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

NT

Client:
LumCAT: 2-2687-L
Luminaire: 92.70.412.00
Report No: 2024326-B023
Ballast type: AC

| | |
|---|---|
| Test No: 2024326-C023 | Voltage(V): 34.450 |
| LampCAT: Fortimo_SLM_C_1210 | Current(A): 0.720 |
| Lamp flux(lm): 4230.0 | Power (W): 24.804 |
| Number of Lamps: 1 | PF: 0.000 |
| Length(mm): 0 | Width(mm): 0 |
| Phm Type: C | Height(mm): 0 |

## Photometric Results

Lumens(lm): 3541.41, Efficiency(%): 83.72% , Luminous Efficacy(lm/W): 142.78
Central intensity(cd): 14040.130, Maximum intensity(cd): 14040.130
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=22.2
[C90/270]Total=22.2
Field angle(10%Imax): [C0/180]Total=54.2
[C90/270]Total=54.2
Maximum s/h(1/2): C0_180=0.37 C90_270=0.37
Maximum s/h(1/4): C0_180=0.42 C90_270=0.42
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 83.72%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.063%

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 0.0 | 14040.133 | 0.000 | 0 | 0.00% | 0.00% |
| 1.0 | 13915.773 | 13.376 | 13.376 | 0.32% | 0.38% |
| 2.0 | 13445.186 | 39.271 | 52.647 | 0.93% | 1.49% |
| 3.0 | 12907.006 | 63.026 | 115.673 | 1.49% | 3.27% |
| 4.0 | 12115.065 | 83.757 | 199.43 | 1.98% | 5.63% |
| 5.0 | 11615.868 | 102.089 | 301.519 | 2.41% | 8.51% |
| 6.0 | 10952.881 | 118.605 | 420.124 | 2.80% | 11.86% |
| 7.0 | 10168.094 | 131.098 | 551.222 | 3.10% | 15.57% |
| 8.0 | 9367.214 | 139.810 | 691.032 | 3.31% | 19.51% |
| 9.0 | 8574.673 | 145.409 | 836.441 | 3.44% | 23.62% |
| 10.0 | 7816.806 | 148.337 | 984.778 | 3.51% | 27.81% |
| 11.0 | 7086.372 | 148.913 | 1133.692 | 3.52% | 32.01% |
| 12.0 | 6420.972 | 147.655 | 1281.346 | 3.49% | 36.18% |
| 13.0 | 5722.652 | 144.114 | 1425.46 | 3.41% | 40.25% |
| 14.0 | 5173.272 | 139.467 | 1564.927 | 3.30% | 44.19% |
| 15.0 | 4677.367 | 135.234 | 1700.161 | 3.20% | 48.01% |
| 16.0 | 4228.572 | 130.497 | 1830.658 | 3.09% | 51.69% |
| 17.0 | 3804.577 | 125.098 | 1955.756 | 2.96% | 55.23% |
| 18.0 | 3465.951 | 119.875 | 2075.631 | 2.83% | 58.61% |
| 19.0 | 3171.583 | 115.480 | 2191.111 | 2.73% | 61.87% |
| 20.0 | 2954.830 | 112.130 | 2303.241 | 2.65% | 65.04% |
| 21.0 | 2740.572 | 109.363 | 2412.604 | 2.59% | 68.13% |
| 22.0 | 2487.177 | 105.054 | 2517.658 | 2.48% | 71.09% |
| 23.0 | 2279.942 | 100.027 | 2617.685 | 2.36% | 73.92% |
| 24.0 | 2035.398 | 94.349 | 2712.034 | 2.23% | 76.58% |
| 25.0 | 1843.810 | 88.205 | 2800.239 | 2.09% | 79.07% |
| 26.0 | 1626.121 | 81.908 | 2882.147 | 1.94% | 81.38% |
| 27.0 | 1427.912 | 74.718 | 2956.864 | 1.77% | 83.49% |
| 28.0 | 1250.926 | 67.822 | 3024.687 | 1.60% | 85.41% |
| 29.0 | 1124.795 | 62.156 | 3086.843 | 1.47% | 87.16% |
| 30.0 | 952.454 | 56.085 | 3142.928 | 1.33% | 88.75% |
| 31.0 | 807.888 | 48.988 | 3191.916 | 1.16% | 90.13% |
| 32.0 | 677.778 | 42.563 | 3234.478 | 1.01% | 91.33% |
| 33.0 | 553.257 | 36.267 | 3270.745 | 0.86% | 92.36% |
| 34.0 | 439.628 | 30.048 | 3300.793 | 0.71% | 93.21% |
| 35.0 | 352.269 | 24.593 | 3325.386 | 0.58% | 93.90% |
| 36.0 | 292.503 | 20.530 | 3345.916 | 0.49% | 94.48% |
| 37.0 | 251.552 | 17.744 | 3363.66 | 0.42% | 94.98% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 38.0 | 191.017 | 14.772 | 3378.432 | 0.35% | 95.40% |
| 39.0 | 151.807 | 11.702 | 3390.134 | 0.28% | 95.73% |
| 40.0 | 112.868 | 9.231 | 3399.365 | 0.22% | 95.99% |
| 41.0 | 92.546 | 7.315 | 3406.679 | 0.17% | 96.20% |
| 42.0 | 77.564 | 6.180 | 3412.86 | 0.15% | 96.37% |
| 43.0 | 65.633 | 5.304 | 3418.164 | 0.13% | 96.52% |
| 44.0 | 57.923 | 4.663 | 3422.827 | 0.11% | 96.65% |
| 45.0 | 51.953 | 4.223 | 3427.05 | 0.10% | 96.77% |
| 46.0 | 47.191 | 3.877 | 3430.927 | 0.09% | 96.88% |
| 47.0 | 43.372 | 3.602 | 3434.529 | 0.09% | 96.98% |
| 48.0 | 40.461 | 3.389 | 3437.918 | 0.08% | 97.08% |
| 49.0 | 38.032 | 3.223 | 3441.142 | 0.08% | 97.17% |
| 50.0 | 35.830 | 3.080 | 3444.221 | 0.07% | 97.26% |
| 51.0 | 34.206 | 2.963 | 3447.184 | 0.07% | 97.34% |
| 52.0 | 33.043 | 2.886 | 3450.07 | 0.07% | 97.42% |
| 53.0 | 32.224 | 2.839 | 3452.909 | 0.07% | 97.50% |
| 54.0 | 31.588 | 2.813 | 3455.722 | 0.07% | 97.58% |
| 55.0 | 31.141 | 2.800 | 3458.522 | 0.07% | 97.66% |
| 56.0 | 30.893 | 2.803 | 3461.325 | 0.07% | 97.74% |
| 57.0 | 30.790 | 2.820 | 3464.145 | 0.07% | 97.82% |
| 58.0 | 30.827 | 2.849 | 3466.995 | 0.07% | 97.90% |
| 59.0 | 30.995 | 2.890 | 3469.885 | 0.07% | 97.98% |
| 60.0 | 31.185 | 2.938 | 3472.823 | 0.07% | 98.06% |
| 61.0 | 31.156 | 2.975 | 3475.798 | 0.07% | 98.15% |
| 62.0 | 30.790 | 2.985 | 3478.782 | 0.07% | 98.23% |
| 63.0 | 29.956 | 2.954 | 3481.737 | 0.07% | 98.32% |
| 64.0 | 28.903 | 2.888 | 3484.625 | 0.07% | 98.40% |
| 65.0 | 27.659 | 2.799 | 3487.424 | 0.07% | 98.48% |
| 66.0 | 26.408 | 2.698 | 3490.122 | 0.06% | 98.55% |
| 67.0 | 25.150 | 2.592 | 3492.714 | 0.06% | 98.62% |
| 68.0 | 24.258 | 2.503 | 3495.217 | 0.06% | 98.70% |
| 69.0 | 23.775 | 2.450 | 3497.668 | 0.06% | 98.76% |
| 70.0 | 23.797 | 2.443 | 3500.111 | 0.06% | 98.83% |
| 71.0 | 23.797 | 2.460 | 3502.571 | 0.06% | 98.90% |
| 72.0 | 23.753 | 2.472 | 3505.043 | 0.06% | 98.97% |
| 73.0 | 23.628 | 2.478 | 3507.521 | 0.06% | 99.04% |
| 74.0 | 23.329 | 2.469 | 3509.989 | 0.06% | 99.11% |
| 75.0 | 22.941 | 2.445 | 3512.434 | 0.06% | 99.18% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 76.0 | 22.407 | 2.407 | 3514.841 | 0.06% | 99.25% |
| 77.0 | 21.705 | 2.352 | 3517.193 | 0.06% | 99.32% |
| 78.0 | 20.849 | 2.278 | 3519.471 | 0.05% | 99.38% |
| 79.0 | 20.000 | 2.195 | 3521.666 | 0.05% | 99.44% |
| 80.0 | 18.705 | 2.087 | 3523.753 | 0.05% | 99.50% |
| 81.0 | 17.637 | 1.965 | 3525.718 | 0.05% | 99.56% |
| 82.0 | 17.089 | 1.883 | 3527.601 | 0.04% | 99.61% |
| 83.0 | 16.686 | 1.836 | 3529.437 | 0.04% | 99.66% |
| 84.0 | 16.335 | 1.799 | 3531.236 | 0.04% | 99.71% |
| 85.0 | 16.028 | 1.766 | 3533.002 | 0.04% | 99.76% |
| 86.0 | 15.640 | 1.731 | 3534.733 | 0.04% | 99.81% |
| 87.0 | 15.391 | 1.698 | 3536.432 | 0.04% | 99.86% |
| 88.0 | 15.194 | 1.675 | 3538.107 | 0.04% | 99.91% |
| 89.0 | 15.048 | 1.658 | 3539.765 | 0.04% | 99.95% |
| 90.0 | 14.945 | 1.644 | 3541.409 | 0.04% | 100.00% |

## Zonal flux distribution table



ZONAL LUMEN SUMMARY

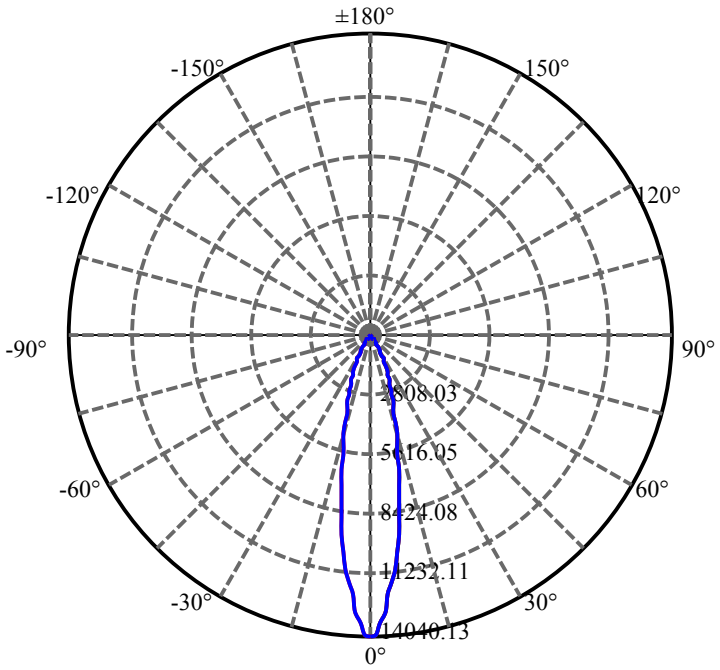
| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-30 | 3142.93 | 74.30% | 88.75% |
| 0-40 | 3399.36 | 80.36% | 95.99% |
| 0-60 | 3472.82 | 82.10% | 98.06% |
| 0-90 | 3539.76 | 83.68% | 99.95% |
| 0-120 | 3539.76 | 83.68% | 99.95% |
| 0-180 | 3541.41 | 83.72% | 100.00% |
| 60-90 | 66.94 | 1.58% | 1.89% |
| 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% |
| 0-25.40 | 2833.13 | 66.98% | 80.00% |

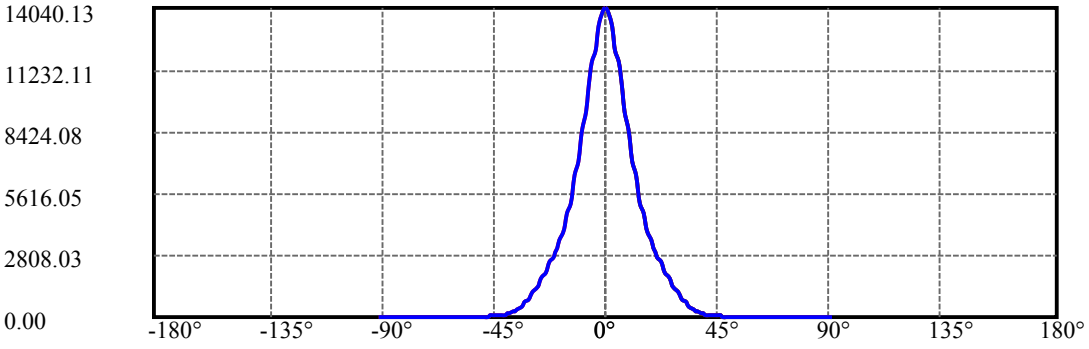
ZONAL LUMEN SUMMARY

| | |
|---|---|
| 0-10 | 984.78 |
| 10-20 | 1318.46 |
| 20-30 | 839.69 |
| 30-40 | 256.44 |
| 40-50 | 44.86 |
| 50-60 | 28.60 |
| 60-70 | 27.29 |
| 70-80 | 23.64 |
| 80-90 | 16.01 |
| 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:

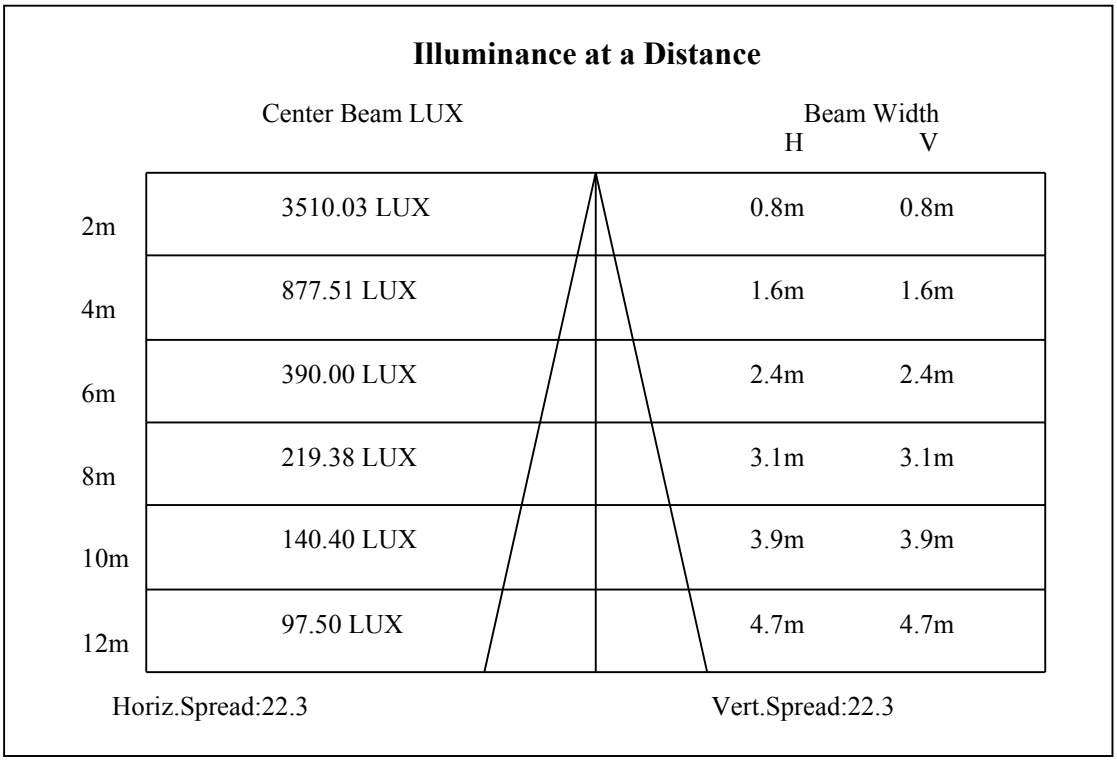
C90/C270:

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

Beam Angle(50%Imax):C0/180Left:11.1 Right:11.1
:C90/270Left:11.1 Right:11.1

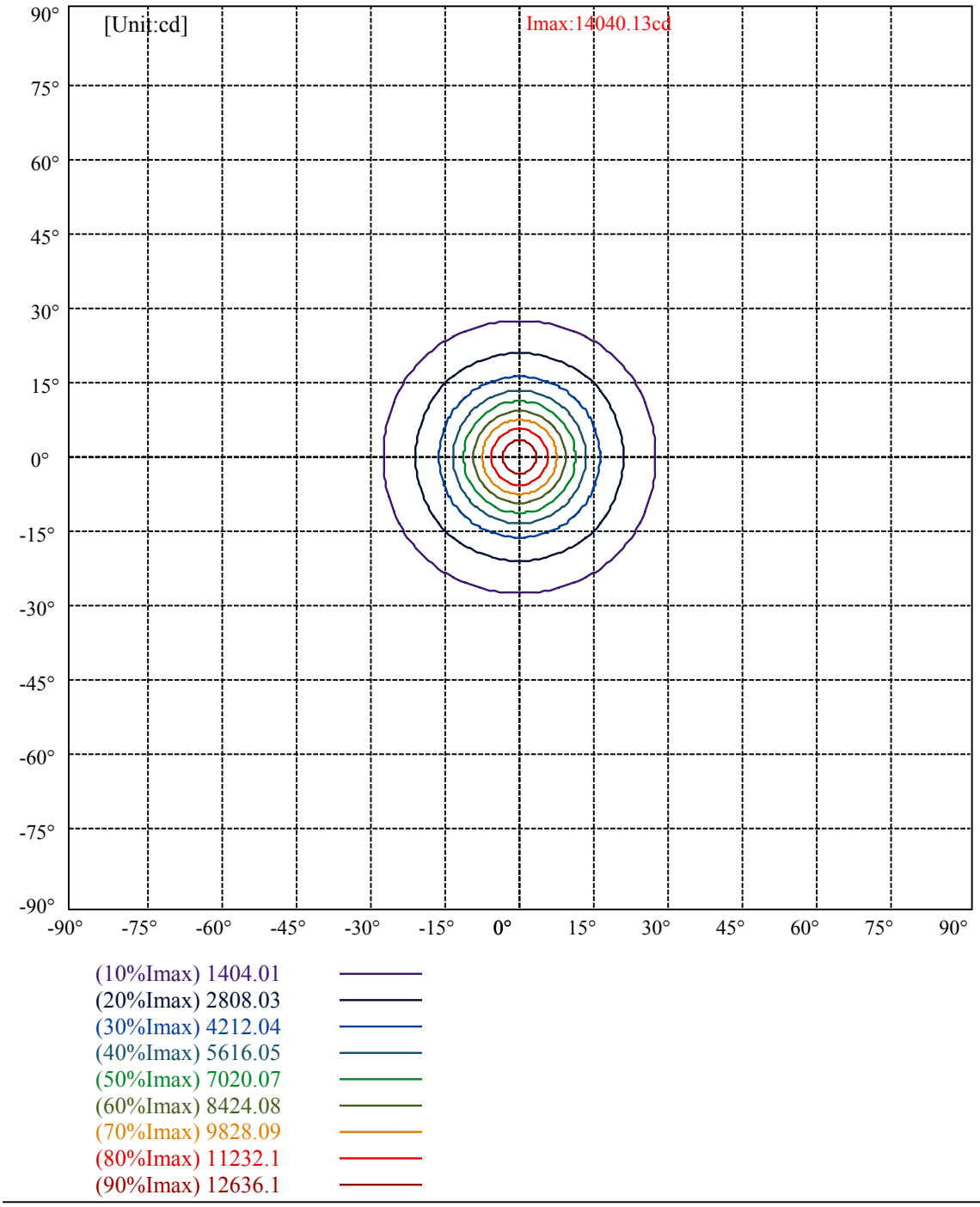
Lux distance Curve





ISO-Intensity(V-H)





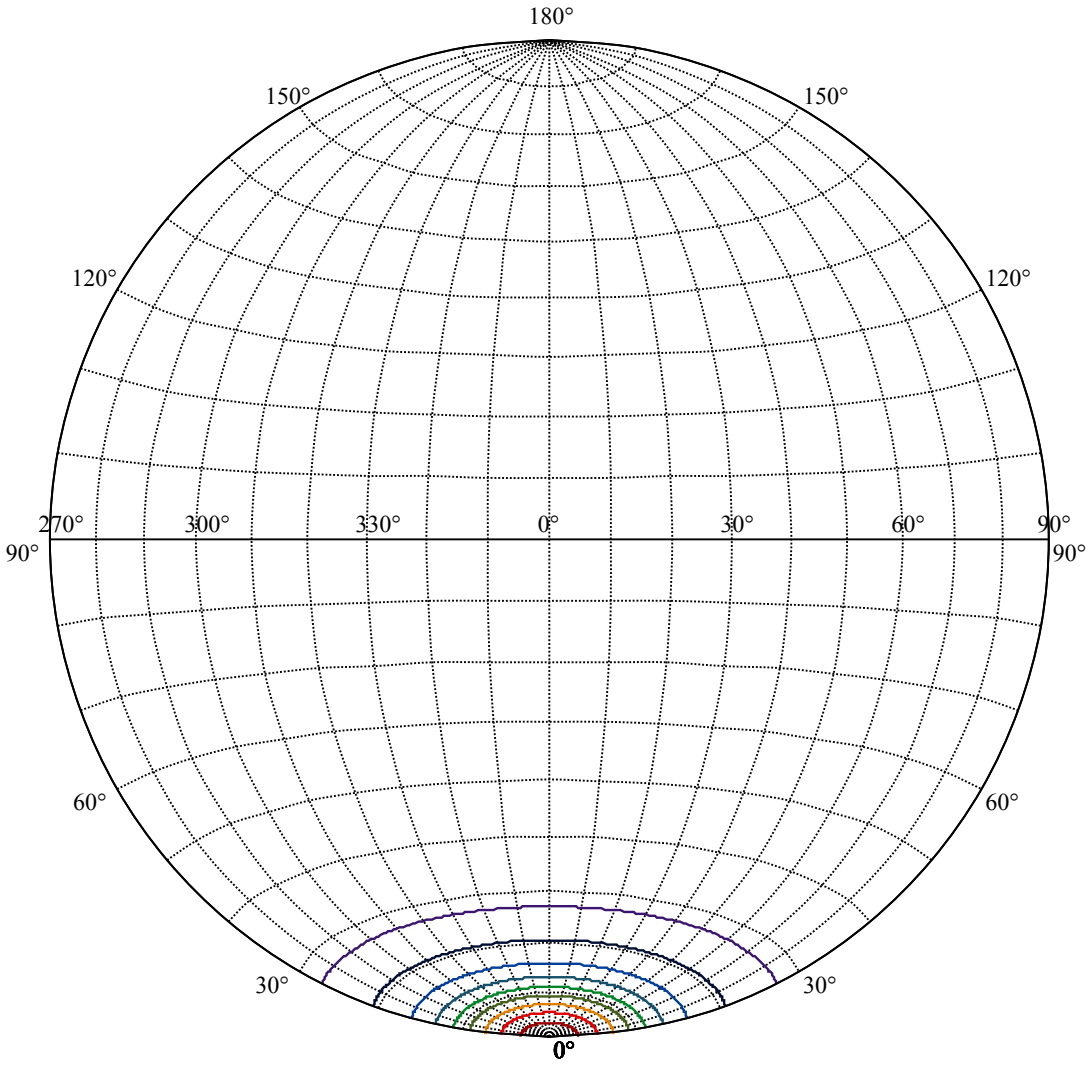

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2024/3/26
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.65

## ISO candela diagram on circular web






[Unit:cd]

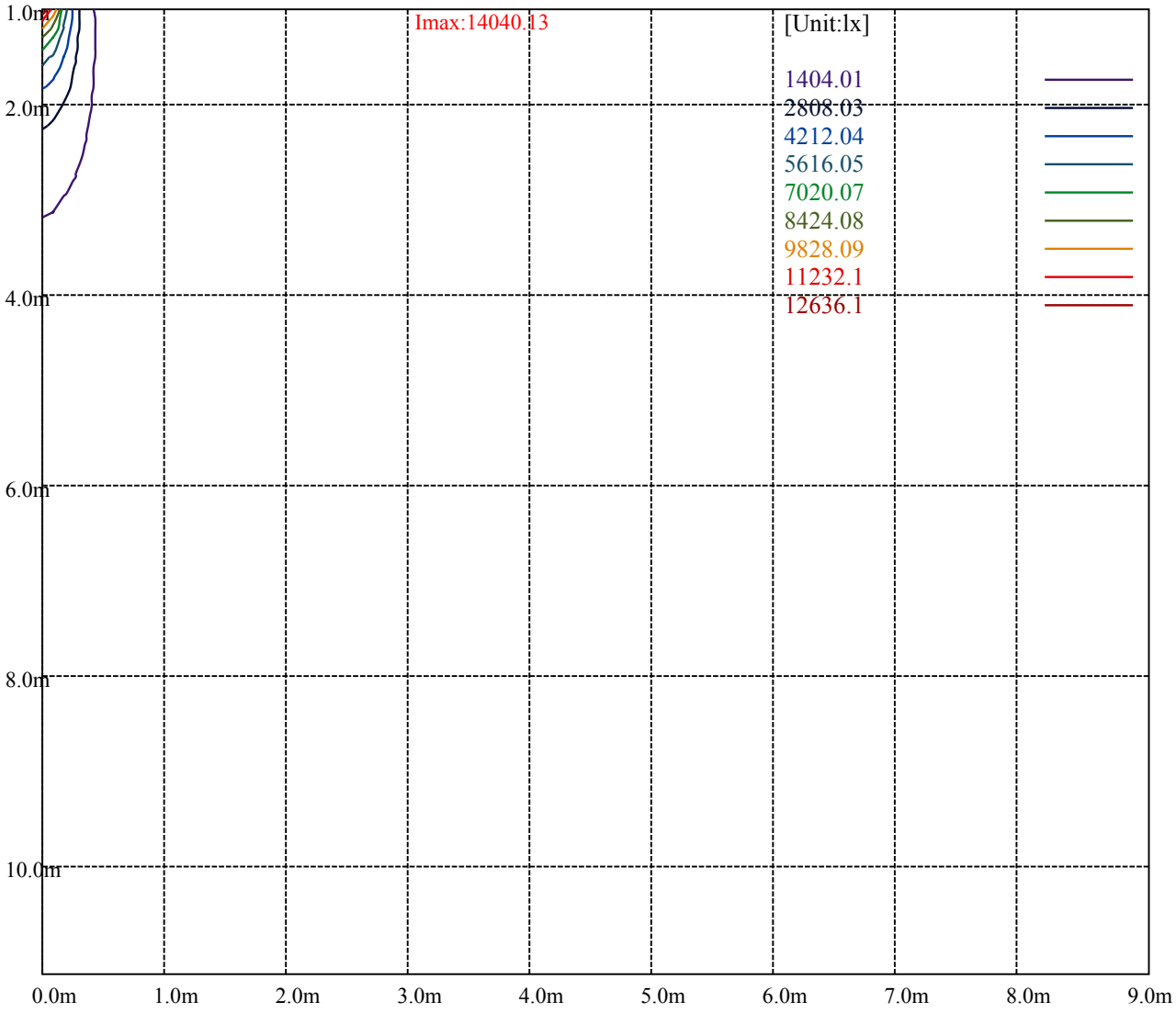
Imax:14040.13

(10%Imax) 1404.01
(20%Imax) 2808.03
(30%Imax) 4212.04
(40%Imax) 5616.05
(50%Imax) 7020.07
(60%Imax) 8424.08
(70%Imax) 9828.09
(80%Imax) 11232.1
(90%Imax) 12636.1

| | | |
|---|---|---|
| Equipment: GMS1980 | Date: 2024/3/26 | Operator: NT07 |
| Temperature(°C): 25.0 | Humidity(%): 60.0% | Distance(m): 7.65 |

## Space ISO Lux diagram






Equipment: GMS1980
Temperature(°C): 25.0

Date: 2024/3/26
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.65

## Luminance Limitting Curve(no luminous side)



Luminance Table

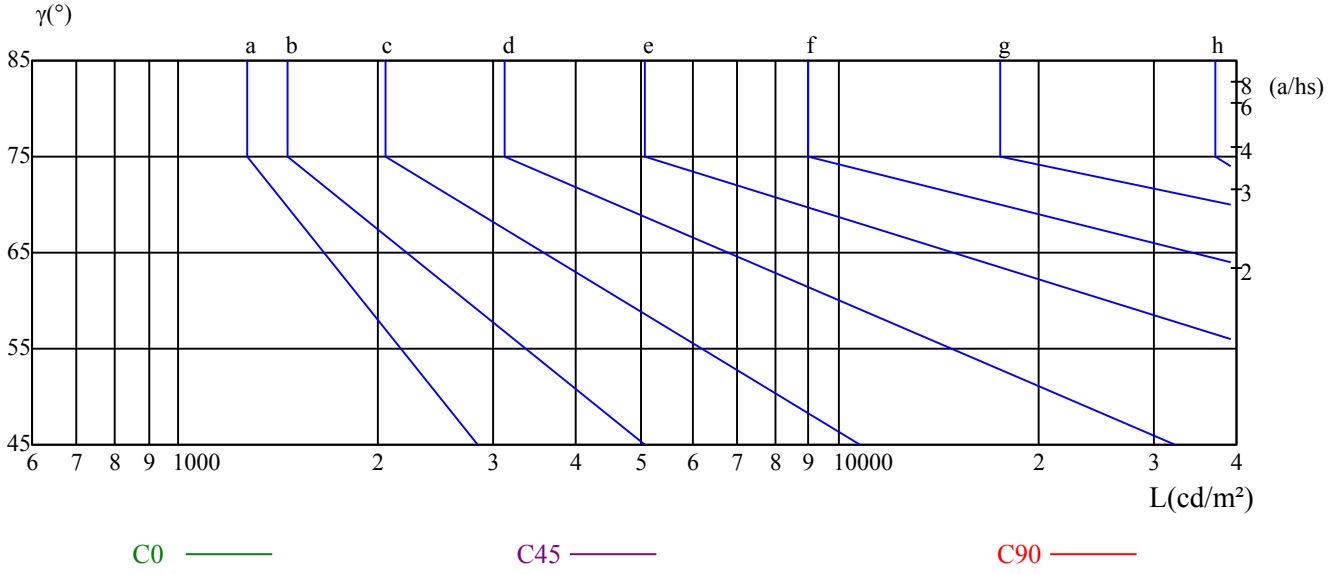
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|---|---|---|---|---|---|---|---|---|---|
| C0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| 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




Equipment: GMS1980
Temperature(°C): 25.0

Date: 2024/3/26
Humidity(%): 60.0%

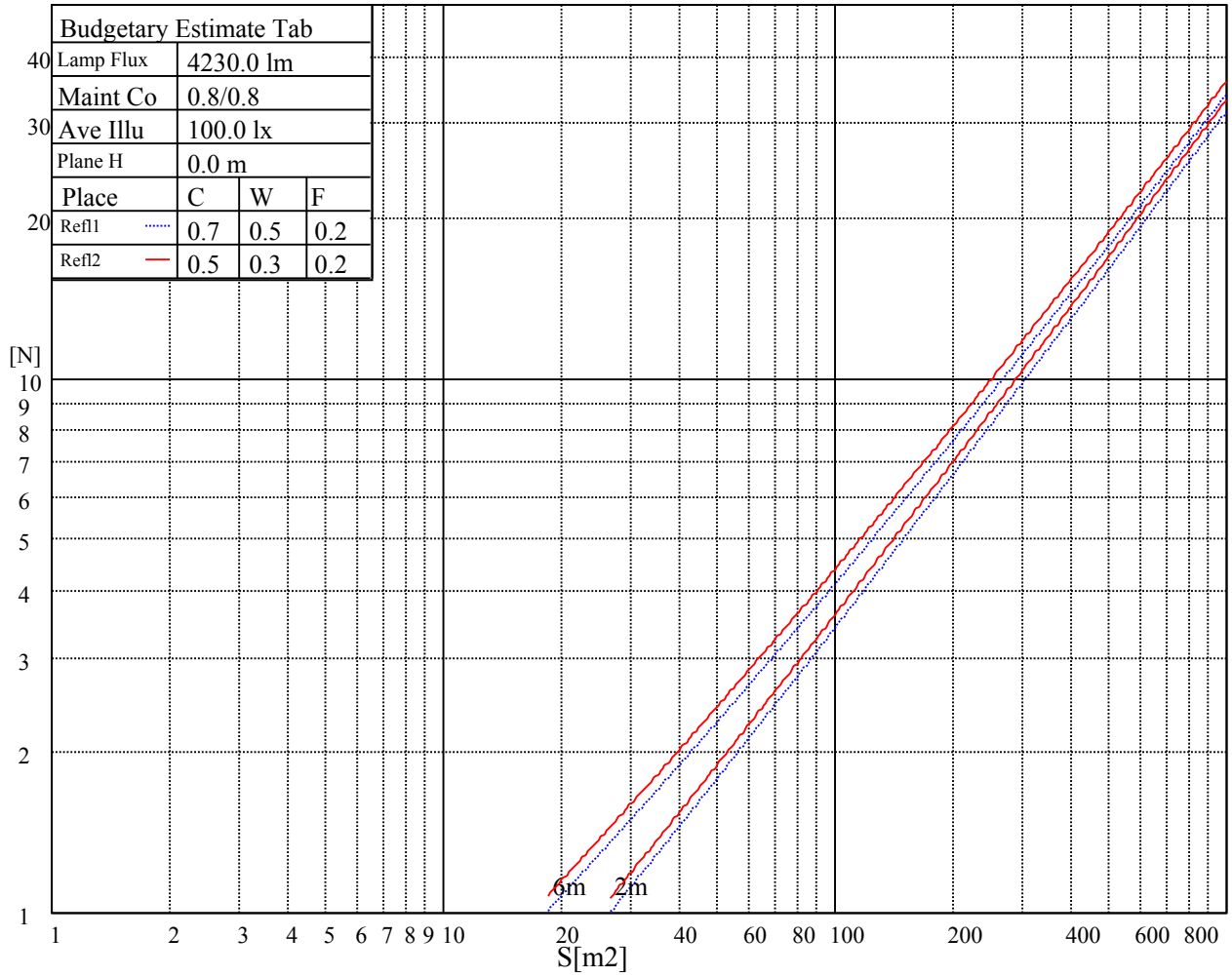
Operator: NT07
Distance(m): 7.65

| 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 X Y | Viewed crosswise | | | | | Viewed endwise | | | | |
| 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 |
| 2H 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 |
| 2H 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 |
| 2H 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 |
| 2H 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 |
| 2H 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 |
| 4H 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 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 |
| 4H 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 |
| 4H 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 |
| 4H 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 |
| 8H 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 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 |
| 8H 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 |
| 12H 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 |
| 12H 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: 2024/3/26 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.65

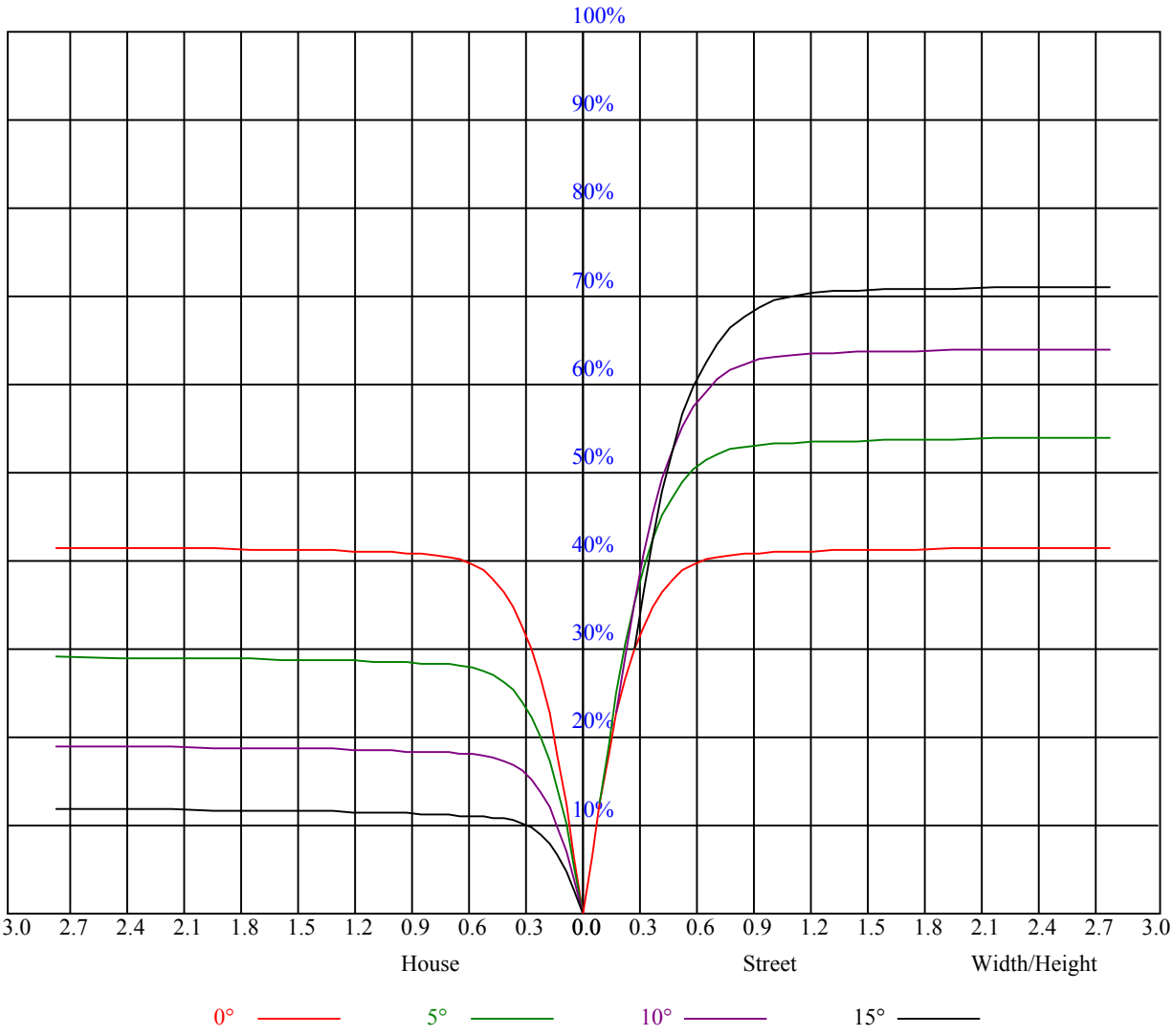
Utilization factor table for indoor luminaire



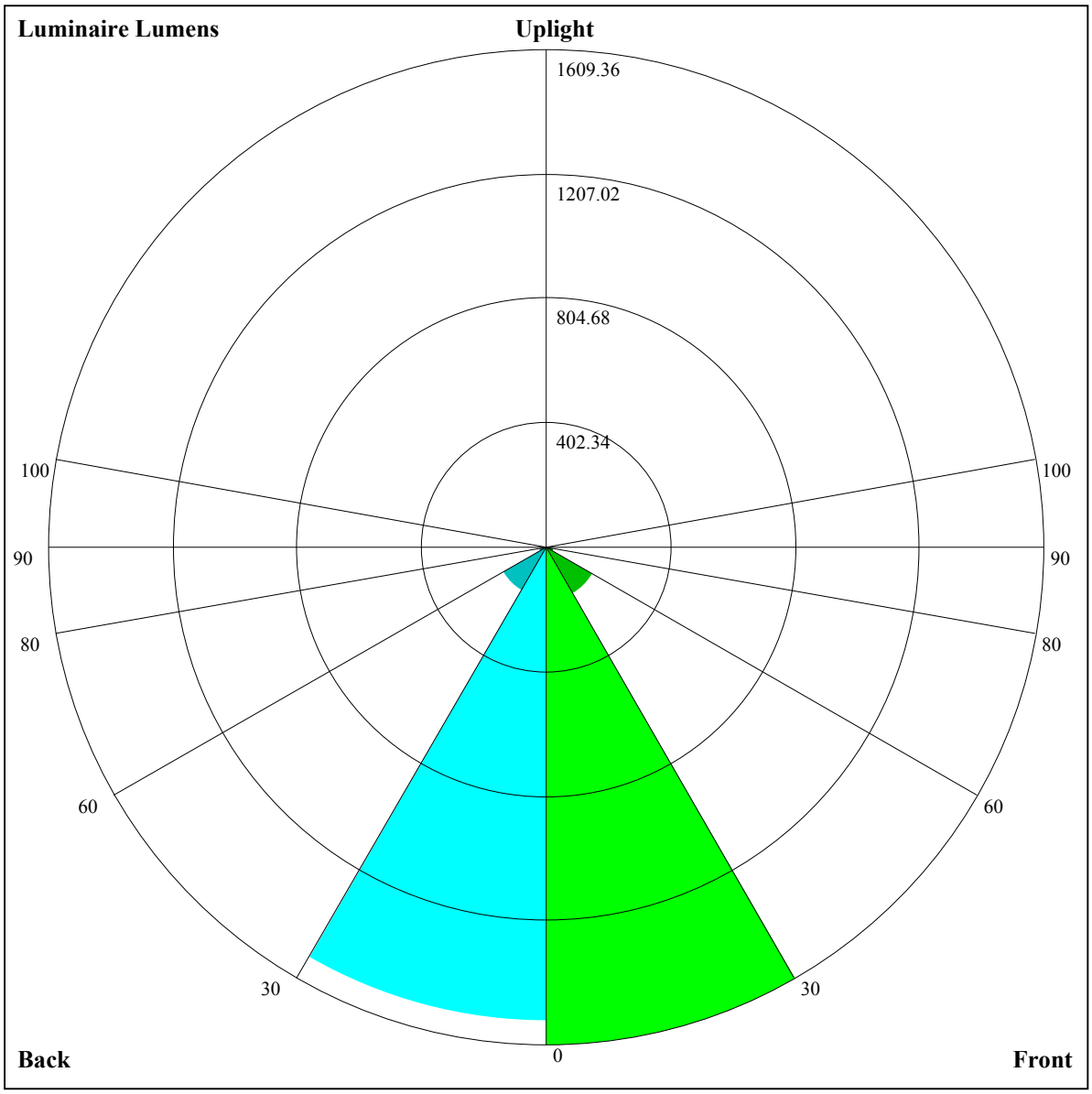
| RHOCC | 80 | | | 70 | | | 50 | | | 30 | | | 10 | | | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RHOW | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | COEFFCIENTS OF UTILIZATION RHOFC=20 CU | | | | | | | | | | | | | | | |
| 0 | 1.00 | 1.00 | 1.00 | 0.97 | 0.97 | 0.97 | 0.93 | 0.93 | 0.93 | 0.89 | 0.89 | 0.89 | 0.85 | 0.85 | 0.85 | 0.84 |
| 1 | 0.94 | 0.92 | 0.90 | 0.92 | 0.90 | 0.89 | 0.88 | 0.87 | 0.86 | 0.85 | 0.84 | 0.83 | 0.82 | 0.82 | 0.81 | 0.79 |
| 2 | 0.88 | 0.85 | 0.83 | 0.87 | 0.84 | 0.82 | 0.84 | 0.82 | 0.80 | 0.82 | 0.80 | 0.79 | 0.80 | 0.78 | 0.77 | 0.76 |
| 3 | 0.84 | 0.80 | 0.78 | 0.83 | 0.80 | 0.77 | 0.81 | 0.78 | 0.76 | 0.79 | 0.76 | 0.75 | 0.77 | 0.75 | 0.74 | 0.72 |
| 4 | 0.80 | 0.76 | 0.73 | 0.79 | 0.75 | 0.73 | 0.77 | 0.74 | 0.72 | 0.76 | 0.73 | 0.71 | 0.74 | 0.72 | 0.70 | 0.69 |
| 5 | 0.76 | 0.72 | 0.69 | 0.76 | 0.72 | 0.69 | 0.74 | 0.71 | 0.69 | 0.73 | 0.70 | 0.68 | 0.72 | 0.69 | 0.67 | 0.66 |
| 6 | 0.73 | 0.69 | 0.66 | 0.73 | 0.69 | 0.66 | 0.71 | 0.68 | 0.66 | 0.70 | 0.67 | 0.65 | 0.69 | 0.67 | 0.65 | 0.64 |
| 7 | 0.70 | 0.66 | 0.63 | 0.70 | 0.66 | 0.63 | 0.69 | 0.65 | 0.63 | 0.68 | 0.65 | 0.63 | 0.67 | 0.64 | 0.62 | 0.61 |
| 8 | 0.68 | 0.64 | 0.61 | 0.67 | 0.63 | 0.61 | 0.66 | 0.63 | 0.61 | 0.66 | 0.63 | 0.60 | 0.65 | 0.62 | 0.60 | 0.59 |
| 9 | 0.65 | 0.61 | 0.59 | 0.65 | 0.61 | 0.59 | 0.64 | 0.61 | 0.58 | 0.63 | 0.60 | 0.58 | 0.63 | 0.60 | 0.58 | 0.57 |
| 10 | 0.63 | 0.59 | 0.57 | 0.63 | 0.59 | 0.56 | 0.62 | 0.59 | 0.56 | 0.61 | 0.58 | 0.56 | 0.61 | 0.58 | 0.56 | 0.55 |

## Coefficient Utilization Curve






| | | |
|---|---|---|
| Equipment: GMS1980 | Date: 2024/3/26 | Operator: NT07 |
| Temperature(°C): 25.0 | Humidity(%): 60.0% | Distance(m): 7.65 |




Luminaire Lumens:
FL=1609.36,FM=172.02,FH=25.04,FVH=8.91
BL=1532.88,BM=160.97,BH=26.21,BVH=8.87
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 | 14124.99 | 14113.29 | 13867.49 | 13475.39 | 11572.30 | 11572.30 | 11387.95 | 10454.52 | 9727.08 |
| 45.0 | 13890.90 | 14148.40 | 14189.37 | 14002.09 | 13539.77 | 12983.80 | 12334.20 | 11456.36 | 10718.98 |
| 90.0 | 14119.14 | 14002.09 | 13709.48 | 13253.01 | 11643.11 | 11643.11 | 11112.90 | 10373.76 | 9661.54 |
| 135.0 | 14025.50 | 14043.06 | 13785.56 | 13405.16 | 12697.04 | 12012.33 | 11298.35 | 10555.12 | 9653.87 |
| 180.0 | 14124.99 | 13890.90 | 13492.95 | 12966.25 | 12146.93 | 11421.25 | 10654.61 | 9893.81 | 8969.16 |
| 225.0 | 13890.90 | 13375.90 | 11565.86 | 11565.86 | 11376.83 | 10411.80 | 9653.34 | 8908.35 | 7987.21 |
| 270.0 | 14119.14 | 13943.57 | 13627.55 | 13007.21 | 12363.46 | 11678.75 | 10736.54 | 9987.45 | 9244.21 |
| 315.0 | 14025.50 | 13808.97 | 13323.23 | 11581.08 | 11581.08 | 11203.61 | 10445.15 | 9715.38 | 8975.65 |
| 360.0 | 14124.99 | 14113.29 | 13867.49 | 13475.39 | 11572.30 | 11572.30 | 11387.95 | 10454.52 | 9727.08 |

| C/γ(°) | 9.0 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 8994.97 | 8076.75 | 7371.55 | 6695.03 | 5924.29 | 5366.57 | 4850.40 | 4380.47 | 3902.34 |
| 45.0 | 9806.03 | 9074.50 | 8337.12 | 7623.14 | 6768.71 | 6130.82 | 5557.30 | 5018.89 | 4427.81 |
| 90.0 | 8736.88 | 8011.79 | 7297.23 | 6466.21 | 5866.94 | 5318.00 | 4699.42 | 4265.76 | 3808.70 |
| 135.0 | 8939.90 | 8214.22 | 7511.95 | 6844.79 | 6078.15 | 5516.33 | 4995.48 | 4427.81 | 4041.56 |
| 180.0 | 8255.18 | 7552.91 | 6704.34 | 6072.29 | 5387.58 | 4872.58 | 4427.81 | 4047.42 | 3631.91 |
| 225.0 | 7282.01 | 6614.27 | 5849.97 | 5306.88 | 4806.51 | 4262.25 | 3897.66 | 3582.81 | 3291.36 |
| 270.0 | 8342.97 | 7623.14 | 6920.87 | 6277.12 | 5569.00 | 5048.15 | 4568.27 | 4164.46 | 3725.54 |
| 315.0 | 8239.44 | 7366.87 | 6697.96 | 6082.30 | 5380.03 | 4871.47 | 4422.60 | 3940.96 | 3607.39 |
| 360.0 | 8994.97 | 8076.75 | 7371.55 | 6695.03 | 5924.29 | 5366.57 | 4850.40 | 4380.47 | 3902.34 |

| C/γ(°) | 18.0 | 19.0 | 20.0 | 21.0 | 22.0 | 23.0 | 24.0 | 25.0 | 26.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 3576.95 | 3271.47 | 2997.58 | 2686.83 | 2468.54 | 2269.56 | 2040.74 | 1866.93 | 1656.83 |
| 45.0 | 4029.86 | 3684.58 | 3380.26 | 3040.83 | 2982.31 | 2982.31 | 2330.42 | 2148.42 | 1967.58 |
| 90.0 | 3499.12 | 3212.36 | 2954.86 | 2664.59 | 2453.32 | 2259.61 | 2081.12 | 1909.06 | 1696.63 |
| 135.0 | 3620.20 | 3333.44 | 3070.09 | 2953.05 | 2953.05 | 2371.98 | 2191.73 | 1971.68 | 1798.45 |
| 180.0 | 3327.59 | 3052.53 | 2994.01 | 2744.18 | 2336.86 | 2170.07 | 1988.65 | 1786.17 | 1621.72 |
| 225.0 | 2963.05 | 2724.87 | 2510.09 | 2319.89 | 2098.68 | 1930.72 | 1763.34 | 1553.83 | 1138.44 |
| 270.0 | 3403.67 | 3122.76 | 2999.86 | 2999.86 | 2335.11 | 2166.56 | 1975.19 | 1772.12 | 1602.99 |
| 315.0 | 3307.16 | 2970.66 | 2731.89 | 2515.36 | 2269.56 | 2088.73 | 1911.99 | 1742.27 | 1526.33 |
| 360.0 | 3576.95 | 3271.47 | 2997.58 | 2686.83 | 2468.54 | 2269.56 | 2040.74 | 1866.93 | 1656.83 |

| C/γ(°) | 27.0 | 28.0 | 29.0 | 30.0 | 31.0 | 32.0 | 33.0 | 34.0 | 35.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 1362.46 | 1158.69 | 1158.69 | 964.39 | 826.69 | 702.97 | 585.34 | 454.54 | 367.87 |
| 45.0 | 1748.71 | 1574.31 | 1364.22 | 1198.60 | 1041.17 | 894.28 | 731.59 | 611.62 | 504.52 |
| 90.0 | 1523.98 | 1149.56 | 1149.56 | 994.06 | 851.91 | 691.27 | 573.11 | 446.18 | 361.61 |
| 135.0 | 1624.06 | 1450.83 | 1238.39 | 1076.87 | 926.47 | 790.70 | 635.61 | 526.18 | 408.55 |
| 180.0 | 1450.25 | 1246.00 | 1087.99 | 896.04 | 753.83 | 634.44 | 524.42 | 404.45 | 326.61 |
| 225.0 | 1138.44 | 1018.82 | 868.83 | 736.15 | 584.41 | 477.60 | 387.83 | 296.47 | 237.89 |
| 270.0 | 1428.01 | 1261.80 | 1104.38 | 911.25 | 768.46 | 642.64 | 531.44 | 407.96 | 329.54 |
| 315.0 | 1147.39 | 1147.39 | 1026.31 | 842.26 | 710.17 | 588.33 | 456.71 | 369.63 | 281.55 |
| 360.0 | 1362.46 | 1158.69 | 1158.69 | 964.39 | 826.69 | 702.97 | 585.34 | 454.54 | 367.87 |

| C/γ(°) | 36.0 | 37.0 | 38.0 | 39.0 | 40.0 | 41.0 | 42.0 | 43.0 | 44.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 296.47 | 238.19 | 180.66 | 145.37 | 113.24 | 94.34 | 79.88 | 66.07 | 58.35 |
| 45.0 | 411.47 | 315.49 | 299.11 | 299.11 | 161.29 | 125.36 | 103.99 | 83.45 | 71.16 |
| 90.0 | 292.09 | 235.49 | 180.07 | 145.96 | 119.97 | 99.49 | 83.63 | 68.71 | 60.16 |
| 135.0 | 330.71 | 296.18 | 296.18 | 157.84 | 128.16 | 100.72 | 84.45 | 71.81 | 62.50 |
| 180.0 | 296.18 | 296.18 | 157.37 | 125.82 | 102.47 | 85.44 | 70.40 | 61.45 | 55.01 |
| 225.0 | 190.55 | 152.57 | 117.10 | 96.56 | 81.11 | 69.70 | 59.46 | 53.61 | 48.22 |
| 270.0 | 296.77 | 296.77 | 158.01 | 129.16 | 101.36 | 84.86 | 69.76 | 61.27 | 55.01 |
| 315.0 | 225.78 | 181.54 | 139.63 | 114.65 | 95.33 | 80.47 | 68.94 | 58.70 | 52.96 |
| 360.0 | 296.47 | 238.19 | 180.66 | 145.37 | 113.24 | 94.34 | 79.88 | 66.07 | 58.35 |

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 | 52.67 | 48.16 | 43.60 | 40.67 | 38.16 | 36.05 | 34.00 | 32.77 | 31.84 |
| 45.0 | 62.21 | 54.43 | 49.69 | 45.76 | 42.55 | 39.21 | 37.04 | 35.35 | 34.00 |
| 90.0 | 52.44 | 47.93 | 44.24 | 40.61 | 38.22 | 36.23 | 34.41 | 33.30 | 32.54 |
| 135.0 | 55.83 | 49.57 | 45.65 | 42.37 | 39.62 | 36.81 | 35.00 | 33.42 | 32.54 |
| 180.0 | 48.92 | 45.18 | 41.38 | 38.92 | 36.87 | 34.70 | 33.42 | 32.42 | 31.72 |
| 225.0 | 44.77 | 41.90 | 38.92 | 36.93 | 35.35 | 33.94 | 32.83 | 32.25 | 31.66 |
| 270.0 | 50.33 | 45.65 | 42.55 | 39.97 | 37.69 | 35.46 | 34.06 | 33.01 | 32.30 |
| 315.0 | 48.46 | 44.71 | 40.97 | 38.45 | 35.82 | 34.24 | 32.89 | 31.84 | 31.19 |
| 360.0 | 52.67 | 48.16 | 43.60 | 40.67 | 38.16 | 36.05 | 34.00 | 32.77 | 31.84 |

| C/γ(°) | 54.0 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 | 60.0 | 61.0 | 62.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 31.08 | 30.67 | 30.31 | 30.14 | 30.08 | 30.20 | 30.43 | 30.61 | 30.61 |
| 45.0 | 32.89 | 32.25 | 31.72 | 31.31 | 31.08 | 30.96 | 31.08 | 31.19 | 31.43 |
| 90.0 | 32.01 | 31.43 | 31.13 | 31.08 | 31.02 | 31.19 | 31.43 | 31.60 | 31.13 |
| 135.0 | 31.89 | 31.25 | 30.96 | 30.84 | 30.84 | 30.96 | 31.25 | 31.54 | 31.43 |
| 180.0 | 31.13 | 30.78 | 30.61 | 30.55 | 30.67 | 31.02 | 31.31 | 31.19 | 30.61 |
| 225.0 | 31.37 | 31.13 | 31.08 | 31.19 | 31.60 | 31.78 | 31.72 | 30.90 | 30.08 |
| 270.0 | 31.60 | 31.19 | 31.02 | 30.96 | 31.02 | 31.25 | 31.49 | 31.49 | 30.96 |
| 315.0 | 30.72 | 30.43 | 30.31 | 30.26 | 30.31 | 30.61 | 30.78 | 30.72 | 30.08 |
| 360.0 | 31.08 | 30.67 | 30.31 | 30.14 | 30.08 | 30.20 | 30.43 | 30.61 | 30.61 |

| C/γ(°) | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 | 70.0 | 71.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 29.79 | 29.03 | 27.80 | 26.39 | 24.93 | 23.70 | 22.53 | 21.77 | 21.13 |
| 45.0 | 31.31 | 30.72 | 29.90 | 28.91 | 27.04 | 25.81 | 24.58 | 23.47 | 22.41 |
| 90.0 | 30.43 | 29.26 | 27.80 | 26.51 | 25.05 | 23.76 | 23.12 | 23.17 | 23.00 |
| 135.0 | 30.61 | 29.85 | 28.56 | 26.92 | 25.75 | 24.40 | 23.00 | 22.30 | 21.59 |
| 180.0 | 29.61 | 28.32 | 27.04 | 25.98 | 24.52 | 23.99 | 24.29 | 25.40 | 26.57 |
| 225.0 | 28.85 | 27.21 | 26.16 | 24.99 | 24.29 | 24.11 | 24.40 | 25.40 | 26.63 |
| 270.0 | 29.96 | 28.91 | 27.51 | 26.51 | 25.75 | 25.69 | 26.39 | 27.51 | 28.09 |
| 315.0 | 29.09 | 27.92 | 26.51 | 25.05 | 23.88 | 22.59 | 21.89 | 21.36 | 20.95 |
| 360.0 | 29.79 | 29.03 | 27.80 | 26.39 | 24.93 | 23.70 | 22.53 | 21.77 | 21.13 |

| C/γ(°) | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0 | 80.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 20.66 | 20.31 | 19.96 | 19.61 | 19.20 | 18.84 | 18.49 | 18.14 | 17.79 |
| 45.0 | 21.89 | 21.65 | 21.36 | 21.01 | 20.48 | 20.01 | 19.49 | 18.84 | 18.43 |
| 90.0 | 22.59 | 22.18 | 21.59 | 20.95 | 20.07 | 19.43 | 18.73 | 18.32 | 17.97 |
| 135.0 | 21.19 | 20.83 | 20.48 | 20.07 | 19.72 | 19.37 | 19.02 | 18.49 | 18.14 |
| 180.0 | 26.98 | 27.10 | 26.98 | 26.86 | 26.63 | 25.40 | 23.41 | 21.95 | 20.01 |
| 225.0 | 27.68 | 28.09 | 27.97 | 27.56 | 26.63 | 25.11 | 23.53 | 21.42 | 18.02 |
| 270.0 | 28.56 | 28.73 | 28.44 | 27.97 | 27.45 | 26.74 | 25.81 | 24.81 | 21.65 |
| 315.0 | 20.48 | 20.13 | 19.84 | 19.49 | 19.08 | 18.73 | 18.32 | 18.02 | 17.62 |
| 360.0 | 20.66 | 20.31 | 19.96 | 19.61 | 19.20 | 18.84 | 18.49 | 18.14 | 17.79 |

| C/γ(°) | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 17.50 | 17.09 | 16.56 | 16.27 | 16.04 | 15.74 | 15.39 | 15.22 | 15.04 |
| 45.0 | 18.08 | 17.67 | 17.26 | 16.74 | 16.33 | 16.09 | 15.74 | 15.51 | 15.22 |
| 90.0 | 17.50 | 17.09 | 16.68 | 16.39 | 16.09 | 15.74 | 15.57 | 15.27 | 15.27 |
| 135.0 | 17.79 | 17.32 | 16.91 | 16.50 | 16.21 | 15.68 | 15.51 | 15.22 | 15.27 |
| 180.0 | 17.56 | 16.80 | 16.44 | 16.15 | 15.74 | 15.33 | 15.04 | 14.92 | 14.81 |
| 225.0 | 17.15 | 16.62 | 16.33 | 15.92 | 15.51 | 15.22 | 15.16 | 14.86 | 14.86 |
| 270.0 | 18.20 | 17.21 | 16.68 | 16.39 | 16.21 | 15.74 | 15.45 | 15.39 | 14.98 |
| 315.0 | 17.32 | 16.91 | 16.62 | 16.33 | 16.09 | 15.57 | 15.27 | 15.16 | 14.92 |
| 360.0 | 17.50 | 17.09 | 16.56 | 16.27 | 16.04 | 15.74 | 15.39 | 15.22 | 15.04 |

Intensity data(cd)



| C/γ(°) | 90.0 |
|---|---|
| 0.0 | 14.92 |
| 45.0 | 15.10 |
| 90.0 | 14.98 |
| 135.0 | 14.92 |
| 180.0 | 14.81 |
| 225.0 | 14.86 |
| 270.0 | 14.98 |
| 315.0 | 14.98 |
| 360.0 | 14.92 |