



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

LumCAT:

Luminaire:

Report No:

Ballast type:

Test No:

Voltage(V): 120.07

LampCAT:

Current(A): 0.8240

Lamp flux(lm): -1.0

Power (W): 98.71

Number of Lamps: 1

PF: 0.9972

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 15854.70, Efficiency(%): 0.00% , Luminous Efficacy(lm/W): 160.62

Central intensity(cd): 5904.986, Maximum intensity(cd): 6322.015

Angle of maximum intensity: C=337.5 γ =25.0

Beam Angle(50%Imax): [C0/180]Total=109.1

[C90/270]Total=98.7

Field angle(10%Imax): [C0/180]Total=153.5

[C90/270]Total=156.9

Maximum s/h(1/2): C0_180=1.06 C90_270=1.19

Maximum s/h(1/4): C0_180=1.23 C90_270=1.33

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 0.00%

Up flux rate of LUM(%): 2.28%

Down flux rate of LUM(%): 97.72%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 76.776%

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

Date:
Humidity(%): 58%

Operator: Sam

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 | 5904.986 | 0.000 | 0 | 0.00% | 0.00% |
| 5.0 | 5448.545 | 135.728 | 135.728 | 0.00% | 0.86% |
| 10.0 | 5411.490 | 388.498 | 524.226 | 0.00% | 3.31% |
| 15.0 | 5074.695 | 622.033 | 1146.259 | 0.00% | 7.23% |
| 20.0 | 4892.794 | 821.461 | 1967.72 | 0.00% | 12.41% |
| 25.0 | 4860.245 | 1022.914 | 2990.634 | 0.00% | 18.86% |
| 30.0 | 4523.984 | 1187.582 | 4178.216 | 0.00% | 26.35% |
| 35.0 | 4300.254 | 1299.431 | 5477.647 | 0.00% | 34.55% |
| 40.0 | 3984.358 | 1382.225 | 6859.872 | 0.00% | 43.27% |
| 45.0 | 3765.888 | 1435.021 | 8294.893 | 0.00% | 52.32% |
| 50.0 | 3333.817 | 1434.599 | 9729.492 | 0.00% | 61.37% |
| 55.0 | 2703.531 | 1312.720 | 11042.213 | 0.00% | 69.65% |
| 60.0 | 2186.813 | 1130.389 | 12172.602 | 0.00% | 76.78% |
| 65.0 | 1736.717 | 953.818 | 13126.42 | 0.00% | 82.79% |
| 70.0 | 1358.172 | 783.646 | 13910.065 | 0.00% | 87.73% |
| 75.0 | 1020.199 | 621.668 | 14531.733 | 0.00% | 91.66% |
| 80.0 | 693.468 | 458.530 | 14990.263 | 0.00% | 94.55% |
| 85.0 | 441.414 | 308.375 | 15298.638 | 0.00% | 96.49% |
| 90.0 | 268.714 | 194.438 | 15493.076 | 0.00% | 97.72% |
| 95.0 | 169.089 | 119.874 | 15612.95 | 0.00% | 98.48% |
| 100.0 | 115.044 | 77.206 | 15690.156 | 0.00% | 98.96% |
| 105.0 | 71.347 | 49.873 | 15740.029 | 0.00% | 99.28% |
| 110.0 | 51.077 | 32.000 | 15772.028 | 0.00% | 99.48% |
| 115.0 | 38.202 | 22.606 | 15794.634 | 0.00% | 99.62% |
| 120.0 | 27.791 | 16.043 | 15810.677 | 0.00% | 99.72% |
| 125.0 | 18.967 | 10.808 | 15821.485 | 0.00% | 99.79% |
| 130.0 | 14.084 | 7.186 | 15828.672 | 0.00% | 99.84% |
| 135.0 | 11.462 | 5.162 | 15833.834 | 0.00% | 99.87% |
| 140.0 | 10.834 | 4.128 | 15837.962 | 0.00% | 99.89% |
| 145.0 | 10.975 | 3.639 | 15841.601 | 0.00% | 99.92% |
| 150.0 | 11.336 | 3.286 | 15844.886 | 0.00% | 99.94% |
| 155.0 | 11.666 | 2.911 | 15847.797 | 0.00% | 99.96% |
| 160.0 | 11.698 | 2.450 | 15850.248 | 0.00% | 99.97% |
| 165.0 | 11.713 | 1.929 | 15852.177 | 0.00% | 99.98% |
| 170.0 | 11.619 | 1.384 | 15853.561 | 0.00% | 99.99% |
| 175.0 | 11.964 | 0.844 | 15854.405 | 0.00% | 100.00% |
| 180.0 | 12.413 | 0.291 | 15854.696 | 0.00% | 100.00% |

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

Date:
Humidity(%): 58%

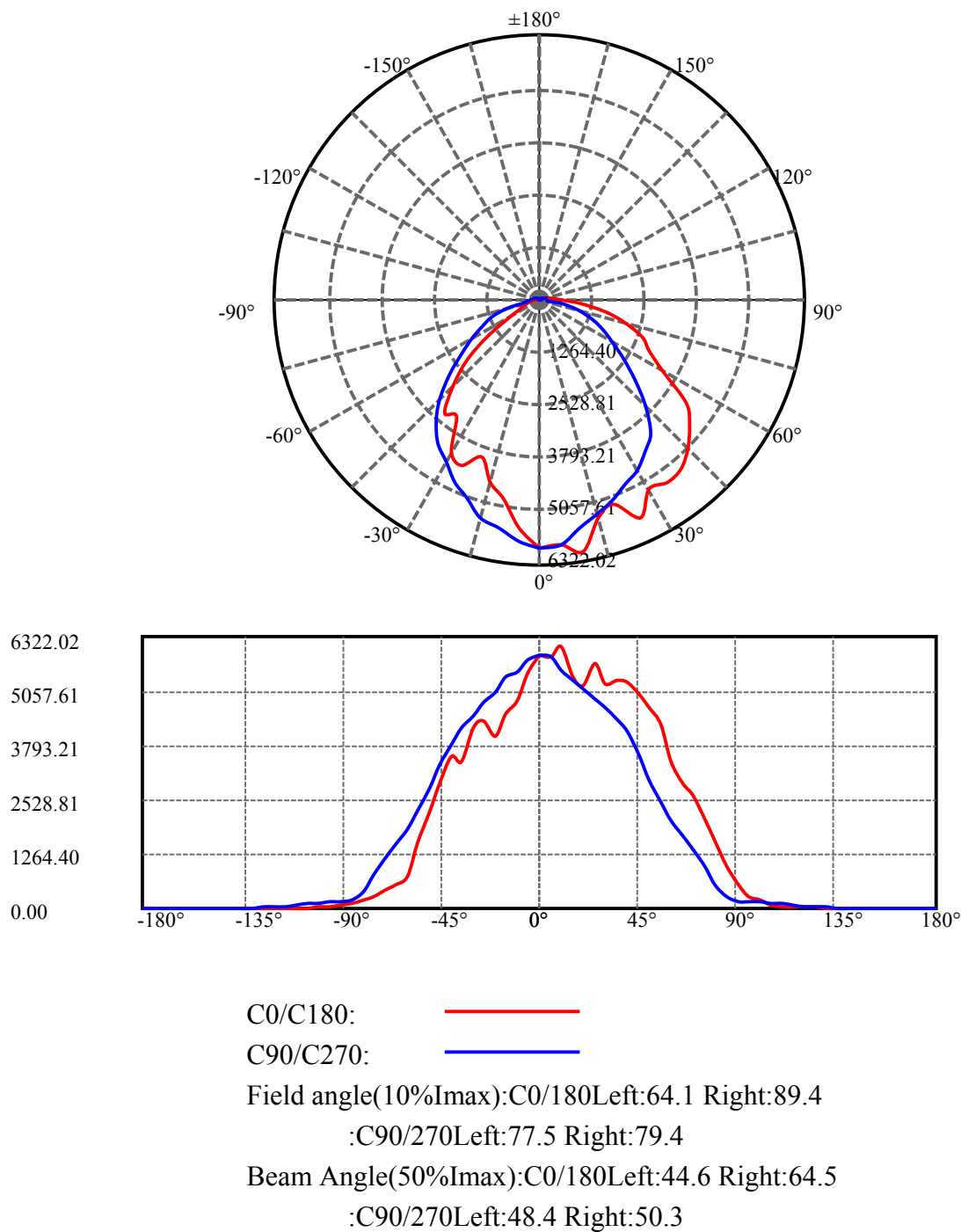
Operator: Sam

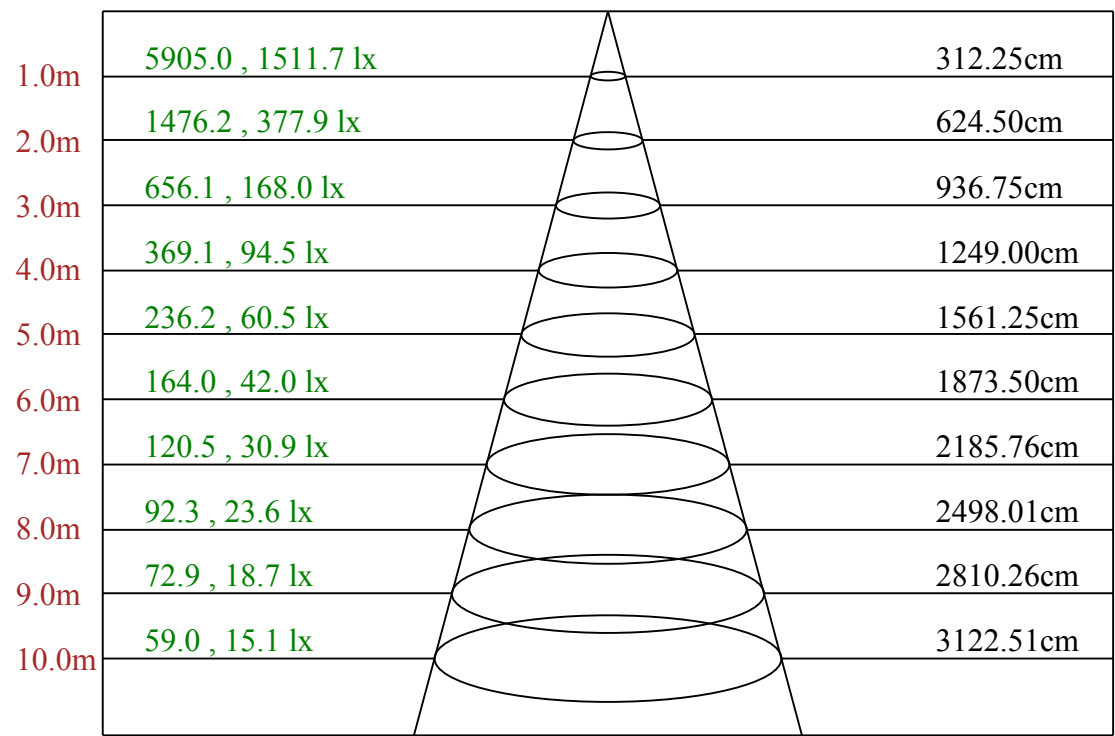
ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|----------|-------|---------|
| 0-30 | 4178.22 | N.A. | 26.35% |
| 0-40 | 6859.87 | N.A. | 43.27% |
| 0-60 | 12172.60 | N.A. | 76.78% |
| 0-90 | 15493.08 | N.A. | 97.72% |
| 0-120 | 15810.68 | N.A. | 99.72% |
| 0-180 | 15854.70 | N.A. | 100.00% |
| 60-90 | 3320.47 | N.A. | 20.94% |
| 90-120 | 317.60 | N.A. | 2.00% |
| 90-130 | 335.60 | N.A. | 2.12% |
| 90-150 | 351.81 | N.A. | 2.22% |
| 90-180 | 361.33 | N.A. | 2.28% |
| 0-62.68 | 12683.76 | N.A. | 80.00% |

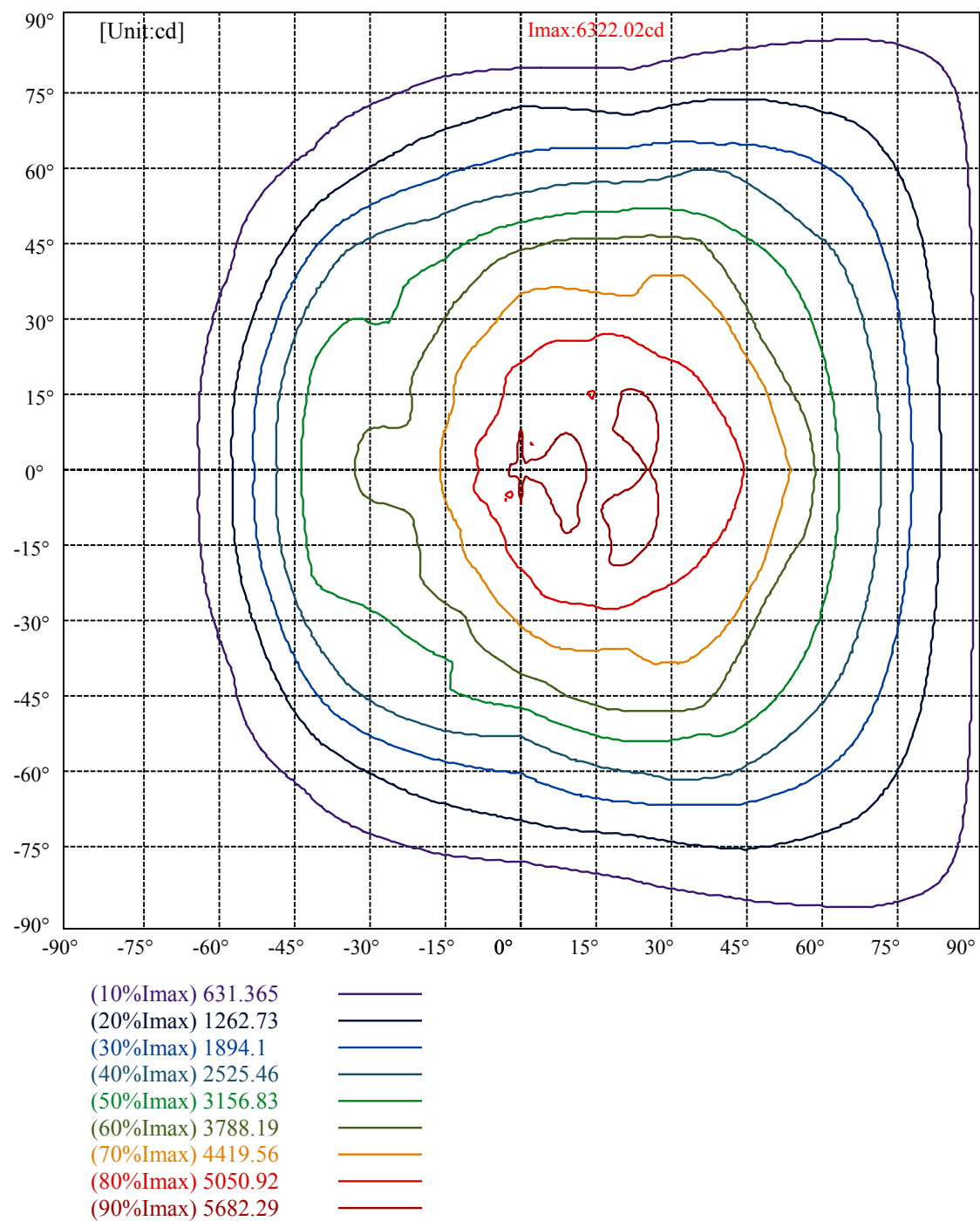
ZONAL LUMEN SUMMARY

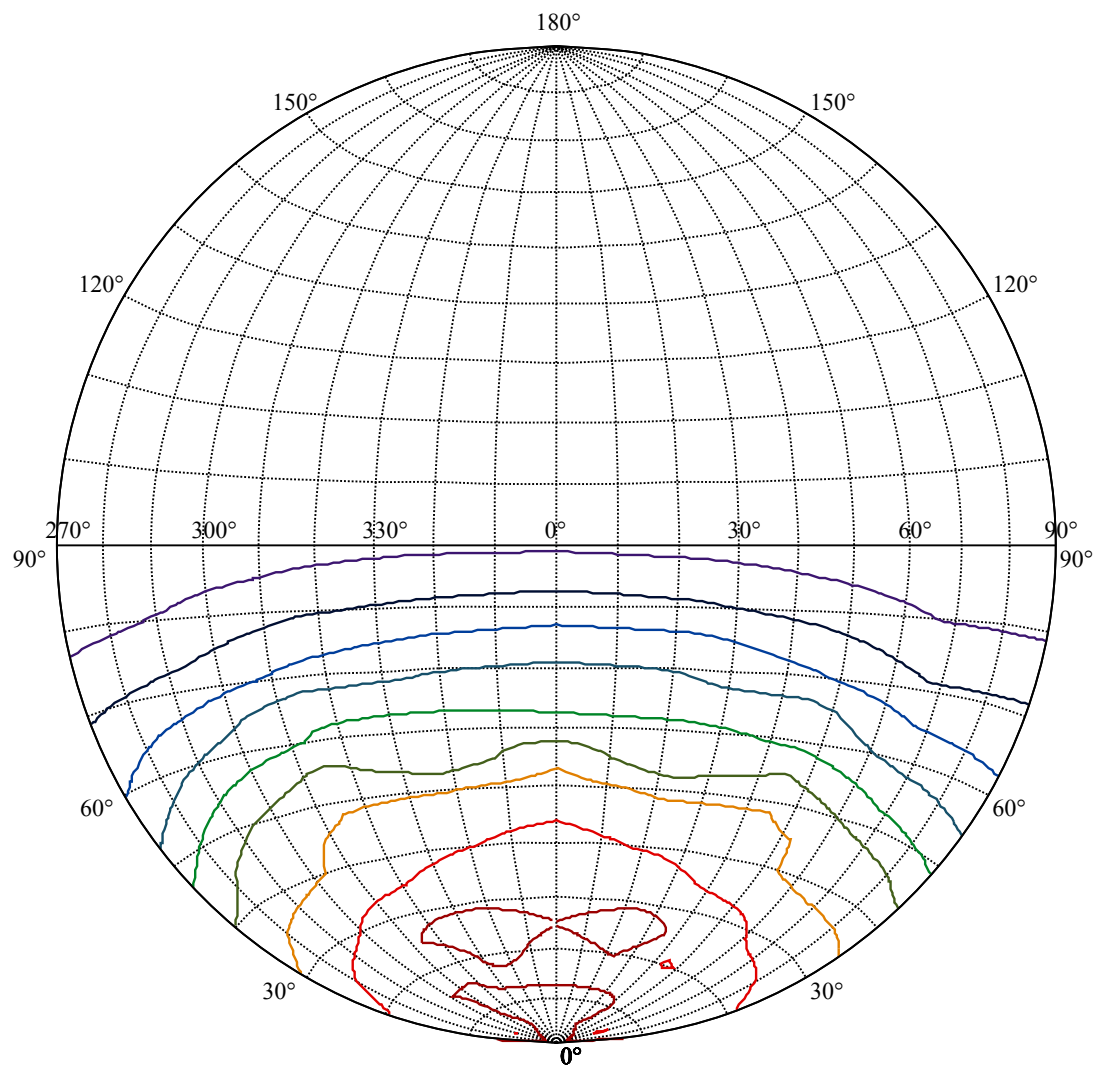
| | |
|---------|---------|
| 0-10 | 524.23 |
| 10-20 | 1443.49 |
| 20-30 | 2210.50 |
| 30-40 | 2681.66 |
| 40-50 | 2869.62 |
| 50-60 | 2443.11 |
| 60-70 | 1737.46 |
| 70-80 | 1080.20 |
| 80-90 | 502.81 |
| 90-100 | 197.08 |
| 100-110 | 81.87 |
| 110-120 | 38.65 |
| 120-130 | 17.99 |
| 130-140 | 9.29 |
| 140-150 | 6.92 |
| 150-160 | 5.36 |
| 160-170 | 3.31 |
| 170-180 | 0.84 |





Max , Ave Beam angle of C337.5 plane 114.72





House

[Unit:cd]

Road

| | |
|--------------|---------|
| Imax:6322.02 | |
| (10%Imax) | 630.845 |
| (20%Imax) | 1261.69 |
| (30%Imax) | 1892.53 |
| (40%Imax) | 2523.38 |
| (50%Imax) | 3154.22 |
| (60%Imax) | 3785.07 |
| (70%Imax) | 4415.91 |
| (80%Imax) | 5046.76 |
| (90%Imax) | 5677.6 |

Intensity data(cd)

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| C/γ(°) | 0.0 | 5.0 | 10.0 | 15.0 | 20.0 | 25.0 | 30.0 | 35.0 | 40.0 |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0.0 | 5904.99 | 5849.72 | 6085.87 | 5372.39 | 5189.00 | 5711.54 | 5224.17 | 5307.08 | 5266.88 |
| 22.5 | 5904.99 | 5739.18 | 6126.06 | 5246.78 | 5731.64 | 6256.70 | 5500.52 | 5392.49 | 4956.62 |
| 45.0 | 5904.99 | 5487.96 | 5598.49 | 5638.69 | 4980.49 | 5322.15 | 5530.66 | 4801.87 | 4628.27 |
| 67.5 | 5904.99 | 4985.51 | 5136.24 | 5334.71 | 5314.61 | 5249.30 | 4751.37 | 4660.43 | 4102.21 |
| 90.0 | 5904.99 | 5869.81 | 5533.18 | 5312.10 | 5101.07 | 4864.92 | 4676.51 | 4390.11 | 4136.38 |
| 112.5 | 5904.99 | 5131.22 | 5181.46 | 4852.36 | 4874.97 | 4470.51 | 4035.89 | 3809.79 | 3387.74 |
| 135.0 | 5904.99 | 5324.66 | 5045.80 | 4611.19 | 4339.87 | 4033.38 | 3704.28 | 3279.71 | 3071.20 |
| 157.5 | 5904.99 | 5440.22 | 5038.27 | 4530.80 | 4153.96 | 3649.01 | 3566.10 | 3746.98 | 3490.74 |
| 180.0 | 5904.99 | 5442.74 | 4819.70 | 4515.73 | 3988.16 | 4349.92 | 4206.72 | 3407.83 | 3538.47 |
| 202.5 | 5904.99 | 5508.05 | 5070.93 | 4478.04 | 4131.35 | 3586.20 | 3307.34 | 3754.52 | 3370.15 |
| 225.0 | 5904.99 | 5332.20 | 5023.19 | 4493.12 | 4289.63 | 3912.79 | 3739.45 | 3473.15 | 3028.49 |
| 247.5 | 5904.99 | 4895.07 | 5209.10 | 4696.61 | 4558.43 | 4176.57 | 3804.77 | 3591.23 | 3116.42 |
| 270.0 | 5904.99 | 5771.84 | 5515.59 | 5397.52 | 5009.38 | 4785.04 | 4462.21 | 4195.42 | 3794.97 |
| 292.5 | 5904.99 | 5025.71 | 5209.10 | 5606.03 | 5430.18 | 5374.91 | 4850.10 | 4691.58 | 4178.58 |
| 315.0 | 5904.99 | 5485.44 | 5822.08 | 5784.40 | 5136.24 | 5698.98 | 5540.71 | 4937.03 | 4677.01 |
| 337.5 | 5904.99 | 5887.40 | 6168.77 | 5324.66 | 6055.72 | 6322.02 | 5482.93 | 5364.86 | 5005.61 |
| 360.0 | 5904.99 | 5849.72 | 6085.87 | 5372.39 | 5189.00 | 5711.54 | 5224.17 | 5307.08 | 5266.88 |

| C/γ(°) | 45.0 | 50.0 | 55.0 | 60.0 | 65.0 | 70.0 | 75.0 | 80.0 | 85.0 |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|--------|
| 0.0 | 4986.52 | 4666.71 | 4268.02 | 3411.85 | 2904.64 | 2617.49 | 2099.72 | 1576.17 | 963.94 |
| 22.5 | 4721.23 | 4255.21 | 3208.36 | 3388.24 | 2681.55 | 2494.14 | 2020.08 | 1389.51 | 861.69 |
| 45.0 | 4545.87 | 4354.94 | 3768.84 | 3002.11 | 2765.46 | 1981.89 | 1554.31 | 1016.45 | 628.56 |
| 67.5 | 4155.22 | 3493.00 | 2905.14 | 2350.19 | 1877.14 | 1344.54 | 958.41 | 603.19 | 350.96 |
| 90.0 | 3586.20 | 2988.29 | 2455.70 | 2061.28 | 1697.01 | 1370.42 | 964.95 | 539.88 | 258.26 |
| 112.5 | 3033.51 | 2631.56 | 2239.65 | 1719.62 | 1350.32 | 985.55 | 662.98 | 503.45 | 415.77 |
| 135.0 | 3108.88 | 2892.83 | 2234.62 | 1503.57 | 942.34 | 613.49 | 453.21 | 330.36 | 232.88 |
| 157.5 | 3146.56 | 2508.46 | 1769.86 | 1031.27 | 632.08 | 500.18 | 357.74 | 236.15 | 150.99 |
| 180.0 | 2900.36 | 2244.67 | 1516.13 | 762.71 | 551.69 | 424.57 | 292.67 | 188.67 | 132.65 |
| 202.5 | 3179.22 | 2470.77 | 1717.11 | 1021.47 | 622.28 | 494.66 | 362.01 | 250.97 | 169.58 |
| 225.0 | 2895.34 | 2749.63 | 2219.55 | 1578.93 | 1002.13 | 652.43 | 482.60 | 352.47 | 252.48 |
| 247.5 | 3126.46 | 2882.78 | 2239.65 | 1717.11 | 1320.17 | 955.40 | 638.61 | 455.97 | 378.59 |
| 270.0 | 3344.53 | 2772.24 | 2269.04 | 1861.81 | 1503.82 | 1188.03 | 783.06 | 400.70 | 208.01 |
| 292.5 | 4144.42 | 3723.12 | 3175.96 | 2635.58 | 2114.54 | 1522.66 | 1088.55 | 700.66 | 438.38 |
| 315.0 | 4534.32 | 4338.86 | 3935.15 | 3213.64 | 3009.90 | 2107.76 | 1651.79 | 1159.64 | 702.42 |
| 337.5 | 4845.58 | 4368.01 | 3333.72 | 3729.65 | 2812.44 | 2477.56 | 1952.50 | 1391.27 | 917.47 |
| 360.0 | 4986.52 | 4666.71 | 4268.02 | 3411.85 | 2904.64 | 2617.49 | 2099.72 | 1576.17 | 963.94 |

| C/γ(°) | 90.0 | 95.0 | 100.0 | 105.0 | 110.0 | 115.0 | 120.0 | 125.0 | 130.0 |
|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|
| 0.0 | 543.14 | 277.35 | 180.13 | 59.54 | 40.45 | 51.50 | 35.42 | 20.85 | 12.56 |
| 22.5 | 465.01 | 252.23 | 168.82 | 81.65 | 62.30 | 44.72 | 34.42 | 21.61 | 13.06 |
| 45.0 | 359.50 | 225.35 | 153.50 | 101.75 | 66.32 | 47.73 | 35.17 | 19.09 | 15.33 |
| 67.5 | 215.30 | 147.72 | 108.78 | 82.40 | 62.05 | 47.73 | 34.67 | 25.12 | 18.09 |
| 90.0 | 161.54 | 163.55 | 155.51 | 133.15 | 101.75 | 72.10 | 47.23 | 29.64 | 20.10 |
| 112.5 | 319.81 | 220.57 | 147.72 | 100.24 | 69.84 | 46.23 | 31.40 | 21.86 | 15.07 |
| 135.0 | 153.50 | 95.47 | 57.78 | 36.93 | 22.36 | 13.82 | 10.55 | 9.80 | 9.55 |
| 157.5 | 96.47 | 54.77 | 18.09 | 7.29 | 7.29 | 8.04 | 9.04 | 9.80 | 10.30 |
| 180.0 | 85.42 | 55.27 | 26.13 | 12.31 | 7.54 | 8.79 | 9.30 | 10.05 | 10.80 |
| 202.5 | 114.31 | 69.59 | 31.15 | 9.55 | 7.54 | 8.04 | 9.30 | 9.80 | 10.05 |
| 225.0 | 173.85 | 115.31 | 66.57 | 38.69 | 26.63 | 18.59 | 13.32 | 10.80 | 10.30 |
| 247.5 | 292.17 | 199.22 | 134.66 | 92.45 | 67.83 | 48.24 | 32.41 | 23.36 | 16.33 |
| 270.0 | 148.98 | 144.20 | 132.90 | 103.50 | 76.37 | 53.51 | 35.42 | 24.87 | 17.84 |
| 292.5 | 258.26 | 168.32 | 119.58 | 91.45 | 64.82 | 47.23 | 34.67 | 24.62 | 17.84 |
| 315.0 | 411.00 | 245.95 | 163.30 | 111.54 | 69.59 | 47.23 | 35.93 | 18.09 | 13.82 |
| 337.5 | 501.19 | 270.57 | 176.11 | 79.14 | 64.56 | 47.73 | 36.43 | 24.12 | 14.32 |
| 360.0 | 543.14 | 277.35 | 180.13 | 59.54 | 40.45 | 51.50 | 35.42 | 20.85 | 12.56 |

| C/ $\gamma(^{\circ})$ | 135.0 | 140.0 | 145.0 | 150.0 | 155.0 | 160.0 | 165.0 | 170.0 | 175.0 |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.0 | 8.54 | 9.04 | 9.80 | 10.30 | 11.05 | 11.05 | 11.56 | 11.56 | 12.31 |
| 22.5 | 9.04 | 9.30 | 10.05 | 10.55 | 10.80 | 11.31 | 11.56 | 11.56 | 12.81 |
| 45.0 | 12.31 | 10.30 | 10.05 | 10.80 | 11.05 | 11.56 | 11.81 | 11.81 | 12.81 |
| 67.5 | 13.82 | 11.81 | 11.05 | 11.31 | 11.56 | 11.56 | 11.56 | 11.31 | 12.56 |
| 90.0 | 14.32 | 11.56 | 10.55 | 10.55 | 10.55 | 10.80 | 10.80 | 11.05 | 11.31 |
| 112.5 | 10.80 | 10.30 | 10.30 | 10.80 | 11.05 | 11.05 | 10.80 | 11.05 | 11.05 |
| 135.0 | 10.05 | 10.55 | 10.80 | 11.31 | 11.56 | 11.31 | 11.56 | 11.56 | 11.31 |
| 157.5 | 11.05 | 11.56 | 12.31 | 12.31 | 12.81 | 12.31 | 12.06 | 11.81 | 11.56 |
| 180.0 | 10.80 | 11.31 | 12.06 | 12.81 | 13.06 | 13.06 | 12.56 | 12.06 | 11.81 |
| 202.5 | 11.05 | 12.06 | 12.56 | 13.06 | 13.32 | 13.06 | 12.31 | 12.06 | 12.06 |
| 225.0 | 10.80 | 11.05 | 12.31 | 12.56 | 12.81 | 12.81 | 12.56 | 12.31 | 12.06 |
| 247.5 | 12.81 | 11.56 | 11.05 | 11.81 | 12.31 | 12.31 | 12.31 | 12.06 | 11.81 |
| 270.0 | 13.57 | 11.81 | 11.05 | 11.05 | 11.31 | 11.31 | 11.56 | 11.56 | 11.81 |
| 292.5 | 14.07 | 11.81 | 11.05 | 10.55 | 11.05 | 11.56 | 11.31 | 11.31 | 12.06 |
| 315.0 | 11.56 | 9.80 | 10.30 | 10.80 | 11.05 | 11.05 | 11.56 | 11.31 | 12.06 |
| 337.5 | 8.79 | 9.55 | 10.30 | 10.80 | 11.31 | 11.05 | 11.56 | 11.56 | 12.06 |
| 360.0 | 8.54 | 9.04 | 9.80 | 10.30 | 11.05 | 11.05 | 11.56 | 11.56 | 12.31 |

| C/ $\gamma(^{\circ})$ | 180.0 |
|-----------------------|-------|
| 0.0 | 12.41 |
| 22.5 | 12.41 |
| 45.0 | 12.41 |
| 67.5 | 12.41 |
| 90.0 | 12.41 |
| 112.5 | 12.41 |
| 135.0 | 12.41 |
| 157.5 | 12.41 |
| 180.0 | 12.41 |
| 202.5 | 12.41 |
| 225.0 | 12.41 |
| 247.5 | 12.41 |
| 270.0 | 12.41 |
| 292.5 | 12.41 |
| 315.0 | 12.41 |
| 337.5 | 12.41 |
| 360.0 | 12.41 |