

Light efficiency:

91 Lumen/Watt

Light quality:

CRI: 92,9

Color temperature:

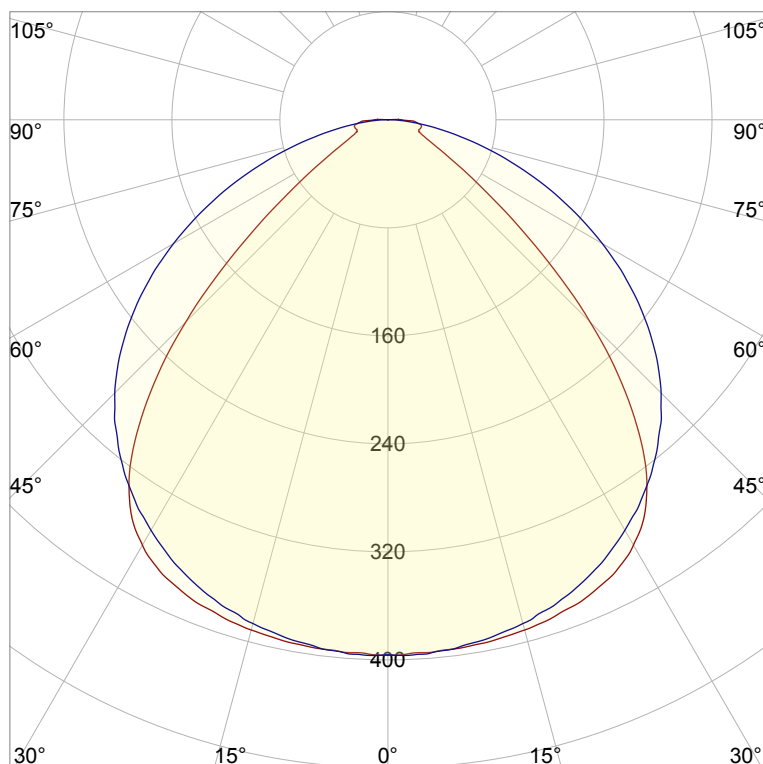
2677 K

Output: 1002 lm

Peak: 397 cd

Power: 11,0 W

PF: 1,0



Product name:

Pegasus-4-0508-927-L9F

Item number:

FLNP/L/09D0508/927/L9F

Date and time:

08.04.2021 11:22:52

Description:

Rank: F9-8GA

Toleranzen:

Lumen +/-4%

Candela +/-2,5%

Colour Temp +/-35 K

CRI +/-0,7

Angular Resolution 1 Grad step

Last Calibration 20-05-2020

Pruefer: Peter Ulrich

Pruefort: Lichtlabor

Gaustrasse 13

55411 Bingen am Rhein

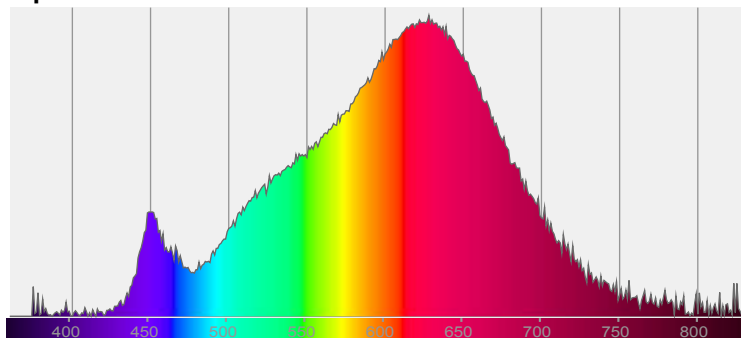


CIE 1931

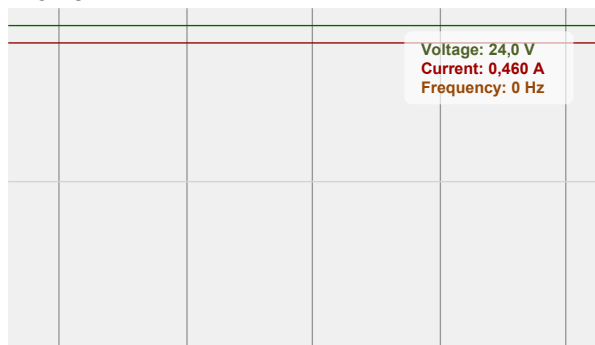
x: 0,463

y: 0,413

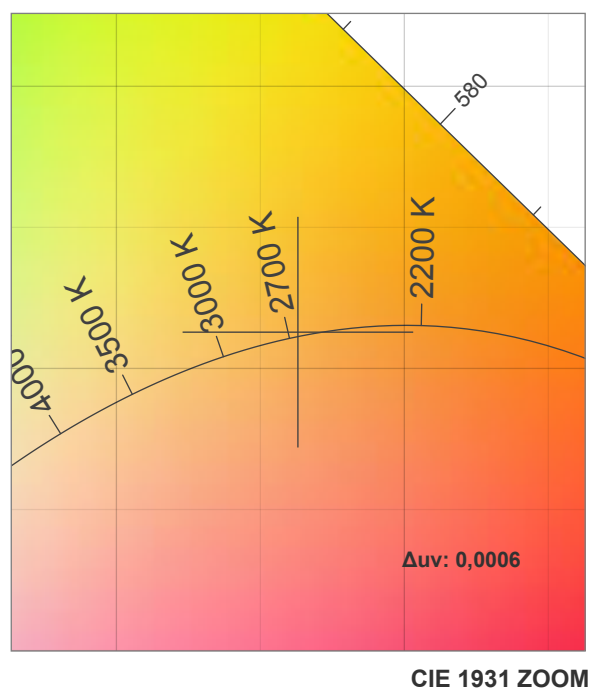
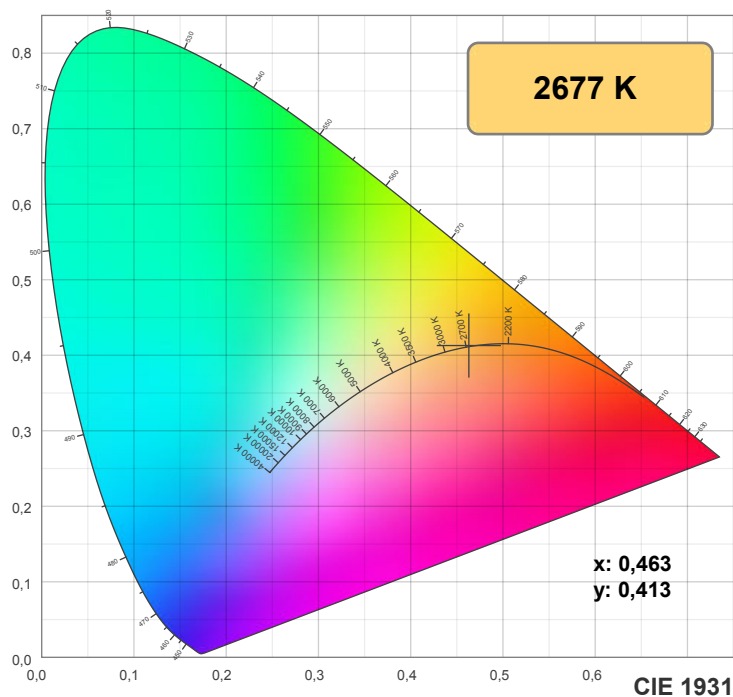
Spectra



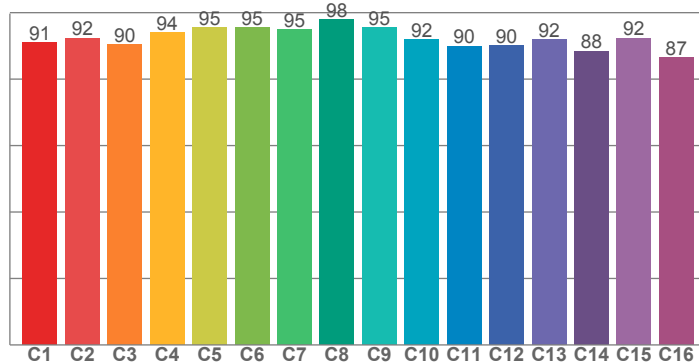
Power



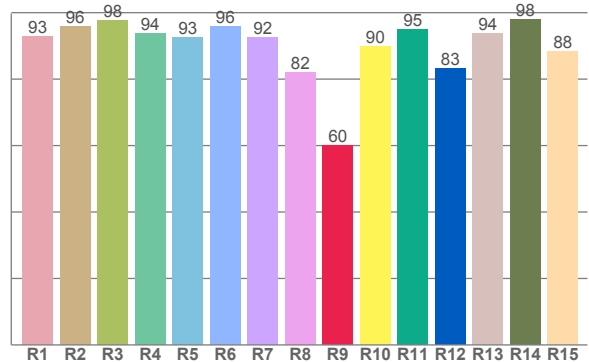
Voltage: 24,0 V
Current: 0,460 A
Frequency: 0 Hz



TM30: 92,3



CRI: 92,9 (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 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 93,0 | 96,0 | 97,7 | 93,7 | 92,6 | 95,7 | 92,4 | 82,0 | 59,9 | 89,8 | 94,9 | 83,3 | 93,8 | 97,8 | 88,4 |

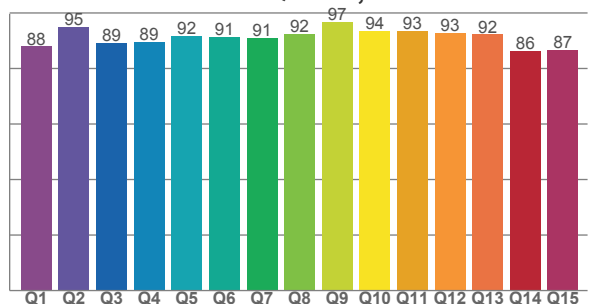
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 91,1 | 92,4 | 90,3 | 94,1 | 95,5 | 95,5 | 95,0 | 98,0 | 95,5 | 91,9 | 90,0 | 90,2 | 91,9 | 88,4 | 92,4 | 86,5 |

CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 87,9 | 95,0 | 89,3 | 89,4 | 91,6 | 91,4 | 90,9 | 92,3 | 96,8 | 93,6 | 93,4 | 92,8 | 92,3 | 86,4 | 86,8 |

CQS: 90,7



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 |
| 2677 K | 92,9 | 59,9 | 92,3 | 99,5 | 90,7 | 0,463 | 0,413 | 0,264 | 0,352 | 0,0006 |

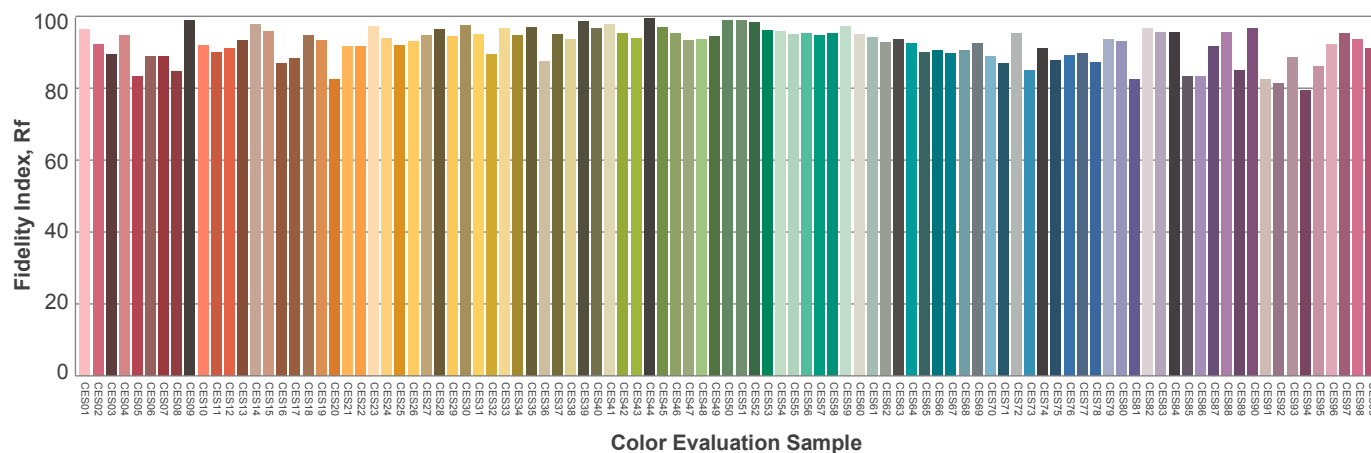
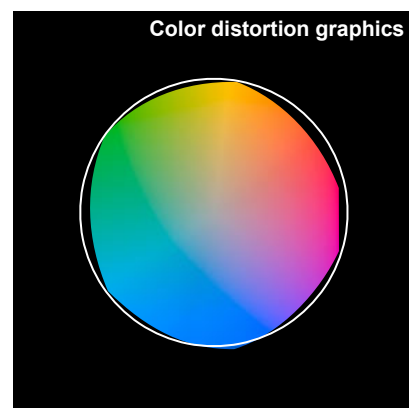
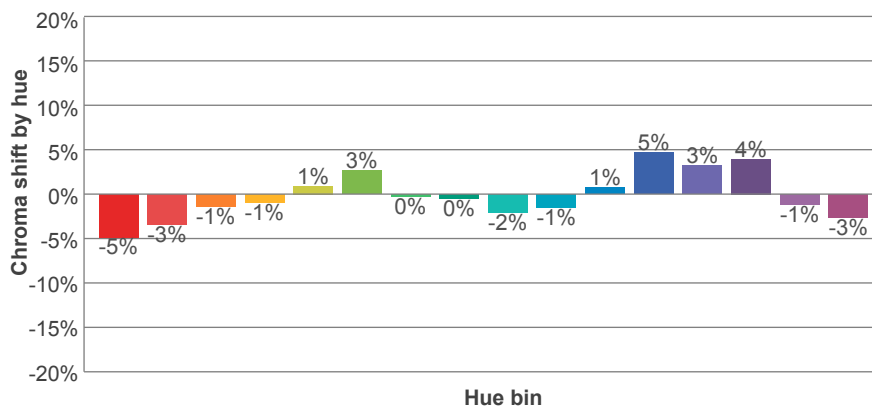
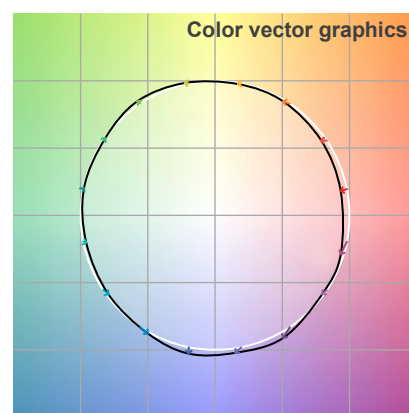
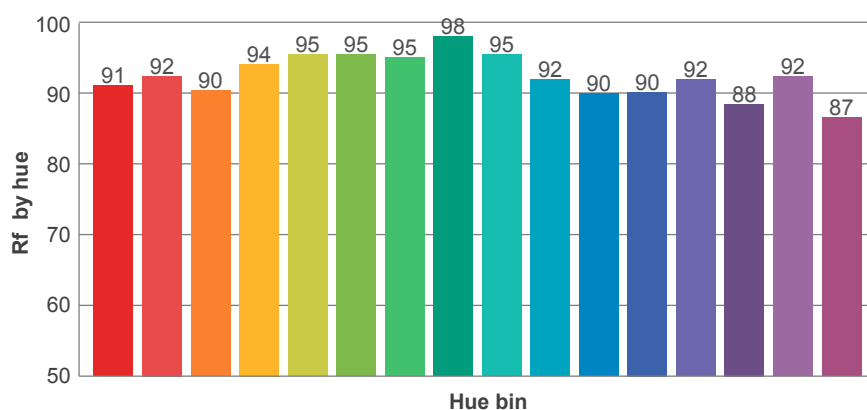
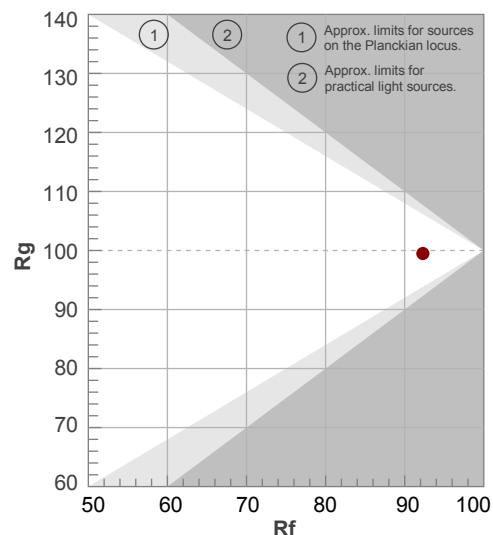
Rf 92,3

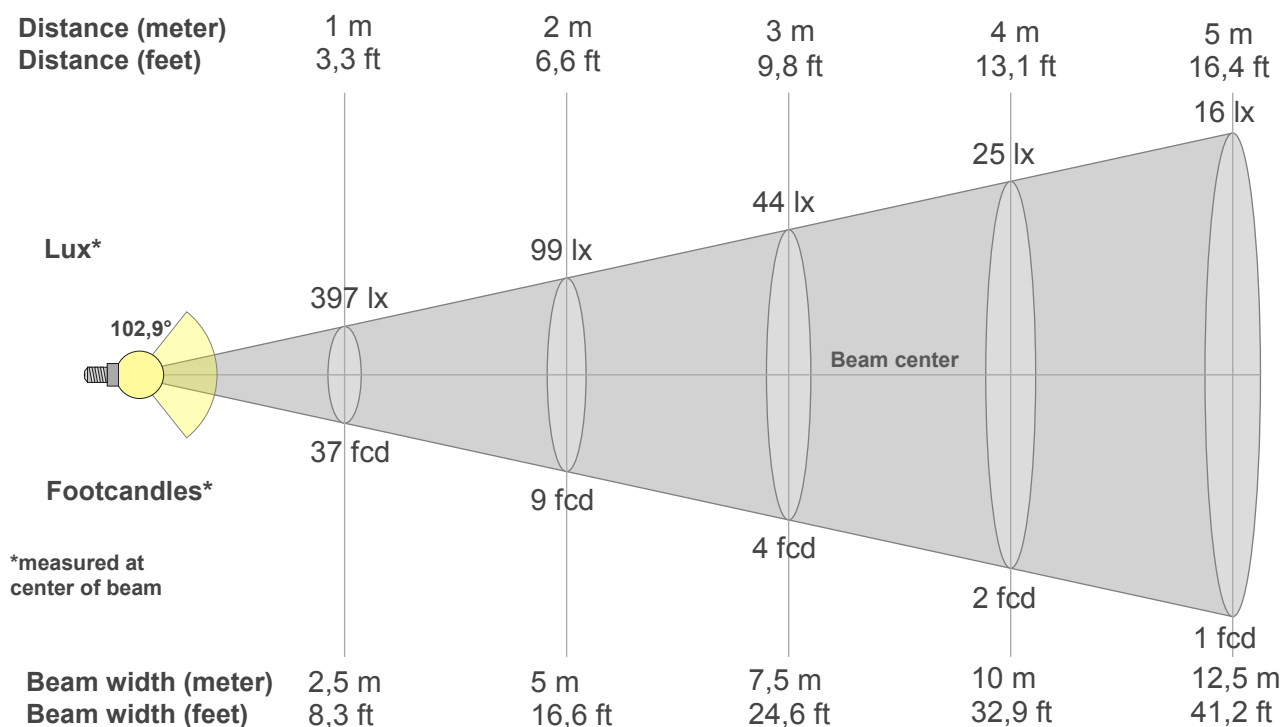
Fidelity index Rf

Rg 99,5

Gamut index Rg

| Hue Bin | R _f | Graphic shifts (%) | |
|---------|----------------|--------------------|------|
| | | Chroma | Hue |
| 1 | 91 | -5% | 0% |
| 2 | 92 | -3% | 3% |
| 3 | 90 | -1% | 5% |
| 4 | 94 | -1% | 2% |
| 5 | 95 | 1% | 3% |
| 6 | 95 | 3% | 1% |
| 7 | 95 | 0% | -2% |
| 8 | 98 | 0% | -1% |
| 9 | 95 | -2% | 1% |
| 10 | 92 | -1% | 5% |
| 11 | 90 | 1% | 7% |
| 12 | 90 | 5% | 1% |
| 13 | 92 | 3% | -5% |
| 14 | 88 | 4% | -8% |
| 15 | 92 | -1% | -4% |
| 16 | 87 | -3% | -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 |
| 397lx | 99lx | 44lx | 25lx | 16lx | 11lx | 8lx | 6lx | 5lx | 4lx | 3lx | 3lx | 2lx | 2lx | 2lx | 2lx | 1lx | 1lx | 1lx | 1lx |
| 36,8fcd | 9,2fcd | 4,1fcd | 2,3fcd | 1,5fcd | 1fcd | 0,8fcd | 0,6fcd | 0,5fcd | 0,4fcd | 0,3fcd | 0,3fcd | 0,2fcd | 0,2fcd | 0,2fcd | 0,1fcd | 0,1fcd | 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° |
|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 397 | 396 | 394 | 391 | 386 | 378 | 364 | 334 | 281 | 211 | 136 | 78 | 45 | 30 | 25 | 25 | 25 | 21 | 10 | 0 |
| 100% | 100% | 99% | 99% | 97% | 95% | 92% | 84% | 71% | 53% | 34% | 20% | 11% | 8% | 6% | 6% | 6% | 5% | 3% | 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° |
|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 397 | 396 | 392 | 386 | 378 | 366 | 351 | 333 | 311 | 286 | 256 | 221 | 183 | 143 | 104 | 68 | 37 | 15 | 3 | 3 |
| 100% | 100% | 99% | 97% | 95% | 92% | 88% | 84% | 78% | 72% | 64% | 56% | 46% | 36% | 26% | 17% | 9% | 4% | 1% | 1% |

Intensities in 180° c-plane

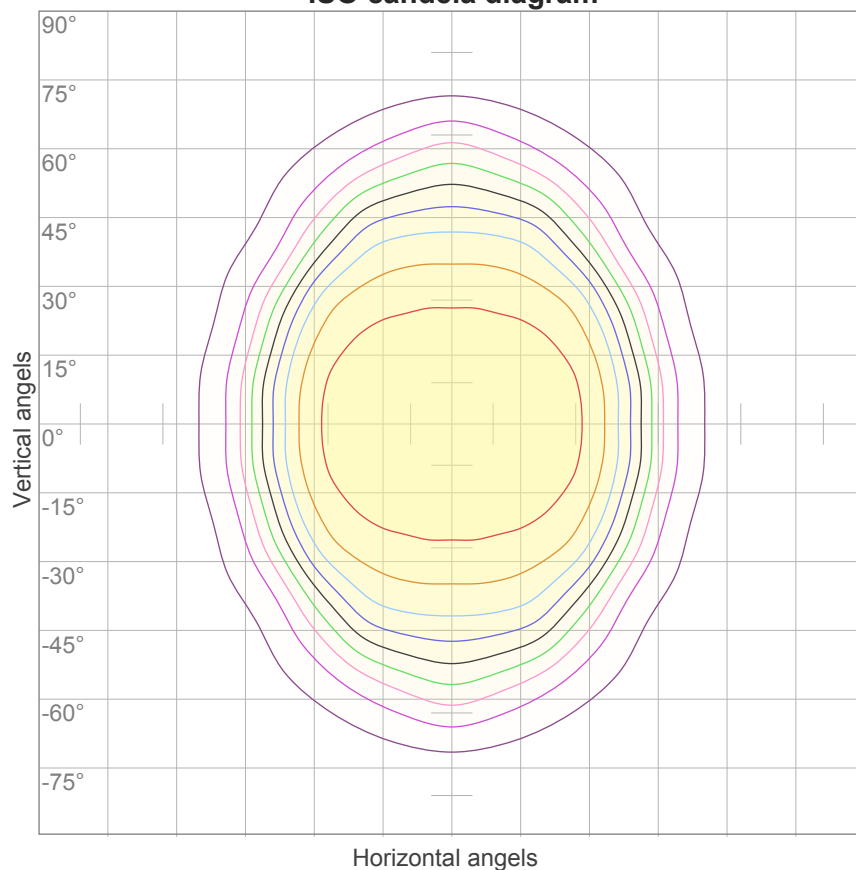
| 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° | 95° |
|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 397 | 396 | 394 | 391 | 386 | 378 | 364 | 334 | 281 | 211 | 136 | 78 | 45 | 30 | 25 | 25 | 25 | 21 | 10 | 0 |
| 100% | 100% | 99% | 99% | 97% | 95% | 92% | 84% | 71% | 53% | 34% | 20% | 11% | 8% | 6% | 6% | 6% | 5% | 3% | 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° |
|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 397 | 396 | 392 | 386 | 378 | 366 | 351 | 333 | 311 | 286 | 256 | 221 | 183 | 143 | 104 | 68 | 37 | 15 | 3 | 3 |
| 100% | 100% | 99% | 97% | 95% | 92% | 88% | 84% | 78% | 72% | 64% | 56% | 46% | 36% | 26% | 17% | 9% | 4% | 1% | 1% |

| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 102,9° | 138,2° | 177,1° | 86,0% | 63,4% |

ISO candela diagram



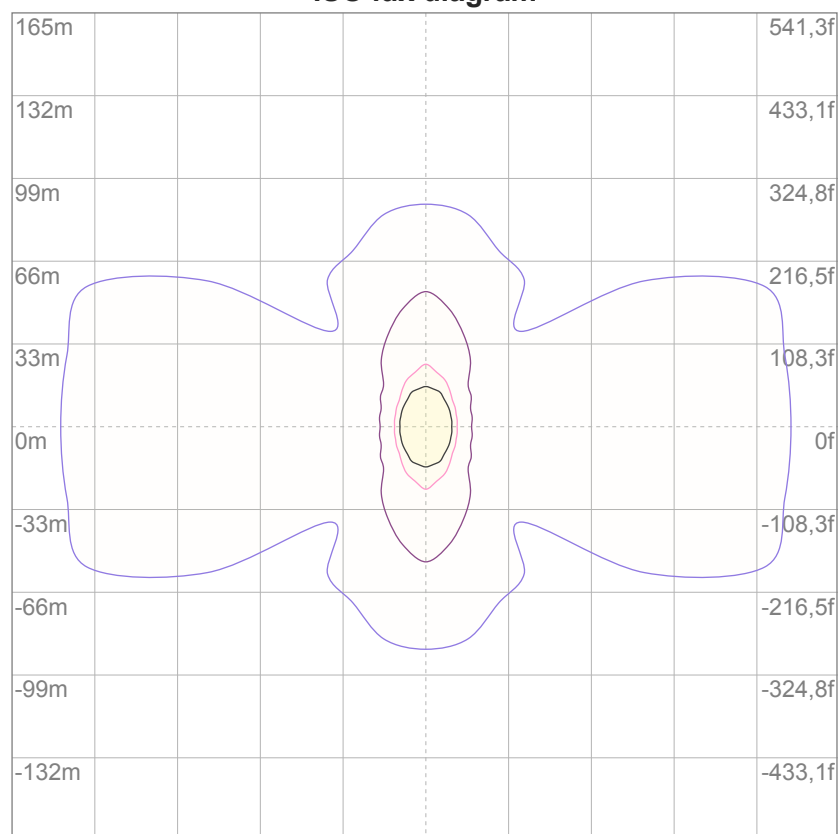
| | |
|-----|--------|
| 10% | 40 cd |
| 20% | 79 cd |
| 30% | 119 cd |
| 40% | 159 cd |
| 50% | 198 cd |
| 60% | 238 cd |
| 70% | 278 cd |
| 80% | 317 cd |
| 90% | 357 cd |

Conditions:

Number of c-planes: 16

Candela at center: 397 cd

ISO lux diagram



| | |
|-----|----------|
| 3% | 0,119 lx |
| 5% | 0,198 lx |
| 10% | 0,397 lx |
| 30% | 1,19 lx |
| 50% | 1,98 lx |

Conditions:

Number of c-planes: 16

Lux at center: 3,97 lx

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

Glare Evaluation According to UGR

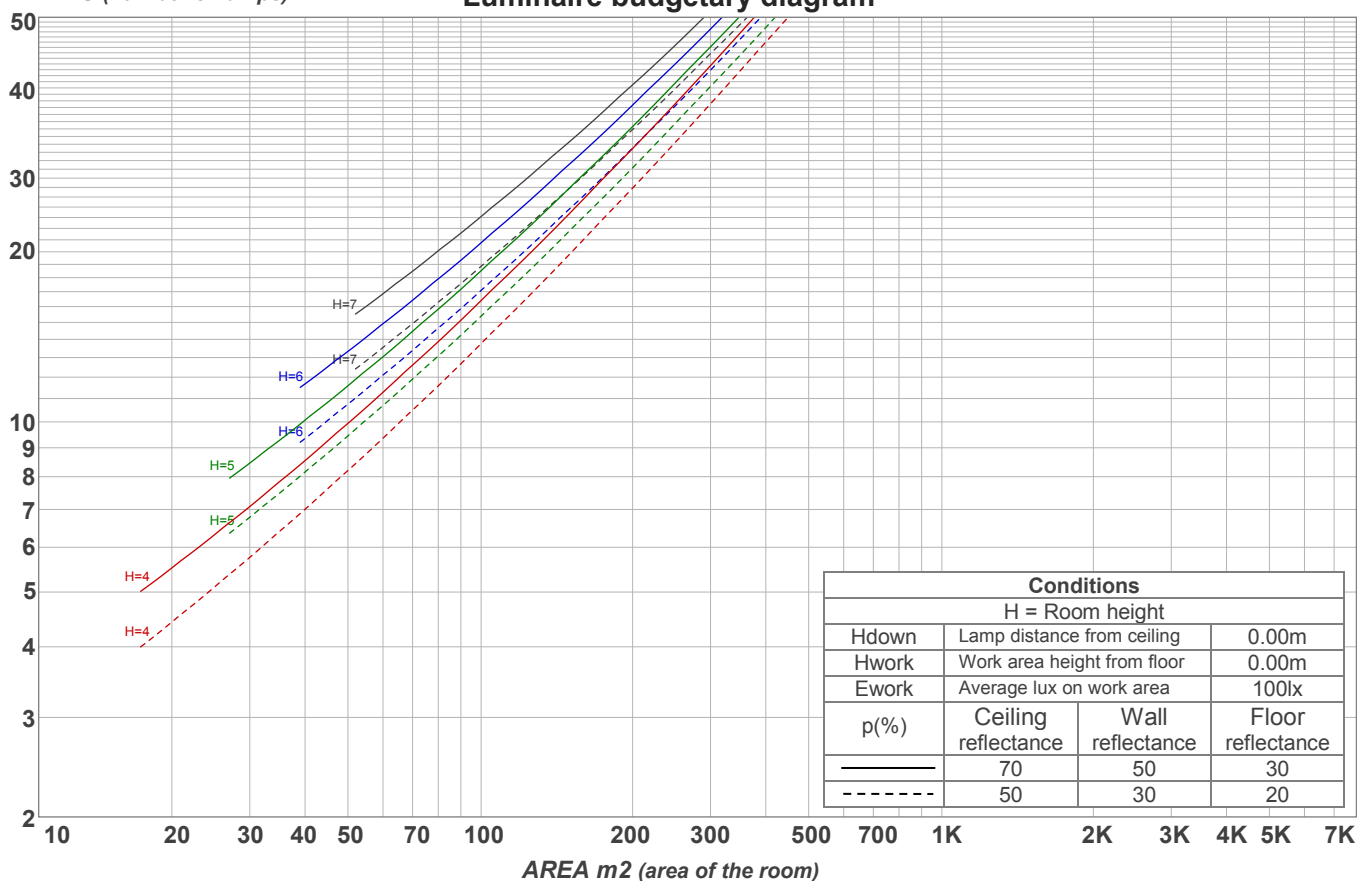
| | | | | | | | | | | | |
|--|-----|---|------|------|------|------|---|------|------|------|------|
| p Ceiling | | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
| p Walls | | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| p Floor | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Room size X Y | | Viewing direction at right angles to lamp axis | | | | | Viewing direction parallel to lamp axis | | | | |
| 2H | 2H | 20,0 | 21,1 | 20,2 | 21,4 | 21,6 | 24,4 | 25,5 | 24,6 | 25,8 | 26,0 |
| | 3H | 20,0 | 21,1 | 20,4 | 21,4 | 21,6 | 25,5 | 26,6 | 25,9 | 26,9 | 27,1 |
| | 4H | 20,1 | 21,2 | 20,5 | 21,5 | 21,7 | 25,9 | 27,0 | 26,3 | 27,3 | 27,5 |
| | 6H | 20,4 | 21,4 | 20,7 | 21,6 | 22,0 | 26,3 | 27,3 | 26,6 | 27,5 | 27,9 |
| | 8H | 20,5 | 21,5 | 20,9 | 21,8 | 22,2 | 26,4 | 27,3 | 26,7 | 27,6 | 28,0 |
| | 12H | 20,7 | 21,6 | 21,0 | 21,9 | 22,4 | 26,4 | 27,3 | 26,8 | 27,6 | 28,1 |
| 4H | 2H | 20,4 | 21,5 | 20,8 | 21,7 | 22,0 | 24,2 | 25,3 | 24,7 | 25,6 | 25,9 |
| | 3H | 20,6 | 21,5 | 20,9 | 21,8 | 22,3 | 25,6 | 26,5 | 25,9 | 26,8 | 27,2 |
| | 4H | 20,7 | 21,5 | 21,1 | 21,9 | 22,5 | 26,0 | 26,8 | 26,5 | 27,3 | 27,8 |
| | 6H | 21,0 | 21,8 | 21,5 | 22,2 | 22,5 | 26,4 | 27,2 | 26,9 | 27,6 | 27,9 |
| | 8H | 21,2 | 22,0 | 21,8 | 22,3 | 22,7 | 26,6 | 27,3 | 27,1 | 27,7 | 28,0 |
| | 12H | 21,5 | 22,1 | 22,0 | 22,5 | 23,0 | 26,6 | 27,2 | 27,1 | 27,7 | 28,1 |
| 8H | 4H | 20,9 | 21,6 | 21,4 | 22,0 | 22,3 | 26,0 | 26,7 | 26,5 | 27,0 | 27,4 |
| | 6H | 21,4 | 21,9 | 21,9 | 22,4 | 22,9 | 26,4 | 27,0 | 26,9 | 27,4 | 28,0 |
| | 8H | 21,7 | 22,2 | 22,2 | 22,7 | 23,3 | 26,6 | 27,1 | 27,2 | 27,6 | 28,3 |
| | 12H | 22,1 | 22,5 | 22,7 | 23,0 | 23,6 | 26,8 | 27,2 | 27,4 | 27,7 | 28,3 |
| 12H | 4H | 20,9 | 21,5 | 21,4 | 21,9 | 22,4 | 25,9 | 26,5 | 26,4 | 26,9 | 27,4 |
| | 6H | 21,4 | 21,9 | 22,0 | 22,4 | 23,1 | 26,4 | 26,9 | 27,0 | 27,4 | 28,1 |
| | 8H | 21,8 | 22,2 | 22,4 | 22,7 | 23,3 | 26,6 | 27,0 | 27,2 | 27,5 | 28,1 |
| Variation of the observer position for the luminaire distance S | | | | | | | | | | | |
| S = 1.0H | | 0,6 / -1,0 | | | | | 0,1 / -0,2 | | | | |
| S = 1.5H | | 1,4 / -1,7 | | | | | 0,7 / -1,0 | | | | |
| S = 2.0H | | 2,4 / -2,2 | | | | | 1,6 / -2,0 | | | | |
| Standard table | | n/a | | | | | n/a | | | | |
| Correction summand | | n/a | | | | | n/a | | | | |
| Corrected glare indices referring to 1002 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 | 101 | 101 | 101 | 98 |
| 1 | 110 | 105 | 101 | 98 | 107 | 103 | 99 | 96 | 98 | 96 | 93 | 94 | 92 | 90 | 90 | 89 | 87 | 85 |
| 2 | 101 | 93 | 87 | 82 | 98 | 91 | 86 | 81 | 88 | 83 | 79 | 84 | 80 | 77 | 81 | 78 | 75 | 73 |
| 3 | 93 | 83 | 76 | 70 | 90 | 81 | 75 | 69 | 78 | 72 | 68 | 75 | 70 | 66 | 73 | 69 | 65 | 63 |
| 4 | 85 | 74 | 66 | 60 | 83 | 73 | 65 | 60 | 70 | 64 | 59 | 68 | 62 | 58 | 66 | 61 | 57 | 55 |
| 5 | 79 | 67 | 59 | 52 | 77 | 66 | 58 | 52 | 64 | 57 | 51 | 61 | 55 | 51 | 60 | 54 | 50 | 48 |
| 6 | 73 | 61 | 52 | 46 | 71 | 60 | 52 | 46 | 58 | 51 | 45 | 56 | 50 | 45 | 54 | 49 | 45 | 43 |
| 7 | 68 | 55 | 47 | 41 | 66 | 54 | 47 | 41 | 53 | 46 | 41 | 51 | 45 | 40 | 50 | 44 | 40 | 38 |
| 8 | 63 | 51 | 42 | 37 | 62 | 50 | 42 | 37 | 48 | 41 | 36 | 47 | 41 | 36 | 46 | 40 | 36 | 34 |
| 9 | 59 | 46 | 39 | 33 | 58 | 46 | 38 | 33 | 45 | 38 | 33 | 43 | 37 | 33 | 42 | 37 | 32 | 31 |
| 10 | 56 | 43 | 35 | 30 | 54 | 42 | 35 | 30 | 41 | 35 | 30 | 40 | 34 | 30 | 39 | 34 | 30 | 28 |

LAMPS (number of lamps)

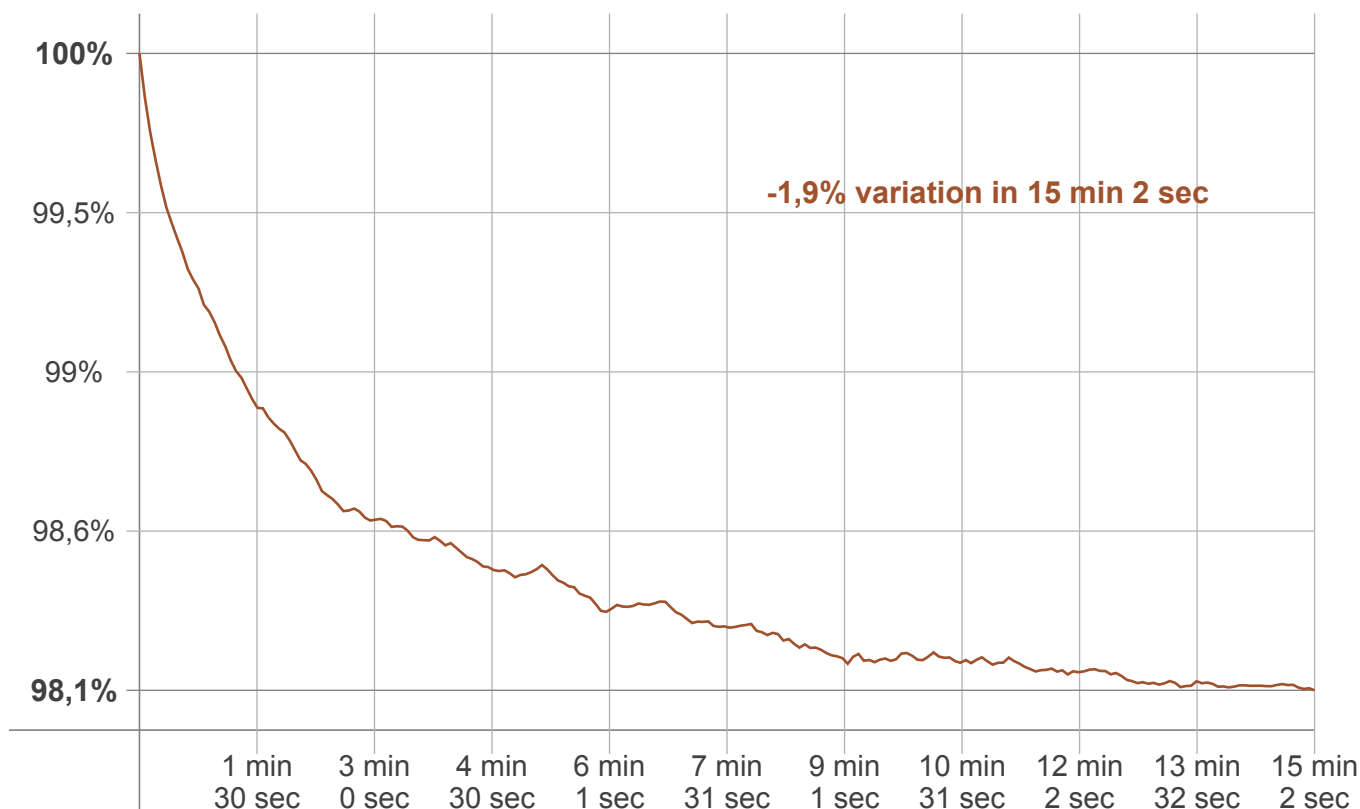
Luminaire budgetary diagram



Zonal Lumen Summary

| 0°-10° | 10°-20° | 20°-30° | 30°-40° | 40°-50° | 50°-60° | 60°-70° | 70°-80° | 80°-90° |
|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 37,7 lm | 110 lm | 172 lm | 211 lm | 199 lm | 132 lm | 69,5 lm | 36,5 lm | 18,6 lm |
| 90°-100° | 100°-110° | 110°-120° | 120°-130° | 130°-140° | 140°-150° | 150°-160° | 160°-170° | 170°-180° |
| 5,61 lm | 2,39 lm | 2,04 lm | 1,85 lm | 1,42 lm | 1,08 lm | 0,792 lm | 0,485 lm | 0,163 lm |

Warmup curve



Warmup result

| | |
|------------------|--------------|
| Warmup time: | 15 min 2 sec |
| Warmup variation | -1,9% |

Warmup conditions

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

Color temperature change

| CCT start | CCT change | CCT end |
|-----------|------------|---------|
| 2679 K | -2 K | 2677 K |

Output change

| Output start | Output change | Output end |
|--------------|---------------|------------|
| 1017 lm | -15 lm | 1002 lm |