



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: 1-0942-N | |
| Luminaire: 92.70.259.00 | |
| Report No: 200923-B033 | Voltage(V): 230.7000 |
| Test No: 200923-C033 | Current(A): 0.0940 |
| LampCAT: SEOUL SAWx06 | Power (W): 11.8800 |
| Lamp flux(lm): 1012.7 | PF: 0.5420 |
| Number of Lamps: 1 | Ballast type: AC |
| Length(feet)(ft.):0.000 | Width(feet)(ft.):0.000 |
| Phm Type: C | Height(feet)(ft.):0.000 |

Photometric Results

Lumens(lm): 761.34
Efficiency(%): 75.18%
Lumens(lm)/Power(W): 64.09
Central intensity(cd): 2135.018
Maximum intensity(cd): 2135.018
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=32.2
 [C90/270]Total=32.2
Field angle(10%Imax): [C0/180]Total=58.4
 [C90/270]Total=58.4
Maximum s/h(1/2): C0_180=0.52 C90_270=0.52
Maximum s/h(1/4): C0_180=0.57 C90_270=0.57
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 76.37%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.872%

Equipment: GMS 1800
Temperature(°C): 25.0

Date: 2020/9/23
Humidity(%): 60.0%

Operator: NT0100
Distance(feet): 22.35

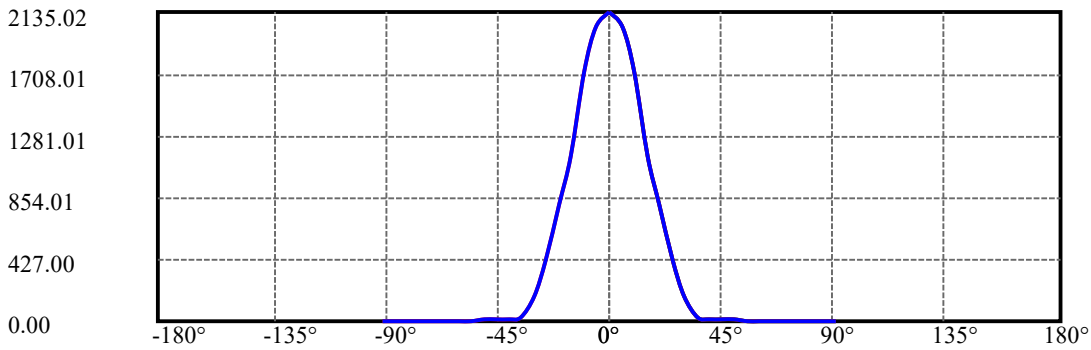
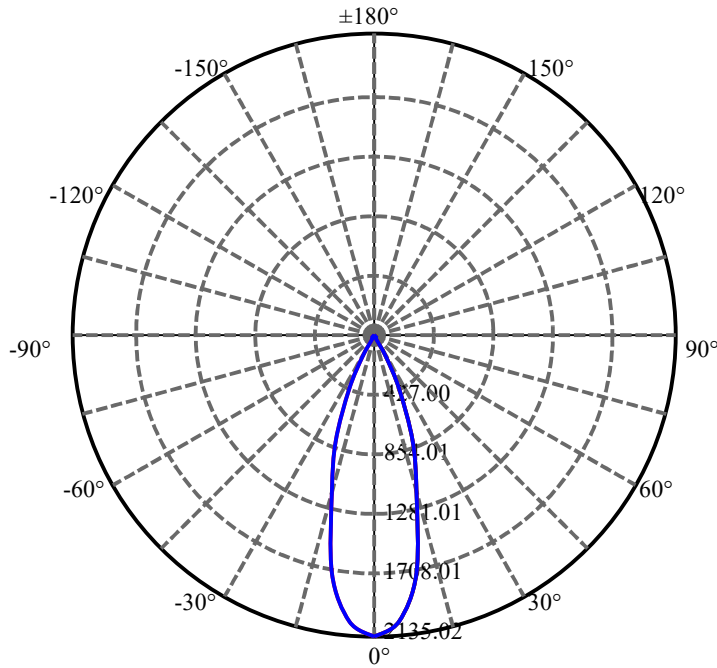
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0 | 2135.018 | 12.768 | 12.768 | 1.261% | 1.677% |
| 5.0 | 2032.350 | 97.092 | 109.86 | 9.588% | 14.430% |
| 10.0 | 1719.128 | 163.632 | 273.492 | 16.158% | 35.923% |
| 15.0 | 1143.715 | 162.257 | 435.749 | 16.023% | 57.235% |
| 20.0 | 802.905 | 150.524 | 586.273 | 14.864% | 77.006% |
| 25.0 | 418.755 | 97.006 | 683.279 | 9.579% | 89.747% |
| 30.0 | 175.613 | 48.130 | 731.409 | 4.753% | 96.069% |
| 35.0 | 30.203 | 9.496 | 740.904 | .938% | 97.316% |
| 40.0 | 13.985 | 4.927 | 745.832 | .487% | 97.964% |
| 45.0 | 9.588 | 3.716 | 749.548 | .367% | 98.452% |
| 50.0 | 7.187 | 3.018 | 752.566 | .298% | 98.848% |
| 55.0 | 5.458 | 2.451 | 755.017 | .242% | 99.170% |
| 60.0 | 4.020 | 1.908 | 756.925 | .188% | 99.421% |
| 65.0 | 2.773 | 1.377 | 758.302 | .136% | 99.602% |
| 70.0 | 1.891 | 0.974 | 759.276 | .096% | 99.729% |
| 75.0 | 1.334 | 0.706 | 759.982 | .070% | 99.822% |
| 80.0 | 0.986 | 0.532 | 760.515 | .053% | 99.892% |
| 85.0 | 1.224 | 0.668 | 761.183 | .066% | 99.980% |
| 90.0 | 0.557 | 0.153 | 761.336 | .015% | 100.000% |

ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|--------|--------|---------|
| 0-30 | 731.41 | 72.23% | 96.07% |
| 0-40 | 745.83 | 73.65% | 97.96% |
| 0-60 | 756.92 | 74.75% | 99.42% |
| 0-90 | 761.18 | 75.17% | 99.98% |
| 0-120 | 761.18 | 75.17% | 99.98% |
| 0-180 | 761.34 | 75.18% | 100.00% |
| 60-90 | 6.17 | 0.61% | 0.81% |
| 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% |
| 0-21.17 | 609.07 | 60.14% | 80.00% |

ZONAL LUMEN SUMMARY

| | |
|---------|--------|
| 0-10 | 273.49 |
| 10-20 | 312.78 |
| 20-30 | 145.14 |
| 30-40 | 14.42 |
| 40-50 | 6.73 |
| 50-60 | 4.36 |
| 60-70 | 2.35 |
| 70-80 | 1.24 |
| 80-90 | 0.67 |
| 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: ———

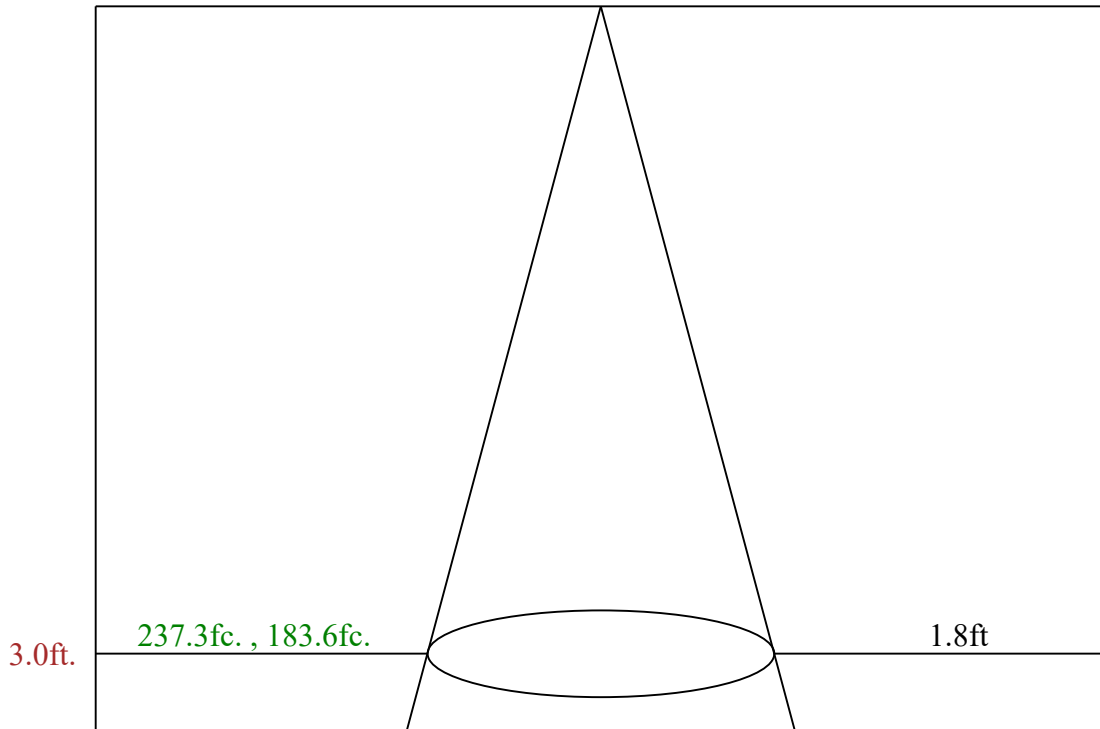
C90/C270: ———

Field angle(10%Imax):C0/180Left:29.2 Right:29.2

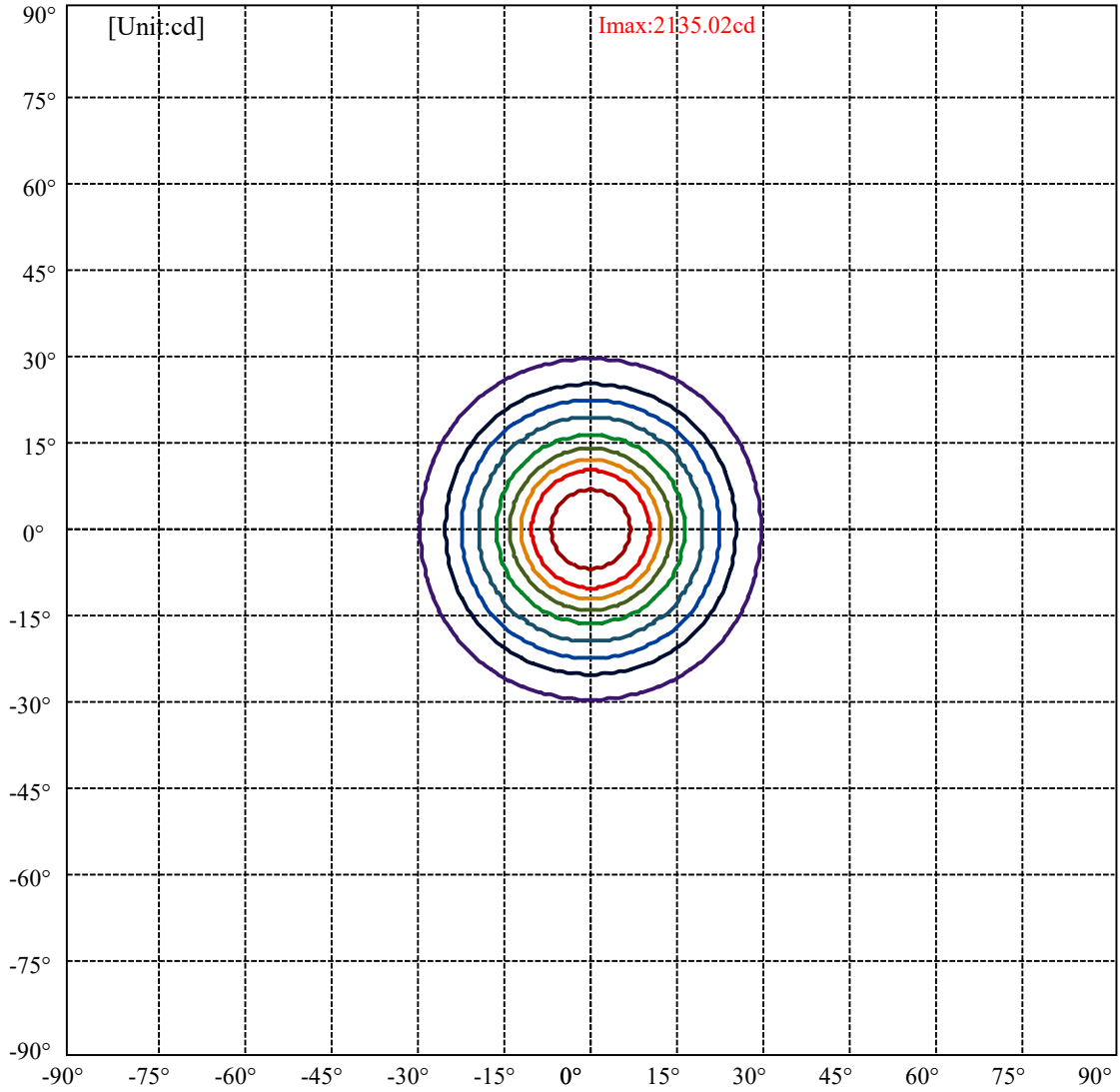
:C90/270Left:29.2 Right:29.2

Beam Angle(50%Imax):C0/180Left:16.1 Right:16.1

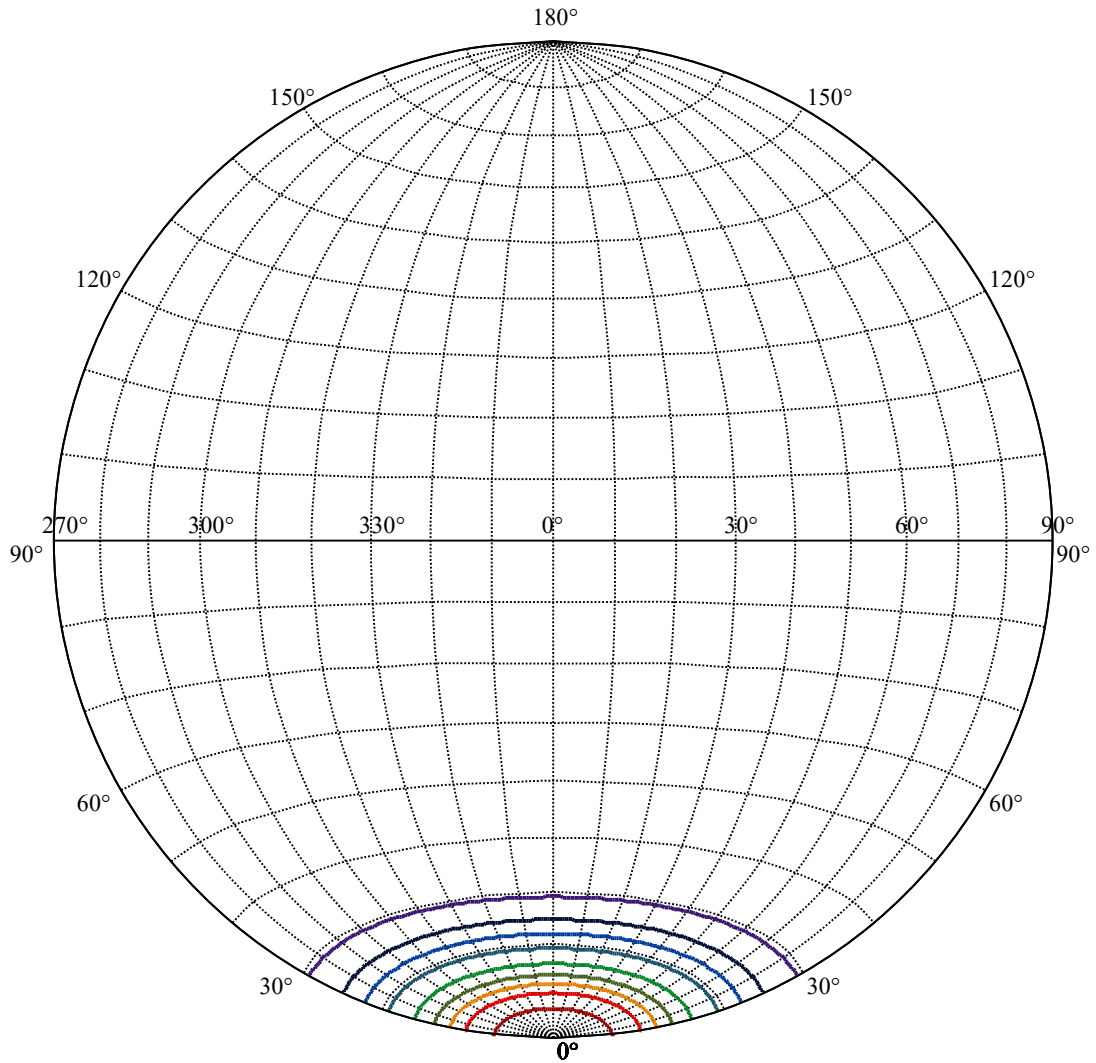
:C90/270Left:16.1 Right:16.1



Max , Ave Beam angle of C0 plane 33.74



| | |
|-------------------|---|
| (10%Imax) 213.502 | — |
| (20%Imax) 427.004 | — |
| (30%Imax) 640.505 | — |
| (40%Imax) 854.007 | — |
| (50%Imax) 1067.51 | — |
| (60%Imax) 1281.01 | — |
| (70%Imax) 1494.51 | — |
| (80%Imax) 1708.01 | — |
| (90%Imax) 1921.52 | — |



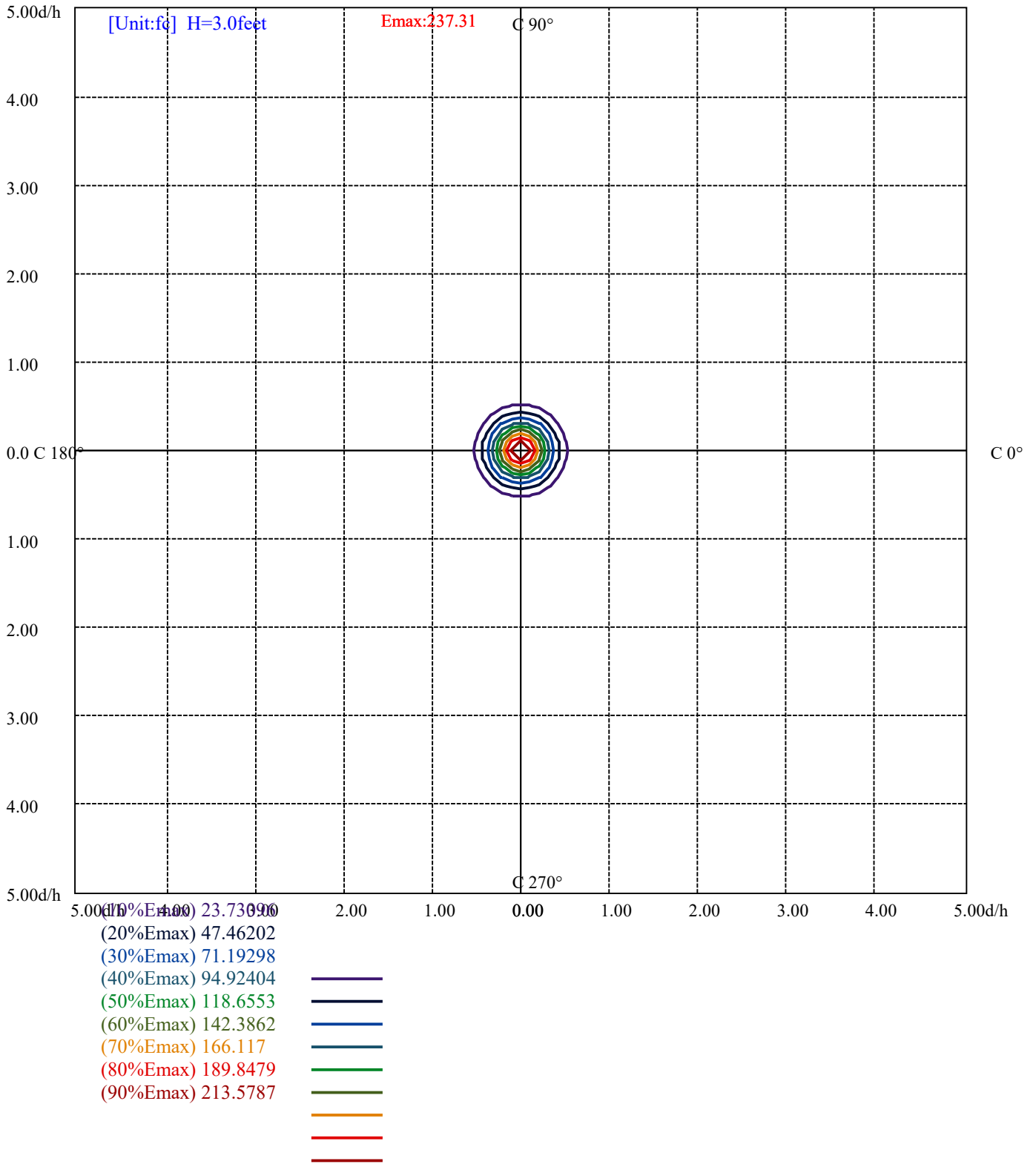
House

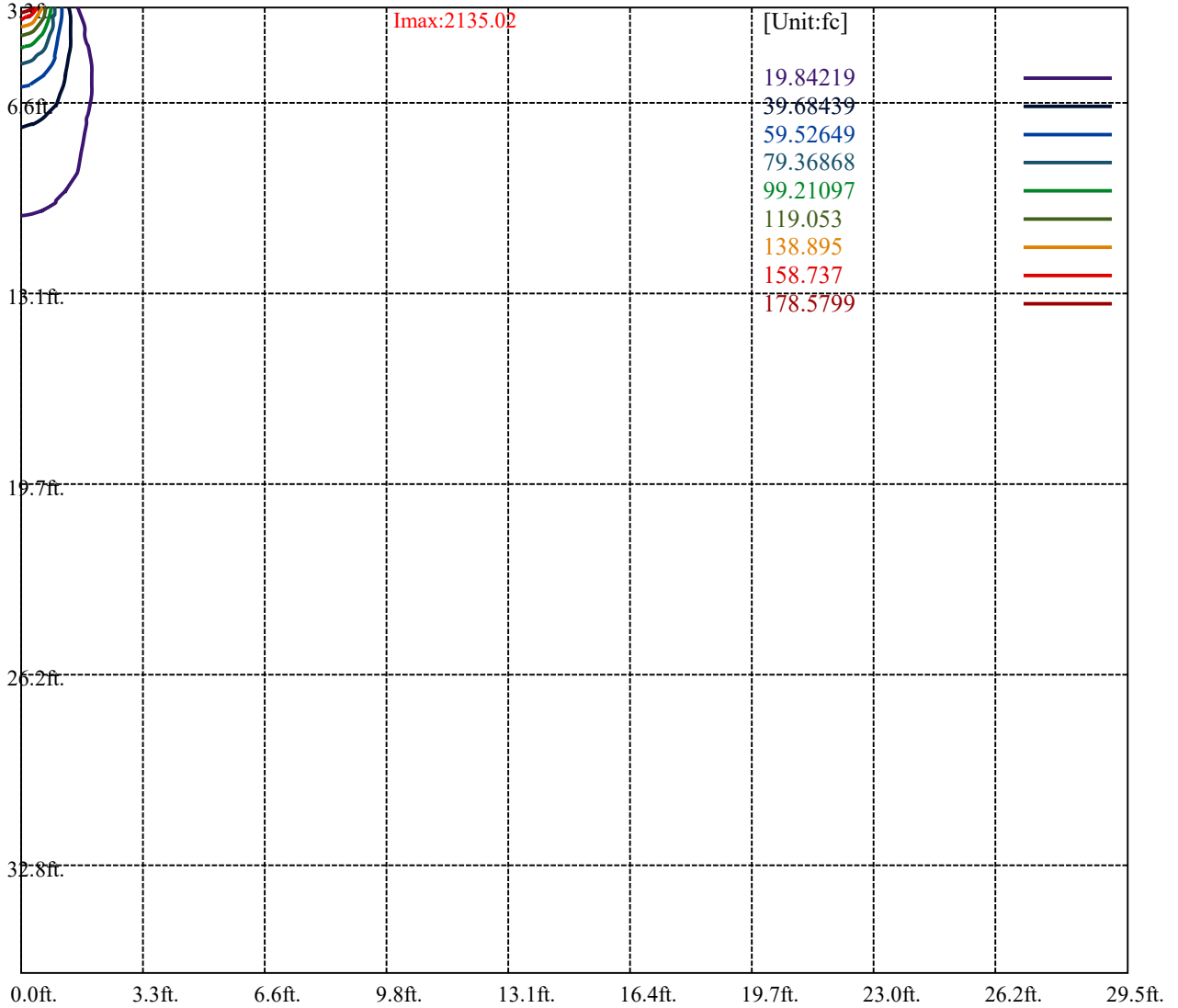
[Unit:cd]

Road

Imax:2135.02

| | | |
|-----------|---------|---|
| (10%Imax) | 213.502 | — |
| (20%Imax) | 427.004 | — |
| (30%Imax) | 640.505 | — |
| (40%Imax) | 854.007 | — |
| (50%Imax) | 1067.51 | — |
| (60%Imax) | 1281.01 | — |
| (70%Imax) | 1494.51 | — |
| (80%Imax) | 1708.01 | — |
| (90%Imax) | 1921.52 | — |





Luminance Table

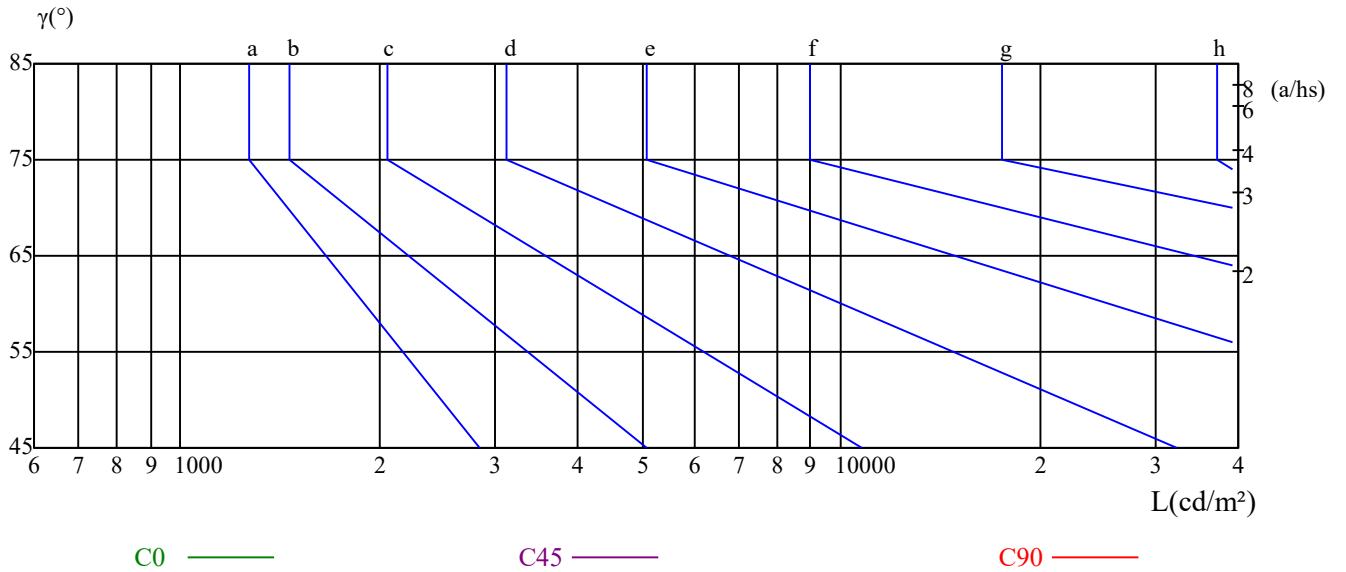
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|----------|----|----|----|----|----|----|----|----|----|
| C0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C45 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

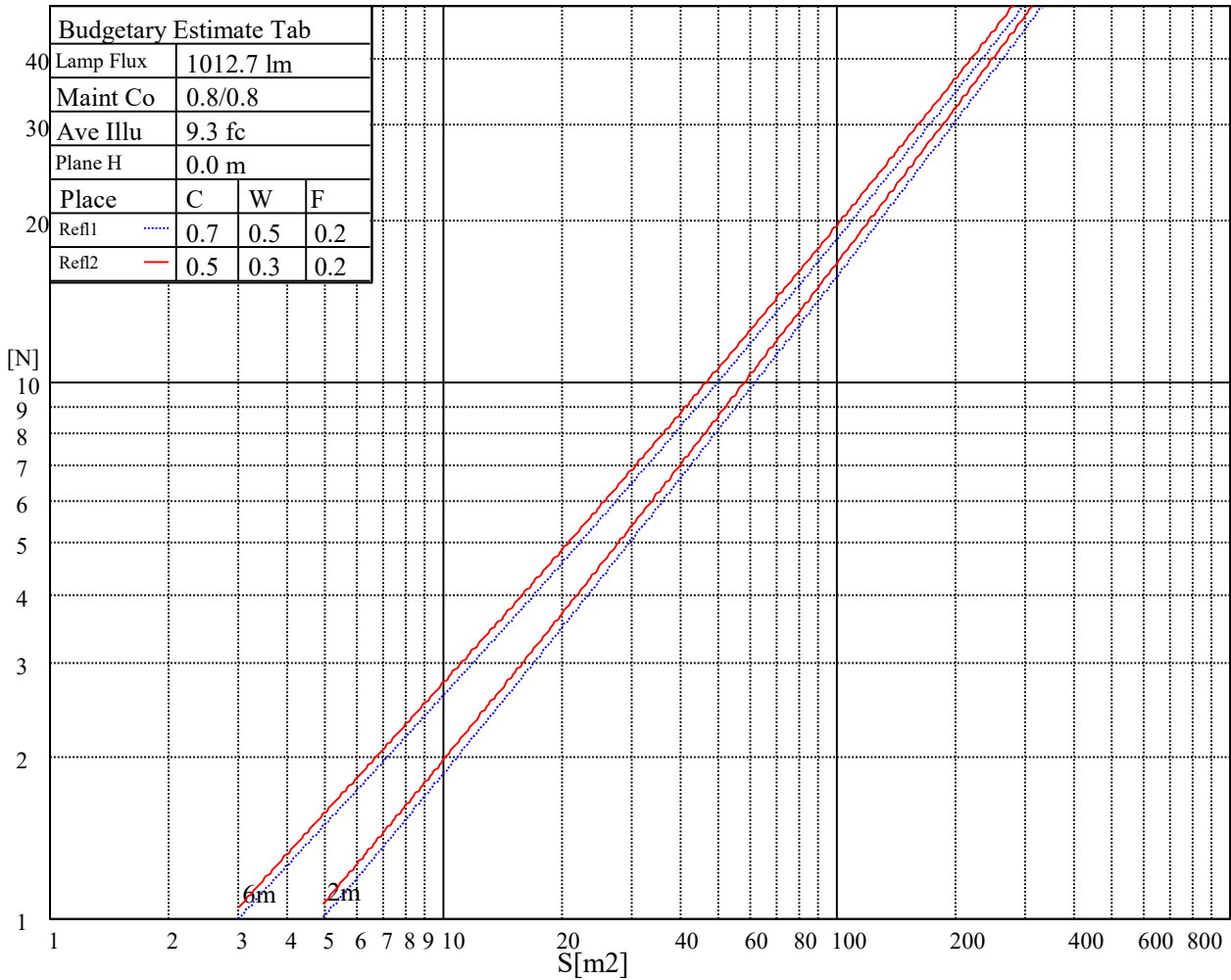
| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Glare Table

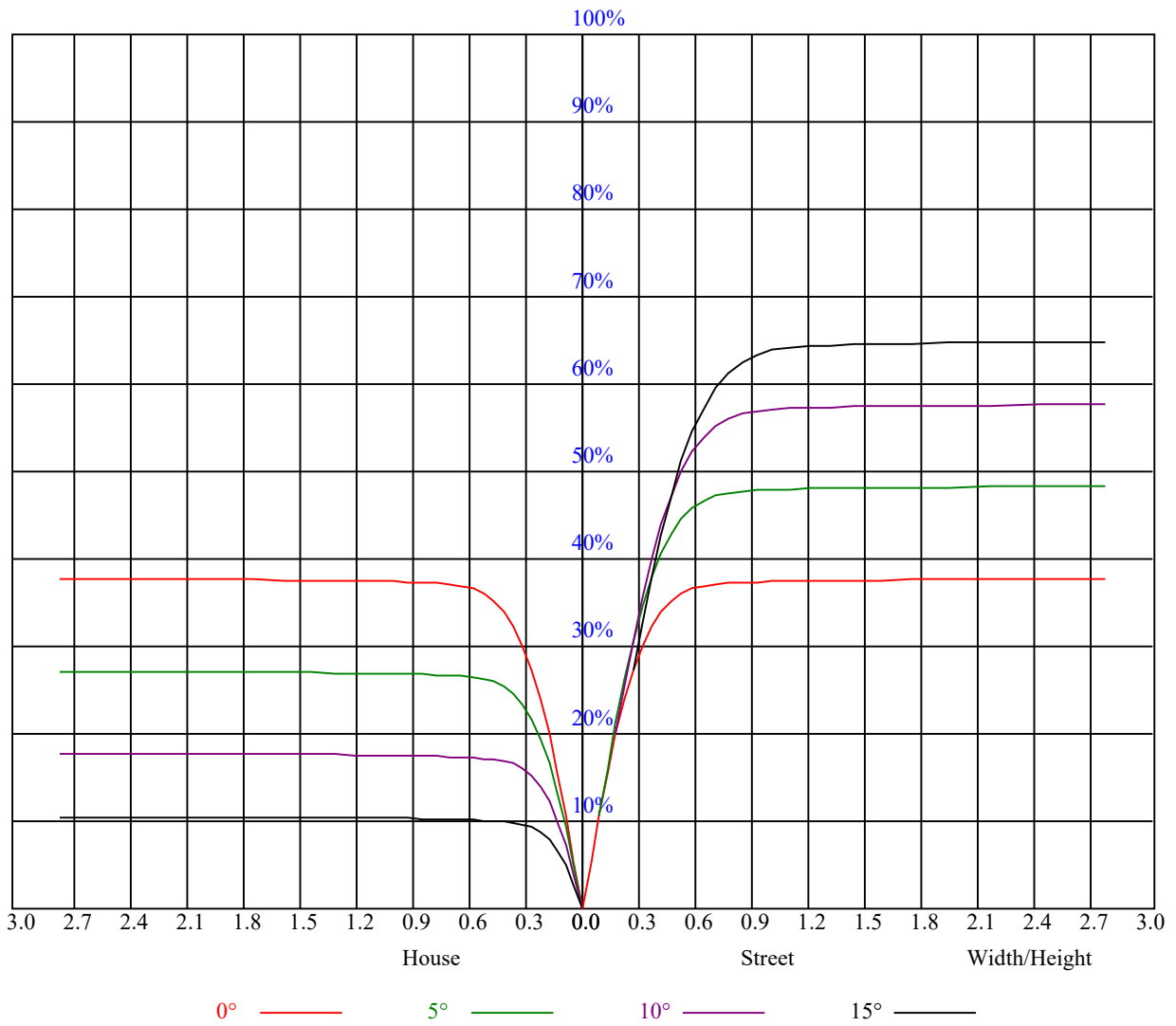
| Glare | Quality | Service Values Illuminance(lx) | | | | | | | |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15 | A | 2000 | 1000 | 500 | <=300 | | | | |
| 1.5 | B | | 2000 | 1000 | 500 | <=300 | | | |
| 1.85 | C | | | 2000 | 1000 |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



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 | 2125.04 | 1960.77 | 1520.41 | 855.58 | 643.61 | 323.34 | 75.54 | 16.52 | 11.00 |
| 45.0 | 2125.51 | 2097.66 | 1853.58 | 1426.21 | 909.74 | 504.64 | 259.63 | 48.45 | 15.59 |
| 90.0 | 2151.03 | 2033.16 | 1679.57 | 916.70 | 799.67 | 378.23 | 136.70 | 21.53 | 12.90 |
| 135.0 | 2138.50 | 2118.54 | 1920.40 | 1440.13 | 1004.86 | 515.31 | 266.59 | 51.37 | 17.08 |
| 180.0 | 2125.04 | 2083.74 | 1857.76 | 1445.23 | 972.38 | 523.20 | 238.28 | 45.38 | 17.63 |
| 225.0 | 2125.51 | 1943.14 | 1606.72 | 883.10 | 634.47 | 337.45 | 96.89 | 19.68 | 12.90 |
| 270.0 | 2151.03 | 2061.47 | 1766.34 | 1297.21 | 821.11 | 475.87 | 261.48 | 21.81 | 13.22 |
| 315.0 | 2138.50 | 1960.31 | 1548.25 | 885.56 | 637.40 | 292.02 | 69.79 | 16.89 | 11.55 |
| 360.0 | 2125.04 | 1960.77 | 1520.41 | 855.58 | 643.61 | 323.34 | 75.54 | 16.52 | 11.00 |
| C/ γ (°) | 45.0 | 50.0 | 55.0 | 60.0 | 65.0 | 70.0 | 75.0 | 80.0 | 85.0 |
| 0.0 | 7.93 | 6.08 | 4.78 | 3.25 | 2.27 | 1.58 | 1.11 | 0.79 | 0.60 |
| 45.0 | 11.04 | 8.03 | 5.99 | 4.50 | 3.11 | 2.13 | 1.53 | 1.30 | 2.23 |
| 90.0 | 9.23 | 6.91 | 5.15 | 3.71 | 2.60 | 1.62 | 1.16 | 0.84 | 0.60 |
| 135.0 | 10.72 | 7.93 | 6.08 | 4.50 | 3.20 | 2.27 | 1.58 | 1.07 | 0.70 |
| 180.0 | 10.63 | 8.03 | 6.08 | 4.55 | 3.25 | 2.09 | 1.44 | 1.07 | 0.70 |
| 225.0 | 9.33 | 6.96 | 5.29 | 3.99 | 2.60 | 1.90 | 1.39 | 1.16 | 3.99 |
| 270.0 | 9.42 | 7.01 | 5.38 | 4.08 | 2.74 | 1.86 | 1.30 | 0.84 | 0.46 |
| 315.0 | 8.40 | 6.54 | 4.92 | 3.57 | 2.41 | 1.67 | 1.16 | 0.84 | 0.51 |
| 360.0 | 7.93 | 6.08 | 4.78 | 3.25 | 2.27 | 1.58 | 1.11 | 0.79 | 0.60 |
| C/ γ (°) | 90.0 | | | | | | | | |
| 0.0 | 0.19 | | | | | | | | |
| 45.0 | 1.11 | | | | | | | | |
| 90.0 | 0.32 | | | | | | | | |
| 135.0 | 0.37 | | | | | | | | |
| 180.0 | 0.46 | | | | | | | | |
| 225.0 | 1.44 | | | | | | | | |
| 270.0 | 0.28 | | | | | | | | |
| 315.0 | 0.28 | | | | | | | | |
| 360.0 | 0.19 | | | | | | | | |