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## Nata

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|-------------------------|----------------------|
| LumCAT: 3-2040-M        |                      |
| Luminaire: 92.70.129.00 |                      |
| Report No: GC2017061901 | Voltage(V): 218.3000 |
| Test No: NT-0010        | Current(A): 0.1000   |
| LampCAT: CREE CXA1830   | Power (W): 19.8000   |
| Lamp flux(lm): 2036.0   | PF: 0.9010           |
| Number of Lamps: 1      | Ballast type: DC     |
| Length(mm): 79          | Width(mm): 79        |
| Phm Type: C             | Height(mm): 0        |

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## Photometric Results

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Lumens(lm): 1835.62  
Efficiency(%): 90.16%  
Lumens(lm)/Power(W): 92.71  
Central intensity(cd): 7638.250  
Maximum intensity(cd): 7638.250  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=22.0  
[C90/270]Total=22.0  
Field angle(10%Imax): [C0/180]Total=51.8  
[C90/270]Total=51.8  
Maximum s/h(1/2): C0\_180=0.37 C90\_270=0.37  
Maximum s/h(1/4): C0\_180=0.39 C90\_270=0.39  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 90.16%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 98.772%

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0                | 7638.250      | 0.000       | 0         | .000%       | .000%      |
| 1.0                | 7595.306      | 7.289       | 7.289     | .358%       | .397%      |
| 2.0                | 7432.476      | 21.569      | 28.858    | 1.059%      | 1.572%     |
| 3.0                | 7169.995      | 34.924      | 63.783    | 1.715%      | 3.475%     |
| 4.0                | 6876.269      | 47.017      | 110.8     | 2.309%      | 6.036%     |
| 5.0                | 6497.481      | 57.533      | 168.333   | 2.826%      | 9.170%     |
| 6.0                | 6105.342      | 66.231      | 234.564   | 3.253%      | 12.778%    |
| 7.0                | 5681.408      | 73.160      | 307.724   | 3.593%      | 16.764%    |
| 8.0                | 5234.074      | 78.120      | 385.844   | 3.837%      | 21.020%    |
| 9.0                | 4746.963      | 80.891      | 466.735   | 3.973%      | 25.427%    |
| 10.0               | 4299.630      | 81.868      | 548.604   | 4.021%      | 29.887%    |
| 11.0               | 3826.970      | 81.201      | 629.805   | 3.988%      | 34.310%    |
| 12.0               | 3384.455      | 78.831      | 708.636   | 3.872%      | 38.605%    |
| 13.0               | 2965.613      | 75.359      | 783.996   | 3.701%      | 42.710%    |
| 14.0               | 2574.437      | 70.912      | 854.908   | 3.483%      | 46.573%    |
| 15.0               | 2242.034      | 66.123      | 921.03    | 3.248%      | 50.175%    |
| 16.0               | 1957.668      | 61.537      | 982.568   | 3.022%      | 53.528%    |
| 17.0               | 1717.484      | 57.232      | 1039.8    | 2.811%      | 56.646%    |
| 18.0               | 1510.610      | 53.224      | 1093.024  | 2.614%      | 59.545%    |
| 19.0               | 1344.560      | 49.674      | 1142.698  | 2.440%      | 62.251%    |
| 20.0               | 1198.206      | 46.540      | 1189.238  | 2.286%      | 64.787%    |
| 21.0               | 1091.782      | 43.972      | 1233.21   | 2.160%      | 67.182%    |
| 22.0               | 999.136       | 42.018      | 1275.228  | 2.064%      | 69.471%    |
| 23.0               | 919.580       | 40.260      | 1315.488  | 1.977%      | 71.664%    |
| 24.0               | 855.425       | 38.808      | 1354.296  | 1.906%      | 73.779%    |
| 25.0               | 799.983       | 37.640      | 1391.936  | 1.849%      | 75.829%    |
| 26.0               | 759.902       | 36.821      | 1428.758  | 1.809%      | 77.835%    |
| 27.0               | 726.153       | 36.357      | 1465.114  | 1.786%      | 79.816%    |
| 28.0               | 700.799       | 36.127      | 1501.242  | 1.774%      | 81.784%    |
| 29.0               | 680.497       | 36.139      | 1537.38   | 1.775%      | 83.752%    |
| 30.0               | 660.470       | 36.206      | 1573.586  | 1.778%      | 85.725%    |
| 31.0               | 631.098       | 35.942      | 1609.529  | 1.765%      | 87.683%    |
| 32.0               | 584.314       | 34.820      | 1644.349  | 1.710%      | 89.580%    |
| 33.0               | 526.573       | 32.727      | 1677.076  | 1.607%      | 91.363%    |
| 34.0               | 450.678       | 29.574      | 1706.65   | 1.453%      | 92.974%    |
| 35.0               | 373.475       | 25.595      | 1732.246  | 1.257%      | 94.368%    |
| 36.0               | 290.216       | 21.132      | 1753.378  | 1.038%      | 95.519%    |
| 37.0               | 229.585       | 16.953      | 1770.331  | .833%       | 96.443%    |

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0               | 145.803       | 12.530      | 1782.861  | .615%       | 97.126%    |
| 39.0               | 81.126        | 7.746       | 1790.606  | .380%       | 97.548%    |
| 40.0               | 46.770        | 4.461       | 1795.067  | .219%       | 97.791%    |
| 41.0               | 26.344        | 2.604       | 1797.67   | .128%       | 97.932%    |
| 42.0               | 16.833        | 1.569       | 1799.239  | .077%       | 98.018%    |
| 43.0               | 13.613        | 1.128       | 1800.367  | .055%       | 98.079%    |
| 44.0               | 11.713        | 0.956       | 1801.323  | .047%       | 98.131%    |
| 45.0               | 10.419        | 0.851       | 1802.173  | .042%       | 98.178%    |
| 46.0               | 9.773         | 0.790       | 1802.963  | .039%       | 98.221%    |
| 47.0               | 9.263         | 0.757       | 1803.72   | .037%       | 98.262%    |
| 48.0               | 8.974         | 0.737       | 1804.457  | .036%       | 98.302%    |
| 49.0               | 8.781         | 0.729       | 1805.187  | .036%       | 98.342%    |
| 50.0               | 8.603         | 0.725       | 1805.911  | .036%       | 98.381%    |
| 51.0               | 8.451         | 0.722       | 1806.633  | .035%       | 98.421%    |
| 52.0               | 8.286         | 0.718       | 1807.351  | .035%       | 98.460%    |
| 53.0               | 8.162         | 0.715       | 1808.067  | .035%       | 98.499%    |
| 54.0               | 8.052         | 0.715       | 1808.781  | .035%       | 98.538%    |
| 55.0               | 7.956         | 0.715       | 1809.496  | .035%       | 98.577%    |
| 56.0               | 7.859         | 0.715       | 1810.21   | .035%       | 98.616%    |
| 57.0               | 7.763         | 0.714       | 1810.925  | .035%       | 98.654%    |
| 58.0               | 7.680         | 0.714       | 1811.639  | .035%       | 98.693%    |
| 59.0               | 7.653         | 0.717       | 1812.356  | .035%       | 98.732%    |
| 60.0               | 7.584         | 0.720       | 1813.076  | .035%       | 98.772%    |
| 61.0               | 7.543         | 0.722       | 1813.797  | .035%       | 98.811%    |
| 62.0               | 7.488         | 0.724       | 1814.522  | .036%       | 98.850%    |
| 63.0               | 7.433         | 0.726       | 1815.247  | .036%       | 98.890%    |
| 64.0               | 7.391         | 0.727       | 1815.975  | .036%       | 98.930%    |
| 65.0               | 7.364         | 0.730       | 1816.705  | .036%       | 98.969%    |
| 66.0               | 7.323         | 0.733       | 1817.438  | .036%       | 99.009%    |
| 67.0               | 7.323         | 0.736       | 1818.174  | .036%       | 99.049%    |
| 68.0               | 7.254         | 0.738       | 1818.912  | .036%       | 99.090%    |
| 69.0               | 7.240         | 0.739       | 1819.652  | .036%       | 99.130%    |
| 70.0               | 7.212         | 0.742       | 1820.394  | .036%       | 99.170%    |
| 71.0               | 7.185         | 0.744       | 1821.138  | .037%       | 99.211%    |
| 72.0               | 7.157         | 0.746       | 1821.884  | .037%       | 99.252%    |
| 73.0               | 7.144         | 0.748       | 1822.632  | .037%       | 99.292%    |
| 74.0               | 7.144         | 0.751       | 1823.383  | .037%       | 99.333%    |
| 75.0               | 7.130         | 0.754       | 1824.137  | .037%       | 99.374%    |

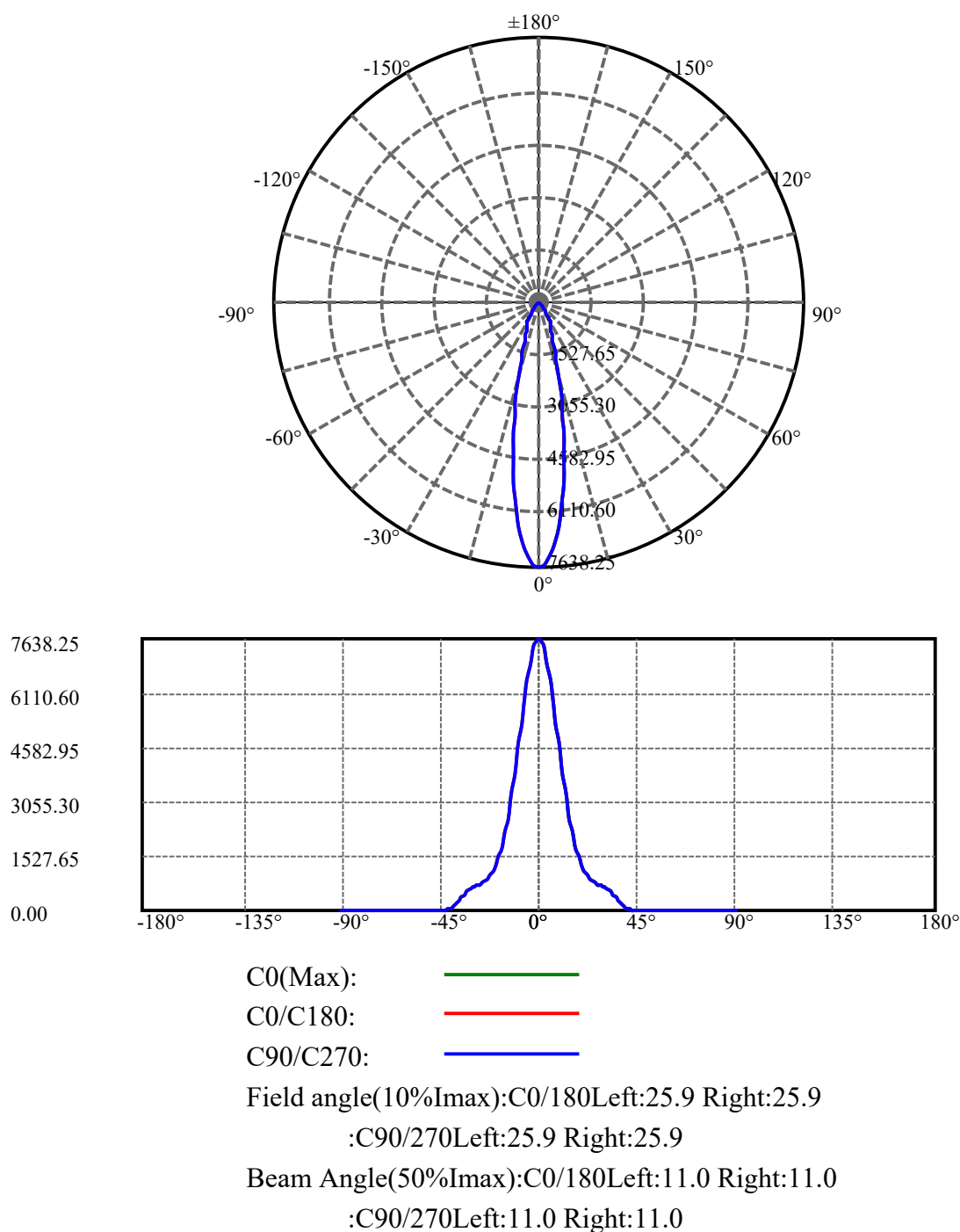
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0               | 7.116         | 0.756       | 1824.893  | .037%       | 99.415%    |
| 77.0               | 7.102         | 0.758       | 1825.651  | .037%       | 99.457%    |
| 78.0               | 7.075         | 0.759       | 1826.41   | .037%       | 99.498%    |
| 79.0               | 7.102         | 0.762       | 1827.172  | .037%       | 99.540%    |
| 80.0               | 7.116         | 0.767       | 1827.939  | .038%       | 99.581%    |
| 81.0               | 7.102         | 0.769       | 1828.707  | .038%       | 99.623%    |
| 82.0               | 7.061         | 0.768       | 1829.475  | .038%       | 99.665%    |
| 83.0               | 7.075         | 0.768       | 1830.244  | .038%       | 99.707%    |
| 84.0               | 7.047         | 0.769       | 1831.013  | .038%       | 99.749%    |
| 85.0               | 7.033         | 0.768       | 1831.782  | .038%       | 99.791%    |
| 86.0               | 7.033         | 0.769       | 1832.551  | .038%       | 99.833%    |
| 87.0               | 7.020         | 0.769       | 1833.32   | .038%       | 99.874%    |
| 88.0               | 7.006         | 0.768       | 1834.088  | .038%       | 99.916%    |
| 89.0               | 6.992         | 0.767       | 1834.855  | .038%       | 99.958%    |
| 90.0               | 7.020         | 0.768       | 1835.624  | .038%       | 100.000%   |

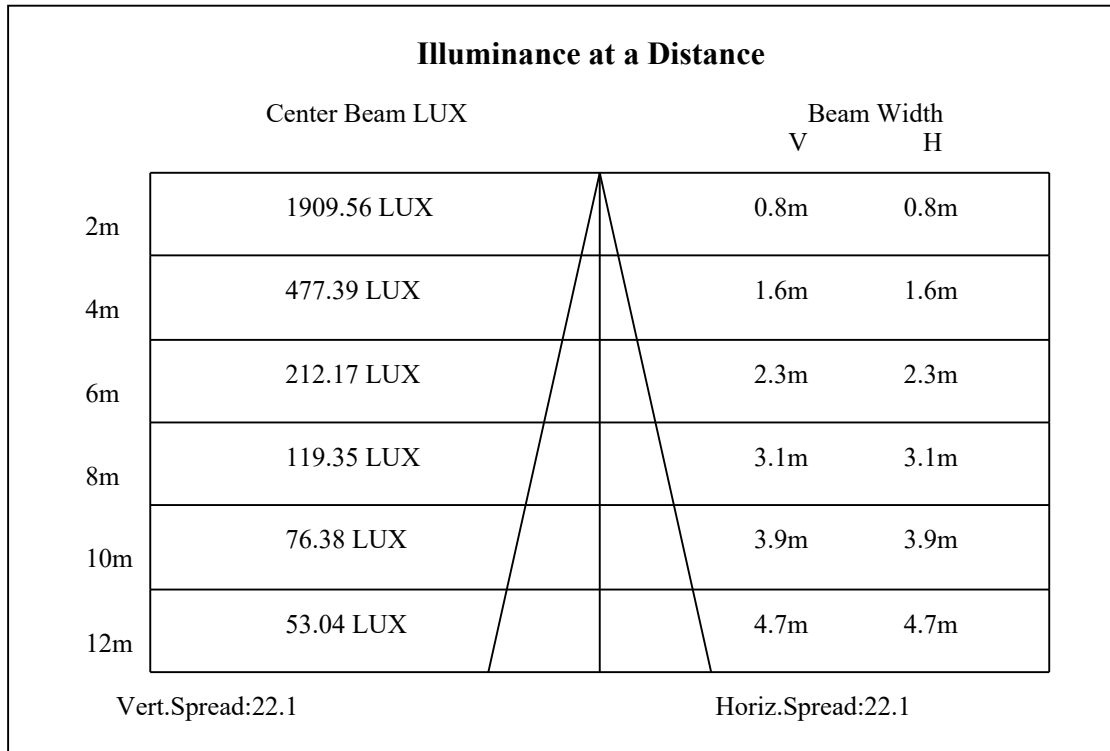
## ZONAL LUMEN SUMMARY

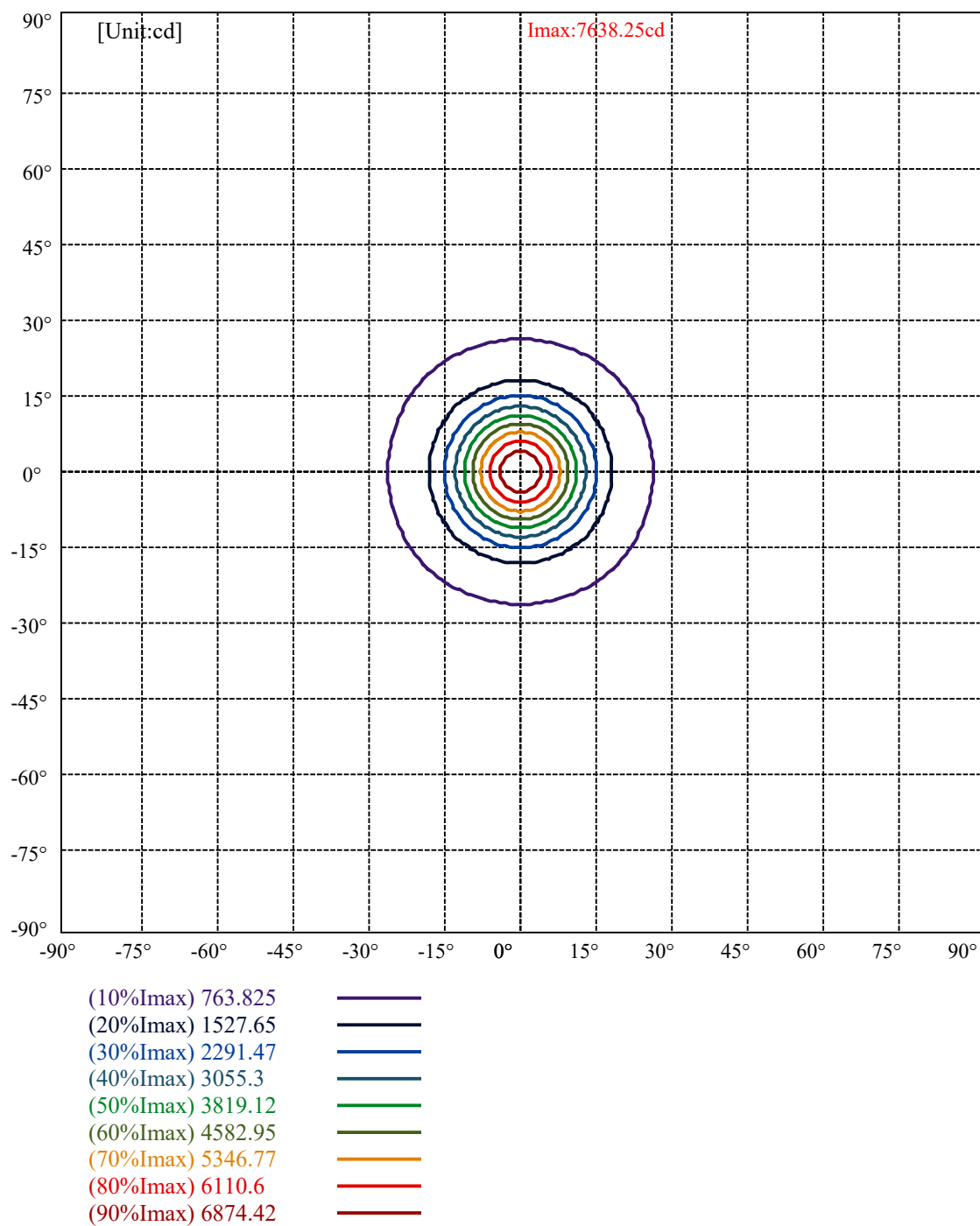
| Zone    | Lumens  | %Lamp  | %Fixt   |
|---------|---------|--------|---------|
| 0-30    | 1573.59 | 77.29% | 85.72%  |
| 0-40    | 1795.07 | 88.17% | 97.79%  |
| 0-60    | 1813.08 | 89.05% | 98.77%  |
| 0-90    | 1834.86 | 90.12% | 99.96%  |
| 0-120   | 1834.86 | 90.12% | 99.96%  |
| 0-180   | 1835.62 | 90.16% | 100.00% |
| 60-90   | 22.50   | 1.11%  | 1.23%   |
| 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%   |
| 0-27.09 | 1468.50 | 72.13% | 80.00%  |

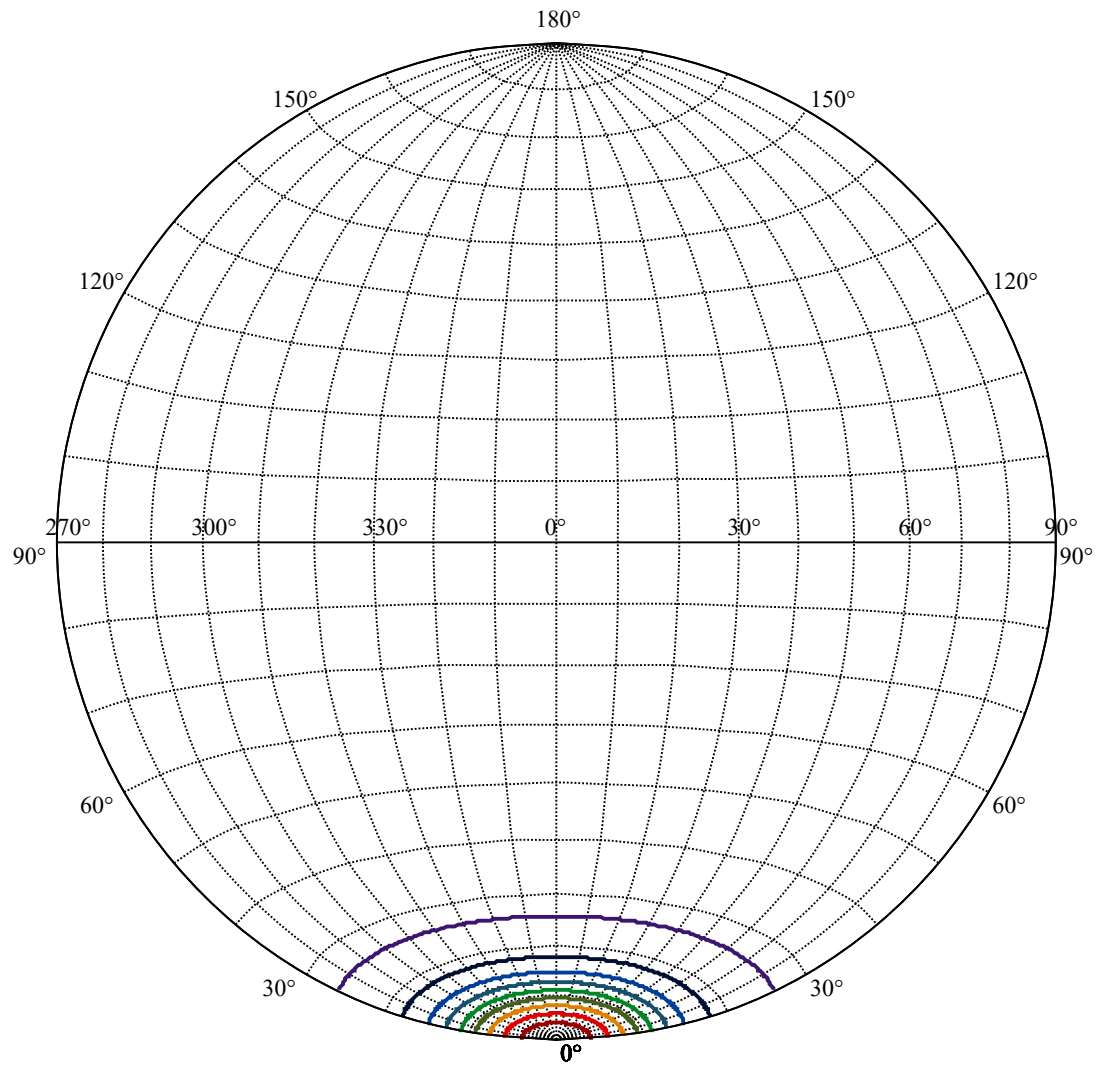
## ZONAL LUMEN SUMMARY

|         |        |
|---------|--------|
| 0-10    | 548.60 |
| 10-20   | 640.63 |
| 20-30   | 384.35 |
| 30-40   | 221.48 |
| 40-50   | 10.84  |
| 50-60   | 7.16   |
| 60-70   | 7.32   |
| 70-80   | 7.54   |
| 80-90   | 6.92   |
| 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   |







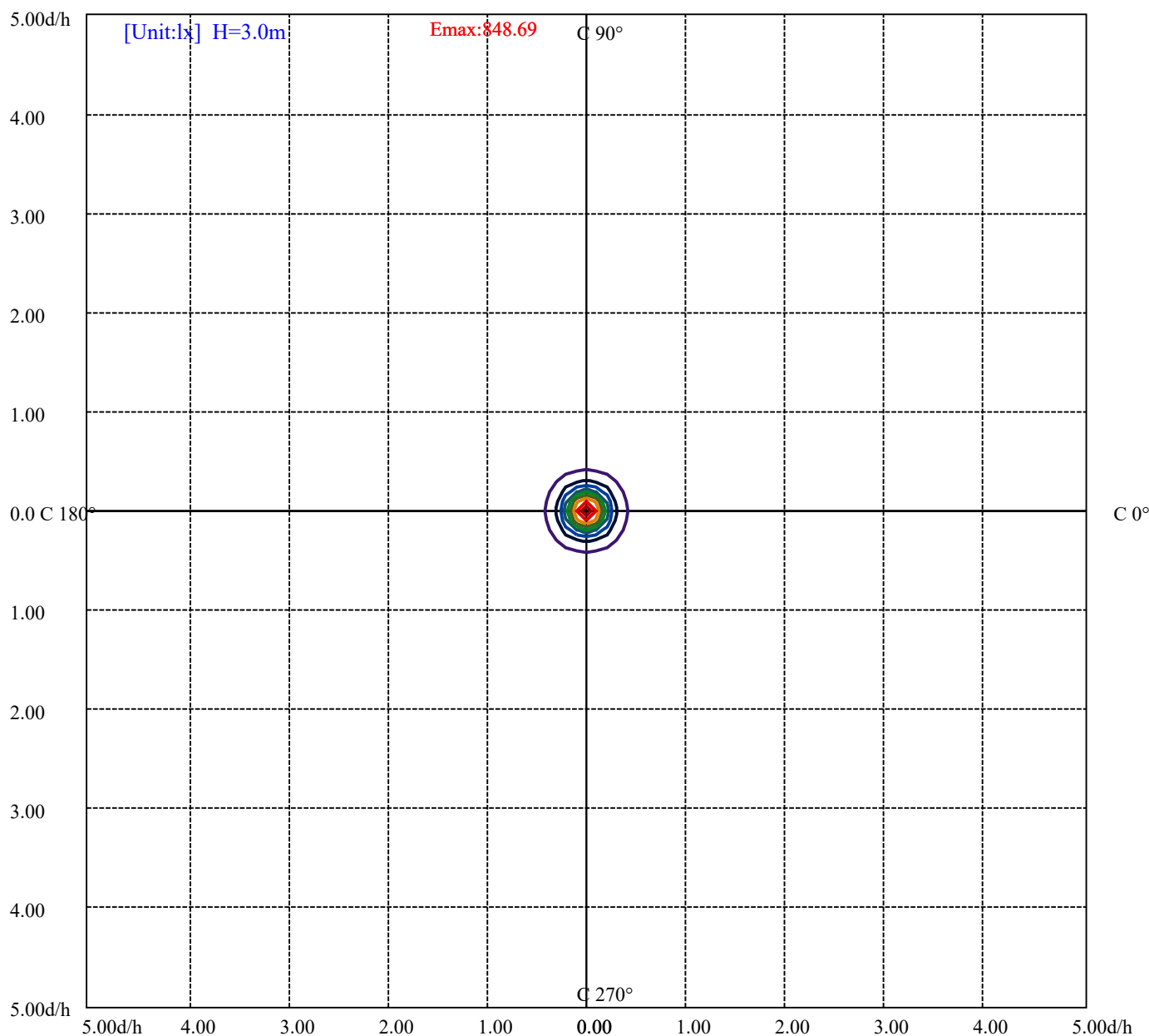


House

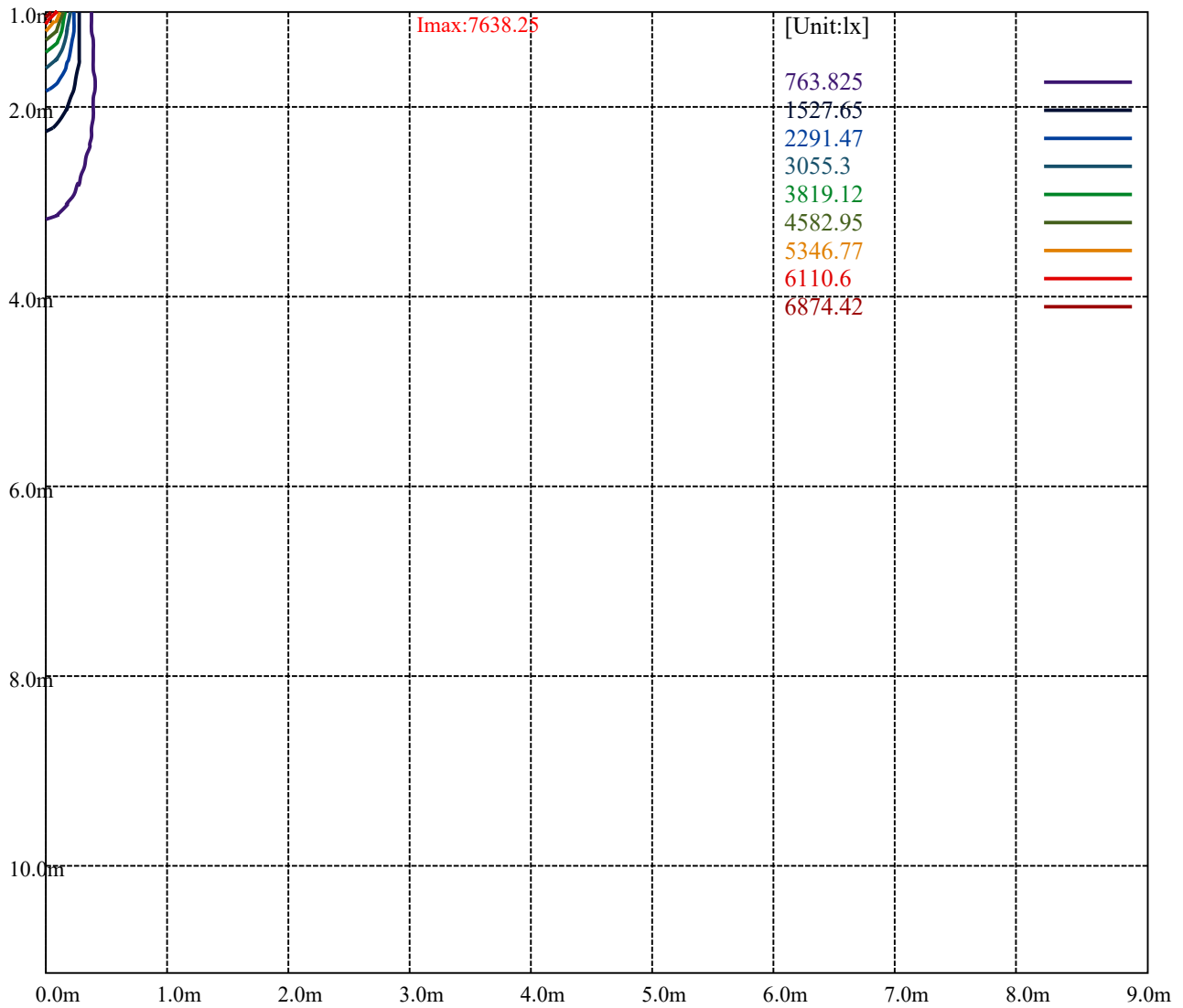
[Unit:cd]

Road

|              |         |
|--------------|---------|
| Imax:7638.25 |         |
| (10%Imax)    | 763.825 |
| (20%Imax)    | 1527.65 |
| (30%Imax)    | 2291.47 |
| (40%Imax)    | 3055.3  |
| (50%Imax)    | 3819.12 |
| (60%Imax)    | 4582.95 |
| (70%Imax)    | 5346.77 |
| (80%Imax)    | 6110.6  |
| (90%Imax)    | 6874.42 |



|           |          |   |
|-----------|----------|---|
| (10%Emax) | 84.86933 | — |
| (20%Emax) | 169.7389 | — |
| (30%Emax) | 254.6078 | — |
| (40%Emax) | 339.4778 | — |
| (50%Emax) | 424.3467 | — |
| (60%Emax) | 509.2167 | — |
| (70%Emax) | 594.0856 | — |
| (80%Emax) | 678.9544 | — |
| (90%Emax) | 763.8245 | — |



Luminance Table

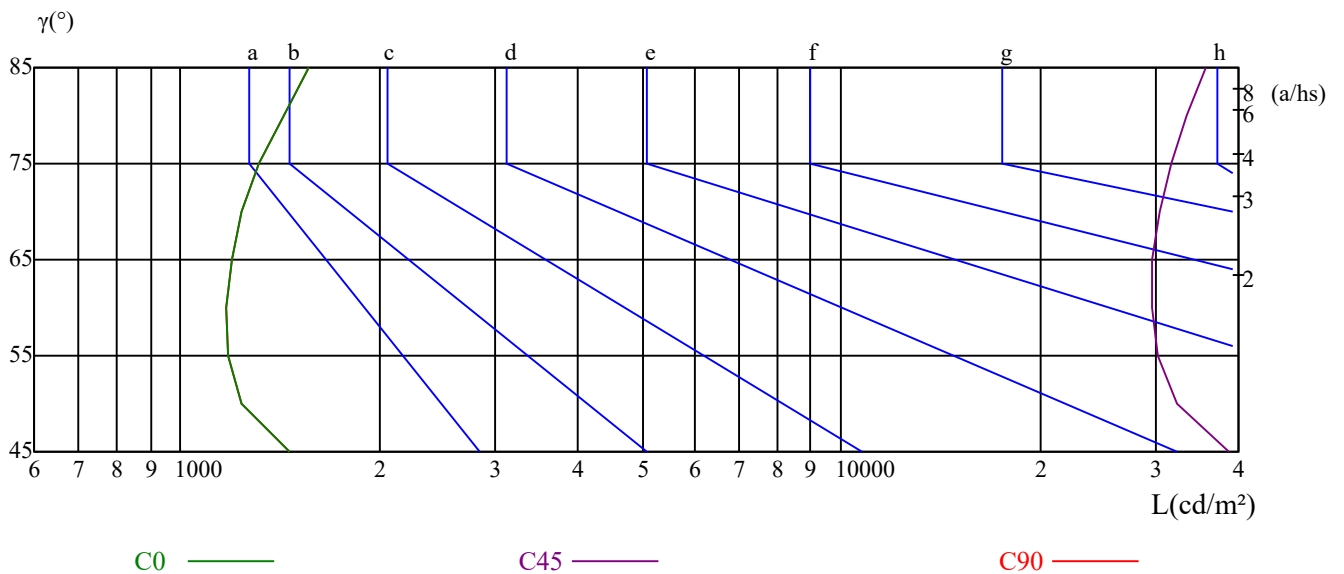
| $\gamma$ | 45    | 50    | 55    | 60    | 65    | 70    | 75    | 80    | 85    |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C0       | 1464  | 1236  | 1179  | 1169  | 1192  | 1239  | 1316  | 1431  | 1565  |
| C45      | 38599 | 32182 | 30259 | 29579 | 29673 | 30453 | 31596 | 33310 | 35762 |
| C90      | 1464  | 1236  | 1179  | 1169  | 1192  | 1239  | 1316  | 1431  | 1565  |

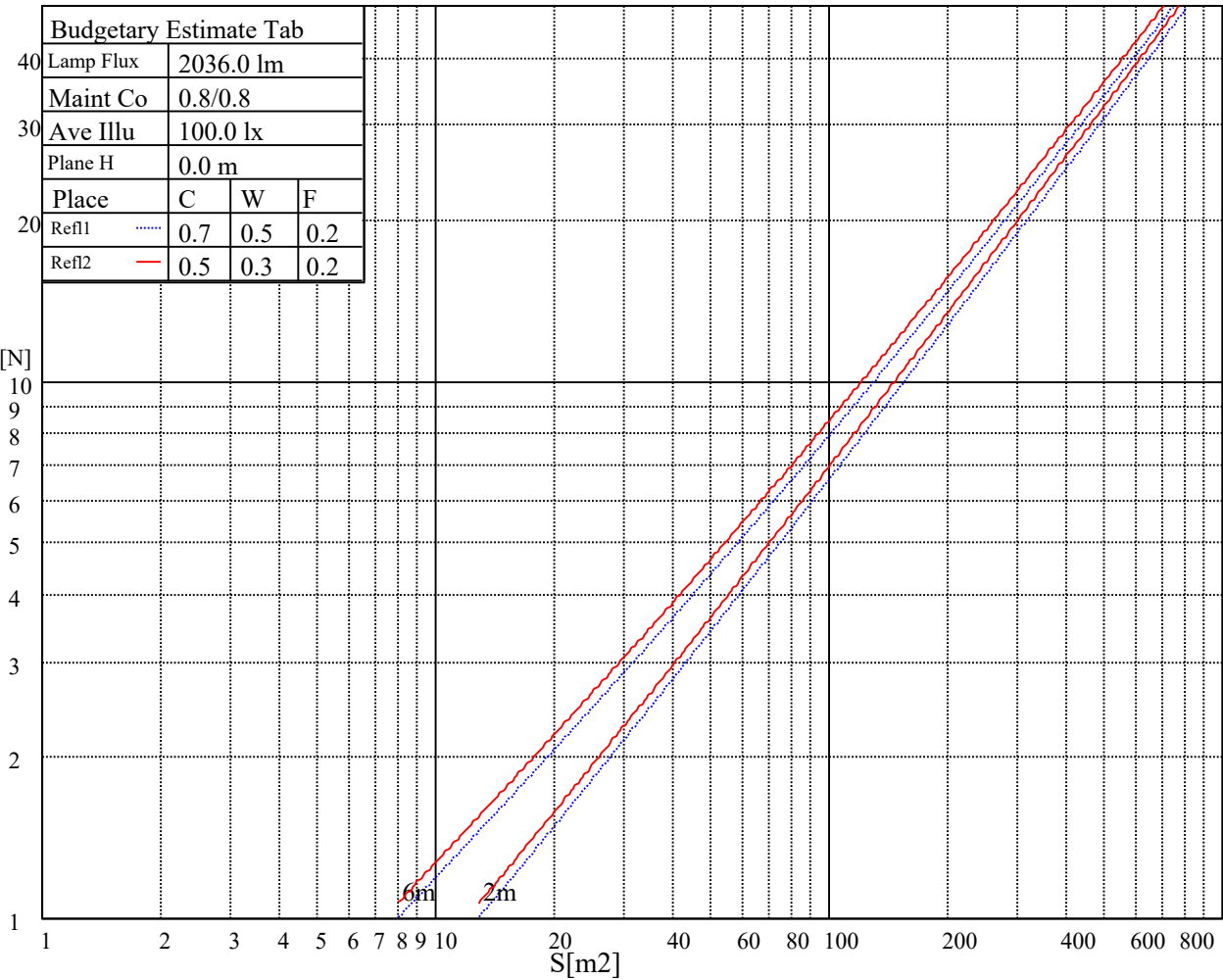
| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 2864       | 2864       | 88515   | 4528       | 4528       | 140630  | 13264      | 13264      | 413736  |

Glare Table

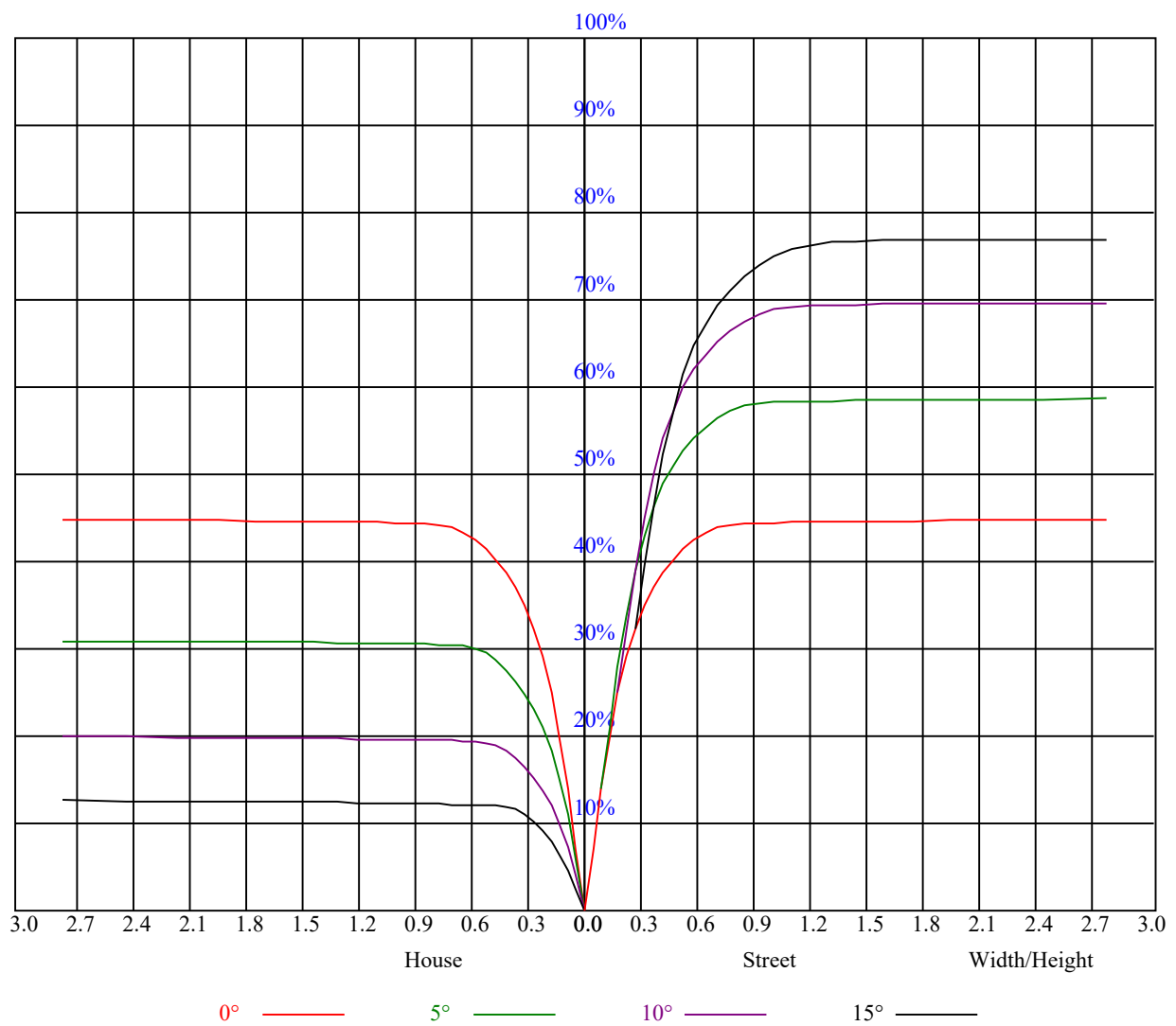
| Glare | Quality | Service Values Illuminance(lx) |      |      |            |            |            |            |            |
|-------|---------|--------------------------------|------|------|------------|------------|------------|------------|------------|
| 1.15  | A       | 2000            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





| RHOC | 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    | 1.07                                    | 1.07 | 1.07 | 1.05 | 1.05 | 1.05 | 1.00 | 1.00 | 1.00 | 0.96 | 0.96 | 0.96 | 0.92 | 0.92 | 0.92 | 0.90 |
| 1    | 1.01                                    | 0.99 | 0.97 | 0.99 | 0.97 | 0.96 | 0.95 | 0.94 | 0.93 | 0.92 | 0.91 | 0.90 | 0.89 | 0.88 | 0.87 | 0.86 |
| 2    | 0.95                                    | 0.92 | 0.90 | 0.94 | 0.91 | 0.89 | 0.91 | 0.89 | 0.87 | 0.88 | 0.87 | 0.85 | 0.86 | 0.85 | 0.83 | 0.82 |
| 3    | 0.91                                    | 0.87 | 0.84 | 0.89 | 0.86 | 0.83 | 0.87 | 0.84 | 0.82 | 0.85 | 0.83 | 0.81 | 0.83 | 0.81 | 0.80 | 0.78 |
| 4    | 0.86                                    | 0.82 | 0.79 | 0.85 | 0.82 | 0.79 | 0.84 | 0.80 | 0.78 | 0.82 | 0.79 | 0.77 | 0.80 | 0.78 | 0.76 | 0.75 |
| 5    | 0.83                                    | 0.78 | 0.75 | 0.82 | 0.78 | 0.75 | 0.80 | 0.77 | 0.74 | 0.79 | 0.76 | 0.74 | 0.78 | 0.75 | 0.73 | 0.72 |
| 6    | 0.79                                    | 0.75 | 0.72 | 0.78 | 0.74 | 0.72 | 0.77 | 0.74 | 0.71 | 0.76 | 0.73 | 0.71 | 0.75 | 0.72 | 0.70 | 0.69 |
| 7    | 0.76                                    | 0.72 | 0.69 | 0.75 | 0.71 | 0.69 | 0.74 | 0.71 | 0.68 | 0.73 | 0.70 | 0.68 | 0.73 | 0.70 | 0.68 | 0.67 |
| 8    | 0.73                                    | 0.69 | 0.66 | 0.73 | 0.69 | 0.66 | 0.72 | 0.68 | 0.66 | 0.71 | 0.68 | 0.65 | 0.70 | 0.67 | 0.65 | 0.64 |
| 9    | 0.71                                    | 0.66 | 0.64 | 0.70 | 0.66 | 0.63 | 0.69 | 0.66 | 0.63 | 0.69 | 0.65 | 0.63 | 0.68 | 0.65 | 0.63 | 0.62 |
| 10   | 0.68                                    | 0.64 | 0.61 | 0.68 | 0.64 | 0.61 | 0.67 | 0.64 | 0.61 | 0.66 | 0.63 | 0.61 | 0.66 | 0.63 | 0.61 | 0.60 |



| Intensity data(cd)         |         |         |         |         |         |         |         |         |         |
|----------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Appendix Page: 16 Total:17 |         |         |         |         |         |         |         |         |         |
| C/γ(°)                     | 0.0     | 1.0     | 2.0     | 3.0     | 4.0     | 5.0     | 6.0     | 7.0     | 8.0     |
| 0.0                        | 7721.66 | 7635.22 | 7404.54 | 7142.47 | 6880.95 | 6420.68 | 6046.84 | 5696.69 | 5173.10 |
| 90.0                       | 7554.84 | 7760.75 | 7818.01 | 7718.36 | 7472.81 | 7157.33 | 6847.36 | 6453.16 | 6072.72 |
| 180.0                      | 7721.66 | 7684.22 | 7499.78 | 7219.00 | 6918.94 | 6584.19 | 6176.23 | 5723.66 | 5291.47 |
| 270.0                      | 7554.84 | 7301.03 | 7007.58 | 6600.16 | 6232.38 | 5827.72 | 5350.93 | 4852.12 | 4399.01 |
| 360.0                      | 7721.66 | 7635.22 | 7404.54 | 7142.47 | 6880.95 | 6420.68 | 6046.84 | 5696.69 | 5173.10 |
| C/γ(°)                     | 9.0     | 10.0    | 11.0    | 12.0    | 13.0    | 14.0    | 15.0    | 16.0    | 17.0    |
| 0.0                        | 4683.10 | 4298.25 | 3754.85 | 3335.87 | 2942.76 | 2507.82 | 2206.66 | 1942.94 | 1667.66 |
| 90.0                       | 5620.16 | 5146.67 | 4700.72 | 4245.40 | 3683.82 | 3261.54 | 2867.34 | 2427.99 | 2128.48 |
| 180.0                      | 4790.46 | 4286.69 | 3842.39 | 3357.34 | 2953.23 | 2544.16 | 2191.80 | 1925.32 | 1700.14 |
| 270.0                      | 3894.14 | 3466.90 | 3009.93 | 2599.21 | 2282.64 | 1984.23 | 1702.34 | 1534.42 | 1373.66 |
| 360.0                      | 4683.10 | 4298.25 | 3754.85 | 3335.87 | 2942.76 | 2507.82 | 2206.66 | 1942.94 | 1667.66 |
| C/γ(°)                     | 18.0    | 19.0    | 20.0    | 21.0    | 22.0    | 23.0    | 24.0    | 25.0    | 26.0    |
| 0.0                        | 1487.07 | 1337.32 | 1180.41 | 1078.55 | 992.12  | 907.88  | 837.96  | 788.41  | 746.56  |
| 90.0                       | 1873.02 | 1630.77 | 1432.57 | 1291.62 | 1161.69 | 1051.58 | 974.50  | 899.07  | 840.71  |
| 180.0                      | 1468.90 | 1318.05 | 1166.65 | 1071.34 | 991.13  | 922.69  | 855.85  | 798.26  | 759.34  |
| 270.0                      | 1213.44 | 1092.10 | 1013.20 | 925.61  | 851.61  | 796.17  | 753.39  | 714.19  | 692.99  |
| 360.0                      | 1487.07 | 1337.32 | 1180.41 | 1078.55 | 992.12  | 907.88  | 837.96  | 788.41  | 746.56  |
| C/γ(°)                     | 27.0    | 28.0    | 29.0    | 30.0    | 31.0    | 32.0    | 33.0    | 34.0    | 35.0    |
| 0.0                        | 715.73  | 695.36  | 676.64  | 661.78  | 644.71  | 599.56  | 539.55  | 459.72  | 373.83  |
| 90.0                       | 788.96  | 747.67  | 719.04  | 699.22  | 679.40  | 665.08  | 642.51  | 579.19  | 511.47  |
| 180.0                      | 723.77  | 701.69  | 682.04  | 663.82  | 644.16  | 594.11  | 521.05  | 448.87  | 373.34  |
| 270.0                      | 676.15  | 658.47  | 644.27  | 617.07  | 556.12  | 478.50  | 403.18  | 314.92  | 235.26  |
| 360.0                      | 715.73  | 695.36  | 676.64  | 661.78  | 644.71  | 599.56  | 539.55  | 459.72  | 373.83  |
| C/γ(°)                     | 36.0    | 37.0    | 38.0    | 39.0    | 40.0    | 41.0    | 42.0    | 43.0    | 44.0    |
| 0.0                        | 296.20  | 286.29  | 125.58  | 65.90   | 31.22   | 20.04   | 16.35   | 12.99   | 10.79   |
| 90.0                       | 432.74  | 343.55  | 284.64  | 176.68  | 109.67  | 51.42   | 22.85   | 18.33   | 15.14   |
| 180.0                      | 278.03  | 204.53  | 134.06  | 60.89   | 28.96   | 20.32   | 16.96   | 13.27   | 11.45   |
| 270.0                      | 153.88  | 83.96   | 38.92   | 21.03   | 17.23   | 13.60   | 11.18   | 9.86    | 9.47    |
| 360.0                      | 296.20  | 286.29  | 125.58  | 65.90   | 31.22   | 20.04   | 16.35   | 12.99   | 10.79   |
| C/γ(°)                     | 45.0    | 46.0    | 47.0    | 48.0    | 49.0    | 50.0    | 51.0    | 52.0    | 53.0    |
| 0.0                        | 9.86    | 9.63    | 9.30    | 9.03    | 8.86    | 8.70    | 8.53    | 8.37    | 8.20    |
| 90.0                       | 12.39   | 10.96   | 9.63    | 9.25    | 8.92    | 8.81    | 8.64    | 8.48    | 8.31    |
| 180.0                      | 10.19   | 9.52    | 9.30    | 9.03    | 8.86    | 8.64    | 8.48    | 8.31    | 8.20    |
| 270.0                      | 9.25    | 8.97    | 8.81    | 8.59    | 8.48    | 8.26    | 8.15    | 7.98    | 7.93    |
| 360.0                      | 9.86    | 9.63    | 9.30    | 9.03    | 8.86    | 8.70    | 8.53    | 8.37    | 8.20    |
| C/γ(°)                     | 54.0    | 55.0    | 56.0    | 57.0    | 58.0    | 59.0    | 60.0    | 61.0    | 62.0    |
| 0.0                        | 8.09    | 7.98    | 7.87    | 7.76    | 7.71    | 7.65    | 7.60    | 7.54    | 7.49    |
| 90.0                       | 8.20    | 8.09    | 7.93    | 7.87    | 7.76    | 7.76    | 7.65    | 7.65    | 7.54    |
| 180.0                      | 8.09    | 7.98    | 7.93    | 7.76    | 7.71    | 7.65    | 7.60    | 7.54    | 7.49    |
| 270.0                      | 7.82    | 7.76    | 7.71    | 7.65    | 7.54    | 7.54    | 7.49    | 7.43    | 7.43    |
| 360.0                      | 8.09    | 7.98    | 7.87    | 7.76    | 7.71    | 7.65    | 7.60    | 7.54    | 7.49    |
| C/γ(°)                     | 63.0    | 64.0    | 65.0    | 66.0    | 67.0    | 68.0    | 69.0    | 70.0    | 71.0    |
| 0.0                        | 7.43    | 7.38    | 7.32    | 7.32    | 7.32    | 7.27    | 7.27    | 7.27    | 7.16    |
| 90.0                       | 7.49    | 7.43    | 7.43    | 7.43    | 7.38    | 7.27    | 7.27    | 7.21    | 7.27    |
| 180.0                      | 7.43    | 7.43    | 7.38    | 7.27    | 7.32    | 7.27    | 7.21    | 7.21    | 7.16    |
| 270.0                      | 7.38    | 7.32    | 7.32    | 7.27    | 7.27    | 7.21    | 7.21    | 7.16    | 7.16    |
| 360.0                      | 7.43    | 7.38    | 7.32    | 7.32    | 7.32    | 7.27    | 7.27    | 7.27    | 7.16    |

# Nata 3-2040-M

| Intensity data(cd) |      |      |      |      |      |      |      | Appendix Page: 17 Total:17 |      |
|--------------------|------|------|------|------|------|------|------|----------------------------|------|
| C/ $\gamma$ (°)    | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0                       | 80.0 |
| 0.0                | 7.16 | 7.10 | 7.16 | 7.10 | 7.16 | 7.10 | 7.05 | 7.05                       | 7.05 |
| 90.0               | 7.21 | 7.21 | 7.16 | 7.16 | 7.16 | 7.16 | 7.16 | 7.21                       | 7.27 |
| 180.0              | 7.10 | 7.10 | 7.10 | 7.10 | 7.05 | 7.05 | 7.05 | 7.05                       | 7.05 |
| 270.0              | 7.16 | 7.16 | 7.16 | 7.16 | 7.10 | 7.10 | 7.05 | 7.10                       | 7.10 |
| 360.0              | 7.16 | 7.10 | 7.16 | 7.10 | 7.16 | 7.10 | 7.05 | 7.05                       | 7.05 |
|                    |      |      |      |      |      |      |      |                            |      |
| C/ $\gamma$ (°)    | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0                       | 89.0 |
| 0.0                | 7.05 | 7.05 | 6.99 | 7.05 | 7.05 | 6.99 | 7.05 | 6.99                       | 6.99 |
| 90.0               | 7.21 | 7.10 | 7.10 | 7.10 | 7.05 | 7.05 | 7.05 | 7.05                       | 6.99 |
| 180.0              | 7.05 | 6.99 | 7.05 | 6.99 | 7.05 | 7.05 | 6.99 | 6.94                       | 6.99 |
| 270.0              | 7.10 | 7.10 | 7.16 | 7.05 | 6.99 | 7.05 | 6.99 | 7.05                       | 6.99 |
| 360.0              | 7.05 | 7.05 | 6.99 | 7.05 | 7.05 | 6.99 | 7.05 | 6.99                       | 6.99 |
|                    |      |      |      |      |      |      |      |                            |      |
| C/ $\gamma$ (°)    | 90.0 |      |      |      |      |      |      |                            |      |
| 0.0                | 6.99 |      |      |      |      |      |      |                            |      |
| 90.0               | 7.05 |      |      |      |      |      |      |                            |      |
| 180.0              | 6.99 |      |      |      |      |      |      |                            |      |
| 270.0              | 7.05 |      |      |      |      |      |      |                            |      |
| 360.0              | 6.99 |      |      |      |      |      |      |                            |      |