



Shenzhen Belling Efficiency Testing Laboratory Co.,Ltd.
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Client:

LumCAT:

Luminaire:

Report No:

Ballast type:

Test No:

Voltage(V): 120.01

LampCAT:

Current(A): 0.2700

Lamp flux(lm): 1663.0

Power (W): 31.93

Number of Lamps: 1

PF: 0.9863

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1662.53, Efficiency(%): 99.97% , Luminous Efficacy(lm/W): 52.06

Central intensity(cd): 527.482, Maximum intensity(cd): 531.898

Angle of maximum intensity: C=270.0 γ =5.0

Beam Angle(50%Imax): [C0/180]Total=108.3

[C90/270]Total=107.1

Field angle(10%Imax): [C0/180]Total=190.2

[C90/270]Total=187.8

Maximum s/h(1/2): C0_180=1.17 C90_270=1.17

Maximum s/h(1/4): C0_180=1.32 C90_270=1.32

Up flux rate of lamp(%): 5.62%

Down flux rate of lamp(%): 94.35%

Up flux rate of LUM(%): 5.62%

Down flux rate of LUM(%): 94.38%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 67.662%

Equipment: GMS-3000
Temperature(°C): 25

Date:
Humidity(%): 59%

Operator: jarvis

Zonal flux distribution table

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| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0 | 527.482 | 0.000 | 0 | 0.00% | 0.00% |
| 5.0 | 525.051 | 12.583 | 12.583 | 0.76% | 0.76% |
| 10.0 | 511.820 | 37.092 | 49.675 | 2.23% | 2.99% |
| 15.0 | 485.385 | 59.154 | 108.828 | 3.56% | 6.55% |
| 20.0 | 461.859 | 78.066 | 186.895 | 4.69% | 11.24% |
| 25.0 | 443.016 | 94.905 | 281.799 | 5.71% | 16.95% |
| 30.0 | 420.133 | 109.232 | 391.032 | 6.57% | 23.52% |
| 35.0 | 393.209 | 119.770 | 510.802 | 7.20% | 30.72% |
| 40.0 | 363.299 | 126.218 | 637.02 | 7.59% | 38.32% |
| 45.0 | 329.939 | 128.359 | 765.378 | 7.72% | 46.04% |
| 50.0 | 293.079 | 125.890 | 891.268 | 7.57% | 53.61% |
| 55.0 | 261.702 | 120.628 | 1011.896 | 7.25% | 60.86% |
| 60.0 | 227.158 | 112.999 | 1124.895 | 6.79% | 67.66% |
| 65.0 | 198.484 | 103.474 | 1228.369 | 6.22% | 73.89% |
| 70.0 | 169.088 | 93.072 | 1321.441 | 5.60% | 79.48% |
| 75.0 | 141.417 | 81.161 | 1402.602 | 4.88% | 84.37% |
| 80.0 | 114.416 | 68.454 | 1471.056 | 4.12% | 88.48% |
| 85.0 | 88.264 | 55.073 | 1526.128 | 3.31% | 91.80% |
| 90.0 | 68.469 | 42.915 | 1569.043 | 2.58% | 94.38% |
| 95.0 | 50.940 | 32.695 | 1601.738 | 1.97% | 96.34% |
| 100.0 | 33.566 | 22.962 | 1624.7 | 1.38% | 97.72% |
| 105.0 | 19.460 | 14.188 | 1638.888 | 0.85% | 98.58% |
| 110.0 | 10.425 | 7.811 | 1646.7 | 0.47% | 99.05% |
| 115.0 | 6.229 | 4.217 | 1650.917 | 0.25% | 99.30% |
| 120.0 | 4.453 | 2.597 | 1653.514 | 0.16% | 99.46% |
| 125.0 | 4.093 | 1.975 | 1655.489 | 0.12% | 99.58% |
| 130.0 | 3.552 | 1.662 | 1657.151 | 0.10% | 99.68% |
| 135.0 | 3.243 | 1.373 | 1658.524 | 0.08% | 99.76% |
| 140.0 | 2.960 | 1.149 | 1659.673 | 0.07% | 99.83% |
| 145.0 | 2.548 | 0.919 | 1660.592 | 0.06% | 99.88% |
| 150.0 | 2.265 | 0.709 | 1661.301 | 0.04% | 99.93% |
| 155.0 | 1.699 | 0.502 | 1661.803 | 0.03% | 99.96% |
| 160.0 | 1.390 | 0.324 | 1662.126 | 0.02% | 99.98% |
| 165.0 | 1.107 | 0.206 | 1662.332 | 0.01% | 99.99% |
| 170.0 | 0.927 | 0.121 | 1662.453 | 0.01% | 100.00% |
| 175.0 | 0.773 | 0.061 | 1662.514 | 0.00% | 100.00% |
| 180.0 | 0.664 | 0.017 | 1662.531 | 0.00% | 100.00% |

Equipment: GMS-3000
Temperature($^{\circ}\text{C}$): 25

Date:
Humidity(%): 59%

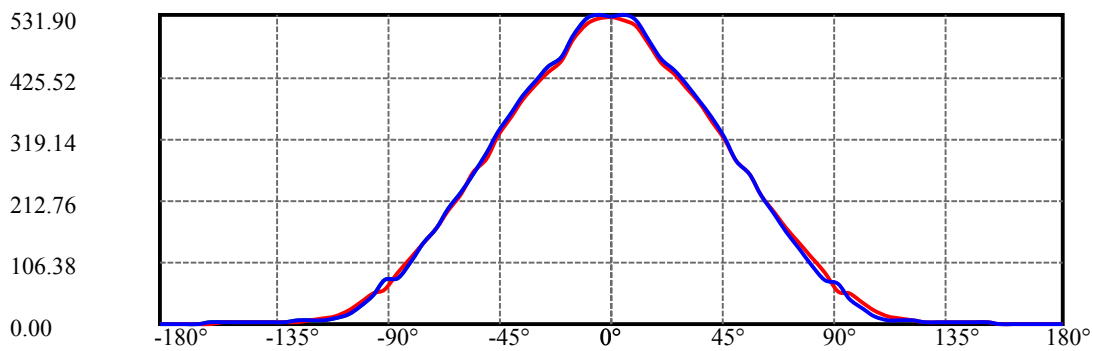
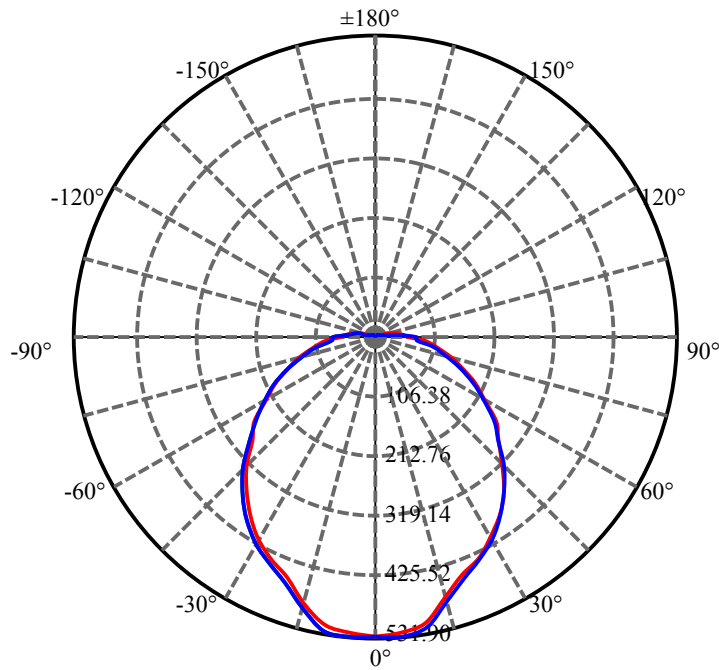
Operator: jarvis

ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|--------|---------|
| 0-30 | 391.03 | 23.51% | 23.52% |
| 0-40 | 637.02 | 38.31% | 38.32% |
| 0-60 | 1124.89 | 67.64% | 67.66% |
| 0-90 | 1569.04 | 94.35% | 94.38% |
| 0-120 | 1653.51 | 99.43% | 99.46% |
| 0-180 | 1662.53 | 99.97% | 100.00% |
| 60-90 | 444.15 | 26.71% | 26.72% |
| 90-120 | 84.47 | 5.08% | 5.08% |
| 90-130 | 88.11 | 5.30% | 5.30% |
| 90-150 | 92.26 | 5.55% | 5.55% |
| 90-180 | 93.47 | 5.62% | 5.62% |
| 0-70.53 | 1330.03 | 79.98% | 80.00% |

ZONAL LUMEN SUMMARY

| | |
|---------|--------|
| 0-10 | 49.67 |
| 10-20 | 137.22 |
| 20-30 | 204.14 |
| 30-40 | 245.99 |
| 40-50 | 254.25 |
| 50-60 | 233.63 |
| 60-70 | 196.55 |
| 70-80 | 149.61 |
| 80-90 | 97.99 |
| 90-100 | 55.66 |
| 100-110 | 22.00 |
| 110-120 | 6.81 |
| 120-130 | 3.64 |
| 130-140 | 2.52 |
| 140-150 | 1.63 |
| 150-160 | 0.83 |
| 160-170 | 0.33 |
| 170-180 | 0.06 |



C270(Max): ———

C0/C180: ———

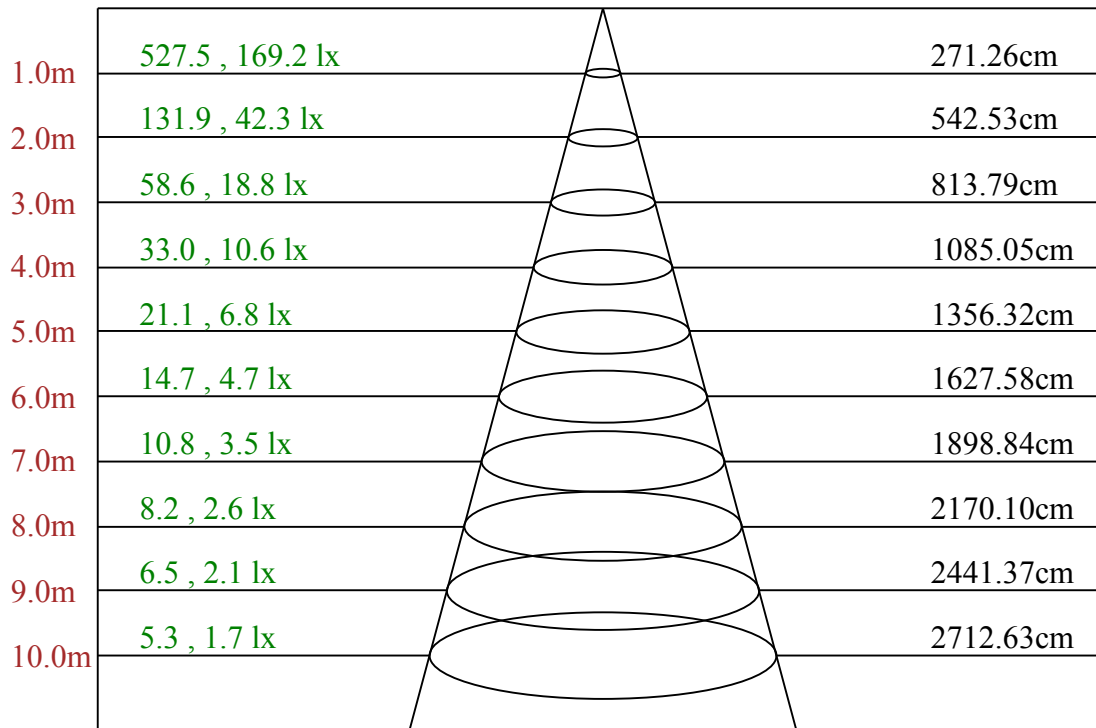
C90/C270: ———

Field angle(10%Imax):C0/180Left:95.4 Right:94.8

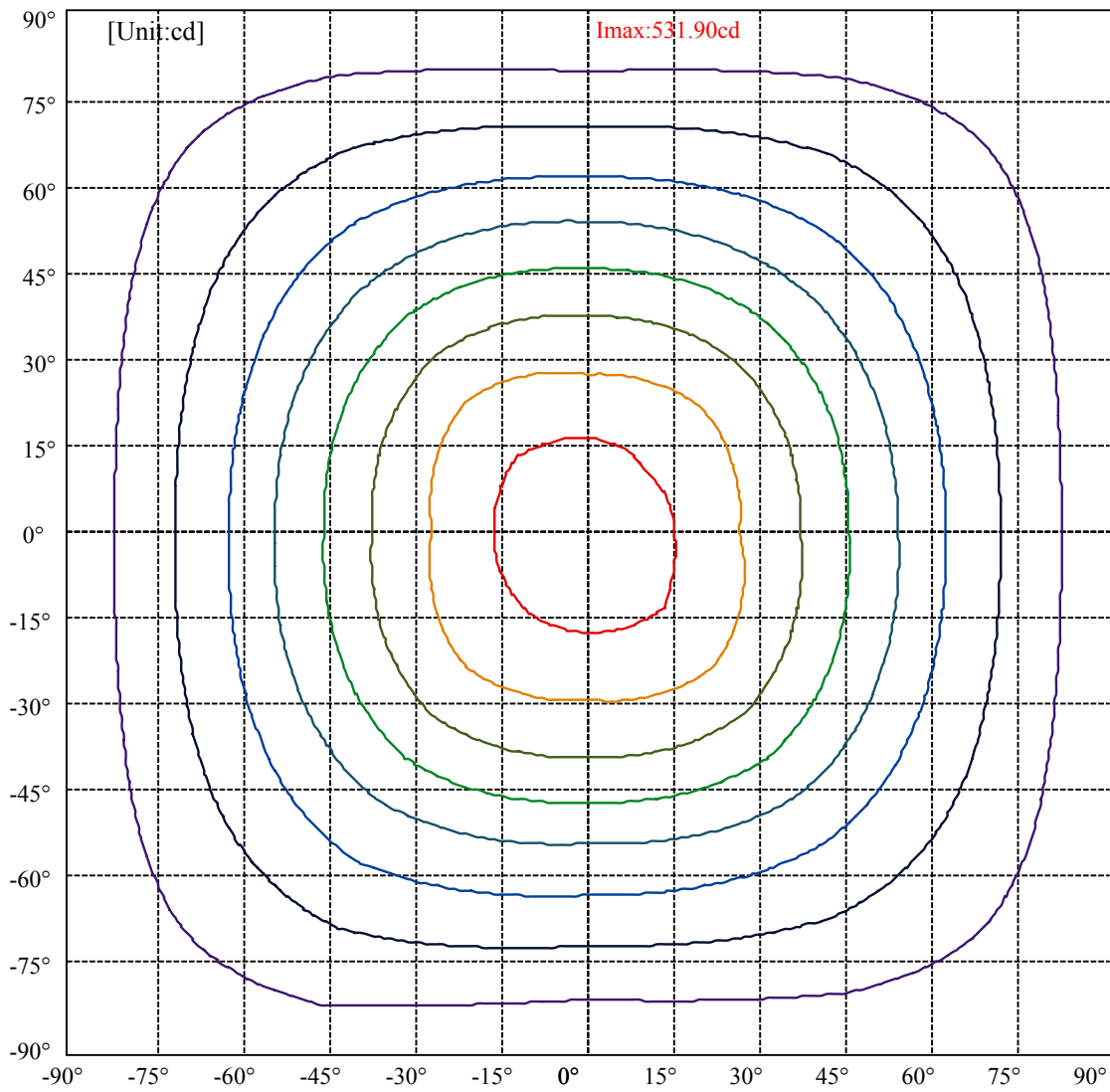
:C90/270Left:94.5 Right:93.3

Beam Angle(50%Imax):C0/180Left:54.4 Right:53.9

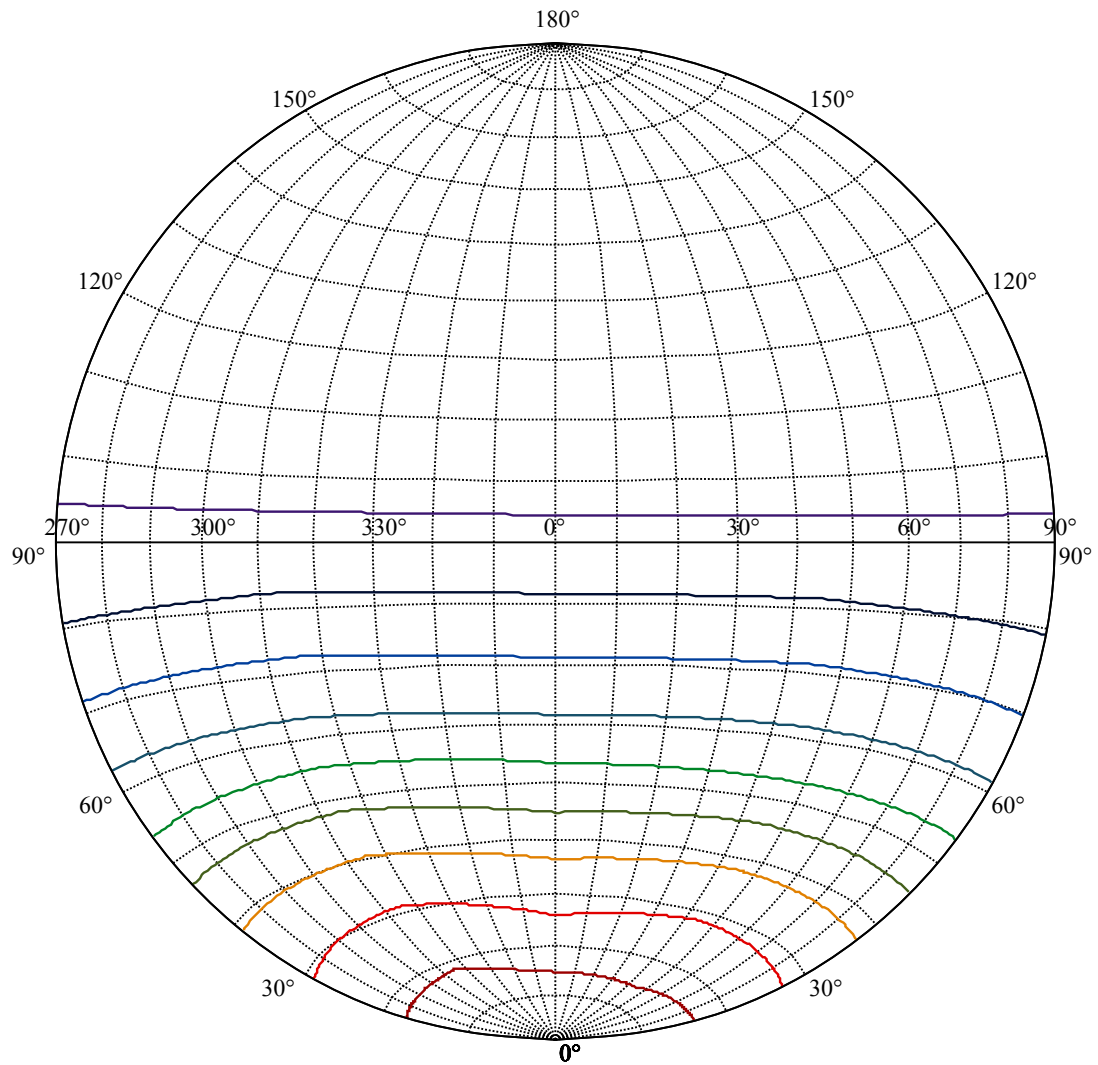
:C90/270Left:53.7 Right:53.4



Max , Ave Beam angle of C270 plane 107.20



| | |
|--------------------------------|---|
| (10%I _{max}) 106.38 | — |
| (20%I _{max}) 159.569 | — |
| (30%I _{max}) 212.759 | — |
| (40%I _{max}) 265.949 | — |
| (50%I _{max}) 319.139 | — |
| (60%I _{max}) 372.329 | — |
| (70%I _{max}) 425.518 | — |
| (80%I _{max}) 478.708 | — |



House

[Unit:cd]

Road

Imax:531.90

(10%Imax) 53.1898

(20%Imax) 106.38

(30%Imax) 159.569

(40%Imax) 212.759

(50%Imax) 265.949

(60%Imax) 319.139

(70%Imax) 372.329

(80%Imax) 425.518

(90%Imax) 478.708



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 | 527.48 | 523.46 | 512.95 | 477.74 | 448.50 | 429.97 | 407.93 | 381.37 | 351.72 |
| 45.0 | 527.48 | 516.45 | 493.18 | 476.71 | 461.06 | 442.53 | 418.23 | 390.64 | 360.57 |
| 90.0 | 527.48 | 531.28 | 520.37 | 485.57 | 455.30 | 434.91 | 412.26 | 384.87 | 355.22 |
| 135.0 | 527.48 | 526.96 | 505.75 | 487.21 | 471.97 | 451.18 | 427.29 | 399.90 | 367.57 |
| 180.0 | 527.48 | 524.49 | 516.45 | 487.63 | 452.00 | 433.67 | 411.64 | 385.28 | 355.63 |
| 225.0 | 527.48 | 520.78 | 512.95 | 484.12 | 471.15 | 452.82 | 430.38 | 404.23 | 375.81 |
| 270.0 | 527.48 | 531.90 | 525.93 | 495.24 | 460.65 | 442.94 | 420.70 | 394.75 | 364.90 |
| 315.0 | 527.48 | 525.10 | 506.98 | 488.86 | 474.24 | 456.12 | 432.64 | 404.64 | 374.99 |
| 360.0 | 527.48 | 523.46 | 512.95 | 477.74 | 448.50 | 429.97 | 407.93 | 381.37 | 351.72 |

| C/γ(°) | 45.0 | 50.0 | 55.0 | 60.0 | 65.0 | 70.0 | 75.0 | 80.0 | 85.0 |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0.0 | 318.36 | 281.70 | 258.64 | 221.98 | 193.16 | 164.74 | 139.62 | 114.29 | 88.75 |
| 45.0 | 326.59 | 290.15 | 254.31 | 222.81 | 196.66 | 167.83 | 139.82 | 113.26 | 89.58 |
| 90.0 | 321.24 | 282.32 | 258.23 | 219.72 | 189.24 | 157.53 | 130.35 | 102.14 | 74.75 |
| 135.0 | 333.59 | 298.59 | 262.76 | 228.16 | 199.75 | 171.33 | 142.70 | 114.91 | 90.19 |
| 180.0 | 323.09 | 283.56 | 261.11 | 223.01 | 195.01 | 165.56 | 139.00 | 114.70 | 88.55 |
| 225.0 | 343.48 | 308.88 | 273.26 | 240.52 | 213.54 | 183.89 | 155.68 | 127.05 | 102.14 |
| 270.0 | 330.92 | 293.65 | 256.17 | 228.57 | 198.51 | 166.80 | 138.17 | 109.96 | 78.46 |
| 315.0 | 342.24 | 305.80 | 269.14 | 232.49 | 202.01 | 175.03 | 146.00 | 119.02 | 93.70 |
| 360.0 | 318.36 | 281.70 | 258.64 | 221.98 | 193.16 | 164.74 | 139.62 | 114.29 | 88.75 |

| C/γ(°) | 90.0 | 95.0 | 100.0 | 105.0 | 110.0 | 115.0 | 120.0 | 125.0 | 130.0 |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.0 | 57.45 | 52.51 | 36.65 | 22.65 | 13.18 | 8.44 | 6.18 | 4.12 | 3.30 |
| 45.0 | 68.16 | 49.63 | 32.54 | 20.18 | 9.68 | 3.50 | 3.71 | 4.32 | 3.91 |
| 90.0 | 70.01 | 44.48 | 27.80 | 14.21 | 7.83 | 5.97 | 5.15 | 4.53 | 3.91 |
| 135.0 | 67.34 | 47.16 | 29.45 | 15.24 | 7.62 | 5.56 | 2.47 | 3.50 | 3.09 |
| 180.0 | 60.95 | 54.16 | 37.68 | 23.27 | 13.59 | 8.44 | 5.97 | 3.50 | 2.47 |
| 225.0 | 77.43 | 57.25 | 39.95 | 24.71 | 12.97 | 5.56 | 3.09 | 3.91 | 3.30 |
| 270.0 | 74.54 | 50.66 | 30.48 | 16.06 | 8.86 | 6.80 | 5.97 | 5.15 | 4.74 |
| 315.0 | 71.87 | 51.69 | 33.98 | 19.36 | 9.68 | 5.56 | 3.09 | 3.71 | 3.71 |
| 360.0 | 57.45 | 52.51 | 36.65 | 22.65 | 13.18 | 8.44 | 6.18 | 4.12 | 3.30 |

| C/γ(°) | 135.0 | 140.0 | 145.0 | 150.0 | 155.0 | 160.0 | 165.0 | 170.0 | 175.0 |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.0 | 3.30 | 3.09 | 2.47 | 2.47 | 1.65 | 1.44 | 1.03 | 1.03 | 0.62 |
| 45.0 | 3.09 | 2.68 | 2.47 | 2.06 | 1.65 | 1.44 | 1.03 | 0.82 | 0.82 |
| 90.0 | 3.71 | 2.88 | 2.68 | 2.27 | 1.65 | 1.44 | 1.24 | 1.03 | 1.03 |
| 135.0 | 2.68 | 2.88 | 2.27 | 1.85 | 1.44 | 1.03 | 1.03 | 0.62 | 0.62 |
| 180.0 | 3.09 | 2.88 | 2.47 | 2.27 | 1.85 | 1.24 | 0.82 | 1.03 | 0.41 |
| 225.0 | 2.88 | 2.68 | 2.27 | 2.27 | 1.65 | 1.24 | 1.03 | 0.62 | 0.62 |
| 270.0 | 4.32 | 3.91 | 3.30 | 3.09 | 2.06 | 1.85 | 1.44 | 1.44 | 1.24 |
| 315.0 | 2.88 | 2.68 | 2.47 | 1.85 | 1.65 | 1.44 | 1.24 | 0.82 | 0.82 |
| 360.0 | 3.30 | 3.09 | 2.47 | 2.47 | 1.65 | 1.44 | 1.03 | 1.03 | 0.62 |

| C/γ(°) | 180.0 |
|--------|-------|
| 0.0 | 0.66 |
| 45.0 | 0.66 |
| 90.0 | 0.66 |
| 135.0 | 0.66 |
| 180.0 | 0.66 |
| 225.0 | 0.66 |
| 270.0 | 0.66 |
| 315.0 | 0.66 |
| 360.0 | 0.66 |