



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: 2-2160-A
Luminaire: 92.70.153.00
Report No: NATA0100 Voltage(V): 33.8900
Test No: GC2019111412 Current(A): 0.4270
LampCAT: PHILIPS SLM92757 TWL152024 Power (W): 14.4700
Lamp flux(lm): 1410.0 PF: 1.0000
Number of Lamps: 1 Ballast type: DC
Length(mm): 0 Width(mm): 0
Phm Type: C Height(mm): 0

Photometric Results

Lumens(lm): 1161.62
Efficiency(%): 82.38%
Lumens(lm)/Power(W): 80.28
Central intensity(cd): 1853.156
Maximum intensity(cd): 1853.156
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=43.0
 [C90/270]Total=43.0
Field angle(10%Imax): [C0/180]Total=78.4
 [C90/270]Total=78.4
Maximum s/h(1/2): C0_180=0.68 C90_270=0.68
Maximum s/h(1/4): C0_180=0.71 C90_270=0.71
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 82.38%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.026%

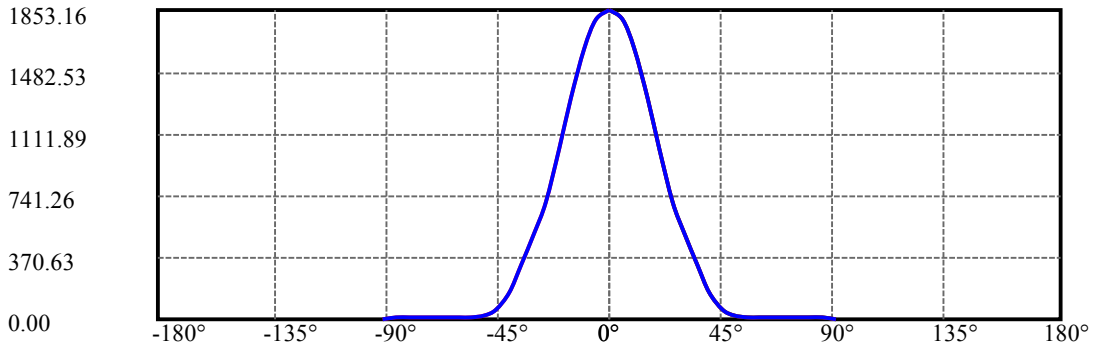
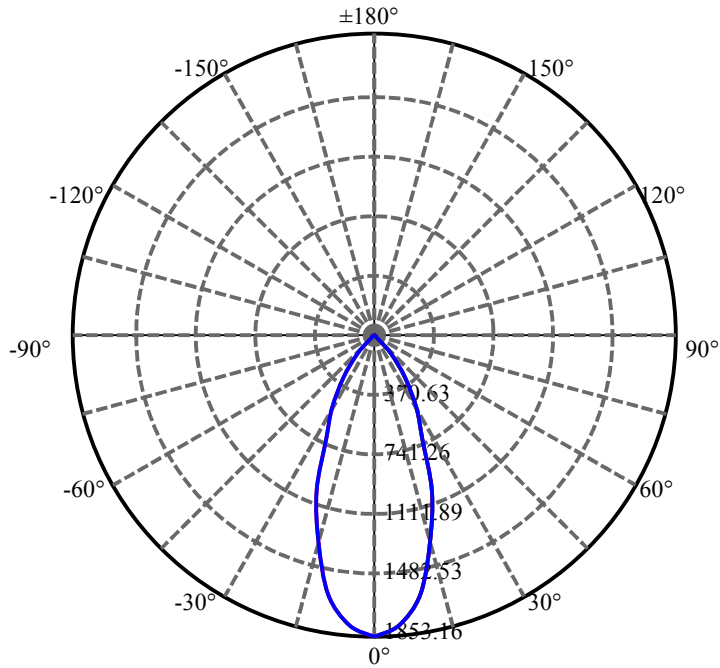
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0 | 1853.156 | 0.000 | 0 | .000% | .000% |
| 5.0 | 1792.055 | 43.577 | 43.577 | 3.091% | 3.751% |
| 10.0 | 1618.383 | 122.002 | 165.58 | 8.653% | 14.254% |
| 15.0 | 1321.102 | 174.368 | 339.948 | 12.367% | 29.265% |
| 20.0 | 1020.143 | 192.951 | 532.899 | 13.684% | 45.875% |
| 25.0 | 707.084 | 181.154 | 714.053 | 12.848% | 61.470% |
| 30.0 | 514.666 | 154.613 | 868.667 | 10.965% | 74.781% |
| 35.0 | 323.796 | 123.469 | 992.136 | 8.757% | 85.410% |
| 40.0 | 158.597 | 80.484 | 1072.62 | 5.708% | 92.338% |
| 45.0 | 58.324 | 40.165 | 1112.785 | 2.849% | 95.796% |
| 50.0 | 20.025 | 15.832 | 1128.616 | 1.123% | 97.159% |
| 55.0 | 8.859 | 6.280 | 1134.897 | .445% | 97.699% |
| 60.0 | 7.580 | 3.800 | 1138.697 | .269% | 98.026% |
| 65.0 | 7.390 | 3.639 | 1142.336 | .258% | 98.340% |
| 70.0 | 7.249 | 3.707 | 1146.042 | .263% | 98.659% |
| 75.0 | 7.109 | 3.753 | 1149.795 | .266% | 98.982% |
| 80.0 | 7.066 | 3.793 | 1153.588 | .269% | 99.308% |
| 85.0 | 8.705 | 4.285 | 1157.874 | .304% | 99.677% |
| 90.0 | 4.985 | 3.748 | 1161.622 | .266% | 100.000% |

ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|--------|---------|
| 0-30 | 868.67 | 61.61% | 74.78% |
| 0-40 | 1072.62 | 76.07% | 92.34% |
| 0-60 | 1138.70 | 80.76% | 98.03% |
| 0-90 | 1157.87 | 82.12% | 99.68% |
| 0-120 | 1157.87 | 82.12% | 99.68% |
| 0-180 | 1161.62 | 82.38% | 100.00% |
| 60-90 | 22.98 | 1.63% | 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% |
| 0-32.46 | 929.30 | 65.91% | 80.00% |

ZONAL LUMEN SUMMARY

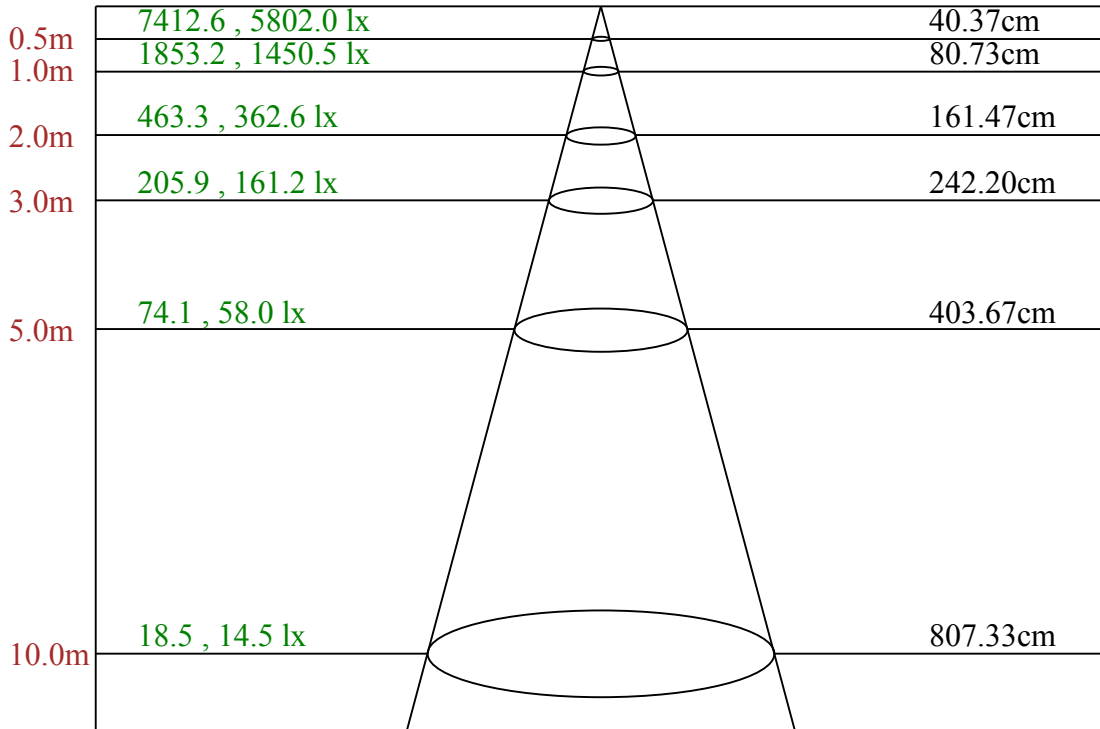
| | |
|---------|--------|
| 0-10 | 165.58 |
| 10-20 | 367.32 |
| 20-30 | 335.77 |
| 30-40 | 203.95 |
| 40-50 | 56.00 |
| 50-60 | 10.08 |
| 60-70 | 7.35 |
| 70-80 | 7.55 |
| 80-90 | 4.29 |
| 90-100 | 0.00 |
| 100-110 | 0.00 |
| 110-120 | 0.00 |
| 120-130 | 0.00 |
| 130-140 | 0.00 |
| 140-150 | 0.00 |
| 150-160 | 0.00 |
| 160-170 | 0.00 |
| 170-180 | 0.00 |



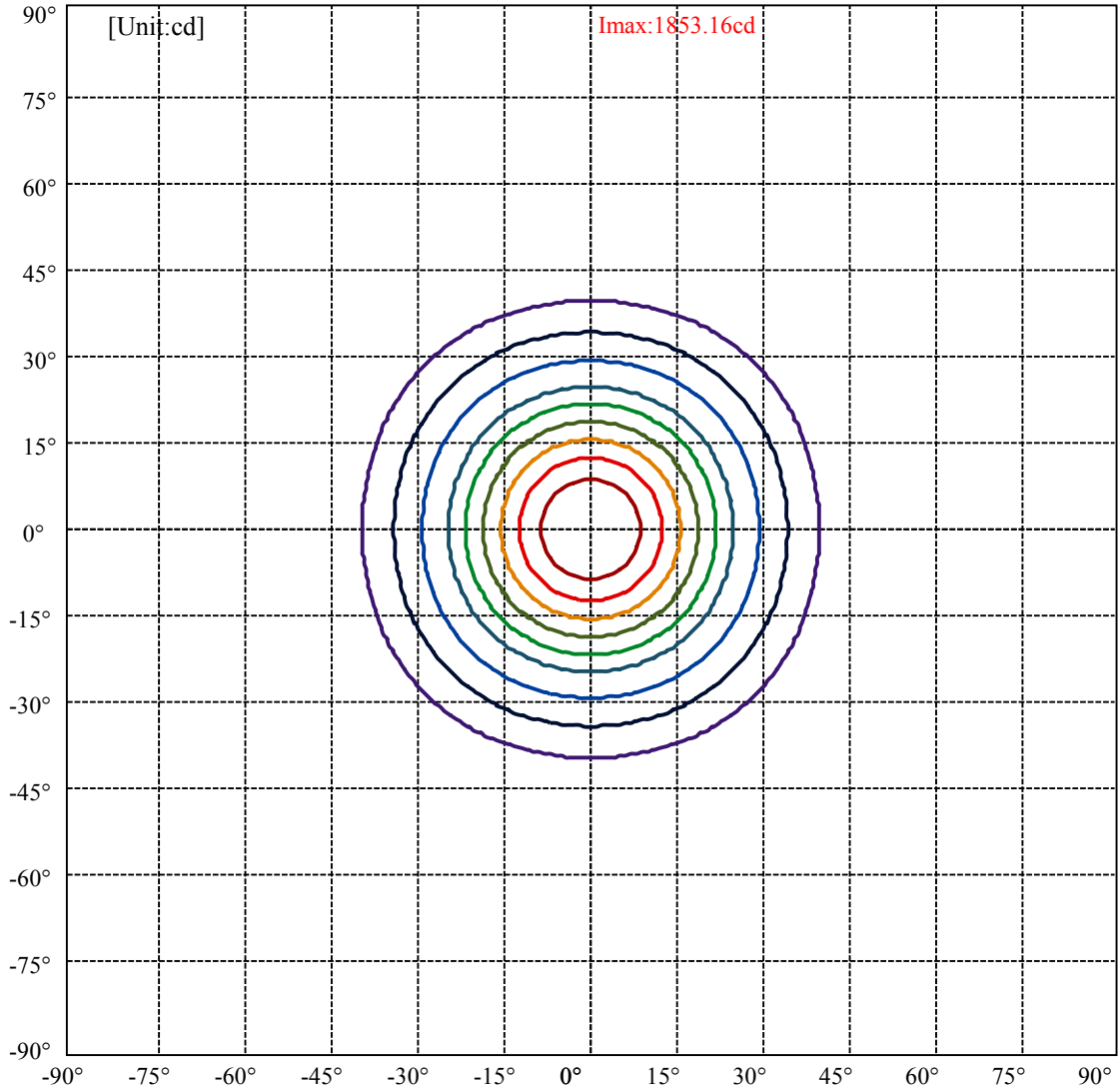
C0(Max): —————
C0/C180: —————
C90/C270: —————

Field angle(10%Imax):C0/180Left:39.2 Right:39.2
:C90/270Left:39.2 Right:39.2

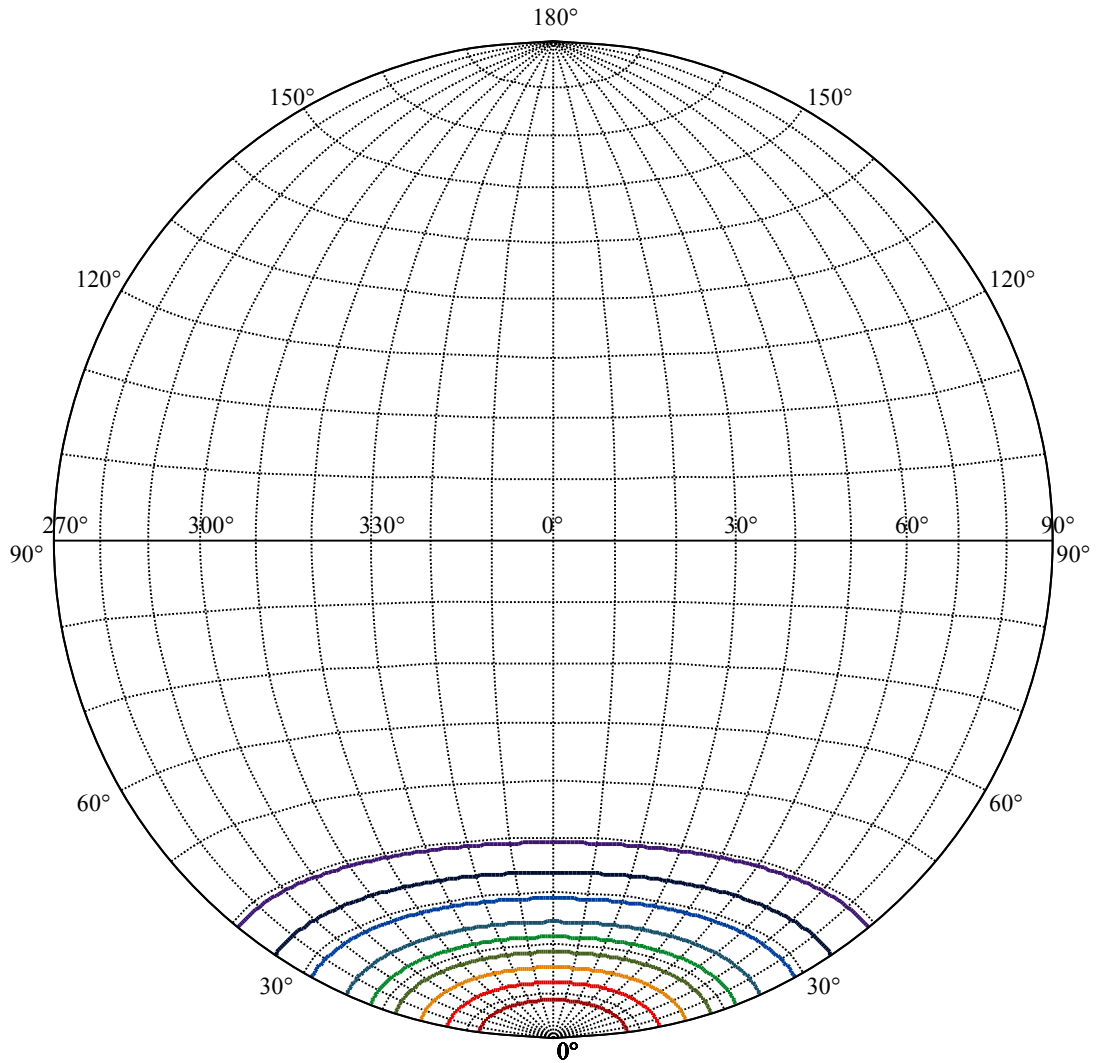
Beam Angle(50%Imax):C0/180Left:21.5 Right:21.5
:C90/270Left:21.5 Right:21.5



Max , Ave Beam angle of C0 plane 43.96



| | |
|-------------------|---|
| (10%Imax) 185.316 | — |
| (20%Imax) 370.631 | — |
| (30%Imax) 555.947 | — |
| (40%Imax) 741.263 | — |
| (50%Imax) 926.578 | — |
| (60%Imax) 1111.89 | — |
| (70%Imax) 1297.21 | — |
| (80%Imax) 1482.53 | — |
| (90%Imax) 1667.84 | — |



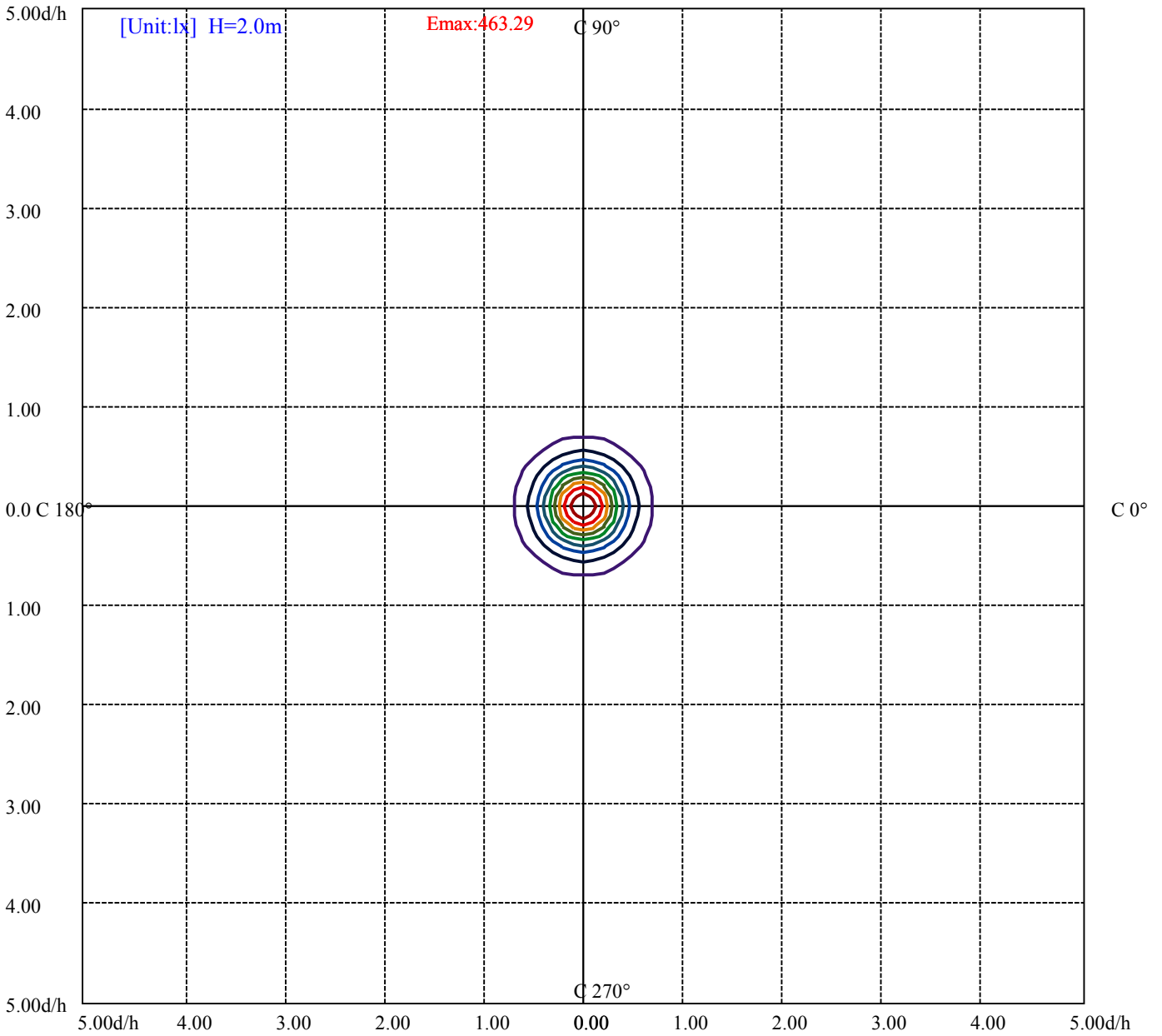
House

[Unit:cd]

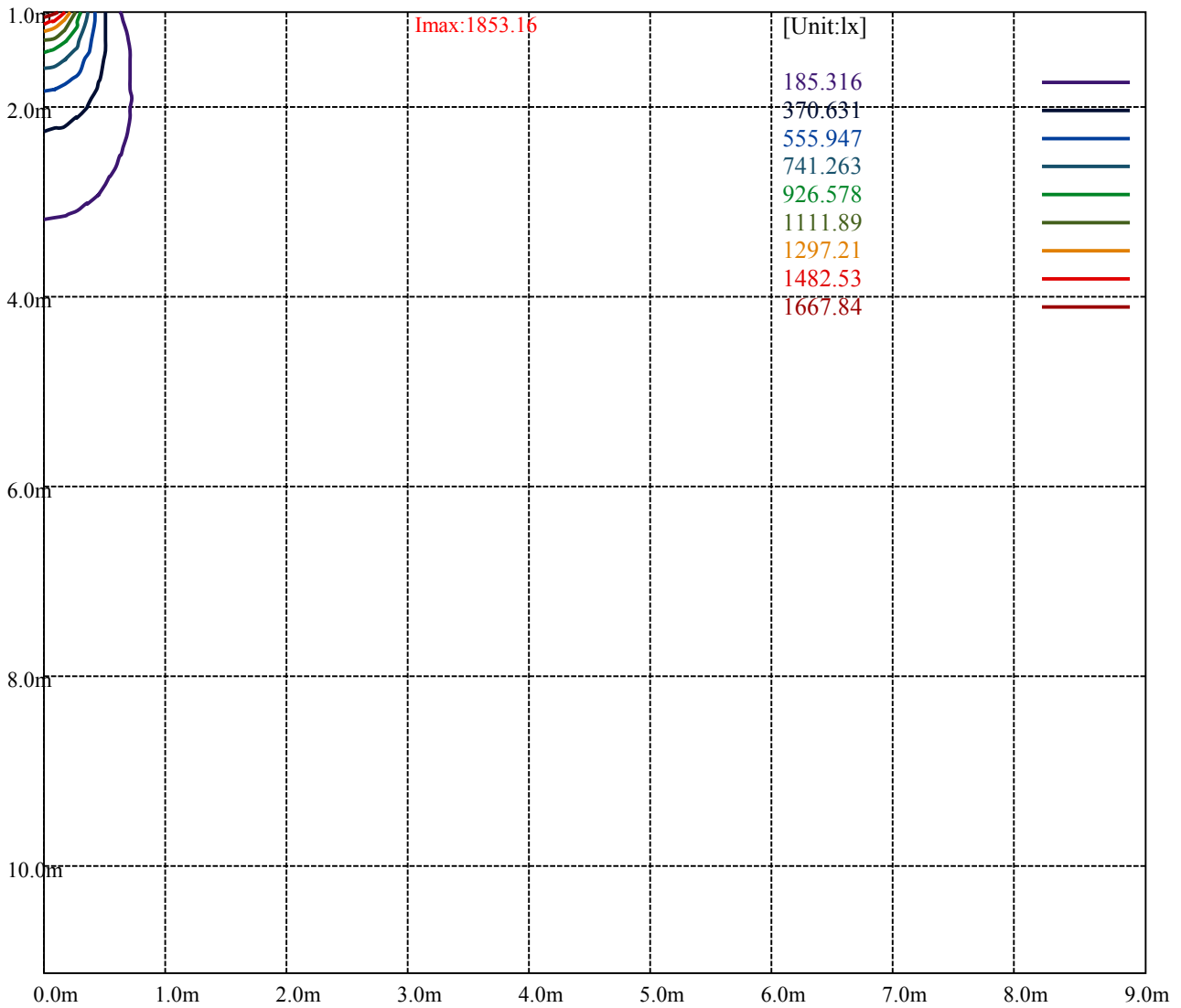
Road

Imax:1853.16

| | | |
|-----------|---------|---|
| (10%Imax) | 185.316 | — |
| (20%Imax) | 370.631 | — |
| (30%Imax) | 555.947 | — |
| (40%Imax) | 741.263 | — |
| (50%Imax) | 926.578 | — |
| (60%Imax) | 1111.89 | — |
| (70%Imax) | 1297.21 | — |
| (80%Imax) | 1482.53 | — |
| (90%Imax) | 1667.84 | — |



- (10%Emax) 46.32875
- (20%Emax) 92.65775
- (30%Emax) 138.9865
- (40%Emax) 185.3155
- (50%Emax) 231.6443
- (60%Emax) 277.9725
- (70%Emax) 324.3025
- (80%Emax) 370.63
- (90%Emax) 416.96



Luminance Table

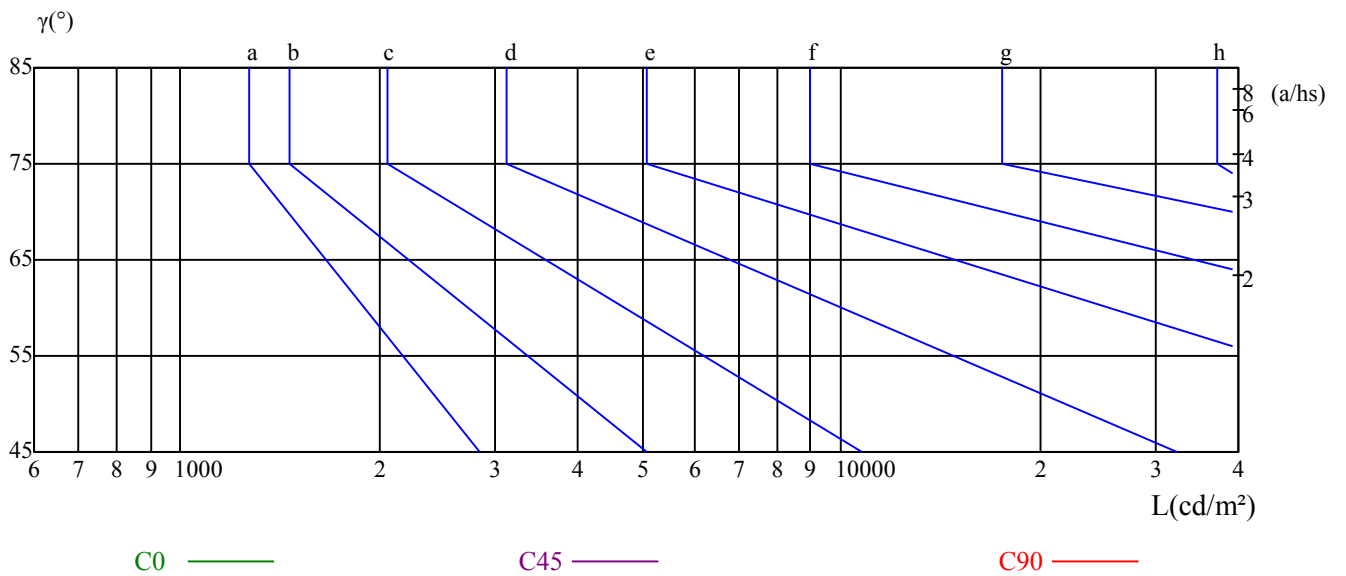
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|----------|----|----|----|----|----|----|----|----|----|
| C0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

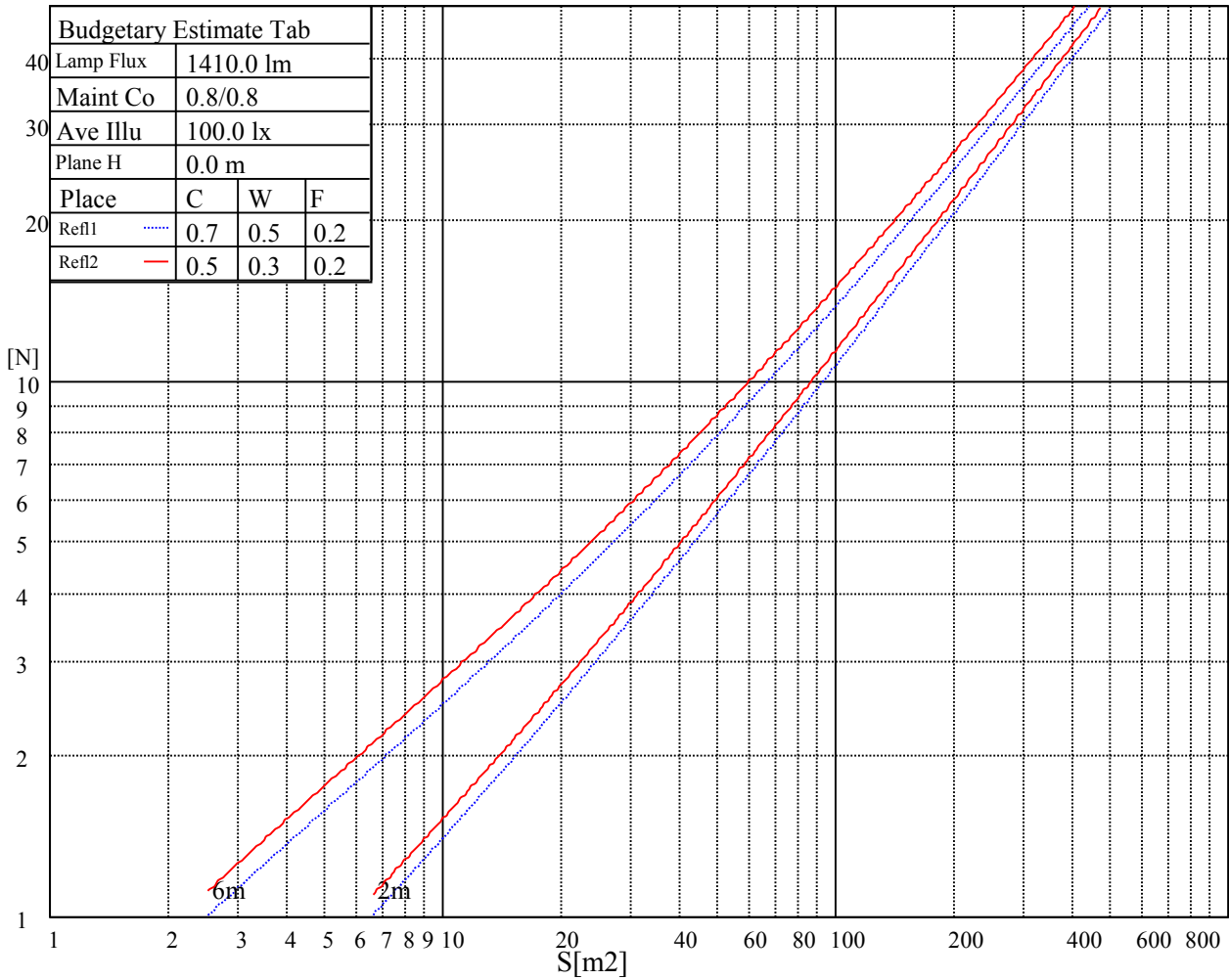
| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Glare Table

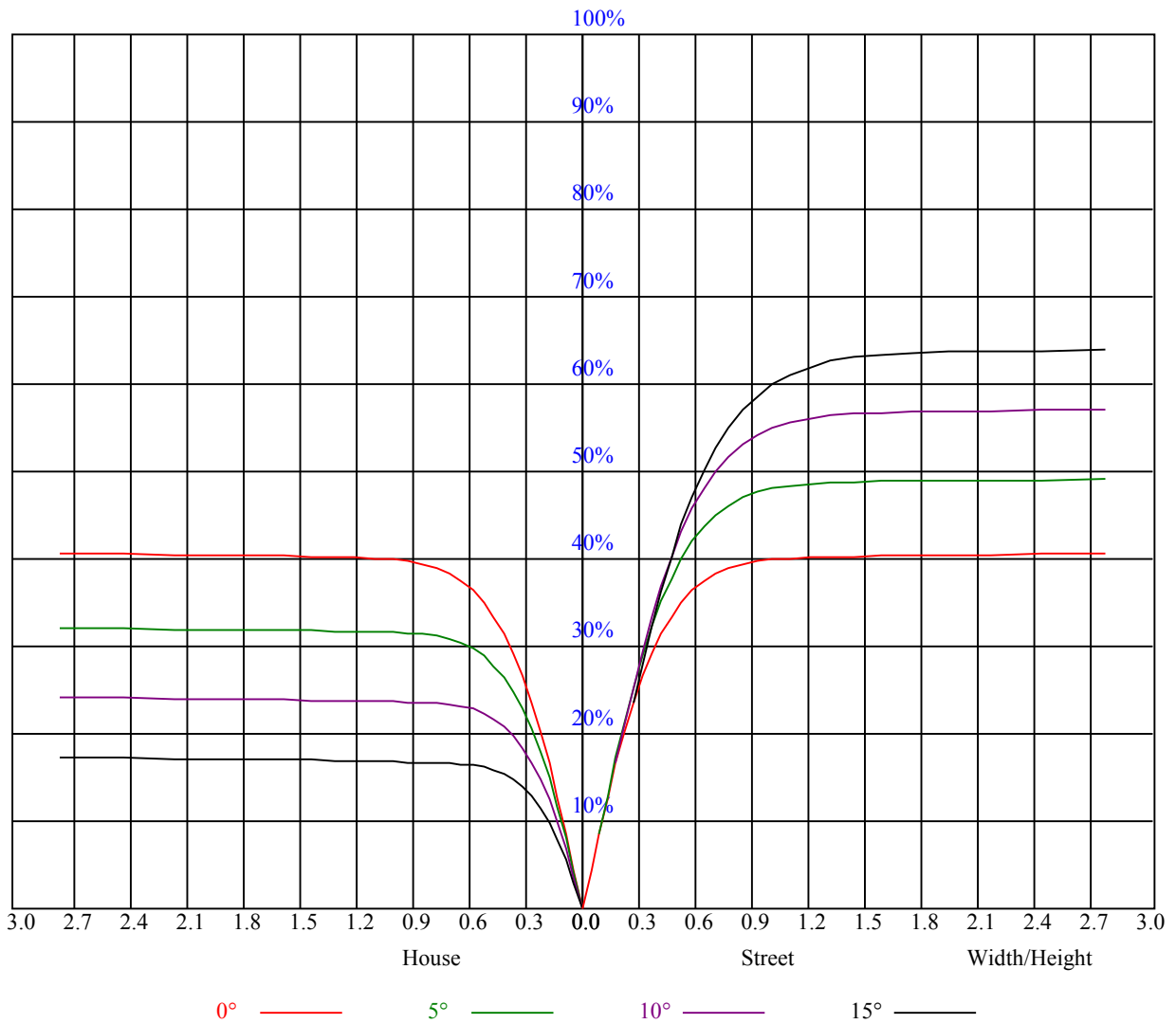
| Glare | Quality | Service Values Illuminance(lx) | | | | | | | |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15 | A | 2000 | 1000 | 500 | <=300 | | | | |
| 1.5 | B | | 2000 | 1000 | 500 | <=300 | | | |
| 1.85 | C | | | 2000 | 1000 | 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 | 0.98 | 0.98 | 0.98 | 0.96 | 0.96 | 0.96 | 0.92 | 0.92 | 0.92 | 0.88 | 0.88 | 0.88 | 0.84 | 0.84 | 0.84 | 0.82 |
| 1 | 0.91 | 0.89 | 0.87 | 0.89 | 0.87 | 0.86 | 0.86 | 0.84 | 0.83 | 0.83 | 0.82 | 0.81 | 0.80 | 0.79 | 0.78 | 0.77 |
| 2 | 0.85 | 0.82 | 0.79 | 0.84 | 0.81 | 0.78 | 0.81 | 0.78 | 0.76 | 0.78 | 0.76 | 0.75 | 0.76 | 0.75 | 0.73 | 0.72 |
| 3 | 0.80 | 0.76 | 0.72 | 0.78 | 0.75 | 0.72 | 0.76 | 0.73 | 0.71 | 0.74 | 0.72 | 0.70 | 0.72 | 0.70 | 0.68 | 0.67 |
| 4 | 0.75 | 0.70 | 0.67 | 0.74 | 0.70 | 0.66 | 0.72 | 0.68 | 0.66 | 0.70 | 0.67 | 0.65 | 0.69 | 0.66 | 0.64 | 0.63 |
| 5 | 0.70 | 0.66 | 0.62 | 0.70 | 0.65 | 0.62 | 0.68 | 0.64 | 0.61 | 0.67 | 0.63 | 0.61 | 0.65 | 0.63 | 0.60 | 0.59 |
| 6 | 0.66 | 0.62 | 0.58 | 0.66 | 0.61 | 0.58 | 0.64 | 0.61 | 0.58 | 0.63 | 0.60 | 0.57 | 0.62 | 0.59 | 0.57 | 0.56 |
| 7 | 0.63 | 0.58 | 0.55 | 0.62 | 0.58 | 0.55 | 0.61 | 0.57 | 0.54 | 0.60 | 0.57 | 0.54 | 0.59 | 0.56 | 0.54 | 0.53 |
| 8 | 0.59 | 0.55 | 0.52 | 0.59 | 0.55 | 0.51 | 0.58 | 0.54 | 0.51 | 0.57 | 0.54 | 0.51 | 0.56 | 0.53 | 0.51 | 0.50 |
| 9 | 0.56 | 0.52 | 0.49 | 0.56 | 0.52 | 0.49 | 0.55 | 0.51 | 0.48 | 0.55 | 0.51 | 0.48 | 0.54 | 0.51 | 0.48 | 0.47 |
| 10 | 0.54 | 0.49 | 0.46 | 0.53 | 0.49 | 0.46 | 0.53 | 0.49 | 0.46 | 0.52 | 0.48 | 0.46 | 0.51 | 0.48 | 0.46 | 0.45 |



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 | 1856.81 | 1820.81 | 1674.00 | 1410.19 | 1106.44 | 763.31 | 551.81 | 369.56 | 186.81 |
| 45.0 | 1847.25 | 1826.44 | 1690.31 | 1464.19 | 1126.13 | 782.44 | 565.31 | 382.50 | 198.34 |
| 90.0 | 1855.13 | 1807.88 | 1644.75 | 1368.56 | 1032.53 | 724.89 | 527.85 | 335.70 | 172.52 |
| 135.0 | 1853.44 | 1808.44 | 1657.13 | 1380.38 | 1055.81 | 740.25 | 540.56 | 345.94 | 179.33 |
| 180.0 | 1856.81 | 1772.44 | 1559.81 | 1212.75 | 942.69 | 649.97 | 459.79 | 284.40 | 129.88 |
| 225.0 | 1847.25 | 1756.69 | 1545.19 | 1117.13 | 934.09 | 645.86 | 466.65 | 263.93 | 123.58 |
| 270.0 | 1855.13 | 1772.44 | 1602.56 | 1320.75 | 998.44 | 689.06 | 510.19 | 312.19 | 143.21 |
| 315.0 | 1853.44 | 1771.31 | 1573.31 | 1294.88 | 965.03 | 660.88 | 495.17 | 296.16 | 135.11 |
| 360.0 | 1856.81 | 1820.81 | 1674.00 | 1410.19 | 1106.44 | 763.31 | 551.81 | 369.56 | 186.81 |
| C/ γ (°) | 45.0 | 50.0 | 55.0 | 60.0 | 65.0 | 70.0 | 75.0 | 80.0 | 85.0 |
| 0.0 | 70.20 | 25.76 | 9.96 | 7.71 | 7.43 | 7.20 | 7.03 | 6.92 | 6.69 |
| 45.0 | 72.17 | 26.04 | 9.68 | 7.54 | 7.31 | 7.14 | 7.03 | 6.92 | 7.71 |
| 90.0 | 61.03 | 19.41 | 8.27 | 7.48 | 7.37 | 7.37 | 7.26 | 7.26 | 9.39 |
| 135.0 | 65.08 | 21.54 | 9.56 | 7.65 | 7.43 | 7.26 | 7.14 | 7.03 | 7.99 |
| 180.0 | 46.24 | 16.20 | 8.27 | 7.54 | 7.26 | 7.09 | 6.92 | 6.81 | 6.64 |
| 225.0 | 44.38 | 14.68 | 8.16 | 7.48 | 7.37 | 7.26 | 7.09 | 7.14 | 9.90 |
| 270.0 | 55.97 | 18.96 | 8.49 | 7.59 | 7.48 | 7.37 | 7.26 | 7.37 | 9.00 |
| 315.0 | 51.53 | 17.61 | 8.49 | 7.65 | 7.48 | 7.31 | 7.14 | 7.09 | 12.32 |
| 360.0 | 70.20 | 25.76 | 9.96 | 7.71 | 7.43 | 7.20 | 7.03 | 6.92 | 6.69 |
| C/ γ (°) | 90.0 | | | | | | | | |
| 0.0 | 5.01 | | | | | | | | |
| 45.0 | 5.01 | | | | | | | | |
| 90.0 | 5.01 | | | | | | | | |
| 135.0 | 4.95 | | | | | | | | |
| 180.0 | 4.95 | | | | | | | | |
| 225.0 | 4.95 | | | | | | | | |
| 270.0 | 5.01 | | | | | | | | |
| 315.0 | 5.01 | | | | | | | | |
| 360.0 | 5.01 | | | | | | | | |