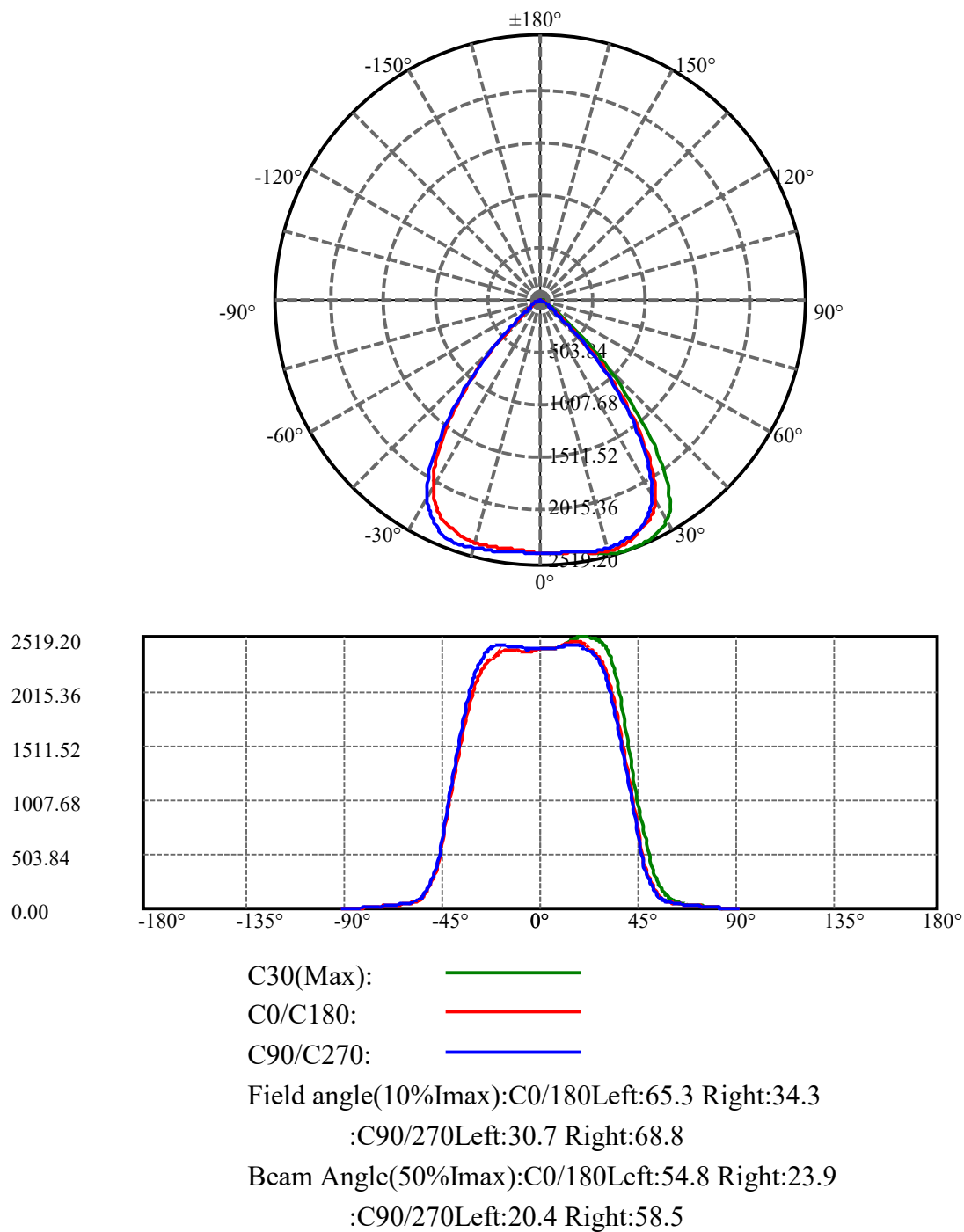
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0               | 16.339        | 0.894       | 3910.482  | 0.02%       | 99.76%     |
| 76.5               | 15.399        | 0.845       | 3911.327  | 0.02%       | 99.78%     |
| 77.0               | 14.478        | 0.797       | 3912.125  | 0.02%       | 99.80%     |
| 77.5               | 13.576        | 0.750       | 3912.875  | 0.02%       | 99.82%     |
| 78.0               | 12.711        | 0.704       | 3913.579  | 0.02%       | 99.84%     |
| 78.5               | 11.877        | 0.660       | 3914.239  | 0.02%       | 99.85%     |
| 79.0               | 11.068        | 0.617       | 3914.856  | 0.02%       | 99.87%     |
| 79.5               | 10.277        | 0.575       | 3915.431  | 0.01%       | 99.88%     |
| 80.0               | 9.506         | 0.534       | 3915.965  | 0.01%       | 99.90%     |
| 80.5               | 8.761         | 0.494       | 3916.458  | 0.01%       | 99.91%     |
| 81.0               | 8.042         | 0.455       | 3916.913  | 0.01%       | 99.92%     |
| 81.5               | 7.342         | 0.417       | 3917.33   | 0.01%       | 99.93%     |
| 82.0               | 6.661         | 0.380       | 3917.709  | 0.01%       | 99.94%     |
| 82.5               | 6.008         | 0.344       | 3918.054  | 0.01%       | 99.95%     |
| 83.0               | 5.376         | 0.310       | 3918.363  | 0.01%       | 99.96%     |
| 83.5               | 4.775         | 0.276       | 3918.64   | 0.01%       | 99.97%     |
| 84.0               | 4.208         | 0.245       | 3918.884  | 0.01%       | 99.97%     |
| 84.5               | 3.678         | 0.215       | 3919.1    | 0.01%       | 99.98%     |
| 85.0               | 3.194         | 0.188       | 3919.287  | 0.00%       | 99.98%     |
| 85.5               | 2.737         | 0.162       | 3919.449  | 0.00%       | 99.99%     |
| 86.0               | 2.290         | 0.137       | 3919.587  | 0.00%       | 99.99%     |
| 86.5               | 1.897         | 0.115       | 3919.701  | 0.00%       | 99.99%     |
| 87.0               | 1.524         | 0.094       | 3919.795  | 0.00%       | 99.99%     |
| 87.5               | 1.171         | 0.074       | 3919.869  | 0.00%       | 100.00%    |
| 88.0               | 0.847         | 0.055       | 3919.924  | 0.00%       | 100.00%    |
| 88.5               | 0.550         | 0.038       | 3919.962  | 0.00%       | 100.00%    |
| 89.0               | 0.280         | 0.023       | 3919.985  | 0.00%       | 100.00%    |
| 89.5               | 0.110         | 0.011       | 3919.996  | 0.00%       | 100.00%    |
| 90.0               | 0.051         | 0.004       | 3920      | 0.00%       | 100.00%    |

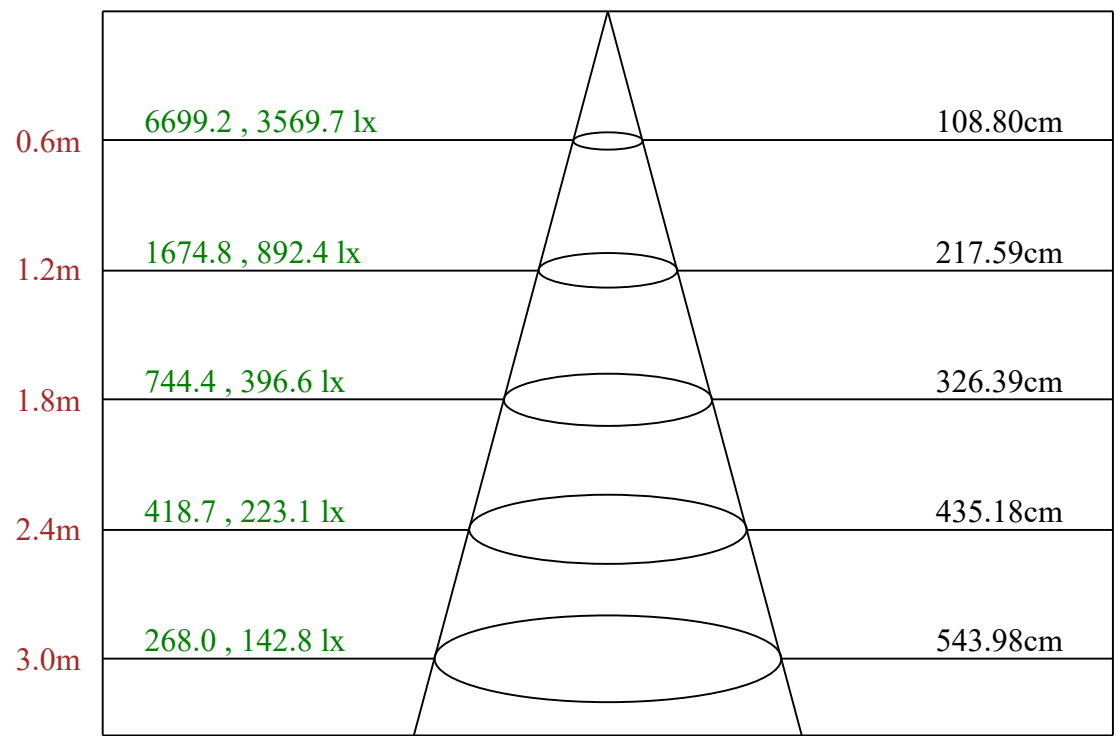
## ZONAL LUMEN SUMMARY

| Zone    | Lumens  | %Lamp   | %Fixt   |
|---------|---------|---------|---------|
| 0-30    | 2008.34 | 51.23%  | 51.23%  |
| 0-40    | 3134.35 | 79.96%  | 79.96%  |
| 0-60    | 3855.29 | 98.35%  | 98.35%  |
| 0-90    | 3920.00 | 100.00% | 100.00% |
| 0-120   | 3920.00 | 100.00% | 100.00% |
| 0-180   | 3920.00 | 100.00% | 100.00% |
| 60-90   | 64.71   | 1.65%   | 1.65%   |
| 90-120  | 0.00    | 0.00%   | 0.00%   |
| 90-130  | 0.00    | 0.00%   | 0.00%   |
| 90-150  | 0.00    | 0.00%   | 0.00%   |
| 90-180  | 0.00    | 0.00%   | 0.00%   |
| 0-40.02 | 3136.00 | 80.00%  | 80.00%  |

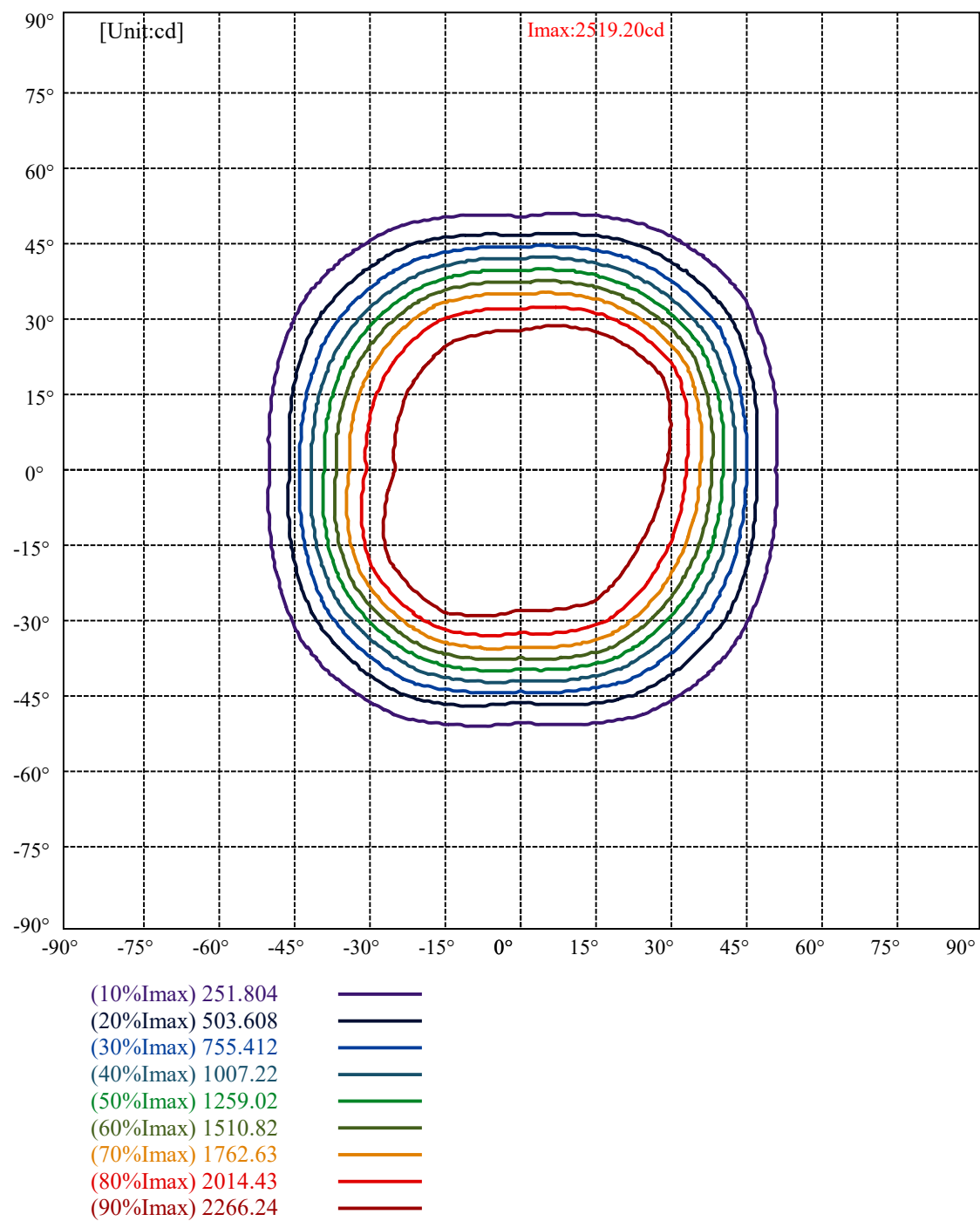
## ZONAL LUMEN SUMMARY

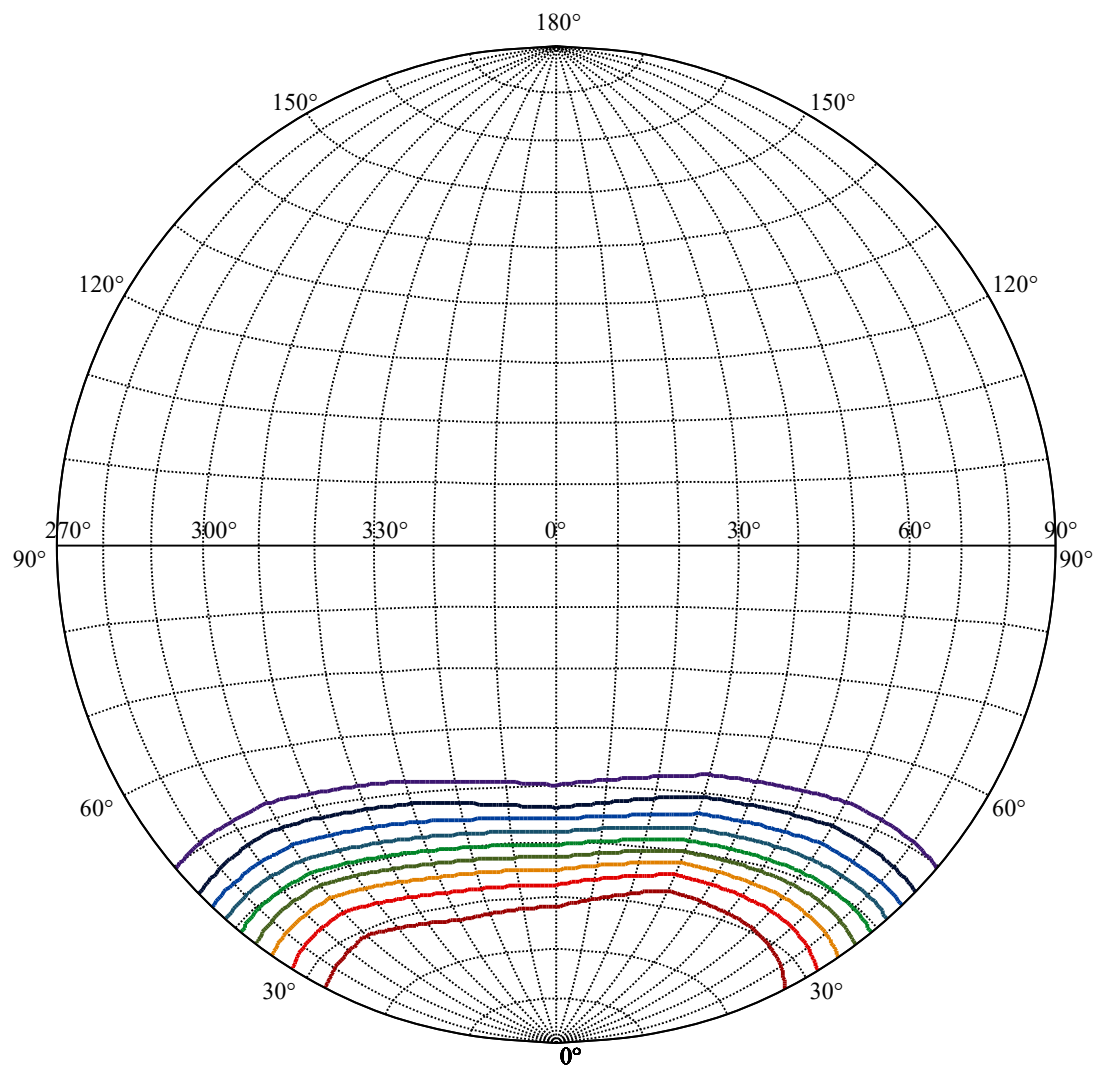
|         |         |
|---------|---------|
| 0-10    | 229.73  |
| 10-20   | 690.43  |
| 20-30   | 1088.17 |
| 30-40   | 1126.01 |
| 40-50   | 583.44  |
| 50-60   | 137.49  |
| 60-70   | 41.06   |
| 70-80   | 19.61   |
| 80-90   | 4.03    |
| 90-100  | 0.00    |
| 100-110 | 0.00    |
| 110-120 | 0.00    |
| 120-130 | 0.00    |
| 130-140 | 0.00    |
| 140-150 | 0.00    |
| 150-160 | 0.00    |
| 160-170 | 0.00    |
| 170-180 | 0.00    |





Max , Ave      Beam angle of C30 plane 84.39



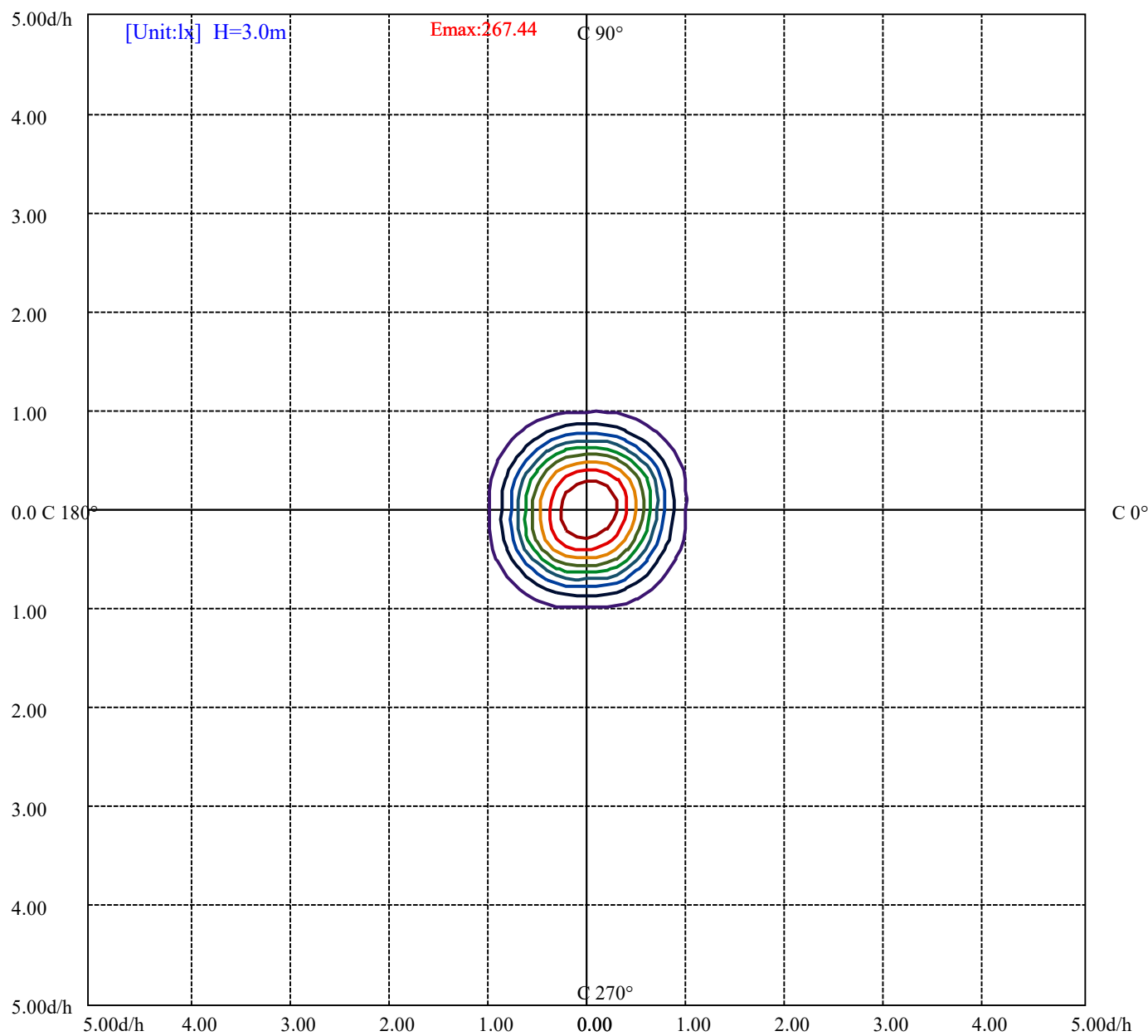


House

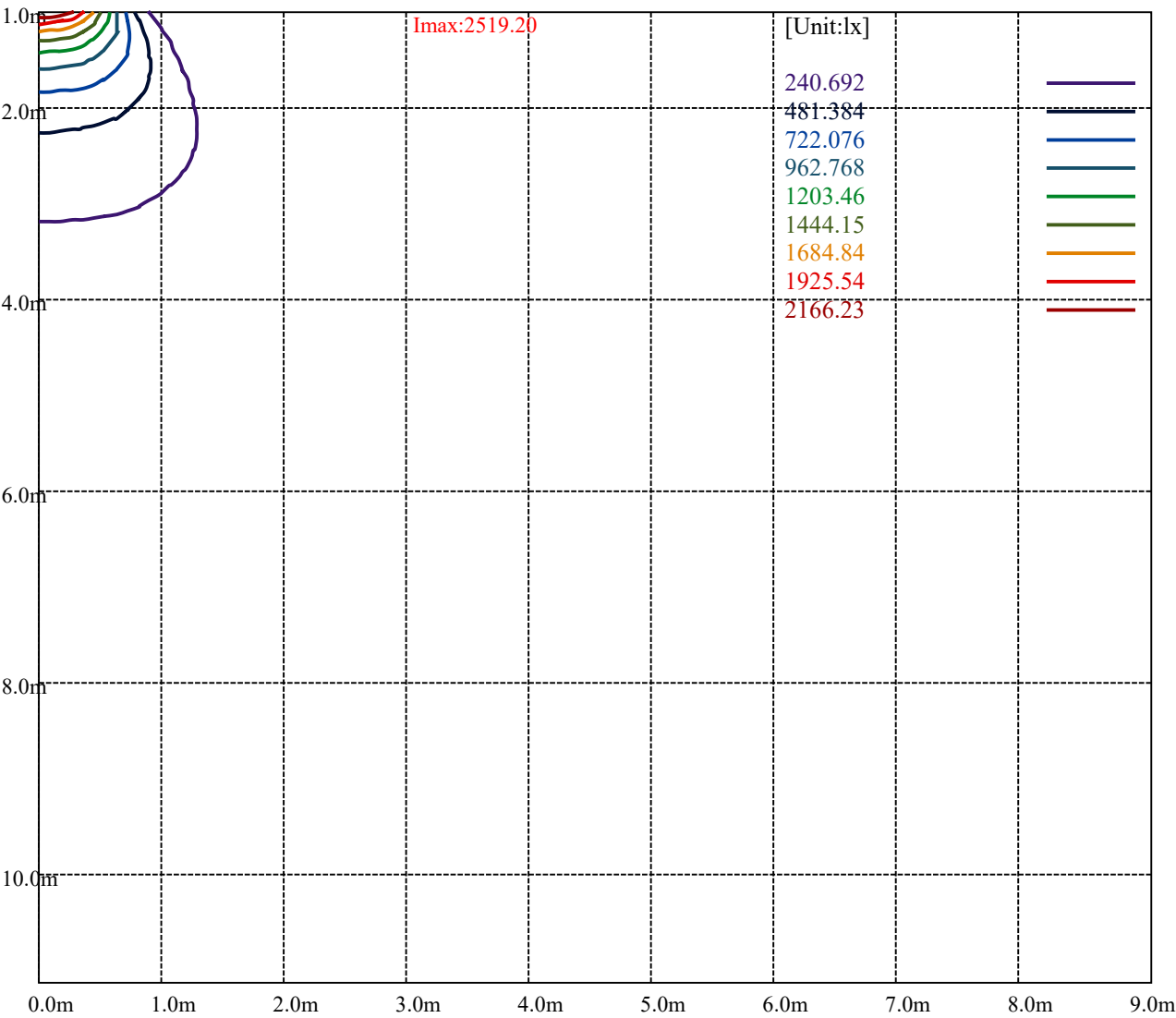
[Unit:cd]

Road

|                   |  |
|-------------------|--|
| Imax:2519.20      |  |
| (10%Imax) 251.92  |  |
| (20%Imax) 503.84  |  |
| (30%Imax) 755.76  |  |
| (40%Imax) 1007.68 |  |
| (50%Imax) 1259.6  |  |
| (60%Imax) 1511.52 |  |
| (70%Imax) 1763.44 |  |
| (80%Imax) 2015.36 |  |
| (90%Imax) 2267.28 |  |



|                    |   |
|--------------------|---|
| (10%Emax) 26.74356 | — |
| (20%Emax) 53.48711 | — |
| (30%Emax) 80.23067 | — |
| (40%Emax) 106.9742 | — |
| (50%Emax) 133.7178 | — |
| (60%Emax) 160.4611 | — |
| (70%Emax) 187.2044 | — |
| (80%Emax) 213.9489 | — |
| (90%Emax) 240.6922 | — |



# Luminance Limiting Curve(no luminous side)

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Luminance Table

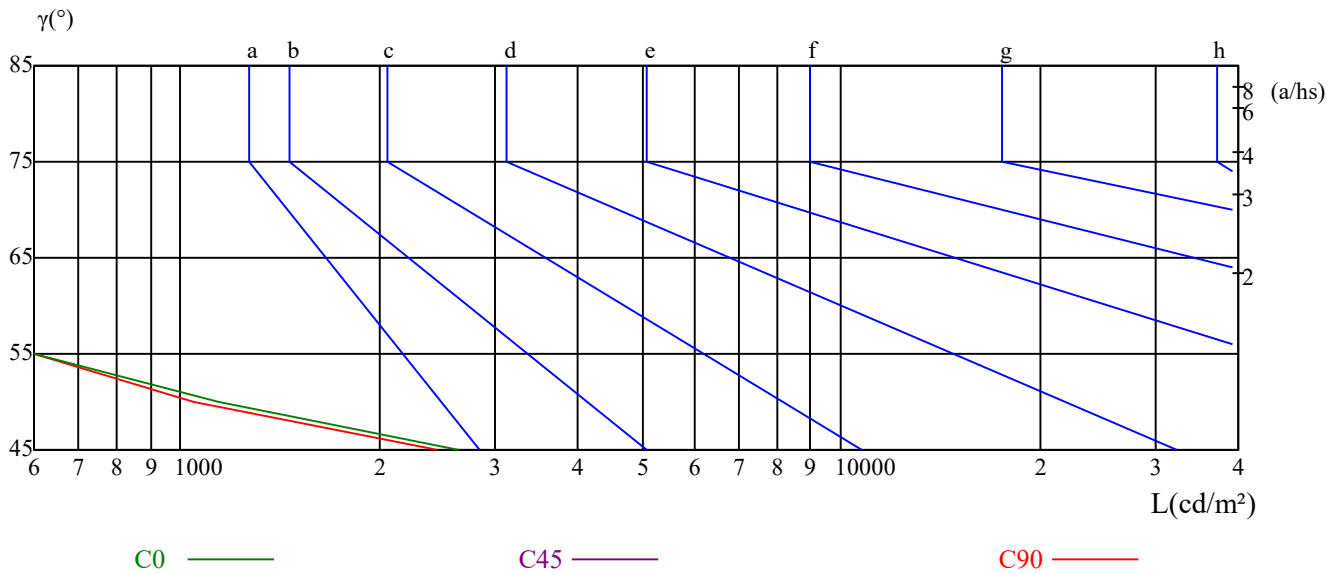
| $\gamma$ | 45   | 50   | 55  | 60  | 65  | 70  | 75  | 80  | 85  |
|----------|------|------|-----|-----|-----|-----|-----|-----|-----|
| C0       | 2636 | 1138 | 460 | 300 | 260 | 243 | 208 | 168 | 121 |
| C45      | 0    | 0    | 0   | 0   | 0   | 0   | 0   | 0   | 0   |
| C90      | 2455 | 1044 | 430 | 292 | 255 | 236 | 199 | 159 | 118 |

| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 250        | 250        | 0       | 193        | 192        | 0       | 100        | 107        | 0       |

Glare Table

| Glare | Quality | Service Values Illuminance(lx) |      |      |            |            |            |            |            |
|-------|---------|--------------------------------|------|------|------------|------------|------------|------------|------------|
| 1.15  | A       | 2000                           | 1000 | 500  | $\leq 300$ |            |            |            |            |
| 1.5   | B       |                                | 2000 | 1000 | 500        | $\leq 300$ |            |            |            |
| 1.85  | C       |                                |      | 2000 | 1000       | 500        | $\leq 300$ |            |            |
| 2.2   | D       |                                |      |      | 2000       | 1000       | 500        | $\leq 300$ |            |
| 2.55  | E       |                                |      |      |            | 2000       | 1000       | 500        | $\leq 300$ |
|       |         | a                              | b    | c    | d          | e          | f          | g          | h          |

Luminance Limiting Curve



| Illumination assessment according UGR             |     |                  |       |       |       |       |                |       |       |       |       |  |
|---------------------------------------------------|-----|------------------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|--|
| Rf of Ceiling                                     | 70  | 70               | 50    | 50    | 30    | 70    | 70             | 50    | 50    | 30    |       |  |
| Rf of Wall                                        | 50  | 30               | 50    | 30    | 30    | 50    | 30             | 50    | 30    | 30    |       |  |
| Rf of Floor                                       | 20  | 20               | 20    | 20    | 20    | 20    | 20             | 20    | 20    | 20    |       |  |
| Room dimensions                                   |     | Viewed crosswise |       |       |       |       | Viewed endwise |       |       |       |       |  |
| X                                                 | Y   |                  |       |       |       |       |                |       |       |       |       |  |
| 2H                                                | 2H  | 13.41            | 14.56 | 13.78 | 14.88 | 15.19 | 12.97          | 14.12 | 13.33 | 14.43 | 14.75 |  |
|                                                   | 3H  | 13.29            | 14.30 | 13.67 | 14.64 | 14.99 | 12.85          | 13.86 | 13.23 | 14.20 | 14.55 |  |
|                                                   | 4H  | 13.22            | 14.16 | 13.62 | 14.51 | 14.88 | 12.78          | 13.72 | 13.18 | 14.08 | 14.44 |  |
|                                                   | 6H  | 13.16            | 14.02 | 13.57 | 14.40 | 14.79 | 12.72          | 13.58 | 13.14 | 13.96 | 14.36 |  |
|                                                   | 8H  | 13.09            | 13.92 | 13.51 | 14.30 | 14.71 | 12.66          | 13.48 | 13.07 | 13.86 | 14.27 |  |
|                                                   | 12H | 13.03            | 13.81 | 13.45 | 14.21 | 14.62 | 12.59          | 13.38 | 13.02 | 13.77 | 14.18 |  |
| 4H                                                | 2H  | 13.20            | 14.14 | 13.59 | 14.49 | 14.86 | 12.76          | 13.71 | 13.16 | 14.06 | 14.42 |  |
|                                                   | 3H  | 13.06            | 13.84 | 13.48 | 14.23 | 14.65 | 12.63          | 13.41 | 13.06 | 13.80 | 14.22 |  |
|                                                   | 4H  | 13.03            | 13.71 | 13.47 | 14.13 | 14.57 | 12.61          | 13.28 | 13.05 | 13.70 | 14.15 |  |
|                                                   | 6H  | 12.93            | 13.53 | 13.40 | 13.98 | 14.43 | 12.51          | 13.10 | 12.98 | 13.55 | 14.00 |  |
|                                                   | 8H  | 12.89            | 13.44 | 13.37 | 13.89 | 14.36 | 12.46          | 13.01 | 12.95 | 13.47 | 13.94 |  |
|                                                   | 12H | 12.84            | 13.35 | 13.33 | 13.80 | 14.32 | 12.42          | 12.93 | 12.91 | 13.38 | 13.90 |  |
| 8H                                                | 4H  | 12.87            | 13.42 | 13.35 | 13.87 | 14.35 | 12.45          | 13.00 | 12.93 | 13.45 | 13.92 |  |
|                                                   | 6H  | 12.76            | 13.21 | 13.26 | 13.69 | 14.20 | 12.34          | 12.79 | 12.84 | 13.27 | 13.78 |  |
|                                                   | 8H  | 12.76            | 13.15 | 13.29 | 13.67 | 14.16 | 12.34          | 12.73 | 12.87 | 13.25 | 13.74 |  |
|                                                   | 12H | 12.71            | 13.03 | 13.25 | 13.54 | 14.06 | 12.29          | 12.61 | 12.83 | 13.12 | 13.64 |  |
| 12H                                               | 4H  | 12.82            | 13.33 | 13.31 | 13.78 | 14.30 | 12.40          | 12.91 | 12.89 | 13.36 | 13.88 |  |
|                                                   | 6H  | 12.75            | 13.14 | 13.28 | 13.66 | 14.15 | 12.33          | 12.72 | 12.86 | 13.24 | 13.73 |  |
|                                                   | 8H  | 12.71            | 13.02 | 13.25 | 13.54 | 14.06 | 12.29          | 12.61 | 12.83 | 13.12 | 13.64 |  |
| Variation with the observer position at spacings: |     |                  |       |       |       |       |                |       |       |       |       |  |
| S = 1.0H                                          |     | 2.8/-7.8         |       |       |       |       | 2.8/-7.8       |       |       |       |       |  |
| S = 1.5H                                          |     | 4.6/-9.4         |       |       |       |       | 4.5/-9.6       |       |       |       |       |  |
| S = 2.0H                                          |     | 6.6/-9.4         |       |       |       |       | 6.5/-9.7       |       |       |       |       |  |
| Standard tables:                                  |     | BK0              |       |       |       |       | BK0            |       |       |       |       |  |
| Uncorrected UGR                                   |     | -5.8             |       |       |       |       | -5.4           |       |       |       |       |  |
|                                                   |     |                  |       |       |       |       |                |       |       |       |       |  |

UGR calculation is based on CIE Publ. 117 ,S/H = 0.25

## Intensity data(cd)

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| C/γ(°) | 0.0     | 0.5     | 1.0     | 1.5     | 2.0     | 2.5     | 3.0     | 3.5     | 4.0     |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0.0    | 2406.92 | 2405.24 | 2406.45 | 2407.58 | 2408.33 | 2408.98 | 2407.67 | 2406.36 | 2408.04 |
| 30.0   | 2406.92 | 2405.33 | 2407.67 | 2409.82 | 2412.91 | 2414.23 | 2414.97 | 2414.88 | 2414.13 |
| 60.0   | 2406.92 | 2410.76 | 2411.79 | 2412.35 | 2413.85 | 2414.88 | 2416.47 | 2416.38 | 2415.82 |
| 90.0   | 2406.92 | 2409.73 | 2409.36 | 2409.07 | 2408.51 | 2407.95 | 2407.86 | 2406.92 | 2407.39 |
| 120.0  | 2406.92 | 2410.01 | 2408.79 | 2407.01 | 2403.74 | 2401.68 | 2400.65 | 2400.37 | 2397.56 |
| 150.0  | 2406.92 | 2407.39 | 2405.70 | 2402.71 | 2399.80 | 2397.74 | 2395.96 | 2394.09 | 2392.87 |
| 180.0  | 2406.92 | 2400.65 | 2399.24 | 2395.87 | 2393.81 | 2391.66 | 2390.07 | 2388.10 | 2385.85 |
| 210.0  | 2406.92 | 2399.15 | 2397.28 | 2395.78 | 2394.09 | 2391.38 | 2390.91 | 2389.22 | 2387.63 |
| 240.0  | 2406.92 | 2406.92 | 2405.52 | 2405.24 | 2403.55 | 2403.55 | 2402.24 | 2400.08 | 2397.93 |
| 270.0  | 2406.92 | 2410.20 | 2409.36 | 2407.39 | 2405.52 | 2405.52 | 2404.67 | 2404.30 | 2403.46 |
| 300.0  | 2406.92 | 2411.98 | 2412.26 | 2412.26 | 2411.79 | 2411.04 | 2410.48 | 2410.20 | 2411.23 |
| 330.0  | 2406.92 | 2411.70 | 2411.13 | 2411.32 | 2410.57 | 2410.39 | 2411.32 | 2412.26 | 2412.63 |
| 360.0  | 2406.92 | 2405.24 | 2406.45 | 2407.58 | 2408.33 | 2408.98 | 2407.67 | 2406.36 | 2408.04 |

| C/γ(°) | 4.5     | 5.0     | 5.5     | 6.0     | 6.5     | 7.0     | 7.5     | 8.0     | 8.5     |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0.0    | 2409.07 | 2409.26 | 2411.04 | 2412.45 | 2413.48 | 2414.69 | 2417.69 | 2420.97 | 2423.96 |
| 30.0   | 2413.01 | 2411.88 | 2410.67 | 2410.20 | 2411.42 | 2412.63 | 2414.51 | 2416.57 | 2419.94 |
| 60.0   | 2415.35 | 2413.66 | 2413.29 | 2413.29 | 2413.10 | 2414.41 | 2416.94 | 2422.75 | 2429.02 |
| 90.0   | 2407.20 | 2407.39 | 2407.76 | 2407.20 | 2408.04 | 2409.64 | 2411.98 | 2414.69 | 2417.88 |
| 120.0  | 2394.47 | 2391.00 | 2389.41 | 2387.63 | 2386.79 | 2386.23 | 2385.85 | 2386.13 | 2386.41 |
| 150.0  | 2391.28 | 2388.75 | 2386.79 | 2385.76 | 2386.04 | 2387.35 | 2386.79 | 2387.91 | 2389.13 |
| 180.0  | 2383.51 | 2381.82 | 2381.36 | 2381.26 | 2381.73 | 2381.17 | 2381.17 | 2380.79 | 2381.08 |
| 210.0  | 2386.23 | 2386.79 | 2386.79 | 2385.85 | 2386.32 | 2388.01 | 2389.22 | 2392.31 | 2394.28 |
| 240.0  | 2396.71 | 2397.74 | 2399.71 | 2401.49 | 2403.36 | 2406.08 | 2409.36 | 2411.98 | 2416.66 |
| 270.0  | 2402.80 | 2402.05 | 2401.77 | 2400.83 | 2403.64 | 2407.11 | 2410.95 | 2414.32 | 2417.69 |
| 300.0  | 2410.01 | 2409.45 | 2409.17 | 2409.54 | 2411.98 | 2414.60 | 2417.69 | 2418.63 | 2420.22 |
| 330.0  | 2414.04 | 2415.26 | 2418.72 | 2421.72 | 2423.03 | 2422.56 | 2422.19 | 2420.69 | 2419.84 |
| 360.0  | 2409.07 | 2409.26 | 2411.04 | 2412.45 | 2413.48 | 2414.69 | 2417.69 | 2420.97 | 2423.96 |

| C/γ(°) | 9.0     | 9.5     | 10.0    | 10.5    | 11.0    | 11.5    | 12.0    | 12.5    | 13.0    |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0.0    | 2427.34 | 2430.61 | 2435.48 | 2439.60 | 2445.69 | 2450.56 | 2453.18 | 2457.58 | 2461.14 |
| 30.0   | 2423.68 | 2428.18 | 2432.86 | 2437.54 | 2443.07 | 2449.62 | 2455.99 | 2462.36 | 2468.91 |
| 60.0   | 2435.76 | 2443.44 | 2451.68 | 2459.74 | 2467.79 | 2475.56 | 2481.93 | 2488.11 | 2491.57 |
| 90.0   | 2422.47 | 2425.74 | 2428.37 | 2430.89 | 2433.61 | 2436.70 | 2440.63 | 2442.88 | 2442.79 |
| 120.0  | 2388.10 | 2390.16 | 2392.12 | 2394.00 | 2397.46 | 2401.40 | 2405.70 | 2411.70 | 2416.66 |
| 150.0  | 2390.16 | 2391.09 | 2392.87 | 2393.62 | 2393.90 | 2393.53 | 2395.03 | 2394.09 | 2393.25 |
| 180.0  | 2383.60 | 2385.20 | 2386.32 | 2386.69 | 2387.07 | 2387.35 | 2389.50 | 2391.28 | 2392.22 |
| 210.0  | 2395.12 | 2396.90 | 2398.87 | 2402.24 | 2404.58 | 2407.67 | 2412.26 | 2416.19 | 2421.34 |
| 240.0  | 2420.31 | 2424.62 | 2427.90 | 2431.55 | 2434.36 | 2435.95 | 2436.61 | 2436.61 | 2437.82 |
| 270.0  | 2420.50 | 2422.37 | 2422.65 | 2424.06 | 2426.40 | 2426.49 | 2426.21 | 2425.93 | 2426.96 |
| 300.0  | 2422.09 | 2422.65 | 2422.56 | 2422.84 | 2422.47 | 2422.19 | 2422.28 | 2422.19 | 2422.56 |
| 330.0  | 2418.06 | 2416.75 | 2415.07 | 2416.00 | 2419.75 | 2421.34 | 2422.37 | 2423.78 | 2426.21 |
| 360.0  | 2427.34 | 2430.61 | 2435.48 | 2439.60 | 2445.69 | 2450.56 | 2453.18 | 2457.58 | 2461.14 |

| C/γ(°) | 13.5    | 14.0    | 14.5    | 15.0    | 15.5    | 16.0    | 16.5    | 17.0    | 17.5    |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0.0    | 2464.23 | 2466.76 | 2468.26 | 2469.48 | 2470.13 | 2471.53 | 2471.35 | 2469.85 | 2468.63 |
| 30.0   | 2475.00 | 2481.65 | 2486.42 | 2491.29 | 2496.35 | 2502.44 | 2507.59 | 2512.36 | 2514.80 |
| 60.0   | 2495.04 | 2498.32 | 2500.28 | 2500.38 | 2501.50 | 2502.62 | 2502.62 | 2503.37 | 2503.09 |
| 90.0   | 2442.60 | 2441.57 | 2442.79 | 2442.41 | 2441.76 | 2440.54 | 2439.23 | 2436.79 | 2434.36 |
| 120.0  | 2420.12 | 2422.93 | 2425.27 | 2426.68 | 2426.87 | 2426.40 | 2426.21 | 2425.46 | 2422.47 |
| 150.0  | 2390.72 | 2389.22 | 2387.44 | 2386.04 | 2383.60 | 2380.14 | 2377.33 | 2373.77 | 2371.06 |
| 180.0  | 2392.69 | 2393.62 | 2392.50 | 2391.09 | 2389.04 | 2386.41 | 2382.95 | 2379.86 | 2375.27 |
| 210.0  | 2426.12 | 2431.08 | 2434.83 | 2436.51 | 2440.63 | 2443.72 | 2445.03 | 2446.34 | 2446.72 |
| 240.0  | 2440.07 | 2441.57 | 2444.00 | 2446.63 | 2449.90 | 2453.65 | 2458.24 | 2462.45 | 2466.10 |
| 270.0  | 2427.90 | 2429.49 | 2431.74 | 2433.98 | 2436.70 | 2440.07 | 2442.51 | 2445.60 | 2447.28 |
| 300.0  | 2424.81 | 2427.05 | 2427.80 | 2427.34 | 2426.02 | 2424.71 | 2424.43 | 2423.03 | 2420.31 |
| 330.0  | 2427.71 | 2428.18 | 2428.18 | 2428.46 | 2427.71 | 2425.65 | 2424.90 | 2424.81 | 2426.68 |
| 360.0  | 2464.23 | 2466.76 | 2468.26 | 2469.48 | 2470.13 | 2471.53 | 2471.35 | 2469.85 | 2468.63 |

## Intensity data(cd)

Appendix Page: 17 Total:21

| C/γ(°) | 18.0    | 18.5    | 19.0    | 19.5    | 20.0    | 20.5    | 21.0    | 21.5    | 22.0    |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0.0    | 2465.17 | 2461.70 | 2458.61 | 2453.65 | 2448.87 | 2443.35 | 2434.45 | 2425.37 | 2417.22 |
| 30.0   | 2516.58 | 2517.89 | 2519.20 | 2519.11 | 2518.54 | 2516.39 | 2515.45 | 2515.08 | 2513.49 |
| 60.0   | 2502.34 | 2500.47 | 2498.50 | 2495.32 | 2494.29 | 2492.89 | 2492.23 | 2489.23 | 2487.45 |
| 90.0   | 2429.11 | 2424.99 | 2421.25 | 2417.32 | 2412.91 | 2407.76 | 2402.52 | 2398.12 | 2392.59 |
| 120.0  | 2419.00 | 2415.26 | 2410.95 | 2405.61 | 2400.65 | 2393.62 | 2387.63 | 2381.73 | 2374.99 |
| 150.0  | 2367.68 | 2365.34 | 2363.10 | 2360.29 | 2357.10 | 2353.26 | 2349.05 | 2344.37 | 2340.25 |
| 180.0  | 2368.71 | 2363.00 | 2355.32 | 2347.55 | 2340.90 | 2334.35 | 2328.82 | 2322.45 | 2315.34 |
| 210.0  | 2445.41 | 2444.19 | 2442.22 | 2439.42 | 2436.61 | 2432.95 | 2429.58 | 2428.37 | 2427.05 |
| 240.0  | 2469.29 | 2473.41 | 2476.22 | 2476.78 | 2478.56 | 2481.09 | 2482.77 | 2484.83 | 2485.30 |
| 270.0  | 2448.31 | 2448.31 | 2448.50 | 2446.16 | 2442.69 | 2438.76 | 2433.80 | 2430.14 | 2423.50 |
| 300.0  | 2420.12 | 2419.38 | 2419.19 | 2418.63 | 2416.38 | 2412.45 | 2409.07 | 2404.67 | 2398.02 |
| 330.0  | 2427.34 | 2427.71 | 2427.71 | 2427.05 | 2425.18 | 2422.65 | 2417.69 | 2410.95 | 2401.86 |
| 360.0  | 2465.17 | 2461.70 | 2458.61 | 2453.65 | 2448.87 | 2443.35 | 2434.45 | 2425.37 | 2417.22 |
| C/γ(°) | 22.5    | 23.0    | 23.5    | 24.0    | 24.5    | 25.0    | 25.5    | 26.0    | 26.5    |
| 0.0    | 2406.27 | 2395.50 | 2386.69 | 2379.01 | 2369.28 | 2358.32 | 2348.58 | 2338.19 | 2326.01 |
| 30.0   | 2511.99 | 2511.24 | 2508.90 | 2504.97 | 2501.88 | 2497.01 | 2490.83 | 2486.61 | 2480.81 |
| 60.0   | 2485.11 | 2480.99 | 2475.56 | 2471.53 | 2466.20 | 2459.83 | 2453.37 | 2444.38 | 2435.01 |
| 90.0   | 2387.26 | 2379.30 | 2371.43 | 2362.16 | 2350.55 | 2338.09 | 2325.17 | 2309.91 | 2294.17 |
| 120.0  | 2367.31 | 2359.82 | 2353.45 | 2347.36 | 2341.56 | 2335.00 | 2327.42 | 2319.27 | 2308.41 |
| 150.0  | 2336.69 | 2331.26 | 2326.48 | 2320.21 | 2312.72 | 2303.16 | 2292.30 | 2280.69 | 2269.64 |
| 180.0  | 2309.63 | 2302.51 | 2292.96 | 2283.87 | 2272.64 | 2258.59 | 2242.76 | 2225.53 | 2207.83 |
| 210.0  | 2424.99 | 2424.53 | 2423.68 | 2420.97 | 2419.66 | 2416.85 | 2411.88 | 2406.55 | 2398.59 |
| 240.0  | 2486.14 | 2484.64 | 2481.65 | 2479.12 | 2474.34 | 2467.32 | 2459.36 | 2450.84 | 2441.38 |
| 270.0  | 2416.10 | 2406.73 | 2395.59 | 2382.48 | 2371.43 | 2357.20 | 2340.81 | 2323.39 | 2305.88 |
| 300.0  | 2391.84 | 2386.51 | 2380.79 | 2372.93 | 2366.75 | 2358.13 | 2351.76 | 2346.05 | 2335.56 |
| 330.0  | 2393.90 | 2382.85 | 2373.12 | 2360.29 | 2347.36 | 2336.97 | 2322.17 | 2307.00 | 2290.80 |
| 360.0  | 2406.27 | 2395.50 | 2386.69 | 2379.01 | 2369.28 | 2358.32 | 2348.58 | 2338.19 | 2326.01 |
| C/γ(°) | 27.0    | 27.5    | 28.0    | 28.5    | 29.0    | 29.5    | 30.0    | 30.5    | 31.0    |
| 0.0    | 2313.09 | 2298.48 | 2282.28 | 2261.77 | 2237.61 | 2212.89 | 2183.67 | 2154.93 | 2121.21 |
| 30.0   | 2474.25 | 2466.29 | 2458.14 | 2447.19 | 2436.04 | 2423.96 | 2408.14 | 2390.53 | 2372.83 |
| 60.0   | 2422.47 | 2407.01 | 2388.38 | 2371.15 | 2350.45 | 2328.82 | 2303.91 | 2275.82 | 2246.79 |
| 90.0   | 2276.85 | 2258.87 | 2237.15 | 2214.76 | 2187.98 | 2159.42 | 2128.71 | 2096.31 | 2060.06 |
| 120.0  | 2298.57 | 2287.99 | 2275.07 | 2261.31 | 2244.54 | 2227.41 | 2204.28 | 2180.77 | 2154.74 |
| 150.0  | 2255.59 | 2238.08 | 2219.63 | 2200.62 | 2180.49 | 2156.61 | 2130.20 | 2103.61 | 2072.80 |
| 180.0  | 2187.70 | 2166.07 | 2143.69 | 2119.90 | 2094.71 | 2065.68 | 2036.56 | 2005.75 | 1973.63 |
| 210.0  | 2389.97 | 2379.76 | 2366.19 | 2353.64 | 2338.84 | 2322.64 | 2304.57 | 2280.97 | 2258.31 |
| 240.0  | 2430.43 | 2419.19 | 2405.52 | 2390.63 | 2374.61 | 2357.48 | 2336.69 | 2315.43 | 2291.37 |
| 270.0  | 2288.37 | 2267.11 | 2246.32 | 2223.19 | 2201.65 | 2177.49 | 2149.87 | 2122.15 | 2090.31 |
| 300.0  | 2326.48 | 2316.46 | 2304.57 | 2291.93 | 2275.91 | 2258.59 | 2237.80 | 2218.23 | 2193.88 |
| 330.0  | 2275.16 | 2260.56 | 2242.76 | 2225.72 | 2205.40 | 2183.02 | 2159.61 | 2133.11 | 2104.55 |
| 360.0  | 2313.09 | 2298.48 | 2282.28 | 2261.77 | 2237.61 | 2212.89 | 2183.67 | 2154.93 | 2121.21 |
| C/γ(°) | 31.5    | 32.0    | 32.5    | 33.0    | 33.5    | 34.0    | 34.5    | 35.0    | 35.5    |
| 0.0    | 2086.19 | 2051.26 | 2008.47 | 1967.26 | 1924.09 | 1878.12 | 1829.23 | 1778.76 | 1725.76 |
| 30.0   | 2351.58 | 2325.64 | 2294.83 | 2260.09 | 2223.75 | 2184.24 | 2140.79 | 2094.53 | 2045.27 |
| 60.0   | 2215.05 | 2181.43 | 2144.16 | 2106.70 | 2064.28 | 2023.36 | 1979.44 | 1929.81 | 1878.21 |
| 90.0   | 2022.98 | 1981.50 | 1939.36 | 1896.00 | 1850.21 | 1804.70 | 1754.69 | 1705.53 | 1653.37 |
| 120.0  | 2126.18 | 2095.93 | 2060.44 | 2024.01 | 1985.24 | 1943.76 | 1900.03 | 1852.83 | 1802.83 |
| 150.0  | 2039.46 | 2005.75 | 1971.01 | 1934.21 | 1894.13 | 1851.43 | 1807.13 | 1760.50 | 1713.58 |
| 180.0  | 1937.95 | 1900.40 | 1862.48 | 1820.24 | 1775.86 | 1729.41 | 1683.71 | 1633.61 | 1582.11 |
| 210.0  | 2232.65 | 2202.03 | 2170.47 | 2135.82 | 2097.24 | 2055.01 | 2009.03 | 1964.64 | 1915.39 |
| 240.0  | 2262.43 | 2231.90 | 2198.28 | 2160.26 | 2118.50 | 2074.11 | 2029.72 | 1977.75 | 1926.44 |
| 270.0  | 2053.14 | 2012.77 | 1972.98 | 1929.99 | 1886.45 | 1837.85 | 1786.63 | 1734.00 | 1681.00 |
| 300.0  | 2167.85 | 2139.85 | 2107.17 | 2073.36 | 2034.78 | 1994.70 | 1952.00 | 1905.65 | 1855.55 |
| 330.0  | 2076.55 | 2042.83 | 2009.87 | 1971.10 | 1930.28 | 1886.54 | 1841.69 | 1792.90 | 1744.67 |
| 360.0  | 2086.19 | 2051.26 | 2008.47 | 1967.26 | 1924.09 | 1878.12 | 1829.23 | 1778.76 | 1725.76 |

## Intensity data(cd)

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| C/γ(°) | 36.0    | 36.5    | 37.0    | 37.5    | 38.0    | 38.5    | 39.0    | 39.5    | 40.0    |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0.0    | 1671.54 | 1615.16 | 1559.82 | 1505.60 | 1447.82 | 1392.01 | 1334.61 | 1277.67 | 1219.71 |
| 30.0   | 1992.27 | 1937.30 | 1877.09 | 1817.53 | 1760.03 | 1692.51 | 1630.05 | 1565.25 | 1501.39 |
| 60.0   | 1826.80 | 1775.39 | 1719.30 | 1662.92 | 1605.89 | 1545.31 | 1485.09 | 1426.38 | 1368.98 |
| 90.0   | 1599.25 | 1548.12 | 1490.99 | 1437.05 | 1383.58 | 1327.87 | 1276.92 | 1220.74 | 1165.96 |
| 120.0  | 1752.07 | 1697.01 | 1642.60 | 1583.98 | 1527.05 | 1469.46 | 1410.65 | 1349.59 | 1288.72 |
| 150.0  | 1665.08 | 1614.88 | 1563.47 | 1509.72 | 1459.53 | 1407.09 | 1353.71 | 1300.24 | 1248.93 |
| 180.0  | 1530.89 | 1482.10 | 1427.41 | 1372.82 | 1320.94 | 1265.59 | 1213.71 | 1161.56 | 1107.71 |
| 210.0  | 1863.32 | 1806.01 | 1748.61 | 1690.92 | 1633.05 | 1574.43 | 1512.34 | 1449.32 | 1386.21 |
| 240.0  | 1873.34 | 1818.00 | 1761.06 | 1700.75 | 1644.10 | 1582.95 | 1521.90 | 1463.37 | 1404.37 |
| 270.0  | 1623.59 | 1564.32 | 1507.19 | 1451.85 | 1391.54 | 1335.26 | 1276.92 | 1217.65 | 1160.06 |
| 300.0  | 1807.13 | 1753.85 | 1700.47 | 1643.44 | 1589.41 | 1529.95 | 1470.49 | 1411.96 | 1351.65 |
| 330.0  | 1693.82 | 1643.54 | 1591.94 | 1538.10 | 1482.94 | 1429.00 | 1374.41 | 1317.57 | 1263.25 |
| 360.0  | 1671.54 | 1615.16 | 1559.82 | 1505.60 | 1447.82 | 1392.01 | 1334.61 | 1277.67 | 1219.71 |

| C/γ(°) | 40.5    | 41.0    | 41.5    | 42.0    | 42.5    | 43.0    | 43.5    | 44.0    | 44.5   |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|--------|
| 0.0    | 1165.77 | 1111.64 | 1057.42 | 1005.26 | 954.04  | 902.53  | 851.16  | 795.01  | 729.48 |
| 30.0   | 1437.99 | 1374.97 | 1310.82 | 1246.86 | 1186.65 | 1127.38 | 1069.69 | 1011.54 | 958.07 |
| 60.0   | 1309.23 | 1250.33 | 1192.55 | 1134.59 | 1078.49 | 1022.31 | 971.08  | 919.51  | 870.90 |
| 90.0   | 1112.21 | 1061.45 | 1010.79 | 960.78  | 906.96  | 853.34  | 794.26  | 732.68  | 668.92 |
| 120.0  | 1233.75 | 1176.63 | 1119.88 | 1066.04 | 1012.47 | 961.81  | 913.00  | 863.71  | 818.29 |
| 150.0  | 1196.76 | 1144.61 | 1091.60 | 1041.69 | 990.84  | 942.80  | 895.94  | 851.63  | 806.79 |
| 180.0  | 1055.64 | 1005.83 | 954.60  | 904.71  | 851.08  | 793.02  | 727.60  | 668.94  | 610.29 |
| 210.0  | 1325.43 | 1265.50 | 1201.35 | 1142.36 | 1086.64 | 1030.73 | 976.80  | 923.72  | 873.05 |
| 240.0  | 1343.41 | 1284.88 | 1224.11 | 1164.36 | 1109.96 | 1055.46 | 1001.80 | 950.11  | 899.87 |
| 270.0  | 1105.84 | 1052.74 | 997.68  | 943.65  | 887.50  | 829.52  | 765.70  | 701.48  | 635.44 |
| 300.0  | 1292.09 | 1231.60 | 1173.17 | 1116.04 | 1059.11 | 1003.77 | 950.95  | 900.54  | 851.10 |
| 330.0  | 1210.62 | 1157.15 | 1103.87 | 1053.02 | 1003.30 | 952.82  | 904.78  | 857.65  | 811.38 |
| 360.0  | 1165.77 | 1111.64 | 1057.42 | 1005.26 | 954.04  | 902.53  | 851.16  | 795.01  | 729.48 |

| C/γ(°) | 45.0   | 45.5   | 46.0   | 46.5   | 47.0   | 47.5   | 48.0   | 48.5   | 49.0   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0.0    | 659.79 | 591.94 | 529.16 | 475.20 | 429.14 | 391.94 | 358.08 | 329.30 | 304.39 |
| 30.0   | 907.07 | 856.11 | 809.35 | 764.96 | 721.90 | 677.59 | 634.28 | 586.86 | 539.45 |
| 60.0   | 823.07 | 779.54 | 734.78 | 692.04 | 647.66 | 603.51 | 559.01 | 511.99 | 466.22 |
| 90.0   | 614.57 | 560.21 | 505.85 | 451.49 | 398.43 | 363.48 | 333.53 | 306.36 | 281.81 |
| 120.0  | 775.46 | 732.62 | 689.65 | 650.85 | 608.38 | 564.91 | 520.70 | 475.45 | 432.43 |
| 150.0  | 765.02 | 725.49 | 686.29 | 647.01 | 602.63 | 558.26 | 513.88 | 469.50 | 425.36 |
| 180.0  | 551.65 | 493.00 | 434.71 | 397.92 | 365.38 | 336.38 | 309.74 | 284.70 | 262.46 |
| 210.0  | 824.33 | 777.16 | 732.31 | 685.41 | 637.65 | 588.34 | 534.79 | 484.72 | 439.33 |
| 240.0  | 850.04 | 801.75 | 754.85 | 708.23 | 662.87 | 615.39 | 567.91 | 520.43 | 472.96 |
| 270.0  | 571.85 | 514.17 | 466.23 | 424.47 | 387.56 | 354.95 | 327.15 | 301.16 | 277.04 |
| 300.0  | 802.76 | 757.60 | 715.91 | 672.63 | 629.26 | 584.75 | 540.25 | 495.75 | 451.24 |
| 330.0  | 769.40 | 727.26 | 688.52 | 649.76 | 611.28 | 570.20 | 526.62 | 479.80 | 435.19 |
| 360.0  | 659.79 | 591.94 | 529.16 | 475.20 | 429.14 | 391.94 | 358.08 | 329.30 | 304.39 |

| C/γ(°) | 49.5   | 50.0   | 50.5   | 51.0   | 51.5   | 52.0   | 52.5   | 53.0   | 53.5   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0.0    | 280.35 | 258.95 | 237.72 | 216.49 | 195.26 | 174.02 | 155.86 | 139.71 | 125.07 |
| 30.0   | 492.04 | 444.63 | 397.58 | 360.54 | 329.06 | 302.77 | 279.49 | 259.43 | 241.16 |
| 60.0   | 424.83 | 384.99 | 350.27 | 319.06 | 292.98 | 269.89 | 251.26 | 232.77 | 214.29 |
| 90.0   | 259.10 | 237.55 | 215.56 | 195.27 | 175.94 | 158.74 | 142.12 | 127.21 | 114.60 |
| 120.0  | 392.28 | 356.99 | 325.08 | 297.89 | 274.48 | 256.72 | 239.00 | 221.28 | 203.56 |
| 150.0  | 386.17 | 351.44 | 321.19 | 294.83 | 271.75 | 251.70 | 233.97 | 217.06 | 201.54 |
| 180.0  | 240.33 | 218.60 | 197.75 | 178.04 | 159.46 | 142.09 | 127.08 | 113.98 | 102.71 |
| 210.0  | 400.13 | 365.96 | 336.60 | 310.35 | 287.63 | 266.89 | 248.74 | 230.72 | 212.69 |
| 240.0  | 426.10 | 389.68 | 357.01 | 325.92 | 299.81 | 276.96 | 256.62 | 237.59 | 219.26 |
| 270.0  | 254.95 | 232.94 | 210.92 | 188.91 | 169.69 | 151.09 | 134.61 | 120.33 | 108.57 |
| 300.0  | 406.92 | 370.00 | 337.68 | 309.55 | 285.08 | 263.63 | 244.33 | 227.54 | 211.19 |
| 330.0  | 393.73 | 355.84 | 324.77 | 297.43 | 273.81 | 255.42 | 237.37 | 219.31 | 201.27 |
| 360.0  | 280.35 | 258.95 | 237.72 | 216.49 | 195.26 | 174.02 | 155.86 | 139.71 | 125.07 |

## Intensity data(cd)

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| C/γ(°) | 54.0   | 54.5   | 55.0   | 55.5   | 56.0   | 56.5   | 57.0   | 57.5   | 58.0   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0.0    | 112.56 | 102.14 | 93.36  | 86.10  | 79.82  | 74.78  | 70.54  | 66.85  | 63.67  |
| 30.0   | 224.11 | 206.71 | 190.47 | 174.29 | 158.74 | 144.09 | 130.31 | 117.50 | 106.44 |
| 60.0   | 195.81 | 180.08 | 164.80 | 149.95 | 136.16 | 123.57 | 111.89 | 101.19 | 92.04  |
| 90.0   | 103.87 | 94.98  | 87.31  | 80.98  | 75.74  | 71.43  | 67.76  | 64.40  | 61.33  |
| 120.0  | 188.12 | 172.75 | 157.97 | 143.65 | 129.93 | 117.70 | 106.65 | 97.14  | 88.90  |
| 150.0  | 186.47 | 171.37 | 156.81 | 142.27 | 129.19 | 117.05 | 106.57 | 96.10  | 87.48  |
| 180.0  | 93.01  | 85.05  | 78.59  | 73.14  | 68.40  | 64.46  | 61.09  | 58.15  | 55.52  |
| 210.0  | 194.68 | 177.27 | 160.44 | 144.88 | 130.72 | 118.01 | 106.74 | 97.06  | 88.63  |
| 240.0  | 201.12 | 183.86 | 167.13 | 151.48 | 136.66 | 123.10 | 110.84 | 100.12 | 90.69  |
| 270.0  | 98.05  | 88.75  | 81.38  | 75.58  | 70.75  | 66.62  | 63.06  | 59.97  | 57.28  |
| 300.0  | 194.98 | 179.75 | 164.01 | 149.30 | 135.25 | 122.60 | 110.68 | 99.74  | 90.62  |
| 330.0  | 186.43 | 171.43 | 157.25 | 143.33 | 130.54 | 118.16 | 106.48 | 96.33  | 88.02  |
| 360.0  | 112.56 | 102.14 | 93.36  | 86.10  | 79.82  | 74.78  | 70.54  | 66.85  | 63.67  |
| C/γ(°) | 58.5   | 59.0   | 59.5   | 60.0   | 60.5   | 61.0   | 61.5   | 62.0   | 62.5   |
| 0.0    | 60.66  | 57.91  | 55.34  | 53.03  | 50.94  | 48.93  | 47.24  | 45.75  | 44.37  |
| 30.0   | 96.84  | 88.79  | 82.22  | 76.32  | 71.50  | 67.28  | 63.39  | 59.98  | 56.87  |
| 60.0   | 84.59  | 78.30  | 72.69  | 68.25  | 64.57  | 61.15  | 58.14  | 55.41  | 52.85  |
| 90.0   | 58.66  | 56.18  | 53.89  | 51.70  | 49.81  | 48.02  | 46.43  | 45.03  | 43.72  |
| 120.0  | 81.92  | 76.07  | 71.22  | 66.97  | 63.25  | 59.87  | 56.91  | 54.12  | 51.43  |
| 150.0  | 80.29  | 74.68  | 69.62  | 65.35  | 61.73  | 58.51  | 55.50  | 52.84  | 50.34  |
| 180.0  | 53.08  | 50.87  | 48.93  | 47.16  | 45.68  | 44.26  | 42.98  | 41.92  | 40.87  |
| 210.0  | 81.86  | 75.88  | 70.50  | 65.97  | 62.10  | 58.52  | 55.11  | 51.97  | 49.08  |
| 240.0  | 82.92  | 76.56  | 71.01  | 66.16  | 62.14  | 58.58  | 55.37  | 52.42  | 49.64  |
| 270.0  | 54.82  | 52.56  | 50.53  | 48.65  | 47.00  | 45.48  | 44.16  | 42.96  | 41.84  |
| 300.0  | 82.99  | 76.50  | 70.99  | 66.36  | 62.59  | 59.12  | 56.00  | 53.17  | 50.61  |
| 330.0  | 80.72  | 74.31  | 69.05  | 64.79  | 61.15  | 57.98  | 55.15  | 52.46  | 50.03  |
| 360.0  | 60.66  | 57.91  | 55.34  | 53.03  | 50.94  | 48.93  | 47.24  | 45.75  | 44.37  |
| C/γ(°) | 63.0   | 63.5   | 64.0   | 64.5   | 65.0   | 65.5   | 66.0   | 66.5   | 67.0   |
| 0.0    | 43.15  | 42.04  | 40.97  | 39.90  | 38.85  | 37.84  | 36.88  | 35.90  | 34.96  |
| 30.0   | 53.91  | 51.13  | 48.55  | 46.04  | 43.71  | 41.73  | 40.10  | 38.69  | 37.56  |
| 60.0   | 50.40  | 48.17  | 46.01  | 43.94  | 42.19  | 40.57  | 39.23  | 37.99  | 36.82  |
| 90.0   | 42.50  | 41.39  | 40.34  | 39.27  | 38.19  | 37.19  | 36.21  | 35.24  | 34.29  |
| 120.0  | 48.98  | 46.65  | 44.46  | 42.47  | 40.72  | 39.25  | 37.94  | 36.76  | 35.65  |
| 150.0  | 47.87  | 45.59  | 43.55  | 41.65  | 40.05  | 38.71  | 37.57  | 36.51  | 35.45  |
| 180.0  | 39.87  | 38.87  | 37.85  | 36.92  | 35.96  | 35.04  | 34.12  | 33.22  | 32.38  |
| 210.0  | 46.43  | 43.93  | 41.70  | 39.90  | 38.40  | 37.24  | 36.13  | 35.06  | 34.01  |
| 240.0  | 47.17  | 44.82  | 42.69  | 40.90  | 39.37  | 38.07  | 37.00  | 35.92  | 34.82  |
| 270.0  | 40.78  | 39.74  | 38.70  | 37.71  | 36.76  | 35.82  | 34.89  | 33.99  | 33.13  |
| 300.0  | 48.08  | 45.82  | 43.66  | 41.73  | 40.12  | 38.72  | 37.56  | 36.44  | 35.34  |
| 330.0  | 47.76  | 45.55  | 43.47  | 41.54  | 39.86  | 38.51  | 37.34  | 36.22  | 35.19  |
| 360.0  | 43.15  | 42.04  | 40.97  | 39.90  | 38.85  | 37.84  | 36.88  | 35.90  | 34.96  |
| C/γ(°) | 67.5   | 68.0   | 68.5   | 69.0   | 69.5   | 70.0   | 70.5   | 71.0   | 71.5   |
| 0.0    | 34.07  | 33.20  | 32.35  | 31.46  | 30.46  | 29.37  | 28.32  | 27.25  | 26.15  |
| 30.0   | 36.45  | 35.34  | 34.24  | 33.18  | 32.11  | 31.07  | 30.02  | 28.97  | 27.95  |
| 60.0   | 35.69  | 34.57  | 33.48  | 32.44  | 31.38  | 30.35  | 29.35  | 28.37  | 27.28  |
| 90.0   | 33.38  | 32.47  | 31.57  | 30.64  | 29.61  | 28.57  | 27.49  | 26.43  | 25.31  |
| 120.0  | 34.52  | 33.41  | 32.34  | 31.26  | 30.25  | 29.22  | 28.24  | 27.18  | 26.09  |
| 150.0  | 34.37  | 33.26  | 32.23  | 31.21  | 30.18  | 29.16  | 28.18  | 27.15  | 26.00  |
| 180.0  | 31.53  | 30.61  | 29.61  | 28.55  | 27.47  | 26.39  | 25.31  | 24.26  | 23.20  |
| 210.0  | 32.98  | 31.95  | 30.92  | 29.91  | 28.89  | 27.91  | 26.87  | 25.76  | 24.63  |
| 240.0  | 33.73  | 32.69  | 31.66  | 30.61  | 29.59  | 28.59  | 27.59  | 26.50  | 25.36  |
| 270.0  | 32.27  | 31.37  | 30.37  | 29.33  | 28.28  | 27.19  | 26.12  | 25.03  | 23.99  |
| 300.0  | 34.28  | 33.25  | 32.23  | 31.22  | 30.21  | 29.19  | 28.23  | 27.21  | 26.15  |
| 330.0  | 34.15  | 33.15  | 32.14  | 31.13  | 30.13  | 29.13  | 28.20  | 27.22  | 26.16  |
| 360.0  | 34.07  | 33.20  | 32.35  | 31.46  | 30.46  | 29.37  | 28.32  | 27.25  | 26.15  |

| C/γ(°) | 72.0  | 72.5  | 73.0  | 73.5  | 74.0  | 74.5  | 75.0  | 75.5  | 76.0  |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.0    | 25.10 | 24.07 | 23.02 | 22.01 | 21.01 | 20.05 | 19.09 | 18.11 | 17.15 |
| 30.0   | 26.89 | 25.76 | 24.64 | 23.51 | 22.40 | 21.27 | 20.16 | 19.17 | 18.15 |
| 60.0   | 26.15 | 25.02 | 23.89 | 22.80 | 21.71 | 20.66 | 19.64 | 18.61 | 17.57 |
| 90.0   | 24.26 | 23.23 | 22.19 | 21.19 | 20.20 | 19.21 | 18.22 | 17.28 | 16.37 |
| 120.0  | 24.97 | 23.87 | 22.76 | 21.69 | 20.65 | 19.62 | 18.57 | 17.57 | 16.58 |
| 150.0  | 24.86 | 23.78 | 22.67 | 21.58 | 20.50 | 19.43 | 18.39 | 17.38 | 16.41 |
| 180.0  | 22.18 | 21.14 | 20.12 | 19.16 | 18.21 | 17.23 | 16.29 | 15.39 | 14.51 |
| 210.0  | 23.55 | 22.44 | 21.37 | 20.30 | 19.23 | 18.19 | 17.17 | 16.22 | 15.27 |
| 240.0  | 24.23 | 23.10 | 21.97 | 20.86 | 19.82 | 18.74 | 17.69 | 16.67 | 15.67 |
| 270.0  | 22.95 | 21.91 | 20.89 | 19.91 | 18.92 | 17.96 | 17.00 | 16.07 | 15.18 |
| 300.0  | 25.03 | 23.94 | 22.82 | 21.71 | 20.62 | 19.58 | 18.53 | 17.50 | 16.50 |
| 330.0  | 25.09 | 24.00 | 22.91 | 21.81 | 20.72 | 19.69 | 18.66 | 17.67 | 16.71 |
| 360.0  | 25.10 | 24.07 | 23.02 | 22.01 | 21.01 | 20.05 | 19.09 | 18.11 | 17.15 |
| C/γ(°) | 76.5  | 77.0  | 77.5  | 78.0  | 78.5  | 79.0  | 79.5  | 80.0  | 80.5  |
| 0.0    | 16.22 | 15.35 | 14.47 | 13.61 | 12.71 | 11.87 | 11.10 | 10.33 | 9.53  |
| 30.0   | 17.12 | 16.11 | 15.13 | 14.21 | 13.31 | 12.47 | 11.65 | 10.84 | 10.06 |
| 60.0   | 16.59 | 15.66 | 14.71 | 13.82 | 12.93 | 12.02 | 11.20 | 10.39 | 9.59  |
| 90.0   | 15.47 | 14.57 | 13.68 | 12.87 | 12.07 | 11.33 | 10.56 | 9.80  | 9.08  |
| 120.0  | 15.65 | 14.72 | 13.81 | 12.95 | 12.06 | 11.19 | 10.38 | 9.62  | 8.88  |
| 150.0  | 15.46 | 14.49 | 13.57 | 12.69 | 11.87 | 11.10 | 10.30 | 9.53  | 8.77  |
| 180.0  | 13.62 | 12.80 | 12.01 | 11.23 | 10.47 | 9.72  | 8.99  | 8.27  | 7.60  |
| 210.0  | 14.35 | 13.44 | 12.54 | 11.67 | 10.89 | 10.08 | 9.27  | 8.50  | 7.79  |
| 240.0  | 14.72 | 13.77 | 12.86 | 12.02 | 11.22 | 10.44 | 9.63  | 8.87  | 8.13  |
| 270.0  | 14.29 | 13.44 | 12.59 | 11.76 | 10.94 | 10.16 | 9.43  | 8.69  | 7.99  |
| 300.0  | 15.53 | 14.57 | 13.64 | 12.73 | 11.91 | 11.13 | 10.32 | 9.54  | 8.78  |
| 330.0  | 15.77 | 14.84 | 13.90 | 12.99 | 12.14 | 11.31 | 10.50 | 9.69  | 8.93  |
| 360.0  | 16.22 | 15.35 | 14.47 | 13.61 | 12.71 | 11.87 | 11.10 | 10.33 | 9.53  |
| C/γ(°) | 81.0  | 81.5  | 82.0  | 82.5  | 83.0  | 83.5  | 84.0  | 84.5  | 85.0  |
| 0.0    | 8.73  | 7.97  | 7.22  | 6.55  | 5.89  | 5.28  | 4.73  | 4.21  | 3.74  |
| 30.0   | 9.29  | 8.52  | 7.75  | 6.98  | 6.26  | 5.55  | 4.88  | 4.25  | 3.68  |
| 60.0   | 8.87  | 8.18  | 7.48  | 6.82  | 6.19  | 5.60  | 5.03  | 4.45  | 3.93  |
| 90.0   | 8.37  | 7.69  | 7.03  | 6.42  | 5.81  | 5.23  | 4.68  | 4.14  | 3.63  |
| 120.0  | 8.17  | 7.48  | 6.83  | 6.21  | 5.61  | 5.03  | 4.47  | 3.95  | 3.47  |
| 150.0  | 8.03  | 7.35  | 6.71  | 6.03  | 5.37  | 4.72  | 4.09  | 3.49  | 2.93  |
| 180.0  | 6.92  | 6.21  | 5.54  | 4.90  | 4.29  | 3.74  | 3.24  | 2.80  | 2.42  |
| 210.0  | 7.11  | 6.46  | 5.81  | 5.16  | 4.51  | 3.92  | 3.34  | 2.81  | 2.39  |
| 240.0  | 7.42  | 6.76  | 6.11  | 5.50  | 4.91  | 4.34  | 3.83  | 3.33  | 2.84  |
| 270.0  | 7.34  | 6.72  | 6.09  | 5.50  | 4.95  | 4.42  | 3.90  | 3.43  | 2.97  |
| 300.0  | 8.06  | 7.35  | 6.69  | 6.05  | 5.45  | 4.85  | 4.31  | 3.77  | 3.27  |
| 330.0  | 8.20  | 7.42  | 6.67  | 5.97  | 5.28  | 4.64  | 4.01  | 3.50  | 3.05  |
| 360.0  | 8.73  | 7.97  | 7.22  | 6.55  | 5.89  | 5.28  | 4.73  | 4.21  | 3.74  |
| C/γ(°) | 85.5  | 86.0  | 86.5  | 87.0  | 87.5  | 88.0  | 88.5  | 89.0  | 89.5  |
| 0.0    | 3.31  | 2.87  | 2.50  | 2.12  | 1.76  | 1.43  | 1.11  | 0.60  | 0.33  |
| 30.0   | 3.15  | 2.65  | 2.25  | 1.86  | 1.51  | 1.20  | 0.91  | 0.57  | 0.29  |
| 60.0   | 3.43  | 2.88  | 2.44  | 2.01  | 1.54  | 1.15  | 0.77  | 0.51  | 0.26  |
| 90.0   | 3.15  | 2.70  | 2.31  | 1.91  | 1.52  | 1.15  | 0.80  | 0.46  | 0.20  |
| 120.0  | 2.99  | 2.54  | 2.10  | 1.63  | 1.20  | 0.85  | 0.57  | 0.33  | 0.12  |
| 150.0  | 2.46  | 2.03  | 1.66  | 1.32  | 1.01  | 0.74  | 0.48  | 0.17  | 0.03  |
| 180.0  | 2.04  | 1.67  | 1.34  | 1.01  | 0.74  | 0.40  | 0.03  | 0.00  | 0.00  |
| 210.0  | 1.99  | 1.63  | 1.30  | 1.02  | 0.75  | 0.50  | 0.22  | 0.04  | 0.00  |
| 240.0  | 2.41  | 1.92  | 1.48  | 1.07  | 0.70  | 0.41  | 0.20  | 0.00  | 0.00  |
| 270.0  | 2.58  | 2.17  | 1.78  | 1.43  | 1.11  | 0.78  | 0.50  | 0.21  | 0.00  |
| 300.0  | 2.73  | 2.25  | 1.83  | 1.44  | 1.04  | 0.67  | 0.39  | 0.17  | 0.00  |
| 330.0  | 2.62  | 2.17  | 1.80  | 1.48  | 1.16  | 0.90  | 0.62  | 0.30  | 0.10  |
| 360.0  | 3.31  | 2.87  | 2.50  | 2.12  | 1.76  | 1.43  | 1.11  | 0.60  | 0.33  |

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**Intensity data(cd)**

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|                                 |             |
|---------------------------------|-------------|
| <b>C/<math>\gamma</math>(°)</b> | <b>90.0</b> |
| <b>0.0</b>                      | <b>0.20</b> |
| <b>30.0</b>                     | <b>0.19</b> |
| <b>60.0</b>                     | <b>0.10</b> |
| <b>90.0</b>                     | <b>0.04</b> |
| <b>120.0</b>                    | <b>0.04</b> |
| <b>150.0</b>                    | <b>0.03</b> |
| <b>180.0</b>                    | <b>0.00</b> |
| <b>210.0</b>                    | <b>0.00</b> |
| <b>240.0</b>                    | <b>0.00</b> |
| <b>270.0</b>                    | <b>0.00</b> |
| <b>300.0</b>                    | <b>0.00</b> |
| <b>330.0</b>                    | <b>0.00</b> |
| <b>360.0</b>                    | <b>0.20</b> |