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

LumCAT: 3-1915-E
Luminaire:92.76.323.00
Report No: NATA0100
Test No: GC2018111010
LampCAT: Philips SLM 1205 G7
Lamp flux(lm): 2840.0
Number of Lamps: 1
Length(mm): 79
Phm Type: C

Voltage(V): 36.1000
Current(A): 0.6000
Power (W): 21.6600
PF: 0.0000
Ballast type: DC
Width(mm): 79
Height(mm): 0

## Photometric Results

Lumens(lm): 2591.22
Efficiency(%): 91.24%
Lumens(lm)/Power(W): 119.84
Central intensity(cd): 19015.310
Maximum intensity(cd): 19015.310
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=14.8
[C90/270]Total=14.8
Field angle(10%Imax): [C0/180]Total=31.6
[C90/270]Total=31.6
Maximum s/h(1/2): C0_180=0.26 C90_270=0.26
Maximum s/h(1/4): C0_180=0.27 C90_270=0.27
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 91.40%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.448%

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 0.0 | 19015.313 | 4.549 | 4.549 | .160% | .176% |
| 1.0 | 18777.656 | 35.938 | 40.487 | 1.265% | 1.562% |
| 2.0 | 18132.891 | 69.397 | 109.883 | 2.444% | 4.241% |
| 3.0 | 16974.141 | 97.418 | 207.302 | 3.430% | 8.000% |
| 4.0 | 15436.617 | 118.083 | 325.385 | 4.158% | 12.557% |
| 5.0 | 13928.977 | 133.127 | 458.512 | 4.688% | 17.695% |
| 6.0 | 11926.547 | 136.710 | 595.222 | 4.814% | 22.971% |
| 7.0 | 10264.992 | 137.184 | 732.407 | 4.830% | 28.265% |
| 8.0 | 8467.453 | 129.229 | 861.636 | 4.550% | 33.252% |
| 9.0 | 7055.156 | 121.029 | 982.665 | 4.262% | 37.923% |
| 10.0 | 5679.281 | 108.147 | 1090.812 | 3.808% | 42.097% |
| 11.0 | 4658.836 | 97.483 | 1188.295 | 3.432% | 45.859% |
| 12.0 | 3739.922 | 85.269 | 1273.564 | 3.002% | 49.149% |
| 13.0 | 3053.813 | 75.332 | 1348.897 | 2.653% | 52.057% |
| 14.0 | 2503.547 | 66.418 | 1415.314 | 2.339% | 54.620% |
| 15.0 | 2149.313 | 61.002 | 1476.317 | 2.148% | 56.974% |
| 16.0 | 1842.328 | 55.687 | 1532.004 | 1.961% | 59.123% |
| 17.0 | 1647.563 | 52.824 | 1584.828 | 1.860% | 61.162% |
| 18.0 | 1486.266 | 50.365 | 1635.193 | 1.773% | 63.105% |
| 19.0 | 1374.047 | 49.056 | 1684.25 | 1.727% | 64.998% |
| 20.0 | 1279.273 | 47.981 | 1732.23 | 1.689% | 66.850% |
| 21.0 | 1209.867 | 47.547 | 1779.777 | 1.674% | 68.685% |
| 22.0 | 1160.550 | 47.675 | 1827.452 | 1.679% | 70.525% |
| 23.0 | 1119.691 | 47.976 | 1875.428 | 1.689% | 72.376% |
| 24.0 | 1087.875 | 48.523 | 1923.951 | 1.709% | 74.249% |
| 25.0 | 1058.941 | 49.076 | 1973.027 | 1.728% | 76.143% |
| 26.0 | 1034.459 | 49.729 | 2022.756 | 1.751% | 78.062% |
| 27.0 | 1010.672 | 50.316 | 2073.072 | 1.772% | 80.004% |
| 28.0 | 986.400 | 50.783 | 2123.855 | 1.788% | 81.964% |
| 29.0 | 963.563 | 51.227 | 2175.082 | 1.804% | 83.941% |
| 30.0 | 924.750 | 50.704 | 2225.786 | 1.785% | 85.897% |
| 31.0 | 872.121 | 49.257 | 2275.043 | 1.734% | 87.798% |
| 32.0 | 805.866 | 46.830 | 2321.873 | 1.649% | 89.606% |
| 33.0 | 734.766 | 43.884 | 2365.758 | 1.545% | 91.299% |
| 34.0 | 646.741 | 39.659 | 2405.417 | 1.396% | 92.830% |
| 35.0 | 545.667 | 34.322 | 2439.739 | 1.209% | 94.154% |
| 36.0 | 442.083 | 28.495 | 2468.234 | 1.003% | 95.254% |
| 37.0 | 336.523 | 22.209 | 2490.443 | .782% | 96.111% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 38.0 | 237.157 | 16.011 | 2506.455 | .564% | 96.729% |
| 39.0 | 165.424 | 11.416 | 2517.871 | .402% | 97.169% |
| 40.0 | 123.898 | 8.733 | 2526.604 | .308% | 97.506% |
| 41.0 | 64.737 | 4.657 | 2531.262 | .164% | 97.686% |
| 42.0 | 36.302 | 2.664 | 2533.925 | .094% | 97.789% |
| 43.0 | 25.439 | 1.903 | 2535.828 | .067% | 97.862% |
| 44.0 | 22.395 | 1.706 | 2537.534 | .060% | 97.928% |
| 45.0 | 19.266 | 1.494 | 2539.028 | .053% | 97.986% |
| 46.0 | 17.423 | 1.374 | 2540.402 | .048% | 98.039% |
| 47.0 | 15.785 | 1.266 | 2541.668 | .045% | 98.088% |
| 48.0 | 13.521 | 1.102 | 2542.77 | .039% | 98.130% |
| 49.0 | 12.628 | 1.045 | 2543.815 | .037% | 98.171% |
| 50.0 | 12.270 | 1.031 | 2544.846 | .036% | 98.210% |
| 51.0 | 12.122 | 1.033 | 2545.879 | .036% | 98.250% |
| 52.0 | 11.967 | 1.034 | 2546.913 | .036% | 98.290% |
| 53.0 | 11.848 | 1.038 | 2547.951 | .037% | 98.330% |
| 54.0 | 11.735 | 1.041 | 2548.992 | .037% | 98.370% |
| 55.0 | 11.651 | 1.047 | 2550.038 | .037% | 98.411% |
| 56.0 | 11.566 | 1.052 | 2551.09 | .037% | 98.451% |
| 57.0 | 11.510 | 1.059 | 2552.149 | .037% | 98.492% |
| 58.0 | 11.468 | 1.066 | 2553.215 | .038% | 98.533% |
| 59.0 | 11.433 | 1.075 | 2554.29 | .038% | 98.575% |
| 60.0 | 11.384 | 1.081 | 2555.371 | .038% | 98.617% |
| 61.0 | 11.370 | 1.090 | 2556.461 | .038% | 98.659% |
| 62.0 | 11.370 | 1.101 | 2557.562 | .039% | 98.701% |
| 63.0 | 11.398 | 1.114 | 2558.676 | .039% | 98.744% |
| 64.0 | 11.637 | 1.147 | 2559.823 | .040% | 98.788% |
| 65.0 | 11.995 | 1.192 | 2561.015 | .042% | 98.834% |
| 66.0 | 12.277 | 1.230 | 2562.245 | .043% | 98.882% |
| 67.0 | 12.192 | 1.231 | 2563.475 | .043% | 98.929% |
| 68.0 | 11.932 | 1.213 | 2564.689 | .043% | 98.976% |
| 69.0 | 11.700 | 1.198 | 2565.886 | .042% | 99.022% |
| 70.0 | 11.686 | 1.204 | 2567.091 | .042% | 99.069% |
| 71.0 | 11.841 | 1.228 | 2568.318 | .043% | 99.116% |
| 72.0 | 11.911 | 1.242 | 2569.561 | .044% | 99.164% |
| 73.0 | 12.298 | 1.290 | 2570.85 | .045% | 99.214% |
| 74.0 | 12.073 | 1.273 | 2572.123 | .045% | 99.263% |
| 75.0 | 12.157 | 1.288 | 2573.411 | .045% | 99.313% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 76.0 | 12.255 | 1.304 | 2574.715 | .046% | 99.363% |
| 77.0 | 12.326 | 1.317 | 2576.032 | .046% | 99.414% |
| 78.0 | 12.319 | 1.321 | 2577.353 | .047% | 99.465% |
| 79.0 | 12.136 | 1.306 | 2578.659 | .046% | 99.515% |
| 80.0 | 11.580 | 1.251 | 2579.91 | .044% | 99.564% |
| 81.0 | 11.447 | 1.240 | 2581.15 | .044% | 99.611% |
| 82.0 | 11.341 | 1.232 | 2582.381 | .043% | 99.659% |
| 83.0 | 11.271 | 1.227 | 2583.608 | .043% | 99.706% |
| 84.0 | 11.306 | 1.233 | 2584.841 | .043% | 99.754% |
| 85.0 | 11.039 | 1.206 | 2586.047 | .042% | 99.800% |
| 86.0 | 10.638 | 1.164 | 2587.211 | .041% | 99.845% |
| 87.0 | 10.491 | 1.149 | 2588.36 | .040% | 99.890% |
| 88.0 | 10.463 | 1.147 | 2589.506 | .040% | 99.934% |
| 89.0 | 10.406 | 1.141 | 2590.647 | .040% | 99.978% |
| 90.0 | 10.385 | 0.569 | 2591.217 | .020% | 100.000% |

## Zonal flux distribution table



ZONAL LUMEN SUMMARY

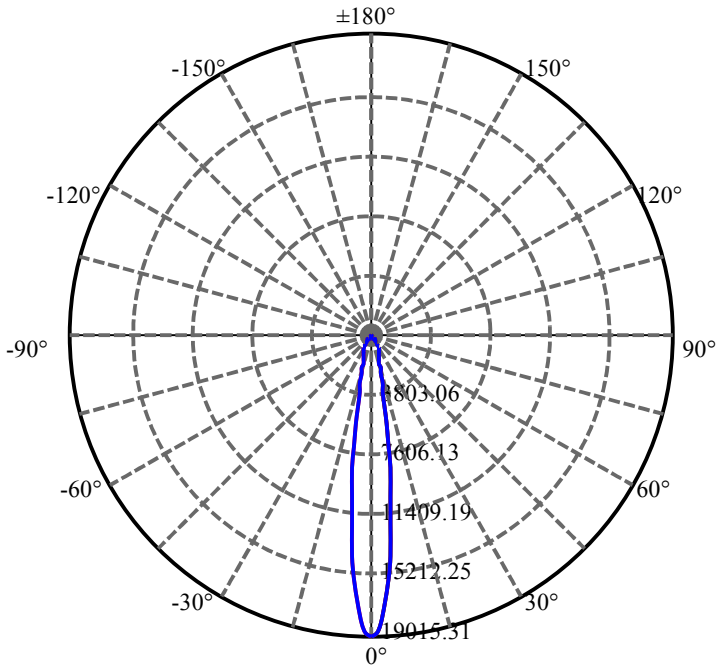
| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-30 | 2225.79 | 78.37% | 85.90% |
| 0-40 | 2526.60 | 88.96% | 97.51% |
| 0-60 | 2555.37 | 89.98% | 98.62% |
| 0-90 | 2590.65 | 91.22% | 99.98% |
| 0-120 | 2590.65 | 91.22% | 99.98% |
| 0-180 | 2591.22 | 91.24% | 100.00% |
| 60-90 | 36.36 | 1.28% | 1.40% |
| 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% |
| 0-27.00 | 2072.97 | 72.99% | 80.00% |

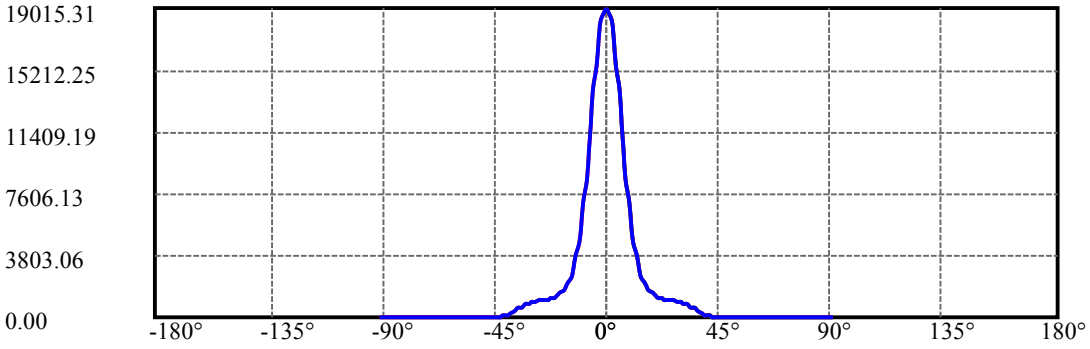
ZONAL LUMEN SUMMARY

| | |
|---|---|
| 0-10 | 1090.81 |
| 10-20 | 641.42 |
| 20-30 | 493.56 |
| 30-40 | 300.82 |
| 40-50 | 18.24 |
| 50-60 | 10.52 |
| 60-70 | 11.72 |
| 70-80 | 12.82 |
| 80-90 | 10.74 |
| 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:

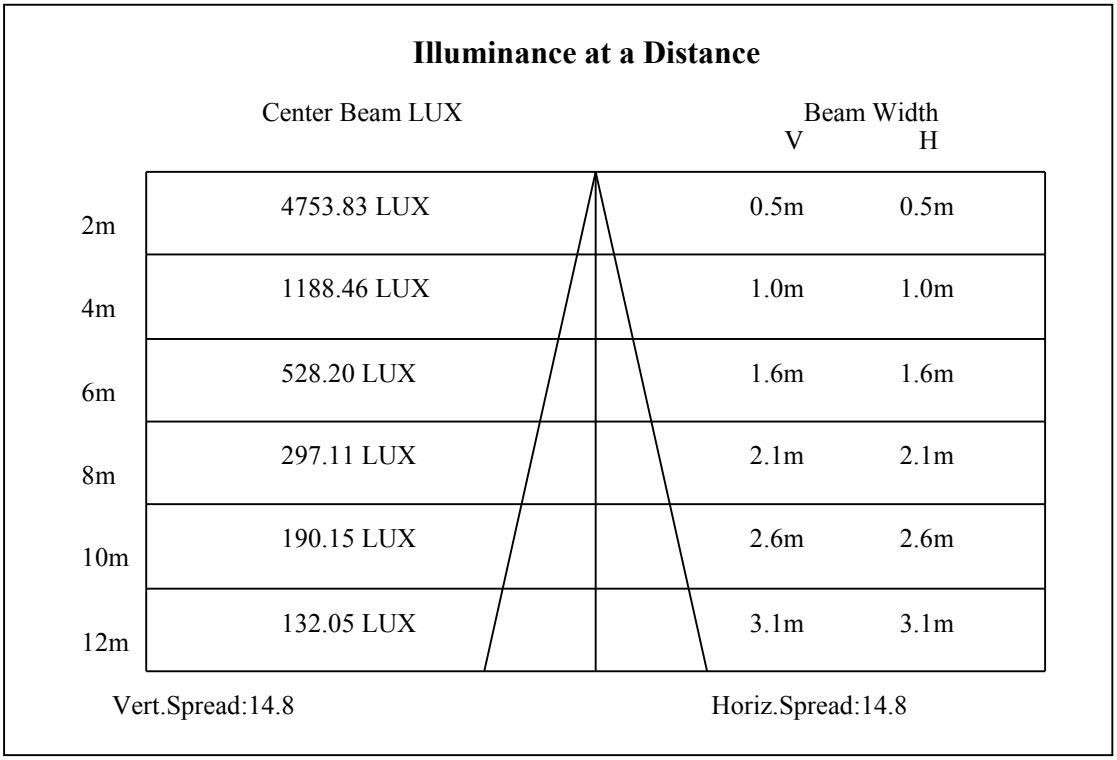
C90/C270:

Field angle(10%Imax):C0/180Left:15.8 Right:15.8
:C90/270Left:15.8 Right:15.8

Beam Angle(50%Imax):C0/180Left:7.4 Right:7.4
:C90/270Left:7.4 Right:7.4

Lux distance Curve

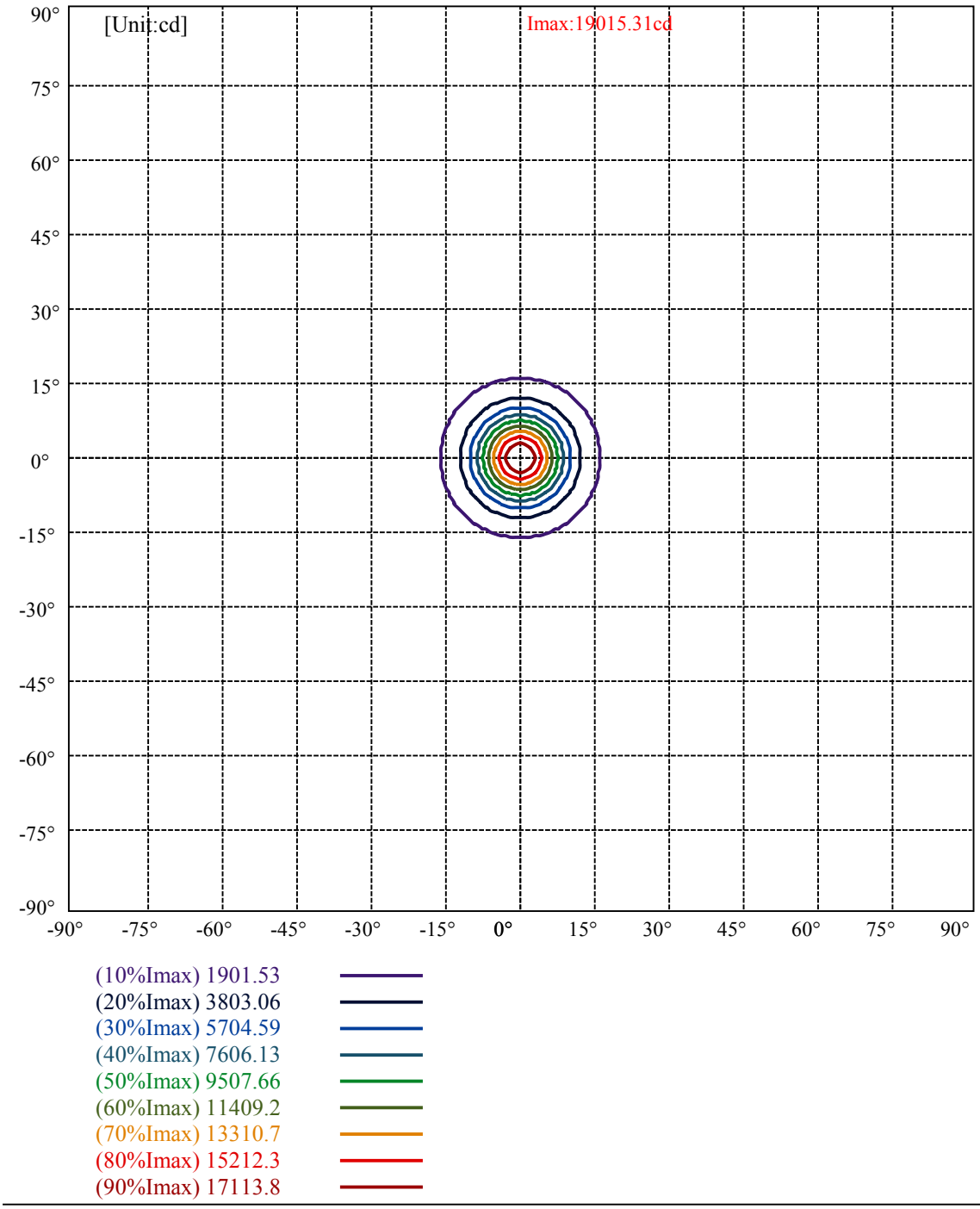





Equipment: GMS1980 Date: 2018/11/10 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

ISO-Intensity(V-H)






(10%Imax) 1901.53
(20%Imax) 3803.06
(30%Imax) 5704.59
(40%Imax) 7606.13
(50%Imax) 9507.66
(60%Imax) 11409.2
(70%Imax) 13310.7
(80%Imax) 15212.3
(90%Imax) 17113.8

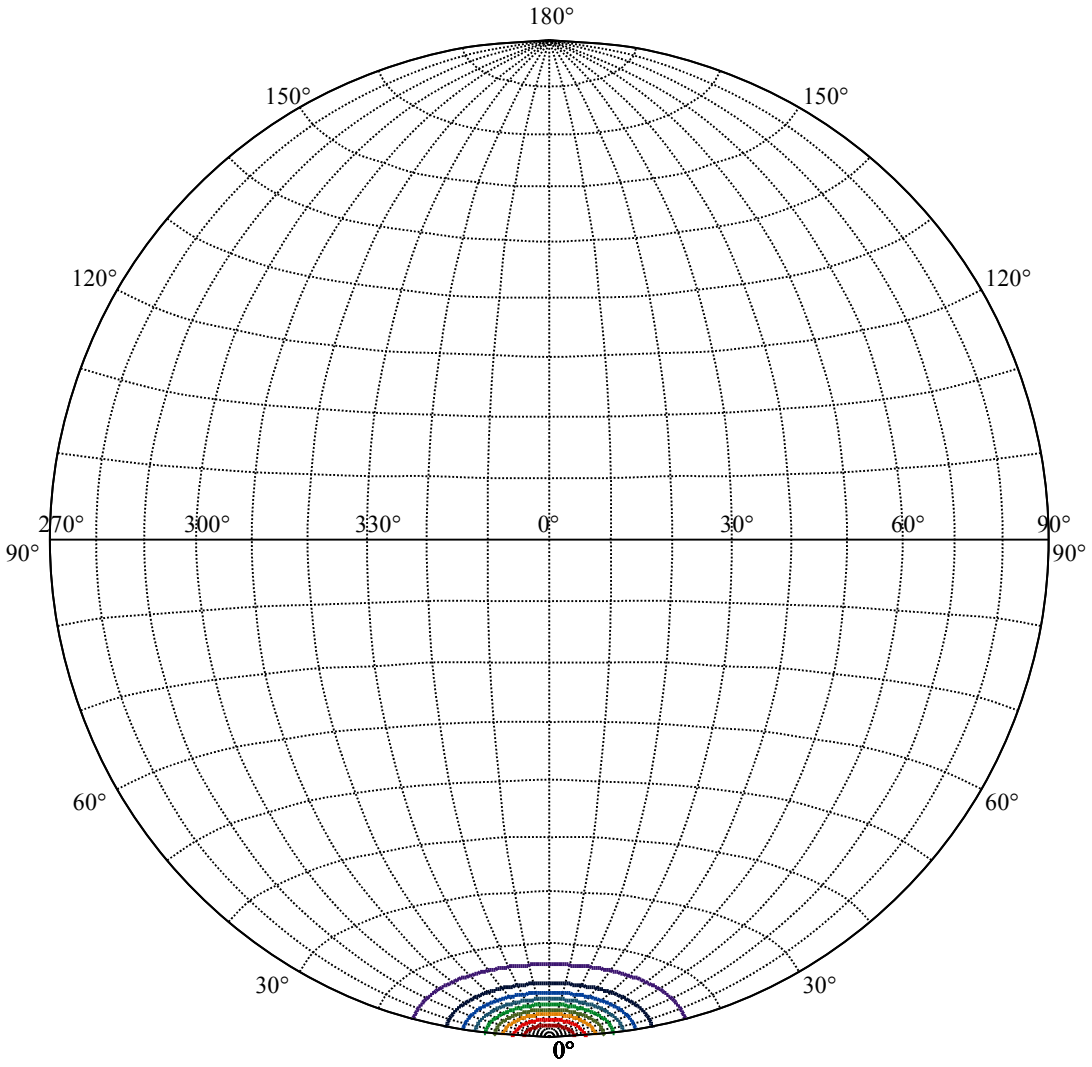
Equipment: GMS1980
Temperature(°C): 25.0

Date: 2018/11/10
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

ISO candela diagram on circular web





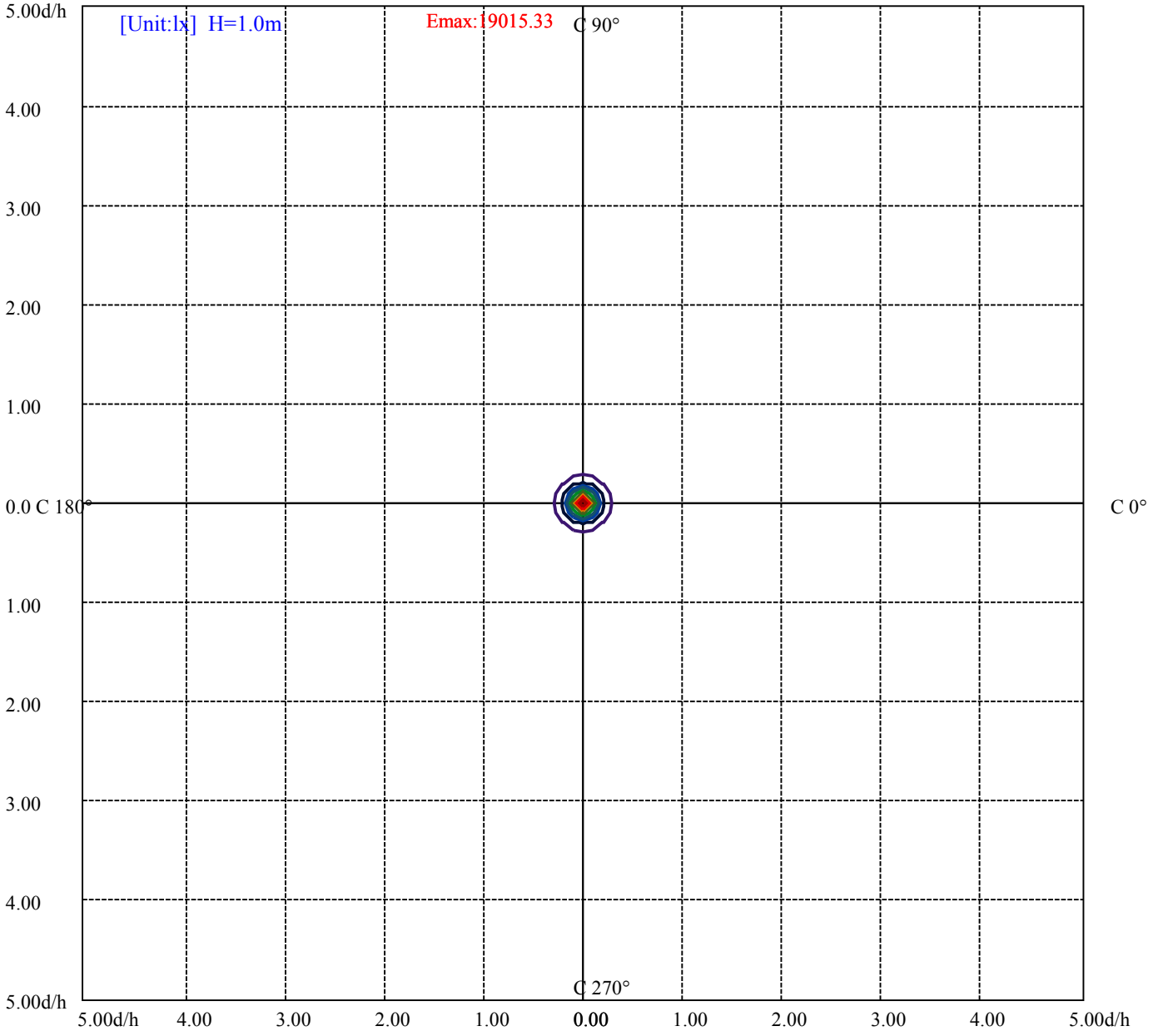

House [Unit:cd] Road

Imax:19015.31

(10%Imax) 1901.53
(20%Imax) 3803.06
(30%Imax) 5704.59
(40%Imax) 7606.13
(50%Imax) 9507.66
(60%Imax) 11409.2
(70%Imax) 13310.7
(80%Imax) 15212.3
(90%Imax) 17113.8

## ISO illuminance diagram



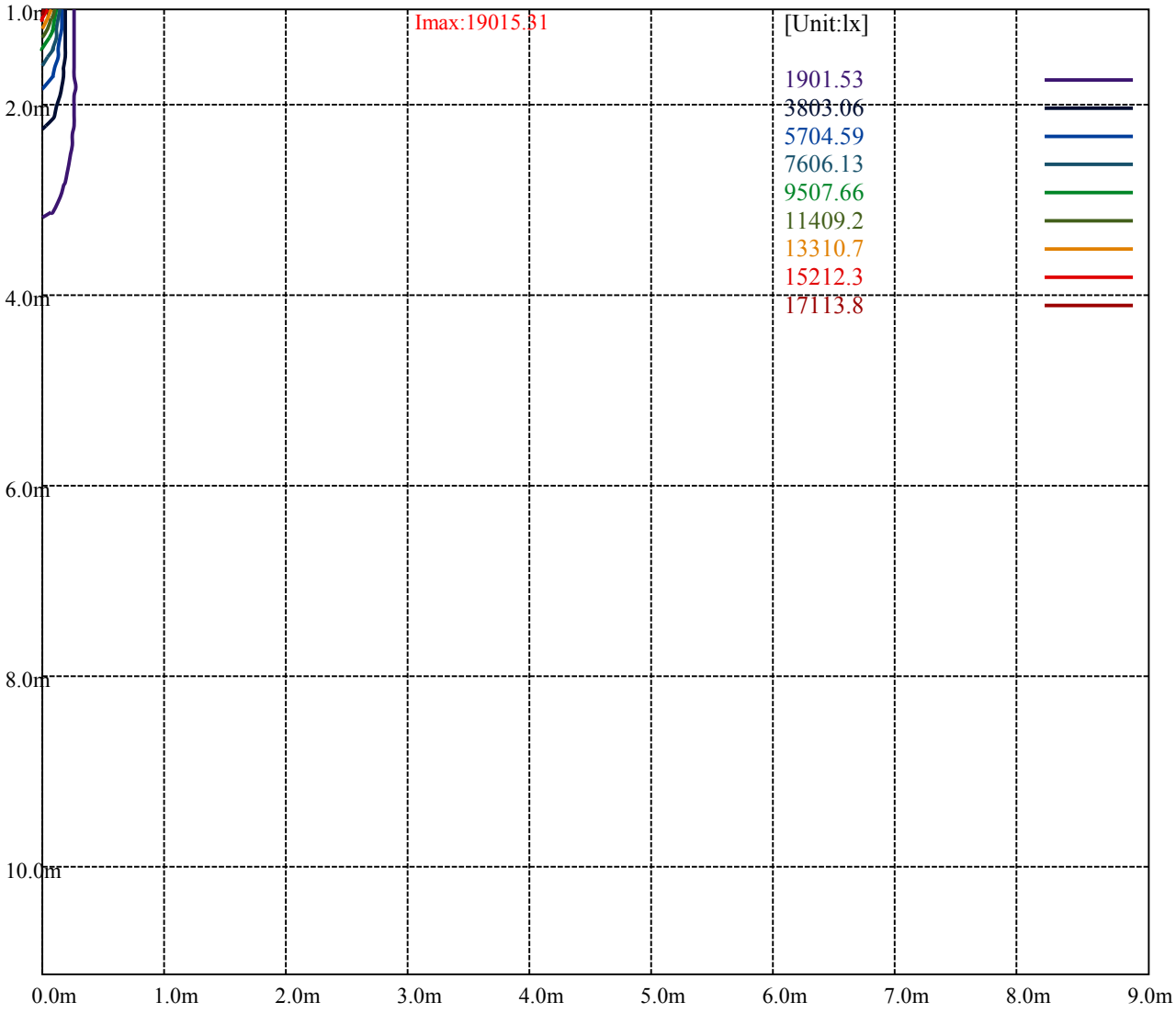



(10%Emax) 1901.53
(20%Emax) 3803.06
(30%Emax) 5704.58
(40%Emax) 7606.11
(50%Emax) 9507.64
(60%Emax) 11409.2
(70%Emax) 13310.7
(80%Emax) 15212.2
(90%Emax) 17113.8

Equipment: GMS1980
Temperature(°C): 25.0
Date: 2018/11/10
Humidity(%): 65.0%
Operator: NT07
Distance(m): 7.50

Space ISO Lux diagram






Equipment: GMS1980
Temperature(°C): 25.0

Date: 2018/11/10
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

NATA 3-1915-A

## Luminance Limitting Curve(no luminous side)



Luminance Table

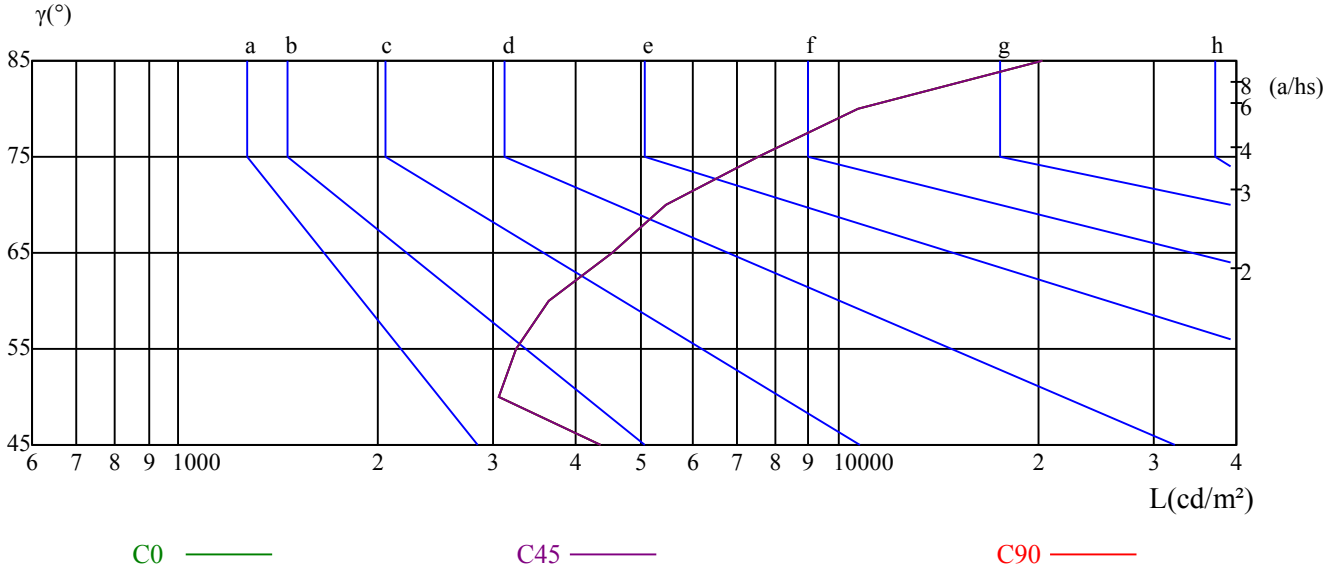
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|---|---|---|---|---|---|---|---|---|---|
| C0 | 4366 | 3058 | 3255 | 3648 | 4548 | 5475 | 7526 | 10686 | 20295 |
| C45 | 4366 | 3058 | 3255 | 3648 | 4548 | 5475 | 7526 | 10686 | 20295 |
| C90 | 4366 | 3058 | 3255 | 3648 | 4548 | 5475 | 7526 | 10686 | 20295 |

| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|---|---|---|---|---|---|---|---|---|
| 4548 | 4548 | 4548 | 7526 | 7526 | 7526 | 20295 | 20295 | 20295 |

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



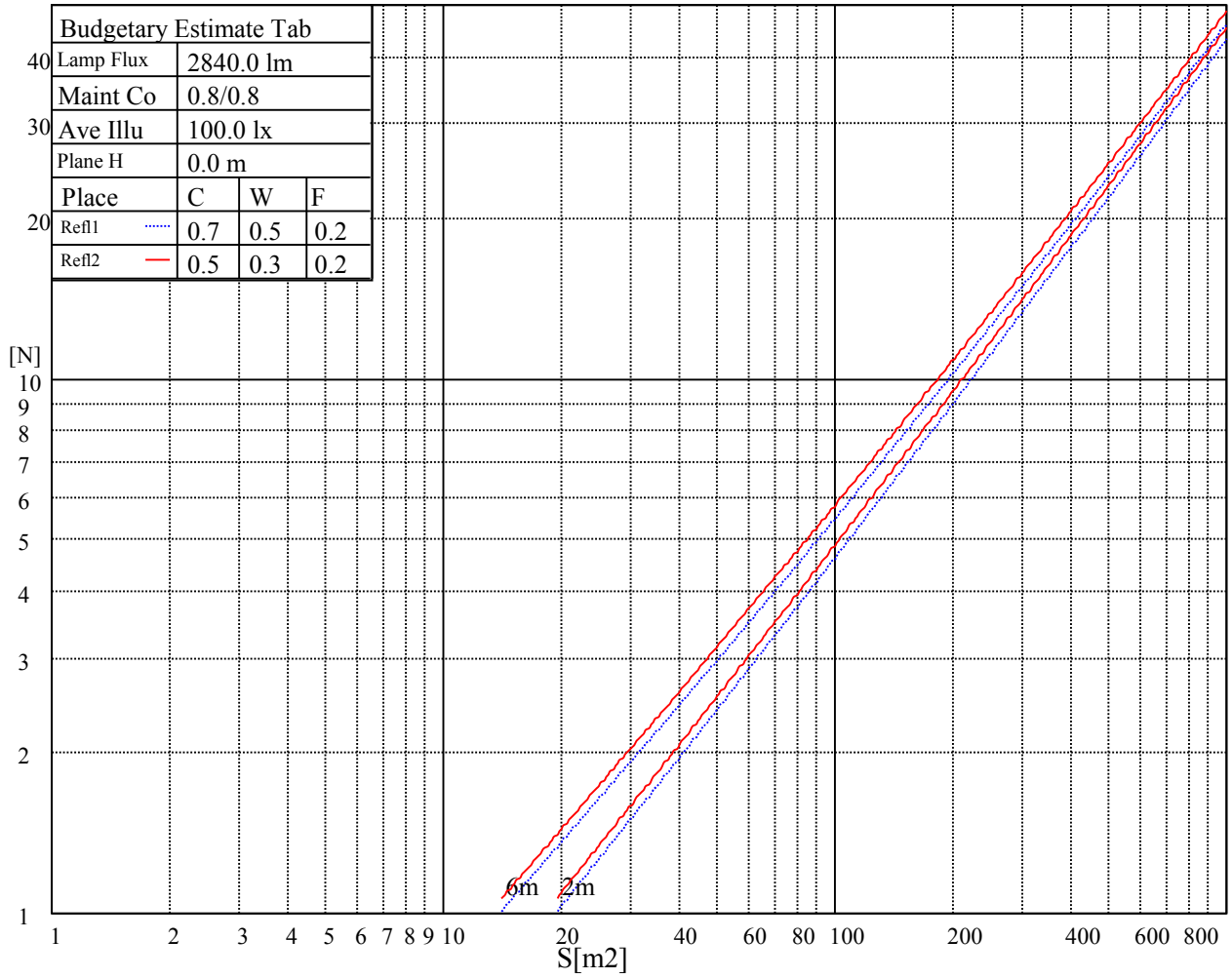

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2018/11/10
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

## Budgetary Estimate Table






Equipment: GMS1980 Date: 2018/11/10 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 65.0% Distance(m): 7.50

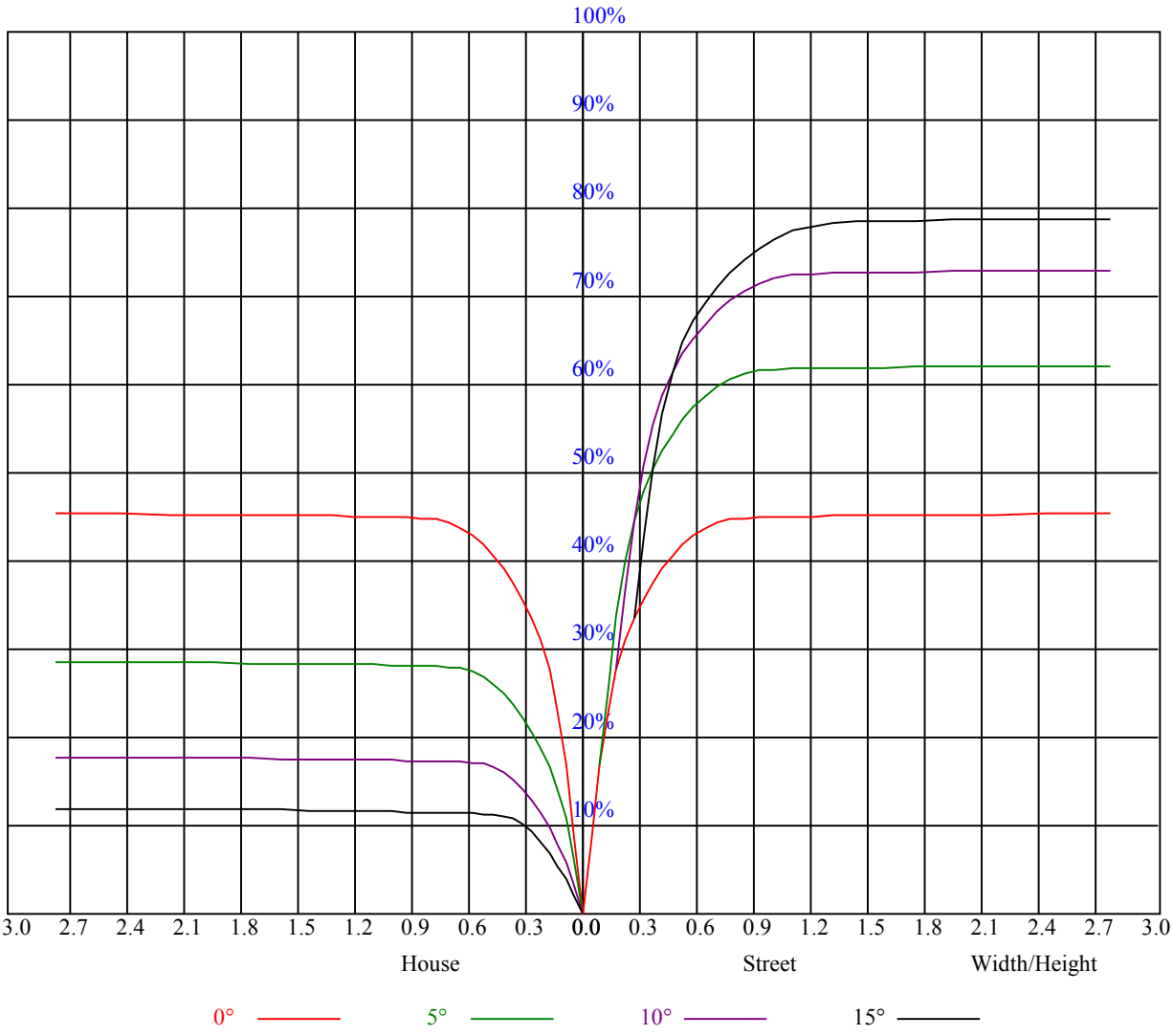
Utilization factor table for indoor luminaire



| 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 | 1.09 | 1.09 | 1.09 | 1.06 | 1.06 | 1.06 | 1.02 | 1.02 | 1.02 | 0.97 | 0.97 | 0.97 | 0.93 | 0.93 | 0.93 | 0.91 |
| 1 | 1.02 | 1.00 | 0.99 | 1.00 | 0.99 | 0.97 | 0.97 | 0.95 | 0.94 | 0.93 | 0.92 | 0.91 | 0.90 | 0.90 | 0.89 | 0.87 |
| 2 | 0.97 | 0.94 | 0.92 | 0.96 | 0.93 | 0.91 | 0.93 | 0.91 | 0.89 | 0.90 | 0.88 | 0.87 | 0.88 | 0.86 | 0.85 | 0.84 |
| 3 | 0.93 | 0.89 | 0.86 | 0.91 | 0.88 | 0.86 | 0.89 | 0.86 | 0.84 | 0.87 | 0.85 | 0.83 | 0.85 | 0.83 | 0.82 | 0.80 |
| 4 | 0.89 | 0.85 | 0.82 | 0.88 | 0.84 | 0.81 | 0.86 | 0.83 | 0.80 | 0.84 | 0.82 | 0.80 | 0.83 | 0.80 | 0.79 | 0.78 |
| 5 | 0.85 | 0.81 | 0.78 | 0.84 | 0.81 | 0.78 | 0.83 | 0.80 | 0.77 | 0.82 | 0.79 | 0.77 | 0.80 | 0.78 | 0.76 | 0.75 |
| 6 | 0.82 | 0.78 | 0.75 | 0.81 | 0.78 | 0.75 | 0.80 | 0.77 | 0.74 | 0.79 | 0.76 | 0.74 | 0.78 | 0.75 | 0.73 | 0.72 |
| 7 | 0.79 | 0.75 | 0.72 | 0.79 | 0.75 | 0.72 | 0.78 | 0.74 | 0.72 | 0.77 | 0.74 | 0.71 | 0.76 | 0.73 | 0.71 | 0.70 |
| 8 | 0.77 | 0.73 | 0.70 | 0.76 | 0.72 | 0.70 | 0.75 | 0.72 | 0.70 | 0.75 | 0.71 | 0.69 | 0.74 | 0.71 | 0.69 | 0.68 |
| 9 | 0.74 | 0.70 | 0.68 | 0.74 | 0.70 | 0.68 | 0.73 | 0.70 | 0.67 | 0.73 | 0.69 | 0.67 | 0.72 | 0.69 | 0.67 | 0.66 |
| 10 | 0.72 | 0.68 | 0.66 | 0.72 | 0.68 | 0.66 | 0.71 | 0.68 | 0.66 | 0.71 | 0.68 | 0.65 | 0.70 | 0.67 | 0.65 | 0.64 |

## Coefficient Utilization Curve






| | | |
|---|---|---|
| Equipment: GMS1980 | Date: 2018/11/10 | 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 | 18596.25 | 19659.38 | 20148.75 | 20041.88 | 19417.50 | 18016.88 | 16503.75 | 14518.13 | 12650.63 |
| 45.0 | 19670.63 | 19158.75 | 18067.50 | 16740.00 | 14923.13 | 12892.50 | 11053.13 | 9101.25 | 7520.63 |
| 90.0 | 18691.88 | 17448.75 | 15907.50 | 13741.88 | 11220.19 | 10107.00 | 8186.06 | 6476.06 | 5177.25 |
| 135.0 | 19102.50 | 17426.25 | 15766.88 | 13972.50 | 11896.88 | 9883.13 | 8173.13 | 6474.38 | 5214.38 |
| 180.0 | 18596.25 | 17246.25 | 15637.50 | 13404.38 | 11107.13 | 9766.69 | 7656.19 | 6187.50 | 4944.38 |
| 225.0 | 19670.63 | 19608.75 | 19080.00 | 17780.63 | 16368.75 | 14709.38 | 11068.88 | 10630.13 | 8915.06 |
| 270.0 | 18691.88 | 19642.50 | 20013.75 | 19822.50 | 18995.63 | 17634.38 | 16070.63 | 14056.88 | 12206.25 |
| 315.0 | 19102.50 | 20030.63 | 20441.25 | 20289.38 | 19563.75 | 18421.88 | 16700.63 | 14675.63 | 11111.06 |
| 360.0 | 18596.25 | 19659.38 | 20148.75 | 20041.88 | 19417.50 | 18016.88 | 16503.75 | 14518.13 | 12650.63 |

| C/γ(°) | 9.0 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 10591.88 | 8656.88 | 7081.88 | 5681.25 | 4246.88 | 3425.63 | 2846.25 | 2342.81 | 2046.38 |
| 45.0 | 5895.00 | 4561.88 | 3678.75 | 3054.38 | 2868.75 | 2181.38 | 1928.81 | 1671.75 | 1514.81 |
| 90.0 | 4027.50 | 3238.88 | 2744.44 | 2318.06 | 2027.25 | 1772.44 | 1571.06 | 1428.75 | 1321.88 |
| 135.0 | 4061.25 | 3251.25 | 2857.50 | 2365.88 | 2000.81 | 1771.88 | 1581.19 | 1387.13 | 1285.31 |
| 180.0 | 3872.25 | 3140.44 | 2626.88 | 2278.13 | 2005.31 | 1759.50 | 1556.44 | 1409.63 | 1291.50 |
| 225.0 | 7143.75 | 5595.19 | 4451.63 | 3507.19 | 2930.06 | 2453.63 | 2136.94 | 1861.88 | 1672.88 |
| 270.0 | 10192.50 | 8302.50 | 6755.63 | 5400.00 | 4044.38 | 3296.25 | 2885.63 | 2292.19 | 2008.69 |
| 315.0 | 10657.13 | 8687.25 | 7074.00 | 5314.50 | 4307.06 | 3367.69 | 2688.19 | 2344.50 | 2039.06 |
| 360.0 | 10591.88 | 8656.88 | 7081.88 | 5681.25 | 4246.88 | 3425.63 | 2846.25 | 2342.81 | 2046.38 |

| C/γ(°) | 18.0 | 19.0 | 20.0 | 21.0 | 22.0 | 23.0 | 24.0 | 25.0 | 26.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 1821.94 | 1644.75 | 1469.25 | 1362.38 | 1288.13 | 1209.94 | 1161.00 | 1132.31 | 1098.56 |
| 45.0 | 1385.44 | 1279.13 | 1204.88 | 1155.94 | 1113.75 | 1081.13 | 1056.94 | 1032.19 | 1010.25 |
| 90.0 | 1226.25 | 1171.13 | 1119.60 | 1087.37 | 1059.58 | 1038.60 | 1019.42 | 996.64 | 972.51 |
| 135.0 | 1211.06 | 1159.31 | 1113.75 | 1085.63 | 1060.31 | 1040.63 | 1020.38 | 998.44 | 975.94 |
| 180.0 | 1215.00 | 1166.06 | 1120.33 | 1087.82 | 1064.19 | 1043.33 | 1021.39 | 998.94 | 976.67 |
| 225.0 | 1497.38 | 1369.13 | 1287.56 | 1217.81 | 1166.63 | 1122.36 | 1096.82 | 1066.33 | 1045.86 |
| 270.0 | 1793.25 | 1604.25 | 1450.13 | 1344.38 | 1256.63 | 1202.63 | 1158.19 | 1125.00 | 1099.13 |
| 315.0 | 1739.81 | 1598.63 | 1468.69 | 1337.63 | 1275.19 | 1218.94 | 1168.88 | 1121.68 | 1096.76 |
| 360.0 | 1821.94 | 1644.75 | 1469.25 | 1362.38 | 1288.13 | 1209.94 | 1161.00 | 1132.31 | 1098.56 |

| C/γ(°) | 27.0 | 28.0 | 29.0 | 30.0 | 31.0 | 32.0 | 33.0 | 34.0 | 35.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 1071.56 | 1050.75 | 1023.19 | 996.75 | 971.44 | 942.75 | 921.94 | 893.81 | 801.56 |
| 45.0 | 985.50 | 958.50 | 937.13 | 916.88 | 884.25 | 810.56 | 717.75 | 588.38 | 482.06 |
| 90.0 | 951.92 | 925.26 | 905.29 | 855.45 | 762.41 | 651.83 | 545.79 | 422.72 | 315.73 |
| 135.0 | 954.56 | 934.88 | 913.50 | 850.50 | 750.38 | 635.63 | 528.75 | 417.94 | 284.63 |
| 180.0 | 954.68 | 932.57 | 908.83 | 832.67 | 739.63 | 626.63 | 504.45 | 395.66 | 292.67 |
| 225.0 | 1026.06 | 996.19 | 974.25 | 953.61 | 931.44 | 895.39 | 820.63 | 715.11 | 608.34 |
| 270.0 | 1072.13 | 1047.38 | 1026.00 | 997.88 | 972.00 | 946.69 | 924.19 | 866.25 | 784.13 |
| 315.0 | 1068.98 | 1045.69 | 1020.32 | 994.28 | 965.42 | 937.46 | 914.63 | 874.07 | 796.22 |
| 360.0 | 1071.56 | 1050.75 | 1023.19 | 996.75 | 971.44 | 942.75 | 921.94 | 893.81 | 801.56 |

| C/γ(°) | 36.0 | 37.0 | 38.0 | 39.0 | 40.0 | 41.0 | 42.0 | 43.0 | 44.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 704.25 | 599.06 | 462.38 | 348.75 | 294.75 | 139.39 | 62.04 | 37.46 | 32.96 |
| 45.0 | 375.19 | 284.63 | 153.28 | 80.78 | 39.71 | 32.06 | 25.54 | 20.81 | 18.79 |
| 90.0 | 205.93 | 113.23 | 55.80 | 35.49 | 30.04 | 23.29 | 20.31 | 17.72 | 16.65 |
| 135.0 | 223.43 | 103.39 | 41.23 | 31.16 | 27.90 | 21.77 | 19.63 | 17.38 | 13.84 |
| 180.0 | 175.50 | 95.74 | 44.66 | 31.67 | 26.78 | 21.88 | 19.52 | 16.37 | 14.51 |
| 225.0 | 482.57 | 357.41 | 254.53 | 149.68 | 67.73 | 38.03 | 33.75 | 26.33 | 21.94 |
| 270.0 | 683.44 | 573.75 | 430.88 | 316.69 | 290.25 | 112.95 | 48.49 | 32.85 | 29.08 |
| 315.0 | 686.36 | 564.98 | 454.50 | 329.18 | 214.03 | 128.53 | 61.14 | 34.59 | 31.39 |
| 360.0 | 704.25 | 599.06 | 462.38 | 348.75 | 294.75 | 139.39 | 62.04 | 37.46 | 32.96 |

Intensity data(cd)



| C/γ(°) | 45.0 | 46.0 | 47.0 | 48.0 | 49.0 | 50.0 | 51.0 | 52.0 | 53.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 26.55 | 23.34 | 21.60 | 15.64 | 13.16 | 12.54 | 12.38 | 12.15 | 11.98 |
| 45.0 | 14.91 | 13.84 | 12.77 | 12.54 | 12.38 | 12.21 | 12.09 | 11.98 | 11.81 |
| 90.0 | 13.61 | 12.83 | 12.60 | 12.49 | 12.32 | 12.21 | 12.09 | 11.98 | 11.93 |
| 135.0 | 12.88 | 12.60 | 12.43 | 12.32 | 12.21 | 12.04 | 11.98 | 11.93 | 11.93 |
| 180.0 | 12.88 | 12.49 | 12.32 | 12.15 | 12.04 | 11.93 | 11.81 | 11.70 | 11.64 |
| 225.0 | 20.25 | 16.71 | 14.06 | 12.66 | 12.38 | 12.15 | 11.98 | 11.81 | 11.64 |
| 270.0 | 25.54 | 23.12 | 18.73 | 13.95 | 13.11 | 12.60 | 12.38 | 12.15 | 11.98 |
| 315.0 | 27.51 | 24.47 | 21.77 | 16.43 | 13.44 | 12.49 | 12.26 | 12.04 | 11.87 |
| 360.0 | 26.55 | 23.34 | 21.60 | 15.64 | 13.16 | 12.54 | 12.38 | 12.15 | 11.98 |

| C/γ(°) | 54.0 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 | 60.0 | 61.0 | 62.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 11.81 | 11.70 | 11.53 | 11.48 | 11.36 | 11.31 | 11.19 | 11.19 | 11.14 |
| 45.0 | 11.70 | 11.59 | 11.48 | 11.42 | 11.36 | 11.31 | 11.25 | 11.19 | 11.14 |
| 90.0 | 11.87 | 11.87 | 11.87 | 11.87 | 11.93 | 11.93 | 11.93 | 11.98 | 11.98 |
| 135.0 | 11.87 | 11.87 | 11.87 | 11.93 | 12.04 | 12.04 | 12.09 | 12.15 | 12.32 |
| 180.0 | 11.59 | 11.48 | 11.42 | 11.42 | 11.36 | 11.36 | 11.31 | 11.31 | 11.25 |
| 225.0 | 11.53 | 11.42 | 11.31 | 11.19 | 11.14 | 11.08 | 11.03 | 10.97 | 10.91 |
| 270.0 | 11.81 | 11.70 | 11.59 | 11.42 | 11.31 | 11.25 | 11.14 | 11.08 | 11.19 |
| 315.0 | 11.70 | 11.59 | 11.48 | 11.36 | 11.25 | 11.19 | 11.14 | 11.08 | 11.03 |
| 360.0 | 11.81 | 11.70 | 11.53 | 11.48 | 11.36 | 11.31 | 11.19 | 11.19 | 11.14 |

| C/γ(°) | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 | 70.0 | 71.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 11.08 | 11.08 | 11.03 | 10.97 | 10.97 | 10.91 | 10.91 | 10.86 | 10.86 |
| 45.0 | 11.08 | 11.08 | 11.03 | 11.08 | 11.08 | 11.03 | 11.03 | 11.08 | 10.97 |
| 90.0 | 12.38 | 14.34 | 17.04 | 19.01 | 18.00 | 15.69 | 13.50 | 12.32 | 11.93 |
| 135.0 | 12.43 | 12.66 | 12.99 | 13.39 | 13.84 | 14.29 | 14.68 | 14.91 | 15.41 |
| 180.0 | 11.25 | 11.25 | 11.25 | 11.19 | 11.19 | 11.19 | 11.19 | 11.19 | 11.19 |
| 225.0 | 10.86 | 10.86 | 10.80 | 10.80 | 10.74 | 10.74 | 10.74 | 11.59 | 12.88 |
| 270.0 | 11.14 | 10.91 | 10.91 | 10.86 | 10.86 | 10.86 | 10.86 | 10.86 | 10.80 |
| 315.0 | 10.97 | 10.91 | 10.91 | 10.91 | 10.86 | 10.74 | 10.69 | 10.69 | 10.69 |
| 360.0 | 11.08 | 11.08 | 11.03 | 10.97 | 10.97 | 10.91 | 10.91 | 10.86 | 10.86 |

| C/γ(°) | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0 | 80.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 10.91 | 10.86 | 10.86 | 10.86 | 10.80 | 10.86 | 10.80 | 10.80 | 10.74 |
| 45.0 | 10.86 | 10.80 | 10.74 | 10.69 | 10.69 | 10.63 | 10.63 | 10.63 | 10.58 |
| 90.0 | 12.04 | 11.81 | 10.97 | 10.80 | 10.80 | 10.80 | 10.80 | 10.74 | 10.74 |
| 135.0 | 16.20 | 16.93 | 17.72 | 18.79 | 19.74 | 20.42 | 20.42 | 18.96 | 14.63 |
| 180.0 | 11.14 | 11.14 | 11.14 | 11.08 | 11.08 | 11.03 | 10.97 | 10.97 | 10.97 |
| 225.0 | 12.71 | 15.53 | 13.89 | 13.84 | 13.78 | 13.78 | 13.78 | 13.78 | 13.78 |
| 270.0 | 10.80 | 10.74 | 10.69 | 10.63 | 10.58 | 10.58 | 10.58 | 10.63 | 10.63 |
| 315.0 | 10.63 | 10.58 | 10.58 | 10.58 | 10.58 | 10.52 | 10.58 | 10.58 | 10.58 |
| 360.0 | 10.91 | 10.86 | 10.86 | 10.86 | 10.80 | 10.86 | 10.80 | 10.80 | 10.74 |

| C/γ(°) | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 10.69 | 10.69 | 10.63 | 10.63 | 10.63 | 10.63 | 10.63 | 10.63 | 10.58 |
| 45.0 | 10.58 | 10.58 | 10.58 | 10.58 | 10.58 | 10.58 | 10.46 | 10.35 | 10.35 |
| 90.0 | 10.74 | 10.74 | 10.74 | 10.69 | 10.69 | 10.69 | 10.35 | 10.35 | 10.29 |
| 135.0 | 13.61 | 12.94 | 12.26 | 11.98 | 11.93 | 10.80 | 10.46 | 10.41 | 10.41 |
| 180.0 | 10.97 | 10.97 | 10.97 | 10.91 | 10.86 | 10.80 | 10.46 | 10.46 | 10.46 |
| 225.0 | 13.78 | 13.67 | 13.78 | 14.46 | 12.49 | 10.46 | 10.46 | 10.46 | 10.35 |
| 270.0 | 10.63 | 10.63 | 10.63 | 10.63 | 10.58 | 10.58 | 10.58 | 10.58 | 10.41 |
| 315.0 | 10.58 | 10.52 | 10.58 | 10.58 | 10.58 | 10.58 | 10.52 | 10.46 | 10.41 |
| 360.0 | 10.69 | 10.69 | 10.63 | 10.63 | 10.63 | 10.63 | 10.63 | 10.63 | 10.58 |

Intensity data(cd)



| C/γ(°) | 90.0 |
|---|---|
| 0.0 | 10.46 |
| 45.0 | 10.35 |
| 90.0 | 10.35 |
| 135.0 | 10.41 |
| 180.0 | 10.46 |
| 225.0 | 10.29 |
| 270.0 | 10.35 |
| 315.0 | 10.41 |
| 360.0 | 10.46 |