

Light efficiency:

123 Lumen/Watt

Light quality:

CRI: 94,8

Color temperature:

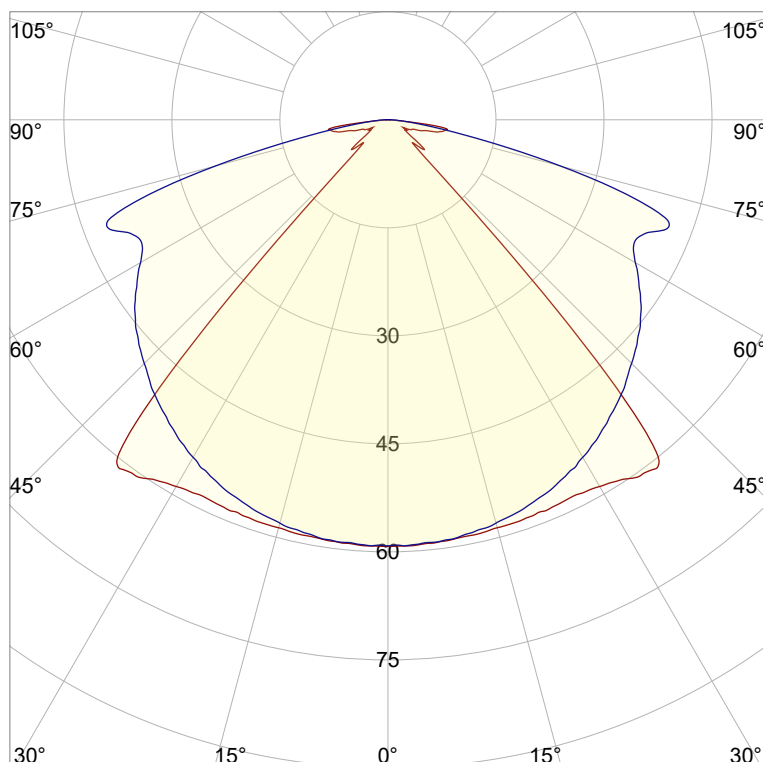
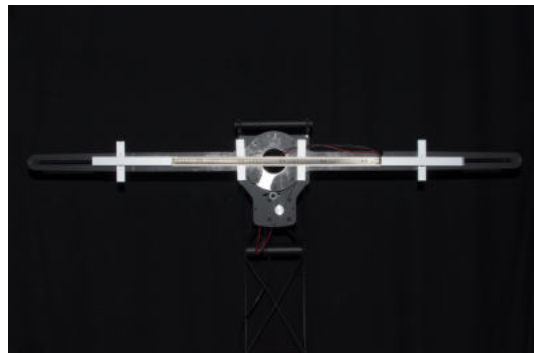
2743 K

Output: 148 lm

Peak: 61,8 cd

Power: 1,2 W

PF: 1,0



Product name:

Mayflower-3_510mm_927_Lens-90°-Transparent

Item number:

NP/L1C/10C/G1/L1C/0510/927/L9T

Date and time:

10.06.2022 15:10:14

Description:

Rank: C80-AD-8GB

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

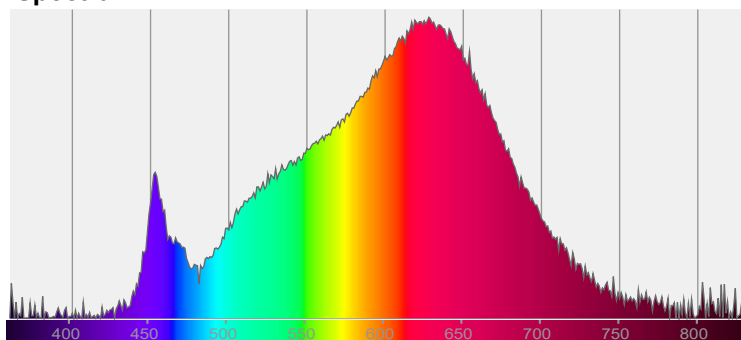


CIE 1931

x: 0,456

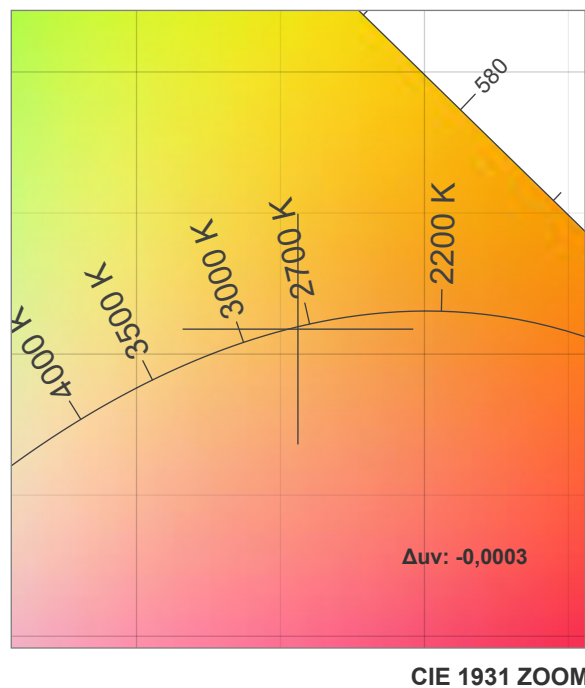
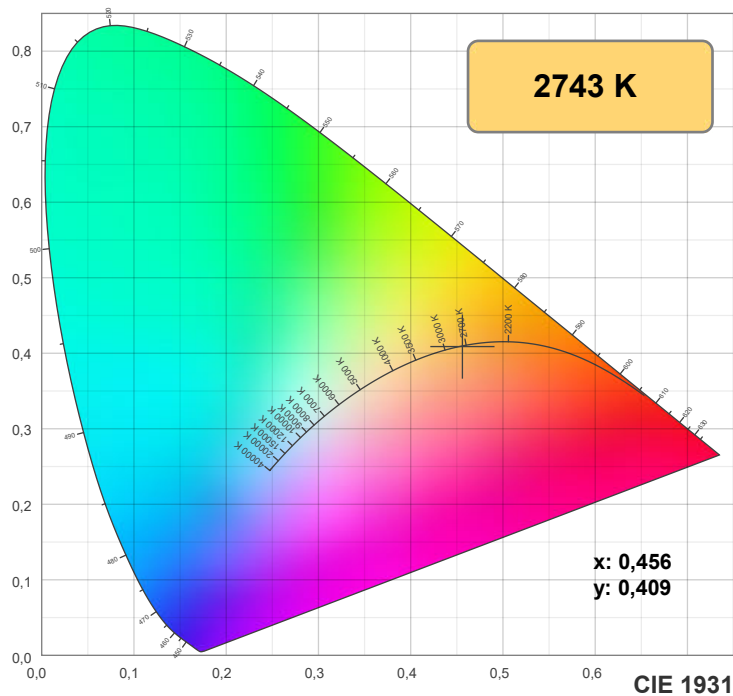
y: 0,409

Spectra

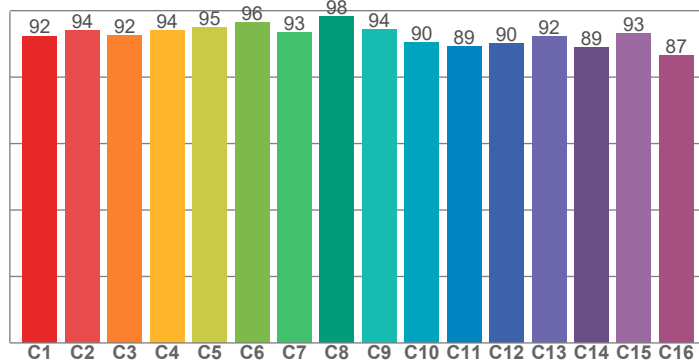


Power

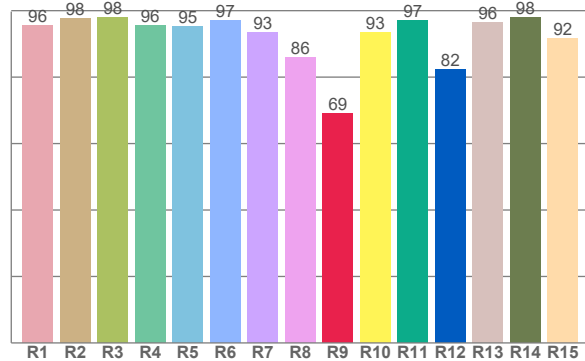
Voltage: 24,0 V
Current: 0,050 A
Frequency: 0 Hz



TM30: 92,5



CRI: 94,8 (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 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 95,7 | 97,7 | 98,1 | 95,7 | 95,2 | 96,9 | 93,5 | 85,9 | 68,9 | 93,4 | 97,0 | 82,3 | 96,4 | 98,0 | 91,7 |

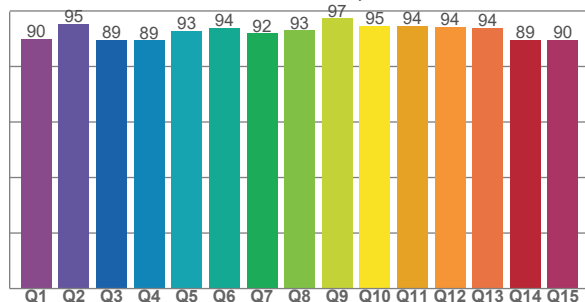
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 92,4 | 94,0 | 92,5 | 94,1 | 94,9 | 96,4 | 93,4 | 98,2 | 94,3 | 90,4 | 89,2 | 90,2 | 92,2 | 88,9 | 93,0 | 86,6 |

CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 89,9 | 95,2 | 89,5 | 89,4 | 92,7 | 93,8 | 91,9 | 93,0 | 97,3 | 94,7 | 94,5 | 94,2 | 93,9 | 89,5 | 89,5 |

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 deviation from black body |
|-------------------|-----------------------|---------------|----------------|-------------|---------------------|---------------------------|---------------------------|------------------|------------------|---------------------------------|
| CCT | CRI | CRI R9 | TM30 Rf | TM30 Rg | CQS | x | y | u | v | Δuv |
| 2743 K | 94,8 | 68,9 | 92,5 | 99,6 | 92,0 | 0,456 | 0,409 | 0,261 | 0,351 | -0,0003 |

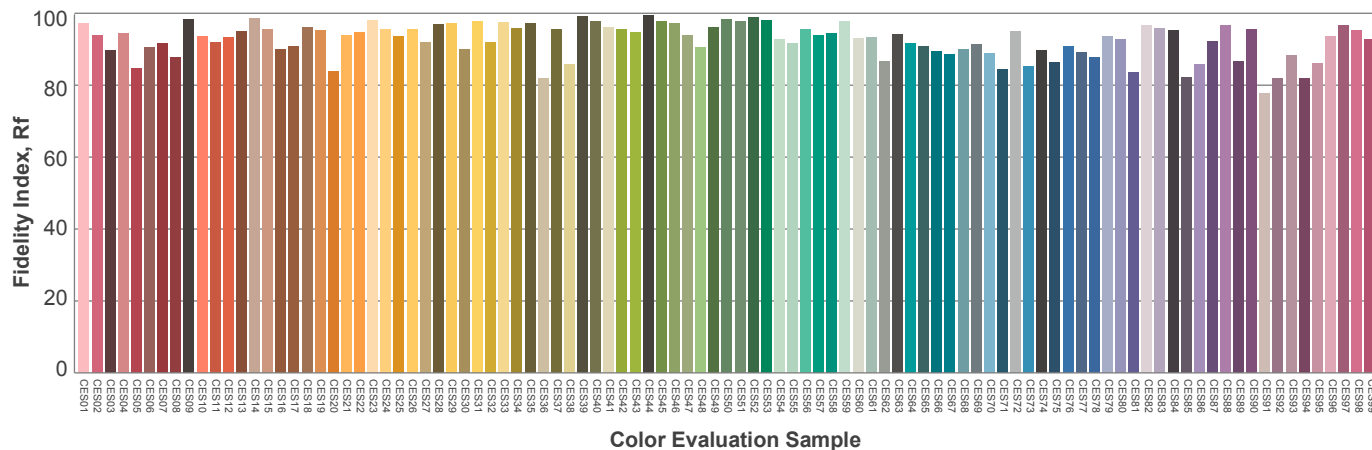
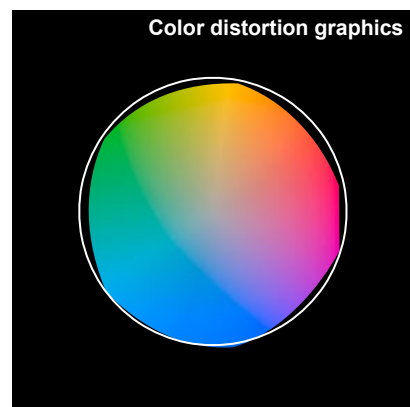
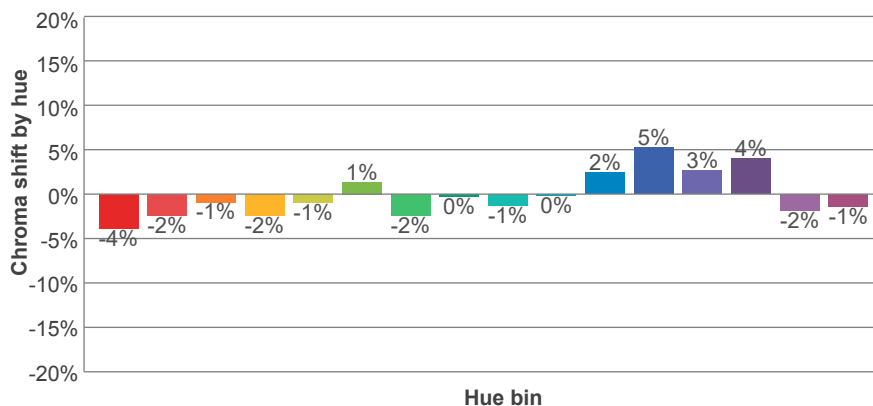
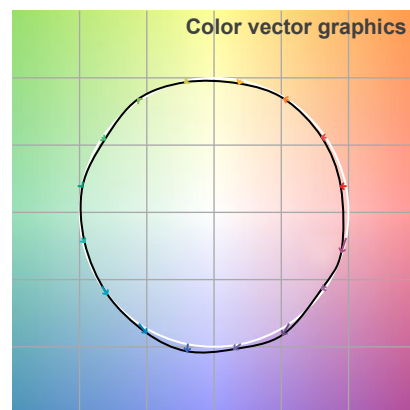
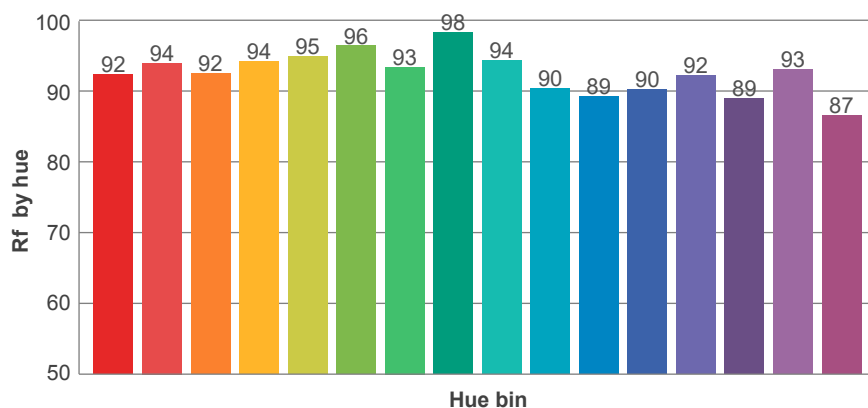
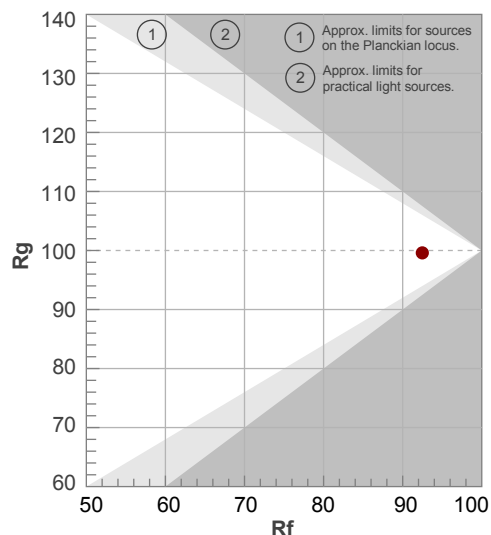
Rf 92,5

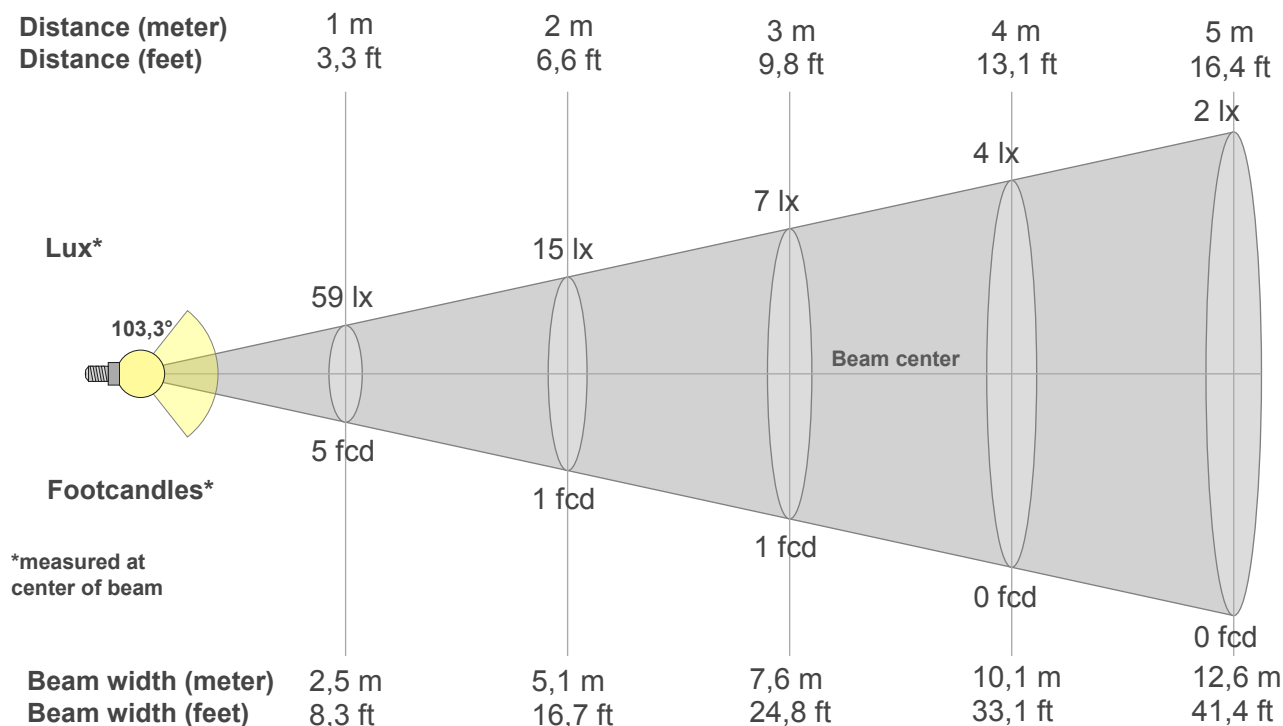
Fidelity index Rf

Rg 99,6

Gammut index Rg

| Hue Bin | R _f | Graphic shifts (%) | |
|---------|----------------|--------------------|------|
| | | Chroma | Hue |
| 1 | 92 | -4% | 0% |
| 2 | 94 | -2% | 2% |
| 3 | 92 | -1% | 4% |
| 4 | 94 | -2% | 0% |
| 5 | 95 | -1% | 2% |
| 6 | 96 | 1% | 0% |
| 7 | 93 | -2% | 0% |
| 8 | 98 | 0% | 0% |
| 9 | 94 | -1% | 3% |
| 10 | 90 | 0% | 6% |
| 11 | 89 | 2% | 8% |
| 12 | 90 | 5% | 0% |
| 13 | 92 | 3% | -5% |
| 14 | 89 | 4% | -8% |
| 15 | 93 | -2% | -3% |
| 16 | 87 | -1% | -10% |





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 |
| 59lx | 15lx | 7lx | 4lx | 2lx | 2lx | 1lx | 1lx | 1lx | 1lx | 0lx | 0lx | 0lx | 0lx | 0lx | 0lx | 0lx | 0lx | 0lx | 0lx |
| 5,5fcd | 1,4fcd | 0,6fcd | 0,3fcd | 0,2fcd | 0,2fcd | 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° |
|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 59,2 | 59,1 | 58,9 | 58,7 | 58,5 | 58,3 | 58,8 | 60,5 | 52,6 | 6,5 | 6,4 | 3,7 | 2,7 | 3,1 | 3,9 | 6,1 | 8,2 | 1,6 | 0,2 | 0,0 |
| 100% | 100% | 99% | 99% | 99% | 99% | 99% | 102% | 89% | 11% | 11% | 6% | 5% | 5% | 7% | 10% | 14% | 3% | 0% | 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° |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|
| 59,2 | 59,0 | 58,7 | 58,0 | 57,0 | 55,7 | 54,1 | 52,2 | 50,2 | 47,8 | 45,6 | 42,8 | 39,7 | 38,5 | 41,3 | 24,8 | 8,0 | 2,0 | 0,3 | 0,0 |
| 100% | 100% | 99% | 98% | 96% | 94% | 91% | 88% | 85% | 81% | 77% | 72% | 67% | 65% | 70% | 42% | 14% | 3% | 1% | 0% |

Intensities in 180° c-plane

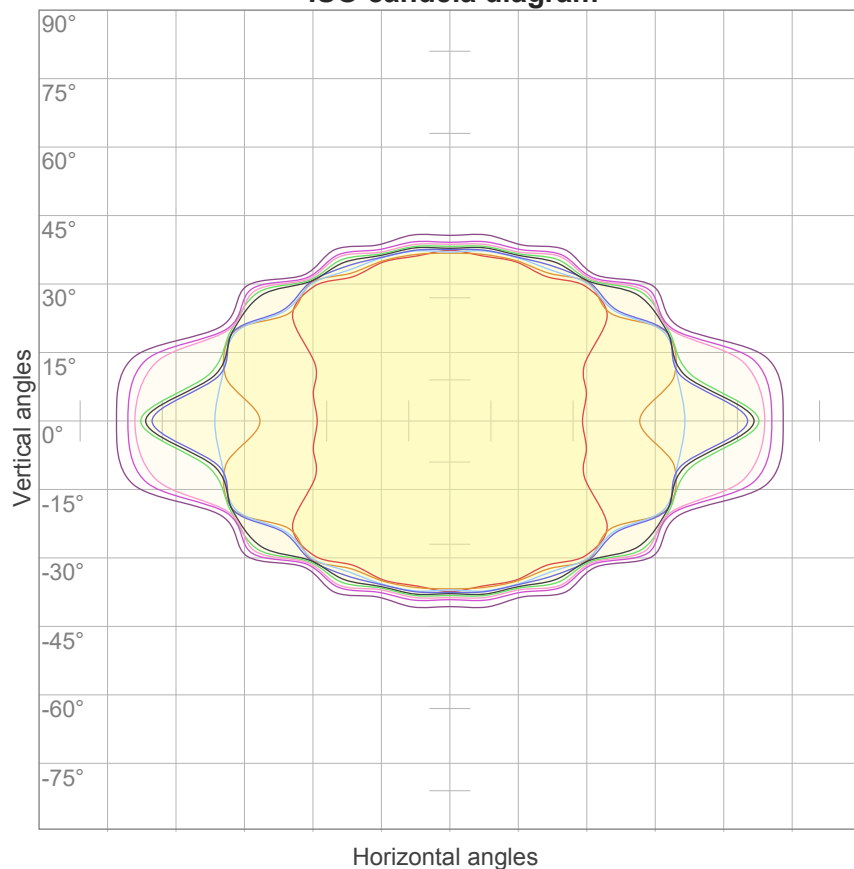
| 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° | 95° |
|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 59,2 | 59,1 | 58,9 | 58,7 | 58,5 | 58,3 | 58,8 | 60,5 | 52,6 | 6,5 | 6,4 | 3,7 | 2,7 | 3,1 | 3,9 | 6,1 | 8,2 | 1,6 | 0,2 | 0,0 |
| 100% | 100% | 99% | 99% | 99% | 99% | 99% | 102% | 89% | 11% | 11% | 6% | 5% | 5% | 7% | 10% | 14% | 3% | 0% | 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° |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|
| 59,2 | 59,0 | 58,7 | 58,0 | 57,0 | 55,7 | 54,1 | 52,2 | 50,2 | 47,8 | 45,6 | 42,8 | 39,7 | 38,5 | 41,3 | 24,8 | 8,0 | 2,0 | 0,3 | 0,0 |
| 100% | 100% | 99% | 98% | 96% | 94% | 91% | 88% | 85% | 81% | 77% | 72% | 67% | 65% | 70% | 42% | 14% | 3% | 1% | 0% |

| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 103,3° | 138,7° | 165,4° | 88,1% | 68,7% |

ISO candela diagram



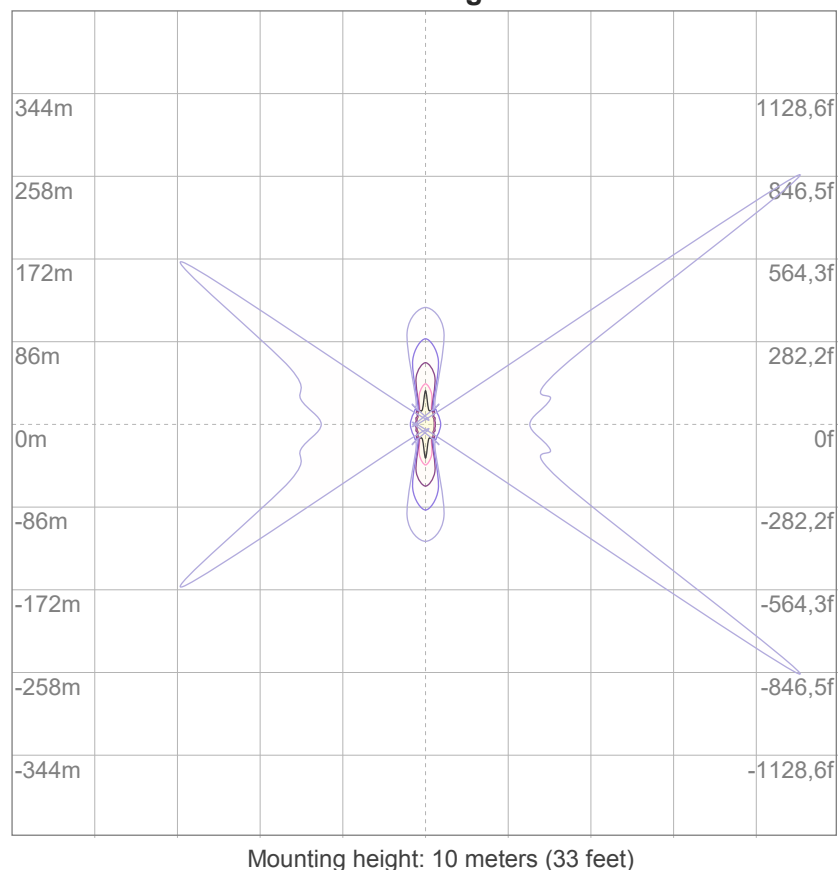
| | |
|-----|-------|
| 10% | 6 cd |
| 20% | 12 cd |
| 30% | 18 cd |
| 40% | 24 cd |
| 50% | 30 cd |
| 60% | 35 cd |
| 70% | 41 cd |
| 80% | 47 cd |
| 90% | 53 cd |

Conditions:

Number of c-planes: 16

Candela at center: 59 cd

ISO lux diagram



| | |
|-----|----------|
| 3% | 17,7m lx |
| 5% | 29,6m lx |
| 10% | 59,2m lx |
| 30% | 0,177 lx |
| 50% | 0,296 lx |

Conditions:

Number of c-planes: 16

Lux at center: 0,592 lx

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

Glare Evaluation According to UGR

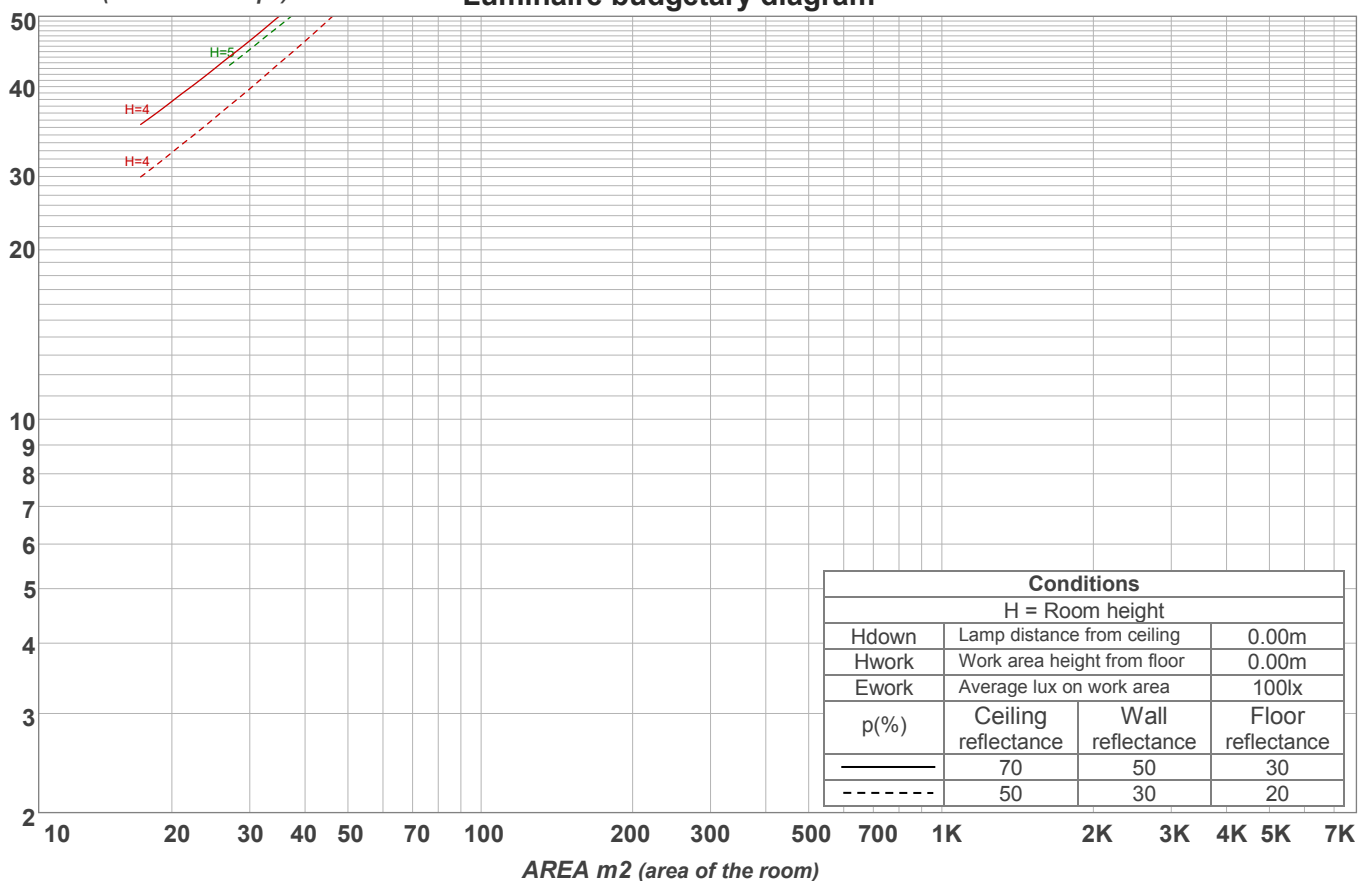
| | | | | | | | | | | | |
|---|-----|---|------|------|------|------|---|------|------|------|------|
| p Ceiling | | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
| p Walls | | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| p Floor | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Room size X Y | | Viewing direction at right angles to lamp axis | | | | | Viewing direction parallel to lamp axis | | | | |
| 2H | 2H | 11,9 | 12,9 | 12,1 | 13,2 | 13,4 | 18,8 | 19,9 | 19,0 | 20,2 | 20,4 |
| | 3H | 11,9 | 13,0 | 12,3 | 13,3 | 13,5 | 20,9 | 22,0 | 21,3 | 22,3 | 22,5 |
| | 4H | 12,4 | 13,5 | 12,8 | 13,7 | 14,0 | 22,0 | 23,0 | 22,4 | 23,3 | 23,5 |
| | 6H | 13,8 | 14,8 | 14,1 | 15,0 | 15,4 | 22,4 | 23,3 | 22,7 | 23,6 | 24,0 |
| | 8H | 14,5 | 15,4 | 14,9 | 15,7 | 16,1 | 22,4 | 23,3 | 22,7 | 23,6 | 24,0 |
| | 12H | 14,7 | 15,6 | 15,1 | 15,9 | 16,4 | 22,4 | 23,3 | 22,7 | 23,6 | 24,0 |
| 4H | 2H | 12,0 | 13,1 | 12,4 | 13,3 | 13,6 | 18,5 | 19,5 | 18,9 | 19,8 | 20,1 |
| | 3H | 12,2 | 13,1 | 12,6 | 13,5 | 13,9 | 20,7 | 21,6 | 21,1 | 21,9 | 22,4 |
| | 4H | 12,8 | 13,6 | 13,3 | 14,1 | 14,6 | 21,7 | 22,5 | 22,2 | 23,0 | 23,5 |
| | 6H | 14,6 | 15,4 | 15,1 | 15,8 | 16,1 | 22,1 | 22,9 | 22,6 | 23,3 | 23,6 |
| | 8H | 15,6 | 16,3 | 16,1 | 16,6 | 17,0 | 22,2 | 22,9 | 22,7 | 23,2 | 23,6 |
| | 12H | 15,9 | 16,5 | 16,4 | 16,9 | 17,4 | 22,2 | 22,8 | 22,7 | 23,2 | 23,6 |
| 8H | 4H | 12,9 | 13,6 | 13,4 | 14,0 | 14,3 | 21,6 | 22,3 | 22,1 | 22,7 | 23,1 |
| | 6H | 15,1 | 15,6 | 15,6 | 16,0 | 16,6 | 22,0 | 22,6 | 22,5 | 23,0 | 23,6 |
| | 8H | 16,3 | 16,8 | 16,8 | 17,3 | 17,9 | 22,1 | 22,6 | 22,6 | 23,1 | 23,7 |
| | 12H | 16,8 | 17,2 | 17,4 | 17,7 | 18,3 | 22,1 | 22,5 | 22,7 | 23,0 | 23,6 |
| 12H | 4H | 12,9 | 13,5 | 13,4 | 13,9 | 14,3 | 21,6 | 22,2 | 22,1 | 22,6 | 23,1 |
| | 6H | 15,1 | 15,6 | 15,6 | 16,1 | 16,7 | 22,0 | 22,5 | 22,5 | 23,0 | 23,6 |
| | 8H | 16,4 | 16,8 | 17,0 | 17,3 | 17,9 | 22,1 | 22,5 | 22,7 | 23,0 | 23,6 |
| Variation of the observer position for the luminaire distance S | | | | | | | | | | | |
| S = 1.0H | | 0,8 / -0,6 | | | | | 0,6 / -1,0 | | | | |
| S = 1.5H | | 1,5 / -0,7 | | | | | 2,0 / -3,5 | | | | |
| S = 2.0H | | 2,3 / -0,8 | | | | | 2,9 / -6,3 | | | | |
| Standard table | | n/a | | | | | n/a | | | | |
| Correction summand | | n/a | | | | | n/a | | | | |
| Corrected glare indices referring to 148 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 | 101 | 101 | 101 | 99 |
| 1 | 110 | 106 | 102 | 98 | 107 | 103 | 100 | 97 | 99 | 96 | 94 | 95 | 93 | 90 | 91 | 89 | 88 | 86 |
| 2 | 101 | 94 | 88 | 83 | 99 | 92 | 87 | 82 | 88 | 84 | 80 | 85 | 81 | 78 | 82 | 79 | 76 | 74 |
| 3 | 93 | 84 | 77 | 71 | 91 | 82 | 76 | 70 | 79 | 74 | 69 | 77 | 72 | 68 | 74 | 70 | 66 | 64 |
| 4 | 86 | 76 | 68 | 62 | 84 | 74 | 67 | 61 | 72 | 65 | 60 | 69 | 64 | 59 | 67 | 62 | 58 | 56 |
| 5 | 80 | 68 | 60 | 54 | 78 | 67 | 59 | 54 | 65 | 58 | 53 | 63 | 57 | 52 | 61 | 56 | 52 | 50 |
| 6 | 74 | 62 | 54 | 48 | 72 | 61 | 53 | 48 | 59 | 52 | 47 | 57 | 51 | 47 | 56 | 50 | 46 | 44 |
| 7 | 69 | 56 | 48 | 43 | 67 | 56 | 48 | 42 | 54 | 47 | 42 | 53 | 46 | 42 | 51 | 46 | 41 | 39 |
| 8 | 64 | 52 | 44 | 38 | 63 | 51 | 43 | 38 | 50 | 43 | 38 | 48 | 42 | 38 | 47 | 42 | 37 | 35 |
| 9 | 60 | 48 | 40 | 35 | 59 | 47 | 39 | 34 | 46 | 39 | 34 | 45 | 38 | 34 | 44 | 38 | 34 | 32 |
| 10 | 56 | 44 | 36 | 31 | 55 | 43 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 31 | 40 | 35 | 31 | 29 |

LAMPS (number of lamps)

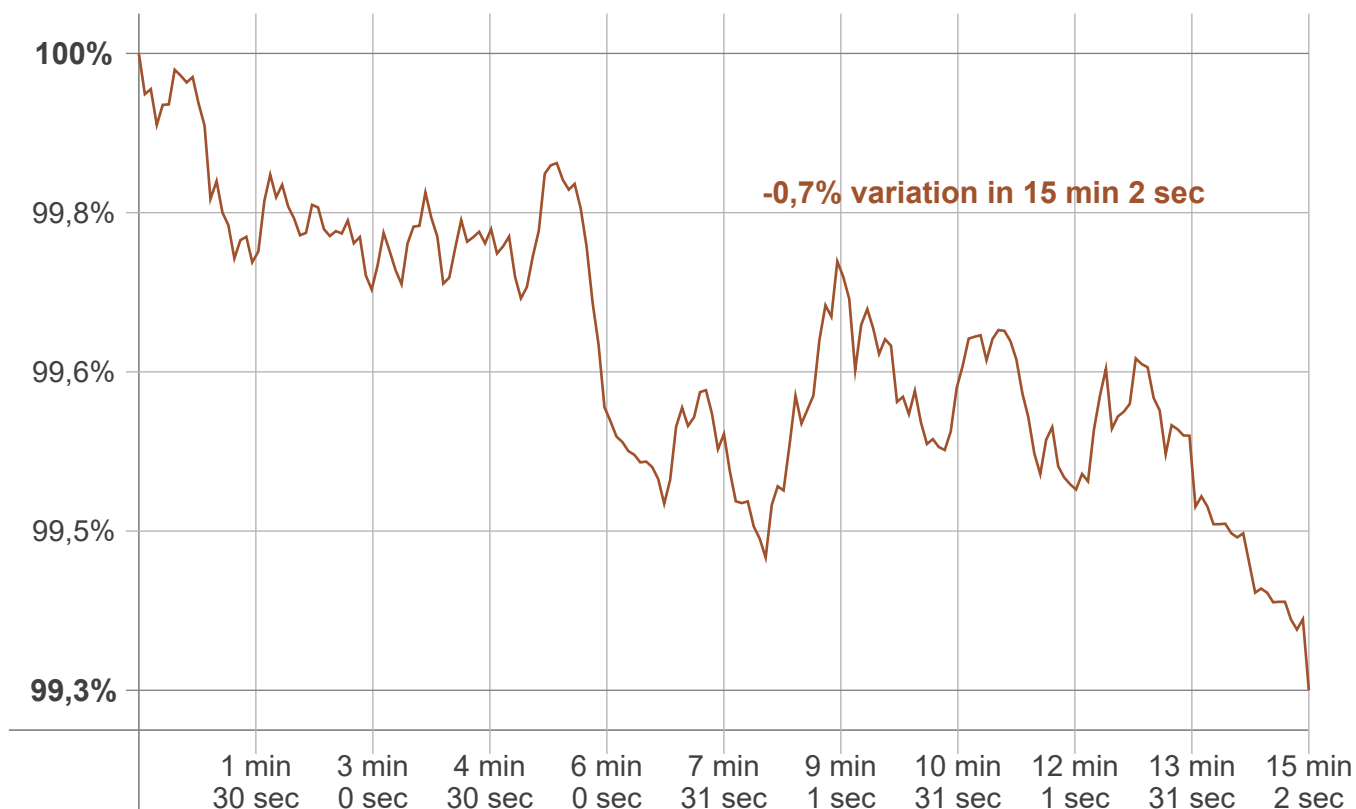
Luminaire budgetary diagram



Zonal Lumen Summary

| 0°-10° | 10°-20° | 20°-30° | 30°-40° | 40°-50° | 50°-60° | 60°-70° | 70°-80° | 80°-90° |
|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 5,63 lm | 16,5 lm | 26,4 lm | 35,4 lm | 29,6 lm | 16,5 lm | 7,12 lm | 6,16 lm | 3,00 lm |
| 90°-100° | 100°-110° | 110°-120° | 120°-130° | 130°-140° | 140°-150° | 150°-160° | 160°-170° | 170°-180° |
| 0,537 lm | 0,179 lm | 0,157 lm | 0,142 lm | 0,122 lm | 0,099 lm | 0,073 lm | 0,045 lm | 0,015 lm |

Warmup curve



Warmup result

| | |
|------------------|---------------------------------|
| Warmup time: | Lamp stabilized in 15 min 2 sec |
| Warmup variation | -0,7% |

Warmup conditions

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

Color temperature change

| CCT start | CCT change | CCT end |
|-----------|------------|---------|
| 2747 K | -4 K | 2743 K |

Output change

| Output start | Output change | Output end |
|--------------|---------------|------------|
| 148 lm | -1 lm | 148 lm |