NATA LIGHTING CO.,LTD
www.nata.cn
Email:info@nata.cn
Tel:+86 0750-377 0000(10 lines) Fax:+86 0750-377 1111
Address:380JinOu Road,Gaoxin Zone,Jiang Men City,Guangdong,China

## Nata

Client: NT
LumCAT: 1-1806-LM
Luminaire: 92.70.458.00 LED HOLDER
Report No: 20251212-B004
Ballast type: DC

| | |
|---|---|
| Test No: 20251212-C004 | Voltage(V): 34.070 |
| LampCAT: PHILIPS SLM 1202 L06 1313 G8N | Current(A): 0.146 |
| Lamp flux(lm): 866.3 | Power (W): 4.974 |
| Number of Lamps: 1 | PF: 0.000 |
| Length(mm): 35 | Width(mm): 35 |
| Phm Type: C | Height(mm): 15 |

## Photometric Results

Lumens(lm): 834.61, Efficiency(%): 96.34% , Luminous Efficacy(lm/W): 167.80
Central intensity(cd): 3860.128, Maximum intensity(cd): 3860.128
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=17.8
[C90/270]Total=17.8
Field angle(10%Imax): [C0/180]Total=43.6
[C90/270]Total=43.6
Maximum s/h(1/2): C0_180=0.30 C90_270=0.30
Maximum s/h(1/4): C0_180=0.33 C90_270=0.33
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 96.34%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 99.121%

NT Nata 1-1806-LM

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 0.0 | 3860.128 | 0.000 | 0 | 0.00% | 0.00% |
| 1.0 | 3817.715 | 3.674 | 3.674 | 0.42% | 0.44% |
| 2.0 | 3696.180 | 10.785 | 14.458 | 1.24% | 1.73% |
| 3.0 | 3522.329 | 17.264 | 31.723 | 1.99% | 3.80% |
| 4.0 | 3303.588 | 22.849 | 54.571 | 2.64% | 6.54% |
| 5.0 | 3040.819 | 27.293 | 81.864 | 3.15% | 9.81% |
| 6.0 | 2768.254 | 30.528 | 112.393 | 3.52% | 13.47% |
| 7.0 | 2433.426 | 32.287 | 144.679 | 3.73% | 17.33% |
| 8.0 | 2172.078 | 32.961 | 177.64 | 3.80% | 21.28% |
| 9.0 | 1893.636 | 32.950 | 210.591 | 3.80% | 25.23% |
| 10.0 | 1670.460 | 32.254 | 242.844 | 3.72% | 29.10% |
| 11.0 | 1464.939 | 31.329 | 274.173 | 3.62% | 32.85% |
| 12.0 | 1237.489 | 29.541 | 303.715 | 3.41% | 36.39% |
| 13.0 | 1048.761 | 27.132 | 330.847 | 3.13% | 39.64% |
| 14.0 | 878.526 | 24.669 | 355.516 | 2.85% | 42.60% |
| 15.0 | 749.133 | 22.345 | 377.861 | 2.58% | 45.27% |
| 16.0 | 639.354 | 20.345 | 398.206 | 2.35% | 47.71% |
| 17.0 | 568.058 | 18.803 | 417.009 | 2.17% | 49.96% |
| 18.0 | 508.443 | 17.749 | 434.758 | 2.05% | 52.09% |
| 19.0 | 465.857 | 16.951 | 451.709 | 1.96% | 54.12% |
| 20.0 | 437.503 | 16.534 | 468.243 | 1.91% | 56.10% |
| 21.0 | 400.935 | 16.100 | 484.343 | 1.86% | 58.03% |
| 22.0 | 383.152 | 15.757 | 500.099 | 1.82% | 59.92% |
| 23.0 | 360.621 | 15.606 | 515.706 | 1.80% | 61.79% |
| 24.0 | 338.478 | 15.285 | 530.99 | 1.76% | 63.62% |
| 25.0 | 325.065 | 15.087 | 546.078 | 1.74% | 65.43% |
| 26.0 | 313.988 | 15.085 | 561.163 | 1.74% | 67.24% |
| 27.0 | 303.126 | 15.098 | 576.261 | 1.74% | 69.05% |
| 28.0 | 294.116 | 15.121 | 591.382 | 1.75% | 70.86% |
| 29.0 | 286.893 | 15.201 | 606.582 | 1.75% | 72.68% |
| 30.0 | 280.315 | 15.315 | 621.897 | 1.77% | 74.51% |
| 31.0 | 274.890 | 15.451 | 637.347 | 1.78% | 76.36% |
| 32.0 | 270.401 | 15.622 | 652.969 | 1.80% | 78.24% |
| 33.0 | 265.697 | 15.794 | 668.763 | 1.82% | 80.13% |
| 34.0 | 259.948 | 15.908 | 684.671 | 1.84% | 82.03% |
| 35.0 | 251.735 | 15.891 | 700.562 | 1.83% | 83.94% |
| 36.0 | 241.067 | 15.691 | 716.252 | 1.81% | 85.82% |
| 37.0 | 226.621 | 15.253 | 731.506 | 1.76% | 87.65% |

NT Nata 1-1806-LM

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 38.0 | 209.429 | 14.555 | 746.061 | 1.68% | 89.39% |
| 39.0 | 188.825 | 13.594 | 759.654 | 1.57% | 91.02% |
| 40.0 | 165.035 | 12.341 | 771.995 | 1.42% | 92.50% |
| 41.0 | 141.902 | 10.930 | 782.925 | 1.26% | 93.81% |
| 42.0 | 118.973 | 9.478 | 792.403 | 1.09% | 94.94% |
| 43.0 | 95.495 | 7.944 | 800.348 | 0.92% | 95.89% |
| 44.0 | 73.631 | 6.383 | 806.731 | 0.74% | 96.66% |
| 45.0 | 53.824 | 4.898 | 811.629 | 0.57% | 97.25% |
| 46.0 | 38.646 | 3.616 | 815.246 | 0.42% | 97.68% |
| 47.0 | 26.352 | 2.585 | 817.831 | 0.30% | 97.99% |
| 48.0 | 18.225 | 1.802 | 819.633 | 0.21% | 98.21% |
| 49.0 | 13.004 | 1.282 | 820.915 | 0.15% | 98.36% |
| 50.0 | 10.689 | 0.988 | 821.903 | 0.11% | 98.48% |
| 51.0 | 9.365 | 0.848 | 822.752 | 0.10% | 98.58% |
| 52.0 | 8.224 | 0.755 | 823.506 | 0.09% | 98.67% |
| 53.0 | 7.245 | 0.673 | 824.179 | 0.08% | 98.75% |
| 54.0 | 6.427 | 0.603 | 824.782 | 0.07% | 98.82% |
| 55.0 | 5.695 | 0.541 | 825.323 | 0.06% | 98.89% |
| 56.0 | 4.984 | 0.483 | 825.805 | 0.06% | 98.94% |
| 57.0 | 4.295 | 0.424 | 826.23 | 0.05% | 99.00% |
| 58.0 | 3.854 | 0.377 | 826.607 | 0.04% | 99.04% |
| 59.0 | 3.531 | 0.345 | 826.952 | 0.04% | 99.08% |
| 60.0 | 3.294 | 0.322 | 827.274 | 0.04% | 99.12% |
| 61.0 | 3.111 | 0.306 | 827.58 | 0.04% | 99.16% |
| 62.0 | 2.971 | 0.293 | 827.873 | 0.03% | 99.19% |
| 63.0 | 2.906 | 0.286 | 828.159 | 0.03% | 99.23% |
| 64.0 | 2.831 | 0.282 | 828.44 | 0.03% | 99.26% |
| 65.0 | 2.745 | 0.276 | 828.716 | 0.03% | 99.29% |
| 66.0 | 2.680 | 0.271 | 828.987 | 0.03% | 99.33% |
| 67.0 | 2.605 | 0.266 | 829.253 | 0.03% | 99.36% |
| 68.0 | 2.562 | 0.262 | 829.515 | 0.03% | 99.39% |
| 69.0 | 2.508 | 0.259 | 829.773 | 0.03% | 99.42% |
| 70.0 | 2.497 | 0.257 | 830.03 | 0.03% | 99.45% |
| 71.0 | 2.444 | 0.255 | 830.286 | 0.03% | 99.48% |
| 72.0 | 2.422 | 0.253 | 830.539 | 0.03% | 99.51% |
| 73.0 | 2.401 | 0.252 | 830.791 | 0.03% | 99.54% |
| 74.0 | 2.368 | 0.251 | 831.042 | 0.03% | 99.57% |
| 75.0 | 2.336 | 0.249 | 831.29 | 0.03% | 99.60% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 76.0 | 2.304 | 0.246 | 831.536 | 0.03% | 99.63% |
| 77.0 | 2.250 | 0.243 | 831.779 | 0.03% | 99.66% |
| 78.0 | 2.228 | 0.240 | 832.019 | 0.03% | 99.69% |
| 79.0 | 2.207 | 0.238 | 832.257 | 0.03% | 99.72% |
| 80.0 | 2.174 | 0.236 | 832.493 | 0.03% | 99.75% |
| 81.0 | 2.121 | 0.232 | 832.726 | 0.03% | 99.77% |
| 82.0 | 2.088 | 0.228 | 832.954 | 0.03% | 99.80% |
| 83.0 | 2.067 | 0.226 | 833.18 | 0.03% | 99.83% |
| 84.0 | 2.035 | 0.223 | 833.403 | 0.03% | 99.86% |
| 85.0 | 1.970 | 0.219 | 833.622 | 0.03% | 99.88% |
| 86.0 | 1.895 | 0.211 | 833.833 | 0.02% | 99.91% |
| 87.0 | 1.798 | 0.202 | 834.035 | 0.02% | 99.93% |
| 88.0 | 1.787 | 0.196 | 834.231 | 0.02% | 99.95% |
| 89.0 | 1.733 | 0.193 | 834.424 | 0.02% | 99.98% |
| 90.0 | 1.690 | 0.188 | 834.612 | 0.02% | 100.00% |

## Zonal flux distribution table



ZONAL LUMEN SUMMARY

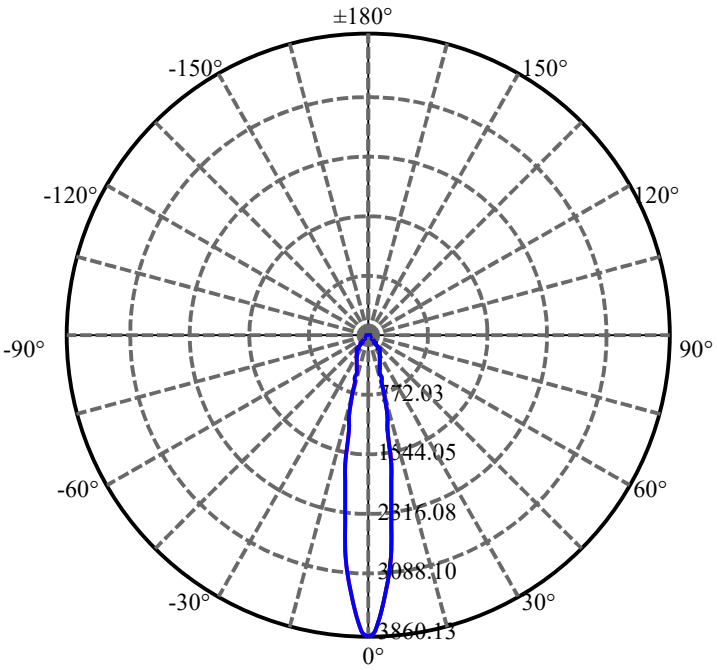
| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-30 | 621.90 | 71.79% | 74.51% |
| 0-40 | 772.00 | 89.11% | 92.50% |
| 0-60 | 827.27 | 95.49% | 99.12% |
| 0-90 | 834.42 | 96.32% | 99.98% |
| 0-120 | 834.42 | 96.32% | 99.98% |
| 0-180 | 834.61 | 96.34% | 100.00% |
| 60-90 | 7.15 | 0.83% | 0.86% |
| 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% |
| 0-32.93 | 667.69 | 77.07% | 80.00% |

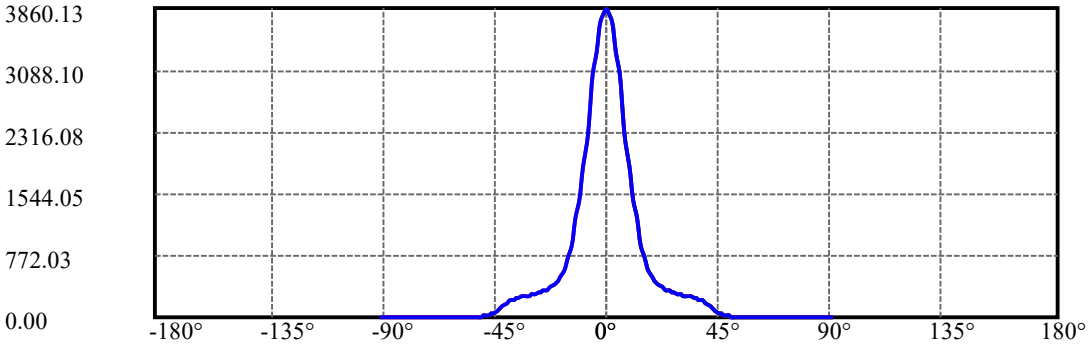
ZONAL LUMEN SUMMARY

| | |
|---|---|
| 0-10 | 242.84 |
| 10-20 | 225.40 |
| 20-30 | 153.65 |
| 30-40 | 150.10 |
| 40-50 | 49.91 |
| 50-60 | 5.37 |
| 60-70 | 2.76 |
| 70-80 | 2.46 |
| 80-90 | 1.93 |
| 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 |

Light Distribution Curve [Unit:cd]






C0(Max):

C0/C180:

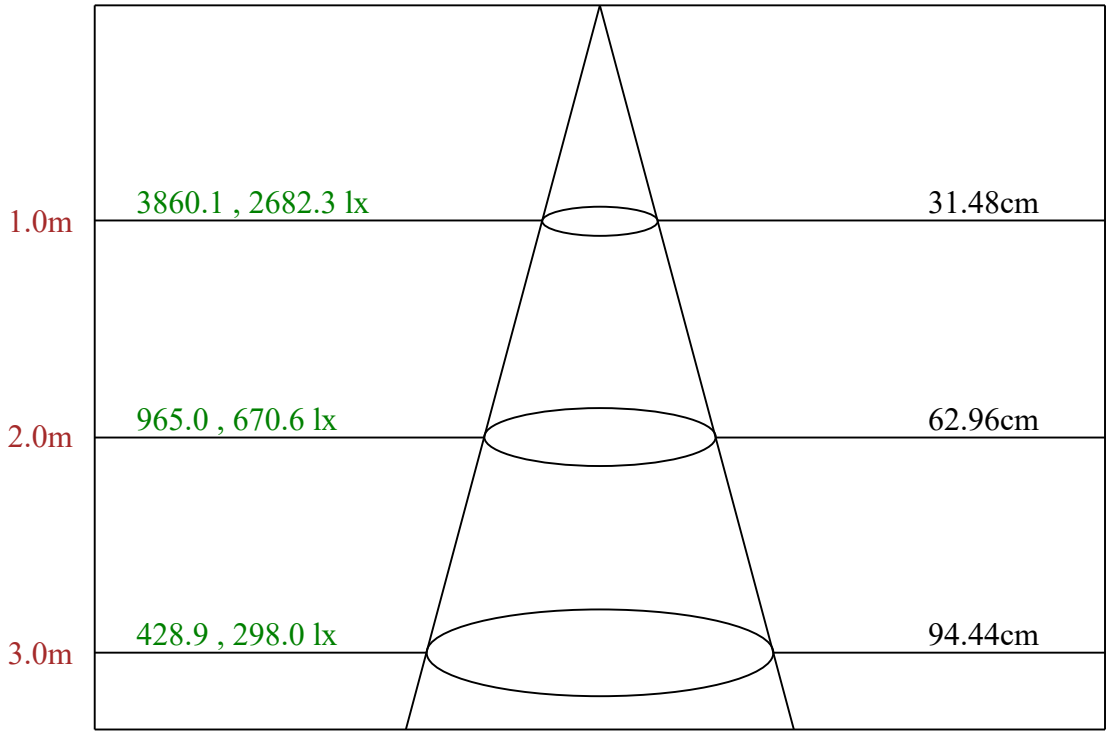
C90/C270:

Field angle(10%Imax):C0/180Left:21.8 Right:21.8
:C90/270Left:21.8 Right:21.8

Beam Angle(50%Imax):C0/180Left:8.9 Right:8.9
:C90/270Left:8.9 Right:8.9

Lux distance Curve



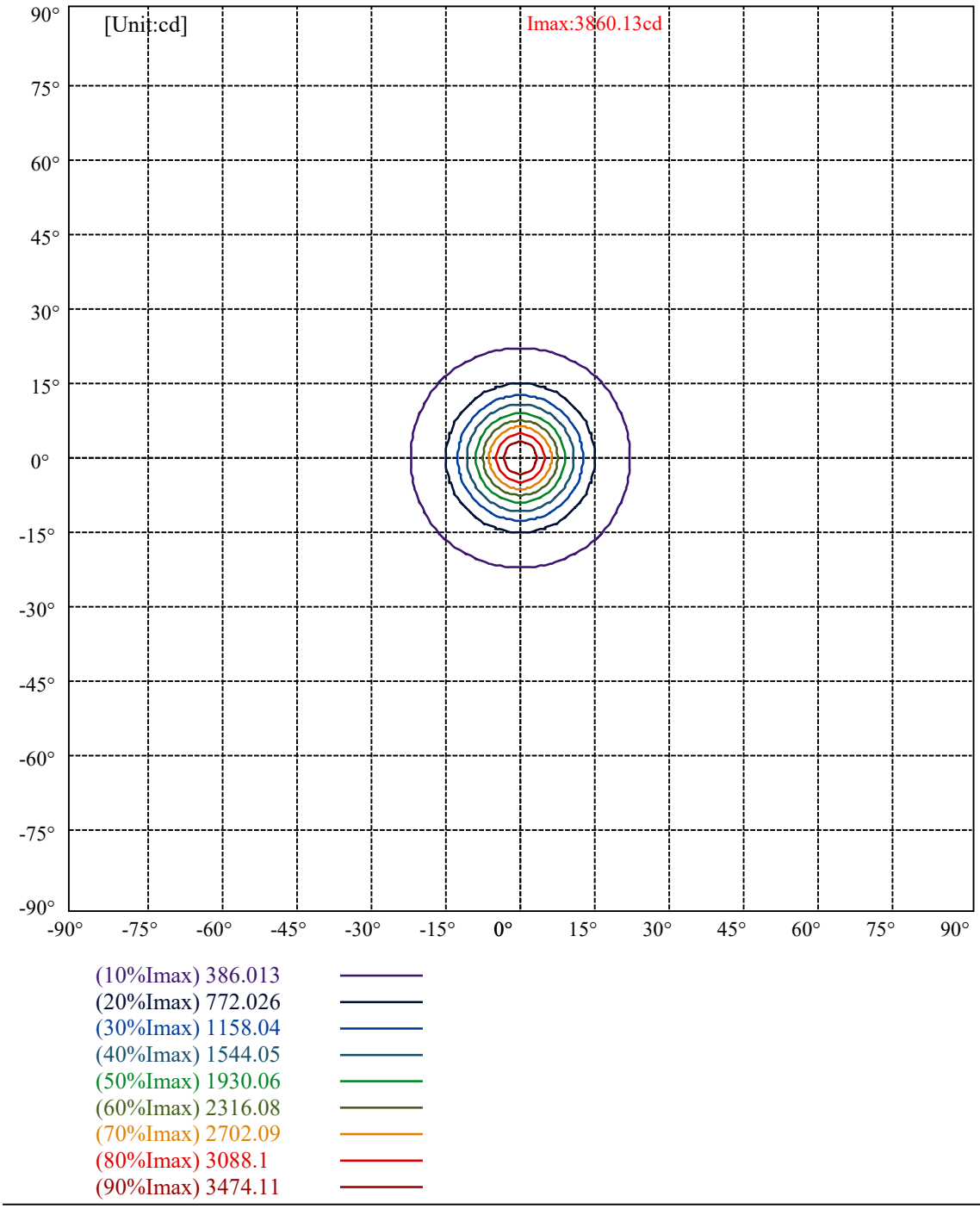



Max , Ave

Beam angle of C0 plane 17.89

ISO-Intensity(V-H)






(10%Imax) 386.013
(20%Imax) 772.026
(30%Imax) 1158.04
(40%Imax) 1544.05
(50%Imax) 1930.06
(60%Imax) 2316.08
(70%Imax) 2702.09
(80%Imax) 3088.1
(90%Imax) 3474.11

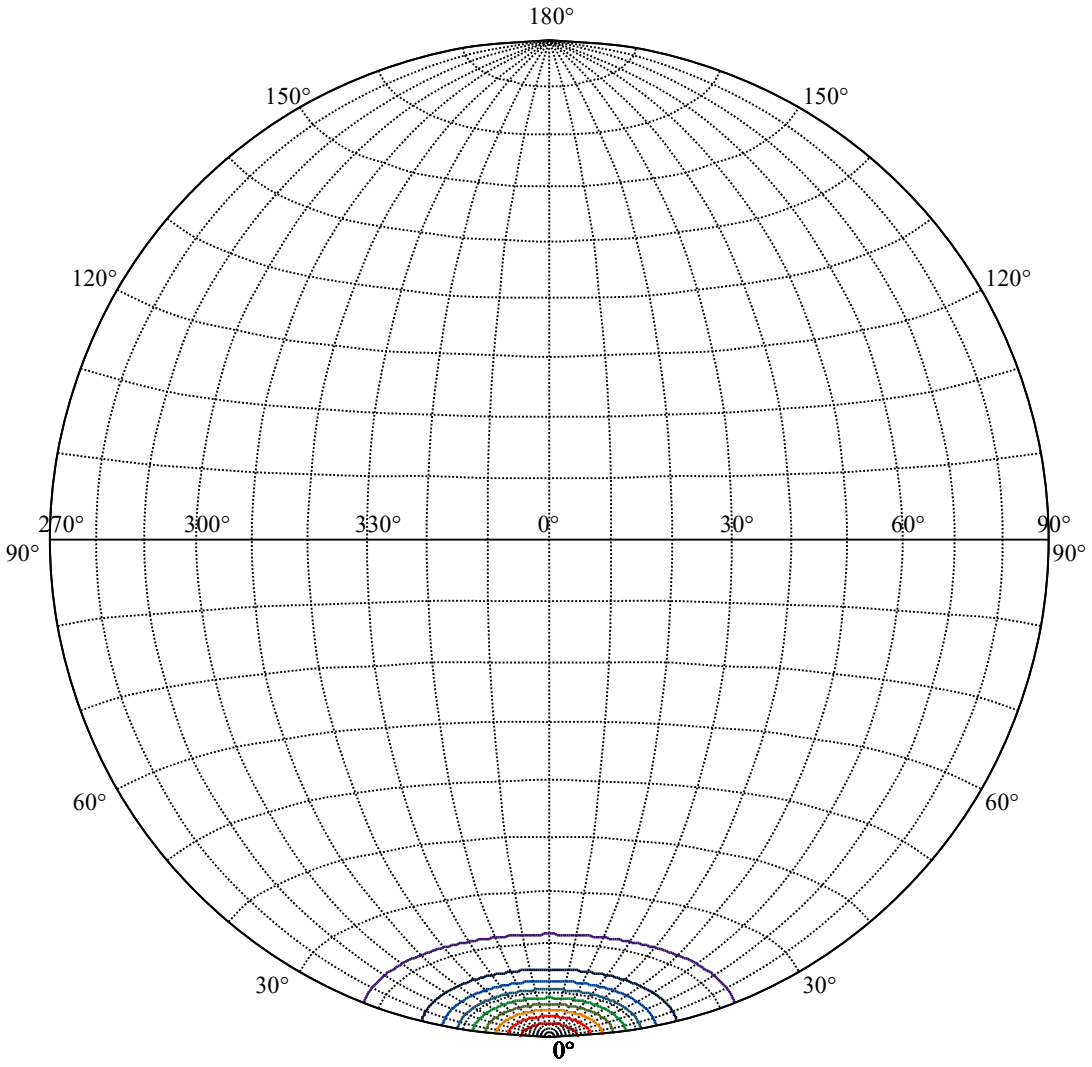
Equipment: GMS1980
Temperature(°C): 25.0

Date: 2025/12/12
Humidity(%): 60.0%

Operator: YZQ
Distance(m): 9.28

## ISO candela diagram on circular web






House [Unit:cd] Road

Imax:3860.13

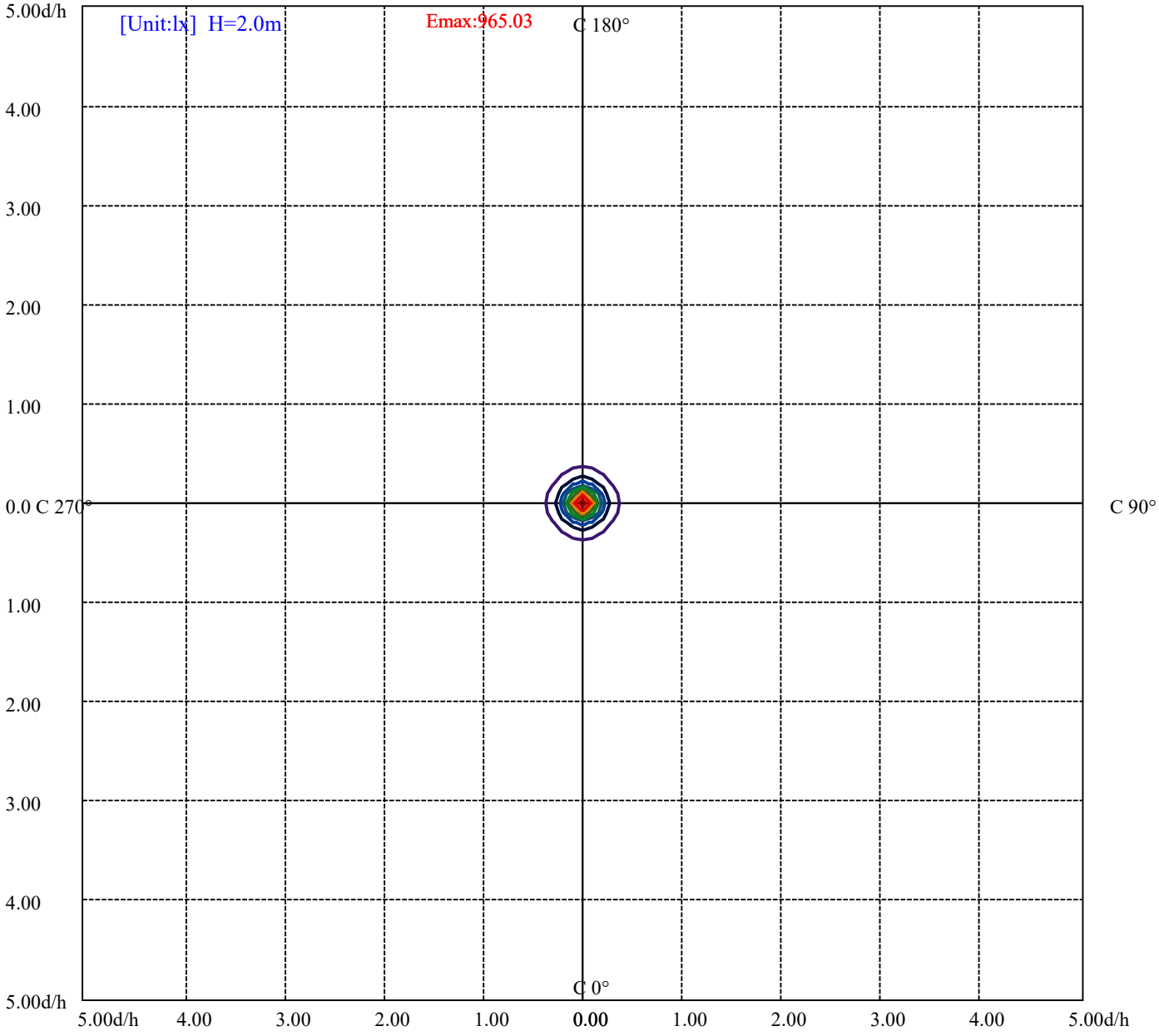
(10%Imax) 386.013
(20%Imax) 772.026
(30%Imax) 1158.04
(40%Imax) 1544.05
(50%Imax) 1930.06
(60%Imax) 2316.08
(70%Imax) 2702.09
(80%Imax) 3088.1
(90%Imax) 3474.11

Equipment: GMS1980 Date: 2025/12/12 Operator: YZQ
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 9.28

NT Nata 1-1806-LM

ISO illuminance diagram



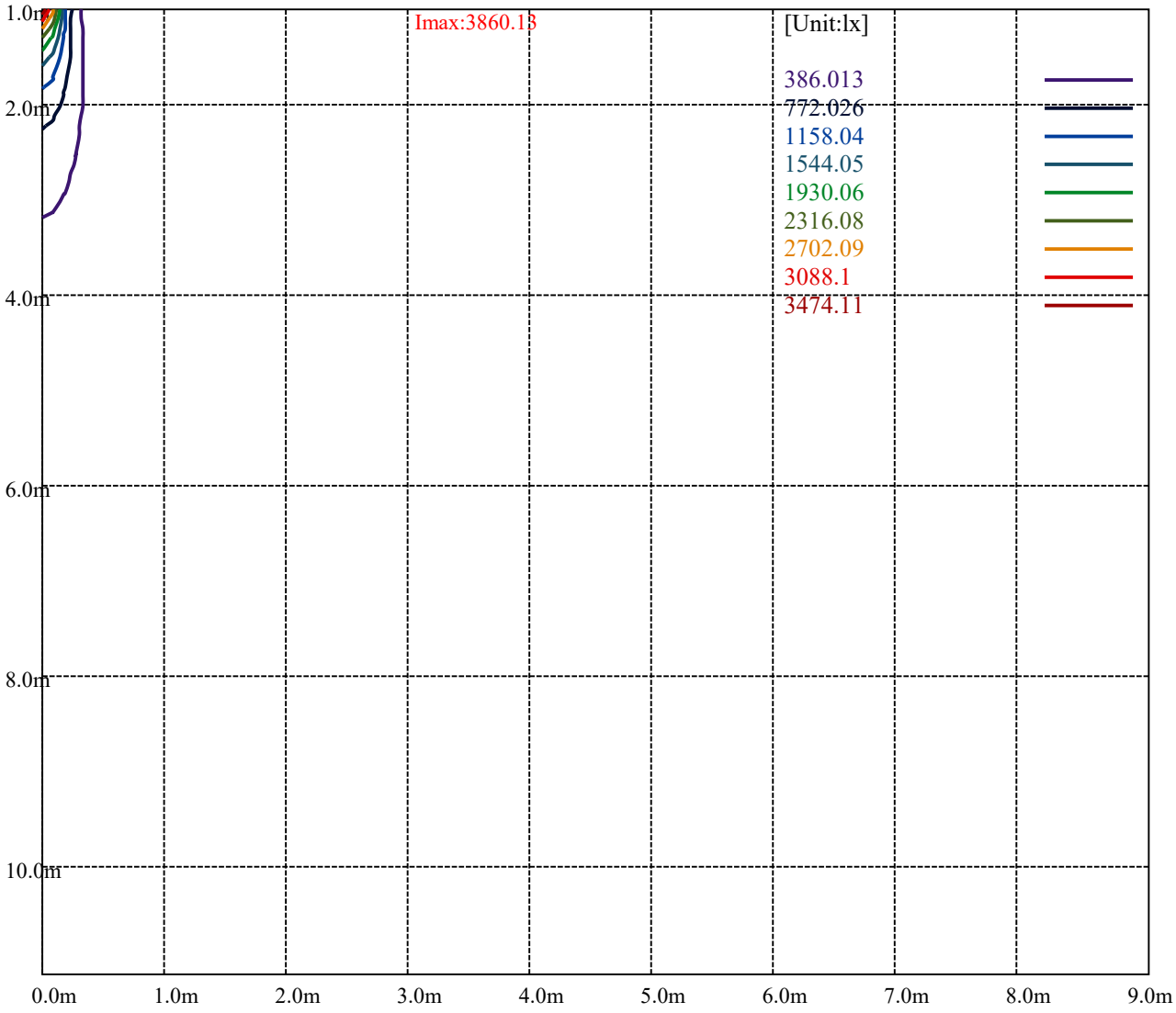



Equipment: GMS1980 Date: 2025/12/12 Operator: YZQ

Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 9.28

## Space ISO Lux diagram






Equipment: GMS1980
Temperature(°C): 25.0

Date: 2025/12/12
Humidity(%): 60.0%

Operator: YZQ
Distance(m): 9.28

## Luminance Limitting Curve(no luminous side)



Luminance Table

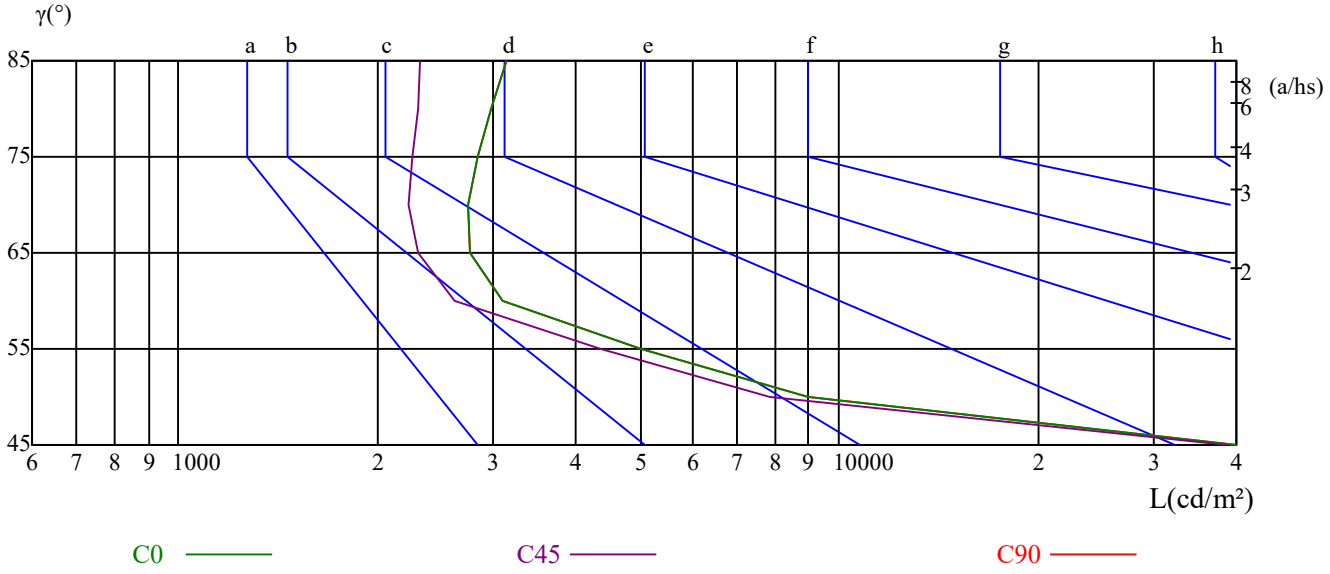
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|---|---|---|---|---|---|---|---|---|---|
| C0 | 43496 | 8986 | 5028 | 3087 | 2763 | 2737 | 2834 | 2980 | 3128 |
| C45 | 38689 | 7882 | 4344 | 2624 | 2306 | 2237 | 2259 | 2304 | 2327 |
| C90 | 43496 | 8986 | 5028 | 3087 | 2763 | 2737 | 2834 | 2980 | 3128 |

| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|---|---|---|---|---|---|---|---|---|
| 5302 | 5302 | 5302 | 7368 | 7368 | 7368 | 18451 | 18451 | 18451 |

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 Limitting Curve




Equipment: GMS1980
Temperature(°C): 25.0

Date: 2025/12/12
Humidity(%): 60.0%

Operator: YZQ
Distance(m): 9.28

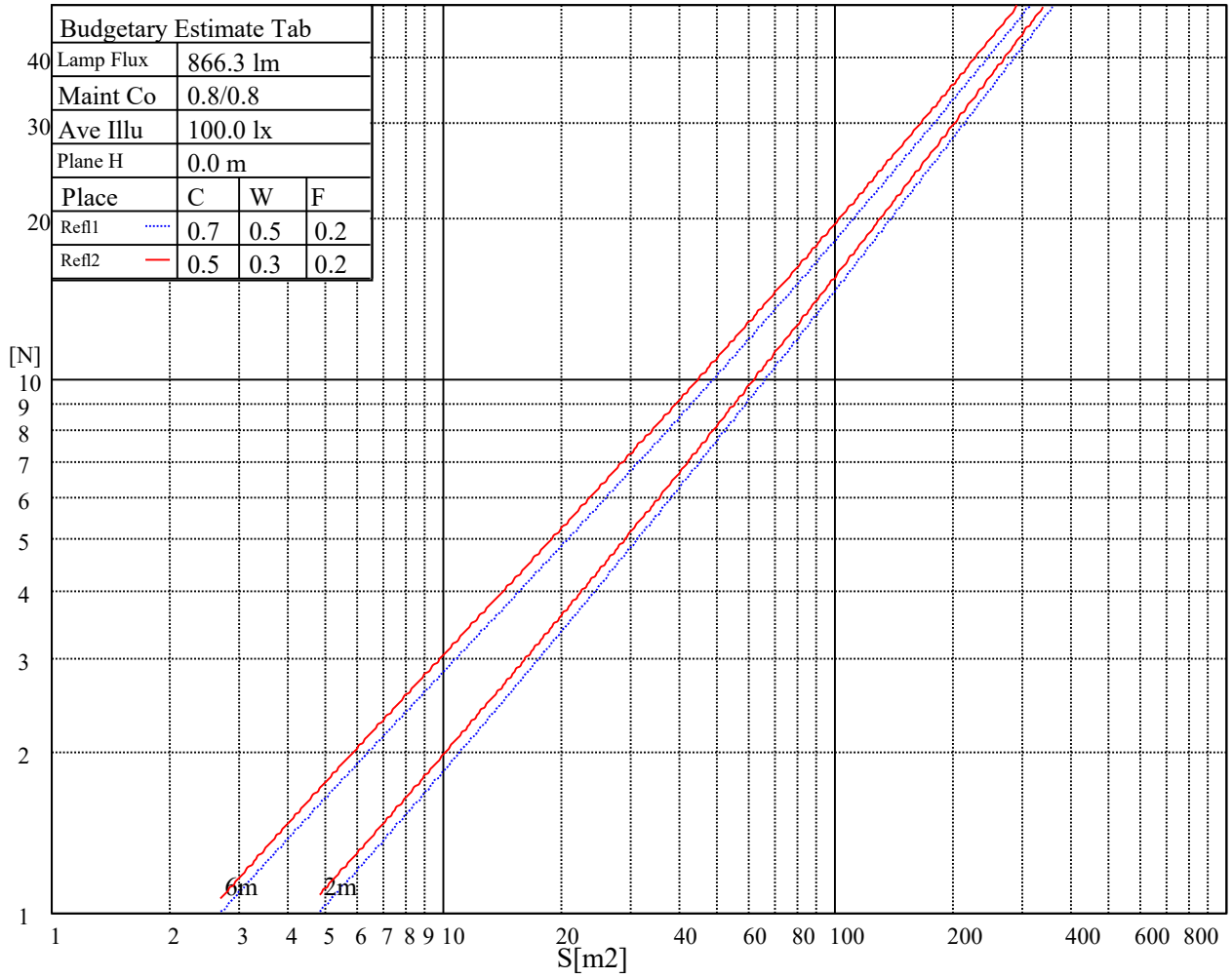
| Illumination assessment according UGR | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Rf of Ceiling | | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
| Rf of Wall | | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| Rf of Floor | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Room dimensions | | Viewed crosswise | | | | | Viewed endwise | | | | |
| X | Y | | | | | | | | | | |
| 2H | 2H | 21.98 | 22.96 | 22.34 | 23.27 | 23.58 | 21.87 | 22.85 | 22.24 | 23.17 | 23.48 |
| | 3H | 21.78 | 22.65 | 22.17 | 22.99 | 23.34 | 21.68 | 22.55 | 22.07 | 22.89 | 23.24 |
| | 4H | 21.69 | 22.50 | 22.09 | 22.85 | 23.22 | 21.59 | 22.40 | 21.99 | 22.75 | 23.12 |
| | 6H | 21.62 | 22.36 | 22.04 | 22.73 | 23.13 | 21.53 | 22.26 | 21.94 | 22.64 | 23.04 |
| | 8H | 21.56 | 22.26 | 21.98 | 22.65 | 23.05 | 21.46 | 22.16 | 21.88 | 22.55 | 22.96 |
| | 12H | 21.50 | 22.17 | 21.93 | 22.56 | 22.98 | 21.41 | 22.07 | 21.83 | 22.47 | 22.88 |
| 4H | 2H | 21.67 | 22.48 | 22.07 | 22.83 | 23.20 | 21.57 | 22.37 | 21.97 | 22.73 | 23.09 |
| | 3H | 21.45 | 22.12 | 21.87 | 22.51 | 22.93 | 21.35 | 22.02 | 21.77 | 22.41 | 22.83 |
| | 4H | 21.39 | 21.97 | 21.83 | 22.40 | 22.84 | 21.30 | 21.87 | 21.73 | 22.30 | 22.75 |
| | 6H | 21.28 | 21.79 | 21.76 | 22.25 | 22.70 | 21.19 | 21.70 | 21.66 | 22.15 | 22.61 |
| | 8H | 21.25 | 21.72 | 21.73 | 22.18 | 22.65 | 21.16 | 21.63 | 21.64 | 22.09 | 22.56 |
| | 12H | 21.22 | 21.66 | 21.71 | 22.11 | 22.63 | 21.13 | 21.57 | 21.62 | 22.02 | 22.54 |
| 8H | 4H | 21.20 | 21.67 | 21.69 | 22.13 | 22.61 | 21.10 | 21.58 | 21.59 | 22.04 | 22.51 |
| | 6H | 21.09 | 21.48 | 21.60 | 21.96 | 22.47 | 21.00 | 21.39 | 21.51 | 21.87 | 22.38 |
| | 8H | 21.11 | 21.44 | 21.65 | 21.96 | 22.46 | 21.03 | 21.35 | 21.56 | 21.87 | 22.37 |
| | 12H | 21.11 | 21.36 | 21.65 | 21.88 | 22.40 | 21.02 | 21.28 | 21.57 | 21.79 | 22.32 |
| 12H | 4H | 21.15 | 21.59 | 21.64 | 22.04 | 22.56 | 21.05 | 21.49 | 21.54 | 21.94 | 22.46 |
| | 6H | 21.09 | 21.41 | 21.62 | 21.93 | 22.43 | 20.99 | 21.32 | 21.53 | 21.84 | 22.34 |
| | 8H | 21.08 | 21.33 | 21.62 | 21.84 | 22.37 | 20.99 | 21.24 | 21.53 | 21.76 | 22.28 |

| Variation with the observer position at spacings: | | |
|---|---|---|
| S = 1.0H | 3.7/-11.9 | 3.7/-11.9 |
| S = 1.5H | 6.1/-11.1 | 6.1/-11.1 |
| S = 2.0H | 8.0/-10.0 | 8.0/-10.0 |
| Standard tables: | BK0 | BK0 |
| Uncorrected UGR | 1.9 | 1.9 |

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

## Budgetary Estimate Table



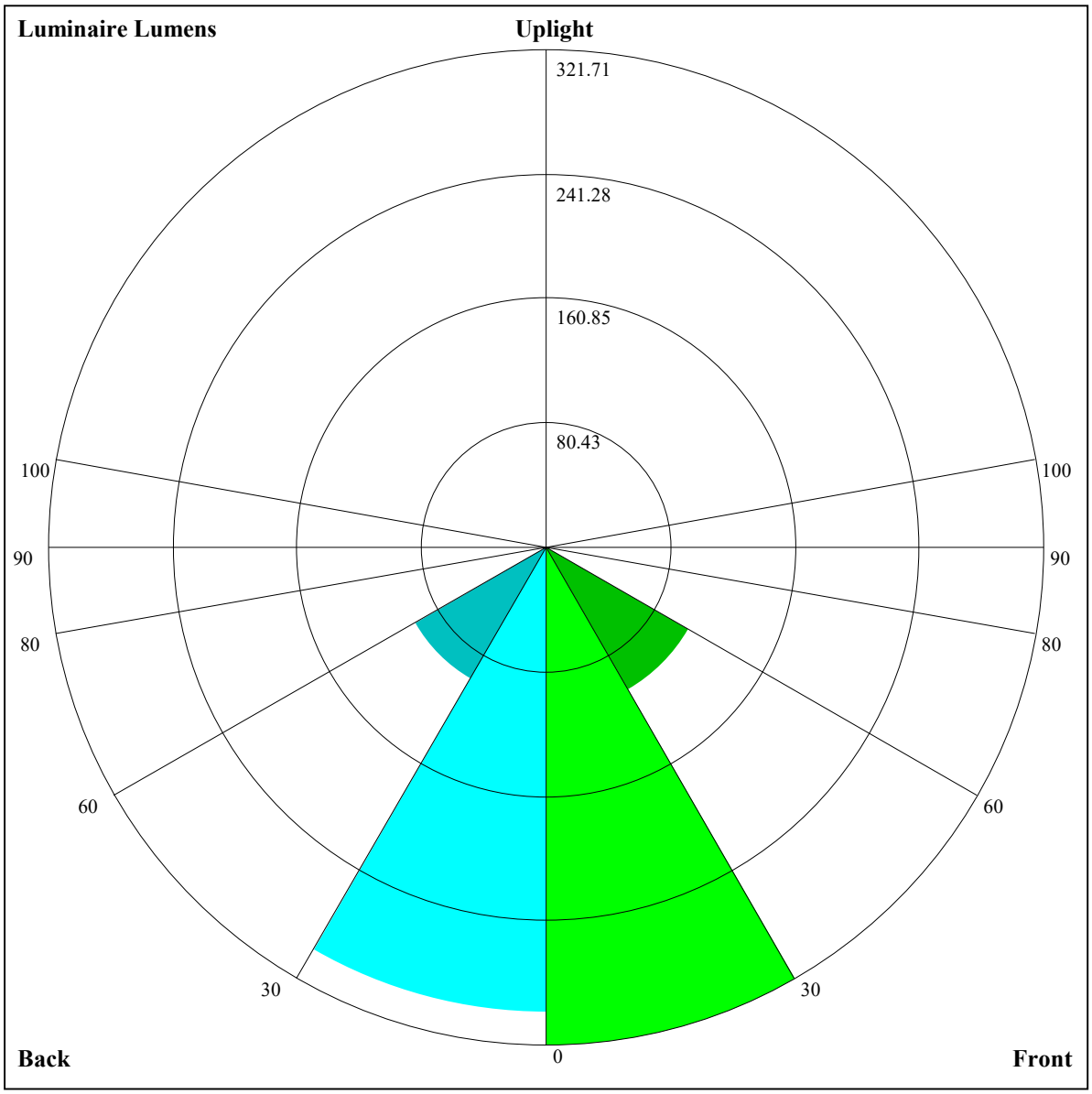



Equipment: GMS1980 Date: 2025/12/12 Operator: YZQ
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 9.28

## Utilization factor table for indoor luminaire



| 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 | COEFFCIENTS OF UTILIZATION RHOFC=20 CU | | | | | | | | | | | | | | | |
| 0 | 1.15 | 1.15 | 1.15 | 1.12 | 1.12 | 1.12 | 1.07 | 1.07 | 1.07 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 | 0.98 | 0.96 |
| 1 | 1.07 | 1.05 | 1.03 | 1.05 | 1.03 | 1.02 | 1.02 | 1.00 | 0.99 | 0.98 | 0.97 | 0.96 | 0.95 | 0.94 | 0.93 | 0.91 |
| 2 | 1.01 | 0.98 | 0.95 | 0.99 | 0.96 | 0.94 | 0.96 | 0.94 | 0.91 | 0.93 | 0.91 | 0.90 | 0.91 | 0.89 | 0.88 | 0.86 |
| 3 | 0.95 | 0.91 | 0.88 | 0.94 | 0.90 | 0.87 | 0.91 | 0.88 | 0.86 | 0.89 | 0.87 | 0.84 | 0.87 | 0.85 | 0.83 | 0.82 |
| 4 | 0.90 | 0.85 | 0.82 | 0.89 | 0.85 | 0.81 | 0.87 | 0.83 | 0.80 | 0.85 | 0.82 | 0.80 | 0.84 | 0.81 | 0.79 | 0.77 |
| 5 | 0.86 | 0.81 | 0.77 | 0.85 | 0.80 | 0.77 | 0.83 | 0.79 | 0.76 | 0.82 | 0.78 | 0.75 | 0.80 | 0.77 | 0.75 | 0.74 |
| 6 | 0.82 | 0.77 | 0.73 | 0.81 | 0.76 | 0.73 | 0.79 | 0.75 | 0.72 | 0.78 | 0.75 | 0.72 | 0.77 | 0.74 | 0.71 | 0.70 |
| 7 | 0.78 | 0.73 | 0.69 | 0.77 | 0.72 | 0.69 | 0.76 | 0.72 | 0.69 | 0.75 | 0.71 | 0.68 | 0.74 | 0.71 | 0.68 | 0.67 |
| 8 | 0.74 | 0.70 | 0.66 | 0.74 | 0.69 | 0.66 | 0.73 | 0.69 | 0.66 | 0.72 | 0.68 | 0.65 | 0.71 | 0.68 | 0.65 | 0.64 |
| 9 | 0.71 | 0.67 | 0.63 | 0.71 | 0.66 | 0.63 | 0.70 | 0.66 | 0.63 | 0.69 | 0.66 | 0.63 | 0.69 | 0.65 | 0.63 | 0.62 |
| 10 | 0.69 | 0.64 | 0.61 | 0.68 | 0.64 | 0.61 | 0.68 | 0.63 | 0.61 | 0.67 | 0.63 | 0.60 | 0.66 | 0.63 | 0.60 | 0.59 |




Luminaire Lumens:
FL=321.71,FM=106.75,FH=2.7,FVH=1.07
BL=300.68,BM=98.5,BH=2.59,BVH=1.04
UL=0,UH=0

BUG Rating:B1-U0-G0

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 | 3885.75 | 3893.50 | 3828.05 | 3709.21 | 3523.19 | 3218.33 | 2971.17 | 2729.18 | 2427.76 |
| 45.0 | 3784.99 | 3879.72 | 3893.50 | 3847.00 | 3735.90 | 3492.19 | 3239.00 | 2916.92 | 2679.23 |
| 90.0 | 3898.67 | 3853.88 | 3766.90 | 3584.33 | 3369.90 | 3113.27 | 2863.52 | 2549.19 | 2299.45 |
| 135.0 | 3871.11 | 3907.28 | 3862.50 | 3729.01 | 3556.78 | 3327.70 | 3078.82 | 2751.57 | 2500.10 |
| 180.0 | 3885.75 | 3791.02 | 3630.84 | 3416.40 | 3102.07 | 2842.85 | 2591.39 | 2277.06 | 2024.73 |
| 225.0 | 3784.99 | 3610.17 | 3334.59 | 3089.15 | 2834.24 | 2572.44 | 2246.05 | 1663.55 | 1663.55 |
| 270.0 | 3898.67 | 3854.75 | 3709.21 | 3475.82 | 3233.83 | 2957.39 | 2686.12 | 2362.31 | 2110.85 |
| 315.0 | 3871.11 | 3751.40 | 3543.86 | 3327.70 | 3072.79 | 2802.38 | 2469.96 | 2217.63 | 1670.96 |
| 360.0 | 3885.75 | 3893.50 | 3828.05 | 3709.21 | 3523.19 | 3218.33 | 2971.17 | 2729.18 | 2427.76 |

| C/γ(°) | 9.0 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 2004.06 | 1707.47 | 1647.53 | 1415.61 | 1196.10 | 960.13 | 810.72 | 700.66 | 619.71 |
| 45.0 | 2444.13 | 2203.86 | 1954.11 | 1650.98 | 1415.87 | 1204.02 | 1015.42 | 827.68 | 716.59 |
| 90.0 | 1708.50 | 1708.50 | 1527.48 | 1303.32 | 1108.34 | 943.60 | 781.27 | 683.44 | 608.94 |
| 135.0 | 2189.22 | 1942.06 | 1703.51 | 1426.21 | 1227.27 | 1042.12 | 880.22 | 725.20 | 632.20 |
| 180.0 | 1779.29 | 1493.38 | 1291.86 | 1053.31 | 888.83 | 752.76 | 647.70 | 555.55 | 501.30 |
| 225.0 | 1489.25 | 1236.57 | 1053.14 | 890.21 | 727.70 | 631.33 | 561.23 | 494.66 | 451.78 |
| 270.0 | 1863.69 | 1622.56 | 1346.12 | 1148.91 | 974.09 | 794.96 | 684.73 | 582.25 | 521.10 |
| 315.0 | 1670.96 | 1449.29 | 1195.75 | 1011.37 | 851.88 | 699.28 | 611.79 | 545.39 | 492.86 |
| 360.0 | 2004.06 | 1707.47 | 1647.53 | 1415.61 | 1196.10 | 960.13 | 810.72 | 700.66 | 619.71 |

| C/γ(°) | 18.0 | 19.0 | 20.0 | 21.0 | 22.0 | 23.0 | 24.0 | 25.0 | 26.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 547.11 | 502.76 | 467.19 | 437.74 | 406.39 | 384.78 | 368.24 | 351.10 | 339.39 |
| 45.0 | 634.78 | 556.41 | 506.46 | 455.65 | 439.29 | 439.29 | 370.83 | 353.09 | 337.93 |
| 90.0 | 537.38 | 492.25 | 446.78 | 416.55 | 391.32 | 364.63 | 347.83 | 333.36 | 320.27 |
| 135.0 | 561.58 | 507.32 | 456.51 | 439.29 | 439.29 | 371.69 | 350.24 | 335.52 | 321.39 |
| 180.0 | 459.96 | 434.12 | 434.12 | 371.60 | 354.55 | 340.60 | 327.77 | 318.21 | 310.63 |
| 225.0 | 409.67 | 384.00 | 362.13 | 343.96 | 328.54 | 312.44 | 301.41 | 292.11 | 282.90 |
| 270.0 | 474.60 | 436.71 | 436.71 | 372.98 | 352.65 | 335.78 | 317.95 | 306.06 | 296.42 |
| 315.0 | 442.48 | 413.28 | 390.12 | 369.71 | 353.17 | 335.78 | 323.55 | 311.06 | 302.96 |
| 360.0 | 547.11 | 502.76 | 467.19 | 437.74 | 406.39 | 384.78 | 368.24 | 351.10 | 339.39 |

| C/γ(°) | 27.0 | 28.0 | 29.0 | 30.0 | 31.0 | 32.0 | 33.0 | 34.0 | 35.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 326.56 | 317.86 | 309.42 | 299.78 | 292.97 | 286.60 | 281.09 | 274.11 | 268.60 |
| 45.0 | 324.75 | 312.01 | 302.45 | 293.23 | 286.09 | 278.51 | 273.08 | 269.12 | 265.42 |
| 90.0 | 305.63 | 295.39 | 286.26 | 278.94 | 271.70 | 266.19 | 261.11 | 255.43 | 252.15 |
| 135.0 | 312.35 | 304.08 | 294.96 | 289.44 | 285.22 | 282.73 | 281.78 | 281.52 | 281.09 |
| 180.0 | 300.64 | 294.27 | 289.87 | 286.60 | 284.79 | 282.30 | 276.70 | 269.29 | 255.34 |
| 225.0 | 273.86 | 267.83 | 262.40 | 256.12 | 252.59 | 249.23 | 243.28 | 233.12 | 216.07 |
| 270.0 | 286.60 | 275.32 | 268.52 | 262.40 | 255.17 | 250.52 | 245.52 | 240.79 | 232.86 |
| 315.0 | 294.61 | 286.17 | 281.26 | 276.01 | 270.58 | 267.14 | 263.01 | 256.20 | 242.34 |
| 360.0 | 326.56 | 317.86 | 309.42 | 299.78 | 292.97 | 286.60 | 281.09 | 274.11 | 268.60 |

| C/γ(°) | 36.0 | 37.0 | 38.0 | 39.0 | 40.0 | 41.0 | 42.0 | 43.0 | 44.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 261.71 | 250.09 | 229.59 | 209.70 | 188.51 | 160.87 | 137.19 | 113.42 | 85.77 |
| 45.0 | 261.80 | 258.18 | 248.28 | 235.19 | 218.74 | 196.26 | 175.16 | 153.46 | 130.81 |
| 90.0 | 246.47 | 235.10 | 220.89 | 203.93 | 180.25 | 159.41 | 137.36 | 115.48 | 89.30 |
| 135.0 | 277.65 | 264.38 | 249.14 | 227.27 | 195.92 | 171.20 | 144.16 | 112.73 | 88.79 |
| 180.0 | 235.36 | 209.10 | 187.31 | 165.86 | 136.58 | 112.90 | 91.54 | 65.54 | 47.02 |
| 225.0 | 200.83 | 183.43 | 163.62 | 136.93 | 114.54 | 91.80 | 71.22 | 48.14 | 32.81 |
| 270.0 | 217.88 | 203.50 | 187.22 | 169.91 | 147.69 | 128.66 | 110.15 | 91.20 | 73.11 |
| 315.0 | 226.84 | 209.18 | 189.37 | 161.82 | 138.05 | 114.11 | 85.00 | 63.99 | 41.42 |
| 360.0 | 261.71 | 250.09 | 229.59 | 209.70 | 188.51 | 160.87 | 137.19 | 113.42 | 85.77 |

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 | 64.50 | 45.64 | 26.35 | 16.79 | 10.42 | 8.53 | 7.75 | 7.15 | 6.54 |
| 45.0 | 100.84 | 78.37 | 57.18 | 39.44 | 24.80 | 17.65 | 15.24 | 12.66 | 10.94 |
| 90.0 | 70.79 | 52.96 | 37.81 | 22.82 | 15.50 | 12.66 | 10.33 | 9.04 | 7.75 |
| 135.0 | 61.83 | 43.58 | 28.51 | 18.69 | 11.20 | 9.82 | 8.96 | 8.27 | 7.41 |
| 180.0 | 30.66 | 17.40 | 10.59 | 8.53 | 7.84 | 6.98 | 6.29 | 5.77 | 5.34 |
| 225.0 | 22.48 | 14.12 | 12.40 | 10.59 | 9.30 | 8.01 | 6.98 | 5.94 | 5.17 |
| 270.0 | 52.19 | 38.67 | 25.84 | 19.20 | 15.85 | 13.26 | 11.37 | 9.65 | 7.92 |
| 315.0 | 27.30 | 18.43 | 12.14 | 9.73 | 9.13 | 8.61 | 8.01 | 7.32 | 6.89 |
| 360.0 | 64.50 | 45.64 | 26.35 | 16.79 | 10.42 | 8.53 | 7.75 | 7.15 | 6.54 |

| C/γ(°) | 54.0 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 | 60.0 | 61.0 | 62.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 6.03 | 5.51 | 4.74 | 4.05 | 3.79 | 3.62 | 3.44 | 3.36 | 3.27 |
| 45.0 | 9.73 | 8.70 | 7.75 | 6.20 | 5.17 | 4.48 | 3.88 | 3.36 | 3.10 |
| 90.0 | 6.89 | 6.11 | 5.25 | 4.56 | 4.13 | 3.79 | 3.53 | 3.36 | 3.19 |
| 135.0 | 6.72 | 6.29 | 5.34 | 4.56 | 4.05 | 3.53 | 3.27 | 3.10 | 2.93 |
| 180.0 | 4.91 | 4.48 | 4.13 | 3.70 | 3.44 | 3.19 | 3.10 | 2.93 | 2.76 |
| 225.0 | 4.31 | 3.79 | 3.44 | 3.19 | 3.01 | 2.93 | 2.84 | 2.76 | 2.67 |
| 270.0 | 6.72 | 5.68 | 4.99 | 4.22 | 3.88 | 3.62 | 3.36 | 3.19 | 3.10 |
| 315.0 | 6.11 | 4.99 | 4.22 | 3.88 | 3.36 | 3.10 | 2.93 | 2.84 | 2.76 |
| 360.0 | 6.03 | 5.51 | 4.74 | 4.05 | 3.79 | 3.62 | 3.44 | 3.36 | 3.27 |

| C/γ(°) | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 | 70.0 | 71.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 3.19 | 3.01 | 2.84 | 2.67 | 2.58 | 2.50 | 2.41 | 2.41 | 2.41 |
| 45.0 | 2.93 | 2.93 | 2.76 | 2.67 | 2.67 | 2.67 | 2.58 | 2.58 | 2.58 |
| 90.0 | 3.10 | 3.01 | 2.93 | 2.93 | 2.76 | 2.76 | 2.67 | 2.67 | 2.58 |
| 135.0 | 2.84 | 2.76 | 2.76 | 2.67 | 2.58 | 2.50 | 2.41 | 2.41 | 2.33 |
| 180.0 | 2.67 | 2.58 | 2.50 | 2.41 | 2.41 | 2.41 | 2.33 | 2.33 | 2.33 |
| 225.0 | 2.67 | 2.58 | 2.58 | 2.58 | 2.50 | 2.41 | 2.41 | 2.41 | 2.33 |
| 270.0 | 3.10 | 3.01 | 2.93 | 2.93 | 2.84 | 2.76 | 2.76 | 2.67 | 2.58 |
| 315.0 | 2.76 | 2.76 | 2.67 | 2.58 | 2.50 | 2.50 | 2.50 | 2.50 | 2.41 |
| 360.0 | 3.19 | 3.01 | 2.84 | 2.67 | 2.58 | 2.50 | 2.41 | 2.41 | 2.41 |

| C/γ(°) | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0 | 80.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 2.41 | 2.33 | 2.33 | 2.33 | 2.33 | 2.24 | 2.24 | 2.15 | 2.07 |
| 45.0 | 2.58 | 2.58 | 2.58 | 2.50 | 2.50 | 2.41 | 2.41 | 2.41 | 2.33 |
| 90.0 | 2.50 | 2.50 | 2.50 | 2.41 | 2.41 | 2.33 | 2.33 | 2.24 | 2.24 |
| 135.0 | 2.33 | 2.24 | 2.15 | 2.15 | 2.15 | 2.15 | 2.15 | 2.07 | 2.15 |
| 180.0 | 2.24 | 2.24 | 2.24 | 2.15 | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 |
| 225.0 | 2.33 | 2.33 | 2.24 | 2.24 | 2.24 | 2.15 | 2.07 | 2.07 | 1.98 |
| 270.0 | 2.58 | 2.58 | 2.50 | 2.50 | 2.41 | 2.41 | 2.33 | 2.33 | 2.33 |
| 315.0 | 2.41 | 2.41 | 2.41 | 2.41 | 2.33 | 2.24 | 2.24 | 2.33 | 2.24 |
| 360.0 | 2.41 | 2.33 | 2.33 | 2.33 | 2.33 | 2.24 | 2.24 | 2.15 | 2.07 |

| C/γ(°) | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 2.07 | 1.98 | 1.98 | 1.98 | 1.89 | 1.98 | 1.89 | 1.89 | 1.81 |
| 45.0 | 2.33 | 2.33 | 2.33 | 2.58 | 2.50 | 2.15 | 1.89 | 1.81 | 1.81 |
| 90.0 | 2.15 | 2.07 | 1.98 | 1.98 | 1.89 | 1.81 | 1.72 | 1.72 | 1.72 |
| 135.0 | 2.07 | 2.07 | 2.15 | 2.07 | 1.98 | 1.89 | 1.81 | 1.81 | 1.81 |
| 180.0 | 2.07 | 2.07 | 2.07 | 1.98 | 1.89 | 1.89 | 1.81 | 1.89 | 1.81 |
| 225.0 | 1.89 | 1.89 | 1.89 | 1.81 | 1.81 | 1.81 | 1.72 | 1.72 | 1.64 |
| 270.0 | 2.24 | 2.24 | 2.15 | 2.07 | 1.89 | 1.81 | 1.72 | 1.72 | 1.64 |
| 315.0 | 2.15 | 2.07 | 1.98 | 1.81 | 1.89 | 1.81 | 1.81 | 1.72 | 1.64 |
| 360.0 | 2.07 | 1.98 | 1.98 | 1.98 | 1.89 | 1.98 | 1.89 | 1.89 | 1.81 |

## Intensity data(cd)

| C/γ(°) | 90.0 |
|---|---|
| 0.0 | 1.81 |
| 45.0 | 1.81 |
| 90.0 | 1.64 |
| 135.0 | 1.72 |
| 180.0 | 1.72 |
| 225.0 | 1.64 |
| 270.0 | 1.55 |
| 315.0 | 1.64 |
| 360.0 | 1.81 |