



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: 1-1378-L

Luminaire: 92.70.410.00

Report No: 20231116-B007

Ballast type: AC

Test No: 20231106-C007

Voltage(V): 35.110

LampCAT: Fortimo\_SLM\_C\_1203

Current(A): 0.246

Lamp flux(lm): 1385.0

Power (W): 8.637

Number of Lamps: 1

PF: 0.000

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

### Photometric Results

Lumens(lm): 1262.64, Efficiency(%): 91.16% , Luminous Efficacy(lm/W): 146.19

Central intensity(cd): 4462.884, Maximum intensity(cd): 4462.884

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

Beam Angle(50%Imax): [C0/180]Total=26.0

[C90/270]Total=26.0

Field angle(10%Imax): [C0/180]Total=54.6

[C90/270]Total=54.6

Maximum s/h(1/2): C0\_180=0.44 C90\_270=0.44

Maximum s/h(1/4): C0\_180=0.45 C90\_270=0.45

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 91.16%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 98.126%

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0                | 4462.884      | 0.000       | 0         | 0.00%       | 0.00%      |
| 1.0                | 4437.767      | 4.259       | 4.259     | 0.31%       | 0.34%      |
| 2.0                | 4374.595      | 12.648      | 16.907    | 0.91%       | 1.34%      |
| 3.0                | 4278.211      | 20.695      | 37.602    | 1.49%       | 2.98%      |
| 4.0                | 4141.764      | 28.184      | 65.786    | 2.03%       | 5.21%      |
| 5.0                | 3974.873      | 34.917      | 100.703   | 2.52%       | 7.98%      |
| 6.0                | 3791.099      | 40.812      | 141.516   | 2.95%       | 11.21%     |
| 7.0                | 3596.877      | 45.857      | 187.373   | 3.31%       | 14.84%     |
| 8.0                | 3366.814      | 49.838      | 237.211   | 3.60%       | 18.79%     |
| 9.0                | 3154.948      | 52.855      | 290.066   | 3.82%       | 22.97%     |
| 10.0               | 2917.135      | 54.950      | 345.016   | 3.97%       | 27.33%     |
| 11.0               | 2691.776      | 56.045      | 401.061   | 4.05%       | 31.76%     |
| 12.0               | 2461.851      | 56.337      | 457.397   | 4.07%       | 36.23%     |
| 13.0               | 2232.687      | 55.712      | 513.109   | 4.02%       | 40.64%     |
| 14.0               | 2013.210      | 54.347      | 567.457   | 3.92%       | 44.94%     |
| 15.0               | 1820.649      | 52.633      | 620.089   | 3.80%       | 49.11%     |
| 16.0               | 1630.025      | 50.562      | 670.652   | 3.65%       | 53.12%     |
| 17.0               | 1435.893      | 47.745      | 718.396   | 3.45%       | 56.90%     |
| 18.0               | 1246.355      | 44.224      | 762.621   | 3.19%       | 60.40%     |
| 19.0               | 1168.646      | 42.016      | 804.637   | 3.03%       | 63.73%     |
| 20.0               | 1054.541      | 40.691      | 845.327   | 2.94%       | 66.95%     |
| 21.0               | 949.293       | 38.478      | 883.805   | 2.78%       | 70.00%     |
| 22.0               | 854.244       | 36.243      | 920.048   | 2.62%       | 72.87%     |
| 23.0               | 764.156       | 33.958      | 954.006   | 2.45%       | 75.56%     |
| 24.0               | 683.914       | 31.660      | 985.666   | 2.29%       | 78.06%     |
| 25.0               | 602.898       | 29.259      | 1014.925  | 2.11%       | 80.38%     |
| 26.0               | 529.948       | 26.741      | 1041.666  | 1.93%       | 82.50%     |
| 27.0               | 462.666       | 24.285      | 1065.951  | 1.75%       | 84.42%     |
| 28.0               | 398.435       | 21.801      | 1087.752  | 1.57%       | 86.15%     |
| 29.0               | 341.179       | 19.350      | 1107.103  | 1.40%       | 87.68%     |
| 30.0               | 284.725       | 16.899      | 1124.002  | 1.22%       | 89.02%     |
| 31.0               | 250.835       | 14.904      | 1138.906  | 1.08%       | 90.20%     |
| 32.0               | 224.597       | 13.621      | 1152.526  | 0.98%       | 91.28%     |
| 33.0               | 175.083       | 11.775      | 1164.301  | 0.85%       | 92.21%     |
| 34.0               | 134.523       | 9.370       | 1173.671  | 0.68%       | 92.95%     |
| 35.0               | 112.043       | 7.657       | 1181.328  | 0.55%       | 93.56%     |
| 36.0               | 92.745        | 6.520       | 1187.849  | 0.47%       | 94.08%     |
| 37.0               | 75.738        | 5.495       | 1193.343  | 0.40%       | 94.51%     |

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0               | 62.204        | 4.604       | 1197.948  | 0.33%       | 94.88%     |
| 39.0               | 52.482        | 3.915       | 1201.862  | 0.28%       | 95.19%     |
| 40.0               | 45.321        | 3.411       | 1205.273  | 0.25%       | 95.46%     |
| 41.0               | 38.983        | 3.002       | 1208.275  | 0.22%       | 95.69%     |
| 42.0               | 34.845        | 2.682       | 1210.958  | 0.19%       | 95.91%     |
| 43.0               | 31.316        | 2.451       | 1213.408  | 0.18%       | 96.10%     |
| 44.0               | 28.673        | 2.264       | 1215.673  | 0.16%       | 96.28%     |
| 45.0               | 26.355        | 2.115       | 1217.787  | 0.15%       | 96.45%     |
| 46.0               | 24.293        | 1.981       | 1219.768  | 0.14%       | 96.60%     |
| 47.0               | 22.460        | 1.859       | 1221.628  | 0.13%       | 96.75%     |
| 48.0               | 20.841        | 1.750       | 1223.378  | 0.13%       | 96.89%     |
| 49.0               | 19.450        | 1.655       | 1225.033  | 0.12%       | 97.02%     |
| 50.0               | 18.038        | 1.563       | 1226.596  | 0.11%       | 97.15%     |
| 51.0               | 16.883        | 1.477       | 1228.073  | 0.11%       | 97.26%     |
| 52.0               | 15.873        | 1.406       | 1229.479  | 0.10%       | 97.37%     |
| 53.0               | 14.966        | 1.341       | 1230.82   | 0.10%       | 97.48%     |
| 54.0               | 14.177        | 1.285       | 1232.105  | 0.09%       | 97.58%     |
| 55.0               | 13.458        | 1.234       | 1233.338  | 0.09%       | 97.68%     |
| 56.0               | 12.890        | 1.191       | 1234.529  | 0.09%       | 97.77%     |
| 57.0               | 12.392        | 1.156       | 1235.685  | 0.08%       | 97.87%     |
| 58.0               | 11.943        | 1.125       | 1236.81   | 0.08%       | 97.95%     |
| 59.0               | 11.534        | 1.098       | 1237.908  | 0.08%       | 98.04%     |
| 60.0               | 11.168        | 1.073       | 1238.98   | 0.08%       | 98.13%     |
| 61.0               | 10.849        | 1.051       | 1240.031  | 0.08%       | 98.21%     |
| 62.0               | 10.538        | 1.031       | 1241.062  | 0.07%       | 98.29%     |
| 63.0               | 10.227        | 1.010       | 1242.071  | 0.07%       | 98.37%     |
| 64.0               | 9.901         | 0.988       | 1243.059  | 0.07%       | 98.45%     |
| 65.0               | 9.666         | 0.968       | 1244.027  | 0.07%       | 98.53%     |
| 66.0               | 9.403         | 0.951       | 1244.979  | 0.07%       | 98.60%     |
| 67.0               | 9.106         | 0.931       | 1245.91   | 0.07%       | 98.68%     |
| 68.0               | 8.850         | 0.910       | 1246.819  | 0.07%       | 98.75%     |
| 69.0               | 8.601         | 0.890       | 1247.709  | 0.06%       | 98.82%     |
| 70.0               | 8.372         | 0.872       | 1248.581  | 0.06%       | 98.89%     |
| 71.0               | 8.116         | 0.852       | 1249.433  | 0.06%       | 98.95%     |
| 72.0               | 7.867         | 0.831       | 1250.264  | 0.06%       | 99.02%     |
| 73.0               | 7.653         | 0.812       | 1251.076  | 0.06%       | 99.08%     |
| 74.0               | 7.466         | 0.795       | 1251.871  | 0.06%       | 99.15%     |
| 75.0               | 7.244         | 0.777       | 1252.648  | 0.06%       | 99.21%     |

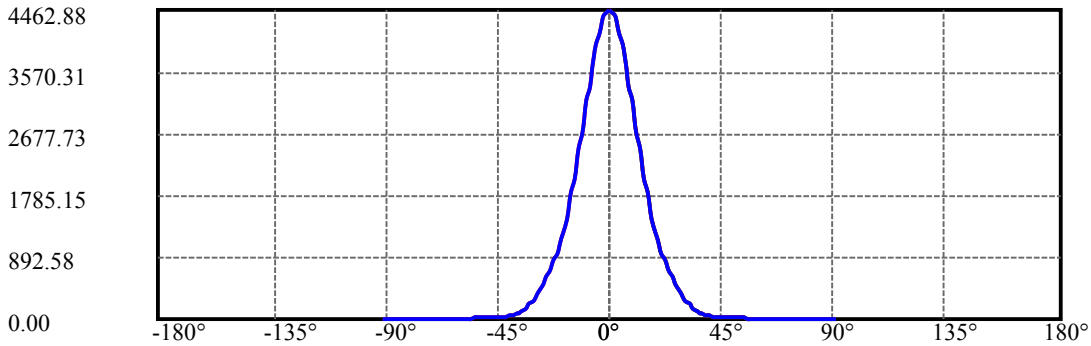
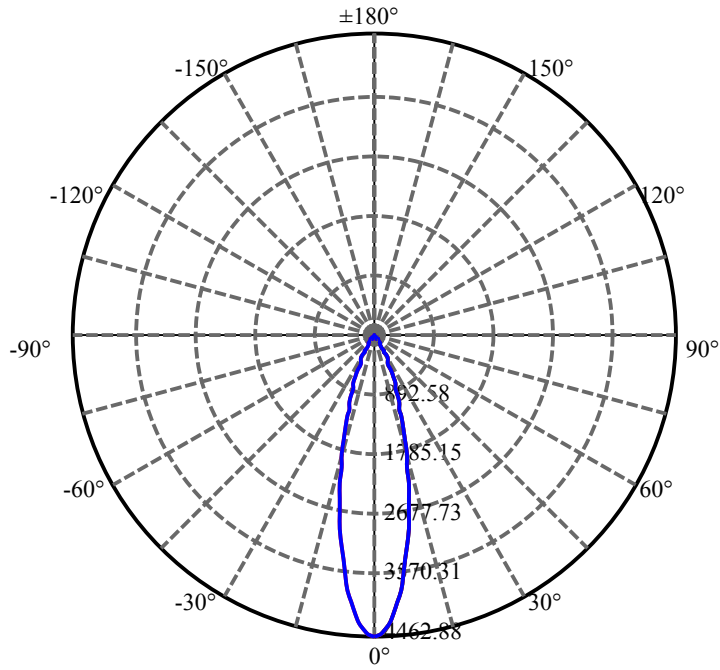
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0               | 7.037         | 0.758       | 1253.406  | 0.05%       | 99.27%     |
| 77.0               | 6.878         | 0.742       | 1254.148  | 0.05%       | 99.33%     |
| 78.0               | 6.705         | 0.727       | 1254.875  | 0.05%       | 99.39%     |
| 79.0               | 6.539         | 0.712       | 1255.587  | 0.05%       | 99.44%     |
| 80.0               | 6.400         | 0.698       | 1256.284  | 0.05%       | 99.50%     |
| 81.0               | 6.283         | 0.686       | 1256.97   | 0.05%       | 99.55%     |
| 82.0               | 6.165         | 0.675       | 1257.645  | 0.05%       | 99.60%     |
| 83.0               | 6.047         | 0.664       | 1258.309  | 0.05%       | 99.66%     |
| 84.0               | 5.923         | 0.652       | 1258.961  | 0.05%       | 99.71%     |
| 85.0               | 5.784         | 0.639       | 1259.6    | 0.05%       | 99.76%     |
| 86.0               | 5.674         | 0.626       | 1260.226  | 0.05%       | 99.81%     |
| 87.0               | 5.570         | 0.615       | 1260.842  | 0.04%       | 99.86%     |
| 88.0               | 5.508         | 0.607       | 1261.448  | 0.04%       | 99.91%     |
| 89.0               | 5.397         | 0.598       | 1262.046  | 0.04%       | 99.95%     |
| 90.0               | 5.369         | 0.590       | 1262.636  | 0.04%       | 100.00%    |

ZONAL LUMEN SUMMARY

| Zone    | Lumens  | %Lamp  | %Fixt   |
|---------|---------|--------|---------|
| 0-30    | 1124.00 | 81.15% | 89.02%  |
| 0-40    | 1205.27 | 87.02% | 95.46%  |
| 0-60    | 1238.98 | 89.46% | 98.13%  |
| 0-90    | 1262.05 | 91.12% | 99.95%  |
| 0-120   | 1262.05 | 91.12% | 99.95%  |
| 0-180   | 1262.64 | 91.16% | 100.00% |
| 60-90   | 23.07   | 1.67%  | 1.83%   |
| 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%   |
| 0-24.84 | 1010.11 | 72.93% | 80.00%  |

ZONAL LUMEN SUMMARY

|         |        |
|---------|--------|
| 0-10    | 345.02 |
| 10-20   | 500.31 |
| 20-30   | 278.67 |
| 30-40   | 81.27  |
| 40-50   | 21.32  |
| 50-60   | 12.38  |
| 60-70   | 9.60   |
| 70-80   | 7.70   |
| 80-90   | 5.76   |
| 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: —————

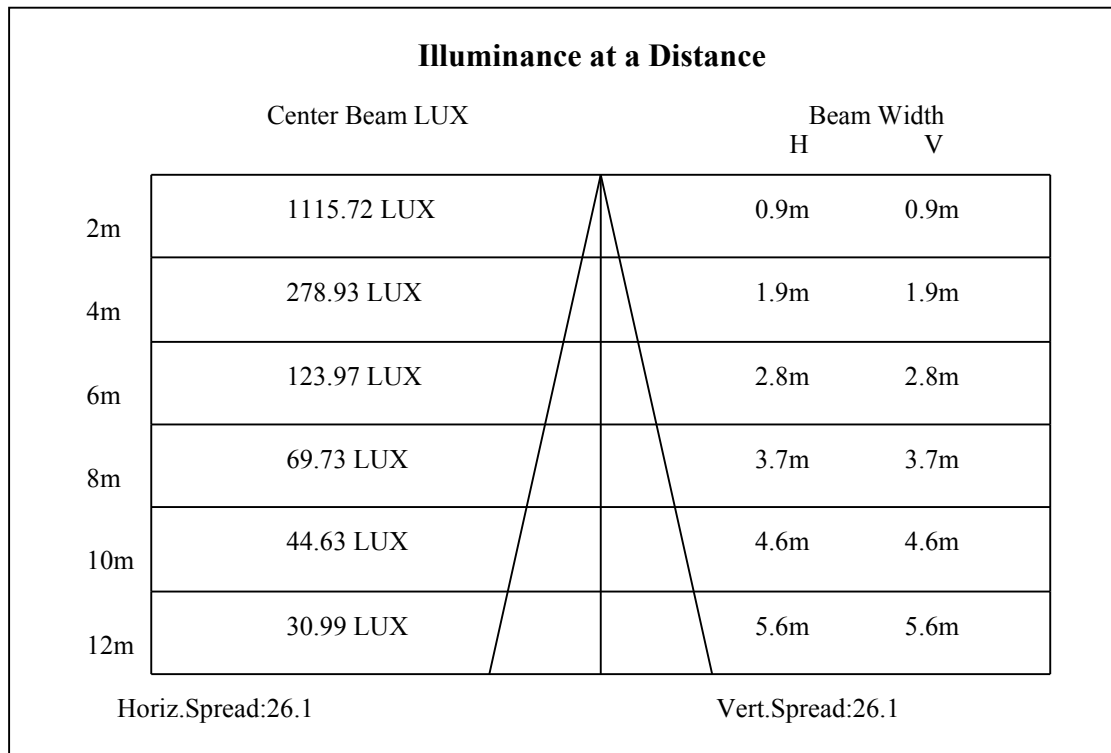
C90/C270: —————

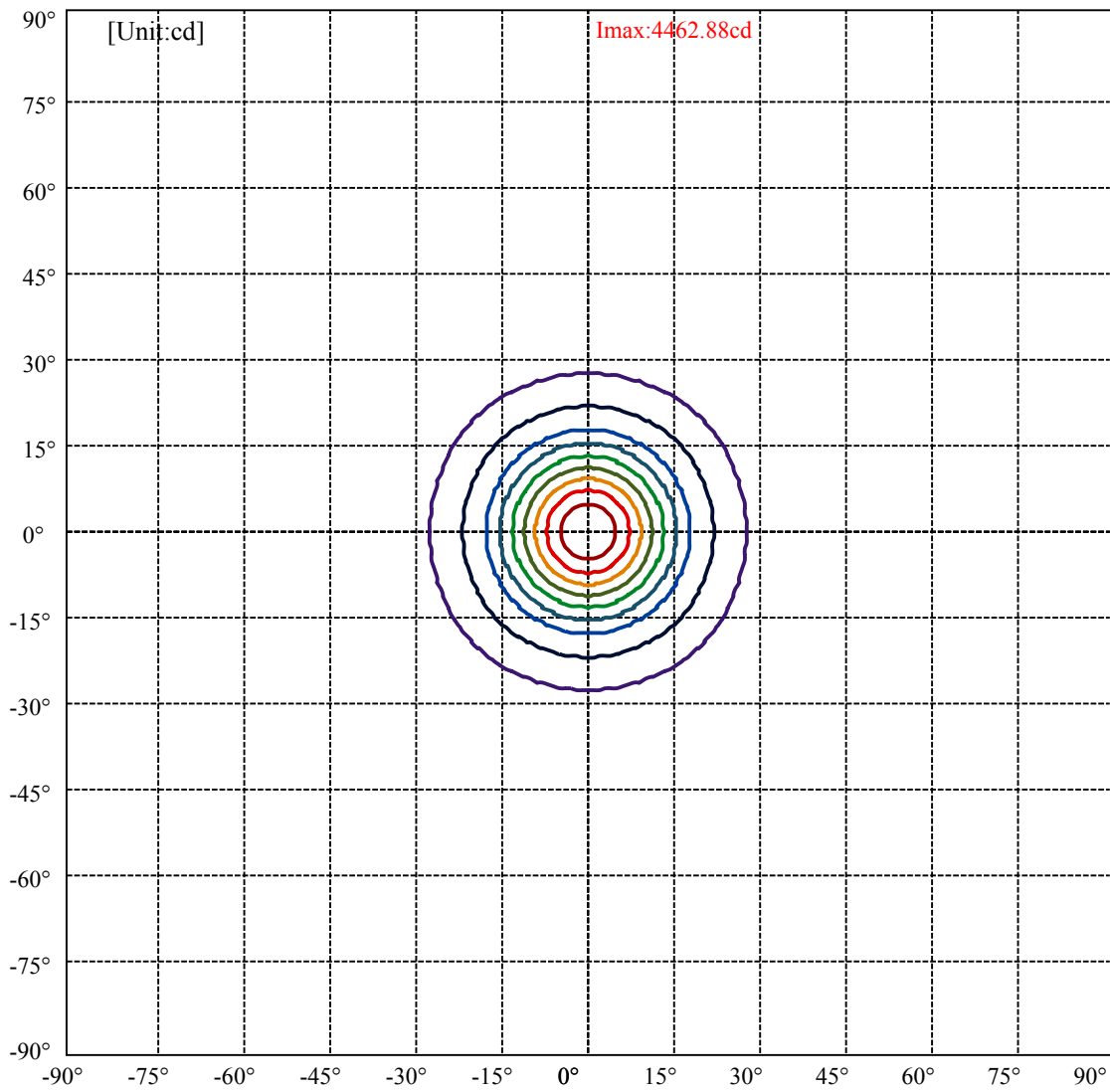
Field angle(10%Imax):C0/180Left:27.3 Right:27.3

:C90/270Left:27.3 Right:27.3

Beam Angle(50%Imax):C0/180Left:13.0 Right:13.0

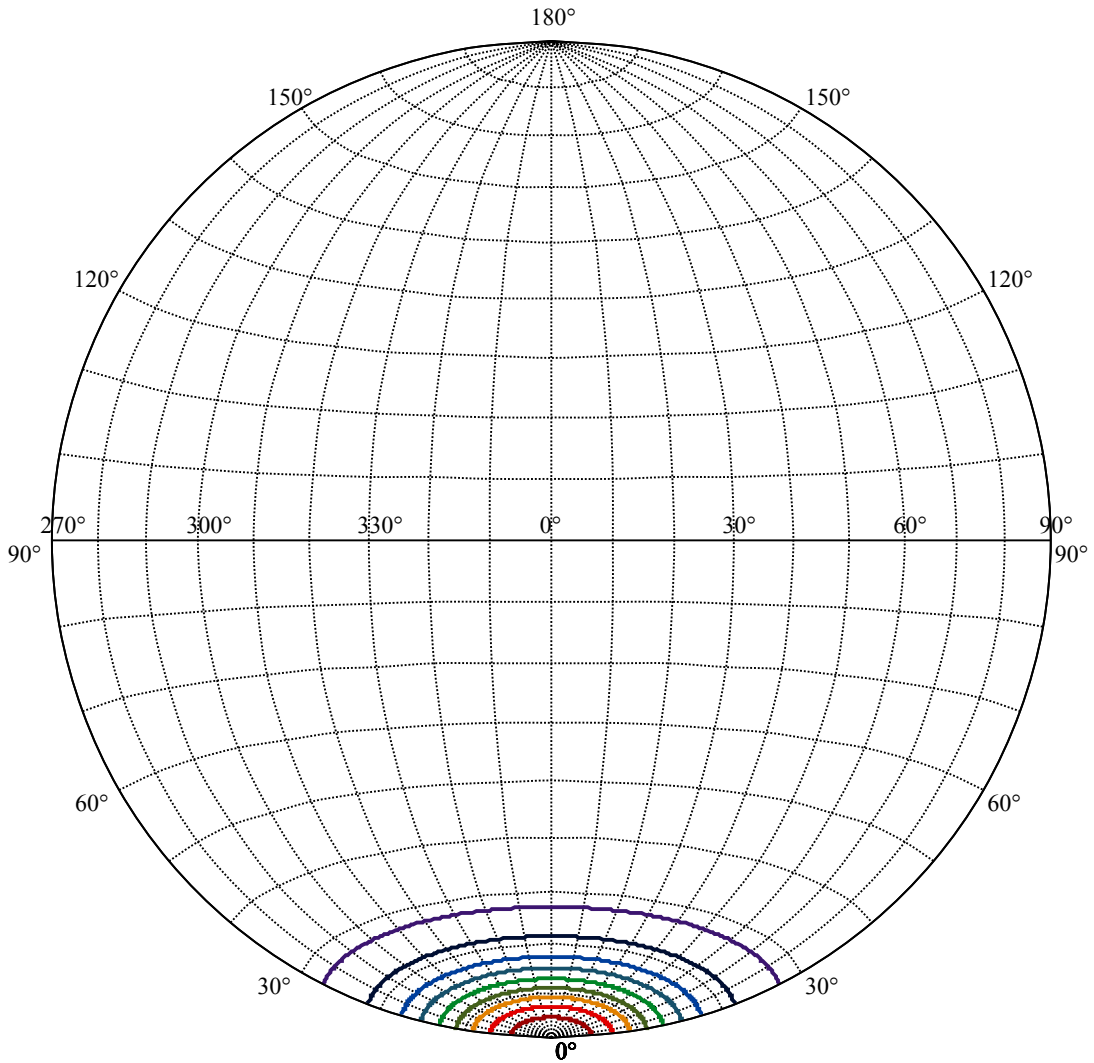
:C90/270Left:13.0 Right:13.0





|                   |   |
|-------------------|---|
| (10%Imax) 446.288 | — |
| (20%Imax) 892.577 | — |
| (30%Imax) 1338.87 | — |
| (40%Imax) 1785.15 | — |
| (50%Imax) 2231.44 | — |
| (60%Imax) 2677.73 | — |
| (70%Imax) 3124.02 | — |
| (80%Imax) 3570.31 | — |
| (90%Imax) 4016.6  | — |





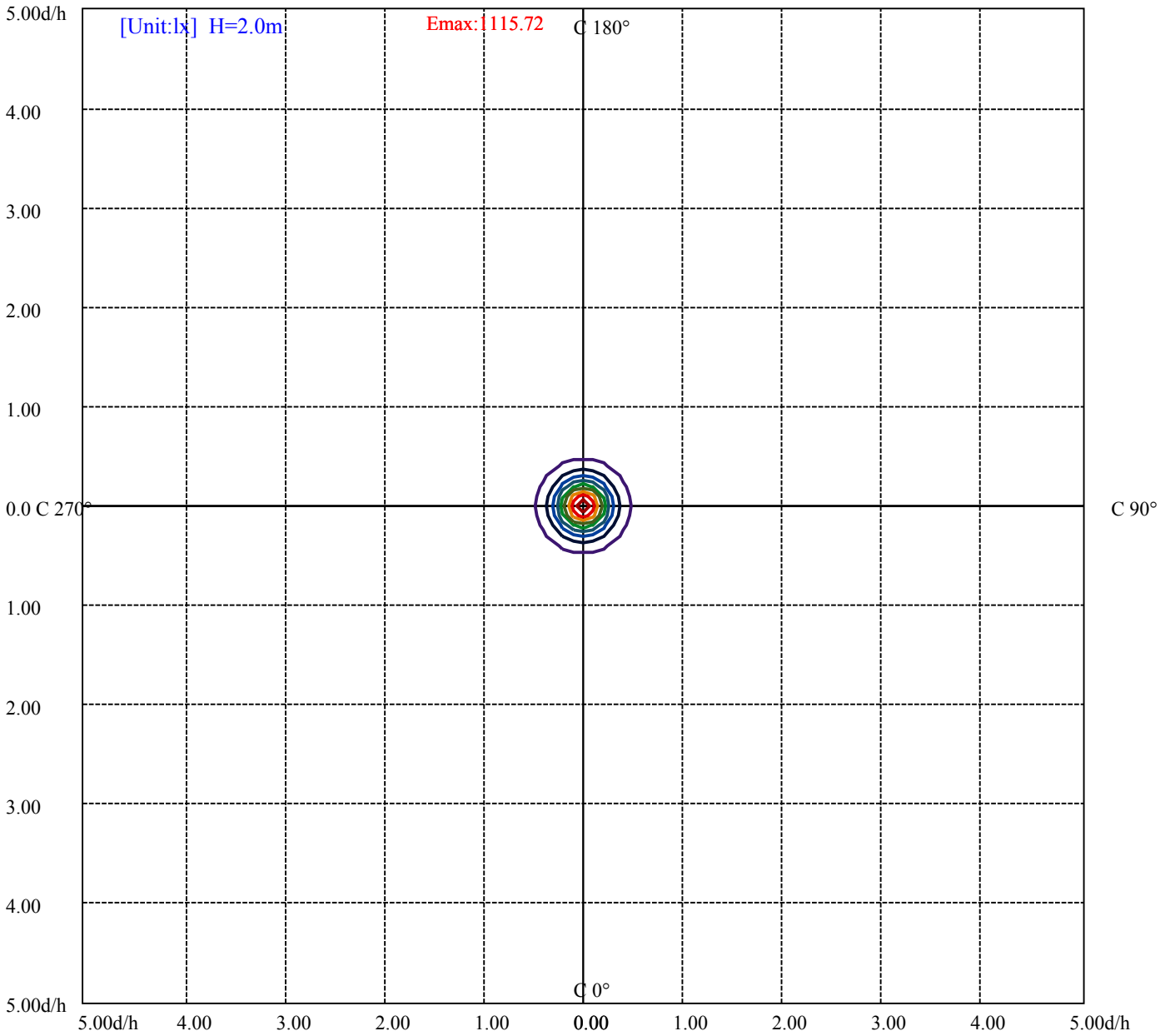
House

[Unit:cd]

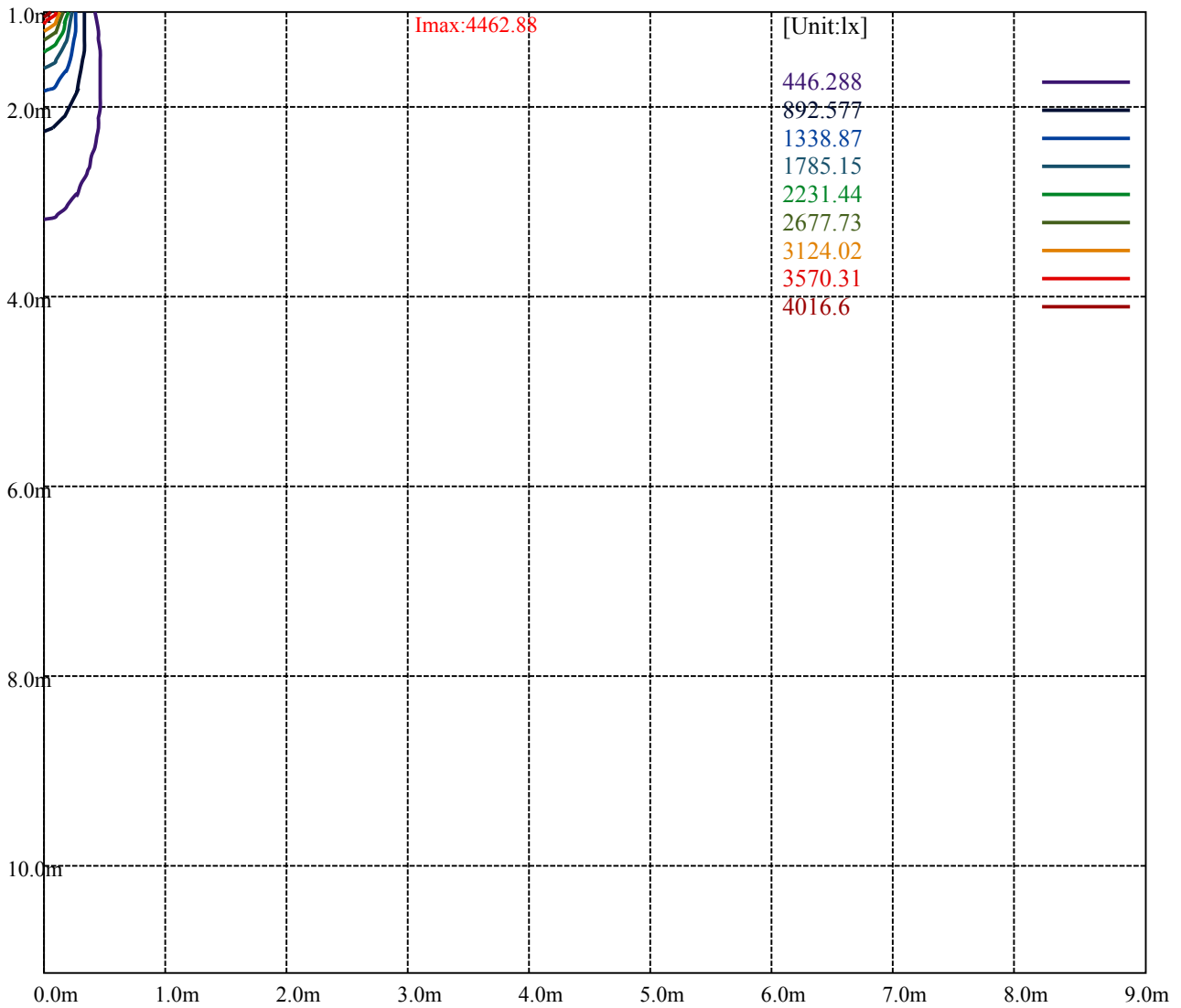
Road

Imax:4462.88

|           |         |   |
|-----------|---------|---|
| (10%Imax) | 446.288 | — |
| (20%Imax) | 892.577 | — |
| (30%Imax) | 1338.87 | — |
| (40%Imax) | 1785.15 | — |
| (50%Imax) | 2231.44 | — |
| (60%Imax) | 2677.73 | — |
| (70%Imax) | 3124.02 | — |
| (80%Imax) | 3570.31 | — |
| (90%Imax) | 4016.6  | — |



|                    |   |
|--------------------|---|
| (10%Emax) 111.572  | — |
| (20%Emax) 223.144  | — |
| (30%Emax) 334.715  | — |
| (40%Emax) 446.2875 | — |
| (50%Emax) 557.86   | — |
| (60%Emax) 669.4325 | — |
| (70%Emax) 781.005  | — |
| (80%Emax) 892.575  | — |
| (90%Emax) 1004.148 | — |



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

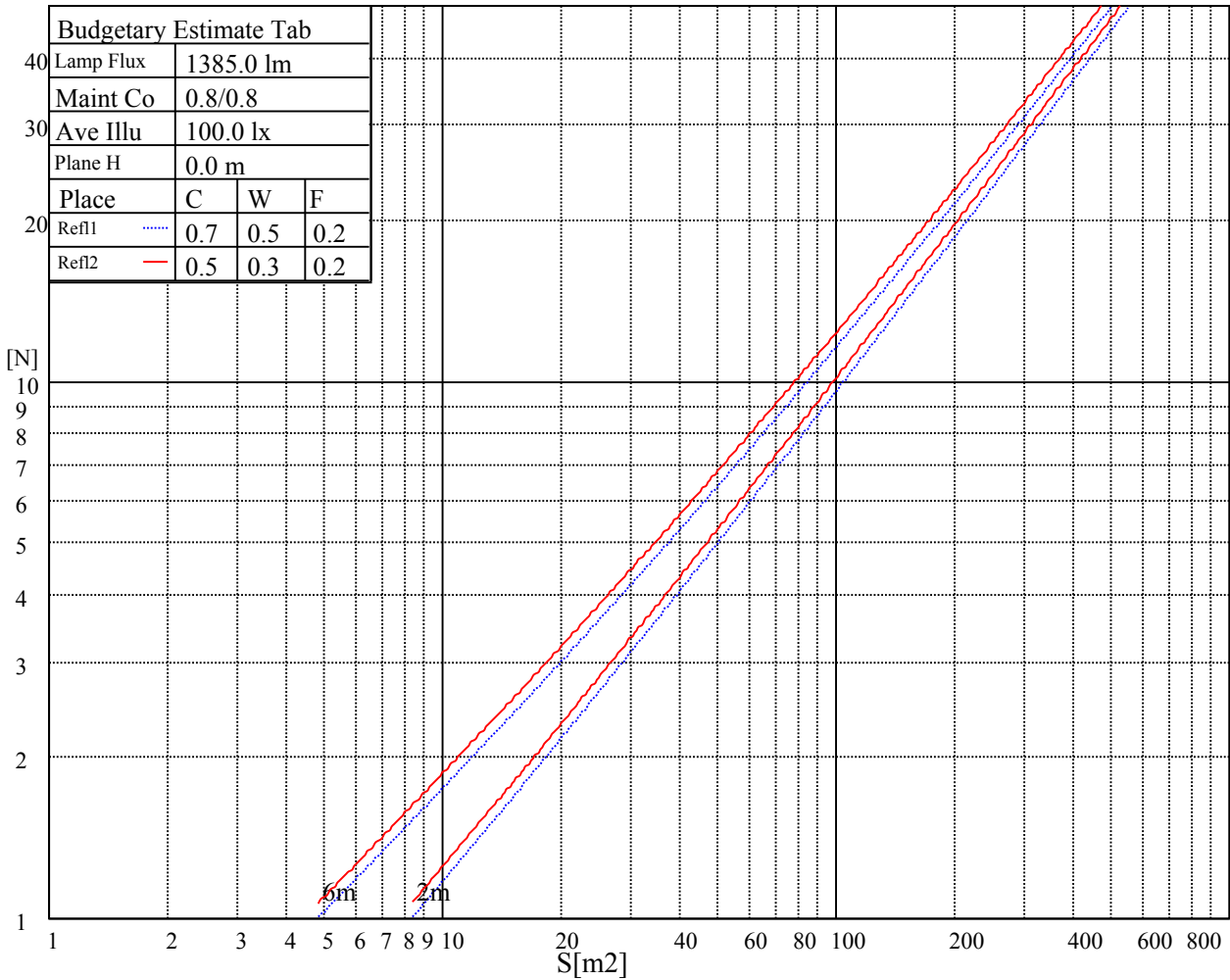
| Glare | Quality | Service Values Illuminance(lx) |      |      |       |       |       |       |       |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15  | A       | 2000                           | 1000 | 500  | <=300 |       |    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

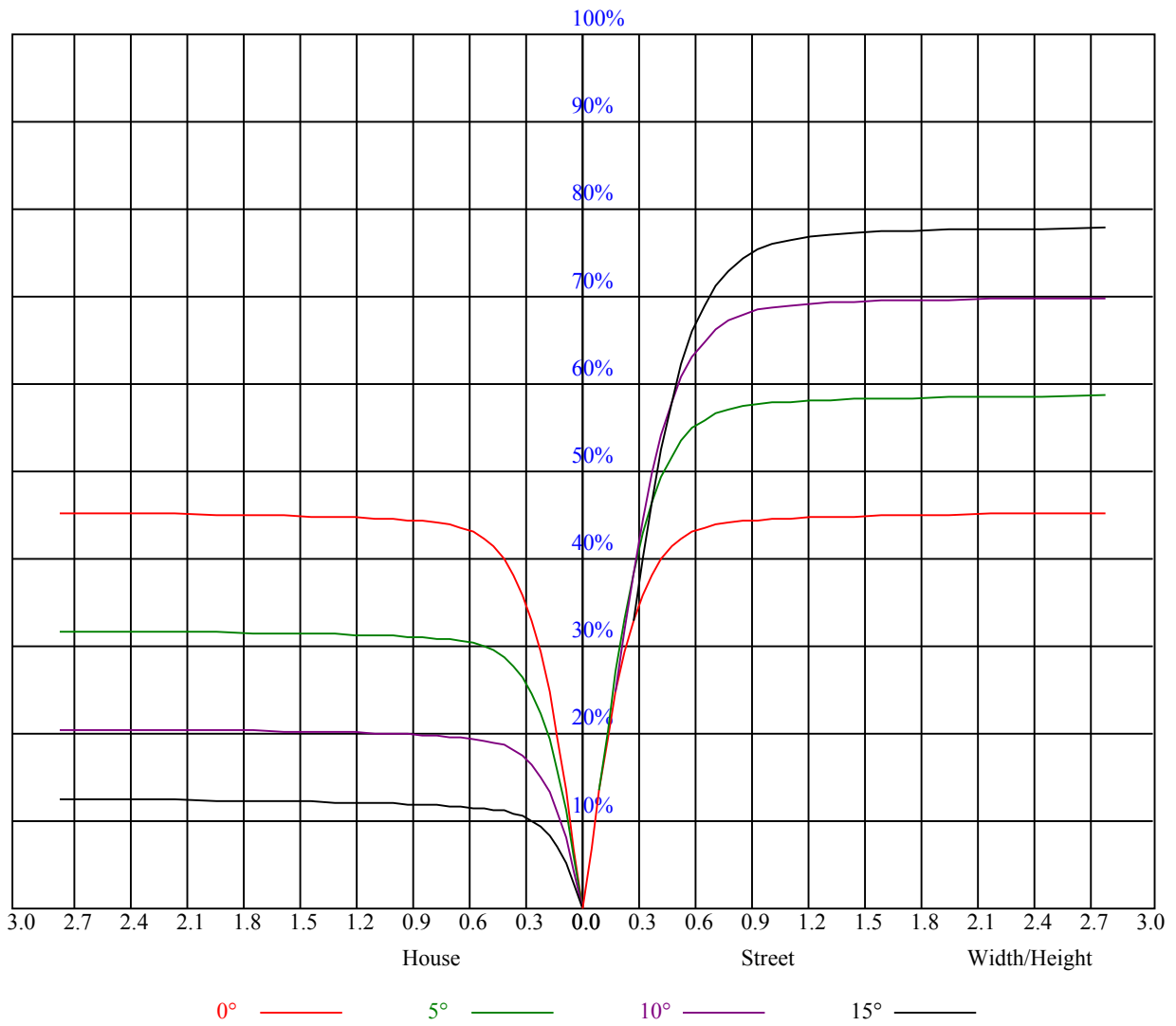


| Illumination assessment according UGR             |     |                  |     |     |     |     |                |     |     |     |     |
|---|-----|------------------|-----|-----|-----|-----|----------------|-----|-----|-----|-----|
| Rf of Ceiling                                     | 70  | 70               | 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 |
|   | 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  | 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 |
| 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 | 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 | 1.06 | 1.06 | 1.06 | 1.01 | 1.01 | 1.01 | 0.97 | 0.97 | 0.97 | 0.93 | 0.93 | 0.93 | 0.91 |
| 1     | 1.02                                   | 1.00 | 0.98 | 1.00 | 0.98 | 0.97 | 0.96 | 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 | 0.90 | 0.88 | 0.89 | 0.87 | 0.86 | 0.87 | 0.85 | 0.84 | 0.83 |
| 3     | 0.91                                   | 0.88 | 0.85 | 0.90 | 0.87 | 0.84 | 0.88 | 0.85 | 0.83 | 0.86 | 0.83 | 0.81 | 0.84 | 0.82 | 0.80 | 0.79 |
| 4     | 0.87                                   | 0.83 | 0.80 | 0.86 | 0.82 | 0.79 | 0.84 | 0.81 | 0.78 | 0.83 | 0.80 | 0.78 | 0.81 | 0.79 | 0.77 | 0.75 |
| 5     | 0.83                                   | 0.79 | 0.76 | 0.82 | 0.78 | 0.75 | 0.81 | 0.77 | 0.75 | 0.80 | 0.77 | 0.74 | 0.78 | 0.76 | 0.74 | 0.72 |
| 6     | 0.80                                   | 0.75 | 0.72 | 0.79 | 0.75 | 0.72 | 0.78 | 0.74 | 0.72 | 0.77 | 0.74 | 0.71 | 0.76 | 0.73 | 0.71 | 0.70 |
| 7     | 0.77                                   | 0.72 | 0.69 | 0.76 | 0.72 | 0.69 | 0.75 | 0.71 | 0.69 | 0.74 | 0.71 | 0.68 | 0.73 | 0.70 | 0.68 | 0.67 |
| 8     | 0.74                                   | 0.69 | 0.67 | 0.73 | 0.69 | 0.66 | 0.72 | 0.69 | 0.66 | 0.72 | 0.68 | 0.66 | 0.71 | 0.68 | 0.66 | 0.65 |
| 9     | 0.71                                   | 0.67 | 0.64 | 0.71 | 0.67 | 0.64 | 0.70 | 0.66 | 0.64 | 0.69 | 0.66 | 0.64 | 0.69 | 0.66 | 0.63 | 0.62 |
| 10    | 0.69                                   | 0.65 | 0.62 | 0.68 | 0.64 | 0.62 | 0.68 | 0.64 | 0.62 | 0.67 | 0.64 | 0.61 | 0.67 | 0.63 | 0.61 | 0.60 |





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    | 4443.79 | 4391.20 | 4295.99 | 4148.75 | 3992.66 | 3813.86 | 3576.40 | 3376.02 | 3162.35 |
| 45.0   | 4465.93 | 4467.04 | 4436.04 | 4362.42 | 4223.48 | 4082.88 | 3908.52 | 3678.25 | 3482.85 |
| 90.0   | 4474.23 | 4416.11 | 4328.10 | 4217.39 | 4078.45 | 3863.13 | 3676.59 | 3481.74 | 3270.84 |
| 135.0  | 4467.59 | 4454.30 | 4398.40 | 4309.83 | 4173.11 | 4022.55 | 3843.20 | 3660.53 | 3405.91 |
| 180.0  | 4443.79 | 4466.48 | 4437.14 | 4377.92 | 4260.01 | 4137.68 | 3993.21 | 3817.74 | 3571.41 |
| 225.0  | 4465.93 | 4400.61 | 4323.67 | 4214.62 | 4073.47 | 3884.16 | 3705.92 | 3516.06 | 3260.33 |
| 270.0  | 4474.23 | 4472.57 | 4412.79 | 4340.83 | 4230.68 | 4054.65 | 3896.89 | 3714.78 | 3461.81 |
| 315.0  | 4467.59 | 4433.82 | 4364.63 | 4253.92 | 4102.26 | 3940.07 | 3728.06 | 3529.90 | 3319.00 |
| 360.0  | 4443.79 | 4391.20 | 4295.99 | 4148.75 | 3992.66 | 3813.86 | 3576.40 | 3376.02 | 3162.35 |
| C/γ(°) | 9.0     | 10.0    | 11.0    | 12.0    | 13.0    | 14.0    | 15.0    | 16.0    | 17.0    |
| 0.0    | 2895.55 | 2677.45 | 2451.06 | 2234.07 | 1984.98 | 1801.21 | 1622.97 | 1460.23 | 1100.60 |
| 45.0   | 3283.02 | 3026.73 | 2808.09 | 2583.35 | 2303.26 | 2096.24 | 1903.61 | 1670.02 | 1504.51 |
| 90.0   | 3068.25 | 2792.59 | 2568.96 | 2298.28 | 2096.79 | 1904.72 | 1679.98 | 1517.80 | 1373.88 |
| 135.0  | 3203.31 | 3000.72 | 2732.81 | 2513.05 | 2301.60 | 2052.51 | 1866.52 | 1646.77 | 1488.46 |
| 180.0  | 3368.27 | 3167.89 | 2960.31 | 2691.29 | 2469.32 | 2213.59 | 2015.42 | 1826.12 | 1611.90 |
| 225.0  | 3047.22 | 2769.89 | 2546.27 | 2346.44 | 2148.27 | 1912.47 | 1730.91 | 1577.02 | 1425.36 |
| 270.0  | 3261.43 | 3063.27 | 2840.19 | 2622.10 | 2350.87 | 2154.36 | 1960.07 | 1727.59 | 1562.63 |
| 315.0  | 3112.53 | 2838.53 | 2626.53 | 2406.22 | 2206.39 | 1970.59 | 1785.71 | 1614.66 | 1419.82 |
| 360.0  | 2895.55 | 2677.45 | 2451.06 | 2234.07 | 1984.98 | 1801.21 | 1622.97 | 1460.23 | 1100.60 |
| C/γ(°) | 18.0    | 19.0    | 20.0    | 21.0    | 22.0    | 23.0    | 24.0    | 25.0    | 26.0    |
| 0.0    | 1100.60 | 1044.08 | 916.60  | 827.76  | 742.24  | 647.08  | 573.24  | 508.26  | 430.32  |
| 45.0   | 1357.82 | 1222.76 | 1079.95 | 974.22  | 882.89  | 776.61  | 694.13  | 617.19  | 530.29  |
| 90.0   | 1095.34 | 1095.34 | 991.83  | 900.55  | 790.95  | 710.85  | 635.63  | 565.77  | 483.13  |
| 135.0  | 1350.07 | 1226.08 | 1081.61 | 982.53  | 893.41  | 807.06  | 710.19  | 634.91  | 564.61  |
| 180.0  | 1467.98 | 1329.04 | 1196.19 | 1061.68 | 968.13  | 882.34  | 799.86  | 698.01  | 628.82  |
| 225.0  | 1082.33 | 1082.33 | 1030.57 | 936.42  | 828.48  | 750.98  | 678.41  | 589.02  | 524.70  |
| 270.0  | 1423.14 | 1255.97 | 1129.77 | 1001.35 | 907.25  | 821.45  | 739.52  | 640.99  | 574.02  |
| 315.0  | 1093.57 | 1093.57 | 1009.82 | 909.85  | 820.62  | 716.88  | 640.33  | 569.04  | 503.72  |
| 360.0  | 1100.60 | 1044.08 | 916.60  | 827.76  | 742.24  | 647.08  | 573.24  | 508.26  | 430.32  |
| C/γ(°) | 27.0    | 28.0    | 29.0    | 30.0    | 31.0    | 32.0    | 33.0    | 34.0    | 35.0    |
| 0.0    | 372.59  | 319.11  | 272.01  | 222.19  | 186.65  | 156.60  | 130.80  | 104.29  | 86.79   |
| 45.0   | 464.97  | 404.08  | 334.89  | 286.73  | 286.73  | 233.20  | 161.69  | 135.45  | 112.98  |
| 90.0   | 420.36  | 364.17  | 311.97  | 256.07  | 217.48  | 175.08  | 146.47  | 116.46  | 96.37   |
| 135.0  | 496.52  | 417.37  | 361.46  | 300.02  | 288.95  | 288.95  | 180.51  | 145.75  | 121.34  |
| 180.0  | 561.84  | 481.02  | 422.90  | 351.50  | 298.36  | 286.73  | 286.73  | 171.93  | 143.81  |
| 225.0  | 447.59  | 386.81  | 334.23  | 271.40  | 229.11  | 191.86  | 160.30  | 127.92  | 106.17  |
| 270.0  | 509.81  | 445.60  | 375.30  | 319.94  | 281.20  | 281.20  | 180.84  | 151.56  | 126.54  |
| 315.0  | 427.66  | 369.32  | 316.68  | 269.96  | 218.20  | 183.17  | 153.33  | 122.83  | 102.35  |
| 360.0  | 372.59  | 319.11  | 272.01  | 222.19  | 186.65  | 156.60  | 130.80  | 104.29  | 86.79   |
| C/γ(°) | 36.0    | 37.0    | 38.0    | 39.0    | 40.0    | 41.0    | 42.0    | 43.0    | 44.0    |
| 0.0    | 72.62   | 59.17   | 50.87   | 43.23   | 38.58   | 35.15   | 32.33   | 29.45   | 27.46   |
| 45.0   | 93.55   | 74.34   | 62.05   | 52.36   | 44.89   | 38.03   | 34.04   | 30.11   | 27.68   |
| 90.0   | 80.26   | 67.31   | 54.97   | 47.38   | 41.68   | 37.20   | 33.60   | 30.17   | 27.79   |
| 135.0  | 100.30  | 79.27   | 66.09   | 55.74   | 47.71   | 40.30   | 35.81   | 32.33   | 29.56   |
| 180.0  | 121.72  | 100.91  | 80.54   | 67.53   | 56.90   | 47.22   | 41.13   | 36.53   | 32.99   |
| 225.0  | 87.85   | 73.12   | 58.62   | 49.82   | 43.01   | 36.64   | 32.88   | 30.00   | 27.07   |
| 270.0  | 100.63  | 83.81   | 67.14   | 56.79   | 48.77   | 41.13   | 36.42   | 32.94   | 30.11   |
| 315.0  | 85.02   | 67.97   | 57.35   | 47.00   | 41.02   | 36.20   | 32.55   | 29.01   | 26.74   |
| 360.0  | 72.62   | 59.17   | 50.87   | 43.23   | 38.58   | 35.15   | 32.33   | 29.45   | 27.46   |

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    | 25.68 | 24.02 | 22.09 | 20.70 | 19.43 | 17.93 | 16.83 | 15.83 | 14.72 |
| 45.0   | 25.63 | 23.36 | 21.75 | 20.31 | 18.99 | 17.49 | 16.50 | 15.61 | 14.78 |
| 90.0   | 25.79 | 23.53 | 21.86 | 20.43 | 18.82 | 17.66 | 16.38 | 15.44 | 14.67 |
| 135.0  | 26.68 | 24.69 | 22.92 | 20.92 | 19.54 | 17.93 | 16.88 | 15.94 | 15.11 |
| 180.0  | 29.50 | 27.34 | 25.30 | 23.08 | 21.48 | 19.76 | 18.49 | 17.33 | 16.27 |
| 225.0  | 25.08 | 23.30 | 21.31 | 19.93 | 18.65 | 17.49 | 16.22 | 15.28 | 14.56 |
| 270.0  | 27.68 | 25.02 | 23.30 | 21.64 | 20.20 | 18.65 | 17.55 | 16.22 | 15.28 |
| 315.0  | 24.80 | 23.08 | 21.15 | 19.71 | 18.49 | 17.38 | 16.22 | 15.33 | 14.34 |
| 360.0  | 25.68 | 24.02 | 22.09 | 20.70 | 19.43 | 17.93 | 16.83 | 15.83 | 14.72 |
| C/γ(°) | 54.0  | 55.0  | 56.0  | 57.0  | 58.0  | 59.0  | 60.0  | 61.0  | 62.0  |
| 0.0    | 13.95 | 13.28 | 12.68 | 12.23 | 11.85 | 11.35 | 11.02 | 10.74 | 10.41 |
| 45.0   | 13.95 | 13.34 | 12.79 | 12.23 | 11.85 | 11.46 | 11.07 | 10.74 | 10.41 |
| 90.0   | 14.00 | 13.23 | 12.73 | 12.23 | 11.90 | 11.40 | 11.07 | 10.79 | 10.52 |
| 135.0  | 14.23 | 13.62 | 13.06 | 12.62 | 12.07 | 11.68 | 11.35 | 10.90 | 10.63 |
| 180.0  | 15.17 | 14.34 | 13.62 | 13.06 | 12.45 | 12.01 | 11.62 | 11.29 | 10.85 |
| 225.0  | 13.84 | 13.06 | 12.62 | 12.12 | 11.68 | 11.35 | 10.96 | 10.68 | 10.41 |
| 270.0  | 14.56 | 13.67 | 13.12 | 12.57 | 12.01 | 11.62 | 11.29 | 10.96 | 10.68 |
| 315.0  | 13.73 | 13.12 | 12.51 | 12.07 | 11.73 | 11.40 | 10.96 | 10.68 | 10.41 |
| 360.0  | 13.95 | 13.28 | 12.68 | 12.23 | 11.85 | 11.35 | 11.02 | 10.74 | 10.41 |
| C/γ(°) | 63.0  | 64.0  | 65.0  | 66.0  | 67.0  | 68.0  | 69.0  | 70.0  | 71.0  |
| 0.0    | 10.07 | 9.80  | 9.58  | 9.30  | 8.91  | 8.69  | 8.41  | 8.19  | 7.92  |
| 45.0   | 10.13 | 9.85  | 9.63  | 9.35  | 9.19  | 8.91  | 8.64  | 8.36  | 8.14  |
| 90.0   | 10.19 | 9.85  | 9.58  | 9.35  | 9.02  | 8.75  | 8.52  | 8.36  | 8.14  |
| 135.0  | 10.35 | 10.02 | 9.74  | 9.47  | 9.19  | 8.91  | 8.69  | 8.41  | 8.19  |
| 180.0  | 10.57 | 10.13 | 9.91  | 9.63  | 9.24  | 9.02  | 8.75  | 8.52  | 8.25  |
| 225.0  | 10.07 | 9.74  | 9.52  | 9.30  | 9.02  | 8.75  | 8.52  | 8.36  | 8.03  |
| 270.0  | 10.30 | 10.02 | 9.80  | 9.47  | 9.24  | 8.97  | 8.69  | 8.47  | 8.19  |
| 315.0  | 10.13 | 9.80  | 9.58  | 9.35  | 9.02  | 8.80  | 8.58  | 8.30  | 8.08  |
| 360.0  | 10.07 | 9.80  | 9.58  | 9.30  | 8.91  | 8.69  | 8.41  | 8.19  | 7.92  |
| C/γ(°) | 72.0  | 73.0  | 74.0  | 75.0  | 76.0  | 77.0  | 78.0  | 79.0  | 80.0  |
| 0.0    | 7.64  | 7.42  | 7.25  | 7.03  | 6.86  | 6.70  | 6.53  | 6.37  | 6.25  |
| 45.0   | 7.92  | 7.69  | 7.47  | 7.25  | 7.03  | 6.86  | 6.70  | 6.53  | 6.42  |
| 90.0   | 7.80  | 7.64  | 7.42  | 7.25  | 7.03  | 6.86  | 6.70  | 6.53  | 6.37  |
| 135.0  | 7.97  | 7.75  | 7.58  | 7.36  | 7.14  | 6.97  | 6.81  | 6.69  | 6.48  |
| 180.0  | 8.03  | 7.80  | 7.58  | 7.36  | 7.14  | 6.97  | 6.75  | 6.64  | 6.48  |
| 225.0  | 7.80  | 7.58  | 7.47  | 7.20  | 6.97  | 6.81  | 6.64  | 6.53  | 6.37  |
| 270.0  | 7.97  | 7.75  | 7.53  | 7.31  | 7.14  | 6.97  | 6.81  | 6.59  | 6.48  |
| 315.0  | 7.80  | 7.58  | 7.42  | 7.20  | 6.97  | 6.86  | 6.70  | 6.53  | 6.37  |
| 360.0  | 7.64  | 7.42  | 7.25  | 7.03  | 6.86  | 6.70  | 6.53  | 6.37  | 6.25  |
| C/γ(°) | 81.0  | 82.0  | 83.0  | 84.0  | 85.0  | 86.0  | 87.0  | 88.0  | 89.0  |
| 0.0    | 6.14  | 6.03  | 5.87  | 5.81  | 5.65  | 5.54  | 5.48  | 5.42  | 5.37  |
| 45.0   | 6.31  | 6.14  | 6.03  | 5.92  | 5.81  | 5.70  | 5.59  | 5.48  | 5.42  |
| 90.0   | 6.25  | 6.14  | 6.03  | 5.92  | 5.76  | 5.65  | 5.54  | 5.54  | 5.37  |
| 135.0  | 6.37  | 6.25  | 6.09  | 5.98  | 5.87  | 5.76  | 5.59  | 5.54  | 5.48  |
| 180.0  | 6.31  | 6.20  | 6.09  | 5.98  | 5.81  | 5.70  | 5.59  | 5.48  | 5.42  |
| 225.0  | 6.25  | 6.14  | 6.09  | 5.87  | 5.76  | 5.65  | 5.54  | 5.54  | 5.31  |
| 270.0  | 6.37  | 6.25  | 6.14  | 5.98  | 5.87  | 5.76  | 5.65  | 5.54  | 5.42  |
| 315.0  | 6.25  | 6.14  | 6.03  | 5.92  | 5.76  | 5.65  | 5.59  | 5.54  | 5.37  |
| 360.0  | 6.14  | 6.03  | 5.87  | 5.81  | 5.65  | 5.54  | 5.48  | 5.42  | 5.37  |

Intensity data(cd)

|               |             |
|---------------|-------------|
| <b>C/γ(°)</b> | <b>90.0</b> |
| <b>0.0</b>    | <b>5.37</b> |
| <b>45.0</b>   | <b>5.31</b> |
| <b>90.0</b>   | <b>5.37</b> |
| <b>135.0</b>  | <b>5.37</b> |
| <b>180.0</b>  | <b>5.31</b> |
| <b>225.0</b>  | <b>5.37</b> |
| <b>270.0</b>  | <b>5.42</b> |
| <b>315.0</b>  | <b>5.42</b> |
| <b>360.0</b>  | <b>5.37</b> |