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NT

Client:

LumCAT: 3-2835-L

Luminaire: 92.70.411.00

Report No: 2024422-B008

Ballast type: AC

Test No: 2024422-C008

Voltage(V): 0.000

LampCAT: NICHIA NFCWJ120B-V3

Current(A): 0.000

Lamp flux(lm): 2731.0

Power (W): 0.000

Number of Lamps: 1

PF: 0.000

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

### Photometric Results

Lumens(lm): 2305.11, Efficiency(%): 84.41% , Luminous Efficacy(lm/W): 0.00

Central intensity(cd): 4042.793, Maximum intensity(cd): 4054.351

Angle of maximum intensity: C=0.0  $\gamma$ =4.0

Beam Angle(50%Imax): [C0/180]Total=44.4

[C90/270]Total=44.4

Field angle(10%Imax): [C0/180]Total=67.4

[C90/270]Total=67.4

Maximum s/h(1/2): C0\_180=0.73 C90\_270=0.73

Maximum s/h(1/4): C0\_180=0.69 C90\_270=0.69

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 84.41%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 97.646%

Equipment: GMS1980  
Temperature(°C): 25.0

Date: 2024/4/21  
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                | 4042.793      | 0.000       | 0         | 0.00%       | 0.00%      |
| 1.0                | 4044.987      | 3.870       | 3.87      | 0.14%       | 0.17%      |
| 2.0                | 4049.450      | 11.618      | 15.488    | 0.43%       | 0.67%      |
| 3.0                | 4052.522      | 19.377      | 34.865    | 0.71%       | 1.51%      |
| 4.0                | 4054.351      | 27.136      | 62.001    | 0.99%       | 2.69%      |
| 5.0                | 4041.842      | 34.829      | 96.831    | 1.28%       | 4.20%      |
| 6.0                | 4013.824      | 42.335      | 139.165   | 1.55%       | 6.04%      |
| 7.0                | 3974.760      | 49.585      | 188.75    | 1.82%       | 8.19%      |
| 8.0                | 3922.968      | 56.523      | 245.273   | 2.07%       | 10.64%     |
| 9.0                | 3862.690      | 63.099      | 308.371   | 2.31%       | 13.38%     |
| 10.0               | 3788.513      | 69.241      | 377.612   | 2.54%       | 16.38%     |
| 11.0               | 3701.387      | 74.839      | 452.452   | 2.74%       | 19.63%     |
| 12.0               | 3605.922      | 79.879      | 532.331   | 2.92%       | 23.09%     |
| 13.0               | 3497.290      | 84.297      | 616.628   | 3.09%       | 26.75%     |
| 14.0               | 3376.295      | 87.981      | 704.609   | 3.22%       | 30.57%     |
| 15.0               | 3241.473      | 90.852      | 795.461   | 3.33%       | 34.51%     |
| 16.0               | 3093.338      | 92.823      | 888.284   | 3.40%       | 38.54%     |
| 17.0               | 2926.549      | 93.746      | 982.03    | 3.43%       | 42.60%     |
| 18.0               | 2758.297      | 93.731      | 1075.76   | 3.43%       | 46.67%     |
| 19.0               | 2598.823      | 93.203      | 1168.963  | 3.41%       | 50.71%     |
| 20.0               | 2422.597      | 91.906      | 1260.869  | 3.37%       | 54.70%     |
| 21.0               | 2247.323      | 89.672      | 1350.541  | 3.28%       | 58.59%     |
| 22.0               | 2069.195      | 86.742      | 1437.283  | 3.18%       | 62.35%     |
| 23.0               | 1890.774      | 83.091      | 1520.374  | 3.04%       | 65.96%     |
| 24.0               | 1715.865      | 78.854      | 1599.228  | 2.89%       | 69.38%     |
| 25.0               | 1539.968      | 74.031      | 1673.259  | 2.71%       | 72.59%     |
| 26.0               | 1395.271      | 69.287      | 1742.546  | 2.54%       | 75.59%     |
| 27.0               | 1242.345      | 64.530      | 1807.075  | 2.36%       | 78.39%     |
| 28.0               | 1146.822      | 60.489      | 1867.564  | 2.21%       | 81.02%     |
| 29.0               | 1021.927      | 56.741      | 1924.305  | 2.08%       | 83.48%     |
| 30.0               | 877.091       | 51.273      | 1975.578  | 1.88%       | 85.70%     |
| 31.0               | 743.806       | 45.107      | 2020.685  | 1.65%       | 87.66%     |
| 32.0               | 618.502       | 39.029      | 2059.714  | 1.43%       | 89.35%     |
| 33.0               | 491.143       | 32.691      | 2092.404  | 1.20%       | 90.77%     |
| 34.0               | 374.237       | 26.189      | 2118.593  | 0.96%       | 91.91%     |
| 35.0               | 278.274       | 20.265      | 2138.858  | 0.74%       | 92.79%     |
| 36.0               | 208.889       | 15.511      | 2154.369  | 0.57%       | 93.46%     |
| 37.0               | 145.465       | 11.557      | 2165.926  | 0.42%       | 93.96%     |

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0               | 83.585        | 7.645       | 2173.571  | 0.28%       | 94.29%     |
| 39.0               | 71.507        | 5.294       | 2178.865  | 0.19%       | 94.52%     |
| 40.0               | 64.777        | 4.753       | 2183.618  | 0.17%       | 94.73%     |
| 41.0               | 60.110        | 4.447       | 2188.065  | 0.16%       | 94.92%     |
| 42.0               | 56.584        | 4.240       | 2192.305  | 0.16%       | 95.11%     |
| 43.0               | 53.716        | 4.086       | 2196.391  | 0.15%       | 95.28%     |
| 44.0               | 51.332        | 3.965       | 2200.356  | 0.15%       | 95.46%     |
| 45.0               | 48.976        | 3.855       | 2204.211  | 0.14%       | 95.62%     |
| 46.0               | 46.745        | 3.743       | 2207.954  | 0.14%       | 95.78%     |
| 47.0               | 44.609        | 3.633       | 2211.588  | 0.13%       | 95.94%     |
| 48.0               | 42.882        | 3.537       | 2215.124  | 0.13%       | 96.10%     |
| 49.0               | 41.200        | 3.453       | 2218.577  | 0.13%       | 96.25%     |
| 50.0               | 39.649        | 3.371       | 2221.948  | 0.12%       | 96.39%     |
| 51.0               | 38.171        | 3.292       | 2225.241  | 0.12%       | 96.53%     |
| 52.0               | 36.730        | 3.214       | 2228.455  | 0.12%       | 96.67%     |
| 53.0               | 35.296        | 3.133       | 2231.588  | 0.11%       | 96.81%     |
| 54.0               | 33.658        | 3.039       | 2234.627  | 0.11%       | 96.94%     |
| 55.0               | 32.092        | 2.935       | 2237.562  | 0.11%       | 97.07%     |
| 56.0               | 30.615        | 2.834       | 2240.396  | 0.10%       | 97.19%     |
| 57.0               | 29.195        | 2.735       | 2243.13   | 0.10%       | 97.31%     |
| 58.0               | 28.032        | 2.646       | 2245.777  | 0.10%       | 97.43%     |
| 59.0               | 26.957        | 2.571       | 2248.347  | 0.09%       | 97.54%     |
| 60.0               | 25.933        | 2.499       | 2250.846  | 0.09%       | 97.65%     |
| 61.0               | 24.974        | 2.429       | 2253.275  | 0.09%       | 97.75%     |
| 62.0               | 24.192        | 2.369       | 2255.645  | 0.09%       | 97.85%     |
| 63.0               | 23.511        | 2.320       | 2257.965  | 0.08%       | 97.95%     |
| 64.0               | 22.751        | 2.270       | 2260.235  | 0.08%       | 98.05%     |
| 65.0               | 21.836        | 2.207       | 2262.441  | 0.08%       | 98.15%     |
| 66.0               | 20.849        | 2.130       | 2264.571  | 0.08%       | 98.24%     |
| 67.0               | 20.095        | 2.059       | 2266.63   | 0.08%       | 98.33%     |
| 68.0               | 19.715        | 2.017       | 2268.646  | 0.07%       | 98.42%     |
| 69.0               | 19.539        | 2.003       | 2270.649  | 0.07%       | 98.50%     |
| 70.0               | 19.415        | 2.001       | 2272.65   | 0.07%       | 98.59%     |
| 71.0               | 19.290        | 2.001       | 2274.65   | 0.07%       | 98.68%     |
| 72.0               | 19.159        | 1.999       | 2276.649  | 0.07%       | 98.77%     |
| 73.0               | 18.969        | 1.994       | 2278.643  | 0.07%       | 98.85%     |
| 74.0               | 18.793        | 1.985       | 2280.628  | 0.07%       | 98.94%     |
| 75.0               | 18.544        | 1.973       | 2282.601  | 0.07%       | 99.02%     |

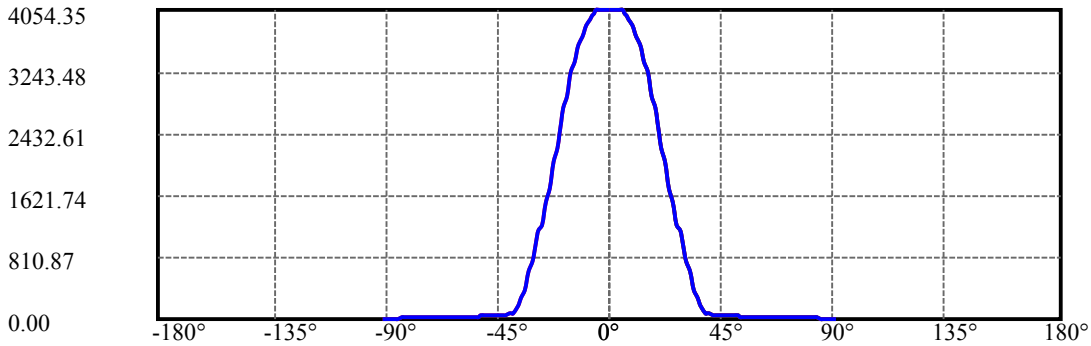
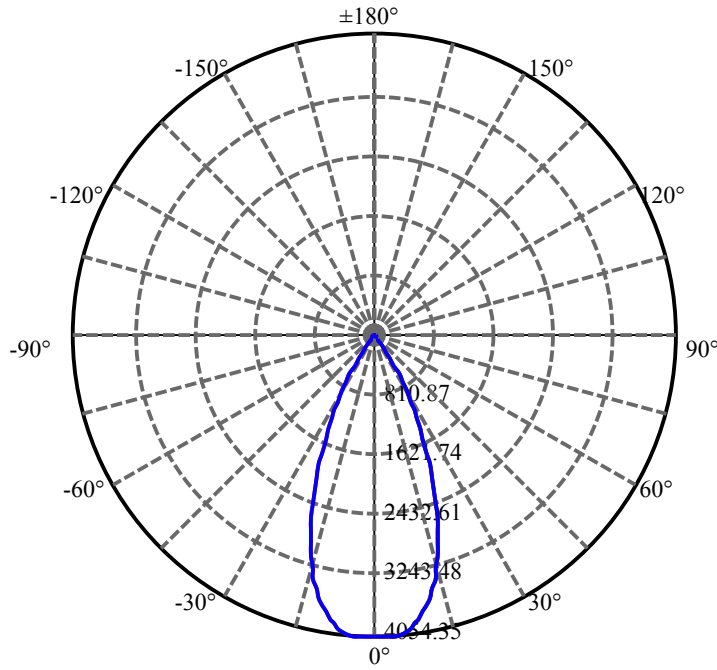
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0               | 18.230        | 1.952       | 2284.553  | 0.07%       | 99.11%     |
| 77.0               | 17.827        | 1.922       | 2286.476  | 0.07%       | 99.19%     |
| 78.0               | 17.381        | 1.885       | 2288.36   | 0.07%       | 99.27%     |
| 79.0               | 16.811        | 1.837       | 2290.197  | 0.07%       | 99.35%     |
| 80.0               | 16.064        | 1.772       | 2291.97   | 0.06%       | 99.43%     |
| 81.0               | 15.209        | 1.691       | 2293.661  | 0.06%       | 99.50%     |
| 82.0               | 14.367        | 1.604       | 2295.265  | 0.06%       | 99.57%     |
| 83.0               | 13.460        | 1.513       | 2296.778  | 0.06%       | 99.64%     |
| 84.0               | 12.363        | 1.407       | 2298.184  | 0.05%       | 99.70%     |
| 85.0               | 11.368        | 1.295       | 2299.48   | 0.05%       | 99.76%     |
| 86.0               | 10.658        | 1.204       | 2300.684  | 0.04%       | 99.81%     |
| 87.0               | 10.300        | 1.147       | 2301.831  | 0.04%       | 99.86%     |
| 88.0               | 10.051        | 1.115       | 2302.945  | 0.04%       | 99.91%     |
| 89.0               | 9.868         | 1.092       | 2304.037  | 0.04%       | 99.95%     |
| 90.0               | 9.788         | 1.078       | 2305.115  | 0.04%       | 100.00%    |

ZONAL LUMEN SUMMARY

| Zone    | Lumens  | %Lamp  | %Fixt   |
|---------|---------|--------|---------|
| 0-30    | 1975.58 | 72.34% | 85.70%  |
| 0-40    | 2183.62 | 79.96% | 94.73%  |
| 0-60    | 2250.85 | 82.42% | 97.65%  |
| 0-90    | 2304.04 | 84.37% | 99.95%  |
| 0-120   | 2304.04 | 84.37% | 99.95%  |
| 0-180   | 2305.11 | 84.41% | 100.00% |
| 60-90   | 53.19   | 1.95%  | 2.31%   |
| 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%   |
| 0-27.61 | 1844.09 | 67.52% | 80.00%  |

ZONAL LUMEN SUMMARY

|         |        |
|---------|--------|
| 0-10    | 377.61 |
| 10-20   | 883.26 |
| 20-30   | 714.71 |
| 30-40   | 208.04 |
| 40-50   | 38.33  |
| 50-60   | 28.90  |
| 60-70   | 21.80  |
| 70-80   | 19.32  |
| 80-90   | 12.07  |
| 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: —————

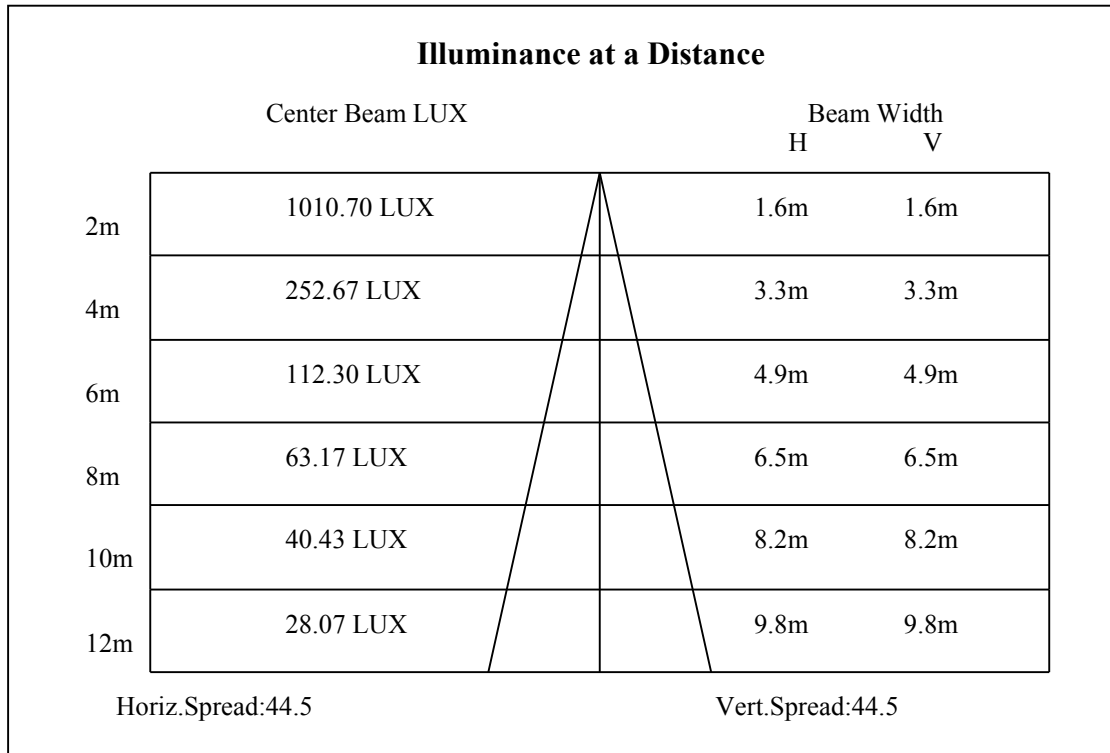
C90/C270: —————

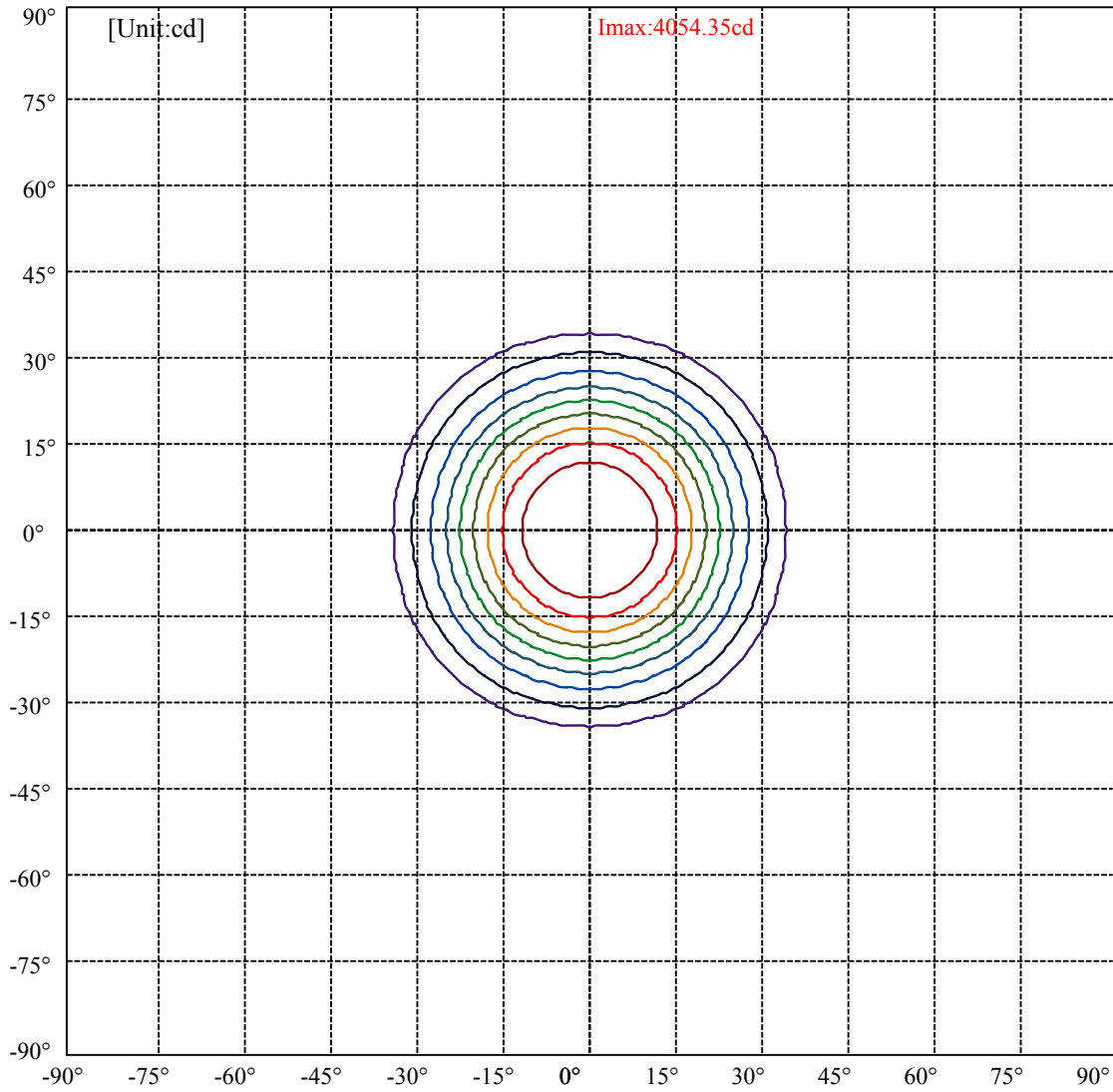
Field angle(10%Imax):C0/180Left:37.7 Right:29.7

:C90/270Left:37.7 Right:29.7

Beam Angle(50%Imax):C0/180Left:26.2 Right:18.2

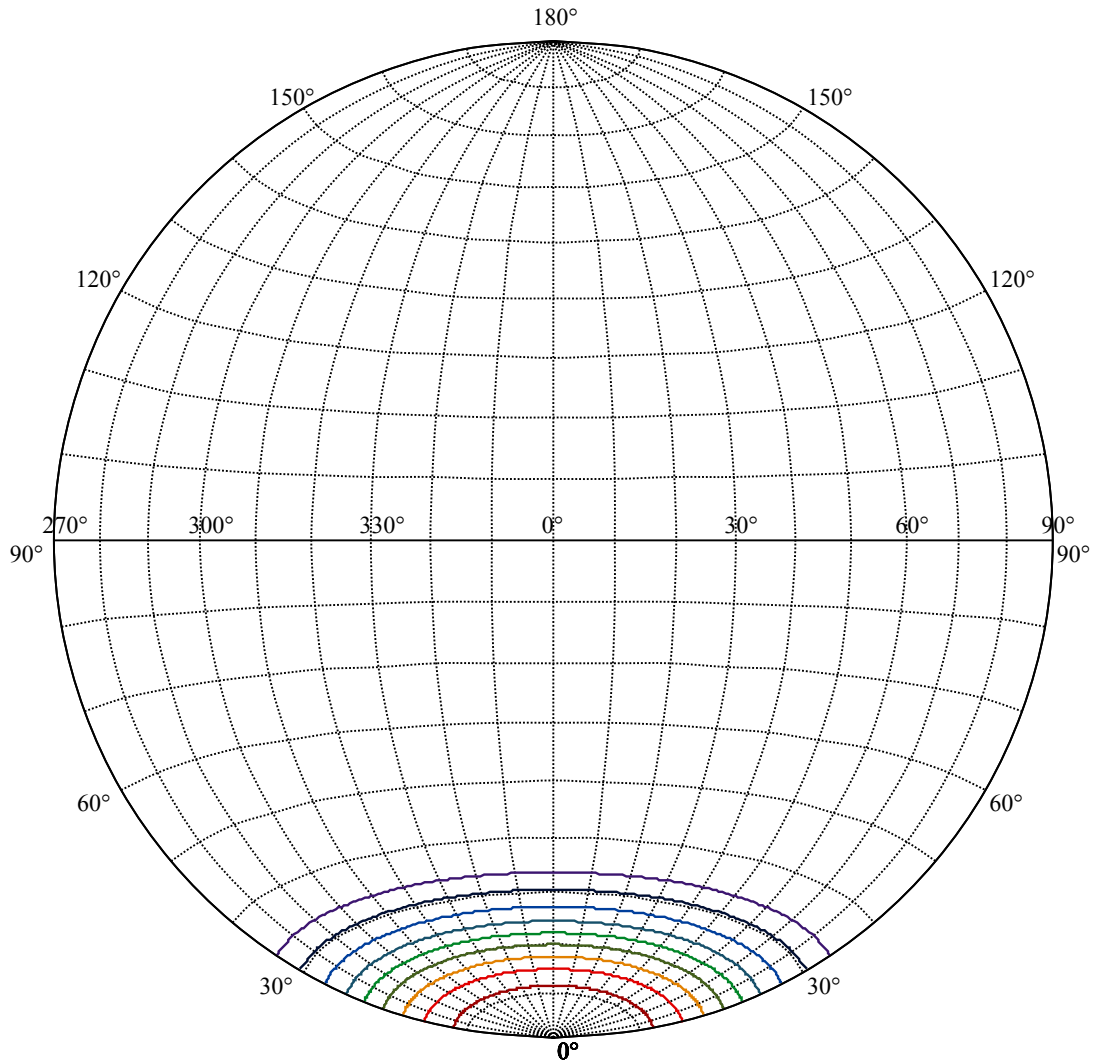
:C90/270Left:26.2 Right:18.2





|                   |   |
|-------------------|---|
| (10%Imax) 405.435 | — |
| (20%Imax) 810.87  | — |
| (30%Imax) 1216.31 | — |
| (40%Imax) 1621.74 | — |
| (50%Imax) 2027.18 | — |
| (60%Imax) 2432.61 | — |
| (70%Imax) 2838.05 | — |
| (80%Imax) 3243.48 | — |
| (90%Imax) 3648.92 | — |





House

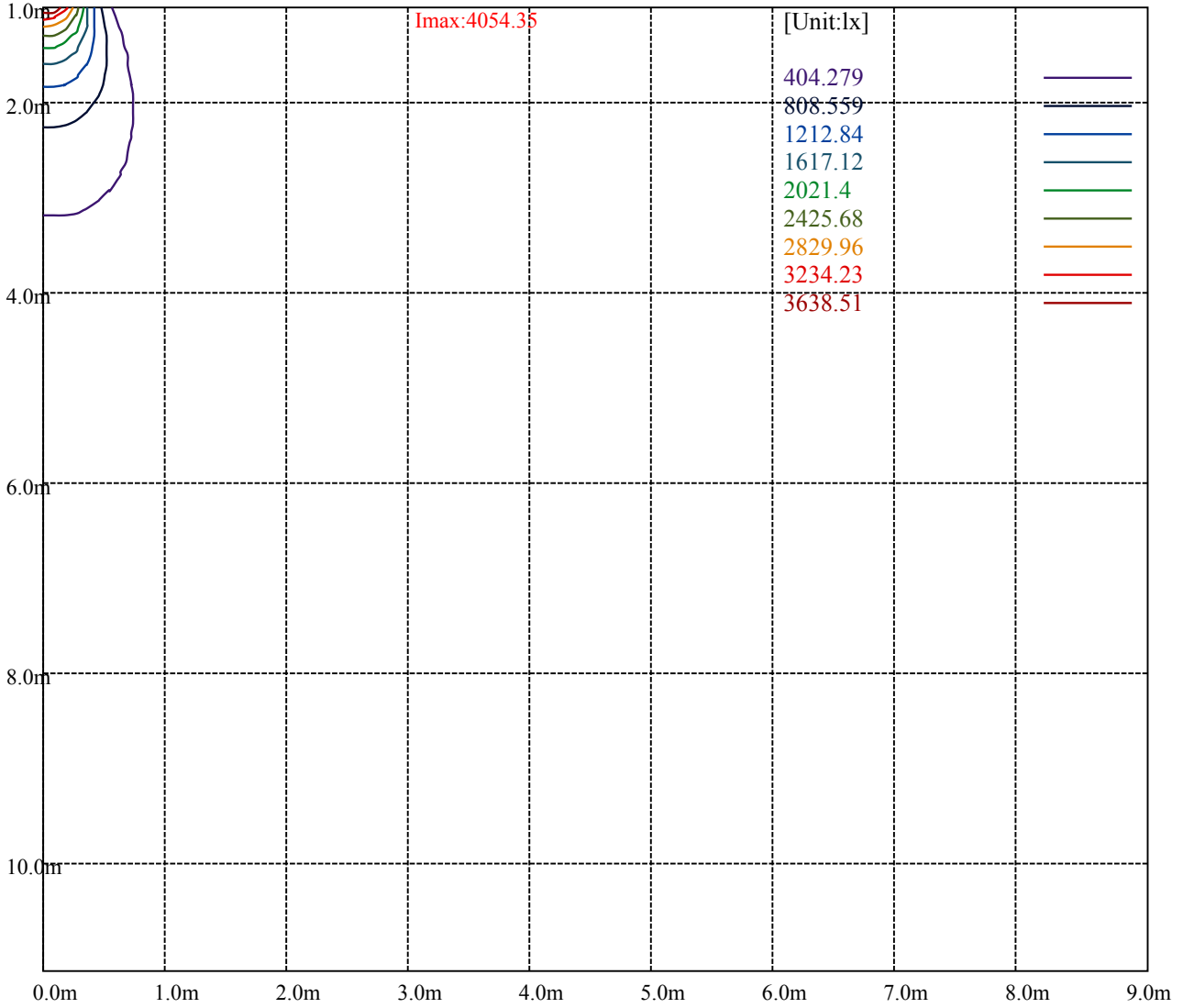
[Unit:cd]

Road

**Imax:4054.35**

|                   |   |
|-------------------|---|
| (10%Imax) 405.435 | — |
| (20%Imax) 810.87  | — |
| (30%Imax) 1216.31 | — |
| (40%Imax) 1621.74 | — |
| (50%Imax) 2027.18 | — |
| (60%Imax) 2432.61 | — |
| (70%Imax) 2838.05 | — |
| (80%Imax) 3243.48 | — |
| (90%Imax) 3648.92 | — |





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

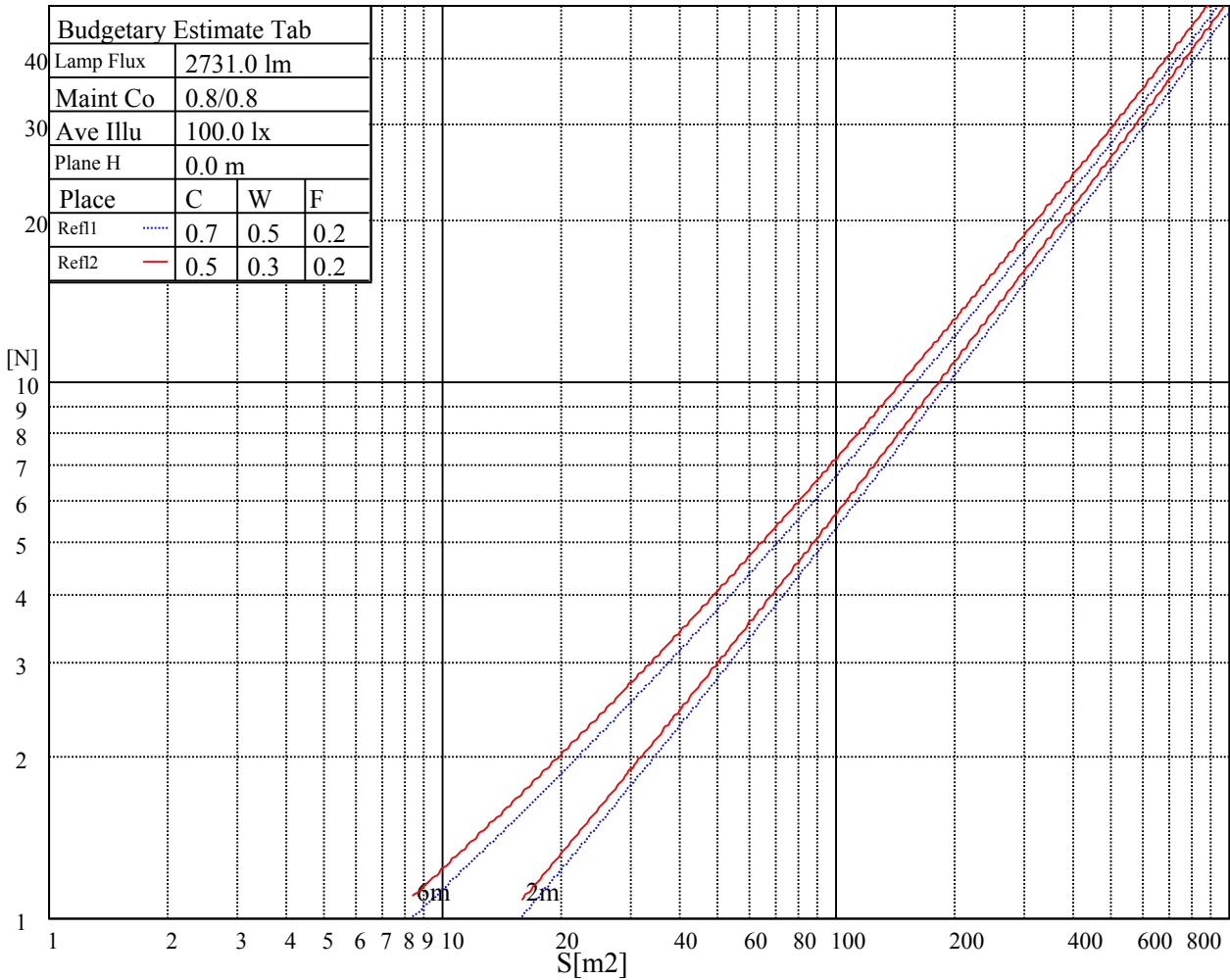
| Glare | Quality | Service Values Illuminance(lx) |      |      |       |       |       |       |       |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15  | A       | 2000                           | 1000 | 500  | <=300 |       |    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

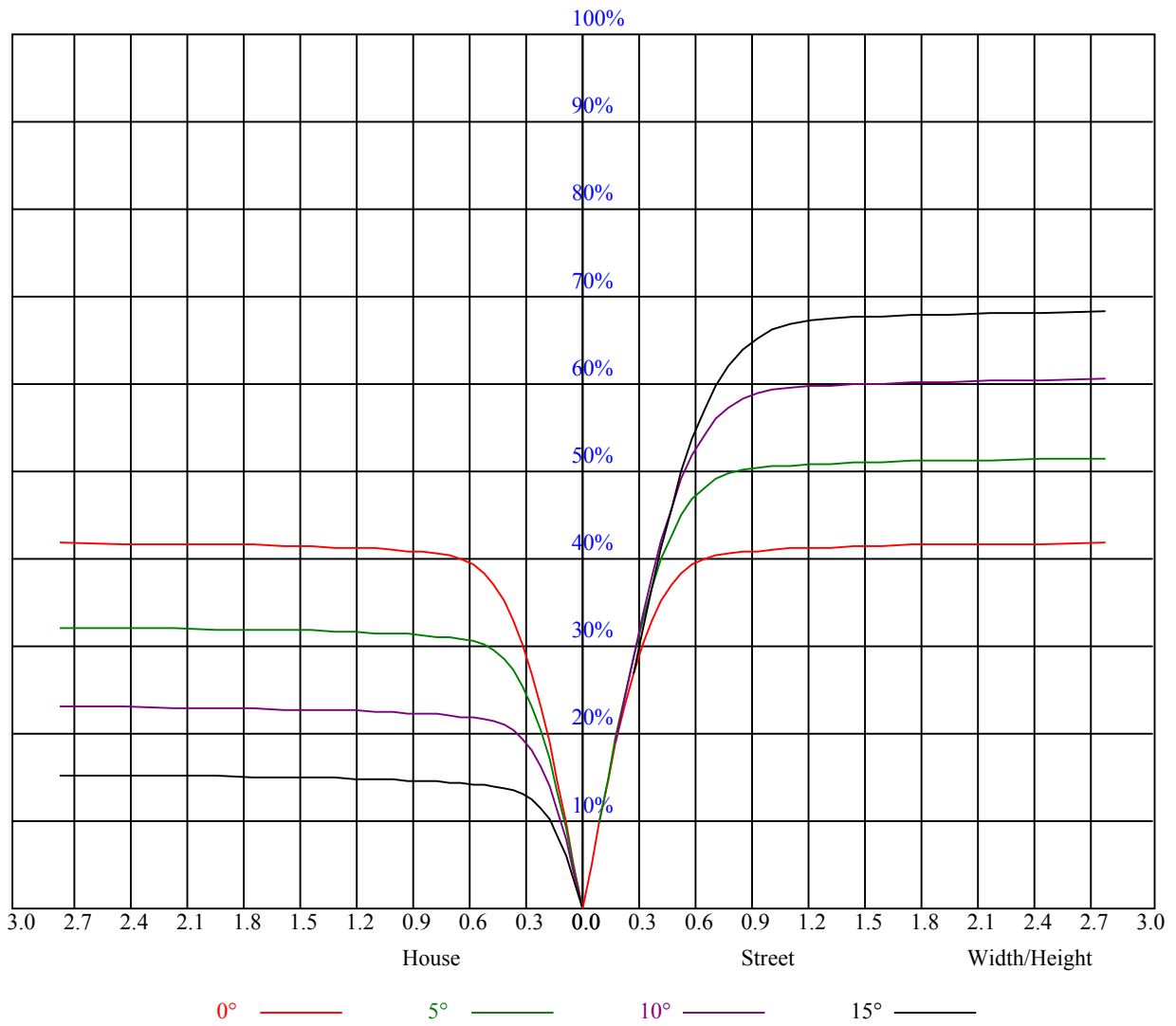


| Illumination assessment according UGR             |     |                  |     |     |     |     |                |     |     |     |     |
|---|-----|------------------|-----|-----|-----|-----|----------------|-----|-----|-----|-----|
| Rf of Ceiling                                     | 70  | 70               | 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 |
|   | 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  | 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 |
| 8H  | 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           |     |     |     |     |

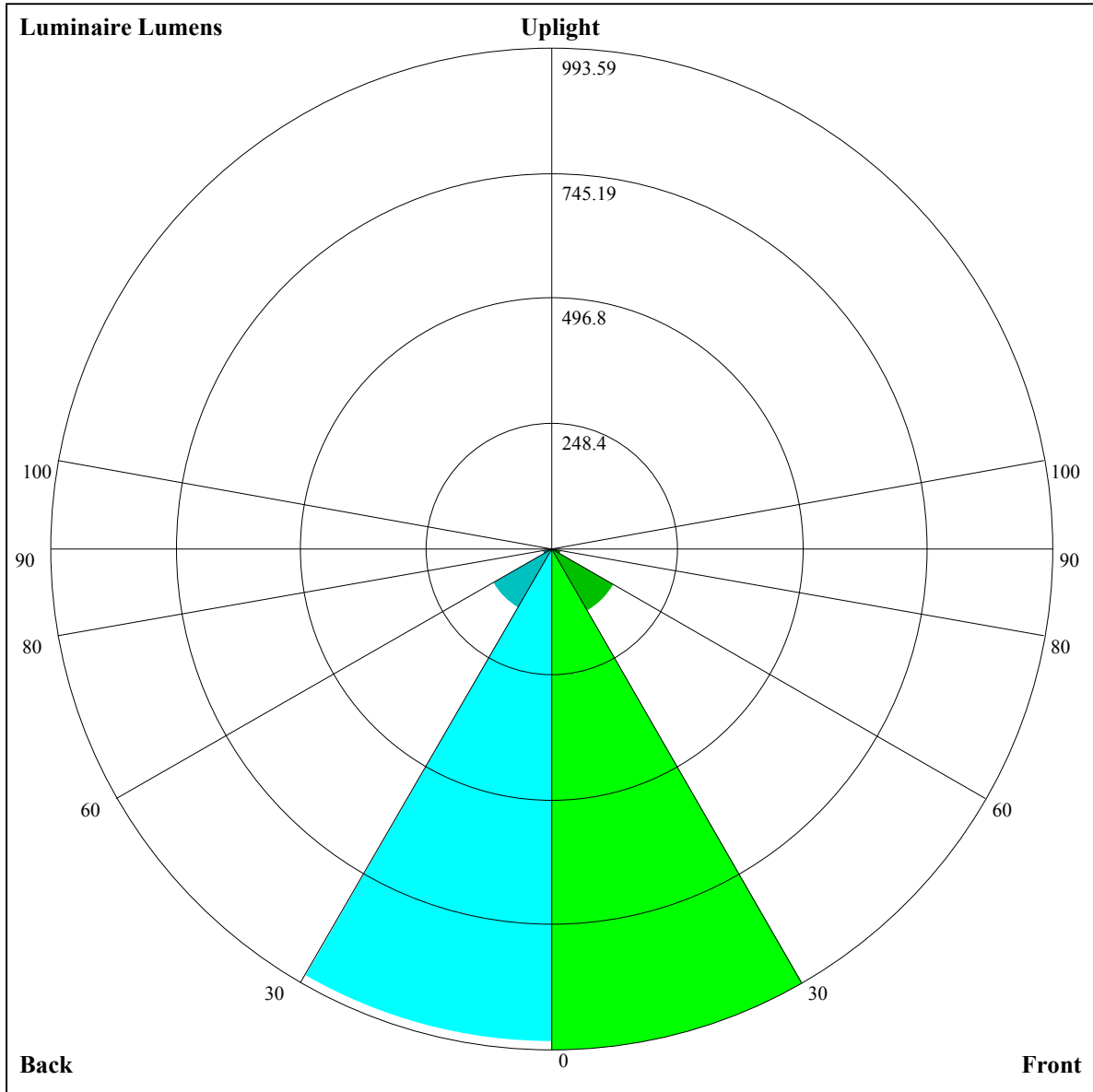
UGR calculation is based on CIE Publ. 117 ,S/H = 0.25



| 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     | 1.00                                   | 1.00 | 1.00 | 0.98 | 0.98 | 0.98 | 0.94 | 0.94 | 0.94 | 0.90 | 0.90 | 0.90 | 0.86 | 0.86 | 0.86 | 0.84 |
| 1     | 0.94                                   | 0.92 | 0.90 | 0.92 | 0.90 | 0.88 | 0.88 | 0.87 | 0.86 | 0.85 | 0.84 | 0.83 | 0.82 | 0.82 | 0.81 | 0.79 |
| 2     | 0.88                                   | 0.85 | 0.82 | 0.86 | 0.84 | 0.81 | 0.84 | 0.81 | 0.79 | 0.81 | 0.79 | 0.78 | 0.79 | 0.77 | 0.76 | 0.75 |
| 3     | 0.83                                   | 0.79 | 0.76 | 0.82 | 0.78 | 0.75 | 0.79 | 0.76 | 0.74 | 0.77 | 0.75 | 0.73 | 0.76 | 0.74 | 0.72 | 0.71 |
| 4     | 0.78                                   | 0.74 | 0.71 | 0.77 | 0.73 | 0.70 | 0.76 | 0.72 | 0.70 | 0.74 | 0.71 | 0.69 | 0.72 | 0.70 | 0.68 | 0.67 |
| 5     | 0.74                                   | 0.70 | 0.66 | 0.73 | 0.69 | 0.66 | 0.72 | 0.68 | 0.66 | 0.71 | 0.67 | 0.65 | 0.69 | 0.67 | 0.64 | 0.63 |
| 6     | 0.70                                   | 0.66 | 0.63 | 0.70 | 0.66 | 0.63 | 0.69 | 0.65 | 0.62 | 0.67 | 0.64 | 0.62 | 0.66 | 0.64 | 0.61 | 0.60 |
| 7     | 0.67                                   | 0.63 | 0.59 | 0.67 | 0.62 | 0.59 | 0.66 | 0.62 | 0.59 | 0.65 | 0.61 | 0.59 | 0.64 | 0.61 | 0.58 | 0.57 |
| 8     | 0.64                                   | 0.60 | 0.56 | 0.64 | 0.59 | 0.56 | 0.63 | 0.59 | 0.56 | 0.62 | 0.58 | 0.56 | 0.61 | 0.58 | 0.56 | 0.55 |
| 9     | 0.61                                   | 0.57 | 0.54 | 0.61 | 0.57 | 0.54 | 0.60 | 0.56 | 0.54 | 0.59 | 0.56 | 0.53 | 0.59 | 0.55 | 0.53 | 0.52 |
| 10    | 0.59                                   | 0.54 | 0.51 | 0.58 | 0.54 | 0.51 | 0.58 | 0.54 | 0.51 | 0.57 | 0.53 | 0.51 | 0.56 | 0.53 | 0.51 | 0.50 |







Luminaire Lumens:

FL=993.59,FM=141.21,FH=20.76,FVH=6.67

BL=977.12,BM=136.9,BH=20.44,BVH=6.56

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    | 4047.47 | 4049.82 | 4060.93 | 4060.35 | 4069.13 | 4057.42 | 4040.45 | 4002.41 | 3940.38 |
| 45.0   | 4040.45 | 4045.72 | 4039.87 | 4050.40 | 4064.45 | 4073.22 | 4062.69 | 4046.89 | 4015.87 |
| 90.0   | 4045.13 | 4047.47 | 4048.65 | 4062.11 | 4065.03 | 4045.72 | 4029.92 | 3991.29 | 3953.84 |
| 135.0  | 4038.11 | 4032.84 | 4039.87 | 4040.45 | 4057.42 | 4049.23 | 4030.50 | 4008.26 | 3962.03 |
| 180.0  | 4047.47 | 4041.62 | 4048.65 | 4055.08 | 4049.23 | 4035.18 | 4010.02 | 3964.96 | 3914.63 |
| 225.0  | 4040.45 | 4052.74 | 4054.50 | 4043.96 | 4029.92 | 4005.92 | 3940.96 | 3888.29 | 3832.11 |
| 270.0  | 4045.13 | 4045.72 | 4051.57 | 4050.40 | 4049.23 | 4039.28 | 4013.53 | 3959.69 | 3908.19 |
| 315.0  | 4038.11 | 4043.96 | 4051.57 | 4057.42 | 4050.40 | 4028.75 | 3982.51 | 3936.28 | 3856.69 |
| 360.0  | 4047.47 | 4049.82 | 4060.93 | 4060.35 | 4069.13 | 4057.42 | 4040.45 | 4002.41 | 3940.38 |
| C/γ(°) | 9.0     | 10.0    | 11.0    | 12.0    | 13.0    | 14.0    | 15.0    | 16.0    | 17.0    |
| 0.0    | 3878.93 | 3794.07 | 3713.90 | 3623.19 | 3496.19 | 3381.49 | 3257.42 | 3114.63 | 2919.75 |
| 45.0   | 3970.22 | 3914.63 | 3834.45 | 3761.30 | 3670.00 | 3582.81 | 3480.39 | 3330.57 | 3195.97 |
| 90.0   | 3892.39 | 3835.04 | 3737.31 | 3655.37 | 3556.47 | 3446.45 | 3294.29 | 3153.84 | 2972.42 |
| 135.0  | 3903.51 | 3843.82 | 3788.22 | 3691.07 | 3605.63 | 3509.65 | 3389.68 | 3260.93 | 3089.46 |
| 180.0  | 3854.94 | 3767.15 | 3691.66 | 3583.98 | 3488.00 | 3372.12 | 3250.98 | 3107.02 | 2920.33 |
| 225.0  | 3756.62 | 3653.62 | 3561.15 | 3453.47 | 3307.75 | 3169.05 | 2984.12 | 2828.45 | 2669.85 |
| 270.0  | 3847.91 | 3783.54 | 3677.61 | 3577.54 | 3466.93 | 3320.04 | 3185.44 | 3004.60 | 2854.79 |
| 315.0  | 3797.00 | 3716.24 | 3606.80 | 3501.46 | 3387.34 | 3228.74 | 3089.46 | 2946.67 | 2789.83 |
| 360.0  | 3878.93 | 3794.07 | 3713.90 | 3623.19 | 3496.19 | 3381.49 | 3257.42 | 3114.63 | 2919.75 |
| C/γ(°) | 18.0    | 19.0    | 20.0    | 21.0    | 22.0    | 23.0    | 24.0    | 25.0    | 26.0    |
| 0.0    | 2759.98 | 2597.87 | 2442.79 | 2243.23 | 2072.93 | 1907.31 | 1711.84 | 1562.02 | 1429.76 |
| 45.0   | 3021.58 | 2861.81 | 2700.87 | 2500.14 | 2332.77 | 2167.73 | 1965.24 | 1799.63 | 1646.30 |
| 90.0   | 2824.35 | 2672.20 | 2474.98 | 2309.94 | 2140.81 | 1928.96 | 1762.17 | 1611.77 | 1467.22 |
| 135.0  | 2935.55 | 2785.73 | 2584.41 | 2420.55 | 2250.83 | 2046.01 | 1883.90 | 1686.09 | 1540.96 |
| 180.0  | 2766.42 | 2596.12 | 2434.59 | 2240.89 | 2067.66 | 1862.24 | 1697.80 | 1564.95 | 1392.89 |
| 225.0  | 2472.05 | 2312.87 | 2146.66 | 1985.73 | 1782.65 | 1634.59 | 1490.63 | 1157.93 | 1157.93 |
| 270.0  | 2703.21 | 2538.18 | 2333.94 | 2181.19 | 2007.38 | 1835.32 | 1649.22 | 1509.94 | 1376.51 |
| 315.0  | 2583.24 | 2425.82 | 2262.54 | 2096.92 | 1898.53 | 1744.03 | 1566.12 | 1427.42 | 1150.61 |
| 360.0  | 2759.98 | 2597.87 | 2442.79 | 2243.23 | 2072.93 | 1907.31 | 1711.84 | 1562.02 | 1429.76 |
| C/γ(°) | 27.0    | 28.0    | 29.0    | 30.0    | 31.0    | 32.0    | 33.0    | 34.0    | 35.0    |
| 0.0    | 1142.42 | 1142.42 | 1015.60 | 856.71  | 732.70  | 610.33  | 493.34  | 352.83  | 252.23  |
| 45.0   | 1498.82 | 1333.79 | 1211.47 | 1082.72 | 948.71  | 792.45  | 663.12  | 546.07  | 402.69  |
| 90.0   | 1144.41 | 1144.41 | 1045.68 | 921.61  | 754.41  | 636.02  | 515.99  | 399.12  | 267.16  |
| 135.0  | 1401.67 | 1272.34 | 1120.18 | 990.26  | 862.68  | 735.69  | 582.36  | 465.31  | 352.95  |
| 180.0  | 1270.58 | 1155.29 | 1035.32 | 866.78  | 743.29  | 617.47  | 501.60  | 365.82  | 313.74  |
| 225.0  | 1101.80 | 975.86  | 848.40  | 691.21  | 572.06  | 461.04  | 331.06  | 235.49  | 141.98  |
| 270.0  | 1228.45 | 1118.42 | 1000.21 | 836.35  | 712.28  | 590.55  | 448.93  | 340.66  | 315.49  |
| 315.0  | 1150.61 | 1032.04 | 898.55  | 771.09  | 624.32  | 504.46  | 392.74  | 288.57  | 179.96  |
| 360.0  | 1142.42 | 1142.42 | 1015.60 | 856.71  | 732.70  | 610.33  | 493.34  | 352.83  | 252.23  |
| C/γ(°) | 36.0    | 37.0    | 38.0    | 39.0    | 40.0    | 41.0    | 42.0    | 43.0    | 44.0    |
| 0.0    | 170.30  | 111.25  | 80.82   | 72.45   | 66.54   | 60.92   | 57.53   | 54.25   | 51.79   |
| 45.0   | 296.77  | 296.77  | 119.03  | 87.14   | 76.55   | 67.77   | 62.79   | 58.93   | 55.95   |
| 90.0   | 180.07  | 105.40  | 80.23   | 71.87   | 64.84   | 60.63   | 57.24   | 54.60   | 51.91   |
| 135.0  | 299.69  | 299.69  | 96.09   | 77.54   | 68.00   | 63.20   | 58.41   | 55.54   | 53.26   |
| 180.0  | 313.74  | 101.36  | 78.24   | 70.11   | 63.20   | 59.22   | 56.01   | 53.02   | 50.74   |
| 225.0  | 92.76   | 74.91   | 67.24   | 61.21   | 57.59   | 54.72   | 52.44   | 49.63   | 47.58   |
| 270.0  | 201.32  | 91.82   | 74.79   | 67.36   | 61.27   | 57.64   | 54.78   | 52.49   | 50.33   |
| 315.0  | 116.46  | 82.52   | 72.22   | 64.37   | 60.22   | 56.77   | 53.49   | 51.27   | 49.10   |
| 360.0  | 170.30  | 111.25  | 80.82   | 72.45   | 66.54   | 60.92   | 57.53   | 54.25   | 51.79   |

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    | 49.45 | 47.29 | 44.77 | 42.90 | 41.32 | 39.91 | 38.33 | 36.93 | 35.52 |
| 45.0   | 53.02 | 50.56 | 48.40 | 46.23 | 43.66 | 41.90 | 40.32 | 38.74 | 37.40 |
| 90.0   | 49.63 | 47.64 | 45.18 | 43.37 | 41.67 | 40.26 | 38.62 | 37.40 | 36.05 |
| 135.0  | 51.09 | 48.52 | 46.58 | 44.65 | 42.90 | 40.91 | 39.56 | 38.27 | 36.99 |
| 180.0  | 48.63 | 46.12 | 44.13 | 42.55 | 40.97 | 39.33 | 37.98 | 36.64 | 35.17 |
| 225.0  | 45.59 | 43.31 | 41.73 | 40.32 | 38.74 | 37.40 | 35.99 | 34.06 | 32.66 |
| 270.0  | 47.81 | 45.88 | 43.60 | 42.02 | 40.61 | 39.03 | 37.69 | 36.28 | 34.59 |
| 315.0  | 46.58 | 44.65 | 42.49 | 41.02 | 39.74 | 38.45 | 36.87 | 35.52 | 34.00 |
| 360.0  | 49.45 | 47.29 | 44.77 | 42.90 | 41.32 | 39.91 | 38.33 | 36.93 | 35.52 |
| C/γ(°) | 54.0  | 55.0  | 56.0  | 57.0  | 58.0  | 59.0  | 60.0  | 61.0  | 62.0  |
| 0.0    | 34.00 | 32.13 | 30.72 | 29.20 | 28.09 | 27.04 | 25.75 | 24.87 | 24.23 |
| 45.0   | 35.70 | 34.29 | 32.83 | 31.02 | 29.73 | 28.56 | 27.51 | 26.51 | 25.22 |
| 90.0   | 34.35 | 32.89 | 31.02 | 29.67 | 28.50 | 27.56 | 26.57 | 25.34 | 24.52 |
| 135.0  | 35.29 | 33.77 | 32.25 | 30.61 | 29.38 | 28.03 | 27.10 | 26.04 | 25.05 |
| 180.0  | 33.30 | 31.72 | 30.31 | 28.85 | 27.80 | 26.45 | 25.52 | 24.64 | 23.88 |
| 225.0  | 31.19 | 29.50 | 28.38 | 27.39 | 26.28 | 25.40 | 24.35 | 23.70 | 23.12 |
| 270.0  | 33.01 | 31.49 | 30.08 | 28.62 | 27.56 | 26.63 | 25.63 | 24.58 | 23.94 |
| 315.0  | 32.42 | 30.96 | 29.32 | 28.21 | 26.92 | 25.98 | 25.05 | 24.11 | 23.58 |
| 360.0  | 34.00 | 32.13 | 30.72 | 29.20 | 28.09 | 27.04 | 25.75 | 24.87 | 24.23 |
| C/γ(°) | 63.0  | 64.0  | 65.0  | 66.0  | 67.0  | 68.0  | 69.0  | 70.0  | 71.0  |
| 0.0    | 23.70 | 23.00 | 22.18 | 21.01 | 20.13 | 19.96 | 19.72 | 19.61 | 19.49 |
| 45.0   | 24.40 | 23.82 | 23.23 | 22.36 | 21.30 | 20.13 | 19.90 | 19.78 | 19.61 |
| 90.0   | 23.88 | 23.29 | 22.53 | 21.48 | 20.31 | 20.01 | 19.84 | 19.66 | 19.55 |
| 135.0  | 24.23 | 23.70 | 23.00 | 22.12 | 20.78 | 20.13 | 19.96 | 19.78 | 19.72 |
| 180.0  | 23.23 | 22.65 | 21.71 | 20.54 | 19.72 | 19.49 | 19.31 | 19.20 | 19.14 |
| 225.0  | 22.24 | 21.07 | 19.72 | 19.31 | 19.14 | 19.02 | 18.90 | 18.79 | 18.61 |
| 270.0  | 23.41 | 22.53 | 21.54 | 20.13 | 19.78 | 19.55 | 19.37 | 19.25 | 19.14 |
| 315.0  | 23.00 | 21.95 | 20.78 | 19.84 | 19.61 | 19.43 | 19.31 | 19.25 | 19.08 |
| 360.0  | 23.70 | 23.00 | 22.18 | 21.01 | 20.13 | 19.96 | 19.72 | 19.61 | 19.49 |
| C/γ(°) | 72.0  | 73.0  | 74.0  | 75.0  | 76.0  | 77.0  | 78.0  | 79.0  | 80.0  |
| 0.0    | 19.31 | 19.14 | 18.90 | 18.61 | 18.20 | 17.62 | 17.15 | 16.56 | 15.80 |
| 45.0   | 19.49 | 19.37 | 19.20 | 19.02 | 18.84 | 18.43 | 17.85 | 17.38 | 16.85 |
| 90.0   | 19.43 | 19.20 | 19.02 | 18.73 | 18.26 | 17.67 | 17.21 | 16.68 | 16.09 |
| 135.0  | 19.72 | 19.49 | 19.37 | 19.02 | 18.61 | 18.14 | 17.67 | 17.03 | 16.56 |
| 180.0  | 18.96 | 18.79 | 18.55 | 18.26 | 17.79 | 17.26 | 16.74 | 16.21 | 15.57 |
| 225.0  | 18.38 | 18.08 | 17.79 | 17.38 | 16.91 | 16.39 | 15.80 | 15.10 | 14.57 |
| 270.0  | 18.96 | 18.79 | 18.73 | 18.73 | 18.55 | 18.55 | 18.38 | 17.91 | 16.62 |
| 315.0  | 19.02 | 18.90 | 18.79 | 18.61 | 18.67 | 18.55 | 18.26 | 17.62 | 16.44 |
| 360.0  | 19.31 | 19.14 | 18.90 | 18.61 | 18.20 | 17.62 | 17.15 | 16.56 | 15.80 |
| C/γ(°) | 81.0  | 82.0  | 83.0  | 84.0  | 85.0  | 86.0  | 87.0  | 88.0  | 89.0  |
| 0.0    | 15.16 | 14.34 | 13.64 | 12.11 | 11.18 | 10.71 | 10.36 | 10.07 | 9.83  |
| 45.0   | 16.21 | 15.45 | 14.46 | 13.69 | 12.29 | 11.35 | 10.65 | 10.42 | 10.12 |
| 90.0   | 15.27 | 14.57 | 13.87 | 13.46 | 12.47 | 10.83 | 10.48 | 10.24 | 9.89  |
| 135.0  | 16.04 | 15.10 | 14.34 | 13.11 | 11.59 | 10.94 | 10.53 | 10.30 | 10.01 |
| 180.0  | 15.10 | 14.40 | 13.34 | 11.76 | 10.77 | 10.48 | 10.24 | 9.89  | 9.77  |
| 225.0  | 14.05 | 13.34 | 12.11 | 11.18 | 10.42 | 10.12 | 9.89  | 9.77  | 9.77  |
| 270.0  | 15.04 | 14.05 | 13.28 | 12.23 | 11.47 | 10.48 | 10.18 | 9.89  | 9.77  |
| 315.0  | 14.81 | 13.69 | 12.64 | 11.35 | 10.77 | 10.36 | 10.07 | 9.83  | 9.77  |
| 360.0  | 15.16 | 14.34 | 13.64 | 12.11 | 11.18 | 10.71 | 10.36 | 10.07 | 9.83  |

Intensity data(cd)

|        |      |
|--------|------|
| C/γ(°) | 90.0 |
| 0.0    | 9.77 |
| 45.0   | 9.89 |
| 90.0   | 9.77 |
| 135.0  | 9.77 |
| 180.0  | 9.71 |
| 225.0  | 9.77 |
| 270.0  | 9.83 |
| 315.0  | 9.77 |
| 360.0  | 9.77 |