NATA LIGHTING CO.,LTD.
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Tel:+86 571 85021543 Fax:+86 571 87977635
Address:Address:Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,ChinaNata

## Nata

Client: NT
LumCAT: 62-0098
Luminaire: 92.70.412.00
Report No:
Ballast type: DC
Test No: 20250905-C002
LampCAT: CITIZEN CLU038
Lamp flux(lm): 3801.0
Number of Lamps: 1
Length(mm): 75
Phm Type: C

Voltage(V): 35.800
Current(A): 0.704
Power (W): 25.200
PF: 0.000
Width(mm): 75
Height(mm): 35

## Photometric Results

Lumens(lm): 3668.38, Efficiency(%): 96.51% , Luminous Efficacy(lm/W): 145.57
Central intensity(cd): 9645.814, Maximum intensity(cd): 9681.286
Angle of maximum intensity: C=135.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=36.0
[C90/270]Total=36.4
Field angle(10%Imax): [C0/180]Total=53.6
[C90/270]Total=53.4
Maximum s/h(1/2): C0_180=0.60 C90_270=0.61
Maximum s/h(1/4): C0_180=0.56 C90_270=0.55
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 96.54%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.321%

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 0.0 | 9640.115 | 0.000 | 0 | 0.00% | 0.00% |
| 1.0 | 9622.590 | 9.217 | 9.217 | 0.24% | 0.25% |
| 2.0 | 9596.409 | 27.585 | 36.802 | 0.73% | 1.00% |
| 3.0 | 9546.263 | 45.783 | 82.585 | 1.20% | 2.25% |
| 4.0 | 9466.030 | 63.640 | 146.225 | 1.67% | 3.99% |
| 5.0 | 9384.741 | 81.095 | 227.32 | 2.13% | 6.20% |
| 6.0 | 9270.831 | 98.040 | 325.36 | 2.58% | 8.87% |
| 7.0 | 9136.018 | 114.251 | 439.611 | 3.01% | 11.98% |
| 8.0 | 8978.296 | 129.641 | 569.252 | 3.41% | 15.52% |
| 9.0 | 8779.085 | 143.914 | 713.166 | 3.79% | 19.44% |
| 10.0 | 8537.540 | 156.709 | 869.875 | 4.12% | 23.71% |
| 11.0 | 8243.528 | 167.677 | 1037.552 | 4.41% | 28.28% |
| 12.0 | 7917.422 | 176.662 | 1214.214 | 4.65% | 33.10% |
| 13.0 | 7514.144 | 183.134 | 1397.348 | 4.82% | 38.09% |
| 14.0 | 7053.225 | 186.461 | 1583.809 | 4.91% | 43.17% |
| 15.0 | 6569.080 | 187.013 | 1770.822 | 4.92% | 48.27% |
| 16.0 | 6021.277 | 184.484 | 1955.306 | 4.85% | 53.30% |
| 17.0 | 5477.063 | 179.060 | 2134.366 | 4.71% | 58.18% |
| 18.0 | 4892.732 | 170.975 | 2305.341 | 4.50% | 62.84% |
| 19.0 | 4329.410 | 160.446 | 2465.788 | 4.22% | 67.22% |
| 20.0 | 3757.747 | 148.017 | 2613.805 | 3.89% | 71.25% |
| 21.0 | 3242.037 | 134.410 | 2748.215 | 3.54% | 74.92% |
| 22.0 | 2642.114 | 118.245 | 2866.46 | 3.11% | 78.14% |
| 23.0 | 2109.460 | 99.701 | 2966.161 | 2.62% | 80.86% |
| 24.0 | 1849.853 | 86.565 | 3052.725 | 2.28% | 83.22% |
| 25.0 | 1516.008 | 76.532 | 3129.258 | 2.01% | 85.30% |
| 26.0 | 1192.689 | 63.939 | 3193.197 | 1.68% | 87.05% |
| 27.0 | 916.043 | 51.591 | 3244.787 | 1.36% | 88.45% |
| 28.0 | 695.148 | 40.792 | 3285.579 | 1.07% | 89.56% |
| 29.0 | 519.088 | 31.768 | 3317.347 | 0.84% | 90.43% |
| 30.0 | 394.516 | 24.667 | 3342.014 | 0.65% | 91.10% |
| 31.0 | 343.272 | 20.532 | 3362.546 | 0.54% | 91.66% |
| 32.0 | 249.420 | 16.980 | 3379.526 | 0.45% | 92.13% |
| 33.0 | 177.727 | 12.584 | 3392.11 | 0.33% | 92.47% |
| 34.0 | 150.701 | 9.939 | 3402.049 | 0.26% | 92.74% |
| 35.0 | 130.960 | 8.747 | 3410.796 | 0.23% | 92.98% |
| 36.0 | 119.094 | 7.962 | 3418.758 | 0.21% | 93.20% |
| 37.0 | 108.779 | 7.432 | 3426.19 | 0.20% | 93.40% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 38.0 | 101.886 | 7.032 | 3433.222 | 0.18% | 93.59% |
| 39.0 | 96.079 | 6.757 | 3439.979 | 0.18% | 93.77% |
| 40.0 | 91.762 | 6.551 | 3446.53 | 0.17% | 93.95% |
| 41.0 | 88.183 | 6.408 | 3452.938 | 0.17% | 94.13% |
| 42.0 | 85.617 | 6.314 | 3459.252 | 0.17% | 94.30% |
| 43.0 | 83.633 | 6.270 | 3465.522 | 0.16% | 94.47% |
| 44.0 | 82.302 | 6.263 | 3471.784 | 0.16% | 94.64% |
| 45.0 | 81.363 | 6.290 | 3478.074 | 0.17% | 94.81% |
| 46.0 | 80.571 | 6.333 | 3484.407 | 0.17% | 94.99% |
| 47.0 | 79.832 | 6.380 | 3490.787 | 0.17% | 95.16% |
| 48.0 | 79.072 | 6.424 | 3497.211 | 0.17% | 95.33% |
| 49.0 | 78.217 | 6.459 | 3503.67 | 0.17% | 95.51% |
| 50.0 | 77.246 | 6.482 | 3510.152 | 0.17% | 95.69% |
| 51.0 | 75.937 | 6.481 | 3516.632 | 0.17% | 95.86% |
| 52.0 | 74.427 | 6.452 | 3523.085 | 0.17% | 96.04% |
| 53.0 | 72.759 | 6.403 | 3529.487 | 0.17% | 96.21% |
| 54.0 | 70.700 | 6.323 | 3535.81 | 0.17% | 96.39% |
| 55.0 | 68.874 | 6.230 | 3542.041 | 0.16% | 96.56% |
| 56.0 | 66.594 | 6.121 | 3548.162 | 0.16% | 96.72% |
| 57.0 | 64.493 | 5.994 | 3554.156 | 0.16% | 96.89% |
| 58.0 | 62.075 | 5.853 | 3560.009 | 0.15% | 97.05% |
| 59.0 | 59.742 | 5.695 | 3565.704 | 0.15% | 97.20% |
| 60.0 | 57.325 | 5.531 | 3571.234 | 0.15% | 97.35% |
| 61.0 | 55.023 | 5.361 | 3576.596 | 0.14% | 97.50% |
| 62.0 | 52.669 | 5.189 | 3581.785 | 0.14% | 97.64% |
| 63.0 | 50.272 | 5.007 | 3586.792 | 0.13% | 97.78% |
| 64.0 | 47.961 | 4.820 | 3591.612 | 0.13% | 97.91% |
| 65.0 | 45.775 | 4.639 | 3596.251 | 0.12% | 98.03% |
| 66.0 | 43.484 | 4.453 | 3600.704 | 0.12% | 98.16% |
| 67.0 | 41.468 | 4.272 | 3604.976 | 0.11% | 98.27% |
| 68.0 | 39.283 | 4.091 | 3609.066 | 0.11% | 98.38% |
| 69.0 | 37.467 | 3.915 | 3612.982 | 0.10% | 98.49% |
| 70.0 | 35.324 | 3.738 | 3616.72 | 0.10% | 98.59% |
| 71.0 | 33.413 | 3.553 | 3620.273 | 0.09% | 98.69% |
| 72.0 | 31.428 | 3.372 | 3623.644 | 0.09% | 98.78% |
| 73.0 | 29.570 | 3.190 | 3626.834 | 0.08% | 98.87% |
| 74.0 | 29.137 | 3.086 | 3629.921 | 0.08% | 98.95% |
| 75.0 | 29.887 | 3.119 | 3633.039 | 0.08% | 99.04% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 76.0 | 31.133 | 3.239 | 3636.278 | 0.09% | 99.13% |
| 77.0 | 31.893 | 3.360 | 3639.639 | 0.09% | 99.22% |
| 78.0 | 31.682 | 3.403 | 3643.042 | 0.09% | 99.31% |
| 79.0 | 30.204 | 3.325 | 3646.367 | 0.09% | 99.40% |
| 80.0 | 26.994 | 3.084 | 3649.45 | 0.08% | 99.48% |
| 81.0 | 24.186 | 2.768 | 3652.218 | 0.07% | 99.56% |
| 82.0 | 21.315 | 2.467 | 3654.686 | 0.06% | 99.63% |
| 83.0 | 19.066 | 2.195 | 3656.881 | 0.06% | 99.69% |
| 84.0 | 17.841 | 2.011 | 3658.891 | 0.05% | 99.74% |
| 85.0 | 16.237 | 1.860 | 3660.751 | 0.05% | 99.79% |
| 86.0 | 15.065 | 1.711 | 3662.462 | 0.05% | 99.84% |
| 87.0 | 14.041 | 1.593 | 3664.055 | 0.04% | 99.88% |
| 88.0 | 13.281 | 1.497 | 3665.552 | 0.04% | 99.92% |
| 89.0 | 12.795 | 1.429 | 3666.981 | 0.04% | 99.96% |
| 90.0 | 12.637 | 1.394 | 3668.376 | 0.04% | 100.00% |

## Zonal flux distribution table



ZONAL LUMEN SUMMARY

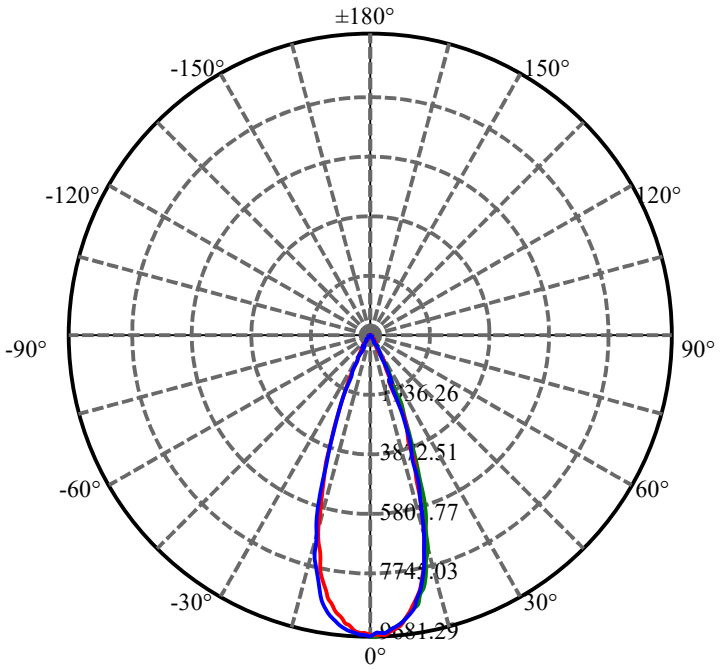
| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-30 | 3342.01 | 87.92% | 91.10% |
| 0-40 | 3446.53 | 90.67% | 93.95% |
| 0-60 | 3571.23 | 93.96% | 97.35% |
| 0-90 | 3666.98 | 96.47% | 99.96% |
| 0-120 | 3666.98 | 96.47% | 99.96% |
| 0-180 | 3668.38 | 96.51% | 100.00% |
| 60-90 | 95.75 | 2.52% | 2.61% |
| 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% |
| 0-22.68 | 2934.70 | 77.21% | 80.00% |

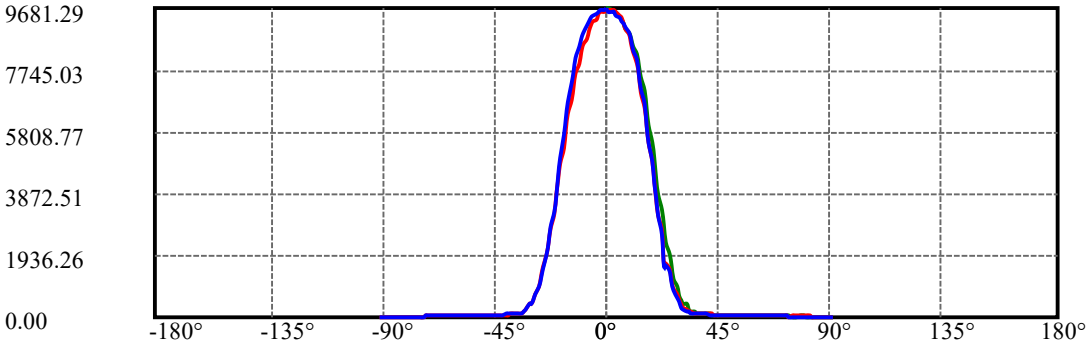
ZONAL LUMEN SUMMARY

| | |
|---|---|
| 0-10 | 869.87 |
| 10-20 | 1743.93 |
| 20-30 | 728.21 |
| 30-40 | 104.52 |
| 40-50 | 63.62 |
| 50-60 | 61.08 |
| 60-70 | 45.49 |
| 70-80 | 32.73 |
| 80-90 | 17.53 |
| 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]






C135(Max):

C0/C180:

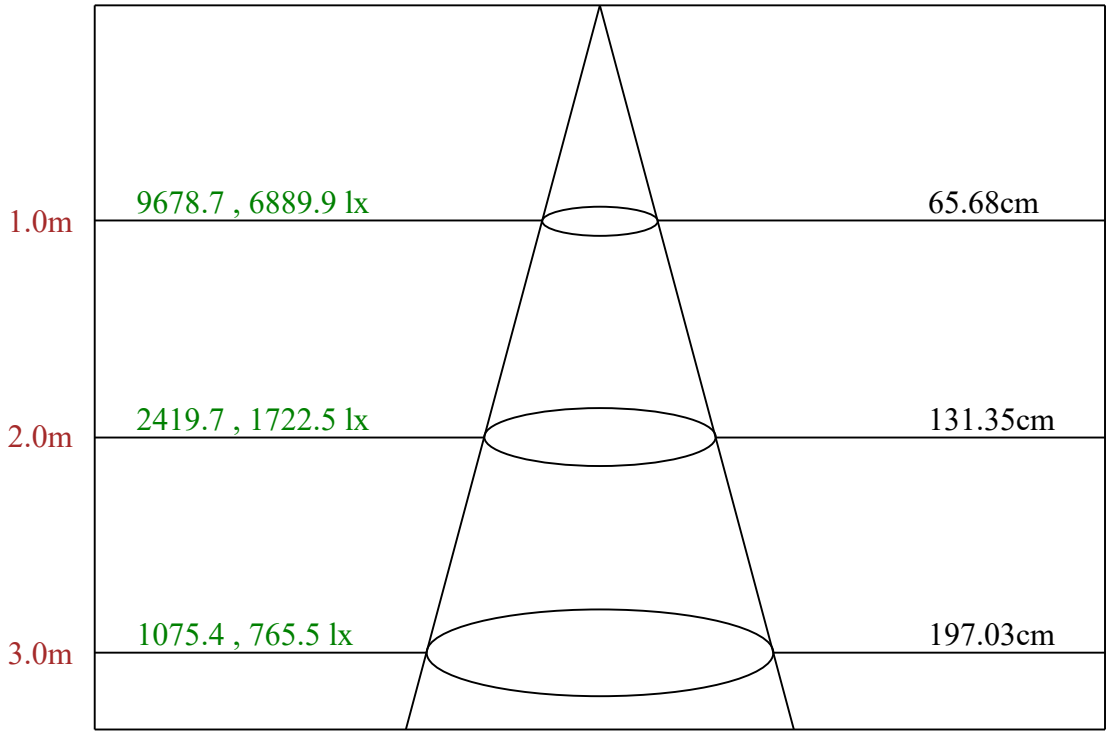
C90/C270:

Field angle(10%Imax):C0/180Left:27.9 Right:25.7
:C90/270Left:27.0 Right:26.4

Beam Angle(50%Imax):C0/180Left:19.0 Right:17.0
:C90/270Left:18.3 Right:18.1

## Lux distance Curve

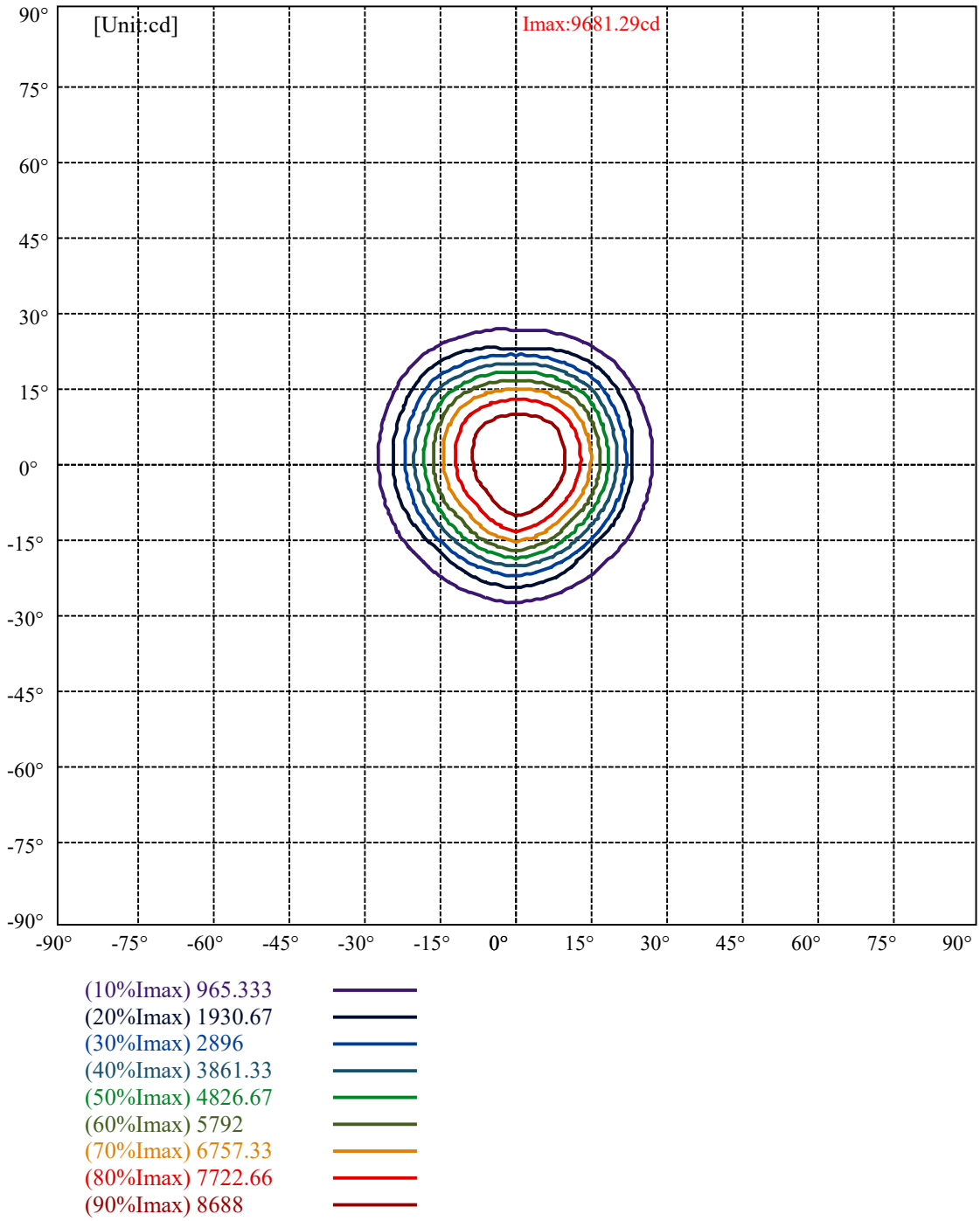





Max , Ave

Beam angle of C135 plane 36.36

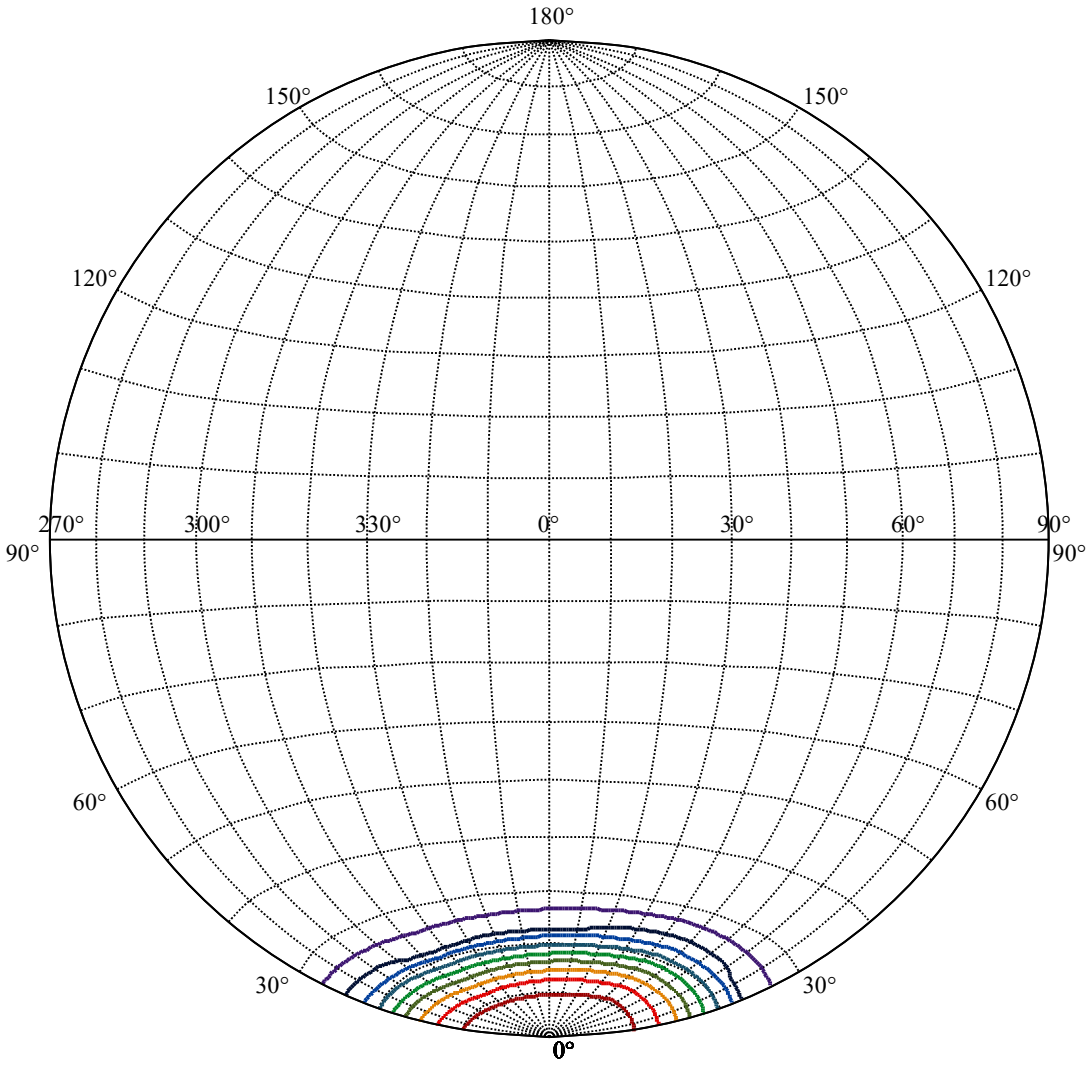
| | | |
|---|---|---|
| Equipment: GMS1980 | Date: 2025/9/5 | Operator: 杨泽全 |
| Temperature(°C): 25.0 | Humidity(%): 60.0% | Distance(m): 9.19 |




Equipment: GMS1980
Temperature(°C): 25.0
Date: 2025/9/5
Humidity(%): 60.0%
Operator: 杨泽全
Distance(m): 9.19

ISO candela diagram on circular web






House [Unit:cd] Road

Imax:9681.29

(10%Imax) 967.867
(20%Imax) 1935.73
(30%Imax) 2903.6
(40%Imax) 3871.47
(50%Imax) 4839.33
(60%Imax) 5807.2
(70%Imax) 6775.07
(80%Imax) 7742.93
(90%Imax) 8710.8

Equipment: GMS1980
Temperature(°C): 25.0

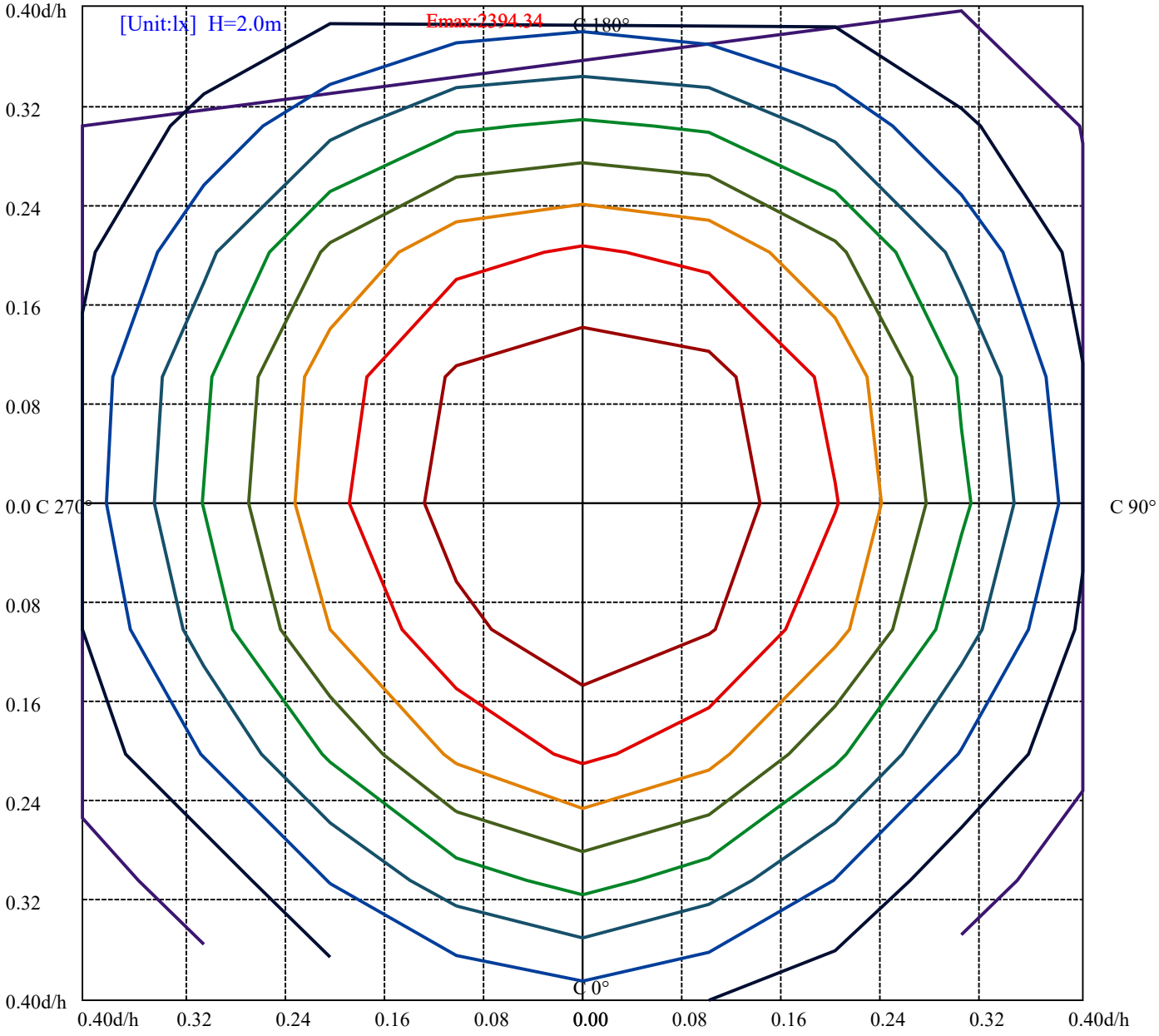
Date: 2025/9/5
Humidity(%): 60.0%

Operator: 杨泽全
Distance(m): 9.19

NT Nata 62-0098

ISO illuminance diagram



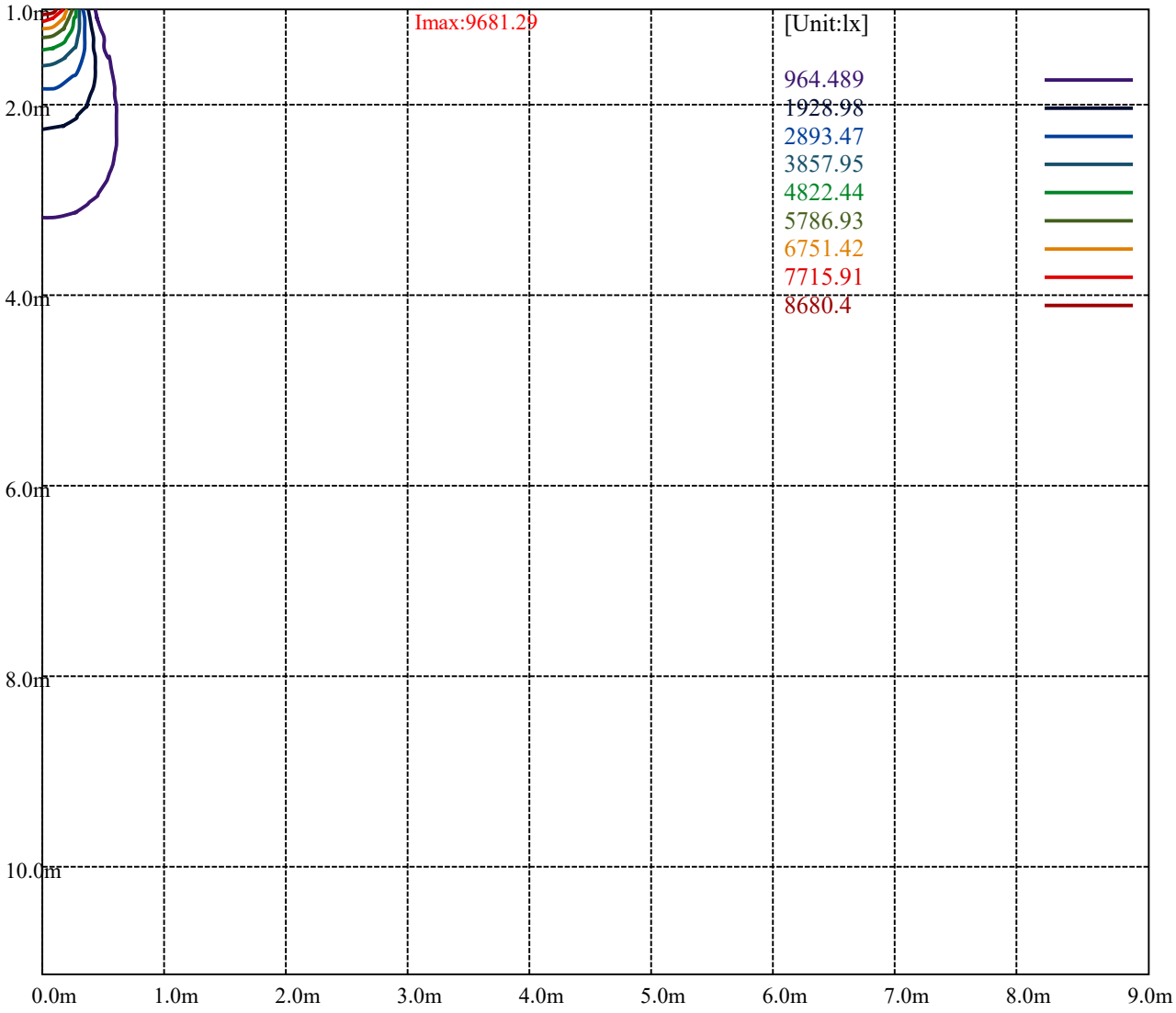



(10%Emax) 239.4335
(20%Emax) 478.8675
(30%Emax) 718.3
(40%Emax) 957.7325
(50%Emax) 1197.167
(60%Emax) 1436.6
(70%Emax) 1676.035
(80%Emax) 1915.468
(90%Emax) 2154.9

Equipment: GMS1980
Temperature(°C): 25.0
Date: 2025/9/5
Humidity(%): 60.0%
Operator: 杨泽全
Distance(m): 9.19

Space ISO Lux diagram






Equipment: GMS1980
Temperature(°C): 25.0

Date: 2025/9/5
Humidity(%): 60.0%

Operator: 杨泽全
Distance(m): 9.19

NT Nata 62-0098

## Luminance Limitting Curve(no luminous side)



Luminance Table

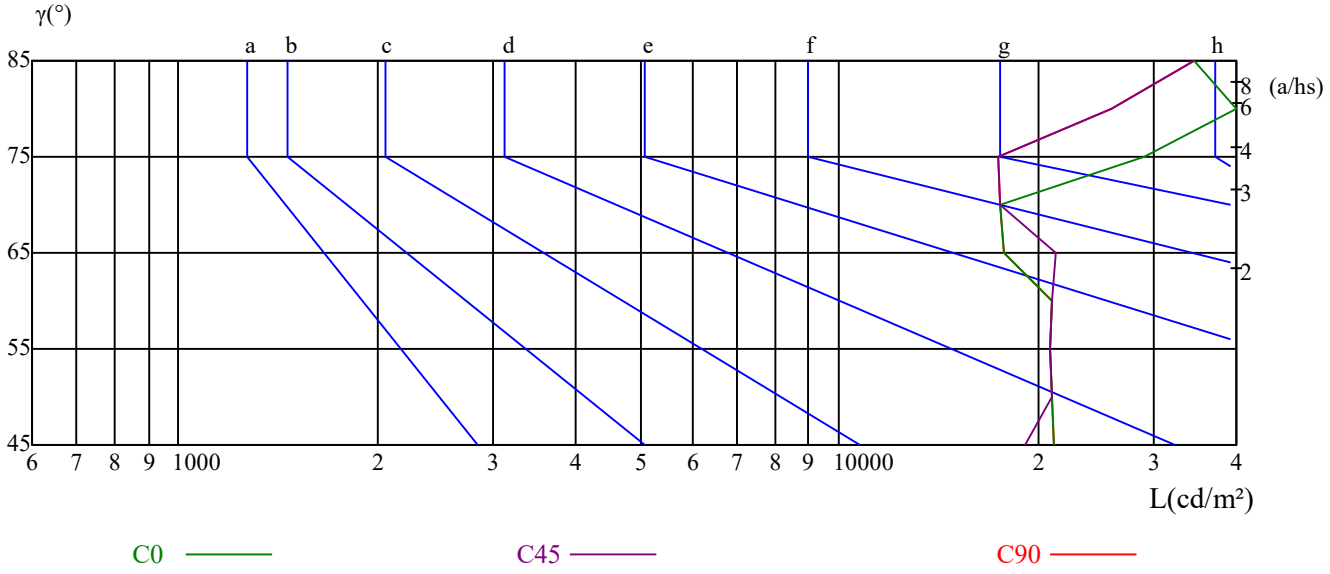
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|---|---|---|---|---|---|---|---|---|---|
| C0 | 21234 | 21022 | 20941 | 21020 | 17764 | 17560 | 29006 | 51879 | 34454 |
| C45 | 19110 | 21022 | 20941 | 21020 | 21316 | 17560 | 17403 | 25939 | 34454 |
| C90 | 21234 | 21022 | 20941 | 21020 | 17764 | 17560 | 17403 | 25939 | 34454 |

| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|---|---|---|---|---|---|---|---|---|
| 17764 | 17764 | 19540 | 23205 | 17403 | 18854 | 34454 | 34454 | 34454 |

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: 2025/9/5
Humidity(%): 60.0%

Operator: 杨泽全
Distance(m): 9.19

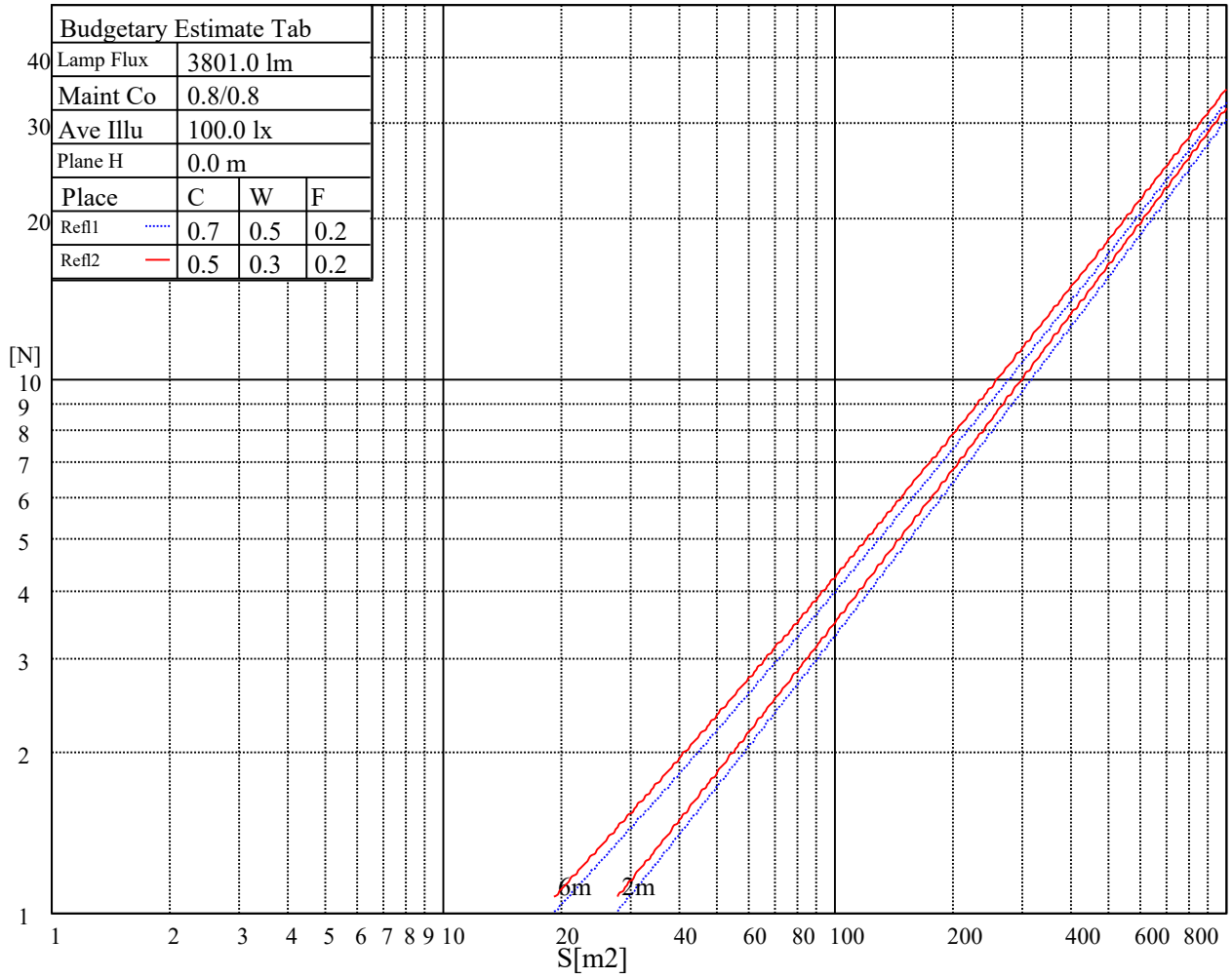
| Illumination assessment according UGR | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Rf of Ceiling | | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
| Rf of Wall | | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| Rf of Floor | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Room dimensions | | Viewed crosswise | | | | | Viewed endwise | | | | |
| X | Y | | | | | | | | | | |
| 2H | 2H | 16.22 | 17.19 | 16.58 | 17.50 | 17.82 | 16.04 | 17.02 | 16.41 | 17.33 | 17.65 |
| | 3H | 17.70 | 18.57 | 18.08 | 18.90 | 19.25 | 17.54 | 18.41 | 17.93 | 18.75 | 19.10 |
| | 4H | 18.88 | 19.69 | 19.28 | 20.04 | 20.41 | 18.16 | 18.97 | 18.56 | 19.32 | 19.69 |
| | 6H | 21.76 | 22.49 | 22.17 | 22.87 | 23.27 | 18.90 | 19.64 | 19.32 | 20.02 | 20.42 |
| | 8H | 22.22 | 22.92 | 22.64 | 23.31 | 23.72 | 19.30 | 20.00 | 19.72 | 20.39 | 20.79 |
| | 12H | 22.43 | 23.09 | 22.85 | 23.49 | 23.90 | 19.72 | 20.39 | 20.15 | 20.78 | 21.20 |
| 4H | 2H | 16.77 | 17.57 | 17.17 | 17.93 | 18.30 | 16.64 | 17.44 | 17.04 | 17.80 | 18.16 |
| | 3H | 18.40 | 19.08 | 18.83 | 19.48 | 19.89 | 18.28 | 18.96 | 18.71 | 19.35 | 19.77 |
| | 4H | 19.89 | 20.48 | 20.33 | 20.90 | 21.35 | 19.08 | 19.66 | 19.52 | 20.09 | 20.54 |
| | 6H | 22.81 | 23.33 | 23.28 | 23.78 | 24.23 | 19.95 | 20.47 | 20.42 | 20.92 | 21.37 |
| | 8H | 23.35 | 23.83 | 23.83 | 24.29 | 24.76 | 20.46 | 20.94 | 20.95 | 21.40 | 21.87 |
| | 12H | 23.63 | 24.07 | 24.12 | 24.53 | 25.05 | 21.01 | 21.45 | 21.50 | 21.91 | 22.43 |
| 8H | 4H | 20.18 | 20.66 | 20.66 | 21.12 | 21.59 | 19.41 | 19.89 | 19.90 | 20.35 | 20.82 |
| | 6H | 23.17 | 23.56 | 23.67 | 24.04 | 24.55 | 20.49 | 20.89 | 21.00 | 21.37 | 21.88 |
| | 8H | 23.84 | 24.17 | 24.37 | 24.69 | 25.19 | 21.21 | 21.54 | 21.74 | 22.06 | 22.56 |
| | 12H | 24.25 | 24.50 | 24.79 | 25.02 | 25.54 | 21.94 | 22.19 | 22.48 | 22.71 | 23.24 |
| 12H | 4H | 20.21 | 20.65 | 20.70 | 21.10 | 21.62 | 19.57 | 20.01 | 20.06 | 20.47 | 20.99 |
| | 6H | 23.25 | 23.58 | 23.78 | 24.10 | 24.60 | 20.75 | 21.08 | 21.29 | 21.60 | 22.10 |
| | 8H | 23.93 | 24.18 | 24.47 | 24.70 | 25.22 | 21.50 | 21.75 | 22.04 | 22.27 | 22.79 |

| Variation with the observer position at spacings: | | |
|---|---|---|
| S = 1.0H | 0.3/-0.8 | 0.5/-1.5 |
| S = 1.5H | 0.5/-0.7 | 0.3/-1.2 |
| S = 2.0H | 0.7/-0.7 | 0.6/-0.6 |
| Standard tables: | BKBF | BKBF |
| Uncorrected UGR | 5.1 | 6.5 |

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

## Budgetary Estimate Table






Equipment: GMS1980
Temperature(°C): 25.0
Date: 2025/9/5
Humidity(%): 60.0%
Operator: 杨泽全
Distance(m): 9.19

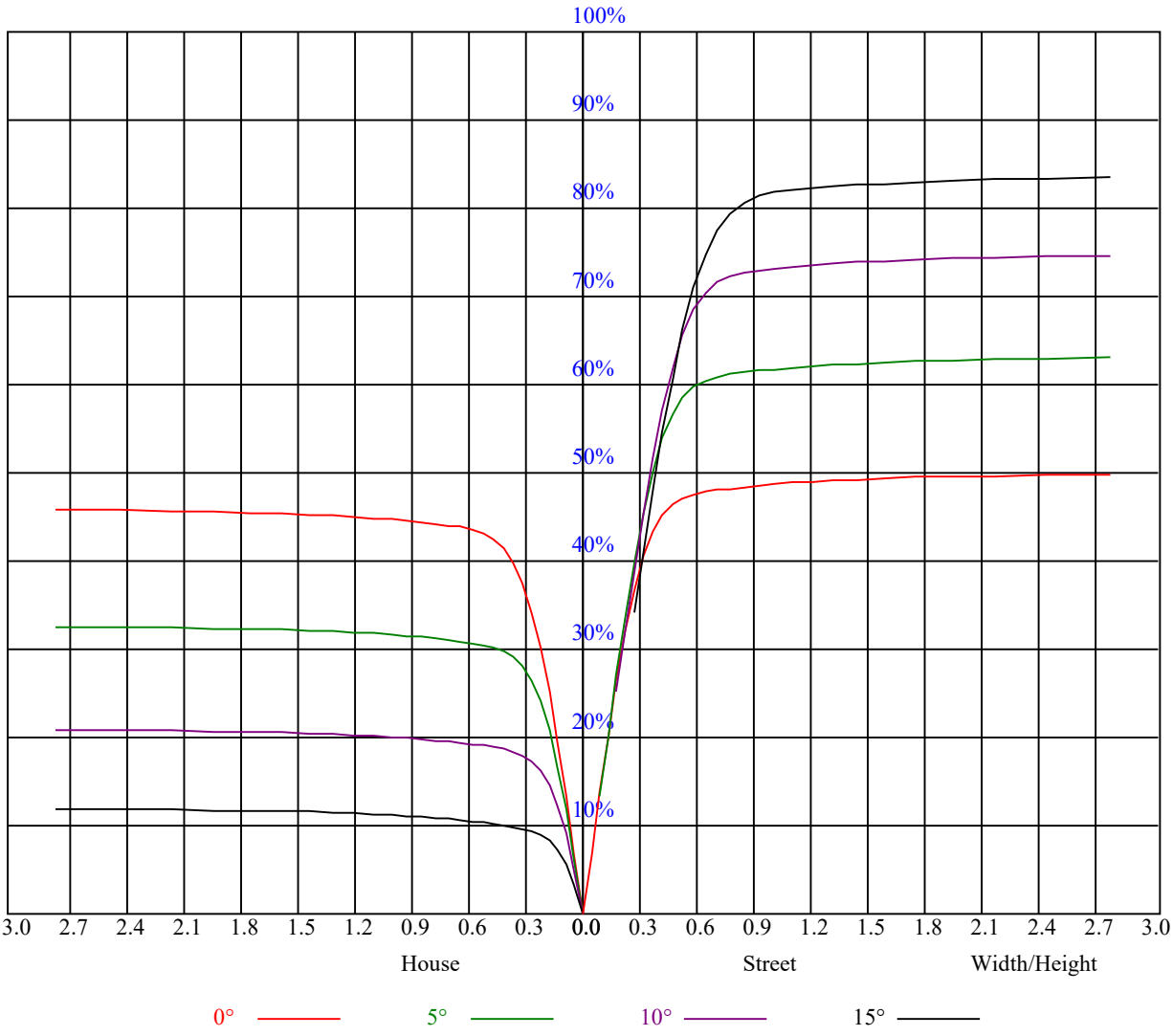
## Utilization factor table for indoor luminaire



| 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 | 1.03 | 1.03 | 1.03 | 0.99 | 0.99 | 0.99 | 0.97 |
| 1 | 1.08 | 1.06 | 1.04 | 1.06 | 1.04 | 1.02 | 1.02 | 1.00 | 0.99 | 0.98 | 0.97 | 0.96 | 0.95 | 0.94 | 0.93 | 0.91 |
| 2 | 1.02 | 0.98 | 0.95 | 1.00 | 0.97 | 0.94 | 0.97 | 0.94 | 0.92 | 0.94 | 0.92 | 0.90 | 0.92 | 0.90 | 0.89 | 0.87 |
| 3 | 0.96 | 0.92 | 0.89 | 0.95 | 0.91 | 0.88 | 0.93 | 0.90 | 0.87 | 0.90 | 0.88 | 0.86 | 0.88 | 0.86 | 0.84 | 0.83 |
| 4 | 0.92 | 0.87 | 0.84 | 0.91 | 0.87 | 0.84 | 0.89 | 0.85 | 0.83 | 0.87 | 0.84 | 0.82 | 0.85 | 0.83 | 0.81 | 0.80 |
| 5 | 0.88 | 0.83 | 0.80 | 0.87 | 0.83 | 0.80 | 0.85 | 0.82 | 0.79 | 0.84 | 0.81 | 0.78 | 0.82 | 0.80 | 0.78 | 0.76 |
| 6 | 0.84 | 0.80 | 0.76 | 0.84 | 0.79 | 0.76 | 0.82 | 0.78 | 0.75 | 0.81 | 0.78 | 0.75 | 0.80 | 0.77 | 0.75 | 0.73 |
| 7 | 0.81 | 0.76 | 0.73 | 0.80 | 0.76 | 0.73 | 0.79 | 0.75 | 0.72 | 0.78 | 0.75 | 0.72 | 0.77 | 0.74 | 0.72 | 0.71 |
| 8 | 0.78 | 0.73 | 0.70 | 0.77 | 0.73 | 0.70 | 0.76 | 0.73 | 0.70 | 0.76 | 0.72 | 0.69 | 0.75 | 0.72 | 0.69 | 0.68 |
| 9 | 0.75 | 0.71 | 0.68 | 0.75 | 0.70 | 0.67 | 0.74 | 0.70 | 0.67 | 0.73 | 0.70 | 0.67 | 0.72 | 0.69 | 0.67 | 0.66 |
| 10 | 0.73 | 0.68 | 0.65 | 0.72 | 0.68 | 0.65 | 0.72 | 0.68 | 0.65 | 0.71 | 0.67 | 0.65 | 0.70 | 0.67 | 0.65 | 0.64 |

## Coefficient Utilization Curve

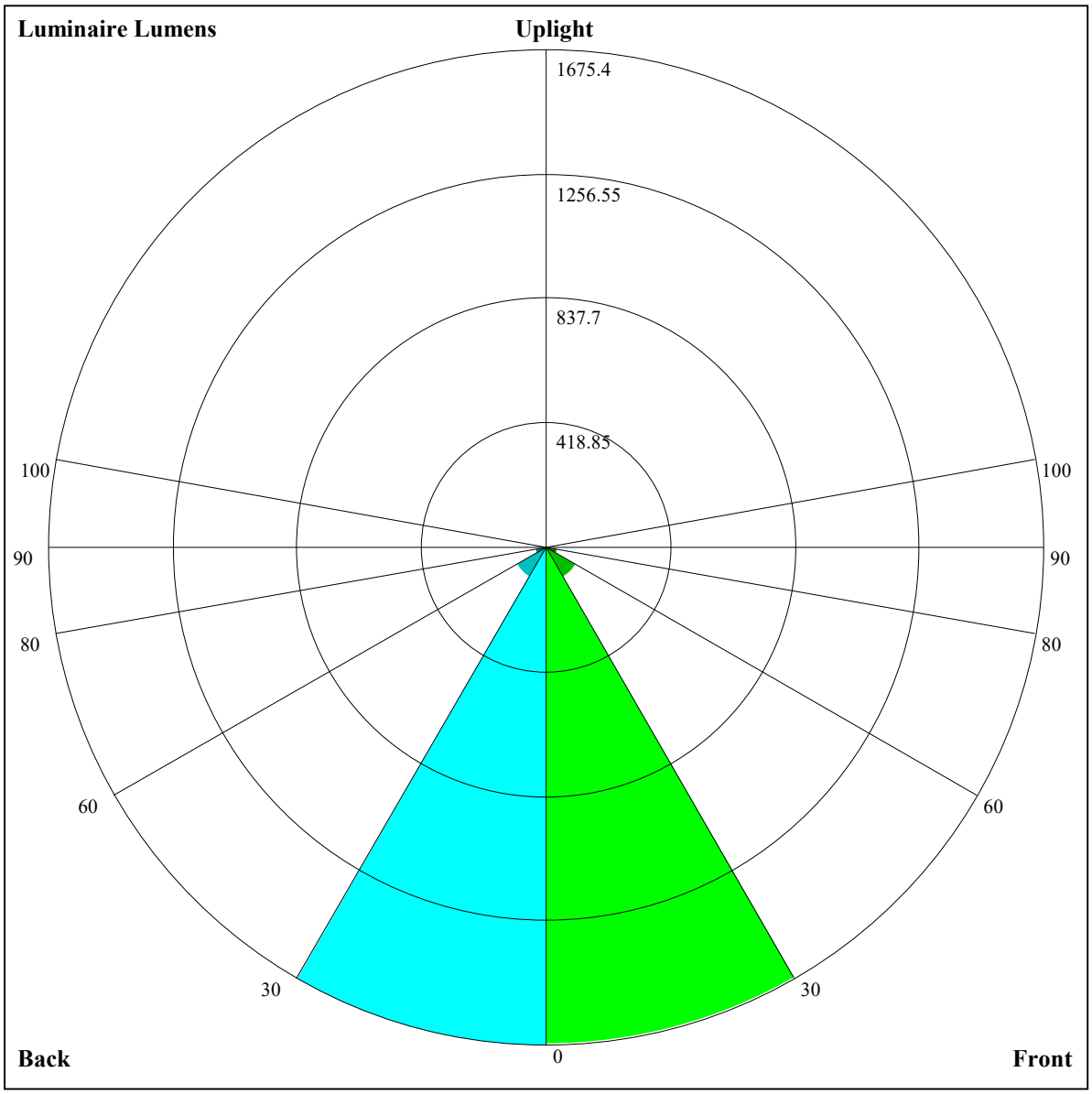





Equipment: GMS1980
Temperature(°C): 25.0

Date: 2025/9/5
Humidity(%): 60.0%

Operator: 杨泽全
Distance(m): 9.19




Luminaire Lumens:
FL=1669.91,FM=113.31,FH=38.83,FVH=9.51
BL=1675.4,BM=115.23,BH=38.43,BVH=9.32
UL=0,UH=0

BUG Rating:B3-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 | 9645.82 | 9650.88 | 9640.75 | 9604.43 | 9544.47 | 9459.17 | 9352.75 | 9181.31 | 9020.84 |
| 45.0 | 9580.78 | 9644.97 | 9640.75 | 9617.95 | 9606.12 | 9530.11 | 9446.50 | 9323.19 | 9231.98 |
| 90.0 | 9652.57 | 9582.47 | 9562.20 | 9560.51 | 9453.26 | 9397.51 | 9290.26 | 9217.62 | 9073.20 |
| 135.0 | 9681.29 | 9665.24 | 9616.26 | 9552.91 | 9481.13 | 9410.18 | 9313.06 | 9183.00 | 9028.44 |
| 180.0 | 9645.82 | 9585.01 | 9558.83 | 9483.66 | 9350.22 | 9261.54 | 9111.21 | 8971.01 | 8742.14 |
| 225.0 | 9580.78 | 9552.07 | 9472.68 | 9373.87 | 9281.81 | 9145.84 | 8992.97 | 8831.66 | 8640.79 |
| 270.0 | 9652.57 | 9649.19 | 9623.01 | 9553.76 | 9505.62 | 9454.10 | 9351.91 | 9239.58 | 9116.28 |
| 315.0 | 9681.29 | 9650.88 | 9656.79 | 9623.01 | 9505.62 | 9419.47 | 9307.99 | 9140.77 | 8972.70 |
| 360.0 | 9645.82 | 9650.88 | 9640.75 | 9604.43 | 9544.47 | 9459.17 | 9352.75 | 9181.31 | 9020.84 |

| C/γ(°) | 9.0 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 8833.35 | 8558.02 | 8274.25 | 7966.83 | 7596.07 | 7055.55 | 6571.61 | 6037.85 | 5499.02 |
| 45.0 | 9047.87 | 8869.66 | 8655.15 | 8319.85 | 7983.72 | 7606.20 | 7157.74 | 6549.66 | 6028.56 |
| 90.0 | 8890.78 | 8650.92 | 8357.86 | 8047.06 | 7573.26 | 7129.02 | 6645.93 | 5996.47 | 5457.64 |
| 135.0 | 8884.02 | 8741.29 | 8471.88 | 8243.84 | 7868.01 | 7498.94 | 7084.26 | 6525.16 | 6031.94 |
| 180.0 | 8542.82 | 8299.59 | 7965.98 | 7660.25 | 7203.35 | 6822.45 | 6395.10 | 5918.77 | 5302.24 |
| 225.0 | 8373.06 | 8081.69 | 7711.77 | 7358.74 | 6951.67 | 6407.77 | 5913.70 | 5423.01 | 4894.32 |
| 270.0 | 8921.18 | 8707.51 | 8478.63 | 8100.27 | 7726.97 | 7328.34 | 6747.28 | 6236.32 | 5685.67 |
| 315.0 | 8739.60 | 8391.64 | 8032.70 | 7642.52 | 7210.10 | 6577.53 | 6037.01 | 5482.97 | 4917.12 |
| 360.0 | 8833.35 | 8558.02 | 8274.25 | 7966.83 | 7596.07 | 7055.55 | 6571.61 | 6037.85 | 5499.02 |

| C/γ(°) | 18.0 | 19.0 | 20.0 | 21.0 | 22.0 | 23.0 | 24.0 | 25.0 | 26.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 4841.11 | 4296.37 | 3667.17 | 3184.08 | 2718.73 | 1656.18 | 1656.18 | 1493.01 | 1139.23 |
| 45.0 | 5484.66 | 4936.54 | 4275.25 | 3754.16 | 3149.45 | 2688.32 | 2259.29 | 1774.51 | 1432.46 |
| 90.0 | 4900.23 | 4236.40 | 3712.77 | 3212.79 | 2614.85 | 1607.96 | 1607.96 | 1438.71 | 1065.67 |
| 135.0 | 5501.55 | 4971.17 | 4331.84 | 3838.61 | 3351.30 | 2892.71 | 2359.79 | 1959.47 | 1606.44 |
| 180.0 | 4807.33 | 4299.74 | 3824.26 | 3238.13 | 2788.82 | 2374.15 | 1988.18 | 1565.06 | 1261.01 |
| 225.0 | 4382.51 | 3764.29 | 3285.43 | 2831.05 | 2090.37 | 1668.77 | 1585.58 | 1278.83 | 954.19 |
| 270.0 | 5001.57 | 4439.10 | 3790.47 | 3285.43 | 2798.12 | 2362.32 | 1957.78 | 1513.54 | 1212.87 |
| 315.0 | 4222.89 | 3691.66 | 3174.79 | 2592.04 | 1625.27 | 1625.27 | 1384.07 | 1104.94 | 869.64 |
| 360.0 | 4841.11 | 4296.37 | 3667.17 | 3184.08 | 2718.73 | 1656.18 | 1656.18 | 1493.01 | 1139.23 |

| C/γ(°) | 27.0 | 28.0 | 29.0 | 30.0 | 31.0 | 32.0 | 33.0 | 34.0 | 35.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 899.96 | 700.14 | 541.36 | 392.30 | 305.98 | 244.84 | 202.69 | 172.54 | 147.97 |
| 45.0 | 1128.42 | 812.55 | 616.61 | 464.59 | 432.50 | 307.25 | 194.50 | 159.79 | 137.33 |
| 90.0 | 819.48 | 619.32 | 467.38 | 328.87 | 253.37 | 202.27 | 160.97 | 140.03 | 123.14 |
| 135.0 | 1206.12 | 938.39 | 678.27 | 515.27 | 450.24 | 450.24 | 219.84 | 180.14 | 153.88 |
| 180.0 | 942.61 | 734.01 | 551.58 | 440.10 | 440.10 | 214.43 | 162.49 | 135.13 | 118.24 |
| 225.0 | 737.98 | 525.49 | 399.39 | 306.15 | 227.27 | 185.55 | 158.10 | 140.70 | 125.92 |
| 270.0 | 960.35 | 748.37 | 530.47 | 426.59 | 426.59 | 218.99 | 177.19 | 148.30 | 126.68 |
| 315.0 | 633.42 | 482.92 | 367.64 | 282.25 | 210.13 | 171.78 | 146.02 | 128.96 | 114.52 |
| 360.0 | 899.96 | 700.14 | 541.36 | 392.30 | 305.98 | 244.84 | 202.69 | 172.54 | 147.97 |

| C/γ(°) | 36.0 | 37.0 | 38.0 | 39.0 | 40.0 | 41.0 | 42.0 | 43.0 | 44.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 134.45 | 121.87 | 113.68 | 107.26 | 100.76 | 95.94 | 93.16 | 90.11 | 88.26 |
| 45.0 | 122.80 | 109.37 | 101.69 | 93.75 | 89.61 | 86.06 | 83.02 | 81.25 | 80.15 |
| 90.0 | 113.34 | 105.49 | 99.40 | 93.66 | 90.28 | 87.24 | 84.88 | 82.68 | 81.58 |
| 135.0 | 136.23 | 121.19 | 111.99 | 104.39 | 98.48 | 93.07 | 89.86 | 87.07 | 84.54 |
| 180.0 | 106.92 | 97.97 | 92.39 | 88.17 | 85.22 | 82.18 | 80.32 | 79.14 | 78.21 |
| 225.0 | 116.63 | 108.95 | 103.29 | 97.29 | 93.75 | 90.62 | 87.58 | 85.64 | 84.54 |
| 270.0 | 116.04 | 105.82 | 99.40 | 94.59 | 90.37 | 86.74 | 84.29 | 82.43 | 81.33 |
| 315.0 | 106.33 | 99.57 | 93.24 | 89.52 | 85.64 | 83.61 | 81.84 | 80.74 | 79.81 |
| 360.0 | 134.45 | 121.87 | 113.68 | 107.26 | 100.76 | 95.94 | 93.16 | 90.11 | 88.26 |

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 | 87.07 | 85.47 | 83.86 | 82.77 | 81.58 | 80.06 | 78.21 | 76.43 | 74.66 |
| 45.0 | 79.22 | 78.88 | 78.29 | 77.87 | 77.28 | 76.43 | 75.50 | 74.15 | 72.80 |
| 90.0 | 80.82 | 80.40 | 79.90 | 79.14 | 78.04 | 77.28 | 75.93 | 74.07 | 72.29 |
| 135.0 | 83.19 | 81.84 | 81.58 | 80.82 | 80.23 | 79.30 | 78.29 | 77.19 | 75.42 |
| 180.0 | 77.70 | 77.28 | 76.86 | 76.35 | 75.84 | 74.83 | 73.90 | 72.89 | 71.37 |
| 225.0 | 83.10 | 82.18 | 81.16 | 79.81 | 78.71 | 77.53 | 75.93 | 73.98 | 72.13 |
| 270.0 | 80.32 | 79.73 | 79.05 | 78.46 | 77.53 | 76.94 | 75.42 | 74.32 | 72.72 |
| 315.0 | 79.47 | 78.80 | 77.95 | 77.36 | 76.52 | 75.59 | 74.32 | 72.38 | 70.69 |
| 360.0 | 87.07 | 85.47 | 83.86 | 82.77 | 81.58 | 80.06 | 78.21 | 76.43 | 74.66 |

| C/γ(°) | 54.0 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 | 60.0 | 61.0 | 62.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 71.96 | 69.68 | 67.14 | 64.52 | 62.50 | 59.29 | 57.09 | 54.81 | 52.53 |
| 45.0 | 71.03 | 69.51 | 66.80 | 64.78 | 62.24 | 59.96 | 57.60 | 55.57 | 52.79 |
| 90.0 | 70.27 | 68.49 | 65.96 | 63.85 | 61.40 | 59.29 | 56.33 | 54.22 | 51.94 |
| 135.0 | 73.65 | 72.13 | 70.10 | 68.24 | 65.45 | 63.34 | 60.39 | 58.02 | 55.57 |
| 180.0 | 69.59 | 67.82 | 65.96 | 64.36 | 61.74 | 59.71 | 57.77 | 55.15 | 53.29 |
| 225.0 | 70.27 | 68.24 | 65.62 | 63.68 | 61.48 | 58.70 | 56.59 | 53.88 | 51.60 |
| 270.0 | 70.44 | 68.75 | 66.80 | 64.69 | 62.16 | 60.13 | 57.94 | 55.83 | 53.12 |
| 315.0 | 68.41 | 66.38 | 64.36 | 61.82 | 59.63 | 57.51 | 54.90 | 52.70 | 50.50 |
| 360.0 | 71.96 | 69.68 | 67.14 | 64.52 | 62.50 | 59.29 | 57.09 | 54.81 | 52.53 |

| C/γ(°) | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 | 70.0 | 71.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 50.34 | 47.72 | 45.69 | 43.58 | 41.72 | 39.27 | 37.41 | 35.13 | 33.36 |
| 45.0 | 50.67 | 48.56 | 46.54 | 44.17 | 42.14 | 40.12 | 38.26 | 35.98 | 34.20 |
| 90.0 | 49.07 | 47.13 | 45.02 | 42.40 | 40.54 | 38.01 | 36.32 | 34.54 | 32.60 |
| 135.0 | 52.70 | 50.50 | 48.22 | 45.61 | 43.49 | 41.55 | 39.53 | 37.33 | 35.39 |
| 180.0 | 50.50 | 48.31 | 46.20 | 43.75 | 41.72 | 39.86 | 38.09 | 36.06 | 33.78 |
| 225.0 | 49.58 | 47.04 | 44.76 | 42.73 | 40.79 | 38.43 | 36.65 | 34.80 | 32.77 |
| 270.0 | 51.01 | 48.65 | 46.11 | 44.00 | 41.55 | 39.53 | 37.75 | 35.47 | 33.70 |
| 315.0 | 48.31 | 45.78 | 43.66 | 41.64 | 39.78 | 37.50 | 35.72 | 33.28 | 31.50 |
| 360.0 | 50.34 | 47.72 | 45.69 | 43.58 | 41.72 | 39.27 | 37.41 | 35.13 | 33.36 |

| C/γ(°) | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0 | 80.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 31.59 | 29.81 | 35.81 | 44.85 | 56.50 | 64.19 | 69.34 | 67.23 | 51.86 |
| 45.0 | 32.01 | 30.32 | 28.46 | 26.27 | 25.25 | 24.24 | 23.14 | 22.21 | 21.28 |
| 90.0 | 30.40 | 28.72 | 27.03 | 25.84 | 24.75 | 24.07 | 23.39 | 22.63 | 21.79 |
| 135.0 | 33.53 | 31.50 | 29.39 | 27.62 | 27.28 | 30.07 | 31.50 | 31.00 | 28.55 |
| 180.0 | 31.84 | 29.81 | 27.62 | 26.01 | 25.00 | 23.65 | 22.63 | 21.54 | 20.86 |
| 225.0 | 30.57 | 29.05 | 31.00 | 37.16 | 40.96 | 41.55 | 37.75 | 32.77 | 28.55 |
| 270.0 | 31.84 | 29.98 | 27.70 | 26.35 | 25.42 | 24.41 | 23.56 | 22.63 | 22.04 |
| 315.0 | 29.64 | 27.36 | 26.10 | 25.00 | 23.90 | 22.97 | 22.13 | 21.62 | 21.03 |
| 360.0 | 31.59 | 29.81 | 35.81 | 44.85 | 56.50 | 64.19 | 69.34 | 67.23 | 51.86 |

| C/γ(°) | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 41.64 | 29.39 | 21.62 | 20.19 | 16.47 | 15.03 | 14.19 | 13.43 | 12.92 |
| 45.0 | 20.69 | 19.85 | 18.50 | 17.23 | 16.30 | 15.20 | 14.19 | 13.26 | 12.58 |
| 90.0 | 20.78 | 19.34 | 18.16 | 17.14 | 16.05 | 14.78 | 13.85 | 13.34 | 12.75 |
| 135.0 | 26.35 | 23.48 | 21.11 | 20.02 | 18.33 | 16.81 | 15.03 | 14.02 | 13.34 |
| 180.0 | 20.19 | 19.00 | 17.82 | 16.81 | 15.88 | 14.95 | 13.85 | 13.01 | 12.42 |
| 225.0 | 23.48 | 21.45 | 19.85 | 17.82 | 15.37 | 14.44 | 13.60 | 12.92 | 12.75 |
| 270.0 | 21.03 | 19.85 | 18.33 | 17.31 | 16.30 | 14.95 | 14.02 | 13.26 | 12.75 |
| 315.0 | 19.34 | 18.16 | 17.14 | 16.22 | 15.20 | 14.36 | 13.60 | 13.01 | 12.84 |
| 360.0 | 41.64 | 29.39 | 21.62 | 20.19 | 16.47 | 15.03 | 14.19 | 13.43 | 12.92 |

Intensity data(cd)



| C/γ(°) | 90.0 |
|---|---|
| 0.0 | 12.84 |
| 45.0 | 12.25 |
| 90.0 | 12.75 |
| 135.0 | 12.92 |
| 180.0 | 12.25 |
| 225.0 | 12.67 |
| 270.0 | 12.67 |
| 315.0 | 12.75 |
| 360.0 | 12.84 |