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Address:Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

NT

Client: NT

LumCAT: 62-0216-1

Luminaire: 92.70.427.00

Report No: 20250226-B003

Ballast type: AC

Test No: 20250226-C003

LampCAT: CITIZEN CLU028

Lamp flux(lm): 1484.0

Number of Lamps: 1

Length(mm): 50

Phm Type: C

Voltage(V): 35.920

Current(A): 0.360

Power (W): 12.930

PF: 0.000

Width(mm): 50

Height(mm): 24

#### Photometric Results

Lumens(lm): 1398.33, Efficiency(%): 94.23% , Luminous Efficacy(lm/W): 108.15

Central intensity(cd): 6690.453, Maximum intensity(cd): 6690.453

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

Beam Angle(50%Imax): [C0/180]Total=23.8

[C90/270]Total=23.8

Field angle(10%Imax): [C0/180]Total=42.8

[C90/270]Total=42.8

Maximum s/h(1/2): C0\_180=0.40 C90\_270=0.40

Maximum s/h(1/4): C0\_180=0.40 C90\_270=0.40

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 94.23%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 97.912%

Equipment: GMS 1800  
Temperature(°C): 25.0

Date: 2025/2/27  
Humidity(%): 60.0%

Operator: NT  
Distance(m): 7.30

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0                | 6690.453      | 0.000       | 0         | 0.00%       | 0.00%      |
| 1.0                | 6666.672      | 6.391       | 6.391     | 0.43%       | 0.46%      |
| 2.0                | 6564.888      | 18.991      | 25.382    | 1.28%       | 1.82%      |
| 3.0                | 6422.005      | 31.060      | 56.443    | 2.09%       | 4.04%      |
| 4.0                | 6224.698      | 42.333      | 98.775    | 2.85%       | 7.06%      |
| 5.0                | 5961.379      | 52.424      | 151.199   | 3.53%       | 10.81%     |
| 6.0                | 5654.029      | 61.042      | 212.241   | 4.11%       | 15.18%     |
| 7.0                | 5307.711      | 68.039      | 280.281   | 4.58%       | 20.04%     |
| 8.0                | 4931.017      | 73.277      | 353.557   | 4.94%       | 25.28%     |
| 9.0                | 4531.941      | 76.692      | 430.249   | 5.17%       | 30.77%     |
| 10.0               | 4119.011      | 78.288      | 508.537   | 5.28%       | 36.37%     |
| 11.0               | 3702.483      | 78.153      | 586.69    | 5.27%       | 41.96%     |
| 12.0               | 3290.085      | 76.439      | 663.129   | 5.15%       | 47.42%     |
| 13.0               | 2889.744      | 73.339      | 736.468   | 4.94%       | 52.67%     |
| 14.0               | 2490.601      | 68.868      | 805.336   | 4.64%       | 57.59%     |
| 15.0               | 2153.968      | 63.763      | 869.098   | 4.30%       | 62.15%     |
| 16.0               | 1797.172      | 57.895      | 926.994   | 3.90%       | 66.29%     |
| 17.0               | 1520.750      | 51.669      | 978.663   | 3.48%       | 69.99%     |
| 18.0               | 1296.772      | 46.455      | 1025.117  | 3.13%       | 73.31%     |
| 19.0               | 1017.433      | 40.262      | 1065.38   | 2.71%       | 76.19%     |
| 20.0               | 868.627       | 34.520      | 1099.9    | 2.33%       | 78.66%     |
| 21.0               | 714.885       | 30.407      | 1130.307  | 2.05%       | 80.83%     |
| 22.0               | 598.800       | 26.399      | 1156.706  | 1.78%       | 82.72%     |
| 23.0               | 477.112       | 22.576      | 1179.281  | 1.52%       | 84.34%     |
| 24.0               | 391.582       | 18.993      | 1198.274  | 1.28%       | 85.69%     |
| 25.0               | 332.137       | 16.456      | 1214.73   | 1.11%       | 86.87%     |
| 26.0               | 267.203       | 14.147      | 1228.877  | 0.95%       | 87.88%     |
| 27.0               | 215.685       | 11.814      | 1240.691  | 0.80%       | 88.73%     |
| 28.0               | 184.890       | 10.142      | 1250.833  | 0.68%       | 89.45%     |
| 29.0               | 150.411       | 8.772       | 1259.605  | 0.59%       | 90.08%     |
| 30.0               | 133.092       | 7.655       | 1267.26   | 0.52%       | 90.63%     |
| 31.0               | 107.246       | 6.688       | 1273.948  | 0.45%       | 91.11%     |
| 32.0               | 93.038        | 5.738       | 1279.686  | 0.39%       | 91.52%     |
| 33.0               | 81.780        | 5.150       | 1284.836  | 0.35%       | 91.88%     |
| 34.0               | 72.967        | 4.683       | 1289.519  | 0.32%       | 92.22%     |
| 35.0               | 65.866        | 4.312       | 1293.831  | 0.29%       | 92.53%     |
| 36.0               | 60.711        | 4.030       | 1297.861  | 0.27%       | 92.82%     |
| 37.0               | 55.468        | 3.789       | 1301.65   | 0.26%       | 93.09%     |

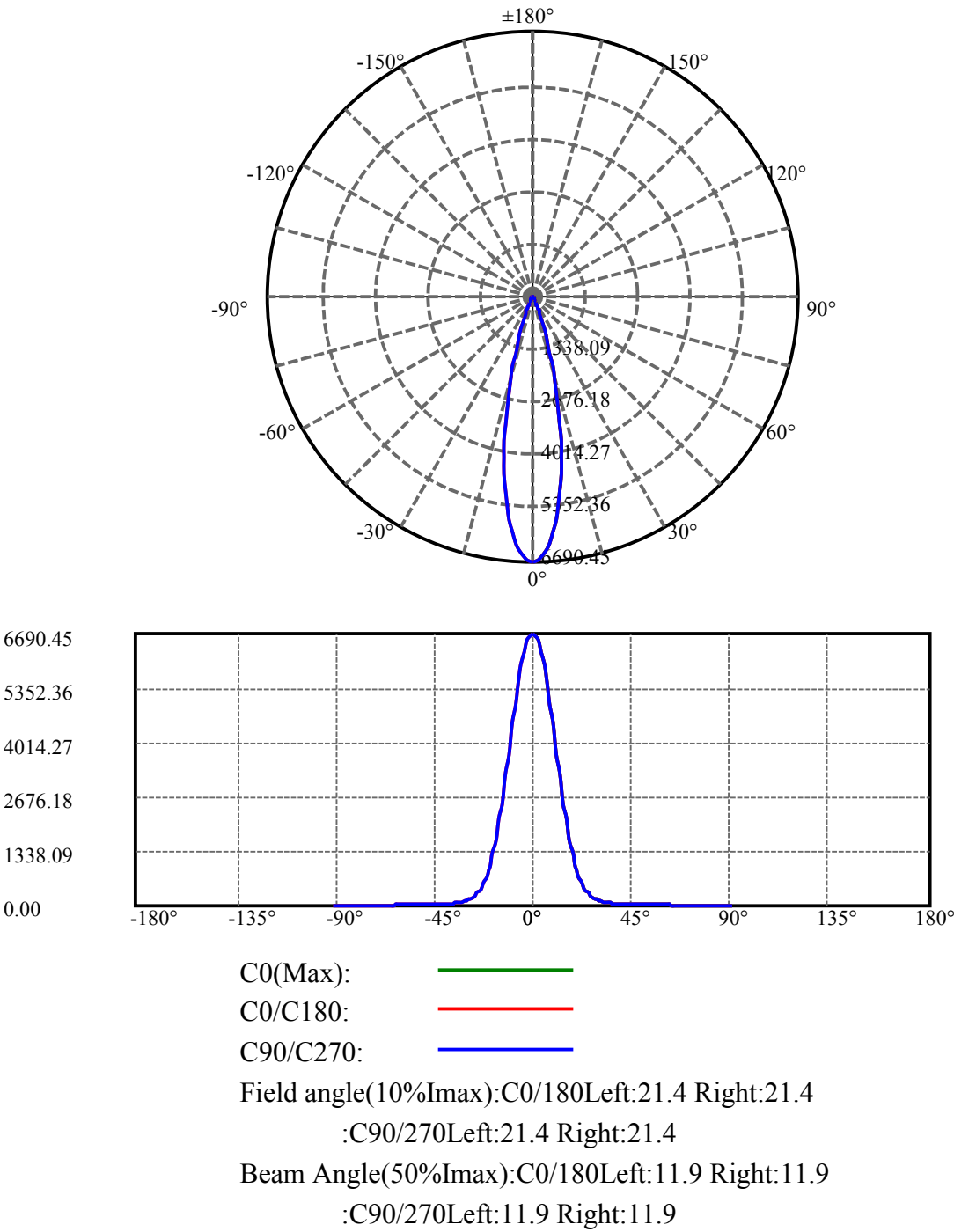
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0               | 51.498        | 3.570       | 1305.221  | 0.24%       | 93.34%     |
| 39.0               | 48.900        | 3.427       | 1308.648  | 0.23%       | 93.59%     |
| 40.0               | 46.176        | 3.316       | 1311.963  | 0.22%       | 93.82%     |
| 41.0               | 44.137        | 3.216       | 1315.18   | 0.22%       | 94.05%     |
| 42.0               | 42.619        | 3.152       | 1318.332  | 0.21%       | 94.28%     |
| 43.0               | 41.280        | 3.108       | 1321.439  | 0.21%       | 94.50%     |
| 44.0               | 40.101        | 3.072       | 1324.511  | 0.21%       | 94.72%     |
| 45.0               | 39.102        | 3.044       | 1327.555  | 0.21%       | 94.94%     |
| 46.0               | 38.162        | 3.022       | 1330.576  | 0.20%       | 95.15%     |
| 47.0               | 37.343        | 3.003       | 1333.579  | 0.20%       | 95.37%     |
| 48.0               | 36.530        | 2.986       | 1336.566  | 0.20%       | 95.58%     |
| 49.0               | 35.751        | 2.968       | 1339.534  | 0.20%       | 95.80%     |
| 50.0               | 34.932        | 2.947       | 1342.481  | 0.20%       | 96.01%     |
| 51.0               | 34.086        | 2.920       | 1345.401  | 0.20%       | 96.22%     |
| 52.0               | 33.206        | 2.888       | 1348.289  | 0.19%       | 96.42%     |
| 53.0               | 32.294        | 2.849       | 1351.138  | 0.19%       | 96.63%     |
| 54.0               | 31.275        | 2.802       | 1353.94   | 0.19%       | 96.83%     |
| 55.0               | 30.122        | 2.741       | 1356.68   | 0.18%       | 97.02%     |
| 56.0               | 28.890        | 2.667       | 1359.347  | 0.18%       | 97.21%     |
| 57.0               | 27.704        | 2.588       | 1361.934  | 0.17%       | 97.40%     |
| 58.0               | 26.445        | 2.504       | 1364.439  | 0.17%       | 97.58%     |
| 59.0               | 24.913        | 2.401       | 1366.84   | 0.16%       | 97.75%     |
| 60.0               | 23.714        | 2.297       | 1369.137  | 0.15%       | 97.91%     |
| 61.0               | 22.348        | 2.198       | 1371.335  | 0.15%       | 98.07%     |
| 62.0               | 20.956        | 2.087       | 1373.422  | 0.14%       | 98.22%     |
| 63.0               | 19.744        | 1.979       | 1375.401  | 0.13%       | 98.36%     |
| 64.0               | 18.545        | 1.879       | 1377.28   | 0.13%       | 98.49%     |
| 65.0               | 17.353        | 1.777       | 1379.057  | 0.12%       | 98.62%     |
| 66.0               | 16.220        | 1.675       | 1380.732  | 0.11%       | 98.74%     |
| 67.0               | 15.154        | 1.578       | 1382.309  | 0.11%       | 98.85%     |
| 68.0               | 14.122        | 1.483       | 1383.792  | 0.10%       | 98.96%     |
| 69.0               | 13.169        | 1.392       | 1385.185  | 0.09%       | 99.06%     |
| 70.0               | 12.263        | 1.306       | 1386.491  | 0.09%       | 99.15%     |
| 71.0               | 11.384        | 1.222       | 1387.713  | 0.08%       | 99.24%     |
| 72.0               | 10.585        | 1.142       | 1388.855  | 0.08%       | 99.32%     |
| 73.0               | 9.765         | 1.064       | 1389.919  | 0.07%       | 99.40%     |
| 74.0               | 8.979         | 0.985       | 1390.905  | 0.07%       | 99.47%     |
| 75.0               | 8.213         | 0.908       | 1391.813  | 0.06%       | 99.53%     |

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0               | 7.454         | 0.832       | 1392.645  | 0.06%       | 99.59%     |
| 77.0               | 6.801         | 0.760       | 1393.405  | 0.05%       | 99.65%     |
| 78.0               | 6.102         | 0.691       | 1394.096  | 0.05%       | 99.70%     |
| 79.0               | 5.509         | 0.624       | 1394.719  | 0.04%       | 99.74%     |
| 80.0               | 4.943         | 0.563       | 1395.283  | 0.04%       | 99.78%     |
| 81.0               | 4.490         | 0.510       | 1395.793  | 0.03%       | 99.82%     |
| 82.0               | 4.003         | 0.461       | 1396.254  | 0.03%       | 99.85%     |
| 83.0               | 3.557         | 0.411       | 1396.665  | 0.03%       | 99.88%     |
| 84.0               | 3.137         | 0.365       | 1397.029  | 0.02%       | 99.91%     |
| 85.0               | 2.678         | 0.317       | 1397.347  | 0.02%       | 99.93%     |
| 86.0               | 2.311         | 0.273       | 1397.619  | 0.02%       | 99.95%     |
| 87.0               | 1.932         | 0.232       | 1397.852  | 0.02%       | 99.97%     |
| 88.0               | 1.572         | 0.192       | 1398.044  | 0.01%       | 99.98%     |
| 89.0               | 1.266         | 0.156       | 1398.199  | 0.01%       | 99.99%     |
| 90.0               | 1.066         | 0.128       | 1398.327  | 0.01%       | 100.00%    |

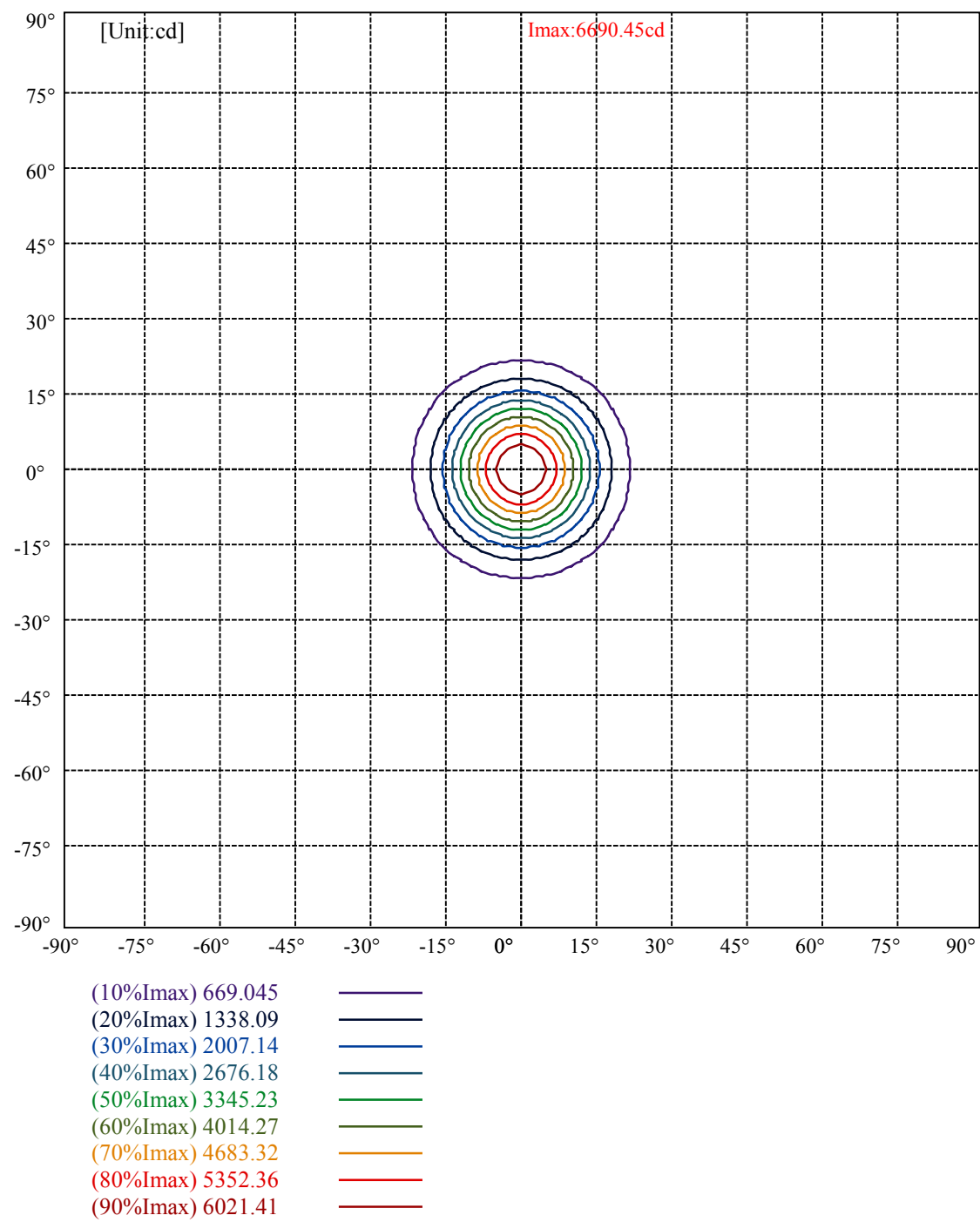
| ZONAL LUMEN SUMMARY |         |        |         |
|---------------------|---------|--------|---------|
| Zone                | Lumens  | %Lamp  | %Fixt   |
| 0-30                | 1267.26 | 85.40% | 90.63%  |
| 0-40                | 1311.96 | 88.41% | 93.82%  |
| 0-60                | 1369.14 | 92.26% | 97.91%  |
| 0-90                | 1398.20 | 94.22% | 99.99%  |
| 0-120               | 1398.20 | 94.22% | 99.99%  |
| 0-180               | 1398.33 | 94.23% | 100.00% |
| 60-90               | 29.06   | 1.96%  | 2.08%   |
| 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%   |
| 0-20.62             | 1118.66 | 75.38% | 80.00%  |

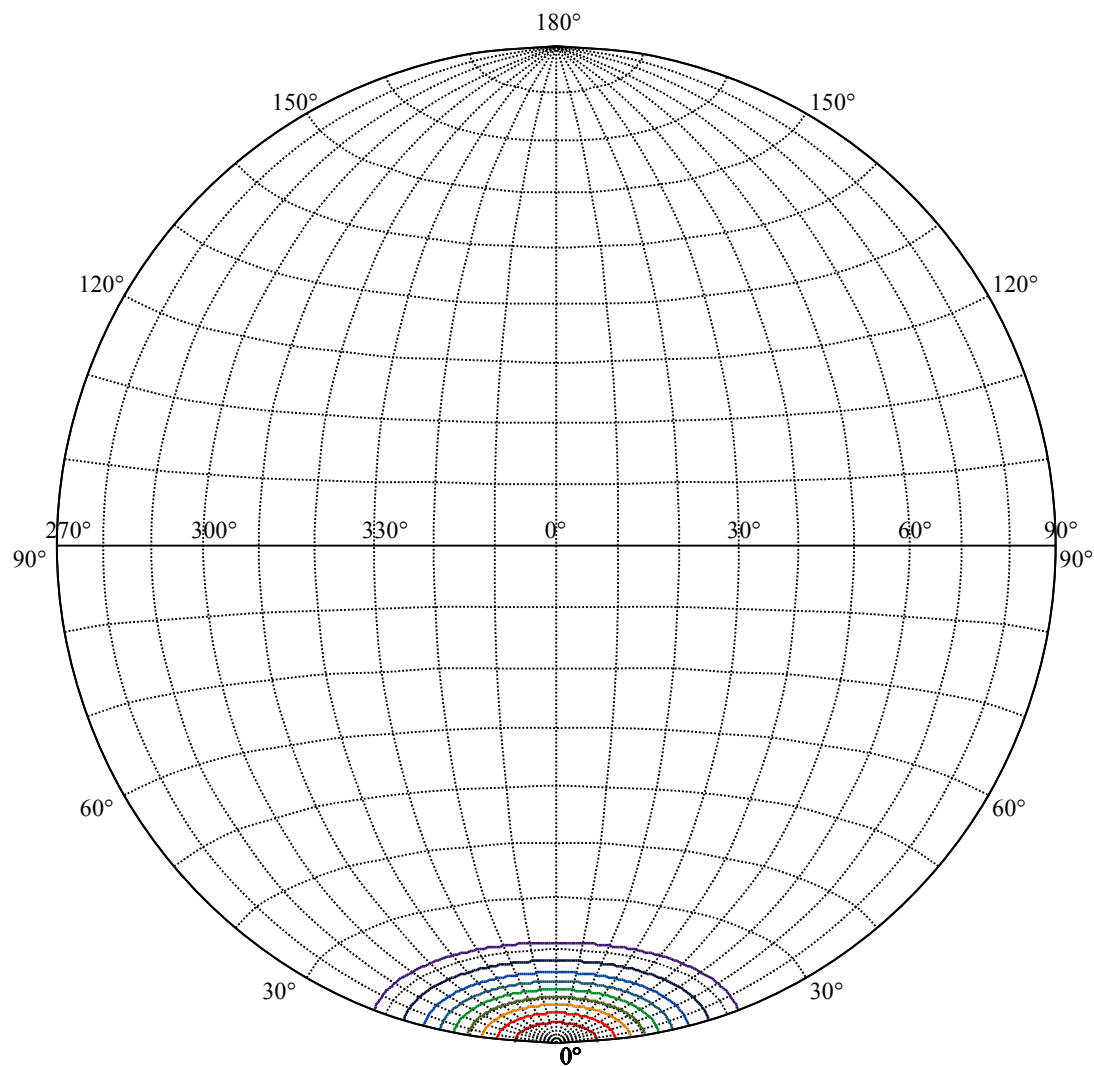
ZONAL LUMEN SUMMARY

|         |        |
|---------|--------|
| 0-10    | 508.54 |
| 10-20   | 591.36 |
| 20-30   | 167.36 |
| 30-40   | 44.70  |
| 40-50   | 30.52  |
| 50-60   | 26.66  |
| 60-70   | 17.35  |
| 70-80   | 8.79   |
| 80-90   | 2.92   |
| 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   |









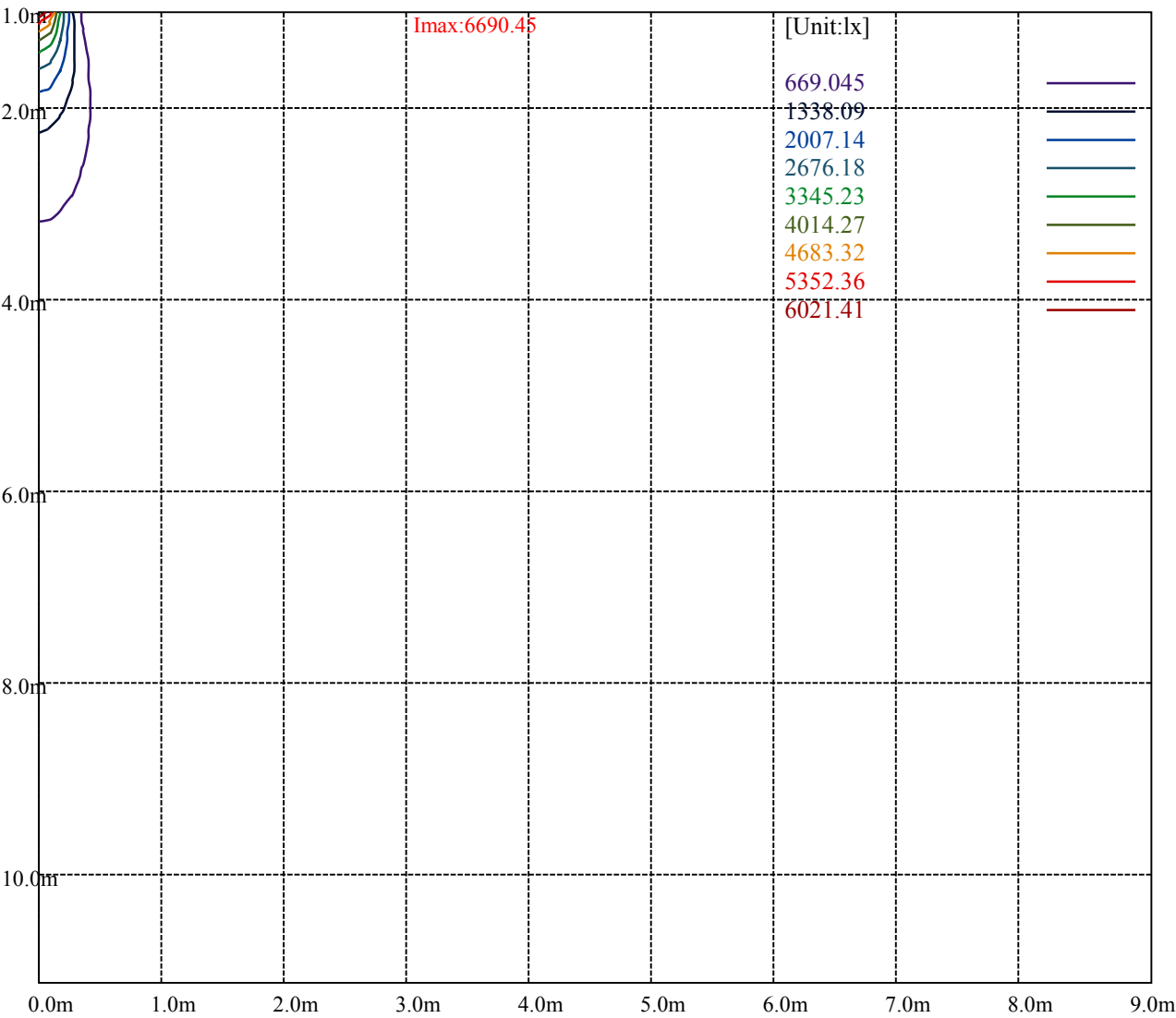
House

[Unit:cd]

Road

|                   |       |
|-------------------|-------|
| Imax:6690.45      |       |
| (10%Imax) 669.045 | _____ |
| (20%Imax) 1338.09 | _____ |
| (30%Imax) 2007.14 | _____ |
| (40%Imax) 2676.18 | _____ |
| (50%Imax) 3345.23 | _____ |
| (60%Imax) 4014.27 | _____ |
| (70%Imax) 4683.32 | _____ |
| (80%Imax) 5352.36 | _____ |
| (90%Imax) 6021.41 | _____ |





Luminance Table

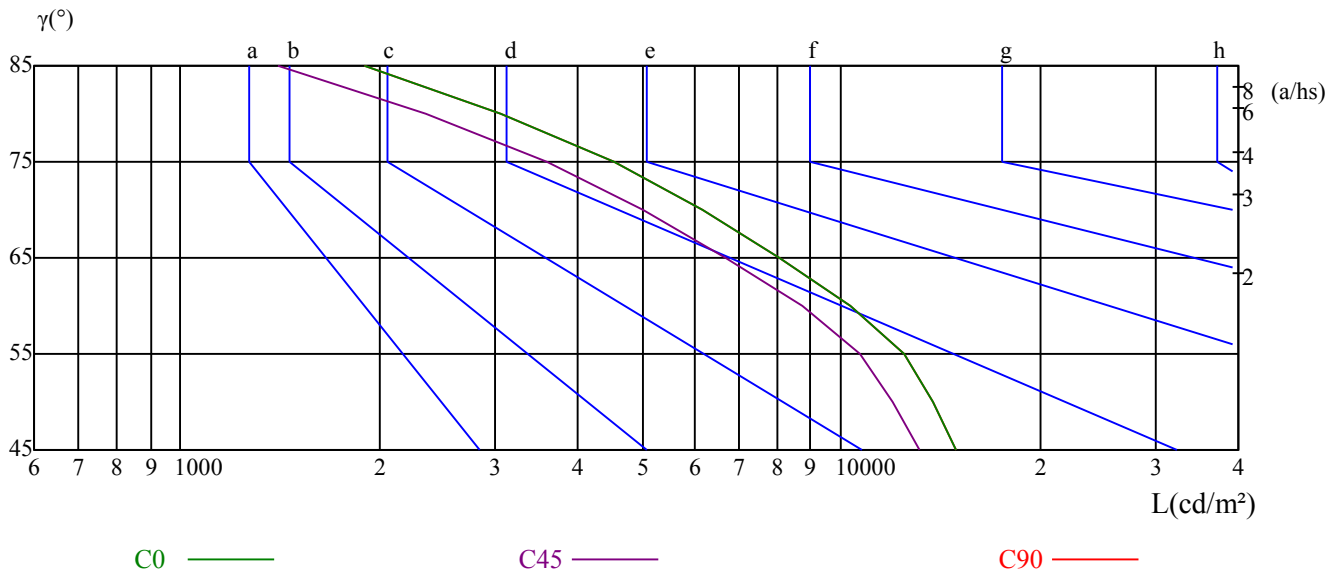
| $\gamma$ | 45    | 50    | 55    | 60    | 65   | 70   | 75   | 80   | 85   |
|----------|-------|-------|-------|-------|------|------|------|------|------|
| C0       | 14945 | 13828 | 12463 | 10359 | 8093 | 6185 | 4547 | 3059 | 1895 |
| C45      | 13175 | 12016 | 10666 | 8719  | 6688 | 5006 | 3592 | 2348 | 1403 |
| C90      | 14945 | 13828 | 12463 | 10359 | 8093 | 6185 | 4547 | 3059 | 1895 |

| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 16424      | 16424      | 16424   | 12694      | 12694      | 12694   | 12290      | 12290      | 12290   |

Glare Table

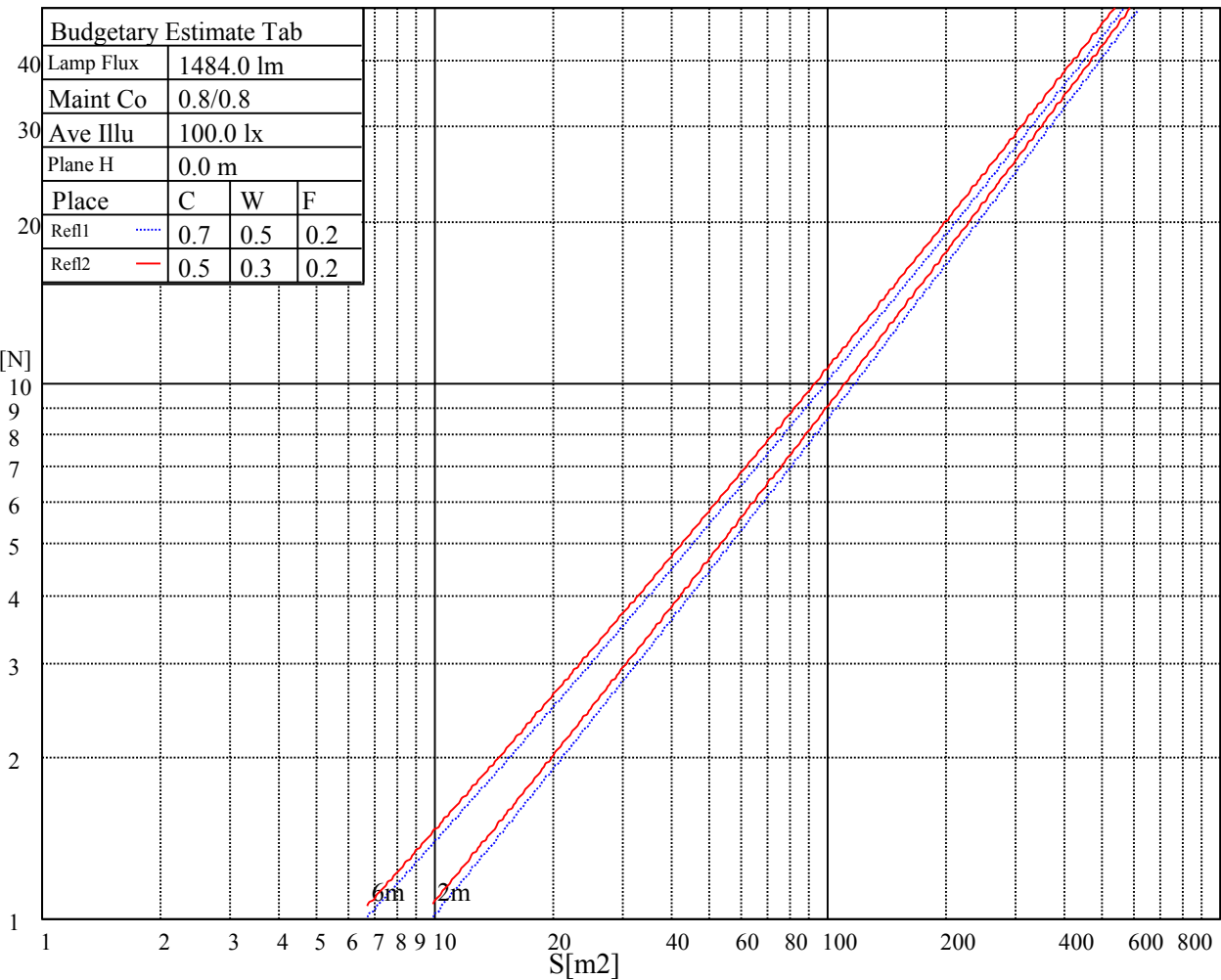
| Glare | Quality | Service Values Illuminance(lx) |      |      |            |            |            |            |            |
|-------|---------|--------------------------------|------|------|------------|------------|------------|------------|------------|
| 1.15  | A       | 2000            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

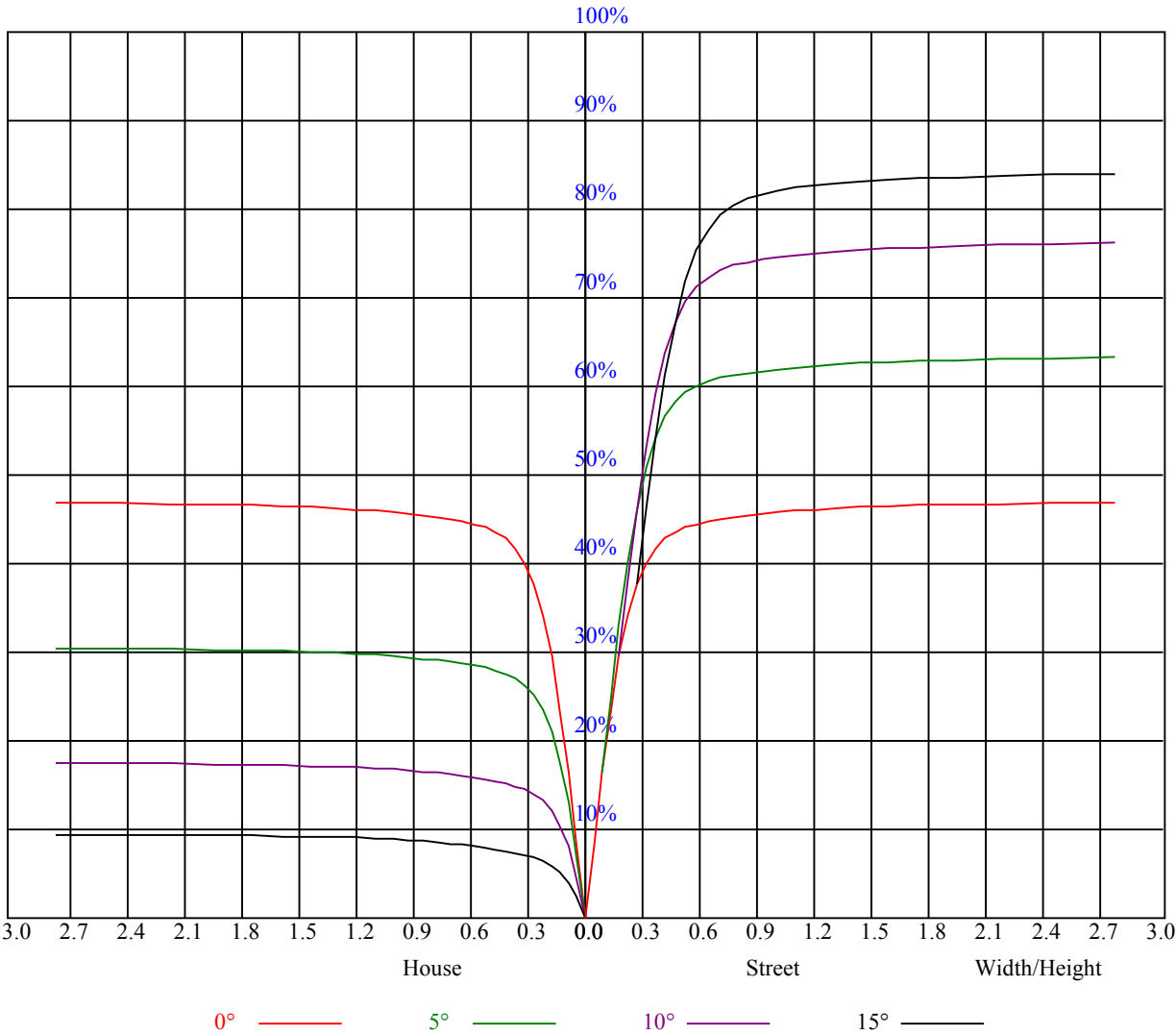


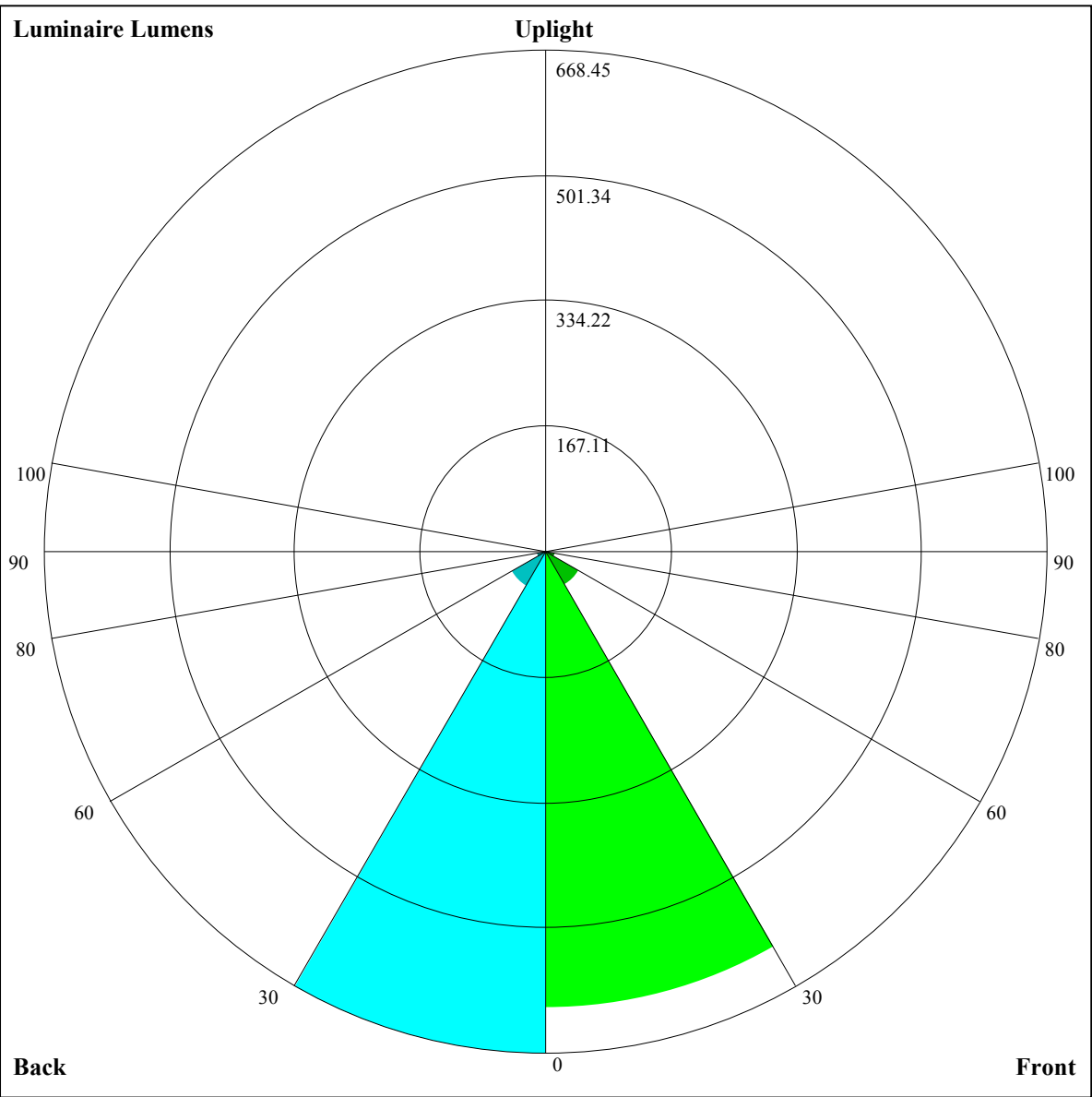
| Illumination assessment according UGR             |     |                  |       |       |       |       |                |       |       |       |       |
|---------------------------------------------------|-----|------------------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|
| Rf of Ceiling                                     | 70  | 70               | 50    | 50    | 30    | 70    | 70             | 50    | 50    | 30    |       |
| Rf of Wall                                        | 50  | 30               | 50    | 30    | 30    | 50    | 30             | 50    | 30    | 30    |       |
| Rf of Floor                                       | 20  | 20               | 20    | 20    | 20    | 20    | 20             | 20    | 20    | 20    |       |
| Room dimensions                                   |     | Viewed crosswise |       |       |       |       | Viewed endwise |       |       |       |       |
| X                                                 | Y   |                  |       |       |       |       |                |       |       |       |       |
| 2H                                                | 2H  | 13.49            | 14.47 | 13.86 | 14.78 | 15.09 | 13.02          | 13.99 | 13.38 | 14.30 | 14.62 |
|                                                   | 3H  | 14.43            | 15.30 | 14.82 | 15.64 | 15.98 | 13.91          | 14.78 | 14.30 | 15.12 | 15.46 |
|                                                   | 4H  | 14.73            | 15.53 | 15.13 | 15.89 | 16.25 | 14.18          | 14.98 | 14.58 | 15.33 | 15.70 |
|                                                   | 6H  | 14.93            | 15.67 | 15.35 | 16.04 | 16.44 | 14.34          | 15.07 | 14.76 | 15.45 | 15.85 |
|                                                   | 8H  | 14.97            | 15.67 | 15.39 | 16.05 | 16.46 | 14.36          | 15.06 | 14.78 | 15.44 | 15.85 |
|                                                   | 12H | 14.98            | 15.64 | 15.41 | 16.04 | 16.45 | 14.35          | 15.01 | 14.78 | 15.41 | 15.82 |
| 4H                                                | 2H  | 13.79            | 14.59 | 14.19 | 14.94 | 15.31 | 13.40          | 14.20 | 13.80 | 14.55 | 14.92 |
|                                                   | 3H  | 14.83            | 15.50 | 15.26 | 15.90 | 16.32 | 14.40          | 15.07 | 14.82 | 15.46 | 15.88 |
|                                                   | 4H  | 15.26            | 15.84 | 15.70 | 16.27 | 16.71 | 14.78          | 15.36 | 15.22 | 15.79 | 16.24 |
|                                                   | 6H  | 15.51            | 16.02 | 15.98 | 16.47 | 16.92 | 14.99          | 15.50 | 15.46 | 15.95 | 16.40 |
|                                                   | 8H  | 15.60            | 16.07 | 16.09 | 16.53 | 17.01 | 15.06          | 15.53 | 15.54 | 15.99 | 16.46 |
|                                                   | 12H | 15.67            | 16.10 | 16.16 | 16.55 | 17.07 | 15.10          | 15.53 | 15.59 | 15.98 | 16.51 |
| 8H                                                | 4H  | 15.30            | 15.77 | 15.78 | 16.23 | 16.70 | 14.85          | 15.33 | 15.34 | 15.78 | 16.26 |
|                                                   | 6H  | 15.63            | 16.02 | 16.14 | 16.50 | 17.01 | 15.15          | 15.54 | 15.66 | 16.02 | 16.53 |
|                                                   | 8H  | 15.83            | 16.15 | 16.36 | 16.68 | 17.17 | 15.32          | 15.65 | 15.86 | 16.17 | 16.67 |
|                                                   | 12H | 15.95            | 16.20 | 16.49 | 16.71 | 17.24 | 15.41          | 15.66 | 15.95 | 16.17 | 16.70 |
| 12H                                               | 4H  | 15.27            | 15.71 | 15.76 | 16.16 | 16.68 | 14.84          | 15.27 | 15.33 | 15.73 | 16.25 |
|                                                   | 6H  | 15.68            | 16.00 | 16.21 | 16.52 | 17.02 | 15.21          | 15.53 | 15.74 | 16.05 | 16.55 |
|                                                   | 8H  | 15.86            | 16.11 | 16.41 | 16.63 | 17.15 | 15.37          | 15.62 | 15.91 | 16.13 | 16.66 |
| Variation with the observer position at spacings: |     |                  |       |       |       |       |                |       |       |       |       |
| S = 1.0H                                          |     | 0.4/-0.5         |       |       |       |       | 0.4/-0.5       |       |       |       |       |
| S = 1.5H                                          |     | 0.8/-1.1         |       |       |       |       | 0.8/-1.1       |       |       |       |       |
| S = 2.0H                                          |     | 2.6/-1.5         |       |       |       |       | 2.6/-1.5       |       |       |       |       |
| Standard tables:                                  |     | BK3              |       |       |       |       | BK3            |       |       |       |       |
| Uncorrected UGR                                   |     | -2.1             |       |       |       |       | -2.1           |       |       |       |       |

UGR calculation is based on CIE Publ. 117 ,S/H = 0.25



| 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   | COEFFCIENTS OF UTILIZATION RHOFC=20 CU |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 0     | 1.12                                   | 1.12 | 1.12 | 1.10 | 1.10 | 1.10 | 1.05 | 1.05 | 1.05 | 1.00 | 1.00 | 1.00 | 0.96 | 0.96 | 0.96 | 0.94 |
| 1     | 1.06                                   | 1.04 | 1.02 | 1.04 | 1.02 | 1.01 | 1.00 | 0.99 | 0.97 | 0.97 | 0.96 | 0.95 | 0.93 | 0.93 | 0.92 | 0.90 |
| 2     | 1.00                                   | 0.97 | 0.95 | 0.99 | 0.96 | 0.94 | 0.96 | 0.94 | 0.92 | 0.93 | 0.91 | 0.90 | 0.91 | 0.89 | 0.88 | 0.87 |
| 3     | 0.96                                   | 0.92 | 0.89 | 0.95 | 0.91 | 0.89 | 0.92 | 0.89 | 0.87 | 0.90 | 0.88 | 0.86 | 0.88 | 0.86 | 0.85 | 0.83 |
| 4     | 0.92                                   | 0.88 | 0.85 | 0.91 | 0.87 | 0.84 | 0.89 | 0.86 | 0.83 | 0.87 | 0.85 | 0.82 | 0.86 | 0.83 | 0.82 | 0.80 |
| 5     | 0.88                                   | 0.84 | 0.81 | 0.87 | 0.84 | 0.81 | 0.86 | 0.83 | 0.80 | 0.85 | 0.82 | 0.79 | 0.83 | 0.81 | 0.79 | 0.78 |
| 6     | 0.85                                   | 0.81 | 0.78 | 0.85 | 0.81 | 0.78 | 0.83 | 0.80 | 0.77 | 0.82 | 0.79 | 0.77 | 0.81 | 0.78 | 0.76 | 0.75 |
| 7     | 0.82                                   | 0.78 | 0.75 | 0.82 | 0.78 | 0.75 | 0.81 | 0.77 | 0.75 | 0.80 | 0.77 | 0.74 | 0.79 | 0.76 | 0.74 | 0.73 |
| 8     | 0.80                                   | 0.76 | 0.73 | 0.79 | 0.76 | 0.73 | 0.79 | 0.75 | 0.73 | 0.78 | 0.75 | 0.72 | 0.77 | 0.74 | 0.72 | 0.71 |
| 9     | 0.78                                   | 0.74 | 0.71 | 0.77 | 0.73 | 0.71 | 0.76 | 0.73 | 0.71 | 0.76 | 0.73 | 0.70 | 0.75 | 0.72 | 0.70 | 0.69 |
| 10    | 0.75                                   | 0.72 | 0.69 | 0.75 | 0.71 | 0.69 | 0.74 | 0.71 | 0.69 | 0.74 | 0.71 | 0.69 | 0.73 | 0.70 | 0.68 | 0.68 |





Luminaire Lumens:

FL=608.71,FM=51.19,FH=13.31,FVH=1.7

BL=668.45,BM=53.3,BH=13.05,BVH=1.35

UL=0,UH=0

BUG Rating:B2-U0-G0

## Intensity data(cd)

Appendix Page: 18 Total:20

| C/γ(°) | 0.0     | 1.0     | 2.0     | 3.0     | 4.0     | 5.0     | 6.0     | 7.0     | 8.0     |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0.0    | 6690.19 | 6571.88 | 6309.70 | 6158.89 | 5867.92 | 5531.66 | 5162.90 | 4770.15 | 4359.28 |
| 45.0   | 6737.61 | 6659.28 | 6475.43 | 6231.36 | 5928.14 | 5578.02 | 5199.67 | 4794.13 | 4368.34 |
| 90.0   | 6559.09 | 6376.84 | 6029.92 | 5761.34 | 5380.85 | 4966.79 | 4538.34 | 4104.56 | 3665.45 |
| 135.0  | 6756.27 | 6656.08 | 6564.42 | 6258.54 | 6090.14 | 5772.00 | 5415.49 | 5029.14 | 4622.53 |
| 180.0  | 6690.19 | 6728.02 | 6733.35 | 6675.27 | 6552.70 | 6366.18 | 6118.38 | 5824.76 | 5484.77 |
| 225.0  | 6774.92 | 6825.54 | 6810.62 | 6767.99 | 6643.82 | 6458.91 | 6213.24 | 5905.22 | 5557.24 |
| 270.0  | 6559.09 | 6728.56 | 6843.66 | 6868.71 | 6840.46 | 6745.61 | 6585.74 | 6361.92 | 6079.48 |
| 315.0  | 6756.27 | 6787.17 | 6752.00 | 6653.95 | 6493.55 | 6271.86 | 5998.48 | 5671.81 | 5311.04 |
| 360.0  | 6690.19 | 6571.88 | 6309.70 | 6158.89 | 5867.92 | 5531.66 | 5162.90 | 4770.15 | 4359.28 |
| C/γ(°) | 9.0     | 10.0    | 11.0    | 12.0    | 13.0    | 14.0    | 15.0    | 16.0    | 17.0    |
| 0.0    | 3937.76 | 3511.97 | 3096.31 | 2697.70 | 2318.27 | 1967.63 | 1642.02 | 1036.49 | 953.89  |
| 45.0   | 3935.63 | 3503.44 | 3080.32 | 2677.98 | 2293.23 | 1934.05 | 1616.45 | 1444.32 | 1186.40 |
| 90.0   | 3235.40 | 2812.81 | 2414.73 | 2045.43 | 1713.43 | 1280.72 | 1048.59 | 968.65  | 790.82  |
| 135.0  | 4194.08 | 3767.76 | 3342.51 | 2926.85 | 2530.90 | 2155.21 | 1812.02 | 1510.93 | 1248.21 |
| 180.0  | 5113.87 | 4716.32 | 4300.13 | 3878.07 | 3455.48 | 3043.02 | 2641.75 | 2264.45 | 1918.60 |
| 225.0  | 5169.29 | 4760.02 | 4338.50 | 3899.39 | 3472.54 | 3054.74 | 2650.27 | 2269.78 | 1913.80 |
| 270.0  | 5747.49 | 5367.00 | 4958.79 | 4536.74 | 4099.23 | 3666.51 | 3235.93 | 2820.27 | 2425.92 |
| 315.0  | 4922.02 | 4512.76 | 4088.57 | 3658.52 | 3234.86 | 2822.93 | 2584.72 | 2062.48 | 1728.35 |
| 360.0  | 3937.76 | 3511.97 | 3096.31 | 2697.70 | 2318.27 | 1967.63 | 1642.02 | 1036.49 | 953.89  |
| C/γ(°) | 18.0    | 19.0    | 20.0    | 21.0    | 22.0    | 23.0    | 24.0    | 25.0    | 26.0    |
| 0.0    | 953.89  | 737.80  | 620.24  | 498.53  | 400.42  | 321.50  | 260.91  | 214.23  | 178.15  |
| 45.0   | 891.70  | 787.25  | 635.38  | 466.98  | 408.36  | 327.89  | 276.20  | 276.20  | 173.19  |
| 90.0   | 697.89  | 565.09  | 455.15  | 367.33  | 297.46  | 242.95  | 200.05  | 166.69  | 140.10  |
| 135.0  | 1021.20 | 835.21  | 681.74  | 549.58  | 445.13  | 359.87  | 291.12  | 291.12  | 269.27  |
| 180.0  | 1604.19 | 1325.48 | 1084.61 | 883.71  | 749.42  | 606.07  | 467.51  | 392.37  | 315.64  |
| 225.0  | 1596.73 | 1012.56 | 1012.56 | 932.95  | 757.84  | 613.47  | 494.05  | 395.57  | 316.76  |
| 270.0  | 2060.35 | 1859.45 | 1442.72 | 1194.39 | 1064.89 | 808.57  | 714.78  | 578.89  | 469.64  |
| 315.0  | 1548.23 | 1016.61 | 1016.61 | 825.62  | 666.87  | 536.58  | 428.03  | 342.02  | 274.87  |
| 360.0  | 953.89  | 737.80  | 620.24  | 498.53  | 400.42  | 321.50  | 260.91  | 214.23  | 178.15  |
| C/γ(°) | 27.0    | 28.0    | 29.0    | 30.0    | 31.0    | 32.0    | 33.0    | 34.0    | 35.0    |
| 0.0    | 150.17  | 127.36  | 109.30  | 94.70   | 82.71   | 72.95   | 65.39   | 59.15   | 54.41   |
| 45.0   | 144.74  | 122.62  | 104.82  | 90.59   | 79.03   | 69.81   | 62.51   | 58.94   | 52.70   |
| 90.0   | 119.16  | 102.00  | 88.04   | 76.90   | 68.74   | 62.56   | 57.66   | 53.82   | 50.95   |
| 135.0  | 173.09  | 146.28  | 124.27  | 106.53  | 92.24   | 80.84   | 71.78   | 64.85   | 59.31   |
| 180.0  | 278.33  | 278.33  | 176.60  | 147.99  | 125.55  | 107.70  | 92.94   | 80.95   | 71.46   |
| 225.0  | 255.85  | 208.42  | 172.29  | 143.94  | 120.97  | 102.48  | 88.19   | 76.84   | 67.94   |
| 270.0  | 381.18  | 310.84  | 275.67  | 275.67  | 179.32  | 153.64  | 133.54  | 116.71  | 102.42  |
| 315.0  | 222.97  | 183.26  | 152.30  | 128.43  | 109.40  | 94.32   | 82.23   | 72.47   | 67.73   |
| 360.0  | 150.17  | 127.36  | 109.30  | 94.70   | 82.71   | 72.95   | 65.39   | 59.15   | 54.41   |
| C/γ(°) | 36.0    | 37.0    | 38.0    | 39.0    | 40.0    | 41.0    | 42.0    | 43.0    | 44.0    |
| 0.0    | 50.95   | 48.23   | 46.04   | 45.03   | 43.01   | 42.26   | 41.14   | 40.29   | 39.54   |
| 45.0   | 50.68   | 47.85   | 45.51   | 43.43   | 41.99   | 40.50   | 39.27   | 38.26   | 37.30   |
| 90.0   | 48.65   | 46.63   | 44.76   | 43.38   | 41.62   | 39.97   | 39.06   | 38.05   | 37.09   |
| 135.0  | 55.10   | 51.85   | 50.20   | 46.74   | 44.76   | 43.64   | 41.62   | 40.77   | 39.54   |
| 180.0  | 64.27   | 60.80   | 54.20   | 52.01   | 48.97   | 45.83   | 44.55   | 42.95   | 41.62   |
| 225.0  | 63.73   | 55.85   | 51.85   | 50.04   | 46.52   | 44.55   | 43.70   | 42.15   | 40.77   |
| 270.0  | 91.23   | 76.42   | 66.99   | 61.02   | 55.42   | 51.26   | 48.07   | 45.56   | 43.86   |
| 315.0  | 61.07   | 56.11   | 52.44   | 49.56   | 47.11   | 45.08   | 43.54   | 42.21   | 41.09   |
| 360.0  | 50.95   | 48.23   | 46.04   | 45.03   | 43.01   | 42.26   | 41.14   | 40.29   | 39.54   |

## Intensity data(cd)

Appendix Page: 19 Total:20

| C/ $\gamma$ (°) | 45.0  | 46.0  | 47.0  | 48.0  | 49.0  | 50.0  | 51.0  | 52.0  | 53.0  |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.0             | 38.80 | 38.00 | 37.36 | 36.72 | 36.02 | 35.28 | 34.43 | 33.41 | 32.29 |
| 45.0            | 36.40 | 35.81 | 35.22 | 34.37 | 33.47 | 32.72 | 31.81 | 30.75 | 29.58 |
| 90.0            | 36.40 | 35.60 | 34.85 | 33.95 | 33.20 | 32.24 | 31.01 | 29.84 | 28.83 |
| 135.0           | 38.48 | 37.41 | 36.61 | 35.76 | 34.85 | 33.79 | 33.04 | 32.03 | 30.91 |
| 180.0           | 40.23 | 38.90 | 37.68 | 36.66 | 35.70 | 34.75 | 33.73 | 32.77 | 31.81 |
| 225.0           | 39.65 | 38.58 | 37.57 | 36.61 | 35.86 | 35.06 | 34.37 | 33.73 | 32.93 |
| 270.0           | 42.58 | 41.51 | 40.55 | 39.75 | 39.01 | 38.26 | 37.68 | 37.14 | 36.56 |
| 315.0           | 40.29 | 39.49 | 38.90 | 38.42 | 37.89 | 37.36 | 36.61 | 35.97 | 35.44 |
| 360.0           | 38.80 | 38.00 | 37.36 | 36.72 | 36.02 | 35.28 | 34.43 | 33.41 | 32.29 |
| C/ $\gamma$ (°) | 54.0  | 55.0  | 56.0  | 57.0  | 58.0  | 59.0  | 60.0  | 61.0  | 62.0  |
| 0.0             | 31.23 | 29.79 | 28.30 | 26.80 | 25.47 | 24.09 | 23.13 | 21.21 | 19.88 |
| 45.0            | 28.35 | 27.55 | 25.69 | 24.83 | 23.45 | 22.06 | 20.84 | 19.56 | 18.33 |
| 90.0            | 27.39 | 26.06 | 24.67 | 23.45 | 22.70 | 20.84 | 19.56 | 18.86 | 17.27 |
| 135.0           | 29.74 | 28.67 | 27.44 | 26.06 | 24.73 | 23.39 | 22.28 | 21.10 | 20.20 |
| 180.0           | 30.91 | 29.74 | 28.67 | 27.39 | 26.59 | 24.89 | 23.50 | 22.33 | 20.89 |
| 225.0           | 31.97 | 30.85 | 29.68 | 28.46 | 26.91 | 25.26 | 24.09 | 22.44 | 21.00 |
| 270.0           | 36.08 | 35.44 | 34.59 | 33.89 | 32.29 | 30.96 | 30.11 | 28.51 | 26.75 |
| 315.0           | 34.53 | 32.88 | 32.08 | 30.75 | 29.42 | 27.82 | 26.22 | 24.78 | 23.34 |
| 360.0           | 31.23 | 29.79 | 28.30 | 26.80 | 25.47 | 24.09 | 23.13 | 21.21 | 19.88 |
| C/ $\gamma$ (°) | 63.0  | 64.0  | 65.0  | 66.0  | 67.0  | 68.0  | 69.0  | 70.0  | 71.0  |
| 0.0             | 19.08 | 17.91 | 16.79 | 15.72 | 14.65 | 13.70 | 12.84 | 11.99 | 11.14 |
| 45.0            | 17.27 | 16.15 | 15.08 | 14.18 | 13.43 | 12.58 | 11.88 | 11.19 | 10.60 |
| 90.0            | 16.73 | 15.67 | 14.76 | 13.86 | 13.06 | 12.20 | 11.40 | 10.66 | 9.86  |
| 135.0           | 18.86 | 18.12 | 17.16 | 16.25 | 15.19 | 14.12 | 13.11 | 12.20 | 11.35 |
| 180.0           | 19.66 | 18.39 | 17.16 | 15.99 | 14.92 | 13.86 | 12.90 | 11.94 | 11.03 |
| 225.0           | 19.77 | 18.60 | 17.27 | 15.99 | 14.92 | 13.80 | 12.74 | 11.67 | 10.71 |
| 270.0           | 24.73 | 22.97 | 21.32 | 19.77 | 18.28 | 17.00 | 15.77 | 14.65 | 13.59 |
| 315.0           | 21.85 | 20.57 | 19.29 | 18.01 | 16.79 | 15.72 | 14.71 | 13.80 | 12.79 |
| 360.0           | 19.08 | 17.91 | 16.79 | 15.72 | 14.65 | 13.70 | 12.84 | 11.99 | 11.14 |
| C/ $\gamma$ (°) | 72.0  | 73.0  | 74.0  | 75.0  | 76.0  | 77.0  | 78.0  | 79.0  | 80.0  |
| 0.0             | 10.39 | 9.65  | 8.85  | 8.10  | 7.30  | 6.71  | 6.13  | 5.65  | 5.17  |
| 45.0            | 9.91  | 9.27  | 8.69  | 8.05  | 7.46  | 7.03  | 6.45  | 6.08  | 5.60  |
| 90.0            | 9.17  | 8.37  | 7.57  | 6.77  | 6.18  | 5.70  | 5.22  | 4.64  | 4.26  |
| 135.0           | 10.50 | 9.65  | 8.90  | 8.21  | 7.41  | 6.55  | 5.97  | 5.49  | 4.90  |
| 180.0           | 10.23 | 9.43  | 8.58  | 7.78  | 6.98  | 6.23  | 5.38  | 4.90  | 4.10  |
| 225.0           | 9.97  | 9.06  | 8.21  | 7.41  | 6.66  | 5.97  | 5.17  | 4.53  | 4.00  |
| 270.0           | 12.52 | 11.62 | 10.76 | 9.75  | 8.95  | 8.15  | 7.35  | 6.45  | 5.65  |
| 315.0           | 11.99 | 11.08 | 10.28 | 9.65  | 8.69  | 8.05  | 7.14  | 6.34  | 5.86  |
| 360.0           | 10.39 | 9.65  | 8.85  | 8.10  | 7.30  | 6.71  | 6.13  | 5.65  | 5.17  |
| C/ $\gamma$ (°) | 81.0  | 82.0  | 83.0  | 84.0  | 85.0  | 86.0  | 87.0  | 88.0  | 89.0  |
| 0.0             | 4.69  | 4.26  | 3.78  | 3.36  | 3.04  | 2.56  | 2.24  | 1.81  | 1.49  |
| 45.0            | 5.12  | 4.58  | 4.21  | 3.73  | 3.25  | 2.82  | 2.45  | 2.03  | 1.81  |
| 90.0            | 3.89  | 3.52  | 3.09  | 2.66  | 2.24  | 1.87  | 1.65  | 1.49  | 1.33  |
| 135.0           | 4.37  | 3.89  | 3.41  | 3.04  | 2.45  | 2.08  | 1.65  | 1.28  | 1.07  |
| 180.0           | 3.68  | 3.25  | 2.82  | 2.50  | 2.03  | 1.71  | 1.28  | 0.96  | 0.59  |
| 225.0           | 3.57  | 3.20  | 2.77  | 2.40  | 1.97  | 1.71  | 1.33  | 1.01  | 0.64  |
| 270.0           | 5.22  | 4.53  | 3.94  | 3.46  | 2.98  | 2.61  | 2.18  | 1.81  | 1.39  |
| 315.0           | 5.38  | 4.80  | 4.42  | 3.94  | 3.46  | 3.14  | 2.66  | 2.18  | 1.81  |
| 360.0           | 4.69  | 4.26  | 3.78  | 3.36  | 3.04  | 2.56  | 2.24  | 1.81  | 1.49  |

Intensity data(cd)

|                       |      |
|-----------------------|------|
| C/ $\gamma(^{\circ})$ | 90.0 |
| 0.0                   | 1.44 |
| 45.0                  | 1.65 |
| 90.0                  | 1.28 |
| 135.0                 | 0.91 |
| 180.0                 | 0.32 |
| 225.0                 | 0.43 |
| 270.0                 | 1.01 |
| 315.0                 | 1.49 |
| 360.0                 | 1.44 |