**Light efficiency:**

51 Lumen/Watt

**Light quality:**

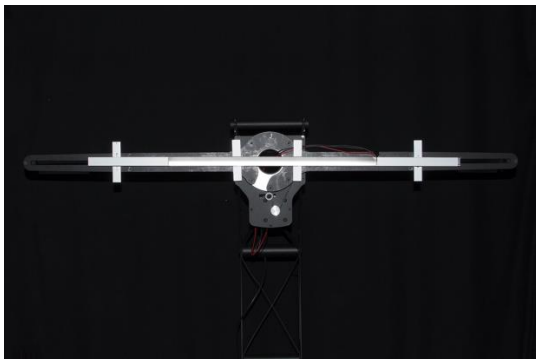
CRI: 95,2

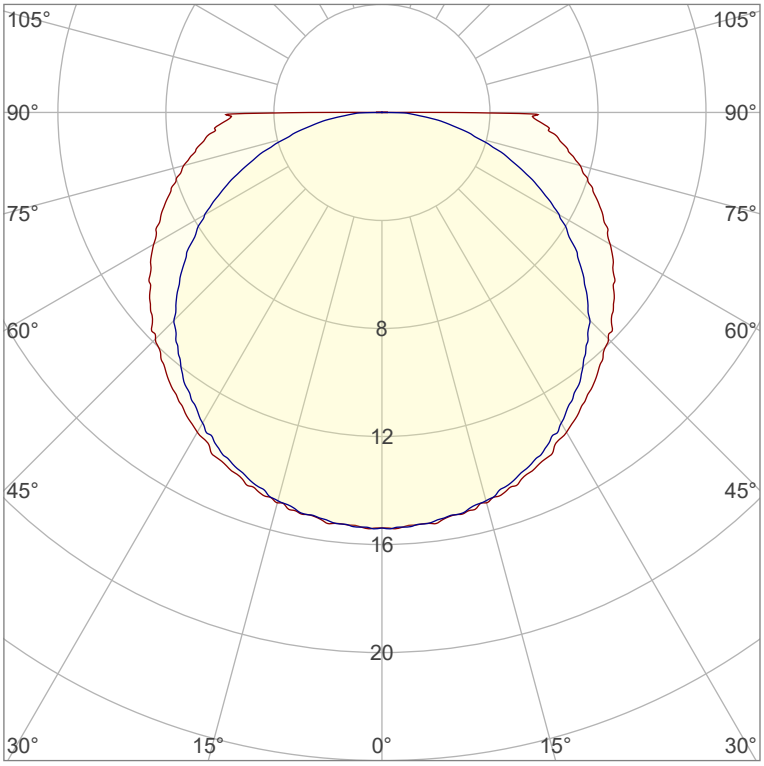
**Color temperature:**

2700 K

**Output:** 61,0 lm
**Peak:** 15,4 cd

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






**Product name:**
**Mayflower-3_510mm_927_Cover-Round-White**

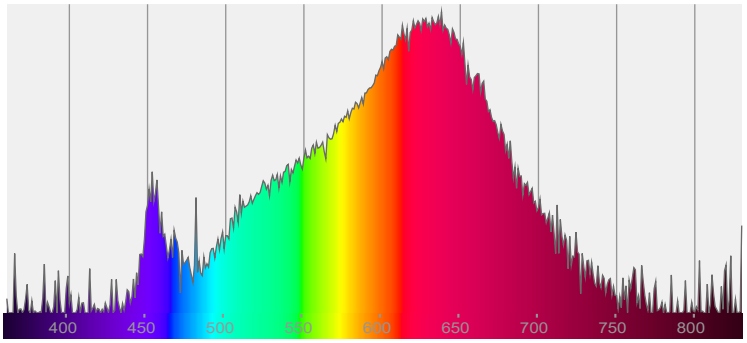
**Item number:**
**NP/L1C/10C/0510/927/CRW**

**Date and time:**
**03.06.2022 15:29:45**

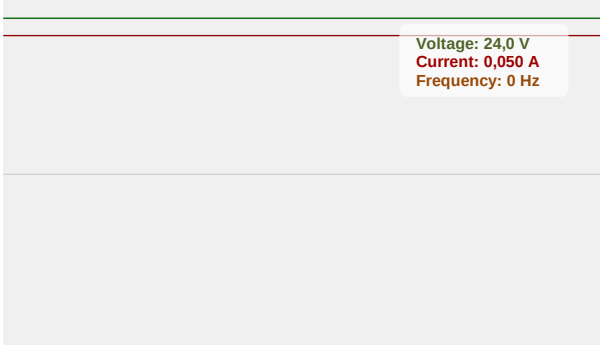
**Description:**
**Tolerances:**
**Lumen +/-4%**
**Candela +/-2,5%**
**Colour Temp +/-35 Kelvin**
**CRI +/-0,7**
**Angular Resolution: 1 Degree Step**
**Last Calibration 20-09-2021**
**Tester: Peter Ulrich**
**Test Site: Lichtlabor**
**Gaustrasse 13**
**55411 Bingen am Rhein**

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

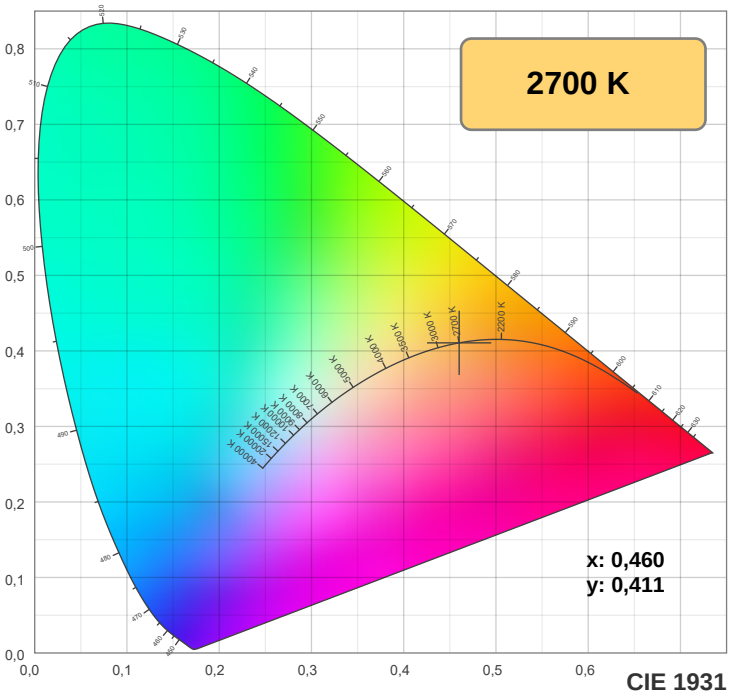
**Spectra**



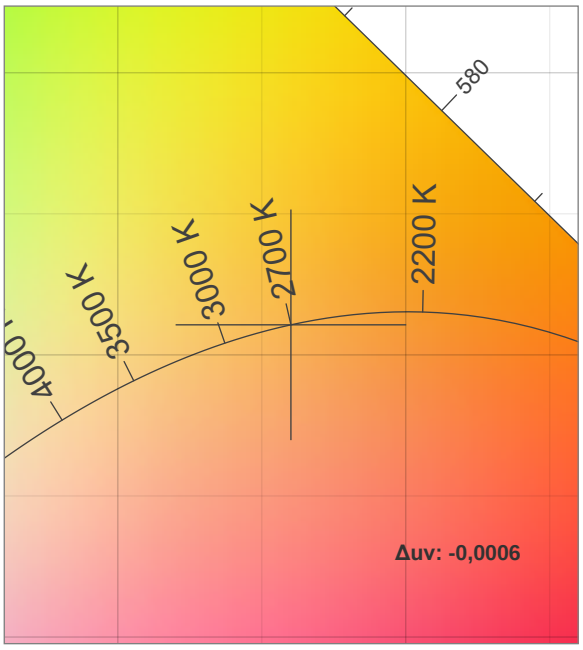

**Power**



# Color details

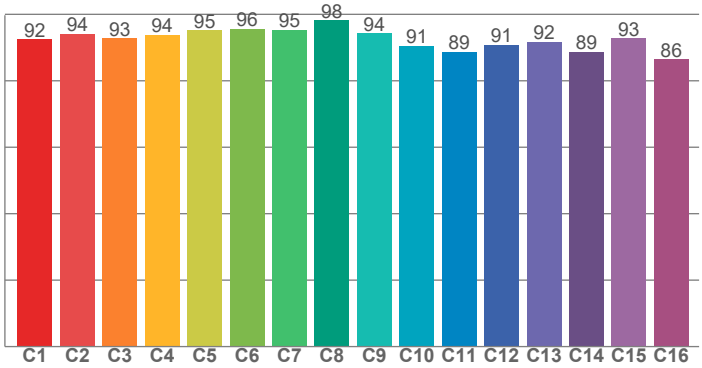



CIE 1931

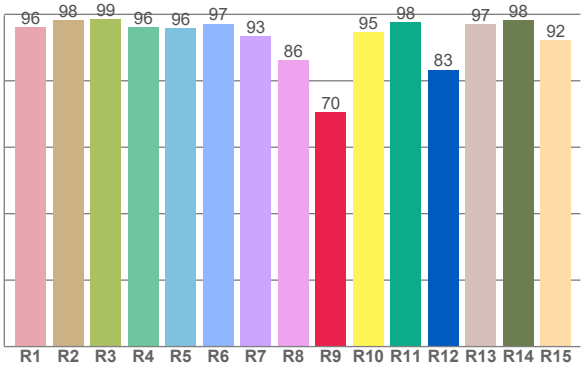



CIE 1931 ZOOM

## TM30: 92,5




## CRI: 95,2 (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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 96,2 | 98,2 | 98,5 | 96,1 | 95,9 | 97,2 | 93,3 | 86,3 | 70,4 | 94,7 | 97,6 | 83,3 | 97,0 | 98,2 | 92,3 |

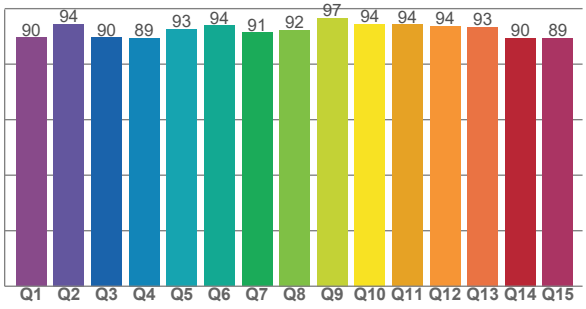
**TM30 C values, 16 binned values out of total of 99 C values**

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 92,5 | 94,1 | 92,8 | 93,8 | 95,1 | 95,7 | 95,3 | 98,2 | 94,2 | 90,5 | 88,7 | 90,7 | 91,8 | 88,6 | 92,7 | 86,5 |

**CQS Q values**

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 89,6 | 94,5 | 89,5 | 89,4 | 92,7 | 93,9 | 91,4 | 92,4 | 96,7 | 94,5 | 94,3 | 93,8 | 93,4 | 89,5 | 89,5 |

## CQS: 91,8




## 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 | 95,2 | 70,4 | 92,5 | 100,0 | 91,8 | 0,460 | 0,411 | 0,263 | 0,352 | -0,0006 |

# TM30 details

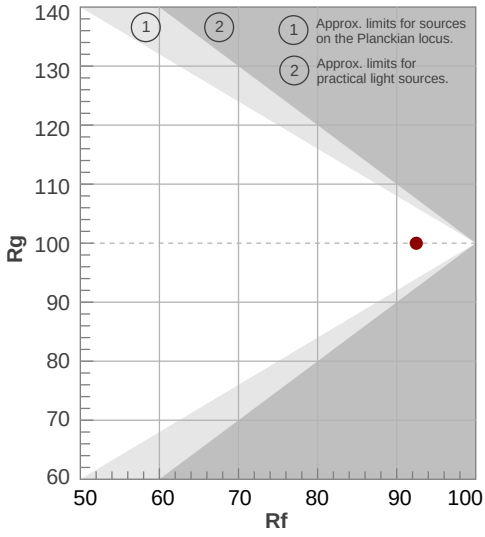
**Rf 92,5**

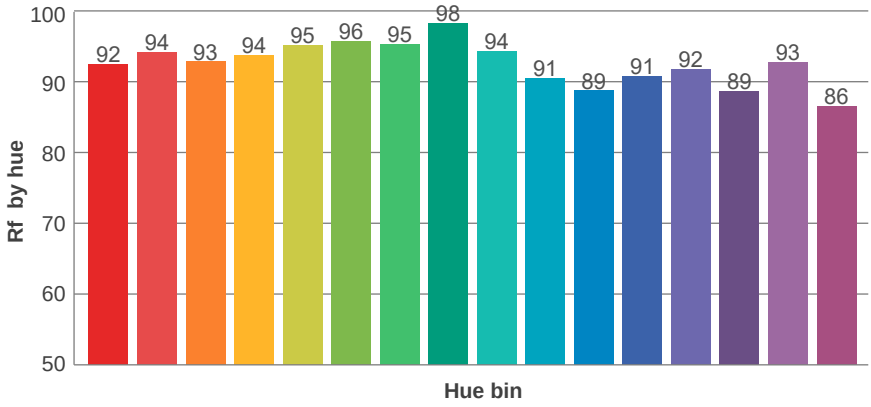
Fidelity index Rf

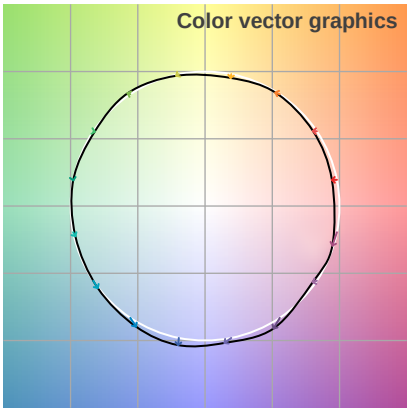
**Rg 100,0**

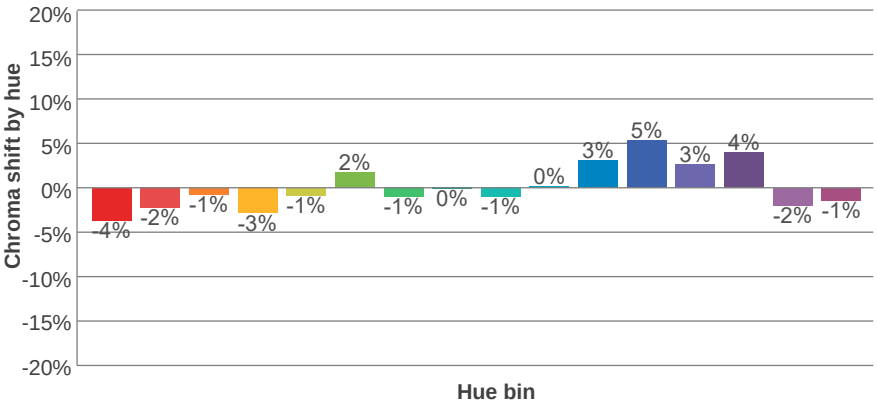
Gammut index Rg

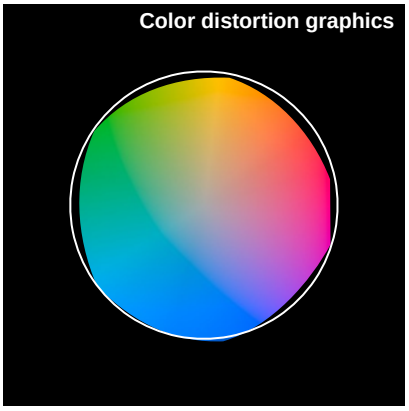
| | | Graphic shifts (%) | |
|---|---|---|---|
| Hue Bin | $R_f$ | Chroma | Hue |
| 1 | 92 | -4% | 1% |
| 2 | 94 | -2% | 2% |
| 3 | 93 | -1% | 3% |
| 4 | 94 | -3% | 0% |
| 5 | 95 | -1% | 2% |
| 6 | 96 | 2% | 1% |
| 7 | 95 | -1% | 0% |
| 8 | 98 | 0% | 0% |
| 9 | 94 | -1% | 3% |
| 10 | 91 | 0% | 6% |
|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

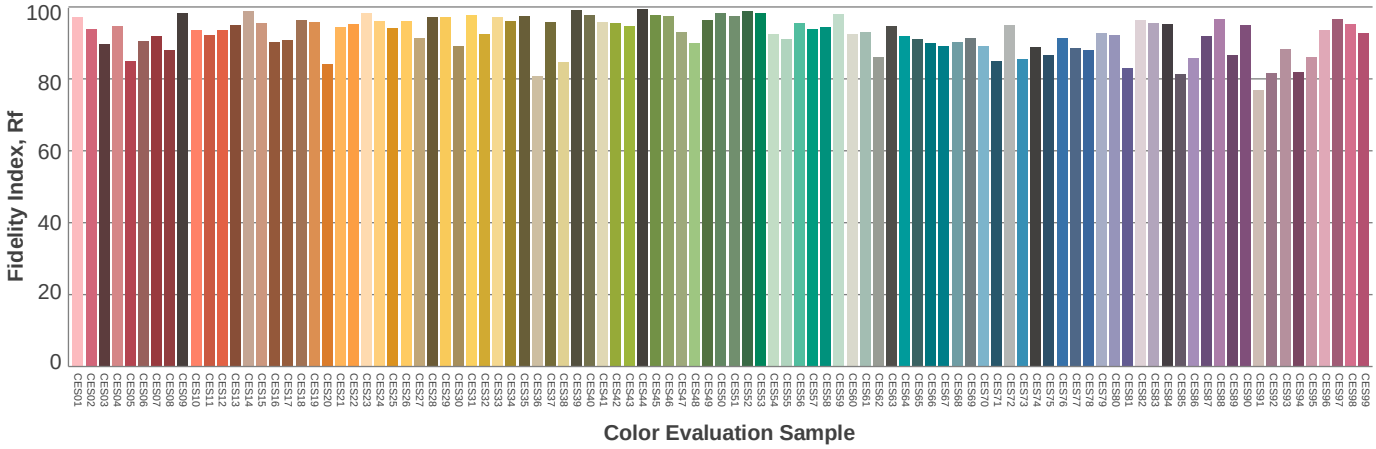


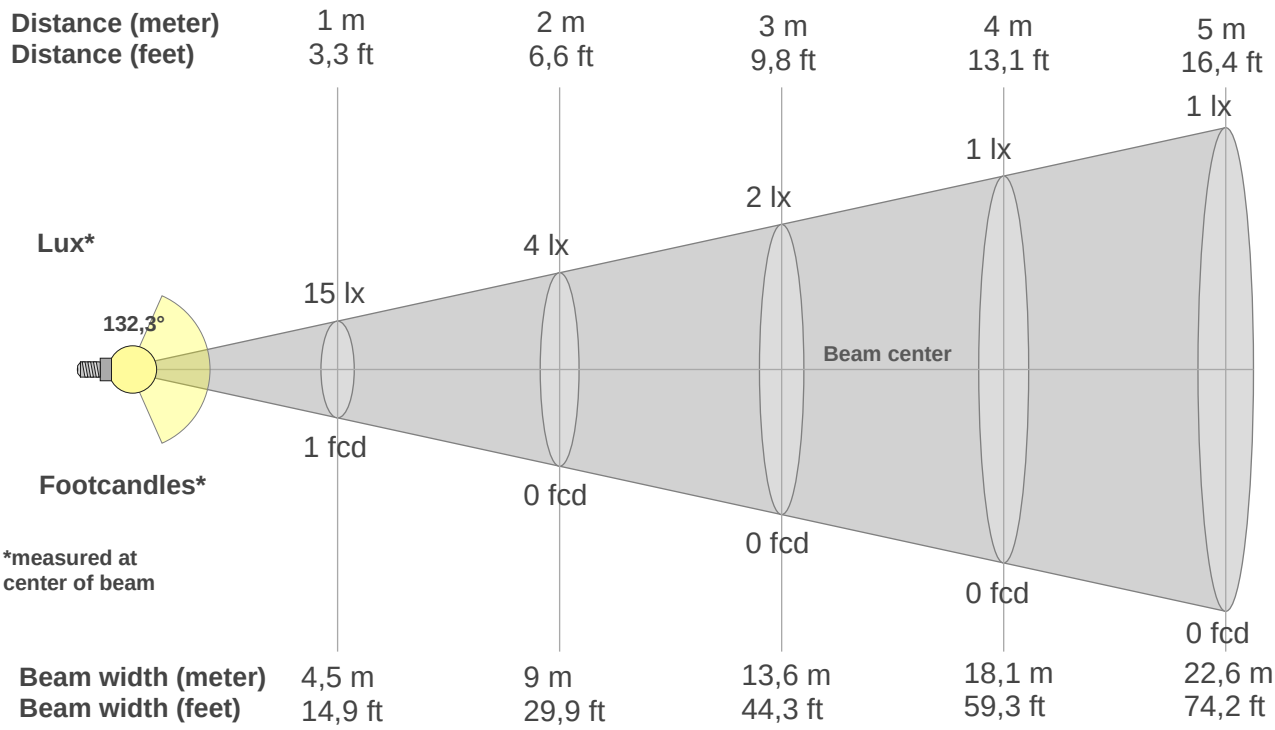



# Beam details




**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 |
| 15lx | 4lx | 2lx | 1lx | 1lx | 0lx | 0lx | 0lx | 0lx | 0lx | 0lx | 0lx | 0lx | 0lx | 0lx | 0lx | 0lx | 0lx | 0lx | 0lx |
| 1,4fcd | 0,4fcd | 0,2fcd | 0,1fcd | 0,1fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd | 0fcd |

**Intensities in 0° c-plane**

| 0° | 9° | 18° | 27° | 36° | 45° | 54° | 63° | 72° | 81° | 90° | 99° | 108° | 117° | 126° | 135° | 144° | 153° | 162° | 171° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15,4 | 15,2 | 14,8 | 14,0 | 12,9 | 11,9 | 10,6 | 9,4 | 8,0 | 6,7 | 2,7 | 2,4 | 2,1 | 1,9 | 1,6 | 1,3 | 1,1 | 0,8 | 0,5 | 0,3 |
| 100% | 99% | 96% | 91% | 84% | 77% | 69% | 61% | 52% | 43% | 17% | 16% | 14% | 12% | 10% | 9% | 7% | 5% | 3% | 2% |

**Intensities in 90° c-plane**

| 0° | 9° | 18° | 27° | 36° | 45° | 54° | 63° | 72° | 81° | 90° | 99° | 108° | 117° | 126° | 135° | 144° | 153° | 162° | 171° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15,4 | 15,2 | 14,6 | 13,7 | 12,4 | 10,9 | 8,9 | 6,8 | 4,5 | 2,3 | 0,4 | 0,3 | 0,3 | 0,3 | 0,2 | 0,2 | 0,1 | 0,1 | 0,1 | 0,0 |
| 100% | 99% | 95% | 89% | 81% | 71% | 58% | 44% | 29% | 15% | 2% | 2% | 2% | 2% | 1% | 1% | 1% | 1% | 0% | 0% |

**Intensities in 180° c-plane**

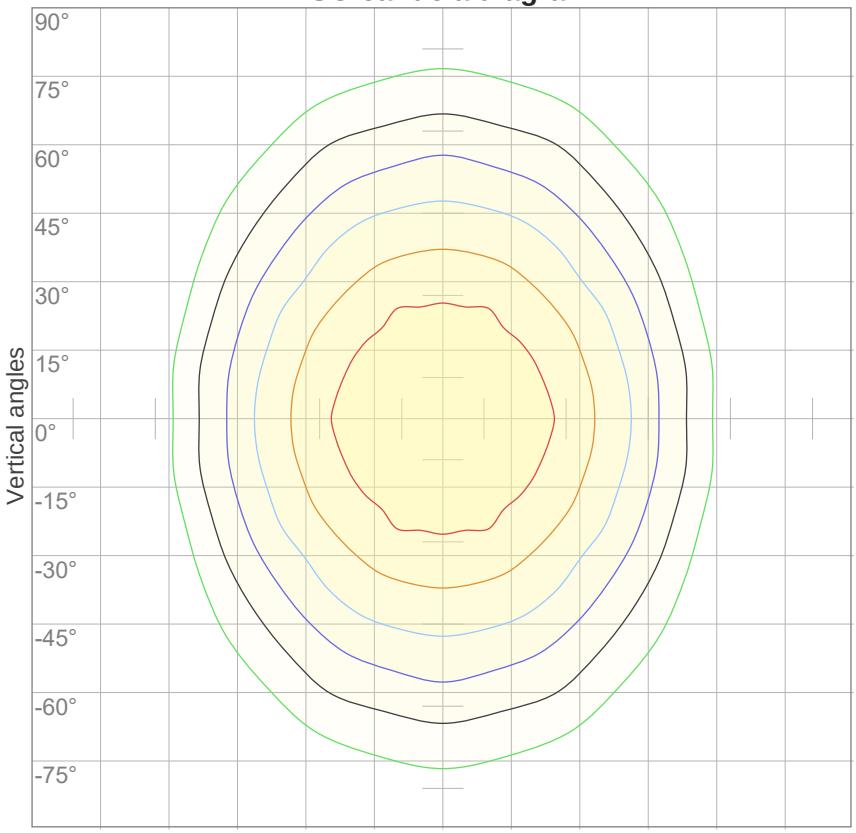
| 0° | 9° | 18° | 27° | 36° | 45° | 54° | 63° | 72° | 81° | 90° | 99° | 108° | 117° | 126° | 135° | 144° | 153° | 162° | 171° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15,4 | 15,2 | 14,8 | 14,0 | 12,9 | 11,9 | 10,6 | 9,4 | 8,0 | 6,7 | 2,7 | 2,4 | 2,1 | 1,9 | 1,6 | 1,3 | 1,1 | 0,8 | 0,5 | 0,3 |
| 100% | 99% | 96% | 91% | 84% | 77% | 69% | 61% | 52% | 43% | 17% | 16% | 14% | 12% | 10% | 9% | 7% | 5% | 3% | 2% |

**Intensities in 270° c-plane**

| 0° | 9° | 18° | 27° | 36° | 45° | 54° | 63° | 72° | 81° | 90° | 99° | 108° | 117° | 126° | 135° | 144° | 153° | 162° | 171° |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15,4 | 15,2 | 14,6 | 13,7 | 12,4 | 10,9 | 8,9 | 6,8 | 4,5 | 2,3 | 0,4 | 0,3 | 0,3 | 0,3 | 0,2 | 0,2 | 0,1 | 0,1 | 0,1 | 0,0 |
| 100% | 99% | 95% | 89% | 81% | 71% | 58% | 44% | 29% | 15% | 2% | 2% | 2% | 2% | 1% | 1% | 1% | 1% | 0% | 0% |

| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|---|---|---|---|---|
| **132,3°** | **194,8°** | **217,6°** | **61,5%** | **40,2%** |

## ISO candela diagram



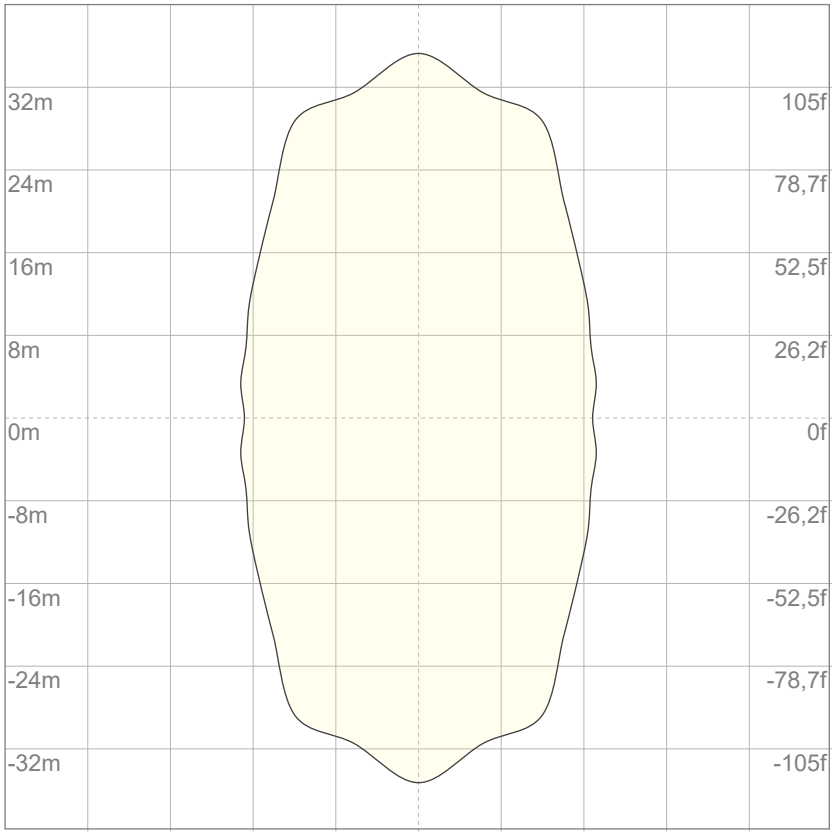

| | |
|---|---|
| 10% | 2 cd |
| 20% | 3 cd |
| 30% | 5 cd |
| 40% | 6 cd |
| 50% | 8 cd |
| 60% | 9 cd |
| 70% | 11 cd |
| 80% | 12 cd |
| 90% | 14 cd |

Conditions:

Number of c-planes: 16

Candela at center: 15 cd

## ISO lux diagram




Mounting height: 10 meters (33 feet)

| | |
|---|---|
| 3% | 4,61m lx |
| 5% | 7,69m lx |
| 10% | 15,4m lx |
| 30% | 46,1m lx |
| 50% | 76,9m lx |

Conditions:

Number of c-planes: 16

Lux at center: 0,154 lx

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

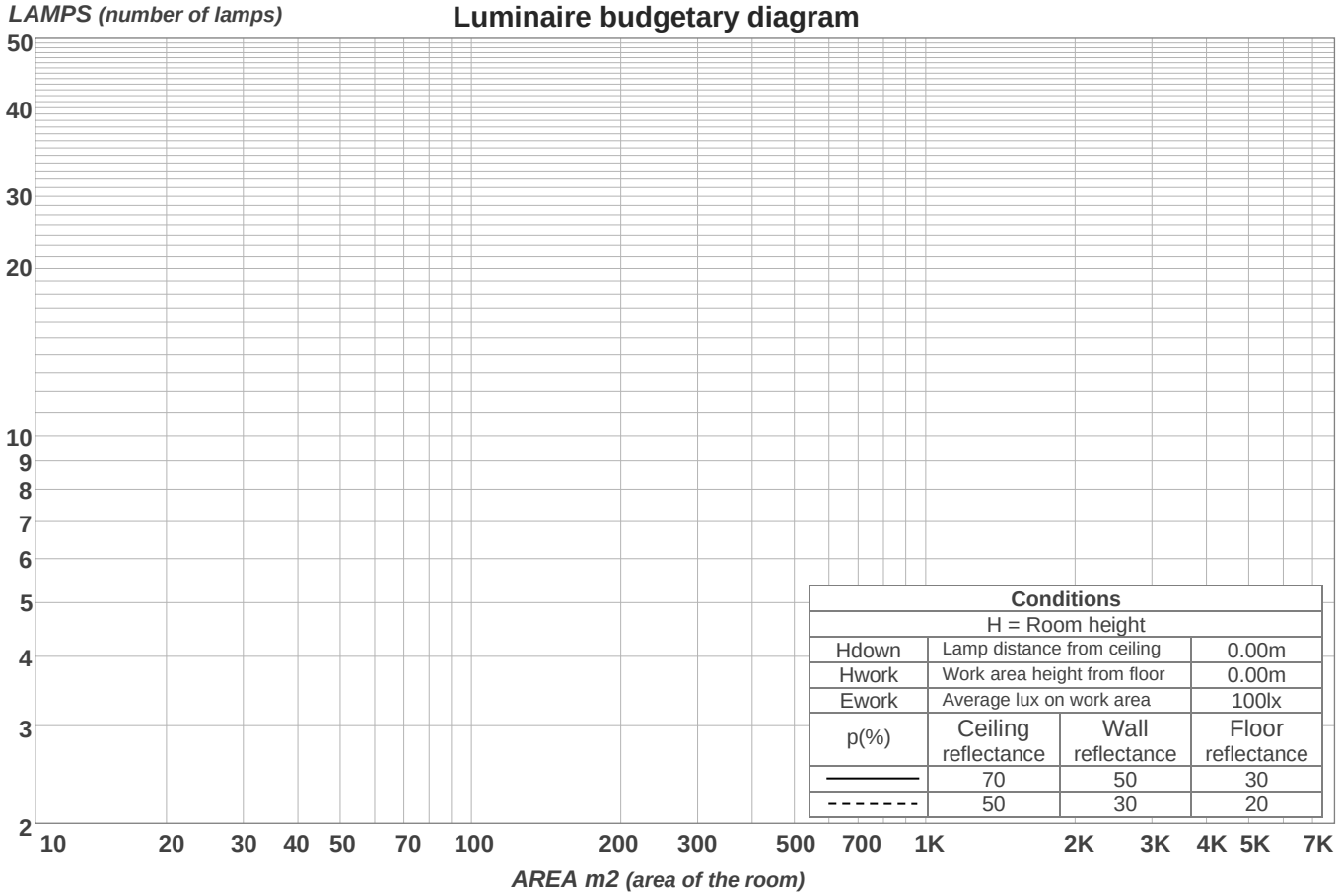
## Glare Evaluation According to UGR

| 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 | 12,2 | 13,6 | 12,5 | 13,9 | 14,2 | 12,3 | 13,6 | 12,5 | 14,0 | 14,2 |
| | 3H | 14,3 | 15,7 | 14,7 | 16,0 | 16,2 | 14,0 | 15,4 | 14,4 | 15,7 | 15,9 |
| | 4H | 15,3 | 16,7 | 15,7 | 17,0 | 17,2 | 14,8 | 16,1 | 15,2 | 16,4 | 16,7 |
| | 6H | 16,4 | 17,7 | 16,7 | 17,9 | 18,3 | 15,5 | 16,7 | 15,8 | 17,0 | 17,4 |
| | 8H | 16,9 | 18,1 | 17,3 | 18,4 | 18,8 | 15,8 | 16,9 | 16,1 | 17,2 | 17,7 |
| | 12H | 17,4 | 18,5 | 17,8 | 18,9 | 19,3 | 16,0 | 17,1 | 16,3 | 17,4 | 17,9 |
| 4H | 2H | 12,9 | 14,3 | 13,3 | 14,6 | 14,8 | 12,9 | 14,3 | 13,3 | 14,6 | 14,8 |
| | 3H | 15,3 | 16,4 | 15,6 | 16,8 | 17,2 | 14,9 | 16,1 | 15,3 | 16,4 | 16,9 |
| | 4H | 16,4 | 17,5 | 16,9 | 17,9 | 18,5 | 15,8 | 16,9 | 16,2 | 17,3 | 17,8 |
| | 6H | 17,6 | 18,7 | 18,1 | 19,0 | 19,4 | 16,6 | 17,6 | 17,1 | 18,0 | 18,4 |
| | 8H | 18,2 | 19,2 | 18,7 | 19,6 | 20,0 | 17,0 | 17,9 | 17,5 | 18,3 | 18,7 |
| | 12H | 18,8 | 19,6 | 19,3 | 20,1 | 20,6 | 17,2 | 18,1 | 17,7 | 18,5 | 19,0 |
| 8H | 4H | 16,8 | 17,8 | 17,3 | 18,2 | 18,5 | 16,3 | 17,2 | 16,8 | 17,6 | 18,0 |
| | 6H | 18,3 | 19,1 | 18,8 | 19,5 | 20,1 | 17,3 | 18,1 | 17,8 | 18,6 | 19,1 |
| | 8H | 19,1 | 19,8 | 19,6 | 20,3 | 20,9 | 17,8 | 18,5 | 18,3 | 19,0 | 19,7 |
| | 12H | 19,8 | 20,4 | 20,4 | 20,9 | 21,6 | 18,2 | 18,8 | 18,8 | 19,3 | 19,9 |
| 12H | 4H | 16,9 | 17,7 | 17,4 | 18,1 | 18,6 | 16,4 | 17,2 | 16,9 | 17,6 | 18,1 |
| | 6H | 18,4 | 19,1 | 19,0 | 19,6 | 20,3 | 17,5 | 18,2 | 18,1 | 18,7 | 19,4 |
| | 8H | 19,3 | 19,9 | 19,9 | 20,4 | 21,0 | 18,1 | 18,7 | 18,7 | 19,2 | 19,8 |
| Variation of the observer position for the luminaire distance S | | | | | | | | | | | |
| S = 1.0H | | 0,1 / 0,0 | | | | | 0,0 / 0,0 | | | | |
| S = 1.5H | | 0,1 / -0,1 | | | | | 0,1 / -0,1 | | | | |
| S = 2.0H | | 0,2 / -0,2 | | | | | 0,3 / -0,3 | | | | |
| Standard table | | n/a | | | | | n/a | | | | |
| Correction summand | | n/a | | | | | n/a | | | | |
| Corrected glare indices referring to 61,0 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 | 117 | 117 | 117 | 117 | 113 | 113 | 113 | 113 | 106 | 106 | 106 | 100 | 100 | 100 | 94 | 94 | 94 | 92 |
| 1 | 104 | 98 | 92 | 88 | 100 | 95 | 90 | 85 | 89 | 85 | 81 | 83 | 80 | 77 | 78 | 76 | 73 | 70 |
| 2 | 93 | 84 | 76 | 69 | 90 | 81 | 74 | 68 | 76 | 70 | 65 | 71 | 66 | 62 | 67 | 63 | 59 | 56 |
| 3 | 84 | 73 | 63 | 56 | 81 | 70 | 62 | 55 | 66 | 59 | 53 | 62 | 56 | 51 | 58 | 53 | 49 | 46 |
| 4 | 77 | 64 | 54 | 47 | 74 | 62 | 53 | 46 | 58 | 51 | 44 | 55 | 48 | 43 | 52 | 46 | 41 | 39 |
| 5 | 70 | 57 | 47 | 40 | 68 | 55 | 46 | 39 | 52 | 44 | 38 | 49 | 42 | 37 | 46 | 40 | 36 | 33 |
| 6 | 65 | 51 | 41 | 34 | 62 | 49 | 40 | 34 | 47 | 39 | 33 | 44 | 37 | 32 | 42 | 36 | 31 | 29 |
| 7 | 60 | 46 | 37 | 30 | 58 | 45 | 36 | 30 | 42 | 35 | 29 | 40 | 33 | 28 | 38 | 32 | 27 | 25 |
| 8 | 56 | 42 | 33 | 27 | 54 | 41 | 32 | 26 | 39 | 31 | 26 | 37 | 30 | 25 | 35 | 29 | 24 | 22 |
| 9 | 52 | 38 | 30 | 24 | 50 | 37 | 29 | 24 | 35 | 28 | 23 | 34 | 27 | 22 | 32 | 26 | 22 | 20 |
| 10 | 49 | 35 | 27 | 22 | 47 | 34 | 27 | 21 | 33 | 26 | 21 | 31 | 25 | 20 | 30 | 24 | 20 | 18 |

## Luminaire budgetary diagram

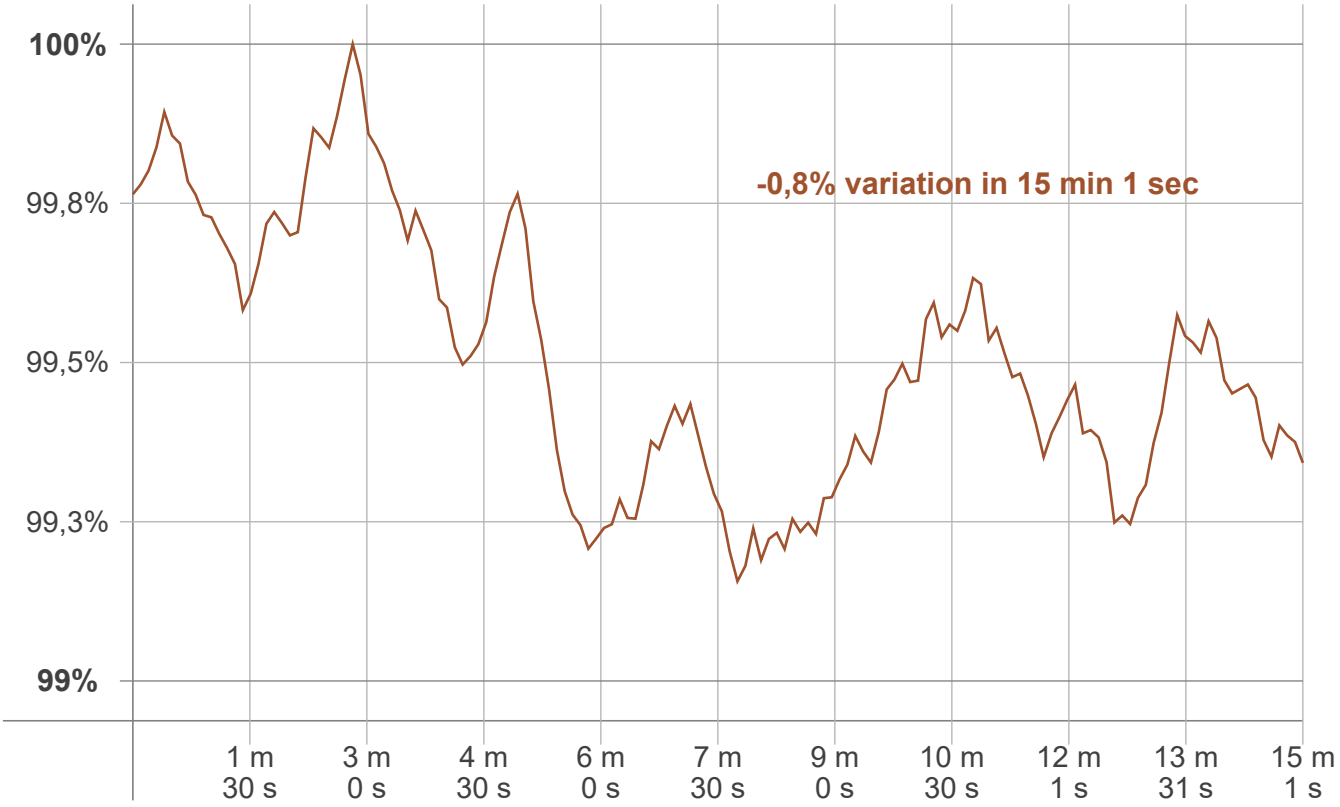



## Zonal Lumen Summary

| 0°-10° | 10°-20° | 20°-30° | 30°-40° | 40°-50° | 50°-60° | 60°-70° | 70°-80° | 80°-90° |
|---|---|---|---|---|---|---|---|---|
| 1,46 lm | 4,21 lm | 6,47 lm | 8,02 lm | 8,73 lm | 8,59 lm | 7,68 lm | 6,22 lm | 4,48 lm |

| 90°-100° | 100°-110° | 110°-120° | 120°-130° | 130°-140° | 140°-150° | 150°-160° | 160°-170° | 170°-180° |
|---|---|---|---|---|---|---|---|---|
| 1,69 lm | 1,17 lm | 0,773 lm | 0,630 lm | 0,396 lm | 0,202 lm | 0,149 lm | 0,091 lm | 0,031 lm |

## Warmup curve




## Warmup result

| | |
|---|---|
| **Warmup time:** | **Lamp stabilized in 15 min 1 sec** |
| **Warmup variation** | **-0,8%** |

## Warmup conditions

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

## Color temperature change

| CCT start | CCT change | CCT end |
|---|---|---|
| 2690 K | +10 K | 2700 K |

## Output change

| Output start | Output change | Output end |
|---|---|---|
| 61,1 lm | -0,1 lm | 61,0 lm |