**Light efficiency:**

72 Lumen/Watt

**Light quality:**

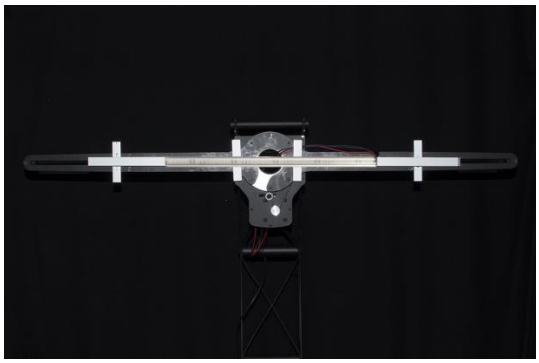
CRI: 93,6

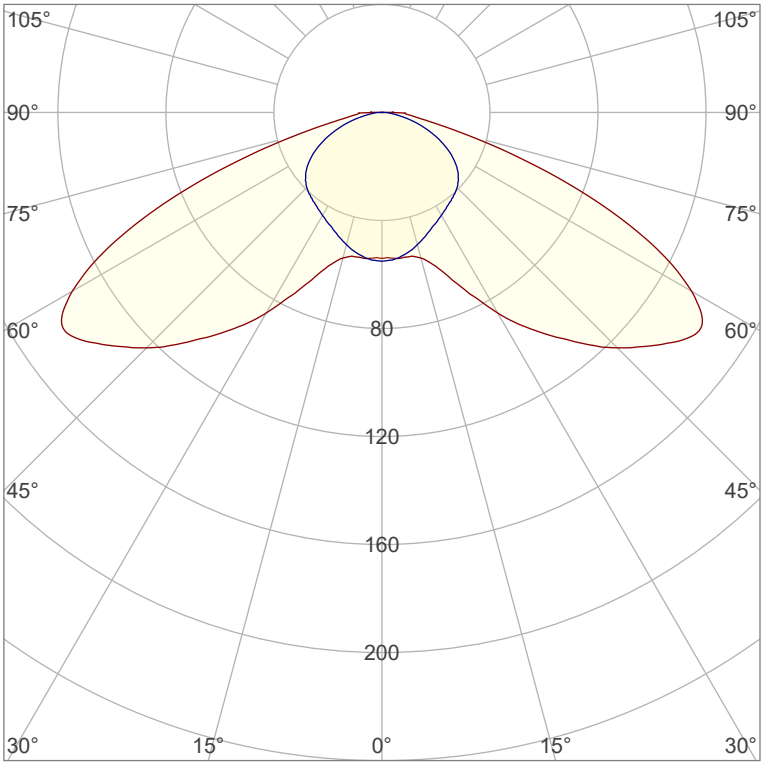
**Color temperature:**

2700 K

**Output:** 348 lm
**Peak:** 143 cd

**Power:** 4,8 W
**PF:** 1,0






**Product name:**
**Victory-7_510mm_927_Inlay-Lens-Batwing**

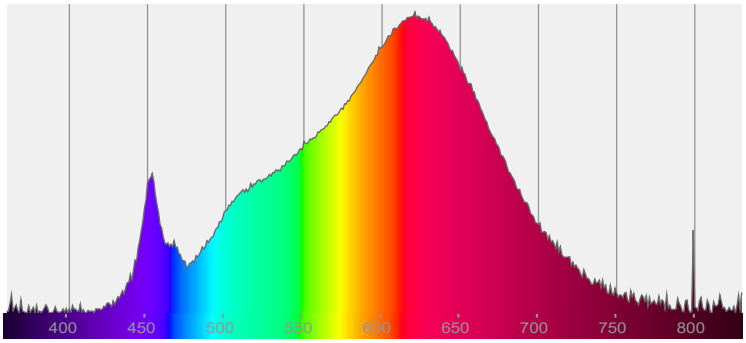
**Item number:**
**NP/L1C/03F/0510/927/ILBW**

**Date and time:**
**23.07.2025 11:10:53**

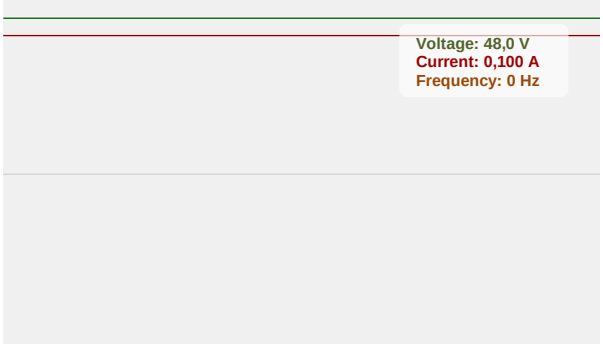
**Description:**
**Tolerances:**
**Lumen +/-4%**
**Candela +/-2,5%**
**Colour Temp +/-35 Kelvin**
**CRI +/-0,7**
**Angular Resolution: 1 Degree Step**
**Last Calibration 13.10.2023**
**Tester: Peter Ulrich**
**Test Site: Lichtlabor**
**Gaustrasse 13**
**55411 Bingen am Rhein**

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

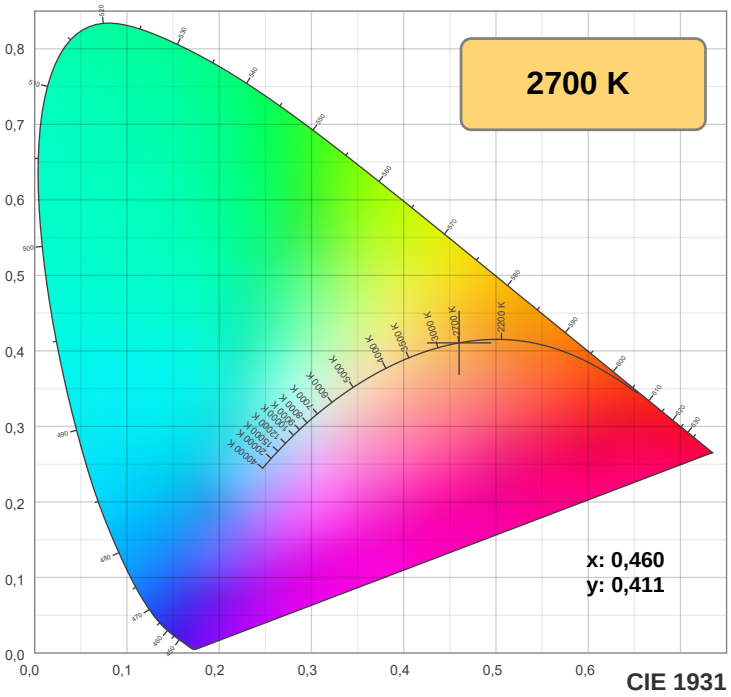
**Spectra**



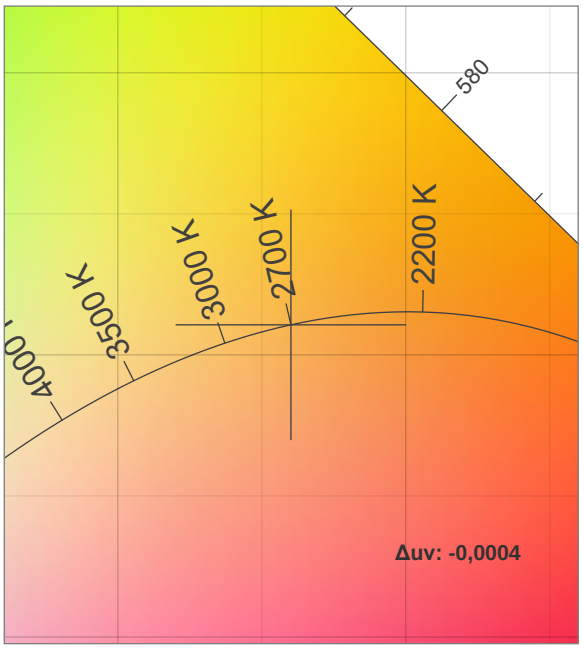

**Power**



# Color details

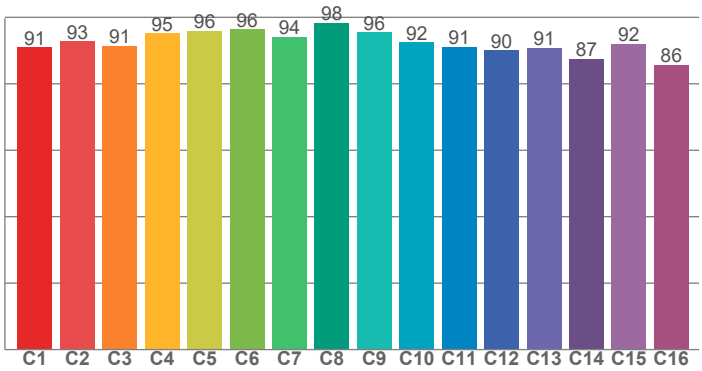



CIE 1931

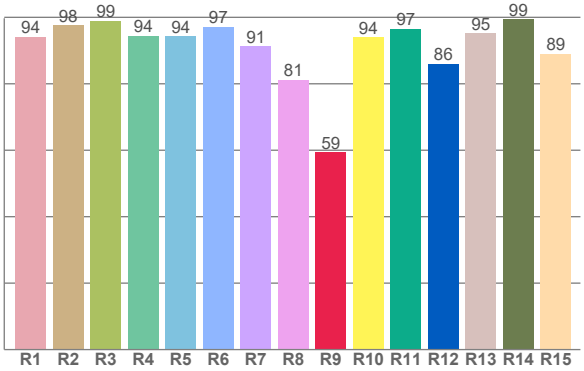



CIE 1931 ZOOM

## TM30: 92,5




## CRI: 93,6 (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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 94,1 | 97,6 | 99,0 | 94,5 | 94,4 | 97,2 | 91,2 | 81,2 | 59,3 | 94,1 | 96,5 | 86,0 | 95,2 | 99,3 | 89,1 |

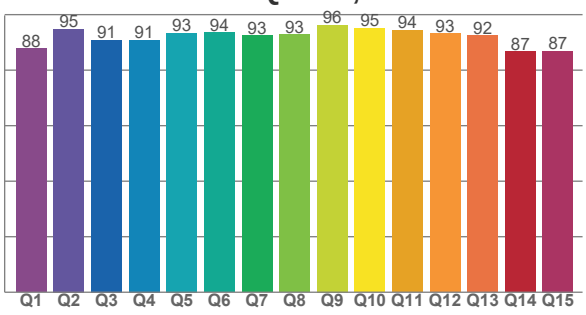
**TM30 C values, 16 binned values out of total of 99 C values**

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 91,0 | 92,7 | 91,5 | 95,2 | 95,9 | 96,3 | 94,1 | 98,3 | 95,5 | 92,5 | 91,1 | 90,1 | 90,8 | 87,4 | 92,0 | 85,7 |

**CQS Q values**

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 87,8 | 94,8 | 90,8 | 90,9 | 93,4 | 93,6 | 92,5 | 92,8 | 96,3 | 95,1 | 94,3 | 93,2 | 92,4 | 86,7 | 86,9 |

## CQS: 91,4




## 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 | 93,6 | 59,3 | 92,5 | 99,2 | 91,4 | 0,460 | 0,411 | 0,263 | 0,352 | -0,0004 |

# TM30 details

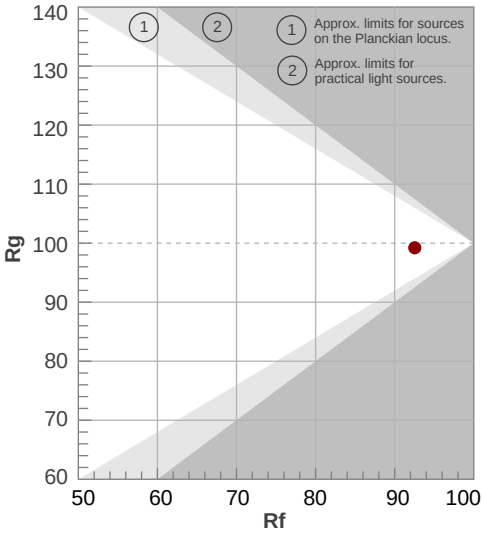
**Rf 92,5**

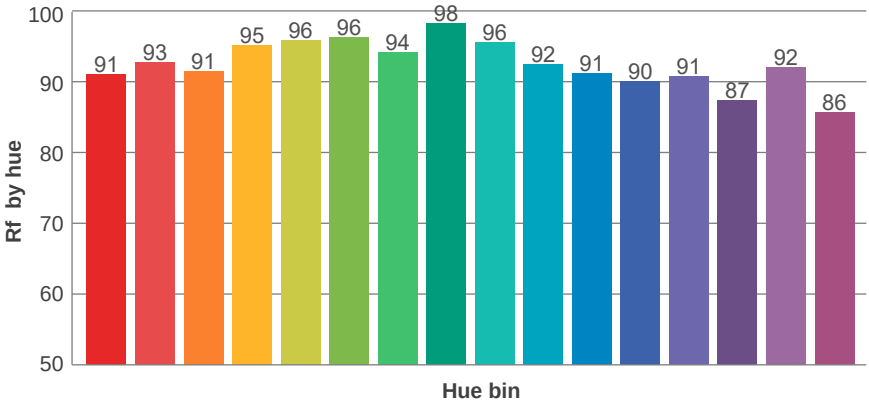
Fidelity index Rf

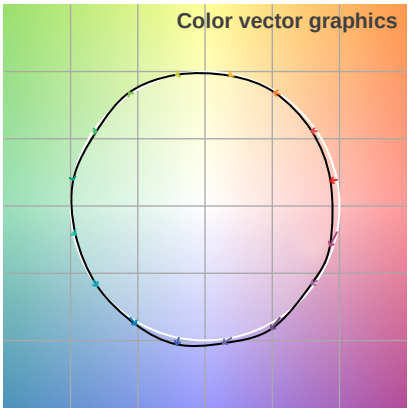
**Rg 99,2**

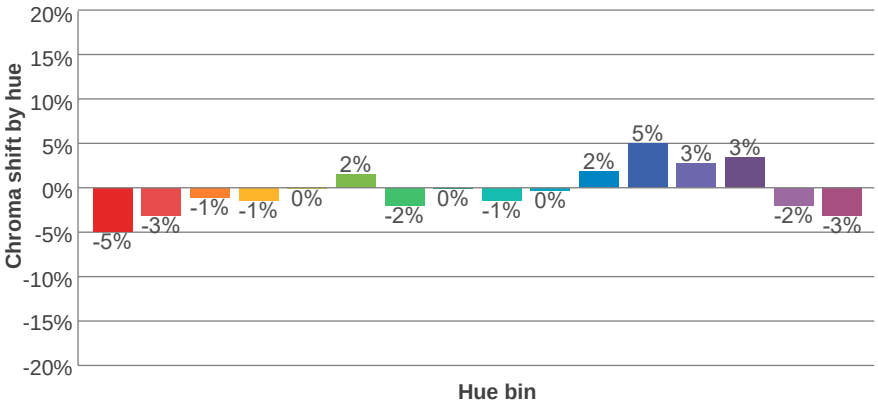
Gammut index Rg

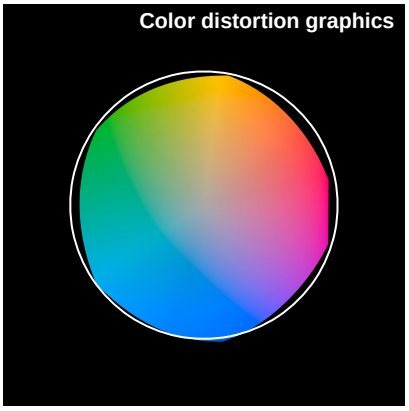
| | | Graphic shifts (%) | |
|---|---|---|---|
| Hue Bin | $R_f$ | Chroma | Hue |
| 1 | 91 | -5% | 0% |
| 2 | 93 | -3% | 3% |
| 3 | 91 | -1% | 4% |
| 4 | 95 | -1% | 1% |
| 5 | 96 | 0% | 2% |
| 6 | 96 | 2% | 0% |
| 7 | 94 | -2% | -1% |
| 8 | 98 | 0% | 0% |
| 9 | 96 | -1% | 2% |
| 10 | 92 | 0% | 5% |
| 11 | 91 | 2% | 6% |
| 12 | 90 | 5% | -1% |
| 13 | 91 | 3% | -7% |
| 14 | 87 | 3% | -10% |
| 15 | 92 | -2% | -4% |
| 16 | 86 | -3% | -11% |

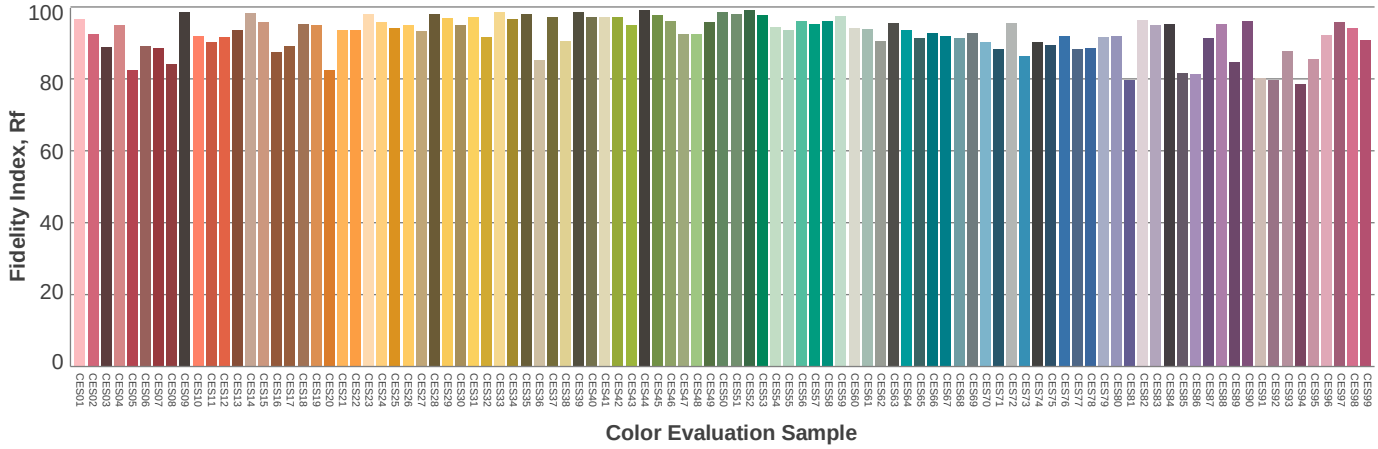


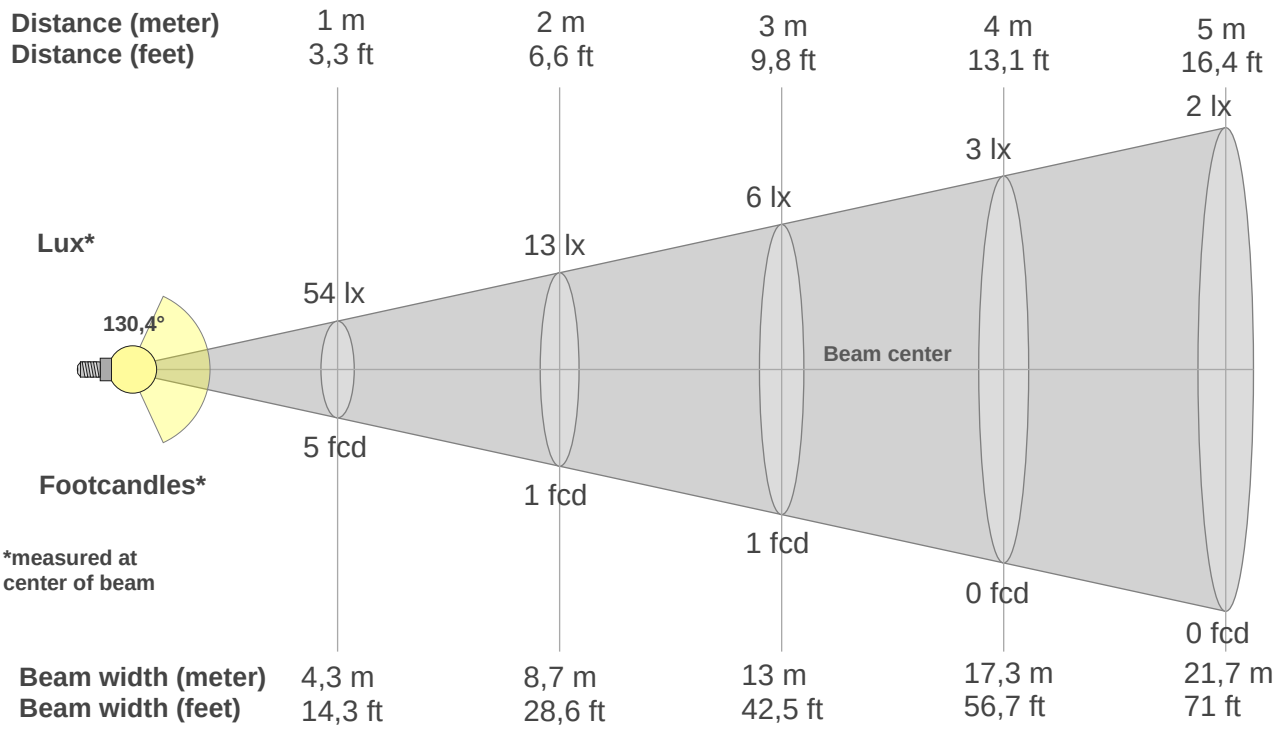



# Beam details




**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 |
| 54lx | 13lx | 6lx | 3lx | 2lx | 1lx | 1lx | 1lx | 1lx | 1lx | 0lx | 0lx | 0lx | 0lx | 0lx | 0lx | 0lx | 0lx | 0lx | 0lx |
| 5fcd | 1,3fcd | 0,6fcd | 0,3fcd | 0,2fcd | 0,1fcd | 0,1fcd | 0,1fcd | 0,1fcd | 0,1fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd |

**Intensities in 0° c-plane**

| 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° | 95° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 54 | 54 | 54 | 56 | 62 | 72 | 86 | 98 | 111 | 123 | 134 | 142 | 132 | 104 | 67 | 34 | 16 | 10 | 4 | 0 |
| 100% | 101% | 101% | 104% | 114% | 134% | 159% | 182% | 205% | 229% | 248% | 264% | 245% | 193% | 124% | 62% | 30% | 18% | 7% | 0% |

**Intensities in 90° c-plane**

| 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° | 95° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 53,9 | 54,5 | 52,9 | 50,7 | 48,2 | 45,9 | 44,0 | 42,3 | 41,0 | 39,3 | 36,9 | 33,4 | 28,6 | 23,1 | 17,0 | 11,2 | 6,1 | 2,9 | 0,7 | 0,0 |
| 100% | 101% | 98% | 94% | 89% | 85% | 82% | 78% | 76% | 73% | 68% | 62% | 53% | 43% | 31% | 21% | 11% | 5% | 1% | 0% |

**Intensities in 180° c-plane**

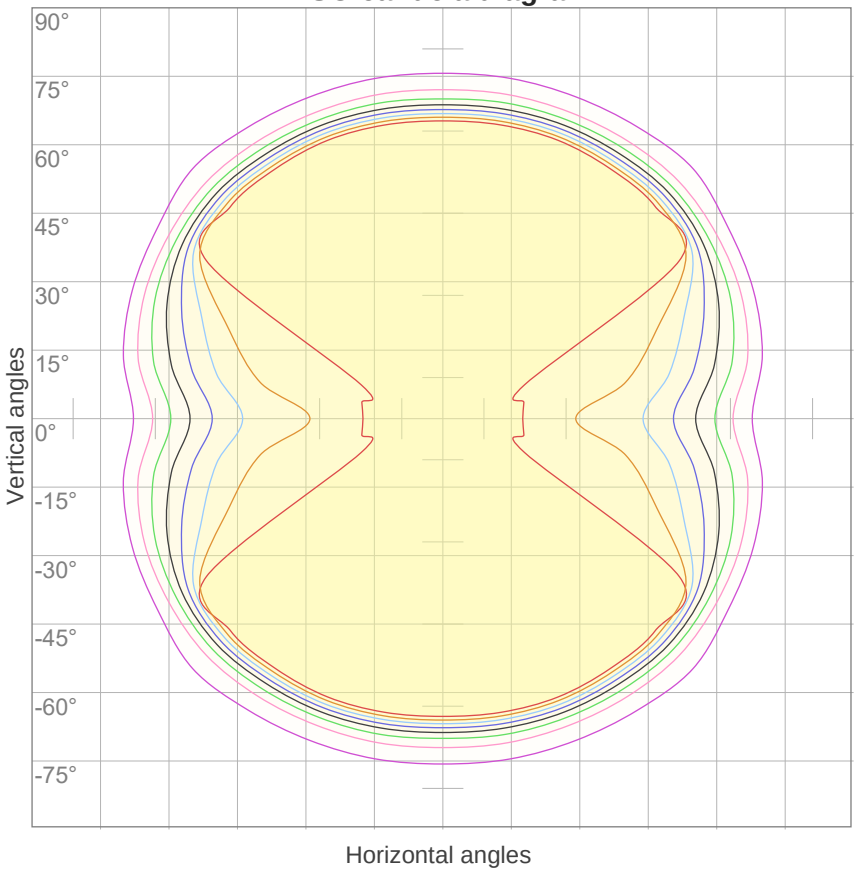
| 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° | 95° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 54 | 54 | 54 | 56 | 62 | 72 | 86 | 98 | 111 | 123 | 134 | 142 | 132 | 104 | 67 | 34 | 16 | 10 | 4 | 0 |
| 100% | 101% | 101% | 104% | 114% | 134% | 159% | 182% | 205% | 229% | 248% | 264% | 245% | 193% | 124% | 62% | 30% | 18% | 7% | 0% |

**Intensities in 270° c-plane**

| 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° | 95° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 53,9 | 54,5 | 52,9 | 50,7 | 48,2 | 45,9 | 44,0 | 42,3 | 41,0 | 39,3 | 36,9 | 33,4 | 28,6 | 23,1 | 17,0 | 11,2 | 6,1 | 2,9 | 0,7 | 0,0 |
| 100% | 101% | 98% | 94% | 89% | 85% | 82% | 78% | 76% | 73% | 68% | 62% | 53% | 43% | 31% | 21% | 11% | 5% | 1% | 0% |

| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|---|---|---|---|---|
| **130,4°** | **161,7°** | **269,2°** | **65,3%** | **33,2%** |

## ISO candela diagram



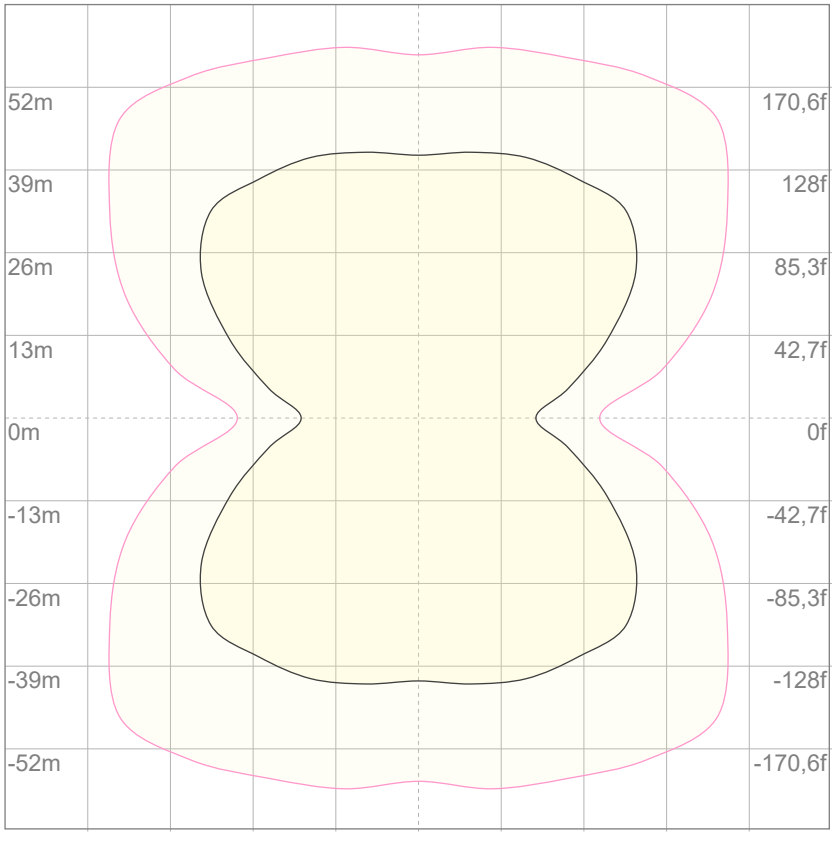

| | |
|---|---|
| 10% | 5 cd |
| 20% | 11 cd |
| 30% | 16 cd |
| 40% | 22 cd |
| 50% | 27 cd |
| 60% | 32 cd |
| 70% | 38 cd |
| 80% | 43 cd |
| 90% | 49 cd |

Conditions:

Number of c-planes: 16

Candela at center: 54 cd

## ISO lux diagram




Mounting height: 10 meters (33 feet)

| | |
|---|---|
| 3% | 16,2m lx |
| 5% | 27,0m lx |
| 10% | 53,9m lx |
| 30% | 0,162 lx |
| 50% | 0,270 lx |

Conditions:

Number of c-planes: 16

Lux at center: 0,539 lx

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

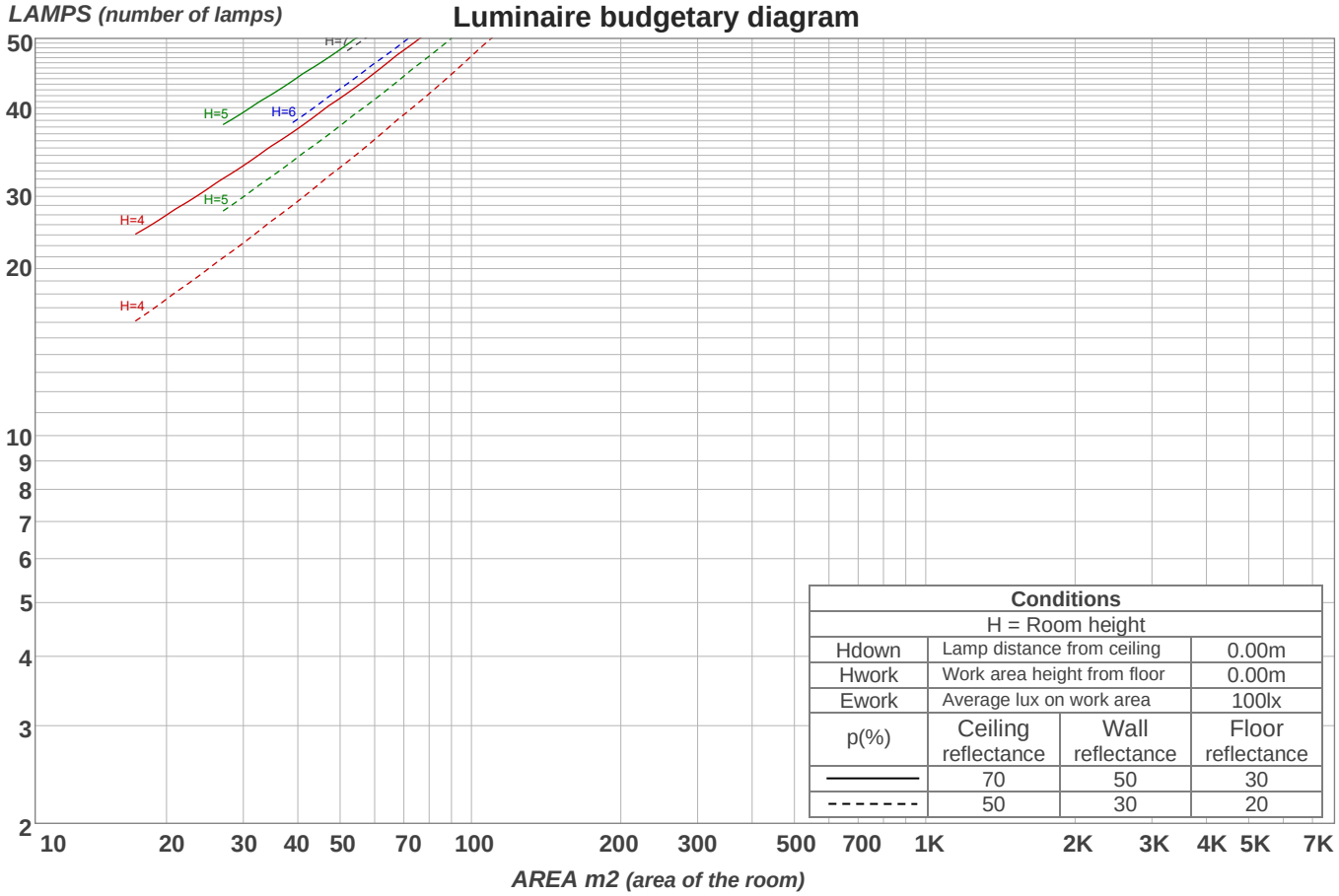
## Glare Evaluation According to UGR

| 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 | | | | |
| 2H | 2H | 22,9 | 24,4 | 23,2 | 24,7 | 25,0 | 17,4 | 18,8 | 17,6 | 19,2 | 19,4 |
| | 3H | 24,3 | 25,8 | 24,7 | 26,1 | 26,3 | 18,7 | 20,1 | 19,1 | 20,5 | 20,7 |
| | 4H | 24,5 | 26,0 | 25,0 | 26,2 | 26,5 | 19,2 | 20,6 | 19,6 | 20,9 | 21,1 |
| | 6H | 24,7 | 25,9 | 25,0 | 26,2 | 26,6 | 19,5 | 20,8 | 19,8 | 21,0 | 21,4 |
| | 8H | 24,6 | 25,9 | 25,0 | 26,1 | 26,6 | 19,6 | 20,8 | 19,9 | 21,1 | 21,5 |
| | 12H | 24,6 | 25,8 | 25,0 | 26,1 | 26,6 | 19,6 | 20,8 | 20,0 | 21,1 | 21,5 |
| 4H | 2H | 23,3 | 24,7 | 23,7 | 25,0 | 25,3 | 19,6 | 21,0 | 20,0 | 21,3 | 21,6 |
| | 3H | 25,0 | 26,2 | 25,4 | 26,5 | 27,0 | 21,0 | 22,2 | 21,4 | 22,5 | 23,0 |
| | 4H | 25,2 | 26,3 | 25,7 | 26,7 | 27,3 | 21,4 | 22,5 | 21,9 | 22,9 | 23,5 |
| | 6H | 25,3 | 26,4 | 25,8 | 26,7 | 27,1 | 21,7 | 22,7 | 22,2 | 23,1 | 23,5 |
| | 8H | 25,3 | 26,3 | 25,9 | 26,7 | 27,0 | 21,8 | 22,7 | 22,3 | 23,1 | 23,5 |
| | 12H | 25,4 | 26,1 | 25,8 | 26,6 | 27,1 | 21,8 | 22,6 | 22,3 | 23,0 | 23,5 |
| 8H | 4H | 25,3 | 26,3 | 25,8 | 26,6 | 27,0 | 22,0 | 22,9 | 22,5 | 23,3 | 23,7 |
| | 6H | 25,5 | 26,2 | 26,0 | 26,7 | 27,3 | 22,4 | 23,1 | 22,9 | 23,6 | 24,2 |
| | 8H | 25,6 | 26,2 | 26,1 | 26,7 | 27,4 | 22,5 | 23,2 | 23,1 | 23,7 | 24,4 |
| | 12H | 25,6 | 26,2 | 26,2 | 26,7 | 27,3 | 22,6 | 23,2 | 23,2 | 23,7 | 24,3 |
| 12H | 4H | 25,3 | 26,1 | 25,8 | 26,5 | 27,0 | 22,0 | 22,8 | 22,5 | 23,2 | 23,7 |
| | 6H | 25,5 | 26,2 | 26,0 | 26,7 | 27,4 | 22,5 | 23,1 | 23,0 | 23,6 | 24,3 |
| | 8H | 25,6 | 26,1 | 26,2 | 26,6 | 27,3 | 22,6 | 23,2 | 23,2 | 23,7 | 24,3 |
| Variation of the observer position for the luminaire distance S | | | | | | | | | | | |
| S = 1.0H | | 0,1 / -0,1 | | | | | 0,1 / -0,1 | | | | |
| S = 1.5H | | 0,5 / -0,5 | | | | | 0,3 / -0,3 | | | | |
| S = 2.0H | | 1,2 / -1,3 | | | | | 1,0 / -1,1 | | | | |
| Standard table | | n/a | | | | | n/a | | | | |
| Correction summand | | n/a | | | | | n/a | | | | |
| Corrected glare indices referring to 348 lm total luminous flux | | | | | | | | | | | |

## 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 | 110 | 110 | 110 | 105 | 105 | 105 | 100 | 100 | 100 | 98 |
| 1 | 106 | 100 | 95 | 90 | 103 | 98 | 93 | 89 | 93 | 89 | 86 | 89 | 85 | 82 | 85 | 82 | 80 | 77 |
| 2 | 94 | 84 | 76 | 70 | 91 | 82 | 75 | 69 | 78 | 72 | 67 | 75 | 69 | 65 | 71 | 67 | 63 | 60 |
| 3 | 84 | 72 | 62 | 55 | 81 | 70 | 61 | 54 | 67 | 59 | 53 | 63 | 57 | 51 | 60 | 55 | 50 | 48 |
| 4 | 76 | 62 | 52 | 44 | 73 | 60 | 51 | 43 | 57 | 49 | 43 | 55 | 48 | 42 | 52 | 46 | 41 | 38 |
| 5 | 69 | 54 | 44 | 36 | 66 | 53 | 43 | 36 | 50 | 42 | 35 | 48 | 40 | 34 | 46 | 39 | 34 | 31 |
| 6 | 63 | 48 | 37 | 30 | 60 | 46 | 37 | 30 | 44 | 36 | 29 | 42 | 35 | 29 | 40 | 34 | 28 | 26 |
| 7 | 57 | 42 | 32 | 26 | 55 | 41 | 32 | 25 | 39 | 31 | 25 | 38 | 30 | 25 | 36 | 29 | 24 | 22 |
| 8 | 53 | 38 | 29 | 22 | 51 | 37 | 28 | 22 | 36 | 27 | 22 | 34 | 27 | 21 | 33 | 26 | 21 | 19 |
| 9 | 49 | 34 | 25 | 19 | 48 | 34 | 25 | 19 | 32 | 24 | 19 | 31 | 24 | 19 | 30 | 23 | 18 | 16 |
| 10 | 46 | 31 | 23 | 17 | 44 | 31 | 22 | 17 | 30 | 22 | 17 | 28 | 21 | 16 | 27 | 21 | 16 | 14 |

## Luminaire budgetary diagram

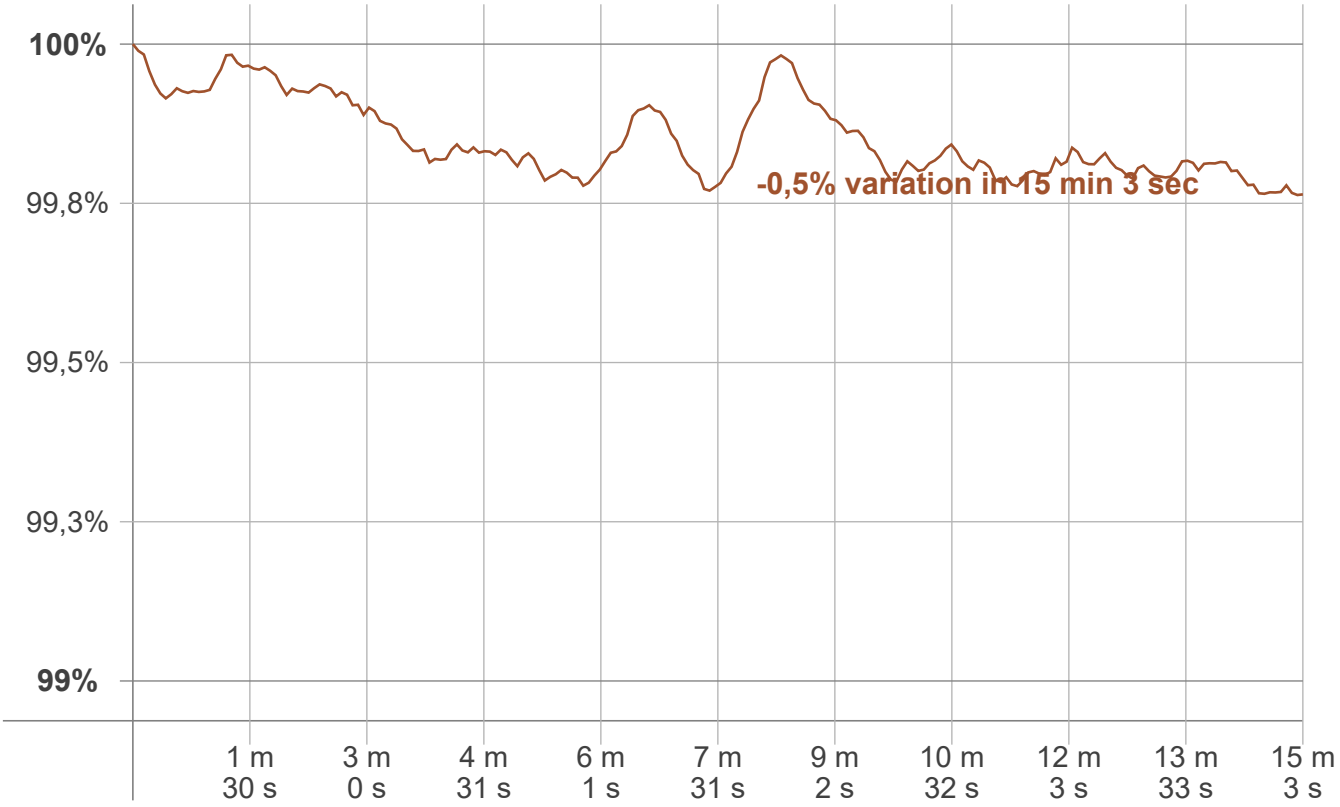



## Zonal Lumen Summary

| 0°-10° | 10°-20° | 20°-30° | 30°-40° | 40°-50° | 50°-60° | 60°-70° | 70°-80° | 80°-90° |
|---|---|---|---|---|---|---|---|---|
| 4,69 lm | 14,8 lm | 26,7 lm | 42,1 lm | 61,5 lm | 77,4 lm | 67,3 lm | 35,4 lm | 10,7 lm |

| 90°-100° | 100°-110° | 110°-120° | 120°-130° | 130°-140° | 140°-150° | 150°-160° | 160°-170° | 170°-180° |
|---|---|---|---|---|---|---|---|---|
| 0,049 lm | 1,59 lm | 0,000 lm | 0,000 lm | 0,000 lm | 0,000 lm | 0,000 lm | 0,000 lm | 5,55 lm |

## Warmup curve




## Warmup result

| | |
|---|---|
| **Warmup time:** | **Lamp stabilized in 15 min 3 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 |
|---|---|---|
| 349 lm | -1 lm | 348 lm |