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NT

Client:

LumCAT: 2-2684-L

Luminaire: 92.70.411.00

Report No: 2024418-B014

Ballast type: AC

Test No: 2024418-C014

Voltage(V): 33.660

LampCAT: NICHIA NFCWJ120B-V3

Current(A): 0.576

Lamp flux(lm): 2726.0

Power (W): 19.388

Number of Lamps: 1

PF: 0.000

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

### Photometric Results

Lumens(lm): 2341.66, Efficiency(%): 85.90% , Luminous Efficacy(lm/W): 120.78

Central intensity(cd): 5356.185, Maximum intensity(cd): 5356.185

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

Beam Angle(50%Imax): [C0/180]Total=35.2

[C90/270]Total=35.2

Field angle(10%Imax): [C0/180]Total=66.0

[C90/270]Total=66.0

Maximum s/h(1/2): C0\_180=0.58 C90\_270=0.58

Maximum s/h(1/4): C0\_180=0.59 C90\_270=0.59

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 85.90%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 98.002%

Equipment: GMS1980  
Temperature(°C): 25.0

Date: 2024/4/18  
Humidity(%): 60.0%

Operator: NT07  
Distance(m): 7.65

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0                | 5356.184      | 0.000       | 0         | 0.00%       | 0.00%      |
| 1.0                | 5342.431      | 5.119       | 5.119     | 0.19%       | 0.22%      |
| 2.0                | 5306.367      | 15.284      | 20.403    | 0.56%       | 0.87%      |
| 3.0                | 5250.331      | 25.248      | 45.651    | 0.93%       | 1.95%      |
| 4.0                | 5173.521      | 34.892      | 80.543    | 1.28%       | 3.44%      |
| 5.0                | 5072.277      | 44.077      | 124.62    | 1.62%       | 5.32%      |
| 6.0                | 4965.034      | 52.749      | 177.369   | 1.94%       | 7.57%      |
| 7.0                | 4827.872      | 60.784      | 238.153   | 2.23%       | 10.17%     |
| 8.0                | 4667.667      | 67.958      | 306.111   | 2.49%       | 13.07%     |
| 9.0                | 4497.220      | 74.276      | 380.388   | 2.72%       | 16.24%     |
| 10.0               | 4304.169      | 79.649      | 460.037   | 2.92%       | 19.65%     |
| 11.0               | 4102.339      | 83.998      | 544.035   | 3.08%       | 23.23%     |
| 12.0               | 3905.558      | 87.538      | 631.573   | 3.21%       | 26.97%     |
| 13.0               | 3666.201      | 89.858      | 721.431   | 3.30%       | 30.81%     |
| 14.0               | 3451.642      | 91.108      | 812.538   | 3.34%       | 34.70%     |
| 15.0               | 3244.692      | 91.930      | 904.469   | 3.37%       | 38.63%     |
| 16.0               | 3038.693      | 92.069      | 996.538   | 3.38%       | 42.56%     |
| 17.0               | 2808.041      | 91.049      | 1087.587  | 3.34%       | 46.45%     |
| 18.0               | 2607.236      | 89.286      | 1176.873  | 3.28%       | 50.26%     |
| 19.0               | 2408.333      | 87.261      | 1264.134  | 3.20%       | 53.98%     |
| 20.0               | 2210.965      | 84.546      | 1348.68   | 3.10%       | 57.59%     |
| 21.0               | 2007.234      | 80.998      | 1429.678  | 2.97%       | 61.05%     |
| 22.0               | 1820.913      | 76.928      | 1506.606  | 2.82%       | 64.34%     |
| 23.0               | 1653.539      | 72.903      | 1579.51   | 2.67%       | 67.45%     |
| 24.0               | 1503.136      | 69.016      | 1648.526  | 2.53%       | 70.40%     |
| 25.0               | 1311.504      | 63.999      | 1712.525  | 2.35%       | 73.13%     |
| 26.0               | 1236.537      | 60.147      | 1772.671  | 2.21%       | 75.70%     |
| 27.0               | 1153.830      | 58.481      | 1831.152  | 2.15%       | 78.20%     |
| 28.0               | 1058.899      | 56.022      | 1887.174  | 2.06%       | 80.59%     |
| 29.0               | 956.353       | 52.725      | 1939.899  | 1.93%       | 82.84%     |
| 30.0               | 838.752       | 48.467      | 1988.366  | 1.78%       | 84.91%     |
| 31.0               | 733.872       | 43.764      | 2032.13   | 1.61%       | 86.78%     |
| 32.0               | 631.597       | 39.119      | 2071.249  | 1.44%       | 88.45%     |
| 33.0               | 532.065       | 34.282      | 2105.531  | 1.26%       | 89.92%     |
| 34.0               | 427.704       | 29.045      | 2134.576  | 1.07%       | 91.16%     |
| 35.0               | 346.643       | 24.048      | 2158.625  | 0.88%       | 92.18%     |
| 36.0               | 272.181       | 19.703      | 2178.328  | 0.72%       | 93.02%     |
| 37.0               | 235.568       | 16.560      | 2194.888  | 0.61%       | 93.73%     |

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0               | 156.899       | 13.100      | 2207.988  | 0.48%       | 94.29%     |
| 39.0               | 99.861        | 8.764       | 2216.752  | 0.32%       | 94.67%     |
| 40.0               | 80.644        | 6.295       | 2223.047  | 0.23%       | 94.93%     |
| 41.0               | 71.961        | 5.434       | 2228.482  | 0.20%       | 95.17%     |
| 42.0               | 66.108        | 5.016       | 2233.498  | 0.18%       | 95.38%     |
| 43.0               | 61.405        | 4.723       | 2238.221  | 0.17%       | 95.58%     |
| 44.0               | 57.228        | 4.478       | 2242.699  | 0.16%       | 95.77%     |
| 45.0               | 53.965        | 4.273       | 2246.972  | 0.16%       | 95.96%     |
| 46.0               | 50.907        | 4.101       | 2251.073  | 0.15%       | 96.13%     |
| 47.0               | 48.018        | 3.935       | 2255.008  | 0.14%       | 96.30%     |
| 48.0               | 45.750        | 3.791       | 2258.798  | 0.14%       | 96.46%     |
| 49.0               | 43.504        | 3.665       | 2262.464  | 0.13%       | 96.62%     |
| 50.0               | 41.156        | 3.530       | 2265.994  | 0.13%       | 96.77%     |
| 51.0               | 39.086        | 3.395       | 2269.388  | 0.12%       | 96.91%     |
| 52.0               | 37.228        | 3.275       | 2272.663  | 0.12%       | 97.05%     |
| 53.0               | 35.479        | 3.163       | 2275.826  | 0.12%       | 97.19%     |
| 54.0               | 33.643        | 3.047       | 2278.872  | 0.11%       | 97.32%     |
| 55.0               | 31.975        | 2.929       | 2281.802  | 0.11%       | 97.44%     |
| 56.0               | 30.468        | 2.822       | 2284.623  | 0.10%       | 97.56%     |
| 57.0               | 28.961        | 2.717       | 2287.34   | 0.10%       | 97.68%     |
| 58.0               | 27.462        | 2.609       | 2289.95   | 0.10%       | 97.79%     |
| 59.0               | 26.160        | 2.507       | 2292.456  | 0.09%       | 97.90%     |
| 60.0               | 24.916        | 2.413       | 2294.869  | 0.09%       | 98.00%     |
| 61.0               | 23.746        | 2.322       | 2297.192  | 0.09%       | 98.10%     |
| 62.0               | 22.729        | 2.239       | 2299.431  | 0.08%       | 98.20%     |
| 63.0               | 21.653        | 2.159       | 2301.59   | 0.08%       | 98.29%     |
| 64.0               | 20.724        | 2.079       | 2303.669  | 0.08%       | 98.38%     |
| 65.0               | 19.927        | 2.012       | 2305.681  | 0.07%       | 98.46%     |
| 66.0               | 19.195        | 1.952       | 2307.633  | 0.07%       | 98.55%     |
| 67.0               | 18.288        | 1.885       | 2309.518  | 0.07%       | 98.63%     |
| 68.0               | 17.674        | 1.822       | 2311.339  | 0.07%       | 98.70%     |
| 69.0               | 17.096        | 1.774       | 2313.113  | 0.07%       | 98.78%     |
| 70.0               | 16.503        | 1.726       | 2314.839  | 0.06%       | 98.85%     |
| 71.0               | 15.882        | 1.674       | 2316.513  | 0.06%       | 98.93%     |
| 72.0               | 15.362        | 1.625       | 2318.137  | 0.06%       | 99.00%     |
| 73.0               | 14.909        | 1.583       | 2319.72   | 0.06%       | 99.06%     |
| 74.0               | 14.455        | 1.544       | 2321.264  | 0.06%       | 99.13%     |
| 75.0               | 14.031        | 1.505       | 2322.769  | 0.06%       | 99.19%     |

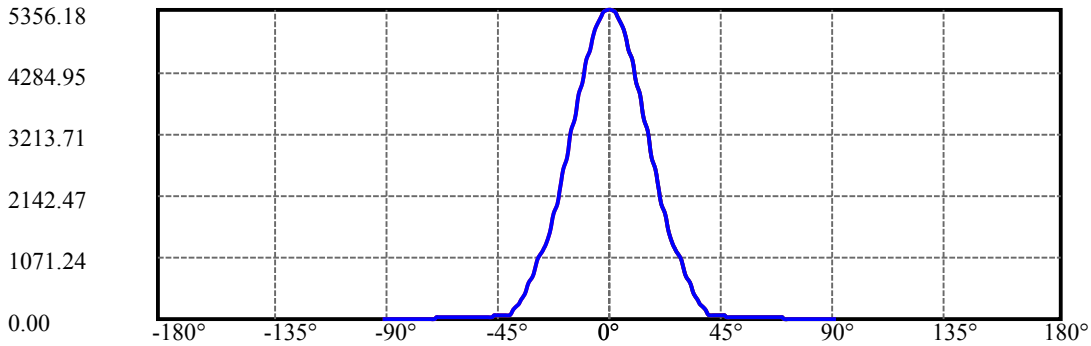
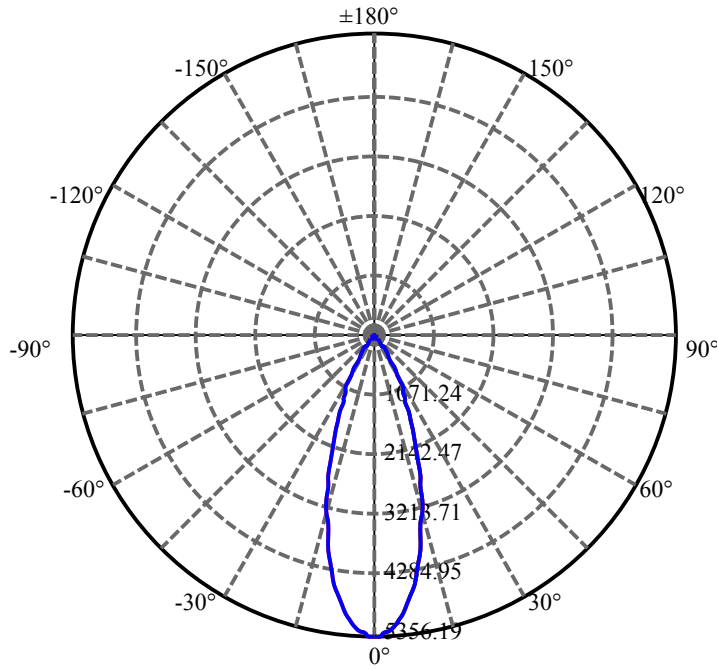
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0               | 13.658        | 1.470       | 2324.239  | 0.05%       | 99.26%     |
| 77.0               | 13.321        | 1.438       | 2325.677  | 0.05%       | 99.32%     |
| 78.0               | 12.970        | 1.407       | 2327.084  | 0.05%       | 99.38%     |
| 79.0               | 12.655        | 1.377       | 2328.461  | 0.05%       | 99.44%     |
| 80.0               | 12.304        | 1.346       | 2329.807  | 0.05%       | 99.49%     |
| 81.0               | 11.982        | 1.313       | 2331.12   | 0.05%       | 99.55%     |
| 82.0               | 11.683        | 1.283       | 2332.404  | 0.05%       | 99.60%     |
| 83.0               | 11.383        | 1.254       | 2333.657  | 0.05%       | 99.66%     |
| 84.0               | 10.995        | 1.219       | 2334.877  | 0.04%       | 99.71%     |
| 85.0               | 10.702        | 1.184       | 2336.061  | 0.04%       | 99.76%     |
| 86.0               | 10.490        | 1.158       | 2337.219  | 0.04%       | 99.81%     |
| 87.0               | 10.293        | 1.137       | 2338.357  | 0.04%       | 99.86%     |
| 88.0               | 10.132        | 1.119       | 2339.475  | 0.04%       | 99.91%     |
| 89.0               | 9.934         | 1.100       | 2340.575  | 0.04%       | 99.95%     |
| 90.0               | 9.934         | 1.089       | 2341.665  | 0.04%       | 100.00%    |

ZONAL LUMEN SUMMARY

| Zone    | Lumens  | %Lamp  | %Fixt   |
|---------|---------|--------|---------|
| 0-30    | 1988.37 | 72.94% | 84.91%  |
| 0-40    | 2223.05 | 81.55% | 94.93%  |
| 0-60    | 2294.87 | 84.18% | 98.00%  |
| 0-90    | 2340.58 | 85.86% | 99.95%  |
| 0-120   | 2340.58 | 85.86% | 99.95%  |
| 0-180   | 2341.66 | 85.90% | 100.00% |
| 60-90   | 45.71   | 1.68%  | 1.95%   |
| 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%   |
| 0-27.75 | 1873.33 | 68.72% | 80.00%  |

ZONAL LUMEN SUMMARY

|         |        |
|---------|--------|
| 0-10    | 460.04 |
| 10-20   | 888.64 |
| 20-30   | 639.69 |
| 30-40   | 234.68 |
| 40-50   | 42.95  |
| 50-60   | 28.88  |
| 60-70   | 19.97  |
| 70-80   | 14.97  |
| 80-90   | 10.77  |
| 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: —————

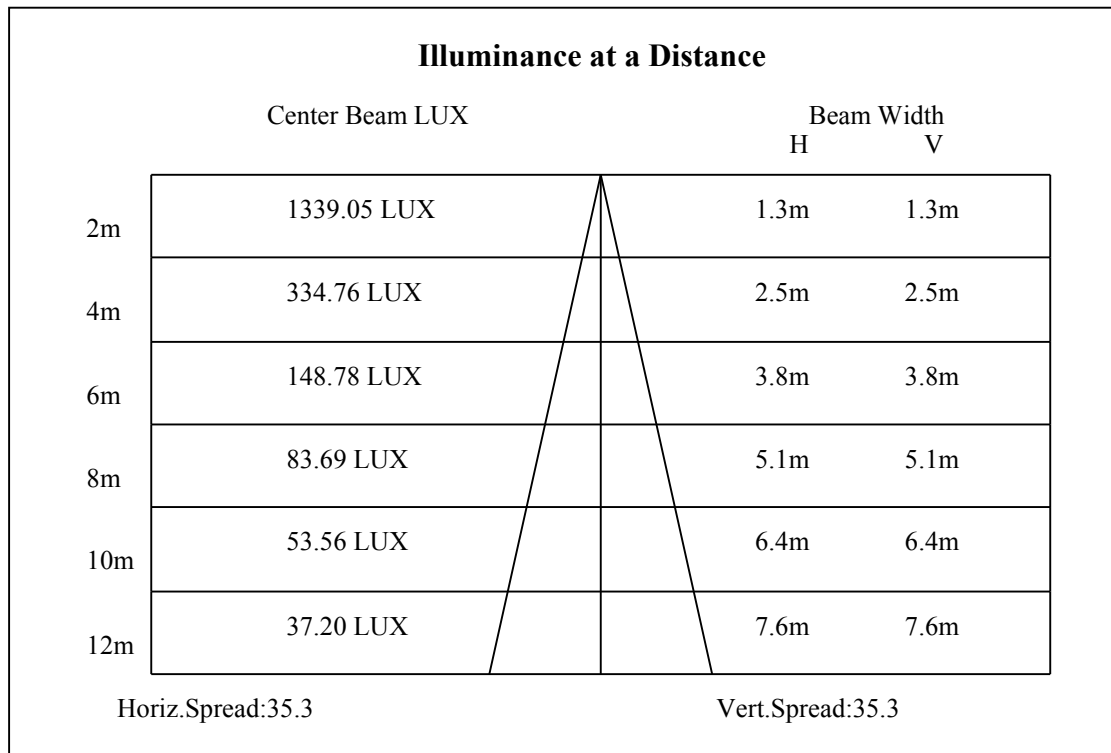
C90/C270: —————

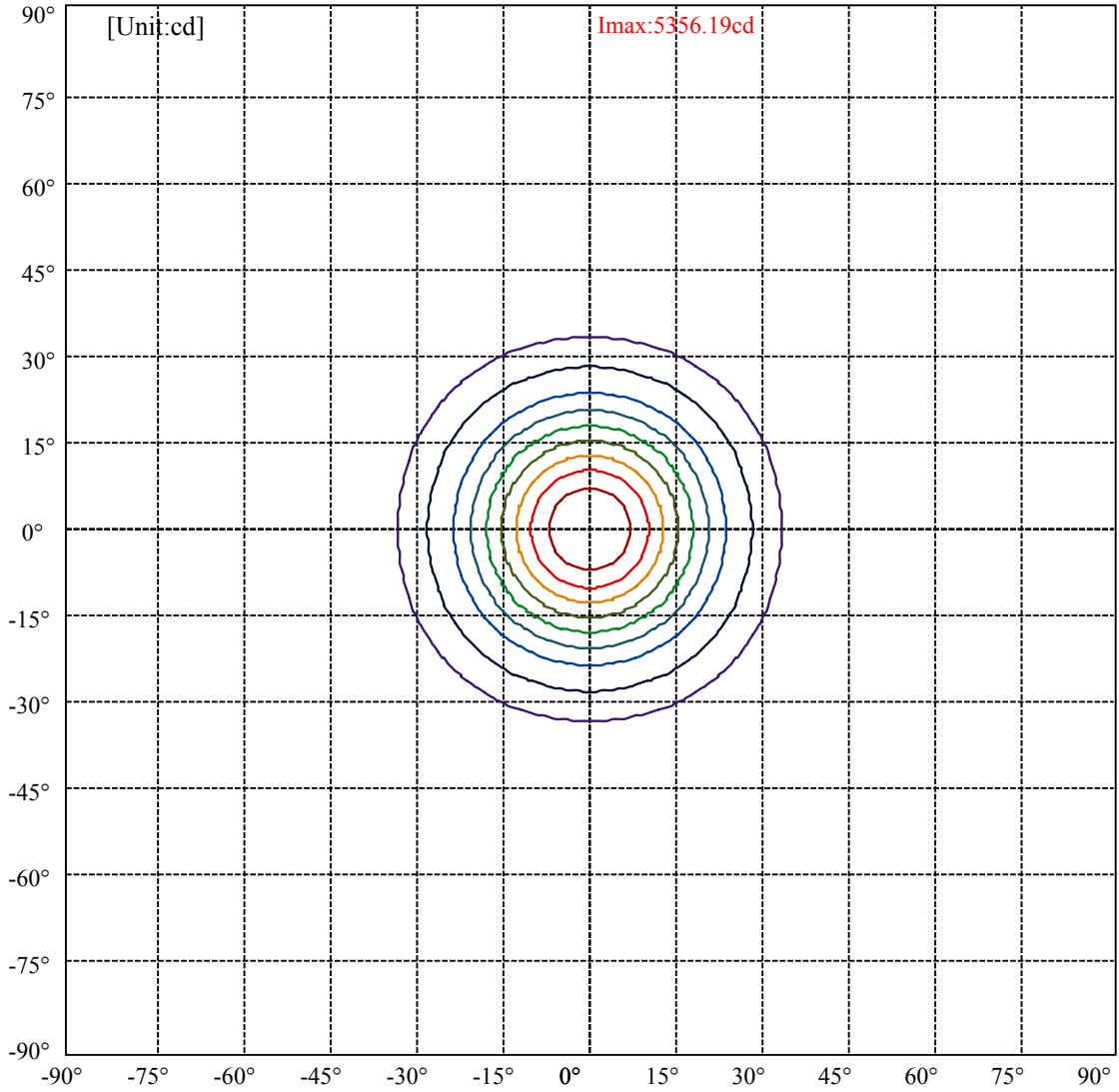
Field angle(10%Imax):C0/180Left:33.0 Right:33.0

:C90/270Left:33.0 Right:33.0

Beam Angle(50%Imax):C0/180Left:17.6 Right:17.6

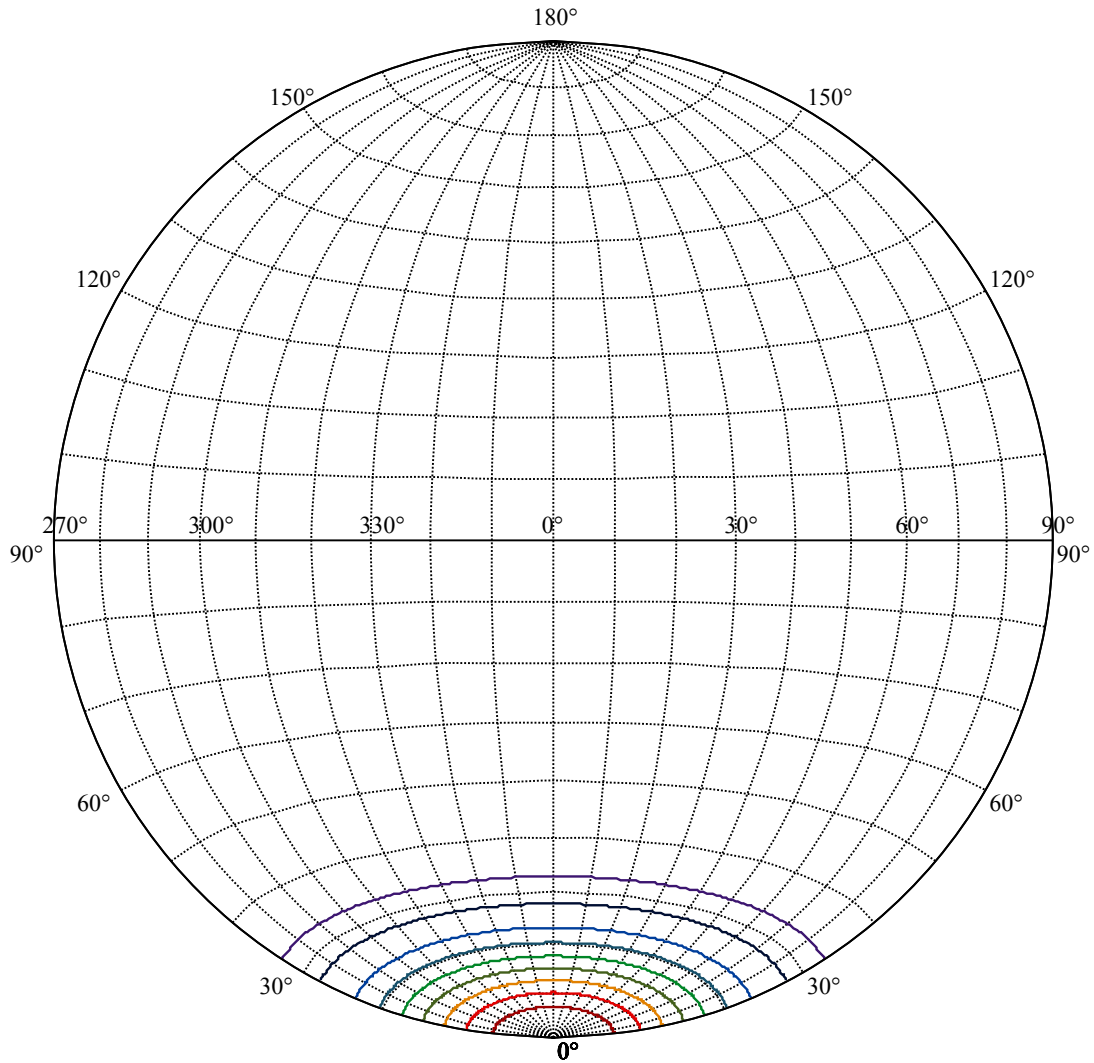
:C90/270Left:17.6 Right:17.6





|                   |   |
|-------------------|---|
| (10%Imax) 535.618 | — |
| (20%Imax) 1071.24 | — |
| (30%Imax) 1606.86 | — |
| (40%Imax) 2142.47 | — |
| (50%Imax) 2678.09 | — |
| (60%Imax) 3213.71 | — |
| (70%Imax) 3749.33 | — |
| (80%Imax) 4284.95 | — |
| (90%Imax) 4820.57 | — |





House

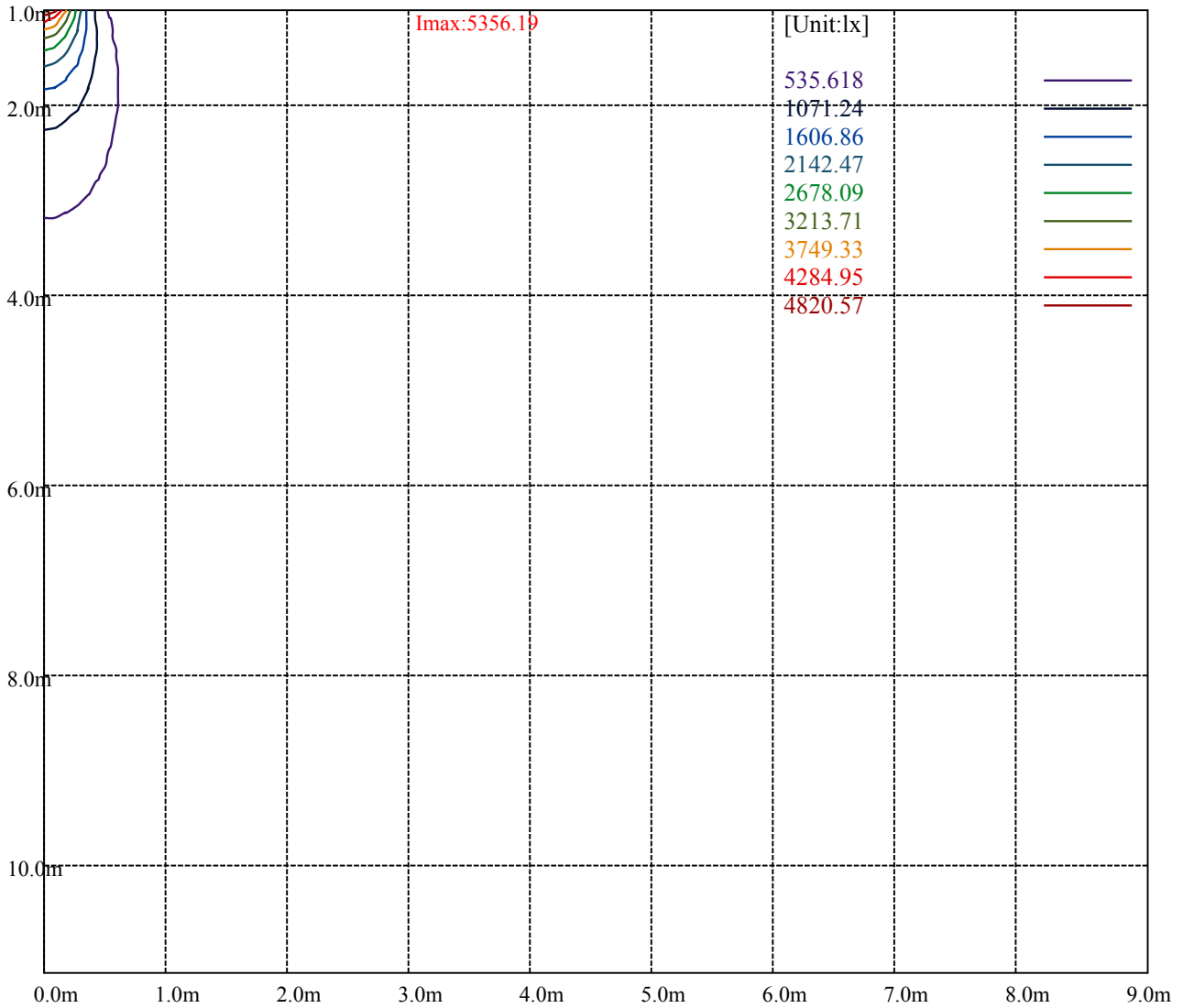
[Unit:cd]

Road

**Imax:5356.19**

|           |         |   |
|-----------|---------|---|
| (10%Imax) | 535.618 | — |
| (20%Imax) | 1071.24 | — |
| (30%Imax) | 1606.86 | — |
| (40%Imax) | 2142.47 | — |
| (50%Imax) | 2678.09 | — |
| (60%Imax) | 3213.71 | — |
| (70%Imax) | 3749.33 | — |
| (80%Imax) | 4284.95 | — |
| (90%Imax) | 4820.57 | — |





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

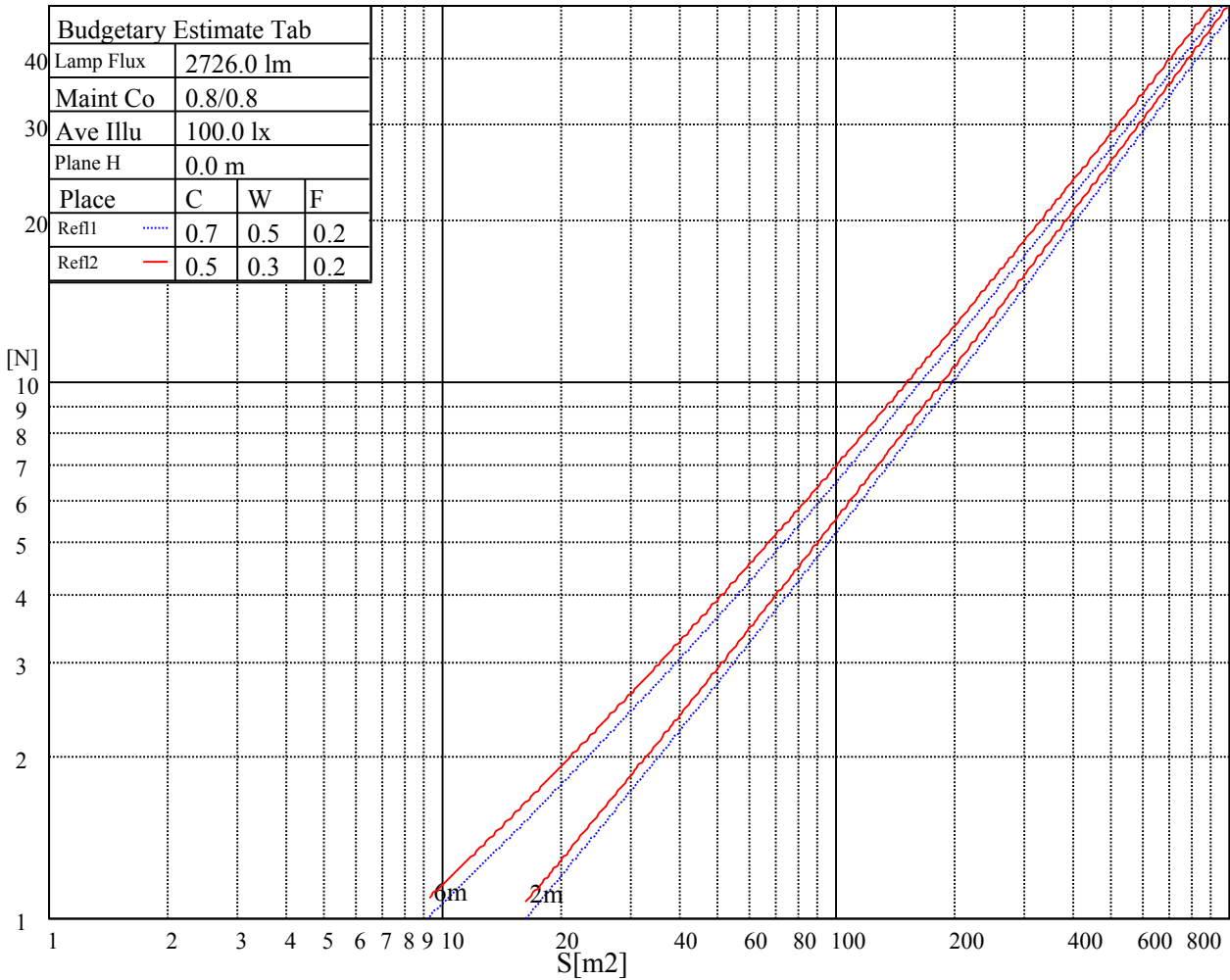
| Glare | Quality | Service Values Illuminance(lx) |      |      |       |       |       |       |       |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15  | A       | 2000                           | 1000 | 500  | <=300 |       |    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

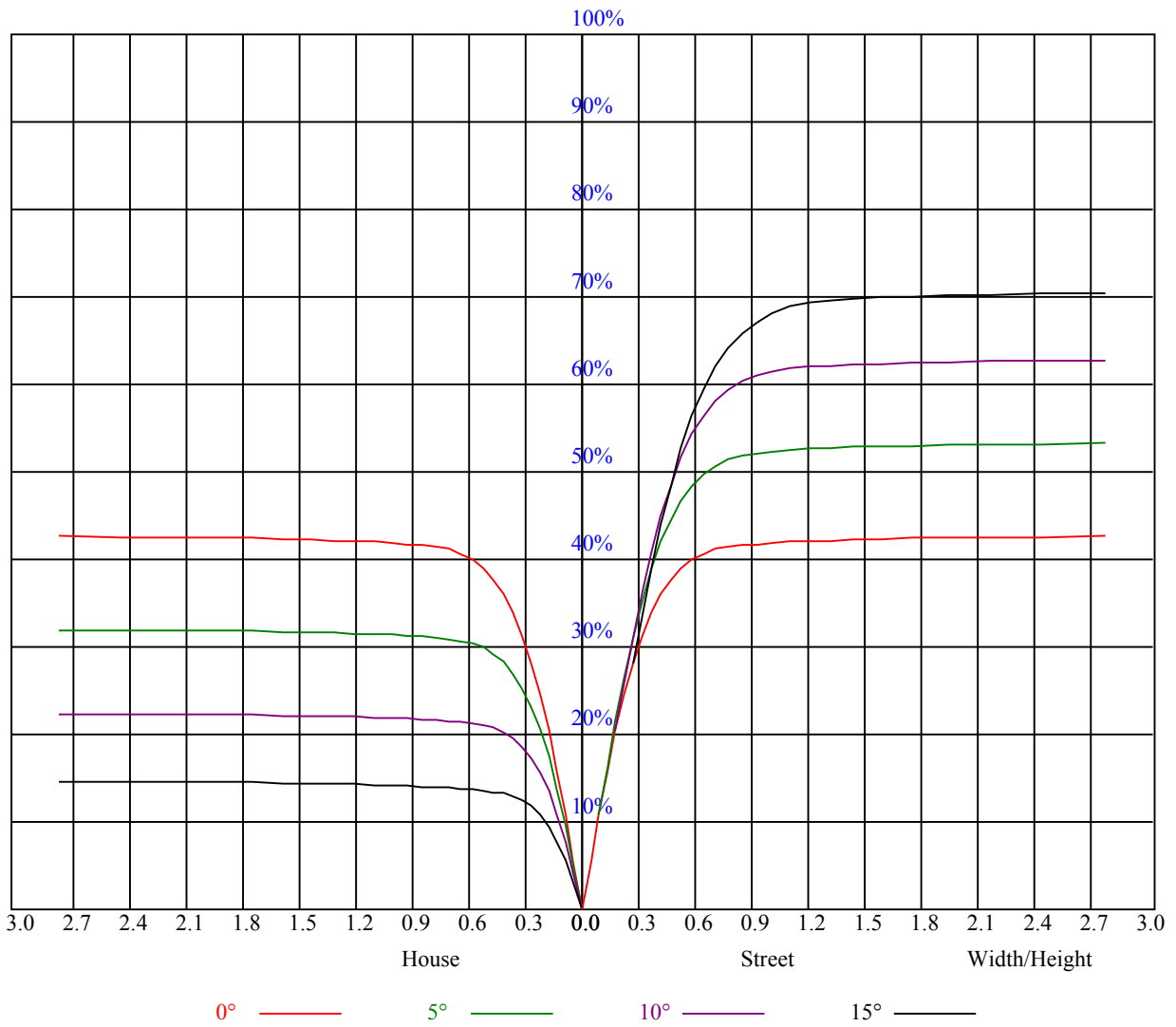


| Illumination assessment according UGR             |     |                  |     |     |     |     |                |     |     |     |     |
|---|-----|------------------|-----|-----|-----|-----|----------------|-----|-----|-----|-----|
| Rf of Ceiling                                     | 70  | 70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

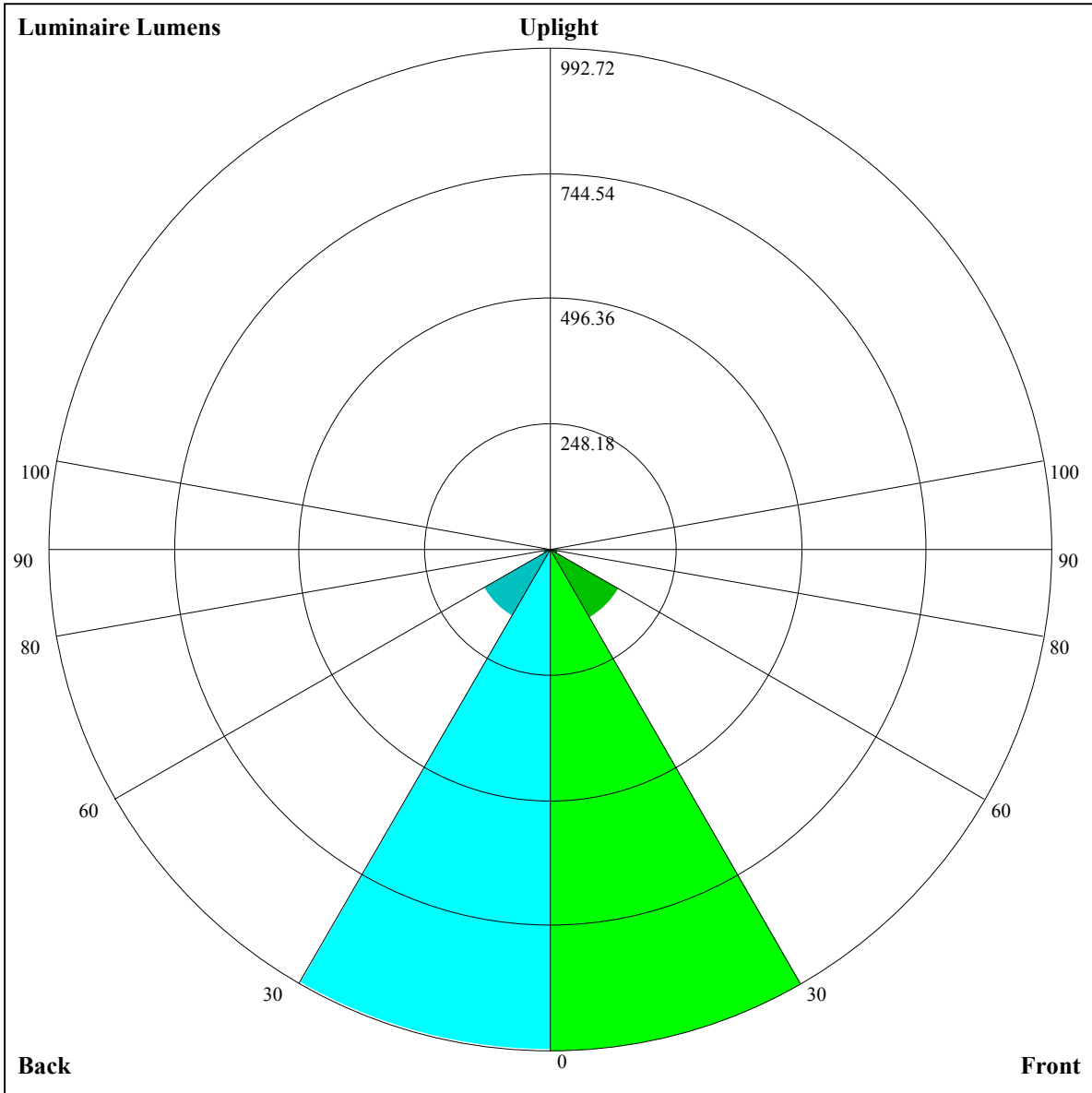
UGR calculation is based on CIE Publ. 117 ,S/H = 0.25



| RHOCC | 80                                     |      |      | 70   |      |      | 50   |      |      | 30   |      |      | 10   |      |      | 0    |
|-------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| RHOW  | 50                                     | 30   | 10   | 50   | 30   | 10   | 50   | 30   | 10   | 50   | 30   | 10   | 50   | 30   | 10   | 0    |
| RCR   | COEFFICIENTS OF UTILIZATION RHOF=20 CU |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 0     | 1.02                                   | 1.02 | 1.02 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 | 0.91 | 0.91 | 0.91 | 0.88 | 0.88 | 0.88 | 0.86 |
| 1     | 0.96                                   | 0.94 | 0.92 | 0.94 | 0.92 | 0.90 | 0.90 | 0.89 | 0.88 | 0.87 | 0.86 | 0.85 | 0.84 | 0.83 | 0.82 | 0.81 |
| 2     | 0.90                                   | 0.87 | 0.84 | 0.88 | 0.85 | 0.83 | 0.86 | 0.83 | 0.81 | 0.83 | 0.81 | 0.79 | 0.81 | 0.79 | 0.78 | 0.76 |
| 3     | 0.85                                   | 0.81 | 0.78 | 0.84 | 0.80 | 0.77 | 0.81 | 0.78 | 0.76 | 0.79 | 0.77 | 0.75 | 0.77 | 0.75 | 0.74 | 0.72 |
| 4     | 0.80                                   | 0.76 | 0.73 | 0.79 | 0.75 | 0.72 | 0.77 | 0.74 | 0.72 | 0.76 | 0.73 | 0.71 | 0.74 | 0.72 | 0.70 | 0.69 |
| 5     | 0.76                                   | 0.72 | 0.69 | 0.75 | 0.71 | 0.68 | 0.74 | 0.70 | 0.68 | 0.73 | 0.69 | 0.67 | 0.71 | 0.69 | 0.66 | 0.65 |
| 6     | 0.73                                   | 0.68 | 0.65 | 0.72 | 0.68 | 0.65 | 0.71 | 0.67 | 0.64 | 0.69 | 0.66 | 0.64 | 0.68 | 0.66 | 0.63 | 0.62 |
| 7     | 0.69                                   | 0.65 | 0.62 | 0.69 | 0.64 | 0.61 | 0.68 | 0.64 | 0.61 | 0.67 | 0.63 | 0.61 | 0.66 | 0.63 | 0.60 | 0.59 |
| 8     | 0.66                                   | 0.62 | 0.59 | 0.66 | 0.61 | 0.59 | 0.65 | 0.61 | 0.58 | 0.64 | 0.61 | 0.58 | 0.63 | 0.60 | 0.58 | 0.57 |
| 9     | 0.63                                   | 0.59 | 0.56 | 0.63 | 0.59 | 0.56 | 0.62 | 0.58 | 0.56 | 0.61 | 0.58 | 0.56 | 0.61 | 0.58 | 0.55 | 0.54 |
| 10    | 0.61                                   | 0.56 | 0.54 | 0.60 | 0.56 | 0.54 | 0.60 | 0.56 | 0.53 | 0.59 | 0.56 | 0.53 | 0.59 | 0.55 | 0.53 | 0.52 |







Luminaire Lumens:

FL=992.72,FM=155.64,FH=17.51,FVH=5.95

BL=989.89,BM=154.07,BH=17.48,BVH=5.92

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    | 5361.89 | 5343.75 | 5308.05 | 5250.70 | 5157.06 | 5070.45 | 4966.86 | 4801.83 | 4661.38 |
| 45.0   | 5354.28 | 5360.13 | 5343.16 | 5301.03 | 5250.11 | 5175.79 | 5066.94 | 4956.91 | 4795.39 |
| 90.0   | 5357.21 | 5339.65 | 5301.03 | 5224.36 | 5149.45 | 5022.46 | 4914.78 | 4780.18 | 4625.09 |
| 135.0  | 5351.36 | 5349.60 | 5329.12 | 5284.06 | 5208.56 | 5126.04 | 5033.58 | 4917.12 | 4753.84 |
| 180.0  | 5361.89 | 5359.55 | 5318.58 | 5267.67 | 5196.27 | 5092.10 | 4992.03 | 4868.55 | 4696.49 |
| 225.0  | 5354.28 | 5306.29 | 5250.70 | 5188.08 | 5092.69 | 4966.86 | 4843.38 | 4696.49 | 4537.31 |
| 270.0  | 5357.21 | 5357.79 | 5327.36 | 5279.96 | 5203.29 | 5113.17 | 5009.58 | 4882.59 | 4709.95 |
| 315.0  | 5351.36 | 5322.68 | 5272.94 | 5206.81 | 5130.73 | 5011.34 | 4893.12 | 4719.31 | 4561.89 |
| 360.0  | 5361.89 | 5343.75 | 5308.05 | 5250.70 | 5157.06 | 5070.45 | 4966.86 | 4801.83 | 4661.38 |
| C/γ(°) | 9.0     | 10.0    | 11.0    | 12.0    | 13.0    | 14.0    | 15.0    | 16.0    | 17.0    |
| 0.0    | 4450.69 | 4270.45 | 4072.05 | 3867.23 | 3610.90 | 3412.51 | 3211.77 | 3012.80 | 2770.51 |
| 45.0   | 4652.01 | 4491.66 | 4312.00 | 4123.55 | 3867.23 | 3662.40 | 3457.57 | 3250.98 | 3005.19 |
| 90.0   | 4459.47 | 4228.31 | 4035.77 | 3835.04 | 3631.96 | 3381.49 | 3173.73 | 2926.77 | 2733.64 |
| 135.0  | 4616.90 | 4405.05 | 4220.70 | 4030.50 | 3781.20 | 3578.71 | 3372.71 | 3169.64 | 2927.35 |
| 180.0  | 4537.89 | 4364.08 | 4131.75 | 3931.01 | 3684.64 | 3480.98 | 3281.42 | 3080.68 | 2838.40 |
| 225.0  | 4312.00 | 4128.82 | 3885.37 | 3681.71 | 3486.83 | 3234.60 | 3042.06 | 2846.01 | 2601.38 |
| 270.0  | 4559.55 | 4389.25 | 4196.71 | 4009.43 | 3756.03 | 3552.96 | 3304.82 | 3101.17 | 2910.97 |
| 315.0  | 4389.25 | 4155.74 | 3964.37 | 3765.98 | 3510.82 | 3309.51 | 3113.46 | 2921.50 | 2676.88 |
| 360.0  | 4450.69 | 4270.45 | 4072.05 | 3867.23 | 3610.90 | 3412.51 | 3211.77 | 3012.80 | 2770.51 |
| C/γ(°) | 18.0    | 19.0    | 20.0    | 21.0    | 22.0    | 23.0    | 24.0    | 25.0    | 26.0    |
| 0.0    | 2583.24 | 2395.97 | 2161.29 | 1981.63 | 1810.74 | 1613.52 | 1471.90 | 1276.43 | 1154.82 |
| 45.0   | 2807.38 | 2614.26 | 2382.51 | 2192.31 | 1968.17 | 1798.45 | 1645.13 | 1505.26 | 1349.59 |
| 90.0   | 2541.11 | 2305.85 | 2126.77 | 1948.86 | 1741.10 | 1588.94 | 1453.76 | 1160.44 | 1160.44 |
| 135.0  | 2730.72 | 2538.18 | 2347.98 | 2112.72 | 1940.08 | 1775.05 | 1588.94 | 1453.76 | 1339.05 |
| 180.0  | 2641.18 | 2436.35 | 2248.49 | 2020.84 | 1844.69 | 1679.65 | 1498.82 | 1375.34 | 1272.34 |
| 225.0  | 2407.09 | 2219.82 | 2030.79 | 1858.15 | 1658.00 | 1519.30 | 1394.06 | 1164.13 | 1164.13 |
| 270.0  | 2664.59 | 2465.61 | 2281.85 | 2055.37 | 1879.22 | 1708.92 | 1557.93 | 1396.41 | 1291.65 |
| 315.0  | 2482.58 | 2290.63 | 2108.04 | 1887.99 | 1725.30 | 1544.47 | 1414.55 | 1160.27 | 1160.27 |
| 360.0  | 2583.24 | 2395.97 | 2161.29 | 1981.63 | 1810.74 | 1613.52 | 1471.90 | 1276.43 | 1154.82 |
| C/γ(°) | 27.0    | 28.0    | 29.0    | 30.0    | 31.0    | 32.0    | 33.0    | 34.0    | 35.0    |
| 0.0    | 1132.18 | 1038.36 | 916.11  | 813.64  | 713.51  | 618.47  | 504.11  | 416.62  | 332.52  |
| 45.0   | 1243.08 | 1152.37 | 1061.66 | 938.17  | 839.86  | 738.61  | 639.12  | 522.08  | 434.88  |
| 90.0   | 1116.49 | 1024.49 | 930.39  | 804.51  | 702.97  | 605.42  | 490.01  | 404.92  | 325.62  |
| 135.0  | 1211.47 | 1120.18 | 1024.20 | 900.72  | 799.48  | 698.23  | 599.91  | 484.62  | 400.35  |
| 180.0  | 1159.97 | 1072.19 | 975.04  | 845.12  | 739.78  | 637.95  | 543.73  | 434.30  | 354.12  |
| 225.0  | 1071.61 | 947.71  | 844.66  | 740.49  | 614.95  | 521.14  | 435.06  | 337.27  | 265.98  |
| 270.0  | 1200.94 | 1111.99 | 993.19  | 887.84  | 782.50  | 653.17  | 556.61  | 441.32  | 358.22  |
| 315.0  | 1094.90 | 1003.89 | 905.58  | 779.52  | 677.92  | 579.78  | 487.96  | 380.51  | 301.45  |
| 360.0  | 1132.18 | 1038.36 | 916.11  | 813.64  | 713.51  | 618.47  | 504.11  | 416.62  | 332.52  |
| C/γ(°) | 36.0    | 37.0    | 38.0    | 39.0    | 40.0    | 41.0    | 42.0    | 43.0    | 44.0    |
| 0.0    | 257.26  | 193.48  | 129.92  | 94.57   | 77.54   | 71.16   | 65.49   | 60.22   | 56.65   |
| 45.0   | 333.05  | 295.01  | 295.01  | 125.47  | 91.70   | 76.78   | 69.29   | 64.32   | 60.34   |
| 90.0   | 235.73  | 175.74  | 117.98  | 88.31   | 75.38   | 69.29   | 64.08   | 58.99   | 55.36   |
| 135.0  | 320.18  | 300.86  | 216.07  | 121.20  | 92.35   | 78.13   | 72.04   | 66.83   | 60.16   |
| 180.0  | 297.35  | 297.35  | 141.04  | 102.59  | 82.46   | 75.03   | 68.24   | 63.73   | 58.05   |
| 225.0  | 203.83  | 151.28  | 102.71  | 82.81   | 75.08   | 68.94   | 63.09   | 58.93   | 55.65   |
| 270.0  | 299.11  | 299.11  | 138.05  | 98.20   | 77.89   | 69.35   | 64.20   | 60.45   | 56.94   |
| 315.0  | 230.93  | 171.71  | 114.41  | 85.74   | 72.74   | 67.01   | 62.44   | 57.76   | 54.66   |
| 360.0  | 257.26  | 193.48  | 129.92  | 94.57   | 77.54   | 71.16   | 65.49   | 60.22   | 56.65   |

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    | 53.61 | 49.92 | 47.46 | 45.18 | 43.01 | 40.50 | 38.68 | 36.87 | 35.17 |
| 45.0   | 56.18 | 52.61 | 49.92 | 47.58 | 45.30 | 42.66 | 40.67 | 38.86 | 36.75 |
| 90.0   | 52.44 | 49.80 | 46.88 | 44.71 | 42.66 | 40.15 | 38.39 | 36.28 | 34.65 |
| 135.0  | 56.77 | 53.67 | 50.21 | 47.81 | 45.41 | 42.66 | 40.61 | 38.68 | 36.93 |
| 180.0  | 55.01 | 52.26 | 48.98 | 46.64 | 44.36 | 42.37 | 39.85 | 37.98 | 36.17 |
| 225.0  | 51.85 | 49.10 | 46.12 | 43.89 | 41.73 | 39.33 | 37.45 | 35.64 | 33.94 |
| 270.0  | 54.02 | 50.68 | 48.22 | 46.06 | 43.48 | 41.49 | 39.21 | 37.45 | 35.76 |
| 315.0  | 51.85 | 49.22 | 46.35 | 44.13 | 42.08 | 40.09 | 37.81 | 36.05 | 34.47 |
| 360.0  | 53.61 | 49.92 | 47.46 | 45.18 | 43.01 | 40.50 | 38.68 | 36.87 | 35.17 |
| C/γ(°) | 54.0  | 55.0  | 56.0  | 57.0  | 58.0  | 59.0  | 60.0  | 61.0  | 62.0  |
| 0.0    | 33.18 | 31.72 | 30.26 | 28.44 | 27.15 | 25.69 | 24.52 | 23.53 | 22.53 |
| 45.0   | 35.11 | 33.47 | 31.60 | 30.26 | 28.44 | 27.15 | 25.93 | 24.76 | 23.64 |
| 90.0   | 33.01 | 31.19 | 29.79 | 28.32 | 27.04 | 25.87 | 24.40 | 23.41 | 22.47 |
| 135.0  | 34.76 | 33.12 | 31.60 | 30.14 | 28.38 | 27.10 | 25.63 | 24.40 | 23.35 |
| 180.0  | 34.41 | 32.48 | 31.02 | 29.50 | 27.80 | 26.57 | 25.40 | 23.94 | 23.00 |
| 225.0  | 32.48 | 30.61 | 29.09 | 27.74 | 26.51 | 25.05 | 23.94 | 22.65 | 21.71 |
| 270.0  | 33.77 | 32.25 | 30.84 | 29.44 | 27.80 | 26.63 | 25.40 | 24.23 | 23.00 |
| 315.0  | 32.42 | 30.96 | 29.55 | 27.86 | 26.57 | 25.22 | 24.11 | 23.06 | 22.12 |
| 360.0  | 33.18 | 31.72 | 30.26 | 28.44 | 27.15 | 25.69 | 24.52 | 23.53 | 22.53 |
| C/γ(°) | 63.0  | 64.0  | 65.0  | 66.0  | 67.0  | 68.0  | 69.0  | 70.0  | 71.0  |
| 0.0    | 21.36 | 20.60 | 19.84 | 19.14 | 18.20 | 17.62 | 17.03 | 16.33 | 15.74 |
| 45.0   | 22.47 | 21.54 | 20.66 | 19.96 | 19.02 | 18.32 | 17.67 | 16.97 | 16.44 |
| 90.0   | 21.59 | 20.48 | 19.78 | 18.84 | 18.14 | 17.56 | 16.85 | 16.27 | 15.74 |
| 135.0  | 22.18 | 21.24 | 20.42 | 19.72 | 18.73 | 18.02 | 17.50 | 16.97 | 16.21 |
| 180.0  | 21.71 | 20.83 | 20.01 | 19.31 | 18.32 | 17.73 | 17.21 | 16.68 | 15.92 |
| 225.0  | 20.83 | 19.78 | 19.08 | 18.38 | 17.62 | 17.03 | 16.50 | 15.92 | 15.45 |
| 270.0  | 22.06 | 21.13 | 20.13 | 19.43 | 18.43 | 17.85 | 17.26 | 16.74 | 16.04 |
| 315.0  | 21.01 | 20.19 | 19.49 | 18.79 | 17.85 | 17.26 | 16.74 | 16.15 | 15.51 |
| 360.0  | 21.36 | 20.60 | 19.84 | 19.14 | 18.20 | 17.62 | 17.03 | 16.33 | 15.74 |
| C/γ(°) | 72.0  | 73.0  | 74.0  | 75.0  | 76.0  | 77.0  | 78.0  | 79.0  | 80.0  |
| 0.0    | 15.33 | 14.81 | 14.40 | 13.99 | 13.64 | 13.28 | 12.99 | 12.64 | 12.35 |
| 45.0   | 15.74 | 15.33 | 14.92 | 14.34 | 13.99 | 13.69 | 13.34 | 13.05 | 12.70 |
| 90.0   | 15.16 | 14.75 | 14.34 | 13.99 | 13.58 | 13.28 | 12.99 | 12.64 | 12.29 |
| 135.0  | 15.68 | 15.22 | 14.69 | 14.28 | 13.87 | 13.52 | 13.17 | 12.87 | 12.52 |
| 180.0  | 15.45 | 15.04 | 14.46 | 14.05 | 13.75 | 13.28 | 12.93 | 12.70 | 12.29 |
| 225.0  | 14.92 | 14.40 | 14.05 | 13.64 | 13.28 | 12.99 | 12.58 | 12.23 | 11.88 |
| 270.0  | 15.51 | 15.16 | 14.63 | 14.16 | 13.81 | 13.46 | 13.05 | 12.70 | 12.41 |
| 315.0  | 15.10 | 14.57 | 14.16 | 13.81 | 13.34 | 13.05 | 12.70 | 12.41 | 12.00 |
| 360.0  | 15.33 | 14.81 | 14.40 | 13.99 | 13.64 | 13.28 | 12.99 | 12.64 | 12.35 |
| C/γ(°) | 81.0  | 82.0  | 83.0  | 84.0  | 85.0  | 86.0  | 87.0  | 88.0  | 89.0  |
| 0.0    | 12.00 | 11.76 | 11.47 | 11.00 | 10.71 | 10.53 | 10.36 | 10.12 | 9.95  |
| 45.0   | 12.35 | 12.00 | 11.76 | 11.35 | 10.94 | 10.71 | 10.48 | 10.30 | 10.12 |
| 90.0   | 12.00 | 11.65 | 11.29 | 10.94 | 10.65 | 10.48 | 10.24 | 10.12 | 9.89  |
| 135.0  | 12.23 | 11.88 | 11.53 | 11.18 | 10.83 | 10.59 | 10.36 | 10.12 | 10.01 |
| 180.0  | 12.00 | 11.65 | 11.41 | 10.94 | 10.71 | 10.48 | 10.30 | 10.12 | 9.89  |
| 225.0  | 11.59 | 11.41 | 11.06 | 10.65 | 10.48 | 10.30 | 10.12 | 9.95  | 9.89  |
| 270.0  | 11.94 | 11.65 | 11.35 | 11.12 | 10.71 | 10.48 | 10.30 | 10.12 | 9.89  |
| 315.0  | 11.76 | 11.47 | 11.18 | 10.77 | 10.59 | 10.36 | 10.18 | 10.18 | 9.83  |
| 360.0  | 12.00 | 11.76 | 11.47 | 11.00 | 10.71 | 10.53 | 10.36 | 10.12 | 9.95  |

Intensity data(cd)

|        |       |
|--------|-------|
| C/γ(°) | 90.0  |
| 0.0    | 9.89  |
| 45.0   | 9.89  |
| 90.0   | 9.89  |
| 135.0  | 9.83  |
| 180.0  | 9.95  |
| 225.0  | 9.95  |
| 270.0  | 10.01 |
| 315.0  | 10.07 |
| 360.0  | 9.89  |