**Light efficiency:**

83 Lumen/Watt

**Light quality:**

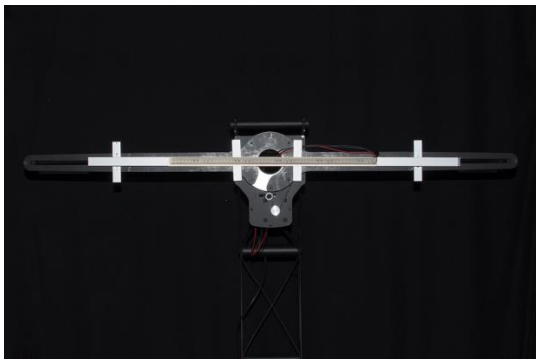
CRI: 94,5

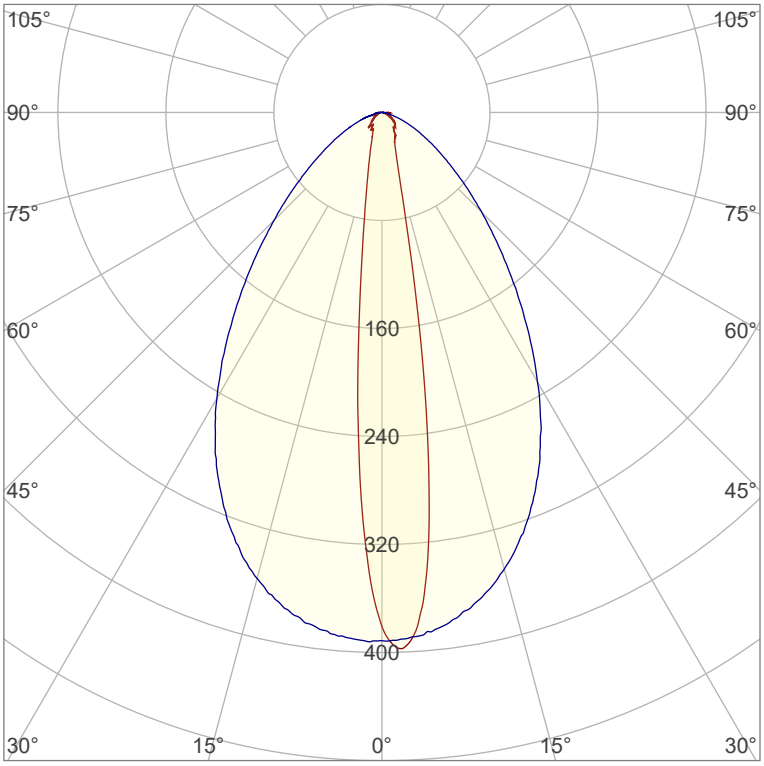
**Color temperature:**

2700 K

**Output:** 199 lm
**Peak:** 397 cd

**Power:** 2,4 W
**PF:** 1,0






**Product name:**
**Sta-Maria-6_510mm_927_Inlay-Lens-Wallwasher**

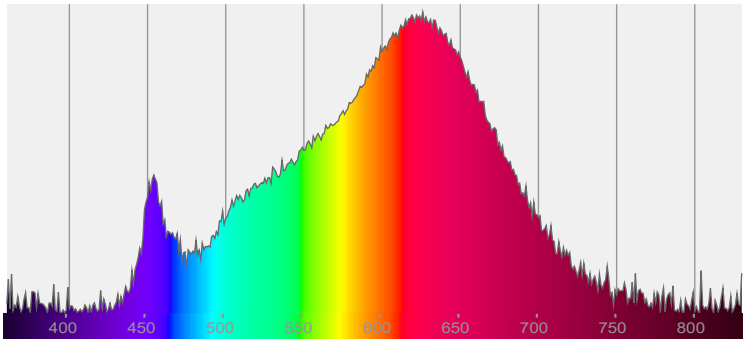
**Item number:**
**NP/L1C/01E/0510/927/ILWW**

**Date and time:**
**15.08.2025 10:35:44**

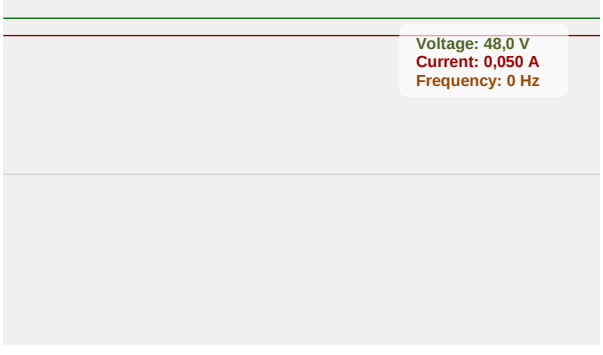
**Description:**
**Tolerances:**
**Lumen +/-4%**
**Candela +/-2,5%**
**Colour Temp +/-35 Kelvin**
**CRI +/-0,7**
**Angular Resolution: 1 Degree Step**
**Last Calibration 13.10.2023**
**Tester: Peter Ulrich**
**Test Site: Lichtlabor**
**Gaustrasse 13**
**55411 Bingen am Rhein**

**CIE 1931**
**x: 0,460**
**y: 0,411**

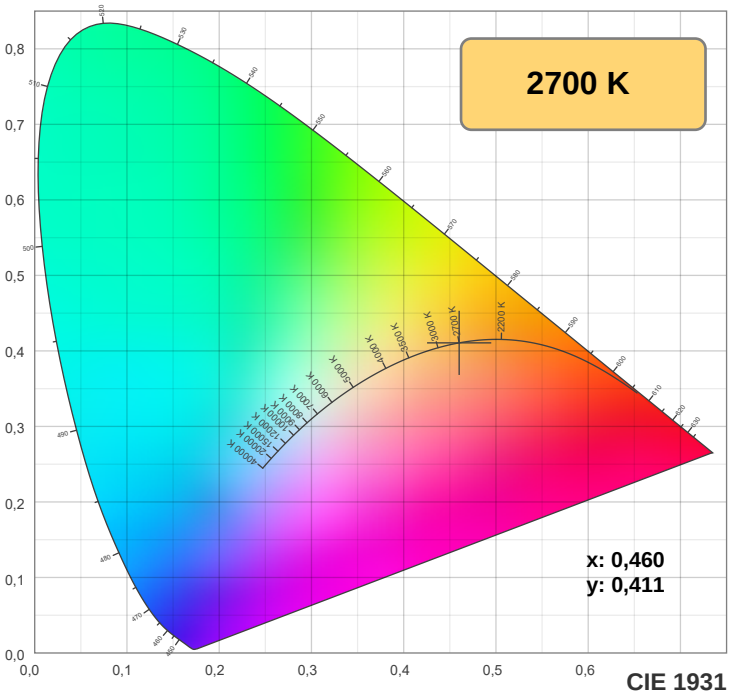
**Spectra**

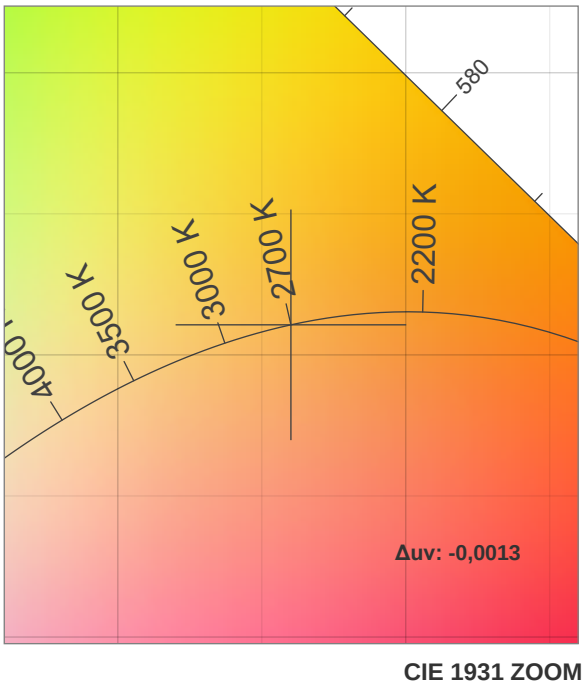



**Power**

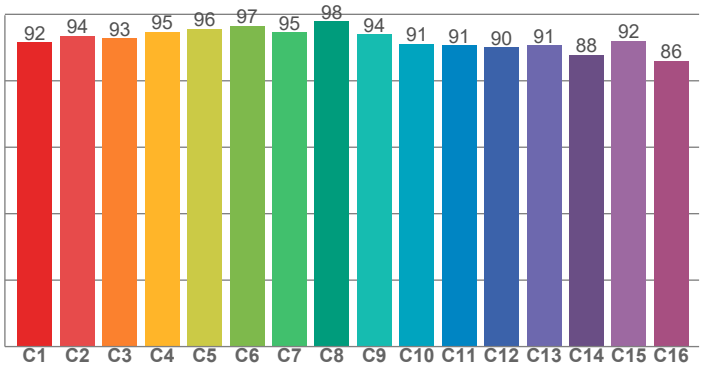


# Color details

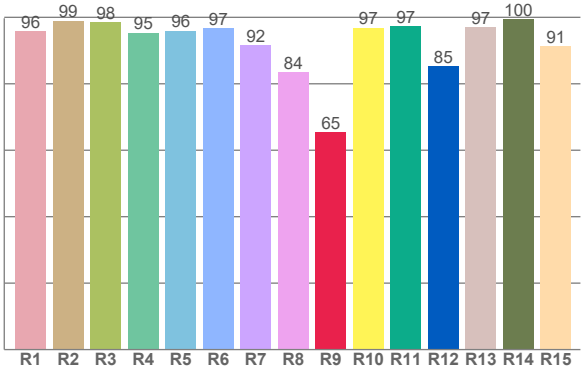



## TM30: 92,4




## CRI: 94,5 (R1-R8)




**CRI R values, only R1-R8 are used to calculate final CRI value**

| R1 | R2 | R3 | R4 | R5 | R6 | R7 | R8 | R9 | R10 | R11 | R12 | R13 | R14 | R15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 95,8 | 99,0 | 98,5 | 95,4 | 96,0 | 96,6 | 91,5 | 83,5 | 65,5 | 96,9 | 97,4 | 85,2 | 97,1 | 99,5 | 91,3 |

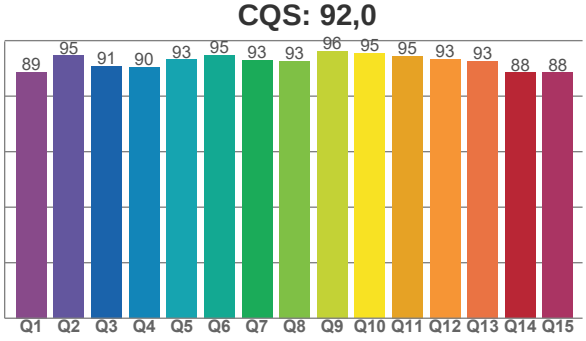
**TM30 C values, 16 binned values out of total of 99 C values**

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 91,6 | 93,5 | 92,8 | 94,7 | 95,5 | 96,5 | 94,6 | 97,9 | 94,0 | 91,1 | 90,6 | 90,0 | 90,6 | 87,8 | 92,0 | 85,9 |

**CQS Q values**

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 88,8 | 94,6 | 90,9 | 90,4 | 93,1 | 94,8 | 92,9 | 92,7 | 96,2 | 95,4 | 94,5 | 93,4 | 92,7 | 88,5 | 88,5 |

## CQS: 92,0




## Color parameters

| Color temperature | Color rendering index | Red component | Color fidelity | Color gamut | Color quality scale | Color coordinate cie 1931 | Color coordinate cie 1931 | Color coordinate | Color coordinate | Color diviation from black body |
|---|---|---|---|---|---|---|---|---|---|---|
| CCT | CRI | CRI R9 | TM30 Rf | TM30 Rg | CQS | x | y | u | v | Δuv |
| 2700 K | 94,5 | 65,5 | 92,4 | 99,3 | 92,0 | 0,460 | 0,411 | 0,263 | 0,352 | -0,0013 |

# TM30 details

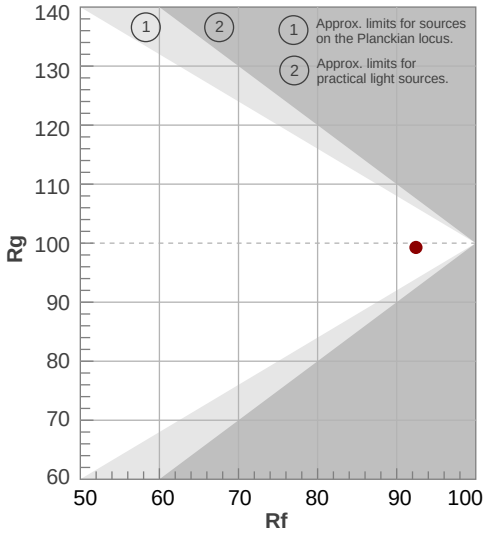
**Rf 92,4**

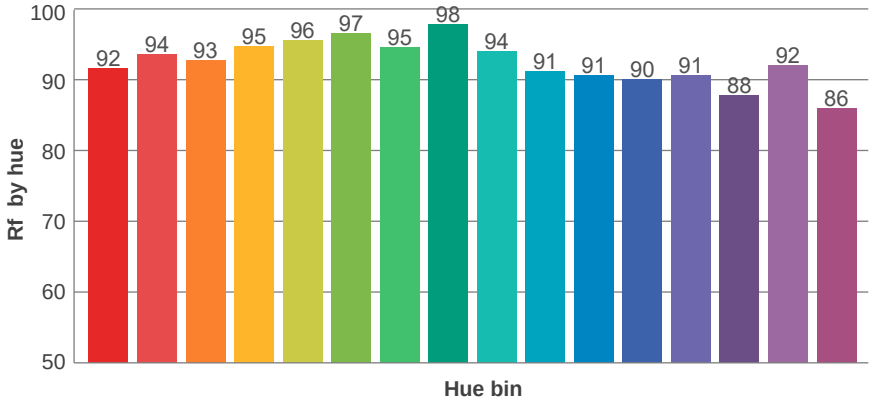
Fidelity index Rf

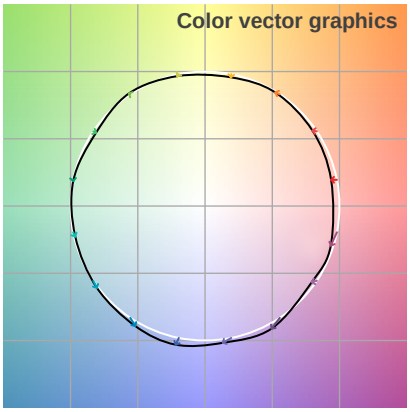
**Rg 99,3**

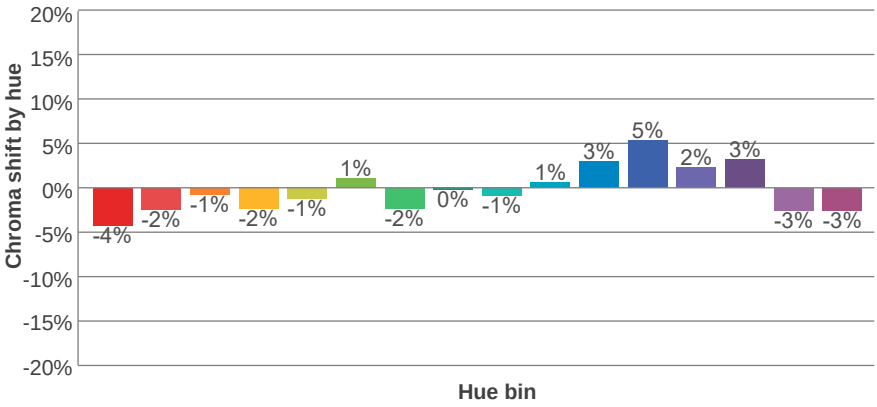
Gammut index Rg

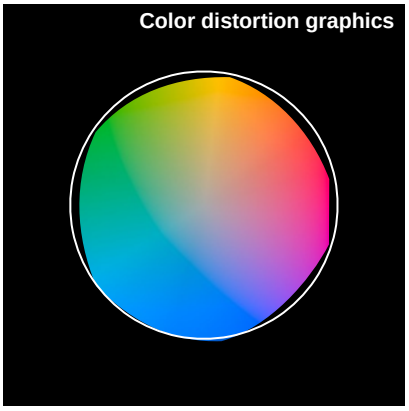
| | | Graphic shifts (%) | |
|---|---|---|---|
| Hue Bin | $R_f$ | Chroma | Hue |
| 1 | 92 | -4% | 1% |
| 2 | 94 | -2% | 2% |
| 3 | 93 | -1% | 3% |
| 4 | 95 | -2% | 0% |
| 5 | 96 | -1% | 1% |
| 6 | 97 | 1% | 1% |
| 7 | 95 | -2% | 0% |
| 8 | 98 | 0% | 1% |
| 9 | 94 | -1% | 3% |
| 10 | 91 | 1% | 6% |
| 11 | 91 | 3% | 6% |
| 12 | 90 | 5% | -1% |
| 13 | 91 | 2% | -7% |
| 14 | 88 | 3% | -9% |
| 15 | 92 | -3% | -3% |
| 16 | 86 | -3% | -11% |

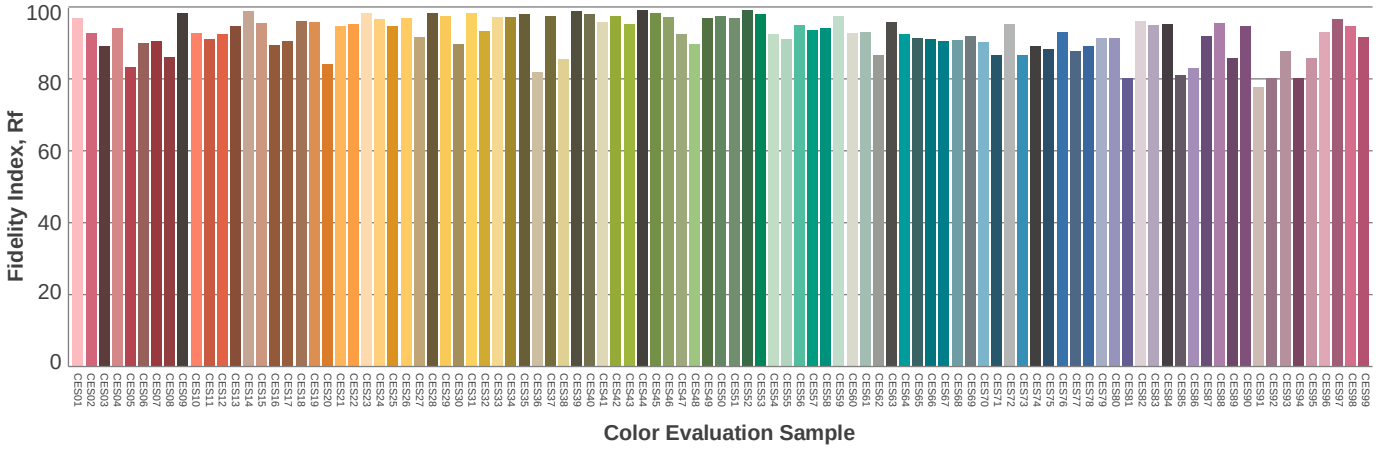


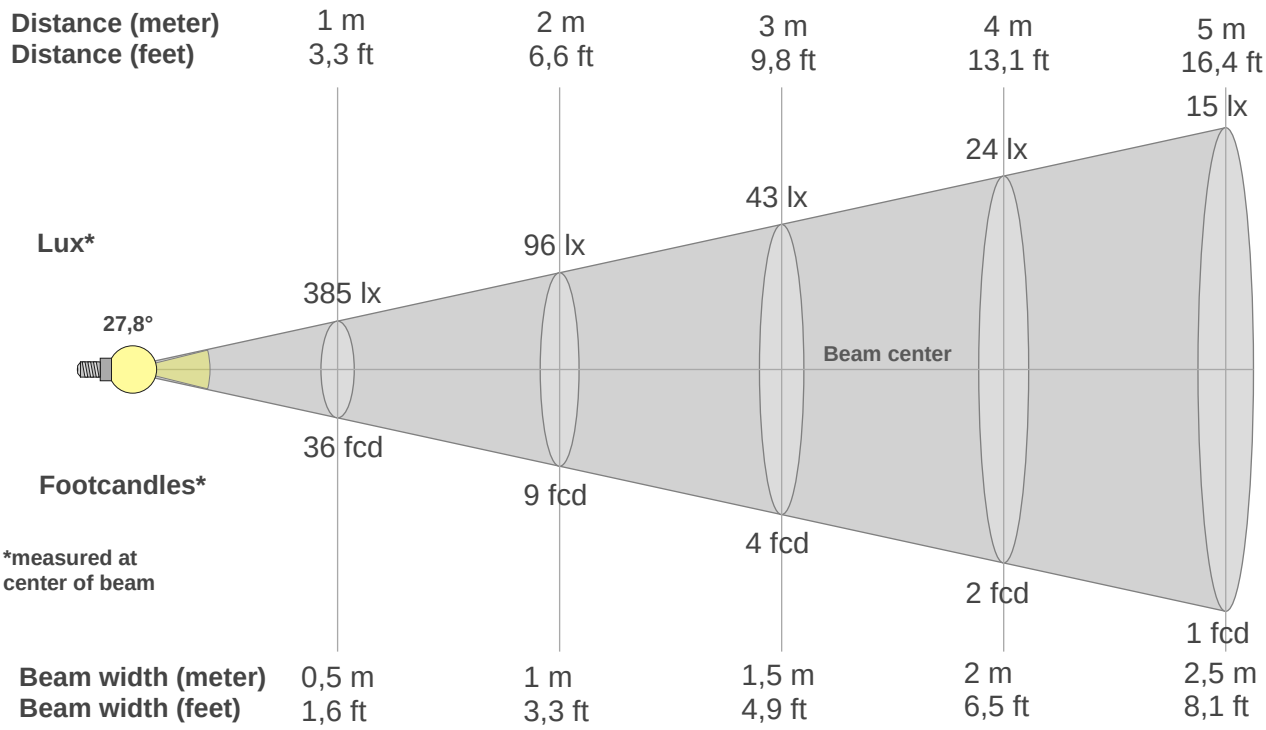



# Beam details




**Beam intensities from 1-20m**

| 1m | 2m | 3m | 4m | 5m | 6m | 7m | 8m | 9m | 10m | 11m | 12m | 13m | 14m | 15m | 16m | 17m | 18m | 19m | 20m |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3,3ft | 6,6ft | 9,8ft | 13,1ft | 16,4ft | 19,7ft | 23ft | 26,2ft | 29,5ft | 32,8ft | 36,1ft | 39,4ft | 42,7ft | 45,9ft | 49,2ft | 52,5ft | 55,8ft | 59,1ft | 62,3ft | 65,6ft |
| 385lx | 96lx | 43lx | 24lx | 15lx | 11lx | 8lx | 6lx | 5lx | 4lx | 3lx | 3lx | 2lx | 2lx | 2lx | 2lx | 1lx | 1lx | 1lx | 1lx |
| 35,8fcd | 9fcd | 4fcd | 2,2fcd | 1,4fcd | 1fcd | 0,7fcd | 0,6fcd | 0,4fcd | 0,4fcd | 0,3fcd | 0,2fcd | 0,2fcd | 0,2fcd | 0,2fcd | 0,1fcd | 0,1fcd | 0,1fcd | 0,1fcd | 0,1fcd |

**Intensities in 0° c-plane**

| 0° | 2° | 4° | 6° | 8° | 10° | 12° | 14° | 16° | 18° | 20° | 22° | 24° | 26° | 28° | 30° | 32° | 34° | 36° | 38° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 385 | 397 | 381 | 327 | 243 | 157 | 93 | 60 | 44 | 35 | 30 | 26 | 23 | 22 | 21 | 20 | 19 | 16 | 15 | 15 |
| 100% | 103% | 99% | 85% | 63% | 41% | 24% | 16% | 11% | 9% | 8% | 7% | 6% | 6% | 5% | 5% | 5% | 4% | 4% | 4% |

**Intensities in 90° c-plane**

| 0° | 2° | 4° | 6° | 8° | 10° | 12° | 14° | 16° | 18° | 20° | 22° | 24° | 26° | 28° | 30° | 32° | 34° | 36° | 38° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 385 | 390 | 389 | 385 | 379 | 373 | 365 | 355 | 345 | 332 | 318 | 303 | 286 | 268 | 250 | 230 | 212 | 193 | 174 | 157 |
| 100% | 101% | 101% | 100% | 98% | 97% | 95% | 92% | 89% | 86% | 83% | 79% | 74% | 69% | 65% | 60% | 55% | 50% | 45% | 41% |

**Intensities in 180° c-plane**

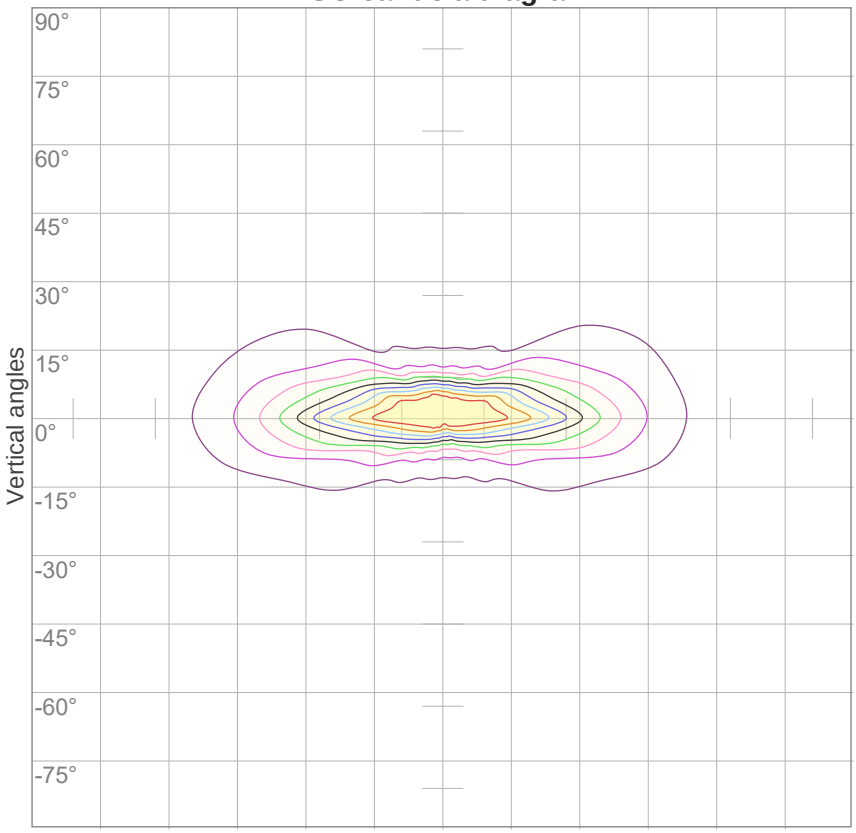
| 0° | 2° | 4° | 6° | 8° | 10° | 12° | 14° | 16° | 18° | 20° | 22° | 24° | 26° | 28° | 30° | 32° | 34° | 36° | 38° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 385 | 326 | 247 | 164 | 105 | 72 | 52 | 40 | 32 | 27 | 22 | 19 | 17 | 15 | 14 | 15 | 15 | 13 | 12 | 12 |
| 100% | 85% | 64% | 43% | 27% | 19% | 14% | 11% | 8% | 7% | 6% | 5% | 4% | 4% | 4% | 4% | 4% | 3% | 3% | 3% |

**Intensities in 270° c-plane**

| 0° | 2° | 4° | 6° | 8° | 10° | 12° | 14° | 16° | 18° | 20° | 22° | 24° | 26° | 28° | 30° | 32° | 34° | 36° | 38° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 385 | 391 | 390 | 386 | 383 | 378 | 370 | 362 | 352 | 341 | 328 | 313 | 298 | 282 | 263 | 244 | 225 | 206 | 187 | 169 |
| 100% | 102% | 101% | 100% | 99% | 98% | 96% | 94% | 91% | 88% | 85% | 81% | 77% | 73% | 68% | 63% | 58% | 54% | 49% | 44% |

| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|---|---|---|---|---|
| **27,8°** | **60,5°** | **118,5°** | **89,4%** | **75,1%** |

## ISO candela diagram



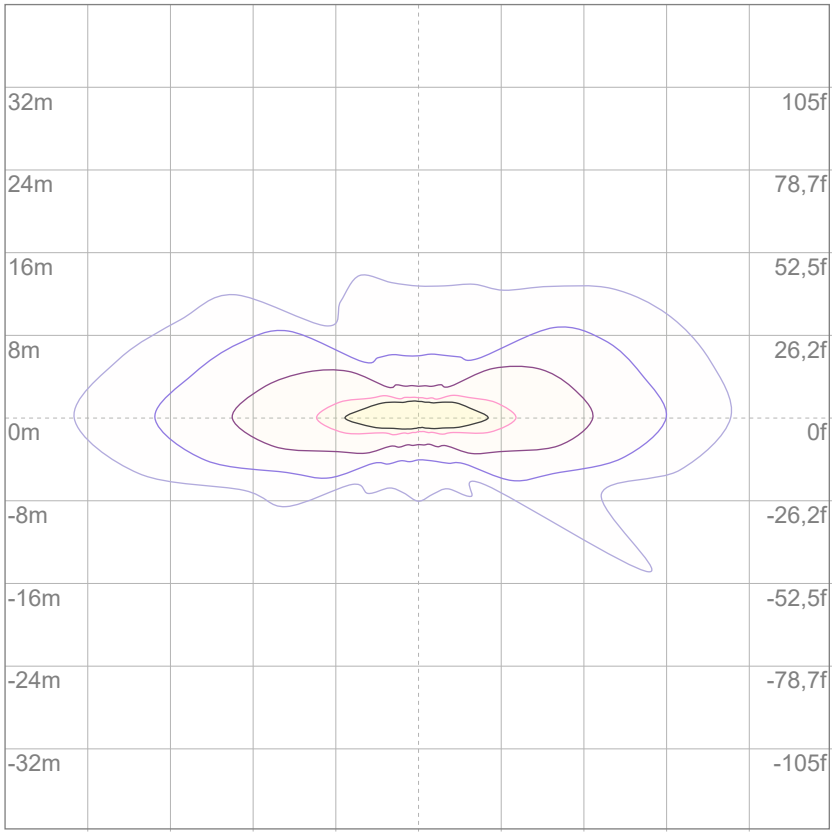

| | |
|---|---|
| 10% | 39 cd |
| 20% | 77 cd |
| 30% | 116 cd |
| 40% | 154 cd |
| 50% | 193 cd |
| 60% | 231 cd |
| 70% | 270 cd |
| 80% | 308 cd |
| 90% | 347 cd |

Conditions:

Number of c-planes: 16

Candela at center: 385 cd

## ISO lux diagram




Mounting height: 10 meters (33 feet)

| | |
|---|---|
| 3% | 0,116 lx |
| 5% | 0,193 lx |
| 10% | 0,385 lx |
| 30% | 1,16 lx |
| 50% | 1,93 lx |

Conditions:

Number of c-planes: 16

Lux at center: 3,85 lx

*Lux distribution on a surface when lamp is mounted at 10 meters from the surface.*

## Glare Evaluation According to UGR

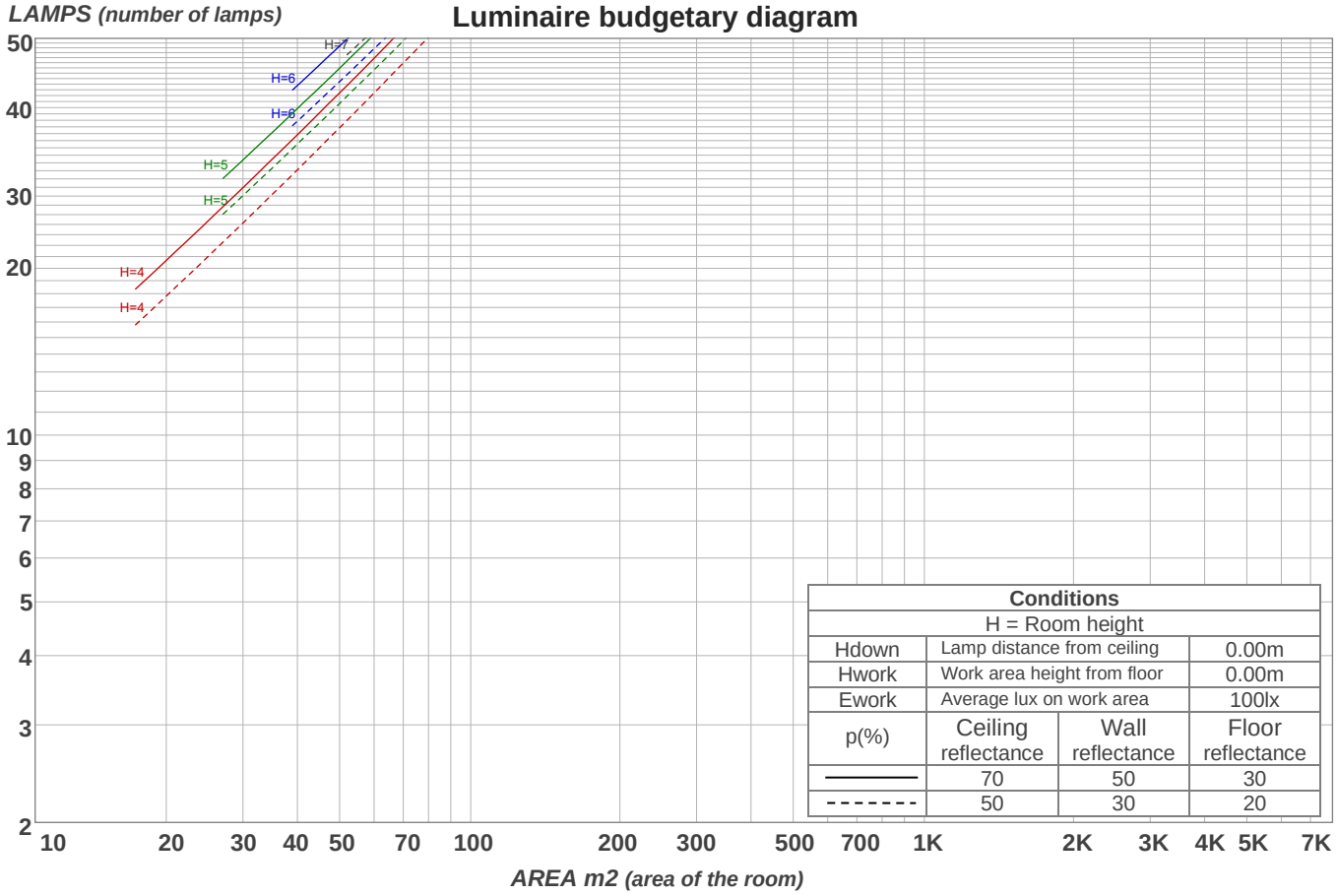
| p Ceiling | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|
| p Walls | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| p Floor | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Room size X Y | Viewing direction at right angles to lamp axis | | | | | Viewing direction parallel to lamp axis | | | | |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Variation of the observer position for the luminaire distance S | | | | | | | | | | |
| n/a | n/a | | | | | n/a | | | | |
| n/a | n/a | | | | | n/a | | | | |
| n/a | n/a | | | | | n/a | | | | |
| Standard table | n/a | | | | | n/a | | | | |
| Correction summand | n/a | | | | | n/a | | | | |
| Corrected glare indices referring to 199 lm total luminous flux | | | | | | | | | | |

UGR data could not be calculated due to missing/wrong symmetry. Go to Edit -> Photometric -> Corrections and select Correct asymmetry (UGR not defined for asymmetrical distributions)..

## Coefficients of Utilization

| Ceiling reflectance | 80 | | | | 70 | | | | 50 | | | 30 | | | 10 | | | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wall reflectance | 70 | 50 | 30 | 10 | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |
| Floor reflectance | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 0 |
| RCR | (RCR: Room Cavity Ratio) | | | | Room Values are expressed as percentage of Lumens delivered to the task surface | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 111 | 107 | 104 | 101 | 108 | 105 | 102 | 99 | 101 | 98 | 96 | 97 | 95 | 93 | 94 | 92 | 90 | 89 |
| 2 | 104 | 97 | 92 | 88 | 101 | 96 | 91 | 87 | 92 | 88 | 85 | 89 | 86 | 83 | 86 | 83 | 81 | 79 |
| 3 | 97 | 89 | 83 | 78 | 95 | 88 | 82 | 77 | 85 | 80 | 76 | 82 | 78 | 74 | 80 | 76 | 73 | 71 |
| 4 | 91 | 82 | 75 | 70 | 89 | 81 | 74 | 69 | 78 | 73 | 68 | 76 | 71 | 68 | 74 | 70 | 67 | 65 |
| 5 | 86 | 76 | 69 | 63 | 84 | 75 | 68 | 63 | 73 | 67 | 63 | 71 | 66 | 62 | 69 | 65 | 61 | 60 |
| 6 | 81 | 71 | 63 | 58 | 79 | 70 | 63 | 58 | 68 | 62 | 58 | 67 | 61 | 57 | 65 | 60 | 57 | 55 |
| 7 | 77 | 66 | 59 | 54 | 75 | 65 | 59 | 54 | 64 | 58 | 54 | 63 | 57 | 53 | 61 | 57 | 53 | 51 |
| 8 | 73 | 62 | 55 | 50 | 71 | 61 | 55 | 50 | 60 | 54 | 50 | 59 | 54 | 50 | 58 | 53 | 50 | 48 |
| 9 | 69 | 58 | 52 | 47 | 68 | 58 | 51 | 47 | 57 | 51 | 47 | 56 | 51 | 47 | 55 | 50 | 47 | 45 |
| 10 | 66 | 55 | 49 | 44 | 65 | 55 | 49 | 44 | 54 | 48 | 44 | 53 | 48 | 44 | 52 | 47 | 44 | 43 |

## Luminaire budgetary diagram

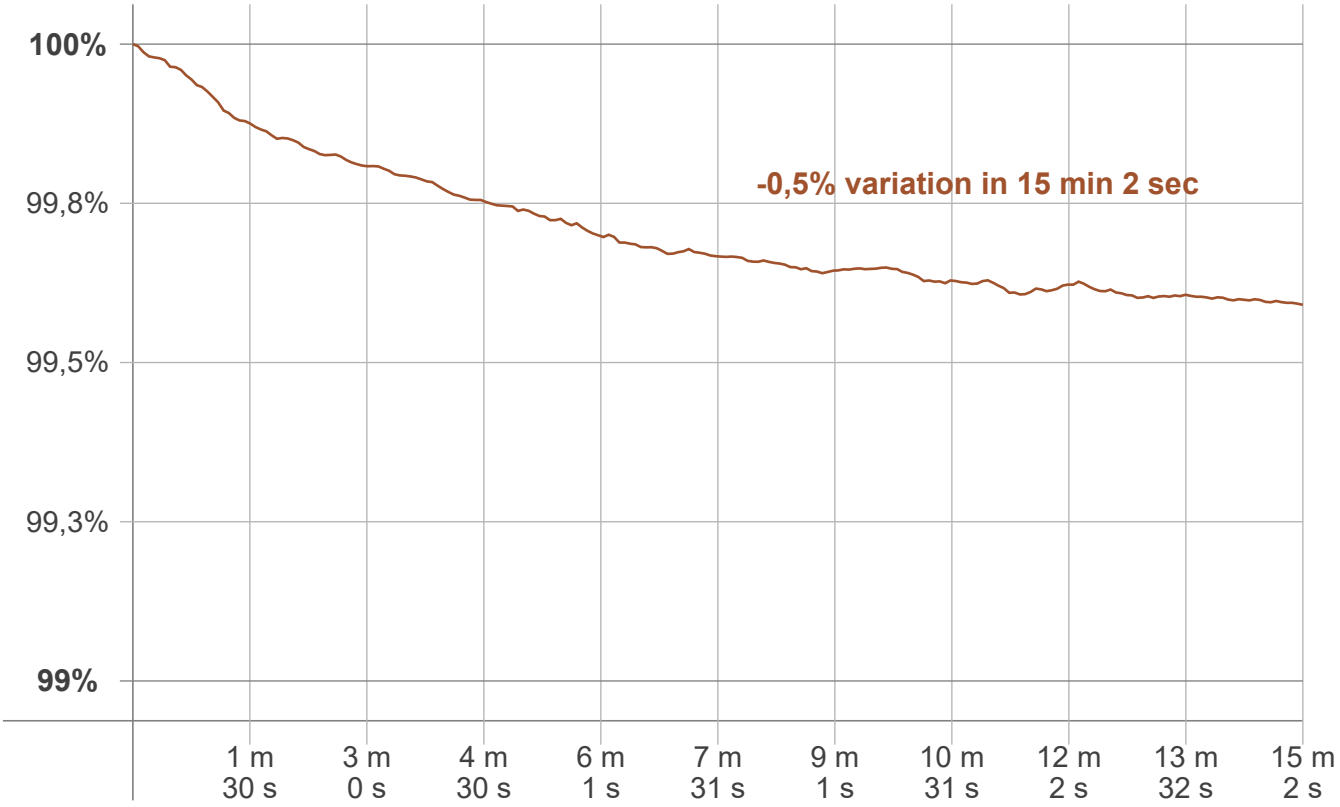



## Zonal Lumen Summary

| 0°-10° | 10°-20° | 20°-30° | 30°-40° | 40°-50° | 50°-60° | 60°-70° | 70°-80° | 80°-90° |
|---|---|---|---|---|---|---|---|---|
| 28,0 lm | 41,0 lm | 36,4 lm | 31,0 lm | 24,4 lm | 17,1 lm | 10,3 lm | 6,36 lm | 4,45 lm |

| 90°-100° | 100°-110° | 110°-120° | 120°-130° | 130°-140° | 140°-150° | 150°-160° | 160°-170° | 170°-180° |
|---|---|---|---|---|---|---|---|---|
| 0,011 lm | 0,000 lm | 0,000 lm | 0,000 lm | 0,000 lm | 0,000 lm | 0,000 lm | 0,000 lm | 0,000 lm |

## Warmup curve




## Warmup result

| | |
|---|---|
| **Warmup time:** | **Lamp stabilized in 15 min 2 sec** |
| **Warmup variation** | **-0,5%** |

## Warmup conditions

| | |
|---|---|
| **Stable period:** | **15 min** |
| **Stable change max:** | **2,0%** |
| **Minimum time:** | **15 min** |

## Color temperature change

| CCT start | CCT change | CCT end |
|---|---|---|
| 2701 K | -1 K | 2700 K |

## Output change

| Output start | Output change | Output end |
|---|---|---|
| 200 lm | -1 lm | 199 lm |