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## Nata

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Client:

LumCAT: 2-2748-L

Luminaire: 92.70.411.00

Report No: 2024828-B009

Ballast type: AC

Test No: 2024828-C009

Voltage(V): 35.400

LampCAT: Fortimo\_SLM\_C\_1205

Current(A): 0.403

Lamp flux(lm): 2291.0

Power (W): 14.260

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): 2154.34, Efficiency(%): 94.03% , Luminous Efficacy(lm/W): 151.08

Central intensity(cd): 11325.460, Maximum intensity(cd): 11446.500

Angle of maximum intensity: C=0.0  $\gamma$ =1.0

Beam Angle(50%Imax): [C0/180]Total=17.8

[C90/270]Total=17.8

Field angle(10%Imax): [C0/180]Total=45.8

[C90/270]Total=45.8

Maximum s/h(1/2): C0\_180=0.31 C90\_270=0.31

Maximum s/h(1/4): C0\_180=0.33 C90\_270=0.33

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 94.03%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 99.143%

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Equipment: GMS 1800  
Temperature(°C): 25.0

Date: 2024/8/28  
Humidity(%): 60.0%

Operator: NT  
Distance(m): 7.25

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0                | 11325.458     | 0.000       | 0         | 0.00%       | 0.00%      |
| 1.0                | 11446.503     | 10.896      | 10.896    | 0.48%       | 0.51%      |
| 2.0                | 10948.053     | 32.143      | 43.039    | 1.40%       | 2.00%      |
| 3.0                | 10558.886     | 51.438      | 94.476    | 2.25%       | 4.39%      |
| 4.0                | 9999.207      | 68.815      | 163.291   | 3.00%       | 7.58%      |
| 5.0                | 9197.242      | 82.582      | 245.873   | 3.60%       | 11.41%     |
| 6.0                | 8313.857      | 92.025      | 337.898   | 4.02%       | 15.68%     |
| 7.0                | 7386.043      | 97.449      | 435.347   | 4.25%       | 20.21%     |
| 8.0                | 6518.611      | 99.513      | 534.86    | 4.34%       | 24.83%     |
| 9.0                | 5678.268      | 98.849      | 633.709   | 4.31%       | 29.42%     |
| 10.0               | 4905.487      | 95.779      | 729.489   | 4.18%       | 33.86%     |
| 11.0               | 4219.619      | 91.179      | 820.667   | 3.98%       | 38.09%     |
| 12.0               | 3656.254      | 86.095      | 906.762   | 3.76%       | 42.09%     |
| 13.0               | 3176.122      | 81.083      | 987.845   | 3.54%       | 45.85%     |
| 14.0               | 2853.033      | 77.173      | 1065.017  | 3.37%       | 49.44%     |
| 15.0               | 2584.590      | 74.650      | 1139.668  | 3.26%       | 52.90%     |
| 16.0               | 2271.219      | 71.151      | 1210.819  | 3.11%       | 56.20%     |
| 17.0               | 2027.152      | 66.937      | 1277.756  | 2.92%       | 59.31%     |
| 18.0               | 1785.239      | 62.858      | 1340.614  | 2.74%       | 62.23%     |
| 19.0               | 1609.589      | 59.063      | 1399.677  | 2.58%       | 64.97%     |
| 20.0               | 1481.086      | 56.568      | 1456.245  | 2.47%       | 67.60%     |
| 21.0               | 1332.321      | 54.023      | 1510.268  | 2.36%       | 70.10%     |
| 22.0               | 1249.516      | 51.883      | 1562.151  | 2.26%       | 72.51%     |
| 23.0               | 1135.455      | 50.043      | 1612.194  | 2.18%       | 74.83%     |
| 24.0               | 1076.007      | 48.350      | 1660.545  | 2.11%       | 77.08%     |
| 25.0               | 1002.130      | 47.252      | 1707.797  | 2.06%       | 79.27%     |
| 26.0               | 928.155       | 45.565      | 1753.362  | 1.99%       | 81.39%     |
| 27.0               | 840.350       | 43.267      | 1796.629  | 1.89%       | 83.40%     |
| 28.0               | 757.623       | 40.457      | 1837.086  | 1.77%       | 85.27%     |
| 29.0               | 678.312       | 37.568      | 1874.654  | 1.64%       | 87.02%     |
| 30.0               | 584.613       | 34.099      | 1908.753  | 1.49%       | 88.60%     |
| 31.0               | 502.110       | 30.242      | 1938.995  | 1.32%       | 90.00%     |
| 32.0               | 424.232       | 26.539      | 1965.533  | 1.16%       | 91.24%     |
| 33.0               | 352.550       | 22.884      | 1988.418  | 1.00%       | 92.30%     |
| 34.0               | 303.785       | 19.863      | 2008.28   | 0.87%       | 93.22%     |
| 35.0               | 265.835       | 17.690      | 2025.97   | 0.77%       | 94.04%     |
| 36.0               | 216.242       | 15.349      | 2041.32   | 0.67%       | 94.75%     |
| 37.0               | 182.162       | 12.994      | 2054.314  | 0.57%       | 95.36%     |

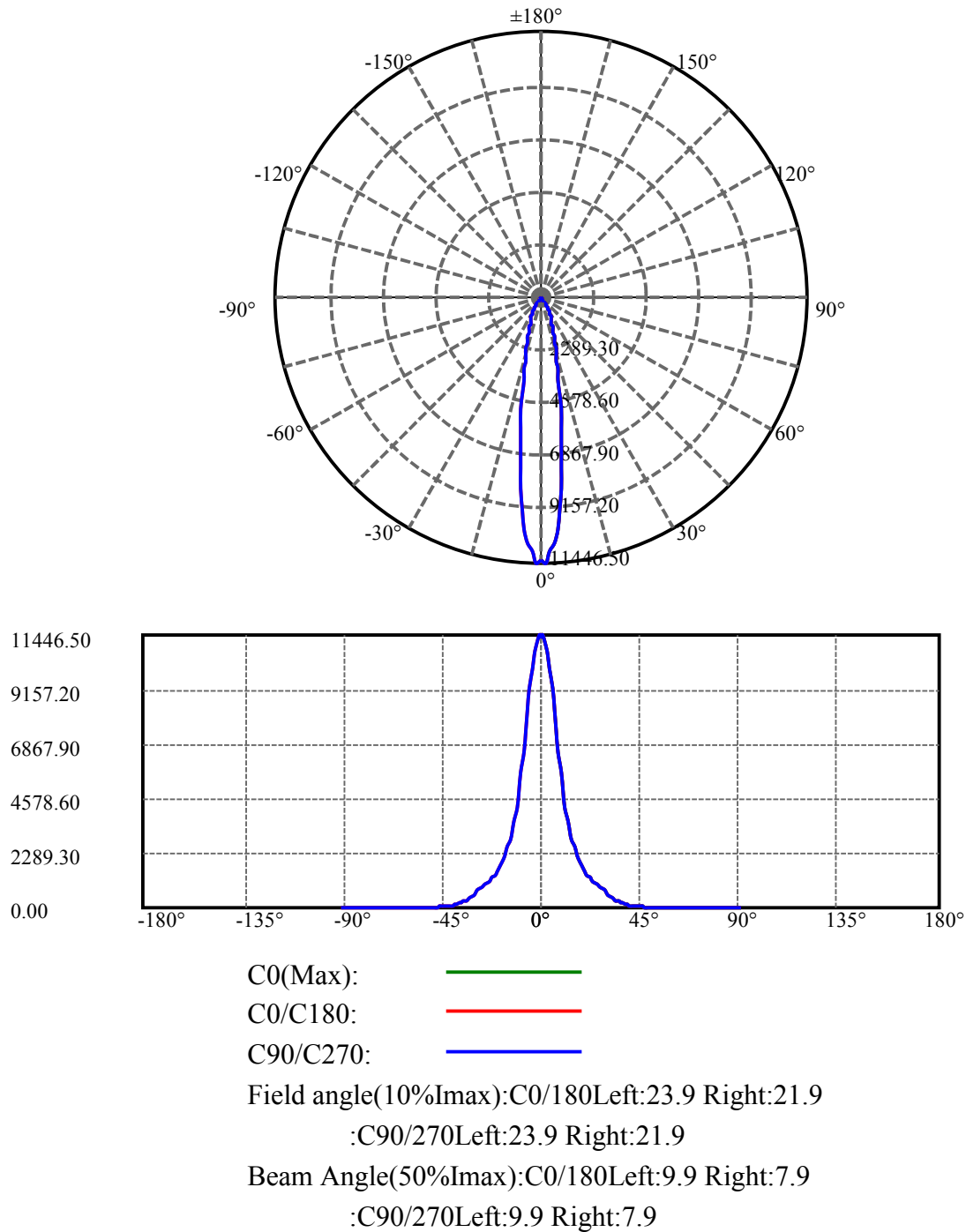
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0               | 145.362       | 10.932      | 2065.246  | 0.48%       | 95.86%     |
| 39.0               | 119.816       | 9.051       | 2074.297  | 0.40%       | 96.28%     |
| 40.0               | 100.151       | 7.672       | 2081.969  | 0.33%       | 96.64%     |
| 41.0               | 82.786        | 6.514       | 2088.483  | 0.28%       | 96.94%     |
| 42.0               | 68.489        | 5.496       | 2093.979  | 0.24%       | 97.20%     |
| 43.0               | 58.331        | 4.698       | 2098.677  | 0.21%       | 97.42%     |
| 44.0               | 48.239        | 4.022       | 2102.699  | 0.18%       | 97.60%     |
| 45.0               | 40.736        | 3.419       | 2106.119  | 0.15%       | 97.76%     |
| 46.0               | 35.874        | 2.996       | 2109.115  | 0.13%       | 97.90%     |
| 47.0               | 31.340        | 2.673       | 2111.788  | 0.12%       | 98.02%     |
| 48.0               | 27.891        | 2.394       | 2114.182  | 0.10%       | 98.14%     |
| 49.0               | 25.591        | 2.196       | 2116.379  | 0.10%       | 98.24%     |
| 50.0               | 23.535        | 2.048       | 2118.427  | 0.09%       | 98.33%     |
| 51.0               | 22.004        | 1.927       | 2120.354  | 0.08%       | 98.42%     |
| 52.0               | 20.848        | 1.839       | 2122.192  | 0.08%       | 98.51%     |
| 53.0               | 19.993        | 1.777       | 2123.969  | 0.08%       | 98.59%     |
| 54.0               | 19.369        | 1.735       | 2125.704  | 0.08%       | 98.67%     |
| 55.0               | 18.975        | 1.712       | 2127.416  | 0.07%       | 98.75%     |
| 56.0               | 18.706        | 1.703       | 2129.118  | 0.07%       | 98.83%     |
| 57.0               | 18.502        | 1.701       | 2130.819  | 0.07%       | 98.91%     |
| 58.0               | 18.252        | 1.700       | 2132.519  | 0.07%       | 98.99%     |
| 59.0               | 17.930        | 1.692       | 2134.211  | 0.07%       | 99.07%     |
| 60.0               | 17.464        | 1.672       | 2135.883  | 0.07%       | 99.14%     |
| 61.0               | 16.741        | 1.632       | 2137.515  | 0.07%       | 99.22%     |
| 62.0               | 15.683        | 1.562       | 2139.078  | 0.07%       | 99.29%     |
| 63.0               | 14.310        | 1.459       | 2140.536  | 0.06%       | 99.36%     |
| 64.0               | 12.911        | 1.336       | 2141.872  | 0.06%       | 99.42%     |
| 65.0               | 11.386        | 1.202       | 2143.074  | 0.05%       | 99.48%     |
| 66.0               | 9.934         | 1.064       | 2144.138  | 0.05%       | 99.53%     |
| 67.0               | 8.903         | 0.947       | 2145.085  | 0.04%       | 99.57%     |
| 68.0               | 7.917         | 0.852       | 2145.937  | 0.04%       | 99.61%     |
| 69.0               | 7.155         | 0.769       | 2146.706  | 0.03%       | 99.65%     |
| 70.0               | 6.603         | 0.707       | 2147.413  | 0.03%       | 99.68%     |
| 71.0               | 6.097         | 0.656       | 2148.069  | 0.03%       | 99.71%     |
| 72.0               | 5.683         | 0.613       | 2148.682  | 0.03%       | 99.74%     |
| 73.0               | 5.289         | 0.574       | 2149.256  | 0.03%       | 99.76%     |
| 74.0               | 4.961         | 0.539       | 2149.795  | 0.02%       | 99.79%     |
| 75.0               | 4.652         | 0.508       | 2150.302  | 0.02%       | 99.81%     |

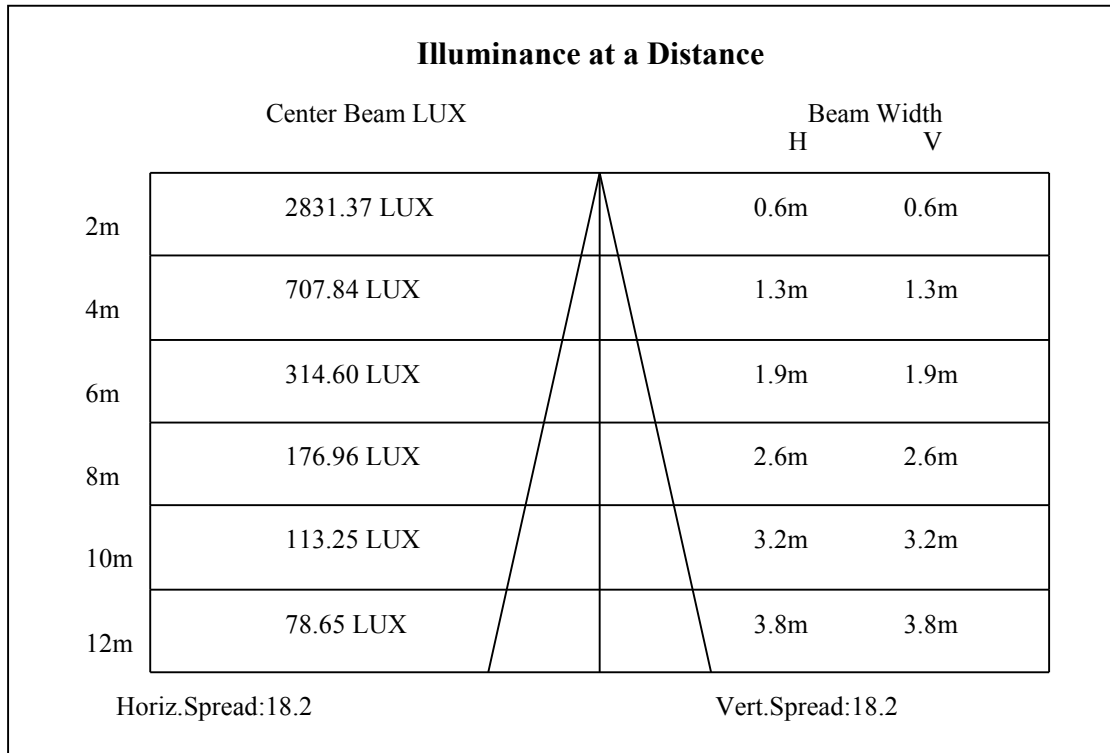
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0               | 4.330         | 0.477       | 2150.779  | 0.02%       | 99.83%     |
| 77.0               | 4.034         | 0.446       | 2151.225  | 0.02%       | 99.86%     |
| 78.0               | 3.739         | 0.416       | 2151.641  | 0.02%       | 99.87%     |
| 79.0               | 3.423         | 0.385       | 2152.026  | 0.02%       | 99.89%     |
| 80.0               | 3.095         | 0.351       | 2152.377  | 0.02%       | 99.91%     |
| 81.0               | 2.806         | 0.319       | 2152.697  | 0.01%       | 99.92%     |
| 82.0               | 2.510         | 0.288       | 2152.985  | 0.01%       | 99.94%     |
| 83.0               | 2.201         | 0.256       | 2153.241  | 0.01%       | 99.95%     |
| 84.0               | 1.899         | 0.223       | 2153.464  | 0.01%       | 99.96%     |
| 85.0               | 1.689         | 0.196       | 2153.66   | 0.01%       | 99.97%     |
| 86.0               | 1.472         | 0.173       | 2153.833  | 0.01%       | 99.98%     |
| 87.0               | 1.288         | 0.151       | 2153.984  | 0.01%       | 99.98%     |
| 88.0               | 1.143         | 0.133       | 2154.117  | 0.01%       | 99.99%     |
| 89.0               | 0.992         | 0.117       | 2154.234  | 0.01%       | 100.00%    |
| 90.0               | 0.953         | 0.107       | 2154.341  | 0.00%       | 100.00%    |

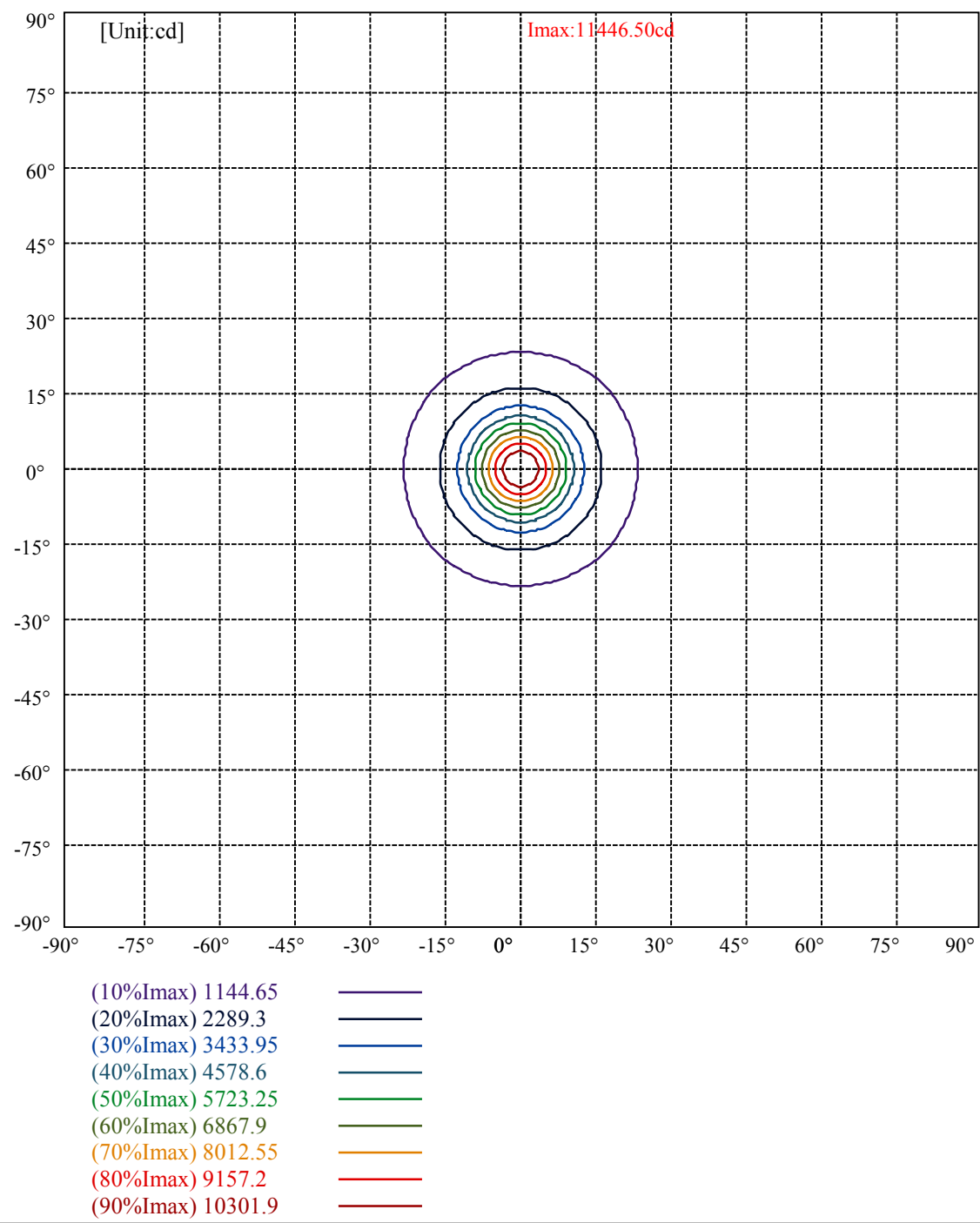
| ZONAL LUMEN SUMMARY |         |        |         |
|---------------------|---------|--------|---------|
| Zone                | Lumens  | %Lamp  | %Fixt   |
| 0-30                | 1908.75 | 83.32% | 88.60%  |
| 0-40                | 2081.97 | 90.88% | 96.64%  |
| 0-60                | 2135.88 | 93.23% | 99.14%  |
| 0-90                | 2154.23 | 94.03% | 100.00% |
| 0-120               | 2154.23 | 94.03% | 100.00% |
| 0-180               | 2154.34 | 94.03% | 100.00% |
| 60-90               | 18.35   | 0.80%  | 0.85%   |
| 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%   |
| 0-25.34             | 1723.47 | 75.23% | 80.00%  |

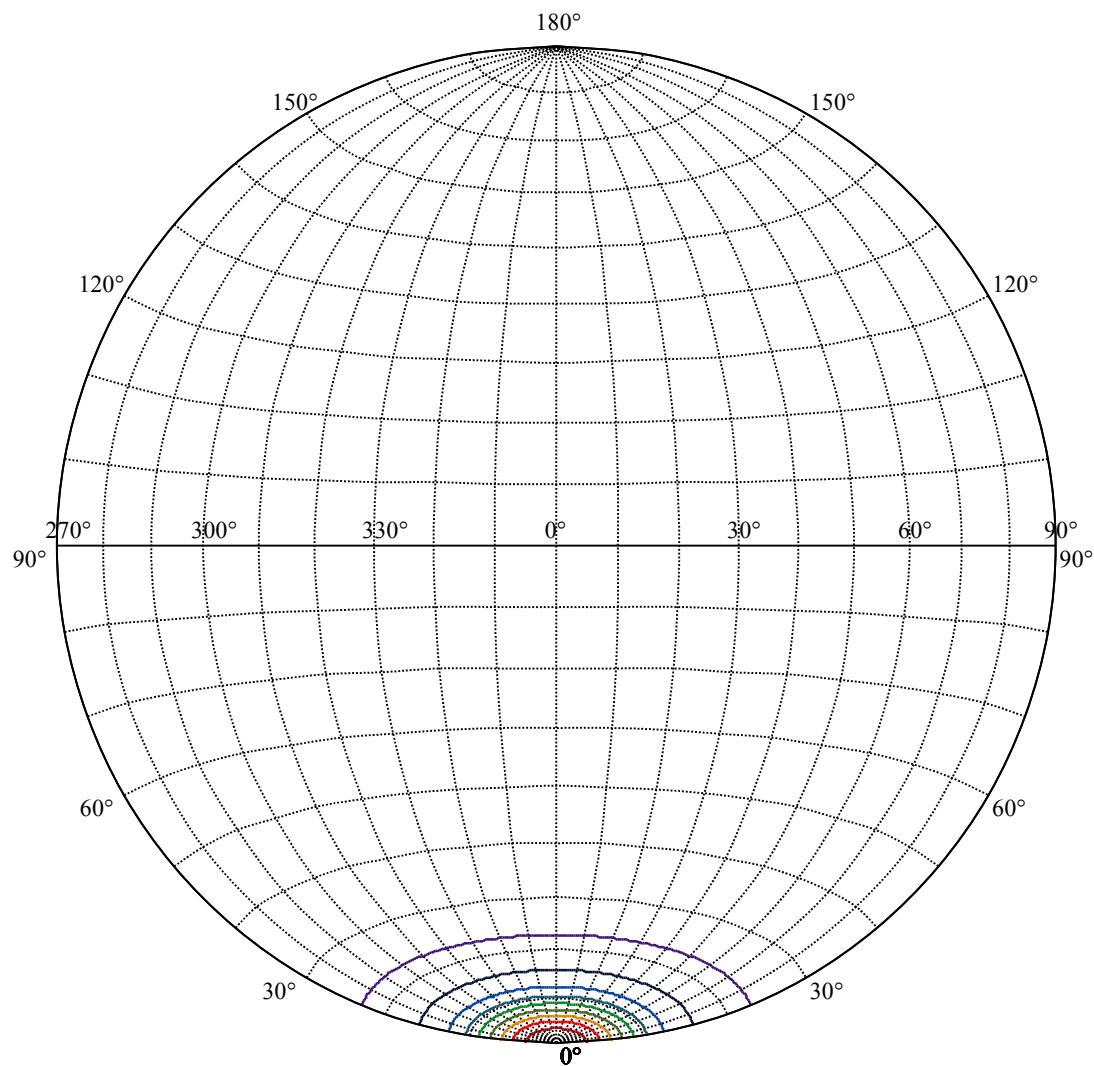
ZONAL LUMEN SUMMARY

|         |        |
|---------|--------|
| 0-10    | 729.49 |
| 10-20   | 726.76 |
| 20-30   | 452.51 |
| 30-40   | 173.22 |
| 40-50   | 36.46  |
| 50-60   | 17.46  |
| 60-70   | 11.53  |
| 70-80   | 4.96   |
| 80-90   | 1.86   |
| 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   |









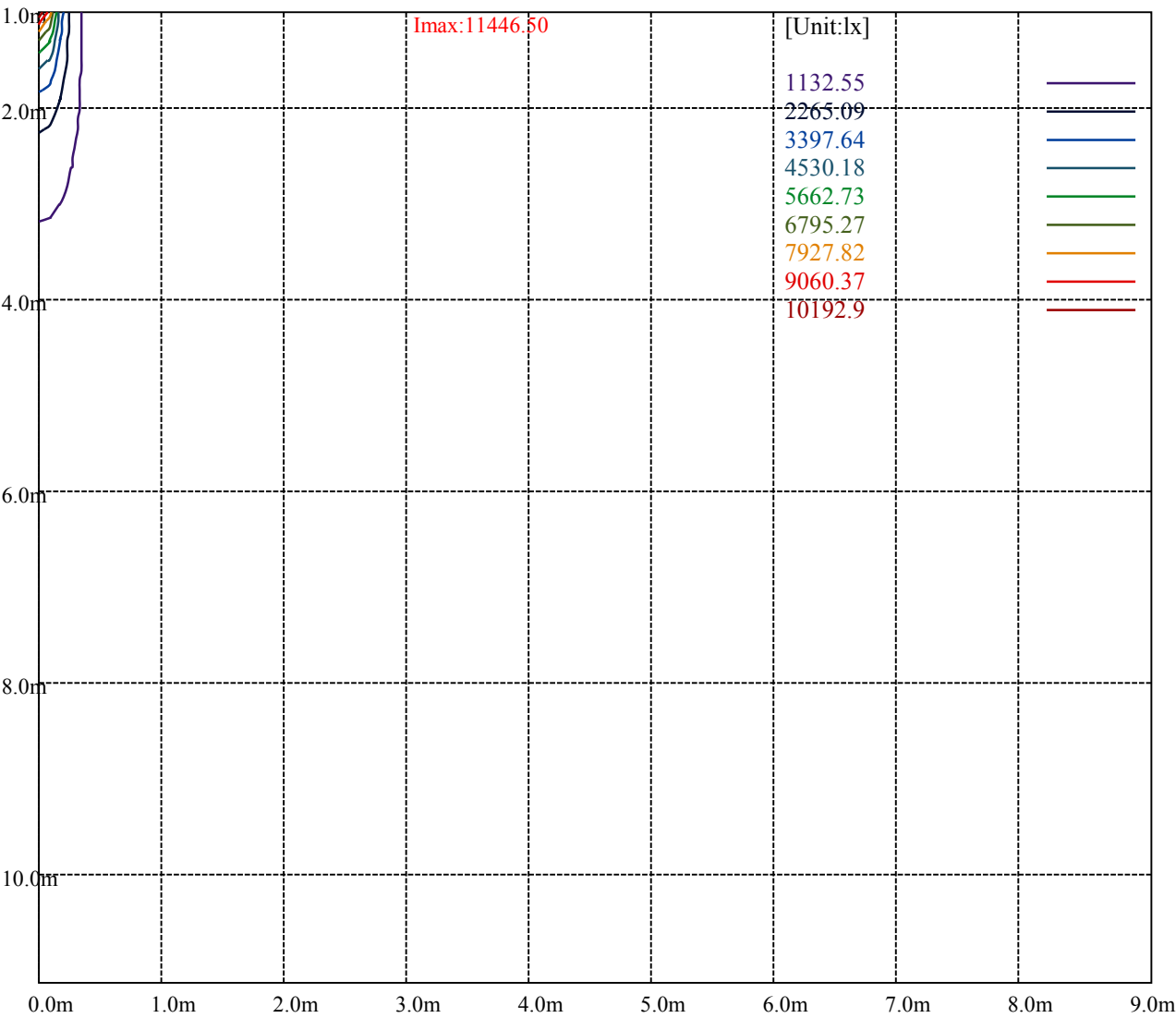
House

[Unit:cd]

Road

|               |         |
|---------------|---------|
| Imax:11446.50 |         |
| (10%Imax)     | 1144.65 |
| (20%Imax)     | 2289.3  |
| (30%Imax)     | 3433.95 |
| (40%Imax)     | 4578.6  |
| (50%Imax)     | 5723.25 |
| (60%Imax)     | 6867.9  |
| (70%Imax)     | 8012.55 |
| (80%Imax)     | 9157.2  |
| (90%Imax)     | 10301.9 |





Luminance Limiting Curve(no luminous side)

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Luminance Table

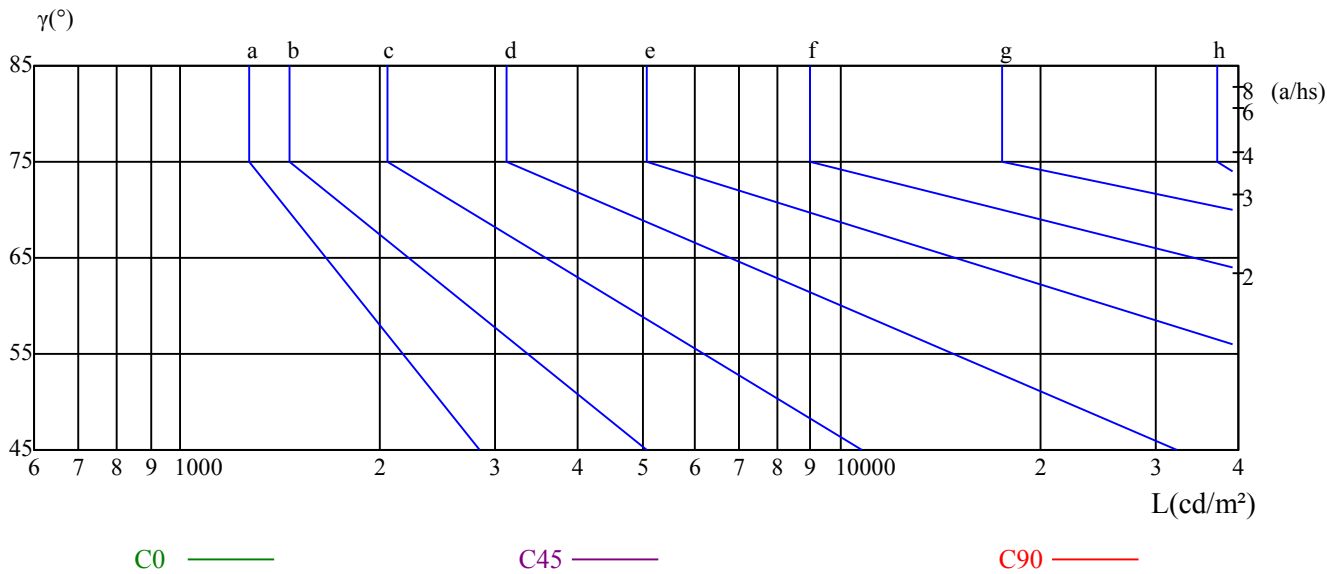
| $\gamma$ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|----------|----|----|----|----|----|----|----|----|----|
| C0       | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| C45      | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| C90      | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |

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

Glare Table

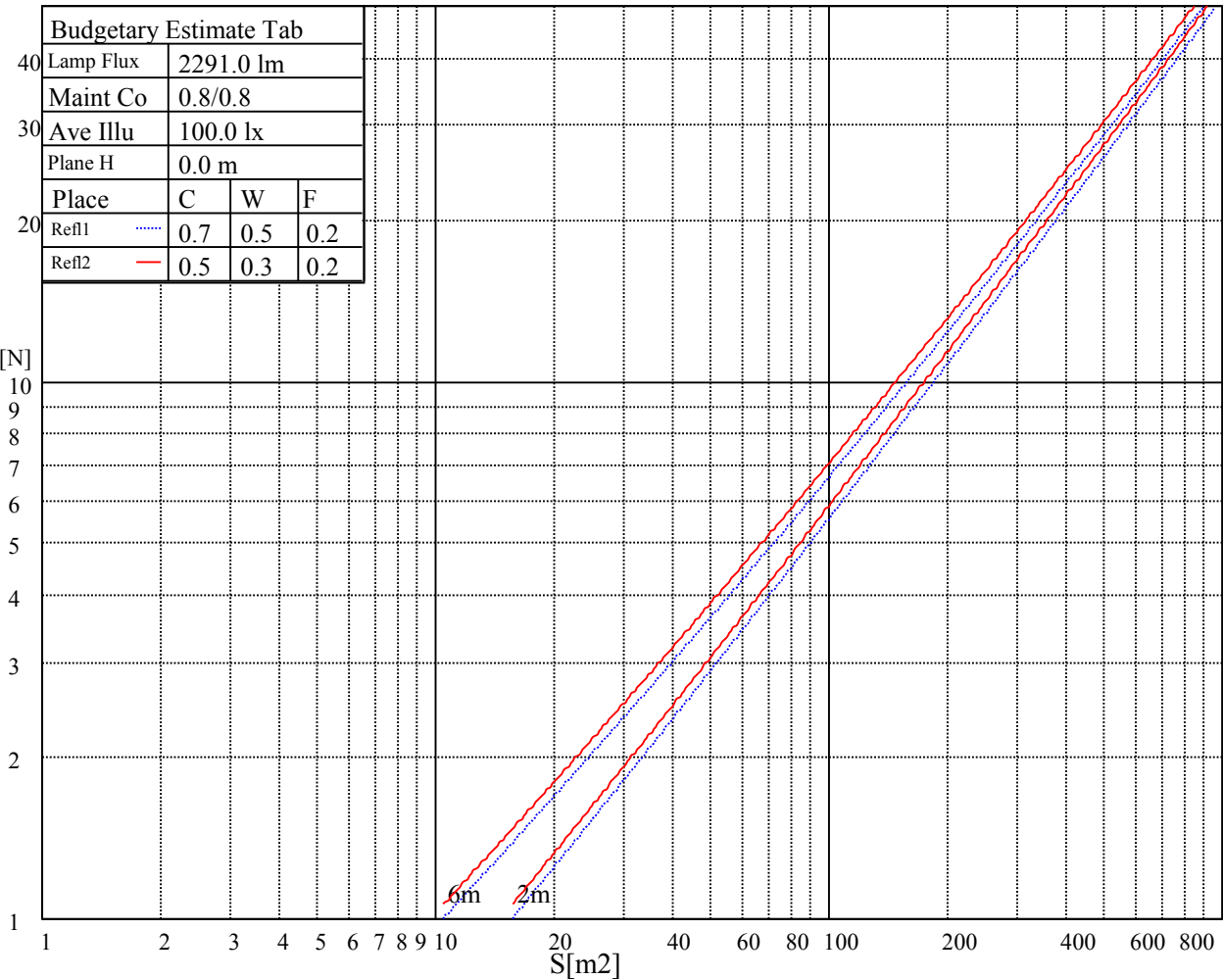
| Glare | Quality | Service Values Illuminance(lx) |      |      |            |            |            |            |            |
|-------|---------|--------------------------------|------|------|------------|------------|------------|------------|------------|
| 1.15  | A       | 2000                           | 1000 | 500  | $\leq 300$ |            |            |            |            |
| 1.5   | B       |                                | 2000 | 1000 | 500        | $\leq 300$ |            |            |            |
| 1.85  | C       |                                |      | 2000 | 1000       | 500        | $\leq 300$ |            |            |
| 2.2   | D       |                                |      |      | 2000       | 1000       | 500        | $\leq 300$ |            |
| 2.55  | E       |                                |      |      |            | 2000       | 1000       | 500        | $\leq 300$ |
|       |         | a                              | b    | c    | d          | e          | f          | g          | h          |

Luminance Limiting Curve

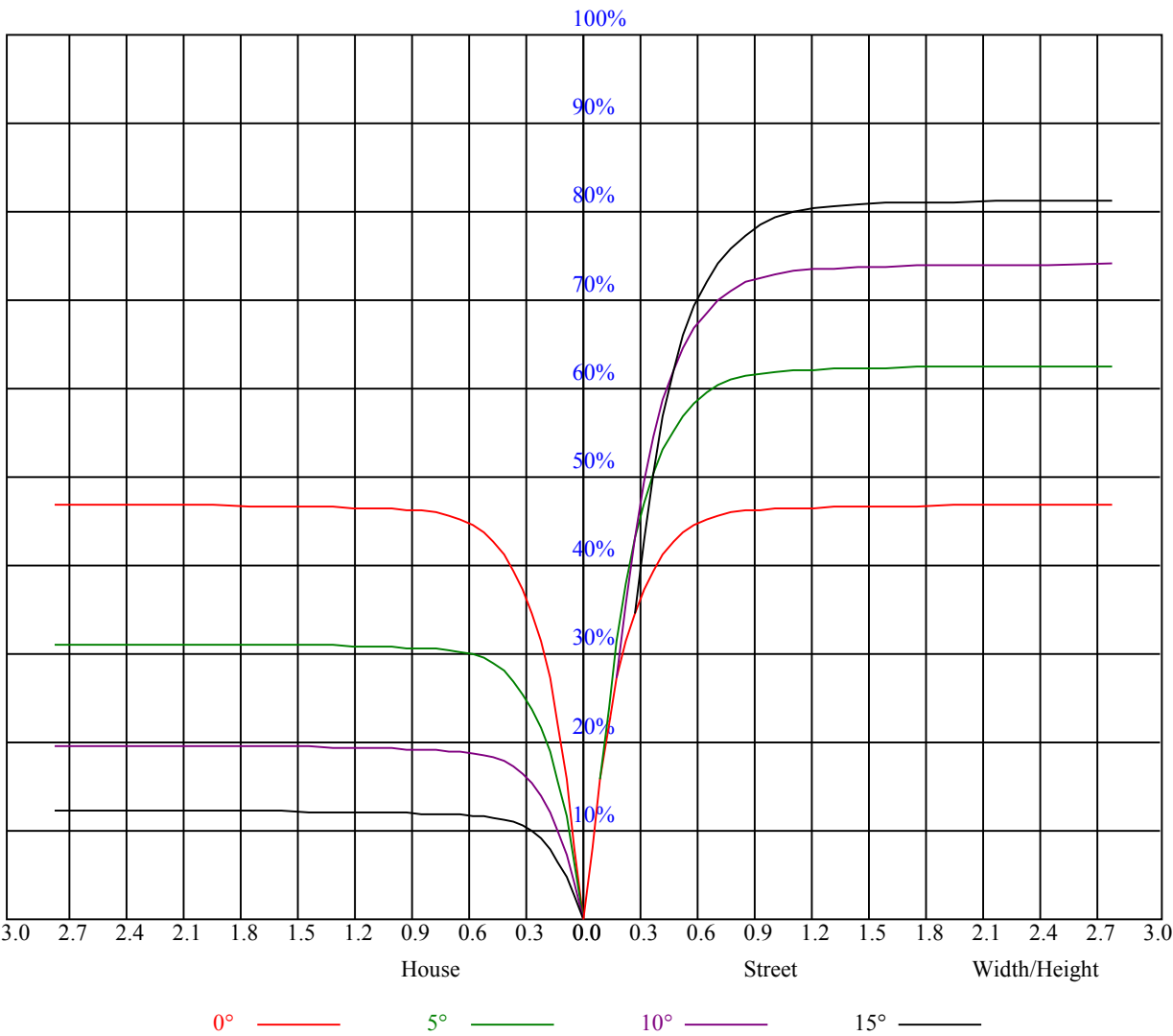


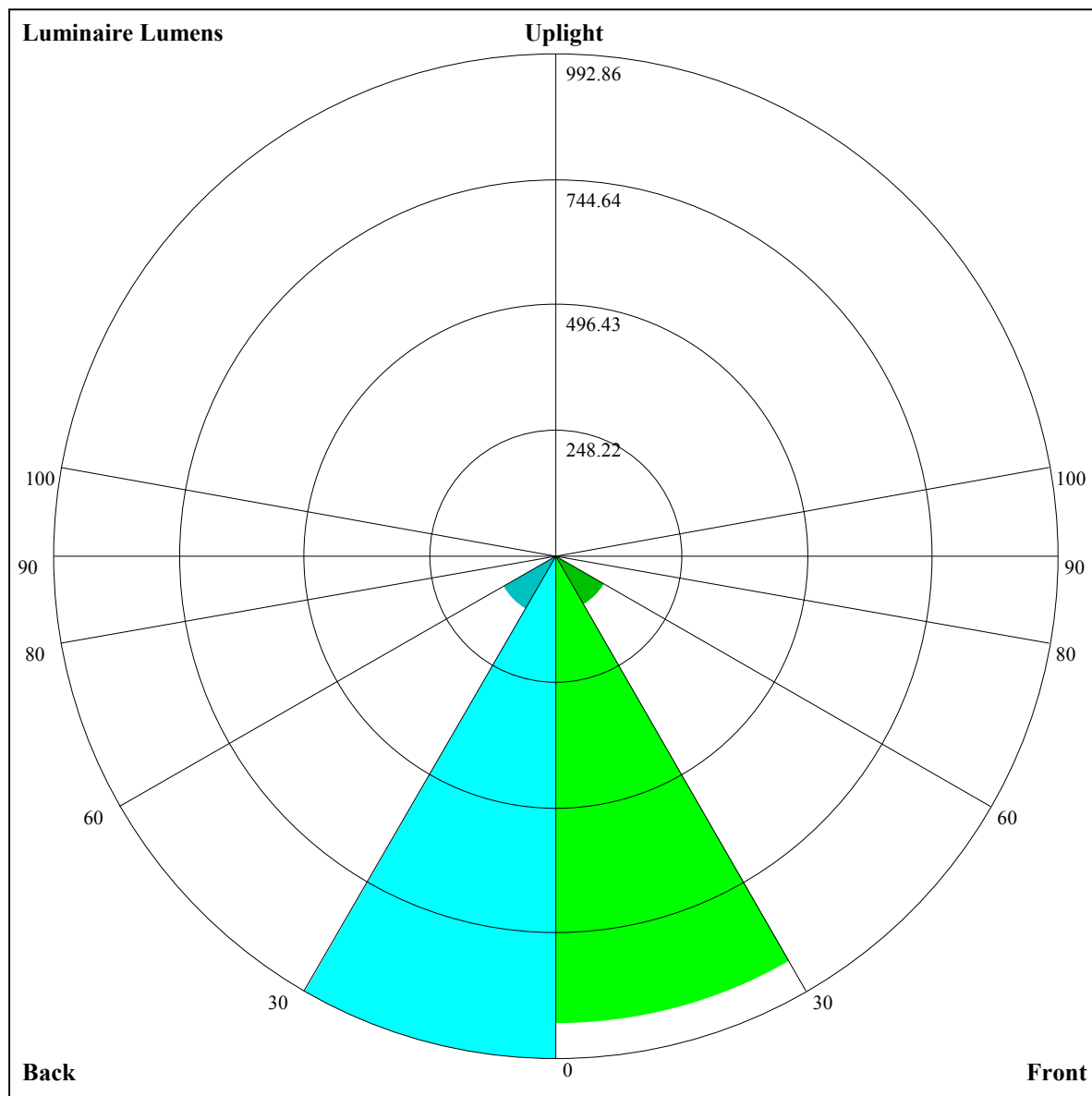
| Illumination assessment according UGR             |     |                  |     |     |     |     |                |     |     |     |  |
|---------------------------------------------------|-----|------------------|-----|-----|-----|-----|----------------|-----|-----|-----|--|
| Rf of Ceiling                                     | 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     | 1.12                                    | 1.12 | 1.12 | 1.09 | 1.09 | 1.09 | 1.04 | 1.04 | 1.04 | 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 | 1.00 | 1.00 | 0.98 | 0.97 | 0.96 | 0.95 | 0.94 | 0.93 | 0.92 | 0.92 | 0.90 |
| 2     | 1.00                                    | 0.97 | 0.94 | 0.99 | 0.96 | 0.93 | 0.96 | 0.93 | 0.91 | 0.93 | 0.91 | 0.89 | 0.90 | 0.89 | 0.88 | 0.86 |
| 3     | 0.95                                    | 0.92 | 0.89 | 0.94 | 0.91 | 0.88 | 0.92 | 0.89 | 0.87 | 0.89 | 0.87 | 0.85 | 0.87 | 0.86 | 0.84 | 0.83 |
| 4     | 0.91                                    | 0.87 | 0.84 | 0.90 | 0.86 | 0.83 | 0.88 | 0.85 | 0.82 | 0.86 | 0.84 | 0.81 | 0.85 | 0.82 | 0.81 | 0.79 |
| 5     | 0.87                                    | 0.83 | 0.80 | 0.86 | 0.82 | 0.79 | 0.85 | 0.81 | 0.79 | 0.83 | 0.80 | 0.78 | 0.82 | 0.80 | 0.78 | 0.76 |
| 6     | 0.84                                    | 0.79 | 0.76 | 0.83 | 0.79 | 0.76 | 0.82 | 0.78 | 0.76 | 0.81 | 0.78 | 0.75 | 0.79 | 0.77 | 0.75 | 0.74 |
| 7     | 0.81                                    | 0.76 | 0.73 | 0.80 | 0.76 | 0.73 | 0.79 | 0.75 | 0.73 | 0.78 | 0.75 | 0.72 | 0.77 | 0.74 | 0.72 | 0.71 |
| 8     | 0.78                                    | 0.74 | 0.71 | 0.77 | 0.73 | 0.71 | 0.76 | 0.73 | 0.70 | 0.76 | 0.72 | 0.70 | 0.75 | 0.72 | 0.70 | 0.69 |
| 9     | 0.75                                    | 0.71 | 0.68 | 0.75 | 0.71 | 0.68 | 0.74 | 0.70 | 0.68 | 0.73 | 0.70 | 0.68 | 0.73 | 0.70 | 0.68 | 0.67 |
| 10    | 0.73                                    | 0.69 | 0.66 | 0.73 | 0.69 | 0.66 | 0.72 | 0.68 | 0.66 | 0.71 | 0.68 | 0.66 | 0.71 | 0.68 | 0.65 | 0.65 |





Luminaire Lumens:

FL=924.55,FM=109.46,FH=8.04,FVH=0.96

BL=992.86,BM=121.95,BH=8.48,BVH=1.03

UL=0,UH=0

BUG Rating:B2-U0-G0

## 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    | 10984.20 | 10984.20 | 10389.71 | 9628.08  | 9109.34  | 7803.90  | 7234.49 | 6311.28 | 5449.89 |
| 45.0   | 11653.63 | 11447.48 | 10829.03 | 10455.73 | 9692.42  | 8812.10  | 7870.50 | 6923.32 | 6020.72 |
| 90.0   | 11032.66 | 10816.47 | 10142.30 | 9323.33  | 8781.72  | 7828.45  | 6498.46 | 5959.69 | 5138.98 |
| 135.0  | 11631.35 | 11458.63 | 11096.47 | 10550.45 | 9826.14  | 9319.12  | 8416.52 | 7084.90 | 6522.17 |
| 180.0  | 10984.20 | 11575.63 | 11558.91 | 11313.76 | 10879.18 | 10255.15 | 9475.13 | 8589.24 | 7647.63 |
| 225.0  | 11653.63 | 11659.20 | 10958.02 | 10958.02 | 10480.54 | 9716.65  | 8816.26 | 7846.27 | 6874.02 |
| 270.0  | 11032.66 | 11798.49 | 11664.78 | 11525.48 | 11191.19 | 10656.31 | 9948.71 | 9090.68 | 8143.51 |
| 315.0  | 11631.35 | 11831.92 | 10945.19 | 10716.23 | 10033.13 | 9186.24  | 8250.79 | 7282.95 | 6351.97 |
| 360.0  | 10984.20 | 10984.20 | 10389.71 | 9628.08  | 9109.34  | 7803.90  | 7234.49 | 6311.28 | 5449.89 |
|        |          |          |          |          |          |          |         |         |         |
| C/γ(°) | 9.0      | 10.0     | 11.0     | 12.0     | 13.0     | 14.0     | 15.0    | 16.0    | 17.0    |
| 0.0    | 4676.54  | 4011.31  | 3479.22  | 3049.62  | 2693.62  | 2387.18  | 2120.84 | 1891.88 | 1706.34 |
| 45.0   | 5207.26  | 4482.95  | 3864.50  | 3357.48  | 2945.18  | 2800.32  | 2538.19 | 2114.17 | 1850.09 |
| 90.0   | 4420.82  | 3810.73  | 3316.54  | 2914.28  | 2579.98  | 2279.64  | 2031.17 | 1822.76 | 1650.04 |
| 135.0  | 5630.71  | 4822.82  | 4126.37  | 3552.49  | 3095.62  | 2861.61  | 2861.61 | 2149.81 | 1917.48 |
| 180.0  | 6873.18  | 5753.28  | 4923.11  | 4343.66  | 3619.35  | 3234.91  | 2844.89 | 2844.89 | 2234.54 |
| 225.0  | 5954.70  | 5117.27  | 4371.78  | 3764.47  | 3278.06  | 2874.12  | 2665.18 | 2245.68 | 1997.74 |
| 270.0  | 7190.76  | 6249.16  | 5385.55  | 4767.10  | 3964.79  | 3541.35  | 3095.62 | 2861.61 | 2861.61 |
| 315.0  | 5472.18  | 4996.38  | 4289.89  | 3500.93  | 3232.38  | 2845.16  | 2519.22 | 2238.95 | 1999.37 |
| 360.0  | 4676.54  | 4011.31  | 3479.22  | 3049.62  | 2693.62  | 2387.18  | 2120.84 | 1891.88 | 1706.34 |
|        |          |          |          |          |          |          |         |         |         |
| C/γ(°) | 18.0     | 19.0     | 20.0     | 21.0     | 22.0     | 23.0     | 24.0    | 25.0    | 26.0    |
| 0.0    | 1549.23  | 1419.92  | 1312.43  | 1095.98  | 1095.98  | 1031.07  | 983.81  | 905.86  | 827.49  |
| 45.0   | 1705.76  | 1552.01  | 1427.18  | 1320.21  | 1218.82  | 1127.99  | 1040.53 | 958.63  | 878.37  |
| 90.0   | 1504.65  | 1388.75  | 1283.42  | 1087.52  | 1087.52  | 1001.95  | 954.69  | 877.06  | 799.79  |
| 135.0  | 1725.26  | 1569.83  | 1467.86  | 1336.35  | 1237.74  | 1167.57  | 1067.81 | 1002.05 | 920.16  |
| 180.0  | 1994.38  | 1789.91  | 1620.50  | 1484.00  | 1364.21  | 1261.71  | 1170.36 | 1085.10 | 1037.74 |
| 225.0  | 1871.80  | 1623.87  | 1540.29  | 1413.83  | 1304.08  | 1086.57  | 1086.57 | 1039.37 | 957.11  |
| 270.0  | 2135.35  | 1907.44  | 1715.22  | 1558.11  | 1430.54  | 1320.21  | 1217.72 | 1125.78 | 1075.64 |
| 315.0  | 1795.48  | 1624.97  | 1481.79  | 1362.58  | 1257.24  | 1086.57  | 1086.57 | 1023.18 | 928.94  |
| 360.0  | 1549.23  | 1419.92  | 1312.43  | 1095.98  | 1095.98  | 1031.07  | 983.81  | 905.86  | 827.49  |
|        |          |          |          |          |          |          |         |         |         |
| C/γ(°) | 27.0     | 28.0     | 29.0     | 30.0     | 31.0     | 32.0     | 33.0    | 34.0    | 35.0    |
| 0.0    | 745.81   | 662.29   | 572.83   | 483.15   | 403.36   | 336.40   | 282.42  | 236.69  | 196.95  |
| 45.0   | 798.69   | 715.11   | 627.12   | 536.82   | 448.83   | 370.83   | 307.28  | 296.72  | 296.72  |
| 90.0   | 716.53   | 627.12   | 531.04   | 441.00   | 366.47   | 305.70   | 256.51  | 214.51  | 178.66  |
| 135.0  | 837.69   | 751.91   | 659.97   | 564.15   | 472.22   | 391.43   | 325.68  | 292.83  | 292.83  |
| 180.0  | 925.73   | 845.52   | 794.80   | 706.76   | 613.72   | 520.68   | 432.64  | 361.89  | 302.81  |
| 225.0  | 877.58   | 798.11   | 714.53   | 624.76   | 532.88   | 461.97   | 371.20  | 322.42  | 270.85  |
| 270.0  | 959.74   | 881.74   | 834.90   | 720.68   | 669.44   | 579.76   | 489.46  | 407.04  | 337.92  |
| 315.0  | 861.03   | 779.19   | 691.30   | 599.58   | 509.96   | 427.07   | 355.22  | 298.19  | 249.93  |
| 360.0  | 745.81   | 662.29   | 572.83   | 483.15   | 403.36   | 336.40   | 282.42  | 236.69  | 196.95  |
|        |          |          |          |          |          |          |         |         |         |
| C/γ(°) | 36.0     | 37.0     | 38.0     | 39.0     | 40.0     | 41.0     | 42.0    | 43.0    | 44.0    |
| 0.0    | 163.31   | 133.46   | 109.01   | 88.57    | 71.80    | 58.50    | 48.15   | 43.10   | 34.43   |
| 45.0   | 191.80   | 158.95   | 130.46   | 106.81   | 87.57    | 72.01    | 59.71   | 50.09   | 42.79   |
| 90.0   | 148.54   | 123.21   | 102.55   | 85.62    | 71.43    | 59.71    | 50.25   | 45.26   | 36.43   |
| 135.0  | 194.74   | 176.45   | 149.96   | 117.42   | 105.28   | 87.04    | 71.85   | 59.40   | 49.36   |
| 180.0  | 302.81   | 208.57   | 177.50   | 151.12   | 128.25   | 107.12   | 88.36   | 72.69   | 64.49   |
| 225.0  | 226.54   | 189.96   | 159.11   | 132.72   | 110.64   | 92.62    | 77.74   | 65.23   | 54.45   |
| 270.0  | 293.35   | 293.35   | 191.27   | 159.26   | 130.93   | 107.81   | 88.99   | 79.21   | 60.87   |
| 315.0  | 208.83   | 173.35   | 143.02   | 117.00   | 95.30    | 77.48    | 62.86   | 51.67   | 43.10   |
| 360.0  | 163.31   | 133.46   | 109.01   | 88.57    | 71.80    | 58.50    | 48.15   | 43.10   | 34.43   |

## 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    | 31.85 | 28.38 | 25.97 | 24.02 | 22.34 | 20.87 | 20.03 | 19.24 | 18.55 |
| 45.0   | 37.27 | 32.96 | 29.59 | 27.02 | 24.81 | 22.81 | 21.50 | 20.87 | 19.76 |
| 90.0   | 33.48 | 29.65 | 26.81 | 24.49 | 22.71 | 21.50 | 20.50 | 19.55 | 19.19 |
| 135.0  | 41.37 | 35.48 | 30.96 | 27.75 | 25.18 | 22.97 | 21.60 | 20.60 | 19.66 |
| 180.0  | 49.09 | 43.99 | 37.06 | 30.07 | 28.07 | 25.44 | 23.29 | 21.55 | 20.55 |
| 225.0  | 45.52 | 38.58 | 33.11 | 29.12 | 26.33 | 24.18 | 22.44 | 21.29 | 20.71 |
| 270.0  | 50.57 | 45.78 | 37.11 | 34.32 | 30.22 | 27.23 | 24.97 | 23.07 | 21.55 |
| 315.0  | 36.74 | 32.17 | 30.12 | 26.33 | 25.07 | 23.29 | 21.71 | 20.60 | 19.97 |
| 360.0  | 31.85 | 28.38 | 25.97 | 24.02 | 22.34 | 20.87 | 20.03 | 19.24 | 18.55 |
| C/γ(°) | 54.0  | 55.0  | 56.0  | 57.0  | 58.0  | 59.0  | 60.0  | 61.0  | 62.0  |
| 0.0    | 18.40 | 18.29 | 18.13 | 18.13 | 18.13 | 17.56 | 16.71 | 15.77 | 14.19 |
| 45.0   | 19.34 | 19.13 | 18.92 | 18.61 | 18.29 | 17.98 | 17.35 | 16.56 | 15.40 |
| 90.0   | 18.98 | 18.61 | 18.19 | 18.19 | 17.61 | 16.77 | 15.93 | 14.56 | 12.67 |
| 135.0  | 19.03 | 19.08 | 18.82 | 18.19 | 18.03 | 17.87 | 17.03 | 16.35 | 15.35 |
| 180.0  | 19.66 | 18.82 | 18.50 | 18.45 | 18.03 | 17.82 | 17.77 | 17.35 | 16.71 |
| 225.0  | 19.55 | 19.13 | 19.08 | 18.76 | 18.45 | 18.40 | 18.29 | 17.71 | 16.98 |
| 270.0  | 20.66 | 19.87 | 19.13 | 18.92 | 18.82 | 18.55 | 18.45 | 18.24 | 17.71 |
| 315.0  | 19.34 | 18.87 | 18.87 | 18.76 | 18.66 | 18.50 | 18.19 | 17.40 | 16.45 |
| 360.0  | 18.40 | 18.29 | 18.13 | 18.13 | 18.13 | 17.56 | 16.71 | 15.77 | 14.19 |
| C/γ(°) | 63.0  | 64.0  | 65.0  | 66.0  | 67.0  | 68.0  | 69.0  | 70.0  | 71.0  |
| 0.0    | 12.30 | 11.20 | 9.36  | 8.46  | 7.62  | 6.89  | 6.36  | 5.89  | 5.57  |
| 45.0   | 13.61 | 11.98 | 10.57 | 9.15  | 8.20  | 7.46  | 6.83  | 6.25  | 5.83  |
| 90.0   | 11.30 | 10.20 | 8.88  | 7.99  | 7.25  | 6.68  | 6.20  | 5.73  | 5.31  |
| 135.0  | 13.40 | 12.09 | 10.72 | 9.36  | 8.36  | 7.57  | 6.99  | 6.47  | 5.99  |
| 180.0  | 15.87 | 14.61 | 13.51 | 11.46 | 10.51 | 9.15  | 7.83  | 7.41  | 6.78  |
| 225.0  | 16.03 | 14.24 | 12.40 | 10.83 | 9.36  | 8.36  | 7.52  | 6.83  | 6.25  |
| 270.0  | 16.87 | 15.82 | 14.14 | 12.35 | 11.41 | 9.25  | 8.57  | 7.67  | 6.94  |
| 315.0  | 15.09 | 13.14 | 11.51 | 9.88  | 8.52  | 7.99  | 6.94  | 6.57  | 6.10  |
| 360.0  | 12.30 | 11.20 | 9.36  | 8.46  | 7.62  | 6.89  | 6.36  | 5.89  | 5.57  |
| C/γ(°) | 72.0  | 73.0  | 74.0  | 75.0  | 76.0  | 77.0  | 78.0  | 79.0  | 80.0  |
| 0.0    | 5.15  | 4.84  | 4.57  | 4.31  | 3.99  | 3.73  | 3.36  | 3.10  | 2.79  |
| 45.0   | 5.52  | 5.15  | 4.78  | 4.63  | 4.36  | 4.05  | 3.73  | 3.42  | 3.05  |
| 90.0   | 4.99  | 4.73  | 4.36  | 4.05  | 3.78  | 3.47  | 3.15  | 2.79  | 2.42  |
| 135.0  | 5.52  | 5.10  | 4.78  | 4.47  | 4.10  | 3.78  | 3.57  | 3.21  | 3.00  |
| 180.0  | 6.25  | 5.83  | 5.47  | 4.99  | 4.68  | 4.36  | 4.10  | 3.73  | 3.36  |
| 225.0  | 5.89  | 5.47  | 5.20  | 4.89  | 4.52  | 4.26  | 3.99  | 3.68  | 3.26  |
| 270.0  | 6.47  | 5.94  | 5.57  | 5.20  | 4.89  | 4.57  | 4.26  | 3.99  | 3.73  |
| 315.0  | 5.68  | 5.26  | 4.94  | 4.68  | 4.31  | 4.05  | 3.73  | 3.47  | 3.15  |
| 360.0  | 5.15  | 4.84  | 4.57  | 4.31  | 3.99  | 3.73  | 3.36  | 3.10  | 2.79  |
| C/γ(°) | 81.0  | 82.0  | 83.0  | 84.0  | 85.0  | 86.0  | 87.0  | 88.0  | 89.0  |
| 0.0    | 2.47  | 2.21  | 1.94  | 1.73  | 1.42  | 1.26  | 1.05  | 0.89  | 0.63  |
| 45.0   | 2.79  | 2.47  | 2.10  | 1.84  | 1.58  | 1.37  | 1.16  | 1.10  | 0.79  |
| 90.0   | 2.26  | 2.00  | 1.73  | 1.52  | 1.37  | 1.21  | 1.31  | 0.89  | 1.10  |
| 135.0  | 2.52  | 2.26  | 2.05  | 1.73  | 1.52  | 1.42  | 1.21  | 1.26  | 1.16  |
| 180.0  | 3.15  | 2.79  | 2.42  | 2.05  | 1.89  | 1.68  | 1.47  | 1.31  | 1.10  |
| 225.0  | 3.00  | 2.63  | 2.37  | 2.05  | 1.84  | 1.58  | 1.31  | 1.21  | 1.05  |
| 270.0  | 3.36  | 3.10  | 2.73  | 2.31  | 2.10  | 1.79  | 1.52  | 1.31  | 1.10  |
| 315.0  | 2.89  | 2.63  | 2.26  | 1.94  | 1.79  | 1.47  | 1.26  | 1.16  | 1.00  |
| 360.0  | 2.47  | 2.21  | 1.94  | 1.73  | 1.42  | 1.26  | 1.05  | 0.89  | 0.63  |

## Intensity data(cd)

Appendix Page: 20 Total:20

|                       |      |
|-----------------------|------|
| C/ $\gamma(^{\circ})$ | 90.0 |
| 0.0                   | 0.63 |
| 45.0                  | 0.79 |
| 90.0                  | 1.05 |
| 135.0                 | 1.10 |
| 180.0                 | 1.05 |
| 225.0                 | 1.10 |
| 270.0                 | 1.00 |
| 315.0                 | 0.89 |
| 360.0                 | 0.63 |