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革星

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Client:

LumCAT: EVYW070418LAJMVxx

Luminaire: LED 灯具

Report No:

Ballast type:

Test No: LCZP23080305

Voltage(V): 120.000

LampCAT:

Current(A): 0.201

Lamp flux(lm): 2342.8

Power (W): 23.940

Number of Lamps: 1

PF: 0.994

Length(mm): -90

Width(mm): -90

Phm Type: C

Height(mm): 0

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Photometric Results

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Lumens(lm): 2342.79, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 97.86

Central intensity(cd): 4233.819, Maximum intensity(cd): 4234.911

Angle of maximum intensity: C=15.0  $\gamma$ =180.0

Beam Angle(50%Imax): [C0/180]Total=N.A.

[C90/270]Total=N.A.

Field angle(10%Imax): [C0/180]Total=N.A.

[C90/270]Total=N.A.

Maximum s/h(1/2): C0\_180=0.33 C90\_270=0.38

Maximum s/h(1/4): C0\_180=0.35 C90\_270=0.38

Up flux rate of lamp(%): 50.00%

Down flux rate of lamp(%): 50.00%

Up flux rate of LUM(%): 50.00%

Down flux rate of LUM(%): 50.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 49.506%

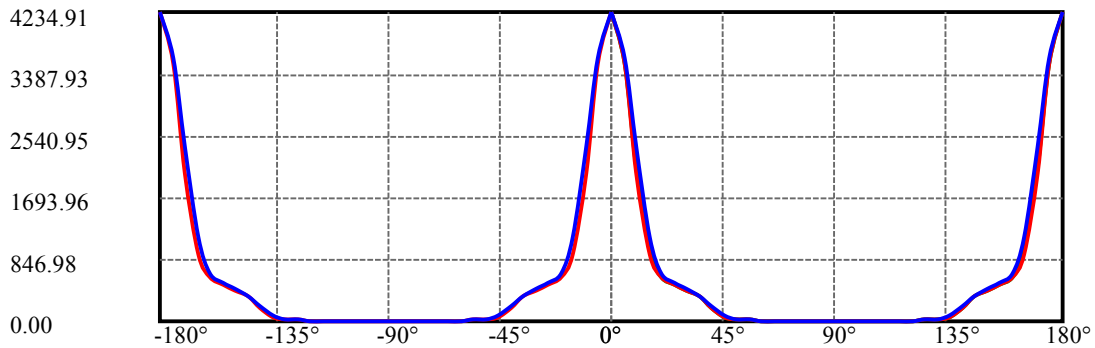
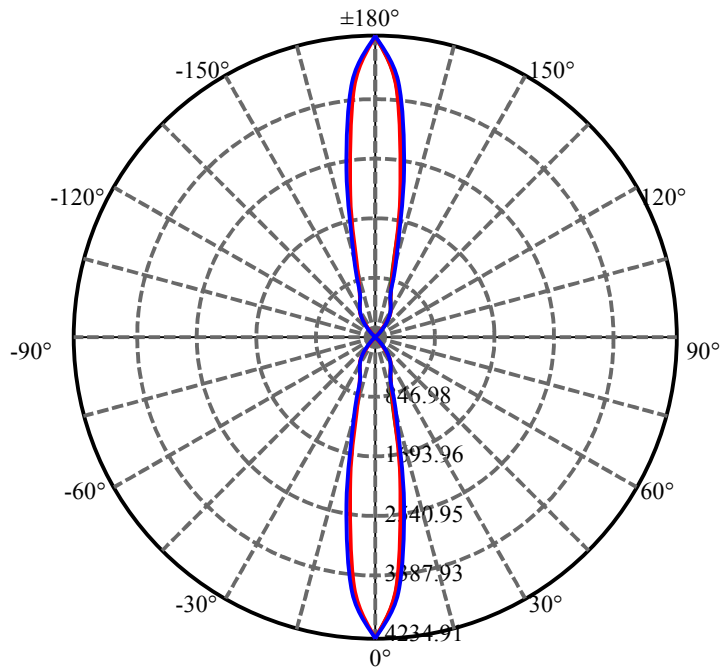
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0                | 4233.819      | 0.000       | 0         | 0.00%       | 0.00%      |
| 5.0                | 3573.490      | 93.334      | 93.334    | 3.98%       | 3.98%      |
| 10.0               | 2205.280      | 206.725     | 300.059   | 8.82%       | 12.81%     |
| 15.0               | 1055.785      | 193.444     | 493.503   | 8.26%       | 21.06%     |
| 20.0               | 632.521       | 139.140     | 632.643   | 5.94%       | 27.00%     |
| 25.0               | 512.874       | 120.131     | 752.774   | 5.13%       | 32.13%     |
| 30.0               | 432.712       | 119.665     | 872.439   | 5.11%       | 37.24%     |
| 35.0               | 338.721       | 113.599     | 986.038   | 4.85%       | 42.09%     |
| 40.0               | 198.157       | 89.574      | 1075.612  | 3.82%       | 45.91%     |
| 45.0               | 70.454        | 49.736      | 1125.347  | 2.12%       | 48.03%     |
| 50.0               | 25.580        | 19.405      | 1144.752  | 0.83%       | 48.86%     |
| 55.0               | 15.881        | 9.015       | 1153.767  | 0.38%       | 49.25%     |
| 60.0               | 10.303        | 6.052       | 1159.82   | 0.26%       | 49.51%     |
| 65.0               | 6.856         | 4.171       | 1163.991  | 0.18%       | 49.68%     |
| 70.0               | 4.761         | 2.942       | 1166.932  | 0.13%       | 49.81%     |
| 75.0               | 3.148         | 2.067       | 1169      | 0.09%       | 49.90%     |
| 80.0               | 1.798         | 1.323       | 1170.323  | 0.06%       | 49.95%     |
| 85.0               | 0.827         | 0.713       | 1171.037  | 0.03%       | 49.98%     |
| 90.0               | 0.378         | 0.330       | 1171.367  | 0.01%       | 50.00%     |
| 95.0               | 0.827         | 0.330       | 1171.696  | 0.01%       | 50.01%     |
| 100.0              | 1.798         | 0.713       | 1172.41   | 0.03%       | 50.04%     |
| 105.0              | 3.149         | 1.324       | 1173.733  | 0.06%       | 50.10%     |
| 110.0              | 4.761         | 2.067       | 1175.801  | 0.09%       | 50.19%     |
| 115.0              | 6.855         | 2.941       | 1178.742  | 0.13%       | 50.31%     |
| 120.0              | 10.302        | 4.171       | 1182.913  | 0.18%       | 50.49%     |
| 125.0              | 15.880        | 6.052       | 1188.964  | 0.26%       | 50.75%     |
| 130.0              | 25.581        | 9.015       | 1197.979  | 0.38%       | 51.13%     |
| 135.0              | 70.428        | 19.400      | 1217.38   | 0.83%       | 51.96%     |
| 140.0              | 198.181       | 49.735      | 1267.115  | 2.12%       | 54.09%     |
| 145.0              | 338.772       | 89.587      | 1356.701  | 3.82%       | 57.91%     |
| 150.0              | 432.733       | 113.610     | 1470.311  | 4.85%       | 62.76%     |
| 155.0              | 512.951       | 119.677     | 1589.988  | 5.11%       | 67.87%     |
| 160.0              | 632.584       | 120.145     | 1710.133  | 5.13%       | 73.00%     |
| 165.0              | 1055.626      | 139.132     | 1849.266  | 5.94%       | 78.93%     |
| 170.0              | 2205.419      | 193.443     | 2042.709  | 8.26%       | 87.19%     |
| 175.0              | 3573.839      | 206.742     | 2249.451  | 8.82%       | 96.02%     |
| 180.0              | 4234.131      | 93.342      | 2342.793  | 3.98%       | 100.00%    |

## ZONAL LUMEN SUMMARY

| Zone     | Lumens  | %Lamp   | %Fixt   |
|----------|---------|---------|---------|
| 0-30     | 872.44  | 37.24%  | 37.24%  |
| 0-40     | 1075.61 | 45.91%  | 45.91%  |
| 0-60     | 1159.82 | 49.51%  | 49.51%  |
| 0-90     | 1171.37 | 50.00%  | 50.00%  |
| 0-120    | 1182.91 | 50.49%  | 50.49%  |
| 0-180    | 2342.79 | 100.00% | 100.00% |
| 60-90    | 11.55   | 0.49%   | 0.49%   |
| 90-120   | 11.55   | 0.49%   | 0.49%   |
| 90-130   | 26.61   | 1.14%   | 1.14%   |
| 90-150   | 298.94  | 12.76%  | 12.76%  |
| 90-180   | 1078.08 | 46.02%  | 46.02%  |
| 0-165.65 | 1874.23 | 80.00%  | 80.00%  |

## ZONAL LUMEN SUMMARY

|         |        |
|---------|--------|
| 0-10    | 300.06 |
| 10-20   | 332.58 |
| 20-30   | 239.80 |
| 30-40   | 203.17 |
| 40-50   | 69.14  |
| 50-60   | 15.07  |
| 60-70   | 7.11   |
| 70-80   | 3.39   |
| 80-90   | 1.04   |
| 90-100  | 1.04   |
| 100-110 | 3.39   |
| 110-120 | 7.11   |
| 120-130 | 15.07  |
| 130-140 | 69.14  |
| 140-150 | 203.20 |
| 150-160 | 239.82 |
| 160-170 | 332.58 |
| 170-180 | 206.74 |



C15(Max):

C0/C180:

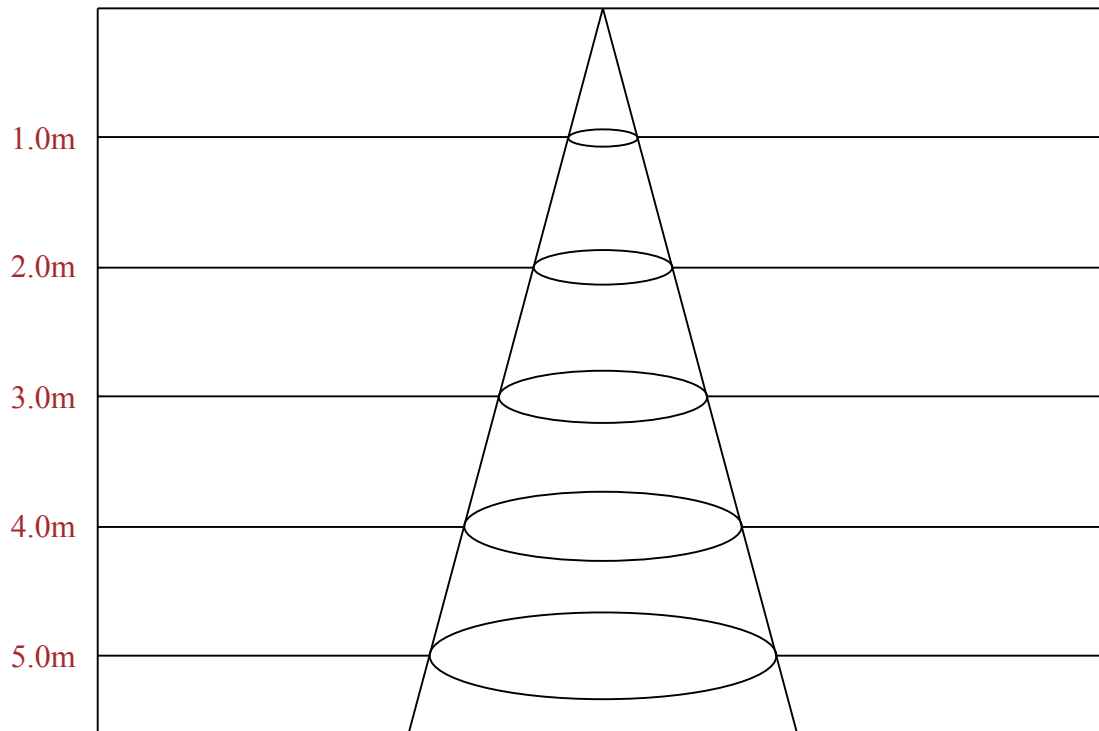
C90/C270:

Field angle(10%I<sub>max</sub>):C0/180Left:0.0 Right:0.0

:C90/270Left:0.0 Right:0.0

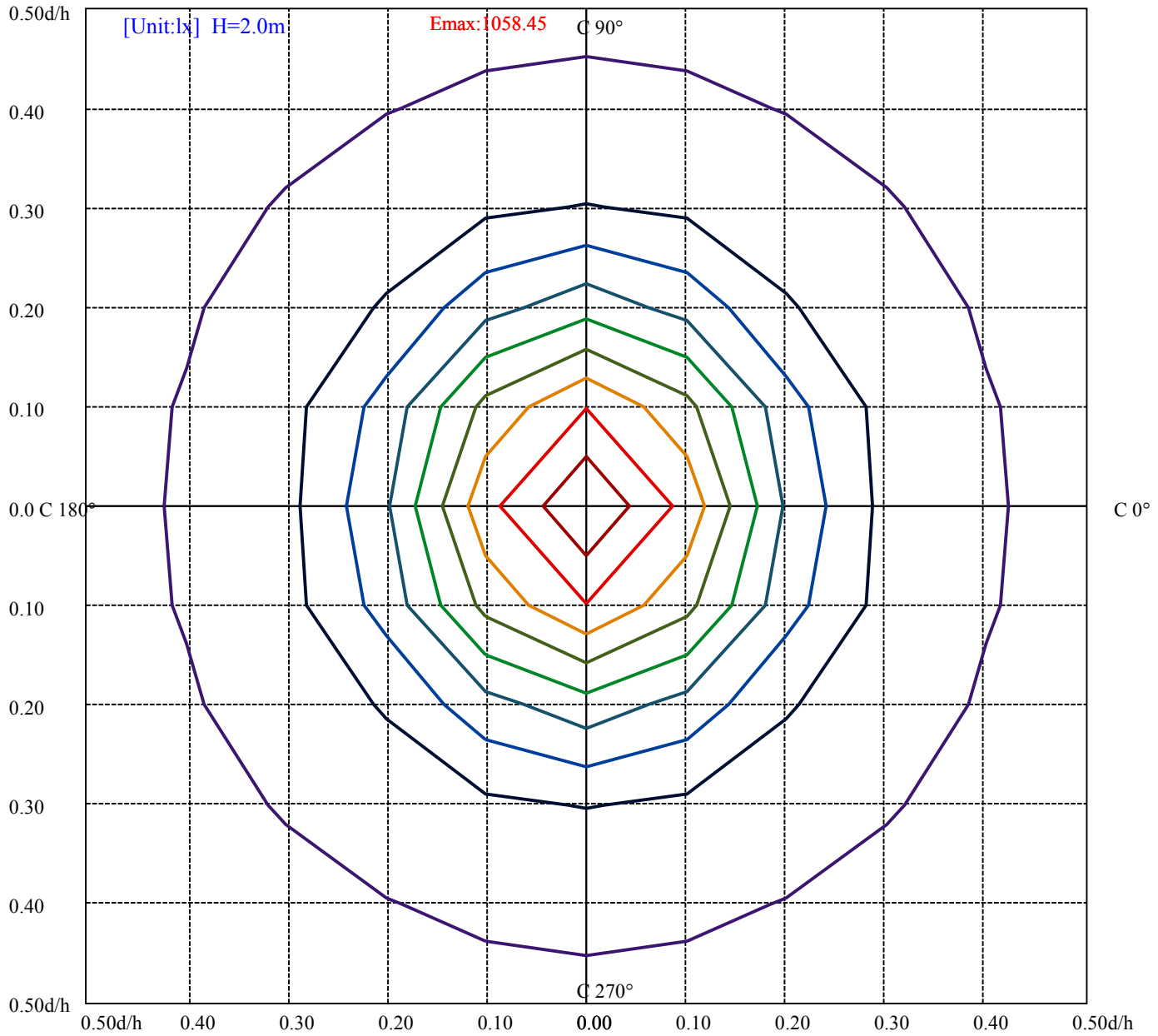
Beam Angle(50%I<sub>max</sub>):C0/180Left:0.0 Right:0.0

:C90/270Left:0.0 Right:0.0

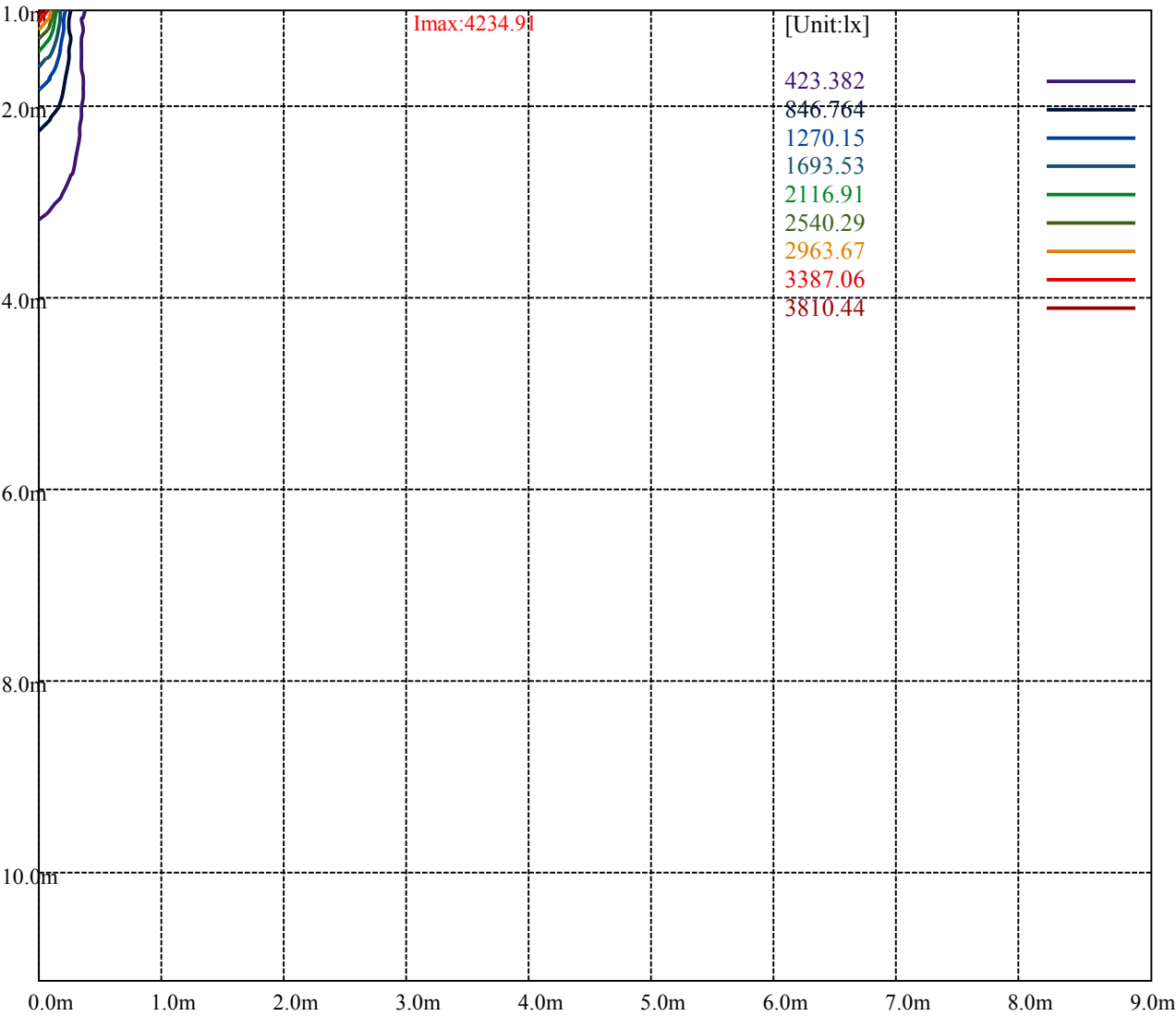


Max , Ave

Beam angle of C15 plane 4414.91



|                   |   |
|-------------------|---|
| (10%Emax) 105.845 | — |
| (20%Emax) 211.69  | — |
| (30%Emax) 317.535 | — |
| (40%Emax) 423.38  | — |
| (50%Emax) 529.225 | — |
| (60%Emax) 635.07  | — |
| (70%Emax) 740.915 | — |
| (80%Emax) 846.76  | — |
| (90%Emax) 952.605 | — |



Luminance Table

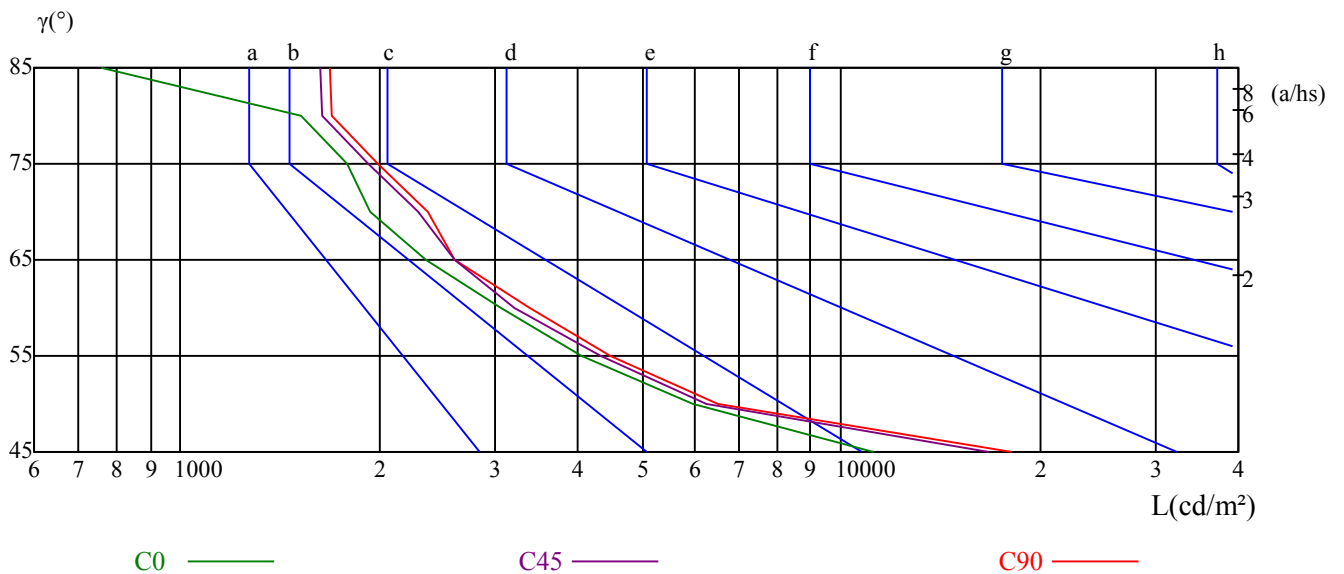
| $\gamma$ | 45    | 50   | 55   | 60   | 65   | 70   | 75   | 80   | 85   |
|----------|-------|------|------|------|------|------|------|------|------|
| C0       | 11233 | 5973 | 4039 | 3045 | 2349 | 1935 | 1790 | 1525 | 759  |
| C45      | 16790 | 6246 | 4336 | 3198 | 2606 | 2285 | 1922 | 1637 | 1631 |
| C90      | 18200 | 6521 | 4487 | 3383 | 2610 | 2365 | 1989 | 1694 | 1687 |

| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 2349       | 2610       | 2606    | 1790       | 1989       | 1922    | 759        | 1687       | 1631    |

Glare Table

| Glare | Quality | Service Values Illuminance(lx) |      |      |            |            |            |            |            |
|-------|---------|--------------------------------|------|------|------------|------------|------------|------------|------------|
| 1.15  | A       | 2000                           | 1000 | 500  | $\leq 300$ |            |            |            |            |
| 1.5   | B       |                                | 2000 | 1000 | 500        | $\leq 300$ |            |            |            |
| 1.85  | C       |                                |      | 2000 | 1000       | 500        | $\leq 300$ |            |            |
| 2.2   | D       |                                |      |      | 2000       | 1000       | 500        | $\leq 300$ |            |
| 2.55  | E       |                                |      |      |            | 2000       | 1000       | 500        | $\leq 300$ |
|       |         | 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     | 1.07                                    | 1.07 | 1.07 | 0.99 | 0.99 | 0.99 | 0.83 | 0.83 | 0.83 | 0.69 | 0.69 | 0.69 | 0.56 | 0.56 | 0.56 | 0.50 |
| 1     | 0.97                                    | 0.94 | 0.91 | 0.90 | 0.88 | 0.85 | 0.77 | 0.75 | 0.74 | 0.65 | 0.64 | 0.63 | 0.54 | 0.53 | 0.52 | 0.47 |
| 2     | 0.88                                    | 0.84 | 0.80 | 0.82 | 0.78 | 0.75 | 0.71 | 0.68 | 0.66 | 0.61 | 0.59 | 0.57 | 0.51 | 0.50 | 0.49 | 0.44 |
| 3     | 0.81                                    | 0.75 | 0.71 | 0.76 | 0.71 | 0.67 | 0.66 | 0.62 | 0.60 | 0.57 | 0.54 | 0.53 | 0.48 | 0.47 | 0.46 | 0.42 |
| 4     | 0.74                                    | 0.68 | 0.64 | 0.70 | 0.64 | 0.60 | 0.61 | 0.57 | 0.54 | 0.53 | 0.51 | 0.49 | 0.46 | 0.44 | 0.43 | 0.40 |
| 5     | 0.69                                    | 0.62 | 0.58 | 0.65 | 0.59 | 0.55 | 0.57 | 0.53 | 0.50 | 0.50 | 0.47 | 0.45 | 0.44 | 0.42 | 0.40 | 0.38 |
| 6     | 0.64                                    | 0.57 | 0.53 | 0.60 | 0.55 | 0.51 | 0.54 | 0.50 | 0.46 | 0.48 | 0.45 | 0.42 | 0.42 | 0.40 | 0.38 | 0.36 |
| 7     | 0.59                                    | 0.53 | 0.49 | 0.56 | 0.51 | 0.47 | 0.51 | 0.46 | 0.43 | 0.45 | 0.42 | 0.40 | 0.40 | 0.38 | 0.36 | 0.34 |
| 8     | 0.56                                    | 0.49 | 0.45 | 0.53 | 0.47 | 0.44 | 0.48 | 0.44 | 0.41 | 0.43 | 0.40 | 0.38 | 0.38 | 0.36 | 0.35 | 0.32 |
| 9     | 0.52                                    | 0.46 | 0.42 | 0.50 | 0.45 | 0.41 | 0.45 | 0.41 | 0.38 | 0.41 | 0.38 | 0.36 | 0.37 | 0.35 | 0.33 | 0.31 |
| 10    | 0.49                                    | 0.44 | 0.40 | 0.47 | 0.42 | 0.38 | 0.43 | 0.39 | 0.36 | 0.39 | 0.36 | 0.34 | 0.35 | 0.33 | 0.32 | 0.30 |

| Intensity data(cd) |         |         |         |         |        |        |        |        | Appendix Page: 10 Total:12 |  |
|--------------------|---------|---------|---------|---------|--------|--------|--------|--------|----------------------------|--|
| C/γ(°)             | 0.0     | 5.0     | 10.0    | 15.0    | 20.0   | 25.0   | 30.0   | 35.0   | 40.0                       |  |
| 0.0                | 4233.82 | 4382.89 | 3058.93 | 1208.58 | 679.67 | 540.70 | 453.95 | 389.10 | 329.31                     |  |
| 15.0               | 4233.82 | 4535.43 | 3230.46 | 1273.00 | 706.93 | 558.29 | 462.36 | 399.27 | 345.69                     |  |
| 30.0               | 4233.82 | 4647.54 | 3308.00 | 1333.39 | 727.30 | 568.32 | 475.21 | 407.57 | 350.48                     |  |
| 45.0               | 4233.82 | 4814.84 | 3452.81 | 1471.03 | 738.67 | 581.02 | 487.34 | 418.88 | 359.42                     |  |
| 60.0               | 4233.82 | 4927.26 | 3599.84 | 1535.08 | 753.82 | 583.66 | 493.09 | 425.39 | 363.19                     |  |
| 75.0               | 4233.82 | 5014.68 | 3808.31 | 1601.41 | 753.17 | 584.26 | 494.73 | 424.58 | 361.82                     |  |
| 90.0               | 4233.82 | 5064.68 | 3839.91 | 1621.48 | 770.04 | 584.78 | 498.70 | 434.14 | 366.78                     |  |
| 105.0              | 4233.82 | 4971.10 | 3634.55 | 1645.92 | 754.88 | 584.45 | 491.83 | 430.70 | 362.16                     |  |
| 120.0              | 4233.82 | 4876.14 | 3550.21 | 1562.68 | 752.43 | 568.91 | 485.41 | 423.93 | 356.03                     |  |
| 135.0              | 4233.82 | 4803.65 | 3488.86 | 1525.30 | 732.25 | 561.67 | 475.47 | 414.67 | 350.25                     |  |
| 150.0              | 4233.82 | 4694.02 | 3432.27 | 1425.27 | 697.00 | 545.98 | 467.35 | 403.90 | 344.92                     |  |
| 165.0              | 4233.82 | 4590.10 | 3228.63 | 1379.15 | 681.62 | 535.75 | 457.07 | 393.41 | 342.14                     |  |
| 180.0              | 4233.82 | 2644.56 | 1014.87 | 624.92  | 516.28 | 441.32 | 382.37 | 293.09 | 44.64                      |  |
| 195.0              | 4233.82 | 2550.32 | 984.35  | 632.61  | 519.40 | 448.53 | 384.58 | 278.28 | 43.21                      |  |
| 210.0              | 4233.82 | 2416.44 | 946.02  | 626.29  | 518.25 | 449.73 | 376.83 | 276.69 | 43.04                      |  |
| 225.0              | 4233.82 | 2418.68 | 945.85  | 635.07  | 530.58 | 461.22 | 382.85 | 272.05 | 42.34                      |  |
| 240.0              | 4233.82 | 2381.29 | 925.80  | 643.12  | 536.09 | 468.39 | 382.40 | 257.07 | 43.00                      |  |
| 255.0              | 4233.82 | 2300.13 | 910.08  | 659.02  | 543.65 | 468.89 | 389.51 | 255.67 | 43.38                      |  |
| 270.0              | 4233.82 | 2123.93 | 922.55  | 671.80  | 553.91 | 476.25 | 392.97 | 248.88 | 43.98                      |  |
| 285.0              | 4233.82 | 2079.40 | 921.60  | 657.63  | 552.04 | 466.82 | 389.02 | 246.38 | 43.53                      |  |
| 300.0              | 4233.82 | 2324.29 | 918.52  | 654.25  | 552.40 | 463.39 | 380.81 | 243.16 | 44.04                      |  |
| 315.0              | 4233.82 | 2336.50 | 925.52  | 652.40  | 543.52 | 460.95 | 382.01 | 251.34 | 44.46                      |  |
| 330.0              | 4233.82 | 2404.65 | 922.18  | 648.74  | 537.94 | 453.94 | 419.99 | 256.46 | 43.79                      |  |
| 345.0              | 4233.82 | 2461.26 | 956.57  | 650.68  | 528.67 | 451.76 | 379.27 | 284.67 | 44.20                      |  |
| 360.0              | 4233.82 | 4382.89 | 3058.93 | 1208.58 | 679.67 | 540.70 | 453.95 | 389.10 | 329.31                     |  |
|                    |         |         |         |         |        |        |        |        |                            |  |
| C/γ(°)             | 45.0    | 50.0    | 55.0    | 60.0    | 65.0   | 70.0   | 75.0   | 80.0   | 85.0                       |  |
| 0.0                | 73.27   | 29.48   | 18.53   | 11.79   | 7.58   | 5.05   | 3.37   | 2.53   | 0.84                       |  |
| 15.0               | 84.69   | 31.98   | 19.88   | 12.10   | 7.78   | 5.19   | 4.32   | 2.59   | 1.73                       |  |
| 30.0               | 105.41  | 32.50   | 20.20   | 12.30   | 7.91   | 5.27   | 4.39   | 2.64   | 0.88                       |  |
| 45.0               | 102.69  | 32.43   | 20.72   | 12.61   | 8.11   | 6.31   | 4.50   | 2.70   | 1.80                       |  |
| 60.0               | 115.27  | 32.93   | 21.96   | 13.72   | 9.15   | 6.40   | 4.57   | 2.74   | 1.83                       |  |
| 75.0               | 135.68  | 34.15   | 22.15   | 13.85   | 9.23   | 6.46   | 4.62   | 2.77   | 1.85                       |  |
| 90.0               | 137.54  | 36.49   | 22.46   | 14.03   | 9.36   | 6.55   | 4.68   | 2.81   | 1.87                       |  |
| 105.0              | 126.89  | 37.05   | 22.23   | 13.89   | 9.26   | 6.48   | 4.63   | 2.78   | 1.85                       |  |
| 120.0              | 131.22  | 37.62   | 22.02   | 13.76   | 9.18   | 6.42   | 4.59   | 2.75   | 1.84                       |  |
| 135.0              | 138.83  | 35.39   | 21.78   | 13.61   | 9.07   | 6.35   | 4.54   | 2.72   | 1.81                       |  |
| 150.0              | 118.85  | 33.96   | 21.45   | 13.40   | 8.94   | 6.26   | 4.47   | 2.68   | 1.79                       |  |
| 165.0              | 93.71   | 32.71   | 21.22   | 13.26   | 7.96   | 5.30   | 3.54   | 2.65   | 1.77                       |  |
| 180.0              | 27.79   | 19.37   | 10.95   | 7.58    | 5.05   | 3.37   | 2.53   | 0.84   | 0.00                       |  |
| 195.0              | 27.66   | 18.15   | 11.23   | 7.78    | 5.19   | 3.46   | 1.73   | 0.86   | 0.00                       |  |
| 210.0              | 26.35   | 17.57   | 10.54   | 7.03    | 5.27   | 3.51   | 1.76   | 0.88   | 0.00                       |  |
| 225.0              | 27.02   | 18.02   | 10.81   | 7.21    | 5.40   | 3.60   | 1.80   | 0.90   | 0.00                       |  |
| 240.0              | 26.53   | 17.38   | 10.98   | 7.32    | 5.49   | 3.66   | 1.83   | 0.91   | 0.00                       |  |
| 255.0              | 26.77   | 17.54   | 10.15   | 7.38    | 4.62   | 3.69   | 1.85   | 0.92   | 0.00                       |  |
| 270.0              | 26.20   | 16.84   | 10.29   | 7.49    | 4.68   | 3.74   | 1.87   | 0.94   | 0.00                       |  |
| 285.0              | 25.93   | 16.67   | 10.19   | 7.41    | 4.63   | 2.78   | 2.78   | 0.93   | 0.00                       |  |
| 300.0              | 25.69   | 15.60   | 10.09   | 8.26    | 4.59   | 3.67   | 1.84   | 0.92   | 0.00                       |  |
| 315.0              | 33.57   | 16.33   | 9.98    | 7.26    | 5.44   | 3.63   | 1.81   | 0.91   | 0.00                       |  |
| 330.0              | 26.81   | 16.98   | 10.72   | 7.15    | 5.36   | 3.57   | 1.79   | 0.89   | 0.00                       |  |
| 345.0              | 26.52   | 16.80   | 10.61   | 7.07    | 5.30   | 3.54   | 1.77   | 0.88   | 0.00                       |  |
| 360.0              | 73.27   | 29.48   | 18.53   | 11.79   | 7.58   | 5.05   | 3.37   | 2.53   | 0.84                       |  |

| Intensity data(cd) |        |        |        |        |        |        |         |         |         | Appendix Page: 11 Total:12 |  |
|--------------------|--------|--------|--------|--------|--------|--------|---------|---------|---------|----------------------------|--|
| C/γ(°)             | 90.0   | 95.0   | 100.0  | 105.0  | 110.0  | 115.0  | 120.0   | 125.0   | 130.0   |                            |  |
| 0.0                | 0.00   | 0.84   | 2.53   | 3.37   | 5.05   | 7.58   | 11.79   | 18.53   | 29.48   |                            |  |
| 15.0               | 0.00   | 0.00   | 0.86   | 1.73   | 3.46   | 5.19   | 6.91    | 10.37   | 16.42   |                            |  |
| 30.0               | 0.00   | 0.00   | 0.88   | 1.76   | 3.51   | 5.27   | 7.03    | 10.54   | 16.69   |                            |  |
| 45.0               | 0.00   | 0.00   | 0.90   | 1.80   | 3.60   | 5.40   | 7.21    | 9.91    | 16.21   |                            |  |
| 60.0               | 0.00   | 0.00   | 0.91   | 1.83   | 3.66   | 4.57   | 8.23    | 10.06   | 15.55   |                            |  |
| 75.0               | 0.00   | 0.00   | 0.92   | 2.77   | 2.77   | 4.62   | 7.38    | 10.15   | 16.61   |                            |  |
| 90.0               | 0.00   | 0.00   | 0.94   | 1.87   | 3.74   | 4.68   | 7.49    | 10.29   | 16.84   |                            |  |
| 105.0              | 0.00   | 0.00   | 0.93   | 1.85   | 3.70   | 4.63   | 7.41    | 10.19   | 17.60   |                            |  |
| 120.0              | 0.00   | 0.00   | 0.92   | 1.84   | 3.67   | 5.51   | 7.34    | 11.01   | 17.43   |                            |  |
| 135.0              | 0.00   | 0.00   | 0.91   | 1.81   | 3.63   | 5.44   | 7.26    | 10.89   | 18.15   |                            |  |
| 150.0              | 0.00   | 0.00   | 0.89   | 1.79   | 3.57   | 5.36   | 7.15    | 10.72   | 17.87   |                            |  |
| 165.0              | 0.00   | 0.00   | 0.88   | 1.77   | 3.54   | 5.30   | 7.96    | 11.49   | 18.57   |                            |  |
| 180.0              | 0.00   | 0.00   | 0.84   | 2.53   | 3.37   | 5.05   | 7.58    | 10.95   | 19.37   |                            |  |
| 195.0              | 0.86   | 1.73   | 2.59   | 3.46   | 5.19   | 7.78   | 12.96   | 20.74   | 31.98   |                            |  |
| 210.0              | 0.88   | 1.76   | 2.64   | 4.39   | 6.15   | 8.78   | 13.18   | 21.08   | 33.38   |                            |  |
| 225.0              | 0.90   | 1.80   | 2.70   | 4.50   | 6.31   | 9.01   | 13.51   | 21.62   | 35.13   |                            |  |
| 240.0              | 0.91   | 1.83   | 2.74   | 4.57   | 6.40   | 9.15   | 13.72   | 21.96   | 37.51   |                            |  |
| 255.0              | 0.92   | 1.85   | 2.77   | 4.62   | 6.46   | 9.23   | 13.85   | 22.15   | 36.92   |                            |  |
| 270.0              | 0.94   | 1.87   | 2.81   | 4.68   | 6.55   | 9.36   | 14.03   | 22.46   | 36.49   |                            |  |
| 285.0              | 0.93   | 1.85   | 2.78   | 4.63   | 6.48   | 9.26   | 13.89   | 22.23   | 34.27   |                            |  |
| 300.0              | 0.92   | 1.84   | 2.75   | 4.59   | 6.42   | 9.18   | 13.76   | 22.02   | 33.03   |                            |  |
| 315.0              | 0.91   | 1.81   | 2.72   | 4.54   | 6.35   | 8.17   | 12.70   | 20.87   | 32.67   |                            |  |
| 330.0              | 0.89   | 0.89   | 2.68   | 4.47   | 5.36   | 8.04   | 12.51   | 20.55   | 33.06   |                            |  |
| 345.0              | 0.00   | 1.77   | 2.65   | 4.42   | 5.30   | 7.96   | 12.38   | 20.33   | 32.71   |                            |  |
| 360.0              | 0.00   | 0.84   | 2.53   | 3.37   | 5.05   | 7.58   | 11.79   | 18.53   | 29.48   |                            |  |
| C/γ(°)             | 135.0  | 140.0  | 145.0  | 150.0  | 155.0  | 160.0  | 165.0   | 170.0   | 175.0   |                            |  |
| 0.0                | 73.27  | 329.31 | 389.10 | 453.95 | 540.70 | 679.67 | 1208.58 | 3058.93 | 4382.89 |                            |  |
| 15.0               | 25.93  | 43.21  | 278.28 | 370.75 | 441.62 | 516.80 | 636.07  | 935.09  | 2405.99 |                            |  |
| 30.0               | 26.35  | 43.04  | 252.10 | 412.84 | 446.22 | 528.79 | 637.71  | 906.49  | 2363.74 |                            |  |
| 45.0               | 33.33  | 44.14  | 249.53 | 379.24 | 457.61 | 539.59 | 647.68  | 918.83  | 2319.59 |                            |  |
| 60.0               | 25.62  | 43.91  | 242.43 | 379.65 | 461.99 | 550.73 | 652.27  | 915.74  | 2317.26 |                            |  |
| 75.0               | 25.84  | 43.38  | 245.52 | 387.66 | 465.19 | 550.11 | 655.33  | 918.39  | 2072.14 |                            |  |
| 90.0               | 26.20  | 43.98  | 248.88 | 392.97 | 476.25 | 553.91 | 671.80  | 922.55  | 2123.93 |                            |  |
| 105.0              | 26.86  | 43.53  | 256.57 | 390.87 | 470.53 | 545.55 | 661.33  | 913.27  | 2308.18 |                            |  |
| 120.0              | 26.61  | 43.13  | 257.85 | 383.56 | 469.81 | 537.72 | 645.07  | 928.61  | 2388.52 |                            |  |
| 135.0              | 27.22  | 42.65  | 274.03 | 385.64 | 464.58 | 534.44 | 639.70  | 952.75  | 2436.31 |                            |  |
| 150.0              | 26.81  | 43.79  | 281.48 | 383.35 | 457.52 | 527.22 | 637.13  | 962.39  | 2458.26 |                            |  |
| 165.0              | 28.29  | 44.20  | 284.67 | 393.41 | 458.83 | 531.33 | 647.14  | 1006.96 | 2608.90 |                            |  |
| 180.0              | 27.79  | 44.64  | 293.09 | 382.37 | 441.32 | 516.28 | 624.92  | 1014.87 | 2644.56 |                            |  |
| 195.0              | 91.61  | 334.45 | 384.58 | 446.80 | 523.72 | 666.31 | 1348.18 | 3156.14 | 4487.04 |                            |  |
| 210.0              | 116.83 | 339.06 | 397.03 | 459.40 | 536.69 | 685.14 | 1401.03 | 3373.88 | 4614.16 |                            |  |
| 225.0              | 137.82 | 347.71 | 411.67 | 472.03 | 557.60 | 726.96 | 1514.27 | 3463.62 | 4768.90 |                            |  |
| 240.0              | 130.82 | 354.95 | 422.65 | 483.94 | 567.19 | 750.16 | 1557.95 | 3539.47 | 4861.39 |                            |  |
| 255.0              | 126.45 | 360.89 | 429.20 | 490.12 | 582.42 | 752.25 | 1640.18 | 3621.87 | 4953.76 |                            |  |
| 270.0              | 137.54 | 366.78 | 434.14 | 498.70 | 584.78 | 770.04 | 1621.48 | 3839.91 | 5064.68 |                            |  |
| 285.0              | 136.16 | 363.08 | 426.07 | 496.46 | 586.31 | 755.81 | 1607.02 | 3821.64 | 5032.23 |                            |  |
| 300.0              | 115.62 | 364.29 | 426.69 | 494.59 | 585.43 | 756.10 | 1539.74 | 3610.77 | 4942.21 |                            |  |
| 315.0              | 103.44 | 362.04 | 421.93 | 490.89 | 585.26 | 744.05 | 1481.75 | 3477.97 | 4849.93 |                            |  |
| 330.0              | 107.23 | 356.54 | 414.62 | 483.43 | 578.15 | 739.89 | 1356.47 | 3365.25 | 4727.97 |                            |  |
| 345.0              | 86.64  | 353.63 | 408.44 | 472.98 | 571.11 | 723.17 | 1302.24 | 3304.66 | 4639.61 |                            |  |
| 360.0              | 73.27  | 329.31 | 389.10 | 453.95 | 540.70 | 679.67 | 1208.58 | 3058.93 | 4382.89 |                            |  |

## Intensity data(cd)

|                 |         |
|-----------------|---------|
| C/ $\gamma$ (°) | 180.0   |
| 0.0             | 4233.82 |
| 15.0            | 4138.75 |
| 30.0            | 4161.79 |
| 45.0            | 4203.19 |
| 60.0            | 4221.01 |
| 75.0            | 4219.05 |
| 90.0            | 4233.82 |
| 105.0           | 4248.64 |
| 120.0           | 4246.67 |
| 135.0           | 4264.67 |
| 150.0           | 4307.09 |
| 165.0           | 4331.07 |
| 180.0           | 4233.82 |
| 195.0           | 4138.75 |
| 210.0           | 4161.79 |
| 225.0           | 4203.19 |
| 240.0           | 4221.01 |
| 255.0           | 4219.05 |
| 270.0           | 4233.82 |
| 285.0           | 4248.64 |
| 300.0           | 4246.67 |
| 315.0           | 4264.67 |
| 330.0           | 4307.09 |
| 345.0           | 4331.07 |
| 360.0           | 4233.82 |