
PQL 91325

LumCAT: /

Luminaire: /

Report No:

Test No:

LampCAT: 2' 9WT8/50K/FR/V5/1380Lm

Lamp flux(lm): -1.0

Number of Lamps: 1

Length(mm): 600

Phm Type: C

Voltage(V):

Current(A):

Power (W): 12.5600

PF:

Ballast type:

Width(mm): 28

Height(mm): 28

Photometric Results

Lumens(lm): 1385.72

Efficiency(%): 0.00%

Lumens(lm)/Power(W): 110.33

Central intensity(cd): 269.079

Maximum intensity(cd): 269.607

Angle of maximum intensity: C=180.0 γ =5.0

Beam Angle(50%Imax): [C0/180]Total=191.4

[C90/270]Total=107.6

Field angle(10%Imax): [C0/180]Total=317.6

[C90/270]Total=162.8

Maximum s/h(1/2): C0_180=1.44 C90_270=1.23

Maximum s/h(1/4): C0_180=1.61 C90_270=1.35

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 0.00%

Up flux rate of LUM(%): 23.86%

Down flux rate of LUM(%): 76.14%

CIE Type : Semidirect lighting

Output flux ratio in π solid angle : 48.530%

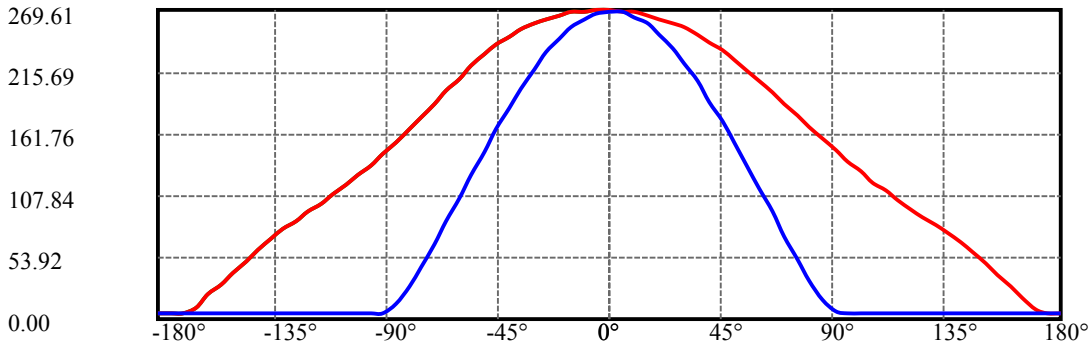
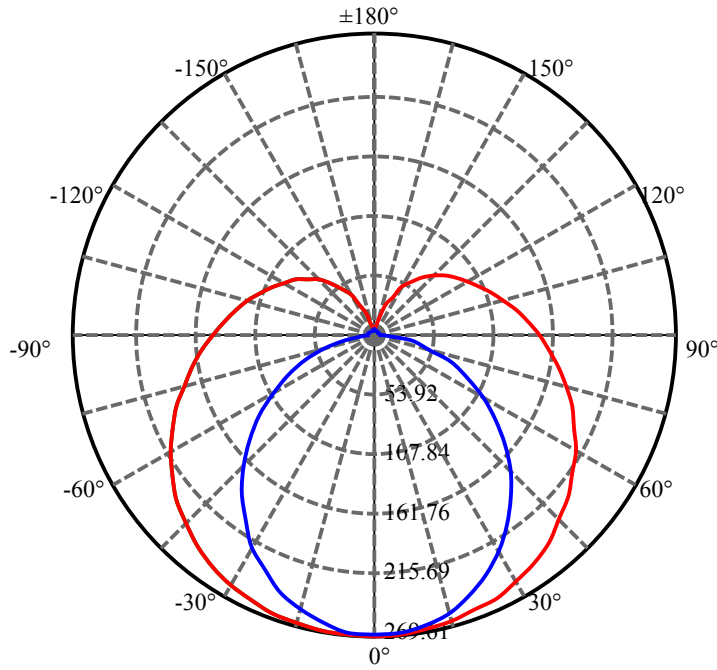
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0 | 268.865 | 0.000 | 0 | .000% | .000% |
| 5.0 | 267.909 | 6.417 | 6.417 | .000% | .463% |
| 10.0 | 265.337 | 19.076 | 25.493 | .000% | 1.840% |
| 15.0 | 261.223 | 31.235 | 56.728 | .000% | 4.094% |
| 20.0 | 255.082 | 42.551 | 99.279 | .000% | 7.164% |
| 25.0 | 247.728 | 52.735 | 152.014 | .000% | 10.970% |
| 30.0 | 238.618 | 61.548 | 213.562 | .000% | 15.412% |
| 35.0 | 228.265 | 68.752 | 282.314 | .000% | 20.373% |
| 40.0 | 216.435 | 74.195 | 356.508 | .000% | 25.727% |
| 45.0 | 203.970 | 77.841 | 434.35 | .000% | 31.345% |
| 50.0 | 190.648 | 79.738 | 514.088 | .000% | 37.099% |
| 55.0 | 176.823 | 79.900 | 593.988 | .000% | 42.865% |
| 60.0 | 162.792 | 78.501 | 672.489 | .000% | 48.530% |
| 65.0 | 148.662 | 75.715 | 748.204 | .000% | 53.994% |
| 70.0 | 134.861 | 71.790 | 819.994 | .000% | 59.174% |
| 75.0 | 121.276 | 66.950 | 886.944 | .000% | 64.006% |
| 80.0 | 108.695 | 61.534 | 948.478 | .000% | 68.446% |
| 85.0 | 97.162 | 55.936 | 1004.414 | .000% | 72.483% |
| 90.0 | 87.690 | 50.614 | 1055.028 | .000% | 76.136% |
| 95.0 | 81.021 | 46.194 | 1101.222 | .000% | 79.469% |
| 100.0 | 75.160 | 42.438 | 1143.66 | .000% | 82.532% |
| 105.0 | 69.842 | 38.798 | 1182.459 | .000% | 85.332% |
| 110.0 | 64.937 | 35.229 | 1217.688 | .000% | 87.874% |
| 115.0 | 59.883 | 31.605 | 1249.293 | .000% | 90.155% |
| 120.0 | 55.588 | 28.071 | 1277.364 | .000% | 92.180% |
| 125.0 | 51.087 | 24.658 | 1302.022 | .000% | 93.960% |
| 130.0 | 45.787 | 21.064 | 1323.085 | .000% | 95.480% |
| 135.0 | 40.321 | 17.399 | 1340.485 | .000% | 96.735% |
| 140.0 | 35.308 | 14.003 | 1354.488 | .000% | 97.746% |
| 145.0 | 30.321 | 10.950 | 1365.438 | .000% | 98.536% |
| 150.0 | 25.004 | 8.147 | 1373.585 | .000% | 99.124% |
| 155.0 | 19.274 | 5.603 | 1379.188 | .000% | 99.528% |
| 160.0 | 13.619 | 3.450 | 1382.638 | .000% | 99.777% |
| 165.0 | 8.293 | 1.806 | 1384.444 | .000% | 99.908% |
| 170.0 | 5.318 | 0.807 | 1385.251 | .000% | 99.966% |
| 175.0 | 4.700 | 0.358 | 1385.61 | .000% | 99.992% |
| 180.0 | 4.700 | 0.112 | 1385.722 | .000% | 100.000% |

ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|-------|---------|
| 0-30 | 213.56 | N.A. | 15.41% |
| 0-40 | 356.51 | N.A. | 25.73% |
| 0-60 | 672.49 | N.A. | 48.53% |
| 0-90 | 1055.03 | N.A. | 76.14% |
| 0-120 | 1277.36 | N.A. | 92.18% |
| 0-180 | 1385.72 | N.A. | 100.00% |
| 60-90 | 461.04 | N.A. | 33.27% |
| 90-120 | 272.95 | N.A. | 19.70% |
| 90-130 | 318.67 | N.A. | 23.00% |
| 90-150 | 369.17 | N.A. | 26.64% |
| 90-180 | 381.20 | N.A. | 27.51% |
| 0-95.87 | 1108.58 | N.A. | 80.00% |

ZONAL LUMEN SUMMARY

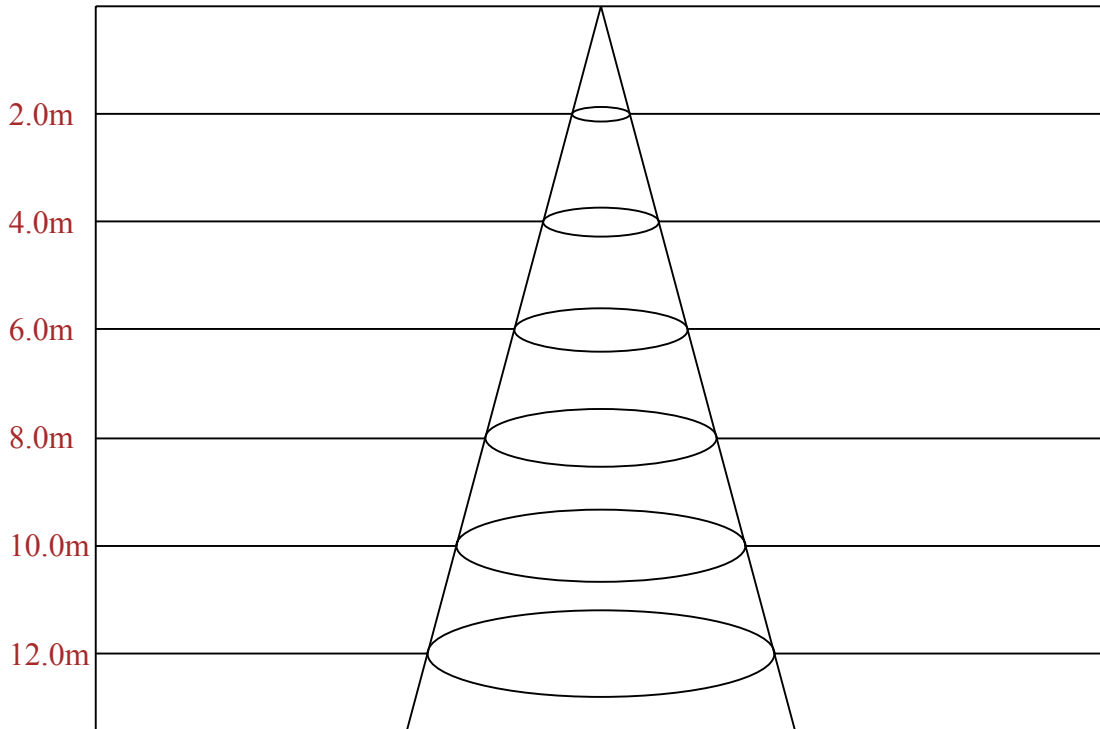
| | |
|---------|--------|
| 0-10 | 25.49 |
| 10-20 | 73.79 |
| 20-30 | 114.28 |
| 30-40 | 142.95 |
| 40-50 | 157.58 |
| 50-60 | 158.40 |
| 60-70 | 147.50 |
| 70-80 | 128.48 |
| 80-90 | 106.55 |
| 90-100 | 88.63 |
| 100-110 | 74.03 |
| 110-120 | 59.68 |
| 120-130 | 45.72 |
| 130-140 | 31.40 |
| 140-150 | 19.10 |
| 150-160 | 9.05 |
| 160-170 | 2.61 |
| 170-180 | 0.36 |



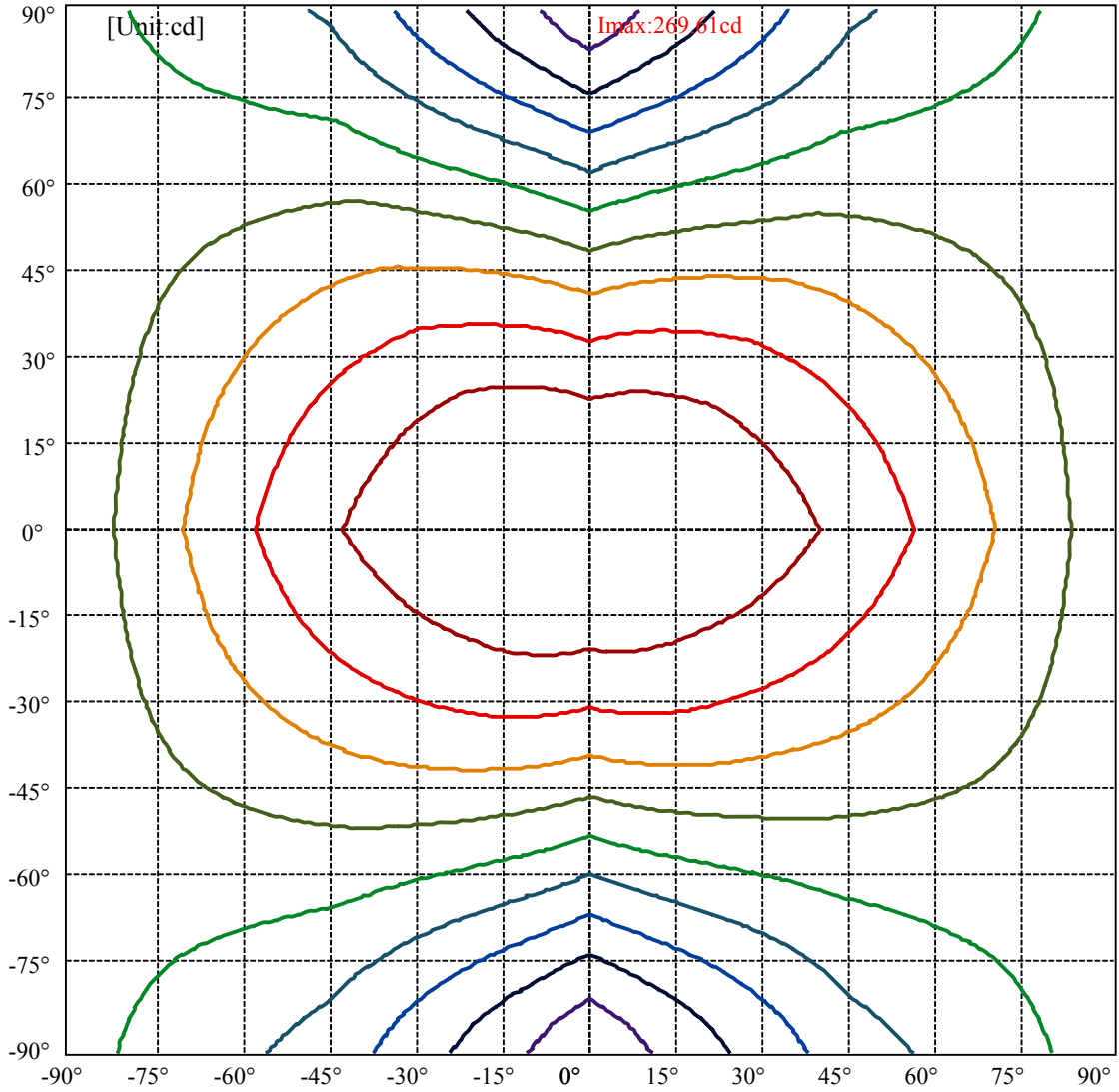
C180(Max): ———
 C0/C180: ———
 C90/C270: ———










Field angle(10%Imax):C0/180Left:151.9 Right:165.7
 :C90/270Left:80.6 Right:82.2

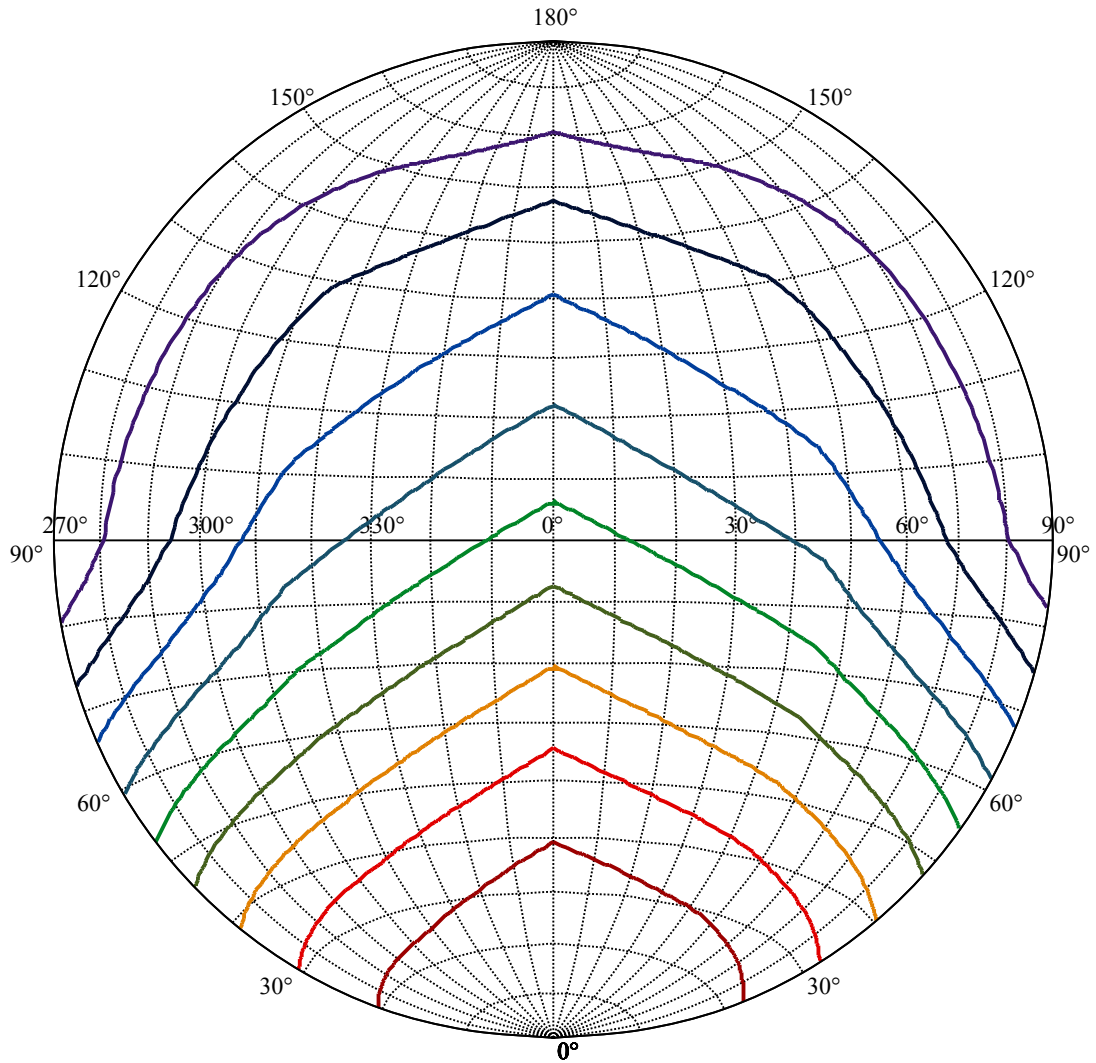
Beam Angle(50%Imax):C0/180Left:90.0 Right:101.4
 :C90/270Left:52.9 Right:54.7



Max , Ave Beam angle of C180 plane 192.10



| | | |
|-----------|---------|---|
| (10%Imax) | 26.9607 |  |
| (20%Imax) | 53.9214 |  |
| (30%Imax) | 80.8821 |  |
| (40%Imax) | 107.843 |  |
| (50%Imax) | 134.803 |  |
| (60%Imax) | 161.764 |  |
| (70%Imax) | 188.725 |  |
| (80%Imax) | 215.686 |  |
| (90%Imax) | 242.646 |  |



House

[Unit:cd]

Road

Imax:269.61

(10%Imax) 26.9607

(20%Imax) 53.9214

(30%Imax) 80.8821

(40%Imax) 107.843

(50%Imax) 134.803

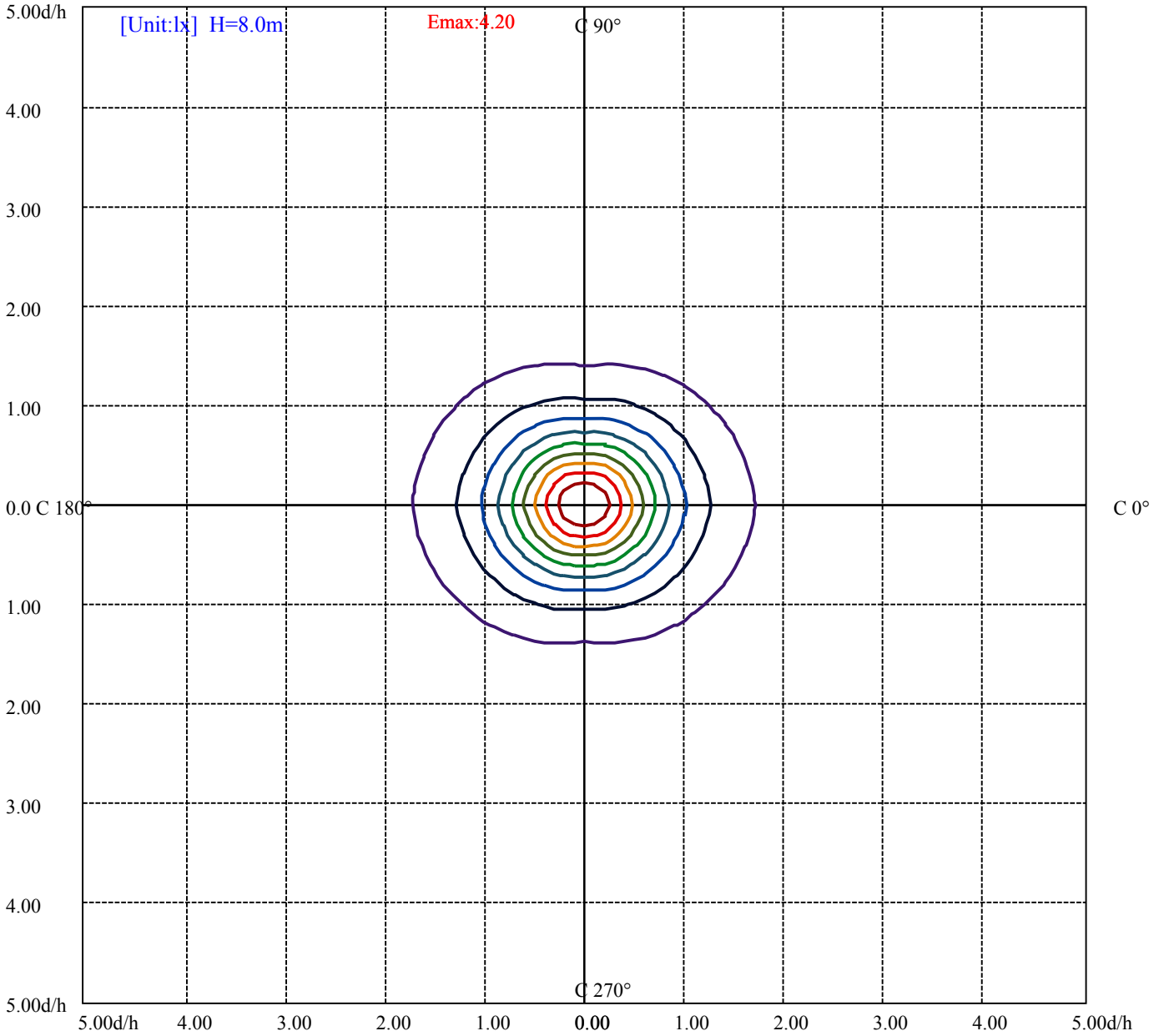
(60%Imax) 161.764

(70%Imax) 188.725

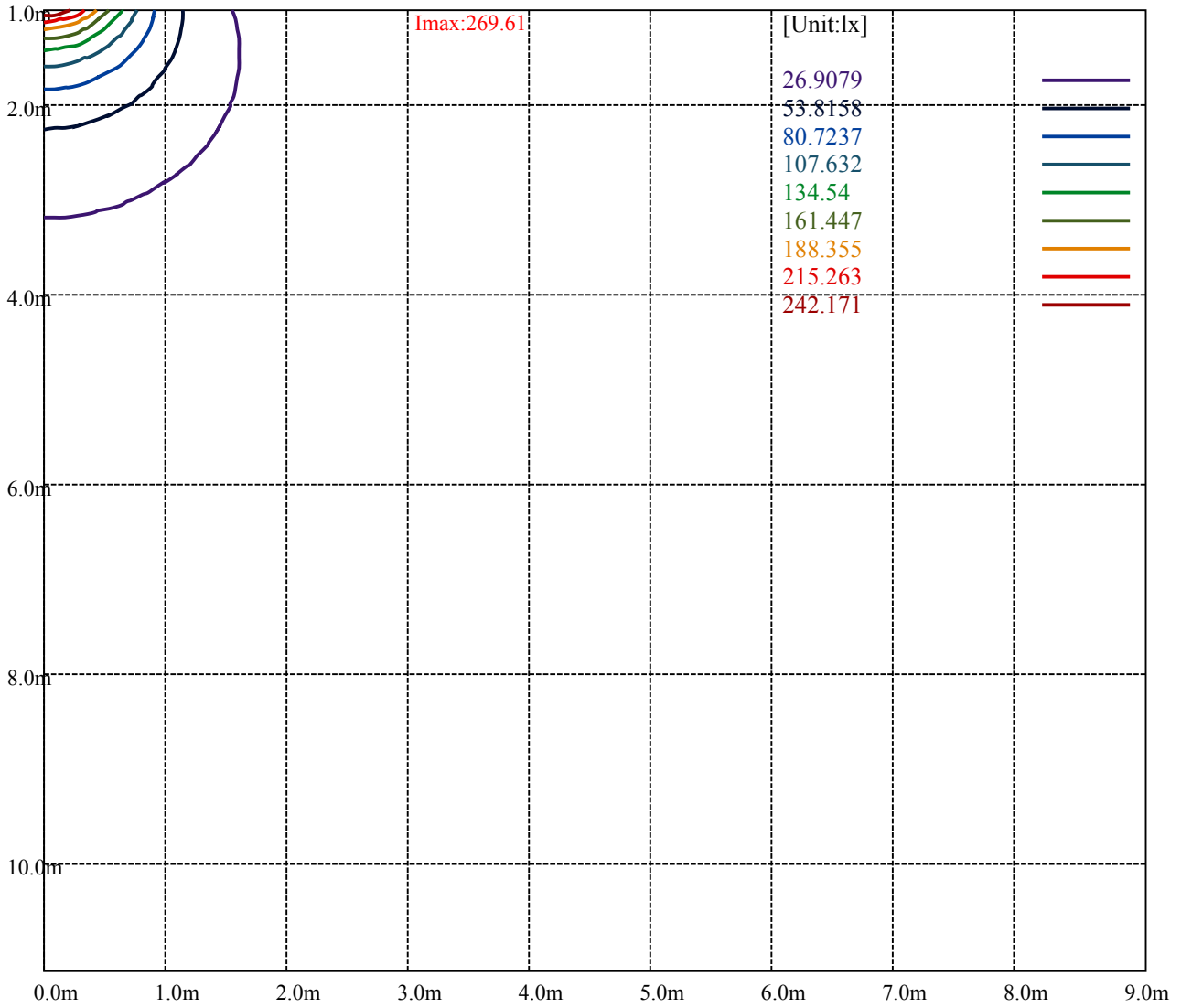
(80%Imax) 215.686

(90%Imax) 242.646





- (10%Emax) 0.4201281 ———
- (20%Emax) 0.8402563 ———
- (30%Emax) 1.260384 ———
- (40%Emax) 1.680516 ———
- (50%Emax) 2.100641 ———
- (60%Emax) 2.520766 ———
- (70%Emax) 2.940891 ———
- (80%Emax) 3.361031 ———
- (90%Emax) 3.781156 ———



Luminance Table

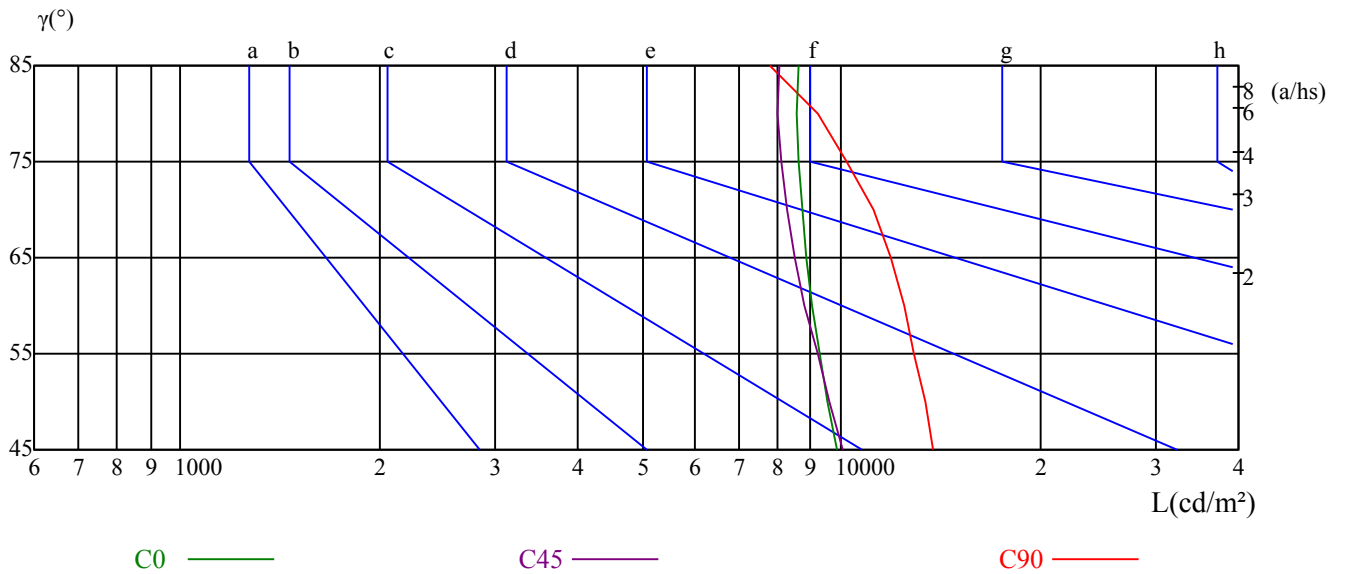
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|----------|-------|-------|-------|-------|-------|-------|-------|------|------|
| C0 | 9849 | 9535 | 9265 | 9038 | 8838 | 8720 | 8606 | 8577 | 8617 |
| C45 | 10047 | 9596 | 9200 | 8818 | 8527 | 8283 | 8100 | 8030 | 8085 |
| C90 | 13833 | 13463 | 12936 | 12465 | 11931 | 11170 | 10218 | 9242 | 7813 |

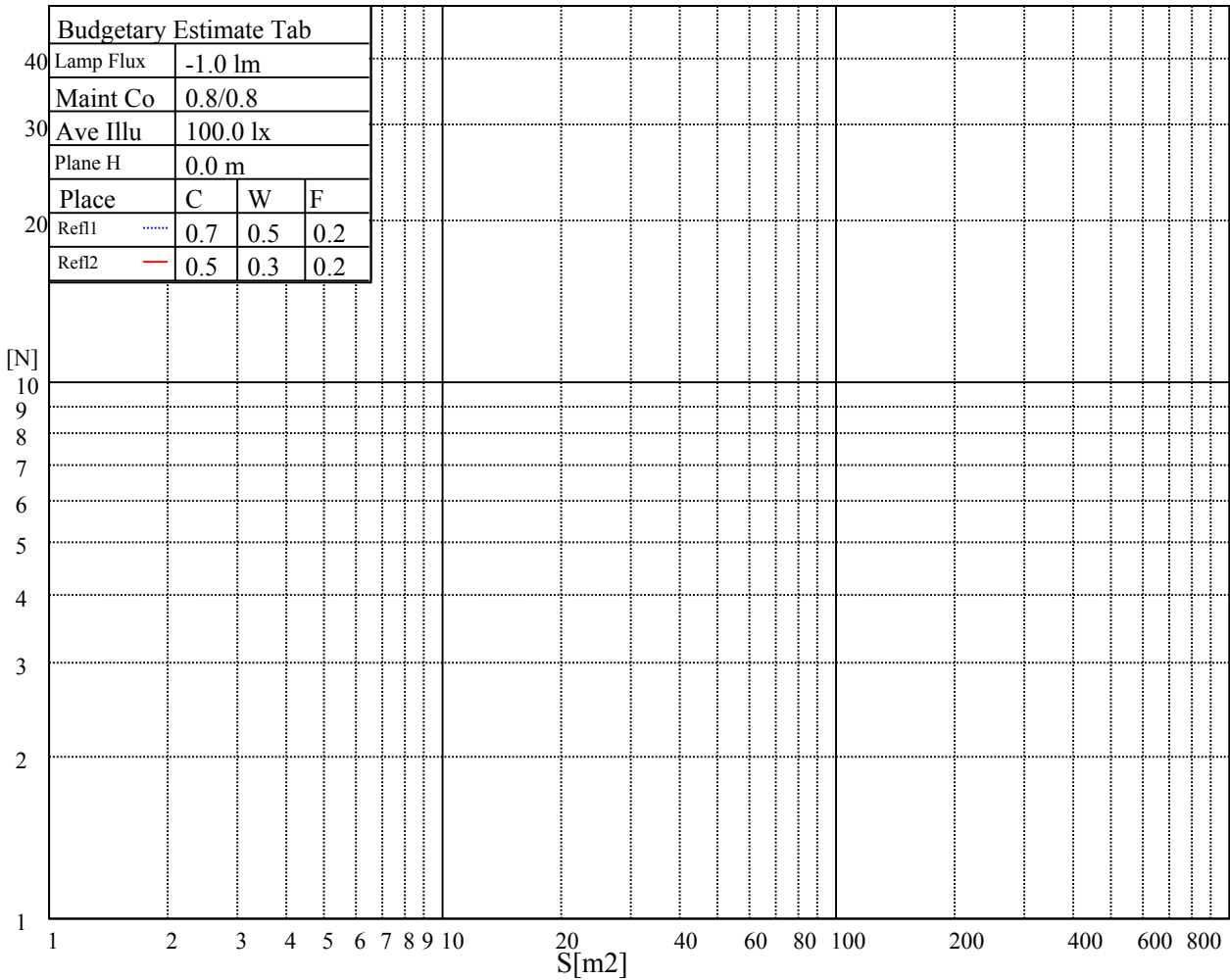
| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 27936 | 12559 | 21629 | 40664 | 11269 | 29816 | 106321 | 10675 | 74218 |

Glare Table

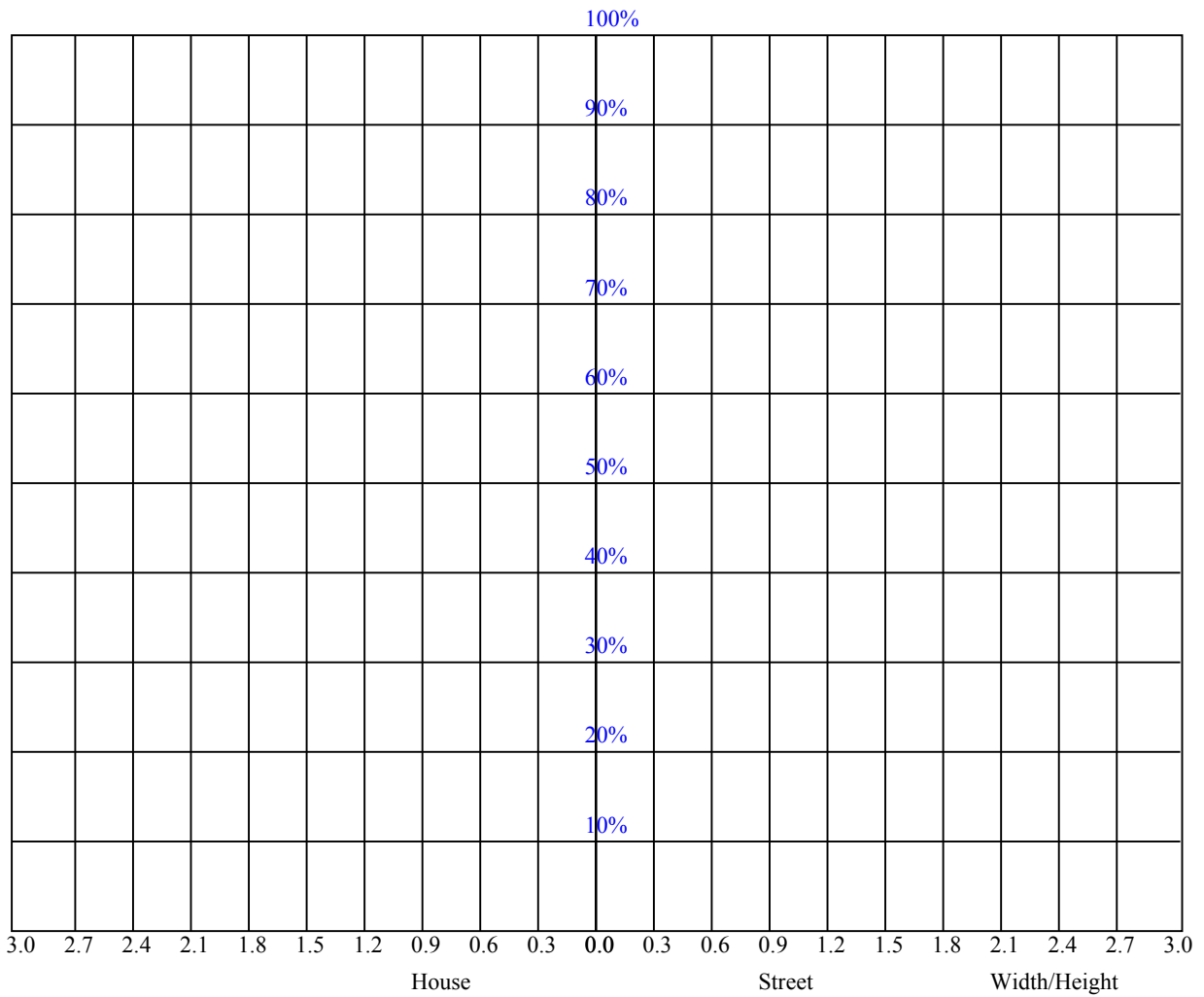
| Glare | Quality | Service Values Illuminance(lx) | | | | | | | |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15 | A | 2000 | 1000 | 500 | <=300 | | | | |
| 1.5 | B | | 2000 | 1000 | 500 | <=300 | | | |
| 1.85 | C | | | 2000 | 1000 | 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 RHOF=20 CU | | | | | | | | | | | | | | | |
| 0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |



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 | 269.08 | 268.29 | 267.17 | 264.93 | 261.89 | 258.66 | 254.04 | 248.57 | 241.78 |
| 45.0 | 268.88 | 267.96 | 265.98 | 262.35 | 256.75 | 249.89 | 241.18 | 230.90 | 219.62 |
| 90.0 | 268.49 | 267.30 | 263.67 | 257.34 | 247.78 | 236.70 | 222.58 | 207.42 | 189.94 |
| 135.0 | 269.01 | 269.28 | 267.76 | 264.99 | 259.85 | 253.58 | 245.54 | 236.04 | 224.83 |
| 180.0 | 269.08 | 269.61 | 268.29 | 267.30 | 265.12 | 262.02 | 258.07 | 252.72 | 246.00 |
| 225.0 | 268.88 | 267.30 | 264.46 | 259.98 | 253.91 | 246.33 | 236.43 | 226.34 | 214.54 |
| 270.0 | 268.49 | 266.44 | 261.83 | 254.44 | 244.08 | 232.08 | 218.10 | 201.74 | 184.66 |
| 315.0 | 269.01 | 267.10 | 263.54 | 258.46 | 251.27 | 242.57 | 233.00 | 222.39 | 210.12 |
| 360.0 | 269.08 | 268.29 | 267.17 | 264.93 | 261.89 | 258.66 | 254.04 | 248.57 | 241.78 |
| C/ γ (°) | 45.0 | 50.0 | 55.0 | 60.0 | 65.0 | 70.0 | 75.0 | 80.0 | 85.0 |
| 0.0 | 233.99 | 225.68 | 216.78 | 207.42 | 197.33 | 187.76 | 177.08 | 166.92 | 156.83 |
| 45.0 | 207.68 | 195.02 | 182.36 | 169.03 | 156.63 | 144.37 | 132.50 | 121.75 | 111.99 |
| 90.0 | 172.00 | 153.47 | 132.96 | 113.17 | 93.19 | 72.41 | 52.17 | 34.10 | 17.54 |
| 135.0 | 213.48 | 200.75 | 187.83 | 174.84 | 161.12 | 148.39 | 136.26 | 124.19 | 113.57 |
| 180.0 | 238.81 | 230.30 | 220.41 | 210.12 | 199.37 | 187.83 | 176.55 | 165.14 | 154.52 |
| 225.0 | 202.34 | 189.54 | 176.29 | 163.16 | 149.84 | 137.64 | 126.16 | 115.22 | 105.06 |
| 270.0 | 165.54 | 145.62 | 125.97 | 105.19 | 85.14 | 65.56 | 45.84 | 28.49 | 13.72 |
| 315.0 | 197.92 | 184.80 | 172.00 | 159.40 | 146.67 | 134.94 | 123.66 | 113.77 | 104.07 |
| 360.0 | 233.99 | 225.68 | 216.78 | 207.42 | 197.33 | 187.76 | 177.08 | 166.92 | 156.83 |
| C/ γ (°) | 90.0 | 95.0 | 100.0 | 105.0 | 110.0 | 115.0 | 120.0 | 125.0 | 130.0 |
| 0.0 | 147.01 | 137.31 | 128.28 | 119.37 | 111.39 | 103.28 | 96.09 | 89.03 | 81.85 |
| 45.0 | 102.29 | 93.72 | 86.59 | 79.87 | 74.46 | 69.05 | 64.43 | 60.02 | 54.87 |
| 90.0 | 6.66 | 5.14 | 4.95 | 4.88 | 4.88 | 4.75 | 4.75 | 4.68 | 4.68 |
| 135.0 | 103.61 | 95.17 | 87.25 | 80.26 | 74.52 | 69.18 | 63.77 | 57.31 | 47.49 |
| 180.0 | 144.23 | 134.80 | 125.44 | 116.93 | 108.49 | 100.90 | 93.32 | 85.54 | 77.95 |
| 225.0 | 96.62 | 89.03 | 82.24 | 76.50 | 70.04 | 60.61 | 55.53 | 49.46 | 41.81 |
| 270.0 | 5.14 | 4.75 | 4.62 | 4.55 | 4.49 | 4.49 | 4.42 | 4.42 | 4.49 |
| 315.0 | 95.96 | 88.24 | 81.91 | 76.37 | 71.23 | 66.81 | 62.39 | 58.23 | 53.16 |
| 360.0 | 147.01 | 137.31 | 128.28 | 119.37 | 111.39 | 103.28 | 96.09 | 89.03 | 81.85 |
| C/ γ (°) | 135.0 | 140.0 | 145.0 | 150.0 | 155.0 | 160.0 | 165.0 | 170.0 | 175.0 |
| 0.0 | 75.12 | 67.73 | 58.96 | 48.67 | 38.71 | 28.43 | 18.53 | 8.31 | 4.42 |
| 45.0 | 48.87 | 42.47 | 35.48 | 28.82 | 21.83 | 14.64 | 7.85 | 4.95 | 4.68 |
| 90.0 | 4.68 | 4.68 | 4.68 | 4.75 | 4.82 | 4.95 | 4.95 | 5.01 | 4.95 |
| 135.0 | 37.92 | 30.34 | 26.12 | 21.96 | 16.42 | 10.75 | 6.40 | 4.88 | 4.82 |
| 180.0 | 69.64 | 61.00 | 51.05 | 40.89 | 30.60 | 20.97 | 10.82 | 4.82 | 4.35 |
| 225.0 | 34.49 | 30.80 | 27.24 | 22.49 | 16.36 | 10.62 | 6.00 | 4.95 | 4.82 |
| 270.0 | 4.49 | 4.55 | 4.62 | 4.68 | 4.75 | 4.82 | 4.88 | 4.95 | 4.95 |
| 315.0 | 47.35 | 40.89 | 34.43 | 27.77 | 20.71 | 13.78 | 6.93 | 4.68 | 4.62 |
| 360.0 | 75.12 | 67.73 | 58.96 | 48.67 | 38.71 | 28.43 | 18.53 | 8.31 | 4.42 |
| C/ γ (°) | 180.0 | | | | | | | | |
| 0.0 | 4.42 | | | | | | | | |
| 45.0 | 4.68 | | | | | | | | |
| 90.0 | 5.01 | | | | | | | | |
| 135.0 | 4.68 | | | | | | | | |
| 180.0 | 4.42 | | | | | | | | |
| 225.0 | 4.68 | | | | | | | | |
| 270.0 | 5.01 | | | | | | | | |
| 315.0 | 4.68 | | | | | | | | |
| 360.0 | 4.42 | | | | | | | | |