NATA LIGHTING CO.,LTD.
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Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

## Nata

Client:
LumCAT: 2-2181-M
Luminaire: BJB 47.360.1010

| | |
|---|---|
| Report No: 200407-B004 | Voltage(V): 33.1600 |
| Test No: 200407-C004 | Current(A): 0.3490 |
| LampCAT: LUMINUS CXM-14-AC40 | Power (W): 11.5730 |
| Lamp flux(lm): 1578.8 | PF: 0.0000 |
| Number of Lamps: 1 | Ballast type: DC |
| Length(mm): 0 | Width(mm): 0 |
| Phm Type: C | Height(mm): 0 |

## Photometric Results

Lumens(lm): 1203.99, Efficiency(%): 76.26% , Luminous Efficacy(lm/W): 104.03
Central intensity(cd): 5305.782, Maximum intensity(cd): 5305.782
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=25.2
[C90/270]Total=25.2
Field angle(10%Imax): [C0/180]Total=47.8
[C90/270]Total=47.8
Maximum s/h(1/2): C0_180=0.43 C90_270=0.43
Maximum s/h(1/4): C0_180=0.44 C90_270=0.44
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 76.26%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.027%

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 0.0 | 5305.781 | 0.000 | 0 | .000% | .000% |
| 1.0 | 5281.805 | 5.066 | 5.066 | .321% | .421% |
| 2.0 | 5212.266 | 15.062 | 20.128 | .954% | 1.672% |
| 3.0 | 5095.406 | 24.653 | 44.781 | 1.561% | 3.719% |
| 4.0 | 4950.070 | 33.625 | 78.406 | 2.130% | 6.512% |
| 5.0 | 4771.477 | 41.822 | 120.228 | 2.649% | 9.986% |
| 6.0 | 4549.992 | 48.987 | 169.214 | 3.103% | 14.054% |
| 7.0 | 4296.094 | 54.908 | 224.122 | 3.478% | 18.615% |
| 8.0 | 4046.344 | 59.705 | 283.827 | 3.782% | 23.574% |
| 9.0 | 3749.906 | 63.184 | 347.012 | 4.002% | 28.822% |
| 10.0 | 3427.805 | 64.956 | 411.967 | 4.114% | 34.217% |
| 11.0 | 3140.859 | 65.634 | 477.602 | 4.157% | 39.668% |
| 12.0 | 2851.594 | 65.506 | 543.108 | 4.149% | 45.109% |
| 13.0 | 2535.047 | 63.926 | 607.034 | 4.049% | 50.418% |
| 14.0 | 2266.313 | 61.457 | 668.491 | 3.893% | 55.523% |
| 15.0 | 2015.156 | 58.778 | 727.268 | 3.723% | 60.405% |
| 16.0 | 1766.813 | 55.416 | 782.685 | 3.510% | 65.008% |
| 17.0 | 1559.461 | 51.799 | 834.484 | 3.281% | 69.310% |
| 18.0 | 1351.104 | 47.989 | 882.473 | 3.040% | 73.296% |
| 19.0 | 1151.782 | 43.545 | 926.018 | 2.758% | 76.912% |
| 20.0 | 1032.441 | 39.977 | 965.995 | 2.532% | 80.233% |
| 21.0 | 887.295 | 36.863 | 1002.858 | 2.335% | 83.295% |
| 22.0 | 753.356 | 32.970 | 1035.828 | 2.088% | 86.033% |
| 23.0 | 633.959 | 29.110 | 1064.937 | 1.844% | 88.451% |
| 24.0 | 516.368 | 25.150 | 1090.087 | 1.593% | 90.540% |
| 25.0 | 396.070 | 20.747 | 1110.834 | 1.314% | 92.263% |
| 26.0 | 309.741 | 16.661 | 1127.495 | 1.055% | 93.647% |
| 27.0 | 220.915 | 12.983 | 1140.478 | .822% | 94.725% |
| 28.0 | 142.235 | 9.194 | 1149.672 | .582% | 95.488% |
| 29.0 | 73.976 | 5.657 | 1155.329 | .358% | 95.958% |
| 30.0 | 35.409 | 2.953 | 1158.282 | .187% | 96.204% |
| 31.0 | 14.850 | 1.399 | 1159.681 | .089% | 96.320% |
| 32.0 | 10.948 | 0.739 | 1160.42 | .047% | 96.381% |
| 33.0 | 10.238 | 0.624 | 1161.044 | .040% | 96.433% |
| 34.0 | 9.738 | 0.605 | 1161.648 | .038% | 96.483% |
| 35.0 | 9.380 | 0.594 | 1162.242 | .038% | 96.533% |
| 36.0 | 9.098 | 0.588 | 1162.83 | .037% | 96.581% |
| 37.0 | 8.859 | 0.586 | 1163.416 | .037% | 96.630% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 38.0 | 8.677 | 0.585 | 1164.001 | .037% | 96.679% |
| 39.0 | 8.508 | 0.587 | 1164.588 | .037% | 96.727% |
| 40.0 | 8.374 | 0.589 | 1165.177 | .037% | 96.776% |
| 41.0 | 8.297 | 0.594 | 1165.77 | .038% | 96.826% |
| 42.0 | 8.234 | 0.601 | 1166.371 | .038% | 96.875% |
| 43.0 | 8.220 | 0.609 | 1166.98 | .039% | 96.926% |
| 44.0 | 8.234 | 0.621 | 1167.601 | .039% | 96.978% |
| 45.0 | 8.318 | 0.636 | 1168.238 | .040% | 97.030% |
| 46.0 | 8.395 | 0.654 | 1168.891 | .041% | 97.085% |
| 47.0 | 8.494 | 0.672 | 1169.563 | .043% | 97.141% |
| 48.0 | 8.578 | 0.690 | 1170.253 | .044% | 97.198% |
| 49.0 | 8.691 | 0.709 | 1170.962 | .045% | 97.257% |
| 50.0 | 8.817 | 0.730 | 1171.692 | .046% | 97.317% |
| 51.0 | 8.951 | 0.752 | 1172.444 | .048% | 97.380% |
| 52.0 | 9.091 | 0.774 | 1173.218 | .049% | 97.444% |
| 53.0 | 9.267 | 0.799 | 1174.017 | .051% | 97.510% |
| 54.0 | 9.387 | 0.822 | 1174.839 | .052% | 97.579% |
| 55.0 | 9.548 | 0.845 | 1175.684 | .054% | 97.649% |
| 56.0 | 9.682 | 0.869 | 1176.553 | .055% | 97.721% |
| 57.0 | 9.788 | 0.890 | 1177.443 | .056% | 97.795% |
| 58.0 | 9.907 | 0.911 | 1178.354 | .058% | 97.871% |
| 59.0 | 10.013 | 0.931 | 1179.285 | .059% | 97.948% |
| 60.0 | 10.090 | 0.950 | 1180.235 | .060% | 98.027% |
| 61.0 | 10.181 | 0.967 | 1181.202 | .061% | 98.107% |
| 62.0 | 10.259 | 0.985 | 1182.187 | .062% | 98.189% |
| 63.0 | 10.266 | 0.998 | 1183.185 | .063% | 98.272% |
| 64.0 | 10.209 | 1.005 | 1184.19 | .064% | 98.355% |
| 65.0 | 10.055 | 1.003 | 1185.193 | .064% | 98.439% |
| 66.0 | 9.900 | 0.996 | 1186.189 | .063% | 98.521% |
| 67.0 | 9.717 | 0.986 | 1187.175 | .062% | 98.603% |
| 68.0 | 9.541 | 0.976 | 1188.151 | .062% | 98.684% |
| 69.0 | 9.330 | 0.963 | 1189.113 | .061% | 98.764% |
| 70.0 | 9.148 | 0.949 | 1190.062 | .060% | 98.843% |
| 71.0 | 8.880 | 0.932 | 1190.994 | .059% | 98.921% |
| 72.0 | 8.529 | 0.905 | 1191.899 | .057% | 98.996% |
| 73.0 | 8.093 | 0.869 | 1192.769 | .055% | 99.068% |
| 74.0 | 7.580 | 0.824 | 1193.592 | .052% | 99.136% |
| 75.0 | 7.284 | 0.785 | 1194.378 | .050% | 99.202% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 76.0 | 7.003 | 0.758 | 1195.136 | .048% | 99.265% |
| 77.0 | 6.820 | 0.737 | 1195.873 | .047% | 99.326% |
| 78.0 | 6.560 | 0.716 | 1196.59 | .045% | 99.385% |
| 79.0 | 6.314 | 0.692 | 1197.281 | .044% | 99.443% |
| 80.0 | 6.138 | 0.671 | 1197.953 | .043% | 99.499% |
| 81.0 | 5.963 | 0.654 | 1198.607 | .041% | 99.553% |
| 82.0 | 5.815 | 0.639 | 1199.246 | .040% | 99.606% |
| 83.0 | 5.695 | 0.626 | 1199.871 | .040% | 99.658% |
| 84.0 | 5.611 | 0.616 | 1200.487 | .039% | 99.709% |
| 85.0 | 5.576 | 0.611 | 1201.098 | .039% | 99.760% |
| 86.0 | 5.527 | 0.607 | 1201.705 | .038% | 99.810% |
| 87.0 | 5.344 | 0.595 | 1202.3 | .038% | 99.860% |
| 88.0 | 5.168 | 0.576 | 1202.875 | .036% | 99.907% |
| 89.0 | 5.063 | 0.561 | 1203.436 | .036% | 99.954% |
| 90.0 | 5.041 | 0.554 | 1203.99 | .035% | 100.000% |

## Zonal flux distribution table



ZONAL LUMEN SUMMARY

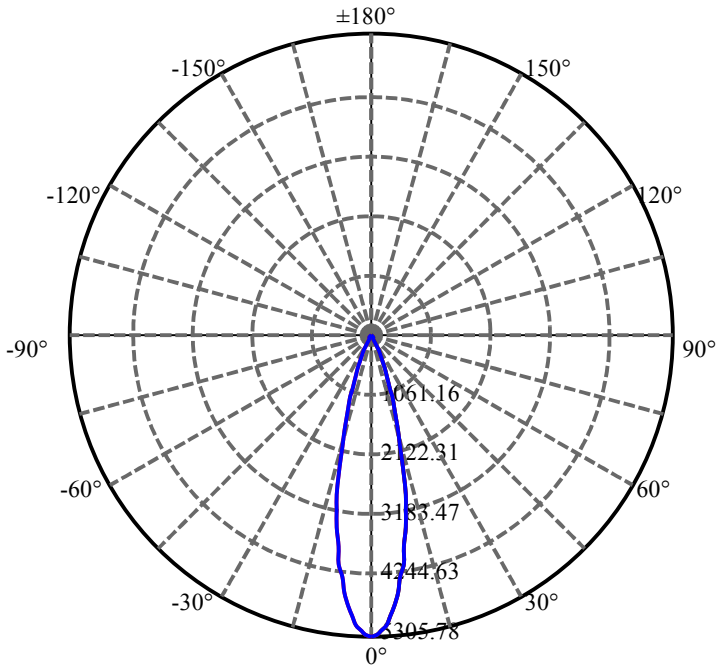
| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-30 | 1158.28 | 73.37% | 96.20% |
| 0-40 | 1165.18 | 73.80% | 96.78% |
| 0-60 | 1180.23 | 74.76% | 98.03% |
| 0-90 | 1203.44 | 76.23% | 99.95% |
| 0-120 | 1203.44 | 76.23% | 99.95% |
| 0-180 | 1203.99 | 76.26% | 100.00% |
| 60-90 | 24.15 | 1.53% | 2.01% |
| 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% |
| 0-19.93 | 963.19 | 61.01% | 80.00% |

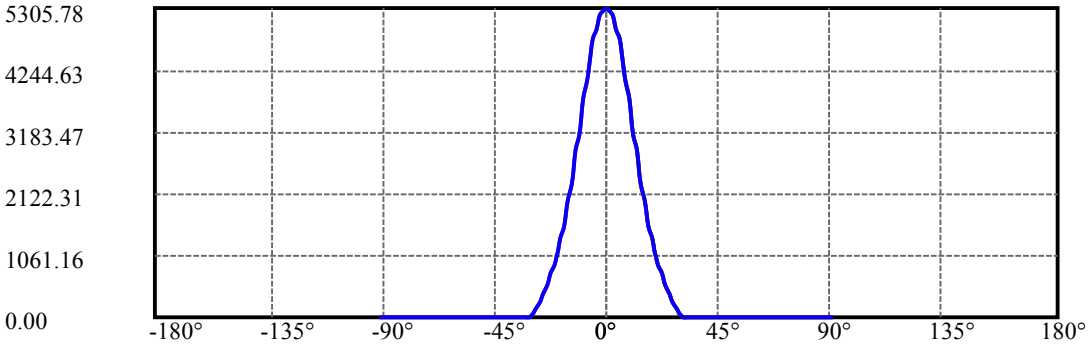
ZONAL LUMEN SUMMARY

| | |
|---|---|
| 0-10 | 411.97 |
| 10-20 | 554.03 |
| 20-30 | 192.29 |
| 30-40 | 6.89 |
| 40-50 | 6.52 |
| 50-60 | 8.54 |
| 60-70 | 9.83 |
| 70-80 | 7.89 |
| 80-90 | 5.48 |
| 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:

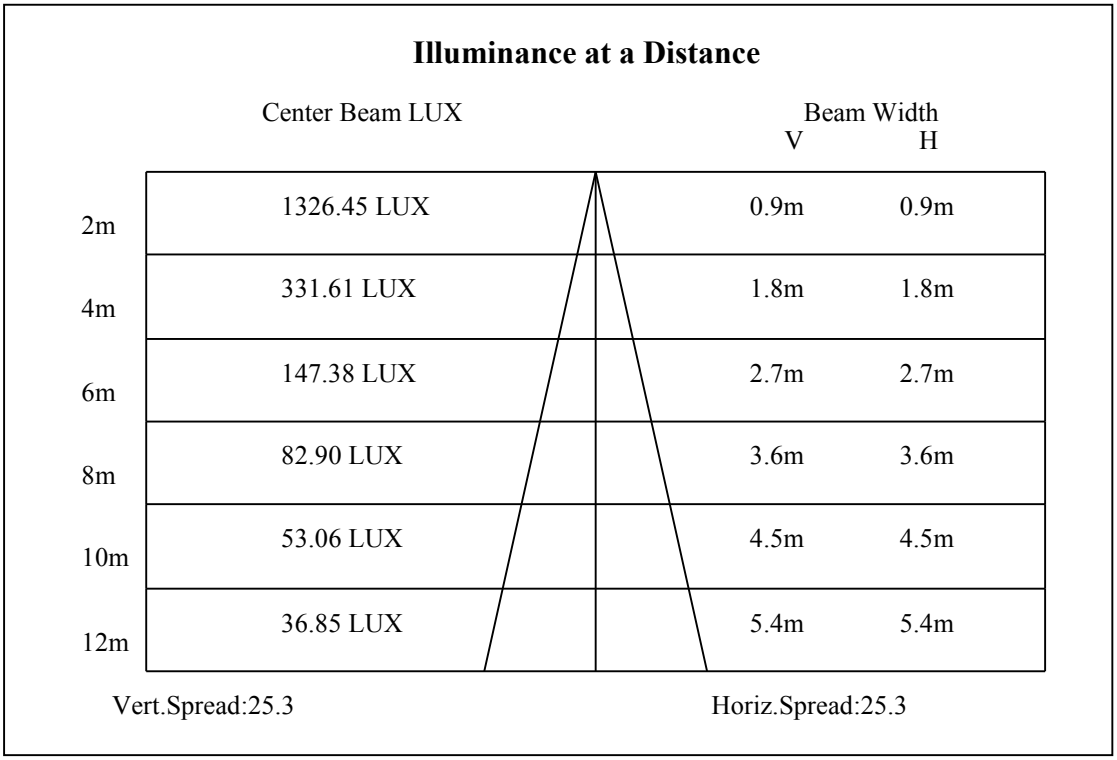
C90/C270:

Field angle(10%Imax):C0/180Left:23.9 Right:23.9
:C90/270Left:23.9 Right:23.9

Beam Angle(50%Imax):C0/180Left:12.6 Right:12.6
:C90/270Left:12.6 Right:12.6

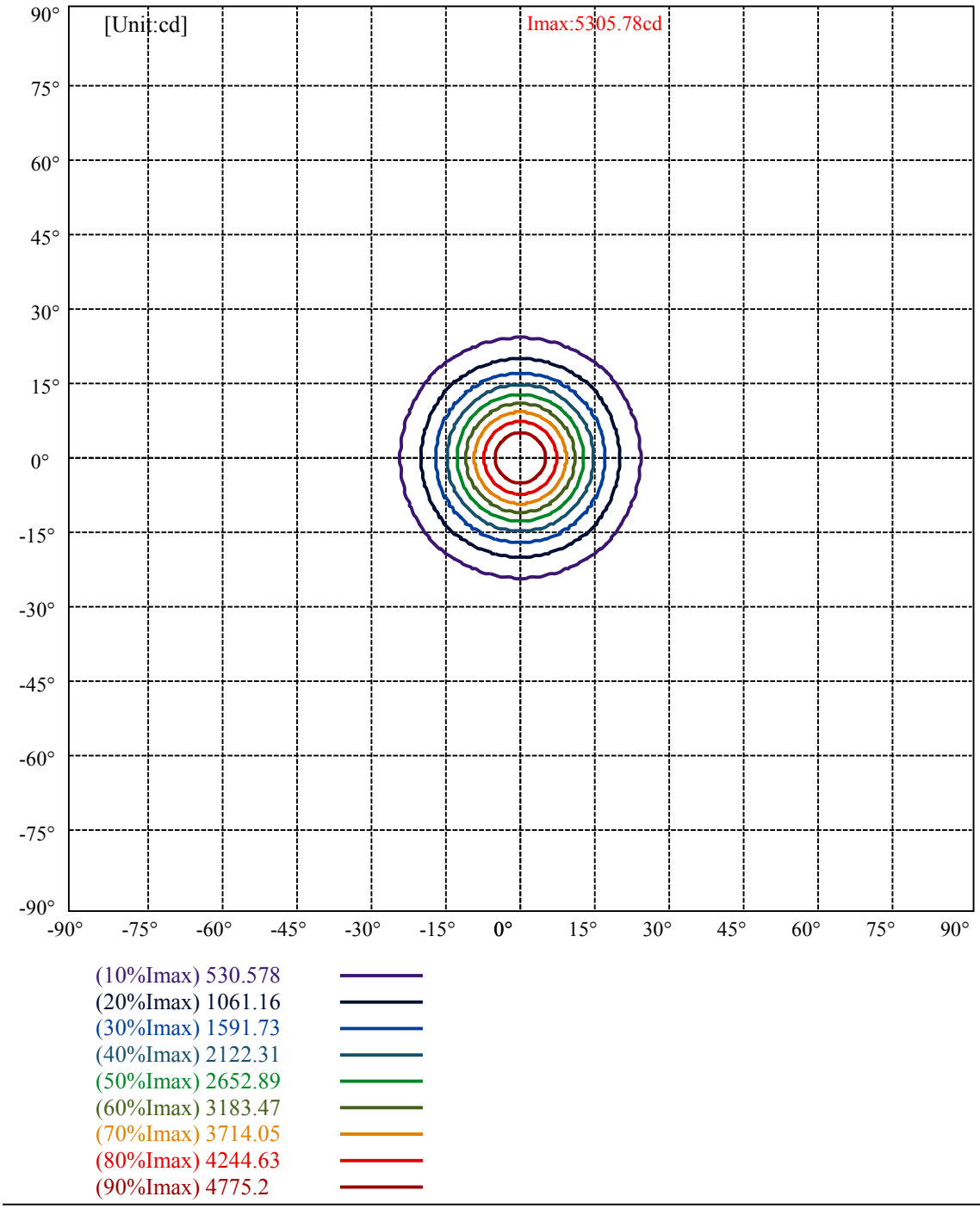
Lux distance Curve





ISO-Intensity(V-H)






(10%Imax) 530.578
(20%Imax) 1061.16
(30%Imax) 1591.73
(40%Imax) 2122.31
(50%Imax) 2652.89
(60%Imax) 3183.47
(70%Imax) 3714.05
(80%Imax) 4244.63
(90%Imax) 4775.2

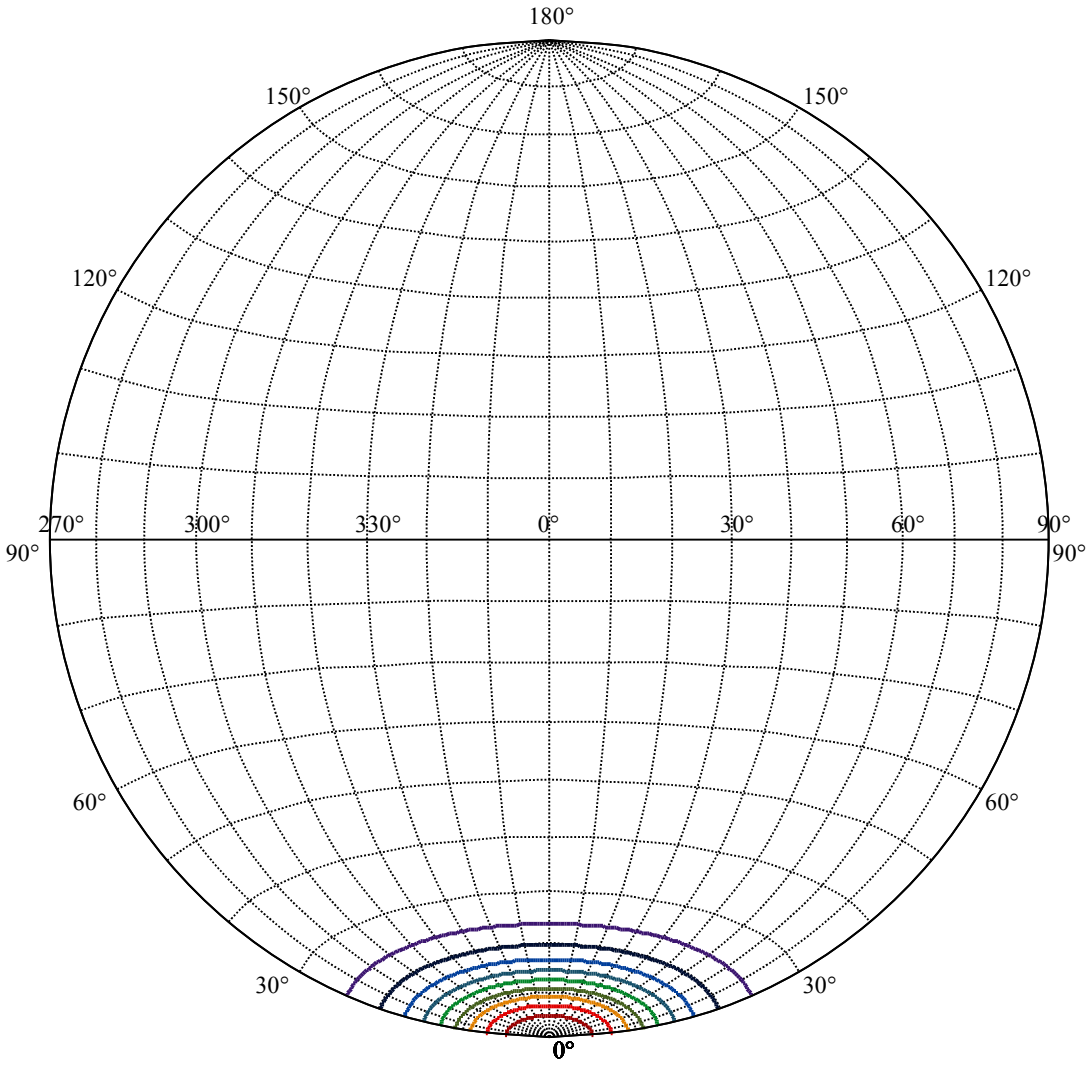
Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/4/7
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web






House [Unit:cd] Road

Imax:5305.78

(10%Imax) 530.578
(20%Imax) 1061.16
(30%Imax) 1591.73
(40%Imax) 2122.31
(50%Imax) 2652.89
(60%Imax) 3183.47
(70%Imax) 3714.05
(80%Imax) 4244.63
(90%Imax) 4775.2

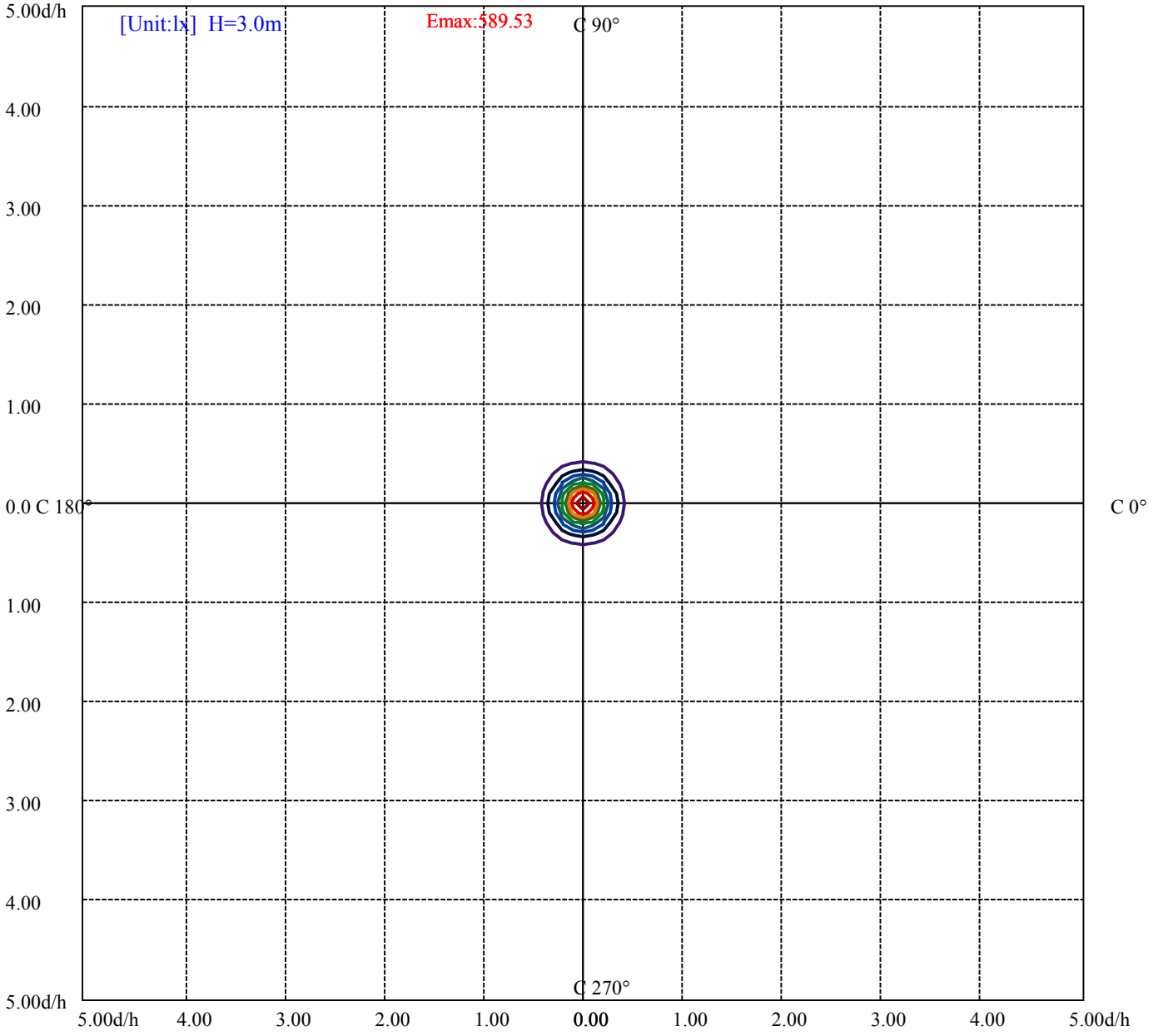
Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/4/7
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

## ISO illuminance diagram

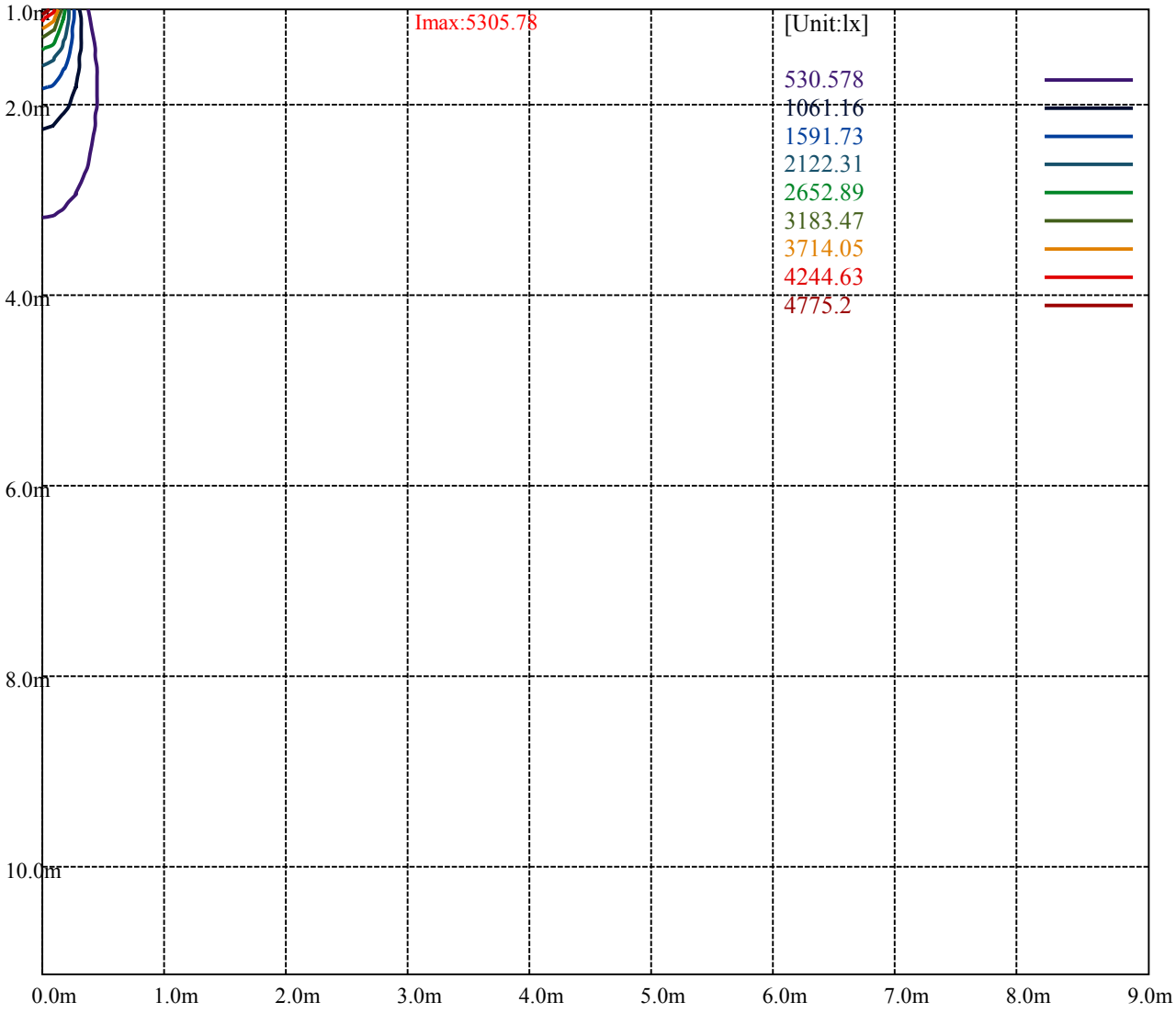





| | | |
|---|---|---|
| Equipment: GMS1980 | Date: 2020/4/7 | Operator: NT07 |
| Temperature(°C): 25.0 | Humidity(%): 65.0% | Distance(m): 7.50 |

## Space ISO Lux diagram






Equipment: GMS1980
Temperature(°C): 25.0

Date: 2020/4/7
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

## Luminance Limitting Curve(no luminous side)



Luminance Table

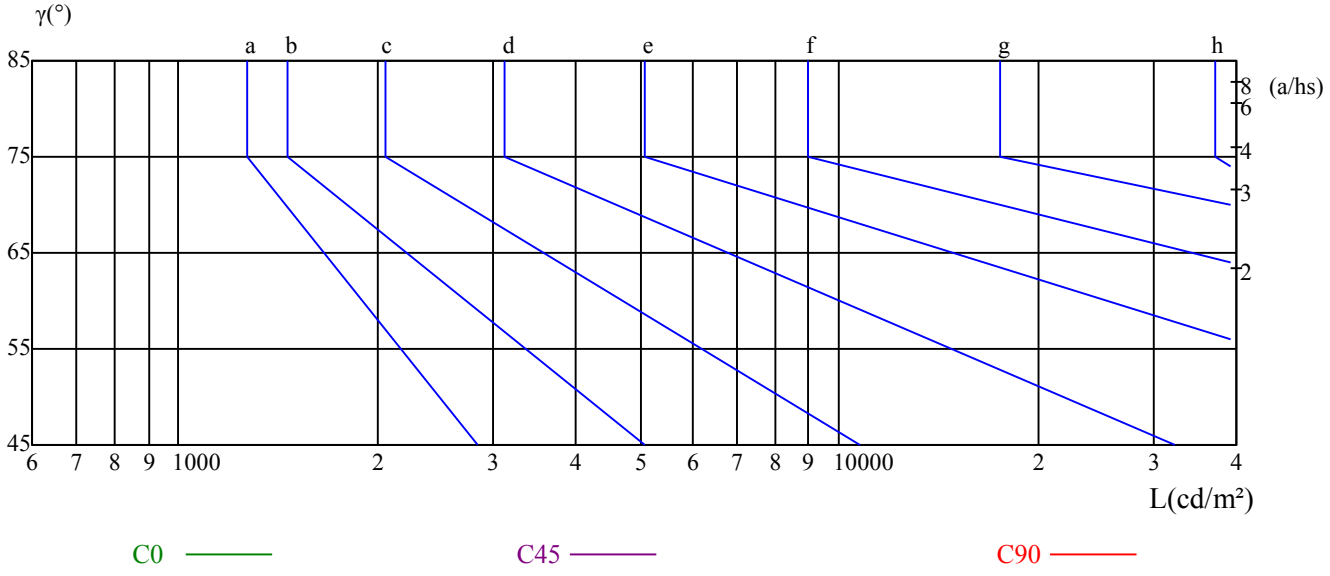
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|---|---|---|---|---|---|---|---|---|---|
| C0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| 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

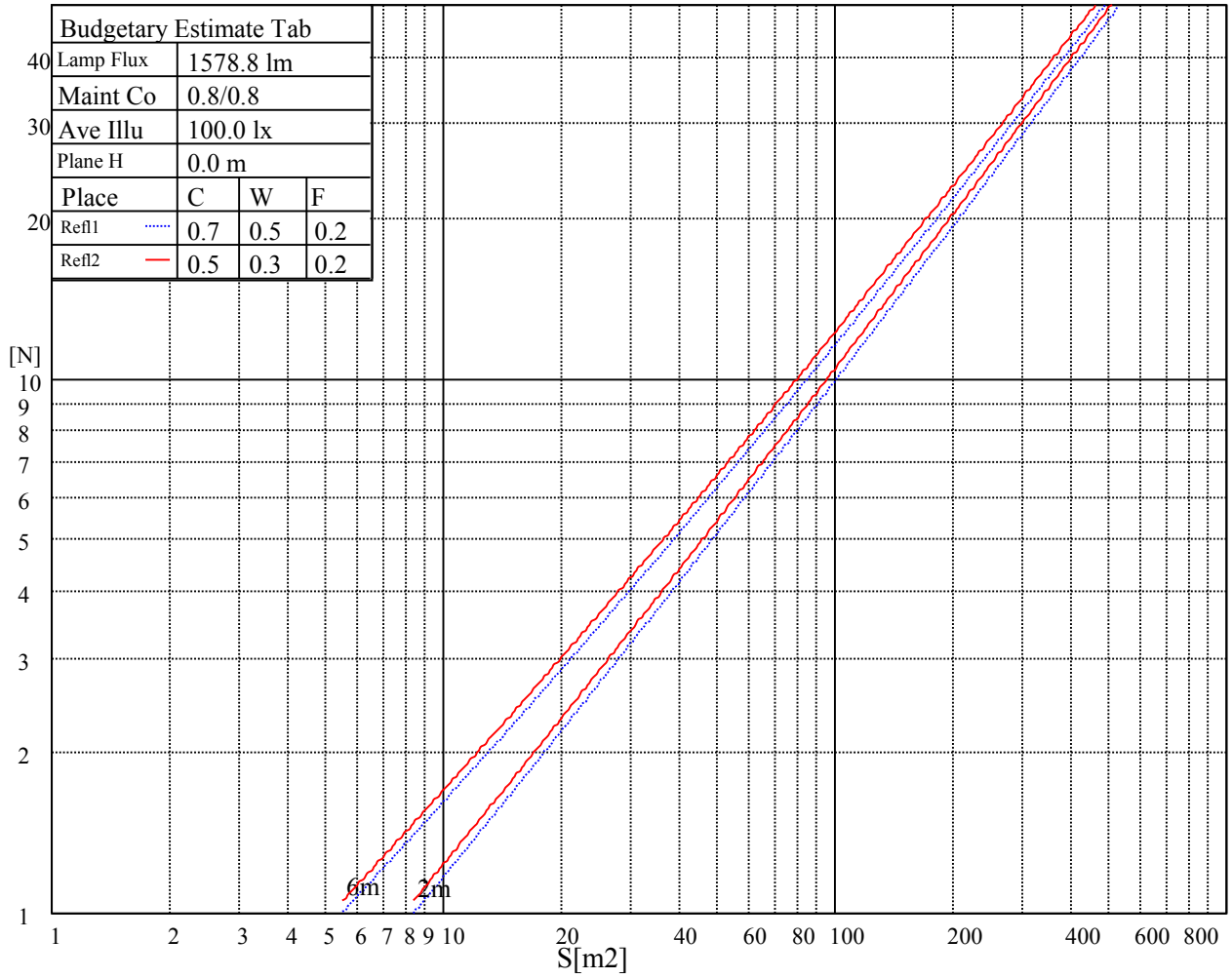
| Glare | Quality | Service Values Illuminance(lx) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1.15 | A | 2000 | 1000 | 500 | <=300 | | | | |
| 1.5 | B | | 2000 | 1000 | 500 | <=300 | | | |
| 1.85 | C | | | 2000 | 1000 | 500 | <=300 | | |
| 2.2 | D | | | | 2000 | 1000 | 500 | <=300 |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

Luminance Limitting Curve



## Budgetary Estimate Table






Equipment: GMS1980 Date: 2020/4/7 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

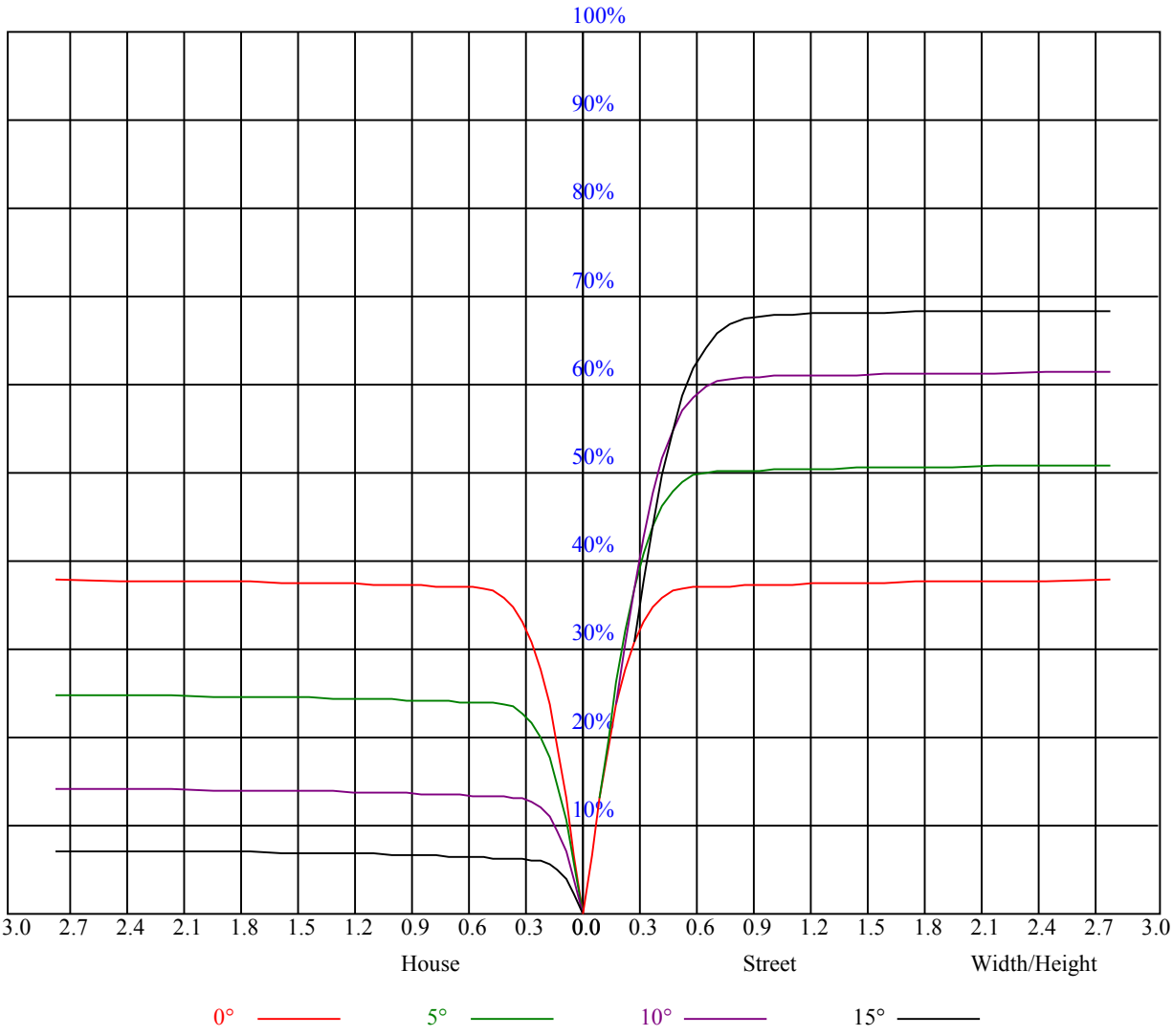
Utilization factor table for indoor luminaire



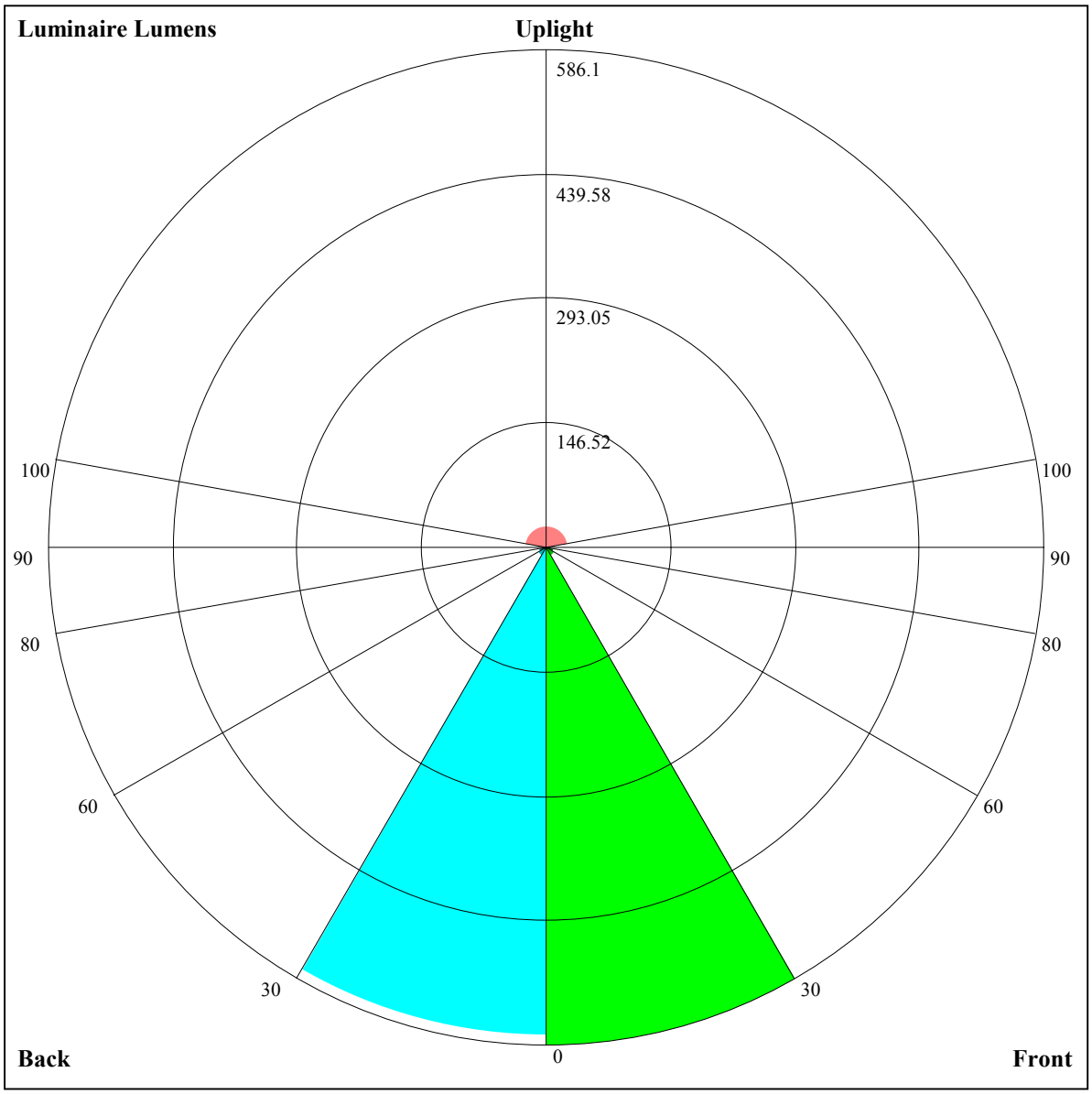
| RHOCC | 80 | | | 70 | | | 50 | | | 30 | | | 10 | | | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RHOW | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| RCR | COEFFCIENTS OF UTILIZATION RHOFC=20 CU | | | | | | | | | | | | | | | |
| 0 | 0.91 | 0.91 | 0.91 | 0.89 | 0.89 | 0.89 | 0.85 | 0.85 | 0.85 | 0.81 | 0.81 | 0.81 | 0.78 | 0.78 | 0.78 | 0.76 |
| 1 | 0.86 | 0.84 | 0.83 | 0.84 | 0.83 | 0.81 | 0.81 | 0.80 | 0.79 | 0.78 | 0.77 | 0.77 | 0.76 | 0.75 | 0.74 | 0.73 |
| 2 | 0.82 | 0.79 | 0.77 | 0.80 | 0.78 | 0.76 | 0.78 | 0.76 | 0.75 | 0.76 | 0.74 | 0.73 | 0.74 | 0.73 | 0.72 | 0.70 |
| 3 | 0.78 | 0.75 | 0.73 | 0.77 | 0.74 | 0.72 | 0.75 | 0.73 | 0.71 | 0.73 | 0.72 | 0.70 | 0.72 | 0.70 | 0.69 | 0.68 |
| 4 | 0.75 | 0.72 | 0.69 | 0.74 | 0.71 | 0.69 | 0.73 | 0.70 | 0.68 | 0.71 | 0.69 | 0.67 | 0.70 | 0.68 | 0.67 | 0.66 |
| 5 | 0.72 | 0.69 | 0.67 | 0.72 | 0.69 | 0.66 | 0.70 | 0.68 | 0.66 | 0.69 | 0.67 | 0.65 | 0.68 | 0.66 | 0.65 | 0.64 |
| 6 | 0.70 | 0.66 | 0.64 | 0.69 | 0.66 | 0.64 | 0.68 | 0.66 | 0.64 | 0.67 | 0.65 | 0.63 | 0.66 | 0.64 | 0.63 | 0.62 |
| 7 | 0.68 | 0.64 | 0.62 | 0.67 | 0.64 | 0.62 | 0.66 | 0.64 | 0.62 | 0.65 | 0.63 | 0.61 | 0.65 | 0.63 | 0.61 | 0.60 |
| 8 | 0.65 | 0.62 | 0.60 | 0.65 | 0.62 | 0.60 | 0.64 | 0.62 | 0.60 | 0.64 | 0.61 | 0.60 | 0.63 | 0.61 | 0.59 | 0.59 |
| 9 | 0.64 | 0.60 | 0.58 | 0.63 | 0.60 | 0.58 | 0.63 | 0.60 | 0.58 | 0.62 | 0.60 | 0.58 | 0.62 | 0.59 | 0.58 | 0.57 |
| 10 | 0.62 | 0.59 | 0.57 | 0.62 | 0.59 | 0.57 | 0.61 | 0.58 | 0.57 | 0.61 | 0.58 | 0.56 | 0.60 | 0.58 | 0.56 | 0.56 |

## Coefficient Utilization Curve






| | | |
|---|---|---|
| Equipment: GMS1980 | Date: 2020/4/7 | Operator: NT07 |
| Temperature(°C): 25.0 | Humidity(%): 65.0% | Distance(m): 7.50 |




Luminaire Lumens:
FL=586.1,FM=10.89,FH=8.38,FVH=2.99
BL=574.75,BM=10.97,BH=8.6,BVH=3.01
UL=5.5,UH=26.18

BUG Rating:B2-U2-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 | 5302.13 | 5295.38 | 5235.75 | 5131.69 | 5001.75 | 4818.38 | 4600.13 | 4381.88 | 4141.69 |
| 45.0 | 5315.63 | 5270.06 | 5172.75 | 5054.06 | 4884.75 | 4682.81 | 4469.06 | 4197.94 | 3940.31 |
| 90.0 | 5289.19 | 5211.56 | 5100.75 | 4920.19 | 4744.69 | 4541.06 | 4246.88 | 3985.31 | 3710.25 |
| 135.0 | 5316.19 | 5271.19 | 5175.56 | 5038.88 | 4888.13 | 4680.00 | 4438.69 | 4195.13 | 3935.81 |
| 180.0 | 5302.13 | 5257.13 | 5178.38 | 5051.25 | 4885.88 | 4706.44 | 4494.94 | 4192.31 | 3933.00 |
| 225.0 | 5315.63 | 5307.75 | 5256.56 | 5146.31 | 5021.44 | 4860.56 | 4645.69 | 4402.69 | 4161.94 |
| 270.0 | 5289.19 | 5328.00 | 5313.38 | 5252.06 | 5142.38 | 5007.38 | 4820.63 | 4596.19 | 4372.31 |
| 315.0 | 5316.19 | 5313.38 | 5265.00 | 5168.81 | 5031.56 | 4875.19 | 4683.94 | 4417.31 | 4175.44 |
| 360.0 | 5302.13 | 5295.38 | 5235.75 | 5131.69 | 5001.75 | 4818.38 | 4600.13 | 4381.88 | 4141.69 |

| C/γ(°) | 9.0 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 3816.56 | 3538.69 | 3255.75 | 2940.19 | 2634.75 | 2372.63 | 2094.75 | 1835.44 | 1626.75 |
| 45.0 | 3637.13 | 3314.81 | 3024.56 | 2745.56 | 2415.38 | 2164.50 | 1928.81 | 1662.75 | 1471.50 |
| 90.0 | 3389.63 | 3065.63 | 2784.38 | 2483.44 | 2200.50 | 1962.00 | 1716.75 | 1519.88 | 1320.19 |
| 135.0 | 3593.81 | 3305.25 | 3013.88 | 2731.50 | 2399.06 | 2148.19 | 1913.63 | 1652.63 | 1464.75 |
| 180.0 | 3655.69 | 3296.81 | 3009.38 | 2732.06 | 2433.38 | 2152.13 | 1918.69 | 1683.00 | 1491.75 |
| 225.0 | 3866.63 | 3548.25 | 3259.69 | 2937.38 | 2658.94 | 2361.94 | 2085.75 | 1856.81 | 1644.75 |
| 270.0 | 4126.50 | 3792.94 | 3510.00 | 3260.25 | 2868.19 | 2592.56 | 2331.56 | 2052.56 | 1797.19 |
| 315.0 | 3913.31 | 3560.06 | 3269.25 | 2982.38 | 2670.19 | 2376.56 | 2131.31 | 1871.44 | 1658.81 |
| 360.0 | 3816.56 | 3538.69 | 3255.75 | 2940.19 | 2634.75 | 2372.63 | 2094.75 | 1835.44 | 1626.75 |

| C/γ(°) | 18.0 | 19.0 | 20.0 | 21.0 | 22.0 | 23.0 | 24.0 | 25.0 | 26.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 1415.81 | 1249.88 | 1082.81 | 930.38 | 806.06 | 675.56 | 548.44 | 440.44 | 340.31 |
| 45.0 | 1287.56 | 1115.44 | 963.00 | 833.63 | 696.94 | 578.25 | 458.44 | 347.63 | 289.69 |
| 90.0 | 1119.21 | 996.24 | 867.04 | 733.05 | 602.61 | 495.06 | 382.16 | 280.52 | 200.31 |
| 135.0 | 1260.56 | 1113.19 | 963.00 | 829.69 | 693.00 | 563.06 | 455.06 | 343.13 | 286.88 |
| 180.0 | 1294.88 | 1118.36 | 981.17 | 839.08 | 708.86 | 593.61 | 484.59 | 357.58 | 267.19 |
| 225.0 | 1390.50 | 1112.63 | 1094.91 | 926.89 | 803.93 | 686.19 | 570.04 | 432.79 | 334.35 |
| 270.0 | 1594.13 | 1388.81 | 1206.00 | 1058.63 | 909.56 | 789.19 | 657.00 | 529.88 | 421.88 |
| 315.0 | 1446.19 | 1119.71 | 1101.60 | 947.03 | 805.89 | 690.75 | 575.21 | 436.61 | 337.33 |
| 360.0 | 1415.81 | 1249.88 | 1082.81 | 930.38 | 806.06 | 675.56 | 548.44 | 440.44 | 340.31 |

| C/γ(°) | 27.0 | 28.0 | 29.0 | 30.0 | 31.0 | 32.0 | 33.0 | 34.0 | 35.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 292.50 | 150.75 | 90.62 | 43.65 | 15.86 | 12.15 | 11.53 | 10.91 | 10.58 |
| 45.0 | 170.04 | 101.03 | 52.48 | 20.25 | 11.08 | 10.58 | 10.18 | 9.73 | 9.45 |
| 90.0 | 133.88 | 64.69 | 25.99 | 11.48 | 9.51 | 8.89 | 8.38 | 7.99 | 7.65 |
| 135.0 | 167.57 | 97.65 | 48.49 | 18.90 | 10.86 | 10.35 | 9.96 | 9.62 | 9.34 |
| 180.0 | 188.33 | 113.68 | 54.68 | 21.54 | 12.54 | 11.87 | 11.36 | 10.91 | 10.63 |
| 225.0 | 245.81 | 159.81 | 90.17 | 44.10 | 15.24 | 11.48 | 10.91 | 10.41 | 10.01 |
| 270.0 | 320.63 | 287.44 | 138.26 | 79.14 | 27.17 | 11.70 | 9.56 | 8.83 | 8.21 |
| 315.0 | 248.57 | 162.84 | 91.13 | 44.21 | 16.54 | 10.58 | 10.01 | 9.51 | 9.17 |
| 360.0 | 292.50 | 150.75 | 90.62 | 43.65 | 15.86 | 12.15 | 11.53 | 10.91 | 10.58 |

| C/γ(°) | 36.0 | 37.0 | 38.0 | 39.0 | 40.0 | 41.0 | 42.0 | 43.0 | 44.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 10.29 | 10.01 | 9.84 | 9.73 | 9.56 | 9.56 | 9.51 | 9.56 | 9.79 |
| 45.0 | 9.23 | 9.06 | 8.89 | 8.72 | 8.61 | 8.55 | 8.44 | 8.38 | 8.33 |
| 90.0 | 7.43 | 7.20 | 7.03 | 6.86 | 6.75 | 6.64 | 6.58 | 6.53 | 6.53 |
| 135.0 | 9.17 | 9.00 | 8.83 | 8.72 | 8.61 | 8.44 | 8.38 | 8.33 | 8.27 |
| 180.0 | 10.29 | 10.07 | 9.96 | 9.79 | 9.73 | 9.73 | 9.84 | 10.18 | 10.41 |
| 225.0 | 9.68 | 9.39 | 9.23 | 9.00 | 8.83 | 8.78 | 8.66 | 8.55 | 8.49 |
| 270.0 | 7.82 | 7.48 | 7.20 | 6.98 | 6.75 | 6.64 | 6.53 | 6.41 | 6.30 |
| 315.0 | 8.89 | 8.66 | 8.44 | 8.27 | 8.16 | 8.04 | 7.93 | 7.82 | 7.76 |
| 360.0 | 10.29 | 10.01 | 9.84 | 9.73 | 9.56 | 9.56 | 9.51 | 9.56 | 9.79 |

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 | 10.18 | 10.63 | 11.08 | 11.48 | 12.04 | 12.49 | 12.94 | 13.56 | 14.12 |
| 45.0 | 8.33 | 8.33 | 8.27 | 8.27 | 8.27 | 8.27 | 8.33 | 8.44 | 8.55 |
| 90.0 | 6.53 | 6.47 | 6.47 | 6.41 | 6.41 | 6.41 | 6.47 | 6.41 | 6.47 |
| 135.0 | 8.21 | 8.16 | 8.16 | 8.10 | 8.04 | 7.99 | 7.93 | 7.93 | 7.88 |
| 180.0 | 10.80 | 11.19 | 11.70 | 12.09 | 12.54 | 13.16 | 13.67 | 14.12 | 14.63 |
| 225.0 | 8.49 | 8.49 | 8.44 | 8.44 | 8.49 | 8.55 | 8.61 | 8.72 | 8.89 |
| 270.0 | 6.30 | 6.19 | 6.19 | 6.19 | 6.19 | 6.13 | 6.13 | 6.08 | 6.13 |
| 315.0 | 7.71 | 7.71 | 7.65 | 7.65 | 7.54 | 7.54 | 7.54 | 7.48 | 7.48 |
| 360.0 | 10.18 | 10.63 | 11.08 | 11.48 | 12.04 | 12.49 | 12.94 | 13.56 | 14.12 |

| C/γ(°) | 54.0 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 | 60.0 | 61.0 | 62.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 14.51 | 15.13 | 15.58 | 15.92 | 16.31 | 16.59 | 16.88 | 17.27 | 17.61 |
| 45.0 | 8.66 | 8.72 | 8.89 | 8.94 | 9.00 | 9.11 | 9.17 | 9.11 | 9.11 |
| 90.0 | 6.41 | 6.47 | 6.47 | 6.47 | 6.53 | 6.53 | 6.53 | 6.58 | 6.58 |
| 135.0 | 7.82 | 7.82 | 7.82 | 7.82 | 7.76 | 7.82 | 7.76 | 7.76 | 7.71 |
| 180.0 | 15.13 | 15.53 | 15.86 | 16.20 | 16.48 | 16.76 | 16.99 | 17.21 | 17.44 |
| 225.0 | 9.00 | 9.17 | 9.34 | 9.45 | 9.56 | 9.68 | 9.79 | 9.90 | 10.01 |
| 270.0 | 6.13 | 6.13 | 6.13 | 6.13 | 6.19 | 6.19 | 6.24 | 6.24 | 6.24 |
| 315.0 | 7.43 | 7.43 | 7.37 | 7.37 | 7.43 | 7.43 | 7.37 | 7.37 | 7.37 |
| 360.0 | 14.51 | 15.13 | 15.58 | 15.92 | 16.31 | 16.59 | 16.88 | 17.27 | 17.61 |

| C/γ(°) | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 | 70.0 | 71.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 17.61 | 17.21 | 16.65 | 15.92 | 14.91 | 14.06 | 13.22 | 12.26 | 11.19 |
| 45.0 | 9.00 | 8.94 | 8.83 | 8.89 | 8.94 | 9.11 | 9.11 | 9.06 | 8.78 |
| 90.0 | 6.64 | 6.75 | 6.81 | 7.03 | 7.43 | 7.71 | 7.99 | 8.27 | 8.33 |
| 135.0 | 7.65 | 7.65 | 7.59 | 7.54 | 7.48 | 7.43 | 7.31 | 7.26 | 7.20 |
| 180.0 | 17.55 | 17.44 | 17.04 | 16.48 | 15.75 | 14.91 | 13.95 | 13.22 | 12.26 |
| 225.0 | 10.07 | 10.01 | 9.90 | 9.79 | 9.68 | 9.62 | 9.56 | 9.51 | 9.51 |
| 270.0 | 6.24 | 6.30 | 6.30 | 6.30 | 6.36 | 6.36 | 6.41 | 6.58 | 6.81 |
| 315.0 | 7.37 | 7.37 | 7.31 | 7.26 | 7.20 | 7.14 | 7.09 | 7.03 | 6.98 |
| 360.0 | 17.61 | 17.21 | 16.65 | 15.92 | 14.91 | 14.06 | 13.22 | 12.26 | 11.19 |

| C/γ(°) | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0 | 80.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 10.07 | 8.55 | 7.20 | 6.92 | 6.75 | 6.58 | 6.36 | 6.19 | 6.08 |
| 45.0 | 8.66 | 8.49 | 8.21 | 8.10 | 7.88 | 7.48 | 6.92 | 6.64 | 6.36 |
| 90.0 | 8.33 | 8.38 | 8.16 | 7.37 | 6.41 | 6.13 | 5.91 | 5.63 | 5.57 |
| 135.0 | 7.03 | 6.98 | 6.92 | 6.81 | 6.64 | 6.53 | 6.41 | 6.30 | 6.19 |
| 180.0 | 10.97 | 9.45 | 7.59 | 6.92 | 6.75 | 6.64 | 6.53 | 6.36 | 6.24 |
| 225.0 | 9.23 | 8.83 | 8.49 | 8.16 | 7.71 | 7.48 | 7.31 | 6.92 | 6.58 |
| 270.0 | 6.98 | 7.14 | 7.20 | 7.20 | 7.20 | 7.14 | 6.58 | 6.13 | 5.85 |
| 315.0 | 6.98 | 6.92 | 6.86 | 6.81 | 6.69 | 6.58 | 6.47 | 6.36 | 6.24 |
| 360.0 | 10.07 | 8.55 | 7.20 | 6.92 | 6.75 | 6.58 | 6.36 | 6.19 | 6.08 |

| C/γ(°) | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 5.96 | 5.85 | 5.74 | 5.68 | 5.68 | 5.63 | 5.40 | 5.12 | 5.06 |
| 45.0 | 6.02 | 5.85 | 5.79 | 5.74 | 5.85 | 5.79 | 5.06 | 5.01 | 4.89 |
| 90.0 | 5.51 | 5.46 | 5.40 | 5.40 | 5.34 | 5.46 | 5.18 | 5.12 | 5.01 |
| 135.0 | 6.08 | 5.91 | 5.74 | 5.68 | 5.57 | 5.46 | 5.46 | 5.29 | 5.18 |
| 180.0 | 6.08 | 5.96 | 5.85 | 5.74 | 5.68 | 5.63 | 5.51 | 5.23 | 5.12 |
| 225.0 | 6.30 | 6.02 | 5.79 | 5.63 | 5.57 | 5.46 | 5.46 | 5.23 | 4.95 |
| 270.0 | 5.68 | 5.51 | 5.46 | 5.40 | 5.34 | 5.29 | 5.29 | 5.18 | 5.12 |
| 315.0 | 6.08 | 5.96 | 5.79 | 5.63 | 5.57 | 5.51 | 5.40 | 5.18 | 5.18 |
| 360.0 | 5.96 | 5.85 | 5.74 | 5.68 | 5.68 | 5.63 | 5.40 | 5.12 | 5.06 |

Intensity data(cd)



| C/γ(°) | 90.0 |
|---|---|
| 0.0 | 5.06 |
| 45.0 | 4.89 |
| 90.0 | 5.01 |
| 135.0 | 5.18 |
| 180.0 | 5.06 |
| 225.0 | 4.89 |
| 270.0 | 5.06 |
| 315.0 | 5.18 |
| 360.0 | 5.06 |