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LumCAT: LL4S-30K

Luminaire:

Report No:

Voltage(V): 120.05

Test No:

Current(A): 0.1132

LampCAT:

Power (W): 13.4210

Lamp flux(lm): 851.6

PF: 0.9876

Number of Lamps: 1

Ballast type:

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

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### Photometric Results

Lumens(lm): 851.63

Efficiency(%): 100.00%

Lumens(lm)/Power(W): 63.45

Central intensity(cd): 327.465

Maximum intensity(cd): 327.465

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=106.1

[C90/270]Total=106.2

Field angle(10%Imax): [C0/180]Total=158.1

[C90/270]Total=157.7

Maximum s/h(1/2): C0\_180=1.26 C90\_270=1.20

Maximum s/h(1/4): C0\_180=1.80 C90\_270=1.32

Up flux rate of lamp(%): 0.33%

Down flux rate of lamp(%): 99.67%

Up flux rate of LUM(%): 0.33%

Down flux rate of LUM(%): 99.67%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 80.167%

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

Date:  
Humidity(%): 58%

Operator: Zac

## 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                | 319.694       | .000        | .000      | .000%       | .000%      |
| 5.0                | 317.932       | 7.623       | 7.623     | .895%       | .895%      |
| 10.0               | 312.826       | 22.564      | 30.187    | 2.650%      | 3.545%     |
| 15.0               | 304.098       | 36.596      | 66.782    | 4.297%      | 7.842%     |
| 20.0               | 292.484       | 49.167      | 115.949   | 5.773%      | 13.615%    |
| 25.0               | 277.915       | 59.824      | 175.774   | 7.025%      | 20.640%    |
| 30.0               | 261.070       | 68.209      | 243.983   | 8.009%      | 28.649%    |
| 35.0               | 241.658       | 74.030      | 318.013   | 8.693%      | 37.342%    |
| 40.0               | 220.470       | 77.103      | 395.115   | 9.054%      | 46.395%    |
| 45.0               | 197.978       | 77.479      | 472.594   | 9.098%      | 55.493%    |
| 50.0               | 174.625       | 75.290      | 547.884   | 8.841%      | 64.334%    |
| 55.0               | 150.856       | 70.770      | 618.654   | 8.310%      | 72.644%    |
| 60.0               | 126.310       | 64.066      | 682.720   | 7.523%      | 80.167%    |
| 65.0               | 101.167       | 55.300      | 738.020   | 6.493%      | 86.660%    |
| 70.0               | 75.664        | 44.775      | 782.795   | 5.258%      | 91.918%    |
| 75.0               | 50.618        | 33.008      | 815.803   | 3.876%      | 95.794%    |
| 80.0               | 27.057        | 20.784      | 836.587   | 2.440%      | 98.234%    |
| 85.0               | 8.755         | 9.731       | 846.318   | 1.143%      | 99.377%    |
| 90.0               | .319          | 2.485       | 848.803   | .292%       | 99.669%    |
| 95.0               | .264          | .160        | 848.962   | .019%       | 99.687%    |
| 100.0              | .250          | .139        | 849.102   | .016%       | 99.704%    |
| 105.0              | .250          | .134        | 849.236   | .016%       | 99.719%    |
| 110.0              | .250          | .131        | 849.366   | .015%       | 99.735%    |
| 115.0              | .389          | .162        | 849.528   | .019%       | 99.754%    |
| 120.0              | .444          | .202        | 849.730   | .024%       | 99.777%    |
| 125.0              | .486          | .215        | 849.945   | .025%       | 99.803%    |
| 130.0              | .541          | .223        | 850.168   | .026%       | 99.829%    |
| 135.0              | .527          | .216        | 850.384   | .025%       | 99.854%    |
| 140.0              | .624          | .213        | 850.597   | .025%       | 99.879%    |
| 145.0              | .666          | .215        | 850.813   | .025%       | 99.905%    |
| 150.0              | .708          | .202        | 851.015   | .024%       | 99.928%    |
| 155.0              | .694          | .177        | 851.192   | .021%       | 99.949%    |
| 160.0              | .735          | .150        | 851.342   | .018%       | 99.967%    |
| 165.0              | .763          | .123        | 851.466   | .015%       | 99.981%    |
| 170.0              | .722          | .088        | 851.554   | .010%       | 99.992%    |
| 175.0              | .777          | .054        | 851.607   | .006%       | 99.998%    |
| 180.0              | .777          | .019        | 851.626   | .002%       | 100.000%   |

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

Date:  
Humidity(%): 58%

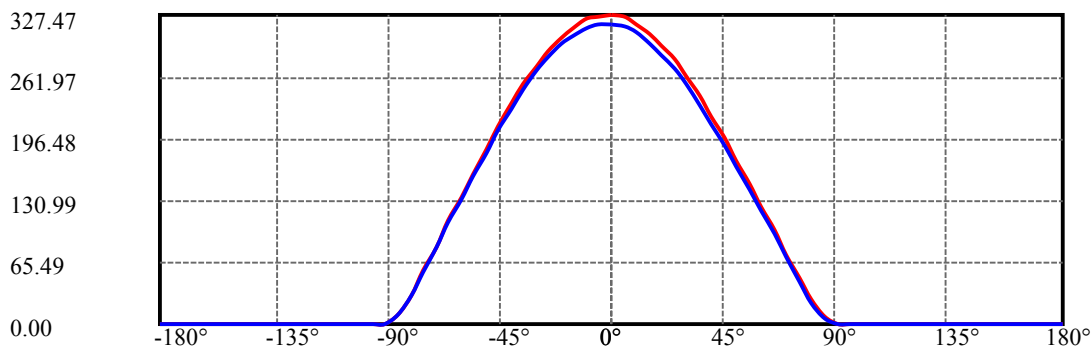
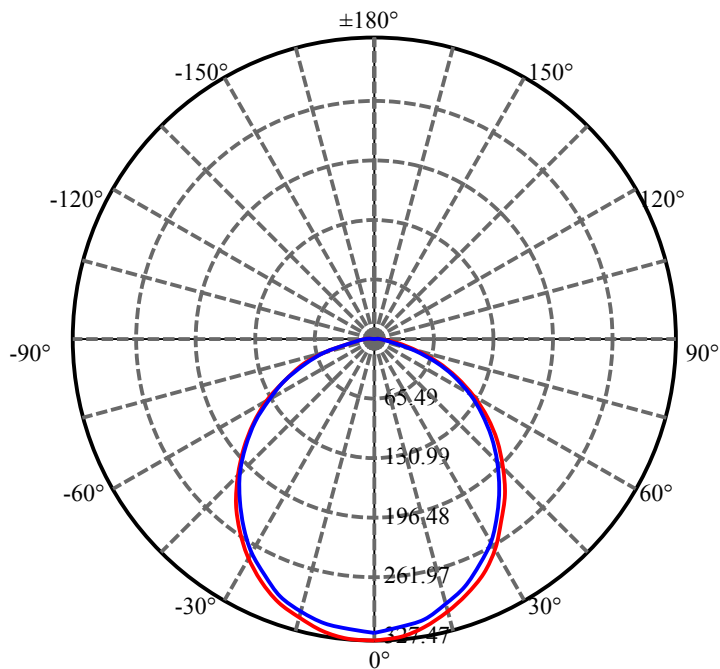
Operator: Zac

ZONAL LUMEN SUMMARY

| Zone    | Lumens | %Lamp   | %Fixt   |
|---------|--------|---------|---------|
| 0-30    | 243.98 | 28.65%  | 28.65%  |
| 0-40    | 395.12 | 46.40%  | 46.40%  |
| 0-60    | 682.72 | 80.17%  | 80.17%  |
| 0-90    | 848.80 | 99.67%  | 99.67%  |
| 0-120   | 849.73 | 99.78%  | 99.78%  |
| 0-180   | 851.63 | 100.00% | 100.00% |
| 60-90   | 230.15 | 27.02%  | 27.02%  |
| 90-120  | 3.41   | 0.40%   | 0.40%   |
| 90-130  | 3.85   | 0.45%   | 0.45%   |
| 90-150  | 4.70   | 0.55%   | 0.55%   |
| 90-180  | 5.29   | 0.62%   | 0.62%   |
| 0-59.89 | 681.30 | 80.00%  | 80.00%  |

ZONAL LUMEN SUMMARY

|         |        |
|---------|--------|
| 0-10    | 30.19  |
| 10-20   | 85.76  |
| 20-30   | 128.03 |
| 30-40   | 151.13 |
| 40-50   | 152.77 |
| 50-60   | 134.84 |
| 60-70   | 100.07 |
| 70-80   | 53.79  |
| 80-90   | 12.22  |
| 90-100  | 0.30   |
| 100-110 | 0.26   |
| 110-120 | 0.36   |
| 120-130 | 0.44   |
| 130-140 | 0.43   |
| 140-150 | 0.42   |
| 150-160 | 0.33   |
| 160-170 | 0.21   |
| 170-180 | 0.05   |

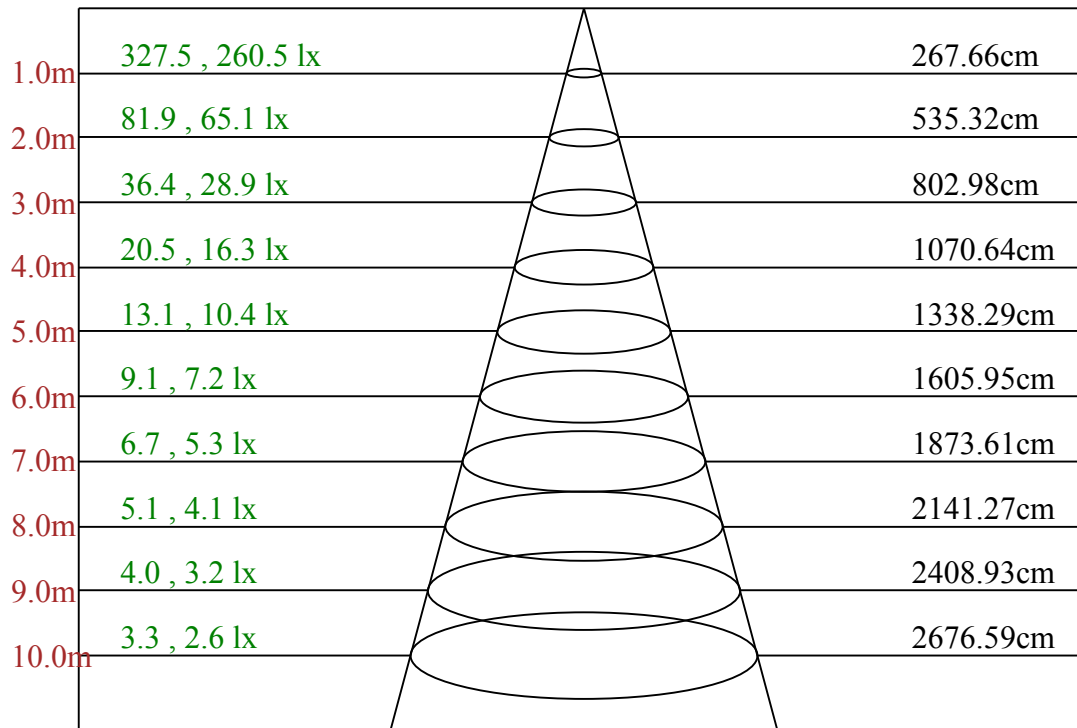


C0/C180: —

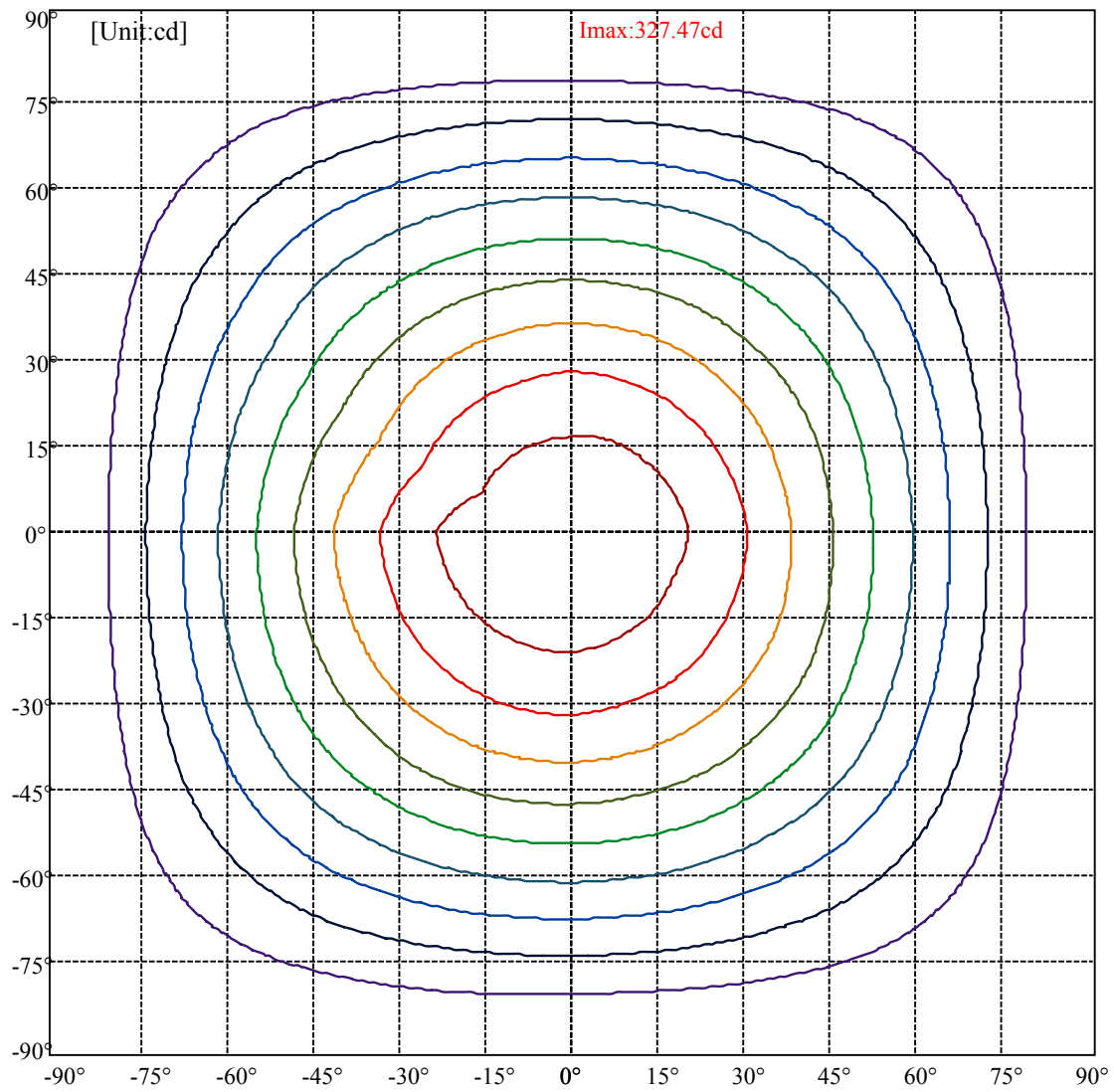
C90/C270: —

Field angle(10%Imax):C0/180Left:79.7 Right:78.4  
 :C90/270Left:79.8 Right:77.9

Beam Angle(50%Imax):C0/180Left:54.2 Right:51.9  
 :C90/270Left:54.7 Right:51.5



Max , Ave      Beam angle of C0plane106.41



|                   |   |
|-------------------|---|
| (10%Imax) 32.7199 | — |
| (20%Imax) 65.4397 | — |
| (30%Imax) 98.1596 | — |
| (40%Imax) 130.879 | — |
| (50%Imax) 163.599 | — |
| (60%Imax) 196.319 | — |
| (70%Imax) 229.039 | — |
| (80%Imax) 261.759 | — |
| (90%Imax) 294.479 | — |

## 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    | 327.47 | 325.02 | 317.92 | 307.04 | 295.05 | 280.84 | 263.08 | 241.77 | 220.01 |
| 22.5   | 322.80 | 319.47 | 313.92 | 304.15 | 290.61 | 275.29 | 257.31 | 236.66 | 214.68 |
| 45.0   | 320.36 | 317.92 | 310.59 | 300.82 | 287.95 | 271.52 | 254.20 | 233.56 | 212.02 |
| 67.5   | 318.81 | 315.48 | 309.04 | 299.49 | 287.28 | 270.63 | 252.43 | 233.11 | 210.91 |
| 90.0   | 318.14 | 314.81 | 308.82 | 297.72 | 285.28 | 270.41 | 253.31 | 232.67 | 211.35 |
| 112.5  | 317.47 | 313.48 | 307.71 | 297.94 | 284.84 | 269.52 | 251.76 | 232.89 | 210.69 |
| 135.0  | 316.59 | 314.14 | 307.71 | 298.38 | 285.51 | 270.63 | 252.65 | 233.33 | 211.80 |
| 157.5  | 315.92 | 314.14 | 308.37 | 299.05 | 286.17 | 271.96 | 253.76 | 234.00 | 213.13 |
| 180.0  | 327.47 | 326.13 | 322.58 | 314.14 | 303.49 | 289.72 | 273.29 | 253.76 | 233.33 |
| 202.5  | 322.80 | 322.80 | 318.36 | 311.04 | 301.05 | 286.39 | 270.41 | 251.76 | 230.00 |
| 225.0  | 320.36 | 320.14 | 317.25 | 309.04 | 298.38 | 284.40 | 268.41 | 249.98 | 229.34 |
| 247.5  | 318.81 | 318.58 | 314.59 | 307.93 | 297.05 | 283.51 | 267.97 | 249.32 | 228.67 |
| 270.0  | 318.14 | 316.59 | 313.03 | 305.71 | 296.38 | 282.62 | 267.74 | 248.65 | 228.00 |
| 292.5  | 317.47 | 316.14 | 312.15 | 305.26 | 294.61 | 281.07 | 264.64 | 247.10 | 225.78 |
| 315.0  | 316.59 | 316.14 | 313.03 | 304.60 | 293.28 | 279.29 | 263.75 | 244.43 | 224.45 |
| 337.5  | 315.92 | 315.92 | 310.15 | 303.27 | 292.83 | 278.85 | 262.42 | 243.55 | 223.34 |
| 360.0  | 327.47 | 325.02 | 317.92 | 307.04 | 295.05 | 280.84 | 263.08 | 241.77 | 220.01 |
| C/γ(°) | 45.0   | 50.0   | 55.0   | 60.0   | 65.0   | 70.0   | 75.0   | 80.0   | 85.0   |
| 0.0    | 196.48 | 172.95 | 149.19 | 124.99 | 99.02  | 73.93  | 48.18  | 25.53  | 7.33   |
| 22.5   | 192.93 | 169.17 | 145.64 | 121.44 | 96.57  | 71.27  | 46.18  | 23.31  | 7.10   |
| 45.0   | 189.38 | 165.84 | 143.20 | 118.55 | 93.91  | 69.71  | 45.07  | 22.65  | 6.44   |
| 67.5   | 188.49 | 165.62 | 142.97 | 118.78 | 93.91  | 69.49  | 45.29  | 21.54  | 6.22   |
| 90.0   | 188.93 | 165.84 | 143.20 | 119.22 | 95.02  | 70.60  | 45.73  | 21.76  | 6.22   |
| 112.5  | 188.71 | 165.84 | 143.42 | 119.66 | 94.80  | 70.16  | 46.40  | 22.87  | 6.66   |
| 135.0  | 189.82 | 166.73 | 143.20 | 120.11 | 95.46  | 70.82  | 47.29  | 24.42  | 7.77   |
| 157.5  | 191.60 | 168.73 | 145.86 | 121.66 | 97.68  | 73.04  | 48.18  | 25.53  | 8.66   |
| 180.0  | 210.24 | 185.16 | 159.63 | 135.20 | 109.01 | 82.14  | 56.39  | 31.30  | 11.10  |
| 202.5  | 207.36 | 183.38 | 159.63 | 134.09 | 108.12 | 81.48  | 55.73  | 31.75  | 11.32  |
| 225.0  | 206.25 | 184.05 | 158.52 | 132.98 | 107.45 | 81.48  | 55.95  | 31.30  | 12.21  |
| 247.5  | 206.91 | 182.94 | 158.29 | 132.76 | 107.68 | 81.03  | 55.50  | 32.64  | 10.43  |
| 270.0  | 205.58 | 181.60 | 157.41 | 132.98 | 107.45 | 80.81  | 55.73  | 30.86  | 9.77   |
| 292.5  | 202.70 | 179.83 | 156.30 | 131.21 | 105.46 | 80.15  | 53.95  | 29.97  | 9.32   |
| 315.0  | 201.36 | 178.94 | 153.85 | 128.77 | 104.12 | 77.93  | 52.39  | 29.31  | 9.99   |
| 337.5  | 200.92 | 177.39 | 153.41 | 128.54 | 103.01 | 76.59  | 51.95  | 28.20  | 9.55   |
| 360.0  | 196.48 | 172.95 | 149.19 | 124.99 | 99.02  | 73.93  | 48.18  | 25.53  | 7.33   |
| C/γ(°) | 90.0   | 95.0   | 100.0  | 105.0  | 110.0  | 115.0  | 120.0  | 125.0  | 130.0  |
| 0.0    | 0.22   | 0.44   | 0.22   | 0.22   | 0.22   | 0.22   | 0.44   | 0.67   | 0.44   |
| 22.5   | 0.44   | 0.22   | 0.44   | 0.22   | 0.44   | 0.67   | 0.44   | 0.67   | 0.67   |
| 45.0   | 0.44   | 0.67   | 0.44   | 0.22   | 0.44   | 0.67   | 0.67   | 0.44   | 0.89   |
| 67.5   | 0.44   | 0.67   | 0.44   | 0.44   | 0.44   | 0.67   | 0.89   | 0.67   | 0.67   |
| 90.0   | 0.67   | 0.67   | 0.44   | 0.44   | 0.67   | 0.44   | 0.67   | 0.67   | 0.67   |
| 112.5  | 0.44   | 0.44   | 0.44   | 0.44   | 0.44   | 0.44   | 0.89   | 0.67   | 0.89   |
| 135.0  | 0.22   | 0.67   | 0.22   | 0.44   | 0.44   | 0.67   | 0.67   | 0.67   | 0.67   |
| 157.5  | 0.67   | 0.44   | 0.67   | 0.67   | 0.44   | 0.67   | 0.89   | 0.67   | 0.67   |
| 180.0  | 0.22   | 0.00   | 0.00   | 0.00   | 0.00   | 0.22   | 0.00   | 0.44   | 0.22   |
| 202.5  | 0.22   | 0.00   | 0.00   | 0.00   | 0.22   | 0.22   | 0.22   | 0.22   | 0.22   |
| 225.0  | 0.44   | 0.00   | 0.22   | 0.22   | 0.00   | 0.22   | 0.44   | 0.44   | 0.44   |
| 247.5  | 0.22   | 0.00   | 0.22   | 0.22   | 0.00   | 0.22   | 0.22   | 0.22   | 0.67   |
| 270.0  | 0.00   | 0.00   | 0.22   | 0.00   | 0.00   | 0.44   | 0.00   | 0.44   | 0.44   |
| 292.5  | 0.00   | 0.00   | 0.00   | 0.22   | 0.00   | 0.22   | 0.22   | 0.44   | 0.44   |
| 315.0  | 0.22   | 0.00   | 0.00   | 0.22   | 0.00   | 0.00   | 0.22   | 0.22   | 0.44   |
| 337.5  | 0.22   | 0.00   | 0.00   | 0.00   | 0.22   | 0.22   | 0.22   | 0.22   | 0.22   |
| 360.0  | 0.22   | 0.44   | 0.22   | 0.22   | 0.22   | 0.22   | 0.44   | 0.67   | 0.44   |

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**Intensity data(cd)**

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| <b>C/γ(°)</b> | <b>135.0</b> | <b>140.0</b> | <b>145.0</b> | <b>150.0</b> | <b>155.0</b> | <b>160.0</b> | <b>165.0</b> | <b>170.0</b> | <b>175.0</b> |
|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>0.0</b>    | <b>0.44</b>  | <b>0.67</b>  | <b>0.44</b>  | <b>0.67</b>  | <b>0.44</b>  | <b>0.67</b>  | <b>0.67</b>  | <b>0.44</b>  | <b>0.67</b>  |
| <b>22.5</b>   | <b>0.89</b>  | <b>0.67</b>  | <b>0.67</b>  | <b>0.67</b>  | <b>0.89</b>  | <b>0.89</b>  | <b>0.67</b>  | <b>0.67</b>  | <b>0.89</b>  |
| <b>45.0</b>   | <b>0.67</b>  | <b>0.67</b>  | <b>0.67</b>  | <b>0.67</b>  | <b>0.89</b>  | <b>0.67</b>  | <b>0.89</b>  | <b>0.89</b>  | <b>0.89</b>  |
| <b>67.5</b>   | <b>0.67</b>  | <b>0.89</b>  | <b>0.89</b>  | <b>0.89</b>  | <b>0.67</b>  | <b>0.89</b>  | <b>0.89</b>  | <b>0.89</b>  | <b>0.67</b>  |
| <b>90.0</b>   | <b>0.67</b>  | <b>0.89</b>  | <b>0.67</b>  | <b>0.89</b>  | <b>0.67</b>  | <b>0.67</b>  | <b>0.67</b>  | <b>0.67</b>  | <b>0.89</b>  |
| <b>112.5</b>  | <b>0.67</b>  | <b>0.89</b>  | <b>0.89</b>  | <b>0.89</b>  | <b>0.67</b>  | <b>0.89</b>  | <b>0.89</b>  | <b>0.89</b>  | <b>0.67</b>  |
| <b>135.0</b>  | <b>0.67</b>  | <b>1.11</b>  | <b>0.89</b>  | <b>0.67</b>  | <b>0.89</b>  | <b>0.89</b>  | <b>0.67</b>  | <b>0.67</b>  | <b>0.67</b>  |
| <b>157.5</b>  | <b>0.89</b>  | <b>0.67</b>  | <b>0.89</b>  | <b>0.89</b>  | <b>0.89</b>  | <b>0.89</b>  | <b>0.89</b>  | <b>0.89</b>  | <b>0.89</b>  |
| <b>180.0</b>  | <b>0.22</b>  | <b>0.22</b>  | <b>0.44</b>  | <b>0.67</b>  | <b>0.44</b>  | <b>0.44</b>  | <b>0.44</b>  | <b>0.67</b>  | <b>0.67</b>  |
| <b>202.5</b>  | <b>0.22</b>  | <b>0.44</b>  | <b>0.67</b>  | <b>0.44</b>  | <b>0.67</b>  | <b>0.67</b>  | <b>0.89</b>  | <b>0.44</b>  | <b>0.89</b>  |
| <b>225.0</b>  | <b>0.44</b>  | <b>0.67</b>  | <b>0.67</b>  | <b>0.44</b>  | <b>0.67</b>  | <b>0.44</b>  | <b>0.89</b>  | <b>0.89</b>  | <b>0.89</b>  |
| <b>247.5</b>  | <b>0.22</b>  | <b>0.44</b>  | <b>0.44</b>  | <b>0.89</b>  | <b>0.67</b>  | <b>0.67</b>  | <b>0.89</b>  | <b>0.67</b>  | <b>0.67</b>  |
| <b>270.0</b>  | <b>0.44</b>  | <b>0.44</b>  | <b>0.67</b>  | <b>0.67</b>  | <b>0.89</b>  | <b>0.89</b>  | <b>0.67</b>  | <b>0.89</b>  | <b>0.89</b>  |
| <b>292.5</b>  | <b>0.44</b>  | <b>0.44</b>  | <b>0.44</b>  | <b>0.67</b>  | <b>0.67</b>  | <b>0.67</b>  | <b>0.67</b>  | <b>0.67</b>  | <b>0.89</b>  |
| <b>315.0</b>  | <b>0.44</b>  | <b>0.44</b>  | <b>0.67</b>  | <b>0.67</b>  | <b>0.44</b>  | <b>0.89</b>  | <b>0.67</b>  | <b>0.67</b>  | <b>0.67</b>  |
| <b>337.5</b>  | <b>0.44</b>  | <b>0.44</b>  | <b>0.67</b>  | <b>0.67</b>  | <b>0.67</b>  | <b>0.67</b>  | <b>0.89</b>  | <b>0.67</b>  | <b>0.67</b>  |
| <b>360.0</b>  | <b>0.44</b>  | <b>0.67</b>  | <b>0.44</b>  | <b>0.67</b>  | <b>0.44</b>  | <b>0.67</b>  | <b>0.67</b>  | <b>0.44</b>  | <b>0.67</b>  |
| <b>C/γ(°)</b> | <b>180.0</b> |              |              |              |              |              |              |              |              |
| <b>0.0</b>    | <b>0.44</b>  |              |              |              |              |              |              |              |              |
| <b>22.5</b>   | <b>0.67</b>  |              |              |              |              |              |              |              |              |
| <b>45.0</b>   | <b>0.89</b>  |              |              |              |              |              |              |              |              |
| <b>67.5</b>   | <b>0.89</b>  |              |              |              |              |              |              |              |              |
| <b>90.0</b>   | <b>0.89</b>  |              |              |              |              |              |              |              |              |
| <b>112.5</b>  | <b>0.67</b>  |              |              |              |              |              |              |              |              |
| <b>135.0</b>  | <b>0.89</b>  |              |              |              |              |              |              |              |              |
| <b>157.5</b>  | <b>0.89</b>  |              |              |              |              |              |              |              |              |
| <b>180.0</b>  | <b>0.44</b>  |              |              |              |              |              |              |              |              |
| <b>202.5</b>  | <b>0.67</b>  |              |              |              |              |              |              |              |              |
| <b>225.0</b>  | <b>0.89</b>  |              |              |              |              |              |              |              |              |
| <b>247.5</b>  | <b>0.89</b>  |              |              |              |              |              |              |              |              |
| <b>270.0</b>  | <b>0.89</b>  |              |              |              |              |              |              |              |              |
| <b>292.5</b>  | <b>0.67</b>  |              |              |              |              |              |              |              |              |
| <b>315.0</b>  | <b>0.89</b>  |              |              |              |              |              |              |              |              |
| <b>337.5</b>  | <b>0.89</b>  |              |              |              |              |              |              |              |              |
| <b>360.0</b>  | <b>0.44</b>  |              |              |              |              |              |              |              |              |