



NATA LIGHTING CO.,LTD.  
www.nata.cn  
Email:info@nata.com  
Tel:+86-750-3770000 Fax:+86-750-3771111  
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

## Nata

LumCAT: 1-1006-M  
Luminaire: BJB 47.360.1020  
Report No: NATA0100  
Test No: GC2019102310  
LampCAT: BRIDGELUX V10B LES10  
Lamp flux(lm): 1480.0  
Number of Lamps: 1  
Length(mm): 0  
Phm Type: C

Voltage(V): 33.8200  
Current(A): 0.3000  
Power (W): 10.1000  
PF: 1.0000  
Ballast type: DC  
Width(mm): 0  
Height(mm): 0

## Photometric Results

Lumens(lm): 1088.01  
Efficiency(%): 73.51%  
Lumens(lm)/Power(W): 107.72  
Central intensity(cd): 5643.141  
Maximum intensity(cd): 5643.141  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=24.3  
[C90/270]Total=24.3  
Field angle(10%Imax): [C0/180]Total=42.6  
[C90/270]Total=42.6  
Maximum s/h(1/2): C0\_180=0.41 C90\_270=0.41  
Maximum s/h(1/4): C0\_180=0.41 C90\_270=0.41  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 73.51%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 98.565%

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0                | 5643.141      | 0.000       | 0         | .000%       | .000%      |
| 1.0                | 5622.750      | 5.391       | 5.391     | .364%       | .495%      |
| 2.0                | 5541.117      | 16.023      | 21.414    | 1.083%      | 1.968%     |
| 3.0                | 5419.477      | 26.214      | 47.628    | 1.771%      | 4.378%     |
| 4.0                | 5267.180      | 35.772      | 83.4      | 2.417%      | 7.665%     |
| 5.0                | 5060.531      | 44.429      | 127.829   | 3.002%      | 11.749%    |
| 6.0                | 4823.859      | 51.945      | 179.774   | 3.510%      | 16.523%    |
| 7.0                | 4565.250      | 58.278      | 238.052   | 3.938%      | 21.880%    |
| 8.0                | 4254.680      | 63.123      | 301.175   | 4.265%      | 27.681%    |
| 9.0                | 3932.648      | 66.354      | 367.529   | 4.483%      | 33.780%    |
| 10.0               | 3587.766      | 68.057      | 435.586   | 4.598%      | 40.035%    |
| 11.0               | 3212.859      | 67.952      | 503.538   | 4.591%      | 46.280%    |
| 12.0               | 2880.633      | 66.611      | 570.148   | 4.501%      | 52.403%    |
| 13.0               | 2521.688      | 64.112      | 634.26    | 4.332%      | 58.295%    |
| 14.0               | 2175.258      | 60.120      | 694.381   | 4.062%      | 63.821%    |
| 15.0               | 1894.781      | 55.875      | 750.256   | 3.775%      | 68.956%    |
| 16.0               | 1619.859      | 51.499      | 801.755   | 3.480%      | 73.690%    |
| 17.0               | 1336.669      | 46.041      | 847.797   | 3.111%      | 77.921%    |
| 18.0               | 1137.839      | 40.799      | 888.596   | 2.757%      | 81.671%    |
| 19.0               | 957.361       | 36.452      | 925.048   | 2.463%      | 85.022%    |
| 20.0               | 771.328       | 31.640      | 956.688   | 2.138%      | 87.930%    |
| 21.0               | 606.108       | 26.450      | 983.137   | 1.787%      | 90.361%    |
| 22.0               | 472.205       | 21.669      | 1004.806  | 1.464%      | 92.352%    |
| 23.0               | 349.165       | 17.235      | 1022.041  | 1.164%      | 93.936%    |
| 24.0               | 235.083       | 12.774      | 1034.815  | .863%       | 95.110%    |
| 25.0               | 166.043       | 9.121       | 1043.936  | .616%       | 95.949%    |
| 26.0               | 89.888        | 6.041       | 1049.977  | .408%       | 96.504%    |
| 27.0               | 50.372        | 3.431       | 1053.408  | .232%       | 96.819%    |
| 28.0               | 29.180        | 2.014       | 1055.422  | .136%       | 97.004%    |
| 29.0               | 19.413        | 1.271       | 1056.694  | .086%       | 97.121%    |
| 30.0               | 13.859        | 0.898       | 1057.592  | .061%       | 97.204%    |
| 31.0               | 11.363        | 0.702       | 1058.294  | .047%       | 97.268%    |
| 32.0               | 10.125        | 0.616       | 1058.909  | .042%       | 97.325%    |
| 33.0               | 9.352         | 0.574       | 1059.483  | .039%       | 97.378%    |
| 34.0               | 8.782         | 0.549       | 1060.032  | .037%       | 97.428%    |
| 35.0               | 8.205         | 0.528       | 1060.56   | .036%       | 97.477%    |
| 36.0               | 7.805         | 0.510       | 1061.069  | .034%       | 97.523%    |
| 37.0               | 7.467         | 0.498       | 1061.567  | .034%       | 97.569%    |

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0               | 7.151         | 0.488       | 1062.055  | .033%       | 97.614%    |
| 39.0               | 6.877         | 0.479       | 1062.534  | .032%       | 97.658%    |
| 40.0               | 6.687         | 0.473       | 1063.007  | .032%       | 97.702%    |
| 41.0               | 6.483         | 0.469       | 1063.476  | .032%       | 97.745%    |
| 42.0               | 6.307         | 0.465       | 1063.941  | .031%       | 97.787%    |
| 43.0               | 6.166         | 0.462       | 1064.403  | .031%       | 97.830%    |
| 44.0               | 6.047         | 0.461       | 1064.864  | .031%       | 97.872%    |
| 45.0               | 5.934         | 0.460       | 1065.324  | .031%       | 97.915%    |
| 46.0               | 5.843         | 0.461       | 1065.785  | .031%       | 97.957%    |
| 47.0               | 5.745         | 0.461       | 1066.246  | .031%       | 97.999%    |
| 48.0               | 5.681         | 0.462       | 1066.708  | .031%       | 98.042%    |
| 49.0               | 5.597         | 0.463       | 1067.171  | .031%       | 98.084%    |
| 50.0               | 5.527         | 0.464       | 1067.635  | .031%       | 98.127%    |
| 51.0               | 5.463         | 0.465       | 1068.1    | .031%       | 98.170%    |
| 52.0               | 5.428         | 0.467       | 1068.567  | .032%       | 98.213%    |
| 53.0               | 5.372         | 0.470       | 1069.037  | .032%       | 98.256%    |
| 54.0               | 5.323         | 0.471       | 1069.508  | .032%       | 98.299%    |
| 55.0               | 5.302         | 0.474       | 1069.982  | .032%       | 98.343%    |
| 56.0               | 5.266         | 0.478       | 1070.46   | .032%       | 98.387%    |
| 57.0               | 5.224         | 0.480       | 1070.94   | .032%       | 98.431%    |
| 58.0               | 5.217         | 0.483       | 1071.422  | .033%       | 98.475%    |
| 59.0               | 5.182         | 0.486       | 1071.909  | .033%       | 98.520%    |
| 60.0               | 5.154         | 0.488       | 1072.397  | .033%       | 98.565%    |
| 61.0               | 5.133         | 0.491       | 1072.888  | .033%       | 98.610%    |
| 62.0               | 5.119         | 0.494       | 1073.382  | .033%       | 98.655%    |
| 63.0               | 5.091         | 0.497       | 1073.878  | .034%       | 98.701%    |
| 64.0               | 5.098         | 0.500       | 1074.378  | .034%       | 98.747%    |
| 65.0               | 5.070         | 0.503       | 1074.881  | .034%       | 98.793%    |
| 66.0               | 5.048         | 0.505       | 1075.386  | .034%       | 98.839%    |
| 67.0               | 5.048         | 0.508       | 1075.894  | .034%       | 98.886%    |
| 68.0               | 5.034         | 0.511       | 1076.405  | .035%       | 98.933%    |
| 69.0               | 5.034         | 0.514       | 1076.918  | .035%       | 98.980%    |
| 70.0               | 5.006         | 0.516       | 1077.434  | .035%       | 99.028%    |
| 71.0               | 4.999         | 0.517       | 1077.951  | .035%       | 99.075%    |
| 72.0               | 4.978         | 0.519       | 1078.47   | .035%       | 99.123%    |
| 73.0               | 4.985         | 0.521       | 1078.991  | .035%       | 99.171%    |
| 74.0               | 4.978         | 0.524       | 1079.515  | .035%       | 99.219%    |
| 75.0               | 4.971         | 0.526       | 1080.04   | .036%       | 99.267%    |

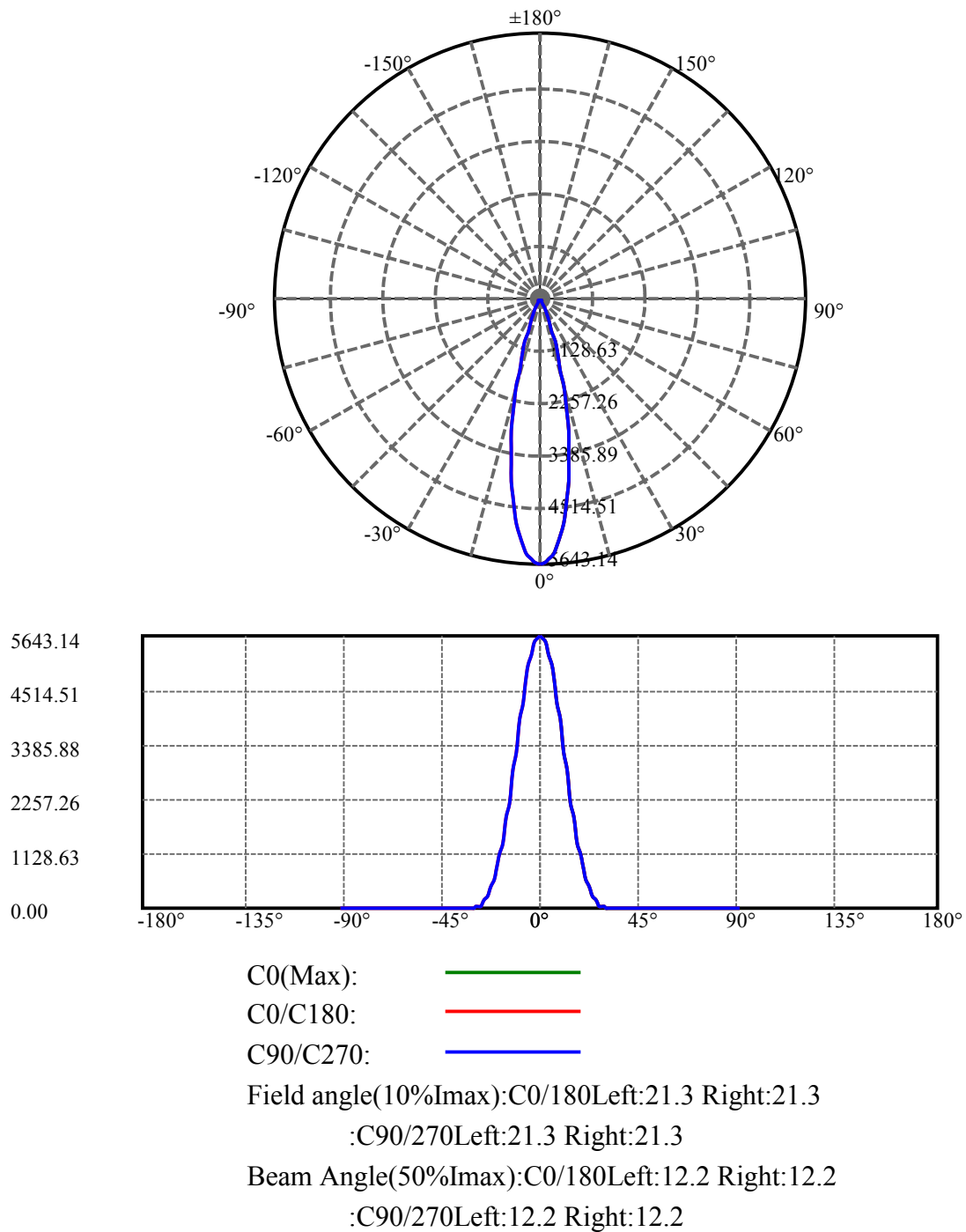
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0               | 4.971         | 0.528       | 1080.568  | .036%       | 99.316%    |
| 77.0               | 4.943         | 0.529       | 1081.097  | .036%       | 99.364%    |
| 78.0               | 4.950         | 0.530       | 1081.626  | .036%       | 99.413%    |
| 79.0               | 4.929         | 0.531       | 1082.157  | .036%       | 99.462%    |
| 80.0               | 4.922         | 0.531       | 1082.688  | .036%       | 99.510%    |
| 81.0               | 4.908         | 0.532       | 1083.22   | .036%       | 99.559%    |
| 82.0               | 4.880         | 0.531       | 1083.75   | .036%       | 99.608%    |
| 83.0               | 4.901         | 0.532       | 1084.282  | .036%       | 99.657%    |
| 84.0               | 4.887         | 0.533       | 1084.815  | .036%       | 99.706%    |
| 85.0               | 4.880         | 0.533       | 1085.348  | .036%       | 99.755%    |
| 86.0               | 4.880         | 0.533       | 1085.882  | .036%       | 99.804%    |
| 87.0               | 4.873         | 0.534       | 1086.416  | .036%       | 99.853%    |
| 88.0               | 4.866         | 0.533       | 1086.949  | .036%       | 99.902%    |
| 89.0               | 4.859         | 0.533       | 1087.482  | .036%       | 99.951%    |
| 90.0               | 4.852         | 0.532       | 1088.014  | .036%       | 100.000%   |

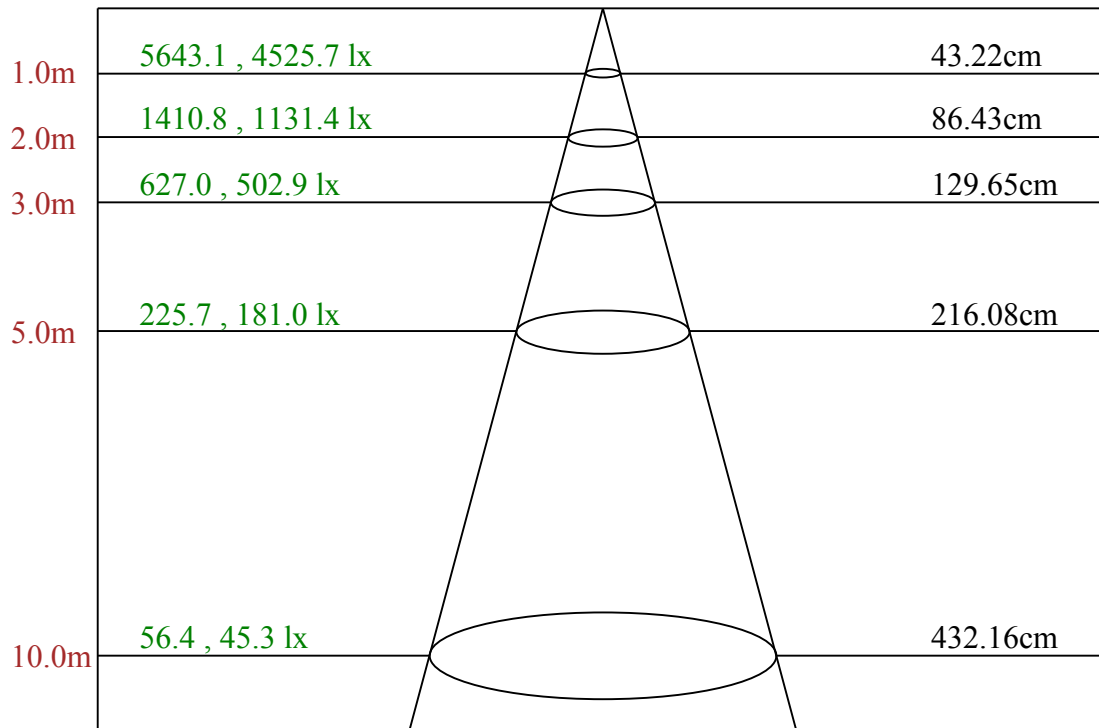
## ZONAL LUMEN SUMMARY

| Zone    | Lumens  | %Lamp  | %Fixt   |
|---------|---------|--------|---------|
| 0-30    | 1057.59 | 71.46% | 97.20%  |
| 0-40    | 1063.01 | 71.82% | 97.70%  |
| 0-60    | 1072.40 | 72.46% | 98.56%  |
| 0-90    | 1087.48 | 73.48% | 99.95%  |
| 0-120   | 1087.48 | 73.48% | 99.95%  |
| 0-180   | 1088.01 | 73.51% | 100.00% |
| 60-90   | 15.57   | 1.05%  | 1.43%   |
| 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%   |
| 0-17.55 | 870.41  | 58.81% | 80.00%  |

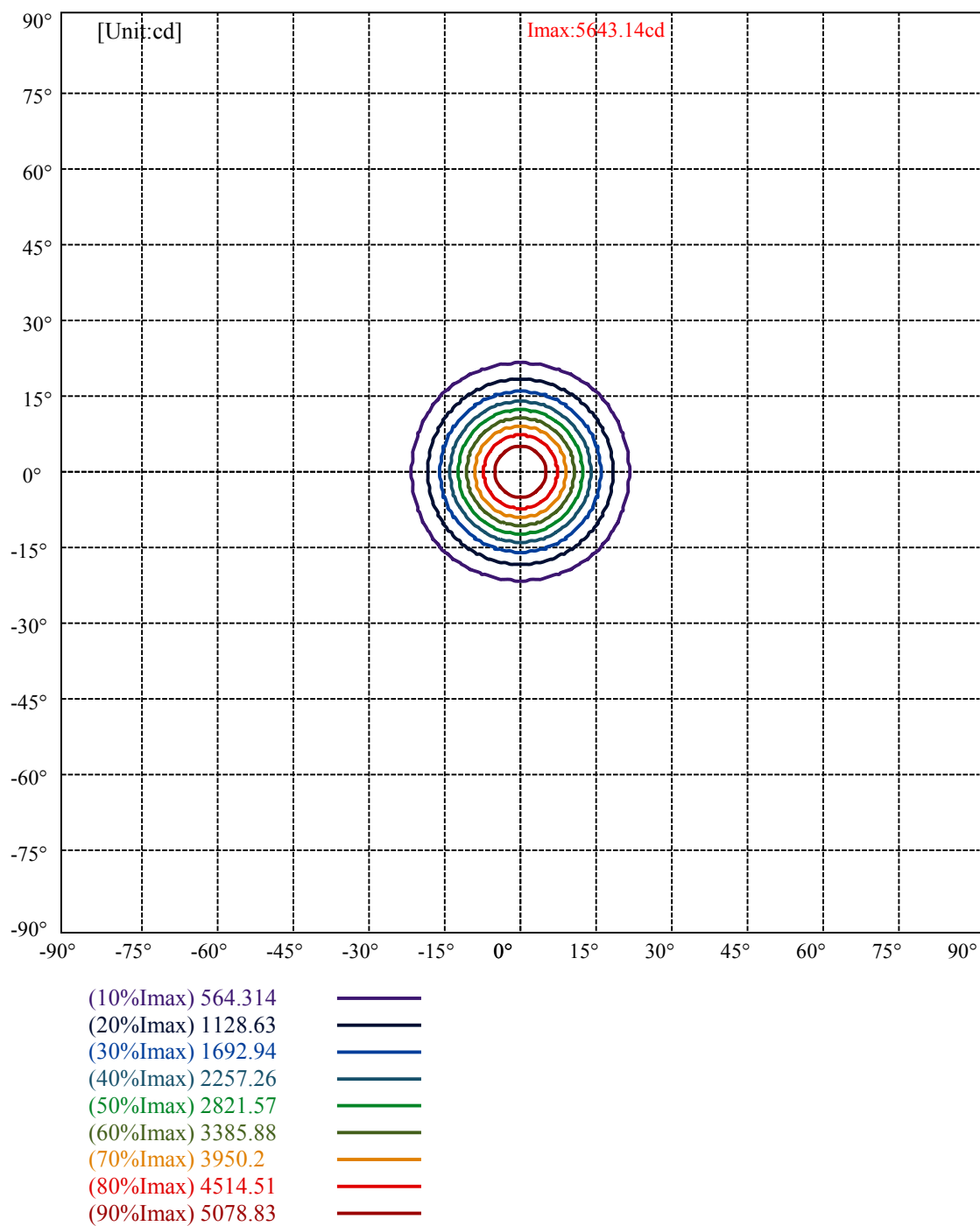
## ZONAL LUMEN SUMMARY

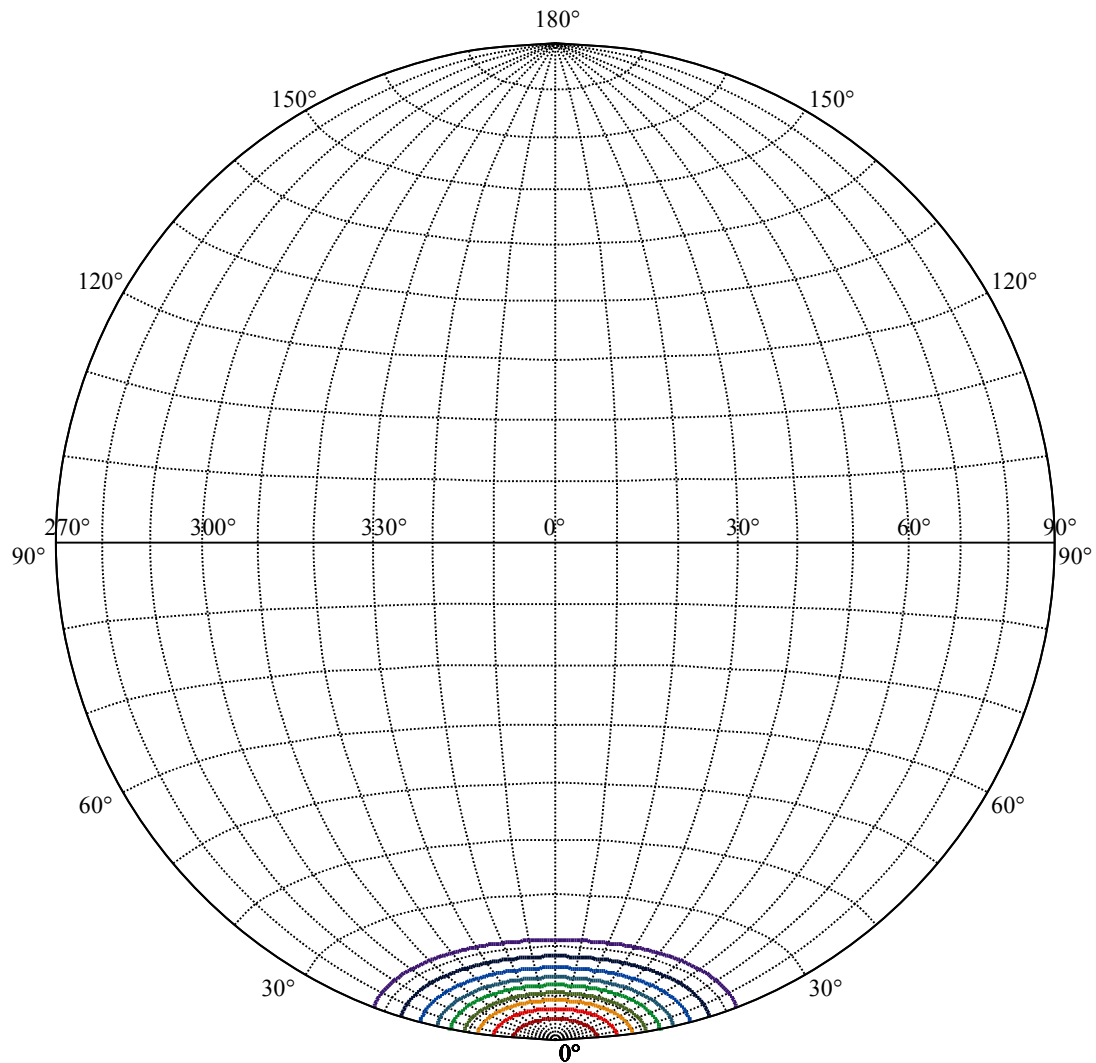
|         |        |
|---------|--------|
| 0-10    | 435.59 |
| 10-20   | 521.10 |
| 20-30   | 100.90 |
| 30-40   | 5.42   |
| 40-50   | 4.63   |
| 50-60   | 4.76   |
| 60-70   | 5.04   |
| 70-80   | 5.25   |
| 80-90   | 4.79   |
| 90-100  | 0.00   |
| 100-110 | 0.00   |
| 110-120 | 0.00   |
| 120-130 | 0.00   |
| 130-140 | 0.00   |
| 140-150 | 0.00   |
| 150-160 | 0.00   |
| 160-170 | 0.00   |
| 170-180 | 0.00   |





Max , Ave      Beam angle of C0 plane 24.39





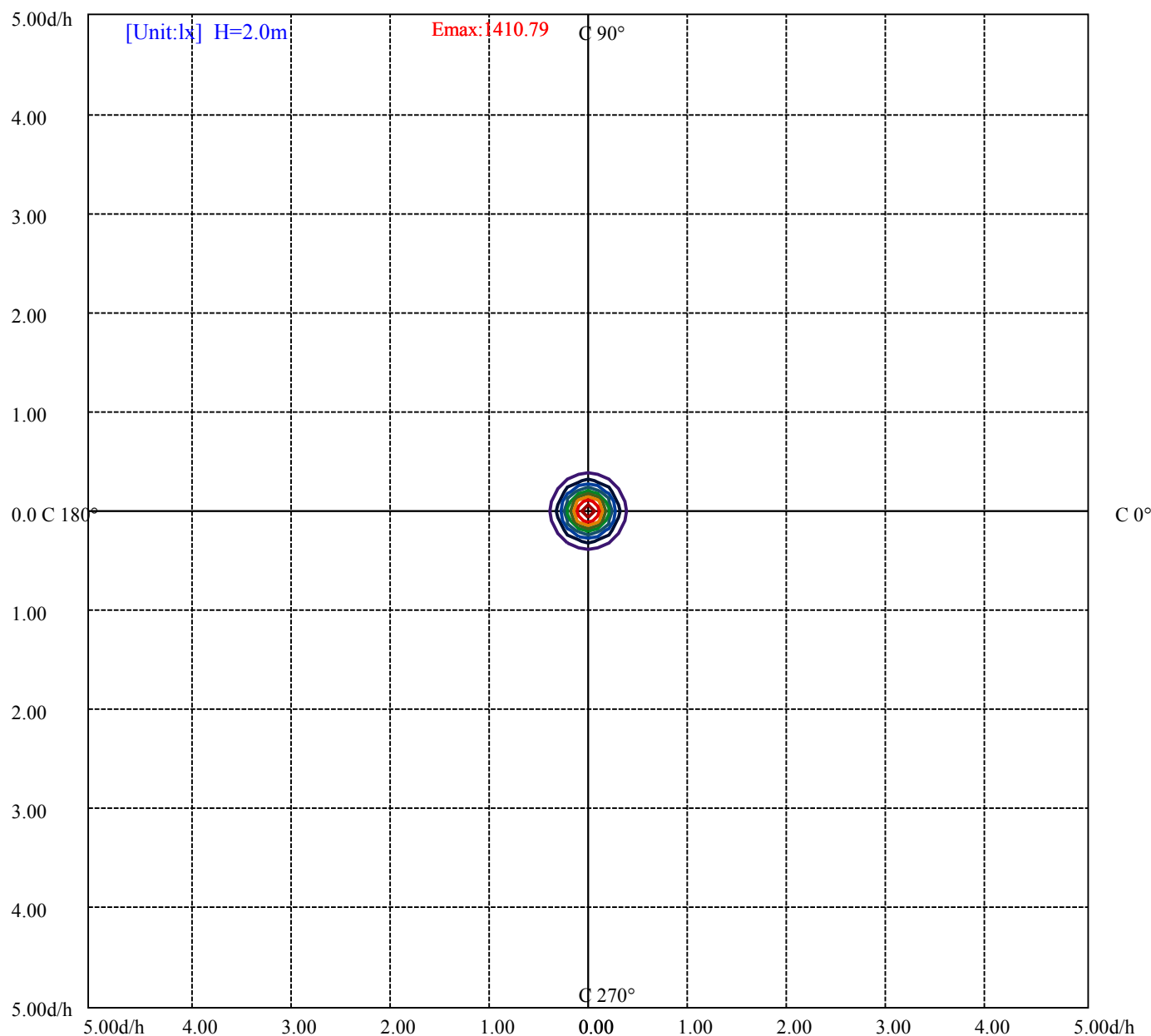
House

[Unit:cd]

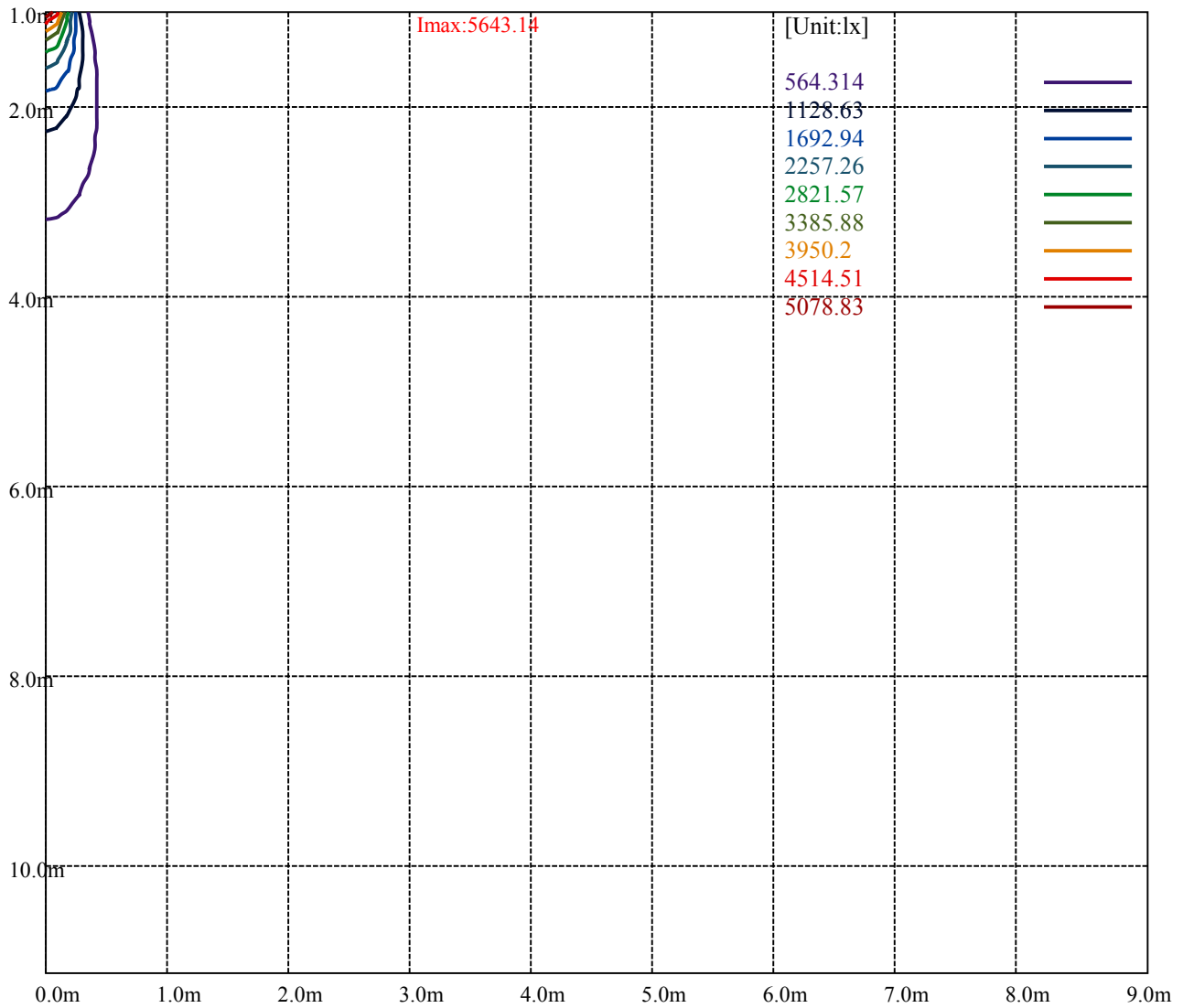
Road

**Imax:5643.14**

|           |         |   |
|-----------|---------|---|
| (10%Imax) | 564.314 | — |
| (20%Imax) | 1128.63 | — |
| (30%Imax) | 1692.94 | — |
| (40%Imax) | 2257.26 | — |
| (50%Imax) | 2821.57 | — |
| (60%Imax) | 3385.88 | — |
| (70%Imax) | 3950.2  | — |
| (80%Imax) | 4514.51 | — |
| (90%Imax) | 5078.83 | — |



|           |          |   |
|-----------|----------|---|
| (10%Emax) | 141.0785 | — |
| (20%Emax) | 282.1575 | — |
| (30%Emax) | 423.235  | — |
| (40%Emax) | 564.315  | — |
| (50%Emax) | 705.3925 | — |
| (60%Emax) | 846.47   | — |
| (70%Emax) | 987.55   | — |
| (80%Emax) | 1128.627 | — |
| (90%Emax) | 1269.705 | — |



Luminance Table

| $\gamma$ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|----------|----|----|----|----|----|----|----|----|----|
| C0       | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| C45      | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| C90      | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |

| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 0          | 0          | 0       | 0          | 0          | 0       | 0          | 0          | 0       |

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          |

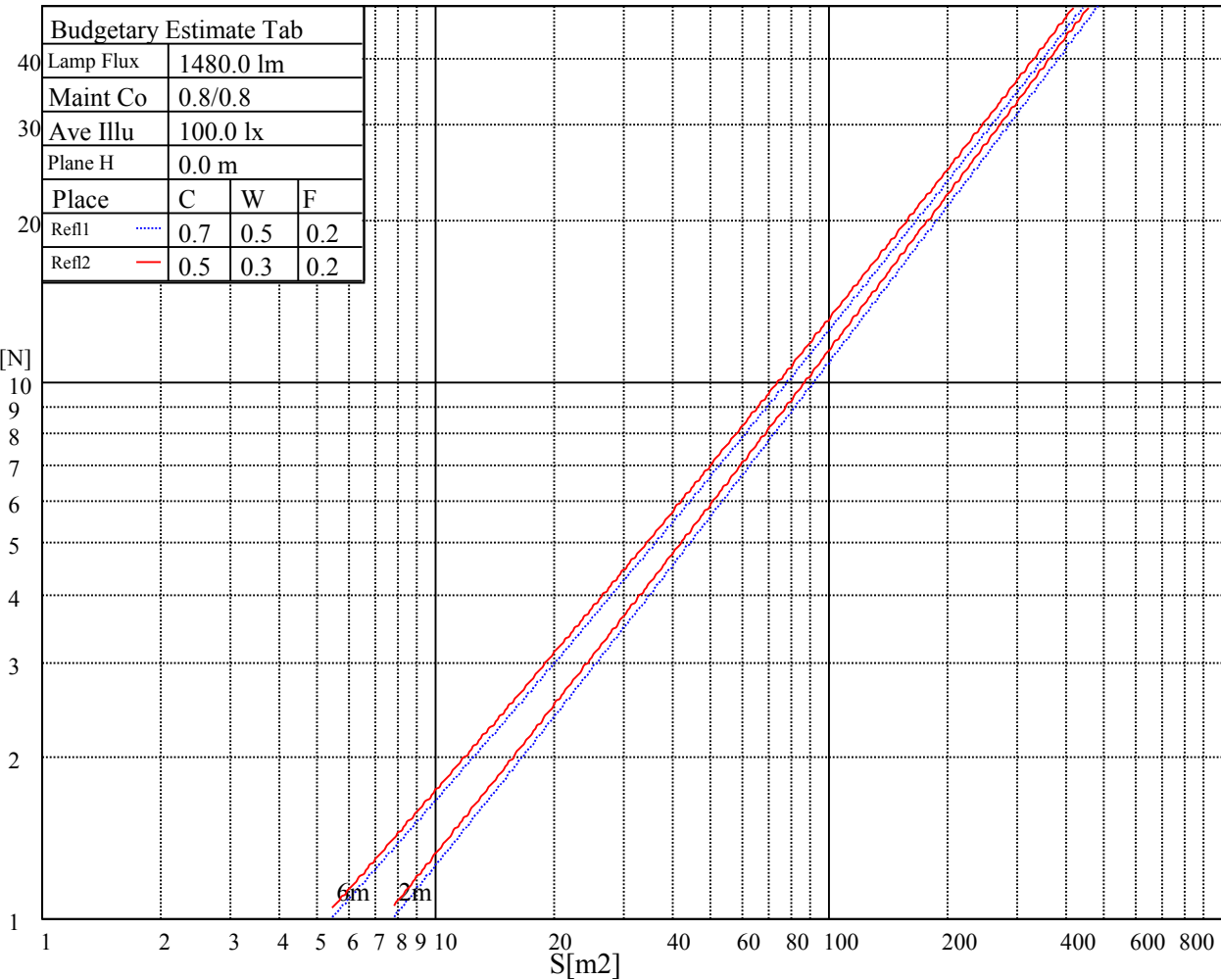
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

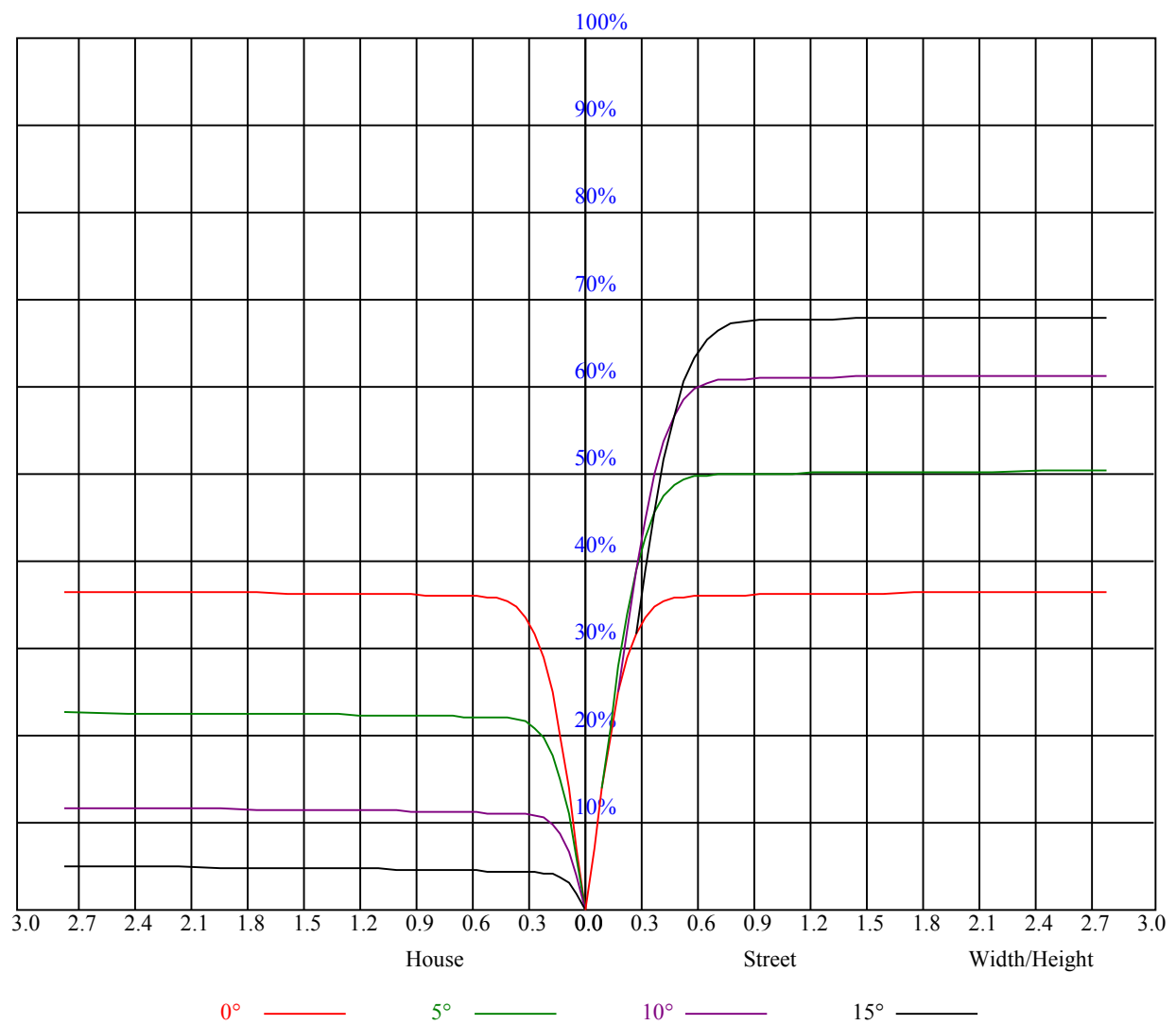
C0 ———

C45 ———

C90 ———



| 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     | 0.88                                    | 0.88 | 0.88 | 0.85 | 0.85 | 0.85 | 0.82 | 0.82 | 0.82 | 0.78 | 0.78 | 0.78 | 0.75 | 0.75 | 0.75 | 0.74 |
| 1     | 0.83                                    | 0.82 | 0.80 | 0.81 | 0.80 | 0.79 | 0.78 | 0.77 | 0.77 | 0.76 | 0.75 | 0.74 | 0.73 | 0.73 | 0.72 | 0.71 |
| 2     | 0.79                                    | 0.77 | 0.75 | 0.78 | 0.76 | 0.74 | 0.76 | 0.74 | 0.73 | 0.74 | 0.72 | 0.71 | 0.72 | 0.71 | 0.70 | 0.69 |
| 3     | 0.76                                    | 0.74 | 0.72 | 0.75 | 0.73 | 0.71 | 0.73 | 0.71 | 0.70 | 0.72 | 0.70 | 0.69 | 0.70 | 0.69 | 0.68 | 0.67 |
| 4     | 0.73                                    | 0.71 | 0.69 | 0.73 | 0.70 | 0.68 | 0.71 | 0.69 | 0.67 | 0.70 | 0.68 | 0.67 | 0.69 | 0.67 | 0.66 | 0.65 |
| 5     | 0.71                                    | 0.68 | 0.66 | 0.70 | 0.68 | 0.66 | 0.69 | 0.67 | 0.65 | 0.68 | 0.66 | 0.65 | 0.67 | 0.66 | 0.64 | 0.63 |
| 6     | 0.69                                    | 0.66 | 0.64 | 0.68 | 0.66 | 0.64 | 0.67 | 0.65 | 0.63 | 0.67 | 0.65 | 0.63 | 0.66 | 0.64 | 0.63 | 0.62 |
| 7     | 0.67                                    | 0.64 | 0.62 | 0.67 | 0.64 | 0.62 | 0.66 | 0.63 | 0.62 | 0.65 | 0.63 | 0.61 | 0.64 | 0.63 | 0.61 | 0.60 |
| 8     | 0.65                                    | 0.62 | 0.60 | 0.65 | 0.62 | 0.60 | 0.64 | 0.62 | 0.60 | 0.64 | 0.61 | 0.60 | 0.63 | 0.61 | 0.60 | 0.59 |
| 9     | 0.64                                    | 0.61 | 0.59 | 0.63 | 0.61 | 0.59 | 0.63 | 0.60 | 0.59 | 0.62 | 0.60 | 0.59 | 0.62 | 0.60 | 0.58 | 0.58 |
| 10    | 0.62                                    | 0.59 | 0.58 | 0.62 | 0.59 | 0.58 | 0.61 | 0.59 | 0.57 | 0.61 | 0.59 | 0.57 | 0.60 | 0.59 | 0.57 | 0.56 |



Nata 1-1006-M

| Intensity data(cd) |         |         |         |         |         |         |         |         | Appendix Page: 16 Total:18 |
|--------------------|---------|---------|---------|---------|---------|---------|---------|---------|----------------------------|
| C/γ(°)             | 0.0     | 1.0     | 2.0     | 3.0     | 4.0     | 5.0     | 6.0     | 7.0     | 8.0                        |
| 0.0                | 5629.50 | 5662.13 | 5640.19 | 5577.19 | 5450.63 | 5276.25 | 5091.75 | 4853.25 | 4609.69                    |
| 45.0               | 5647.50 | 5646.38 | 5581.13 | 5476.50 | 5337.00 | 5144.06 | 4907.81 | 4660.31 | 4352.63                    |
| 90.0               | 5639.06 | 5580.56 | 5443.31 | 5292.00 | 5108.06 | 4833.00 | 4577.06 | 4291.88 | 3902.06                    |
| 135.0              | 5656.50 | 5605.31 | 5476.50 | 5330.81 | 5153.06 | 4916.81 | 4640.06 | 4358.25 | 4015.69                    |
| 180.0              | 5629.50 | 5559.19 | 5438.25 | 5238.00 | 5051.25 | 4833.56 | 4550.06 | 4223.25 | 3910.50                    |
| 225.0              | 5647.50 | 5612.06 | 5517.56 | 5373.00 | 5211.56 | 4997.81 | 4747.50 | 4491.00 | 4168.13                    |
| 270.0              | 5639.06 | 5654.25 | 5617.69 | 5537.81 | 5416.88 | 5246.44 | 5050.13 | 4838.63 | 4560.19                    |
| 315.0              | 5656.50 | 5662.13 | 5614.31 | 5530.50 | 5409.00 | 5236.31 | 5026.50 | 4805.44 | 4518.56                    |
| 360.0              | 5629.50 | 5662.13 | 5640.19 | 5577.19 | 5450.63 | 5276.25 | 5091.75 | 4853.25 | 4609.69                    |
| C/γ(°)             | 9.0     | 10.0    | 11.0    | 12.0    | 13.0    | 14.0    | 15.0    | 16.0    | 17.0                       |
| 0.0                | 4305.94 | 4008.38 | 3655.69 | 3331.69 | 2920.50 | 2594.25 | 2282.63 | 1918.13 | 1657.13                    |
| 45.0               | 4017.38 | 3695.63 | 3318.75 | 2980.13 | 2607.75 | 2256.19 | 1969.31 | 1708.31 | 1412.44                    |
| 90.0               | 3609.00 | 3222.56 | 2797.31 | 2512.13 | 2167.31 | 1820.25 | 1603.69 | 1379.25 | 1110.88                    |
| 135.0              | 3649.50 | 3308.63 | 2918.25 | 2581.31 | 2263.50 | 1899.00 | 1641.94 | 1412.44 | 1167.75                    |
| 180.0              | 3537.00 | 3148.88 | 2808.56 | 2441.25 | 2135.25 | 1821.94 | 1542.38 | 1250.44 | 1121.06                    |
| 225.0              | 3857.63 | 3488.06 | 3102.19 | 2761.88 | 2395.13 | 2058.75 | 1784.25 | 1530.00 | 1106.72                    |
| 270.0              | 4248.00 | 3939.75 | 3576.94 | 3243.94 | 2865.94 | 2495.25 | 2182.50 | 1891.69 | 1569.38                    |
| 315.0              | 4236.75 | 3890.25 | 3525.19 | 3192.75 | 2818.13 | 2456.44 | 2151.56 | 1868.63 | 1548.00                    |
| 360.0              | 4305.94 | 4008.38 | 3655.69 | 3331.69 | 2920.50 | 2594.25 | 2282.63 | 1918.13 | 1657.13                    |
| C/γ(°)             | 18.0    | 19.0    | 20.0    | 21.0    | 22.0    | 23.0    | 24.0    | 25.0    | 26.0                       |
| 0.0                | 1419.75 | 1183.50 | 973.69  | 802.69  | 647.44  | 475.88  | 353.81  | 288.56  | 151.14                     |
| 45.0               | 1206.00 | 1011.94 | 810.56  | 654.19  | 517.50  | 379.13  | 286.88  | 171.34  | 104.96                     |
| 90.0               | 956.98  | 795.38  | 645.02  | 477.62  | 359.78  | 255.32  | 153.06  | 92.08   | 52.09                      |
| 135.0              | 983.25  | 809.44  | 630.56  | 497.81  | 367.31  | 290.25  | 152.78  | 92.42   | 48.32                      |
| 180.0              | 895.73  | 733.05  | 587.03  | 423.34  | 310.39  | 215.16  | 131.01  | 71.10   | 40.16                      |
| 225.0              | 1059.13 | 879.30  | 698.74  | 541.58  | 416.36  | 292.61  | 189.68  | 118.07  | 62.10                      |
| 270.0              | 1337.06 | 1133.44 | 901.13  | 736.31  | 588.94  | 444.94  | 315.00  | 289.13  | 129.32                     |
| 315.0              | 1244.81 | 1112.85 | 923.91  | 715.33  | 569.93  | 440.04  | 298.46  | 205.65  | 131.01                     |
| 360.0              | 1419.75 | 1183.50 | 973.69  | 802.69  | 647.44  | 475.88  | 353.81  | 288.56  | 151.14                     |
| C/γ(°)             | 27.0    | 28.0    | 29.0    | 30.0    | 31.0    | 32.0    | 33.0    | 34.0    | 35.0                       |
| 0.0                | 84.60   | 48.88   | 30.71   | 19.91   | 14.23   | 11.98   | 10.97   | 10.07   | 9.34                       |
| 45.0               | 55.69   | 31.95   | 20.31   | 13.50   | 11.31   | 10.41   | 9.51    | 9.06    | 8.44                       |
| 90.0               | 29.42   | 17.10   | 12.66   | 10.69   | 9.90    | 9.17    | 8.61    | 8.16    | 7.71                       |
| 135.0              | 29.14   | 17.33   | 12.38   | 10.80   | 9.90    | 9.23    | 8.61    | 8.21    | 7.71                       |
| 180.0              | 24.75   | 15.81   | 11.64   | 10.18   | 9.45    | 8.78    | 8.21    | 7.82    | 7.48                       |
| 225.0              | 36.84   | 22.73   | 14.34   | 11.53   | 10.24   | 9.28    | 8.66    | 8.16    | 7.59                       |
| 270.0              | 73.07   | 40.11   | 26.04   | 16.82   | 12.49   | 10.74   | 9.84    | 9.17    | 8.44                       |
| 315.0              | 69.47   | 39.54   | 27.23   | 17.44   | 13.39   | 11.42   | 10.41   | 9.62    | 8.94                       |
| 360.0              | 84.60   | 48.88   | 30.71   | 19.91   | 14.23   | 11.98   | 10.97   | 10.07   | 9.34                       |
| C/γ(°)             | 36.0    | 37.0    | 38.0    | 39.0    | 40.0    | 41.0    | 42.0    | 43.0    | 44.0                       |
| 0.0                | 8.83    | 8.33    | 7.82    | 7.48    | 7.26    | 6.92    | 6.69    | 6.53    | 6.36                       |
| 45.0               | 7.99    | 7.65    | 7.37    | 7.03    | 6.81    | 6.64    | 6.41    | 6.24    | 6.19                       |
| 90.0               | 7.43    | 7.20    | 6.92    | 6.75    | 6.58    | 6.41    | 6.24    | 6.13    | 6.02                       |
| 135.0              | 7.43    | 7.20    | 6.92    | 6.69    | 6.58    | 6.36    | 6.24    | 6.13    | 6.02                       |
| 180.0              | 7.14    | 6.86    | 6.69    | 6.47    | 6.36    | 6.19    | 6.08    | 5.96    | 5.85                       |
| 225.0              | 7.26    | 6.98    | 6.69    | 6.47    | 6.30    | 6.13    | 5.96    | 5.85    | 5.74                       |
| 270.0              | 7.99    | 7.59    | 7.20    | 6.92    | 6.69    | 6.47    | 6.30    | 6.13    | 6.02                       |
| 315.0              | 8.38    | 7.93    | 7.59    | 7.20    | 6.92    | 6.75    | 6.53    | 6.36    | 6.19                       |
| 360.0              | 8.83    | 8.33    | 7.82    | 7.48    | 7.26    | 6.92    | 6.69    | 6.53    | 6.36                       |

## 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             | 6.24 | 6.08 | 5.96 | 5.91 | 5.79 | 5.74 | 5.63 | 5.63 | 5.51 |
| 45.0            | 5.96 | 5.91 | 5.79 | 5.74 | 5.63 | 5.57 | 5.51 | 5.46 | 5.40 |
| 90.0            | 5.91 | 5.79 | 5.74 | 5.68 | 5.57 | 5.46 | 5.46 | 5.40 | 5.34 |
| 135.0           | 5.91 | 5.85 | 5.74 | 5.68 | 5.63 | 5.57 | 5.46 | 5.46 | 5.40 |
| 180.0           | 5.79 | 5.74 | 5.63 | 5.57 | 5.51 | 5.46 | 5.46 | 5.40 | 5.34 |
| 225.0           | 5.68 | 5.63 | 5.51 | 5.46 | 5.40 | 5.34 | 5.29 | 5.23 | 5.18 |
| 270.0           | 5.91 | 5.79 | 5.74 | 5.63 | 5.57 | 5.46 | 5.40 | 5.40 | 5.34 |
| 315.0           | 6.08 | 5.96 | 5.85 | 5.79 | 5.68 | 5.63 | 5.51 | 5.46 | 5.46 |
| 360.0           | 6.24 | 6.08 | 5.96 | 5.91 | 5.79 | 5.74 | 5.63 | 5.63 | 5.51 |
| C/ $\gamma$ (°) | 54.0 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 | 60.0 | 61.0 | 62.0 |
| 0.0             | 5.46 | 5.40 | 5.40 | 5.34 | 5.29 | 5.29 | 5.23 | 5.23 | 5.23 |
| 45.0            | 5.34 | 5.29 | 5.29 | 5.23 | 5.23 | 5.18 | 5.18 | 5.12 | 5.12 |
| 90.0            | 5.29 | 5.29 | 5.29 | 5.23 | 5.23 | 5.18 | 5.18 | 5.12 | 5.12 |
| 135.0           | 5.34 | 5.34 | 5.29 | 5.29 | 5.29 | 5.23 | 5.18 | 5.18 | 5.18 |
| 180.0           | 5.29 | 5.29 | 5.23 | 5.23 | 5.23 | 5.18 | 5.18 | 5.12 | 5.12 |
| 225.0           | 5.18 | 5.18 | 5.12 | 5.06 | 5.06 | 5.06 | 5.01 | 5.01 | 5.01 |
| 270.0           | 5.29 | 5.29 | 5.23 | 5.18 | 5.18 | 5.18 | 5.12 | 5.12 | 5.06 |
| 315.0           | 5.40 | 5.34 | 5.29 | 5.23 | 5.23 | 5.18 | 5.18 | 5.18 | 5.12 |
| 360.0           | 5.46 | 5.40 | 5.40 | 5.34 | 5.29 | 5.29 | 5.23 | 5.23 | 5.23 |
| C/ $\gamma$ (°) | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 | 70.0 | 71.0 |
| 0.0             | 5.18 | 5.18 | 5.18 | 5.12 | 5.12 | 5.12 | 5.12 | 5.06 | 5.06 |
| 45.0            | 5.06 | 5.06 | 5.06 | 5.06 | 5.01 | 5.01 | 5.01 | 5.01 | 5.01 |
| 90.0            | 5.12 | 5.12 | 5.12 | 5.06 | 5.06 | 5.06 | 5.06 | 5.01 | 5.06 |
| 135.0           | 5.12 | 5.18 | 5.12 | 5.12 | 5.12 | 5.06 | 5.06 | 5.06 | 5.01 |
| 180.0           | 5.12 | 5.12 | 5.06 | 5.06 | 5.06 | 5.06 | 5.06 | 5.01 | 5.01 |
| 225.0           | 4.95 | 4.95 | 4.95 | 4.89 | 4.95 | 4.95 | 4.89 | 4.89 | 4.89 |
| 270.0           | 5.06 | 5.06 | 5.01 | 5.01 | 5.01 | 5.01 | 5.01 | 5.01 | 4.95 |
| 315.0           | 5.12 | 5.12 | 5.06 | 5.06 | 5.06 | 5.01 | 5.06 | 5.01 | 5.01 |
| 360.0           | 5.18 | 5.18 | 5.18 | 5.12 | 5.12 | 5.12 | 5.12 | 5.06 | 5.06 |
| C/ $\gamma$ (°) | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0 | 80.0 |
| 0.0             | 5.06 | 5.06 | 5.06 | 5.01 | 5.01 | 5.01 | 5.01 | 5.01 | 5.01 |
| 45.0            | 4.95 | 4.95 | 4.95 | 4.95 | 4.95 | 4.89 | 4.89 | 4.89 | 4.89 |
| 90.0            | 5.01 | 5.01 | 5.01 | 5.01 | 5.01 | 5.01 | 4.95 | 4.89 | 4.84 |
| 135.0           | 5.01 | 5.06 | 5.01 | 5.01 | 5.01 | 4.95 | 5.01 | 4.95 | 4.95 |
| 180.0           | 5.01 | 5.01 | 5.01 | 5.01 | 5.01 | 4.95 | 5.01 | 4.95 | 4.95 |
| 225.0           | 4.89 | 4.89 | 4.89 | 4.89 | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 |
| 270.0           | 4.95 | 4.95 | 4.95 | 4.95 | 4.95 | 4.95 | 4.95 | 4.95 | 4.95 |
| 315.0           | 4.95 | 4.95 | 4.95 | 4.95 | 5.01 | 4.95 | 4.95 | 4.95 | 4.95 |
| 360.0           | 5.06 | 5.06 | 5.06 | 5.01 | 5.01 | 5.01 | 5.01 | 5.01 | 5.01 |
| C/ $\gamma$ (°) | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.0 |
| 0.0             | 5.01 | 4.95 | 5.01 | 5.01 | 4.95 | 4.95 | 4.95 | 4.95 | 4.95 |
| 45.0            | 4.89 | 4.84 | 4.89 | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 | 4.78 |
| 90.0            | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 | 4.78 | 4.78 |
| 135.0           | 4.95 | 4.89 | 4.95 | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 |
| 180.0           | 4.95 | 4.95 | 4.95 | 4.95 | 4.95 | 4.95 | 4.95 | 4.95 | 4.95 |
| 225.0           | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 | 4.78 | 4.84 | 4.78 |
| 270.0           | 4.89 | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 |
| 315.0           | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 | 4.84 | 4.89 |
| 360.0           | 5.01 | 4.95 | 5.01 | 5.01 | 4.95 | 4.95 | 4.95 | 4.95 | 4.95 |

## Intensity data(cd)

Appendix Page: 18 Total:18

|                 |      |
|-----------------|------|
| C/ $\gamma$ (°) | 90.0 |
| 0.0             | 4.89 |
| 45.0            | 4.84 |
| 90.0            | 4.84 |
| 135.0           | 4.84 |
| 180.0           | 4.89 |
| 225.0           | 4.84 |
| 270.0           | 4.84 |
| 315.0           | 4.84 |
| 360.0           | 4.89 |