NATA LIGHTING CO .LED
www.nata.cn
Email:info@nata.cn
Tel:+86 0750-377 0000（10 lines） Fax:+86 0750-377 1111
Address:380 JinOu Road, JiangMen City, GuangDong, China 529040

NT

Client: NT
LumCAT: 1-1596-L
Luminaire: 92.70.410.00 LED HOLDER
Report No: 20250314-B002
Ballast type: AC

| | |
|---|---|
| Test No: 20250314-C002 | Voltage(V): 34.820 |
| LampCAT: LUMILEDS LUXEON COB 1203 | Current(A): 0.301 |
| Lamp flux(lm): 1561.2 | Power (W): 10.480 |
| Number of Lamps: 1 | PF: 0.000 |
| Length(mm): 45 | Width(mm): 45 |
| Phm Type: C | Height(mm): 32 |

## Photometric Results

Lumens(lm): 1486.05, Efficiency(%): 95.19% , Luminous Efficacy(lm/W): 141.80
Central intensity(cd): 6002.746, Maximum intensity(cd): 6261.735
Angle of maximum intensity: C=135.0 γ=2.0
Beam Angle(50%Imax): [C0/180]Total=23.9
[C90/270]Total=24.1
Field angle(10%Imax): [C0/180]Total=53.2
[C90/270]Total=53.4
Maximum s/h(1/2): C0_180=0.50 C90_270=0.41
Maximum s/h(1/4): C0_180=0.49 C90_270=0.43
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 95.09%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 100.050%

| | | |
|---|---|---|
| Equipment: GMS 1800 | Date: 2025/3/14 | Operator: NT |
| Temperature(°C): 25.0 | Humidity(%): 60.0% | Distance(m): 7.30 |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 0.0 | 6111.191 | 0.000 | 0 | 0.00% | 0.00% |
| 1.0 | 6074.354 | 5.831 | 5.831 | 0.37% | 0.39% |
| 2.0 | 5976.700 | 17.297 | 23.127 | 1.11% | 1.56% |
| 3.0 | 5849.337 | 28.284 | 51.411 | 1.81% | 3.46% |
| 4.0 | 5656.494 | 38.514 | 89.925 | 2.47% | 6.05% |
| 5.0 | 5400.768 | 47.568 | 137.493 | 3.05% | 9.25% |
| 6.0 | 5135.784 | 55.372 | 192.865 | 3.55% | 12.98% |
| 7.0 | 4829.433 | 61.854 | 254.719 | 3.96% | 17.14% |
| 8.0 | 4500.833 | 66.775 | 321.494 | 4.28% | 21.63% |
| 9.0 | 4158.445 | 70.179 | 391.673 | 4.50% | 26.36% |
| 10.0 | 3807.730 | 72.091 | 463.764 | 4.62% | 31.21% |
| 11.0 | 3458.481 | 72.604 | 536.368 | 4.65% | 36.09% |
| 12.0 | 3118.891 | 71.900 | 608.268 | 4.61% | 40.93% |
| 13.0 | 2790.557 | 70.130 | 678.399 | 4.49% | 45.65% |
| 14.0 | 2482.608 | 67.496 | 745.895 | 4.32% | 50.19% |
| 15.0 | 2208.497 | 64.402 | 810.296 | 4.13% | 54.53% |
| 16.0 | 1939.316 | 60.777 | 871.073 | 3.89% | 58.62% |
| 17.0 | 1703.641 | 56.731 | 927.804 | 3.63% | 62.43% |
| 18.0 | 1487.237 | 52.611 | 980.415 | 3.37% | 65.97% |
| 19.0 | 1354.479 | 49.440 | 1029.855 | 3.17% | 69.30% |
| 20.0 | 1181.672 | 46.419 | 1076.273 | 2.97% | 72.43% |
| 21.0 | 1079.562 | 43.420 | 1119.693 | 2.78% | 75.35% |
| 22.0 | 984.906 | 41.486 | 1161.18 | 2.66% | 78.14% |
| 23.0 | 891.782 | 39.378 | 1200.558 | 2.52% | 80.79% |
| 24.0 | 806.038 | 37.120 | 1237.678 | 2.38% | 83.29% |
| 25.0 | 729.460 | 34.914 | 1272.592 | 2.24% | 85.64% |
| 26.0 | 659.490 | 32.786 | 1305.378 | 2.10% | 87.84% |
| 27.0 | 585.251 | 30.453 | 1335.831 | 1.95% | 89.89% |
| 28.0 | 511.790 | 27.775 | 1363.606 | 1.78% | 91.76% |
| 29.0 | 435.959 | 24.796 | 1388.402 | 1.59% | 93.43% |
| 30.0 | 362.652 | 21.562 | 1409.964 | 1.38% | 94.88% |
| 31.0 | 293.388 | 18.257 | 1428.221 | 1.17% | 96.11% |
| 32.0 | 244.235 | 15.402 | 1443.623 | 0.99% | 97.15% |
| 33.0 | 171.141 | 12.237 | 1455.86 | 0.78% | 97.97% |
| 34.0 | 127.796 | 9.047 | 1464.907 | 0.58% | 98.58% |
| 35.0 | 85.750 | 6.632 | 1471.539 | 0.42% | 99.02% |
| 36.0 | 47.621 | 4.247 | 1475.785 | 0.27% | 99.31% |
| 37.0 | 27.864 | 2.462 | 1478.247 | 0.16% | 99.48% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 38.0 | 16.333 | 1.475 | 1479.723 | 0.09% | 99.57% |
| 39.0 | 10.412 | 0.913 | 1480.635 | 0.06% | 99.64% |
| 40.0 | 7.934 | 0.640 | 1481.275 | 0.04% | 99.68% |
| 41.0 | 6.515 | 0.514 | 1481.79 | 0.03% | 99.71% |
| 42.0 | 5.436 | 0.434 | 1482.224 | 0.03% | 99.74% |
| 43.0 | 4.576 | 0.371 | 1482.595 | 0.02% | 99.77% |
| 44.0 | 3.937 | 0.321 | 1482.916 | 0.02% | 99.79% |
| 45.0 | 3.404 | 0.282 | 1483.198 | 0.02% | 99.81% |
| 46.0 | 2.991 | 0.250 | 1483.448 | 0.02% | 99.83% |
| 47.0 | 2.625 | 0.223 | 1483.672 | 0.01% | 99.84% |
| 48.0 | 2.351 | 0.201 | 1483.873 | 0.01% | 99.85% |
| 49.0 | 2.112 | 0.183 | 1484.056 | 0.01% | 99.87% |
| 50.0 | 1.878 | 0.166 | 1484.222 | 0.01% | 99.88% |
| 51.0 | 1.699 | 0.151 | 1484.374 | 0.01% | 99.89% |
| 52.0 | 1.512 | 0.138 | 1484.512 | 0.01% | 99.90% |
| 53.0 | 1.372 | 0.125 | 1484.637 | 0.01% | 99.91% |
| 54.0 | 1.246 | 0.115 | 1484.752 | 0.01% | 99.91% |
| 55.0 | 1.146 | 0.107 | 1484.859 | 0.01% | 99.92% |
| 56.0 | 1.013 | 0.098 | 1484.957 | 0.01% | 99.93% |
| 57.0 | 0.933 | 0.089 | 1485.046 | 0.01% | 99.93% |
| 58.0 | 0.833 | 0.082 | 1485.127 | 0.01% | 99.94% |
| 59.0 | 0.766 | 0.075 | 1485.202 | 0.00% | 99.94% |
| 60.0 | 0.693 | 0.069 | 1485.271 | 0.00% | 99.95% |
| 61.0 | 0.613 | 0.062 | 1485.333 | 0.00% | 99.95% |
| 62.0 | 0.573 | 0.057 | 1485.39 | 0.00% | 99.96% |
| 63.0 | 0.513 | 0.053 | 1485.443 | 0.00% | 99.96% |
| 64.0 | 0.480 | 0.049 | 1485.492 | 0.00% | 99.96% |
| 65.0 | 0.433 | 0.045 | 1485.537 | 0.00% | 99.97% |
| 66.0 | 0.393 | 0.041 | 1485.578 | 0.00% | 99.97% |
| 67.0 | 0.380 | 0.039 | 1485.617 | 0.00% | 99.97% |
| 68.0 | 0.333 | 0.036 | 1485.653 | 0.00% | 99.97% |
| 69.0 | 0.306 | 0.033 | 1485.686 | 0.00% | 99.98% |
| 70.0 | 0.293 | 0.031 | 1485.717 | 0.00% | 99.98% |
| 71.0 | 0.266 | 0.029 | 1485.746 | 0.00% | 99.98% |
| 72.0 | 0.246 | 0.027 | 1485.772 | 0.00% | 99.98% |
| 73.0 | 0.220 | 0.024 | 1485.797 | 0.00% | 99.98% |
| 74.0 | 0.187 | 0.021 | 1485.818 | 0.00% | 99.98% |
| 75.0 | 0.187 | 0.020 | 1485.838 | 0.00% | 99.99% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 76.0 | 0.173 | 0.019 | 1485.857 | 0.00% | 99.99% |
| 77.0 | 0.147 | 0.017 | 1485.874 | 0.00% | 99.99% |
| 78.0 | 0.140 | 0.015 | 1485.889 | 0.00% | 99.99% |
| 79.0 | 0.160 | 0.016 | 1485.905 | 0.00% | 99.99% |
| 80.0 | 0.147 | 0.017 | 1485.922 | 0.00% | 99.99% |
| 81.0 | 0.127 | 0.015 | 1485.937 | 0.00% | 99.99% |
| 82.0 | 0.113 | 0.013 | 1485.95 | 0.00% | 99.99% |
| 83.0 | 0.107 | 0.012 | 1485.961 | 0.00% | 99.99% |
| 84.0 | 0.127 | 0.013 | 1485.974 | 0.00% | 100.00% |
| 85.0 | 0.100 | 0.012 | 1485.987 | 0.00% | 100.00% |
| 86.0 | 0.100 | 0.011 | 1485.997 | 0.00% | 100.00% |
| 87.0 | 0.113 | 0.012 | 1486.009 | 0.00% | 100.00% |
| 88.0 | 0.107 | 0.012 | 1486.021 | 0.00% | 100.00% |
| 89.0 | 0.120 | 0.012 | 1486.034 | 0.00% | 100.00% |
| 90.0 | 0.107 | 0.012 | 1486.046 | 0.00% | 100.00% |

## Zonal flux distribution table



ZONAL LUMEN SUMMARY

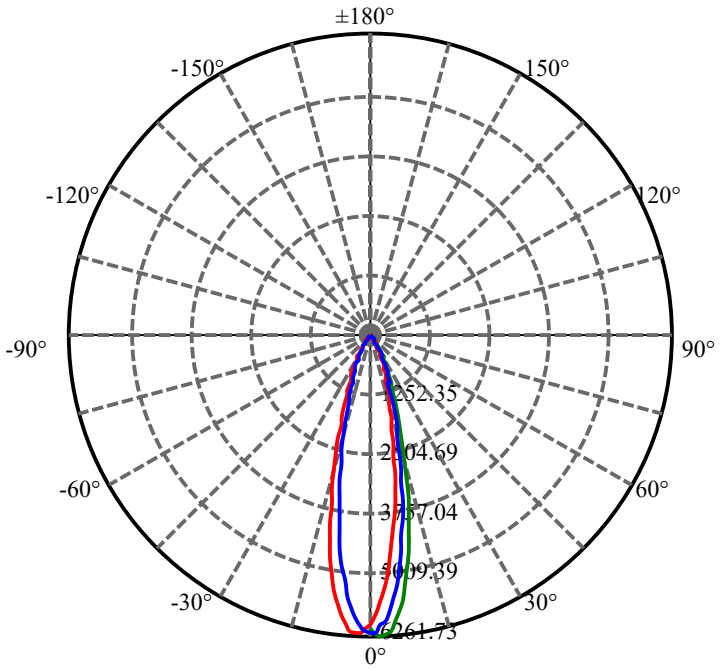
| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-30 | 1409.96 | 90.31% | 94.88% |
| 0-40 | 1481.28 | 94.88% | 99.68% |
| 0-60 | 1485.27 | 95.14% | 99.95% |
| 0-90 | 1486.03 | 95.19% | 100.00% |
| 0-120 | 1486.03 | 95.19% | 100.00% |
| 0-180 | 1486.05 | 95.19% | 100.00% |
| 60-90 | 0.76 | 0.05% | 0.05% |
| 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% |
| 0-22.70 | 1188.84 | 76.15% | 80.00% |

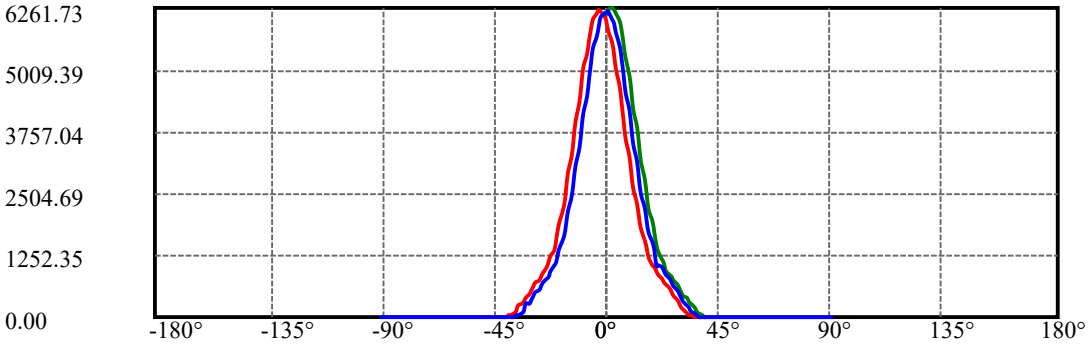
ZONAL LUMEN SUMMARY

| | |
|---|---|
| 0-10 | 463.76 |
| 10-20 | 612.51 |
| 20-30 | 333.69 |
| 30-40 | 71.31 |
| 40-50 | 2.95 |
| 50-60 | 1.05 |
| 60-70 | 0.45 |
| 70-80 | 0.21 |
| 80-90 | 0.11 |
| 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:

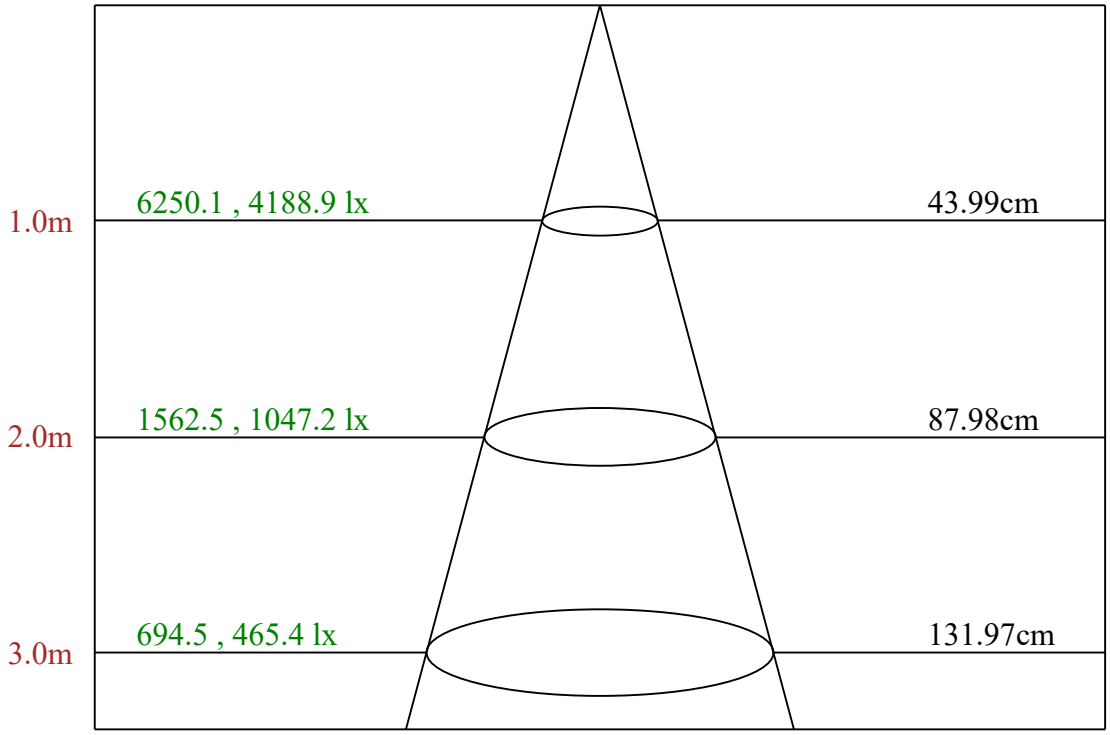
C90/C270:

Field angle(10%Imax):C0/180Left:25.8 Right:27.4
:C90/270Left:26.3 Right:27.1

Beam Angle(50%Imax):C0/180Left:11.4 Right:12.5
:C90/270Left:11.9 Right:12.2

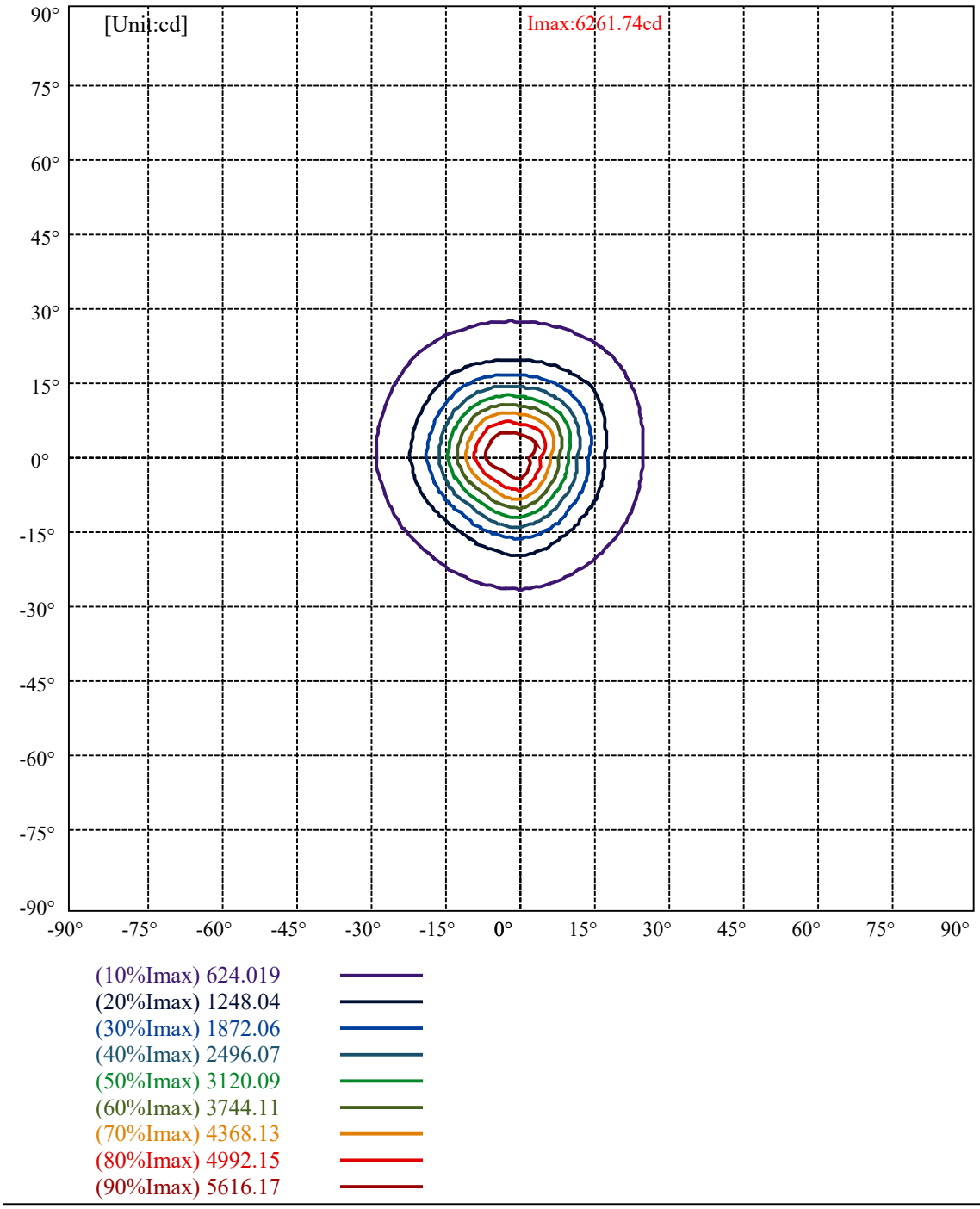
Lux distance Curve






Max , Ave

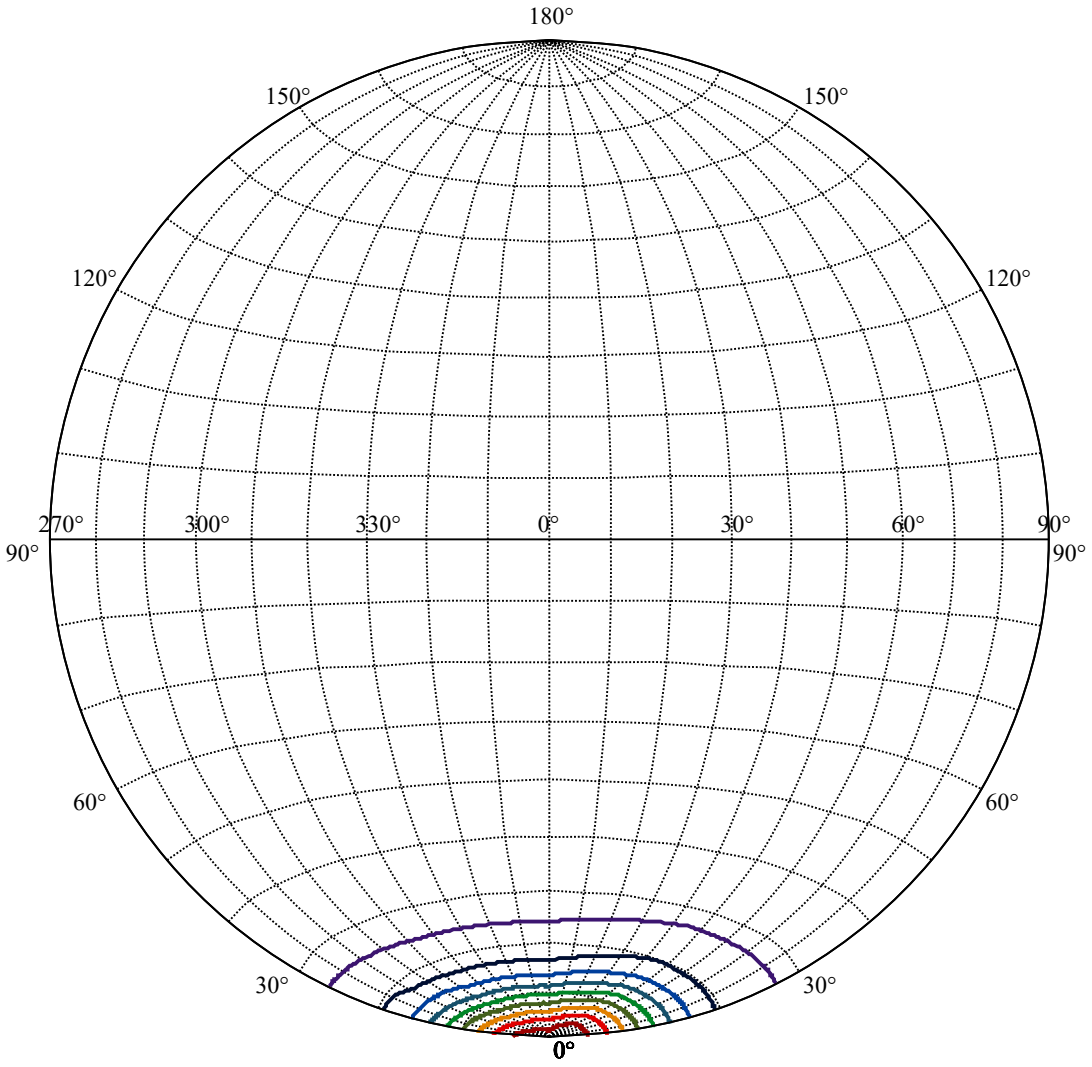
Beam angle of C135 plane 24.81




Equipment: GMS 1800
Temperature(°C): 25.0
Date: 2025/3/14
Humidity(%): 60.0%
Operator: NT
Distance(m): 7.30

## ISO candela diagram on circular web






House [Unit:cd] Road

Imax:6261.74

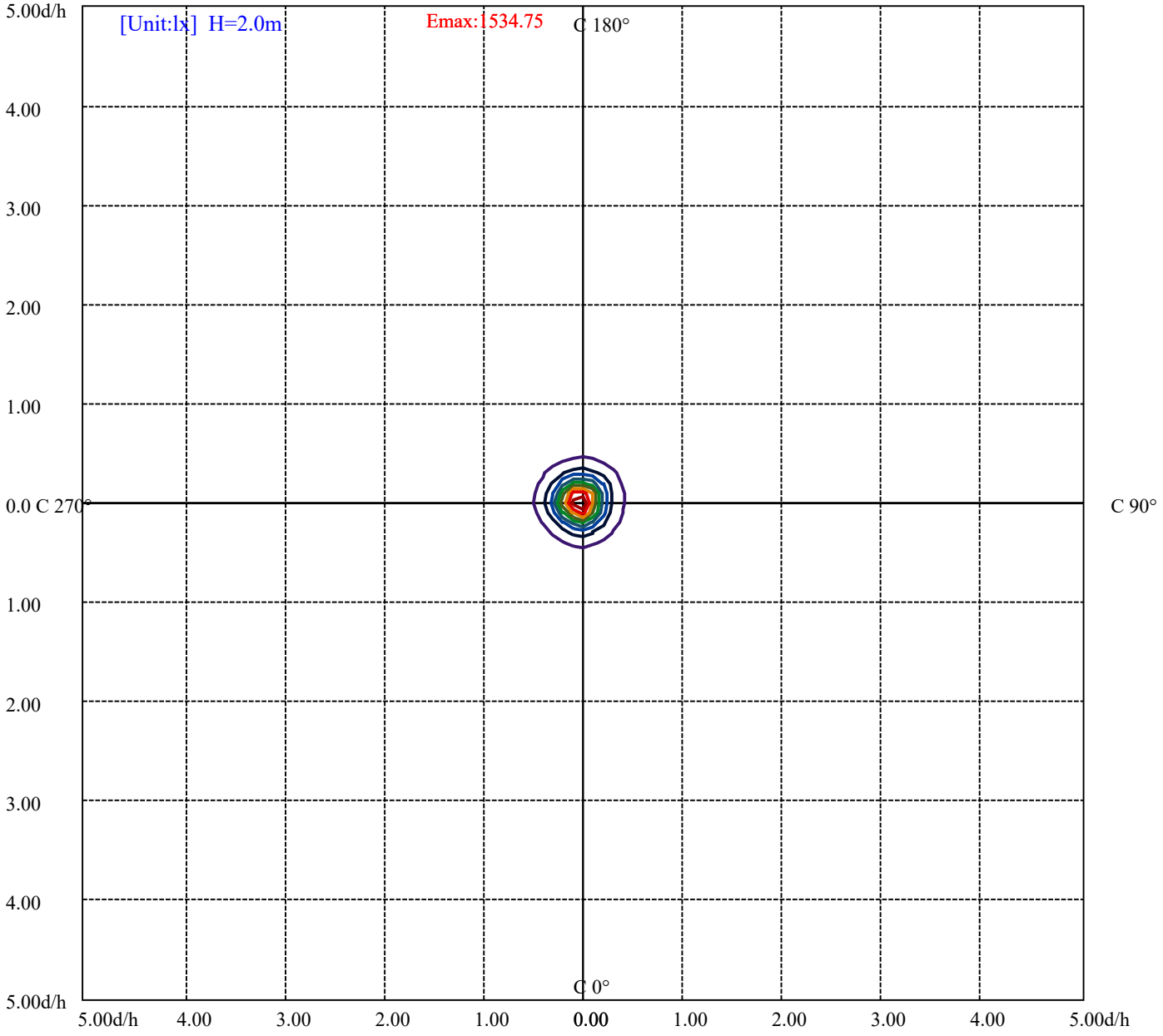
(10%Imax) 626.158
(20%Imax) 1252.32
(30%Imax) 1878.47
(40%Imax) 2504.63
(50%Imax) 3130.79
(60%Imax) 3756.95
(70%Imax) 4383.1
(80%Imax) 5009.26
(90%Imax) 5635.42

| | | |
|---|---|---|
| Equipment: GMS 1800 | Date: 2025/3/14 | Operator: NT |
| Temperature(°C): 25.0 | Humidity(%): 60.0% | Distance(m): 7.30 |

NT NT 1-1596-L

ISO illuminance diagram



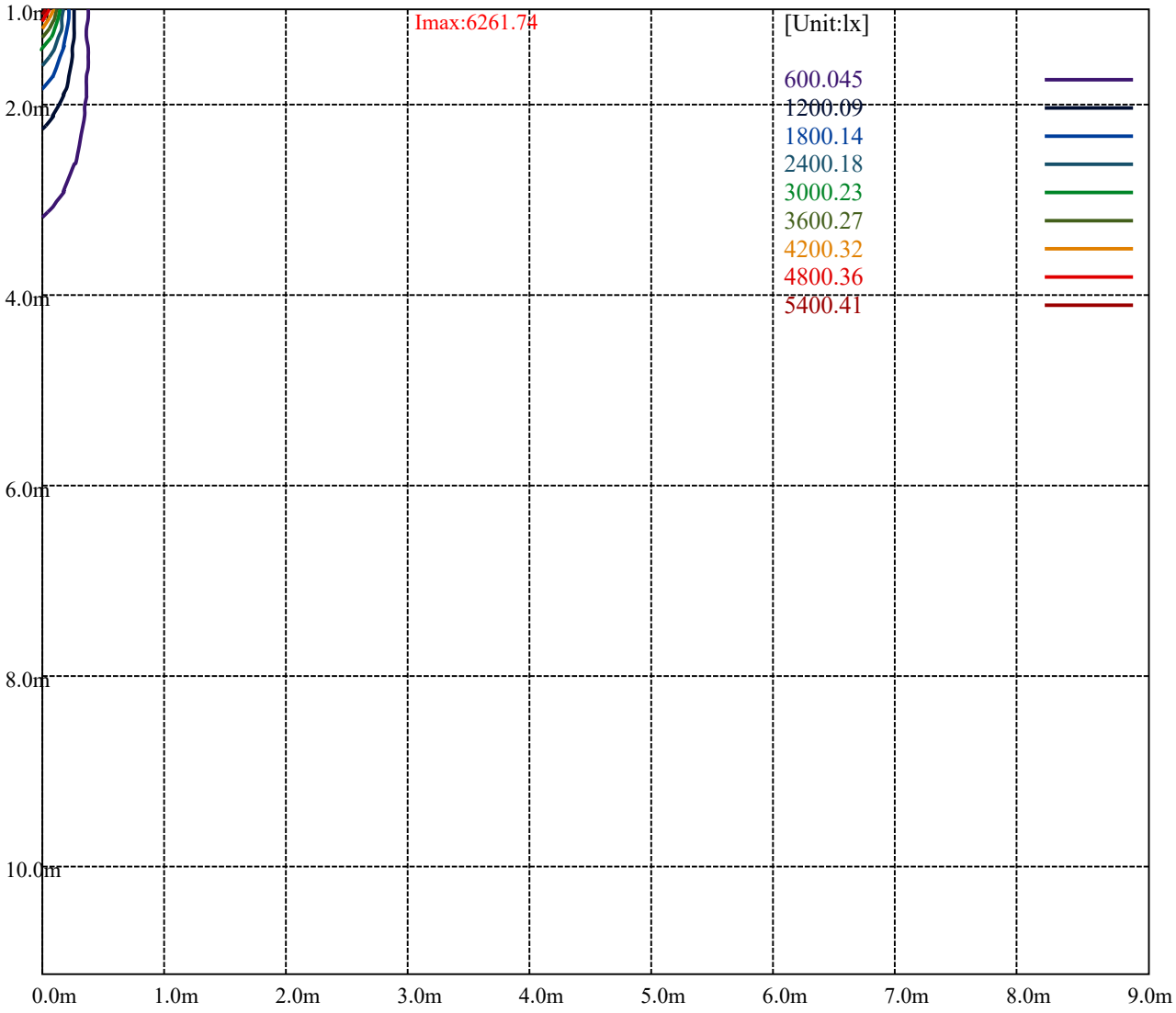



(10%Emax) 153.4753
(20%Emax) 306.95
(30%Emax) 460.425
(40%Emax) 613.9
(50%Emax) 767.375
(60%Emax) 920.85
(70%Emax) 1074.325
(80%Emax) 1227.802
(90%Emax) 1381.277

Equipment: GMS 1800
Temperature(°C): 25.0
Date: 2025/3/14
Humidity(%): 60.0%
Operator: NT
Distance(m): 7.30

## Space ISO Lux diagram






Equipment: GMS 1800
Temperature(°C): 25.0
Date: 2025/3/14
Humidity(%): 60.0%
Operator: NT
Distance(m): 7.30

NT NT 1-1596-L

## Luminance Limitting Curve(no luminous side)



Luminance Table

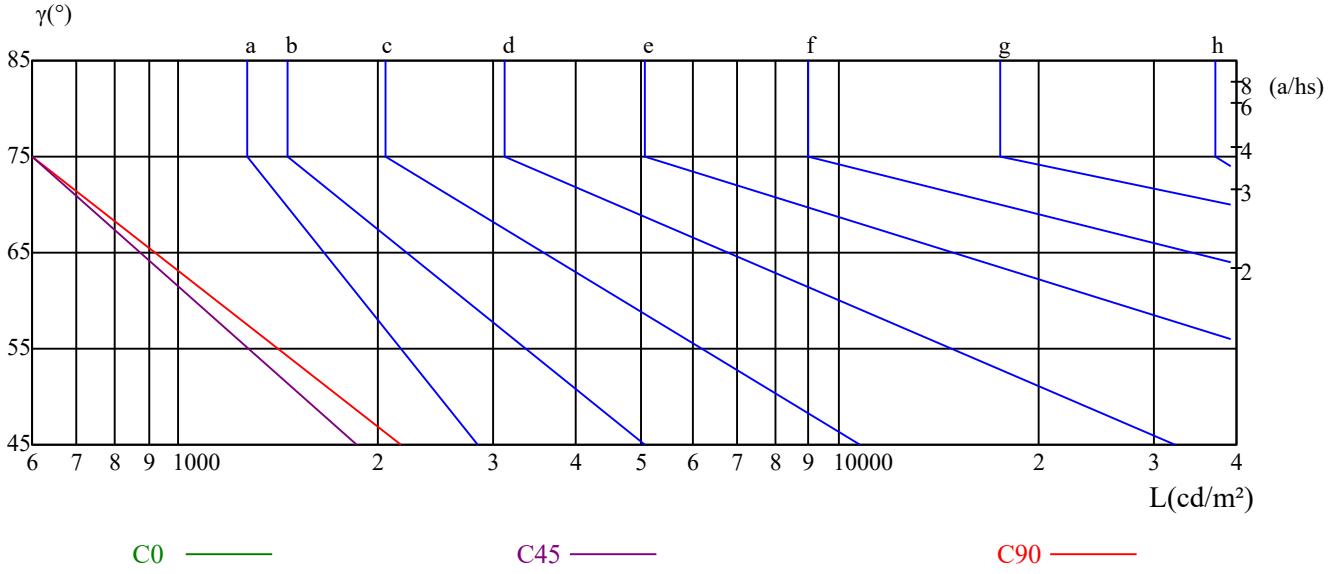
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|---|---|---|---|---|---|---|---|---|---|
| C0 | 0 | 0 | 0 | 0 | 0 | 0 | 83 | 60 | 66 |
| C45 | 1856 | 0 | 0 | 0 | 0 | 0 | 64 | 45 | 48 |
| C90 | 2175 | 0 | 0 | 0 | 0 | 0 | 83 | 0 | 66 |

| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 153 | 153 | 76 | 302 | 302 | 151 |

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: GMS 1800
Temperature(°C): 25.0

Date: 2025/3/14
Humidity(%): 60.0%

Operator: NT
Distance(m): 7.30

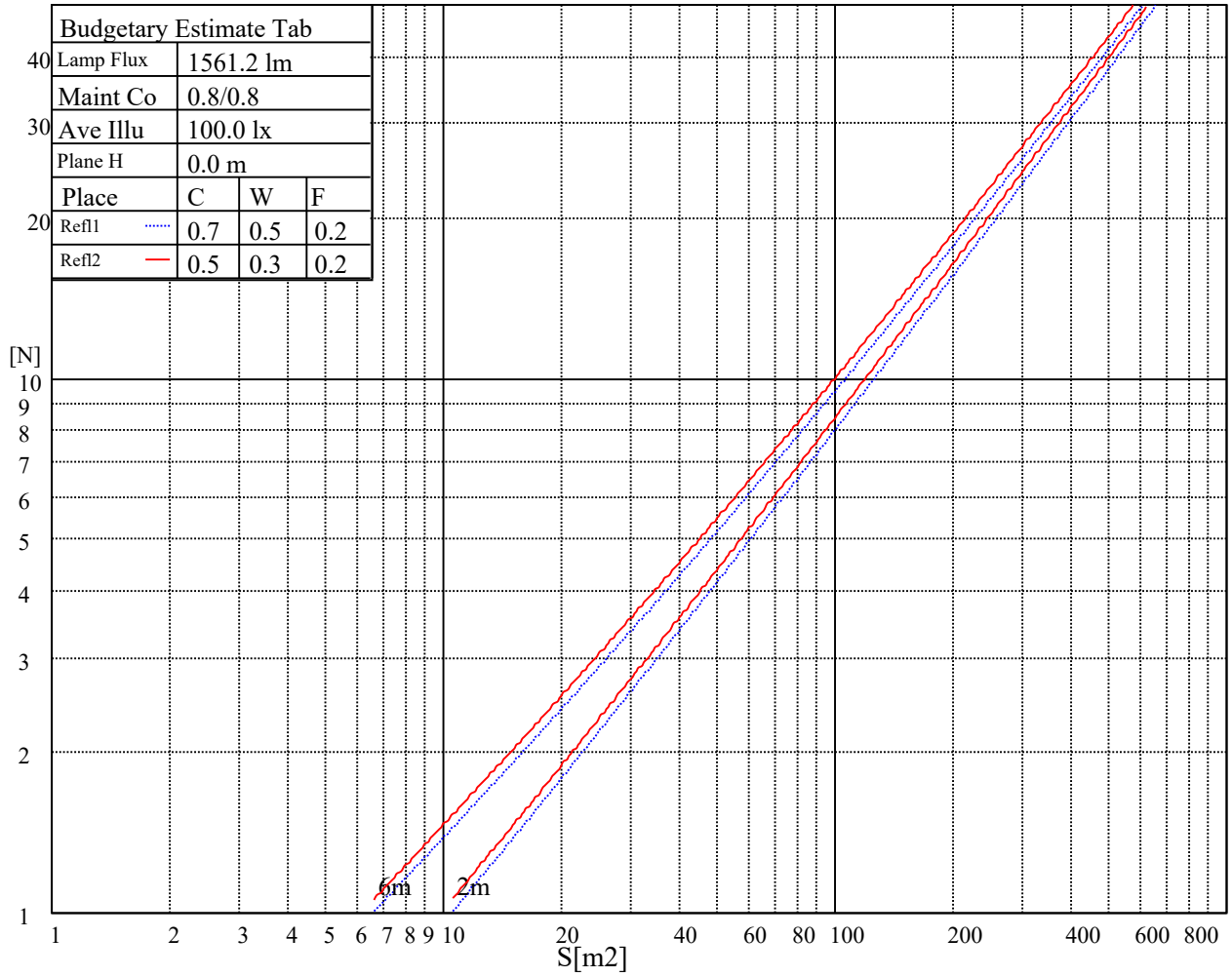
| Illumination assessment according UGR | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Rf of Ceiling | | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
| Rf of Wall | | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| Rf of Floor | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Room dimensions | | Viewed crosswise | | | | | Viewed endwise | | | | |
| X | Y | | | | | | | | | | |
| 2H | 2H | 7.04 | 7.91 | 7.40 | 8.22 | 8.54 | 11.22 | 12.10 | 11.59 | 12.41 | 12.73 |
| | 3H | 6.81 | 7.59 | 7.20 | 7.93 | 8.28 | 11.00 | 11.78 | 11.39 | 12.11 | 12.46 |
| | 4H | 6.70 | 7.42 | 7.10 | 7.78 | 8.15 | 10.88 | 11.60 | 11.29 | 11.96 | 12.33 |
| | 6H | 6.60 | 7.26 | 7.03 | 7.64 | 8.04 | 10.79 | 11.44 | 11.21 | 11.82 | 12.22 |
| | 8H | 6.53 | 7.15 | 6.95 | 7.54 | 7.95 | 10.71 | 11.33 | 11.13 | 11.72 | 12.13 |
| | 12H | 6.45 | 7.04 | 6.88 | 7.44 | 7.86 | 10.63 | 11.22 | 11.06 | 11.62 | 12.04 |
| 4H | 2H | 6.70 | 7.42 | 7.10 | 7.77 | 8.14 | 10.88 | 11.60 | 11.29 | 11.96 | 12.33 |
| | 3H | 6.44 | 7.04 | 6.86 | 7.44 | 7.85 | 10.62 | 11.22 | 11.04 | 11.62 | 12.04 |
| | 4H | 6.35 | 6.87 | 6.79 | 7.29 | 7.74 | 10.53 | 11.05 | 10.97 | 11.47 | 11.92 |
| | 6H | 6.20 | 6.65 | 6.67 | 7.11 | 7.56 | 10.38 | 10.83 | 10.85 | 11.29 | 11.74 |
| | 8H | 6.14 | 6.56 | 6.62 | 7.02 | 7.49 | 10.31 | 10.73 | 10.80 | 11.19 | 11.67 |
| | 12H | 6.08 | 6.47 | 6.57 | 6.92 | 7.45 | 10.26 | 10.64 | 10.75 | 11.10 | 11.62 |
| 8H | 4H | 6.13 | 6.55 | 6.62 | 7.02 | 7.49 | 10.31 | 10.73 | 10.80 | 11.19 | 11.67 |
| | 6H | 5.97 | 6.31 | 6.48 | 6.79 | 7.31 | 10.15 | 10.49 | 10.65 | 10.97 | 11.48 |
| | 8H | 5.95 | 6.23 | 6.49 | 6.76 | 7.26 | 10.13 | 10.41 | 10.66 | 10.93 | 11.43 |
| | 12H | 5.90 | 6.10 | 6.44 | 6.62 | 7.15 | 10.07 | 10.28 | 10.61 | 10.79 | 11.32 |
| 12H | 4H | 6.08 | 6.46 | 6.57 | 6.92 | 7.44 | 10.25 | 10.64 | 10.75 | 11.10 | 11.62 |
| | 6H | 5.95 | 6.23 | 6.49 | 6.76 | 7.25 | 10.12 | 10.41 | 10.66 | 10.93 | 11.43 |
| | 8H | 5.89 | 6.10 | 6.44 | 6.62 | 7.15 | 10.07 | 10.27 | 10.61 | 10.79 | 11.32 |

| Variation with the observer position at spacings: | | |
|---|---|---|
| S = 1.0H | 7.1/-19.9 | 6.9/-16.5 |
| S = 1.5H | 9.9/-21.4 | 9.7/-18.1 |
| S = 2.0H | 11.9/-22.0 | 11.7/-18.1 |
| Standard tables: | BK0 | BK0 |
| Uncorrected UGR | -8.0 | -12.2 |

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

## Budgetary Estimate Table



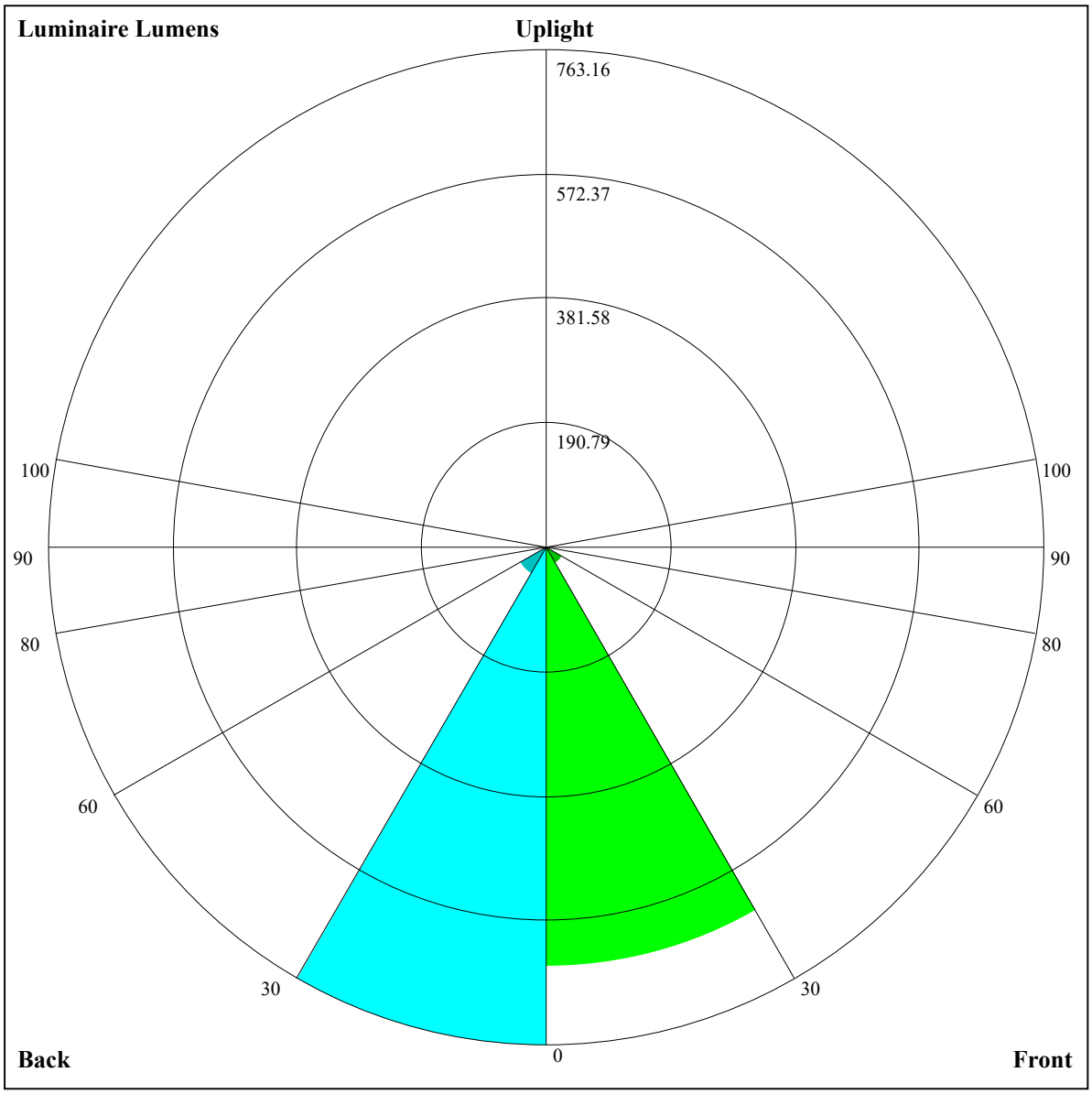



Equipment: GMS 1800 Date: 2025/3/14 Operator: NT
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.30

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 | 1.13 | 1.13 | 1.13 | 1.11 | 1.11 | 1.11 | 1.06 | 1.06 | 1.06 | 1.01 | 1.01 | 1.01 | 0.97 | 0.97 | 0.97 | 0.95 |
| 1 | 1.07 | 1.05 | 1.04 | 1.05 | 1.04 | 1.02 | 1.01 | 1.00 | 0.99 | 0.98 | 0.97 | 0.96 | 0.95 | 0.94 | 0.93 | 0.92 |
| 2 | 1.02 | 0.99 | 0.97 | 1.00 | 0.98 | 0.96 | 0.97 | 0.95 | 0.93 | 0.95 | 0.93 | 0.92 | 0.92 | 0.91 | 0.90 | 0.88 |
| 3 | 0.97 | 0.94 | 0.91 | 0.96 | 0.93 | 0.90 | 0.94 | 0.91 | 0.89 | 0.92 | 0.89 | 0.88 | 0.90 | 0.88 | 0.86 | 0.85 |
| 4 | 0.93 | 0.89 | 0.86 | 0.92 | 0.89 | 0.86 | 0.90 | 0.87 | 0.85 | 0.89 | 0.86 | 0.84 | 0.87 | 0.85 | 0.83 | 0.82 |
| 5 | 0.90 | 0.86 | 0.83 | 0.89 | 0.85 | 0.82 | 0.87 | 0.84 | 0.82 | 0.86 | 0.83 | 0.81 | 0.84 | 0.82 | 0.80 | 0.79 |
| 6 | 0.86 | 0.82 | 0.79 | 0.86 | 0.82 | 0.79 | 0.84 | 0.81 | 0.78 | 0.83 | 0.80 | 0.78 | 0.82 | 0.79 | 0.77 | 0.76 |
| 7 | 0.83 | 0.79 | 0.76 | 0.83 | 0.79 | 0.76 | 0.82 | 0.78 | 0.76 | 0.81 | 0.78 | 0.75 | 0.80 | 0.77 | 0.75 | 0.74 |
| 8 | 0.80 | 0.76 | 0.73 | 0.80 | 0.76 | 0.73 | 0.79 | 0.76 | 0.73 | 0.78 | 0.75 | 0.73 | 0.77 | 0.75 | 0.72 | 0.72 |
| 9 | 0.78 | 0.74 | 0.71 | 0.77 | 0.74 | 0.71 | 0.77 | 0.73 | 0.71 | 0.76 | 0.73 | 0.70 | 0.75 | 0.72 | 0.70 | 0.69 |
| 10 | 0.75 | 0.71 | 0.69 | 0.75 | 0.71 | 0.69 | 0.74 | 0.71 | 0.68 | 0.74 | 0.71 | 0.68 | 0.73 | 0.70 | 0.68 | 0.67 |




Luminaire Lumens:
FL=643.49,FM=29.06,FH=0.29,FVH=0.06
BL=763.16,BM=47.57,BH=0.36,BVH=0.06
UL=0,UH=0

BUG Rating:B2-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 | 6002.75 | 5783.19 | 5542.32 | 5320.63 | 5007.82 | 4667.83 | 4317.72 | 3969.73 | 3614.29 |
| 45.0 | 6137.57 | 6108.79 | 6032.05 | 5890.84 | 5688.87 | 5435.21 | 5144.24 | 4824.50 | 4477.05 |
| 90.0 | 6187.13 | 6169.54 | 6036.85 | 5934.00 | 5739.49 | 5494.89 | 5208.72 | 4891.12 | 4554.86 |
| 135.0 | 6117.32 | 6224.96 | 6261.73 | 6227.63 | 6147.69 | 5984.09 | 5778.39 | 5531.13 | 5243.90 |
| 180.0 | 6002.75 | 6118.38 | 6201.52 | 6208.44 | 6149.83 | 6019.80 | 5839.15 | 5611.06 | 5343.02 |
| 225.0 | 6137.57 | 6090.67 | 5968.64 | 5867.39 | 5673.95 | 5329.69 | 5161.30 | 4845.82 | 4511.16 |
| 270.0 | 6187.13 | 6158.35 | 6052.31 | 5882.84 | 5671.81 | 5427.21 | 5139.45 | 4824.50 | 4481.85 |
| 315.0 | 6117.32 | 5940.93 | 5718.18 | 5462.92 | 5172.49 | 4847.42 | 4497.30 | 4137.60 | 3780.55 |
| 360.0 | 6002.75 | 5783.19 | 5542.32 | 5320.63 | 5007.82 | 4667.83 | 4317.72 | 3969.73 | 3614.29 |

| C/γ(°) | 9.0 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 3265.24 | 2917.25 | 2591.65 | 2293.76 | 2017.72 | 1775.25 | 1565.82 | 1387.30 | 1186.93 |
| 45.0 | 4123.74 | 3770.43 | 3422.98 | 3077.66 | 2747.79 | 2438.71 | 2158.40 | 1907.41 | 1683.06 |
| 90.0 | 4201.54 | 3839.17 | 3488.52 | 3146.40 | 2812.81 | 2504.26 | 2213.29 | 1956.44 | 1729.95 |
| 135.0 | 4919.36 | 4570.31 | 4203.68 | 3849.30 | 3486.39 | 3132.01 | 2797.88 | 2481.88 | 2190.91 |
| 180.0 | 5047.79 | 4713.66 | 4352.89 | 3982.52 | 3614.29 | 3256.18 | 2904.46 | 2571.40 | 2263.39 |
| 225.0 | 4159.44 | 3800.27 | 3444.29 | 3098.97 | 2759.52 | 2438.71 | 2144.55 | 1877.03 | 1640.43 |
| 270.0 | 4127.47 | 3768.83 | 3417.65 | 3072.86 | 2747.26 | 2436.58 | 2147.75 | 1884.49 | 1649.49 |
| 315.0 | 3422.98 | 3081.92 | 2746.19 | 2429.65 | 2138.69 | 1879.17 | 1735.82 | 1448.58 | 1284.98 |
| 360.0 | 3265.24 | 2917.25 | 2591.65 | 2293.76 | 2017.72 | 1775.25 | 1565.82 | 1387.30 | 1186.93 |

| C/γ(°) | 18.0 | 19.0 | 20.0 | 21.0 | 22.0 | 23.0 | 24.0 | 25.0 | 26.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 1045.55 | 1003.45 | 943.50 | 854.77 | 782.03 | 718.88 | 649.71 | 568.98 | 492.08 |
| 45.0 | 1492.81 | 1357.99 | 1219.44 | 1096.87 | 991.35 | 899.16 | 821.89 | 754.21 | 689.20 |
| 90.0 | 1530.12 | 1363.85 | 1060.52 | 1060.52 | 1018.37 | 923.20 | 840.01 | 767.96 | 700.92 |
| 135.0 | 1927.13 | 1694.78 | 1493.35 | 1323.35 | 1178.93 | 1102.20 | 946.59 | 856.00 | 806.97 |
| 180.0 | 1985.75 | 1836.00 | 1609.52 | 1344.67 | 1250.34 | 1113.39 | 997.75 | 898.63 | 815.50 |
| 225.0 | 1440.59 | 1209.84 | 1031.37 | 1031.37 | 925.65 | 834.95 | 761.03 | 697.41 | 627.65 |
| 270.0 | 1444.85 | 1338.80 | 1128.31 | 1052.10 | 940.73 | 817.10 | 771.27 | 707.85 | 637.51 |
| 315.0 | 1031.11 | 1031.11 | 967.37 | 872.84 | 791.84 | 725.38 | 660.05 | 584.64 | 506.10 |
| 360.0 | 1045.55 | 1003.45 | 943.50 | 854.77 | 782.03 | 718.88 | 649.71 | 568.98 | 492.08 |

| C/γ(°) | 27.0 | 28.0 | 29.0 | 30.0 | 31.0 | 32.0 | 33.0 | 34.0 | 35.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 414.12 | 340.36 | 266.82 | 200.96 | 142.60 | 92.35 | 50.68 | 23.71 | 12.31 |
| 45.0 | 614.06 | 536.26 | 457.92 | 382.78 | 304.98 | 291.12 | 212.04 | 134.24 | 68.32 |
| 90.0 | 630.79 | 552.03 | 470.44 | 391.04 | 313.45 | 239.54 | 175.75 | 118.73 | 70.93 |
| 135.0 | 739.83 | 673.21 | 599.67 | 522.40 | 444.07 | 369.99 | 296.99 | 267.68 | 206.87 |
| 180.0 | 747.82 | 681.74 | 605.53 | 527.73 | 452.06 | 377.99 | 307.64 | 277.27 | 218.81 |
| 225.0 | 548.19 | 474.60 | 396.74 | 325.34 | 256.91 | 192.59 | 137.59 | 87.98 | 47.06 |
| 270.0 | 561.84 | 486.16 | 411.03 | 338.02 | 281.00 | 281.00 | 130.56 | 83.61 | 45.78 |
| 315.0 | 425.36 | 349.96 | 279.51 | 212.95 | 152.04 | 109.30 | 57.87 | 29.15 | 15.93 |
| 360.0 | 414.12 | 340.36 | 266.82 | 200.96 | 142.60 | 92.35 | 50.68 | 23.71 | 12.31 |

| C/γ(°) | 36.0 | 37.0 | 38.0 | 39.0 | 40.0 | 41.0 | 42.0 | 43.0 | 44.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 10.23 | 8.10 | 6.39 | 5.54 | 4.58 | 4.05 | 3.52 | 2.98 | 2.72 |
| 45.0 | 43.91 | 19.66 | 11.62 | 9.59 | 7.67 | 6.18 | 5.28 | 4.48 | 3.78 |
| 90.0 | 35.01 | 15.29 | 11.56 | 9.54 | 8.37 | 6.08 | 5.44 | 4.64 | 4.00 |
| 135.0 | 107.38 | 62.30 | 34.59 | 13.64 | 11.24 | 9.65 | 7.19 | 6.08 | 5.12 |
| 180.0 | 119.32 | 83.19 | 37.94 | 21.21 | 13.27 | 10.82 | 8.74 | 6.93 | 5.92 |
| 225.0 | 23.23 | 12.63 | 10.55 | 9.27 | 6.45 | 5.33 | 4.85 | 4.21 | 3.57 |
| 270.0 | 31.07 | 12.84 | 11.14 | 8.95 | 7.09 | 5.92 | 5.06 | 4.32 | 3.73 |
| 315.0 | 10.82 | 8.90 | 6.87 | 5.54 | 4.80 | 4.10 | 3.41 | 2.98 | 2.66 |
| 360.0 | 10.23 | 8.10 | 6.39 | 5.54 | 4.58 | 4.05 | 3.52 | 2.98 | 2.72 |

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 | 2.40 | 2.24 | 2.03 | 1.76 | 1.60 | 1.44 | 1.33 | 1.17 | 1.07 |
| 45.0 | 3.30 | 2.93 | 2.61 | 2.29 | 2.08 | 1.87 | 1.71 | 1.44 | 1.33 |
| 90.0 | 3.46 | 2.98 | 2.66 | 2.40 | 2.13 | 1.87 | 1.71 | 1.55 | 1.39 |
| 135.0 | 4.37 | 3.73 | 3.25 | 2.88 | 2.61 | 2.29 | 2.08 | 1.81 | 1.71 |
| 180.0 | 5.01 | 4.26 | 3.68 | 3.25 | 2.93 | 2.61 | 2.29 | 2.08 | 1.87 |
| 225.0 | 3.09 | 2.72 | 2.34 | 2.18 | 1.92 | 1.71 | 1.55 | 1.44 | 1.28 |
| 270.0 | 3.25 | 2.88 | 2.56 | 2.34 | 2.08 | 1.81 | 1.71 | 1.49 | 1.33 |
| 315.0 | 2.34 | 2.18 | 1.87 | 1.71 | 1.55 | 1.44 | 1.23 | 1.12 | 1.01 |
| 360.0 | 2.40 | 2.24 | 2.03 | 1.76 | 1.60 | 1.44 | 1.33 | 1.17 | 1.07 |

| C/γ(°) | 54.0 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 | 60.0 | 61.0 | 62.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 1.01 | 0.91 | 0.75 | 0.69 | 0.64 | 0.59 | 0.53 | 0.48 | 0.48 |
| 45.0 | 1.23 | 1.17 | 1.01 | 0.91 | 0.85 | 0.75 | 0.69 | 0.64 | 0.53 |
| 90.0 | 1.23 | 1.12 | 1.01 | 0.91 | 0.80 | 0.75 | 0.69 | 0.59 | 0.59 |
| 135.0 | 1.49 | 1.33 | 1.23 | 1.12 | 1.01 | 0.96 | 0.80 | 0.75 | 0.69 |
| 180.0 | 1.71 | 1.60 | 1.33 | 1.28 | 1.17 | 1.01 | 0.96 | 0.85 | 0.75 |
| 225.0 | 1.12 | 1.07 | 0.96 | 0.91 | 0.75 | 0.69 | 0.69 | 0.53 | 0.53 |
| 270.0 | 1.23 | 1.12 | 1.01 | 0.96 | 0.80 | 0.80 | 0.64 | 0.59 | 0.59 |
| 315.0 | 0.96 | 0.85 | 0.80 | 0.69 | 0.64 | 0.59 | 0.53 | 0.48 | 0.43 |
| 360.0 | 1.01 | 0.91 | 0.75 | 0.69 | 0.64 | 0.59 | 0.53 | 0.48 | 0.48 |

| C/γ(°) | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 | 70.0 | 71.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 0.43 | 0.37 | 0.37 | 0.32 | 0.32 | 0.32 | 0.27 | 0.21 | 0.21 |
| 45.0 | 0.48 | 0.48 | 0.43 | 0.37 | 0.32 | 0.32 | 0.32 | 0.27 | 0.21 |
| 90.0 | 0.48 | 0.43 | 0.43 | 0.37 | 0.37 | 0.37 | 0.32 | 0.27 | 0.27 |
| 135.0 | 0.59 | 0.59 | 0.48 | 0.53 | 0.48 | 0.37 | 0.37 | 0.37 | 0.32 |
| 180.0 | 0.75 | 0.69 | 0.53 | 0.53 | 0.59 | 0.48 | 0.43 | 0.43 | 0.43 |
| 225.0 | 0.48 | 0.43 | 0.43 | 0.37 | 0.37 | 0.27 | 0.27 | 0.32 | 0.27 |
| 270.0 | 0.53 | 0.48 | 0.43 | 0.37 | 0.37 | 0.32 | 0.27 | 0.27 | 0.27 |
| 315.0 | 0.37 | 0.37 | 0.37 | 0.27 | 0.21 | 0.21 | 0.21 | 0.21 | 0.16 |
| 360.0 | 0.43 | 0.37 | 0.37 | 0.32 | 0.32 | 0.32 | 0.27 | 0.21 | 0.21 |

| C/γ(°) | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0 | 80.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 0.21 | 0.21 | 0.16 | 0.16 | 0.16 | 0.16 | 0.11 | 0.11 | 0.11 |
| 45.0 | 0.27 | 0.21 | 0.16 | 0.16 | 0.16 | 0.16 | 0.11 | 0.16 | 0.11 |
| 90.0 | 0.27 | 0.21 | 0.21 | 0.16 | 0.21 | 0.11 | 0.11 | 0.16 | 0.16 |
| 135.0 | 0.27 | 0.27 | 0.27 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 |
| 180.0 | 0.32 | 0.32 | 0.21 | 0.27 | 0.21 | 0.16 | 0.16 | 0.21 | 0.16 |
| 225.0 | 0.21 | 0.16 | 0.16 | 0.21 | 0.16 | 0.11 | 0.16 | 0.16 | 0.16 |
| 270.0 | 0.27 | 0.21 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 | 0.16 |
| 315.0 | 0.16 | 0.16 | 0.16 | 0.16 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 |
| 360.0 | 0.21 | 0.21 | 0.16 | 0.16 | 0.16 | 0.16 | 0.11 | 0.11 | 0.11 |

| C/γ(°) | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 0.16 | 0.11 | 0.11 | 0.16 | 0.11 | 0.11 | 0.11 | 0.16 | 0.16 |
| 45.0 | 0.11 | 0.11 | 0.11 | 0.16 | 0.11 | 0.11 | 0.16 | 0.11 | 0.16 |
| 90.0 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.16 | 0.11 |
| 135.0 | 0.16 | 0.16 | 0.11 | 0.16 | 0.16 | 0.11 | 0.11 | 0.11 | 0.11 |
| 180.0 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.16 |
| 225.0 | 0.11 | 0.11 | 0.11 | 0.11 | 0.05 | 0.11 | 0.11 | 0.11 | 0.11 |
| 270.0 | 0.16 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.11 | 0.05 | 0.11 |
| 315.0 | 0.11 | 0.11 | 0.11 | 0.11 | 0.05 | 0.05 | 0.11 | 0.05 | 0.05 |
| 360.0 | 0.16 | 0.11 | 0.11 | 0.16 | 0.11 | 0.11 | 0.11 | 0.16 | 0.16 |

Intensity data(cd)



| C/γ(°) | 90.0 |
|---|---|
| 0.0 | 0.16 |
| 45.0 | 0.11 |
| 90.0 | 0.16 |
| 135.0 | 0.11 |
| 180.0 | 0.11 |
| 225.0 | 0.05 |
| 270.0 | 0.05 |
| 315.0 | 0.11 |
| 360.0 | 0.16 |