



NATA LIGHTING CO.,LTD.  
www.nata.cn  
Email:info@nata.com  
Tel:+86-750-3770000 Fax:+86-750-3771111  
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

NT

Client:

LumCAT: 2-2645-L

Luminaire: 92.70.411.00

Report No: 20231027-B012

Ballast type: AC

Test No: 20231027-C012

Voltage(V): 34.610

LampCAT: Fortimo\_SLM\_C\_1208

Current(A): 0.600

Lamp flux(lm): 3391.2

Power (W): 20.766

Number of Lamps: 1

PF: 0.000

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

### Photometric Results

Lumens(lm): 3173.20, Efficiency(%): 93.57% , Luminous Efficacy(lm/W): 152.81

Central intensity(cd): 6770.299, Maximum intensity(cd): 6770.299

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

Beam Angle(50%Imax): [C0/180]Total=39.8

[C90/270]Total=39.8

Field angle(10%Imax): [C0/180]Total=63.6

[C90/270]Total=63.6

Maximum s/h(1/2): C0\_180=0.65 C90\_270=0.65

Maximum s/h(1/4): C0\_180=0.63 C90\_270=0.63

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 93.57%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 98.137%

Equipment: GMS1980  
Temperature(°C): 0.0

Date: 2023/10/27  
Humidity(%): 0.0%

Operator: NT07  
Distance(m): 7.44

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0                | 6770.299      | 0.000       | 0         | 0.00%       | 0.00%      |
| 1.0                | 6759.574      | 6.474       | 6.474     | 0.19%       | 0.20%      |
| 2.0                | 6724.909      | 19.354      | 25.828    | 0.57%       | 0.81%      |
| 3.0                | 6670.178      | 32.037      | 57.865    | 0.94%       | 1.82%      |
| 4.0                | 6595.520      | 44.405      | 102.269   | 1.31%       | 3.22%      |
| 5.0                | 6500.796      | 56.340      | 158.609   | 1.66%       | 5.00%      |
| 6.0                | 6384.761      | 67.717      | 226.326   | 2.00%       | 7.13%      |
| 7.0                | 6255.372      | 78.457      | 304.783   | 2.31%       | 9.60%      |
| 8.0                | 6124.530      | 88.601      | 393.384   | 2.61%       | 12.40%     |
| 9.0                | 5968.294      | 98.006      | 491.389   | 2.89%       | 15.49%     |
| 10.0               | 5806.247      | 106.555     | 597.945   | 3.14%       | 18.84%     |
| 11.0               | 5636.242      | 114.334     | 712.279   | 3.37%       | 22.45%     |
| 12.0               | 5428.528      | 120.954     | 833.232   | 3.57%       | 26.26%     |
| 13.0               | 5220.260      | 126.374     | 959.607   | 3.73%       | 30.24%     |
| 14.0               | 4998.084      | 130.794     | 1090.401  | 3.86%       | 34.36%     |
| 15.0               | 4755.566      | 133.902     | 1224.303  | 3.95%       | 38.58%     |
| 16.0               | 4494.228      | 135.535     | 1359.838  | 4.00%       | 42.85%     |
| 17.0               | 4237.387      | 135.975     | 1495.813  | 4.01%       | 47.14%     |
| 18.0               | 3953.631      | 135.052     | 1630.865  | 3.98%       | 51.40%     |
| 19.0               | 3652.922      | 132.338     | 1763.204  | 3.90%       | 55.57%     |
| 20.0               | 3345.918      | 128.098     | 1891.302  | 3.78%       | 59.60%     |
| 21.0               | 3055.450      | 122.919     | 2014.221  | 3.62%       | 63.48%     |
| 22.0               | 2753.565      | 116.735     | 2130.956  | 3.44%       | 67.15%     |
| 23.0               | 2474.444      | 109.698     | 2240.653  | 3.23%       | 70.61%     |
| 24.0               | 2206.325      | 102.338     | 2342.992  | 3.02%       | 73.84%     |
| 25.0               | 1959.171      | 94.714      | 2437.706  | 2.79%       | 76.82%     |
| 26.0               | 1687.060      | 86.070      | 2523.776  | 2.54%       | 79.53%     |
| 27.0               | 1460.934      | 77.016      | 2600.792  | 2.27%       | 81.96%     |
| 28.0               | 1250.002      | 68.635      | 2669.427  | 2.02%       | 84.12%     |
| 29.0               | 1104.685      | 61.605      | 2731.033  | 1.82%       | 86.07%     |
| 30.0               | 951.328       | 55.512      | 2786.544  | 1.64%       | 87.82%     |
| 31.0               | 790.131       | 48.462      | 2835.007  | 1.43%       | 89.34%     |
| 32.0               | 654.134       | 41.377      | 2876.383  | 1.22%       | 90.65%     |
| 33.0               | 532.453       | 34.957      | 2911.341  | 1.03%       | 91.75%     |
| 34.0               | 434.657       | 29.268      | 2940.608  | 0.86%       | 92.67%     |
| 35.0               | 351.744       | 24.423      | 2965.031  | 0.72%       | 93.44%     |
| 36.0               | 282.151       | 20.183      | 2985.214  | 0.60%       | 94.08%     |
| 37.0               | 242.899       | 17.124      | 3002.338  | 0.50%       | 94.62%     |

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0               | 199.079       | 14.753      | 3017.091  | 0.44%       | 95.08%     |
| 39.0               | 147.109       | 11.816      | 3028.907  | 0.35%       | 95.45%     |
| 40.0               | 116.208       | 9.184       | 3038.091  | 0.27%       | 95.74%     |
| 41.0               | 96.841        | 7.587       | 3045.678  | 0.22%       | 95.98%     |
| 42.0               | 81.183        | 6.468       | 3052.145  | 0.19%       | 96.19%     |
| 43.0               | 70.555        | 5.621       | 3057.766  | 0.17%       | 96.36%     |
| 44.0               | 62.889        | 5.037       | 3062.803  | 0.15%       | 96.52%     |
| 45.0               | 56.654        | 4.594       | 3067.397  | 0.14%       | 96.67%     |
| 46.0               | 51.714        | 4.238       | 3071.635  | 0.12%       | 96.80%     |
| 47.0               | 47.867        | 3.961       | 3075.596  | 0.12%       | 96.92%     |
| 48.0               | 44.359        | 3.728       | 3079.324  | 0.11%       | 97.04%     |
| 49.0               | 41.328        | 3.519       | 3082.843  | 0.10%       | 97.15%     |
| 50.0               | 38.872        | 3.344       | 3086.187  | 0.10%       | 97.26%     |
| 51.0               | 36.665        | 3.196       | 3089.382  | 0.09%       | 97.36%     |
| 52.0               | 34.776        | 3.066       | 3092.448  | 0.09%       | 97.46%     |
| 53.0               | 33.143        | 2.954       | 3095.402  | 0.09%       | 97.55%     |
| 54.0               | 31.794        | 2.862       | 3098.265  | 0.08%       | 97.64%     |
| 55.0               | 30.521        | 2.782       | 3101.046  | 0.08%       | 97.73%     |
| 56.0               | 29.503        | 2.712       | 3103.759  | 0.08%       | 97.81%     |
| 57.0               | 28.542        | 2.654       | 3106.412  | 0.08%       | 97.90%     |
| 58.0               | 27.711        | 2.601       | 3109.014  | 0.08%       | 97.98%     |
| 59.0               | 26.936        | 2.555       | 3111.569  | 0.08%       | 98.06%     |
| 60.0               | 26.279        | 2.514       | 3114.083  | 0.07%       | 98.14%     |
| 61.0               | 25.615        | 2.476       | 3116.559  | 0.07%       | 98.22%     |
| 62.0               | 24.992        | 2.439       | 3118.998  | 0.07%       | 98.29%     |
| 63.0               | 24.404        | 2.402       | 3121.4    | 0.07%       | 98.37%     |
| 64.0               | 23.899        | 2.370       | 3123.77   | 0.07%       | 98.44%     |
| 65.0               | 23.394        | 2.340       | 3126.111  | 0.07%       | 98.52%     |
| 66.0               | 22.820        | 2.306       | 3128.417  | 0.07%       | 98.59%     |
| 67.0               | 22.356        | 2.272       | 3130.688  | 0.07%       | 98.66%     |
| 68.0               | 21.851        | 2.239       | 3132.927  | 0.07%       | 98.73%     |
| 69.0               | 21.373        | 2.205       | 3135.133  | 0.07%       | 98.80%     |
| 70.0               | 20.861        | 2.169       | 3137.302  | 0.06%       | 98.87%     |
| 71.0               | 20.405        | 2.133       | 3139.435  | 0.06%       | 98.94%     |
| 72.0               | 19.983        | 2.100       | 3141.535  | 0.06%       | 99.00%     |
| 73.0               | 19.561        | 2.068       | 3143.602  | 0.06%       | 99.07%     |
| 74.0               | 19.139        | 2.035       | 3145.637  | 0.06%       | 99.13%     |
| 75.0               | 18.744        | 2.002       | 3147.638  | 0.06%       | 99.19%     |

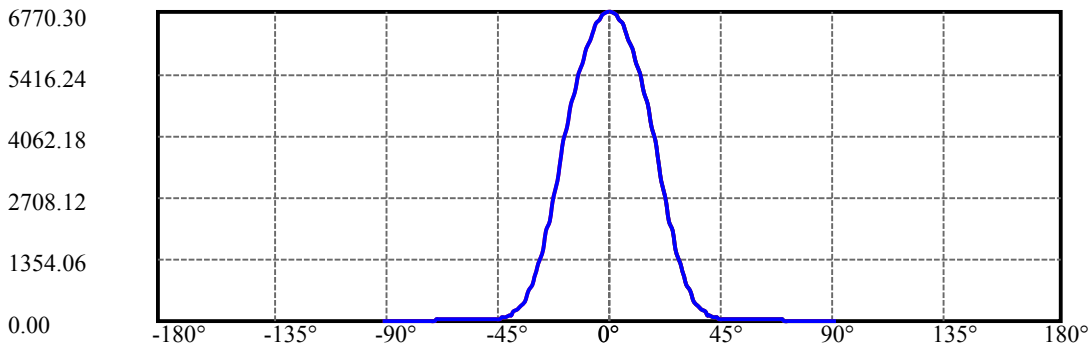
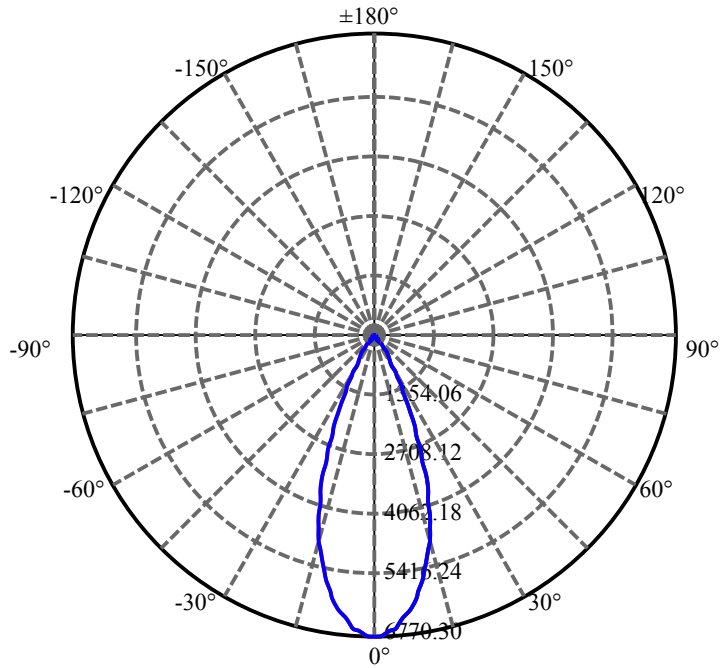
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0               | 18.336        | 1.968       | 3149.607  | 0.06%       | 99.26%     |
| 77.0               | 17.900        | 1.932       | 3151.539  | 0.06%       | 99.32%     |
| 78.0               | 17.436        | 1.892       | 3153.43   | 0.06%       | 99.38%     |
| 79.0               | 17.021        | 1.851       | 3155.282  | 0.05%       | 99.44%     |
| 80.0               | 16.634        | 1.814       | 3157.096  | 0.05%       | 99.49%     |
| 81.0               | 16.170        | 1.774       | 3158.87   | 0.05%       | 99.55%     |
| 82.0               | 15.769        | 1.732       | 3160.602  | 0.05%       | 99.60%     |
| 83.0               | 15.354        | 1.692       | 3162.294  | 0.05%       | 99.66%     |
| 84.0               | 14.994        | 1.653       | 3163.947  | 0.05%       | 99.71%     |
| 85.0               | 14.648        | 1.618       | 3165.565  | 0.05%       | 99.76%     |
| 86.0               | 14.357        | 1.585       | 3167.151  | 0.05%       | 99.81%     |
| 87.0               | 14.053        | 1.555       | 3168.705  | 0.05%       | 99.86%     |
| 88.0               | 13.762        | 1.524       | 3170.229  | 0.04%       | 99.91%     |
| 89.0               | 13.486        | 1.493       | 3171.723  | 0.04%       | 99.95%     |
| 90.0               | 13.389        | 1.473       | 3173.196  | 0.04%       | 100.00%    |

ZONAL LUMEN SUMMARY

| Zone    | Lumens  | %Lamp  | %Fixt   |
|---------|---------|--------|---------|
| 0-30    | 2786.54 | 82.17% | 87.82%  |
| 0-40    | 3038.09 | 89.59% | 95.74%  |
| 0-60    | 3114.08 | 91.83% | 98.14%  |
| 0-90    | 3171.72 | 93.53% | 99.95%  |
| 0-120   | 3171.72 | 93.53% | 99.95%  |
| 0-180   | 3173.20 | 93.57% | 100.00% |
| 60-90   | 57.64   | 1.70%  | 1.82%   |
| 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%   |
| 0-26.19 | 2538.56 | 74.86% | 80.00%  |

ZONAL LUMEN SUMMARY

|         |         |
|---------|---------|
| 0-10    | 597.94  |
| 10-20   | 1293.36 |
| 20-30   | 895.24  |
| 30-40   | 251.55  |
| 40-50   | 48.10   |
| 50-60   | 27.90   |
| 60-70   | 23.22   |
| 70-80   | 19.79   |
| 80-90   | 14.63   |
| 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: —————

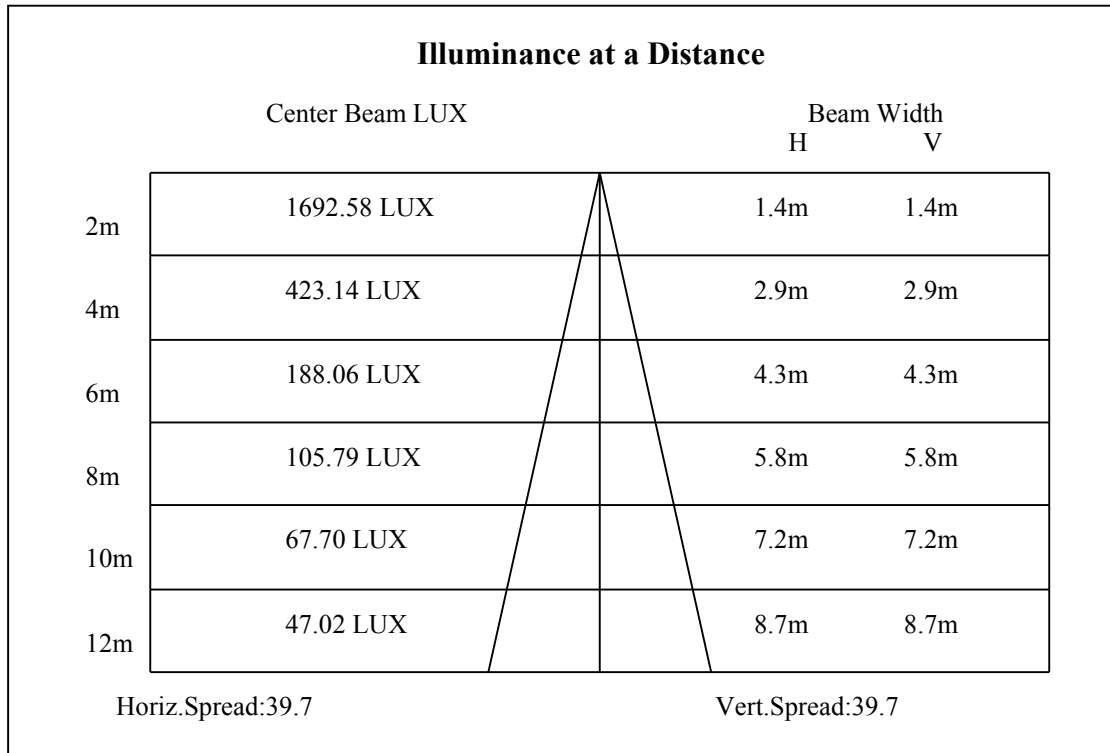
C90/C270: —————

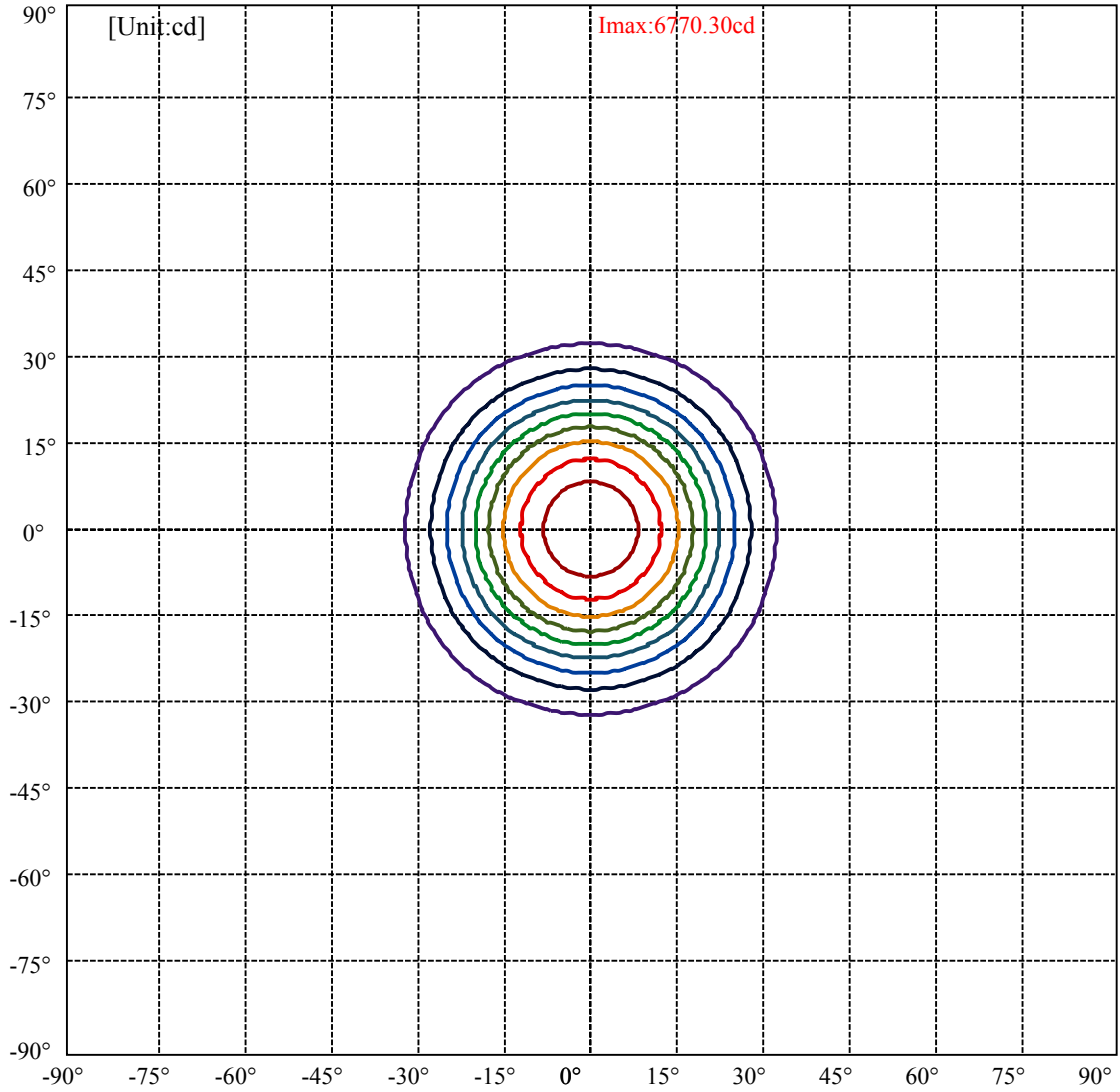
Field angle(10%Imax):C0/180Left:31.8 Right:31.8

:C90/270Left:31.8 Right:31.8

Beam Angle(50%Imax):C0/180Left:19.9 Right:19.9

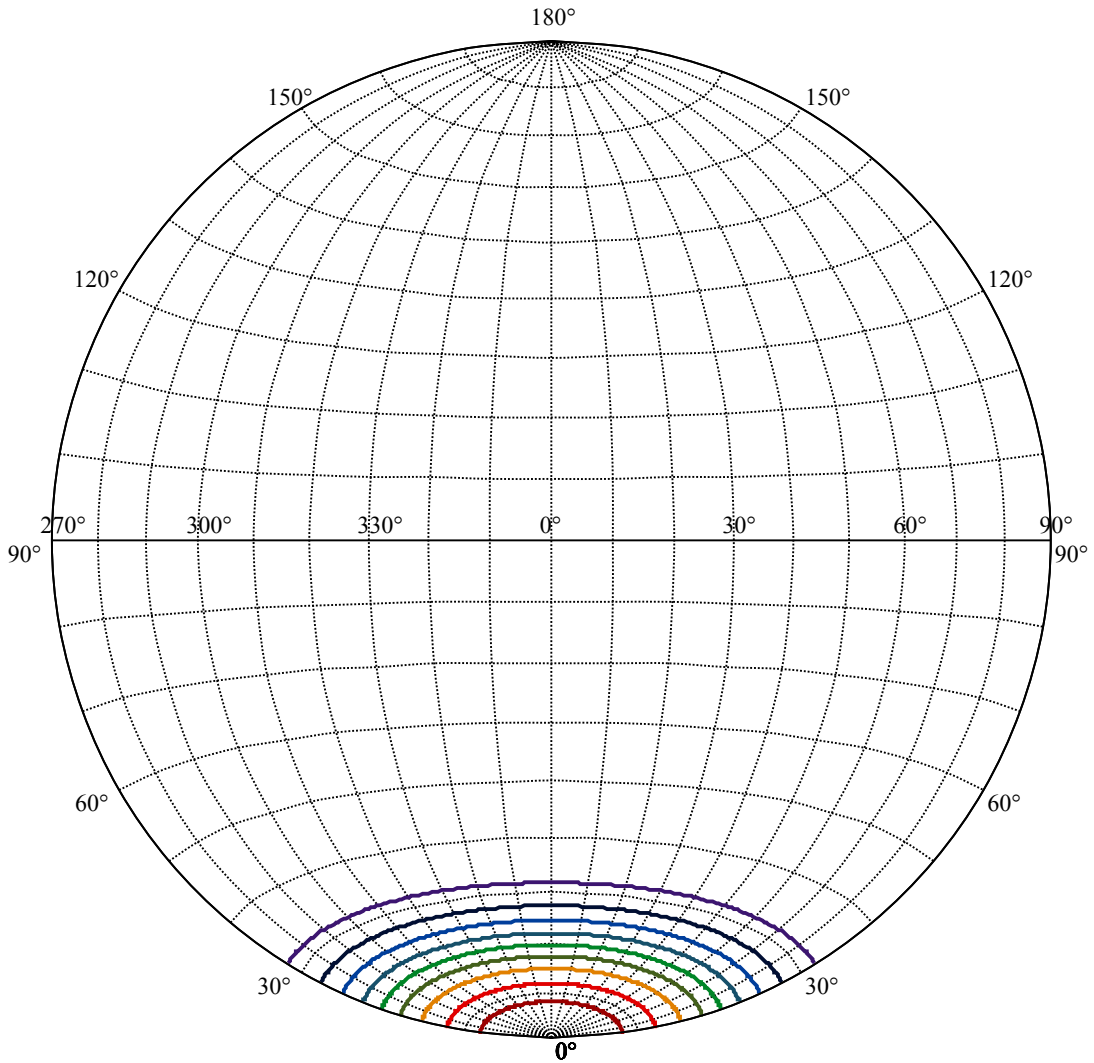
:C90/270Left:19.9 Right:19.9





|                   |   |
|-------------------|---|
| (10%Imax) 677.03  | — |
| (20%Imax) 1354.06 | — |
| (30%Imax) 2031.09 | — |
| (40%Imax) 2708.12 | — |
| (50%Imax) 3385.15 | — |
| (60%Imax) 4062.18 | — |
| (70%Imax) 4739.21 | — |
| (80%Imax) 5416.24 | — |
| (90%Imax) 6093.27 | — |





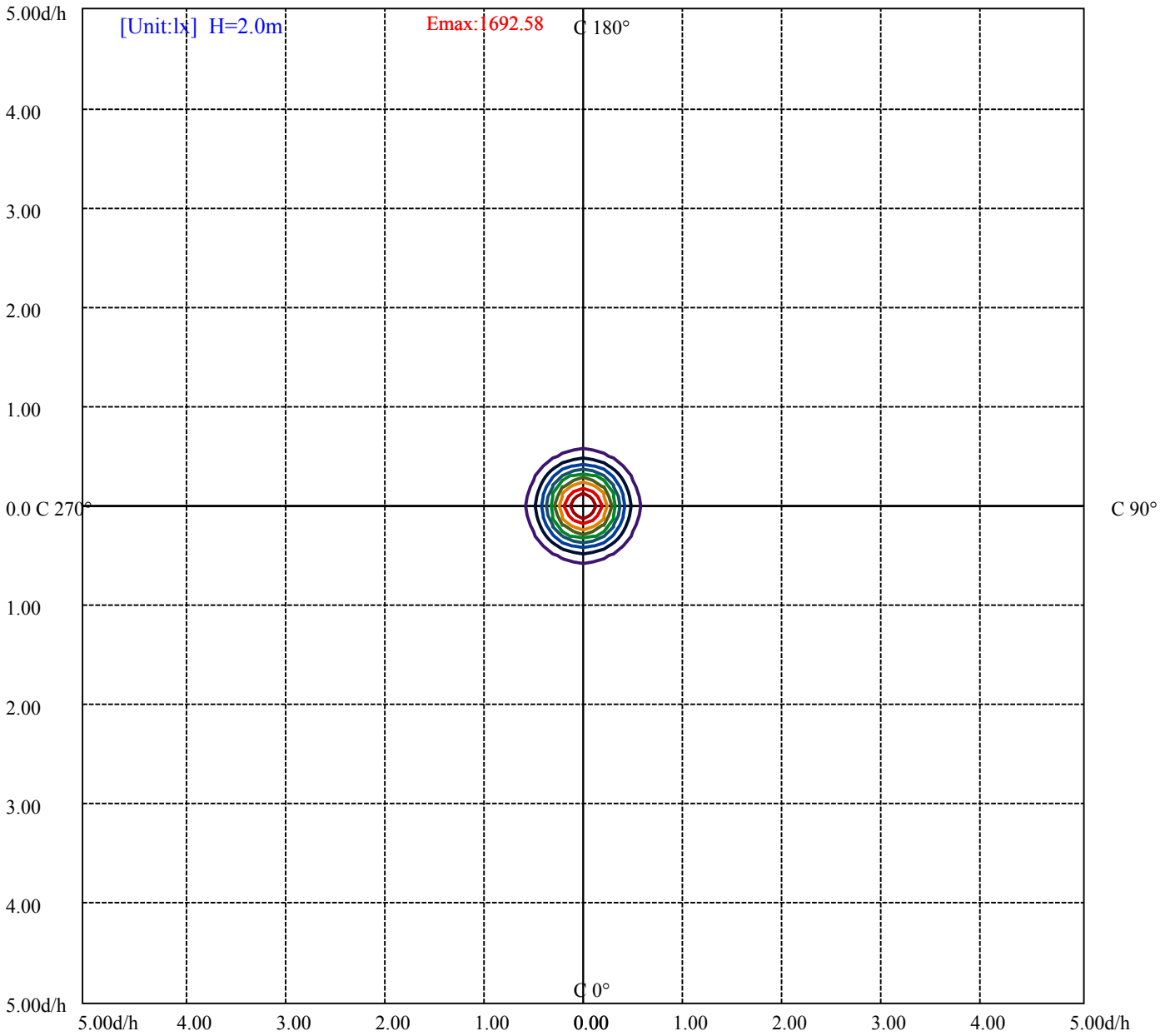
House

[Unit:cd]

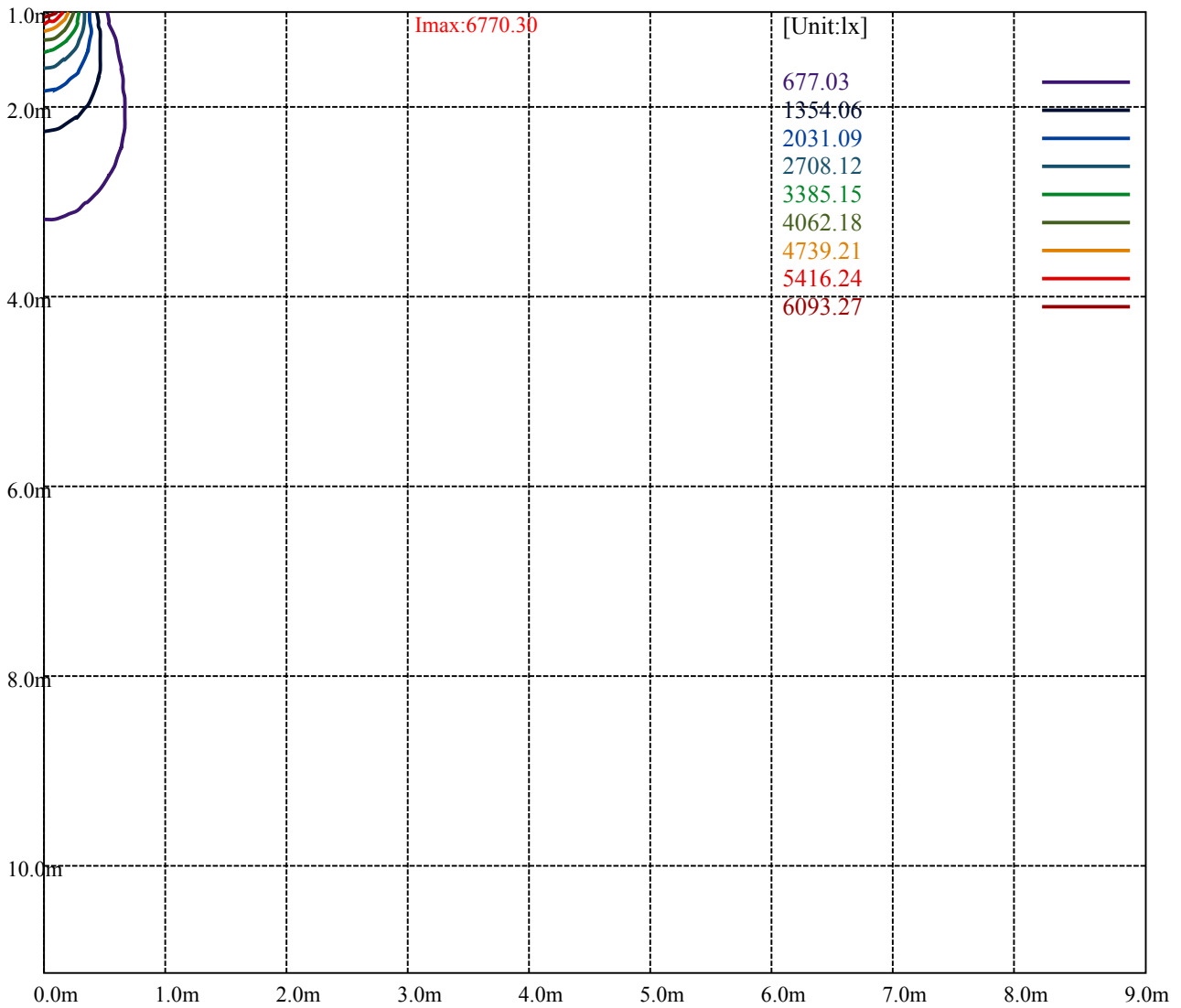
Road

**Imax:6770.30**

|           |         |   |
|-----------|---------|---|
| (10%Imax) | 677.03  | — |
| (20%Imax) | 1354.06 | — |
| (30%Imax) | 2031.09 | — |
| (40%Imax) | 2708.12 | — |
| (50%Imax) | 3385.15 | — |
| (60%Imax) | 4062.18 | — |
| (70%Imax) | 4739.21 | — |
| (80%Imax) | 5416.24 | — |
| (90%Imax) | 6093.27 | — |



- (10%Emax) 169.2575
- (20%Emax) 338.515
- (30%Emax) 507.7725
- (40%Emax) 677.03
- (50%Emax) 846.2875
- (60%Emax) 1015.545
- (70%Emax) 1184.802
- (80%Emax) 1354.06
- (90%Emax) 1523.318



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

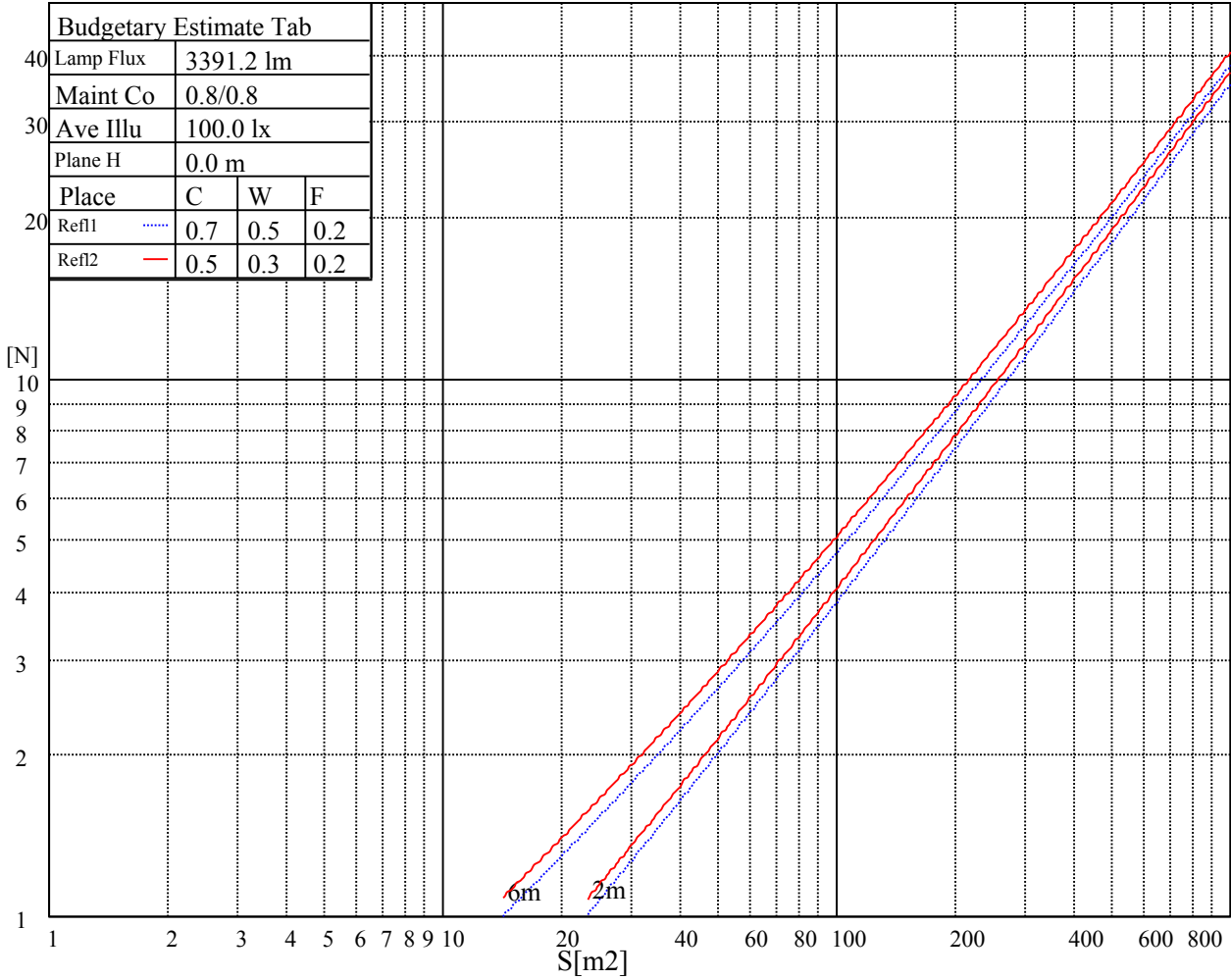
| Glare | Quality | Service Values Illuminance(lx) |      |      |       |       |       |       |       |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15  | A       | 2000                           | 1000 | 500  | <=300 |       |       |       |       |
| 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

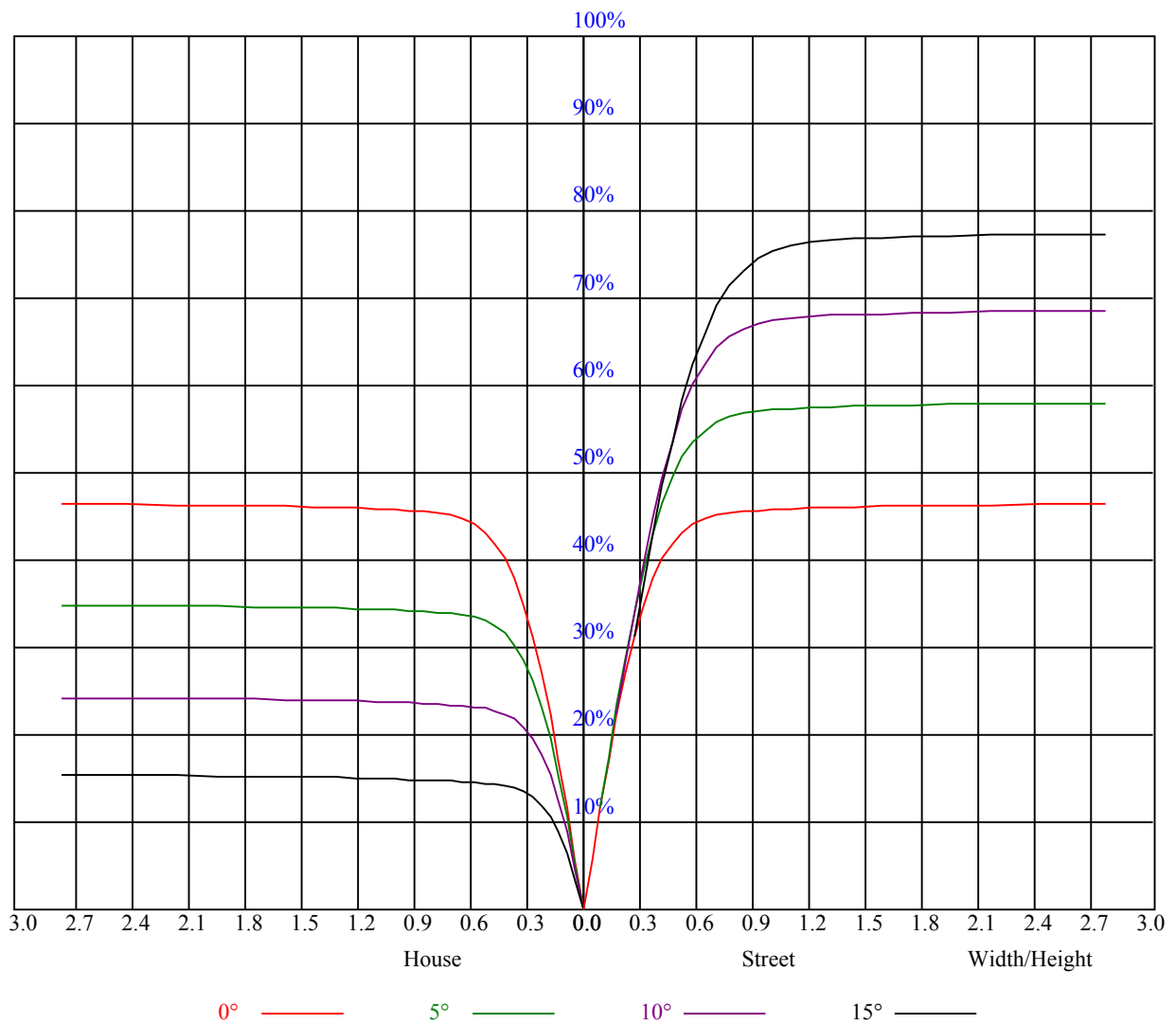


| Illumination assessment according UGR             |     |                  |     |     |     |     |                |     |     |     |  |
|---|-----|------------------|-----|-----|-----|-----|----------------|-----|-----|-----|--|
| Rf of Ceiling                                     | 70  | 70               | 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 RHOF=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 | 0.95 | 0.95 | 0.95 | 0.94 |
| 1     | 1.04                                   | 1.02 | 1.00 | 1.02 | 1.00 | 0.99 | 0.98 | 0.97 | 0.95 | 0.95 | 0.94 | 0.93 | 0.92 | 0.91 | 0.90 | 0.88 |
| 2     | 0.98                                   | 0.95 | 0.92 | 0.96 | 0.93 | 0.91 | 0.93 | 0.91 | 0.89 | 0.91 | 0.89 | 0.87 | 0.88 | 0.87 | 0.85 | 0.84 |
| 3     | 0.93                                   | 0.89 | 0.85 | 0.91 | 0.88 | 0.85 | 0.89 | 0.86 | 0.83 | 0.87 | 0.84 | 0.82 | 0.85 | 0.83 | 0.81 | 0.79 |
| 4     | 0.88                                   | 0.83 | 0.80 | 0.87 | 0.83 | 0.79 | 0.85 | 0.81 | 0.79 | 0.83 | 0.80 | 0.78 | 0.81 | 0.79 | 0.77 | 0.75 |
| 5     | 0.84                                   | 0.79 | 0.75 | 0.83 | 0.78 | 0.75 | 0.81 | 0.77 | 0.74 | 0.80 | 0.76 | 0.74 | 0.78 | 0.75 | 0.73 | 0.72 |
| 6     | 0.80                                   | 0.75 | 0.71 | 0.79 | 0.74 | 0.71 | 0.78 | 0.74 | 0.71 | 0.76 | 0.73 | 0.70 | 0.75 | 0.72 | 0.70 | 0.69 |
| 7     | 0.76                                   | 0.71 | 0.68 | 0.75 | 0.71 | 0.68 | 0.74 | 0.70 | 0.67 | 0.73 | 0.70 | 0.67 | 0.72 | 0.69 | 0.67 | 0.66 |
| 8     | 0.73                                   | 0.68 | 0.65 | 0.72 | 0.68 | 0.65 | 0.71 | 0.67 | 0.64 | 0.70 | 0.67 | 0.64 | 0.70 | 0.66 | 0.64 | 0.63 |
| 9     | 0.70                                   | 0.65 | 0.62 | 0.69 | 0.65 | 0.62 | 0.68 | 0.64 | 0.62 | 0.68 | 0.64 | 0.61 | 0.67 | 0.64 | 0.61 | 0.60 |
| 10    | 0.67                                   | 0.62 | 0.59 | 0.67 | 0.62 | 0.59 | 0.66 | 0.62 | 0.59 | 0.65 | 0.61 | 0.59 | 0.65 | 0.61 | 0.59 | 0.58 |





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    | 6720.48 | 6708.30 | 6643.54 | 6535.05 | 6446.48 | 6299.79 | 6174.69 | 6037.42 | 5904.01 |
| 45.0   | 6790.78 | 6749.26 | 6713.28 | 6629.15 | 6537.81 | 6441.50 | 6328.58 | 6172.48 | 6044.06 |
| 90.0   | 6764.21 | 6705.54 | 6638.00 | 6560.51 | 6463.64 | 6350.16 | 6193.51 | 6059.56 | 5929.48 |
| 135.0  | 6805.73 | 6788.01 | 6745.94 | 6707.20 | 6606.45 | 6524.53 | 6426.55 | 6299.79 | 6129.86 |
| 180.0  | 6720.48 | 6786.35 | 6790.23 | 6756.46 | 6728.23 | 6663.47 | 6577.11 | 6483.57 | 6368.99 |
| 225.0  | 6790.78 | 6768.64 | 6752.59 | 6735.98 | 6656.27 | 6551.10 | 6446.48 | 6293.70 | 6164.18 |
| 270.0  | 6764.21 | 6808.49 | 6776.39 | 6753.69 | 6719.37 | 6647.41 | 6536.71 | 6442.05 | 6326.92 |
| 315.0  | 6805.73 | 6762.00 | 6739.30 | 6683.39 | 6605.90 | 6528.40 | 6394.45 | 6254.40 | 6128.75 |
| 360.0  | 6720.48 | 6708.30 | 6643.54 | 6535.05 | 6446.48 | 6299.79 | 6174.69 | 6037.42 | 5904.01 |
| C/γ(°) | 9.0     | 10.0    | 11.0    | 12.0    | 13.0    | 14.0    | 15.0    | 16.0    | 17.0    |
| 0.0    | 5705.30 | 5534.25 | 5351.03 | 5147.88 | 4898.79 | 4679.04 | 4435.48 | 4180.86 | 3852.06 |
| 45.0   | 5911.76 | 5720.79 | 5558.05 | 5380.92 | 5143.46 | 4946.40 | 4731.07 | 4423.31 | 4173.66 |
| 90.0   | 5741.28 | 5569.13 | 5401.40 | 5153.42 | 4942.52 | 4672.40 | 4439.91 | 4174.77 | 3926.23 |
| 135.0  | 5999.78 | 5863.61 | 5720.24 | 5491.63 | 5293.46 | 5084.78 | 4803.03 | 4567.23 | 4310.38 |
| 180.0  | 6206.25 | 6073.40 | 5934.46 | 5732.42 | 5555.29 | 5358.78 | 5100.28 | 4890.49 | 4660.77 |
| 225.0  | 6028.56 | 5866.93 | 5650.50 | 5463.95 | 5266.90 | 5070.94 | 4790.85 | 4550.07 | 4300.42 |
| 270.0  | 6158.09 | 6020.26 | 5857.52 | 5631.12 | 5435.17 | 5219.84 | 5007.84 | 4729.97 | 4491.94 |
| 315.0  | 5995.35 | 5801.61 | 5616.73 | 5426.87 | 5226.49 | 4952.49 | 4736.05 | 4437.14 | 4183.63 |
| 360.0  | 5705.30 | 5534.25 | 5351.03 | 5147.88 | 4898.79 | 4679.04 | 4435.48 | 4180.86 | 3852.06 |
| C/γ(°) | 18.0    | 19.0    | 20.0    | 21.0    | 22.0    | 23.0    | 24.0    | 25.0    | 26.0    |
| 0.0    | 3579.16 | 3231.54 | 2953.11 | 2685.76 | 2361.94 | 2118.38 | 1887.00 | 1619.65 | 1099.49 |
| 45.0   | 3927.89 | 3658.87 | 3309.59 | 3033.93 | 2757.16 | 2499.22 | 2200.86 | 1962.84 | 1735.89 |
| 90.0   | 3599.64 | 3318.45 | 3044.45 | 2769.34 | 2436.11 | 2185.36 | 1951.77 | 1737.00 | 1490.67 |
| 135.0  | 3990.99 | 3725.85 | 3372.69 | 3093.16 | 2813.07 | 2540.73 | 2226.32 | 1981.66 | 1755.26 |
| 180.0  | 4335.85 | 4060.74 | 3780.10 | 3483.40 | 3113.09 | 2841.85 | 2575.05 | 2322.64 | 2024.83 |
| 225.0  | 4036.38 | 3687.66 | 3402.03 | 3045.00 | 2771.00 | 2506.41 | 2204.73 | 1973.91 | 1756.92 |
| 270.0  | 4236.21 | 3964.98 | 3619.02 | 3330.07 | 3047.22 | 2701.81 | 2444.97 | 2145.51 | 1918.00 |
| 315.0  | 3922.91 | 3575.29 | 3286.34 | 3002.93 | 2728.93 | 2401.79 | 2159.90 | 1930.18 | 1715.41 |
| 360.0  | 3579.16 | 3231.54 | 2953.11 | 2685.76 | 2361.94 | 2118.38 | 1887.00 | 1619.65 | 1099.49 |
| C/γ(°) | 27.0    | 28.0    | 29.0    | 30.0    | 31.0    | 32.0    | 33.0    | 34.0    | 35.0    |
| 0.0    | 1099.49 | 1056.04 | 859.59  | 722.70  | 600.20  | 493.26  | 381.83  | 309.76  | 250.31  |
| 45.0   | 1470.75 | 1280.33 | 1108.73 | 907.25  | 764.43  | 612.76  | 509.81  | 420.69  | 345.96  |
| 90.0   | 1088.75 | 1088.75 | 929.17  | 784.58  | 626.99  | 520.71  | 430.54  | 352.55  | 272.01  |
| 135.0  | 1547.69 | 1313.54 | 1141.94 | 985.29  | 803.18  | 676.42  | 565.16  | 449.47  | 370.32  |
| 180.0  | 1804.53 | 1596.95 | 1362.81 | 1193.42 | 1034.56 | 841.37  | 696.90  | 559.07  | 459.43  |
| 225.0  | 1499.53 | 1090.74 | 1090.74 | 966.58  | 780.43  | 653.89  | 543.41  | 450.25  | 352.88  |
| 270.0  | 1708.77 | 1506.17 | 1277.01 | 1105.96 | 952.08  | 803.73  | 637.12  | 531.39  | 433.97  |
| 315.0  | 1467.98 | 1067.49 | 1067.49 | 944.83  | 759.17  | 630.92  | 494.86  | 404.08  | 329.08  |
| 360.0  | 1099.49 | 1056.04 | 859.59  | 722.70  | 600.20  | 493.26  | 381.83  | 309.76  | 250.31  |
| C/γ(°) | 36.0    | 37.0    | 38.0    | 39.0    | 40.0    | 41.0    | 42.0    | 43.0    | 44.0    |
| 0.0    | 191.80  | 156.48  | 122.55  | 102.79  | 87.74   | 76.17   | 65.54   | 59.17   | 54.19   |
| 45.0   | 281.75  | 281.75  | 172.70  | 141.59  | 112.09  | 94.54   | 81.37   | 69.58   | 62.72   |
| 90.0   | 219.92  | 178.02  | 144.31  | 112.42  | 93.77   | 80.21   | 68.08   | 61.11   | 55.74   |
| 135.0  | 300.57  | 285.62  | 219.26  | 145.58  | 118.35  | 94.27   | 80.54   | 70.47   | 62.99   |
| 180.0  | 378.07  | 306.66  | 290.61  | 223.19  | 151.45  | 124.16  | 98.64   | 83.58   | 72.68   |
| 225.0  | 288.61  | 235.31  | 182.22  | 149.12  | 117.07  | 98.25   | 84.08   | 73.90   | 64.54   |
| 270.0  | 342.64  | 293.37  | 293.37  | 171.43  | 141.10  | 116.35  | 93.33   | 80.15   | 70.41   |
| 315.0  | 253.85  | 205.97  | 167.61  | 130.75  | 108.11  | 90.78   | 77.88   | 66.48   | 59.84   |
| 360.0  | 191.80  | 156.48  | 122.55  | 102.79  | 87.74   | 76.17   | 65.54   | 59.17   | 54.19   |

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    | 49.98 | 45.50 | 42.62 | 40.19 | 37.97 | 35.59 | 33.99 | 32.33 | 31.16 |
| 45.0   | 57.24 | 51.87 | 48.21 | 44.95 | 41.40 | 39.13 | 37.09 | 35.32 | 33.43 |
| 90.0   | 50.32 | 46.77 | 43.67 | 40.46 | 38.19 | 36.26 | 34.21 | 32.77 | 31.55 |
| 135.0  | 55.96 | 51.53 | 47.71 | 44.45 | 40.91 | 38.64 | 36.09 | 34.37 | 32.49 |
| 180.0  | 64.76 | 57.35 | 52.81 | 47.99 | 44.73 | 41.85 | 38.86 | 36.81 | 34.98 |
| 225.0  | 58.84 | 54.30 | 50.26 | 46.00 | 43.18 | 40.63 | 38.42 | 36.04 | 34.43 |
| 270.0  | 61.50 | 56.02 | 51.70 | 47.94 | 43.95 | 41.29 | 39.02 | 36.98 | 34.82 |
| 315.0  | 54.63 | 50.37 | 45.94 | 42.90 | 40.30 | 37.59 | 35.65 | 33.60 | 32.27 |
| 360.0  | 49.98 | 45.50 | 42.62 | 40.19 | 37.97 | 35.59 | 33.99 | 32.33 | 31.16 |
| C/γ(°) | 54.0  | 55.0  | 56.0  | 57.0  | 58.0  | 59.0  | 60.0  | 61.0  | 62.0  |
| 0.0    | 30.11 | 28.95 | 28.17 | 27.40 | 26.68 | 25.96 | 25.41 | 24.74 | 24.24 |
| 45.0   | 31.99 | 30.94 | 29.89 | 28.84 | 28.01 | 27.29 | 26.51 | 25.91 | 25.35 |
| 90.0   | 30.44 | 29.17 | 28.29 | 27.57 | 26.85 | 26.07 | 25.52 | 24.80 | 24.30 |
| 135.0  | 31.16 | 30.11 | 29.12 | 27.90 | 27.18 | 26.46 | 25.91 | 25.30 | 24.58 |
| 180.0  | 33.43 | 31.72 | 30.56 | 29.56 | 28.67 | 27.62 | 26.90 | 26.24 | 25.46 |
| 225.0  | 32.71 | 31.50 | 30.44 | 29.28 | 28.40 | 27.62 | 26.96 | 26.18 | 25.52 |
| 270.0  | 33.38 | 31.77 | 30.67 | 29.67 | 28.56 | 27.79 | 27.07 | 26.40 | 25.68 |
| 315.0  | 31.11 | 30.00 | 28.89 | 28.12 | 27.34 | 26.68 | 25.96 | 25.35 | 24.80 |
| 360.0  | 30.11 | 28.95 | 28.17 | 27.40 | 26.68 | 25.96 | 25.41 | 24.74 | 24.24 |
| C/γ(°) | 63.0  | 64.0  | 65.0  | 66.0  | 67.0  | 68.0  | 69.0  | 70.0  | 71.0  |
| 0.0    | 23.69 | 23.25 | 22.69 | 22.09 | 21.64 | 21.20 | 20.59 | 20.20 | 19.71 |
| 45.0   | 24.63 | 24.13 | 23.75 | 23.08 | 22.58 | 22.14 | 21.70 | 21.09 | 20.59 |
| 90.0   | 23.86 | 23.30 | 22.86 | 22.36 | 21.92 | 21.37 | 20.92 | 20.48 | 20.09 |
| 135.0  | 24.08 | 23.64 | 23.14 | 22.64 | 22.20 | 21.70 | 21.26 | 20.70 | 20.26 |
| 180.0  | 24.91 | 24.30 | 23.75 | 23.25 | 22.81 | 22.20 | 21.81 | 21.37 | 20.87 |
| 225.0  | 24.91 | 24.41 | 23.80 | 23.19 | 22.75 | 22.14 | 21.64 | 21.03 | 20.59 |
| 270.0  | 25.02 | 24.47 | 23.97 | 23.36 | 22.86 | 22.36 | 21.92 | 21.37 | 20.87 |
| 315.0  | 24.13 | 23.69 | 23.19 | 22.58 | 22.09 | 21.70 | 21.15 | 20.65 | 20.26 |
| 360.0  | 23.69 | 23.25 | 22.69 | 22.09 | 21.64 | 21.20 | 20.59 | 20.20 | 19.71 |
| C/γ(°) | 72.0  | 73.0  | 74.0  | 75.0  | 76.0  | 77.0  | 78.0  | 79.0  | 80.0  |
| 0.0    | 19.32 | 18.93 | 18.65 | 18.16 | 17.77 | 17.33 | 16.94 | 16.50 | 16.11 |
| 45.0   | 20.15 | 19.76 | 19.21 | 18.88 | 18.43 | 17.99 | 17.55 | 17.05 | 16.66 |
| 90.0   | 19.71 | 19.21 | 18.88 | 18.38 | 17.93 | 17.49 | 16.99 | 16.61 | 16.22 |
| 135.0  | 19.93 | 19.54 | 19.04 | 18.76 | 18.38 | 17.93 | 17.38 | 17.05 | 16.72 |
| 180.0  | 20.37 | 19.98 | 19.54 | 19.21 | 18.76 | 18.43 | 17.88 | 17.49 | 17.10 |
| 225.0  | 20.15 | 19.65 | 19.21 | 18.88 | 18.49 | 17.93 | 17.55 | 17.16 | 16.77 |
| 270.0  | 20.37 | 19.98 | 19.60 | 19.04 | 18.71 | 18.32 | 17.88 | 17.38 | 16.99 |
| 315.0  | 19.87 | 19.43 | 18.99 | 18.65 | 18.21 | 17.77 | 17.33 | 16.94 | 16.50 |
| 360.0  | 19.32 | 18.93 | 18.65 | 18.16 | 17.77 | 17.33 | 16.94 | 16.50 | 16.11 |
| C/γ(°) | 81.0  | 82.0  | 83.0  | 84.0  | 85.0  | 86.0  | 87.0  | 88.0  | 89.0  |
| 0.0    | 15.67 | 15.33 | 14.95 | 14.67 | 14.39 | 14.06 | 13.78 | 13.51 | 13.40 |
| 45.0   | 16.22 | 15.72 | 15.39 | 15.00 | 14.61 | 14.34 | 14.00 | 13.73 | 13.34 |
| 90.0   | 15.72 | 15.39 | 15.06 | 14.67 | 14.39 | 14.12 | 13.84 | 13.51 | 13.40 |
| 135.0  | 16.16 | 15.83 | 15.39 | 15.00 | 14.67 | 14.39 | 14.06 | 13.78 | 13.45 |
| 180.0  | 16.66 | 16.22 | 15.72 | 15.39 | 15.00 | 14.67 | 14.39 | 14.06 | 13.73 |
| 225.0  | 16.22 | 15.83 | 15.39 | 15.06 | 14.72 | 14.39 | 14.06 | 13.78 | 13.51 |
| 270.0  | 16.61 | 16.11 | 15.67 | 15.22 | 14.83 | 14.56 | 14.23 | 13.95 | 13.62 |
| 315.0  | 16.11 | 15.72 | 15.28 | 14.95 | 14.56 | 14.34 | 14.06 | 13.78 | 13.45 |
| 360.0  | 15.67 | 15.33 | 14.95 | 14.67 | 14.39 | 14.06 | 13.78 | 13.51 | 13.40 |

Intensity data(cd)

|        |       |
|--------|-------|
| C/γ(°) | 90.0  |
| 0.0    | 13.40 |
| 45.0   | 13.40 |
| 90.0   | 13.40 |
| 135.0  | 13.45 |
| 180.0  | 13.45 |
| 225.0  | 13.34 |
| 270.0  | 13.34 |
| 315.0  | 13.34 |
| 360.0  | 13.40 |