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Nata

| | |
|----------------------------|---------------------|
| LumCAT: 3-1542-E | |
| Luminaire: 92.76.263.00 | |
| Report No: NATA0100 | Voltage(V): 33.0000 |
| Test No: | Current(A): 0.5500 |
| LampCAT: brideglux VERO 13 | Power (W): 18.1500 |
| Lamp flux(lm): 1556.0 | PF: 0.0000 |
| Number of Lamps: 1 | Ballast type: |
| Length(mm): 88 | Width(mm): 88 |
| Phm Type: C | Height(mm): 0 |

Photometric Results

Lumens(lm): 1451.19
Efficiency(%): 93.26%
Lumens(lm)/Power(W): 82.10
Central intensity(cd): 6728.030
Maximum intensity(cd): 6728.030
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=18.6
 [C90/270]Total=18.6
Field angle(10%Imax): [C0/180]Total=47.4
 [C90/270]Total=47.4
Maximum s/h(1/2): C0_180=0.32 C90_270=0.32
Maximum s/h(1/4): C0_180=0.35 C90_270=0.35
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 95.76%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.187%

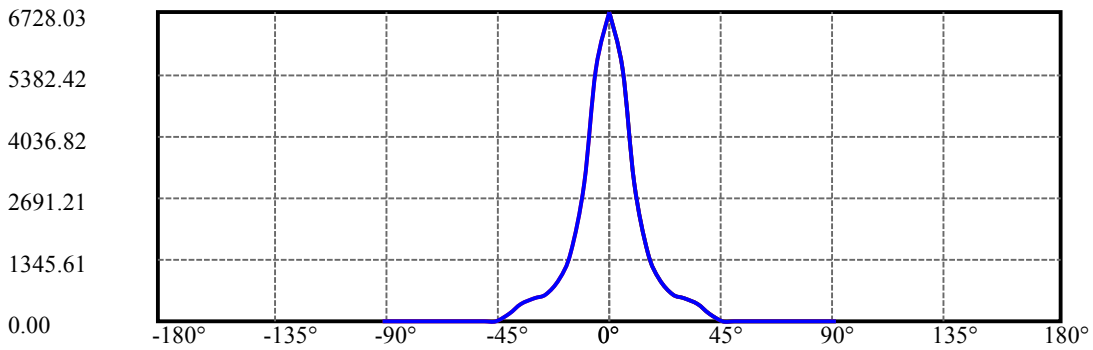
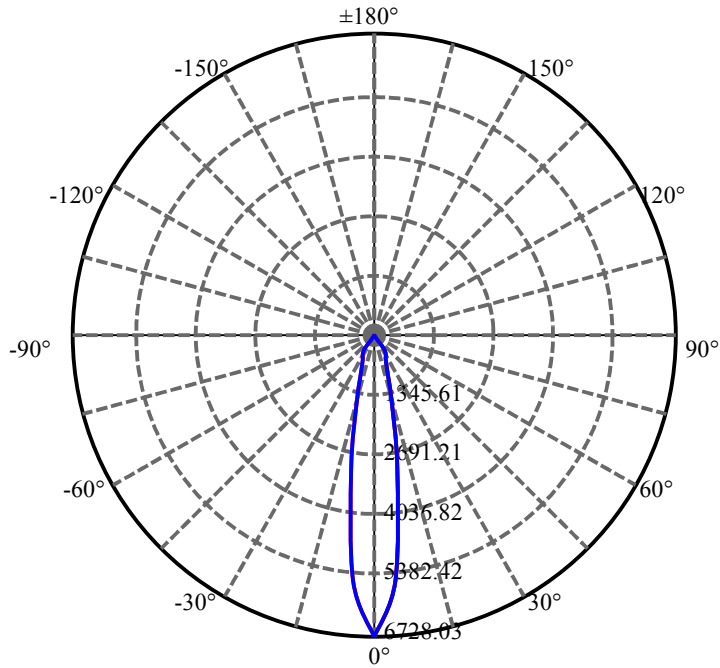
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0 | 6728.030 | 40.235 | 40.235 | 2.586% | 2.773% |
| 5.0 | 5486.439 | 262.105 | 302.34 | 16.845% | 20.834% |
| 10.0 | 3019.087 | 287.366 | 589.706 | 18.468% | 40.636% |
| 15.0 | 1511.842 | 214.483 | 804.189 | 13.784% | 55.416% |
| 20.0 | 901.982 | 169.098 | 973.287 | 10.867% | 67.068% |
| 25.0 | 593.136 | 137.402 | 1110.689 | 8.830% | 76.536% |
| 30.0 | 503.257 | 137.927 | 1248.616 | 8.864% | 86.041% |
| 35.0 | 381.747 | 120.021 | 1368.637 | 7.713% | 94.311% |
| 40.0 | 148.377 | 52.279 | 1420.915 | 3.360% | 97.914% |
| 45.0 | 9.628 | 3.732 | 1424.647 | .240% | 98.171% |
| 50.0 | 6.744 | 2.832 | 1427.479 | .182% | 98.366% |
| 55.0 | 6.297 | 2.827 | 1430.306 | .182% | 98.561% |
| 60.0 | 6.153 | 2.921 | 1433.227 | .188% | 98.762% |
| 65.0 | 6.097 | 3.029 | 1436.256 | .195% | 98.971% |
| 70.0 | 6.077 | 3.130 | 1439.386 | .201% | 99.186% |
| 75.0 | 6.159 | 3.261 | 1442.647 | .210% | 99.411% |
| 80.0 | 6.331 | 3.418 | 1446.065 | .220% | 99.647% |
| 85.0 | 6.387 | 3.487 | 1449.552 | .224% | 99.887% |
| 90.0 | 5.987 | 1.641 | 1451.193 | .105% | 100.000% |

ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|--------|---------|
| 0-30 | 1248.62 | 80.25% | 86.04% |
| 0-40 | 1420.92 | 91.32% | 97.91% |
| 0-60 | 1433.23 | 92.11% | 98.76% |
| 0-90 | 1449.55 | 93.16% | 99.89% |
| 0-120 | 1449.55 | 93.16% | 99.89% |
| 0-180 | 1451.19 | 93.26% | 100.00% |
| 60-90 | 19.25 | 1.24% | 1.33% |
| 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% |
| 0-26.82 | 1160.96 | 74.61% | 80.00% |

ZONAL LUMEN SUMMARY

| | |
|---------|--------|
| 0-10 | 589.71 |
| 10-20 | 383.58 |
| 20-30 | 275.33 |
| 30-40 | 172.30 |
| 40-50 | 6.56 |
| 50-60 | 5.75 |
| 60-70 | 6.16 |
| 70-80 | 6.68 |
| 80-90 | 3.49 |
| 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 |



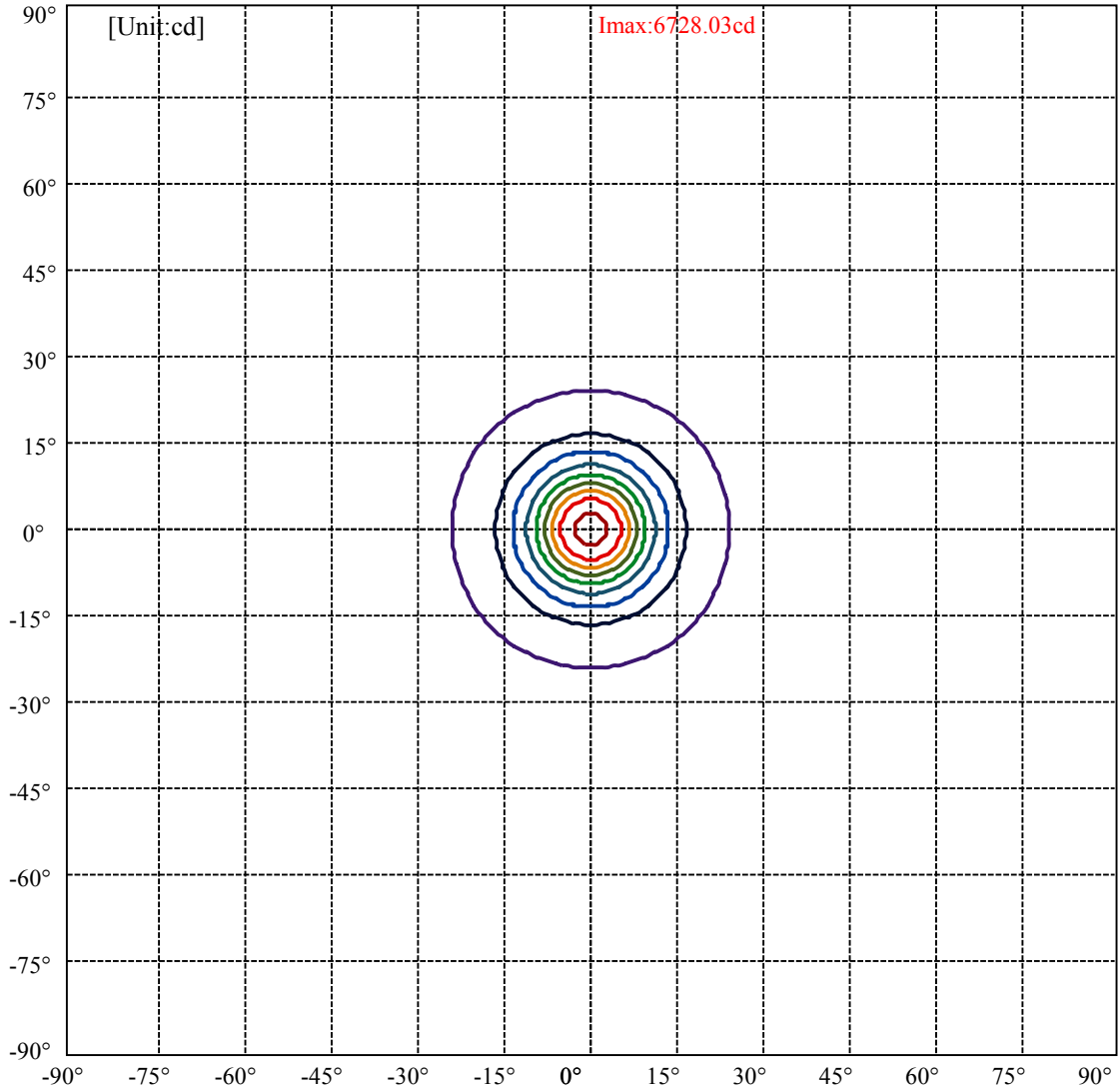
C0(Max): —————

C0/C180: —————

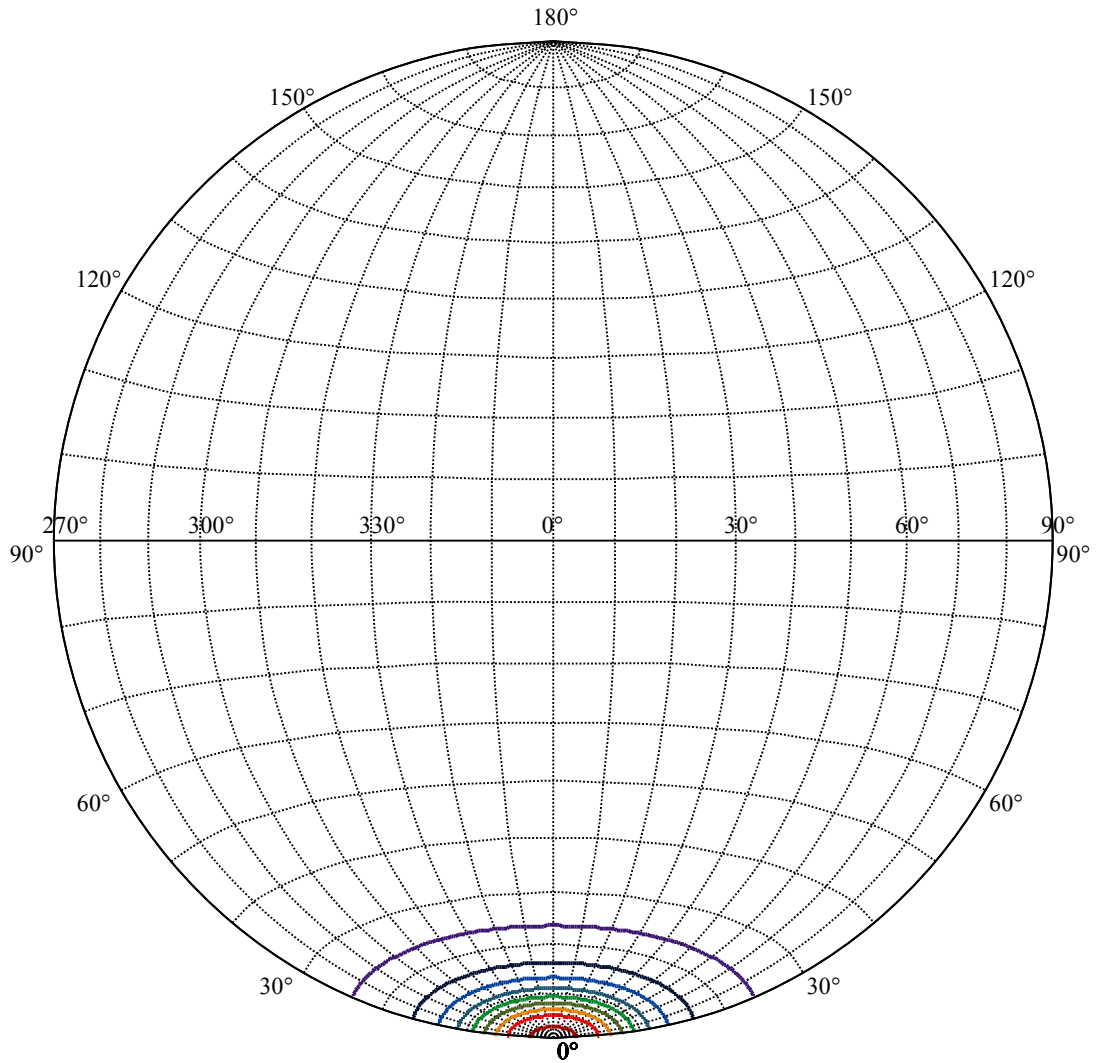
C90/C270: —————

Field angle(10%Imax):C0/180Left:23.7 Right:23.7
:C90/270Left:23.7 Right:23.7

Beam Angle(50%Imax):C0/180Left:9.3 Right:9.3
:C90/270Left:9.3 Right:9.3



| | |
|-------------------|---|
| (10%Imax) 672.803 | — |
| (20%Imax) 1345.61 | — |
| (30%Imax) 2018.41 | — |
| (40%Imax) 2691.21 | — |
| (50%Imax) 3364.01 | — |
| (60%Imax) 4036.82 | — |
| (70%Imax) 4709.62 | — |
| (80%Imax) 5382.42 | — |
| (90%Imax) 6055.23 | — |



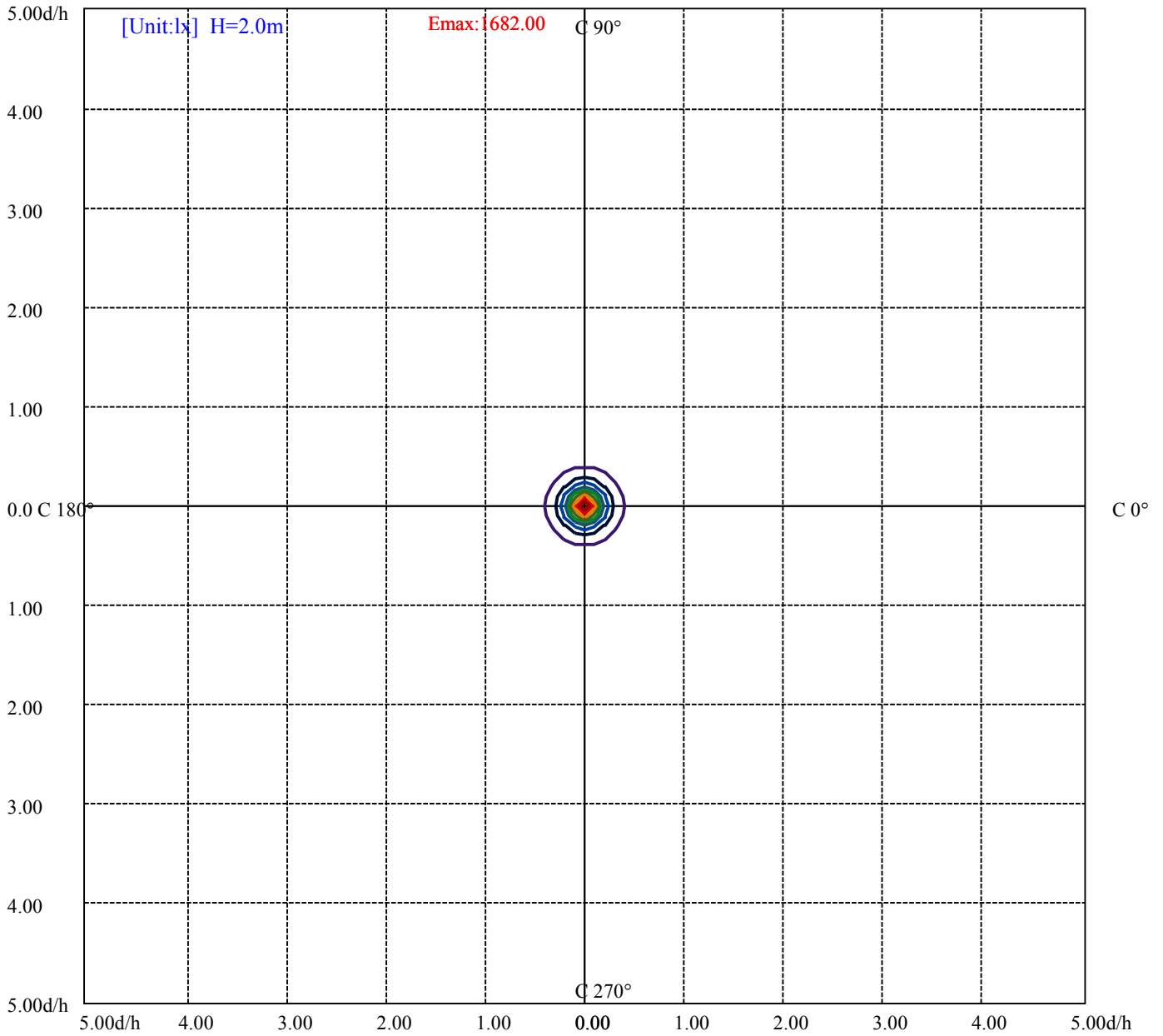
House

[Unit:cd]

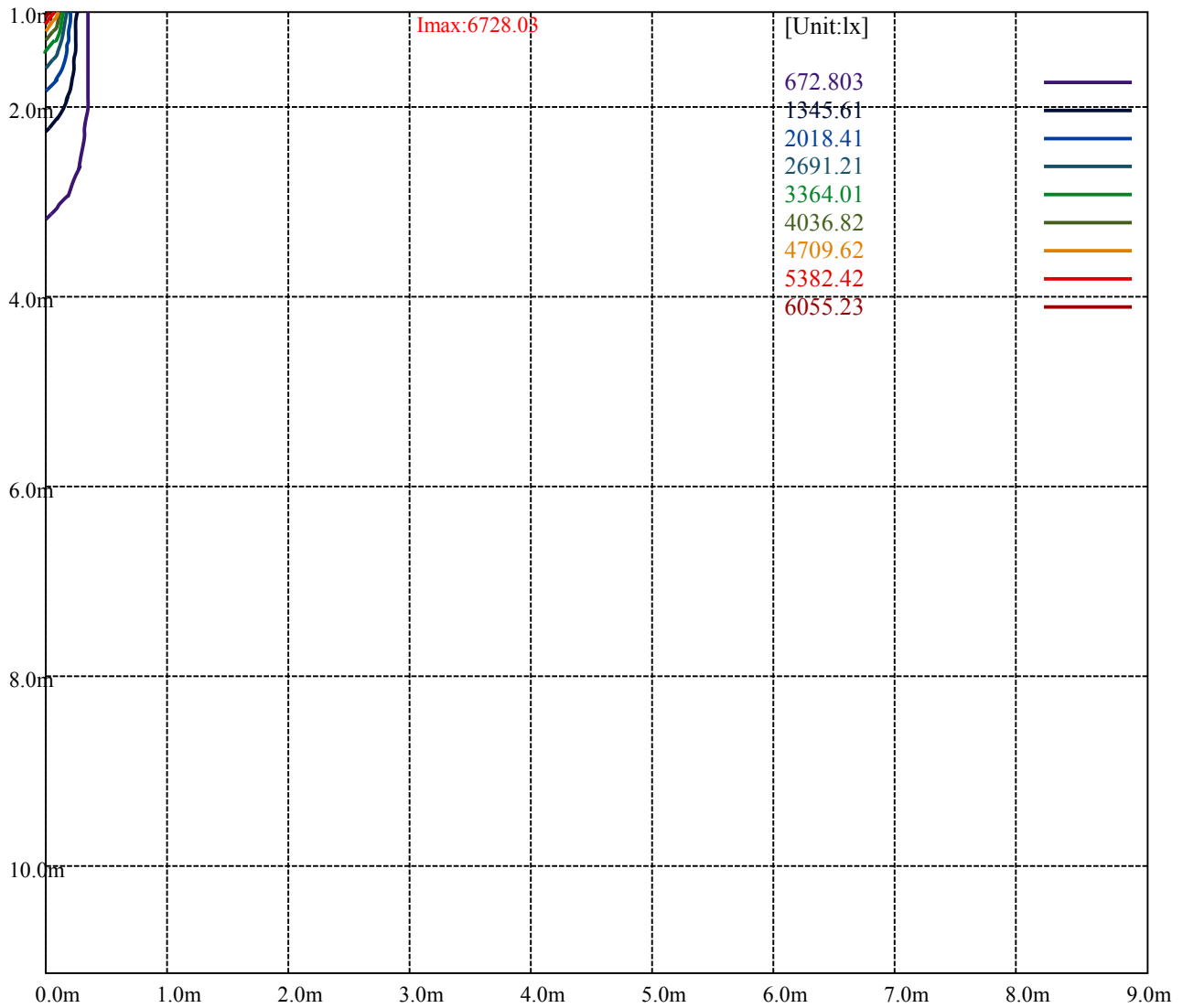
Road

Imax:6728.03

| | |
|-------------------|---|
| (10%Imax) 672.803 | — |
| (20%Imax) 1345.61 | — |
| (30%Imax) 2018.41 | — |
| (40%Imax) 2691.21 | — |
| (50%Imax) 3364.01 | — |
| (60%Imax) 4036.82 | — |
| (70%Imax) 4709.62 | — |
| (80%Imax) 5382.42 | — |
| (90%Imax) 6055.23 | — |



| | |
|--------------------|---|
| (10%Emax) 168.1998 | — |
| (20%Emax) 336.4 | — |
| (30%Emax) 504.6 | — |
| (40%Emax) 672.8 | — |
| (50%Emax) 841 | — |
| (60%Emax) 1009.2 | — |
| (70%Emax) 1177.397 | — |
| (80%Emax) 1345.598 | — |
| (90%Emax) 1513.797 | — |



Luminance Table

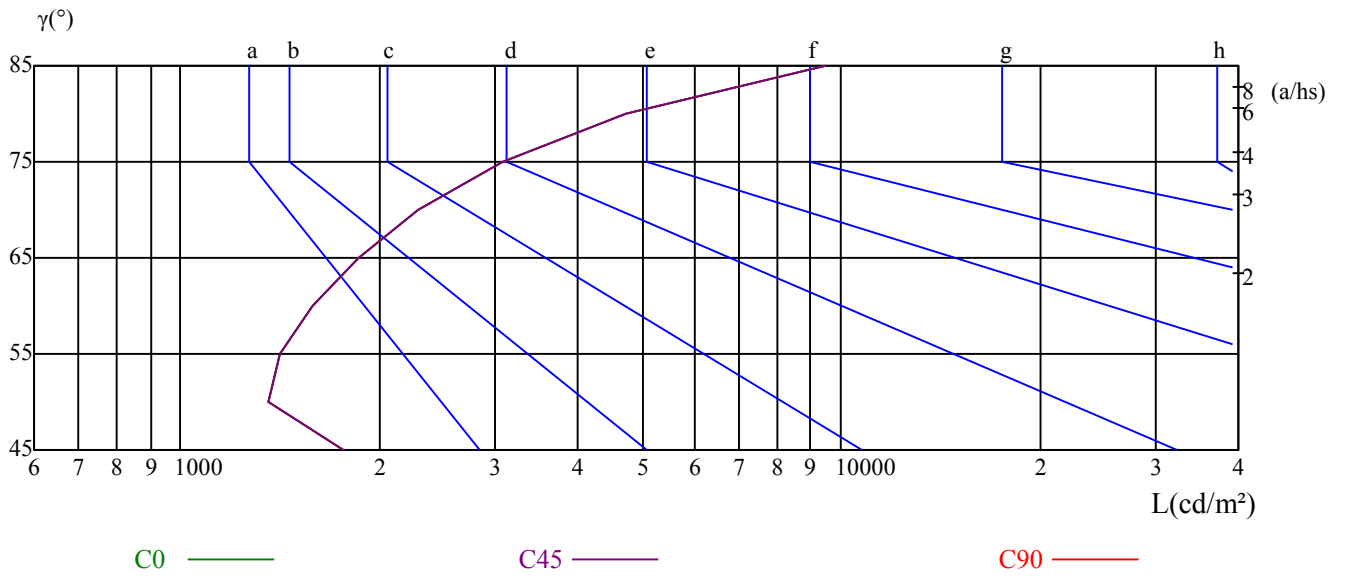
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|----------|------|------|------|------|------|------|------|------|------|
| C0 | 1758 | 1355 | 1418 | 1589 | 1863 | 2294 | 3073 | 4708 | 9462 |
| C45 | 1758 | 1355 | 1418 | 1589 | 1863 | 2294 | 3073 | 4708 | 9462 |
| C90 | 1758 | 1355 | 1418 | 1589 | 1863 | 2294 | 3073 | 4708 | 9462 |

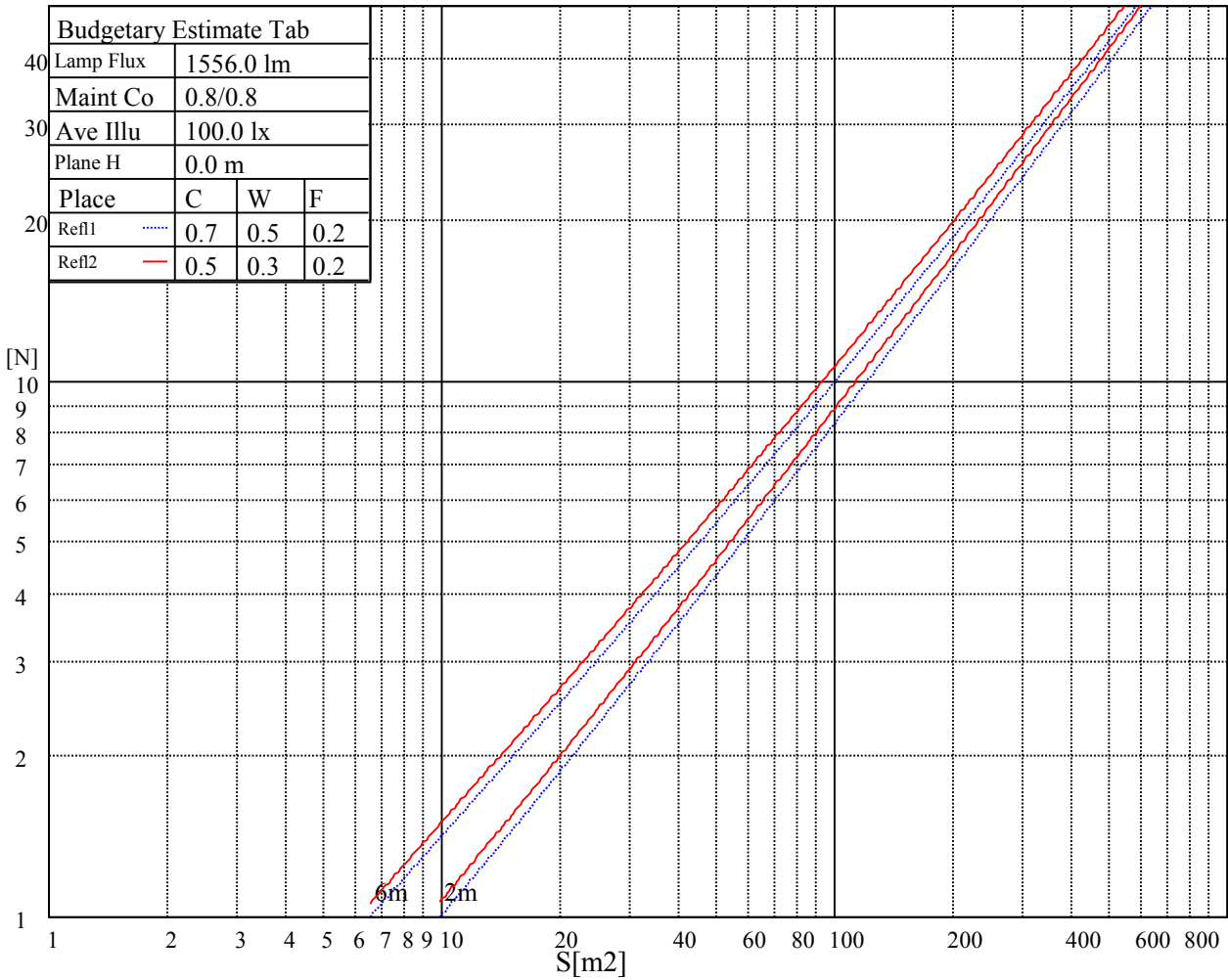
| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 1863 | 1863 | 1863 | 3073 | 3073 | 3073 | 9462 | 9462 | 9462 |

Glare Table

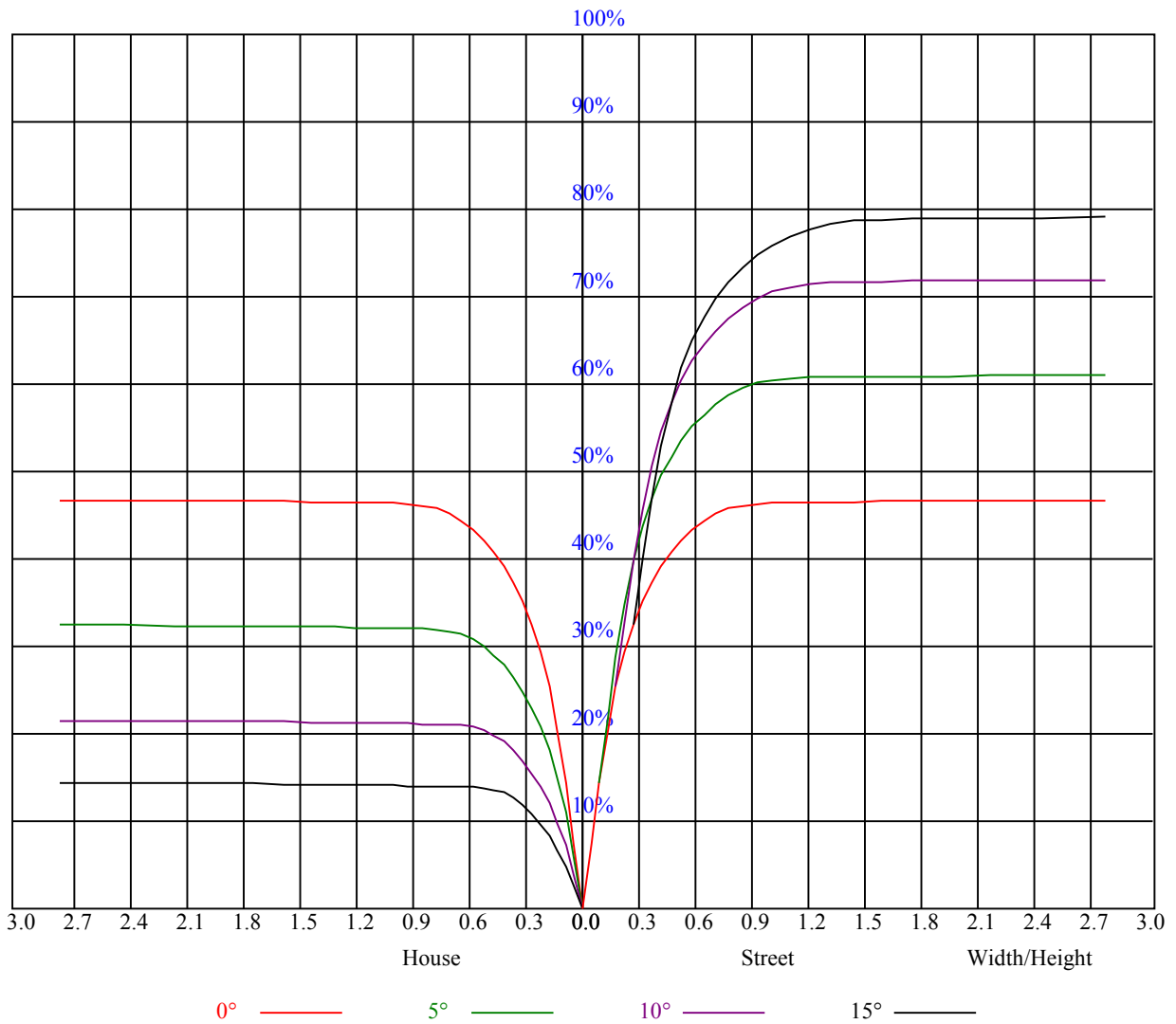
| Glare | Quality | Service Values Illuminance(lx) | | | | | | | |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| | | a | b | c | d | e | f | g | h |
| 1.15 | A | 2000 | 1000 | 500 | <=300 | | | | |
| 1.5 | B | | 2000 | 1000 | 500 | <=300 | | | |
| 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 RHOFC=20 CU | | | | | | | | | | | | | | | |
| 0 | 1.14 | 1.14 | 1.14 | 1.11 | 1.11 | 1.11 | 1.06 | 1.06 | 1.06 | 1.02 | 1.02 | 1.02 | 0.98 | 0.98 | 0.98 | 0.96 |
| 1 | 1.04 | 1.01 | 0.99 | 1.02 | 0.99 | 0.97 | 0.98 | 0.96 | 0.94 | 0.94 | 0.93 | 0.91 | 0.91 | 0.90 | 0.89 | 0.87 |
| 2 | 0.99 | 0.95 | 0.91 | 0.97 | 0.93 | 0.90 | 0.94 | 0.91 | 0.88 | 0.91 | 0.89 | 0.86 | 0.88 | 0.86 | 0.85 | 0.83 |
| 3 | 0.94 | 0.89 | 0.86 | 0.92 | 0.88 | 0.85 | 0.90 | 0.87 | 0.84 | 0.88 | 0.85 | 0.82 | 0.86 | 0.83 | 0.81 | 0.80 |
| 4 | 0.90 | 0.85 | 0.81 | 0.88 | 0.84 | 0.81 | 0.86 | 0.83 | 0.80 | 0.85 | 0.82 | 0.79 | 0.83 | 0.80 | 0.78 | 0.77 |
| 5 | 0.86 | 0.81 | 0.78 | 0.85 | 0.80 | 0.77 | 0.83 | 0.79 | 0.77 | 0.82 | 0.78 | 0.76 | 0.80 | 0.78 | 0.75 | 0.74 |
| 6 | 0.82 | 0.78 | 0.74 | 0.82 | 0.77 | 0.74 | 0.80 | 0.76 | 0.74 | 0.79 | 0.76 | 0.73 | 0.78 | 0.75 | 0.73 | 0.71 |
| 7 | 0.79 | 0.75 | 0.71 | 0.79 | 0.74 | 0.71 | 0.78 | 0.74 | 0.71 | 0.77 | 0.73 | 0.71 | 0.76 | 0.73 | 0.70 | 0.69 |
| 8 | 0.77 | 0.72 | 0.69 | 0.76 | 0.72 | 0.69 | 0.75 | 0.71 | 0.69 | 0.74 | 0.71 | 0.68 | 0.74 | 0.70 | 0.68 | 0.67 |
| 9 | 0.74 | 0.70 | 0.67 | 0.74 | 0.69 | 0.67 | 0.73 | 0.69 | 0.66 | 0.72 | 0.69 | 0.66 | 0.72 | 0.68 | 0.66 | 0.65 |
| 10 | 0.72 | 0.68 | 0.65 | 0.72 | 0.67 | 0.65 | 0.71 | 0.67 | 0.64 | 0.70 | 0.67 | 0.64 | 0.70 | 0.66 | 0.64 | 0.63 |



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 | 6812.68 | 5121.35 | 2697.21 | 1419.35 | 811.53 | 570.38 | 498.26 | 360.07 | 79.50 |
| 45.0 | 6732.85 | 6190.54 | 3797.24 | 1799.79 | 1054.88 | 645.26 | 517.53 | 451.46 | 285.19 |
| 90.0 | 6800.57 | 6228.53 | 3623.81 | 1720.51 | 1020.47 | 618.06 | 508.67 | 448.16 | 220.39 |
| 135.0 | 6566.03 | 6621.08 | 4182.08 | 2070.12 | 1139.12 | 666.18 | 529.64 | 466.33 | 286.84 |
| 180.0 | 6812.68 | 5845.89 | 3298.98 | 1631.32 | 948.13 | 605.84 | 505.64 | 421.79 | 186.42 |
| 225.0 | 6732.85 | 4718.33 | 2140.59 | 1081.91 | 750.09 | 551.78 | 492.15 | 314.87 | 46.03 |
| 270.0 | 6800.57 | 4929.20 | 2345.40 | 1288.32 | 780.15 | 554.97 | 494.96 | 331.44 | 54.12 |
| 315.0 | 6566.03 | 4236.59 | 2067.37 | 1083.40 | 711.49 | 532.62 | 479.21 | 259.87 | 28.52 |
| 360.0 | 6812.68 | 5121.35 | 2697.21 | 1419.35 | 811.53 | 570.38 | 498.26 | 360.07 | 79.50 |
| C/ γ (°) | 45.0 | 50.0 | 55.0 | 60.0 | 65.0 | 70.0 | 75.0 | 80.0 | 85.0 |
| 0.0 | 8.70 | 6.50 | 6.22 | 6.11 | 6.06 | 6.00 | 6.00 | 6.11 | 6.11 |
| 45.0 | 10.63 | 6.83 | 6.39 | 6.22 | 6.17 | 6.11 | 6.11 | 6.17 | 6.17 |
| 90.0 | 9.03 | 6.66 | 6.33 | 6.17 | 6.11 | 6.06 | 6.00 | 6.06 | 6.06 |
| 135.0 | 18.44 | 8.15 | 6.39 | 6.17 | 6.11 | 6.06 | 6.00 | 6.00 | 6.00 |
| 180.0 | 8.15 | 6.50 | 6.22 | 6.11 | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 |
| 225.0 | 7.43 | 6.50 | 6.39 | 6.17 | 6.17 | 6.11 | 6.22 | 6.50 | 6.99 |
| 270.0 | 7.93 | 6.50 | 6.28 | 6.17 | 6.17 | 6.22 | 6.88 | 7.71 | 7.65 |
| 315.0 | 6.72 | 6.33 | 6.17 | 6.11 | 6.00 | 6.06 | 6.06 | 6.11 | 6.11 |
| 360.0 | 8.70 | 6.50 | 6.22 | 6.11 | 6.06 | 6.00 | 6.00 | 6.11 | 6.11 |
| C/ γ (°) | 90.0 | | | | | | | | |
| 0.0 | 5.89 | | | | | | | | |
| 45.0 | 6.06 | | | | | | | | |
| 90.0 | 6.11 | | | | | | | | |
| 135.0 | 5.95 | | | | | | | | |
| 180.0 | 5.89 | | | | | | | | |
| 225.0 | 6.06 | | | | | | | | |
| 270.0 | 6.00 | | | | | | | | |
| 315.0 | 5.95 | | | | | | | | |
| 360.0 | 5.89 | | | | | | | | |