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NT

Client:

LumCAT: 1-1381-L

Luminaire: 92.70.410.00

Report No: 20231109-B011

Ballast type: AC

Test No: 20231109-C011

LampCAT: Fortimo\_SLM\_C\_1204

Lamp flux(lm): 1771.7

Number of Lamps: 1

Length(mm): 0

Phm Type: C

Voltage(V): 34.760

Current(A): 0.320

Power (W): 11.123

PF: 0.000

Width(mm): 0

Height(mm): 0

#### Photometric Results

Lumens(lm): 1630.78, Efficiency(%): 92.05% , Luminous Efficacy(lm/W): 146.61

Central intensity(cd): 7741.339, Maximum intensity(cd): 7741.339

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

Beam Angle(50%Imax): [C0/180]Total=18.0

[C90/270]Total=18.0

Field angle(10%Imax): [C0/180]Total=50.6

[C90/270]Total=50.6

Beam angle of C0 plane : 17.93

Aveage BeamAngle(IEC 61341):17.93

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

Maximum s/h(1/4): C0\_180=0.36 C90\_270=0.36

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 92.05%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 97.729%

Equipment: GMS1980  
Temperature(°C): 0.0

Date: 2023/11/09  
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                | 7741.339      | 0.000       | 0         | 0.00%       | 0.00%      |
| 1.0                | 7655.195      | 7.367       | 7.367     | 0.42%       | 0.45%      |
| 2.0                | 7443.191      | 21.671      | 29.038    | 1.22%       | 1.78%      |
| 3.0                | 7108.509      | 34.803      | 63.84     | 1.96%       | 3.91%      |
| 4.0                | 6624.096      | 45.967      | 109.808   | 2.59%       | 6.73%      |
| 5.0                | 6107.439      | 54.770      | 164.578   | 3.09%       | 10.09%     |
| 6.0                | 5524.497      | 61.129      | 225.707   | 3.45%       | 13.84%     |
| 7.0                | 4904.537      | 64.733      | 290.44    | 3.65%       | 17.81%     |
| 8.0                | 4342.352      | 66.178      | 356.618   | 3.74%       | 21.87%     |
| 9.0                | 3854.202      | 66.429      | 423.047   | 3.75%       | 25.94%     |
| 10.0               | 3404.523      | 65.689      | 488.736   | 3.71%       | 29.97%     |
| 11.0               | 3022.030      | 64.214      | 552.95    | 3.62%       | 33.91%     |
| 12.0               | 2705.269      | 62.608      | 615.558   | 3.53%       | 37.75%     |
| 13.0               | 2443.100      | 61.098      | 676.656   | 3.45%       | 41.49%     |
| 14.0               | 2214.767      | 59.620      | 736.276   | 3.37%       | 45.15%     |
| 15.0               | 2018.538      | 58.117      | 794.393   | 3.28%       | 48.71%     |
| 16.0               | 1836.563      | 56.488      | 850.881   | 3.19%       | 52.18%     |
| 17.0               | 1674.516      | 54.677      | 905.558   | 3.09%       | 55.53%     |
| 18.0               | 1529.351      | 52.825      | 958.383   | 2.98%       | 58.77%     |
| 19.0               | 1385.418      | 50.711      | 1009.094  | 2.86%       | 61.88%     |
| 20.0               | 1224.920      | 47.776      | 1056.87   | 2.70%       | 64.81%     |
| 21.0               | 1158.938      | 45.775      | 1102.645  | 2.58%       | 67.61%     |
| 22.0               | 1069.522      | 44.782      | 1147.427  | 2.53%       | 70.36%     |
| 23.0               | 964.903       | 42.688      | 1190.115  | 2.41%       | 72.98%     |
| 24.0               | 873.030       | 40.184      | 1230.298  | 2.27%       | 75.44%     |
| 25.0               | 792.082       | 37.861      | 1268.159  | 2.14%       | 77.76%     |
| 26.0               | 724.385       | 35.796      | 1303.956  | 2.02%       | 79.96%     |
| 27.0               | 650.702       | 33.642      | 1337.598  | 1.90%       | 82.02%     |
| 28.0               | 576.895       | 31.080      | 1368.678  | 1.75%       | 83.93%     |
| 29.0               | 508.617       | 28.400      | 1397.078  | 1.60%       | 85.67%     |
| 30.0               | 435.086       | 25.480      | 1422.558  | 1.44%       | 87.23%     |
| 31.0               | 371.471       | 22.445      | 1445.003  | 1.27%       | 88.61%     |
| 32.0               | 310.215       | 19.530      | 1464.532  | 1.10%       | 89.81%     |
| 33.0               | 252.641       | 16.582      | 1481.114  | 0.94%       | 90.82%     |
| 34.0               | 224.403       | 14.437      | 1495.551  | 0.81%       | 91.71%     |
| 35.0               | 164.795       | 12.087      | 1507.638  | 0.68%       | 92.45%     |
| 36.0               | 114.561       | 8.895       | 1516.533  | 0.50%       | 92.99%     |
| 37.0               | 93.617        | 6.790       | 1523.322  | 0.38%       | 93.41%     |

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0               | 82.013        | 5.862       | 1529.185  | 0.33%       | 93.77%     |
| 39.0               | 73.703        | 5.315       | 1534.5    | 0.30%       | 94.10%     |
| 40.0               | 65.580        | 4.858       | 1539.358  | 0.27%       | 94.39%     |
| 41.0               | 59.166        | 4.442       | 1543.8    | 0.25%       | 94.67%     |
| 42.0               | 53.631        | 4.098       | 1547.898  | 0.23%       | 94.92%     |
| 43.0               | 48.829        | 3.795       | 1551.693  | 0.21%       | 95.15%     |
| 44.0               | 44.442        | 3.520       | 1555.213  | 0.20%       | 95.37%     |
| 45.0               | 40.920        | 3.281       | 1558.494  | 0.19%       | 95.57%     |
| 46.0               | 37.820        | 3.079       | 1561.573  | 0.17%       | 95.76%     |
| 47.0               | 34.942        | 2.894       | 1564.467  | 0.16%       | 95.93%     |
| 48.0               | 32.666        | 2.733       | 1567.2    | 0.15%       | 96.10%     |
| 49.0               | 30.694        | 2.602       | 1569.802  | 0.15%       | 96.26%     |
| 50.0               | 28.964        | 2.487       | 1572.29   | 0.14%       | 96.41%     |
| 51.0               | 27.476        | 2.388       | 1574.677  | 0.13%       | 96.56%     |
| 52.0               | 26.196        | 2.303       | 1576.981  | 0.13%       | 96.70%     |
| 53.0               | 25.144        | 2.233       | 1579.214  | 0.13%       | 96.84%     |
| 54.0               | 24.259        | 2.177       | 1581.391  | 0.12%       | 96.97%     |
| 55.0               | 23.470        | 2.131       | 1583.522  | 0.12%       | 97.10%     |
| 56.0               | 22.799        | 2.091       | 1585.613  | 0.12%       | 97.23%     |
| 57.0               | 22.301        | 2.062       | 1587.675  | 0.12%       | 97.36%     |
| 58.0               | 21.906        | 2.044       | 1589.719  | 0.12%       | 97.48%     |
| 59.0               | 21.436        | 2.026       | 1591.745  | 0.11%       | 97.61%     |
| 60.0               | 20.875        | 1.999       | 1593.744  | 0.11%       | 97.73%     |
| 61.0               | 20.294        | 1.965       | 1595.709  | 0.11%       | 97.85%     |
| 62.0               | 19.554        | 1.920       | 1597.629  | 0.11%       | 97.97%     |
| 63.0               | 18.557        | 1.854       | 1599.482  | 0.10%       | 98.08%     |
| 64.0               | 17.679        | 1.778       | 1601.261  | 0.10%       | 98.19%     |
| 65.0               | 16.751        | 1.704       | 1602.964  | 0.10%       | 98.29%     |
| 66.0               | 15.852        | 1.627       | 1604.591  | 0.09%       | 98.39%     |
| 67.0               | 15.008        | 1.552       | 1606.143  | 0.09%       | 98.49%     |
| 68.0               | 14.337        | 1.486       | 1607.629  | 0.08%       | 98.58%     |
| 69.0               | 13.693        | 1.430       | 1609.059  | 0.08%       | 98.67%     |
| 70.0               | 13.105        | 1.376       | 1610.436  | 0.08%       | 98.75%     |
| 71.0               | 12.600        | 1.329       | 1611.764  | 0.07%       | 98.83%     |
| 72.0               | 12.178        | 1.288       | 1613.053  | 0.07%       | 98.91%     |
| 73.0               | 11.714        | 1.249       | 1614.302  | 0.07%       | 98.99%     |
| 74.0               | 11.327        | 1.211       | 1615.513  | 0.07%       | 99.06%     |
| 75.0               | 10.953        | 1.177       | 1616.69   | 0.07%       | 99.14%     |

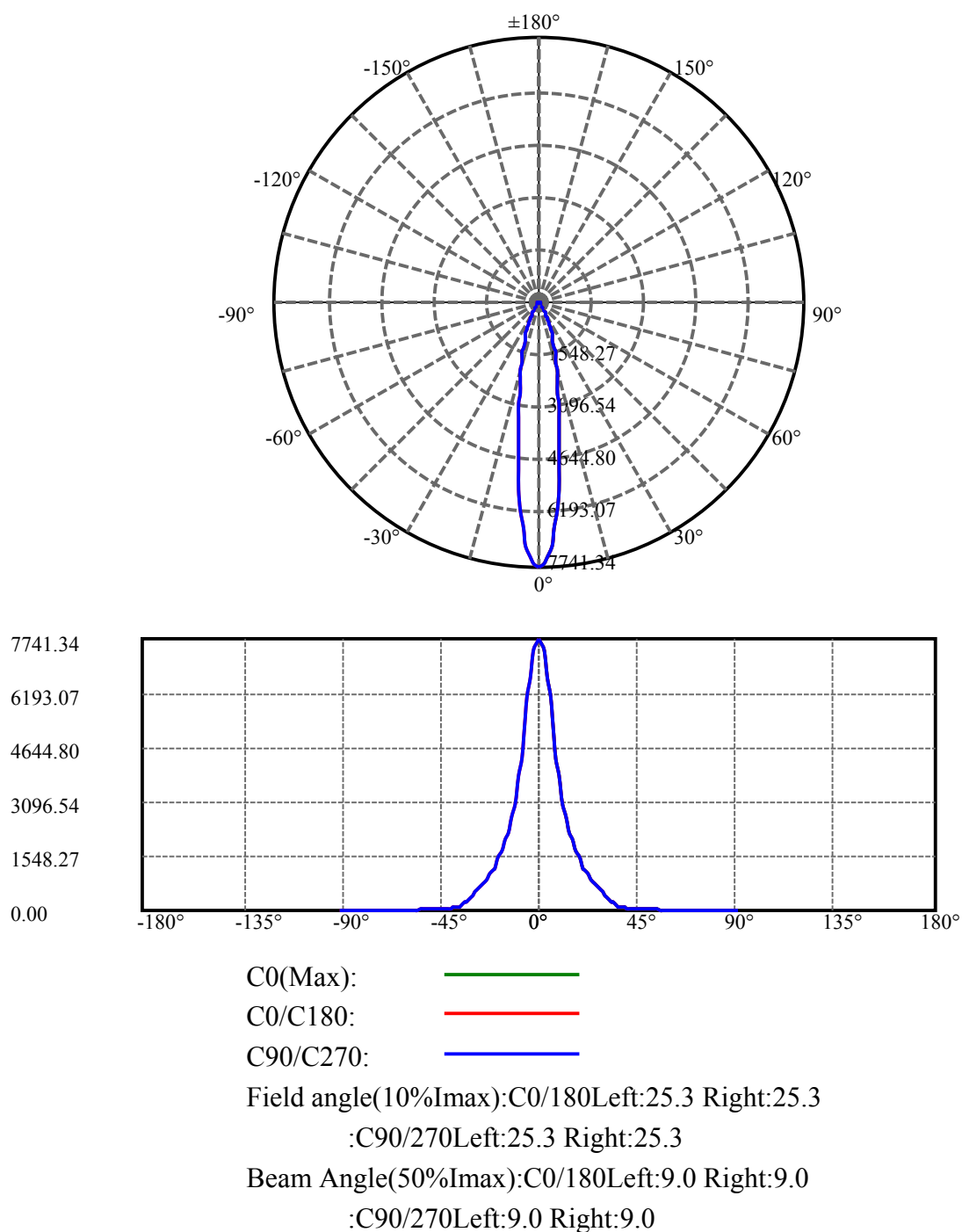
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0               | 10.579        | 1.143       | 1617.833  | 0.06%       | 99.21%     |
| 77.0               | 10.192        | 1.107       | 1618.941  | 0.06%       | 99.27%     |
| 78.0               | 9.874         | 1.074       | 1620.015  | 0.06%       | 99.34%     |
| 79.0               | 9.562         | 1.044       | 1621.059  | 0.06%       | 99.40%     |
| 80.0               | 9.223         | 1.013       | 1622.072  | 0.06%       | 99.47%     |
| 81.0               | 8.967         | 0.984       | 1623.056  | 0.06%       | 99.53%     |
| 82.0               | 8.684         | 0.957       | 1624.013  | 0.05%       | 99.58%     |
| 83.0               | 8.421         | 0.930       | 1624.943  | 0.05%       | 99.64%     |
| 84.0               | 8.130         | 0.902       | 1625.844  | 0.05%       | 99.70%     |
| 85.0               | 7.881         | 0.874       | 1626.718  | 0.05%       | 99.75%     |
| 86.0               | 7.666         | 0.850       | 1627.568  | 0.05%       | 99.80%     |
| 87.0               | 7.493         | 0.830       | 1628.398  | 0.05%       | 99.85%     |
| 88.0               | 7.376         | 0.815       | 1629.212  | 0.05%       | 99.90%     |
| 89.0               | 7.134         | 0.795       | 1630.008  | 0.04%       | 99.95%     |
| 90.0               | 7.030         | 0.777       | 1630.784  | 0.04%       | 100.00%    |

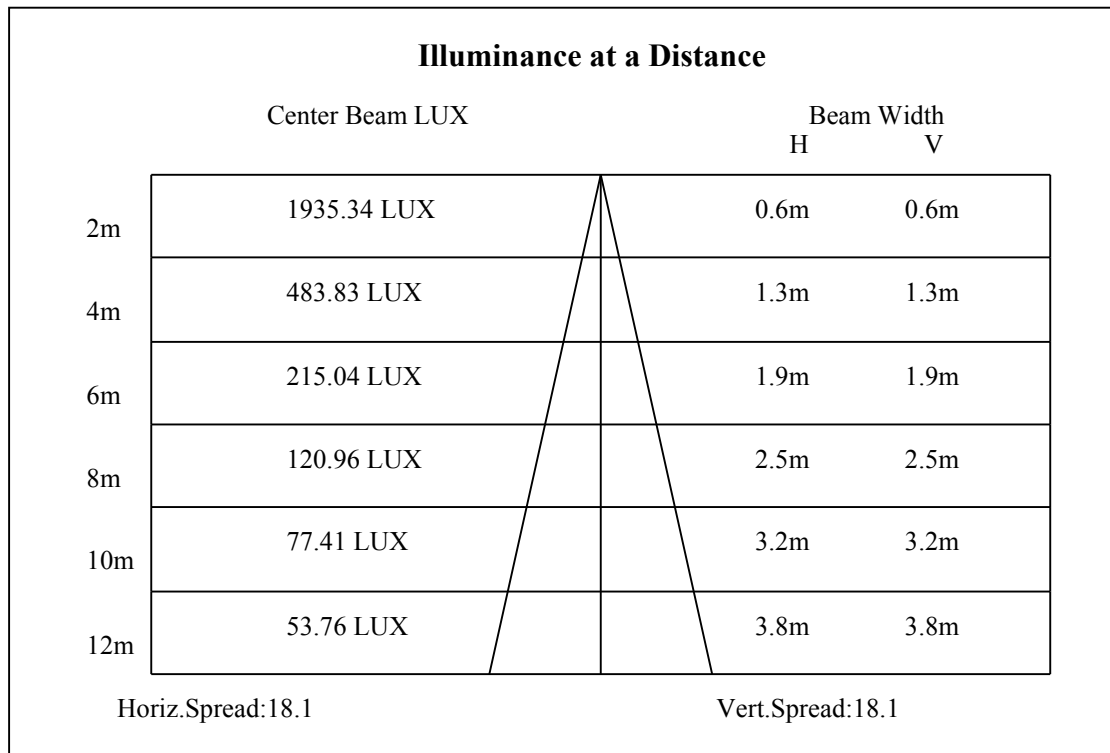
## ZONAL LUMEN SUMMARY

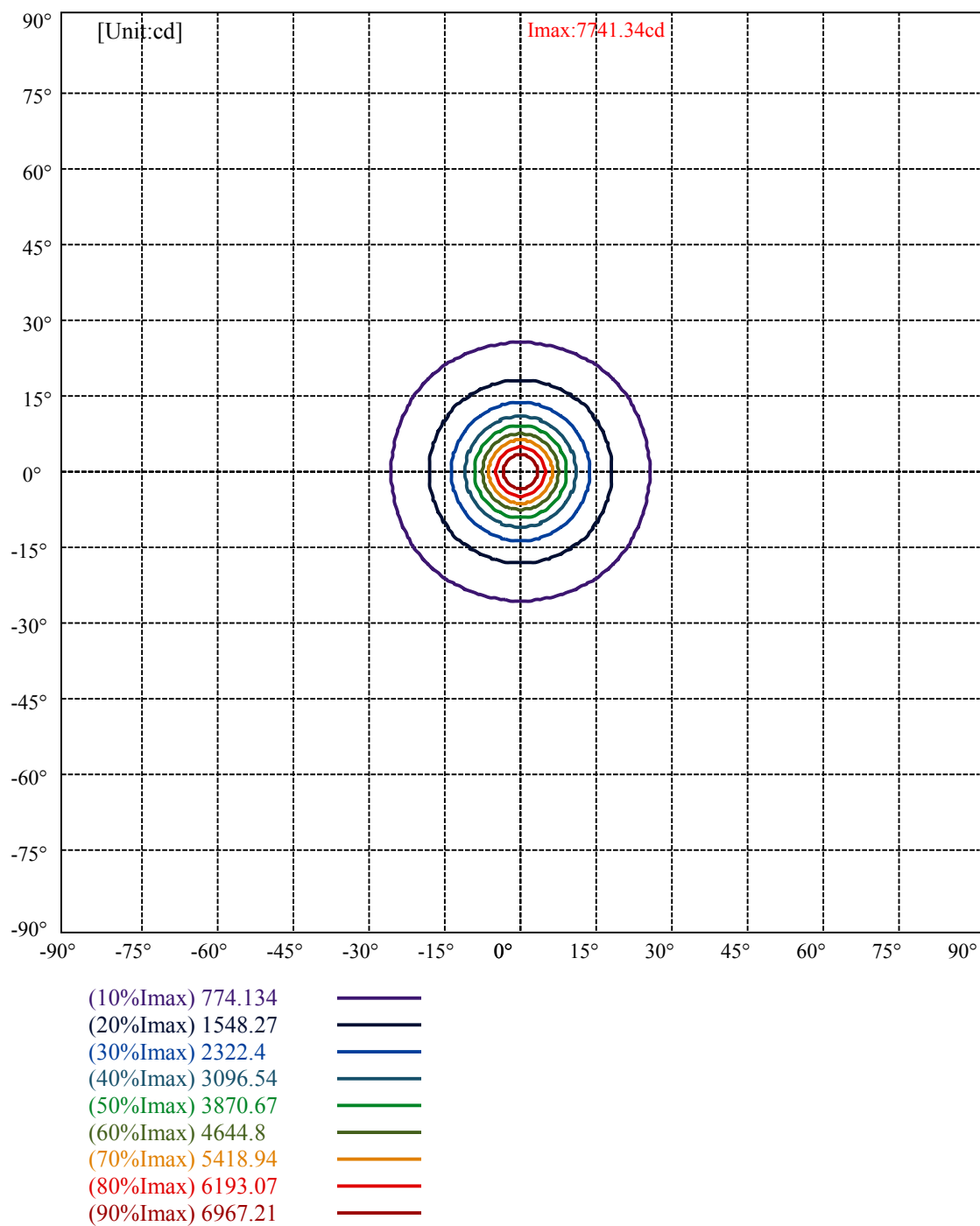
| Zone    | Lumens  | %Lamp  | %Fixt   |
|---------|---------|--------|---------|
| 0-30    | 1422.56 | 80.29% | 87.23%  |
| 0-40    | 1539.36 | 86.89% | 94.39%  |
| 0-60    | 1593.74 | 89.96% | 97.73%  |
| 0-90    | 1630.01 | 92.00% | 99.95%  |
| 0-120   | 1630.01 | 92.00% | 99.95%  |
| 0-180   | 1630.78 | 92.05% | 100.00% |
| 60-90   | 36.26   | 2.05%  | 2.22%   |
| 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%   |
| 0-26.02 | 1304.63 | 73.64% | 80.00%  |

## ZONAL LUMEN SUMMARY

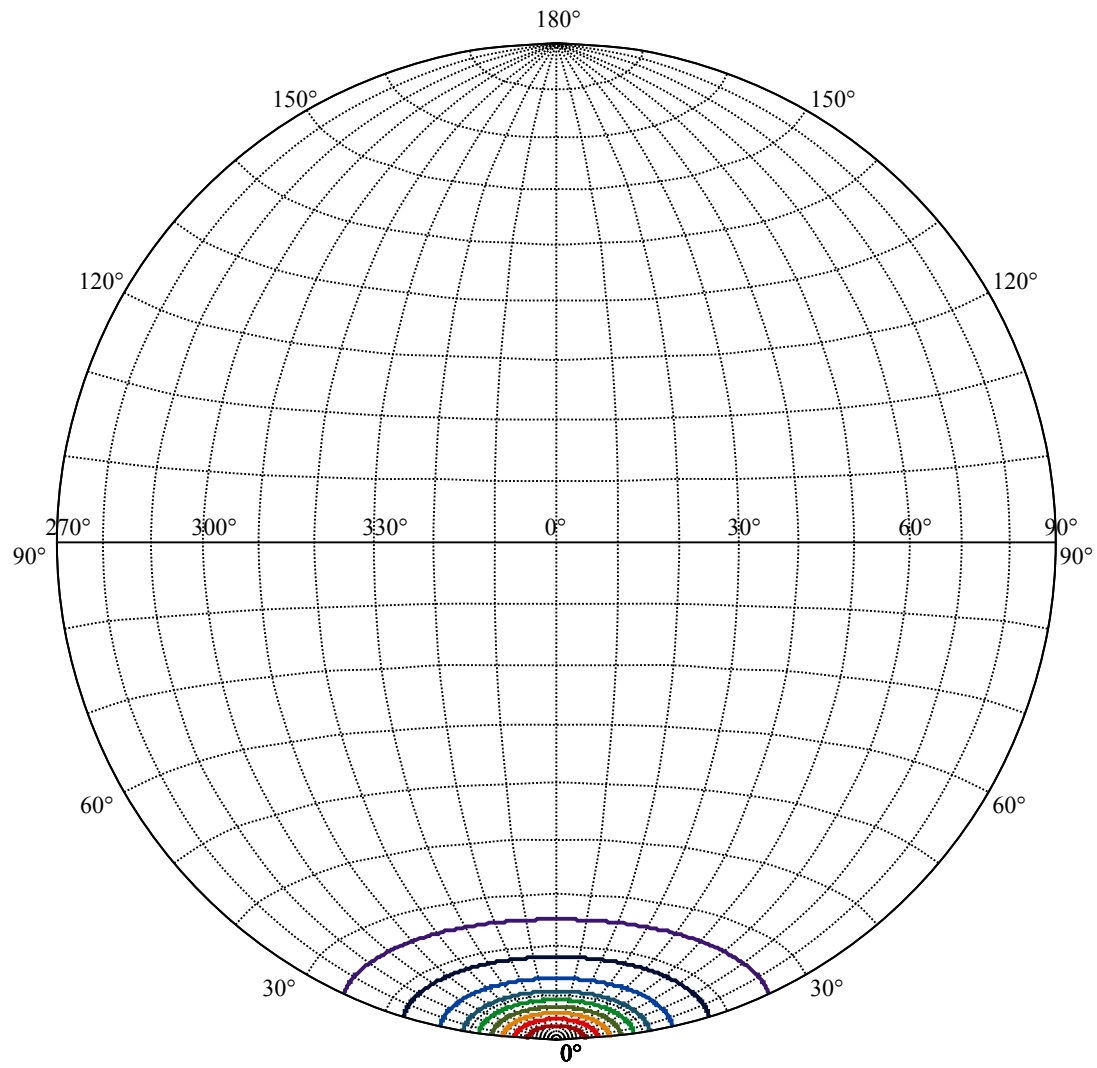
|         |        |
|---------|--------|
| 0-10    | 488.74 |
| 10-20   | 568.13 |
| 20-30   | 365.69 |
| 30-40   | 116.80 |
| 40-50   | 32.93  |
| 50-60   | 21.45  |
| 60-70   | 16.69  |
| 70-80   | 11.64  |
| 80-90   | 7.94   |
| 90-100  | 0.00   |
| 100-110 | 0.00   |
| 110-120 | 0.00   |
| 120-130 | 0.00   |
| 130-140 | 0.00   |
| 140-150 | 0.00   |
| 150-160 | 0.00   |
| 160-170 | 0.00   |
| 170-180 | 0.00   |









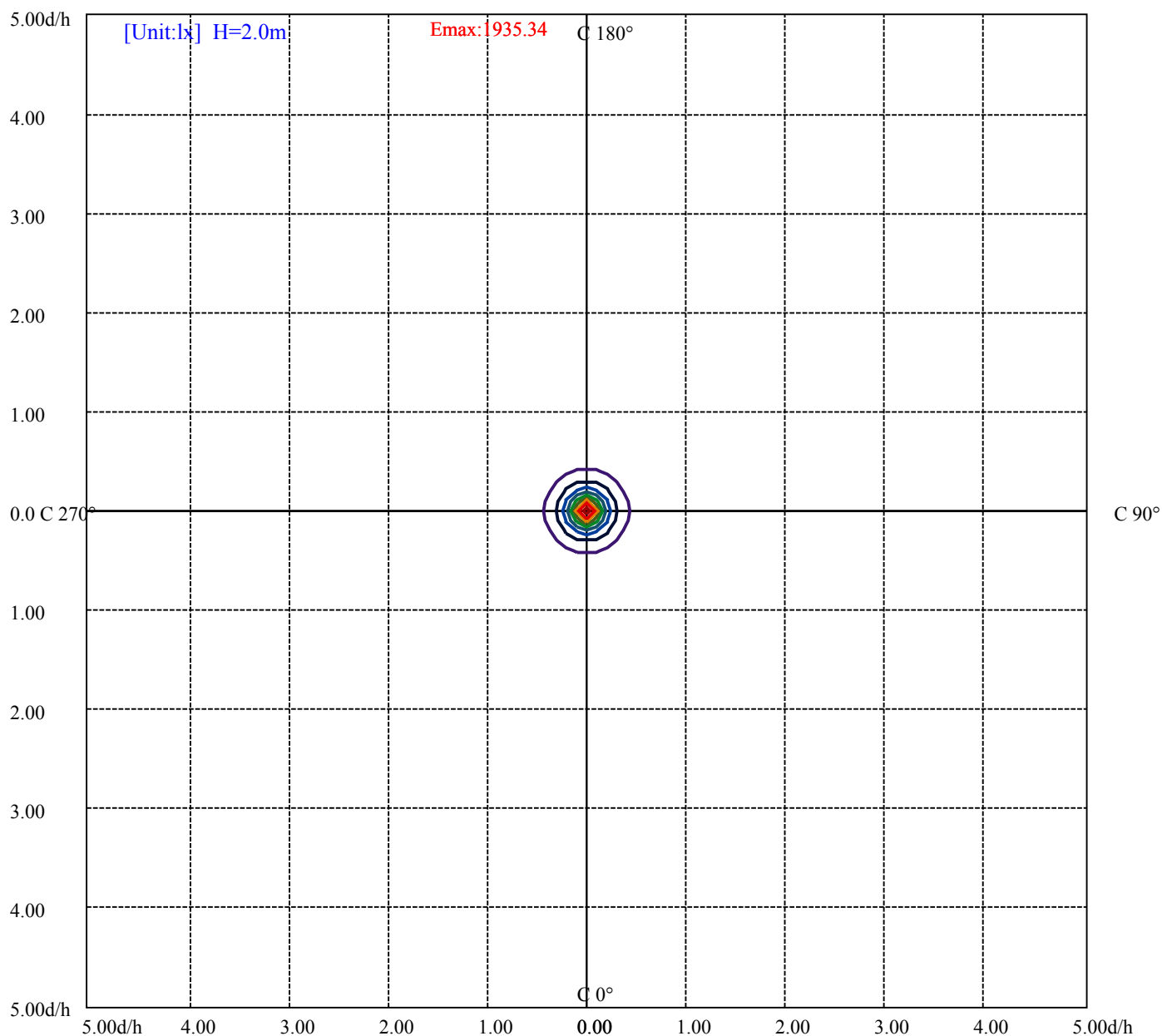


House

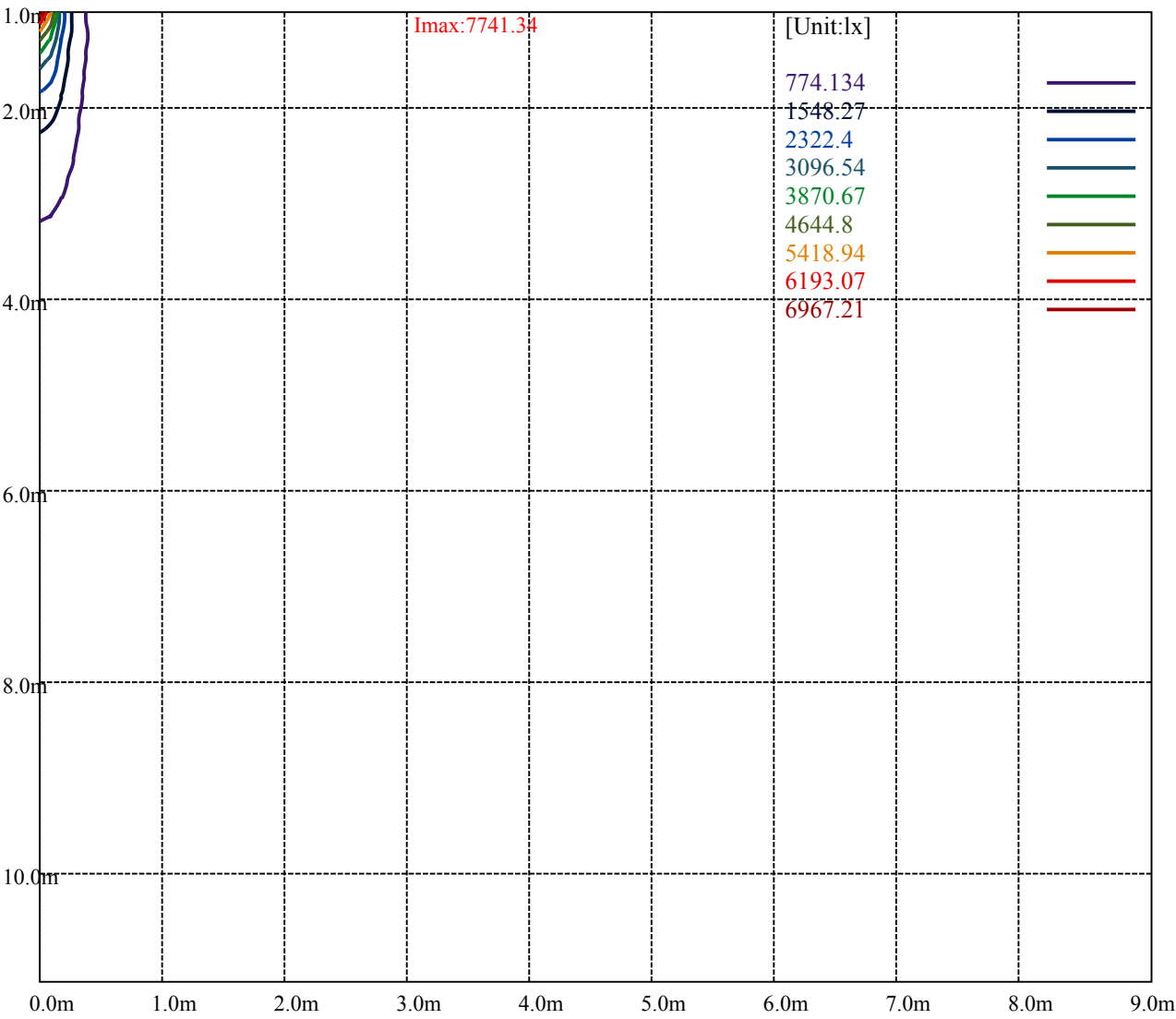
[Unit:cd]

Road

|                   |   |
|-------------------|---|
| Imax:7741.34      |   |
| (10%Imax) 774.134 | — |
| (20%Imax) 1548.27 | — |
| (30%Imax) 2322.4  | — |
| (40%Imax) 3096.54 | — |
| (50%Imax) 3870.67 | — |
| (60%Imax) 4644.8  | — |
| (70%Imax) 5418.94 | — |
| (80%Imax) 6193.07 | — |
| (90%Imax) 6967.21 | — |



|                                 |   |
|---------------------------------|---|
| (10%E <sub>max</sub> ) 193.5332 | — |
| (20%E <sub>max</sub> ) 387.0675 | — |
| (30%E <sub>max</sub> ) 580.6    | — |
| (40%E <sub>max</sub> ) 774.1325 | — |
| (50%E <sub>max</sub> ) 967.665  | — |
| (60%E <sub>max</sub> ) 1161.2   | — |
| (70%E <sub>max</sub> ) 1354.733 | — |
| (80%E <sub>max</sub> ) 1548.265 | — |
| (90%E <sub>max</sub> ) 1741.797 | — |



Luminance Table

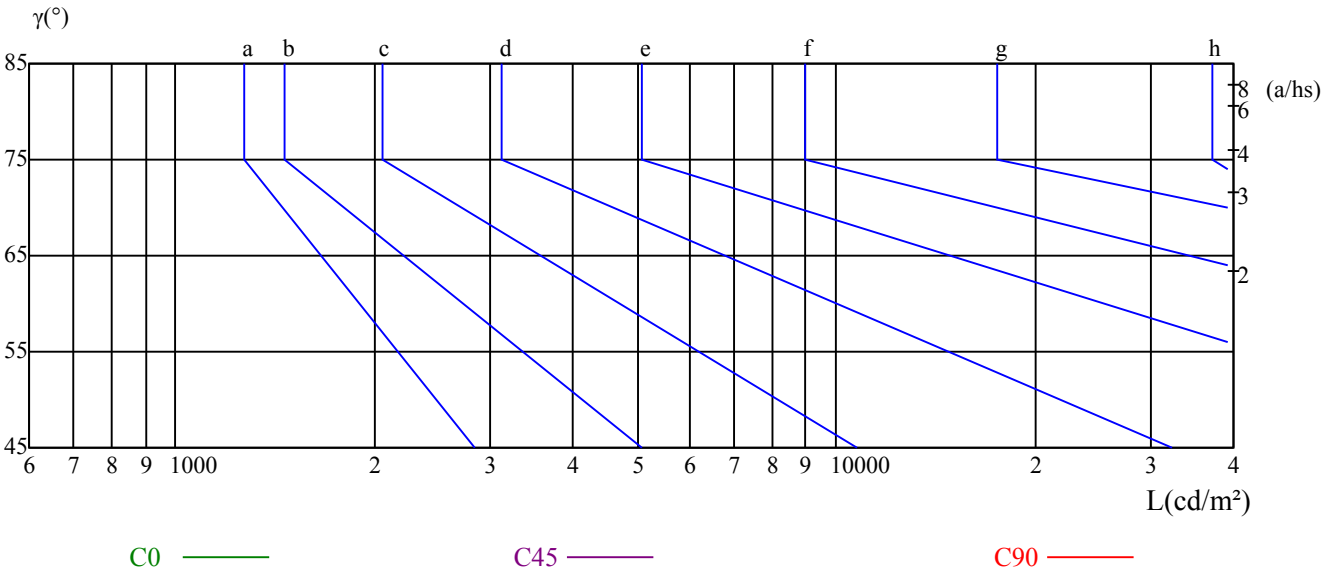
| $\gamma$ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|----------|----|----|----|----|----|----|----|----|----|
| C0       | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| C45      | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| C90      | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |

| 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

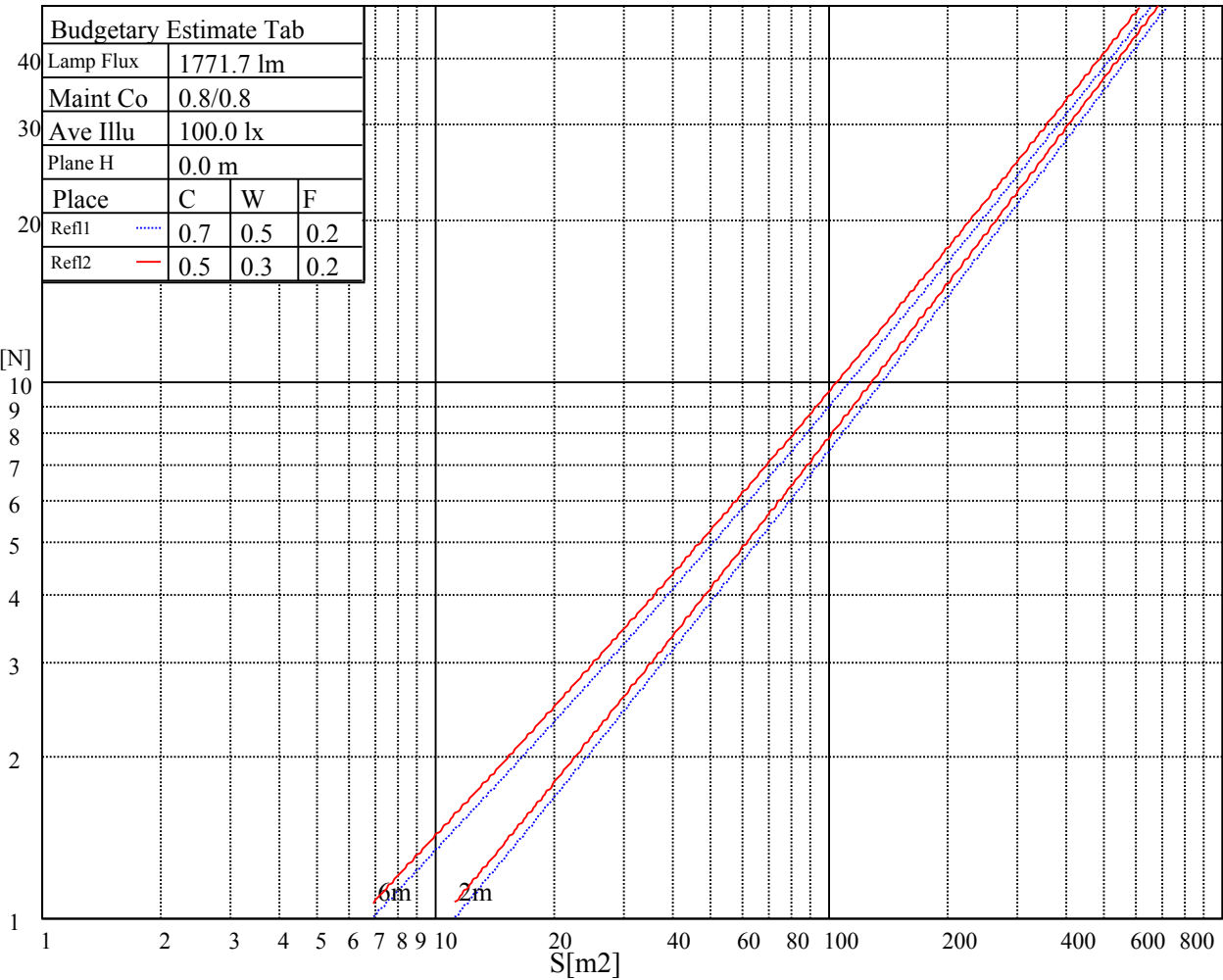
| Glare | Quality | Service Values Illuminance(lx) |      |      |            |            |            |            |            |
|-------|---------|--------------------------------|------|------|------------|------------|------------|------------|------------|
| 1.15  | A       | 2000            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

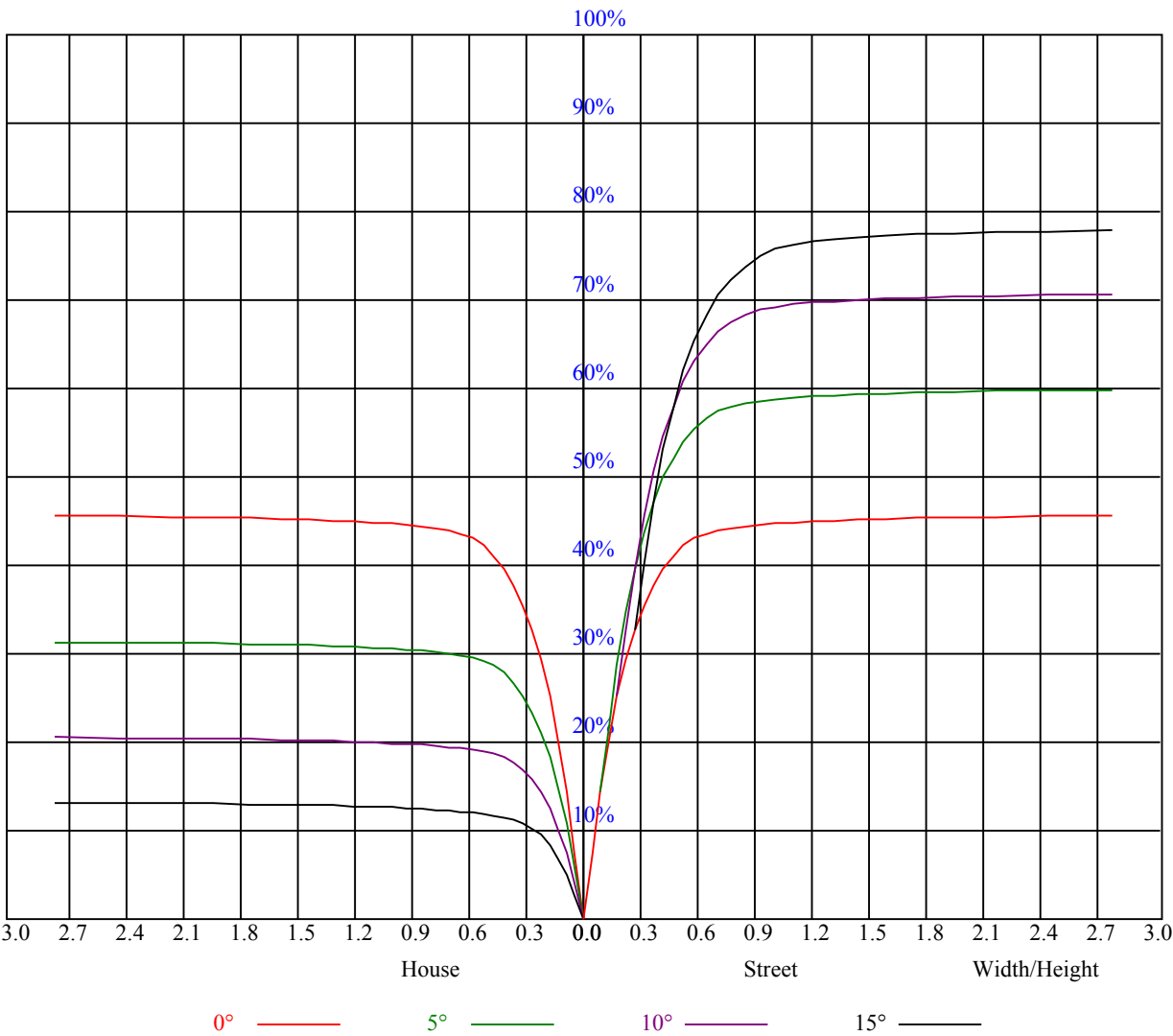


| Illumination assessment according UGR             |     |                  |     |     |     |     |                |     |     |     |  |
|---------------------------------------------------|-----|------------------|-----|-----|-----|-----|----------------|-----|-----|-----|--|
| Rf of Ceiling                                     | 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     | 1.10                                    | 1.10 | 1.10 | 1.07 | 1.07 | 1.07 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 | 0.98 | 0.94 | 0.94 | 0.94 | 0.92 |
| 1     | 1.03                                    | 1.01 | 0.99 | 1.01 | 0.99 | 0.97 | 0.97 | 0.96 | 0.94 | 0.94 | 0.93 | 0.92 | 0.91 | 0.90 | 0.89 | 0.87 |
| 2     | 0.97                                    | 0.94 | 0.91 | 0.95 | 0.93 | 0.90 | 0.93 | 0.90 | 0.88 | 0.90 | 0.88 | 0.86 | 0.87 | 0.86 | 0.84 | 0.83 |
| 3     | 0.92                                    | 0.88 | 0.85 | 0.91 | 0.87 | 0.84 | 0.88 | 0.86 | 0.83 | 0.86 | 0.84 | 0.82 | 0.84 | 0.82 | 0.81 | 0.79 |
| 4     | 0.88                                    | 0.83 | 0.80 | 0.87 | 0.83 | 0.80 | 0.85 | 0.81 | 0.79 | 0.83 | 0.80 | 0.78 | 0.81 | 0.79 | 0.77 | 0.76 |
| 5     | 0.84                                    | 0.79 | 0.76 | 0.83 | 0.79 | 0.76 | 0.81 | 0.78 | 0.75 | 0.80 | 0.77 | 0.75 | 0.79 | 0.76 | 0.74 | 0.73 |
| 6     | 0.80                                    | 0.76 | 0.73 | 0.80 | 0.75 | 0.72 | 0.78 | 0.75 | 0.72 | 0.77 | 0.74 | 0.71 | 0.76 | 0.73 | 0.71 | 0.70 |
| 7     | 0.77                                    | 0.73 | 0.70 | 0.77 | 0.72 | 0.69 | 0.76 | 0.72 | 0.69 | 0.75 | 0.71 | 0.69 | 0.74 | 0.71 | 0.68 | 0.67 |
| 8     | 0.74                                    | 0.70 | 0.67 | 0.74 | 0.70 | 0.67 | 0.73 | 0.69 | 0.66 | 0.72 | 0.69 | 0.66 | 0.71 | 0.68 | 0.66 | 0.65 |
| 9     | 0.72                                    | 0.67 | 0.64 | 0.71 | 0.67 | 0.64 | 0.70 | 0.67 | 0.64 | 0.70 | 0.66 | 0.64 | 0.69 | 0.66 | 0.64 | 0.63 |
| 10    | 0.69                                    | 0.65 | 0.62 | 0.69 | 0.65 | 0.62 | 0.68 | 0.65 | 0.62 | 0.68 | 0.64 | 0.62 | 0.67 | 0.64 | 0.62 | 0.61 |





## Intensity data(cd)

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| C/γ(°) | 0.0     | 1.0     | 2.0     | 3.0     | 4.0     | 5.0     | 6.0     | 7.0     | 8.0     |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0.0    | 7671.46 | 7386.38 | 7129.54 | 6691.70 | 6037.42 | 5471.70 | 4908.76 | 4374.04 | 3770.13 |
| 45.0   | 7768.32 | 7787.14 | 7595.62 | 7318.30 | 6914.22 | 6309.76 | 5762.86 | 5072.60 | 4529.59 |
| 90.0   | 7776.63 | 7570.16 | 7280.11 | 6894.29 | 6308.65 | 5778.36 | 5251.40 | 4576.64 | 4069.60 |
| 135.0  | 7748.95 | 7700.24 | 7526.43 | 7233.61 | 6718.82 | 6226.17 | 5569.68 | 5012.82 | 4485.30 |
| 180.0  | 7671.46 | 7768.32 | 7707.44 | 7505.95 | 7089.14 | 6671.77 | 6197.94 | 5518.20 | 4953.59 |
| 225.0  | 7768.32 | 7619.42 | 7275.12 | 6881.56 | 6412.71 | 5891.28 | 5204.35 | 4648.04 | 4123.84 |
| 270.0  | 7776.63 | 7786.04 | 7648.21 | 7307.78 | 6912.56 | 6443.71 | 5923.94 | 5219.84 | 4666.31 |
| 315.0  | 7748.95 | 7623.85 | 7383.06 | 7034.89 | 6599.26 | 6066.75 | 5377.05 | 4814.10 | 4140.45 |
| 360.0  | 7671.46 | 7386.38 | 7129.54 | 6691.70 | 6037.42 | 5471.70 | 4908.76 | 4374.04 | 3770.13 |
| C/γ(°) | 9.0     | 10.0    | 11.0    | 12.0    | 13.0    | 14.0    | 15.0    | 16.0    | 17.0    |
| 0.0    | 3355.54 | 2928.21 | 2652.54 | 2410.10 | 2149.38 | 1971.70 | 1807.85 | 1663.38 | 1502.85 |
| 45.0   | 4041.92 | 3606.29 | 3230.99 | 2835.76 | 2583.35 | 2348.65 | 2151.04 | 1924.64 | 1765.23 |
| 90.0   | 3631.20 | 3245.94 | 2836.87 | 2572.84 | 2338.69 | 2138.86 | 1913.57 | 1753.60 | 1583.67 |
| 135.0  | 3884.16 | 3467.35 | 3111.43 | 2749.41 | 2497.00 | 2277.25 | 2081.85 | 1863.20 | 1709.32 |
| 180.0  | 4423.31 | 3828.25 | 3410.34 | 3051.64 | 2679.11 | 2434.45 | 2226.88 | 2041.99 | 1835.53 |
| 225.0  | 3667.73 | 3188.37 | 2868.98 | 2546.27 | 2318.76 | 2120.04 | 1901.40 | 1748.62 | 1610.79 |
| 270.0  | 4156.50 | 3707.03 | 3214.94 | 2887.80 | 2616.01 | 2319.87 | 2131.67 | 1920.77 | 1757.48 |
| 315.0  | 3673.26 | 3264.76 | 2850.16 | 2588.33 | 2362.49 | 2107.31 | 1934.05 | 1776.30 | 1631.27 |
| 360.0  | 3355.54 | 2928.21 | 2652.54 | 2410.10 | 2149.38 | 1971.70 | 1807.85 | 1663.38 | 1502.85 |
| C/γ(°) | 18.0    | 19.0    | 20.0    | 21.0    | 22.0    | 23.0    | 24.0    | 25.0    | 26.0    |
| 0.0    | 1386.05 | 1093.12 | 1093.12 | 1043.53 | 949.26  | 862.35  | 788.62  | 707.42  | 639.83  |
| 45.0   | 1592.52 | 1467.42 | 1348.97 | 1216.67 | 1117.04 | 1022.93 | 905.58  | 826.43  | 760.00  |
| 90.0   | 1456.91 | 1344.54 | 1086.15 | 1086.15 | 1015.02 | 900.88  | 822.06  | 761.06  | 696.68  |
| 135.0  | 1573.70 | 1451.37 | 1316.31 | 1216.12 | 1121.46 | 1005.22 | 915.00  | 814.80  | 751.70  |
| 180.0  | 1686.62 | 1549.35 | 1427.02 | 1288.08 | 1181.80 | 1062.24 | 972.01  | 875.14  | 788.79  |
| 225.0  | 1450.82 | 1334.58 | 1094.67 | 1094.67 | 1021.83 | 909.02  | 826.76  | 762.39  | 699.78  |
| 270.0  | 1615.22 | 1487.90 | 1342.88 | 1236.05 | 1130.32 | 1029.02 | 911.67  | 832.52  | 766.09  |
| 315.0  | 1472.96 | 1355.06 | 1090.24 | 1090.24 | 1019.45 | 927.56  | 842.54  | 756.91  | 692.20  |
| 360.0  | 1386.05 | 1093.12 | 1093.12 | 1043.53 | 949.26  | 862.35  | 788.62  | 707.42  | 639.83  |
| C/γ(°) | 27.0    | 28.0    | 29.0    | 30.0    | 31.0    | 32.0    | 33.0    | 34.0    | 35.0    |
| 0.0    | 571.47  | 490.60  | 428.10  | 354.15  | 295.75  | 240.46  | 190.42  | 138.77  | 110.87  |
| 45.0   | 692.47  | 605.57  | 538.59  | 474.38  | 412.94  | 338.76  | 281.20  | 281.20  | 214.11  |
| 90.0   | 611.10  | 542.80  | 477.98  | 416.92  | 341.09  | 282.69  | 227.17  | 176.52  | 125.54  |
| 135.0  | 684.72  | 616.09  | 531.95  | 466.63  | 401.31  | 340.42  | 280.09  | 280.09  | 160.03  |
| 180.0  | 722.92  | 660.37  | 591.18  | 505.38  | 441.72  | 377.51  | 318.84  | 288.95  | 288.95  |
| 225.0  | 612.76  | 543.24  | 477.20  | 398.60  | 338.71  | 280.31  | 214.05  | 168.22  | 121.94  |
| 270.0  | 684.17  | 613.32  | 546.89  | 466.08  | 403.53  | 342.64  | 284.52  | 284.52  | 167.44  |
| 315.0  | 625.99  | 543.18  | 477.04  | 398.55  | 336.72  | 278.93  | 224.85  | 176.97  | 129.47  |
| 360.0  | 571.47  | 490.60  | 428.10  | 354.15  | 295.75  | 240.46  | 190.42  | 138.77  | 110.87  |
| C/γ(°) | 36.0    | 37.0    | 38.0    | 39.0    | 40.0    | 41.0    | 42.0    | 43.0    | 44.0    |
| 0.0    | 94.71   | 85.13   | 75.39   | 68.47   | 62.16   | 56.85   | 51.20   | 47.22   | 42.79   |
| 45.0   | 125.15  | 101.19  | 85.52   | 77.27   | 69.97   | 61.66   | 56.07   | 51.42   | 47.22   |
| 90.0   | 100.74  | 83.92   | 75.56   | 68.20   | 60.00   | 54.41   | 49.76   | 45.50   | 40.96   |
| 135.0  | 123.05  | 94.32   | 82.48   | 73.73   | 64.38   | 57.84   | 52.70   | 47.05   | 43.34   |
| 180.0  | 147.35  | 108.05  | 89.34   | 78.44   | 68.64   | 61.83   | 55.63   | 49.21   | 44.89   |
| 225.0  | 98.14   | 85.08   | 76.94   | 69.52   | 61.33   | 55.52   | 50.76   | 46.72   | 42.12   |
| 270.0  | 123.55  | 102.40  | 90.84   | 82.75   | 73.56   | 66.65   | 60.45   | 55.24   | 49.65   |
| 315.0  | 103.79  | 88.84   | 80.04   | 71.24   | 64.60   | 58.56   | 52.48   | 48.27   | 44.56   |
| 360.0  | 94.71   | 85.13   | 75.39   | 68.47   | 62.16   | 56.85   | 51.20   | 47.22   | 42.79   |

## Intensity data(cd)

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| C/γ(°) | 45.0  | 46.0  | 47.0  | 48.0  | 49.0  | 50.0  | 51.0  | 52.0  | 53.0  |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.0    | 39.80 | 37.14 | 34.37 | 32.44 | 30.83 | 29.06 | 27.73 | 26.63 | 25.79 |
| 45.0   | 42.73 | 39.63 | 36.70 | 34.15 | 31.44 | 29.67 | 28.29 | 26.68 | 25.52 |
| 90.0   | 37.97 | 35.26 | 32.99 | 30.39 | 28.73 | 27.34 | 25.68 | 24.63 | 23.86 |
| 135.0  | 40.13 | 36.64 | 34.21 | 31.94 | 29.95 | 28.12 | 26.85 | 25.63 | 24.69 |
| 180.0  | 41.24 | 38.08 | 34.71 | 32.44 | 30.44 | 28.62 | 26.90 | 25.63 | 24.41 |
| 225.0  | 38.97 | 35.54 | 33.16 | 31.22 | 29.23 | 27.84 | 26.57 | 25.19 | 24.30 |
| 270.0  | 45.89 | 42.57 | 38.86 | 36.37 | 34.26 | 31.88 | 30.28 | 28.84 | 27.29 |
| 315.0  | 40.63 | 37.70 | 34.54 | 32.38 | 30.67 | 29.17 | 27.51 | 26.35 | 25.30 |
| 360.0  | 39.80 | 37.14 | 34.37 | 32.44 | 30.83 | 29.06 | 27.73 | 26.63 | 25.79 |
|        |       |       |       |       |       |       |       |       |       |
| C/γ(°) | 54.0  | 55.0  | 56.0  | 57.0  | 58.0  | 59.0  | 60.0  | 61.0  | 62.0  |
| 0.0    | 24.74 | 23.97 | 23.41 | 22.97 | 22.25 | 21.59 | 20.87 | 20.04 | 19.04 |
| 45.0   | 24.80 | 23.75 | 23.03 | 22.36 | 22.03 | 21.64 | 21.03 | 20.59 | 19.82 |
| 90.0   | 23.08 | 22.47 | 21.98 | 21.64 | 21.31 | 20.81 | 20.31 | 19.65 | 18.76 |
| 135.0  | 23.91 | 23.08 | 22.47 | 21.92 | 21.64 | 21.26 | 20.70 | 20.09 | 19.60 |
| 180.0  | 23.30 | 22.64 | 21.86 | 21.42 | 21.20 | 20.87 | 20.59 | 20.26 | 19.87 |
| 225.0  | 23.53 | 22.81 | 22.25 | 22.03 | 21.75 | 21.37 | 20.76 | 20.26 | 19.37 |
| 270.0  | 26.24 | 25.35 | 24.52 | 23.64 | 23.19 | 22.64 | 22.03 | 21.48 | 20.81 |
| 315.0  | 24.47 | 23.69 | 22.86 | 22.42 | 21.86 | 21.31 | 20.70 | 19.98 | 19.15 |
| 360.0  | 24.74 | 23.97 | 23.41 | 22.97 | 22.25 | 21.59 | 20.87 | 20.04 | 19.04 |
|        |       |       |       |       |       |       |       |       |       |
| C/γ(°) | 63.0  | 64.0  | 65.0  | 66.0  | 67.0  | 68.0  | 69.0  | 70.0  | 71.0  |
| 0.0    | 17.99 | 17.10 | 16.22 | 15.50 | 14.61 | 14.00 | 13.45 | 12.95 | 12.40 |
| 45.0   | 18.88 | 18.05 | 17.27 | 16.16 | 15.44 | 14.78 | 14.00 | 13.40 | 12.79 |
| 90.0   | 17.88 | 17.10 | 15.89 | 15.17 | 14.34 | 13.67 | 13.17 | 12.68 | 12.23 |
| 135.0  | 18.49 | 17.66 | 16.83 | 15.89 | 15.00 | 14.39 | 13.78 | 13.06 | 12.68 |
| 180.0  | 19.04 | 18.21 | 17.38 | 16.55 | 15.39 | 14.61 | 14.00 | 13.28 | 12.73 |
| 225.0  | 18.27 | 17.38 | 16.16 | 15.33 | 14.61 | 14.00 | 13.23 | 12.79 | 12.34 |
| 270.0  | 19.87 | 18.71 | 17.88 | 16.66 | 15.78 | 15.11 | 14.39 | 13.62 | 13.12 |
| 315.0  | 18.05 | 17.21 | 16.38 | 15.55 | 14.89 | 14.12 | 13.51 | 13.06 | 12.51 |
| 360.0  | 17.99 | 17.10 | 16.22 | 15.50 | 14.61 | 14.00 | 13.45 | 12.95 | 12.40 |
|        |       |       |       |       |       |       |       |       |       |
| C/γ(°) | 72.0  | 73.0  | 74.0  | 75.0  | 76.0  | 77.0  | 78.0  | 79.0  | 80.0  |
| 0.0    | 11.96 | 11.51 | 11.07 | 10.74 | 10.41 | 9.96  | 9.69  | 9.35  | 8.97  |
| 45.0   | 12.34 | 11.90 | 11.46 | 11.13 | 10.74 | 10.41 | 10.02 | 9.69  | 9.35  |
| 90.0   | 11.85 | 11.40 | 11.07 | 10.74 | 10.41 | 9.96  | 9.69  | 9.35  | 9.13  |
| 135.0  | 12.29 | 11.79 | 11.46 | 10.96 | 10.63 | 10.30 | 9.96  | 9.63  | 9.35  |
| 180.0  | 12.34 | 11.79 | 11.40 | 11.07 | 10.63 | 10.30 | 9.96  | 9.69  | 9.30  |
| 225.0  | 11.96 | 11.46 | 11.07 | 10.74 | 10.30 | 9.96  | 9.63  | 9.35  | 9.02  |
| 270.0  | 12.62 | 12.18 | 11.73 | 11.35 | 10.96 | 10.46 | 10.13 | 9.85  | 9.41  |
| 315.0  | 12.07 | 11.68 | 11.35 | 10.90 | 10.57 | 10.19 | 9.91  | 9.58  | 9.24  |
| 360.0  | 11.96 | 11.51 | 11.07 | 10.74 | 10.41 | 9.96  | 9.69  | 9.35  | 8.97  |
|        |       |       |       |       |       |       |       |       |       |
| C/γ(°) | 81.0  | 82.0  | 83.0  | 84.0  | 85.0  | 86.0  | 87.0  | 88.0  | 89.0  |
| 0.0    | 8.75  | 8.47  | 8.25  | 7.92  | 7.69  | 7.47  | 7.36  | 7.20  | 6.97  |
| 45.0   | 9.08  | 8.75  | 8.47  | 8.14  | 7.86  | 7.64  | 7.53  | 7.31  | 7.25  |
| 90.0   | 8.86  | 8.52  | 8.19  | 7.97  | 7.75  | 7.58  | 7.42  | 7.36  | 6.97  |
| 135.0  | 9.08  | 8.86  | 8.47  | 8.19  | 7.92  | 7.75  | 7.58  | 7.47  | 7.09  |
| 180.0  | 9.08  | 8.75  | 8.58  | 8.19  | 7.97  | 7.75  | 7.58  | 7.42  | 7.36  |
| 225.0  | 8.69  | 8.47  | 8.19  | 7.97  | 7.75  | 7.53  | 7.36  | 7.36  | 6.92  |
| 270.0  | 9.19  | 8.91  | 8.64  | 8.36  | 8.08  | 7.80  | 7.53  | 7.42  | 7.25  |
| 315.0  | 9.02  | 8.75  | 8.58  | 8.30  | 8.03  | 7.80  | 7.58  | 7.47  | 7.25  |
| 360.0  | 8.75  | 8.47  | 8.25  | 7.92  | 7.69  | 7.47  | 7.36  | 7.20  | 6.97  |

## Intensity data(cd)

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|                 |      |
|-----------------|------|
| C/ $\gamma$ (°) | 90.0 |
| 0.0             | 7.03 |
| 45.0            | 6.92 |
| 90.0            | 7.09 |
| 135.0           | 7.14 |
| 180.0           | 6.92 |
| 225.0           | 7.03 |
| 270.0           | 6.97 |
| 315.0           | 7.14 |
| 360.0           | 7.03 |