



Shenzhen Belling Efficiency Testing Lab Co.,Ltd
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| | | | | |
|-----------------|---|--------------|---|----------|
| Report No | : | Voltage | : | 120.01 V |
| Test No | : | Current | : | 0.1263 A |
| LumCAT | : | Power | : | 14.907 W |
| Luminaire | : | PF | : | 0.9836 |
| LampCAT | : | Ballast type | : | |
| Lamp flux | : | Width | : | 0 mm |
| Number of Lamps | : | Length | : | 0 mm |
| Phm Type | : | Height | : | 0 mm |

Photometric Results

| | | | | | |
|--------------------------------------|---|--|----------------------------|---|-------------|
| Lumens(lm) | : | 1383.12 | Central intensity(cd) | : | 4287.109 |
| Efficiency(%) | : | 100.00% | Maximum intensity(cd) | : | 4287.109 |
| Luminous Efficacy(lm/W) | : | 92.78 | Angle of maximum intensity | : | C=0.0 γ=0.0 |
| Beam Angle(50%Imax) | : | [C0/180]Total=32.8 [C90/270]Total=33.4 | | | |
| Field angle(10%Imax) | : | [C0/180]Total=50.2 [C90/270]Total=50.9 | | | |
| Maximum s/h(1/2) | : | C0_180=0.57 C90_270=0.54 | | | |
| Maximum s/h(1/4) | : | C0_180=0.53 C90_270=0.50 | | | |
| Up flux rate of lamp(%) | : | 0.05% | | | |
| Down flux rate of lamp(%) | : | 99.95% | | | |
| Up flux rate of LUM(%) | : | 0.05% | | | |
| Down flux rate of LUM(%) | : | 99.95% | | | |
| CIE Type | : | Direct lighting | | | |
| Output flux ratio in π solid angle : | : | 99.047% | | | |

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 | 4287.109 | 0.000 | 0 | 0.00% | 0.00% |
| 5.0 | 4034.608 | 99.484 | 99.484 | 7.19% | 7.19% |
| 10.0 | 3464.664 | 268.273 | 367.756 | 19.40% | 26.59% |
| 15.0 | 2505.422 | 354.141 | 721.898 | 25.60% | 52.19% |
| 20.0 | 1311.598 | 314.576 | 1036.474 | 22.74% | 74.94% |
| 25.0 | 447.689 | 184.517 | 1220.991 | 13.34% | 88.28% |
| 30.0 | 127.861 | 72.836 | 1293.827 | 5.27% | 93.54% |
| 35.0 | 57.841 | 27.346 | 1321.173 | 1.98% | 95.52% |
| 40.0 | 34.594 | 15.422 | 1336.595 | 1.12% | 96.64% |
| 45.0 | 25.366 | 11.102 | 1347.697 | 0.80% | 97.44% |
| 50.0 | 18.753 | 8.915 | 1356.612 | 0.64% | 98.08% |
| 55.0 | 14.795 | 7.294 | 1363.906 | 0.53% | 98.61% |
| 60.0 | 11.295 | 6.031 | 1369.937 | 0.44% | 99.05% |
| 65.0 | 8.156 | 4.728 | 1374.665 | 0.34% | 99.39% |
| 70.0 | 5.594 | 3.481 | 1378.147 | 0.25% | 99.64% |
| 75.0 | 3.514 | 2.381 | 1380.527 | 0.17% | 99.81% |
| 80.0 | 1.650 | 1.382 | 1381.909 | 0.10% | 99.91% |
| 85.0 | 0.201 | 0.503 | 1382.412 | 0.04% | 99.95% |
| 90.0 | 0.000 | 0.055 | 1382.467 | 0.00% | 99.95% |
| 95.0 | 0.000 | 0.000 | 1382.467 | 0.00% | 99.95% |
| 100.0 | 0.000 | 0.000 | 1382.467 | 0.00% | 99.95% |
| 105.0 | 0.000 | 0.000 | 1382.467 | 0.00% | 99.95% |
| 110.0 | 0.000 | 0.000 | 1382.467 | 0.00% | 99.95% |
| 115.0 | 0.000 | 0.000 | 1382.467 | 0.00% | 99.95% |
| 120.0 | 0.000 | 0.000 | 1382.467 | 0.00% | 99.95% |
| 125.0 | 0.000 | 0.000 | 1382.467 | 0.00% | 99.95% |
| 130.0 | 0.000 | 0.000 | 1382.467 | 0.00% | 99.95% |
| 135.0 | 0.000 | 0.000 | 1382.467 | 0.00% | 99.95% |
| 140.0 | 0.000 | 0.000 | 1382.467 | 0.00% | 99.95% |
| 145.0 | 0.027 | 0.004 | 1382.472 | 0.00% | 99.95% |
| 150.0 | 0.134 | 0.024 | 1382.496 | 0.00% | 99.95% |
| 155.0 | 0.416 | 0.070 | 1382.565 | 0.01% | 99.96% |
| 160.0 | 0.845 | 0.132 | 1382.697 | 0.01% | 99.97% |
| 165.0 | 1.087 | 0.159 | 1382.857 | 0.01% | 99.98% |
| 170.0 | 1.247 | 0.138 | 1382.995 | 0.01% | 99.99% |
| 175.0 | 1.341 | 0.093 | 1383.088 | 0.01% | 100.00% |
| 180.0 | 1.490 | 0.034 | 1383.121 | 0.00% | 100.00% |

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

Date:
Humidity(%): 59%

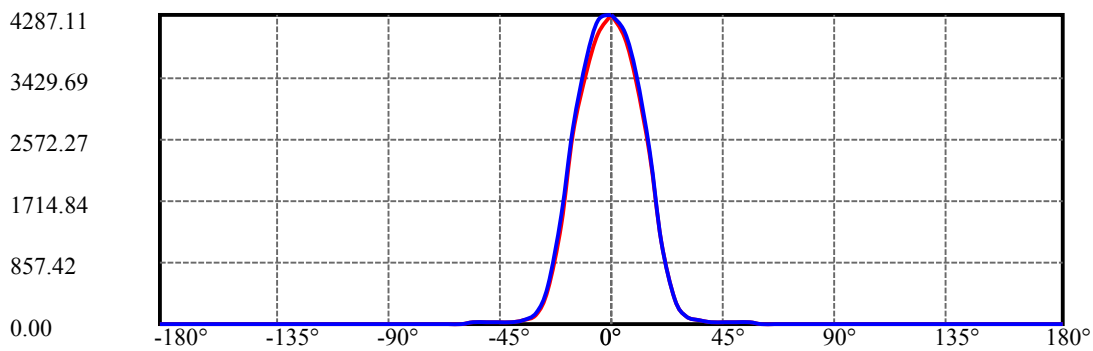
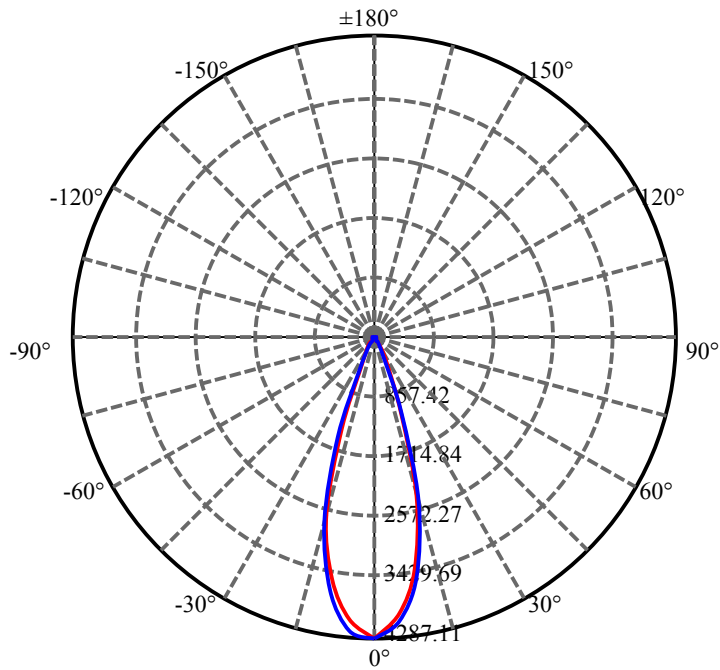
Operator: jarvis

ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|---------|---------|
| 0-30 | 1293.83 | 93.54% | 93.54% |
| 0-40 | 1336.60 | 96.64% | 96.64% |
| 0-60 | 1369.94 | 99.05% | 99.05% |
| 0-90 | 1382.47 | 99.95% | 99.95% |
| 0-120 | 1382.47 | 99.95% | 99.95% |
| 0-180 | 1383.12 | 100.00% | 100.00% |
| 60-90 | 12.53 | 0.91% | 0.91% |
| 90-120 | 0.00 | 0.00% | 0.00% |
| 90-130 | 0.00 | 0.00% | 0.00% |
| 90-150 | 0.03 | 0.00% | 0.00% |
| 90-180 | 0.62 | 0.04% | 0.04% |
| 0-21.90 | 1106.50 | 80.00% | 80.00% |

ZONAL LUMEN SUMMARY

| | |
|---------|--------|
| 0-10 | 367.76 |
| 10-20 | 668.72 |
| 20-30 | 257.35 |
| 30-40 | 42.77 |
| 40-50 | 20.02 |
| 50-60 | 13.33 |
| 60-70 | 8.21 |
| 70-80 | 3.76 |
| 80-90 | 0.56 |
| 90-100 | 0.00 |
| 100-110 | 0.00 |
| 110-120 | 0.00 |
| 120-130 | 0.00 |
| 130-140 | 0.00 |
| 140-150 | 0.03 |
| 150-160 | 0.20 |
| 160-170 | 0.30 |
| 170-180 | 0.09 |



C0/C180: —

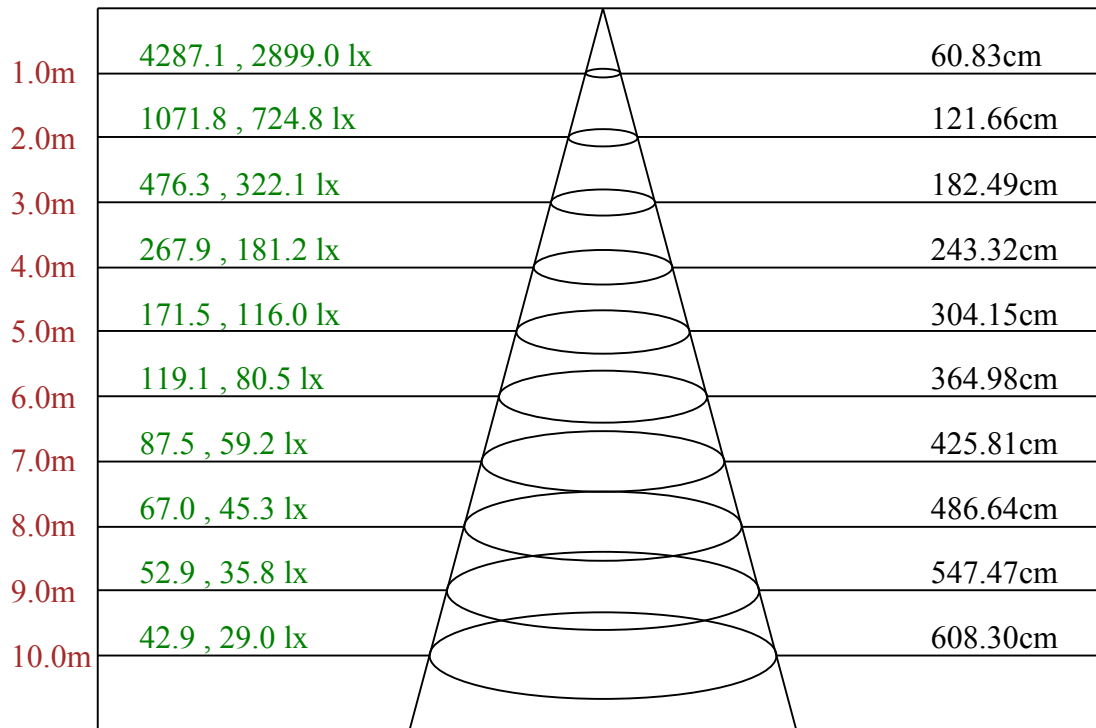
C90/C270: —

Field angle(10%Imax):C0/180Left:25.7 Right:24.5

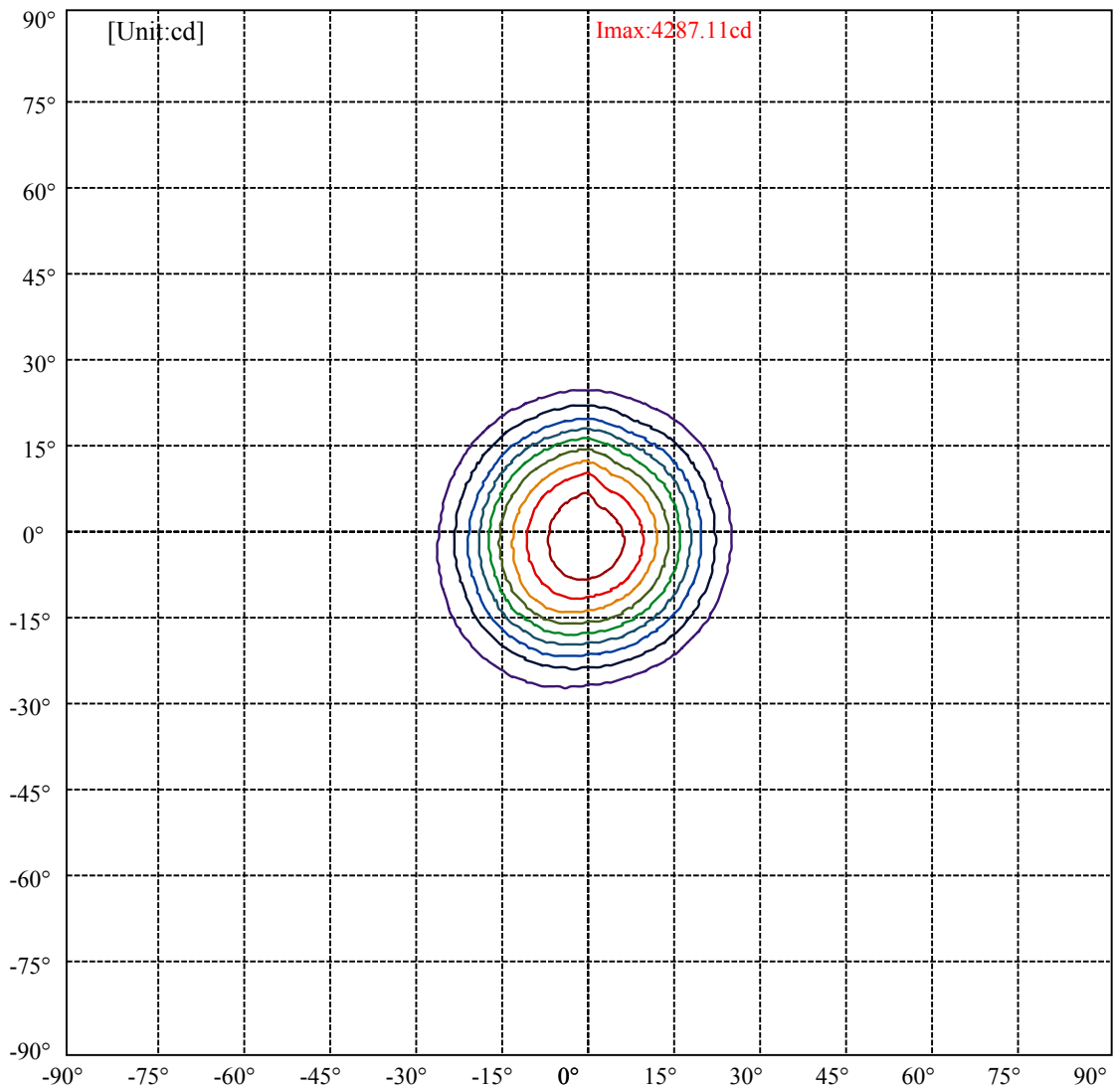
:C90/270Left:26.4 Right:24.5

Beam Angle(50%Imax):C0/180Left:17.0 Right:15.8

:C90/270Left:17.4 Right:16.0



Max , Ave Beam angle of C0 plane 33.83



| | |
|-------------------|---|
| (10%Imax) 428.711 | — |
| (20%Imax) 857.422 | — |
| (30%Imax) 1286.13 | — |
| (40%Imax) 1714.84 | — |
| (50%Imax) 2143.55 | — |
| (60%Imax) 2572.27 | — |
| (70%Imax) 3000.98 | — |
| (80%Imax) 3429.69 | — |
| (90%Imax) 3858.4 | — |

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 | 4287.11 | 3959.79 | 3354.12 | 2341.10 | 1152.31 | 356.27 | 99.16 | 51.51 | 30.69 |
| 22.5 | 4287.11 | 3884.67 | 3275.35 | 2236.58 | 1101.23 | 334.17 | 91.64 | 50.44 | 30.69 |
| 45.0 | 4287.11 | 3851.40 | 3229.85 | 2153.31 | 1019.89 | 323.65 | 89.93 | 52.80 | 29.83 |
| 67.5 | 4287.11 | 3829.94 | 3148.08 | 2093.21 | 956.57 | 283.30 | 84.35 | 51.08 | 30.05 |
| 90.0 | 4287.11 | 4049.93 | 3457.57 | 2401.63 | 1143.94 | 340.82 | 102.16 | 55.80 | 33.27 |
| 112.5 | 4287.11 | 4026.32 | 3395.33 | 2341.53 | 1126.77 | 335.24 | 97.01 | 53.44 | 33.05 |
| 135.0 | 4287.11 | 4009.15 | 3393.18 | 2408.06 | 1167.55 | 362.93 | 105.59 | 54.30 | 32.62 |
| 157.5 | 4287.11 | 4017.73 | 3440.40 | 2472.45 | 1244.81 | 426.88 | 119.12 | 58.59 | 33.27 |
| 180.0 | 4287.11 | 4032.33 | 3501.14 | 2627.84 | 1388.39 | 474.53 | 136.93 | 60.09 | 33.91 |
| 202.5 | 4287.11 | 4068.81 | 3611.45 | 2786.66 | 1563.74 | 584.20 | 175.35 | 66.10 | 35.63 |
| 225.0 | 4287.11 | 4131.91 | 3695.16 | 2987.76 | 1751.75 | 705.68 | 220.20 | 73.40 | 41.64 |
| 247.5 | 4287.11 | 4165.82 | 3743.02 | 2978.96 | 1794.24 | 728.21 | 209.47 | 68.89 | 43.14 |
| 270.0 | 4287.11 | 4195.87 | 3664.68 | 2721.63 | 1513.52 | 538.70 | 151.31 | 61.60 | 39.49 |
| 292.5 | 4287.11 | 4156.38 | 3585.27 | 2602.94 | 1441.83 | 491.06 | 130.92 | 57.09 | 37.99 |
| 315.0 | 4287.11 | 4106.59 | 3515.30 | 2519.67 | 1343.32 | 455.21 | 124.48 | 56.88 | 34.98 |
| 337.5 | 4287.11 | 4067.10 | 3424.73 | 2413.43 | 1275.72 | 422.16 | 108.17 | 53.44 | 33.27 |
| 360.0 | 4287.11 | 3959.79 | 3354.12 | 2341.10 | 1152.31 | 356.27 | 99.16 | 51.51 | 30.69 |
| C/ γ (°) | 45.0 | 50.0 | 55.0 | 60.0 | 65.0 | 70.0 | 75.0 | 80.0 | 85.0 |
| 0.0 | 23.39 | 18.03 | 14.59 | 11.16 | 8.16 | 5.58 | 3.43 | 1.50 | 0.00 |
| 22.5 | 23.39 | 17.38 | 13.95 | 10.73 | 7.73 | 5.15 | 3.22 | 1.29 | 0.00 |
| 45.0 | 23.39 | 16.96 | 13.52 | 10.09 | 7.30 | 5.15 | 3.01 | 1.29 | 0.00 |
| 67.5 | 22.75 | 16.53 | 13.31 | 9.87 | 7.08 | 4.72 | 2.79 | 1.07 | 0.00 |
| 90.0 | 25.33 | 18.03 | 14.38 | 10.95 | 7.73 | 4.94 | 3.22 | 1.29 | 0.00 |
| 112.5 | 25.11 | 18.03 | 14.38 | 10.30 | 7.51 | 4.94 | 3.01 | 1.29 | 0.00 |
| 135.0 | 24.90 | 18.24 | 14.17 | 10.73 | 7.51 | 5.15 | 3.01 | 1.07 | 0.00 |
| 157.5 | 25.11 | 18.24 | 14.59 | 10.95 | 7.73 | 5.15 | 3.01 | 1.29 | 0.00 |
| 180.0 | 24.90 | 18.67 | 14.59 | 10.95 | 7.94 | 5.15 | 3.22 | 1.29 | 0.00 |
| 202.5 | 26.18 | 19.32 | 15.24 | 11.59 | 8.16 | 5.58 | 3.43 | 1.50 | 0.00 |
| 225.0 | 27.26 | 20.39 | 15.45 | 12.02 | 8.59 | 5.80 | 3.65 | 1.93 | 0.22 |
| 247.5 | 28.33 | 21.03 | 15.67 | 12.45 | 9.01 | 6.22 | 3.86 | 1.72 | 0.43 |
| 270.0 | 27.90 | 20.82 | 16.31 | 12.66 | 9.44 | 6.87 | 4.72 | 2.79 | 0.86 |
| 292.5 | 27.26 | 20.18 | 15.88 | 12.45 | 9.23 | 6.65 | 4.51 | 2.79 | 0.64 |
| 315.0 | 25.97 | 19.53 | 15.67 | 12.02 | 9.01 | 6.44 | 4.29 | 2.36 | 0.64 |
| 337.5 | 24.68 | 18.67 | 15.02 | 11.80 | 8.37 | 6.01 | 3.86 | 1.93 | 0.43 |
| 360.0 | 23.39 | 18.03 | 14.59 | 11.16 | 8.16 | 5.58 | 3.43 | 1.50 | 0.00 |
| 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 | 0.00 |
| 45.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 90.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 112.5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 135.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 157.5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 180.0 | 0.00 | 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 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 292.5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 315.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 337.5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 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)

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| C/γ(°) | 135.0 | 140.0 | 145.0 | 150.0 | 155.0 | 160.0 | 165.0 | 170.0 | 175.0 |
|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 0.0 | 0.00 | 0.00 | 0.00 | 0.22 | 0.43 | 1.07 | 1.07 | 1.07 | 1.29 |
| 22.5 | 0.00 | 0.00 | 0.00 | 0.22 | 0.43 | 0.86 | 1.07 | 1.29 | 1.29 |
| 45.0 | 0.00 | 0.00 | 0.00 | 0.22 | 0.64 | 1.07 | 1.29 | 1.07 | 1.29 |
| 67.5 | 0.00 | 0.00 | 0.00 | 0.43 | 0.43 | 0.86 | 1.29 | 1.07 | 1.29 |
| 90.0 | 0.00 | 0.00 | 0.00 | 0.22 | 0.43 | 1.07 | 1.07 | 1.50 | 1.50 |
| 112.5 | 0.00 | 0.00 | 0.00 | 0.22 | 0.43 | 0.64 | 1.07 | 1.29 | 1.50 |
| 135.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.43 | 0.86 | 1.29 | 1.29 | 1.50 |
| 157.5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.43 | 0.86 | 1.07 | 1.50 | 1.29 |
| 180.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.43 | 0.86 | 0.86 | 0.86 |
| 202.5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.22 | 0.64 | 0.64 | 1.07 | 1.07 |
| 225.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.22 | 0.64 | 1.07 | 0.86 | 1.29 |
| 247.5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.22 | 0.43 | 0.86 | 1.07 | 1.29 |
| 270.0 | 0.00 | 0.00 | 0.43 | 0.43 | 0.86 | 1.07 | 1.29 | 1.93 | 1.72 |
| 292.5 | 0.00 | 0.00 | 0.00 | 0.22 | 0.43 | 1.07 | 1.07 | 1.29 | 1.29 |
| 315.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.64 | 1.07 | 1.07 | 1.50 | 1.50 |
| 337.5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.43 | 0.86 | 1.29 | 1.29 | 1.50 |
| 360.0 | 0.00 | 0.00 | 0.00 | 0.22 | 0.43 | 1.07 | 1.07 | 1.07 | 1.29 |

| C/γ(°) | 180.0 |
|---------------|--------------|
| 0.0 | 1.49 |
| 22.5 | 1.49 |
| 45.0 | 1.49 |
| 67.5 | 1.49 |
| 90.0 | 1.49 |
| 112.5 | 1.49 |
| 135.0 | 1.49 |
| 157.5 | 1.49 |
| 180.0 | 1.49 |
| 202.5 | 1.49 |
| 225.0 | 1.49 |
| 247.5 | 1.49 |
| 270.0 | 1.49 |
| 292.5 | 1.49 |
| 315.0 | 1.49 |
| 337.5 | 1.49 |
| 360.0 | 1.49 |