NATA LIGHTING CO.,LTD.
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Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

NT

Client:
LumCAT: 2-2686-L
Luminaire: 92.70.412.00
Report No: 2024314-B020
Ballast type: AC

| | |
|---|---|
| Test No: 2024314-C020 | Voltage(V): 34.580 |
| LampCAT: BRIDGELUX V13B LES13 | Current(A): 0.450 |
| Lamp flux(lm): 2653.0 | Power (W): 15.561 |
| Number of Lamps: 1 | PF: 0.000 |
| Length(mm): 0 | Width(mm): 0 |
| Phm Type: C | Height(mm): 0 |

## Photometric Results

Lumens(lm): 2221.90, Efficiency(%): 83.75% , Luminous Efficacy(lm/W): 142.79
Central intensity(cd): 11517.140, Maximum intensity(cd): 11517.140
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=18.8
[C90/270]Total=18.8
Field angle(10%Imax): [C0/180]Total=47.0
[C90/270]Total=47.0
Maximum s/h(1/2): C0_180=0.32 C90_270=0.32
Maximum s/h(1/4): C0_180=0.34 C90_270=0.34
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 83.75%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.187%

| | | |
|---|---|---|
| Equipment: GMS1980 | Date: 2024/3/14 | Operator: NT07 |
| Temperature(°C): 25.0 | Humidity(%): 60.0% | Distance(m): 7.65 |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 0.0 | 11517.140 | 0.000 | 0 | 0.00% | 0.00% |
| 1.0 | 11426.942 | 10.978 | 10.978 | 0.41% | 0.49% |
| 2.0 | 11179.319 | 32.447 | 43.425 | 1.22% | 1.95% |
| 3.0 | 10772.076 | 52.501 | 95.925 | 1.98% | 4.32% |
| 4.0 | 10180.852 | 70.136 | 166.062 | 2.64% | 7.47% |
| 5.0 | 9489.043 | 84.619 | 250.681 | 3.19% | 11.28% |
| 6.0 | 8736.736 | 95.781 | 346.462 | 3.61% | 15.59% |
| 7.0 | 7892.330 | 103.216 | 449.678 | 3.89% | 20.24% |
| 8.0 | 6955.165 | 106.261 | 555.939 | 4.01% | 25.02% |
| 9.0 | 6138.191 | 106.115 | 662.053 | 4.00% | 29.80% |
| 10.0 | 5288.956 | 103.411 | 765.465 | 3.90% | 34.45% |
| 11.0 | 4551.792 | 98.329 | 863.794 | 3.71% | 38.88% |
| 12.0 | 3909.362 | 92.493 | 956.287 | 3.49% | 43.04% |
| 13.0 | 3344.912 | 86.090 | 1042.377 | 3.25% | 46.91% |
| 14.0 | 2925.159 | 80.256 | 1122.633 | 3.03% | 50.53% |
| 15.0 | 2595.605 | 75.792 | 1198.425 | 2.86% | 53.94% |
| 16.0 | 2329.986 | 72.174 | 1270.598 | 2.72% | 57.19% |
| 17.0 | 2093.189 | 68.881 | 1339.479 | 2.60% | 60.29% |
| 18.0 | 1899.187 | 65.826 | 1405.305 | 2.48% | 63.25% |
| 19.0 | 1737.153 | 63.265 | 1468.569 | 2.38% | 66.10% |
| 20.0 | 1580.312 | 60.719 | 1529.288 | 2.29% | 68.83% |
| 21.0 | 1407.517 | 57.372 | 1586.661 | 2.16% | 71.41% |
| 22.0 | 1296.347 | 54.335 | 1640.996 | 2.05% | 73.86% |
| 23.0 | 1188.490 | 52.139 | 1693.134 | 1.97% | 76.20% |
| 24.0 | 1111.693 | 50.290 | 1743.425 | 1.90% | 78.47% |
| 25.0 | 1015.022 | 48.357 | 1791.782 | 1.82% | 80.64% |
| 26.0 | 917.962 | 45.628 | 1837.41 | 1.72% | 82.70% |
| 27.0 | 822.622 | 42.584 | 1879.994 | 1.61% | 84.61% |
| 28.0 | 728.817 | 39.279 | 1919.273 | 1.48% | 86.38% |
| 29.0 | 637.500 | 35.747 | 1955.02 | 1.35% | 87.99% |
| 30.0 | 545.569 | 31.943 | 1986.962 | 1.20% | 89.43% |
| 31.0 | 467.668 | 28.197 | 2015.159 | 1.06% | 90.70% |
| 32.0 | 396.746 | 24.764 | 2039.923 | 0.93% | 91.81% |
| 33.0 | 331.654 | 21.459 | 2061.382 | 0.81% | 92.78% |
| 34.0 | 279.752 | 18.503 | 2079.885 | 0.70% | 93.61% |
| 35.0 | 233.944 | 15.953 | 2095.839 | 0.60% | 94.33% |
| 36.0 | 195.034 | 13.659 | 2109.498 | 0.51% | 94.94% |
| 37.0 | 138.245 | 10.870 | 2120.367 | 0.41% | 95.43% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 38.0 | 108.391 | 8.232 | 2128.6 | 0.31% | 95.80% |
| 39.0 | 85.823 | 6.629 | 2135.229 | 0.25% | 96.10% |
| 40.0 | 68.274 | 5.374 | 2140.603 | 0.20% | 96.34% |
| 41.0 | 53.797 | 4.347 | 2144.95 | 0.16% | 96.54% |
| 42.0 | 44.309 | 3.564 | 2148.514 | 0.13% | 96.70% |
| 43.0 | 36.781 | 3.004 | 2151.518 | 0.11% | 96.83% |
| 44.0 | 32.165 | 2.602 | 2154.12 | 0.10% | 96.95% |
| 45.0 | 28.713 | 2.340 | 2156.46 | 0.09% | 97.05% |
| 46.0 | 25.991 | 2.139 | 2158.599 | 0.08% | 97.15% |
| 47.0 | 23.921 | 1.985 | 2160.584 | 0.07% | 97.24% |
| 48.0 | 22.341 | 1.870 | 2162.455 | 0.07% | 97.32% |
| 49.0 | 21.039 | 1.781 | 2164.236 | 0.07% | 97.40% |
| 50.0 | 19.876 | 1.706 | 2165.942 | 0.06% | 97.48% |
| 51.0 | 18.969 | 1.643 | 2167.585 | 0.06% | 97.56% |
| 52.0 | 18.266 | 1.598 | 2169.183 | 0.06% | 97.63% |
| 53.0 | 17.740 | 1.566 | 2170.749 | 0.06% | 97.70% |
| 54.0 | 17.271 | 1.543 | 2172.293 | 0.06% | 97.77% |
| 55.0 | 16.964 | 1.528 | 2173.821 | 0.06% | 97.84% |
| 56.0 | 16.796 | 1.526 | 2175.346 | 0.06% | 97.90% |
| 57.0 | 16.767 | 1.535 | 2176.881 | 0.06% | 97.97% |
| 58.0 | 16.803 | 1.552 | 2178.433 | 0.06% | 98.04% |
| 59.0 | 16.942 | 1.578 | 2180.011 | 0.06% | 98.11% |
| 60.0 | 17.111 | 1.609 | 2181.62 | 0.06% | 98.19% |
| 61.0 | 17.250 | 1.640 | 2183.259 | 0.06% | 98.26% |
| 62.0 | 17.308 | 1.665 | 2184.925 | 0.06% | 98.34% |
| 63.0 | 17.191 | 1.678 | 2186.602 | 0.06% | 98.41% |
| 64.0 | 16.898 | 1.673 | 2188.275 | 0.06% | 98.49% |
| 65.0 | 16.416 | 1.649 | 2189.924 | 0.06% | 98.56% |
| 66.0 | 15.808 | 1.608 | 2191.532 | 0.06% | 98.63% |
| 67.0 | 15.062 | 1.552 | 2193.084 | 0.06% | 98.70% |
| 68.0 | 14.426 | 1.494 | 2194.578 | 0.06% | 98.77% |
| 69.0 | 14.045 | 1.452 | 2196.03 | 0.05% | 98.84% |
| 70.0 | 13.819 | 1.431 | 2197.461 | 0.05% | 98.90% |
| 71.0 | 13.475 | 1.411 | 2198.872 | 0.05% | 98.96% |
| 72.0 | 13.277 | 1.391 | 2200.263 | 0.05% | 99.03% |
| 73.0 | 13.255 | 1.387 | 2201.65 | 0.05% | 99.09% |
| 74.0 | 13.087 | 1.385 | 2203.035 | 0.05% | 99.15% |
| 75.0 | 12.816 | 1.369 | 2204.404 | 0.05% | 99.21% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 76.0 | 12.495 | 1.344 | 2205.747 | 0.05% | 99.27% |
| 77.0 | 12.326 | 1.323 | 2207.071 | 0.05% | 99.33% |
| 78.0 | 11.939 | 1.299 | 2208.37 | 0.05% | 99.39% |
| 79.0 | 11.690 | 1.270 | 2209.639 | 0.05% | 99.45% |
| 80.0 | 11.331 | 1.241 | 2210.88 | 0.05% | 99.50% |
| 81.0 | 10.988 | 1.207 | 2212.087 | 0.05% | 99.56% |
| 82.0 | 10.658 | 1.174 | 2213.261 | 0.04% | 99.61% |
| 83.0 | 10.402 | 1.145 | 2214.406 | 0.04% | 99.66% |
| 84.0 | 10.176 | 1.121 | 2215.527 | 0.04% | 99.71% |
| 85.0 | 10.007 | 1.102 | 2216.629 | 0.04% | 99.76% |
| 86.0 | 9.810 | 1.083 | 2217.712 | 0.04% | 99.81% |
| 87.0 | 9.664 | 1.066 | 2218.778 | 0.04% | 99.86% |
| 88.0 | 9.525 | 1.051 | 2219.829 | 0.04% | 99.91% |
| 89.0 | 9.459 | 1.041 | 2220.869 | 0.04% | 99.95% |
| 90.0 | 9.415 | 1.035 | 2221.904 | 0.04% | 100.00% |

## Zonal flux distribution table



ZONAL LUMEN SUMMARY

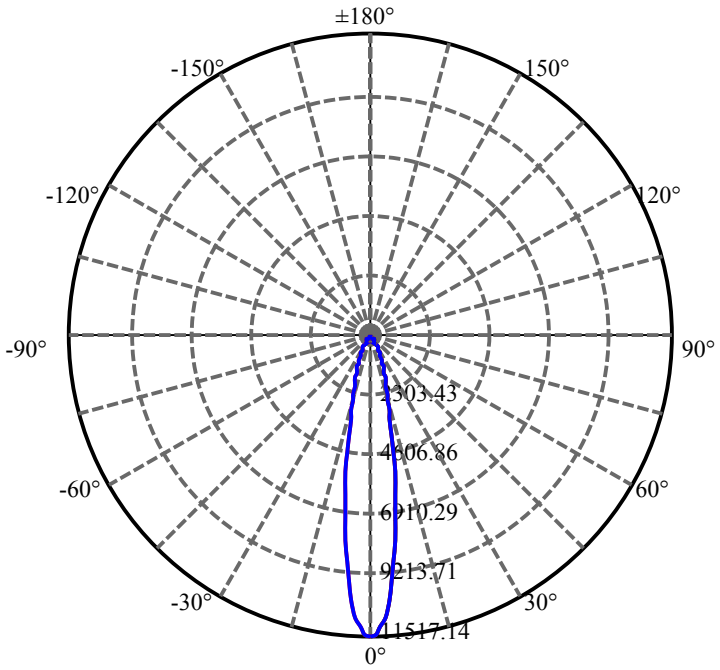
| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-30 | 1986.96 | 74.89% | 89.43% |
| 0-40 | 2140.60 | 80.69% | 96.34% |
| 0-60 | 2181.62 | 82.23% | 98.19% |
| 0-90 | 2220.87 | 83.71% | 99.95% |
| 0-120 | 2220.87 | 83.71% | 99.95% |
| 0-180 | 2221.90 | 83.75% | 100.00% |
| 60-90 | 39.25 | 1.48% | 1.77% |
| 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% |
| 0-24.71 | 1777.52 | 67.00% | 80.00% |

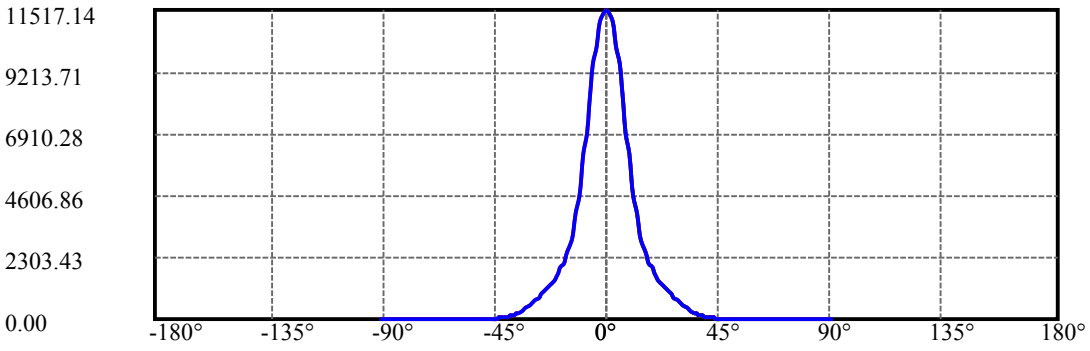
ZONAL LUMEN SUMMARY

| | |
|---|---|
| 0-10 | 765.46 |
| 10-20 | 763.82 |
| 20-30 | 457.67 |
| 30-40 | 153.64 |
| 40-50 | 25.34 |
| 50-60 | 15.68 |
| 60-70 | 15.84 |
| 70-80 | 13.42 |
| 80-90 | 9.99 |
| 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:

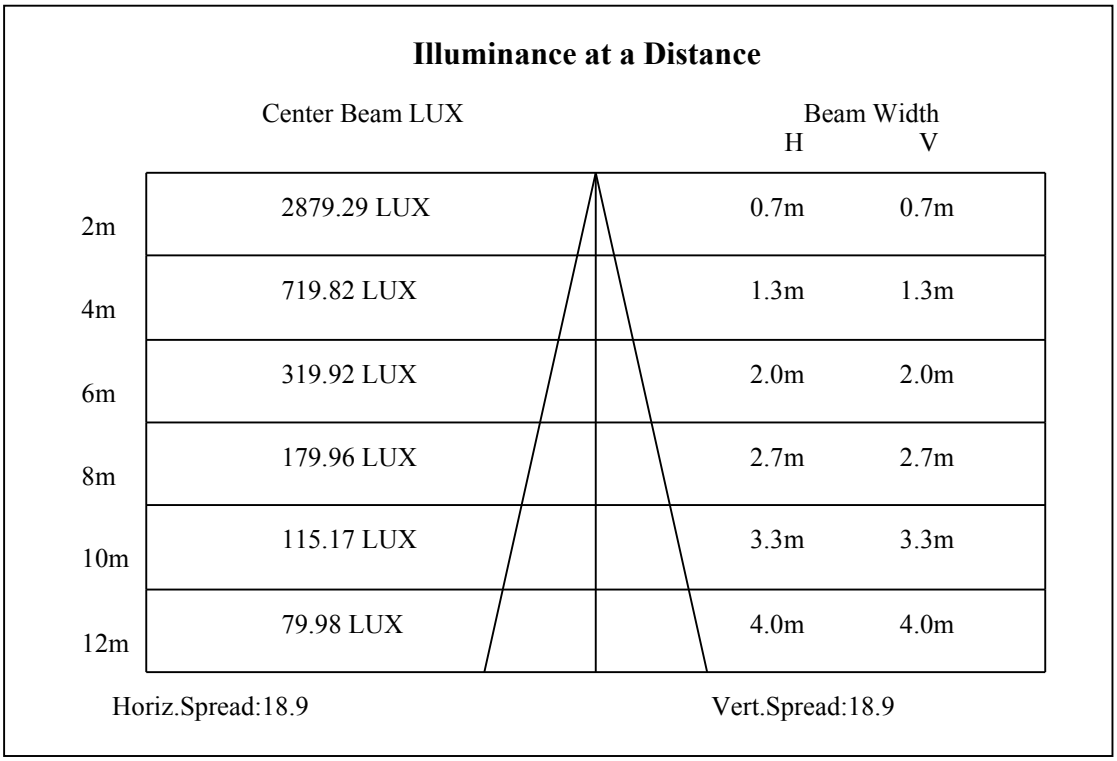
C90/C270:

Field angle(10%Imax):C0/180Left:23.5 Right:23.5
:C90/270Left:23.5 Right:23.5

Beam Angle(50%Imax):C0/180Left:9.4 Right:9.4
:C90/270Left:9.4 Right:9.4

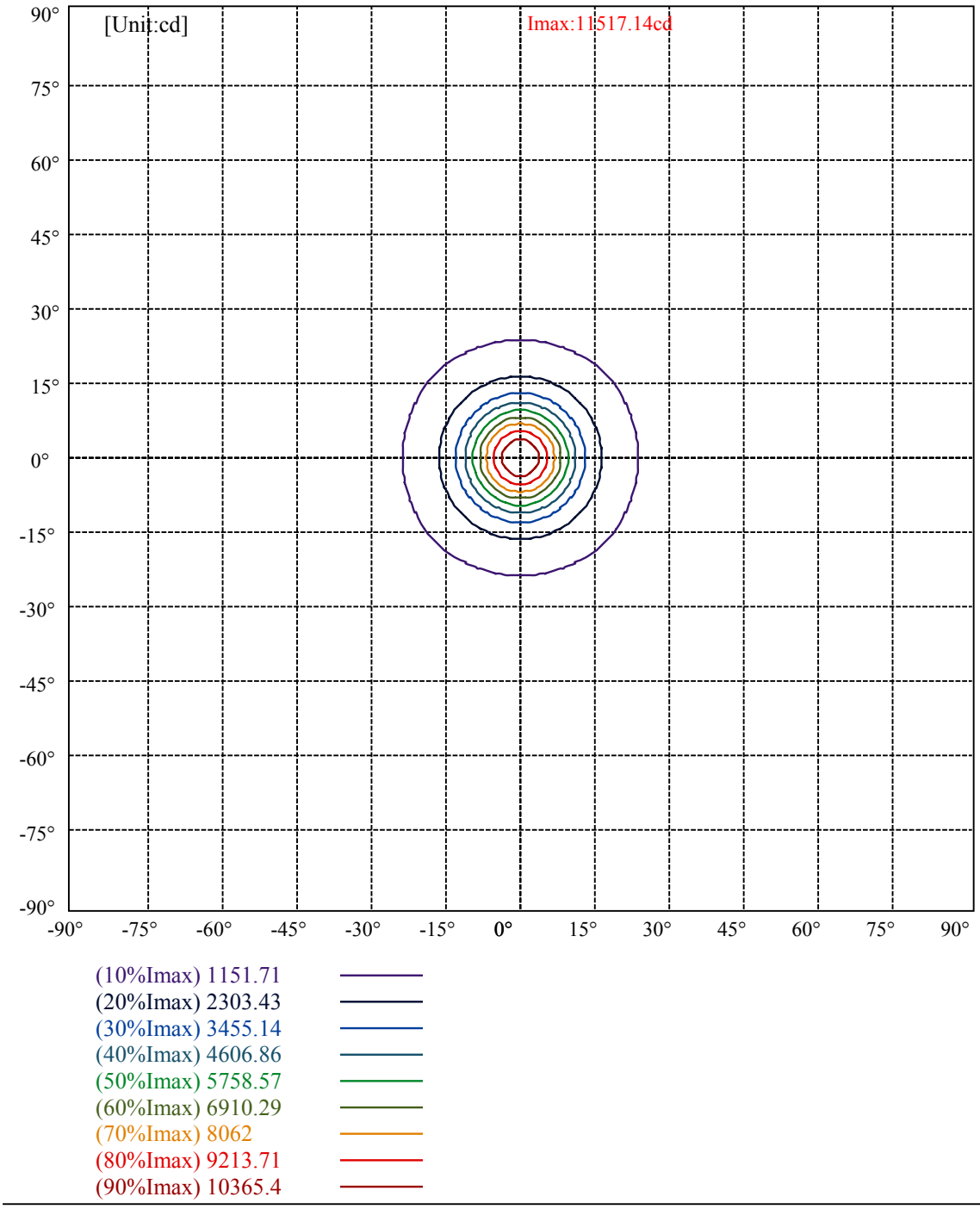
Lux distance Curve





ISO-Intensity(V-H)





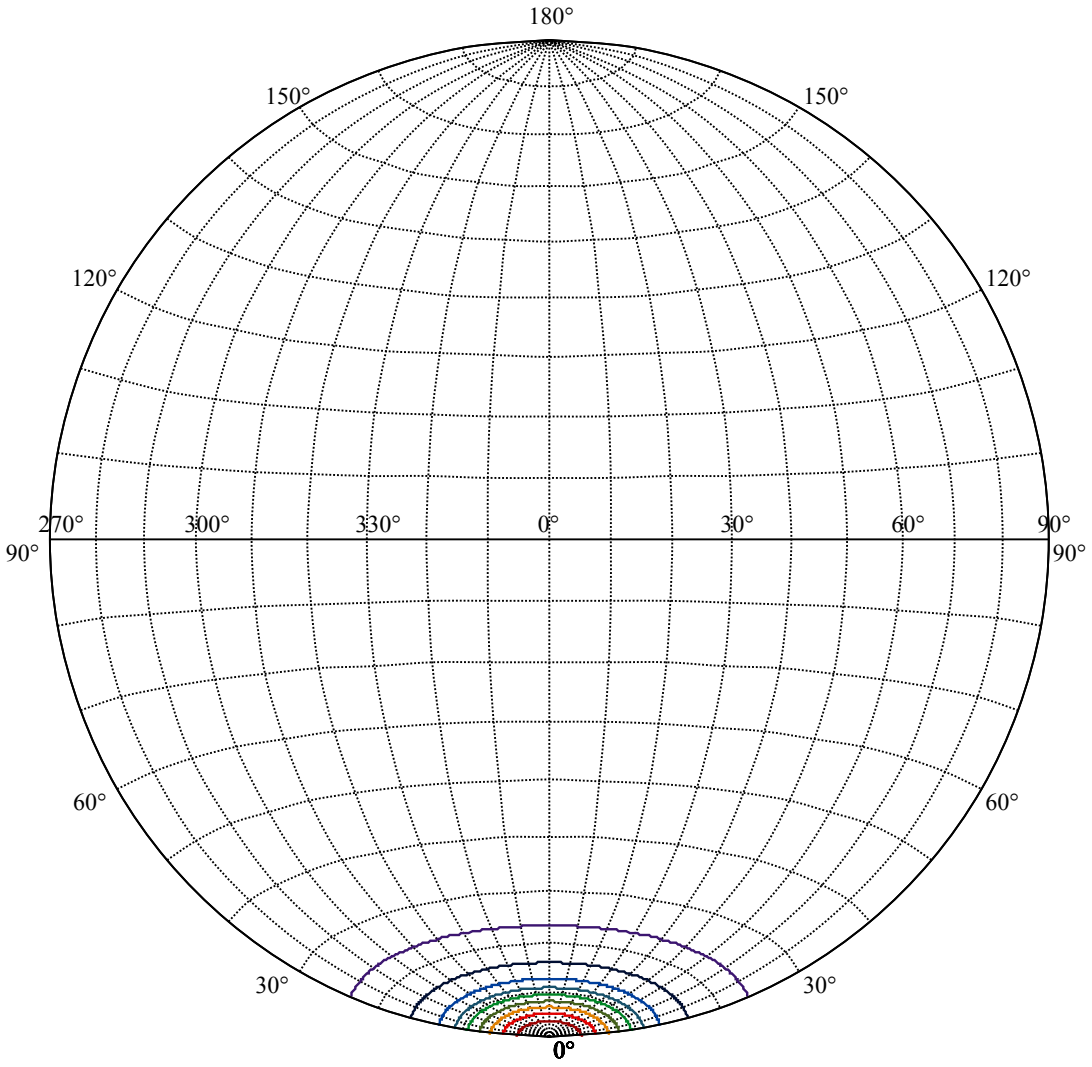

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2024/3/14
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.65

## ISO candela diagram on circular web






[Unit:cd]

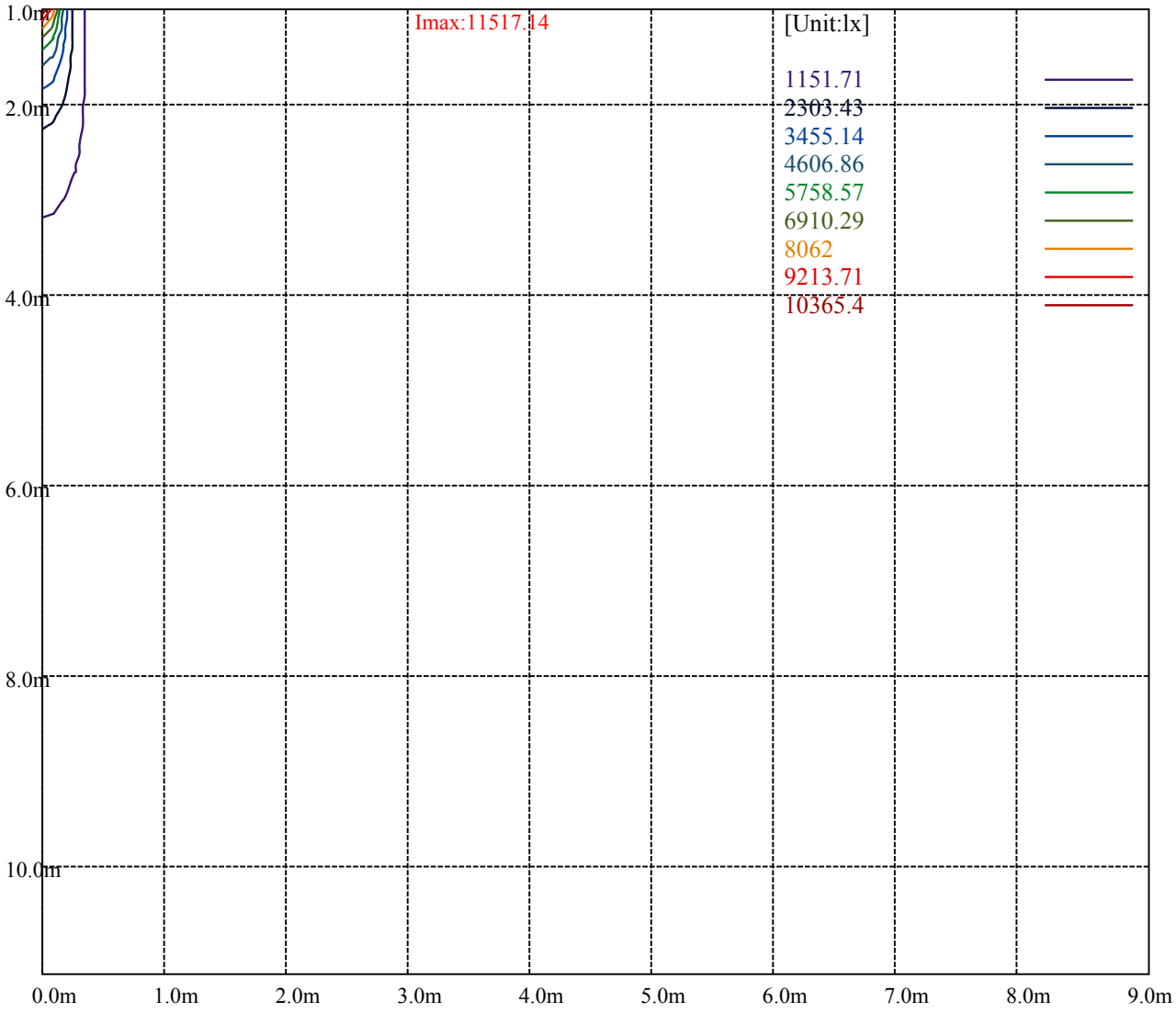
Imax:11517.14

(10%Imax) 1151.71
(20%Imax) 2303.43
(30%Imax) 3455.14
(40%Imax) 4606.86
(50%Imax) 5758.57
(60%Imax) 6910.29
(70%Imax) 8062
(80%Imax) 9213.71
(90%Imax) 10365.4

| | | |
|---|---|---|
| Equipment: GMS1980 | Date: 2024/3/14 | Operator: NT07 |
| Temperature(°C): 25.0 | Humidity(%): 60.0% | Distance(m): 7.65 |

Space ISO Lux diagram






Equipment: GMS1980
Temperature(°C): 25.0

Date: 2024/3/14
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.65

## Luminance Limitting Curve(no luminous side)



Luminance Table

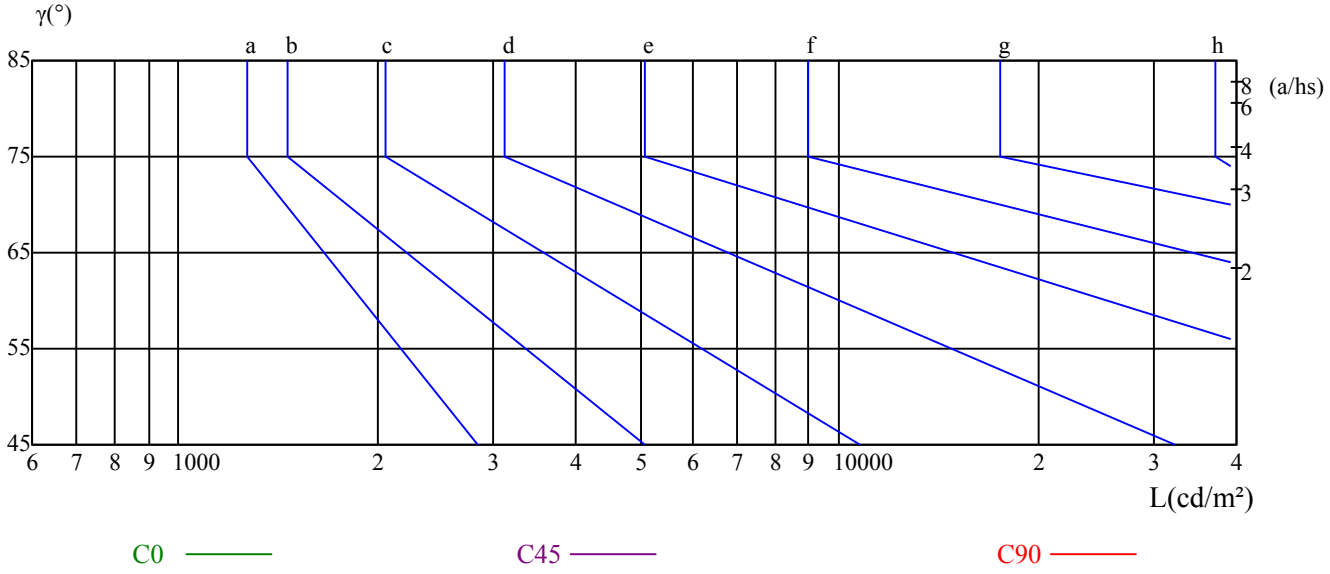
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|---|---|---|---|---|---|---|---|---|---|
| C0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| 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

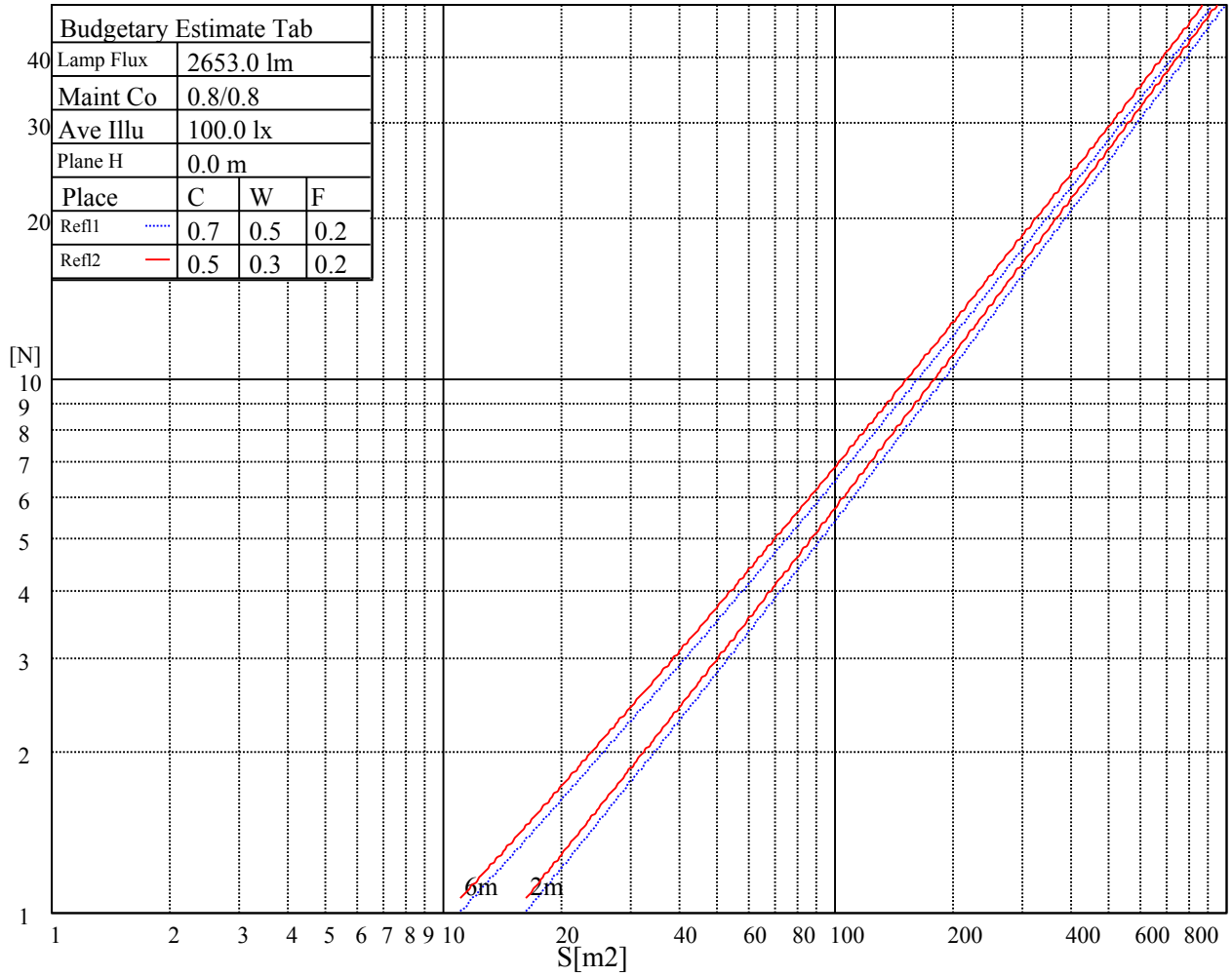


| Illumination assessment according UGR | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Rf of Ceiling | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
| Rf of Wall | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| Rf of Floor | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 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: 2024/3/14 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.65

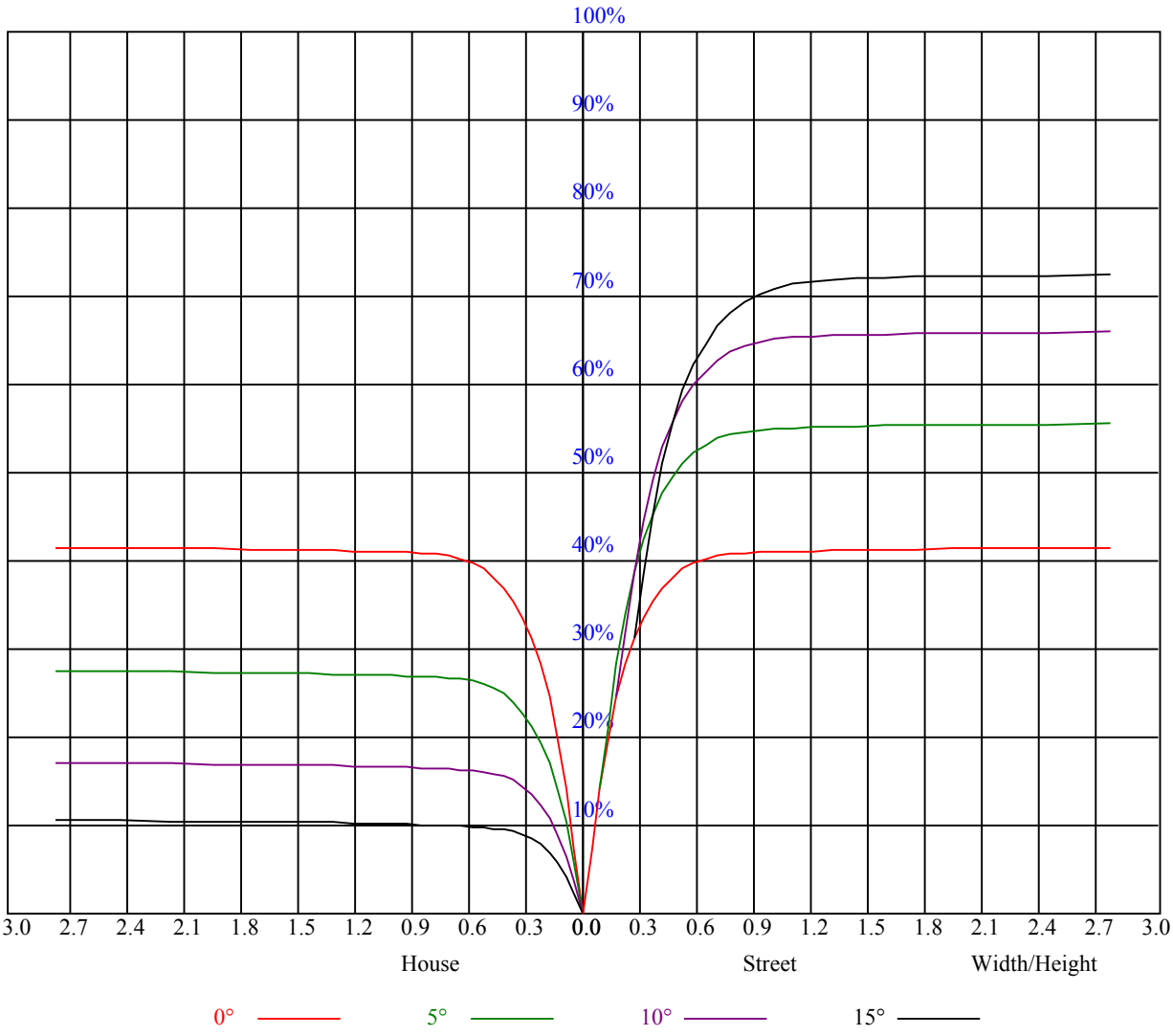
Utilization factor table for indoor luminaire



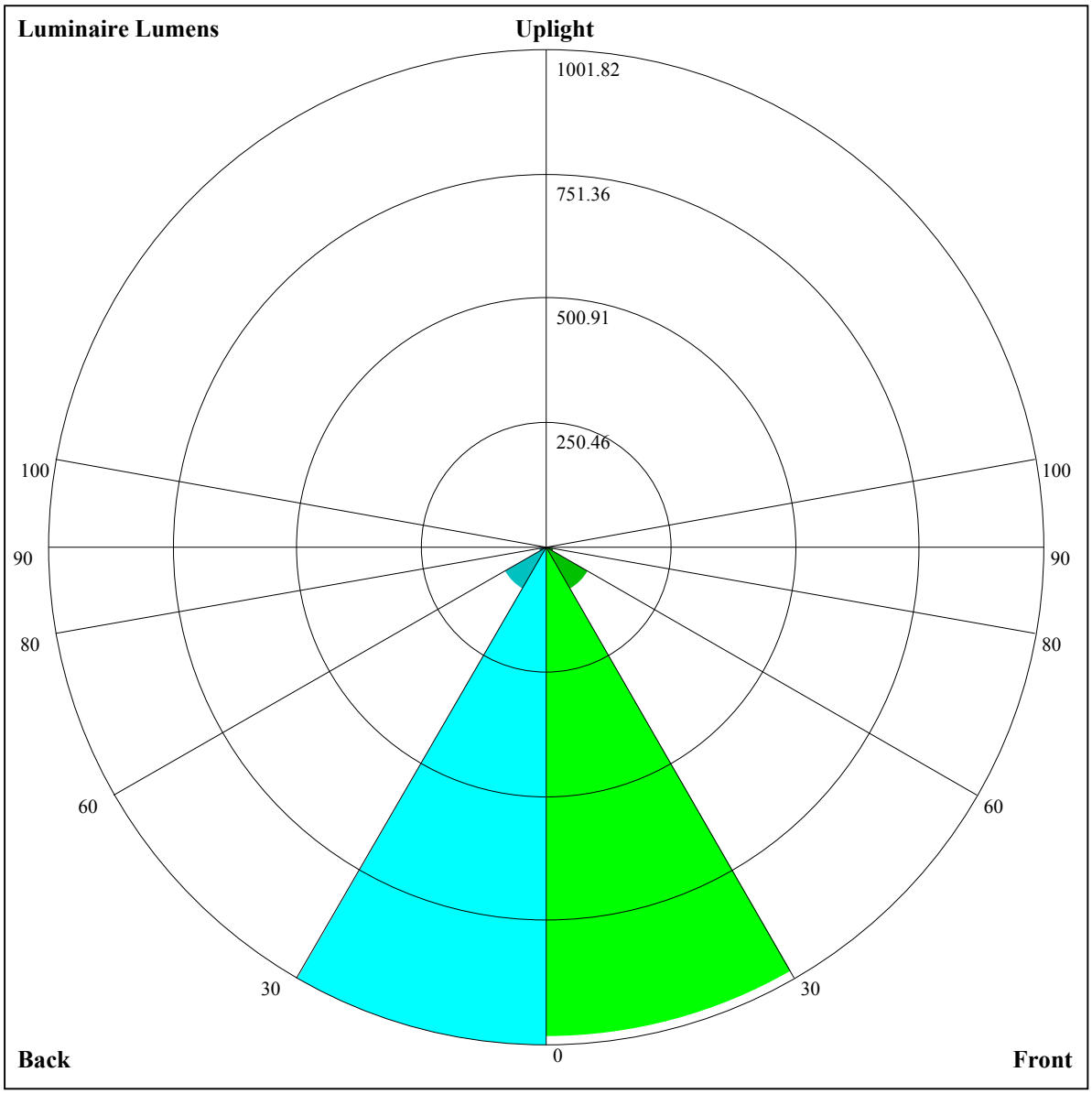
| RHOCC | 80 | | | 70 | | | 50 | | | 30 | | | 10 | | | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RHOW | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | COEFFCIENTS OF UTILIZATION RHOFC=20 CU | | | | | | | | | | | | | | | |
| 0 |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

## Coefficient Utilization Curve






| | | |
|---|---|---|
| Equipment: GMS1980 | Date: 2024/3/14 | Operator: NT07 |
| Temperature(°C): 25.0 | Humidity(%): 60.0% | Distance(m): 7.65 |




Luminaire Lumens:
FL=986.92,FM=98.01,FH=14.34,FVH=5.49
BL=1001.82,BM=98.79,BH=14.72,BVH=5.55
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 | 11468.71 | 11195.41 | 10769.37 | 10225.11 | 9385.90 | 8671.34 | 7873.68 | 7034.46 | 6007.39 |
| 45.0 | 11601.56 | 11537.18 | 11259.79 | 10853.64 | 10309.38 | 9498.85 | 8739.22 | 7918.15 | 6867.09 |
| 90.0 | 11459.35 | 11091.83 | 10634.18 | 9905.58 | 9221.45 | 8464.17 | 7423.64 | 6572.72 | 5752.82 |
| 135.0 | 11538.94 | 11354.59 | 11002.87 | 10517.14 | 9767.46 | 9054.66 | 8267.53 | 7227.00 | 6403.59 |
| 180.0 | 11468.71 | 11603.90 | 11559.42 | 11341.13 | 10854.81 | 10325.18 | 9698.99 | 8788.38 | 7928.10 |
| 225.0 | 11601.56 | 11505.58 | 11245.74 | 10813.85 | 10283.05 | 9471.34 | 8722.25 | 7894.16 | 7047.34 |
| 270.0 | 11459.35 | 11575.81 | 11560.01 | 11404.34 | 10943.18 | 10443.40 | 9848.81 | 9150.05 | 8121.23 |
| 315.0 | 11538.94 | 11551.23 | 11403.17 | 11115.82 | 10681.59 | 9983.41 | 9319.77 | 8553.71 | 7513.76 |
| 360.0 | 11468.71 | 11195.41 | 10769.37 | 10225.11 | 9385.90 | 8671.34 | 7873.68 | 7034.46 | 6007.39 |

| C/γ(°) | 9.0 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 5237.24 | 4521.51 | 3787.05 | 3310.09 | 2840.16 | 2542.86 | 2297.65 | 2095.75 | 1883.90 |
| 45.0 | 6033.73 | 5246.60 | 4542.57 | 3795.24 | 3311.85 | 2920.33 | 2599.04 | 2285.95 | 2084.04 |
| 90.0 | 4977.98 | 4127.65 | 3576.37 | 3122.82 | 2763.49 | 2406.50 | 2180.02 | 1993.92 | 1831.23 |
| 135.0 | 5608.27 | 4671.91 | 4027.58 | 3497.95 | 2972.42 | 2643.52 | 2370.22 | 2151.93 | 1926.03 |
| 180.0 | 7068.41 | 6099.27 | 5292.25 | 4577.69 | 3823.92 | 3317.70 | 2916.23 | 2599.63 | 2339.20 |
| 225.0 | 6224.51 | 5253.04 | 4552.52 | 3936.87 | 3324.14 | 2935.55 | 2546.96 | 2298.82 | 2094.58 |
| 270.0 | 7273.82 | 6524.73 | 5716.54 | 4779.59 | 4147.55 | 3496.19 | 3069.56 | 2717.84 | 2381.92 |
| 315.0 | 6681.57 | 5866.94 | 4919.46 | 4254.64 | 3575.78 | 3138.62 | 2785.14 | 2496.04 | 2204.60 |
| 360.0 | 5237.24 | 4521.51 | 3787.05 | 3310.09 | 2840.16 | 2542.86 | 2297.65 | 2095.75 | 1883.90 |

| C/γ(°) | 18.0 | 19.0 | 20.0 | 21.0 | 22.0 | 23.0 | 24.0 | 25.0 | 26.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 1731.15 | 1587.19 | 1457.27 | 1163.02 | 1163.02 | 1117.19 | 1026.07 | 913.89 | 823.24 |
| 45.0 | 1914.91 | 1721.21 | 1581.92 | 1425.08 | 1317.40 | 1216.74 | 1123.69 | 1010.16 | 918.28 |
| 90.0 | 1643.37 | 1508.77 | 1285.80 | 1155.12 | 1155.12 | 1045.74 | 958.19 | 873.33 | 762.49 |
| 135.0 | 1768.02 | 1624.06 | 1492.38 | 1346.08 | 1243.66 | 1126.62 | 1035.91 | 945.78 | 833.42 |
| 180.0 | 2078.19 | 1903.21 | 1737.59 | 1558.51 | 1436.20 | 1325.01 | 1200.94 | 1105.55 | 999.04 |
| 225.0 | 1877.46 | 1724.72 | 1581.92 | 1457.85 | 1149.62 | 1149.62 | 1128.26 | 1036.90 | 950.23 |
| 270.0 | 2166.56 | 1980.46 | 1807.82 | 1628.74 | 1501.75 | 1377.09 | 1270.58 | 1151.78 | 1062.83 |
| 315.0 | 2013.82 | 1847.61 | 1697.80 | 1525.74 | 1404.01 | 1149.91 | 1149.91 | 1082.78 | 994.18 |
| 360.0 | 1731.15 | 1587.19 | 1457.27 | 1163.02 | 1163.02 | 1117.19 | 1026.07 | 913.89 | 823.24 |

| C/γ(°) | 27.0 | 28.0 | 29.0 | 30.0 | 31.0 | 32.0 | 33.0 | 34.0 | 35.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 710.05 | 621.51 | 541.22 | 455.13 | 389.88 | 327.78 | 259.84 | 213.08 | 174.10 |
| 45.0 | 825.81 | 733.93 | 623.32 | 540.81 | 472.92 | 407.38 | 330.13 | 302.03 | 302.03 |
| 90.0 | 671.96 | 585.63 | 511.60 | 428.09 | 364.01 | 304.79 | 252.99 | 197.40 | 160.35 |
| 135.0 | 742.71 | 652.58 | 569.48 | 478.19 | 411.47 | 348.85 | 305.55 | 305.55 | 184.64 |
| 180.0 | 912.42 | 822.30 | 731.59 | 623.91 | 537.30 | 459.46 | 394.50 | 311.98 | 297.35 |
| 225.0 | 837.98 | 750.20 | 640.94 | 553.27 | 473.51 | 386.66 | 322.46 | 265.81 | 206.64 |
| 270.0 | 974.46 | 866.19 | 772.56 | 687.70 | 577.09 | 495.16 | 410.30 | 340.07 | 296.77 |
| 315.0 | 905.58 | 798.19 | 709.29 | 597.46 | 515.17 | 443.89 | 377.47 | 302.09 | 249.66 |
| 360.0 | 710.05 | 621.51 | 541.22 | 455.13 | 389.88 | 327.78 | 259.84 | 213.08 | 174.10 |

| C/γ(°) | 36.0 | 37.0 | 38.0 | 39.0 | 40.0 | 41.0 | 42.0 | 43.0 | 44.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 141.74 | 107.45 | 84.92 | 67.59 | 54.66 | 42.84 | 36.58 | 31.49 | 28.50 |
| 45.0 | 171.76 | 137.53 | 102.59 | 81.17 | 64.55 | 49.69 | 41.14 | 35.29 | 31.31 |
| 90.0 | 129.16 | 96.39 | 76.02 | 57.41 | 46.64 | 38.80 | 33.59 | 29.26 | 26.69 |
| 135.0 | 150.05 | 114.12 | 90.59 | 71.69 | 54.48 | 44.59 | 36.28 | 31.89 | 28.79 |
| 180.0 | 297.35 | 168.66 | 131.50 | 104.87 | 82.05 | 65.49 | 53.37 | 41.38 | 35.70 |
| 225.0 | 168.54 | 136.65 | 110.31 | 84.80 | 68.24 | 54.89 | 44.54 | 35.76 | 31.54 |
| 270.0 | 296.77 | 177.50 | 142.62 | 116.28 | 93.58 | 72.16 | 58.64 | 47.23 | 39.85 |
| 315.0 | 204.89 | 167.67 | 128.57 | 102.77 | 81.99 | 61.92 | 50.33 | 41.96 | 34.94 |
| 360.0 | 141.74 | 107.45 | 84.92 | 67.59 | 54.66 | 42.84 | 36.58 | 31.49 | 28.50 |

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 | 26.16 | 23.82 | 22.30 | 21.01 | 19.96 | 18.90 | 18.26 | 17.79 | 17.44 |
| 45.0 | 28.38 | 25.52 | 23.70 | 22.18 | 20.66 | 19.61 | 18.84 | 18.08 | 17.67 |
| 90.0 | 24.58 | 22.82 | 21.13 | 19.96 | 19.08 | 18.20 | 17.67 | 17.32 | 16.97 |
| 135.0 | 26.34 | 23.94 | 22.36 | 21.01 | 19.90 | 18.84 | 18.14 | 17.56 | 17.15 |
| 180.0 | 31.66 | 28.73 | 26.16 | 24.46 | 23.00 | 21.71 | 20.42 | 19.55 | 18.84 |
| 225.0 | 28.56 | 25.81 | 24.05 | 22.30 | 21.07 | 20.07 | 19.08 | 18.38 | 17.85 |
| 270.0 | 32.89 | 29.03 | 26.22 | 24.23 | 22.65 | 20.95 | 19.90 | 18.90 | 18.14 |
| 315.0 | 31.13 | 28.27 | 25.46 | 23.58 | 22.00 | 20.72 | 19.43 | 18.55 | 17.85 |
| 360.0 | 26.16 | 23.82 | 22.30 | 21.01 | 19.96 | 18.90 | 18.26 | 17.79 | 17.44 |

| C/γ(°) | 54.0 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 | 60.0 | 61.0 | 62.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 17.21 | 17.03 | 16.97 | 17.09 | 17.26 | 17.50 | 17.67 | 17.67 | 17.62 |
| 45.0 | 17.26 | 17.09 | 16.97 | 16.97 | 17.09 | 17.21 | 17.44 | 17.56 | 17.62 |
| 90.0 | 16.80 | 16.68 | 16.68 | 16.85 | 17.03 | 17.21 | 17.32 | 17.26 | 17.21 |
| 135.0 | 16.80 | 16.56 | 16.44 | 16.44 | 16.56 | 16.80 | 16.97 | 17.15 | 17.09 |
| 180.0 | 18.14 | 17.67 | 17.38 | 17.15 | 17.03 | 17.09 | 17.21 | 17.38 | 17.50 |
| 225.0 | 17.38 | 17.03 | 16.80 | 16.80 | 16.80 | 16.91 | 17.15 | 17.32 | 17.44 |
| 270.0 | 17.32 | 16.91 | 16.62 | 16.44 | 16.33 | 16.39 | 16.50 | 16.80 | 17.03 |
| 315.0 | 17.26 | 16.74 | 16.50 | 16.39 | 16.33 | 16.44 | 16.62 | 16.85 | 16.97 |
| 360.0 | 17.21 | 17.03 | 16.97 | 17.09 | 17.26 | 17.50 | 17.67 | 17.67 | 17.62 |

| C/γ(°) | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 | 70.0 | 71.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 17.21 | 16.74 | 16.04 | 15.39 | 14.57 | 13.99 | 13.58 | 13.40 | 13.34 |
| 45.0 | 17.50 | 17.15 | 16.68 | 15.86 | 15.16 | 14.40 | 13.99 | 13.81 | 13.52 |
| 90.0 | 16.74 | 16.15 | 15.51 | 14.86 | 14.10 | 13.52 | 13.05 | 12.76 | 12.52 |
| 135.0 | 16.80 | 16.39 | 15.80 | 15.10 | 14.34 | 13.75 | 13.28 | 12.87 | 12.70 |
| 180.0 | 17.67 | 17.56 | 17.26 | 16.80 | 16.04 | 15.39 | 14.75 | 14.10 | 13.69 |
| 225.0 | 17.44 | 17.21 | 16.62 | 15.98 | 15.33 | 14.75 | 15.33 | 16.21 | 15.68 |
| 270.0 | 17.21 | 17.15 | 16.91 | 16.50 | 15.74 | 15.16 | 14.46 | 13.93 | 13.34 |
| 315.0 | 16.97 | 16.85 | 16.50 | 15.98 | 15.22 | 14.46 | 13.93 | 13.46 | 12.99 |
| 360.0 | 17.21 | 16.74 | 16.04 | 15.39 | 14.57 | 13.99 | 13.58 | 13.40 | 13.34 |

| C/γ(°) | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0 | 80.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 13.28 | 13.23 | 12.87 | 12.64 | 12.29 | 11.94 | 11.65 | 11.24 | 11.00 |
| 45.0 | 13.40 | 13.05 | 12.58 | 12.23 | 12.00 | 11.70 | 11.53 | 11.24 | 11.00 |
| 90.0 | 12.23 | 12.06 | 11.88 | 11.70 | 11.47 | 11.29 | 11.06 | 10.89 | 10.65 |
| 135.0 | 12.82 | 12.87 | 12.87 | 12.58 | 12.47 | 12.23 | 12.00 | 11.65 | 11.18 |
| 180.0 | 13.69 | 13.93 | 13.75 | 13.87 | 13.64 | 13.52 | 12.93 | 12.87 | 12.35 |
| 225.0 | 15.04 | 15.39 | 15.57 | 14.69 | 13.64 | 13.93 | 12.93 | 12.70 | 12.06 |
| 270.0 | 12.99 | 12.70 | 12.47 | 12.23 | 12.06 | 11.88 | 11.59 | 11.41 | 11.24 |
| 315.0 | 12.76 | 12.82 | 12.70 | 12.58 | 12.41 | 12.11 | 11.82 | 11.53 | 11.18 |
| 360.0 | 13.28 | 13.23 | 12.87 | 12.64 | 12.29 | 11.94 | 11.65 | 11.24 | 11.00 |

| C/γ(°) | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 10.65 | 10.42 | 10.18 | 10.01 | 9.89 | 9.66 | 9.54 | 9.48 | 9.42 |
| 45.0 | 10.77 | 10.48 | 10.30 | 10.12 | 10.01 | 9.77 | 9.66 | 9.54 | 9.42 |
| 90.0 | 10.48 | 10.30 | 10.12 | 10.01 | 9.77 | 9.66 | 9.54 | 9.42 | 9.48 |
| 135.0 | 10.65 | 10.30 | 10.12 | 9.95 | 9.77 | 9.66 | 9.54 | 9.42 | 9.42 |
| 180.0 | 12.06 | 11.53 | 10.94 | 10.42 | 10.24 | 10.07 | 9.77 | 9.60 | 9.48 |
| 225.0 | 11.41 | 10.83 | 10.42 | 10.24 | 10.07 | 9.77 | 9.66 | 9.54 | 9.42 |
| 270.0 | 11.00 | 10.83 | 10.65 | 10.48 | 10.24 | 10.07 | 9.89 | 9.66 | 9.54 |
| 315.0 | 10.89 | 10.59 | 10.48 | 10.18 | 10.07 | 9.83 | 9.71 | 9.54 | 9.48 |
| 360.0 | 10.65 | 10.42 | 10.18 | 10.01 | 9.89 | 9.66 | 9.54 | 9.48 | 9.42 |

Intensity data(cd)



| C/γ(°) | 90.0 |
|---|---|
| 0.0 | 9.42 |
| 45.0 | 9.42 |
| 90.0 | 9.42 |
| 135.0 | 9.36 |
| 180.0 | 9.42 |
| 225.0 | 9.42 |
| 270.0 | 9.42 |
| 315.0 | 9.42 |
| 360.0 | 9.42 |