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Nata

LumCAT: 3-1548-A3
Luminaire: TE 2213401-1+92.76.365.00
Report No: GC2015051302
Test No: NT-0010
LampCAT: CREE CXA1816
Lamp flux(lm): 2260.0
Number of Lamps: 1
Length(mm): 79
Phm Type: C

Voltage(V): 40.0000
Current(A): 0.7300
Power (W): 29.2000
PF: 0.0000
Ballast type: DC
Width(mm): 79
Height(mm): 0

Photometric Results

Lumens(lm): 2146.39
Efficiency(%): 94.97%
Lumens(lm)/Power(W): 73.51
Central intensity(cd): 21042.250
Maximum intensity(cd): 21042.250
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=12.4
 [C90/270]Total=12.4
Field angle(10%Imax): [C0/180]Total=27.0
 [C90/270]Total=27.0
Maximum s/h(1/2): C0_180=0.21 C90_270=0.21
Maximum s/h(1/4): C0_180=0.23 C90_270=0.23
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 94.97%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 99.463%

Equipment: GMS1980
Temperature(°C): 26.0

Date: 2015-5-13
Humidity(%): 90.0%

Operator: NT07
Distance(m): 7.48

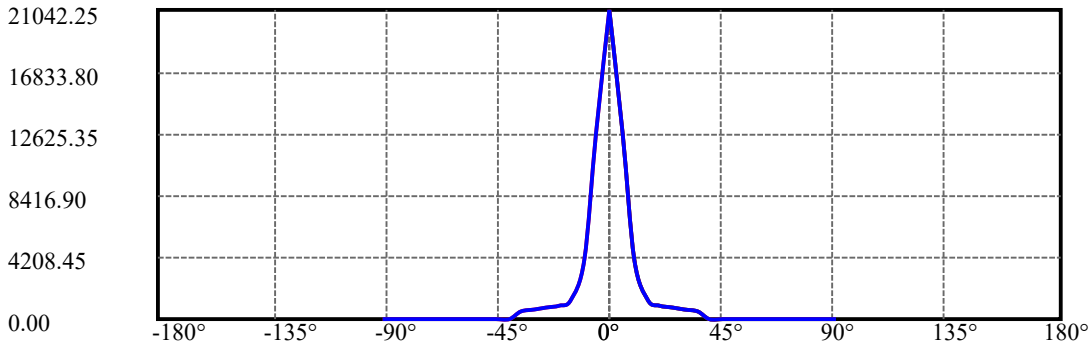
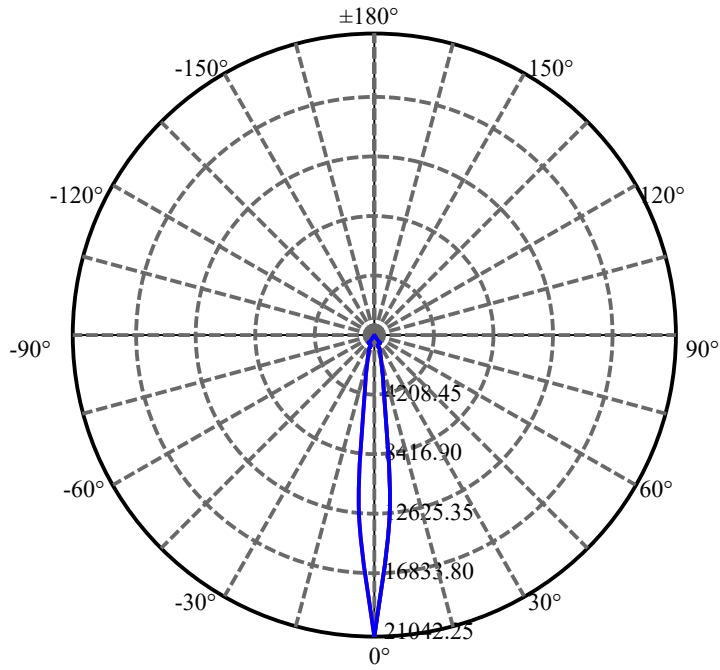
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0 | 21042.246 | 0.000 | 0 | .000% | .000% |
| 5.0 | 12528.274 | 401.326 | 401.326 | 17.758% | 18.698% |
| 10.0 | 4031.156 | 592.383 | 993.709 | 26.212% | 46.297% |
| 15.0 | 1296.385 | 316.026 | 1309.735 | 13.983% | 61.020% |
| 20.0 | 907.278 | 181.613 | 1491.348 | 8.036% | 69.482% |
| 25.0 | 770.612 | 175.980 | 1667.328 | 7.787% | 77.681% |
| 30.0 | 694.491 | 185.410 | 1852.738 | 8.204% | 86.319% |
| 35.0 | 495.756 | 175.272 | 2028.01 | 7.755% | 94.485% |
| 40.0 | 47.949 | 90.713 | 2118.723 | 4.014% | 98.711% |
| 45.0 | 6.071 | 10.002 | 2128.725 | .443% | 99.177% |
| 50.0 | 4.917 | 2.220 | 2130.945 | .098% | 99.280% |
| 55.0 | 4.301 | 2.004 | 2132.949 | .089% | 99.374% |
| 60.0 | 3.993 | 1.917 | 2134.867 | .085% | 99.463% |
| 65.0 | 3.812 | 1.897 | 2136.764 | .084% | 99.552% |
| 70.0 | 3.693 | 1.900 | 2138.664 | .084% | 99.640% |
| 75.0 | 3.630 | 1.914 | 2140.578 | .085% | 99.729% |
| 80.0 | 3.588 | 1.931 | 2142.51 | .085% | 99.819% |
| 85.0 | 3.553 | 1.940 | 2144.45 | .086% | 99.910% |
| 90.0 | 3.532 | 1.940 | 2146.39 | .086% | 100.000% |

ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|--------|---------|
| 0-30 | 1852.74 | 81.98% | 86.32% |
| 0-40 | 2118.72 | 93.75% | 98.71% |
| 0-60 | 2134.87 | 94.46% | 99.46% |
| 0-90 | 2144.45 | 94.89% | 99.91% |
| 0-120 | 2144.45 | 94.89% | 99.91% |
| 0-180 | 2146.39 | 94.97% | 100.00% |
| 60-90 | 11.50 | 0.51% | 0.54% |
| 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% |
| 0-26.34 | 1717.11 | 75.98% | 80.00% |

ZONAL LUMEN SUMMARY

| | |
|---------|--------|
| 0-10 | 993.71 |
| 10-20 | 497.64 |
| 20-30 | 361.39 |
| 30-40 | 265.99 |
| 40-50 | 12.22 |
| 50-60 | 3.92 |
| 60-70 | 3.80 |
| 70-80 | 3.85 |
| 80-90 | 1.94 |
| 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: —————

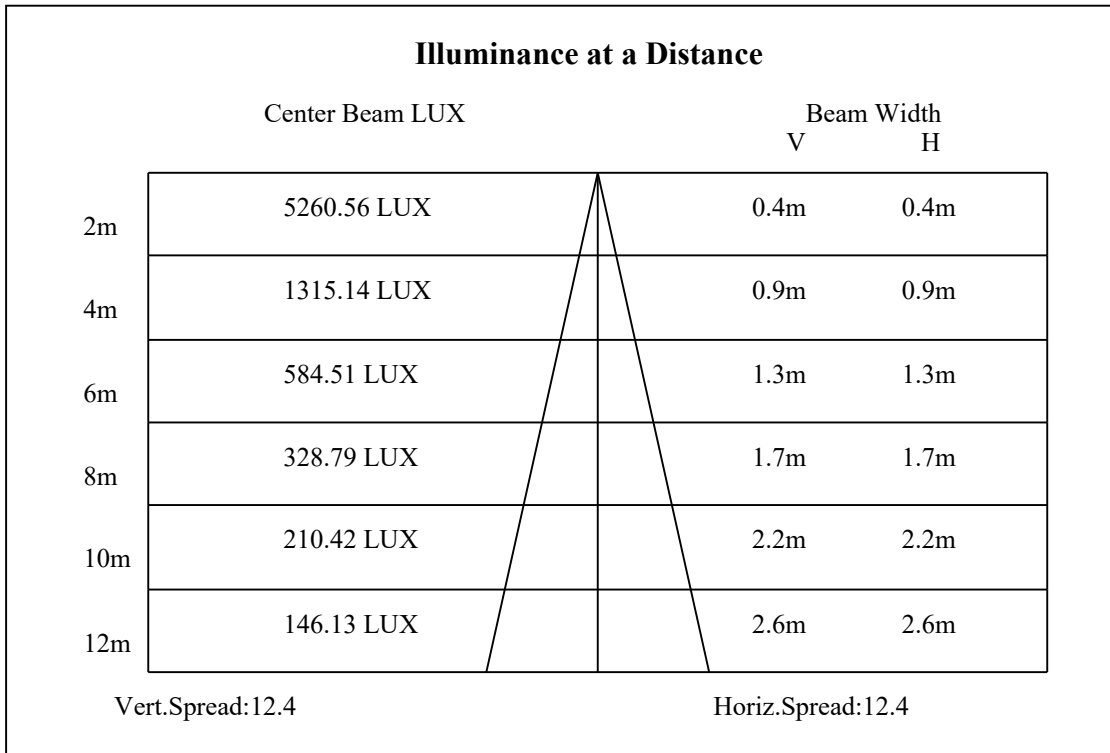
C90/C270: —————

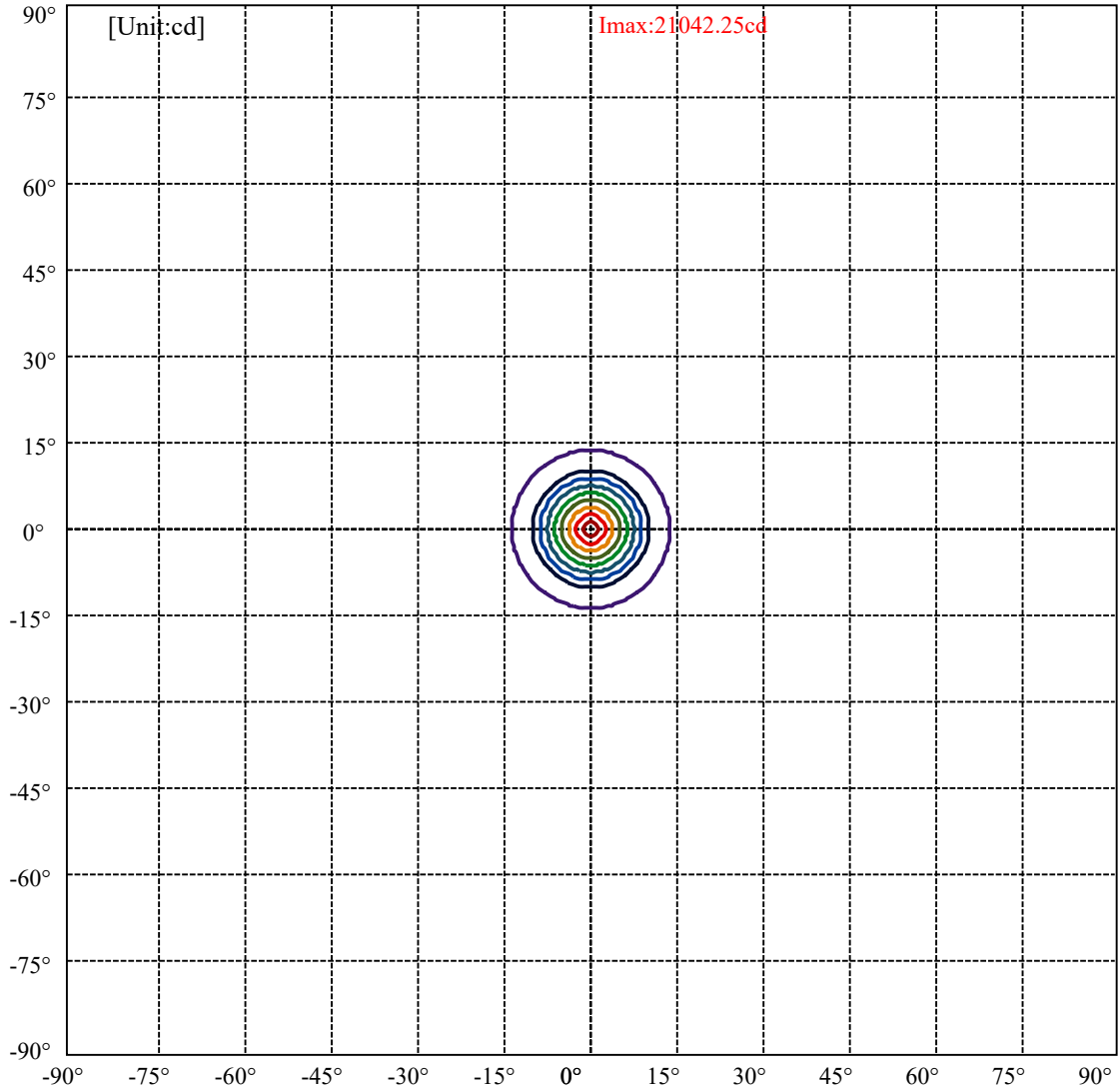
Field angle(10%Imax):C0/180Left:13.5 Right:13.5

:C90/270Left:13.5 Right:13.5

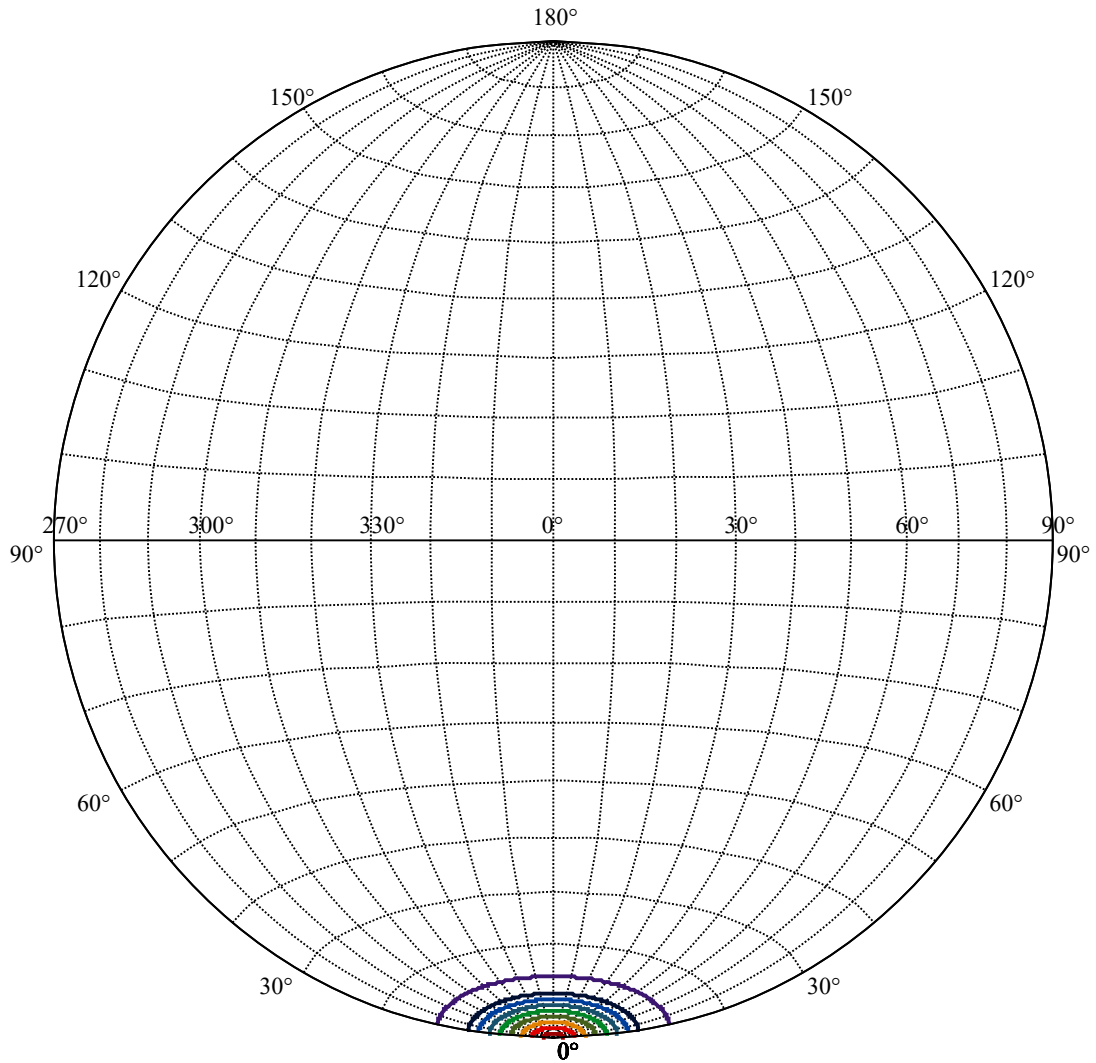
Beam Angle(50%Imax):C0/180Left:6.2 Right:6.2

:C90/270Left:6.2 Right:6.2





| | |
|--------------------------------|---|
| (10%I _{max}) 2104.22 | — |
| (20%I _{max}) 4208.45 | — |
| (30%I _{max}) 6312.67 | — |
| (40%I _{max}) 8416.9 | — |
| (50%I _{max}) 10521.1 | — |
| (60%I _{max}) 12625.3 | — |
| (70%I _{max}) 14729.6 | — |
| (80%I _{max}) 16833.8 | — |
| (90%I _{max}) 18938 | — |



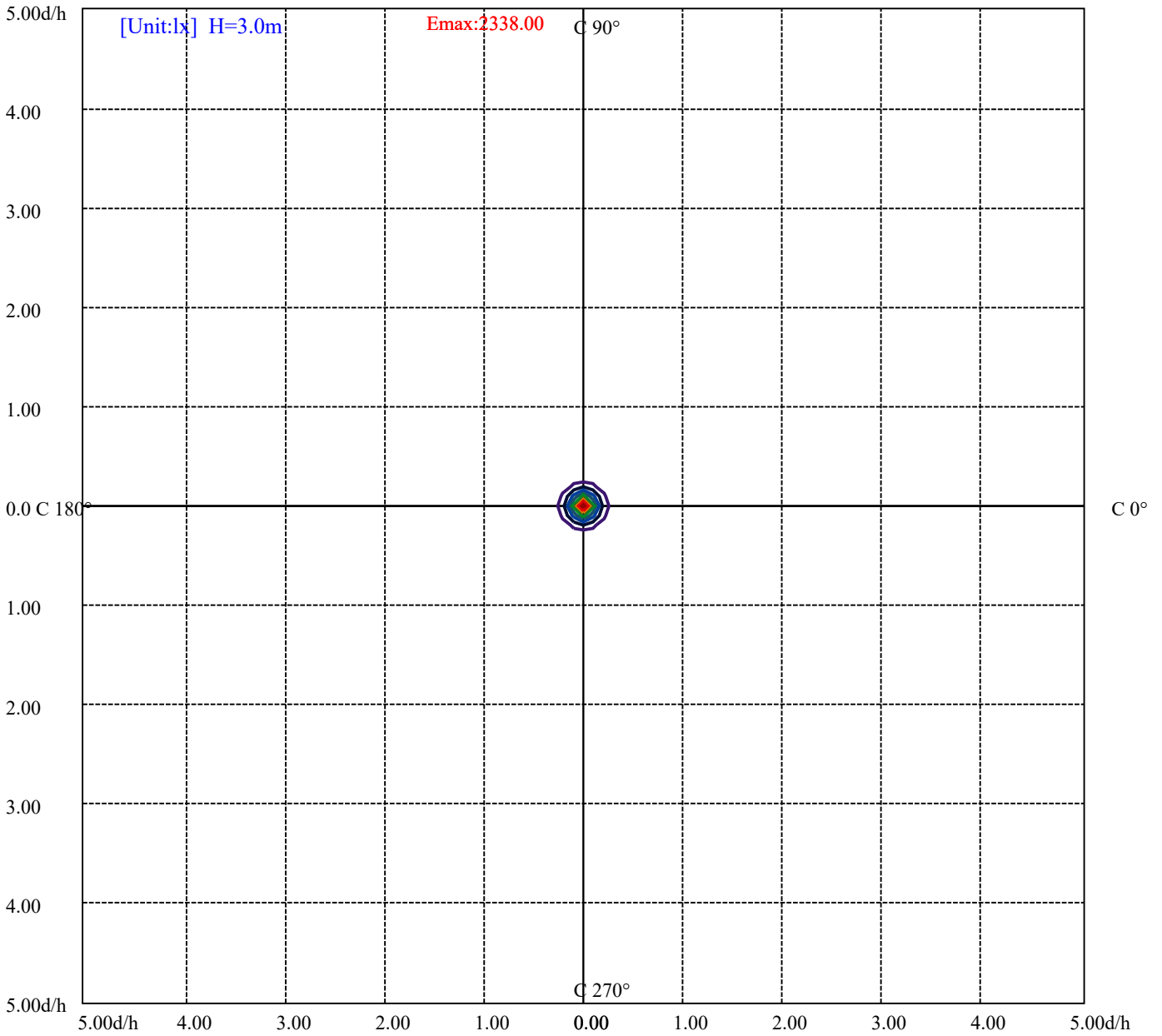
House

[Unit:cd]

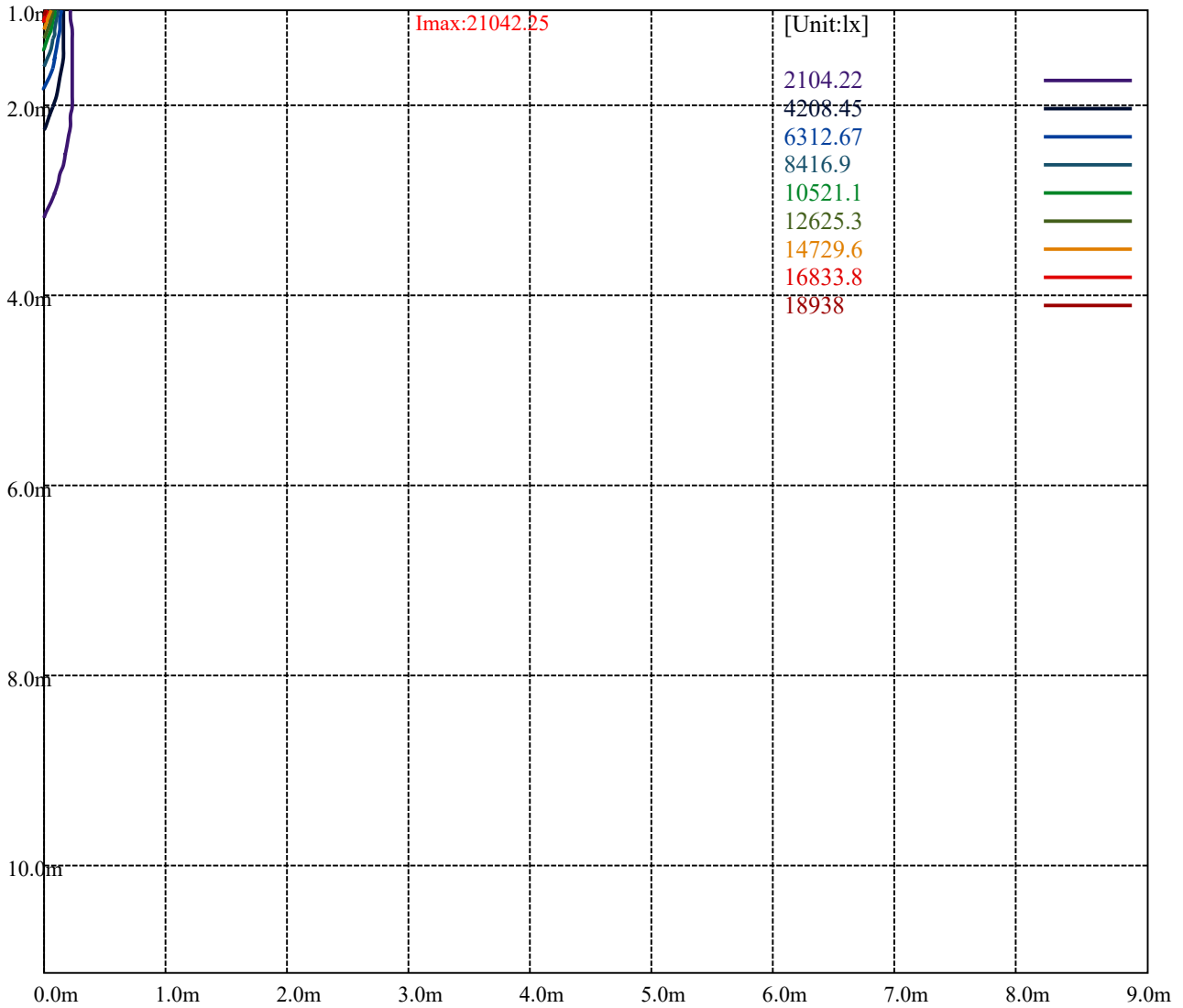
Road

Imax:21042.25

| | |
|-------------------|---|
| (10%Imax) 2104.22 | — |
| (20%Imax) 4208.45 | — |
| (30%Imax) 6312.67 | — |
| (40%Imax) 8416.9 | — |
| (50%Imax) 10521.1 | — |
| (60%Imax) 12625.3 | — |
| (70%Imax) 14729.6 | — |
| (80%Imax) 16833.8 | — |
| (90%Imax) 18938 | — |



- (10%Emax) 233.8
- (20%Emax) 467.6
- (30%Emax) 701.4
- (40%Emax) 935.1989
- (50%Emax) 1169
- (60%Emax) 1402.8
- (70%Emax) 1636.6
- (80%Emax) 1870.4
- (90%Emax) 2104.2



Luminance Table

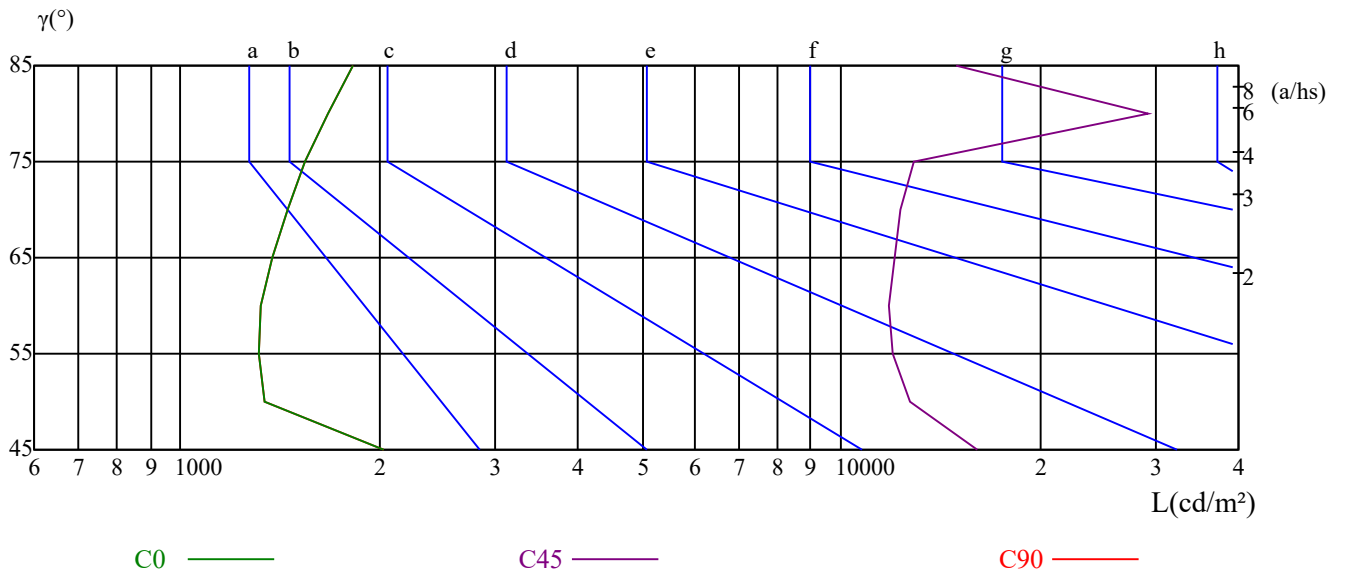
| γ | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| C0 | 2031 | 1340 | 1311 | 1326 | 1381 | 1454 | 1545 | 1667 | 1824 |
| C45 | 16043 | 12705 | 11957 | 11832 | 12082 | 12309 | 12854 | 29115 | 14901 |
| C90 | 2031 | 1340 | 1311 | 1326 | 1381 | 1454 | 1545 | 1667 | 1824 |

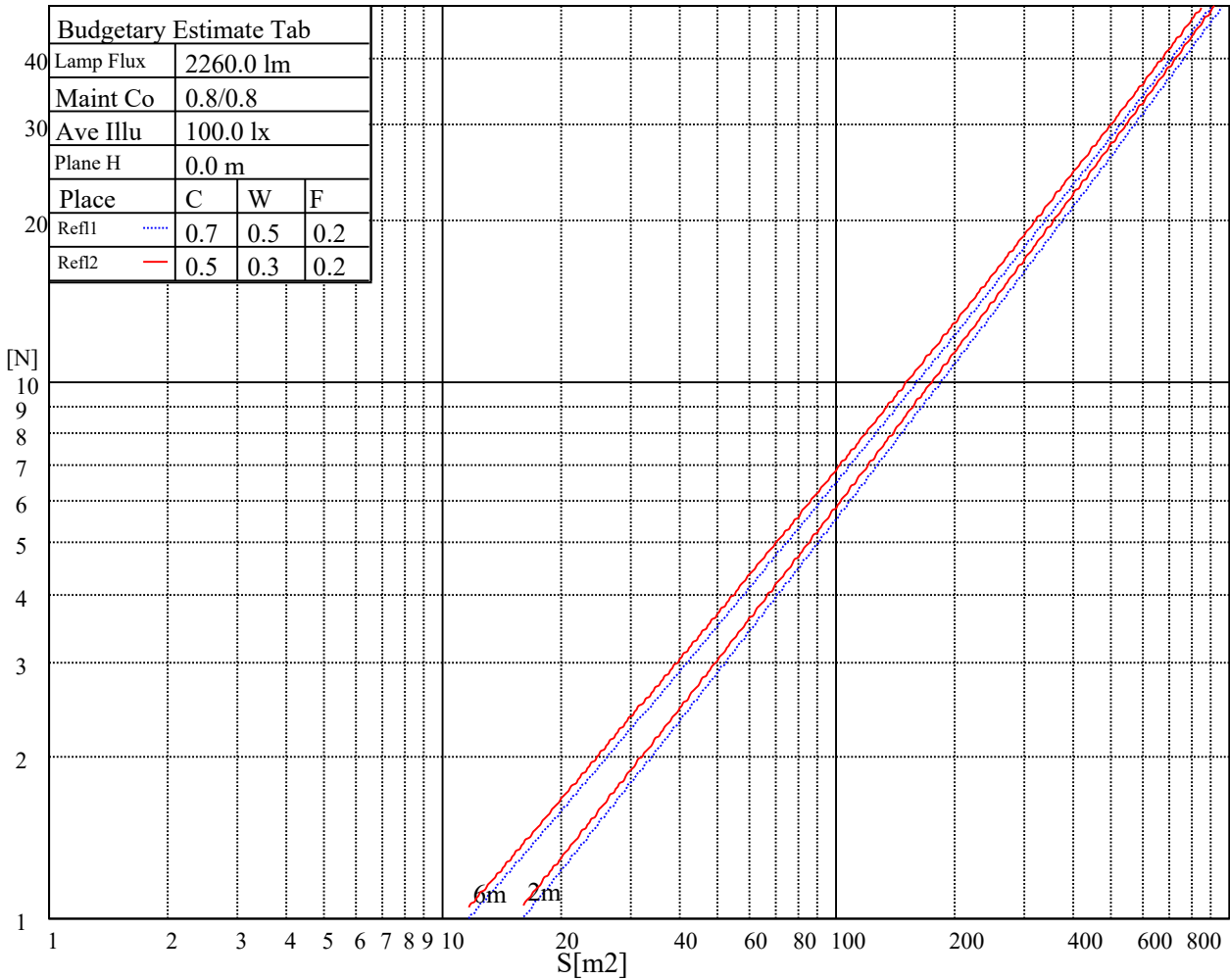
| L(Hor)(65) | L(Ver)(65) | L45(65) | L(Hor)(75) | L(Ver)(75) | L45(75) | L(Hor)(85) | L(Ver)(85) | L45(85) |
|------------|------------|---------|------------|------------|---------|------------|------------|---------|
| 3394 | 3394 | 36980 | 5463 | 5463 | 58954 | 15990 | 15990 | 178562 |

Glare Table

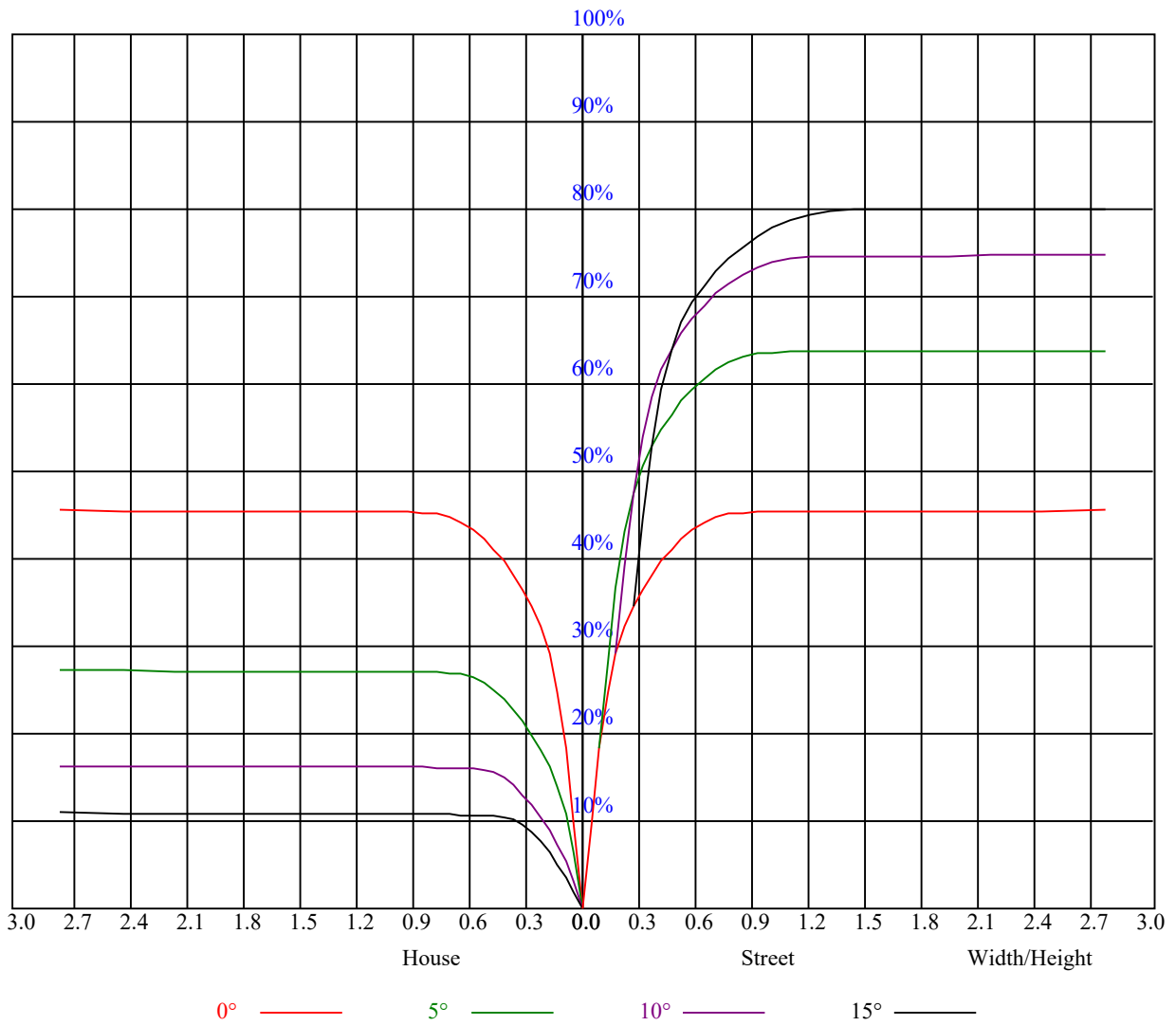
| Glare | Quality | Service Values Illuminance(lx) | | | | | | | |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15 | A | 2000 | 1000 | 500 | <=300 | | | | |
| 1.5 | B | | 2000 | 1000 | 500 | <=300 | | | |
| 1.85 | C | | | 2000 | 1000 | 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 RHOFC=20 CU | | | | | | | | | | | | | | | |
| 0 | 1.13 | 1.13 | 1.13 | 1.10 | 1.10 | 1.10 | 1.06 | 1.06 | 1.06 | 1.01 | 1.01 | 1.01 | 0.97 | 0.97 | 0.97 | 0.95 |
| 1 | 1.07 | 1.05 | 1.04 | 1.05 | 1.03 | 1.02 | 1.01 | 1.00 | 0.99 | 0.98 | 0.97 | 0.96 | 0.95 | 0.94 | 0.93 | 0.92 |
| 2 | 1.02 | 0.99 | 0.97 | 1.00 | 0.98 | 0.95 | 0.97 | 0.95 | 0.93 | 0.95 | 0.93 | 0.91 | 0.92 | 0.91 | 0.90 | 0.88 |
| 3 | 0.97 | 0.94 | 0.91 | 0.96 | 0.93 | 0.90 | 0.94 | 0.91 | 0.89 | 0.92 | 0.90 | 0.88 | 0.90 | 0.88 | 0.86 | 0.85 |
| 4 | 0.94 | 0.90 | 0.87 | 0.93 | 0.89 | 0.86 | 0.91 | 0.88 | 0.85 | 0.89 | 0.86 | 0.84 | 0.87 | 0.85 | 0.83 | 0.82 |
| 5 | 0.90 | 0.86 | 0.83 | 0.89 | 0.86 | 0.83 | 0.88 | 0.85 | 0.82 | 0.86 | 0.84 | 0.81 | 0.85 | 0.83 | 0.81 | 0.80 |
| 6 | 0.87 | 0.83 | 0.80 | 0.86 | 0.82 | 0.80 | 0.85 | 0.82 | 0.79 | 0.84 | 0.81 | 0.79 | 0.83 | 0.80 | 0.78 | 0.77 |
| 7 | 0.84 | 0.80 | 0.77 | 0.84 | 0.80 | 0.77 | 0.83 | 0.79 | 0.77 | 0.82 | 0.79 | 0.76 | 0.81 | 0.78 | 0.76 | 0.75 |
| 8 | 0.82 | 0.78 | 0.75 | 0.81 | 0.77 | 0.75 | 0.80 | 0.77 | 0.74 | 0.79 | 0.76 | 0.74 | 0.79 | 0.76 | 0.74 | 0.73 |
| 9 | 0.79 | 0.75 | 0.73 | 0.79 | 0.75 | 0.73 | 0.78 | 0.75 | 0.72 | 0.77 | 0.74 | 0.72 | 0.77 | 0.74 | 0.72 | 0.71 |
| 10 | 0.77 | 0.73 | 0.71 | 0.77 | 0.73 | 0.71 | 0.76 | 0.73 | 0.71 | 0.76 | 0.73 | 0.70 | 0.75 | 0.72 | 0.70 | 0.69 |



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 | 21138.06 | 13025.25 | 3849.39 | 1373.02 | 915.35 | 776.59 | 705.53 | 494.60 | 26.91 |
| 45.0 | 21014.97 | 14250.57 | 4531.98 | 1471.50 | 933.25 | 781.63 | 706.65 | 556.15 | 67.59 |
| 90.0 | 21087.71 | 10734.64 | 3269.74 | 1099.65 | 867.96 | 746.66 | 677.17 | 455.60 | 18.63 |
| 135.0 | 21014.97 | 14933.16 | 5052.32 | 1501.71 | 950.04 | 773.79 | 693.78 | 519.22 | 60.93 |
| 180.0 | 21138.06 | 11120.70 | 4083.82 | 1272.87 | 897.50 | 762.49 | 680.36 | 487.72 | 37.71 |
| 225.0 | 21014.97 | 11012.16 | 3414.65 | 1099.20 | 878.42 | 765.79 | 689.14 | 472.56 | 18.74 |
| 270.0 | 21087.71 | 14009.98 | 4839.71 | 1465.34 | 932.69 | 796.73 | 712.25 | 538.24 | 139.54 |
| 315.0 | 20841.52 | 11139.72 | 3207.64 | 1087.79 | 883.01 | 761.21 | 691.04 | 441.95 | 13.54 |
| 360.0 | 21138.06 | 13025.25 | 3849.39 | 1373.02 | 915.35 | 776.59 | 705.53 | 494.60 | 26.91 |

| C/γ(°) | 45.0 | 50.0 | 55.0 | 60.0 | 65.0 | 70.0 | 75.0 | 80.0 | 85.0 |
|--------|------|------|------|------|------|------|------|------|------|
| 0.0 | 5.93 | 4.81 | 4.25 | 3.97 | 3.80 | 3.69 | 3.64 | 3.58 | 3.52 |
| 45.0 | 6.55 | 5.60 | 4.42 | 4.08 | 3.86 | 3.75 | 3.64 | 3.64 | 3.58 |
| 90.0 | 5.71 | 4.76 | 4.25 | 3.97 | 3.80 | 3.69 | 3.64 | 3.58 | 3.52 |
| 135.0 | 6.15 | 4.98 | 4.48 | 4.08 | 3.92 | 3.75 | 3.69 | 3.64 | 3.64 |
| 180.0 | 6.32 | 4.76 | 4.25 | 3.97 | 3.80 | 3.69 | 3.64 | 3.58 | 3.52 |
| 225.0 | 5.60 | 4.64 | 4.20 | 3.92 | 3.69 | 3.64 | 3.58 | 3.52 | 3.52 |
| 270.0 | 6.55 | 5.20 | 4.36 | 4.03 | 3.86 | 3.69 | 3.64 | 3.64 | 3.58 |
| 315.0 | 5.76 | 4.59 | 4.20 | 3.92 | 3.75 | 3.64 | 3.58 | 3.52 | 3.52 |
| 360.0 | 5.93 | 4.81 | 4.25 | 3.97 | 3.80 | 3.69 | 3.64 | 3.58 | 3.52 |

| C/γ(°) | 90.0 |
|--------|------|
| 0.0 | 3.52 |
| 45.0 | 3.52 |
| 90.0 | 3.52 |
| 135.0 | 3.58 |
| 180.0 | 3.52 |
| 225.0 | 3.52 |
| 270.0 | 3.52 |
| 315.0 | 3.52 |
| 360.0 | 3.52 |