

**Light efficiency:**

**83 Lumen/Watt**

**Light quality:**

**CRI: 81,9**

**Color temperature:**

**2231 K**

**Output: 998 lm**

**Peak: 400 cd**

**Power: 12,0 W**

**PF: 1,0**



**Product name:**

**Pegasus-3-Gold-0508-822-L9F**

**Item number:**

**FLNP-L-16A-0508-822-L9F**

**Date and time:**

**16.03.2021 14:08:27**

**Description:**

**Rank: M1A4T**

**Toleranzen:**

**Lumen +/-4%**

**Candela +/-2,5%**

**Colour Temp +/-35 Grad K**

**CRI +/-0,7**

**Angular Resolution 1 Grad step**

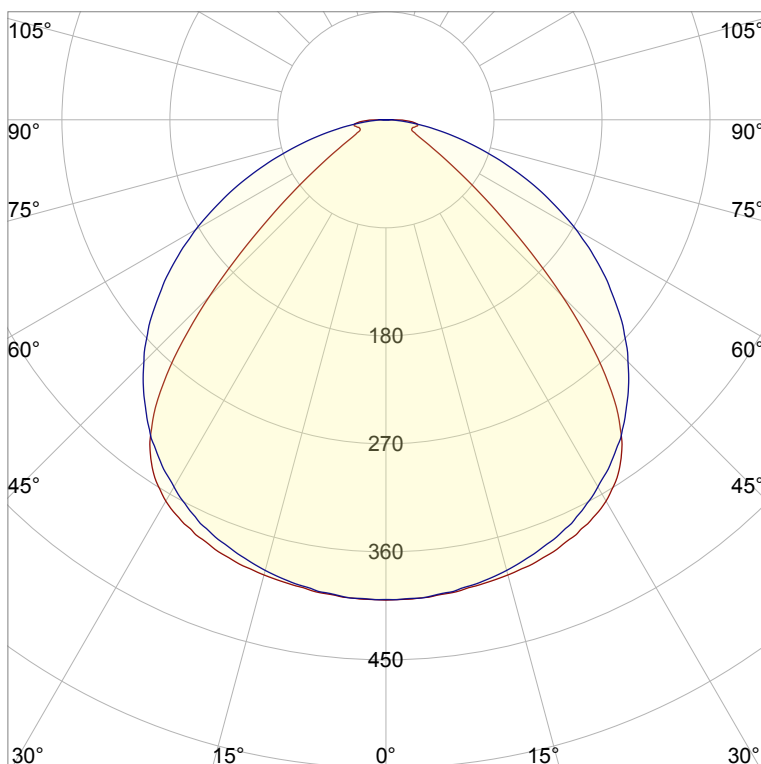
**Last Calibration 20-05-2020**

**Pruefer: Peter Ulrich**

**Pruefort: Lichtlabor**

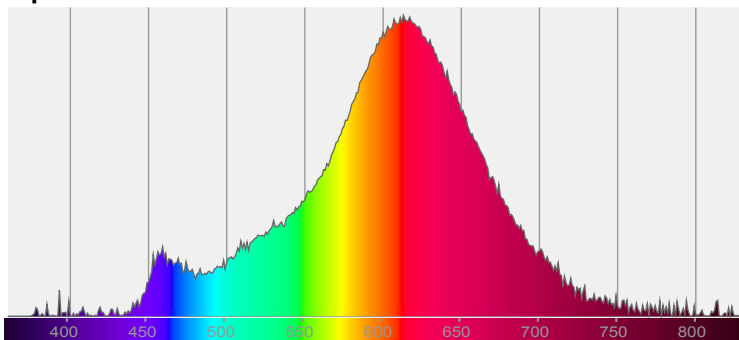
**Gaustrasse13-15**

**55411 Bingen am Rhein**

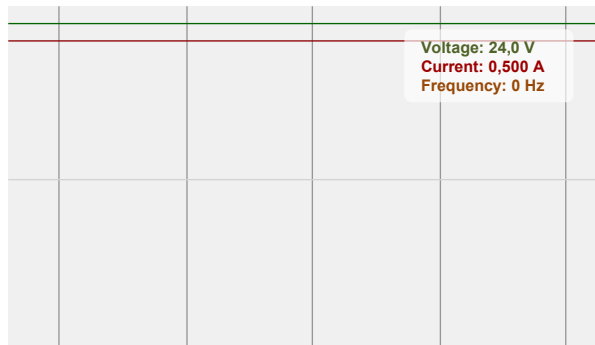


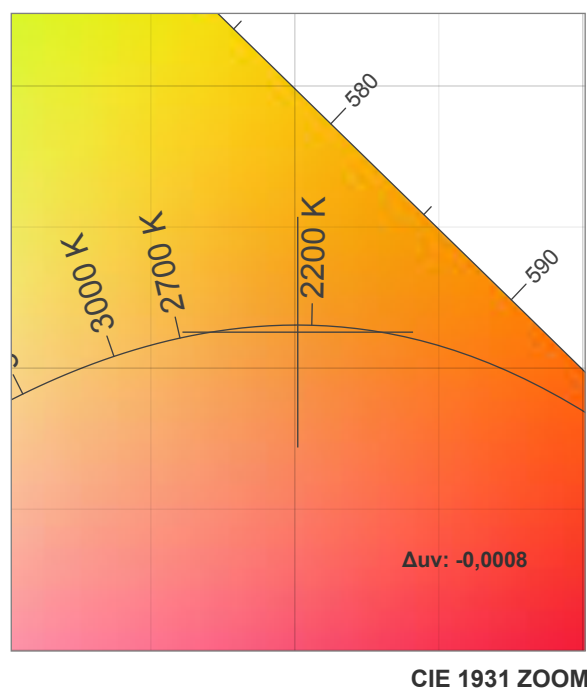
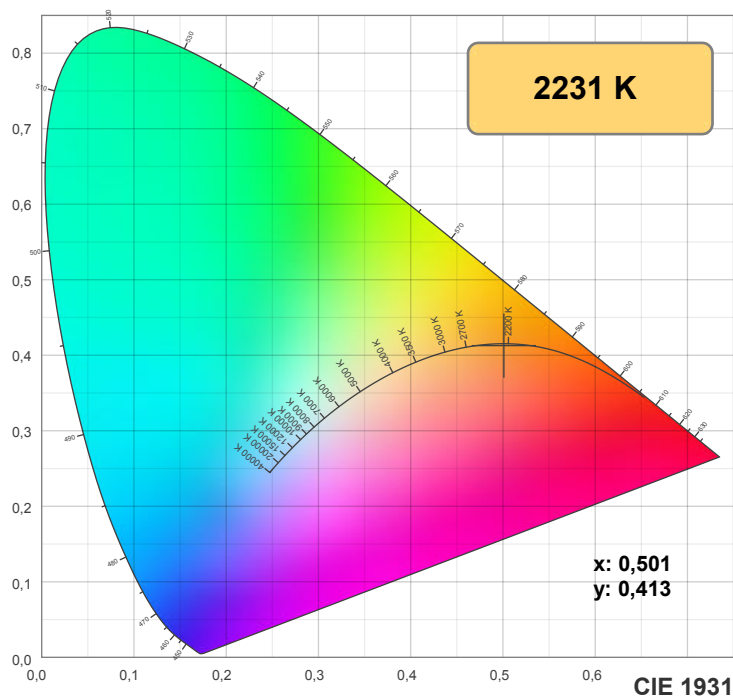
**CIE 1931**  
**x: 0,501**  
**y: 0,413**

**Spectra**

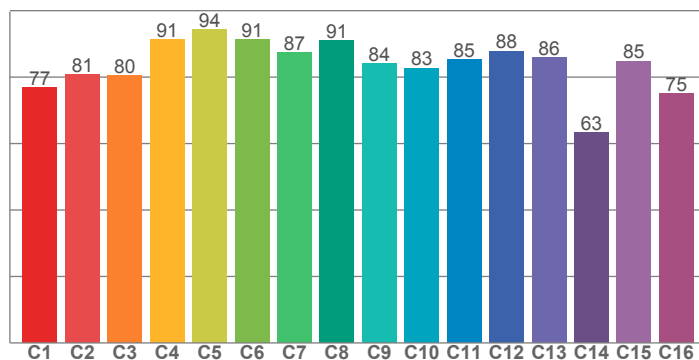


**Power**

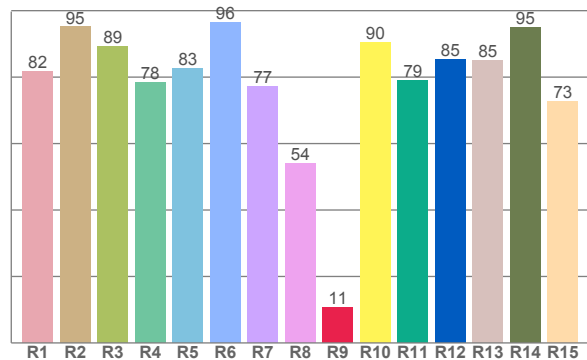




**TM30: 84,3**



**CRI: 81,9 (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  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 81,7 | 95,1 | 89,3 | 78,3 | 82,6 | 96,4 | 77,3 | 54,2 | 10,6 | 90,3 | 78,9 | 85,4 | 85,1 | 94,9 | 72,6 |

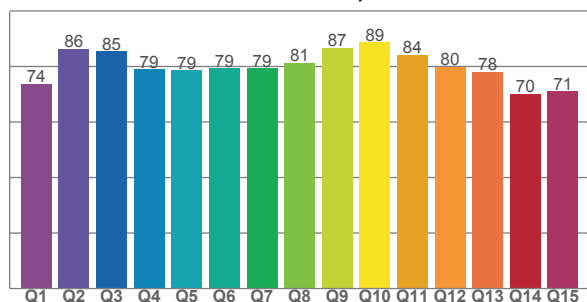
TM30 C values, 16 binned values out of total of 99 C values

| C1   | C2   | C3   | C4   | C5   | C6   | C7   | C8   | C9   | C10  | C11  | C12  | C13  | C14  | C15  | C16  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 76,9 | 80,7 | 80,5 | 91,4 | 94,3 | 91,2 | 87,3 | 91,0 | 84,1 | 82,7 | 85,2 | 87,8 | 85,9 | 63,4 | 84,9 | 75,0 |

CQS Q values

| Q1   | Q2   | Q3   | Q4   | Q5   | Q6   | Q7   | Q8   | Q9   | Q10  | Q11  | Q12  | Q13  | Q14  | Q15  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 73,6 | 86,2 | 85,4 | 78,9 | 78,6 | 79,3 | 79,3 | 81,3 | 86,8 | 88,6 | 84,2 | 79,8 | 77,9 | 70,1 | 71,0 |

**CQS: 79,0**



## 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                | $\Delta uv$                     |
| 2231 K            | 81,9                  | 10,6          | 84,3           | 93,7        | 79,0                | 0,501                     | 0,413                     | 0,288            | 0,356            | -0,0008                         |

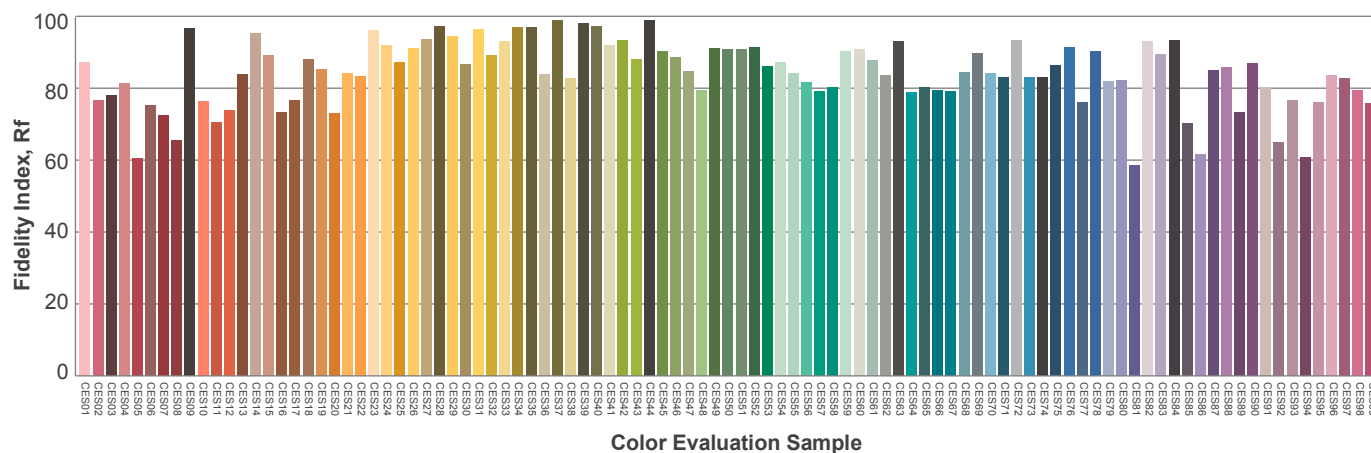
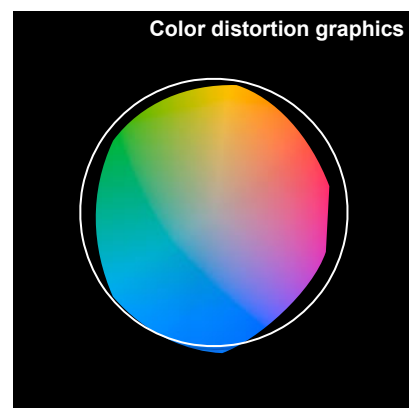
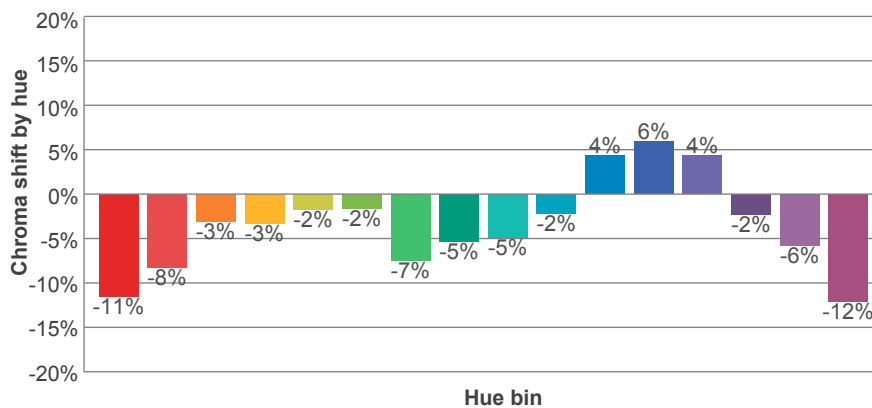
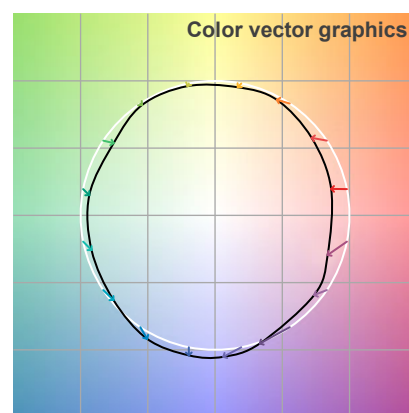
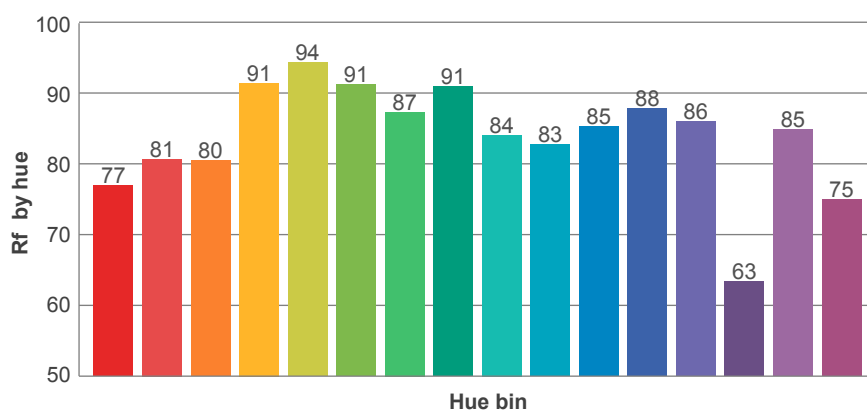
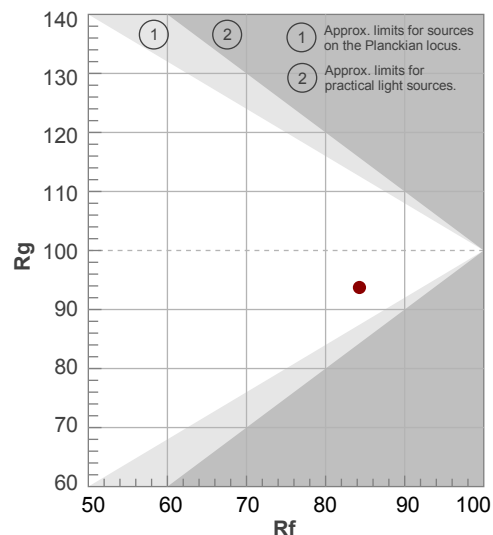
**Rf 84,3**

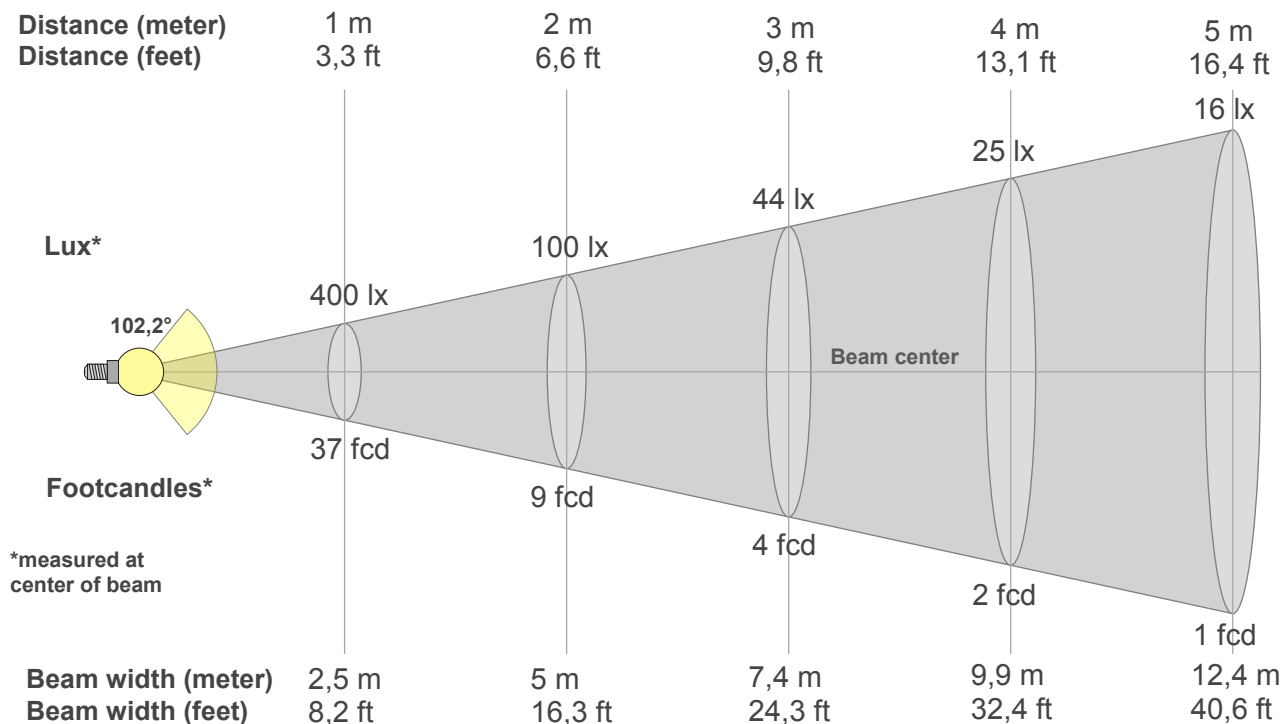
Fidelity index Rf

**Rg 93,7**

Gamut index Rg

| Hue Bin | R <sub>f</sub> | Graphic shifts (%) |      |
|---------|----------------|--------------------|------|
|         |                | Chroma             | Hue  |
| 1       | 77             | -11%               | 2%   |
| 2       | 81             | -8%                | 8%   |
| 3       | 80             | -3%                | 10%  |
| 4       | 91             | -3%                | 2%   |
| 5       | 94             | -2%                | 1%   |
| 6       | 91             | -2%                | 0%   |
| 7       | 87             | -7%                | -3%  |
| 8       | 91             | -5%                | 4%   |
| 9       | 84             | -5%                | 7%   |
| 10      | 83             | -2%                | 10%  |
| 11      | 85             | 4%                 | 9%   |
| 12      | 88             | 6%                 | 1%   |
| 13      | 86             | 4%                 | -14% |
| 14      | 63             | -2%                | -25% |
| 15      | 85             | -6%                | -8%  |
| 16      | 75             | -12%               | -13% |





## 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 |
| 400lx   | 100lx  | 44lx   | 25lx   | 16lx   | 11lx   | 8lx    | 6lx    | 5lx    | 4lx    | 3lx    | 3lx    | 2lx    | 2lx    | 2lx    | 2lx    | 1lx    | 1lx    | 1lx    | 1lx    |
| 37,2fcd | 9,3fcd | 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° |
|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 400  | 399  | 396 | 393 | 387 | 379 | 367 | 342 | 290 | 208 | 125 | 70  | 40  | 27  | 23  | 24  | 27  | 22  | 9   | 8   |
| 100% | 100% | 99% | 98% | 97% | 95% | 92% | 85% | 72% | 52% | 31% | 17% | 10% | 7%  | 6%  | 6%  | 7%  | 6%  | 2%  | 2%  |

## 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° |
|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 400  | 399  | 395 | 389 | 380 | 369 | 353 | 335 | 312 | 285 | 255 | 220 | 183 | 144 | 104 | 67  | 37  | 14  | 1   | 1   |
| 100% | 100% | 99% | 97% | 95% | 92% | 88% | 84% | 78% | 71% | 64% | 55% | 46% | 36% | 26% | 17% | 9%  | 4%  | 0%  | 0%  |

## Intensities in 180° c-plane

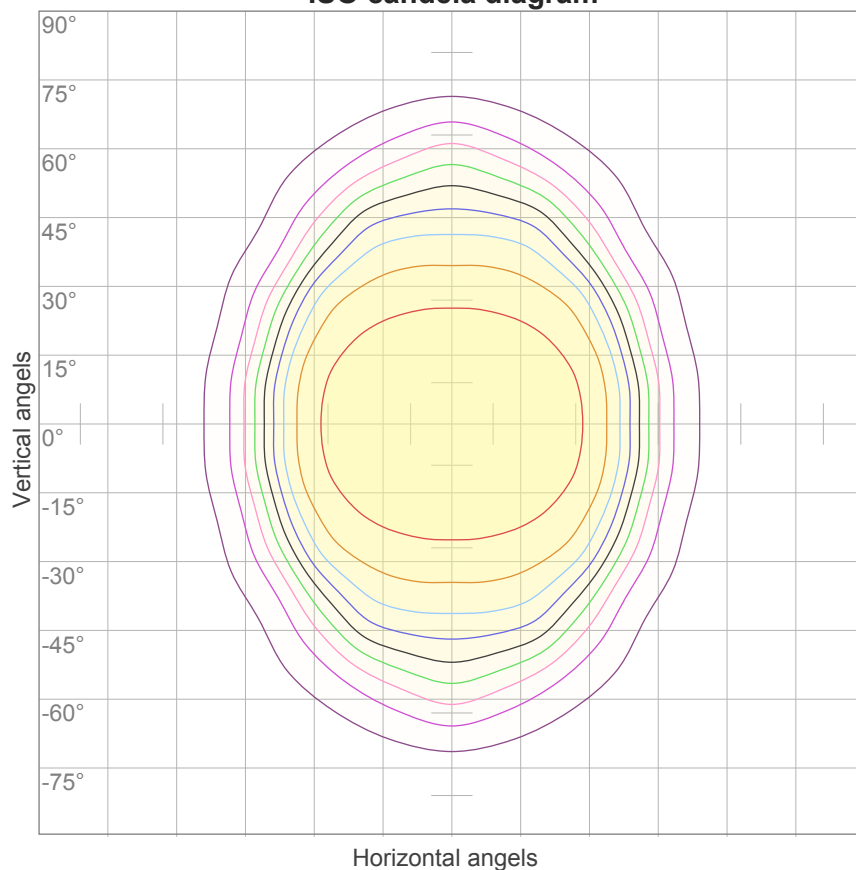
| 0°   | 5°   | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° | 95° |
|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 400  | 399  | 396 | 393 | 387 | 379 | 367 | 342 | 290 | 208 | 125 | 70  | 40  | 27  | 23  | 24  | 27  | 22  | 9   | 8   |
| 100% | 100% | 99% | 98% | 97% | 95% | 92% | 85% | 72% | 52% | 31% | 17% | 10% | 7%  | 6%  | 6%  | 7%  | 6%  | 2%  | 2%  |

## 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° |
|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 400  | 399  | 395 | 389 | 380 | 369 | 353 | 335 | 312 | 285 | 255 | 220 | 183 | 144 | 104 | 67  | 37  | 14  | 1   | 1   |
| 100% | 100% | 99% | 97% | 95% | 92% | 88% | 84% | 78% | 71% | 64% | 55% | 46% | 36% | 26% | 17% | 9%  | 4%  | 0%  | 0%  |

| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 102,2°         | 136,4°          | 176,9°            | 86,3%                        | 64,2%                       |

### ISO candela diagram



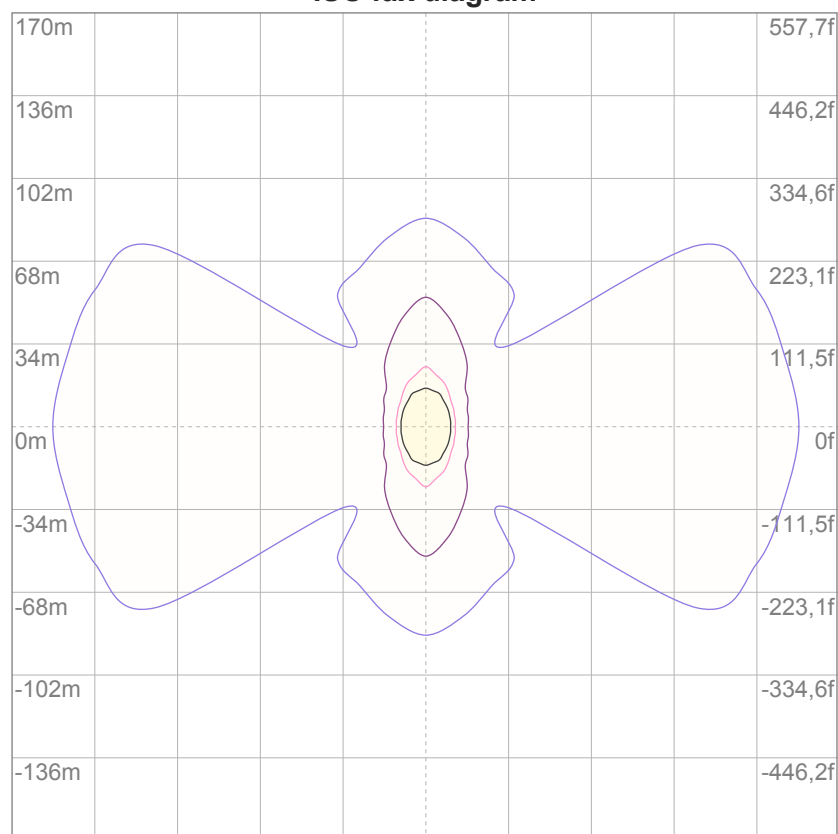
|     |        |
|-----|--------|
| 10% | 40 cd  |
| 20% | 80 cd  |
| 30% | 120 cd |
| 40% | 160 cd |
| 50% | 200 cd |
| 60% | 240 cd |
| 70% | 280 cd |
| 80% | 320 cd |
| 90% | 360 cd |

#### Conditions:

Number of c-planes: 16

Candela at center: 400 cd

### ISO lux diagram



|     |          |
|-----|----------|
| 3%  | 0,120 lx |
| 5%  | 0,200 lx |
| 10% | 0,400 lx |
| 30% | 1,20 lx  |
| 50% | 2,00 lx  |

#### Conditions:

Number of c-planes: 16

Lux at center: 4,00 lx

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

### Glare Evaluation According to UGR

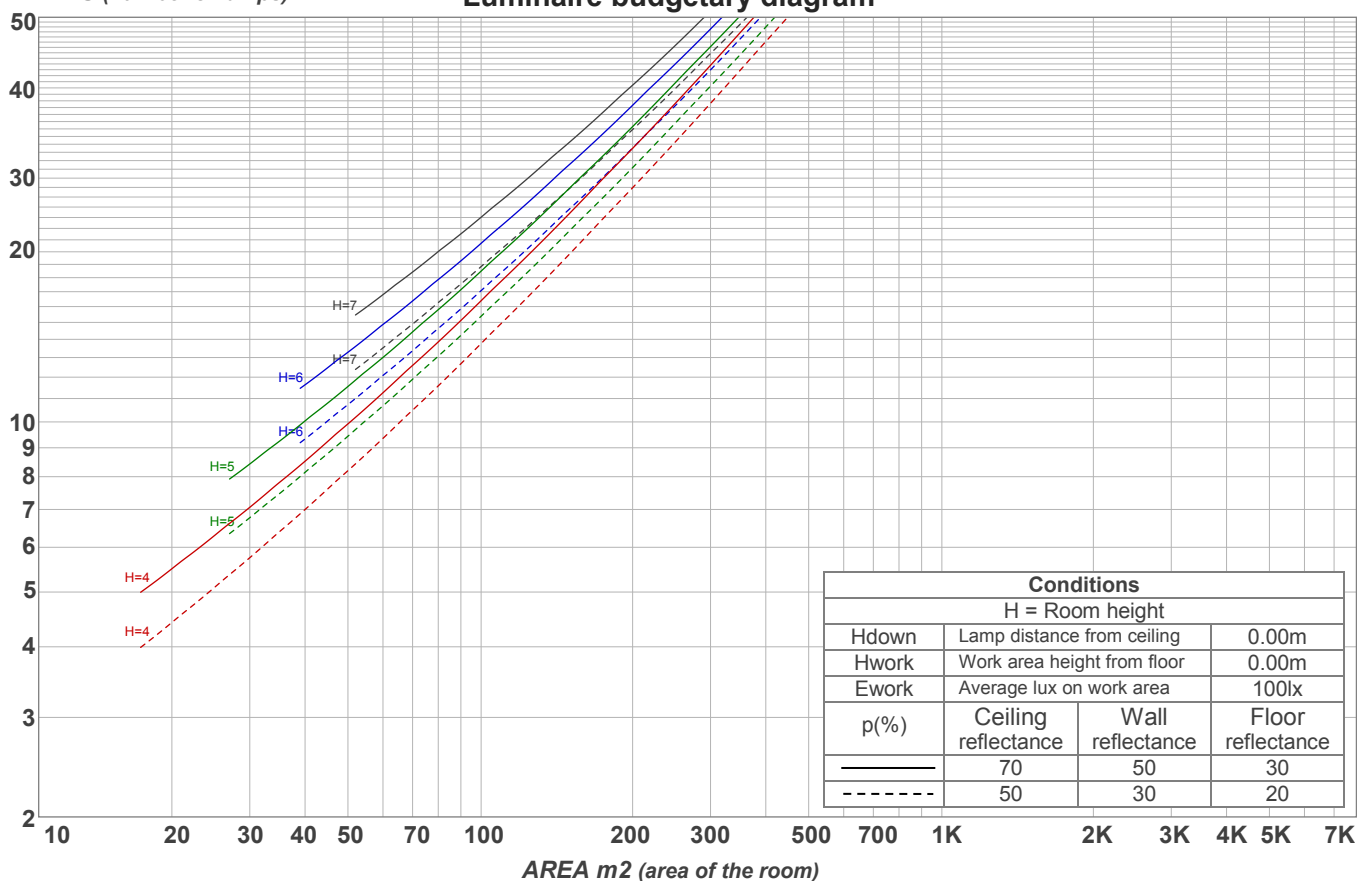
|   |     |   |      |      |      |      |   |      |      |      |      |
|---|-----|---|------|------|------|------|---|------|------|------|------|
| p Ceiling   |     | 70  | 70   | 50   | 50   | 30   | 70                                      | 70   | 50   | 50   | 30   |
| p Walls   |     | 50  | 30   | 50   | 30   | 30   | 50                                      | 30   | 50   | 30   | 30   |
| p Floor   |     | 20  | 20   | 20   | 20   | 20   | 20                                      | 20   | 20   | 20   | 20   |
| Room size<br>X      Y   |     | Viewing direction at right angles to<br>lamp axis |      |      |      |      | Viewing direction parallel to lamp axis |      |      |      |      |
| 2H  | 2H  | 19,9  | 20,9 | 20,1 | 21,2 | 21,4 | 24,4                                    | 25,4 | 24,6 | 25,7 | 25,9 |
|   | 3H  | 19,8  | 20,9 | 20,2 | 21,2 | 21,4 | 25,4                                    | 26,5 | 25,8 | 26,8 | 27,0 |
|   | 4H  | 19,9  | 21,0 | 20,3 | 21,3 | 21,5 | 25,8                                    | 26,9 | 26,2 | 27,2 | 27,4 |
|   | 6H  | 20,2  | 21,2 | 20,6 | 21,5 | 21,8 | 26,2                                    | 27,2 | 26,5 | 27,4 | 27,8 |
|   | 8H  | 20,4  | 21,3 | 20,8 | 21,7 | 22,1 | 26,3                                    | 27,2 | 26,6 | 27,5 | 27,9 |
|   | 12H | 20,6  | 21,5 | 21,0 | 21,8 | 22,3 | 26,3                                    | 27,2 | 26,7 | 27,5 | 28,0 |
| 4H  | 2H  | 20,2  | 21,3 | 20,6 | 21,5 | 21,8 | 24,2                                    | 25,3 | 24,6 | 25,5 | 25,8 |
|   | 3H  | 20,4  | 21,2 | 20,7 | 21,6 | 22,0 | 25,5                                    | 26,4 | 25,8 | 26,7 | 27,1 |
|   | 4H  | 20,5  | 21,3 | 20,9 | 21,7 | 22,2 | 25,9                                    | 26,7 | 26,4 | 27,1 | 27,7 |
|   | 6H  | 20,9  | 21,6 | 21,4 | 22,0 | 22,4 | 26,3                                    | 27,1 | 26,8 | 27,5 | 27,8 |
|   | 8H  | 21,1  | 21,9 | 21,6 | 22,2 | 22,6 | 26,4                                    | 27,2 | 26,9 | 27,5 | 27,9 |
|   | 12H | 21,4  | 22,0 | 21,9 | 22,4 | 22,9 | 26,5                                    | 27,1 | 27,0 | 27,5 | 28,0 |
| 8H  | 4H  | 20,6  | 21,4 | 21,1 | 21,7 | 22,1 | 25,8                                    | 26,6 | 26,3 | 26,9 | 27,3 |
|   | 6H  | 21,2  | 21,7 | 21,7 | 22,2 | 22,7 | 26,3                                    | 26,8 | 26,8 | 27,3 | 27,8 |
|   | 8H  | 21,6  | 22,1 | 22,1 | 22,6 | 23,2 | 26,5                                    | 27,0 | 27,0 | 27,5 | 28,1 |
|   | 12H | 22,0  | 22,4 | 22,6 | 22,9 | 23,5 | 26,6                                    | 27,0 | 27,2 | 27,5 | 28,1 |
| 12H   | 4H  | 20,6  | 21,2 | 21,1 | 21,7 | 22,1 | 25,8                                    | 26,4 | 26,3 | 26,8 | 27,3 |
|   | 6H  | 21,3  | 21,7 | 21,8 | 22,2 | 22,9 | 26,3                                    | 26,8 | 26,8 | 27,3 | 27,9 |
|   | 8H  | 21,7  | 22,1 | 22,3 | 22,6 | 23,2 | 26,5                                    | 26,9 | 27,1 | 27,4 | 28,0 |
| Variation of the observer position for the luminaire distance S |     |   |      |      |      |      |   |      |      |      |      |
| S = 1.0H  |     | 0,7 / -1,0  |      |      |      |      | 0,1 / -0,2                              |      |      |      |      |
| S = 1.5H  |     | 1,5 / -1,7  |      |      |      |      | 0,8 / -1,1                              |      |      |      |      |
| S = 2.0H  |     | 2,6 / -2,1  |      |      |      |      | 1,6 / -2,2                              |      |      |      |      |
| Standard table  |     | n/a   |      |      |      |      | n/a                                     |      |      |      |      |
| Correction<br>summand   |     | n/a   |      |      |      |      | n/a                                     |      |      |      |      |
| Corrected glare indices referring to 998 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 | 100 | 100 | 100 | 98 |
| 1                   | 110  | 105 | 102 | 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  | 82  | 75  | 69  | 79  | 73  | 68  | 76  | 71  | 67  | 73  | 69  | 65  | 63 |
| 4                   | 86   | 75  | 67  | 61  | 83  | 73  | 66  | 60  | 71  | 64  | 59  | 68  | 63  | 58  | 66  | 61  | 57  | 55 |
| 5                   | 79   | 67  | 59  | 53  | 77  | 66  | 58  | 52  | 64  | 57  | 52  | 62  | 56  | 51  | 60  | 55  | 50  | 48 |
| 6                   | 73   | 61  | 53  | 47  | 71  | 60  | 52  | 46  | 58  | 51  | 46  | 56  | 50  | 45  | 55  | 49  | 45  | 43 |
| 7                   | 68   | 55  | 47  | 41  | 66  | 55  | 47  | 41  | 53  | 46  | 41  | 51  | 45  | 40  | 50  | 44  | 40  | 38 |
| 8                   | 64   | 51  | 43  | 37  | 62  | 50  | 42  | 37  | 49  | 42  | 37  | 47  | 41  | 36  | 46  | 40  | 36  | 34 |
| 9                   | 59   | 47  | 39  | 34  | 58  | 46  | 39  | 33  | 45  | 38  | 33  | 44  | 37  | 33  | 43  | 37  | 33  | 31 |
| 10                  | 56   | 43  | 36  | 31  | 54  | 43  | 35  | 30  | 41  | 35  | 30  | 40  | 34  | 30  | 39  | 34  | 30  | 28 |

LAMPS (number of lamps)

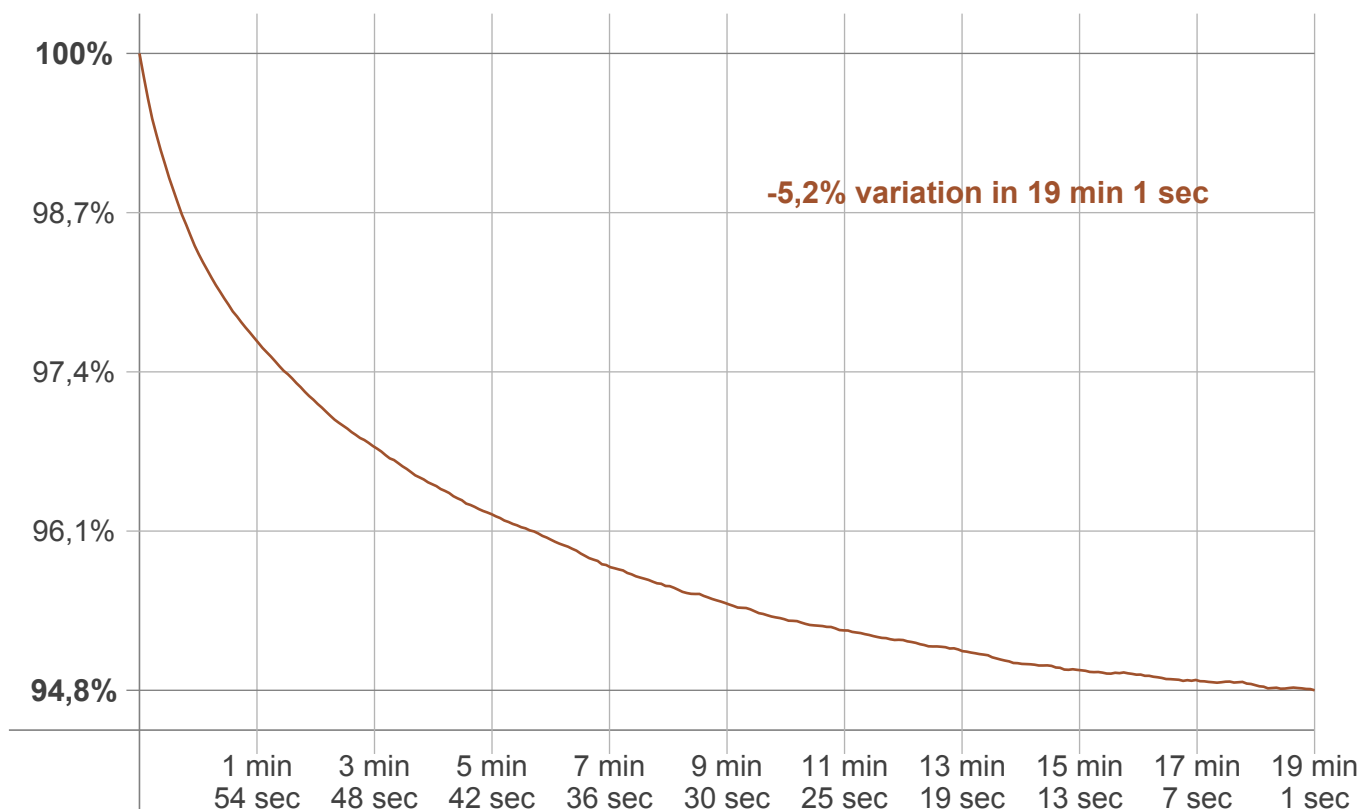
## Luminaire budgetary diagram



## Zonal Lumen Summary

| 0°-10°   | 10°-20°   | 20°-30°   | 30°-40°   | 40°-50°   | 50°-60°   | 60°-70°   | 70°-80°   | 80°-90°   |
|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 38,0 lm  | 110 lm    | 173 lm    | 213 lm    | 199 lm    | 128 lm    | 66,3 lm   | 35,1 lm   | 18,7 lm   |
| 90°-100° | 100°-110° | 110°-120° | 120°-130° | 130°-140° | 140°-150° | 150°-160° | 160°-170° | 170°-180° |
| 5,75 lm  | 2,95 lm   | 2,52 lm   | 2,28 lm   | 1,44 lm   | 0,857 lm  | 0,631 lm  | 0,387 lm  | 0,130 lm  |

## Warmup curve



## Warmup result

|                  |              |
|------------------|--------------|
| Warmup time:     | 19 min 1 sec |
| Warmup variation | -5,2%        |

## Warmup conditions

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

## Color temperature change

| CCT start | CCT change | CCT end |
|-----------|------------|---------|
| 2230 K    | +1 K       | 2231 K  |

## Output change

| Output start | Output change | Output end |
|--------------|---------------|------------|
| 1048 lm      | -49 lm        | 998 lm     |