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## Nata

Client:

LumCAT: 2-2751-L

Luminaire: 92.70.412.00

Report No: 2024826-B012

Ballast type: AC

Test No: 2024826-C012

Voltage(V): 34.820

LampCAT: Fortimo\_SLM\_C\_1210

Current(A): 0.715

Lamp flux(lm): 4003.0

Power (W): 24.890

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

Lumens(lm): 3768.96, Efficiency(%): 94.15% , Luminous Efficacy(lm/W): 151.42

Central intensity(cd): 17916.140, Maximum intensity(cd): 17916.140

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

Beam Angle(50%Imax): [C0/180]Total=19.4

[C90/270]Total=19.4

Field angle(10%Imax): [C0/180]Total=50.0

[C90/270]Total=50.0

Maximum s/h(1/2): C0\_180=0.33 C90\_270=0.33

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(%): 94.15%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 99.035%

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Equipment: GMS 1800  
Temperature(°C): 25.0

Date: 2024/8/26  
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                | 17916.139     | 0.000       | 0         | 0.00%       | 0.00%      |
| 1.0                | 17778.938     | 17.079      | 17.079    | 0.43%       | 0.45%      |
| 2.0                | 17449.516     | 50.563      | 67.643    | 1.26%       | 1.79%      |
| 3.0                | 16811.564     | 81.941      | 149.584   | 2.05%       | 3.97%      |
| 4.0                | 16009.946     | 109.864     | 259.448   | 2.74%       | 6.88%      |
| 5.0                | 15059.288     | 133.658     | 393.106   | 3.34%       | 10.43%     |
| 6.0                | 13341.348     | 149.253     | 542.359   | 3.73%       | 14.39%     |
| 7.0                | 11951.924     | 156.995     | 699.354   | 3.92%       | 18.56%     |
| 8.0                | 11169.176     | 165.473     | 864.827   | 4.13%       | 22.95%     |
| 9.0                | 9826.553      | 170.159     | 1034.986  | 4.25%       | 27.46%     |
| 10.0               | 8543.134      | 166.239     | 1201.225  | 4.15%       | 31.87%     |
| 11.0               | 7516.070      | 160.464     | 1361.69   | 4.01%       | 36.13%     |
| 12.0               | 6578.709      | 154.076     | 1515.766  | 3.85%       | 40.22%     |
| 13.0               | 5692.414      | 145.627     | 1661.393  | 3.64%       | 44.08%     |
| 14.0               | 5010.579      | 136.997     | 1798.39   | 3.42%       | 47.72%     |
| 15.0               | 4454.672      | 129.943     | 1928.334  | 3.25%       | 51.16%     |
| 16.0               | 3922.930      | 122.755     | 2051.089  | 3.07%       | 54.42%     |
| 17.0               | 3545.939      | 116.310     | 2167.399  | 2.91%       | 57.51%     |
| 18.0               | 3195.281      | 111.148     | 2278.547  | 2.78%       | 60.46%     |
| 19.0               | 2901.995      | 106.080     | 2384.627  | 2.65%       | 63.27%     |
| 20.0               | 2664.715      | 101.886     | 2486.514  | 2.55%       | 65.97%     |
| 21.0               | 2550.917      | 100.151     | 2586.664  | 2.50%       | 68.63%     |
| 22.0               | 2299.379      | 97.469      | 2684.133  | 2.43%       | 71.22%     |
| 23.0               | 2096.830      | 92.244      | 2776.378  | 2.30%       | 73.66%     |
| 24.0               | 1926.685      | 87.968      | 2864.346  | 2.20%       | 76.00%     |
| 25.0               | 1785.798      | 84.414      | 2948.76   | 2.11%       | 78.24%     |
| 26.0               | 1634.109      | 80.727      | 3029.487  | 2.02%       | 80.38%     |
| 27.0               | 1480.331      | 76.195      | 3105.682  | 1.90%       | 82.40%     |
| 28.0               | 1268.780      | 69.602      | 3175.284  | 1.74%       | 84.25%     |
| 29.0               | 1189.181      | 64.307      | 3239.591  | 1.61%       | 85.95%     |
| 30.0               | 1075.876      | 61.156      | 3300.747  | 1.53%       | 87.58%     |
| 31.0               | 937.032       | 56.016      | 3356.764  | 1.40%       | 89.06%     |
| 32.0               | 798.201       | 49.712      | 3406.476  | 1.24%       | 90.38%     |
| 33.0               | 662.478       | 43.032      | 3449.508  | 1.07%       | 91.52%     |
| 34.0               | 557.149       | 36.910      | 3486.418  | 0.92%       | 92.50%     |
| 35.0               | 466.545       | 31.792      | 3518.21   | 0.79%       | 93.35%     |
| 36.0               | 391.998       | 27.336      | 3545.546  | 0.68%       | 94.07%     |
| 37.0               | 332.399       | 23.626      | 3569.172  | 0.59%       | 94.70%     |

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0               | 280.723       | 20.465      | 3589.637  | 0.51%       | 95.24%     |
| 39.0               | 248.936       | 18.079      | 3607.716  | 0.45%       | 95.72%     |
| 40.0               | 211.420       | 16.056      | 3623.771  | 0.40%       | 96.15%     |
| 41.0               | 161.715       | 13.287      | 3637.058  | 0.33%       | 96.50%     |
| 42.0               | 132.950       | 10.706      | 3647.764  | 0.27%       | 96.78%     |
| 43.0               | 114.501       | 9.166       | 3656.93   | 0.23%       | 97.03%     |
| 44.0               | 95.670        | 7.932       | 3664.863  | 0.20%       | 97.24%     |
| 45.0               | 81.452        | 6.807       | 3671.67   | 0.17%       | 97.42%     |
| 46.0               | 72.563        | 6.023       | 3677.693  | 0.15%       | 97.58%     |
| 47.0               | 63.686        | 5.419       | 3683.112  | 0.14%       | 97.72%     |
| 48.0               | 57.425        | 4.896       | 3688.008  | 0.12%       | 97.85%     |
| 49.0               | 52.510        | 4.515       | 3692.522  | 0.11%       | 97.97%     |
| 50.0               | 48.417        | 4.208       | 3696.73   | 0.11%       | 98.08%     |
| 51.0               | 45.302        | 3.965       | 3700.696  | 0.10%       | 98.19%     |
| 52.0               | 43.055        | 3.791       | 3704.487  | 0.09%       | 98.29%     |
| 53.0               | 41.137        | 3.662       | 3708.149  | 0.09%       | 98.39%     |
| 54.0               | 39.586        | 3.558       | 3711.707  | 0.09%       | 98.48%     |
| 55.0               | 38.811        | 3.500       | 3715.207  | 0.09%       | 98.57%     |
| 56.0               | 38.338        | 3.486       | 3718.693  | 0.09%       | 98.67%     |
| 57.0               | 37.852        | 3.484       | 3722.177  | 0.09%       | 98.76%     |
| 58.0               | 37.405        | 3.480       | 3725.657  | 0.09%       | 98.85%     |
| 59.0               | 36.945        | 3.476       | 3729.133  | 0.09%       | 98.94%     |
| 60.0               | 35.907        | 3.442       | 3732.574  | 0.09%       | 99.03%     |
| 61.0               | 34.218        | 3.347       | 3735.921  | 0.08%       | 99.12%     |
| 62.0               | 32.024        | 3.192       | 3739.113  | 0.08%       | 99.21%     |
| 63.0               | 28.969        | 2.966       | 3742.079  | 0.07%       | 99.29%     |
| 64.0               | 25.946        | 2.695       | 3744.774  | 0.07%       | 99.36%     |
| 65.0               | 22.457        | 2.395       | 3747.169  | 0.06%       | 99.42%     |
| 66.0               | 19.823        | 2.109       | 3749.279  | 0.05%       | 99.48%     |
| 67.0               | 17.490        | 1.876       | 3751.155  | 0.05%       | 99.53%     |
| 68.0               | 15.703        | 1.681       | 3752.836  | 0.04%       | 99.57%     |
| 69.0               | 14.198        | 1.525       | 3754.362  | 0.04%       | 99.61%     |
| 70.0               | 13.101        | 1.402       | 3755.764  | 0.04%       | 99.65%     |
| 71.0               | 12.063        | 1.301       | 3757.064  | 0.03%       | 99.68%     |
| 72.0               | 11.189        | 1.209       | 3758.273  | 0.03%       | 99.72%     |
| 73.0               | 10.434        | 1.131       | 3759.404  | 0.03%       | 99.75%     |
| 74.0               | 9.685         | 1.058       | 3760.462  | 0.03%       | 99.77%     |
| 75.0               | 9.001         | 0.987       | 3761.449  | 0.02%       | 99.80%     |

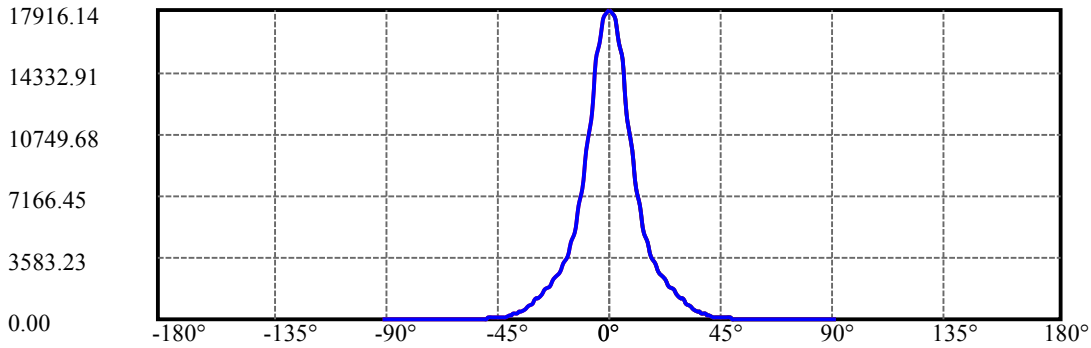
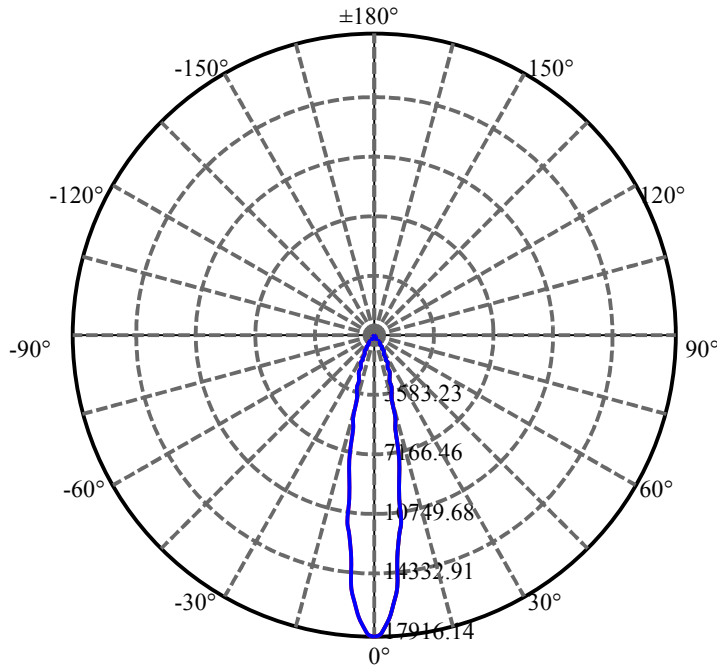
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0               | 8.311         | 0.919       | 3762.368  | 0.02%       | 99.83%     |
| 77.0               | 7.753         | 0.856       | 3763.225  | 0.02%       | 99.85%     |
| 78.0               | 7.122         | 0.796       | 3764.021  | 0.02%       | 99.87%     |
| 79.0               | 6.491         | 0.731       | 3764.752  | 0.02%       | 99.89%     |
| 80.0               | 5.933         | 0.670       | 3765.422  | 0.02%       | 99.91%     |
| 81.0               | 5.315         | 0.608       | 3766.031  | 0.02%       | 99.92%     |
| 82.0               | 4.685         | 0.542       | 3766.573  | 0.01%       | 99.94%     |
| 83.0               | 4.060         | 0.475       | 3767.048  | 0.01%       | 99.95%     |
| 84.0               | 3.541         | 0.414       | 3767.462  | 0.01%       | 99.96%     |
| 85.0               | 3.055         | 0.360       | 3767.822  | 0.01%       | 99.97%     |
| 86.0               | 2.622         | 0.310       | 3768.133  | 0.01%       | 99.98%     |
| 87.0               | 2.240         | 0.266       | 3768.399  | 0.01%       | 99.99%     |
| 88.0               | 1.873         | 0.225       | 3768.624  | 0.01%       | 99.99%     |
| 89.0               | 1.485         | 0.184       | 3768.808  | 0.00%       | 100.00%    |
| 90.0               | 1.275         | 0.151       | 3768.959  | 0.00%       | 100.00%    |

ZONAL LUMEN SUMMARY

| Zone    | Lumens  | %Lamp  | %Fixt   |
|---------|---------|--------|---------|
| 0-30    | 3300.75 | 82.46% | 87.58%  |
| 0-40    | 3623.77 | 90.53% | 96.15%  |
| 0-60    | 3732.57 | 93.24% | 99.03%  |
| 0-90    | 3768.81 | 94.15% | 100.00% |
| 0-120   | 3768.81 | 94.15% | 100.00% |
| 0-180   | 3768.96 | 94.15% | 100.00% |
| 60-90   | 36.23   | 0.91%  | 0.96%   |
| 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%   |
| 0-25.82 | 3015.17 | 75.32% | 80.00%  |

ZONAL LUMEN SUMMARY

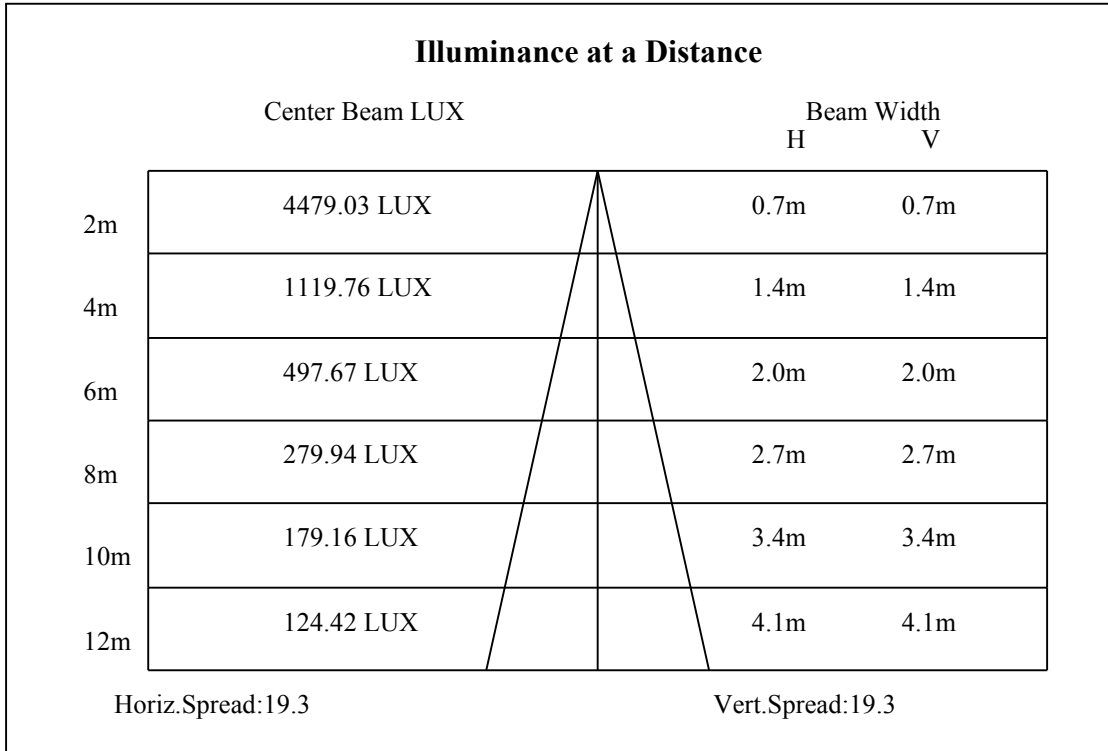
|         |         |
|---------|---------|
| 0-10    | 1201.23 |
| 10-20   | 1285.29 |
| 20-30   | 814.23  |
| 30-40   | 323.02  |
| 40-50   | 72.96   |
| 50-60   | 35.84   |
| 60-70   | 23.19   |
| 70-80   | 9.66    |
| 80-90   | 3.39    |
| 90-100  | 0.00    |
| 100-110 | 0.00    |
| 110-120 | 0.00    |
| 120-130 | 0.00    |
| 130-140 | 0.00    |
| 140-150 | 0.00    |
| 150-160 | 0.00    |
| 160-170 | 0.00    |
| 170-180 | 0.00    |

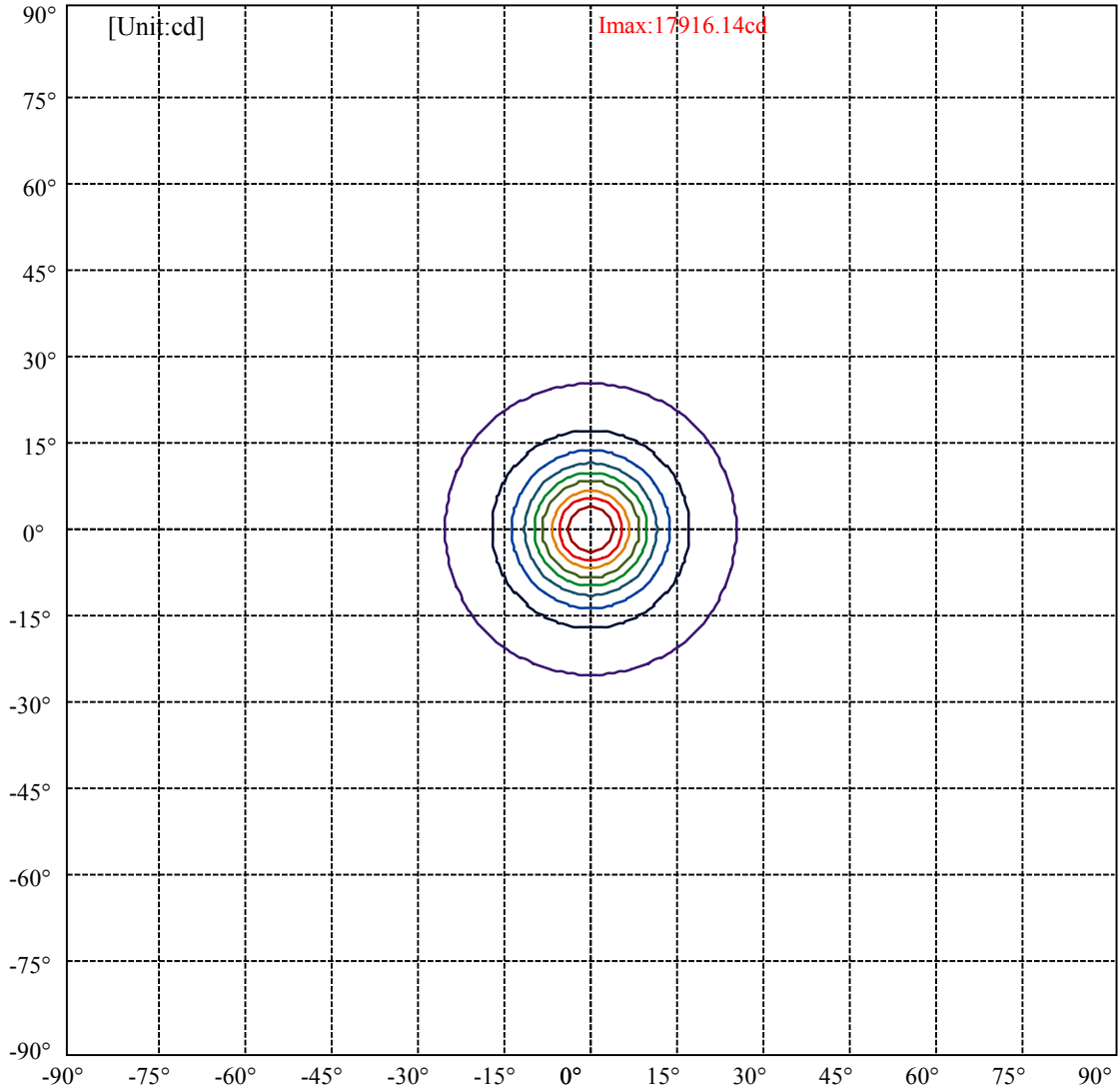


C0(Max): —————  
C0/C180: —————  
C90/C270: —————

Field angle(10%Imax):C0/180Left:25.0 Right:25.0  
:C90/270Left:25.0 Right:25.0

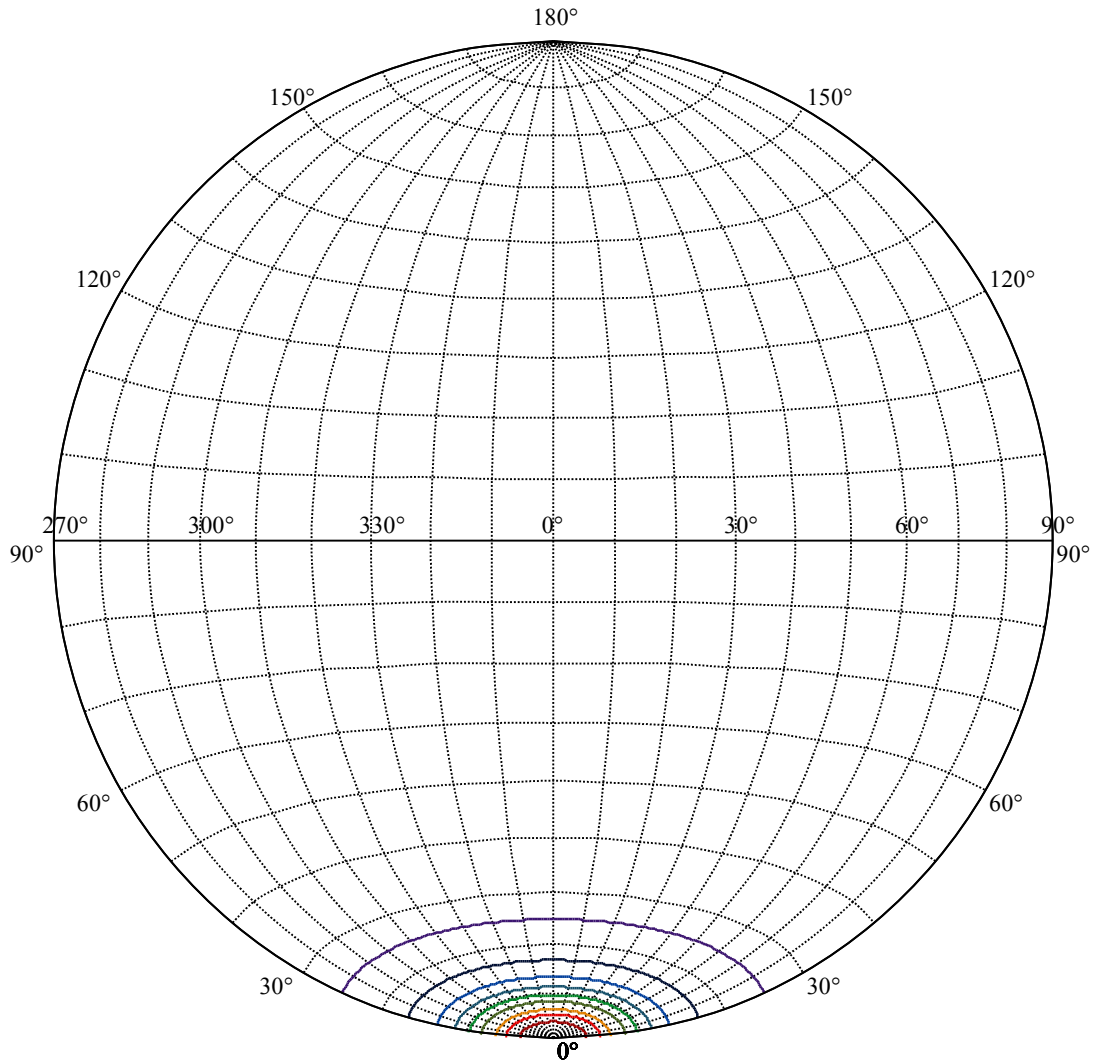
Beam Angle(50%Imax):C0/180Left:9.7 Right:9.7  
:C90/270Left:9.7 Right:9.7





|                   |   |
|-------------------|---|
| (10%Imax) 1791.61 | — |
| (20%Imax) 3583.23 | — |
| (30%Imax) 5374.84 | — |
| (40%Imax) 7166.45 | — |
| (50%Imax) 8958.07 | — |
| (60%Imax) 10749.7 | — |
| (70%Imax) 12541.3 | — |
| (80%Imax) 14332.9 | — |
| (90%Imax) 16124.5 | — |





House

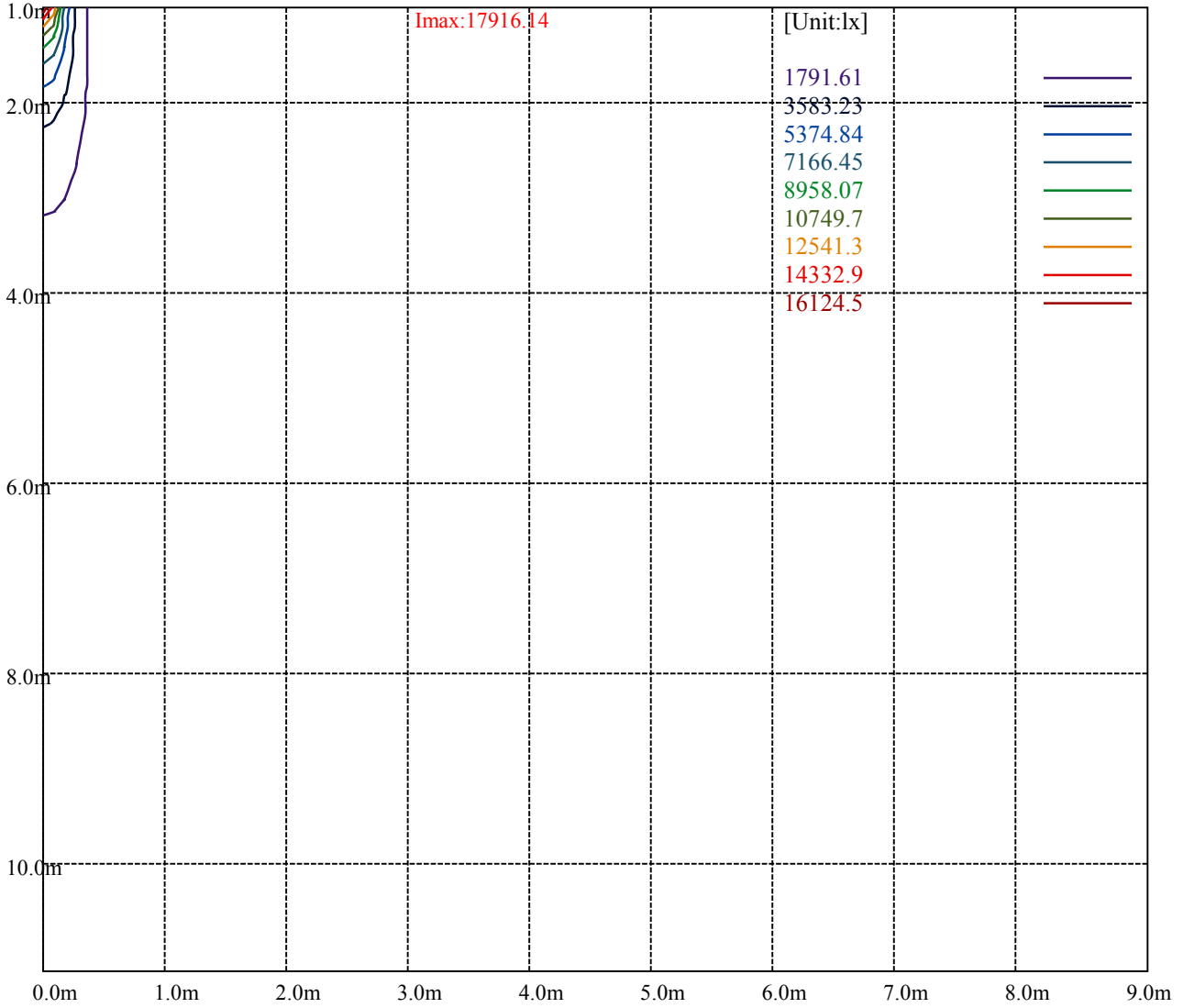
[Unit:cd]

Road

**Imax:17916.14**

|                   |   |
|-------------------|---|
| (10%Imax) 1791.61 | — |
| (20%Imax) 3583.23 | — |
| (30%Imax) 5374.84 | — |
| (40%Imax) 7166.45 | — |
| (50%Imax) 8958.07 | — |
| (60%Imax) 10749.7 | — |
| (70%Imax) 12541.3 | — |
| (80%Imax) 14332.9 | — |
| (90%Imax) 16124.5 | — |





Luminance Table

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

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

Glare Table

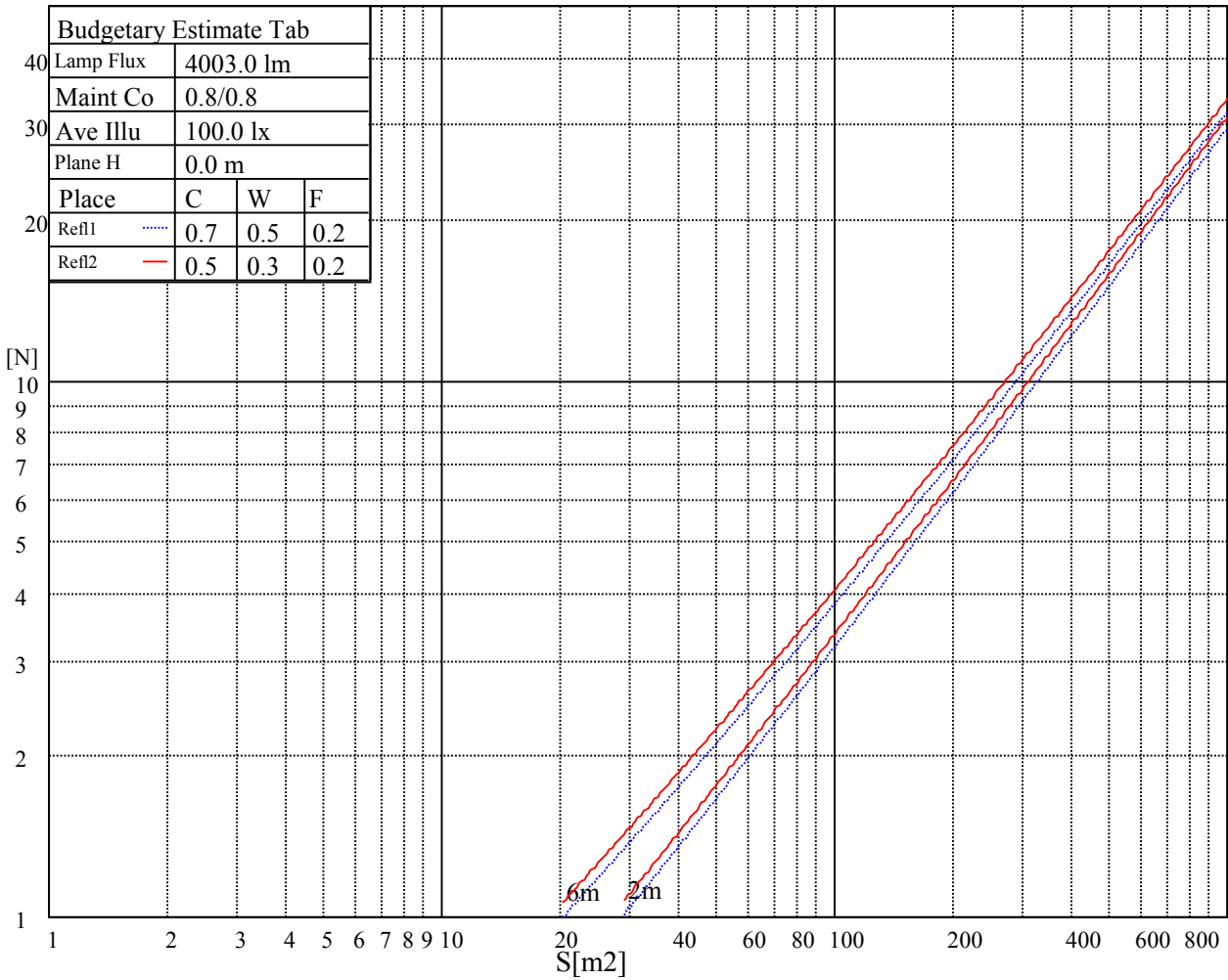
| Glare | Quality | Service Values Illuminance(lx) |      |      |       |       |       |       |       |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15  | A       | 2000                           | 1000 | 500  | <=300 |       |    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

Luminance Limiting Curve

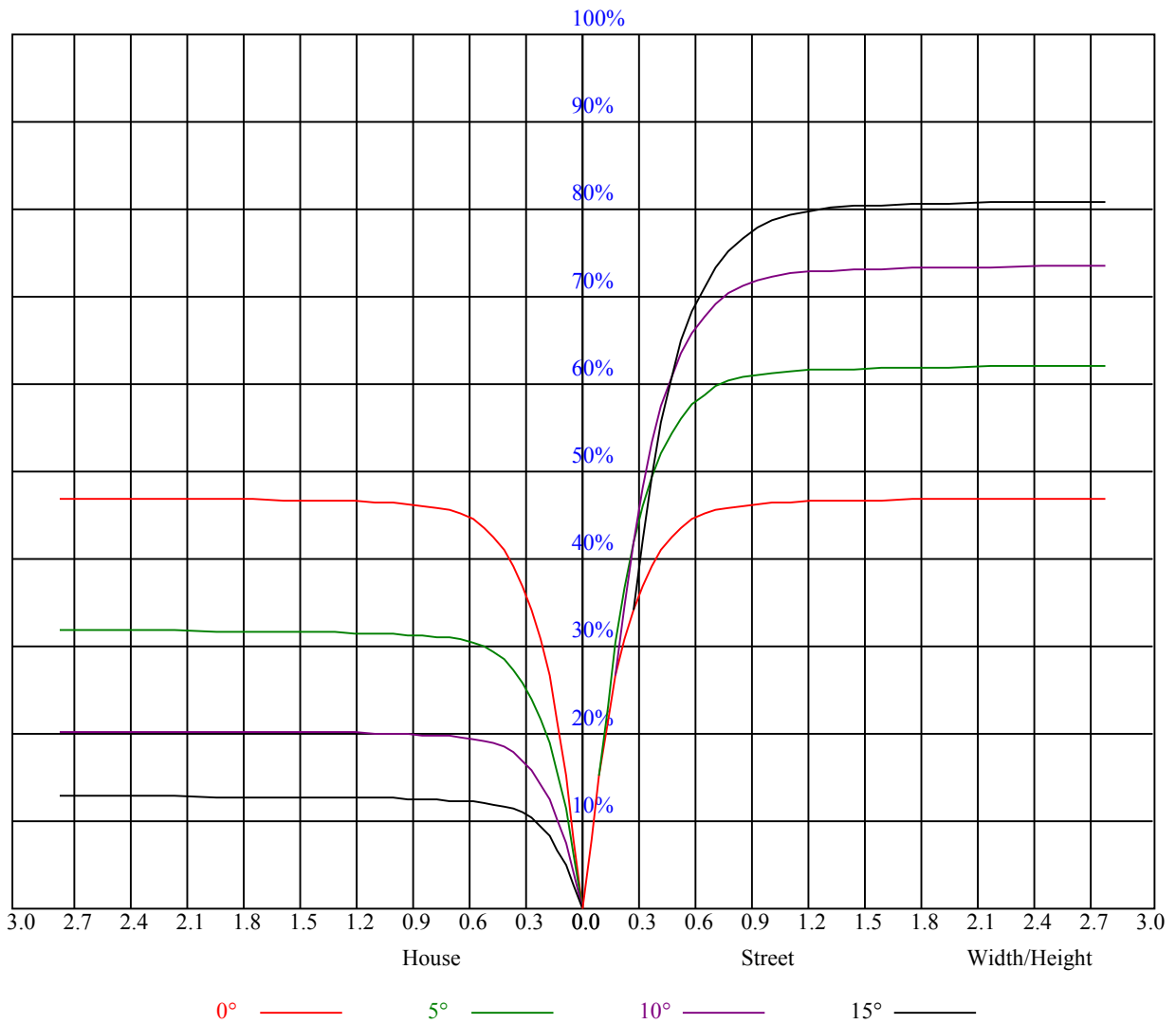


| Illumination assessment according UGR             |     |                  |     |     |     |     |                |     |     |     |  |
|---|-----|------------------|-----|-----|-----|-----|----------------|-----|-----|-----|--|
| Rf of Ceiling                                     | 70  | 70               | 50  | 50  | 30  | 70  | 70             | 50  | 50  | 30  |  |
| Rf of Wall  | 50  | 30               | 50  | 30  | 30  | 50  | 30             | 50  | 30  | 30  |  |
| Rf of Floor                                       | 20  | 20               | 20  | 20  | 20  | 20  | 20             | 20  | 20  | 20  |  |
| Room dimensions                                   |     | Viewed crosswise |     |     |     |     | Viewed endwise |     |     |     |  |
| X   | Y   |                  |     |     |     |     |                |     |     |     |  |
| 2H  | 2H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 3H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 4H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 6H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 8H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
| 4H  | 12H | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 2H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 3H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 4H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 6H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
| 8H  | 8H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 12H | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 4H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 6H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 8H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
| 12H   | 12H | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 4H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 6H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
|   | 8H  | 非数字              | 非数字 | 非数字 | 非数字 | 非数字 | 非数字            | 非数字 | 非数字 | 非数字 |  |
| Variation with the observer position at spacings: |     |                  |     |     |     |     |                |     |     |     |  |
| S = 1.0H  |     | 非数字/非数字          |     |     |     |     | 非数字/非数字        |     |     |     |  |
| S = 1.5H  |     | 非数字/非数字          |     |     |     |     | 非数字/非数字        |     |     |     |  |
| S = 2.0H  |     | 非数字/非数字          |     |     |     |     | 非数字/非数字        |     |     |     |  |
| Standard tables:                                  |     | BK0              |     |     |     |     | BK0            |     |     |     |  |
| Uncorrected UGR                                   |     | 负无穷大             |     |     |     |     | 负无穷大           |     |     |     |  |

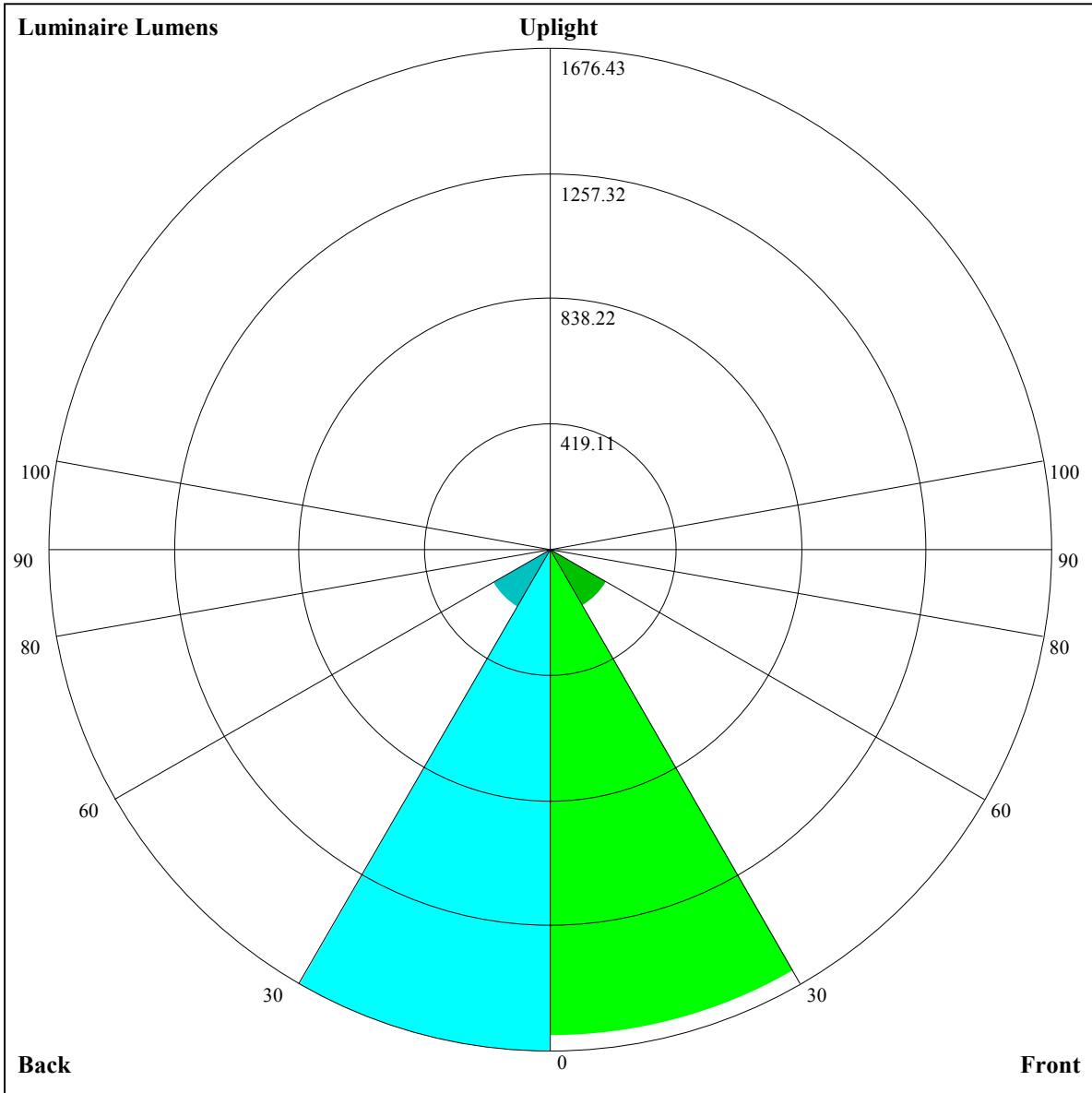
UGR calculation is based on CIE Publ. 117 ,S/H = 0.25



| RHOCC | 80                                      |      |      | 70   |      |      | 50   |      |      | 30   |      |      | 10   |      |      | 0    |
|-------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| RHOW  | 50                                      | 30   | 10   | 50   | 30   | 10   | 50   | 30   | 10   | 50   | 30   | 10   | 50   | 30   | 10   | 0    |
| RCR   | COEFFICIENTS OF UTILIZATION RHOFC=20 CU |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 0     | 1.12                                    | 1.12 | 1.12 | 1.09 | 1.09 | 1.09 | 1.05 | 1.05 | 1.05 | 1.00 | 1.00 | 1.00 | 0.96 | 0.96 | 0.96 | 0.94 |
| 1     | 1.06                                    | 1.04 | 1.02 | 1.04 | 1.02 | 1.00 | 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 | 0.98 | 0.96 | 0.93 | 0.95 | 0.93 | 0.91 | 0.93 | 0.91 | 0.89 | 0.90 | 0.89 | 0.87 | 0.86 |
| 3     | 0.95                                    | 0.91 | 0.88 | 0.94 | 0.90 | 0.87 | 0.91 | 0.88 | 0.86 | 0.89 | 0.87 | 0.85 | 0.87 | 0.85 | 0.84 | 0.82 |
| 4     | 0.91                                    | 0.86 | 0.83 | 0.90 | 0.86 | 0.83 | 0.88 | 0.84 | 0.82 | 0.86 | 0.83 | 0.81 | 0.84 | 0.82 | 0.80 | 0.79 |
| 5     | 0.87                                    | 0.82 | 0.79 | 0.86 | 0.82 | 0.79 | 0.84 | 0.81 | 0.78 | 0.83 | 0.80 | 0.77 | 0.81 | 0.79 | 0.77 | 0.76 |
| 6     | 0.83                                    | 0.79 | 0.76 | 0.82 | 0.78 | 0.75 | 0.81 | 0.78 | 0.75 | 0.80 | 0.77 | 0.74 | 0.79 | 0.76 | 0.74 | 0.73 |
| 7     | 0.80                                    | 0.76 | 0.72 | 0.79 | 0.75 | 0.72 | 0.78 | 0.75 | 0.72 | 0.77 | 0.74 | 0.72 | 0.76 | 0.73 | 0.71 | 0.70 |
| 8     | 0.77                                    | 0.73 | 0.70 | 0.77 | 0.72 | 0.70 | 0.76 | 0.72 | 0.69 | 0.75 | 0.71 | 0.69 | 0.74 | 0.71 | 0.69 | 0.68 |
| 9     | 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 | 0.66 | 0.66 |
| 10    | 0.72                                    | 0.68 | 0.65 | 0.72 | 0.68 | 0.65 | 0.71 | 0.67 | 0.65 | 0.70 | 0.67 | 0.65 | 0.70 | 0.67 | 0.64 | 0.63 |







Luminaire Lumens:

FL=1625.84,FM=214.37,FH=16.32,FVH=1.77

BL=1676.43,BM=221.9,BH=16.5,BVH=1.78

UL=0,UH=0

BUG Rating:B3-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    | 17921.71 | 17648.70 | 17136.11 | 16378.37 | 15397.76 | 14205.44 | 10897.84 | 10897.84 | 9810.27  |
| 45.0   | 17955.14 | 17955.14 | 17771.28 | 17080.39 | 16640.24 | 15715.35 | 14589.88 | 13325.12 | 11948.93 |
| 90.0   | 17838.14 | 17481.55 | 16896.53 | 16044.07 | 15013.32 | 13765.28 | 10750.77 | 10750.77 | 9938.94  |
| 135.0  | 17949.57 | 17793.56 | 17431.41 | 16790.67 | 15915.93 | 15291.90 | 14105.15 | 12260.94 | 11430.77 |
| 180.0  | 17921.71 | 17944.00 | 17715.56 | 17236.40 | 16523.23 | 15971.64 | 14428.30 | 13141.26 | 12327.80 |
| 225.0  | 17955.14 | 17615.27 | 17314.40 | 16623.52 | 15715.35 | 14601.02 | 13330.69 | 10615.36 | 10615.36 |
| 270.0  | 17838.14 | 17949.57 | 17815.85 | 17425.84 | 16812.96 | 15949.35 | 14890.75 | 13653.85 | 12311.08 |
| 315.0  | 17949.57 | 17843.71 | 17514.98 | 16913.25 | 16060.79 | 14974.32 | 13737.42 | 10970.27 | 10970.27 |
| 360.0  | 17921.71 | 17648.70 | 17136.11 | 16378.37 | 15397.76 | 14205.44 | 10897.84 | 10897.84 | 9810.27  |
| C/γ(°) | 9.0      | 10.0     | 11.0     | 12.0     | 13.0     | 14.0     | 15.0     | 16.0     | 17.0     |
| 0.0    | 9021.30  | 7371.00  | 6752.55  | 5862.77  | 5120.64  | 4514.96  | 4000.16  | 3566.16  | 3211.78  |
| 45.0   | 10544.88 | 9190.97  | 7965.22  | 6884.32  | 5976.15  | 5223.98  | 4599.95  | 4087.37  | 3652.78  |
| 90.0   | 8649.69  | 7492.47  | 6499.04  | 5681.11  | 4982.45  | 4400.74  | 3911.60  | 3509.28  | 3166.63  |
| 135.0  | 10099.15 | 8360.80  | 7686.63  | 6689.31  | 5848.00  | 5134.83  | 4533.10  | 4031.65  | 3613.78  |
| 180.0  | 10433.45 | 9631.13  | 8399.80  | 7307.76  | 6377.30  | 5591.70  | 4923.11  | 4360.37  | 3897.93  |
| 225.0  | 9313.29  | 8130.42  | 7069.55  | 6158.59  | 5415.93  | 4893.31  | 4335.57  | 3772.83  | 3455.25  |
| 270.0  | 10946.04 | 9597.70  | 8344.09  | 7658.78  | 6260.30  | 5457.98  | 5034.54  | 4215.51  | 3931.36  |
| 315.0  | 9604.64  | 8570.58  | 7411.68  | 6387.03  | 5558.54  | 4867.13  | 4299.35  | 3840.27  | 3438.01  |
| 360.0  | 9021.30  | 7371.00  | 6752.55  | 5862.77  | 5120.64  | 4514.96  | 4000.16  | 3566.16  | 3211.78  |
| C/γ(°) | 18.0     | 19.0     | 20.0     | 21.0     | 22.0     | 23.0     | 24.0     | 25.0     | 26.0     |
| 0.0    | 2903.13  | 2650.15  | 2429.54  | 2230.59  | 2052.30  | 1892.41  | 1743.08  | 1599.90  | 1463.97  |
| 45.0   | 3279.48  | 2967.47  | 2744.60  | 2744.60  | 2331.46  | 2148.18  | 1974.30  | 1815.51  | 1667.34  |
| 90.0   | 2877.48  | 2641.79  | 2431.17  | 2241.21  | 2141.45  | 1980.45  | 1767.62  | 1680.16  | 1533.62  |
| 135.0  | 3257.19  | 2956.33  | 2761.32  | 2761.32  | 2286.89  | 2181.61  | 2016.67  | 1862.34  | 1710.80  |
| 180.0  | 3513.49  | 3184.76  | 2906.18  | 2800.32  | 2761.32  | 2285.21  | 2113.07  | 1983.81  | 1798.27  |
| 225.0  | 3120.43  | 2840.69  | 2603.89  | 2394.43  | 2198.85  | 2021.13  | 1858.45  | 1705.23  | 1553.64  |
| 270.0  | 3502.34  | 3145.76  | 2844.89  | 2844.89  | 2414.46  | 2228.39  | 2059.03  | 1906.34  | 1758.16  |
| 315.0  | 3108.70  | 2829.02  | 2596.11  | 2389.96  | 2208.31  | 2037.27  | 1881.26  | 1733.09  | 1587.07  |
| 360.0  | 2903.13  | 2650.15  | 2429.54  | 2230.59  | 2052.30  | 1892.41  | 1743.08  | 1599.90  | 1463.97  |
| C/γ(°) | 27.0     | 28.0     | 29.0     | 30.0     | 31.0     | 32.0     | 33.0     | 34.0     | 35.0     |
| 0.0    | 1330.78  | 1074.90  | 1074.90  | 965.05   | 823.39   | 690.62   | 576.82   | 487.73   | 412.25   |
| 45.0   | 1522.47  | 1382.08  | 1244.42  | 1107.39  | 967.52   | 826.55   | 696.19   | 580.29   | 488.36   |
| 90.0   | 1267.86  | 1071.22  | 1071.22  | 918.37   | 772.77   | 640.58   | 532.88   | 447.25   | 374.67   |
| 135.0  | 1563.16  | 1412.72  | 1260.03  | 1107.39  | 954.17   | 805.42   | 668.91   | 553.54   | 462.18   |
| 180.0  | 1682.37  | 1536.93  | 1357.53  | 1233.85  | 1083.42  | 928.52   | 780.34   | 647.73   | 537.40   |
| 225.0  | 1412.14  | 1083.31  | 1054.61  | 995.85   | 907.28   | 766.31   | 590.17   | 527.36   | 443.00   |
| 270.0  | 1620.50  | 1482.37  | 1373.14  | 1201.53  | 1054.98  | 937.98   | 794.80   | 663.86   | 551.91   |
| 315.0  | 1443.37  | 1106.70  | 1077.58  | 1077.58  | 932.72   | 789.65   | 659.71   | 549.44   | 462.60   |
| 360.0  | 1330.78  | 1074.90  | 1074.90  | 965.05   | 823.39   | 690.62   | 576.82   | 487.73   | 412.25   |
| C/γ(°) | 36.0     | 37.0     | 38.0     | 39.0     | 40.0     | 41.0     | 42.0     | 43.0     | 44.0     |
| 0.0    | 347.18   | 290.04   | 241.47   | 200.26   | 166.15   | 137.77   | 114.85   | 96.14    | 81.26    |
| 45.0   | 411.46   | 371.35   | 311.17   | 289.46   | 237.48   | 173.51   | 144.86   | 121.00   | 101.71   |
| 90.0   | 314.69   | 262.08   | 217.56   | 180.60   | 161.26   | 124.89   | 105.07   | 94.93    | 75.90    |
| 135.0  | 386.39   | 323.47   | 290.57   | 290.57   | 192.85   | 160.89   | 129.41   | 112.22   | 94.14    |
| 180.0  | 448.25   | 375.82   | 314.53   | 302.81   | 281.68   | 193.06   | 148.96   | 133.67   | 111.80   |
| 225.0  | 373.25   | 314.85   | 264.39   | 220.87   | 184.34   | 155.06   | 130.67   | 111.49   | 95.56    |
| 270.0  | 463.86   | 391.96   | 330.15   | 277.21   | 277.21   | 190.64   | 158.90   | 133.19   | 112.69   |
| 315.0  | 390.91   | 329.62   | 275.95   | 229.70   | 190.38   | 157.90   | 130.88   | 113.38   | 92.30    |
| 360.0  | 347.18   | 290.04   | 241.47   | 200.26   | 166.15   | 137.77   | 114.85   | 96.14    | 81.26    |

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    | 70.22 | 64.91 | 55.56 | 52.77 | 48.78 | 44.15 | 42.79 | 41.05 | 39.11 |
| 45.0   | 85.99 | 73.96 | 65.02 | 58.03 | 53.14 | 49.15 | 45.73 | 43.99 | 41.10 |
| 90.0   | 69.65 | 61.60 | 55.45 | 50.83 | 46.94 | 43.63 | 41.47 | 39.47 | 37.69 |
| 135.0  | 79.95 | 68.86 | 59.97 | 53.35 | 48.36 | 44.31 | 41.26 | 39.53 | 38.16 |
| 180.0  | 88.04 | 79.95 | 68.96 | 60.55 | 54.14 | 48.88 | 44.84 | 41.84 | 40.21 |
| 225.0  | 82.84 | 72.90 | 65.23 | 59.40 | 54.98 | 51.98 | 48.30 | 46.31 | 44.68 |
| 270.0  | 95.93 | 87.67 | 76.74 | 68.07 | 61.55 | 56.56 | 52.40 | 48.73 | 46.31 |
| 315.0  | 79.00 | 70.64 | 62.55 | 56.40 | 52.19 | 48.67 | 45.62 | 43.52 | 41.84 |
| 360.0  | 70.22 | 64.91 | 55.56 | 52.77 | 48.78 | 44.15 | 42.79 | 41.05 | 39.11 |
| C/γ(°) | 54.0  | 55.0  | 56.0  | 57.0  | 58.0  | 59.0  | 60.0  | 61.0  | 62.0  |
| 0.0    | 37.69 | 37.32 | 36.74 | 36.16 | 35.90 | 35.48 | 33.96 | 32.06 | 29.96 |
| 45.0   | 39.21 | 38.53 | 38.16 | 37.79 | 37.32 | 37.11 | 36.48 | 35.32 | 33.27 |
| 90.0   | 37.00 | 36.58 | 36.06 | 35.64 | 35.80 | 34.95 | 33.32 | 32.33 | 28.44 |
| 135.0  | 37.00 | 36.74 | 36.53 | 36.16 | 35.85 | 35.85 | 34.69 | 32.90 | 31.91 |
| 180.0  | 38.69 | 37.74 | 37.63 | 37.42 | 37.21 | 37.27 | 37.06 | 35.48 | 33.69 |
| 225.0  | 42.94 | 42.42 | 41.94 | 41.10 | 40.21 | 39.11 | 37.21 | 34.32 | 31.70 |
| 270.0  | 44.10 | 42.00 | 40.79 | 40.37 | 39.42 | 38.58 | 38.27 | 37.11 | 35.01 |
| 315.0  | 40.05 | 39.16 | 38.84 | 38.16 | 37.53 | 37.21 | 36.27 | 34.22 | 32.22 |
| 360.0  | 37.69 | 37.32 | 36.74 | 36.16 | 35.90 | 35.48 | 33.96 | 32.06 | 29.96 |
| C/γ(°) | 63.0  | 64.0  | 65.0  | 66.0  | 67.0  | 68.0  | 69.0  | 70.0  | 71.0  |
| 0.0    | 26.44 | 23.07 | 20.18 | 17.61 | 15.72 | 14.24 | 13.40 | 12.30 | 11.41 |
| 45.0   | 30.96 | 27.23 | 23.71 | 20.66 | 17.87 | 15.98 | 14.56 | 13.40 | 12.35 |
| 90.0   | 24.65 | 22.71 | 18.55 | 16.98 | 15.19 | 13.77 | 12.67 | 11.72 | 10.88 |
| 135.0  | 27.96 | 25.65 | 22.71 | 19.82 | 17.29 | 15.61 | 14.19 | 13.04 | 12.04 |
| 180.0  | 31.59 | 28.91 | 24.49 | 22.23 | 19.03 | 16.82 | 15.14 | 13.77 | 12.56 |
| 225.0  | 27.81 | 24.18 | 21.24 | 18.55 | 16.56 | 15.09 | 13.88 | 12.83 | 11.77 |
| 270.0  | 32.90 | 30.17 | 26.07 | 22.86 | 20.03 | 17.77 | 15.51 | 14.30 | 13.09 |
| 315.0  | 29.44 | 25.65 | 22.71 | 19.87 | 18.24 | 16.35 | 14.24 | 13.46 | 12.40 |
| 360.0  | 26.44 | 23.07 | 20.18 | 17.61 | 15.72 | 14.24 | 13.40 | 12.30 | 11.41 |
| C/γ(°) | 72.0  | 73.0  | 74.0  | 75.0  | 76.0  | 77.0  | 78.0  | 79.0  | 80.0  |
| 0.0    | 10.51 | 9.72  | 8.99  | 8.41  | 7.78  | 7.15  | 6.57  | 5.99  | 5.41  |
| 45.0   | 11.46 | 10.99 | 9.93  | 9.25  | 8.78  | 8.20  | 7.52  | 6.83  | 6.25  |
| 90.0   | 10.20 | 9.51  | 8.83  | 8.25  | 7.57  | 6.99  | 6.41  | 5.78  | 5.10  |
| 135.0  | 11.20 | 10.46 | 9.78  | 9.15  | 8.46  | 7.94  | 7.31  | 6.68  | 6.36  |
| 180.0  | 11.67 | 10.83 | 10.14 | 9.41  | 8.73  | 8.20  | 7.52  | 6.83  | 6.20  |
| 225.0  | 10.99 | 10.20 | 9.67  | 8.94  | 7.88  | 7.52  | 6.89  | 6.25  | 5.68  |
| 270.0  | 12.04 | 11.14 | 10.35 | 9.57  | 8.83  | 8.25  | 7.62  | 6.94  | 6.41  |
| 315.0  | 11.46 | 10.62 | 9.78  | 9.04  | 8.46  | 7.78  | 7.15  | 6.62  | 6.04  |
| 360.0  | 10.51 | 9.72  | 8.99  | 8.41  | 7.78  | 7.15  | 6.57  | 5.99  | 5.41  |
| C/γ(°) | 81.0  | 82.0  | 83.0  | 84.0  | 85.0  | 86.0  | 87.0  | 88.0  | 89.0  |
| 0.0    | 4.78  | 4.26  | 3.68  | 3.15  | 2.79  | 2.37  | 2.05  | 1.68  | 1.26  |
| 45.0   | 5.73  | 4.89  | 4.31  | 3.73  | 3.21  | 2.63  | 2.21  | 1.89  | 1.47  |
| 90.0   | 4.57  | 4.05  | 3.42  | 2.89  | 2.52  | 2.21  | 1.89  | 1.52  | 1.37  |
| 135.0  | 5.47  | 4.84  | 4.15  | 3.78  | 3.31  | 2.94  | 2.52  | 2.05  | 1.42  |
| 180.0  | 5.62  | 5.05  | 4.31  | 3.73  | 3.21  | 2.79  | 2.37  | 1.94  | 1.58  |
| 225.0  | 5.05  | 4.26  | 3.78  | 3.31  | 2.79  | 2.31  | 2.00  | 1.68  | 1.26  |
| 270.0  | 5.83  | 5.26  | 4.57  | 3.94  | 3.36  | 2.89  | 2.42  | 2.10  | 1.79  |
| 315.0  | 5.47  | 4.89  | 4.26  | 3.78  | 3.26  | 2.84  | 2.47  | 2.10  | 1.73  |
| 360.0  | 4.78  | 4.26  | 3.68  | 3.15  | 2.79  | 2.37  | 2.05  | 1.68  | 1.26  |

Intensity data(cd)

|                 |      |
|-----------------|------|
| C/ $\gamma$ (°) | 90.0 |
| 0.0             | 1.21 |
| 45.0            | 1.26 |
| 90.0            | 1.47 |
| 135.0           | 1.21 |
| 180.0           | 1.16 |
| 225.0           | 1.16 |
| 270.0           | 1.31 |
| 315.0           | 1.42 |
| 360.0           | 1.21 |