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## Nata

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Client:

LumCAT: 2-27456-L

Luminaire: 92.70.411.00

Report No: 2024828-B012

Ballast type: AC

Test No: 2024828-C012

Voltage(V): 35.310

LampCAT: Fortimo\_SLM\_C\_1205

Current(A): 0.403

Lamp flux(lm): 2291.0

Power (W): 14.220

Number of Lamps: 1

PF: 0.000

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

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## Photometric Results

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Lumens(lm): 2128.90, Efficiency(%): 92.92% , Luminous Efficacy(lm/W): 149.71

Central intensity(cd): 4894.948, Maximum intensity(cd): 4894.948

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=67.0

[C90/270]Total=67.0

Maximum s/h(1/2): C0\_180=0.57 C90\_270=0.57

Maximum s/h(1/4): C0\_180=0.61 C90\_270=0.61

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 92.92%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 99.503%

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0                | 4894.949      | 0.000       | 0         | 0.00%       | 0.00%      |
| 1.0                | 4880.678      | 4.677       | 4.677     | 0.20%       | 0.22%      |
| 2.0                | 4840.573      | 13.953      | 18.63     | 0.61%       | 0.88%      |
| 3.0                | 4770.507      | 22.987      | 41.617    | 1.00%       | 1.95%      |
| 4.0                | 4693.766      | 31.680      | 73.297    | 1.38%       | 3.44%      |
| 5.0                | 4573.976      | 39.869      | 113.166   | 1.74%       | 5.32%      |
| 6.0                | 4456.965      | 47.460      | 160.626   | 2.07%       | 7.55%      |
| 7.0                | 4317.530      | 54.463      | 215.089   | 2.38%       | 10.10%     |
| 8.0                | 4160.138      | 60.673      | 275.762   | 2.65%       | 12.95%     |
| 9.0                | 3991.182      | 66.062      | 341.824   | 2.88%       | 16.06%     |
| 10.0               | 3817.759      | 70.668      | 412.492   | 3.08%       | 19.38%     |
| 11.0               | 3643.370      | 74.552      | 487.044   | 3.25%       | 22.88%     |
| 12.0               | 3467.509      | 77.732      | 564.776   | 3.39%       | 26.53%     |
| 13.0               | 3289.572      | 80.190      | 644.966   | 3.50%       | 30.30%     |
| 14.0               | 3105.649      | 81.858      | 726.824   | 3.57%       | 34.14%     |
| 15.0               | 2929.295      | 82.850      | 809.675   | 3.62%       | 38.03%     |
| 16.0               | 2749.538      | 83.211      | 892.885   | 3.63%       | 41.94%     |
| 17.0               | 2549.446      | 82.519      | 975.405   | 3.60%       | 45.82%     |
| 18.0               | 2380.424      | 81.283      | 1056.688  | 3.55%       | 49.64%     |
| 19.0               | 2212.645      | 79.910      | 1136.598  | 3.49%       | 53.39%     |
| 20.0               | 2040.627      | 77.847      | 1214.444  | 3.40%       | 57.05%     |
| 21.0               | 1887.533      | 75.429      | 1289.873  | 3.29%       | 60.59%     |
| 22.0               | 1743.794      | 72.973      | 1362.846  | 3.19%       | 64.02%     |
| 23.0               | 1596.014      | 70.078      | 1432.924  | 3.06%       | 67.31%     |
| 24.0               | 1464.930      | 66.923      | 1499.847  | 2.92%       | 70.45%     |
| 25.0               | 1359.766      | 64.227      | 1564.075  | 2.80%       | 73.47%     |
| 26.0               | 1256.395      | 61.755      | 1625.83   | 2.70%       | 76.37%     |
| 27.0               | 1132.308      | 58.440      | 1684.27   | 2.55%       | 79.11%     |
| 28.0               | 1054.233      | 55.359      | 1739.628  | 2.42%       | 81.71%     |
| 29.0               | 961.749       | 52.744      | 1792.372  | 2.30%       | 84.19%     |
| 30.0               | 856.059       | 49.080      | 1841.453  | 2.14%       | 86.50%     |
| 31.0               | 747.058       | 44.612      | 1886.065  | 1.95%       | 88.59%     |
| 32.0               | 644.837       | 39.876      | 1925.941  | 1.74%       | 90.47%     |
| 33.0               | 535.224       | 34.765      | 1960.706  | 1.52%       | 92.10%     |
| 34.0               | 435.533       | 29.378      | 1990.084  | 1.28%       | 93.48%     |
| 35.0               | 348.181       | 24.339      | 2014.423  | 1.06%       | 94.62%     |
| 36.0               | 284.849       | 20.156      | 2034.579  | 0.88%       | 95.57%     |
| 37.0               | 209.646       | 16.128      | 2050.707  | 0.70%       | 96.33%     |

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0               | 160.631       | 12.359      | 2063.066  | 0.54%       | 96.91%     |
| 39.0               | 117.451       | 9.492       | 2072.558  | 0.41%       | 97.35%     |
| 40.0               | 74.941        | 6.710       | 2079.268  | 0.29%       | 97.67%     |
| 41.0               | 60.079        | 4.808       | 2084.076  | 0.21%       | 97.89%     |
| 42.0               | 51.071        | 4.038       | 2088.114  | 0.18%       | 98.08%     |
| 43.0               | 43.699        | 3.511       | 2091.625  | 0.15%       | 98.25%     |
| 44.0               | 38.003        | 3.084       | 2094.708  | 0.13%       | 98.39%     |
| 45.0               | 33.535        | 2.749       | 2097.458  | 0.12%       | 98.52%     |
| 46.0               | 29.442        | 2.463       | 2099.92   | 0.11%       | 98.64%     |
| 47.0               | 26.137        | 2.210       | 2102.131  | 0.10%       | 98.74%     |
| 48.0               | 23.167        | 1.993       | 2104.124  | 0.09%       | 98.84%     |
| 49.0               | 20.650        | 1.799       | 2105.923  | 0.08%       | 98.92%     |
| 50.0               | 18.456        | 1.630       | 2107.554  | 0.07%       | 99.00%     |
| 51.0               | 16.643        | 1.485       | 2109.039  | 0.06%       | 99.07%     |
| 52.0               | 15.072        | 1.361       | 2110.4    | 0.06%       | 99.13%     |
| 53.0               | 13.712        | 1.252       | 2111.652  | 0.05%       | 99.19%     |
| 54.0               | 12.523        | 1.156       | 2112.808  | 0.05%       | 99.24%     |
| 55.0               | 11.551        | 1.075       | 2113.883  | 0.05%       | 99.29%     |
| 56.0               | 10.631        | 1.002       | 2114.885  | 0.04%       | 99.34%     |
| 57.0               | 9.875         | 0.938       | 2115.823  | 0.04%       | 99.39%     |
| 58.0               | 9.152         | 0.880       | 2116.703  | 0.04%       | 99.43%     |
| 59.0               | 8.535         | 0.827       | 2117.53   | 0.04%       | 99.47%     |
| 60.0               | 7.990         | 0.781       | 2118.31   | 0.03%       | 99.50%     |
| 61.0               | 7.530         | 0.741       | 2119.051  | 0.03%       | 99.54%     |
| 62.0               | 7.011         | 0.701       | 2119.751  | 0.03%       | 99.57%     |
| 63.0               | 6.629         | 0.663       | 2120.415  | 0.03%       | 99.60%     |
| 64.0               | 6.262         | 0.633       | 2121.047  | 0.03%       | 99.63%     |
| 65.0               | 5.861         | 0.600       | 2121.647  | 0.03%       | 99.66%     |
| 66.0               | 5.519         | 0.568       | 2122.215  | 0.02%       | 99.69%     |
| 67.0               | 5.210         | 0.540       | 2122.755  | 0.02%       | 99.71%     |
| 68.0               | 4.954         | 0.515       | 2123.269  | 0.02%       | 99.74%     |
| 69.0               | 4.665         | 0.491       | 2123.76   | 0.02%       | 99.76%     |
| 70.0               | 4.382         | 0.465       | 2124.225  | 0.02%       | 99.78%     |
| 71.0               | 4.133         | 0.440       | 2124.665  | 0.02%       | 99.80%     |
| 72.0               | 3.890         | 0.417       | 2125.082  | 0.02%       | 99.82%     |
| 73.0               | 3.673         | 0.395       | 2125.478  | 0.02%       | 99.84%     |
| 74.0               | 3.417         | 0.373       | 2125.85   | 0.02%       | 99.86%     |
| 75.0               | 3.173         | 0.348       | 2126.198  | 0.02%       | 99.87%     |

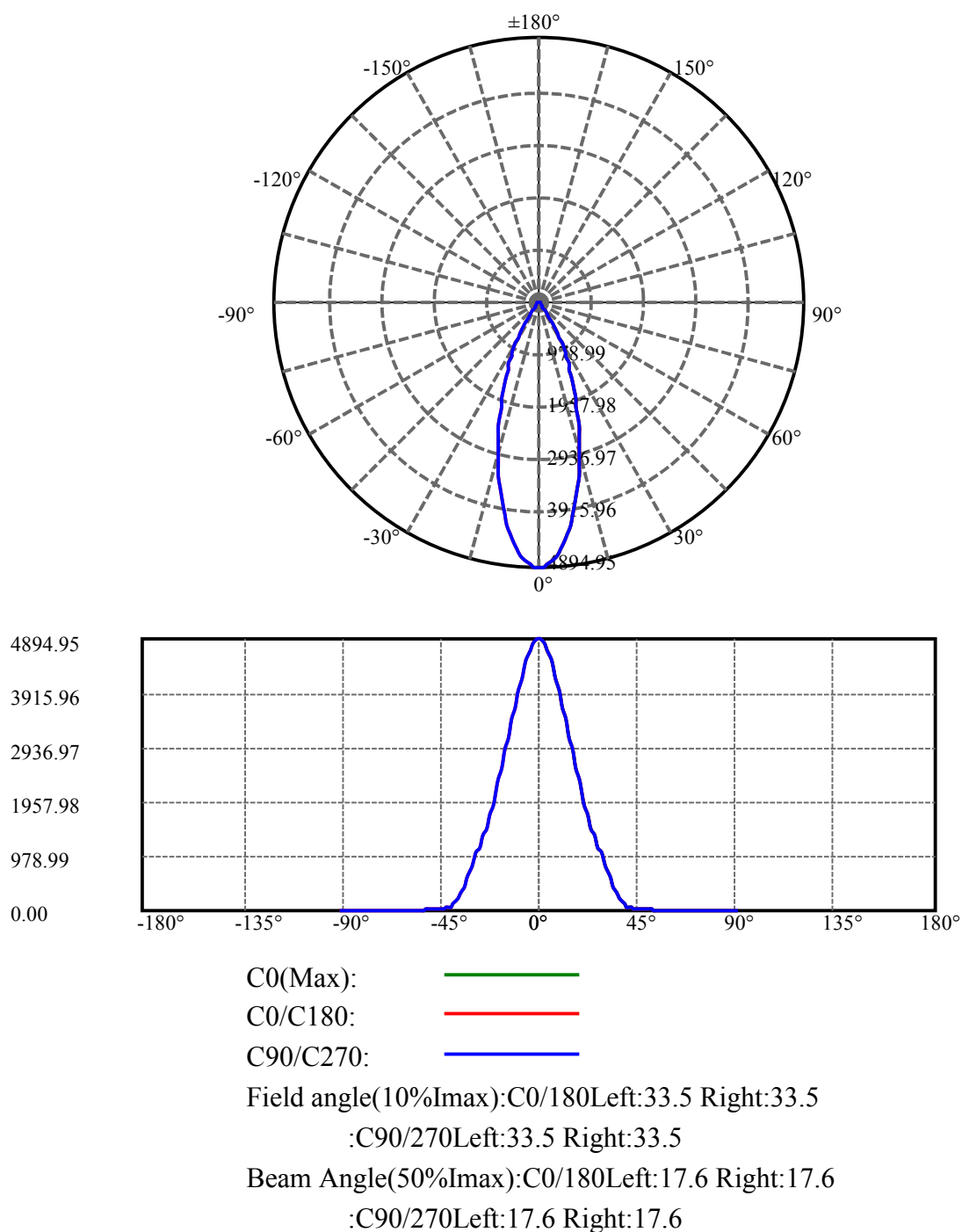
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0               | 2.957         | 0.325       | 2126.524  | 0.01%       | 99.89%     |
| 77.0               | 2.746         | 0.304       | 2126.828  | 0.01%       | 99.90%     |
| 78.0               | 2.516         | 0.282       | 2127.11   | 0.01%       | 99.92%     |
| 79.0               | 2.286         | 0.258       | 2127.368  | 0.01%       | 99.93%     |
| 80.0               | 2.050         | 0.234       | 2127.602  | 0.01%       | 99.94%     |
| 81.0               | 1.840         | 0.210       | 2127.812  | 0.01%       | 99.95%     |
| 82.0               | 1.649         | 0.189       | 2128.001  | 0.01%       | 99.96%     |
| 83.0               | 1.452         | 0.169       | 2128.17   | 0.01%       | 99.97%     |
| 84.0               | 1.288         | 0.149       | 2128.319  | 0.01%       | 99.97%     |
| 85.0               | 1.130         | 0.132       | 2128.451  | 0.01%       | 99.98%     |
| 86.0               | 0.992         | 0.116       | 2128.567  | 0.01%       | 99.98%     |
| 87.0               | 0.874         | 0.102       | 2128.669  | 0.00%       | 99.99%     |
| 88.0               | 0.736         | 0.088       | 2128.757  | 0.00%       | 99.99%     |
| 89.0               | 0.624         | 0.075       | 2128.832  | 0.00%       | 100.00%    |
| 90.0               | 0.591         | 0.067       | 2128.898  | 0.00%       | 100.00%    |

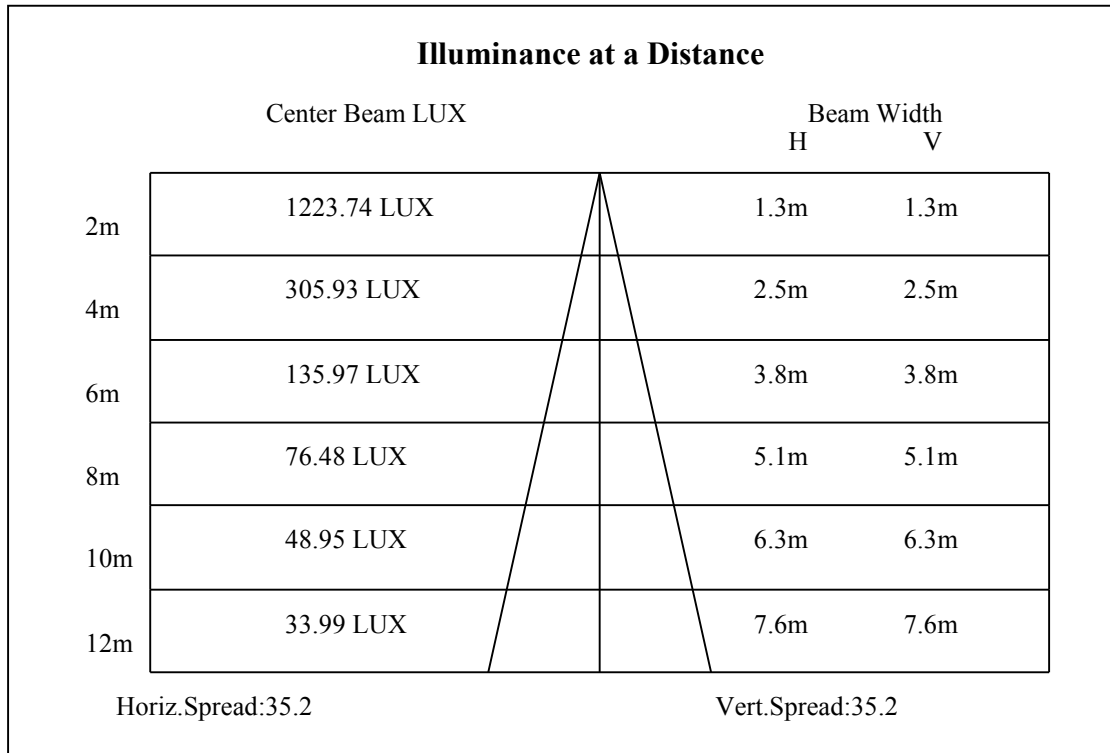
Zonal flux distribution table

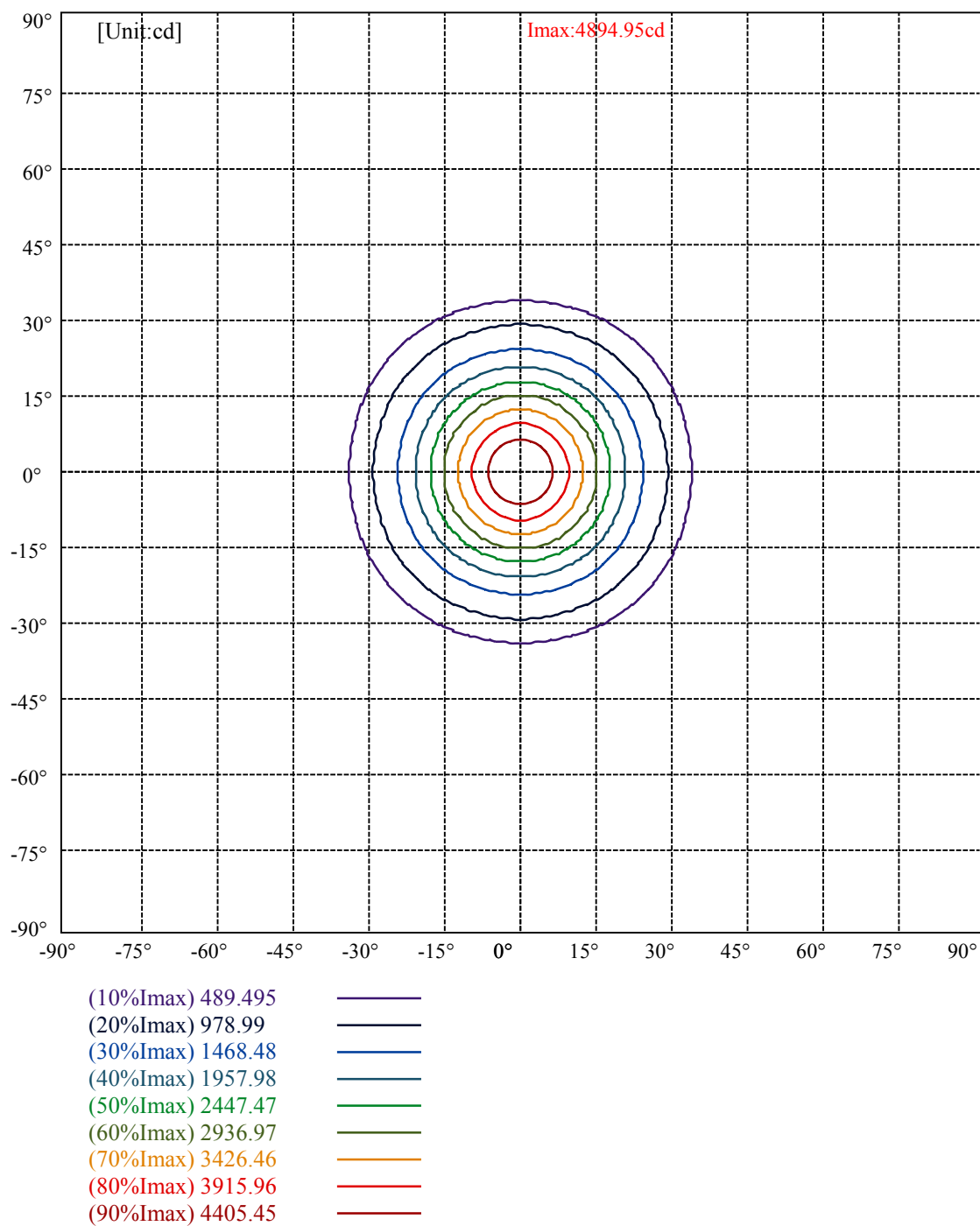
| ZONAL LUMEN SUMMARY |         |        |         |
|---------------------|---------|--------|---------|
| Zone                | Lumens  | %Lamp  | %Fixt   |
| 0-30                | 1841.45 | 80.38% | 86.50%  |
| 0-40                | 2079.27 | 90.76% | 97.67%  |
| 0-60                | 2118.31 | 92.46% | 99.50%  |
| 0-90                | 2128.83 | 92.92% | 100.00% |
| 0-120               | 2128.83 | 92.92% | 100.00% |
| 0-180               | 2128.90 | 92.92% | 100.00% |
| 60-90               | 10.52   | 0.46%  | 0.49%   |
| 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%   |
| 0-27.34             | 1703.12 | 74.34% | 80.00%  |

ZONAL LUMEN SUMMARY

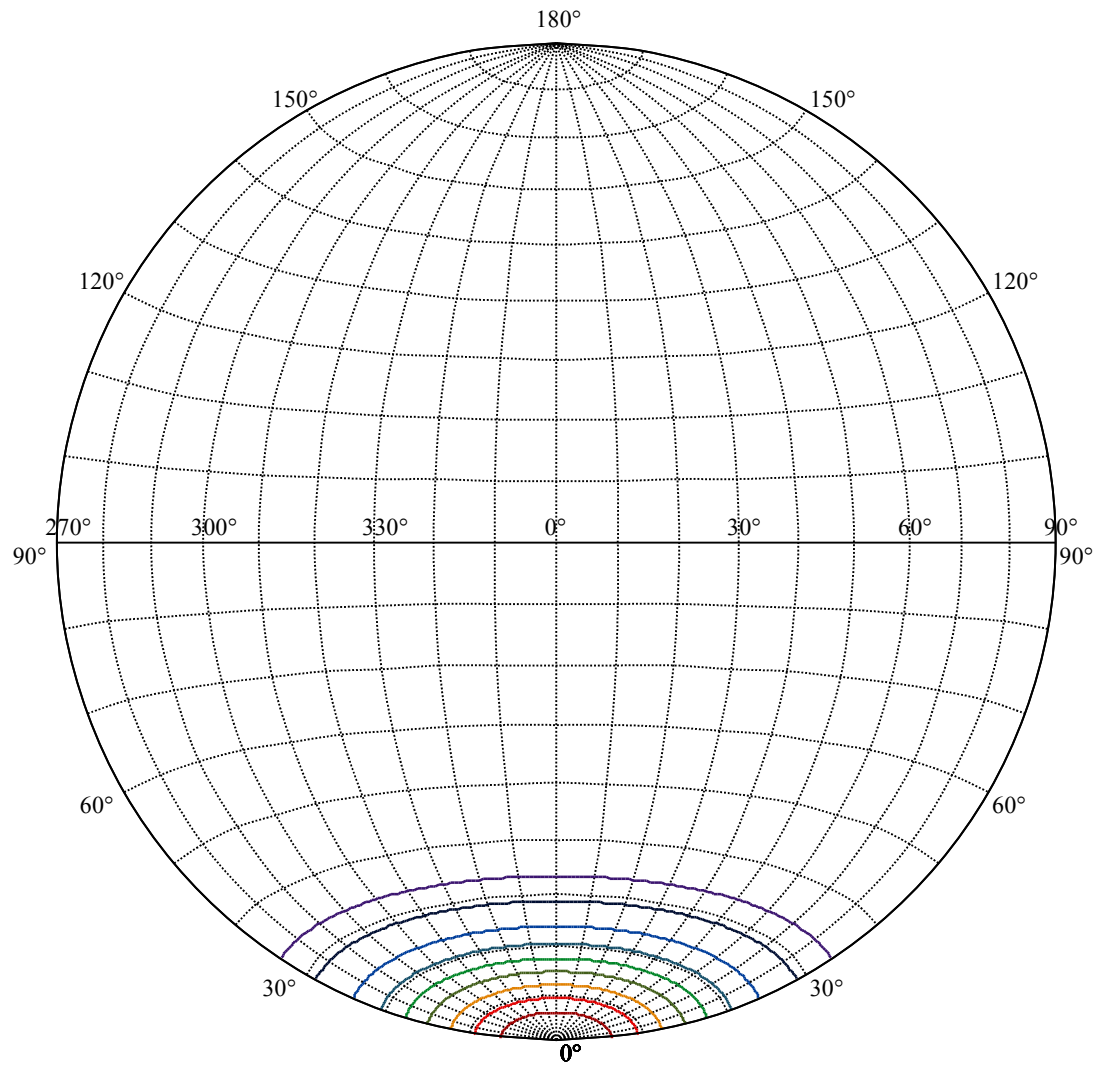
|         |        |
|---------|--------|
| 0-10    | 412.49 |
| 10-20   | 801.95 |
| 20-30   | 627.01 |
| 30-40   | 237.82 |
| 40-50   | 28.29  |
| 50-60   | 10.76  |
| 60-70   | 5.91   |
| 70-80   | 3.38   |
| 80-90   | 1.23   |
| 90-100  | 0.00   |
| 100-110 | 0.00   |
| 110-120 | 0.00   |
| 120-130 | 0.00   |
| 130-140 | 0.00   |
| 140-150 | 0.00   |
| 150-160 | 0.00   |
| 160-170 | 0.00   |
| 170-180 | 0.00   |











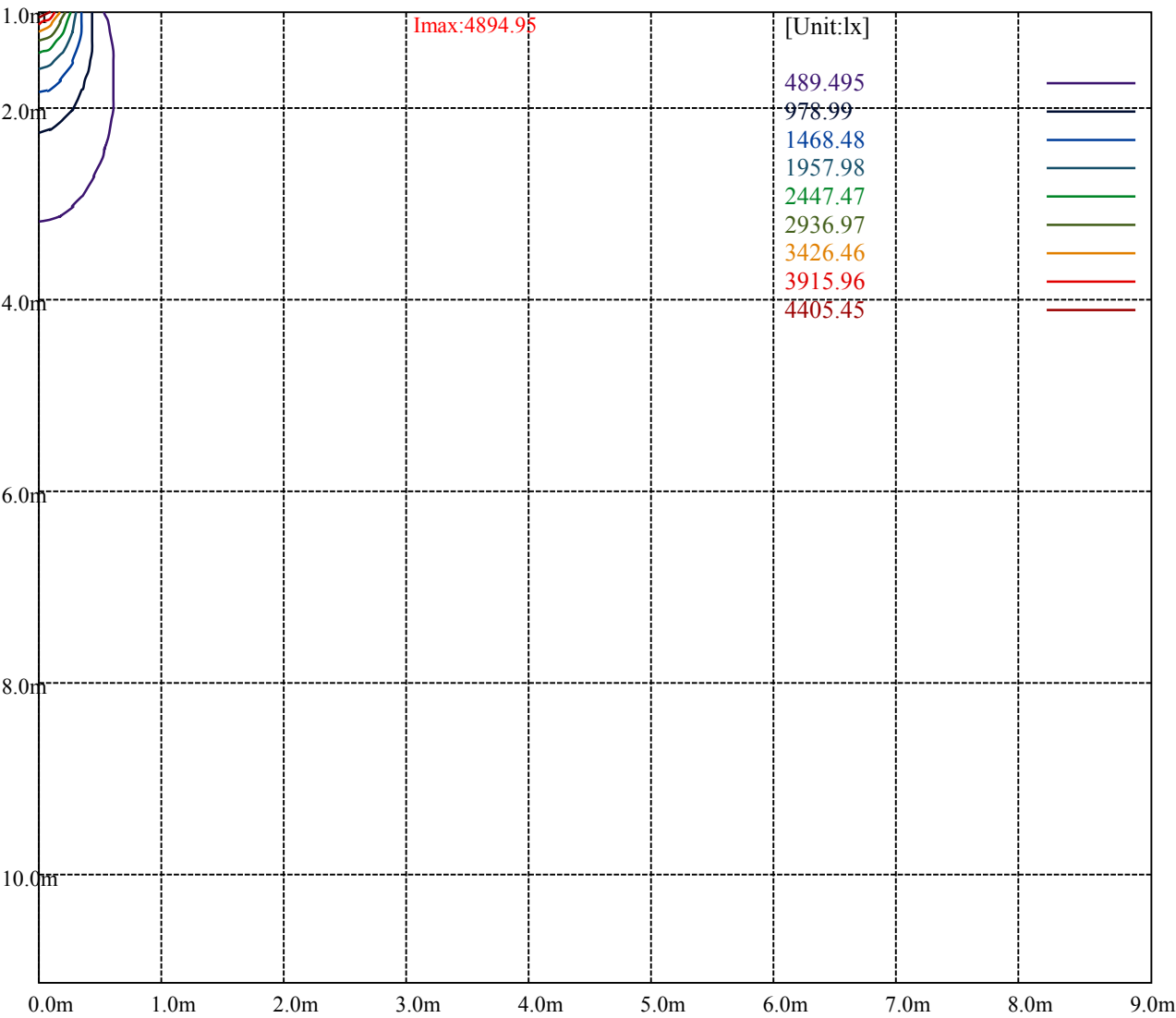
House

[Unit:cd]

Road

|                   |  |
|-------------------|--|
| Imax:4894.95      |  |
| (10%Imax) 489.495 |  |
| (20%Imax) 978.99  |  |
| (30%Imax) 1468.48 |  |
| (40%Imax) 1957.98 |  |
| (50%Imax) 2447.47 |  |
| (60%Imax) 2936.97 |  |
| (70%Imax) 3426.46 |  |
| (80%Imax) 3915.96 |  |
| (90%Imax) 4405.45 |  |





Luminance Limiting Curve(no luminous side)

Luminance Table

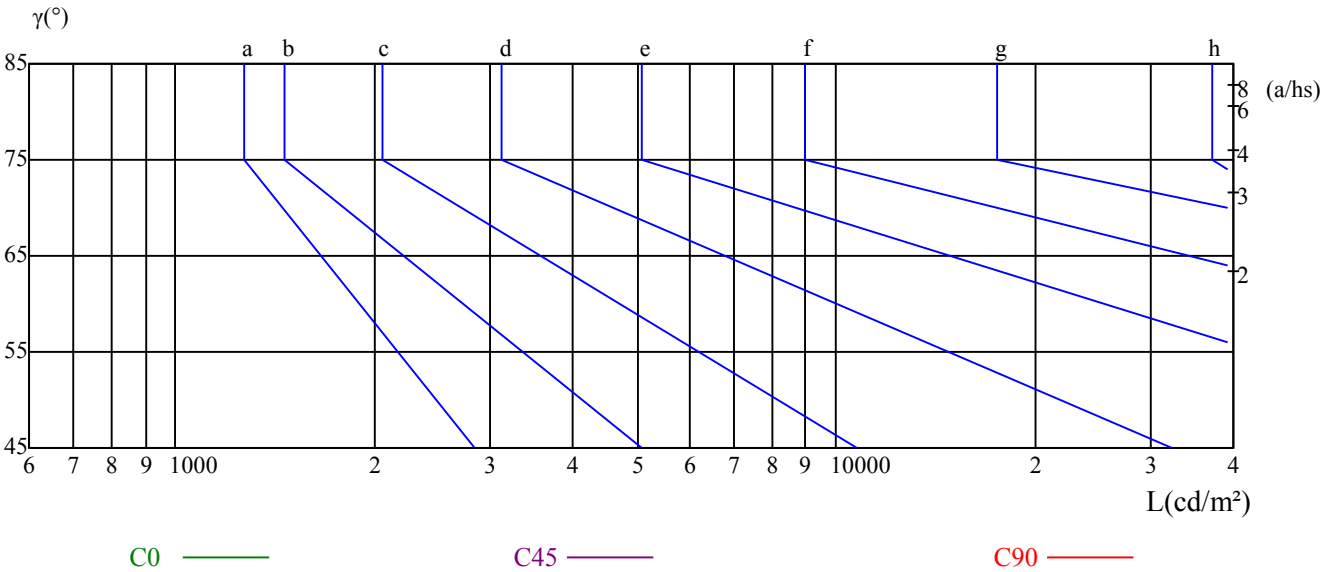
| $\gamma$ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|----------|----|----|----|----|----|----|----|----|----|
| C0       | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| C45      | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |
| C90      | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  |

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

Glare Table

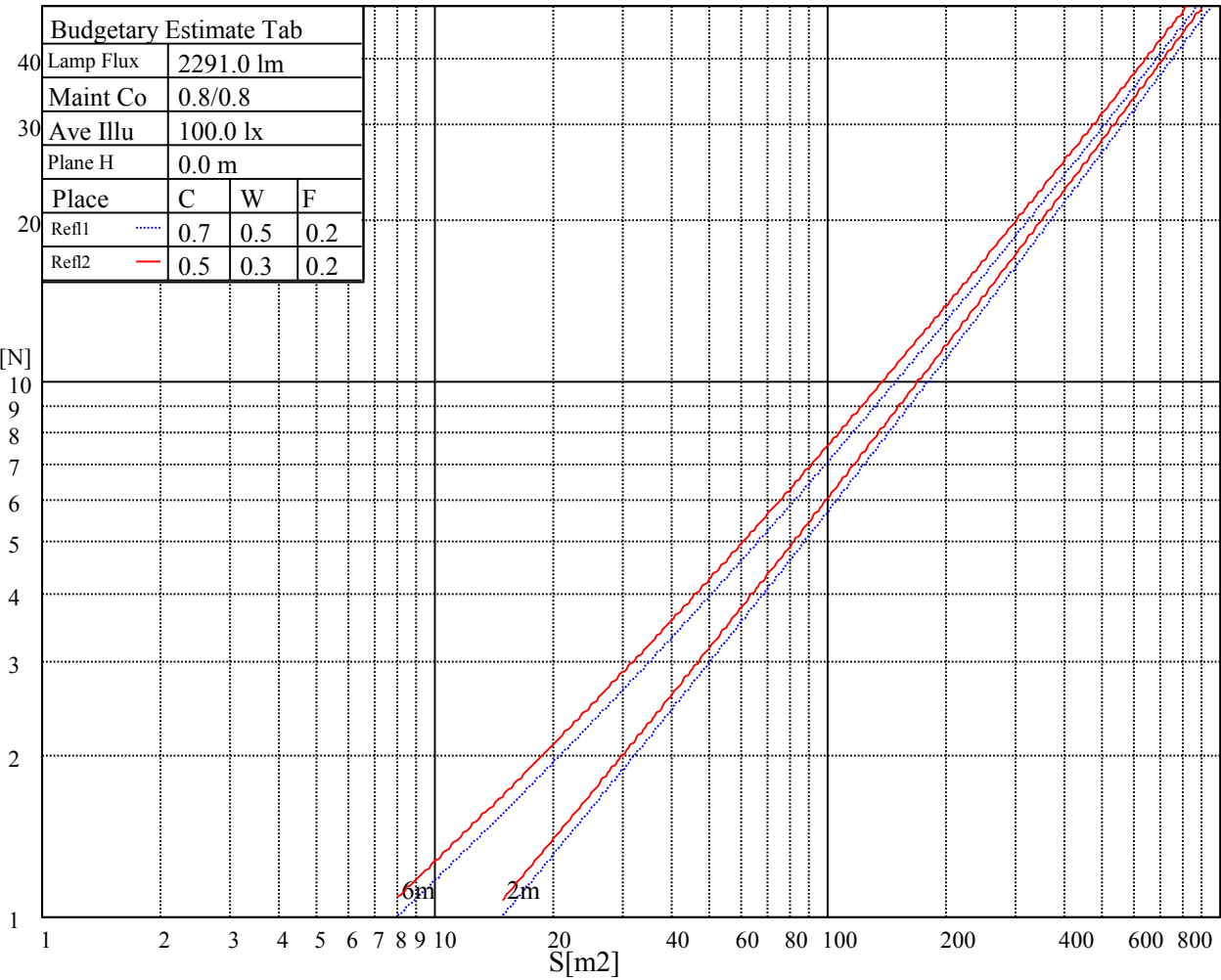
| Glare | Quality | Service Values Illuminance(lx) |      |      |            |            |            |            |            |
|-------|---------|--------------------------------|------|------|------------|------------|------------|------------|------------|
| 1.15  | A       | 2000            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

Luminance Limiting Curve

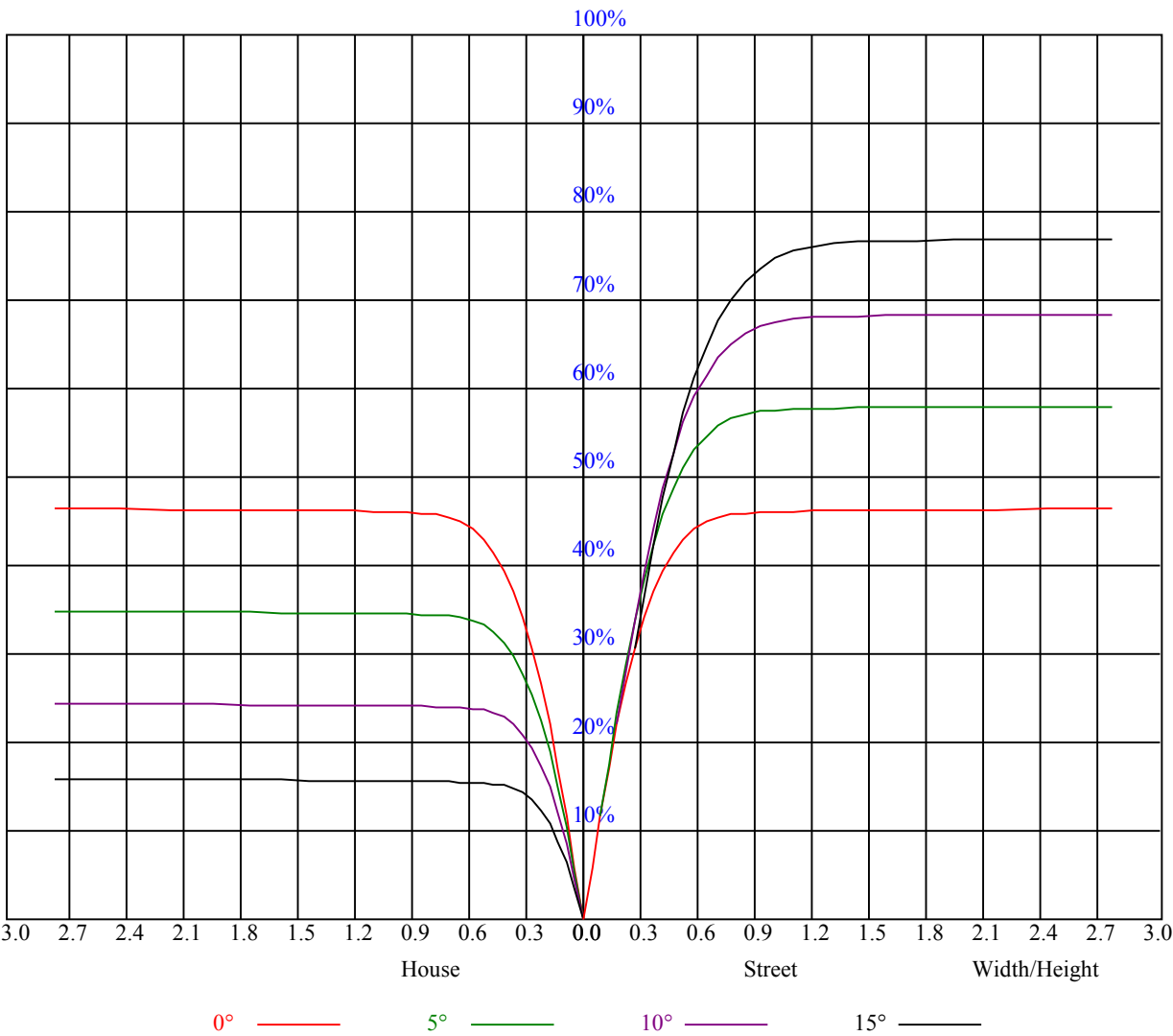


| Illumination assessment according UGR             |     |                  |     |     |     |     |                |     |     |     |  |
|---------------------------------------------------|-----|------------------|-----|-----|-----|-----|----------------|-----|-----|-----|--|
| Rf of Ceiling   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

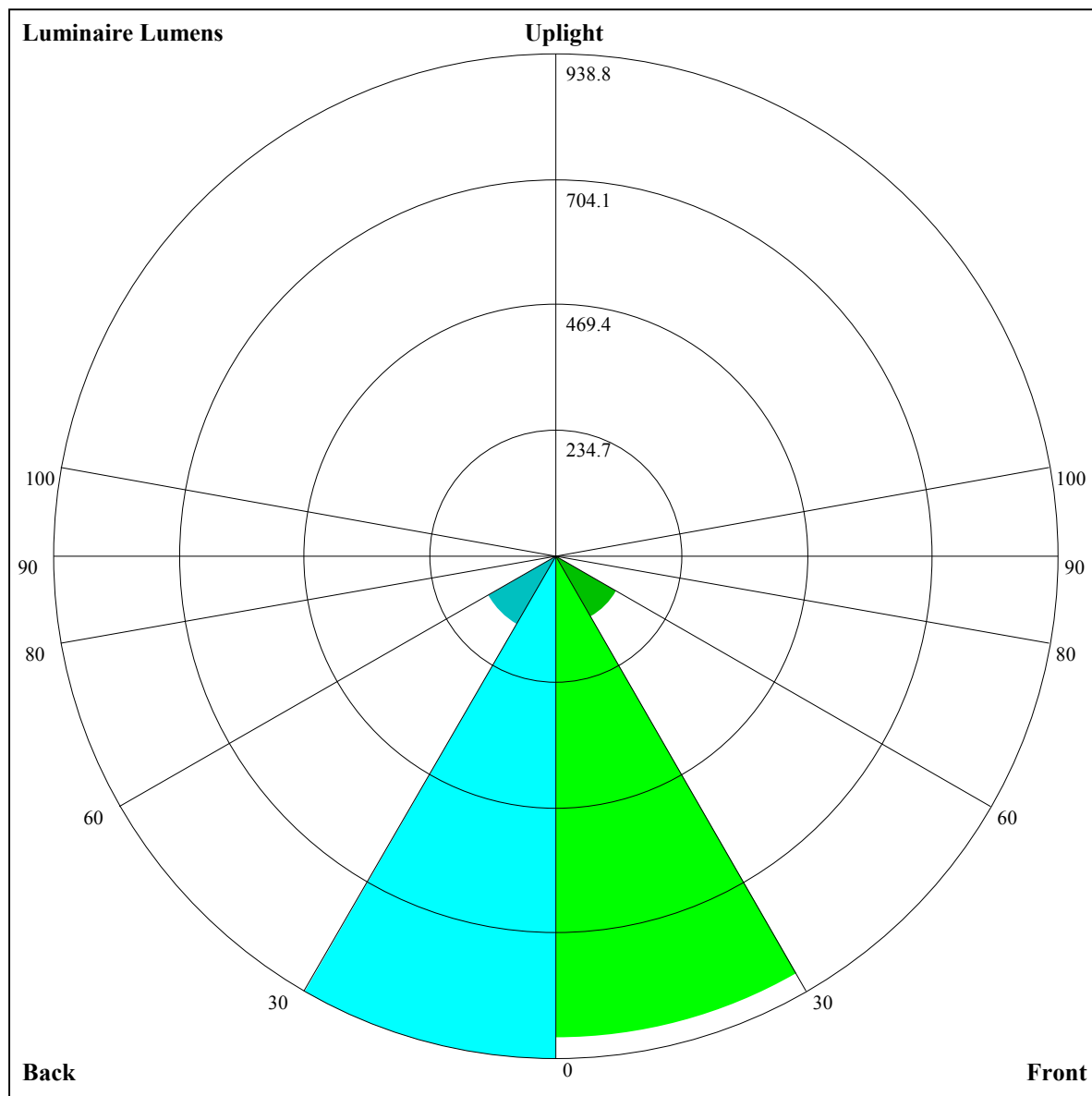
UGR calculation is based on CIE Publ. 117 ,S/H = 0.25



| RHOCC | 80                                      |      |      | 70   |      |      | 50   |      |      | 30   |      |      | 10   |      |      | 0    |
|-------|-----------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| RHOW  | 50                                      | 30   | 10   | 50   | 30   | 10   | 50   | 30   | 10   | 50   | 30   | 10   | 50   | 30   | 10   | 0    |
| RCR   | COEFFICIENTS OF UTILIZATION RHOFC=20 CU |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| 0     | 1.11                                    | 1.11 | 1.11 | 1.08 | 1.08 | 1.08 | 1.03 | 1.03 | 1.03 | 0.99 | 0.99 | 0.99 | 0.95 | 0.95 | 0.95 | 0.93 |
| 1     | 1.04                                    | 1.02 | 1.00 | 1.02 | 1.00 | 0.98 | 0.98 | 0.97 | 0.95 | 0.95 | 0.94 | 0.93 | 0.92 | 0.91 | 0.90 | 0.88 |
| 2     | 0.98                                    | 0.95 | 0.92 | 0.96 | 0.93 | 0.91 | 0.93 | 0.91 | 0.89 | 0.91 | 0.89 | 0.87 | 0.88 | 0.87 | 0.85 | 0.84 |
| 3     | 0.92                                    | 0.88 | 0.85 | 0.91 | 0.88 | 0.85 | 0.89 | 0.86 | 0.83 | 0.87 | 0.84 | 0.82 | 0.85 | 0.83 | 0.81 | 0.79 |
| 4     | 0.88                                    | 0.83 | 0.80 | 0.87 | 0.83 | 0.79 | 0.85 | 0.81 | 0.78 | 0.83 | 0.80 | 0.78 | 0.81 | 0.79 | 0.77 | 0.75 |
| 5     | 0.83                                    | 0.79 | 0.75 | 0.82 | 0.78 | 0.75 | 0.81 | 0.77 | 0.74 | 0.79 | 0.76 | 0.74 | 0.78 | 0.75 | 0.73 | 0.72 |
| 6     | 0.79                                    | 0.75 | 0.71 | 0.79 | 0.74 | 0.71 | 0.77 | 0.73 | 0.70 | 0.76 | 0.73 | 0.70 | 0.75 | 0.72 | 0.70 | 0.68 |
| 7     | 0.76                                    | 0.71 | 0.68 | 0.75 | 0.71 | 0.67 | 0.74 | 0.70 | 0.67 | 0.73 | 0.69 | 0.67 | 0.72 | 0.69 | 0.66 | 0.65 |
| 8     | 0.72                                    | 0.68 | 0.64 | 0.72 | 0.67 | 0.64 | 0.71 | 0.67 | 0.64 | 0.70 | 0.66 | 0.64 | 0.69 | 0.66 | 0.63 | 0.62 |
| 9     | 0.69                                    | 0.64 | 0.61 | 0.69 | 0.64 | 0.61 | 0.68 | 0.64 | 0.61 | 0.67 | 0.63 | 0.61 | 0.66 | 0.63 | 0.61 | 0.60 |
| 10    | 0.66                                    | 0.62 | 0.59 | 0.66 | 0.62 | 0.59 | 0.65 | 0.61 | 0.58 | 0.65 | 0.61 | 0.58 | 0.64 | 0.61 | 0.58 | 0.57 |







Luminaire Lumens:

FL=901.01,FM=132.58,FH=4.52,FVH=0.64

BL=938.8,BM=147.55,BH=4.79,BVH=0.67

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    | 4877.12 | 4804.16 | 4711.65 | 4597.43 | 4524.47 | 4327.79 | 4229.70 | 4070.91 | 3904.34 |
| 45.0   | 4921.69 | 4891.05 | 4815.30 | 4713.91 | 4603.00 | 4484.90 | 4353.96 | 4200.74 | 4026.34 |
| 90.0   | 4863.19 | 4794.12 | 4691.62 | 4584.61 | 4468.18 | 4326.68 | 4151.70 | 3988.44 | 3807.94 |
| 135.0  | 4917.80 | 4889.94 | 4859.30 | 4748.97 | 4690.47 | 4580.19 | 4446.47 | 4304.92 | 4144.45 |
| 180.0  | 4877.12 | 4913.33 | 4913.91 | 4884.37 | 4833.12 | 4756.22 | 4650.94 | 4527.79 | 4382.40 |
| 225.0  | 4921.69 | 4930.05 | 4916.70 | 4894.41 | 4834.80 | 4701.61 | 4634.75 | 4504.97 | 4352.28 |
| 270.0  | 4863.19 | 4913.33 | 4940.09 | 4931.73 | 4892.20 | 4834.80 | 4738.40 | 4630.86 | 4505.50 |
| 315.0  | 4917.80 | 4909.44 | 4876.01 | 4808.63 | 4703.87 | 4579.61 | 4449.78 | 4311.60 | 4157.85 |
| 360.0  | 4877.12 | 4804.16 | 4711.65 | 4597.43 | 4524.47 | 4327.79 | 4229.70 | 4070.91 | 3904.34 |
| C/γ(°) | 9.0     | 10.0    | 11.0    | 12.0    | 13.0    | 14.0    | 15.0    | 16.0    | 17.0    |
| 0.0    | 3732.73 | 3556.12 | 3386.18 | 3212.36 | 3032.38 | 2856.88 | 2675.22 | 2489.68 | 2307.49 |
| 45.0   | 3851.41 | 3672.54 | 3504.87 | 3338.24 | 3159.95 | 2982.24 | 2799.48 | 2684.68 | 2415.04 |
| 90.0   | 3639.11 | 3470.86 | 3285.89 | 3105.34 | 2925.94 | 2734.30 | 2546.55 | 2363.21 | 2184.92 |
| 135.0  | 3964.53 | 3794.01 | 3612.36 | 3430.75 | 3260.24 | 3064.13 | 2877.48 | 2694.20 | 2505.86 |
| 180.0  | 4215.78 | 4044.16 | 3864.76 | 3682.00 | 3501.50 | 3319.32 | 3134.88 | 2983.92 | 2757.69 |
| 225.0  | 4182.35 | 4006.84 | 3828.02 | 3654.15 | 3465.29 | 3273.65 | 3080.27 | 2882.47 | 2688.05 |
| 270.0  | 4351.75 | 4184.61 | 4013.51 | 3846.94 | 3678.11 | 3498.72 | 3312.65 | 3130.41 | 2943.76 |
| 315.0  | 3991.81 | 3812.94 | 3651.36 | 3470.28 | 3293.15 | 3115.96 | 3007.84 | 2767.73 | 2592.75 |
| 360.0  | 3732.73 | 3556.12 | 3386.18 | 3212.36 | 3032.38 | 2856.88 | 2675.22 | 2489.68 | 2307.49 |
| C/γ(°) | 18.0    | 19.0    | 20.0    | 21.0    | 22.0    | 23.0    | 24.0    | 25.0    | 26.0    |
| 0.0    | 2133.67 | 1970.99 | 1814.98 | 1667.86 | 1536.40 | 1413.83 | 1311.28 | 1219.92 | 1089.41 |
| 45.0   | 2229.49 | 2126.42 | 1962.63 | 1798.27 | 1656.19 | 1531.93 | 1418.82 | 1311.28 | 1205.99 |
| 90.0   | 2007.73 | 1843.37 | 1689.04 | 1554.22 | 1480.11 | 1324.68 | 1087.89 | 1087.89 | 1068.86 |
| 135.0  | 2323.68 | 2150.38 | 1981.03 | 1818.29 | 1672.33 | 1561.47 | 1429.96 | 1297.35 | 1207.68 |
| 180.0  | 2603.37 | 2413.35 | 2230.59 | 2057.87 | 1899.66 | 1748.12 | 1609.94 | 1480.69 | 1364.79 |
| 225.0  | 2497.51 | 2313.07 | 2136.46 | 1968.73 | 1811.09 | 1666.23 | 1561.47 | 1441.11 | 1311.85 |
| 270.0  | 2763.26 | 2650.73 | 2378.82 | 2265.71 | 2082.95 | 1849.52 | 1758.69 | 1613.83 | 1485.15 |
| 315.0  | 2484.68 | 2232.86 | 2131.46 | 1969.31 | 1811.62 | 1672.33 | 1541.40 | 1426.07 | 1317.43 |
| 360.0  | 2133.67 | 1970.99 | 1814.98 | 1667.86 | 1536.40 | 1413.83 | 1311.28 | 1219.92 | 1089.41 |
| C/γ(°) | 27.0    | 28.0    | 29.0    | 30.0    | 31.0    | 32.0    | 33.0    | 34.0    | 35.0    |
| 0.0    | 1054.61 | 956.58  | 845.84  | 730.93  | 619.24  | 514.53  | 416.30  | 324.15  | 241.05  |
| 45.0   | 1111.85 | 1013.77 | 910.12  | 800.37  | 691.20  | 585.34  | 483.36  | 387.54  | 298.40  |
| 90.0   | 972.56  | 861.39  | 750.17  | 640.47  | 535.82  | 437.27  | 343.97  | 257.40  | 182.50  |
| 135.0  | 1107.39 | 1015.98 | 916.27  | 812.09  | 700.08  | 592.01  | 487.83  | 389.75  | 298.92  |
| 180.0  | 1258.35 | 1159.21 | 1063.34 | 964.73  | 855.56  | 743.55  | 635.48  | 531.25  | 428.75  |
| 225.0  | 1098.35 | 1079.63 | 1041.53 | 934.25  | 818.66  | 707.60  | 600.32  | 496.51  | 401.68  |
| 270.0  | 1370.36 | 1262.29 | 1159.74 | 1066.13 | 969.78  | 861.66  | 751.91  | 641.58  | 538.50  |
| 315.0  | 1085.00 | 1085.00 | 1006.99 | 899.50  | 786.12  | 716.74  | 562.63  | 456.08  | 395.64  |
| 360.0  | 1054.61 | 956.58  | 845.84  | 730.93  | 619.24  | 514.53  | 416.30  | 324.15  | 241.05  |
| C/γ(°) | 36.0    | 37.0    | 38.0    | 39.0    | 40.0    | 41.0    | 42.0    | 43.0    | 44.0    |
| 0.0    | 169.09  | 112.12  | 77.69   | 62.29   | 52.83   | 44.73   | 40.16   | 33.69   | 29.70   |
| 45.0   | 298.40  | 210.41  | 94.72   | 78.37   | 62.76   | 52.98   | 45.41   | 39.37   | 34.69   |
| 90.0   | 123.15  | 87.04   | 68.65   | 59.55   | 50.14   | 41.94   | 37.95   | 33.48   | 29.54   |
| 135.0  | 298.92  | 150.59  | 118.79  | 75.80   | 67.91   | 57.98   | 49.83   | 43.10   | 38.11   |
| 180.0  | 332.93  | 314.53  | 314.53  | 139.29  | 96.93   | 75.16   | 63.55   | 54.30   | 46.73   |
| 225.0  | 314.27  | 232.06  | 160.79  | 125.41  | 75.69   | 62.23   | 56.24   | 47.73   | 40.79   |
| 270.0  | 441.58  | 351.33  | 298.92  | 298.92  | 122.26  | 87.78   | 66.07   | 55.98   | 47.94   |
| 315.0  | 300.45  | 219.08  | 150.96  | 99.97   | 71.01   | 57.82   | 49.36   | 41.94   | 36.53   |
| 360.0  | 169.09  | 112.12  | 77.69   | 62.29   | 52.83   | 44.73   | 40.16   | 33.69   | 29.70   |

## 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    | 27.60 | 23.07 | 21.34 | 18.98 | 17.03 | 15.30 | 13.98 | 12.83 | 11.67 |
| 45.0   | 30.75 | 27.17 | 24.02 | 21.39 | 19.19 | 17.29 | 15.72 | 14.30 | 13.04 |
| 90.0   | 26.02 | 22.97 | 20.50 | 18.40 | 16.61 | 15.09 | 13.77 | 12.51 | 11.51 |
| 135.0  | 33.53 | 29.75 | 26.33 | 23.29 | 20.76 | 18.61 | 16.82 | 15.24 | 13.88 |
| 180.0  | 41.00 | 36.11 | 31.70 | 28.02 | 24.65 | 21.87 | 19.55 | 17.56 | 15.93 |
| 225.0  | 35.74 | 31.48 | 27.86 | 24.60 | 21.97 | 19.66 | 17.71 | 16.03 | 14.61 |
| 270.0  | 41.21 | 36.43 | 32.12 | 28.44 | 25.12 | 22.13 | 19.71 | 17.71 | 15.93 |
| 315.0  | 32.43 | 28.54 | 25.23 | 22.23 | 19.87 | 17.71 | 15.87 | 14.40 | 13.14 |
| 360.0  | 27.60 | 23.07 | 21.34 | 18.98 | 17.03 | 15.30 | 13.98 | 12.83 | 11.67 |
| C/γ(°) | 54.0  | 55.0  | 56.0  | 57.0  | 58.0  | 59.0  | 60.0  | 61.0  | 62.0  |
| 0.0    | 10.67 | 9.83  | 9.15  | 8.52  | 7.94  | 7.41  | 6.94  | 6.52  | 6.15  |
| 45.0   | 11.98 | 11.41 | 10.20 | 9.72  | 9.04  | 8.46  | 7.88  | 7.41  | 6.89  |
| 90.0   | 10.67 | 9.88  | 9.20  | 8.57  | 7.99  | 7.52  | 6.99  | 6.83  | 6.20  |
| 135.0  | 12.62 | 11.67 | 10.83 | 9.93  | 9.25  | 8.73  | 8.09  | 7.57  | 7.15  |
| 180.0  | 14.40 | 13.40 | 11.98 | 11.20 | 10.30 | 9.41  | 8.83  | 8.25  | 7.67  |
| 225.0  | 13.35 | 12.19 | 11.25 | 10.41 | 9.78  | 8.94  | 8.36  | 7.94  | 7.41  |
| 270.0  | 14.51 | 13.14 | 12.04 | 11.09 | 10.25 | 9.46  | 9.04  | 8.41  | 7.83  |
| 315.0  | 11.98 | 10.88 | 10.41 | 9.57  | 8.67  | 8.36  | 7.78  | 7.31  | 6.78  |
| 360.0  | 10.67 | 9.83  | 9.15  | 8.52  | 7.94  | 7.41  | 6.94  | 6.52  | 6.15  |
| C/γ(°) | 63.0  | 64.0  | 65.0  | 66.0  | 67.0  | 68.0  | 69.0  | 70.0  | 71.0  |
| 0.0    | 5.89  | 5.62  | 5.15  | 4.94  | 4.68  | 4.52  | 4.21  | 3.94  | 3.73  |
| 45.0   | 6.47  | 6.10  | 5.73  | 5.41  | 5.10  | 4.84  | 4.57  | 4.26  | 3.99  |
| 90.0   | 5.99  | 5.68  | 5.31  | 4.99  | 4.73  | 4.52  | 4.26  | 3.99  | 3.73  |
| 135.0  | 6.62  | 6.36  | 5.99  | 5.62  | 5.26  | 4.99  | 4.78  | 4.52  | 4.21  |
| 180.0  | 7.25  | 6.78  | 6.36  | 5.94  | 5.62  | 5.26  | 4.94  | 4.68  | 4.47  |
| 225.0  | 6.94  | 6.57  | 6.10  | 5.73  | 5.47  | 5.15  | 4.84  | 4.52  | 4.26  |
| 270.0  | 7.46  | 6.94  | 6.52  | 6.10  | 5.78  | 5.52  | 5.15  | 4.84  | 4.63  |
| 315.0  | 6.41  | 6.04  | 5.73  | 5.41  | 5.05  | 4.84  | 4.57  | 4.31  | 4.05  |
| 360.0  | 5.89  | 5.62  | 5.15  | 4.94  | 4.68  | 4.52  | 4.21  | 3.94  | 3.73  |
| C/γ(°) | 72.0  | 73.0  | 74.0  | 75.0  | 76.0  | 77.0  | 78.0  | 79.0  | 80.0  |
| 0.0    | 3.47  | 3.31  | 3.05  | 2.89  | 2.68  | 2.42  | 2.21  | 2.00  | 1.79  |
| 45.0   | 3.78  | 3.57  | 3.31  | 3.05  | 2.89  | 2.68  | 2.37  | 2.21  | 1.94  |
| 90.0   | 3.47  | 3.26  | 3.05  | 2.79  | 2.52  | 2.37  | 2.16  | 1.89  | 1.68  |
| 135.0  | 3.99  | 3.78  | 3.47  | 3.26  | 3.00  | 2.73  | 2.52  | 2.26  | 2.00  |
| 180.0  | 4.15  | 3.89  | 3.63  | 3.36  | 3.15  | 3.00  | 2.68  | 2.52  | 2.26  |
| 225.0  | 4.05  | 3.78  | 3.57  | 3.26  | 3.10  | 2.84  | 2.52  | 2.37  | 2.16  |
| 270.0  | 4.36  | 4.10  | 3.89  | 3.57  | 3.36  | 3.15  | 3.05  | 2.73  | 2.47  |
| 315.0  | 3.84  | 3.68  | 3.36  | 3.21  | 2.94  | 2.79  | 2.63  | 2.31  | 2.10  |
| 360.0  | 3.47  | 3.31  | 3.05  | 2.89  | 2.68  | 2.42  | 2.21  | 2.00  | 1.79  |
| C/γ(°) | 81.0  | 82.0  | 83.0  | 84.0  | 85.0  | 86.0  | 87.0  | 88.0  | 89.0  |
| 0.0    | 1.58  | 1.42  | 1.26  | 1.05  | 1.00  | 0.84  | 0.79  | 0.63  | 0.53  |
| 45.0   | 1.73  | 1.52  | 1.37  | 1.26  | 1.10  | 0.95  | 0.84  | 0.68  | 0.58  |
| 90.0   | 1.52  | 1.42  | 1.26  | 1.10  | 0.95  | 0.79  | 0.79  | 0.58  | 0.63  |
| 135.0  | 1.79  | 1.58  | 1.42  | 1.21  | 1.05  | 1.00  | 0.84  | 0.68  | 0.58  |
| 180.0  | 2.00  | 1.73  | 1.52  | 1.47  | 1.26  | 1.10  | 0.95  | 0.84  | 0.63  |
| 225.0  | 1.94  | 1.73  | 1.47  | 1.31  | 1.16  | 1.05  | 0.89  | 0.79  | 0.63  |
| 270.0  | 2.21  | 2.05  | 1.84  | 1.52  | 1.37  | 1.21  | 1.00  | 0.89  | 0.79  |
| 315.0  | 1.94  | 1.73  | 1.47  | 1.37  | 1.16  | 1.00  | 0.89  | 0.79  | 0.63  |
| 360.0  | 1.58  | 1.42  | 1.26  | 1.05  | 1.00  | 0.84  | 0.79  | 0.63  | 0.53  |

## Intensity data(cd)

Appendix Page: 20 Total:20

|                       |      |
|-----------------------|------|
| C/ $\gamma(^{\circ})$ | 90.0 |
| 0.0                   | 0.58 |
| 45.0                  | 0.58 |
| 90.0                  | 0.63 |
| 135.0                 | 0.58 |
| 180.0                 | 0.63 |
| 225.0                 | 0.58 |
| 270.0                 | 0.63 |
| 315.0                 | 0.53 |
| 360.0                 | 0.58 |