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## NATA

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Client:

LumCAT: 2-2643-L

Luminaire: 92.70.412.00

Report No: 20231009-B006

Ballast type: AC

Test No: 20231009-C006

Voltage(V): 34.180

LampCAT: BRIDGELUX V13B LES13

Current(A): 0.450

Lamp flux(lm): 2091.1

Power (W): 15.415

Number of Lamps: 1

PF: 0.000

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

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## Photometric Results

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Lumens(lm): 1987.95, Efficiency(%): 95.07% , Luminous Efficacy(lm/W): 128.96

Central intensity(cd): 11292.940, Maximum intensity(cd): 11292.940

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

Beam Angle(50%Imax): [C0/180]Total=17.0

[C90/270]Total=17.0

Field angle(10%Imax): [C0/180]Total=44.2

[C90/270]Total=44.2

Maximum s/h(1/2): C0\_180=0.29 C90\_270=0.29

Maximum s/h(1/4): C0\_180=0.32 C90\_270=0.32

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 95.07%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 98.011%

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0                | 11292.937     | 0.000       | 0         | 0.00%       | 0.00%      |
| 1.0                | 11285.118     | 10.803      | 10.803    | 0.52%       | 0.54%      |
| 2.0                | 11101.068     | 32.131      | 42.934    | 1.54%       | 2.16%      |
| 3.0                | 10605.445     | 51.915      | 94.849    | 2.48%       | 4.77%      |
| 4.0                | 9878.653      | 68.567      | 163.416   | 3.28%       | 8.22%      |
| 5.0                | 8991.058      | 81.177      | 244.592   | 3.88%       | 12.30%     |
| 6.0                | 8005.279      | 89.320      | 333.912   | 4.27%       | 16.80%     |
| 7.0                | 7047.178      | 93.430      | 427.343   | 4.47%       | 21.50%     |
| 8.0                | 6103.814      | 94.119      | 521.462   | 4.50%       | 26.23%     |
| 9.0                | 5205.425      | 91.655      | 613.117   | 4.38%       | 30.84%     |
| 10.0               | 4450.609      | 87.384      | 700.501   | 4.18%       | 35.24%     |
| 11.0               | 3821.031      | 82.651      | 783.151   | 3.95%       | 39.40%     |
| 12.0               | 3300.154      | 77.845      | 860.996   | 3.72%       | 43.31%     |
| 13.0               | 2891.575      | 73.480      | 934.476   | 3.51%       | 47.01%     |
| 14.0               | 2620.273      | 70.551      | 1005.027  | 3.37%       | 50.56%     |
| 15.0               | 2489.639      | 70.151      | 1075.179  | 3.35%       | 54.08%     |
| 16.0               | 2120.617      | 67.553      | 1142.732  | 3.23%       | 57.48%     |
| 17.0               | 1865.569      | 62.076      | 1204.807  | 2.97%       | 60.61%     |
| 18.0               | 1686.223      | 58.561      | 1263.369  | 2.80%       | 63.55%     |
| 19.0               | 1539.190      | 56.116      | 1319.484  | 2.68%       | 66.37%     |
| 20.0               | 1347.618      | 52.837      | 1372.321  | 2.53%       | 69.03%     |
| 21.0               | 1218.125      | 49.267      | 1421.588  | 2.36%       | 71.51%     |
| 22.0               | 1139.731      | 47.382      | 1468.97   | 2.27%       | 73.89%     |
| 23.0               | 1031.362      | 45.555      | 1514.526  | 2.18%       | 76.19%     |
| 24.0               | 944.056       | 43.190      | 1557.716  | 2.07%       | 78.36%     |
| 25.0               | 873.549       | 41.328      | 1599.044  | 1.98%       | 80.44%     |
| 26.0               | 800.406       | 39.514      | 1638.558  | 1.89%       | 82.42%     |
| 27.0               | 723.340       | 37.279      | 1675.837  | 1.78%       | 84.30%     |
| 28.0               | 643.223       | 34.598      | 1710.435  | 1.65%       | 86.04%     |
| 29.0               | 558.933       | 31.452      | 1741.887  | 1.50%       | 87.62%     |
| 30.0               | 476.837       | 27.966      | 1769.852  | 1.34%       | 89.03%     |
| 31.0               | 392.983       | 24.206      | 1794.058  | 1.16%       | 90.25%     |
| 32.0               | 319.508       | 20.412      | 1814.47   | 0.98%       | 91.27%     |
| 33.0               | 252.447       | 16.850      | 1831.32   | 0.81%       | 92.12%     |
| 34.0               | 222.605       | 14.376      | 1845.697  | 0.69%       | 92.84%     |
| 35.0               | 158.768       | 11.844      | 1857.541  | 0.57%       | 93.44%     |
| 36.0               | 116.934       | 8.778       | 1866.319  | 0.42%       | 93.88%     |
| 37.0               | 102.736       | 7.164       | 1873.484  | 0.34%       | 94.24%     |

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0               | 92.191        | 6.506       | 1879.99   | 0.31%       | 94.57%     |
| 39.0               | 82.076        | 5.948       | 1885.938  | 0.28%       | 94.87%     |
| 40.0               | 73.226        | 5.416       | 1891.355  | 0.26%       | 95.14%     |
| 41.0               | 65.421        | 4.937       | 1896.292  | 0.24%       | 95.39%     |
| 42.0               | 58.882        | 4.516       | 1900.808  | 0.22%       | 95.62%     |
| 43.0               | 53.395        | 4.159       | 1904.967  | 0.20%       | 95.83%     |
| 44.0               | 48.455        | 3.844       | 1908.811  | 0.18%       | 96.02%     |
| 45.0               | 44.228        | 3.562       | 1912.373  | 0.17%       | 96.20%     |
| 46.0               | 40.477        | 3.313       | 1915.686  | 0.16%       | 96.37%     |
| 47.0               | 37.170        | 3.088       | 1918.774  | 0.15%       | 96.52%     |
| 48.0               | 34.741        | 2.907       | 1921.681  | 0.14%       | 96.67%     |
| 49.0               | 32.327        | 2.754       | 1924.435  | 0.13%       | 96.81%     |
| 50.0               | 30.278        | 2.610       | 1927.045  | 0.12%       | 96.94%     |
| 51.0               | 28.542        | 2.489       | 1929.534  | 0.12%       | 97.06%     |
| 52.0               | 26.936        | 2.381       | 1931.915  | 0.11%       | 97.18%     |
| 53.0               | 25.560        | 2.284       | 1934.198  | 0.11%       | 97.30%     |
| 54.0               | 24.363        | 2.200       | 1936.398  | 0.11%       | 97.41%     |
| 55.0               | 23.338        | 2.129       | 1938.528  | 0.10%       | 97.51%     |
| 56.0               | 22.404        | 2.067       | 1940.595  | 0.10%       | 97.62%     |
| 57.0               | 21.567        | 2.010       | 1942.605  | 0.10%       | 97.72%     |
| 58.0               | 20.951        | 1.966       | 1944.571  | 0.09%       | 97.82%     |
| 59.0               | 20.425        | 1.934       | 1946.506  | 0.09%       | 97.92%     |
| 60.0               | 19.886        | 1.904       | 1948.41   | 0.09%       | 98.01%     |
| 61.0               | 19.436        | 1.877       | 1950.287  | 0.09%       | 98.11%     |
| 62.0               | 19.055        | 1.855       | 1952.142  | 0.09%       | 98.20%     |
| 63.0               | 18.530        | 1.828       | 1953.969  | 0.09%       | 98.29%     |
| 64.0               | 17.879        | 1.787       | 1955.756  | 0.09%       | 98.38%     |
| 65.0               | 17.270        | 1.740       | 1957.496  | 0.08%       | 98.47%     |
| 66.0               | 16.592        | 1.690       | 1959.185  | 0.08%       | 98.55%     |
| 67.0               | 15.935        | 1.636       | 1960.821  | 0.08%       | 98.64%     |
| 68.0               | 15.285        | 1.581       | 1962.402  | 0.08%       | 98.72%     |
| 69.0               | 14.676        | 1.528       | 1963.931  | 0.07%       | 98.79%     |
| 70.0               | 14.053        | 1.475       | 1965.406  | 0.07%       | 98.87%     |
| 71.0               | 13.541        | 1.426       | 1966.832  | 0.07%       | 98.94%     |
| 72.0               | 13.084        | 1.384       | 1968.217  | 0.07%       | 99.01%     |
| 73.0               | 12.676        | 1.347       | 1969.564  | 0.06%       | 99.08%     |
| 74.0               | 12.282        | 1.312       | 1970.876  | 0.06%       | 99.14%     |
| 75.0               | 11.908        | 1.278       | 1972.154  | 0.06%       | 99.21%     |

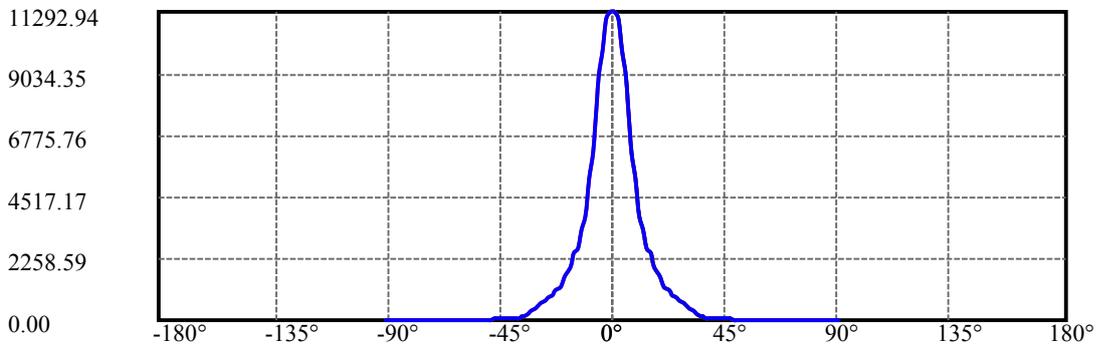
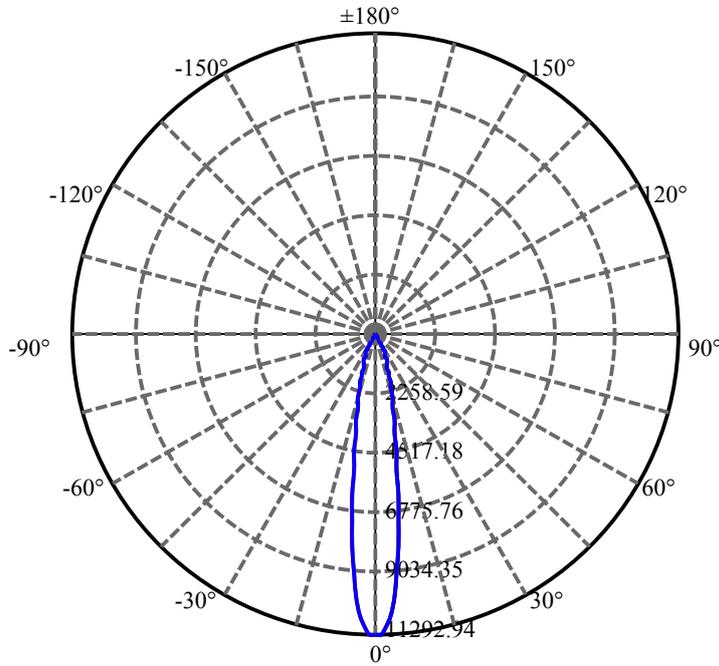
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0               | 11.597        | 1.248       | 1973.402  | 0.06%       | 99.27%     |
| 77.0               | 11.251        | 1.218       | 1974.62   | 0.06%       | 99.33%     |
| 78.0               | 10.932        | 1.187       | 1975.807  | 0.06%       | 99.39%     |
| 79.0               | 10.586        | 1.156       | 1976.963  | 0.06%       | 99.45%     |
| 80.0               | 10.275        | 1.125       | 1978.088  | 0.05%       | 99.50%     |
| 81.0               | 9.977         | 1.095       | 1979.183  | 0.05%       | 99.56%     |
| 82.0               | 9.694         | 1.067       | 1980.25   | 0.05%       | 99.61%     |
| 83.0               | 9.410         | 1.039       | 1981.288  | 0.05%       | 99.67%     |
| 84.0               | 9.154         | 1.011       | 1982.3    | 0.05%       | 99.72%     |
| 85.0               | 8.940         | 0.988       | 1983.287  | 0.05%       | 99.77%     |
| 86.0               | 8.732         | 0.966       | 1984.253  | 0.05%       | 99.81%     |
| 87.0               | 8.552         | 0.946       | 1985.199  | 0.05%       | 99.86%     |
| 88.0               | 8.400         | 0.929       | 1986.128  | 0.04%       | 99.91%     |
| 89.0               | 8.268         | 0.914       | 1987.041  | 0.04%       | 99.95%     |
| 90.0               | 8.220         | 0.904       | 1987.945  | 0.04%       | 100.00%    |

ZONAL LUMEN SUMMARY

| Zone    | Lumens  | %Lamp  | %Fixt   |
|---------|---------|--------|---------|
| 0-30    | 1769.85 | 84.64% | 89.03%  |
| 0-40    | 1891.35 | 90.45% | 95.14%  |
| 0-60    | 1948.41 | 93.17% | 98.01%  |
| 0-90    | 1987.04 | 95.02% | 99.95%  |
| 0-120   | 1987.04 | 95.02% | 99.95%  |
| 0-180   | 1987.95 | 95.07% | 100.00% |
| 60-90   | 38.63   | 1.85%  | 1.94%   |
| 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%   |
| 0-24.79 | 1590.36 | 76.05% | 80.00%  |

ZONAL LUMEN SUMMARY

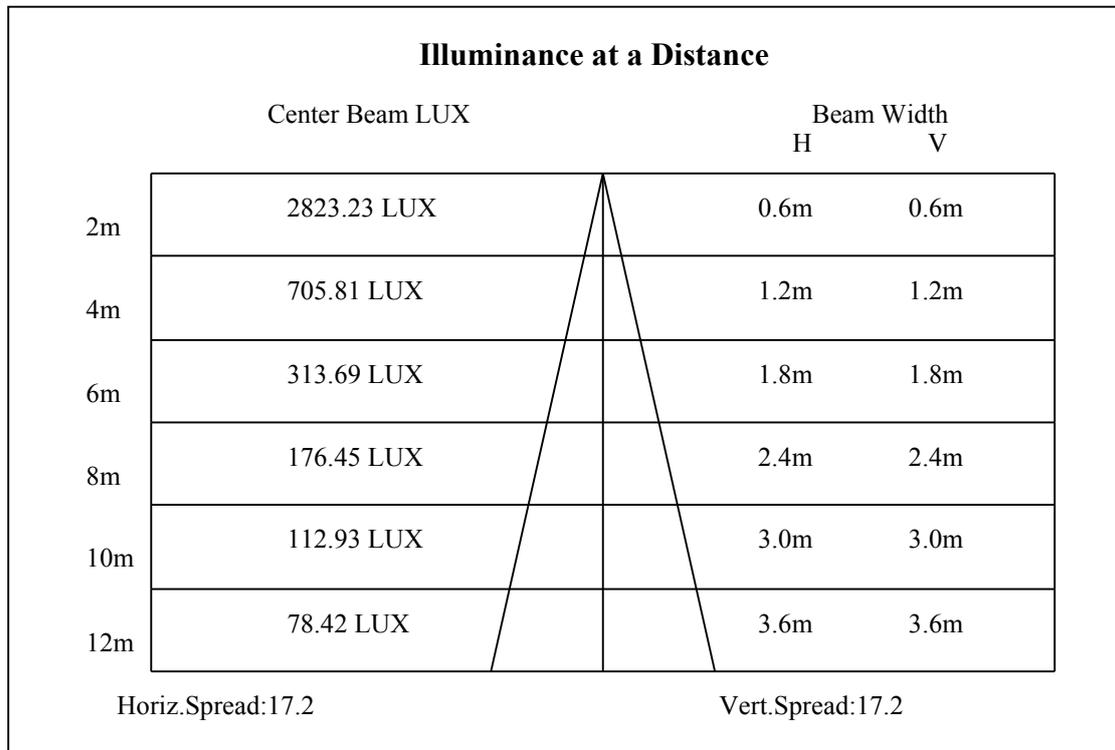
|         |        |
|---------|--------|
| 0-10    | 700.50 |
| 10-20   | 671.82 |
| 20-30   | 397.53 |
| 30-40   | 121.50 |
| 40-50   | 35.69  |
| 50-60   | 21.36  |
| 60-70   | 17.00  |
| 70-80   | 12.68  |
| 80-90   | 8.95   |
| 90-100  | 0.00   |
| 100-110 | 0.00   |
| 110-120 | 0.00   |
| 120-130 | 0.00   |
| 130-140 | 0.00   |
| 140-150 | 0.00   |
| 150-160 | 0.00   |
| 160-170 | 0.00   |
| 170-180 | 0.00   |

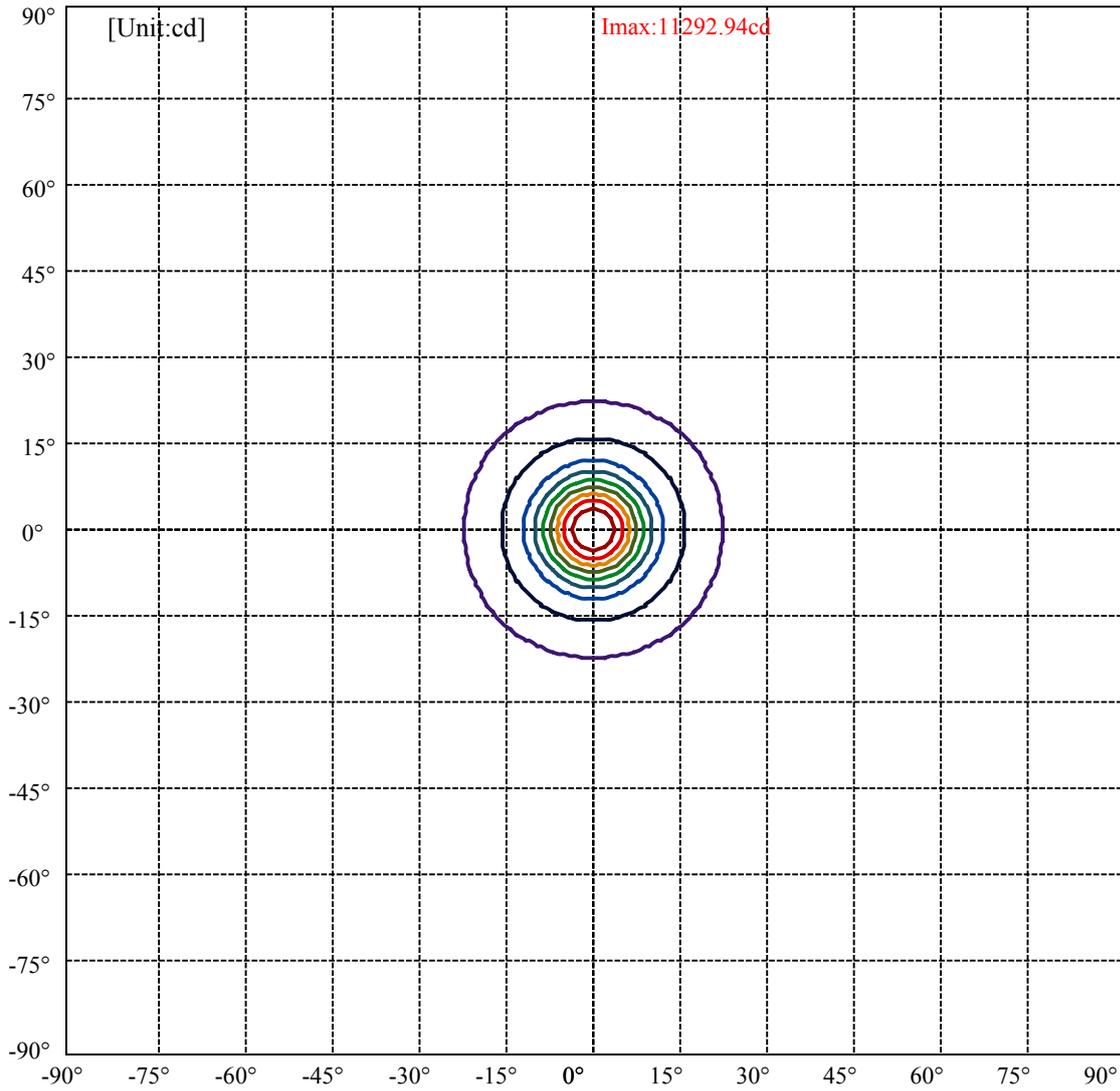


C0(Max): —————  
C0/C180: —————  
C90/C270: —————

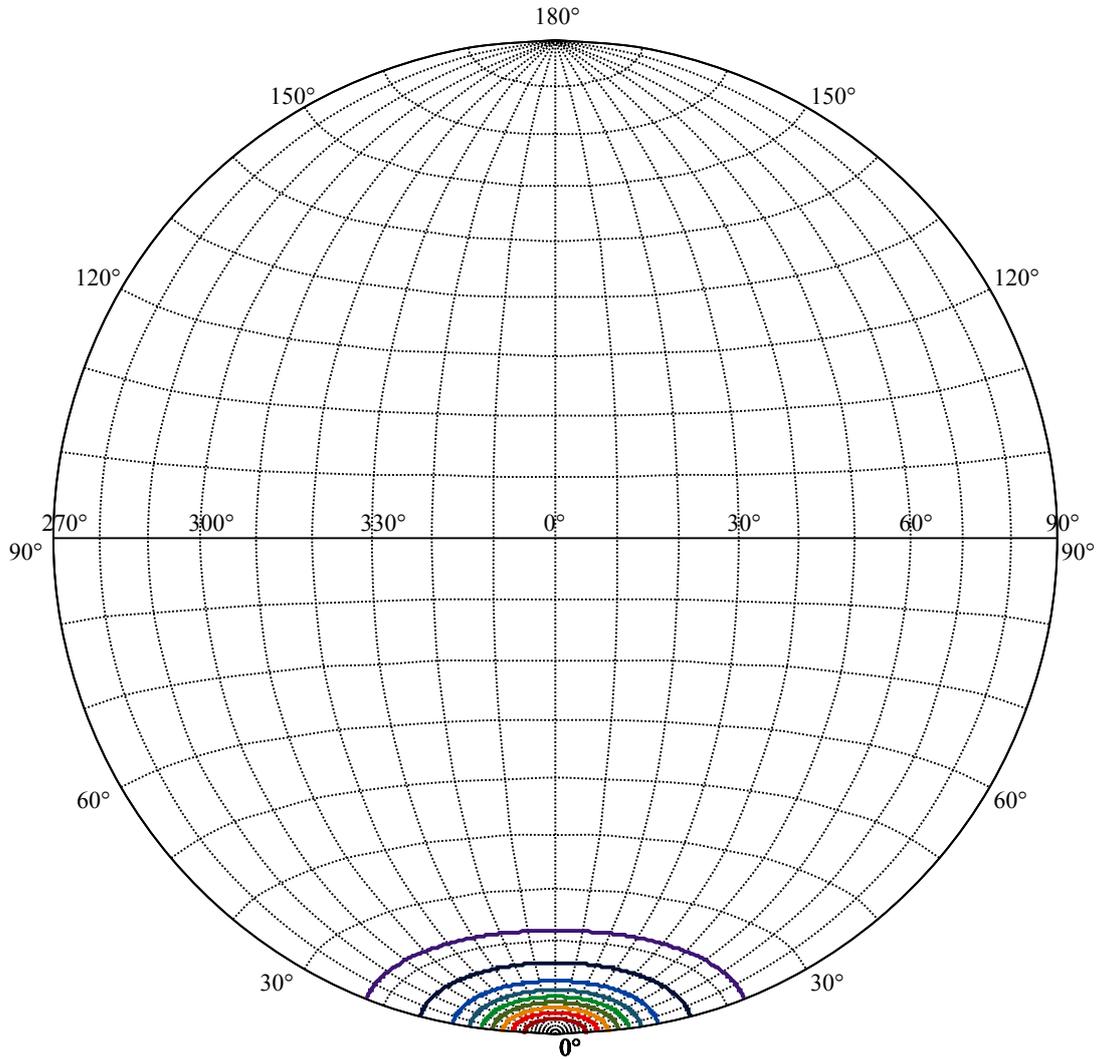
Field angle(10%Imax):C0/180Left:22.1 Right:22.1  
:C90/270Left:22.1 Right:22.1

Beam Angle(50%Imax):C0/180Left:8.5 Right:8.5  
:C90/270Left:8.5 Right:8.5





|                   |   |
|-------------------|---|
| (10%Imax) 1129.29 | — |
| (20%Imax) 2258.59 | — |
| (30%Imax) 3387.88 | — |
| (40%Imax) 4517.17 | — |
| (50%Imax) 5646.47 | — |
| (60%Imax) 6775.76 | — |
| (70%Imax) 7905.06 | — |
| (80%Imax) 9034.35 | — |
| (90%Imax) 10163.6 | — |



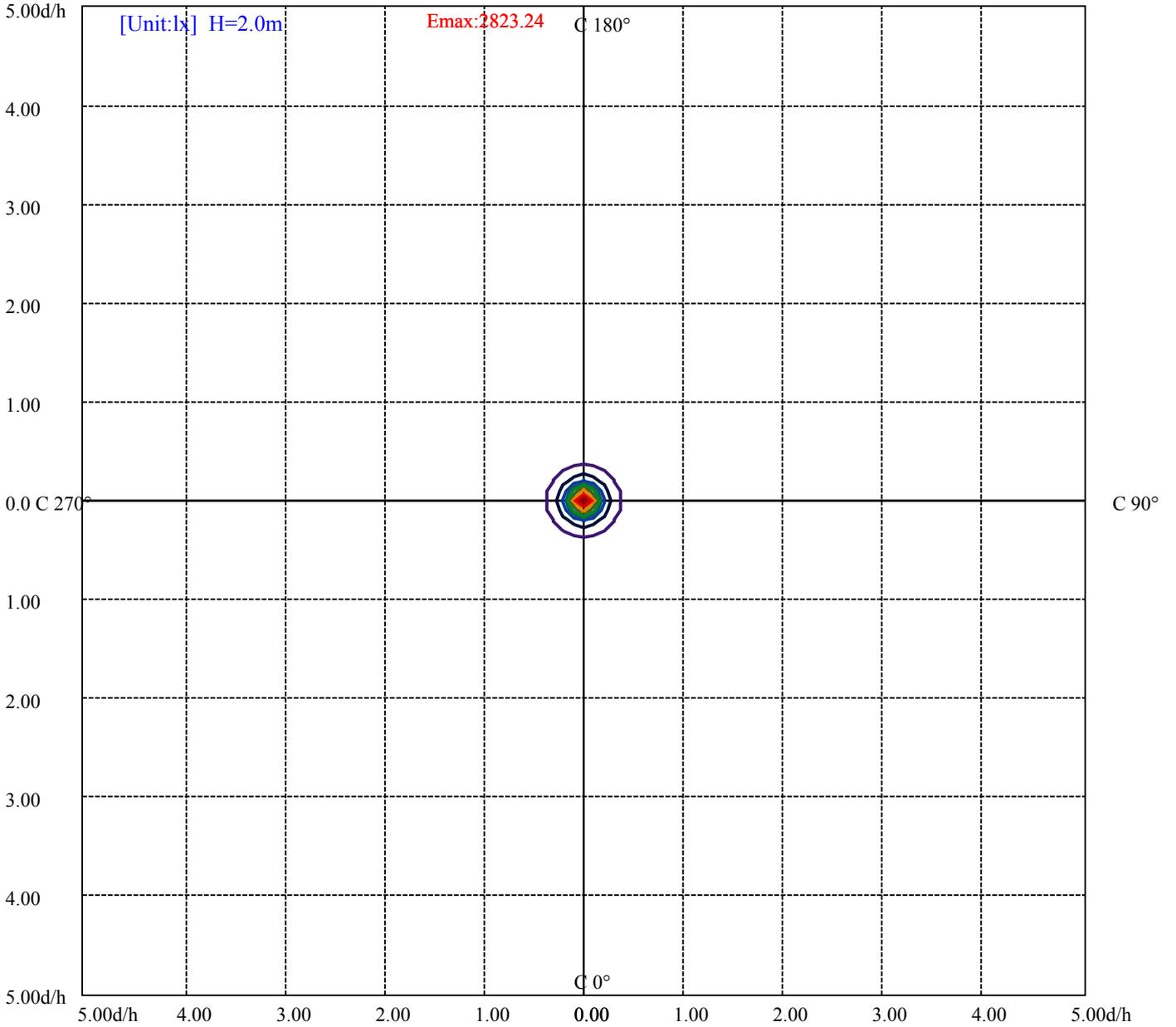
House

[Unit:cd]

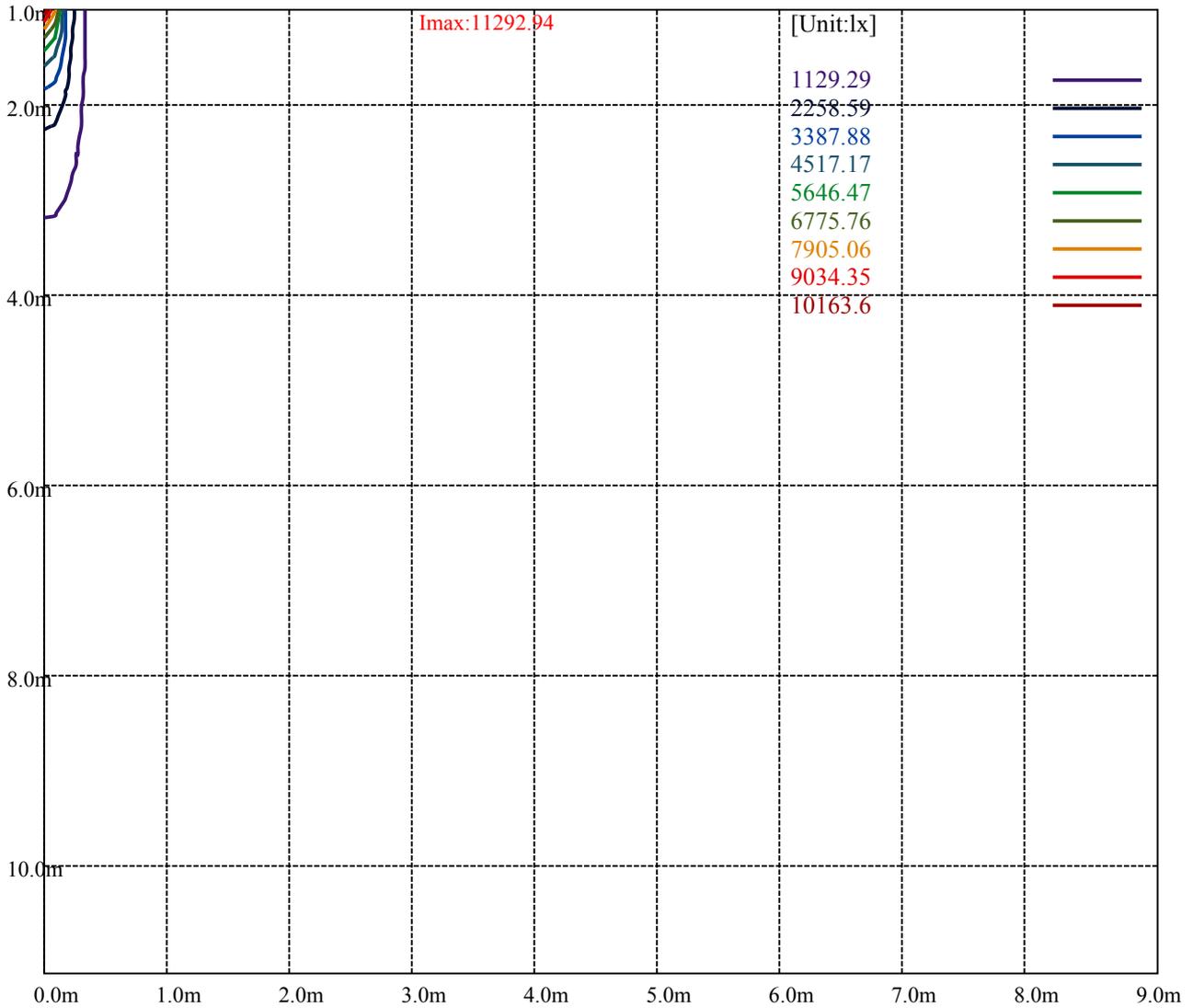
Road

**Imax:11292.94**

|           |         |   |
|-----------|---------|---|
| (10%Imax) | 1129.29 | — |
| (20%Imax) | 2258.59 | — |
| (30%Imax) | 3387.88 | — |
| (40%Imax) | 4517.17 | — |
| (50%Imax) | 5646.47 | — |
| (60%Imax) | 6775.76 | — |
| (70%Imax) | 7905.06 | — |
| (80%Imax) | 9034.35 | — |
| (90%Imax) | 10163.6 | — |



- (10%Emax) 282.3225
- (20%Emax) 564.6475
- (30%Emax) 846.97
- (40%Emax) 1129.292
- (50%Emax) 1411.618
- (60%Emax) 1693.94
- (70%Emax) 1976.262
- (80%Emax) 2258.587
- (90%Emax) 2540.9



Luminance Table

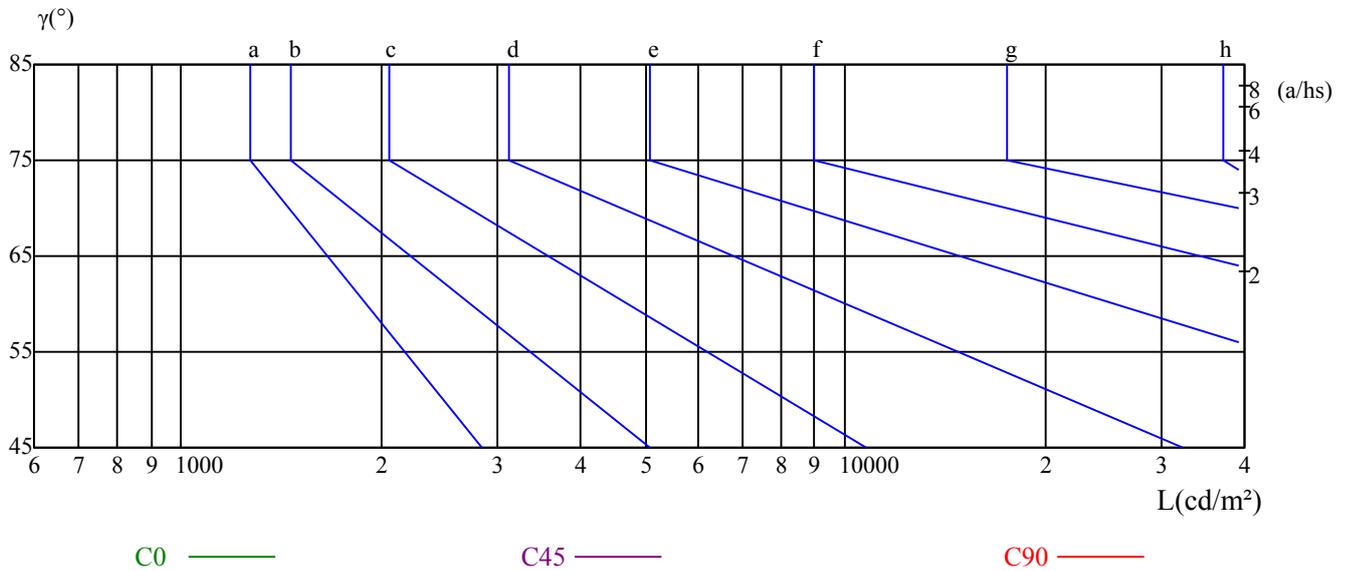
| $\gamma$ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|----------|----|----|----|----|----|----|----|----|----|
| C0       | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| C45      | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| C90      | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |

| 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

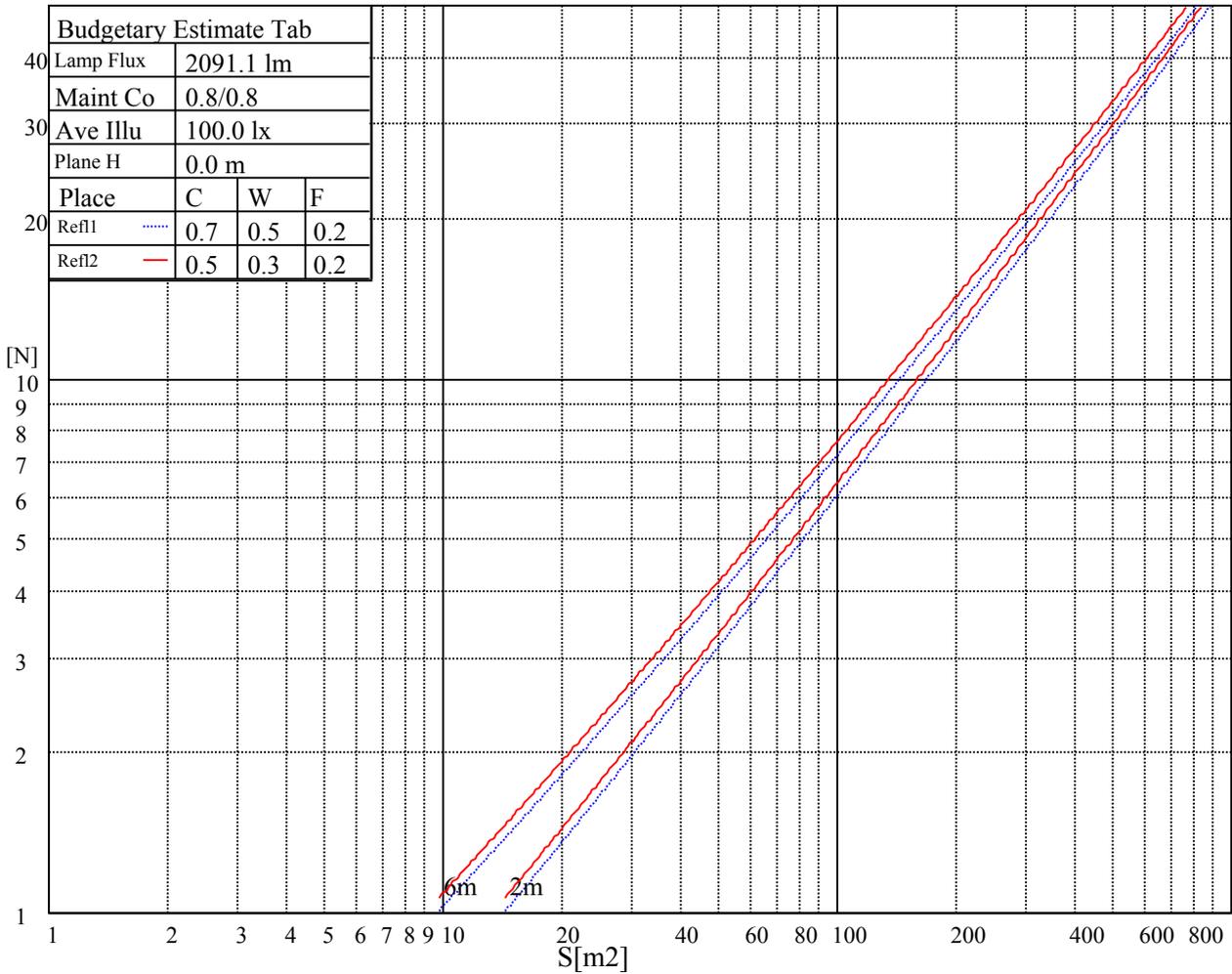
| Glare | Quality | Service Values Illuminance(lx) |      |      |       |       |       |       |       |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15  | A       | 2000                           | 1000 | 500  | <=300 |       |    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

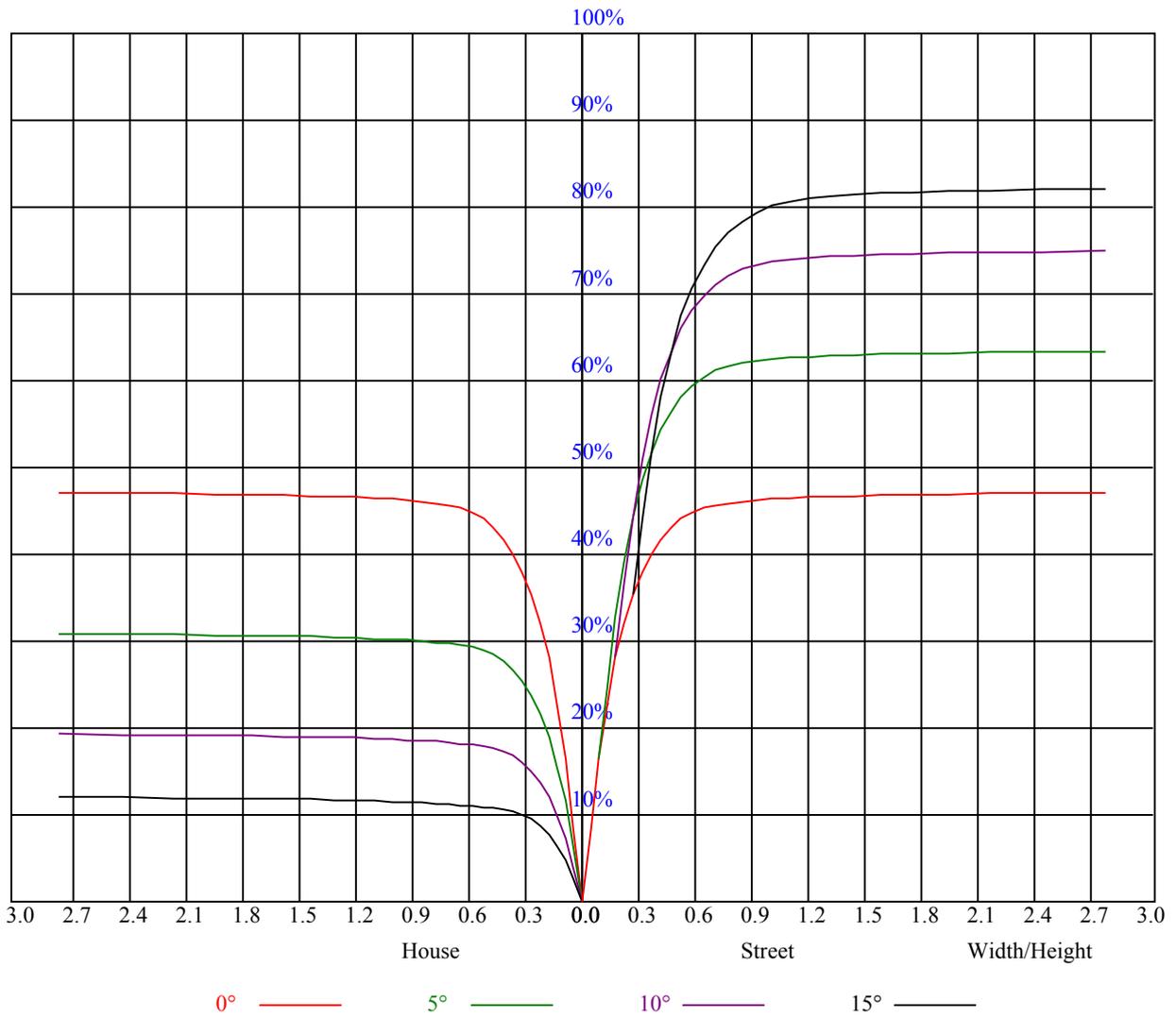


| Illumination assessment according UGR             |     |                  |     |     |     |     |                |     |     |     |  |
|---|-----|------------------|-----|-----|-----|-----|----------------|-----|-----|-----|--|
| Rf of Ceiling                                     | 70  | 70               | 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 RHOF=20 CU |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 0     | 1.13                                   | 1.13 | 1.13 | 1.11 | 1.11 | 1.11 | 1.06 | 1.06 | 1.06 | 1.01 | 1.01 | 1.01 | 0.97 | 0.97 | 0.97 | 0.95 |
| 1     | 1.06                                   | 1.04 | 1.03 | 1.04 | 1.03 | 1.01 | 1.01 | 0.99 | 0.98 | 0.97 | 0.96 | 0.95 | 0.94 | 0.93 | 0.92 | 0.91 |
| 2     | 1.01                                   | 0.98 | 0.95 | 0.99 | 0.96 | 0.94 | 0.96 | 0.94 | 0.92 | 0.93 | 0.92 | 0.90 | 0.91 | 0.89 | 0.88 | 0.87 |
| 3     | 0.96                                   | 0.92 | 0.89 | 0.95 | 0.91 | 0.88 | 0.92 | 0.89 | 0.87 | 0.90 | 0.88 | 0.86 | 0.88 | 0.86 | 0.84 | 0.83 |
| 4     | 0.92                                   | 0.88 | 0.84 | 0.91 | 0.87 | 0.84 | 0.89 | 0.86 | 0.83 | 0.87 | 0.84 | 0.82 | 0.85 | 0.83 | 0.81 | 0.80 |
| 5     | 0.88                                   | 0.84 | 0.81 | 0.87 | 0.83 | 0.80 | 0.86 | 0.82 | 0.80 | 0.84 | 0.81 | 0.79 | 0.83 | 0.80 | 0.78 | 0.77 |
| 6     | 0.85                                   | 0.80 | 0.77 | 0.84 | 0.80 | 0.77 | 0.83 | 0.79 | 0.76 | 0.81 | 0.78 | 0.76 | 0.80 | 0.78 | 0.75 | 0.74 |
| 7     | 0.82                                   | 0.77 | 0.74 | 0.81 | 0.77 | 0.74 | 0.80 | 0.76 | 0.74 | 0.79 | 0.76 | 0.73 | 0.78 | 0.75 | 0.73 | 0.72 |
| 8     | 0.79                                   | 0.75 | 0.72 | 0.78 | 0.74 | 0.72 | 0.77 | 0.74 | 0.71 | 0.77 | 0.73 | 0.71 | 0.76 | 0.73 | 0.71 | 0.70 |
| 9     | 0.76                                   | 0.72 | 0.69 | 0.76 | 0.72 | 0.69 | 0.75 | 0.72 | 0.69 | 0.74 | 0.71 | 0.69 | 0.74 | 0.71 | 0.69 | 0.68 |
| 10    | 0.74                                   | 0.70 | 0.67 | 0.74 | 0.70 | 0.67 | 0.73 | 0.69 | 0.67 | 0.72 | 0.69 | 0.67 | 0.72 | 0.69 | 0.67 | 0.66 |



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    | 10933.94 | 10933.94 | 10652.74 | 9951.97  | 8874.23  | 7938.76 | 6816.74 | 5933.85 | 5109.08 |
| 45.0   | 11664.11 | 11581.08 | 11320.92 | 10712.03 | 10042.25 | 9200.88 | 8315.22 | 7186.00 | 6311.42 |
| 90.0   | 10937.26 | 10937.26 | 10670.46 | 9995.70  | 9200.82  | 8311.84 | 7212.52 | 6330.18 | 5492.13 |
| 135.0  | 11636.43 | 11520.19 | 11116.11 | 10601.32 | 9914.94  | 8907.50 | 8049.52 | 6953.52 | 6090.00 |
| 180.0  | 10933.94 | 11664.11 | 11531.26 | 11221.28 | 10728.63 | 9931.54 | 9139.99 | 8270.93 | 7108.51 |
| 225.0  | 11664.11 | 10970.47 | 10970.47 | 10552.00 | 9860.08  | 8820.54 | 7909.97 | 6967.86 | 5832.55 |
| 270.0  | 10937.26 | 11669.65 | 11542.33 | 11243.42 | 10579.18 | 9848.51 | 8774.65 | 7839.18 | 6903.70 |
| 315.0  | 11636.43 | 11004.24 | 11004.24 | 10565.84 | 9829.08  | 8968.89 | 7823.62 | 6895.90 | 5983.12 |
| 360.0  | 10933.94 | 10933.94 | 10652.74 | 9951.97  | 8874.23  | 7938.76 | 6816.74 | 5933.85 | 5109.08 |
| C/γ(°) | 9.0      | 10.0     | 11.0     | 12.0     | 13.0     | 14.0    | 15.0    | 16.0    | 17.0    |
| 0.0    | 4221.76  | 3662.14  | 3212.67  | 2849.55  | 2488.09  | 2251.18 | 2041.39 | 1855.95 | 1653.91 |
| 45.0   | 5470.04  | 4534.57  | 3931.21  | 3438.57  | 2940.38  | 2857.35 | 2857.35 | 2086.22 | 1893.04 |
| 90.0   | 4565.51  | 3958.28  | 3467.29  | 2964.13  | 2655.26  | 2334.21 | 2109.47 | 1911.30 | 1743.58 |
| 135.0  | 5281.84  | 4584.39  | 3986.57  | 3377.68  | 2995.74  | 2829.68 | 2829.68 | 2109.47 | 1916.84 |
| 180.0  | 6206.25  | 5381.48  | 4462.61  | 3859.25  | 3366.61  | 2896.10 | 2807.53 | 2807.53 | 2091.76 |
| 225.0  | 4992.84  | 4289.85  | 3583.54  | 3146.24  | 2794.19  | 2443.81 | 2210.21 | 2003.74 | 1824.40 |
| 270.0  | 5774.49  | 4960.79  | 4257.80  | 3554.81  | 3117.51  | 2857.35 | 2857.35 | 2194.16 | 1981.05 |
| 315.0  | 5130.67  | 4233.39  | 3666.57  | 3211.01  | 2774.82  | 2492.52 | 2204.12 | 1996.55 | 1819.97 |
| 360.0  | 4221.76  | 3662.14  | 3212.67  | 2849.55  | 2488.09  | 2251.18 | 2041.39 | 1855.95 | 1653.91 |
| C/γ(°) | 18.0     | 19.0     | 20.0     | 21.0     | 22.0     | 23.0    | 24.0    | 25.0    | 26.0    |
| 0.0    | 1516.08  | 1386.55  | 1092.68  | 1092.68  | 1014.91  | 928.00  | 849.46  | 785.58  | 695.41  |
| 45.0   | 1727.53  | 1582.50  | 1417.00  | 1297.99  | 1183.96  | 1079.34 | 961.44  | 892.24  | 828.03  |
| 90.0   | 1562.02  | 1424.75  | 1099.93  | 1099.93  | 1073.08  | 954.46  | 888.81  | 827.87  | 745.78  |
| 135.0  | 1744.14  | 1596.90  | 1428.62  | 1299.65  | 1153.51  | 1046.68 | 965.86  | 887.82  | 821.39  |
| 180.0  | 1868.68  | 1692.66  | 1547.63  | 1417.00  | 1269.20  | 1157.39 | 1050.00 | 962.54  | 886.16  |
| 225.0  | 1630.66  | 1490.62  | 1360.54  | 1091.24  | 1091.24  | 997.03  | 924.07  | 849.46  | 784.31  |
| 270.0  | 1813.88  | 1653.91  | 1477.33  | 1353.34  | 1238.76  | 1092.62 | 993.54  | 923.24  | 849.07  |
| 315.0  | 1626.79  | 1485.64  | 1357.21  | 1093.18  | 1093.18  | 995.37  | 919.26  | 859.64  | 793.11  |
| 360.0  | 1516.08  | 1386.55  | 1092.68  | 1092.68  | 1014.91  | 928.00  | 849.46  | 785.58  | 695.41  |
| C/γ(°) | 27.0     | 28.0     | 29.0     | 30.0     | 31.0     | 32.0    | 33.0    | 34.0    | 35.0    |
| 0.0    | 618.74   | 543.79   | 468.79   | 377.07   | 306.60   | 240.18  | 182.00  | 128.81  | 108.55  |
| 45.0   | 739.47   | 665.29   | 569.53   | 492.59   | 415.10   | 338.71  | 285.02  | 285.02  | 140.49  |
| 90.0   | 672.16   | 596.27   | 499.79   | 420.74   | 325.81   | 255.62  | 193.74  | 145.86  | 113.09  |
| 135.0  | 751.65   | 655.88   | 578.39   | 502.00   | 425.06   | 350.33  | 296.09  | 296.09  | 146.02  |
| 180.0  | 824.71   | 731.72   | 656.99   | 577.84   | 479.86   | 402.92  | 330.41  | 296.09  | 296.09  |
| 225.0  | 693.75   | 615.97   | 535.38   | 456.72   | 360.91   | 289.83  | 226.12  | 176.14  | 135.51  |
| 270.0  | 782.09   | 709.02   | 611.60   | 532.45   | 450.52   | 371.37  | 280.59  | 280.59  | 203.76  |
| 315.0  | 704.15   | 627.82   | 550.99   | 455.28   | 380.00   | 307.10  | 225.62  | 172.26  | 126.65  |
| 360.0  | 618.74   | 543.79   | 468.79   | 377.07   | 306.60   | 240.18  | 182.00  | 128.81  | 108.55  |
| C/γ(°) | 36.0     | 37.0     | 38.0     | 39.0     | 40.0     | 41.0    | 42.0    | 43.0    | 44.0    |
| 0.0    | 97.81    | 86.19    | 77.72    | 70.19    | 61.66    | 55.91   | 51.04   | 45.61   | 42.07   |
| 45.0   | 114.31   | 99.03    | 88.95    | 80.32    | 72.57    | 63.88   | 57.96   | 52.81   | 47.22   |
| 90.0   | 100.80   | 90.50    | 81.20    | 71.30    | 64.04    | 57.84   | 52.64   | 46.88   | 43.18   |
| 135.0  | 115.19   | 103.46   | 92.61    | 80.71    | 72.73    | 64.04   | 58.12   | 52.97   | 48.43   |
| 180.0  | 145.47   | 122.55   | 110.32   | 95.71    | 86.02    | 77.22   | 67.70   | 61.50   | 55.85   |
| 225.0  | 119.84   | 108.49   | 95.10    | 85.63    | 77.33    | 68.14   | 61.83   | 56.29   | 50.37   |
| 270.0  | 131.85   | 111.98   | 101.52   | 91.72    | 80.71    | 72.68   | 64.21   | 58.56   | 53.58   |
| 315.0  | 110.21   | 99.69    | 90.12    | 81.04    | 70.74    | 63.66   | 57.57   | 52.53   | 46.94   |
| 360.0  | 97.81    | 86.19    | 77.72    | 70.19    | 61.66    | 55.91   | 51.04   | 45.61   | 42.07   |

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    | 38.86 | 35.20 | 32.99 | 31.11 | 29.28 | 27.46 | 26.13 | 24.85 | 23.75 |
| 45.0   | 43.51 | 40.19 | 36.48 | 34.10 | 31.50 | 29.67 | 28.06 | 26.74 | 25.13 |
| 90.0   | 38.86 | 35.92 | 33.10 | 31.11 | 29.17 | 27.68 | 26.40 | 24.80 | 23.75 |
| 135.0  | 43.73 | 40.19 | 37.25 | 34.98 | 32.05 | 30.06 | 28.51 | 26.68 | 25.35 |
| 180.0  | 49.76 | 45.67 | 41.02 | 38.08 | 35.65 | 33.16 | 30.67 | 28.95 | 27.40 |
| 225.0  | 46.28 | 42.46 | 38.97 | 36.20 | 33.54 | 31.44 | 29.39 | 27.79 | 26.29 |
| 270.0  | 49.26 | 44.56 | 40.91 | 38.03 | 35.65 | 32.82 | 30.89 | 29.23 | 27.68 |
| 315.0  | 43.56 | 39.63 | 36.64 | 34.32 | 31.77 | 29.95 | 28.29 | 26.46 | 25.13 |
| 360.0  | 38.86 | 35.20 | 32.99 | 31.11 | 29.28 | 27.46 | 26.13 | 24.85 | 23.75 |
| C/γ(°) | 54.0  | 55.0  | 56.0  | 57.0  | 58.0  | 59.0  | 60.0  | 61.0  | 62.0  |
| 0.0    | 22.64 | 21.81 | 20.87 | 20.26 | 19.82 | 19.21 | 18.71 | 18.49 | 18.16 |
| 45.0   | 24.02 | 23.19 | 22.42 | 21.37 | 20.70 | 20.20 | 19.60 | 19.04 | 18.71 |
| 90.0   | 22.92 | 22.14 | 21.15 | 20.59 | 20.15 | 19.71 | 19.26 | 18.88 | 18.54 |
| 135.0  | 24.24 | 23.14 | 22.36 | 21.53 | 20.87 | 20.48 | 20.04 | 19.54 | 19.21 |
| 180.0  | 26.02 | 24.63 | 23.69 | 22.81 | 22.03 | 21.31 | 20.81 | 20.15 | 19.71 |
| 225.0  | 25.13 | 23.91 | 22.97 | 22.03 | 21.42 | 21.03 | 20.31 | 19.93 | 19.60 |
| 270.0  | 25.96 | 24.85 | 23.75 | 22.69 | 21.98 | 21.31 | 20.76 | 20.26 | 19.76 |
| 315.0  | 23.97 | 23.03 | 22.03 | 21.26 | 20.65 | 20.15 | 19.60 | 19.21 | 18.76 |
| 360.0  | 22.64 | 21.81 | 20.87 | 20.26 | 19.82 | 19.21 | 18.71 | 18.49 | 18.16 |
| C/γ(°) | 63.0  | 64.0  | 65.0  | 66.0  | 67.0  | 68.0  | 69.0  | 70.0  | 71.0  |
| 0.0    | 17.44 | 16.88 | 16.38 | 15.67 | 15.00 | 14.45 | 13.89 | 13.28 | 12.90 |
| 45.0   | 18.27 | 17.66 | 17.05 | 16.38 | 15.78 | 15.22 | 14.67 | 14.00 | 13.51 |
| 90.0   | 17.77 | 17.10 | 16.61 | 15.89 | 15.33 | 14.72 | 14.12 | 13.62 | 13.23 |
| 135.0  | 18.76 | 18.10 | 17.55 | 16.83 | 16.16 | 15.55 | 14.83 | 14.17 | 13.56 |
| 180.0  | 19.32 | 18.71 | 18.05 | 17.44 | 16.77 | 15.94 | 15.33 | 14.78 | 14.12 |
| 225.0  | 18.93 | 17.99 | 17.38 | 16.72 | 16.00 | 15.22 | 14.61 | 14.00 | 13.45 |
| 270.0  | 19.37 | 18.88 | 18.16 | 17.38 | 16.66 | 16.00 | 15.44 | 14.67 | 14.12 |
| 315.0  | 18.38 | 17.71 | 16.99 | 16.44 | 15.78 | 15.17 | 14.50 | 13.89 | 13.45 |
| 360.0  | 17.44 | 16.88 | 16.38 | 15.67 | 15.00 | 14.45 | 13.89 | 13.28 | 12.90 |
| C/γ(°) | 72.0  | 73.0  | 74.0  | 75.0  | 76.0  | 77.0  | 78.0  | 79.0  | 80.0  |
| 0.0    | 12.51 | 12.12 | 11.79 | 11.40 | 11.13 | 10.85 | 10.46 | 10.19 | 9.85  |
| 45.0   | 13.12 | 12.73 | 12.29 | 11.96 | 11.68 | 11.35 | 11.02 | 10.63 | 10.35 |
| 90.0   | 12.79 | 12.40 | 12.07 | 11.79 | 11.40 | 11.07 | 10.68 | 10.41 | 10.13 |
| 135.0  | 13.12 | 12.73 | 12.29 | 11.90 | 11.62 | 11.35 | 11.07 | 10.68 | 10.41 |
| 180.0  | 13.51 | 13.12 | 12.68 | 12.18 | 11.90 | 11.46 | 11.13 | 10.85 | 10.46 |
| 225.0  | 13.01 | 12.62 | 12.18 | 11.85 | 11.57 | 11.13 | 10.85 | 10.52 | 10.19 |
| 270.0  | 13.62 | 13.12 | 12.73 | 12.29 | 11.96 | 11.62 | 11.35 | 10.90 | 10.57 |
| 315.0  | 13.01 | 12.57 | 12.23 | 11.90 | 11.51 | 11.18 | 10.90 | 10.52 | 10.24 |
| 360.0  | 12.51 | 12.12 | 11.79 | 11.40 | 11.13 | 10.85 | 10.46 | 10.19 | 9.85  |
| C/γ(°) | 81.0  | 82.0  | 83.0  | 84.0  | 85.0  | 86.0  | 87.0  | 88.0  | 89.0  |
| 0.0    | 9.63  | 9.35  | 9.13  | 8.91  | 8.75  | 8.58  | 8.41  | 8.30  | 8.19  |
| 45.0   | 10.07 | 9.74  | 9.41  | 9.24  | 8.97  | 8.80  | 8.58  | 8.36  | 8.25  |
| 90.0   | 9.80  | 9.58  | 9.24  | 9.02  | 8.86  | 8.64  | 8.47  | 8.41  | 8.19  |
| 135.0  | 10.13 | 9.80  | 9.52  | 9.19  | 9.02  | 8.75  | 8.64  | 8.47  | 8.25  |
| 180.0  | 10.19 | 9.85  | 9.58  | 9.30  | 9.02  | 8.86  | 8.58  | 8.41  | 8.36  |
| 225.0  | 9.85  | 9.58  | 9.35  | 9.08  | 8.86  | 8.64  | 8.47  | 8.36  | 8.08  |
| 270.0  | 10.24 | 9.96  | 9.63  | 9.30  | 9.08  | 8.86  | 8.69  | 8.47  | 8.52  |
| 315.0  | 9.91  | 9.69  | 9.41  | 9.19  | 8.97  | 8.75  | 8.58  | 8.41  | 8.30  |
| 360.0  | 9.63  | 9.35  | 9.13  | 8.91  | 8.75  | 8.58  | 8.41  | 8.30  | 8.19  |

Intensity data(cd)

|               |             |
|---------------|-------------|
| <i>C/γ(°)</i> | <b>90.0</b> |
| <b>0.0</b>    | <b>8.30</b> |
| <b>45.0</b>   | <b>8.19</b> |
| <b>90.0</b>   | <b>8.36</b> |
| <b>135.0</b>  | <b>8.30</b> |
| <b>180.0</b>  | <b>8.08</b> |
| <b>225.0</b>  | <b>8.19</b> |
| <b>270.0</b>  | <b>8.14</b> |
| <b>315.0</b>  | <b>8.19</b> |
| <b>360.0</b>  | <b>8.30</b> |