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NT

Client:

LumCAT: 2-2644-L

Luminaire: 92.70.411.00

Report No: 20231027-B011

Ballast type: AC

Test No: 20231027-C011

Voltage(V): 34.620

LampCAT: Fortimo\_SLM\_C\_1208

Current(A): 0.600

Lamp flux(lm): 3391.2

Power (W): 20.772

Number of Lamps: 1

PF: 0.000

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

### Photometric Results

Lumens(lm): 3047.27, Efficiency(%): 89.86% , Luminous Efficacy(lm/W): 146.70

Central intensity(cd): 10232.530, Maximum intensity(cd): 10232.530

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=56.8

[C90/270]Total=56.8

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(%): 89.86%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 97.934%

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0                | 10232.528     | 0.000       | 0         | 0.00%       | 0.00%      |
| 1.0                | 10170.255     | 9.762       | 9.762     | 0.29%       | 0.32%      |
| 2.0                | 10011.667     | 28.967      | 38.729    | 0.85%       | 1.27%      |
| 3.0                | 9769.634      | 47.310      | 86.04     | 1.40%       | 2.82%      |
| 4.0                | 9444.708      | 64.317      | 150.356   | 1.90%       | 4.93%      |
| 5.0                | 9056.264      | 79.590      | 229.946   | 2.35%       | 7.55%      |
| 6.0                | 8640.559      | 93.002      | 322.948   | 2.74%       | 10.60%     |
| 7.0                | 8183.891      | 104.429     | 427.377   | 3.08%       | 14.02%     |
| 8.0                | 7688.338      | 113.595     | 540.972   | 3.35%       | 17.75%     |
| 9.0                | 7151.754      | 120.271     | 661.242   | 3.55%       | 21.70%     |
| 10.0               | 6607.075      | 124.512     | 785.755   | 3.67%       | 25.79%     |
| 11.0               | 6107.370      | 127.043     | 912.798   | 3.75%       | 29.95%     |
| 12.0               | 5557.986      | 127.519     | 1040.317  | 3.76%       | 34.14%     |
| 13.0               | 5066.999      | 126.092     | 1166.409  | 3.72%       | 38.28%     |
| 14.0               | 4610.747      | 123.874     | 1290.283  | 3.65%       | 42.34%     |
| 15.0               | 4187.292      | 120.783     | 1411.067  | 3.56%       | 46.31%     |
| 16.0               | 3823.619      | 117.382     | 1528.449  | 3.46%       | 50.16%     |
| 17.0               | 3469.425      | 113.572     | 1642.021  | 3.35%       | 53.88%     |
| 18.0               | 3178.888      | 109.616     | 1751.638  | 3.23%       | 57.48%     |
| 19.0               | 2874.789      | 105.322     | 1856.959  | 3.11%       | 60.94%     |
| 20.0               | 2605.978      | 100.313     | 1957.272  | 2.96%       | 64.23%     |
| 21.0               | 2357.095      | 95.301      | 2052.574  | 2.81%       | 67.36%     |
| 22.0               | 2131.736      | 90.205      | 2142.778  | 2.66%       | 70.32%     |
| 23.0               | 1931.080      | 85.249      | 2228.027  | 2.51%       | 73.12%     |
| 24.0               | 1737.342      | 80.205      | 2308.232  | 2.37%       | 75.75%     |
| 25.0               | 1507.334      | 73.777      | 2382.009  | 2.18%       | 78.17%     |
| 26.0               | 1336.928      | 67.139      | 2449.148  | 1.98%       | 80.37%     |
| 27.0               | 1201.471      | 62.102      | 2511.251  | 1.83%       | 82.41%     |
| 28.0               | 1075.749      | 57.654      | 2568.905  | 1.70%       | 84.30%     |
| 29.0               | 936.735       | 52.652      | 2621.557  | 1.55%       | 86.03%     |
| 30.0               | 808.751       | 47.128      | 2668.685  | 1.39%       | 87.58%     |
| 31.0               | 686.509       | 41.611      | 2710.296  | 1.23%       | 88.94%     |
| 32.0               | 572.619       | 36.073      | 2746.368  | 1.06%       | 90.13%     |
| 33.0               | 478.643       | 30.971      | 2777.339  | 0.91%       | 91.14%     |
| 34.0               | 394.872       | 26.435      | 2803.774  | 0.78%       | 92.01%     |
| 35.0               | 324.773       | 22.350      | 2826.124  | 0.66%       | 92.74%     |
| 36.0               | 266.126       | 18.814      | 2844.938  | 0.55%       | 93.36%     |
| 37.0               | 236.360       | 16.388      | 2861.326  | 0.48%       | 93.90%     |

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0               | 191.918       | 14.295      | 2875.622  | 0.42%       | 94.37%     |
| 39.0               | 143.622       | 11.453      | 2887.075  | 0.34%       | 94.74%     |
| 40.0               | 122.062       | 9.266       | 2896.341  | 0.27%       | 95.05%     |
| 41.0               | 103.407       | 8.029       | 2904.369  | 0.24%       | 95.31%     |
| 42.0               | 90.178        | 7.033       | 2911.403  | 0.21%       | 95.54%     |
| 43.0               | 80.034        | 6.305       | 2917.708  | 0.19%       | 95.75%     |
| 44.0               | 72.015        | 5.739       | 2923.447  | 0.17%       | 95.94%     |
| 45.0               | 65.407        | 5.281       | 2928.728  | 0.16%       | 96.11%     |
| 46.0               | 59.823        | 4.897       | 2933.625  | 0.14%       | 96.27%     |
| 47.0               | 55.402        | 4.583       | 2938.208  | 0.14%       | 96.42%     |
| 48.0               | 51.430        | 4.319       | 2942.527  | 0.13%       | 96.56%     |
| 49.0               | 48.171        | 4.090       | 2946.617  | 0.12%       | 96.70%     |
| 50.0               | 45.438        | 3.903       | 2950.52   | 0.12%       | 96.82%     |
| 51.0               | 43.224        | 3.751       | 2954.271  | 0.11%       | 96.95%     |
| 52.0               | 41.204        | 3.623       | 2957.894  | 0.11%       | 97.07%     |
| 53.0               | 39.730        | 3.521       | 2961.415  | 0.10%       | 97.18%     |
| 54.0               | 38.471        | 3.447       | 2964.862  | 0.10%       | 97.30%     |
| 55.0               | 37.301        | 3.382       | 2968.244  | 0.10%       | 97.41%     |
| 56.0               | 36.277        | 3.325       | 2971.569  | 0.10%       | 97.52%     |
| 57.0               | 35.295        | 3.272       | 2974.841  | 0.10%       | 97.62%     |
| 58.0               | 34.305        | 3.219       | 2978.06   | 0.09%       | 97.73%     |
| 59.0               | 33.247        | 3.158       | 2981.218  | 0.09%       | 97.83%     |
| 60.0               | 32.160        | 3.090       | 2984.308  | 0.09%       | 97.93%     |
| 61.0               | 31.081        | 3.018       | 2987.326  | 0.09%       | 98.03%     |
| 62.0               | 29.926        | 2.940       | 2990.266  | 0.09%       | 98.13%     |
| 63.0               | 28.895        | 2.861       | 2993.126  | 0.08%       | 98.22%     |
| 64.0               | 27.933        | 2.788       | 2995.915  | 0.08%       | 98.31%     |
| 65.0               | 27.013        | 2.719       | 2998.634  | 0.08%       | 98.40%     |
| 66.0               | 26.058        | 2.648       | 3001.282  | 0.08%       | 98.49%     |
| 67.0               | 25.179        | 2.576       | 3003.858  | 0.08%       | 98.58%     |
| 68.0               | 24.300        | 2.506       | 3006.365  | 0.07%       | 98.66%     |
| 69.0               | 23.415        | 2.434       | 3008.799  | 0.07%       | 98.74%     |
| 70.0               | 22.640        | 2.365       | 3011.164  | 0.07%       | 98.82%     |
| 71.0               | 21.816        | 2.298       | 3013.462  | 0.07%       | 98.89%     |
| 72.0               | 21.034        | 2.228       | 3015.69   | 0.07%       | 98.96%     |
| 73.0               | 20.391        | 2.166       | 3017.856  | 0.06%       | 99.03%     |
| 74.0               | 19.754        | 2.111       | 3019.967  | 0.06%       | 99.10%     |
| 75.0               | 19.194        | 2.058       | 3022.025  | 0.06%       | 99.17%     |

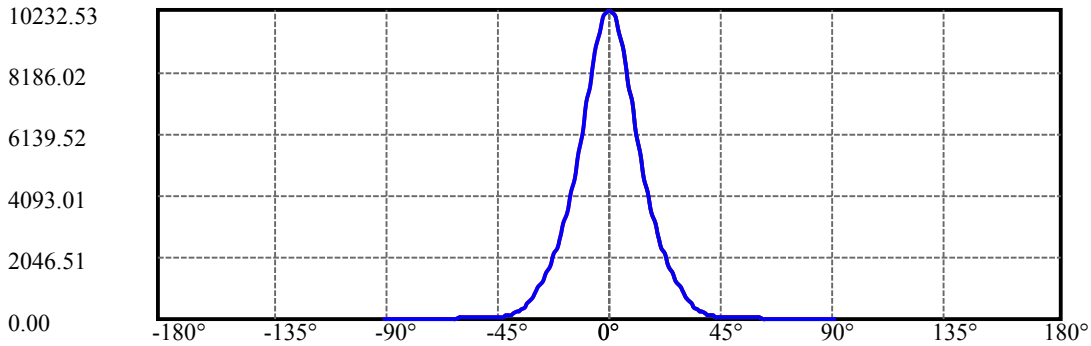
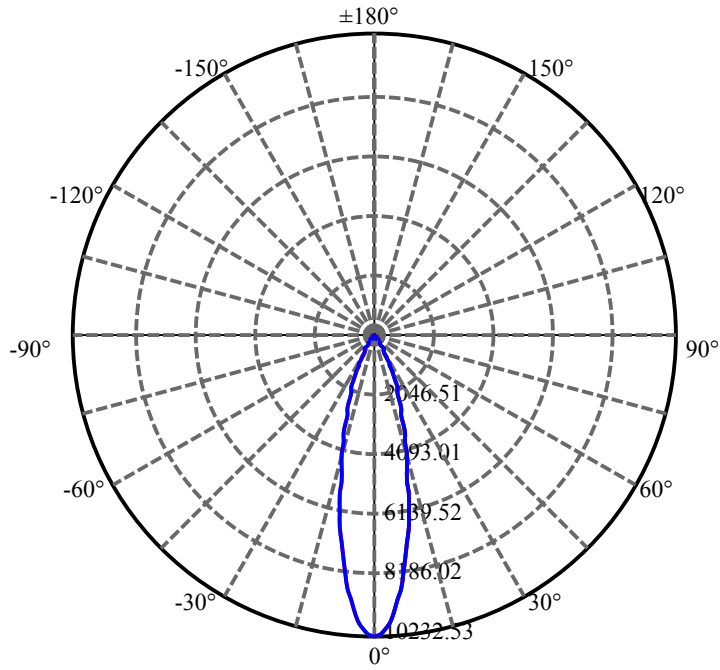
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0               | 18.626        | 2.008       | 3024.032  | 0.06%       | 99.24%     |
| 77.0               | 18.121        | 1.959       | 3025.991  | 0.06%       | 99.30%     |
| 78.0               | 17.547        | 1.909       | 3027.901  | 0.06%       | 99.36%     |
| 79.0               | 17.063        | 1.860       | 3029.76   | 0.05%       | 99.43%     |
| 80.0               | 16.578        | 1.814       | 3031.574  | 0.05%       | 99.48%     |
| 81.0               | 16.108        | 1.768       | 3033.342  | 0.05%       | 99.54%     |
| 82.0               | 15.665        | 1.723       | 3035.065  | 0.05%       | 99.60%     |
| 83.0               | 15.229        | 1.679       | 3036.744  | 0.05%       | 99.65%     |
| 84.0               | 14.807        | 1.636       | 3038.38   | 0.05%       | 99.71%     |
| 85.0               | 14.371        | 1.592       | 3039.973  | 0.05%       | 99.76%     |
| 86.0               | 13.804        | 1.540       | 3041.513  | 0.05%       | 99.81%     |
| 87.0               | 13.375        | 1.487       | 3043      | 0.04%       | 99.86%     |
| 88.0               | 13.077        | 1.449       | 3044.449  | 0.04%       | 99.91%     |
| 89.0               | 12.856        | 1.421       | 3045.871  | 0.04%       | 99.95%     |
| 90.0               | 12.724        | 1.403       | 3047.273  | 0.04%       | 100.00%    |

ZONAL LUMEN SUMMARY

| Zone    | Lumens  | %Lamp  | %Fixt   |
|---------|---------|--------|---------|
| 0-30    | 2668.68 | 78.69% | 87.58%  |
| 0-40    | 2896.34 | 85.41% | 95.05%  |
| 0-60    | 2984.31 | 88.00% | 97.93%  |
| 0-90    | 3045.87 | 89.82% | 99.95%  |
| 0-120   | 3045.87 | 89.82% | 99.95%  |
| 0-180   | 3047.27 | 89.86% | 100.00% |
| 60-90   | 61.56   | 1.82%  | 2.02%   |
| 90-120  | 0.00    | 0.00%  | 0.00%   |
| 90-130  | 0.00    | 0.00%  | 0.00%   |
| 90-150  | 0.00    | 0.00%  | 0.00%   |
| 90-180  | 0.00    | 0.00%  | 0.00%   |
| 0-25.83 | 2437.82 | 71.89% | 80.00%  |

ZONAL LUMEN SUMMARY

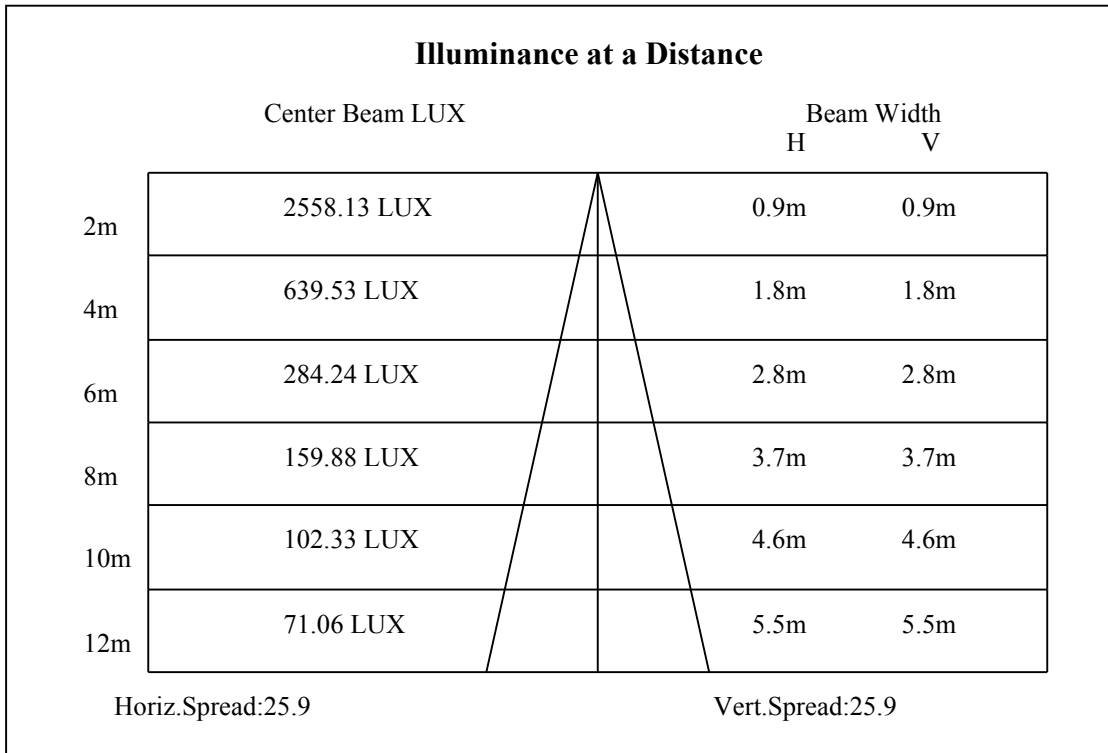
|         |         |
|---------|---------|
| 0-10    | 785.75  |
| 10-20   | 1171.52 |
| 20-30   | 711.41  |
| 30-40   | 227.66  |
| 40-50   | 54.18   |
| 50-60   | 33.79   |
| 60-70   | 26.86   |
| 70-80   | 20.41   |
| 80-90   | 14.30   |
| 90-100  | 0.00    |
| 100-110 | 0.00    |
| 110-120 | 0.00    |
| 120-130 | 0.00    |
| 130-140 | 0.00    |
| 140-150 | 0.00    |
| 150-160 | 0.00    |
| 160-170 | 0.00    |
| 170-180 | 0.00    |

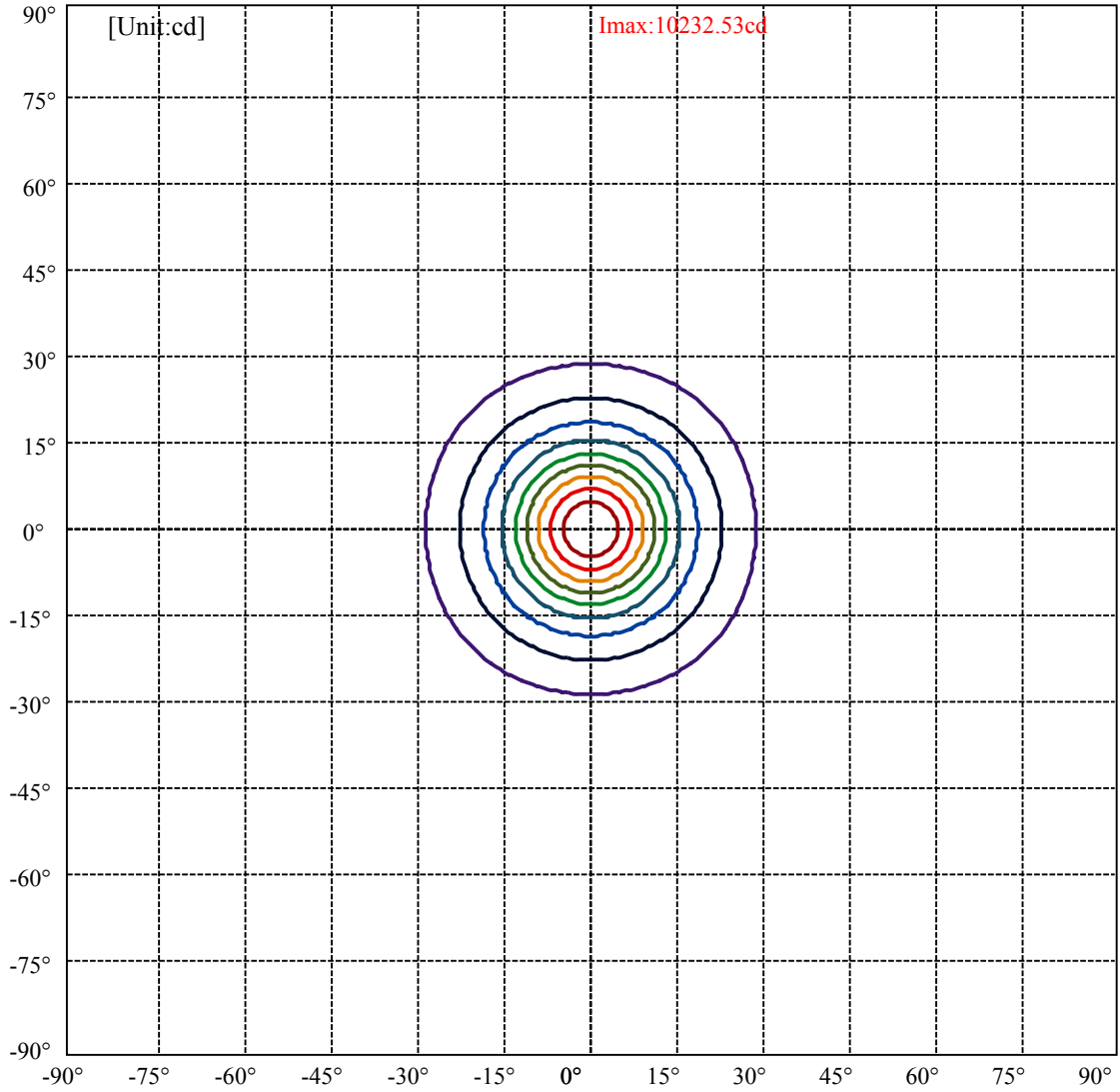


C0(Max): ———  
C0/C180: ———  
C90/C270: ———

Field angle(10%Imax):C0/180Left:28.4 Right:28.4  
:C90/270Left:28.4 Right:28.4

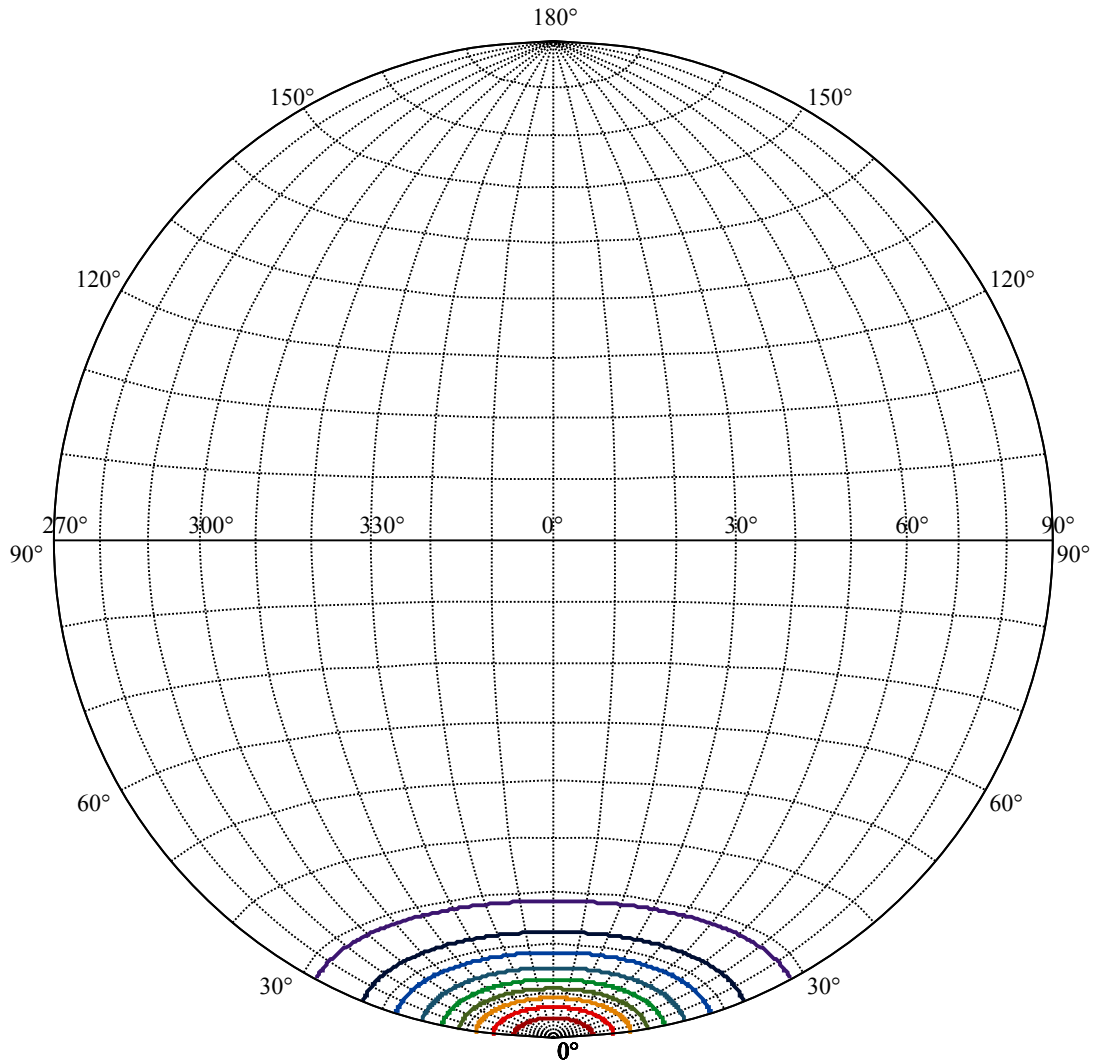
Beam Angle(50%Imax):C0/180Left:12.9 Right:12.9  
:C90/270Left:12.9 Right:12.9





|                   |   |
|-------------------|---|
| (10%Imax) 1023.25 | — |
| (20%Imax) 2046.51 | — |
| (30%Imax) 3069.76 | — |
| (40%Imax) 4093.01 | — |
| (50%Imax) 5116.26 | — |
| (60%Imax) 6139.52 | — |
| (70%Imax) 7162.77 | — |
| (80%Imax) 8186.02 | — |
| (90%Imax) 9209.28 | — |





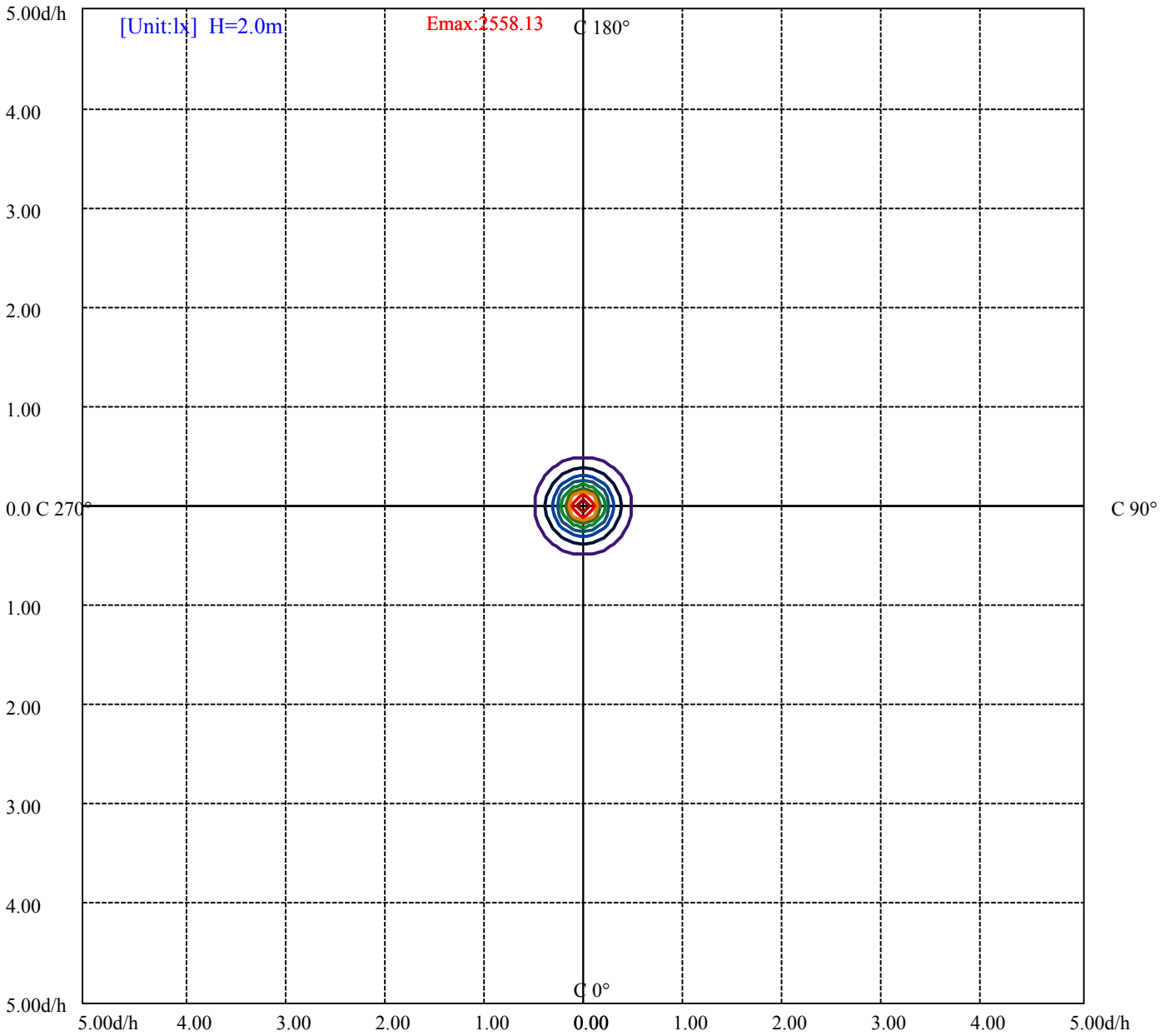
House

[Unit:cd]

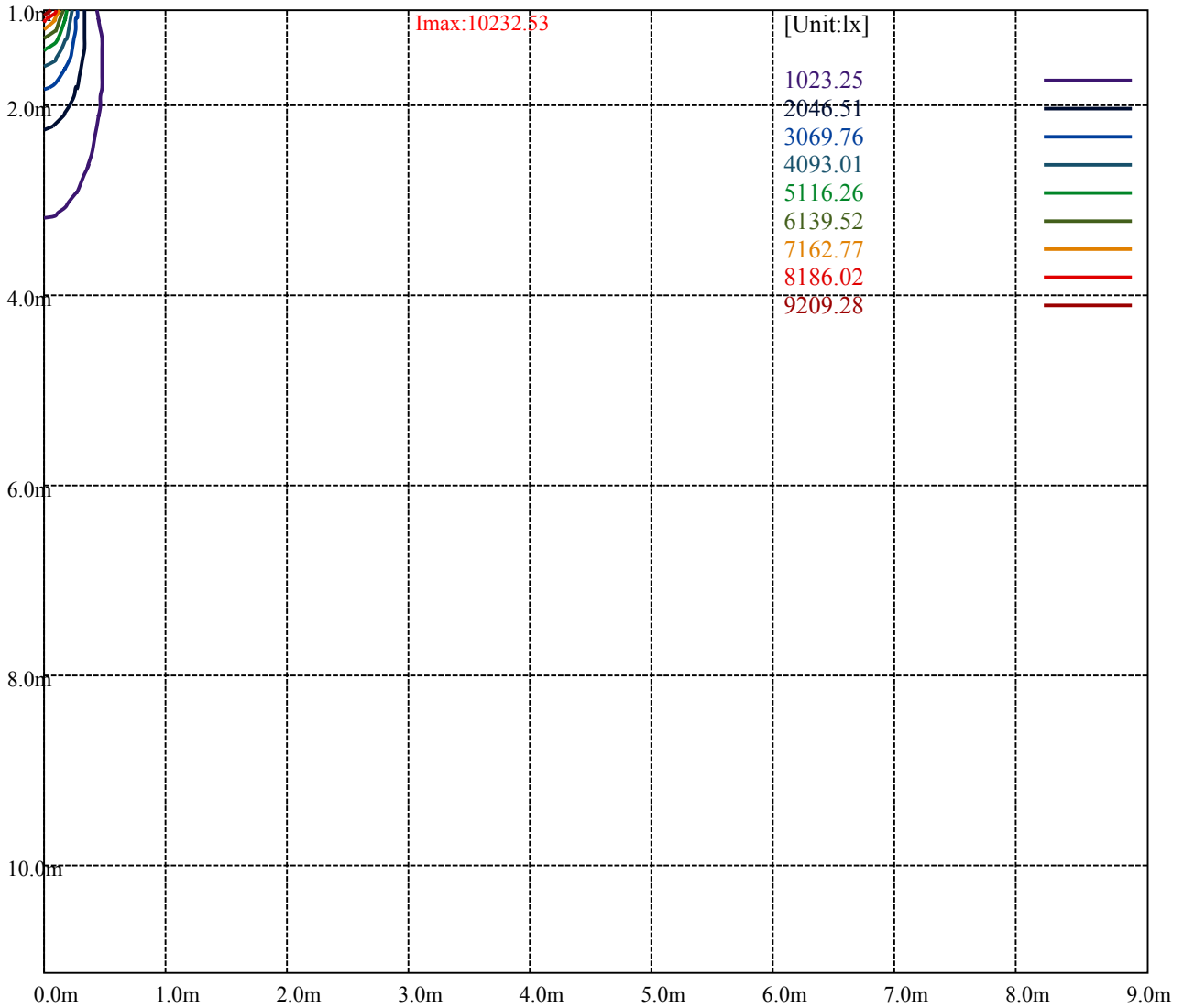
Road

Imax:10232.53

|           |         |   |
|-----------|---------|---|
| (10%Imax) | 1023.25 | — |
| (20%Imax) | 2046.51 | — |
| (30%Imax) | 3069.76 | — |
| (40%Imax) | 4093.01 | — |
| (50%Imax) | 5116.26 | — |
| (60%Imax) | 6139.52 | — |
| (70%Imax) | 7162.77 | — |
| (80%Imax) | 8186.02 | — |
| (90%Imax) | 9209.28 | — |



- (10%Emax) 255.8125
- (20%Emax) 511.625
- (30%Emax) 767.44
- (40%Emax) 1023.253
- (50%Emax) 1279.065
- (60%Emax) 1534.877
- (70%Emax) 1790.69
- (80%Emax) 2046.502
- (90%Emax) 2302.317



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

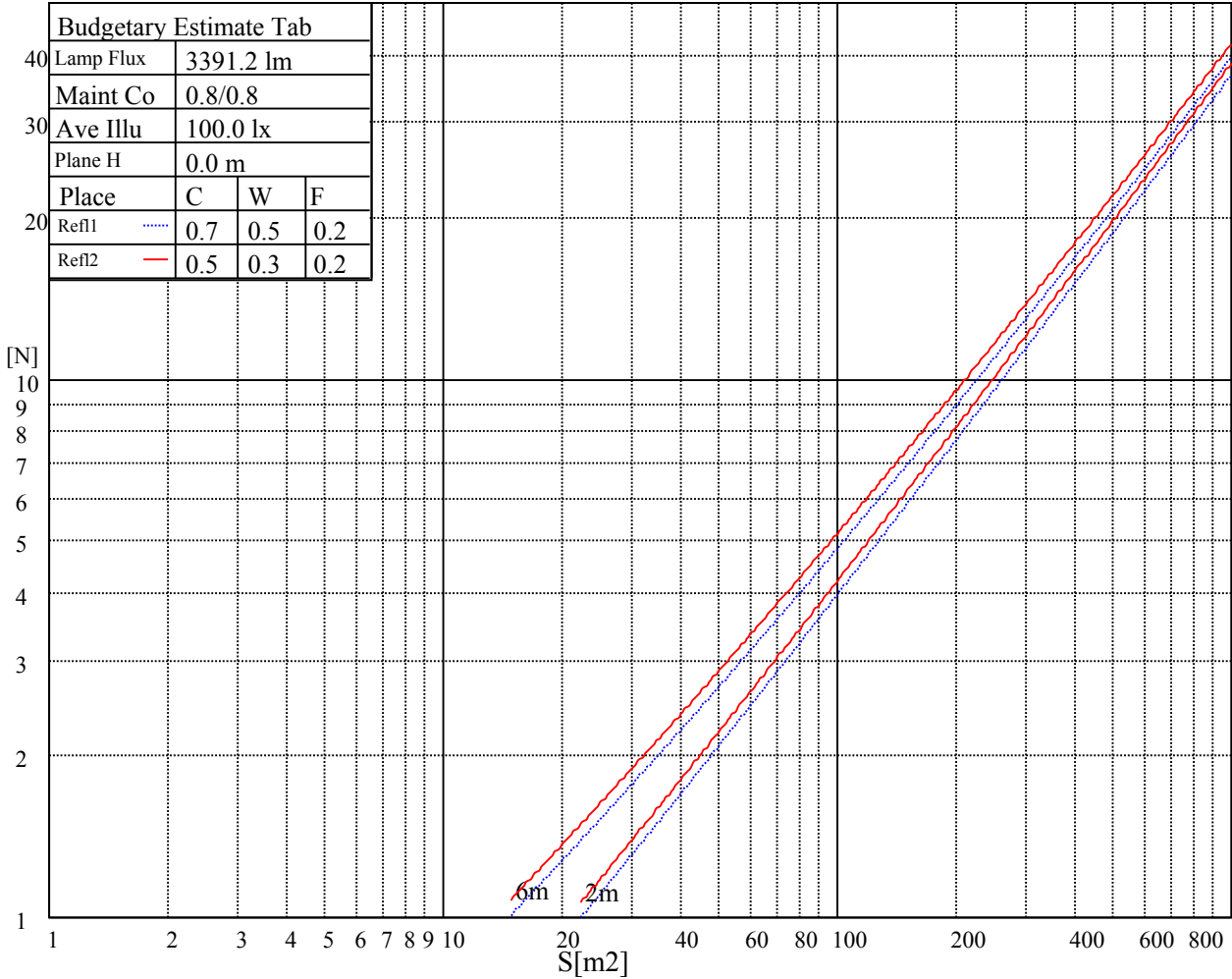
| Glare | Quality | Service Values Illuminance(lx) |      |      |       |       |       |       |       |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15  | A       | 2000                           | 1000 | 500  | <=300 |       |    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

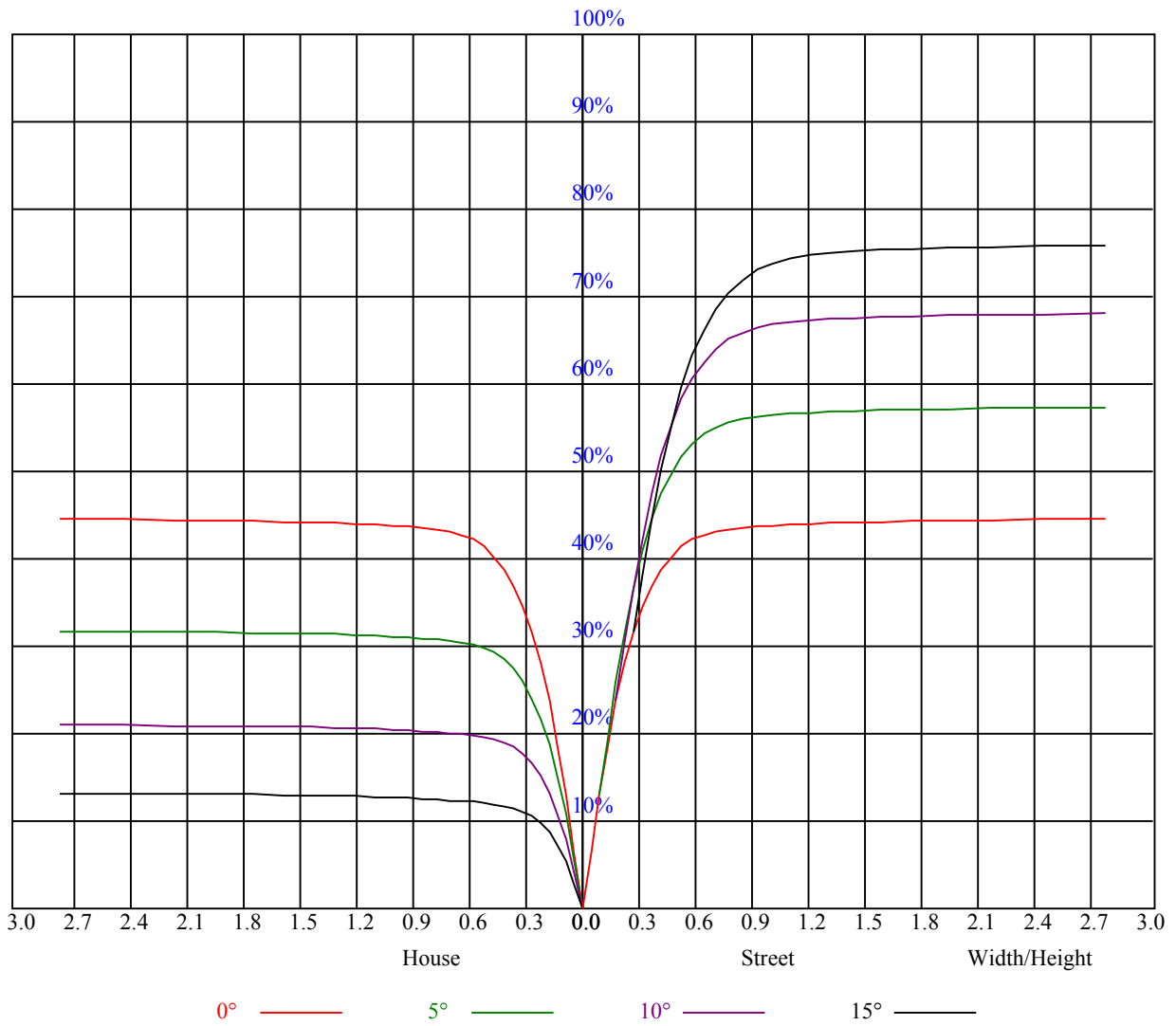


| Illumination assessment according UGR             |         |                  |     |     |     |         |                |     |     |     |  |
|---|---------|------------------|-----|-----|-----|---------|----------------|-----|-----|-----|--|
| Rf of Ceiling                                     | 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 | 0.80 | 0.77 | 0.82 | 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 | 0.73 | 0.79 | 0.76 | 0.73 | 0.78 | 0.75 | 0.72 | 0.76 | 0.74 | 0.72 | 0.70 |
| 6     | 0.78                                   | 0.73 | 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                                   | 0.67 | 0.64 | 0.71 | 0.67 | 0.64 | 0.70 | 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 | 0.61 | 0.67 | 0.63 | 0.61 | 0.60 |
| 10    | 0.67                                   | 0.62 | 0.60 | 0.66 | 0.62 | 0.60 | 0.66 | 0.62 | 0.59 | 0.65 | 0.62 | 0.59 | 0.64 | 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    | 10144.10 | 9862.90  | 9587.80  | 9260.66  | 8852.15 | 8310.79 | 7863.53 | 7392.47 | 6893.74 |
| 45.0   | 10281.38 | 10169.56 | 9980.81  | 9710.13  | 9313.80 | 8944.59 | 8532.76 | 8095.46 | 7508.16 |
| 90.0   | 10221.60 | 10053.87 | 9741.13  | 9449.41  | 9009.91 | 8614.13 | 8194.55 | 7624.40 | 7126.22 |
| 135.0  | 10283.04 | 10248.17 | 10123.62 | 9852.39  | 9591.67 | 9191.47 | 8806.20 | 8383.86 | 7813.16 |
| 180.0  | 10144.10 | 10270.31 | 10288.02 | 10150.19 | 9927.67 | 9582.26 | 9283.91 | 8934.62 | 8534.97 |
| 225.0  | 10281.38 | 10263.66 | 10119.19 | 9883.94  | 9591.12 | 9245.16 | 8769.67 | 8335.15 | 7874.05 |
| 270.0  | 10221.60 | 10281.38 | 10252.04 | 10120.30 | 9872.31 | 9553.48 | 9193.13 | 8692.18 | 8242.70 |
| 315.0  | 10283.04 | 10212.19 | 10000.73 | 9730.06  | 9399.04 | 9008.24 | 8480.73 | 8012.99 | 7513.70 |
| 360.0  | 10144.10 | 9862.90  | 9587.80  | 9260.66  | 8852.15 | 8310.79 | 7863.53 | 7392.47 | 6893.74 |
| C/γ(°) | 9.0      | 10.0     | 11.0     | 12.0     | 13.0    | 14.0    | 15.0    | 16.0    | 17.0    |
| 0.0    | 6249.42  | 5740.72  | 5258.04  | 4721.11  | 4335.29 | 3903.54 | 3577.50 | 3274.72 | 2938.17 |
| 45.0   | 7006.66  | 6511.80  | 6006.97  | 5395.87  | 4959.13 | 4558.37 | 4092.29 | 3749.10 | 3365.50 |
| 90.0   | 6604.79  | 5953.83  | 5461.74  | 5002.86  | 4585.49 | 4117.75 | 3769.03 | 3450.74 | 3171.21 |
| 135.0  | 7335.46  | 6841.15  | 6312.52  | 5687.03  | 5204.35 | 4765.39 | 4355.77 | 3888.59 | 3560.90 |
| 180.0  | 7984.20  | 7530.30  | 7028.25  | 6496.85  | 5854.75 | 5346.60 | 4879.42 | 4478.11 | 4028.64 |
| 225.0  | 7397.46  | 6759.23  | 6252.19  | 5738.51  | 5251.95 | 4708.38 | 4326.44 | 3960.00 | 3550.38 |
| 270.0  | 7762.79  | 7161.10  | 6675.64  | 6156.43  | 5522.63 | 5050.46 | 4515.19 | 4138.24 | 3797.81 |
| 315.0  | 6873.26  | 6358.47  | 5863.61  | 5265.23  | 4822.41 | 4435.48 | 3982.69 | 3649.46 | 3342.80 |
| 360.0  | 6249.42  | 5740.72  | 5258.04  | 4721.11  | 4335.29 | 3903.54 | 3577.50 | 3274.72 | 2938.17 |
| C/γ(°) | 18.0     | 19.0     | 20.0     | 21.0     | 22.0    | 23.0    | 24.0    | 25.0    | 26.0    |
| 0.0    | 2687.97  | 2454.38  | 2240.16  | 1997.71  | 1820.03 | 1654.52 | 1498.42 | 1090.08 | 1090.08 |
| 45.0   | 3084.86  | 2830.78  | 2587.23  | 2311.57  | 2112.29 | 1927.41 | 1708.77 | 1544.37 | 1387.71 |
| 90.0   | 2906.62  | 2597.19  | 2366.37  | 2100.12  | 1911.36 | 1687.18 | 1520.56 | 1101.26 | 1101.26 |
| 135.0  | 3264.20  | 2920.46  | 2668.04  | 2429.47  | 2164.33 | 1968.37 | 1740.87 | 1574.26 | 1410.41 |
| 180.0  | 3686.55  | 3363.84  | 3000.72  | 2732.81  | 2437.77 | 2224.11 | 2024.28 | 1844.38 | 1637.36 |
| 225.0  | 3252.02  | 2901.08  | 2638.15  | 2399.03  | 2136.10 | 1948.45 | 1775.19 | 1612.45 | 1422.03 |
| 270.0  | 3485.06  | 3192.80  | 2847.39  | 2596.64  | 2377.99 | 2170.97 | 1932.95 | 1753.60 | 1557.65 |
| 315.0  | 3063.82  | 2737.79  | 2499.77  | 2289.42  | 2094.03 | 1867.63 | 1697.69 | 1538.28 | 1088.92 |
| 360.0  | 2687.97  | 2454.38  | 2240.16  | 1997.71  | 1820.03 | 1654.52 | 1498.42 | 1090.08 | 1090.08 |
| C/γ(°) | 27.0     | 28.0     | 29.0     | 30.0     | 31.0    | 32.0    | 33.0    | 34.0    | 35.0    |
| 0.0    | 1020.33  | 853.94   | 735.10   | 627.71   | 506.93  | 422.57  | 349.50  | 273.61  | 224.74  |
| 45.0   | 1234.39  | 1052.83  | 916.10   | 793.22   | 654.28  | 556.86  | 467.74  | 373.64  | 309.43  |
| 90.0   | 1027.36  | 892.69   | 770.96   | 662.86   | 565.22  | 456.17  | 382.11  | 318.84  | 264.59  |
| 135.0  | 1255.97  | 1073.86  | 938.24   | 814.80   | 702.99  | 578.45  | 489.88  | 410.72  | 326.59  |
| 180.0  | 1481.26  | 1329.59  | 1184.01  | 1010.20  | 881.23  | 757.79  | 617.75  | 521.43  | 435.63  |
| 225.0  | 1093.68  | 1093.68  | 990.83   | 860.80   | 718.38  | 614.15  | 519.22  | 416.54  | 346.68  |
| 270.0  | 1409.86  | 1256.53  | 1075.52  | 941.01   | 814.80  | 670.33  | 562.95  | 477.70  | 401.31  |
| 315.0  | 1088.92  | 1052.88  | 883.11   | 759.40   | 648.25  | 524.64  | 440.01  | 366.50  | 289.22  |
| 360.0  | 1020.33  | 853.94   | 735.10   | 627.71   | 506.93  | 422.57  | 349.50  | 273.61  | 224.74  |
| C/γ(°) | 36.0     | 37.0     | 38.0     | 39.0     | 40.0    | 41.0    | 42.0    | 43.0    | 44.0    |
| 0.0    | 185.43   | 154.33   | 124.21   | 106.89   | 93.44   | 82.81   | 72.40   | 65.59   | 60.06   |
| 45.0   | 280.64   | 280.64   | 163.07   | 137.00   | 117.35  | 99.14   | 88.23   | 79.38   | 72.18   |
| 90.0   | 211.34   | 177.80   | 145.08   | 124.77   | 108.27  | 91.89   | 81.70   | 73.68   | 65.87   |
| 135.0  | 282.86   | 282.86   | 180.56   | 144.25   | 122.50  | 102.35  | 90.39   | 80.93   | 73.29   |
| 180.0  | 344.85   | 286.18   | 286.18   | 182.61   | 152.17  | 128.03  | 105.84  | 92.83   | 82.75   |
| 225.0  | 274.28   | 227.78   | 189.36   | 151.56   | 128.14  | 110.26  | 96.76   | 84.25   | 76.50   |
| 270.0  | 311.64   | 285.07   | 285.07   | 173.26   | 145.91  | 119.01  | 103.29  | 91.17   | 79.38   |
| 315.0  | 237.97   | 196.23   | 161.80   | 128.64   | 108.71  | 93.77   | 82.81   | 72.46   | 66.09   |
| 360.0  | 185.43   | 154.33   | 124.21   | 106.89   | 93.44   | 82.81   | 72.40   | 65.59   | 60.06   |

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    | 54.52 | 50.76 | 47.66 | 44.39 | 42.23 | 40.41 | 38.75 | 37.59 | 36.64 |
| 45.0   | 64.76 | 59.89 | 55.69 | 51.26 | 48.16 | 45.67 | 43.18 | 41.46 | 40.08 |
| 90.0   | 60.67 | 56.35 | 52.70 | 48.77 | 46.16 | 44.06 | 42.18 | 40.35 | 39.19 |
| 135.0  | 65.65 | 60.56 | 56.07 | 52.42 | 48.38 | 45.72 | 43.56 | 41.29 | 39.74 |
| 180.0  | 74.84 | 66.65 | 61.28 | 56.63 | 52.86 | 48.82 | 46.11 | 43.29 | 41.52 |
| 225.0  | 70.13 | 64.60 | 58.62 | 54.80 | 51.37 | 47.77 | 45.33 | 42.90 | 41.24 |
| 270.0  | 71.85 | 64.32 | 59.45 | 55.30 | 50.93 | 47.99 | 45.39 | 43.34 | 41.13 |
| 315.0  | 60.83 | 55.46 | 51.76 | 47.88 | 45.28 | 43.07 | 41.29 | 39.41 | 38.30 |
| 360.0  | 54.52 | 50.76 | 47.66 | 44.39 | 42.23 | 40.41 | 38.75 | 37.59 | 36.64 |
| C/γ(°) | 54.0  | 55.0  | 56.0  | 57.0  | 58.0  | 59.0  | 60.0  | 61.0  | 62.0  |
| 0.0    | 35.70 | 34.60 | 33.88 | 33.05 | 32.11 | 30.78 | 29.84 | 28.95 | 27.84 |
| 45.0   | 38.58 | 37.59 | 36.53 | 35.54 | 34.37 | 33.32 | 32.05 | 30.89 | 29.56 |
| 90.0   | 38.14 | 36.81 | 35.70 | 34.49 | 33.60 | 32.38 | 31.16 | 30.00 | 29.06 |
| 135.0  | 38.58 | 37.36 | 36.53 | 35.65 | 34.49 | 33.65 | 32.71 | 31.44 | 30.11 |
| 180.0  | 39.91 | 38.42 | 37.42 | 36.48 | 35.54 | 34.43 | 33.60 | 32.77 | 31.66 |
| 225.0  | 39.85 | 38.69 | 37.31 | 36.26 | 35.20 | 34.26 | 32.99 | 31.77 | 30.67 |
| 270.0  | 39.69 | 38.53 | 37.47 | 36.31 | 35.32 | 34.43 | 33.32 | 32.22 | 31.05 |
| 315.0  | 37.31 | 36.42 | 35.37 | 34.60 | 33.82 | 32.71 | 31.61 | 30.61 | 29.45 |
| 360.0  | 35.70 | 34.60 | 33.88 | 33.05 | 32.11 | 30.78 | 29.84 | 28.95 | 27.84 |
| C/γ(°) | 63.0  | 64.0  | 65.0  | 66.0  | 67.0  | 68.0  | 69.0  | 70.0  | 71.0  |
| 0.0    | 27.01 | 26.13 | 25.41 | 24.58 | 23.69 | 23.03 | 22.36 | 21.75 | 21.09 |
| 45.0   | 28.62 | 27.68 | 26.63 | 25.74 | 24.63 | 23.75 | 23.03 | 22.03 | 21.15 |
| 90.0   | 28.06 | 26.96 | 26.13 | 25.24 | 24.30 | 23.19 | 22.42 | 21.64 | 20.70 |
| 135.0  | 29.28 | 28.34 | 27.40 | 26.40 | 25.57 | 24.74 | 23.75 | 22.97 | 22.09 |
| 180.0  | 30.39 | 29.45 | 28.45 | 27.29 | 26.46 | 25.68 | 24.58 | 23.80 | 22.86 |
| 225.0  | 29.39 | 28.40 | 27.46 | 26.35 | 25.57 | 24.63 | 23.58 | 22.75 | 21.98 |
| 270.0  | 29.89 | 28.89 | 27.95 | 26.90 | 26.07 | 25.24 | 24.13 | 23.30 | 22.53 |
| 315.0  | 28.51 | 27.62 | 26.68 | 25.96 | 25.13 | 24.13 | 23.47 | 22.86 | 22.14 |
| 360.0  | 27.01 | 26.13 | 25.41 | 24.58 | 23.69 | 23.03 | 22.36 | 21.75 | 21.09 |
| C/γ(°) | 72.0  | 73.0  | 74.0  | 75.0  | 76.0  | 77.0  | 78.0  | 79.0  | 80.0  |
| 0.0    | 20.59 | 20.15 | 19.65 | 18.99 | 18.49 | 17.88 | 17.21 | 16.66 | 16.11 |
| 45.0   | 20.43 | 19.87 | 19.21 | 18.76 | 18.27 | 17.82 | 17.21 | 16.83 | 16.38 |
| 90.0   | 19.98 | 19.32 | 18.76 | 18.21 | 17.71 | 17.21 | 16.66 | 16.22 | 15.83 |
| 135.0  | 21.03 | 20.26 | 19.54 | 18.99 | 18.43 | 17.93 | 17.33 | 16.94 | 16.55 |
| 180.0  | 22.09 | 21.31 | 20.54 | 19.93 | 19.26 | 18.76 | 18.27 | 17.88 | 17.33 |
| 225.0  | 20.98 | 20.26 | 19.65 | 19.04 | 18.38 | 17.88 | 17.38 | 16.88 | 16.33 |
| 270.0  | 21.75 | 20.98 | 20.15 | 19.48 | 18.88 | 18.38 | 17.88 | 17.27 | 16.83 |
| 315.0  | 21.42 | 20.98 | 20.54 | 20.15 | 19.60 | 19.10 | 18.43 | 17.82 | 17.27 |
| 360.0  | 20.59 | 20.15 | 19.65 | 18.99 | 18.49 | 17.88 | 17.21 | 16.66 | 16.11 |
| C/γ(°) | 81.0  | 82.0  | 83.0  | 84.0  | 85.0  | 86.0  | 87.0  | 88.0  | 89.0  |
| 0.0    | 15.67 | 15.28 | 14.95 | 14.56 | 14.12 | 13.23 | 12.90 | 12.73 | 12.79 |
| 45.0   | 15.89 | 15.50 | 14.95 | 14.61 | 14.28 | 13.56 | 13.23 | 12.90 | 12.68 |
| 90.0   | 15.33 | 14.89 | 14.56 | 14.23 | 13.84 | 13.45 | 13.17 | 12.84 | 12.73 |
| 135.0  | 16.16 | 15.72 | 15.33 | 14.89 | 14.17 | 13.78 | 13.56 | 13.17 | 12.79 |
| 180.0  | 16.94 | 16.44 | 15.94 | 15.39 | 14.95 | 14.06 | 13.78 | 13.51 | 13.28 |
| 225.0  | 15.94 | 15.50 | 15.06 | 14.67 | 14.34 | 13.78 | 13.45 | 13.17 | 12.90 |
| 270.0  | 16.27 | 15.83 | 15.39 | 15.00 | 14.56 | 14.23 | 13.56 | 13.34 | 13.01 |
| 315.0  | 16.66 | 16.16 | 15.67 | 15.11 | 14.72 | 14.34 | 13.34 | 12.95 | 12.68 |
| 360.0  | 15.67 | 15.28 | 14.95 | 14.56 | 14.12 | 13.23 | 12.90 | 12.73 | 12.79 |

Intensity data(cd)

|               |              |
|---------------|--------------|
| <b>C/γ(°)</b> | <b>90.0</b>  |
| <b>0.0</b>    | <b>12.73</b> |
| <b>45.0</b>   | <b>12.68</b> |
| <b>90.0</b>   | <b>12.68</b> |
| <b>135.0</b>  | <b>12.68</b> |
| <b>180.0</b>  | <b>12.95</b> |
| <b>225.0</b>  | <b>12.68</b> |
| <b>270.0</b>  | <b>12.68</b> |
| <b>315.0</b>  | <b>12.73</b> |
| <b>360.0</b>  | <b>12.73</b> |