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## NATA

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Client:

LumCAT: 2-2646-L

Luminaire: 92.70.411.00

Report No: 2023718-B008

Ballast type: AC

Test No: 2023718-C008

Voltage(V): 35.520

LampCAT: SLM C 1205 L13 2024 G7 HE+

Current(A): 0.480

Lamp flux(lm): 2636.6

Power (W): 17.049

Number of Lamps: 1

PF: 0.000

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

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## Photometric Results

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Lumens(lm): 2408.54, Efficiency(%): 91.35% , Luminous Efficacy(lm/W): 141.27

Central intensity(cd): 4421.314, Maximum intensity(cd): 4421.314

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

Beam Angle(50%Imax): [C0/180]Total=45.4

[C90/270]Total=45.4

Field angle(10%Imax): [C0/180]Total=66.0

[C90/270]Total=66.0

Maximum s/h(1/2): C0\_180=0.72 C90\_270=0.72

Maximum s/h(1/4): C0\_180=0.71 C90\_270=0.71

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 91.35%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 98.192%

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0                | 4421.313      | 0.000       | 0         | 0.00%       | 0.00%      |
| 1.0                | 4409.136      | 4.225       | 4.225     | 0.16%       | 0.18%      |
| 2.0                | 4364.922      | 12.593      | 16.819    | 0.48%       | 0.70%      |
| 3.0                | 4307.147      | 20.741      | 37.559    | 0.79%       | 1.56%      |
| 4.0                | 4239.477      | 28.608      | 66.168    | 1.09%       | 2.75%      |
| 5.0                | 4165.303      | 36.157      | 102.325   | 1.37%       | 4.25%      |
| 6.0                | 4093.343      | 43.401      | 145.726   | 1.65%       | 6.05%      |
| 7.0                | 4021.314      | 50.368      | 196.093   | 1.91%       | 8.14%      |
| 8.0                | 3949.493      | 57.046      | 253.139   | 2.16%       | 10.51%     |
| 9.0                | 3870.199      | 63.374      | 316.513   | 2.40%       | 13.14%     |
| 10.0               | 3788.207      | 69.306      | 385.819   | 2.63%       | 16.02%     |
| 11.0               | 3709.397      | 74.916      | 460.736   | 2.84%       | 19.13%     |
| 12.0               | 3613.497      | 80.050      | 540.785   | 3.04%       | 22.45%     |
| 13.0               | 3520.641      | 84.664      | 625.449   | 3.21%       | 25.97%     |
| 14.0               | 3421.697      | 88.861      | 714.311   | 3.37%       | 29.66%     |
| 15.0               | 3310.090      | 92.417      | 806.728   | 3.51%       | 33.49%     |
| 16.0               | 3180.493      | 95.105      | 901.833   | 3.61%       | 37.44%     |
| 17.0               | 3055.809      | 97.116      | 998.949   | 3.68%       | 41.48%     |
| 18.0               | 2916.457      | 98.470      | 1097.419  | 3.73%       | 45.56%     |
| 19.0               | 2763.473      | 98.819      | 1196.238  | 3.75%       | 49.67%     |
| 20.0               | 2610.905      | 98.366      | 1294.604  | 3.73%       | 53.75%     |
| 21.0               | 2466.570      | 97.498      | 1392.102  | 3.70%       | 57.80%     |
| 22.0               | 2314.486      | 96.077      | 1488.179  | 3.64%       | 61.79%     |
| 23.0               | 2165.585      | 94.004      | 1582.183  | 3.57%       | 65.69%     |
| 24.0               | 2020.766      | 91.529      | 1673.712  | 3.47%       | 69.49%     |
| 25.0               | 1866.191      | 88.381      | 1762.093  | 3.35%       | 73.16%     |
| 26.0               | 1669.478      | 83.460      | 1845.552  | 3.17%       | 76.63%     |
| 27.0               | 1483.006      | 77.126      | 1922.679  | 2.93%       | 79.83%     |
| 28.0               | 1261.529      | 69.486      | 1992.164  | 2.64%       | 82.71%     |
| 29.0               | 1108.712      | 62.012      | 2054.177  | 2.35%       | 85.29%     |
| 30.0               | 951.964       | 55.638      | 2109.815  | 2.11%       | 87.60%     |
| 31.0               | 758.711       | 47.606      | 2157.42   | 1.81%       | 89.57%     |
| 32.0               | 589.544       | 38.626      | 2196.046  | 1.46%       | 91.18%     |
| 33.0               | 436.664       | 30.232      | 2226.278  | 1.15%       | 92.43%     |
| 34.0               | 314.000       | 22.717      | 2248.996  | 0.86%       | 93.38%     |
| 35.0               | 241.321       | 17.246      | 2266.242  | 0.65%       | 94.09%     |
| 36.0               | 183.200       | 13.517      | 2279.759  | 0.51%       | 94.65%     |
| 37.0               | 145.206       | 10.711      | 2290.47   | 0.41%       | 95.10%     |

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0               | 99.872        | 8.180       | 2298.65   | 0.31%       | 95.44%     |
| 39.0               | 84.269        | 6.285       | 2304.935  | 0.24%       | 95.70%     |
| 40.0               | 72.845        | 5.480       | 2310.415  | 0.21%       | 95.93%     |
| 41.0               | 63.387        | 4.851       | 2315.266  | 0.18%       | 96.13%     |
| 42.0               | 55.174        | 4.308       | 2319.573  | 0.16%       | 96.31%     |
| 43.0               | 49.175        | 3.865       | 2323.439  | 0.15%       | 96.47%     |
| 44.0               | 44.283        | 3.527       | 2326.966  | 0.13%       | 96.61%     |
| 45.0               | 40.325        | 3.252       | 2330.218  | 0.12%       | 96.75%     |
| 46.0               | 37.246        | 3.034       | 2333.251  | 0.12%       | 96.87%     |
| 47.0               | 34.651        | 2.860       | 2336.111  | 0.11%       | 96.99%     |
| 48.0               | 32.527        | 2.716       | 2338.827  | 0.10%       | 97.11%     |
| 49.0               | 30.645        | 2.594       | 2341.421  | 0.10%       | 97.21%     |
| 50.0               | 29.033        | 2.488       | 2343.909  | 0.09%       | 97.32%     |
| 51.0               | 27.587        | 2.396       | 2346.305  | 0.09%       | 97.42%     |
| 52.0               | 26.293        | 2.312       | 2348.617  | 0.09%       | 97.51%     |
| 53.0               | 25.117        | 2.236       | 2350.853  | 0.08%       | 97.60%     |
| 54.0               | 24.141        | 2.171       | 2353.024  | 0.08%       | 97.70%     |
| 55.0               | 23.214        | 2.114       | 2355.138  | 0.08%       | 97.78%     |
| 56.0               | 22.377        | 2.060       | 2357.198  | 0.08%       | 97.87%     |
| 57.0               | 21.588        | 2.010       | 2359.208  | 0.08%       | 97.95%     |
| 58.0               | 20.917        | 1.966       | 2361.174  | 0.07%       | 98.03%     |
| 59.0               | 20.266        | 1.925       | 2363.099  | 0.07%       | 98.11%     |
| 60.0               | 19.657        | 1.886       | 2364.985  | 0.07%       | 98.19%     |
| 61.0               | 19.125        | 1.851       | 2366.836  | 0.07%       | 98.27%     |
| 62.0               | 18.592        | 1.817       | 2368.653  | 0.07%       | 98.34%     |
| 63.0               | 18.087        | 1.784       | 2370.437  | 0.07%       | 98.42%     |
| 64.0               | 17.630        | 1.753       | 2372.19   | 0.07%       | 98.49%     |
| 65.0               | 17.208        | 1.724       | 2373.914  | 0.07%       | 98.56%     |
| 66.0               | 16.779        | 1.696       | 2375.61   | 0.06%       | 98.63%     |
| 67.0               | 16.399        | 1.668       | 2377.278  | 0.06%       | 98.70%     |
| 68.0               | 16.004        | 1.641       | 2378.919  | 0.06%       | 98.77%     |
| 69.0               | 15.658        | 1.615       | 2380.535  | 0.06%       | 98.84%     |
| 70.0               | 15.285        | 1.589       | 2382.124  | 0.06%       | 98.90%     |
| 71.0               | 14.945        | 1.562       | 2383.686  | 0.06%       | 98.97%     |
| 72.0               | 14.586        | 1.536       | 2385.222  | 0.06%       | 99.03%     |
| 73.0               | 14.274        | 1.509       | 2386.731  | 0.06%       | 99.09%     |
| 74.0               | 13.963        | 1.485       | 2388.215  | 0.06%       | 99.16%     |
| 75.0               | 13.631        | 1.458       | 2389.673  | 0.06%       | 99.22%     |

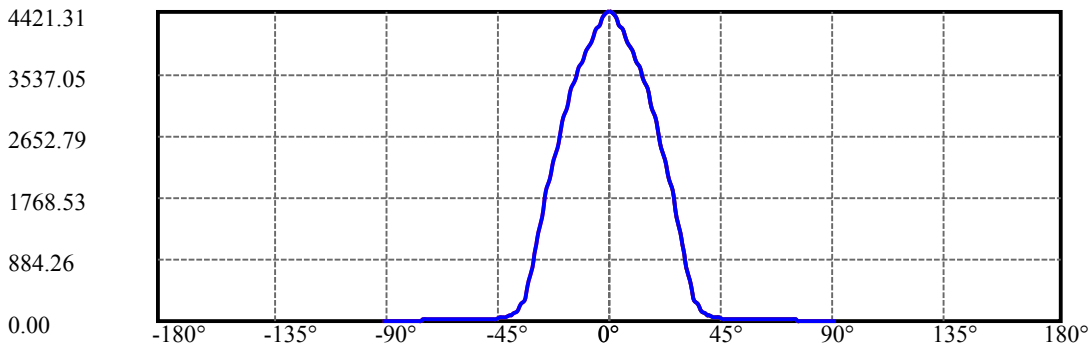
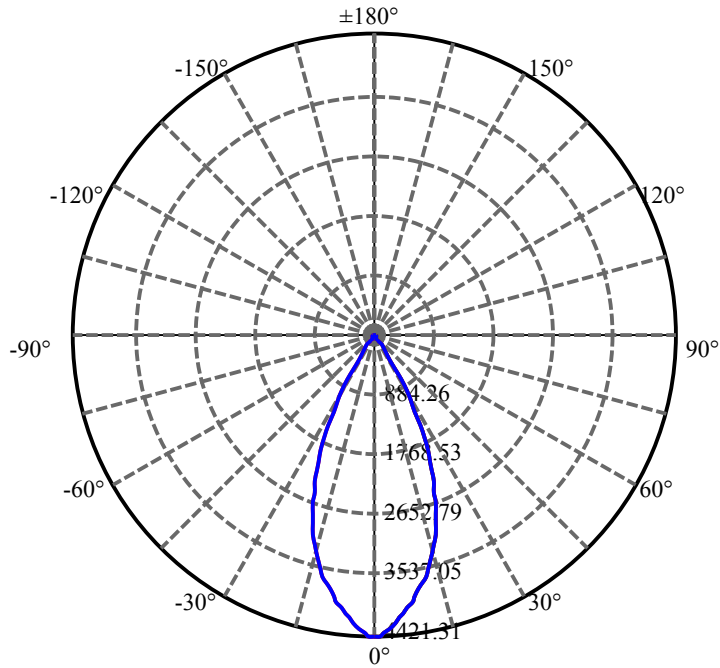
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0               | 13.319        | 1.431       | 2391.104  | 0.05%       | 99.28%     |
| 77.0               | 13.029        | 1.405       | 2392.509  | 0.05%       | 99.33%     |
| 78.0               | 12.731        | 1.379       | 2393.888  | 0.05%       | 99.39%     |
| 79.0               | 12.434        | 1.352       | 2395.24   | 0.05%       | 99.45%     |
| 80.0               | 12.164        | 1.326       | 2396.566  | 0.05%       | 99.50%     |
| 81.0               | 11.901        | 1.301       | 2397.867  | 0.05%       | 99.56%     |
| 82.0               | 11.659        | 1.278       | 2399.145  | 0.05%       | 99.61%     |
| 83.0               | 11.382        | 1.253       | 2400.397  | 0.05%       | 99.66%     |
| 84.0               | 11.140        | 1.227       | 2401.624  | 0.05%       | 99.71%     |
| 85.0               | 10.891        | 1.202       | 2402.827  | 0.05%       | 99.76%     |
| 86.0               | 10.656        | 1.178       | 2404.005  | 0.04%       | 99.81%     |
| 87.0               | 10.496        | 1.158       | 2405.162  | 0.04%       | 99.86%     |
| 88.0               | 10.310        | 1.140       | 2406.302  | 0.04%       | 99.91%     |
| 89.0               | 10.178        | 1.123       | 2407.425  | 0.04%       | 99.95%     |
| 90.0               | 10.137        | 1.114       | 2408.539  | 0.04%       | 100.00%    |

ZONAL LUMEN SUMMARY

| Zone    | Lumens  | %Lamp  | %Fixt   |
|---------|---------|--------|---------|
| 0-30    | 2109.81 | 80.02% | 87.60%  |
| 0-40    | 2310.41 | 87.63% | 95.93%  |
| 0-60    | 2364.99 | 89.70% | 98.19%  |
| 0-90    | 2407.42 | 91.31% | 99.95%  |
| 0-120   | 2407.42 | 91.31% | 99.95%  |
| 0-180   | 2408.54 | 91.35% | 100.00% |
| 60-90   | 42.44   | 1.61%  | 1.76%   |
| 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%   |
| 0-27.06 | 1926.83 | 73.08% | 80.00%  |

ZONAL LUMEN SUMMARY

|         |        |
|---------|--------|
| 0-10    | 385.82 |
| 10-20   | 908.78 |
| 20-30   | 815.21 |
| 30-40   | 200.60 |
| 40-50   | 33.49  |
| 50-60   | 21.08  |
| 60-70   | 17.14  |
| 70-80   | 14.44  |
| 80-90   | 10.86  |
| 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: ———

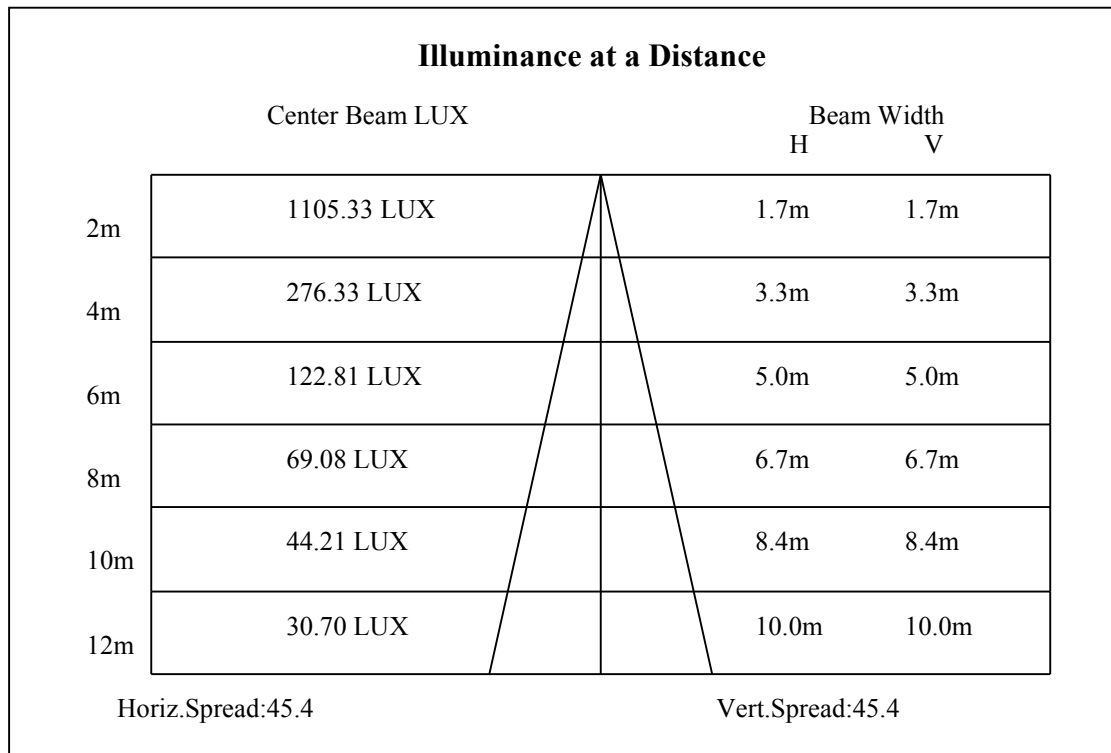
C90/C270: ———

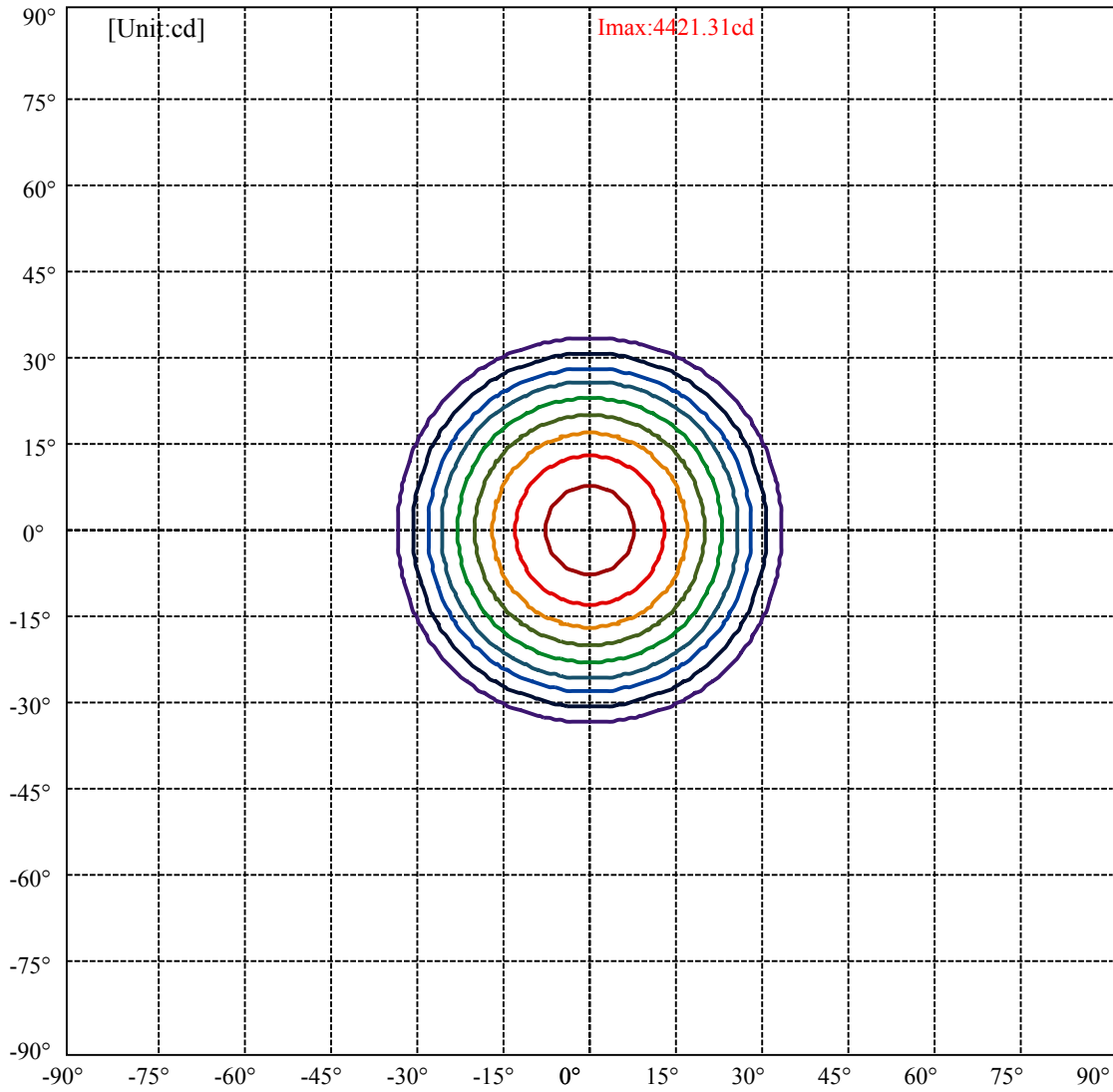
Field angle(10%Imax):C0/180Left:33.0 Right:33.0

:C90/270Left:33.0 Right:33.0

Beam Angle(50%Imax):C0/180Left:22.7 Right:22.7

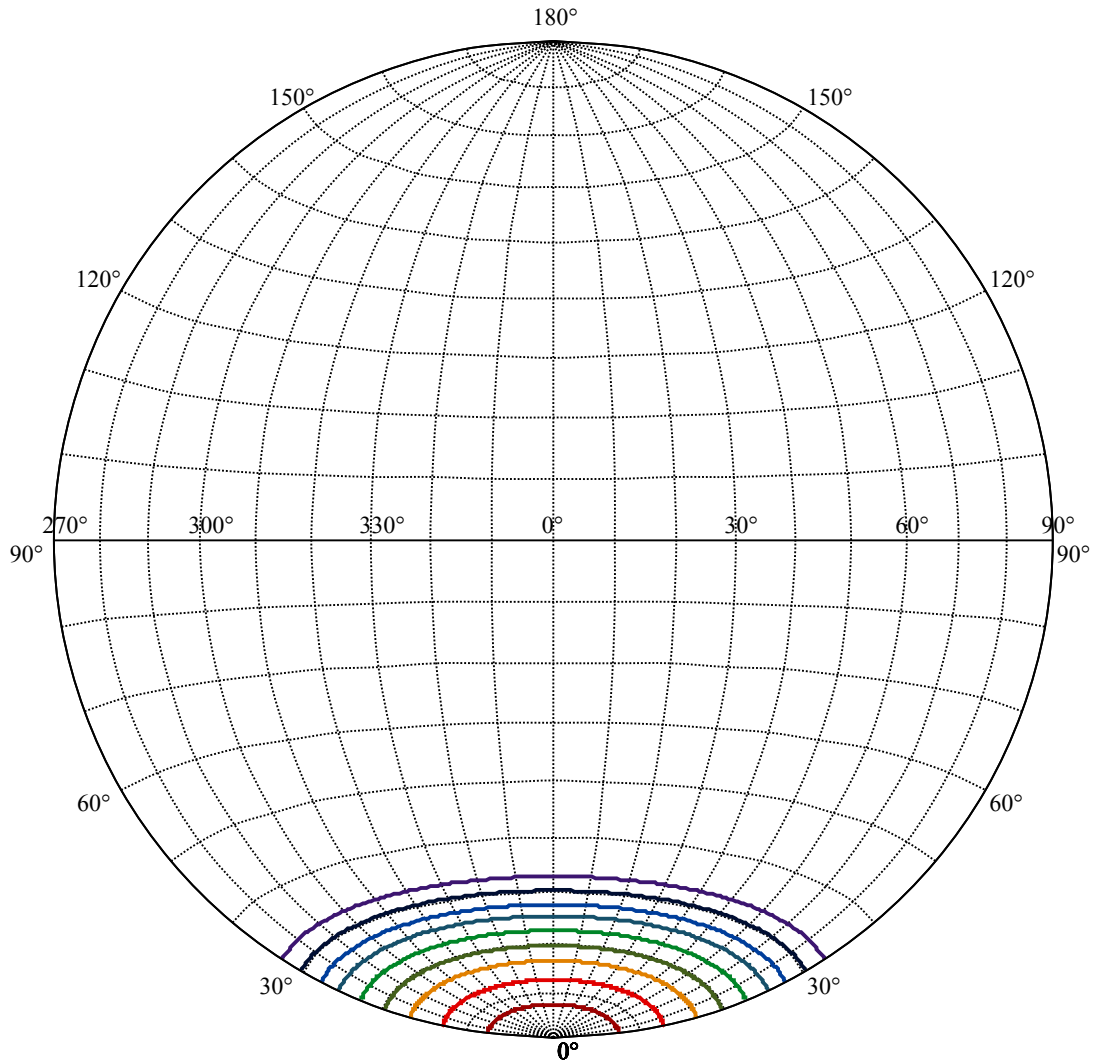
:C90/270Left:22.7 Right:22.7





|                   |   |
|-------------------|---|
| (10%Imax) 442.131 | — |
| (20%Imax) 884.263 | — |
| (30%Imax) 1326.39 | — |
| (40%Imax) 1768.53 | — |
| (50%Imax) 2210.66 | — |
| (60%Imax) 2652.79 | — |
| (70%Imax) 3094.92 | — |
| (80%Imax) 3537.05 | — |
| (90%Imax) 3979.18 | — |





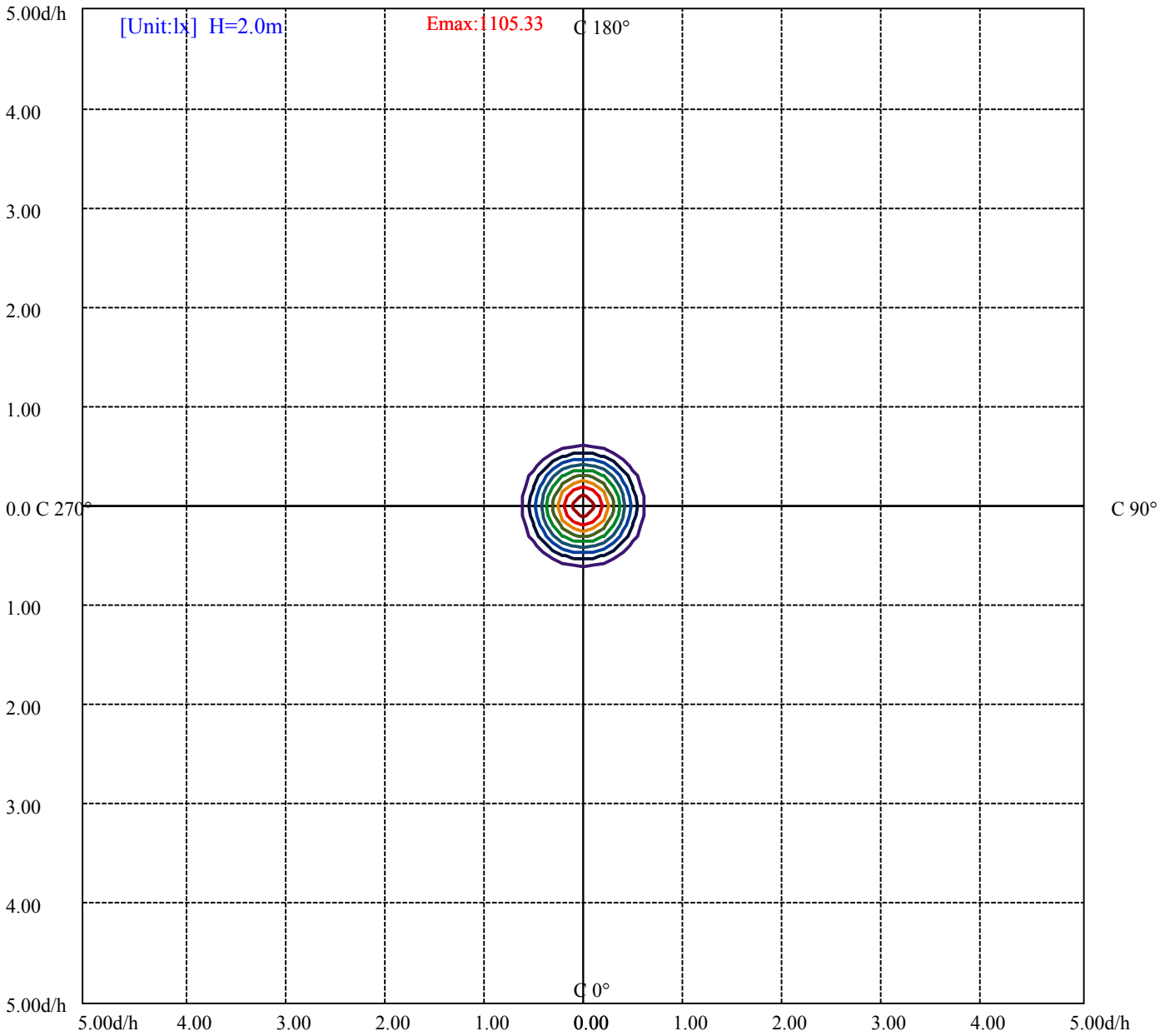
House

[Unit:cd]

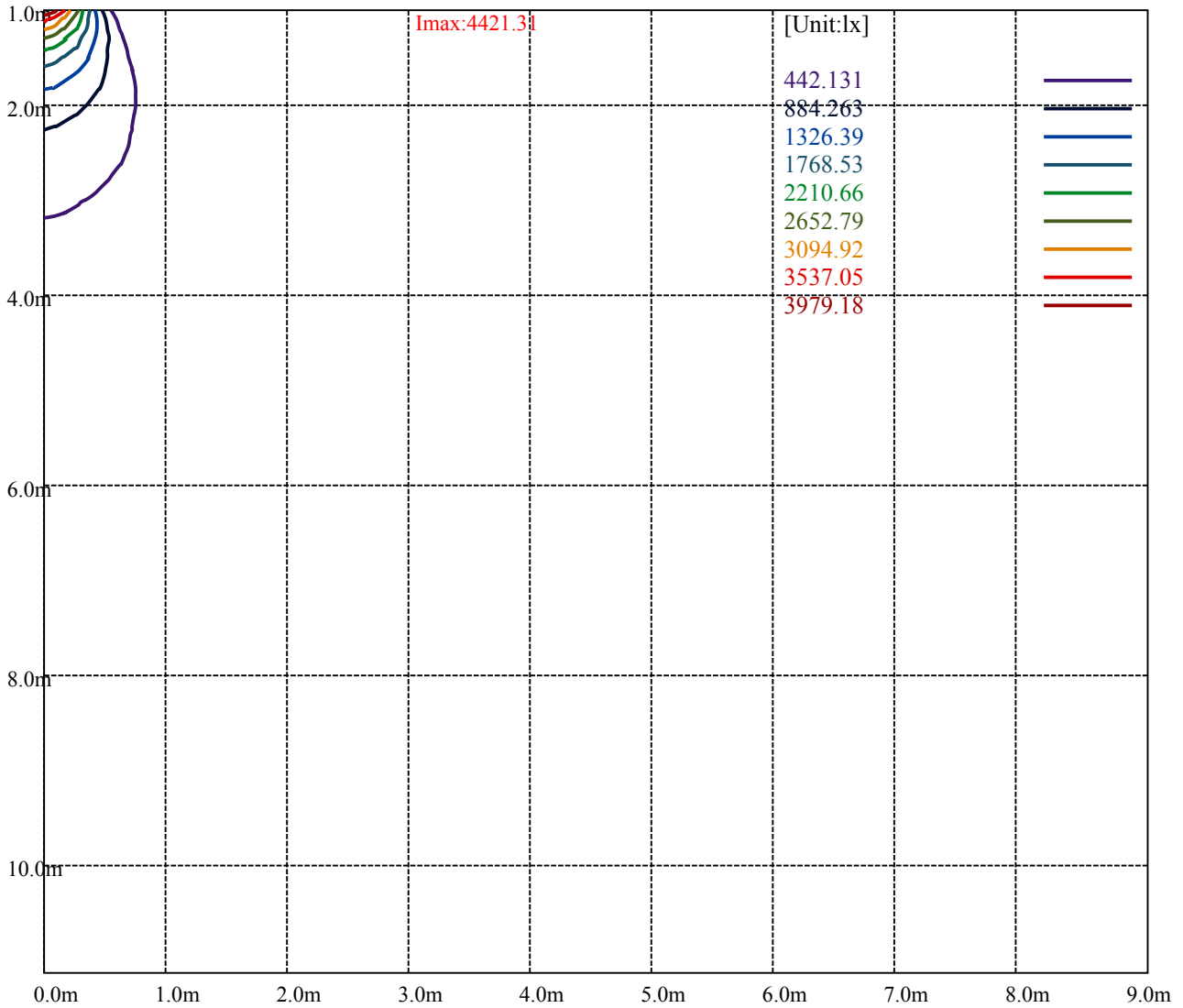
Road

Imax:4421.31

|           |         |   |
|-----------|---------|---|
| (10%Imax) | 442.131 | — |
| (20%Imax) | 884.263 | — |
| (30%Imax) | 1326.39 | — |
| (40%Imax) | 1768.53 | — |
| (50%Imax) | 2210.66 | — |
| (60%Imax) | 2652.79 | — |
| (70%Imax) | 3094.92 | — |
| (80%Imax) | 3537.05 | — |
| (90%Imax) | 3979.18 | — |



|                    |   |
|--------------------|---|
| (10%Emax) 110.5328 | — |
| (20%Emax) 221.0655 | — |
| (30%Emax) 331.5975 | — |
| (40%Emax) 442.13   | — |
| (50%Emax) 552.665  | — |
| (60%Emax) 663.1975 | — |
| (70%Emax) 773.73   | — |
| (80%Emax) 884.2625 | — |
| (90%Emax) 994.795  | — |



Luminance Table

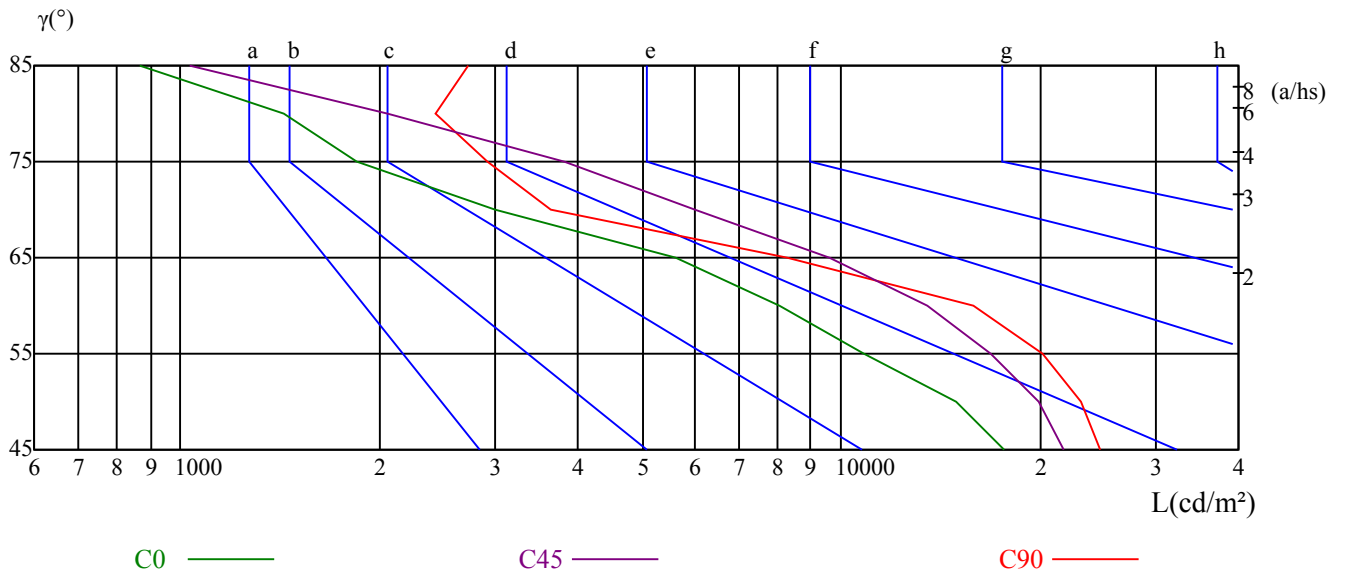
| $\gamma$ | 45    | 50    | 55    | 60    | 65   | 70   | 75   | 80   | 85   |
|----------|-------|-------|-------|-------|------|------|------|------|------|
| C0       | 17707 | 14902 | 10843 | 8081  | 5637 | 2993 | 1851 | 1437 | 868  |
| C45      | 21736 | 19918 | 16903 | 13532 | 9602 | 6004 | 3809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

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

Glare Table

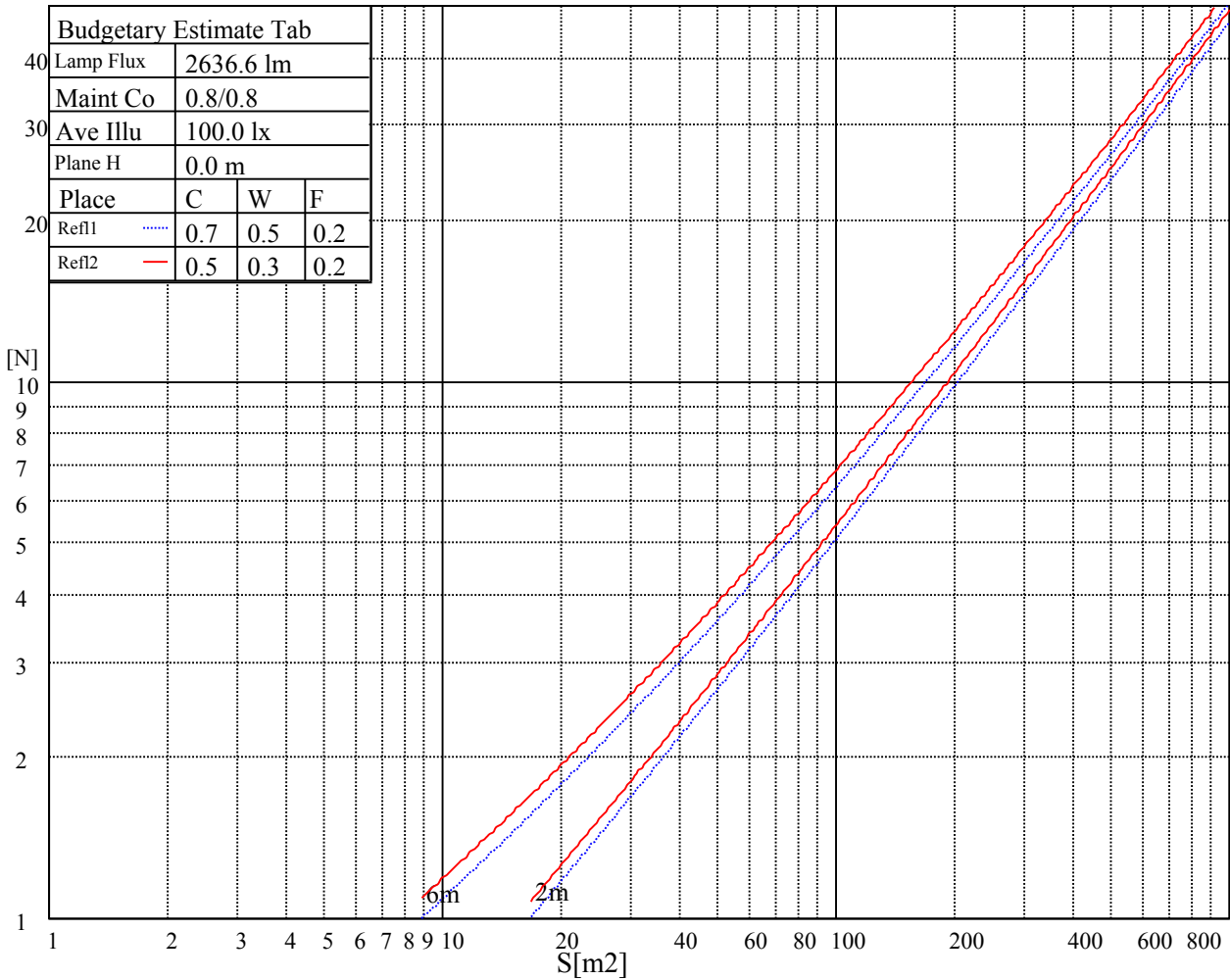
| Glare | Quality | Service Values Illuminance(lx) |      |      |       |       |       |       |       |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15  | A       | 2000                           | 1000 | 500  | <=300 |       |       |       |       |
| 1.5   | B       |                                | 2000 | 1000 | 500   | <=300 |       |       |       |
| 1.85  | C       |                                |      | 2000 | 1000  | 500   | <=300 |       |       |
| 2.2   | D       |                                |      |      | 2000  | 1000  | 500   | <=300 |       |
| 2.55  | E       |                                |      |      |       | 2000  | 1000  | 500   | <=300 |
|       |         | a                              | b    | c    | d     | e     | f     | g     | h     |

Luminance Limiting Curve

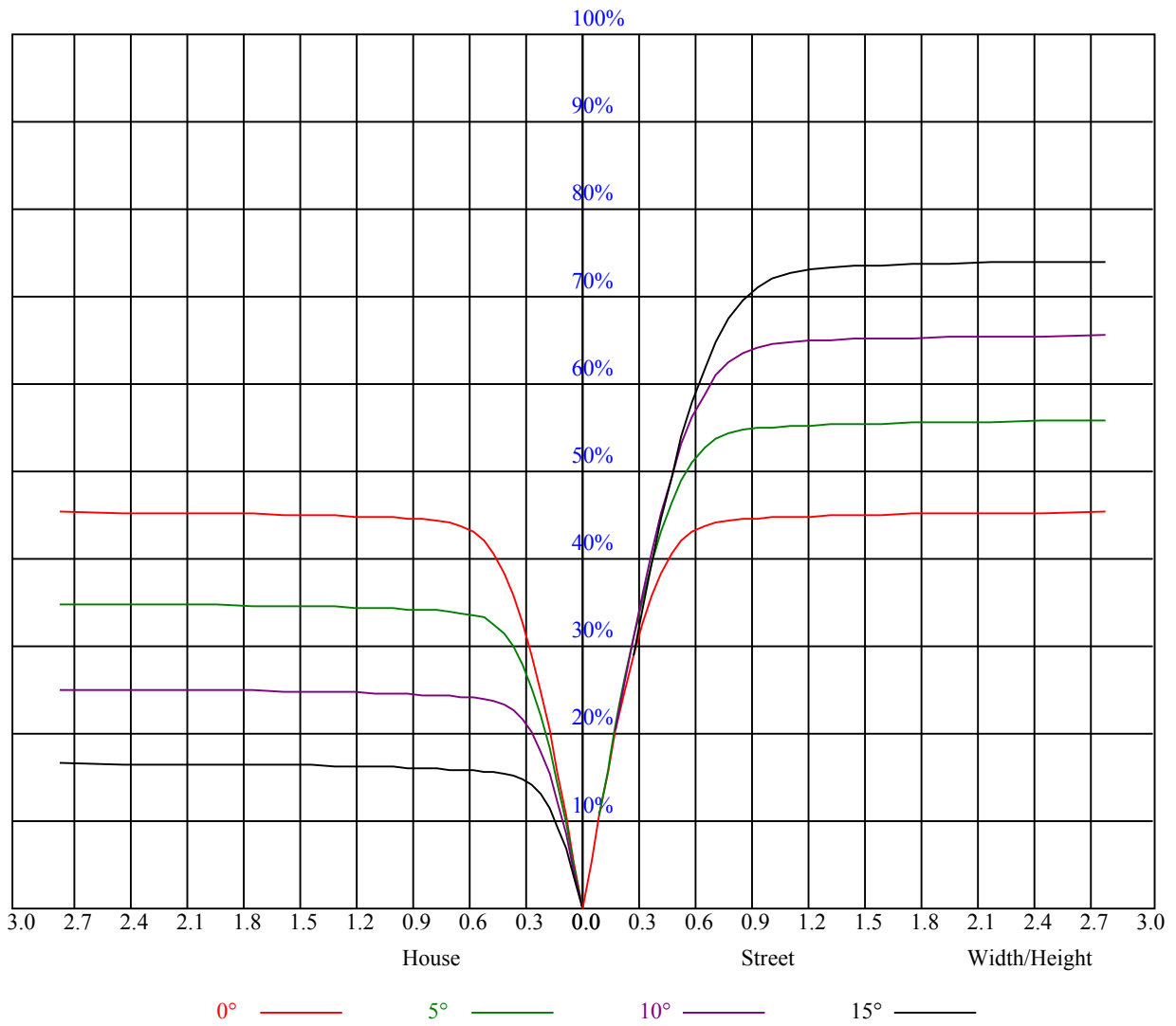


| Illumination assessment according UGR             |     |                  |     |     |     |     |                |     |     |     |  |
|---|-----|------------------|-----|-----|-----|-----|----------------|-----|-----|-----|--|
| Rf of Ceiling                                     | 70  | 70               | 50  | 50  | 30  | 70  | 70             | 50  | 50  | 30  |  |
| Rf of Wall  | 50  | 30               | 50  | 30  | 30  | 50  | 30             | 50  | 30  | 30  |  |
| Rf of Floor                                       | 20  | 20               | 20  | 20  | 20  | 20  | 20             | 20  | 20  | 20  |  |
| Room dimensions                                   |     | Viewed crosswise |     |     |     |     | Viewed endwise |     |     |     |  |
| X   | Y   |                  |     |     |     |     |                |     |     |     |  |
| 2H  | 2H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 3H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 4H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 6H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 8H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 12H | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
| 4H  | 2H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 3H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 4H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 6H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 8H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
| 8H  | 12H | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 4H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 6H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 8H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
| 12H   | 12H | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 4H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 6H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 8H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
| Variation with the observer position at spacings: |     |                  |     |     |     |     |                |     |     |     |  |
| S = 1.0H  |     | 非数字/非数字          |     |     |     |     | 非数字/非数字        |     |     |     |  |
| S = 1.5H  |     | 非数字/非数字          |     |     |     |     | 非数字/非数字        |     |     |     |  |
| S = 2.0H  |     | 非数字/非数字          |     |     |     |     | 非数字/非数字        |     |     |     |  |
| Standard tables:                                  |     | BK0              |     |     |     |     | BK0            |     |     |     |  |
| Uncorrected UGR                                   |     | 负无穷大             |     |     |     |     | 负无穷大           |     |     |     |  |

UGR calculation is based on CIE Publ. 117 ,S/H = 0.25



| RHOCC | 80                                     |      |      | 70   |      |      | 50   |      |      | 30   |      |      | 10   |      |      | 0    |
|-------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| RHOW  | 50                                     | 30   | 10   | 50   | 30   | 10   | 50   | 30   | 10   | 50   | 30   | 10   | 50   | 30   | 10   | 0    |
| RCR   | COEFFICIENTS OF UTILIZATION RHOF=20 CU |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 0     | 1.09                                   | 1.09 | 1.09 | 1.06 | 1.06 | 1.06 | 1.02 | 1.02 | 1.02 | 0.97 | 0.97 | 0.97 | 0.93 | 0.93 | 0.93 | 0.91 |
| 1     | 1.02                                   | 0.99 | 0.97 | 1.00 | 0.98 | 0.96 | 0.96 | 0.94 | 0.93 | 0.93 | 0.91 | 0.90 | 0.89 | 0.88 | 0.88 | 0.86 |
| 2     | 0.95                                   | 0.92 | 0.89 | 0.94 | 0.91 | 0.88 | 0.91 | 0.88 | 0.86 | 0.88 | 0.86 | 0.84 | 0.86 | 0.84 | 0.83 | 0.81 |
| 3     | 0.90                                   | 0.86 | 0.83 | 0.89 | 0.85 | 0.82 | 0.86 | 0.83 | 0.81 | 0.84 | 0.82 | 0.79 | 0.82 | 0.80 | 0.78 | 0.77 |
| 4     | 0.85                                   | 0.80 | 0.77 | 0.84 | 0.80 | 0.77 | 0.82 | 0.79 | 0.76 | 0.80 | 0.77 | 0.75 | 0.79 | 0.76 | 0.74 | 0.73 |
| 5     | 0.81                                   | 0.76 | 0.72 | 0.80 | 0.75 | 0.72 | 0.78 | 0.74 | 0.71 | 0.77 | 0.73 | 0.71 | 0.75 | 0.73 | 0.70 | 0.69 |
| 6     | 0.77                                   | 0.72 | 0.68 | 0.76 | 0.71 | 0.68 | 0.75 | 0.71 | 0.68 | 0.73 | 0.70 | 0.67 | 0.72 | 0.69 | 0.67 | 0.66 |
| 7     | 0.73                                   | 0.68 | 0.65 | 0.72 | 0.68 | 0.65 | 0.71 | 0.67 | 0.64 | 0.70 | 0.67 | 0.64 | 0.69 | 0.66 | 0.64 | 0.62 |
| 8     | 0.70                                   | 0.65 | 0.61 | 0.69 | 0.65 | 0.61 | 0.68 | 0.64 | 0.61 | 0.67 | 0.64 | 0.61 | 0.66 | 0.63 | 0.61 | 0.59 |
| 9     | 0.66                                   | 0.62 | 0.59 | 0.66 | 0.62 | 0.58 | 0.65 | 0.61 | 0.58 | 0.64 | 0.61 | 0.58 | 0.64 | 0.60 | 0.58 | 0.57 |
| 10    | 0.64                                   | 0.59 | 0.56 | 0.63 | 0.59 | 0.56 | 0.63 | 0.58 | 0.56 | 0.62 | 0.58 | 0.55 | 0.61 | 0.58 | 0.55 | 0.54 |





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    | 4395.02 | 4344.65 | 4257.74 | 4196.30 | 4127.11 | 4036.88 | 3980.42 | 3922.85 | 3855.88 |
| 45.0   | 4434.88 | 4404.98 | 4359.04 | 4290.96 | 4217.34 | 4153.68 | 4091.68 | 4005.88 | 3941.12 |
| 90.0   | 4409.97 | 4370.66 | 4302.03 | 4243.35 | 4191.87 | 4124.34 | 4036.88 | 3967.14 | 3886.32 |
| 135.0  | 4445.39 | 4427.68 | 4387.82 | 4324.72 | 4243.91 | 4186.34 | 4113.27 | 4047.95 | 3955.51 |
| 180.0  | 4395.02 | 4439.30 | 4430.45 | 4382.84 | 4328.60 | 4231.17 | 4158.66 | 4092.24 | 4031.35 |
| 225.0  | 4434.88 | 4431.00 | 4387.27 | 4331.92 | 4243.91 | 4171.95 | 4107.74 | 4021.38 | 3958.28 |
| 270.0  | 4409.97 | 4434.88 | 4431.55 | 4390.59 | 4334.69 | 4266.60 | 4183.02 | 4104.41 | 4019.72 |
| 315.0  | 4445.39 | 4419.93 | 4363.47 | 4296.49 | 4228.41 | 4151.46 | 4075.08 | 4008.65 | 3947.76 |
| 360.0  | 4395.02 | 4344.65 | 4257.74 | 4196.30 | 4127.11 | 4036.88 | 3980.42 | 3922.85 | 3855.88 |
| C/γ(°) | 9.0     | 10.0    | 11.0    | 12.0    | 13.0    | 14.0    | 15.0    | 16.0    | 17.0    |
| 0.0    | 3765.10 | 3693.69 | 3621.18 | 3538.15 | 3430.21 | 3322.27 | 3206.03 | 3033.88 | 2884.97 |
| 45.0   | 3863.63 | 3762.88 | 3679.30 | 3587.41 | 3470.62 | 3377.07 | 3271.34 | 3112.48 | 2979.63 |
| 90.0   | 3771.19 | 3677.64 | 3583.54 | 3452.35 | 3349.94 | 3237.58 | 3085.91 | 2967.45 | 2830.17 |
| 135.0  | 3884.11 | 3803.29 | 3712.51 | 3604.02 | 3515.45 | 3420.80 | 3291.82 | 3177.24 | 3061.55 |
| 180.0  | 3941.67 | 3874.70 | 3808.27 | 3720.26 | 3642.77 | 3571.36 | 3469.51 | 3373.19 | 3271.90 |
| 225.0  | 3895.18 | 3801.08 | 3723.58 | 3647.75 | 3561.95 | 3451.80 | 3356.59 | 3250.86 | 3126.32 |
| 270.0  | 3956.62 | 3895.73 | 3825.99 | 3719.71 | 3636.12 | 3549.22 | 3449.58 | 3318.39 | 3214.88 |
| 315.0  | 3884.11 | 3796.65 | 3720.81 | 3638.34 | 3558.07 | 3443.49 | 3349.94 | 3210.45 | 3077.05 |
| 360.0  | 3765.10 | 3693.69 | 3621.18 | 3538.15 | 3430.21 | 3322.27 | 3206.03 | 3033.88 | 2884.97 |
| C/γ(°) | 18.0    | 19.0    | 20.0    | 21.0    | 22.0    | 23.0    | 24.0    | 25.0    | 26.0    |
| 0.0    | 2742.72 | 2556.17 | 2405.61 | 2267.78 | 2090.10 | 1948.94 | 1812.22 | 1663.87 | 1293.56 |
| 45.0   | 2841.24 | 2700.65 | 2528.50 | 2397.86 | 2268.89 | 2129.95 | 1958.36 | 1824.40 | 1672.73 |
| 90.0   | 2707.29 | 2542.34 | 2418.34 | 2291.58 | 2160.40 | 1994.33 | 1858.72 | 1666.64 | 1333.97 |
| 135.0  | 2901.03 | 2768.18 | 2598.24 | 2467.05 | 2334.21 | 2205.79 | 2033.64 | 1900.23 | 1755.21 |
| 180.0  | 3127.42 | 2989.04 | 2842.91 | 2670.76 | 2525.73 | 2368.53 | 2227.37 | 2049.69 | 1909.09 |
| 225.0  | 2960.81 | 2825.19 | 2678.51 | 2492.52 | 2350.81 | 2175.34 | 2035.85 | 1901.34 | 1765.72 |
| 270.0  | 3105.84 | 2961.92 | 2796.41 | 2667.43 | 2487.54 | 2342.51 | 2218.52 | 2032.53 | 1912.97 |
| 315.0  | 2945.31 | 2764.30 | 2618.72 | 2477.57 | 2298.23 | 2159.29 | 2021.46 | 1890.82 | 1712.59 |
| 360.0  | 2742.72 | 2556.17 | 2405.61 | 2267.78 | 2090.10 | 1948.94 | 1812.22 | 1663.87 | 1293.56 |
| C/γ(°) | 27.0    | 28.0    | 29.0    | 30.0    | 31.0    | 32.0    | 33.0    | 34.0    | 35.0    |
| 0.0    | 1073.08 | 1073.08 | 902.65  | 700.78  | 547.11  | 404.14  | 258.11  | 180.23  | 138.11  |
| 45.0   | 1452.42 | 1262.01 | 1032.84 | 855.71  | 687.99  | 533.55  | 364.17  | 281.14  | 281.14  |
| 90.0   | 1098.33 | 1050.78 | 864.96  | 691.64  | 494.14  | 362.46  | 261.21  | 189.03  | 139.33  |
| 135.0  | 1575.86 | 1383.78 | 1147.42 | 968.08  | 800.91  | 603.30  | 460.49  | 304.94  | 304.94  |
| 180.0  | 1777.90 | 1619.59 | 1390.98 | 1197.80 | 970.29  | 807.00  | 645.92  | 462.15  | 332.62  |
| 225.0  | 1571.43 | 1061.96 | 1061.96 | 1017.40 | 798.92  | 636.23  | 485.78  | 352.49  | 225.40  |
| 270.0  | 1772.37 | 1573.09 | 1400.94 | 1209.97 | 1012.36 | 771.57  | 601.08  | 449.97  | 324.87  |
| 315.0  | 1542.65 | 1067.94 | 1067.94 | 974.33  | 757.96  | 598.10  | 416.54  | 292.05  | 184.16  |
| 360.0  | 1073.08 | 1073.08 | 902.65  | 700.78  | 547.11  | 404.14  | 258.11  | 180.23  | 138.11  |
| C/γ(°) | 36.0    | 37.0    | 38.0    | 39.0    | 40.0    | 41.0    | 42.0    | 43.0    | 44.0    |
| 0.0    | 109.43  | 92.88   | 77.66   | 68.14   | 59.78   | 53.14   | 46.55   | 42.57   | 39.19   |
| 45.0   | 139.99  | 111.98  | 95.43   | 82.64   | 72.35   | 61.83   | 54.74   | 49.15   | 43.90   |
| 90.0   | 116.24  | 99.19   | 86.24   | 73.51   | 64.99   | 57.84   | 50.59   | 46.16   | 42.40   |
| 135.0  | 199.11  | 120.01  | 100.47  | 85.52   | 74.62   | 63.27   | 56.02   | 50.04   | 45.45   |
| 180.0  | 303.28  | 303.28  | 118.73  | 99.75   | 85.08   | 74.12   | 62.77   | 55.52   | 49.38   |
| 225.0  | 162.41  | 127.76  | 101.85  | 86.52   | 72.07   | 62.72   | 55.13   | 47.44   | 42.79   |
| 270.0  | 297.75  | 193.46  | 122.50  | 99.30   | 85.52   | 74.51   | 62.94   | 55.63   | 49.49   |
| 315.0  | 137.39  | 113.09  | 96.09   | 78.77   | 68.36   | 59.67   | 52.64   | 46.88   | 41.68   |
| 360.0  | 109.43  | 92.88   | 77.66   | 68.14   | 59.78   | 53.14   | 46.55   | 42.57   | 39.19   |

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    | 36.53 | 33.77 | 31.88 | 30.22 | 28.73 | 27.07 | 25.96 | 24.69 | 23.80 |
| 45.0   | 40.41 | 37.64 | 34.65 | 32.66 | 30.39 | 28.84 | 27.57 | 26.35 | 25.08 |
| 90.0   | 38.69 | 36.26 | 34.10 | 31.77 | 30.11 | 28.62 | 27.34 | 25.91 | 24.85 |
| 135.0  | 40.85 | 37.92 | 35.43 | 33.27 | 31.00 | 29.34 | 27.62 | 26.40 | 25.08 |
| 180.0  | 44.56 | 39.97 | 37.14 | 34.26 | 32.44 | 30.78 | 28.89 | 27.57 | 26.35 |
| 225.0  | 39.19 | 36.20 | 33.32 | 31.39 | 29.78 | 28.34 | 26.74 | 25.57 | 24.52 |
| 270.0  | 43.95 | 40.46 | 37.59 | 35.37 | 32.99 | 31.27 | 29.72 | 28.40 | 26.79 |
| 315.0  | 38.42 | 35.76 | 33.10 | 31.27 | 29.72 | 28.01 | 26.85 | 25.46 | 24.47 |
| 360.0  | 36.53 | 33.77 | 31.88 | 30.22 | 28.73 | 27.07 | 25.96 | 24.69 | 23.80 |
| C/γ(°) | 54.0  | 55.0  | 56.0  | 57.0  | 58.0  | 59.0  | 60.0  | 61.0  | 62.0  |
| 0.0    | 23.03 | 22.09 | 21.42 | 20.81 | 20.20 | 19.54 | 18.99 | 18.54 | 18.10 |
| 45.0   | 24.13 | 23.36 | 22.58 | 21.70 | 21.09 | 20.48 | 19.71 | 19.21 | 18.65 |
| 90.0   | 23.91 | 23.03 | 22.09 | 21.37 | 20.70 | 19.98 | 19.43 | 18.76 | 18.32 |
| 135.0  | 24.08 | 23.19 | 22.42 | 21.53 | 20.87 | 20.20 | 19.71 | 19.21 | 18.60 |
| 180.0  | 25.24 | 24.02 | 23.19 | 22.36 | 21.59 | 20.81 | 20.20 | 19.65 | 19.04 |
| 225.0  | 23.41 | 22.58 | 21.81 | 20.92 | 20.37 | 19.82 | 19.21 | 18.71 | 18.27 |
| 270.0  | 25.68 | 24.63 | 23.53 | 22.69 | 21.75 | 21.09 | 20.48 | 19.87 | 19.21 |
| 315.0  | 23.64 | 22.81 | 21.98 | 21.31 | 20.76 | 20.20 | 19.54 | 19.04 | 18.54 |
| 360.0  | 23.03 | 22.09 | 21.42 | 20.81 | 20.20 | 19.54 | 18.99 | 18.54 | 18.10 |
| C/γ(°) | 63.0  | 64.0  | 65.0  | 66.0  | 67.0  | 68.0  | 69.0  | 70.0  | 71.0  |
| 0.0    | 17.55 | 17.16 | 16.77 | 16.33 | 15.94 | 15.61 | 15.22 | 14.89 | 14.56 |
| 45.0   | 18.10 | 17.66 | 17.27 | 16.77 | 16.44 | 16.05 | 15.72 | 15.28 | 14.95 |
| 90.0   | 17.82 | 17.33 | 16.88 | 16.55 | 16.16 | 15.67 | 15.33 | 15.00 | 14.67 |
| 135.0  | 18.10 | 17.66 | 17.21 | 16.77 | 16.38 | 16.05 | 15.72 | 15.22 | 14.95 |
| 180.0  | 18.54 | 18.10 | 17.55 | 17.16 | 16.72 | 16.33 | 16.00 | 15.67 | 15.22 |
| 225.0  | 17.88 | 17.33 | 16.99 | 16.66 | 16.27 | 15.89 | 15.61 | 15.22 | 14.89 |
| 270.0  | 18.71 | 18.21 | 17.77 | 17.27 | 16.88 | 16.50 | 16.05 | 15.72 | 15.33 |
| 315.0  | 17.99 | 17.60 | 17.21 | 16.72 | 16.38 | 15.94 | 15.61 | 15.28 | 15.00 |
| 360.0  | 17.55 | 17.16 | 16.77 | 16.33 | 15.94 | 15.61 | 15.22 | 14.89 | 14.56 |
| C/γ(°) | 72.0  | 73.0  | 74.0  | 75.0  | 76.0  | 77.0  | 78.0  | 79.0  | 80.0  |
| 0.0    | 14.17 | 13.89 | 13.56 | 13.28 | 12.95 | 12.68 | 12.40 | 12.12 | 11.85 |
| 45.0   | 14.56 | 14.28 | 13.95 | 13.62 | 13.28 | 12.95 | 12.73 | 12.34 | 12.12 |
| 90.0   | 14.28 | 13.95 | 13.67 | 13.28 | 13.01 | 12.73 | 12.40 | 12.12 | 11.90 |
| 135.0  | 14.61 | 14.28 | 14.00 | 13.62 | 13.34 | 13.06 | 12.73 | 12.45 | 12.18 |
| 180.0  | 14.89 | 14.61 | 14.28 | 13.95 | 13.67 | 13.40 | 13.12 | 12.73 | 12.45 |
| 225.0  | 14.56 | 14.23 | 13.95 | 13.67 | 13.34 | 13.01 | 12.73 | 12.51 | 12.23 |
| 270.0  | 14.95 | 14.67 | 14.28 | 13.95 | 13.67 | 13.40 | 13.01 | 12.73 | 12.45 |
| 315.0  | 14.67 | 14.28 | 14.00 | 13.67 | 13.28 | 13.01 | 12.73 | 12.45 | 12.12 |
| 360.0  | 14.17 | 13.89 | 13.56 | 13.28 | 12.95 | 12.68 | 12.40 | 12.12 | 11.85 |
| C/γ(°) | 81.0  | 82.0  | 83.0  | 84.0  | 85.0  | 86.0  | 87.0  | 88.0  | 89.0  |
| 0.0    | 11.62 | 11.35 | 11.13 | 10.85 | 10.63 | 10.46 | 10.35 | 10.19 | 10.13 |
| 45.0   | 11.85 | 11.57 | 11.29 | 11.07 | 10.79 | 10.63 | 10.46 | 10.30 | 10.13 |
| 90.0   | 11.62 | 11.40 | 11.18 | 10.90 | 10.63 | 10.46 | 10.35 | 10.13 | 10.13 |
| 135.0  | 11.90 | 11.68 | 11.35 | 11.13 | 10.85 | 10.63 | 10.46 | 10.30 | 10.07 |
| 180.0  | 12.18 | 11.96 | 11.62 | 11.40 | 11.18 | 10.96 | 10.74 | 10.46 | 10.30 |
| 225.0  | 11.96 | 11.73 | 11.46 | 11.24 | 11.02 | 10.68 | 10.52 | 10.35 | 10.24 |
| 270.0  | 12.18 | 11.96 | 11.68 | 11.40 | 11.18 | 10.85 | 10.63 | 10.46 | 10.30 |
| 315.0  | 11.90 | 11.62 | 11.35 | 11.13 | 10.85 | 10.57 | 10.46 | 10.30 | 10.13 |
| 360.0  | 11.62 | 11.35 | 11.13 | 10.85 | 10.63 | 10.46 | 10.35 | 10.19 | 10.13 |

Intensity data(cd)

|        |       |
|--------|-------|
| C/γ(°) | 90.0  |
| 0.0    | 10.13 |
| 45.0   | 10.13 |
| 90.0   | 10.13 |
| 135.0  | 10.13 |
| 180.0  | 10.19 |
| 225.0  | 10.13 |
| 270.0  | 10.19 |
| 315.0  | 10.07 |
| 360.0  | 10.13 |