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

## NATA

LumCAT: 3-1942-M
Luminaire: BJB 47.319.2030
Report No: NATA0100
Test No: GC2019021909
LampCAT: BRIDGELUX V22B
Lamp flux(lm): 6677.9
Number of Lamps: 1
Length(mm): 86
Phm Type: C

Voltage(V): 50.6000
Current(A): 0.9000
Power (W): 50.6090
PF: 0.0000
Ballast type: DC
Width(mm): 86
Height(mm): 0

## Photometric Results

Lumens(lm): 5653.17
Efficiency(%): 84.66%
Lumens(lm)/Power(W): 111.78
Central intensity(cd): 16278.750
Maximum intensity(cd): 16278.750
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=23.4
[C90/270]Total=23.4
Field angle(10%Imax): [C0/180]Total=66.9
[C90/270]Total=66.9
Maximum s/h(1/2): C0_180=0.39 C90_270=0.39
Maximum s/h(1/4): C0_180=0.51 C90_270=0.51
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 84.71%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.656%

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 0.0 | 16278.750 | 3.895 | 3.895 | .058% | .069% |
| 1.0 | 16248.516 | 31.097 | 34.992 | .466% | .619% |
| 2.0 | 16134.609 | 61.749 | 96.741 | .925% | 1.711% |
| 3.0 | 15898.359 | 91.244 | 187.985 | 1.366% | 3.325% |
| 4.0 | 15544.688 | 118.910 | 306.895 | 1.781% | 5.429% |
| 5.0 | 14960.391 | 142.985 | 449.88 | 2.141% | 7.958% |
| 6.0 | 14227.734 | 163.088 | 612.968 | 2.442% | 10.843% |
| 7.0 | 13182.188 | 176.171 | 789.138 | 2.638% | 13.959% |
| 8.0 | 11944.547 | 182.296 | 971.434 | 2.730% | 17.184% |
| 9.0 | 10853.578 | 186.190 | 1157.625 | 2.788% | 20.477% |
| 10.0 | 9715.711 | 185.011 | 1342.635 | 2.770% | 23.750% |
| 11.0 | 8729.297 | 182.654 | 1525.289 | 2.735% | 26.981% |
| 12.0 | 7903.758 | 180.204 | 1705.493 | 2.699% | 30.169% |
| 13.0 | 7258.852 | 179.064 | 1884.557 | 2.681% | 33.336% |
| 14.0 | 6734.320 | 178.657 | 2063.214 | 2.675% | 36.497% |
| 15.0 | 6325.172 | 179.523 | 2242.737 | 2.688% | 39.672% |
| 16.0 | 5964.750 | 180.294 | 2423.032 | 2.700% | 42.861% |
| 17.0 | 5657.836 | 181.400 | 2604.432 | 2.716% | 46.070% |
| 18.0 | 5342.133 | 181.029 | 2785.461 | 2.711% | 49.273% |
| 19.0 | 5077.406 | 181.274 | 2966.735 | 2.715% | 52.479% |
| 20.0 | 4796.438 | 179.896 | 3146.631 | 2.694% | 55.661% |
| 21.0 | 4520.813 | 177.663 | 3324.294 | 2.660% | 58.804% |
| 22.0 | 4289.555 | 176.214 | 3500.508 | 2.639% | 61.921% |
| 23.0 | 4048.453 | 173.468 | 3673.976 | 2.598% | 64.990% |
| 24.0 | 3815.930 | 170.202 | 3844.178 | 2.549% | 68.000% |
| 25.0 | 3600.281 | 166.854 | 4011.032 | 2.499% | 70.952% |
| 26.0 | 3399.258 | 163.410 | 4174.442 | 2.447% | 73.842% |
| 27.0 | 3191.273 | 158.878 | 4333.319 | 2.379% | 76.653% |
| 28.0 | 3015.000 | 155.220 | 4488.539 | 2.324% | 79.399% |
| 29.0 | 2807.859 | 149.279 | 4637.818 | 2.235% | 82.039% |
| 30.0 | 2592.703 | 142.159 | 4779.977 | 2.129% | 84.554% |
| 31.0 | 2306.602 | 130.276 | 4910.253 | 1.951% | 86.858% |
| 32.0 | 2019.797 | 117.373 | 5027.626 | 1.758% | 88.935% |
| 33.0 | 1751.906 | 104.634 | 5132.26 | 1.567% | 90.785% |
| 34.0 | 1470.234 | 90.157 | 5222.417 | 1.350% | 92.380% |
| 35.0 | 1216.090 | 76.491 | 5298.908 | 1.145% | 93.733% |
| 36.0 | 1006.791 | 64.895 | 5363.803 | .972% | 94.881% |
| 37.0 | 800.430 | 52.825 | 5416.627 | .791% | 95.816% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 38.0 | 583.819 | 39.416 | 5456.043 | .590% | 96.513% |
| 39.0 | 400.697 | 27.653 | 5483.696 | .414% | 97.002% |
| 40.0 | 273.663 | 19.290 | 5502.986 | .289% | 97.343% |
| 41.0 | 170.508 | 12.267 | 5515.253 | .184% | 97.560% |
| 42.0 | 97.235 | 7.135 | 5522.388 | .107% | 97.686% |
| 43.0 | 80.205 | 5.998 | 5528.387 | .090% | 97.793% |
| 44.0 | 70.221 | 5.349 | 5533.736 | .080% | 97.887% |
| 45.0 | 60.497 | 4.691 | 5538.427 | .070% | 97.970% |
| 46.0 | 52.355 | 4.130 | 5542.557 | .062% | 98.043% |
| 47.0 | 45.246 | 3.629 | 5546.186 | .054% | 98.107% |
| 48.0 | 40.676 | 3.315 | 5549.501 | .050% | 98.166% |
| 49.0 | 37.048 | 3.066 | 5552.567 | .046% | 98.220% |
| 50.0 | 34.383 | 2.888 | 5555.455 | .043% | 98.271% |
| 51.0 | 32.548 | 2.774 | 5558.229 | .042% | 98.320% |
| 52.0 | 31.282 | 2.703 | 5560.932 | .040% | 98.368% |
| 53.0 | 30.171 | 2.642 | 5563.574 | .040% | 98.415% |
| 54.0 | 29.088 | 2.581 | 5566.155 | .039% | 98.461% |
| 55.0 | 28.188 | 2.532 | 5568.687 | .038% | 98.505% |
| 56.0 | 27.260 | 2.478 | 5571.165 | .037% | 98.549% |
| 57.0 | 26.578 | 2.444 | 5573.61 | .037% | 98.593% |
| 58.0 | 26.002 | 2.418 | 5576.028 | .036% | 98.635% |
| 59.0 | 25.566 | 2.403 | 5578.431 | .036% | 98.678% |
| 60.0 | 25.179 | 2.391 | 5580.822 | .036% | 98.720% |
| 61.0 | 24.841 | 2.383 | 5583.205 | .036% | 98.762% |
| 62.0 | 24.588 | 2.381 | 5585.586 | .036% | 98.804% |
| 63.0 | 24.356 | 2.380 | 5587.965 | .036% | 98.846% |
| 64.0 | 24.145 | 2.380 | 5590.345 | .036% | 98.889% |
| 65.0 | 23.955 | 2.381 | 5592.726 | .036% | 98.931% |
| 66.0 | 23.815 | 2.386 | 5595.112 | .036% | 98.973% |
| 67.0 | 23.653 | 2.388 | 5597.499 | .036% | 99.015% |
| 68.0 | 23.520 | 2.391 | 5599.891 | .036% | 99.057% |
| 69.0 | 23.421 | 2.398 | 5602.289 | .036% | 99.100% |
| 70.0 | 23.323 | 2.403 | 5604.692 | .036% | 99.142% |
| 71.0 | 23.224 | 2.408 | 5607.1 | .036% | 99.185% |
| 72.0 | 23.154 | 2.415 | 5609.515 | .036% | 99.228% |
| 73.0 | 23.098 | 2.422 | 5611.937 | .036% | 99.271% |
| 74.0 | 23.041 | 2.429 | 5614.366 | .036% | 99.313% |
| 75.0 | 22.999 | 2.436 | 5616.802 | .036% | 99.357% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 76.0 | 22.964 | 2.443 | 5619.245 | .037% | 99.400% |
| 77.0 | 22.943 | 2.451 | 5621.697 | .037% | 99.443% |
| 78.0 | 22.929 | 2.459 | 5624.156 | .037% | 99.487% |
| 79.0 | 22.943 | 2.470 | 5626.626 | .037% | 99.530% |
| 80.0 | 23.013 | 2.485 | 5629.111 | .037% | 99.574% |
| 81.0 | 23.077 | 2.499 | 5631.611 | .037% | 99.619% |
| 82.0 | 23.091 | 2.507 | 5634.118 | .038% | 99.663% |
| 83.0 | 23.013 | 2.505 | 5636.623 | .038% | 99.707% |
| 84.0 | 23.041 | 2.513 | 5639.136 | .038% | 99.752% |
| 85.0 | 23.119 | 2.526 | 5641.662 | .038% | 99.796% |
| 86.0 | 23.154 | 2.533 | 5644.195 | .038% | 99.841% |
| 87.0 | 23.266 | 2.548 | 5646.743 | .038% | 99.886% |
| 88.0 | 23.541 | 2.580 | 5649.322 | .039% | 99.932% |
| 89.0 | 23.688 | 2.597 | 5651.92 | .039% | 99.978% |
| 90.0 | 22.894 | 1.255 | 5653.175 | .019% | 100.000% |

## Zonal flux distribution table



ZONAL LUMEN SUMMARY

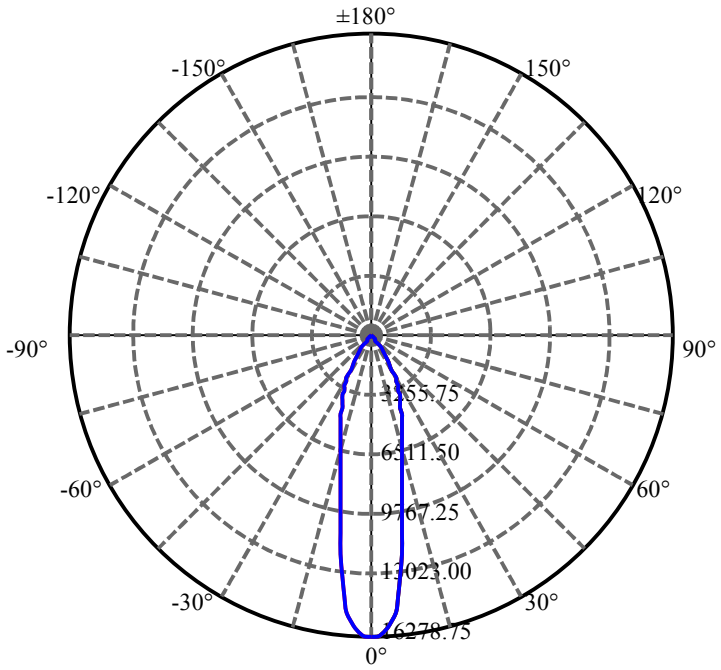
| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-30 | 4779.98 | 71.58% | 84.55% |
| 0-40 | 5502.99 | 82.41% | 97.34% |
| 0-60 | 5580.82 | 83.57% | 98.72% |
| 0-90 | 5651.92 | 84.64% | 99.98% |
| 0-120 | 5651.92 | 84.64% | 99.98% |
| 0-180 | 5653.17 | 84.66% | 100.00% |
| 60-90 | 73.49 | 1.10% | 1.30% |
| 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% |
| 0-28.23 | 4522.54 | 67.72% | 80.00% |

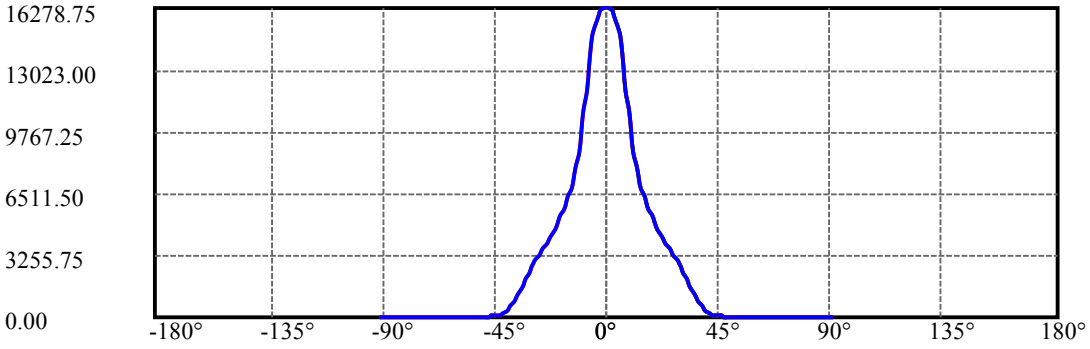
ZONAL LUMEN SUMMARY

| | |
|---|---|
| 0-10 | 1342.64 |
| 10-20 | 1804.00 |
| 20-30 | 1633.35 |
| 30-40 | 723.01 |
| 40-50 | 52.47 |
| 50-60 | 25.37 |
| 60-70 | 23.87 |
| 70-80 | 24.42 |
| 80-90 | 22.81 |
| 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:

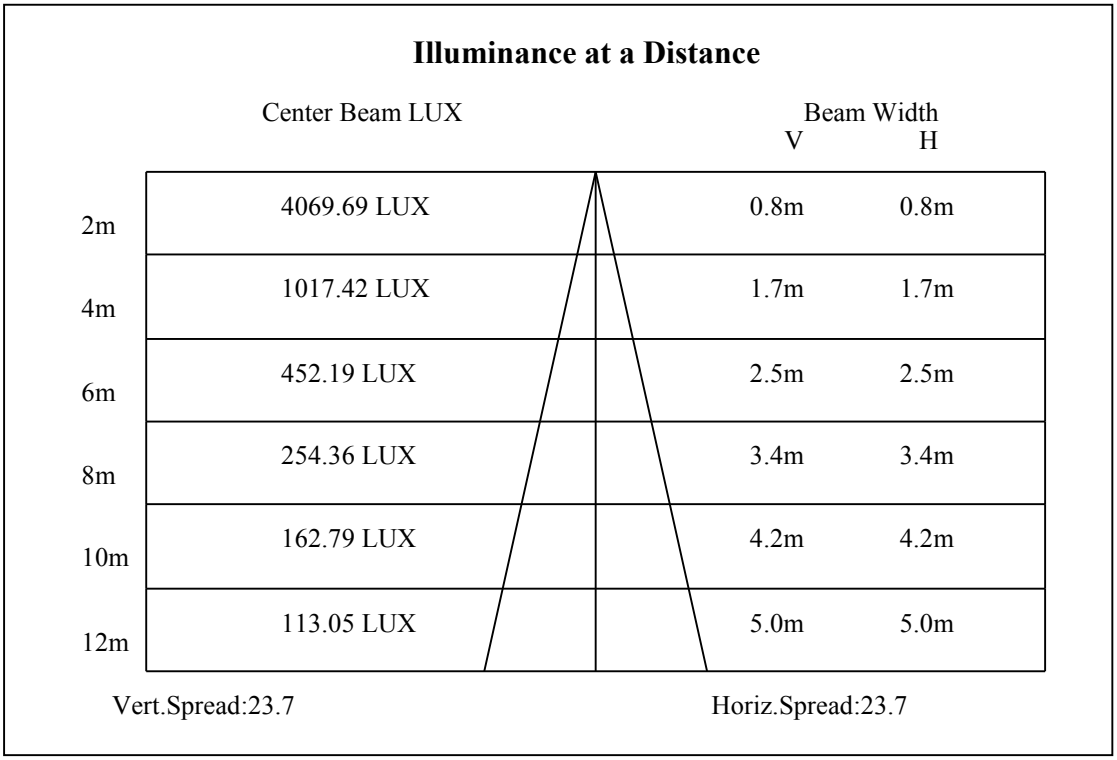
C90/C270:

Field angle(10%Imax):C0/180Left:33.4 Right:33.4
:C90/270Left:33.4 Right:33.4

Beam Angle(50%Imax):C0/180Left:11.7 Right:11.7
:C90/270Left:11.7 Right:11.7

Lux distance Curve

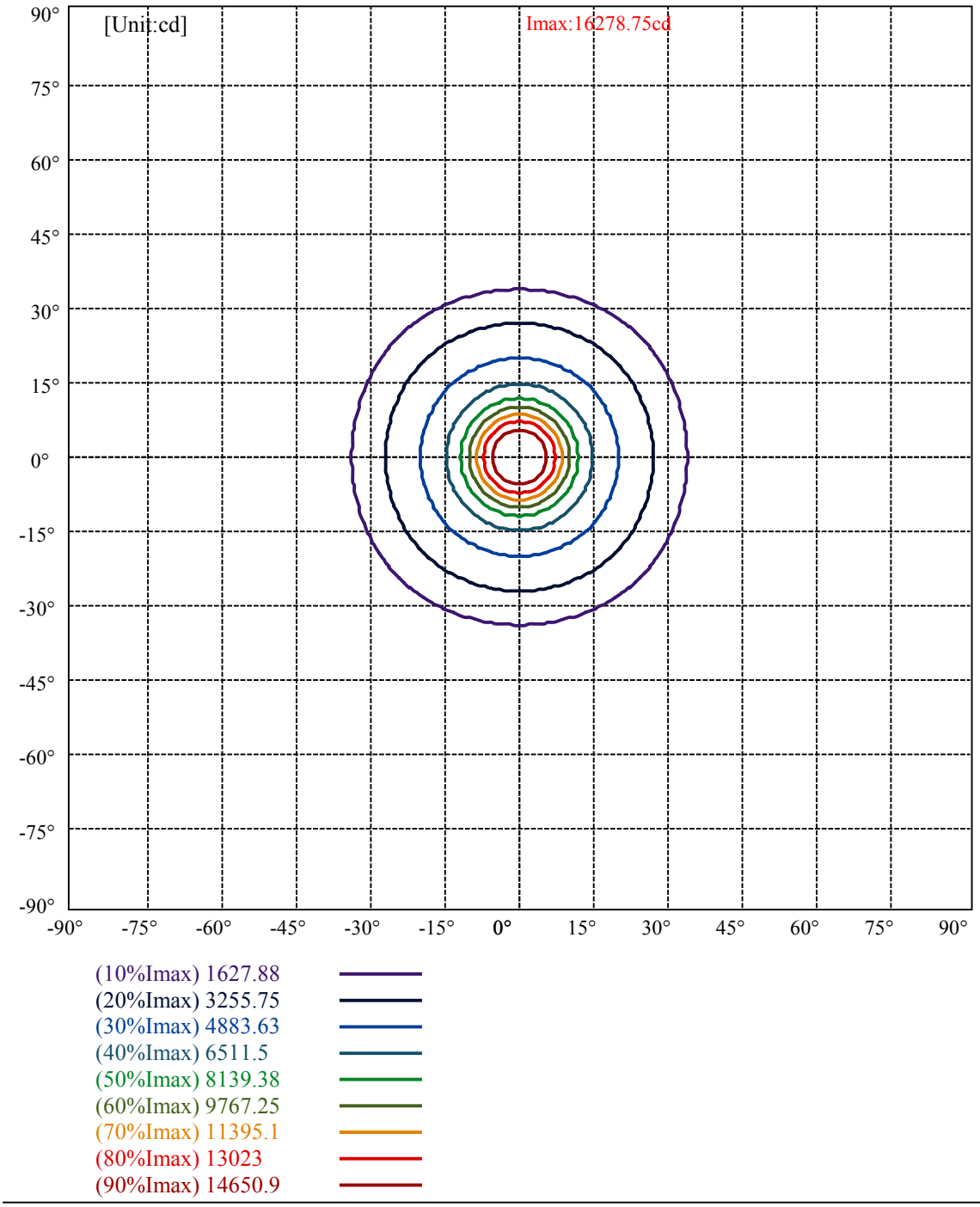





Equipment: GMS1980 Date: 2019/2/19 Operator: NT07
Temperature(°C): 10.0 Humidity(%): 65.0% Distance(m): 7.50

ISO-Intensity(V-H)





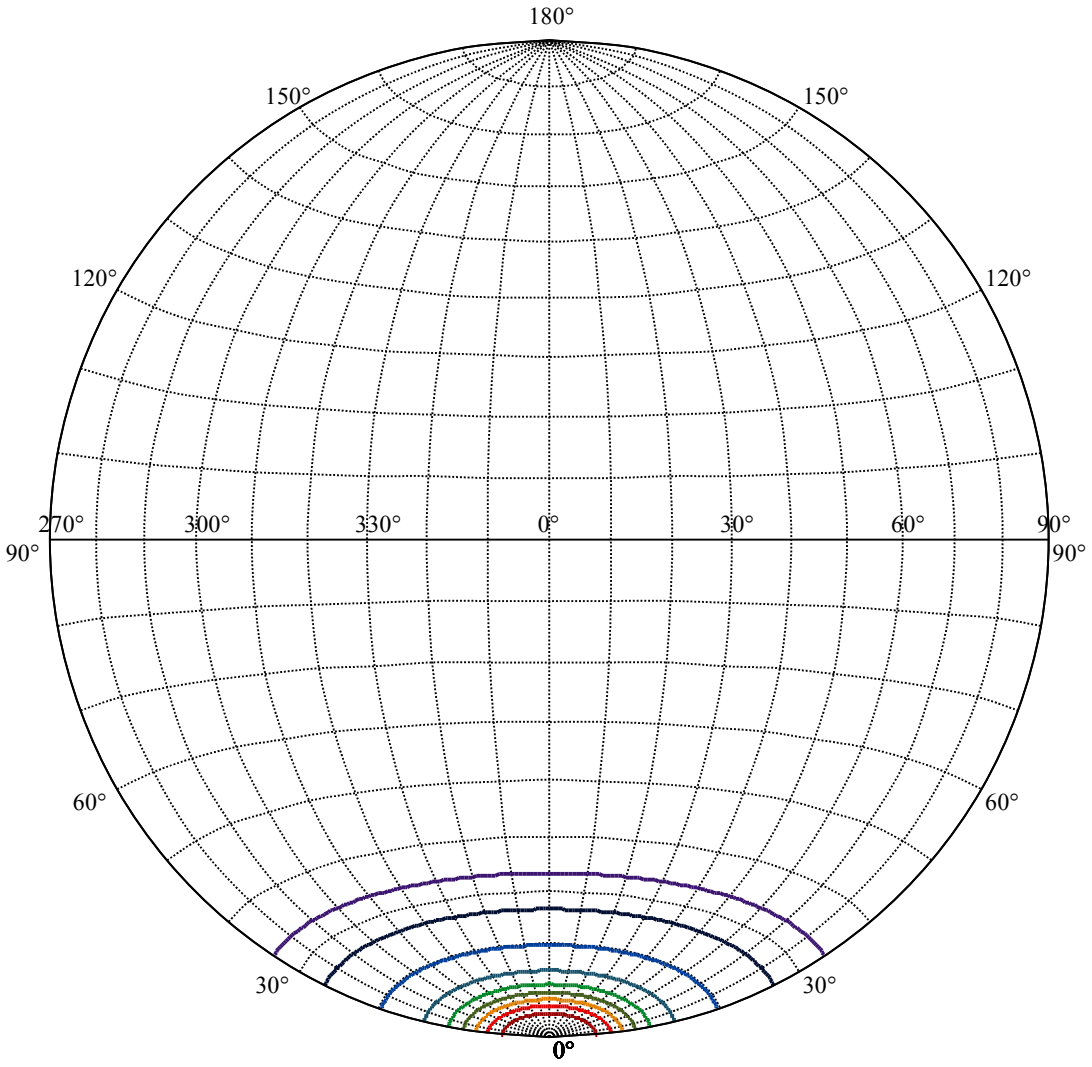

Equipment: GMS1980
Temperature(°C): 10.0

Date: 2019/2/19
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web






House [Unit:cd] Road

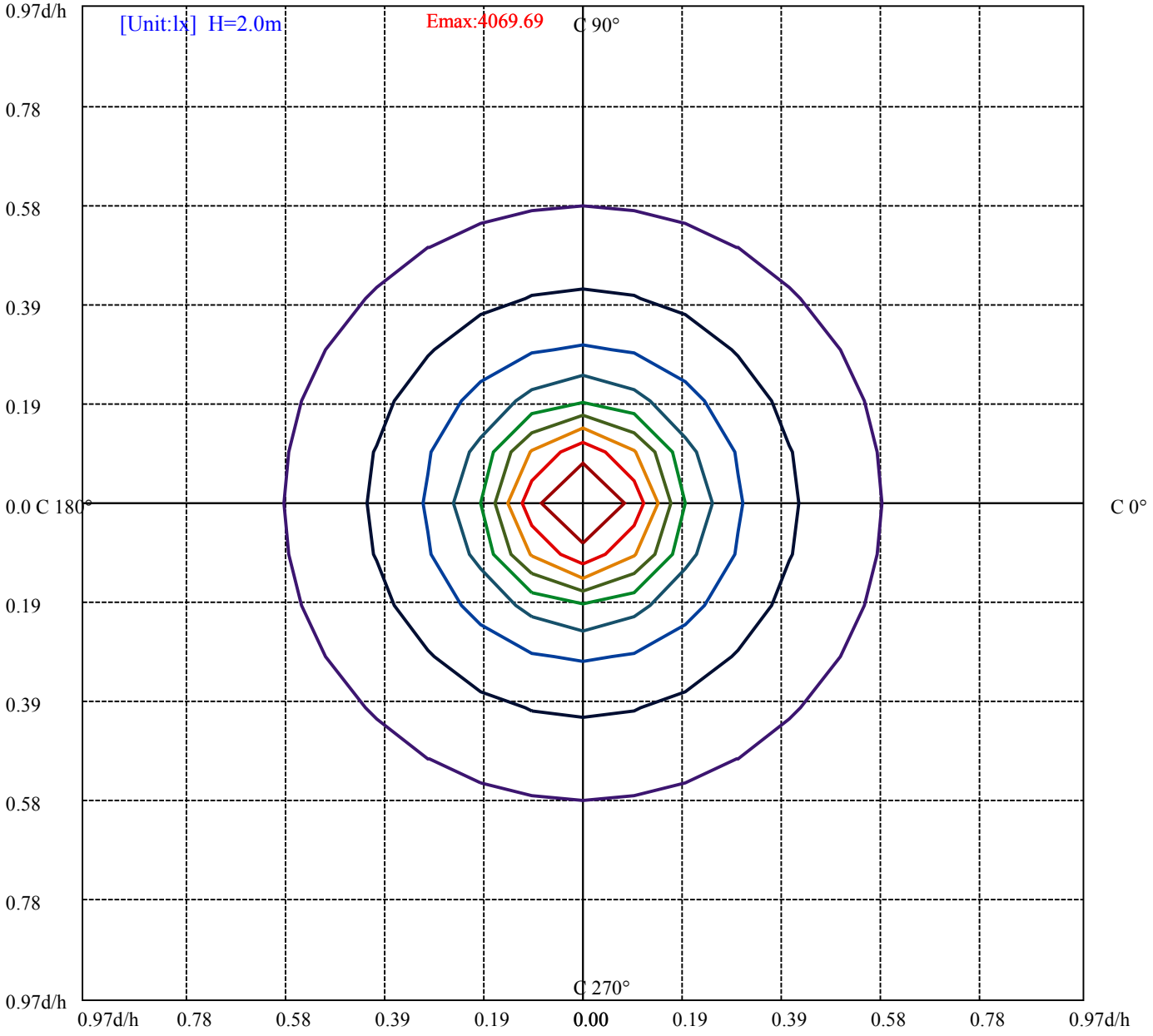
Imax:16278.75

(10%Imax) 1627.88
(20%Imax) 3255.75
(30%Imax) 4883.63
(40%Imax) 6511.5
(50%Imax) 8139.38
(60%Imax) 9767.25
(70%Imax) 11395.1
(80%Imax) 13023
(90%Imax) 14650.9

Equipment: GMS1980 Date: 2019/2/19 Operator: NT07
Temperature(°C): 10.0 Humidity(%): 65.0% Distance(m): 7.50

## ISO illuminance diagram



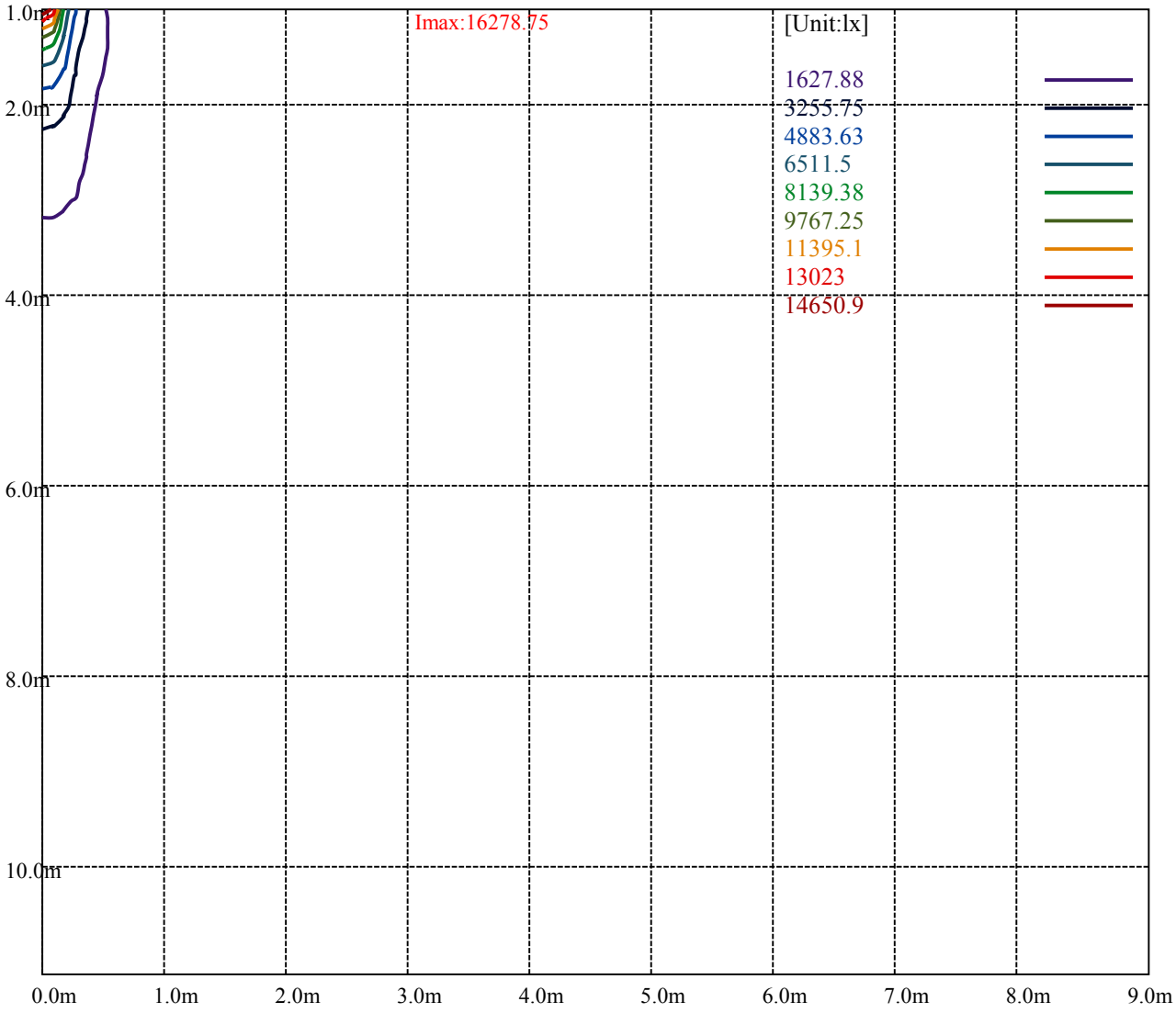



(10%Emax) 406.9675
(20%Emax) 813.9375
(30%Emax) 1220.905
(40%Emax) 1627.875
(50%Emax) 2034.843
(60%Emax) 2441.813
(70%Emax) 2848.775
(80%Emax) 3255.75
(90%Emax) 3662.725

Equipment: GMS1980
Temperature(°C): 10.0
Date: 2019/2/19
Humidity(%): 65.0%
Operator: NT07
Distance(m): 7.50

## Space ISO Lux diagram






Equipment: GMS1980
Temperature(°C): 10.0

Date: 2019/2/19
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

## Luminance Limitting Curve(no luminous side)



Luminance Table

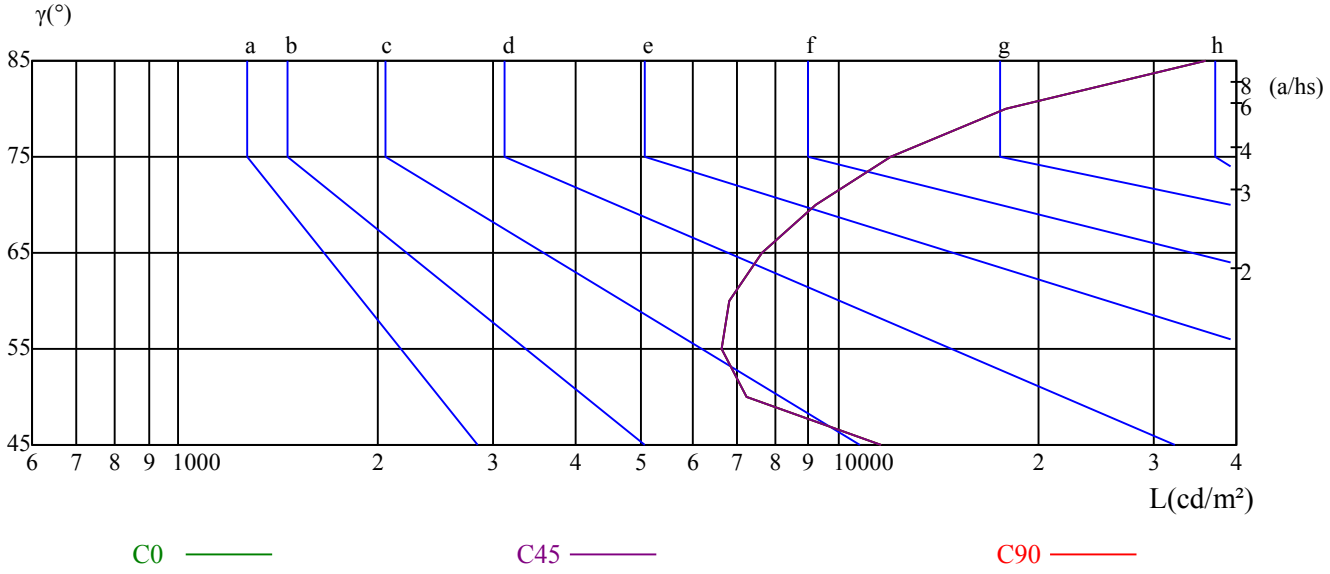
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|---|---|---|---|---|---|---|---|---|---|
| C0 | 11568 | 7232 | 6645 | 6809 | 7664 | 9220 | 12015 | 17919 | 35865 |
| C45 | 11568 | 7232 | 6645 | 6809 | 7664 | 9220 | 12015 | 17919 | 35865 |
| C90 | 11568 | 7232 | 6645 | 6809 | 7664 | 9220 | 12015 | 17919 | 35865 |

| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|---|---|---|---|---|---|---|---|---|
| 7664 | 7664 | 7664 | 12015 | 12015 | 12015 | 35865 | 35865 | 35865 |

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

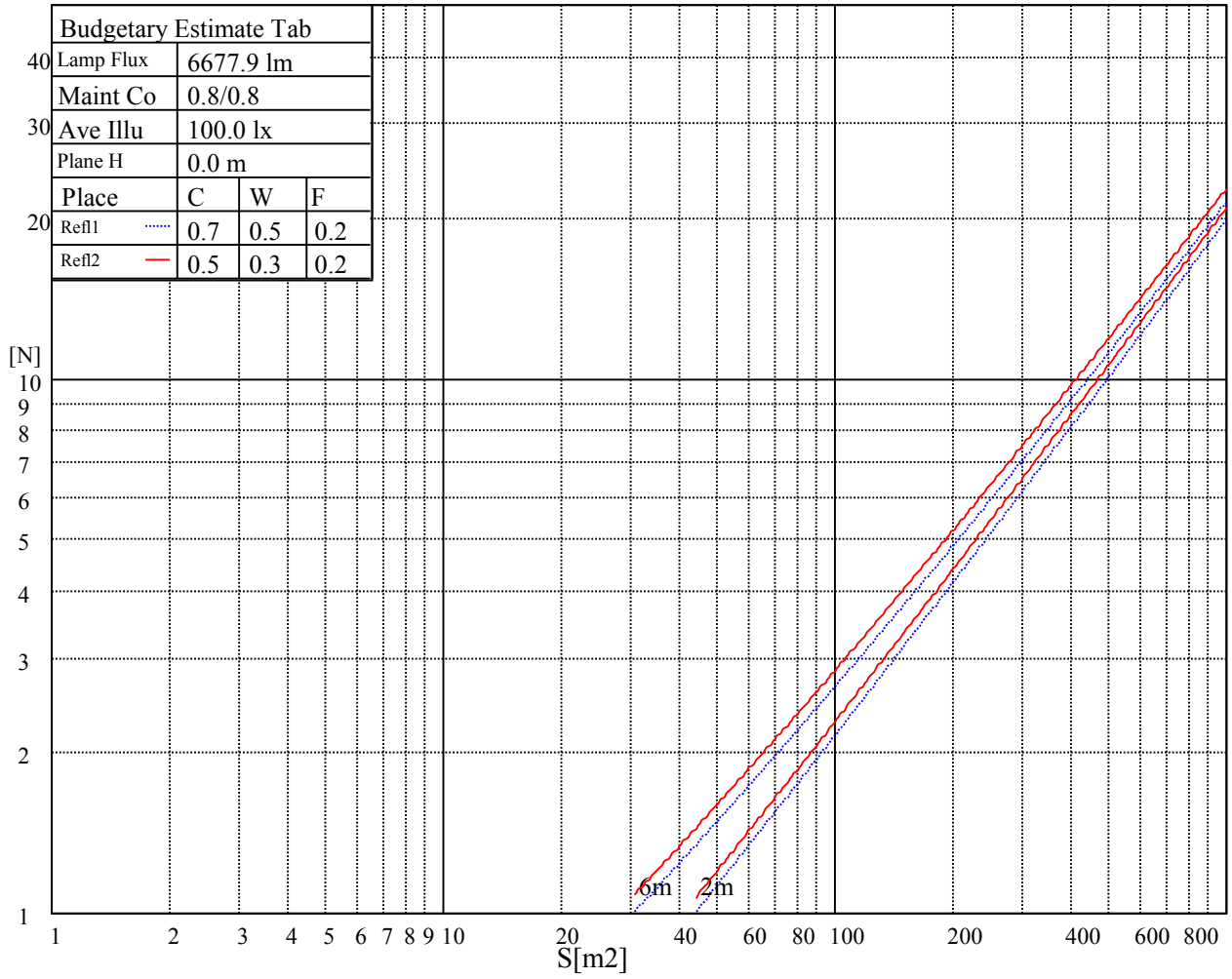
| Rf of Ceiling | | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Rf of Wall | | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| Rf of Floor | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Room dimensions | | Viewed crosswise | | | | | Viewed endwise | | | | |
| X | Y | | | | | | | | | | |
| 2H | 2H | 1.30 | 2.21 | 1.66 | 2.52 | 2.84 | 1.38 | 2.29 | 1.74 | 2.60 | 2.92 |
| | 3H | 4.28 | 5.08 | 4.66 | 5.42 | 5.79 | 4.34 | 5.14 | 4.72 | 5.48 | 5.85 |
| | 4H | 5.97 | 6.72 | 6.38 | 7.07 | 7.47 | 6.01 | 6.75 | 6.41 | 7.11 | 7.50 |
| | 6H | 7.91 | 8.60 | 8.33 | 8.97 | 9.37 | 7.97 | 8.65 | 8.39 | 9.03 | 9.43 |
| | 8H | 9.01 | 9.65 | 9.44 | 10.04 | 10.45 | 9.07 | 9.71 | 9.50 | 10.10 | 10.51 |
| | 12H | 10.79 | 11.40 | 11.22 | 11.78 | 12.22 | 10.84 | 11.45 | 11.27 | 11.83 | 12.26 |
| 4H | 2H | 2.12 | 2.87 | 2.53 | 3.22 | 3.61 | 2.18 | 2.92 | 2.59 | 3.28 | 3.67 |
| | 3H | 5.39 | 6.00 | 5.81 | 6.42 | 6.82 | 5.43 | 6.05 | 5.85 | 6.46 | 6.86 |
| | 4H | 7.27 | 7.82 | 7.71 | 8.24 | 8.69 | 7.29 | 7.84 | 7.73 | 8.26 | 8.71 |
| | 6H | 9.39 | 9.86 | 9.86 | 10.31 | 10.78 | 9.45 | 9.92 | 9.93 | 10.37 | 10.85 |
| | 8H | 10.58 | 11.02 | 11.06 | 11.47 | 11.95 | 10.65 | 11.08 | 11.13 | 11.53 | 12.01 |
| | 12H | 12.26 | 12.64 | 12.76 | 13.13 | 13.61 | 12.31 | 12.68 | 12.80 | 13.17 | 13.65 |
| 8H | 4H | 8.00 | 8.44 | 8.48 | 8.89 | 9.36 | 8.02 | 8.45 | 8.49 | 8.90 | 9.38 |
| | 6H | 10.40 | 10.74 | 10.91 | 11.24 | 11.73 | 10.45 | 10.80 | 10.96 | 11.30 | 11.79 |
| | 8H | 11.78 | 12.09 | 12.32 | 12.61 | 13.11 | 11.84 | 12.14 | 12.37 | 12.67 | 13.16 |
| | 12H | 13.60 | 13.86 | 14.13 | 14.36 | 14.95 | 13.64 | 13.90 | 14.16 | 14.40 | 14.98 |
| 12H | 4H | 8.21 | 8.59 | 8.71 | 9.08 | 9.56 | 8.22 | 8.60 | 8.72 | 9.09 | 9.57 |
| | 6H | 10.93 | 11.03 | 11.26 | 11.50 | 12.05 | 10.98 | 11.08 | 11.31 | 11.55 | 12.10 |
| | 8H | 12.25 | 12.51 | 12.77 | 13.01 | 13.59 | 12.29 | 12.55 | 12.82 | 13.05 | 13.63 |

Variation with the observer position at spacings:

| | | |
|---|---|---|
| S = 1.0H | 5.8/-7.7 | 5.8/-7.7 |
| S = 1.5H | 8.1/-5.8 | 8.1/-5.8 |
| S = 2.0H | 9.5/-4.4 | 9.5/-4.4 |
| Standard tables: | BK2 | BK2 |
| Uncorrected UGR | 3.2 | 3.2 |

## Budgetary Estimate Table






Equipment: GMS1980 Date: 2019/2/19 Operator: NT07
Temperature(°C): 10.0 Humidity(%): 65.0% Distance(m): 7.50

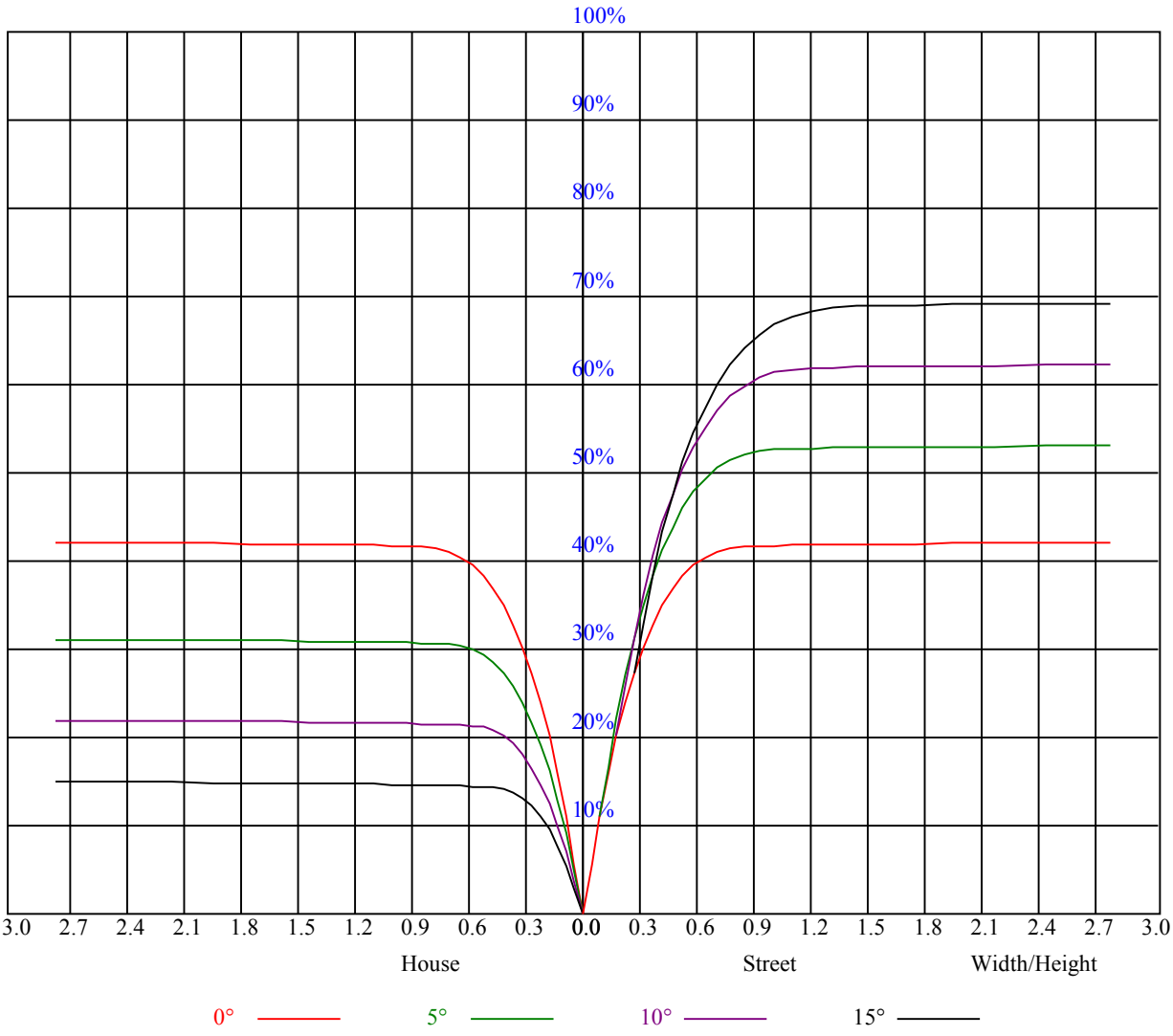
Utilization factor table for indoor luminaire



| 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 | 1.01 | 1.01 | 1.01 | 0.99 | 0.99 | 0.99 | 0.94 | 0.94 | 0.94 | 0.90 | 0.90 | 0.90 | 0.86 | 0.86 | 0.86 | 0.85 |
| 1 | 0.94 | 0.92 | 0.91 | 0.93 | 0.91 | 0.89 | 0.89 | 0.88 | 0.87 | 0.86 | 0.85 | 0.84 | 0.83 | 0.82 | 0.82 | 0.80 |
| 2 | 0.89 | 0.86 | 0.83 | 0.87 | 0.85 | 0.82 | 0.85 | 0.83 | 0.81 | 0.82 | 0.80 | 0.79 | 0.80 | 0.79 | 0.77 | 0.76 |
| 3 | 0.84 | 0.80 | 0.77 | 0.83 | 0.80 | 0.77 | 0.81 | 0.78 | 0.76 | 0.79 | 0.76 | 0.74 | 0.77 | 0.75 | 0.73 | 0.72 |
| 4 | 0.80 | 0.76 | 0.73 | 0.79 | 0.75 | 0.72 | 0.77 | 0.74 | 0.71 | 0.75 | 0.73 | 0.70 | 0.74 | 0.72 | 0.70 | 0.69 |
| 5 | 0.76 | 0.72 | 0.68 | 0.75 | 0.71 | 0.68 | 0.74 | 0.70 | 0.68 | 0.72 | 0.69 | 0.67 | 0.71 | 0.68 | 0.66 | 0.65 |
| 6 | 0.72 | 0.68 | 0.65 | 0.72 | 0.68 | 0.65 | 0.70 | 0.67 | 0.64 | 0.69 | 0.66 | 0.64 | 0.68 | 0.65 | 0.63 | 0.62 |
| 7 | 0.69 | 0.65 | 0.62 | 0.68 | 0.64 | 0.61 | 0.67 | 0.64 | 0.61 | 0.67 | 0.63 | 0.61 | 0.66 | 0.63 | 0.61 | 0.60 |
| 8 | 0.66 | 0.62 | 0.59 | 0.66 | 0.62 | 0.59 | 0.65 | 0.61 | 0.58 | 0.64 | 0.61 | 0.58 | 0.63 | 0.60 | 0.58 | 0.57 |
| 9 | 0.63 | 0.59 | 0.56 | 0.63 | 0.59 | 0.56 | 0.62 | 0.59 | 0.56 | 0.62 | 0.58 | 0.56 | 0.61 | 0.58 | 0.56 | 0.55 |
| 10 | 0.61 | 0.57 | 0.54 | 0.60 | 0.57 | 0.54 | 0.60 | 0.56 | 0.54 | 0.59 | 0.56 | 0.54 | 0.59 | 0.56 | 0.53 | 0.52 |

## Coefficient Utilization Curve






| | | |
|---|---|---|
| Equipment: GMS1980 | Date: 2019/2/19 | Operator: NT07 |
| Temperature(°C): 10.0 | Humidity(%): 65.0% | Distance(m): 7.50 |

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 | 16290.00 | 16267.50 | 16143.75 | 15980.63 | 15755.63 | 15210.00 | 14647.50 | 14000.63 | 12802.50 |
| 45.0 | 16267.50 | 16261.88 | 16188.75 | 16042.50 | 15778.13 | 15350.63 | 14793.75 | 13938.75 | 12960.00 |
| 90.0 | 16284.38 | 16273.13 | 16194.38 | 15969.38 | 15660.00 | 15114.38 | 14422.50 | 13404.38 | 11947.50 |
| 135.0 | 16273.13 | 16301.25 | 16239.38 | 16093.13 | 15828.75 | 15277.50 | 14636.25 | 13651.88 | 12600.00 |
| 180.0 | 16290.00 | 16250.63 | 16104.38 | 15817.50 | 15384.38 | 14675.63 | 13837.50 | 12673.13 | 11128.50 |
| 225.0 | 16267.50 | 16200.00 | 16048.13 | 15671.25 | 15159.38 | 14456.25 | 13460.63 | 11930.63 | 11122.88 |
| 270.0 | 16284.38 | 16233.75 | 16104.38 | 15868.13 | 15435.00 | 14788.13 | 14028.75 | 12943.13 | 11812.50 |
| 315.0 | 16273.13 | 16200.00 | 16053.75 | 15744.38 | 15356.25 | 14810.63 | 13995.00 | 12915.00 | 11182.50 |
| 360.0 | 16290.00 | 16267.50 | 16143.75 | 15980.63 | 15755.63 | 15210.00 | 14647.50 | 14000.63 | 12802.50 |

| C/γ(°) | 9.0 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 11536.88 | 10575.00 | 9292.50 | 8403.75 | 7700.63 | 7025.63 | 6598.13 | 6238.13 | 5838.75 |
| 45.0 | 11694.38 | 10445.63 | 9416.25 | 8510.63 | 7627.50 | 7087.50 | 6665.63 | 6215.63 | 5906.25 |
| 90.0 | 10962.00 | 9736.88 | 8780.06 | 7918.31 | 7336.13 | 6815.81 | 6392.81 | 6062.63 | 5753.25 |
| 135.0 | 11340.00 | 10209.38 | 9050.63 | 8190.00 | 7436.25 | 6856.88 | 6446.25 | 6007.50 | 5709.38 |
| 180.0 | 10312.88 | 9176.06 | 8329.50 | 7572.94 | 7032.38 | 6542.44 | 6136.88 | 5808.38 | 5509.69 |
| 225.0 | 9941.06 | 8882.44 | 8091.00 | 7324.88 | 6893.44 | 6441.75 | 6019.31 | 5748.19 | 5458.50 |
| 270.0 | 10563.75 | 9405.00 | 8505.00 | 7756.88 | 7042.50 | 6586.88 | 6215.63 | 5816.25 | 5540.63 |
| 315.0 | 10477.69 | 9295.31 | 8369.44 | 7552.69 | 7002.00 | 6517.69 | 6126.75 | 5821.31 | 5546.25 |
| 360.0 | 11536.88 | 10575.00 | 9292.50 | 8403.75 | 7700.63 | 7025.63 | 6598.13 | 6238.13 | 5838.75 |

| C/γ(°) | 18.0 | 19.0 | 20.0 | 21.0 | 22.0 | 23.0 | 24.0 | 25.0 | 26.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 5568.75 | 5304.38 | 4989.38 | 4741.88 | 4511.25 | 4230.00 | 4010.63 | 3802.50 | 3571.88 |
| 45.0 | 5619.38 | 5310.00 | 5017.50 | 4764.38 | 4488.75 | 4230.00 | 3999.38 | 3751.88 | 3555.00 |
| 90.0 | 5393.25 | 5114.81 | 4846.50 | 4527.00 | 4287.94 | 4064.63 | 3801.38 | 3601.13 | 3406.50 |
| 135.0 | 5411.25 | 5175.00 | 4820.63 | 4573.13 | 4359.38 | 4083.75 | 3841.88 | 3628.13 | 3414.38 |
| 180.0 | 5157.56 | 4893.75 | 4642.88 | 4344.19 | 4116.94 | 3900.94 | 3669.19 | 3445.88 | 3258.56 |
| 225.0 | 5084.44 | 4853.81 | 4601.25 | 4276.13 | 4078.69 | 3860.44 | 3626.44 | 3408.75 | 3230.44 |
| 270.0 | 5276.25 | 4989.38 | 4713.75 | 4483.13 | 4235.63 | 3993.75 | 3785.63 | 3588.75 | 3369.38 |
| 315.0 | 5226.19 | 4978.13 | 4739.63 | 4456.69 | 4237.88 | 4024.13 | 3792.94 | 3575.25 | 3387.94 |
| 360.0 | 5568.75 | 5304.38 | 4989.38 | 4741.88 | 4511.25 | 4230.00 | 4010.63 | 3802.50 | 3571.88 |

| C/γ(°) | 27.0 | 28.0 | 29.0 | 30.0 | 31.0 | 32.0 | 33.0 | 34.0 | 35.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 3352.50 | 3166.88 | 2964.38 | 2857.50 | 2482.31 | 2206.69 | 1962.56 | 1692.00 | 1427.63 |
| 45.0 | 3341.25 | 3144.38 | 2964.38 | 2851.88 | 2478.38 | 2183.06 | 1923.75 | 1649.81 | 1407.38 |
| 90.0 | 3178.69 | 3027.38 | 2815.88 | 2532.94 | 2325.94 | 2045.81 | 1739.25 | 1531.69 | 1101.38 |
| 135.0 | 3206.25 | 3065.63 | 2846.25 | 2721.94 | 2372.63 | 2087.44 | 1832.06 | 1559.25 | 1311.19 |
| 180.0 | 3065.06 | 2887.88 | 2644.31 | 2380.50 | 2137.50 | 1854.56 | 1577.81 | 1254.38 | 1110.09 |
| 225.0 | 3044.25 | 2859.75 | 2615.63 | 2348.44 | 2098.13 | 1816.31 | 1538.44 | 1117.69 | 1061.27 |
| 270.0 | 3161.25 | 2964.38 | 2840.63 | 2540.81 | 2298.38 | 1987.31 | 1742.06 | 1497.94 | 1196.44 |
| 315.0 | 3180.94 | 3003.75 | 2771.44 | 2507.63 | 2259.56 | 1977.19 | 1699.31 | 1459.13 | 1113.36 |
| 360.0 | 3352.50 | 3166.88 | 2964.38 | 2857.50 | 2482.31 | 2206.69 | 1962.56 | 1692.00 | 1427.63 |

| C/γ(°) | 36.0 | 37.0 | 38.0 | 39.0 | 40.0 | 41.0 | 42.0 | 43.0 | 44.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 1199.81 | 982.13 | 721.13 | 536.06 | 375.19 | 289.13 | 122.12 | 90.90 | 80.27 |
| 45.0 | 1169.44 | 983.81 | 716.63 | 533.25 | 394.31 | 288.00 | 117.68 | 86.01 | 74.08 |
| 90.0 | 1047.49 | 813.38 | 620.61 | 407.31 | 264.60 | 154.46 | 96.36 | 80.04 | 70.37 |
| 135.0 | 1082.81 | 865.69 | 617.06 | 436.50 | 289.13 | 160.65 | 97.48 | 84.99 | 73.74 |
| 180.0 | 841.84 | 646.14 | 473.51 | 294.58 | 181.35 | 106.88 | 84.49 | 75.26 | 66.66 |
| 225.0 | 816.41 | 601.88 | 436.56 | 279.68 | 161.44 | 98.21 | 80.78 | 68.51 | 59.96 |
| 270.0 | 968.06 | 757.69 | 522.56 | 363.94 | 295.88 | 129.43 | 86.74 | 77.06 | 67.61 |
| 315.0 | 928.46 | 752.74 | 562.50 | 354.26 | 227.42 | 137.31 | 92.25 | 78.86 | 69.08 |
| 360.0 | 1199.81 | 982.13 | 721.13 | 536.06 | 375.19 | 289.13 | 122.12 | 90.90 | 80.27 |

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 | 69.08 | 59.06 | 50.06 | 43.99 | 39.71 | 36.39 | 34.26 | 32.29 | 30.99 |
| 45.0 | 63.51 | 55.69 | 48.43 | 43.54 | 38.59 | 35.44 | 33.41 | 32.23 | 30.99 |
| 90.0 | 60.86 | 51.69 | 45.00 | 41.18 | 37.58 | 34.54 | 32.68 | 31.22 | 30.26 |
| 135.0 | 63.51 | 54.34 | 46.29 | 42.30 | 38.64 | 35.94 | 33.64 | 32.12 | 30.88 |
| 180.0 | 56.64 | 50.12 | 43.43 | 38.64 | 36.17 | 34.09 | 32.34 | 31.44 | 30.38 |
| 225.0 | 52.65 | 46.18 | 40.89 | 36.84 | 33.53 | 31.67 | 30.71 | 29.70 | 28.74 |
| 270.0 | 58.56 | 51.19 | 43.82 | 39.21 | 35.49 | 32.85 | 31.39 | 30.49 | 29.31 |
| 315.0 | 59.18 | 50.57 | 44.04 | 39.71 | 36.68 | 34.14 | 31.95 | 30.77 | 29.81 |
| 360.0 | 69.08 | 59.06 | 50.06 | 43.99 | 39.71 | 36.39 | 34.26 | 32.29 | 30.99 |

| C/γ(°) | 54.0 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 | 60.0 | 61.0 | 62.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 30.09 | 29.25 | 28.35 | 27.39 | 26.61 | 26.04 | 25.54 | 25.20 | 24.86 |
| 45.0 | 29.98 | 29.03 | 27.84 | 27.23 | 26.55 | 26.04 | 25.65 | 25.26 | 25.03 |
| 90.0 | 29.19 | 28.13 | 27.28 | 26.61 | 25.99 | 25.59 | 25.26 | 24.86 | 24.64 |
| 135.0 | 29.81 | 28.86 | 27.68 | 26.89 | 26.33 | 25.82 | 25.26 | 24.98 | 24.69 |
| 180.0 | 28.91 | 28.01 | 26.94 | 26.27 | 25.82 | 25.37 | 24.98 | 24.64 | 24.36 |
| 225.0 | 27.73 | 26.89 | 26.27 | 25.76 | 25.26 | 24.92 | 24.69 | 24.36 | 24.13 |
| 270.0 | 28.35 | 27.56 | 26.72 | 26.16 | 25.65 | 25.26 | 24.92 | 24.64 | 24.36 |
| 315.0 | 28.63 | 27.79 | 27.00 | 26.33 | 25.82 | 25.48 | 25.14 | 24.81 | 24.64 |
| 360.0 | 30.09 | 29.25 | 28.35 | 27.39 | 26.61 | 26.04 | 25.54 | 25.20 | 24.86 |

| C/γ(°) | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 | 70.0 | 71.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 24.64 | 24.41 | 24.19 | 24.08 | 23.91 | 23.74 | 23.63 | 23.51 | 23.34 |
| 45.0 | 24.75 | 24.53 | 24.30 | 24.19 | 24.02 | 23.85 | 23.74 | 23.63 | 23.51 |
| 90.0 | 24.41 | 24.19 | 23.96 | 23.85 | 23.63 | 23.51 | 23.40 | 23.29 | 23.18 |
| 135.0 | 24.41 | 24.19 | 24.02 | 23.85 | 23.63 | 23.51 | 23.40 | 23.34 | 23.23 |
| 180.0 | 24.13 | 23.85 | 23.68 | 23.51 | 23.34 | 23.23 | 23.18 | 23.06 | 23.01 |
| 225.0 | 23.91 | 23.79 | 23.57 | 23.46 | 23.34 | 23.23 | 23.12 | 23.06 | 23.01 |
| 270.0 | 24.19 | 23.96 | 23.79 | 23.63 | 23.51 | 23.34 | 23.29 | 23.18 | 23.06 |
| 315.0 | 24.41 | 24.24 | 24.13 | 23.96 | 23.85 | 23.74 | 23.63 | 23.51 | 23.46 |
| 360.0 | 24.64 | 24.41 | 24.19 | 24.08 | 23.91 | 23.74 | 23.63 | 23.51 | 23.34 |

| C/γ(°) | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0 | 80.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 23.29 | 23.23 | 23.18 | 23.12 | 23.12 | 23.06 | 23.06 | 23.12 | 23.63 |
| 45.0 | 23.46 | 23.40 | 23.34 | 23.34 | 23.29 | 23.29 | 23.29 | 23.34 | 23.40 |
| 90.0 | 23.06 | 23.01 | 22.95 | 22.89 | 22.78 | 22.73 | 22.67 | 22.67 | 22.67 |
| 135.0 | 23.18 | 23.12 | 23.06 | 23.01 | 22.95 | 22.95 | 22.89 | 22.89 | 22.89 |
| 180.0 | 22.95 | 22.89 | 22.84 | 22.78 | 22.78 | 22.73 | 22.73 | 22.67 | 22.67 |
| 225.0 | 22.89 | 22.84 | 22.78 | 22.73 | 22.73 | 22.73 | 22.67 | 22.67 | 22.61 |
| 270.0 | 23.01 | 22.95 | 22.89 | 22.84 | 22.78 | 22.78 | 22.78 | 22.78 | 22.78 |
| 315.0 | 23.40 | 23.34 | 23.29 | 23.29 | 23.29 | 23.29 | 23.34 | 23.40 | 23.46 |
| 360.0 | 23.29 | 23.23 | 23.18 | 23.12 | 23.12 | 23.06 | 23.06 | 23.12 | 23.63 |

| C/γ(°) | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 23.63 | 23.06 | 23.06 | 23.06 | 23.18 | 23.57 | 23.85 | 24.19 | 25.20 |
| 45.0 | 23.46 | 23.63 | 23.79 | 23.85 | 24.02 | 24.13 | 24.08 | 24.30 | 25.71 |
| 90.0 | 22.61 | 22.61 | 22.67 | 22.73 | 22.78 | 22.89 | 23.18 | 23.63 | 22.33 |
| 135.0 | 22.89 | 22.89 | 22.84 | 22.89 | 22.95 | 22.78 | 22.67 | 22.61 | 22.89 |
| 180.0 | 22.61 | 22.61 | 22.61 | 22.61 | 22.61 | 22.67 | 23.01 | 23.57 | 22.28 |
| 225.0 | 22.67 | 22.67 | 22.78 | 22.84 | 23.01 | 23.12 | 23.40 | 23.96 | 24.36 |
| 270.0 | 22.78 | 22.78 | 22.84 | 22.84 | 22.89 | 22.89 | 22.84 | 22.95 | 23.40 |
| 315.0 | 23.96 | 24.47 | 23.51 | 23.51 | 23.51 | 23.18 | 23.12 | 23.12 | 23.34 |
| 360.0 | 23.63 | 23.06 | 23.06 | 23.06 | 23.18 | 23.57 | 23.85 | 24.19 | 25.20 |

Intensity data(cd)



| C/γ(°) | 90.0 |
|---|---|
| 0.0 | 25.88 |
| 45.0 | 22.28 |
| 90.0 | 22.28 |
| 135.0 | 22.22 |
| 180.0 | 22.28 |
| 225.0 | 22.33 |
| 270.0 | 23.01 |
| 315.0 | 22.89 |
| 360.0 | 25.88 |