



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

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Nata

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LumCAT: NA01D0201545BW

Luminaire:

|   |                    |
|---|--------------------|
| Report No: 200420-B002                        | Voltage(V): 6.5500 |
| Test No: 200420-C002                          | Current(A): 0.1600 |
| LampCAT: LUMILEDS LUXEON 3030 2D(ROUND)1.0500 | Power(W): 1.0500   |
| Lamp flux(lm): 93.0                           | PF: 0.0000         |
| Number of Lamps: 1                            | Ballast type: DC   |
| Length(mm): 0                                 | Width(mm): 0       |
| Phm Type: C                                   | Height(mm): 0      |

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Photometric Results

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Lumens(lm): 79.50  
Efficiency(%): 85.48%  
Lumens(lm)/Power(W): 75.71  
Central intensity(cd): 234.731  
Maximum intensity(cd): 239.006  
Angle of maximum intensity: C=345.0  $\gamma$ =3.0  
Beam Angle(50%Imax): [C0/180]Total=45.0  
                                  [C90/270]Total=15.0  
Field angle(10%Imax): [C0/180]Total=79.1  
                                  [C90/270]Total=39.6  
Maximum s/h(1/2): C0\_180=0.68 C90\_270=0.22  
Maximum s/h(1/4): C0\_180=0.72 C90\_270=0.26  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 85.48%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 91.670%

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0                | 234.689       | 0.000       | 0         | .000%       | .000%      |
| 1.0                | 232.999       | 0.224       | 0.224     | .241%       | .281%      |
| 2.0                | 228.162       | 0.662       | 0.886     | .712%       | 1.114%     |
| 3.0                | 220.779       | 1.074       | 1.959     | 1.155%      | 2.465%     |
| 4.0                | 211.683       | 1.448       | 3.407     | 1.557%      | 4.286%     |
| 5.0                | 200.194       | 1.772       | 5.179     | 1.905%      | 6.514%     |
| 6.0                | 186.848       | 2.034       | 7.213     | 2.187%      | 9.073%     |
| 7.0                | 173.409       | 2.236       | 9.449     | 2.404%      | 11.886%    |
| 8.0                | 160.116       | 2.387       | 11.836    | 2.567%      | 14.888%    |
| 9.0                | 146.555       | 2.485       | 14.321    | 2.672%      | 18.015%    |
| 10.0               | 133.425       | 2.534       | 16.855    | 2.724%      | 21.202%    |
| 11.0               | 121.812       | 2.550       | 19.405    | 2.742%      | 24.410%    |
| 12.0               | 111.293       | 2.548       | 21.954    | 2.740%      | 27.615%    |
| 13.0               | 100.748       | 2.516       | 24.47     | 2.706%      | 30.780%    |
| 14.0               | 91.533        | 2.461       | 26.931    | 2.646%      | 33.876%    |
| 15.0               | 83.733        | 2.406       | 29.337    | 2.587%      | 36.903%    |
| 16.0               | 76.493        | 2.348       | 31.685    | 2.524%      | 39.856%    |
| 17.0               | 69.469        | 2.273       | 33.958    | 2.444%      | 42.715%    |
| 18.0               | 63.738        | 2.196       | 36.154    | 2.362%      | 45.478%    |
| 19.0               | 58.507        | 2.127       | 38.281    | 2.287%      | 48.153%    |
| 20.0               | 53.555        | 2.051       | 40.332    | 2.205%      | 50.733%    |
| 21.0               | 49.057        | 1.970       | 42.303    | 2.119%      | 53.212%    |
| 22.0               | 45.143        | 1.893       | 44.196    | 2.035%      | 55.593%    |
| 23.0               | 41.663        | 1.821       | 46.017    | 1.959%      | 57.884%    |
| 24.0               | 38.198        | 1.746       | 47.763    | 1.877%      | 60.080%    |
| 25.0               | 35.070        | 1.666       | 49.429    | 1.791%      | 62.176%    |
| 26.0               | 32.269        | 1.590       | 51.018    | 1.709%      | 64.175%    |
| 27.0               | 29.667        | 1.515       | 52.534    | 1.629%      | 66.081%    |
| 28.0               | 27.105        | 1.437       | 53.971    | 1.546%      | 67.889%    |
| 29.0               | 24.795        | 1.358       | 55.329    | 1.460%      | 69.597%    |
| 30.0               | 22.741        | 1.283       | 56.612    | 1.380%      | 71.212%    |
| 31.0               | 20.714        | 1.209       | 57.822    | 1.300%      | 72.733%    |
| 32.0               | 18.818        | 1.133       | 58.954    | 1.218%      | 74.158%    |
| 33.0               | 17.205        | 1.061       | 60.016    | 1.141%      | 75.493%    |
| 34.0               | 15.670        | 0.995       | 61.01     | 1.070%      | 76.744%    |
| 35.0               | 14.166        | 0.927       | 61.937    | .996%       | 77.910%    |
| 36.0               | 12.905        | 0.862       | 62.799    | .927%       | 78.994%    |
| 37.0               | 11.747        | 0.804       | 63.603    | .865%       | 80.005%    |

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0               | 10.652        | 0.748       | 64.351    | .804%       | 80.946%    |
| 39.0               | 9.595         | 0.691       | 65.042    | .743%       | 81.815%    |
| 40.0               | 8.740         | 0.639       | 65.681    | .688%       | 82.619%    |
| 41.0               | 7.938         | 0.594       | 66.275    | .639%       | 83.366%    |
| 42.0               | 7.188         | 0.550       | 66.825    | .591%       | 84.058%    |
| 43.0               | 6.532         | 0.508       | 67.333    | .546%       | 84.697%    |
| 44.0               | 5.984         | 0.472       | 67.805    | .508%       | 85.291%    |
| 45.0               | 5.498         | 0.441       | 68.247    | .474%       | 85.846%    |
| 46.0               | 5.053         | 0.413       | 68.659    | .444%       | 86.365%    |
| 47.0               | 4.688         | 0.387       | 69.047    | .417%       | 86.853%    |
| 48.0               | 4.376         | 0.366       | 69.413    | .394%       | 87.313%    |
| 49.0               | 4.116         | 0.349       | 69.762    | .375%       | 87.752%    |
| 50.0               | 3.848         | 0.332       | 70.094    | .357%       | 88.170%    |
| 51.0               | 3.661         | 0.318       | 70.411    | .342%       | 88.569%    |
| 52.0               | 3.483         | 0.307       | 70.718    | .330%       | 88.955%    |
| 53.0               | 3.316         | 0.296       | 71.014    | .318%       | 89.327%    |
| 54.0               | 3.171         | 0.286       | 71.3      | .307%       | 89.687%    |
| 55.0               | 3.052         | 0.278       | 71.577    | .299%       | 90.036%    |
| 56.0               | 2.946         | 0.271       | 71.849    | .291%       | 90.377%    |
| 57.0               | 2.843         | 0.265       | 72.113    | .285%       | 90.710%    |
| 58.0               | 2.754         | 0.259       | 72.372    | .278%       | 91.036%    |
| 59.0               | 2.681         | 0.254       | 72.626    | .273%       | 91.355%    |
| 60.0               | 2.609         | 0.250       | 72.876    | .269%       | 91.670%    |
| 61.0               | 2.552         | 0.246       | 73.122    | .265%       | 91.979%    |
| 62.0               | 2.494         | 0.243       | 73.365    | .261%       | 92.285%    |
| 63.0               | 2.449         | 0.240       | 73.606    | .258%       | 92.588%    |
| 64.0               | 2.405         | 0.238       | 73.844    | .256%       | 92.887%    |
| 65.0               | 2.370         | 0.236       | 74.08     | .254%       | 93.184%    |
| 66.0               | 2.337         | 0.235       | 74.315    | .252%       | 93.480%    |
| 67.0               | 2.320         | 0.234       | 74.549    | .252%       | 93.774%    |
| 68.0               | 2.304         | 0.234       | 74.784    | .252%       | 94.069%    |
| 69.0               | 2.297         | 0.235       | 75.018    | .252%       | 94.364%    |
| 70.0               | 2.295         | 0.236       | 75.254    | .254%       | 94.661%    |
| 71.0               | 2.295         | 0.237       | 75.491    | .255%       | 94.959%    |
| 72.0               | 2.299         | 0.239       | 75.73     | .257%       | 95.260%    |
| 73.0               | 2.309         | 0.241       | 75.971    | .259%       | 95.563%    |
| 74.0               | 2.318         | 0.243       | 76.214    | .262%       | 95.869%    |
| 75.0               | 2.327         | 0.245       | 76.46     | .264%       | 96.177%    |

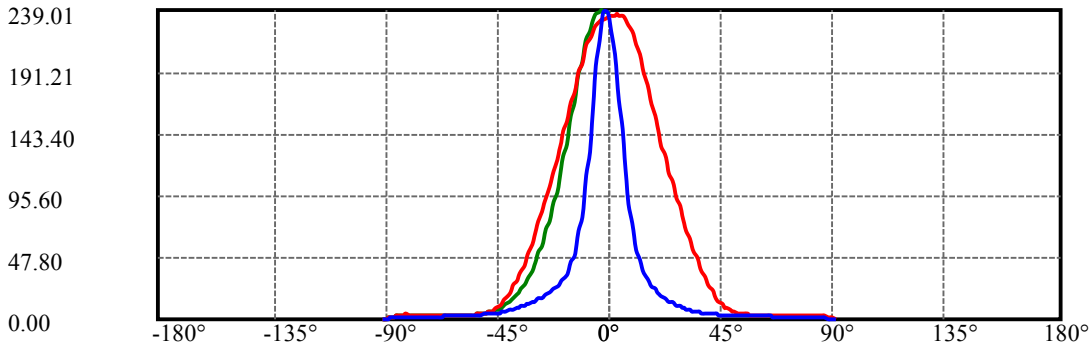
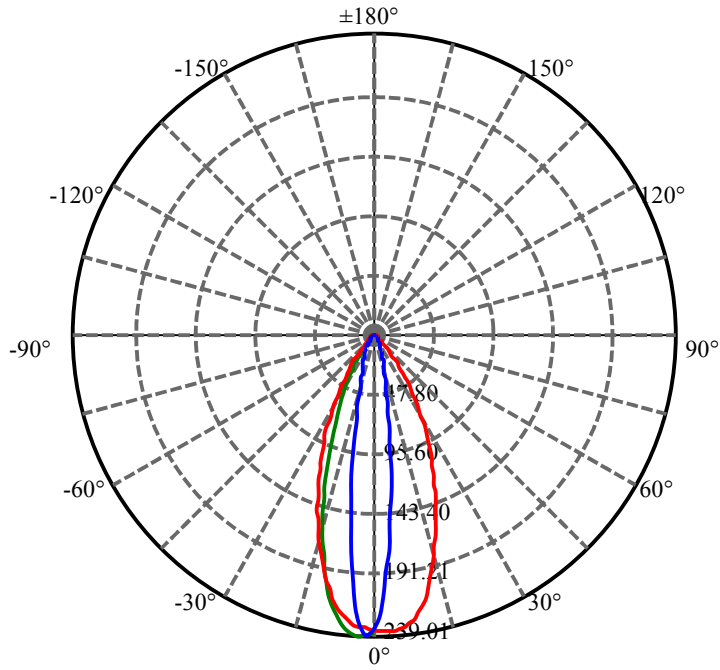
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0               | 2.327         | 0.247       | 76.707    | .266%       | 96.488%    |
| 77.0               | 2.337         | 0.249       | 76.956    | .267%       | 96.801%    |
| 78.0               | 2.337         | 0.250       | 77.206    | .269%       | 97.116%    |
| 79.0               | 2.332         | 0.251       | 77.457    | .270%       | 97.431%    |
| 80.0               | 2.316         | 0.251       | 77.707    | .269%       | 97.746%    |
| 81.0               | 2.295         | 0.249       | 77.956    | .268%       | 98.060%    |
| 82.0               | 2.266         | 0.247       | 78.204    | .266%       | 98.371%    |
| 83.0               | 2.182         | 0.242       | 78.446    | .260%       | 98.675%    |
| 84.0               | 2.126         | 0.235       | 78.68     | .252%       | 98.971%    |
| 85.0               | 2.044         | 0.228       | 78.908    | .245%       | 99.257%    |
| 86.0               | 1.805         | 0.210       | 79.118    | .226%       | 99.521%    |
| 87.0               | 1.148         | 0.162       | 79.28     | .174%       | 99.725%    |
| 88.0               | 0.731         | 0.103       | 79.383    | .111%       | 99.854%    |
| 89.0               | 0.516         | 0.068       | 79.451    | .073%       | 99.940%    |
| 90.0               | 0.352         | 0.048       | 79.499    | .051%       | 100.000%   |

ZONAL LUMEN SUMMARY

| Zone    | Lumens | %Lamp  | %Fixt   |
|---------|--------|--------|---------|
| 0-30    | 56.61  | 60.87% | 71.21%  |
| 0-40    | 65.68  | 70.62% | 82.62%  |
| 0-60    | 72.88  | 78.36% | 91.67%  |
| 0-90    | 79.45  | 85.43% | 99.94%  |
| 0-120   | 79.45  | 85.43% | 99.94%  |
| 0-180   | 79.50  | 85.48% | 100.00% |
| 60-90   | 6.82   | 7.34%  | 8.59%   |
| 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%   |
| 0-36.99 | 63.60  | 68.39% | 80.00%  |

ZONAL LUMEN SUMMARY

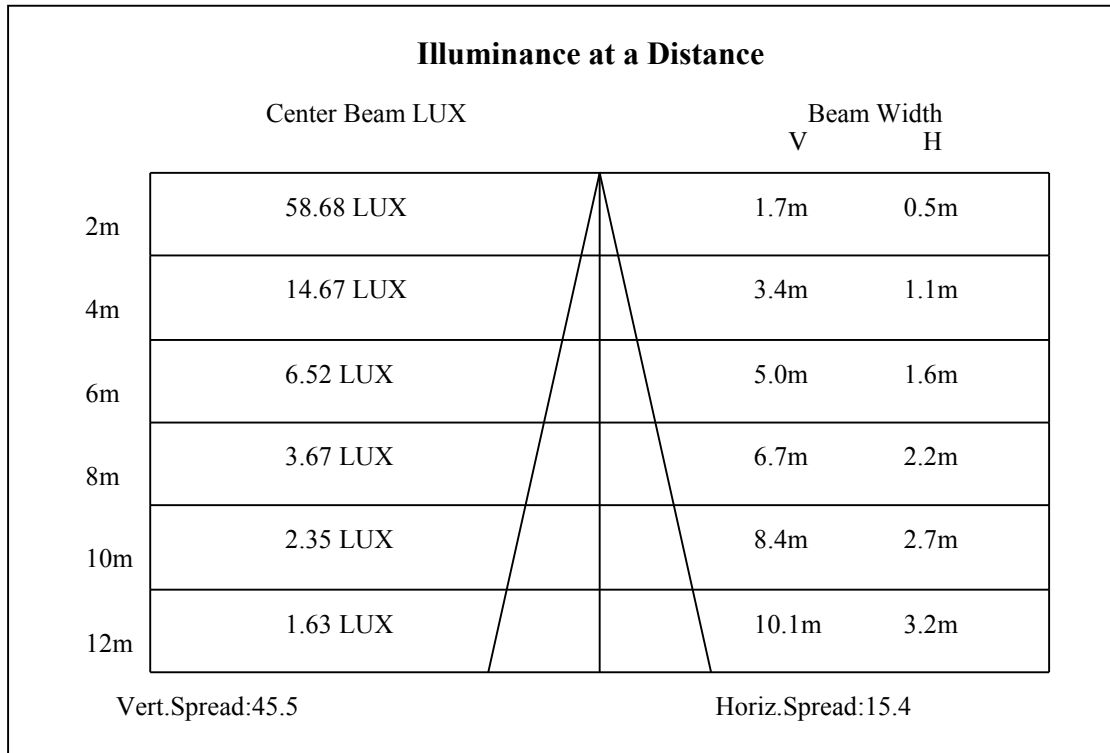
|         |       |
|---------|-------|
| 0-10    | 16.86 |
| 10-20   | 23.48 |
| 20-30   | 16.28 |
| 30-40   | 9.07  |
| 40-50   | 4.41  |
| 50-60   | 2.78  |
| 60-70   | 2.38  |
| 70-80   | 2.45  |
| 80-90   | 1.74  |
| 90-100  | 0.00  |
| 100-110 | 0.00  |
| 110-120 | 0.00  |
| 120-130 | 0.00  |
| 130-140 | 0.00  |
| 140-150 | 0.00  |
| 150-160 | 0.00  |
| 160-170 | 0.00  |
| 170-180 | 0.00  |

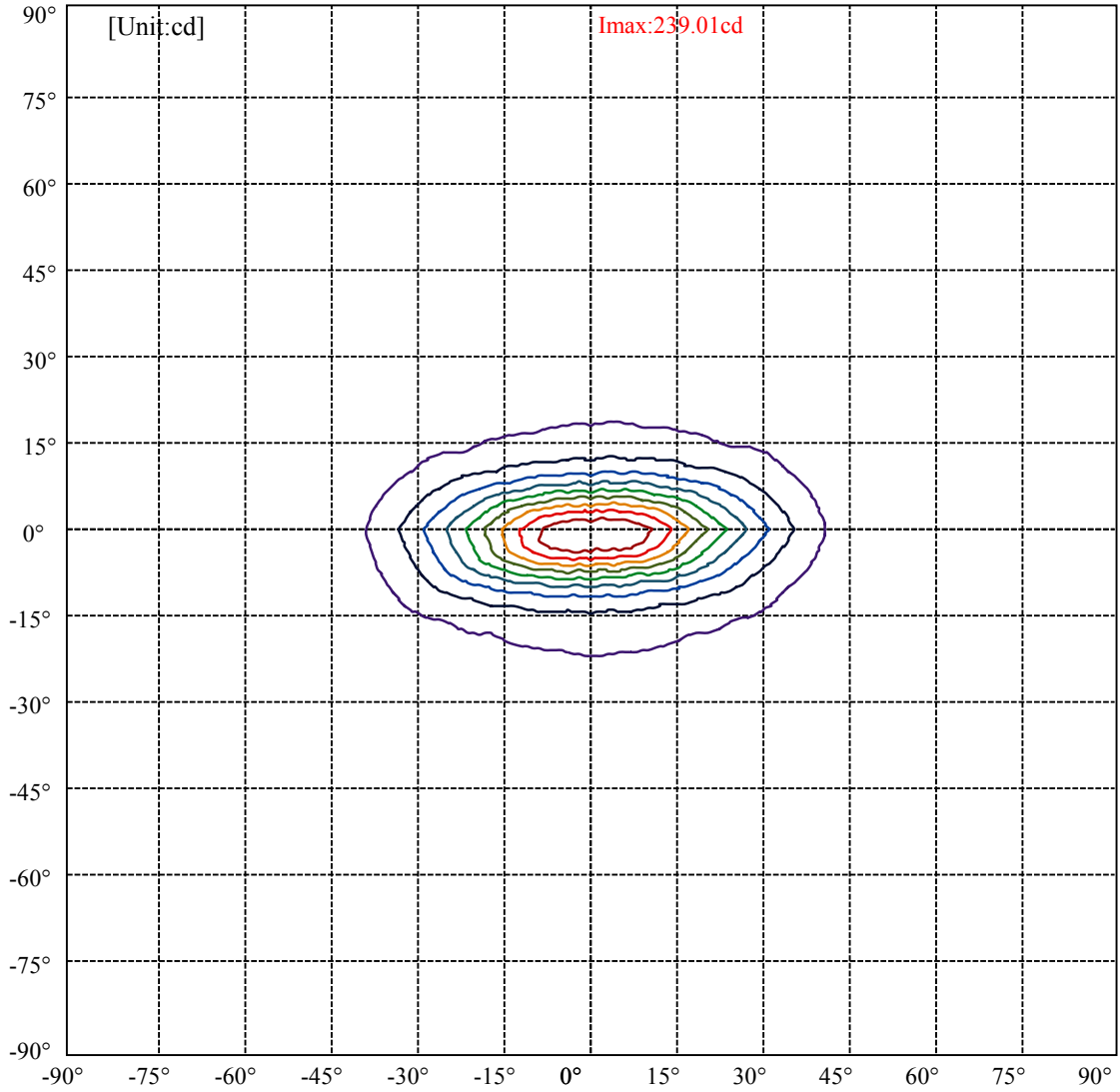


C345(Max): ———  
 C0/C180: ———  
 C90/C270: ———

Field angle(10%Imax):C0/180Left:41.7 Right:37.4  
 :C90/270Left:20.8 Right:18.9

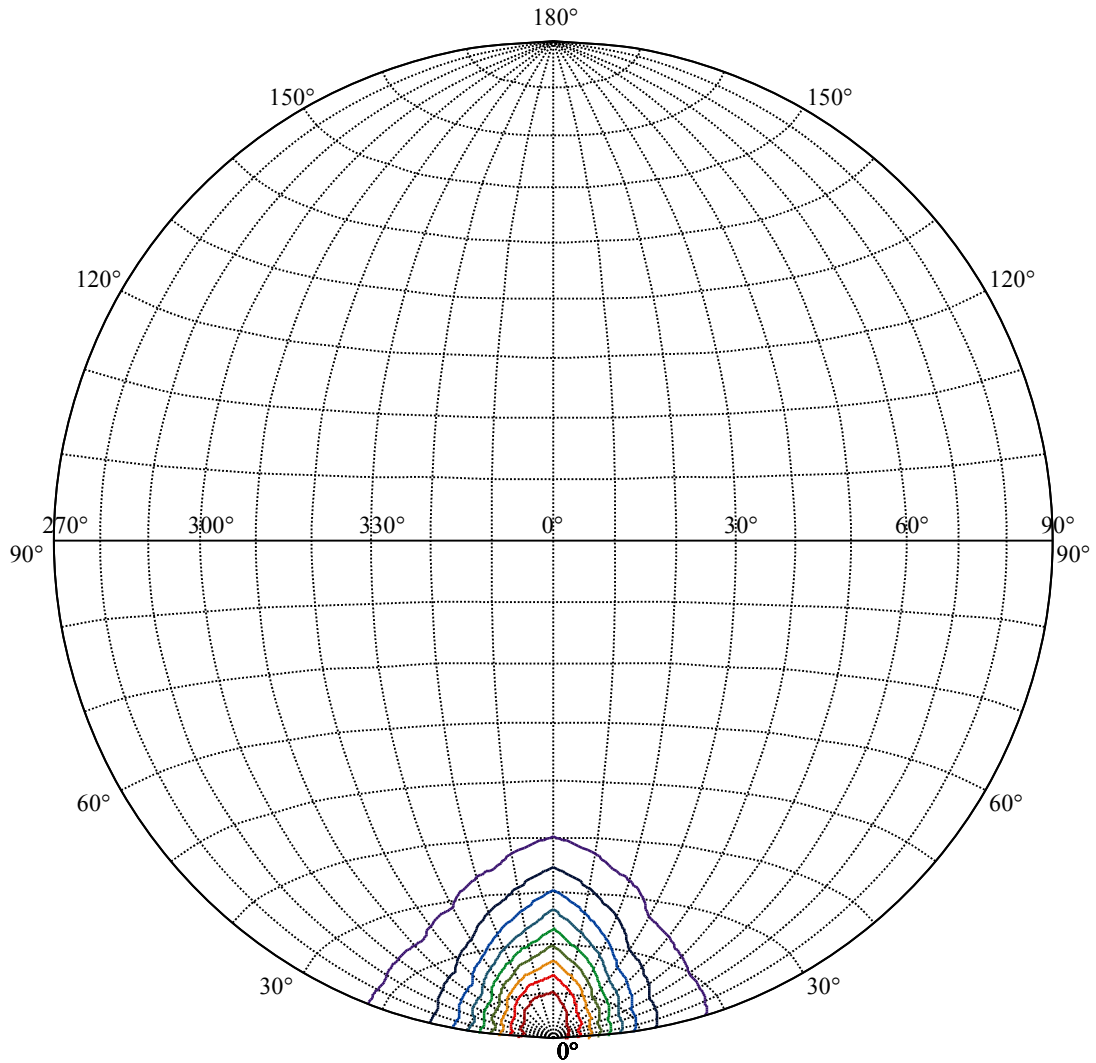
Beam Angle(50%Imax):C0/180Left:24.6 Right:20.5  
 :C90/270Left:7.6 Right:7.4





|                                |   |
|--------------------------------|---|
| (10%I <sub>max</sub> ) 23.8633 | — |
| (20%I <sub>max</sub> ) 47.7266 | — |
| (30%I <sub>max</sub> ) 71.5899 | — |
| (40%I <sub>max</sub> ) 95.4531 | — |
| (50%I <sub>max</sub> ) 119.316 | — |
| (60%I <sub>max</sub> ) 143.18  | — |
| (70%I <sub>max</sub> ) 167.043 | — |
| (80%I <sub>max</sub> ) 190.906 | — |
| (90%I <sub>max</sub> ) 214.77  | — |





House

[Unit:cd]

Road

**Imax:239.01**

(10%Imax) 23.9006

(20%Imax) 47.8013

(30%Imax) 71.7019

(40%Imax) 95.6025

(50%Imax) 119.503

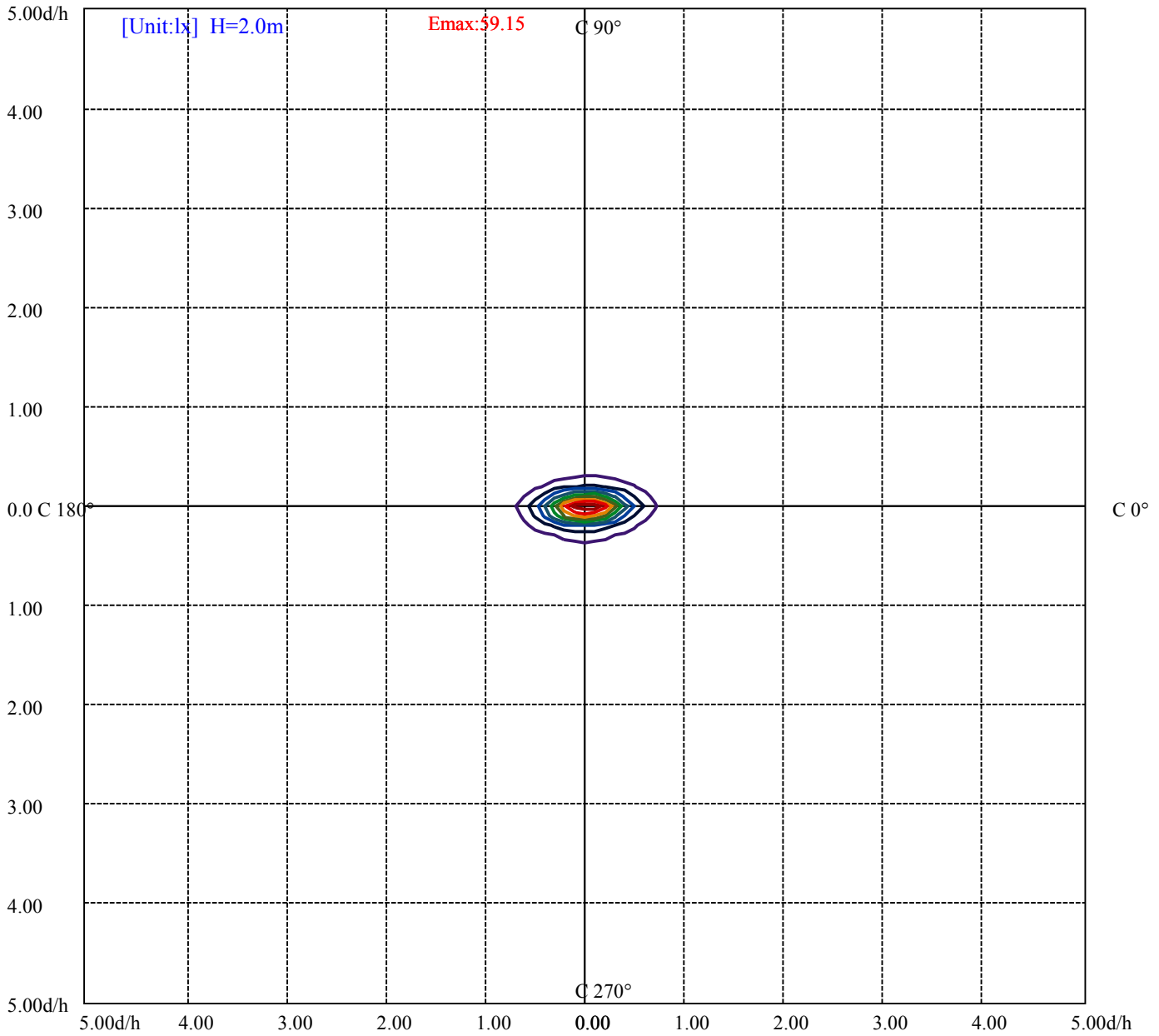
(60%Imax) 143.404

(70%Imax) 167.304

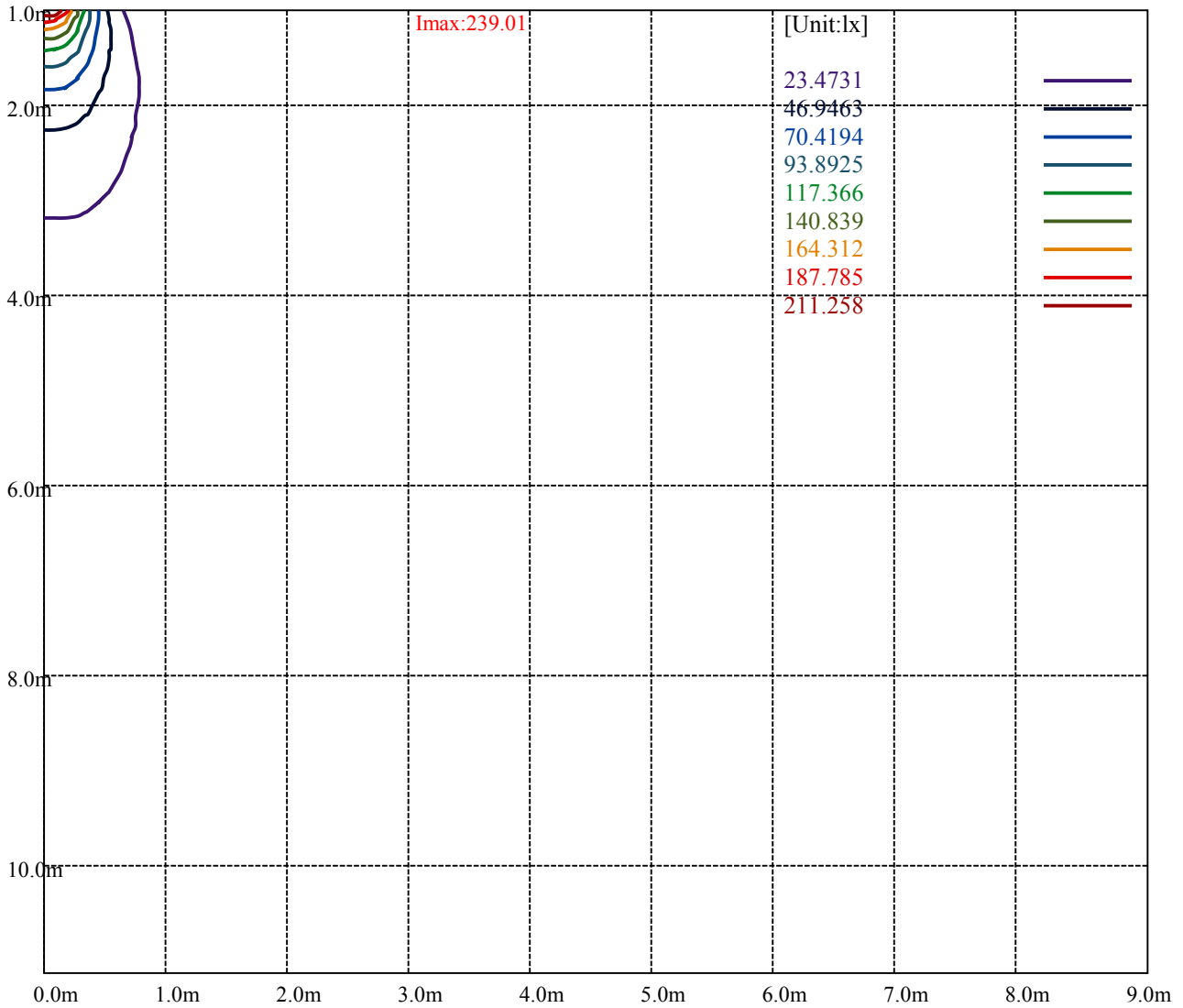
(80%Imax) 191.205

(90%Imax) 215.106





- (10%Emax) 5.91465
- (20%Emax) 11.8293
- (30%Emax) 17.74395
- (40%Emax) 23.65858
- (50%Emax) 29.57325
- (60%Emax) 35.488
- (70%Emax) 41.4025
- (80%Emax) 47.31725
- (90%Emax) 53.23175



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  |

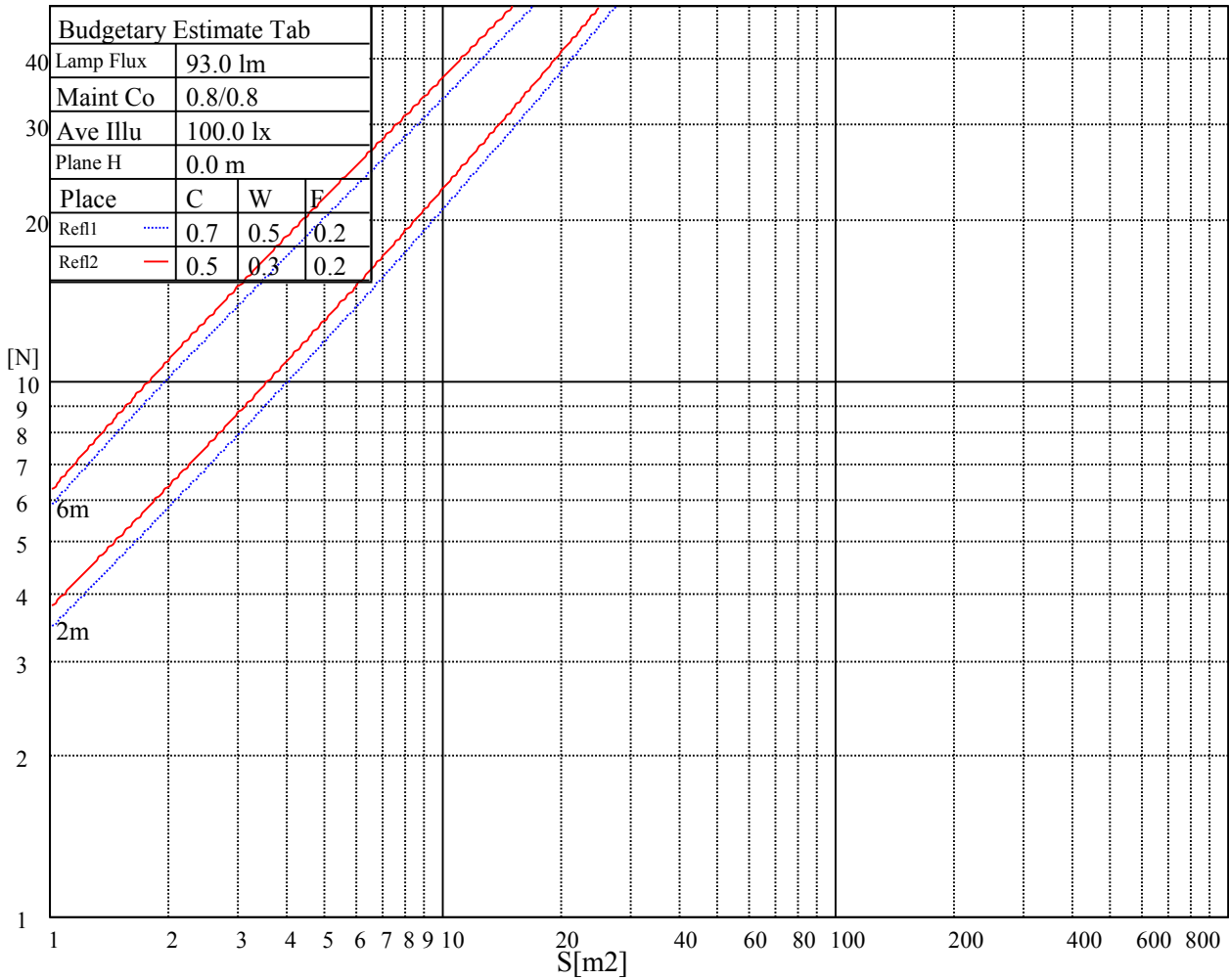
| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 0          | 0          | 0       | 0          | 0          | 0       | 0          | 0          | 0       |

Glare Table

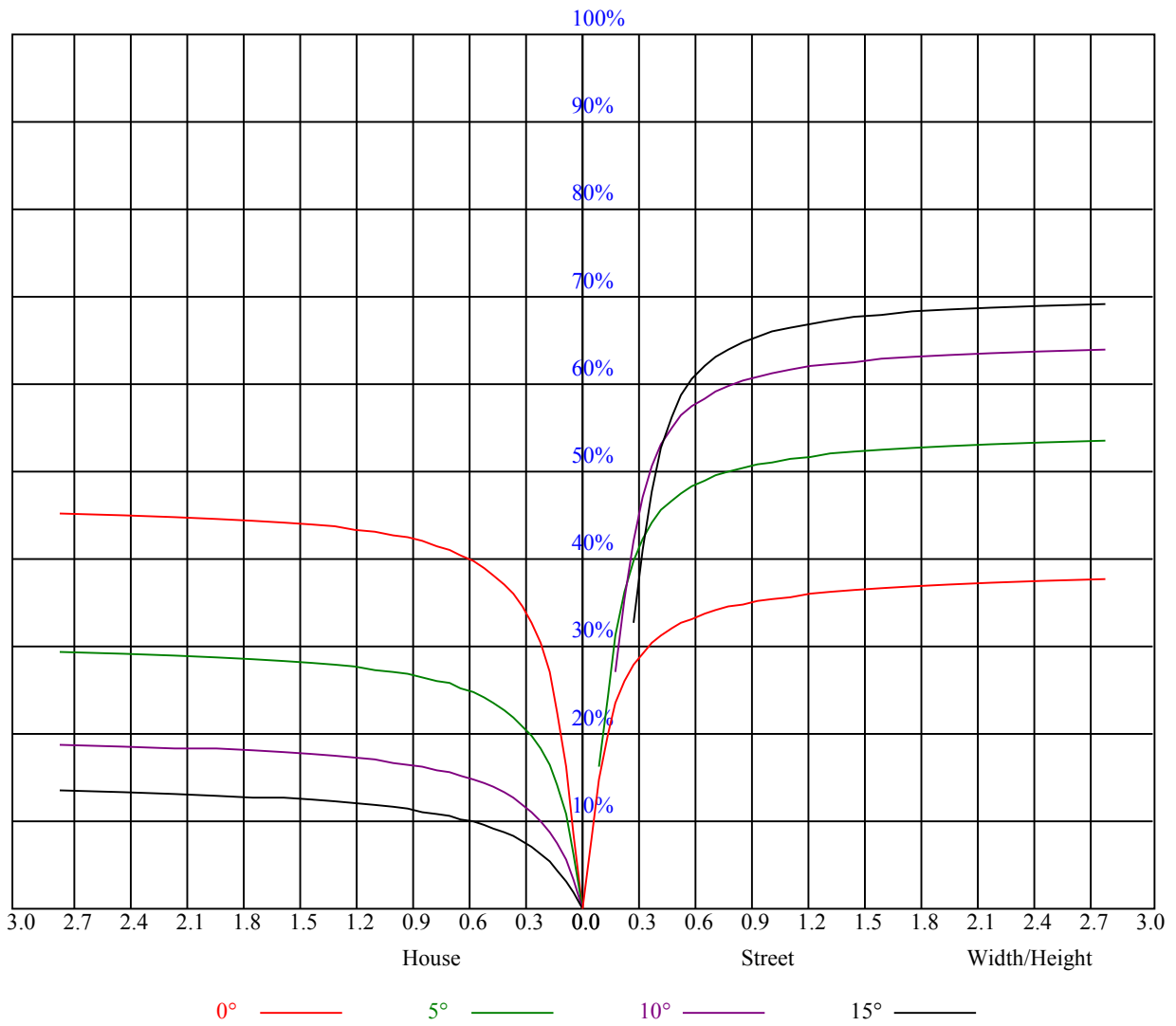
| Glare | Quality | Service Values Illuminance(lx) |      |      |       |       |       |       |       |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15  | A       | 2000                           | 1000 | 500  | <=300 |       |    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





| 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 RHOFC=20 CU |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 0     | 1.02                                    | 1.02 | 1.02 | 0.99 | 0.99 | 0.99 | 0.95 | 0.95 | 0.95 | 0.91 | 0.91 | 0.91 | 0.87 | 0.87 | 0.87 | 0.85 |
| 1     | 0.93                                    | 0.91 | 0.88 | 0.91 | 0.89 | 0.87 | 0.88 | 0.86 | 0.84 | 0.84 | 0.83 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 |
| 2     | 0.86                                    | 0.82 | 0.79 | 0.85 | 0.81 | 0.78 | 0.82 | 0.79 | 0.76 | 0.79 | 0.77 | 0.75 | 0.77 | 0.75 | 0.73 | 0.72 |
| 3     | 0.80                                    | 0.76 | 0.72 | 0.79 | 0.75 | 0.71 | 0.77 | 0.73 | 0.70 | 0.75 | 0.72 | 0.69 | 0.73 | 0.70 | 0.68 | 0.67 |
| 4     | 0.75                                    | 0.70 | 0.67 | 0.74 | 0.70 | 0.66 | 0.73 | 0.69 | 0.65 | 0.71 | 0.67 | 0.65 | 0.69 | 0.66 | 0.64 | 0.63 |
| 5     | 0.71                                    | 0.66 | 0.62 | 0.70 | 0.66 | 0.62 | 0.69 | 0.65 | 0.61 | 0.67 | 0.64 | 0.61 | 0.66 | 0.63 | 0.60 | 0.59 |
| 6     | 0.67                                    | 0.62 | 0.59 | 0.67 | 0.62 | 0.58 | 0.65 | 0.61 | 0.58 | 0.64 | 0.60 | 0.58 | 0.63 | 0.60 | 0.57 | 0.56 |
| 7     | 0.64                                    | 0.59 | 0.55 | 0.63 | 0.59 | 0.55 | 0.62 | 0.58 | 0.55 | 0.61 | 0.58 | 0.55 | 0.60 | 0.57 | 0.54 | 0.53 |
| 8     | 0.61                                    | 0.56 | 0.53 | 0.61 | 0.56 | 0.53 | 0.60 | 0.55 | 0.52 | 0.59 | 0.55 | 0.52 | 0.58 | 0.54 | 0.52 | 0.51 |
| 9     | 0.58                                    | 0.54 | 0.50 | 0.58 | 0.53 | 0.50 | 0.57 | 0.53 | 0.50 | 0.56 | 0.53 | 0.50 | 0.56 | 0.52 | 0.50 | 0.49 |
| 10    | 0.56                                    | 0.51 | 0.48 | 0.56 | 0.51 | 0.48 | 0.55 | 0.51 | 0.48 | 0.54 | 0.50 | 0.48 | 0.54 | 0.50 | 0.48 | 0.47 |



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    | 234.73 | 234.96 | 234.79 | 235.41 | 235.24 | 234.06 | 232.54 | 230.06 | 226.91 |
| 15.0   | 234.34 | 232.43 | 229.95 | 228.15 | 225.23 | 220.67 | 215.83 | 210.38 | 203.18 |
| 30.0   | 233.66 | 228.71 | 223.14 | 217.35 | 208.91 | 200.19 | 189.73 | 178.03 | 167.06 |
| 45.0   | 236.59 | 230.63 | 221.79 | 212.34 | 200.31 | 187.93 | 172.86 | 156.83 | 142.93 |
| 60.0   | 233.21 | 224.44 | 212.85 | 195.75 | 180.11 | 164.08 | 142.99 | 126.23 | 110.59 |
| 75.0   | 236.14 | 228.77 | 213.53 | 197.83 | 180.45 | 157.61 | 139.16 | 120.94 | 102.21 |
| 90.0   | 232.82 | 222.75 | 204.75 | 187.48 | 168.64 | 146.81 | 125.38 | 107.44 | 89.66  |
| 105.0  | 235.74 | 228.09 | 216.23 | 196.88 | 179.10 | 160.54 | 136.86 | 118.35 | 101.76 |
| 120.0  | 233.10 | 223.43 | 211.44 | 192.88 | 176.34 | 159.30 | 142.20 | 121.22 | 105.69 |
| 135.0  | 235.80 | 228.94 | 220.33 | 209.53 | 195.92 | 181.46 | 167.57 | 150.64 | 135.79 |
| 150.0  | 234.17 | 229.56 | 222.30 | 213.92 | 206.27 | 195.64 | 183.43 | 171.96 | 158.57 |
| 165.0  | 235.97 | 233.78 | 229.73 | 226.24 | 223.09 | 217.80 | 211.11 | 204.36 | 196.48 |
| 180.0  | 234.73 | 233.55 | 232.09 | 231.53 | 230.34 | 227.76 | 224.27 | 220.11 | 216.45 |
| 195.0  | 234.34 | 235.07 | 234.73 | 234.79 | 234.62 | 232.48 | 229.16 | 225.68 | 221.12 |
| 210.0  | 233.66 | 236.19 | 236.87 | 235.86 | 233.94 | 230.79 | 223.65 | 216.11 | 207.34 |
| 225.0  | 236.59 | 238.61 | 237.43 | 232.54 | 225.84 | 217.01 | 202.44 | 188.44 | 173.53 |
| 240.0  | 233.21 | 238.39 | 238.16 | 233.21 | 224.16 | 209.59 | 191.98 | 175.11 | 155.14 |
| 255.0  | 236.14 | 238.50 | 234.62 | 224.61 | 210.60 | 190.29 | 170.78 | 148.61 | 127.07 |
| 270.0  | 232.82 | 237.99 | 237.04 | 228.71 | 215.44 | 195.47 | 172.58 | 151.99 | 129.88 |
| 285.0  | 235.74 | 237.94 | 233.49 | 223.76 | 205.14 | 189.06 | 166.61 | 141.75 | 125.16 |
| 300.0  | 233.10 | 237.71 | 237.43 | 231.19 | 221.29 | 205.76 | 187.14 | 169.31 | 151.09 |
| 315.0  | 235.80 | 237.83 | 236.81 | 231.69 | 224.55 | 214.09 | 199.35 | 182.70 | 167.34 |
| 330.0  | 234.17 | 236.81 | 238.33 | 238.05 | 236.70 | 230.34 | 223.71 | 216.62 | 204.64 |
| 345.0  | 235.97 | 236.93 | 238.05 | 239.01 | 238.16 | 235.91 | 233.04 | 228.99 | 223.20 |
| 360.0  | 234.73 | 234.96 | 234.79 | 235.41 | 235.24 | 234.06 | 232.54 | 230.06 | 226.91 |

| C/γ(°) | 9.0    | 10.0   | 11.0   | 12.0   | 13.0   | 14.0   | 15.0   | 16.0   | 17.0   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0.0    | 222.41 | 217.52 | 212.06 | 205.43 | 197.38 | 189.90 | 181.35 | 173.93 | 165.71 |
| 15.0   | 195.75 | 187.99 | 180.00 | 170.78 | 160.43 | 150.13 | 141.30 | 132.92 | 122.57 |
| 30.0   | 155.98 | 141.98 | 130.61 | 119.81 | 106.99 | 96.86  | 87.41  | 76.84  | 69.19  |
| 45.0   | 127.46 | 112.39 | 99.62  | 88.31  | 75.54  | 66.66  | 58.78  | 51.53  | 45.00  |
| 60.0   | 94.44  | 80.21  | 69.81  | 59.79  | 52.26  | 45.17  | 39.43  | 35.38  | 31.50  |
| 75.0   | 86.18  | 73.91  | 62.10  | 53.55  | 45.96  | 39.94  | 35.55  | 31.61  | 28.35  |
| 90.0   | 74.64  | 63.45  | 53.61  | 46.63  | 40.39  | 35.49  | 31.89  | 28.91  | 25.76  |
| 105.0  | 83.76  | 71.27  | 60.75  | 51.41  | 43.99  | 38.81  | 34.14  | 30.77  | 27.56  |
| 120.0  | 91.46  | 75.83  | 65.25  | 56.42  | 48.38  | 41.74  | 36.96  | 32.57  | 29.36  |
| 135.0  | 119.70 | 104.40 | 91.80  | 80.44  | 68.23  | 59.68  | 52.31  | 44.72  | 39.54  |
| 150.0  | 146.64 | 133.48 | 120.32 | 109.18 | 97.48  | 86.74  | 77.74  | 69.47  | 60.24  |
| 165.0  | 187.99 | 179.89 | 169.59 | 160.59 | 150.53 | 140.18 | 131.01 | 121.22 | 111.60 |
| 180.0  | 211.61 | 204.13 | 197.78 | 191.42 | 182.87 | 175.44 | 168.41 | 160.76 | 152.89 |
| 195.0  | 215.61 | 208.13 | 199.41 | 191.53 | 182.08 | 172.01 | 163.24 | 154.18 | 143.16 |
| 210.0  | 195.30 | 184.22 | 172.52 | 158.63 | 144.39 | 132.30 | 119.31 | 108.23 | 96.24  |
| 225.0  | 155.98 | 138.66 | 123.98 | 110.42 | 94.61  | 83.19  | 73.24  | 63.45  | 55.24  |
| 240.0  | 135.45 | 116.72 | 101.53 | 87.98  | 74.87  | 63.79  | 55.80  | 48.94  | 42.24  |
| 255.0  | 109.58 | 92.36  | 77.91  | 67.22  | 58.33  | 49.56  | 43.82  | 39.04  | 34.31  |
| 270.0  | 111.99 | 93.88  | 78.75  | 67.78  | 57.71  | 49.73  | 43.99  | 39.32  | 34.76  |
| 285.0  | 107.89 | 87.36  | 76.56  | 66.21  | 56.59  | 48.99  | 43.59  | 38.59  | 34.65  |
| 300.0  | 128.93 | 112.56 | 97.71  | 84.71  | 70.99  | 61.88  | 54.39  | 46.69  | 41.79  |
| 315.0  | 149.68 | 131.85 | 117.06 | 100.24 | 89.55  | 77.34  | 66.94  | 59.18  | 52.88  |
| 330.0  | 191.81 | 181.46 | 165.71 | 152.33 | 139.44 | 123.81 | 111.71 | 100.24 | 87.19  |
| 345.0  | 217.07 | 208.58 | 199.07 | 190.24 | 178.99 | 167.46 | 157.28 | 147.38 | 135.51 |
| 360.0  | 222.41 | 217.52 | 212.06 | 205.43 | 197.38 | 189.90 | 181.35 | 173.93 | 165.71 |



Intensity data(cd)

|        |        |        |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| C/γ(°) | 18.0   | 19.0   | 20.0   | 21.0   | 22.0   | 23.0   | 24.0   | 25.0   | 26.0   |
| 0.0    | 157.44 | 149.96 | 142.76 | 133.82 | 127.35 | 121.22 | 113.46 | 107.04 | 100.52 |
| 15.0   | 114.41 | 106.65 | 97.43  | 90.51  | 84.04  | 77.46  | 71.10  | 65.48  | 59.68  |
| 30.0   | 62.21  | 54.45  | 49.56  | 44.04  | 38.70  | 35.44  | 31.78  | 28.07  | 25.82  |
| 45.0   | 39.83  | 35.38  | 31.61  | 28.63  | 25.71  | 23.57  | 21.26  | 19.29  | 17.72  |
| 60.0   | 28.24  | 25.65  | 23.57  | 21.21  | 19.46  | 18.00  | 16.48  | 15.08  | 13.95  |
| 75.0   | 25.76  | 23.68  | 21.26  | 19.52  | 17.89  | 16.31  | 14.85  | 13.78  | 12.77  |
| 90.0   | 23.51  | 21.49  | 19.29  | 17.66  | 16.26  | 14.91  | 13.67  | 12.66  | 11.70  |
| 105.0  | 24.69  | 22.61  | 20.53  | 18.62  | 17.10  | 15.75  | 14.29  | 13.16  | 12.26  |
| 120.0  | 26.21  | 23.57  | 21.66  | 19.63  | 17.78  | 16.37  | 15.13  | 13.73  | 12.71  |
| 135.0  | 35.10  | 31.16  | 27.84  | 25.20  | 22.67  | 20.59  | 18.79  | 16.99  | 15.69  |
| 150.0  | 53.66  | 47.93  | 42.24  | 37.29  | 33.47  | 29.70  | 26.61  | 24.02  | 21.54  |
| 165.0  | 103.61 | 95.68  | 86.57  | 79.71  | 73.18  | 67.22  | 60.19  | 54.96  | 49.44  |
| 180.0  | 145.35 | 136.07 | 130.05 | 122.51 | 114.30 | 108.68 | 101.70 | 93.99  | 88.59  |
| 195.0  | 134.66 | 126.00 | 116.49 | 107.61 | 100.01 | 91.74  | 84.83  | 77.40  | 70.14  |
| 210.0  | 85.33  | 76.78  | 68.18  | 60.30  | 54.11  | 48.60  | 42.53  | 38.19  | 34.31  |
| 225.0  | 49.11  | 43.20  | 38.70  | 34.26  | 30.43  | 27.68  | 24.92  | 22.61  | 20.81  |
| 240.0  | 37.86  | 34.26  | 30.38  | 27.79  | 25.65  | 23.57  | 21.77  | 20.25  | 18.73  |
| 255.0  | 31.28  | 28.91  | 26.55  | 24.47  | 22.78  | 21.15  | 19.91  | 18.51  | 17.33  |
| 270.0  | 31.84  | 29.36  | 27.06  | 25.03  | 23.40  | 21.83  | 20.48  | 19.13  | 17.83  |
| 285.0  | 31.73  | 29.08  | 27.00  | 24.98  | 23.29  | 21.77  | 20.42  | 19.01  | 17.94  |
| 300.0  | 37.80  | 34.03  | 30.88  | 28.52  | 26.04  | 24.13  | 22.44  | 20.93  | 19.69  |
| 315.0  | 46.01  | 41.34  | 37.35  | 33.02  | 29.98  | 27.56  | 24.86  | 22.89  | 21.21  |
| 330.0  | 78.02  | 70.20  | 61.48  | 55.18  | 49.50  | 43.88  | 39.09  | 35.38  | 31.73  |
| 345.0  | 126.06 | 116.72 | 106.88 | 97.88  | 90.34  | 82.80  | 76.22  | 69.13  | 62.33  |
| 360.0  | 157.44 | 149.96 | 142.76 | 133.82 | 127.35 | 121.22 | 113.46 | 107.04 | 100.52 |
| C/γ(°) | 27.0   | 28.0   | 29.0   | 30.0   | 31.0   | 32.0   | 33.0   | 34.0   | 35.0   |
| 0.0    | 93.60  | 86.96  | 80.89  | 74.53  | 68.29  | 62.89  | 57.04  | 52.14  | 46.86  |
| 15.0   | 54.90  | 49.89  | 45.11  | 41.01  | 36.56  | 33.02  | 29.64  | 26.38  | 23.18  |
| 30.0   | 23.46  | 20.59  | 19.01  | 17.38  | 15.69  | 14.18  | 13.05  | 11.93  | 10.86  |
| 45.0   | 16.59  | 15.02  | 13.84  | 12.94  | 11.64  | 10.80  | 10.18  | 9.28   | 8.61   |
| 60.0   | 12.83  | 11.81  | 11.03  | 10.18  | 9.51   | 8.78   | 8.10   | 7.59   | 7.03   |
| 75.0   | 11.76  | 10.91  | 10.13  | 9.34   | 8.55   | 7.93   | 7.37   | 6.75   | 6.24   |
| 90.0   | 10.80  | 9.96   | 9.11   | 8.38   | 7.76   | 7.09   | 6.64   | 6.19   | 5.68   |
| 105.0  | 11.31  | 10.41  | 9.68   | 8.83   | 8.10   | 7.54   | 6.98   | 6.47   | 6.02   |
| 120.0  | 11.81  | 10.91  | 10.01  | 9.39   | 8.72   | 8.10   | 7.54   | 6.98   | 6.47   |
| 135.0  | 14.34  | 13.16  | 12.15  | 11.25  | 10.24  | 9.56   | 8.94   | 8.16   | 7.59   |
| 150.0  | 19.58  | 17.66  | 15.92  | 14.57  | 13.39  | 11.98  | 11.03  | 10.18  | 9.34   |
| 165.0  | 44.44  | 40.33  | 35.94  | 32.29  | 28.52  | 25.37  | 22.84  | 20.36  | 17.72  |
| 180.0  | 82.46  | 75.09  | 69.24  | 63.62  | 57.60  | 51.98  | 47.19  | 42.13  | 37.52  |
| 195.0  | 64.07  | 57.66  | 51.75  | 46.74  | 42.19  | 36.90  | 33.02  | 29.53  | 25.93  |
| 210.0  | 30.49  | 27.00  | 24.30  | 21.66  | 19.52  | 17.61  | 15.81  | 14.40  | 12.99  |
| 225.0  | 19.13  | 17.49  | 16.14  | 15.02  | 13.84  | 12.77  | 11.98  | 11.14  | 10.35  |
| 240.0  | 17.44  | 16.26  | 15.08  | 14.18  | 13.22  | 12.38  | 11.64  | 10.80  | 10.07  |
| 255.0  | 16.26  | 15.24  | 14.18  | 13.33  | 12.49  | 11.59  | 10.86  | 10.13  | 9.34   |
| 270.0  | 16.76  | 15.69  | 14.79  | 13.78  | 12.88  | 11.93  | 11.19  | 10.46  | 9.68   |
| 285.0  | 16.82  | 15.69  | 14.74  | 13.84  | 12.88  | 12.04  | 11.19  | 10.46  | 9.73   |
| 300.0  | 18.28  | 17.04  | 15.98  | 15.19  | 14.01  | 13.16  | 12.49  | 11.42  | 10.69  |
| 315.0  | 19.29  | 18.11  | 16.88  | 15.58  | 14.63  | 13.67  | 12.54  | 11.87  | 11.14  |
| 330.0  | 28.74  | 25.82  | 23.12  | 21.15  | 19.29  | 17.44  | 16.03  | 14.79  | 13.44  |
| 345.0  | 56.87  | 51.81  | 46.07  | 41.63  | 37.63  | 32.96  | 29.64  | 26.55  | 23.51  |
| 360.0  | 93.60  | 86.96  | 80.89  | 74.53  | 68.29  | 62.89  | 57.04  | 52.14  | 46.86  |

Intensity data(cd)

|        |       |       |       |       |       |       |       |       |       |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C/γ(°) | 36.0  | 37.0  | 38.0  | 39.0  | 40.0  | 41.0  | 42.0  | 43.0  | 44.0  |
| 0.0    | 41.68 | 37.24 | 33.08 | 28.29 | 24.81 | 21.60 | 18.06 | 15.53 | 13.33 |
| 15.0   | 20.98 | 18.68 | 16.65 | 14.46 | 12.88 | 11.42 | 9.84  | 8.78  | 7.82  |
| 30.0   | 10.07 | 9.23  | 8.61  | 7.93  | 7.26  | 6.81  | 6.36  | 5.79  | 5.46  |
| 45.0   | 8.10  | 7.48  | 7.03  | 6.64  | 6.13  | 5.74  | 5.40  | 5.06  | 4.73  |
| 60.0   | 6.53  | 6.13  | 5.79  | 5.34  | 5.06  | 4.78  | 4.50  | 4.28  | 4.11  |
| 75.0   | 5.91  | 5.51  | 5.06  | 4.84  | 4.56  | 4.39  | 4.16  | 3.99  | 3.83  |
| 90.0   | 5.34  | 5.06  | 4.73  | 4.50  | 4.28  | 4.11  | 3.94  | 3.77  | 3.60  |
| 105.0  | 5.63  | 5.29  | 4.95  | 4.67  | 4.44  | 4.28  | 4.05  | 3.88  | 3.71  |
| 120.0  | 6.08  | 5.68  | 5.34  | 5.06  | 4.73  | 4.50  | 4.22  | 3.99  | 3.83  |
| 135.0  | 7.14  | 6.75  | 6.30  | 5.91  | 5.57  | 5.18  | 4.84  | 4.61  | 4.33  |
| 150.0  | 8.55  | 7.93  | 7.37  | 6.75  | 6.30  | 5.91  | 5.51  | 5.06  | 4.78  |
| 165.0  | 15.98 | 14.40 | 12.60 | 11.19 | 10.13 | 8.89  | 7.88  | 7.09  | 6.41  |
| 180.0  | 33.47 | 29.42 | 25.99 | 22.44 | 19.18 | 16.54 | 14.23 | 11.76 | 10.07 |
| 195.0  | 22.84 | 20.19 | 17.61 | 15.36 | 13.56 | 11.81 | 10.35 | 9.06  | 7.88  |
| 210.0  | 11.81 | 10.80 | 9.96  | 9.00  | 8.38  | 7.76  | 7.09  | 6.58  | 6.19  |
| 225.0  | 9.73  | 9.06  | 8.49  | 7.93  | 7.43  | 6.98  | 6.53  | 6.02  | 5.68  |
| 240.0  | 9.45  | 8.89  | 8.16  | 7.65  | 7.26  | 6.81  | 6.30  | 6.02  | 5.57  |
| 255.0  | 8.72  | 8.16  | 7.54  | 7.09  | 6.69  | 6.13  | 5.79  | 5.46  | 5.18  |
| 270.0  | 9.00  | 8.38  | 7.76  | 7.20  | 6.69  | 6.24  | 5.85  | 5.46  | 5.18  |
| 285.0  | 9.06  | 8.44  | 7.82  | 7.20  | 6.81  | 6.36  | 5.96  | 5.57  | 5.29  |
| 300.0  | 10.13 | 9.34  | 8.72  | 8.21  | 7.59  | 7.14  | 6.69  | 6.19  | 5.85  |
| 315.0  | 10.35 | 9.73  | 9.11  | 8.38  | 7.99  | 7.48  | 6.98  | 6.53  | 6.13  |
| 330.0  | 12.38 | 11.48 | 10.58 | 9.79  | 9.11  | 8.44  | 7.82  | 7.31  | 6.81  |
| 345.0  | 20.81 | 18.68 | 16.43 | 14.46 | 12.94 | 11.25 | 10.18 | 9.00  | 7.88  |
| 360.0  | 41.68 | 37.24 | 33.08 | 28.29 | 24.81 | 21.60 | 18.06 | 15.53 | 13.33 |
| C/γ(°) | 45.0  | 46.0  | 47.0  | 48.0  | 49.0  | 50.0  | 51.0  | 52.0  | 53.0  |
| 0.0    | 11.25 | 9.51  | 8.33  | 7.20  | 6.41  | 5.68  | 5.12  | 4.67  | 4.33  |
| 15.0   | 6.92  | 6.24  | 5.68  | 5.18  | 4.84  | 4.44  | 4.16  | 3.94  | 3.66  |
| 30.0   | 5.06  | 4.73  | 4.44  | 4.22  | 3.99  | 3.71  | 3.54  | 3.38  | 3.26  |
| 45.0   | 4.50  | 4.22  | 3.94  | 3.77  | 3.60  | 3.43  | 3.32  | 3.15  | 2.98  |
| 60.0   | 3.88  | 3.71  | 3.54  | 3.38  | 3.26  | 3.09  | 3.04  | 2.93  | 2.87  |
| 75.0   | 3.66  | 3.54  | 3.43  | 3.32  | 3.21  | 3.09  | 2.98  | 2.93  | 2.81  |
| 90.0   | 3.49  | 3.38  | 3.32  | 3.15  | 3.09  | 2.98  | 2.93  | 2.87  | 2.81  |
| 105.0  | 3.60  | 3.49  | 3.38  | 3.21  | 3.15  | 3.04  | 2.98  | 2.87  | 2.81  |
| 120.0  | 3.66  | 3.54  | 3.32  | 3.26  | 3.21  | 3.04  | 2.98  | 2.87  | 2.81  |
| 135.0  | 4.11  | 3.88  | 3.71  | 3.54  | 3.38  | 3.26  | 3.09  | 2.98  | 2.81  |
| 150.0  | 4.44  | 4.16  | 3.94  | 3.77  | 3.60  | 3.43  | 3.26  | 3.15  | 3.04  |
| 165.0  | 5.74  | 5.23  | 4.84  | 4.44  | 4.11  | 3.88  | 3.66  | 3.49  | 3.32  |
| 180.0  | 8.72  | 7.37  | 6.47  | 5.79  | 5.12  | 4.67  | 4.28  | 3.99  | 3.71  |
| 195.0  | 7.03  | 6.13  | 5.51  | 5.06  | 4.67  | 4.28  | 4.05  | 3.83  | 3.54  |
| 210.0  | 5.68  | 5.29  | 4.95  | 4.56  | 4.28  | 4.05  | 3.83  | 3.66  | 3.43  |
| 225.0  | 5.29  | 4.95  | 4.67  | 4.39  | 4.11  | 3.83  | 3.71  | 3.49  | 3.32  |
| 240.0  | 5.29  | 5.01  | 4.67  | 4.44  | 4.22  | 3.94  | 3.77  | 3.60  | 3.38  |
| 255.0  | 4.89  | 4.61  | 4.28  | 4.16  | 3.94  | 3.71  | 3.54  | 3.43  | 3.26  |
| 270.0  | 4.89  | 4.61  | 4.39  | 4.16  | 3.94  | 3.77  | 3.54  | 3.43  | 3.32  |
| 285.0  | 5.01  | 4.73  | 4.44  | 4.16  | 3.99  | 3.71  | 3.60  | 3.43  | 3.32  |
| 300.0  | 5.51  | 5.12  | 4.84  | 4.56  | 4.28  | 4.05  | 3.88  | 3.66  | 3.49  |
| 315.0  | 5.74  | 5.40  | 5.06  | 4.73  | 4.44  | 4.16  | 3.94  | 3.77  | 3.60  |
| 330.0  | 6.41  | 5.96  | 5.57  | 5.18  | 4.89  | 4.50  | 4.28  | 3.99  | 3.77  |
| 345.0  | 7.20  | 6.47  | 5.79  | 5.40  | 5.06  | 4.61  | 4.39  | 4.11  | 3.94  |
| 360.0  | 11.25 | 9.51  | 8.33  | 7.20  | 6.41  | 5.68  | 5.12  | 4.67  | 4.33  |

Intensity data(cd)

|        |      |      |      |      |      |      |      |      |      |
|--------|------|------|------|------|------|------|------|------|------|
| C/γ(°) | 54.0 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 | 60.0 | 61.0 | 62.0 |
| 0.0    | 4.05 | 3.83 | 3.60 | 3.43 | 3.26 | 3.15 | 3.09 | 2.98 | 2.93 |
| 15.0   | 3.49 | 3.32 | 3.21 | 3.09 | 2.98 | 2.93 | 2.81 | 2.76 | 2.70 |
| 30.0   | 3.09 | 2.98 | 2.93 | 2.81 | 2.70 | 2.64 | 2.59 | 2.53 | 2.42 |
| 45.0   | 2.93 | 2.81 | 2.76 | 2.64 | 2.53 | 2.48 | 2.42 | 2.42 | 2.36 |
| 60.0   | 2.76 | 2.64 | 2.64 | 2.53 | 2.48 | 2.42 | 2.36 | 2.31 | 2.25 |
| 75.0   | 2.76 | 2.70 | 2.59 | 2.53 | 2.48 | 2.48 | 2.42 | 2.36 | 2.31 |
| 90.0   | 2.70 | 2.64 | 2.59 | 2.53 | 2.48 | 2.48 | 2.42 | 2.36 | 2.31 |
| 105.0  | 2.76 | 2.70 | 2.59 | 2.53 | 2.48 | 2.42 | 2.42 | 2.42 | 2.36 |
| 120.0  | 2.70 | 2.64 | 2.59 | 2.53 | 2.42 | 2.42 | 2.36 | 2.36 | 2.31 |
| 135.0  | 2.76 | 2.70 | 2.64 | 2.59 | 2.53 | 2.48 | 2.36 | 2.36 | 2.31 |
| 150.0  | 2.93 | 2.81 | 2.76 | 2.64 | 2.59 | 2.53 | 2.48 | 2.42 | 2.42 |
| 165.0  | 3.21 | 3.09 | 2.98 | 2.87 | 2.81 | 2.76 | 2.64 | 2.64 | 2.59 |
| 180.0  | 3.54 | 3.38 | 3.26 | 3.15 | 3.09 | 2.98 | 2.93 | 2.87 | 2.87 |
| 195.0  | 3.38 | 3.26 | 3.09 | 3.04 | 2.93 | 2.87 | 2.81 | 2.76 | 2.76 |
| 210.0  | 3.26 | 3.15 | 3.04 | 2.93 | 2.87 | 2.76 | 2.64 | 2.59 | 2.53 |
| 225.0  | 3.21 | 3.04 | 2.93 | 2.81 | 2.70 | 2.64 | 2.53 | 2.48 | 2.42 |
| 240.0  | 3.26 | 3.09 | 3.04 | 2.87 | 2.81 | 2.64 | 2.59 | 2.53 | 2.42 |
| 255.0  | 3.15 | 3.04 | 2.93 | 2.81 | 2.70 | 2.64 | 2.53 | 2.48 | 2.42 |
| 270.0  | 3.15 | 3.04 | 2.98 | 2.87 | 2.76 | 2.70 | 2.64 | 2.59 | 2.48 |
| 285.0  | 3.15 | 3.04 | 2.93 | 2.81 | 2.70 | 2.64 | 2.59 | 2.48 | 2.48 |
| 300.0  | 3.32 | 3.21 | 3.04 | 2.93 | 2.81 | 2.70 | 2.59 | 2.53 | 2.48 |
| 315.0  | 3.32 | 3.21 | 3.04 | 2.93 | 2.87 | 2.76 | 2.64 | 2.53 | 2.42 |
| 330.0  | 3.60 | 3.43 | 3.26 | 3.15 | 3.04 | 2.87 | 2.81 | 2.70 | 2.59 |
| 345.0  | 3.66 | 3.49 | 3.32 | 3.21 | 3.09 | 2.98 | 2.93 | 2.81 | 2.76 |
| 360.0  | 4.05 | 3.83 | 3.60 | 3.43 | 3.26 | 3.15 | 3.09 | 2.98 | 2.93 |
| C/γ(°) | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 | 70.0 | 71.0 |
| 0.0    | 2.87 | 2.81 | 2.81 | 2.76 | 2.76 | 2.76 | 2.81 | 2.81 | 2.87 |
| 15.0   | 2.64 | 2.59 | 2.59 | 2.53 | 2.53 | 2.48 | 2.48 | 2.48 | 2.48 |
| 30.0   | 2.42 | 2.36 | 2.31 | 2.31 | 2.25 | 2.25 | 2.25 | 2.25 | 2.19 |
| 45.0   | 2.31 | 2.25 | 2.25 | 2.19 | 2.19 | 2.19 | 2.19 | 2.14 | 2.14 |
| 60.0   | 2.25 | 2.19 | 2.14 | 2.14 | 2.14 | 2.14 | 2.08 | 2.08 | 2.08 |
| 75.0   | 2.25 | 2.25 | 2.19 | 2.19 | 2.14 | 2.14 | 2.08 | 2.08 | 2.08 |
| 90.0   | 2.25 | 2.25 | 2.19 | 2.19 | 2.14 | 2.14 | 2.14 | 2.08 | 2.08 |
| 105.0  | 2.31 | 2.25 | 2.25 | 2.19 | 2.19 | 2.19 | 2.19 | 2.19 | 2.19 |
| 120.0  | 2.25 | 2.25 | 2.19 | 2.19 | 2.19 | 2.19 | 2.25 | 2.19 | 2.25 |
| 135.0  | 2.31 | 2.31 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.31 |
| 150.0  | 2.42 | 2.36 | 2.36 | 2.31 | 2.36 | 2.31 | 2.36 | 2.36 | 2.42 |
| 165.0  | 2.59 | 2.53 | 2.53 | 2.53 | 2.53 | 2.53 | 2.59 | 2.70 | 2.76 |
| 180.0  | 2.87 | 2.87 | 2.87 | 2.87 | 2.93 | 2.98 | 3.04 | 3.15 | 3.21 |
| 195.0  | 2.70 | 2.64 | 2.64 | 2.64 | 2.64 | 2.64 | 2.64 | 2.70 | 2.70 |
| 210.0  | 2.48 | 2.42 | 2.36 | 2.36 | 2.36 | 2.31 | 2.31 | 2.25 | 2.25 |
| 225.0  | 2.36 | 2.31 | 2.31 | 2.25 | 2.19 | 2.19 | 2.14 | 2.14 | 2.14 |
| 240.0  | 2.36 | 2.31 | 2.25 | 2.25 | 2.19 | 2.14 | 2.14 | 2.14 | 2.08 |
| 255.0  | 2.36 | 2.31 | 2.25 | 2.25 | 2.19 | 2.14 | 2.08 | 2.08 | 2.08 |
| 270.0  | 2.42 | 2.36 | 2.31 | 2.25 | 2.19 | 2.19 | 2.14 | 2.08 | 2.03 |
| 285.0  | 2.36 | 2.36 | 2.31 | 2.19 | 2.19 | 2.14 | 2.08 | 2.08 | 2.03 |
| 300.0  | 2.42 | 2.31 | 2.25 | 2.19 | 2.14 | 2.14 | 2.14 | 2.08 | 2.03 |
| 315.0  | 2.36 | 2.31 | 2.31 | 2.19 | 2.19 | 2.14 | 2.08 | 2.08 | 2.08 |
| 330.0  | 2.53 | 2.48 | 2.36 | 2.31 | 2.31 | 2.25 | 2.19 | 2.19 | 2.14 |
| 345.0  | 2.70 | 2.64 | 2.59 | 2.53 | 2.48 | 2.48 | 2.48 | 2.48 | 2.48 |
| 360.0  | 2.87 | 2.81 | 2.81 | 2.76 | 2.76 | 2.76 | 2.81 | 2.81 | 2.87 |

Intensity data(cd)

|        |      |      |      |      |      |      |      |      |      |
|--------|------|------|------|------|------|------|------|------|------|
| C/γ(°) | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0 | 80.0 |
| 0.0    | 2.87 | 2.98 | 2.98 | 3.09 | 3.15 | 3.26 | 3.26 | 3.32 | 3.32 |
| 15.0   | 2.48 | 2.53 | 2.53 | 2.53 | 2.53 | 2.53 | 2.59 | 2.59 | 2.59 |
| 30.0   | 2.25 | 2.25 | 2.25 | 2.25 | 2.31 | 2.25 | 2.25 | 2.31 | 2.31 |
| 45.0   | 2.14 | 2.19 | 2.19 | 2.19 | 2.19 | 2.19 | 2.19 | 2.25 | 2.25 |
| 60.0   | 2.08 | 2.14 | 2.14 | 2.14 | 2.14 | 2.14 | 2.14 | 2.08 | 2.14 |
| 75.0   | 2.08 | 2.08 | 2.08 | 2.08 | 2.08 | 2.08 | 2.08 | 2.03 | 2.03 |
| 90.0   | 2.08 | 2.08 | 2.08 | 2.08 | 2.03 | 2.08 | 2.03 | 2.03 | 1.97 |
| 105.0  | 2.19 | 2.19 | 2.19 | 2.19 | 2.14 | 2.14 | 2.14 | 2.14 | 2.08 |
| 120.0  | 2.25 | 2.25 | 2.31 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 |
| 135.0  | 2.31 | 2.31 | 2.31 | 2.31 | 2.31 | 2.36 | 2.36 | 2.36 | 2.36 |
| 150.0  | 2.42 | 2.42 | 2.42 | 2.48 | 2.48 | 2.48 | 2.48 | 2.48 | 2.42 |
| 165.0  | 2.81 | 2.81 | 2.87 | 2.93 | 2.87 | 2.81 | 2.76 | 2.70 | 2.70 |
| 180.0  | 3.32 | 3.32 | 3.43 | 3.54 | 3.66 | 3.66 | 3.66 | 3.66 | 3.60 |
| 195.0  | 2.76 | 2.76 | 2.81 | 2.81 | 2.87 | 2.93 | 2.93 | 2.93 | 2.87 |
| 210.0  | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 |
| 225.0  | 2.14 | 2.14 | 2.08 | 2.08 | 2.14 | 2.14 | 2.14 | 2.08 | 2.08 |
| 240.0  | 2.08 | 2.08 | 2.08 | 2.08 | 2.03 | 2.03 | 2.08 | 2.08 | 2.03 |
| 255.0  | 2.03 | 2.03 | 2.03 | 2.03 | 1.97 | 1.97 | 1.97 | 1.97 | 1.97 |
| 270.0  | 2.03 | 1.97 | 1.97 | 1.97 | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 |
| 285.0  | 1.97 | 1.97 | 1.97 | 1.91 | 1.91 | 1.91 | 1.91 | 1.86 | 1.80 |
| 300.0  | 2.03 | 2.03 | 1.97 | 1.97 | 1.97 | 1.97 | 1.97 | 1.97 | 1.97 |
| 315.0  | 2.03 | 2.03 | 2.03 | 2.03 | 2.03 | 2.03 | 2.03 | 2.03 | 1.97 |
| 330.0  | 2.14 | 2.14 | 2.14 | 2.14 | 2.14 | 2.14 | 2.14 | 2.14 | 2.14 |
| 345.0  | 2.48 | 2.48 | 2.53 | 2.53 | 2.53 | 2.59 | 2.59 | 2.59 | 2.59 |
| 360.0  | 2.87 | 2.98 | 2.98 | 3.09 | 3.15 | 3.26 | 3.26 | 3.32 | 3.32 |
| C/γ(°) | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.0 |
| 0.0    | 3.32 | 3.15 | 2.98 | 2.70 | 2.53 | 2.31 | 1.69 | 1.07 | 0.90 |
| 15.0   | 2.53 | 2.53 | 2.48 | 2.36 | 2.31 | 2.08 | 1.18 | 0.90 | 0.68 |
| 30.0   | 2.25 | 2.25 | 2.25 | 2.19 | 2.14 | 1.52 | 0.84 | 0.62 | 0.39 |
| 45.0   | 2.25 | 2.25 | 2.25 | 2.25 | 2.19 | 2.03 | 0.90 | 0.68 | 0.45 |
| 60.0   | 2.08 | 2.08 | 2.08 | 2.03 | 1.97 | 1.18 | 0.68 | 0.51 | 0.28 |
| 75.0   | 1.97 | 1.97 | 1.91 | 1.86 | 1.86 | 1.69 | 0.73 | 0.51 | 0.39 |
| 90.0   | 1.91 | 1.86 | 1.80 | 1.74 | 1.69 | 1.07 | 0.56 | 0.39 | 0.28 |
| 105.0  | 2.03 | 1.97 | 1.91 | 1.74 | 1.63 | 1.46 | 0.73 | 0.45 | 0.34 |
| 120.0  | 2.19 | 2.14 | 2.08 | 2.03 | 1.86 | 1.35 | 0.62 | 0.51 | 0.28 |
| 135.0  | 2.36 | 2.42 | 2.36 | 2.36 | 2.25 | 2.08 | 0.90 | 0.62 | 0.45 |
| 150.0  | 2.42 | 2.42 | 2.36 | 2.31 | 2.19 | 1.58 | 0.84 | 0.62 | 0.34 |
| 165.0  | 2.64 | 2.59 | 2.48 | 2.42 | 2.31 | 2.03 | 1.13 | 0.84 | 0.68 |
| 180.0  | 3.71 | 3.66 | 2.81 | 2.64 | 2.31 | 1.91 | 1.01 | 0.84 | 0.56 |
| 195.0  | 2.81 | 2.70 | 2.53 | 2.42 | 2.31 | 2.08 | 1.24 | 0.90 | 0.68 |
| 210.0  | 2.25 | 2.25 | 2.19 | 2.19 | 2.14 | 2.03 | 1.63 | 0.84 | 0.68 |
| 225.0  | 2.08 | 2.08 | 2.03 | 2.03 | 2.03 | 1.91 | 1.24 | 0.79 | 0.51 |
| 240.0  | 2.03 | 2.03 | 2.03 | 1.97 | 1.97 | 1.91 | 1.69 | 0.84 | 0.56 |
| 255.0  | 1.97 | 1.91 | 1.91 | 1.91 | 1.86 | 1.86 | 1.29 | 0.73 | 0.51 |
| 270.0  | 1.86 | 1.86 | 1.80 | 1.80 | 1.80 | 1.74 | 1.58 | 0.73 | 0.45 |
| 285.0  | 1.80 | 1.74 | 1.74 | 1.74 | 1.69 | 1.69 | 1.13 | 0.62 | 0.45 |
| 300.0  | 1.97 | 1.91 | 1.91 | 1.91 | 1.86 | 1.80 | 1.63 | 0.90 | 0.56 |
| 315.0  | 2.03 | 2.03 | 1.97 | 1.97 | 1.91 | 1.91 | 1.24 | 0.79 | 0.56 |
| 330.0  | 2.14 | 2.14 | 2.08 | 2.08 | 2.03 | 1.97 | 1.74 | 0.96 | 0.68 |
| 345.0  | 2.48 | 2.48 | 2.42 | 2.36 | 2.25 | 2.14 | 1.35 | 0.90 | 0.73 |
| 360.0  | 3.32 | 3.15 | 2.98 | 2.70 | 2.53 | 2.31 | 1.69 | 1.07 | 0.90 |

Intensity data(cd)

|        |      |
|--------|------|
| C/γ(°) | 90.0 |
| 0.0    | 0.62 |
| 15.0   | 0.28 |
| 30.0   | 0.28 |
| 45.0   | 0.28 |
| 60.0   | 0.28 |
| 75.0   | 0.28 |
| 90.0   | 0.28 |
| 105.0  | 0.28 |
| 120.0  | 0.28 |
| 135.0  | 0.28 |
| 150.0  | 0.28 |
| 165.0  | 0.28 |
| 180.0  | 0.23 |
| 195.0  | 0.34 |
| 210.0  | 0.39 |
| 225.0  | 0.34 |
| 240.0  | 0.45 |
| 255.0  | 0.39 |
| 270.0  | 0.39 |
| 285.0  | 0.39 |
| 300.0  | 0.45 |
| 315.0  | 0.39 |
| 330.0  | 0.51 |
| 345.0  | 0.45 |
| 360.0  | 0.62 |