



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

NATA

| | |
|-------------------------------|---------------------|
| LumCAT: 3-1823-E | |
| Luminaire: 99.02.73.181 | |
| Report No: NATA0100 | Voltage(V): 34.9000 |
| Test No: GC2019022110 | Current(A): 0.7000 |
| LampCAT: LUMILEDS LUXEON 1208 | Power (W): 24.4300 |
| Lamp flux(lm): 2996.0 | PF: 0.0000 |
| Number of Lamps: 1 | Ballast type: DC |
| Length(mm): 72 | Width(mm): 72 |
| Phm Type: C | Height(mm): 0 |

Photometric Results

Lumens(lm): 2638.01
Efficiency(%): 88.05%
Lumens(lm)/Power(W): 108.07
Central intensity(cd): 9775.968
Maximum intensity(cd): 9775.968
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=24.9
 [C90/270]Total=24.9
Field angle(10%Imax): [C0/180]Total=58.0
 [C90/270]Total=58.0
Maximum s/h(1/2): C0_180=0.42 C90_270=0.42
Maximum s/h(1/4): C0_180=0.44 C90_270=0.44
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 88.13%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.624%

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0 | 9775.969 | 2.339 | 2.339 | .078% | .089% |
| 1.0 | 9697.781 | 18.560 | 20.899 | .619% | .792% |
| 2.0 | 9436.570 | 36.115 | 57.014 | 1.205% | 2.161% |
| 3.0 | 9099.422 | 52.223 | 109.237 | 1.743% | 4.141% |
| 4.0 | 8749.266 | 66.928 | 176.165 | 2.234% | 6.678% |
| 5.0 | 8321.766 | 79.536 | 255.701 | 2.655% | 9.693% |
| 6.0 | 7905.234 | 90.615 | 346.316 | 3.025% | 13.128% |
| 7.0 | 7473.656 | 99.880 | 446.196 | 3.334% | 16.914% |
| 8.0 | 7007.414 | 106.946 | 553.143 | 3.570% | 20.968% |
| 9.0 | 6532.242 | 112.059 | 665.201 | 3.740% | 25.216% |
| 10.0 | 6064.242 | 115.478 | 780.679 | 3.854% | 29.593% |
| 11.0 | 5578.102 | 116.718 | 897.397 | 3.896% | 34.018% |
| 12.0 | 5116.430 | 116.653 | 1014.05 | 3.894% | 38.440% |
| 13.0 | 4631.484 | 114.251 | 1128.301 | 3.813% | 42.771% |
| 14.0 | 4127.273 | 109.494 | 1237.795 | 3.655% | 46.922% |
| 15.0 | 3689.227 | 104.709 | 1342.504 | 3.495% | 50.891% |
| 16.0 | 3283.945 | 99.263 | 1441.767 | 3.313% | 54.654% |
| 17.0 | 2872.828 | 92.108 | 1533.875 | 3.074% | 58.145% |
| 18.0 | 2545.172 | 86.248 | 1620.123 | 2.879% | 61.415% |
| 19.0 | 2289.094 | 81.725 | 1701.849 | 2.728% | 64.513% |
| 20.0 | 2028.867 | 76.095 | 1777.944 | 2.540% | 67.397% |
| 21.0 | 1824.188 | 71.689 | 1849.632 | 2.393% | 70.115% |
| 22.0 | 1662.398 | 68.291 | 1917.923 | 2.279% | 72.703% |
| 23.0 | 1499.555 | 64.253 | 1982.176 | 2.145% | 75.139% |
| 24.0 | 1368.352 | 61.033 | 2043.209 | 2.037% | 77.453% |
| 25.0 | 1267.685 | 58.750 | 2101.959 | 1.961% | 79.680% |
| 26.0 | 1178.269 | 56.642 | 2158.601 | 1.891% | 81.827% |
| 27.0 | 1104.152 | 54.970 | 2213.571 | 1.835% | 83.911% |
| 28.0 | 1052.142 | 54.167 | 2267.738 | 1.808% | 85.964% |
| 29.0 | 977.393 | 51.963 | 2319.701 | 1.734% | 87.934% |
| 30.0 | 883.624 | 48.450 | 2368.151 | 1.617% | 89.770% |
| 31.0 | 784.659 | 44.317 | 2412.468 | 1.479% | 91.450% |
| 32.0 | 668.967 | 38.875 | 2451.342 | 1.298% | 92.924% |
| 33.0 | 561.755 | 33.551 | 2484.894 | 1.120% | 94.196% |
| 34.0 | 459.745 | 28.192 | 2513.086 | .941% | 95.264% |
| 35.0 | 353.869 | 22.258 | 2535.344 | .743% | 96.108% |
| 36.0 | 265.760 | 17.130 | 2552.474 | .572% | 96.757% |
| 37.0 | 182.953 | 12.074 | 2564.548 | .403% | 97.215% |

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0 | 95.238 | 6.430 | 2570.978 | .215% | 97.459% |
| 39.0 | 53.459 | 3.689 | 2574.667 | .123% | 97.599% |
| 40.0 | 39.551 | 2.788 | 2577.455 | .093% | 97.704% |
| 41.0 | 31.690 | 2.280 | 2579.735 | .076% | 97.791% |
| 42.0 | 23.955 | 1.758 | 2581.493 | .059% | 97.858% |
| 43.0 | 19.913 | 1.489 | 2582.982 | .050% | 97.914% |
| 44.0 | 18.408 | 1.402 | 2584.384 | .047% | 97.967% |
| 45.0 | 17.501 | 1.357 | 2585.741 | .045% | 98.019% |
| 46.0 | 16.791 | 1.325 | 2587.066 | .044% | 98.069% |
| 47.0 | 16.123 | 1.293 | 2588.359 | .043% | 98.118% |
| 48.0 | 15.539 | 1.266 | 2589.625 | .042% | 98.166% |
| 49.0 | 15.033 | 1.244 | 2590.869 | .042% | 98.213% |
| 50.0 | 14.583 | 1.225 | 2592.094 | .041% | 98.259% |
| 51.0 | 14.175 | 1.208 | 2593.302 | .040% | 98.305% |
| 52.0 | 13.866 | 1.198 | 2594.501 | .040% | 98.351% |
| 53.0 | 13.577 | 1.189 | 2595.69 | .040% | 98.396% |
| 54.0 | 13.317 | 1.181 | 2596.871 | .039% | 98.440% |
| 55.0 | 13.106 | 1.177 | 2598.049 | .039% | 98.485% |
| 56.0 | 12.930 | 1.176 | 2599.224 | .039% | 98.530% |
| 57.0 | 12.769 | 1.174 | 2600.398 | .039% | 98.574% |
| 58.0 | 12.614 | 1.173 | 2601.571 | .039% | 98.619% |
| 59.0 | 12.502 | 1.175 | 2602.747 | .039% | 98.663% |
| 60.0 | 12.368 | 1.175 | 2603.921 | .039% | 98.708% |
| 61.0 | 12.277 | 1.177 | 2605.099 | .039% | 98.752% |
| 62.0 | 12.164 | 1.178 | 2606.276 | .039% | 98.797% |
| 63.0 | 12.080 | 1.180 | 2607.457 | .039% | 98.842% |
| 64.0 | 11.953 | 1.178 | 2608.635 | .039% | 98.886% |
| 65.0 | 11.848 | 1.177 | 2609.812 | .039% | 98.931% |
| 66.0 | 11.714 | 1.174 | 2610.986 | .039% | 98.976% |
| 67.0 | 11.616 | 1.173 | 2612.158 | .039% | 99.020% |
| 68.0 | 11.496 | 1.169 | 2613.327 | .039% | 99.064% |
| 69.0 | 11.384 | 1.165 | 2614.493 | .039% | 99.108% |
| 70.0 | 11.285 | 1.163 | 2615.656 | .039% | 99.153% |
| 71.0 | 11.215 | 1.163 | 2616.818 | .039% | 99.197% |
| 72.0 | 11.102 | 1.158 | 2617.976 | .039% | 99.241% |
| 73.0 | 11.039 | 1.158 | 2619.134 | .039% | 99.284% |
| 74.0 | 10.976 | 1.157 | 2620.291 | .039% | 99.328% |
| 75.0 | 10.905 | 1.155 | 2621.446 | .039% | 99.372% |

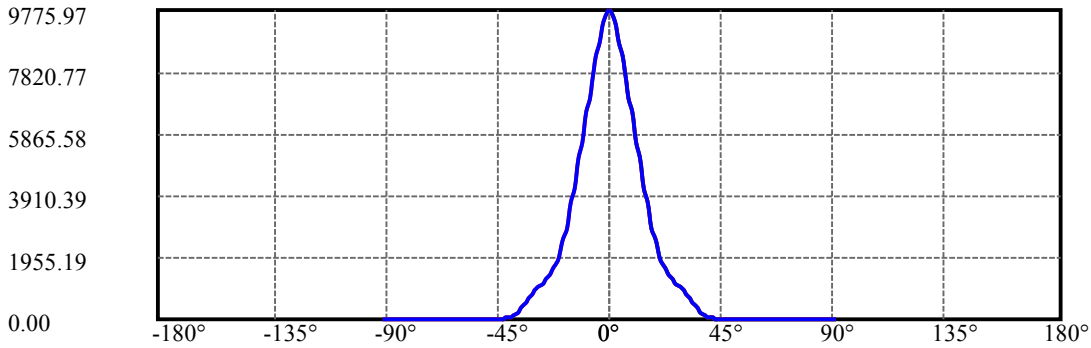
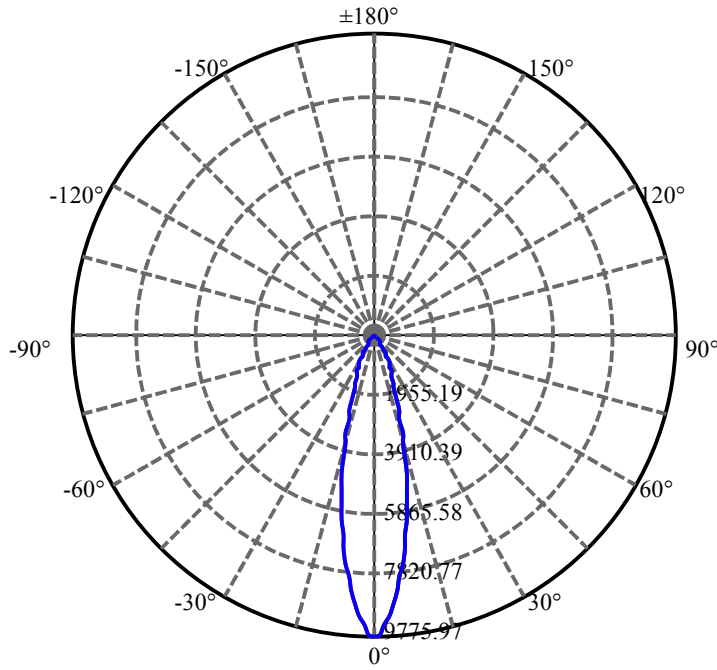
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0 | 10.842 | 1.154 | 2622.6 | .039% | 99.416% |
| 77.0 | 10.793 | 1.153 | 2623.753 | .038% | 99.459% |
| 78.0 | 10.758 | 1.154 | 2624.907 | .039% | 99.503% |
| 79.0 | 10.702 | 1.152 | 2626.059 | .038% | 99.547% |
| 80.0 | 10.659 | 1.151 | 2627.21 | .038% | 99.591% |
| 81.0 | 10.603 | 1.148 | 2628.359 | .038% | 99.634% |
| 82.0 | 10.575 | 1.148 | 2629.507 | .038% | 99.678% |
| 83.0 | 10.526 | 1.146 | 2630.653 | .038% | 99.721% |
| 84.0 | 10.491 | 1.144 | 2631.797 | .038% | 99.764% |
| 85.0 | 10.448 | 1.141 | 2632.938 | .038% | 99.808% |
| 86.0 | 10.399 | 1.138 | 2634.076 | .038% | 99.851% |
| 87.0 | 10.343 | 1.133 | 2635.208 | .038% | 99.894% |
| 88.0 | 10.287 | 1.127 | 2636.336 | .038% | 99.936% |
| 89.0 | 10.216 | 1.120 | 2637.456 | .037% | 99.979% |
| 90.0 | 10.139 | 0.556 | 2638.012 | .019% | 100.000% |

ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|--------|---------|
| 0-30 | 2368.15 | 79.04% | 89.77% |
| 0-40 | 2577.46 | 86.03% | 97.70% |
| 0-60 | 2603.92 | 86.91% | 98.71% |
| 0-90 | 2637.46 | 88.03% | 99.98% |
| 0-120 | 2637.46 | 88.03% | 99.98% |
| 0-180 | 2638.01 | 88.05% | 100.00% |
| 60-90 | 34.71 | 1.16% | 1.32% |
| 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% |
| 0-25.15 | 2110.41 | 70.44% | 80.00% |

ZONAL LUMEN SUMMARY

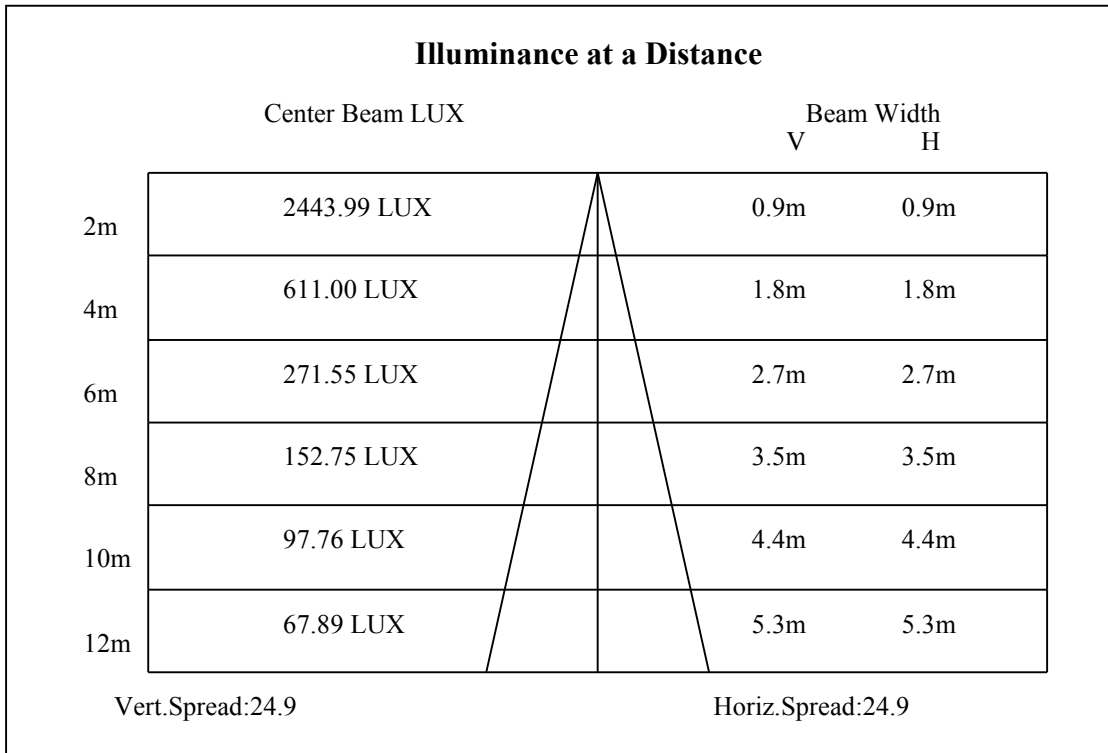
| | |
|---------|--------|
| 0-10 | 780.68 |
| 10-20 | 997.26 |
| 20-30 | 590.21 |
| 30-40 | 209.30 |
| 40-50 | 14.64 |
| 50-60 | 11.83 |
| 60-70 | 11.73 |
| 70-80 | 11.55 |
| 80-90 | 10.25 |
| 90-100 | 0.00 |
| 100-110 | 0.00 |
| 110-120 | 0.00 |
| 120-130 | 0.00 |
| 130-140 | 0.00 |
| 140-150 | 0.00 |
| 150-160 | 0.00 |
| 160-170 | 0.00 |
| 170-180 | 0.00 |

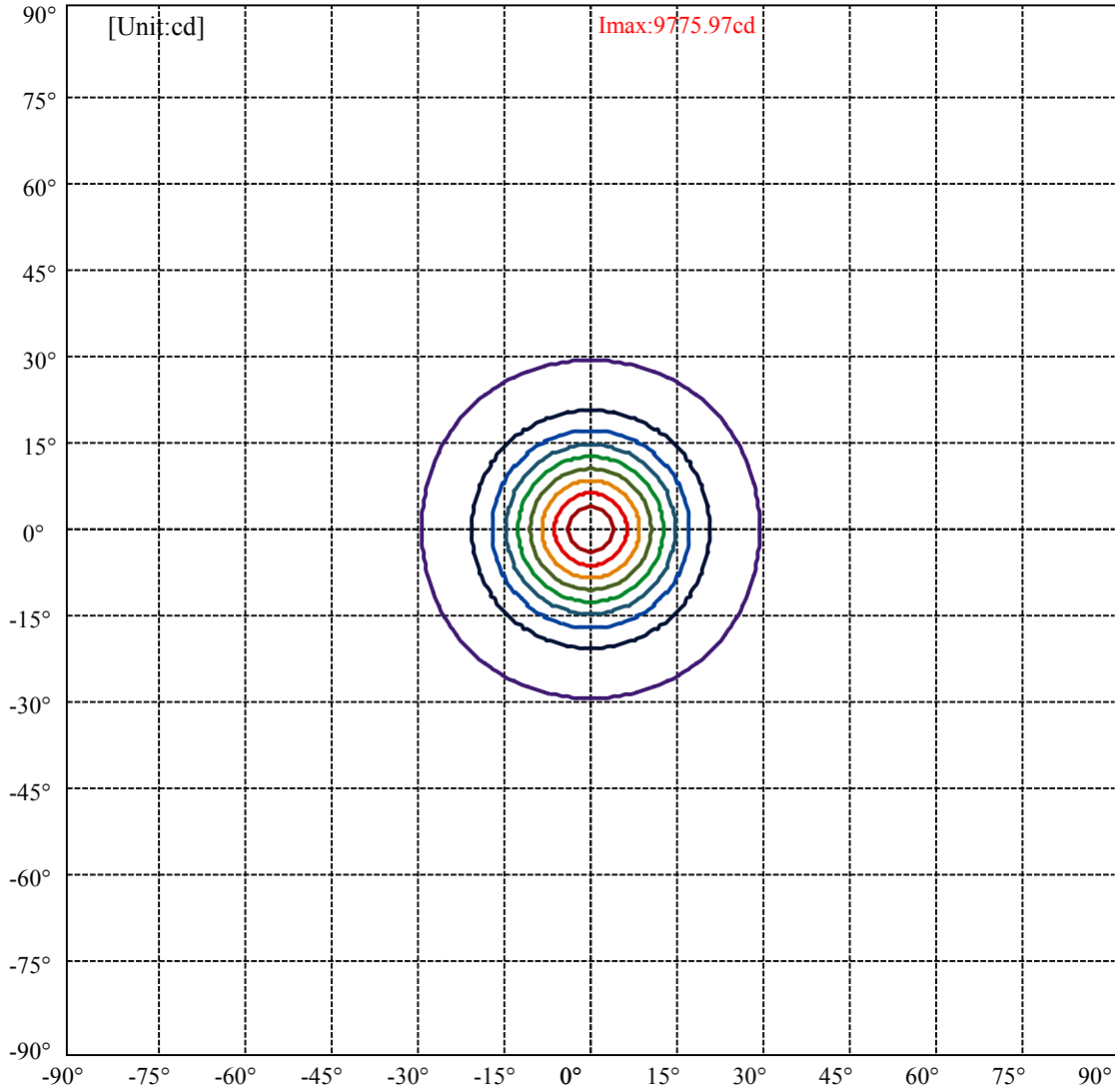


C0(Max): —
C0/C180: —
C90/C270: —

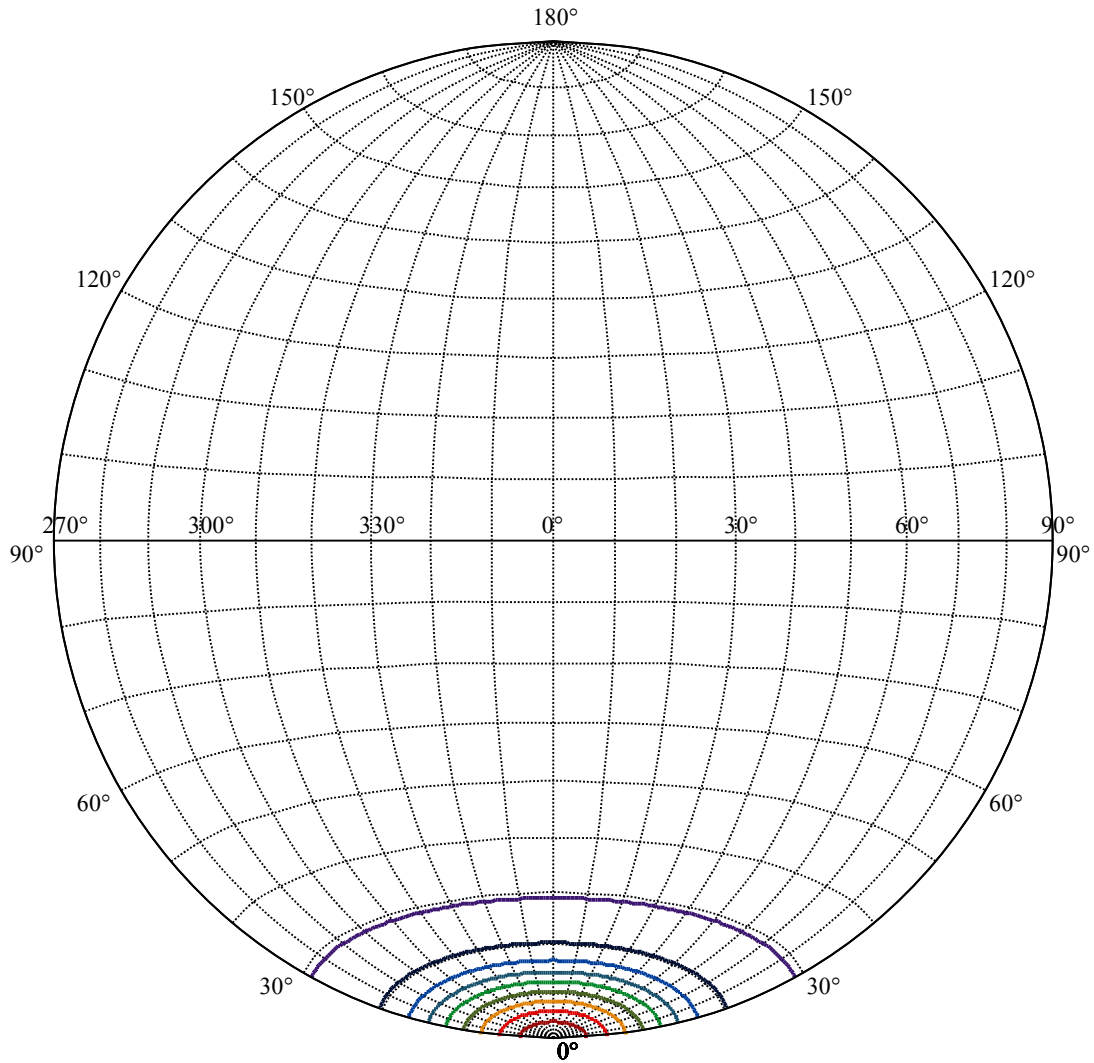
Field angle(10%Imax):C0/180Left:29.0 Right:29.0
:C90/270Left:29.0 Right:29.0

Beam Angle(50%Imax):C0/180Left:12.5 Right:12.5
:C90/270Left:12.5 Right:12.5





| | |
|-------------------|---|
| (10%Imax) 977.597 | — |
| (20%Imax) 1955.19 | — |
| (30%Imax) 2932.79 | — |
| (40%Imax) 3910.39 | — |
| (50%Imax) 4887.98 | — |
| (60%Imax) 5865.58 | — |
| (70%Imax) 6843.18 | — |
| (80%Imax) 7820.77 | — |
| (90%Imax) 8798.37 | — |



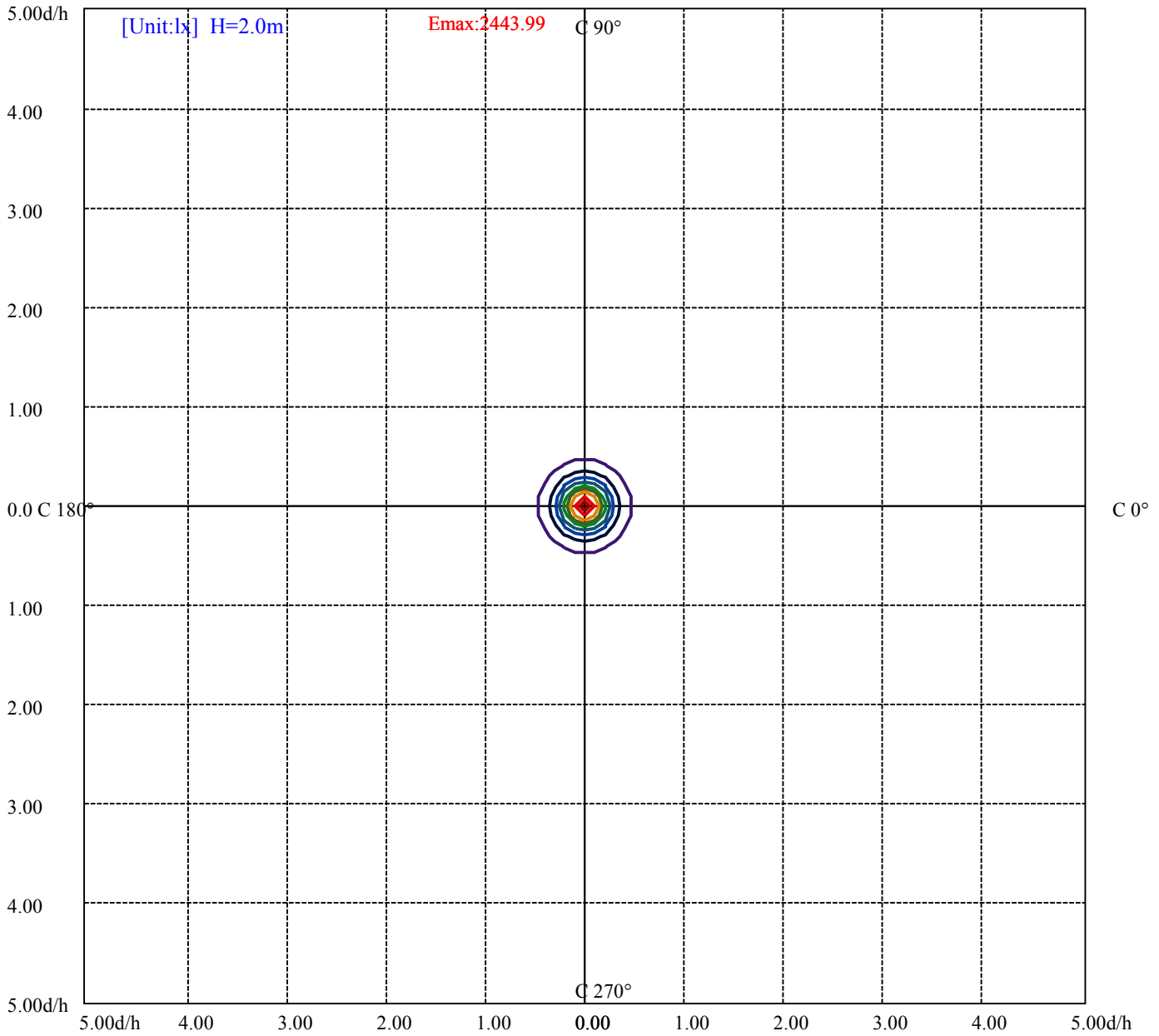
House

[Unit:cd]

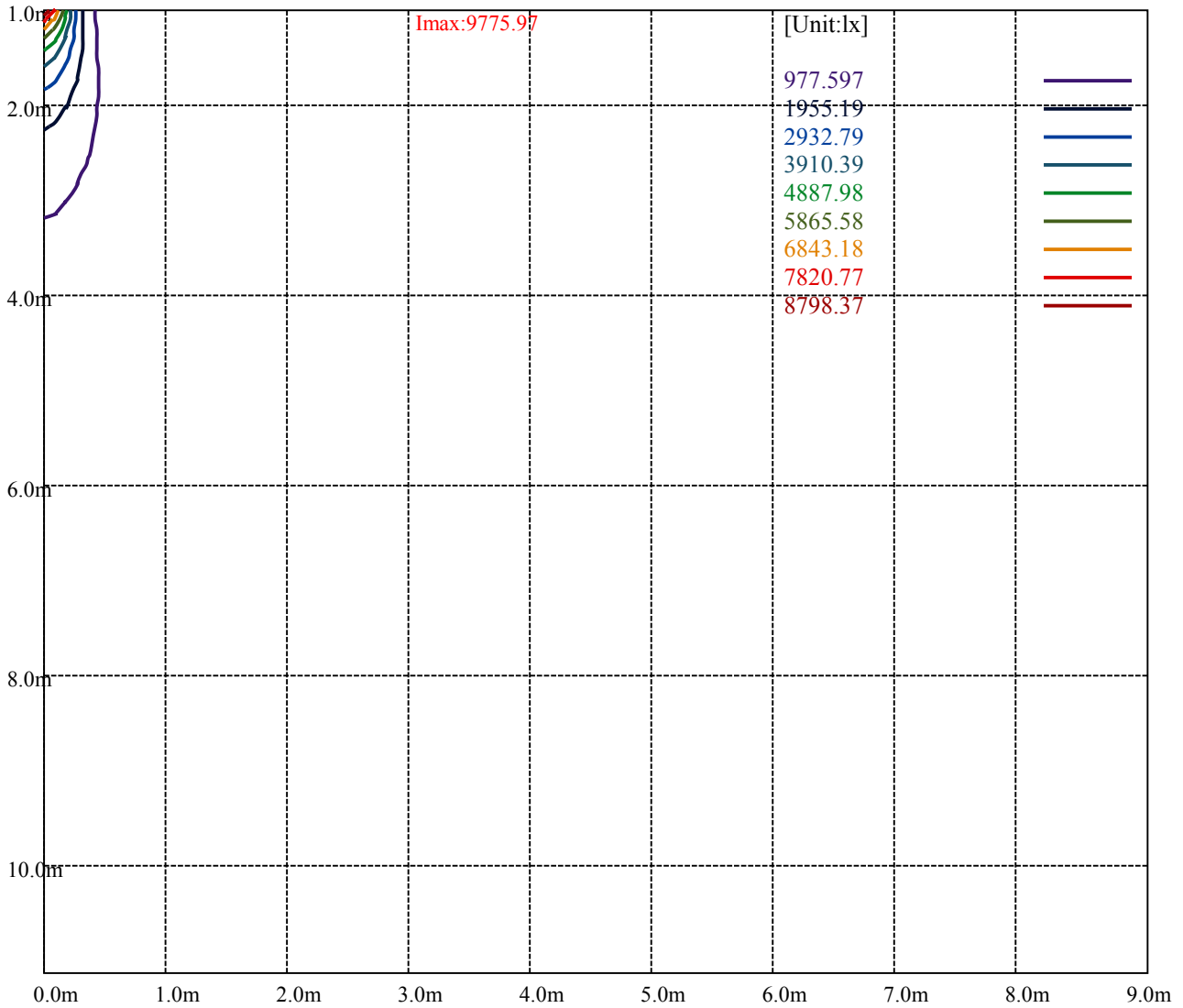
Road

I_{max}:9775.97

| | |
|--------------------------------|---|
| (10%I _{max}) 977.597 | — |
| (20%I _{max}) 1955.19 | — |
| (30%I _{max}) 2932.79 | — |
| (40%I _{max}) 3910.39 | — |
| (50%I _{max}) 4887.98 | — |
| (60%I _{max}) 5865.58 | — |
| (70%I _{max}) 6843.18 | — |
| (80%I _{max}) 7820.77 | — |
| (90%I _{max}) 8798.37 | — |



- (10%Emax) 244.399
- (20%Emax) 488.7975
- (30%Emax) 733.1975
- (40%Emax) 977.595
- (50%Emax) 1221.995
- (60%Emax) 1466.392
- (70%Emax) 1710.792
- (80%Emax) 1955.19
- (90%Emax) 2199.59



Luminance Table

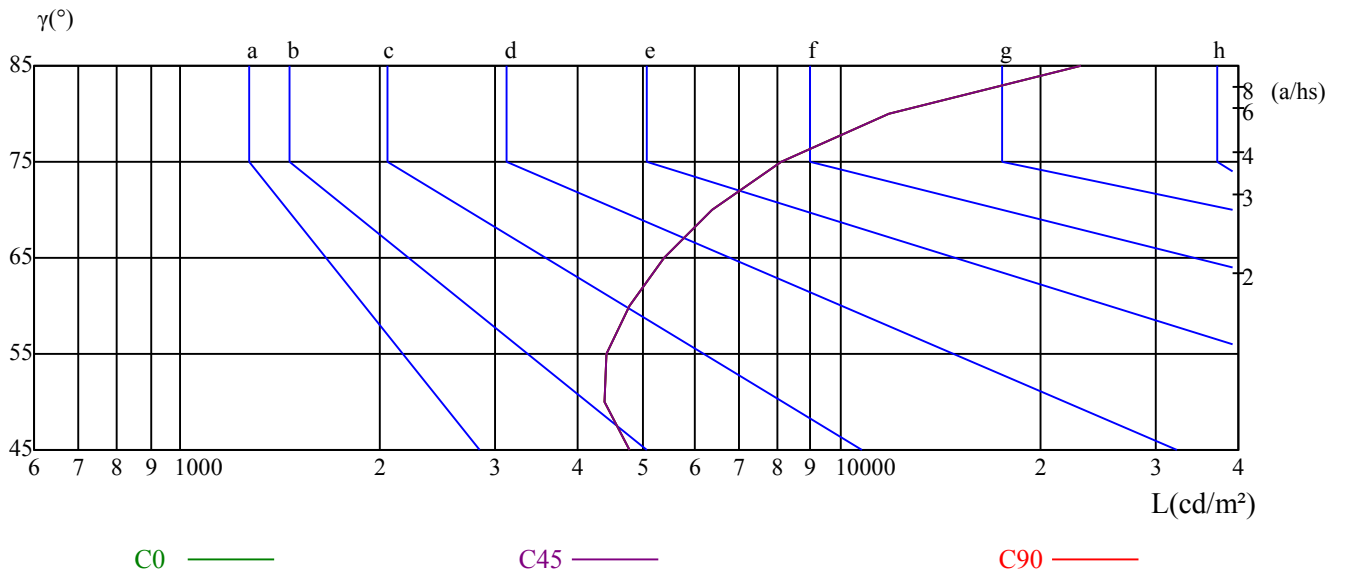
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|----------|------|------|------|------|------|------|------|-------|-------|
| C0 | 4774 | 4376 | 4408 | 4772 | 5408 | 6365 | 8128 | 11841 | 23125 |
| C45 | 4774 | 4376 | 4408 | 4772 | 5408 | 6365 | 8128 | 11841 | 23125 |
| C90 | 4774 | 4376 | 4408 | 4772 | 5408 | 6365 | 8128 | 11841 | 23125 |

| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 5408 | 5408 | 5408 | 8128 | 8128 | 8128 | 23125 | 23125 | 23125 |

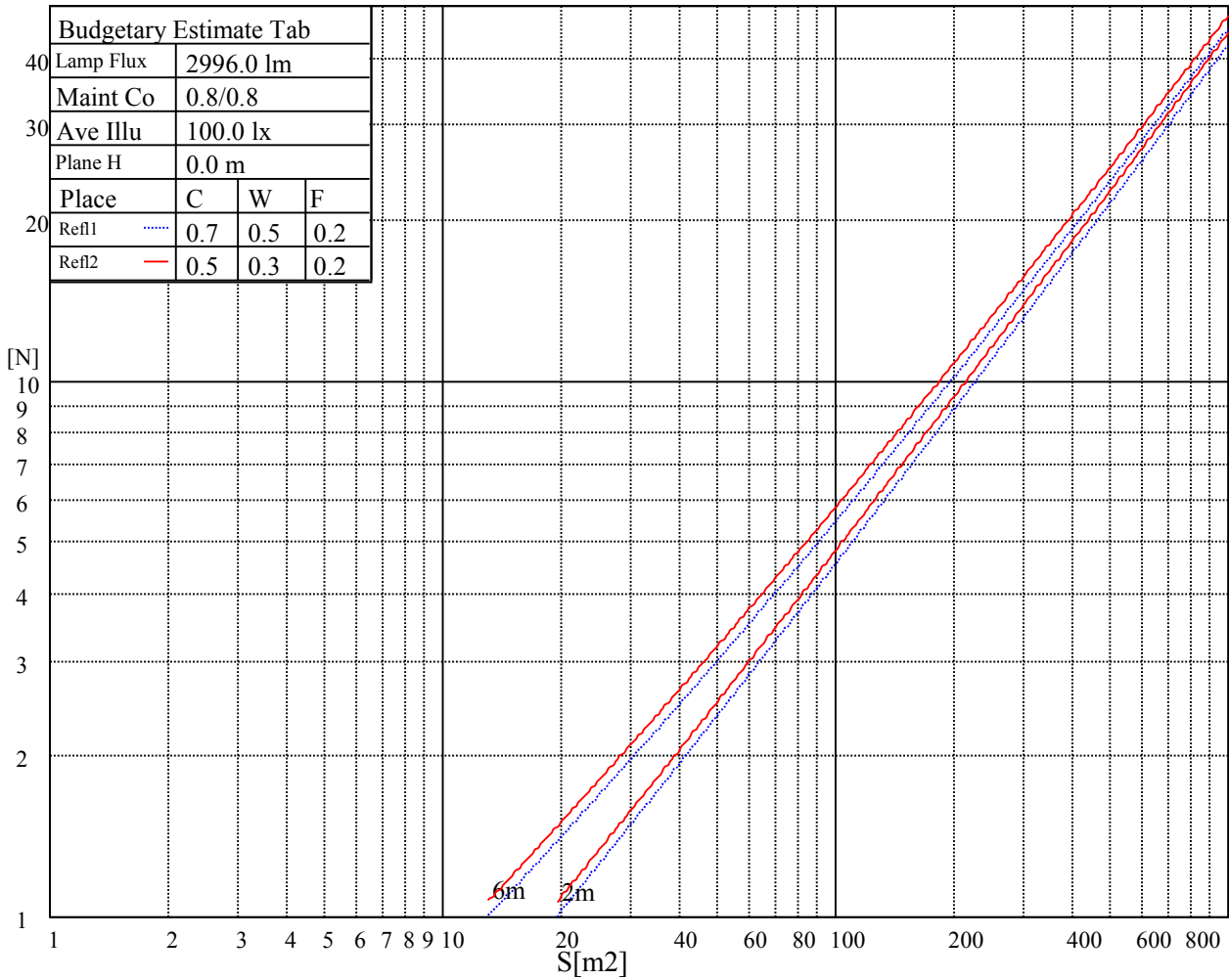
Glare Table

| 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 |

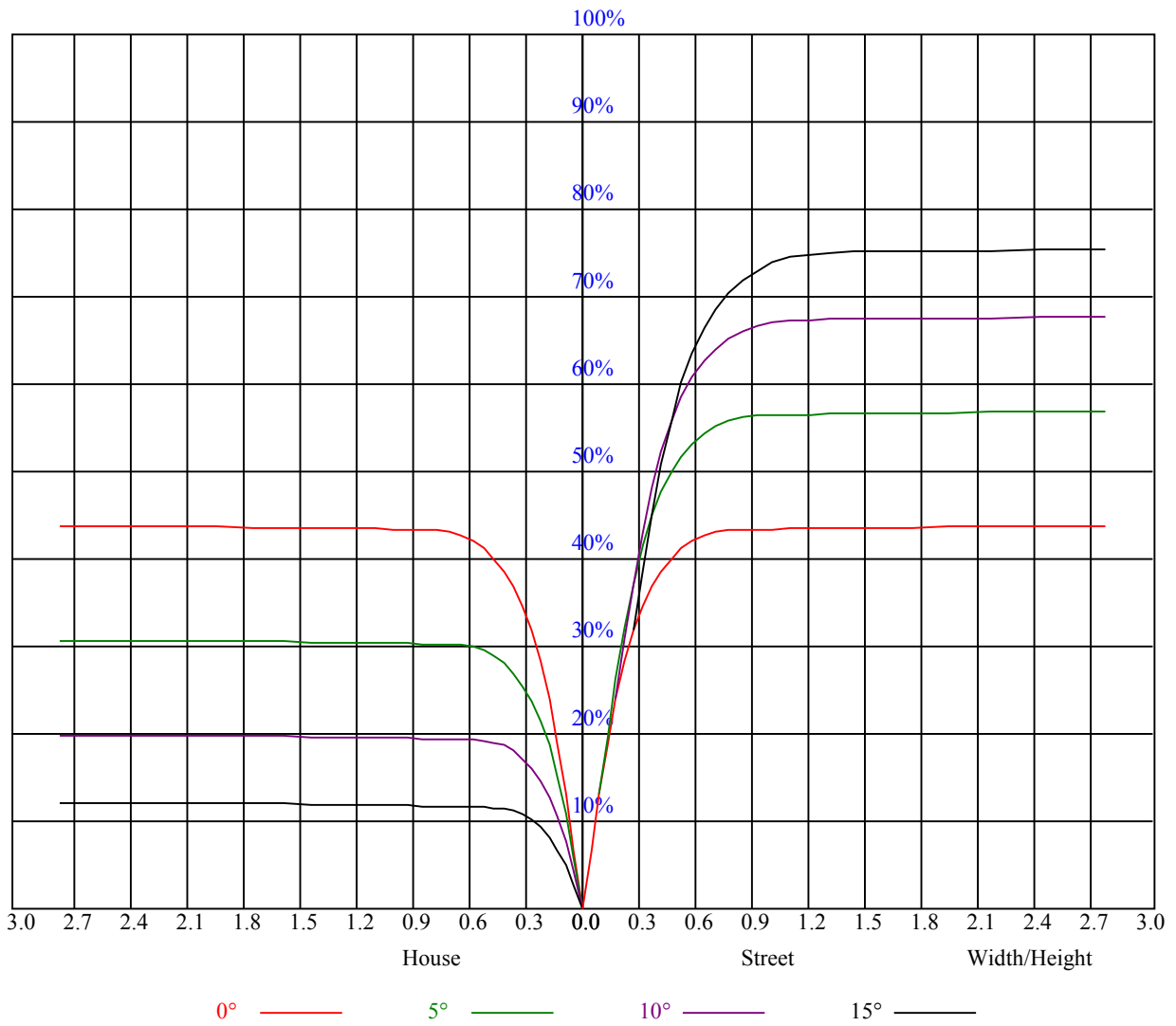
Luminance Limiting Curve



| 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 | 3.02 | 3.93 | 3.39 | 4.24 | 4.56 | 2.48 | 3.40 | 2.85 | 3.71 | 4.02 |
| | 3H | 5.95 | 6.76 | 6.34 | 7.09 | 7.46 | 5.67 | 6.47 | 6.05 | 6.81 | 7.18 |
| | 4H | 7.57 | 8.32 | 7.98 | 8.67 | 9.06 | 7.35 | 8.09 | 7.75 | 8.44 | 8.84 |
| | 6H | 9.42 | 10.10 | 9.84 | 10.47 | 10.87 | 9.23 | 9.91 | 9.65 | 10.29 | 10.68 |
| | 8H | 10.44 | 11.08 | 10.88 | 11.47 | 11.88 | 10.28 | 10.92 | 10.72 | 11.31 | 11.72 |
| | 12H | 12.11 | 12.72 | 12.55 | 13.10 | 13.53 | 12.01 | 12.62 | 12.44 | 13.00 | 13.43 |
| 4H | 2H | 3.80 | 4.55 | 4.21 | 4.90 | 5.29 | 3.42 | 4.17 | 3.83 | 4.52 | 4.91 |
| | 3H | 7.01 | 7.62 | 7.43 | 8.03 | 8.44 | 6.81 | 7.42 | 7.23 | 7.84 | 8.24 |
| | 4H | 8.81 | 9.36 | 9.25 | 9.78 | 10.23 | 8.65 | 9.19 | 9.09 | 9.62 | 10.07 |
| | 6H | 10.80 | 11.27 | 11.27 | 11.72 | 12.20 | 10.67 | 11.14 | 11.14 | 11.59 | 12.07 |
| | 8H | 11.94 | 12.37 | 12.42 | 12.82 | 13.30 | 11.83 | 12.26 | 12.31 | 12.71 | 13.19 |
| 8H | 12H | 13.53 | 13.90 | 14.02 | 14.39 | 14.87 | 13.47 | 13.84 | 13.96 | 14.33 | 14.81 |
| | 4H | 9.48 | 9.91 | 9.96 | 10.36 | 10.84 | 9.35 | 9.78 | 9.82 | 10.23 | 10.71 |
| | 6H | 11.75 | 12.10 | 12.27 | 12.60 | 13.09 | 11.65 | 11.99 | 12.16 | 12.50 | 12.98 |
| | 8H | 13.08 | 13.38 | 13.62 | 13.91 | 14.41 | 13.00 | 13.30 | 13.53 | 13.83 | 14.32 |
| 12H | 12H | 14.83 | 15.09 | 15.36 | 15.59 | 16.17 | 14.79 | 15.04 | 15.31 | 15.54 | 16.13 |
| | 4H | 9.66 | 10.03 | 10.16 | 10.52 | 11.00 | 9.55 | 9.92 | 10.04 | 10.41 | 10.89 |
| | 6H | 12.25 | 12.36 | 12.59 | 12.83 | 13.38 | 12.16 | 12.26 | 12.50 | 12.74 | 13.29 |
| | 8H | 13.51 | 13.77 | 14.04 | 14.27 | 14.85 | 13.44 | 13.70 | 13.97 | 14.20 | 14.78 |
| Variation with the observer position at spacings: | | | | | | | | | | | |
| S = 1.0H | 5.7/-5.6 | | | | | 5.7/-5.6 | | | | | |
| S = 1.5H | 7.5/-4.0 | | | | | 7.5/-4.0 | | | | | |
| S = 2.0H | 8.5/-2.9 | | | | | 8.5/-2.9 | | | | | |
| Standard tables: | BK4 | | | | | BK4 | | | | | |
| Uncorrected UGR | 0.6 | | | | | 0.6 | | | | | |



| 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 | 1.05 | 1.05 | 1.05 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 | 0.98 | 0.94 | 0.94 | 0.94 | 0.90 | 0.90 | 0.90 | 0.88 |
| 1 | 0.99 | 0.97 | 0.95 | 0.97 | 0.95 | 0.94 | 0.93 | 0.92 | 0.91 | 0.90 | 0.89 | 0.88 | 0.87 | 0.86 | 0.85 | 0.84 |
| 2 | 0.93 | 0.90 | 0.88 | 0.92 | 0.89 | 0.87 | 0.89 | 0.87 | 0.85 | 0.87 | 0.85 | 0.83 | 0.84 | 0.83 | 0.82 | 0.80 |
| 3 | 0.89 | 0.85 | 0.82 | 0.88 | 0.84 | 0.82 | 0.85 | 0.83 | 0.81 | 0.83 | 0.81 | 0.79 | 0.81 | 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 | 0.80 | 0.78 | 0.76 | 0.79 | 0.77 | 0.75 | 0.74 |
| 5 | 0.81 | 0.77 | 0.74 | 0.80 | 0.77 | 0.74 | 0.79 | 0.76 | 0.73 | 0.78 | 0.75 | 0.73 | 0.76 | 0.74 | 0.72 | 0.71 |
| 6 | 0.78 | 0.74 | 0.71 | 0.77 | 0.73 | 0.71 | 0.76 | 0.73 | 0.70 | 0.75 | 0.72 | 0.70 | 0.74 | 0.71 | 0.69 | 0.68 |
| 7 | 0.75 | 0.71 | 0.68 | 0.74 | 0.71 | 0.68 | 0.73 | 0.70 | 0.67 | 0.72 | 0.69 | 0.67 | 0.72 | 0.69 | 0.67 | 0.66 |
| 8 | 0.72 | 0.68 | 0.65 | 0.72 | 0.68 | 0.65 | 0.71 | 0.67 | 0.65 | 0.70 | 0.67 | 0.65 | 0.69 | 0.67 | 0.64 | 0.64 |
| 9 | 0.70 | 0.66 | 0.63 | 0.69 | 0.65 | 0.63 | 0.69 | 0.65 | 0.63 | 0.68 | 0.65 | 0.62 | 0.67 | 0.64 | 0.62 | 0.61 |
| 10 | 0.67 | 0.63 | 0.61 | 0.67 | 0.63 | 0.61 | 0.66 | 0.63 | 0.61 | 0.66 | 0.63 | 0.60 | 0.65 | 0.62 | 0.60 | 0.59 |



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 | 9761.06 | 9777.94 | 9595.69 | 9325.69 | 8947.69 | 8577.56 | 8143.31 | 7692.75 | 7287.19 |
| 45.0 | 9800.44 | 9694.69 | 9392.06 | 9059.06 | 8692.88 | 8206.88 | 7807.50 | 7392.38 | 6903.00 |
| 90.0 | 9730.69 | 9505.69 | 9092.25 | 8726.06 | 8339.63 | 7890.19 | 7468.31 | 6975.56 | 6476.63 |
| 135.0 | 9811.69 | 9663.75 | 9313.31 | 8960.06 | 8634.38 | 8105.06 | 7707.38 | 7336.69 | 6795.56 |
| 180.0 | 9761.06 | 9579.38 | 9287.44 | 8856.56 | 8488.69 | 8108.44 | 7607.25 | 7178.63 | 6741.00 |
| 225.0 | 9800.44 | 9739.69 | 9489.38 | 9142.31 | 8796.38 | 8389.69 | 8012.25 | 7564.50 | 7093.69 |
| 270.0 | 9730.69 | 9830.81 | 9712.69 | 9466.31 | 9162.56 | 8721.00 | 8348.63 | 7962.75 | 7497.00 |
| 315.0 | 9811.69 | 9790.31 | 9609.75 | 9259.31 | 8931.94 | 8575.31 | 8147.25 | 7686.00 | 7265.25 |
| 360.0 | 9761.06 | 9777.94 | 9595.69 | 9325.69 | 8947.69 | 8577.56 | 8143.31 | 7692.75 | 7287.19 |
| C/γ(°) | 9.0 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 |
| 0.0 | 6820.31 | 6337.13 | 5902.31 | 5464.13 | 4909.50 | 4467.38 | 4024.69 | 3647.81 | 3114.00 |
| 45.0 | 6419.25 | 5975.44 | 5472.56 | 5024.25 | 4517.44 | 4016.81 | 3589.88 | 3146.63 | 2766.38 |
| 90.0 | 6023.25 | 5512.50 | 5016.38 | 4568.63 | 4117.50 | 3587.63 | 3199.50 | 2847.38 | 2538.56 |
| 135.0 | 6297.75 | 5905.13 | 5346.00 | 4896.00 | 4434.75 | 3893.06 | 3481.31 | 3100.50 | 2689.88 |
| 180.0 | 6234.19 | 5731.31 | 5283.00 | 4777.31 | 4282.31 | 3848.63 | 3402.00 | 3040.31 | 2672.44 |
| 225.0 | 6662.25 | 6164.44 | 5650.31 | 5200.31 | 4746.94 | 4184.44 | 3754.13 | 3348.00 | 2896.88 |
| 270.0 | 7013.81 | 6582.94 | 6088.50 | 5640.19 | 5132.81 | 4615.31 | 4156.31 | 3658.50 | 3205.13 |
| 315.0 | 6787.13 | 6305.06 | 5865.75 | 5360.63 | 4910.63 | 4404.94 | 3906.00 | 3482.44 | 3089.38 |
| 360.0 | 6820.31 | 6337.13 | 5902.31 | 5464.13 | 4909.50 | 4467.38 | 4024.69 | 3647.81 | 3114.00 |
| C/γ(°) | 18.0 | 19.0 | 20.0 | 21.0 | 22.0 | 23.0 | 24.0 | 25.0 | 26.0 |
| 0.0 | 2782.13 | 2527.31 | 2190.94 | 1986.75 | 1831.50 | 1629.00 | 1472.63 | 1375.31 | 1263.38 |
| 45.0 | 2467.13 | 2216.81 | 1962.56 | 1784.25 | 1622.81 | 1472.06 | 1345.50 | 1260.00 | 1177.88 |
| 90.0 | 2216.81 | 1996.88 | 1806.75 | 1600.31 | 1458.56 | 1338.19 | 1219.50 | 1113.92 | 1046.70 |
| 135.0 | 2407.50 | 2170.69 | 1916.44 | 1742.06 | 1587.94 | 1437.75 | 1319.63 | 1234.69 | 1158.19 |
| 180.0 | 2356.88 | 2121.19 | 1915.31 | 1697.63 | 1545.19 | 1420.31 | 1291.50 | 1211.06 | 1119.83 |
| 225.0 | 2591.44 | 2327.63 | 2049.19 | 1861.88 | 1693.13 | 1506.38 | 1400.06 | 1290.94 | 1194.19 |
| 270.0 | 2850.19 | 2539.69 | 2211.19 | 1991.25 | 1803.38 | 1594.69 | 1451.81 | 1329.19 | 1220.63 |
| 315.0 | 2689.31 | 2412.56 | 2178.56 | 1929.38 | 1756.69 | 1598.06 | 1446.19 | 1326.38 | 1245.38 |
| 360.0 | 2782.13 | 2527.31 | 2190.94 | 1986.75 | 1831.50 | 1629.00 | 1472.63 | 1375.31 | 1263.38 |
| C/γ(°) | 27.0 | 28.0 | 29.0 | 30.0 | 31.0 | 32.0 | 33.0 | 34.0 | 35.0 |
| 0.0 | 1187.44 | 1121.06 | 1059.19 | 978.19 | 888.75 | 761.63 | 658.69 | 555.75 | 426.38 |
| 45.0 | 1115.44 | 1067.06 | 991.69 | 896.63 | 789.75 | 665.44 | 569.81 | 459.00 | 345.38 |
| 90.0 | 988.43 | 924.19 | 834.36 | 731.81 | 634.33 | 529.48 | 433.41 | 346.73 | 268.26 |
| 135.0 | 1096.31 | 1040.06 | 952.88 | 858.38 | 747.56 | 623.81 | 519.19 | 406.13 | 302.63 |
| 180.0 | 1079.16 | 1012.89 | 927.73 | 820.69 | 720.51 | 604.35 | 476.89 | 390.15 | 282.88 |
| 225.0 | 1115.66 | 1081.13 | 1009.80 | 911.31 | 813.94 | 699.13 | 581.29 | 476.94 | 375.24 |
| 270.0 | 1132.31 | 1066.50 | 1002.38 | 927.00 | 830.81 | 730.69 | 634.50 | 527.06 | 417.94 |
| 315.0 | 1118.48 | 1104.24 | 1041.13 | 945.00 | 851.63 | 737.21 | 620.27 | 516.21 | 412.26 |
| 360.0 | 1187.44 | 1121.06 | 1059.19 | 978.19 | 888.75 | 761.63 | 658.69 | 555.75 | 426.38 |
| C/γ(°) | 36.0 | 37.0 | 38.0 | 39.0 | 40.0 | 41.0 | 42.0 | 43.0 | 44.0 |
| 0.0 | 325.69 | 290.25 | 136.74 | 68.29 | 42.24 | 35.33 | 27.28 | 20.81 | 17.83 |
| 45.0 | 294.75 | 163.80 | 86.40 | 46.69 | 39.32 | 32.79 | 24.30 | 20.70 | 19.91 |
| 90.0 | 173.70 | 106.48 | 63.17 | 47.64 | 40.89 | 32.79 | 26.38 | 24.13 | 22.73 |
| 135.0 | 289.69 | 128.81 | 57.04 | 39.26 | 33.30 | 25.14 | 18.68 | 16.93 | 16.31 |
| 180.0 | 174.49 | 111.54 | 58.16 | 35.44 | 29.59 | 22.22 | 16.31 | 15.02 | 14.51 |
| 225.0 | 255.09 | 171.73 | 100.63 | 46.13 | 36.79 | 29.87 | 21.77 | 17.33 | 16.59 |
| 270.0 | 322.88 | 288.56 | 133.37 | 80.83 | 52.20 | 40.05 | 30.49 | 24.41 | 20.98 |
| 315.0 | 289.80 | 202.44 | 126.39 | 63.39 | 42.08 | 35.33 | 26.44 | 19.97 | 18.39 |
| 360.0 | 325.69 | 290.25 | 136.74 | 68.29 | 42.24 | 35.33 | 27.28 | 20.81 | 17.83 |

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 | 17.04 | 16.26 | 15.53 | 15.02 | 14.51 | 13.95 | 13.50 | 13.22 | 12.88 |
| 45.0 | 18.84 | 18.17 | 17.55 | 16.82 | 16.20 | 15.69 | 15.24 | 14.85 | 14.51 |
| 90.0 | 21.38 | 20.36 | 19.35 | 18.45 | 17.72 | 17.04 | 16.43 | 15.92 | 15.53 |
| 135.0 | 15.64 | 15.13 | 14.63 | 14.23 | 13.95 | 13.67 | 13.39 | 13.28 | 13.05 |
| 180.0 | 14.01 | 13.67 | 13.33 | 12.99 | 12.77 | 12.54 | 12.38 | 12.15 | 12.04 |
| 225.0 | 15.98 | 15.36 | 14.74 | 14.29 | 13.84 | 13.50 | 13.16 | 12.94 | 12.77 |
| 270.0 | 19.58 | 18.56 | 17.72 | 16.99 | 16.31 | 15.75 | 15.24 | 14.85 | 14.40 |
| 315.0 | 17.55 | 16.82 | 16.14 | 15.53 | 14.96 | 14.51 | 14.06 | 13.73 | 13.44 |
| 360.0 | 17.04 | 16.26 | 15.53 | 15.02 | 14.51 | 13.95 | 13.50 | 13.22 | 12.88 |
| C/γ(°) | 54.0 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 | 60.0 | 61.0 | 62.0 |
| 0.0 | 12.66 | 12.49 | 12.32 | 12.21 | 12.09 | 11.98 | 11.93 | 11.87 | 11.81 |
| 45.0 | 14.12 | 13.89 | 13.61 | 13.39 | 13.16 | 13.05 | 12.83 | 12.66 | 12.49 |
| 90.0 | 15.08 | 14.68 | 14.46 | 14.12 | 13.78 | 13.61 | 13.39 | 13.16 | 12.99 |
| 135.0 | 12.99 | 12.83 | 12.71 | 12.66 | 12.54 | 12.49 | 12.38 | 12.32 | 12.21 |
| 180.0 | 11.93 | 11.81 | 11.70 | 11.64 | 11.59 | 11.59 | 11.53 | 11.53 | 11.53 |
| 225.0 | 12.54 | 12.43 | 12.32 | 12.26 | 12.15 | 12.04 | 11.93 | 11.87 | 11.76 |
| 270.0 | 14.06 | 13.78 | 13.50 | 13.28 | 13.11 | 12.94 | 12.77 | 12.66 | 12.49 |
| 315.0 | 13.16 | 12.94 | 12.83 | 12.60 | 12.49 | 12.32 | 12.21 | 12.15 | 12.04 |
| 360.0 | 12.66 | 12.49 | 12.32 | 12.21 | 12.09 | 11.98 | 11.93 | 11.87 | 11.81 |
| C/γ(°) | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 | 70.0 | 71.0 |
| 0.0 | 11.81 | 11.76 | 11.64 | 11.59 | 11.59 | 11.42 | 11.36 | 11.31 | 11.19 |
| 45.0 | 12.32 | 12.15 | 11.98 | 11.81 | 11.64 | 11.53 | 11.31 | 11.19 | 11.14 |
| 90.0 | 12.77 | 12.54 | 12.38 | 12.09 | 11.93 | 11.76 | 11.59 | 11.48 | 11.42 |
| 135.0 | 12.09 | 11.93 | 11.87 | 11.76 | 11.59 | 11.48 | 11.36 | 11.19 | 11.14 |
| 180.0 | 11.59 | 11.53 | 11.53 | 11.42 | 11.42 | 11.36 | 11.25 | 11.19 | 11.14 |
| 225.0 | 11.70 | 11.64 | 11.53 | 11.48 | 11.36 | 11.25 | 11.25 | 11.19 | 11.14 |
| 270.0 | 12.38 | 12.21 | 12.09 | 11.98 | 11.87 | 11.76 | 11.64 | 11.48 | 11.42 |
| 315.0 | 11.98 | 11.87 | 11.76 | 11.59 | 11.53 | 11.42 | 11.31 | 11.25 | 11.14 |
| 360.0 | 11.81 | 11.76 | 11.64 | 11.59 | 11.59 | 11.42 | 11.36 | 11.31 | 11.19 |
| C/γ(°) | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0 | 80.0 |
| 0.0 | 11.08 | 11.03 | 10.97 | 10.91 | 10.86 | 10.74 | 10.74 | 10.69 | 10.63 |
| 45.0 | 10.97 | 10.91 | 10.86 | 10.74 | 10.69 | 10.63 | 10.63 | 10.52 | 10.52 |
| 90.0 | 11.25 | 11.19 | 11.14 | 11.03 | 10.97 | 10.91 | 10.80 | 10.74 | 10.69 |
| 135.0 | 11.03 | 10.97 | 10.91 | 10.80 | 10.74 | 10.74 | 10.69 | 10.63 | 10.63 |
| 180.0 | 11.08 | 10.97 | 10.86 | 10.80 | 10.74 | 10.69 | 10.63 | 10.58 | 10.58 |
| 225.0 | 11.03 | 10.97 | 10.91 | 10.86 | 10.80 | 10.74 | 10.74 | 10.69 | 10.63 |
| 270.0 | 11.36 | 11.31 | 11.25 | 11.25 | 11.19 | 11.19 | 11.14 | 11.08 | 11.03 |
| 315.0 | 11.03 | 10.97 | 10.91 | 10.86 | 10.74 | 10.69 | 10.69 | 10.69 | 10.58 |
| 360.0 | 11.08 | 11.03 | 10.97 | 10.91 | 10.86 | 10.74 | 10.74 | 10.69 | 10.63 |
| C/γ(°) | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.0 |
| 0.0 | 10.63 | 10.63 | 10.58 | 10.58 | 10.58 | 10.52 | 10.52 | 10.46 | 10.46 |
| 45.0 | 10.46 | 10.41 | 10.41 | 10.35 | 10.35 | 10.35 | 10.29 | 10.24 | 10.18 |
| 90.0 | 10.58 | 10.52 | 10.46 | 10.35 | 10.29 | 10.24 | 10.13 | 10.07 | 10.07 |
| 135.0 | 10.58 | 10.52 | 10.46 | 10.46 | 10.41 | 10.35 | 10.35 | 10.29 | 10.18 |
| 180.0 | 10.52 | 10.52 | 10.46 | 10.46 | 10.41 | 10.41 | 10.35 | 10.35 | 10.13 |
| 225.0 | 10.58 | 10.58 | 10.52 | 10.52 | 10.46 | 10.41 | 10.29 | 10.24 | 10.18 |
| 270.0 | 10.91 | 10.91 | 10.80 | 10.74 | 10.63 | 10.52 | 10.41 | 10.29 | 10.24 |
| 315.0 | 10.58 | 10.52 | 10.52 | 10.46 | 10.46 | 10.41 | 10.41 | 10.35 | 10.29 |
| 360.0 | 10.63 | 10.63 | 10.58 | 10.58 | 10.58 | 10.52 | 10.52 | 10.46 | 10.46 |

Intensity data(cd)

| | |
|-----------------|-------|
| C/ γ (°) | 90.0 |
| 0.0 | 10.35 |
| 45.0 | 10.07 |
| 90.0 | 10.07 |
| 135.0 | 10.13 |
| 180.0 | 10.13 |
| 225.0 | 10.07 |
| 270.0 | 10.07 |
| 315.0 | 10.24 |
| 360.0 | 10.35 |