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NT

LumCAT: 2-2642-L  
Luminaire: 92.70.411.00  
LampCAT: LUMILEDS LUXEON 1205  
Ballast type: AC  
Report No: 20231026-B010 Voltage(V): 35.1600  
Test No: 20231026-C010 Current(A): 0.4850  
Number of Lamps: 1 Power (W): 17.0520  
Lamp flux(lm): 2083.2 PF: 0.0000  
Length(mm): 0 Width(mm): 0  
Phm Type: C Height(mm): 0

### Photometric Results

Lumens(lm): 1942.99, Efficiency(%): 93.27% , Luminous Efficacy(lm/W): 113.94  
Central intensity(cd): 3256.729, Maximum intensity(cd): 3256.729  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=45.6  
[C90/270]Total=45.6  
Field angle(10%Imax): [C0/180]Total=71.4  
[C90/270]Total=71.4  
Maximum s/h(1/2): C0\_180=0.72 C90\_270=0.72  
Maximum s/h(1/4): C0\_180=0.72 C90\_270=0.72  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 93.27%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 97.967%

Equipment: GMS1980  
Temperature(°C): 0.0

Date: 2023/10/26  
Humidity(%): 0.0%

Operator: NT07  
Distance(m): 7.44

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0                | 3256.729      | 0.000       | 0         | 0.00%       | 0.00%      |
| 1.0                | 3255.691      | 3.116       | 3.116     | 0.15%       | 0.16%      |
| 2.0                | 3247.250      | 9.334       | 12.45     | 0.45%       | 0.64%      |
| 3.0                | 3237.009      | 15.508      | 27.958    | 0.74%       | 1.44%      |
| 4.0                | 3209.263      | 21.578      | 49.536    | 1.04%       | 2.55%      |
| 5.0                | 3168.232      | 27.436      | 76.971    | 1.32%       | 3.96%      |
| 6.0                | 3116.684      | 33.029      | 110       | 1.59%       | 5.66%      |
| 7.0                | 3058.286      | 38.328      | 148.328   | 1.84%       | 7.63%      |
| 8.0                | 2996.083      | 43.330      | 191.658   | 2.08%       | 9.86%      |
| 9.0                | 2925.023      | 47.987      | 239.645   | 2.30%       | 12.33%     |
| 10.0               | 2844.068      | 52.208      | 291.854   | 2.51%       | 15.02%     |
| 11.0               | 2759.239      | 55.989      | 347.842   | 2.69%       | 17.90%     |
| 12.0               | 2667.490      | 59.322      | 407.164   | 2.85%       | 20.96%     |
| 13.0               | 2572.835      | 62.189      | 469.354   | 2.99%       | 24.16%     |
| 14.0               | 2478.457      | 64.656      | 534.01    | 3.10%       | 27.48%     |
| 15.0               | 2390.860      | 66.848      | 600.858   | 3.21%       | 30.92%     |
| 16.0               | 2301.879      | 68.762      | 669.62    | 3.30%       | 34.46%     |
| 17.0               | 2201.136      | 70.124      | 739.744   | 3.37%       | 38.07%     |
| 18.0               | 2113.816      | 71.144      | 810.888   | 3.42%       | 41.73%     |
| 19.0               | 2017.915      | 71.884      | 882.771   | 3.45%       | 45.43%     |
| 20.0               | 1917.449      | 72.028      | 954.8     | 3.46%       | 49.14%     |
| 21.0               | 1809.232      | 71.560      | 1026.359  | 3.44%       | 52.82%     |
| 22.0               | 1708.074      | 70.682      | 1097.041  | 3.39%       | 56.46%     |
| 23.0               | 1603.040      | 69.476      | 1166.517  | 3.34%       | 60.04%     |
| 24.0               | 1495.170      | 67.738      | 1234.255  | 3.25%       | 63.52%     |
| 25.0               | 1370.922      | 65.169      | 1299.424  | 3.13%       | 66.88%     |
| 26.0               | 1259.350      | 62.088      | 1361.512  | 2.98%       | 70.07%     |
| 27.0               | 1158.378      | 59.150      | 1420.662  | 2.84%       | 73.12%     |
| 28.0               | 1075.493      | 56.557      | 1477.219  | 2.71%       | 76.03%     |
| 29.0               | 970.605       | 53.532      | 1530.75   | 2.57%       | 78.78%     |
| 30.0               | 860.195       | 49.431      | 1580.182  | 2.37%       | 81.33%     |
| 31.0               | 754.020       | 44.921      | 1625.103  | 2.16%       | 83.64%     |
| 32.0               | 648.488       | 40.180      | 1665.283  | 1.93%       | 85.71%     |
| 33.0               | 550.554       | 35.324      | 1700.607  | 1.70%       | 87.53%     |
| 34.0               | 455.754       | 30.454      | 1731.061  | 1.46%       | 89.09%     |
| 35.0               | 374.799       | 25.794      | 1756.855  | 1.24%       | 90.42%     |
| 36.0               | 303.497       | 21.597      | 1778.452  | 1.04%       | 91.53%     |
| 37.0               | 254.377       | 18.195      | 1796.647  | 0.87%       | 92.47%     |

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0               | 216.606       | 15.721      | 1812.368  | 0.75%       | 93.28%     |
| 39.0               | 165.736       | 13.050      | 1825.418  | 0.63%       | 93.95%     |
| 40.0               | 121.148       | 10.005      | 1835.424  | 0.48%       | 94.46%     |
| 41.0               | 98.059        | 7.806       | 1843.229  | 0.37%       | 94.87%     |
| 42.0               | 81.723        | 6.532       | 1849.761  | 0.31%       | 95.20%     |
| 43.0               | 69.289        | 5.594       | 1855.355  | 0.27%       | 95.49%     |
| 44.0               | 60.107        | 4.884       | 1860.239  | 0.23%       | 95.74%     |
| 45.0               | 52.953        | 4.345       | 1864.584  | 0.21%       | 95.96%     |
| 46.0               | 47.182        | 3.916       | 1868.5    | 0.19%       | 96.17%     |
| 47.0               | 42.795        | 3.579       | 1872.079  | 0.17%       | 96.35%     |
| 48.0               | 38.900        | 3.303       | 1875.381  | 0.16%       | 96.52%     |
| 49.0               | 35.745        | 3.065       | 1878.446  | 0.15%       | 96.68%     |
| 50.0               | 32.887        | 2.861       | 1881.308  | 0.14%       | 96.83%     |
| 51.0               | 30.583        | 2.685       | 1883.993  | 0.13%       | 96.96%     |
| 52.0               | 28.618        | 2.540       | 1886.534  | 0.12%       | 97.09%     |
| 53.0               | 26.978        | 2.418       | 1888.952  | 0.12%       | 97.22%     |
| 54.0               | 25.435        | 2.310       | 1891.262  | 0.11%       | 97.34%     |
| 55.0               | 24.176        | 2.215       | 1893.477  | 0.11%       | 97.45%     |
| 56.0               | 23.041        | 2.134       | 1895.61   | 0.10%       | 97.56%     |
| 57.0               | 22.003        | 2.060       | 1897.67   | 0.10%       | 97.67%     |
| 58.0               | 21.124        | 1.994       | 1899.664  | 0.10%       | 97.77%     |
| 59.0               | 20.329        | 1.938       | 1901.602  | 0.09%       | 97.87%     |
| 60.0               | 19.574        | 1.885       | 1903.487  | 0.09%       | 97.97%     |
| 61.0               | 18.924        | 1.837       | 1905.324  | 0.09%       | 98.06%     |
| 62.0               | 18.267        | 1.792       | 1907.117  | 0.09%       | 98.15%     |
| 63.0               | 17.665        | 1.748       | 1908.864  | 0.08%       | 98.24%     |
| 64.0               | 17.153        | 1.708       | 1910.573  | 0.08%       | 98.33%     |
| 65.0               | 16.655        | 1.673       | 1912.246  | 0.08%       | 98.42%     |
| 66.0               | 16.184        | 1.638       | 1913.884  | 0.08%       | 98.50%     |
| 67.0               | 15.658        | 1.601       | 1915.485  | 0.08%       | 98.58%     |
| 68.0               | 15.243        | 1.565       | 1917.051  | 0.08%       | 98.67%     |
| 69.0               | 14.786        | 1.532       | 1918.582  | 0.07%       | 98.74%     |
| 70.0               | 14.378        | 1.498       | 1920.08   | 0.07%       | 98.82%     |
| 71.0               | 13.935        | 1.463       | 1921.544  | 0.07%       | 98.90%     |
| 72.0               | 13.534        | 1.428       | 1922.972  | 0.07%       | 98.97%     |
| 73.0               | 13.133        | 1.394       | 1924.366  | 0.07%       | 99.04%     |
| 74.0               | 12.738        | 1.360       | 1925.727  | 0.07%       | 99.11%     |
| 75.0               | 12.358        | 1.326       | 1927.053  | 0.06%       | 99.18%     |

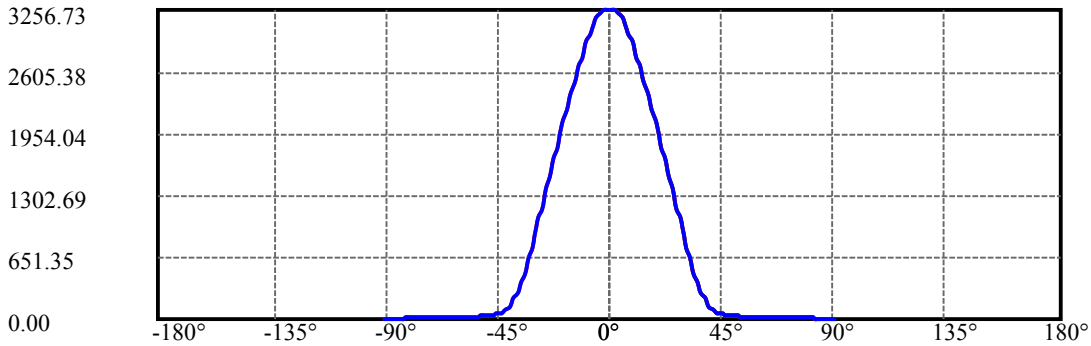
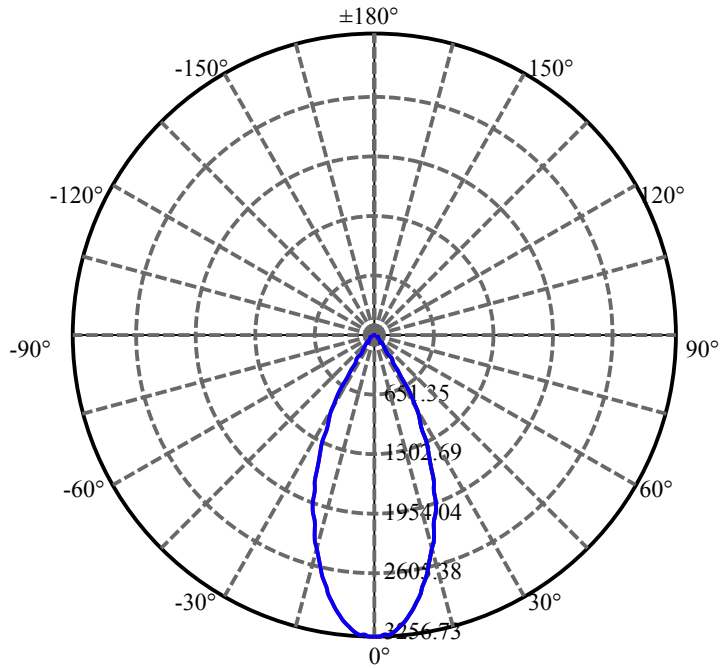
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0               | 11.922        | 1.289       | 1928.341  | 0.06%       | 99.25%     |
| 77.0               | 11.590        | 1.254       | 1929.595  | 0.06%       | 99.31%     |
| 78.0               | 11.195        | 1.220       | 1930.815  | 0.06%       | 99.37%     |
| 79.0               | 10.815        | 1.183       | 1931.997  | 0.06%       | 99.43%     |
| 80.0               | 10.448        | 1.146       | 1933.144  | 0.06%       | 99.49%     |
| 81.0               | 10.116        | 1.112       | 1934.256  | 0.05%       | 99.55%     |
| 82.0               | 9.784         | 1.079       | 1935.335  | 0.05%       | 99.61%     |
| 83.0               | 9.465         | 1.046       | 1936.381  | 0.05%       | 99.66%     |
| 84.0               | 9.209         | 1.017       | 1937.399  | 0.05%       | 99.71%     |
| 85.0               | 8.926         | 0.990       | 1938.388  | 0.05%       | 99.76%     |
| 86.0               | 8.691         | 0.963       | 1939.351  | 0.05%       | 99.81%     |
| 87.0               | 8.497         | 0.941       | 1940.292  | 0.05%       | 99.86%     |
| 88.0               | 8.262         | 0.918       | 1941.21   | 0.04%       | 99.91%     |
| 89.0               | 8.089         | 0.896       | 1942.106  | 0.04%       | 99.95%     |
| 90.0               | 7.999         | 0.882       | 1942.988  | 0.04%       | 100.00%    |

ZONAL LUMEN SUMMARY

| Zone    | Lumens  | %Lamp  | %Fixt   |
|---------|---------|--------|---------|
| 0-30    | 1580.18 | 75.86% | 81.33%  |
| 0-40    | 1835.42 | 88.11% | 94.46%  |
| 0-60    | 1903.49 | 91.38% | 97.97%  |
| 0-90    | 1942.11 | 93.23% | 99.95%  |
| 0-120   | 1942.11 | 93.23% | 99.95%  |
| 0-180   | 1942.99 | 93.27% | 100.00% |
| 60-90   | 38.62   | 1.85%  | 1.99%   |
| 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%   |
| 0-29.48 | 1554.39 | 74.62% | 80.00%  |

ZONAL LUMEN SUMMARY

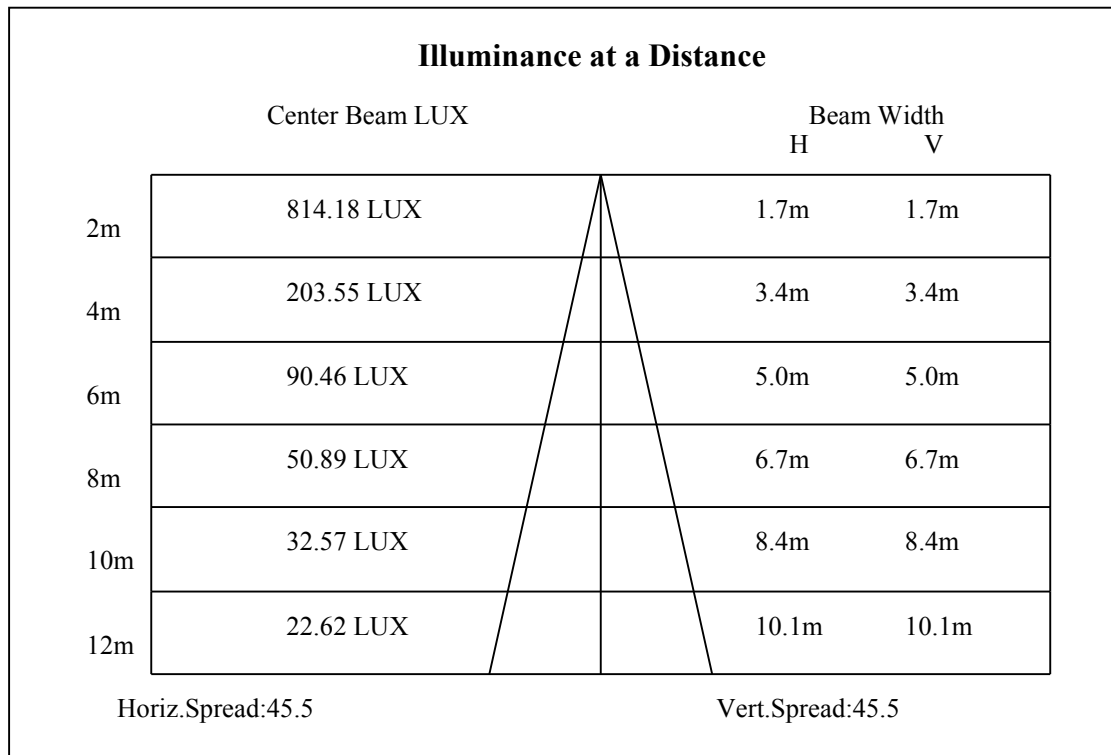
|         |        |
|---------|--------|
| 0-10    | 291.85 |
| 10-20   | 662.95 |
| 20-30   | 625.38 |
| 30-40   | 255.24 |
| 40-50   | 45.88  |
| 50-60   | 22.18  |
| 60-70   | 16.59  |
| 70-80   | 13.06  |
| 80-90   | 8.96   |
| 90-100  | 0.00   |
| 100-110 | 0.00   |
| 110-120 | 0.00   |
| 120-130 | 0.00   |
| 130-140 | 0.00   |
| 140-150 | 0.00   |
| 150-160 | 0.00   |
| 160-170 | 0.00   |
| 170-180 | 0.00   |

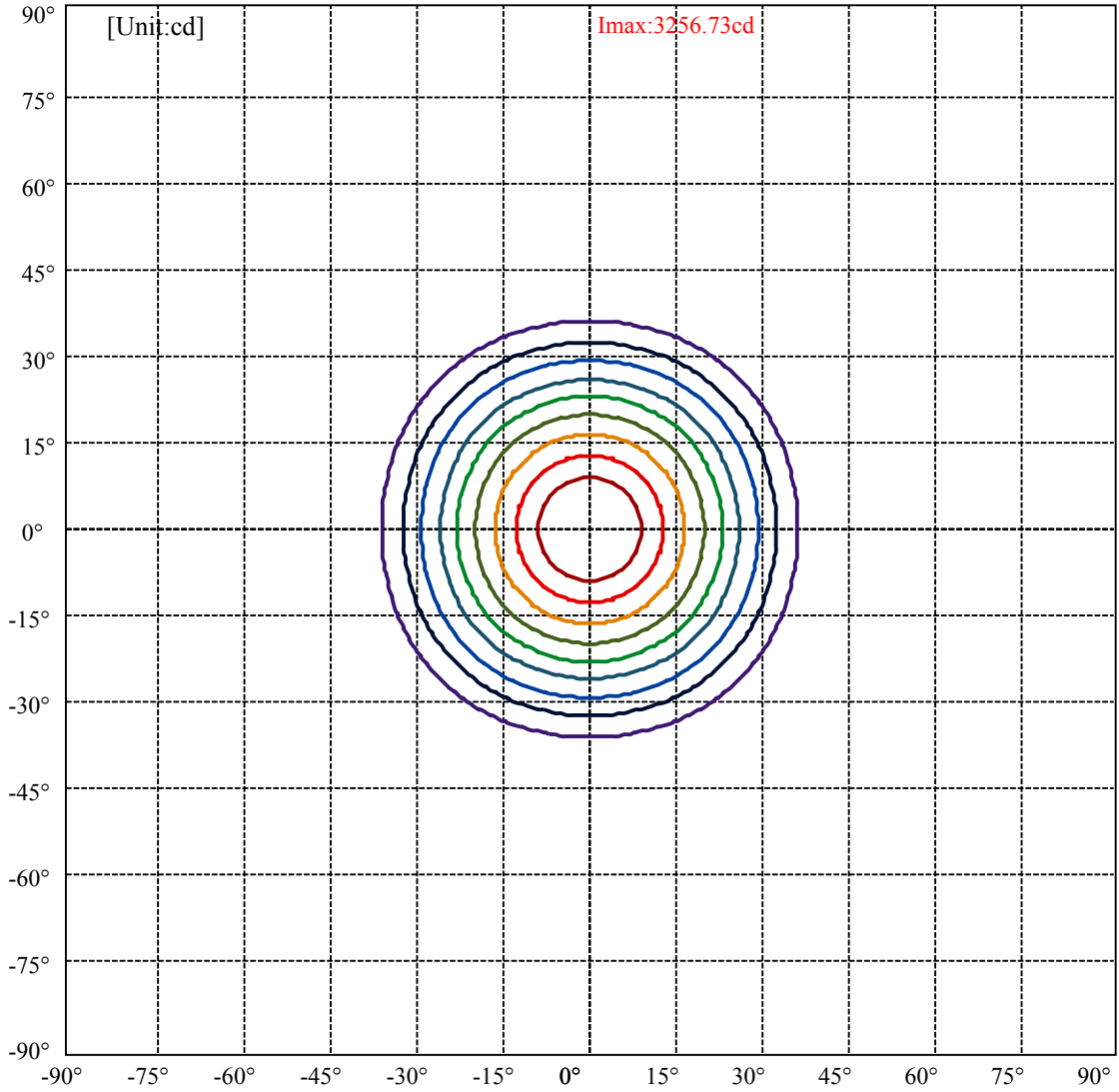


C0(Max): ———  
C0/C180: ———  
C90/C270: ———

Field angle(10%Imax):C0/180Left:35.7 Right:35.7  
:C90/270Left:35.7 Right:35.7

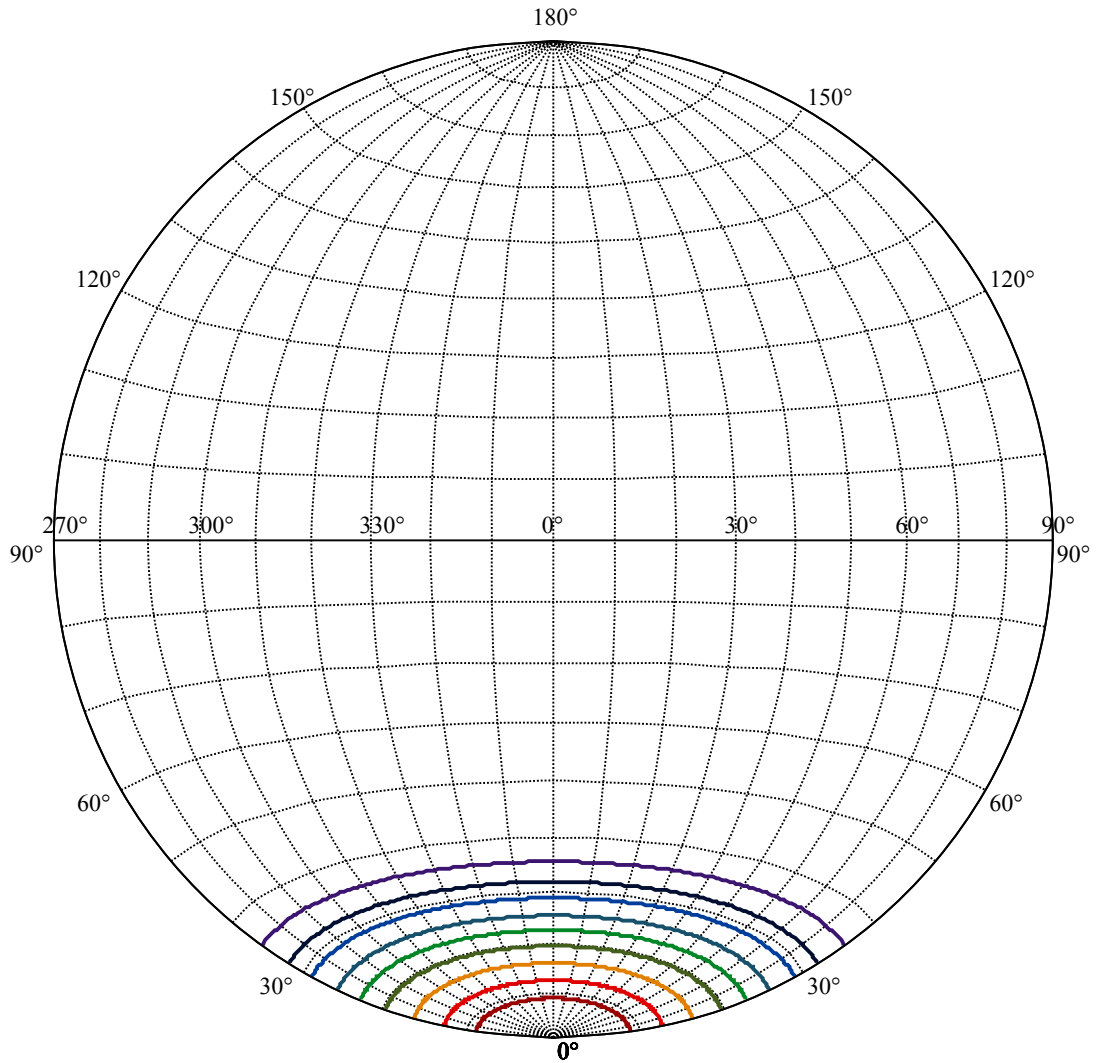
Beam Angle(50%Imax):C0/180Left:22.8 Right:22.8  
:C90/270Left:22.8 Right:22.8





|                                |   |
|--------------------------------|---|
| (10%I <sub>max</sub> ) 325.673 | — |
| (20%I <sub>max</sub> ) 651.346 | — |
| (30%I <sub>max</sub> ) 977.019 | — |
| (40%I <sub>max</sub> ) 1302.69 | — |
| (50%I <sub>max</sub> ) 1628.36 | — |
| (60%I <sub>max</sub> ) 1954.04 | — |
| (70%I <sub>max</sub> ) 2279.71 | — |
| (80%I <sub>max</sub> ) 2605.38 | — |
| (90%I <sub>max</sub> ) 2931.06 | — |





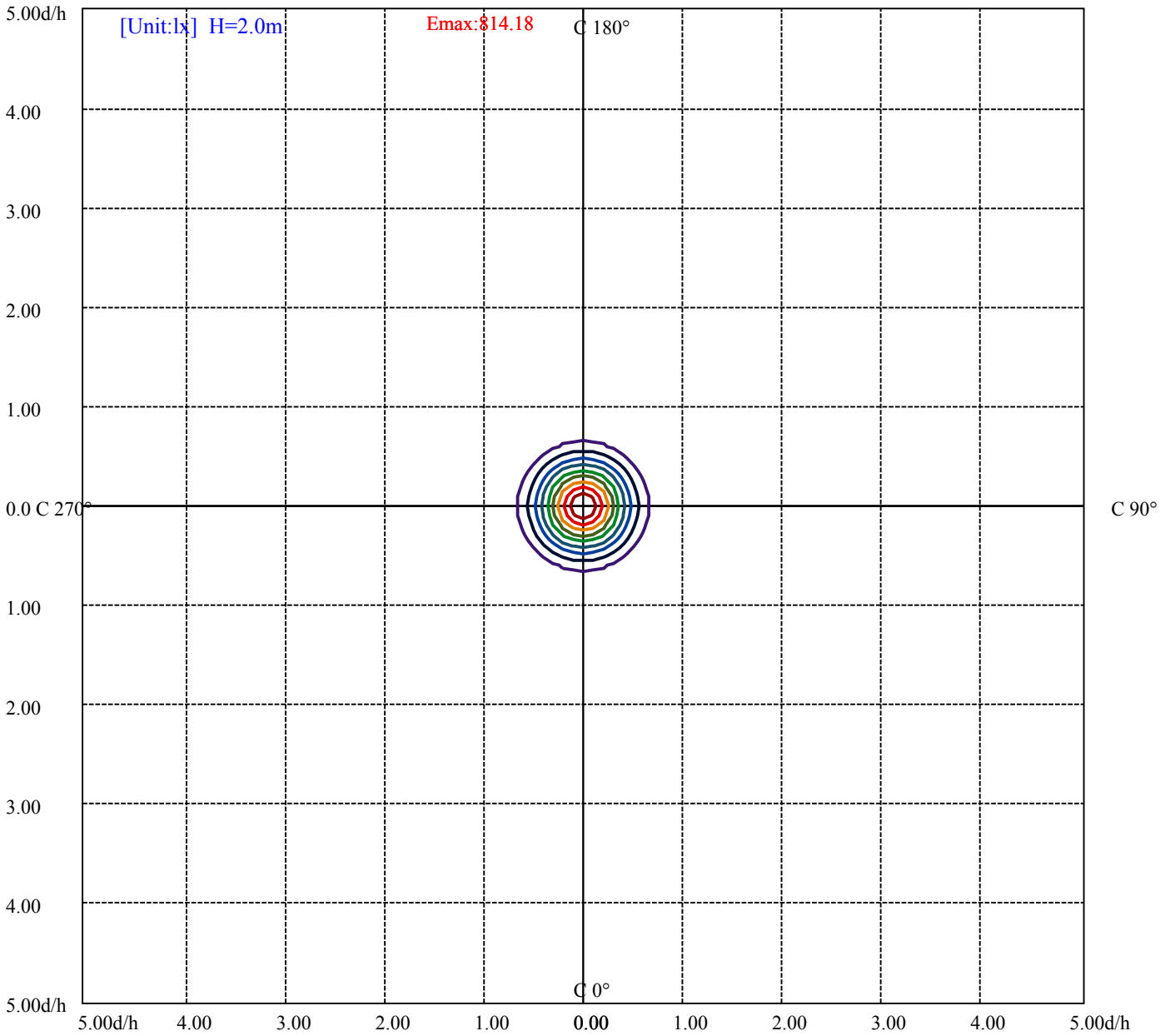
House

[Unit:cd]

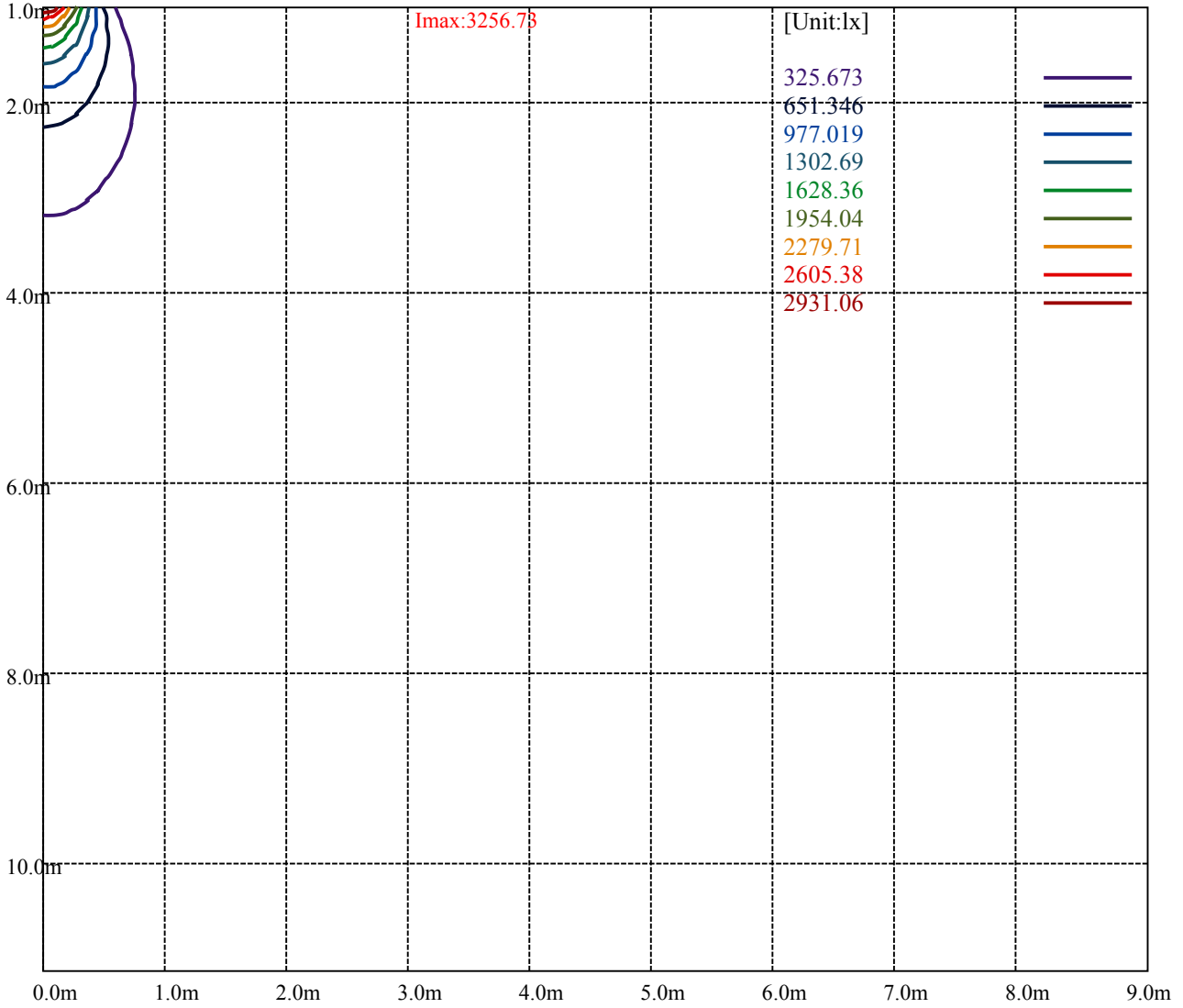
Road

**Imax:3256.73**

|           |         |   |
|-----------|---------|---|
| (10%Imax) | 325.673 | — |
| (20%Imax) | 651.346 | — |
| (30%Imax) | 977.019 | — |
| (40%Imax) | 1302.69 | — |
| (50%Imax) | 1628.36 | — |
| (60%Imax) | 1954.04 | — |
| (70%Imax) | 2279.71 | — |
| (80%Imax) | 2605.38 | — |
| (90%Imax) | 2931.06 | — |



|                    |   |
|--------------------|---|
| (10%Emax) 81.41825 | — |
| (20%Emax) 162.8365 | — |
| (30%Emax) 244.2547 | — |
| (40%Emax) 325.6725 | — |
| (50%Emax) 407.09   | — |
| (60%Emax) 488.51   | — |
| (70%Emax) 569.9275 | — |
| (80%Emax) 651.345  | — |
| (90%Emax) 732.765  | — |



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

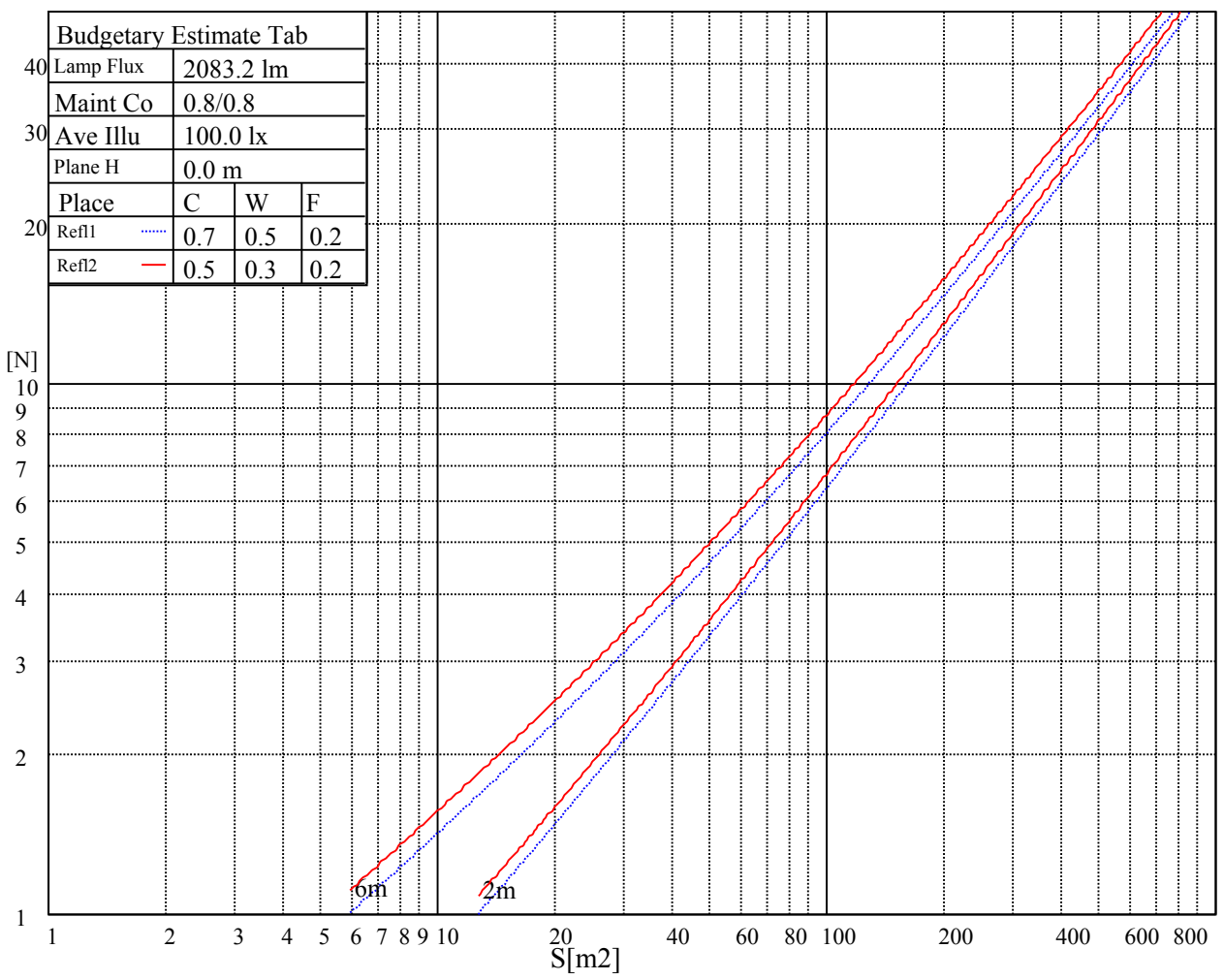
| Glare | Quality | Service Values Illuminance(lx) |      |      |       |       |       |       |       |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15  | A       | 2000                           | 1000 | 500  | <=300 |       |       |       |       |
| 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

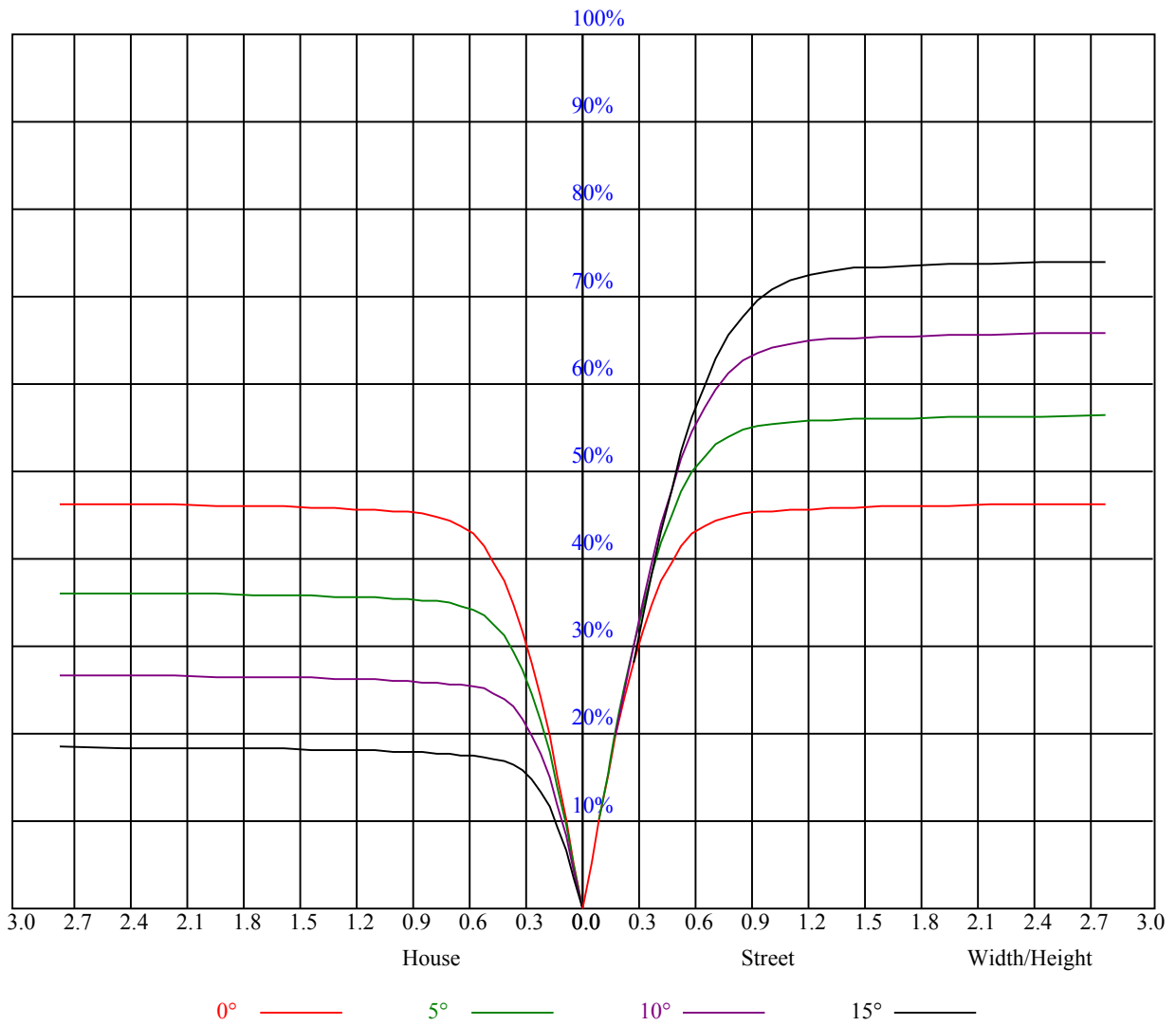


| Illumination assessment according UGR             |     |                  |     |     |     |     |                |     |     |     |  |
|---|-----|------------------|-----|-----|-----|-----|----------------|-----|-----|-----|--|
| Rf of Ceiling                                     | 70  | 70               | 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  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 3H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 4H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 6H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 8H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
| 4H  | 12H | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 2H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 3H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 4H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 6H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
| 8H  | 8H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 12H | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 4H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 6H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 8H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
| 12H   | 12H | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 4H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 6H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
| 8H  | 非数字 | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 |     |  |
| Variation with the observer position at spacings: |     |                  |     |     |     |     |                |     |     |     |  |
| S = 1.0H  |     | 非数字/非数字          |     |     |     |     | 非数字/非数字        |     |     |     |  |
| S = 1.5H  |     | 非数字/非数字          |     |     |     |     | 非数字/非数字        |     |     |     |  |
| S = 2.0H  |     | 非数字/非数字          |     |     |     |     | 非数字/非数字        |     |     |     |  |
| Standard tables:                                  |     | BK0              |     |     |     |     | BK0            |     |     |     |  |
| Uncorrected UGR                                   |     | 负无穷大             |     |     |     |     | 负无穷大           |     |     |     |  |

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   | COEFFICIENTS OF UTILIZATION RHOFC=20 CU |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 0     | 1.11                                    | 1.11 | 1.11 | 1.08 | 1.08 | 1.08 | 1.04 | 1.04 | 1.04 | 0.99 | 0.99 | 0.99 | 0.95 | 0.95 | 0.95 | 0.93 |
| 1     | 1.03                                    | 1.01 | 0.99 | 1.01 | 0.99 | 0.98 | 0.98 | 0.96 | 0.95 | 0.94 | 0.93 | 0.92 | 0.91 | 0.90 | 0.89 | 0.87 |
| 2     | 0.97                                    | 0.93 | 0.90 | 0.95 | 0.92 | 0.89 | 0.92 | 0.89 | 0.87 | 0.89 | 0.87 | 0.85 | 0.87 | 0.85 | 0.84 | 0.82 |
| 3     | 0.91                                    | 0.86 | 0.83 | 0.90 | 0.86 | 0.82 | 0.87 | 0.84 | 0.81 | 0.85 | 0.82 | 0.80 | 0.83 | 0.81 | 0.79 | 0.77 |
| 4     | 0.86                                    | 0.81 | 0.77 | 0.85 | 0.80 | 0.77 | 0.83 | 0.79 | 0.76 | 0.81 | 0.77 | 0.75 | 0.79 | 0.76 | 0.74 | 0.73 |
| 5     | 0.81                                    | 0.76 | 0.72 | 0.80 | 0.75 | 0.72 | 0.78 | 0.74 | 0.71 | 0.77 | 0.73 | 0.70 | 0.75 | 0.72 | 0.70 | 0.69 |
| 6     | 0.77                                    | 0.71 | 0.68 | 0.76 | 0.71 | 0.67 | 0.74 | 0.70 | 0.67 | 0.73 | 0.69 | 0.67 | 0.72 | 0.69 | 0.66 | 0.65 |
| 7     | 0.73                                    | 0.67 | 0.64 | 0.72 | 0.67 | 0.64 | 0.71 | 0.67 | 0.63 | 0.70 | 0.66 | 0.63 | 0.69 | 0.65 | 0.63 | 0.61 |
| 8     | 0.69                                    | 0.64 | 0.60 | 0.69 | 0.64 | 0.60 | 0.68 | 0.63 | 0.60 | 0.67 | 0.63 | 0.60 | 0.66 | 0.62 | 0.60 | 0.58 |
| 9     | 0.66                                    | 0.61 | 0.57 | 0.65 | 0.60 | 0.57 | 0.64 | 0.60 | 0.57 | 0.64 | 0.60 | 0.57 | 0.63 | 0.59 | 0.57 | 0.55 |
| 10    | 0.63                                    | 0.58 | 0.54 | 0.62 | 0.58 | 0.54 | 0.62 | 0.57 | 0.54 | 0.61 | 0.57 | 0.54 | 0.60 | 0.57 | 0.54 | 0.53 |





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    | 3233.76 | 3224.90 | 3191.14 | 3149.07 | 3102.02 | 3047.77 | 2986.33 | 2911.05 | 2836.87 |
| 45.0   | 3263.65 | 3242.06 | 3237.08 | 3219.37 | 3181.72 | 3145.75 | 3094.27 | 3023.41 | 2961.42 |
| 90.0   | 3260.88 | 3251.47 | 3233.20 | 3218.81 | 3190.03 | 3142.98 | 3077.11 | 3018.99 | 2949.79 |
| 135.0  | 3268.63 | 3275.27 | 3268.63 | 3281.36 | 3259.22 | 3210.51 | 3165.67 | 3110.32 | 3055.52 |
| 180.0  | 3233.76 | 3263.65 | 3268.08 | 3275.83 | 3281.91 | 3285.79 | 3244.83 | 3211.62 | 3158.48 |
| 225.0  | 3263.65 | 3262.54 | 3260.88 | 3256.45 | 3226.56 | 3193.90 | 3165.12 | 3114.75 | 3035.04 |
| 270.0  | 3260.88 | 3266.42 | 3264.76 | 3259.77 | 3254.24 | 3193.90 | 3156.82 | 3086.52 | 3038.36 |
| 315.0  | 3268.63 | 3259.22 | 3254.24 | 3235.42 | 3178.40 | 3125.26 | 3043.34 | 2989.65 | 2933.19 |
| 360.0  | 3233.76 | 3224.90 | 3191.14 | 3149.07 | 3102.02 | 3047.77 | 2986.33 | 2911.05 | 2836.87 |
| C/γ(°) | 9.0     | 10.0    | 11.0    | 12.0    | 13.0    | 14.0    | 15.0    | 16.0    | 17.0    |
| 0.0    | 2746.65 | 2665.83 | 2587.78 | 2509.73 | 2417.85 | 2338.69 | 2252.34 | 2165.99 | 2061.92 |
| 45.0   | 2891.12 | 2817.50 | 2749.97 | 2644.80 | 2552.35 | 2457.15 | 2372.46 | 2278.35 | 2170.41 |
| 90.0   | 2881.15 | 2803.11 | 2708.45 | 2607.71 | 2499.77 | 2416.18 | 2309.35 | 2214.14 | 2129.45 |
| 135.0  | 2997.95 | 2928.76 | 2840.19 | 2749.41 | 2652.54 | 2518.04 | 2430.58 | 2340.90 | 2232.96 |
| 180.0  | 3088.73 | 3025.63 | 2938.72 | 2827.46 | 2735.57 | 2628.19 | 2537.96 | 2454.38 | 2351.42 |
| 225.0  | 2952.01 | 2829.12 | 2746.09 | 2667.49 | 2567.85 | 2493.68 | 2416.18 | 2330.39 | 2217.47 |
| 270.0  | 2980.24 | 2907.17 | 2807.53 | 2721.18 | 2635.38 | 2550.69 | 2461.02 | 2360.28 | 2278.35 |
| 315.0  | 2862.33 | 2775.43 | 2695.17 | 2612.14 | 2521.36 | 2425.04 | 2346.99 | 2270.60 | 2167.09 |
| 360.0  | 2746.65 | 2665.83 | 2587.78 | 2509.73 | 2417.85 | 2338.69 | 2252.34 | 2165.99 | 2061.92 |
| C/γ(°) | 18.0    | 19.0    | 20.0    | 21.0    | 22.0    | 23.0    | 24.0    | 25.0    | 26.0    |
| 0.0    | 1972.25 | 1874.83 | 1756.37 | 1662.82 | 1547.69 | 1453.59 | 1354.50 | 1081.78 | 1081.78 |
| 45.0   | 2092.92 | 2008.23 | 1912.47 | 1792.35 | 1702.12 | 1609.68 | 1489.01 | 1396.02 | 1273.13 |
| 90.0   | 2041.44 | 1922.43 | 1827.22 | 1729.80 | 1634.04 | 1505.62 | 1408.20 | 1312.99 | 1086.31 |
| 135.0  | 2143.84 | 2054.17 | 1959.52 | 1828.88 | 1733.12 | 1633.48 | 1530.53 | 1403.77 | 1306.34 |
| 180.0  | 2262.86 | 2169.86 | 2070.78 | 1953.43 | 1858.77 | 1759.14 | 1652.30 | 1528.87 | 1436.43 |
| 225.0  | 2124.47 | 2033.69 | 1940.70 | 1846.60 | 1720.94 | 1619.09 | 1498.98 | 1406.53 | 1309.11 |
| 270.0  | 2197.54 | 2087.38 | 1998.26 | 1888.66 | 1791.24 | 1683.86 | 1558.20 | 1461.34 | 1370.00 |
| 315.0  | 2075.21 | 1992.73 | 1874.27 | 1771.32 | 1676.66 | 1559.86 | 1469.64 | 1376.09 | 1211.69 |
| 360.0  | 1972.25 | 1874.83 | 1756.37 | 1662.82 | 1547.69 | 1453.59 | 1354.50 | 1081.78 | 1081.78 |
| C/γ(°) | 27.0    | 28.0    | 29.0    | 30.0    | 31.0    | 32.0    | 33.0    | 34.0    | 35.0    |
| 0.0    | 1032.90 | 933.10  | 829.70  | 700.50  | 602.97  | 513.29  | 432.20  | 339.32  | 275.66  |
| 45.0   | 1174.60 | 1079.40 | 957.06  | 853.00  | 748.93  | 647.08  | 528.63  | 443.38  | 365.33  |
| 90.0   | 1086.31 | 988.34  | 860.80  | 756.07  | 651.95  | 533.28  | 445.93  | 367.05  | 297.53  |
| 135.0  | 1183.46 | 1086.04 | 990.28  | 867.39  | 769.97  | 669.23  | 571.25  | 464.97  | 387.48  |
| 180.0  | 1340.66 | 1213.35 | 1112.61 | 1011.86 | 891.19  | 786.02  | 679.74  | 563.50  | 481.58  |
| 225.0  | 1087.26 | 1087.26 | 987.29  | 860.75  | 758.79  | 656.05  | 561.45  | 475.38  | 377.01  |
| 270.0  | 1277.56 | 1157.44 | 1062.79 | 969.24  | 875.69  | 748.38  | 642.10  | 552.98  | 447.26  |
| 315.0  | 1084.27 | 1059.03 | 964.32  | 862.74  | 732.66  | 634.57  | 543.13  | 439.45  | 366.55  |
| 360.0  | 1032.90 | 933.10  | 829.70  | 700.50  | 602.97  | 513.29  | 432.20  | 339.32  | 275.66  |
| C/γ(°) | 36.0    | 37.0    | 38.0    | 39.0    | 40.0    | 41.0    | 42.0    | 43.0    | 44.0    |
| 0.0    | 211.45  | 170.99  | 138.11  | 108.27  | 90.61   | 77.00   | 64.32   | 56.74   | 50.70   |
| 45.0   | 296.70  | 281.20  | 213.50  | 141.87  | 110.54  | 92.66   | 78.55   | 65.37   | 57.57   |
| 90.0   | 225.68  | 180.73  | 144.81  | 112.15  | 93.49   | 79.16   | 68.25   | 57.90   | 51.64   |
| 135.0  | 316.62  | 285.62  | 285.62  | 152.33  | 123.88  | 98.09   | 83.36   | 71.85   | 61.11   |
| 180.0  | 397.44  | 329.35  | 282.30  | 282.30  | 160.75  | 128.70  | 100.63  | 84.64   | 72.29   |
| 225.0  | 307.71  | 249.59  | 190.47  | 153.38  | 123.60  | 96.59   | 81.09   | 66.92   | 58.67   |
| 270.0  | 371.42  | 305.00  | 290.05  | 223.13  | 148.18  | 114.19  | 94.82   | 79.99   | 68.69   |
| 315.0  | 300.96  | 232.54  | 187.98  | 152.44  | 118.12  | 98.09   | 82.75   | 70.91   | 60.17   |
| 360.0  | 211.45  | 170.99  | 138.11  | 108.27  | 90.61   | 77.00   | 64.32   | 56.74   | 50.70   |

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    | 45.89 | 40.85 | 37.59 | 34.71 | 32.27 | 29.72 | 27.95 | 26.18 | 24.91 |
| 45.0   | 51.53 | 45.33 | 41.29 | 37.86 | 34.82 | 31.77 | 29.61 | 27.90 | 26.46 |
| 90.0   | 46.44 | 41.18 | 37.75 | 34.15 | 31.72 | 29.67 | 27.95 | 26.13 | 24.80 |
| 135.0  | 54.47 | 47.88 | 43.56 | 39.97 | 36.75 | 33.43 | 31.27 | 29.45 | 27.73 |
| 180.0  | 60.94 | 54.30 | 48.71 | 43.23 | 39.52 | 36.42 | 33.16 | 30.94 | 29.06 |
| 225.0  | 52.25 | 47.05 | 41.85 | 38.42 | 35.43 | 32.88 | 30.22 | 28.40 | 26.85 |
| 270.0  | 58.29 | 52.25 | 47.27 | 43.12 | 38.75 | 35.70 | 33.21 | 30.56 | 28.67 |
| 315.0  | 53.80 | 48.60 | 44.34 | 39.74 | 36.70 | 33.49 | 31.27 | 29.39 | 27.34 |
| 360.0  | 45.89 | 40.85 | 37.59 | 34.71 | 32.27 | 29.72 | 27.95 | 26.18 | 24.91 |
| C/γ(°) | 54.0  | 55.0  | 56.0  | 57.0  | 58.0  | 59.0  | 60.0  | 61.0  | 62.0  |
| 0.0    | 23.75 | 22.47 | 21.59 | 20.81 | 20.09 | 19.21 | 18.65 | 18.10 | 17.49 |
| 45.0   | 24.74 | 23.69 | 22.69 | 21.53 | 20.70 | 19.87 | 19.21 | 18.65 | 18.05 |
| 90.0   | 23.69 | 22.69 | 21.53 | 20.76 | 20.04 | 19.37 | 18.65 | 18.10 | 17.49 |
| 135.0  | 25.96 | 24.74 | 23.64 | 22.42 | 21.48 | 20.70 | 19.87 | 19.21 | 18.43 |
| 180.0  | 27.12 | 25.74 | 24.47 | 23.41 | 22.25 | 21.37 | 20.59 | 19.71 | 19.04 |
| 225.0  | 25.52 | 24.02 | 22.97 | 21.92 | 21.03 | 20.26 | 19.43 | 18.82 | 18.21 |
| 270.0  | 26.74 | 25.41 | 24.13 | 22.86 | 21.98 | 21.15 | 20.43 | 19.71 | 18.93 |
| 315.0  | 25.96 | 24.63 | 23.30 | 22.31 | 21.42 | 20.70 | 19.76 | 19.10 | 18.49 |
| 360.0  | 23.75 | 22.47 | 21.59 | 20.81 | 20.09 | 19.21 | 18.65 | 18.10 | 17.49 |
| C/γ(°) | 63.0  | 64.0  | 65.0  | 66.0  | 67.0  | 68.0  | 69.0  | 70.0  | 71.0  |
| 0.0    | 16.88 | 16.50 | 16.05 | 15.55 | 15.06 | 14.72 | 14.17 | 13.78 | 13.40 |
| 45.0   | 17.44 | 16.99 | 16.55 | 16.11 | 15.55 | 15.17 | 14.78 | 14.45 | 13.89 |
| 90.0   | 16.99 | 16.61 | 16.00 | 15.61 | 15.17 | 14.83 | 14.28 | 13.89 | 13.56 |
| 135.0  | 17.88 | 17.44 | 16.88 | 16.44 | 15.83 | 15.44 | 15.06 | 14.61 | 14.12 |
| 180.0  | 18.49 | 17.77 | 17.27 | 16.83 | 16.22 | 15.78 | 15.33 | 14.89 | 14.39 |
| 225.0  | 17.49 | 17.05 | 16.55 | 16.11 | 15.55 | 15.11 | 14.72 | 14.34 | 13.89 |
| 270.0  | 18.27 | 17.66 | 17.16 | 16.55 | 16.16 | 15.61 | 15.17 | 14.72 | 14.28 |
| 315.0  | 17.88 | 17.21 | 16.77 | 16.27 | 15.72 | 15.28 | 14.78 | 14.34 | 13.95 |
| 360.0  | 16.88 | 16.50 | 16.05 | 15.55 | 15.06 | 14.72 | 14.17 | 13.78 | 13.40 |
| C/γ(°) | 72.0  | 73.0  | 74.0  | 75.0  | 76.0  | 77.0  | 78.0  | 79.0  | 80.0  |
| 0.0    | 12.95 | 12.57 | 12.23 | 11.85 | 11.40 | 11.13 | 10.74 | 10.46 | 10.02 |
| 45.0   | 13.56 | 13.12 | 12.73 | 12.40 | 11.96 | 11.62 | 11.29 | 10.85 | 10.52 |
| 90.0   | 13.17 | 12.73 | 12.40 | 12.07 | 11.68 | 11.29 | 10.96 | 10.52 | 10.24 |
| 135.0  | 13.73 | 13.34 | 12.84 | 12.57 | 12.07 | 11.73 | 11.40 | 10.90 | 10.57 |
| 180.0  | 14.06 | 13.67 | 13.34 | 12.79 | 12.34 | 12.07 | 11.62 | 11.24 | 10.79 |
| 225.0  | 13.51 | 13.06 | 12.62 | 12.29 | 11.79 | 11.46 | 11.07 | 10.74 | 10.30 |
| 270.0  | 13.84 | 13.51 | 13.01 | 12.62 | 12.18 | 11.90 | 11.40 | 11.02 | 10.68 |
| 315.0  | 13.45 | 13.06 | 12.73 | 12.29 | 11.96 | 11.51 | 11.07 | 10.79 | 10.46 |
| 360.0  | 12.95 | 12.57 | 12.23 | 11.85 | 11.40 | 11.13 | 10.74 | 10.46 | 10.02 |
| C/γ(°) | 81.0  | 82.0  | 83.0  | 84.0  | 85.0  | 86.0  | 87.0  | 88.0  | 89.0  |
| 0.0    | 9.80  | 9.47  | 9.19  | 8.97  | 8.75  | 8.47  | 8.30  | 8.08  | 8.08  |
| 45.0   | 10.19 | 9.85  | 9.58  | 9.30  | 9.02  | 8.75  | 8.52  | 8.30  | 8.08  |
| 90.0   | 9.80  | 9.58  | 9.24  | 9.02  | 8.75  | 8.52  | 8.41  | 8.14  | 7.97  |
| 135.0  | 10.24 | 9.85  | 9.52  | 9.24  | 8.97  | 8.75  | 8.52  | 8.30  | 8.14  |
| 180.0  | 10.46 | 10.13 | 9.74  | 9.47  | 9.13  | 8.91  | 8.69  | 8.41  | 8.25  |
| 225.0  | 10.02 | 9.69  | 9.41  | 9.13  | 8.86  | 8.64  | 8.41  | 8.25  | 7.97  |
| 270.0  | 10.35 | 10.02 | 9.63  | 9.35  | 9.08  | 8.86  | 8.64  | 8.36  | 8.19  |
| 315.0  | 10.07 | 9.69  | 9.41  | 9.19  | 8.86  | 8.64  | 8.47  | 8.25  | 8.03  |
| 360.0  | 9.80  | 9.47  | 9.19  | 8.97  | 8.75  | 8.47  | 8.30  | 8.08  | 8.08  |

Intensity data(cd)

|        |      |
|--------|------|
| C/γ(°) | 90.0 |
| 0.0    | 7.97 |
| 45.0   | 8.03 |
| 90.0   | 8.03 |
| 135.0  | 8.03 |
| 180.0  | 8.03 |
| 225.0  | 7.92 |
| 270.0  | 7.97 |
| 315.0  | 8.03 |
| 360.0  | 7.97 |