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

Nata

Client:
LumCAT: 2-2752-L
Luminaire: 92.70.412.00
Report No: 2024815-B012
Ballast type:
Test No: 2024815-C012
LampCAT: BRIDGELUX V13B LES13
Lamp flux(lm): 2544.0
Number of Lamps: 1
Length(mm): 0
Phm Type: C

Voltage(V): 35.330
Current(A): 0.450
Power (W): 15.890
PF: 0.000
Width(mm): 0
Height(mm): 0

## Photometric Results

Lumens(lm): 2362.20, Efficiency(%): 92.85% , Luminous Efficacy(lm/W): 148.66
Central intensity(cd): 8547.871, Maximum intensity(cd): 8547.871
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=25.0
[C90/270]Total=25.0
Field angle(10%Imax): [C0/180]Total=56.0
[C90/270]Total=56.0
Maximum s/h(1/2): C0_180=0.42 C90_270=0.42
Maximum s/h(1/4): C0_180=0.44 C90_270=0.44
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 92.85%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 99.237%

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 0.0 | 8547.871 | 0.000 | 0 | 0.00% | 0.00% |
| 1.0 | 8496.531 | 8.155 | 8.155 | 0.32% | 0.35% |
| 2.0 | 8358.088 | 24.191 | 32.347 | 0.95% | 1.37% |
| 3.0 | 8154.651 | 39.493 | 71.84 | 1.55% | 3.04% |
| 4.0 | 7876.208 | 53.660 | 125.5 | 2.11% | 5.31% |
| 5.0 | 7564.204 | 66.424 | 191.924 | 2.61% | 8.12% |
| 6.0 | 7142.075 | 77.285 | 269.209 | 3.04% | 11.40% |
| 7.0 | 6744.465 | 86.194 | 355.403 | 3.39% | 15.05% |
| 8.0 | 6337.526 | 93.625 | 449.028 | 3.68% | 19.01% |
| 9.0 | 5899.037 | 99.171 | 548.199 | 3.90% | 23.21% |
| 10.0 | 5428.997 | 102.515 | 650.714 | 4.03% | 27.55% |
| 11.0 | 4975.901 | 103.966 | 754.68 | 4.09% | 31.95% |
| 12.0 | 4489.494 | 103.470 | 858.15 | 4.07% | 36.33% |
| 13.0 | 4068.765 | 101.565 | 959.715 | 3.99% | 40.63% |
| 14.0 | 3636.681 | 98.629 | 1058.344 | 3.88% | 44.80% |
| 15.0 | 3258.717 | 94.663 | 1153.007 | 3.72% | 48.81% |
| 16.0 | 2858.953 | 89.641 | 1242.648 | 3.52% | 52.61% |
| 17.0 | 2553.072 | 84.280 | 1326.928 | 3.31% | 56.17% |
| 18.0 | 2266.134 | 79.458 | 1406.386 | 3.12% | 59.54% |
| 19.0 | 2019.937 | 74.569 | 1480.955 | 2.93% | 62.69% |
| 20.0 | 1818.662 | 70.257 | 1551.212 | 2.76% | 65.67% |
| 21.0 | 1643.925 | 66.489 | 1617.701 | 2.61% | 68.48% |
| 22.0 | 1507.703 | 63.333 | 1681.034 | 2.49% | 71.16% |
| 23.0 | 1345.607 | 59.870 | 1740.904 | 2.35% | 73.70% |
| 24.0 | 1234.016 | 56.400 | 1797.304 | 2.22% | 76.09% |
| 25.0 | 1122.932 | 53.592 | 1850.896 | 2.11% | 78.35% |
| 26.0 | 1050.212 | 51.297 | 1902.193 | 2.02% | 80.53% |
| 27.0 | 945.987 | 48.837 | 1951.031 | 1.92% | 82.59% |
| 28.0 | 856.131 | 45.626 | 1996.656 | 1.79% | 84.53% |
| 29.0 | 766.092 | 42.442 | 2039.098 | 1.67% | 86.32% |
| 30.0 | 674.935 | 38.907 | 2078.006 | 1.53% | 87.97% |
| 31.0 | 588.004 | 35.146 | 2113.152 | 1.38% | 89.46% |
| 32.0 | 506.683 | 31.361 | 2144.513 | 1.23% | 90.78% |
| 33.0 | 422.951 | 27.387 | 2171.9 | 1.08% | 91.94% |
| 34.0 | 358.792 | 23.658 | 2195.558 | 0.93% | 92.95% |
| 35.0 | 300.112 | 20.463 | 2216.021 | 0.80% | 93.81% |
| 36.0 | 263.463 | 17.944 | 2233.966 | 0.71% | 94.57% |
| 37.0 | 219.777 | 15.761 | 2249.726 | 0.62% | 95.24% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 38.0 | 185.289 | 13.521 | 2263.247 | 0.53% | 95.81% |
| 39.0 | 145.066 | 11.276 | 2274.523 | 0.44% | 96.29% |
| 40.0 | 119.672 | 9.233 | 2283.756 | 0.36% | 96.68% |
| 41.0 | 98.331 | 7.763 | 2291.519 | 0.31% | 97.01% |
| 42.0 | 80.486 | 6.497 | 2298.016 | 0.26% | 97.28% |
| 43.0 | 67.530 | 5.483 | 2303.499 | 0.22% | 97.51% |
| 44.0 | 55.342 | 4.638 | 2308.136 | 0.18% | 97.71% |
| 45.0 | 46.465 | 3.913 | 2312.049 | 0.15% | 97.88% |
| 46.0 | 39.915 | 3.378 | 2315.427 | 0.13% | 98.02% |
| 47.0 | 34.869 | 2.974 | 2318.401 | 0.12% | 98.15% |
| 48.0 | 31.137 | 2.668 | 2321.07 | 0.10% | 98.26% |
| 49.0 | 28.351 | 2.443 | 2323.512 | 0.10% | 98.36% |
| 50.0 | 26.288 | 2.278 | 2325.791 | 0.09% | 98.46% |
| 51.0 | 24.704 | 2.157 | 2327.948 | 0.08% | 98.55% |
| 52.0 | 23.357 | 2.062 | 2330.01 | 0.08% | 98.64% |
| 53.0 | 22.254 | 1.984 | 2331.994 | 0.08% | 98.72% |
| 54.0 | 21.216 | 1.916 | 2333.91 | 0.08% | 98.80% |
| 55.0 | 20.309 | 1.854 | 2335.764 | 0.07% | 98.88% |
| 56.0 | 19.553 | 1.801 | 2337.565 | 0.07% | 98.96% |
| 57.0 | 18.679 | 1.748 | 2339.313 | 0.07% | 99.03% |
| 58.0 | 17.812 | 1.687 | 2341.001 | 0.07% | 99.10% |
| 59.0 | 16.873 | 1.622 | 2342.622 | 0.06% | 99.17% |
| 60.0 | 16.012 | 1.554 | 2344.176 | 0.06% | 99.24% |
| 61.0 | 15.059 | 1.483 | 2345.659 | 0.06% | 99.30% |
| 62.0 | 13.936 | 1.397 | 2347.056 | 0.05% | 99.36% |
| 63.0 | 12.996 | 1.310 | 2348.366 | 0.05% | 99.41% |
| 64.0 | 12.096 | 1.231 | 2349.597 | 0.05% | 99.47% |
| 65.0 | 11.189 | 1.152 | 2350.749 | 0.05% | 99.52% |
| 66.0 | 10.289 | 1.072 | 2351.821 | 0.04% | 99.56% |
| 67.0 | 9.514 | 0.996 | 2352.817 | 0.04% | 99.60% |
| 68.0 | 8.699 | 0.923 | 2353.739 | 0.04% | 99.64% |
| 69.0 | 8.016 | 0.853 | 2354.592 | 0.03% | 99.68% |
| 70.0 | 7.378 | 0.791 | 2355.382 | 0.03% | 99.71% |
| 71.0 | 6.675 | 0.726 | 2356.109 | 0.03% | 99.74% |
| 72.0 | 6.071 | 0.663 | 2356.772 | 0.03% | 99.77% |
| 73.0 | 5.506 | 0.605 | 2357.377 | 0.02% | 99.80% |
| 74.0 | 5.033 | 0.554 | 2357.931 | 0.02% | 99.82% |
| 75.0 | 4.645 | 0.511 | 2358.442 | 0.02% | 99.84% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 76.0 | 4.218 | 0.470 | 2358.913 | 0.02% | 99.86% |
| 77.0 | 3.870 | 0.431 | 2359.344 | 0.02% | 99.88% |
| 78.0 | 3.535 | 0.396 | 2359.74 | 0.02% | 99.90% |
| 79.0 | 3.187 | 0.361 | 2360.102 | 0.01% | 99.91% |
| 80.0 | 2.884 | 0.327 | 2360.429 | 0.01% | 99.92% |
| 81.0 | 2.582 | 0.296 | 2360.725 | 0.01% | 99.94% |
| 82.0 | 2.319 | 0.266 | 2360.99 | 0.01% | 99.95% |
| 83.0 | 2.004 | 0.235 | 2361.225 | 0.01% | 99.96% |
| 84.0 | 1.761 | 0.205 | 2361.43 | 0.01% | 99.97% |
| 85.0 | 1.544 | 0.180 | 2361.611 | 0.01% | 99.97% |
| 86.0 | 1.347 | 0.158 | 2361.769 | 0.01% | 99.98% |
| 87.0 | 1.163 | 0.137 | 2361.906 | 0.01% | 99.99% |
| 88.0 | 0.979 | 0.117 | 2362.024 | 0.00% | 99.99% |
| 89.0 | 0.795 | 0.097 | 2362.121 | 0.00% | 100.00% |
| 90.0 | 0.690 | 0.081 | 2362.202 | 0.00% | 100.00% |

## Zonal flux distribution table



ZONAL LUMEN SUMMARY

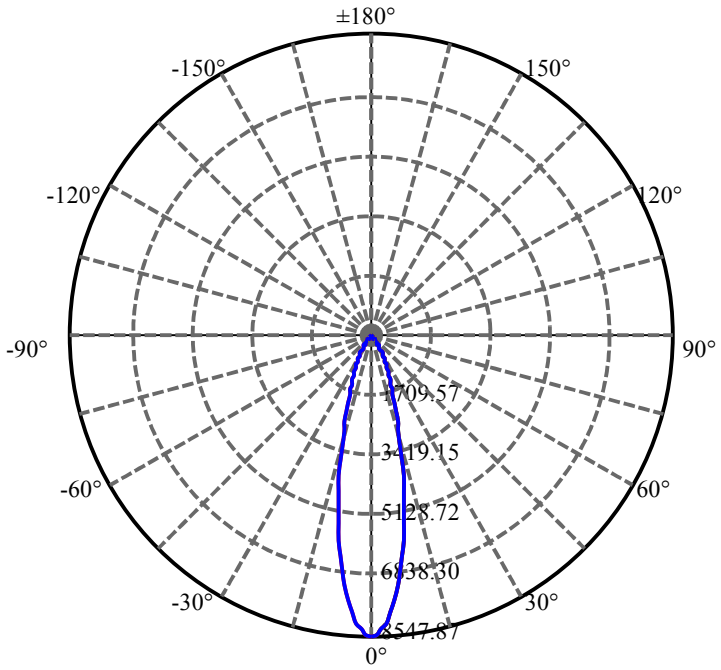
| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-30 | 2078.01 | 81.68% | 87.97% |
| 0-40 | 2283.76 | 89.77% | 96.68% |
| 0-60 | 2344.18 | 92.15% | 99.24% |
| 0-90 | 2362.12 | 92.85% | 100.00% |
| 0-120 | 2362.12 | 92.85% | 100.00% |
| 0-180 | 2362.20 | 92.85% | 100.00% |
| 60-90 | 17.94 | 0.71% | 0.76% |
| 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% |
| 0-25.76 | 1889.76 | 74.28% | 80.00% |

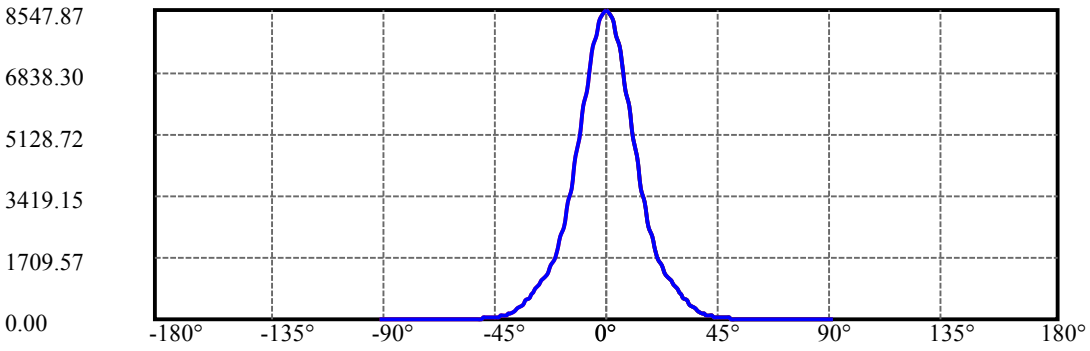
ZONAL LUMEN SUMMARY

| | |
|---|---|
| 0-10 | 650.71 |
| 10-20 | 900.50 |
| 20-30 | 526.79 |
| 30-40 | 205.75 |
| 40-50 | 42.03 |
| 50-60 | 18.39 |
| 60-70 | 11.21 |
| 70-80 | 5.05 |
| 80-90 | 1.69 |
| 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:

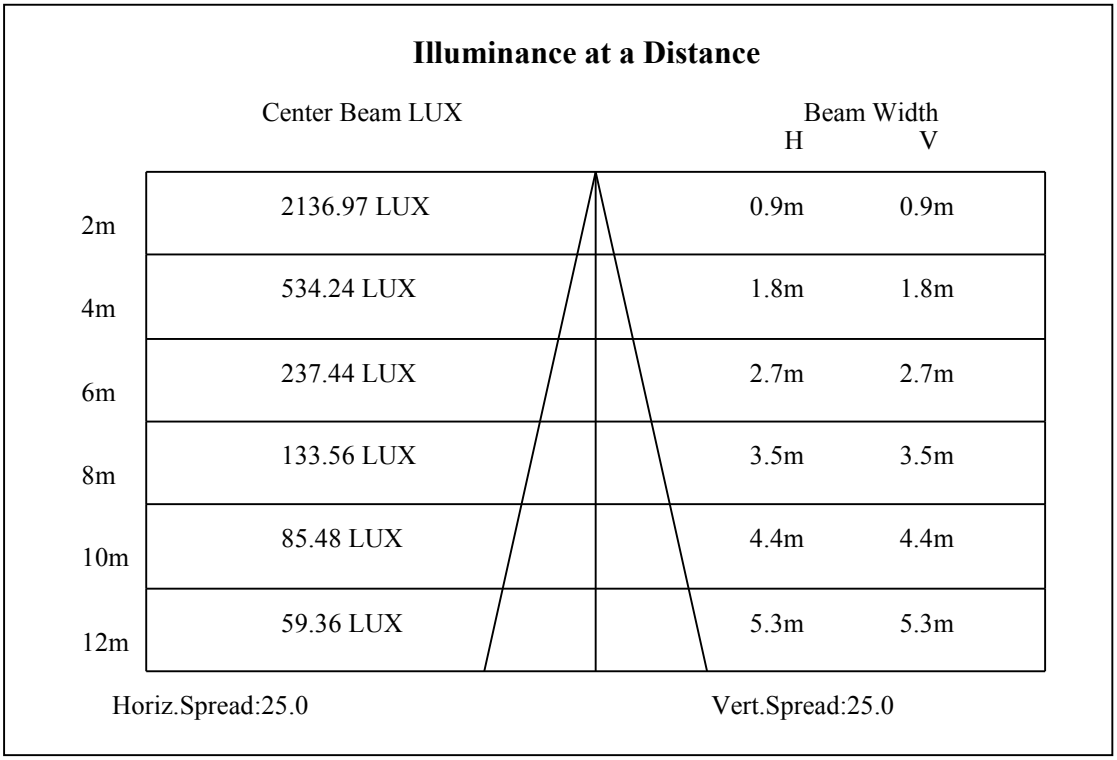
C90/C270:

Field angle(10%Imax):C0/180Left:28.0 Right:28.0
:C90/270Left:28.0 Right:28.0

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

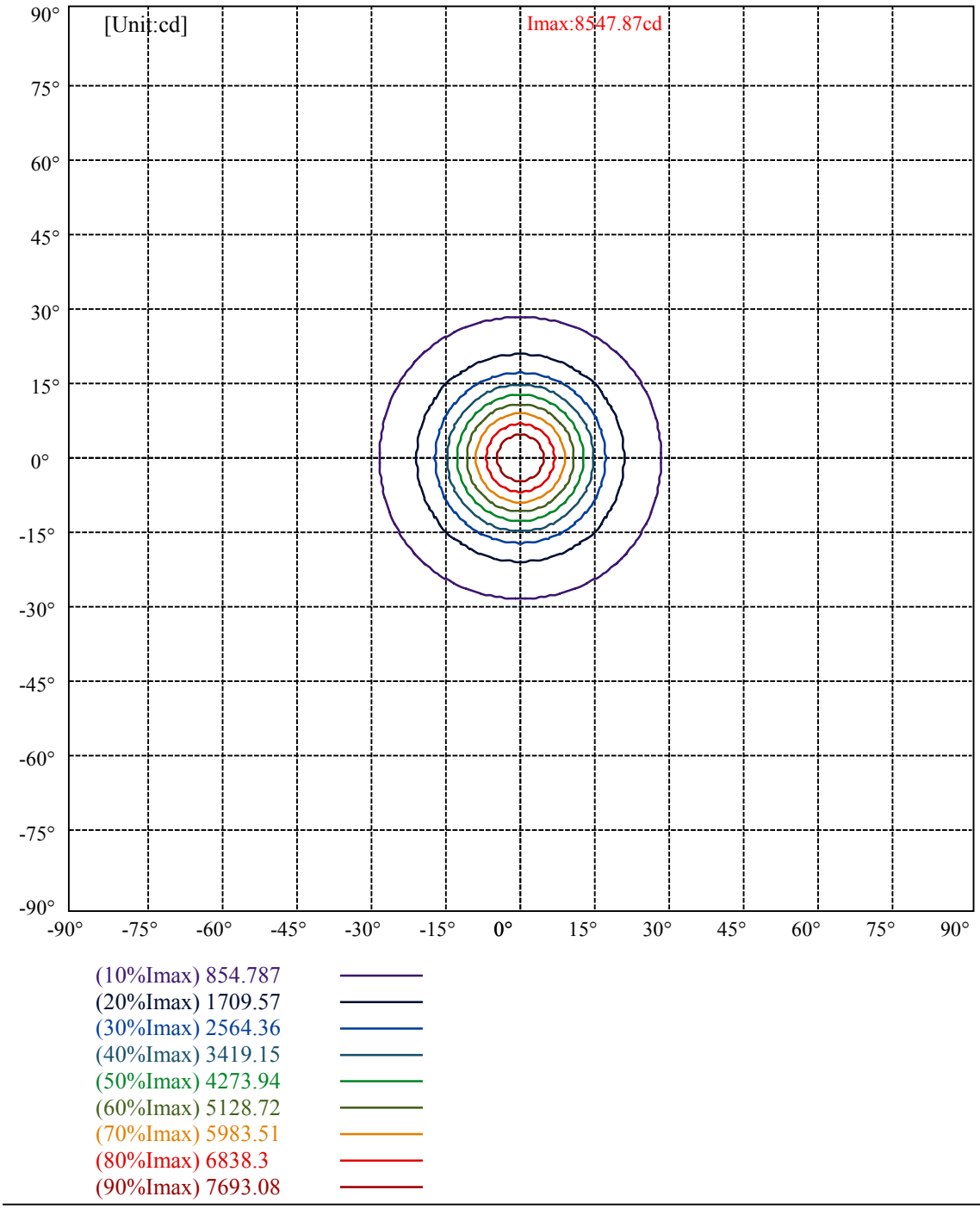
Lux distance Curve





ISO-Intensity(V-H)





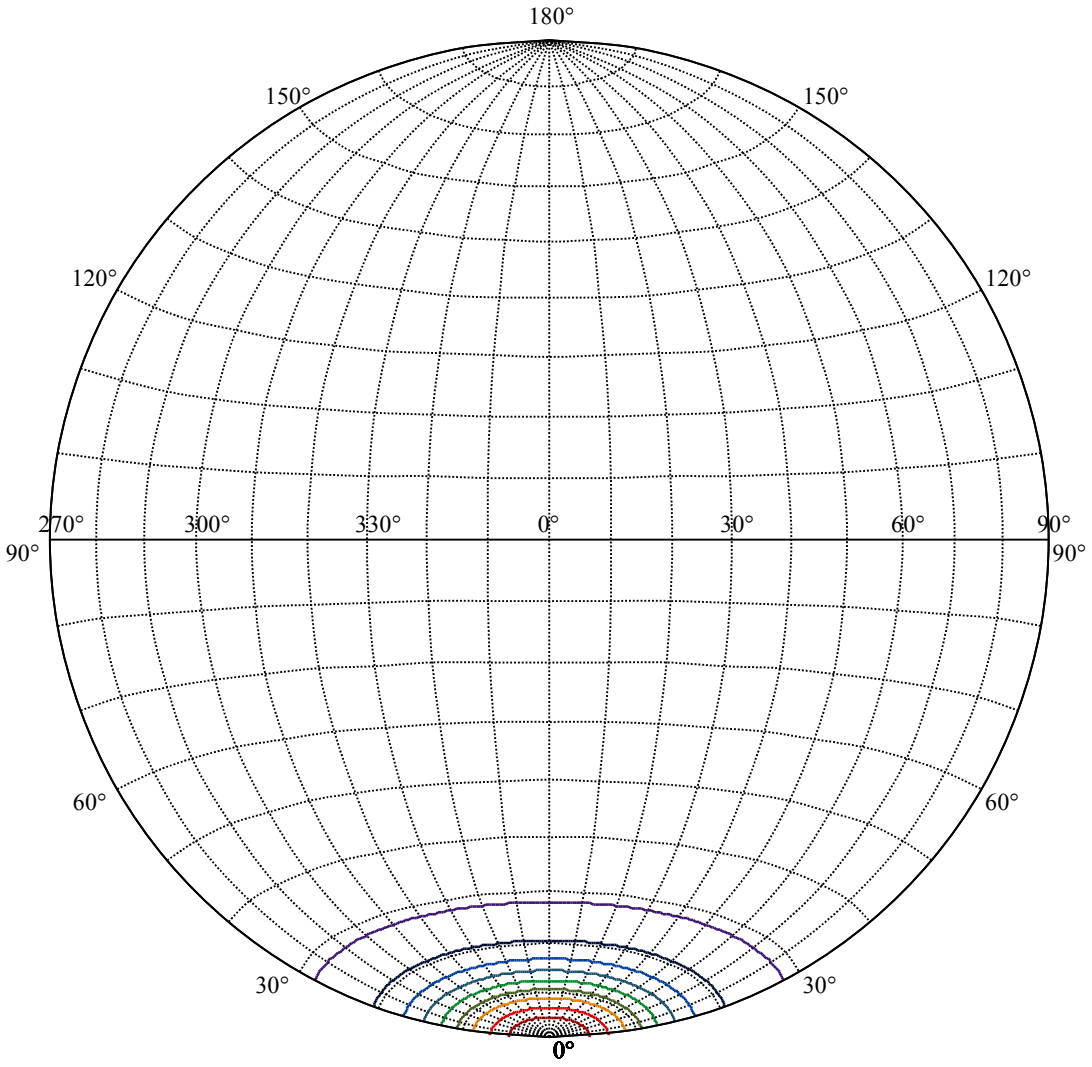

Equipment: GMS 1800
Temperature(°C): 25

Date: 2024/8/15
Humidity(%): 60%

Operator: NT0

ISO candela diagram on circular web






House [Unit:cd] Road

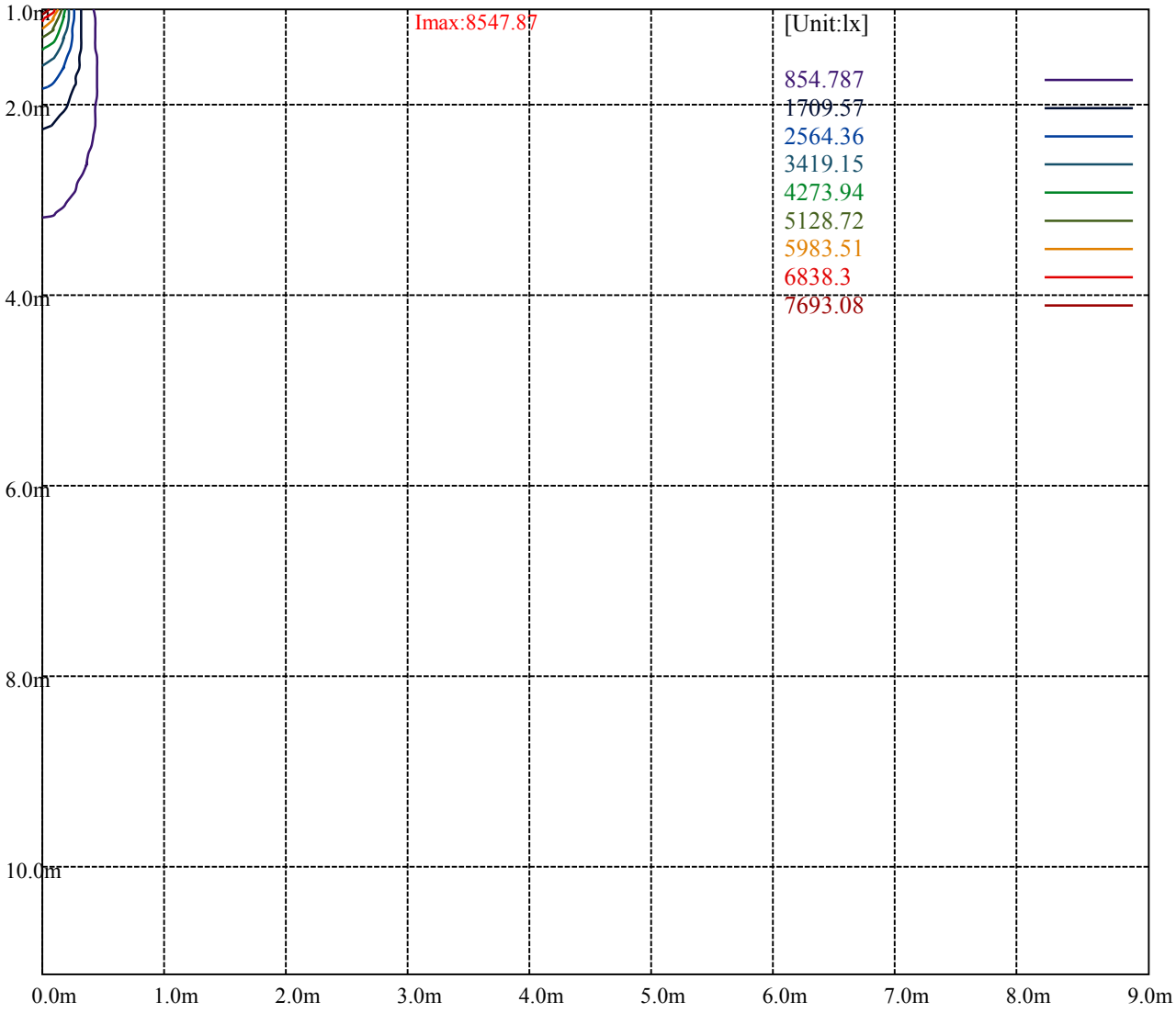
Imax:8547.87

(10%Imax) 854.787
(20%Imax) 1709.57
(30%Imax) 2564.36
(40%Imax) 3419.15
(50%Imax) 4273.94
(60%Imax) 5128.72
(70%Imax) 5983.51
(80%Imax) 6838.3
(90%Imax) 7693.08

Equipment: GMS 1800 Date: 2024/8/15 Operator: NT0
Temperature(°C): 25 Humidity(%): 60%

Space ISO Lux diagram






Equipment: GMS 1800
Temperature(°C): 25

Date: 2024/8/15
Humidity(%): 60%

Operator: NT0

Nata 2-2752-L

## Luminance Limitting Curve(no luminous side)



Luminance Table

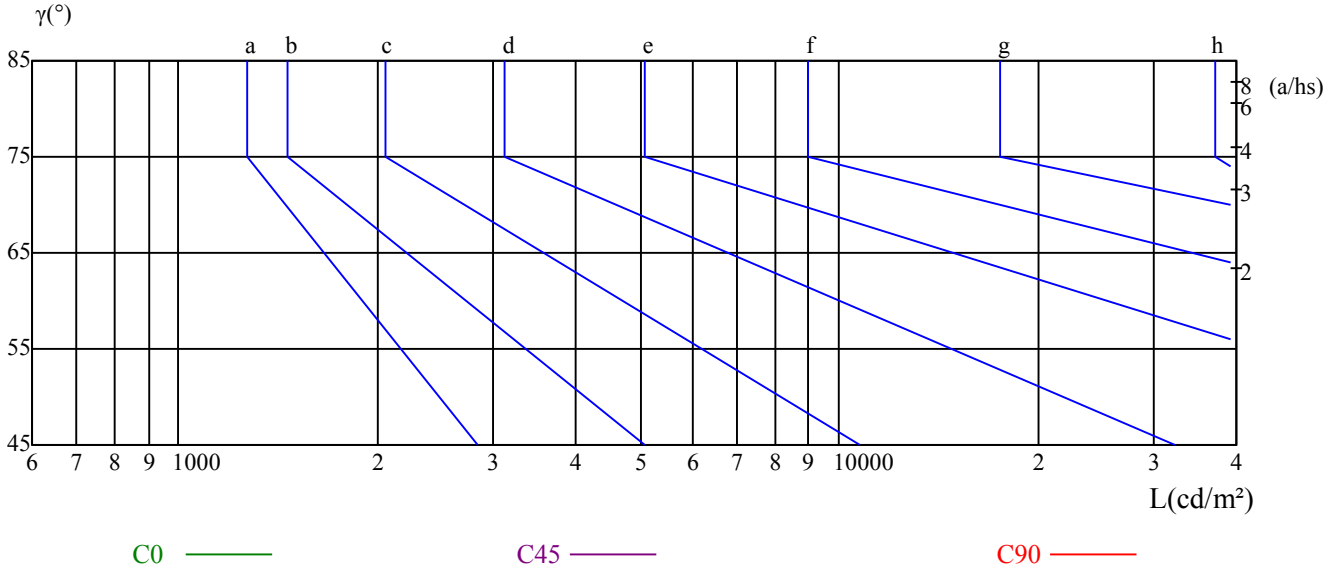
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|---|---|---|---|---|---|---|---|---|---|
| C0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| 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




Equipment: GMS 1800 Date: 2024/8/15 Operator: NT0
Temperature(°C): 25 Humidity(%): 60%

UGR Glare

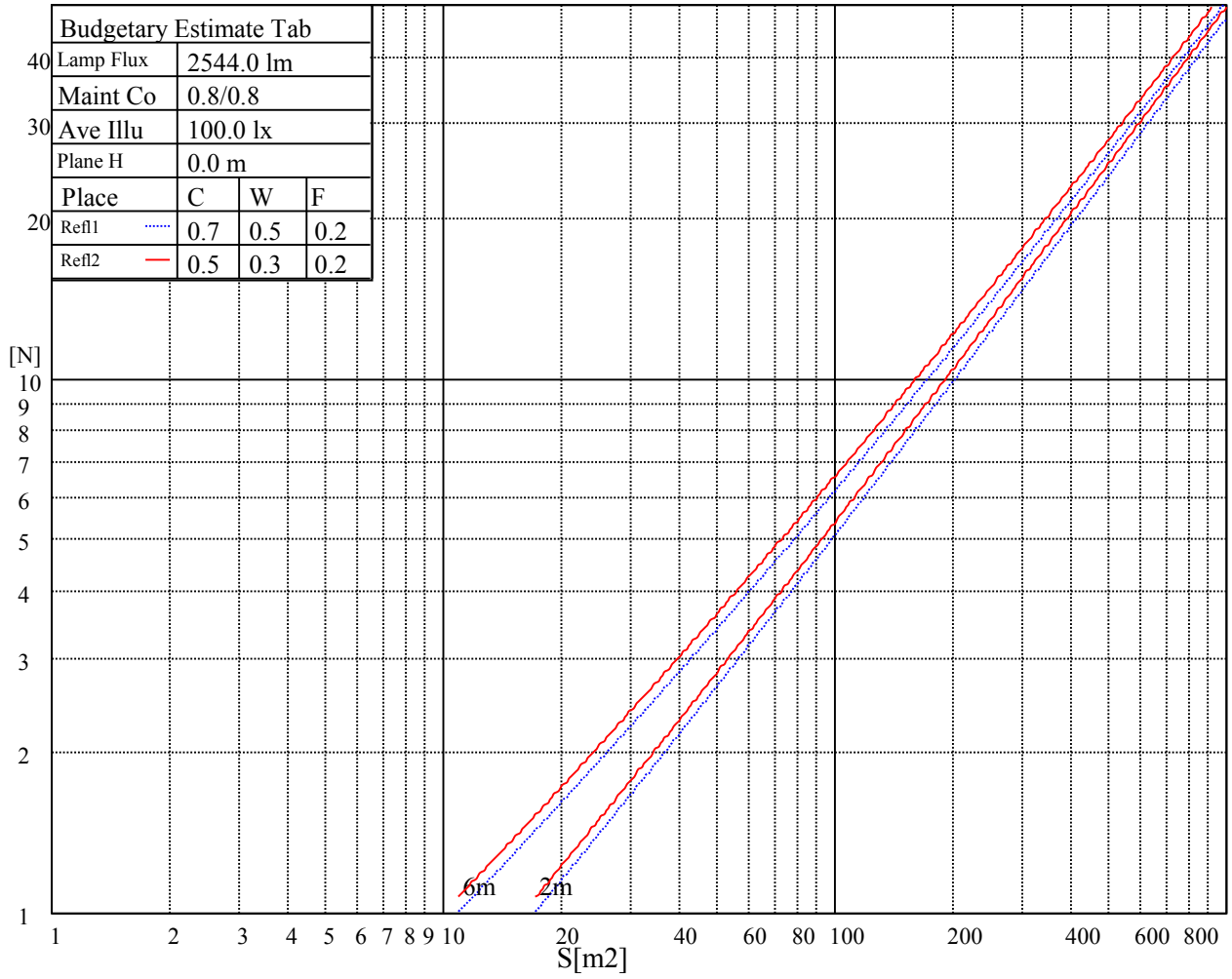


| Illumination assessment according UGR | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Rf of Ceiling | | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
| Rf of Wall | | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| Rf of Floor | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 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: GMS 1800 Date: 2024/8/15 Operator: NT0
Temperature(°C): 25 Humidity(%): 60%

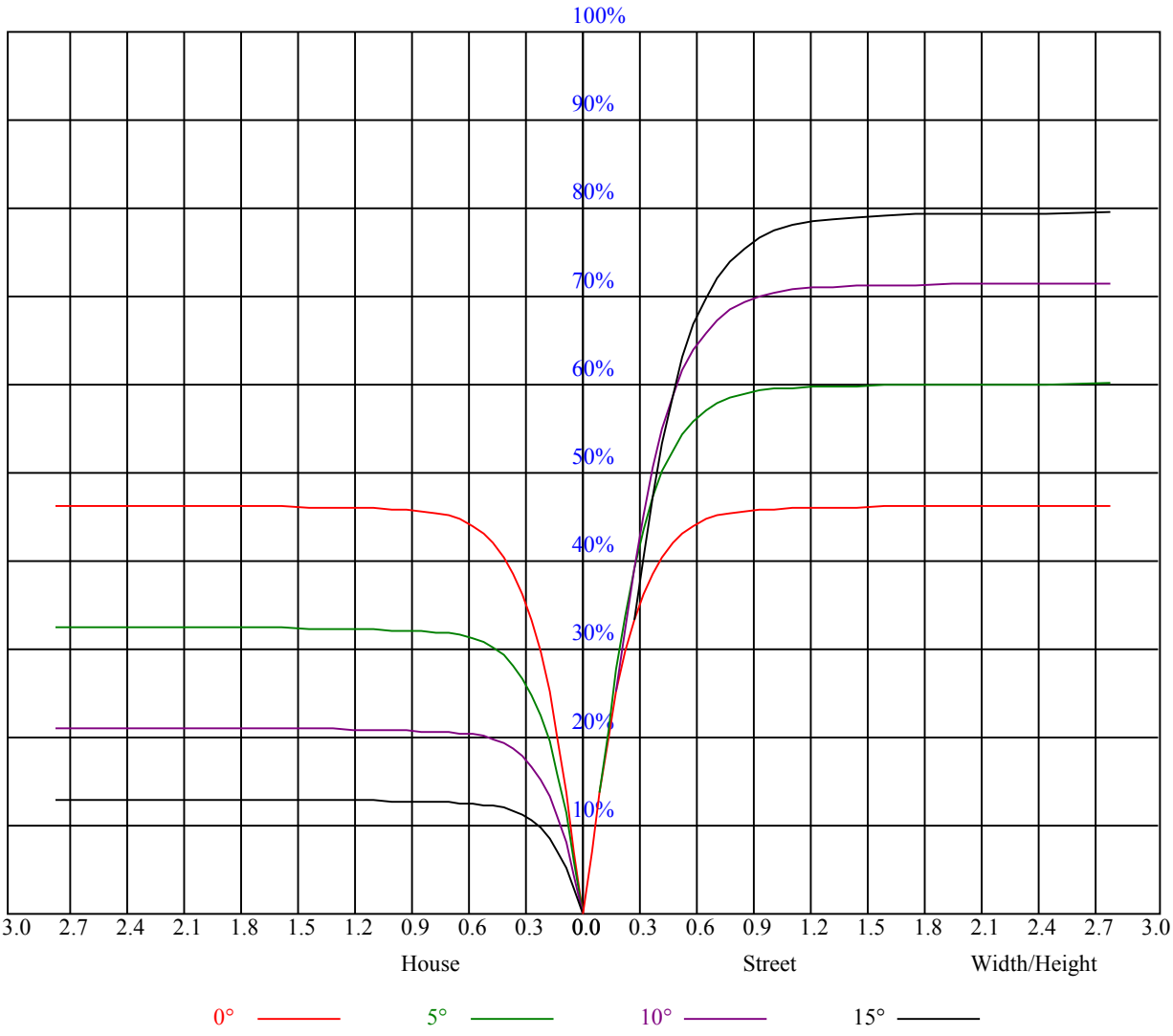
## Utilization factor table for indoor luminaire



| 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 | 1.11 | 1.11 | 1.11 | 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 | 0.99 | 0.98 | 0.97 | 0.96 | 0.95 | 0.94 | 0.93 | 0.92 | 0.91 | 0.90 | 0.89 |
| 2 | 0.98 | 0.95 | 0.93 | 0.97 | 0.94 | 0.92 | 0.94 | 0.92 | 0.90 | 0.91 | 0.89 | 0.88 | 0.89 | 0.87 | 0.86 | 0.85 |
| 3 | 0.93 | 0.90 | 0.87 | 0.92 | 0.89 | 0.86 | 0.90 | 0.87 | 0.85 | 0.88 | 0.85 | 0.83 | 0.86 | 0.84 | 0.82 | 0.81 |
| 4 | 0.89 | 0.85 | 0.82 | 0.88 | 0.84 | 0.81 | 0.86 | 0.83 | 0.80 | 0.84 | 0.82 | 0.79 | 0.83 | 0.80 | 0.79 | 0.77 |
| 5 | 0.85 | 0.81 | 0.77 | 0.84 | 0.80 | 0.77 | 0.83 | 0.79 | 0.77 | 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 | 0.73 | 0.70 | 0.77 | 0.73 | 0.70 | 0.76 | 0.72 | 0.70 | 0.75 | 0.72 | 0.69 | 0.68 |
| 8 | 0.75 | 0.71 | 0.68 | 0.75 | 0.71 | 0.68 | 0.74 | 0.70 | 0.67 | 0.73 | 0.70 | 0.67 | 0.72 | 0.69 | 0.67 | 0.66 |
| 9 | 0.72 | 0.68 | 0.65 | 0.72 | 0.68 | 0.65 | 0.71 | 0.68 | 0.65 | 0.71 | 0.67 | 0.65 | 0.70 | 0.67 | 0.65 | 0.64 |
| 10 | 0.70 | 0.66 | 0.63 | 0.70 | 0.66 | 0.63 | 0.69 | 0.65 | 0.63 | 0.68 | 0.65 | 0.62 | 0.68 | 0.65 | 0.62 | 0.61 |

## Coefficient Utilization Curve

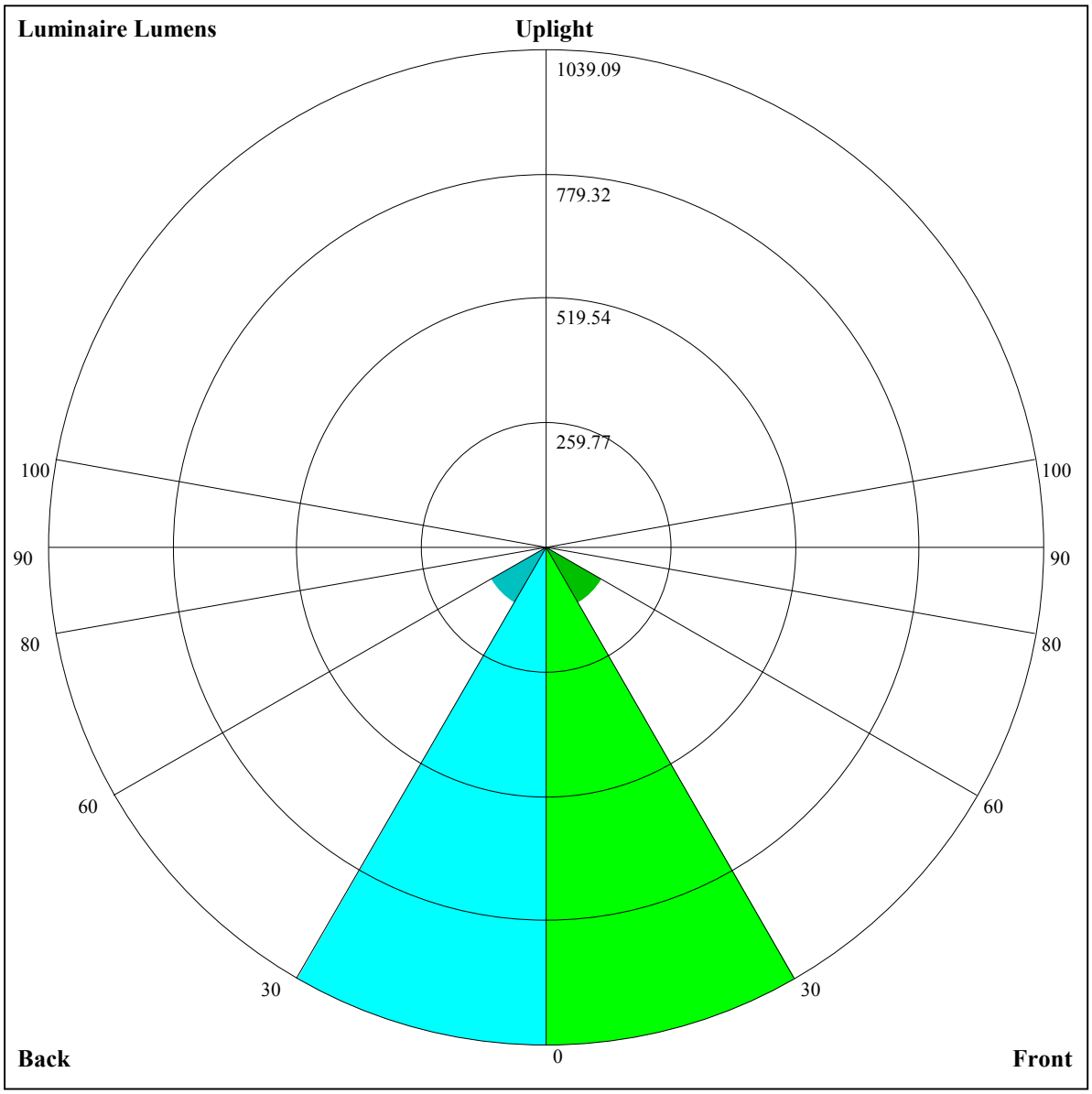





Equipment: GMS 1800
Temperature(°C): 25

Date: 2024/8/15
Humidity(%): 60%

Operator: NT0




Luminaire Lumens:
FL=1039.09,FM=134.1,FH=8.15,FVH=0.89
BL=1039.09,BM=134.1,BH=8.15,BVH=0.89
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 | 8547.87 | 8496.53 | 8358.09 | 8154.65 | 7876.21 | 7564.20 | 7142.08 | 6744.47 | 6337.53 |
| 45.0 | 8547.87 | 8496.53 | 8358.09 | 8154.65 | 7876.21 | 7564.20 | 7142.08 | 6744.47 | 6337.53 |
| 90.0 | 8547.87 | 8496.53 | 8358.09 | 8154.65 | 7876.21 | 7564.20 | 7142.08 | 6744.47 | 6337.53 |
| 135.0 | 8547.87 | 8496.53 | 8358.09 | 8154.65 | 7876.21 | 7564.20 | 7142.08 | 6744.47 | 6337.53 |
| 180.0 | 8547.87 | 8496.53 | 8358.09 | 8154.65 | 7876.21 | 7564.20 | 7142.08 | 6744.47 | 6337.53 |
| 225.0 | 8547.87 | 8496.53 | 8358.09 | 8154.65 | 7876.21 | 7564.20 | 7142.08 | 6744.47 | 6337.53 |
| 270.0 | 8547.87 | 8496.53 | 8358.09 | 8154.65 | 7876.21 | 7564.20 | 7142.08 | 6744.47 | 6337.53 |
| 315.0 | 8547.87 | 8496.53 | 8358.09 | 8154.65 | 7876.21 | 7564.20 | 7142.08 | 6744.47 | 6337.53 |
| 360.0 | 8547.87 | 8496.53 | 8358.09 | 8154.65 | 7876.21 | 7564.20 | 7142.08 | 6744.47 | 6337.53 |

| C/γ(°) | 9.0 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 5899.04 | 5429.00 | 4975.90 | 4489.49 | 4068.77 | 3636.68 | 3258.72 | 2858.95 | 2553.07 |
| 45.0 | 5899.04 | 5429.00 | 4975.90 | 4489.49 | 4068.77 | 3636.68 | 3258.72 | 2858.95 | 2553.07 |
| 90.0 | 5899.04 | 5429.00 | 4975.90 | 4489.49 | 4068.77 | 3636.68 | 3258.72 | 2858.95 | 2553.07 |
| 135.0 | 5899.04 | 5429.00 | 4975.90 | 4489.49 | 4068.77 | 3636.68 | 3258.72 | 2858.95 | 2553.07 |
| 180.0 | 5899.04 | 5429.00 | 4975.90 | 4489.49 | 4068.77 | 3636.68 | 3258.72 | 2858.95 | 2553.07 |
| 225.0 | 5899.04 | 5429.00 | 4975.90 | 4489.49 | 4068.77 | 3636.68 | 3258.72 | 2858.95 | 2553.07 |
| 270.0 | 5899.04 | 5429.00 | 4975.90 | 4489.49 | 4068.77 | 3636.68 | 3258.72 | 2858.95 | 2553.07 |
| 315.0 | 5899.04 | 5429.00 | 4975.90 | 4489.49 | 4068.77 | 3636.68 | 3258.72 | 2858.95 | 2553.07 |
| 360.0 | 5899.04 | 5429.00 | 4975.90 | 4489.49 | 4068.77 | 3636.68 | 3258.72 | 2858.95 | 2553.07 |

| C/γ(°) | 18.0 | 19.0 | 20.0 | 21.0 | 22.0 | 23.0 | 24.0 | 25.0 | 26.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 2266.13 | 2019.94 | 1818.66 | 1643.93 | 1507.70 | 1345.61 | 1234.02 | 1122.93 | 1050.21 |
| 45.0 | 2266.13 | 2019.94 | 1818.66 | 1643.93 | 1507.70 | 1345.61 | 1234.02 | 1122.93 | 1050.21 |
| 90.0 | 2266.13 | 2019.94 | 1818.66 | 1643.93 | 1507.70 | 1345.61 | 1234.02 | 1122.93 | 1050.21 |
| 135.0 | 2266.13 | 2019.94 | 1818.66 | 1643.93 | 1507.70 | 1345.61 | 1234.02 | 1122.93 | 1050.21 |
| 180.0 | 2266.13 | 2019.94 | 1818.66 | 1643.93 | 1507.70 | 1345.61 | 1234.02 | 1122.93 | 1050.21 |
| 225.0 | 2266.13 | 2019.94 | 1818.66 | 1643.93 | 1507.70 | 1345.61 | 1234.02 | 1122.93 | 1050.21 |
| 270.0 | 2266.13 | 2019.94 | 1818.66 | 1643.93 | 1507.70 | 1345.61 | 1234.02 | 1122.93 | 1050.21 |
| 315.0 | 2266.13 | 2019.94 | 1818.66 | 1643.93 | 1507.70 | 1345.61 | 1234.02 | 1122.93 | 1050.21 |
| 360.0 | 2266.13 | 2019.94 | 1818.66 | 1643.93 | 1507.70 | 1345.61 | 1234.02 | 1122.93 | 1050.21 |

| C/γ(°) | 27.0 | 28.0 | 29.0 | 30.0 | 31.0 | 32.0 | 33.0 | 34.0 | 35.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 945.99 | 856.13 | 766.09 | 674.94 | 588.00 | 506.68 | 422.95 | 358.79 | 300.11 |
| 45.0 | 945.99 | 856.13 | 766.09 | 674.94 | 588.00 | 506.68 | 422.95 | 358.79 | 300.11 |
| 90.0 | 945.99 | 856.13 | 766.09 | 674.94 | 588.00 | 506.68 | 422.95 | 358.79 | 300.11 |
| 135.0 | 945.99 | 856.13 | 766.09 | 674.94 | 588.00 | 506.68 | 422.95 | 358.79 | 300.11 |
| 180.0 | 945.99 | 856.13 | 766.09 | 674.94 | 588.00 | 506.68 | 422.95 | 358.79 | 300.11 |
| 225.0 | 945.99 | 856.13 | 766.09 | 674.94 | 588.00 | 506.68 | 422.95 | 358.79 | 300.11 |
| 270.0 | 945.99 | 856.13 | 766.09 | 674.94 | 588.00 | 506.68 | 422.95 | 358.79 | 300.11 |
| 315.0 | 945.99 | 856.13 | 766.09 | 674.94 | 588.00 | 506.68 | 422.95 | 358.79 | 300.11 |
| 360.0 | 945.99 | 856.13 | 766.09 | 674.94 | 588.00 | 506.68 | 422.95 | 358.79 | 300.11 |

| C/γ(°) | 36.0 | 37.0 | 38.0 | 39.0 | 40.0 | 41.0 | 42.0 | 43.0 | 44.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 263.46 | 219.78 | 185.29 | 145.07 | 119.67 | 98.33 | 80.49 | 67.53 | 55.34 |
| 45.0 | 263.46 | 219.78 | 185.29 | 145.07 | 119.67 | 98.33 | 80.49 | 67.53 | 55.34 |
| 90.0 | 263.46 | 219.78 | 185.29 | 145.07 | 119.67 | 98.33 | 80.49 | 67.53 | 55.34 |
| 135.0 | 263.46 | 219.78 | 185.29 | 145.07 | 119.67 | 98.33 | 80.49 | 67.53 | 55.34 |
| 180.0 | 263.46 | 219.78 | 185.29 | 145.07 | 119.67 | 98.33 | 80.49 | 67.53 | 55.34 |
| 225.0 | 263.46 | 219.78 | 185.29 | 145.07 | 119.67 | 98.33 | 80.49 | 67.53 | 55.34 |
| 270.0 | 263.46 | 219.78 | 185.29 | 145.07 | 119.67 | 98.33 | 80.49 | 67.53 | 55.34 |
| 315.0 | 263.46 | 219.78 | 185.29 | 145.07 | 119.67 | 98.33 | 80.49 | 67.53 | 55.34 |
| 360.0 | 263.46 | 219.78 | 185.29 | 145.07 | 119.67 | 98.33 | 80.49 | 67.53 | 55.34 |

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 | 46.47 | 39.92 | 34.87 | 31.14 | 28.35 | 26.29 | 24.70 | 23.36 | 22.25 |
| 45.0 | 46.47 | 39.92 | 34.87 | 31.14 | 28.35 | 26.29 | 24.70 | 23.36 | 22.25 |
| 90.0 | 46.47 | 39.92 | 34.87 | 31.14 | 28.35 | 26.29 | 24.70 | 23.36 | 22.25 |
| 135.0 | 46.47 | 39.92 | 34.87 | 31.14 | 28.35 | 26.29 | 24.70 | 23.36 | 22.25 |
| 180.0 | 46.47 | 39.92 | 34.87 | 31.14 | 28.35 | 26.29 | 24.70 | 23.36 | 22.25 |
| 225.0 | 46.47 | 39.92 | 34.87 | 31.14 | 28.35 | 26.29 | 24.70 | 23.36 | 22.25 |
| 270.0 | 46.47 | 39.92 | 34.87 | 31.14 | 28.35 | 26.29 | 24.70 | 23.36 | 22.25 |
| 315.0 | 46.47 | 39.92 | 34.87 | 31.14 | 28.35 | 26.29 | 24.70 | 23.36 | 22.25 |
| 360.0 | 46.47 | 39.92 | 34.87 | 31.14 | 28.35 | 26.29 | 24.70 | 23.36 | 22.25 |

| C/γ(°) | 54.0 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 | 60.0 | 61.0 | 62.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 21.22 | 20.31 | 19.55 | 18.68 | 17.81 | 16.87 | 16.01 | 15.06 | 13.94 |
| 45.0 | 21.22 | 20.31 | 19.55 | 18.68 | 17.81 | 16.87 | 16.01 | 15.06 | 13.94 |
| 90.0 | 21.22 | 20.31 | 19.55 | 18.68 | 17.81 | 16.87 | 16.01 | 15.06 | 13.94 |
| 135.0 | 21.22 | 20.31 | 19.55 | 18.68 | 17.81 | 16.87 | 16.01 | 15.06 | 13.94 |
| 180.0 | 21.22 | 20.31 | 19.55 | 18.68 | 17.81 | 16.87 | 16.01 | 15.06 | 13.94 |
| 225.0 | 21.22 | 20.31 | 19.55 | 18.68 | 17.81 | 16.87 | 16.01 | 15.06 | 13.94 |
| 270.0 | 21.22 | 20.31 | 19.55 | 18.68 | 17.81 | 16.87 | 16.01 | 15.06 | 13.94 |
| 315.0 | 21.22 | 20.31 | 19.55 | 18.68 | 17.81 | 16.87 | 16.01 | 15.06 | 13.94 |
| 360.0 | 21.22 | 20.31 | 19.55 | 18.68 | 17.81 | 16.87 | 16.01 | 15.06 | 13.94 |

| C/γ(°) | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 | 70.0 | 71.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 13.00 | 12.10 | 11.19 | 10.29 | 9.51 | 8.70 | 8.02 | 7.38 | 6.68 |
| 45.0 | 13.00 | 12.10 | 11.19 | 10.29 | 9.51 | 8.70 | 8.02 | 7.38 | 6.68 |
| 90.0 | 13.00 | 12.10 | 11.19 | 10.29 | 9.51 | 8.70 | 8.02 | 7.38 | 6.68 |
| 135.0 | 13.00 | 12.10 | 11.19 | 10.29 | 9.51 | 8.70 | 8.02 | 7.38 | 6.68 |
| 180.0 | 13.00 | 12.10 | 11.19 | 10.29 | 9.51 | 8.70 | 8.02 | 7.38 | 6.68 |
| 225.0 | 13.00 | 12.10 | 11.19 | 10.29 | 9.51 | 8.70 | 8.02 | 7.38 | 6.68 |
| 270.0 | 13.00 | 12.10 | 11.19 | 10.29 | 9.51 | 8.70 | 8.02 | 7.38 | 6.68 |
| 315.0 | 13.00 | 12.10 | 11.19 | 10.29 | 9.51 | 8.70 | 8.02 | 7.38 | 6.68 |
| 360.0 | 13.00 | 12.10 | 11.19 | 10.29 | 9.51 | 8.70 | 8.02 | 7.38 | 6.68 |

| C/γ(°) | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0 | 80.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 6.07 | 5.51 | 5.03 | 4.65 | 4.22 | 3.87 | 3.54 | 3.19 | 2.88 |
| 45.0 | 6.07 | 5.51 | 5.03 | 4.65 | 4.22 | 3.87 | 3.54 | 3.19 | 2.88 |
| 90.0 | 6.07 | 5.51 | 5.03 | 4.65 | 4.22 | 3.87 | 3.54 | 3.19 | 2.88 |
| 135.0 | 6.07 | 5.51 | 5.03 | 4.65 | 4.22 | 3.87 | 3.54 | 3.19 | 2.88 |
| 180.0 | 6.07 | 5.51 | 5.03 | 4.65 | 4.22 | 3.87 | 3.54 | 3.19 | 2.88 |
| 225.0 | 6.07 | 5.51 | 5.03 | 4.65 | 4.22 | 3.87 | 3.54 | 3.19 | 2.88 |
| 270.0 | 6.07 | 5.51 | 5.03 | 4.65 | 4.22 | 3.87 | 3.54 | 3.19 | 2.88 |
| 315.0 | 6.07 | 5.51 | 5.03 | 4.65 | 4.22 | 3.87 | 3.54 | 3.19 | 2.88 |
| 360.0 | 6.07 | 5.51 | 5.03 | 4.65 | 4.22 | 3.87 | 3.54 | 3.19 | 2.88 |

| C/γ(°) | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 2.58 | 2.32 | 2.00 | 1.76 | 1.54 | 1.35 | 1.16 | 0.98 | 0.80 |
| 45.0 | 2.58 | 2.32 | 2.00 | 1.76 | 1.54 | 1.35 | 1.16 | 0.98 | 0.80 |
| 90.0 | 2.58 | 2.32 | 2.00 | 1.76 | 1.54 | 1.35 | 1.16 | 0.98 | 0.80 |
| 135.0 | 2.58 | 2.32 | 2.00 | 1.76 | 1.54 | 1.35 | 1.16 | 0.98 | 0.80 |
| 180.0 | 2.58 | 2.32 | 2.00 | 1.76 | 1.54 | 1.35 | 1.16 | 0.98 | 0.80 |
| 225.0 | 2.58 | 2.32 | 2.00 | 1.76 | 1.54 | 1.35 | 1.16 | 0.98 | 0.80 |
| 270.0 | 2.58 | 2.32 | 2.00 | 1.76 | 1.54 | 1.35 | 1.16 | 0.98 | 0.80 |
| 315.0 | 2.58 | 2.32 | 2.00 | 1.76 | 1.54 | 1.35 | 1.16 | 0.98 | 0.80 |
| 360.0 | 2.58 | 2.32 | 2.00 | 1.76 | 1.54 | 1.35 | 1.16 | 0.98 | 0.80 |

Intensity data(cd)

| C/γ(°) | 90.0 |
|---|---|
| 0.0 | 0.69 |
| 45.0 | 0.69 |
| 90.0 | 0.69 |
| 135.0 | 0.69 |
| 180.0 | 0.69 |
| 225.0 | 0.69 |
| 270.0 | 0.69 |
| 315.0 | 0.69 |
| 360.0 | 0.69 |