



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: 3-2383-L

Luminaire:

Report No: NATA0100

Voltage(V): 34.3500

Test No: GC2020010626

Current(A): 0.6000

LampCAT: LUMINUS CXM-14-AC40

Power (W): 20.6580

Lamp flux(lm): 2559.0

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): 2577.03

Efficiency(%): 100.00%

Lumens(lm)/Power(W): 124.75

Central intensity(cd): 11207.950

Maximum intensity(cd): 11207.950

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=23.6

[C90/270]Total=23.6

Field angle(10%Imax): [C0/180]Total=42.5

[C90/270]Total=42.5

Maximum s/h(1/2): C0_180=0.40 C90_270=0.40

Maximum s/h(1/4): C0_180=0.37 C90_270=0.37

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 100.70%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.416%

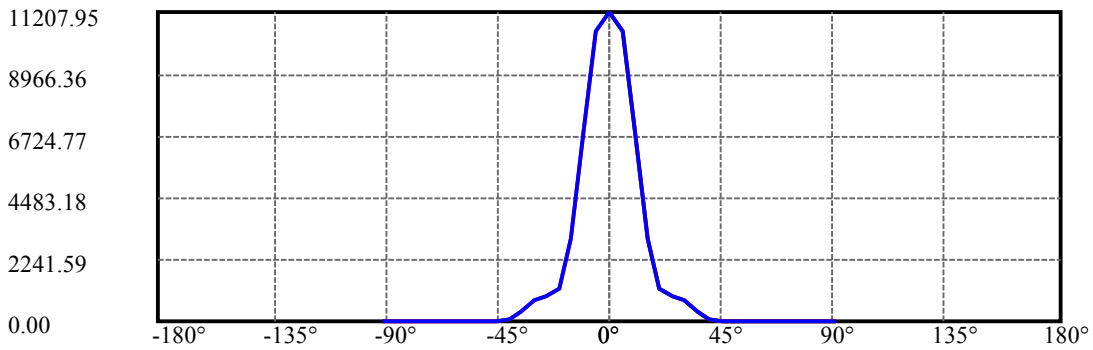
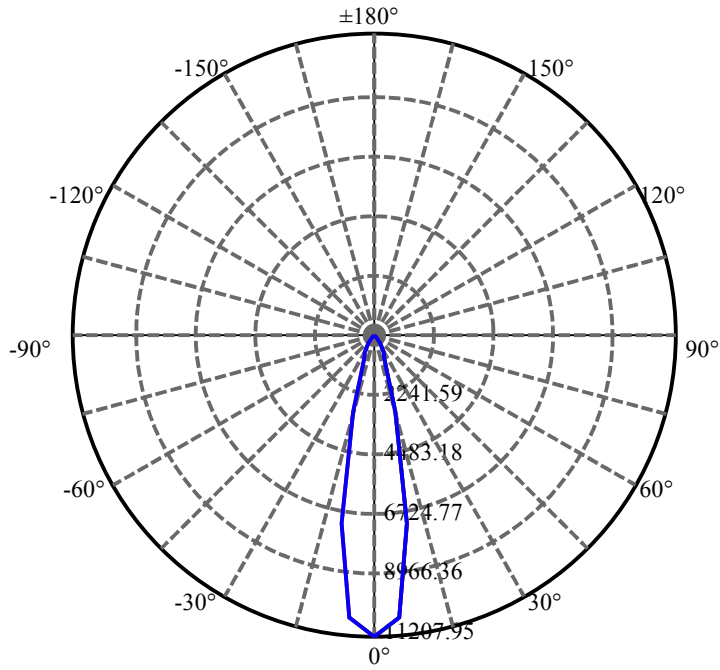
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0 | 11207.953 | 0.000 | 0 | .000% | .000% |
| 5.0 | 10510.102 | 259.633 | 259.633 | 10.146% | 10.075% |
| 10.0 | 7094.039 | 629.756 | 889.389 | 24.609% | 34.512% |
| 15.0 | 2965.922 | 596.750 | 1486.139 | 23.320% | 57.669% |
| 20.0 | 1197.323 | 343.110 | 1829.249 | 13.408% | 70.983% |
| 25.0 | 889.045 | 218.822 | 2048.07 | 8.551% | 79.474% |
| 30.0 | 755.543 | 208.124 | 2256.194 | 8.133% | 87.550% |
| 35.0 | 370.927 | 165.881 | 2422.075 | 6.482% | 93.987% |
| 40.0 | 66.459 | 72.975 | 2495.049 | 2.852% | 96.819% |
| 45.0 | 24.483 | 16.839 | 2511.888 | .658% | 97.472% |
| 50.0 | 19.505 | 8.888 | 2520.776 | .347% | 97.817% |
| 55.0 | 16.889 | 7.913 | 2528.69 | .309% | 98.124% |
| 60.0 | 15.638 | 7.518 | 2536.208 | .294% | 98.416% |
| 65.0 | 14.850 | 7.412 | 2543.62 | .290% | 98.704% |
| 70.0 | 13.570 | 7.196 | 2550.816 | .281% | 98.983% |
| 75.0 | 12.607 | 6.842 | 2557.658 | .267% | 99.248% |
| 80.0 | 12.171 | 6.630 | 2564.288 | .259% | 99.506% |
| 85.0 | 11.637 | 6.469 | 2570.757 | .253% | 99.757% |
| 90.0 | 11.271 | 6.272 | 2577.03 | .245% | 100.000% |

ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|---------|---------|
| 0-30 | 2256.19 | 88.17% | 87.55% |
| 0-40 | 2495.05 | 97.50% | 96.82% |
| 0-60 | 2536.21 | 99.11% | 98.42% |
| 0-90 | 2570.76 | 100.46% | 99.76% |
| 0-120 | 2570.76 | 100.46% | 99.76% |
| 0-180 | 2577.03 | 100.70% | 100.00% |
| 60-90 | 42.07 | 1.64% | 1.63% |
| 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% |
| 0-25.33 | 2061.62 | 80.56% | 80.00% |

ZONAL LUMEN SUMMARY

| | |
|---------|--------|
| 0-10 | 889.39 |
| 10-20 | 939.86 |
| 20-30 | 426.95 |
| 30-40 | 238.86 |
| 40-50 | 25.73 |
| 50-60 | 15.43 |
| 60-70 | 14.61 |
| 70-80 | 13.47 |
| 80-90 | 6.47 |
| 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: —————

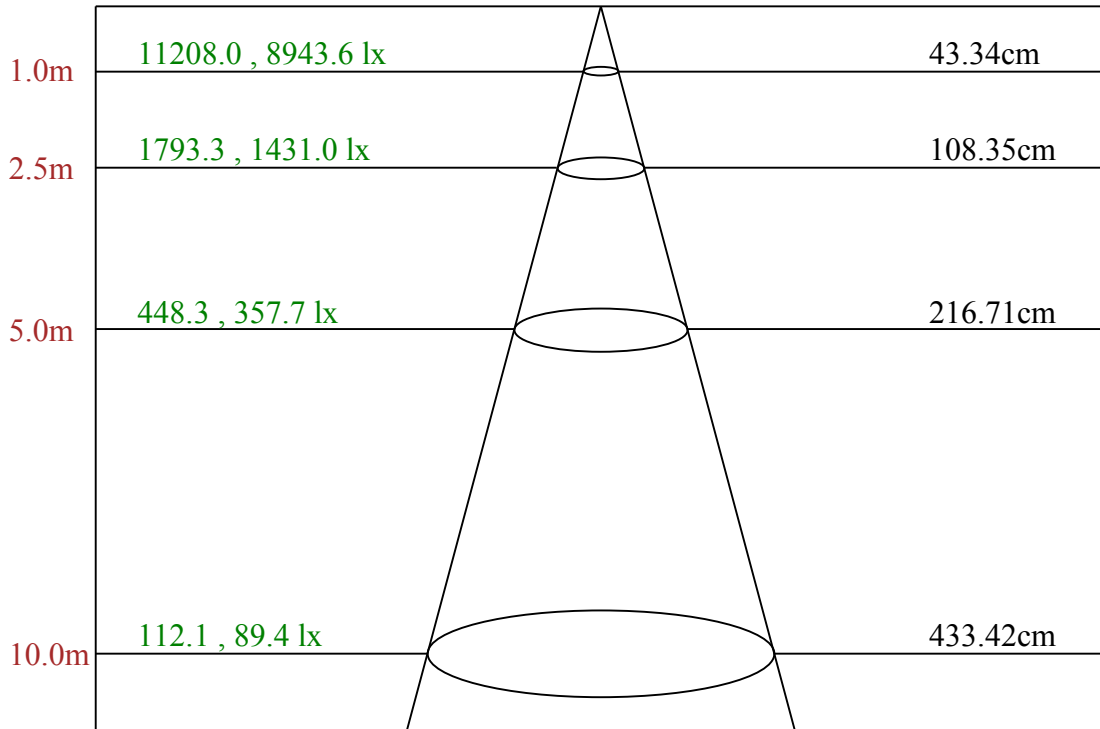
C90/C270: —————

Field angle(10%Imax):C0/180Left:21.2 Right:21.2

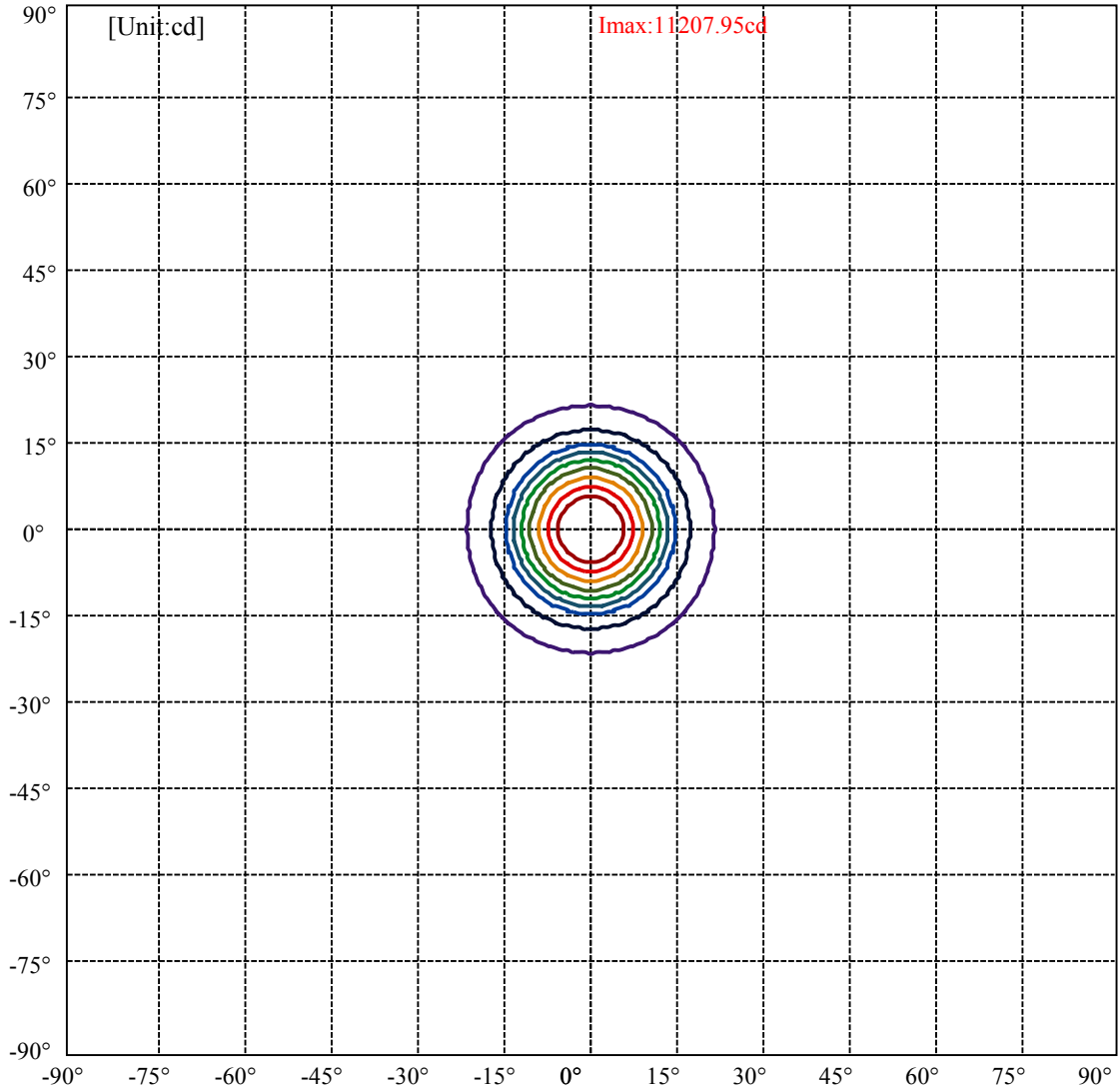
:C90/270Left:21.2 Right:21.2

Beam Angle(50%Imax):C0/180Left:11.8 Right:11.8

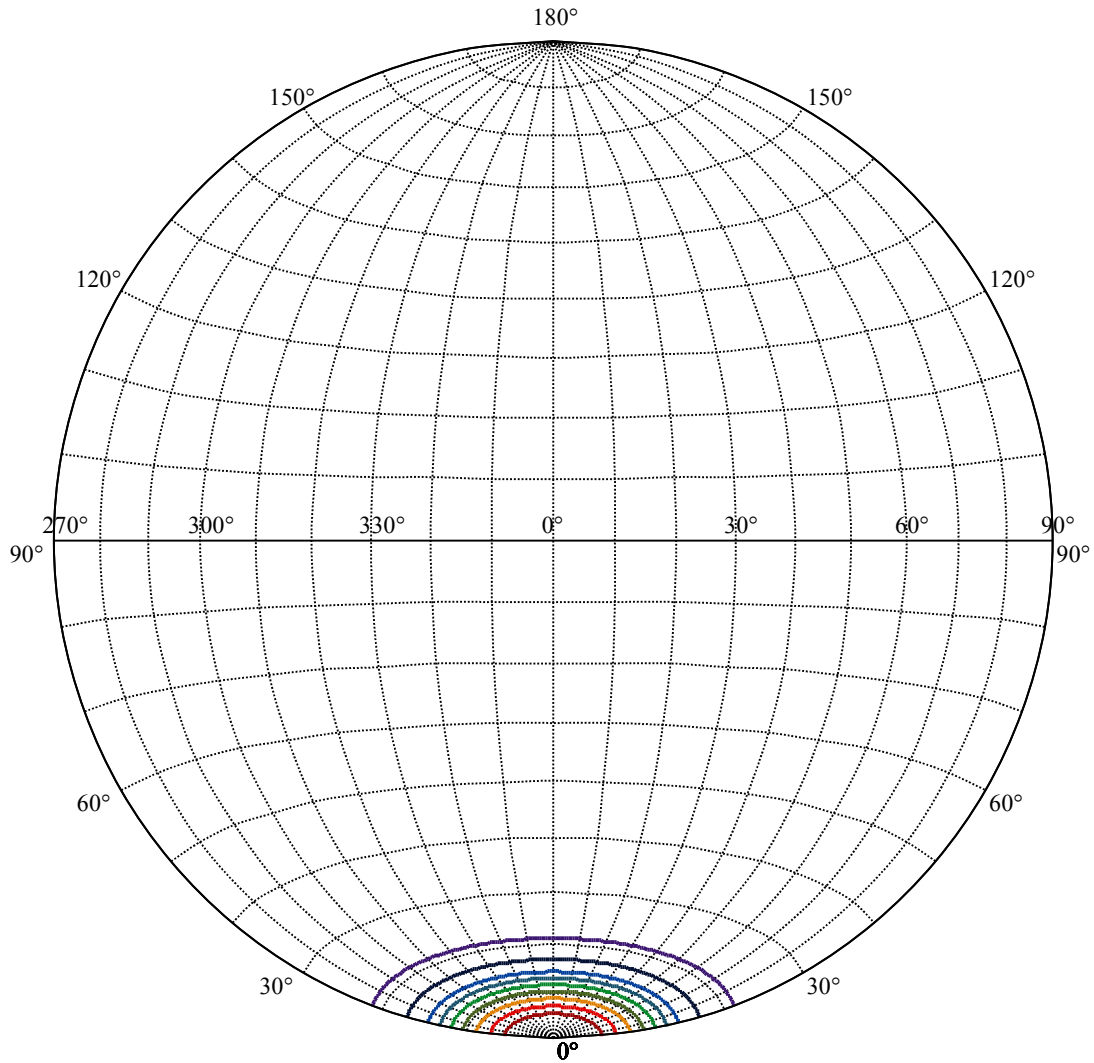
:C90/270Left:11.8 Right:11.8



Max , Ave Beam angle of C0 plane 24.45



| | |
|-------------------|---|
| (10%Imax) 1120.8 | — |
| (20%Imax) 2241.59 | — |
| (30%Imax) 3362.39 | — |
| (40%Imax) 4483.18 | — |
| (50%Imax) 5603.98 | — |
| (60%Imax) 6724.77 | — |
| (70%Imax) 7845.57 | — |
| (80%Imax) 8966.36 | — |
| (90%Imax) 10087.2 | — |



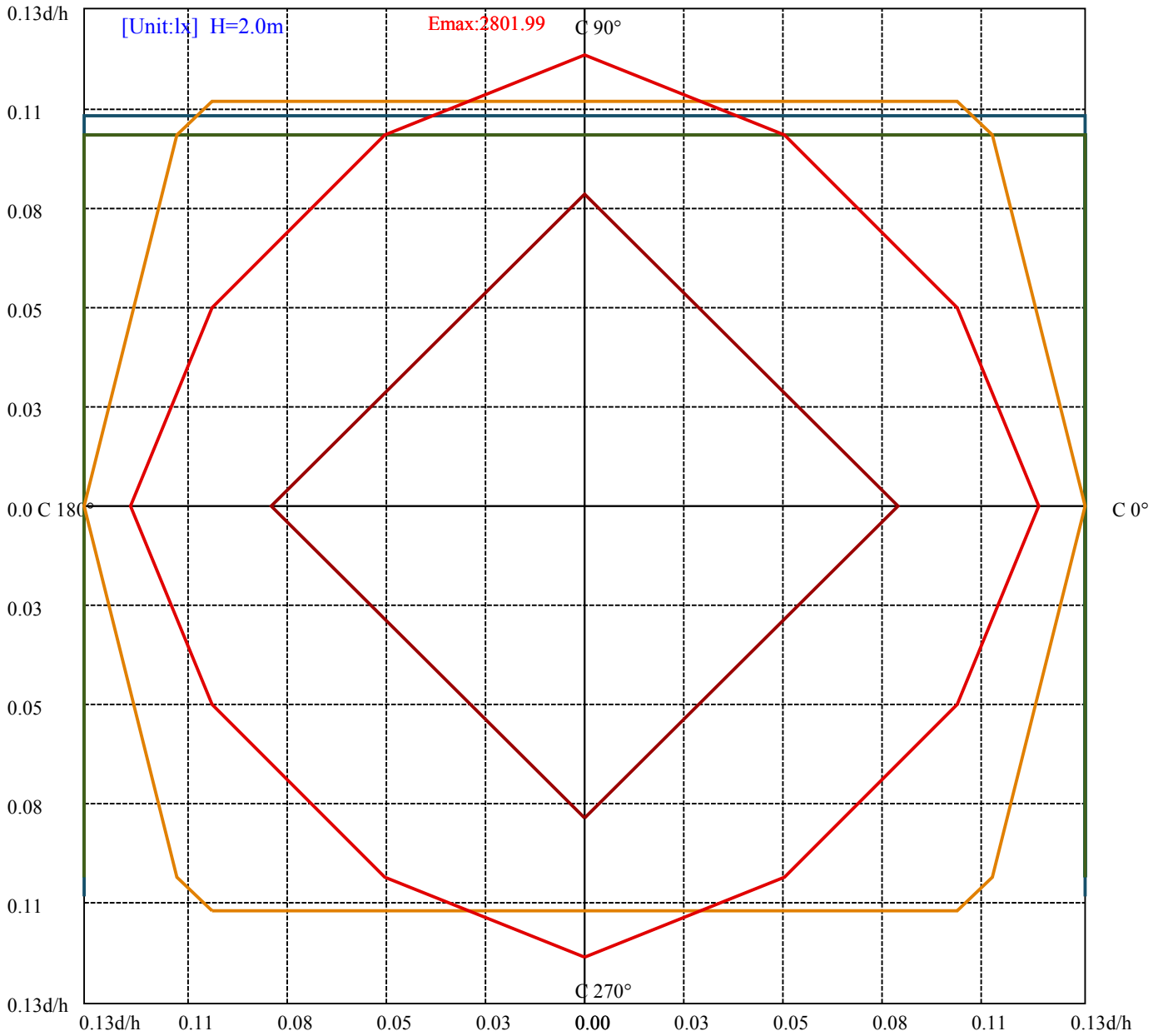
House

[Unit:cd]

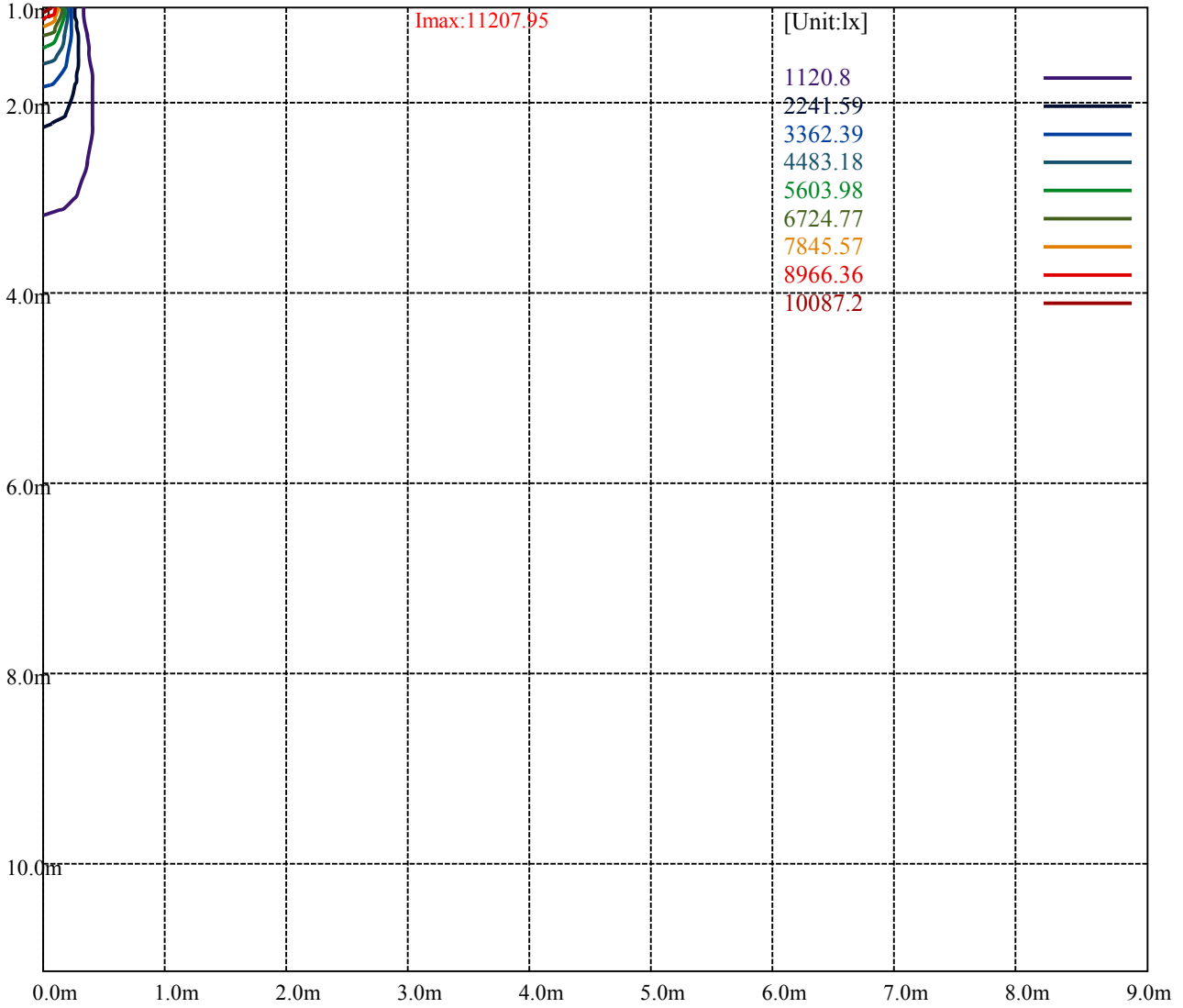
Road

Imax:11207.95

| | |
|-------------------|---|
| (10%Imax) 1120.8 | — |
| (20%Imax) 2241.59 | — |
| (30%Imax) 3362.39 | — |
| (40%Imax) 4483.18 | — |
| (50%Imax) 5603.98 | — |
| (60%Imax) 6724.77 | — |
| (70%Imax) 7845.57 | — |
| (80%Imax) 8966.36 | — |
| (90%Imax) 10087.2 | — |



| | |
|--------------------|---|
| (10%Emax) 280.1975 | — |
| (20%Emax) 560.3975 | — |
| (30%Emax) 840.595 | — |
| (40%Emax) 1120.792 | — |
| (50%Emax) 1400.993 | — |
| (60%Emax) 1681.19 | — |
| (70%Emax) 1961.387 | — |
| (80%Emax) 2241.587 | — |
| (90%Emax) 2521.775 | — |



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 |

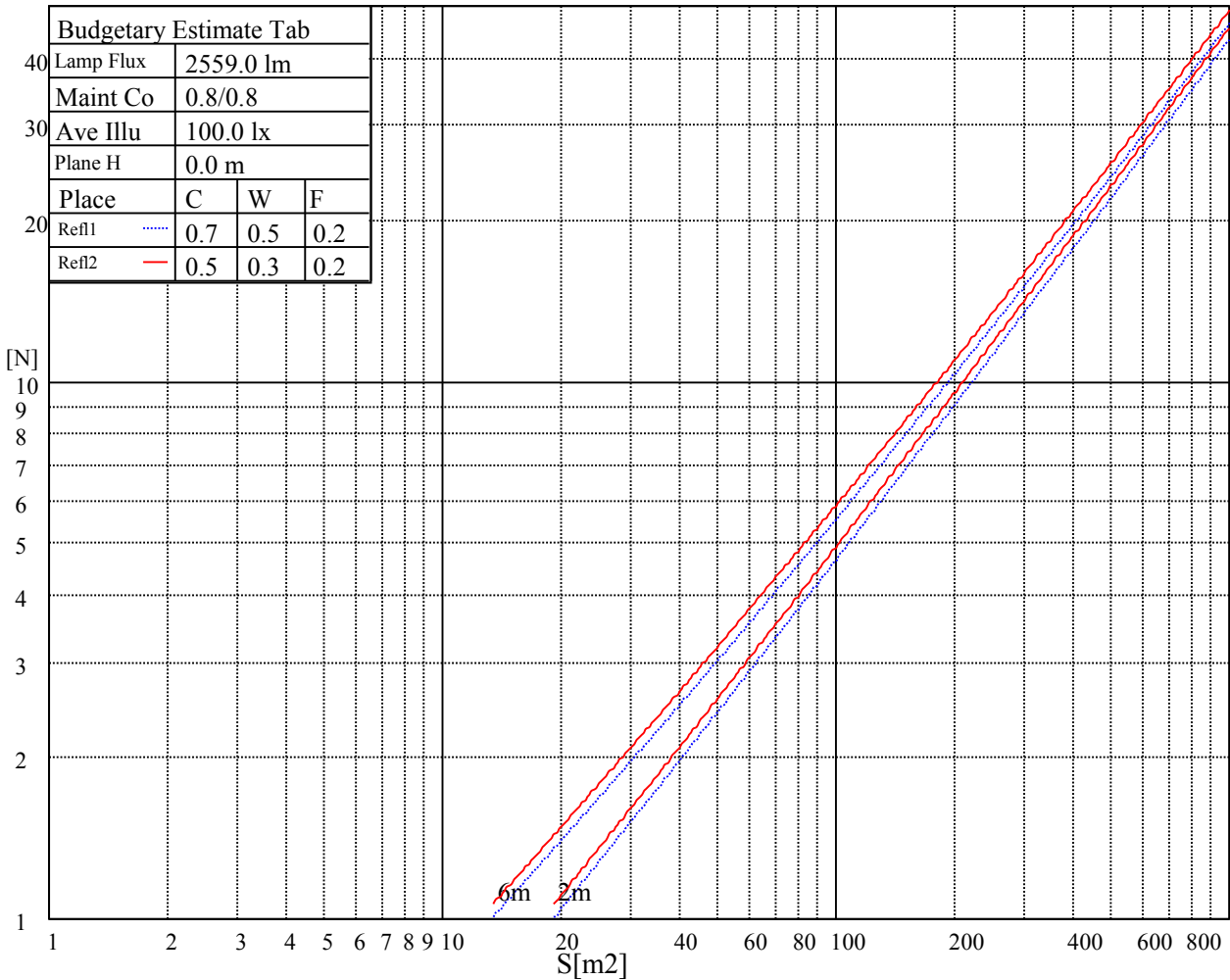
| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Glare Table

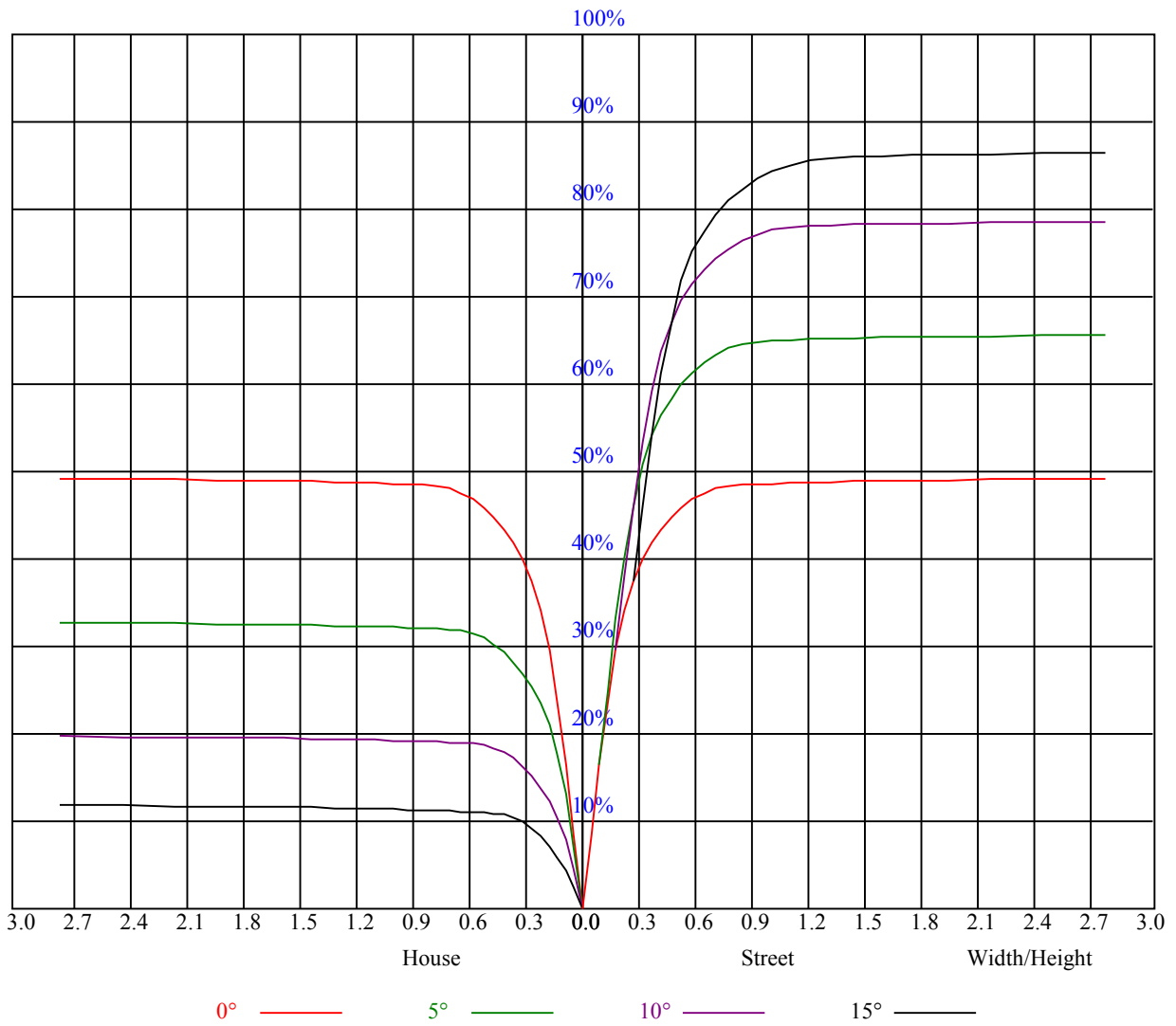
| Glare | Quality | Service Values Illuminance(lx) | | | | | | | |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15 | A | 2000 | 1000 | 500 | <=300 | | | | |
| 1.5 | B | | 2000 | 1000 | 500 | <=300 | | | |
| 1.85 | C | | | 2000 | 1000 | 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 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 | 1.20 | 1.20 | 1.20 | 1.17 | 1.17 | 1.17 | 1.12 | 1.12 | 1.12 | 1.07 | 1.07 | 1.07 | 1.03 | 1.03 | 1.03 | 1.01 |
| 1 | 1.13 | 1.11 | 1.09 | 1.11 | 1.09 | 1.07 | 1.07 | 1.05 | 1.04 | 1.03 | 1.02 | 1.01 | 1.00 | 0.99 | 0.98 | 0.96 |
| 2 | 1.07 | 1.04 | 1.01 | 1.05 | 1.02 | 1.00 | 1.02 | 1.00 | 0.98 | 0.99 | 0.97 | 0.96 | 0.97 | 0.95 | 0.94 | 0.92 |
| 3 | 1.02 | 0.98 | 0.95 | 1.01 | 0.97 | 0.94 | 0.98 | 0.95 | 0.93 | 0.96 | 0.93 | 0.91 | 0.94 | 0.92 | 0.90 | 0.88 |
| 4 | 0.97 | 0.93 | 0.90 | 0.96 | 0.92 | 0.89 | 0.94 | 0.91 | 0.88 | 0.92 | 0.90 | 0.87 | 0.91 | 0.88 | 0.86 | 0.85 |
| 5 | 0.94 | 0.89 | 0.86 | 0.93 | 0.88 | 0.85 | 0.91 | 0.87 | 0.85 | 0.89 | 0.86 | 0.84 | 0.88 | 0.85 | 0.83 | 0.82 |
| 6 | 0.90 | 0.85 | 0.82 | 0.89 | 0.85 | 0.82 | 0.88 | 0.84 | 0.81 | 0.87 | 0.83 | 0.81 | 0.85 | 0.83 | 0.80 | 0.79 |
| 7 | 0.87 | 0.82 | 0.79 | 0.86 | 0.82 | 0.79 | 0.85 | 0.81 | 0.78 | 0.84 | 0.81 | 0.78 | 0.83 | 0.80 | 0.78 | 0.77 |
| 8 | 0.84 | 0.79 | 0.76 | 0.83 | 0.79 | 0.76 | 0.82 | 0.79 | 0.76 | 0.81 | 0.78 | 0.75 | 0.81 | 0.78 | 0.75 | 0.74 |
| 9 | 0.81 | 0.77 | 0.74 | 0.81 | 0.76 | 0.74 | 0.80 | 0.76 | 0.73 | 0.79 | 0.76 | 0.73 | 0.78 | 0.75 | 0.73 | 0.72 |
| 10 | 0.79 | 0.74 | 0.71 | 0.78 | 0.74 | 0.71 | 0.78 | 0.74 | 0.71 | 0.77 | 0.73 | 0.71 | 0.76 | 0.73 | 0.71 | 0.70 |



Intensity data(cd)

| C/γ(°) | 0.0 | 5.0 | 10.0 | 15.0 | 20.0 | 25.0 | 30.0 | 35.0 | 40.0 |
|--------|----------|----------|---------|---------|---------|--------|--------|--------|--------|
| 0.0 | 11220.19 | 10175.63 | 6114.38 | 2913.75 | 1173.94 | 920.81 | 753.75 | 305.44 | 33.53 |
| 45.0 | 11211.75 | 10327.50 | 6384.38 | 2992.50 | 1137.38 | 896.63 | 775.13 | 297.56 | 32.63 |
| 90.0 | 11227.50 | 10289.25 | 6775.88 | 2469.38 | 974.25 | 697.33 | 574.88 | 269.16 | 54.68 |
| 135.0 | 11172.38 | 10991.25 | 8533.13 | 3853.13 | 1458.56 | 981.00 | 848.81 | 564.75 | 173.70 |
| 180.0 | 11220.19 | 10909.69 | 8064.00 | 3366.56 | 1378.13 | 988.03 | 849.04 | 479.03 | 86.85 |
| 225.0 | 11211.75 | 10876.50 | 7766.44 | 2997.00 | 1212.75 | 965.36 | 851.06 | 467.78 | 62.94 |
| 270.0 | 11227.50 | 10792.13 | 7565.06 | 3234.94 | 1149.19 | 781.31 | 692.44 | 359.44 | 59.29 |
| 315.0 | 11172.38 | 9718.88 | 5549.06 | 1900.13 | 1094.40 | 881.89 | 699.24 | 224.27 | 28.07 |
| 360.0 | 11220.19 | 10175.63 | 6114.38 | 2913.75 | 1173.94 | 920.81 | 753.75 | 305.44 | 33.53 |

| C/γ(°) | 45.0 | 50.0 | 55.0 | 60.0 | 65.0 | 70.0 | 75.0 | 80.0 | 85.0 |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.0 | 24.98 | 20.64 | 18.28 | 16.71 | 16.43 | 14.18 | 12.38 | 11.76 | 11.42 |
| 45.0 | 21.77 | 17.61 | 16.14 | 15.24 | 14.40 | 13.11 | 12.43 | 11.93 | 11.59 |
| 90.0 | 25.99 | 20.19 | 17.33 | 15.64 | 14.63 | 13.44 | 12.94 | 12.94 | 11.70 |
| 135.0 | 24.69 | 19.35 | 16.26 | 15.64 | 14.91 | 13.67 | 12.66 | 12.04 | 11.76 |
| 180.0 | 27.23 | 21.77 | 18.56 | 16.37 | 15.86 | 14.74 | 12.77 | 11.93 | 11.53 |
| 225.0 | 23.74 | 19.01 | 16.20 | 15.13 | 14.18 | 13.16 | 12.66 | 11.98 | 11.76 |
| 270.0 | 28.13 | 21.04 | 17.16 | 15.36 | 14.23 | 13.22 | 12.88 | 12.99 | 11.81 |
| 315.0 | 19.35 | 16.43 | 15.19 | 15.02 | 14.18 | 13.05 | 12.15 | 11.81 | 11.53 |
| 360.0 | 24.98 | 20.64 | 18.28 | 16.71 | 16.43 | 14.18 | 12.38 | 11.76 | 11.42 |

| C/γ(°) | 90.0 |
|--------|-------|
| 0.0 | 11.08 |
| 45.0 | 11.31 |
| 90.0 | 11.31 |
| 135.0 | 11.31 |
| 180.0 | 11.25 |
| 225.0 | 11.42 |
| 270.0 | 11.31 |
| 315.0 | 11.19 |
| 360.0 | 11.08 |