



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

---

## Nata

---

Client:

LumCAT: 1-1373-L

Luminaire: 92.70.409.00

Report No: 2023718-B011

Ballast type:

Test No: NT0100

Voltage(V): 35.310

LampCAT: Fortimo LED SLM 1202 G7N

Current(A): 0.208

Lamp flux(lm): 863.3

Power (W): 7.344

Number of Lamps: 1

PF: 0.000

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

---

## Photometric Results

---

Lumens(lm): 811.12, Efficiency(%): 93.95% , Luminous Efficacy(lm/W): 110.45

Central intensity(cd): 4091.296, Maximum intensity(cd): 4091.296

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

Beam Angle(50%Imax): [C0/180]Total=18.8

[C90/270]Total=18.8

Field angle(10%Imax): [C0/180]Total=51.8

[C90/270]Total=51.8

Maximum s/h(1/2): C0\_180=0.32 C90\_270=0.32

Maximum s/h(1/4): C0\_180=0.35 C90\_270=0.35

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 93.95%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 99.982%

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0                | 4091.296      | 0.000       | 0         | 0.00%       | 0.00%      |
| 1.0                | 4060.611      | 3.901       | 3.901     | 0.45%       | 0.48%      |
| 2.0                | 3968.365      | 11.524      | 15.424    | 1.33%       | 1.90%      |
| 3.0                | 3810.684      | 18.605      | 34.029    | 2.16%       | 4.20%      |
| 4.0                | 3638.740      | 24.936      | 58.965    | 2.89%       | 7.27%      |
| 5.0                | 3346.255      | 30.049      | 89.014    | 3.48%       | 10.97%     |
| 6.0                | 3085.261      | 33.799      | 122.813   | 3.92%       | 15.14%     |
| 7.0                | 2780.297      | 36.407      | 159.221   | 4.22%       | 19.63%     |
| 8.0                | 2447.593      | 37.415      | 196.636   | 4.33%       | 24.24%     |
| 9.0                | 2158.516      | 37.330      | 233.966   | 4.32%       | 28.84%     |
| 10.0               | 1876.571      | 36.516      | 270.482   | 4.23%       | 33.35%     |
| 11.0               | 1605.932      | 34.797      | 305.279   | 4.03%       | 37.64%     |
| 12.0               | 1400.321      | 32.863      | 338.142   | 3.81%       | 41.69%     |
| 13.0               | 1251.808      | 31.474      | 369.616   | 3.65%       | 45.57%     |
| 14.0               | 1095.441      | 30.045      | 399.661   | 3.48%       | 49.27%     |
| 15.0               | 1001.932      | 28.794      | 428.454   | 3.34%       | 52.82%     |
| 16.0               | 927.279       | 28.268      | 456.723   | 3.27%       | 56.31%     |
| 17.0               | 840.811       | 27.534      | 484.257   | 3.19%       | 59.70%     |
| 18.0               | 783.314       | 26.778      | 511.035   | 3.10%       | 63.00%     |
| 19.0               | 722.641       | 26.201      | 537.235   | 3.03%       | 66.23%     |
| 20.0               | 663.945       | 25.378      | 562.614   | 2.94%       | 69.36%     |
| 21.0               | 619.996       | 24.654      | 587.268   | 2.86%       | 72.40%     |
| 22.0               | 572.813       | 23.970      | 611.238   | 2.78%       | 75.36%     |
| 23.0               | 525.089       | 23.037      | 634.275   | 2.67%       | 78.20%     |
| 24.0               | 485.849       | 22.103      | 656.378   | 2.56%       | 80.92%     |
| 25.0               | 444.883       | 21.163      | 677.54    | 2.45%       | 83.53%     |
| 26.0               | 403.974       | 20.037      | 697.578   | 2.32%       | 86.00%     |
| 27.0               | 359.909       | 18.689      | 716.266   | 2.16%       | 88.31%     |
| 28.0               | 315.606       | 17.103      | 733.369   | 1.98%       | 90.41%     |
| 29.0               | 274.788       | 15.446      | 748.815   | 1.79%       | 92.32%     |
| 30.0               | 224.609       | 13.484      | 762.299   | 1.56%       | 93.98%     |
| 31.0               | 191.850       | 11.589      | 773.888   | 1.34%       | 95.41%     |
| 32.0               | 144.152       | 9.626       | 783.515   | 1.12%       | 96.60%     |
| 33.0               | 107.225       | 7.406       | 790.92    | 0.86%       | 97.51%     |
| 34.0               | 73.841        | 5.480       | 796.4     | 0.63%       | 98.19%     |
| 35.0               | 50.346        | 3.857       | 800.257   | 0.45%       | 98.66%     |
| 36.0               | 34.704        | 2.708       | 802.965   | 0.31%       | 98.99%     |
| 37.0               | 23.469        | 1.897       | 804.862   | 0.22%       | 99.23%     |

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0               | 17.265        | 1.360       | 806.221   | 0.16%       | 99.40%     |
| 39.0               | 13.252        | 1.042       | 807.263   | 0.12%       | 99.52%     |
| 40.0               | 10.578        | 0.831       | 808.094   | 0.10%       | 99.63%     |
| 41.0               | 7.647         | 0.649       | 808.743   | 0.08%       | 99.71%     |
| 42.0               | 5.656         | 0.483       | 809.227   | 0.06%       | 99.77%     |
| 43.0               | 4.175         | 0.364       | 809.591   | 0.04%       | 99.81%     |
| 44.0               | 2.970         | 0.270       | 809.86    | 0.03%       | 99.85%     |
| 45.0               | 2.171         | 0.198       | 810.058   | 0.02%       | 99.87%     |
| 46.0               | 1.669         | 0.150       | 810.208   | 0.02%       | 99.89%     |
| 47.0               | 1.340         | 0.120       | 810.328   | 0.01%       | 99.90%     |
| 48.0               | 1.134         | 0.100       | 810.428   | 0.01%       | 99.91%     |
| 49.0               | 0.966         | 0.086       | 810.514   | 0.01%       | 99.93%     |
| 50.0               | 0.805         | 0.074       | 810.588   | 0.01%       | 99.93%     |
| 51.0               | 0.683         | 0.063       | 810.651   | 0.01%       | 99.94%     |
| 52.0               | 0.606         | 0.055       | 810.706   | 0.01%       | 99.95%     |
| 53.0               | 0.535         | 0.050       | 810.756   | 0.01%       | 99.96%     |
| 54.0               | 0.457         | 0.044       | 810.8     | 0.01%       | 99.96%     |
| 55.0               | 0.393         | 0.038       | 810.837   | 0.00%       | 99.97%     |
| 56.0               | 0.341         | 0.033       | 810.871   | 0.00%       | 99.97%     |
| 57.0               | 0.303         | 0.029       | 810.9     | 0.00%       | 99.97%     |
| 58.0               | 0.277         | 0.027       | 810.927   | 0.00%       | 99.98%     |
| 59.0               | 0.251         | 0.025       | 810.952   | 0.00%       | 99.98%     |
| 60.0               | 0.206         | 0.022       | 810.973   | 0.00%       | 99.98%     |
| 61.0               | 0.167         | 0.018       | 810.991   | 0.00%       | 99.98%     |
| 62.0               | 0.174         | 0.016       | 811.007   | 0.00%       | 99.99%     |
| 63.0               | 0.142         | 0.015       | 811.023   | 0.00%       | 99.99%     |
| 64.0               | 0.122         | 0.013       | 811.036   | 0.00%       | 99.99%     |
| 65.0               | 0.097         | 0.011       | 811.047   | 0.00%       | 99.99%     |
| 66.0               | 0.097         | 0.010       | 811.056   | 0.00%       | 99.99%     |
| 67.0               | 0.090         | 0.009       | 811.066   | 0.00%       | 99.99%     |
| 68.0               | 0.058         | 0.007       | 811.073   | 0.00%       | 99.99%     |
| 69.0               | 0.064         | 0.006       | 811.079   | 0.00%       | 100.00%    |
| 70.0               | 0.052         | 0.006       | 811.085   | 0.00%       | 100.00%    |
| 71.0               | 0.058         | 0.006       | 811.091   | 0.00%       | 100.00%    |
| 72.0               | 0.039         | 0.005       | 811.096   | 0.00%       | 100.00%    |
| 73.0               | 0.032         | 0.004       | 811.1     | 0.00%       | 100.00%    |
| 74.0               | 0.026         | 0.003       | 811.103   | 0.00%       | 100.00%    |
| 75.0               | 0.019         | 0.002       | 811.105   | 0.00%       | 100.00%    |

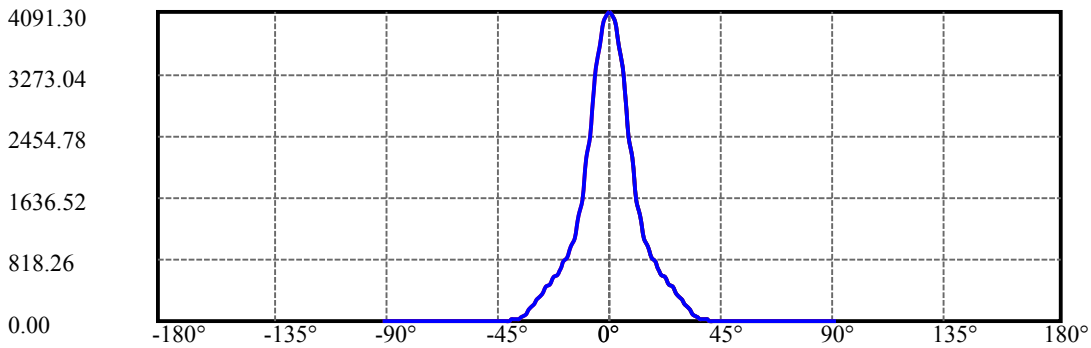
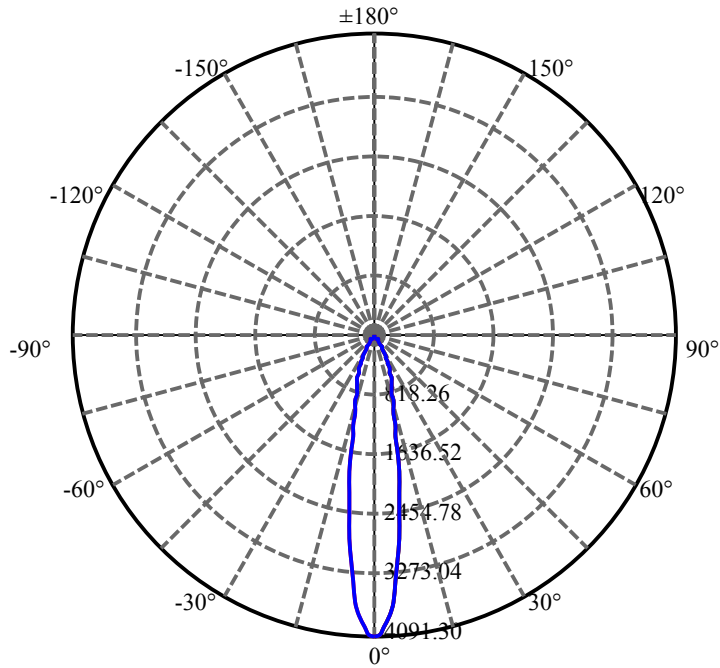
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0               | 0.006         | 0.001       | 811.107   | 0.00%       | 100.00%    |
| 77.0               | 0.013         | 0.001       | 811.108   | 0.00%       | 100.00%    |
| 78.0               | 0.006         | 0.001       | 811.109   | 0.00%       | 100.00%    |
| 79.0               | 0.013         | 0.001       | 811.11    | 0.00%       | 100.00%    |
| 80.0               | 0.013         | 0.001       | 811.111   | 0.00%       | 100.00%    |
| 81.0               | 0.006         | 0.001       | 811.112   | 0.00%       | 100.00%    |
| 82.0               | 0.013         | 0.001       | 811.113   | 0.00%       | 100.00%    |
| 83.0               | 0.013         | 0.001       | 811.114   | 0.00%       | 100.00%    |
| 84.0               | 0.006         | 0.001       | 811.115   | 0.00%       | 100.00%    |
| 85.0               | 0.006         | 0.001       | 811.116   | 0.00%       | 100.00%    |
| 86.0               | 0.006         | 0.001       | 811.117   | 0.00%       | 100.00%    |
| 87.0               | 0.000         | 0.000       | 811.117   | 0.00%       | 100.00%    |
| 88.0               | 0.000         | 0.000       | 811.117   | 0.00%       | 100.00%    |
| 89.0               | 0.000         | 0.000       | 811.117   | 0.00%       | 100.00%    |
| 90.0               | 0.006         | 0.000       | 811.117   | 0.00%       | 100.00%    |

ZONAL LUMEN SUMMARY

| Zone    | Lumens | %Lamp  | %Fixt   |
|---------|--------|--------|---------|
| 0-30    | 762.30 | 88.30% | 93.98%  |
| 0-40    | 808.09 | 93.60% | 99.63%  |
| 0-60    | 810.97 | 93.94% | 99.98%  |
| 0-90    | 811.12 | 93.95% | 100.00% |
| 0-120   | 811.12 | 93.95% | 100.00% |
| 0-180   | 811.12 | 93.95% | 100.00% |
| 60-90   | 0.14   | 0.02%  | 0.02%   |
| 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%   |
| 0-23.66 | 648.89 | 75.16% | 80.00%  |

ZONAL LUMEN SUMMARY

|         |        |
|---------|--------|
| 0-10    | 270.48 |
| 10-20   | 292.13 |
| 20-30   | 199.69 |
| 30-40   | 45.80  |
| 40-50   | 2.49   |
| 50-60   | 0.39   |
| 60-70   | 0.11   |
| 70-80   | 0.03   |
| 80-90   | 0.01   |
| 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   |



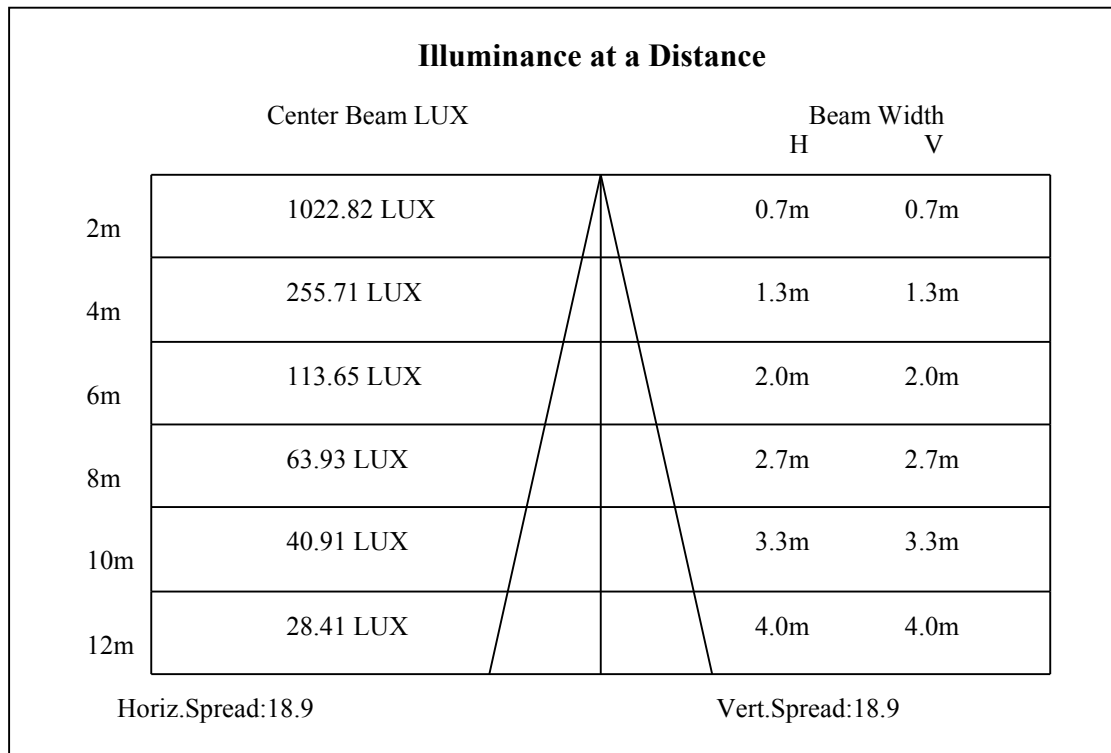
C0(Max): —————

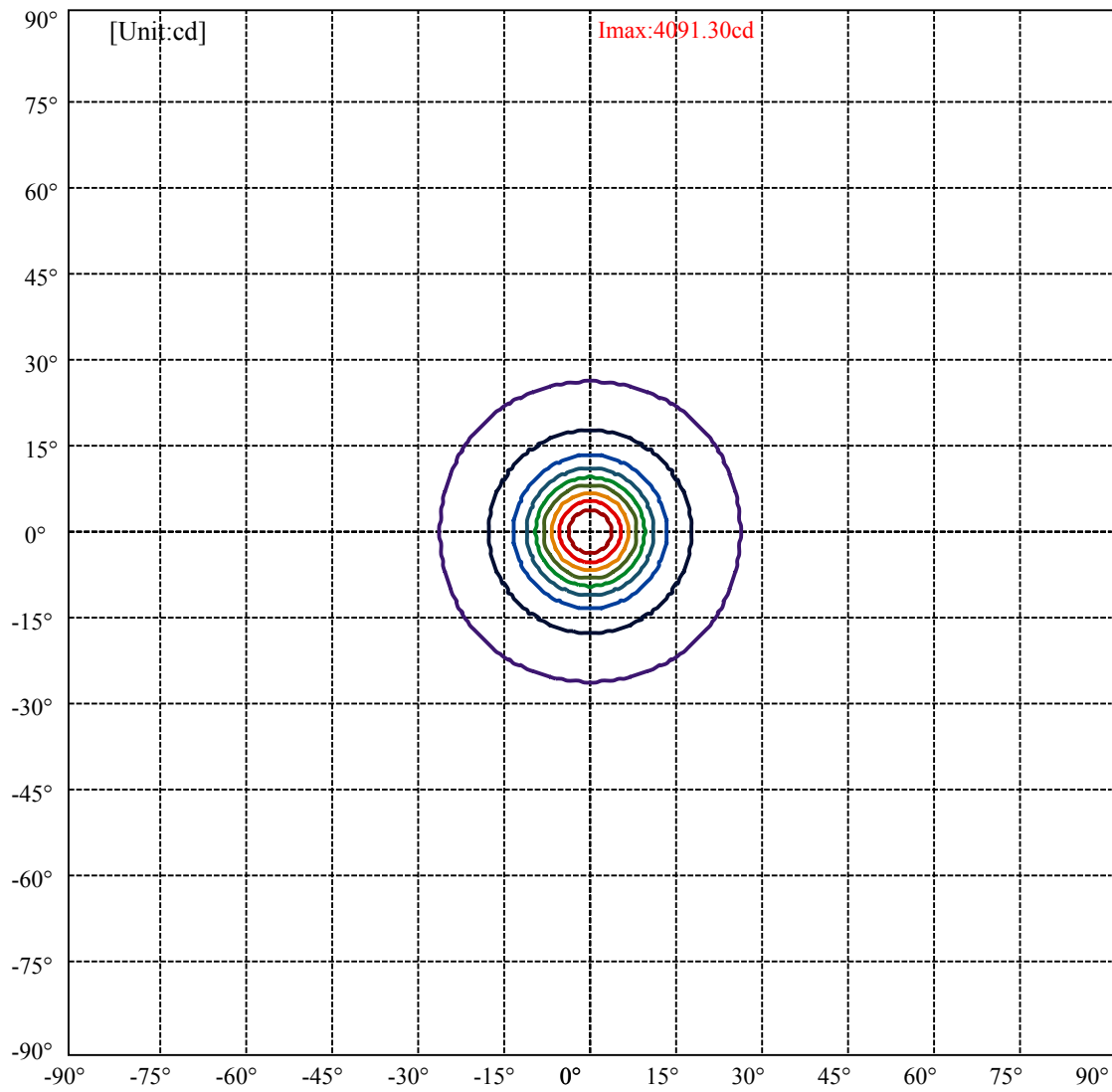
C0/C180: —————

C90/C270: —————

Field angle(10%Imax):C0/180Left:25.9 Right:25.9  
:C90/270Left:25.9 Right:25.9

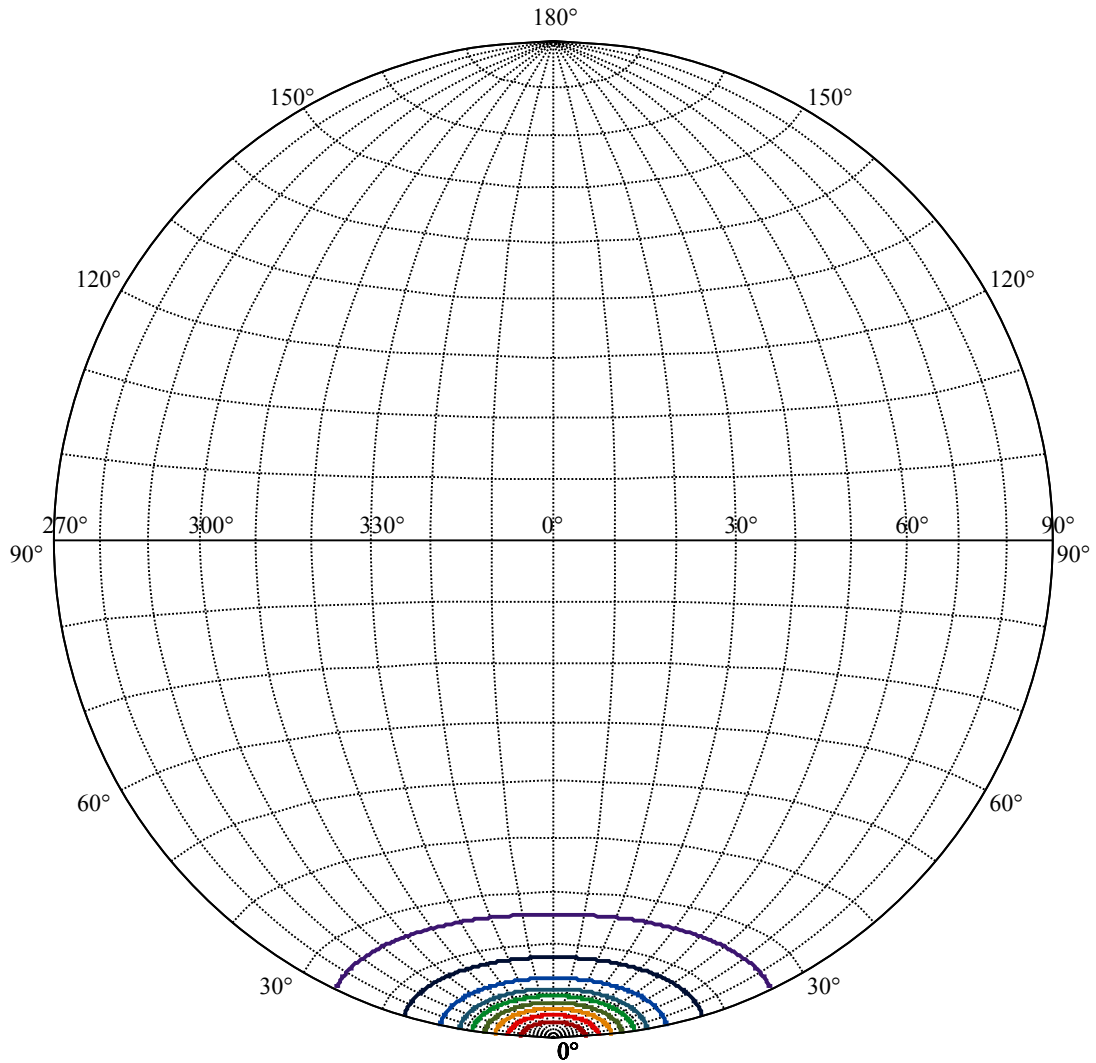
Beam Angle(50%Imax):C0/180Left:9.4 Right:9.4  
:C90/270Left:9.4 Right:9.4





|                   |   |
|-------------------|---|
| (10%Imax) 409.13  | — |
| (20%Imax) 818.259 | — |
| (30%Imax) 1227.39 | — |
| (40%Imax) 1636.52 | — |
| (50%Imax) 2045.65 | — |
| (60%Imax) 2454.78 | — |
| (70%Imax) 2863.91 | — |
| (80%Imax) 3273.04 | — |
| (90%Imax) 3682.17 | — |





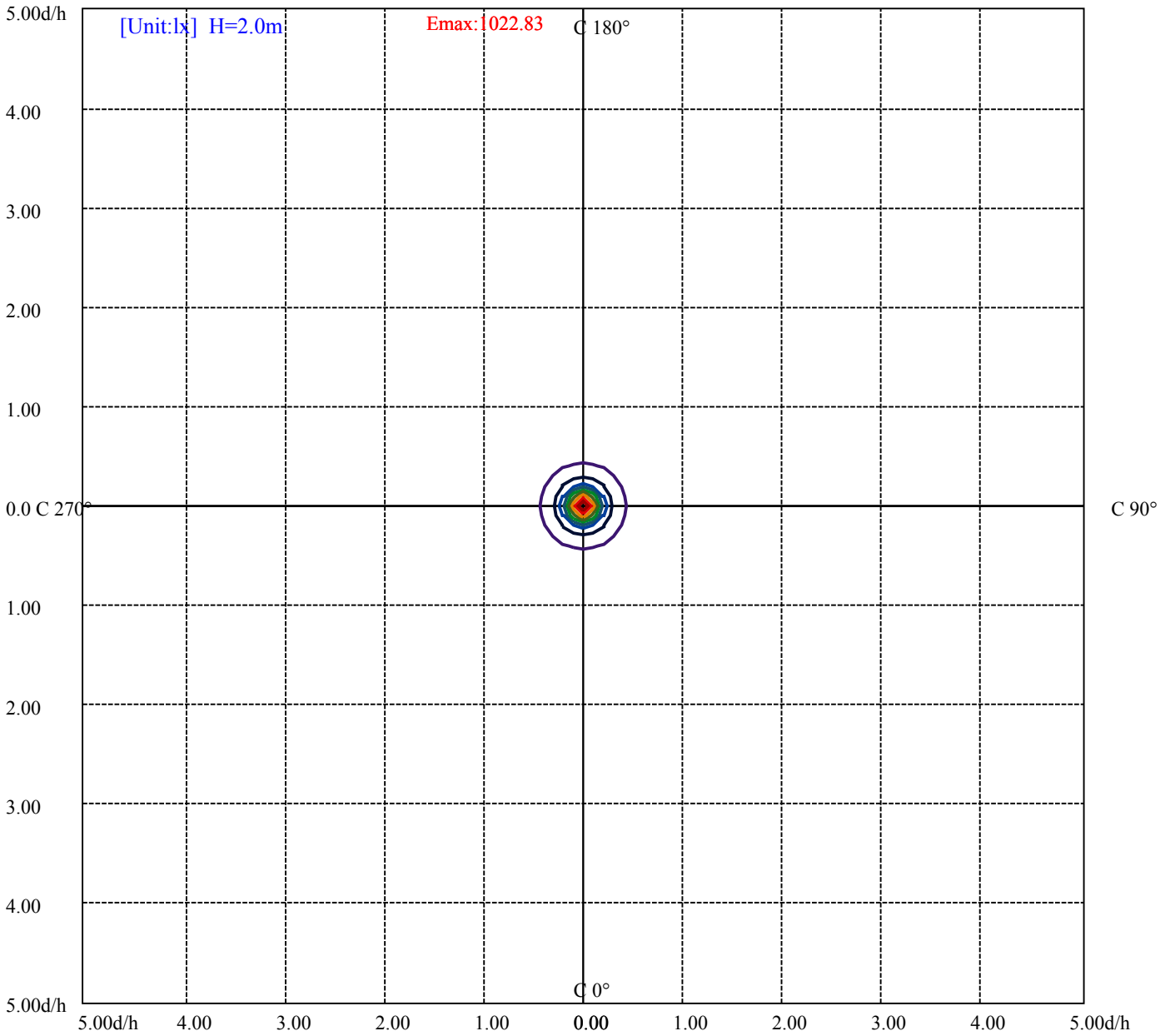
House

[Unit:cd]

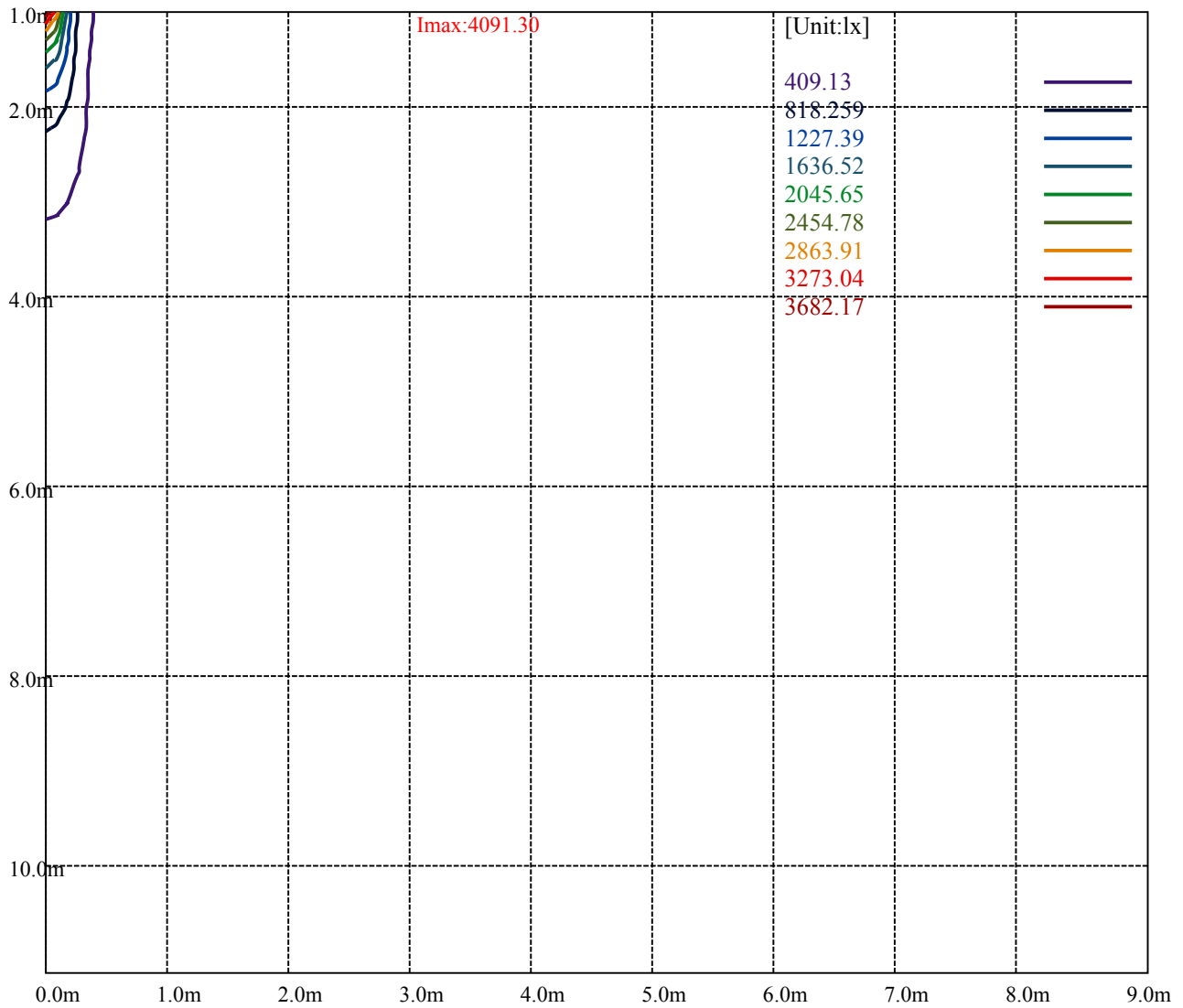
Road

Imax:4091.30

|           |         |   |
|-----------|---------|---|
| (10%Imax) | 409.13  | — |
| (20%Imax) | 818.259 | — |
| (30%Imax) | 1227.39 | — |
| (40%Imax) | 1636.52 | — |
| (50%Imax) | 2045.65 | — |
| (60%Imax) | 2454.78 | — |
| (70%Imax) | 2863.91 | — |
| (80%Imax) | 3273.04 | — |
| (90%Imax) | 3682.17 | — |



- (10%Emax) 102.2822
- (20%Emax) 204.5645
- (30%Emax) 306.8475
- (40%Emax) 409.13
- (50%Emax) 511.4125
- (60%Emax) 613.6925
- (70%Emax) 715.975
- (80%Emax) 818.2575
- (90%Emax) 920.54



Luminance Table

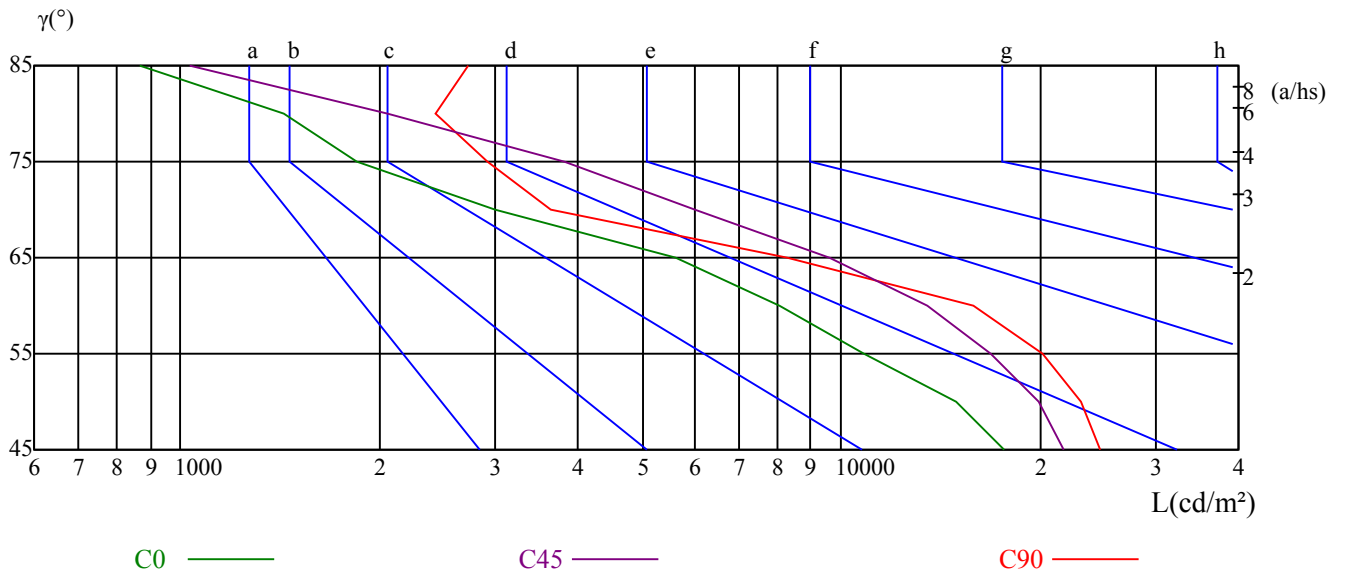
| $\gamma$ | 45    | 50    | 55    | 60    | 65   | 70   | 75   | 80   | 85   |
|----------|-------|-------|-------|-------|------|------|------|------|------|
| C0       | 17707 | 14902 | 10843 | 8081  | 5637 | 2993 | 1851 | 1437 | 868  |
| C45      | 21736 | 19918 | 16903 | 13532 | 9602 | 6004 | 3809 | 2064 | 1031 |
| C90      | 24698 | 23118 | 20255 | 15854 | 8293 | 3645 | 2908 | 2436 | 2724 |

| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 10642      | 10437      | 15758   | 4678       | 3676       | 7686    | 4962       | 3969       | 5458    |

Glare Table

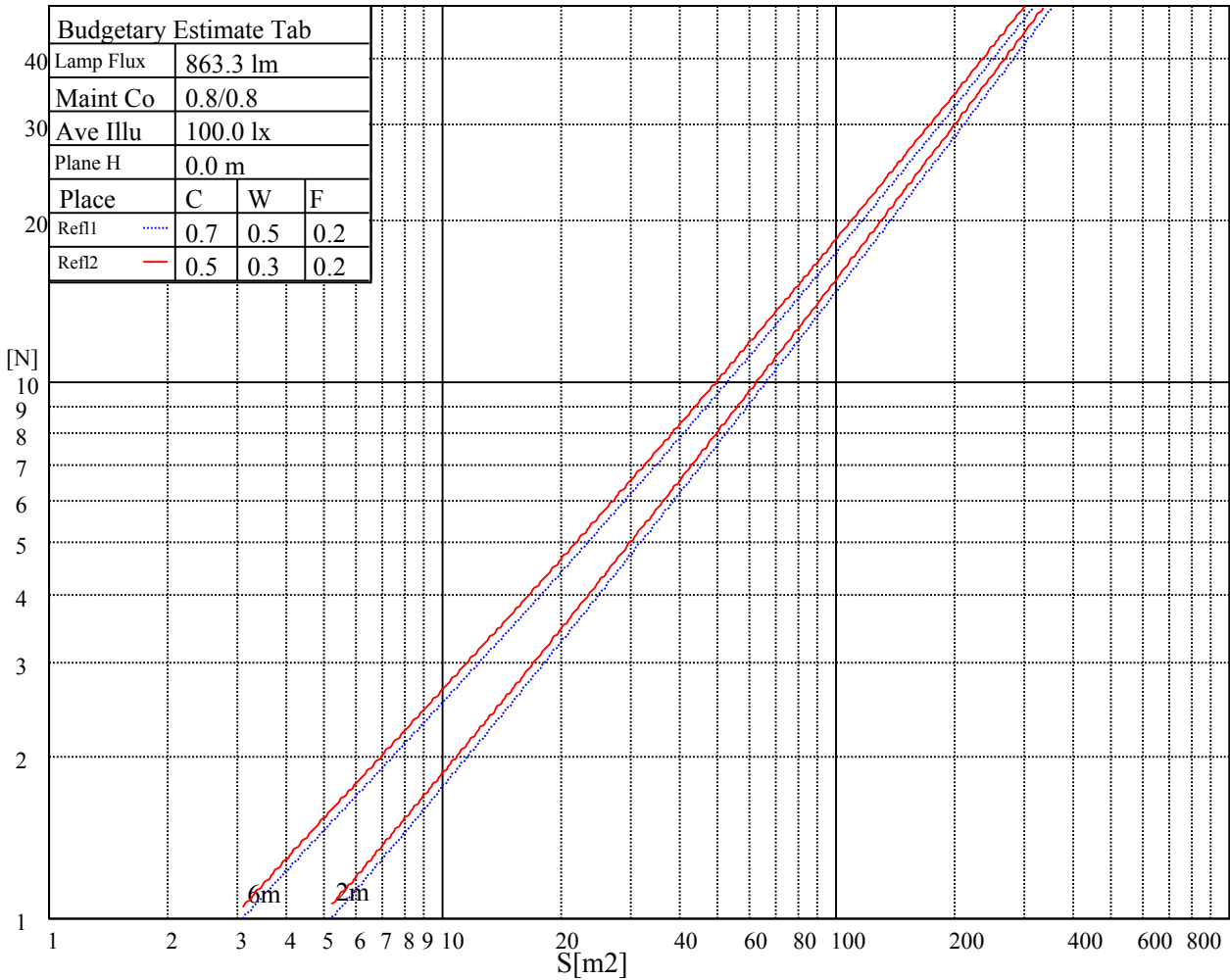
| Glare | Quality | Service Values Illuminance(lx) |      |      |       |       |       |       |       |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15  | A       | 2000                           | 1000 | 500  | <=300 |       |    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

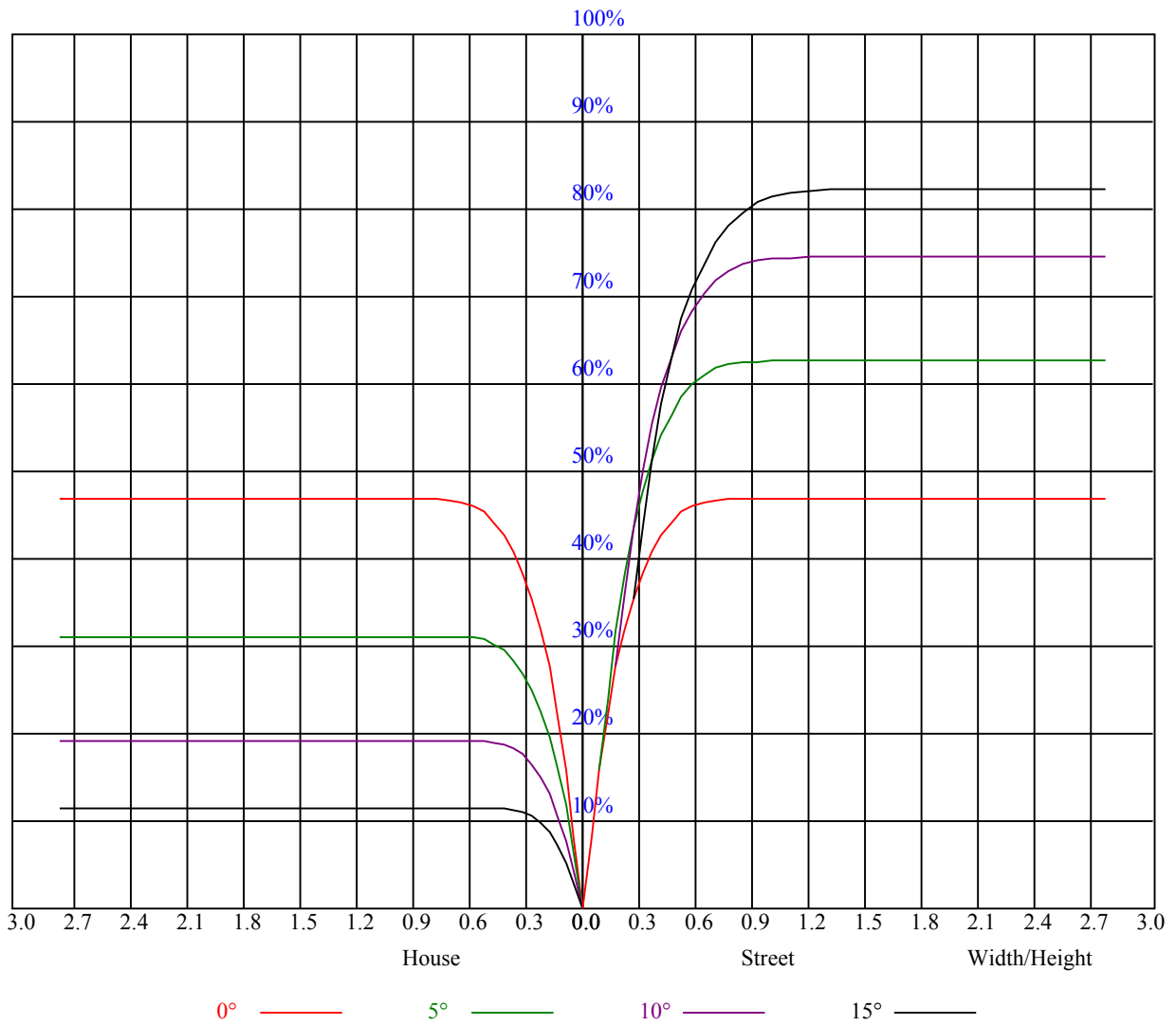


| Illumination assessment according UGR             |     |                  |     |     |     |     |                |     |     |     |  |
|---------------------------------------------------|-----|------------------|-----|-----|-----|-----|----------------|-----|-----|-----|--|
| Rf of Ceiling                                     | 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     | 1.12                                   | 1.12 | 1.12 | 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     | 1.06                                   | 1.04 | 1.02 | 1.04 | 1.02 | 1.01 | 1.00 | 0.99 | 0.98 | 0.97 | 0.96 | 0.95 | 0.94 | 0.93 | 0.92 | 0.90 |
| 2     | 1.01                                   | 0.98 | 0.95 | 0.99 | 0.96 | 0.94 | 0.96 | 0.94 | 0.92 | 0.93 | 0.92 | 0.90 | 0.91 | 0.90 | 0.88 | 0.87 |
| 3     | 0.96                                   | 0.93 | 0.90 | 0.95 | 0.92 | 0.89 | 0.93 | 0.90 | 0.88 | 0.90 | 0.88 | 0.86 | 0.88 | 0.87 | 0.85 | 0.84 |
| 4     | 0.92                                   | 0.88 | 0.85 | 0.91 | 0.87 | 0.85 | 0.89 | 0.86 | 0.84 | 0.87 | 0.85 | 0.83 | 0.86 | 0.84 | 0.82 | 0.81 |
| 5     | 0.88                                   | 0.84 | 0.81 | 0.88 | 0.84 | 0.81 | 0.86 | 0.83 | 0.80 | 0.85 | 0.82 | 0.80 | 0.83 | 0.81 | 0.79 | 0.78 |
| 6     | 0.85                                   | 0.81 | 0.78 | 0.84 | 0.81 | 0.78 | 0.83 | 0.80 | 0.77 | 0.82 | 0.79 | 0.77 | 0.81 | 0.78 | 0.76 | 0.75 |
| 7     | 0.82                                   | 0.78 | 0.75 | 0.81 | 0.78 | 0.75 | 0.80 | 0.77 | 0.74 | 0.79 | 0.76 | 0.74 | 0.79 | 0.76 | 0.74 | 0.73 |
| 8     | 0.79                                   | 0.75 | 0.72 | 0.79 | 0.75 | 0.72 | 0.78 | 0.74 | 0.72 | 0.77 | 0.74 | 0.72 | 0.76 | 0.73 | 0.71 | 0.70 |
| 9     | 0.77                                   | 0.73 | 0.70 | 0.76 | 0.72 | 0.70 | 0.75 | 0.72 | 0.70 | 0.75 | 0.72 | 0.69 | 0.74 | 0.71 | 0.69 | 0.68 |
| 10    | 0.74                                   | 0.70 | 0.68 | 0.74 | 0.70 | 0.68 | 0.73 | 0.70 | 0.67 | 0.73 | 0.69 | 0.67 | 0.72 | 0.69 | 0.67 | 0.66 |





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    | 4091.30 | 4060.61 | 3968.37 | 3810.68 | 3638.74 | 3346.26 | 3085.26 | 2780.30 | 2447.59 |
| 45.0   | 4091.30 | 4060.61 | 3968.37 | 3810.68 | 3638.74 | 3346.26 | 3085.26 | 2780.30 | 2447.59 |
| 90.0   | 4091.30 | 4060.61 | 3968.37 | 3810.68 | 3638.74 | 3346.26 | 3085.26 | 2780.30 | 2447.59 |
| 135.0  | 4091.30 | 4060.61 | 3968.37 | 3810.68 | 3638.74 | 3346.26 | 3085.26 | 2780.30 | 2447.59 |
| 180.0  | 4091.30 | 4060.61 | 3968.37 | 3810.68 | 3638.74 | 3346.26 | 3085.26 | 2780.30 | 2447.59 |
| 225.0  | 4091.30 | 4060.61 | 3968.37 | 3810.68 | 3638.74 | 3346.26 | 3085.26 | 2780.30 | 2447.59 |
| 270.0  | 4091.30 | 4060.61 | 3968.37 | 3810.68 | 3638.74 | 3346.26 | 3085.26 | 2780.30 | 2447.59 |
| 315.0  | 4091.30 | 4060.61 | 3968.37 | 3810.68 | 3638.74 | 3346.26 | 3085.26 | 2780.30 | 2447.59 |
| 360.0  | 4091.30 | 4060.61 | 3968.37 | 3810.68 | 3638.74 | 3346.26 | 3085.26 | 2780.30 | 2447.59 |
| C/γ(°) | 9.0     | 10.0    | 11.0    | 12.0    | 13.0    | 14.0    | 15.0    | 16.0    | 17.0    |
| 0.0    | 2158.52 | 1876.57 | 1605.93 | 1400.32 | 1251.81 | 1095.44 | 1001.93 | 927.28  | 840.81  |
| 45.0   | 2158.52 | 1876.57 | 1605.93 | 1400.32 | 1251.81 | 1095.44 | 1001.93 | 927.28  | 840.81  |
| 90.0   | 2158.52 | 1876.57 | 1605.93 | 1400.32 | 1251.81 | 1095.44 | 1001.93 | 927.28  | 840.81  |
| 135.0  | 2158.52 | 1876.57 | 1605.93 | 1400.32 | 1251.81 | 1095.44 | 1001.93 | 927.28  | 840.81  |
| 180.0  | 2158.52 | 1876.57 | 1605.93 | 1400.32 | 1251.81 | 1095.44 | 1001.93 | 927.28  | 840.81  |
| 225.0  | 2158.52 | 1876.57 | 1605.93 | 1400.32 | 1251.81 | 1095.44 | 1001.93 | 927.28  | 840.81  |
| 270.0  | 2158.52 | 1876.57 | 1605.93 | 1400.32 | 1251.81 | 1095.44 | 1001.93 | 927.28  | 840.81  |
| 315.0  | 2158.52 | 1876.57 | 1605.93 | 1400.32 | 1251.81 | 1095.44 | 1001.93 | 927.28  | 840.81  |
| 360.0  | 2158.52 | 1876.57 | 1605.93 | 1400.32 | 1251.81 | 1095.44 | 1001.93 | 927.28  | 840.81  |
| C/γ(°) | 18.0    | 19.0    | 20.0    | 21.0    | 22.0    | 23.0    | 24.0    | 25.0    | 26.0    |
| 0.0    | 783.31  | 722.64  | 663.95  | 620.00  | 572.81  | 525.09  | 485.85  | 444.88  | 403.97  |
| 45.0   | 783.31  | 722.64  | 663.95  | 620.00  | 572.81  | 525.09  | 485.85  | 444.88  | 403.97  |
| 90.0   | 783.31  | 722.64  | 663.95  | 620.00  | 572.81  | 525.09  | 485.85  | 444.88  | 403.97  |
| 135.0  | 783.31  | 722.64  | 663.95  | 620.00  | 572.81  | 525.09  | 485.85  | 444.88  | 403.97  |
| 180.0  | 783.31  | 722.64  | 663.95  | 620.00  | 572.81  | 525.09  | 485.85  | 444.88  | 403.97  |
| 225.0  | 783.31  | 722.64  | 663.95  | 620.00  | 572.81  | 525.09  | 485.85  | 444.88  | 403.97  |
| 270.0  | 783.31  | 722.64  | 663.95  | 620.00  | 572.81  | 525.09  | 485.85  | 444.88  | 403.97  |
| 315.0  | 783.31  | 722.64  | 663.95  | 620.00  | 572.81  | 525.09  | 485.85  | 444.88  | 403.97  |
| 360.0  | 783.31  | 722.64  | 663.95  | 620.00  | 572.81  | 525.09  | 485.85  | 444.88  | 403.97  |
| C/γ(°) | 27.0    | 28.0    | 29.0    | 30.0    | 31.0    | 32.0    | 33.0    | 34.0    | 35.0    |
| 0.0    | 359.91  | 315.61  | 274.79  | 224.61  | 191.85  | 144.15  | 107.23  | 73.84   | 50.35   |
| 45.0   | 359.91  | 315.61  | 274.79  | 224.61  | 191.85  | 144.15  | 107.23  | 73.84   | 50.35   |
| 90.0   | 359.91  | 315.61  | 274.79  | 224.61  | 191.85  | 144.15  | 107.23  | 73.84   | 50.35   |
| 135.0  | 359.91  | 315.61  | 274.79  | 224.61  | 191.85  | 144.15  | 107.23  | 73.84   | 50.35   |
| 180.0  | 359.91  | 315.61  | 274.79  | 224.61  | 191.85  | 144.15  | 107.23  | 73.84   | 50.35   |
| 225.0  | 359.91  | 315.61  | 274.79  | 224.61  | 191.85  | 144.15  | 107.23  | 73.84   | 50.35   |
| 270.0  | 359.91  | 315.61  | 274.79  | 224.61  | 191.85  | 144.15  | 107.23  | 73.84   | 50.35   |
| 315.0  | 359.91  | 315.61  | 274.79  | 224.61  | 191.85  | 144.15  | 107.23  | 73.84   | 50.35   |
| 360.0  | 359.91  | 315.61  | 274.79  | 224.61  | 191.85  | 144.15  | 107.23  | 73.84   | 50.35   |
| C/γ(°) | 36.0    | 37.0    | 38.0    | 39.0    | 40.0    | 41.0    | 42.0    | 43.0    | 44.0    |
| 0.0    | 34.70   | 23.47   | 17.27   | 13.25   | 10.58   | 7.65    | 5.66    | 4.18    | 2.97    |
| 45.0   | 34.70   | 23.47   | 17.27   | 13.25   | 10.58   | 7.65    | 5.66    | 4.18    | 2.97    |
| 90.0   | 34.70   | 23.47   | 17.27   | 13.25   | 10.58   | 7.65    | 5.66    | 4.18    | 2.97    |
| 135.0  | 34.70   | 23.47   | 17.27   | 13.25   | 10.58   | 7.65    | 5.66    | 4.18    | 2.97    |
| 180.0  | 34.70   | 23.47   | 17.27   | 13.25   | 10.58   | 7.65    | 5.66    | 4.18    | 2.97    |
| 225.0  | 34.70   | 23.47   | 17.27   | 13.25   | 10.58   | 7.65    | 5.66    | 4.18    | 2.97    |
| 270.0  | 34.70   | 23.47   | 17.27   | 13.25   | 10.58   | 7.65    | 5.66    | 4.18    | 2.97    |
| 315.0  | 34.70   | 23.47   | 17.27   | 13.25   | 10.58   | 7.65    | 5.66    | 4.18    | 2.97    |
| 360.0  | 34.70   | 23.47   | 17.27   | 13.25   | 10.58   | 7.65    | 5.66    | 4.18    | 2.97    |

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    | 2.17 | 1.67 | 1.34 | 1.13 | 0.97 | 0.81 | 0.68 | 0.61 | 0.54 |
| 45.0   | 2.17 | 1.67 | 1.34 | 1.13 | 0.97 | 0.81 | 0.68 | 0.61 | 0.54 |
| 90.0   | 2.17 | 1.67 | 1.34 | 1.13 | 0.97 | 0.81 | 0.68 | 0.61 | 0.54 |
| 135.0  | 2.17 | 1.67 | 1.34 | 1.13 | 0.97 | 0.81 | 0.68 | 0.61 | 0.54 |
| 180.0  | 2.17 | 1.67 | 1.34 | 1.13 | 0.97 | 0.81 | 0.68 | 0.61 | 0.54 |
| 225.0  | 2.17 | 1.67 | 1.34 | 1.13 | 0.97 | 0.81 | 0.68 | 0.61 | 0.54 |
| 270.0  | 2.17 | 1.67 | 1.34 | 1.13 | 0.97 | 0.81 | 0.68 | 0.61 | 0.54 |
| 315.0  | 2.17 | 1.67 | 1.34 | 1.13 | 0.97 | 0.81 | 0.68 | 0.61 | 0.54 |
| 360.0  | 2.17 | 1.67 | 1.34 | 1.13 | 0.97 | 0.81 | 0.68 | 0.61 | 0.54 |
| C/γ(°) | 54.0 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 | 60.0 | 61.0 | 62.0 |
| 0.0    | 0.46 | 0.39 | 0.34 | 0.30 | 0.28 | 0.25 | 0.21 | 0.17 | 0.17 |
| 45.0   | 0.46 | 0.39 | 0.34 | 0.30 | 0.28 | 0.25 | 0.21 | 0.17 | 0.17 |
| 90.0   | 0.46 | 0.39 | 0.34 | 0.30 | 0.28 | 0.25 | 0.21 | 0.17 | 0.17 |
| 135.0  | 0.46 | 0.39 | 0.34 | 0.30 | 0.28 | 0.25 | 0.21 | 0.17 | 0.17 |
| 180.0  | 0.46 | 0.39 | 0.34 | 0.30 | 0.28 | 0.25 | 0.21 | 0.17 | 0.17 |
| 225.0  | 0.46 | 0.39 | 0.34 | 0.30 | 0.28 | 0.25 | 0.21 | 0.17 | 0.17 |
| 270.0  | 0.46 | 0.39 | 0.34 | 0.30 | 0.28 | 0.25 | 0.21 | 0.17 | 0.17 |
| 315.0  | 0.46 | 0.39 | 0.34 | 0.30 | 0.28 | 0.25 | 0.21 | 0.17 | 0.17 |
| 360.0  | 0.46 | 0.39 | 0.34 | 0.30 | 0.28 | 0.25 | 0.21 | 0.17 | 0.17 |
| C/γ(°) | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 | 70.0 | 71.0 |
| 0.0    | 0.14 | 0.12 | 0.10 | 0.10 | 0.09 | 0.06 | 0.06 | 0.05 | 0.06 |
| 45.0   | 0.14 | 0.12 | 0.10 | 0.10 | 0.09 | 0.06 | 0.06 | 0.05 | 0.06 |
| 90.0   | 0.14 | 0.12 | 0.10 | 0.10 | 0.09 | 0.06 | 0.06 | 0.05 | 0.06 |
| 135.0  | 0.14 | 0.12 | 0.10 | 0.10 | 0.09 | 0.06 | 0.06 | 0.05 | 0.06 |
| 180.0  | 0.14 | 0.12 | 0.10 | 0.10 | 0.09 | 0.06 | 0.06 | 0.05 | 0.06 |
| 225.0  | 0.14 | 0.12 | 0.10 | 0.10 | 0.09 | 0.06 | 0.06 | 0.05 | 0.06 |
| 270.0  | 0.14 | 0.12 | 0.10 | 0.10 | 0.09 | 0.06 | 0.06 | 0.05 | 0.06 |
| 315.0  | 0.14 | 0.12 | 0.10 | 0.10 | 0.09 | 0.06 | 0.06 | 0.05 | 0.06 |
| 360.0  | 0.14 | 0.12 | 0.10 | 0.10 | 0.09 | 0.06 | 0.06 | 0.05 | 0.06 |
| C/γ(°) | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0 | 80.0 |
| 0.0    | 0.04 | 0.03 | 0.03 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| 45.0   | 0.04 | 0.03 | 0.03 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| 90.0   | 0.04 | 0.03 | 0.03 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| 135.0  | 0.04 | 0.03 | 0.03 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| 180.0  | 0.04 | 0.03 | 0.03 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| 225.0  | 0.04 | 0.03 | 0.03 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| 270.0  | 0.04 | 0.03 | 0.03 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| 315.0  | 0.04 | 0.03 | 0.03 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| 360.0  | 0.04 | 0.03 | 0.03 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| C/γ(°) | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.0 |
| 0.0    | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| 45.0   | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| 90.0   | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| 135.0  | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| 180.0  | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| 225.0  | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| 270.0  | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| 315.0  | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |
| 360.0  | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 |

Intensity data(cd)

|               |             |
|---------------|-------------|
| <b>C/γ(°)</b> | <b>90.0</b> |
| <b>0.0</b>    | <b>0.01</b> |
| <b>45.0</b>   | <b>0.01</b> |
| <b>90.0</b>   | <b>0.01</b> |
| <b>135.0</b>  | <b>0.01</b> |
| <b>180.0</b>  | <b>0.01</b> |
| <b>225.0</b>  | <b>0.01</b> |
| <b>270.0</b>  | <b>0.01</b> |
| <b>315.0</b>  | <b>0.01</b> |
| <b>360.0</b>  | <b>0.01</b> |