

Light efficiency:

67 Lumen/Watt

Light quality:

CRI: 35,6

Color temperature:

11868 K

Output: 577 lm

Peak: 285 cd

Power: 8,6 W

PF: 1,0



Product name:

Defiant-0508-RGB-L6F

Item number:

FLNP/L22A0508/RGB/L6F

Date and time:

07.07.2020 16:21:00

Description:

Rank: R2G2B4/RC2GA2BA5/A

Toleranzen:

Lumen +/-4%

Candela +/-2,5%

Colour Temp +/-35 K

CRI +/-0,7

Angular Resolution 1 Grad Step

Last Calibration 20.05.2020

Pruefer:

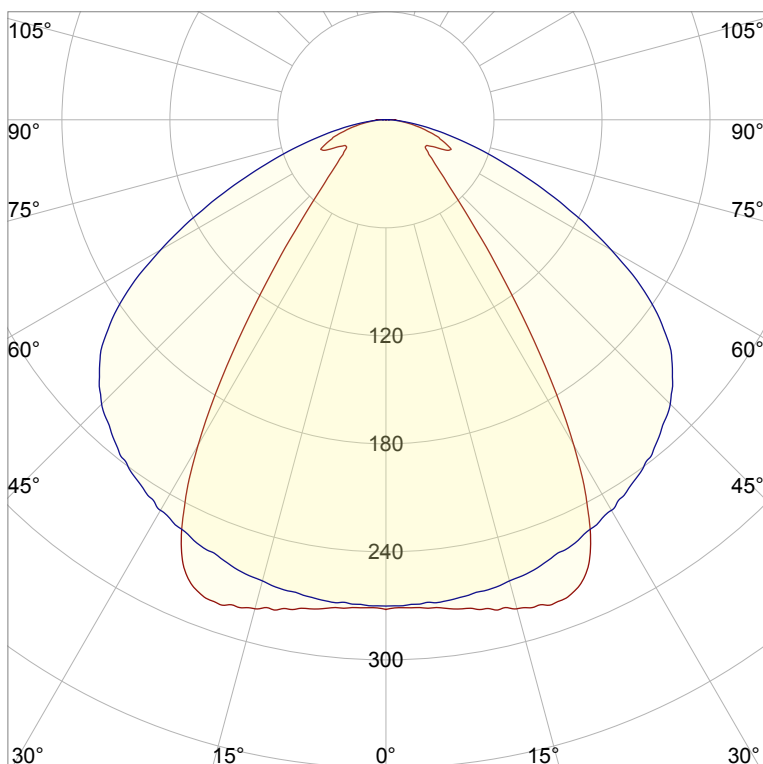
Peter Ulrich

Pruefort:

Lichtlabor

Gaustrasse 13

55411 Bingen am Rhein

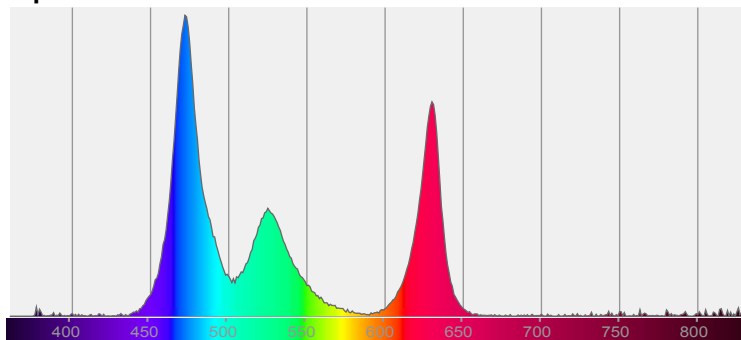


CIE 1931

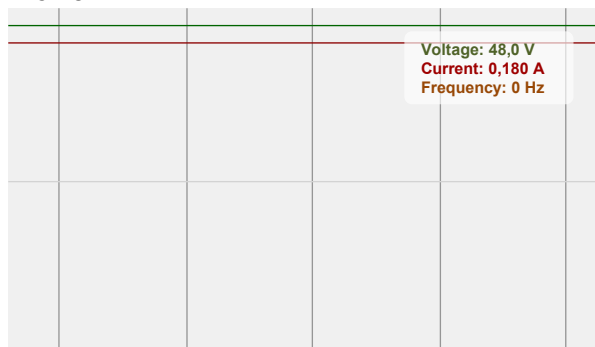
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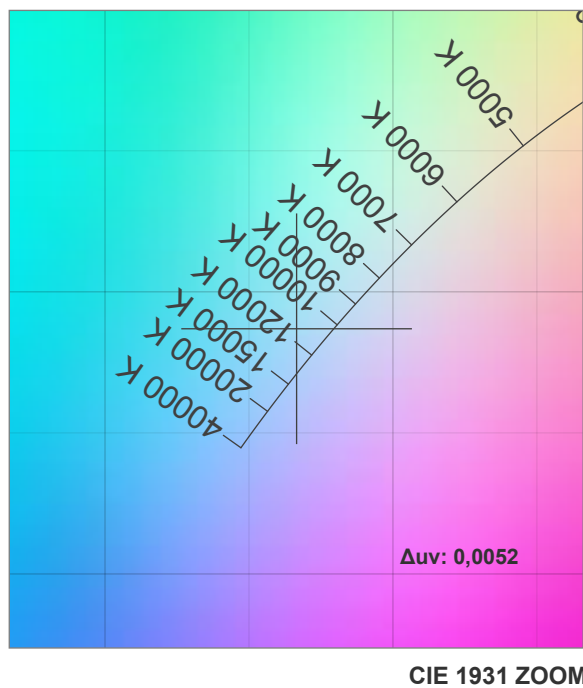
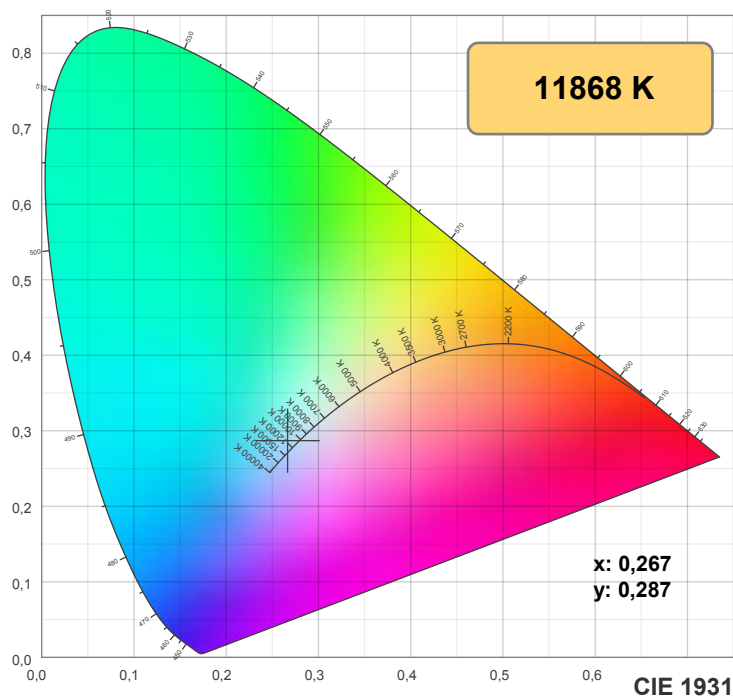
y: 0,287

Spectra



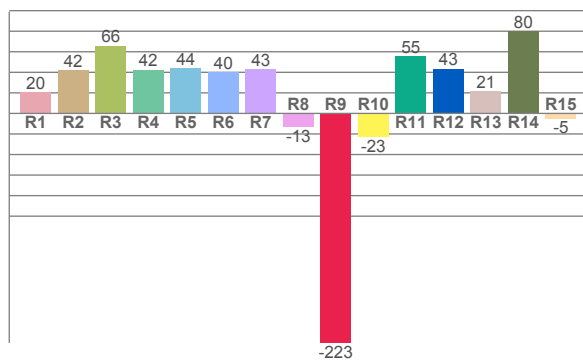
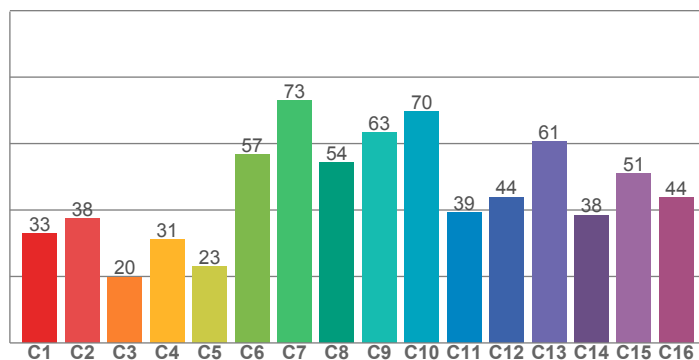
Power





TM30: 44,8

CRI: 35,6 (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 |
|------|------|------|------|------|------|------|-------|--------|-------|------|------|------|------|------|
| 20,4 | 42,1 | 66,0 | 42,3 | 43,8 | 40,2 | 43,0 | -12,9 | -223,4 | -23,3 | 55,4 | 43,3 | 21,4 | 79,8 | -4,9 |

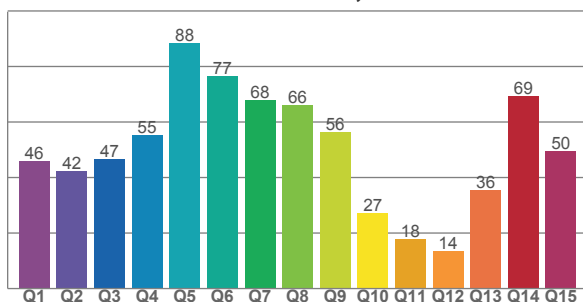
TM30 C values, 16 binned values out of total of 99 C values

| C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C9 | C10 | C11 | C12 | C13 | C14 | C15 | C16 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 32,9 | 37,5 | 19,8 | 31,0 | 23,1 | 56,7 | 73,0 | 54,4 | 63,4 | 69,7 | 39,1 | 43,9 | 60,6 | 38,5 | 51,0 | 43,8 |

CQS Q values

| Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 46,1 | 42,4 | 46,8 | 55,4 | 88,3 | 76,6 | 67,8 | 66,1 | 56,3 | 27,2 | 18,0 | 13,6 | 35,5 | 69,5 | 49,5 |

CQS: 46,0



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 |
| 11868 K | 35,6 | -223,4 | 44,8 | 87,6 | 46,0 | 0,267 | 0,287 | 0,180 | 0,291 | 0,0052 |

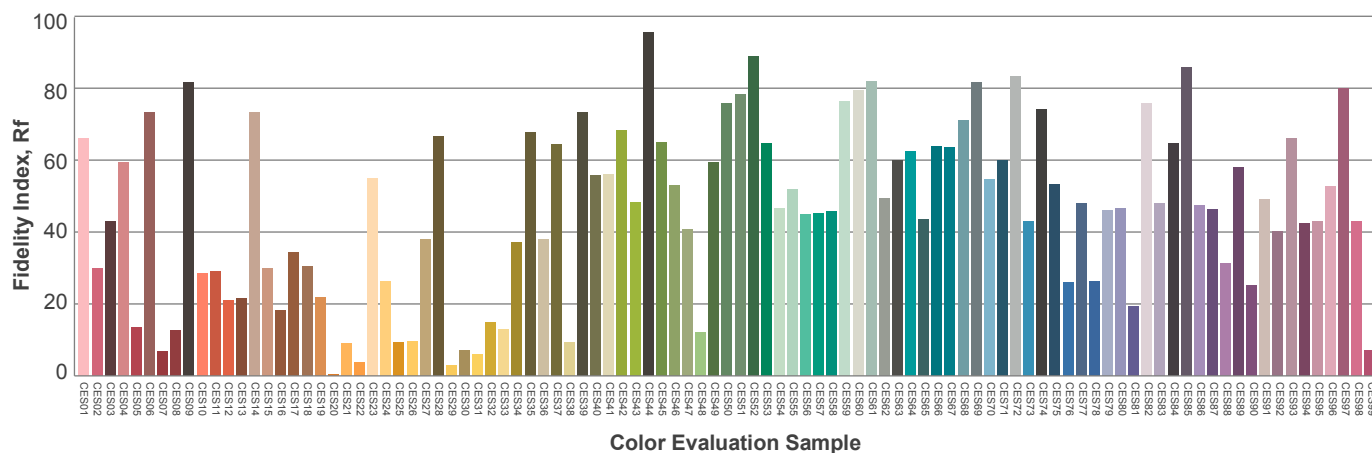
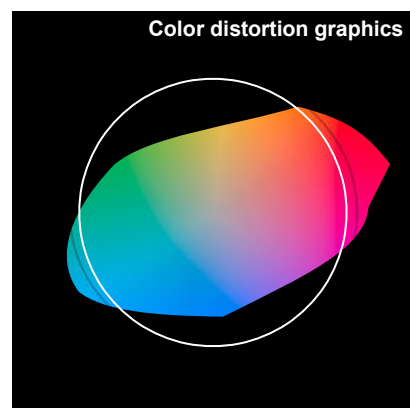
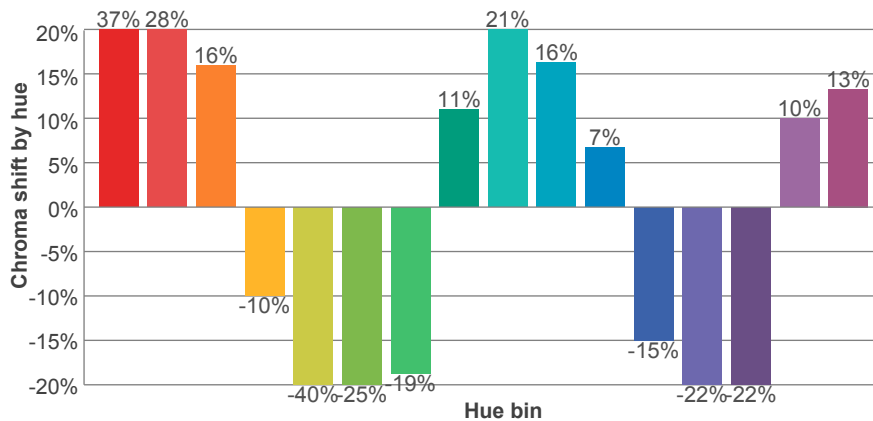
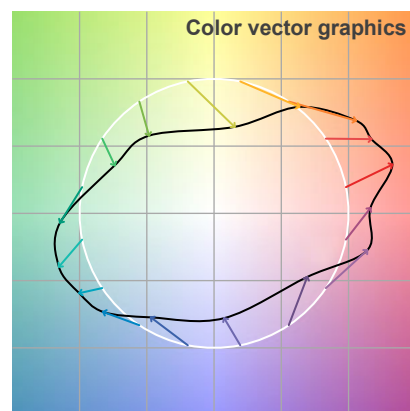
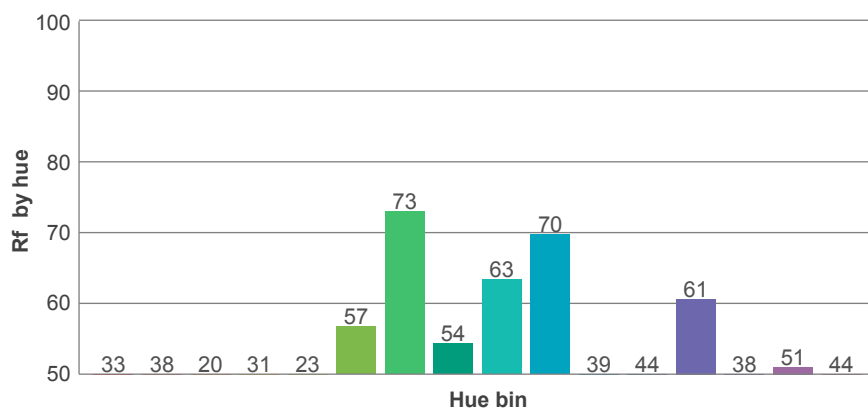
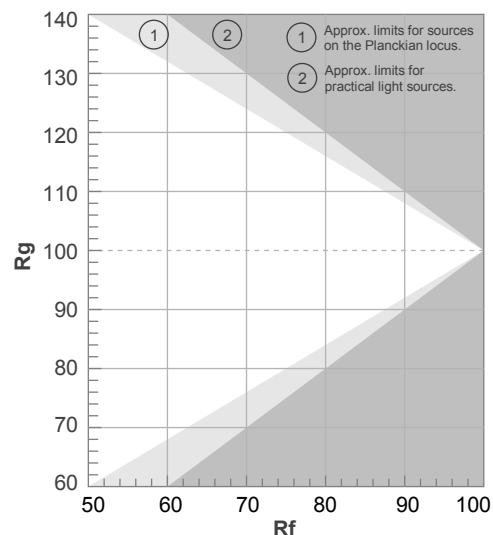
Rf 44,8

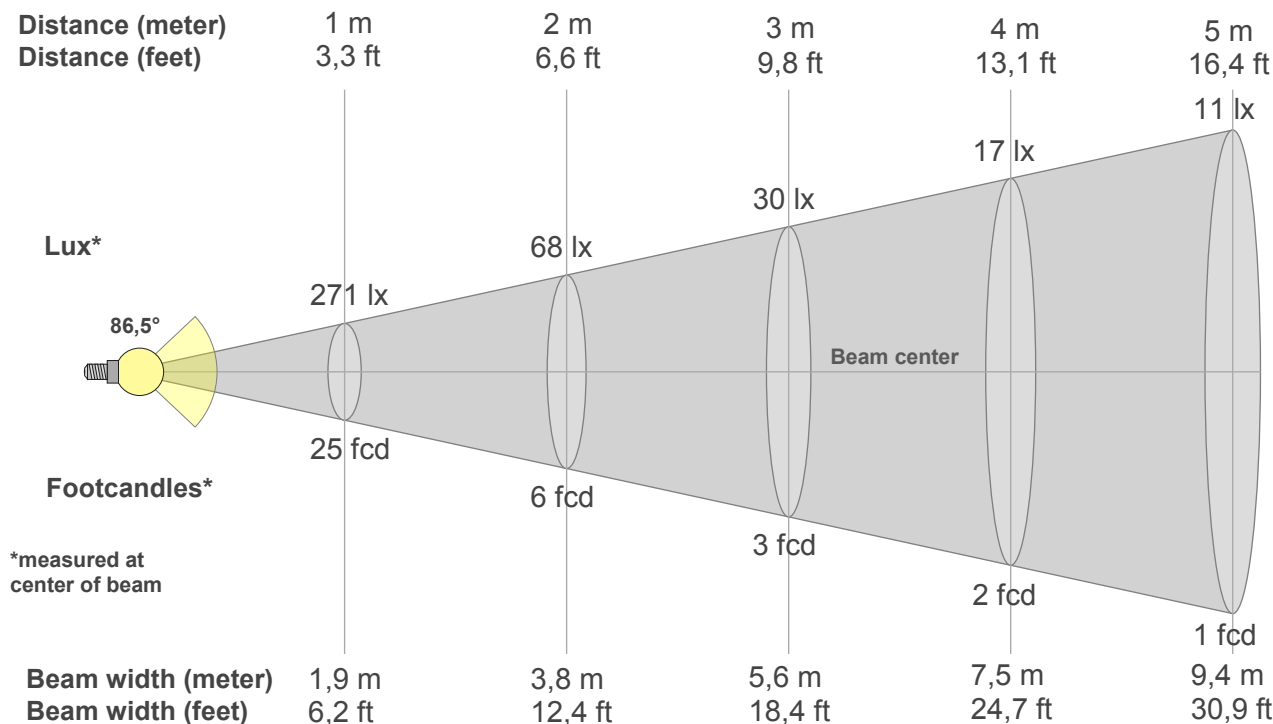
Fidelity index Rf

Rg 87,6

Gamut index Rg

| Hue Bin | R _f | Graphic shifts (%) | |
|---------|----------------|--------------------|------|
| | | Chroma | Hue |
| 1 | 33 | 37% | 10% |
| 2 | 38 | 28% | -19% |
| 3 | 20 | 16% | -49% |
| 4 | 31 | -10% | -47% |
| 5 | 23 | -40% | -28% |
| 6 | 57 | -25% | 8% |
| 7 | 73 | -19% | 11% |
| 8 | 54 | 11% | 29% |
| 9 | 63 | 21% | 16% |
| 10 | 70 | 16% | -6% |
| 11 | 39 | 7% | -28% |
| 12 | 44 | -15% | -31% |
| 13 | 61 | -22% | -8% |
| 14 | 38 | -22% | 31% |
| 15 | 51 | 10% | 41% |
| 16 | 44 | 13% | 27% |





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 |
| 271lx | 68lx | 30lx | 17lx | 11lx | 8lx | 6lx | 4lx | 3lx | 3lx | 2lx | 2lx | 2lx | 1lx | 1lx | 1lx | 1lx | 1lx | 1lx | 1lx |
| 25,1fcd | 6,3fcd | 2,8fcd | 1,6fcd | 1fcd | 0,7fcd | 0,5fcd | 0,4fcd | 0,3fcd | 0,3fcd | 0,2fcd | 0,2fcd | 0,1fcd | 0,1fcd | 0,1fcd | 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° |
|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 271 | 272 | 276 | 281 | 284 | 268 | 208 | 130 | 73 | 46 | 33 | 27 | 30 | 39 | 33 | 23 | 15 | 8 | 5 | 0 |
| 100% | 101% | 102% | 104% | 105% | 99% | 77% | 48% | 27% | 17% | 12% | 10% | 11% | 15% | 12% | 9% | 5% | 3% | 2% | 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° |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 271 | 269 | 268 | 265 | 261 | 256 | 250 | 243 | 234 | 223 | 207 | 182 | 144 | 105 | 69 | 41 | 22 | 8 | 1 | 0 |
| 100% | 99% | 99% | 98% | 96% | 95% | 93% | 90% | 86% | 83% | 77% | 67% | 53% | 39% | 26% | 15% | 8% | 3% | 0% | 0% |

Intensities in 180° c-plane

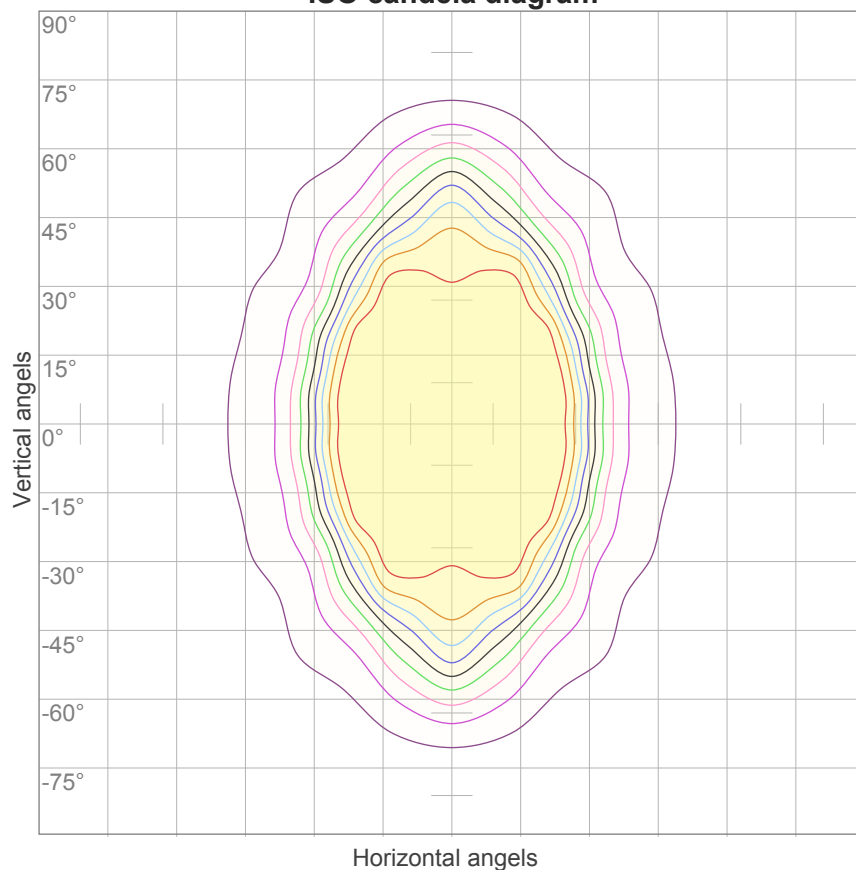
| 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° | 95° |
|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 271 | 272 | 276 | 281 | 284 | 268 | 208 | 130 | 73 | 46 | 33 | 27 | 30 | 39 | 33 | 23 | 15 | 8 | 5 | 0 |
| 100% | 101% | 102% | 104% | 105% | 99% | 77% | 48% | 27% | 17% | 12% | 10% | 11% | 15% | 12% | 9% | 5% | 3% | 2% | 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° |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 271 | 269 | 268 | 265 | 261 | 256 | 250 | 243 | 234 | 223 | 207 | 182 | 144 | 105 | 69 | 41 | 22 | 8 | 1 | 0 |
| 100% | 99% | 99% | 98% | 96% | 95% | 93% | 90% | 86% | 83% | 77% | 67% | 53% | 39% | 26% | 15% | 8% | 3% | 0% | 0% |

| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 86,5° | 138,3° | 176,1° | 86,5% | 69,6% |

ISO candela diagram



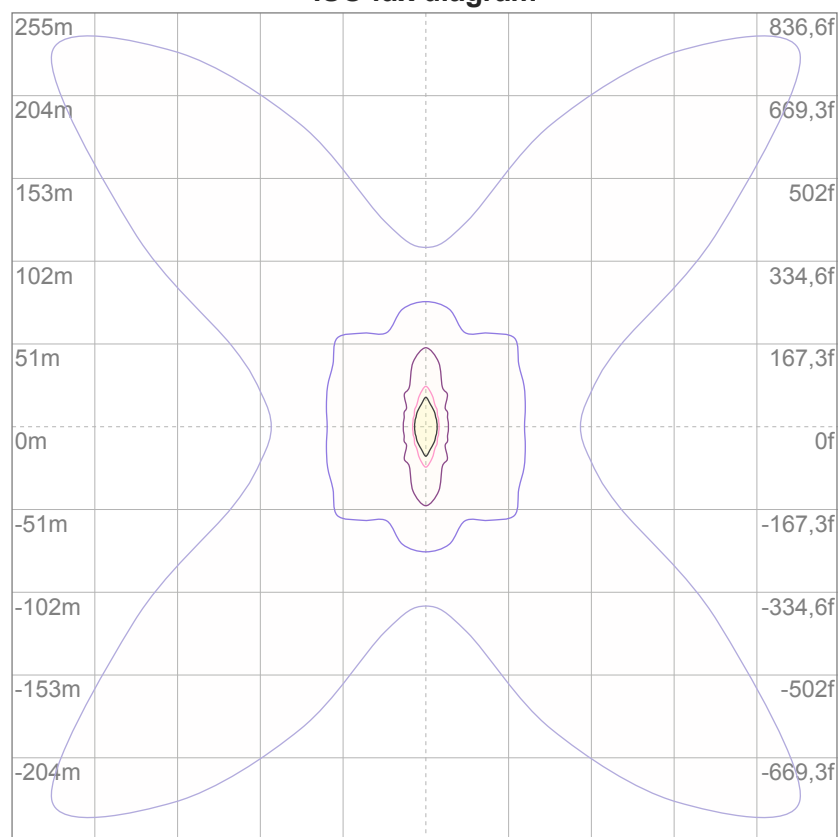
| | |
|-----|--------|
| 10% | 27 cd |
| 20% | 54 cd |
| 30% | 81 cd |
| 40% | 108 cd |
| 50% | 135 cd |
| 60% | 162 cd |
| 70% | 189 cd |
| 80% | 217 cd |
| 90% | 244 cd |

Conditions:

Number of c-planes: 16

Candela at center: 271 cd

ISO lux diagram



| | |
|-----|----------|
| 3% | 81,2m lx |
| 5% | 0,135 lx |
| 10% | 0,271 lx |
| 30% | 0,812 lx |
| 50% | 1,35 lx |

Conditions:

Number of c-planes: 16

Lux at center: 2,71 lx

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

Glare Evaluation According to UGR

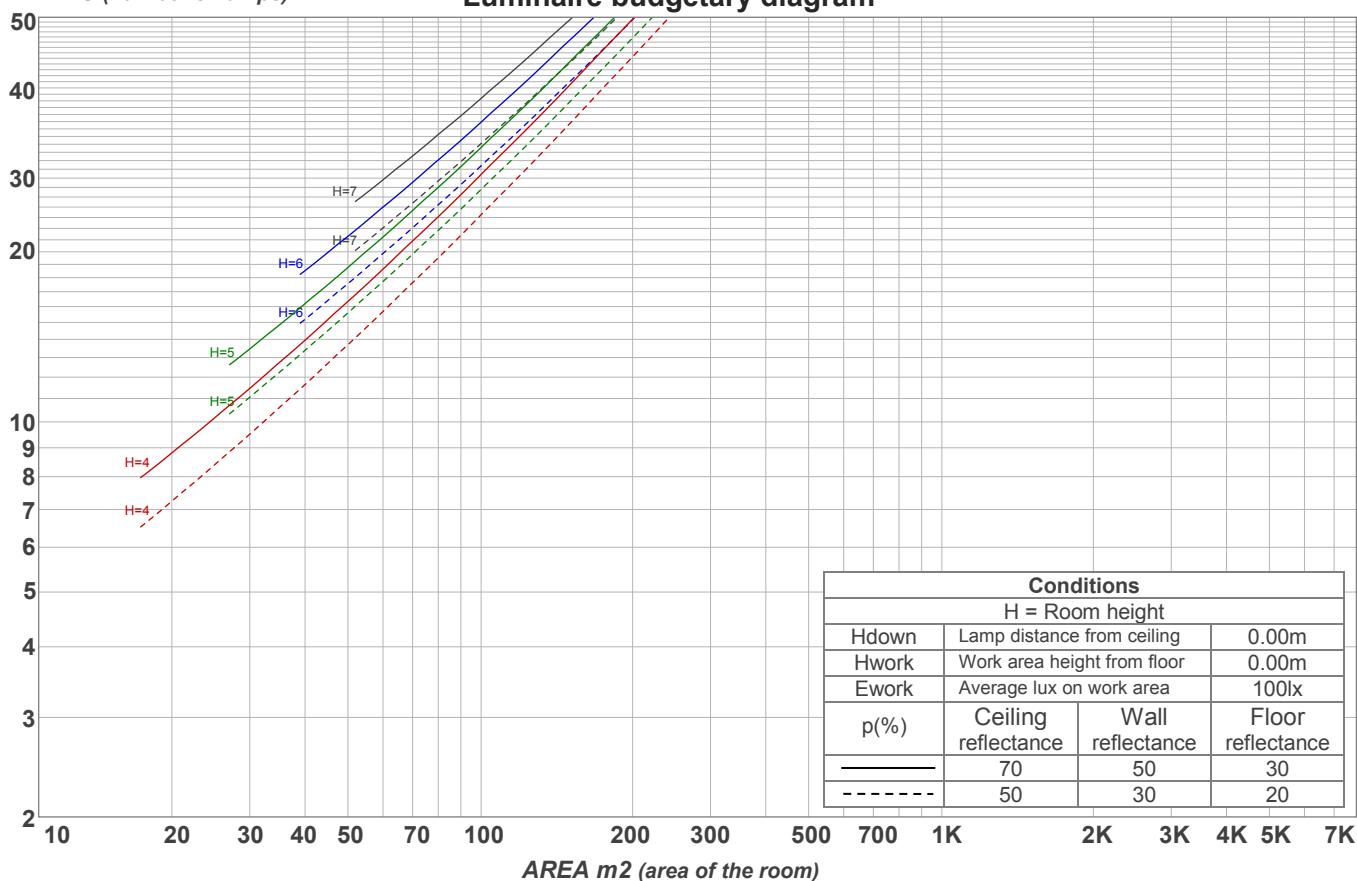
| | | | | | | | | | | | |
|---|-----|---|------|------|------|------|---|------|------|------|------|
| p Ceiling | | 70 | 70 | 50 | 50 | 30 | 70 | 70 | 50 | 50 | 30 |
| p Walls | | 50 | 30 | 50 | 30 | 30 | 50 | 30 | 50 | 30 | 30 |
| p Floor | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Room size X Y | | Viewing direction at right angles to lamp axis | | | | | Viewing direction parallel to lamp axis | | | | |
| 2H | 2H | 16,2 | 17,2 | 16,4 | 17,5 | 17,7 | 23,1 | 24,2 | 23,3 | 24,5 | 24,7 |
| | 3H | 18,8 | 19,9 | 19,2 | 20,2 | 20,4 | 24,2 | 25,3 | 24,6 | 25,6 | 25,8 |
| | 4H | 19,8 | 20,9 | 20,2 | 21,1 | 21,4 | 24,7 | 25,7 | 25,1 | 26,0 | 26,2 |
| | 6H | 20,6 | 21,5 | 20,9 | 21,8 | 22,2 | 25,1 | 26,0 | 25,4 | 26,3 | 26,6 |
| | 8H | 20,8 | 21,7 | 21,2 | 22,0 | 22,4 | 25,1 | 26,0 | 25,5 | 26,3 | 26,8 |
| | 12H | 21,0 | 21,9 | 21,4 | 22,2 | 22,6 | 25,2 | 26,0 | 25,5 | 26,4 | 26,8 |
| 4H | 2H | 16,8 | 17,9 | 17,2 | 18,1 | 18,4 | 22,9 | 24,0 | 23,3 | 24,2 | 24,5 |
| | 3H | 19,8 | 20,7 | 20,2 | 21,0 | 21,5 | 24,2 | 25,1 | 24,6 | 25,4 | 25,9 |
| | 4H | 20,9 | 21,7 | 21,4 | 22,1 | 22,7 | 24,7 | 25,5 | 25,1 | 25,9 | 26,4 |
| | 6H | 21,8 | 22,6 | 22,3 | 22,9 | 23,3 | 25,1 | 25,9 | 25,6 | 26,3 | 26,6 |
| | 8H | 22,1 | 22,8 | 22,6 | 23,2 | 23,6 | 25,3 | 26,0 | 25,8 | 26,4 | 26,8 |
| | 12H | 22,3 | 22,9 | 22,8 | 23,3 | 23,8 | 25,4 | 26,0 | 25,9 | 26,4 | 26,9 |
| 8H | 4H | 21,3 | 22,0 | 21,8 | 22,4 | 22,8 | 24,8 | 25,5 | 25,3 | 25,8 | 26,2 |
| | 6H | 22,4 | 23,0 | 22,9 | 23,4 | 24,0 | 25,3 | 25,9 | 25,8 | 26,3 | 26,9 |
| | 8H | 22,9 | 23,3 | 23,4 | 23,9 | 24,5 | 25,6 | 26,1 | 26,1 | 26,6 | 27,2 |
| | 12H | 23,2 | 23,6 | 23,8 | 24,1 | 24,7 | 25,8 | 26,2 | 26,4 | 26,7 | 27,3 |
| 12H | 4H | 21,4 | 22,0 | 21,9 | 22,4 | 22,8 | 24,8 | 25,3 | 25,3 | 25,8 | 26,2 |
| | 6H | 22,6 | 23,0 | 23,1 | 23,6 | 24,2 | 25,4 | 25,8 | 25,9 | 26,4 | 27,0 |
| | 8H | 23,1 | 23,5 | 23,7 | 24,0 | 24,6 | 25,7 | 26,1 | 26,3 | 26,6 | 27,2 |
| Variation of the observer position for the luminaire distance S | | | | | | | | | | | |
| S = 1.0H | | 0,3 / -0,2 | | | | | 0,3 / -0,5 | | | | |
| S = 1.5H | | 0,7 / -0,4 | | | | | 1,1 / -1,4 | | | | |
| S = 2.0H | | 1,0 / -0,5 | | | | | 2,2 / -2,2 | | | | |
| Standard table | | n/a | | | | | n/a | | | | |
| Correction summand | | n/a | | | | | n/a | | | | |
| Corrected glare indices referring to 577 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 | 110 | 106 | 102 | 99 | 107 | 104 | 100 | 97 | 99 | 97 | 94 | 96 | 93 | 91 | 92 | 90 | 89 | 87 |
| 2 | 102 | 94 | 88 | 83 | 99 | 93 | 87 | 82 | 89 | 85 | 81 | 86 | 82 | 79 | 83 | 80 | 77 | 75 |
| 3 | 94 | 85 | 77 | 72 | 92 | 83 | 77 | 71 | 80 | 75 | 70 | 78 | 73 | 69 | 75 | 71 | 68 | 66 |
| 4 | 87 | 76 | 69 | 63 | 85 | 75 | 68 | 62 | 73 | 66 | 61 | 71 | 65 | 61 | 68 | 64 | 60 | 58 |
| 5 | 81 | 69 | 61 | 55 | 79 | 68 | 61 | 55 | 66 | 60 | 55 | 64 | 59 | 54 | 63 | 58 | 53 | 52 |
| 6 | 75 | 63 | 55 | 49 | 74 | 62 | 55 | 49 | 61 | 54 | 49 | 59 | 53 | 48 | 58 | 52 | 48 | 46 |
| 7 | 70 | 58 | 50 | 45 | 69 | 57 | 50 | 44 | 56 | 49 | 44 | 54 | 48 | 44 | 53 | 48 | 44 | 42 |
| 8 | 66 | 54 | 46 | 40 | 64 | 53 | 45 | 40 | 52 | 45 | 40 | 50 | 44 | 40 | 49 | 44 | 40 | 38 |
| 9 | 62 | 50 | 42 | 37 | 61 | 49 | 42 | 37 | 48 | 41 | 37 | 47 | 41 | 36 | 46 | 40 | 36 | 35 |
| 10 | 58 | 46 | 39 | 34 | 57 | 45 | 38 | 34 | 45 | 38 | 34 | 44 | 38 | 33 | 43 | 37 | 33 | 32 |

LAMPS (number of lamps)

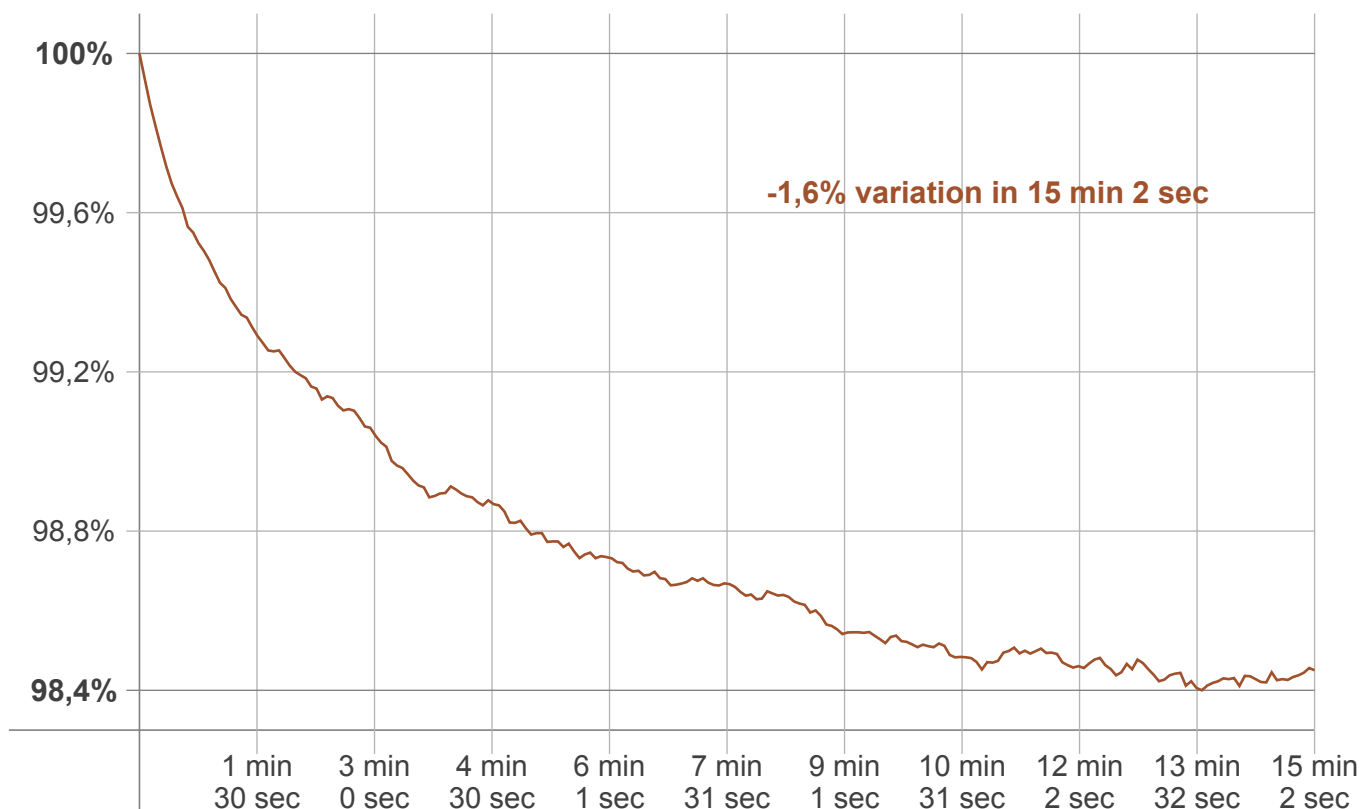
Luminaire budgetary diagram



Zonal Lumen Summary

| 0°-10° | 10°-20° | 20°-30° | 30°-40° | 40°-50° | 50°-60° | 60°-70° | 70°-80° | 80°-90° |
|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 25,9 lm | 77,5 lm | 123 lm | 126 lm | 89,2 lm | 57,3 lm | 40,9 lm | 26,4 lm | 10,7 lm |
| 90°-100° | 100°-110° | 110°-120° | 120°-130° | 130°-140° | 140°-150° | 150°-160° | 160°-170° | 170°-180° |
| 0,026 lm | 0,000 lm | 0,000 lm | 0,000 lm | 0,000 lm | 0,000 lm | 0,000 lm | 0,000 lm | 0,000 lm |

Warmup curve



Warmup result

| | |
|------------------|--------------|
| Warmup time: | 15 min 2 sec |
| Warmup variation | -1,6% |

Warmup conditions

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

Color temperature change

| CCT start | CCT change | CCT end |
|-----------|------------|---------|
| 11677 K | +191 K | 11868 K |

Output change

| Output start | Output change | Output end |
|--------------|---------------|------------|
| 584 lm | -8 lm | 577 lm |