**Light efficiency:**

**121 Lumen/Watt**

**Light quality:**

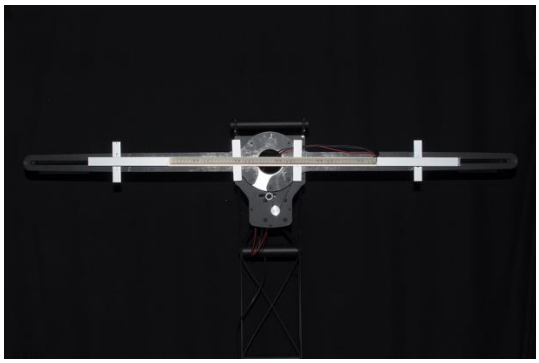
**CRI: 94,3**

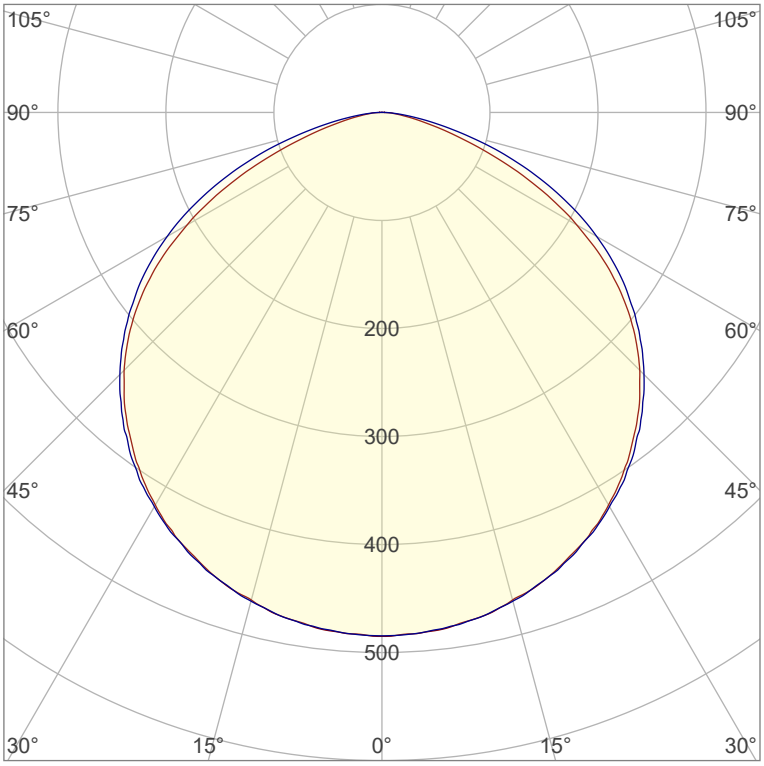
**Color temperature:**

**2700 K**

**Output: 1390 lm**
**Peak: 485 cd**

**Power: 11,5 W**
**PF: 1,0**






**Product name:**
**Jago-2_510mm_927_Cover-Flat-Transparent**

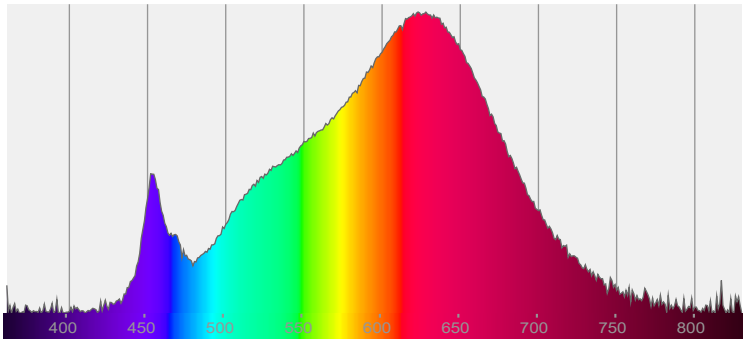
**Item number:**
**NP/L1C/19B/0510/927/CFT**

**Date and time:**
**20.07.2022 15:04:27**

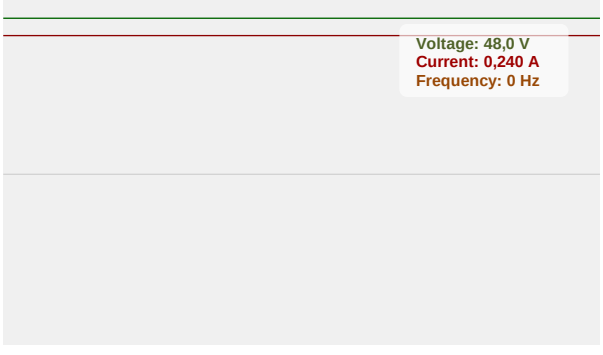
**Description:**
**Tolerances:**
**Lumen +/-4%**
**Candela +/-2,5%**
**Colour Temp +/-35 Kelvin**
**CRI +/-0,7**
**Angular Resolution: 1 Degree Step**
**Last Calibration 07.10.2025**
**Tester: Peter Ulrich**
**Test Site: Lichtlabor**
**Gaustrasse 13**
**55411 Bingen am Rhein**

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

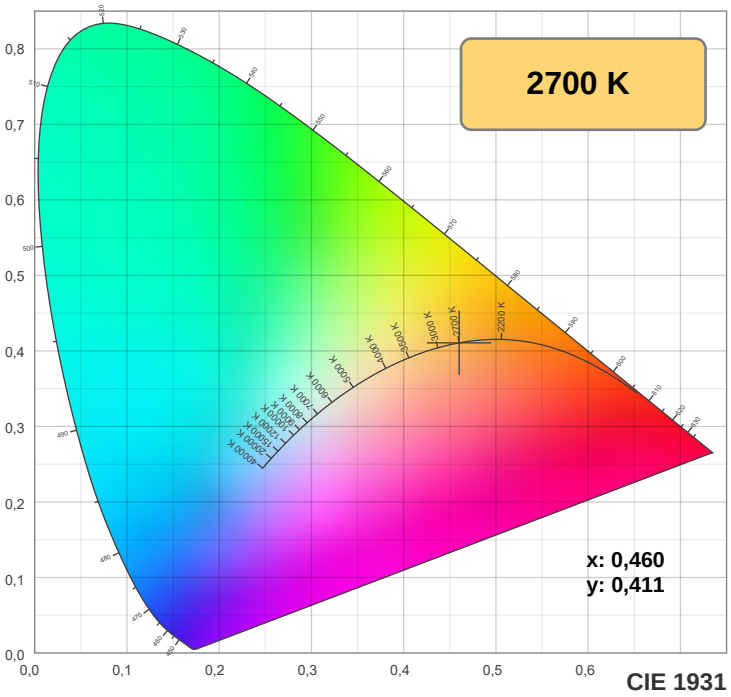
**Spectra**

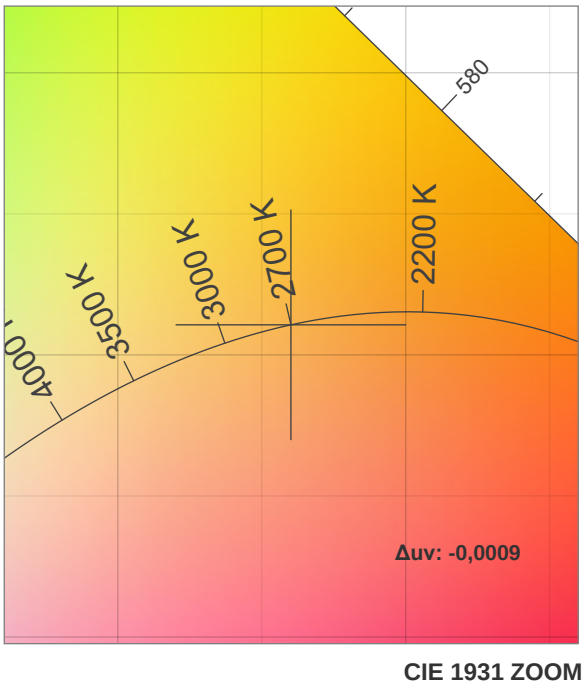



**Power**

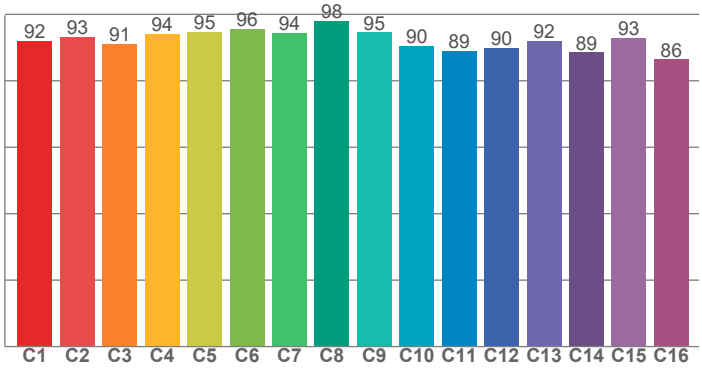


# Color details

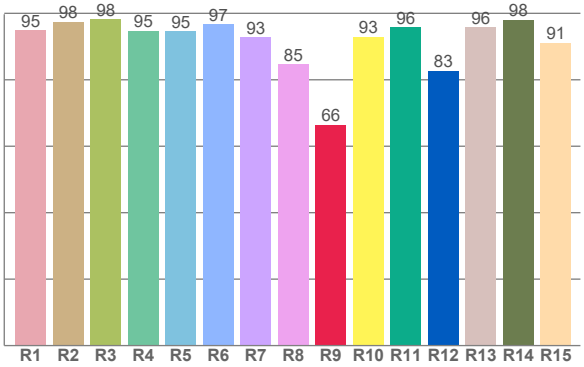



## TM30: 92,2




## CRI: 94,3 (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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 95,0 | 97,5 | 98,2 | 94,8 | 94,6 | 96,7 | 92,8 | 84,6 | 66,5 | 92,9 | 95,9 | 82,7 | 95,9 | 98,1 | 91,1 |

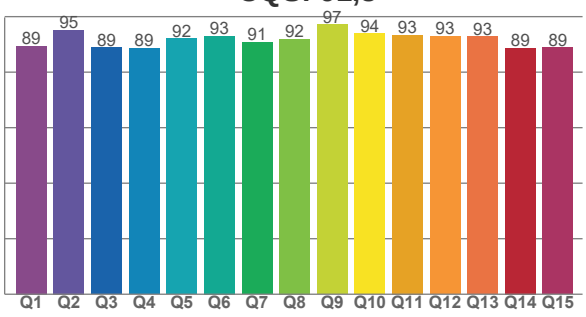
**TM30 C values, 16 binned values out of total of 99 C values**

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 92,0 | 93,3 | 91,2 | 94,1 | 94,8 | 95,7 | 94,4 | 98,1 | 94,6 | 90,4 | 89,0 | 89,9 | 92,0 | 88,6 | 93,0 | 86,4 |

**CQS Q values**

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 89,5 | 95,2 | 88,8 | 88,6 | 92,1 | 92,9 | 90,7 | 91,9 | 97,1 | 93,9 | 93,4 | 92,9 | 92,8 | 88,7 | 88,8 |

## CQS: 91,3




## 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 | 94,3 | 66,5 | 92,2 | 99,9 | 91,3 | 0,460 | 0,411 | 0,263 | 0,352 | -0,0009 |

# TM30 details

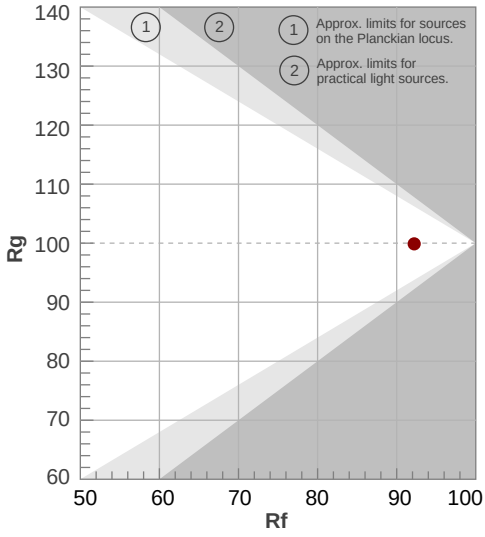
**Rf 92,2**

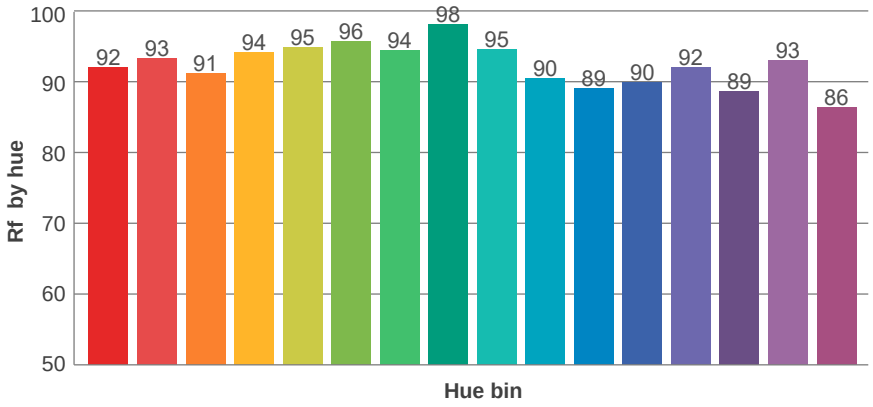
Fidelity index Rf

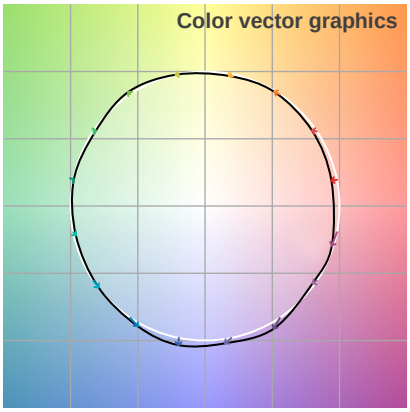
**Rg 99,9**

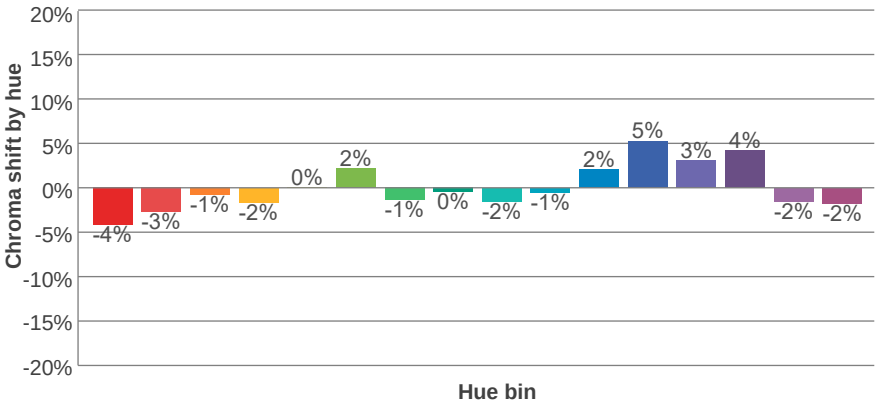
Gammut index Rg

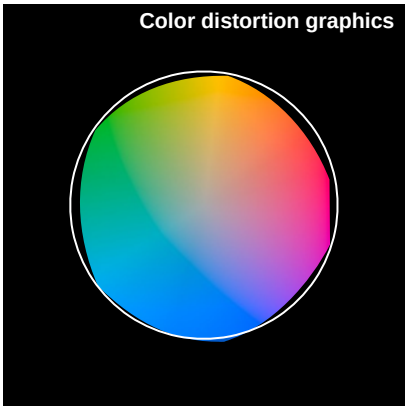
| | | Graphic shifts (%) | |
|---|---|---|---|
| Hue Bin | $R_f$ | Chroma | Hue |
| 1 | 92 | -4% | 0% |
| 2 | 93 | -3% | 2% |
| 3 | 91 | -1% | 4% |
| 4 | 94 | -2% | 1% |
| 5 | 95 | 0% | 2% |
| 6 | 96 | 2% | 0% |
| 7 | 94 | -1% | -1% |
| 8 | 98 | 0% | 0% |
| 9 | 95 | -2% | 3% |
| 10 | 90 | -1% | 6% |
| 11 | 89 | 2% | 8% |
| 12 | 90 | 5% | 1% |
| 13 | 92 | 3% | -5% |
| 14 | 89 | 4% | -8% |
| 15 | 93 | -2% | -3% |
| 16 | 86 | -2% | -10% |

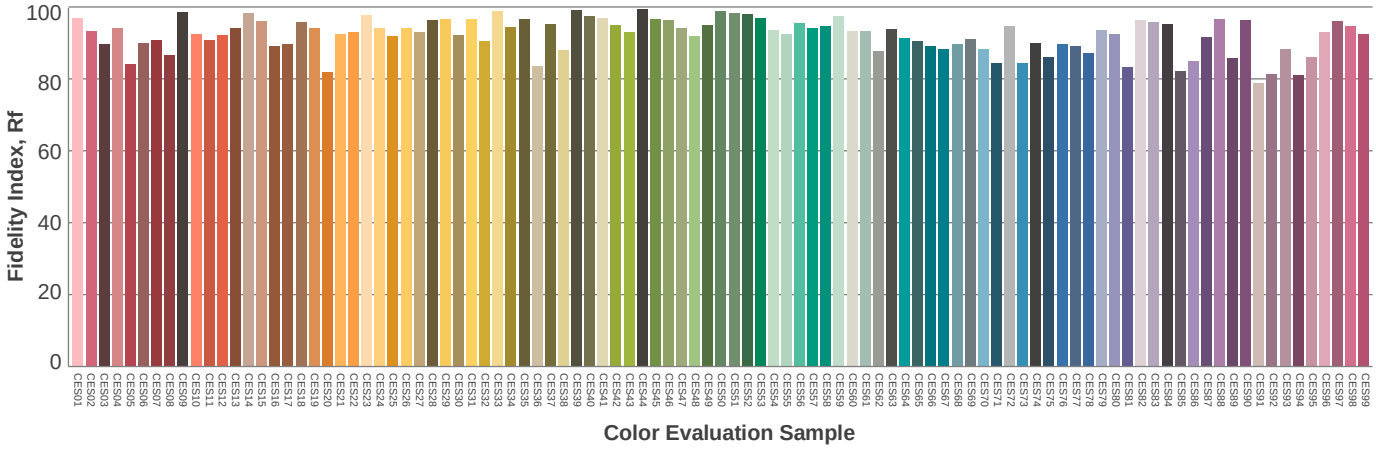


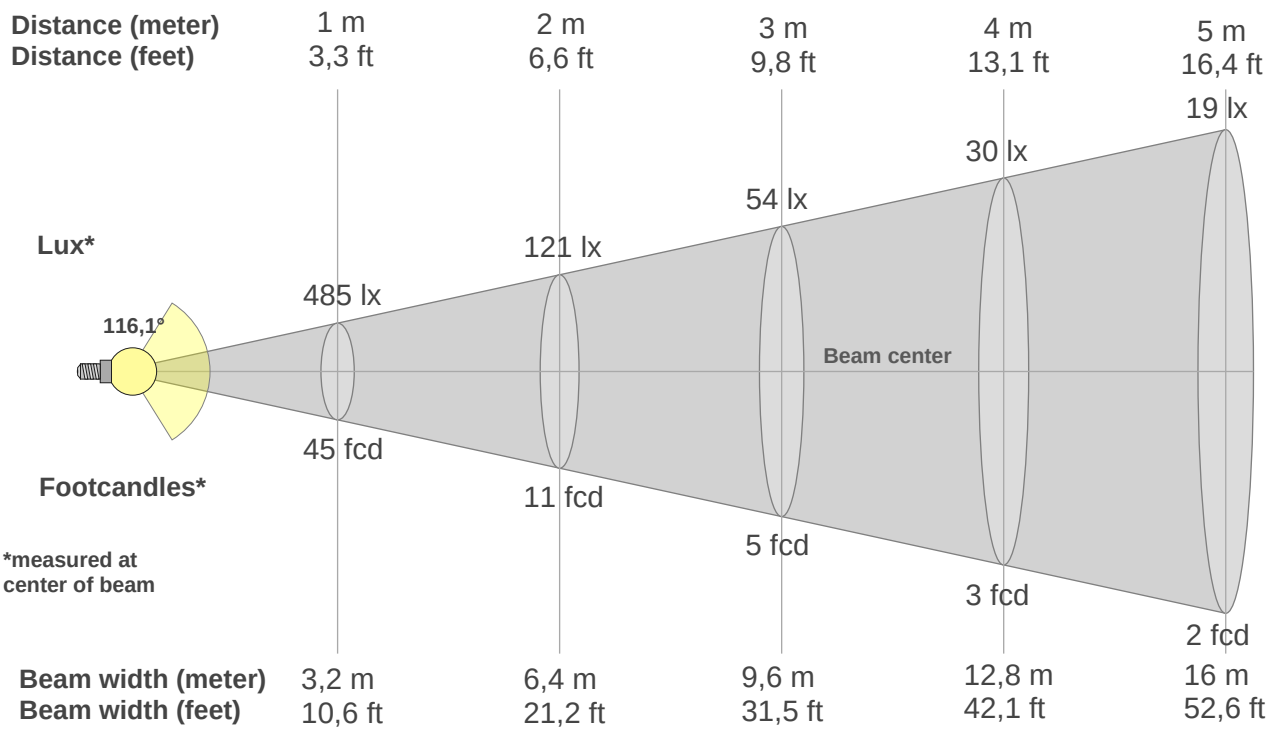



# Beam details




**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 |
| 485lx | 121lx | 54lx | 30lx | 19lx | 13lx | 10lx | 8lx | 6lx | 5lx | 4lx | 3lx | 3lx | 2lx | 2lx | 2lx | 2lx | 1lx | 1lx | 1lx |
| 45fcd | 11,3fcd | 5fcd | 2,8fcd | 1,8fcd | 1,3fcd | 0,9fcd | 0,7fcd | 0,6fcd | 0,5fcd | 0,4fcd | 0,3fcd | 0,3fcd | 0,2fcd | 0,2fcd | 0,2fcd | 0,2fcd | 0,1fcd | 0,1fcd | 0,1fcd |

**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° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 485 | 483 | 477 | 467 | 456 | 440 | 420 | 396 | 368 | 338 | 301 | 259 | 208 | 153 | 97 | 53 | 25 | 10 | 3 | 0 |
| 100% | 100% | 98% | 96% | 94% | 91% | 87% | 82% | 76% | 70% | 62% | 53% | 43% | 32% | 20% | 11% | 5% | 2% | 1% | 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° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 485 | 482 | 477 | 468 | 456 | 440 | 421 | 399 | 373 | 343 | 309 | 272 | 230 | 182 | 130 | 80 | 40 | 15 | 2 | 0 |
| 100% | 100% | 98% | 97% | 94% | 91% | 87% | 82% | 77% | 71% | 64% | 56% | 47% | 38% | 27% | 17% | 8% | 3% | 0% | 0% |

**Intensities in 180° c-plane**

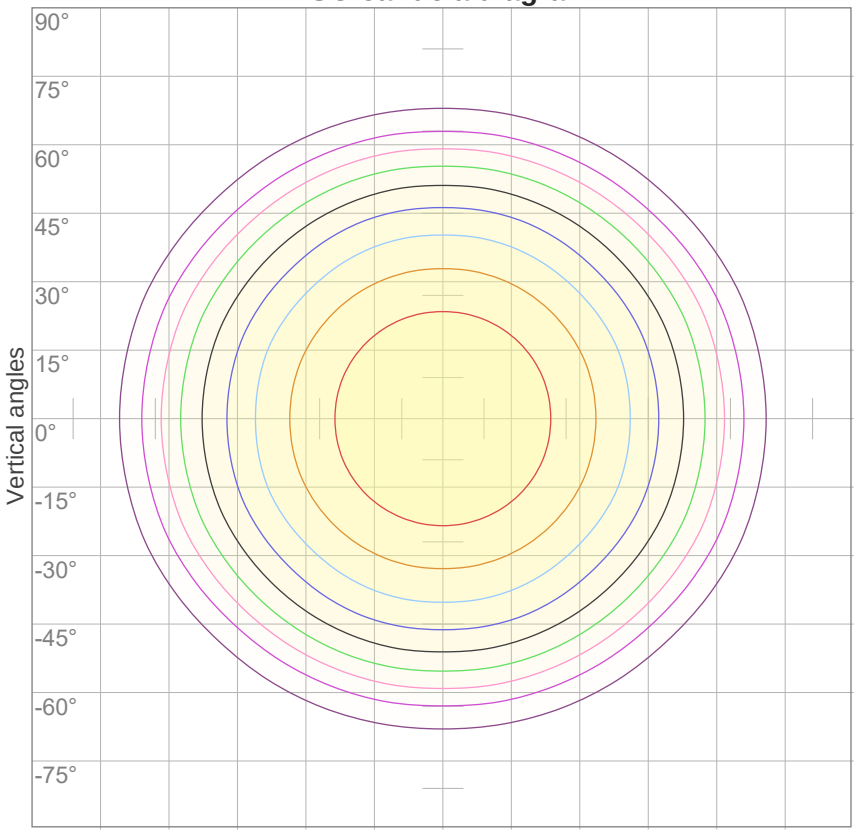
| 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° | 95° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 485 | 483 | 477 | 467 | 456 | 440 | 420 | 396 | 368 | 338 | 301 | 259 | 208 | 153 | 97 | 53 | 25 | 10 | 3 | 0 |
| 100% | 100% | 98% | 96% | 94% | 91% | 87% | 82% | 76% | 70% | 62% | 53% | 43% | 32% | 20% | 11% | 5% | 2% | 1% | 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° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 485 | 482 | 477 | 468 | 456 | 440 | 421 | 399 | 373 | 343 | 309 | 272 | 230 | 182 | 130 | 80 | 40 | 15 | 2 | 0 |
| 100% | 100% | 98% | 97% | 94% | 91% | 87% | 82% | 77% | 71% | 64% | 56% | 47% | 38% | 27% | 17% | 8% | 3% | 0% | 0% |

| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|---|---|---|---|---|
| **116,1°** | **155,6°** | **171,2°** | **80,8%** | **54,3%** |

## ISO candela diagram



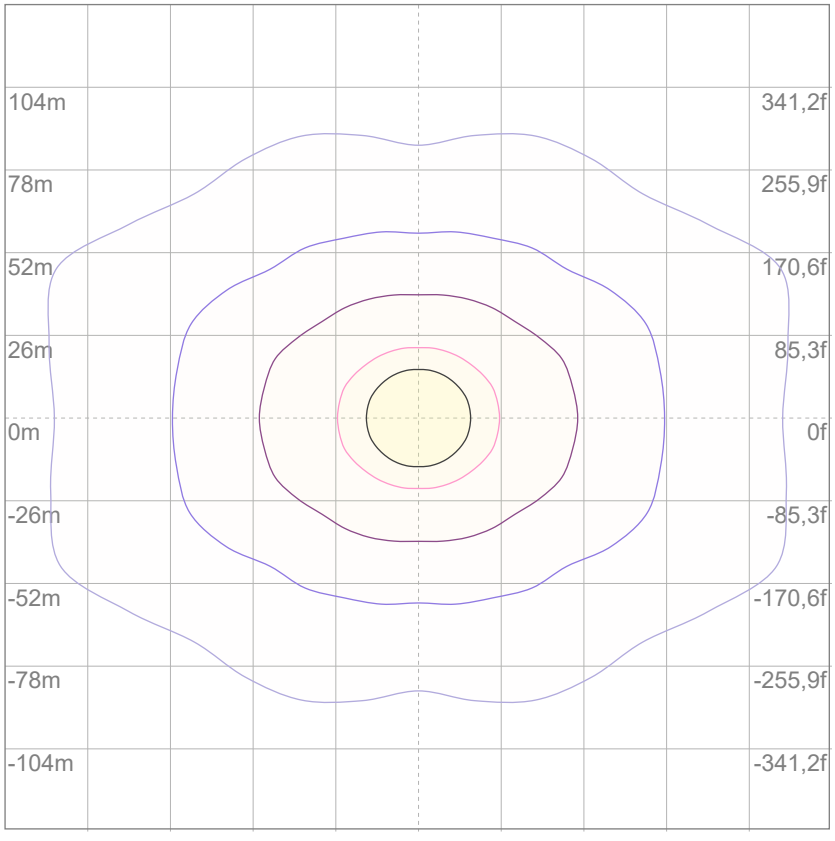

| | |
|---|---|
| 10% | 48 cd |
| 20% | 97 cd |
| 30% | 145 cd |
| 40% | 194 cd |
| 50% | 242 cd |
| 60% | 291 cd |
| 70% | 339 cd |
| 80% | 388 cd |
| 90% | 436 cd |

Conditions:

Number of c-planes: 16

Candela at center: 485 cd

## ISO lux diagram




| | |
|---|---|
| 3% | 0,145 lx |
| 5% | 0,242 lx |
| 10% | 0,485 lx |
| 30% | 1,45 lx |
| 50% | 2,42 lx |

Conditions:

Number of c-planes: 16

Lux at center: 4,85 lx

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

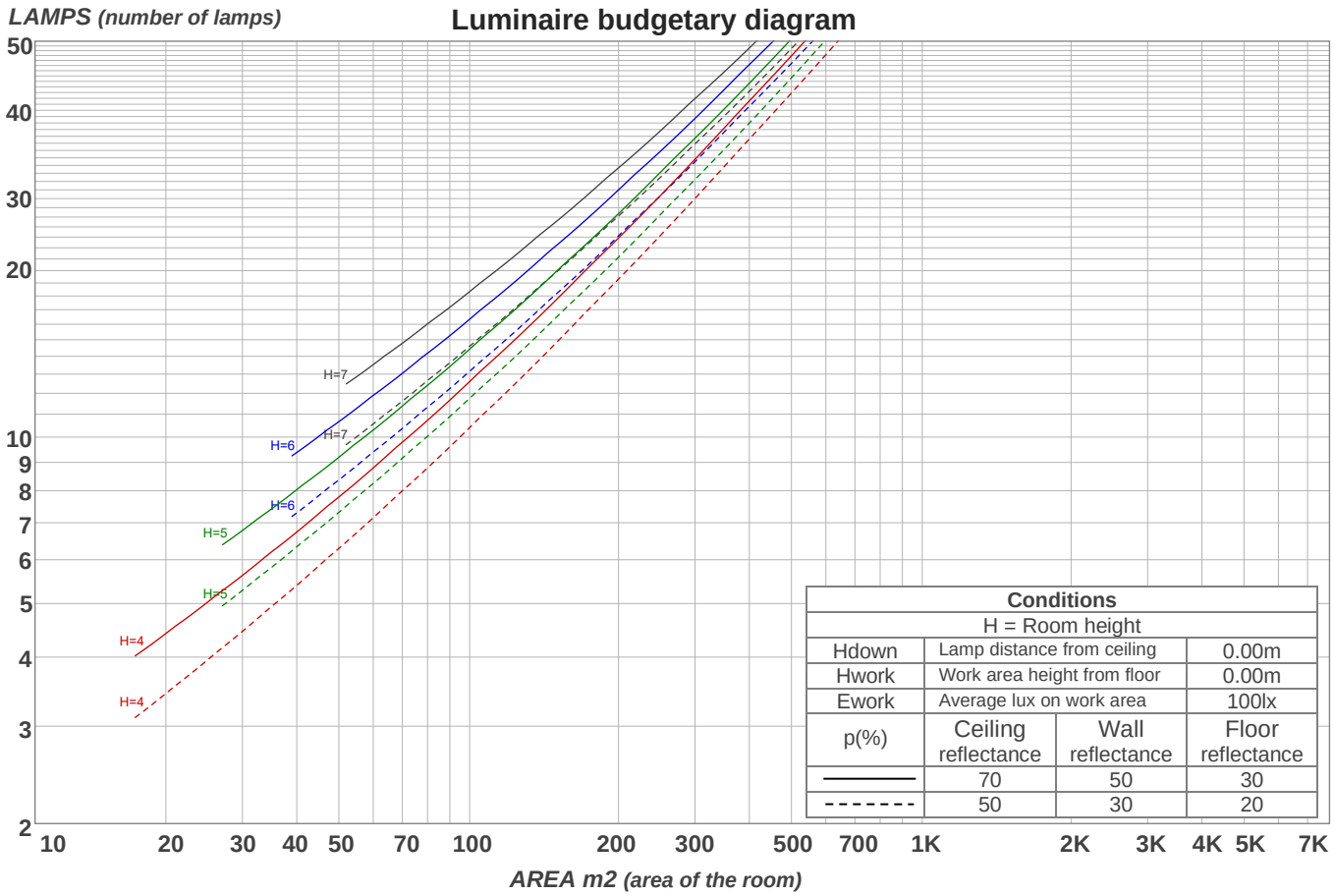
## Glare Evaluation According to UGR

| 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 | | | | |
| 2H | 2H | 24,6 | 25,8 | 24,8 | 26,1 | 26,3 | 25,5 | 26,7 | 25,7 | 27,0 | 27,2 |
| | 3H | 25,4 | 26,6 | 25,8 | 26,9 | 27,1 | 26,8 | 28,0 | 27,2 | 28,3 | 28,5 |
| | 4H | 25,6 | 26,8 | 26,0 | 27,0 | 27,3 | 27,2 | 28,4 | 27,6 | 28,7 | 28,9 |
| | 6H | 25,7 | 26,7 | 26,0 | 27,0 | 27,4 | 27,5 | 28,5 | 27,8 | 28,8 | 29,2 |
| | 8H | 25,7 | 26,7 | 26,0 | 27,0 | 27,4 | 27,5 | 28,5 | 27,9 | 28,8 | 29,3 |
| | 12H | 25,6 | 26,6 | 26,0 | 26,9 | 27,4 | 27,5 | 28,5 | 27,9 | 28,8 | 29,3 |
| 4H | 2H | 25,2 | 26,3 | 25,6 | 26,6 | 26,9 | 25,9 | 27,0 | 26,3 | 27,3 | 27,6 |
| | 3H | 26,2 | 27,2 | 26,6 | 27,5 | 28,0 | 27,4 | 28,4 | 27,8 | 28,7 | 29,2 |
| | 4H | 26,4 | 27,2 | 26,8 | 27,7 | 28,2 | 27,9 | 28,7 | 28,3 | 29,2 | 29,7 |
| | 6H | 26,4 | 27,3 | 26,9 | 27,7 | 28,0 | 28,1 | 29,0 | 28,6 | 29,4 | 29,7 |
| | 8H | 26,5 | 27,2 | 27,0 | 27,6 | 28,0 | 28,2 | 29,0 | 28,7 | 29,4 | 29,7 |
| | 12H | 26,4 | 27,1 | 26,9 | 27,5 | 28,0 | 28,2 | 28,9 | 28,7 | 29,3 | 29,8 |
| 8H | 4H | 26,5 | 27,3 | 27,0 | 27,6 | 28,0 | 27,9 | 28,7 | 28,4 | 29,0 | 29,4 |
| | 6H | 26,7 | 27,2 | 27,2 | 27,7 | 28,3 | 28,3 | 28,9 | 28,8 | 29,3 | 29,9 |
| | 8H | 26,7 | 27,2 | 27,2 | 27,7 | 28,4 | 28,4 | 28,9 | 28,9 | 29,4 | 30,1 |
| | 12H | 26,7 | 27,1 | 27,3 | 27,6 | 28,3 | 28,5 | 28,9 | 29,0 | 29,4 | 30,0 |
| 12H | 4H | 26,5 | 27,1 | 27,0 | 27,6 | 28,0 | 27,9 | 28,5 | 28,4 | 28,9 | 29,4 |
| | 6H | 26,7 | 27,2 | 27,2 | 27,7 | 28,4 | 28,3 | 28,8 | 28,8 | 29,3 | 29,9 |
| | 8H | 26,7 | 27,1 | 27,3 | 27,7 | 28,3 | 28,4 | 28,8 | 29,0 | 29,3 | 29,9 |
| Variation of the observer position for the luminaire distance S | | | | | | | | | | | |
| S = 1.0H | | 0,1 / -0,2 | | | | | 0,1 / -0,1 | | | | |
| S = 1.5H | | 0,4 / -0,7 | | | | | 0,2 / -0,3 | | | | |
| S = 2.0H | | 1,0 / -1,5 | | | | | 0,7 / -1,0 | | | | |
| Standard table | | n/a | | | | | n/a | | | | |
| Correction summand | | n/a | | | | | n/a | | | | |
| Corrected glare indices referring to 1390 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 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 109 | 105 | 100 | 97 | 106 | 102 | 98 | 95 | 98 | 95 | 92 | 94 | 91 | 89 | 90 | 88 | 86 | 84 |
| 2 | 99 | 91 | 85 | 79 | 97 | 89 | 83 | 78 | 86 | 81 | 76 | 82 | 78 | 74 | 79 | 76 | 73 | 70 |
| 3 | 91 | 80 | 72 | 66 | 88 | 79 | 71 | 65 | 75 | 69 | 64 | 73 | 67 | 63 | 70 | 65 | 62 | 59 |
| 4 | 83 | 71 | 62 | 56 | 80 | 70 | 61 | 55 | 67 | 60 | 54 | 65 | 58 | 53 | 62 | 57 | 53 | 51 |
| 5 | 76 | 63 | 54 | 48 | 74 | 62 | 54 | 47 | 60 | 52 | 47 | 58 | 51 | 46 | 56 | 50 | 46 | 44 |
| 6 | 70 | 57 | 48 | 41 | 68 | 56 | 47 | 41 | 54 | 46 | 41 | 52 | 46 | 40 | 51 | 45 | 40 | 38 |
| 7 | 65 | 51 | 43 | 36 | 63 | 51 | 42 | 36 | 49 | 41 | 36 | 48 | 41 | 36 | 46 | 40 | 35 | 33 |
| 8 | 60 | 47 | 38 | 32 | 59 | 46 | 38 | 32 | 45 | 37 | 32 | 43 | 37 | 32 | 42 | 36 | 32 | 30 |
| 9 | 56 | 43 | 35 | 29 | 55 | 42 | 34 | 29 | 41 | 34 | 29 | 40 | 33 | 29 | 39 | 33 | 28 | 27 |
| 10 | 53 | 40 | 32 | 26 | 51 | 39 | 31 | 26 | 38 | 31 | 26 | 37 | 31 | 26 | 36 | 30 | 26 | 24 |

## Luminaire budgetary diagram

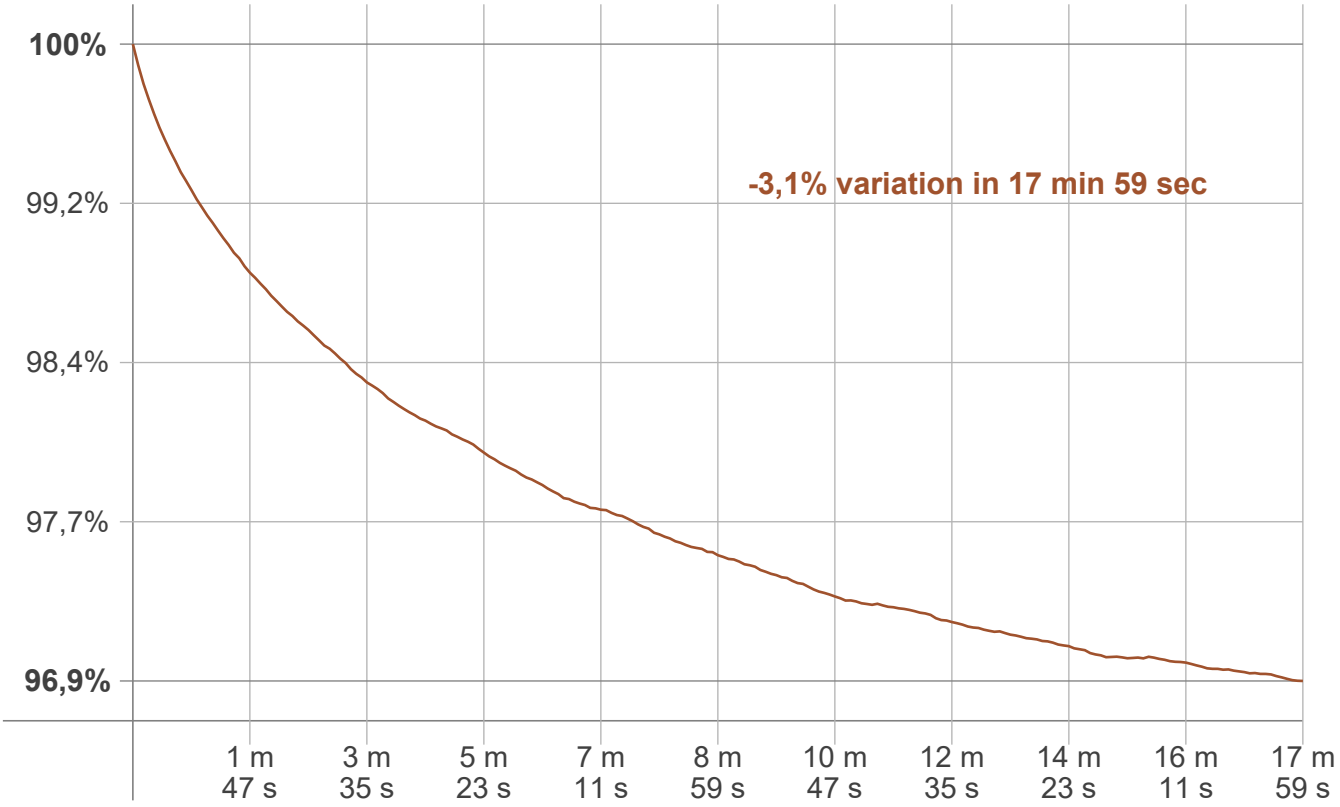



## Zonal Lumen Summary

| 0°-10° | 10°-20° | 20°-30° | 30°-40° | 40°-50° | 50°-60° | 60°-70° | 70°-80° | 80°-90° |
|---|---|---|---|---|---|---|---|---|
| 42,1 lm | 132 lm | 200 lm | 250 lm | 257 lm | 242 lm | 171 lm | 73,9 lm | 16,1 lm |

| 90°-100° | 100°-110° | 110°-120° | 120°-130° | 130°-140° | 140°-150° | 150°-160° | 160°-170° | 170°-180° |
|---|---|---|---|---|---|---|---|---|
| 1,14 lm | 1,31 lm | 0,203 lm | 0,184 lm | 0,159 lm | 0,129 lm | 0,095 lm | 0,058 lm | 2,64 lm |

## Warmup curve




## Warmup result

| | |
|---|---|
| **Warmup time:** | **Lamp stabilized in 17 min 59 sec** |
| **Warmup variation** | **-3,1%** |

## Warmup conditions

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

## Color temperature change

| CCT start | CCT change | CCT end |
|---|---|---|
| 2707 K | -7 K | 2700 K |

## Output change

| Output start | Output change | Output end |
|---|---|---|
| 1438 lm | -48 lm | 1390 lm |