



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: 2-2644-L

Luminaire: 92.70.411.00

Report No: 20231026-B020

Ballast type: AC

Test No: 20231026-C020

Voltage(V): 34.410

LampCAT: LUMILEDS LUXEON 1208

Current(A): 0.576

Lamp flux(lm): 2763.9

Power (W): 19.820

Number of Lamps: 1

PF: 0.000

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

### Photometric Results

Lumens(lm): 2483.21, Efficiency(%): 89.84% , Luminous Efficacy(lm/W): 125.29

Central intensity(cd): 8354.519, Maximum intensity(cd): 8354.519

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

Beam Angle(50%Imax): [C0/180]Total=25.8

[C90/270]Total=25.8

Field angle(10%Imax): [C0/180]Total=56.6

[C90/270]Total=56.6

Maximum s/h(1/2): C0\_180=0.43 C90\_270=0.43

Maximum s/h(1/4): C0\_180=0.48 C90\_270=0.48

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 89.84%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 98.005%

Equipment: GMS1980  
Temperature(°C): 0.0

Date: 2023/10/26  
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                | 8354.519      | 0.000       | 0         | 0.00%       | 0.00%      |
| 1.0                | 8310.582      | 7.974       | 7.974     | 0.29%       | 0.32%      |
| 2.0                | 8190.257      | 23.684      | 31.658    | 0.86%       | 1.27%      |
| 3.0                | 7992.299      | 38.703      | 70.361    | 1.40%       | 2.83%      |
| 4.0                | 7738.710      | 52.657      | 123.018   | 1.91%       | 4.95%      |
| 5.0                | 7430.045      | 65.255      | 188.273   | 2.36%       | 7.58%      |
| 6.0                | 7081.109      | 76.260      | 264.533   | 2.76%       | 10.65%     |
| 7.0                | 6716.329      | 85.640      | 350.173   | 3.10%       | 14.10%     |
| 8.0                | 6277.859      | 92.997      | 443.17    | 3.36%       | 17.85%     |
| 9.0                | 5870.872      | 98.459      | 541.629   | 3.56%       | 21.81%     |
| 10.0               | 5399.951      | 101.997     | 643.626   | 3.69%       | 25.92%     |
| 11.0               | 4991.234      | 103.829     | 747.455   | 3.76%       | 30.10%     |
| 12.0               | 4530.000      | 104.081     | 851.536   | 3.77%       | 34.29%     |
| 13.0               | 4142.179      | 102.917     | 954.453   | 3.72%       | 38.44%     |
| 14.0               | 3769.580      | 101.270     | 1055.723  | 3.66%       | 42.51%     |
| 15.0               | 3434.068      | 98.895      | 1154.617  | 3.58%       | 46.50%     |
| 16.0               | 3126.994      | 96.138      | 1250.755  | 3.48%       | 50.37%     |
| 17.0               | 2837.841      | 92.888      | 1343.644  | 3.36%       | 54.11%     |
| 18.0               | 2594.354      | 89.565      | 1433.209  | 3.24%       | 57.72%     |
| 19.0               | 2361.661      | 86.225      | 1519.433  | 3.12%       | 61.19%     |
| 20.0               | 2131.321      | 82.234      | 1601.667  | 2.98%       | 64.50%     |
| 21.0               | 1925.613      | 77.901      | 1679.569  | 2.82%       | 67.64%     |
| 22.0               | 1740.594      | 73.674      | 1753.243  | 2.67%       | 70.60%     |
| 23.0               | 1573.910      | 69.547      | 1822.79   | 2.52%       | 73.40%     |
| 24.0               | 1375.405      | 64.483      | 1887.273  | 2.33%       | 76.00%     |
| 25.0               | 1217.793      | 58.964      | 1946.236  | 2.13%       | 78.38%     |
| 26.0               | 1125.532      | 55.314      | 2001.551  | 2.00%       | 80.60%     |
| 27.0               | 1006.204      | 52.153      | 2053.704  | 1.89%       | 82.70%     |
| 28.0               | 876.116       | 47.656      | 2101.361  | 1.72%       | 84.62%     |
| 29.0               | 757.735       | 42.746      | 2144.107  | 1.55%       | 86.34%     |
| 30.0               | 650.723       | 38.028      | 2182.135  | 1.38%       | 87.88%     |
| 31.0               | 548.443       | 33.371      | 2215.506  | 1.21%       | 89.22%     |
| 32.0               | 458.093       | 28.836      | 2244.342  | 1.04%       | 90.38%     |
| 33.0               | 382.113       | 24.753      | 2269.095  | 0.90%       | 91.38%     |
| 34.0               | 315.467       | 21.111      | 2290.206  | 0.76%       | 92.23%     |
| 35.0               | 263.469       | 17.980      | 2308.185  | 0.65%       | 92.95%     |
| 36.0               | 234.132       | 15.844      | 2324.029  | 0.57%       | 93.59%     |
| 37.0               | 188.507       | 13.784      | 2337.813  | 0.50%       | 94.14%     |

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0               | 138.682       | 10.921      | 2348.734  | 0.40%       | 94.58%     |
| 39.0               | 113.634       | 8.612       | 2357.346  | 0.31%       | 94.93%     |
| 40.0               | 95.949        | 7.309       | 2364.656  | 0.26%       | 95.23%     |
| 41.0               | 81.868        | 6.332       | 2370.988  | 0.23%       | 95.48%     |
| 42.0               | 71.517        | 5.573       | 2376.561  | 0.20%       | 95.71%     |
| 43.0               | 62.826        | 4.976       | 2381.537  | 0.18%       | 95.91%     |
| 44.0               | 56.675        | 4.510       | 2386.047  | 0.16%       | 96.09%     |
| 45.0               | 51.202        | 4.146       | 2390.193  | 0.15%       | 96.25%     |
| 46.0               | 47.099        | 3.844       | 2394.037  | 0.14%       | 96.41%     |
| 47.0               | 43.314        | 3.596       | 2397.633  | 0.13%       | 96.55%     |
| 48.0               | 40.374        | 3.383       | 2401.017  | 0.12%       | 96.69%     |
| 49.0               | 37.710        | 3.207       | 2404.223  | 0.12%       | 96.82%     |
| 50.0               | 35.447        | 3.050       | 2407.273  | 0.11%       | 96.94%     |
| 51.0               | 33.821        | 2.931       | 2410.204  | 0.11%       | 97.06%     |
| 52.0               | 32.257        | 2.835       | 2413.039  | 0.10%       | 97.17%     |
| 53.0               | 31.040        | 2.753       | 2415.793  | 0.10%       | 97.29%     |
| 54.0               | 30.057        | 2.693       | 2418.486  | 0.10%       | 97.39%     |
| 55.0               | 29.164        | 2.644       | 2421.129  | 0.10%       | 97.50%     |
| 56.0               | 28.320        | 2.598       | 2423.727  | 0.09%       | 97.60%     |
| 57.0               | 27.545        | 2.554       | 2426.281  | 0.09%       | 97.71%     |
| 58.0               | 26.743        | 2.510       | 2428.792  | 0.09%       | 97.81%     |
| 59.0               | 25.961        | 2.464       | 2431.255  | 0.09%       | 97.91%     |
| 60.0               | 25.075        | 2.411       | 2433.667  | 0.09%       | 98.00%     |
| 61.0               | 24.155        | 2.349       | 2436.016  | 0.09%       | 98.10%     |
| 62.0               | 23.290        | 2.286       | 2438.302  | 0.08%       | 98.19%     |
| 63.0               | 22.550        | 2.229       | 2440.532  | 0.08%       | 98.28%     |
| 64.0               | 21.740        | 2.173       | 2442.705  | 0.08%       | 98.37%     |
| 65.0               | 21.027        | 2.117       | 2444.821  | 0.08%       | 98.45%     |
| 66.0               | 20.294        | 2.062       | 2446.883  | 0.07%       | 98.54%     |
| 67.0               | 19.623        | 2.007       | 2448.89   | 0.07%       | 98.62%     |
| 68.0               | 18.931        | 1.953       | 2450.843  | 0.07%       | 98.70%     |
| 69.0               | 18.246        | 1.897       | 2452.74   | 0.07%       | 98.77%     |
| 70.0               | 17.644        | 1.843       | 2454.583  | 0.07%       | 98.85%     |
| 71.0               | 17.021        | 1.792       | 2456.375  | 0.06%       | 98.92%     |
| 72.0               | 16.475        | 1.742       | 2458.116  | 0.06%       | 98.99%     |
| 73.0               | 15.963        | 1.696       | 2459.813  | 0.06%       | 99.06%     |
| 74.0               | 15.506        | 1.654       | 2461.467  | 0.06%       | 99.12%     |
| 75.0               | 15.084        | 1.616       | 2463.083  | 0.06%       | 99.19%     |

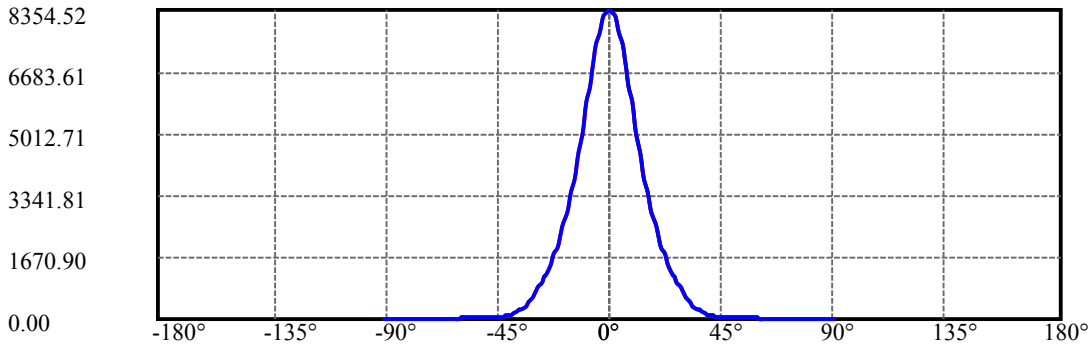
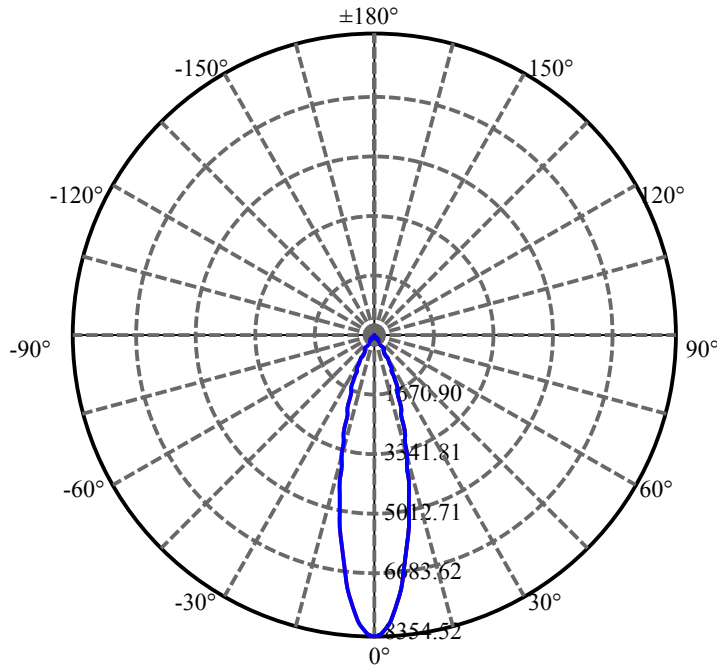
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0               | 14.669        | 1.579       | 2464.663  | 0.06%       | 99.25%     |
| 77.0               | 14.281        | 1.543       | 2466.206  | 0.06%       | 99.32%     |
| 78.0               | 13.908        | 1.509       | 2467.715  | 0.05%       | 99.38%     |
| 79.0               | 13.562        | 1.476       | 2469.191  | 0.05%       | 99.44%     |
| 80.0               | 13.209        | 1.443       | 2470.634  | 0.05%       | 99.49%     |
| 81.0               | 12.821        | 1.408       | 2472.042  | 0.05%       | 99.55%     |
| 82.0               | 12.496        | 1.373       | 2473.415  | 0.05%       | 99.61%     |
| 83.0               | 12.171        | 1.341       | 2474.756  | 0.05%       | 99.66%     |
| 84.0               | 11.860        | 1.309       | 2476.065  | 0.05%       | 99.71%     |
| 85.0               | 11.507        | 1.275       | 2477.34   | 0.05%       | 99.76%     |
| 86.0               | 11.029        | 1.232       | 2478.572  | 0.04%       | 99.81%     |
| 87.0               | 10.725        | 1.191       | 2479.763  | 0.04%       | 99.86%     |
| 88.0               | 10.531        | 1.164       | 2480.927  | 0.04%       | 99.91%     |
| 89.0               | 10.379        | 1.146       | 2482.073  | 0.04%       | 99.95%     |
| 90.0               | 10.317        | 1.135       | 2483.208  | 0.04%       | 100.00%    |

ZONAL LUMEN SUMMARY

| Zone    | Lumens  | %Lamp  | %Fixt   |
|---------|---------|--------|---------|
| 0-30    | 2182.13 | 78.95% | 87.88%  |
| 0-40    | 2364.66 | 85.55% | 95.23%  |
| 0-60    | 2433.67 | 88.05% | 98.00%  |
| 0-90    | 2482.07 | 89.80% | 99.95%  |
| 0-120   | 2482.07 | 89.80% | 99.95%  |
| 0-180   | 2483.21 | 89.84% | 100.00% |
| 60-90   | 48.41   | 1.75%  | 1.95%   |
| 90-120  | 0.00    | 0.00%  | 0.00%   |
| 90-130  | 0.00    | 0.00%  | 0.00%   |
| 90-150  | 0.00    | 0.00%  | 0.00%   |
| 90-180  | 0.00    | 0.00%  | 0.00%   |
| 0-25.73 | 1986.57 | 71.87% | 80.00%  |

ZONAL LUMEN SUMMARY

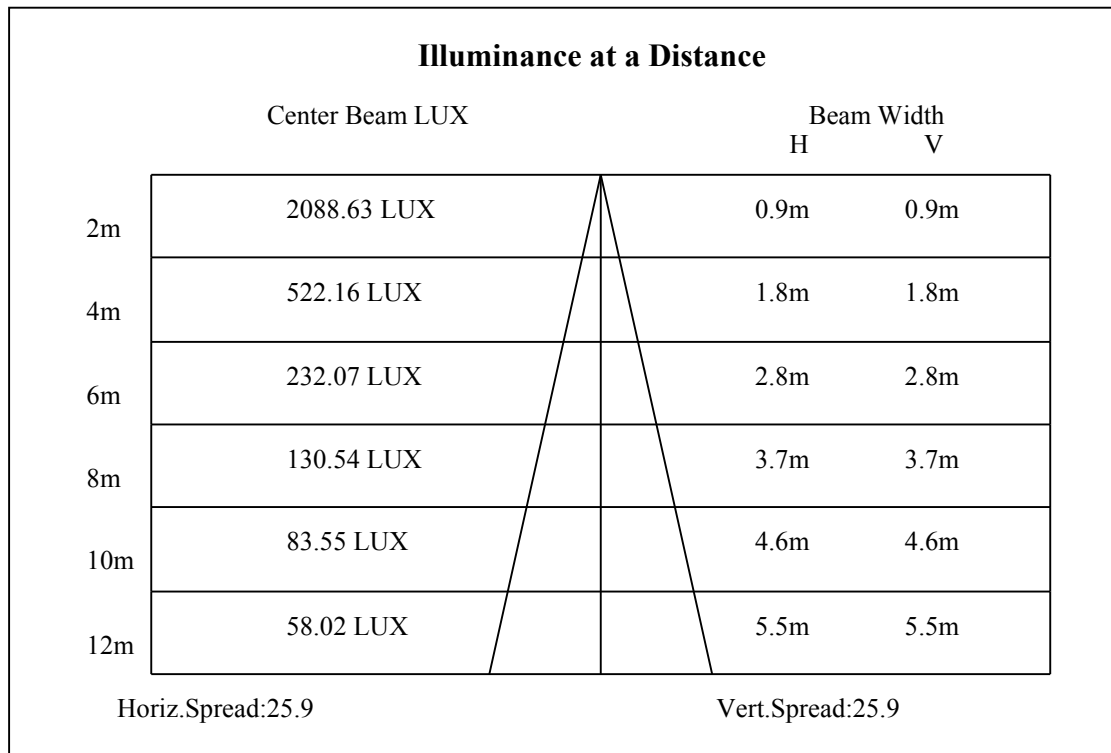
|         |        |
|---------|--------|
| 0-10    | 643.63 |
| 10-20   | 958.04 |
| 20-30   | 580.47 |
| 30-40   | 182.52 |
| 40-50   | 42.62  |
| 50-60   | 26.39  |
| 60-70   | 20.92  |
| 70-80   | 16.05  |
| 80-90   | 11.44  |
| 90-100  | 0.00   |
| 100-110 | 0.00   |
| 110-120 | 0.00   |
| 120-130 | 0.00   |
| 130-140 | 0.00   |
| 140-150 | 0.00   |
| 150-160 | 0.00   |
| 160-170 | 0.00   |
| 170-180 | 0.00   |

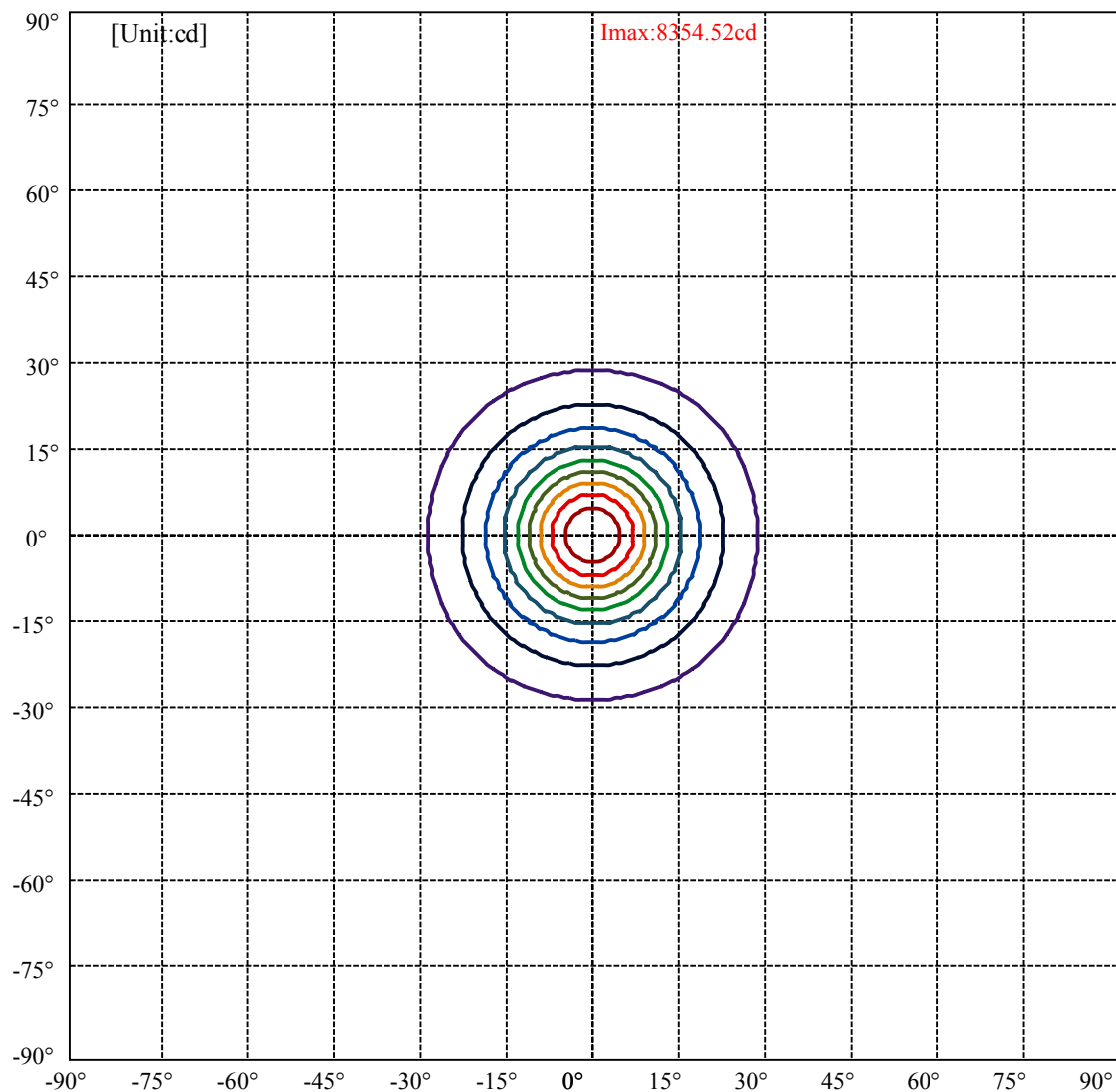


C0(Max): ———  
C0/C180: ———  
C90/C270: ———

Field angle(10%Imax):C0/180Left:28.3 Right:28.3  
:C90/270Left:28.3 Right:28.3

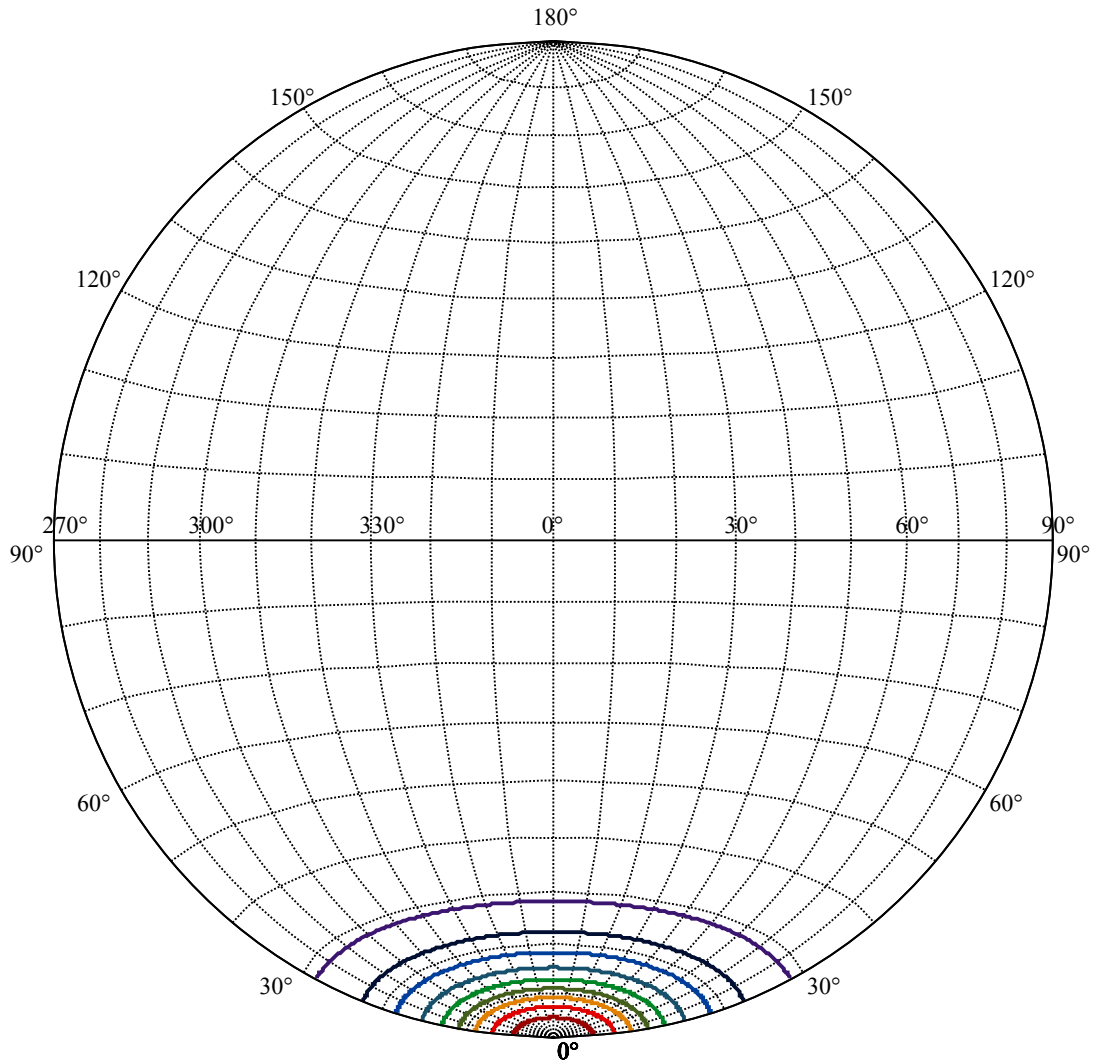
Beam Angle(50%Imax):C0/180Left:12.9 Right:12.9  
:C90/270Left:12.9 Right:12.9





|                   |   |
|-------------------|---|
| (10%Imax) 835.452 | — |
| (20%Imax) 1670.9  | — |
| (30%Imax) 2506.36 | — |
| (40%Imax) 3341.81 | — |
| (50%Imax) 4177.26 | — |
| (60%Imax) 5012.71 | — |
| (70%Imax) 5848.16 | — |
| (80%Imax) 6683.61 | — |
| (90%Imax) 7519.07 | — |





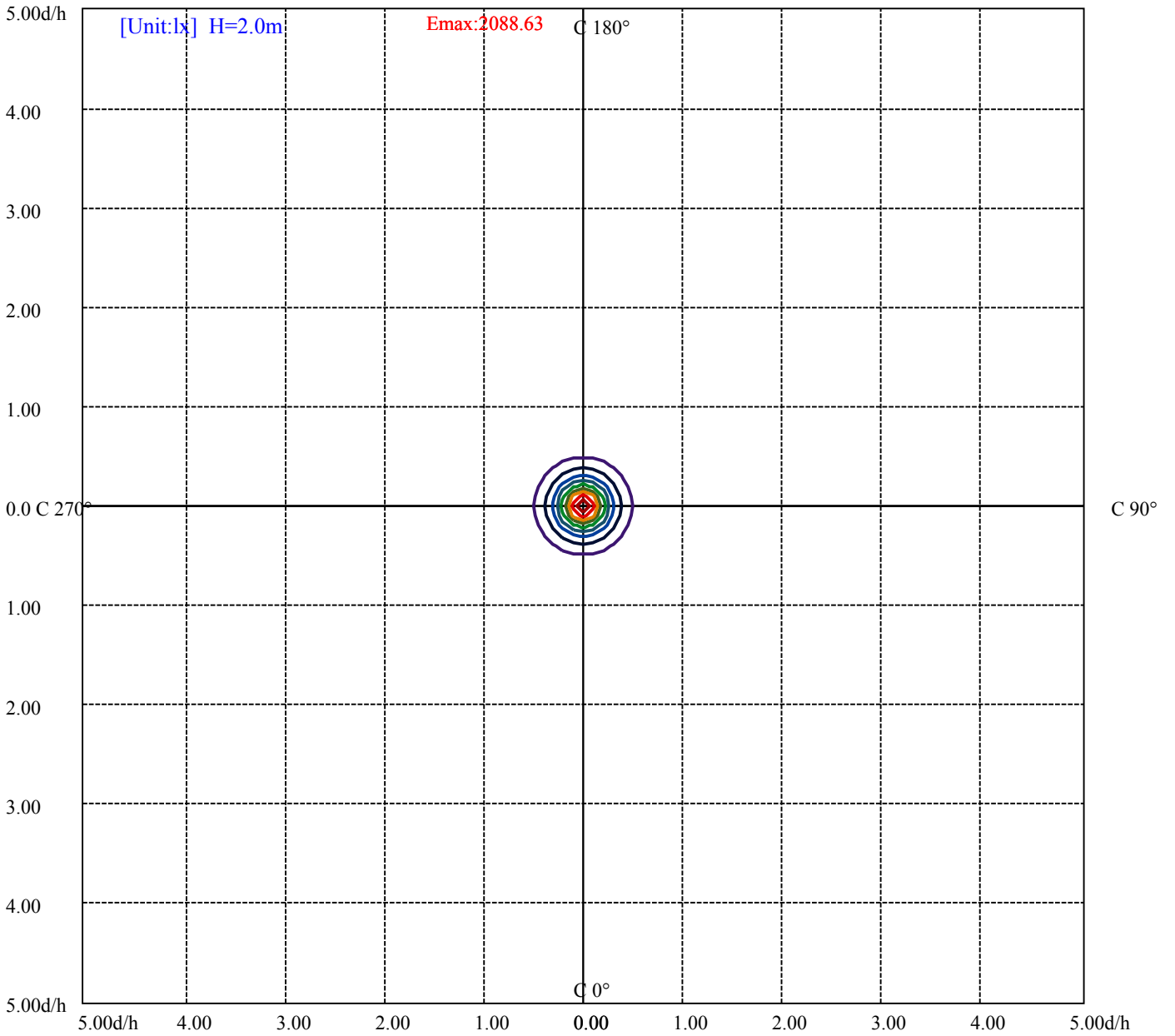
House

[Unit:cd]

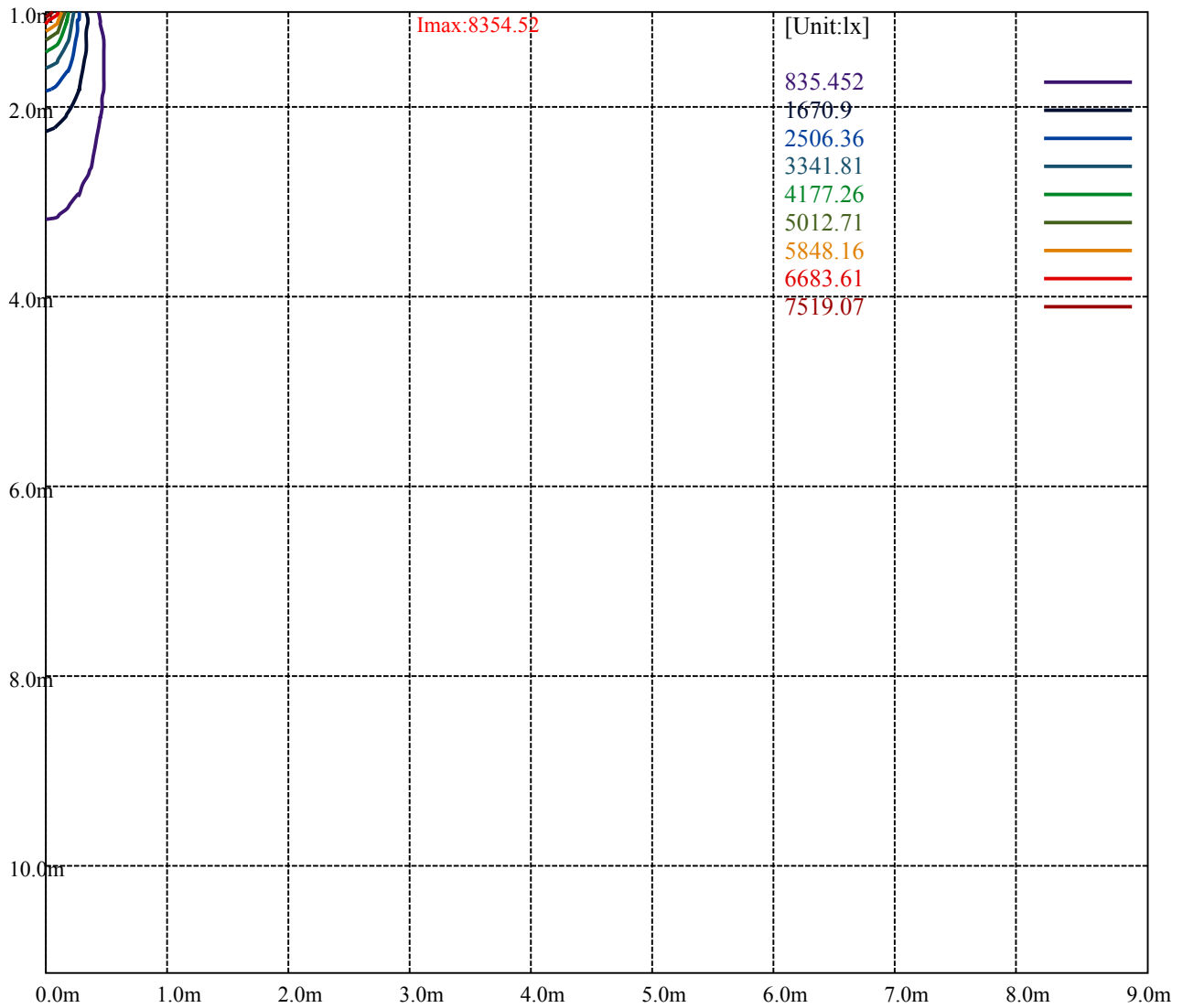
Road

**Imax:8354.52**

|           |         |   |
|-----------|---------|---|
| (10%Imax) | 835.452 | — |
| (20%Imax) | 1670.9  | — |
| (30%Imax) | 2506.36 | — |
| (40%Imax) | 3341.81 | — |
| (50%Imax) | 4177.26 | — |
| (60%Imax) | 5012.71 | — |
| (70%Imax) | 5848.16 | — |
| (80%Imax) | 6683.61 | — |
| (90%Imax) | 7519.07 | — |



- (10%Emax) 208.8627
- (20%Emax) 417.725
- (30%Emax) 626.5875
- (40%Emax) 835.45
- (50%Emax) 1044.315
- (60%Emax) 1253.177
- (70%Emax) 1462.04
- (80%Emax) 1670.902
- (90%Emax) 1879.765



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

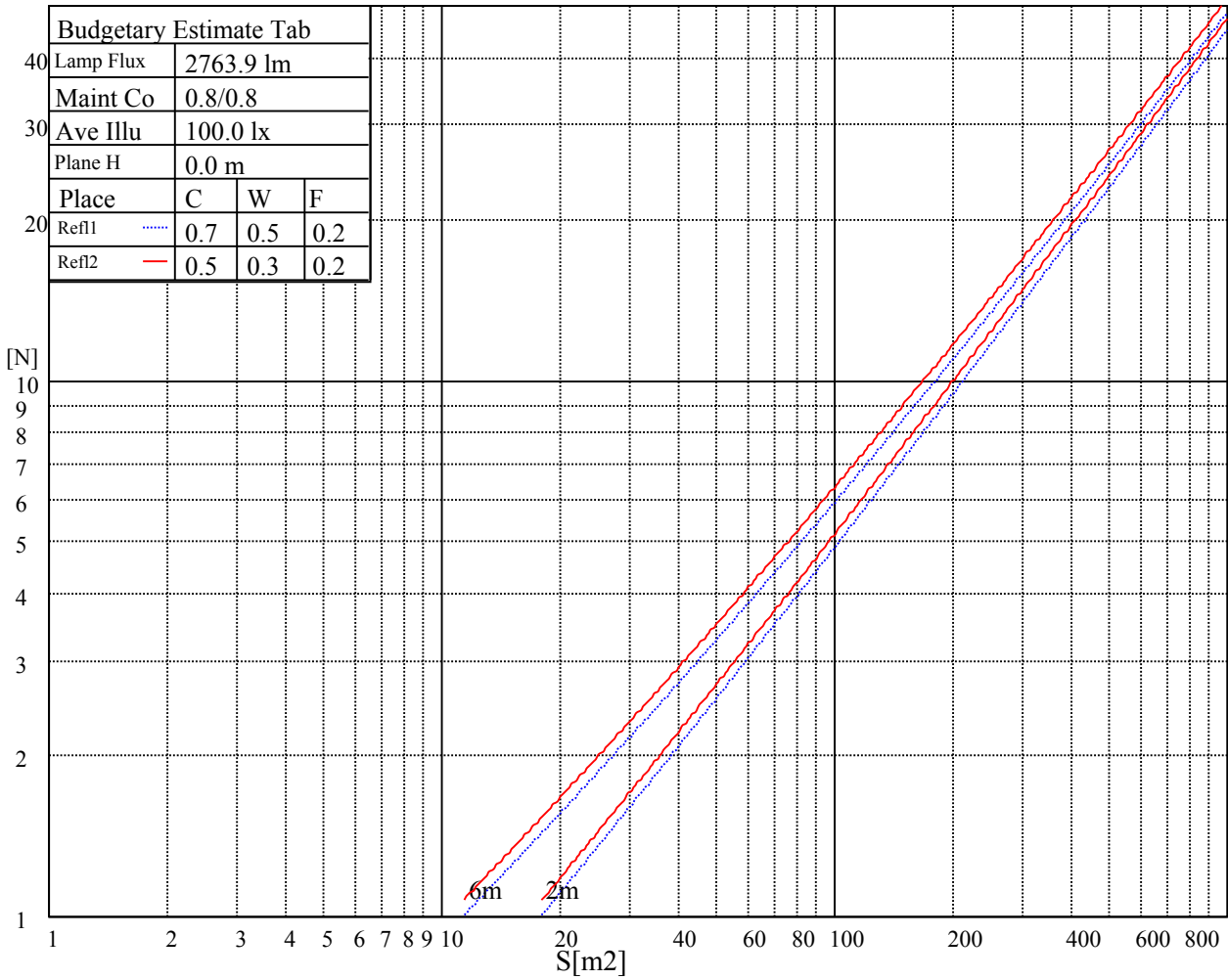
| Glare | Quality | Service Values Illuminance(lx) |      |      |       |       |       |       |       |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15  | A       | 2000                           | 1000 | 500  | <=300 |       |    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

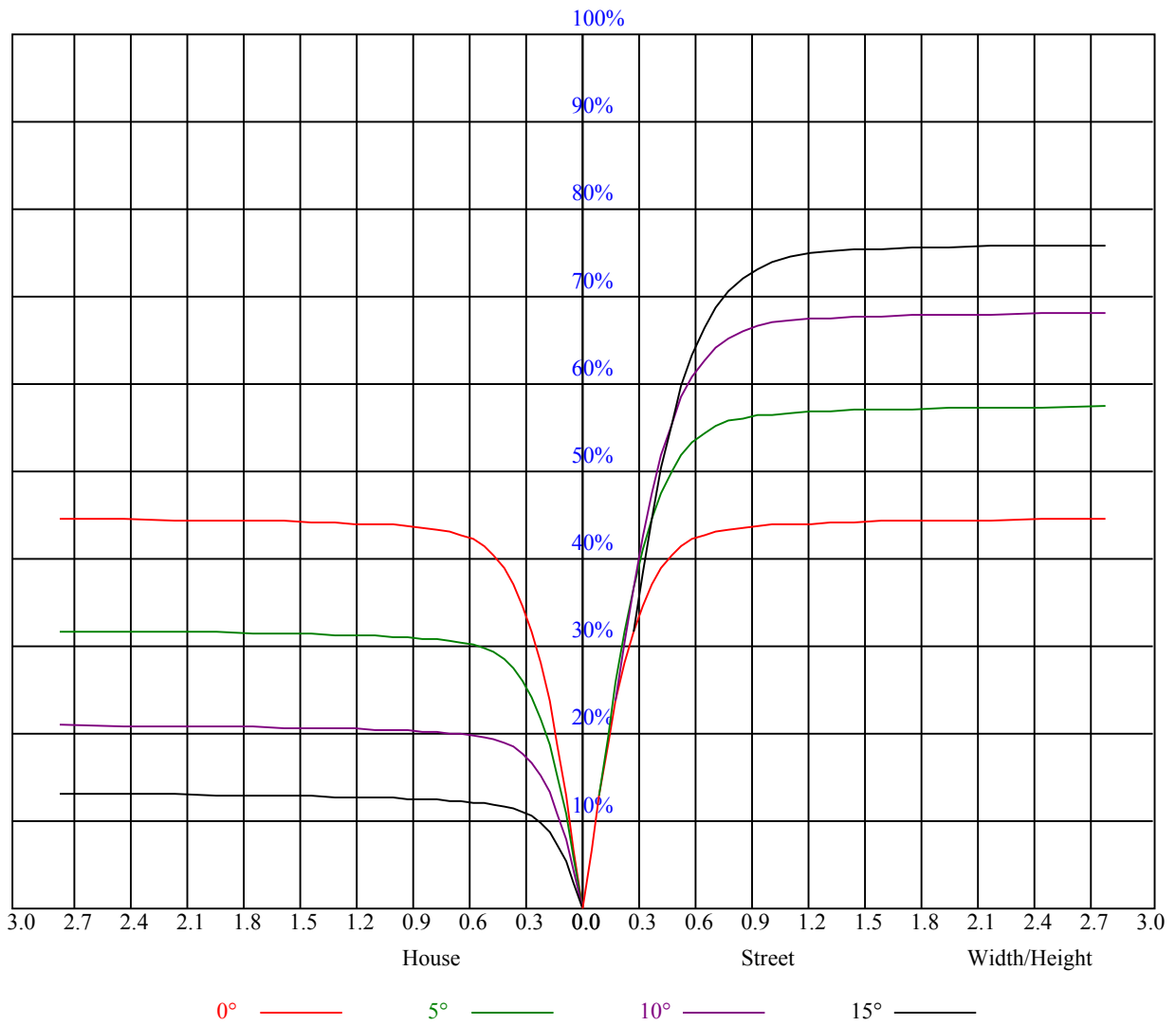


| Illumination assessment according UGR             |                  |     |     |     |     |                |     |     |     |     |
|---|------------------|-----|-----|-----|-----|----------------|-----|-----|-----|-----|
| Rf of Ceiling                                     | 70               | 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 |
| 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 |
|   | 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  | 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               | 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     | 1.07                                   | 1.07 | 1.07 | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | 0.96 | 0.96 | 0.96 | 0.92 | 0.92 | 0.92 | 0.90 |
| 1     | 1.00                                   | 0.98 | 0.96 | 0.98 | 0.97 | 0.95 | 0.95 | 0.93 | 0.92 | 0.91 | 0.90 | 0.89 | 0.88 | 0.88 | 0.87 | 0.85 |
| 2     | 0.95                                   | 0.91 | 0.89 | 0.93 | 0.90 | 0.88 | 0.90 | 0.88 | 0.86 | 0.88 | 0.86 | 0.84 | 0.85 | 0.84 | 0.82 | 0.81 |
| 3     | 0.90                                   | 0.86 | 0.83 | 0.88 | 0.85 | 0.82 | 0.86 | 0.83 | 0.81 | 0.84 | 0.82 | 0.80 | 0.82 | 0.80 | 0.78 | 0.77 |
| 4     | 0.85                                   | 0.81 | 0.78 | 0.84 | 0.81 | 0.78 | 0.83 | 0.79 | 0.77 | 0.81 | 0.78 | 0.76 | 0.79 | 0.77 | 0.75 | 0.74 |
| 5     | 0.81                                   | 0.77 | 0.74 | 0.81 | 0.77 | 0.74 | 0.79 | 0.76 | 0.73 | 0.78 | 0.75 | 0.72 | 0.76 | 0.74 | 0.72 | 0.71 |
| 6     | 0.78                                   | 0.74 | 0.70 | 0.77 | 0.73 | 0.70 | 0.76 | 0.72 | 0.70 | 0.75 | 0.72 | 0.69 | 0.74 | 0.71 | 0.69 | 0.68 |
| 7     | 0.75                                   | 0.70 | 0.67 | 0.74 | 0.70 | 0.67 | 0.73 | 0.69 | 0.67 | 0.72 | 0.69 | 0.66 | 0.71 | 0.68 | 0.66 | 0.65 |
| 8     | 0.72                                   | 0.68 | 0.65 | 0.71 | 0.67 | 0.64 | 0.71 | 0.67 | 0.64 | 0.70 | 0.66 | 0.64 | 0.69 | 0.66 | 0.64 | 0.63 |
| 9     | 0.69                                   | 0.65 | 0.62 | 0.69 | 0.65 | 0.62 | 0.68 | 0.64 | 0.62 | 0.67 | 0.64 | 0.62 | 0.67 | 0.64 | 0.61 | 0.60 |
| 10    | 0.67                                   | 0.63 | 0.60 | 0.66 | 0.62 | 0.60 | 0.66 | 0.62 | 0.60 | 0.65 | 0.62 | 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    | 8309.13 | 8134.77 | 7933.83 | 7693.60 | 7348.19 | 7021.05 | 6665.13 | 6273.78 | 5752.90 |
| 45.0   | 8371.12 | 8311.34 | 8192.33 | 8014.09 | 7747.84 | 7466.65 | 7158.33 | 6810.15 | 6336.88 |
| 90.0   | 8342.89 | 8220.56 | 7983.65 | 7745.08 | 7469.41 | 7078.62 | 6728.78 | 6351.83 | 5844.23 |
| 135.0  | 8394.93 | 8354.52 | 8217.24 | 7999.15 | 7769.43 | 7406.87 | 7080.28 | 6734.87 | 6254.96 |
| 180.0  | 8309.13 | 8364.48 | 8364.48 | 8246.58 | 8041.22 | 7785.48 | 7440.63 | 7121.24 | 6758.67 |
| 225.0  | 8371.12 | 8362.27 | 8250.45 | 7975.35 | 7725.70 | 7415.72 | 7002.78 | 6635.79 | 6237.80 |
| 270.0  | 8342.89 | 8386.62 | 8370.02 | 8264.29 | 8063.36 | 7793.79 | 7516.47 | 7100.76 | 6732.10 |
| 315.0  | 8394.93 | 8350.09 | 8210.05 | 8000.26 | 7744.52 | 7472.18 | 7056.48 | 6702.21 | 6305.33 |
| 360.0  | 8309.13 | 8134.77 | 7933.83 | 7693.60 | 7348.19 | 7021.05 | 6665.13 | 6273.78 | 5752.90 |
| C/γ(°) | 9.0     | 10.0    | 11.0    | 12.0    | 13.0    | 14.0    | 15.0    | 16.0    | 17.0    |
| 0.0    | 5333.32 | 4915.95 | 4524.60 | 4070.70 | 3733.60 | 3350.55 | 3069.91 | 2813.07 | 2524.68 |
| 45.0   | 5921.73 | 5503.81 | 5095.30 | 4582.17 | 4222.37 | 3810.54 | 3492.26 | 3202.21 | 2872.85 |
| 90.0   | 5425.21 | 4907.10 | 4506.89 | 4147.65 | 3811.10 | 3506.10 | 3137.44 | 2880.05 | 2651.99 |
| 135.0  | 5854.20 | 5446.24 | 5028.87 | 4514.64 | 4144.32 | 3807.22 | 3485.62 | 3110.32 | 2858.46 |
| 180.0  | 6368.99 | 5875.23 | 5466.17 | 5049.36 | 4628.67 | 4138.79 | 3784.53 | 3462.92 | 3104.23 |
| 225.0  | 5834.82 | 5337.75 | 4922.04 | 4514.09 | 4029.74 | 3686.55 | 3376.57 | 3096.48 | 2775.98 |
| 270.0  | 6335.77 | 5852.54 | 5439.60 | 4917.61 | 4508.00 | 4128.83 | 3774.56 | 3376.57 | 3094.82 |
| 315.0  | 5892.94 | 5361.00 | 4946.40 | 4443.79 | 4059.63 | 3728.06 | 3351.66 | 3074.34 | 2819.71 |
| 360.0  | 5333.32 | 4915.95 | 4524.60 | 4070.70 | 3733.60 | 3350.55 | 3069.91 | 2813.07 | 2524.68 |
| C/γ(°) | 18.0    | 19.0    | 20.0    | 21.0    | 22.0    | 23.0    | 24.0    | 25.0    | 26.0    |
| 0.0    | 2311.01 | 2113.95 | 1927.97 | 1712.64 | 1555.99 | 1410.41 | 1077.57 | 1077.57 | 984.69  |
| 45.0   | 2639.81 | 2423.93 | 2213.59 | 1973.36 | 1801.76 | 1639.02 | 1489.01 | 1313.54 | 1181.25 |
| 90.0   | 2434.45 | 2174.84 | 1983.87 | 1805.63 | 1604.70 | 1454.14 | 1085.71 | 1085.71 | 1023.93 |
| 135.0  | 2623.21 | 2354.19 | 2147.72 | 1906.93 | 1738.10 | 1585.33 | 1439.19 | 1266.49 | 1139.18 |
| 180.0  | 2844.62 | 2600.51 | 2308.25 | 2105.65 | 1924.64 | 1712.64 | 1554.88 | 1410.41 | 1250.99 |
| 225.0  | 2540.18 | 2320.42 | 2062.48 | 1879.81 | 1675.55 | 1523.88 | 1384.39 | 1088.97 | 1088.97 |
| 270.0  | 2835.76 | 2595.53 | 2306.03 | 2106.20 | 1918.00 | 1710.43 | 1559.86 | 1416.50 | 1252.10 |
| 315.0  | 2525.78 | 2309.91 | 2100.67 | 1914.68 | 1706.00 | 1555.44 | 1412.62 | 1083.16 | 1083.16 |
| 360.0  | 2311.01 | 2113.95 | 1927.97 | 1712.64 | 1555.99 | 1410.41 | 1077.57 | 1077.57 | 984.69  |
| C/γ(°) | 27.0    | 28.0    | 29.0    | 30.0    | 31.0    | 32.0    | 33.0    | 34.0    | 35.0    |
| 0.0    | 865.90  | 753.92  | 626.71  | 539.48  | 438.68  | 367.60  | 305.72  | 239.90  | 196.17  |
| 45.0   | 1052.27 | 898.94  | 784.91  | 679.74  | 561.84  | 478.26  | 385.81  | 321.60  | 280.09  |
| 90.0   | 899.61  | 756.30  | 650.52  | 559.90  | 456.89  | 385.32  | 321.94  | 267.97  | 211.51  |
| 135.0  | 1013.52 | 892.30  | 750.04  | 648.74  | 557.96  | 455.56  | 383.60  | 320.50  | 291.71  |
| 180.0  | 1127.55 | 1005.22 | 888.43  | 755.02  | 653.17  | 556.86  | 479.36  | 385.81  | 322.71  |
| 225.0  | 966.31  | 850.18  | 740.58  | 638.12  | 526.74  | 446.21  | 359.13  | 299.96  | 248.87  |
| 270.0  | 1129.77 | 975.88  | 859.64  | 751.15  | 649.30  | 533.06  | 451.13  | 379.17  | 313.85  |
| 315.0  | 994.70  | 876.19  | 761.06  | 633.63  | 542.96  | 441.89  | 370.20  | 308.82  | 242.84  |
| 360.0  | 865.90  | 753.92  | 626.71  | 539.48  | 438.68  | 367.60  | 305.72  | 239.90  | 196.17  |
| C/γ(°) | 36.0    | 37.0    | 38.0    | 39.0    | 40.0    | 41.0    | 42.0    | 43.0    | 44.0    |
| 0.0    | 160.86  | 126.32  | 104.95  | 88.95   | 76.83   | 65.82   | 58.84   | 53.19   | 48.55   |
| 45.0   | 280.09  | 169.71  | 140.60  | 117.40  | 99.69   | 86.24   | 73.23   | 65.10   | 58.51   |
| 90.0   | 175.64  | 147.35  | 124.27  | 102.18  | 88.18   | 74.28   | 65.48   | 58.73   | 52.25   |
| 135.0  | 291.71  | 168.50  | 133.46  | 111.92  | 95.65   | 80.37   | 71.02   | 63.32   | 57.07   |
| 180.0  | 281.75  | 281.75  | 169.33  | 133.40  | 111.48  | 93.94   | 80.59   | 68.53   | 61.50   |
| 225.0  | 196.17  | 162.85  | 135.62  | 109.32  | 93.44   | 81.20   | 71.79   | 62.94   | 57.35   |
| 270.0  | 287.29  | 287.29  | 165.62  | 138.16  | 111.04  | 94.43   | 81.98   | 70.47   | 63.21   |
| 315.0  | 199.55  | 164.29  | 135.62  | 107.72  | 91.28   | 78.66   | 69.19   | 60.34   | 54.97   |
| 360.0  | 160.86  | 126.32  | 104.95  | 88.95   | 76.83   | 65.82   | 58.84   | 53.19   | 48.55   |

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    | 43.90 | 40.74 | 37.53 | 35.43 | 33.60 | 31.88 | 30.72 | 29.72 | 28.95 |
| 45.0   | 51.92 | 47.83 | 43.40 | 40.52 | 37.92 | 35.43 | 33.82 | 32.38 | 31.22 |
| 90.0   | 47.99 | 44.45 | 41.57 | 38.42 | 36.37 | 34.65 | 33.21 | 31.72 | 30.78 |
| 135.0  | 51.09 | 47.11 | 43.73 | 40.80 | 37.64 | 35.65 | 34.04 | 32.33 | 31.22 |
| 180.0  | 55.80 | 51.15 | 46.22 | 42.95 | 40.13 | 37.09 | 35.15 | 33.49 | 31.77 |
| 225.0  | 52.64 | 48.55 | 44.17 | 41.24 | 38.69 | 35.98 | 34.32 | 32.44 | 31.27 |
| 270.0  | 55.91 | 51.37 | 47.38 | 43.95 | 40.46 | 37.97 | 35.92 | 34.21 | 32.38 |
| 315.0  | 50.37 | 45.61 | 42.51 | 39.69 | 36.87 | 34.93 | 33.38 | 31.77 | 30.72 |
| 360.0  | 43.90 | 40.74 | 37.53 | 35.43 | 33.60 | 31.88 | 30.72 | 29.72 | 28.95 |
| C/γ(°) | 54.0  | 55.0  | 56.0  | 57.0  | 58.0  | 59.0  | 60.0  | 61.0  | 62.0  |
| 0.0    | 28.12 | 27.46 | 26.79 | 26.18 | 25.35 | 24.52 | 23.58 | 22.86 | 22.20 |
| 45.0   | 30.11 | 29.28 | 28.51 | 27.68 | 26.79 | 26.02 | 25.19 | 23.91 | 23.14 |
| 90.0   | 29.89 | 28.78 | 27.90 | 27.07 | 26.13 | 25.19 | 24.24 | 23.30 | 22.53 |
| 135.0  | 30.33 | 29.34 | 28.56 | 27.68 | 26.85 | 26.18 | 25.30 | 24.30 | 23.41 |
| 180.0  | 30.61 | 29.72 | 28.78 | 28.12 | 27.40 | 26.68 | 25.85 | 25.13 | 24.19 |
| 225.0  | 30.33 | 29.45 | 28.51 | 27.73 | 27.01 | 26.35 | 25.30 | 24.36 | 23.58 |
| 270.0  | 31.16 | 30.22 | 29.34 | 28.40 | 27.68 | 26.68 | 26.02 | 25.13 | 23.97 |
| 315.0  | 29.89 | 29.06 | 28.17 | 27.51 | 26.74 | 26.07 | 25.13 | 24.24 | 23.30 |
| 360.0  | 28.12 | 27.46 | 26.79 | 26.18 | 25.35 | 24.52 | 23.58 | 22.86 | 22.20 |
| C/γ(°) | 63.0  | 64.0  | 65.0  | 66.0  | 67.0  | 68.0  | 69.0  | 70.0  | 71.0  |
| 0.0    | 21.53 | 20.87 | 20.31 | 19.54 | 19.04 | 18.54 | 18.16 | 17.77 | 17.33 |
| 45.0   | 22.53 | 21.53 | 20.87 | 20.26 | 19.43 | 18.76 | 18.16 | 17.60 | 16.88 |
| 90.0   | 21.81 | 21.03 | 20.26 | 19.54 | 18.88 | 18.21 | 17.44 | 16.83 | 16.11 |
| 135.0  | 22.69 | 21.92 | 21.20 | 20.43 | 19.76 | 18.99 | 18.16 | 17.55 | 16.77 |
| 180.0  | 23.41 | 22.47 | 21.70 | 21.03 | 20.20 | 19.60 | 18.76 | 18.16 | 17.55 |
| 225.0  | 22.64 | 21.81 | 21.15 | 20.31 | 19.71 | 18.93 | 18.16 | 17.55 | 16.99 |
| 270.0  | 23.25 | 22.47 | 21.75 | 20.87 | 20.26 | 19.54 | 18.88 | 18.05 | 17.44 |
| 315.0  | 22.53 | 21.81 | 20.98 | 20.37 | 19.71 | 18.88 | 18.27 | 17.66 | 17.10 |
| 360.0  | 21.53 | 20.87 | 20.31 | 19.54 | 19.04 | 18.54 | 18.16 | 17.77 | 17.33 |
| C/γ(°) | 72.0  | 73.0  | 74.0  | 75.0  | 76.0  | 77.0  | 78.0  | 79.0  | 80.0  |
| 0.0    | 17.05 | 16.77 | 16.38 | 15.94 | 15.50 | 14.95 | 14.45 | 14.00 | 13.45 |
| 45.0   | 16.38 | 15.89 | 15.55 | 15.11 | 14.78 | 14.45 | 14.00 | 13.78 | 13.56 |
| 90.0   | 15.67 | 15.22 | 14.72 | 14.39 | 14.00 | 13.56 | 13.28 | 12.95 | 12.62 |
| 135.0  | 16.22 | 15.67 | 15.22 | 14.72 | 14.34 | 14.00 | 13.62 | 13.23 | 12.90 |
| 180.0  | 16.88 | 16.33 | 15.83 | 15.39 | 14.95 | 14.61 | 14.28 | 14.00 | 13.67 |
| 225.0  | 16.38 | 15.78 | 15.28 | 14.89 | 14.50 | 14.06 | 13.78 | 13.45 | 13.06 |
| 270.0  | 16.83 | 16.16 | 15.61 | 15.11 | 14.61 | 14.23 | 13.78 | 13.45 | 13.12 |
| 315.0  | 16.38 | 15.89 | 15.44 | 15.11 | 14.67 | 14.39 | 14.06 | 13.62 | 13.28 |
| 360.0  | 17.05 | 16.77 | 16.38 | 15.94 | 15.50 | 14.95 | 14.45 | 14.00 | 13.45 |
| C/γ(°) | 81.0  | 82.0  | 83.0  | 84.0  | 85.0  | 86.0  | 87.0  | 88.0  | 89.0  |
| 0.0    | 13.06 | 12.62 | 12.34 | 11.96 | 11.68 | 10.74 | 10.52 | 10.35 | 10.41 |
| 45.0   | 13.01 | 12.68 | 12.23 | 12.01 | 11.68 | 10.96 | 10.74 | 10.57 | 10.30 |
| 90.0   | 12.29 | 12.07 | 11.79 | 11.57 | 11.02 | 10.79 | 10.57 | 10.41 | 10.30 |
| 135.0  | 12.62 | 12.23 | 11.96 | 11.62 | 11.18 | 10.90 | 10.74 | 10.52 | 10.30 |
| 180.0  | 13.34 | 13.01 | 12.68 | 12.29 | 11.96 | 11.29 | 10.90 | 10.68 | 10.52 |
| 225.0  | 12.73 | 12.34 | 12.01 | 11.73 | 11.35 | 10.90 | 10.68 | 10.52 | 10.35 |
| 270.0  | 12.68 | 12.40 | 12.12 | 11.79 | 11.57 | 11.35 | 10.85 | 10.68 | 10.46 |
| 315.0  | 12.84 | 12.62 | 12.23 | 11.90 | 11.62 | 11.29 | 10.79 | 10.52 | 10.41 |
| 360.0  | 13.06 | 12.62 | 12.34 | 11.96 | 11.68 | 10.74 | 10.52 | 10.35 | 10.41 |

Intensity data(cd)

|                 |       |
|-----------------|-------|
| C/ $\gamma$ (°) | 90.0  |
| 0.0             | 10.30 |
| 45.0            | 10.30 |
| 90.0            | 10.35 |
| 135.0           | 10.35 |
| 180.0           | 10.35 |
| 225.0           | 10.30 |
| 270.0           | 10.30 |
| 315.0           | 10.30 |
| 360.0           | 10.30 |