



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

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## Nata

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Client:

LumCAT: 2-1568-M

Luminaire:

Report No:

Voltage(V): 32.8200

Test No: GC2019081203

Current(A): 0.2970

LampCAT: TRIDONIC SLE G7 17MM

Power (W): 9.7500

Lamp flux(lm): 1190.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 70

Width(mm): 70

Phm Type: C

Height(mm): 0

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## Photometric Results

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Lumens(lm): 1049.68, Efficiency(%): 88.21% , Luminous Efficacy(lm/W): 107.66

Central intensity(cd): 2238.750, Maximum intensity(cd): 2238.750

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

Beam Angle(50%Imax): [C0/180]Total=36.4

[C90/270]Total=36.4

Field angle(10%Imax): [C0/180]Total=71.8

[C90/270]Total=71.8

Maximum s/h(1/2): C0\_180=0.60 C90\_270=0.60

Maximum s/h(1/4): C0\_180=0.60 C90\_270=0.60

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 88.21%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 98.090%

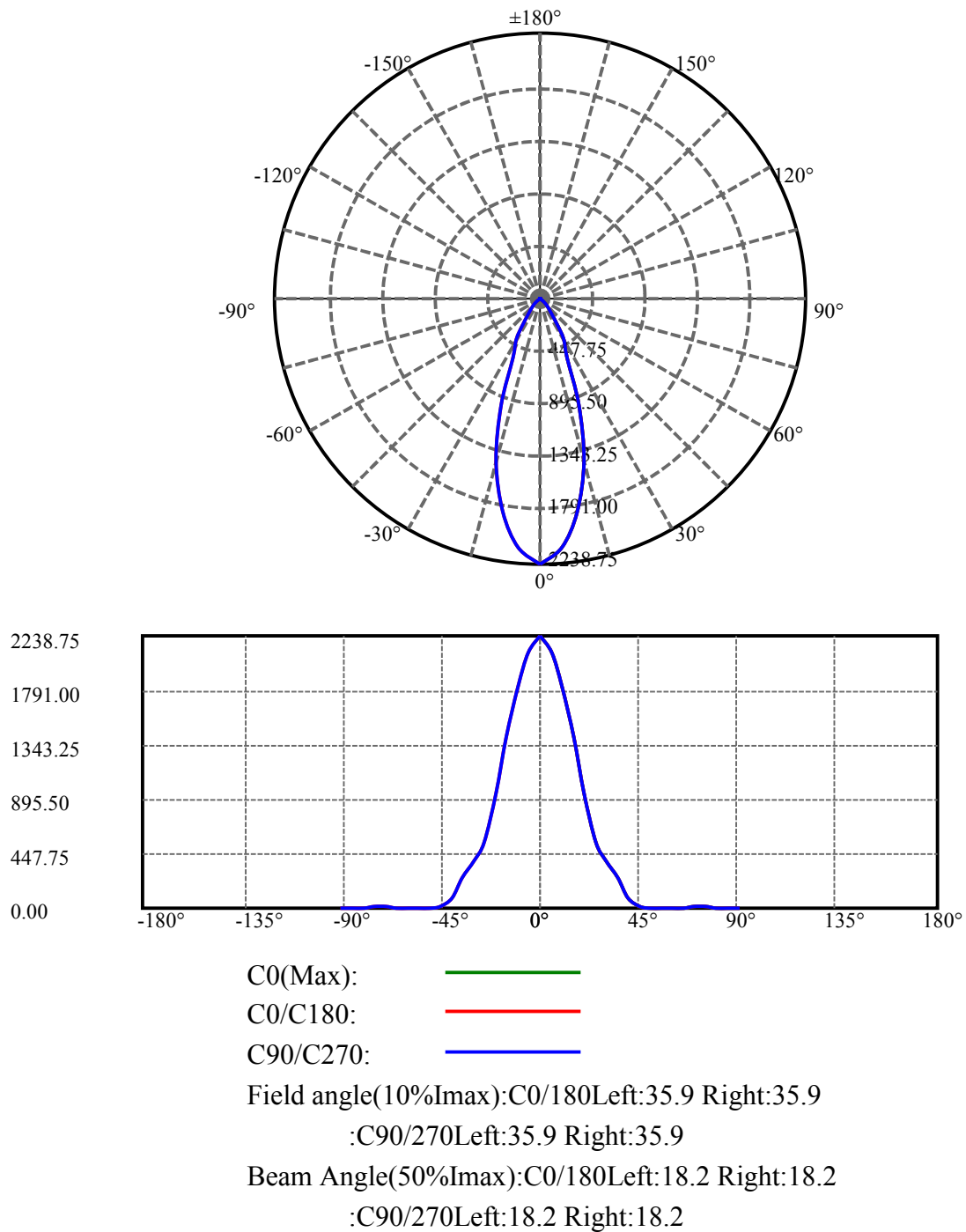
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0                | 2238.750      | 0.000       | 0         | .000%       | .000%      |
| 5.0                | 2099.391      | 51.861      | 51.861    | 4.358%      | 4.941%     |
| 10.0               | 1822.359      | 140.293     | 192.155   | 11.789%     | 18.306%    |
| 15.0               | 1410.103      | 191.747     | 383.902   | 16.113%     | 36.573%    |
| 20.0               | 950.773       | 194.569     | 578.471   | 16.350%     | 55.109%    |
| 25.0               | 543.073       | 156.677     | 735.148   | 13.166%     | 70.035%    |
| 30.0               | 389.130       | 117.971     | 853.119   | 9.914%      | 81.274%    |
| 35.0               | 256.472       | 95.069      | 948.189   | 7.989%      | 90.331%    |
| 40.0               | 80.297        | 56.187      | 1004.376  | 4.722%      | 95.684%    |
| 45.0               | 10.034        | 16.725      | 1021.101  | 1.405%      | 97.277%    |
| 50.0               | 6.778         | 3.397       | 1024.499  | .285%       | 97.601%    |
| 55.0               | 5.470         | 2.663       | 1027.162  | .224%       | 97.855%    |
| 60.0               | 5.224         | 2.472       | 1029.634  | .208%       | 98.090%    |
| 65.0               | 6.349         | 2.814       | 1032.447  | .236%       | 98.358%    |
| 70.0               | 8.866         | 3.853       | 1036.3    | .324%       | 98.725%    |
| 75.0               | 8.079         | 4.429       | 1040.729  | .372%       | 99.147%    |
| 80.0               | 5.210         | 3.556       | 1044.285  | .299%       | 99.486%    |
| 85.0               | 5.070         | 2.793       | 1047.078  | .235%       | 99.752%    |
| 90.0               | 4.437         | 2.603       | 1049.681  | .219%       | 100.000%   |

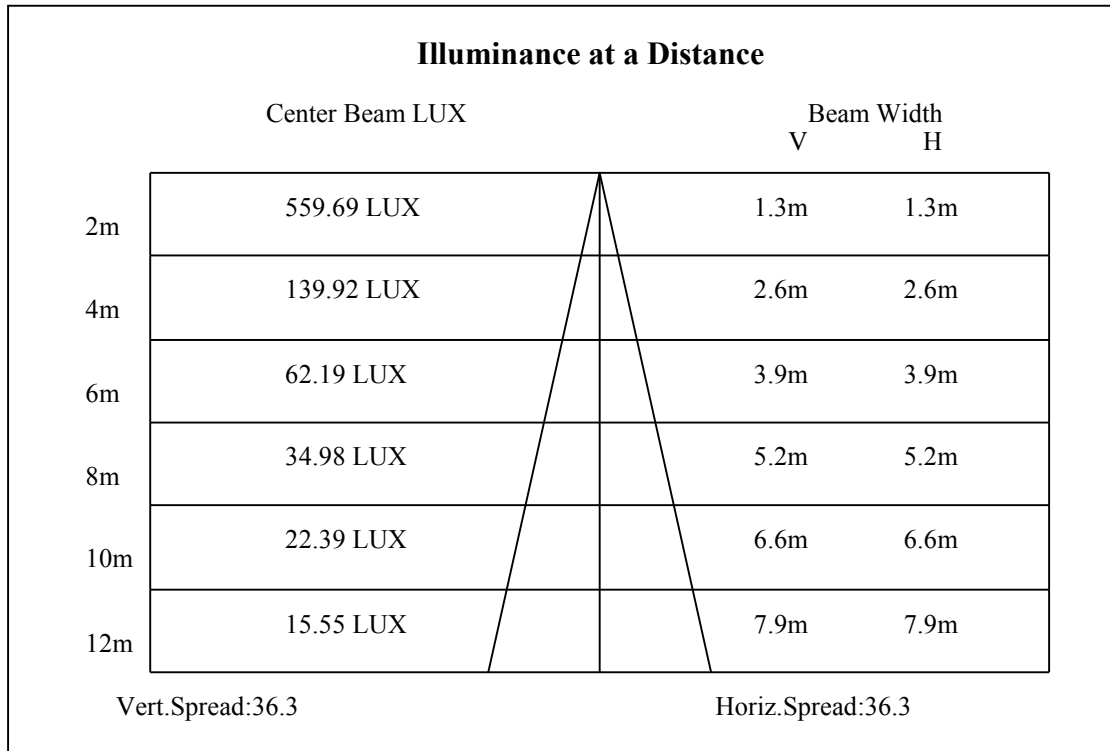
## ZONAL LUMEN SUMMARY

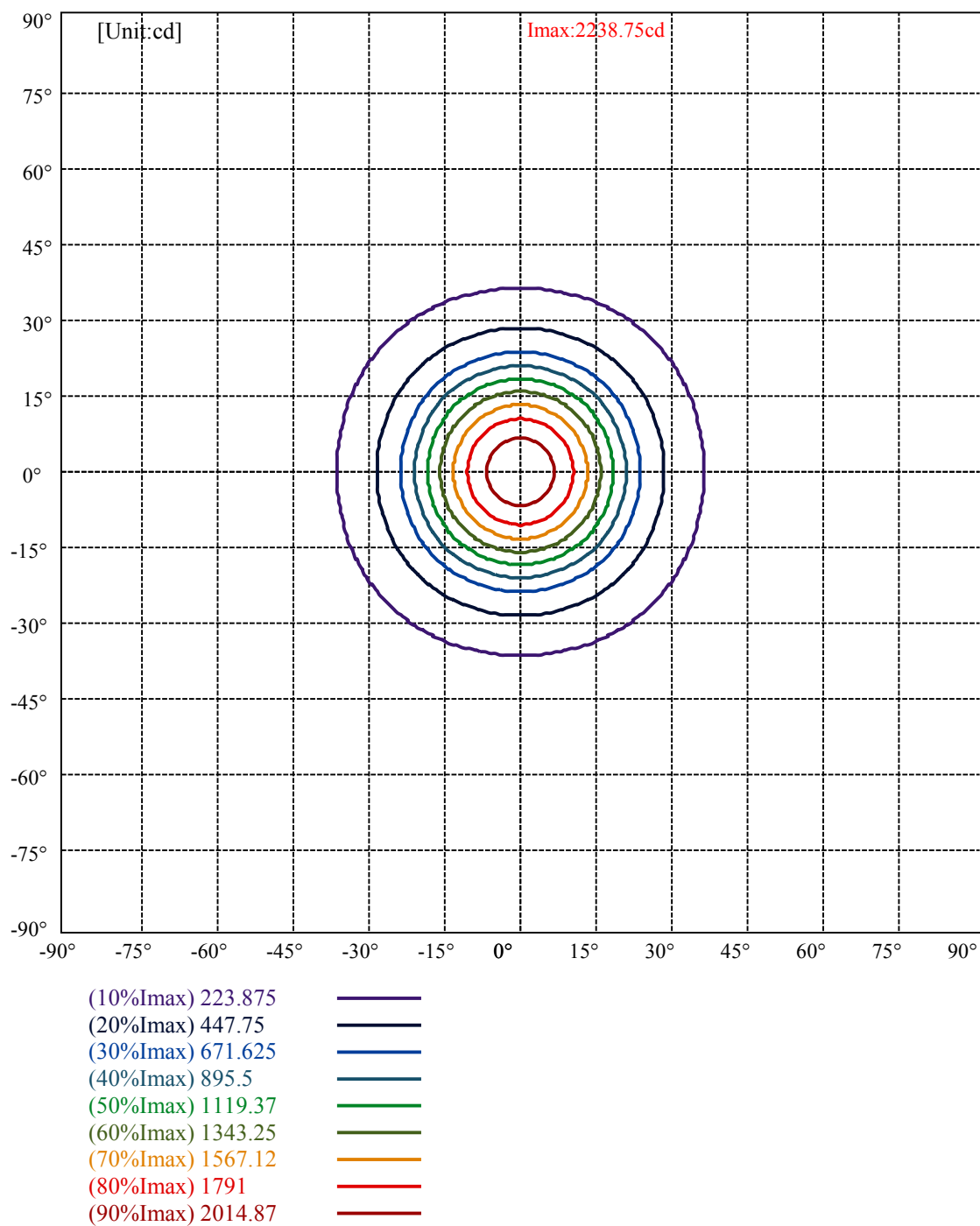
| Zone    | Lumens  | %Lamp  | %Fixt   |
|---------|---------|--------|---------|
| 0-30    | 853.12  | 71.69% | 81.27%  |
| 0-40    | 1004.38 | 84.40% | 95.68%  |
| 0-60    | 1029.63 | 86.52% | 98.09%  |
| 0-90    | 1047.08 | 87.99% | 99.75%  |
| 0-120   | 1047.08 | 87.99% | 99.75%  |
| 0-180   | 1049.68 | 88.21% | 100.00% |
| 60-90   | 19.92   | 1.67%  | 1.90%   |
| 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%   |
| 0-29.43 | 839.74  | 70.57% | 80.00%  |

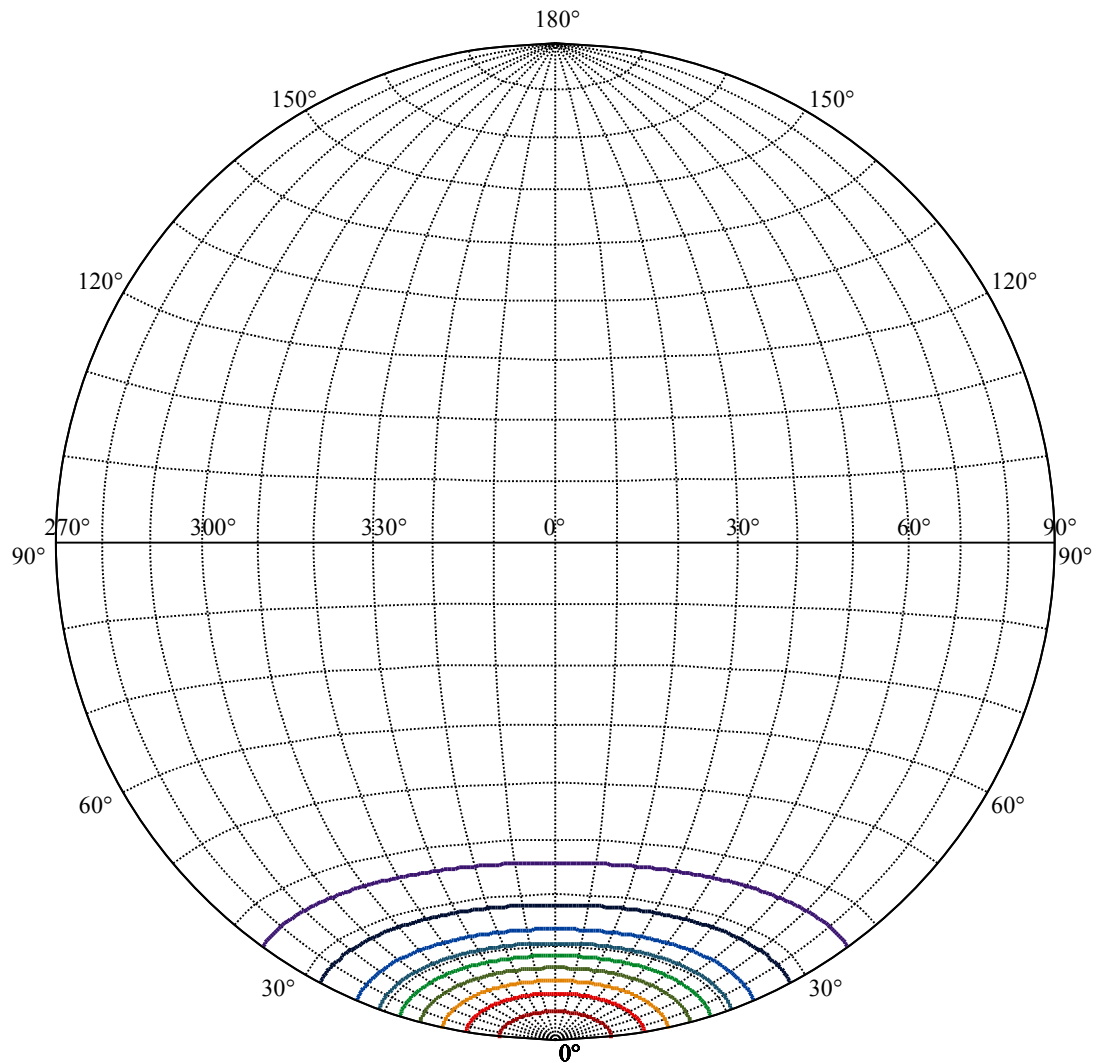
## ZONAL LUMEN SUMMARY

|         |        |
|---------|--------|
| 0-10    | 192.15 |
| 10-20   | 386.32 |
| 20-30   | 274.65 |
| 30-40   | 151.26 |
| 40-50   | 20.12  |
| 50-60   | 5.14   |
| 60-70   | 6.67   |
| 70-80   | 7.99   |
| 80-90   | 2.79   |
| 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   |









House

[Unit:cd]

Road

**Imax:2238.75**

(10%Imax) 223.875

(20%Imax) 447.75

(30%Imax) 671.625

(40%Imax) 895.5

(50%Imax) 1119.37

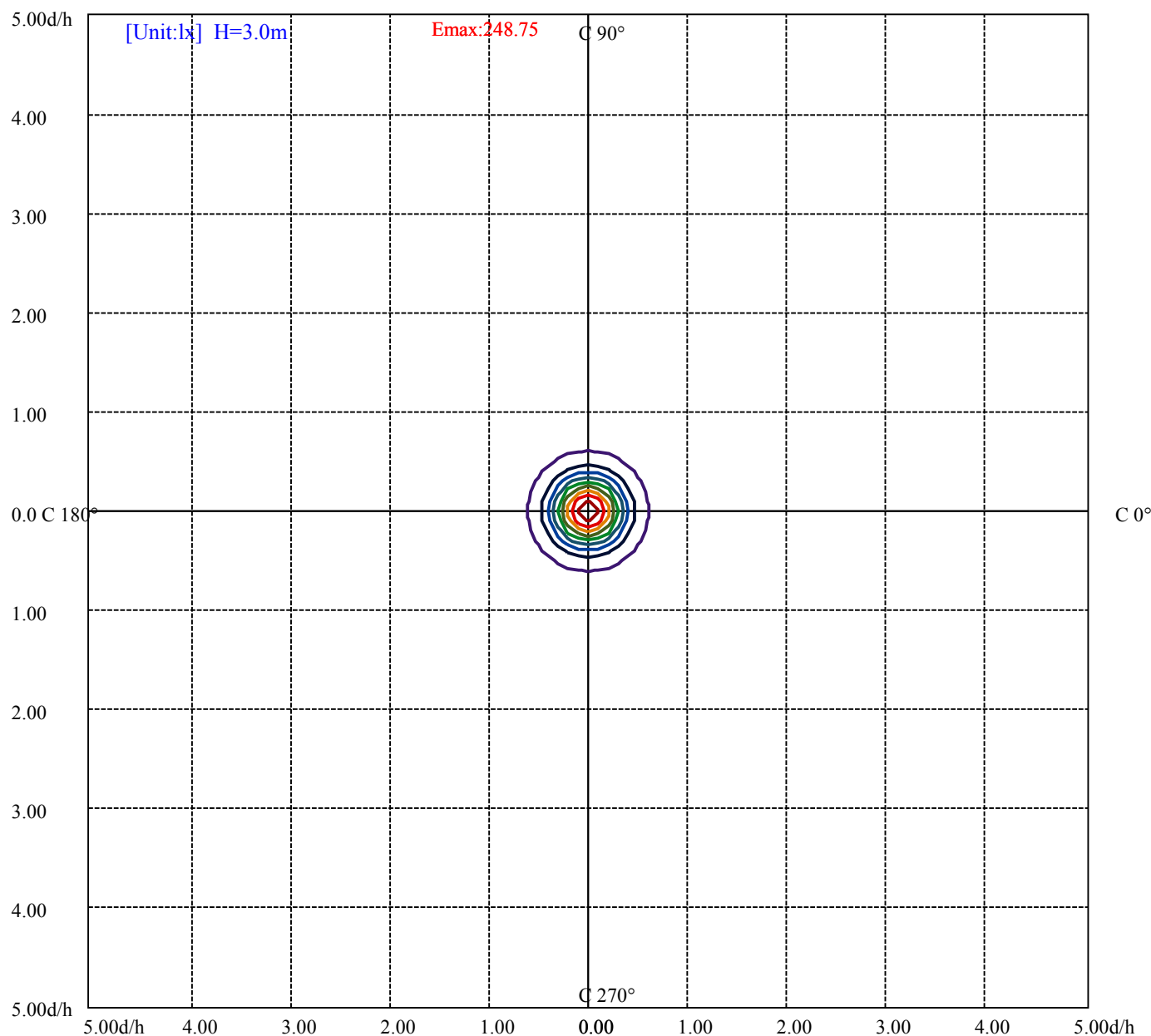
(60%Imax) 1343.25

(70%Imax) 1567.12

(80%Imax) 1791

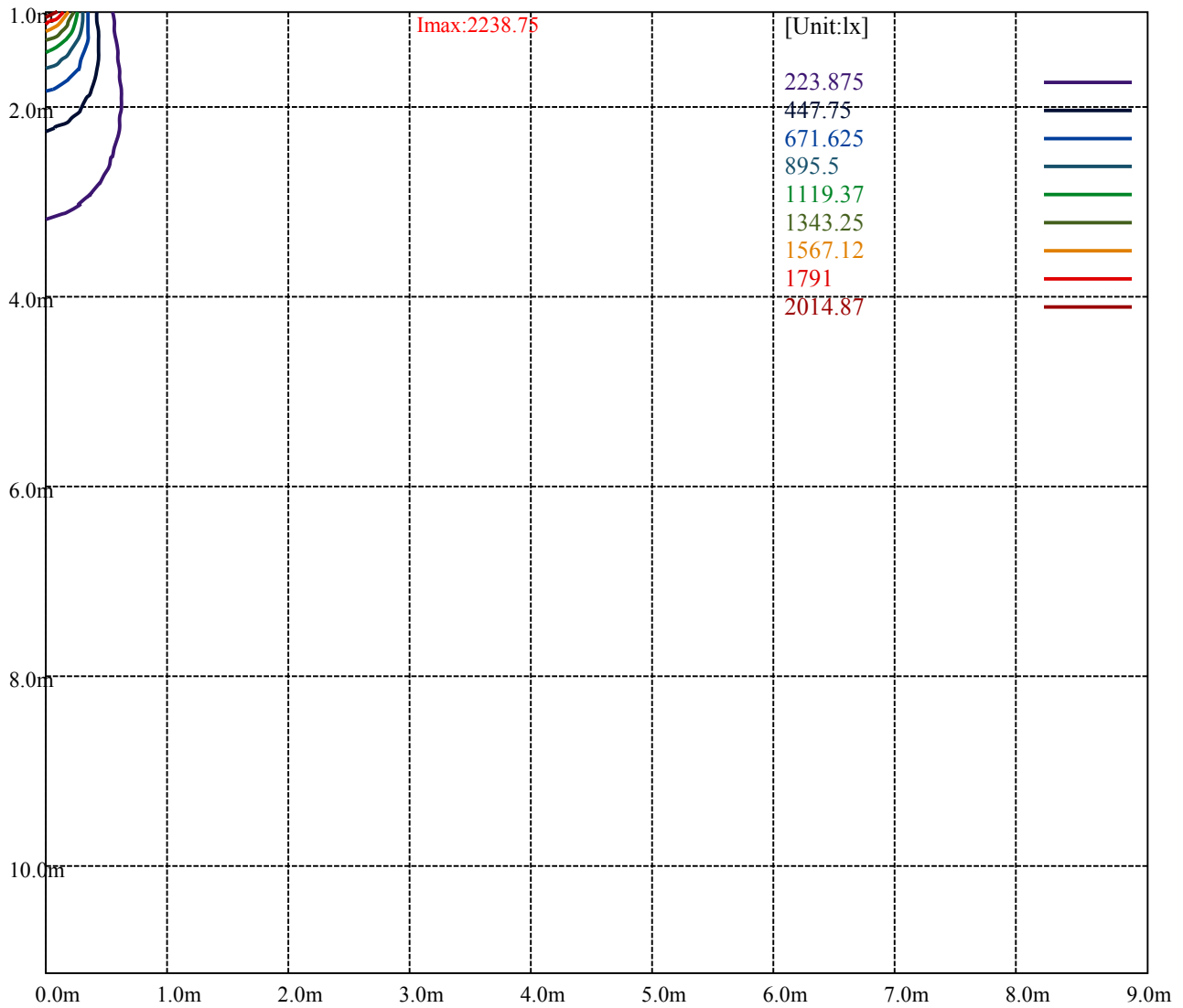
(90%Imax) 2014.87





|           |          |  |
|-----------|----------|--|
| (10%Emax) | 24.875   |  |
| (20%Emax) | 49.74989 |  |
| (30%Emax) | 74.62489 |  |
| (40%Emax) | 99.49978 |  |
| (50%Emax) | 124.3744 |  |
| (60%Emax) | 149.25   |  |
| (70%Emax) | 174.1245 |  |
| (80%Emax) | 199      |  |
| (90%Emax) | 223.8745 |  |





Luminance Table

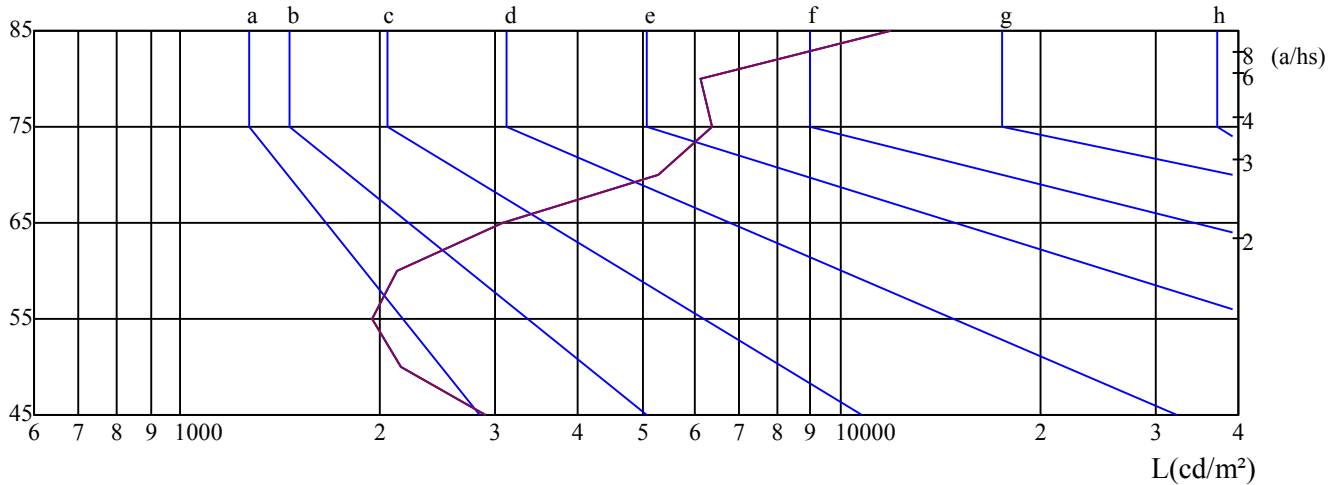
| $\gamma$ | 45   | 50   | 55   | 60   | 65   | 70   | 75   | 80   | 85    |
|----------|------|------|------|------|------|------|------|------|-------|
| C0       | 2896 | 2152 | 1946 | 2132 | 3066 | 5291 | 6370 | 6123 | 11871 |
| C45      | 2896 | 2152 | 1946 | 2132 | 3066 | 5291 | 6370 | 6123 | 11871 |
| C90      | 2896 | 2152 | 1946 | 2132 | 3066 | 5291 | 6370 | 6123 | 11871 |

| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 3066       | 3066       | 3066    | 6370       | 6370       | 6370    | 11871      | 11871      | 11871   |

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          |

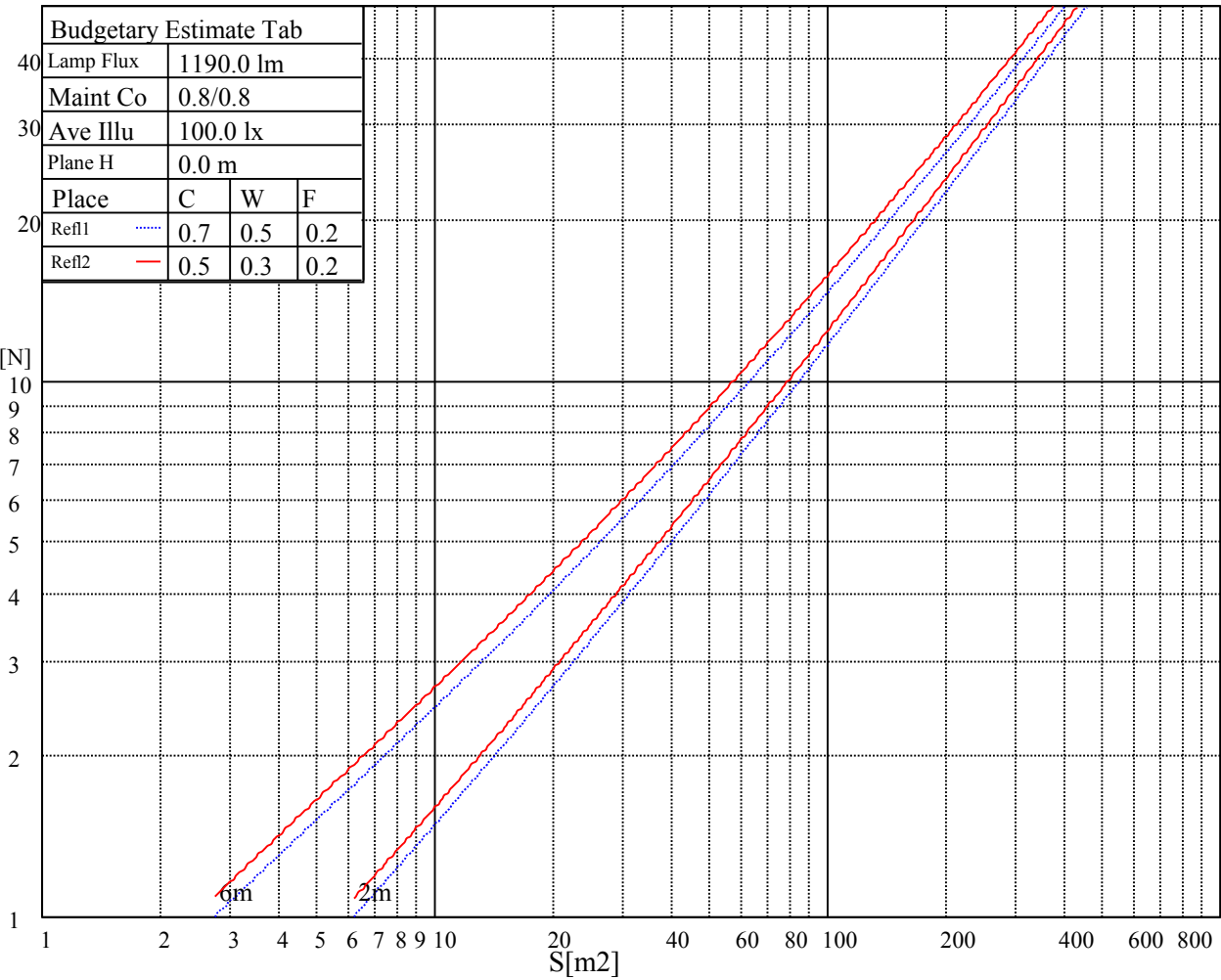
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

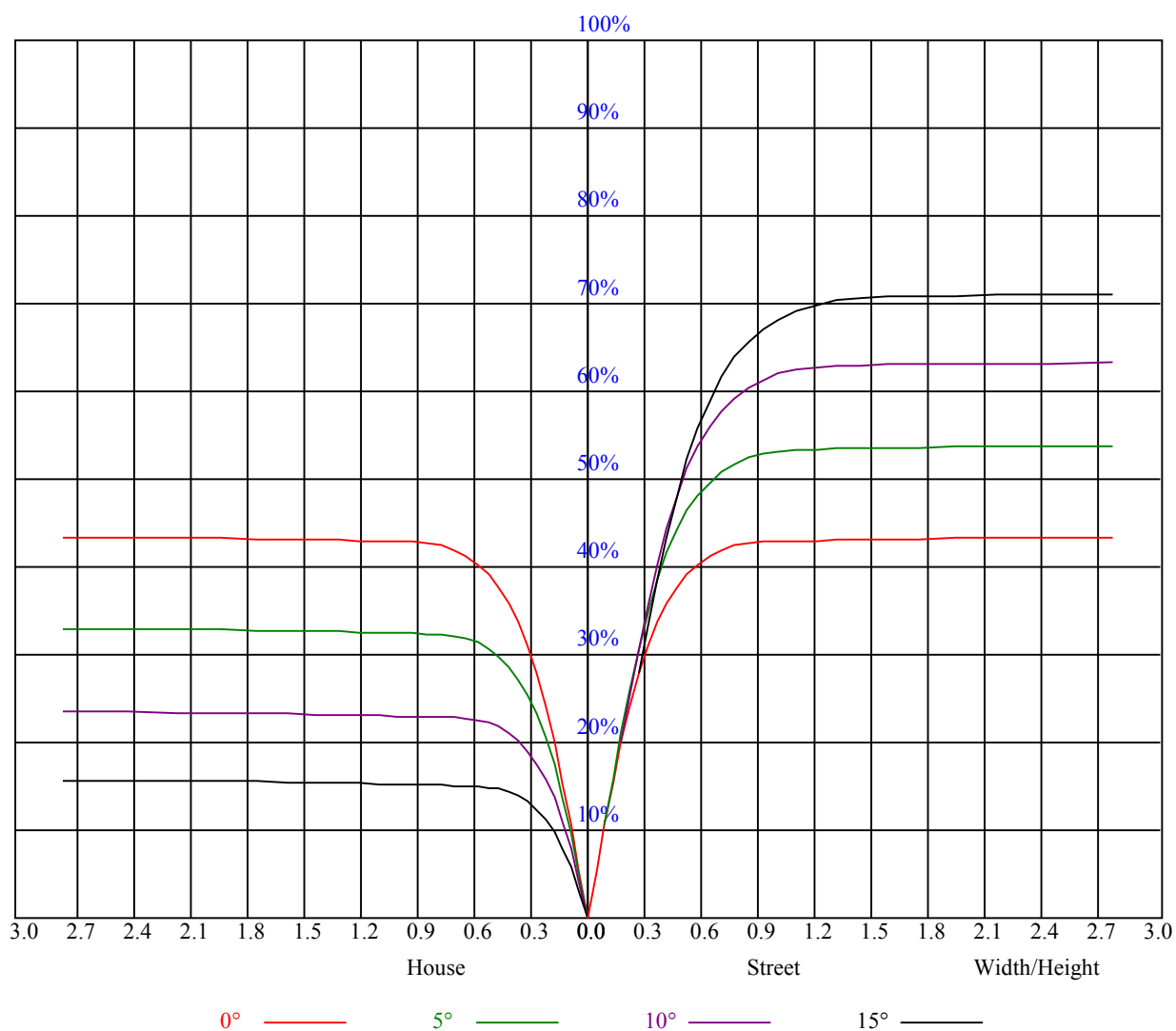
C0 ———

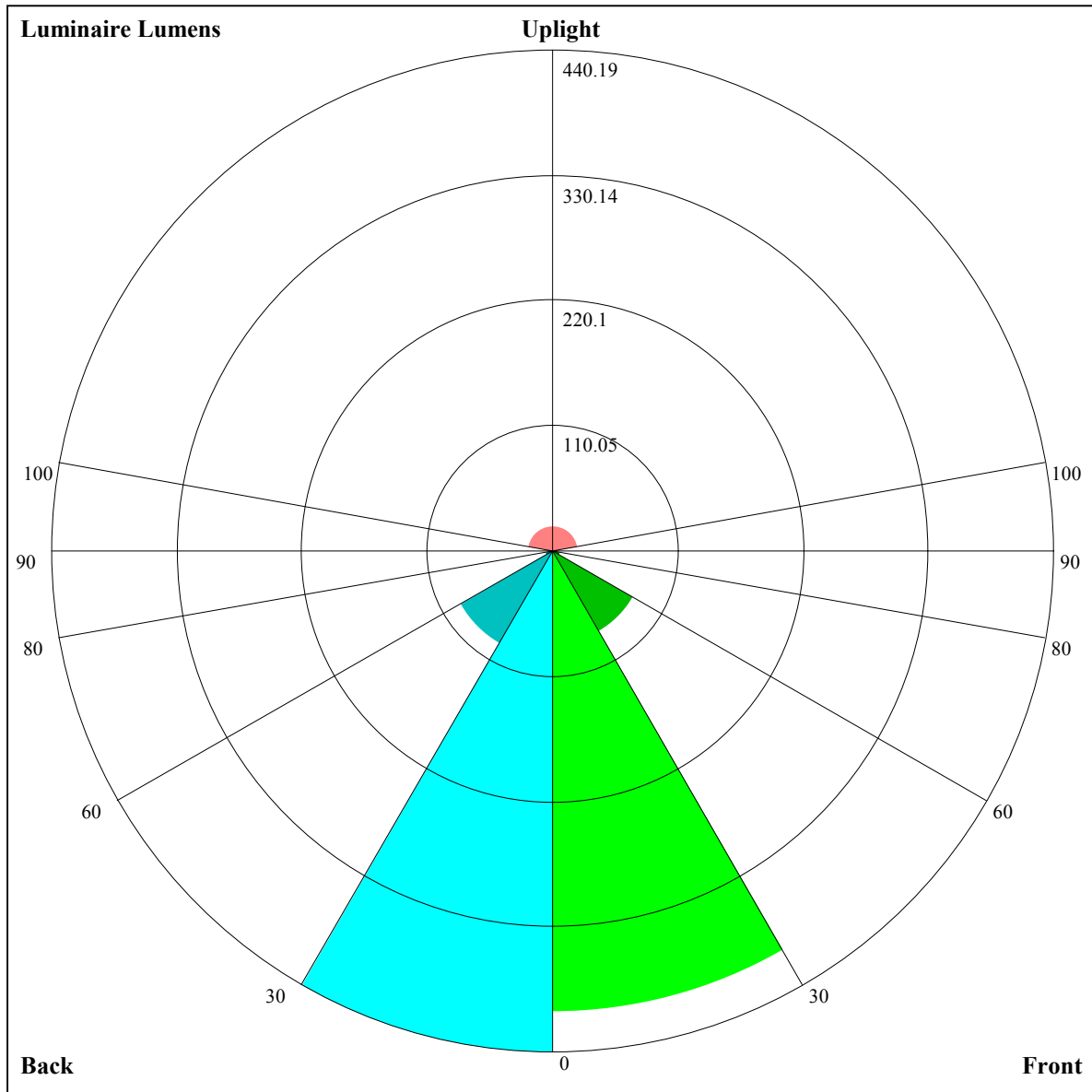
C45 ———

C90 ———



| 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    | 1.05                                    | 1.05 | 1.05 | 1.03 | 1.03 | 1.03 | 0.98 | 0.98 | 0.98 | 0.94 | 0.94 | 0.94 | 0.90 | 0.90 | 0.90 | 0.88 |
| 1    | 0.98                                    | 0.96 | 0.94 | 0.96 | 0.94 | 0.93 | 0.93 | 0.91 | 0.90 | 0.89 | 0.88 | 0.87 | 0.86 | 0.85 | 0.85 | 0.83 |
| 2    | 0.92                                    | 0.89 | 0.86 | 0.90 | 0.87 | 0.85 | 0.88 | 0.85 | 0.83 | 0.85 | 0.83 | 0.81 | 0.83 | 0.81 | 0.80 | 0.78 |
| 3    | 0.87                                    | 0.83 | 0.79 | 0.85 | 0.82 | 0.79 | 0.83 | 0.80 | 0.78 | 0.81 | 0.79 | 0.76 | 0.79 | 0.77 | 0.75 | 0.74 |
| 4    | 0.82                                    | 0.78 | 0.74 | 0.81 | 0.77 | 0.74 | 0.79 | 0.76 | 0.73 | 0.77 | 0.74 | 0.72 | 0.76 | 0.73 | 0.71 | 0.70 |
| 5    | 0.78                                    | 0.73 | 0.70 | 0.77 | 0.73 | 0.69 | 0.75 | 0.72 | 0.69 | 0.74 | 0.71 | 0.68 | 0.73 | 0.70 | 0.68 | 0.66 |
| 6    | 0.74                                    | 0.69 | 0.66 | 0.73 | 0.69 | 0.65 | 0.72 | 0.68 | 0.65 | 0.71 | 0.67 | 0.65 | 0.70 | 0.67 | 0.64 | 0.63 |
| 7    | 0.70                                    | 0.66 | 0.62 | 0.70 | 0.65 | 0.62 | 0.69 | 0.65 | 0.62 | 0.68 | 0.64 | 0.61 | 0.67 | 0.64 | 0.61 | 0.60 |
| 8    | 0.67                                    | 0.62 | 0.59 | 0.67 | 0.62 | 0.59 | 0.66 | 0.62 | 0.59 | 0.65 | 0.61 | 0.59 | 0.64 | 0.61 | 0.58 | 0.57 |
| 9    | 0.64                                    | 0.59 | 0.56 | 0.64 | 0.59 | 0.56 | 0.63 | 0.59 | 0.56 | 0.62 | 0.58 | 0.56 | 0.61 | 0.58 | 0.56 | 0.55 |
| 10   | 0.61                                    | 0.57 | 0.54 | 0.61 | 0.57 | 0.54 | 0.60 | 0.56 | 0.54 | 0.60 | 0.56 | 0.53 | 0.59 | 0.56 | 0.53 | 0.52 |





Luminaire Lumens:

FL=405.06,FM=81.9,FH=7.43,FVH=2.73

BL=440.19,BM=93.51,BH=6.69,BVH=2.62

UL=4.84,UH=23.04

BUG Rating:B1-U2-G0

Nata 2-1568-M

| Intensity data(cd) |         |         |         |         |         |        |        |        |        | Appendix Page: 15 Total:15 |  |
|--------------------|---------|---------|---------|---------|---------|--------|--------|--------|--------|----------------------------|--|
| C/γ(°)             | 0.0     | 5.0     | 10.0    | 15.0    | 20.0    | 25.0   | 30.0   | 35.0   | 40.0   |                            |  |
| 0.0                | 2242.69 | 2023.31 | 1734.19 | 1312.88 | 860.63  | 497.81 | 370.13 | 238.22 | 47.93  |                            |  |
| 45.0               | 2247.19 | 2059.88 | 1793.25 | 1451.81 | 952.31  | 533.81 | 396.00 | 293.06 | 72.17  |                            |  |
| 90.0               | 2238.75 | 2080.13 | 1821.94 | 1442.25 | 959.96  | 532.13 | 390.38 | 238.89 | 68.63  |                            |  |
| 135.0              | 2226.38 | 2196.56 | 1950.75 | 1601.44 | 1161.00 | 663.75 | 424.13 | 299.25 | 138.99 |                            |  |
| 180.0              | 2242.69 | 2194.88 | 1909.13 | 1518.19 | 1050.92 | 585.79 | 398.70 | 279.96 | 114.02 |                            |  |
| 225.0              | 2247.19 | 2133.56 | 1852.31 | 1429.31 | 929.14  | 535.39 | 389.48 | 240.58 | 83.42  |                            |  |
| 270.0              | 2238.75 | 2099.81 | 1836.00 | 1419.19 | 926.44  | 538.88 | 393.19 | 286.88 | 86.85  |                            |  |
| 315.0              | 2226.38 | 2007.00 | 1681.31 | 1105.76 | 765.79  | 457.03 | 351.06 | 174.94 | 30.38  |                            |  |
| 360.0              | 2242.69 | 2023.31 | 1734.19 | 1312.88 | 860.63  | 497.81 | 370.13 | 238.22 | 47.93  |                            |  |
| C/γ(°)             | 45.0    | 50.0    | 55.0    | 60.0    | 65.0    | 70.0   | 75.0   | 80.0   | 85.0   |                            |  |
| 0.0                | 10.18   | 7.03    | 5.51    | 5.34    | 5.34    | 6.36   | 5.57   | 5.68   | 5.74   |                            |  |
| 45.0               | 10.35   | 7.48    | 5.79    | 5.46    | 12.83   | 20.14  | 16.71  | 6.02   | 5.63   |                            |  |
| 90.0               | 9.39    | 6.64    | 5.57    | 5.23    | 5.12    | 7.76   | 7.20   | 4.89   | 4.78   |                            |  |
| 135.0              | 11.81   | 7.14    | 5.34    | 5.12    | 5.01    | 4.95   | 4.84   | 4.78   | 4.73   |                            |  |
| 180.0              | 10.35   | 6.75    | 5.46    | 5.23    | 5.06    | 4.95   | 4.95   | 4.84   | 4.78   |                            |  |
| 225.0              | 9.45    | 6.81    | 5.63    | 5.23    | 7.43    | 16.14  | 14.79  | 5.68   | 5.23   |                            |  |
| 270.0              | 9.96    | 6.98    | 5.34    | 5.18    | 5.01    | 5.68   | 5.68   | 4.89   | 4.84   |                            |  |
| 315.0              | 8.78    | 5.40    | 5.12    | 5.01    | 5.01    | 4.95   | 4.89   | 4.89   | 4.84   |                            |  |
| 360.0              | 10.18   | 7.03    | 5.51    | 5.34    | 5.34    | 6.36   | 5.57   | 5.68   | 5.74   |                            |  |
| C/γ(°)             | 90.0    |         |         |         |         |        |        |        |        |                            |  |
| 0.0                | 4.44    |         |         |         |         |        |        |        |        |                            |  |
| 45.0               | 4.44    |         |         |         |         |        |        |        |        |                            |  |
| 90.0               | 4.39    |         |         |         |         |        |        |        |        |                            |  |
| 135.0              | 4.44    |         |         |         |         |        |        |        |        |                            |  |
| 180.0              | 4.50    |         |         |         |         |        |        |        |        |                            |  |
| 225.0              | 4.44    |         |         |         |         |        |        |        |        |                            |  |
| 270.0              | 4.39    |         |         |         |         |        |        |        |        |                            |  |
| 315.0              | 4.44    |         |         |         |         |        |        |        |        |                            |  |
| 360.0              | 4.44    |         |         |         |         |        |        |        |        |                            |  |