



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: 92.70.412.00

Report No: 20231116-B007

Ballast type: AC

Test No: 20231116-C007

Voltage(V): 34.620

LampCAT: Fortimo\_SLM\_C\_1210

Current(A): 0.720

Lamp flux(lm): 4030.4

Power (W): 24.926

Number of Lamps: 1

PF: 0.000

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

### Photometric Results

Lumens(lm): 3698.51, Efficiency(%): 91.77% , Luminous Efficacy(lm/W): 148.38

Central intensity(cd): 8237.030, Maximum intensity(cd): 8237.030

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

Beam Angle(50%Imax): [C0/180]Total=38.2

[C90/270]Total=38.2

Field angle(10%Imax): [C0/180]Total=63.2

[C90/270]Total=63.2

Maximum s/h(1/2): C0\_180=0.63 C90\_270=0.63

Maximum s/h(1/4): C0\_180=0.61 C90\_270=0.61

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 91.77%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 97.958%

Equipment: GMS1980  
Temperature(°C): 0.0

Date: 2023/11/16  
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                | 8237.031      | 0.000       | 0         | 0.00%       | 0.00%      |
| 1.0                | 8218.903      | 7.874       | 7.874     | 0.20%       | 0.21%      |
| 2.0                | 8171.783      | 23.525      | 31.399    | 0.58%       | 0.85%      |
| 3.0                | 8094.910      | 38.905      | 70.304    | 0.97%       | 1.90%      |
| 4.0                | 7976.454      | 53.796      | 124.1     | 1.33%       | 3.36%      |
| 5.0                | 7846.373      | 68.069      | 192.169   | 1.69%       | 5.20%      |
| 6.0                | 7689.860      | 81.647      | 273.816   | 2.03%       | 7.40%      |
| 7.0                | 7511.276      | 94.353      | 368.169   | 2.34%       | 9.95%      |
| 8.0                | 7334.767      | 106.250     | 474.419   | 2.64%       | 12.83%     |
| 9.0                | 7141.030      | 117.318     | 591.738   | 2.91%       | 16.00%     |
| 10.0               | 6929.925      | 127.337     | 719.075   | 3.16%       | 19.44%     |
| 11.0               | 6699.515      | 136.186     | 855.261   | 3.38%       | 23.12%     |
| 12.0               | 6467.099      | 143.930     | 999.191   | 3.57%       | 27.02%     |
| 13.0               | 6197.043      | 150.291     | 1149.482  | 3.73%       | 31.08%     |
| 14.0               | 5908.582      | 154.951     | 1304.433  | 3.84%       | 35.27%     |
| 15.0               | 5604.206      | 158.053     | 1462.486  | 3.92%       | 39.54%     |
| 16.0               | 5265.719      | 159.275     | 1621.761  | 3.95%       | 43.85%     |
| 17.0               | 4897.133      | 158.263     | 1780.024  | 3.93%       | 48.13%     |
| 18.0               | 4517.200      | 155.222     | 1935.246  | 3.85%       | 52.33%     |
| 19.0               | 4156.848      | 150.911     | 2086.156  | 3.74%       | 56.41%     |
| 20.0               | 3772.901      | 145.136     | 2231.293  | 3.60%       | 60.33%     |
| 21.0               | 3427.287      | 138.258     | 2369.551  | 3.43%       | 64.07%     |
| 22.0               | 3106.928      | 131.308     | 2500.859  | 3.26%       | 67.62%     |
| 23.0               | 2778.405      | 123.490     | 2624.349  | 3.06%       | 70.96%     |
| 24.0               | 2492.434      | 115.239     | 2739.588  | 2.86%       | 74.07%     |
| 25.0               | 2226.599      | 107.300     | 2846.889  | 2.66%       | 76.97%     |
| 26.0               | 1980.967      | 99.320      | 2946.209  | 2.46%       | 79.66%     |
| 27.0               | 1688.997      | 89.786      | 3035.995  | 2.23%       | 82.09%     |
| 28.0               | 1507.368      | 80.925      | 3116.921  | 2.01%       | 84.28%     |
| 29.0               | 1276.496      | 72.834      | 3189.754  | 1.81%       | 86.24%     |
| 30.0               | 1073.777      | 63.457      | 3253.211  | 1.57%       | 87.96%     |
| 31.0               | 920.150       | 55.488      | 3308.699  | 1.38%       | 89.46%     |
| 32.0               | 758.974       | 48.105      | 3356.804  | 1.19%       | 90.76%     |
| 33.0               | 590.830       | 39.766      | 3396.57   | 0.99%       | 91.84%     |
| 34.0               | 454.598       | 31.638      | 3428.208  | 0.78%       | 92.69%     |
| 35.0               | 351.973       | 25.049      | 3453.257  | 0.62%       | 93.37%     |
| 36.0               | 283.272       | 20.226      | 3473.483  | 0.50%       | 93.92%     |
| 37.0               | 207.673       | 16.012      | 3489.495  | 0.40%       | 94.35%     |

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0               | 186.943       | 13.172      | 3502.667  | 0.33%       | 94.70%     |
| 39.0               | 157.087       | 11.743      | 3514.409  | 0.29%       | 95.02%     |
| 40.0               | 125.722       | 9.863       | 3524.273  | 0.24%       | 95.29%     |
| 41.0               | 111.883       | 8.461       | 3532.734  | 0.21%       | 95.52%     |
| 42.0               | 100.564       | 7.719       | 3540.452  | 0.19%       | 95.73%     |
| 43.0               | 90.614        | 7.082       | 3547.534  | 0.18%       | 95.92%     |
| 44.0               | 81.909        | 6.512       | 3554.046  | 0.16%       | 96.09%     |
| 45.0               | 75.336        | 6.043       | 3560.089  | 0.15%       | 96.26%     |
| 46.0               | 69.752        | 5.674       | 3565.763  | 0.14%       | 96.41%     |
| 47.0               | 64.307        | 5.332       | 3571.095  | 0.13%       | 96.56%     |
| 48.0               | 60.176        | 5.032       | 3576.127  | 0.12%       | 96.69%     |
| 49.0               | 56.447        | 4.789       | 3580.916  | 0.12%       | 96.82%     |
| 50.0               | 53.043        | 4.565       | 3585.481  | 0.11%       | 96.94%     |
| 51.0               | 50.053        | 4.362       | 3589.843  | 0.11%       | 97.06%     |
| 52.0               | 47.493        | 4.186       | 3594.029  | 0.10%       | 97.18%     |
| 53.0               | 45.210        | 4.033       | 3598.061  | 0.10%       | 97.28%     |
| 54.0               | 43.024        | 3.889       | 3601.95   | 0.10%       | 97.39%     |
| 55.0               | 41.218        | 3.760       | 3605.711  | 0.09%       | 97.49%     |
| 56.0               | 39.460        | 3.646       | 3609.356  | 0.09%       | 97.59%     |
| 57.0               | 37.938        | 3.539       | 3612.895  | 0.09%       | 97.69%     |
| 58.0               | 36.603        | 3.447       | 3616.342  | 0.09%       | 97.78%     |
| 59.0               | 35.426        | 3.367       | 3619.71   | 0.08%       | 97.87%     |
| 60.0               | 34.264        | 3.292       | 3623.002  | 0.08%       | 97.96%     |
| 61.0               | 33.122        | 3.216       | 3626.218  | 0.08%       | 98.05%     |
| 62.0               | 32.202        | 3.148       | 3629.366  | 0.08%       | 98.13%     |
| 63.0               | 31.254        | 3.086       | 3632.452  | 0.08%       | 98.21%     |
| 64.0               | 30.410        | 3.026       | 3635.478  | 0.08%       | 98.30%     |
| 65.0               | 29.635        | 2.972       | 3638.449  | 0.07%       | 98.38%     |
| 66.0               | 28.908        | 2.921       | 3641.37   | 0.07%       | 98.46%     |
| 67.0               | 28.154        | 2.869       | 3644.239  | 0.07%       | 98.53%     |
| 68.0               | 27.448        | 2.817       | 3647.056  | 0.07%       | 98.61%     |
| 69.0               | 26.805        | 2.768       | 3649.824  | 0.07%       | 98.68%     |
| 70.0               | 26.141        | 2.719       | 3652.543  | 0.07%       | 98.76%     |
| 71.0               | 25.560        | 2.672       | 3655.215  | 0.07%       | 98.83%     |
| 72.0               | 25.380        | 2.649       | 3657.864  | 0.07%       | 98.90%     |
| 73.0               | 26.535        | 2.715       | 3660.579  | 0.07%       | 98.97%     |
| 74.0               | 27.345        | 2.833       | 3663.411  | 0.07%       | 99.05%     |
| 75.0               | 26.833        | 2.863       | 3666.274  | 0.07%       | 99.13%     |

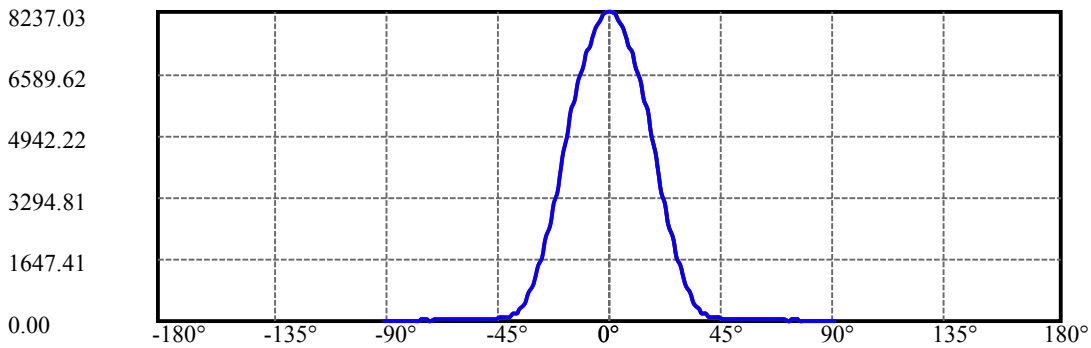
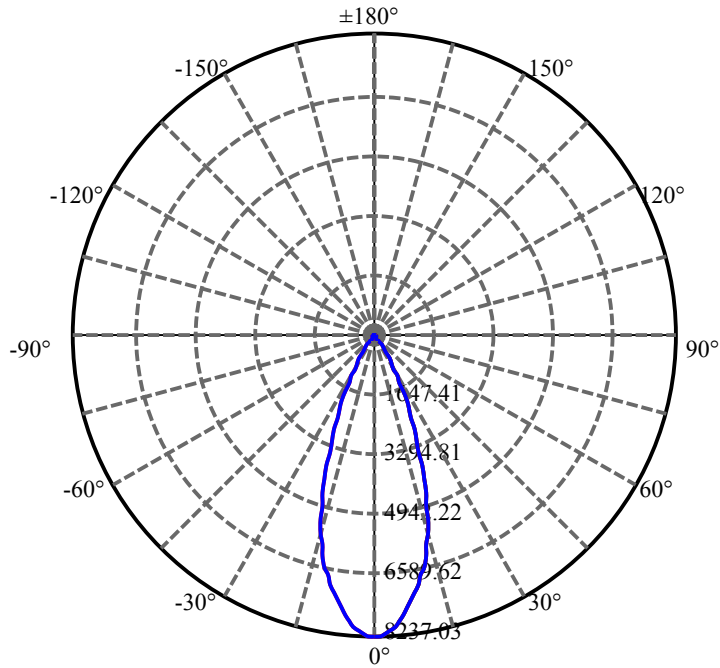
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0               | 25.290        | 2.767       | 3669.041  | 0.07%       | 99.20%     |
| 77.0               | 23.864        | 2.621       | 3671.661  | 0.07%       | 99.27%     |
| 78.0               | 22.806        | 2.498       | 3674.16   | 0.06%       | 99.34%     |
| 79.0               | 21.719        | 2.392       | 3676.552  | 0.06%       | 99.41%     |
| 80.0               | 20.730        | 2.289       | 3678.84   | 0.06%       | 99.47%     |
| 81.0               | 20.093        | 2.208       | 3681.048  | 0.05%       | 99.53%     |
| 82.0               | 19.533        | 2.149       | 3683.197  | 0.05%       | 99.59%     |
| 83.0               | 19.007        | 2.095       | 3685.292  | 0.05%       | 99.64%     |
| 84.0               | 18.495        | 2.043       | 3687.335  | 0.05%       | 99.70%     |
| 85.0               | 17.865        | 1.984       | 3689.319  | 0.05%       | 99.75%     |
| 86.0               | 17.270        | 1.921       | 3691.24   | 0.05%       | 99.80%     |
| 87.0               | 16.841        | 1.867       | 3693.107  | 0.05%       | 99.85%     |
| 88.0               | 16.447        | 1.823       | 3694.93   | 0.05%       | 99.90%     |
| 89.0               | 16.315        | 1.796       | 3696.726  | 0.04%       | 99.95%     |
| 90.0               | 16.184        | 1.782       | 3698.508  | 0.04%       | 100.00%    |

ZONAL LUMEN SUMMARY

| Zone    | Lumens  | %Lamp  | %Fixt   |
|---------|---------|--------|---------|
| 0-30    | 3253.21 | 80.72% | 87.96%  |
| 0-40    | 3524.27 | 87.44% | 95.29%  |
| 0-60    | 3623.00 | 89.89% | 97.96%  |
| 0-90    | 3696.73 | 91.72% | 99.95%  |
| 0-120   | 3696.73 | 91.72% | 99.95%  |
| 0-180   | 3698.51 | 91.77% | 100.00% |
| 60-90   | 73.72   | 1.83%  | 1.99%   |
| 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%   |
| 0-26.14 | 2958.81 | 73.41% | 80.00%  |

ZONAL LUMEN SUMMARY

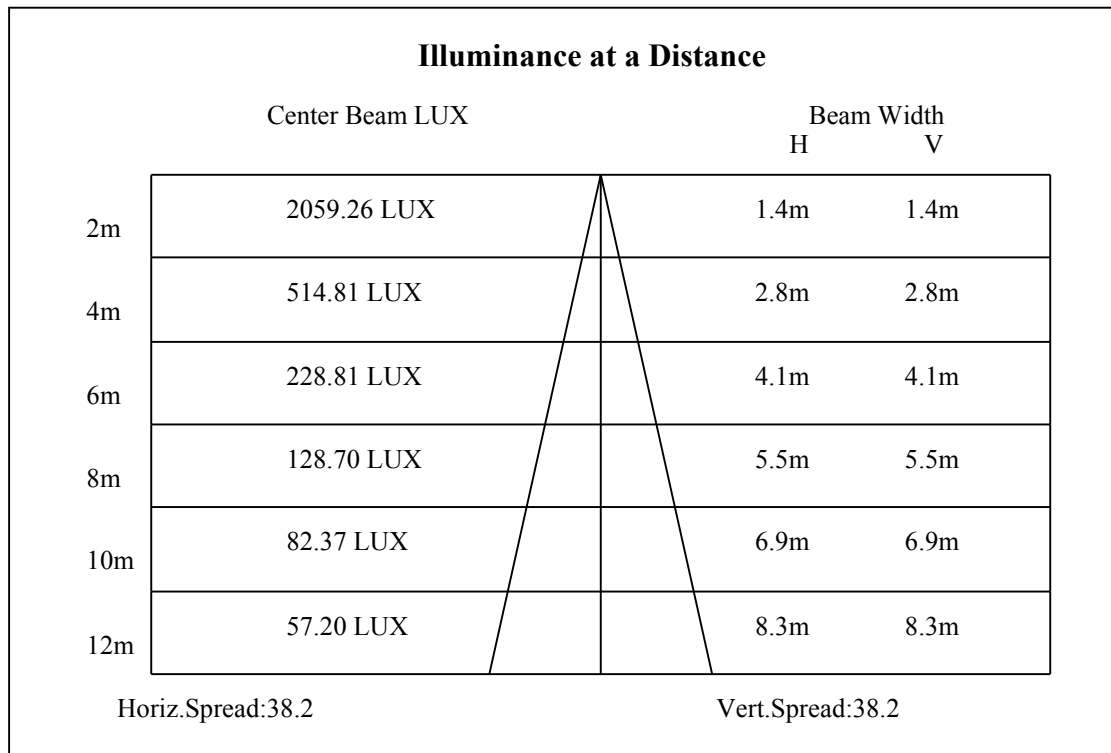
|         |         |
|---------|---------|
| 0-10    | 719.07  |
| 10-20   | 1512.22 |
| 20-30   | 1021.92 |
| 30-40   | 271.06  |
| 40-50   | 61.21   |
| 50-60   | 37.52   |
| 60-70   | 29.54   |
| 70-80   | 26.30   |
| 80-90   | 17.89   |
| 90-100  | 0.00    |
| 100-110 | 0.00    |
| 110-120 | 0.00    |
| 120-130 | 0.00    |
| 130-140 | 0.00    |
| 140-150 | 0.00    |
| 150-160 | 0.00    |
| 160-170 | 0.00    |
| 170-180 | 0.00    |

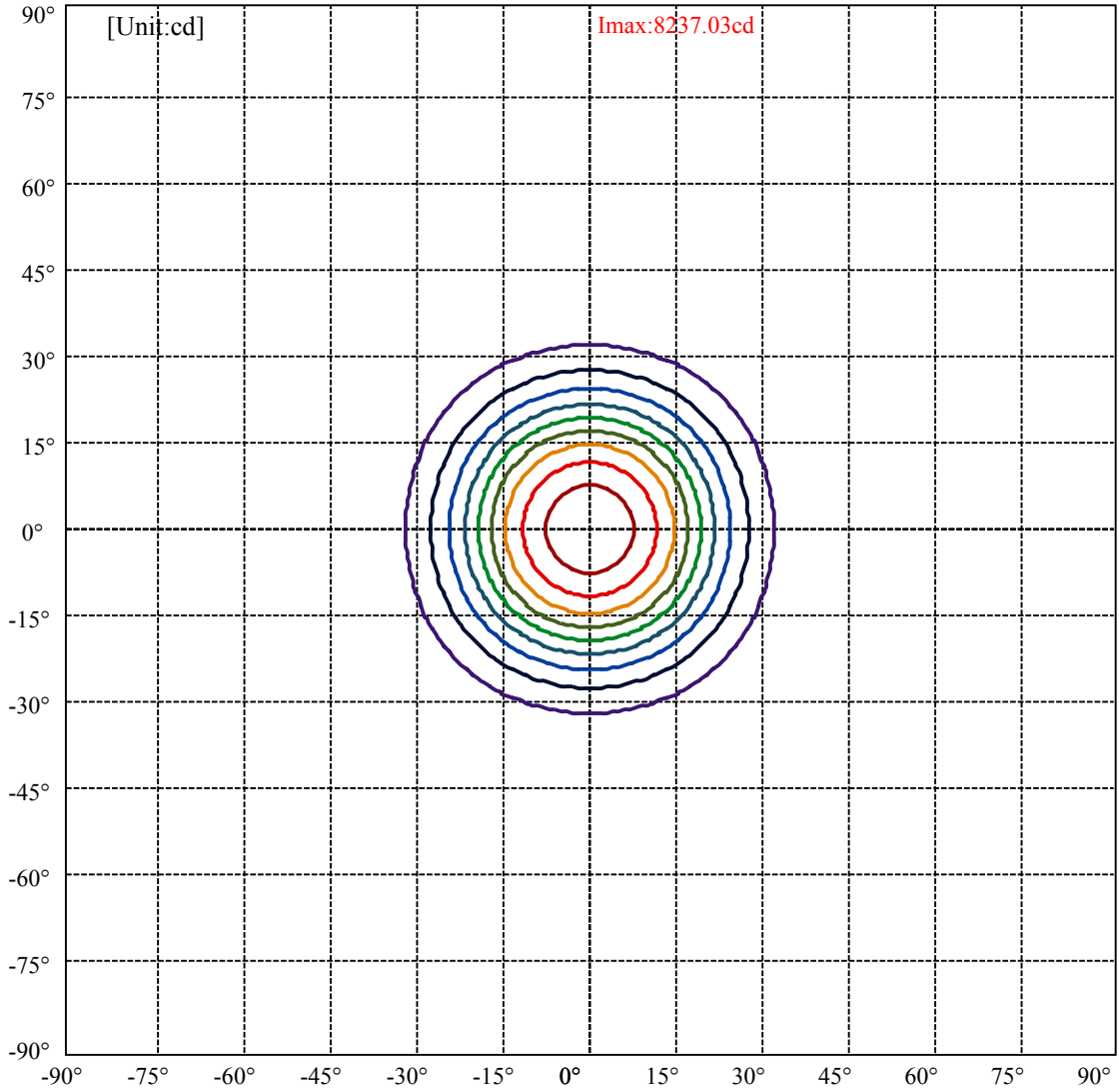


C0(Max): —————  
C0/C180: —————  
C90/C270: —————

Field angle(10%Imax):C0/180Left:31.6 Right:31.6  
:C90/270Left:31.6 Right:31.6

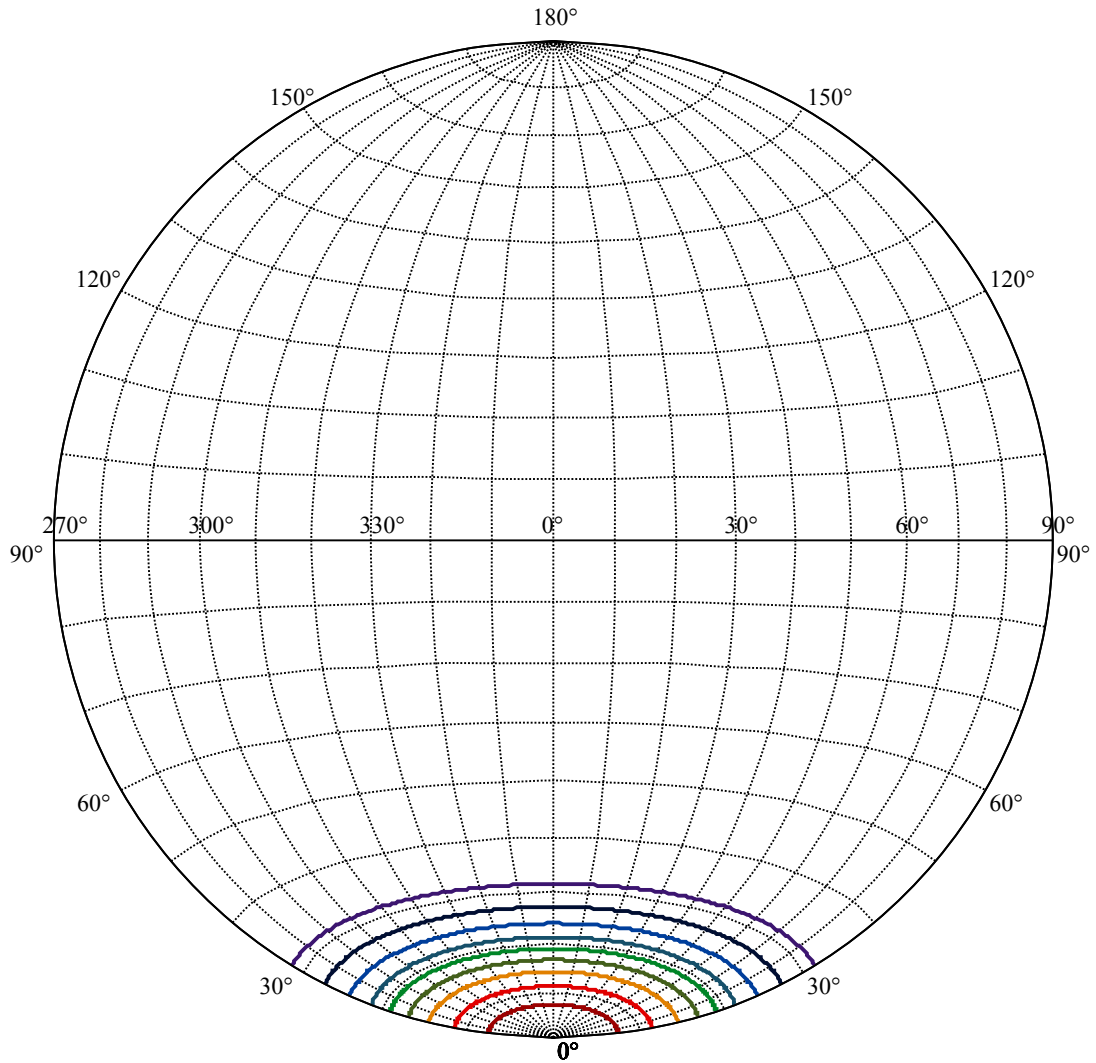
Beam Angle(50%Imax):C0/180Left:19.1 Right:19.1  
:C90/270Left:19.1 Right:19.1





|                   |   |
|-------------------|---|
| (10%Imax) 823.703 | — |
| (20%Imax) 1647.41 | — |
| (30%Imax) 2471.11 | — |
| (40%Imax) 3294.81 | — |
| (50%Imax) 4118.52 | — |
| (60%Imax) 4942.22 | — |
| (70%Imax) 5765.92 | — |
| (80%Imax) 6589.62 | — |
| (90%Imax) 7413.33 | — |





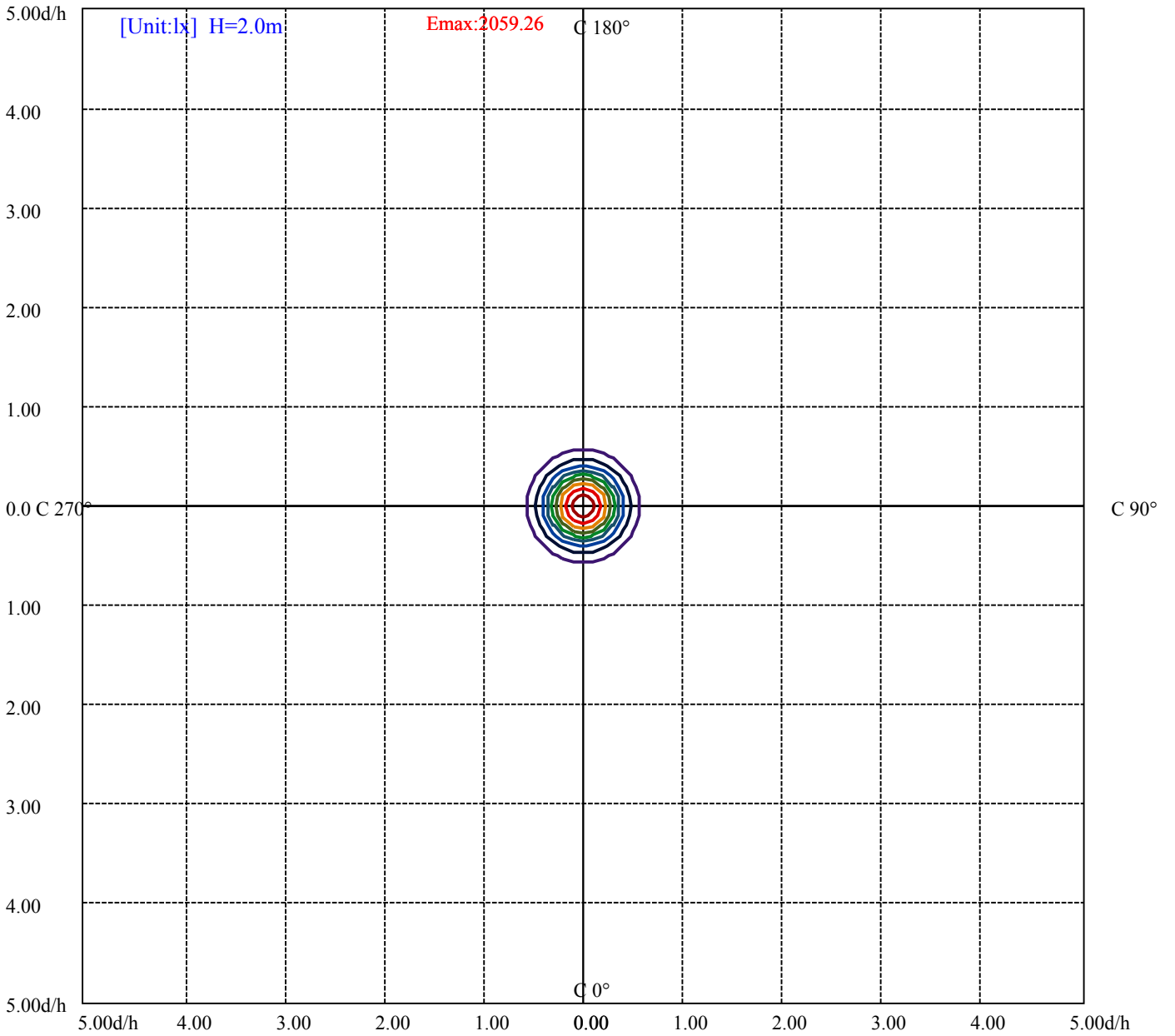
House

[Unit:cd]

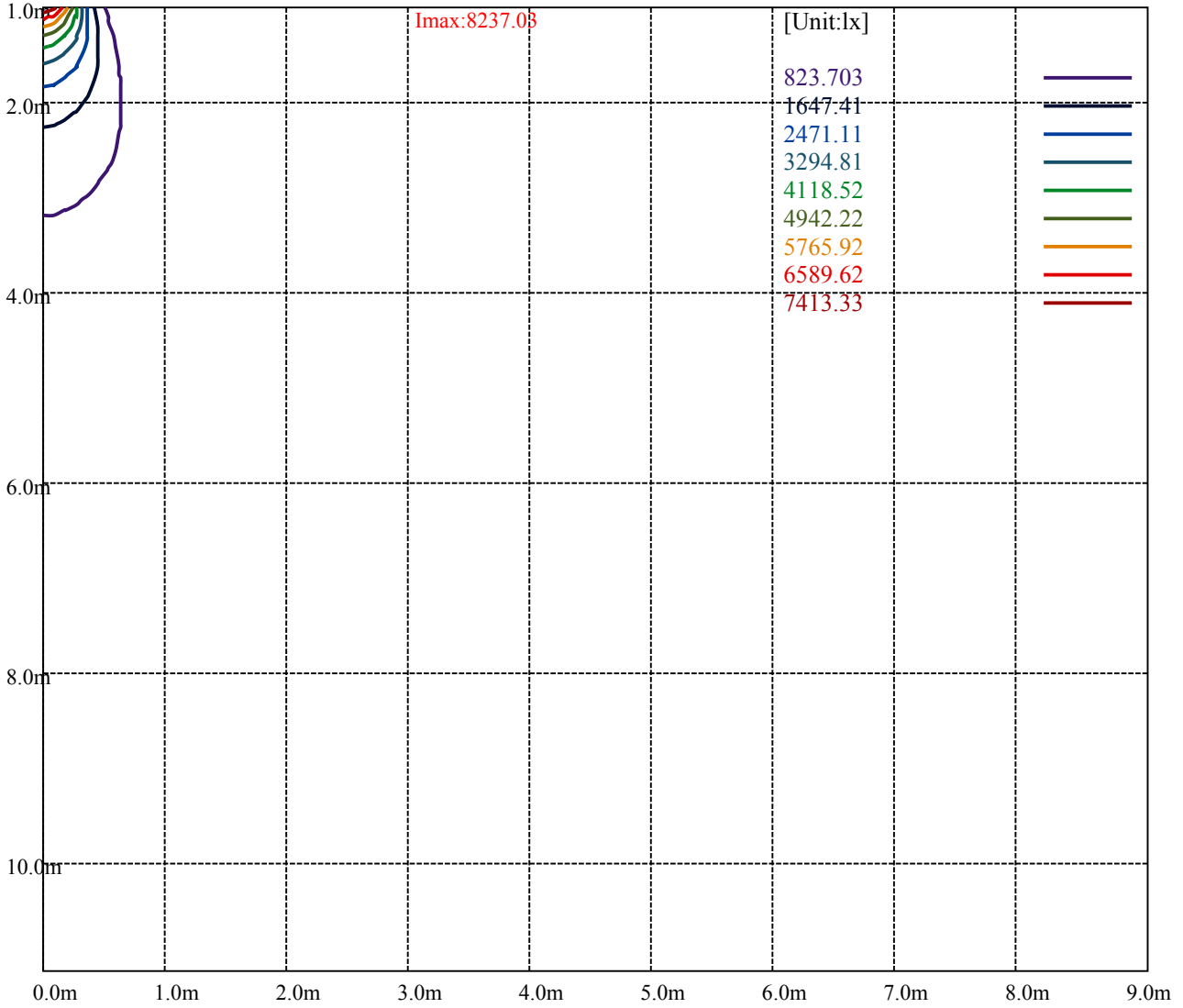
Road

Imax:8237.03

|           |         |   |
|-----------|---------|---|
| (10%Imax) | 823.703 | — |
| (20%Imax) | 1647.41 | — |
| (30%Imax) | 2471.11 | — |
| (40%Imax) | 3294.81 | — |
| (50%Imax) | 4118.52 | — |
| (60%Imax) | 4942.22 | — |
| (70%Imax) | 5765.92 | — |
| (80%Imax) | 6589.62 | — |
| (90%Imax) | 7413.33 | — |



- (10%Emax) 205.9258
- (20%Emax) 411.8525
- (30%Emax) 617.7775
- (40%Emax) 823.7025
- (50%Emax) 1029.627
- (60%Emax) 1235.555
- (70%Emax) 1441.48
- (80%Emax) 1647.405
- (90%Emax) 1853.33



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

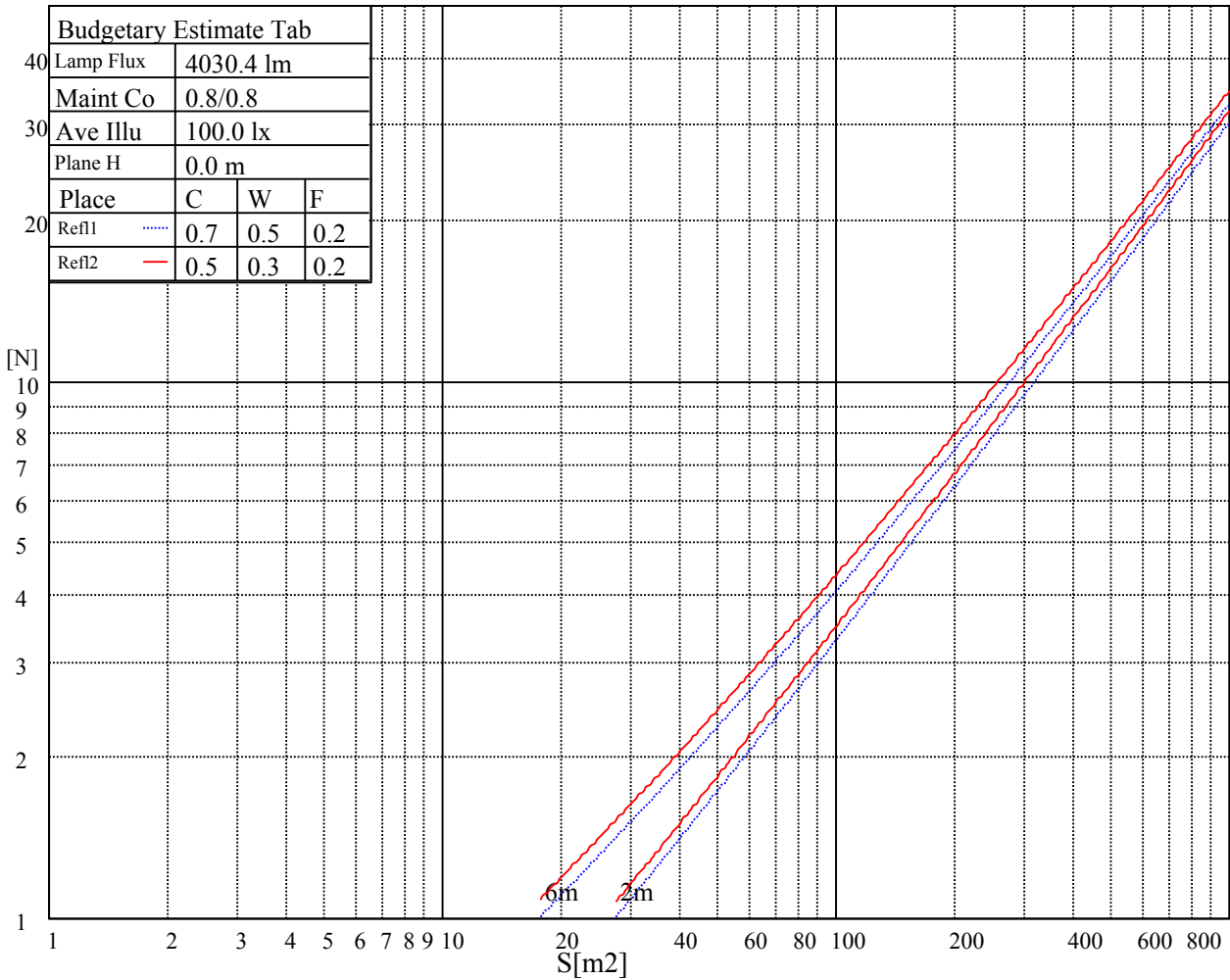
| Glare | Quality | Service Values Illuminance(lx) |      |      |       |       |       |       |       |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15  | A       | 2000                           | 1000 | 500  | <=300 |       |    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

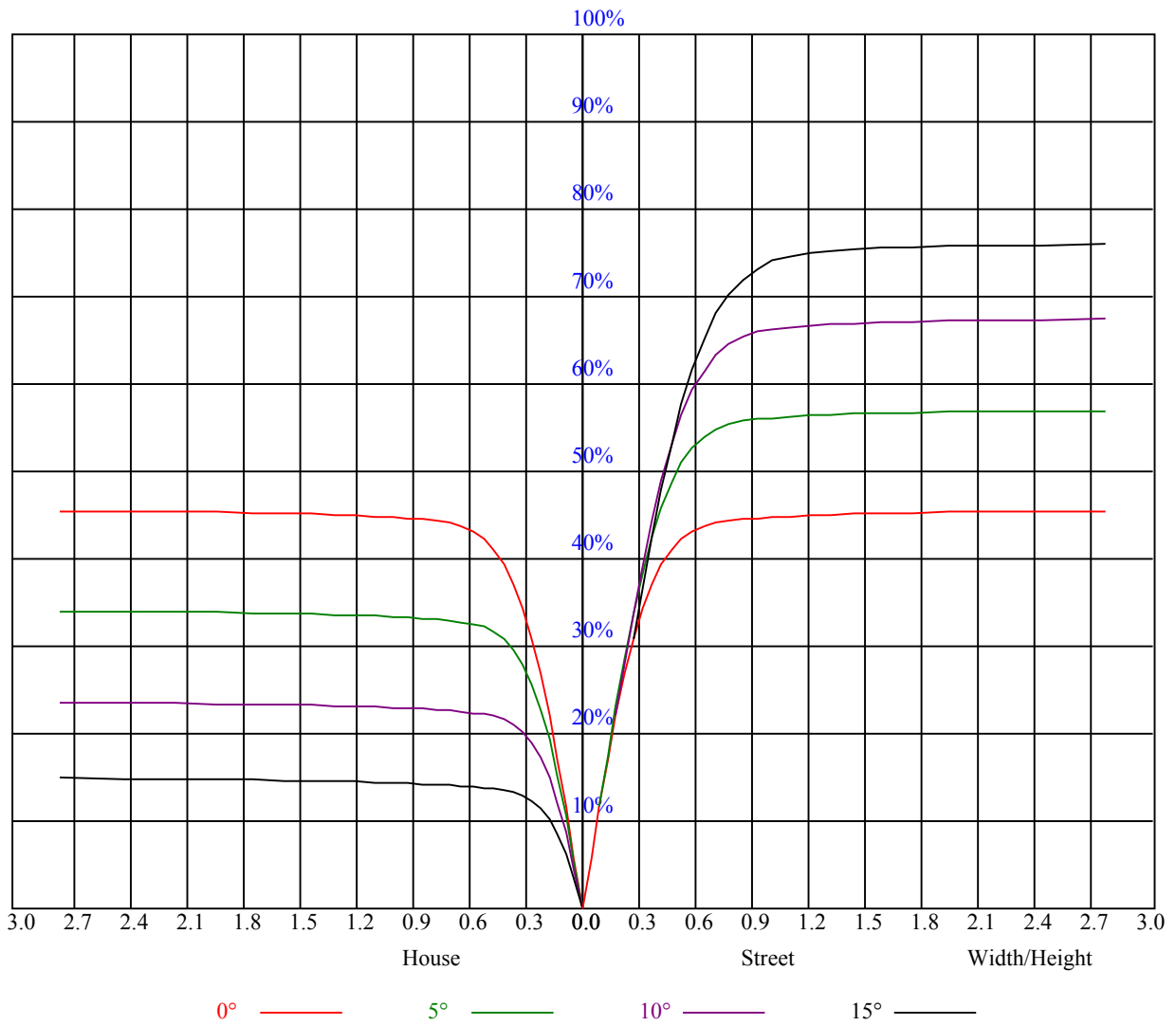


| Illumination assessment according UGR             |     |                  |     |     |     |     |                |     |     |     |     |
|---|-----|------------------|-----|-----|-----|-----|----------------|-----|-----|-----|-----|
| Rf of Ceiling                                     | 70  | 70               | 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 | 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 | 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 | 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 | 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 | 非数字 |
| 4H  | 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 | 非数字 |
|   | 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 | 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 | 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 | 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 | 非数字 |
| 8H  | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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 | 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     | 1.09                                   | 1.09 | 1.09 | 1.07 | 1.07 | 1.07 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 | 0.98 | 0.94 | 0.94 | 0.94 | 0.92 |
| 1     | 1.02                                   | 1.00 | 0.98 | 1.00 | 0.98 | 0.97 | 0.97 | 0.95 | 0.94 | 0.93 | 0.92 | 0.91 | 0.90 | 0.89 | 0.88 | 0.87 |
| 2     | 0.96                                   | 0.93 | 0.90 | 0.95 | 0.92 | 0.89 | 0.92 | 0.89 | 0.87 | 0.89 | 0.87 | 0.85 | 0.86 | 0.85 | 0.83 | 0.82 |
| 3     | 0.91                                   | 0.87 | 0.84 | 0.90 | 0.86 | 0.83 | 0.87 | 0.84 | 0.82 | 0.85 | 0.83 | 0.80 | 0.83 | 0.81 | 0.79 | 0.78 |
| 4     | 0.86                                   | 0.82 | 0.78 | 0.85 | 0.81 | 0.78 | 0.83 | 0.80 | 0.77 | 0.81 | 0.79 | 0.76 | 0.80 | 0.77 | 0.75 | 0.74 |
| 5     | 0.82                                   | 0.77 | 0.74 | 0.81 | 0.77 | 0.74 | 0.80 | 0.76 | 0.73 | 0.78 | 0.75 | 0.72 | 0.77 | 0.74 | 0.72 | 0.71 |
| 6     | 0.78                                   | 0.73 | 0.70 | 0.77 | 0.73 | 0.70 | 0.76 | 0.72 | 0.69 | 0.75 | 0.72 | 0.69 | 0.74 | 0.71 | 0.69 | 0.67 |
| 7     | 0.75                                   | 0.70 | 0.67 | 0.74 | 0.70 | 0.67 | 0.73 | 0.69 | 0.66 | 0.72 | 0.68 | 0.66 | 0.71 | 0.68 | 0.66 | 0.64 |
| 8     | 0.71                                   | 0.67 | 0.64 | 0.71 | 0.67 | 0.64 | 0.70 | 0.66 | 0.63 | 0.69 | 0.66 | 0.63 | 0.68 | 0.65 | 0.63 | 0.62 |
| 9     | 0.69                                   | 0.64 | 0.61 | 0.68 | 0.64 | 0.61 | 0.67 | 0.63 | 0.61 | 0.67 | 0.63 | 0.60 | 0.66 | 0.63 | 0.60 | 0.59 |
| 10    | 0.66                                   | 0.61 | 0.58 | 0.65 | 0.61 | 0.58 | 0.65 | 0.61 | 0.58 | 0.64 | 0.61 | 0.58 | 0.64 | 0.60 | 0.58 | 0.57 |





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    | 8213.37 | 8141.96 | 8051.73 | 7937.71 | 7771.65 | 7619.42 | 7447.83 | 7276.78 | 7053.16 |
| 45.0   | 8258.20 | 8223.33 | 8129.23 | 8026.27 | 7877.37 | 7729.02 | 7557.43 | 7333.80 | 7156.11 |
| 90.0   | 8217.24 | 8109.86 | 8006.34 | 7895.08 | 7711.86 | 7542.48 | 7368.12 | 7155.56 | 6960.72 |
| 135.0  | 8259.31 | 8234.40 | 8166.32 | 8050.63 | 7925.53 | 7779.95 | 7633.81 | 7434.54 | 7262.39 |
| 180.0  | 8213.37 | 8262.08 | 8268.72 | 8251.01 | 8172.96 | 8075.54 | 7915.01 | 7768.32 | 7602.82 |
| 225.0  | 8258.20 | 8272.60 | 8259.86 | 8205.62 | 8105.43 | 7991.40 | 7824.23 | 7664.26 | 7492.11 |
| 270.0  | 8217.24 | 8254.33 | 8275.92 | 8250.45 | 8201.19 | 8120.93 | 8000.26 | 7839.73 | 7685.85 |
| 315.0  | 8259.31 | 8252.67 | 8216.13 | 8142.51 | 8045.65 | 7912.24 | 7772.20 | 7617.21 | 7464.99 |
| 360.0  | 8213.37 | 8141.96 | 8051.73 | 7937.71 | 7771.65 | 7619.42 | 7447.83 | 7276.78 | 7053.16 |
| C/γ(°) | 9.0     | 10.0    | 11.0    | 12.0    | 13.0    | 14.0    | 15.0    | 16.0    | 17.0    |
| 0.0    | 6863.85 | 6650.18 | 6370.09 | 6120.45 | 5762.86 | 5467.83 | 5136.81 | 4790.85 | 4356.33 |
| 45.0   | 6971.23 | 6774.73 | 6506.82 | 6272.67 | 6011.40 | 5721.90 | 5332.21 | 4984.04 | 4630.88 |
| 90.0   | 6757.01 | 6470.84 | 6219.53 | 5945.53 | 5657.14 | 5269.11 | 4922.04 | 4560.58 | 4205.21 |
| 135.0  | 7034.89 | 6845.03 | 6633.02 | 6337.43 | 6067.31 | 5776.70 | 5463.40 | 5129.06 | 4776.93 |
| 180.0  | 7417.94 | 7204.27 | 7029.35 | 6824.55 | 6600.92 | 6309.20 | 6054.58 | 5760.65 | 5361.00 |
| 225.0  | 7310.00 | 7065.89 | 6864.95 | 6659.59 | 6380.06 | 6155.87 | 5885.75 | 5504.36 | 5181.65 |
| 270.0  | 7525.32 | 7358.15 | 7128.99 | 6936.91 | 6680.63 | 6465.85 | 6230.05 | 5890.18 | 5587.39 |
| 315.0  | 7248.80 | 7070.32 | 6843.37 | 6639.66 | 6416.04 | 6102.18 | 5808.81 | 5506.02 | 5176.67 |
| 360.0  | 6863.85 | 6650.18 | 6370.09 | 6120.45 | 5762.86 | 5467.83 | 5136.81 | 4790.85 | 4356.33 |
| C/γ(°) | 18.0    | 19.0    | 20.0    | 21.0    | 22.0    | 23.0    | 24.0    | 25.0    | 26.0    |
| 0.0    | 4007.60 | 3653.34 | 3308.48 | 2922.67 | 2645.90 | 2385.74 | 2133.88 | 1831.10 | 1613.56 |
| 45.0   | 4178.64 | 3814.97 | 3372.14 | 3048.32 | 2756.61 | 2491.47 | 2189.79 | 1950.11 | 1723.16 |
| 90.0   | 3752.97 | 3404.25 | 3005.70 | 2708.45 | 2438.88 | 2131.67 | 1894.20 | 1681.09 | 1484.03 |
| 135.0  | 4313.15 | 3955.57 | 3607.95 | 3195.56 | 2890.56 | 2536.30 | 2277.80 | 2035.35 | 1748.62 |
| 180.0  | 5038.28 | 4694.54 | 4262.78 | 3932.87 | 3583.59 | 3164.57 | 2878.94 | 2611.03 | 2311.57 |
| 225.0  | 4852.85 | 4436.59 | 4103.36 | 3773.45 | 3451.30 | 3074.89 | 2797.02 | 2544.60 | 2309.91 |
| 270.0  | 5264.68 | 4923.70 | 4505.78 | 4167.02 | 3827.70 | 3487.83 | 3098.69 | 2821.37 | 2569.51 |
| 315.0  | 4729.41 | 4371.83 | 4017.01 | 3669.94 | 3260.88 | 2954.78 | 2669.15 | 2338.14 | 2087.38 |
| 360.0  | 4007.60 | 3653.34 | 3308.48 | 2922.67 | 2645.90 | 2385.74 | 2133.88 | 1831.10 | 1613.56 |
| C/γ(°) | 27.0    | 28.0    | 29.0    | 30.0    | 31.0    | 32.0    | 33.0    | 34.0    | 35.0    |
| 0.0    | 1096.44 | 1096.44 | 1013.14 | 850.34  | 653.50  | 507.26  | 346.79  | 257.62  | 207.30  |
| 45.0   | 1510.60 | 1274.24 | 1096.55 | 927.73  | 763.88  | 574.57  | 441.17  | 306.66  | 285.62  |
| 90.0   | 1080.78 | 1080.78 | 912.45  | 749.27  | 557.96  | 419.19  | 306.05  | 230.55  | 181.01  |
| 135.0  | 1546.03 | 1358.38 | 1143.05 | 982.53  | 823.11  | 669.23  | 489.33  | 362.57  | 287.84  |
| 180.0  | 2080.74 | 1847.15 | 1628.50 | 1376.09 | 1191.76 | 1020.17 | 855.77  | 657.05  | 508.70  |
| 225.0  | 2014.87 | 1787.37 | 1512.26 | 1067.83 | 1067.83 | 930.77  | 718.38  | 563.78  | 399.60  |
| 270.0  | 2332.60 | 2033.69 | 1802.87 | 1533.29 | 1326.83 | 1135.30 | 911.12  | 743.40  | 586.75  |
| 315.0  | 1849.92 | 1580.90 | 1103.14 | 1103.14 | 976.33  | 815.30  | 658.04  | 515.18  | 358.97  |
| 360.0  | 1096.44 | 1096.44 | 1013.14 | 850.34  | 653.50  | 507.26  | 346.79  | 257.62  | 207.30  |
| C/γ(°) | 36.0    | 37.0    | 38.0    | 39.0    | 40.0    | 41.0    | 42.0    | 43.0    | 44.0    |
| 0.0    | 177.13  | 149.84  | 133.90  | 120.89  | 108.99  | 96.81   | 88.23   | 81.26   | 75.17   |
| 45.0   | 285.62  | 163.18  | 139.33  | 125.32  | 109.93  | 100.02  | 91.17   | 83.64   | 75.83   |
| 90.0   | 156.43  | 133.62  | 120.17  | 108.27  | 96.15   | 87.85   | 80.76   | 74.78   | 68.20   |
| 135.0  | 287.84  | 166.39  | 145.47  | 129.36  | 113.03  | 102.46  | 91.00   | 83.03   | 76.50   |
| 180.0  | 347.62  | 296.70  | 296.70  | 171.21  | 141.98  | 126.82  | 113.86  | 99.03   | 89.62   |
| 225.0  | 297.86  | 230.77  | 191.25  | 162.41  | 135.56  | 121.17  | 108.60  | 94.77   | 86.13   |
| 270.0  | 446.70  | 308.87  | 287.84  | 287.84  | 165.01  | 137.66  | 123.55  | 111.09  | 96.87   |
| 315.0  | 266.97  | 212.00  | 180.90  | 151.39  | 135.12  | 122.28  | 107.33  | 97.31   | 86.96   |
| 360.0  | 177.13  | 149.84  | 133.90  | 120.89  | 108.99  | 96.81   | 88.23   | 81.26   | 75.17   |

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    | 68.58 | 64.15 | 59.23 | 55.80 | 52.81 | 49.49 | 47.16 | 45.11 | 43.23 |
| 45.0   | 70.47 | 65.87 | 61.66 | 58.01 | 53.97 | 51.15 | 48.66 | 45.89 | 43.90 |
| 90.0   | 63.66 | 59.62 | 56.18 | 52.53 | 49.87 | 47.44 | 44.89 | 43.07 | 41.35 |
| 135.0  | 70.96 | 64.93 | 60.78 | 57.01 | 53.80 | 50.15 | 47.55 | 45.39 | 43.40 |
| 180.0  | 81.70 | 75.23 | 68.58 | 63.99 | 60.06 | 56.63 | 52.86 | 50.21 | 47.71 |
| 225.0  | 78.88 | 72.96 | 66.65 | 62.33 | 57.79 | 54.63 | 51.70 | 48.49 | 46.22 |
| 270.0  | 88.29 | 81.04 | 73.51 | 68.25 | 63.71 | 58.79 | 55.46 | 52.42 | 48.99 |
| 315.0  | 80.15 | 74.23 | 67.86 | 63.49 | 59.56 | 56.07 | 52.14 | 49.38 | 46.88 |
| 360.0  | 68.58 | 64.15 | 59.23 | 55.80 | 52.81 | 49.49 | 47.16 | 45.11 | 43.23 |
| C/γ(°) | 54.0  | 55.0  | 56.0  | 57.0  | 58.0  | 59.0  | 60.0  | 61.0  | 62.0  |
| 0.0    | 41.07 | 39.52 | 38.19 | 36.87 | 35.43 | 34.43 | 33.32 | 32.22 | 31.39 |
| 45.0   | 41.74 | 40.19 | 38.75 | 37.09 | 35.92 | 34.82 | 33.82 | 32.49 | 31.61 |
| 90.0   | 39.52 | 38.19 | 36.64 | 35.54 | 34.60 | 33.65 | 32.49 | 31.72 | 31.05 |
| 135.0  | 41.24 | 39.63 | 37.92 | 36.64 | 35.48 | 34.15 | 33.27 | 32.38 | 31.33 |
| 180.0  | 45.06 | 43.18 | 40.96 | 39.41 | 38.03 | 36.81 | 35.32 | 34.26 | 33.32 |
| 225.0  | 44.23 | 42.35 | 40.24 | 38.75 | 37.42 | 36.20 | 35.04 | 33.77 | 32.82 |
| 270.0  | 46.61 | 44.45 | 42.46 | 40.24 | 38.75 | 37.42 | 36.09 | 34.65 | 33.60 |
| 315.0  | 44.73 | 42.23 | 40.52 | 38.97 | 37.20 | 35.92 | 34.76 | 33.49 | 32.49 |
| 360.0  | 41.07 | 39.52 | 38.19 | 36.87 | 35.43 | 34.43 | 33.32 | 32.22 | 31.39 |
| C/γ(°) | 63.0  | 64.0  | 65.0  | 66.0  | 67.0  | 68.0  | 69.0  | 70.0  | 71.0  |
| 0.0    | 30.61 | 29.67 | 28.89 | 28.23 | 27.40 | 26.85 | 26.18 | 25.63 | 24.96 |
| 45.0   | 30.83 | 30.06 | 29.12 | 28.51 | 27.79 | 26.96 | 26.35 | 25.74 | 25.02 |
| 90.0   | 30.33 | 29.45 | 28.78 | 28.23 | 27.62 | 26.90 | 26.40 | 25.74 | 25.35 |
| 135.0  | 30.67 | 29.95 | 29.28 | 28.67 | 27.90 | 27.34 | 26.74 | 26.02 | 25.57 |
| 180.0  | 32.16 | 31.27 | 30.50 | 29.78 | 28.84 | 28.17 | 27.57 | 26.74 | 26.13 |
| 225.0  | 31.66 | 30.83 | 30.11 | 29.17 | 28.45 | 27.73 | 26.90 | 26.35 | 25.68 |
| 270.0  | 32.44 | 31.50 | 30.67 | 29.72 | 29.01 | 28.23 | 27.57 | 26.79 | 26.18 |
| 315.0  | 31.33 | 30.56 | 29.72 | 28.95 | 28.23 | 27.40 | 26.74 | 26.13 | 25.57 |
| 360.0  | 30.61 | 29.67 | 28.89 | 28.23 | 27.40 | 26.85 | 26.18 | 25.63 | 24.96 |
| C/γ(°) | 72.0  | 73.0  | 74.0  | 75.0  | 76.0  | 77.0  | 78.0  | 79.0  | 80.0  |
| 0.0    | 24.58 | 25.85 | 27.51 | 26.51 | 25.24 | 24.24 | 23.19 | 21.92 | 20.54 |
| 45.0   | 24.47 | 23.86 | 23.36 | 22.86 | 23.80 | 26.90 | 26.51 | 24.19 | 21.26 |
| 90.0   | 27.73 | 34.71 | 39.02 | 37.47 | 31.88 | 24.08 | 21.70 | 20.70 | 20.15 |
| 135.0  | 25.24 | 29.23 | 32.49 | 33.60 | 29.34 | 25.85 | 23.14 | 21.37 | 20.70 |
| 180.0  | 25.52 | 24.91 | 24.36 | 23.86 | 23.25 | 22.81 | 22.25 | 21.70 | 21.15 |
| 225.0  | 25.13 | 24.41 | 23.91 | 23.41 | 22.86 | 22.31 | 21.75 | 21.15 | 20.65 |
| 270.0  | 25.57 | 25.02 | 24.30 | 23.80 | 23.30 | 22.64 | 22.14 | 21.64 | 20.92 |
| 315.0  | 24.80 | 24.30 | 23.80 | 23.14 | 22.64 | 22.09 | 21.75 | 21.09 | 20.48 |
| 360.0  | 24.58 | 25.85 | 27.51 | 26.51 | 25.24 | 24.24 | 23.19 | 21.92 | 20.54 |
| C/γ(°) | 81.0  | 82.0  | 83.0  | 84.0  | 85.0  | 86.0  | 87.0  | 88.0  | 89.0  |
| 0.0    | 19.87 | 19.32 | 18.82 | 18.10 | 17.27 | 16.94 | 16.55 | 16.11 | 16.27 |
| 45.0   | 19.87 | 19.37 | 18.71 | 18.32 | 17.71 | 16.83 | 16.50 | 15.94 | 16.11 |
| 90.0   | 19.48 | 18.93 | 18.43 | 18.05 | 16.83 | 16.38 | 15.89 | 15.94 | 16.00 |
| 135.0  | 20.09 | 19.54 | 18.93 | 18.43 | 18.05 | 16.94 | 16.50 | 15.94 | 15.78 |
| 180.0  | 20.70 | 20.09 | 19.60 | 19.04 | 18.60 | 18.21 | 17.71 | 17.05 | 16.77 |
| 225.0  | 20.20 | 19.65 | 19.10 | 18.65 | 18.05 | 17.71 | 17.33 | 16.94 | 16.61 |
| 270.0  | 20.48 | 19.93 | 19.43 | 18.93 | 18.38 | 17.88 | 17.38 | 17.05 | 16.72 |
| 315.0  | 20.04 | 19.43 | 19.04 | 18.43 | 18.05 | 17.27 | 16.88 | 16.61 | 16.27 |
| 360.0  | 19.87 | 19.32 | 18.82 | 18.10 | 17.27 | 16.94 | 16.55 | 16.11 | 16.27 |

Intensity data(cd)

|        |       |
|--------|-------|
| C/γ(°) | 90.0  |
| 0.0    | 16.33 |
| 45.0   | 16.05 |
| 90.0   | 16.00 |
| 135.0  | 15.94 |
| 180.0  | 16.33 |
| 225.0  | 16.50 |
| 270.0  | 16.38 |
| 315.0  | 15.94 |
| 360.0  | 16.33 |