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Address:380JinOu Road,Gaoxin Zone,Jiang Men City,Guangdong,China

## Nata

Client: NT
LumCAT: 1-1768-LM
Luminaire: 92.70.121.00
Report No: 20251209-B023
Ballast type: DC
Test No: 20251209-C023 Voltage(V): 34.540
LampCAT: LUMINUS CXM-11（TC） LES Current(A): 0.451
Lamp flux(lm): 2191.0 Power (W): 15.570
Number of Lamps: 1 PF: 0.000
Length(mm): 50 Width(mm): 50
Phm Type: C Height(mm): 22

## Photometric Results

Lumens(lm): 2094.87, Efficiency(%): 95.61% , Luminous Efficacy(lm/W): 134.55
Central intensity(cd): 3716.526, Maximum intensity(cd): 3716.526
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=37.8
[C90/270]Total=37.8
Field angle(10%Imax): [C0/180]Total=82.2
[C90/270]Total=82.2
Maximum s/h(1/2): C0_180=0.62 C90_270=0.62
Maximum s/h(1/4): C0_180=0.65 C90_270=0.65
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 95.61%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 99.321%

NT Nata 1-1768-LM

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 0.0 | 3716.526 | 0.000 | 0 | 0.00% | 0.00% |
| 1.0 | 3711.897 | 3.554 | 3.554 | 0.16% | 0.17% |
| 2.0 | 3696.826 | 10.634 | 14.188 | 0.49% | 0.68% |
| 3.0 | 3672.175 | 17.624 | 31.812 | 0.80% | 1.52% |
| 4.0 | 3640.419 | 24.478 | 56.29 | 1.12% | 2.69% |
| 5.0 | 3597.575 | 31.137 | 87.427 | 1.42% | 4.17% |
| 6.0 | 3545.258 | 37.537 | 124.965 | 1.71% | 5.97% |
| 7.0 | 3479.269 | 43.601 | 168.566 | 1.99% | 8.05% |
| 8.0 | 3394.335 | 49.193 | 217.759 | 2.25% | 10.39% |
| 9.0 | 3299.928 | 54.253 | 272.012 | 2.48% | 12.98% |
| 10.0 | 3186.252 | 58.698 | 330.71 | 2.68% | 15.79% |
| 11.0 | 3071.607 | 62.529 | 393.239 | 2.85% | 18.77% |
| 12.0 | 2935.324 | 65.664 | 458.903 | 3.00% | 21.91% |
| 13.0 | 2788.923 | 67.932 | 526.835 | 3.10% | 25.15% |
| 14.0 | 2643.167 | 69.530 | 596.366 | 3.17% | 28.47% |
| 15.0 | 2495.905 | 70.551 | 666.917 | 3.22% | 31.84% |
| 16.0 | 2343.260 | 70.907 | 737.825 | 3.24% | 35.22% |
| 17.0 | 2195.675 | 70.683 | 808.508 | 3.23% | 38.59% |
| 18.0 | 2021.511 | 69.532 | 878.04 | 3.17% | 41.91% |
| 19.0 | 1834.408 | 67.085 | 945.125 | 3.06% | 45.12% |
| 20.0 | 1758.602 | 65.762 | 1010.887 | 3.00% | 48.26% |
| 21.0 | 1642.203 | 65.302 | 1076.19 | 2.98% | 51.37% |
| 22.0 | 1513.692 | 63.419 | 1139.609 | 2.89% | 54.40% |
| 23.0 | 1405.614 | 61.255 | 1200.864 | 2.80% | 57.32% |
| 24.0 | 1291.367 | 58.966 | 1259.829 | 2.69% | 60.14% |
| 25.0 | 1191.857 | 56.463 | 1316.292 | 2.58% | 62.83% |
| 26.0 | 1093.090 | 53.936 | 1370.229 | 2.46% | 65.41% |
| 27.0 | 1005.917 | 51.353 | 1421.581 | 2.34% | 67.86% |
| 28.0 | 932.081 | 49.066 | 1470.647 | 2.24% | 70.20% |
| 29.0 | 858.482 | 46.846 | 1517.494 | 2.14% | 72.44% |
| 30.0 | 801.795 | 44.827 | 1562.321 | 2.05% | 74.58% |
| 31.0 | 755.527 | 43.338 | 1605.659 | 1.98% | 76.65% |
| 32.0 | 721.155 | 42.305 | 1647.964 | 1.93% | 78.67% |
| 33.0 | 693.124 | 41.665 | 1689.629 | 1.90% | 80.66% |
| 34.0 | 668.569 | 41.209 | 1730.838 | 1.88% | 82.62% |
| 35.0 | 637.610 | 40.565 | 1771.403 | 1.85% | 84.56% |
| 36.0 | 599.685 | 39.396 | 1810.799 | 1.80% | 86.44% |
| 37.0 | 557.175 | 37.730 | 1848.529 | 1.72% | 88.24% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 38.0 | 507.377 | 35.533 | 1884.062 | 1.62% | 89.94% |
| 39.0 | 457.472 | 32.933 | 1916.995 | 1.50% | 91.51% |
| 40.0 | 413.261 | 30.368 | 1947.363 | 1.39% | 92.96% |
| 41.0 | 377.123 | 28.145 | 1975.509 | 1.28% | 94.30% |
| 42.0 | 301.059 | 24.640 | 2000.148 | 1.12% | 95.48% |
| 43.0 | 241.218 | 20.088 | 2020.236 | 0.92% | 96.44% |
| 44.0 | 191.000 | 16.313 | 2036.549 | 0.74% | 97.22% |
| 45.0 | 143.409 | 12.852 | 2049.401 | 0.59% | 97.83% |
| 46.0 | 97.002 | 9.402 | 2058.802 | 0.43% | 98.28% |
| 47.0 | 61.198 | 6.292 | 2065.094 | 0.29% | 98.58% |
| 48.0 | 33.134 | 3.813 | 2068.908 | 0.17% | 98.76% |
| 49.0 | 18.246 | 2.110 | 2071.018 | 0.10% | 98.86% |
| 50.0 | 13.897 | 1.340 | 2072.358 | 0.06% | 98.93% |
| 51.0 | 12.778 | 1.129 | 2073.487 | 0.05% | 98.98% |
| 52.0 | 11.917 | 1.060 | 2074.546 | 0.05% | 99.03% |
| 53.0 | 11.066 | 1.000 | 2075.546 | 0.05% | 99.08% |
| 54.0 | 10.205 | 0.938 | 2076.484 | 0.04% | 99.12% |
| 55.0 | 9.387 | 0.875 | 2077.358 | 0.04% | 99.16% |
| 56.0 | 8.569 | 0.811 | 2078.169 | 0.04% | 99.20% |
| 57.0 | 7.331 | 0.727 | 2078.896 | 0.03% | 99.24% |
| 58.0 | 6.319 | 0.631 | 2079.528 | 0.03% | 99.27% |
| 59.0 | 5.910 | 0.572 | 2080.099 | 0.03% | 99.30% |
| 60.0 | 5.748 | 0.551 | 2080.65 | 0.03% | 99.32% |
| 61.0 | 5.587 | 0.541 | 2081.191 | 0.02% | 99.35% |
| 62.0 | 5.415 | 0.530 | 2081.721 | 0.02% | 99.37% |
| 63.0 | 5.253 | 0.519 | 2082.24 | 0.02% | 99.40% |
| 64.0 | 5.146 | 0.510 | 2082.75 | 0.02% | 99.42% |
| 65.0 | 5.081 | 0.506 | 2083.256 | 0.02% | 99.45% |
| 66.0 | 4.963 | 0.501 | 2083.758 | 0.02% | 99.47% |
| 67.0 | 4.898 | 0.496 | 2084.253 | 0.02% | 99.49% |
| 68.0 | 4.812 | 0.492 | 2084.745 | 0.02% | 99.52% |
| 69.0 | 4.747 | 0.488 | 2085.233 | 0.02% | 99.54% |
| 70.0 | 4.693 | 0.485 | 2085.718 | 0.02% | 99.56% |
| 71.0 | 4.607 | 0.481 | 2086.198 | 0.02% | 99.59% |
| 72.0 | 4.564 | 0.477 | 2086.675 | 0.02% | 99.61% |
| 73.0 | 4.500 | 0.474 | 2087.149 | 0.02% | 99.63% |
| 74.0 | 4.435 | 0.470 | 2087.619 | 0.02% | 99.65% |
| 75.0 | 4.403 | 0.467 | 2088.086 | 0.02% | 99.68% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 76.0 | 4.371 | 0.466 | 2088.552 | 0.02% | 99.70% |
| 77.0 | 4.327 | 0.464 | 2089.015 | 0.02% | 99.72% |
| 78.0 | 4.284 | 0.461 | 2089.476 | 0.02% | 99.74% |
| 79.0 | 4.241 | 0.458 | 2089.935 | 0.02% | 99.76% |
| 80.0 | 4.231 | 0.457 | 2090.391 | 0.02% | 99.79% |
| 81.0 | 4.209 | 0.456 | 2090.848 | 0.02% | 99.81% |
| 82.0 | 4.231 | 0.458 | 2091.305 | 0.02% | 99.83% |
| 83.0 | 4.177 | 0.457 | 2091.762 | 0.02% | 99.85% |
| 84.0 | 4.144 | 0.453 | 2092.216 | 0.02% | 99.87% |
| 85.0 | 4.080 | 0.449 | 2092.665 | 0.02% | 99.89% |
| 86.0 | 4.048 | 0.444 | 2093.109 | 0.02% | 99.92% |
| 87.0 | 4.037 | 0.442 | 2093.551 | 0.02% | 99.94% |
| 88.0 | 3.983 | 0.439 | 2093.991 | 0.02% | 99.96% |
| 89.0 | 4.005 | 0.438 | 2094.428 | 0.02% | 99.98% |
| 90.0 | 3.983 | 0.438 | 2094.866 | 0.02% | 100.00% |

## Zonal flux distribution table



ZONAL LUMEN SUMMARY

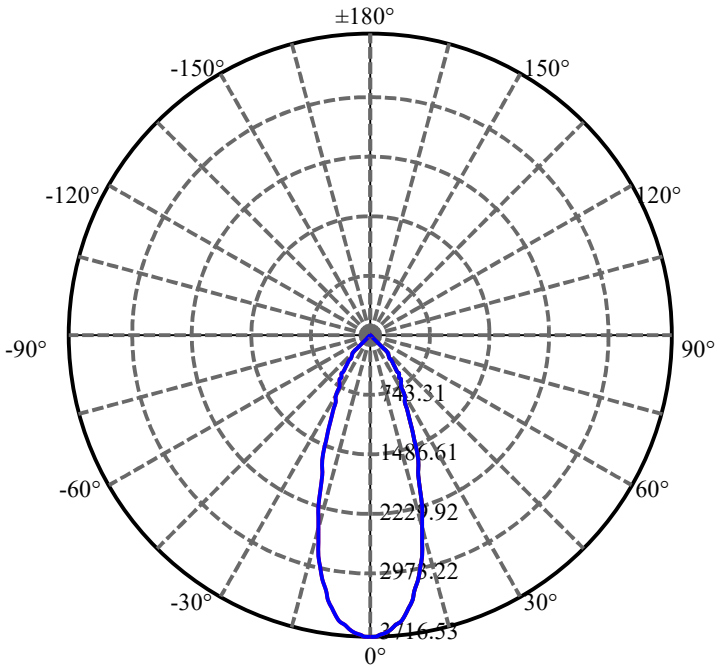
| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-30 | 1562.32 | 71.31% | 74.58% |
| 0-40 | 1947.36 | 88.88% | 92.96% |
| 0-60 | 2080.65 | 94.96% | 99.32% |
| 0-90 | 2094.43 | 95.59% | 99.98% |
| 0-120 | 2094.43 | 95.59% | 99.98% |
| 0-180 | 2094.87 | 95.61% | 100.00% |
| 60-90 | 13.78 | 0.63% | 0.66% |
| 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% |
| 0-32.67 | 1675.89 | 76.49% | 80.00% |

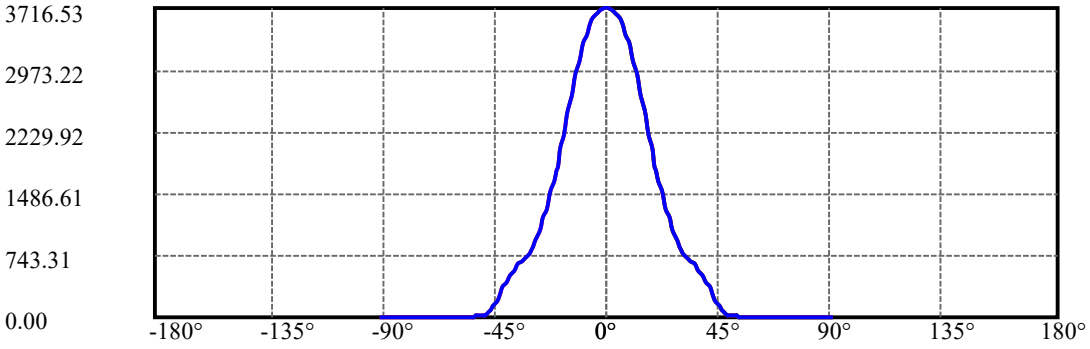
ZONAL LUMEN SUMMARY

| | |
|---|---|
| 0-10 | 330.71 |
| 10-20 | 680.18 |
| 20-30 | 551.43 |
| 30-40 | 385.04 |
| 40-50 | 124.99 |
| 50-60 | 8.29 |
| 60-70 | 5.07 |
| 70-80 | 4.67 |
| 80-90 | 4.04 |
| 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:

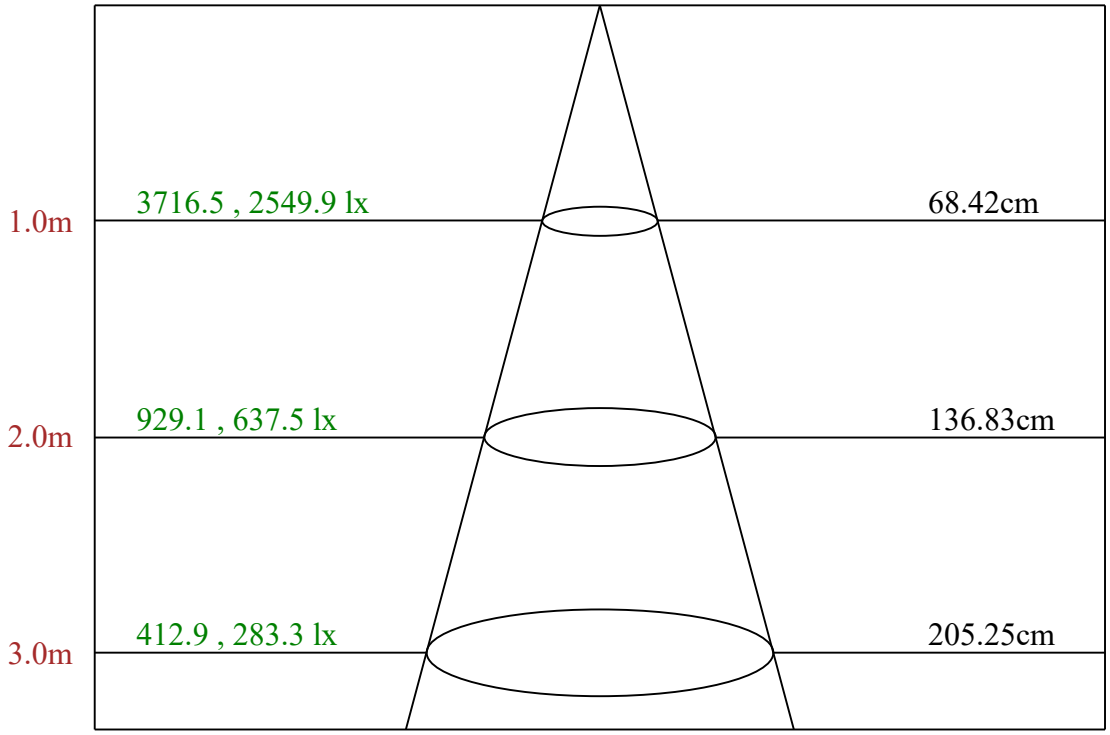
C90/C270:

Field angle(10%Imax):C0/180Left:41.1 Right:41.1
:C90/270Left:41.1 Right:41.1

Beam Angle(50%Imax):C0/180Left:18.9 Right:18.9
:C90/270Left:18.9 Right:18.9

Lux distance Curve

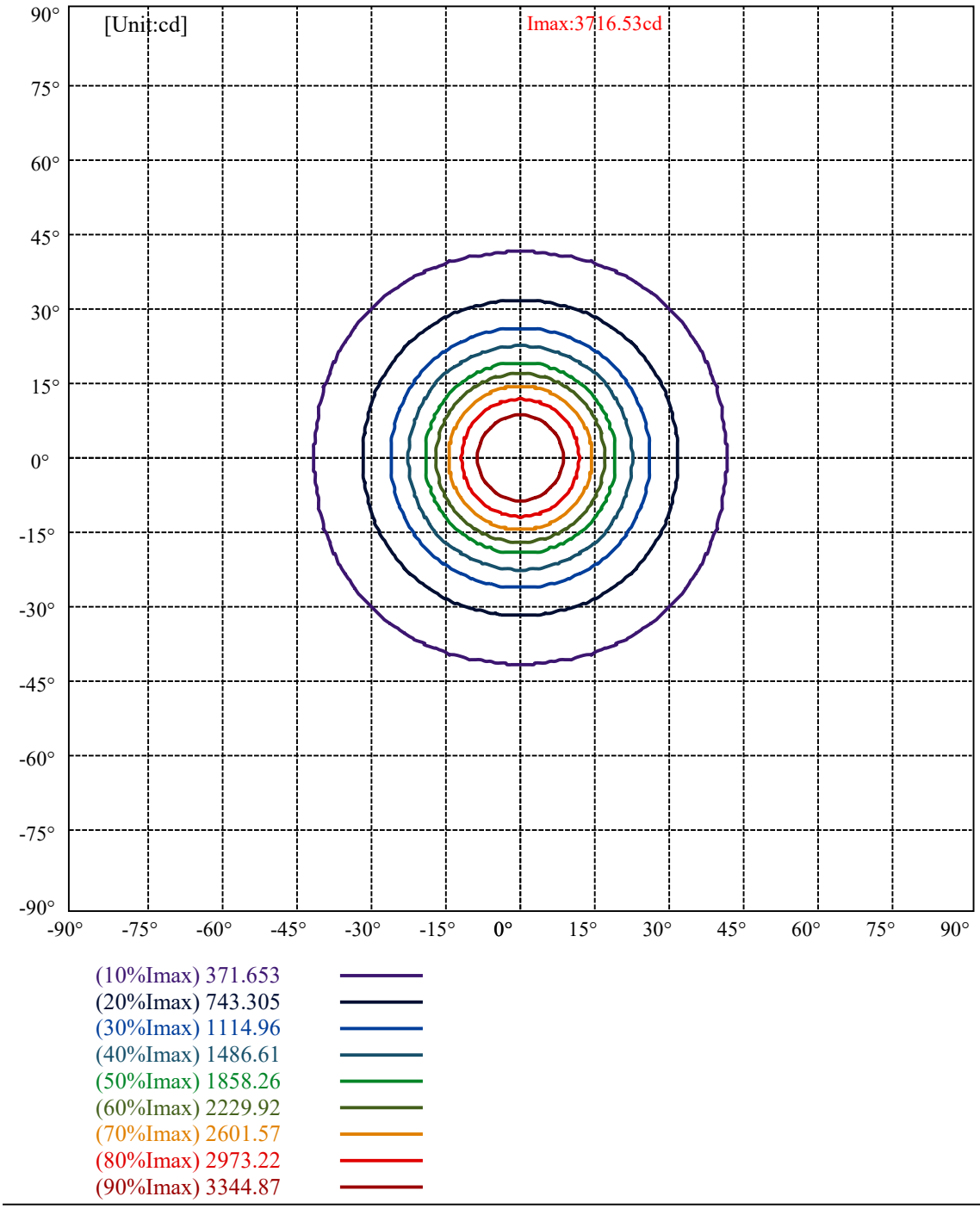





Max , Ave

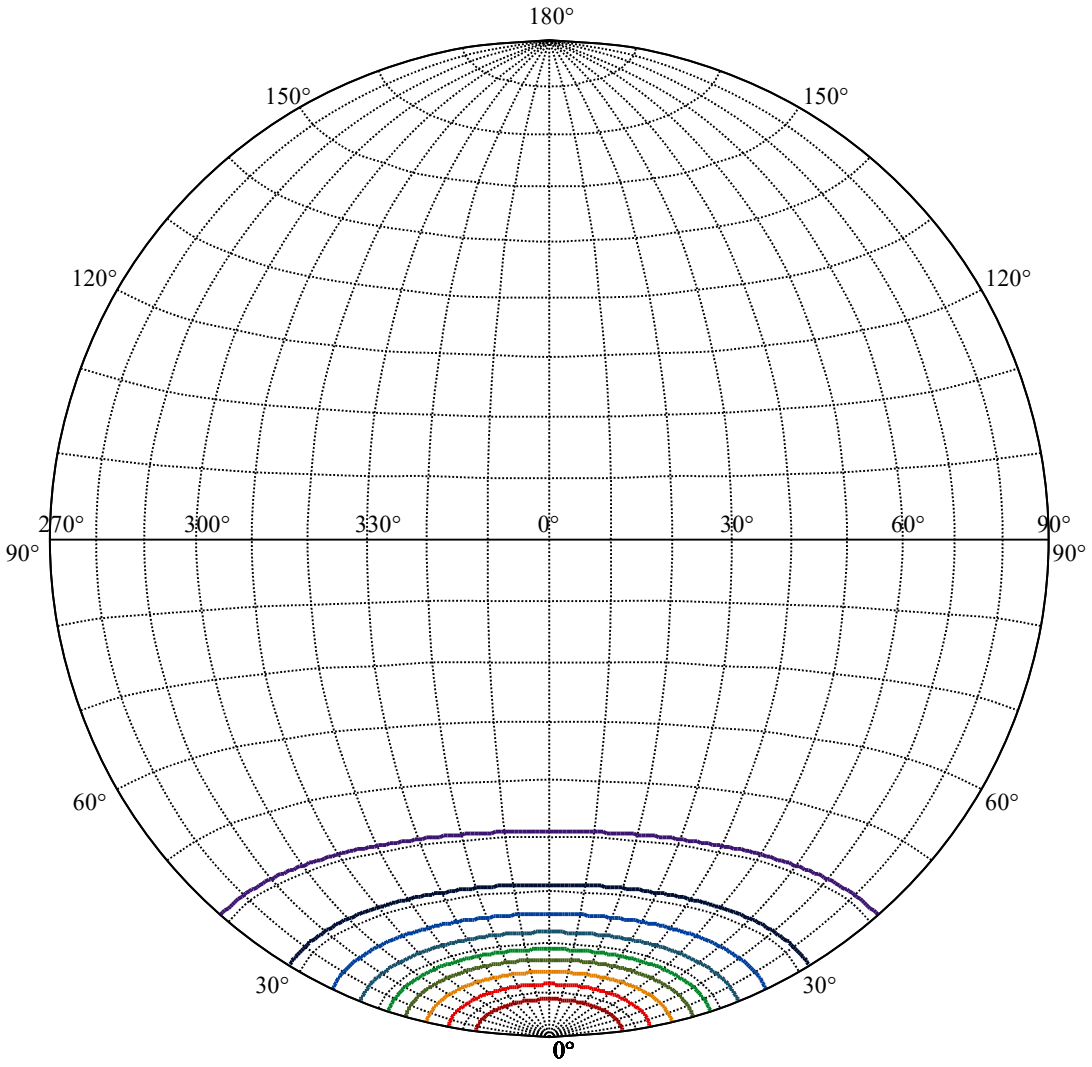
Beam angle of C0 plane 37.77

| | | |
|---|---|---|
| Equipment: GMS1980 | Date: 2025/12/9 | Operator: YZQ |
| Temperature(°C): 25.0 | Humidity(%): 60.0% | Distance(m): 9.28 |


[Unit:cd]
Imax:3716.53cd
90°
75°
60°
45°
30°
15°
0°
-15°
-30°
-45°
-60°
-75°
-90°
-90° -75° -60° -45° -30° -15° 0° 15° 30° 45° 60° 75° 90°
(10%Imax) 371.653
(20%Imax) 743.305
(30%Imax) 1114.96
(40%Imax) 1486.61
(50%Imax) 1858.26
(60%Imax) 2229.92
(70%Imax) 2601.57
(80%Imax) 2973.22
(90%Imax) 3344.87

## ISO candela diagram on circular web






House [Unit:cd] Road

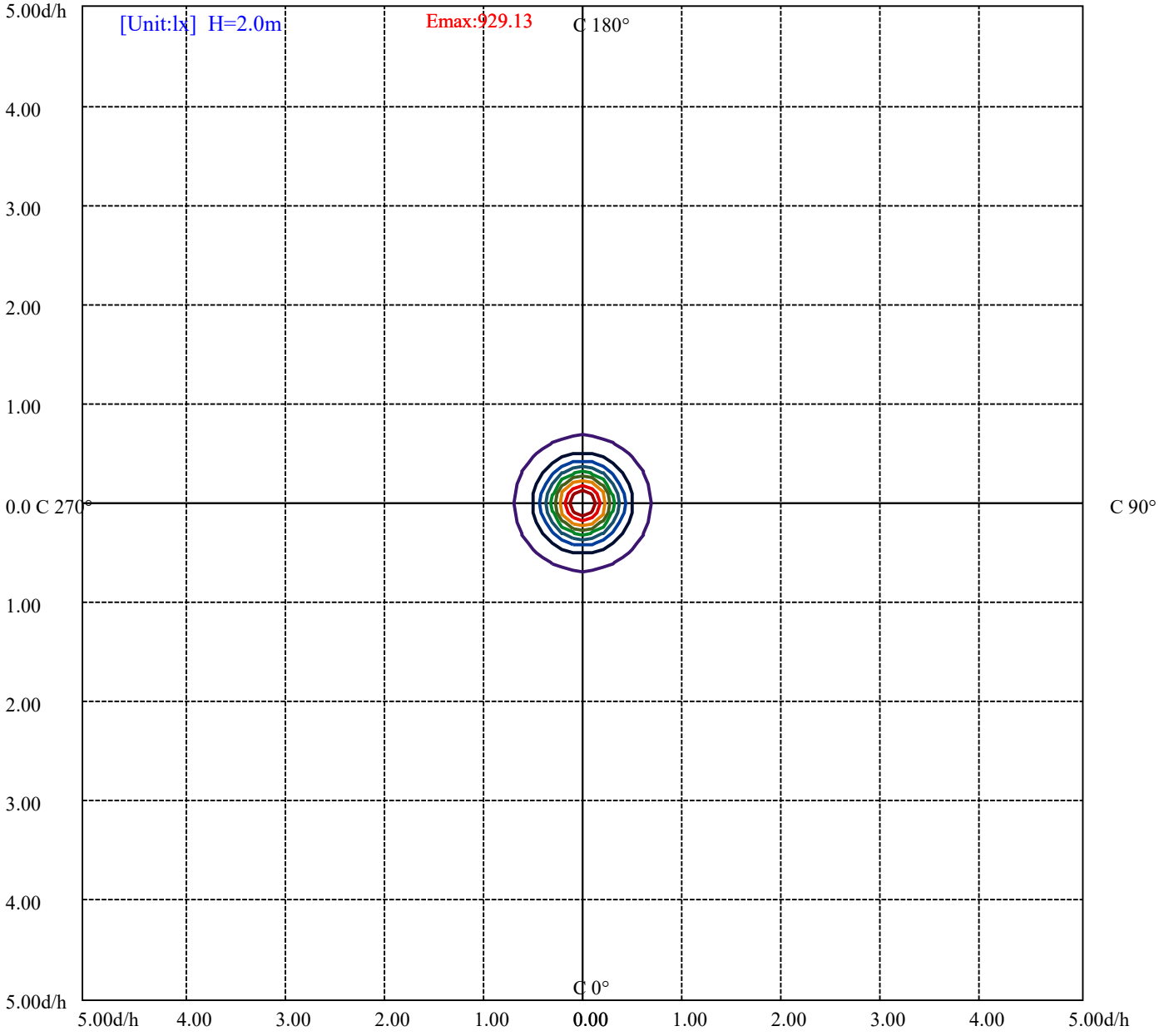
Imax:3716.53

(10%Imax) 371.653
(20%Imax) 743.305
(30%Imax) 1114.96
(40%Imax) 1486.61
(50%Imax) 1858.26
(60%Imax) 2229.92
(70%Imax) 2601.57
(80%Imax) 2973.22
(90%Imax) 3344.87

NT Nata 1-1768-LM

ISO illuminance diagram





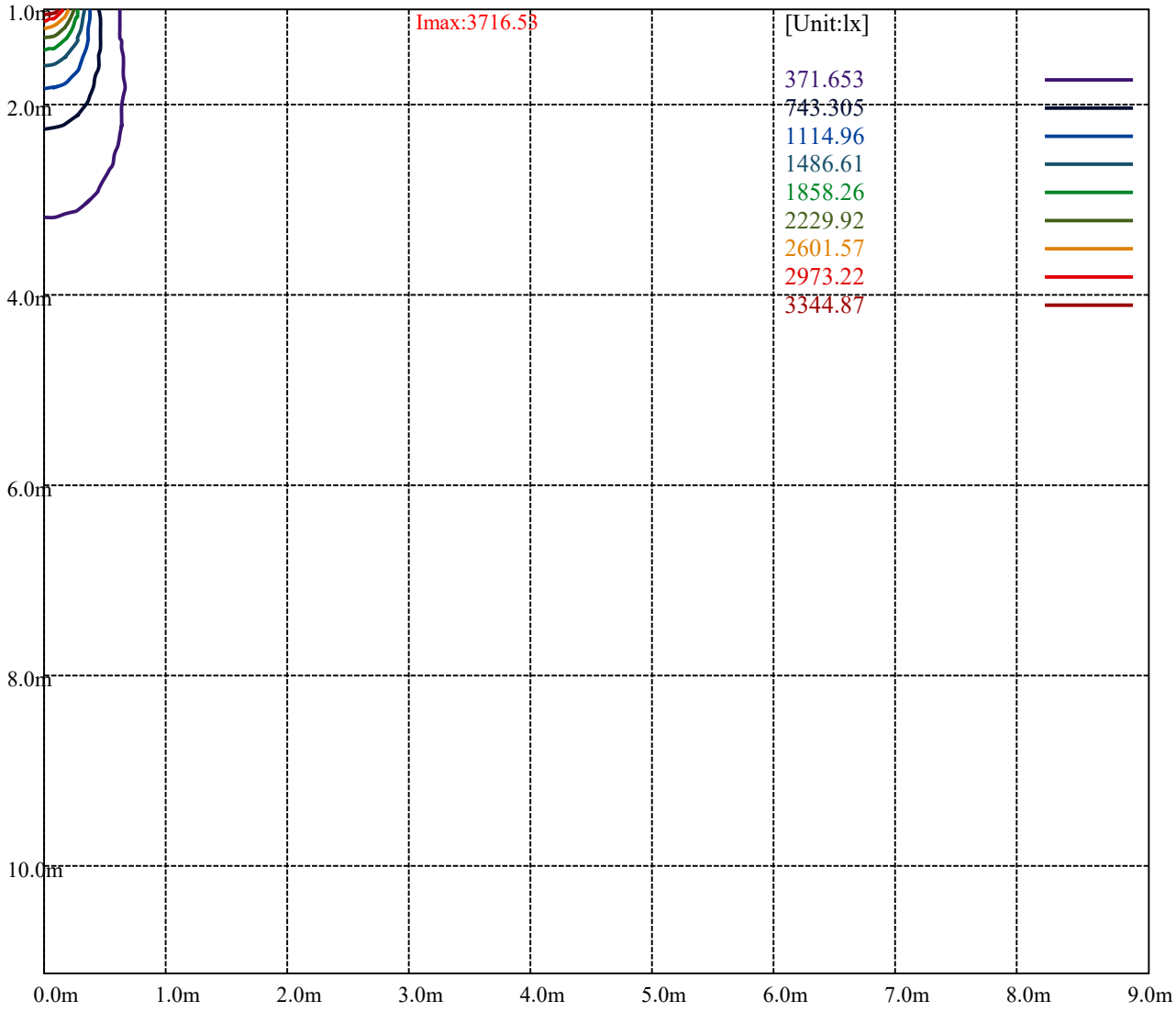

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2025/12/9
Humidity(%): 60.0%

Operator: YZQ
Distance(m): 9.28

## Space ISO Lux diagram






Equipment: GMS1980
Temperature(°C): 25.0

Date: 2025/12/9
Humidity(%): 60.0%

Operator: YZQ
Distance(m): 9.28

NT Nata 1-1768-LM

## Luminance Limitting Curve(no luminous side)



Luminance Table

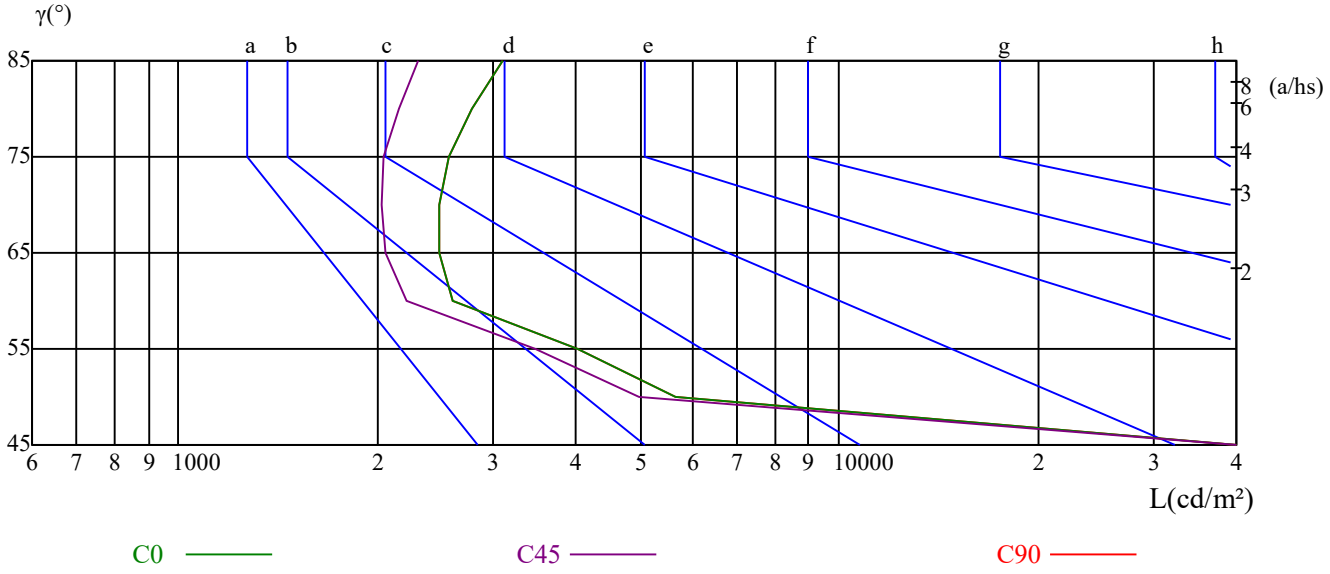
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|---|---|---|---|---|---|---|---|---|---|
| C0 | 56336 | 5673 | 4020 | 2610 | 2474 | 2485 | 2575 | 2788 | 3106 |
| C45 | 50007 | 4966 | 3466 | 2213 | 2060 | 2026 | 2048 | 2152 | 2308 |
| C90 | 56336 | 5673 | 4020 | 2610 | 2474 | 2485 | 2575 | 2788 | 3106 |

| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|---|---|---|---|---|---|---|---|---|
| 4809 | 4809 | 4809 | 6804 | 6804 | 6804 | 18724 | 18724 | 18724 |

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: 2025/12/9
Humidity(%): 60.0%

Operator: YZQ
Distance(m): 9.28

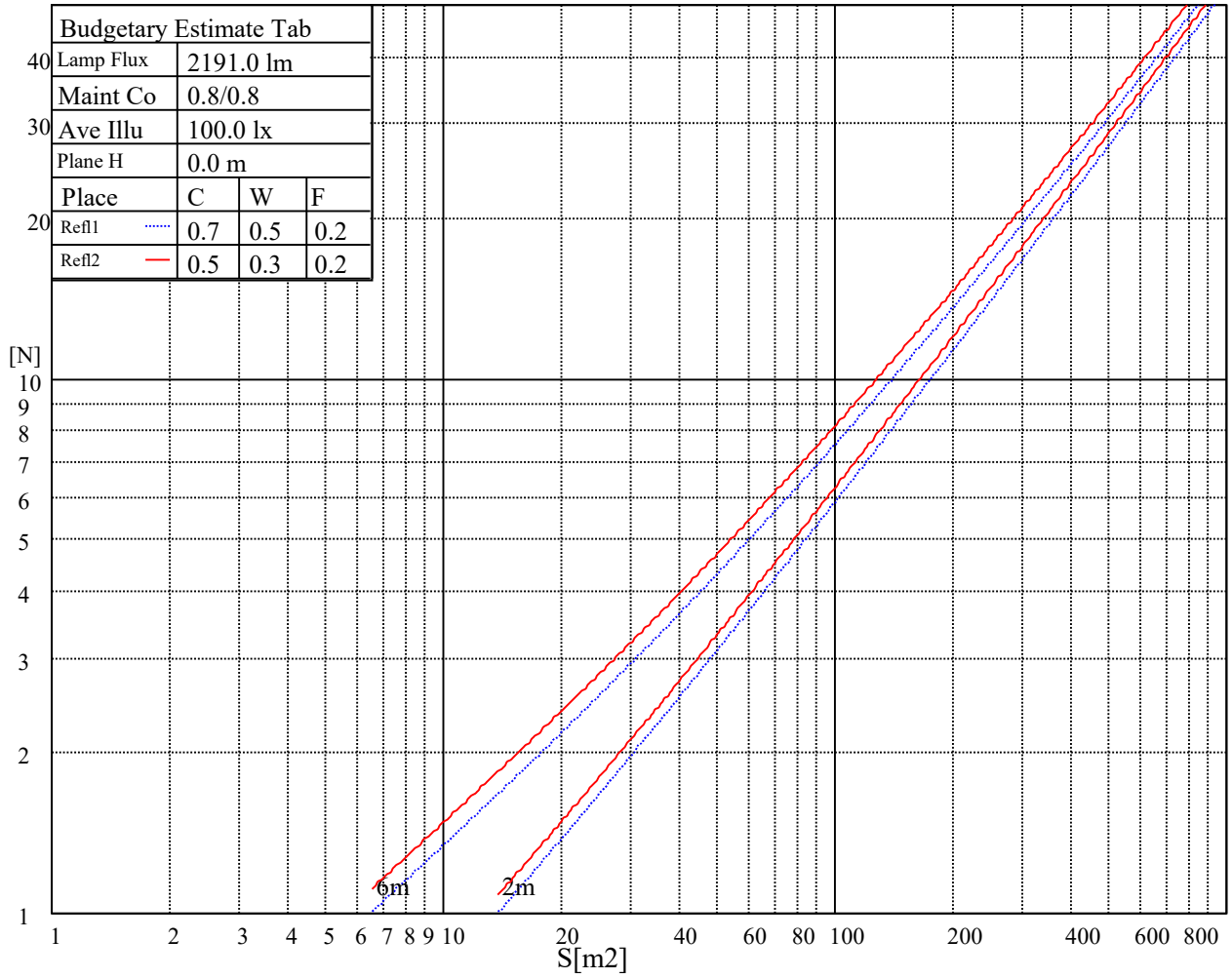
| Illumination assessment according UGR | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Rf of Ceiling | | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
| Rf of Wall | | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| Rf of Floor | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Room dimensions | | Viewed crosswise | | | | | Viewed endwise | | | | |
| X | Y | | | | | | | | | | |
| 2H | 2H | 22.06 | 23.03 | 22.42 | 23.34 | 23.66 | 21.89 | 22.87 | 22.25 | 23.18 | 23.49 |
| | 3H | 21.86 | 22.72 | 22.25 | 23.06 | 23.41 | 21.69 | 22.56 | 22.08 | 22.89 | 23.24 |
| | 4H | 21.76 | 22.56 | 22.17 | 22.92 | 23.28 | 21.60 | 22.39 | 22.00 | 22.75 | 23.12 |
| | 6H | 21.69 | 22.42 | 22.11 | 22.79 | 23.19 | 21.52 | 22.25 | 21.94 | 22.63 | 23.03 |
| | 8H | 21.62 | 22.32 | 22.04 | 22.70 | 23.11 | 21.45 | 22.15 | 21.88 | 22.54 | 22.94 |
| | 12H | 21.56 | 22.22 | 21.99 | 22.62 | 23.03 | 21.40 | 22.05 | 21.82 | 22.45 | 22.87 |
| 4H | 2H | 21.75 | 22.55 | 22.15 | 22.90 | 23.27 | 21.58 | 22.38 | 21.98 | 22.73 | 23.10 |
| | 3H | 21.52 | 22.18 | 21.94 | 22.58 | 22.99 | 21.35 | 22.01 | 21.78 | 22.41 | 22.83 |
| | 4H | 21.45 | 22.02 | 21.89 | 22.45 | 22.90 | 21.29 | 21.86 | 21.72 | 22.28 | 22.73 |
| | 6H | 21.33 | 21.84 | 21.81 | 22.29 | 22.74 | 21.17 | 21.67 | 21.64 | 22.12 | 22.58 |
| | 8H | 21.29 | 21.76 | 21.78 | 22.22 | 22.69 | 21.12 | 21.59 | 21.61 | 22.05 | 22.52 |
| | 12H | 21.26 | 21.69 | 21.75 | 22.14 | 22.66 | 21.09 | 21.53 | 21.59 | 21.98 | 22.50 |
| 8H | 4H | 21.25 | 21.72 | 21.74 | 22.18 | 22.66 | 21.09 | 21.56 | 21.57 | 22.01 | 22.49 |
| | 6H | 21.13 | 21.51 | 21.64 | 21.99 | 22.50 | 20.96 | 21.35 | 21.47 | 21.83 | 22.34 |
| | 8H | 21.14 | 21.46 | 21.67 | 21.99 | 22.48 | 20.98 | 21.30 | 21.51 | 21.82 | 22.32 |
| | 12H | 21.12 | 21.37 | 21.67 | 21.89 | 22.41 | 20.96 | 21.21 | 21.50 | 21.73 | 22.25 |
| 12H | 4H | 21.20 | 21.63 | 21.69 | 22.09 | 22.61 | 21.04 | 21.47 | 21.53 | 21.92 | 22.44 |
| | 6H | 21.12 | 21.44 | 21.65 | 21.96 | 22.46 | 20.95 | 21.27 | 21.49 | 21.80 | 22.29 |
| | 8H | 21.09 | 21.34 | 21.64 | 21.86 | 22.38 | 20.93 | 21.18 | 21.47 | 21.70 | 22.22 |

| Variation with the observer position at spacings: | | |
|---|---|---|
| S = 1.0H | 3.6/-14.5 | 3.6/-14.5 |
| S = 1.5H | 6.3/-13.1 | 6.3/-13.1 |
| S = 2.0H | 8.3/-12.0 | 8.3/-12.0 |
| Standard tables: | BK0 | BK0 |
| Uncorrected UGR | 2.6 | 2.6 |

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

## Budgetary Estimate Table






Equipment: GMS1980 Date: 2025/12/9 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 | 1.14 | 1.14 | 1.14 | 1.11 | 1.11 | 1.11 | 1.06 | 1.06 | 1.06 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 | 0.98 | 0.96 |
| 1 | 1.06 | 1.04 | 1.02 | 1.04 | 1.02 | 1.00 | 1.00 | 0.99 | 0.97 | 0.97 | 0.95 | 0.94 | 0.93 | 0.92 | 0.92 | 0.90 |
| 2 | 0.99 | 0.96 | 0.93 | 0.98 | 0.94 | 0.92 | 0.95 | 0.92 | 0.90 | 0.92 | 0.90 | 0.88 | 0.89 | 0.87 | 0.86 | 0.84 |
| 3 | 0.93 | 0.89 | 0.85 | 0.92 | 0.88 | 0.84 | 0.89 | 0.86 | 0.83 | 0.87 | 0.84 | 0.82 | 0.85 | 0.83 | 0.80 | 0.79 |
| 4 | 0.88 | 0.83 | 0.79 | 0.86 | 0.82 | 0.78 | 0.84 | 0.81 | 0.77 | 0.83 | 0.79 | 0.76 | 0.81 | 0.78 | 0.76 | 0.74 |
| 5 | 0.83 | 0.77 | 0.73 | 0.82 | 0.77 | 0.73 | 0.80 | 0.76 | 0.72 | 0.78 | 0.75 | 0.72 | 0.77 | 0.74 | 0.71 | 0.70 |
| 6 | 0.78 | 0.73 | 0.69 | 0.77 | 0.72 | 0.68 | 0.76 | 0.71 | 0.68 | 0.74 | 0.71 | 0.68 | 0.73 | 0.70 | 0.67 | 0.66 |
| 7 | 0.74 | 0.68 | 0.65 | 0.73 | 0.68 | 0.64 | 0.72 | 0.67 | 0.64 | 0.71 | 0.67 | 0.64 | 0.70 | 0.66 | 0.63 | 0.62 |
| 8 | 0.70 | 0.65 | 0.61 | 0.69 | 0.64 | 0.61 | 0.68 | 0.64 | 0.61 | 0.67 | 0.63 | 0.60 | 0.67 | 0.63 | 0.60 | 0.59 |
| 9 | 0.67 | 0.61 | 0.58 | 0.66 | 0.61 | 0.58 | 0.65 | 0.61 | 0.57 | 0.64 | 0.60 | 0.57 | 0.64 | 0.60 | 0.57 | 0.56 |
| 10 | 0.63 | 0.58 | 0.55 | 0.63 | 0.58 | 0.55 | 0.62 | 0.58 | 0.55 | 0.62 | 0.57 | 0.54 | 0.61 | 0.57 | 0.54 | 0.53 |

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 | 3720.40 | 3714.37 | 3698.87 | 3676.48 | 3638.59 | 3598.97 | 3549.03 | 3468.94 | 3392.29 |
| 45.0 | 3716.10 | 3719.54 | 3715.23 | 3694.57 | 3671.31 | 3640.31 | 3588.64 | 3536.97 | 3456.88 |
| 90.0 | 3715.23 | 3708.34 | 3686.81 | 3655.81 | 3619.64 | 3559.36 | 3505.10 | 3435.35 | 3352.68 |
| 135.0 | 3714.37 | 3715.23 | 3710.07 | 3683.37 | 3654.95 | 3622.23 | 3580.89 | 3513.72 | 3442.24 |
| 180.0 | 3720.40 | 3718.68 | 3703.18 | 3680.79 | 3646.34 | 3608.45 | 3558.50 | 3499.08 | 3400.90 |
| 225.0 | 3716.10 | 3702.32 | 3677.34 | 3648.92 | 3611.03 | 3564.53 | 3489.60 | 3413.82 | 3328.56 |
| 270.0 | 3715.23 | 3714.37 | 3701.45 | 3682.51 | 3658.40 | 3618.78 | 3575.72 | 3519.75 | 3435.35 |
| 315.0 | 3714.37 | 3702.32 | 3681.65 | 3654.95 | 3623.09 | 3567.97 | 3514.58 | 3446.54 | 3345.79 |
| 360.0 | 3720.40 | 3714.37 | 3698.87 | 3676.48 | 3638.59 | 3598.97 | 3549.03 | 3468.94 | 3392.29 |

| C/γ(°) | 9.0 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 3304.45 | 3178.72 | 3063.32 | 2939.31 | 2806.68 | 2635.31 | 2495.80 | 2355.42 | 2216.77 |
| 45.0 | 3380.23 | 3292.39 | 3192.50 | 3054.71 | 2928.11 | 2793.77 | 2655.98 | 2479.43 | 2336.48 |
| 90.0 | 3233.83 | 3124.46 | 3002.17 | 2871.27 | 2699.90 | 2561.25 | 2420.87 | 2280.50 | 2109.99 |
| 135.0 | 3356.98 | 3237.28 | 3128.77 | 3007.34 | 2843.72 | 2704.20 | 2565.55 | 2390.73 | 2251.22 |
| 180.0 | 3310.48 | 3183.88 | 3063.32 | 2933.28 | 2761.04 | 2620.67 | 2479.43 | 2308.92 | 2171.13 |
| 225.0 | 3206.27 | 3091.74 | 2966.86 | 2800.66 | 2662.87 | 2491.49 | 2351.12 | 2210.75 | 2071.23 |
| 270.0 | 3356.12 | 3263.11 | 3157.19 | 3006.48 | 2872.13 | 2736.93 | 2566.41 | 2427.76 | 2253.80 |
| 315.0 | 3251.06 | 3118.43 | 2998.73 | 2869.55 | 2736.93 | 2601.72 | 2432.07 | 2292.56 | 2154.77 |
| 360.0 | 3304.45 | 3178.72 | 3063.32 | 2939.31 | 2806.68 | 2635.31 | 2495.80 | 2355.42 | 2216.77 |

| C/γ(°) | 18.0 | 19.0 | 20.0 | 21.0 | 22.0 | 23.0 | 24.0 | 25.0 | 26.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 2047.98 | 1698.69 | 1698.69 | 1639.26 | 1525.85 | 1415.36 | 1290.14 | 1197.82 | 1086.47 |
| 45.0 | 2196.11 | 2024.73 | 1893.83 | 1767.24 | 1619.97 | 1508.02 | 1400.37 | 1278.08 | 1184.21 |
| 90.0 | 1979.09 | 1696.79 | 1696.79 | 1580.53 | 1444.81 | 1342.67 | 1246.48 | 1156.14 | 1050.64 |
| 135.0 | 2116.02 | 1983.39 | 1824.94 | 1705.23 | 1588.11 | 1477.88 | 1345.26 | 1250.53 | 1137.71 |
| 180.0 | 2036.79 | 1905.03 | 1781.88 | 1632.03 | 1520.08 | 1409.84 | 1283.25 | 1190.24 | 1104.12 |
| 225.0 | 1696.70 | 1696.70 | 1634.53 | 1518.70 | 1381.86 | 1280.24 | 1186.19 | 1099.22 | 997.68 |
| 270.0 | 2114.29 | 1978.23 | 1846.46 | 1693.17 | 1570.89 | 1458.07 | 1349.56 | 1223.83 | 1130.82 |
| 315.0 | 1985.12 | 1691.71 | 1691.71 | 1601.46 | 1457.98 | 1352.83 | 1229.68 | 1139.00 | 1053.06 |
| 360.0 | 2047.98 | 1698.69 | 1698.69 | 1639.26 | 1525.85 | 1415.36 | 1290.14 | 1197.82 | 1086.47 |

| C/γ(°) | 27.0 | 28.0 | 29.0 | 30.0 | 31.0 | 32.0 | 33.0 | 34.0 | 35.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 1003.11 | 928.70 | 866.35 | 798.15 | 755.86 | 723.39 | 696.87 | 674.22 | 642.70 |
| 45.0 | 1095.51 | 1011.98 | 923.28 | 862.13 | 809.60 | 757.07 | 726.93 | 701.95 | 679.56 |
| 90.0 | 972.54 | 903.64 | 845.85 | 786.26 | 748.80 | 719.26 | 694.72 | 664.58 | 630.21 |
| 135.0 | 1052.45 | 976.67 | 894.86 | 840.60 | 793.24 | 755.34 | 717.45 | 694.20 | 665.78 |
| 180.0 | 1003.37 | 931.03 | 853.52 | 798.40 | 755.34 | 721.76 | 688.17 | 665.78 | 635.64 |
| 225.0 | 923.62 | 858.17 | 789.79 | 747.42 | 706.69 | 681.97 | 660.87 | 634.35 | 591.98 |
| 270.0 | 1043.84 | 964.61 | 875.05 | 813.04 | 753.62 | 717.45 | 690.76 | 665.78 | 644.25 |
| 315.0 | 952.90 | 881.85 | 819.16 | 768.35 | 721.07 | 692.99 | 669.23 | 647.70 | 610.75 |
| 360.0 | 1003.11 | 928.70 | 866.35 | 798.15 | 755.86 | 723.39 | 696.87 | 674.22 | 642.70 |

| C/γ(°) | 36.0 | 37.0 | 38.0 | 39.0 | 40.0 | 41.0 | 42.0 | 43.0 | 44.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 607.31 | 566.57 | 510.17 | 460.99 | 400.19 | 350.59 | 301.41 | 240.53 | 193.51 |
| 45.0 | 641.67 | 606.36 | 552.11 | 504.74 | 456.51 | 444.46 | 379.87 | 285.83 | 235.02 |
| 90.0 | 579.06 | 534.02 | 486.31 | 423.70 | 374.10 | 324.58 | 263.01 | 215.30 | 169.22 |
| 135.0 | 628.75 | 579.66 | 531.44 | 486.66 | 446.18 | 446.18 | 315.45 | 253.02 | 203.58 |
| 180.0 | 597.75 | 543.49 | 500.43 | 454.79 | 443.60 | 382.88 | 292.72 | 244.49 | 184.72 |
| 225.0 | 553.48 | 513.01 | 468.31 | 409.58 | 359.29 | 308.56 | 259.30 | 197.73 | 153.03 |
| 270.0 | 613.25 | 577.08 | 526.27 | 482.35 | 434.98 | 434.98 | 319.33 | 269.46 | 220.38 |
| 315.0 | 576.22 | 537.21 | 483.99 | 436.96 | 391.24 | 324.75 | 277.39 | 223.39 | 168.53 |
| 360.0 | 607.31 | 566.57 | 510.17 | 460.99 | 400.19 | 350.59 | 301.41 | 240.53 | 193.51 |

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 | 148.21 | 105.58 | 59.94 | 32.72 | 18.34 | 14.04 | 13.09 | 12.40 | 11.71 |
| 45.0 | 176.54 | 131.93 | 93.96 | 60.20 | 29.02 | 16.62 | 13.78 | 13.09 | 12.23 |
| 90.0 | 125.30 | 76.21 | 44.35 | 23.17 | 14.55 | 12.92 | 12.23 | 11.37 | 10.59 |
| 135.0 | 158.72 | 107.48 | 69.50 | 40.91 | 19.20 | 13.95 | 13.09 | 12.31 | 11.20 |
| 180.0 | 139.08 | 87.07 | 52.88 | 27.56 | 15.85 | 13.00 | 12.23 | 11.54 | 10.76 |
| 225.0 | 101.10 | 65.54 | 37.63 | 17.14 | 13.26 | 12.40 | 11.63 | 10.42 | 9.65 |
| 270.0 | 172.93 | 117.12 | 77.94 | 38.93 | 20.32 | 14.12 | 12.92 | 12.14 | 11.20 |
| 315.0 | 125.39 | 85.08 | 53.39 | 24.46 | 15.42 | 14.12 | 13.26 | 12.06 | 11.20 |
| 360.0 | 148.21 | 105.58 | 59.94 | 32.72 | 18.34 | 14.04 | 13.09 | 12.40 | 11.71 |

| C/γ(°) | 54.0 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 | 60.0 | 61.0 | 62.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 10.76 | 10.08 | 9.30 | 7.84 | 6.20 | 5.94 | 5.77 | 5.60 | 5.43 |
| 45.0 | 11.45 | 10.59 | 10.08 | 9.65 | 7.84 | 6.20 | 5.94 | 5.86 | 5.60 |
| 90.0 | 9.90 | 9.04 | 8.18 | 6.80 | 6.03 | 5.77 | 5.68 | 5.51 | 5.43 |
| 135.0 | 10.33 | 9.56 | 8.70 | 7.66 | 6.20 | 5.94 | 5.77 | 5.60 | 5.43 |
| 180.0 | 9.82 | 8.96 | 8.18 | 6.80 | 6.11 | 5.94 | 5.77 | 5.60 | 5.43 |
| 225.0 | 8.78 | 8.10 | 7.23 | 6.20 | 6.03 | 5.77 | 5.68 | 5.51 | 5.34 |
| 270.0 | 10.25 | 9.47 | 8.61 | 7.58 | 6.20 | 5.94 | 5.77 | 5.60 | 5.43 |
| 315.0 | 10.33 | 9.30 | 8.27 | 6.11 | 5.94 | 5.77 | 5.60 | 5.43 | 5.25 |
| 360.0 | 10.76 | 10.08 | 9.30 | 7.84 | 6.20 | 5.94 | 5.77 | 5.60 | 5.43 |

| C/γ(°) | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 | 70.0 | 71.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 5.34 | 5.17 | 5.08 | 4.99 | 4.91 | 4.82 | 4.74 | 4.65 | 4.65 |
| 45.0 | 5.43 | 5.25 | 5.25 | 5.08 | 4.99 | 4.91 | 4.82 | 4.82 | 4.74 |
| 90.0 | 5.17 | 5.08 | 4.99 | 4.91 | 4.82 | 4.74 | 4.74 | 4.65 | 4.56 |
| 135.0 | 5.25 | 5.17 | 5.08 | 4.99 | 4.91 | 4.82 | 4.74 | 4.65 | 4.56 |
| 180.0 | 5.25 | 5.17 | 5.17 | 4.99 | 4.91 | 4.82 | 4.82 | 4.74 | 4.65 |
| 225.0 | 5.17 | 5.08 | 5.08 | 4.99 | 4.91 | 4.82 | 4.74 | 4.74 | 4.65 |
| 270.0 | 5.25 | 5.17 | 5.08 | 4.91 | 4.91 | 4.82 | 4.74 | 4.65 | 4.56 |
| 315.0 | 5.17 | 5.08 | 4.91 | 4.82 | 4.82 | 4.74 | 4.65 | 4.65 | 4.48 |
| 360.0 | 5.34 | 5.17 | 5.08 | 4.99 | 4.91 | 4.82 | 4.74 | 4.65 | 4.65 |

| C/γ(°) | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0 | 80.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 4.56 | 4.56 | 4.48 | 4.39 | 4.39 | 4.31 | 4.31 | 4.22 | 4.22 |
| 45.0 | 4.65 | 4.56 | 4.56 | 4.48 | 4.48 | 4.39 | 4.39 | 4.31 | 4.31 |
| 90.0 | 4.48 | 4.48 | 4.39 | 4.39 | 4.31 | 4.31 | 4.22 | 4.22 | 4.22 |
| 135.0 | 4.56 | 4.48 | 4.39 | 4.39 | 4.31 | 4.31 | 4.22 | 4.22 | 4.22 |
| 180.0 | 4.65 | 4.56 | 4.48 | 4.39 | 4.39 | 4.39 | 4.31 | 4.31 | 4.22 |
| 225.0 | 4.56 | 4.48 | 4.48 | 4.48 | 4.48 | 4.39 | 4.39 | 4.31 | 4.39 |
| 270.0 | 4.56 | 4.48 | 4.39 | 4.39 | 4.31 | 4.31 | 4.22 | 4.22 | 4.13 |
| 315.0 | 4.48 | 4.39 | 4.31 | 4.31 | 4.31 | 4.22 | 4.22 | 4.13 | 4.13 |
| 360.0 | 4.56 | 4.56 | 4.48 | 4.39 | 4.39 | 4.31 | 4.31 | 4.22 | 4.22 |

| C/γ(°) | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 4.22 | 4.22 | 4.13 | 4.13 | 4.05 | 4.05 | 4.05 | 4.05 | 4.05 |
| 45.0 | 4.31 | 4.31 | 4.31 | 4.31 | 4.22 | 4.05 | 4.05 | 3.96 | 4.05 |
| 90.0 | 4.13 | 4.13 | 4.05 | 4.05 | 4.05 | 4.05 | 3.96 | 3.96 | 3.96 |
| 135.0 | 4.13 | 4.13 | 4.05 | 4.05 | 4.05 | 4.05 | 4.05 | 3.96 | 3.96 |
| 180.0 | 4.22 | 4.22 | 4.22 | 4.13 | 4.13 | 4.05 | 4.05 | 4.05 | 4.05 |
| 225.0 | 4.39 | 4.65 | 4.48 | 4.31 | 4.05 | 4.05 | 4.05 | 3.96 | 4.05 |
| 270.0 | 4.13 | 4.13 | 4.13 | 4.13 | 4.05 | 4.05 | 4.05 | 3.96 | 3.96 |
| 315.0 | 4.13 | 4.05 | 4.05 | 4.05 | 4.05 | 4.05 | 4.05 | 3.96 | 3.96 |
| 360.0 | 4.22 | 4.22 | 4.13 | 4.13 | 4.05 | 4.05 | 4.05 | 4.05 | 4.05 |

Intensity data(cd)



| C/γ(°) | 90.0 |
|---|---|
| 0.0 | 4.05 |
| 45.0 | 3.96 |
| 90.0 | 3.96 |
| 135.0 | 3.96 |
| 180.0 | 4.05 |
| 225.0 | 3.96 |
| 270.0 | 3.96 |
| 315.0 | 3.96 |
| 360.0 | 4.05 |