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Nata

Client:

LumCAT: 2-2519-L

Luminaire: 92.70.411.00

Report No: 2024829-B022

Ballast type:

Test No: 2024829-C022

LampCAT: Fortimo_SLM_C_1208

Lamp flux(lm): 3408.0

Number of Lamps: 1

Length(mm): 0

Phm Type: C

Voltage(V):

Current(A):

Power (W): 21.010

PF:

Width(mm): 0

Height(mm): 0

Photometric Results

Lumens(lm): 3093.07, Efficiency(%): 90.76% , Luminous Efficacy(lm/W): 147.22

Central intensity(cd): 10345.420, Maximum intensity(cd): 10345.420

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=26.4

[C90/270]Total=26.4

Field angle(10%Imax): [C0/180]Total=57.0

[C90/270]Total=57.0

Maximum s/h(1/2): C0_180=0.44 C90_270=0.44

Maximum s/h(1/4): C0_180=0.48 C90_270=0.48

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 90.76%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.118%

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 0.0 | 10345.417 | 0.000 | 0 | 0.00% | 0.00% |
| 1.0 | 10311.769 | 9.884 | 9.884 | 0.29% | 0.32% |
| 2.0 | 10175.751 | 29.406 | 39.29 | 0.86% | 1.27% |
| 3.0 | 9975.253 | 48.195 | 87.484 | 1.41% | 2.83% |
| 4.0 | 9715.323 | 65.911 | 153.395 | 1.93% | 4.96% |
| 5.0 | 9310.625 | 81.849 | 235.244 | 2.40% | 7.61% |
| 6.0 | 8930.224 | 95.860 | 331.104 | 2.81% | 10.70% |
| 7.0 | 8454.330 | 107.906 | 439.01 | 3.17% | 14.19% |
| 8.0 | 7941.892 | 117.345 | 556.354 | 3.44% | 17.99% |
| 9.0 | 7402.403 | 124.357 | 680.711 | 3.65% | 22.01% |
| 10.0 | 6854.361 | 129.018 | 809.73 | 3.79% | 26.18% |
| 11.0 | 6304.313 | 131.482 | 941.212 | 3.86% | 30.43% |
| 12.0 | 5767.203 | 131.959 | 1073.171 | 3.87% | 34.70% |
| 13.0 | 5246.546 | 130.705 | 1203.877 | 3.84% | 38.92% |
| 14.0 | 4758.470 | 128.063 | 1331.94 | 3.76% | 43.06% |
| 15.0 | 4310.920 | 124.509 | 1456.449 | 3.65% | 47.09% |
| 16.0 | 3919.369 | 120.597 | 1577.045 | 3.54% | 50.99% |
| 17.0 | 3535.078 | 116.086 | 1693.131 | 3.41% | 54.74% |
| 18.0 | 3230.932 | 111.557 | 1804.688 | 3.27% | 58.35% |
| 19.0 | 2937.166 | 107.312 | 1912 | 3.15% | 61.82% |
| 20.0 | 2664.156 | 102.520 | 2014.52 | 3.01% | 65.13% |
| 21.0 | 2421.725 | 97.659 | 2112.179 | 2.87% | 68.29% |
| 22.0 | 2191.896 | 92.713 | 2204.892 | 2.72% | 71.28% |
| 23.0 | 1978.709 | 87.511 | 2292.402 | 2.57% | 74.11% |
| 24.0 | 1752.749 | 81.583 | 2373.985 | 2.39% | 76.75% |
| 25.0 | 1575.252 | 75.671 | 2449.657 | 2.22% | 79.20% |
| 26.0 | 1434.253 | 71.040 | 2520.697 | 2.08% | 81.49% |
| 27.0 | 1254.686 | 65.785 | 2586.482 | 1.93% | 83.62% |
| 28.0 | 1119.890 | 60.119 | 2646.601 | 1.76% | 85.57% |
| 29.0 | 954.226 | 54.265 | 2700.866 | 1.59% | 87.32% |
| 30.0 | 838.838 | 48.412 | 2749.278 | 1.42% | 88.89% |
| 31.0 | 721.355 | 43.418 | 2792.696 | 1.27% | 90.29% |
| 32.0 | 607.734 | 38.077 | 2830.773 | 1.12% | 91.52% |
| 33.0 | 507.333 | 32.850 | 2863.623 | 0.96% | 92.58% |
| 34.0 | 420.842 | 28.089 | 2891.713 | 0.82% | 93.49% |
| 35.0 | 352.057 | 24.003 | 2915.716 | 0.70% | 94.27% |
| 36.0 | 288.982 | 20.411 | 2936.127 | 0.60% | 94.93% |
| 37.0 | 230.092 | 16.929 | 2953.056 | 0.50% | 95.47% |

| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 38.0 | 192.339 | 14.100 | 2967.156 | 0.41% | 95.93% |
| 39.0 | 169.212 | 12.341 | 2979.497 | 0.36% | 96.33% |
| 40.0 | 135.421 | 10.625 | 2990.122 | 0.31% | 96.67% |
| 41.0 | 103.706 | 8.515 | 2998.637 | 0.25% | 96.95% |
| 42.0 | 88.515 | 6.984 | 3005.621 | 0.20% | 97.17% |
| 43.0 | 75.559 | 6.078 | 3011.698 | 0.18% | 97.37% |
| 44.0 | 65.585 | 5.327 | 3017.025 | 0.16% | 97.54% |
| 45.0 | 57.930 | 4.747 | 3021.772 | 0.14% | 97.69% |
| 46.0 | 51.945 | 4.297 | 3026.069 | 0.13% | 97.83% |
| 47.0 | 47.109 | 3.940 | 3030.009 | 0.12% | 97.96% |
| 48.0 | 43.101 | 3.647 | 3033.656 | 0.11% | 98.08% |
| 49.0 | 39.724 | 3.401 | 3037.057 | 0.10% | 98.19% |
| 50.0 | 36.846 | 3.192 | 3040.249 | 0.09% | 98.29% |
| 51.0 | 34.435 | 3.016 | 3043.265 | 0.09% | 98.39% |
| 52.0 | 32.503 | 2.872 | 3046.138 | 0.08% | 98.48% |
| 53.0 | 30.834 | 2.755 | 3048.893 | 0.08% | 98.57% |
| 54.0 | 29.468 | 2.658 | 3051.551 | 0.08% | 98.66% |
| 55.0 | 28.206 | 2.574 | 3054.125 | 0.08% | 98.74% |
| 56.0 | 27.004 | 2.495 | 3056.62 | 0.07% | 98.82% |
| 57.0 | 25.972 | 2.422 | 3059.042 | 0.07% | 98.90% |
| 58.0 | 24.685 | 2.343 | 3061.385 | 0.07% | 98.98% |
| 59.0 | 23.561 | 2.256 | 3063.64 | 0.07% | 99.05% |
| 60.0 | 22.293 | 2.166 | 3065.806 | 0.06% | 99.12% |
| 61.0 | 21.163 | 2.074 | 3067.88 | 0.06% | 99.19% |
| 62.0 | 19.869 | 1.977 | 3069.857 | 0.06% | 99.25% |
| 63.0 | 18.719 | 1.877 | 3071.734 | 0.06% | 99.31% |
| 64.0 | 17.490 | 1.777 | 3073.511 | 0.05% | 99.37% |
| 65.0 | 16.413 | 1.678 | 3075.189 | 0.05% | 99.42% |
| 66.0 | 15.361 | 1.585 | 3076.774 | 0.05% | 99.47% |
| 67.0 | 14.336 | 1.493 | 3078.267 | 0.04% | 99.52% |
| 68.0 | 13.377 | 1.404 | 3079.671 | 0.04% | 99.57% |
| 69.0 | 12.326 | 1.311 | 3080.982 | 0.04% | 99.61% |
| 70.0 | 11.413 | 1.219 | 3082.202 | 0.04% | 99.65% |
| 71.0 | 10.578 | 1.137 | 3083.338 | 0.03% | 99.69% |
| 72.0 | 9.809 | 1.060 | 3084.398 | 0.03% | 99.72% |
| 73.0 | 8.863 | 0.976 | 3085.375 | 0.03% | 99.75% |
| 74.0 | 7.990 | 0.886 | 3086.261 | 0.03% | 99.78% |
| 75.0 | 7.227 | 0.804 | 3087.065 | 0.02% | 99.81% |

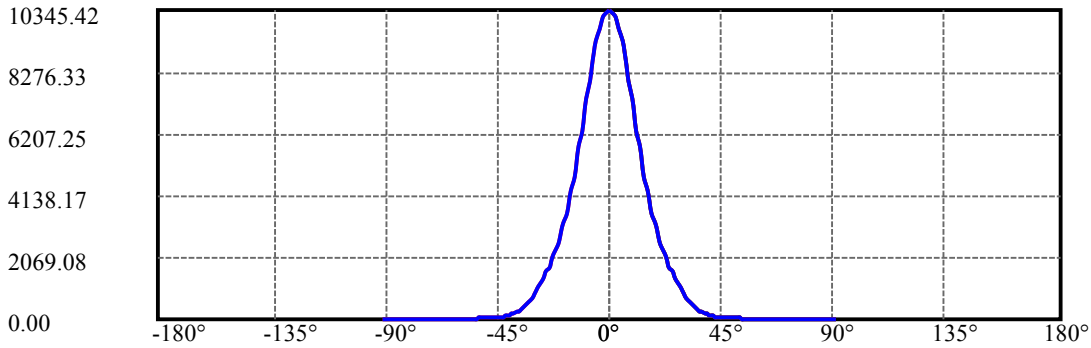
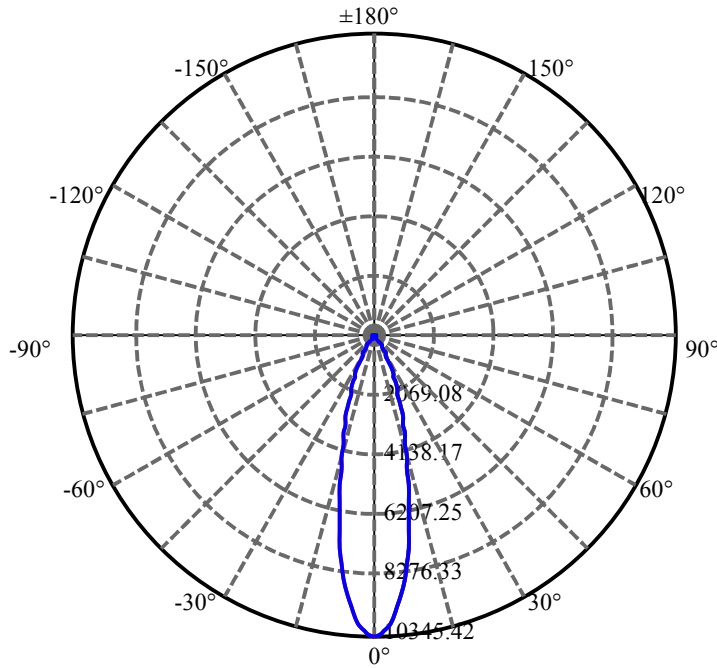
| $\gamma(^{\circ})$ | Average I(cd) | Zonal F(lm) | Sum F(lm) | Eff Flux(%) | Eff Sum(%) |
|--------------------|---------------|-------------|-----------|-------------|------------|
| 76.0 | 6.577 | 0.733 | 3087.797 | 0.02% | 99.83% |
| 77.0 | 5.940 | 0.667 | 3088.465 | 0.02% | 99.85% |
| 78.0 | 5.414 | 0.608 | 3089.073 | 0.02% | 99.87% |
| 79.0 | 4.921 | 0.555 | 3089.628 | 0.02% | 99.89% |
| 80.0 | 4.461 | 0.506 | 3090.134 | 0.01% | 99.91% |
| 81.0 | 4.028 | 0.459 | 3090.593 | 0.01% | 99.92% |
| 82.0 | 3.607 | 0.414 | 3091.007 | 0.01% | 99.93% |
| 83.0 | 3.252 | 0.373 | 3091.38 | 0.01% | 99.95% |
| 84.0 | 2.898 | 0.335 | 3091.715 | 0.01% | 99.96% |
| 85.0 | 2.536 | 0.297 | 3092.011 | 0.01% | 99.97% |
| 86.0 | 2.300 | 0.264 | 3092.276 | 0.01% | 99.97% |
| 87.0 | 1.997 | 0.235 | 3092.511 | 0.01% | 99.98% |
| 88.0 | 1.807 | 0.208 | 3092.719 | 0.01% | 99.99% |
| 89.0 | 1.570 | 0.185 | 3092.904 | 0.01% | 99.99% |
| 90.0 | 1.445 | 0.165 | 3093.07 | 0.00% | 100.00% |

ZONAL LUMEN SUMMARY

| Zone | Lumens | %Lamp | %Fixt |
|---------|---------|--------|---------|
| 0-30 | 2749.28 | 80.67% | 88.89% |
| 0-40 | 2990.12 | 87.74% | 96.67% |
| 0-60 | 3065.81 | 89.96% | 99.12% |
| 0-90 | 3092.90 | 90.75% | 99.99% |
| 0-120 | 3092.90 | 90.75% | 99.99% |
| 0-180 | 3093.07 | 90.76% | 100.00% |
| 60-90 | 27.10 | 0.80% | 0.88% |
| 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% |
| 0-25.35 | 2474.46 | 72.61% | 80.00% |

ZONAL LUMEN SUMMARY

| | |
|---------|---------|
| 0-10 | 809.73 |
| 10-20 | 1204.79 |
| 20-30 | 734.76 |
| 30-40 | 240.84 |
| 40-50 | 50.13 |
| 50-60 | 25.56 |
| 60-70 | 16.40 |
| 70-80 | 7.93 |
| 80-90 | 2.77 |
| 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: ———

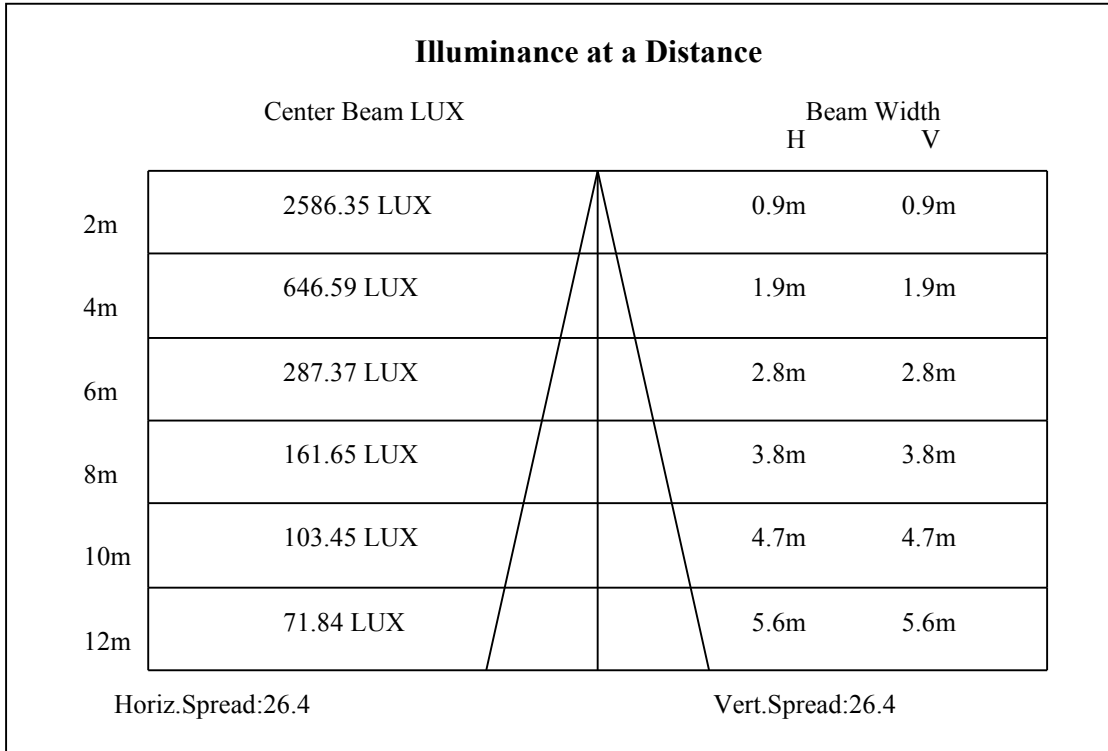
C90/C270: ———

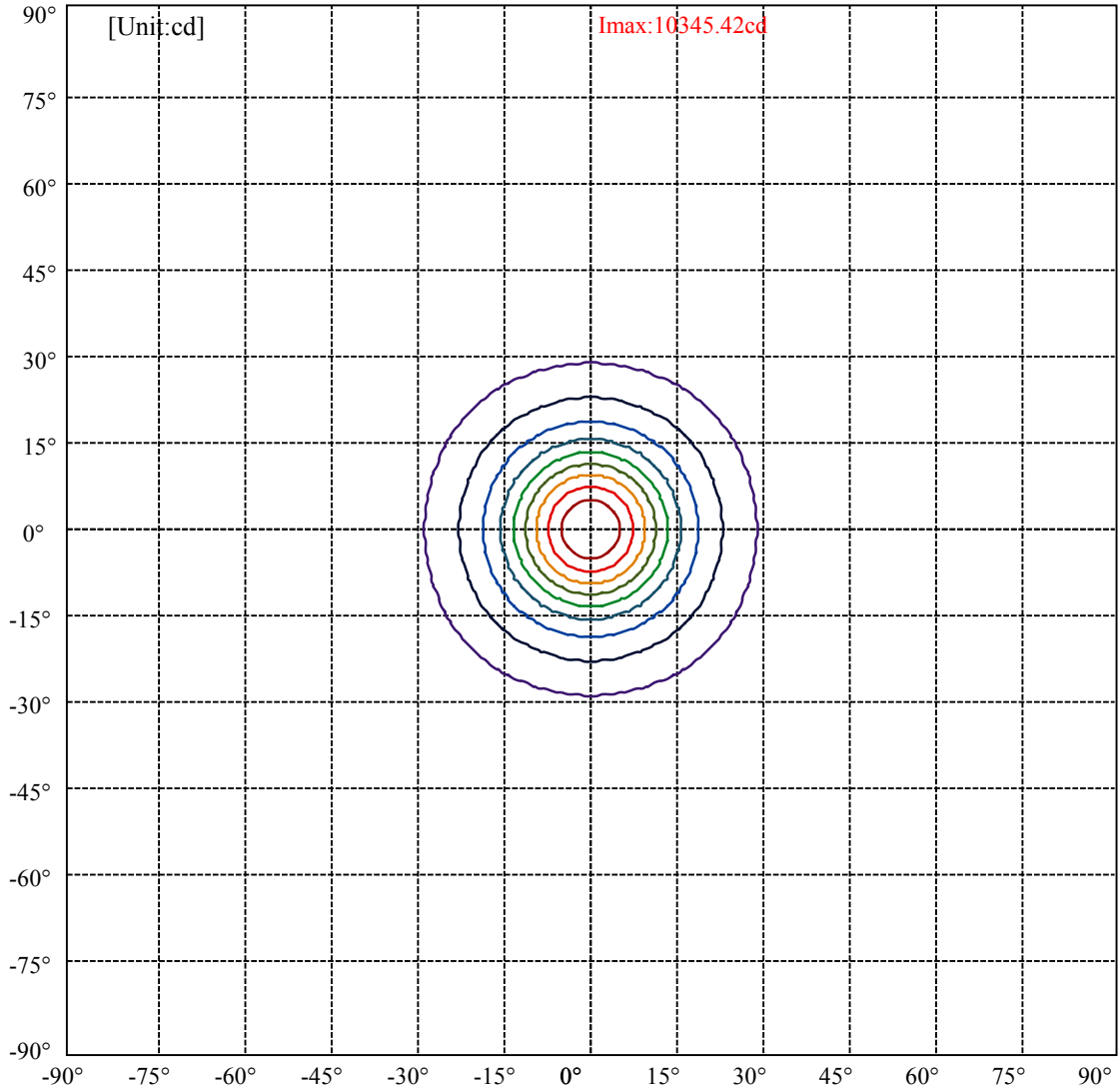
Field angle(10%Imax):C0/180Left:28.5 Right:28.5

:C90/270Left:28.5 Right:28.5

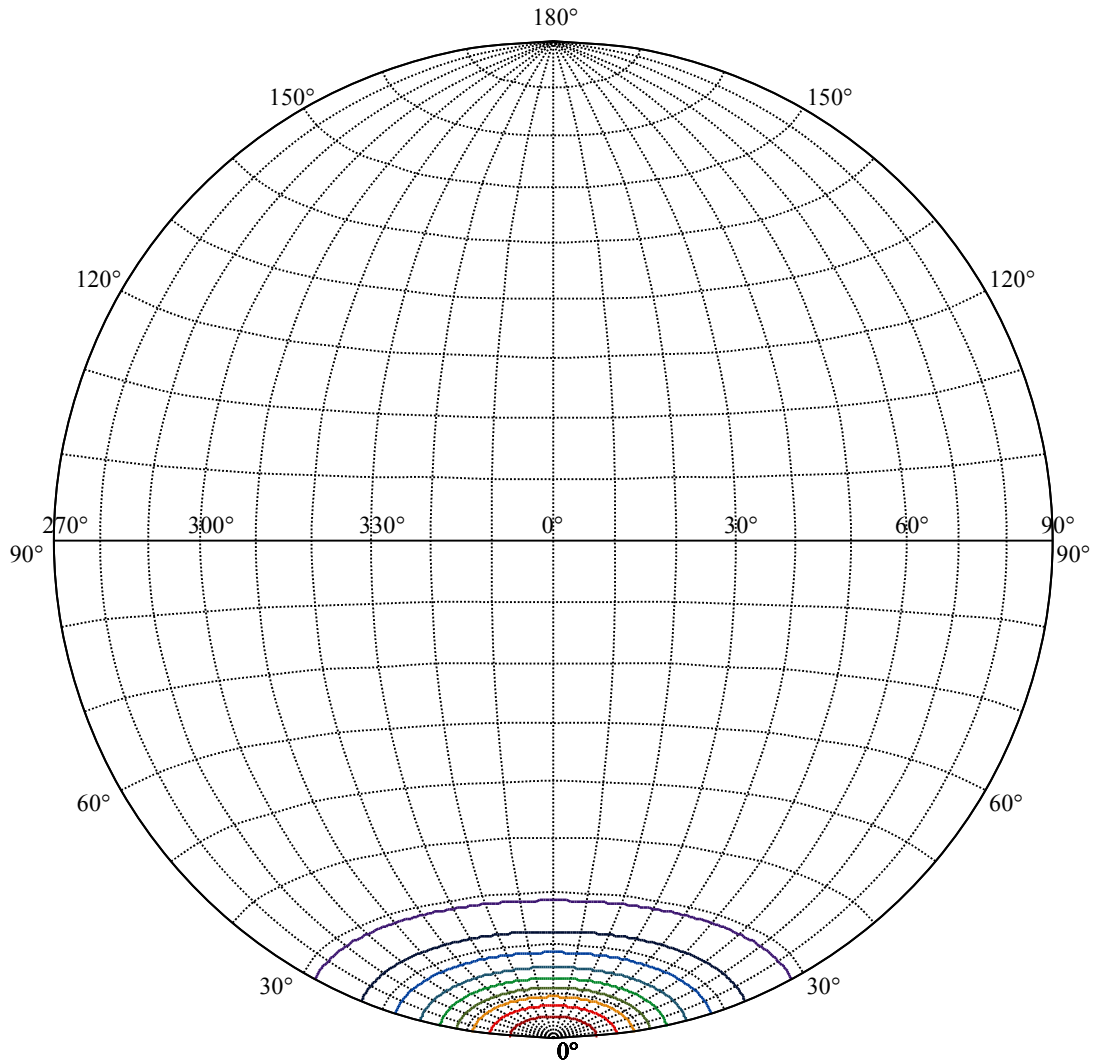
Beam Angle(50%Imax):C0/180Left:13.2 Right:13.2

:C90/270Left:13.2 Right:13.2





| | |
|-------------------|---|
| (10%Imax) 1034.54 | — |
| (20%Imax) 2069.08 | — |
| (30%Imax) 3103.63 | — |
| (40%Imax) 4138.17 | — |
| (50%Imax) 5172.71 | — |
| (60%Imax) 6207.25 | — |
| (70%Imax) 7241.79 | — |
| (80%Imax) 8276.33 | — |
| (90%Imax) 9310.88 | — |



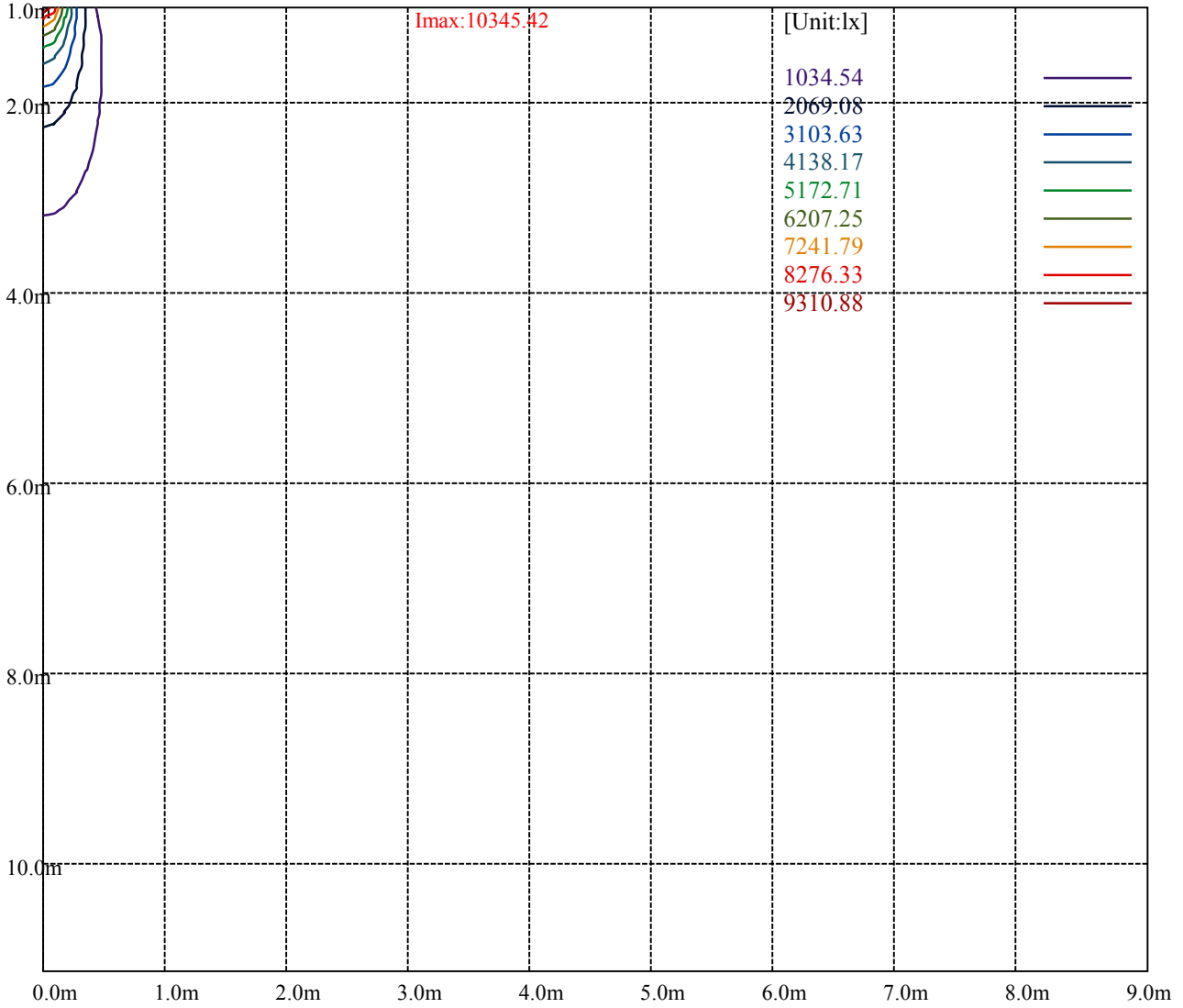
House

[Unit:cd]

Road

Imax:10345.42

| | |
|-------------------|---|
| (10%Imax) 1034.54 | — |
| (20%Imax) 2069.08 | — |
| (30%Imax) 3103.63 | — |
| (40%Imax) 4138.17 | — |
| (50%Imax) 5172.71 | — |
| (60%Imax) 6207.25 | — |
| (70%Imax) 7241.79 | — |
| (80%Imax) 8276.33 | — |
| (90%Imax) 9310.88 | — |



Luminance Table

| γ | 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

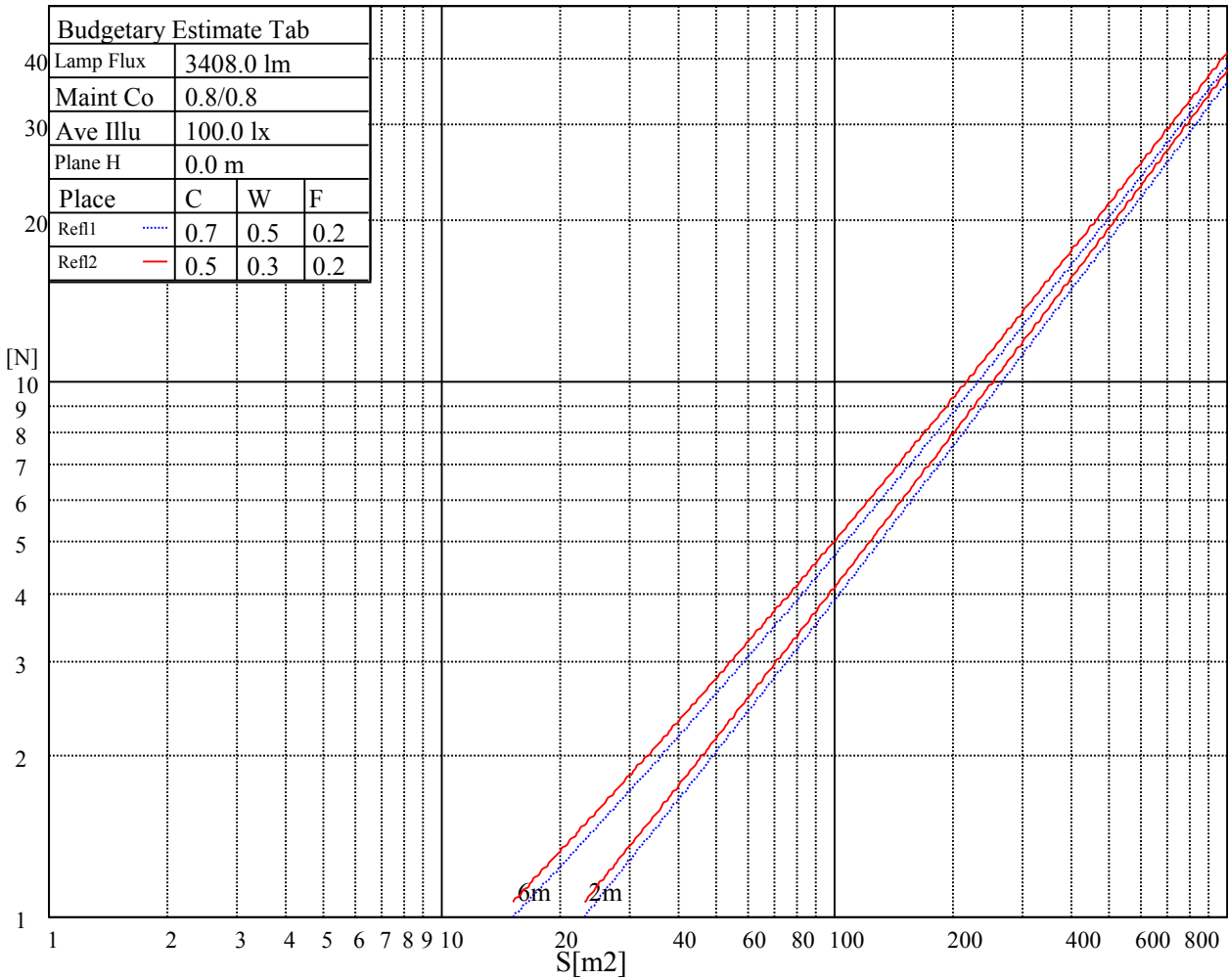
| Glare | Quality | Service Values Illuminance(lx) | | | | | | | |
|-------|---------|--------------------------------|------|------|-------|-------|-------|-------|-------|
| 1.15 | A | 2000 | 1000 | 500 | <=300 | | | | |
| 1.5 | B | | 2000 | 1000 | 500 | <=300 | | | |
| 1.85 | C | | | 2000 | 1000 |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

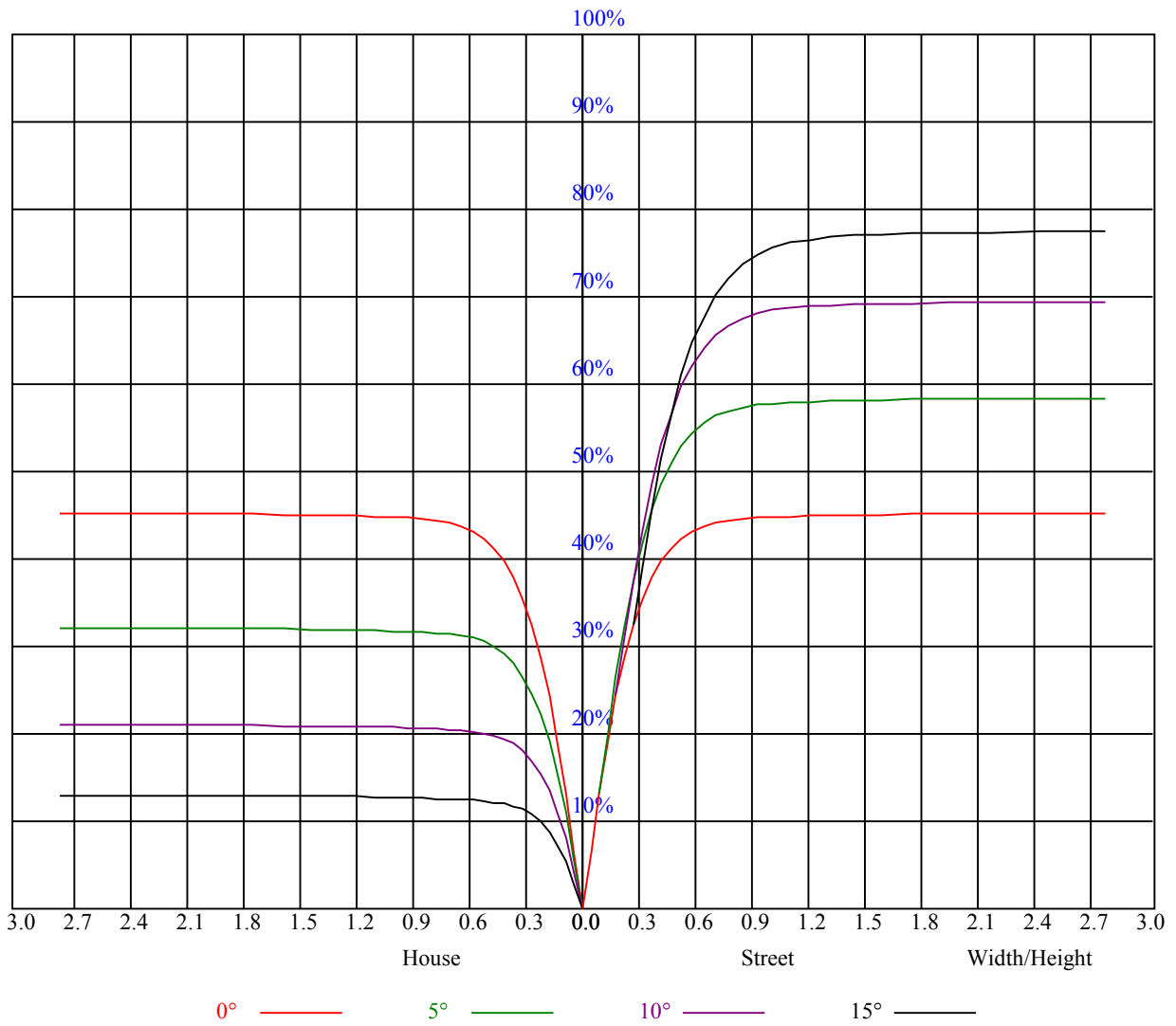


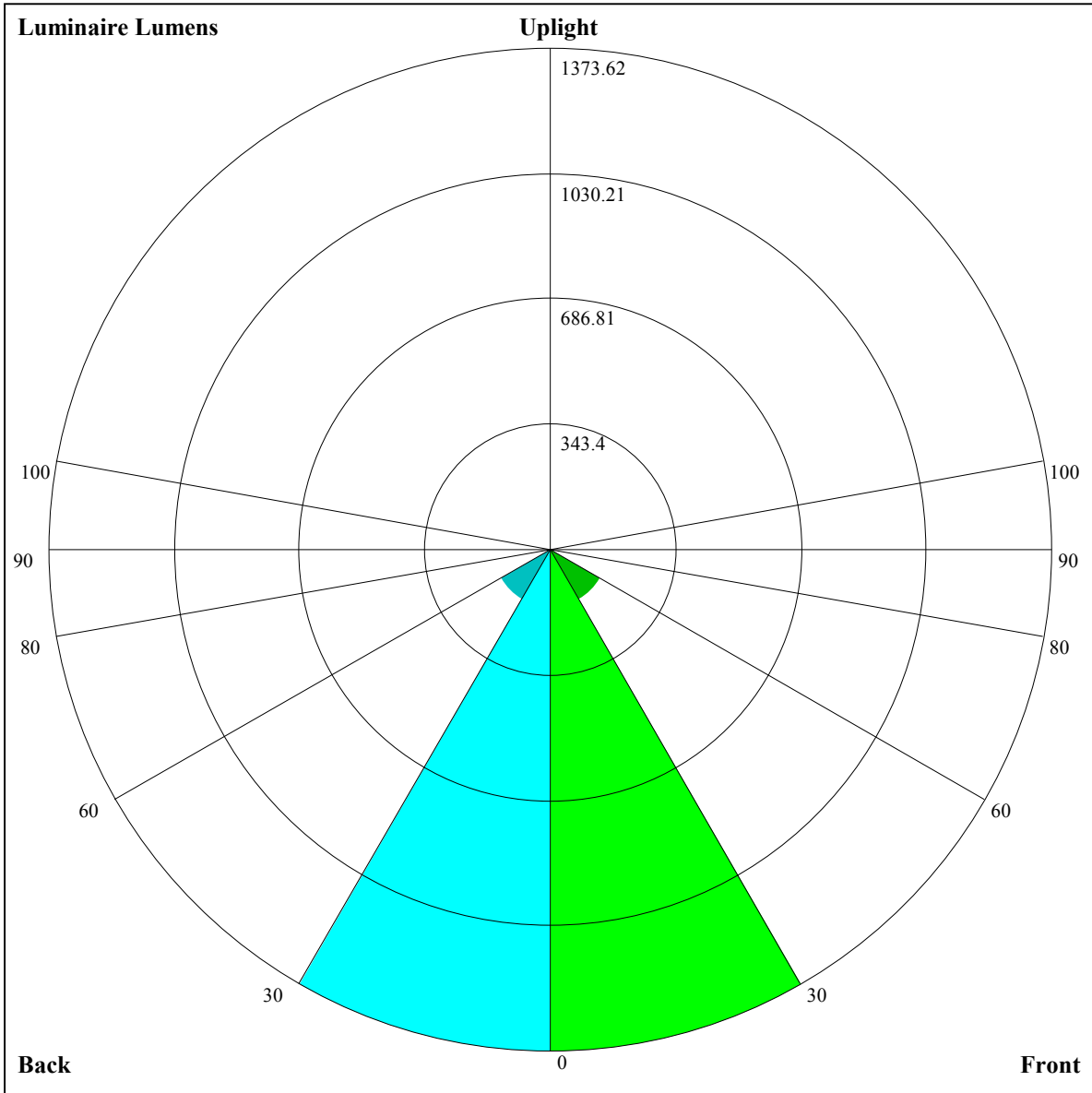
| Illumination assessment according UGR | | | | | | | | | | | |
|---|-----|------------------|-----|-----|-----|-----|----------------|-----|-----|-----|--|
| Rf of Ceiling | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 | |
| Rf of Wall | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 | |
| Rf of 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 | 1.08 | 1.08 | 1.08 | 1.06 | 1.06 | 1.06 | 1.01 | 1.01 | 1.01 | 0.97 | 0.97 | 0.97 | 0.93 | 0.93 | 0.93 | 0.91 |
| 1 | 1.02 | 1.00 | 0.98 | 1.00 | 0.98 | 0.96 | 0.96 | 0.95 | 0.94 | 0.93 | 0.92 | 0.91 | 0.90 | 0.89 | 0.88 | 0.87 |
| 2 | 0.96 | 0.93 | 0.90 | 0.95 | 0.92 | 0.89 | 0.92 | 0.89 | 0.88 | 0.89 | 0.87 | 0.86 | 0.87 | 0.85 | 0.84 | 0.83 |
| 3 | 0.91 | 0.88 | 0.85 | 0.90 | 0.87 | 0.84 | 0.88 | 0.85 | 0.83 | 0.86 | 0.83 | 0.81 | 0.84 | 0.82 | 0.80 | 0.79 |
| 4 | 0.87 | 0.83 | 0.80 | 0.86 | 0.82 | 0.79 | 0.84 | 0.81 | 0.78 | 0.82 | 0.80 | 0.77 | 0.81 | 0.78 | 0.77 | 0.75 |
| 5 | 0.83 | 0.79 | 0.76 | 0.82 | 0.78 | 0.75 | 0.81 | 0.77 | 0.75 | 0.79 | 0.76 | 0.74 | 0.78 | 0.75 | 0.73 | 0.72 |
| 6 | 0.79 | 0.75 | 0.72 | 0.79 | 0.75 | 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 | 0.76 | 0.72 | 0.69 | 0.75 | 0.71 | 0.68 | 0.74 | 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 | 0.63 | 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 | 0.63 | 0.61 | 0.66 | 0.63 | 0.61 | 0.66 | 0.63 | 0.61 | 0.60 |





Luminaire Lumens:

FL=1373.62,FM=160.07,FH=12.18,FVH=1.47

BL=1373.62,BM=160.07,BH=12.18,BVH=1.47

UL=0,UH=0

BUG Rating:B3-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 | 10345.42 | 10311.77 | 10175.75 | 9975.25 | 9715.32 | 9310.63 | 8930.22 | 8454.33 | 7941.89 |
| 45.0 | 10345.42 | 10311.77 | 10175.75 | 9975.25 | 9715.32 | 9310.63 | 8930.22 | 8454.33 | 7941.89 |
| 90.0 | 10345.42 | 10311.77 | 10175.75 | 9975.25 | 9715.32 | 9310.63 | 8930.22 | 8454.33 | 7941.89 |
| 135.0 | 10345.42 | 10311.77 | 10175.75 | 9975.25 | 9715.32 | 9310.63 | 8930.22 | 8454.33 | 7941.89 |
| 180.0 | 10345.42 | 10311.77 | 10175.75 | 9975.25 | 9715.32 | 9310.63 | 8930.22 | 8454.33 | 7941.89 |
| 225.0 | 10345.42 | 10311.77 | 10175.75 | 9975.25 | 9715.32 | 9310.63 | 8930.22 | 8454.33 | 7941.89 |
| 270.0 | 10345.42 | 10311.77 | 10175.75 | 9975.25 | 9715.32 | 9310.63 | 8930.22 | 8454.33 | 7941.89 |
| 315.0 | 10345.42 | 10311.77 | 10175.75 | 9975.25 | 9715.32 | 9310.63 | 8930.22 | 8454.33 | 7941.89 |
| 360.0 | 10345.42 | 10311.77 | 10175.75 | 9975.25 | 9715.32 | 9310.63 | 8930.22 | 8454.33 | 7941.89 |

| C/γ(°) | 9.0 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0.0 | 7402.40 | 6854.36 | 6304.31 | 5767.20 | 5246.55 | 4758.47 | 4310.92 | 3919.37 | 3535.08 |
| 45.0 | 7402.40 | 6854.36 | 6304.31 | 5767.20 | 5246.55 | 4758.47 | 4310.92 | 3919.37 | 3535.08 |
| 90.0 | 7402.40 | 6854.36 | 6304.31 | 5767.20 | 5246.55 | 4758.47 | 4310.92 | 3919.37 | 3535.08 |
| 135.0 | 7402.40 | 6854.36 | 6304.31 | 5767.20 | 5246.55 | 4758.47 | 4310.92 | 3919.37 | 3535.08 |
| 180.0 | 7402.40 | 6854.36 | 6304.31 | 5767.20 | 5246.55 | 4758.47 | 4310.92 | 3919.37 | 3535.08 |
| 225.0 | 7402.40 | 6854.36 | 6304.31 | 5767.20 | 5246.55 | 4758.47 | 4310.92 | 3919.37 | 3535.08 |
| 270.0 | 7402.40 | 6854.36 | 6304.31 | 5767.20 | 5246.55 | 4758.47 | 4310.92 | 3919.37 | 3535.08 |
| 315.0 | 7402.40 | 6854.36 | 6304.31 | 5767.20 | 5246.55 | 4758.47 | 4310.92 | 3919.37 | 3535.08 |
| 360.0 | 7402.40 | 6854.36 | 6304.31 | 5767.20 | 5246.55 | 4758.47 | 4310.92 | 3919.37 | 3535.08 |

| C/γ(°) | 18.0 | 19.0 | 20.0 | 21.0 | 22.0 | 23.0 | 24.0 | 25.0 | 26.0 |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0.0 | 3230.93 | 2937.17 | 2664.16 | 2421.73 | 2191.90 | 1978.71 | 1752.75 | 1575.25 | 1434.25 |
| 45.0 | 3230.93 | 2937.17 | 2664.16 | 2421.73 | 2191.90 | 1978.71 | 1752.75 | 1575.25 | 1434.25 |
| 90.0 | 3230.93 | 2937.17 | 2664.16 | 2421.73 | 2191.90 | 1978.71 | 1752.75 | 1575.25 | 1434.25 |
| 135.0 | 3230.93 | 2937.17 | 2664.16 | 2421.73 | 2191.90 | 1978.71 | 1752.75 | 1575.25 | 1434.25 |
| 180.0 | 3230.93 | 2937.17 | 2664.16 | 2421.73 | 2191.90 | 1978.71 | 1752.75 | 1575.25 | 1434.25 |
| 225.0 | 3230.93 | 2937.17 | 2664.16 | 2421.73 | 2191.90 | 1978.71 | 1752.75 | 1575.25 | 1434.25 |
| 270.0 | 3230.93 | 2937.17 | 2664.16 | 2421.73 | 2191.90 | 1978.71 | 1752.75 | 1575.25 | 1434.25 |
| 315.0 | 3230.93 | 2937.17 | 2664.16 | 2421.73 | 2191.90 | 1978.71 | 1752.75 | 1575.25 | 1434.25 |
| 360.0 | 3230.93 | 2937.17 | 2664.16 | 2421.73 | 2191.90 | 1978.71 | 1752.75 | 1575.25 | 1434.25 |

| C/γ(°) | 27.0 | 28.0 | 29.0 | 30.0 | 31.0 | 32.0 | 33.0 | 34.0 | 35.0 |
|--------|---------|---------|--------|--------|--------|--------|--------|--------|--------|
| 0.0 | 1254.69 | 1119.89 | 954.23 | 838.84 | 721.36 | 607.73 | 507.33 | 420.84 | 352.06 |
| 45.0 | 1254.69 | 1119.89 | 954.23 | 838.84 | 721.36 | 607.73 | 507.33 | 420.84 | 352.06 |
| 90.0 | 1254.69 | 1119.89 | 954.23 | 838.84 | 721.36 | 607.73 | 507.33 | 420.84 | 352.06 |
| 135.0 | 1254.69 | 1119.89 | 954.23 | 838.84 | 721.36 | 607.73 | 507.33 | 420.84 | 352.06 |
| 180.0 | 1254.69 | 1119.89 | 954.23 | 838.84 | 721.36 | 607.73 | 507.33 | 420.84 | 352.06 |
| 225.0 | 1254.69 | 1119.89 | 954.23 | 838.84 | 721.36 | 607.73 | 507.33 | 420.84 | 352.06 |
| 270.0 | 1254.69 | 1119.89 | 954.23 | 838.84 | 721.36 | 607.73 | 507.33 | 420.84 | 352.06 |
| 315.0 | 1254.69 | 1119.89 | 954.23 | 838.84 | 721.36 | 607.73 | 507.33 | 420.84 | 352.06 |
| 360.0 | 1254.69 | 1119.89 | 954.23 | 838.84 | 721.36 | 607.73 | 507.33 | 420.84 | 352.06 |

| C/γ(°) | 36.0 | 37.0 | 38.0 | 39.0 | 40.0 | 41.0 | 42.0 | 43.0 | 44.0 |
|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| 0.0 | 288.98 | 230.09 | 192.34 | 169.21 | 135.42 | 103.71 | 88.52 | 75.56 | 65.59 |
| 45.0 | 288.98 | 230.09 | 192.34 | 169.21 | 135.42 | 103.71 | 88.52 | 75.56 | 65.59 |
| 90.0 | 288.98 | 230.09 | 192.34 | 169.21 | 135.42 | 103.71 | 88.52 | 75.56 | 65.59 |
| 135.0 | 288.98 | 230.09 | 192.34 | 169.21 | 135.42 | 103.71 | 88.52 | 75.56 | 65.59 |
| 180.0 | 288.98 | 230.09 | 192.34 | 169.21 | 135.42 | 103.71 | 88.52 | 75.56 | 65.59 |
| 225.0 | 288.98 | 230.09 | 192.34 | 169.21 | 135.42 | 103.71 | 88.52 | 75.56 | 65.59 |
| 270.0 | 288.98 | 230.09 | 192.34 | 169.21 | 135.42 | 103.71 | 88.52 | 75.56 | 65.59 |
| 315.0 | 288.98 | 230.09 | 192.34 | 169.21 | 135.42 | 103.71 | 88.52 | 75.56 | 65.59 |
| 360.0 | 288.98 | 230.09 | 192.34 | 169.21 | 135.42 | 103.71 | 88.52 | 75.56 | 65.59 |

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 | 57.93 | 51.95 | 47.11 | 43.10 | 39.72 | 36.85 | 34.44 | 32.50 | 30.83 |
| 45.0 | 57.93 | 51.95 | 47.11 | 43.10 | 39.72 | 36.85 | 34.44 | 32.50 | 30.83 |
| 90.0 | 57.93 | 51.95 | 47.11 | 43.10 | 39.72 | 36.85 | 34.44 | 32.50 | 30.83 |
| 135.0 | 57.93 | 51.95 | 47.11 | 43.10 | 39.72 | 36.85 | 34.44 | 32.50 | 30.83 |
| 180.0 | 57.93 | 51.95 | 47.11 | 43.10 | 39.72 | 36.85 | 34.44 | 32.50 | 30.83 |
| 225.0 | 57.93 | 51.95 | 47.11 | 43.10 | 39.72 | 36.85 | 34.44 | 32.50 | 30.83 |
| 270.0 | 57.93 | 51.95 | 47.11 | 43.10 | 39.72 | 36.85 | 34.44 | 32.50 | 30.83 |
| 315.0 | 57.93 | 51.95 | 47.11 | 43.10 | 39.72 | 36.85 | 34.44 | 32.50 | 30.83 |
| 360.0 | 57.93 | 51.95 | 47.11 | 43.10 | 39.72 | 36.85 | 34.44 | 32.50 | 30.83 |
| C/γ(°) | 54.0 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 | 60.0 | 61.0 | 62.0 |
| 0.0 | 29.47 | 28.21 | 27.00 | 25.97 | 24.69 | 23.56 | 22.29 | 21.16 | 19.87 |
| 45.0 | 29.47 | 28.21 | 27.00 | 25.97 | 24.69 | 23.56 | 22.29 | 21.16 | 19.87 |
| 90.0 | 29.47 | 28.21 | 27.00 | 25.97 | 24.69 | 23.56 | 22.29 | 21.16 | 19.87 |
| 135.0 | 29.47 | 28.21 | 27.00 | 25.97 | 24.69 | 23.56 | 22.29 | 21.16 | 19.87 |
| 180.0 | 29.47 | 28.21 | 27.00 | 25.97 | 24.69 | 23.56 | 22.29 | 21.16 | 19.87 |
| 225.0 | 29.47 | 28.21 | 27.00 | 25.97 | 24.69 | 23.56 | 22.29 | 21.16 | 19.87 |
| 270.0 | 29.47 | 28.21 | 27.00 | 25.97 | 24.69 | 23.56 | 22.29 | 21.16 | 19.87 |
| 315.0 | 29.47 | 28.21 | 27.00 | 25.97 | 24.69 | 23.56 | 22.29 | 21.16 | 19.87 |
| 360.0 | 29.47 | 28.21 | 27.00 | 25.97 | 24.69 | 23.56 | 22.29 | 21.16 | 19.87 |
| C/γ(°) | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 | 70.0 | 71.0 |
| 0.0 | 18.72 | 17.49 | 16.41 | 15.36 | 14.34 | 13.38 | 12.33 | 11.41 | 10.58 |
| 45.0 | 18.72 | 17.49 | 16.41 | 15.36 | 14.34 | 13.38 | 12.33 | 11.41 | 10.58 |
| 90.0 | 18.72 | 17.49 | 16.41 | 15.36 | 14.34 | 13.38 | 12.33 | 11.41 | 10.58 |
| 135.0 | 18.72 | 17.49 | 16.41 | 15.36 | 14.34 | 13.38 | 12.33 | 11.41 | 10.58 |
| 180.0 | 18.72 | 17.49 | 16.41 | 15.36 | 14.34 | 13.38 | 12.33 | 11.41 | 10.58 |
| 225.0 | 18.72 | 17.49 | 16.41 | 15.36 | 14.34 | 13.38 | 12.33 | 11.41 | 10.58 |
| 270.0 | 18.72 | 17.49 | 16.41 | 15.36 | 14.34 | 13.38 | 12.33 | 11.41 | 10.58 |
| 315.0 | 18.72 | 17.49 | 16.41 | 15.36 | 14.34 | 13.38 | 12.33 | 11.41 | 10.58 |
| 360.0 | 18.72 | 17.49 | 16.41 | 15.36 | 14.34 | 13.38 | 12.33 | 11.41 | 10.58 |
| C/γ(°) | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0 | 80.0 |
| 0.0 | 9.81 | 8.86 | 7.99 | 7.23 | 6.58 | 5.94 | 5.41 | 4.92 | 4.46 |
| 45.0 | 9.81 | 8.86 | 7.99 | 7.23 | 6.58 | 5.94 | 5.41 | 4.92 | 4.46 |
| 90.0 | 9.81 | 8.86 | 7.99 | 7.23 | 6.58 | 5.94 | 5.41 | 4.92 | 4.46 |
| 135.0 | 9.81 | 8.86 | 7.99 | 7.23 | 6.58 | 5.94 | 5.41 | 4.92 | 4.46 |
| 180.0 | 9.81 | 8.86 | 7.99 | 7.23 | 6.58 | 5.94 | 5.41 | 4.92 | 4.46 |
| 225.0 | 9.81 | 8.86 | 7.99 | 7.23 | 6.58 | 5.94 | 5.41 | 4.92 | 4.46 |
| 270.0 | 9.81 | 8.86 | 7.99 | 7.23 | 6.58 | 5.94 | 5.41 | 4.92 | 4.46 |
| 315.0 | 9.81 | 8.86 | 7.99 | 7.23 | 6.58 | 5.94 | 5.41 | 4.92 | 4.46 |
| 360.0 | 9.81 | 8.86 | 7.99 | 7.23 | 6.58 | 5.94 | 5.41 | 4.92 | 4.46 |
| C/γ(°) | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.0 |
| 0.0 | 4.03 | 3.61 | 3.25 | 2.90 | 2.54 | 2.30 | 2.00 | 1.81 | 1.57 |
| 45.0 | 4.03 | 3.61 | 3.25 | 2.90 | 2.54 | 2.30 | 2.00 | 1.81 | 1.57 |
| 90.0 | 4.03 | 3.61 | 3.25 | 2.90 | 2.54 | 2.30 | 2.00 | 1.81 | 1.57 |
| 135.0 | 4.03 | 3.61 | 3.25 | 2.90 | 2.54 | 2.30 | 2.00 | 1.81 | 1.57 |
| 180.0 | 4.03 | 3.61 | 3.25 | 2.90 | 2.54 | 2.30 | 2.00 | 1.81 | 1.57 |
| 225.0 | 4.03 | 3.61 | 3.25 | 2.90 | 2.54 | 2.30 | 2.00 | 1.81 | 1.57 |
| 270.0 | 4.03 | 3.61 | 3.25 | 2.90 | 2.54 | 2.30 | 2.00 | 1.81 | 1.57 |
| 315.0 | 4.03 | 3.61 | 3.25 | 2.90 | 2.54 | 2.30 | 2.00 | 1.81 | 1.57 |
| 360.0 | 4.03 | 3.61 | 3.25 | 2.90 | 2.54 | 2.30 | 2.00 | 1.81 | 1.57 |

Intensity data(cd)

| | |
|--------|------|
| C/γ(°) | 90.0 |
| 0.0 | 1.45 |
| 45.0 | 1.45 |
| 90.0 | 1.45 |
| 135.0 | 1.45 |
| 180.0 | 1.45 |
| 225.0 | 1.45 |
| 270.0 | 1.45 |
| 315.0 | 1.45 |
| 360.0 | 1.45 |