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## NATA

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Client:

LumCAT: 1-1382-L

Luminaire: 92.70.410.00

Report No: 2023626-B015

Ballast type: AC

Test No: 2023626-C015

Voltage(V): 35.230

LampCAT: FORTIMO SLM C 1203

Current(A): 0.282

Lamp flux(lm): 1100.8

Power (W): 9.934

Number of Lamps: 1

PF: 0.000

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

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## Photometric Results

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Lumens(lm): 1030.69, Efficiency(%): 93.63% , Luminous Efficacy(lm/W): 103.75

Central intensity(cd): 3721.851, Maximum intensity(cd): 3721.851

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=25.0

[C90/270]Total=25.0

Field angle(10%Imax): [C0/180]Total=56.8

[C90/270]Total=56.8

Maximum s/h(1/2): C0\_180=0.42 C90\_270=0.42

Maximum s/h(1/4): C0\_180=0.44 C90\_270=0.44

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 93.63%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 98.256%

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0                | 3721.852      | 0.000       | 0         | 0.00%       | 0.00%      |
| 1.0                | 3704.415      | 3.553       | 3.553     | 0.32%       | 0.34%      |
| 2.0                | 3658.402      | 10.568      | 14.121    | 0.96%       | 1.37%      |
| 3.0                | 3578.762      | 17.309      | 31.43     | 1.57%       | 3.05%      |
| 4.0                | 3463.489      | 23.573      | 55.003    | 2.14%       | 5.34%      |
| 5.0                | 3308.983      | 29.135      | 84.138    | 2.65%       | 8.16%      |
| 6.0                | 3150.326      | 33.945      | 118.083   | 3.08%       | 11.46%     |
| 7.0                | 2979.006      | 38.045      | 156.128   | 3.46%       | 15.15%     |
| 8.0                | 2774.336      | 41.176      | 197.303   | 3.74%       | 19.14%     |
| 9.0                | 2573.749      | 43.343      | 240.646   | 3.94%       | 23.35%     |
| 10.0               | 2368.387      | 44.725      | 285.371   | 4.06%       | 27.69%     |
| 11.0               | 2180.669      | 45.454      | 330.825   | 4.13%       | 32.10%     |
| 12.0               | 1960.292      | 45.267      | 376.092   | 4.11%       | 36.49%     |
| 13.0               | 1763.995      | 44.198      | 420.29    | 4.02%       | 40.78%     |
| 14.0               | 1577.273      | 42.768      | 463.058   | 3.89%       | 44.93%     |
| 15.0               | 1405.490      | 40.949      | 504.007   | 3.72%       | 48.90%     |
| 16.0               | 1225.287      | 38.548      | 542.555   | 3.50%       | 52.64%     |
| 17.0               | 1083.851      | 35.959      | 578.514   | 3.27%       | 56.13%     |
| 18.0               | 990.816       | 34.207      | 612.721   | 3.11%       | 59.45%     |
| 19.0               | 897.019       | 32.844      | 645.565   | 2.98%       | 62.63%     |
| 20.0               | 806.924       | 31.187      | 676.752   | 2.83%       | 65.66%     |
| 21.0               | 725.914       | 29.434      | 706.186   | 2.67%       | 68.52%     |
| 22.0               | 657.013       | 27.790      | 733.976   | 2.52%       | 71.21%     |
| 23.0               | 602.974       | 26.438      | 760.414   | 2.40%       | 73.78%     |
| 24.0               | 556.407       | 25.348      | 785.763   | 2.30%       | 76.24%     |
| 25.0               | 512.574       | 24.306      | 810.069   | 2.21%       | 78.60%     |
| 26.0               | 471.225       | 23.223      | 833.292   | 2.11%       | 80.85%     |
| 27.0               | 429.765       | 22.043      | 855.335   | 2.00%       | 82.99%     |
| 28.0               | 388.091       | 20.706      | 876.041   | 1.88%       | 85.00%     |
| 29.0               | 342.971       | 19.127      | 895.168   | 1.74%       | 86.85%     |
| 30.0               | 301.193       | 17.392      | 912.56    | 1.58%       | 88.54%     |
| 31.0               | 256.695       | 15.525      | 928.085   | 1.41%       | 90.05%     |
| 32.0               | 212.226       | 13.434      | 941.519   | 1.22%       | 91.35%     |
| 33.0               | 163.528       | 11.070      | 952.589   | 1.01%       | 92.42%     |
| 34.0               | 131.257       | 8.921       | 961.51    | 0.81%       | 93.29%     |
| 35.0               | 93.658        | 6.985       | 968.495   | 0.63%       | 93.97%     |
| 36.0               | 70.763        | 5.235       | 973.73    | 0.48%       | 94.47%     |
| 37.0               | 56.364        | 4.146       | 977.876   | 0.38%       | 94.88%     |

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0               | 46.082        | 3.419       | 981.296   | 0.31%       | 95.21%     |
| 39.0               | 39.945        | 2.936       | 984.232   | 0.27%       | 95.49%     |
| 40.0               | 35.911        | 2.646       | 986.878   | 0.24%       | 95.75%     |
| 41.0               | 32.437        | 2.434       | 989.312   | 0.22%       | 95.99%     |
| 42.0               | 29.407        | 2.247       | 991.559   | 0.20%       | 96.20%     |
| 43.0               | 26.563        | 2.073       | 993.632   | 0.19%       | 96.40%     |
| 44.0               | 24.203        | 1.916       | 995.548   | 0.17%       | 96.59%     |
| 45.0               | 21.712        | 1.765       | 997.312   | 0.16%       | 96.76%     |
| 46.0               | 19.374        | 1.607       | 998.919   | 0.15%       | 96.92%     |
| 47.0               | 17.305        | 1.459       | 1000.378  | 0.13%       | 97.06%     |
| 48.0               | 15.637        | 1.332       | 1001.71   | 0.12%       | 97.19%     |
| 49.0               | 14.240        | 1.227       | 1002.937  | 0.11%       | 97.31%     |
| 50.0               | 12.939        | 1.133       | 1004.07   | 0.10%       | 97.42%     |
| 51.0               | 11.943        | 1.053       | 1005.123  | 0.10%       | 97.52%     |
| 52.0               | 11.105        | 0.989       | 1006.112  | 0.09%       | 97.62%     |
| 53.0               | 10.434        | 0.937       | 1007.049  | 0.09%       | 97.71%     |
| 54.0               | 9.839         | 0.894       | 1007.942  | 0.08%       | 97.79%     |
| 55.0               | 9.313         | 0.855       | 1008.797  | 0.08%       | 97.88%     |
| 56.0               | 8.905         | 0.823       | 1009.62   | 0.07%       | 97.96%     |
| 57.0               | 8.573         | 0.799       | 1010.419  | 0.07%       | 98.03%     |
| 58.0               | 8.275         | 0.779       | 1011.199  | 0.07%       | 98.11%     |
| 59.0               | 8.040         | 0.763       | 1011.961  | 0.07%       | 98.18%     |
| 60.0               | 7.833         | 0.750       | 1012.711  | 0.07%       | 98.26%     |
| 61.0               | 7.666         | 0.740       | 1013.451  | 0.07%       | 98.33%     |
| 62.0               | 7.528         | 0.732       | 1014.183  | 0.07%       | 98.40%     |
| 63.0               | 7.383         | 0.725       | 1014.908  | 0.07%       | 98.47%     |
| 64.0               | 7.231         | 0.717       | 1015.625  | 0.07%       | 98.54%     |
| 65.0               | 7.099         | 0.709       | 1016.334  | 0.06%       | 98.61%     |
| 66.0               | 6.947         | 0.701       | 1017.035  | 0.06%       | 98.68%     |
| 67.0               | 6.795         | 0.691       | 1017.726  | 0.06%       | 98.74%     |
| 68.0               | 6.649         | 0.681       | 1018.407  | 0.06%       | 98.81%     |
| 69.0               | 6.483         | 0.670       | 1019.077  | 0.06%       | 98.87%     |
| 70.0               | 6.324         | 0.658       | 1019.735  | 0.06%       | 98.94%     |
| 71.0               | 6.151         | 0.645       | 1020.38   | 0.06%       | 99.00%     |
| 72.0               | 5.985         | 0.631       | 1021.011  | 0.06%       | 99.06%     |
| 73.0               | 5.833         | 0.618       | 1021.629  | 0.06%       | 99.12%     |
| 74.0               | 5.674         | 0.605       | 1022.234  | 0.05%       | 99.18%     |
| 75.0               | 5.535         | 0.592       | 1022.826  | 0.05%       | 99.24%     |

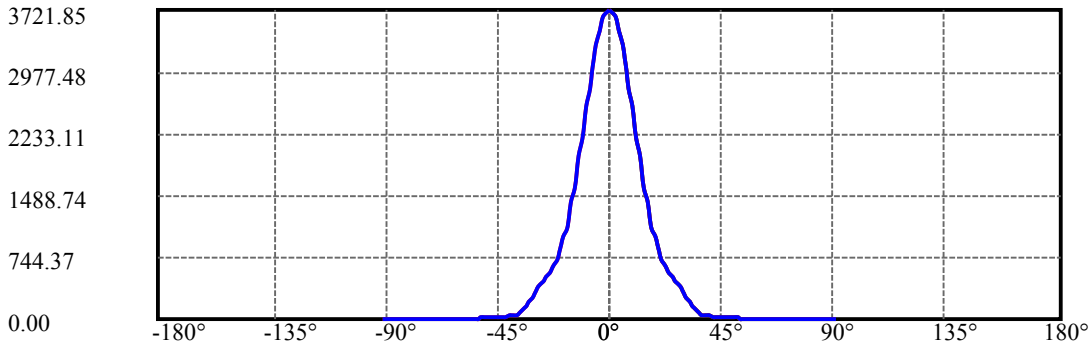
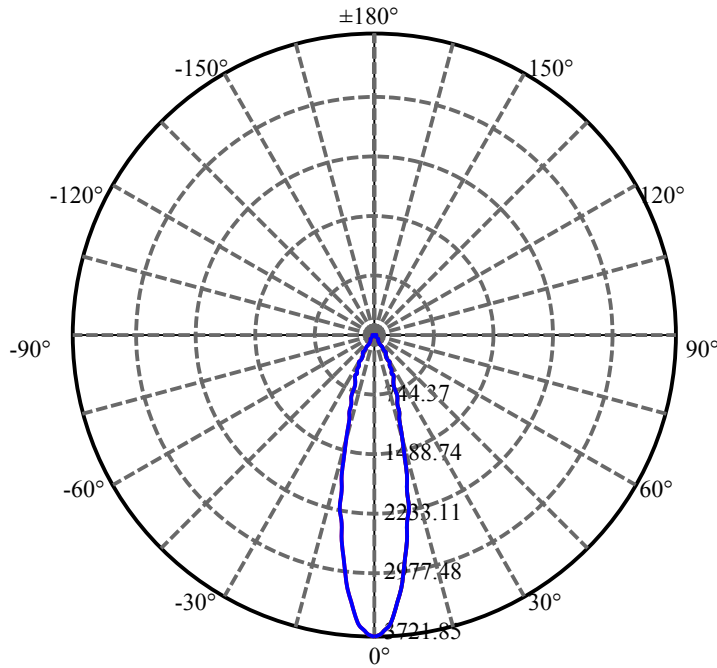
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0               | 5.397         | 0.580       | 1023.406  | 0.05%       | 99.29%     |
| 77.0               | 5.293         | 0.570       | 1023.976  | 0.05%       | 99.35%     |
| 78.0               | 5.196         | 0.562       | 1024.538  | 0.05%       | 99.40%     |
| 79.0               | 5.093         | 0.553       | 1025.091  | 0.05%       | 99.46%     |
| 80.0               | 4.989         | 0.544       | 1025.634  | 0.05%       | 99.51%     |
| 81.0               | 4.913         | 0.535       | 1026.169  | 0.05%       | 99.56%     |
| 82.0               | 4.823         | 0.528       | 1026.697  | 0.05%       | 99.61%     |
| 83.0               | 4.747         | 0.520       | 1027.218  | 0.05%       | 99.66%     |
| 84.0               | 4.670         | 0.513       | 1027.731  | 0.05%       | 99.71%     |
| 85.0               | 4.608         | 0.506       | 1028.237  | 0.05%       | 99.76%     |
| 86.0               | 4.546         | 0.500       | 1028.737  | 0.05%       | 99.81%     |
| 87.0               | 4.484         | 0.494       | 1029.232  | 0.04%       | 99.86%     |
| 88.0               | 4.442         | 0.489       | 1029.721  | 0.04%       | 99.91%     |
| 89.0               | 4.408         | 0.485       | 1030.206  | 0.04%       | 99.95%     |
| 90.0               | 4.366         | 0.481       | 1030.687  | 0.04%       | 100.00%    |

ZONAL LUMEN SUMMARY

| Zone    | Lumens  | %Lamp  | %Fixt   |
|---------|---------|--------|---------|
| 0-30    | 912.56  | 82.90% | 88.54%  |
| 0-40    | 986.88  | 89.65% | 95.75%  |
| 0-60    | 1012.71 | 92.00% | 98.26%  |
| 0-90    | 1030.21 | 93.59% | 99.95%  |
| 0-120   | 1030.21 | 93.59% | 99.95%  |
| 0-180   | 1030.69 | 93.63% | 100.00% |
| 60-90   | 17.49   | 1.59%  | 1.70%   |
| 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%   |
| 0-25.62 | 824.55  | 74.91% | 80.00%  |

ZONAL LUMEN SUMMARY

|         |        |
|---------|--------|
| 0-10    | 285.37 |
| 10-20   | 391.38 |
| 20-30   | 235.81 |
| 30-40   | 74.32  |
| 40-50   | 17.19  |
| 50-60   | 8.64   |
| 60-70   | 7.02   |
| 70-80   | 5.90   |
| 80-90   | 4.57   |
| 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   |



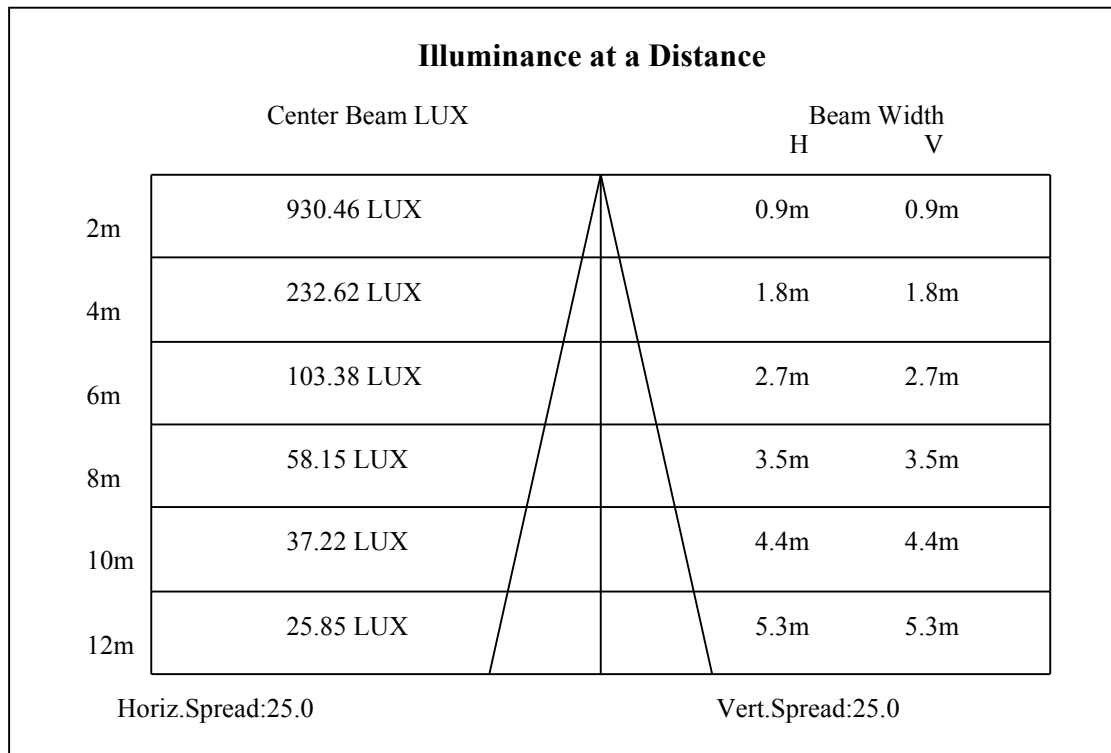
C0(Max): —————

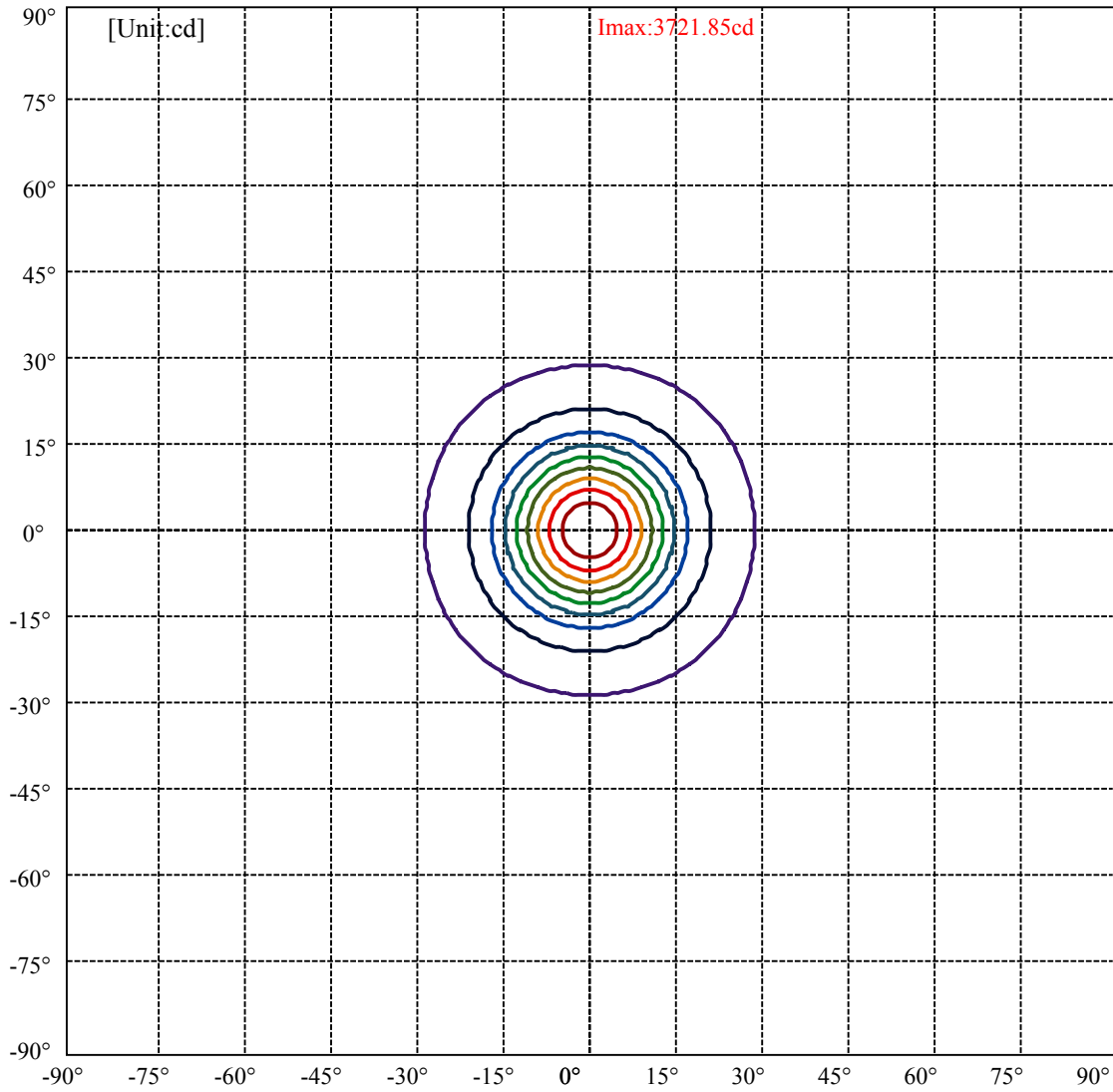
C0/C180: —————

C90/C270: —————

Field angle(10%Imax):C0/180Left:28.4 Right:28.4  
:C90/270Left:28.4 Right:28.4

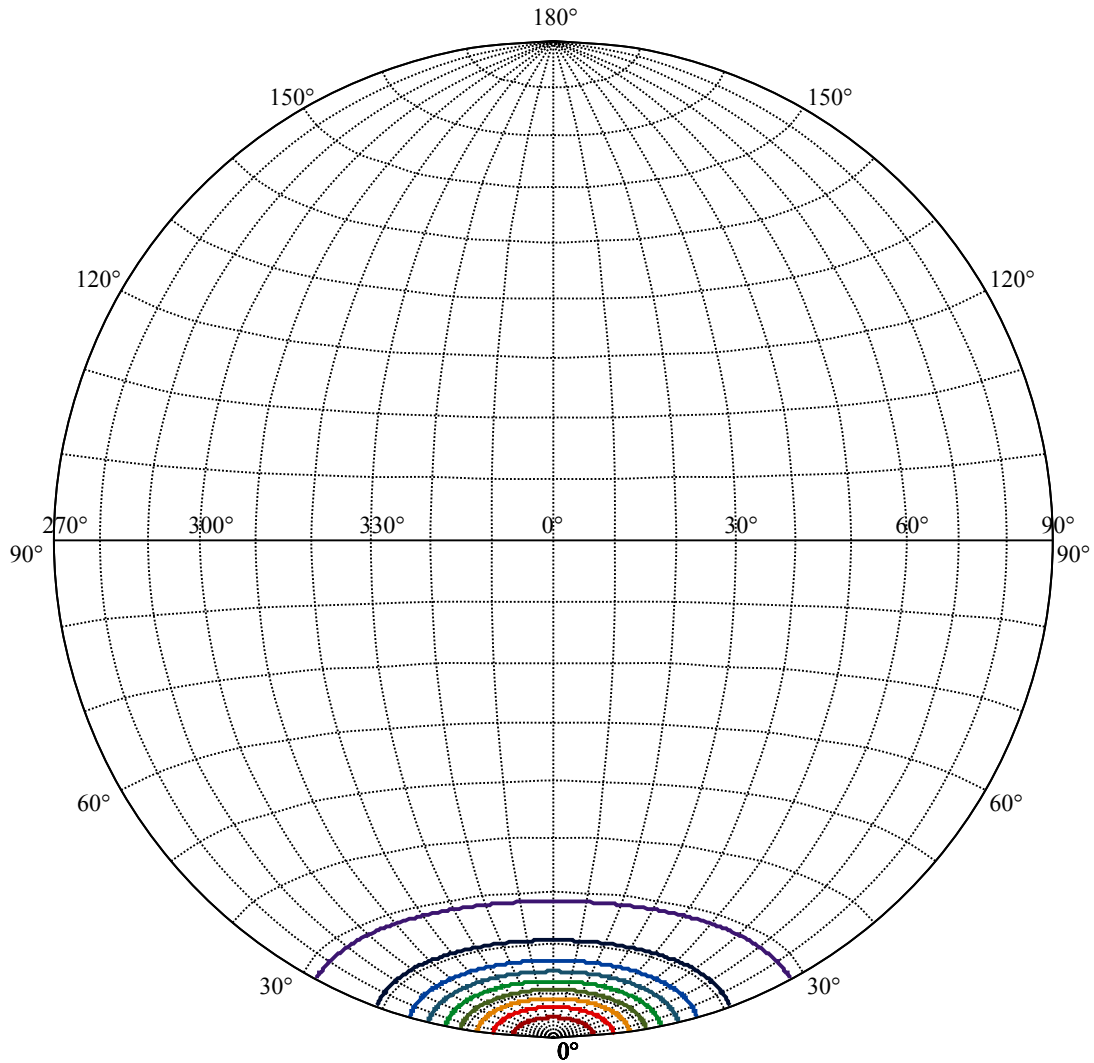
Beam Angle(50%Imax):C0/180Left:12.5 Right:12.5  
:C90/270Left:12.5 Right:12.5





|                   |   |
|-------------------|---|
| (10%Imax) 372.185 | — |
| (20%Imax) 744.37  | — |
| (30%Imax) 1116.56 | — |
| (40%Imax) 1488.74 | — |
| (50%Imax) 1860.93 | — |
| (60%Imax) 2233.11 | — |
| (70%Imax) 2605.3  | — |
| (80%Imax) 2977.48 | — |
| (90%Imax) 3349.67 | — |





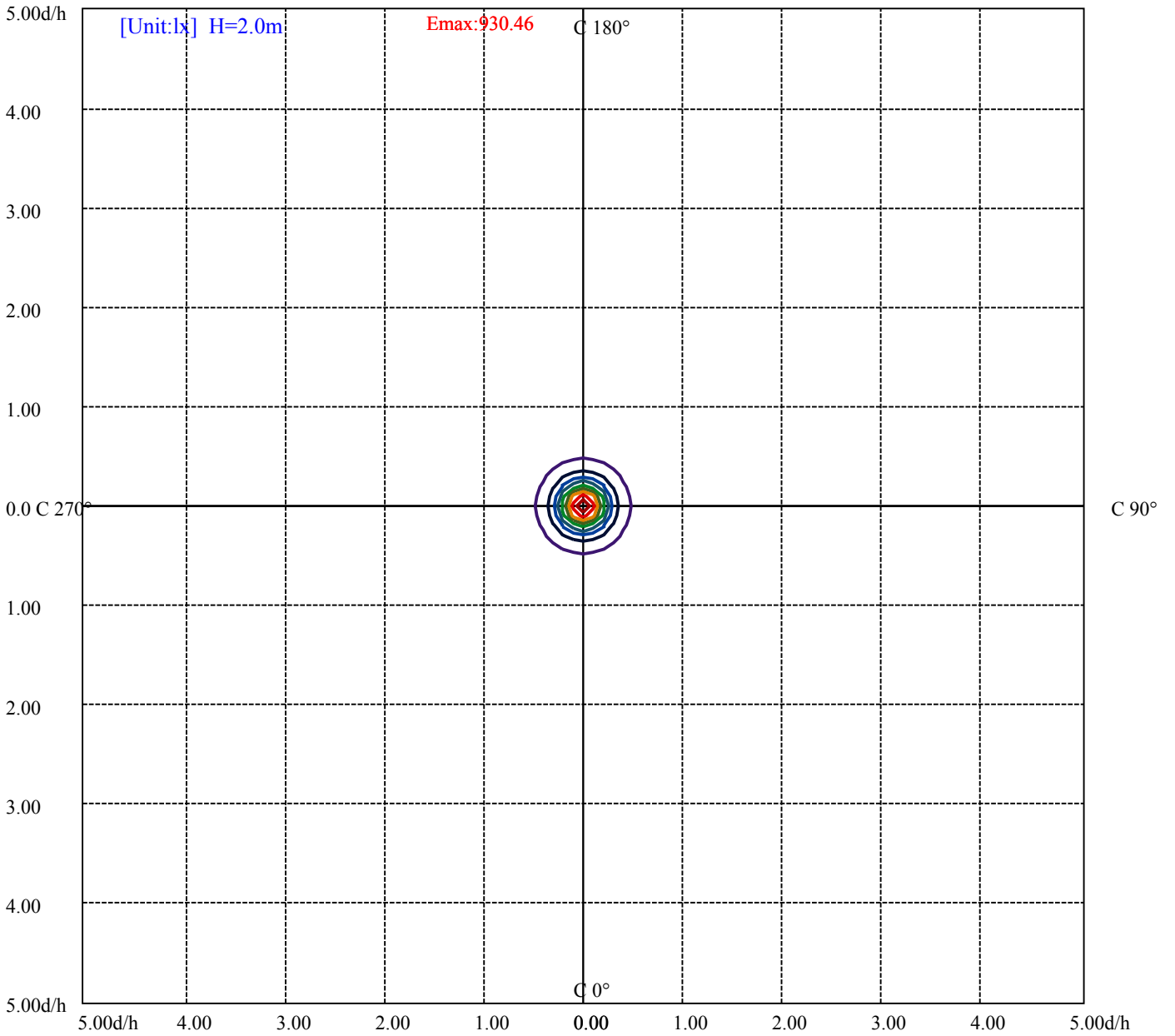
House

[Unit:cd]

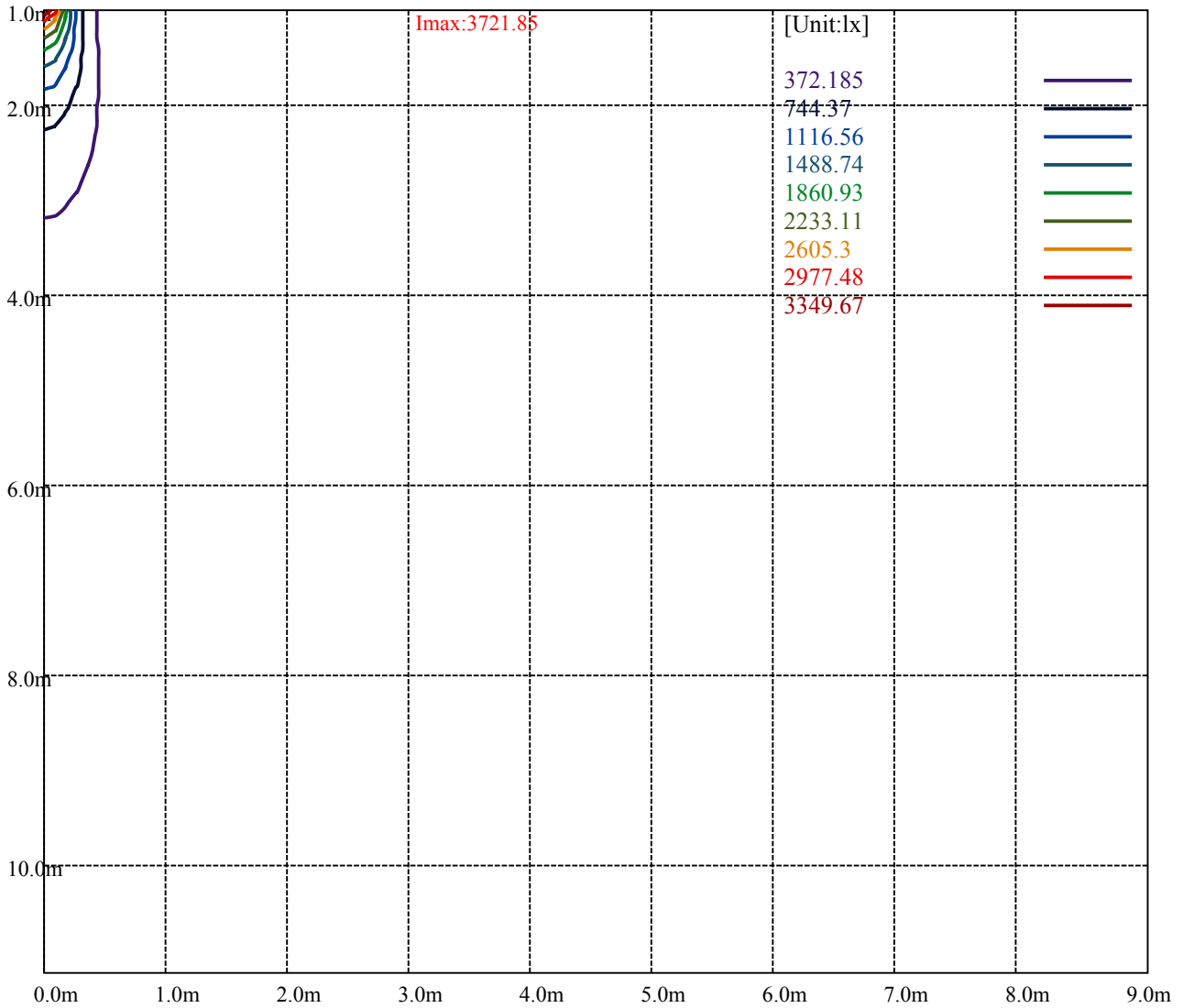
Road

**Imax:3721.85**

|           |         |   |
|-----------|---------|---|
| (10%Imax) | 372.185 | — |
| (20%Imax) | 744.37  | — |
| (30%Imax) | 1116.56 | — |
| (40%Imax) | 1488.74 | — |
| (50%Imax) | 1860.93 | — |
| (60%Imax) | 2233.11 | — |
| (70%Imax) | 2605.3  | — |
| (80%Imax) | 2977.48 | — |
| (90%Imax) | 3349.67 | — |



|                    |   |
|--------------------|---|
| (10%Emax) 93.04625 | — |
| (20%Emax) 186.0925 | — |
| (30%Emax) 279.1375 | — |
| (40%Emax) 372.185  | — |
| (50%Emax) 465.23   | — |
| (60%Emax) 558.2775 | — |
| (70%Emax) 651.3225 | — |
| (80%Emax) 744.37   | — |
| (90%Emax) 837.415  | — |



Luminance Table

| $\gamma$ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|----------|----|----|----|----|----|----|----|----|----|
| C0       | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| C45      | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| C90      | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |

| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 0          | 0          | 0       | 0          | 0          | 0       | 0          | 0          | 0       |

Glare Table

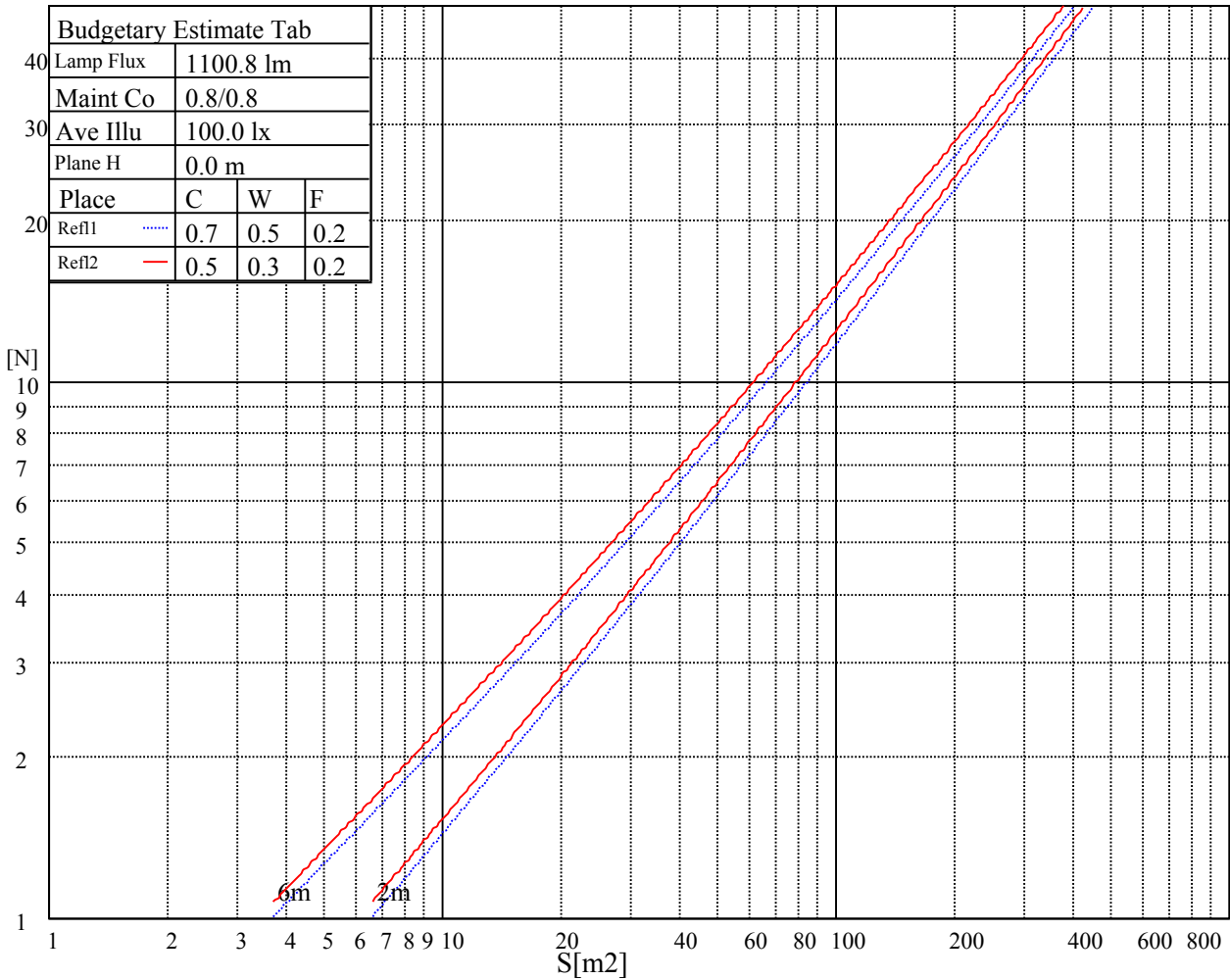
| Glare | Quality | Service Values Illuminance(lx) |      |      |       |       |       |       |       |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15  | A       | 2000                           | 1000 | 500  | <=300 |       |    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

Luminance Limiting Curve

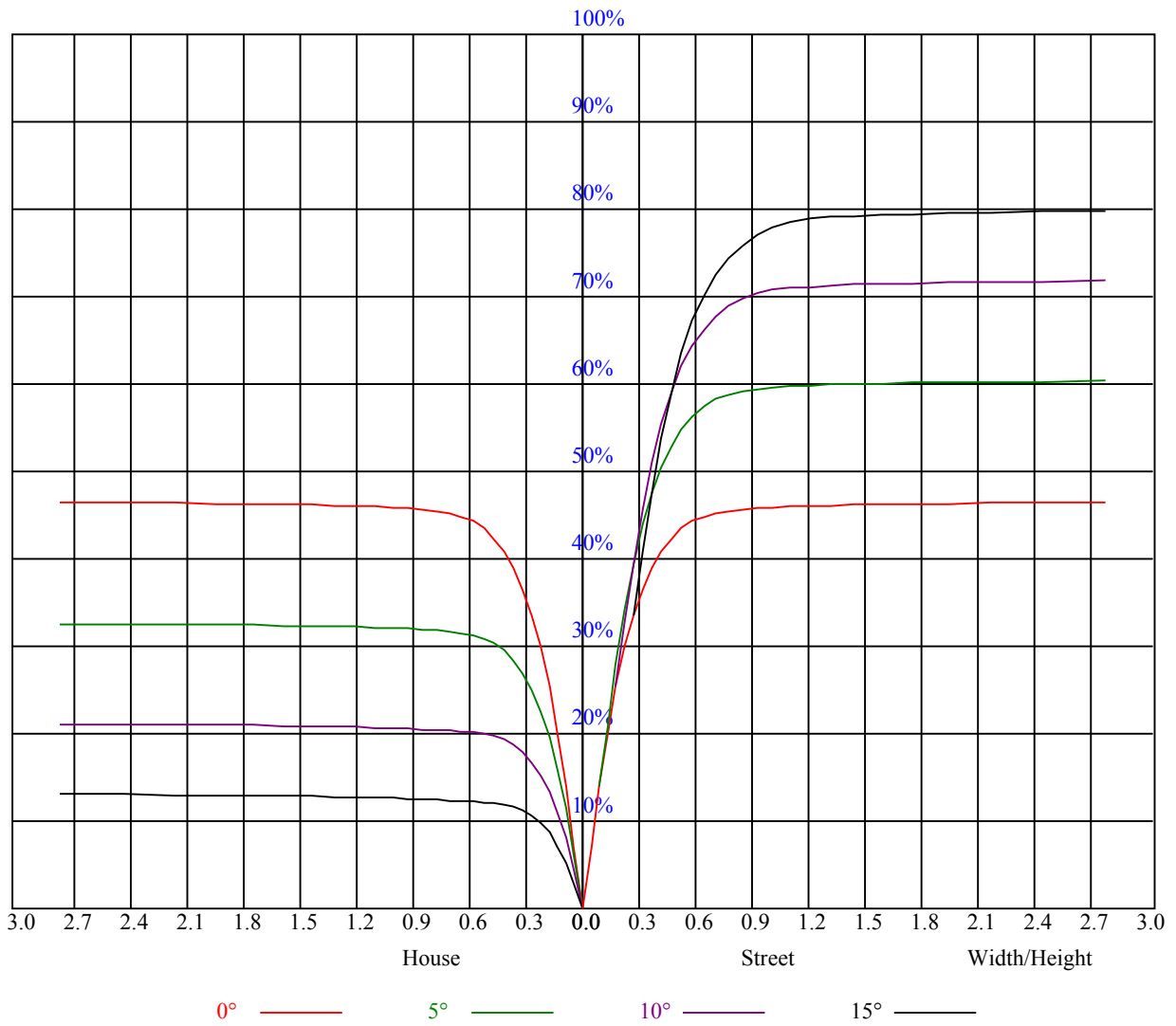


| Illumination assessment according UGR             |     |                  |     |     |     |     |                |     |     |     |  |
|---|-----|------------------|-----|-----|-----|-----|----------------|-----|-----|-----|--|
| Rf of Ceiling                                     | 70  | 70               | 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  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 3H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 4H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 6H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 8H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 12H | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
| 4H  | 2H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 3H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 4H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 6H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 8H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
| 8H  | 12H | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 4H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 6H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 8H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
| 12H   | 12H | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 4H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 6H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 8H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
| Variation with the observer position at spacings: |     |                  |     |     |     |     |                |     |     |     |  |
| S = 1.0H  |     | 非数字/非数字          |     |     |     |     | 非数字/非数字        |     |     |     |  |
| S = 1.5H  |     | 非数字/非数字          |     |     |     |     | 非数字/非数字        |     |     |     |  |
| S = 2.0H  |     | 非数字/非数字          |     |     |     |     | 非数字/非数字        |     |     |     |  |
| Standard tables:                                  |     | BK0              |     |     |     |     | BK0            |     |     |     |  |
| Uncorrected UGR                                   |     | 负无穷大             |     |     |     |     | 负无穷大           |     |     |     |  |

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



| RHOCC | 80                                      |      |      | 70   |      |      | 50   |      |      | 30   |      |      | 10   |      |      | 0    |
|-------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| RHOW  | 50                                      | 30   | 10   | 50   | 30   | 10   | 50   | 30   | 10   | 50   | 30   | 10   | 50   | 30   | 10   | 0    |
| RCR   | COEFFICIENTS OF UTILIZATION RHOFC=20 CU |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 0     | 1.11                                    | 1.11 | 1.11 | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | 0.96 | 0.96 | 0.96 | 0.94 |
| 1     | 1.05                                    | 1.03 | 1.01 | 1.03 | 1.01 | 0.99 | 0.99 | 0.97 | 0.96 | 0.95 | 0.94 | 0.93 | 0.92 | 0.91 | 0.91 | 0.89 |
| 2     | 0.99                                    | 0.96 | 0.93 | 0.97 | 0.94 | 0.92 | 0.94 | 0.92 | 0.90 | 0.92 | 0.90 | 0.88 | 0.89 | 0.88 | 0.86 | 0.85 |
| 3     | 0.94                                    | 0.90 | 0.87 | 0.93 | 0.89 | 0.86 | 0.90 | 0.87 | 0.85 | 0.88 | 0.86 | 0.84 | 0.86 | 0.84 | 0.82 | 0.81 |
| 4     | 0.89                                    | 0.85 | 0.82 | 0.88 | 0.84 | 0.81 | 0.86 | 0.83 | 0.81 | 0.85 | 0.82 | 0.80 | 0.83 | 0.81 | 0.79 | 0.77 |
| 5     | 0.85                                    | 0.81 | 0.78 | 0.85 | 0.81 | 0.77 | 0.83 | 0.79 | 0.77 | 0.82 | 0.79 | 0.76 | 0.80 | 0.78 | 0.75 | 0.74 |
| 6     | 0.82                                    | 0.77 | 0.74 | 0.81 | 0.77 | 0.74 | 0.80 | 0.76 | 0.73 | 0.79 | 0.75 | 0.73 | 0.78 | 0.75 | 0.73 | 0.71 |
| 7     | 0.79                                    | 0.74 | 0.71 | 0.78 | 0.74 | 0.71 | 0.77 | 0.73 | 0.70 | 0.76 | 0.73 | 0.70 | 0.75 | 0.72 | 0.70 | 0.69 |
| 8     | 0.76                                    | 0.71 | 0.68 | 0.75 | 0.71 | 0.68 | 0.74 | 0.70 | 0.68 | 0.73 | 0.70 | 0.68 | 0.73 | 0.70 | 0.67 | 0.66 |
| 9     | 0.73                                    | 0.69 | 0.66 | 0.73 | 0.68 | 0.66 | 0.72 | 0.68 | 0.65 | 0.71 | 0.68 | 0.65 | 0.70 | 0.67 | 0.65 | 0.64 |
| 10    | 0.70                                    | 0.66 | 0.63 | 0.70 | 0.66 | 0.63 | 0.69 | 0.66 | 0.63 | 0.69 | 0.65 | 0.63 | 0.68 | 0.65 | 0.63 | 0.62 |





Intensity data(cd)

|        |         |         |         |         |         |         |         |         |         |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| C/γ(°) | 0.0     | 1.0     | 2.0     | 3.0     | 4.0     | 5.0     | 6.0     | 7.0     | 8.0     |
| 0.0    | 3766.20 | 3756.24 | 3716.39 | 3622.84 | 3514.90 | 3352.16 | 3201.04 | 3034.43 | 2856.19 |
| 45.0   | 3734.65 | 3714.72 | 3679.85 | 3605.12 | 3479.47 | 3349.39 | 3197.72 | 3031.66 | 2802.50 |
| 90.0   | 3660.48 | 3561.95 | 3442.94 | 3300.68 | 3140.71 | 2917.08 | 2739.95 | 2546.76 | 2357.45 |
| 135.0  | 3719.71 | 3648.85 | 3547.00 | 3422.46 | 3228.17 | 3056.57 | 2870.58 | 2684.04 | 2444.91 |
| 180.0  | 3766.20 | 3744.62 | 3686.49 | 3600.70 | 3489.44 | 3312.30 | 3150.67 | 2971.33 | 2784.23 |
| 225.0  | 3734.65 | 3716.39 | 3658.26 | 3571.91 | 3457.33 | 3276.32 | 3107.50 | 2924.28 | 2694.56 |
| 270.0  | 3660.48 | 3718.60 | 3747.38 | 3746.83 | 3706.42 | 3606.79 | 3491.10 | 3348.84 | 3131.30 |
| 315.0  | 3732.44 | 3773.95 | 3788.90 | 3759.56 | 3691.48 | 3601.25 | 3444.05 | 3290.72 | 3123.55 |
| 360.0  | 3766.20 | 3756.24 | 3716.39 | 3622.84 | 3514.90 | 3352.16 | 3201.04 | 3034.43 | 2856.19 |
| C/γ(°) | 9.0     | 10.0    | 11.0    | 12.0    | 13.0    | 14.0    | 15.0    | 16.0    | 17.0    |
| 0.0    | 2626.47 | 2434.40 | 2241.21 | 2005.96 | 1812.22 | 1631.77 | 1465.15 | 1090.69 | 1090.69 |
| 45.0   | 2624.26 | 2384.58 | 2199.70 | 1962.78 | 1775.13 | 1598.56 | 1430.28 | 1280.27 | 1117.53 |
| 90.0   | 2124.97 | 1935.66 | 1751.89 | 1531.58 | 1254.26 | 1089.52 | 1058.14 | 950.86  | 860.42  |
| 135.0  | 2259.48 | 2076.81 | 1891.38 | 1669.96 | 1505.01 | 1347.80 | 1172.89 | 1052.22 | 921.58  |
| 180.0  | 2546.76 | 2355.79 | 2160.40 | 1922.38 | 1736.94 | 1562.58 | 1367.73 | 1234.33 | 1088.75 |
| 225.0  | 2505.25 | 2267.78 | 2085.11 | 1903.00 | 1728.08 | 1516.08 | 1259.24 | 1101.43 | 1101.43 |
| 270.0  | 2960.26 | 2784.78 | 2597.69 | 2360.78 | 2168.15 | 1975.51 | 1784.54 | 1564.79 | 1402.60 |
| 315.0  | 2942.54 | 2707.29 | 2517.98 | 2325.90 | 2132.17 | 1896.36 | 1705.94 | 1527.70 | 1087.81 |
| 360.0  | 2626.47 | 2434.40 | 2241.21 | 2005.96 | 1812.22 | 1631.77 | 1465.15 | 1090.69 | 1090.69 |
| C/γ(°) | 18.0    | 19.0    | 20.0    | 21.0    | 22.0    | 23.0    | 24.0    | 25.0    | 26.0    |
| 0.0    | 1037.05 | 908.96  | 819.12  | 740.24  | 655.50  | 599.87  | 554.09  | 507.21  | 473.00  |
| 45.0   | 1005.72 | 907.74  | 823.05  | 733.38  | 671.38  | 618.24  | 565.10  | 527.46  | 490.93  |
| 90.0   | 764.16  | 697.34  | 641.60  | 591.95  | 542.74  | 507.15  | 470.51  | 430.76  | 377.12  |
| 135.0  | 834.68  | 757.18  | 690.76  | 618.80  | 568.43  | 529.13  | 489.82  | 441.67  | 398.49  |
| 180.0  | 983.58  | 887.26  | 798.14  | 723.97  | 647.03  | 595.00  | 551.82  | 515.29  | 471.00  |
| 225.0  | 961.49  | 867.89  | 786.02  | 713.84  | 642.88  | 594.72  | 545.73  | 510.97  | 477.70  |
| 270.0  | 1252.04 | 1091.52 | 975.28  | 854.05  | 774.34  | 704.60  | 652.56  | 592.78  | 555.69  |
| 315.0  | 1087.81 | 1058.25 | 921.42  | 831.08  | 753.81  | 675.09  | 621.62  | 574.46  | 525.86  |
| 360.0  | 1037.05 | 908.96  | 819.12  | 740.24  | 655.50  | 599.87  | 554.09  | 507.21  | 473.00  |
| C/γ(°) | 27.0    | 28.0    | 29.0    | 30.0    | 31.0    | 32.0    | 33.0    | 34.0    | 35.0    |
| 0.0    | 435.25  | 396.44  | 342.64  | 296.53  | 251.19  | 208.35  | 157.15  | 120.23  | 91.61   |
| 45.0   | 440.01  | 395.72  | 340.37  | 295.53  | 285.02  | 285.02  | 154.66  | 119.79  | 90.28   |
| 90.0   | 333.62  | 289.28  | 234.81  | 193.41  | 155.88  | 114.64  | 87.18   | 66.92   | 53.19   |
| 135.0  | 353.10  | 298.30  | 287.78  | 287.78  | 160.08  | 124.93  | 94.43   | 66.20   | 53.03   |
| 180.0  | 431.70  | 389.63  | 334.83  | 288.89  | 288.89  | 181.34  | 139.27  | 97.75   | 73.51   |
| 225.0  | 428.99  | 384.98  | 338.54  | 280.92  | 235.31  | 191.74  | 151.39  | 107.05  | 79.21   |
| 270.0  | 521.93  | 489.82  | 443.33  | 399.04  | 354.21  | 312.14  | 288.89  | 288.89  | 163.57  |
| 315.0  | 493.53  | 460.54  | 421.46  | 367.44  | 322.99  | 279.65  | 235.25  | 183.22  | 144.86  |
| 360.0  | 435.25  | 396.44  | 342.64  | 296.53  | 251.19  | 208.35  | 157.15  | 120.23  | 91.61   |
| C/γ(°) | 36.0    | 37.0    | 38.0    | 39.0    | 40.0    | 41.0    | 42.0    | 43.0    | 44.0    |
| 0.0    | 66.42   | 54.47   | 45.83   | 40.63   | 36.64   | 33.32   | 30.00   | 27.51   | 25.19   |
| 45.0   | 69.41   | 54.69   | 48.27   | 43.01   | 38.53   | 34.04   | 31.00   | 27.79   | 25.46   |
| 90.0   | 47.11   | 42.12   | 38.03   | 33.93   | 31.11   | 28.56   | 26.07   | 22.97   | 20.59   |
| 135.0  | 45.61   | 39.58   | 35.54   | 32.33   | 29.61   | 26.68   | 24.41   | 22.14   | 19.93   |
| 180.0  | 56.18   | 46.72   | 40.46   | 36.42   | 33.10   | 30.28   | 27.18   | 24.69   | 22.47   |
| 225.0  | 59.67   | 48.77   | 41.68   | 37.64   | 33.54   | 30.78   | 28.17   | 25.08   | 22.69   |
| 270.0  | 119.29  | 88.68   | 60.94   | 49.82   | 44.28   | 39.63   | 35.43   | 32.60   | 29.95   |
| 315.0  | 102.40  | 75.89   | 57.90   | 45.78   | 40.46   | 36.20   | 32.99   | 29.72   | 27.34   |
| 360.0  | 66.42   | 54.47   | 45.83   | 40.63   | 36.64   | 33.32   | 30.00   | 27.51   | 25.19   |

Intensity data(cd)

|        |       |       |       |       |       |       |       |       |       |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C/γ(°) | 45.0  | 46.0  | 47.0  | 48.0  | 49.0  | 50.0  | 51.0  | 52.0  | 53.0  |
| 0.0    | 22.69 | 19.65 | 17.66 | 16.16 | 14.45 | 13.28 | 12.34 | 11.35 | 10.74 |
| 45.0   | 23.08 | 20.15 | 18.10 | 16.55 | 15.11 | 13.51 | 12.51 | 11.68 | 10.96 |
| 90.0   | 18.05 | 16.44 | 15.06 | 13.51 | 12.51 | 11.62 | 10.79 | 10.19 | 9.69  |
| 135.0  | 17.33 | 15.72 | 13.95 | 12.79 | 11.73 | 10.68 | 10.07 | 9.52  | 9.13  |
| 180.0  | 19.60 | 17.44 | 15.67 | 13.89 | 12.73 | 11.73 | 10.74 | 10.19 | 9.63  |
| 225.0  | 20.31 | 18.16 | 16.00 | 14.56 | 13.28 | 12.23 | 11.13 | 10.46 | 9.85  |
| 270.0  | 27.51 | 24.58 | 22.03 | 19.76 | 17.88 | 15.94 | 14.61 | 13.17 | 12.23 |
| 315.0  | 25.13 | 22.86 | 19.98 | 17.88 | 16.22 | 14.50 | 13.34 | 12.29 | 11.24 |
| 360.0  | 22.69 | 19.65 | 17.66 | 16.16 | 14.45 | 13.28 | 12.34 | 11.35 | 10.74 |
| C/γ(°) | 54.0  | 55.0  | 56.0  | 57.0  | 58.0  | 59.0  | 60.0  | 61.0  | 62.0  |
| 0.0    | 10.13 | 9.52  | 9.13  | 8.80  | 8.52  | 8.25  | 8.08  | 7.92  | 7.80  |
| 45.0   | 10.24 | 9.74  | 9.30  | 8.91  | 8.64  | 8.36  | 8.08  | 7.92  | 7.75  |
| 90.0   | 9.24  | 8.80  | 8.47  | 8.25  | 7.97  | 7.75  | 7.58  | 7.42  | 7.31  |
| 135.0  | 8.69  | 8.36  | 8.08  | 7.92  | 7.64  | 7.53  | 7.42  | 7.31  | 7.14  |
| 180.0  | 9.19  | 8.69  | 8.47  | 8.19  | 7.97  | 7.80  | 7.64  | 7.53  | 7.42  |
| 225.0  | 9.24  | 8.86  | 8.52  | 8.19  | 7.97  | 7.75  | 7.58  | 7.47  | 7.36  |
| 270.0  | 11.40 | 10.52 | 9.91  | 9.41  | 8.91  | 8.58  | 8.30  | 8.03  | 7.80  |
| 315.0  | 10.57 | 10.02 | 9.35  | 8.91  | 8.58  | 8.30  | 7.97  | 7.75  | 7.64  |
| 360.0  | 10.13 | 9.52  | 9.13  | 8.80  | 8.52  | 8.25  | 8.08  | 7.92  | 7.80  |
| C/γ(°) | 63.0  | 64.0  | 65.0  | 66.0  | 67.0  | 68.0  | 69.0  | 70.0  | 71.0  |
| 0.0    | 7.64  | 7.47  | 7.36  | 7.20  | 6.97  | 6.86  | 6.64  | 6.48  | 6.25  |
| 45.0   | 7.58  | 7.47  | 7.31  | 7.14  | 6.97  | 6.81  | 6.64  | 6.53  | 6.31  |
| 90.0   | 7.14  | 6.97  | 6.81  | 6.70  | 6.48  | 6.37  | 6.20  | 6.03  | 5.87  |
| 135.0  | 7.03  | 6.92  | 6.75  | 6.64  | 6.48  | 6.31  | 6.20  | 5.98  | 5.81  |
| 180.0  | 7.31  | 7.14  | 7.09  | 6.92  | 6.81  | 6.64  | 6.48  | 6.31  | 6.20  |
| 225.0  | 7.25  | 7.09  | 6.97  | 6.81  | 6.70  | 6.53  | 6.42  | 6.25  | 6.09  |
| 270.0  | 7.64  | 7.47  | 7.31  | 7.14  | 7.03  | 6.92  | 6.70  | 6.59  | 6.37  |
| 315.0  | 7.47  | 7.31  | 7.20  | 7.03  | 6.92  | 6.75  | 6.59  | 6.42  | 6.31  |
| 360.0  | 7.64  | 7.47  | 7.36  | 7.20  | 6.97  | 6.86  | 6.64  | 6.48  | 6.25  |
| C/γ(°) | 72.0  | 73.0  | 74.0  | 75.0  | 76.0  | 77.0  | 78.0  | 79.0  | 80.0  |
| 0.0    | 6.09  | 5.92  | 5.76  | 5.59  | 5.48  | 5.37  | 5.31  | 5.20  | 5.09  |
| 45.0   | 6.14  | 5.98  | 5.81  | 5.65  | 5.48  | 5.37  | 5.26  | 5.15  | 5.09  |
| 90.0   | 5.70  | 5.54  | 5.42  | 5.31  | 5.20  | 5.09  | 5.04  | 4.93  | 4.82  |
| 135.0  | 5.70  | 5.54  | 5.37  | 5.26  | 5.15  | 5.09  | 4.98  | 4.87  | 4.76  |
| 180.0  | 5.98  | 5.87  | 5.70  | 5.54  | 5.42  | 5.31  | 5.20  | 5.15  | 5.04  |
| 225.0  | 5.92  | 5.76  | 5.65  | 5.54  | 5.37  | 5.26  | 5.15  | 5.09  | 4.93  |
| 270.0  | 6.25  | 6.09  | 5.92  | 5.76  | 5.59  | 5.48  | 5.37  | 5.20  | 5.15  |
| 315.0  | 6.09  | 5.98  | 5.76  | 5.65  | 5.48  | 5.37  | 5.26  | 5.15  | 5.04  |
| 360.0  | 6.09  | 5.92  | 5.76  | 5.59  | 5.48  | 5.37  | 5.31  | 5.20  | 5.09  |
| C/γ(°) | 81.0  | 82.0  | 83.0  | 84.0  | 85.0  | 86.0  | 87.0  | 88.0  | 89.0  |
| 0.0    | 4.98  | 4.93  | 4.82  | 4.76  | 4.71  | 4.65  | 4.54  | 4.48  | 4.48  |
| 45.0   | 4.98  | 4.87  | 4.82  | 4.71  | 4.65  | 4.59  | 4.54  | 4.48  | 4.43  |
| 90.0   | 4.76  | 4.65  | 4.59  | 4.54  | 4.48  | 4.43  | 4.37  | 4.32  | 4.37  |
| 135.0  | 4.71  | 4.65  | 4.54  | 4.48  | 4.43  | 4.37  | 4.43  | 4.26  | 4.37  |
| 180.0  | 4.93  | 4.87  | 4.82  | 4.71  | 4.65  | 4.59  | 4.48  | 4.59  | 4.43  |
| 225.0  | 4.93  | 4.87  | 4.76  | 4.71  | 4.59  | 4.54  | 4.48  | 4.48  | 4.37  |
| 270.0  | 5.04  | 4.93  | 4.87  | 4.76  | 4.71  | 4.65  | 4.54  | 4.48  | 4.43  |
| 315.0  | 4.98  | 4.82  | 4.76  | 4.71  | 4.65  | 4.54  | 4.48  | 4.43  | 4.37  |
| 360.0  | 4.98  | 4.93  | 4.82  | 4.76  | 4.71  | 4.65  | 4.54  | 4.48  | 4.48  |

Intensity data(cd)

|        |      |
|--------|------|
| C/γ(°) | 90.0 |
| 0.0    | 4.43 |
| 45.0   | 4.37 |
| 90.0   | 4.32 |
| 135.0  | 4.32 |
| 180.0  | 4.43 |
| 225.0  | 4.37 |
| 270.0  | 4.37 |
| 315.0  | 4.32 |
| 360.0  | 4.43 |