
Nata

LumCAT: 3-1939-M
Luminaire: BJB 47.319.2011
Report No: GC2017060709
Test No: NT-0010
LampCAT: LUXEON CoB 1208
Lamp flux(lm): 3235.0
Number of Lamps: 1
Length(mm): 78
Phm Type: C

Voltage(V): 217.5000
Current(A): 0.1370
Power (W): 28.1000
PF: 0.9440
Ballast type: DC
Width(mm): 78
Height(mm): 0

Photometric Results

Lumens(lm): 2983.87
Efficiency(%): 92.24%
Lumens(lm)/Power(W): 106.19
Central intensity(cd): 10150.960
Maximum intensity(cd): 10150.960
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=27.5
 [C90/270]Total=27.5
Field angle(10%Imax): [C0/180]Total=57.1
 [C90/270]Total=57.1
Maximum s/h(1/2): C0_180=0.47 C90_270=0.47
Maximum s/h(1/4): C0_180=0.45 C90_270=0.45
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 92.24%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.697%

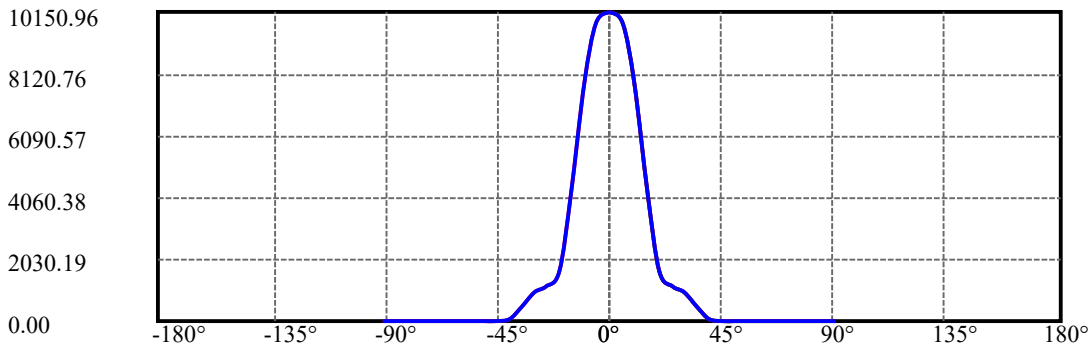
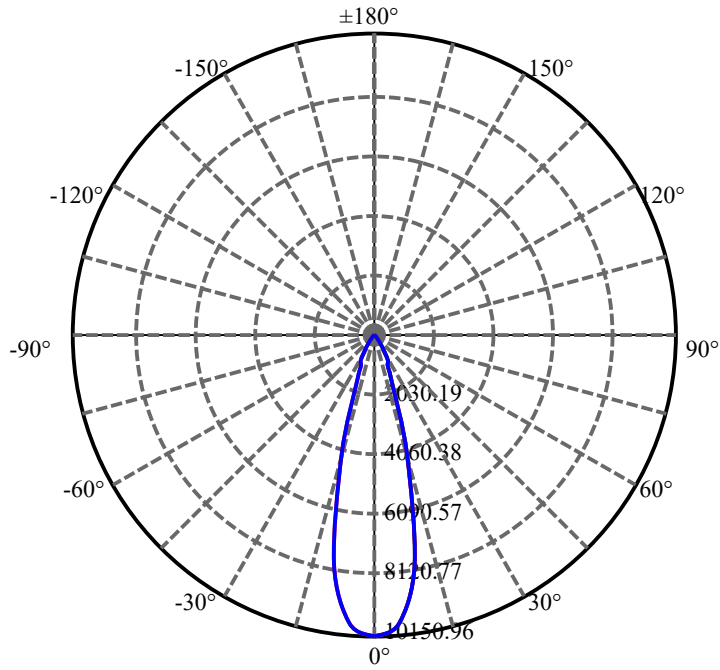
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0 | 10150.955 | 0.000 | 0 | .000% | .000% |
| 5.0 | 9742.918 | 237.826 | 237.826 | 7.352% | 7.970% |
| 10.0 | 7812.778 | 628.023 | 865.848 | 19.413% | 29.018% |
| 15.0 | 4174.996 | 711.107 | 1576.955 | 21.982% | 52.849% |
| 20.0 | 1660.570 | 480.933 | 2057.887 | 14.867% | 68.967% |
| 25.0 | 1125.965 | 292.256 | 2350.144 | 9.034% | 78.762% |
| 30.0 | 969.584 | 265.194 | 2615.337 | 8.198% | 87.649% |
| 35.0 | 449.191 | 208.925 | 2824.262 | 6.458% | 94.651% |
| 40.0 | 68.187 | 86.321 | 2910.583 | 2.668% | 97.544% |
| 45.0 | 17.350 | 15.838 | 2926.42 | .490% | 98.075% |
| 50.0 | 14.315 | 6.398 | 2932.819 | .198% | 98.289% |
| 55.0 | 13.489 | 6.045 | 2938.864 | .187% | 98.492% |
| 60.0 | 13.028 | 6.129 | 2944.993 | .189% | 98.697% |
| 65.0 | 12.670 | 6.247 | 2951.24 | .193% | 98.907% |
| 70.0 | 12.477 | 6.367 | 2957.608 | .197% | 99.120% |
| 75.0 | 12.278 | 6.470 | 2964.078 | .200% | 99.337% |
| 80.0 | 12.209 | 6.552 | 2970.63 | .203% | 99.556% |
| 85.0 | 12.119 | 6.611 | 2977.241 | .204% | 99.778% |
| 90.0 | 12.078 | 6.625 | 2983.866 | .205% | 100.000% |

ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|--------|---------|
| 0-30 | 2615.34 | 80.85% | 87.65% |
| 0-40 | 2910.58 | 89.97% | 97.54% |
| 0-60 | 2944.99 | 91.04% | 98.70% |
| 0-90 | 2977.24 | 92.03% | 99.78% |
| 0-120 | 2977.24 | 92.03% | 99.78% |
| 0-180 | 2983.87 | 92.24% | 100.00% |
| 60-90 | 38.38 | 1.19% | 1.29% |
| 90-120 | 0.00 | 0.00% | 0.00% |
| 90-130 | 0.00 | 0.00% | 0.00% |
| 90-150 | 0.00 | 0.00% | 0.00% |
| 90-180 | 0.00 | 0.00% | 0.00% |
| 0-25.70 | 2387.09 | 73.79% | 80.00% |

ZONAL LUMEN SUMMARY

| | |
|---------|---------|
| 0-10 | 865.85 |
| 10-20 | 1192.04 |
| 20-30 | 557.45 |
| 30-40 | 295.25 |
| 40-50 | 22.24 |
| 50-60 | 12.17 |
| 60-70 | 12.61 |
| 70-80 | 13.02 |
| 80-90 | 6.61 |
| 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: —————

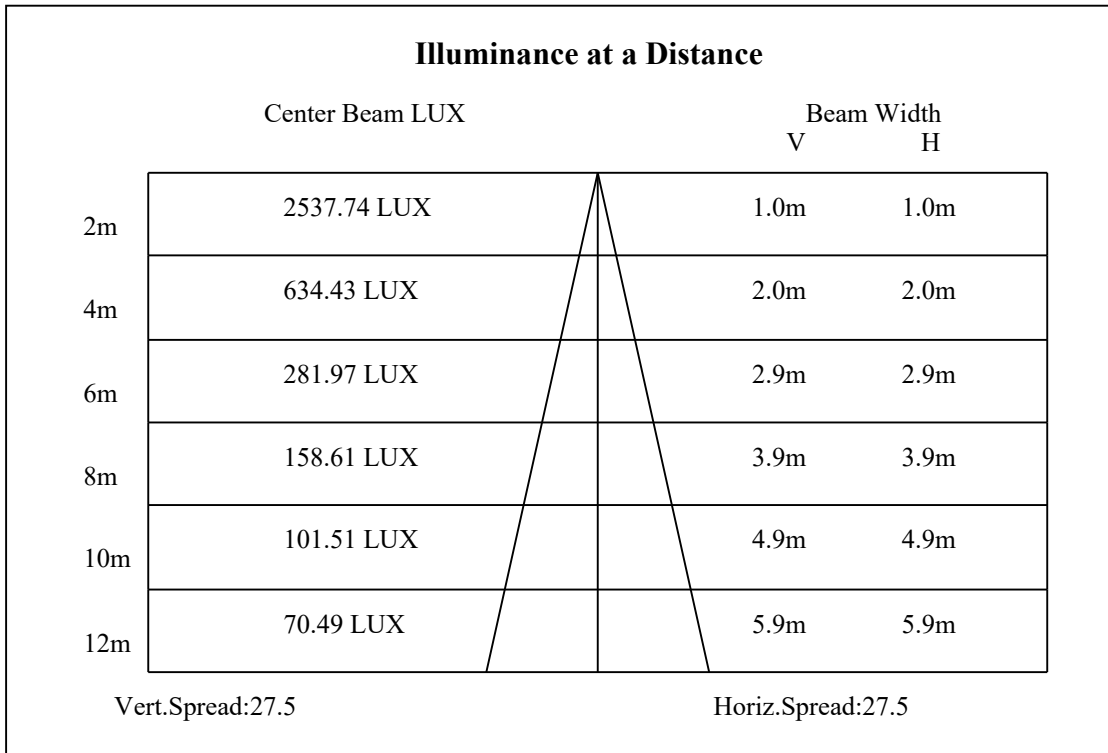
C90/C270: —————

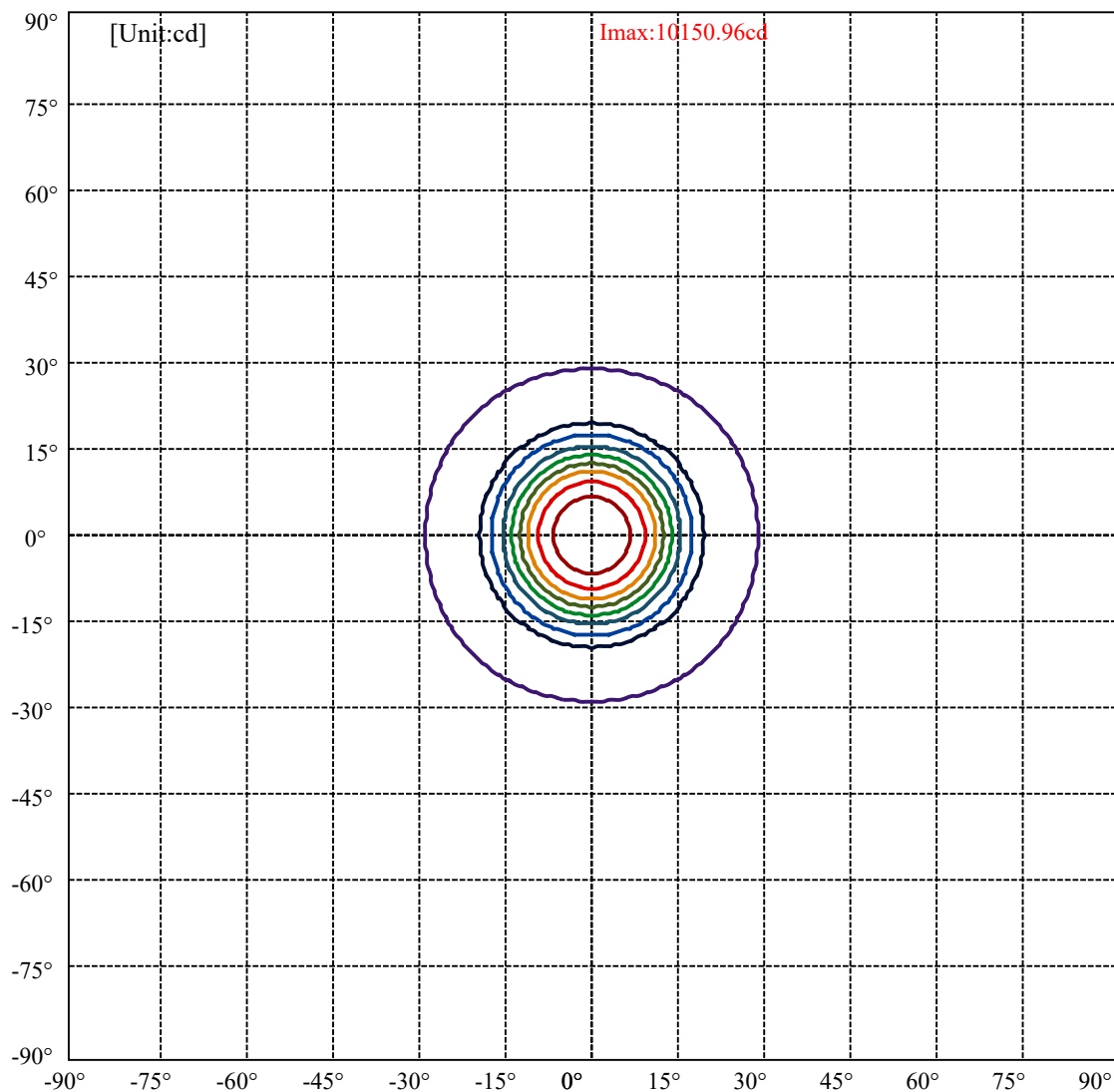
Field angle(10%Imax):C0/180Left:28.5 Right:28.5

:C90/270Left:28.5 Right:28.5

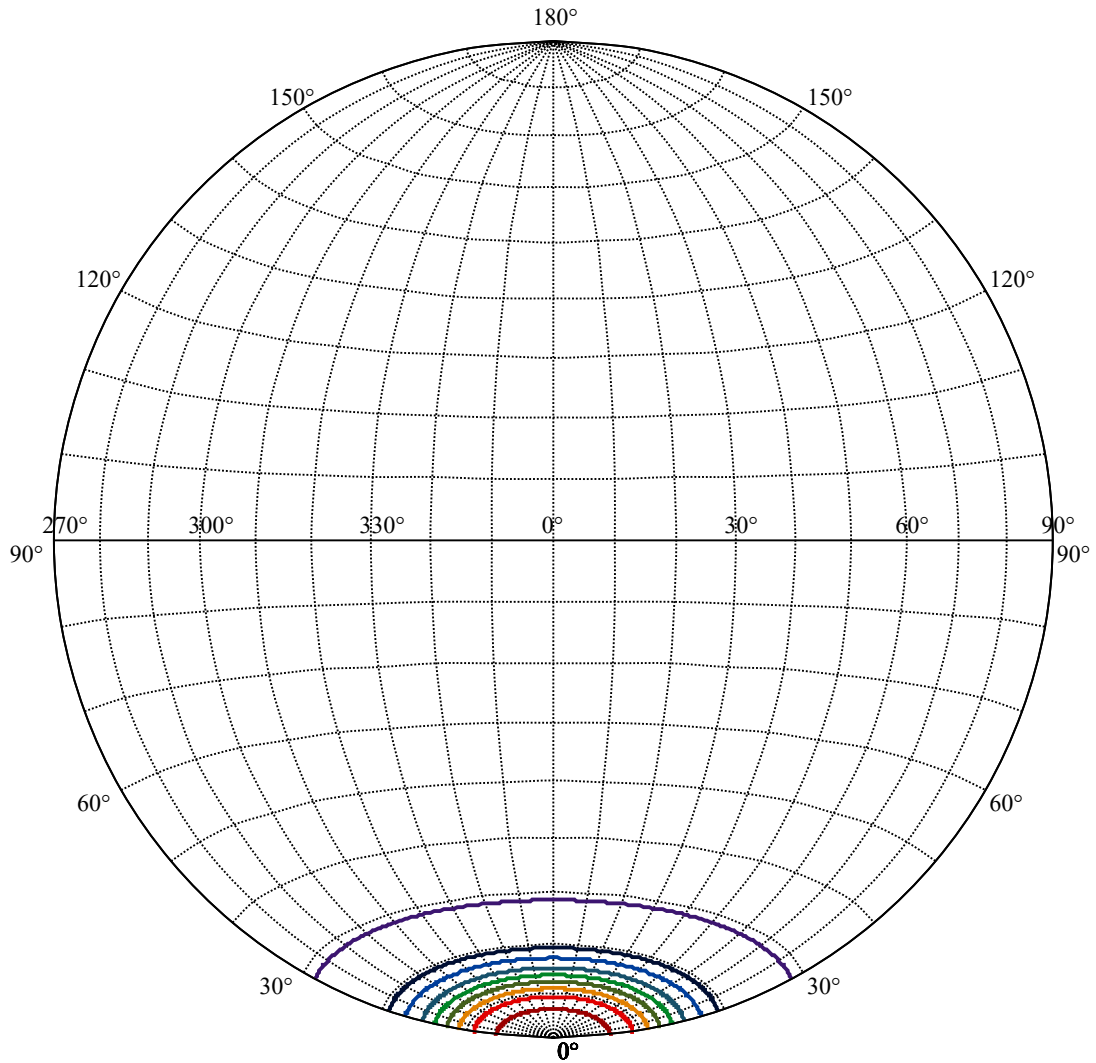
Beam Angle(50%Imax):C0/180Left:13.8 Right:13.8

:C90/270Left:13.8 Right:13.8





| | |
|-------------------|---|
| (10%Imax) 1015.1 | — |
| (20%Imax) 2030.19 | — |
| (30%Imax) 3045.29 | — |
| (40%Imax) 4060.38 | — |
| (50%Imax) 5075.48 | — |
| (60%Imax) 6090.57 | — |
| (70%Imax) 7105.67 | — |
| (80%Imax) 8120.76 | — |
| (90%Imax) 9135.86 | — |



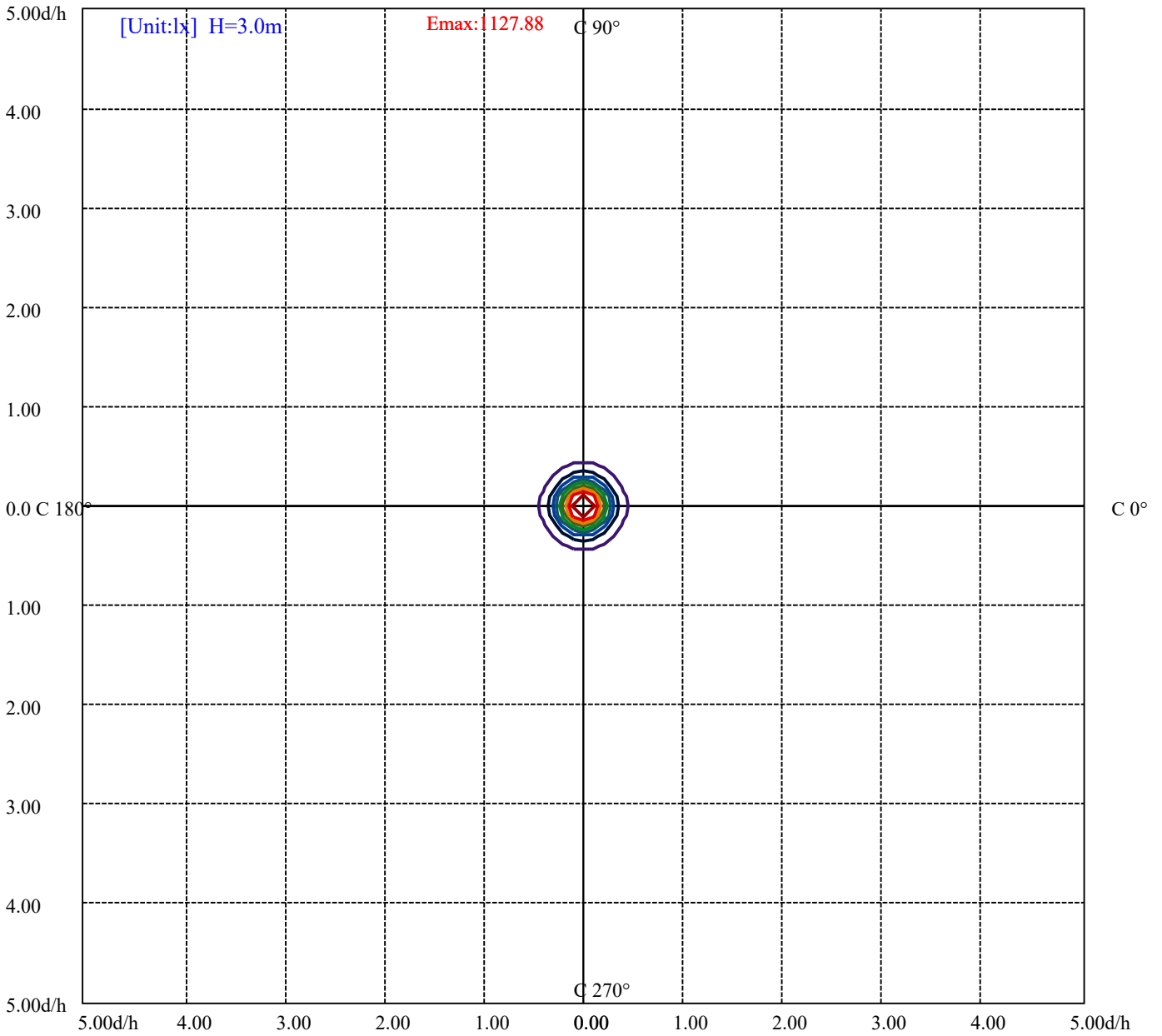
House

[Unit:cd]

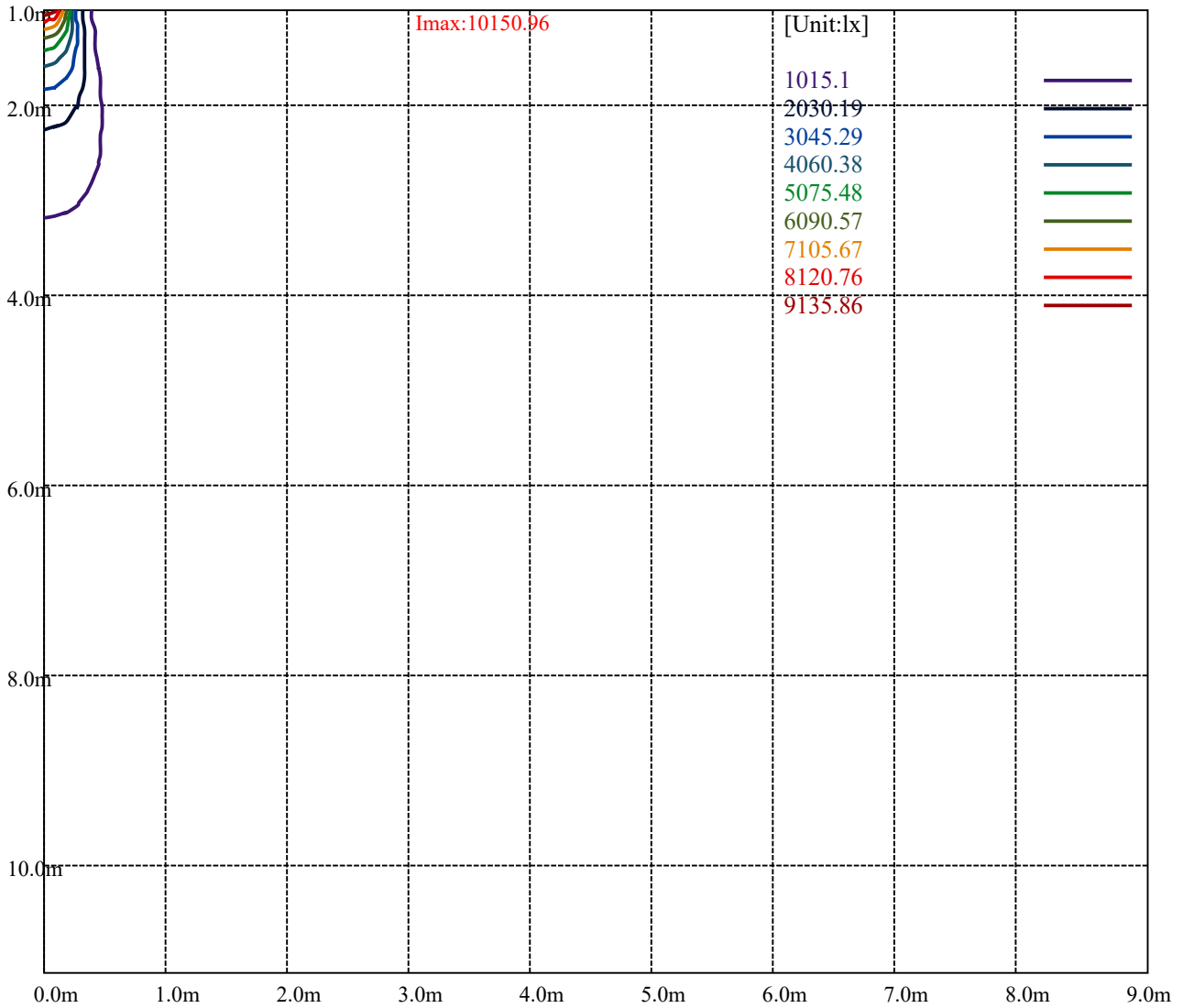
Road

Imax:10150.96

| | | |
|-----------|---------|---|
| (10%Imax) | 1015.1 | — |
| (20%Imax) | 2030.19 | — |
| (30%Imax) | 3045.29 | — |
| (40%Imax) | 4060.38 | — |
| (50%Imax) | 5075.48 | — |
| (60%Imax) | 6090.57 | — |
| (70%Imax) | 7105.67 | — |
| (80%Imax) | 8120.76 | — |
| (90%Imax) | 9135.86 | — |



- (10%Emax) 112.7878
- (20%Emax) 225.5767
- (30%Emax) 338.3644
- (40%Emax) 451.1533
- (50%Emax) 563.9412
- (60%Emax) 676.73
- (70%Emax) 789.5178
- (80%Emax) 902.3055
- (90%Emax) 1015.094



Luminance Table

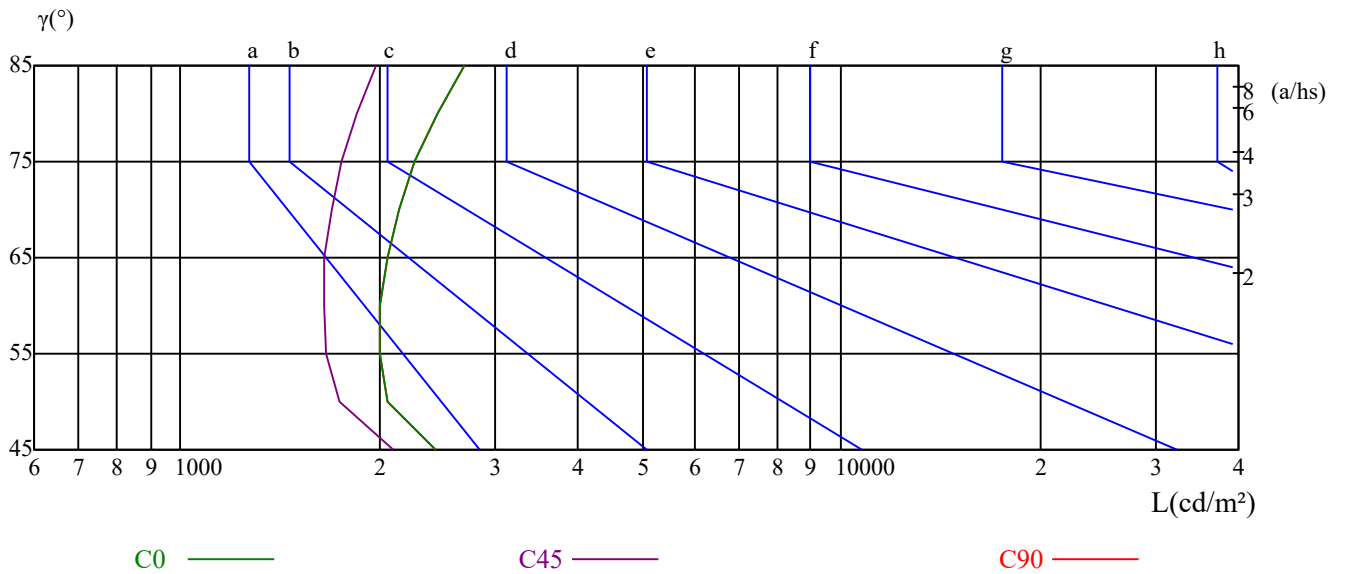
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|----------|------|------|------|------|------|------|------|------|------|
| C0 | 2438 | 2057 | 1999 | 2008 | 2051 | 2144 | 2266 | 2454 | 2697 |
| C45 | 2095 | 1741 | 1666 | 1646 | 1652 | 1694 | 1752 | 1851 | 1976 |
| C90 | 2438 | 2057 | 1999 | 2008 | 2051 | 2144 | 2266 | 2454 | 2697 |

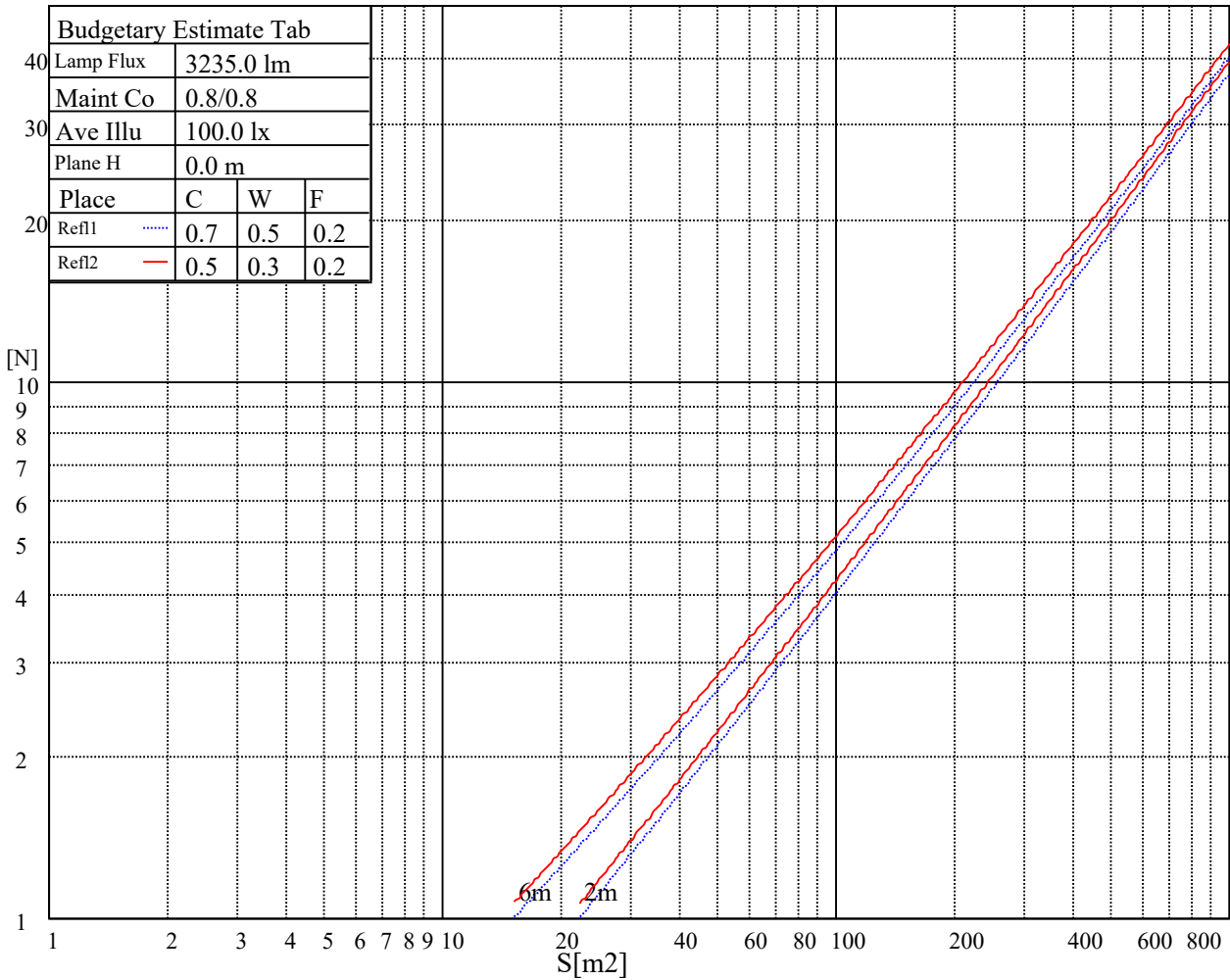
| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 4928 | 4928 | 4928 | 7797 | 7797 | 7797 | 22856 | 22856 | 22856 |

Glare Table

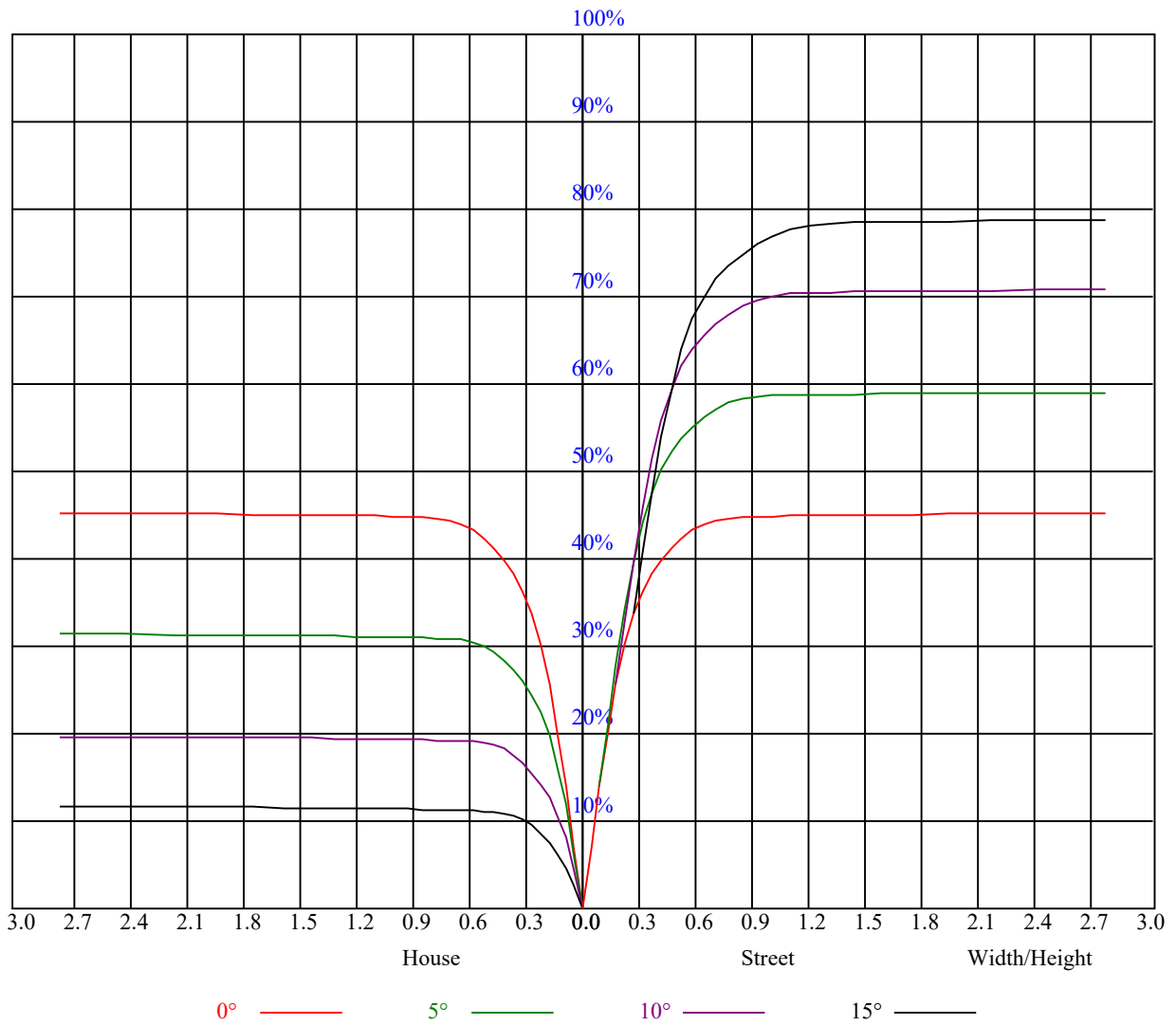
| Glare | Quality | Service Values Illuminance(lx) | | | | | | | |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15 | A | 2000 | 1000 | 500 | <=300 | | | | |
| 1.5 | B | | 2000 | 1000 | 500 | <=300 | | | |
| 1.85 | C | | | 2000 | 1000 | 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





| 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 | 1.10 | 1.10 | 1.10 | 1.07 | 1.07 | 1.07 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 | 0.98 | 0.94 | 0.94 | 0.94 | 0.92 |
| 1 | 1.03 | 1.01 | 1.00 | 1.01 | 1.00 | 0.98 | 0.98 | 0.96 | 0.95 | 0.94 | 0.93 | 0.92 | 0.91 | 0.90 | 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 | 0.93 | 0.89 | 0.86 | 0.92 | 0.88 | 0.86 | 0.89 | 0.87 | 0.84 | 0.87 | 0.85 | 0.83 | 0.85 | 0.83 | 0.82 | 0.80 |
| 4 | 0.89 | 0.85 | 0.82 | 0.88 | 0.84 | 0.81 | 0.86 | 0.83 | 0.80 | 0.84 | 0.81 | 0.79 | 0.83 | 0.80 | 0.78 | 0.77 |
| 5 | 0.85 | 0.81 | 0.78 | 0.84 | 0.80 | 0.77 | 0.83 | 0.79 | 0.77 | 0.81 | 0.78 | 0.76 | 0.80 | 0.77 | 0.75 | 0.74 |
| 6 | 0.81 | 0.77 | 0.74 | 0.81 | 0.77 | 0.74 | 0.80 | 0.76 | 0.73 | 0.78 | 0.75 | 0.73 | 0.77 | 0.75 | 0.72 | 0.71 |
| 7 | 0.78 | 0.74 | 0.71 | 0.78 | 0.74 | 0.71 | 0.77 | 0.73 | 0.70 | 0.76 | 0.73 | 0.70 | 0.75 | 0.72 | 0.70 | 0.69 |
| 8 | 0.75 | 0.71 | 0.68 | 0.75 | 0.71 | 0.68 | 0.74 | 0.70 | 0.68 | 0.73 | 0.70 | 0.68 | 0.72 | 0.70 | 0.67 | 0.66 |
| 9 | 0.73 | 0.69 | 0.66 | 0.72 | 0.68 | 0.66 | 0.72 | 0.68 | 0.66 | 0.71 | 0.68 | 0.65 | 0.70 | 0.67 | 0.65 | 0.64 |
| 10 | 0.70 | 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 |



Nata 3-1939-M

Intensity data(cd)

| C/γ(°) | 0.0 | 5.0 | 10.0 | 15.0 | 20.0 | 25.0 | 30.0 | 35.0 | 40.0 |
|--------|----------|---------|---------|---------|---------|---------|---------|--------|--------|
| 0.0 | 10127.07 | 9513.20 | 7341.22 | 3569.86 | 1440.28 | 1112.69 | 937.06 | 349.06 | 27.97 |
| 45.0 | 10175.52 | 9834.17 | 8016.76 | 4398.46 | 1789.88 | 1156.73 | 992.12 | 493.86 | 36.45 |
| 90.0 | 10159.01 | 9773.61 | 7765.71 | 4161.16 | 1622.51 | 1090.50 | 971.64 | 435.50 | 33.75 |
| 135.0 | 10139.19 | 9964.66 | 8681.84 | 5382.31 | 2111.96 | 1227.76 | 1023.50 | 624.34 | 306.66 |
| 180.0 | 10127.07 | 9882.07 | 8393.90 | 4861.48 | 1817.96 | 1095.18 | 1009.79 | 553.37 | 54.34 |
| 225.0 | 10181.58 | 9764.25 | 7644.03 | 3798.89 | 1541.03 | 1095.79 | 959.80 | 417.82 | 29.90 |
| 270.0 | 10159.01 | 9789.03 | 7807.55 | 4204.11 | 1602.69 | 1145.72 | 998.72 | 460.27 | 31.27 |
| 315.0 | 10139.19 | 9422.35 | 6851.22 | 3023.70 | 1358.24 | 1083.34 | 864.06 | 259.32 | 25.16 |
| 360.0 | 10127.07 | 9513.20 | 7341.22 | 3569.86 | 1440.28 | 1112.69 | 937.06 | 349.06 | 27.97 |

| C/γ(°) | 45.0 | 50.0 | 55.0 | 60.0 | 65.0 | 70.0 | 75.0 | 80.0 | 85.0 |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.0 | 15.47 | 14.04 | 13.27 | 12.88 | 12.55 | 12.39 | 12.17 | 12.17 | 12.06 |
| 45.0 | 17.62 | 14.48 | 13.65 | 13.16 | 12.77 | 12.55 | 12.33 | 12.28 | 12.17 |
| 90.0 | 17.40 | 14.48 | 13.65 | 13.10 | 12.77 | 12.50 | 12.33 | 12.22 | 12.17 |
| 135.0 | 20.10 | 14.53 | 13.65 | 13.16 | 12.72 | 12.55 | 12.28 | 12.22 | 12.11 |
| 180.0 | 19.16 | 14.20 | 13.38 | 12.88 | 12.55 | 12.33 | 12.17 | 12.06 | 12.00 |
| 225.0 | 15.91 | 14.31 | 13.43 | 12.99 | 12.66 | 12.50 | 12.28 | 12.22 | 12.17 |
| 270.0 | 17.34 | 14.59 | 13.65 | 13.21 | 12.77 | 12.61 | 12.39 | 12.28 | 12.17 |
| 315.0 | 15.80 | 13.87 | 13.21 | 12.83 | 12.55 | 12.39 | 12.28 | 12.22 | 12.11 |
| 360.0 | 15.47 | 14.04 | 13.27 | 12.88 | 12.55 | 12.39 | 12.17 | 12.17 | 12.06 |

| C/γ(°) | 90.0 |
|--------|-------|
| 0.0 | 12.00 |
| 45.0 | 12.17 |
| 90.0 | 12.11 |
| 135.0 | 12.06 |
| 180.0 | 11.95 |
| 225.0 | 12.11 |
| 270.0 | 12.17 |
| 315.0 | 12.06 |
| 360.0 | 12.00 |