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

## Nata

Client:
LumCAT: 2-2756-L
Luminaire: 92.70.412.00
Report No: 2024814-B013
Ballast type: AC

| | |
|---|---|
| Test No: 2024814-C013 | Voltage(V): 34.800 |
| LampCAT: LUMINUS CXM-14-AC40 | Current(A): 0.694 |
| Lamp flux(lm): 3147.0 | Power (W): 24.150 |
| Number of Lamps: 1 | PF: 0.000 |
| Length(mm): 0 | Width(mm): 0 |
| Phm Type: C | Height(mm): 0 |

## Photometric Results

Lumens(lm): 2890.46, Efficiency(%): 91.85% , Luminous Efficacy(lm/W): 119.69
Central intensity(cd): 6105.542, Maximum intensity(cd): 6105.542
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=37.6
[C90/270]Total=37.6
Field angle(10%Imax): [C0/180]Total=67.4
[C90/270]Total=67.4
Maximum s/h(1/2): C0_180=0.60 C90_270=0.60
Maximum s/h(1/4): C0_180=0.64 C90_270=0.64
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 91.85%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 99.371%

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 0.0 | 6105.542 | 0.000 | 0 | 0.00% | 0.00% |
| 1.0 | 6092.664 | 5.837 | 5.837 | 0.19% | 0.20% |
| 2.0 | 6053.104 | 17.433 | 23.269 | 0.55% | 0.81% |
| 3.0 | 5976.987 | 28.772 | 52.041 | 0.91% | 1.80% |
| 4.0 | 5889.911 | 39.722 | 91.764 | 1.26% | 3.17% |
| 5.0 | 5779.529 | 50.201 | 141.965 | 1.60% | 4.91% |
| 6.0 | 5636.822 | 59.996 | 201.961 | 1.91% | 6.99% |
| 7.0 | 5492.735 | 69.081 | 271.042 | 2.20% | 9.38% |
| 8.0 | 5316.316 | 77.358 | 348.4 | 2.46% | 12.05% |
| 9.0 | 5122.229 | 84.599 | 432.999 | 2.69% | 14.98% |
| 10.0 | 4921.085 | 90.888 | 523.887 | 2.89% | 18.12% |
| 11.0 | 4718.976 | 96.324 | 620.211 | 3.06% | 21.46% |
| 12.0 | 4509.823 | 100.884 | 721.095 | 3.21% | 24.95% |
| 13.0 | 4297.273 | 104.518 | 825.613 | 3.32% | 28.56% |
| 14.0 | 4078.160 | 107.205 | 932.818 | 3.41% | 32.27% |
| 15.0 | 3866.235 | 109.064 | 1041.882 | 3.47% | 36.05% |
| 16.0 | 3640.091 | 109.989 | 1151.871 | 3.50% | 39.85% |
| 17.0 | 3445.866 | 110.347 | 1262.218 | 3.51% | 43.67% |
| 18.0 | 3241.444 | 110.259 | 1372.478 | 3.50% | 47.48% |
| 19.0 | 3017.331 | 108.890 | 1481.367 | 3.46% | 51.25% |
| 20.0 | 2839.525 | 107.197 | 1588.564 | 3.41% | 54.96% |
| 21.0 | 2643.329 | 105.282 | 1693.846 | 3.35% | 58.60% |
| 22.0 | 2450.280 | 102.358 | 1796.204 | 3.25% | 62.14% |
| 23.0 | 2272.822 | 99.103 | 1895.308 | 3.15% | 65.57% |
| 24.0 | 2075.792 | 95.076 | 1990.384 | 3.02% | 68.86% |
| 25.0 | 1904.674 | 90.507 | 2080.891 | 2.88% | 71.99% |
| 26.0 | 1753.058 | 86.341 | 2167.232 | 2.74% | 74.98% |
| 27.0 | 1561.750 | 81.098 | 2248.33 | 2.58% | 77.78% |
| 28.0 | 1418.123 | 75.444 | 2323.774 | 2.40% | 80.39% |
| 29.0 | 1304.943 | 71.243 | 2395.017 | 2.26% | 82.86% |
| 30.0 | 1100.002 | 64.933 | 2459.95 | 2.06% | 85.11% |
| 31.0 | 981.841 | 57.935 | 2517.885 | 1.84% | 87.11% |
| 32.0 | 838.063 | 52.138 | 2570.023 | 1.66% | 88.91% |
| 33.0 | 692.189 | 45.082 | 2615.105 | 1.43% | 90.47% |
| 34.0 | 572.774 | 38.281 | 2653.386 | 1.22% | 91.80% |
| 35.0 | 479.022 | 32.665 | 2686.051 | 1.04% | 92.93% |
| 36.0 | 397.951 | 27.923 | 2713.974 | 0.89% | 93.89% |
| 37.0 | 331.912 | 23.804 | 2737.778 | 0.76% | 94.72% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 38.0 | 282.648 | 20.513 | 2758.291 | 0.65% | 95.43% |
| 39.0 | 233.864 | 17.630 | 2775.921 | 0.56% | 96.04% |
| 40.0 | 197.306 | 15.038 | 2790.959 | 0.48% | 96.56% |
| 41.0 | 160.184 | 12.730 | 2803.689 | 0.40% | 97.00% |
| 42.0 | 122.668 | 10.277 | 2813.965 | 0.33% | 97.35% |
| 43.0 | 101.860 | 8.317 | 2822.283 | 0.26% | 97.64% |
| 44.0 | 83.693 | 7.003 | 2829.286 | 0.22% | 97.88% |
| 45.0 | 67.628 | 5.815 | 2835.101 | 0.18% | 98.08% |
| 46.0 | 57.135 | 4.879 | 2839.98 | 0.16% | 98.25% |
| 47.0 | 48.239 | 4.191 | 2844.172 | 0.13% | 98.40% |
| 48.0 | 41.229 | 3.617 | 2847.788 | 0.11% | 98.52% |
| 49.0 | 36.071 | 3.174 | 2850.963 | 0.10% | 98.63% |
| 50.0 | 31.912 | 2.834 | 2853.797 | 0.09% | 98.73% |
| 51.0 | 28.535 | 2.557 | 2856.354 | 0.08% | 98.82% |
| 52.0 | 25.756 | 2.330 | 2858.684 | 0.07% | 98.90% |
| 53.0 | 23.679 | 2.150 | 2860.835 | 0.07% | 98.97% |
| 54.0 | 21.498 | 1.991 | 2862.826 | 0.06% | 99.04% |
| 55.0 | 19.744 | 1.841 | 2864.667 | 0.06% | 99.11% |
| 56.0 | 18.292 | 1.719 | 2866.385 | 0.05% | 99.17% |
| 57.0 | 16.997 | 1.614 | 2867.999 | 0.05% | 99.22% |
| 58.0 | 15.782 | 1.516 | 2869.515 | 0.05% | 99.28% |
| 59.0 | 14.704 | 1.425 | 2870.94 | 0.05% | 99.32% |
| 60.0 | 13.739 | 1.344 | 2872.284 | 0.04% | 99.37% |
| 61.0 | 12.891 | 1.271 | 2873.555 | 0.04% | 99.42% |
| 62.0 | 12.070 | 1.203 | 2874.757 | 0.04% | 99.46% |
| 63.0 | 11.334 | 1.138 | 2875.896 | 0.04% | 99.50% |
| 64.0 | 10.716 | 1.082 | 2876.978 | 0.03% | 99.53% |
| 65.0 | 10.125 | 1.031 | 2878.009 | 0.03% | 99.57% |
| 66.0 | 9.540 | 0.981 | 2878.99 | 0.03% | 99.60% |
| 67.0 | 9.047 | 0.935 | 2879.925 | 0.03% | 99.64% |
| 68.0 | 8.555 | 0.892 | 2880.816 | 0.03% | 99.67% |
| 69.0 | 8.075 | 0.848 | 2881.665 | 0.03% | 99.70% |
| 70.0 | 7.641 | 0.807 | 2882.472 | 0.03% | 99.72% |
| 71.0 | 7.208 | 0.767 | 2883.239 | 0.02% | 99.75% |
| 72.0 | 6.741 | 0.725 | 2883.965 | 0.02% | 99.78% |
| 73.0 | 6.321 | 0.683 | 2884.648 | 0.02% | 99.80% |
| 74.0 | 5.940 | 0.645 | 2885.292 | 0.02% | 99.82% |
| 75.0 | 5.512 | 0.605 | 2885.897 | 0.02% | 99.84% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 76.0 | 5.125 | 0.565 | 2886.462 | 0.02% | 99.86% |
| 77.0 | 4.737 | 0.526 | 2886.988 | 0.02% | 99.88% |
| 78.0 | 4.350 | 0.486 | 2887.474 | 0.02% | 99.90% |
| 79.0 | 3.922 | 0.444 | 2887.919 | 0.01% | 99.91% |
| 80.0 | 3.574 | 0.404 | 2888.323 | 0.01% | 99.93% |
| 81.0 | 3.154 | 0.364 | 2888.687 | 0.01% | 99.94% |
| 82.0 | 2.806 | 0.323 | 2889.01 | 0.01% | 99.95% |
| 83.0 | 2.457 | 0.286 | 2889.296 | 0.01% | 99.96% |
| 84.0 | 2.109 | 0.249 | 2889.545 | 0.01% | 99.97% |
| 85.0 | 1.827 | 0.215 | 2889.76 | 0.01% | 99.98% |
| 86.0 | 1.577 | 0.186 | 2889.946 | 0.01% | 99.98% |
| 87.0 | 1.353 | 0.160 | 2890.106 | 0.01% | 99.99% |
| 88.0 | 1.150 | 0.137 | 2890.243 | 0.00% | 99.99% |
| 89.0 | 0.972 | 0.116 | 2890.359 | 0.00% | 100.00% |
| 90.0 | 0.900 | 0.103 | 2890.462 | 0.00% | 100.00% |

## Zonal flux distribution table



ZONAL LUMEN SUMMARY

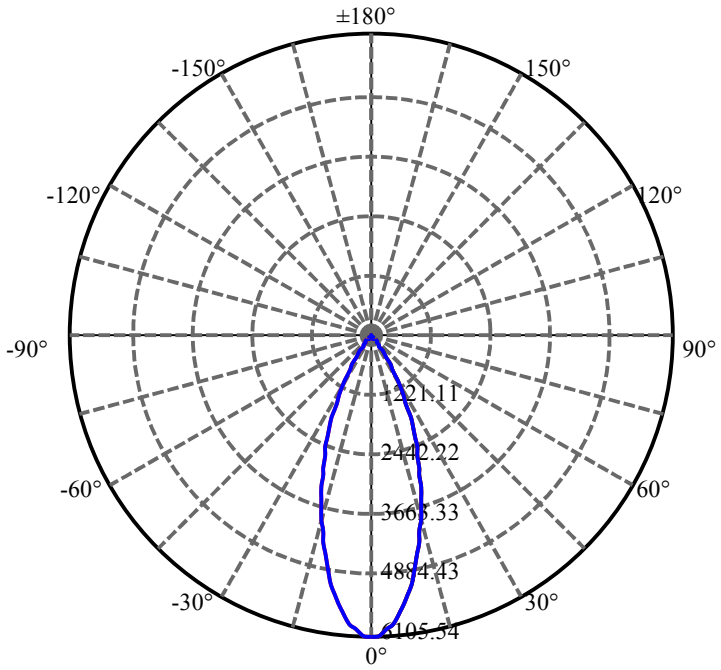
| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-30 | 2459.95 | 78.17% | 85.11% |
| 0-40 | 2790.96 | 88.69% | 96.56% |
| 0-60 | 2872.28 | 91.27% | 99.37% |
| 0-90 | 2890.36 | 91.84% | 100.00% |
| 0-120 | 2890.36 | 91.84% | 100.00% |
| 0-180 | 2890.46 | 91.85% | 100.00% |
| 60-90 | 18.08 | 0.57% | 0.63% |
| 90-120 | 0.00 | 0.00% | 0.00% |
| 90-130 | 0.00 | 0.00% | 0.00% |
| 90-150 | 0.00 | 0.00% | 0.00% |
| 90-180 | 0.00 | 0.00% | 0.00% |
| 0-27.85 | 2312.37 | 73.48% | 80.00% |

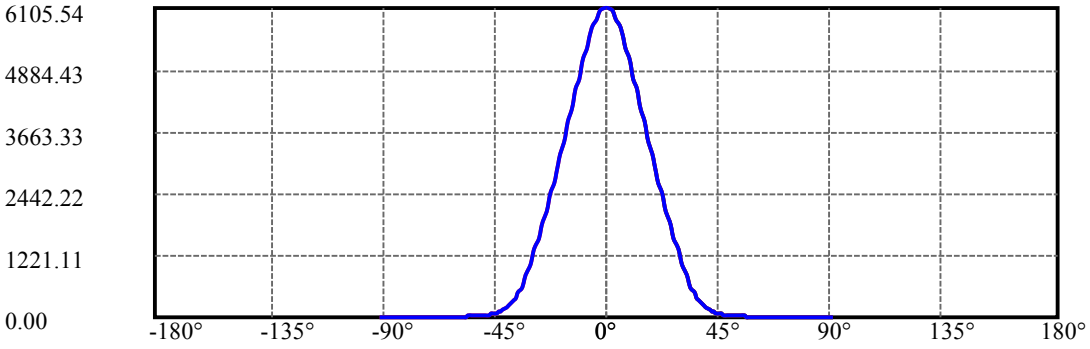
ZONAL LUMEN SUMMARY

| | |
|---|---|
| 0-10 | 523.89 |
| 10-20 | 1064.68 |
| 20-30 | 871.39 |
| 30-40 | 331.01 |
| 40-50 | 62.84 |
| 50-60 | 18.49 |
| 60-70 | 10.19 |
| 70-80 | 5.85 |
| 80-90 | 2.04 |
| 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:

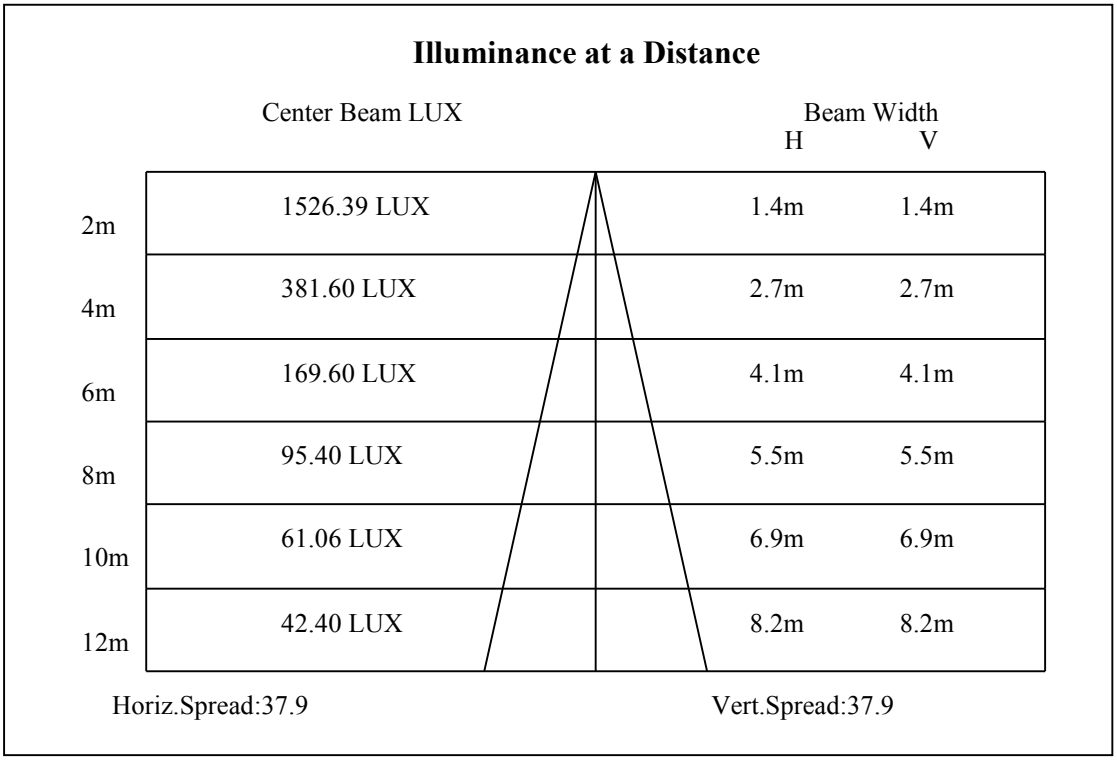
C90/C270:

Field angle(10%Imax):C0/180Left:33.7 Right:33.7
:C90/270Left:33.7 Right:33.7

Beam Angle(50%Imax):C0/180Left:18.8 Right:18.8
:C90/270Left:18.8 Right:18.8

Lux distance Curve

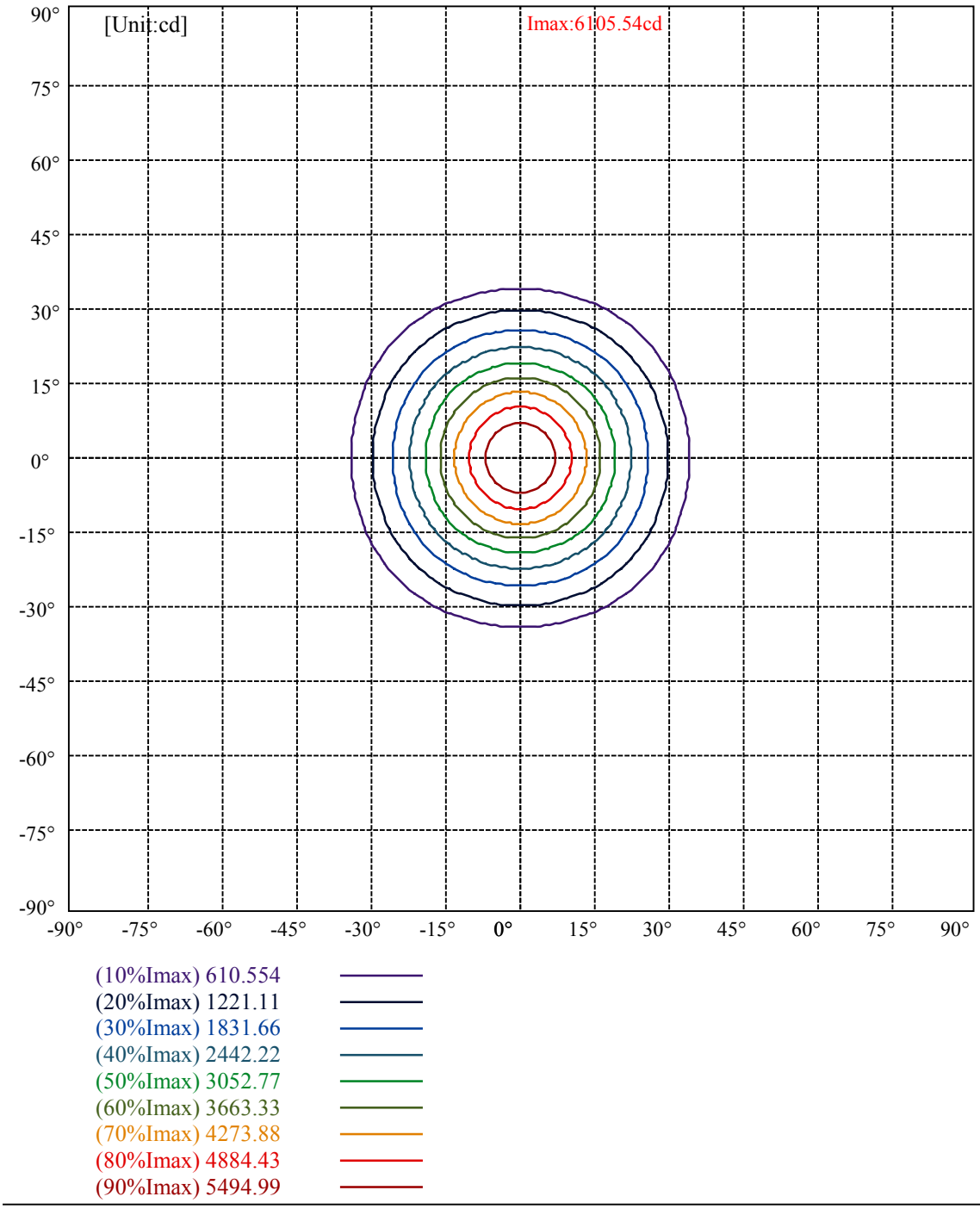





Equipment: GMS 1800
Temperature(°C): 25.0
Date: 2024/8/14
Humidity(%): 60.0%
Operator: NT
Distance(m): 7.25

ISO-Intensity(V-H)





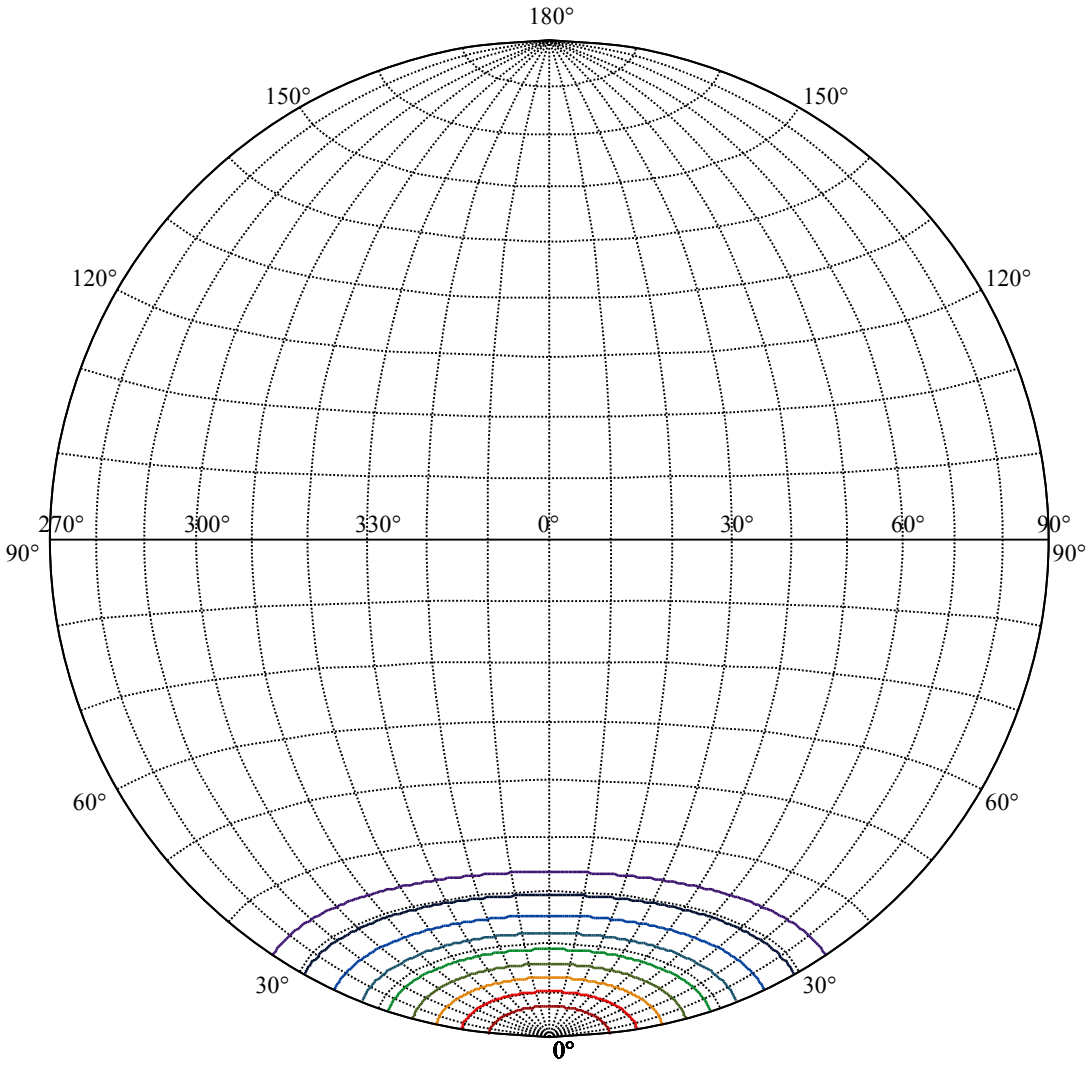

Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2024/8/14
Humidity(%): 60.0%

Operator: NT
Distance(m): 7.25

ISO candela diagram on circular web






House [Unit:cd] Road

Imax:6105.54

(10%Imax) 610.554
(20%Imax) 1221.11
(30%Imax) 1831.66
(40%Imax) 2442.22
(50%Imax) 3052.77
(60%Imax) 3663.33
(70%Imax) 4273.88
(80%Imax) 4884.43
(90%Imax) 5494.99

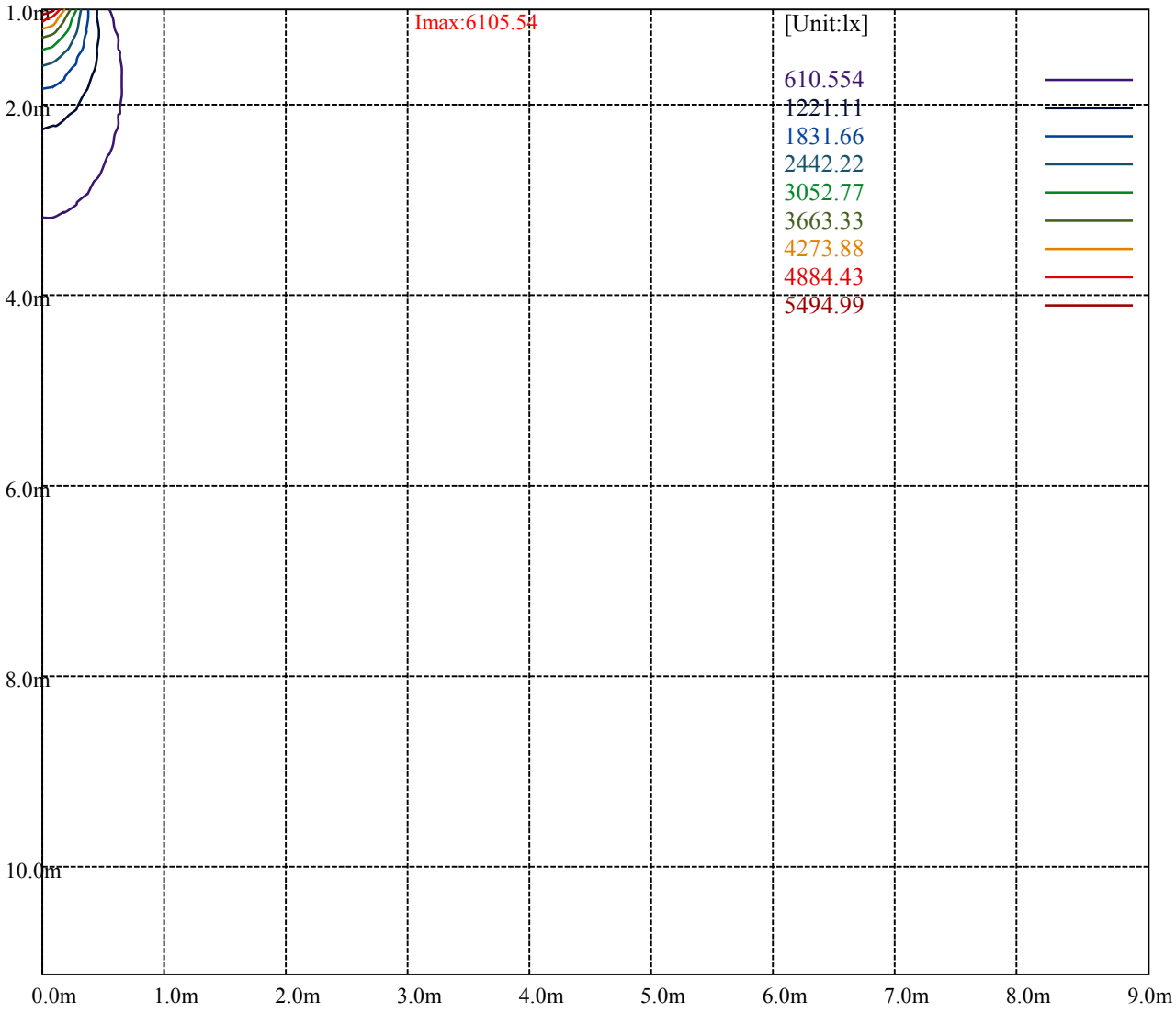
Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2024/8/14
Humidity(%): 60.0%

Operator: NT
Distance(m): 7.25

## Space ISO Lux diagram






Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2024/8/14
Humidity(%): 60.0%

Operator: NT
Distance(m): 7.25

## Luminance Limitting Curve(no luminous side)



Luminance Table

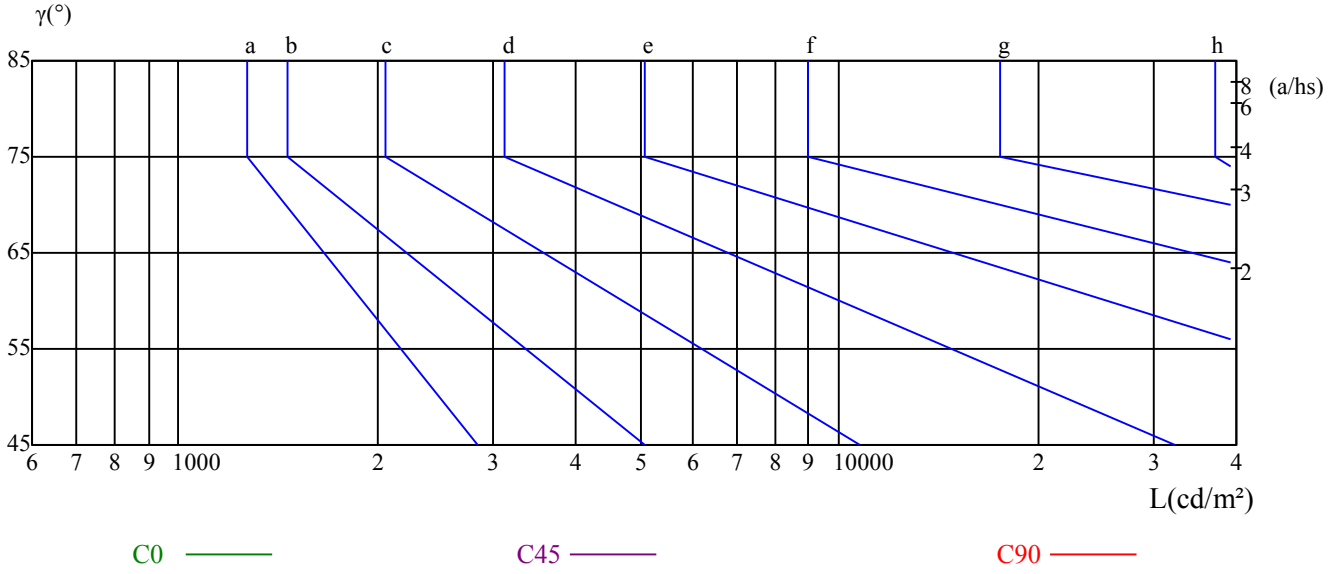
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|---|---|---|---|---|---|---|---|---|---|
| C0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| 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



UGR Glare

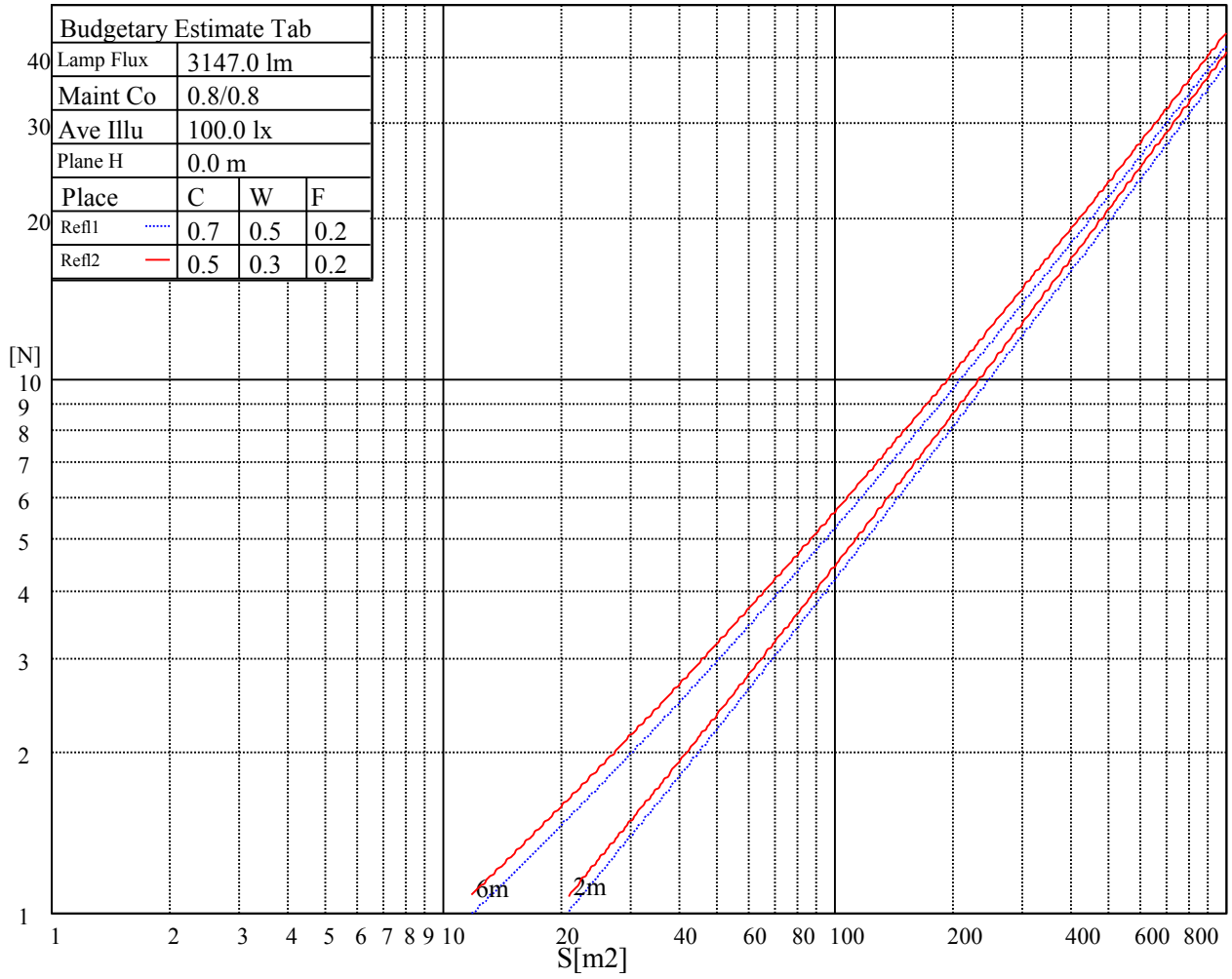


| Illumination assessment according UGR | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Rf of Ceiling | | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
| Rf of Wall | | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| Rf of Floor | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 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
Temperature(°C): 25.0

Date: 2024/8/14
Humidity(%): 60.0%

Operator: NT
Distance(m): 7.25

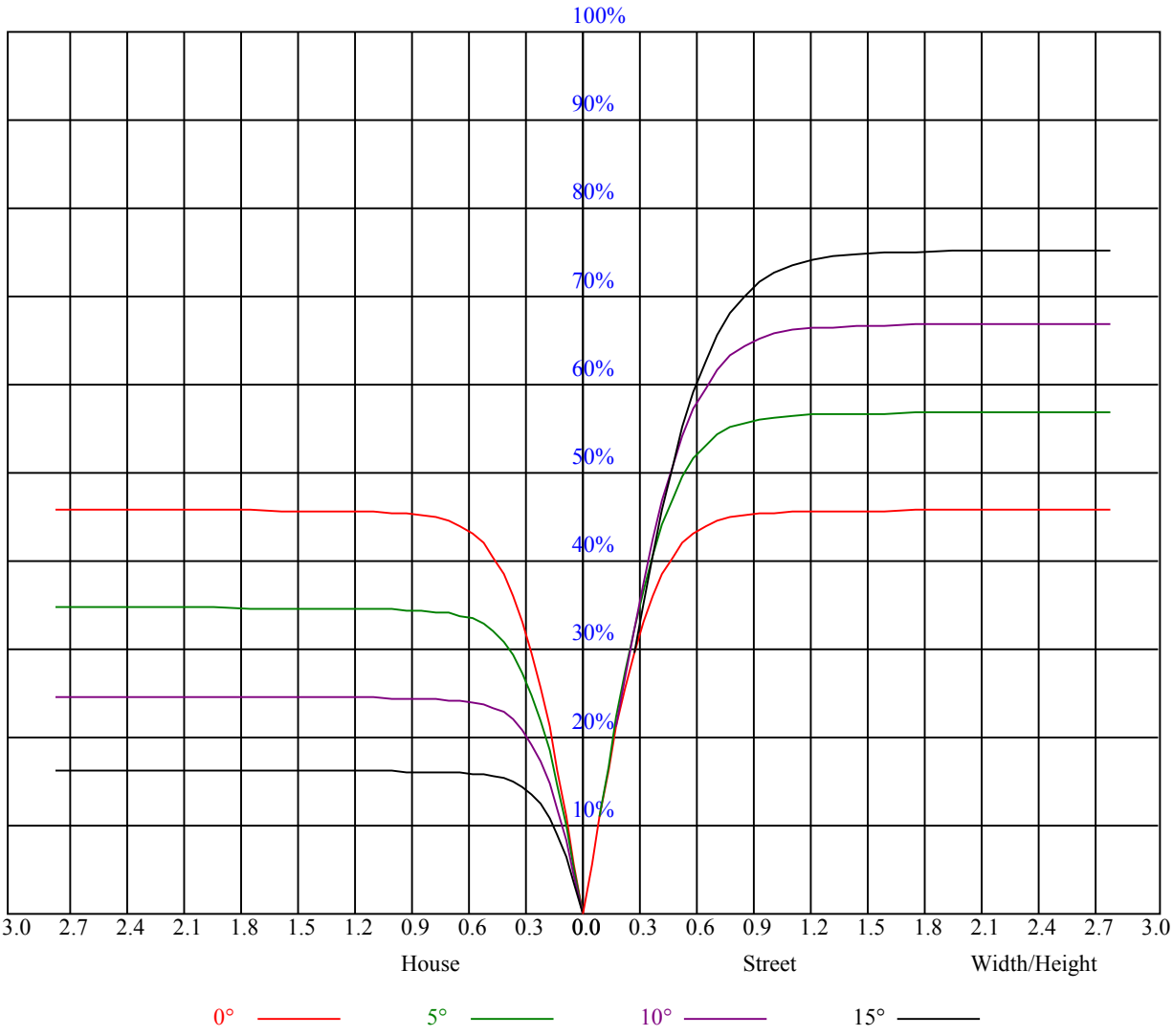
Utilization factor table for indoor luminaire



| 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 | 1.09 | 1.09 | 1.09 | 1.07 | 1.07 | 1.07 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 | 0.98 | 0.94 | 0.94 | 0.94 | 0.92 |
| 1 | 1.03 | 1.00 | 0.99 | 1.01 | 0.99 | 0.97 | 0.97 | 0.95 | 0.94 | 0.93 | 0.92 | 0.91 | 0.90 | 0.89 | 0.89 | 0.87 |
| 2 | 0.96 | 0.93 | 0.90 | 0.95 | 0.92 | 0.89 | 0.92 | 0.89 | 0.87 | 0.89 | 0.87 | 0.86 | 0.87 | 0.85 | 0.84 | 0.82 |
| 3 | 0.91 | 0.87 | 0.84 | 0.90 | 0.86 | 0.83 | 0.87 | 0.84 | 0.82 | 0.85 | 0.83 | 0.80 | 0.83 | 0.81 | 0.79 | 0.78 |
| 4 | 0.86 | 0.82 | 0.78 | 0.85 | 0.81 | 0.78 | 0.83 | 0.80 | 0.77 | 0.81 | 0.78 | 0.76 | 0.80 | 0.77 | 0.75 | 0.74 |
| 5 | 0.82 | 0.77 | 0.73 | 0.81 | 0.76 | 0.73 | 0.79 | 0.75 | 0.73 | 0.78 | 0.74 | 0.72 | 0.76 | 0.74 | 0.71 | 0.70 |
| 6 | 0.78 | 0.73 | 0.69 | 0.77 | 0.72 | 0.69 | 0.76 | 0.72 | 0.69 | 0.74 | 0.71 | 0.68 | 0.73 | 0.70 | 0.68 | 0.67 |
| 7 | 0.74 | 0.69 | 0.66 | 0.73 | 0.69 | 0.66 | 0.72 | 0.68 | 0.65 | 0.71 | 0.68 | 0.65 | 0.70 | 0.67 | 0.65 | 0.63 |
| 8 | 0.71 | 0.66 | 0.62 | 0.70 | 0.65 | 0.62 | 0.69 | 0.65 | 0.62 | 0.68 | 0.65 | 0.62 | 0.67 | 0.64 | 0.62 | 0.60 |
| 9 | 0.67 | 0.63 | 0.59 | 0.67 | 0.62 | 0.59 | 0.66 | 0.62 | 0.59 | 0.65 | 0.62 | 0.59 | 0.65 | 0.61 | 0.59 | 0.58 |
| 10 | 0.65 | 0.60 | 0.57 | 0.64 | 0.60 | 0.57 | 0.63 | 0.59 | 0.57 | 0.63 | 0.59 | 0.56 | 0.62 | 0.59 | 0.56 | 0.55 |

## Coefficient Utilization Curve

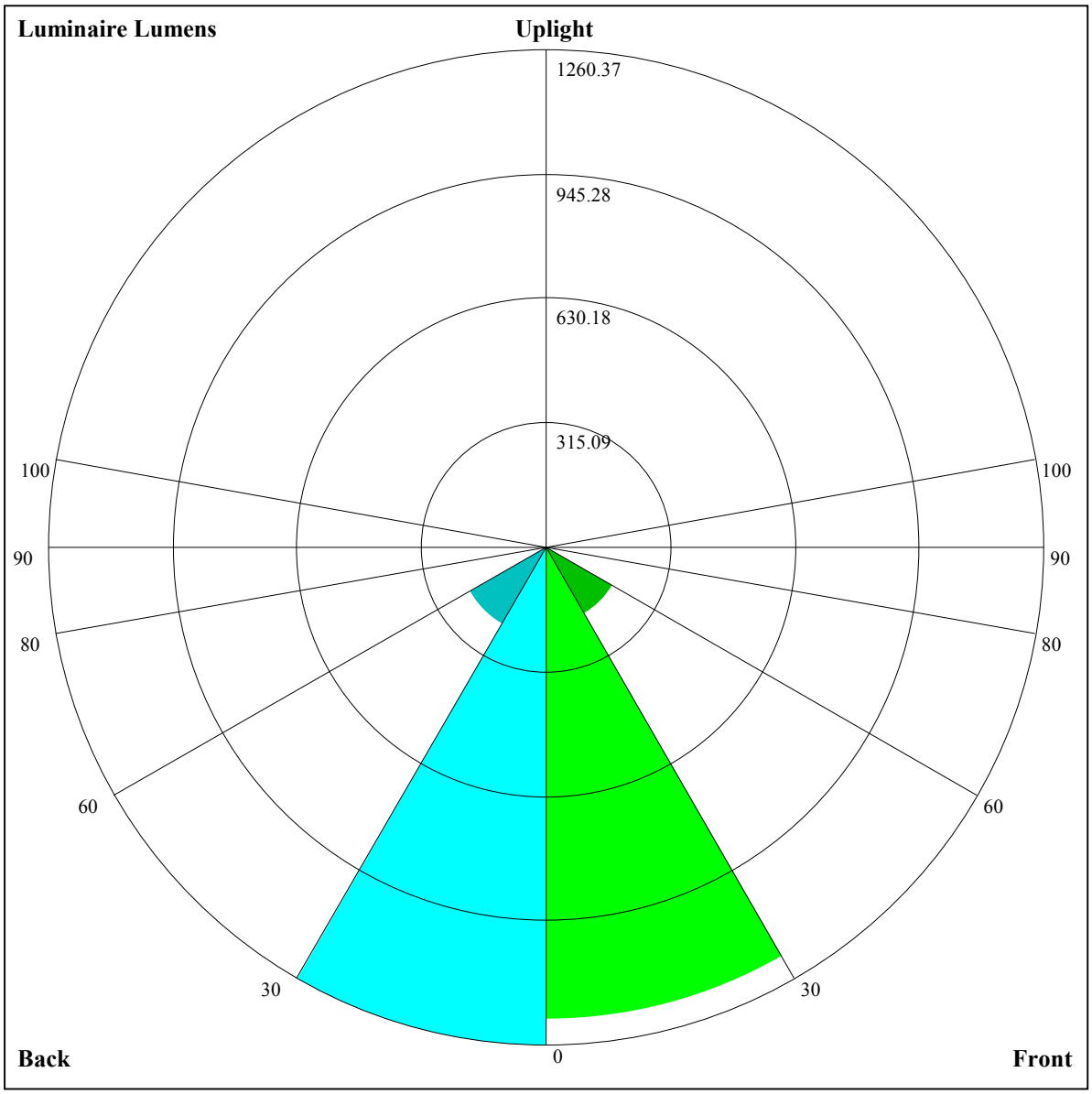





Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2024/8/14
Humidity(%): 60.0%

Operator: NT
Distance(m): 7.25




Luminaire Lumens:
FL=1196.72,FM=195.41,FH=7.77,FVH=1.04
BL=1260.37,BM=222.94,BH=8.26,BVH=1.14
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 | 6068.92 | 6012.10 | 5936.88 | 5822.66 | 5682.22 | 5520.11 | 5350.70 | 5165.74 | 4966.84 |
| 45.0 | 6114.60 | 6061.67 | 6017.09 | 5888.94 | 5764.69 | 5683.90 | 5524.00 | 5335.67 | 5139.56 |
| 90.0 | 6086.16 | 6029.92 | 5937.41 | 5833.81 | 5713.44 | 5547.97 | 5378.56 | 5187.50 | 4984.66 |
| 135.0 | 6152.49 | 6122.95 | 6065.03 | 6000.96 | 5919.59 | 5810.36 | 5678.91 | 5505.08 | 5317.85 |
| 180.0 | 6068.92 | 6092.31 | 6096.20 | 6060.56 | 6019.30 | 5950.23 | 5818.20 | 5701.19 | 5582.51 |
| 225.0 | 6114.60 | 6139.67 | 6135.78 | 6088.42 | 6020.46 | 5931.84 | 5817.62 | 5698.93 | 5511.76 |
| 270.0 | 6086.16 | 6150.81 | 6166.42 | 6126.84 | 6063.87 | 6019.88 | 5891.15 | 5806.47 | 5671.07 |
| 315.0 | 6152.49 | 6131.89 | 6070.02 | 5993.70 | 5935.73 | 5771.94 | 5635.44 | 5541.30 | 5356.28 |
| 360.0 | 6068.92 | 6012.10 | 5936.88 | 5822.66 | 5682.22 | 5520.11 | 5350.70 | 5165.74 | 4966.84 |

| C/γ(°) | 9.0 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 4760.11 | 4548.39 | 4355.64 | 4138.88 | 3919.95 | 3697.09 | 3473.07 | 3264.13 | 3137.67 |
| 45.0 | 4932.31 | 4731.73 | 4526.68 | 4331.68 | 4120.53 | 3909.91 | 3689.83 | 3466.39 | 3256.93 |
| 90.0 | 4792.44 | 4587.97 | 4372.36 | 4155.59 | 3946.66 | 3715.43 | 3488.68 | 3252.99 | 3036.85 |
| 135.0 | 5120.64 | 4913.91 | 4713.33 | 4494.93 | 4294.88 | 4068.13 | 3889.31 | 3617.93 | 3390.07 |
| 180.0 | 5414.25 | 5212.57 | 5010.31 | 4795.80 | 4577.41 | 4362.32 | 4147.23 | 3923.84 | 3704.87 |
| 225.0 | 5301.72 | 5102.77 | 4898.30 | 4690.47 | 4473.75 | 4258.67 | 4049.20 | 3816.30 | 3687.05 |
| 270.0 | 5491.15 | 5307.29 | 5117.27 | 4917.80 | 4706.66 | 4495.46 | 4286.00 | 4084.84 | 3876.48 |
| 315.0 | 5165.21 | 4964.06 | 4757.90 | 4553.44 | 4338.35 | 4118.27 | 3906.55 | 3694.30 | 3477.01 |
| 360.0 | 4760.11 | 4548.39 | 4355.64 | 4138.88 | 3919.95 | 3697.09 | 3473.07 | 3264.13 | 3137.67 |

| C/γ(°) | 18.0 | 19.0 | 20.0 | 21.0 | 22.0 | 23.0 | 24.0 | 25.0 | 26.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 2947.13 | 2691.41 | 2579.98 | 2387.76 | 2194.38 | 2008.31 | 1833.38 | 1676.22 | 1528.57 |
| 45.0 | 3052.41 | 2854.62 | 2666.34 | 2472.96 | 2276.85 | 2132.57 | 1925.84 | 1766.52 | 1641.16 |
| 90.0 | 2874.70 | 2682.47 | 2489.68 | 2301.40 | 2117.53 | 1938.66 | 1778.77 | 1619.40 | 1463.97 |
| 135.0 | 3219.56 | 3013.41 | 2818.98 | 2612.83 | 2412.25 | 2216.14 | 2030.59 | 1866.23 | 1702.97 |
| 180.0 | 3468.07 | 3251.88 | 3049.62 | 2847.94 | 2656.30 | 2457.93 | 2261.82 | 2081.32 | 1911.91 |
| 225.0 | 3461.40 | 3156.06 | 3041.27 | 2850.73 | 2650.73 | 2449.57 | 2254.56 | 2072.38 | 1896.30 |
| 270.0 | 3636.33 | 3410.15 | 3184.50 | 2977.19 | 2800.58 | 2686.36 | 2418.93 | 2227.81 | 2117.53 |
| 315.0 | 3271.96 | 3078.64 | 2885.84 | 2695.83 | 2493.62 | 2293.04 | 2102.45 | 1927.52 | 1762.05 |
| 360.0 | 2947.13 | 2691.41 | 2579.98 | 2387.76 | 2194.38 | 2008.31 | 1833.38 | 1676.22 | 1528.57 |

| C/γ(°) | 27.0 | 28.0 | 29.0 | 30.0 | 31.0 | 32.0 | 33.0 | 34.0 | 35.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 1389.86 | 1103.92 | 1103.92 | 938.87 | 782.08 | 640.79 | 524.84 | 450.93 | 372.41 |
| 45.0 | 1489.04 | 1303.50 | 1174.77 | 1013.19 | 851.09 | 700.08 | 572.51 | 467.18 | 384.76 |
| 90.0 | 1097.98 | 1067.33 | 1004.31 | 841.37 | 690.78 | 559.63 | 459.55 | 379.29 | 337.14 |
| 135.0 | 1549.75 | 1394.85 | 1234.96 | 1073.96 | 909.59 | 754.69 | 615.98 | 503.39 | 417.03 |
| 180.0 | 1750.33 | 1597.11 | 1507.44 | 1356.43 | 1202.10 | 1047.20 | 887.83 | 736.30 | 599.79 |
| 225.0 | 1728.62 | 1573.14 | 1417.14 | 1076.59 | 1076.59 | 986.02 | 771.67 | 629.28 | 555.64 |
| 270.0 | 1876.27 | 1778.19 | 1619.98 | 1463.97 | 1306.86 | 1148.60 | 987.60 | 829.33 | 682.26 |
| 315.0 | 1612.14 | 1526.94 | 1377.03 | 1035.64 | 1035.64 | 867.49 | 717.53 | 586.49 | 483.15 |
| 360.0 | 1389.86 | 1103.92 | 1103.92 | 938.87 | 782.08 | 640.79 | 524.84 | 450.93 | 372.41 |

| C/γ(°) | 36.0 | 37.0 | 38.0 | 39.0 | 40.0 | 41.0 | 42.0 | 43.0 | 44.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 307.23 | 252.93 | 208.31 | 170.25 | 138.98 | 113.32 | 92.09 | 75.48 | 62.55 |
| 45.0 | 316.74 | 305.07 | 281.68 | 176.61 | 156.58 | 127.88 | 96.50 | 85.57 | 70.17 |
| 90.0 | 278.32 | 229.86 | 188.96 | 154.11 | 125.20 | 101.18 | 82.10 | 66.96 | 55.35 |
| 135.0 | 371.93 | 285.57 | 285.57 | 275.53 | 173.40 | 142.23 | 116.32 | 94.93 | 77.37 |
| 180.0 | 494.51 | 410.93 | 342.39 | 306.75 | 306.75 | 192.54 | 157.58 | 128.83 | 109.65 |
| 225.0 | 459.19 | 382.71 | 317.27 | 262.65 | 216.82 | 178.19 | 145.34 | 118.37 | 96.14 |
| 270.0 | 556.32 | 456.61 | 364.10 | 300.60 | 276.64 | 276.64 | 170.51 | 138.29 | 112.12 |
| 315.0 | 399.37 | 331.62 | 272.90 | 224.39 | 184.07 | 149.49 | 120.89 | 106.44 | 86.20 |
| 360.0 | 307.23 | 252.93 | 208.31 | 170.25 | 138.98 | 113.32 | 92.09 | 75.48 | 62.55 |

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 | 52.77 | 45.26 | 39.63 | 35.01 | 31.22 | 28.07 | 25.49 | 23.34 | 22.13 |
| 45.0 | 58.50 | 49.67 | 42.84 | 37.48 | 33.17 | 29.65 | 26.60 | 24.13 | 22.02 |
| 90.0 | 46.78 | 40.32 | 35.43 | 31.54 | 28.23 | 25.55 | 23.39 | 21.45 | 19.97 |
| 135.0 | 63.71 | 53.40 | 45.47 | 39.42 | 34.74 | 30.96 | 27.86 | 25.18 | 23.39 |
| 180.0 | 85.62 | 73.06 | 60.66 | 49.72 | 44.10 | 38.53 | 34.32 | 30.80 | 27.91 |
| 225.0 | 78.42 | 64.02 | 53.19 | 45.20 | 38.95 | 34.27 | 30.38 | 27.28 | 25.55 |
| 270.0 | 90.51 | 73.75 | 60.34 | 50.30 | 42.47 | 36.69 | 32.17 | 28.70 | 25.65 |
| 315.0 | 64.70 | 57.61 | 48.36 | 41.16 | 35.69 | 31.59 | 28.07 | 25.18 | 22.81 |
| 360.0 | 52.77 | 45.26 | 39.63 | 35.01 | 31.22 | 28.07 | 25.49 | 23.34 | 22.13 |

| C/γ(°) | 54.0 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 | 60.0 | 61.0 | 62.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 19.61 | 18.13 | 17.35 | 16.14 | 14.98 | 13.98 | 13.14 | 12.35 | 11.56 |
| 45.0 | 20.13 | 18.61 | 17.14 | 15.93 | 14.82 | 13.82 | 12.93 | 12.09 | 11.46 |
| 90.0 | 18.13 | 16.87 | 15.98 | 14.88 | 13.88 | 12.98 | 12.25 | 11.56 | 10.78 |
| 135.0 | 21.39 | 19.61 | 18.13 | 16.82 | 15.61 | 14.51 | 13.56 | 12.72 | 11.93 |
| 180.0 | 25.34 | 23.23 | 21.34 | 19.66 | 18.24 | 16.98 | 15.77 | 14.61 | 13.77 |
| 225.0 | 23.23 | 20.45 | 19.40 | 17.87 | 16.56 | 15.35 | 14.24 | 13.30 | 12.51 |
| 270.0 | 23.34 | 21.97 | 19.45 | 18.50 | 17.03 | 15.87 | 14.82 | 13.82 | 12.98 |
| 315.0 | 20.81 | 19.08 | 17.56 | 16.19 | 15.14 | 14.14 | 13.19 | 12.67 | 11.56 |
| 360.0 | 19.61 | 18.13 | 17.35 | 16.14 | 14.98 | 13.98 | 13.14 | 12.35 | 11.56 |

| C/γ(°) | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 | 70.0 | 71.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 10.83 | 10.30 | 9.72 | 9.15 | 8.57 | 8.09 | 7.62 | 7.15 | 6.73 |
| 45.0 | 10.62 | 10.04 | 9.57 | 9.04 | 8.57 | 8.04 | 7.57 | 7.15 | 6.73 |
| 90.0 | 10.20 | 9.67 | 9.25 | 8.62 | 8.20 | 7.73 | 7.36 | 6.89 | 6.41 |
| 135.0 | 11.14 | 10.57 | 9.93 | 9.41 | 8.88 | 8.41 | 7.94 | 7.67 | 7.25 |
| 180.0 | 12.93 | 12.09 | 11.62 | 10.62 | 10.30 | 9.72 | 9.15 | 8.57 | 8.04 |
| 225.0 | 11.72 | 10.99 | 10.41 | 9.78 | 9.30 | 8.73 | 8.30 | 7.83 | 7.41 |
| 270.0 | 12.25 | 11.51 | 10.78 | 10.25 | 9.62 | 9.20 | 8.67 | 8.25 | 7.83 |
| 315.0 | 10.99 | 10.57 | 9.72 | 9.46 | 8.94 | 8.52 | 7.99 | 7.62 | 7.25 |
| 360.0 | 10.83 | 10.30 | 9.72 | 9.15 | 8.57 | 8.09 | 7.62 | 7.15 | 6.73 |

| C/γ(°) | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0 | 80.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 6.25 | 5.83 | 5.68 | 4.99 | 4.63 | 4.36 | 3.84 | 3.31 | 3.10 |
| 45.0 | 6.25 | 5.83 | 5.47 | 5.05 | 4.68 | 4.26 | 3.94 | 3.47 | 3.10 |
| 90.0 | 6.04 | 5.68 | 5.20 | 4.78 | 4.36 | 4.10 | 3.78 | 3.15 | 2.94 |
| 135.0 | 6.57 | 6.25 | 5.94 | 5.62 | 5.15 | 4.73 | 4.31 | 3.99 | 3.47 |
| 180.0 | 7.67 | 7.10 | 6.62 | 6.15 | 5.78 | 5.31 | 4.89 | 4.52 | 4.10 |
| 225.0 | 6.94 | 6.57 | 6.10 | 5.78 | 5.31 | 4.94 | 4.63 | 4.21 | 3.84 |
| 270.0 | 7.41 | 6.94 | 6.57 | 6.15 | 5.94 | 5.41 | 4.94 | 4.68 | 4.36 |
| 315.0 | 6.78 | 6.36 | 5.94 | 5.57 | 5.15 | 4.78 | 4.47 | 4.05 | 3.68 |
| 360.0 | 6.25 | 5.83 | 5.68 | 4.99 | 4.63 | 4.36 | 3.84 | 3.31 | 3.10 |

| C/γ(°) | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 2.63 | 2.37 | 2.10 | 1.79 | 1.52 | 1.37 | 1.21 | 0.95 | 0.68 |
| 45.0 | 2.68 | 2.37 | 2.10 | 1.79 | 1.47 | 1.37 | 1.10 | 1.00 | 0.79 |
| 90.0 | 2.47 | 2.21 | 1.94 | 1.73 | 1.42 | 1.31 | 1.16 | 1.00 | 0.89 |
| 135.0 | 3.10 | 2.73 | 2.31 | 2.00 | 1.73 | 1.42 | 1.31 | 1.05 | 0.95 |
| 180.0 | 3.73 | 3.31 | 2.89 | 2.42 | 2.16 | 1.84 | 1.52 | 1.31 | 1.10 |
| 225.0 | 3.36 | 3.05 | 2.73 | 2.31 | 2.05 | 1.73 | 1.47 | 1.26 | 1.10 |
| 270.0 | 4.05 | 3.47 | 3.10 | 2.73 | 2.37 | 2.00 | 1.68 | 1.47 | 1.26 |
| 315.0 | 3.21 | 2.94 | 2.47 | 2.10 | 1.89 | 1.58 | 1.37 | 1.16 | 1.00 |
| 360.0 | 2.63 | 2.37 | 2.10 | 1.79 | 1.52 | 1.37 | 1.21 | 0.95 | 0.68 |

Intensity data(cd)



| C/γ(°) | 90.0 |
|---|---|
| 0.0 | 0.84 |
| 45.0 | 0.79 |
| 90.0 | 0.89 |
| 135.0 | 0.79 |
| 180.0 | 0.95 |
| 225.0 | 0.95 |
| 270.0 | 1.10 |
| 315.0 | 0.89 |
| 360.0 | 0.84 |