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

## Nata

LumCAT: 3-2055-A
Luminaire: TE 2213480-1+92.76.365.00

| | |
|---|---|
| Report No: GC20170511606 | Voltage(V): 219.9000 |
| Test No: NT-0010 | Current(A): 0.0960 |
| LampCAT: LUMILEDS LUXEON CoB 1216 | Power (W): 18.8000 |
| Lamp flux(lm): 2549.0 | PF: 0.8920 |
| Number of Lamps: 1 | Ballast type: DC |
| Length(mm): 79 | Width(mm): 79 |
| Phm Type: C | Height(mm): 0 |

## Photometric Results

Lumens(lm): 2306.15
Efficiency(%): 90.47%
Lumens(lm)/Power(W): 122.67
Central intensity(cd): 6014.086
Maximum intensity(cd): 6014.086
Angle of maximum intensity: C=0.0 γ=0.0
Beam Angle(50%Imax): [C0/180]Total=29.8
[C90/270]Total=29.8
Field angle(10%Imax): [C0/180]Total=68.1
[C90/270]Total=68.1
Maximum s/h(1/2): C0_180=0.49 C90_270=0.49
Maximum s/h(1/4): C0_180=0.52 C90_270=0.52
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 90.47%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.029%

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 0.0 | 6014.086 | 0.000 | 0 | .000% | .000% |
| 1.0 | 5993.715 | 5.746 | 5.746 | .225% | .249% |
| 2.0 | 5928.473 | 17.112 | 22.857 | .671% | .991% |
| 3.0 | 5815.332 | 28.087 | 50.945 | 1.102% | 2.209% |
| 4.0 | 5662.138 | 38.419 | 89.363 | 1.507% | 3.875% |
| 5.0 | 5483.893 | 47.950 | 137.313 | 1.881% | 5.954% |
| 6.0 | 5292.021 | 56.630 | 193.943 | 2.222% | 8.410% |
| 7.0 | 5040.000 | 64.131 | 258.074 | 2.516% | 11.191% |
| 8.0 | 4814.132 | 70.524 | 328.598 | 2.767% | 14.249% |
| 9.0 | 4568.855 | 76.044 | 404.642 | 2.983% | 17.546% |
| 10.0 | 4285.728 | 80.131 | 484.773 | 3.144% | 21.021% |
| 11.0 | 4041.828 | 83.209 | 567.982 | 3.264% | 24.629% |
| 12.0 | 3779.071 | 85.494 | 653.476 | 3.354% | 28.336% |
| 13.0 | 3498.421 | 86.365 | 739.841 | 3.388% | 32.081% |
| 14.0 | 3233.325 | 86.166 | 826.007 | 3.380% | 35.818% |
| 15.0 | 2979.515 | 85.293 | 911.3 | 3.346% | 39.516% |
| 16.0 | 2705.471 | 83.301 | 994.601 | 3.268% | 43.128% |
| 17.0 | 2484.145 | 80.816 | 1075.417 | 3.171% | 46.632% |
| 18.0 | 2262.818 | 78.267 | 1153.684 | 3.071% | 50.026% |
| 19.0 | 2055.255 | 75.126 | 1228.81 | 2.947% | 53.284% |
| 20.0 | 1879.901 | 72.024 | 1300.834 | 2.826% | 56.407% |
| 21.0 | 1715.557 | 69.040 | 1369.874 | 2.709% | 59.401% |
| 22.0 | 1575.164 | 66.128 | 1436.003 | 2.594% | 62.268% |
| 23.0 | 1454.590 | 63.572 | 1499.575 | 2.494% | 65.025% |
| 24.0 | 1351.772 | 61.357 | 1560.932 | 2.407% | 67.685% |
| 25.0 | 1249.780 | 59.154 | 1620.086 | 2.321% | 70.251% |
| 26.0 | 1179.336 | 57.340 | 1677.425 | 2.249% | 72.737% |
| 27.0 | 1093.861 | 55.614 | 1733.04 | 2.182% | 75.148% |
| 28.0 | 1041.158 | 54.054 | 1787.094 | 2.121% | 77.492% |
| 29.0 | 976.935 | 52.799 | 1839.893 | 2.071% | 79.782% |
| 30.0 | 908.265 | 50.900 | 1890.793 | 1.997% | 81.989% |
| 31.0 | 830.691 | 48.393 | 1939.185 | 1.898% | 84.087% |
| 32.0 | 755.470 | 45.442 | 1984.627 | 1.783% | 86.058% |
| 33.0 | 684.365 | 42.418 | 2027.045 | 1.664% | 87.897% |
| 34.0 | 605.359 | 39.031 | 2066.076 | 1.531% | 89.590% |
| 35.0 | 533.854 | 35.380 | 2101.456 | 1.388% | 91.124% |
| 36.0 | 459.129 | 31.617 | 2133.073 | 1.240% | 92.495% |
| 37.0 | 385.959 | 27.562 | 2160.635 | 1.081% | 93.690% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 38.0 | 314.881 | 23.393 | 2184.028 | .918% | 94.704% |
| 39.0 | 241.821 | 19.002 | 2203.03 | .745% | 95.528% |
| 40.0 | 184.714 | 14.876 | 2217.906 | .584% | 96.173% |
| 41.0 | 122.363 | 10.935 | 2228.84 | .429% | 96.647% |
| 42.0 | 74.574 | 7.155 | 2235.995 | .281% | 96.958% |
| 43.0 | 40.411 | 4.259 | 2240.255 | .167% | 97.142% |
| 44.0 | 24.610 | 2.454 | 2242.709 | .096% | 97.249% |
| 45.0 | 18.114 | 1.642 | 2244.351 | .064% | 97.320% |
| 46.0 | 14.948 | 1.293 | 2245.644 | .051% | 97.376% |
| 47.0 | 13.750 | 1.141 | 2246.785 | .045% | 97.426% |
| 48.0 | 13.682 | 1.109 | 2247.894 | .044% | 97.474% |
| 49.0 | 13.351 | 1.110 | 2249.004 | .044% | 97.522% |
| 50.0 | 13.241 | 1.109 | 2250.113 | .043% | 97.570% |
| 51.0 | 12.842 | 1.104 | 2251.217 | .043% | 97.618% |
| 52.0 | 12.622 | 1.093 | 2252.309 | .043% | 97.665% |
| 53.0 | 12.346 | 1.086 | 2253.395 | .043% | 97.712% |
| 54.0 | 12.057 | 1.076 | 2254.471 | .042% | 97.759% |
| 55.0 | 11.713 | 1.061 | 2255.532 | .042% | 97.805% |
| 56.0 | 11.438 | 1.046 | 2256.578 | .041% | 97.850% |
| 57.0 | 11.190 | 1.035 | 2257.613 | .041% | 97.895% |
| 58.0 | 10.956 | 1.024 | 2258.637 | .040% | 97.940% |
| 59.0 | 10.819 | 1.018 | 2259.655 | .040% | 97.984% |
| 60.0 | 11.176 | 1.039 | 2260.694 | .041% | 98.029% |
| 61.0 | 12.704 | 1.140 | 2261.834 | .045% | 98.078% |
| 62.0 | 14.549 | 1.313 | 2263.147 | .052% | 98.135% |
| 63.0 | 16.434 | 1.507 | 2264.654 | .059% | 98.200% |
| 64.0 | 17.990 | 1.689 | 2266.343 | .066% | 98.274% |
| 65.0 | 18.994 | 1.830 | 2268.173 | .072% | 98.353% |
| 66.0 | 19.435 | 1.917 | 2270.091 | .075% | 98.436% |
| 67.0 | 19.738 | 1.970 | 2272.06 | .077% | 98.522% |
| 68.0 | 19.779 | 2.002 | 2274.062 | .079% | 98.608% |
| 69.0 | 19.655 | 2.012 | 2276.074 | .079% | 98.696% |
| 70.0 | 19.297 | 2.001 | 2278.074 | .078% | 98.782% |
| 71.0 | 18.774 | 1.968 | 2280.042 | .077% | 98.868% |
| 72.0 | 18.182 | 1.922 | 2281.964 | .075% | 98.951% |
| 73.0 | 17.618 | 1.872 | 2283.836 | .073% | 99.032% |
| 74.0 | 17.040 | 1.822 | 2285.658 | .071% | 99.111% |
| 75.0 | 16.434 | 1.769 | 2287.427 | .069% | 99.188% |

## Zonal flux distribution table



| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 76.0 | 15.677 | 1.705 | 2289.131 | .067% | 99.262% |
| 77.0 | 14.879 | 1.629 | 2290.76 | .064% | 99.332% |
| 78.0 | 14.094 | 1.551 | 2292.311 | .061% | 99.400% |
| 79.0 | 13.200 | 1.467 | 2293.778 | .058% | 99.463% |
| 80.0 | 12.388 | 1.379 | 2295.157 | .054% | 99.523% |
| 81.0 | 11.837 | 1.310 | 2296.467 | .051% | 99.580% |
| 82.0 | 11.342 | 1.257 | 2297.724 | .049% | 99.634% |
| 83.0 | 10.846 | 1.206 | 2298.93 | .047% | 99.687% |
| 84.0 | 10.433 | 1.159 | 2300.09 | .045% | 99.737% |
| 85.0 | 10.103 | 1.121 | 2301.21 | .044% | 99.786% |
| 86.0 | 9.649 | 1.080 | 2302.29 | .042% | 99.832% |
| 87.0 | 9.126 | 1.027 | 2303.318 | .040% | 99.877% |
| 88.0 | 8.726 | 0.978 | 2304.295 | .038% | 99.919% |
| 89.0 | 8.410 | 0.939 | 2305.235 | .037% | 99.960% |
| 90.0 | 8.369 | 0.920 | 2306.155 | .036% | 100.000% |

## Zonal flux distribution table



ZONAL LUMEN SUMMARY

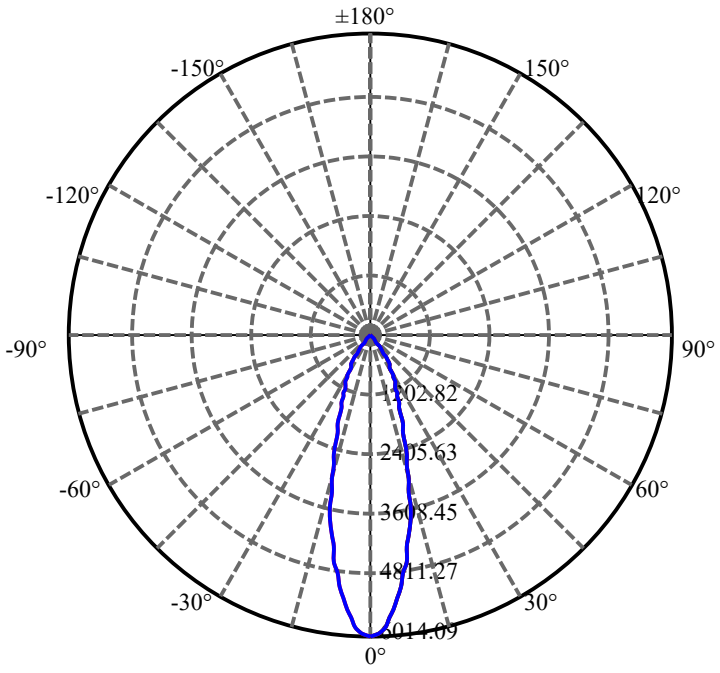
| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-30 | 1890.79 | 74.18% | 81.99% |
| 0-40 | 2217.91 | 87.01% | 96.17% |
| 0-60 | 2260.69 | 88.69% | 98.03% |
| 0-90 | 2305.23 | 90.44% | 99.96% |
| 0-120 | 2305.23 | 90.44% | 99.96% |
| 0-180 | 2306.15 | 90.47% | 100.00% |
| 60-90 | 45.58 | 1.79% | 1.98% |
| 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% |
| 0-29.10 | 1844.92 | 72.38% | 80.00% |

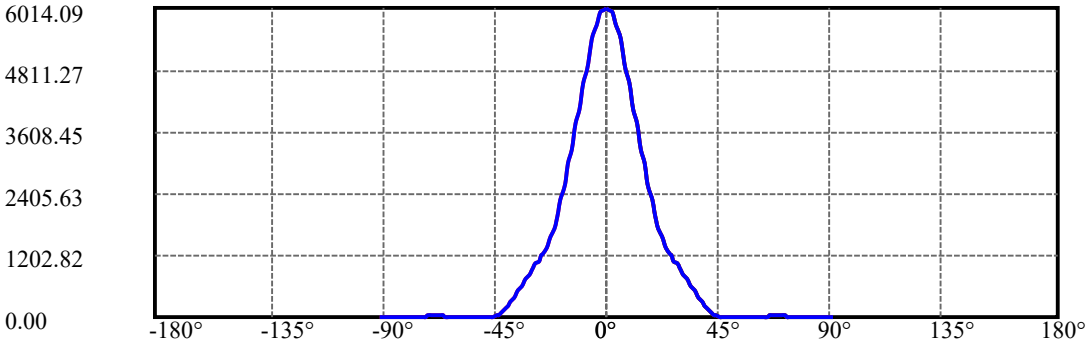
ZONAL LUMEN SUMMARY

| | |
|---|---|
| 0-10 | 484.77 |
| 10-20 | 816.06 |
| 20-30 | 589.96 |
| 30-40 | 327.11 |
| 40-50 | 32.21 |
| 50-60 | 10.58 |
| 60-70 | 17.38 |
| 70-80 | 17.08 |
| 80-90 | 10.08 |
| 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:

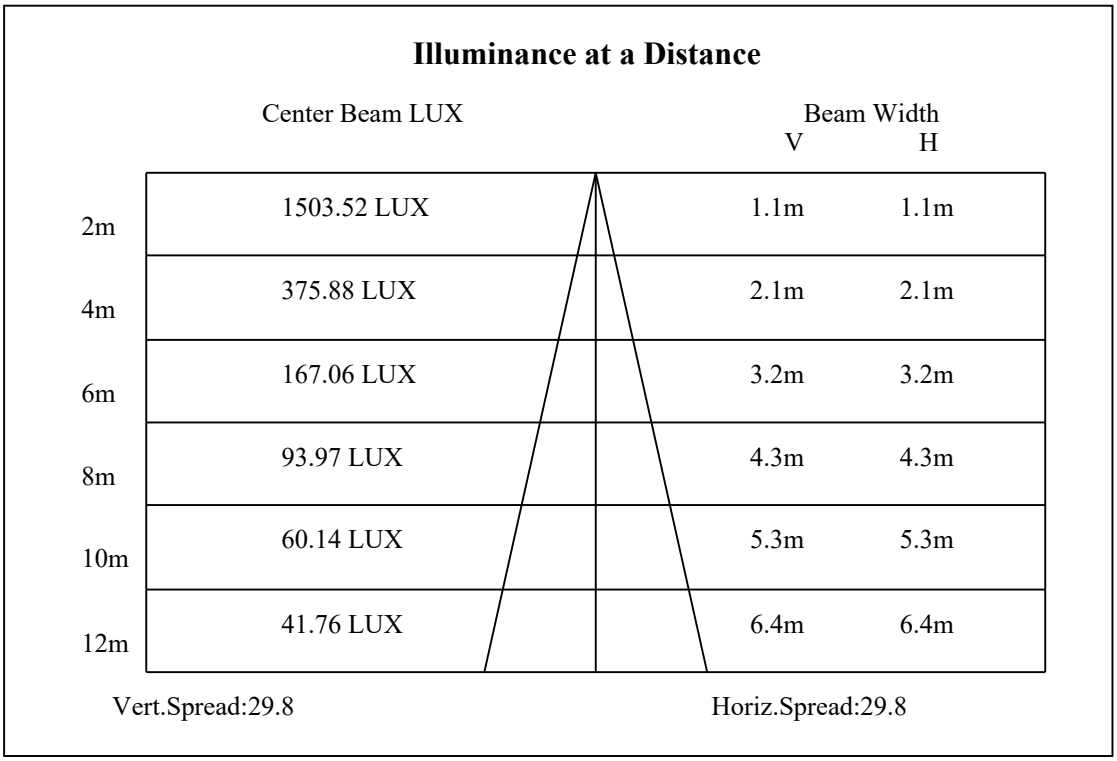
C90/C270:

Field angle(10%Imax):C0/180Left:34.1 Right:34.1
:C90/270Left:34.1 Right:34.1

Beam Angle(50%Imax):C0/180Left:14.9 Right:14.9
:C90/270Left:14.9 Right:14.9

Lux distance Curve

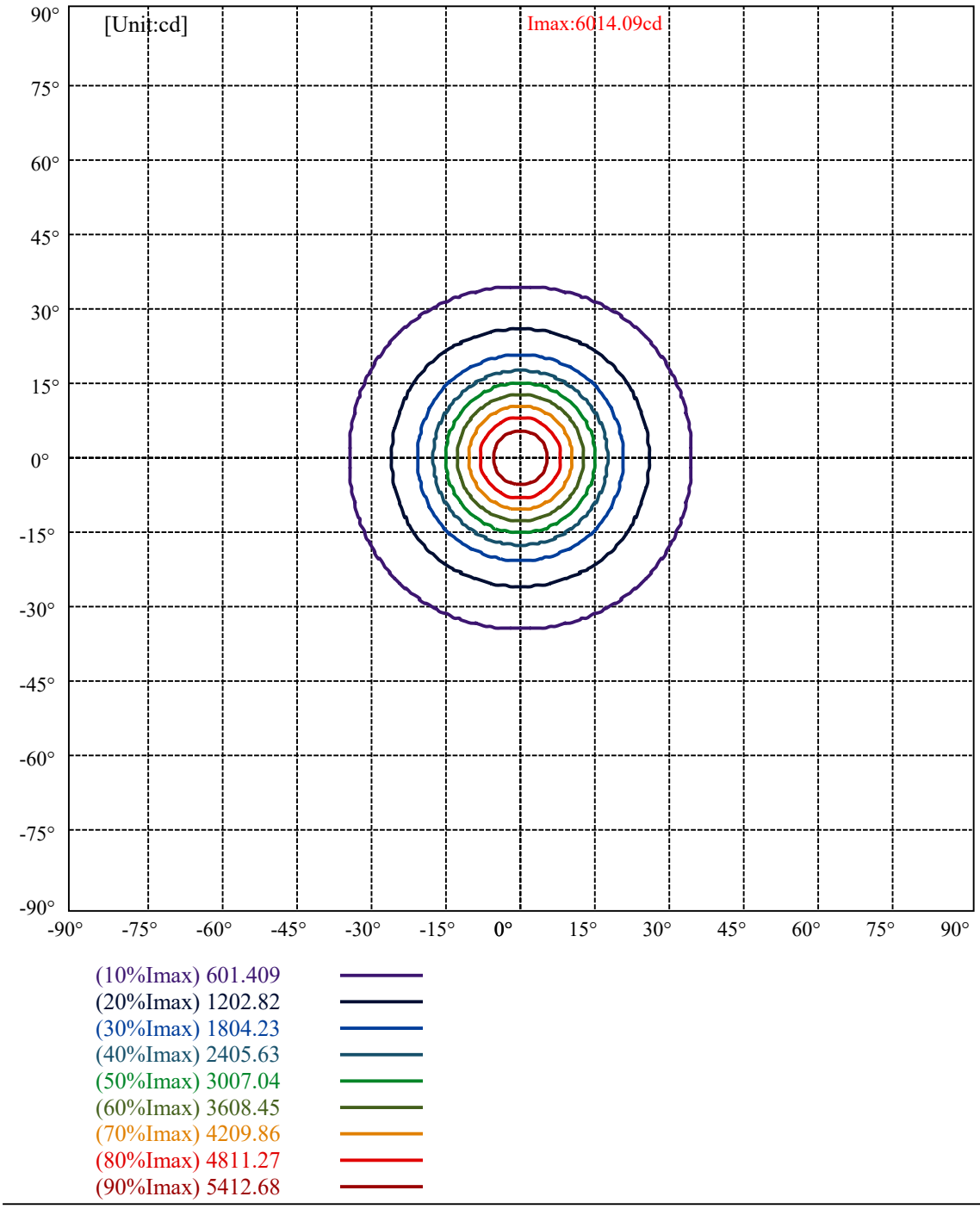





Equipment: gms1980 Date: 2017/5/16 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.42

ISO-Intensity(V-H)





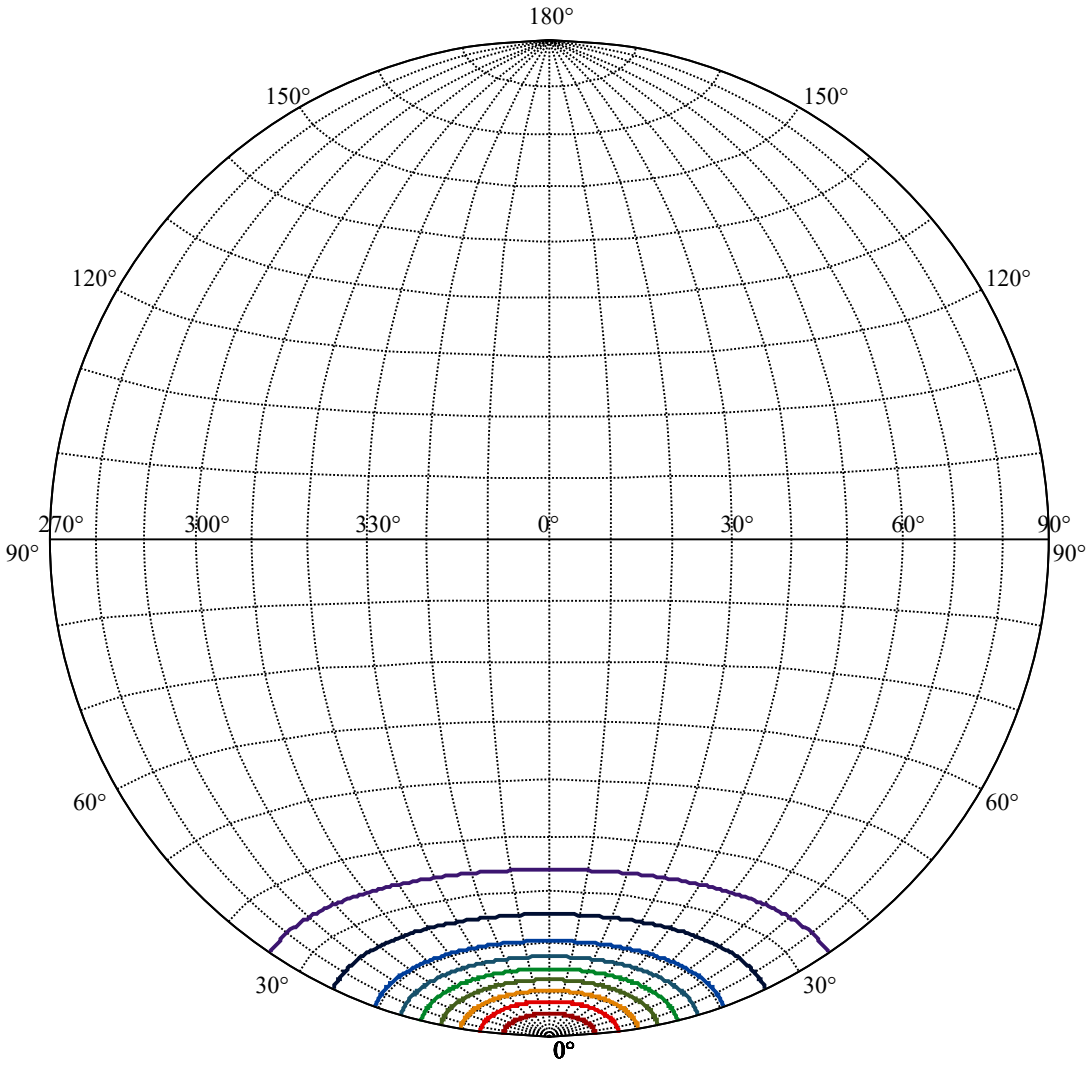

Equipment: gms1980
Temperature(°C): 25.0

Date: 2017/5/16
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

## ISO candela diagram on circular web






House [Unit:cd] Road

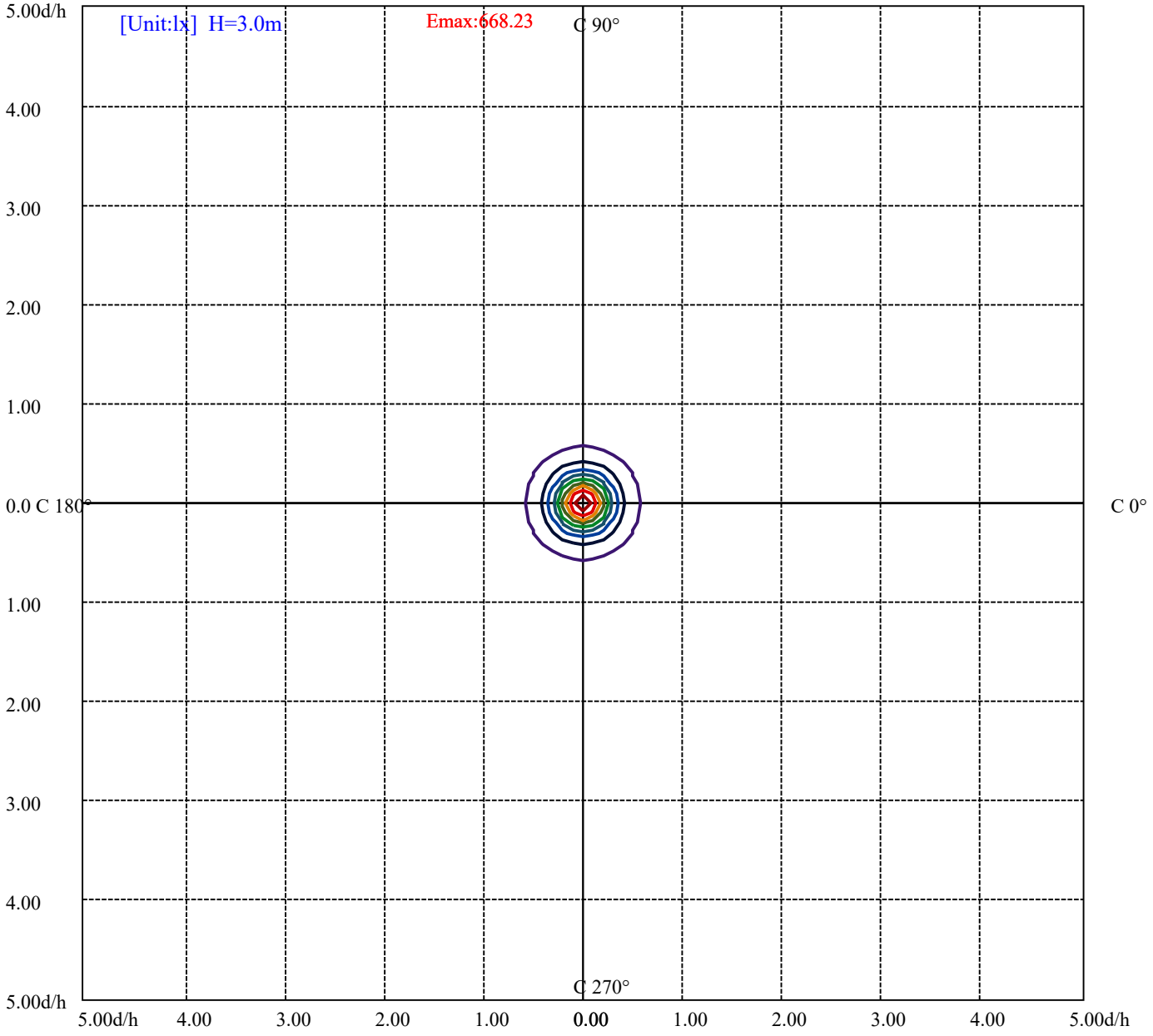
Imax:6014.09

(10%Imax) 601.409
(20%Imax) 1202.82
(30%Imax) 1804.23
(40%Imax) 2405.63
(50%Imax) 3007.04
(60%Imax) 3608.45
(70%Imax) 4209.86
(80%Imax) 4811.27
(90%Imax) 5412.68

Equipment: gms1980 Date: 2017/5/16 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.42

## ISO illuminance diagram



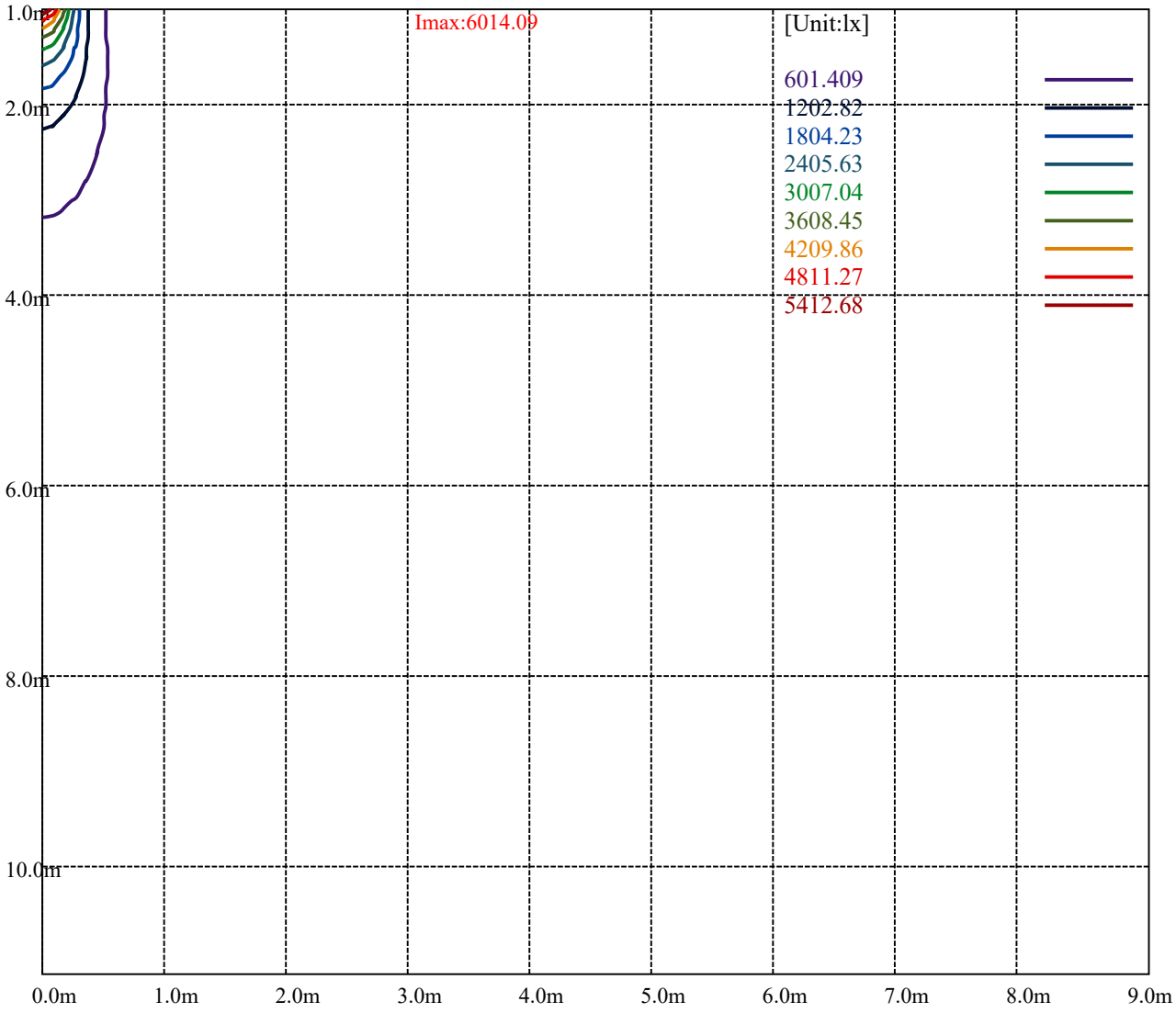



(10%Emax) 66.82311
(20%Emax) 133.6467
(30%Emax) 200.4689
(40%Emax) 267.2922
(50%Emax) 334.1156
(60%Emax) 400.9389
(70%Emax) 467.7622
(80%Emax) 534.5856
(90%Emax) 601.4078

Equipment: gms1980
Temperature(°C): 25.0
Date: 2017/5/16
Humidity(%): 60.0%
Operator: NT07
Distance(m): 7.42

## Space ISO Lux diagram






Equipment: gms1980
Temperature(°C): 25.0

Date: 2017/5/16
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

## Luminance Limitting Curve(no luminous side)



Luminance Table

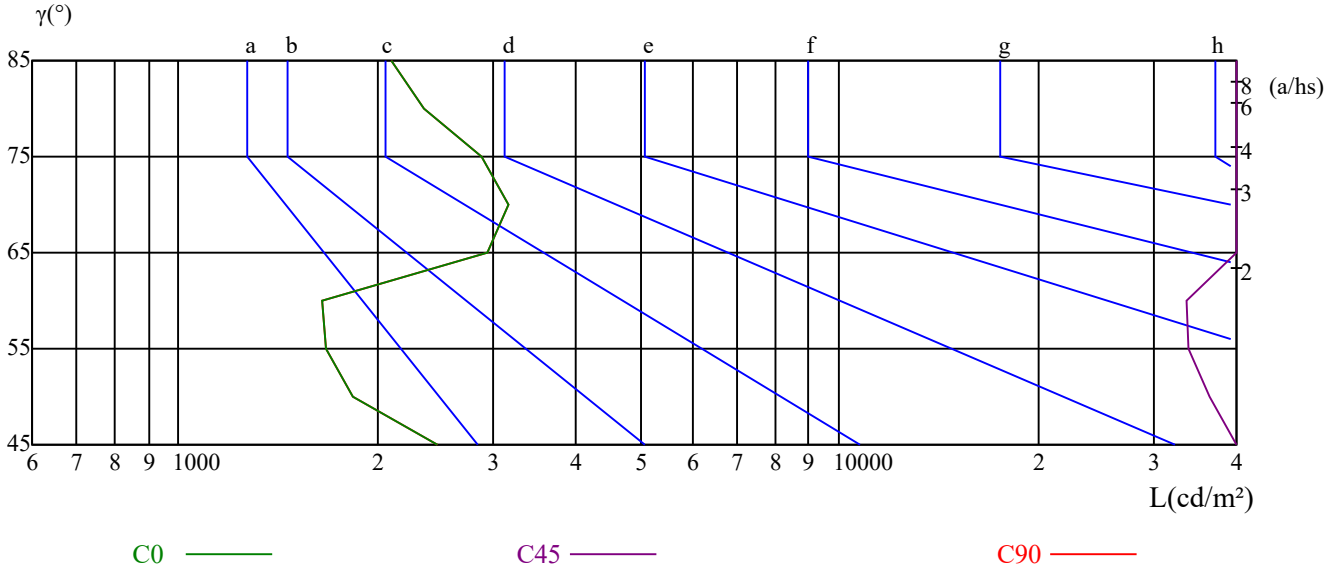
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|---|---|---|---|---|---|---|---|---|---|
| C0 | 2469 | 1840 | 1672 | 1654 | 2941 | 3157 | 2874 | 2346 | 2103 |
| C45 | 49497 | 36316 | 33780 | 33685 | 53952 | 59734 | 54992 | 44592 | 39947 |
| C90 | 2469 | 1840 | 1672 | 1654 | 2941 | 3157 | 2874 | 2346 | 2103 |

| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|---|---|---|---|---|---|---|---|---|
| 7387 | 7387 | 169329 | 10437 | 10437 | 259652 | 19053 | 19053 | 495269 |

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 |

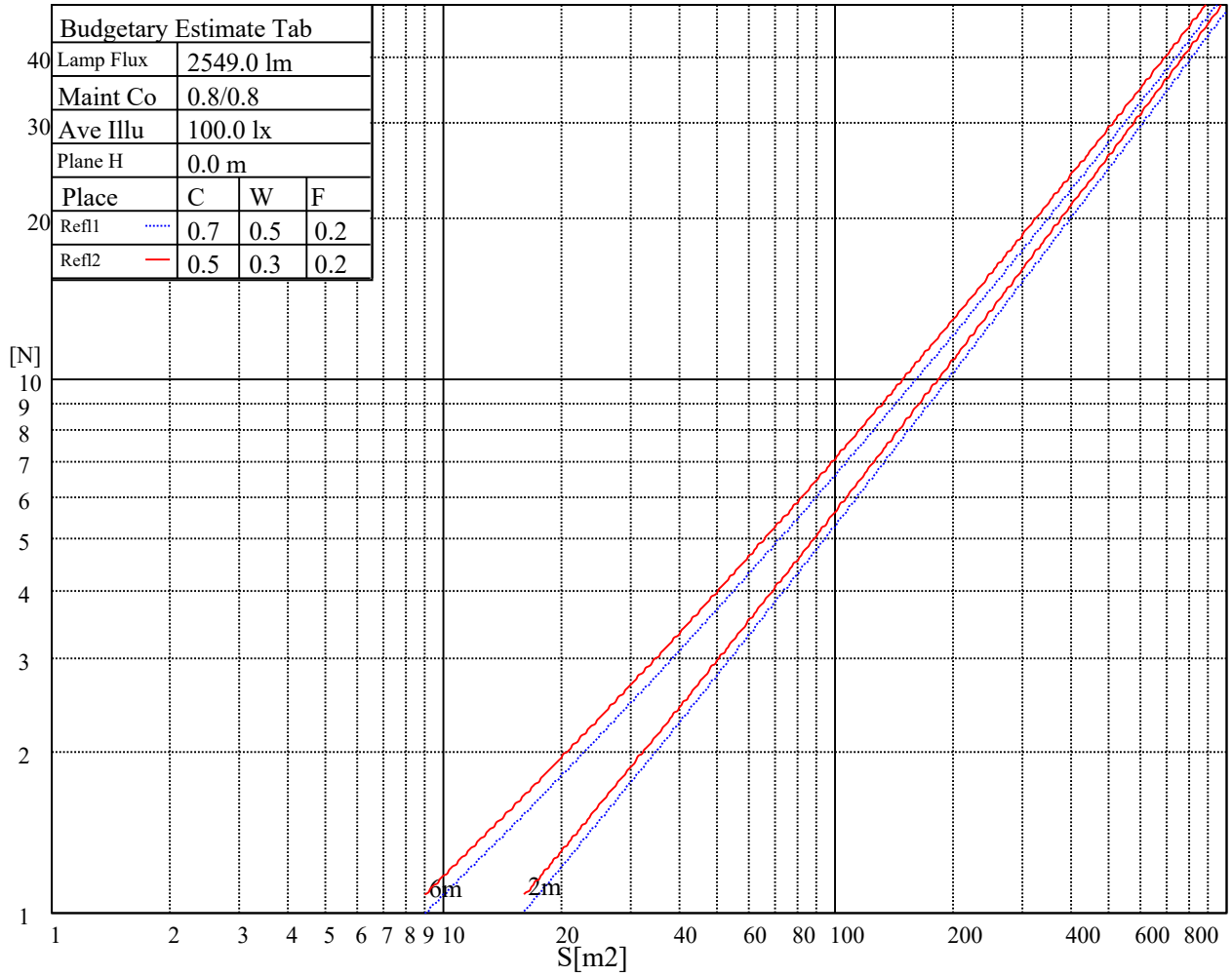
Luminance Limitting Curve




Equipment: gms1980 Date: 2017/5/16 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.42

## Budgetary Estimate Table






Equipment: gms1980 Date: 2017/5/16 Operator: NT07
Temperature(°C): 25.0 Humidity(%): 60.0% Distance(m): 7.42

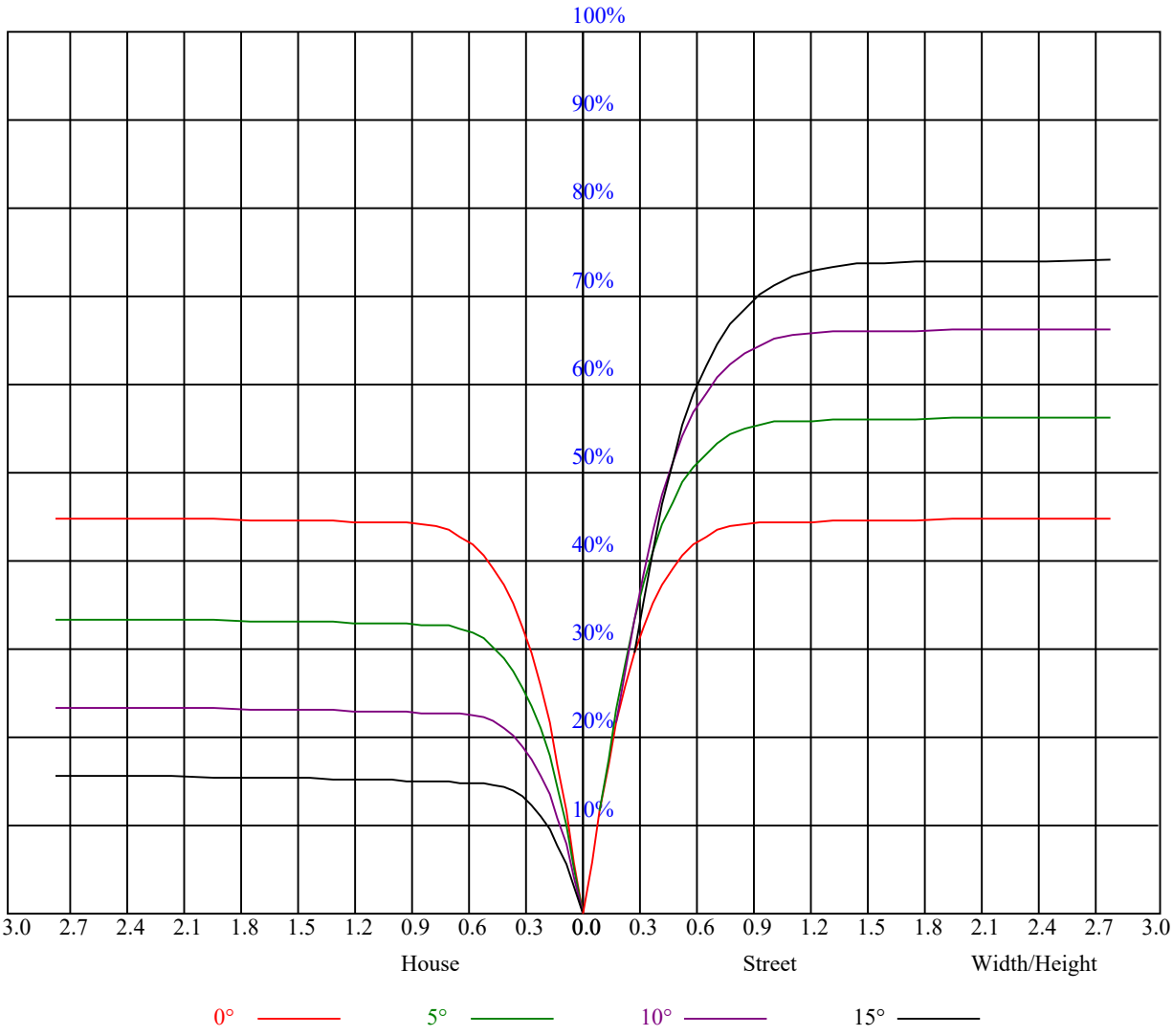
## Utilization factor table for indoor luminaire



| 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 | 1.08 | 1.08 | 1.08 | 1.05 | 1.05 | 1.05 | 1.01 | 1.01 | 1.01 | 0.96 | 0.96 | 0.96 | 0.92 | 0.92 | 0.92 | 0.90 |
| 1 | 1.01 | 0.99 | 0.97 | 0.99 | 0.97 | 0.95 | 0.95 | 0.94 | 0.92 | 0.92 | 0.91 | 0.89 | 0.89 | 0.88 | 0.87 | 0.85 |
| 2 | 0.95 | 0.91 | 0.88 | 0.93 | 0.90 | 0.87 | 0.90 | 0.88 | 0.86 | 0.87 | 0.85 | 0.84 | 0.85 | 0.83 | 0.82 | 0.81 |
| 3 | 0.89 | 0.85 | 0.82 | 0.88 | 0.84 | 0.81 | 0.86 | 0.83 | 0.80 | 0.84 | 0.81 | 0.79 | 0.82 | 0.79 | 0.78 | 0.76 |
| 4 | 0.84 | 0.80 | 0.77 | 0.83 | 0.79 | 0.76 | 0.82 | 0.78 | 0.75 | 0.80 | 0.77 | 0.74 | 0.78 | 0.76 | 0.74 | 0.72 |
| 5 | 0.80 | 0.76 | 0.72 | 0.79 | 0.75 | 0.72 | 0.78 | 0.74 | 0.71 | 0.76 | 0.73 | 0.71 | 0.75 | 0.72 | 0.70 | 0.69 |
| 6 | 0.76 | 0.72 | 0.68 | 0.76 | 0.71 | 0.68 | 0.74 | 0.70 | 0.68 | 0.73 | 0.70 | 0.67 | 0.72 | 0.69 | 0.67 | 0.66 |
| 7 | 0.73 | 0.68 | 0.65 | 0.72 | 0.68 | 0.65 | 0.71 | 0.67 | 0.64 | 0.70 | 0.67 | 0.64 | 0.69 | 0.66 | 0.64 | 0.63 |
| 8 | 0.70 | 0.65 | 0.62 | 0.69 | 0.65 | 0.62 | 0.68 | 0.64 | 0.61 | 0.67 | 0.64 | 0.61 | 0.66 | 0.63 | 0.61 | 0.60 |
| 9 | 0.67 | 0.62 | 0.59 | 0.66 | 0.62 | 0.59 | 0.65 | 0.61 | 0.59 | 0.65 | 0.61 | 0.58 | 0.64 | 0.61 | 0.58 | 0.57 |
| 10 | 0.64 | 0.59 | 0.56 | 0.64 | 0.59 | 0.56 | 0.63 | 0.59 | 0.56 | 0.62 | 0.59 | 0.56 | 0.62 | 0.58 | 0.56 | 0.55 |

## Coefficient Utilization Curve






| | | |
|---|---|---|
| Equipment: gms1980 | Date: 2017/5/16 | Operator: NT07 |
| Temperature(°C): 25.0 | Humidity(%): 60.0% | Distance(m): 7.42 |

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 | 6023.17 | 5986.28 | 5884.98 | 5760.55 | 5563.45 | 5347.63 | 5162.09 | 4894.51 | 4667.68 |
| 90.0 | 6005.00 | 6033.63 | 6016.01 | 5954.35 | 5864.61 | 5717.06 | 5521.61 | 5317.90 | 5104.28 |
| 180.0 | 6023.17 | 6025.37 | 5987.93 | 5890.48 | 5772.11 | 5632.27 | 5450.03 | 5184.66 | 4957.28 |
| 270.0 | 6005.00 | 5929.57 | 5824.97 | 5655.94 | 5448.38 | 5238.62 | 5034.36 | 4762.93 | 4527.29 |
| 360.0 | 6023.17 | 5986.28 | 5884.98 | 5760.55 | 5563.45 | 5347.63 | 5162.09 | 4894.51 | 4667.68 |

| C/γ(°) | 9.0 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 4438.65 | 4139.69 | 3897.99 | 3649.69 | 3333.67 | 3082.61 | 2836.51 | 2543.06 | 2331.64 |
| 90.0 | 4821.29 | 4587.30 | 4351.66 | 4084.63 | 3803.85 | 3550.59 | 3272.55 | 2992.32 | 2750.62 |
| 180.0 | 4724.39 | 4425.98 | 4181.53 | 3901.85 | 3655.19 | 3372.20 | 3120.60 | 2848.07 | 2613.53 |
| 270.0 | 4291.10 | 3989.94 | 3736.13 | 3480.12 | 3200.98 | 2927.90 | 2688.40 | 2438.45 | 2240.80 |
| 360.0 | 4438.65 | 4139.69 | 3897.99 | 3649.69 | 3333.67 | 3082.61 | 2836.51 | 2543.06 | 2331.64 |

| C/γ(°) | 18.0 | 19.0 | 20.0 | 21.0 | 22.0 | 23.0 | 24.0 | 25.0 | 26.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 2139.49 | 1942.94 | 1768.96 | 1634.62 | 1500.29 | 1382.47 | 1292.72 | 1205.74 | 1136.91 |
| 90.0 | 2501.21 | 2278.23 | 2071.22 | 1875.77 | 1730.42 | 1582.87 | 1454.04 | 1352.74 | 1267.40 |
| 180.0 | 2373.48 | 2149.95 | 1971.02 | 1788.78 | 1632.97 | 1512.40 | 1403.94 | 1289.97 | 1215.09 |
| 270.0 | 2037.09 | 1849.90 | 1708.40 | 1563.05 | 1436.97 | 1340.62 | 1256.39 | 1150.68 | 1097.93 |
| 360.0 | 2139.49 | 1942.94 | 1768.96 | 1634.62 | 1500.29 | 1382.47 | 1292.72 | 1205.74 | 1136.91 |

| C/γ(°) | 27.0 | 28.0 | 29.0 | 30.0 | 31.0 | 32.0 | 33.0 | 34.0 | 35.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 1070.85 | 1006.98 | 944.22 | 877.60 | 795.56 | 727.85 | 659.58 | 571.49 | 499.36 |
| 90.0 | 1178.21 | 1115.44 | 1058.73 | 984.41 | 903.48 | 833.55 | 757.58 | 685.45 | 610.02 |
| 180.0 | 1085.88 | 1072.00 | 1010.12 | 943.89 | 867.36 | 789.56 | 717.16 | 638.21 | 568.07 |
| 270.0 | 1040.51 | 970.20 | 894.67 | 827.17 | 756.36 | 670.92 | 603.14 | 526.28 | 457.96 |
| 360.0 | 1070.85 | 1006.98 | 944.22 | 877.60 | 795.56 | 727.85 | 659.58 | 571.49 | 499.36 |

| C/γ(°) | 36.0 | 37.0 | 38.0 | 39.0 | 40.0 | 41.0 | 42.0 | 43.0 | 44.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 427.24 | 346.86 | 278.03 | 202.77 | 137.75 | 87.21 | 43.82 | 23.51 | 17.07 |
| 90.0 | 538.45 | 470.18 | 395.30 | 319.88 | 279.69 | 189.78 | 123.22 | 68.49 | 36.83 |
| 180.0 | 487.85 | 410.56 | 345.04 | 273.47 | 205.75 | 148.05 | 96.95 | 47.07 | 27.97 |
| 270.0 | 382.97 | 316.24 | 241.15 | 171.17 | 115.67 | 64.42 | 34.30 | 22.57 | 16.57 |
| 360.0 | 427.24 | 346.86 | 278.03 | 202.77 | 137.75 | 87.21 | 43.82 | 23.51 | 17.07 |

| C/γ(°) | 45.0 | 46.0 | 47.0 | 48.0 | 49.0 | 50.0 | 51.0 | 52.0 | 53.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 13.38 | 13.27 | 13.32 | 13.21 | 11.67 | 11.51 | 11.34 | 11.12 | 10.96 |
| 90.0 | 23.51 | 16.41 | 14.04 | 14.04 | 14.37 | 14.31 | 13.21 | 13.16 | 12.88 |
| 180.0 | 21.75 | 16.63 | 14.37 | 14.31 | 14.31 | 14.26 | 14.15 | 13.82 | 13.49 |
| 270.0 | 13.82 | 13.49 | 13.27 | 13.16 | 13.05 | 12.88 | 12.66 | 12.39 | 12.06 |
| 360.0 | 13.38 | 13.27 | 13.32 | 13.21 | 11.67 | 11.51 | 11.34 | 11.12 | 10.96 |

| C/γ(°) | 54.0 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 | 60.0 | 61.0 | 62.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 10.85 | 10.68 | 10.57 | 10.41 | 10.24 | 10.19 | 10.79 | 12.50 | 13.76 |
| 90.0 | 12.72 | 12.22 | 11.89 | 11.56 | 11.29 | 11.12 | 11.07 | 12.06 | 13.87 |
| 180.0 | 12.99 | 12.61 | 12.28 | 12.00 | 11.73 | 11.51 | 11.51 | 12.94 | 14.59 |
| 270.0 | 11.67 | 11.34 | 11.01 | 10.79 | 10.57 | 10.46 | 11.34 | 13.32 | 15.97 |
| 360.0 | 10.85 | 10.68 | 10.57 | 10.41 | 10.24 | 10.19 | 10.79 | 12.50 | 13.76 |

| C/γ(°) | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 | 70.0 | 71.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 14.48 | 14.81 | 14.98 | 15.03 | 15.14 | 15.14 | 15.03 | 14.81 | 14.48 |
| 90.0 | 16.24 | 18.33 | 18.99 | 19.32 | 19.71 | 19.93 | 20.04 | 19.99 | 19.77 |
| 180.0 | 16.46 | 18.99 | 21.64 | 22.90 | 23.62 | 23.84 | 23.89 | 23.51 | 23.01 |
| 270.0 | 18.55 | 19.82 | 20.37 | 20.48 | 20.48 | 20.21 | 19.66 | 18.88 | 17.84 |
| 360.0 | 14.48 | 14.81 | 14.98 | 15.03 | 15.14 | 15.14 | 15.03 | 14.81 | 14.48 |

Intensity data(cd)



| C/γ(°) | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0 | 80.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 14.15 | 13.76 | 13.27 | 12.55 | 12.06 | 11.62 | 11.23 | 10.96 | 10.68 |
| 90.0 | 19.55 | 19.21 | 18.77 | 18.22 | 17.56 | 16.52 | 15.31 | 13.98 | 13.21 |
| 180.0 | 22.30 | 21.58 | 20.92 | 20.26 | 18.83 | 17.62 | 16.52 | 14.98 | 13.43 |
| 270.0 | 16.74 | 15.91 | 15.20 | 14.70 | 14.26 | 13.76 | 13.32 | 12.88 | 12.22 |
| 360.0 | 14.15 | 13.76 | 13.27 | 12.55 | 12.06 | 11.62 | 11.23 | 10.96 | 10.68 |

| C/γ(°) | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 10.35 | 10.13 | 9.97 | 9.69 | 9.41 | 8.70 | 8.42 | 8.42 | 8.37 |
| 90.0 | 12.55 | 12.00 | 11.40 | 10.90 | 10.57 | 10.13 | 9.91 | 8.86 | 8.42 |
| 180.0 | 12.72 | 12.17 | 11.45 | 10.79 | 10.24 | 9.91 | 9.69 | 9.25 | 8.48 |
| 270.0 | 11.73 | 11.07 | 10.57 | 10.35 | 10.19 | 9.86 | 8.48 | 8.37 | 8.37 |
| 360.0 | 10.35 | 10.13 | 9.97 | 9.69 | 9.41 | 8.70 | 8.42 | 8.42 | 8.37 |

| C/γ(°) | 90.0 |
|---|---|
| 0.0 | 8.42 |
| 90.0 | 8.37 |
| 180.0 | 8.37 |
| 270.0 | 8.31 |
| 360.0 | 8.42 |