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

NT

Client:
LumCAT: 1-1298-L
Luminaire: 92.70.410.00
Report No: 2024731-B011
Ballast type: AC

| | |
|---|---|
| Test No: 2024731-C011 | Voltage(V): 35.060 |
| LampCAT: LUXEON CoB 1203 LES9 | Current(A): 0.300 |
| Lamp flux(lm): 1274.0 | Power (W): 10.518 |
| Number of Lamps: 1 | PF: 0.000 |
| Length(mm): 0 | Width(mm): 0 |
| Phm Type: C | Height(mm): 0 |

## Photometric Results

Lumens(lm): 1180.29, Efficiency(%): 92.64% , Luminous Efficacy(lm/W): 112.22
Central intensity(cd): 5699.565, Maximum intensity(cd): 5699.565
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=18.4
[C90/270]Total=18.4
Field angle(10%Imax): [C0/180]Total=50.0
[C90/270]Total=50.0
Maximum s/h(1/2): C0_180=0.31 C90_270=0.31
Maximum s/h(1/4): C0_180=0.35 C90_270=0.35
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 92.64%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.889%

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 0.0 | 5699.565 | 0.000 | 0 | 0.00% | 0.00% |
| 1.0 | 5649.674 | 5.430 | 5.43 | 0.43% | 0.46% |
| 2.0 | 5503.076 | 16.007 | 21.438 | 1.26% | 1.82% |
| 3.0 | 5281.714 | 25.794 | 47.232 | 2.02% | 4.00% |
| 4.0 | 4956.695 | 34.271 | 81.503 | 2.69% | 6.91% |
| 5.0 | 4571.763 | 40.991 | 122.494 | 3.22% | 10.38% |
| 6.0 | 4169.201 | 45.936 | 168.43 | 3.61% | 14.27% |
| 7.0 | 3761.446 | 49.225 | 217.655 | 3.86% | 18.44% |
| 8.0 | 3338.840 | 50.815 | 268.471 | 3.99% | 22.75% |
| 9.0 | 2923.257 | 50.751 | 319.221 | 3.98% | 27.05% |
| 10.0 | 2588.289 | 49.877 | 369.099 | 3.92% | 31.27% |
| 11.0 | 2274.974 | 48.594 | 417.693 | 3.81% | 35.39% |
| 12.0 | 2025.230 | 47.007 | 464.7 | 3.69% | 39.37% |
| 13.0 | 1747.701 | 44.775 | 509.476 | 3.51% | 43.17% |
| 14.0 | 1548.864 | 42.196 | 551.671 | 3.31% | 46.74% |
| 15.0 | 1416.705 | 40.713 | 592.384 | 3.20% | 50.19% |
| 16.0 | 1293.508 | 39.712 | 632.096 | 3.12% | 53.55% |
| 17.0 | 1160.092 | 38.209 | 670.305 | 3.00% | 56.79% |
| 18.0 | 1068.123 | 36.738 | 707.044 | 2.88% | 59.90% |
| 19.0 | 980.332 | 35.639 | 742.683 | 2.80% | 62.92% |
| 20.0 | 897.113 | 34.362 | 777.045 | 2.70% | 65.84% |
| 21.0 | 821.736 | 33.005 | 810.051 | 2.59% | 68.63% |
| 22.0 | 749.900 | 31.583 | 841.633 | 2.48% | 71.31% |
| 23.0 | 686.586 | 30.141 | 871.775 | 2.37% | 73.86% |
| 24.0 | 630.617 | 28.799 | 900.573 | 2.26% | 76.30% |
| 25.0 | 569.987 | 27.299 | 927.872 | 2.14% | 78.61% |
| 26.0 | 515.510 | 25.623 | 953.496 | 2.01% | 80.78% |
| 27.0 | 465.342 | 23.997 | 977.493 | 1.88% | 82.82% |
| 28.0 | 415.151 | 22.292 | 999.785 | 1.75% | 84.71% |
| 29.0 | 367.192 | 20.468 | 1020.253 | 1.61% | 86.44% |
| 30.0 | 318.084 | 18.502 | 1038.755 | 1.45% | 88.01% |
| 31.0 | 280.074 | 16.646 | 1055.401 | 1.31% | 89.42% |
| 32.0 | 234.712 | 14.748 | 1070.149 | 1.16% | 90.67% |
| 33.0 | 195.385 | 12.671 | 1082.82 | 0.99% | 91.74% |
| 34.0 | 164.236 | 10.883 | 1093.703 | 0.85% | 92.66% |
| 35.0 | 122.356 | 8.900 | 1102.604 | 0.70% | 93.42% |
| 36.0 | 98.501 | 7.032 | 1109.636 | 0.55% | 94.01% |
| 37.0 | 76.650 | 5.712 | 1115.348 | 0.45% | 94.50% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 38.0 | 59.576 | 4.547 | 1119.895 | 0.36% | 94.88% |
| 39.0 | 47.111 | 3.642 | 1123.537 | 0.29% | 95.19% |
| 40.0 | 37.484 | 2.950 | 1126.487 | 0.23% | 95.44% |
| 41.0 | 31.273 | 2.448 | 1128.936 | 0.19% | 95.65% |
| 42.0 | 26.723 | 2.107 | 1131.043 | 0.17% | 95.83% |
| 43.0 | 23.555 | 1.862 | 1132.905 | 0.15% | 95.99% |
| 44.0 | 21.514 | 1.701 | 1134.606 | 0.13% | 96.13% |
| 45.0 | 19.934 | 1.593 | 1136.199 | 0.13% | 96.26% |
| 46.0 | 18.537 | 1.505 | 1137.704 | 0.12% | 96.39% |
| 47.0 | 17.447 | 1.431 | 1139.135 | 0.11% | 96.51% |
| 48.0 | 16.576 | 1.375 | 1140.51 | 0.11% | 96.63% |
| 49.0 | 15.845 | 1.331 | 1141.842 | 0.10% | 96.74% |
| 50.0 | 15.172 | 1.293 | 1143.135 | 0.10% | 96.85% |
| 51.0 | 14.609 | 1.260 | 1144.395 | 0.10% | 96.96% |
| 52.0 | 14.236 | 1.238 | 1145.633 | 0.10% | 97.06% |
| 53.0 | 13.943 | 1.226 | 1146.858 | 0.10% | 97.17% |
| 54.0 | 13.643 | 1.216 | 1148.074 | 0.10% | 97.27% |
| 55.0 | 13.453 | 1.210 | 1149.284 | 0.09% | 97.37% |
| 56.0 | 13.343 | 1.211 | 1150.495 | 0.10% | 97.48% |
| 57.0 | 13.219 | 1.214 | 1151.709 | 0.10% | 97.58% |
| 58.0 | 13.124 | 1.218 | 1152.927 | 0.10% | 97.68% |
| 59.0 | 12.999 | 1.221 | 1154.148 | 0.10% | 97.79% |
| 60.0 | 12.824 | 1.220 | 1155.368 | 0.10% | 97.89% |
| 61.0 | 12.568 | 1.212 | 1156.58 | 0.10% | 97.99% |
| 62.0 | 12.246 | 1.196 | 1157.776 | 0.09% | 98.09% |
| 63.0 | 11.800 | 1.169 | 1158.945 | 0.09% | 98.19% |
| 64.0 | 11.390 | 1.138 | 1160.083 | 0.09% | 98.29% |
| 65.0 | 10.936 | 1.105 | 1161.188 | 0.09% | 98.38% |
| 66.0 | 10.505 | 1.070 | 1162.258 | 0.08% | 98.47% |
| 67.0 | 10.066 | 1.034 | 1163.292 | 0.08% | 98.56% |
| 68.0 | 9.649 | 0.999 | 1164.291 | 0.08% | 98.64% |
| 69.0 | 9.166 | 0.960 | 1165.251 | 0.08% | 98.73% |
| 70.0 | 8.683 | 0.917 | 1166.167 | 0.07% | 98.80% |
| 71.0 | 8.347 | 0.880 | 1167.048 | 0.07% | 98.88% |
| 72.0 | 8.040 | 0.852 | 1167.9 | 0.07% | 98.95% |
| 73.0 | 7.783 | 0.827 | 1168.727 | 0.06% | 99.02% |
| 74.0 | 7.535 | 0.805 | 1169.532 | 0.06% | 99.09% |
| 75.0 | 7.330 | 0.785 | 1170.318 | 0.06% | 99.16% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 76.0 | 7.147 | 0.768 | 1171.086 | 0.06% | 99.22% |
| 77.0 | 6.957 | 0.752 | 1171.838 | 0.06% | 99.28% |
| 78.0 | 6.818 | 0.737 | 1172.576 | 0.06% | 99.35% |
| 79.0 | 6.650 | 0.724 | 1173.299 | 0.06% | 99.41% |
| 80.0 | 6.489 | 0.708 | 1174.008 | 0.06% | 99.47% |
| 81.0 | 6.364 | 0.695 | 1174.703 | 0.05% | 99.53% |
| 82.0 | 6.233 | 0.683 | 1175.386 | 0.05% | 99.58% |
| 83.0 | 6.086 | 0.670 | 1176.055 | 0.05% | 99.64% |
| 84.0 | 5.947 | 0.656 | 1176.711 | 0.05% | 99.70% |
| 85.0 | 5.808 | 0.642 | 1177.353 | 0.05% | 99.75% |
| 86.0 | 5.545 | 0.621 | 1177.973 | 0.05% | 99.80% |
| 87.0 | 5.355 | 0.597 | 1178.57 | 0.05% | 99.85% |
| 88.0 | 5.238 | 0.580 | 1179.15 | 0.05% | 99.90% |
| 89.0 | 5.194 | 0.572 | 1179.722 | 0.04% | 99.95% |
| 90.0 | 5.150 | 0.567 | 1180.289 | 0.04% | 100.00% |

## Zonal flux distribution table



ZONAL LUMEN SUMMARY

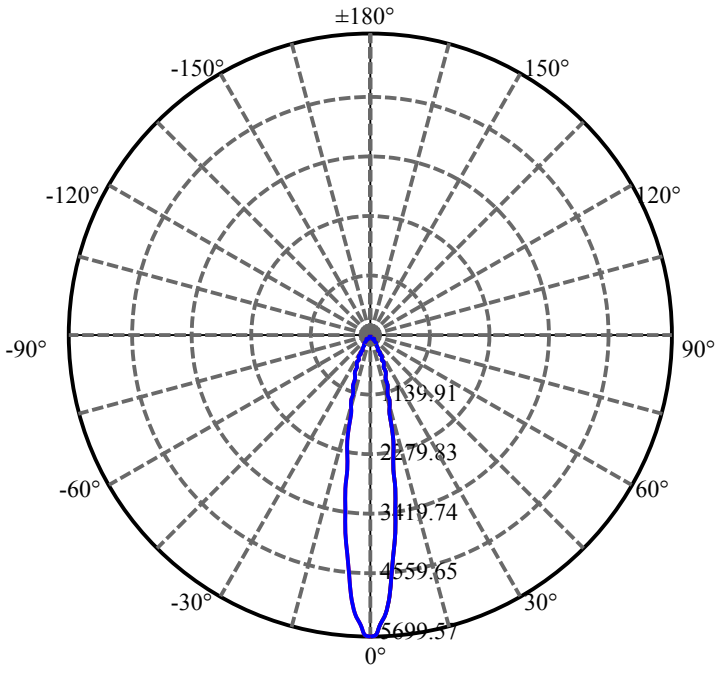
| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-30 | 1038.76 | 81.53% | 88.01% |
| 0-40 | 1126.49 | 88.42% | 95.44% |
| 0-60 | 1155.37 | 90.69% | 97.89% |
| 0-90 | 1179.72 | 92.60% | 99.95% |
| 0-120 | 1179.72 | 92.60% | 99.95% |
| 0-180 | 1180.29 | 92.64% | 100.00% |
| 60-90 | 24.35 | 1.91% | 2.06% |
| 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% |
| 0-25.64 | 944.23 | 74.12% | 80.00% |

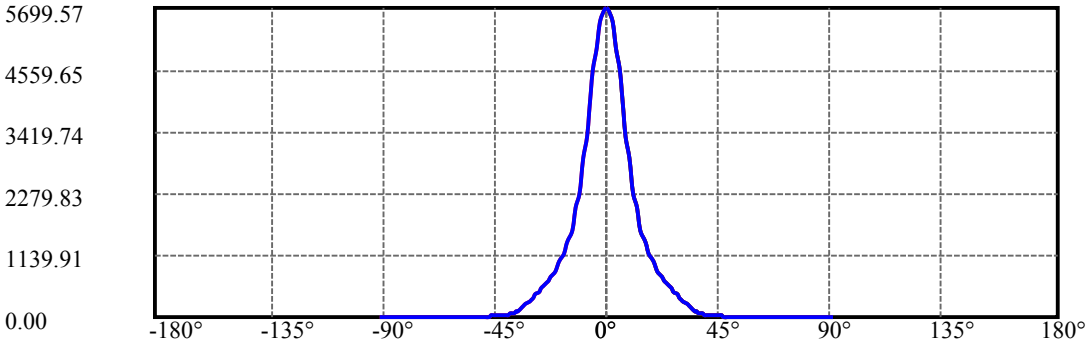
ZONAL LUMEN SUMMARY

| | |
|---|---|
| 0-10 | 369.10 |
| 10-20 | 407.95 |
| 20-30 | 261.71 |
| 30-40 | 87.73 |
| 40-50 | 16.65 |
| 50-60 | 12.23 |
| 60-70 | 10.80 |
| 70-80 | 7.84 |
| 80-90 | 5.71 |
| 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:

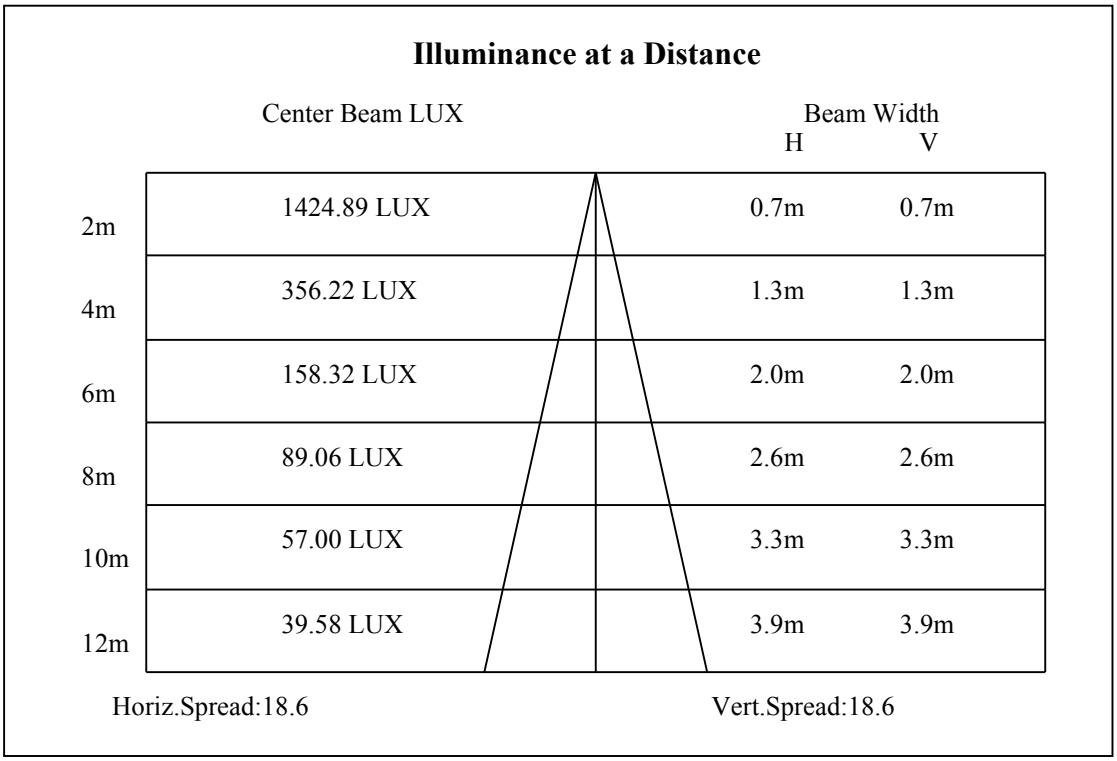
C90/C270:

Field angle(10%Imax):C0/180Left:25.0 Right:25.0
:C90/270Left:25.0 Right:25.0

Beam Angle(50%Imax):C0/180Left:9.2 Right:9.2
:C90/270Left:9.2 Right:9.2

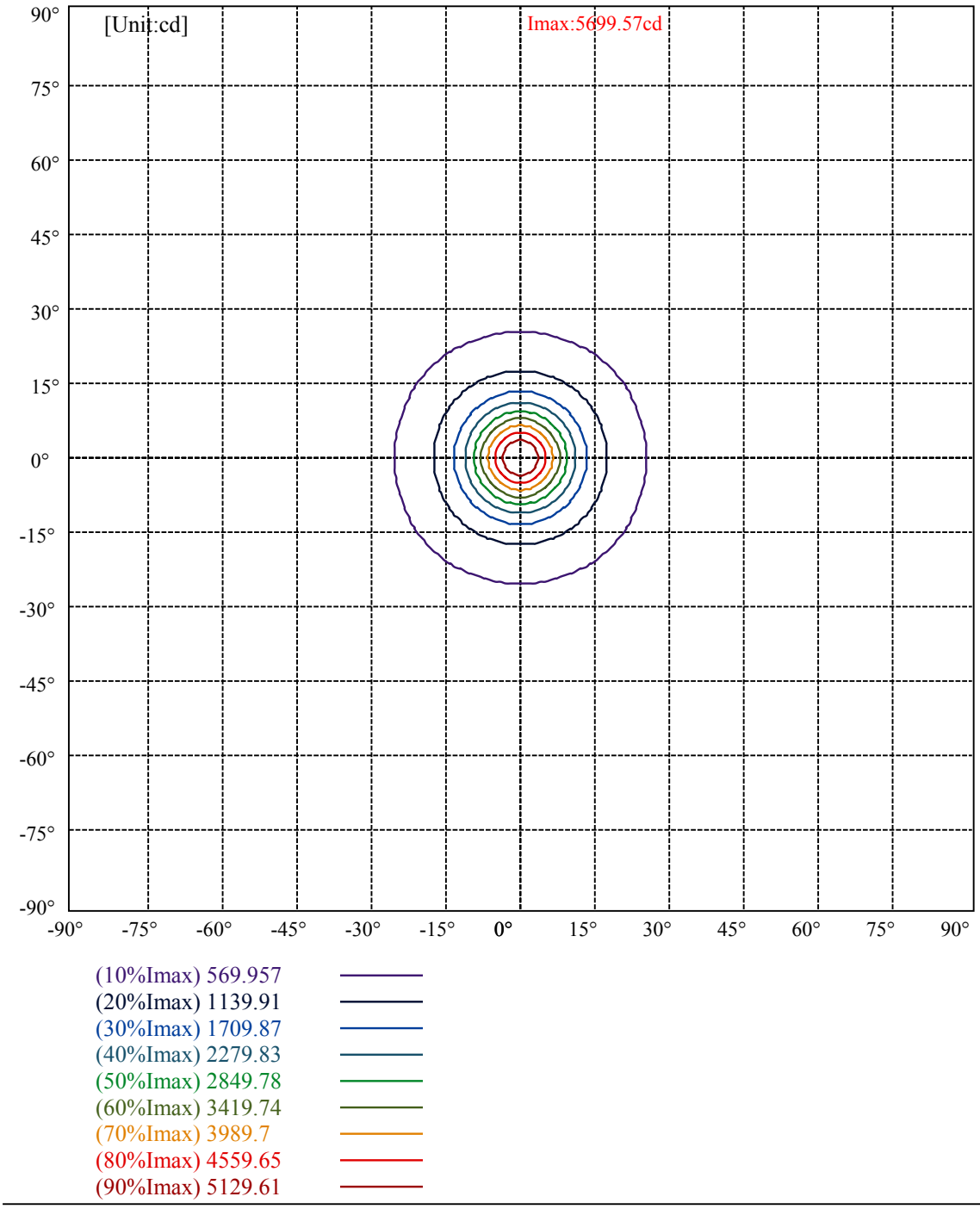
Lux distance Curve





ISO-Intensity(V-H)






(10%Imax) 569.957
(20%Imax) 1139.91
(30%Imax) 1709.87
(40%Imax) 2279.83
(50%Imax) 2849.78
(60%Imax) 3419.74
(70%Imax) 3989.7
(80%Imax) 4559.65
(90%Imax) 5129.61

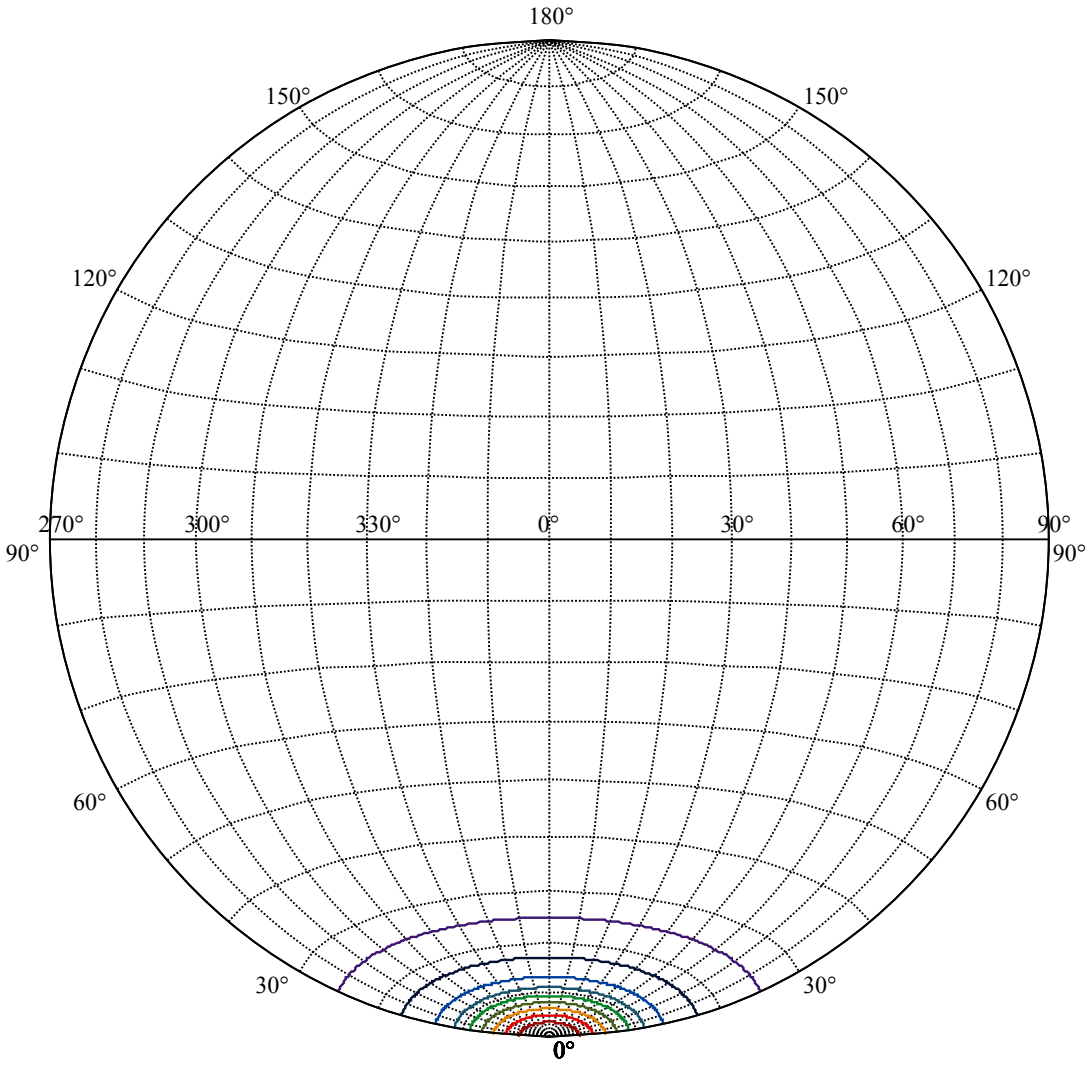
Equipment: GMS1980
Temperature(°C): 25.0

Date: 2024/7/31
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.65

## ISO candela diagram on circular web






House [Unit:cd] Road

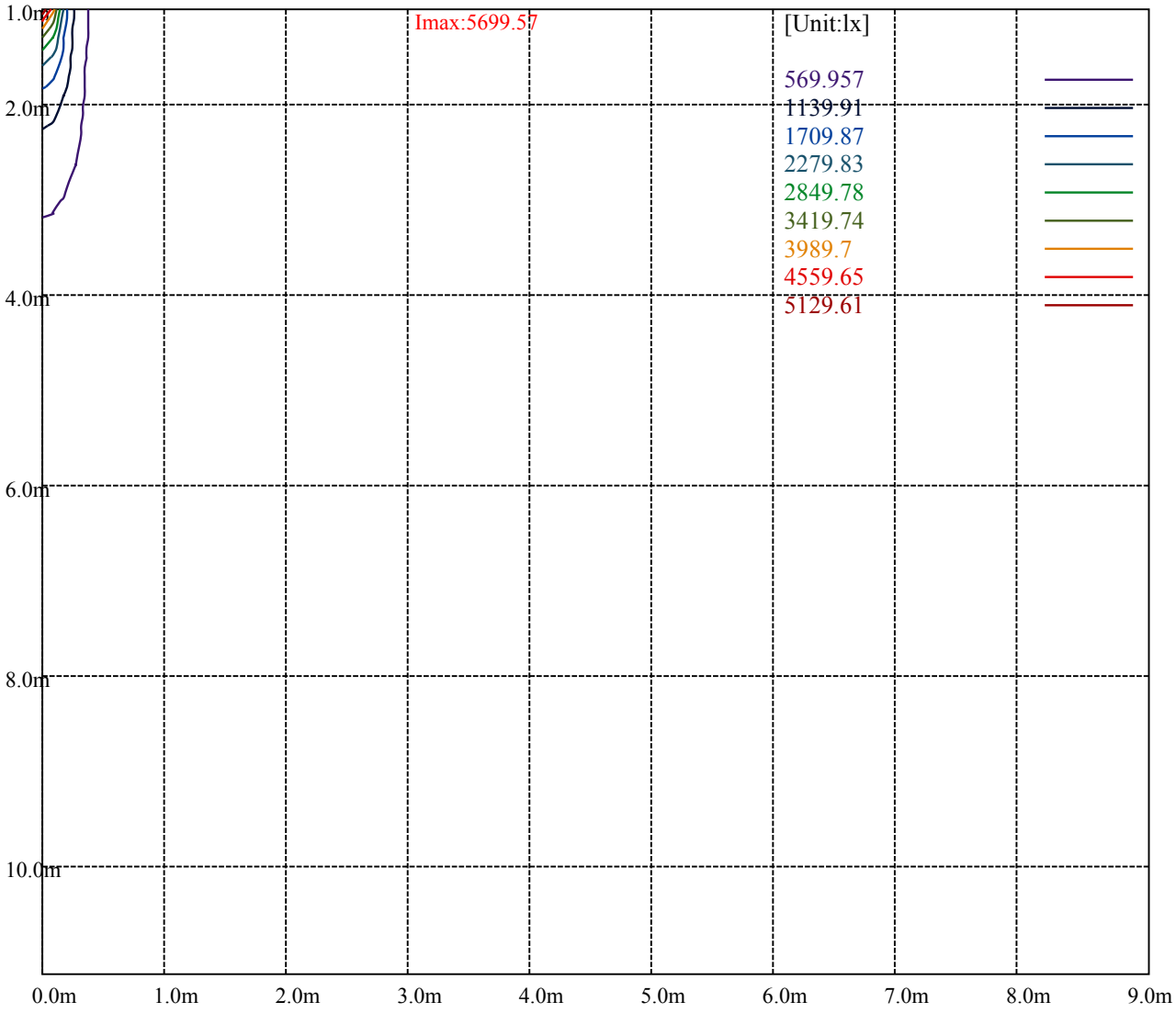
Imax:5699.57

(10%Imax) 569.957
(20%Imax) 1139.91
(30%Imax) 1709.87
(40%Imax) 2279.83
(50%Imax) 2849.78
(60%Imax) 3419.74
(70%Imax) 3989.7
(80%Imax) 4559.65
(90%Imax) 5129.61

Equipment: GMS1980 Date: 2024/7/31 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.65

Space ISO Lux diagram






Equipment: GMS1980
Temperature(°C): 25.0

Date: 2024/7/31
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.65

## Luminance Limitting Curve(no luminous side)



Luminance Table

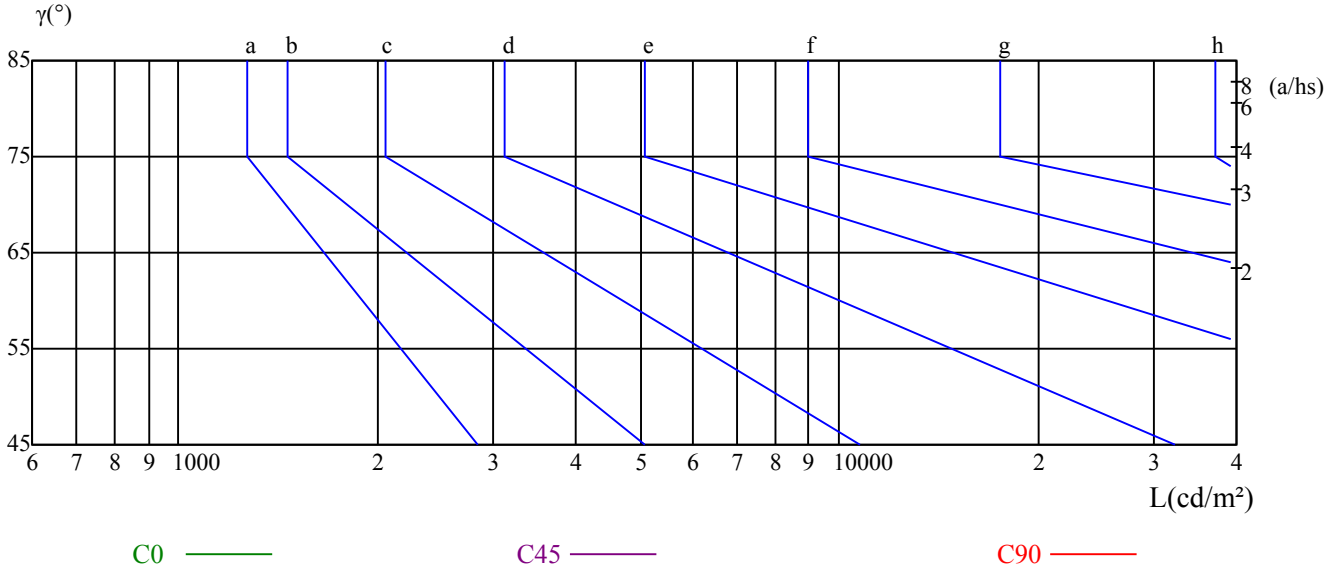
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|---|---|---|---|---|---|---|---|---|---|
| C0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| 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

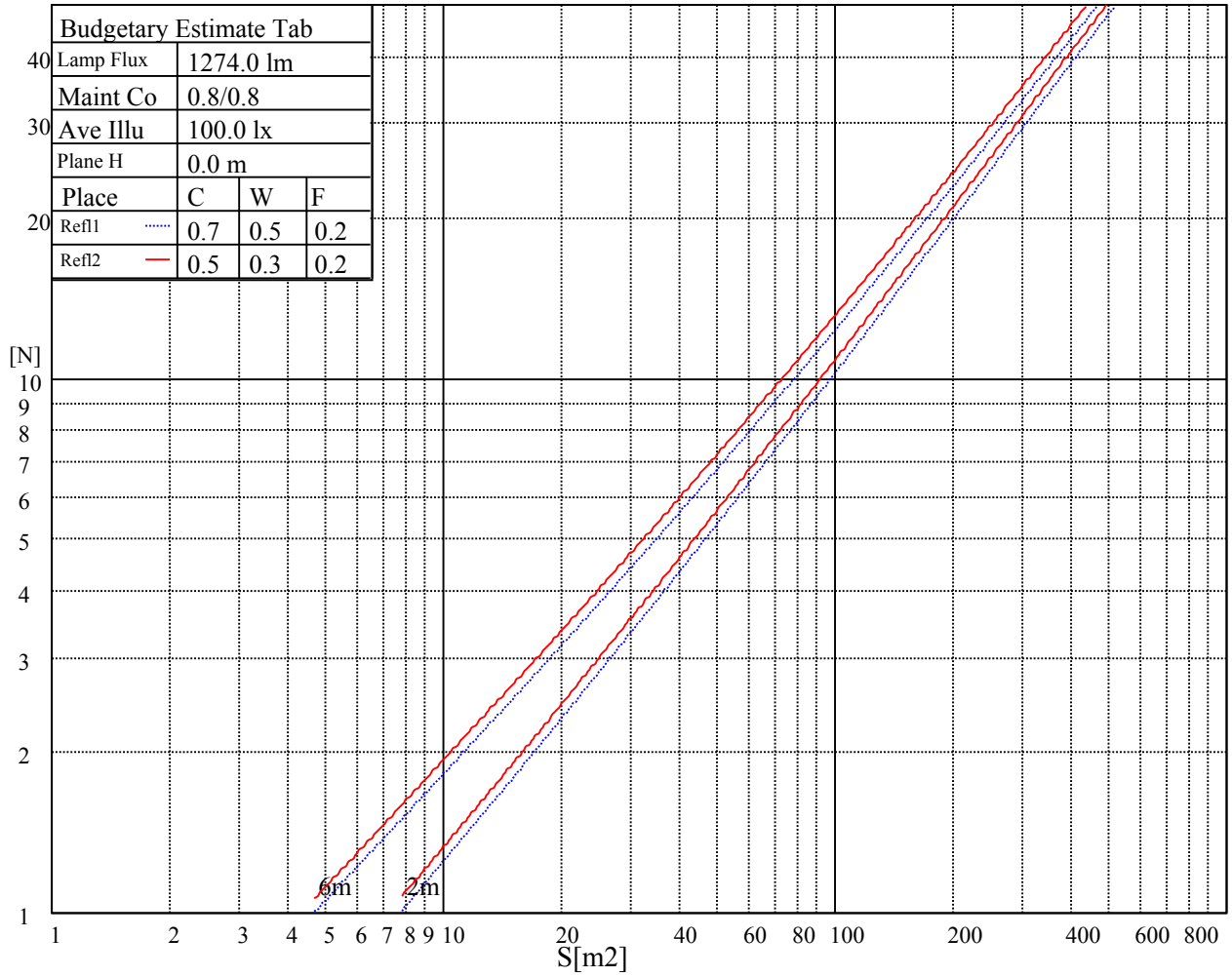


| Illumination assessment according UGR | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Rf of Ceiling | | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
| Rf of Wall | | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| Rf of Floor | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 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: 2024/7/31 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.65

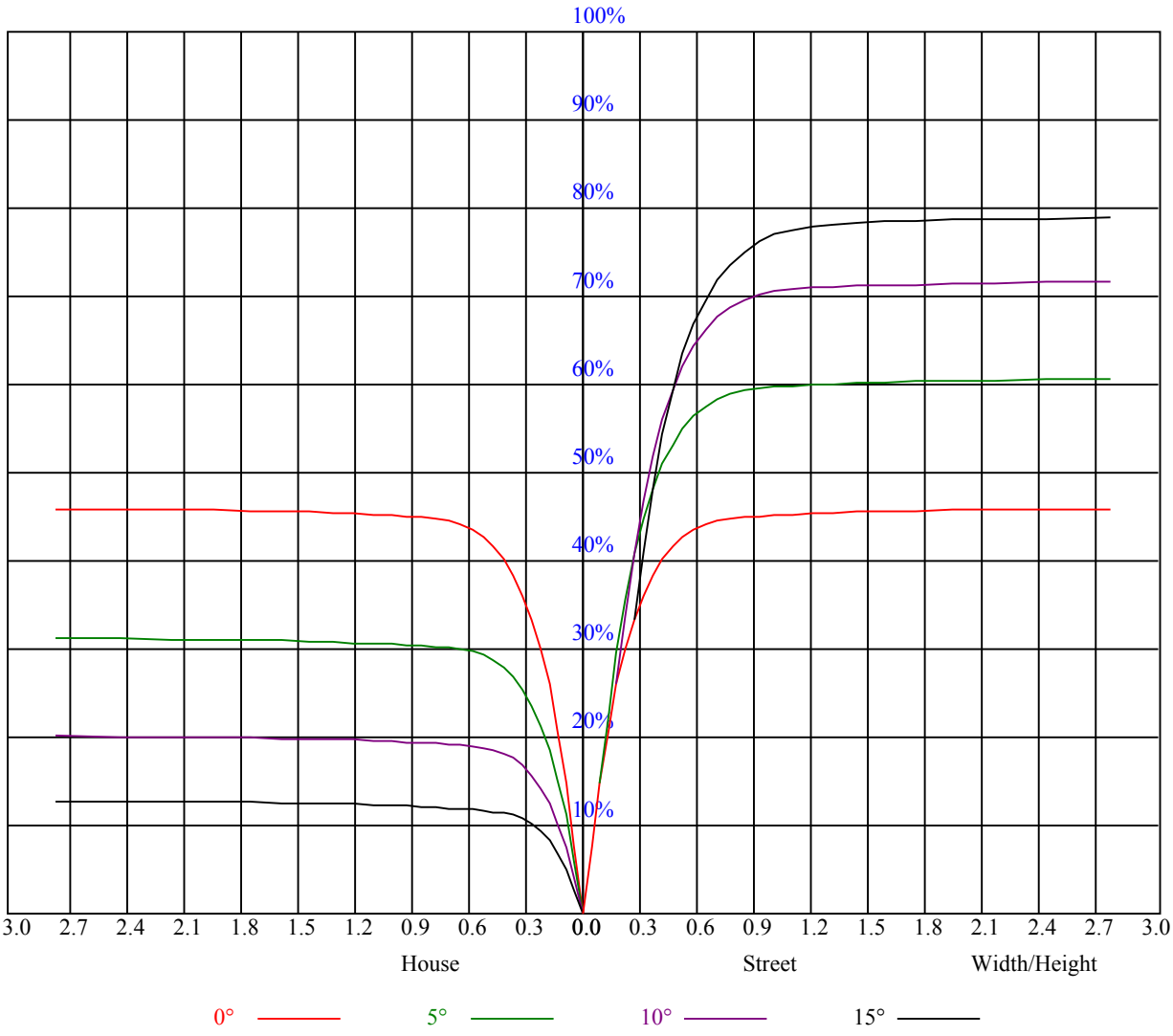
Utilization factor table for indoor luminaire



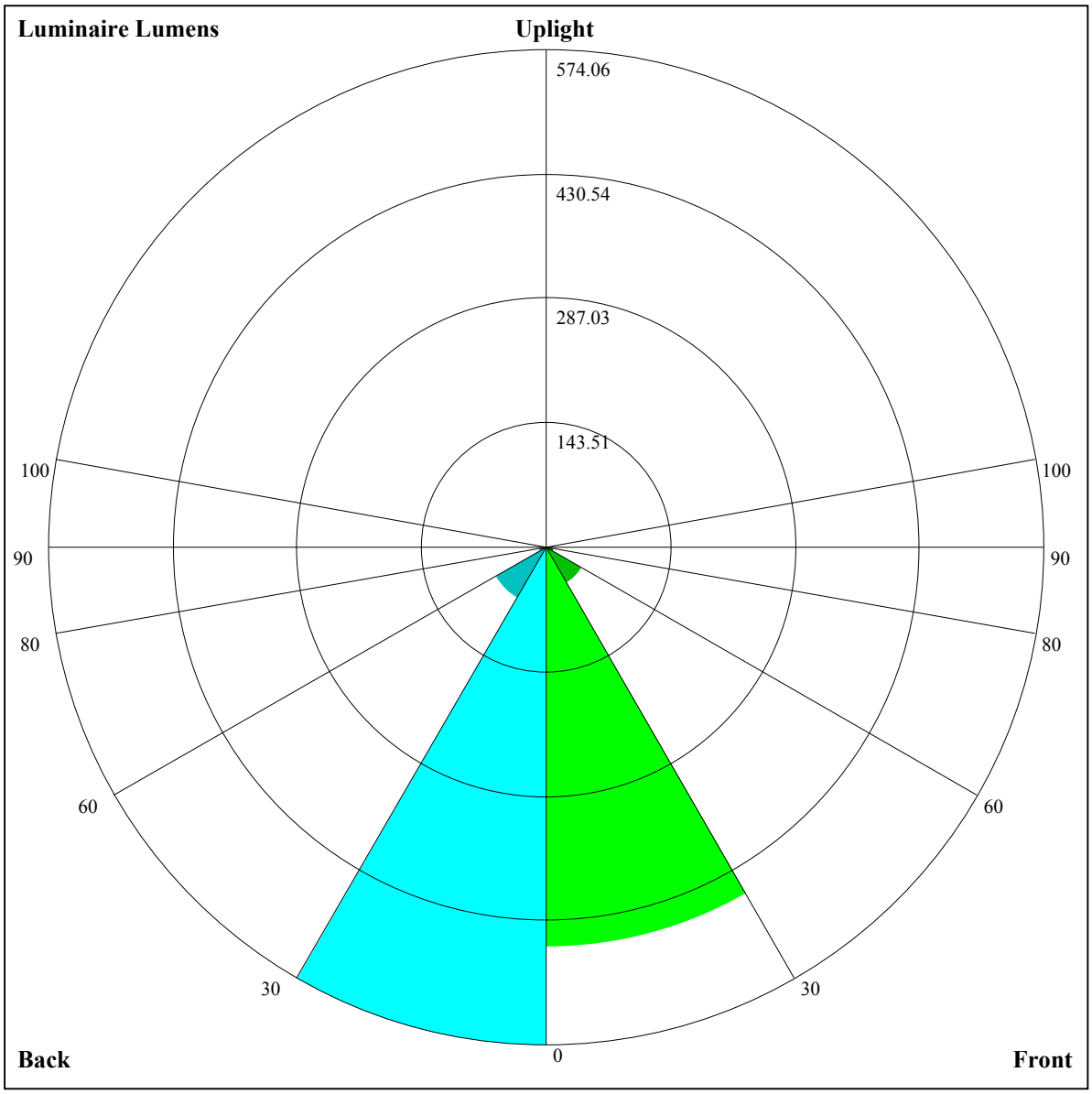
| RHOCC | 80 | | | 70 | | | 50 | | | 30 | | | 10 | | | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RHOW | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | COEFFCIENTS OF UTILIZATION RHOFC=20 CU | | | | | | | | | | | | | | | |
| 0 | 1.10 | 1.10 | 1.10 | 1.08 | 1.08 | 1.08 | 1.03 | 1.03 | 1.03 | 0.99 | 0.99 | 0.99 | 0.95 | 0.95 | 0.95 | 0.93 |
| 1 | 1.04 | 1.02 | 1.00 | 1.02 | 1.00 | 0.98 | 0.98 | 0.96 | 0.95 | 0.94 | 0.93 | 0.92 | 0.91 | 0.90 | 0.90 | 0.88 |
| 2 | 0.98 | 0.95 | 0.92 | 0.96 | 0.93 | 0.91 | 0.93 | 0.91 | 0.89 | 0.91 | 0.89 | 0.87 | 0.88 | 0.87 | 0.85 | 0.84 |
| 3 | 0.93 | 0.89 | 0.86 | 0.92 | 0.88 | 0.85 | 0.89 | 0.86 | 0.84 | 0.87 | 0.85 | 0.83 | 0.85 | 0.83 | 0.82 | 0.80 |
| 4 | 0.89 | 0.84 | 0.81 | 0.88 | 0.84 | 0.81 | 0.86 | 0.83 | 0.80 | 0.84 | 0.81 | 0.79 | 0.82 | 0.80 | 0.78 | 0.77 |
| 5 | 0.85 | 0.81 | 0.77 | 0.84 | 0.80 | 0.77 | 0.82 | 0.79 | 0.76 | 0.81 | 0.78 | 0.76 | 0.80 | 0.77 | 0.75 | 0.74 |
| 6 | 0.81 | 0.77 | 0.74 | 0.81 | 0.77 | 0.74 | 0.79 | 0.76 | 0.73 | 0.78 | 0.75 | 0.73 | 0.77 | 0.74 | 0.72 | 0.71 |
| 7 | 0.78 | 0.74 | 0.71 | 0.78 | 0.74 | 0.71 | 0.77 | 0.73 | 0.70 | 0.76 | 0.72 | 0.70 | 0.75 | 0.72 | 0.70 | 0.69 |
| 8 | 0.75 | 0.71 | 0.68 | 0.75 | 0.71 | 0.68 | 0.74 | 0.70 | 0.68 | 0.73 | 0.70 | 0.67 | 0.72 | 0.69 | 0.67 | 0.66 |
| 9 | 0.73 | 0.69 | 0.66 | 0.72 | 0.68 | 0.66 | 0.72 | 0.68 | 0.65 | 0.71 | 0.68 | 0.65 | 0.70 | 0.67 | 0.65 | 0.64 |
| 10 | 0.70 | 0.66 | 0.64 | 0.70 | 0.66 | 0.63 | 0.69 | 0.66 | 0.63 | 0.69 | 0.65 | 0.63 | 0.68 | 0.65 | 0.63 | 0.62 |

## Coefficient Utilization Curve






| | | |
|---|---|---|
| Equipment: GMS1980 | Date: 2024/7/31 | Operator: NT07 |
| Temperature(°C): 25.0 | Humidity(%): 60.0% | Distance(m): 7.65 |




Luminaire Lumens:
FL=461.02,FM=47.71,FH=9.11,FVH=3.09
BL=574.06,BM=68.42,BH=9.56,BVH=3.18
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 | 5530.43 | 5178.71 | 4792.47 | 4378.71 | 3955.01 | 3434.16 | 3067.22 | 2723.11 | 2355.00 |
| 45.0 | 5906.15 | 5665.62 | 5266.50 | 4893.71 | 4359.98 | 3930.43 | 3520.19 | 3137.45 | 2706.72 |
| 90.0 | 5701.32 | 5472.50 | 5200.95 | 4863.28 | 4392.76 | 3994.22 | 3507.31 | 3135.11 | 2790.41 |
| 135.0 | 5660.35 | 5800.22 | 5825.97 | 5715.37 | 5539.21 | 5258.31 | 4812.36 | 4423.19 | 4004.17 |
| 180.0 | 5530.43 | 5873.38 | 6047.77 | 6114.49 | 6013.25 | 5823.05 | 5519.90 | 5028.90 | 4575.93 |
| 225.0 | 5906.15 | 6050.70 | 6067.09 | 5942.43 | 5714.20 | 5281.71 | 4848.06 | 4365.84 | 3880.69 |
| 270.0 | 5701.32 | 5789.69 | 5766.28 | 5648.06 | 5378.86 | 5059.91 | 4688.30 | 4267.52 | 3729.11 |
| 315.0 | 5660.35 | 5366.57 | 5057.57 | 4697.66 | 4300.29 | 3792.32 | 3390.27 | 3010.46 | 2668.68 |
| 360.0 | 5530.43 | 5178.71 | 4792.47 | 4378.71 | 3955.01 | 3434.16 | 3067.22 | 2723.11 | 2355.00 |

| C/γ(°) | 9.0 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 2113.89 | 1902.62 | 1672.63 | 1518.13 | 1148.97 | 1148.97 | 1123.92 | 1030.41 | 925.94 |
| 45.0 | 2407.67 | 2156.61 | 1933.06 | 1746.37 | 1540.37 | 1410.45 | 1284.04 | 1146.51 | 1052.29 |
| 90.0 | 2485.51 | 2158.95 | 1932.47 | 1739.35 | 1571.39 | 1301.01 | 1153.65 | 1153.65 | 1053.99 |
| 135.0 | 3499.70 | 3118.14 | 2765.83 | 2458.59 | 2132.62 | 1910.82 | 1723.55 | 1561.44 | 1384.12 |
| 180.0 | 3994.22 | 3531.89 | 3098.24 | 2706.72 | 2299.41 | 2039.57 | 1822.45 | 1642.20 | 1461.95 |
| 225.0 | 3287.27 | 2872.34 | 2510.09 | 2205.77 | 1901.45 | 1714.18 | 1522.81 | 1303.94 | 1160.68 |
| 270.0 | 3301.90 | 2909.21 | 2487.26 | 2201.67 | 1908.48 | 1717.11 | 1554.42 | 1413.38 | 1257.71 |
| 315.0 | 2295.90 | 2056.54 | 1800.21 | 1625.23 | 1478.92 | 1148.80 | 1148.80 | 1096.54 | 984.06 |
| 360.0 | 2113.89 | 1902.62 | 1672.63 | 1518.13 | 1148.97 | 1148.97 | 1123.92 | 1030.41 | 925.94 |

| C/γ(°) | 18.0 | 19.0 | 20.0 | 21.0 | 22.0 | 23.0 | 24.0 | 25.0 | 26.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 856.48 | 792.57 | 732.12 | 675.64 | 608.93 | 558.48 | 509.32 | 450.45 | 404.51 |
| 45.0 | 953.98 | 881.99 | 816.45 | 737.44 | 680.09 | 628.59 | 576.51 | 515.06 | 464.73 |
| 90.0 | 946.72 | 871.87 | 802.40 | 722.99 | 666.40 | 597.40 | 545.84 | 499.14 | 442.49 |
| 135.0 | 1262.97 | 1154.71 | 1036.49 | 954.56 | 863.27 | 797.72 | 736.27 | 664.29 | 611.03 |
| 180.0 | 1333.20 | 1213.82 | 1090.33 | 1006.06 | 928.81 | 835.76 | 774.90 | 699.40 | 644.98 |
| 225.0 | 1135.69 | 1043.40 | 964.45 | 893.11 | 809.13 | 747.22 | 689.34 | 633.92 | 569.07 |
| 270.0 | 1151.20 | 1049.37 | 962.75 | 872.63 | 801.82 | 740.37 | 678.92 | 613.37 | 563.04 |
| 315.0 | 904.76 | 834.94 | 771.91 | 711.46 | 640.76 | 587.16 | 533.84 | 484.27 | 424.23 |
| 360.0 | 856.48 | 792.57 | 732.12 | 675.64 | 608.93 | 558.48 | 509.32 | 450.45 | 404.51 |

| C/γ(°) | 27.0 | 28.0 | 29.0 | 30.0 | 31.0 | 32.0 | 33.0 | 34.0 | 35.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 359.09 | 299.40 | 253.93 | 203.25 | 166.56 | 134.37 | 105.98 | 77.25 | 59.93 |
| 45.0 | 417.32 | 369.92 | 323.10 | 299.69 | 299.69 | 183.88 | 141.39 | 112.60 | 82.87 |
| 90.0 | 397.48 | 352.77 | 308.71 | 256.62 | 217.65 | 182.47 | 149.88 | 114.65 | 91.24 |
| 135.0 | 559.53 | 511.55 | 450.68 | 405.03 | 359.39 | 316.08 | 304.38 | 253.46 | 186.86 |
| 180.0 | 594.06 | 543.73 | 493.99 | 433.71 | 386.89 | 339.49 | 305.55 | 305.55 | 199.62 |
| 225.0 | 519.56 | 471.40 | 425.34 | 366.82 | 321.11 | 265.11 | 224.43 | 187.62 | 145.25 |
| 270.0 | 498.08 | 451.85 | 406.20 | 345.34 | 300.86 | 300.86 | 205.41 | 167.84 | 138.41 |
| 315.0 | 377.59 | 320.59 | 275.58 | 234.21 | 188.44 | 155.44 | 126.06 | 94.92 | 74.67 |
| 360.0 | 359.09 | 299.40 | 253.93 | 203.25 | 166.56 | 134.37 | 105.98 | 77.25 | 59.93 |

| C/γ(°) | 36.0 | 37.0 | 38.0 | 39.0 | 40.0 | 41.0 | 42.0 | 43.0 | 44.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 47.29 | 38.27 | 30.49 | 26.34 | 23.58 | 21.71 | 19.78 | 18.55 | 17.26 |
| 45.0 | 64.37 | 50.45 | 38.10 | 31.25 | 26.63 | 23.64 | 21.07 | 19.55 | 18.38 |
| 90.0 | 72.28 | 54.78 | 44.48 | 36.81 | 30.67 | 27.51 | 25.34 | 23.00 | 21.65 |
| 135.0 | 154.09 | 117.57 | 92.58 | 72.10 | 53.55 | 42.66 | 33.47 | 28.68 | 25.40 |
| 180.0 | 164.27 | 132.79 | 99.61 | 78.01 | 57.12 | 44.83 | 36.05 | 29.03 | 25.46 |
| 225.0 | 116.05 | 91.00 | 70.75 | 51.79 | 41.20 | 33.88 | 29.03 | 25.22 | 23.17 |
| 270.0 | 110.67 | 81.29 | 64.14 | 50.21 | 40.97 | 32.66 | 28.21 | 25.22 | 22.88 |
| 315.0 | 58.99 | 47.05 | 36.46 | 30.37 | 26.16 | 23.29 | 20.83 | 19.20 | 17.91 |
| 360.0 | 47.29 | 38.27 | 30.49 | 26.34 | 23.58 | 21.71 | 19.78 | 18.55 | 17.26 |

Intensity data(cd)



| C/γ(°) | 45.0 | 46.0 | 47.0 | 48.0 | 49.0 | 50.0 | 51.0 | 52.0 | 53.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 16.33 | 15.57 | 14.86 | 14.40 | 14.05 | 13.64 | 13.40 | 13.28 | 13.17 |
| 45.0 | 17.32 | 16.21 | 15.57 | 14.92 | 14.34 | 13.93 | 13.58 | 13.34 | 13.23 |
| 90.0 | 20.48 | 19.43 | 18.32 | 17.56 | 16.97 | 16.39 | 15.80 | 15.45 | 15.22 |
| 135.0 | 23.23 | 21.13 | 19.66 | 18.49 | 17.56 | 16.39 | 15.74 | 15.22 | 14.69 |
| 180.0 | 23.06 | 20.83 | 19.43 | 18.14 | 17.09 | 16.15 | 15.10 | 14.46 | 13.93 |
| 225.0 | 21.65 | 20.01 | 18.90 | 17.91 | 16.91 | 16.27 | 15.57 | 15.04 | 14.57 |
| 270.0 | 20.72 | 19.31 | 17.85 | 16.80 | 15.92 | 15.04 | 14.51 | 14.05 | 13.75 |
| 315.0 | 16.68 | 15.80 | 14.98 | 14.40 | 13.93 | 13.58 | 13.17 | 13.05 | 12.99 |
| 360.0 | 16.33 | 15.57 | 14.86 | 14.40 | 14.05 | 13.64 | 13.40 | 13.28 | 13.17 |

| C/γ(°) | 54.0 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 | 60.0 | 61.0 | 62.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 13.11 | 13.23 | 13.28 | 13.28 | 13.17 | 12.93 | 12.76 | 12.23 | 11.70 |
| 45.0 | 13.11 | 13.11 | 13.17 | 13.17 | 13.17 | 13.11 | 12.82 | 12.58 | 12.17 |
| 90.0 | 14.98 | 14.81 | 14.63 | 14.57 | 14.40 | 14.22 | 13.75 | 13.28 | 12.70 |
| 135.0 | 14.16 | 13.81 | 13.58 | 13.34 | 13.23 | 13.17 | 13.05 | 12.87 | 12.58 |
| 180.0 | 13.34 | 12.99 | 12.70 | 12.41 | 12.29 | 12.17 | 12.17 | 12.17 | 12.23 |
| 225.0 | 14.16 | 13.75 | 13.52 | 13.28 | 13.17 | 13.05 | 12.99 | 12.93 | 12.82 |
| 270.0 | 13.40 | 13.17 | 13.05 | 12.93 | 12.93 | 12.99 | 12.99 | 12.87 | 12.70 |
| 315.0 | 12.87 | 12.76 | 12.82 | 12.76 | 12.64 | 12.35 | 12.06 | 11.59 | 11.06 |
| 360.0 | 13.11 | 13.23 | 13.28 | 13.28 | 13.17 | 12.93 | 12.76 | 12.23 | 11.70 |

| C/γ(°) | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 | 70.0 | 71.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 11.18 | 10.71 | 10.36 | 10.18 | 9.77 | 9.19 | 8.78 | 8.49 | 8.25 |
| 45.0 | 11.47 | 11.06 | 10.59 | 10.07 | 10.07 | 10.07 | 9.48 | 8.72 | 8.13 |
| 90.0 | 12.11 | 11.41 | 10.94 | 10.48 | 10.12 | 9.66 | 9.07 | 8.43 | 8.08 |
| 135.0 | 12.23 | 11.94 | 11.47 | 10.94 | 10.36 | 9.89 | 9.42 | 8.95 | 8.66 |
| 180.0 | 12.06 | 11.88 | 11.65 | 11.29 | 10.77 | 10.36 | 9.89 | 9.31 | 8.95 |
| 225.0 | 12.47 | 12.23 | 11.65 | 11.18 | 10.65 | 9.95 | 9.42 | 9.01 | 8.60 |
| 270.0 | 12.35 | 12.00 | 11.41 | 10.89 | 10.18 | 9.71 | 9.19 | 8.72 | 8.43 |
| 315.0 | 10.53 | 9.89 | 9.42 | 9.01 | 8.60 | 8.37 | 8.08 | 7.84 | 7.67 |
| 360.0 | 11.18 | 10.71 | 10.36 | 10.18 | 9.77 | 9.19 | 8.78 | 8.49 | 8.25 |

| C/γ(°) | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0 | 80.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 7.96 | 7.78 | 7.55 | 7.37 | 7.20 | 6.96 | 6.85 | 6.73 | 6.55 |
| 45.0 | 7.84 | 7.61 | 7.43 | 7.20 | 7.02 | 6.85 | 6.73 | 6.50 | 6.38 |
| 90.0 | 7.78 | 7.49 | 7.32 | 7.14 | 6.91 | 6.73 | 6.61 | 6.44 | 6.26 |
| 135.0 | 8.31 | 8.08 | 7.78 | 7.49 | 7.37 | 7.20 | 7.02 | 6.85 | 6.67 |
| 180.0 | 8.66 | 8.31 | 8.02 | 7.78 | 7.61 | 7.37 | 7.26 | 7.08 | 6.91 |
| 225.0 | 8.13 | 7.84 | 7.55 | 7.37 | 7.14 | 6.96 | 6.85 | 6.61 | 6.50 |
| 270.0 | 8.19 | 7.90 | 7.61 | 7.43 | 7.26 | 7.02 | 6.85 | 6.73 | 6.55 |
| 315.0 | 7.43 | 7.26 | 7.02 | 6.85 | 6.67 | 6.55 | 6.38 | 6.26 | 6.09 |
| 360.0 | 7.96 | 7.78 | 7.55 | 7.37 | 7.20 | 6.96 | 6.85 | 6.73 | 6.55 |

| C/γ(°) | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 6.44 | 6.38 | 6.20 | 6.09 | 5.91 | 5.50 | 5.21 | 5.15 | 5.15 |
| 45.0 | 6.26 | 6.14 | 5.91 | 5.85 | 5.74 | 5.44 | 5.21 | 5.09 | 5.03 |
| 90.0 | 6.14 | 5.97 | 5.85 | 5.74 | 5.56 | 5.27 | 5.15 | 5.03 | 5.03 |
| 135.0 | 6.50 | 6.38 | 6.26 | 6.03 | 5.97 | 5.74 | 5.50 | 5.33 | 5.27 |
| 180.0 | 6.79 | 6.61 | 6.50 | 6.32 | 6.20 | 6.03 | 5.79 | 5.68 | 5.62 |
| 225.0 | 6.38 | 6.26 | 6.09 | 5.97 | 5.79 | 5.56 | 5.44 | 5.33 | 5.21 |
| 270.0 | 6.38 | 6.20 | 6.09 | 5.91 | 5.79 | 5.56 | 5.38 | 5.27 | 5.21 |
| 315.0 | 6.03 | 5.91 | 5.79 | 5.68 | 5.50 | 5.27 | 5.15 | 5.03 | 5.03 |
| 360.0 | 6.44 | 6.38 | 6.20 | 6.09 | 5.91 | 5.50 | 5.21 | 5.15 | 5.15 |

Intensity data(cd)



| C/γ(°) | 90.0 |
|---|---|
| 0.0 | 5.21 |
| 45.0 | 5.09 |
| 90.0 | 4.97 |
| 135.0 | 5.15 |
| 180.0 | 5.50 |
| 225.0 | 5.21 |
| 270.0 | 5.03 |
| 315.0 | 5.03 |
| 360.0 | 5.21 |