Shenzhen Belling Efficiency Testing Lab Co.,Ltd
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Client:
LumCAT:LL4G-5CCT(2700K)
Luminaire:
Report No:
Ballast type:

| | |
|---|---|
| Test No: | Voltage(V): 120.05 |
| LampCAT: | Current(A): 0.0890 |
| Lamp flux(lm): -1.0 | Power (W): 10.50 |
| Number of Lamps: 1 | PF: 0.9824 |
| Length(mm): 0 | Width(mm): 0 |
| Phm Type: C | Height(mm): 0 |

## Photometric Results

Lumens(lm): 985.48, Efficiency(%): 0.00% , Luminous Efficacy(lm/W): 93.83
Central intensity(cd): 1509.992, Maximum intensity(cd): 1528.776
Angle of maximum intensity: C=90.0 γ=5.0
Beam Angle(50%Imax): [C0/180]Total=41.5
[C90/270]Total=40.1
Field angle(10%Imax): [C0/180]Total=77.1
[C90/270]Total=75.2
Maximum s/h(1/2): C0_180=0.68 C90_270=0.69
Maximum s/h(1/4): C0_180=0.76 C90_270=0.75
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 0.00%
Up flux rate of LUM(%): 0.09%
Down flux rate of LUM(%): 99.91%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 94.784%

## Zonal flux distribution table



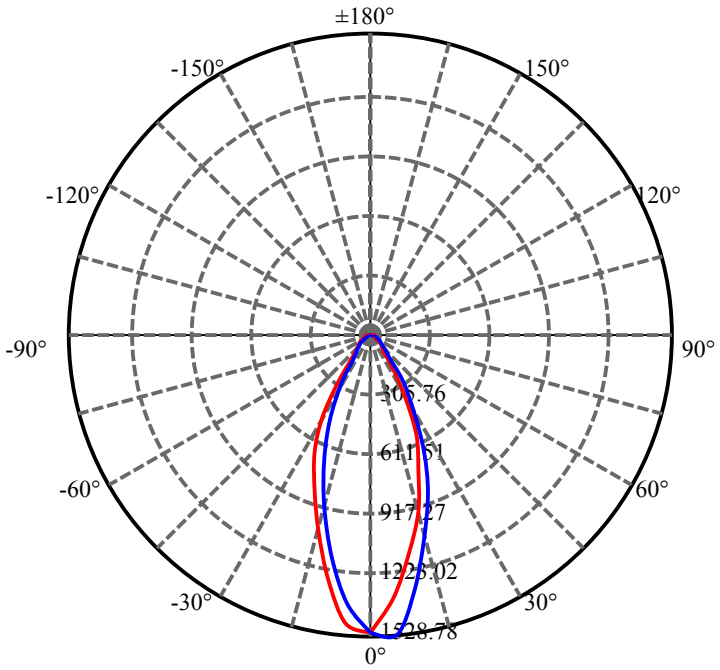
| γ(°) | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|---|---|---|---|---|---|
| 0.0 | 1509.992 | 0.000 | 0 | 0.00% | 0.00% |
| 5.0 | 1412.709 | 34.940 | 34.94 | 0.00% | 3.55% |
| 10.0 | 1200.493 | 93.482 | 128.422 | 0.00% | 13.03% |
| 15.0 | 979.203 | 129.298 | 257.721 | 0.00% | 26.15% |
| 20.0 | 779.287 | 144.924 | 402.645 | 0.00% | 40.86% |
| 25.0 | 589.656 | 143.577 | 546.222 | 0.00% | 55.43% |
| 30.0 | 390.478 | 124.037 | 670.258 | 0.00% | 68.01% |
| 35.0 | 220.143 | 89.918 | 760.177 | 0.00% | 77.14% |
| 40.0 | 124.454 | 57.493 | 817.67 | 0.00% | 82.97% |
| 45.0 | 89.839 | 39.678 | 857.348 | 0.00% | 87.00% |
| 50.0 | 66.669 | 31.625 | 888.973 | 0.00% | 90.21% |
| 55.0 | 49.272 | 25.209 | 914.182 | 0.00% | 92.77% |
| 60.0 | 36.807 | 19.897 | 934.079 | 0.00% | 94.78% |
| 65.0 | 28.319 | 15.832 | 949.911 | 0.00% | 96.39% |
| 70.0 | 21.717 | 12.670 | 962.581 | 0.00% | 97.68% |
| 75.0 | 15.562 | 9.744 | 972.325 | 0.00% | 98.67% |
| 80.0 | 9.928 | 6.820 | 979.145 | 0.00% | 99.36% |
| 85.0 | 4.830 | 4.010 | 983.155 | 0.00% | 99.76% |
| 90.0 | 0.421 | 1.438 | 984.593 | 0.00% | 99.91% |
| 95.0 | 0.013 | 0.119 | 984.712 | 0.00% | 99.92% |
| 100.0 | 0.000 | 0.003 | 984.715 | 0.00% | 99.92% |
| 105.0 | 0.026 | 0.007 | 984.722 | 0.00% | 99.92% |
| 110.0 | 0.013 | 0.010 | 984.732 | 0.00% | 99.92% |
| 115.0 | 0.013 | 0.006 | 984.739 | 0.00% | 99.92% |
| 120.0 | 0.038 | 0.012 | 984.751 | 0.00% | 99.93% |
| 125.0 | 0.013 | 0.012 | 984.763 | 0.00% | 99.93% |
| 130.0 | 0.089 | 0.022 | 984.785 | 0.00% | 99.93% |
| 135.0 | 0.102 | 0.039 | 984.824 | 0.00% | 99.93% |
| 140.0 | 0.140 | 0.045 | 984.868 | 0.00% | 99.94% |
| 145.0 | 0.179 | 0.053 | 984.922 | 0.00% | 99.94% |
| 150.0 | 0.306 | 0.071 | 984.993 | 0.00% | 99.95% |
| 155.0 | 0.459 | 0.097 | 985.09 | 0.00% | 99.96% |
| 160.0 | 0.625 | 0.114 | 985.203 | 0.00% | 99.97% |
| 165.0 | 0.676 | 0.107 | 985.311 | 0.00% | 99.98% |
| 170.0 | 0.778 | 0.086 | 985.397 | 0.00% | 99.99% |
| 175.0 | 0.880 | 0.059 | 985.456 | 0.00% | 100.00% |
| 180.0 | 0.936 | 0.022 | 985.478 | 0.00% | 100.00% |

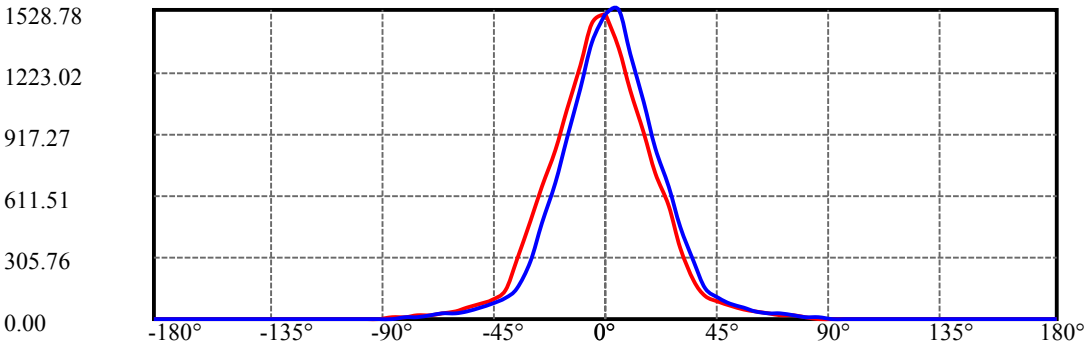
ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---|---|---|---|
| 0-30 | 670.26 | N.A. | 68.01% |
| 0-40 | 817.67 | N.A. | 82.97% |
| 0-60 | 934.08 | N.A. | 94.78% |
| 0-90 | 984.59 | N.A. | 99.91% |
| 0-120 | 984.75 | N.A. | 99.93% |
| 0-180 | 985.48 | N.A. | 100.00% |
| 60-90 | 50.51 | N.A. | 5.13% |
| 90-120 | 0.16 | N.A. | 0.02% |
| 90-130 | 0.19 | N.A. | 0.02% |
| 90-150 | 0.40 | N.A. | 0.04% |
| 90-180 | 0.86 | N.A. | 0.09% |
| 0-37.45 | 788.38 | N.A. | 80.00% |

ZONAL LUMEN SUMMARY

| | |
|---|---|
| 0-10 | 128.42 |
| 10-20 | 274.22 |
| 20-30 | 267.61 |
| 30-40 | 147.41 |
| 40-50 | 71.30 |
| 50-60 | 45.11 |
| 60-70 | 28.50 |
| 70-80 | 16.56 |
| 80-90 | 5.45 |
| 90-100 | 0.12 |
| 100-110 | 0.02 |
| 110-120 | 0.02 |
| 120-130 | 0.03 |
| 130-140 | 0.08 |
| 140-150 | 0.12 |
| 150-160 | 0.21 |
| 160-170 | 0.19 |
| 170-180 | 0.06 |



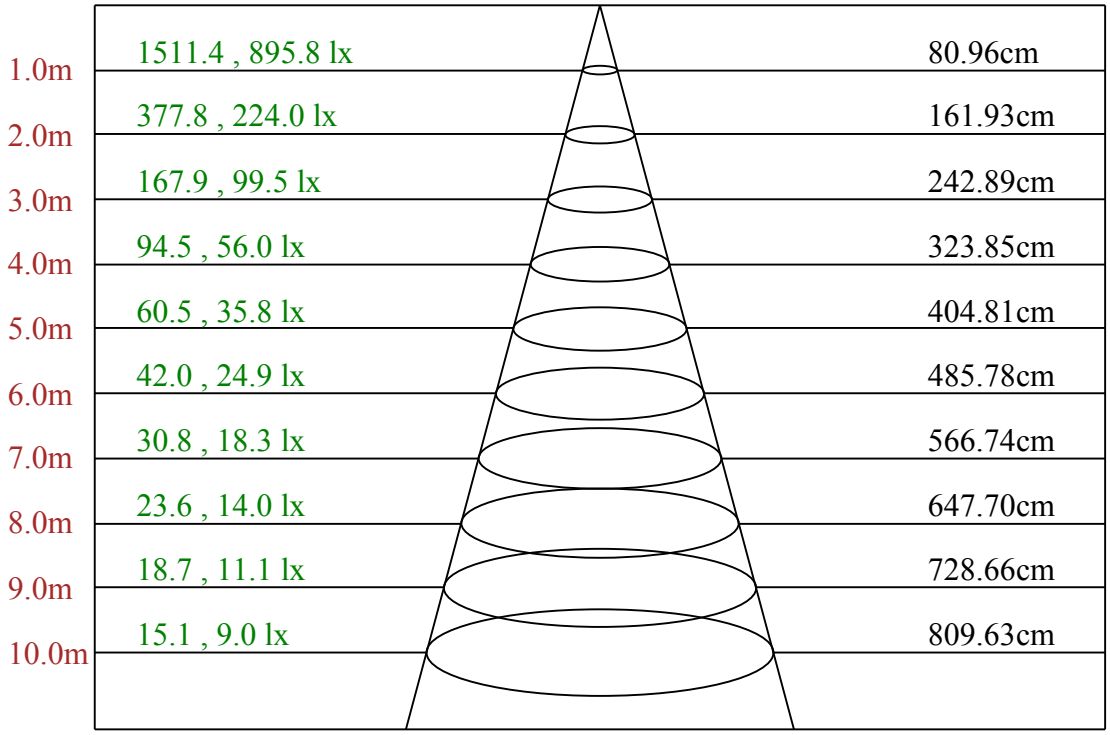




C0/C180:

C90/C270:

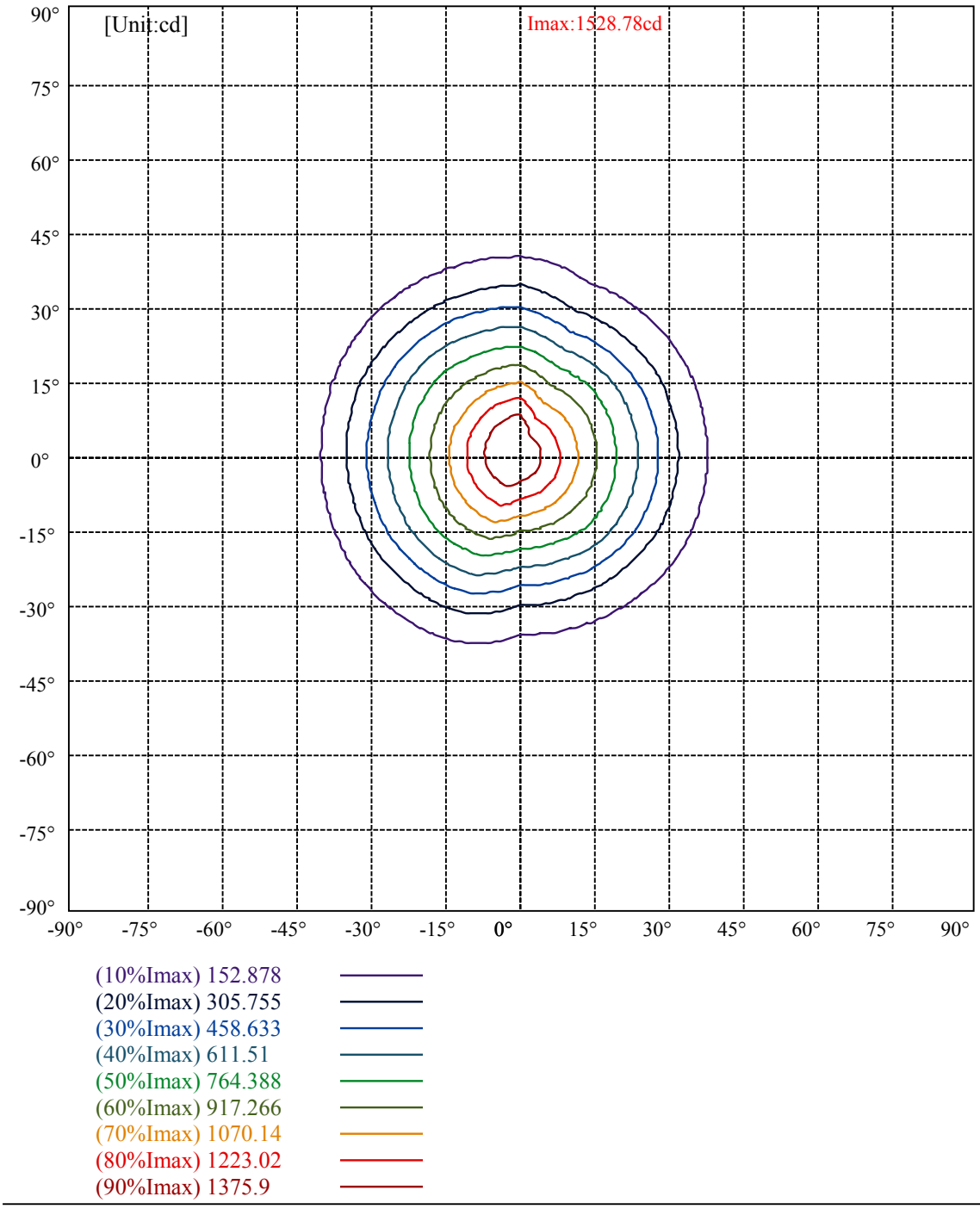
Field angle(10%Imax):C0/180Left:39.7 Right:37.4
:C90/270Left:35.2 Right:40.0

Beam Angle(50%Imax):C0/180Left:22.3 Right:19.2
:C90/270Left:18.0 Right:22.1




Max , Ave

Beam angle of C90 plane 44.08


[Unit:cd]
Imax:1528.78cd
90°
75°
60°
45°
30°
15°
0°
-15°
-30°
-45°
-60°
-75°
-90°
-90° -75° -60° -45° -30° -15° 0° 15° 30° 45° 60° 75° 90°
(10%Imax) 152.878
(20%Imax) 305.755
(30%Imax) 458.633
(40%Imax) 611.51
(50%Imax) 764.388
(60%Imax) 917.266
(70%Imax) 1070.14
(80%Imax) 1223.02
(90%Imax) 1375.9

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 | 1509.99 | 1342.80 | 1128.69 | 922.94 | 723.30 | 558.33 | 354.82 | 187.81 | 109.91 |
| 22.5 | 1509.99 | 1352.59 | 1133.79 | 935.58 | 736.76 | 558.13 | 359.92 | 186.38 | 112.16 |
| 45.0 | 1509.99 | 1358.10 | 1146.02 | 943.53 | 749.60 | 545.28 | 349.11 | 180.06 | 112.16 |
| 67.5 | 1509.99 | 1366.66 | 1143.98 | 938.23 | 743.69 | 534.88 | 337.69 | 182.10 | 112.56 |
| 90.0 | 1509.99 | 1528.78 | 1312.22 | 1068.94 | 846.87 | 653.76 | 456.17 | 285.89 | 152.94 |
| 112.5 | 1509.99 | 1507.57 | 1305.89 | 1055.89 | 842.59 | 658.05 | 463.71 | 275.70 | 148.45 |
| 135.0 | 1509.99 | 1494.52 | 1284.07 | 1040.60 | 851.16 | 683.13 | 473.09 | 273.66 | 147.43 |
| 157.5 | 1509.99 | 1477.59 | 1263.27 | 1041.62 | 851.16 | 675.79 | 477.78 | 298.94 | 147.43 |
| 180.0 | 1509.99 | 1463.12 | 1252.26 | 1030.60 | 838.11 | 659.06 | 480.64 | 291.81 | 142.54 |
| 202.5 | 1509.99 | 1443.95 | 1243.90 | 1027.34 | 839.12 | 648.66 | 463.10 | 261.22 | 133.16 |
| 225.0 | 1509.99 | 1430.08 | 1234.93 | 1027.75 | 826.07 | 632.96 | 432.51 | 232.67 | 127.45 |
| 247.5 | 1509.99 | 1417.23 | 1237.17 | 1018.37 | 796.91 | 609.51 | 410.28 | 223.29 | 124.39 |
| 270.0 | 1509.99 | 1366.25 | 1142.15 | 896.02 | 675.99 | 472.48 | 284.47 | 154.77 | 103.39 |
| 292.5 | 1509.99 | 1352.80 | 1125.02 | 893.37 | 692.71 | 486.14 | 282.02 | 155.18 | 102.98 |
| 315.0 | 1509.99 | 1351.98 | 1127.26 | 906.62 | 725.75 | 512.65 | 292.01 | 158.65 | 106.45 |
| 337.5 | 1509.99 | 1349.33 | 1127.26 | 919.88 | 728.80 | 545.69 | 330.35 | 174.15 | 107.87 |
| 360.0 | 1509.99 | 1342.80 | 1128.69 | 922.94 | 723.30 | 558.33 | 354.82 | 187.81 | 109.91 |

| C/γ(°) | 45.0 | 50.0 | 55.0 | 60.0 | 65.0 | 70.0 | 75.0 | 80.0 | 85.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 83.00 | 62.40 | 46.49 | 35.48 | 27.73 | 21.62 | 15.29 | 9.38 | 3.47 |
| 22.5 | 83.81 | 62.60 | 46.49 | 35.48 | 27.53 | 21.62 | 15.50 | 9.58 | 3.87 |
| 45.0 | 83.40 | 63.22 | 46.70 | 35.07 | 27.73 | 21.41 | 15.29 | 9.58 | 4.28 |
| 67.5 | 83.61 | 62.20 | 46.70 | 35.07 | 27.33 | 21.41 | 15.50 | 9.58 | 4.49 |
| 90.0 | 103.79 | 75.86 | 56.49 | 41.80 | 32.02 | 25.29 | 19.17 | 12.85 | 7.55 |
| 112.5 | 102.98 | 75.45 | 55.06 | 40.99 | 31.40 | 24.47 | 17.95 | 12.03 | 7.14 |
| 135.0 | 102.37 | 74.43 | 54.45 | 40.38 | 30.79 | 23.45 | 17.33 | 11.42 | 6.53 |
| 157.5 | 100.74 | 73.62 | 54.45 | 39.97 | 30.18 | 22.43 | 16.31 | 10.81 | 6.53 |
| 180.0 | 96.25 | 72.39 | 53.83 | 38.95 | 29.77 | 21.82 | 15.91 | 10.40 | 6.12 |
| 202.5 | 94.01 | 70.15 | 52.20 | 37.93 | 28.55 | 21.00 | 15.50 | 9.99 | 5.71 |
| 225.0 | 93.60 | 68.92 | 51.18 | 37.52 | 27.94 | 21.21 | 15.09 | 9.99 | 5.30 |
| 247.5 | 91.36 | 68.11 | 49.96 | 36.91 | 27.94 | 21.41 | 15.29 | 9.99 | 5.51 |
| 270.0 | 78.31 | 58.32 | 42.62 | 32.22 | 25.08 | 19.17 | 12.85 | 7.95 | 2.45 |
| 292.5 | 78.51 | 57.71 | 42.82 | 32.63 | 25.29 | 19.58 | 13.46 | 7.95 | 2.45 |
| 315.0 | 79.94 | 59.75 | 43.64 | 33.85 | 26.31 | 20.39 | 13.87 | 8.57 | 2.86 |
| 337.5 | 81.77 | 61.58 | 45.27 | 34.67 | 27.53 | 21.21 | 14.68 | 8.77 | 3.06 |
| 360.0 | 83.00 | 62.40 | 46.49 | 35.48 | 27.73 | 21.62 | 15.29 | 9.38 | 3.47 |

| C/γ(°) | 90.0 | 95.0 | 100.0 | 105.0 | 110.0 | 115.0 | 120.0 | 125.0 | 130.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.20 |
| 45.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.20 |
| 67.5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.20 |
| 90.0 | 2.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 112.5 | 1.84 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 135.0 | 1.22 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 157.5 | 0.82 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 180.0 | 0.61 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 202.5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 225.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 247.5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 270.0 | 0.20 | 0.20 | 0.00 | 0.41 | 0.20 | 0.20 | 0.41 | 0.20 | 0.41 |
| 292.5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.20 |
| 315.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.20 |
| 337.5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.20 | 0.00 | 0.00 |
| 360.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Intensity data(cd)

| C/γ(°) | 135.0 | 140.0 | 145.0 | 150.0 | 155.0 | 160.0 | 165.0 | 170.0 | 175.0 |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 0.00 | 0.20 | 0.41 | 0.41 | 0.61 | 0.61 | 0.61 | 0.82 | 0.82 |
| 22.5 | 0.20 | 0.20 | 0.20 | 0.41 | 0.41 | 0.61 | 0.82 | 0.82 | 1.02 |
| 45.0 | 0.00 | 0.00 | 0.20 | 0.41 | 0.41 | 0.61 | 0.61 | 0.82 | 0.82 |
| 67.5 | 0.20 | 0.20 | 0.20 | 0.41 | 0.61 | 0.61 | 0.82 | 0.82 | 1.02 |
| 90.0 | 0.00 | 0.00 | 0.00 | 0.61 | 0.61 | 0.61 | 0.82 | 0.82 | 0.82 |
| 112.5 | 0.00 | 0.00 | 0.00 | 0.20 | 0.41 | 0.61 | 0.61 | 0.82 | 0.82 |
| 135.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.41 | 0.61 | 0.41 | 0.61 | 0.61 |
| 157.5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.41 | 0.20 | 0.61 | 0.61 | 1.02 |
| 180.0 | 0.00 | 0.00 | 0.00 | 0.20 | 0.20 | 0.61 | 0.61 | 0.61 | 0.82 |
| 202.5 | 0.00 | 0.00 | 0.20 | 0.00 | 0.20 | 0.41 | 0.61 | 0.61 | 0.61 |
| 225.0 | 0.00 | 0.00 | 0.00 | 0.20 | 0.20 | 0.41 | 0.41 | 0.61 | 0.61 |
| 247.5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.20 | 0.41 | 0.41 | 0.82 | 0.82 |
| 270.0 | 0.61 | 0.61 | 0.82 | 1.02 | 0.82 | 1.22 | 1.43 | 1.22 | 1.43 |
| 292.5 | 0.20 | 0.20 | 0.20 | 0.41 | 0.61 | 0.61 | 0.61 | 0.82 | 1.02 |
| 315.0 | 0.20 | 0.41 | 0.41 | 0.20 | 0.61 | 0.82 | 0.82 | 0.82 | 1.02 |
| 337.5 | 0.20 | 0.41 | 0.20 | 0.41 | 0.61 | 1.02 | 0.61 | 0.82 | 0.82 |
| 360.0 | 0.00 | 0.20 | 0.41 | 0.41 | 0.61 | 0.61 | 0.61 | 0.82 | 0.82 |

| C/γ(°) | 180.0 |
|---|---|
| 0.0 | 0.94 |
| 22.5 | 0.94 |
| 45.0 | 0.94 |
| 67.5 | 0.94 |
| 90.0 | 0.94 |
| 112.5 | 0.94 |
| 135.0 | 0.94 |
| 157.5 | 0.94 |
| 180.0 | 0.94 |
| 202.5 | 0.94 |
| 225.0 | 0.94 |
| 247.5 | 0.94 |
| 270.0 | 0.94 |
| 292.5 | 0.94 |
| 315.0 | 0.94 |
| 337.5 | 0.94 |
| 360.0 | 0.94 |