



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

Client:

LumCAT: CR01D07538AR

Luminaire: 92.70.074.00

Report No: GC2019091909

Test No:

LampCAT: CREE CXA1816

Lamp flux(lm): 1109.0

Number of Lamps: 1

Length(mm): 75

Phm Type: C

Voltage(V): 34.7000

Current(A): 0.2970

Power (W): 10.3100

PF: 0.0000

Ballast type:

Width(mm): 75

Height(mm): 0

Photometric Results

Lumens(lm): 1043.96, Efficiency(%): 94.14% , Luminous Efficacy(lm/W): 101.26

Central intensity(cd): 2246.203, Maximum intensity(cd): 2246.203

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=37.8

[C90/270]Total=37.8

Field angle(10%Imax): [C0/180]Total=62.4

[C90/270]Total=62.4

Maximum s/h(1/2): C0_180=0.62 C90_270=0.62

Maximum s/h(1/4): C0_180=0.61 C90_270=0.61

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 94.14%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 95.181%

Equipment:
Temperature(°C): -1.0

Date: 2019/7/23
Humidity(%): -1.0%

Operator:
Distance(m): 1.00

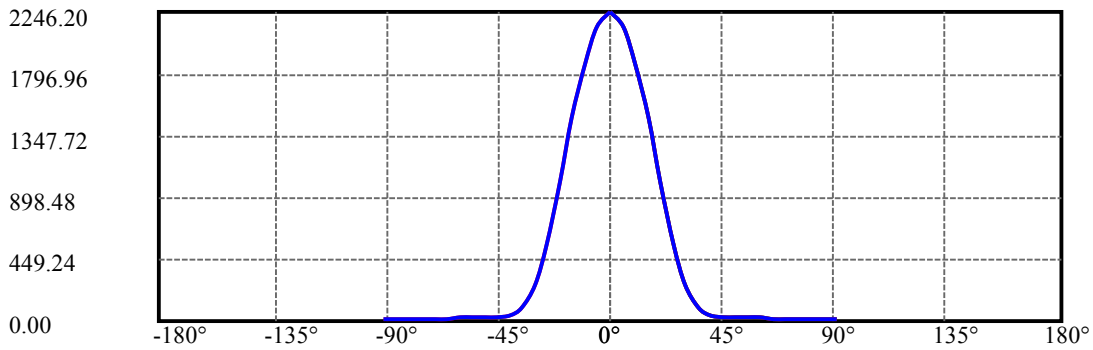
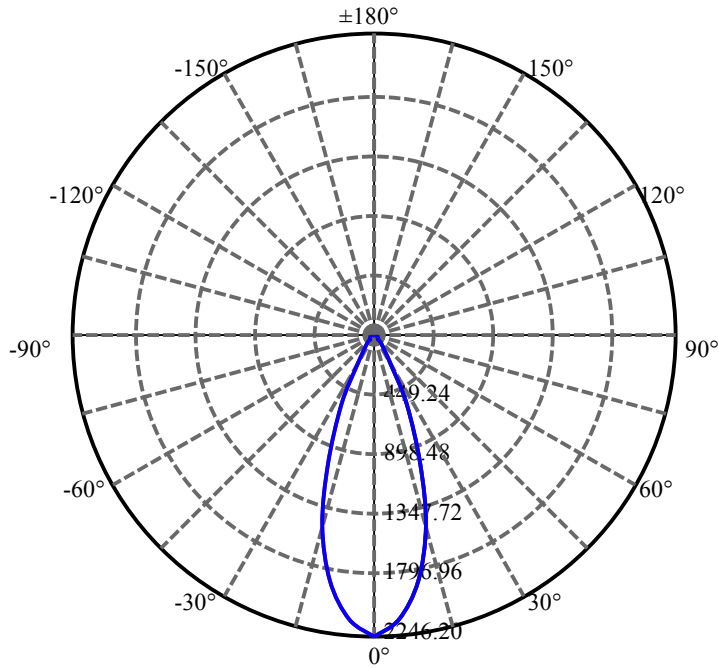
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0 | 2246.203 | 0.000 | 0 | .000% | .000% |
| 5.0 | 2132.367 | 52.345 | 52.345 | 4.720% | 5.014% |
| 10.0 | 1863.070 | 142.929 | 195.274 | 12.888% | 18.705% |
| 15.0 | 1472.695 | 197.875 | 393.149 | 17.843% | 37.659% |
| 20.0 | 1021.120 | 205.525 | 598.675 | 18.532% | 57.346% |
| 25.0 | 560.433 | 165.876 | 764.55 | 14.957% | 73.236% |
| 30.0 | 268.137 | 104.856 | 869.407 | 9.455% | 83.280% |
| 35.0 | 90.935 | 52.876 | 922.282 | 4.768% | 88.345% |
| 40.0 | 43.439 | 22.419 | 944.702 | 2.022% | 90.492% |
| 45.0 | 32.252 | 14.015 | 958.717 | 1.264% | 91.835% |
| 50.0 | 28.561 | 12.288 | 971.005 | 1.108% | 93.012% |
| 55.0 | 25.741 | 11.807 | 982.812 | 1.065% | 94.143% |
| 60.0 | 21.157 | 10.840 | 993.652 | .977% | 95.181% |
| 65.0 | 20.060 | 10.020 | 1003.672 | .904% | 96.141% |
| 70.0 | 18.795 | 9.838 | 1013.51 | .887% | 97.083% |
| 75.0 | 14.020 | 8.577 | 1022.088 | .773% | 97.905% |
| 80.0 | 12.178 | 7.010 | 1029.098 | .632% | 98.576% |
| 85.0 | 13.451 | 6.964 | 1036.062 | .628% | 99.243% |
| 90.0 | 15.398 | 7.899 | 1043.961 | .712% | 100.000% |

ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|--------|---------|
| 0-30 | 869.41 | 78.40% | 83.28% |
| 0-40 | 944.70 | 85.19% | 90.49% |
| 0-60 | 993.65 | 89.60% | 95.18% |
| 0-90 | 1036.06 | 93.42% | 99.24% |
| 0-120 | 1036.06 | 93.42% | 99.24% |
| 0-180 | 1043.96 | 94.14% | 100.00% |
| 60-90 | 53.25 | 4.80% | 5.10% |
| 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% |
| 0-28.37 | 835.17 | 75.31% | 80.00% |

ZONAL LUMEN SUMMARY

| | |
|---------|--------|
| 0-10 | 195.27 |
| 10-20 | 403.40 |
| 20-30 | 270.73 |
| 30-40 | 75.30 |
| 40-50 | 26.30 |
| 50-60 | 22.65 |
| 60-70 | 19.86 |
| 70-80 | 15.59 |
| 80-90 | 6.96 |
| 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: —————

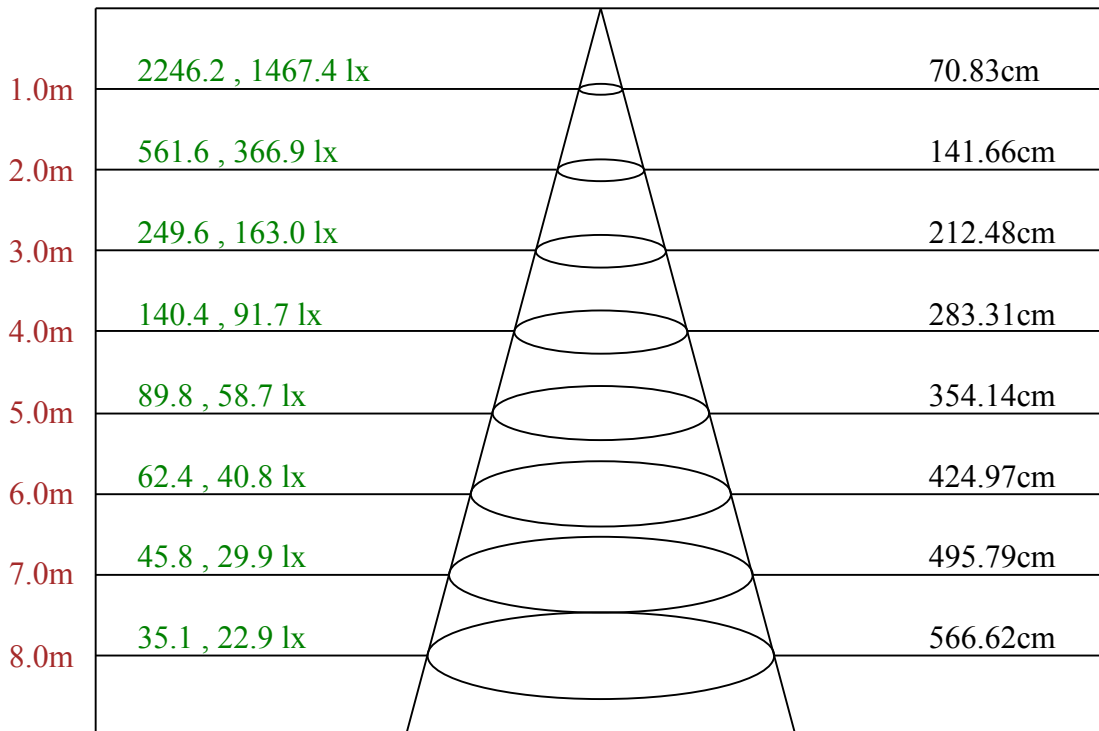
C90/C270: —————

Field angle(10%Imax):C0/180Left:31.2 Right:31.2

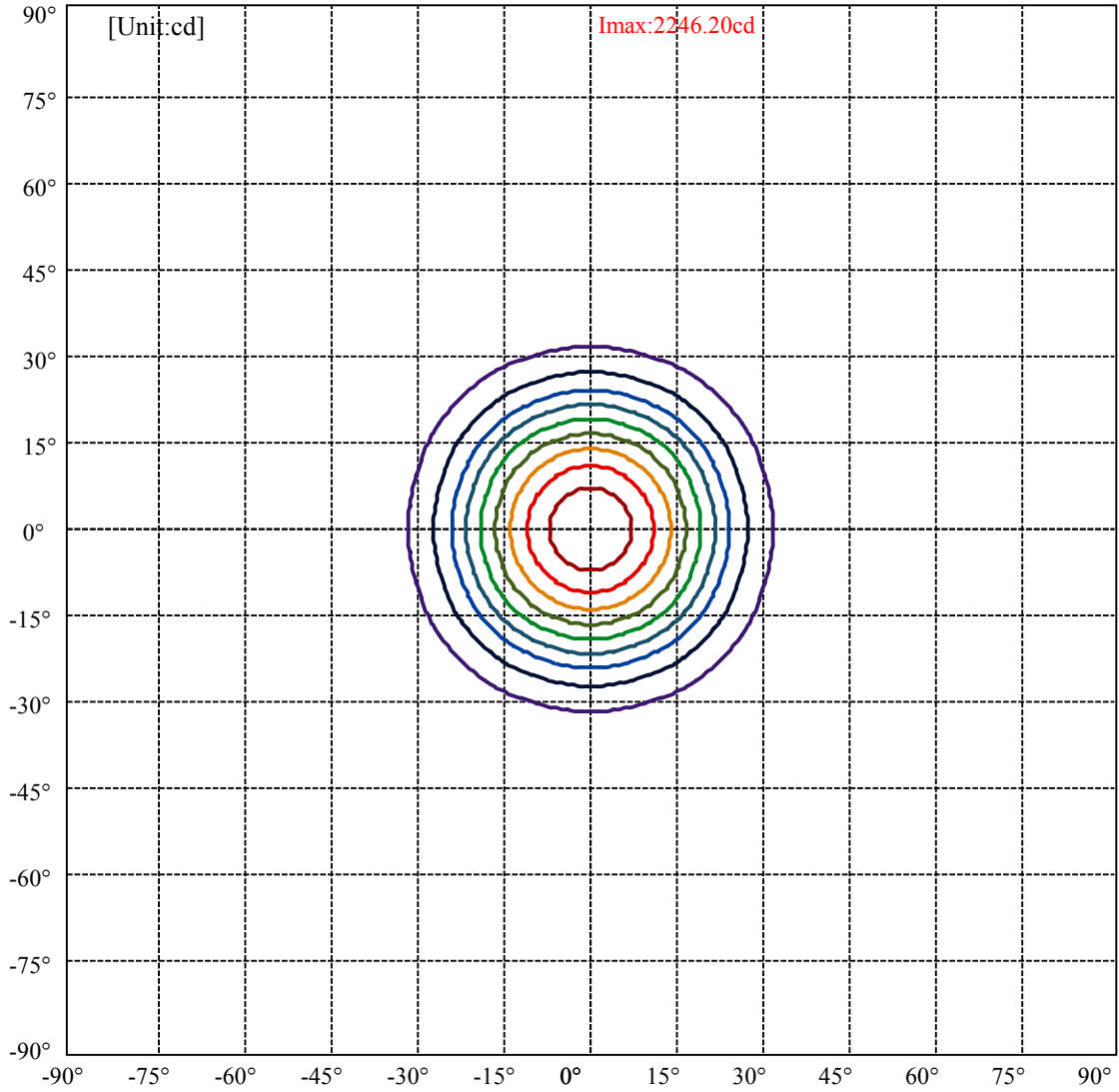
:C90/270Left:31.2 Right:31.2

Beam Angle(50%Imax):C0/180Left:18.9 Right:18.9

:C90/270Left:18.9 Right:18.9



Max , Ave Beam angle of C0 plane 39.00

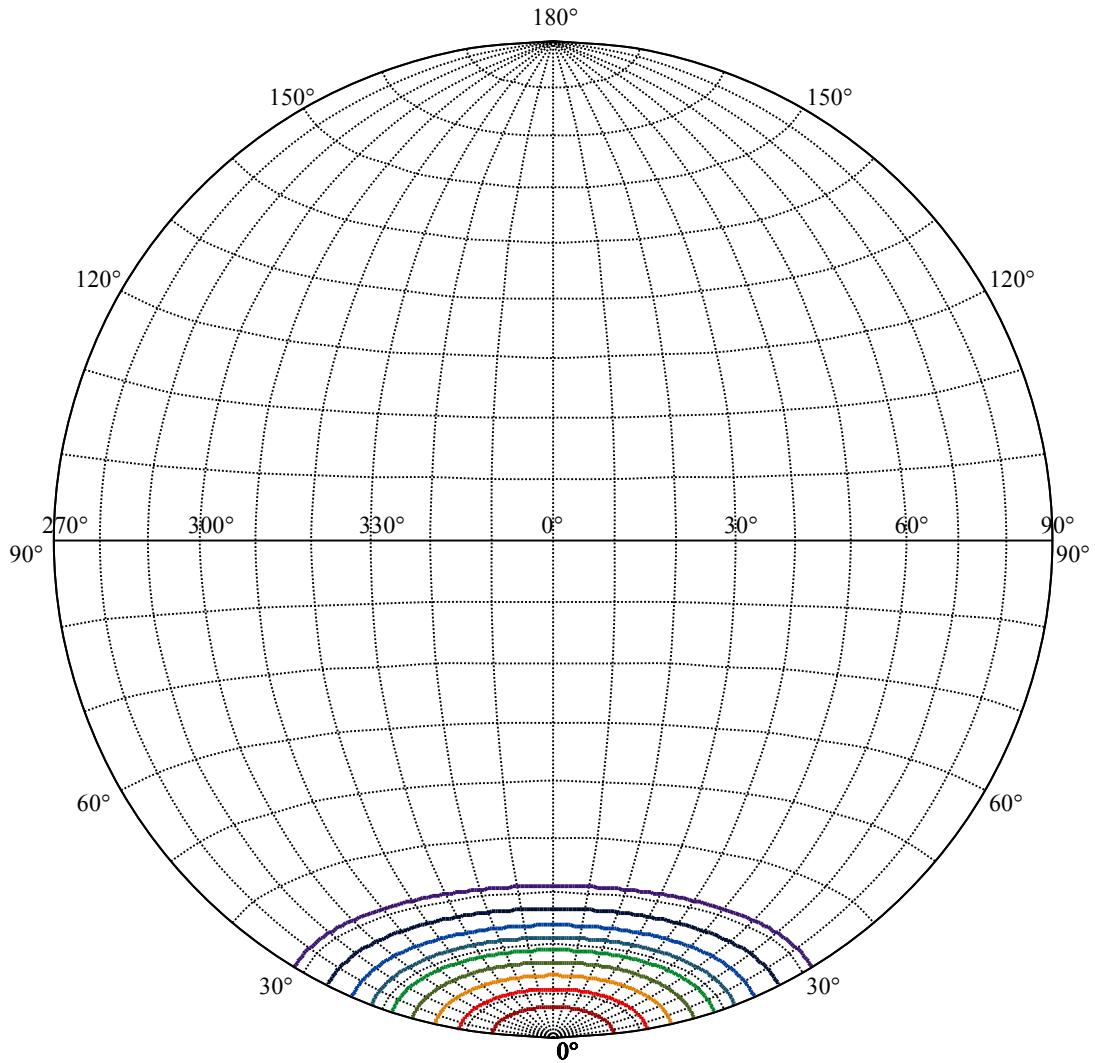


| | |
|-------------------|---|
| (10%Imax) 224.62 | — |
| (20%Imax) 449.241 | — |
| (30%Imax) 673.861 | — |
| (40%Imax) 898.481 | — |
| (50%Imax) 1123.1 | — |
| (60%Imax) 1347.72 | — |
| (70%Imax) 1572.34 | — |
| (80%Imax) 1796.96 | — |
| (90%Imax) 2021.58 | — |

Equipment:
Temperature(°C): -1.0

Date: 2019/7/23
Humidity(%): -1.0%

Operator:
Distance(m): 1.00



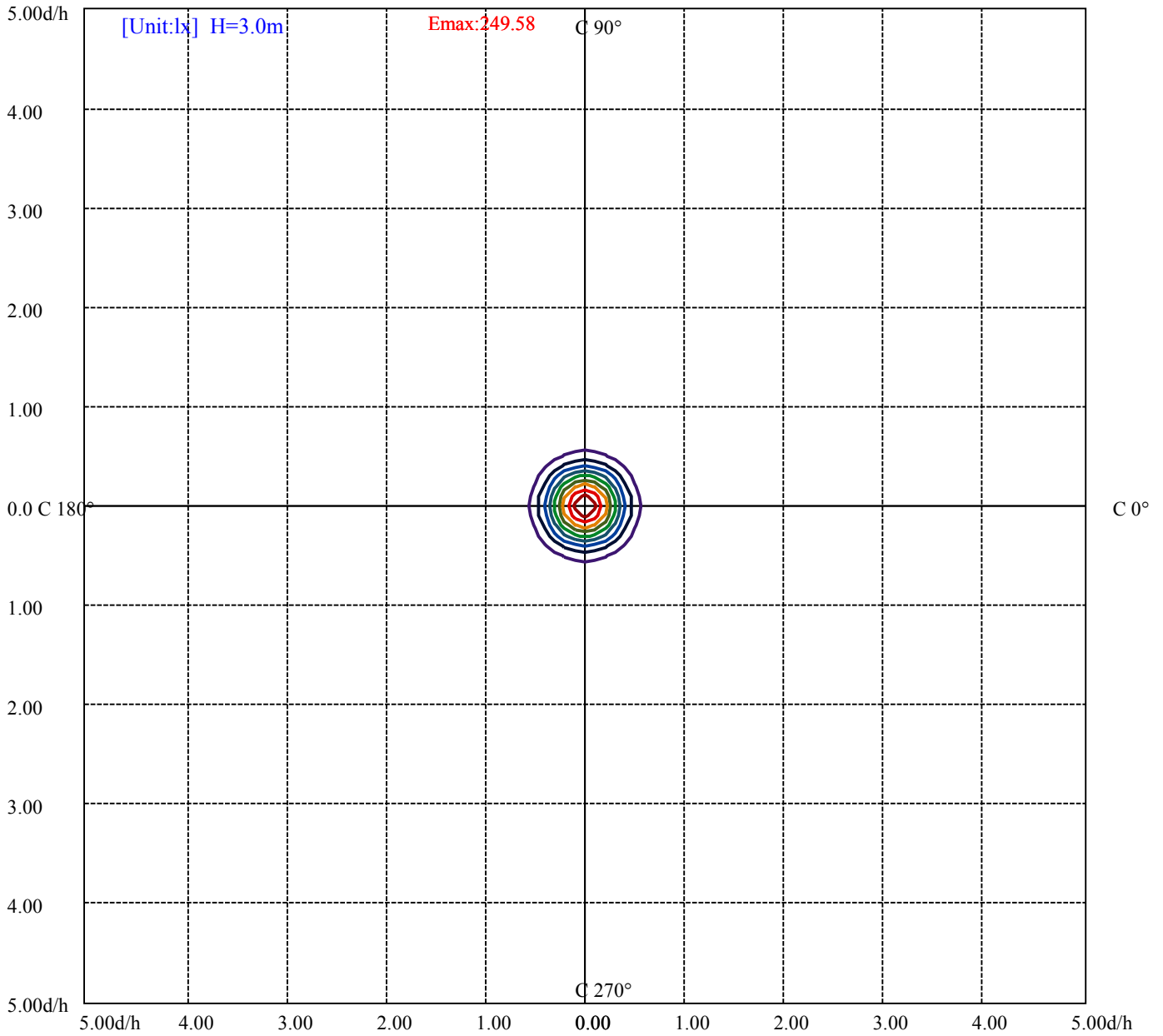
House

[Unit:cd]

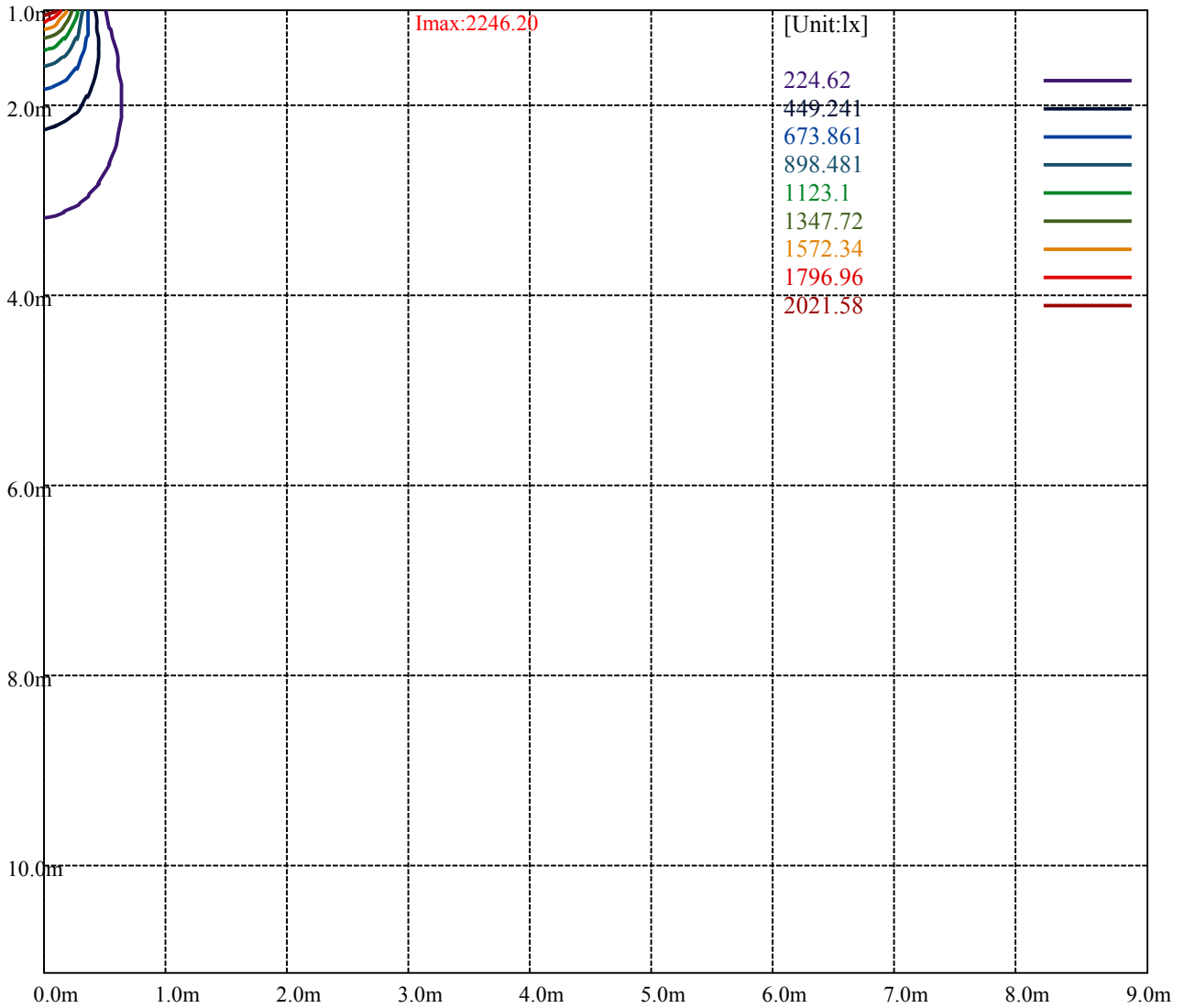
Road

Imax:2246.20

| | | |
|-----------|---------|---|
| (10%Imax) | 224.62 | — |
| (20%Imax) | 449.241 | — |
| (30%Imax) | 673.861 | — |
| (40%Imax) | 898.481 | — |
| (50%Imax) | 1123.1 | — |
| (60%Imax) | 1347.72 | — |
| (70%Imax) | 1572.34 | — |
| (80%Imax) | 1796.96 | — |
| (90%Imax) | 2021.58 | — |



- (10%Emax) 24.95778
- (20%Emax) 49.91555
- (30%Emax) 74.87333
- (40%Emax) 99.83111
- (50%Emax) 124.7889
- (60%Emax) 149.7467
- (70%Emax) 174.7044
- (80%Emax) 199.6622
- (90%Emax) 224.62



Luminance Table

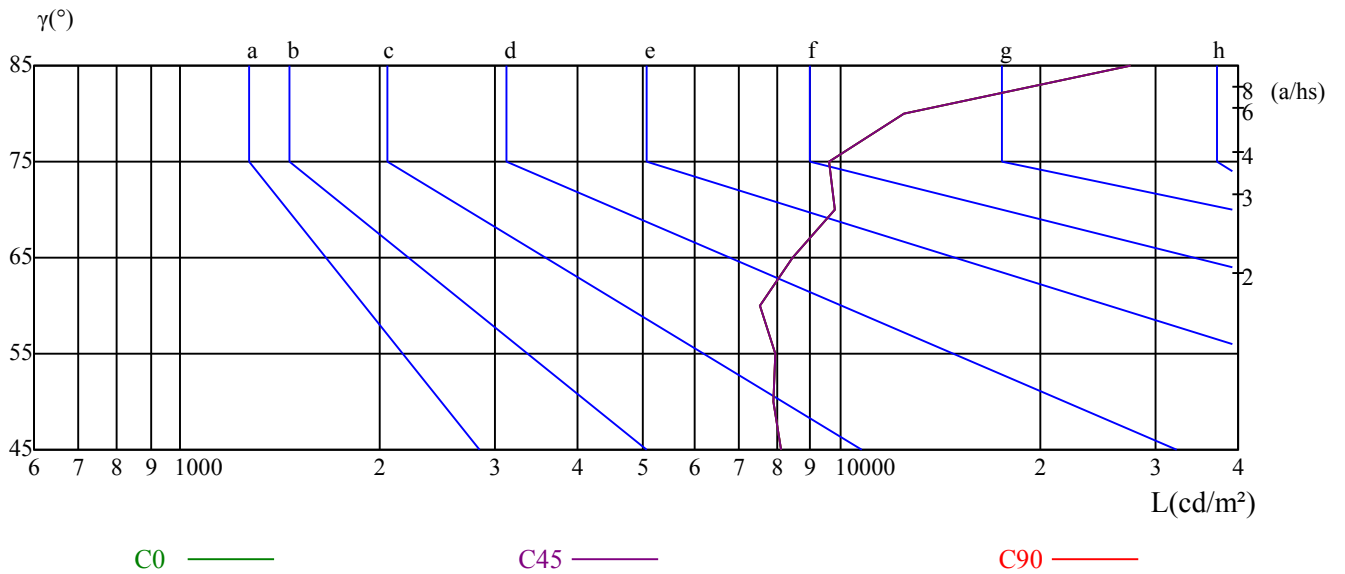
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|----------|------|------|------|------|------|------|------|-------|-------|
| C0 | 8109 | 7899 | 7978 | 7522 | 8438 | 9769 | 9630 | 12468 | 27437 |
| C45 | 8109 | 7899 | 7978 | 7522 | 8438 | 9769 | 9630 | 12468 | 27437 |
| C90 | 8109 | 7899 | 7978 | 7522 | 8438 | 9769 | 9630 | 12468 | 27437 |

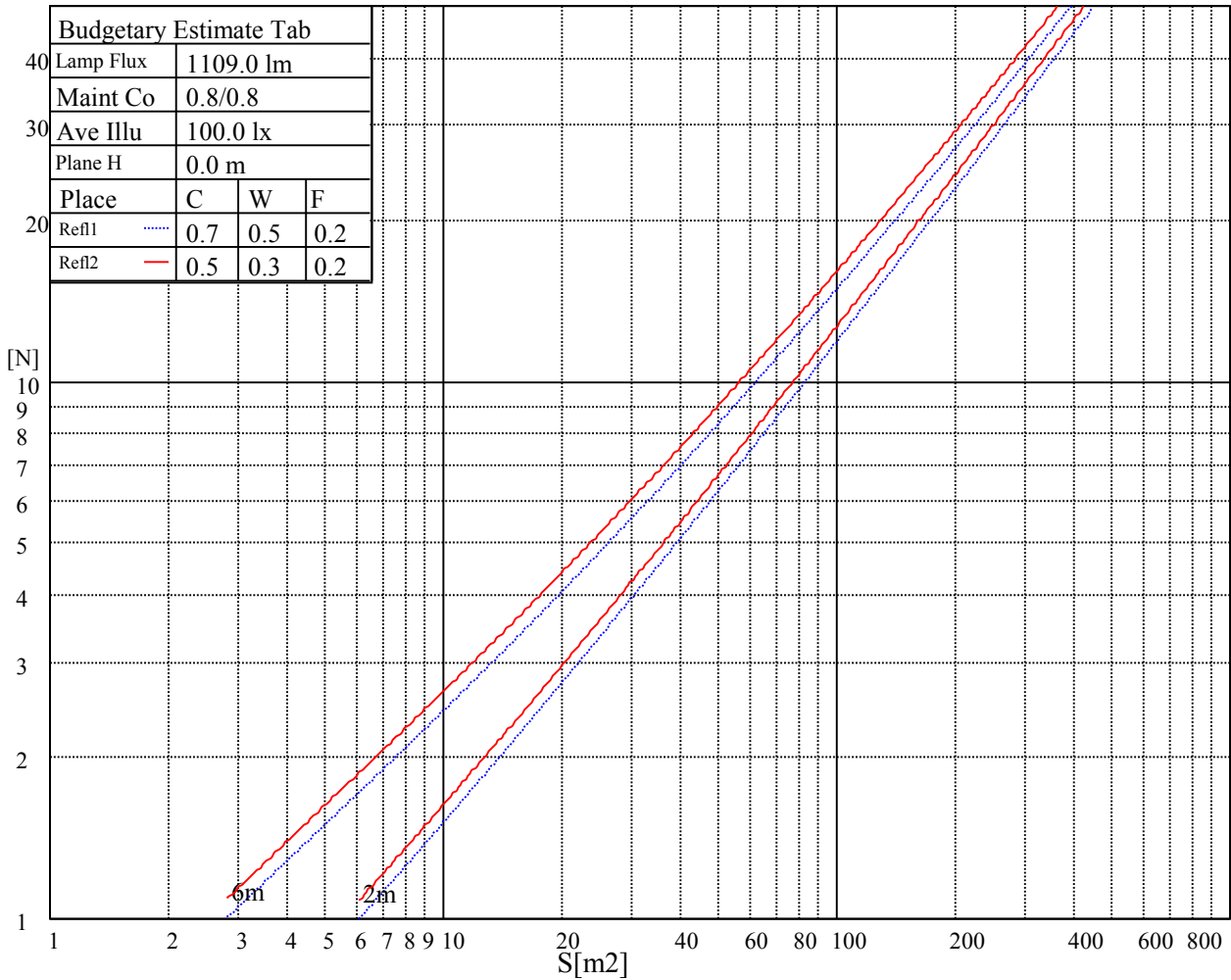
| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 8438 | 8438 | 8438 | 9630 | 9630 | 9630 | 27437 | 27437 | 27437 |

Glare Table

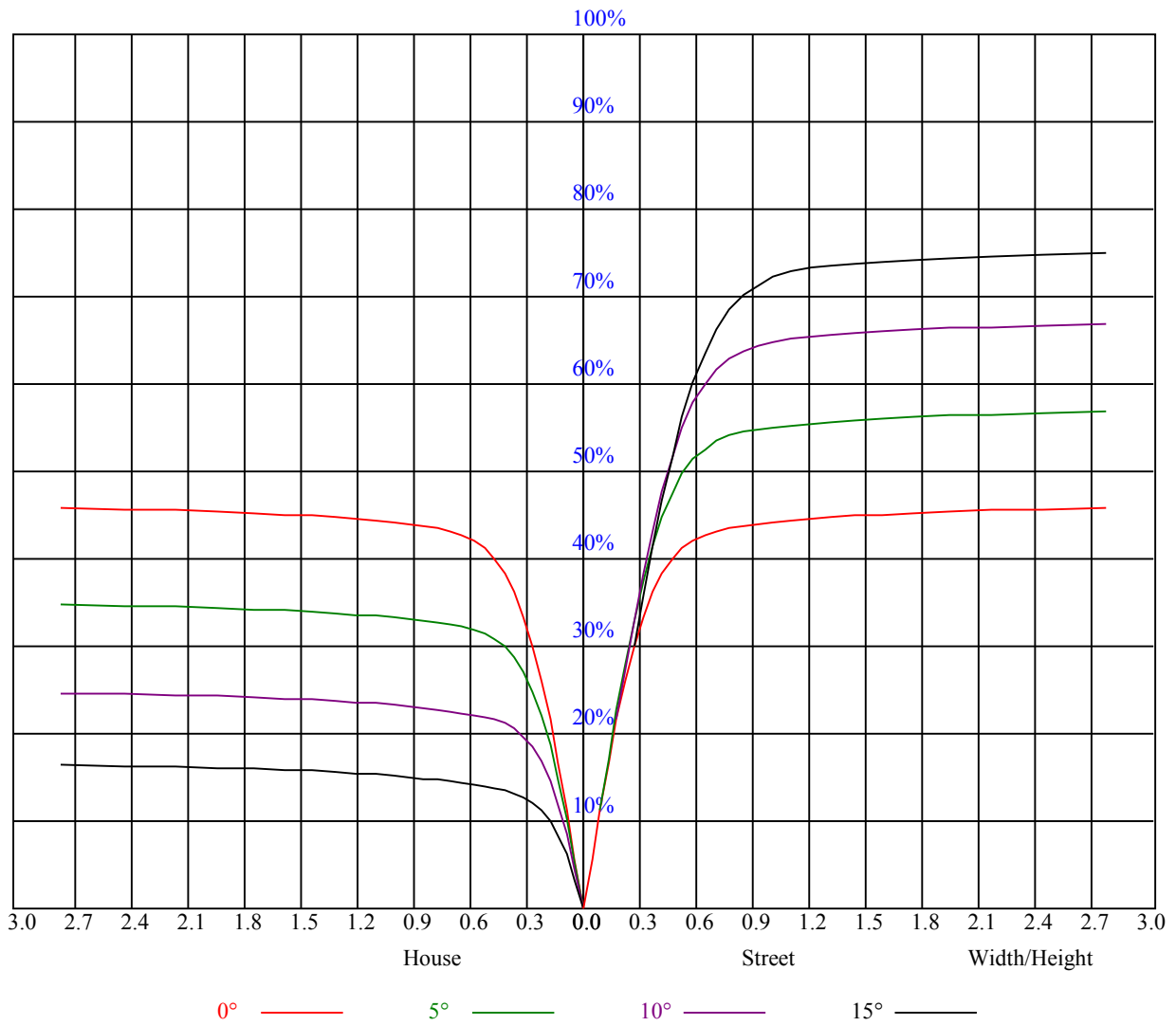
| Glare | Quality | Service Values Illuminance(lx) | | | | | | | |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15 | A | 2000 | 1000 | 500 | <=300 | | | | |
| 1.5 | B | | 2000 | 1000 | 500 | <=300 | | | |
| 1.85 | C | | | 2000 | 1000 |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

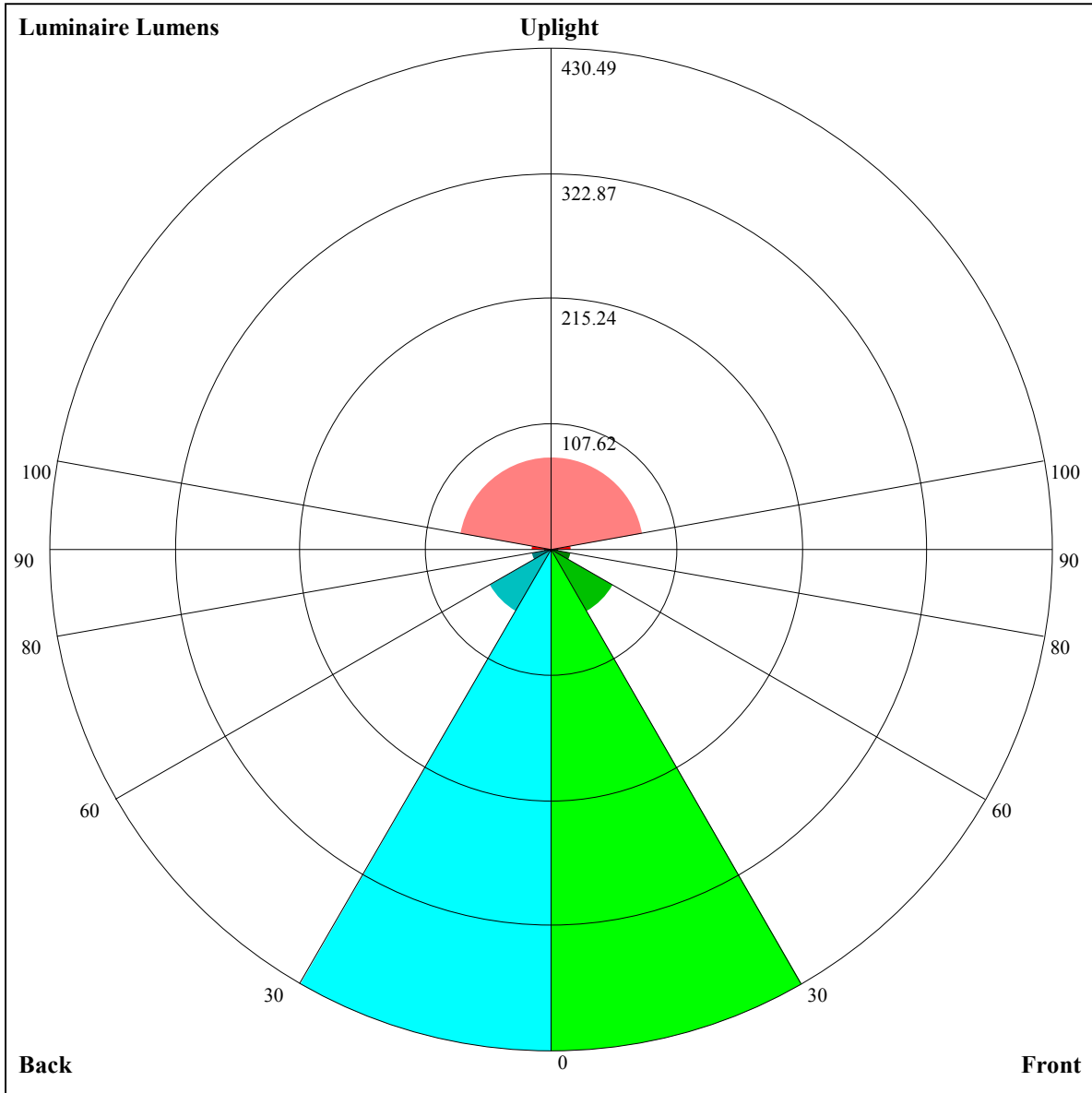
Luminance Limiting Curve





| 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 | 1.12 | 1.12 | 1.12 | 1.09 | 1.09 | 1.09 | 1.05 | 1.05 | 1.05 | 1.00 | 1.00 | 1.00 | 0.96 | 0.96 | 0.96 | 0.94 |
| 1 | 1.04 | 1.01 | 0.99 | 1.02 | 1.00 | 0.98 | 0.98 | 0.96 | 0.95 | 0.94 | 0.93 | 0.92 | 0.91 | 0.90 | 0.89 | 0.87 |
| 2 | 0.97 | 0.93 | 0.90 | 0.95 | 0.92 | 0.89 | 0.92 | 0.90 | 0.87 | 0.90 | 0.87 | 0.85 | 0.87 | 0.85 | 0.84 | 0.82 |
| 3 | 0.91 | 0.87 | 0.83 | 0.90 | 0.86 | 0.83 | 0.88 | 0.84 | 0.81 | 0.85 | 0.82 | 0.80 | 0.83 | 0.81 | 0.79 | 0.77 |
| 4 | 0.86 | 0.81 | 0.78 | 0.85 | 0.81 | 0.77 | 0.83 | 0.79 | 0.76 | 0.81 | 0.78 | 0.75 | 0.80 | 0.77 | 0.75 | 0.73 |
| 5 | 0.82 | 0.77 | 0.73 | 0.81 | 0.76 | 0.73 | 0.79 | 0.75 | 0.72 | 0.78 | 0.74 | 0.71 | 0.76 | 0.73 | 0.71 | 0.70 |
| 6 | 0.78 | 0.73 | 0.69 | 0.77 | 0.72 | 0.69 | 0.76 | 0.71 | 0.68 | 0.74 | 0.71 | 0.68 | 0.73 | 0.70 | 0.67 | 0.66 |
| 7 | 0.74 | 0.69 | 0.66 | 0.74 | 0.69 | 0.65 | 0.72 | 0.68 | 0.65 | 0.71 | 0.68 | 0.65 | 0.70 | 0.67 | 0.64 | 0.63 |
| 8 | 0.71 | 0.66 | 0.62 | 0.70 | 0.66 | 0.62 | 0.69 | 0.65 | 0.62 | 0.69 | 0.65 | 0.62 | 0.68 | 0.64 | 0.62 | 0.60 |
| 9 | 0.68 | 0.63 | 0.60 | 0.68 | 0.63 | 0.60 | 0.67 | 0.62 | 0.59 | 0.66 | 0.62 | 0.59 | 0.65 | 0.62 | 0.59 | 0.58 |
| 10 | 0.65 | 0.60 | 0.57 | 0.65 | 0.60 | 0.57 | 0.64 | 0.60 | 0.57 | 0.63 | 0.60 | 0.57 | 0.63 | 0.59 | 0.57 | 0.56 |





Luminaire Lumens:

FL=430.49,FM=61.67,FH=17.72,FVH=7.43

BL=430.49,BM=61.67,BH=17.72,BVH=7.43

UL=16.8,UH=79.95

BUG Rating:B1-U2-G0

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 | 2246.20 | 2132.37 | 1863.07 | 1472.70 | 1021.12 | 560.43 | 268.14 | 90.94 | 43.44 |
| 45.0 | 2246.20 | 2132.37 | 1863.07 | 1472.70 | 1021.12 | 560.43 | 268.14 | 90.94 | 43.44 |
| 90.0 | 2246.20 | 2132.37 | 1863.07 | 1472.70 | 1021.12 | 560.43 | 268.14 | 90.94 | 43.44 |
| 135.0 | 2246.20 | 2132.37 | 1863.07 | 1472.70 | 1021.12 | 560.43 | 268.14 | 90.94 | 43.44 |
| 180.0 | 2246.20 | 2132.37 | 1863.07 | 1472.70 | 1021.12 | 560.43 | 268.14 | 90.94 | 43.44 |
| 225.0 | 2246.20 | 2132.37 | 1863.07 | 1472.70 | 1021.12 | 560.43 | 268.14 | 90.94 | 43.44 |
| 270.0 | 2246.20 | 2132.37 | 1863.07 | 1472.70 | 1021.12 | 560.43 | 268.14 | 90.94 | 43.44 |
| 315.0 | 2246.20 | 2132.37 | 1863.07 | 1472.70 | 1021.12 | 560.43 | 268.14 | 90.94 | 43.44 |
| 360.0 | 2246.20 | 2132.37 | 1863.07 | 1472.70 | 1021.12 | 560.43 | 268.14 | 90.94 | 43.44 |
| C/γ(°) | 45.0 | 50.0 | 55.0 | 60.0 | 65.0 | 70.0 | 75.0 | 80.0 | 85.0 |
| 0.0 | 32.25 | 28.56 | 25.74 | 21.16 | 20.06 | 18.80 | 14.02 | 12.18 | 13.45 |
| 45.0 | 32.25 | 28.56 | 25.74 | 21.16 | 20.06 | 18.80 | 14.02 | 12.18 | 13.45 |
| 90.0 | 32.25 | 28.56 | 25.74 | 21.16 | 20.06 | 18.80 | 14.02 | 12.18 | 13.45 |
| 135.0 | 32.25 | 28.56 | 25.74 | 21.16 | 20.06 | 18.80 | 14.02 | 12.18 | 13.45 |
| 180.0 | 32.25 | 28.56 | 25.74 | 21.16 | 20.06 | 18.80 | 14.02 | 12.18 | 13.45 |
| 225.0 | 32.25 | 28.56 | 25.74 | 21.16 | 20.06 | 18.80 | 14.02 | 12.18 | 13.45 |
| 270.0 | 32.25 | 28.56 | 25.74 | 21.16 | 20.06 | 18.80 | 14.02 | 12.18 | 13.45 |
| 315.0 | 32.25 | 28.56 | 25.74 | 21.16 | 20.06 | 18.80 | 14.02 | 12.18 | 13.45 |
| 360.0 | 32.25 | 28.56 | 25.74 | 21.16 | 20.06 | 18.80 | 14.02 | 12.18 | 13.45 |
| C/γ(°) | 90.0 | | | | | | | | |
| 0.0 | 15.40 | | | | | | | | |
| 45.0 | 15.40 | | | | | | | | |
| 90.0 | 15.40 | | | | | | | | |
| 135.0 | 15.40 | | | | | | | | |
| 180.0 | 15.40 | | | | | | | | |
| 225.0 | 15.40 | | | | | | | | |
| 270.0 | 15.40 | | | | | | | | |
| 315.0 | 15.40 | | | | | | | | |
| 360.0 | 15.40 | | | | | | | | |