NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

NT

Client:
LumCAT: 2-2565-L
Luminaire: 92.70.412.00
Report No: 2024806-B003
Ballast type: AC

| | |
|---|---|
| Test No: 2024806-C003 | Voltage(V): 35.010 |
| LampCAT: CITIZEN CLU038 LES14.5 | Current(A): 0.450 |
| Lamp flux(lm): 2571.0 | Power (W): 15.754 |
| Number of Lamps: 1 | PF: 0.000 |
| Length(mm): 0 | Width(mm): 0 |
| Phm Type: C | Height(mm): 0 |

## Photometric Results

Lumens(lm): 2368.35, Efficiency(%): 92.12% , Luminous Efficacy(lm/W): 150.33
Central intensity(cd): 7255.825, Maximum intensity(cd): 7255.825
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=25.8
[C90/270]Total=25.8
Field angle(10%Imax): [C0/180]Total=61.6
[C90/270]Total=61.6
Maximum s/h(1/2): C0_180=0.43 C90_270=0.43
Maximum s/h(1/4): C0_180=0.49 C90_270=0.49
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 92.12%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.967%

NT 2-2565-L

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 0.0 | 7255.824 | 0.000 | 0 | 0.00% | 0.00% |
| 1.0 | 7208.641 | 6.921 | 6.921 | 0.27% | 0.29% |
| 2.0 | 7096.716 | 20.532 | 27.453 | 0.80% | 1.16% |
| 3.0 | 6921.368 | 33.527 | 60.98 | 1.30% | 2.57% |
| 4.0 | 6680.256 | 45.529 | 106.509 | 1.77% | 4.50% |
| 5.0 | 6396.714 | 56.256 | 162.765 | 2.19% | 6.87% |
| 6.0 | 6076.596 | 65.551 | 228.316 | 2.55% | 9.64% |
| 7.0 | 5723.778 | 73.245 | 301.561 | 2.85% | 12.73% |
| 8.0 | 5340.968 | 79.188 | 380.749 | 3.08% | 16.08% |
| 9.0 | 4973.593 | 83.594 | 464.343 | 3.25% | 19.61% |
| 10.0 | 4601.097 | 86.647 | 550.99 | 3.37% | 23.26% |
| 11.0 | 4267.812 | 88.619 | 639.609 | 3.45% | 27.01% |
| 12.0 | 3935.916 | 89.678 | 729.287 | 3.49% | 30.79% |
| 13.0 | 3600.070 | 89.433 | 818.721 | 3.48% | 34.57% |
| 14.0 | 3319.016 | 88.564 | 907.284 | 3.44% | 38.31% |
| 15.0 | 3051.056 | 87.451 | 994.736 | 3.40% | 42.00% |
| 16.0 | 2798.678 | 85.715 | 1080.451 | 3.33% | 45.62% |
| 17.0 | 2550.689 | 83.304 | 1163.755 | 3.24% | 49.14% |
| 18.0 | 2350.030 | 80.802 | 1244.557 | 3.14% | 52.55% |
| 19.0 | 2168.098 | 78.606 | 1323.163 | 3.06% | 55.87% |
| 20.0 | 1996.554 | 76.225 | 1399.388 | 2.96% | 59.09% |
| 21.0 | 1838.543 | 73.642 | 1473.029 | 2.86% | 62.20% |
| 22.0 | 1692.529 | 70.958 | 1543.988 | 2.76% | 65.19% |
| 23.0 | 1572.778 | 68.515 | 1612.503 | 2.66% | 68.09% |
| 24.0 | 1426.113 | 65.566 | 1678.069 | 2.55% | 70.85% |
| 25.0 | 1280.216 | 61.536 | 1739.605 | 2.39% | 73.45% |
| 26.0 | 1198.007 | 58.499 | 1798.104 | 2.28% | 75.92% |
| 27.0 | 1122.184 | 56.764 | 1854.868 | 2.21% | 78.32% |
| 28.0 | 1022.966 | 54.311 | 1909.178 | 2.11% | 80.61% |
| 29.0 | 918.247 | 50.788 | 1959.966 | 1.98% | 82.76% |
| 30.0 | 810.683 | 46.681 | 2006.647 | 1.82% | 84.73% |
| 31.0 | 708.181 | 42.268 | 2048.915 | 1.64% | 86.51% |
| 32.0 | 616.915 | 37.962 | 2086.877 | 1.48% | 88.12% |
| 33.0 | 522.408 | 33.565 | 2120.442 | 1.31% | 89.53% |
| 34.0 | 434.354 | 28.954 | 2149.396 | 1.13% | 90.76% |
| 35.0 | 361.896 | 24.729 | 2174.125 | 0.96% | 91.80% |
| 36.0 | 301.157 | 21.112 | 2195.237 | 0.82% | 92.69% |
| 37.0 | 263.732 | 18.423 | 2213.66 | 0.72% | 93.47% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 38.0 | 205.707 | 15.669 | 2229.329 | 0.61% | 94.13% |
| 39.0 | 151.427 | 12.190 | 2241.519 | 0.47% | 94.64% |
| 40.0 | 118.376 | 9.410 | 2250.929 | 0.37% | 95.04% |
| 41.0 | 93.490 | 7.544 | 2258.474 | 0.29% | 95.36% |
| 42.0 | 77.528 | 6.213 | 2264.687 | 0.24% | 95.62% |
| 43.0 | 64.455 | 5.259 | 2269.946 | 0.20% | 95.85% |
| 44.0 | 56.313 | 4.558 | 2274.504 | 0.18% | 96.04% |
| 45.0 | 49.634 | 4.072 | 2278.576 | 0.16% | 96.21% |
| 46.0 | 44.294 | 3.673 | 2282.25 | 0.14% | 96.36% |
| 47.0 | 40.351 | 3.367 | 2285.616 | 0.13% | 96.51% |
| 48.0 | 37.154 | 3.133 | 2288.749 | 0.12% | 96.64% |
| 49.0 | 34.799 | 2.955 | 2291.704 | 0.11% | 96.76% |
| 50.0 | 32.656 | 2.812 | 2294.516 | 0.11% | 96.88% |
| 51.0 | 31.119 | 2.698 | 2297.215 | 0.10% | 97.00% |
| 52.0 | 30.015 | 2.623 | 2299.838 | 0.10% | 97.11% |
| 53.0 | 29.261 | 2.579 | 2302.417 | 0.10% | 97.22% |
| 54.0 | 28.610 | 2.551 | 2304.967 | 0.10% | 97.32% |
| 55.0 | 28.193 | 2.536 | 2307.503 | 0.10% | 97.43% |
| 56.0 | 27.944 | 2.537 | 2310.04 | 0.10% | 97.54% |
| 57.0 | 27.659 | 2.542 | 2312.582 | 0.10% | 97.65% |
| 58.0 | 27.367 | 2.545 | 2315.126 | 0.10% | 97.75% |
| 59.0 | 27.030 | 2.543 | 2317.67 | 0.10% | 97.86% |
| 60.0 | 26.445 | 2.526 | 2320.196 | 0.10% | 97.97% |
| 61.0 | 25.684 | 2.488 | 2322.684 | 0.10% | 98.07% |
| 62.0 | 24.704 | 2.428 | 2325.112 | 0.09% | 98.17% |
| 63.0 | 23.541 | 2.346 | 2327.458 | 0.09% | 98.27% |
| 64.0 | 22.275 | 2.248 | 2329.706 | 0.09% | 98.37% |
| 65.0 | 21.149 | 2.149 | 2331.855 | 0.08% | 98.46% |
| 66.0 | 19.949 | 2.050 | 2333.906 | 0.08% | 98.55% |
| 67.0 | 18.808 | 1.949 | 2335.854 | 0.08% | 98.63% |
| 68.0 | 17.827 | 1.856 | 2337.71 | 0.07% | 98.71% |
| 69.0 | 16.986 | 1.776 | 2339.486 | 0.07% | 98.78% |
| 70.0 | 16.299 | 1.709 | 2341.196 | 0.07% | 98.85% |
| 71.0 | 15.772 | 1.658 | 2342.853 | 0.06% | 98.92% |
| 72.0 | 15.296 | 1.615 | 2344.469 | 0.06% | 98.99% |
| 73.0 | 14.857 | 1.577 | 2346.046 | 0.06% | 99.06% |
| 74.0 | 14.484 | 1.543 | 2347.588 | 0.06% | 99.12% |
| 75.0 | 14.148 | 1.513 | 2349.101 | 0.06% | 99.19% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 76.0 | 13.753 | 1.481 | 2350.582 | 0.06% | 99.25% |
| 77.0 | 13.453 | 1.450 | 2352.032 | 0.06% | 99.31% |
| 78.0 | 13.109 | 1.422 | 2353.454 | 0.06% | 99.37% |
| 79.0 | 12.765 | 1.390 | 2354.845 | 0.05% | 99.43% |
| 80.0 | 12.451 | 1.359 | 2356.204 | 0.05% | 99.49% |
| 81.0 | 12.136 | 1.330 | 2357.534 | 0.05% | 99.54% |
| 82.0 | 11.851 | 1.301 | 2358.834 | 0.05% | 99.60% |
| 83.0 | 11.580 | 1.274 | 2360.108 | 0.05% | 99.65% |
| 84.0 | 11.302 | 1.247 | 2361.355 | 0.05% | 99.70% |
| 85.0 | 11.068 | 1.221 | 2362.576 | 0.05% | 99.76% |
| 86.0 | 10.812 | 1.196 | 2363.772 | 0.05% | 99.81% |
| 87.0 | 10.607 | 1.172 | 2364.944 | 0.05% | 99.86% |
| 88.0 | 10.424 | 1.152 | 2366.096 | 0.04% | 99.91% |
| 89.0 | 10.227 | 1.132 | 2367.228 | 0.04% | 99.95% |
| 90.0 | 10.154 | 1.117 | 2368.345 | 0.04% | 100.00% |

## Zonal flux distribution table



ZONAL LUMEN SUMMARY

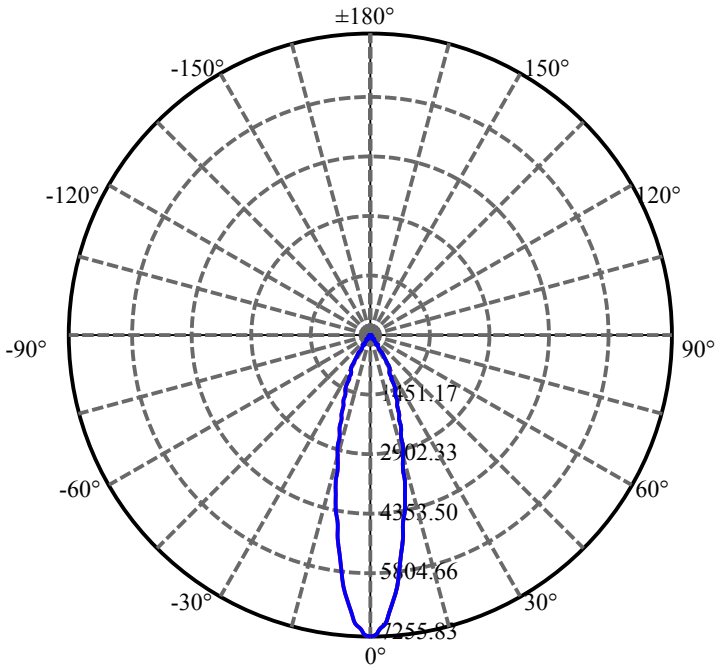
| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-30 | 2006.65 | 78.05% | 84.73% |
| 0-40 | 2250.93 | 87.55% | 95.04% |
| 0-60 | 2320.20 | 90.24% | 97.97% |
| 0-90 | 2367.23 | 92.07% | 99.95% |
| 0-120 | 2367.23 | 92.07% | 99.95% |
| 0-180 | 2368.35 | 92.12% | 100.00% |
| 60-90 | 47.03 | 1.83% | 1.99% |
| 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% |
| 0-27.73 | 1894.68 | 73.69% | 80.00% |

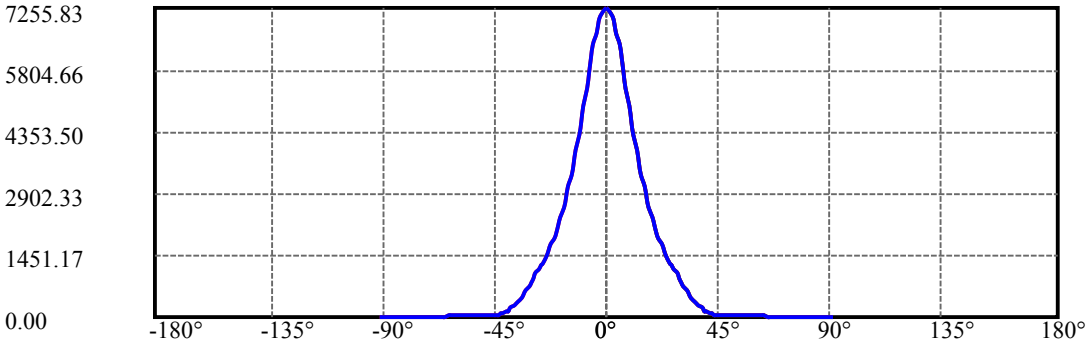
ZONAL LUMEN SUMMARY

| | |
|---|---|
| 0-10 | 550.99 |
| 10-20 | 848.40 |
| 20-30 | 607.26 |
| 30-40 | 244.28 |
| 40-50 | 43.59 |
| 50-60 | 25.68 |
| 60-70 | 21.00 |
| 70-80 | 15.01 |
| 80-90 | 11.02 |
| 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:

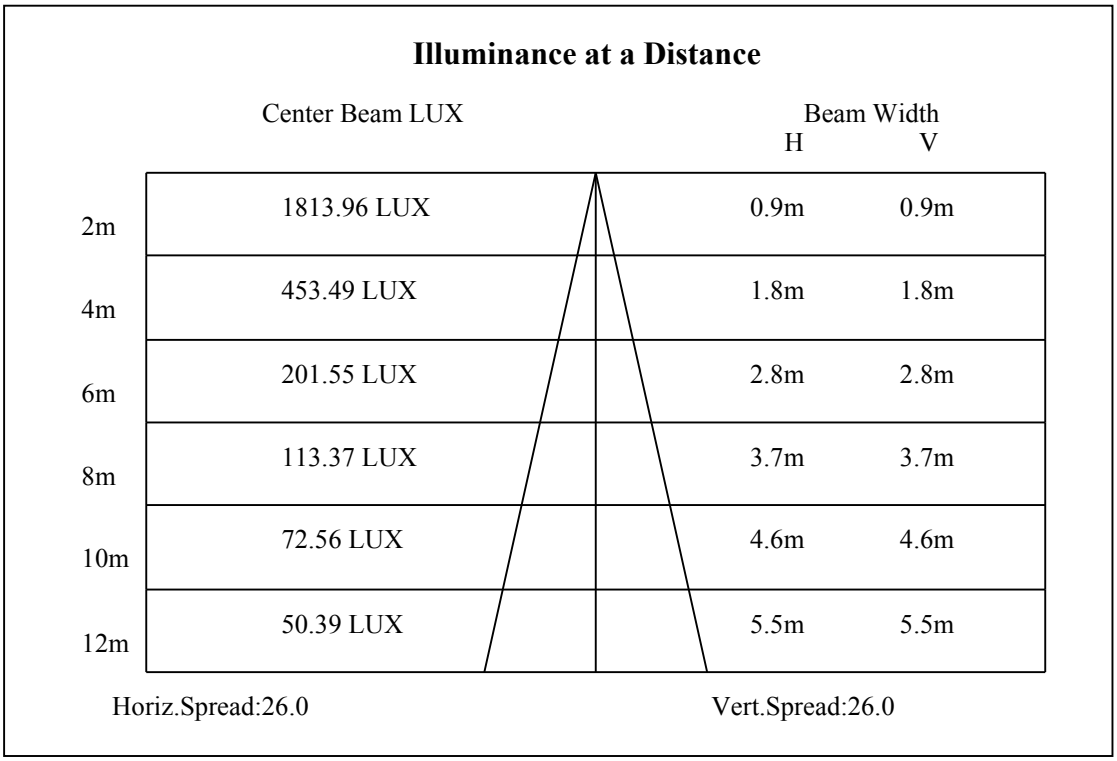
C90/C270:

Field angle(10%Imax):C0/180Left:30.8 Right:30.8
:C90/270Left:30.8 Right:30.8

Beam Angle(50%Imax):C0/180Left:12.9 Right:12.9
:C90/270Left:12.9 Right:12.9

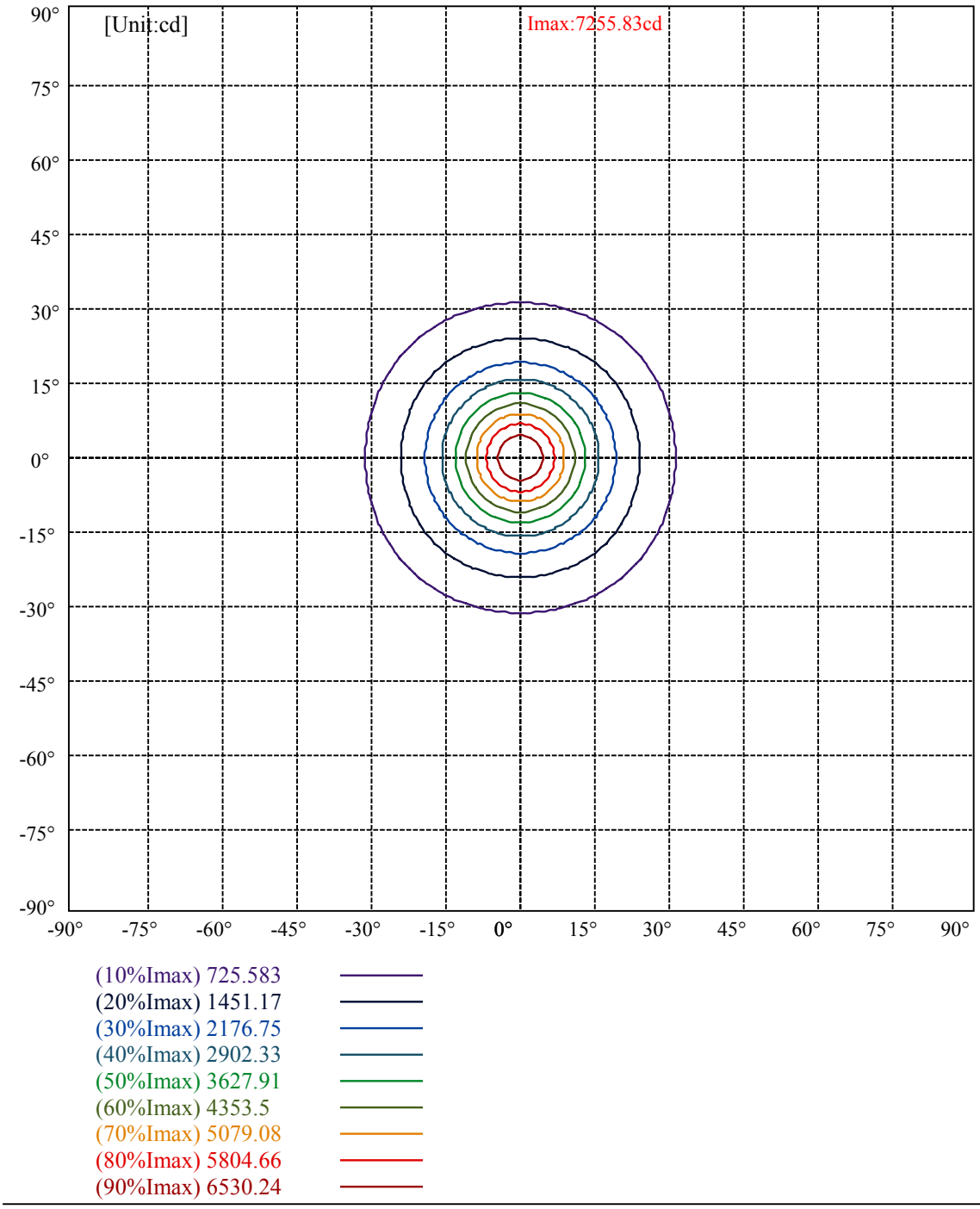
Lux distance Curve





ISO-Intensity(V-H)





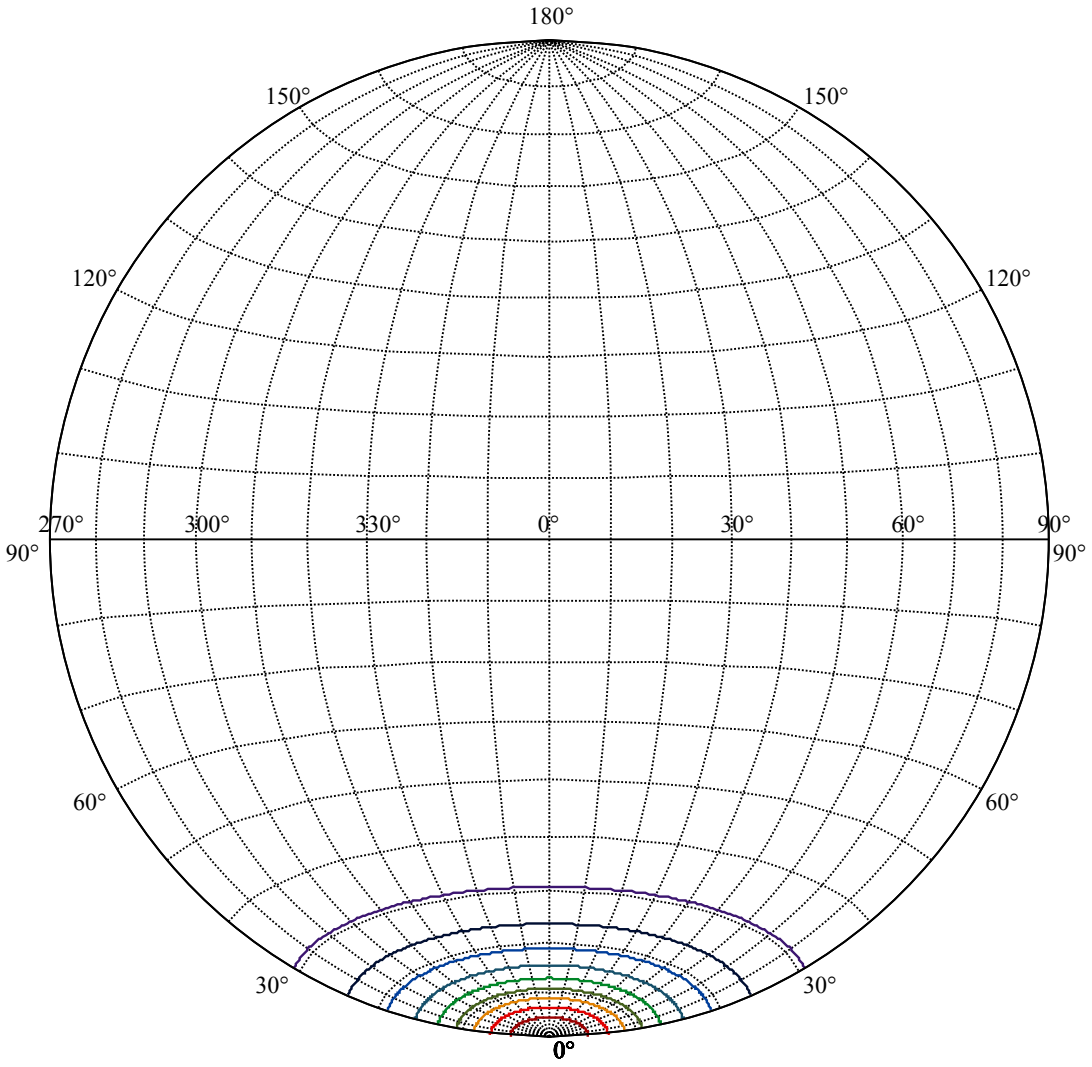

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2024/8/6
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.65

## ISO candela diagram on circular web






House [Unit:cd] Road

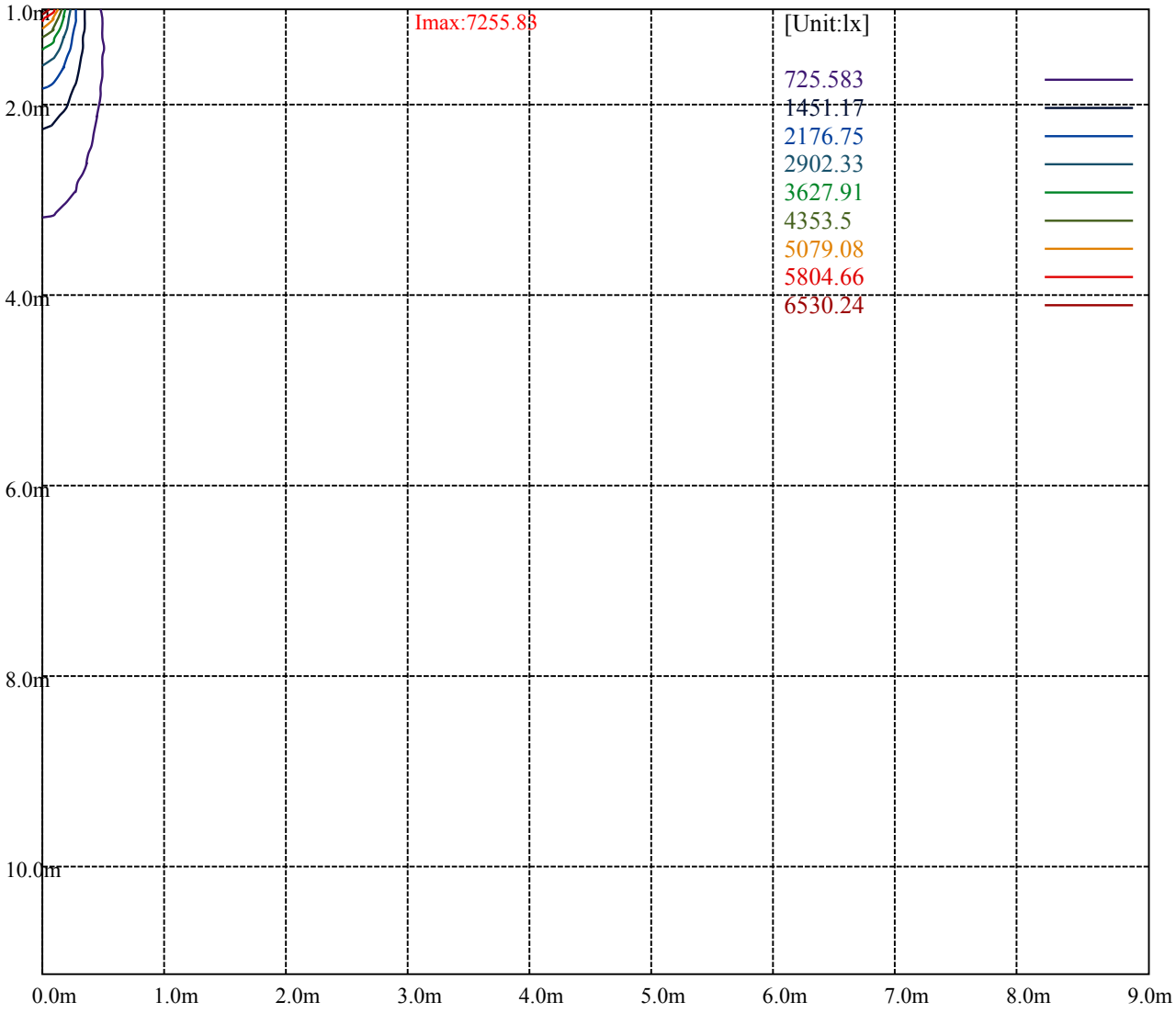
Imax:7255.83

(10%Imax) 725.583
(20%Imax) 1451.17
(30%Imax) 2176.75
(40%Imax) 2902.33
(50%Imax) 3627.91
(60%Imax) 4353.5
(70%Imax) 5079.08
(80%Imax) 5804.66
(90%Imax) 6530.24

| | | |
|---|---|---|
| Equipment: GMS1980 | Date: 2024/8/6 | Operator: NT07 |
| Temperature(°C): 25.0 | Humidity(%): 60.0% | Distance(m): 7.65 |

Space ISO Lux diagram






Equipment: GMS1980
Temperature(°C): 25.0

Date: 2024/8/6
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.65

NT 2-2565-L

## Luminance Limitting Curve(no luminous side)



Luminance Table

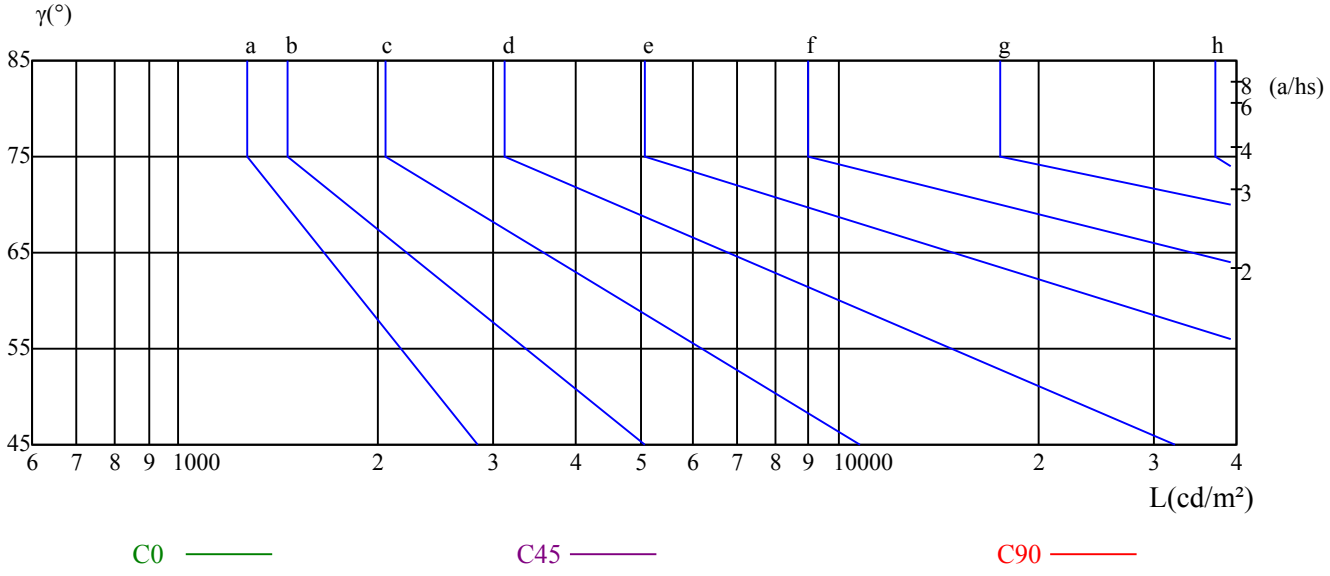
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|---|---|---|---|---|---|---|---|---|---|
| C0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| 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 | 0 | 0 | 0 | 0 | 0 | 0 |

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

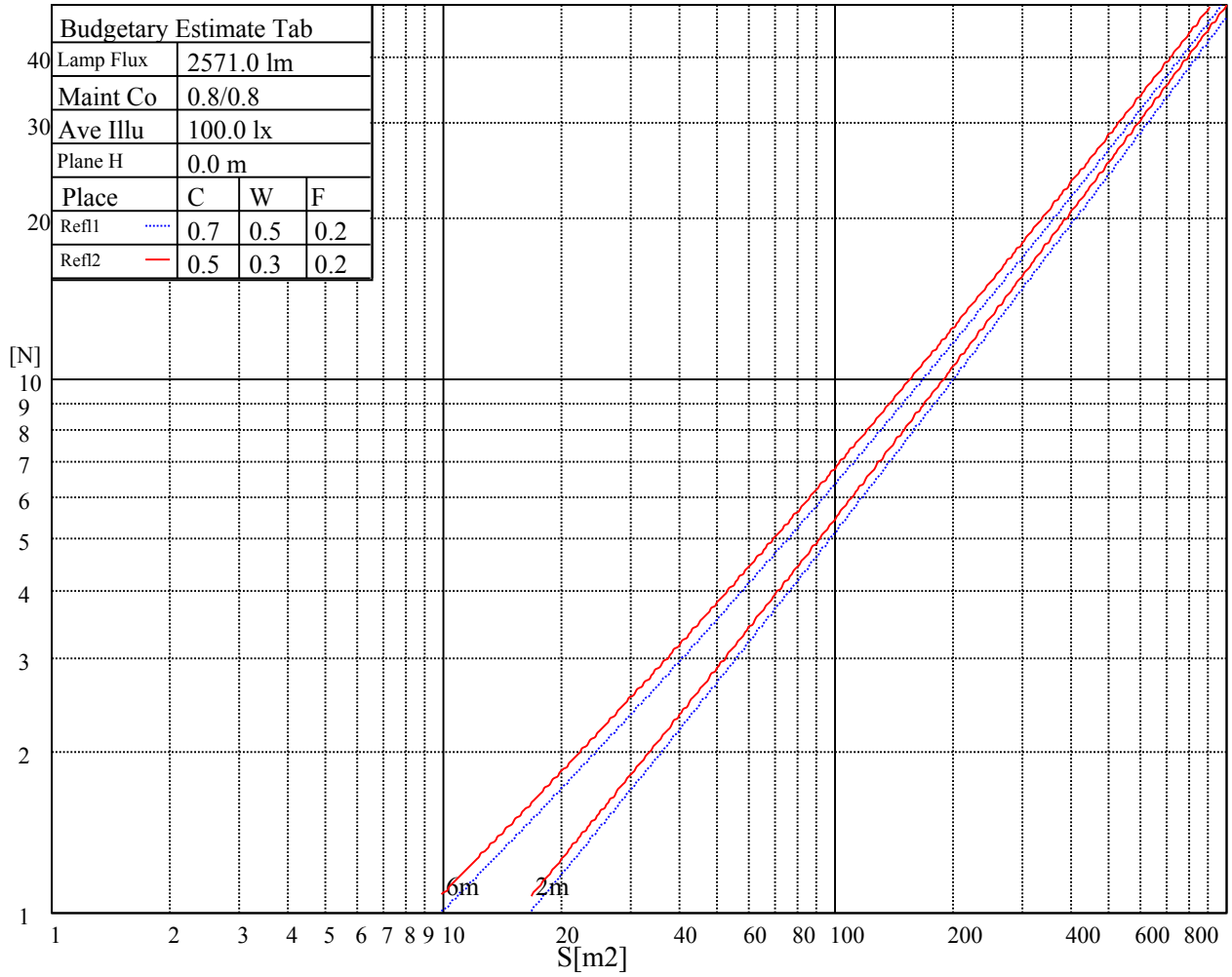


| Illumination assessment according UGR | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Rf of Ceiling | | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
| Rf of Wall | | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| Rf of Floor | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Room dimensions | | Viewed crosswise | | | | | Viewed endwise | | | | |
| X | Y | | | | | | | | | | |
| 2H | 2H | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 |
| | 3H | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 |
| | 4H | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 |
| | 6H | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 |
| | 8H | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 |
| | 12H | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 |
| 4H | 2H | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 |
| | 3H | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 |
| | 4H | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 |
| | 6H | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 |
| | 8H | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 |
| | 12H | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 |
| 8H | 4H | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 |
| | 6H | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 |
| | 8H | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 |
| | 12H | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 |
| 12H | 4H | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 |
| | 6H | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 |
| | 8H | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 | 非数字 |
| Variation with the observer position at spacings: | | | | | | | | | | | |
| S = 1.0H | | 非数字/非数字 | | | | | 非数字/非数字 | | | | |
| S = 1.5H | | 非数字/非数字 | | | | | 非数字/非数字 | | | | |
| S = 2.0H | | 非数字/非数字 | | | | | 非数字/非数字 | | | | |
| Standard tables: | | BK0 | | | | | BK0 | | | | |
| Uncorrected UGR | | 负无穷大 | | | | | 负无穷大 | | | | |

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

## Budgetary Estimate Table






Equipment: GMS1980 Date: 2024/8/6 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.65

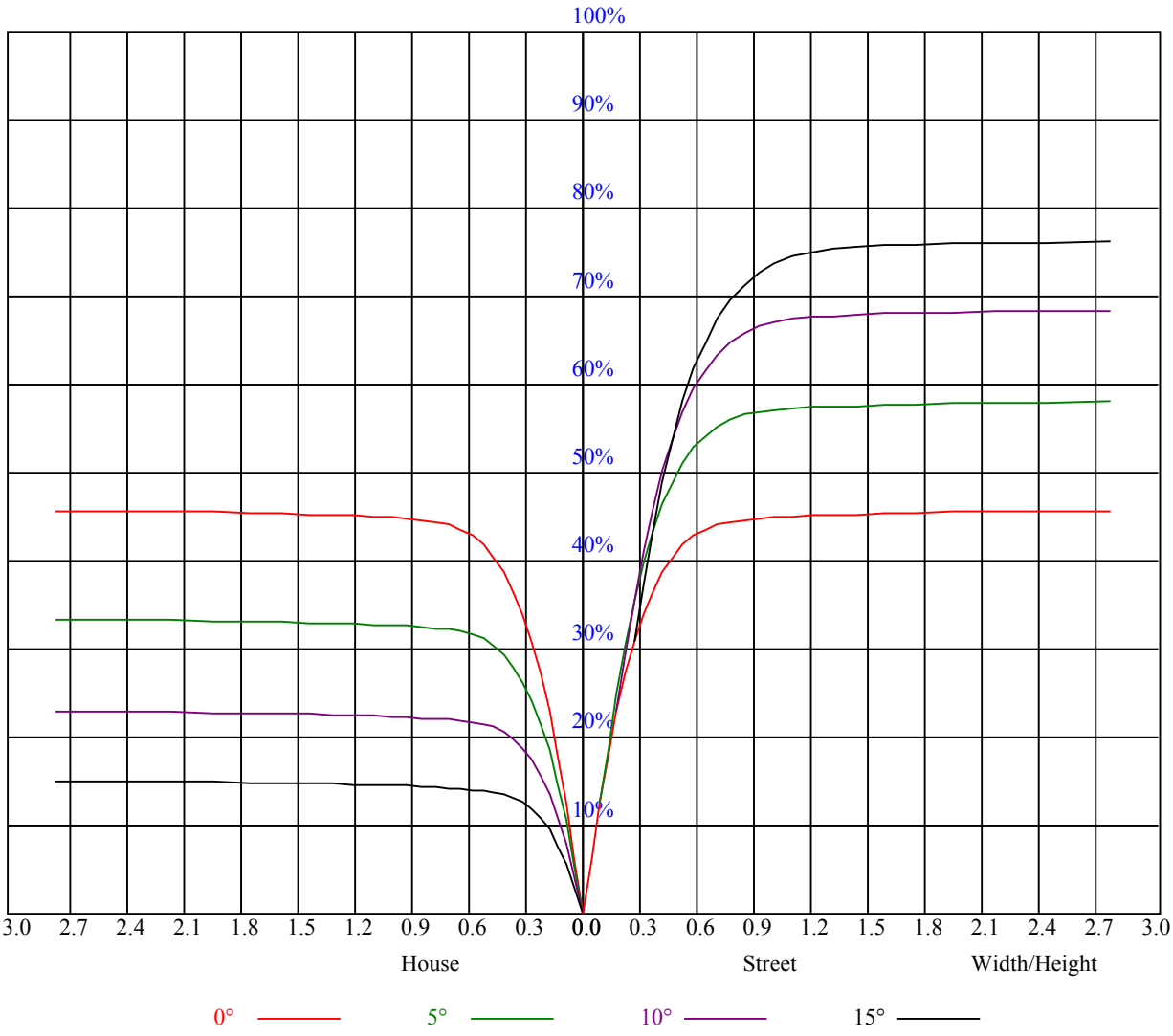
Utilization factor table for indoor luminaire



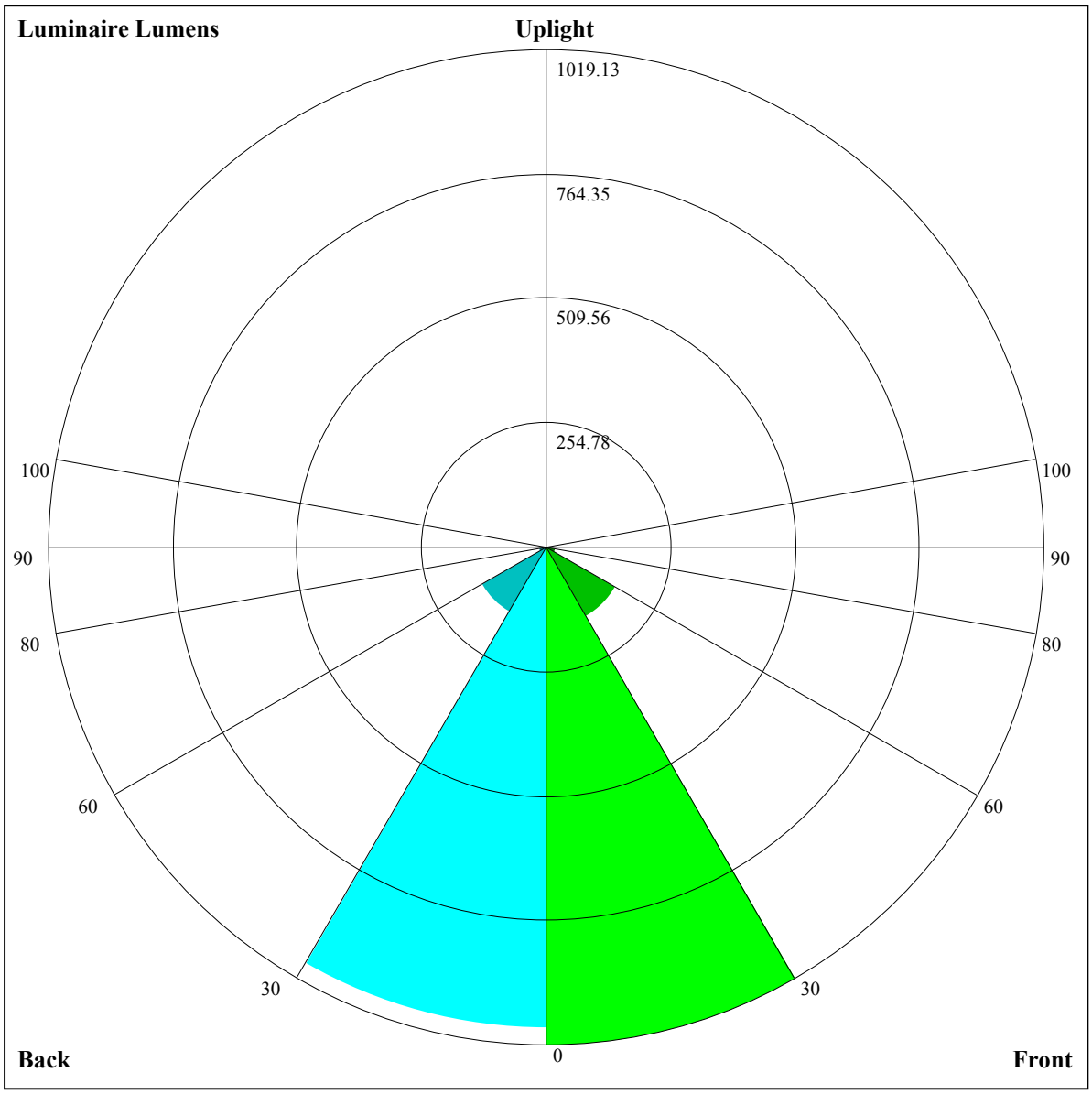
| RHOCC | 80 | | | 70 | | | 50 | | | 30 | | | 10 | | | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RHOW | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | COEFFCIENTS OF UTILIZATION RHOFC=20 CU | | | | | | | | | | | | | | | |
| 0 | 1.10 | 1.10 | 1.10 | 1.07 | 1.07 | 1.07 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 | 0.98 | 0.94 | 0.94 | 0.94 | 0.92 |
| 1 | 1.03 | 1.00 | 0.99 | 1.01 | 0.99 | 0.97 | 0.97 | 0.95 | 0.94 | 0.94 | 0.92 | 0.91 | 0.90 | 0.89 | 0.89 | 0.87 |
| 2 | 0.97 | 0.93 | 0.90 | 0.95 | 0.92 | 0.89 | 0.92 | 0.90 | 0.87 | 0.89 | 0.87 | 0.86 | 0.87 | 0.85 | 0.84 | 0.82 |
| 3 | 0.91 | 0.87 | 0.84 | 0.90 | 0.86 | 0.83 | 0.88 | 0.85 | 0.82 | 0.85 | 0.83 | 0.81 | 0.83 | 0.81 | 0.79 | 0.78 |
| 4 | 0.87 | 0.82 | 0.79 | 0.85 | 0.81 | 0.78 | 0.84 | 0.80 | 0.77 | 0.82 | 0.79 | 0.76 | 0.80 | 0.78 | 0.76 | 0.74 |
| 5 | 0.82 | 0.78 | 0.74 | 0.81 | 0.77 | 0.74 | 0.80 | 0.76 | 0.73 | 0.78 | 0.75 | 0.73 | 0.77 | 0.74 | 0.72 | 0.71 |
| 6 | 0.78 | 0.74 | 0.70 | 0.78 | 0.73 | 0.70 | 0.77 | 0.73 | 0.70 | 0.75 | 0.72 | 0.69 | 0.74 | 0.71 | 0.69 | 0.68 |
| 7 | 0.75 | 0.70 | 0.67 | 0.74 | 0.70 | 0.67 | 0.73 | 0.69 | 0.67 | 0.72 | 0.69 | 0.66 | 0.71 | 0.68 | 0.66 | 0.65 |
| 8 | 0.72 | 0.67 | 0.64 | 0.71 | 0.67 | 0.64 | 0.70 | 0.66 | 0.64 | 0.70 | 0.66 | 0.63 | 0.69 | 0.66 | 0.63 | 0.62 |
| 9 | 0.69 | 0.64 | 0.61 | 0.69 | 0.64 | 0.61 | 0.68 | 0.64 | 0.61 | 0.67 | 0.63 | 0.61 | 0.66 | 0.63 | 0.61 | 0.60 |
| 10 | 0.66 | 0.62 | 0.59 | 0.66 | 0.62 | 0.59 | 0.65 | 0.61 | 0.59 | 0.65 | 0.61 | 0.58 | 0.64 | 0.61 | 0.58 | 0.57 |

## Coefficient Utilization Curve






| | | |
|---|---|---|
| Equipment: GMS1980 | Date: 2024/8/6 | Operator: NT07 |
| Temperature(°C): 25.0 | Humidity(%): 60.0% | Distance(m): 7.65 |




Luminaire Lumens:
FL=1019.13,FM=163.54,FH=18.18,FVH=6.07
BL=986.25,BM=154.05,BH=17.74,BVH=6.06
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 | 7279.67 | 7266.21 | 7186.04 | 7034.46 | 6750.04 | 6495.47 | 6211.05 | 5885.67 | 5470.16 |
| 45.0 | 7222.91 | 7245.73 | 7174.33 | 6995.25 | 6785.74 | 6545.21 | 6173.60 | 5830.07 | 5430.95 |
| 90.0 | 7223.49 | 7028.61 | 6832.56 | 6517.71 | 6230.95 | 5907.90 | 5477.18 | 5126.63 | 4757.94 |
| 135.0 | 7311.27 | 7216.47 | 7046.75 | 6850.12 | 6521.22 | 6209.30 | 5880.98 | 5516.39 | 5076.30 |
| 180.0 | 7279.67 | 7195.40 | 7030.95 | 6860.65 | 6646.46 | 6294.74 | 5976.96 | 5552.09 | 5193.93 |
| 225.0 | 7222.91 | 7102.35 | 6958.38 | 6788.67 | 6562.19 | 6218.07 | 5906.15 | 5566.13 | 5211.49 |
| 270.0 | 7195.40 | 7290.79 | 7287.28 | 7203.01 | 7018.08 | 6851.87 | 6610.76 | 6328.68 | 5947.70 |
| 315.0 | 7311.27 | 7323.56 | 7257.43 | 7121.08 | 6927.37 | 6651.14 | 6376.08 | 5984.57 | 5639.29 |
| 360.0 | 7279.67 | 7266.21 | 7186.04 | 7034.46 | 6750.04 | 6495.47 | 6211.05 | 5885.67 | 5470.16 |

| C/γ(°) | 9.0 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 5133.65 | 4690.64 | 4327.21 | 4005.92 | 3626.70 | 3353.98 | 3090.05 | 2842.50 | 2572.71 |
| 45.0 | 5109.66 | 4778.42 | 4421.43 | 4088.44 | 3730.28 | 3441.18 | 3180.17 | 2875.85 | 2642.35 |
| 90.0 | 4417.34 | 4069.71 | 3760.13 | 3469.27 | 3202.41 | 2891.66 | 2673.37 | 2467.37 | 2238.54 |
| 135.0 | 4740.97 | 4356.47 | 4042.21 | 3742.57 | 3392.02 | 3131.01 | 2896.92 | 2619.53 | 2425.82 |
| 180.0 | 4748.57 | 4418.51 | 4117.12 | 3822.75 | 3473.37 | 3208.85 | 2970.66 | 2746.52 | 2492.53 |
| 225.0 | 4753.84 | 4421.43 | 4122.97 | 3754.86 | 3486.24 | 3221.72 | 2928.52 | 2700.87 | 2496.04 |
| 270.0 | 5619.39 | 5262.40 | 4893.12 | 4454.21 | 4137.01 | 3828.60 | 3471.03 | 3195.97 | 2891.07 |
| 315.0 | 5265.33 | 4811.19 | 4458.30 | 4149.30 | 3752.52 | 3475.12 | 3197.73 | 2940.81 | 2646.45 |
| 360.0 | 5133.65 | 4690.64 | 4327.21 | 4005.92 | 3626.70 | 3353.98 | 3090.05 | 2842.50 | 2572.71 |

| C/γ(°) | 18.0 | 19.0 | 20.0 | 21.0 | 22.0 | 23.0 | 24.0 | 25.0 | 26.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 2374.90 | 2199.92 | 2033.13 | 1847.03 | 1712.43 | 1589.53 | 1447.32 | 1165.89 | 1165.89 |
| 45.0 | 2438.11 | 2259.61 | 2055.95 | 1905.55 | 1739.93 | 1618.21 | 1505.84 | 1371.83 | 1271.17 |
| 90.0 | 2078.78 | 1891.51 | 1756.90 | 1633.42 | 1491.80 | 1389.38 | 1147.74 | 1147.74 | 1077.63 |
| 135.0 | 2251.42 | 2089.31 | 1941.84 | 1779.73 | 1660.34 | 1552.08 | 1417.47 | 1322.08 | 1197.43 |
| 180.0 | 2305.26 | 2129.69 | 1979.29 | 1810.16 | 1685.51 | 1563.78 | 1432.10 | 1333.20 | 1203.87 |
| 225.0 | 2263.71 | 2098.68 | 1938.91 | 1796.11 | 1640.44 | 1525.15 | 1420.40 | 1143.30 | 1143.30 |
| 270.0 | 2653.47 | 2437.52 | 2201.09 | 2031.96 | 1880.97 | 1743.44 | 1579.58 | 1471.90 | 1367.14 |
| 315.0 | 2434.59 | 2238.54 | 2065.32 | 1904.38 | 1728.81 | 1600.65 | 1458.44 | 1285.80 | 1157.63 |
| 360.0 | 2374.90 | 2199.92 | 2033.13 | 1847.03 | 1712.43 | 1589.53 | 1447.32 | 1165.89 | 1165.89 |

| C/γ(°) | 27.0 | 28.0 | 29.0 | 30.0 | 31.0 | 32.0 | 33.0 | 34.0 | 35.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 1118.54 | 1021.86 | 929.40 | 811.47 | 716.37 | 624.32 | 537.00 | 437.28 | 367.05 |
| 45.0 | 1171.68 | 1074.53 | 952.22 | 857.41 | 759.10 | 665.46 | 553.68 | 472.34 | 398.60 |
| 90.0 | 981.36 | 886.97 | 790.70 | 674.24 | 582.83 | 498.85 | 421.83 | 335.33 | 273.53 |
| 135.0 | 1102.04 | 1003.72 | 881.99 | 785.43 | 687.11 | 596.40 | 490.48 | 412.64 | 343.00 |
| 180.0 | 1110.23 | 1012.50 | 915.35 | 790.11 | 691.21 | 596.40 | 489.89 | 412.64 | 344.17 |
| 225.0 | 1094.25 | 995.18 | 873.16 | 776.65 | 655.57 | 564.04 | 481.93 | 408.84 | 326.61 |
| 270.0 | 1265.31 | 1147.68 | 1054.05 | 956.32 | 834.00 | 740.95 | 644.98 | 538.47 | 458.29 |
| 315.0 | 1134.05 | 1041.29 | 949.12 | 833.83 | 739.26 | 648.90 | 559.48 | 457.29 | 383.91 |
| 360.0 | 1118.54 | 1021.86 | 929.40 | 811.47 | 716.37 | 624.32 | 537.00 | 437.28 | 367.05 |

| C/γ(°) | 36.0 | 37.0 | 38.0 | 39.0 | 40.0 | 41.0 | 42.0 | 43.0 | 44.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 303.21 | 248.31 | 190.55 | 152.39 | 123.13 | 95.45 | 79.18 | 64.67 | 56.47 |
| 45.0 | 317.84 | 303.21 | 303.21 | 157.84 | 127.93 | 104.64 | 83.22 | 70.46 | 60.86 |
| 90.0 | 208.22 | 166.91 | 133.26 | 101.71 | 84.33 | 71.22 | 61.57 | 52.85 | 47.40 |
| 135.0 | 310.81 | 310.81 | 166.15 | 131.79 | 105.98 | 82.93 | 70.11 | 58.46 | 51.68 |
| 180.0 | 296.77 | 296.77 | 171.30 | 137.47 | 111.08 | 86.32 | 72.33 | 59.93 | 52.79 |
| 225.0 | 268.56 | 217.88 | 176.04 | 133.31 | 107.56 | 88.08 | 73.80 | 60.86 | 53.61 |
| 270.0 | 385.14 | 305.55 | 305.55 | 236.78 | 158.77 | 120.15 | 97.91 | 81.29 | 69.06 |
| 315.0 | 318.71 | 260.43 | 199.62 | 160.12 | 128.22 | 99.14 | 82.11 | 67.13 | 58.64 |
| 360.0 | 303.21 | 248.31 | 190.55 | 152.39 | 123.13 | 95.45 | 79.18 | 64.67 | 56.47 |

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 | 49.98 | 43.89 | 40.09 | 37.04 | 34.65 | 32.77 | 31.02 | 29.96 | 29.26 |
| 45.0 | 53.78 | 46.99 | 42.60 | 39.15 | 36.34 | 33.59 | 32.01 | 30.55 | 29.73 |
| 90.0 | 43.07 | 39.68 | 36.34 | 34.29 | 32.66 | 31.02 | 30.08 | 29.26 | 28.91 |
| 135.0 | 46.35 | 41.26 | 38.10 | 35.58 | 33.53 | 31.60 | 30.49 | 29.67 | 29.03 |
| 180.0 | 47.23 | 41.90 | 38.57 | 35.87 | 33.77 | 31.72 | 30.43 | 29.55 | 28.91 |
| 225.0 | 46.70 | 42.37 | 38.98 | 35.52 | 33.47 | 31.78 | 30.20 | 29.26 | 28.62 |
| 270.0 | 57.88 | 51.38 | 46.29 | 41.14 | 37.92 | 34.76 | 32.77 | 31.13 | 29.79 |
| 315.0 | 52.09 | 46.88 | 41.84 | 38.62 | 36.05 | 34.00 | 31.95 | 30.72 | 29.85 |
| 360.0 | 49.98 | 43.89 | 40.09 | 37.04 | 34.65 | 32.77 | 31.02 | 29.96 | 29.26 |

| C/γ(°) | 54.0 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 | 60.0 | 61.0 | 62.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 28.56 | 28.32 | 28.15 | 28.03 | 27.86 | 27.68 | 27.39 | 26.69 | 25.81 |
| 45.0 | 29.09 | 28.56 | 28.32 | 28.09 | 27.86 | 27.56 | 27.21 | 26.51 | 25.52 |
| 90.0 | 28.62 | 28.32 | 27.97 | 27.68 | 27.10 | 26.45 | 25.28 | 24.17 | 23.06 |
| 135.0 | 28.44 | 28.21 | 28.03 | 27.68 | 27.39 | 26.86 | 25.98 | 25.11 | 23.99 |
| 180.0 | 28.32 | 27.92 | 27.80 | 27.45 | 27.21 | 26.86 | 26.16 | 25.34 | 24.40 |
| 225.0 | 28.03 | 27.62 | 27.45 | 27.15 | 26.80 | 26.51 | 25.93 | 25.05 | 23.94 |
| 270.0 | 28.68 | 28.09 | 27.56 | 27.21 | 27.04 | 26.80 | 26.57 | 26.28 | 25.46 |
| 315.0 | 29.14 | 28.50 | 28.27 | 27.97 | 27.68 | 27.51 | 27.04 | 26.34 | 25.46 |
| 360.0 | 28.56 | 28.32 | 28.15 | 28.03 | 27.86 | 27.68 | 27.39 | 26.69 | 25.81 |

| C/γ(°) | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 | 70.0 | 71.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 24.81 | 23.41 | 22.30 | 21.07 | 19.96 | 18.67 | 17.73 | 16.80 | 16.27 |
| 45.0 | 24.29 | 23.12 | 22.00 | 20.48 | 19.37 | 18.38 | 17.15 | 16.50 | 15.98 |
| 90.0 | 21.89 | 20.31 | 19.25 | 17.97 | 17.09 | 16.39 | 15.74 | 15.27 | 14.92 |
| 135.0 | 22.59 | 21.42 | 20.13 | 19.08 | 17.91 | 16.97 | 16.33 | 15.86 | 15.27 |
| 180.0 | 23.17 | 22.06 | 21.01 | 19.90 | 18.79 | 17.85 | 17.15 | 16.62 | 16.04 |
| 225.0 | 22.82 | 21.48 | 20.37 | 19.31 | 18.43 | 17.32 | 16.56 | 16.04 | 15.63 |
| 270.0 | 24.58 | 23.41 | 22.30 | 21.19 | 19.78 | 18.79 | 17.91 | 16.80 | 16.21 |
| 315.0 | 24.17 | 23.00 | 21.83 | 20.60 | 19.14 | 18.26 | 17.32 | 16.50 | 15.86 |
| 360.0 | 24.81 | 23.41 | 22.30 | 21.07 | 19.96 | 18.67 | 17.73 | 16.80 | 16.27 |

| C/γ(°) | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0 | 80.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 15.80 | 15.27 | 14.86 | 14.51 | 14.10 | 13.81 | 13.46 | 13.11 | 12.76 |
| 45.0 | 15.39 | 14.98 | 14.57 | 14.16 | 13.81 | 13.52 | 13.23 | 12.82 | 12.52 |
| 90.0 | 14.46 | 14.10 | 13.81 | 13.46 | 13.11 | 12.82 | 12.47 | 12.17 | 11.82 |
| 135.0 | 14.86 | 14.40 | 14.05 | 13.75 | 13.34 | 13.05 | 12.70 | 12.35 | 12.11 |
| 180.0 | 15.68 | 15.22 | 14.86 | 14.57 | 14.10 | 13.81 | 13.52 | 13.11 | 12.82 |
| 225.0 | 15.10 | 14.75 | 14.40 | 14.10 | 13.69 | 13.34 | 12.99 | 12.70 | 12.41 |
| 270.0 | 15.68 | 15.27 | 14.81 | 14.46 | 14.10 | 13.81 | 13.40 | 13.05 | 12.76 |
| 315.0 | 15.39 | 14.86 | 14.51 | 14.16 | 13.75 | 13.46 | 13.11 | 12.82 | 12.41 |
| 360.0 | 15.80 | 15.27 | 14.86 | 14.51 | 14.10 | 13.81 | 13.46 | 13.11 | 12.76 |

| C/γ(°) | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 12.47 | 12.11 | 11.82 | 11.53 | 11.29 | 11.06 | 10.83 | 10.65 | 10.48 |
| 45.0 | 12.17 | 11.82 | 11.59 | 11.24 | 11.00 | 10.77 | 10.53 | 10.36 | 10.24 |
| 90.0 | 11.53 | 11.29 | 11.06 | 10.83 | 10.59 | 10.42 | 10.18 | 10.12 | 10.12 |
| 135.0 | 11.76 | 11.53 | 11.24 | 10.94 | 10.77 | 10.48 | 10.36 | 10.18 | 10.07 |
| 180.0 | 12.52 | 12.23 | 12.00 | 11.70 | 11.47 | 11.29 | 11.12 | 10.77 | 10.18 |
| 225.0 | 12.06 | 11.82 | 11.53 | 11.35 | 11.06 | 10.77 | 10.53 | 10.42 | 10.24 |
| 270.0 | 12.41 | 12.17 | 11.82 | 11.53 | 11.29 | 10.94 | 10.77 | 10.53 | 10.30 |
| 315.0 | 12.17 | 11.82 | 11.59 | 11.29 | 11.06 | 10.77 | 10.53 | 10.36 | 10.18 |
| 360.0 | 12.47 | 12.11 | 11.82 | 11.53 | 11.29 | 11.06 | 10.83 | 10.65 | 10.48 |

Intensity data(cd)



| C/γ(°) | 90.0 |
|---|---|
| 0.0 | 10.30 |
| 45.0 | 10.12 |
| 90.0 | 10.12 |
| 135.0 | 10.07 |
| 180.0 | 10.18 |
| 225.0 | 10.18 |
| 270.0 | 10.18 |
| 315.0 | 10.07 |
| 360.0 | 10.30 |