NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86-750-3770000 Fax:+86-750-3771111
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

## NATA

Client:
LumCAT: 1697-M
Luminaire: 92.70.124.00

| | |
|---|---|
| Report No: nt0100 | Voltage(V): 33.5300 |
| Test No: GC2019122315 | Current(A): 0.2970 |
| LampCAT: LUMINUS CXM-9-AC40 | Power (W): 9.9500 |
| Lamp flux(lm): 1036.0 | PF: 1.0000 |
| Number of Lamps: 1 | Ballast type: DC |
| Length(mm): 0 | Width(mm): 0 |
| Phm Type: C | Height(mm): 0 |

## Photometric Results

Lumens(lm): 996.75, Efficiency(%): 96.21% , Luminous Efficacy(lm/W): 100.18
Central intensity(cd): 2492.789, Maximum intensity(cd): 2492.789
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=27.0
[C90/270]Total=27.0
Field angle(10%Imax): [C0/180]Total=80.6
[C90/270]Total=80.6
Maximum s/h(1/2): C0_180=0.45 C90_270=0.45
Maximum s/h(1/4): C0_180=0.45 C90_270=0.45
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 96.21%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.660%

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 0.0 | 2492.789 | 0.000 | 0 | .000% | .000% |
| 1.0 | 2486.109 | 2.382 | 2.382 | .230% | .239% |
| 2.0 | 2466.703 | 7.109 | 9.491 | .686% | .952% |
| 3.0 | 2431.406 | 11.715 | 21.206 | 1.131% | 2.127% |
| 4.0 | 2383.945 | 16.119 | 37.324 | 1.556% | 3.745% |
| 5.0 | 2322.000 | 20.245 | 57.569 | 1.954% | 5.776% |
| 6.0 | 2232.352 | 23.934 | 81.503 | 2.310% | 8.177% |
| 7.0 | 2129.906 | 27.076 | 108.58 | 2.614% | 10.893% |
| 8.0 | 2022.680 | 29.719 | 138.299 | 2.869% | 13.875% |
| 9.0 | 1890.984 | 31.718 | 170.017 | 3.062% | 17.057% |
| 10.0 | 1749.164 | 32.942 | 202.959 | 3.180% | 20.362% |
| 11.0 | 1617.539 | 33.640 | 236.599 | 3.247% | 23.737% |
| 12.0 | 1475.789 | 33.815 | 270.414 | 3.264% | 27.130% |
| 13.0 | 1306.920 | 33.024 | 303.438 | 3.188% | 30.443% |
| 14.0 | 1172.630 | 31.738 | 335.176 | 3.064% | 33.627% |
| 15.0 | 1049.709 | 30.509 | 365.685 | 2.945% | 36.688% |
| 16.0 | 915.588 | 28.797 | 394.482 | 2.780% | 39.577% |
| 17.0 | 802.441 | 26.754 | 421.236 | 2.582% | 42.261% |
| 18.0 | 705.009 | 24.855 | 446.091 | 2.399% | 44.755% |
| 19.0 | 626.611 | 23.167 | 469.258 | 2.236% | 47.079% |
| 20.0 | 565.601 | 21.821 | 491.079 | 2.106% | 49.268% |
| 21.0 | 518.175 | 20.811 | 511.89 | 2.009% | 51.356% |
| 22.0 | 481.430 | 20.087 | 531.977 | 1.939% | 53.371% |
| 23.0 | 453.860 | 19.625 | 551.602 | 1.894% | 55.340% |
| 24.0 | 431.916 | 19.366 | 570.969 | 1.869% | 57.283% |
| 25.0 | 414.640 | 19.249 | 590.217 | 1.858% | 59.214% |
| 26.0 | 402.188 | 19.281 | 609.499 | 1.861% | 61.149% |
| 27.0 | 391.163 | 19.409 | 628.908 | 1.874% | 63.096% |
| 28.0 | 380.791 | 19.544 | 648.452 | 1.887% | 65.057% |
| 29.0 | 372.565 | 19.710 | 668.162 | 1.903% | 67.034% |
| 30.0 | 364.901 | 19.911 | 688.074 | 1.922% | 69.032% |
| 31.0 | 356.991 | 20.089 | 708.163 | 1.939% | 71.047% |
| 32.0 | 350.381 | 20.265 | 728.428 | 1.956% | 73.080% |
| 33.0 | 344.405 | 20.469 | 748.897 | 1.976% | 75.134% |
| 34.0 | 337.767 | 20.645 | 769.541 | 1.993% | 77.205% |
| 35.0 | 331.917 | 20.798 | 790.339 | 2.008% | 79.292% |
| 36.0 | 325.737 | 20.940 | 811.279 | 2.021% | 81.393% |
| 37.0 | 316.786 | 20.955 | 832.235 | 2.023% | 83.495% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 38.0 | 302.815 | 20.681 | 852.916 | 1.996% | 85.570% |
| 39.0 | 282.994 | 19.995 | 872.911 | 1.930% | 87.576% |
| 40.0 | 256.908 | 18.830 | 891.741 | 1.818% | 89.465% |
| 41.0 | 230.604 | 17.360 | 909.101 | 1.676% | 91.207% |
| 42.0 | 198.232 | 15.580 | 924.682 | 1.504% | 92.770% |
| 43.0 | 164.152 | 13.424 | 938.105 | 1.296% | 94.117% |
| 44.0 | 134.831 | 11.284 | 949.39 | 1.089% | 95.249% |
| 45.0 | 105.595 | 9.240 | 958.63 | .892% | 96.176% |
| 46.0 | 74.714 | 7.052 | 965.681 | .681% | 96.883% |
| 47.0 | 50.808 | 4.992 | 970.674 | .482% | 97.384% |
| 48.0 | 32.569 | 3.371 | 974.044 | .325% | 97.722% |
| 49.0 | 19.287 | 2.129 | 976.174 | .206% | 97.936% |
| 50.0 | 13.155 | 1.353 | 977.526 | .131% | 98.072% |
| 51.0 | 10.575 | 1.004 | 978.53 | .097% | 98.172% |
| 52.0 | 8.452 | 0.816 | 979.347 | .079% | 98.254% |
| 53.0 | 6.813 | 0.664 | 980.011 | .064% | 98.321% |
| 54.0 | 5.927 | 0.562 | 980.572 | .054% | 98.377% |
| 55.0 | 5.449 | 0.508 | 981.08 | .049% | 98.428% |
| 56.0 | 5.210 | 0.482 | 981.562 | .046% | 98.476% |
| 57.0 | 5.006 | 0.467 | 982.029 | .045% | 98.523% |
| 58.0 | 4.887 | 0.457 | 982.486 | .044% | 98.569% |
| 59.0 | 4.788 | 0.452 | 982.939 | .044% | 98.615% |
| 60.0 | 4.711 | 0.449 | 983.387 | .043% | 98.660% |
| 61.0 | 4.627 | 0.446 | 983.833 | .043% | 98.704% |
| 62.0 | 4.563 | 0.443 | 984.276 | .043% | 98.749% |
| 63.0 | 4.514 | 0.441 | 984.717 | .043% | 98.793% |
| 64.0 | 4.465 | 0.441 | 985.158 | .043% | 98.837% |
| 65.0 | 4.416 | 0.439 | 985.597 | .042% | 98.881% |
| 66.0 | 4.395 | 0.440 | 986.037 | .042% | 98.925% |
| 67.0 | 4.366 | 0.441 | 986.477 | .043% | 98.970% |
| 68.0 | 4.324 | 0.440 | 986.918 | .042% | 99.014% |
| 69.0 | 4.310 | 0.440 | 987.358 | .043% | 99.058% |
| 70.0 | 4.289 | 0.442 | 987.8 | .043% | 99.102% |
| 71.0 | 4.261 | 0.442 | 988.242 | .043% | 99.147% |
| 72.0 | 4.261 | 0.443 | 988.685 | .043% | 99.191% |
| 73.0 | 4.247 | 0.445 | 989.13 | .043% | 99.236% |
| 74.0 | 4.226 | 0.445 | 989.575 | .043% | 99.280% |
| 75.0 | 4.212 | 0.446 | 990.021 | .043% | 99.325% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 76.0 | 4.191 | 0.446 | 990.467 | .043% | 99.370% |
| 77.0 | 4.198 | 0.447 | 990.914 | .043% | 99.415% |
| 78.0 | 4.184 | 0.449 | 991.363 | .043% | 99.460% |
| 79.0 | 4.163 | 0.448 | 991.811 | .043% | 99.505% |
| 80.0 | 4.163 | 0.449 | 992.26 | .043% | 99.550% |
| 81.0 | 4.148 | 0.449 | 992.71 | .043% | 99.595% |
| 82.0 | 4.134 | 0.449 | 993.159 | .043% | 99.640% |
| 83.0 | 4.134 | 0.450 | 993.608 | .043% | 99.685% |
| 84.0 | 4.134 | 0.450 | 994.059 | .043% | 99.730% |
| 85.0 | 4.113 | 0.450 | 994.509 | .043% | 99.775% |
| 86.0 | 4.099 | 0.449 | 994.958 | .043% | 99.820% |
| 87.0 | 4.085 | 0.448 | 995.406 | .043% | 99.865% |
| 88.0 | 4.085 | 0.448 | 995.853 | .043% | 99.910% |
| 89.0 | 4.078 | 0.447 | 996.301 | .043% | 99.955% |
| 90.0 | 4.078 | 0.447 | 996.748 | .043% | 100.000% |

## Zonal flux distribution table



ZONAL LUMEN SUMMARY

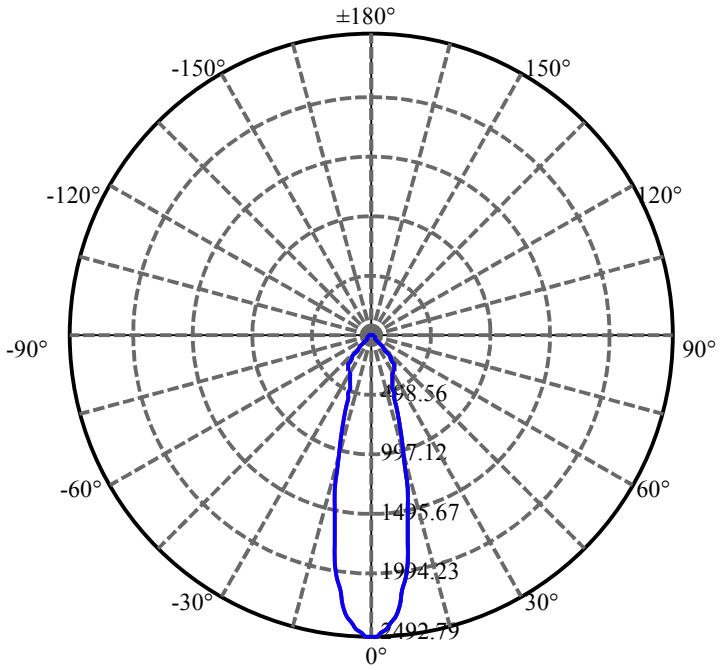
| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-30 | 688.07 | 66.42% | 69.03% |
| 0-40 | 891.74 | 86.08% | 89.47% |
| 0-60 | 983.39 | 94.92% | 98.66% |
| 0-90 | 996.30 | 96.17% | 99.96% |
| 0-120 | 996.30 | 96.17% | 99.96% |
| 0-180 | 996.75 | 96.21% | 100.00% |
| 60-90 | 13.36 | 1.29% | 1.34% |
| 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% |
| 0-35.34 | 797.40 | 76.97% | 80.00% |

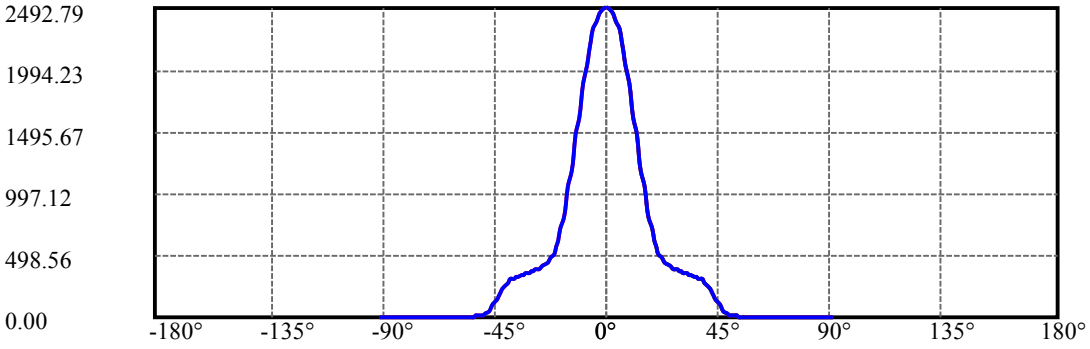
ZONAL LUMEN SUMMARY

| | |
|---|---|
| 0-10 | 202.96 |
| 10-20 | 288.12 |
| 20-30 | 196.99 |
| 30-40 | 203.67 |
| 40-50 | 85.78 |
| 50-60 | 5.86 |
| 60-70 | 4.41 |
| 70-80 | 4.46 |
| 80-90 | 4.04 |
| 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:40.3 Right:40.3
:C90/270Left:40.3 Right:40.3

Beam Angle(50%Imax):C0/180Left:13.5 Right:13.5
:C90/270Left:13.5 Right:13.5

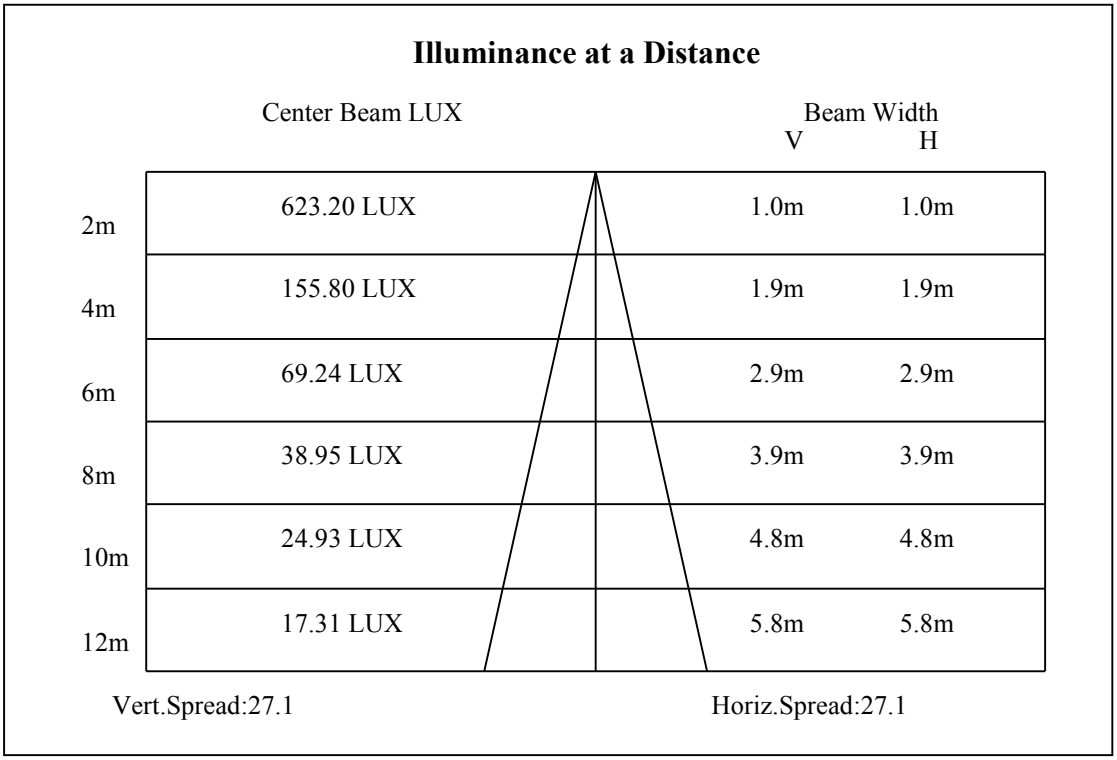
Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/12/23
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

Lux distance Curve





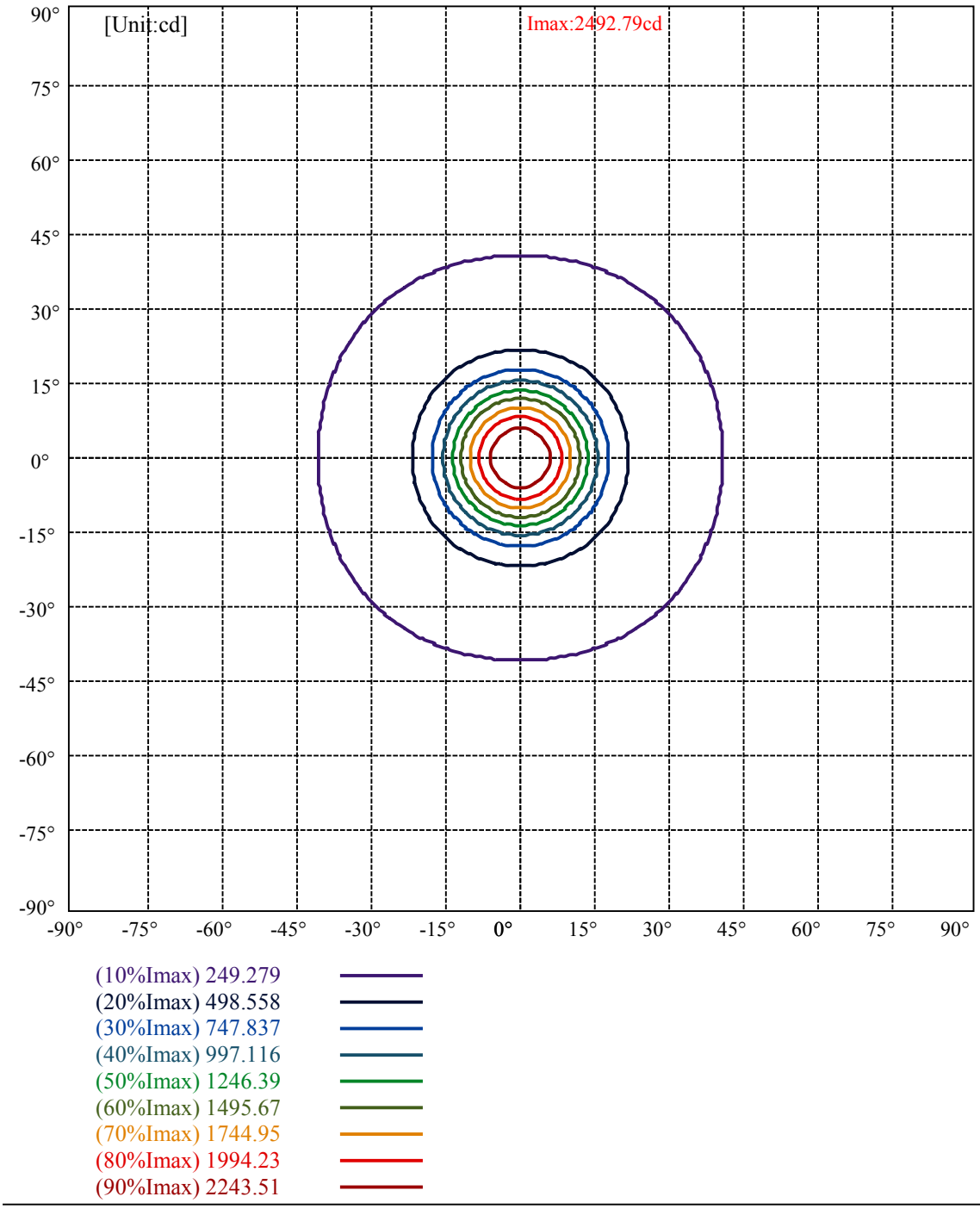

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/12/23
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO-Intensity(V-H)





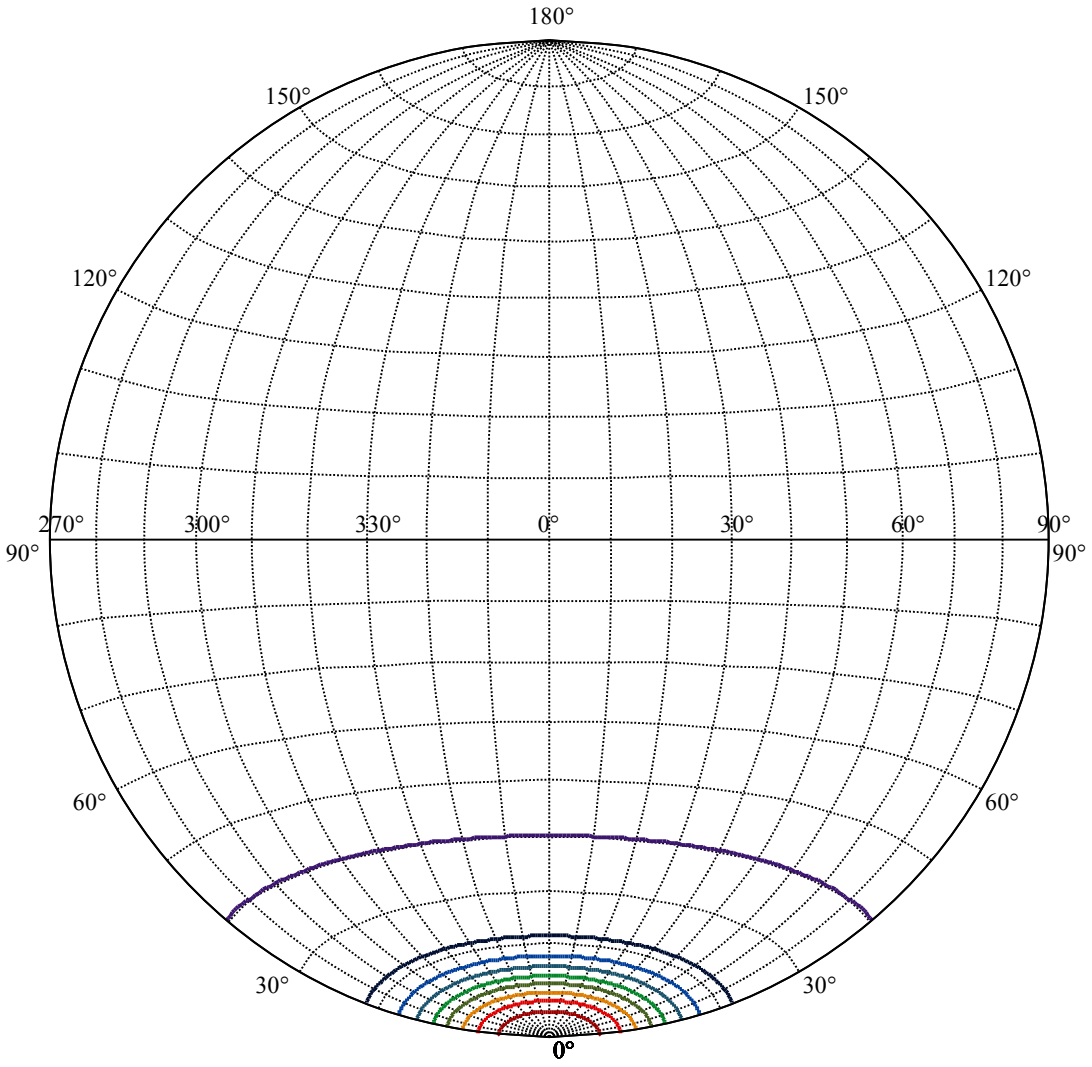

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/12/23
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web






House [Unit:cd] Road

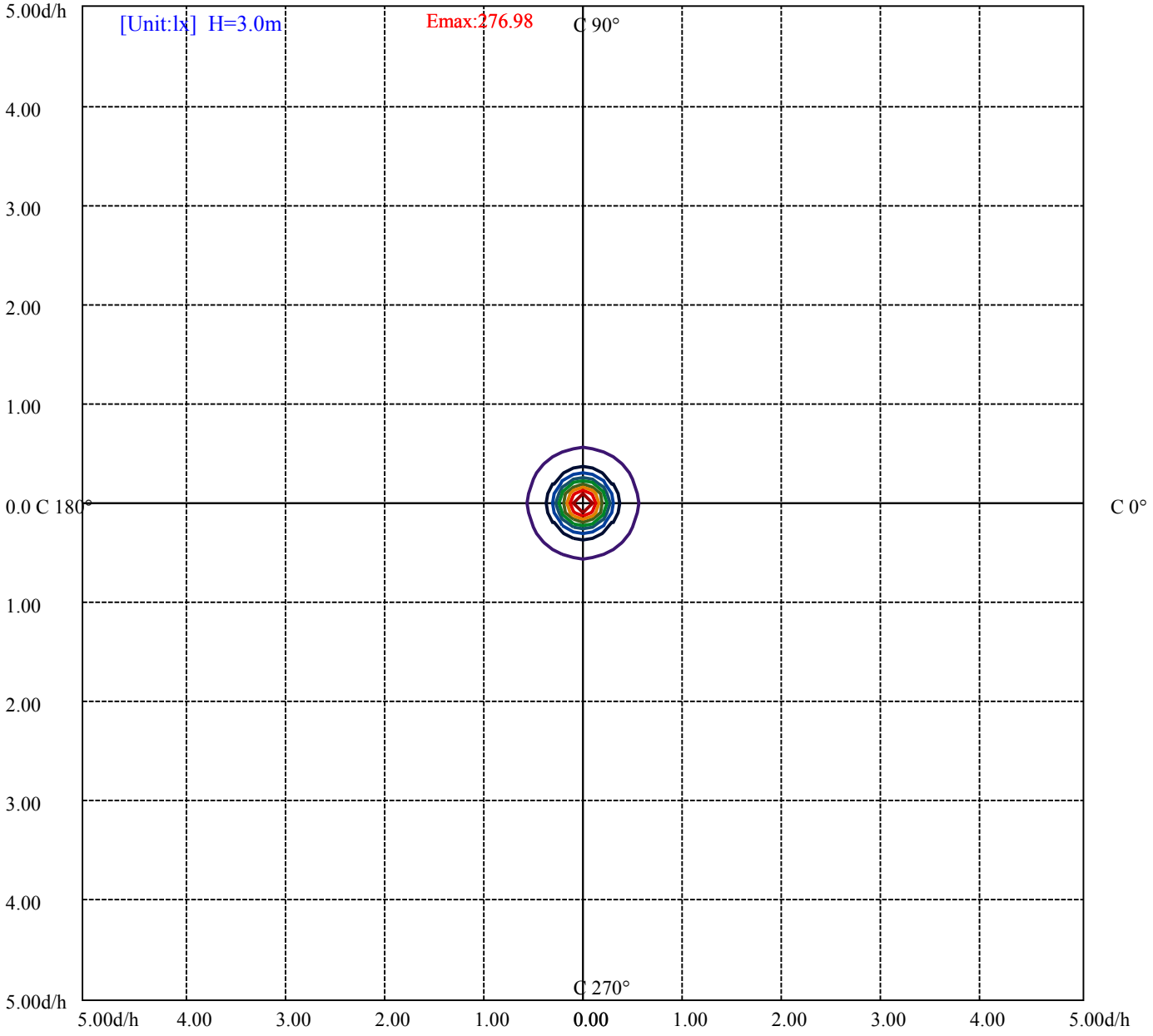
Imax:2492.79

(10%Imax) 249.279
(20%Imax) 498.558
(30%Imax) 747.837
(40%Imax) 997.116
(50%Imax) 1246.39
(60%Imax) 1495.67
(70%Imax) 1744.95
(80%Imax) 1994.23
(90%Imax) 2243.51

Equipment: GMS1980 Date: 2019/12/23 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

## ISO illuminance diagram



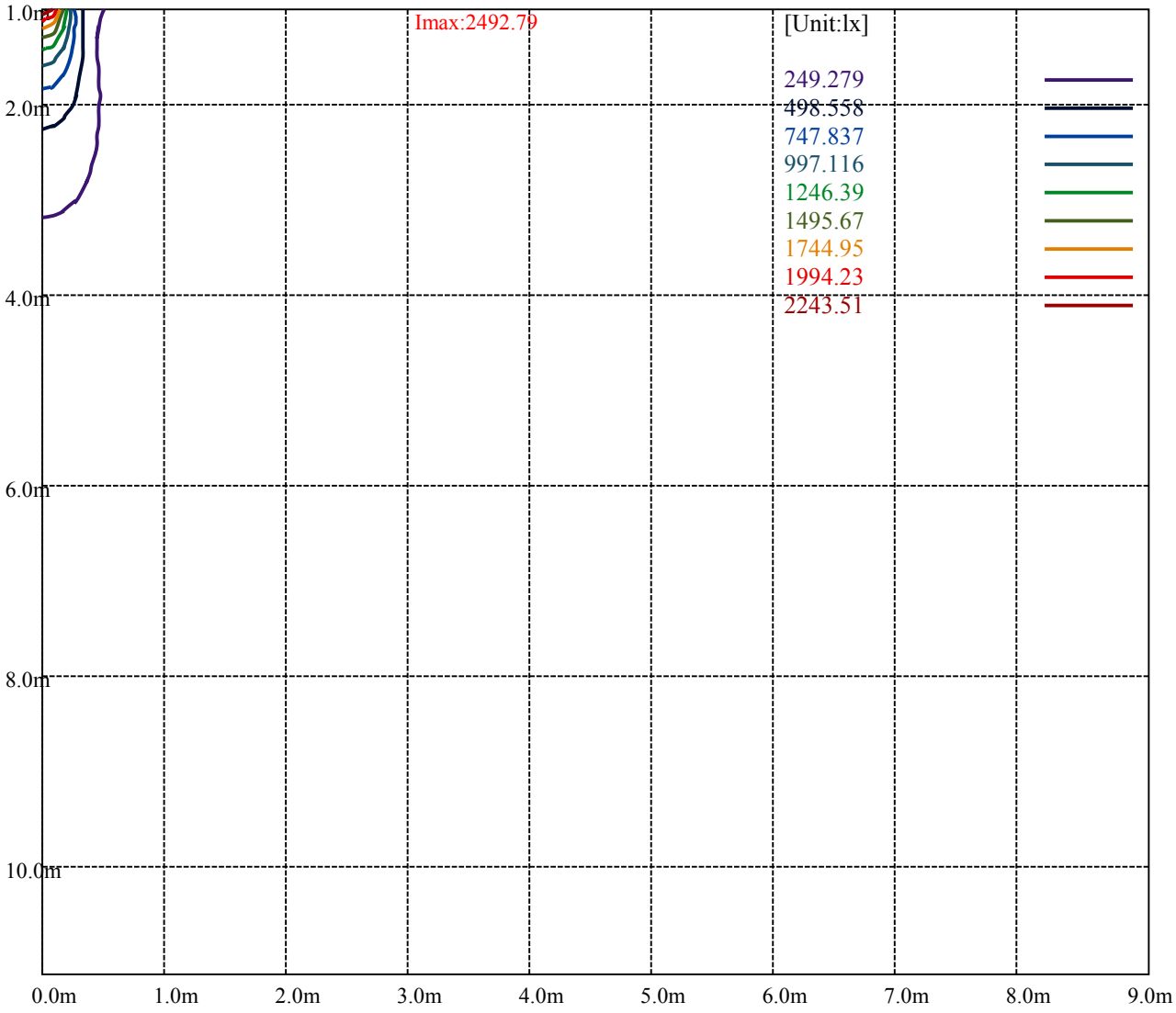



(10%Emax) 27.69767
(20%Emax) 55.39534
(30%Emax) 83.09289
(40%Emax) 110.7906
(50%Emax) 138.4878
(60%Emax) 166.1856
(70%Emax) 193.8833
(80%Emax) 221.5811
(90%Emax) 249.2789

Equipment: GMS1980
Temperature(°C): 25.0
Date: 2019/12/23
Humidity(%): 65.0%
Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram






Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/12/23
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

## Luminance Limitting Curve(no luminous side)



Luminance Table

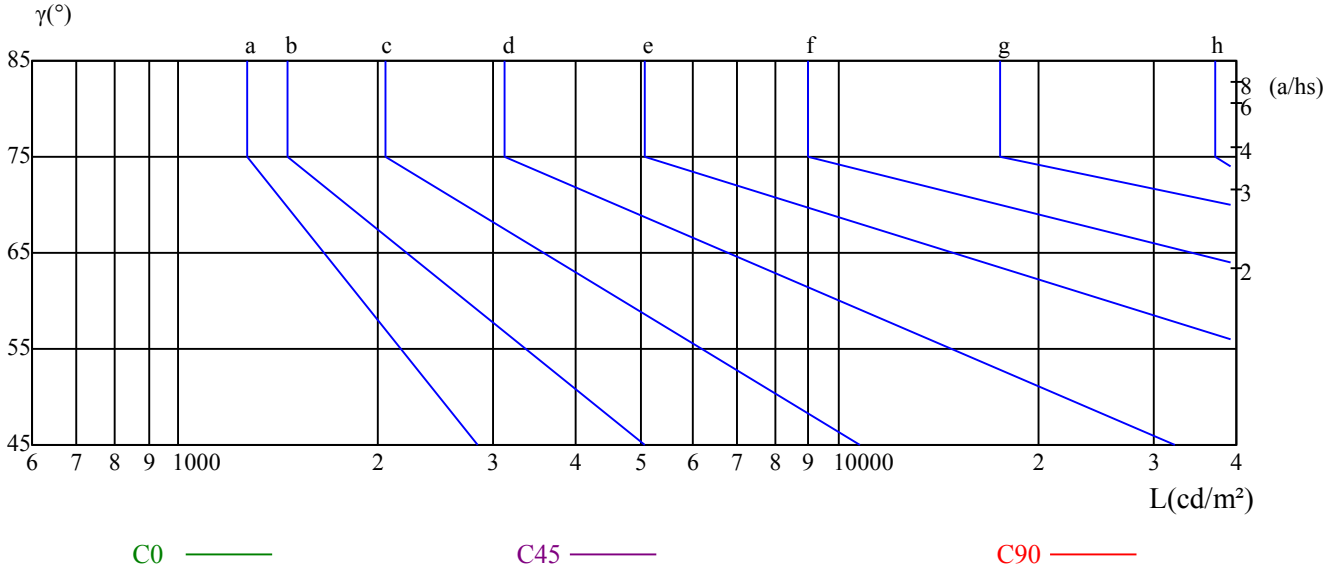
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|---|---|---|---|---|---|---|---|---|---|
| C0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| 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

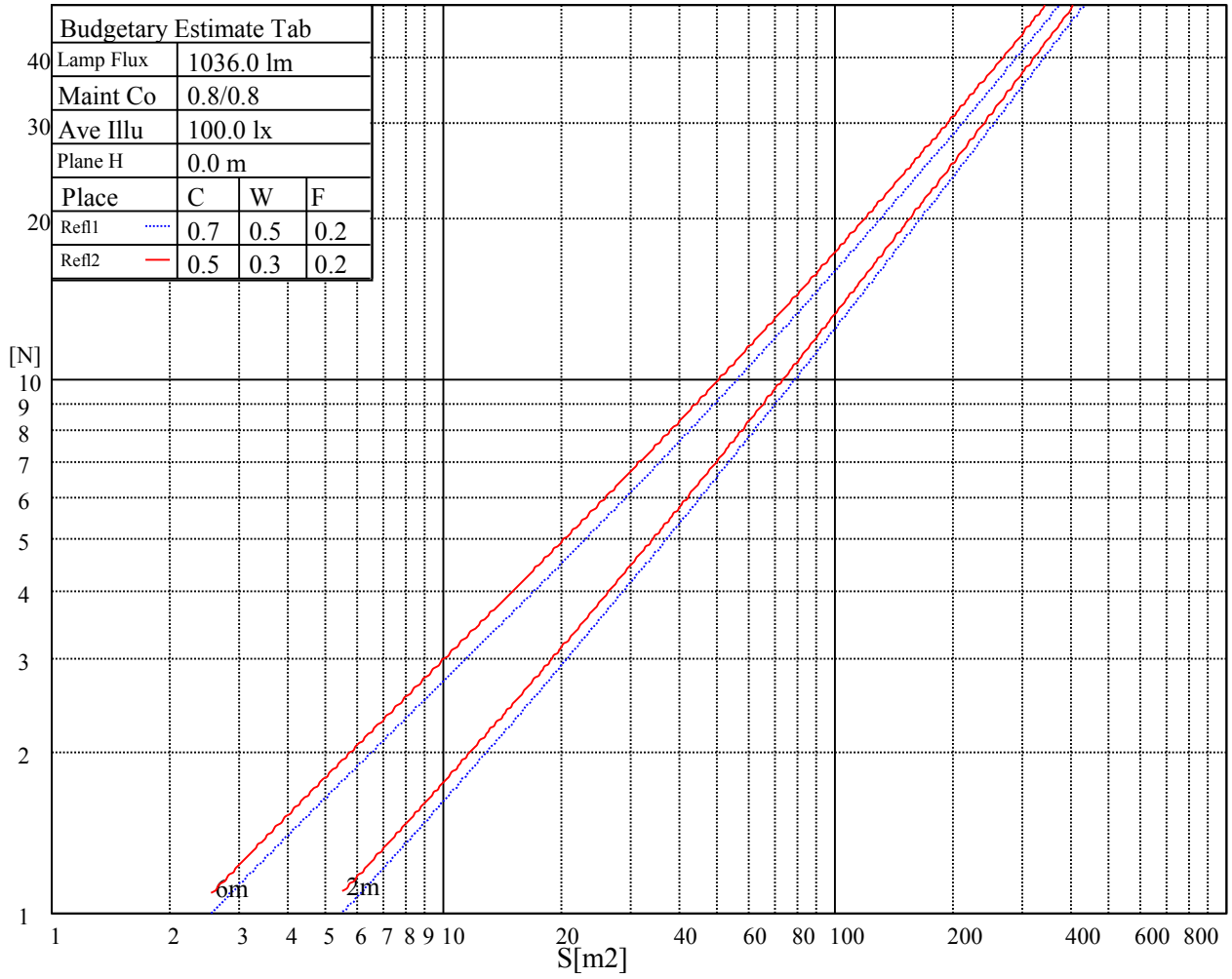
| Glare | Quality | Service Values Illuminance(lx) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1.15 | A | 2000 | 1000 | 500 | <=300 | | | | |
| 1.5 | B | | 2000 | 1000 | 500 | <=300 | | | |
| 1.85 | C | | | 2000 | 1000 | 500 | <=300 | | |
| 2.2 | D | | | | 2000 | 1000 | 500 | <=300 | |
| 2.55 | E | | | | | 2000 | 1000 | 500 | <=300 |
| | | a | b | c | d | e | f | g | h |

Luminance Limitting Curve



## Budgetary Estimate Table






Equipment: GMS1980 Date: 2019/12/23 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

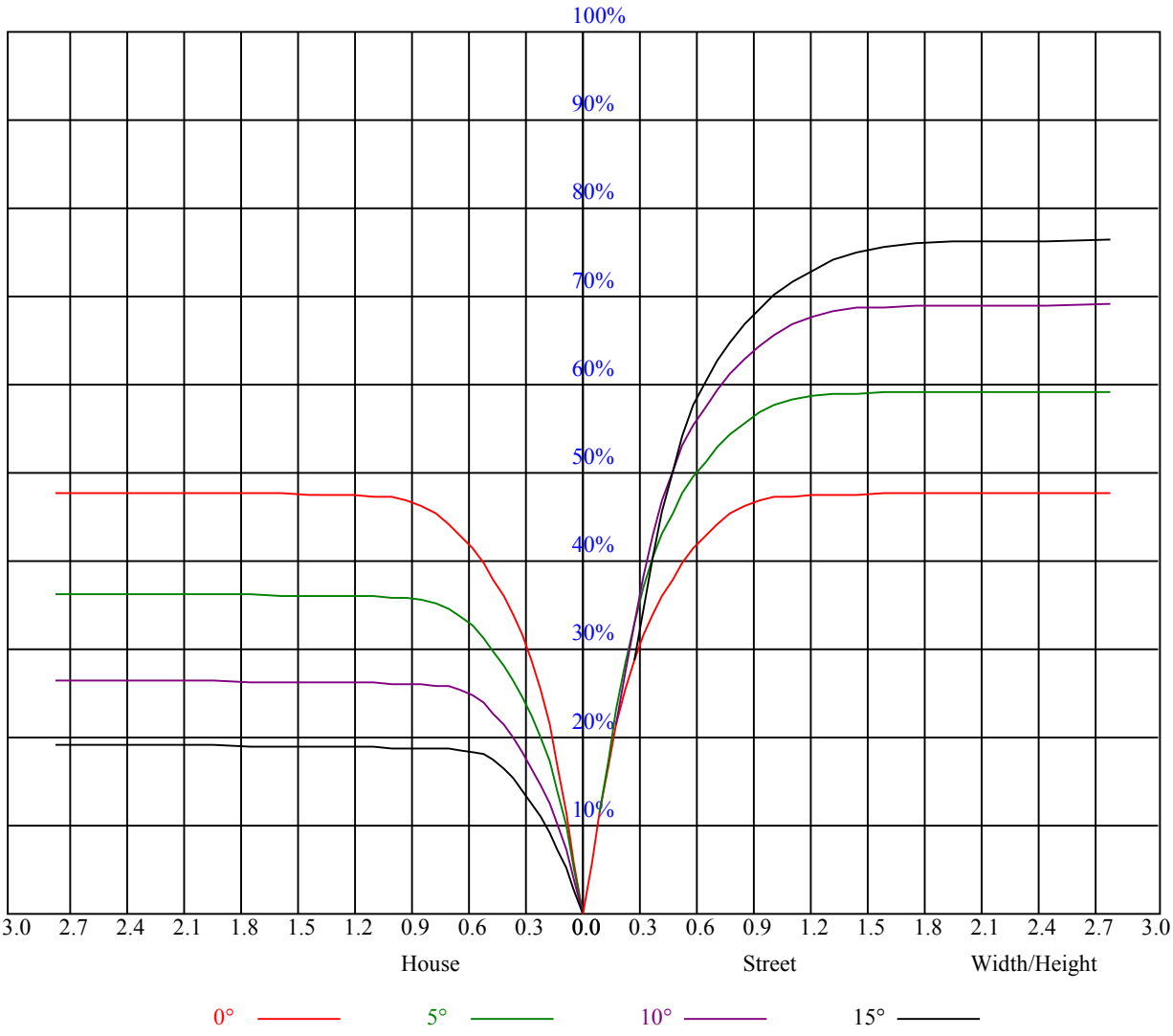
Utilization factor table for indoor luminaire



| 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 | 1.15 | 1.15 | 1.15 | 1.12 | 1.12 | 1.12 | 1.07 | 1.07 | 1.07 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 | 0.98 | 0.96 |
| 1 | 1.07 | 1.04 | 1.02 | 1.05 | 1.02 | 1.01 | 1.01 | 0.99 | 0.97 | 0.97 | 0.96 | 0.95 | 0.94 | 0.93 | 0.92 | 0.90 |
| 2 | 1.00 | 0.96 | 0.93 | 0.98 | 0.94 | 0.92 | 0.95 | 0.92 | 0.90 | 0.92 | 0.90 | 0.88 | 0.89 | 0.87 | 0.86 | 0.84 |
| 3 | 0.93 | 0.89 | 0.85 | 0.92 | 0.88 | 0.84 | 0.89 | 0.86 | 0.83 | 0.87 | 0.84 | 0.82 | 0.85 | 0.83 | 0.80 | 0.79 |
| 4 | 0.88 | 0.83 | 0.79 | 0.87 | 0.82 | 0.78 | 0.85 | 0.80 | 0.77 | 0.83 | 0.79 | 0.76 | 0.81 | 0.78 | 0.76 | 0.74 |
| 5 | 0.83 | 0.77 | 0.73 | 0.82 | 0.77 | 0.73 | 0.80 | 0.76 | 0.72 | 0.78 | 0.75 | 0.72 | 0.77 | 0.74 | 0.71 | 0.70 |
| 6 | 0.78 | 0.73 | 0.69 | 0.77 | 0.72 | 0.68 | 0.76 | 0.71 | 0.68 | 0.75 | 0.71 | 0.68 | 0.73 | 0.70 | 0.67 | 0.66 |
| 7 | 0.74 | 0.69 | 0.65 | 0.73 | 0.68 | 0.65 | 0.72 | 0.68 | 0.64 | 0.71 | 0.67 | 0.64 | 0.70 | 0.66 | 0.64 | 0.62 |
| 8 | 0.70 | 0.65 | 0.61 | 0.70 | 0.65 | 0.61 | 0.69 | 0.64 | 0.61 | 0.68 | 0.64 | 0.61 | 0.67 | 0.63 | 0.60 | 0.59 |
| 9 | 0.67 | 0.62 | 0.58 | 0.66 | 0.61 | 0.58 | 0.66 | 0.61 | 0.58 | 0.65 | 0.61 | 0.58 | 0.64 | 0.60 | 0.57 | 0.56 |
| 10 | 0.64 | 0.59 | 0.55 | 0.63 | 0.58 | 0.55 | 0.63 | 0.58 | 0.55 | 0.62 | 0.58 | 0.55 | 0.61 | 0.57 | 0.55 | 0.54 |

## Coefficient Utilization Curve

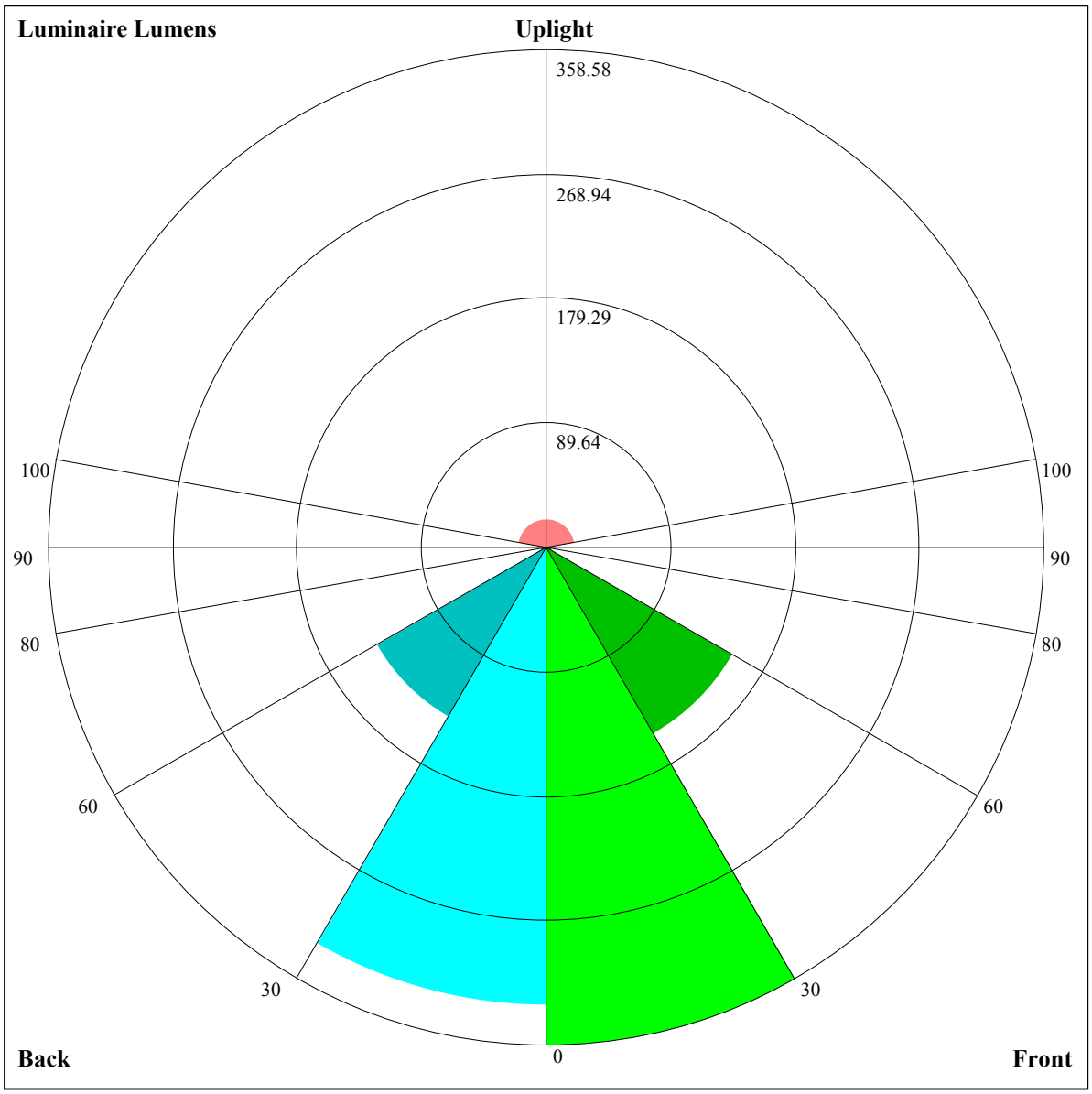





| | | |
|---|---|---|
| Equipment: GMS1980 | Date: 2019/12/23 | Operator: NT07 |
| Temperature(°C): 25.0 | Humidity(%): 65.0% | Distance(m): 7.50 |

LCS Graph






Luminaire Lumens:

FL=358.58,FM=155.01,FH=4.46,FVH=2.25

BL=330.48,BM=141.18,BH=4.42,BVH=2.24

UL=4.45,UH=21.17

BUG Rating:B1-U2-G0

| | | |
|---|---|---|
| Equipment: GMS1980 | Date: 2019/12/23 | Operator: NT07 |
| Temperature(°C): 25.0 | 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 | 2495.25 | 2503.69 | 2498.63 | 2478.38 | 2449.13 | 2407.50 | 2334.38 | 2257.31 | 2164.50 |
| 45.0 | 2490.75 | 2498.63 | 2490.75 | 2472.19 | 2439.00 | 2390.63 | 2331.56 | 2244.38 | 2151.00 |
| 90.0 | 2488.50 | 2478.38 | 2457.56 | 2417.06 | 2370.38 | 2309.63 | 2208.94 | 2108.25 | 1995.19 |
| 135.0 | 2496.94 | 2484.00 | 2456.44 | 2412.56 | 2359.69 | 2283.75 | 2187.00 | 2082.38 | 1967.63 |
| 180.0 | 2495.25 | 2471.63 | 2437.31 | 2381.63 | 2306.81 | 2226.38 | 2116.69 | 1990.13 | 1868.63 |
| 225.0 | 2490.75 | 2471.63 | 2440.69 | 2385.56 | 2323.69 | 2246.06 | 2125.13 | 2016.56 | 1899.00 |
| 270.0 | 2487.94 | 2485.13 | 2468.81 | 2443.50 | 2400.19 | 2342.81 | 2257.88 | 2154.38 | 2050.88 |
| 315.0 | 2496.94 | 2495.81 | 2483.44 | 2460.38 | 2422.69 | 2369.25 | 2297.25 | 2185.88 | 2084.63 |
| 360.0 | 2495.25 | 2503.69 | 2498.63 | 2478.38 | 2449.13 | 2407.50 | 2334.38 | 2257.31 | 2164.50 |

| C/γ(°) | 9.0 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 2030.63 | 1912.50 | 1786.50 | 1640.81 | 1487.81 | 1350.00 | 1199.25 | 1069.88 | 931.50 |
| 45.0 | 2031.19 | 1894.50 | 1763.44 | 1629.00 | 1459.69 | 1323.56 | 1189.13 | 1032.75 | 916.88 |
| 90.0 | 1871.44 | 1709.44 | 1577.25 | 1444.50 | 1278.56 | 1113.30 | 1020.15 | 890.55 | 776.19 |
| 135.0 | 1814.06 | 1683.00 | 1545.19 | 1390.50 | 1239.19 | 1108.69 | 969.19 | 843.75 | 746.44 |
| 180.0 | 1742.63 | 1577.81 | 1443.94 | 1311.19 | 1110.94 | 1017.17 | 899.33 | 783.51 | 685.91 |
| 225.0 | 1743.19 | 1612.69 | 1478.25 | 1308.94 | 1118.42 | 1037.19 | 901.07 | 792.39 | 699.53 |
| 270.0 | 1923.19 | 1787.06 | 1659.38 | 1526.63 | 1357.31 | 1221.19 | 1103.63 | 941.63 | 811.69 |
| 315.0 | 1971.56 | 1816.31 | 1686.38 | 1554.75 | 1403.44 | 1209.94 | 1115.94 | 970.26 | 851.40 |
| 360.0 | 2030.63 | 1912.50 | 1786.50 | 1640.81 | 1487.81 | 1350.00 | 1199.25 | 1069.88 | 931.50 |

| C/γ(°) | 18.0 | 19.0 | 20.0 | 21.0 | 22.0 | 23.0 | 24.0 | 25.0 | 26.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 808.88 | 717.19 | 632.81 | 567.56 | 523.13 | 488.25 | 455.06 | 434.25 | 417.94 |
| 45.0 | 808.31 | 702.56 | 623.81 | 570.38 | 522.56 | 483.75 | 458.44 | 435.38 | 419.06 |
| 90.0 | 689.18 | 611.16 | 558.73 | 513.62 | 478.97 | 454.44 | 432.56 | 415.46 | 403.37 |
| 135.0 | 652.50 | 585.56 | 531.56 | 489.94 | 461.81 | 437.06 | 415.13 | 401.63 | 390.94 |
| 180.0 | 614.81 | 558.96 | 511.09 | 474.30 | 448.82 | 426.49 | 409.22 | 396.96 | 385.31 |
| 225.0 | 610.65 | 556.48 | 513.56 | 471.43 | 445.78 | 426.71 | 412.31 | 398.70 | 389.76 |
| 270.0 | 716.06 | 631.13 | 566.44 | 527.06 | 482.06 | 455.06 | 435.38 | 417.38 | 406.13 |
| 315.0 | 739.69 | 649.86 | 586.80 | 531.11 | 488.31 | 459.11 | 437.23 | 417.38 | 405.00 |
| 360.0 | 808.88 | 717.19 | 632.81 | 567.56 | 523.13 | 488.25 | 455.06 | 434.25 | 417.94 |

| C/γ(°) | 27.0 | 28.0 | 29.0 | 30.0 | 31.0 | 32.0 | 33.0 | 34.0 | 35.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 403.31 | 392.63 | 383.63 | 374.63 | 366.19 | 360.00 | 353.25 | 347.06 | 340.88 |
| 45.0 | 404.44 | 392.63 | 383.63 | 375.19 | 365.63 | 358.88 | 353.25 | 345.94 | 340.31 |
| 90.0 | 393.53 | 381.99 | 373.95 | 366.58 | 359.04 | 351.96 | 346.05 | 339.92 | 333.79 |
| 135.0 | 380.25 | 371.81 | 365.06 | 357.75 | 350.44 | 344.81 | 339.19 | 333.00 | 327.94 |
| 180.0 | 375.69 | 365.85 | 356.96 | 349.48 | 342.45 | 334.13 | 328.05 | 322.03 | 314.94 |
| 225.0 | 381.66 | 373.22 | 365.91 | 359.78 | 353.48 | 347.18 | 341.78 | 335.53 | 330.19 |
| 270.0 | 396.00 | 385.31 | 377.44 | 369.56 | 361.13 | 354.94 | 348.75 | 341.44 | 335.25 |
| 315.0 | 394.43 | 382.89 | 373.95 | 366.24 | 357.58 | 351.17 | 344.93 | 337.22 | 332.04 |
| 360.0 | 403.31 | 392.63 | 383.63 | 374.63 | 366.19 | 360.00 | 353.25 | 347.06 | 340.88 |

| C/γ(°) | 36.0 | 37.0 | 38.0 | 39.0 | 40.0 | 41.0 | 42.0 | 43.0 | 44.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 334.69 | 329.06 | 323.44 | 308.81 | 290.25 | 285.19 | 236.53 | 204.19 | 173.25 |
| 45.0 | 334.69 | 329.06 | 321.19 | 306.56 | 286.88 | 255.77 | 224.78 | 196.48 | 164.03 |
| 90.0 | 328.50 | 319.33 | 303.02 | 279.51 | 251.78 | 224.27 | 195.47 | 158.34 | 130.84 |
| 135.0 | 322.88 | 314.44 | 295.88 | 285.75 | 244.91 | 217.18 | 184.16 | 150.24 | 120.66 |
| 180.0 | 307.58 | 293.74 | 272.53 | 247.05 | 221.40 | 189.34 | 160.14 | 126.28 | 95.06 |
| 225.0 | 323.10 | 307.74 | 287.44 | 259.76 | 229.67 | 201.60 | 172.58 | 136.69 | 108.51 |
| 270.0 | 329.06 | 322.31 | 309.38 | 287.44 | 269.61 | 233.27 | 201.94 | 170.38 | 141.64 |
| 315.0 | 325.41 | 318.60 | 309.66 | 289.07 | 260.78 | 238.22 | 210.26 | 170.61 | 144.68 |
| 360.0 | 334.69 | 329.06 | 323.44 | 308.81 | 290.25 | 285.19 | 236.53 | 204.19 | 173.25 |

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 | 142.65 | 104.63 | 77.34 | 53.89 | 32.23 | 18.34 | 13.39 | 11.03 | 8.55 |
| 45.0 | 131.63 | 100.13 | 73.35 | 49.61 | 28.58 | 16.59 | 13.16 | 10.91 | 8.16 |
| 90.0 | 102.32 | 70.14 | 47.42 | 28.91 | 15.92 | 12.54 | 10.29 | 7.93 | 6.36 |
| 135.0 | 89.33 | 60.86 | 39.32 | 22.50 | 12.83 | 10.86 | 8.78 | 6.75 | 5.57 |
| 180.0 | 69.47 | 45.11 | 25.88 | 15.69 | 12.32 | 9.84 | 7.93 | 6.53 | 5.91 |
| 225.0 | 80.77 | 52.43 | 29.81 | 17.66 | 12.99 | 10.52 | 8.44 | 6.64 | 5.85 |
| 270.0 | 113.63 | 80.44 | 56.93 | 36.34 | 19.52 | 13.16 | 11.14 | 8.66 | 6.69 |
| 315.0 | 114.98 | 83.98 | 56.42 | 35.94 | 19.91 | 13.39 | 11.48 | 9.17 | 7.43 |
| 360.0 | 142.65 | 104.63 | 77.34 | 53.89 | 32.23 | 18.34 | 13.39 | 11.03 | 8.55 |

| C/γ(°) | 54.0 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 | 60.0 | 61.0 | 62.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 6.75 | 5.63 | 5.40 | 5.23 | 5.06 | 4.95 | 4.84 | 4.73 | 4.67 |
| 45.0 | 6.58 | 5.85 | 5.46 | 5.12 | 5.01 | 4.89 | 4.78 | 4.73 | 4.61 |
| 90.0 | 5.91 | 5.63 | 5.12 | 4.95 | 4.84 | 4.78 | 4.73 | 4.67 | 4.56 |
| 135.0 | 5.29 | 5.12 | 5.01 | 4.89 | 4.84 | 4.73 | 4.67 | 4.56 | 4.56 |
| 180.0 | 5.68 | 5.12 | 4.89 | 4.84 | 4.73 | 4.67 | 4.61 | 4.56 | 4.50 |
| 225.0 | 5.34 | 5.12 | 5.01 | 4.89 | 4.78 | 4.67 | 4.61 | 4.56 | 4.50 |
| 270.0 | 5.68 | 5.29 | 5.12 | 5.01 | 4.89 | 4.78 | 4.73 | 4.61 | 4.56 |
| 315.0 | 6.19 | 5.85 | 5.68 | 5.12 | 4.95 | 4.84 | 4.73 | 4.61 | 4.56 |
| 360.0 | 6.75 | 5.63 | 5.40 | 5.23 | 5.06 | 4.95 | 4.84 | 4.73 | 4.67 |

| C/γ(°) | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 | 70.0 | 71.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 4.61 | 4.56 | 4.44 | 4.44 | 4.44 | 4.39 | 4.33 | 4.28 | 4.28 |
| 45.0 | 4.61 | 4.56 | 4.50 | 4.44 | 4.44 | 4.39 | 4.39 | 4.33 | 4.33 |
| 90.0 | 4.50 | 4.50 | 4.44 | 4.44 | 4.39 | 4.33 | 4.33 | 4.33 | 4.33 |
| 135.0 | 4.50 | 4.44 | 4.39 | 4.39 | 4.33 | 4.33 | 4.33 | 4.28 | 4.22 |
| 180.0 | 4.44 | 4.39 | 4.39 | 4.33 | 4.33 | 4.28 | 4.28 | 4.28 | 4.22 |
| 225.0 | 4.44 | 4.39 | 4.33 | 4.33 | 4.33 | 4.28 | 4.28 | 4.28 | 4.22 |
| 270.0 | 4.50 | 4.44 | 4.39 | 4.39 | 4.33 | 4.33 | 4.28 | 4.28 | 4.28 |
| 315.0 | 4.50 | 4.44 | 4.44 | 4.39 | 4.33 | 4.28 | 4.28 | 4.28 | 4.22 |
| 360.0 | 4.61 | 4.56 | 4.44 | 4.44 | 4.44 | 4.39 | 4.33 | 4.28 | 4.28 |

| C/γ(°) | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0 | 80.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 4.28 | 4.28 | 4.22 | 4.22 | 4.22 | 4.22 | 4.22 | 4.16 | 4.16 |
| 45.0 | 4.28 | 4.28 | 4.28 | 4.28 | 4.22 | 4.22 | 4.22 | 4.16 | 4.16 |
| 90.0 | 4.28 | 4.28 | 4.28 | 4.22 | 4.22 | 4.22 | 4.22 | 4.22 | 4.22 |
| 135.0 | 4.28 | 4.22 | 4.22 | 4.22 | 4.22 | 4.22 | 4.16 | 4.16 | 4.16 |
| 180.0 | 4.22 | 4.22 | 4.16 | 4.16 | 4.16 | 4.16 | 4.16 | 4.16 | 4.11 |
| 225.0 | 4.22 | 4.22 | 4.22 | 4.16 | 4.16 | 4.16 | 4.16 | 4.11 | 4.16 |
| 270.0 | 4.28 | 4.28 | 4.22 | 4.22 | 4.16 | 4.22 | 4.16 | 4.16 | 4.16 |
| 315.0 | 4.28 | 4.22 | 4.22 | 4.22 | 4.16 | 4.16 | 4.16 | 4.16 | 4.16 |
| 360.0 | 4.28 | 4.28 | 4.22 | 4.22 | 4.22 | 4.22 | 4.22 | 4.16 | 4.16 |

| C/γ(°) | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 4.16 | 4.16 | 4.11 | 4.16 | 4.11 | 4.11 | 4.11 | 4.05 | 4.11 |
| 45.0 | 4.16 | 4.11 | 4.16 | 4.16 | 4.16 | 4.11 | 4.11 | 4.11 | 4.05 |
| 90.0 | 4.16 | 4.16 | 4.16 | 4.16 | 4.11 | 4.11 | 4.11 | 4.05 | 4.05 |
| 135.0 | 4.16 | 4.16 | 4.11 | 4.11 | 4.11 | 4.11 | 4.05 | 4.11 | 4.05 |
| 180.0 | 4.11 | 4.11 | 4.11 | 4.11 | 4.11 | 4.05 | 4.05 | 4.05 | 4.05 |
| 225.0 | 4.16 | 4.11 | 4.11 | 4.11 | 4.11 | 4.11 | 4.05 | 4.11 | 4.11 |
| 270.0 | 4.16 | 4.16 | 4.16 | 4.16 | 4.11 | 4.11 | 4.11 | 4.11 | 4.11 |
| 315.0 | 4.11 | 4.11 | 4.16 | 4.11 | 4.11 | 4.11 | 4.11 | 4.11 | 4.11 |
| 360.0 | 4.16 | 4.16 | 4.11 | 4.16 | 4.11 | 4.11 | 4.11 | 4.05 | 4.11 |

Intensity data(cd)



| C/γ(°) | 90.0 |
|---|---|
| 0.0 | 4.11 |
| 45.0 | 4.05 |
| 90.0 | 4.05 |
| 135.0 | 4.05 |
| 180.0 | 4.05 |
| 225.0 | 4.11 |
| 270.0 | 4.11 |
| 315.0 | 4.11 |
| 360.0 | 4.11 |