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Nata

Client:

LumCAT: 2-1777-L

Luminaire: 92.70.131.00

Report No: NT2018010910

Test No: GC2018010910

LampCAT: SEOUL SAWx15

Lamp flux(lm): 3105.0

Number of Lamps: 1

Length(mm): 64

Phm Type: C

Voltage(V): 34.6000

Current(A): 0.6400

Power (W): 22.1440

PF: 0.0000

Ballast type: DC

Width(mm): 64

Height(mm): 0

Photometric Results

Lumens(lm): 3045.75, Efficiency(%): 98.09% , Luminous Efficacy(lm/W): 137.54

Central intensity(cd): 17670.350, Maximum intensity(cd): 17670.350

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=17.6

[C90/270]Total=17.6

Field angle(10%Imax): [C0/180]Total=39.4

[C90/270]Total=39.4

Maximum s/h(1/2): C0_180=0.31 C90_270=0.31

Maximum s/h(1/4): C0_180=0.31 C90_270=0.31

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 98.22%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.393%

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0 | 17670.352 | 4.228 | 4.228 | .136% | .139% |
| 1.0 | 17595.338 | 33.675 | 37.902 | 1.085% | 1.244% |
| 2.0 | 17412.963 | 66.641 | 104.544 | 2.146% | 3.432% |
| 3.0 | 17088.818 | 98.076 | 202.62 | 3.159% | 6.653% |
| 4.0 | 16537.566 | 126.505 | 329.125 | 4.074% | 10.806% |
| 5.0 | 15613.307 | 149.225 | 478.35 | 4.806% | 15.706% |
| 6.0 | 13972.695 | 160.165 | 638.515 | 5.158% | 20.964% |
| 7.0 | 11974.698 | 160.033 | 798.548 | 5.154% | 26.218% |
| 8.0 | 10428.302 | 159.155 | 957.703 | 5.126% | 31.444% |
| 9.0 | 8542.551 | 146.545 | 1104.249 | 4.720% | 36.255% |
| 10.0 | 6947.842 | 132.304 | 1236.552 | 4.261% | 40.599% |
| 11.0 | 5857.588 | 122.566 | 1359.118 | 3.947% | 44.623% |
| 12.0 | 4936.150 | 112.543 | 1471.661 | 3.625% | 48.319% |
| 13.0 | 4155.107 | 102.500 | 1574.161 | 3.301% | 51.684% |
| 14.0 | 3574.674 | 94.834 | 1668.995 | 3.054% | 54.798% |
| 15.0 | 3087.288 | 87.624 | 1756.619 | 2.822% | 57.674% |
| 16.0 | 2729.834 | 82.514 | 1839.133 | 2.657% | 60.384% |
| 17.0 | 2387.796 | 76.557 | 1915.69 | 2.466% | 62.897% |
| 18.0 | 2085.330 | 70.666 | 1986.355 | 2.276% | 65.217% |
| 19.0 | 1896.349 | 67.704 | 2054.059 | 2.180% | 67.440% |
| 20.0 | 1723.196 | 64.631 | 2118.69 | 2.082% | 69.562% |
| 21.0 | 1586.450 | 62.346 | 2181.035 | 2.008% | 71.609% |
| 22.0 | 1484.045 | 60.964 | 2242 | 1.963% | 73.611% |
| 23.0 | 1383.086 | 59.262 | 2301.262 | 1.909% | 75.557% |
| 24.0 | 1303.391 | 58.135 | 2359.397 | 1.872% | 77.465% |
| 25.0 | 1236.291 | 57.296 | 2416.693 | 1.845% | 79.346% |
| 26.0 | 1170.850 | 56.285 | 2472.978 | 1.813% | 81.194% |
| 27.0 | 1122.999 | 55.909 | 2528.887 | 1.801% | 83.030% |
| 28.0 | 1079.697 | 55.586 | 2584.472 | 1.790% | 84.855% |
| 29.0 | 1028.846 | 54.698 | 2639.17 | 1.762% | 86.651% |
| 30.0 | 964.512 | 52.885 | 2692.055 | 1.703% | 88.387% |
| 31.0 | 884.151 | 49.936 | 2741.992 | 1.608% | 90.027% |
| 32.0 | 786.515 | 45.706 | 2787.697 | 1.472% | 91.528% |
| 33.0 | 692.320 | 41.349 | 2829.046 | 1.332% | 92.885% |
| 34.0 | 587.459 | 36.024 | 2865.07 | 1.160% | 94.068% |
| 35.0 | 483.781 | 30.429 | 2895.499 | .980% | 95.067% |
| 36.0 | 386.785 | 24.931 | 2920.43 | .803% | 95.885% |
| 37.0 | 297.016 | 19.602 | 2940.032 | .631% | 96.529% |

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0 | 206.111 | 13.915 | 2953.948 | .448% | 96.986% |
| 39.0 | 132.438 | 9.140 | 2963.087 | .294% | 97.286% |
| 40.0 | 72.791 | 5.131 | 2968.218 | .165% | 97.454% |
| 41.0 | 40.687 | 2.927 | 2971.145 | .094% | 97.551% |
| 42.0 | 29.696 | 2.179 | 2973.324 | .070% | 97.622% |
| 43.0 | 25.574 | 1.913 | 2975.237 | .062% | 97.685% |
| 44.0 | 22.477 | 1.712 | 2976.949 | .055% | 97.741% |
| 45.0 | 20.770 | 1.611 | 2978.56 | .052% | 97.794% |
| 46.0 | 19.896 | 1.569 | 2980.129 | .051% | 97.846% |
| 47.0 | 19.160 | 1.537 | 2981.666 | .049% | 97.896% |
| 48.0 | 18.609 | 1.517 | 2983.182 | .049% | 97.946% |
| 49.0 | 18.107 | 1.499 | 2984.681 | .048% | 97.995% |
| 50.0 | 17.673 | 1.485 | 2986.166 | .048% | 98.044% |
| 51.0 | 17.350 | 1.479 | 2987.644 | .048% | 98.092% |
| 52.0 | 17.047 | 1.473 | 2989.117 | .047% | 98.141% |
| 53.0 | 16.785 | 1.470 | 2990.587 | .047% | 98.189% |
| 54.0 | 16.538 | 1.467 | 2992.055 | .047% | 98.237% |
| 55.0 | 16.304 | 1.465 | 2993.519 | .047% | 98.285% |
| 56.0 | 16.070 | 1.461 | 2994.98 | .047% | 98.333% |
| 57.0 | 15.904 | 1.463 | 2996.443 | .047% | 98.381% |
| 58.0 | 15.725 | 1.462 | 2997.905 | .047% | 98.429% |
| 59.0 | 15.588 | 1.465 | 2999.37 | .047% | 98.477% |
| 60.0 | 15.464 | 1.469 | 3000.839 | .047% | 98.526% |
| 61.0 | 15.340 | 1.471 | 3002.31 | .047% | 98.574% |
| 62.0 | 15.237 | 1.475 | 3003.786 | .048% | 98.622% |
| 63.0 | 15.147 | 1.480 | 3005.266 | .048% | 98.671% |
| 64.0 | 15.044 | 1.483 | 3006.748 | .048% | 98.720% |
| 65.0 | 14.948 | 1.486 | 3008.234 | .048% | 98.768% |
| 66.0 | 14.872 | 1.490 | 3009.724 | .048% | 98.817% |
| 67.0 | 14.796 | 1.494 | 3011.217 | .048% | 98.866% |
| 68.0 | 14.734 | 1.498 | 3012.716 | .048% | 98.915% |
| 69.0 | 14.666 | 1.501 | 3014.217 | .048% | 98.965% |
| 70.0 | 14.617 | 1.506 | 3015.723 | .049% | 99.014% |
| 71.0 | 14.542 | 1.508 | 3017.231 | .049% | 99.064% |
| 72.0 | 14.528 | 1.515 | 3018.746 | .049% | 99.113% |
| 73.0 | 14.494 | 1.520 | 3020.266 | .049% | 99.163% |
| 74.0 | 14.452 | 1.523 | 3021.79 | .049% | 99.213% |
| 75.0 | 14.418 | 1.527 | 3023.317 | .049% | 99.264% |

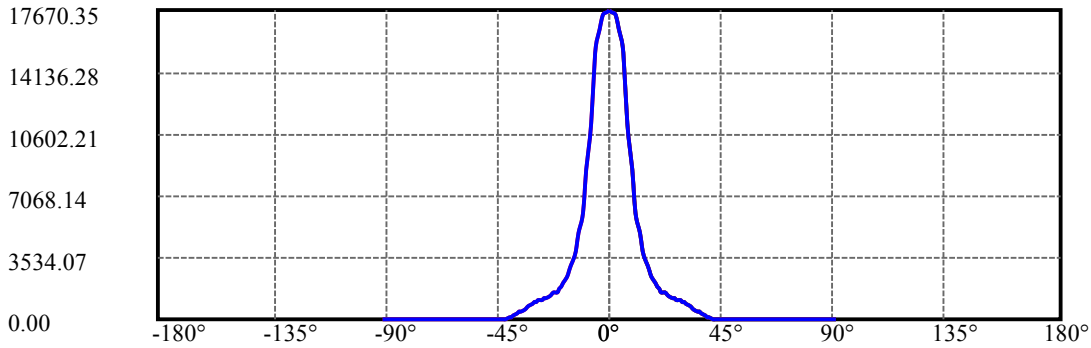
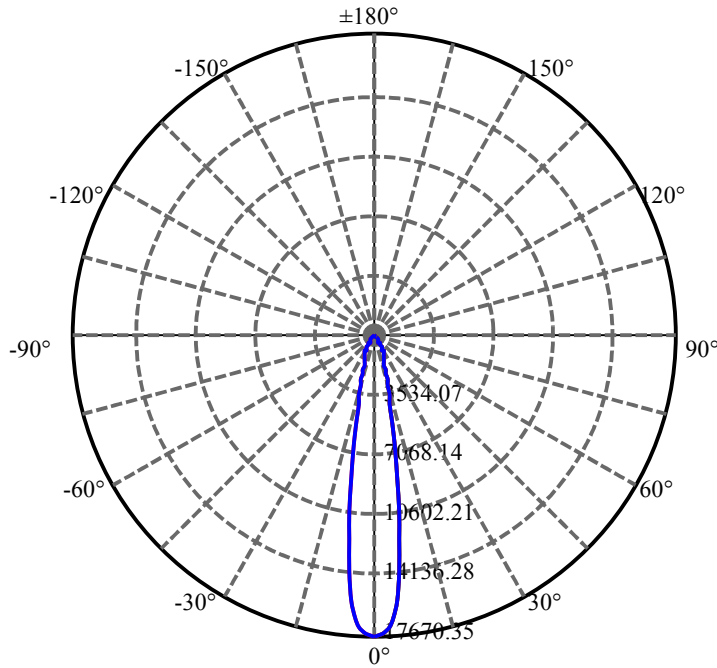
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0 | 14.397 | 1.532 | 3024.849 | .049% | 99.314% |
| 77.0 | 14.370 | 1.535 | 3026.384 | .049% | 99.364% |
| 78.0 | 14.342 | 1.538 | 3027.923 | .050% | 99.415% |
| 79.0 | 14.315 | 1.541 | 3029.464 | .050% | 99.465% |
| 80.0 | 14.328 | 1.547 | 3031.011 | .050% | 99.516% |
| 81.0 | 14.418 | 1.562 | 3032.573 | .050% | 99.567% |
| 82.0 | 14.569 | 1.582 | 3034.155 | .051% | 99.619% |
| 83.0 | 14.535 | 1.582 | 3035.737 | .051% | 99.671% |
| 84.0 | 14.287 | 1.558 | 3037.295 | .050% | 99.722% |
| 85.0 | 14.266 | 1.559 | 3038.853 | .050% | 99.774% |
| 86.0 | 14.239 | 1.558 | 3040.411 | .050% | 99.825% |
| 87.0 | 14.019 | 1.535 | 3041.946 | .049% | 99.875% |
| 88.0 | 13.909 | 1.524 | 3043.471 | .049% | 99.925% |
| 89.0 | 13.854 | 1.519 | 3044.99 | .049% | 99.975% |
| 90.0 | 13.833 | 0.758 | 3045.748 | .024% | 100.000% |

ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|--------|---------|
| 0-30 | 2692.06 | 86.70% | 88.39% |
| 0-40 | 2968.22 | 95.59% | 97.45% |
| 0-60 | 3000.84 | 96.65% | 98.53% |
| 0-90 | 3044.99 | 98.07% | 99.98% |
| 0-120 | 3044.99 | 98.07% | 99.98% |
| 0-180 | 3045.75 | 98.09% | 100.00% |
| 60-90 | 45.62 | 1.47% | 1.50% |
| 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% |
| 0-25.35 | 2436.60 | 78.47% | 80.00% |

ZONAL LUMEN SUMMARY

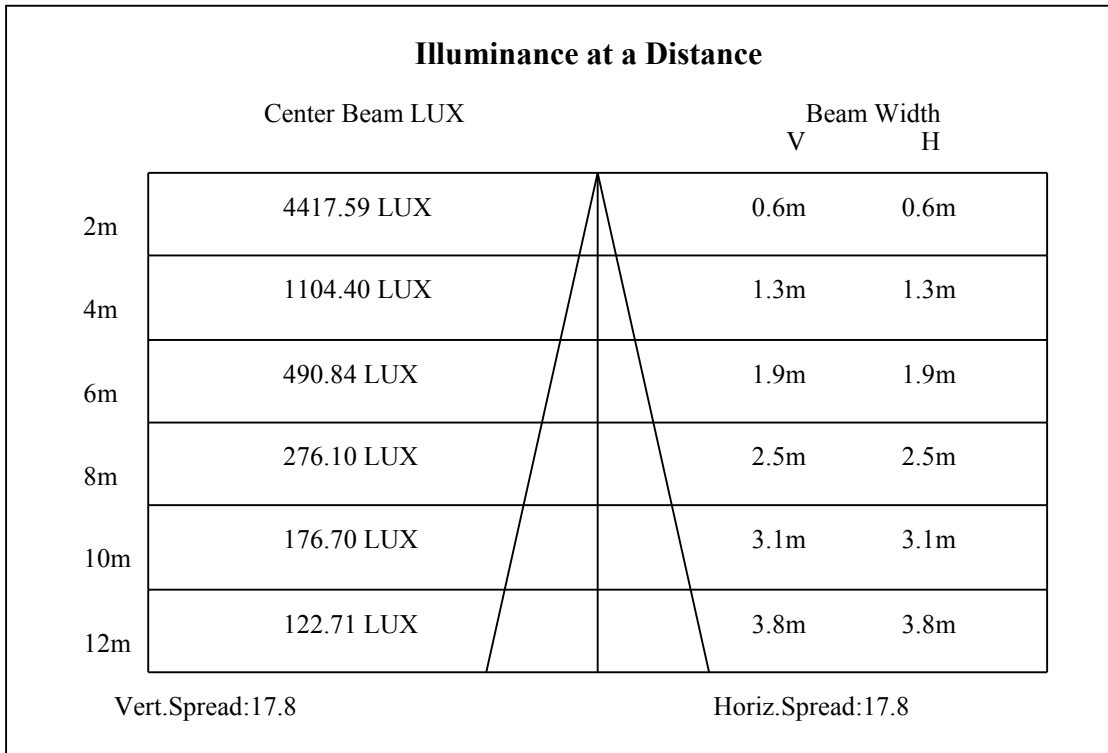
| | |
|---------|---------|
| 0-10 | 1236.55 |
| 10-20 | 882.14 |
| 20-30 | 573.37 |
| 30-40 | 276.16 |
| 40-50 | 17.95 |
| 50-60 | 14.67 |
| 60-70 | 14.88 |
| 70-80 | 15.29 |
| 80-90 | 13.98 |
| 90-100 | 0.00 |
| 100-110 | 0.00 |
| 110-120 | 0.00 |
| 120-130 | 0.00 |
| 130-140 | 0.00 |
| 140-150 | 0.00 |
| 150-160 | 0.00 |
| 160-170 | 0.00 |
| 170-180 | 0.00 |

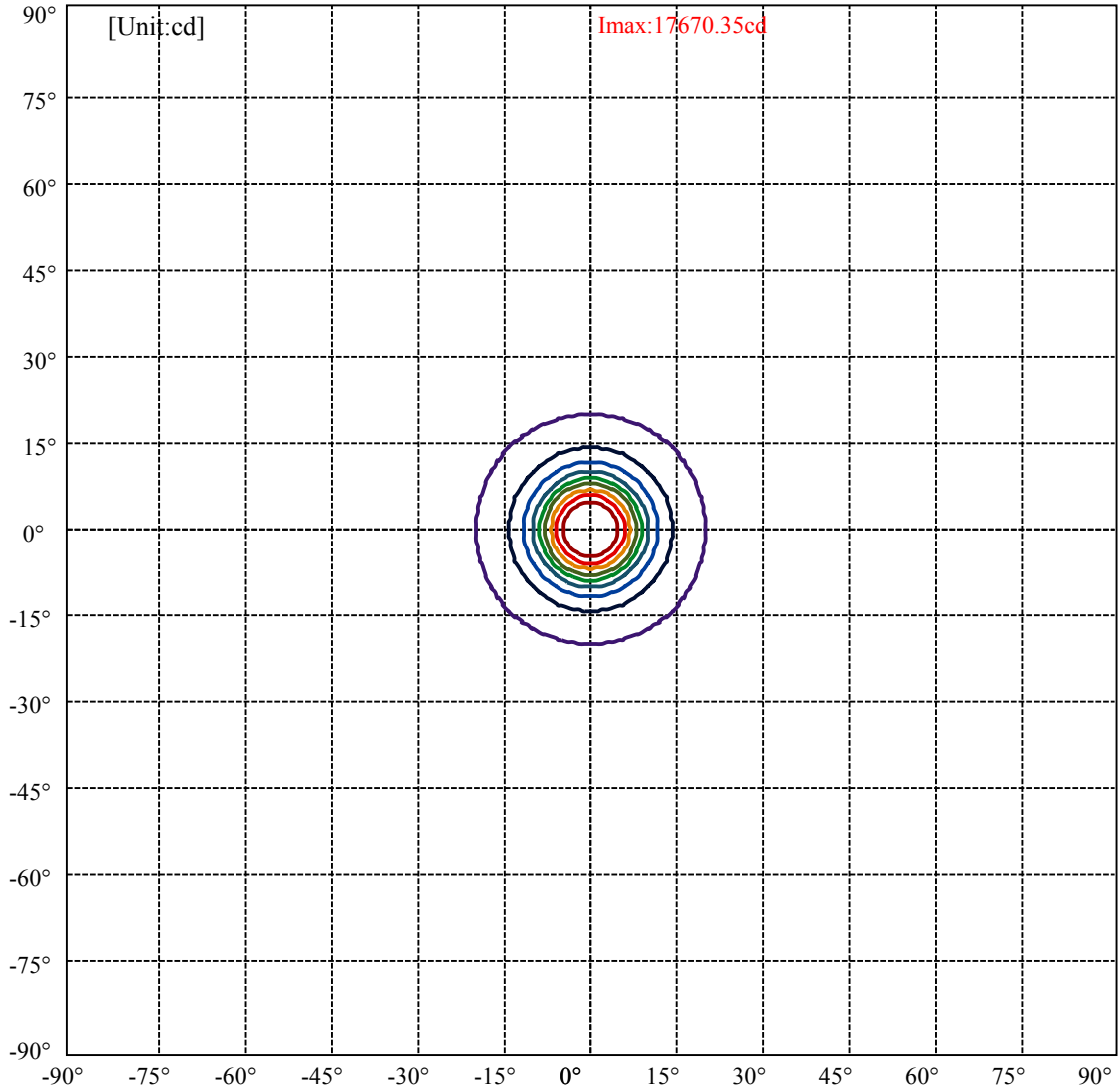


C0(Max): —————
C0/C180: —————
C90/C270: —————

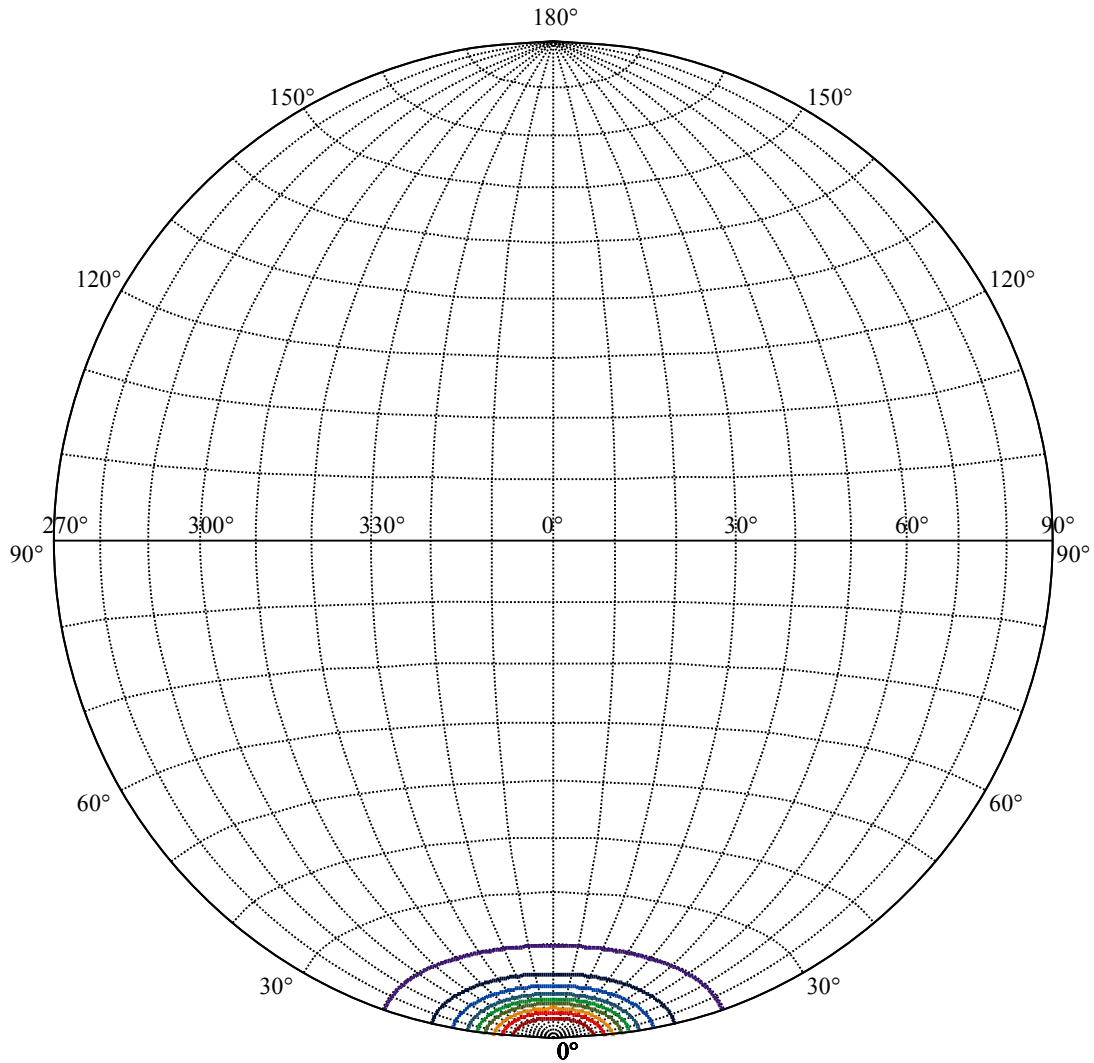
Field angle(10%Imax):C0/180Left:19.7 Right:19.7
:C90/270Left:19.7 Right:19.7

Beam Angle(50%Imax):C0/180Left:8.8 Right:8.8
:C90/270Left:8.8 Right:8.8





| | |
|-------------------|---|
| (10%Imax) 1767.04 | — |
| (20%Imax) 3534.07 | — |
| (30%Imax) 5301.11 | — |
| (40%Imax) 7068.14 | — |
| (50%Imax) 8835.18 | — |
| (60%Imax) 10602.2 | — |
| (70%Imax) 12369.2 | — |
| (80%Imax) 14136.3 | — |
| (90%Imax) 15903.3 | — |



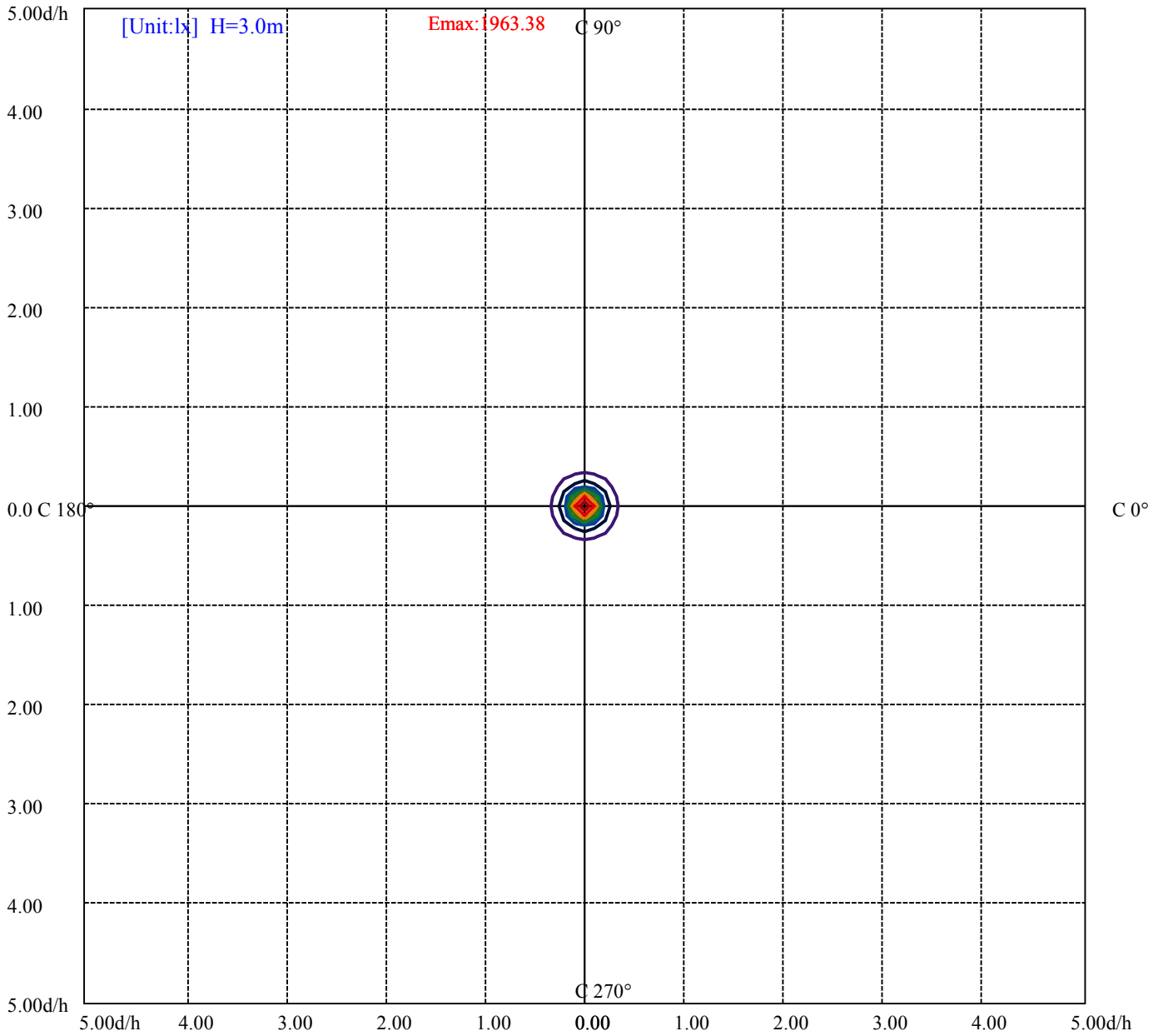
House

[Unit:cd]

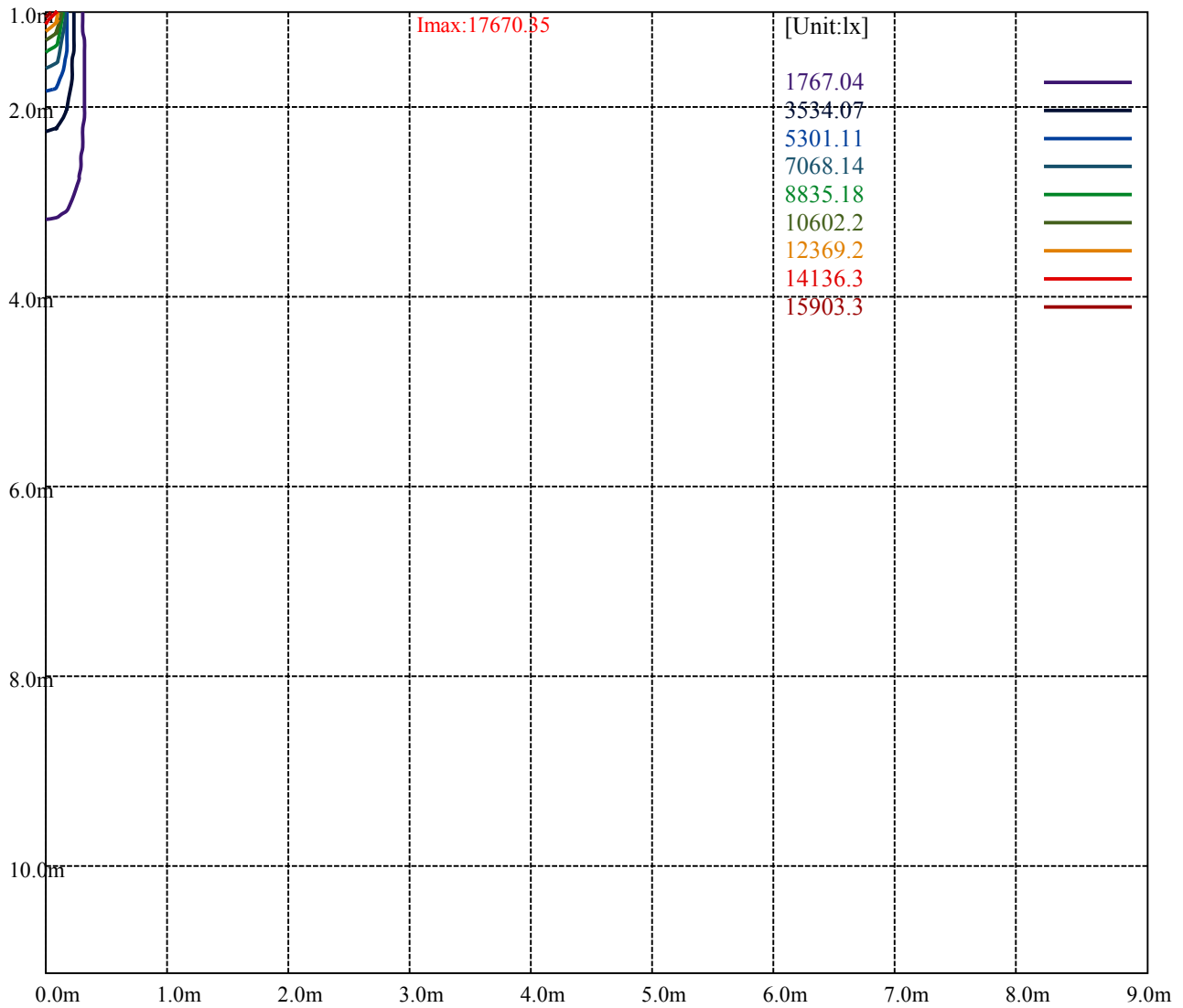
Road

Imax:17670.35

| | | |
|-----------|---------|---|
| (10%Imax) | 1767.04 | — |
| (20%Imax) | 3534.07 | — |
| (30%Imax) | 5301.11 | — |
| (40%Imax) | 7068.14 | — |
| (50%Imax) | 8835.18 | — |
| (60%Imax) | 10602.2 | — |
| (70%Imax) | 12369.2 | — |
| (80%Imax) | 14136.3 | — |
| (90%Imax) | 15903.3 | — |



- (10%Emax) 196.3367
- (20%Emax) 392.6744
- (30%Emax) 589.0111
- (40%Emax) 785.3489
- (50%Emax) 981.6855
- (60%Emax) 1178.022
- (70%Emax) 1374.356
- (80%Emax) 1570.7
- (90%Emax) 1767.033



Luminance Table

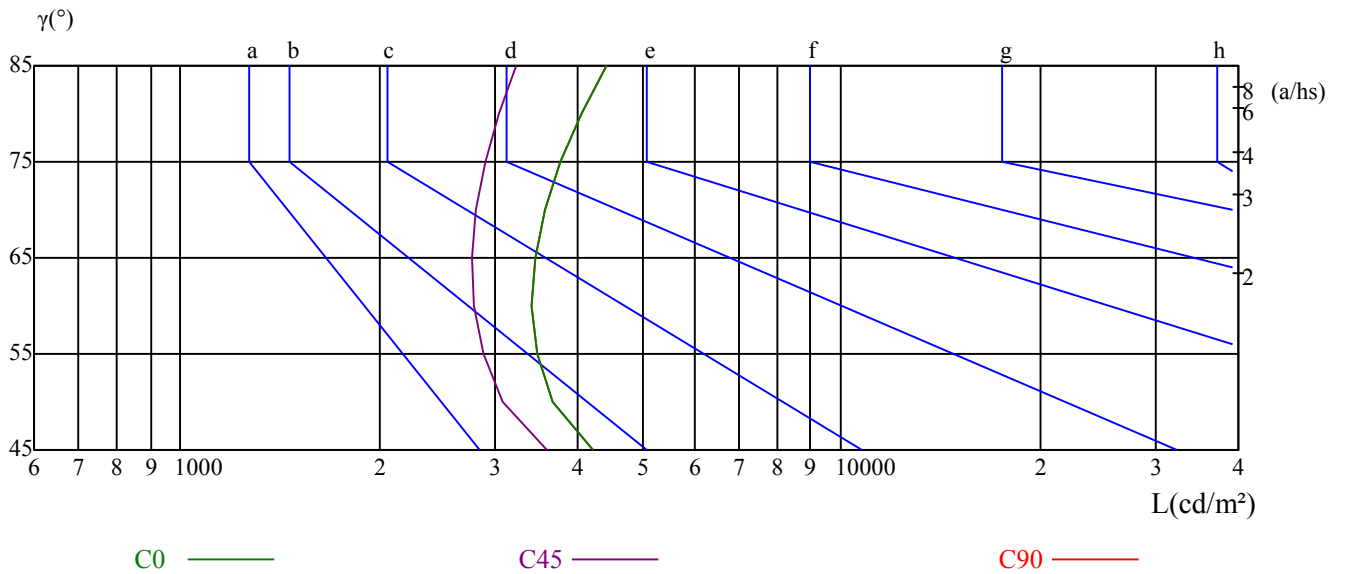
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|----------|------|------|------|------|------|------|------|------|------|
| C0 | 4211 | 3652 | 3463 | 3405 | 3443 | 3559 | 3753 | 4039 | 4422 |
| C45 | 3596 | 3072 | 2867 | 2774 | 2757 | 2796 | 2887 | 3034 | 3232 |
| C90 | 4211 | 3652 | 3463 | 3405 | 3443 | 3559 | 3753 | 4039 | 4422 |

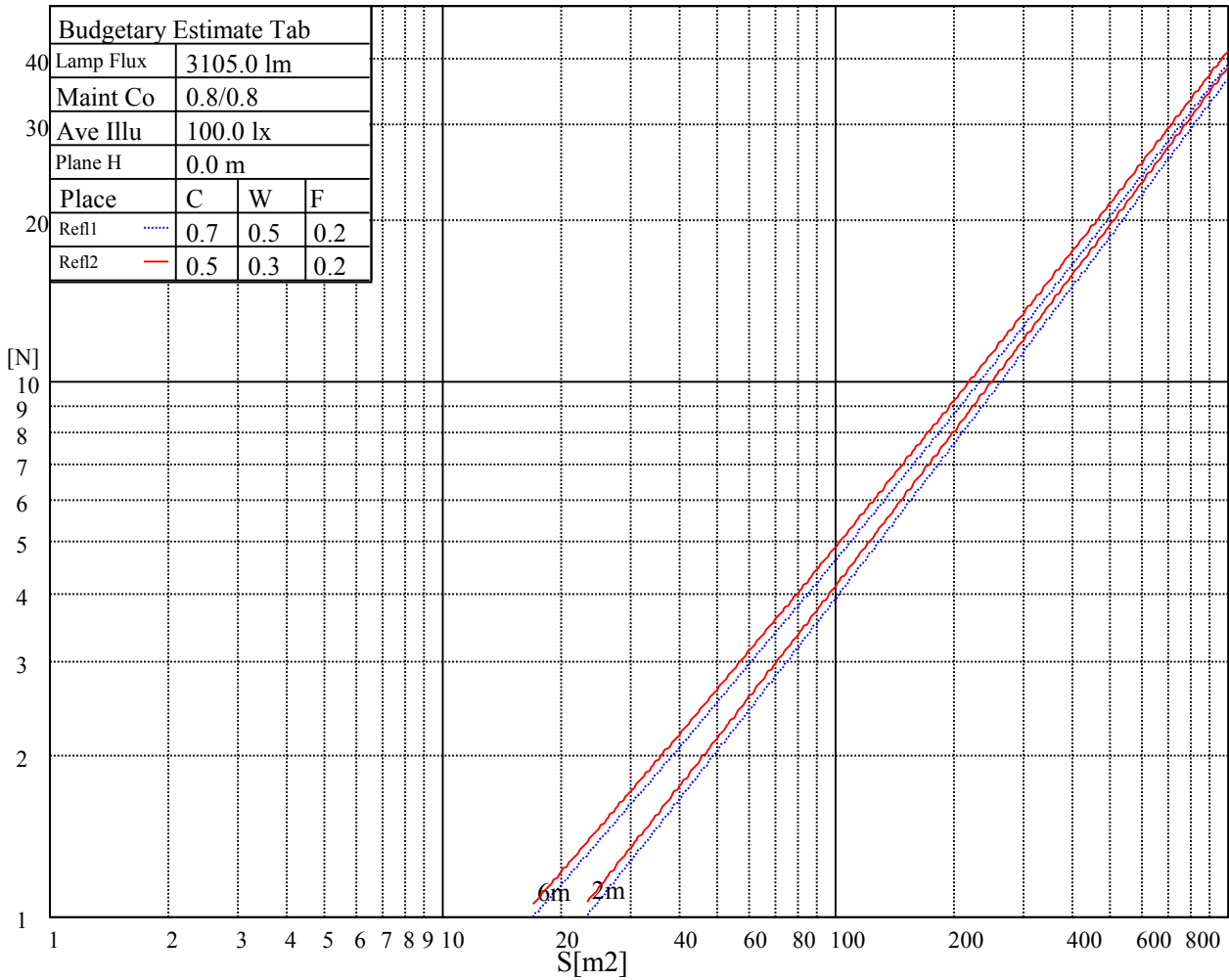
| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 8635 | 8635 | 8635 | 13600 | 13600 | 13600 | 39963 | 39963 | 39963 |

Glare Table

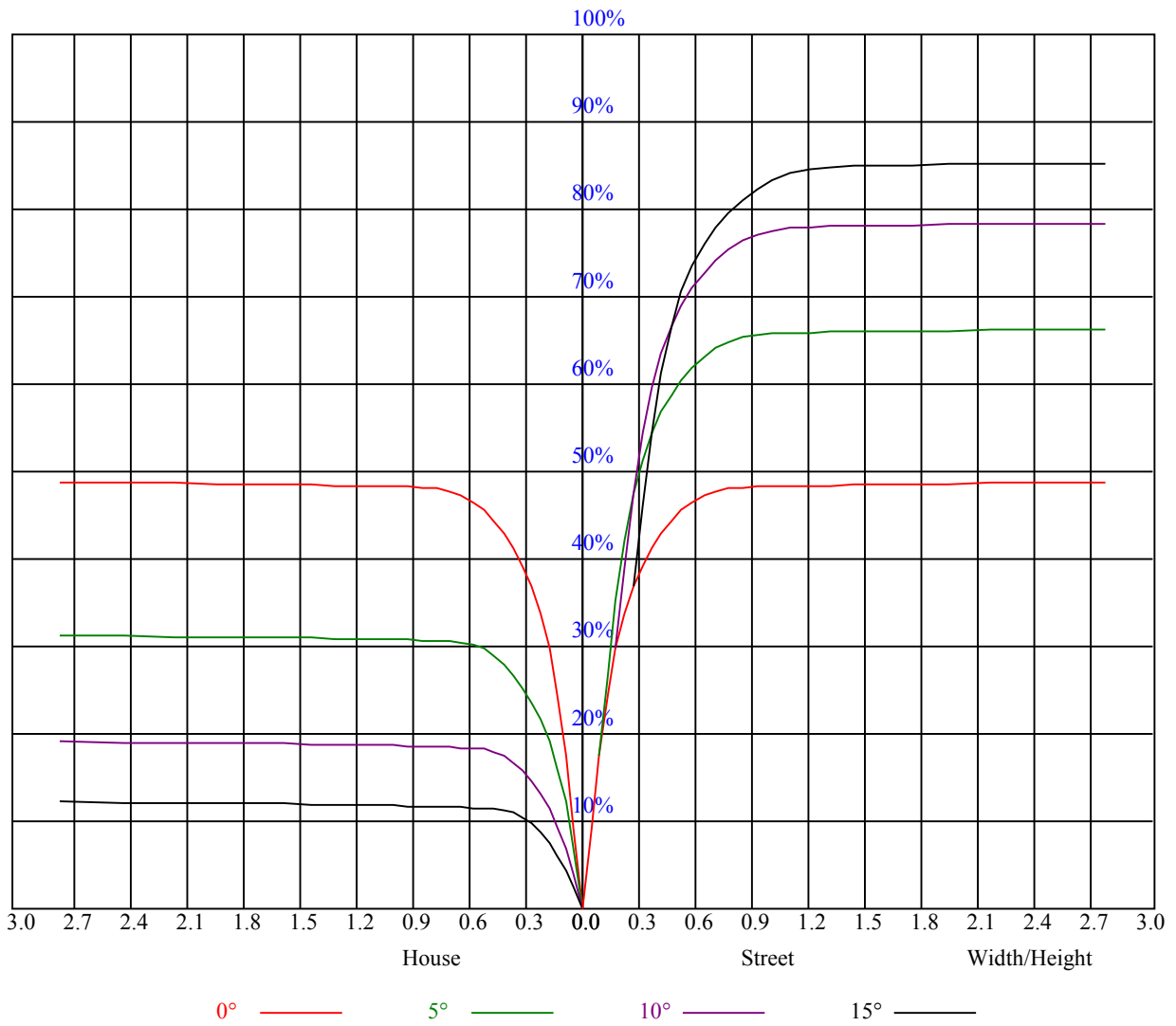
| Glare | Quality | Service Values Illuminance(lx) | | | | | | | |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15 | A | 2000 | 1000 | 500 | <=300 | | | | |
| 1.5 | B | | 2000 | 1000 | 500 | <=300 | | | |
| 1.85 | C | | | 2000 | 1000 | 500 | <=300 | | |
| 2.2 | D | | | | 2000 | 1000 | 500 | <=300 | |
| 2.55 | E | | | | | 2000 | 1000 | 500 | <=300 |
| | | a | b | c | d | e | f | g | h |

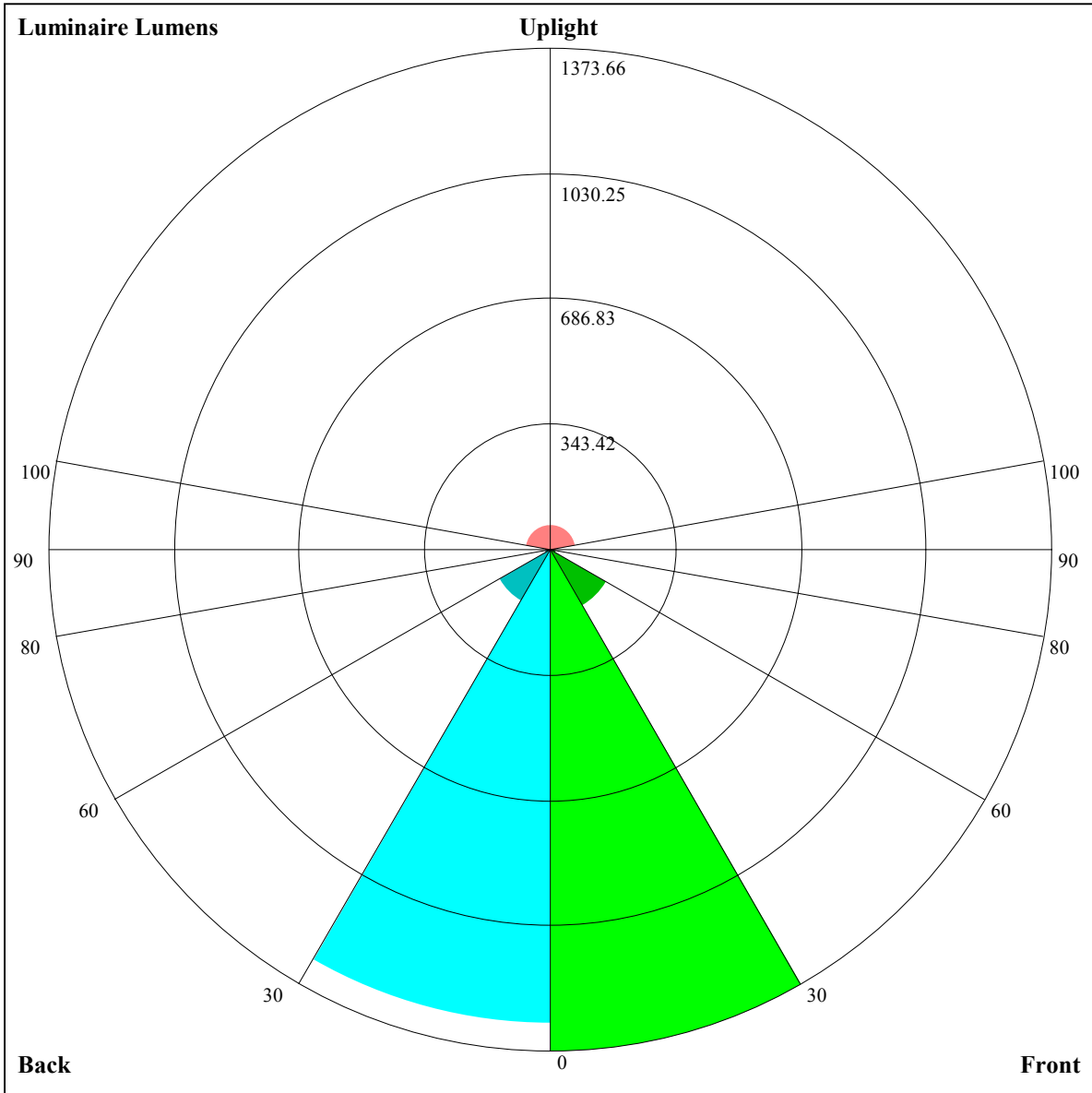
Luminance Limiting Curve





| 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 | 1.17 | 1.17 | 1.17 | 1.14 | 1.14 | 1.14 | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 1.00 | 1.00 | 1.00 | 0.98 |
| 1 | 1.10 | 1.08 | 1.06 | 1.08 | 1.06 | 1.05 | 1.04 | 1.03 | 1.01 | 1.00 | 0.99 | 0.98 | 0.97 | 0.96 | 0.95 | 0.94 |
| 2 | 1.05 | 1.01 | 0.99 | 1.03 | 1.00 | 0.98 | 1.00 | 0.98 | 0.96 | 0.97 | 0.95 | 0.93 | 0.94 | 0.93 | 0.92 | 0.90 |
| 3 | 1.00 | 0.96 | 0.93 | 0.99 | 0.95 | 0.92 | 0.96 | 0.93 | 0.91 | 0.94 | 0.91 | 0.89 | 0.92 | 0.90 | 0.88 | 0.87 |
| 4 | 0.96 | 0.91 | 0.88 | 0.95 | 0.91 | 0.88 | 0.93 | 0.89 | 0.87 | 0.91 | 0.88 | 0.86 | 0.89 | 0.87 | 0.85 | 0.84 |
| 5 | 0.92 | 0.88 | 0.84 | 0.91 | 0.87 | 0.84 | 0.89 | 0.86 | 0.83 | 0.88 | 0.85 | 0.83 | 0.87 | 0.84 | 0.82 | 0.81 |
| 6 | 0.89 | 0.84 | 0.81 | 0.88 | 0.84 | 0.81 | 0.87 | 0.83 | 0.80 | 0.85 | 0.82 | 0.80 | 0.84 | 0.81 | 0.79 | 0.78 |
| 7 | 0.86 | 0.81 | 0.78 | 0.85 | 0.81 | 0.78 | 0.84 | 0.80 | 0.78 | 0.83 | 0.80 | 0.77 | 0.82 | 0.79 | 0.77 | 0.76 |
| 8 | 0.83 | 0.79 | 0.76 | 0.82 | 0.78 | 0.76 | 0.81 | 0.78 | 0.75 | 0.81 | 0.77 | 0.75 | 0.80 | 0.77 | 0.75 | 0.74 |
| 9 | 0.80 | 0.76 | 0.73 | 0.80 | 0.76 | 0.73 | 0.79 | 0.76 | 0.73 | 0.78 | 0.75 | 0.73 | 0.78 | 0.75 | 0.73 | 0.72 |
| 10 | 0.78 | 0.74 | 0.71 | 0.78 | 0.74 | 0.71 | 0.77 | 0.74 | 0.71 | 0.76 | 0.73 | 0.71 | 0.76 | 0.73 | 0.71 | 0.70 |





Luminaire Lumens:

FL=1373.66,FM=176.59,FH=15.02,FVH=7.74

BL=1296.38,BM=160.35,BH=15.05,BVH=7.78

UL=15.09,UH=71.82

BUG Rating:B3-U2-G0

Intensity data(cd)

| | | | | | | | | | |
|--------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| C/γ(°) | 0.0 | 1.0 | 2.0 | 3.0 | 4.0 | 5.0 | 6.0 | 7.0 | 8.0 |
| 0.0 | 17662.09 | 17739.17 | 17656.59 | 17441.87 | 17012.43 | 16494.90 | 15597.48 | 13995.34 | 12128.92 |
| 45.0 | 17728.16 | 17529.96 | 17265.69 | 17039.96 | 16577.48 | 15619.50 | 14248.60 | 12316.12 | 10537.79 |
| 90.0 | 17590.52 | 17370.29 | 17172.09 | 16726.13 | 16021.41 | 14914.78 | 13241.06 | 10966.13 | 9403.08 |
| 135.0 | 17700.63 | 17574.00 | 17375.80 | 16918.83 | 16313.21 | 15261.63 | 13791.63 | 11732.52 | 9822.06 |
| 180.0 | 17662.09 | 17524.45 | 17227.15 | 16704.11 | 15900.29 | 14611.97 | 10940.26 | 10482.19 | 8704.42 |
| 225.0 | 17728.16 | 17623.55 | 17441.87 | 17183.10 | 16665.57 | 15696.58 | 14083.43 | 10775.64 | 10331.88 |
| 270.0 | 17590.52 | 17695.13 | 17540.97 | 17397.82 | 17034.45 | 16197.59 | 15041.41 | 13307.13 | 11539.82 |
| 315.0 | 17700.63 | 17706.14 | 17623.55 | 17298.72 | 16775.69 | 16109.50 | 14837.70 | 12222.52 | 10958.43 |
| 360.0 | 17662.09 | 17739.17 | 17656.59 | 17441.87 | 17012.43 | 16494.90 | 15597.48 | 13995.34 | 12128.92 |
| C/γ(°) | 9.0 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 |
| 0.0 | 10009.25 | 8109.81 | 6815.98 | 5791.93 | 4767.88 | 4090.69 | 3540.13 | 3094.17 | 2802.37 |
| 45.0 | 8643.85 | 7058.23 | 5935.08 | 5043.17 | 4140.24 | 3589.68 | 3127.20 | 2785.85 | 2333.84 |
| 90.0 | 7792.68 | 6212.01 | 5257.34 | 4334.59 | 3830.27 | 3298.43 | 2812.83 | 2519.38 | 2235.29 |
| 135.0 | 7955.65 | 6551.71 | 5582.72 | 4806.42 | 4002.60 | 3474.06 | 3028.10 | 2824.39 | 2239.14 |
| 180.0 | 7038.96 | 5810.65 | 4957.83 | 4195.85 | 3596.28 | 3160.24 | 2752.27 | 2442.85 | 2151.05 |
| 225.0 | 8456.11 | 6862.78 | 5760.55 | 4802.02 | 4122.62 | 3511.50 | 3012.69 | 2641.06 | 2305.21 |
| 270.0 | 9513.75 | 7685.87 | 6397.55 | 5406.54 | 4437.55 | 3826.42 | 3319.90 | 2813.38 | 2631.70 |
| 315.0 | 8930.15 | 7291.67 | 6153.65 | 5108.68 | 4343.40 | 3646.39 | 3105.18 | 2717.58 | 2239.76 |
| 360.0 | 10009.25 | 8109.81 | 6815.98 | 5791.93 | 4767.88 | 4090.69 | 3540.13 | 3094.17 | 2802.37 |
| C/γ(°) | 18.0 | 19.0 | 20.0 | 21.0 | 22.0 | 23.0 | 24.0 | 25.0 | 26.0 |
| 0.0 | 2336.59 | 2107.56 | 1880.73 | 1733.18 | 1612.60 | 1500.29 | 1403.94 | 1330.16 | 1256.94 |
| 45.0 | 2084.44 | 1869.16 | 1688.58 | 1569.11 | 1465.05 | 1350.53 | 1279.51 | 1209.59 | 1157.84 |
| 90.0 | 1931.93 | 1779.97 | 1623.61 | 1484.32 | 1402.84 | 1325.21 | 1249.23 | 1184.26 | 1097.93 |
| 135.0 | 2007.91 | 1826.77 | 1648.39 | 1537.73 | 1446.33 | 1338.42 | 1270.15 | 1211.24 | 1153.98 |
| 180.0 | 1914.31 | 1745.84 | 1611.50 | 1472.76 | 1380.26 | 1301.53 | 1221.15 | 1169.40 | 1096.67 |
| 225.0 | 2050.85 | 1870.27 | 1720.51 | 1568.56 | 1465.05 | 1376.96 | 1302.08 | 1224.45 | 1173.25 |
| 270.0 | 2240.80 | 2032.13 | 1825.67 | 1690.78 | 1572.96 | 1449.08 | 1367.05 | 1294.93 | 1222.80 |
| 315.0 | 2115.82 | 1939.09 | 1786.58 | 1635.18 | 1527.26 | 1422.66 | 1334.02 | 1266.30 | 1207.39 |
| 360.0 | 2336.59 | 2107.56 | 1880.73 | 1733.18 | 1612.60 | 1500.29 | 1403.94 | 1330.16 | 1256.94 |
| C/γ(°) | 27.0 | 28.0 | 29.0 | 30.0 | 31.0 | 32.0 | 33.0 | 34.0 | 35.0 |
| 0.0 | 1201.33 | 1147.93 | 1100.58 | 1046.62 | 972.30 | 879.80 | 788.41 | 692.61 | 572.04 |
| 45.0 | 1110.49 | 1068.09 | 1020.20 | 962.94 | 883.66 | 781.80 | 688.76 | 558.27 | 472.38 |
| 90.0 | 1087.42 | 1041.17 | 981.60 | 909.86 | 811.31 | 713.20 | 611.68 | 504.32 | 412.43 |
| 135.0 | 1104.98 | 1063.69 | 1002.58 | 923.85 | 837.41 | 725.09 | 642.51 | 540.65 | 429.44 |
| 180.0 | 1077.07 | 1024.87 | 962.39 | 865.65 | 775.63 | 676.31 | 570.55 | 486.09 | 389.30 |
| 225.0 | 1093.09 | 1078.94 | 1032.31 | 975.54 | 907.16 | 809.55 | 710.34 | 596.81 | 496.72 |
| 270.0 | 1162.24 | 1118.75 | 1073.05 | 1027.35 | 966.79 | 876.50 | 790.61 | 682.70 | 566.53 |
| 315.0 | 1147.38 | 1094.14 | 1058.07 | 1004.28 | 918.95 | 829.87 | 735.72 | 638.21 | 531.40 |
| 360.0 | 1201.33 | 1147.93 | 1100.58 | 1046.62 | 972.30 | 879.80 | 788.41 | 692.61 | 572.04 |
| C/γ(°) | 36.0 | 37.0 | 38.0 | 39.0 | 40.0 | 41.0 | 42.0 | 43.0 | 44.0 |
| 0.0 | 481.74 | 390.90 | 290.70 | 232.67 | 121.67 | 65.90 | 39.26 | 31.82 | 28.02 |
| 45.0 | 372.73 | 284.09 | 172.82 | 108.30 | 72.40 | 35.68 | 26.81 | 24.22 | 20.59 |
| 90.0 | 310.57 | 218.46 | 144.96 | 82.03 | 41.29 | 27.97 | 25.05 | 21.20 | 19.21 |
| 135.0 | 347.96 | 284.64 | 168.14 | 108.74 | 55.33 | 32.37 | 28.30 | 24.61 | 21.53 |
| 180.0 | 294.94 | 216.81 | 139.29 | 67.06 | 37.93 | 30.28 | 27.53 | 23.95 | 22.41 |
| 225.0 | 386.06 | 282.22 | 196.66 | 122.56 | 62.93 | 34.41 | 27.20 | 23.62 | 20.70 |
| 270.0 | 472.93 | 372.18 | 289.05 | 169.96 | 101.69 | 50.43 | 30.06 | 26.81 | 23.01 |
| 315.0 | 427.35 | 326.81 | 247.26 | 168.20 | 89.08 | 48.45 | 33.36 | 28.35 | 24.33 |
| 360.0 | 481.74 | 390.90 | 290.70 | 232.67 | 121.67 | 65.90 | 39.26 | 31.82 | 28.02 |

Intensity data(cd)

| | | | | | | | | | |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C/γ(°) | 45.0 | 46.0 | 47.0 | 48.0 | 49.0 | 50.0 | 51.0 | 52.0 | 53.0 |
| 0.0 | 24.83 | 22.79 | 21.75 | 20.87 | 20.15 | 19.43 | 18.88 | 18.39 | 17.89 |
| 45.0 | 19.16 | 18.72 | 18.06 | 17.62 | 17.34 | 17.01 | 16.79 | 16.57 | 16.35 |
| 90.0 | 18.66 | 18.06 | 17.56 | 17.23 | 16.90 | 16.68 | 16.46 | 16.30 | 16.13 |
| 135.0 | 20.59 | 19.88 | 19.16 | 18.61 | 18.06 | 17.62 | 17.29 | 17.01 | 16.68 |
| 180.0 | 21.69 | 20.87 | 20.32 | 19.88 | 19.32 | 18.99 | 18.61 | 18.22 | 17.95 |
| 225.0 | 19.27 | 18.61 | 18.00 | 17.51 | 17.12 | 16.79 | 16.57 | 16.30 | 16.13 |
| 270.0 | 20.04 | 19.21 | 18.28 | 17.78 | 17.29 | 16.90 | 16.63 | 16.41 | 16.19 |
| 315.0 | 21.91 | 21.03 | 20.15 | 19.38 | 18.66 | 17.95 | 17.56 | 17.18 | 16.96 |
| 360.0 | 24.83 | 22.79 | 21.75 | 20.87 | 20.15 | 19.43 | 18.88 | 18.39 | 17.89 |
| C/γ(°) | 54.0 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 | 60.0 | 61.0 | 62.0 |
| 0.0 | 17.51 | 17.18 | 16.85 | 16.57 | 16.35 | 16.13 | 15.91 | 15.80 | 15.64 |
| 45.0 | 16.19 | 15.97 | 15.80 | 15.64 | 15.53 | 15.42 | 15.31 | 15.25 | 15.14 |
| 90.0 | 15.91 | 15.75 | 15.58 | 15.47 | 15.31 | 15.31 | 15.20 | 15.09 | 14.98 |
| 135.0 | 16.46 | 16.24 | 15.97 | 15.86 | 15.69 | 15.53 | 15.42 | 15.31 | 15.20 |
| 180.0 | 17.62 | 17.29 | 16.96 | 16.63 | 16.30 | 16.08 | 15.91 | 15.69 | 15.58 |
| 225.0 | 15.97 | 15.80 | 15.64 | 15.58 | 15.42 | 15.31 | 15.25 | 15.09 | 15.03 |
| 270.0 | 16.02 | 15.86 | 15.64 | 15.53 | 15.42 | 15.31 | 15.20 | 15.14 | 15.09 |
| 315.0 | 16.63 | 16.35 | 16.13 | 15.97 | 15.80 | 15.64 | 15.53 | 15.36 | 15.25 |
| 360.0 | 17.51 | 17.18 | 16.85 | 16.57 | 16.35 | 16.13 | 15.91 | 15.80 | 15.64 |
| C/γ(°) | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 | 70.0 | 71.0 |
| 0.0 | 15.53 | 15.36 | 15.25 | 15.14 | 15.03 | 14.98 | 14.87 | 14.81 | 14.70 |
| 45.0 | 15.03 | 14.98 | 14.87 | 14.76 | 14.70 | 14.59 | 14.59 | 14.53 | 14.42 |
| 90.0 | 14.92 | 14.81 | 14.76 | 14.70 | 14.65 | 14.59 | 14.48 | 14.42 | 14.37 |
| 135.0 | 15.14 | 15.03 | 14.92 | 14.87 | 14.76 | 14.76 | 14.65 | 14.65 | 14.53 |
| 180.0 | 15.42 | 15.31 | 15.20 | 15.20 | 15.09 | 15.03 | 15.03 | 14.98 | 14.92 |
| 225.0 | 14.98 | 14.87 | 14.81 | 14.70 | 14.65 | 14.65 | 14.53 | 14.48 | 14.48 |
| 270.0 | 14.98 | 14.92 | 14.81 | 14.70 | 14.70 | 14.59 | 14.53 | 14.48 | 14.37 |
| 315.0 | 15.20 | 15.09 | 14.98 | 14.92 | 14.81 | 14.70 | 14.65 | 14.59 | 14.53 |
| 360.0 | 15.53 | 15.36 | 15.25 | 15.14 | 15.03 | 14.98 | 14.87 | 14.81 | 14.70 |
| C/γ(°) | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0 | 80.0 |
| 0.0 | 14.70 | 14.65 | 14.59 | 14.53 | 14.53 | 14.42 | 14.42 | 14.31 | 14.31 |
| 45.0 | 14.42 | 14.42 | 14.31 | 14.31 | 14.26 | 14.26 | 14.20 | 14.15 | 14.15 |
| 90.0 | 14.37 | 14.31 | 14.26 | 14.26 | 14.20 | 14.20 | 14.15 | 14.15 | 14.31 |
| 135.0 | 14.53 | 14.48 | 14.48 | 14.42 | 14.42 | 14.37 | 14.31 | 14.31 | 14.31 |
| 180.0 | 14.98 | 14.98 | 14.98 | 14.92 | 14.98 | 14.98 | 14.98 | 15.03 | 15.03 |
| 225.0 | 14.42 | 14.37 | 14.31 | 14.26 | 14.20 | 14.20 | 14.20 | 14.20 | 14.15 |
| 270.0 | 14.31 | 14.31 | 14.26 | 14.20 | 14.20 | 14.20 | 14.15 | 14.09 | 14.09 |
| 315.0 | 14.48 | 14.42 | 14.42 | 14.42 | 14.37 | 14.31 | 14.31 | 14.26 | 14.26 |
| 360.0 | 14.70 | 14.65 | 14.59 | 14.53 | 14.53 | 14.42 | 14.42 | 14.31 | 14.31 |
| C/γ(°) | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.0 |
| 0.0 | 14.26 | 14.26 | 14.20 | 14.15 | 14.15 | 14.09 | 14.09 | 14.04 | 13.93 |
| 45.0 | 14.26 | 14.59 | 14.81 | 14.31 | 14.26 | 14.31 | 13.93 | 13.93 | 13.87 |
| 90.0 | 15.09 | 15.97 | 15.58 | 14.31 | 14.37 | 14.42 | 13.87 | 13.87 | 13.82 |
| 135.0 | 14.31 | 14.37 | 14.37 | 14.31 | 14.31 | 14.31 | 14.31 | 13.87 | 13.82 |
| 180.0 | 15.03 | 15.03 | 15.03 | 14.98 | 14.92 | 14.81 | 14.15 | 13.87 | 13.82 |
| 225.0 | 14.09 | 14.09 | 14.09 | 14.04 | 14.04 | 14.04 | 13.98 | 13.93 | 13.82 |
| 270.0 | 14.09 | 14.04 | 14.04 | 14.04 | 14.04 | 13.98 | 13.87 | 13.87 | 13.87 |
| 315.0 | 14.20 | 14.20 | 14.15 | 14.15 | 14.04 | 13.93 | 13.93 | 13.87 | 13.87 |
| 360.0 | 14.26 | 14.26 | 14.20 | 14.15 | 14.15 | 14.09 | 14.09 | 14.04 | 13.93 |

Intensity data(cd)

| | |
|---------------|--------------|
| C/γ(°) | 90.0 |
| 0.0 | 13.87 |
| 45.0 | 13.87 |
| 90.0 | 13.82 |
| 135.0 | 13.82 |
| 180.0 | 13.82 |
| 225.0 | 13.82 |
| 270.0 | 13.82 |
| 315.0 | 13.82 |
| 360.0 | 13.87 |