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NATA

LumCAT: 2-1701-A
Luminaire: 99.02.73.173+92.76.365.00
Report No: NATA0100
Test No: GC2018101117
LampCAT: CREE CXA3050
Lamp flux(lm): 2641.0
Number of Lamps: 1
Length(mm): 71
Phm Type: C

Voltage(V): 34.8000
Current(A): 0.6000
Power (W): 20.8800
PF: 0.0000
Ballast type: DC
Width(mm): 71
Height(mm): 0

Photometric Results

Lumens(lm): 2367.17
Efficiency(%): 89.63%
Lumens(lm)/Power(W): 113.45
Central intensity(cd): 7158.374
Maximum intensity(cd): 7158.374
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=25.6
 [C90/270]Total=25.6
Field angle(10%Imax): [C0/180]Total=66.6
 [C90/270]Total=66.6
Maximum s/h(1/2): C0_180=0.44 C90_270=0.44
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(%): 89.69%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.461%

Equipment:
Temperature(°C): 25.0

Date: 2018/10/11
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.50

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0 | 7158.375 | 1.713 | 1.713 | .065% | .072% |
| 1.0 | 7155.773 | 13.695 | 15.408 | .519% | .651% |
| 2.0 | 7133.906 | 27.302 | 42.71 | 1.034% | 1.804% |
| 3.0 | 7088.344 | 40.681 | 83.391 | 1.540% | 3.523% |
| 4.0 | 7007.695 | 53.606 | 136.997 | 2.030% | 5.787% |
| 5.0 | 6878.953 | 65.746 | 202.743 | 2.489% | 8.565% |
| 6.0 | 6683.133 | 76.607 | 279.35 | 2.901% | 11.801% |
| 7.0 | 6390.844 | 85.409 | 364.759 | 3.234% | 15.409% |
| 8.0 | 6042.867 | 92.225 | 456.984 | 3.492% | 19.305% |
| 9.0 | 5568.398 | 95.524 | 552.509 | 3.617% | 23.341% |
| 10.0 | 5049.000 | 96.145 | 648.654 | 3.640% | 27.402% |
| 11.0 | 4525.453 | 94.692 | 743.346 | 3.585% | 31.402% |
| 12.0 | 3988.266 | 90.932 | 834.277 | 3.443% | 35.244% |
| 13.0 | 3467.461 | 85.536 | 919.814 | 3.239% | 38.857% |
| 14.0 | 3024.773 | 80.245 | 1000.059 | 3.038% | 42.247% |
| 15.0 | 2655.211 | 75.361 | 1075.42 | 2.854% | 45.431% |
| 16.0 | 2335.852 | 70.605 | 1146.025 | 2.673% | 48.413% |
| 17.0 | 2084.484 | 66.832 | 1212.857 | 2.531% | 51.237% |
| 18.0 | 1866.938 | 63.265 | 1276.122 | 2.395% | 53.909% |
| 19.0 | 1703.180 | 60.807 | 1336.929 | 2.302% | 56.478% |
| 20.0 | 1562.203 | 58.592 | 1395.522 | 2.219% | 58.953% |
| 21.0 | 1437.891 | 56.508 | 1452.029 | 2.140% | 61.340% |
| 22.0 | 1345.711 | 55.281 | 1507.311 | 2.093% | 63.676% |
| 23.0 | 1264.359 | 54.175 | 1561.486 | 2.051% | 65.964% |
| 24.0 | 1190.700 | 53.109 | 1614.595 | 2.011% | 68.208% |
| 25.0 | 1123.362 | 52.062 | 1666.657 | 1.971% | 70.407% |
| 26.0 | 1085.927 | 52.203 | 1718.86 | 1.977% | 72.613% |
| 27.0 | 1038.769 | 51.715 | 1770.575 | 1.958% | 74.797% |
| 28.0 | 999.113 | 51.437 | 1822.012 | 1.948% | 76.970% |
| 29.0 | 958.655 | 50.967 | 1872.978 | 1.930% | 79.123% |
| 30.0 | 912.888 | 50.054 | 1923.032 | 1.895% | 81.238% |
| 31.0 | 858.389 | 48.481 | 1971.514 | 1.836% | 83.286% |
| 32.0 | 799.875 | 46.482 | 2017.996 | 1.760% | 85.249% |
| 33.0 | 736.144 | 43.967 | 2061.962 | 1.665% | 87.107% |
| 34.0 | 671.070 | 41.151 | 2103.113 | 1.558% | 88.845% |
| 35.0 | 605.749 | 38.101 | 2141.214 | 1.443% | 90.455% |
| 36.0 | 533.658 | 34.398 | 2175.612 | 1.302% | 91.908% |
| 37.0 | 468.063 | 30.890 | 2206.502 | 1.170% | 93.213% |

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0 | 397.927 | 26.866 | 2233.368 | 1.017% | 94.348% |
| 39.0 | 329.231 | 22.721 | 2256.089 | .860% | 95.308% |
| 40.0 | 271.083 | 19.108 | 2275.197 | .724% | 96.115% |
| 41.0 | 203.351 | 14.630 | 2289.827 | .554% | 96.733% |
| 42.0 | 145.512 | 10.677 | 2300.504 | .404% | 97.184% |
| 43.0 | 97.397 | 7.284 | 2307.788 | .276% | 97.492% |
| 44.0 | 60.919 | 4.641 | 2312.429 | .176% | 97.688% |
| 45.0 | 34.538 | 2.678 | 2315.107 | .101% | 97.801% |
| 46.0 | 21.923 | 1.729 | 2316.836 | .065% | 97.874% |
| 47.0 | 16.734 | 1.342 | 2318.178 | .051% | 97.931% |
| 48.0 | 14.590 | 1.189 | 2319.367 | .045% | 97.981% |
| 49.0 | 13.352 | 1.105 | 2320.473 | .042% | 98.027% |
| 50.0 | 12.804 | 1.076 | 2321.548 | .041% | 98.073% |
| 51.0 | 12.523 | 1.067 | 2322.615 | .040% | 98.118% |
| 52.0 | 12.305 | 1.063 | 2323.679 | .040% | 98.163% |
| 53.0 | 12.129 | 1.062 | 2324.741 | .040% | 98.208% |
| 54.0 | 11.904 | 1.056 | 2325.797 | .040% | 98.252% |
| 55.0 | 11.770 | 1.057 | 2326.854 | .040% | 98.297% |
| 56.0 | 11.637 | 1.058 | 2327.912 | .040% | 98.342% |
| 57.0 | 11.630 | 1.070 | 2328.982 | .040% | 98.387% |
| 58.0 | 11.784 | 1.096 | 2330.078 | .041% | 98.433% |
| 59.0 | 11.946 | 1.123 | 2331.201 | .043% | 98.481% |
| 60.0 | 12.016 | 1.141 | 2332.342 | .043% | 98.529% |
| 61.0 | 12.052 | 1.156 | 2333.498 | .044% | 98.578% |
| 62.0 | 12.066 | 1.168 | 2334.666 | .044% | 98.627% |
| 63.0 | 12.066 | 1.179 | 2335.845 | .045% | 98.677% |
| 64.0 | 12.094 | 1.192 | 2337.037 | .045% | 98.727% |
| 65.0 | 12.122 | 1.205 | 2338.242 | .046% | 98.778% |
| 66.0 | 12.115 | 1.214 | 2339.455 | .046% | 98.829% |
| 67.0 | 12.073 | 1.219 | 2340.674 | .046% | 98.881% |
| 68.0 | 12.030 | 1.223 | 2341.897 | .046% | 98.932% |
| 69.0 | 11.981 | 1.227 | 2343.124 | .046% | 98.984% |
| 70.0 | 11.897 | 1.226 | 2344.35 | .046% | 99.036% |
| 71.0 | 11.813 | 1.225 | 2345.574 | .046% | 99.088% |
| 72.0 | 11.770 | 1.228 | 2346.802 | .046% | 99.140% |
| 73.0 | 11.686 | 1.225 | 2348.028 | .046% | 99.191% |
| 74.0 | 11.602 | 1.223 | 2349.25 | .046% | 99.243% |
| 75.0 | 11.538 | 1.222 | 2350.473 | .046% | 99.295% |

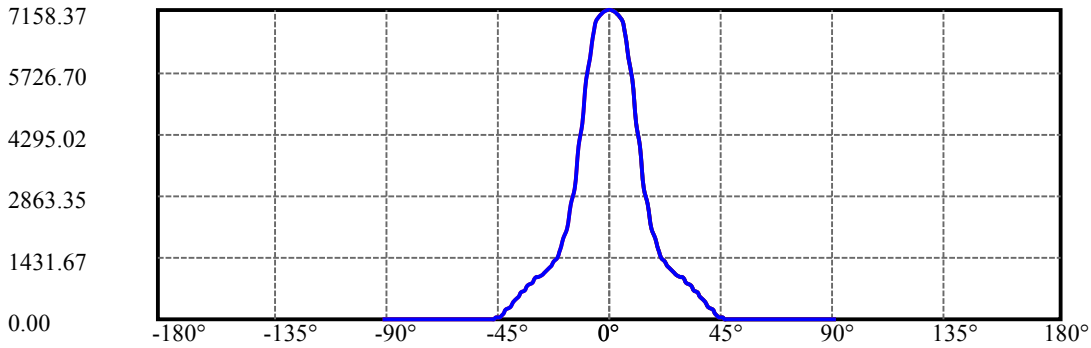
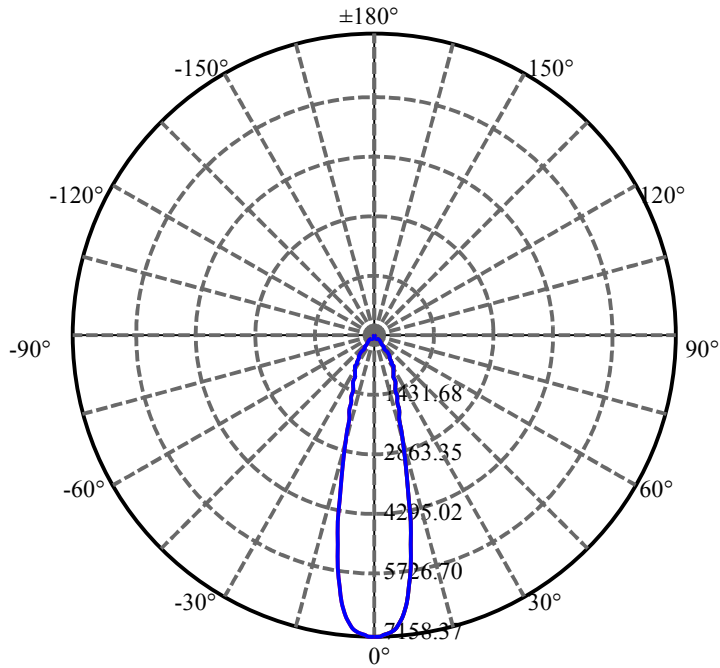
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0 | 11.440 | 1.217 | 2351.69 | .046% | 99.346% |
| 77.0 | 11.363 | 1.214 | 2352.904 | .046% | 99.397% |
| 78.0 | 11.257 | 1.207 | 2354.111 | .046% | 99.448% |
| 79.0 | 11.145 | 1.200 | 2355.311 | .045% | 99.499% |
| 80.0 | 11.046 | 1.193 | 2356.504 | .045% | 99.550% |
| 81.0 | 10.955 | 1.187 | 2357.691 | .045% | 99.600% |
| 82.0 | 10.856 | 1.179 | 2358.869 | .045% | 99.649% |
| 83.0 | 10.744 | 1.169 | 2360.039 | .044% | 99.699% |
| 84.0 | 10.638 | 1.160 | 2361.199 | .044% | 99.748% |
| 85.0 | 10.505 | 1.148 | 2362.347 | .043% | 99.796% |
| 86.0 | 10.371 | 1.135 | 2363.481 | .043% | 99.844% |
| 87.0 | 9.907 | 1.085 | 2364.566 | .041% | 99.890% |
| 88.0 | 9.499 | 1.041 | 2365.607 | .039% | 99.934% |
| 89.0 | 9.485 | 1.040 | 2366.647 | .039% | 99.978% |
| 90.0 | 9.478 | 0.520 | 2367.167 | .020% | 100.000% |

ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|--------|---------|
| 0-30 | 1923.03 | 72.81% | 81.24% |
| 0-40 | 2275.20 | 86.15% | 96.11% |
| 0-60 | 2332.34 | 88.31% | 98.53% |
| 0-90 | 2366.65 | 89.61% | 99.98% |
| 0-120 | 2366.65 | 89.61% | 99.98% |
| 0-180 | 2367.17 | 89.63% | 100.00% |
| 60-90 | 35.45 | 1.34% | 1.50% |
| 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% |
| 0-29.41 | 1893.73 | 71.71% | 80.00% |

ZONAL LUMEN SUMMARY

| | |
|---------|--------|
| 0-10 | 648.65 |
| 10-20 | 746.87 |
| 20-30 | 527.51 |
| 30-40 | 352.16 |
| 40-50 | 46.35 |
| 50-60 | 10.79 |
| 60-70 | 12.01 |
| 70-80 | 12.15 |
| 80-90 | 10.14 |
| 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 |



C0(Max): —————

C0/C180: —————

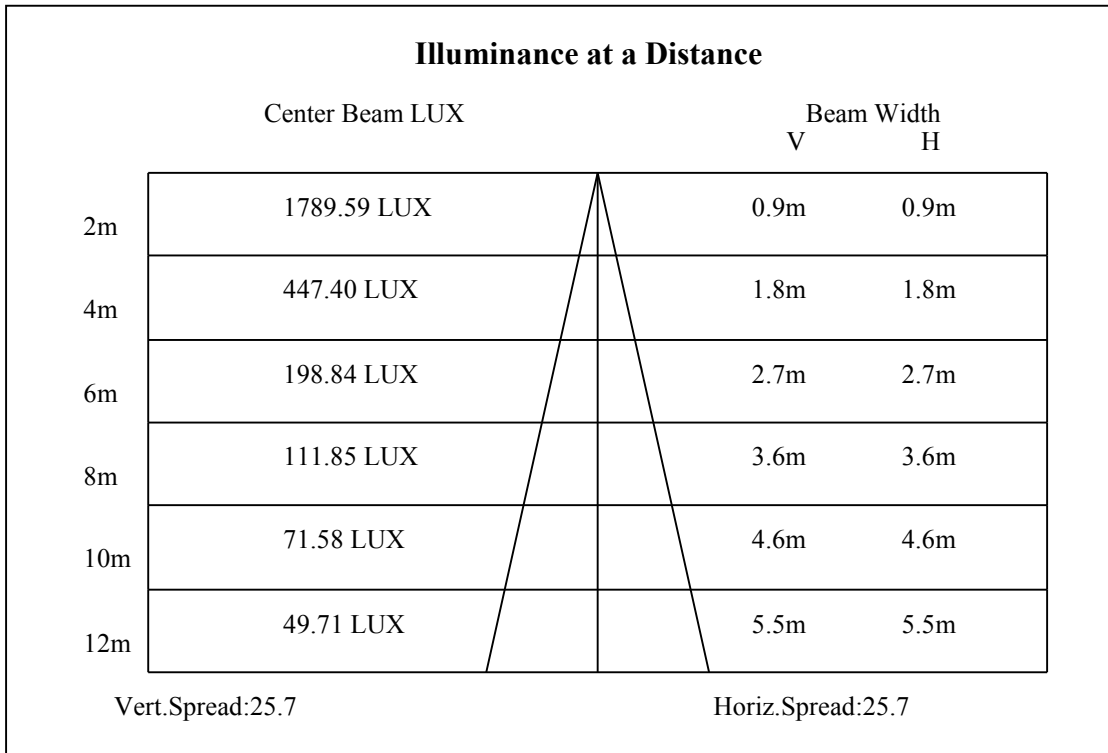
C90/C270: —————

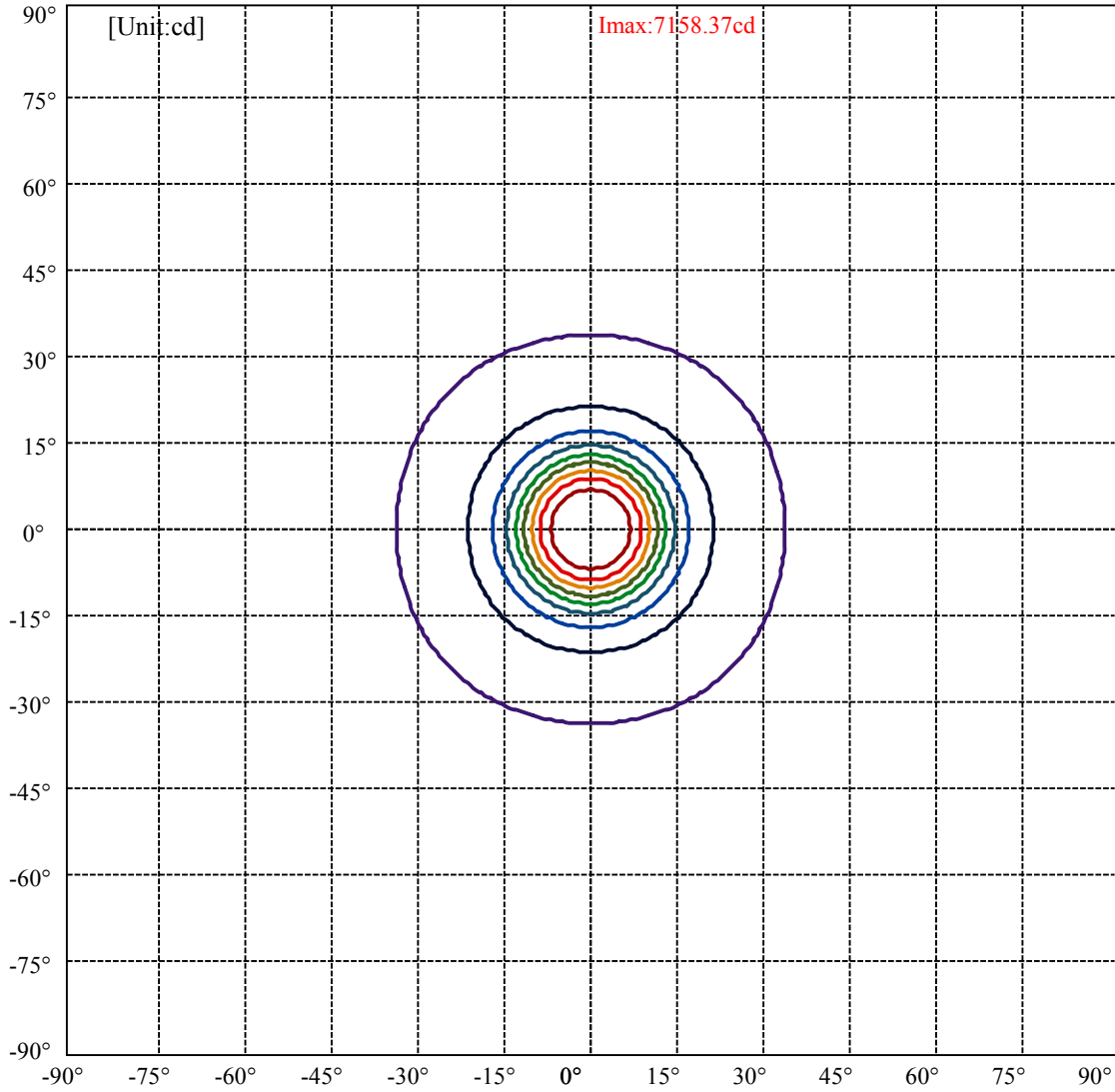
Field angle(10%Imax):C0/180Left:33.3 Right:33.3

:C90/270Left:33.3 Right:33.3

Beam Angle(50%Imax):C0/180Left:12.8 Right:12.8

:C90/270Left:12.8 Right:12.8



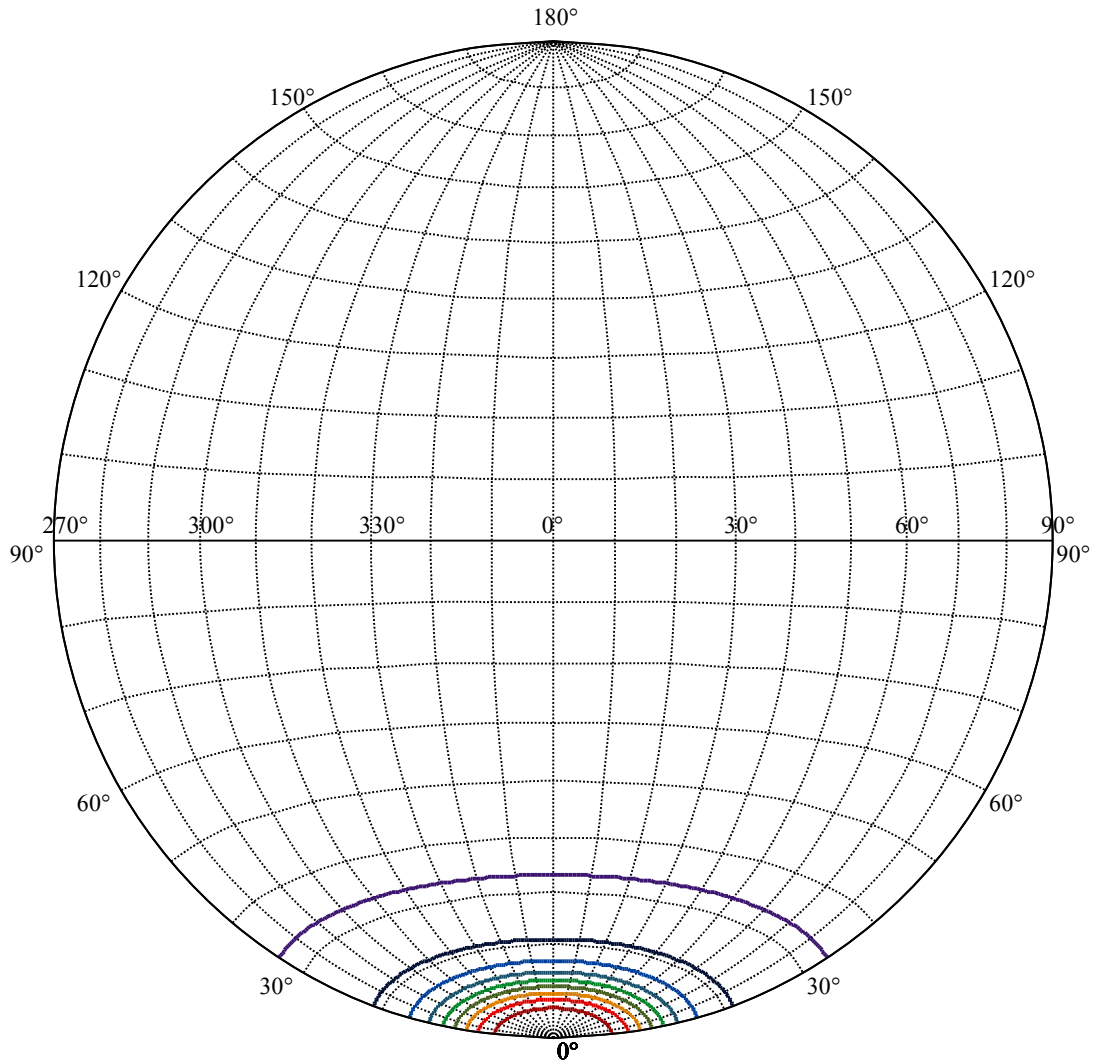


| | |
|-------------------|---|
| (10%Imax) 715.837 | — |
| (20%Imax) 1431.67 | — |
| (30%Imax) 2147.51 | — |
| (40%Imax) 2863.35 | — |
| (50%Imax) 3579.19 | — |
| (60%Imax) 4295.02 | — |
| (70%Imax) 5010.86 | — |
| (80%Imax) 5726.7 | — |
| (90%Imax) 6442.54 | — |

Equipment:
Temperature(°C): 25.0

Date: 2018/10/11
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.50



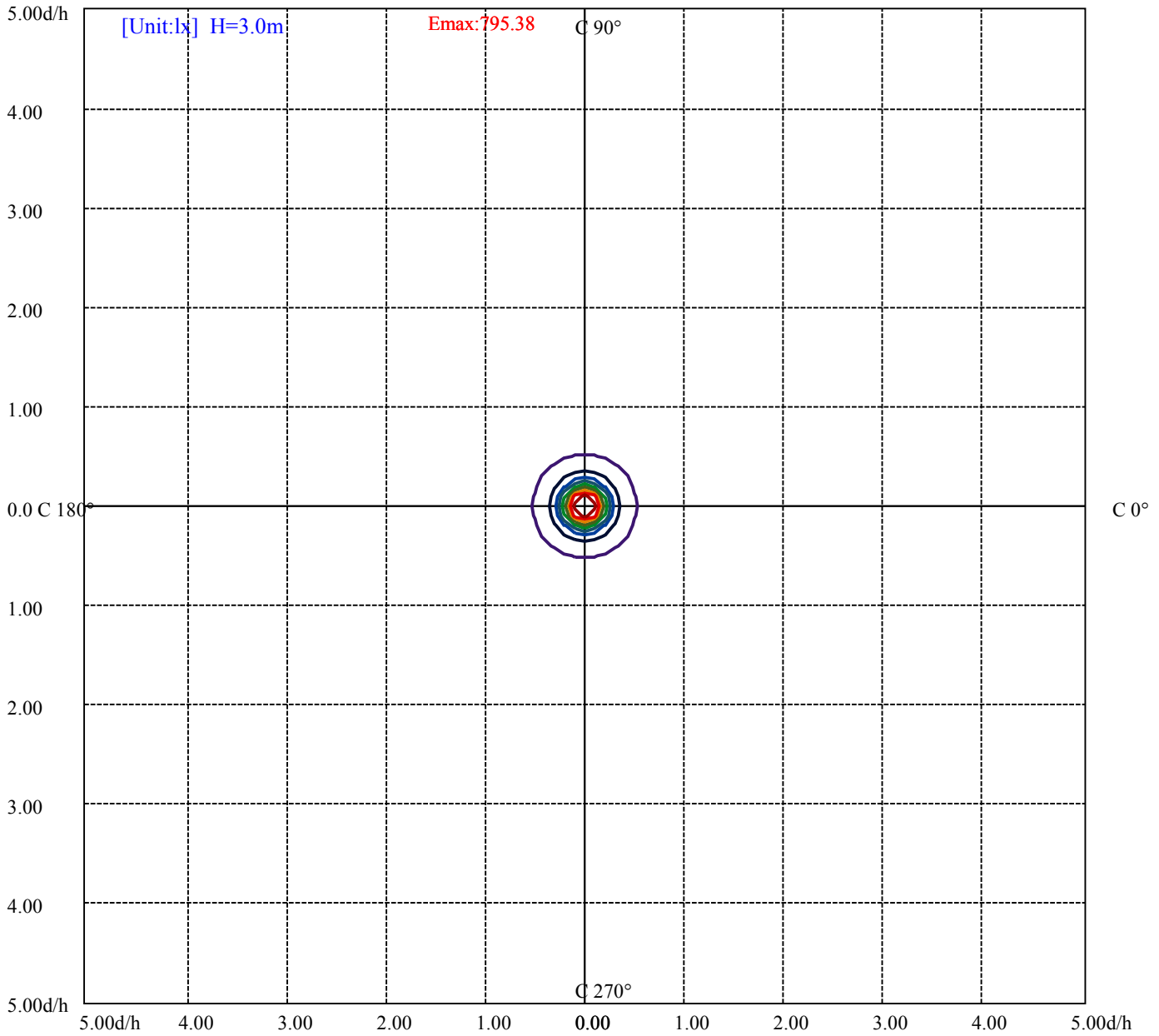
House

[Unit:cd]

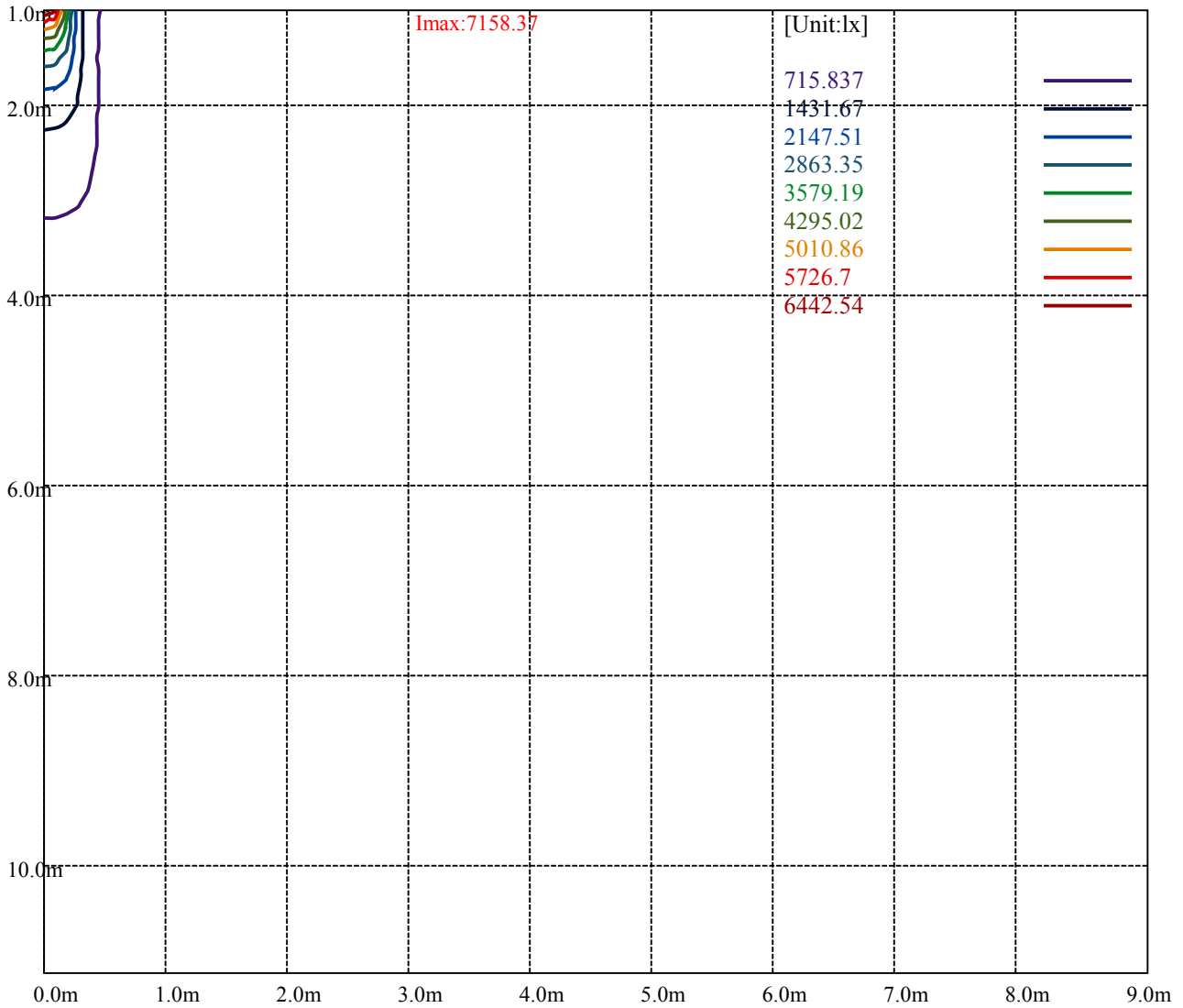
Road

Imax:7158.37

| | |
|-------------------|---|
| (10%Imax) 715.837 | — |
| (20%Imax) 1431.67 | — |
| (30%Imax) 2147.51 | — |
| (40%Imax) 2863.35 | — |
| (50%Imax) 3579.19 | — |
| (60%Imax) 4295.02 | — |
| (70%Imax) 5010.86 | — |
| (80%Imax) 5726.7 | — |
| (90%Imax) 6442.54 | — |



- (10%Emax) 79.53745
- (20%Emax) 159.0744
- (30%Emax) 238.6122
- (40%Emax) 318.15
- (50%Emax) 397.6878
- (60%Emax) 477.2245
- (70%Emax) 556.7622
- (80%Emax) 636.3
- (90%Emax) 715.8378



Luminance Table

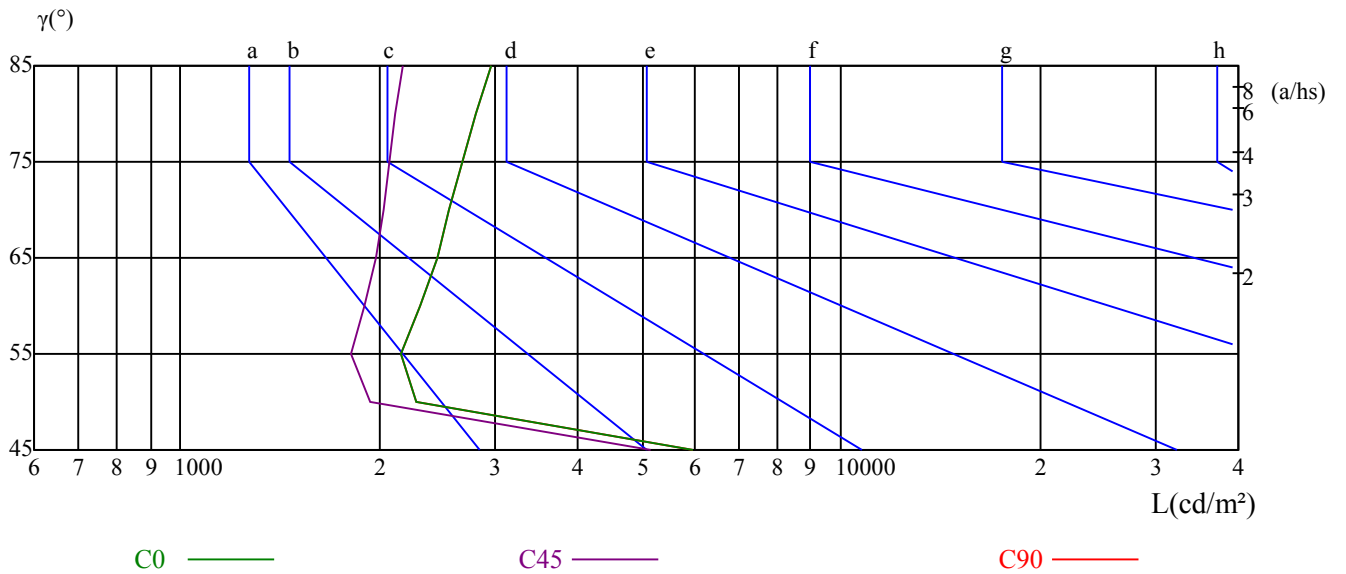
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|----------|------|------|------|------|------|------|------|------|------|
| C0 | 5982 | 2273 | 2160 | 2299 | 2443 | 2553 | 2670 | 2795 | 2958 |
| C45 | 5164 | 1933 | 1808 | 1893 | 1976 | 2025 | 2071 | 2114 | 2170 |
| C90 | 5982 | 2273 | 2160 | 2299 | 2443 | 2553 | 2670 | 2795 | 2958 |

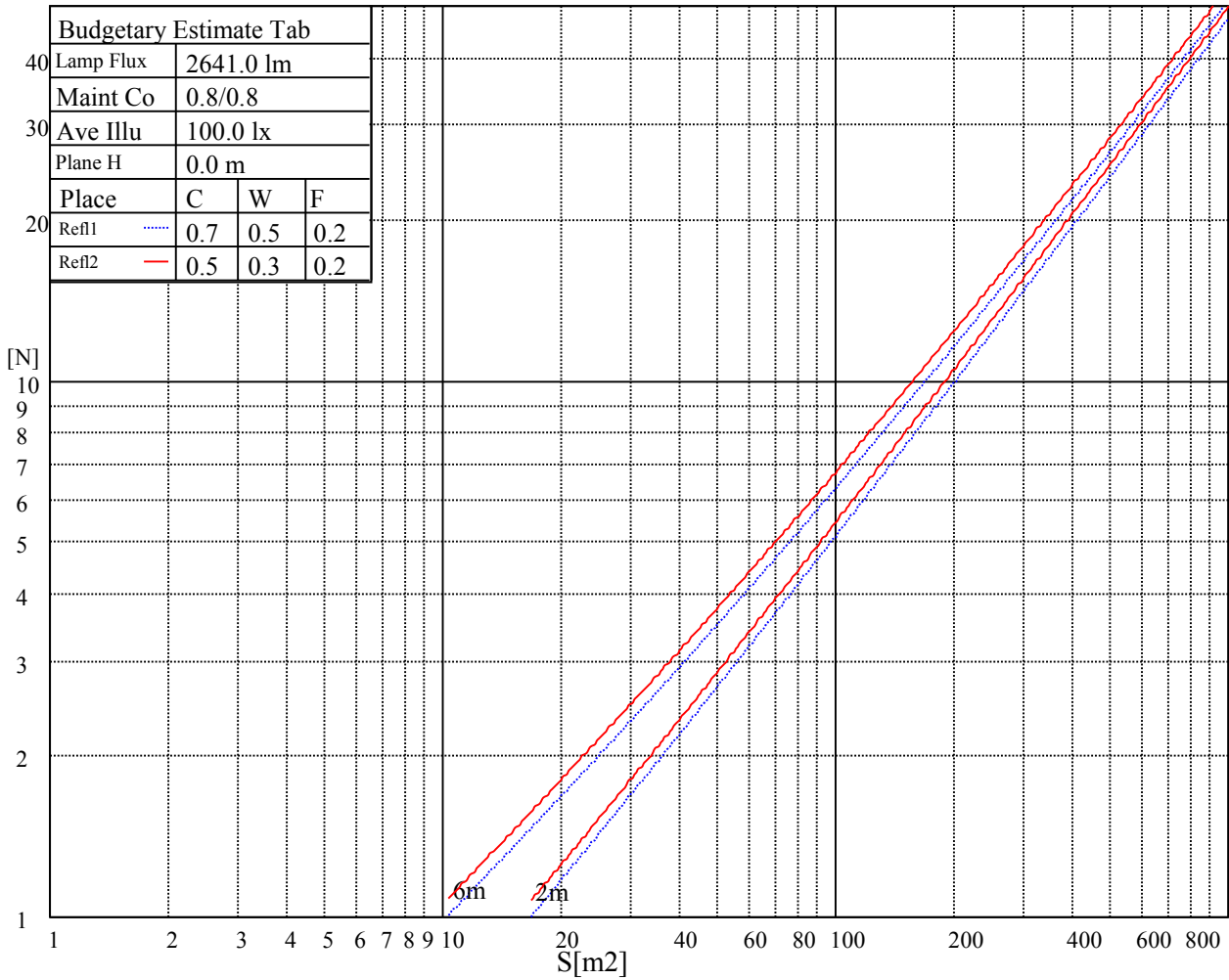
| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 5690 | 5690 | 5690 | 8844 | 8844 | 8844 | 23909 | 23909 | 23909 |

Glare Table

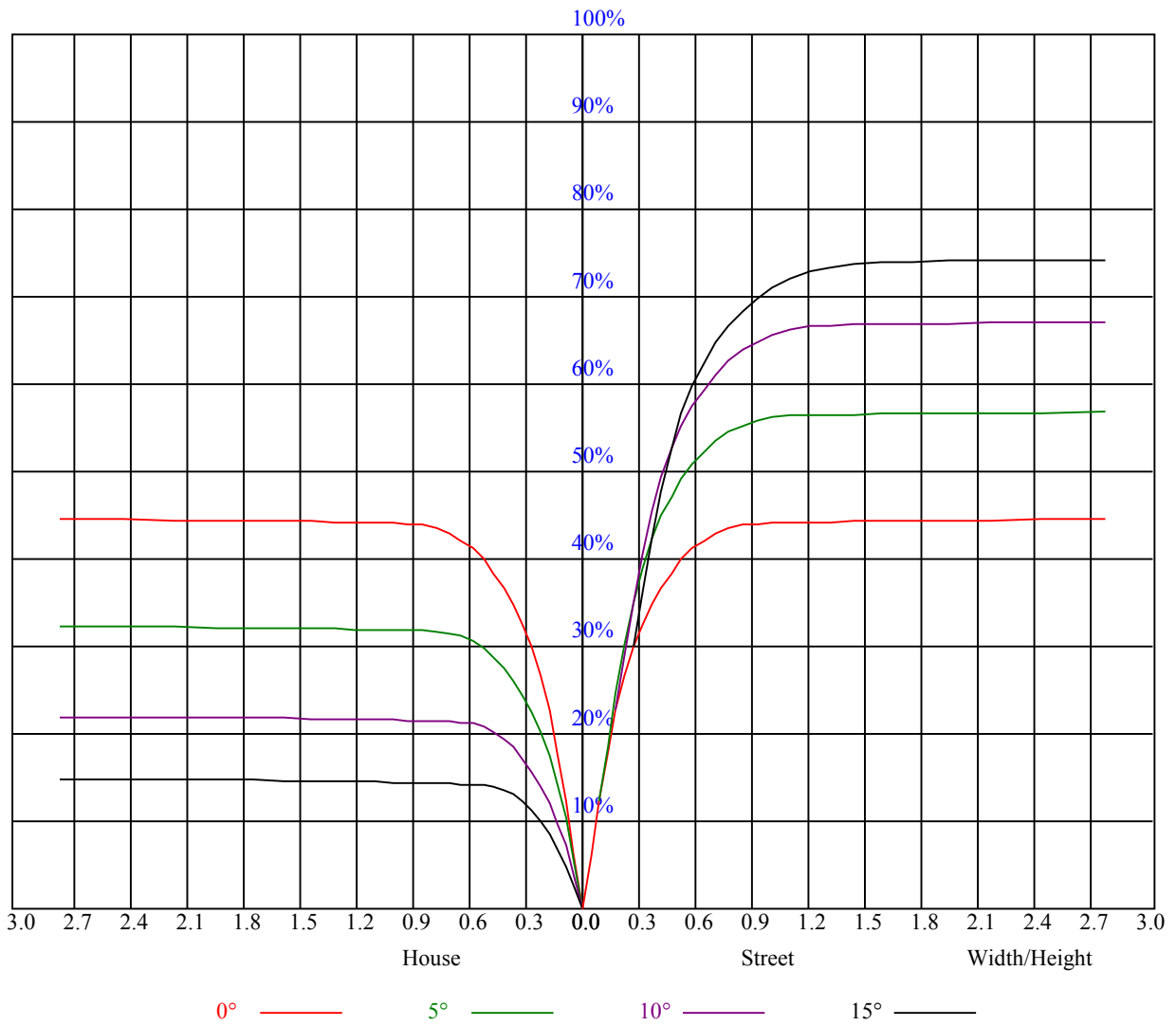
| Glare | Quality | Service Values Illuminance(lx) | | | | | | | |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15 | A | 2000 | 1000 | 500 | <=300 | | | | |
| 1.5 | B | | 2000 | 1000 | 500 | <=300 | | | |
| 1.85 | C | | | 2000 | 1000 | 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 Limiting Curve





| 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 | COEFFICIENTS OF UTILIZATION RHOFC=20 CU | | | | | | | | | | | | | | | |
| 0 | 1.07 | 1.07 | 1.07 | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 0.92 | 0.92 | 0.92 | 0.90 |
| 1 | 1.00 | 0.98 | 0.96 | 0.98 | 0.96 | 0.95 | 0.94 | 0.93 | 0.92 | 0.91 | 0.90 | 0.89 | 0.88 | 0.87 | 0.86 | 0.85 |
| 2 | 0.94 | 0.91 | 0.88 | 0.93 | 0.90 | 0.87 | 0.90 | 0.87 | 0.85 | 0.87 | 0.85 | 0.84 | 0.85 | 0.83 | 0.82 | 0.80 |
| 3 | 0.89 | 0.85 | 0.82 | 0.88 | 0.84 | 0.81 | 0.86 | 0.83 | 0.80 | 0.83 | 0.81 | 0.79 | 0.82 | 0.80 | 0.78 | 0.76 |
| 4 | 0.85 | 0.80 | 0.77 | 0.84 | 0.80 | 0.77 | 0.82 | 0.78 | 0.76 | 0.80 | 0.77 | 0.75 | 0.78 | 0.76 | 0.74 | 0.73 |
| 5 | 0.81 | 0.76 | 0.73 | 0.80 | 0.76 | 0.72 | 0.78 | 0.75 | 0.72 | 0.77 | 0.74 | 0.71 | 0.75 | 0.73 | 0.71 | 0.69 |
| 6 | 0.77 | 0.72 | 0.69 | 0.76 | 0.72 | 0.69 | 0.75 | 0.71 | 0.68 | 0.74 | 0.70 | 0.68 | 0.73 | 0.70 | 0.68 | 0.66 |
| 7 | 0.74 | 0.69 | 0.66 | 0.73 | 0.69 | 0.66 | 0.72 | 0.68 | 0.65 | 0.71 | 0.68 | 0.65 | 0.70 | 0.67 | 0.65 | 0.64 |
| 8 | 0.71 | 0.66 | 0.63 | 0.70 | 0.66 | 0.63 | 0.69 | 0.65 | 0.63 | 0.68 | 0.65 | 0.62 | 0.68 | 0.64 | 0.62 | 0.61 |
| 9 | 0.68 | 0.63 | 0.60 | 0.67 | 0.63 | 0.60 | 0.67 | 0.63 | 0.60 | 0.66 | 0.62 | 0.60 | 0.65 | 0.62 | 0.60 | 0.59 |
| 10 | 0.65 | 0.61 | 0.58 | 0.65 | 0.61 | 0.58 | 0.64 | 0.60 | 0.58 | 0.64 | 0.60 | 0.58 | 0.63 | 0.60 | 0.58 | 0.57 |



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 | 7159.50 | 7149.38 | 7094.25 | 7020.00 | 6882.75 | 6617.25 | 6323.63 | 5960.25 | 5536.69 |
| 45.0 | 7162.88 | 7152.75 | 7134.75 | 7081.88 | 7001.44 | 6850.69 | 6603.19 | 6297.19 | 5924.81 |
| 90.0 | 7161.19 | 7169.63 | 7153.88 | 7130.25 | 7076.25 | 6986.81 | 6834.38 | 6520.50 | 6163.31 |
| 135.0 | 7149.94 | 7166.25 | 7180.31 | 7166.81 | 7152.19 | 7122.38 | 7045.31 | 6934.50 | 6768.56 |
| 180.0 | 7159.50 | 7170.19 | 7171.88 | 7155.00 | 7133.63 | 7086.94 | 7003.69 | 6847.31 | 6568.88 |
| 225.0 | 7162.88 | 7166.81 | 7151.06 | 7117.31 | 7053.75 | 6963.75 | 6814.69 | 6511.50 | 6166.69 |
| 270.0 | 7161.19 | 7156.69 | 7125.75 | 7076.25 | 7005.38 | 6860.25 | 6608.25 | 6308.44 | 5928.19 |
| 315.0 | 7149.94 | 7114.50 | 7059.38 | 6959.25 | 6756.19 | 6543.56 | 6231.94 | 5747.06 | 5285.81 |
| 360.0 | 7159.50 | 7149.38 | 7094.25 | 7020.00 | 6882.75 | 6617.25 | 6323.63 | 5960.25 | 5536.69 |
| C/γ(°) | 9.0 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 |
| 0.0 | 4934.25 | 4441.50 | 3954.94 | 3441.94 | 2995.31 | 2663.44 | 2345.06 | 2072.81 | 1878.75 |
| 45.0 | 5375.25 | 4875.19 | 4348.69 | 3788.44 | 3285.56 | 2899.13 | 2544.75 | 2248.31 | 2019.38 |
| 90.0 | 5731.31 | 5112.00 | 4579.88 | 4048.88 | 3488.63 | 3011.06 | 2657.25 | 2330.44 | 2087.44 |
| 135.0 | 6362.44 | 5955.75 | 5470.88 | 4862.81 | 4235.63 | 3706.31 | 3175.88 | 2736.00 | 2414.81 |
| 180.0 | 6211.69 | 5731.31 | 5168.81 | 4628.81 | 4084.88 | 3456.00 | 3022.31 | 2652.75 | 2314.69 |
| 225.0 | 5750.44 | 5157.56 | 4623.19 | 4089.94 | 3528.56 | 3063.38 | 2709.00 | 2376.00 | 2106.56 |
| 270.0 | 5391.00 | 4899.94 | 4389.75 | 3817.13 | 3309.19 | 2923.88 | 2562.75 | 2262.38 | 2044.13 |
| 315.0 | 4790.81 | 4218.75 | 3667.50 | 3228.19 | 2811.94 | 2475.00 | 2224.69 | 2008.13 | 1810.13 |
| 360.0 | 4934.25 | 4441.50 | 3954.94 | 3441.94 | 2995.31 | 2663.44 | 2345.06 | 2072.81 | 1878.75 |
| C/γ(°) | 18.0 | 19.0 | 20.0 | 21.0 | 22.0 | 23.0 | 24.0 | 25.0 | 26.0 |
| 0.0 | 1704.38 | 1580.63 | 1463.63 | 1361.81 | 1282.50 | 1202.63 | 1139.63 | 1092.94 | 1058.63 |
| 45.0 | 1807.31 | 1663.31 | 1527.19 | 1406.25 | 1328.63 | 1248.75 | 1169.44 | 1119.94 | 1078.88 |
| 90.0 | 1860.75 | 1662.75 | 1550.25 | 1433.81 | 1327.50 | 1262.81 | 1197.56 | 1119.49 | 1082.08 |
| 135.0 | 2110.50 | 1905.19 | 1714.50 | 1550.81 | 1455.75 | 1361.81 | 1270.69 | 1205.44 | 1147.50 |
| 180.0 | 2043.00 | 1847.25 | 1665.00 | 1523.25 | 1418.06 | 1311.75 | 1239.19 | 1114.82 | 1110.32 |
| 225.0 | 1911.38 | 1731.94 | 1598.63 | 1467.56 | 1356.19 | 1272.94 | 1202.63 | 1118.31 | 1083.32 |
| 270.0 | 1847.25 | 1704.94 | 1562.06 | 1434.94 | 1342.13 | 1266.19 | 1186.31 | 1134.00 | 1087.31 |
| 315.0 | 1650.94 | 1529.44 | 1416.38 | 1324.69 | 1254.94 | 1188.00 | 1120.16 | 1081.97 | 1039.39 |
| 360.0 | 1704.38 | 1580.63 | 1463.63 | 1361.81 | 1282.50 | 1202.63 | 1139.63 | 1092.94 | 1058.63 |
| C/γ(°) | 27.0 | 28.0 | 29.0 | 30.0 | 31.0 | 32.0 | 33.0 | 34.0 | 35.0 |
| 0.0 | 1009.69 | 972.56 | 930.94 | 875.25 | 815.63 | 762.75 | 684.00 | 611.44 | 555.19 |
| 45.0 | 1029.94 | 996.19 | 958.50 | 909.00 | 843.19 | 783.56 | 716.06 | 644.63 | 583.31 |
| 90.0 | 1042.76 | 1008.11 | 959.46 | 910.58 | 860.23 | 789.30 | 730.58 | 671.34 | 602.16 |
| 135.0 | 1083.94 | 1040.63 | 1005.19 | 965.25 | 915.75 | 869.06 | 802.69 | 743.06 | 675.00 |
| 180.0 | 1063.69 | 1020.21 | 983.25 | 952.82 | 914.06 | 854.66 | 801.51 | 742.56 | 674.38 |
| 225.0 | 1040.57 | 994.84 | 965.70 | 929.64 | 871.65 | 821.98 | 764.66 | 689.18 | 633.77 |
| 270.0 | 1035.56 | 999.56 | 960.75 | 907.88 | 851.06 | 797.06 | 731.81 | 673.31 | 603.00 |
| 315.0 | 1004.01 | 960.81 | 905.46 | 852.69 | 795.54 | 720.62 | 657.84 | 593.04 | 519.19 |
| 360.0 | 1009.69 | 972.56 | 930.94 | 875.25 | 815.63 | 762.75 | 684.00 | 611.44 | 555.19 |
| C/γ(°) | 36.0 | 37.0 | 38.0 | 39.0 | 40.0 | 41.0 | 42.0 | 43.0 | 44.0 |
| 0.0 | 470.81 | 403.88 | 337.50 | 289.69 | 195.92 | 145.18 | 91.80 | 56.76 | 31.50 |
| 45.0 | 520.31 | 447.75 | 374.63 | 304.31 | 288.00 | 179.83 | 124.14 | 78.36 | 45.56 |
| 90.0 | 530.61 | 469.41 | 399.09 | 328.50 | 267.75 | 201.94 | 149.79 | 100.52 | 59.68 |
| 135.0 | 607.50 | 546.19 | 473.63 | 402.19 | 336.94 | 289.69 | 197.83 | 147.66 | 103.84 |
| 180.0 | 600.24 | 534.77 | 462.88 | 388.97 | 323.83 | 252.39 | 194.34 | 136.46 | 88.54 |
| 225.0 | 561.04 | 490.28 | 426.77 | 353.64 | 283.89 | 224.89 | 170.83 | 112.05 | 71.61 |
| 270.0 | 532.69 | 469.69 | 397.69 | 325.13 | 286.88 | 202.67 | 147.09 | 97.93 | 61.31 |
| 315.0 | 446.06 | 382.56 | 311.23 | 241.43 | 185.46 | 130.22 | 88.26 | 49.44 | 25.31 |
| 360.0 | 470.81 | 403.88 | 337.50 | 289.69 | 195.92 | 145.18 | 91.80 | 56.76 | 31.50 |

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 | 18.62 | 15.69 | 13.73 | 13.33 | 13.05 | 12.83 | 12.38 | 11.98 | 11.81 |
| 45.0 | 24.24 | 17.33 | 14.74 | 13.39 | 13.05 | 12.71 | 12.26 | 12.09 | 11.98 |
| 90.0 | 33.24 | 20.64 | 16.48 | 13.84 | 13.28 | 13.05 | 12.83 | 12.66 | 12.38 |
| 135.0 | 57.94 | 32.96 | 21.26 | 17.83 | 14.74 | 13.33 | 13.11 | 13.05 | 12.94 |
| 180.0 | 54.23 | 30.77 | 20.19 | 17.44 | 14.01 | 12.71 | 12.43 | 12.26 | 12.04 |
| 225.0 | 40.89 | 23.79 | 18.17 | 14.46 | 12.94 | 12.60 | 12.43 | 12.15 | 11.98 |
| 270.0 | 29.19 | 19.58 | 16.03 | 13.50 | 13.11 | 12.83 | 12.54 | 12.26 | 12.04 |
| 315.0 | 17.94 | 14.63 | 13.28 | 12.94 | 12.66 | 12.38 | 12.21 | 11.98 | 11.87 |
| 360.0 | 18.62 | 15.69 | 13.73 | 13.33 | 13.05 | 12.83 | 12.38 | 11.98 | 11.81 |
| C/γ(°) | 54.0 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 | 60.0 | 61.0 | 62.0 |
| 0.0 | 11.64 | 11.53 | 11.42 | 11.42 | 11.59 | 11.70 | 11.93 | 12.04 | 12.09 |
| 45.0 | 11.87 | 11.81 | 11.70 | 11.64 | 11.64 | 11.76 | 11.81 | 11.81 | 11.81 |
| 90.0 | 12.26 | 12.15 | 12.09 | 12.49 | 12.54 | 12.60 | 12.60 | 12.54 | 12.54 |
| 135.0 | 12.26 | 11.93 | 11.81 | 11.64 | 11.53 | 11.64 | 11.81 | 11.87 | 11.87 |
| 180.0 | 11.87 | 11.76 | 11.53 | 11.42 | 11.31 | 11.14 | 11.03 | 10.97 | 10.91 |
| 225.0 | 11.70 | 11.59 | 11.42 | 11.31 | 11.14 | 11.03 | 10.97 | 10.97 | 11.03 |
| 270.0 | 11.93 | 11.76 | 11.59 | 11.48 | 11.98 | 12.43 | 12.49 | 12.60 | 12.71 |
| 315.0 | 11.70 | 11.64 | 11.53 | 11.64 | 12.54 | 13.28 | 13.50 | 13.61 | 13.56 |
| 360.0 | 11.64 | 11.53 | 11.42 | 11.42 | 11.59 | 11.70 | 11.93 | 12.04 | 12.09 |
| C/γ(°) | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 | 70.0 | 71.0 |
| 0.0 | 12.21 | 12.26 | 12.38 | 12.38 | 12.32 | 12.26 | 12.21 | 12.09 | 12.04 |
| 45.0 | 11.81 | 11.93 | 11.93 | 11.98 | 11.98 | 11.98 | 11.98 | 11.93 | 11.87 |
| 90.0 | 12.43 | 12.43 | 12.38 | 12.38 | 12.26 | 12.21 | 12.15 | 12.04 | 11.93 |
| 135.0 | 11.93 | 11.93 | 11.98 | 11.98 | 11.98 | 11.98 | 11.93 | 11.87 | 11.81 |
| 180.0 | 10.86 | 10.86 | 10.86 | 10.91 | 10.91 | 10.91 | 10.97 | 10.91 | 10.91 |
| 225.0 | 11.08 | 11.19 | 11.42 | 11.48 | 11.53 | 11.59 | 11.53 | 11.53 | 11.48 |
| 270.0 | 12.77 | 12.83 | 12.83 | 12.77 | 12.66 | 12.54 | 12.43 | 12.32 | 12.21 |
| 315.0 | 13.44 | 13.33 | 13.22 | 13.05 | 12.94 | 12.77 | 12.66 | 12.49 | 12.26 |
| 360.0 | 12.21 | 12.26 | 12.38 | 12.38 | 12.32 | 12.26 | 12.21 | 12.09 | 12.04 |
| C/γ(°) | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0 | 80.0 |
| 0.0 | 11.93 | 11.87 | 11.76 | 11.70 | 11.59 | 11.53 | 11.36 | 11.19 | 11.08 |
| 45.0 | 11.87 | 11.81 | 11.76 | 11.70 | 11.64 | 11.53 | 11.42 | 11.31 | 11.25 |
| 90.0 | 11.93 | 11.81 | 11.70 | 11.64 | 11.53 | 11.48 | 11.36 | 11.25 | 11.19 |
| 135.0 | 11.81 | 11.70 | 11.64 | 11.59 | 11.48 | 11.42 | 11.31 | 11.19 | 11.08 |
| 180.0 | 10.86 | 10.86 | 10.86 | 10.86 | 10.80 | 10.80 | 10.80 | 10.74 | 10.69 |
| 225.0 | 11.48 | 11.42 | 11.36 | 11.31 | 11.25 | 11.19 | 11.08 | 11.03 | 10.91 |
| 270.0 | 12.15 | 12.04 | 11.87 | 11.76 | 11.64 | 11.53 | 11.42 | 11.31 | 11.19 |
| 315.0 | 12.15 | 11.98 | 11.87 | 11.76 | 11.59 | 11.42 | 11.31 | 11.14 | 10.97 |
| 360.0 | 11.93 | 11.87 | 11.76 | 11.70 | 11.59 | 11.53 | 11.36 | 11.19 | 11.08 |
| C/γ(°) | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.0 |
| 0.0 | 10.91 | 10.80 | 10.63 | 10.46 | 10.24 | 10.07 | 9.84 | 9.39 | 9.45 |
| 45.0 | 11.08 | 10.97 | 10.86 | 10.74 | 10.58 | 10.41 | 10.29 | 9.62 | 9.56 |
| 90.0 | 11.14 | 11.03 | 10.91 | 10.86 | 10.74 | 10.63 | 9.96 | 9.56 | 9.51 |
| 135.0 | 10.97 | 10.91 | 10.86 | 10.74 | 10.69 | 10.58 | 10.52 | 9.51 | 9.51 |
| 180.0 | 10.69 | 10.63 | 10.46 | 10.41 | 10.29 | 10.18 | 9.68 | 9.45 | 9.39 |
| 225.0 | 10.86 | 10.74 | 10.63 | 10.58 | 10.41 | 10.35 | 9.62 | 9.51 | 9.51 |
| 270.0 | 11.14 | 11.03 | 10.97 | 10.80 | 10.69 | 10.58 | 9.79 | 9.51 | 9.51 |
| 315.0 | 10.86 | 10.74 | 10.63 | 10.52 | 10.41 | 10.18 | 9.56 | 9.45 | 9.45 |
| 360.0 | 10.91 | 10.80 | 10.63 | 10.46 | 10.24 | 10.07 | 9.84 | 9.39 | 9.45 |

Intensity data(cd)

| | |
|---------------|-------------|
| C/γ(°) | 90.0 |
| 0.0 | 9.39 |
| 45.0 | 9.56 |
| 90.0 | 9.51 |
| 135.0 | 9.45 |
| 180.0 | 9.39 |
| 225.0 | 9.51 |
| 270.0 | 9.51 |
| 315.0 | 9.51 |
| 360.0 | 9.39 |