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## Nata

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Client: NT

LumCAT: 1-1824-LM

Luminaire: 92.70.458.00

Report No: 20251224-B007

Ballast type: DC

Test No: 20251224-C007

LampCAT: PHILIPS SLM 1202

Lamp flux(lm): 856.3

Number of Lamps: 1

Length(mm): 35

Phm Type: C

Voltage(V): 33.940

Current(A): 0.146

Power (W): 4.955

PF: 0.000

Width(mm): 35

Height(mm): 15

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## Photometric Results

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Lumens(lm): 813.86, Efficiency(%): 95.04% , Luminous Efficacy(lm/W): 164.25

Central intensity(cd): 890.701, Maximum intensity(cd): 890.701

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

Beam Angle(50%Imax): [C0/180]Total=58.2

[C90/270]Total=58.2

Field angle(10%Imax): [C0/180]Total=87.6

[C90/270]Total=87.6

Maximum s/h(1/2): C0\_180=0.88 C90\_270=0.88

Maximum s/h(1/4): C0\_180=0.89 C90\_270=0.89

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 95.04%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 98.731%

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0                | 890.701       | 0.000       | 0         | 0.00%       | 0.00%      |
| 1.0                | 889.700       | 0.852       | 0.852     | 0.10%       | 0.10%      |
| 2.0                | 887.978       | 2.551       | 3.403     | 0.30%       | 0.42%      |
| 3.0                | 886.912       | 4.245       | 7.648     | 0.50%       | 0.94%      |
| 4.0                | 885.437       | 5.933       | 13.581    | 0.69%       | 1.67%      |
| 5.0                | 883.715       | 7.611       | 21.192    | 0.89%       | 2.60%      |
| 6.0                | 881.110       | 9.275       | 30.466    | 1.08%       | 3.74%      |
| 7.0                | 876.997       | 10.913      | 41.379    | 1.27%       | 5.08%      |
| 8.0                | 871.992       | 12.517      | 53.896    | 1.46%       | 6.62%      |
| 9.0                | 862.949       | 14.061      | 67.957    | 1.64%       | 8.35%      |
| 10.0               | 853.143       | 15.530      | 83.487    | 1.81%       | 10.26%     |
| 11.0               | 839.891       | 16.917      | 100.404   | 1.98%       | 12.34%     |
| 12.0               | 824.336       | 18.192      | 118.596   | 2.12%       | 14.57%     |
| 13.0               | 809.158       | 19.385      | 137.982   | 2.26%       | 16.95%     |
| 14.0               | 789.846       | 20.467      | 158.449   | 2.39%       | 19.47%     |
| 15.0               | 769.737       | 21.411      | 179.859   | 2.50%       | 22.10%     |
| 16.0               | 750.113       | 22.270      | 202.129   | 2.60%       | 24.84%     |
| 17.0               | 728.002       | 23.018      | 225.148   | 2.69%       | 27.66%     |
| 18.0               | 708.076       | 23.678      | 248.825   | 2.77%       | 30.57%     |
| 19.0               | 686.730       | 24.267      | 273.092   | 2.83%       | 33.56%     |
| 20.0               | 664.769       | 24.736      | 297.828   | 2.89%       | 36.59%     |
| 21.0               | 644.176       | 25.134      | 322.963   | 2.94%       | 39.68%     |
| 22.0               | 622.238       | 25.449      | 348.412   | 2.97%       | 42.81%     |
| 23.0               | 597.608       | 25.596      | 374.008   | 2.99%       | 45.95%     |
| 24.0               | 575.648       | 25.652      | 399.659   | 3.00%       | 49.11%     |
| 25.0               | 549.705       | 25.588      | 425.247   | 2.99%       | 52.25%     |
| 26.0               | 525.290       | 25.375      | 450.623   | 2.96%       | 55.37%     |
| 27.0               | 500.811       | 25.104      | 475.726   | 2.93%       | 58.45%     |
| 28.0               | 472.187       | 24.634      | 500.361   | 2.88%       | 61.48%     |
| 29.0               | 448.020       | 24.075      | 524.436   | 2.81%       | 64.44%     |
| 30.0               | 423.982       | 23.544      | 547.98    | 2.75%       | 67.33%     |
| 31.0               | 397.673       | 22.865      | 570.845   | 2.67%       | 70.14%     |
| 32.0               | 373.980       | 22.107      | 592.952   | 2.58%       | 72.86%     |
| 33.0               | 350.437       | 21.342      | 614.294   | 2.49%       | 75.48%     |
| 34.0               | 328.294       | 20.540      | 634.834   | 2.40%       | 78.00%     |
| 35.0               | 305.979       | 19.698      | 654.532   | 2.30%       | 80.42%     |
| 36.0               | 281.004       | 18.690      | 673.222   | 2.18%       | 82.72%     |
| 37.0               | 258.538       | 17.597      | 690.819   | 2.05%       | 84.88%     |

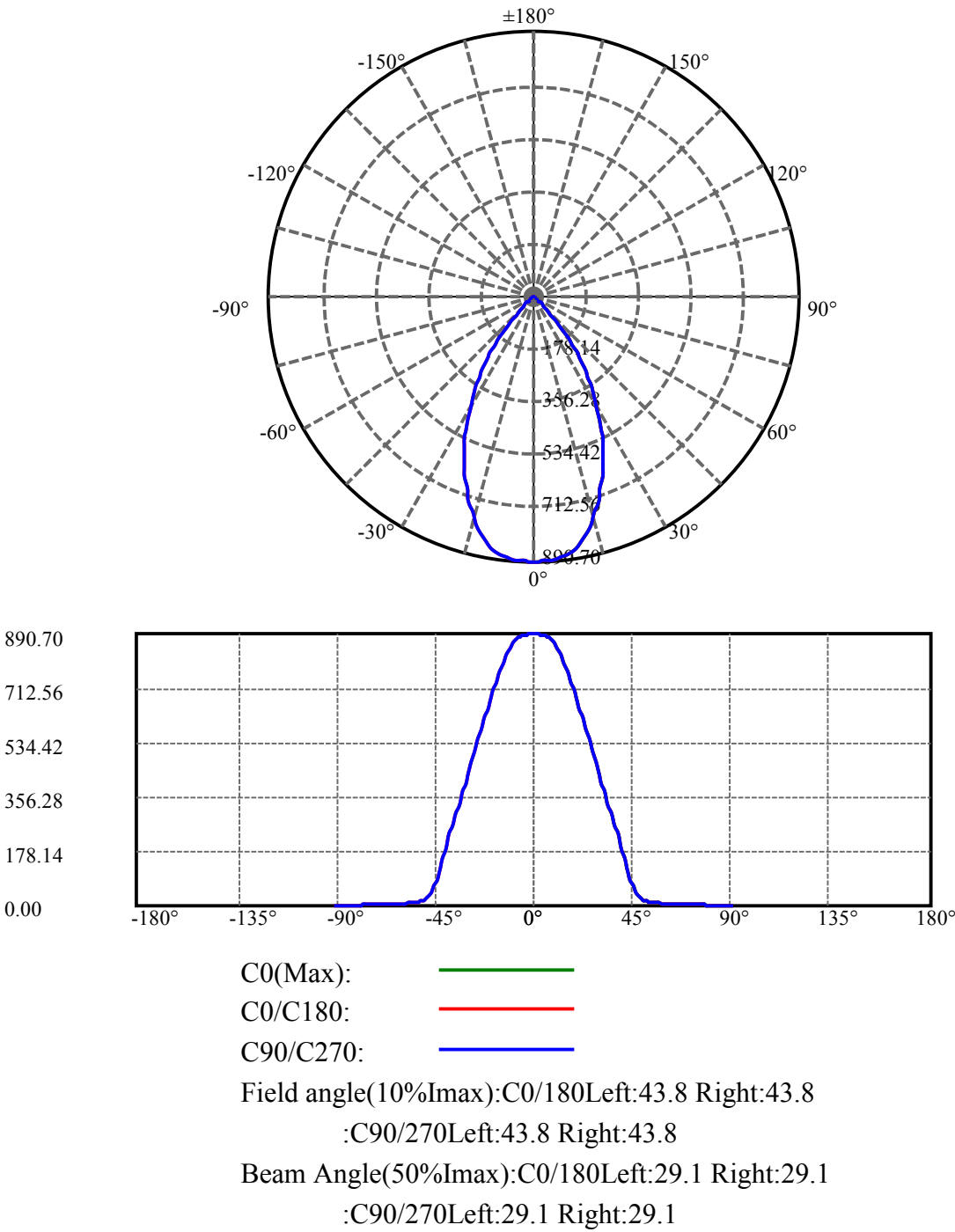
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0               | 235.566       | 16.493      | 707.311   | 1.93%       | 86.91%     |
| 39.0               | 208.633       | 15.162      | 722.473   | 1.77%       | 88.77%     |
| 40.0               | 182.270       | 13.633      | 736.106   | 1.59%       | 90.45%     |
| 41.0               | 154.561       | 11.994      | 748.101   | 1.40%       | 91.92%     |
| 42.0               | 129.005       | 10.302      | 758.403   | 1.20%       | 93.19%     |
| 43.0               | 105.893       | 8.701       | 767.104   | 1.02%       | 94.25%     |
| 44.0               | 83.621        | 7.153       | 774.257   | 0.84%       | 95.13%     |
| 45.0               | 64.277        | 5.684       | 779.941   | 0.66%       | 95.83%     |
| 46.0               | 50.121        | 4.474       | 784.415   | 0.52%       | 96.38%     |
| 47.0               | 37.311        | 3.477       | 787.892   | 0.41%       | 96.81%     |
| 48.0               | 28.634        | 2.666       | 790.558   | 0.31%       | 97.14%     |
| 49.0               | 21.777        | 2.070       | 792.628   | 0.24%       | 97.39%     |
| 50.0               | 17.159        | 1.623       | 794.252   | 0.19%       | 97.59%     |
| 51.0               | 14.672        | 1.347       | 795.599   | 0.16%       | 97.76%     |
| 52.0               | 12.810        | 1.179       | 796.778   | 0.14%       | 97.90%     |
| 53.0               | 11.701        | 1.066       | 797.844   | 0.12%       | 98.03%     |
| 54.0               | 10.829        | 0.993       | 798.837   | 0.12%       | 98.15%     |
| 55.0               | 9.957         | 0.928       | 799.765   | 0.11%       | 98.27%     |
| 56.0               | 9.182         | 0.865       | 800.63    | 0.10%       | 98.37%     |
| 57.0               | 8.461         | 0.807       | 801.437   | 0.09%       | 98.47%     |
| 58.0               | 7.751         | 0.750       | 802.186   | 0.09%       | 98.57%     |
| 59.0               | 7.159         | 0.697       | 802.883   | 0.08%       | 98.65%     |
| 60.0               | 6.706         | 0.655       | 803.538   | 0.08%       | 98.73%     |
| 61.0               | 6.254         | 0.619       | 804.157   | 0.07%       | 98.81%     |
| 62.0               | 5.888         | 0.585       | 804.742   | 0.07%       | 98.88%     |
| 63.0               | 5.544         | 0.556       | 805.298   | 0.06%       | 98.95%     |
| 64.0               | 5.210         | 0.528       | 805.826   | 0.06%       | 99.01%     |
| 65.0               | 4.920         | 0.501       | 806.327   | 0.06%       | 99.07%     |
| 66.0               | 4.618         | 0.476       | 806.803   | 0.06%       | 99.13%     |
| 67.0               | 4.371         | 0.452       | 807.255   | 0.05%       | 99.19%     |
| 68.0               | 4.166         | 0.432       | 807.687   | 0.05%       | 99.24%     |
| 69.0               | 3.929         | 0.413       | 808.1     | 0.05%       | 99.29%     |
| 70.0               | 3.735         | 0.394       | 808.494   | 0.05%       | 99.34%     |
| 71.0               | 3.585         | 0.378       | 808.872   | 0.04%       | 99.39%     |
| 72.0               | 3.412         | 0.364       | 809.236   | 0.04%       | 99.43%     |
| 73.0               | 3.262         | 0.349       | 809.585   | 0.04%       | 99.47%     |
| 74.0               | 3.100         | 0.334       | 809.919   | 0.04%       | 99.52%     |
| 75.0               | 2.993         | 0.322       | 810.241   | 0.04%       | 99.55%     |

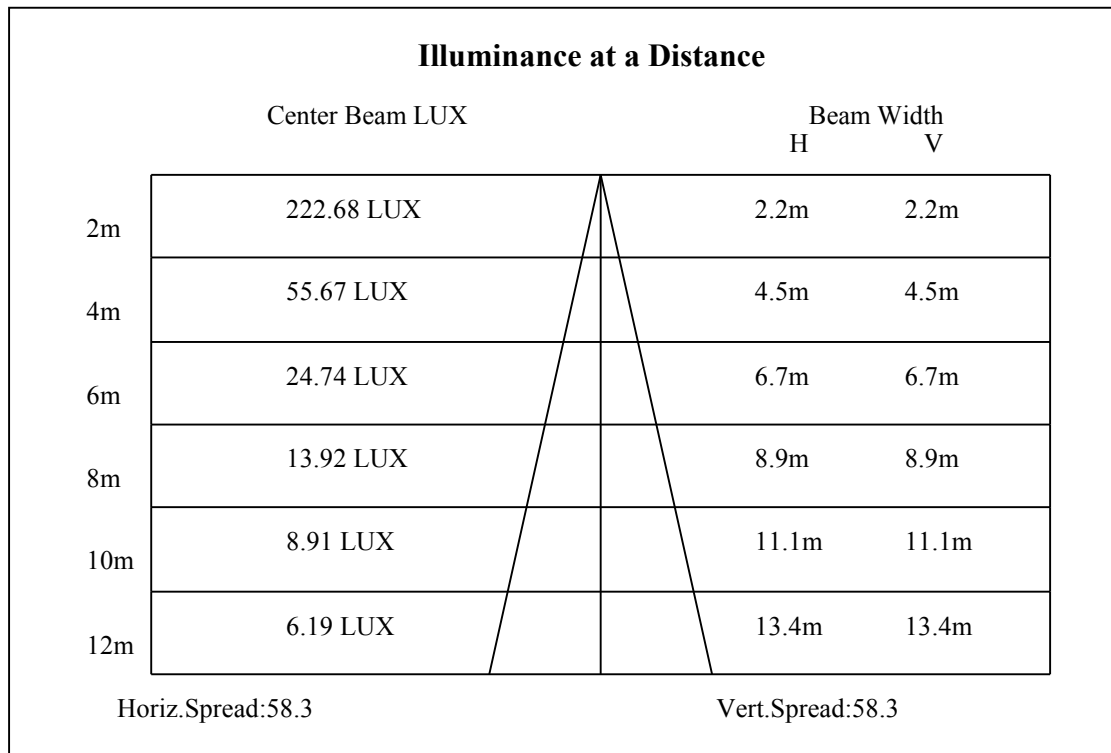
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0               | 2.874         | 0.311       | 810.553   | 0.04%       | 99.59%     |
| 77.0               | 2.767         | 0.301       | 810.854   | 0.04%       | 99.63%     |
| 78.0               | 2.648         | 0.290       | 811.143   | 0.03%       | 99.67%     |
| 79.0               | 2.540         | 0.279       | 811.422   | 0.03%       | 99.70%     |
| 80.0               | 2.444         | 0.269       | 811.691   | 0.03%       | 99.73%     |
| 81.0               | 2.379         | 0.261       | 811.952   | 0.03%       | 99.77%     |
| 82.0               | 2.282         | 0.253       | 812.205   | 0.03%       | 99.80%     |
| 83.0               | 2.207         | 0.244       | 812.449   | 0.03%       | 99.83%     |
| 84.0               | 2.078         | 0.233       | 812.682   | 0.03%       | 99.85%     |
| 85.0               | 1.981         | 0.221       | 812.903   | 0.03%       | 99.88%     |
| 86.0               | 1.862         | 0.210       | 813.113   | 0.02%       | 99.91%     |
| 87.0               | 1.798         | 0.200       | 813.314   | 0.02%       | 99.93%     |
| 88.0               | 1.722         | 0.193       | 813.507   | 0.02%       | 99.96%     |
| 89.0               | 1.625         | 0.184       | 813.69    | 0.02%       | 99.98%     |
| 90.0               | 1.550         | 0.174       | 813.864   | 0.02%       | 100.00%    |

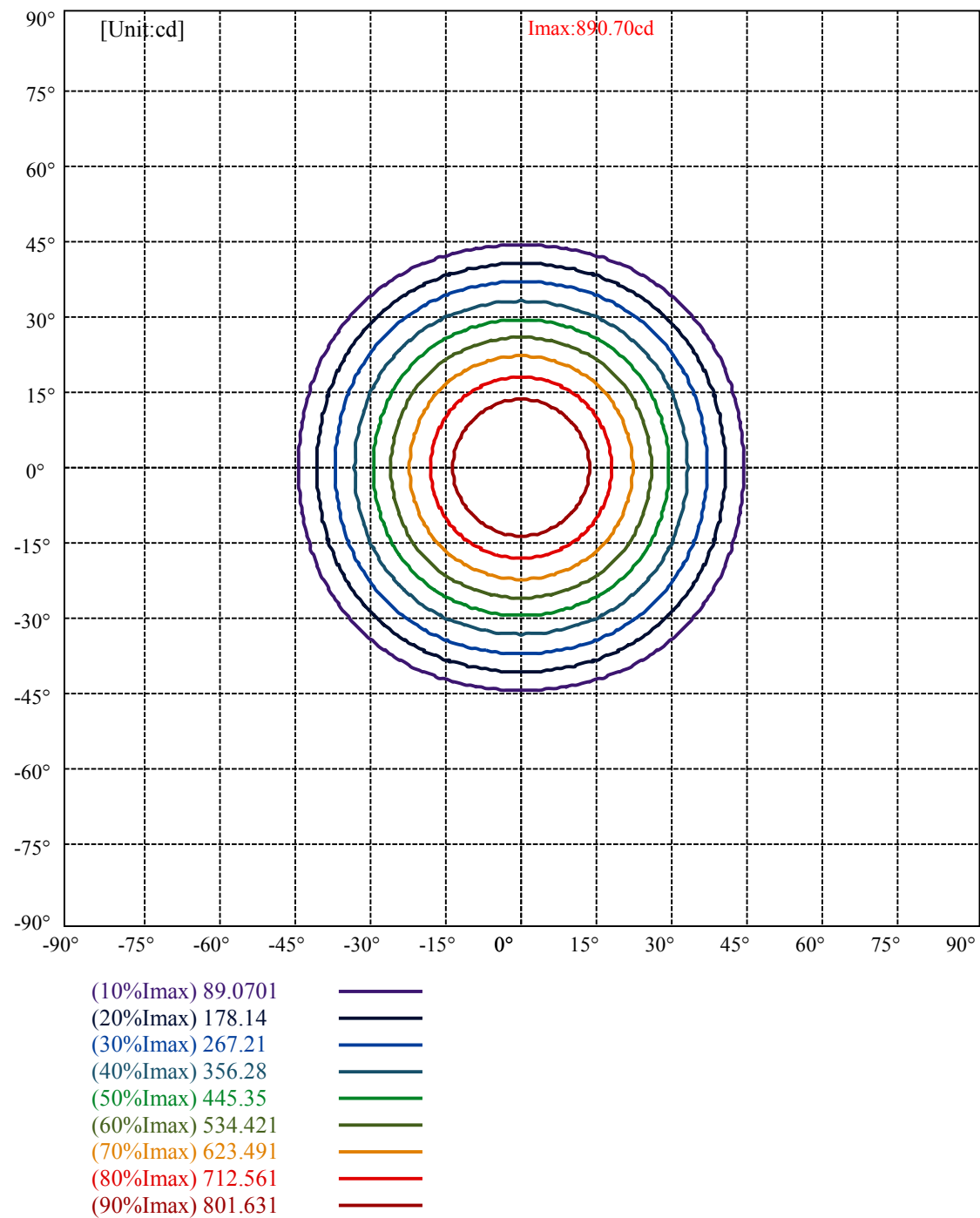
| ZONAL LUMEN SUMMARY |        |        |         |
|---------------------|--------|--------|---------|
| Zone                | Lumens | %Lamp  | %Fixt   |
| 0-30                | 547.98 | 63.99% | 67.33%  |
| 0-40                | 736.11 | 85.96% | 90.45%  |
| 0-60                | 803.54 | 93.83% | 98.73%  |
| 0-90                | 813.69 | 95.02% | 99.98%  |
| 0-120               | 813.69 | 95.02% | 99.98%  |
| 0-180               | 813.86 | 95.04% | 100.00% |
| 60-90               | 10.15  | 1.19%  | 1.25%   |
| 90-120              | 0.00   | 0.00%  | 0.00%   |
| 90-130              | 0.00   | 0.00%  | 0.00%   |
| 90-150              | 0.00   | 0.00%  | 0.00%   |
| 90-180              | 0.00   | 0.00%  | 0.00%   |
| 0-34.83             | 651.09 | 76.03% | 80.00%  |

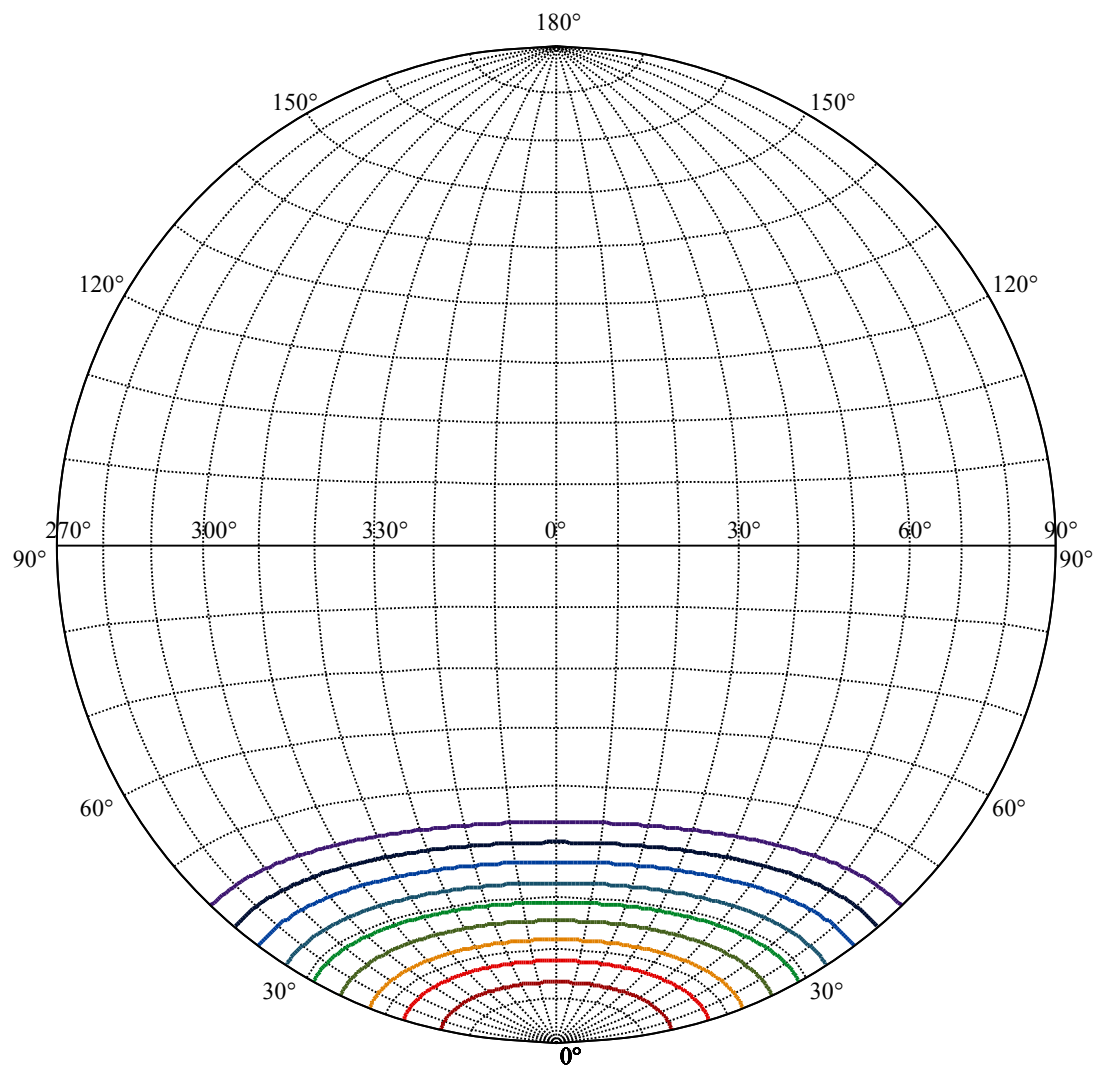
ZONAL LUMEN SUMMARY

|         |        |
|---------|--------|
| 0-10    | 83.49  |
| 10-20   | 214.34 |
| 20-30   | 250.15 |
| 30-40   | 188.13 |
| 40-50   | 58.15  |
| 50-60   | 9.29   |
| 60-70   | 4.96   |
| 70-80   | 3.20   |
| 80-90   | 2.00   |
| 90-100  | 0.00   |
| 100-110 | 0.00   |
| 110-120 | 0.00   |
| 120-130 | 0.00   |
| 130-140 | 0.00   |
| 140-150 | 0.00   |
| 150-160 | 0.00   |
| 160-170 | 0.00   |
| 170-180 | 0.00   |







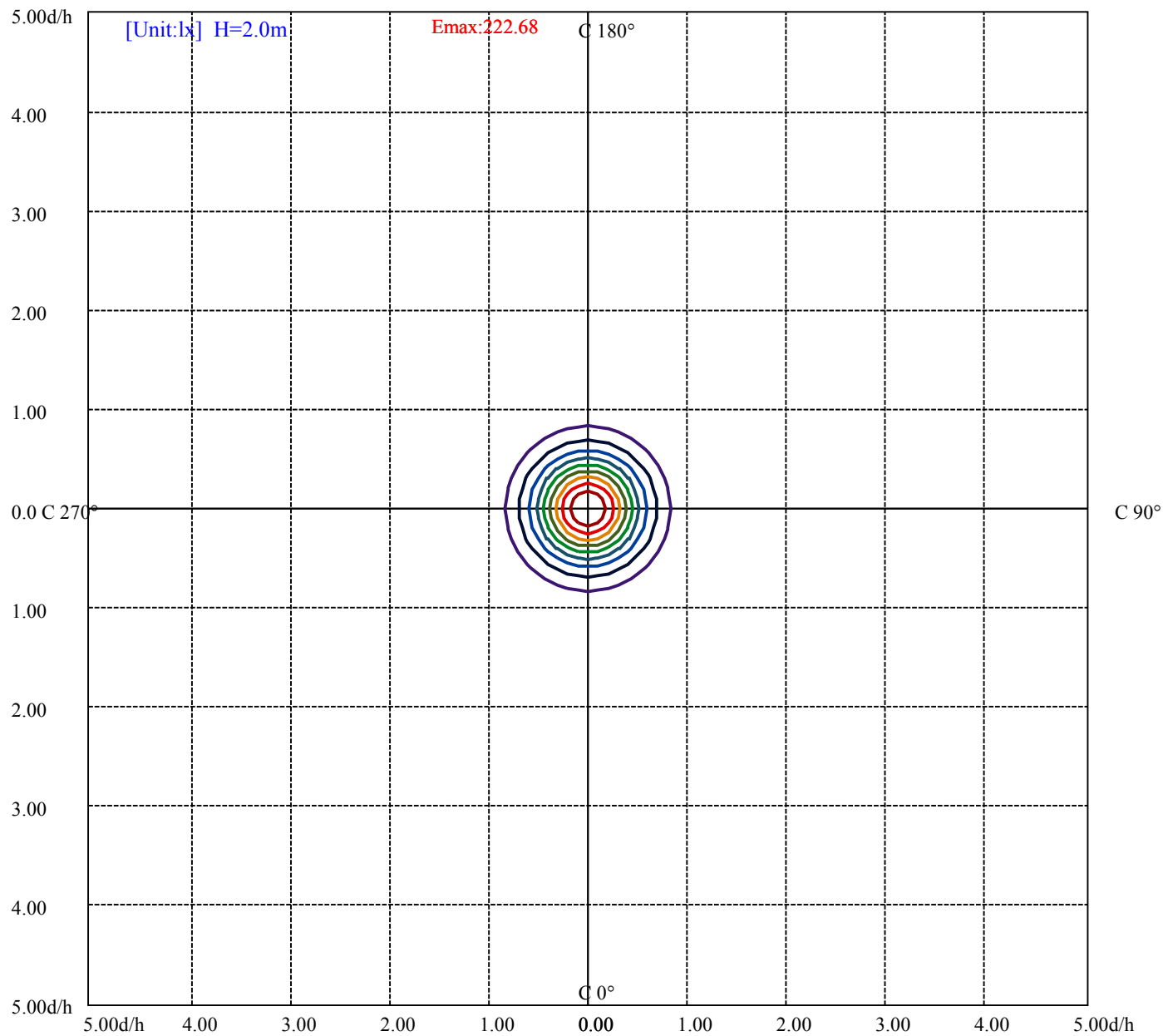


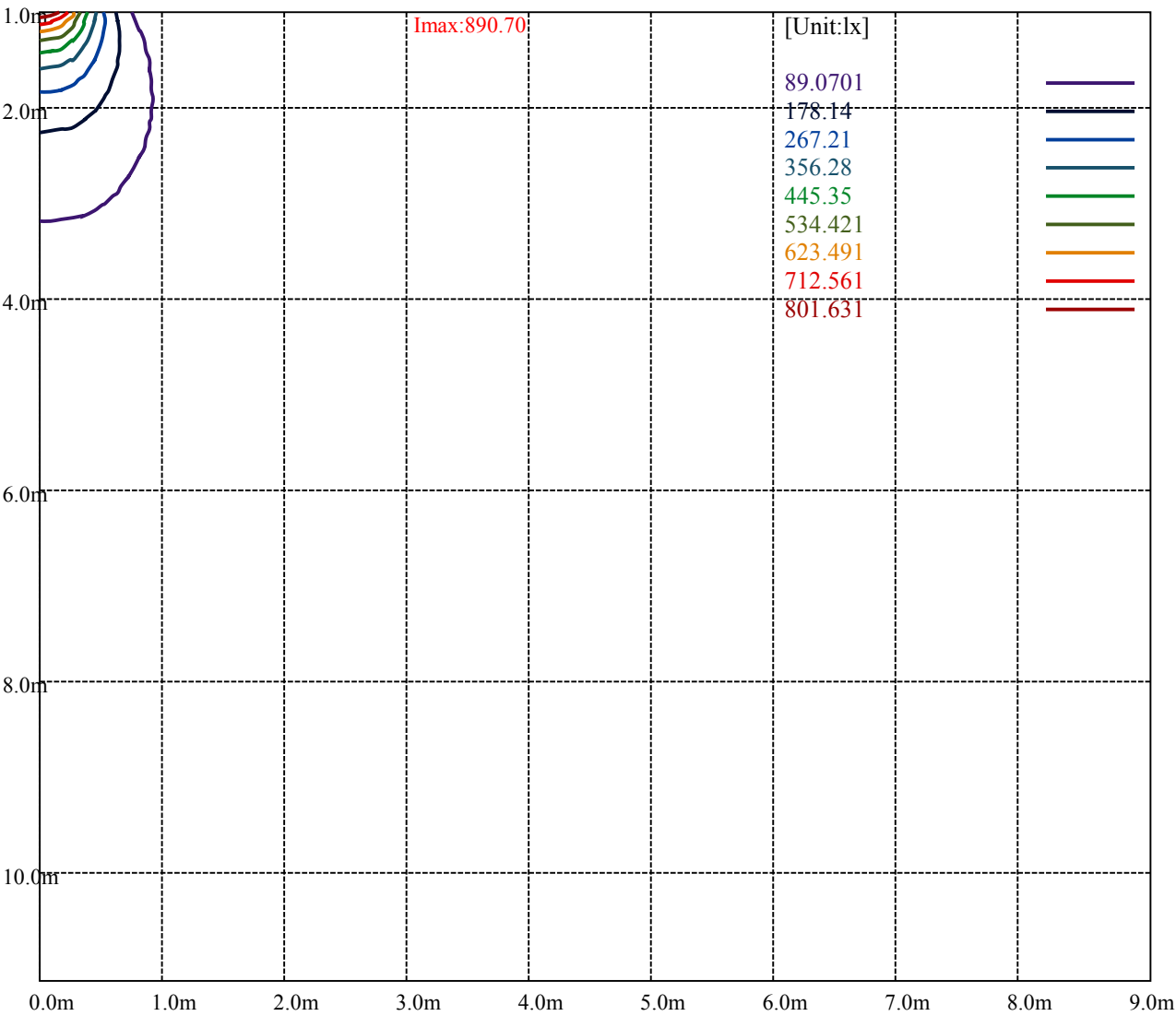
House

[Unit:cd]

Road

|                   |             |
|-------------------|-------------|
| Imax:890.70       |             |
| (10%Imax) 89.0701 | <div></div> |
| (20%Imax) 178.14  | <div></div> |
| (30%Imax) 267.21  | <div></div> |
| (40%Imax) 356.28  | <div></div> |
| (50%Imax) 445.35  | <div></div> |
| (60%Imax) 534.421 | <div></div> |
| (70%Imax) 623.491 | <div></div> |
| (80%Imax) 712.561 | <div></div> |
| (90%Imax) 801.631 | <div></div> |





Luminance Table

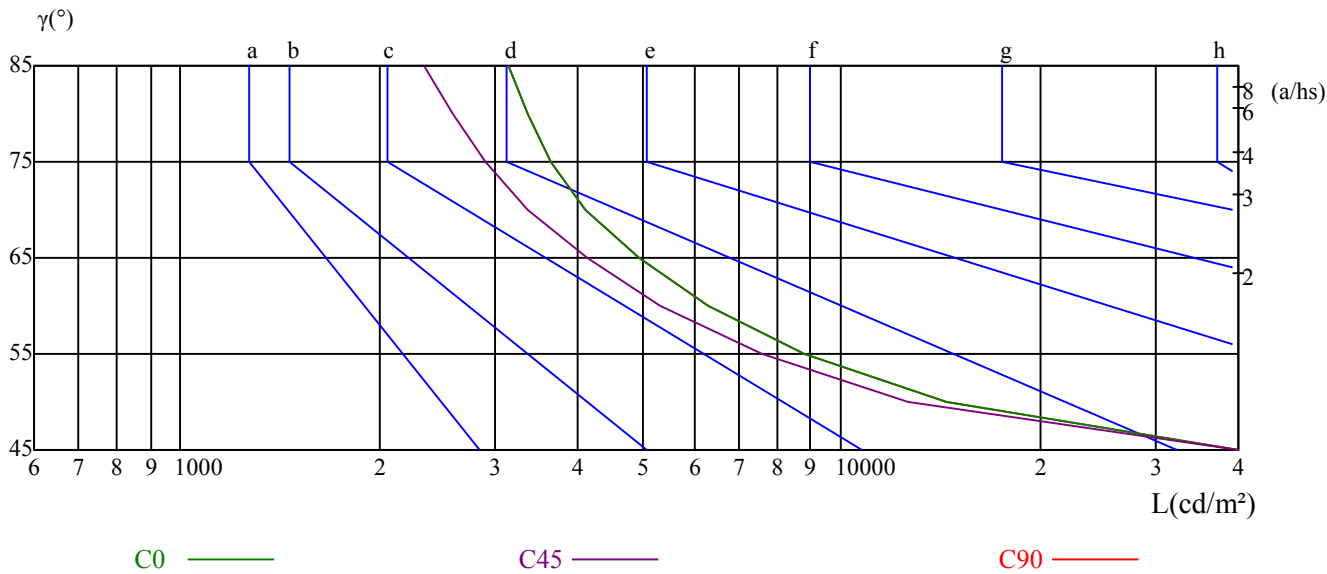
| $\gamma$ | 45    | 50    | 55   | 60   | 65   | 70   | 75   | 80   | 85   |
|----------|-------|-------|------|------|------|------|------|------|------|
| C0       | 51943 | 14424 | 8791 | 6284 | 4952 | 4094 | 3631 | 3349 | 3145 |
| C45      | 46202 | 12653 | 7596 | 5342 | 4132 | 3345 | 2894 | 2589 | 2340 |
| C90      | 51943 | 14424 | 8791 | 6284 | 4952 | 4094 | 3631 | 3349 | 3145 |

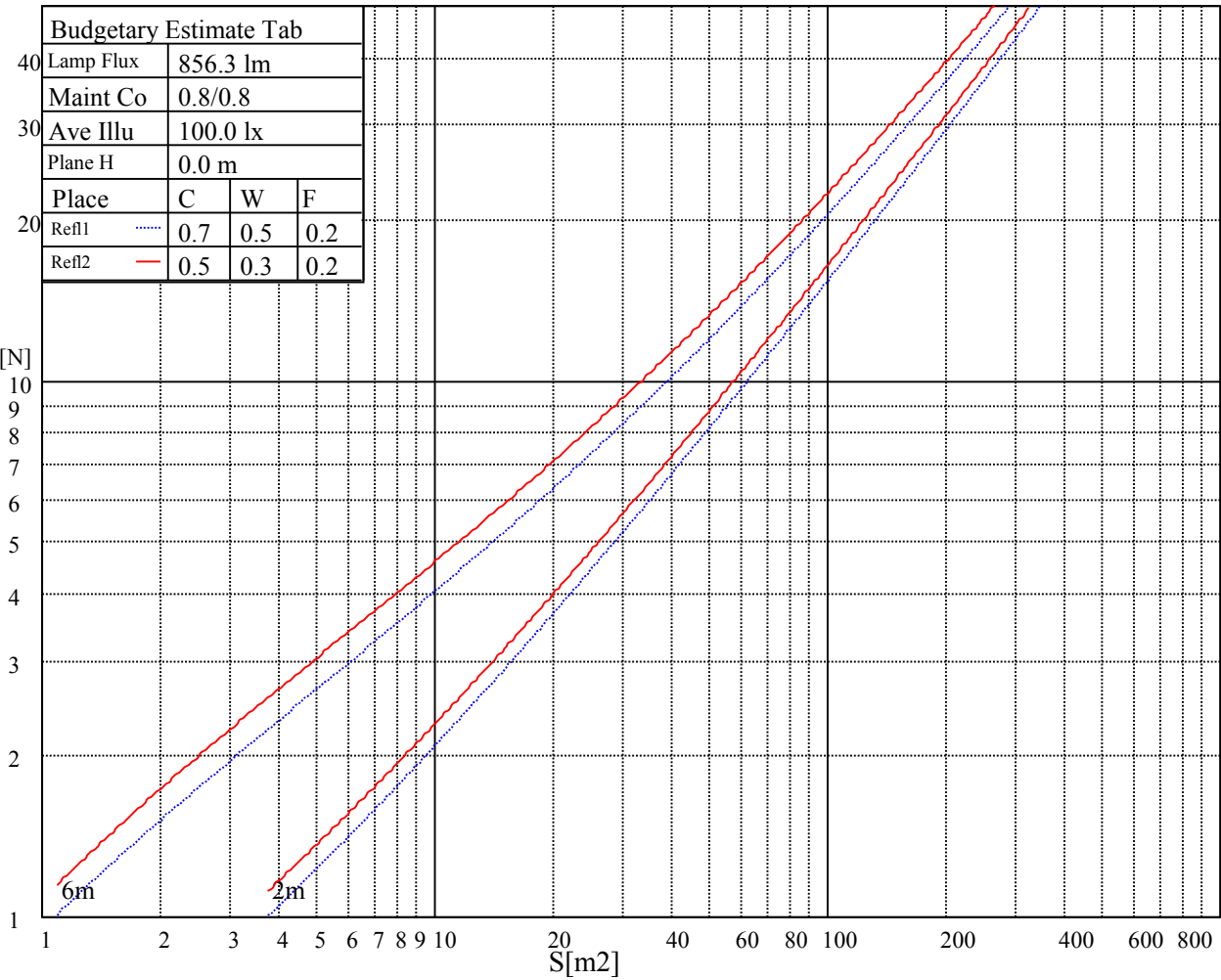
| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 9502       | 9502       | 9502    | 9439       | 9439       | 9439    | 18552      | 18552      | 18552   |

Glare Table

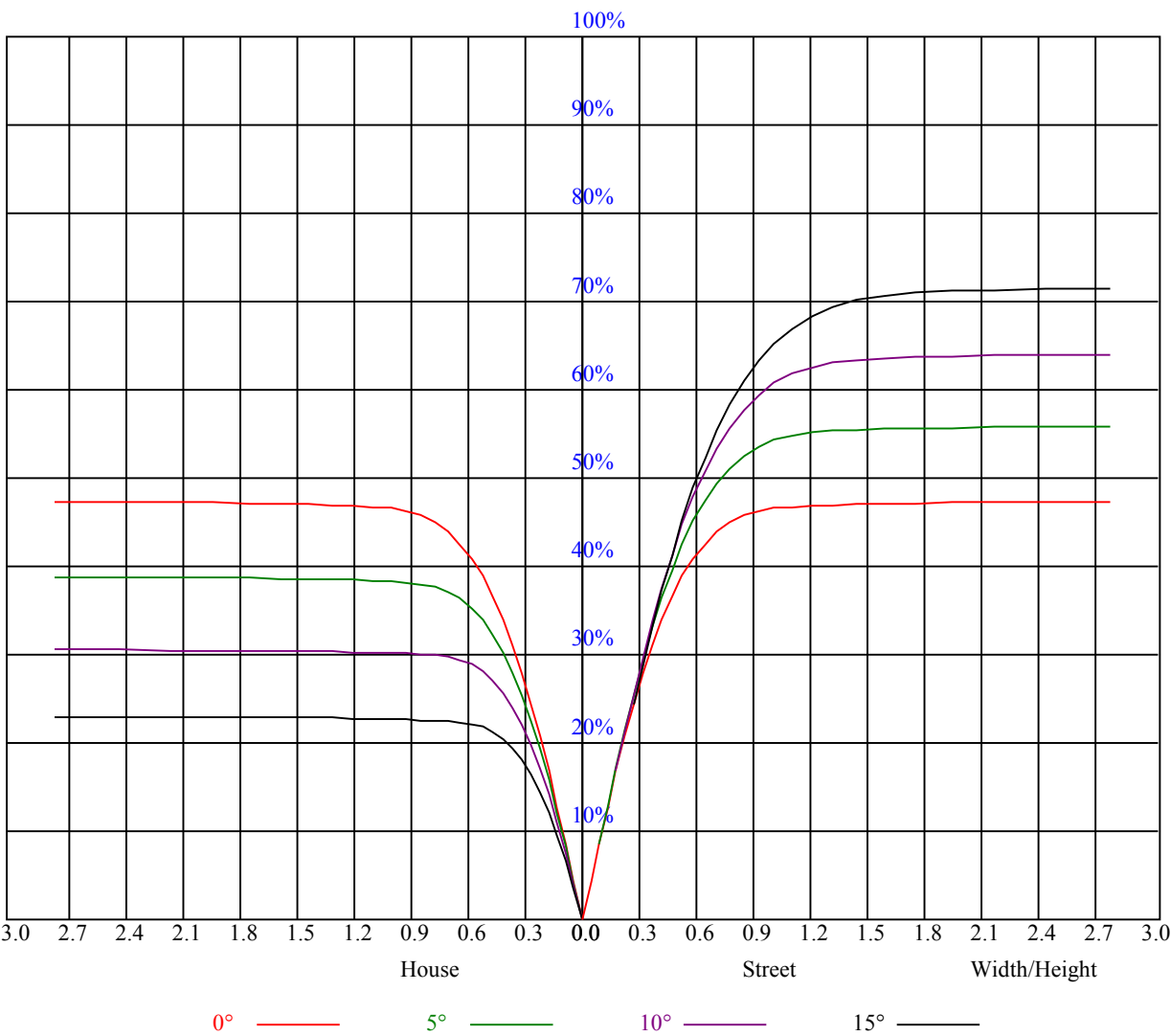
| Glare | Quality | Service Values Illuminance(lx) |      |      |            |            |            |            |            |
|-------|---------|--------------------------------|------|------|------------|------------|------------|------------|------------|
| 1.15  | A       | 2000                           | 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          |

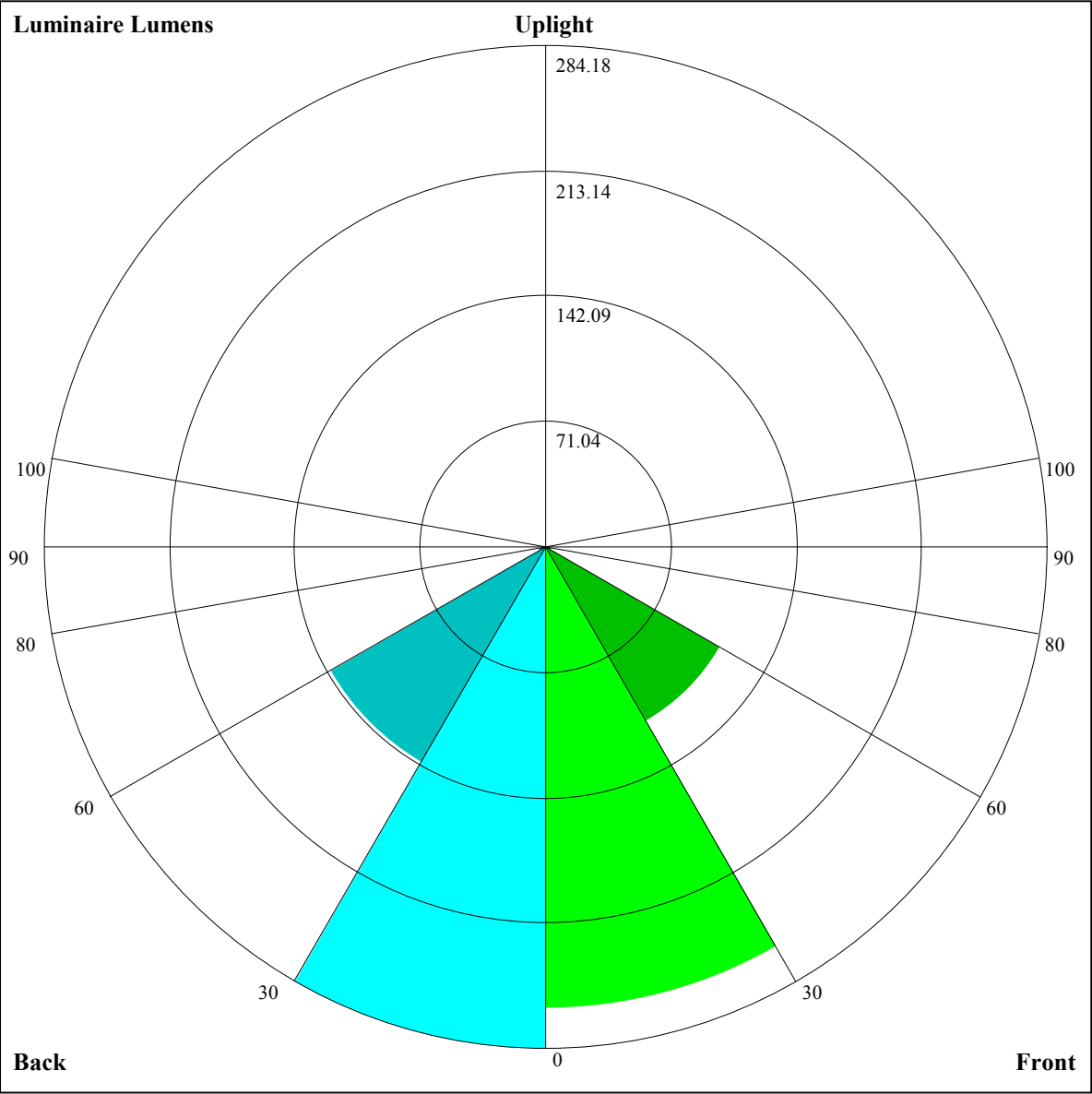
Luminance Limiting Curve





| RHOC | 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    | 1.13                                    | 1.13 | 1.13 | 1.11 | 1.11 | 1.11 | 1.06 | 1.06 | 1.06 | 1.01 | 1.01 | 1.01 | 0.97 | 0.97 | 0.97 | 0.95 |
| 1    | 1.05                                    | 1.02 | 1.00 | 1.03 | 1.01 | 0.99 | 0.99 | 0.97 | 0.96 | 0.95 | 0.94 | 0.93 | 0.92 | 0.91 | 0.90 | 0.88 |
| 2    | 0.97                                    | 0.93 | 0.90 | 0.96 | 0.92 | 0.89 | 0.93 | 0.90 | 0.87 | 0.90 | 0.87 | 0.85 | 0.87 | 0.85 | 0.83 | 0.82 |
| 3    | 0.91                                    | 0.86 | 0.82 | 0.89 | 0.85 | 0.81 | 0.87 | 0.83 | 0.80 | 0.84 | 0.81 | 0.79 | 0.82 | 0.80 | 0.77 | 0.76 |
| 4    | 0.84                                    | 0.79 | 0.75 | 0.83 | 0.78 | 0.74 | 0.81 | 0.77 | 0.74 | 0.79 | 0.76 | 0.73 | 0.78 | 0.74 | 0.72 | 0.70 |
| 5    | 0.79                                    | 0.73 | 0.69 | 0.78 | 0.73 | 0.69 | 0.76 | 0.72 | 0.68 | 0.75 | 0.71 | 0.67 | 0.73 | 0.70 | 0.67 | 0.65 |
| 6    | 0.74                                    | 0.68 | 0.64 | 0.73 | 0.68 | 0.64 | 0.72 | 0.67 | 0.63 | 0.70 | 0.66 | 0.63 | 0.69 | 0.65 | 0.62 | 0.61 |
| 7    | 0.69                                    | 0.63 | 0.59 | 0.69 | 0.63 | 0.59 | 0.67 | 0.62 | 0.59 | 0.66 | 0.62 | 0.59 | 0.65 | 0.61 | 0.58 | 0.57 |
| 8    | 0.65                                    | 0.59 | 0.55 | 0.65 | 0.59 | 0.55 | 0.64 | 0.59 | 0.55 | 0.63 | 0.58 | 0.55 | 0.62 | 0.58 | 0.54 | 0.53 |
| 9    | 0.61                                    | 0.56 | 0.52 | 0.61 | 0.55 | 0.52 | 0.60 | 0.55 | 0.52 | 0.59 | 0.55 | 0.51 | 0.58 | 0.54 | 0.51 | 0.50 |
| 10   | 0.58                                    | 0.52 | 0.49 | 0.58 | 0.52 | 0.49 | 0.57 | 0.52 | 0.48 | 0.56 | 0.51 | 0.48 | 0.55 | 0.51 | 0.48 | 0.47 |





Luminaire Lumens:

FL=261.26,FM=113.6,FH=3.86,FVH=1.06

BL=284.18,BM=140.8,BH=4.3,BVH=1.11

UL=0,UH=0

BUG Rating:B1-U0-G0

## Intensity data(cd)

| C/ $\gamma$ (°) | 0.0    | 1.0    | 2.0    | 3.0    | 4.0    | 5.0    | 6.0    | 7.0    | 8.0    |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0.0             | 893.22 | 879.01 | 869.97 | 860.06 | 852.83 | 848.44 | 840.95 | 834.49 | 827.77 |
| 45.0            | 896.49 | 895.37 | 891.15 | 887.19 | 884.18 | 881.51 | 876.17 | 873.84 | 870.57 |
| 90.0            | 894.60 | 902.52 | 906.83 | 910.62 | 915.61 | 919.57 | 921.81 | 920.35 | 918.97 |
| 135.0           | 878.49 | 890.21 | 902.35 | 913.03 | 918.54 | 925.51 | 938.17 | 944.98 | 951.26 |
| 180.0           | 893.22 | 901.14 | 907.60 | 916.04 | 921.73 | 927.67 | 933.70 | 937.66 | 936.88 |
| 225.0           | 896.49 | 894.94 | 892.96 | 892.44 | 888.91 | 885.73 | 879.27 | 871.09 | 860.75 |
| 270.0           | 894.60 | 886.24 | 876.43 | 866.18 | 860.32 | 851.80 | 844.13 | 833.45 | 821.91 |
| 315.0           | 878.49 | 868.16 | 856.53 | 849.73 | 841.38 | 829.49 | 814.68 | 800.13 | 787.81 |
| 360.0           | 893.22 | 879.01 | 869.97 | 860.06 | 852.83 | 848.44 | 840.95 | 834.49 | 827.77 |
| C/ $\gamma$ (°) | 9.0    | 10.0   | 11.0   | 12.0   | 13.0   | 14.0   | 15.0   | 16.0   | 17.0   |
| 0.0             | 816.75 | 803.74 | 789.79 | 772.57 | 755.17 | 732.87 | 717.02 | 700.66 | 678.27 |
| 45.0            | 863.68 | 853.61 | 841.64 | 825.27 | 811.49 | 794.36 | 776.19 | 753.19 | 733.99 |
| 90.0            | 916.47 | 910.87 | 898.47 | 887.45 | 875.05 | 851.97 | 830.87 | 810.63 | 786.00 |
| 135.0           | 953.68 | 953.68 | 950.92 | 945.75 | 940.59 | 932.49 | 919.40 | 899.42 | 880.65 |
| 180.0           | 933.35 | 928.27 | 921.47 | 907.95 | 892.01 | 869.11 | 846.54 | 825.96 | 795.82 |
| 225.0           | 843.96 | 830.61 | 811.41 | 792.72 | 771.28 | 750.69 | 723.48 | 704.02 | 684.38 |
| 270.0           | 806.93 | 791.69 | 769.90 | 752.42 | 737.00 | 715.04 | 694.29 | 673.36 | 648.04 |
| 315.0           | 768.78 | 752.67 | 735.54 | 710.56 | 690.67 | 672.24 | 650.11 | 633.66 | 616.87 |
| 360.0           | 816.75 | 803.74 | 789.79 | 772.57 | 755.17 | 732.87 | 717.02 | 700.66 | 678.27 |
| C/ $\gamma$ (°) | 18.0   | 19.0   | 20.0   | 21.0   | 22.0   | 23.0   | 24.0   | 25.0   | 26.0   |
| 0.0             | 660.36 | 637.53 | 620.91 | 603.00 | 578.72 | 559.08 | 537.29 | 514.04 | 483.64 |
| 45.0            | 716.16 | 697.73 | 674.57 | 656.31 | 636.16 | 611.01 | 588.88 | 561.23 | 537.81 |
| 90.0            | 766.63 | 746.04 | 716.33 | 691.53 | 663.97 | 627.98 | 603.52 | 576.48 | 548.92 |
| 135.0           | 859.98 | 838.19 | 810.89 | 786.86 | 757.67 | 732.61 | 707.20 | 675.60 | 646.23 |
| 180.0           | 771.79 | 749.32 | 724.77 | 694.80 | 672.24 | 650.11 | 628.49 | 600.50 | 578.11 |
| 225.0           | 664.32 | 639.77 | 620.31 | 602.31 | 584.05 | 557.87 | 538.41 | 513.01 | 492.68 |
| 270.0           | 626.08 | 607.13 | 587.50 | 572.60 | 555.98 | 536.00 | 512.32 | 490.53 | 469.86 |
| 315.0           | 599.30 | 578.11 | 562.87 | 545.99 | 529.11 | 506.20 | 489.07 | 466.25 | 445.06 |
| 360.0           | 660.36 | 637.53 | 620.91 | 603.00 | 578.72 | 559.08 | 537.29 | 514.04 | 483.64 |
| C/ $\gamma$ (°) | 27.0   | 28.0   | 29.0   | 30.0   | 31.0   | 32.0   | 33.0   | 34.0   | 35.0   |
| 0.0             | 459.27 | 435.93 | 412.51 | 386.59 | 367.98 | 350.76 | 327.34 | 302.71 | 279.97 |
| 45.0            | 513.78 | 481.92 | 456.60 | 433.95 | 411.82 | 384.26 | 363.85 | 346.54 | 331.73 |
| 90.0            | 516.19 | 488.81 | 463.06 | 436.71 | 402.17 | 375.30 | 352.14 | 332.76 | 319.15 |
| 135.0           | 614.54 | 573.46 | 543.15 | 514.64 | 486.83 | 451.78 | 426.80 | 401.74 | 376.77 |
| 180.0           | 557.19 | 529.20 | 501.98 | 474.25 | 442.13 | 419.57 | 392.96 | 371.34 | 350.59 |
| 225.0           | 472.45 | 443.94 | 421.21 | 399.16 | 371.51 | 352.83 | 334.23 | 316.83 | 292.89 |
| 270.0           | 448.59 | 423.27 | 403.98 | 383.14 | 359.80 | 341.55 | 317.78 | 294.61 | 272.39 |
| 315.0           | 424.48 | 400.97 | 381.68 | 363.42 | 339.13 | 315.80 | 288.41 | 259.82 | 224.34 |
| 360.0           | 459.27 | 435.93 | 412.51 | 386.59 | 367.98 | 350.76 | 327.34 | 302.71 | 279.97 |
| C/ $\gamma$ (°) | 36.0   | 37.0   | 38.0   | 39.0   | 40.0   | 41.0   | 42.0   | 43.0   | 44.0   |
| 0.0             | 245.70 | 216.24 | 185.15 | 148.73 | 122.98 | 98.00  | 75.61  | 50.47  | 34.53  |
| 45.0            | 312.01 | 292.63 | 269.46 | 234.93 | 206.43 | 171.29 | 143.56 | 116.00 | 91.46  |
| 90.0            | 301.67 | 283.76 | 265.16 | 248.02 | 217.02 | 188.51 | 161.82 | 136.93 | 106.18 |
| 135.0           | 348.26 | 330.18 | 313.21 | 292.29 | 269.64 | 239.84 | 215.81 | 192.13 | 168.88 |
| 180.0           | 332.42 | 311.66 | 293.32 | 271.36 | 247.50 | 220.64 | 187.48 | 161.47 | 136.41 |
| 225.0           | 271.27 | 249.05 | 226.41 | 196.95 | 172.06 | 140.72 | 116.69 | 93.52  | 67.26  |
| 270.0           | 241.30 | 216.67 | 191.01 | 167.07 | 136.50 | 112.56 | 88.27  | 67.26  | 44.95  |
| 315.0           | 195.40 | 168.10 | 140.80 | 109.71 | 86.03  | 64.93  | 42.80  | 29.37  | 19.29  |
| 360.0           | 245.70 | 216.24 | 185.15 | 148.73 | 122.98 | 98.00  | 75.61  | 50.47  | 34.53  |

## Intensity data(cd)

| C/ $\gamma$ (°) | 45.0   | 46.0   | 47.0  | 48.0  | 49.0  | 50.0  | 51.0  | 52.0  | 53.0  |
|-----------------|--------|--------|-------|-------|-------|-------|-------|-------|-------|
| 0.0             | 23.77  | 16.02  | 13.18 | 12.23 | 11.37 | 10.16 | 9.30  | 8.53  | 7.92  |
| 45.0            | 63.90  | 45.64  | 31.35 | 22.74 | 16.10 | 14.73 | 13.78 | 12.92 | 11.71 |
| 90.0            | 84.74  | 64.76  | 42.97 | 31.78 | 23.60 | 17.91 | 16.45 | 14.81 | 13.61 |
| 135.0           | 140.63 | 118.59 | 96.71 | 75.35 | 52.19 | 36.77 | 26.35 | 19.03 | 16.71 |
| 180.0           | 104.63 | 83.19  | 57.87 | 40.56 | 28.33 | 18.34 | 15.07 | 13.95 | 12.83 |
| 225.0           | 48.23  | 33.67  | 23.94 | 16.53 | 14.81 | 13.61 | 12.49 | 11.20 | 10.25 |
| 270.0           | 32.12  | 23.85  | 18.00 | 16.45 | 15.16 | 13.78 | 12.75 | 11.80 | 10.94 |
| 315.0           | 16.19  | 15.24  | 14.47 | 13.43 | 12.66 | 11.97 | 11.20 | 10.25 | 9.65  |
| 360.0           | 23.77  | 16.02  | 13.18 | 12.23 | 11.37 | 10.16 | 9.30  | 8.53  | 7.92  |
| C/ $\gamma$ (°) | 54.0   | 55.0   | 56.0  | 57.0  | 58.0  | 59.0  | 60.0  | 61.0  | 62.0  |
| 0.0             | 7.49   | 7.06   | 6.72  | 6.46  | 6.20  | 5.86  | 5.60  | 5.25  | 4.99  |
| 45.0            | 10.94  | 9.90   | 8.70  | 8.10  | 7.49  | 6.98  | 6.80  | 6.37  | 5.94  |
| 90.0            | 12.23  | 11.20  | 10.08 | 8.70  | 8.01  | 7.41  | 6.72  | 6.29  | 5.94  |
| 135.0           | 15.67  | 14.64  | 13.69 | 12.66 | 11.28 | 9.90  | 9.30  | 8.70  | 8.10  |
| 180.0           | 11.63  | 10.76  | 9.99  | 9.04  | 8.01  | 7.58  | 7.06  | 6.54  | 6.29  |
| 225.0           | 9.47   | 8.18   | 7.49  | 6.98  | 6.46  | 6.11  | 5.77  | 5.51  | 5.25  |
| 270.0           | 10.16  | 9.39   | 8.78  | 8.10  | 7.49  | 6.89  | 6.37  | 5.86  | 5.60  |
| 315.0           | 9.04   | 8.53   | 8.01  | 7.66  | 7.06  | 6.54  | 6.03  | 5.51  | 4.99  |
| 360.0           | 7.49   | 7.06   | 6.72  | 6.46  | 6.20  | 5.86  | 5.60  | 5.25  | 4.99  |
| C/ $\gamma$ (°) | 63.0   | 64.0   | 65.0  | 66.0  | 67.0  | 68.0  | 69.0  | 70.0  | 71.0  |
| 0.0             | 4.56   | 4.22   | 4.05  | 3.96  | 3.88  | 3.62  | 3.44  | 3.36  | 3.36  |
| 45.0            | 5.60   | 5.25   | 4.91  | 4.48  | 4.22  | 4.05  | 3.88  | 3.62  | 3.53  |
| 90.0            | 5.68   | 5.25   | 5.08  | 4.82  | 4.56  | 4.39  | 4.13  | 3.96  | 3.70  |
| 135.0           | 7.75   | 7.41   | 6.98  | 6.46  | 6.03  | 5.60  | 5.08  | 4.65  | 4.31  |
| 180.0           | 5.94   | 5.68   | 5.43  | 4.99  | 4.65  | 4.39  | 4.13  | 3.96  | 3.88  |
| 225.0           | 5.08   | 4.74   | 4.39  | 4.22  | 4.05  | 3.88  | 3.70  | 3.62  | 3.44  |
| 270.0           | 5.17   | 4.91   | 4.56  | 4.31  | 4.05  | 3.88  | 3.70  | 3.44  | 3.36  |
| 315.0           | 4.56   | 4.22   | 3.96  | 3.70  | 3.53  | 3.53  | 3.36  | 3.27  | 3.10  |
| 360.0           | 4.56   | 4.22   | 4.05  | 3.96  | 3.88  | 3.62  | 3.44  | 3.36  | 3.36  |
| C/ $\gamma$ (°) | 72.0   | 73.0   | 74.0  | 75.0  | 76.0  | 77.0  | 78.0  | 79.0  | 80.0  |
| 0.0             | 3.19   | 3.10   | 3.01  | 2.93  | 2.76  | 2.67  | 2.58  | 2.50  | 2.41  |
| 45.0            | 3.36   | 3.19   | 3.01  | 3.01  | 2.93  | 2.84  | 2.67  | 2.50  | 2.41  |
| 90.0            | 3.62   | 3.44   | 3.27  | 3.10  | 3.01  | 2.84  | 2.76  | 2.67  | 2.50  |
| 135.0           | 3.96   | 3.70   | 3.44  | 3.36  | 3.19  | 3.10  | 2.93  | 2.76  | 2.67  |
| 180.0           | 3.70   | 3.53   | 3.36  | 3.19  | 3.01  | 2.93  | 2.84  | 2.67  | 2.58  |
| 225.0           | 3.27   | 3.19   | 2.93  | 2.84  | 2.76  | 2.67  | 2.58  | 2.41  | 2.33  |
| 270.0           | 3.27   | 3.10   | 2.93  | 2.84  | 2.76  | 2.67  | 2.50  | 2.50  | 2.41  |
| 315.0           | 2.93   | 2.84   | 2.84  | 2.67  | 2.58  | 2.41  | 2.33  | 2.33  | 2.24  |
| 360.0           | 3.19   | 3.10   | 3.01  | 2.93  | 2.76  | 2.67  | 2.58  | 2.50  | 2.41  |
| C/ $\gamma$ (°) | 81.0   | 82.0   | 83.0  | 84.0  | 85.0  | 86.0  | 87.0  | 88.0  | 89.0  |
| 0.0             | 2.33   | 2.24   | 2.07  | 2.07  | 1.98  | 1.81  | 1.81  | 1.64  | 1.46  |
| 45.0            | 2.41   | 2.33   | 2.33  | 2.15  | 2.07  | 1.89  | 1.89  | 1.81  | 1.64  |
| 90.0            | 2.50   | 2.33   | 2.24  | 2.15  | 2.07  | 1.89  | 1.81  | 1.72  | 1.64  |
| 135.0           | 2.58   | 2.50   | 2.33  | 2.24  | 2.15  | 2.07  | 1.98  | 1.89  | 1.72  |
| 180.0           | 2.50   | 2.33   | 2.24  | 2.15  | 2.07  | 2.07  | 1.98  | 2.07  | 1.89  |
| 225.0           | 2.24   | 2.24   | 2.24  | 1.98  | 1.89  | 1.89  | 1.81  | 1.72  | 1.64  |
| 270.0           | 2.33   | 2.24   | 2.15  | 1.98  | 1.81  | 1.64  | 1.55  | 1.55  | 1.55  |
| 315.0           | 2.15   | 2.07   | 2.07  | 1.89  | 1.81  | 1.64  | 1.55  | 1.38  | 1.46  |
| 360.0           | 2.33   | 2.24   | 2.07  | 2.07  | 1.98  | 1.81  | 1.81  | 1.64  | 1.46  |

Intensity data(cd)

|                 |      |
|-----------------|------|
| C/ $\gamma$ (°) | 90.0 |
| 0.0             | 1.46 |
| 45.0            | 1.55 |
| 90.0            | 1.55 |
| 135.0           | 1.72 |
| 180.0           | 1.81 |
| 225.0           | 1.46 |
| 270.0           | 1.46 |
| 315.0           | 1.38 |
| 360.0           | 1.46 |