

### Light efficiency:

**79 Lumen/Watt**

### Light quality:

**CRI: 82,1**

### Color temperature:

**2237 K**

**Output: 945 lm**

**Peak: 333 cd**

**Power: 12,0 W**

**PF: 1,0**



### Product name:

**Pegasus-3-Gold-0508-822-CSF**

### Item number:

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

### Date and time:

**17.03.2021 15:40:54**

### Description:

**Rank: M1A4T**

**Toleranzen:**

**Lumen +/-4%**

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

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

**CRI +/-0,7**

**Angular Resolution 1 Grad step**

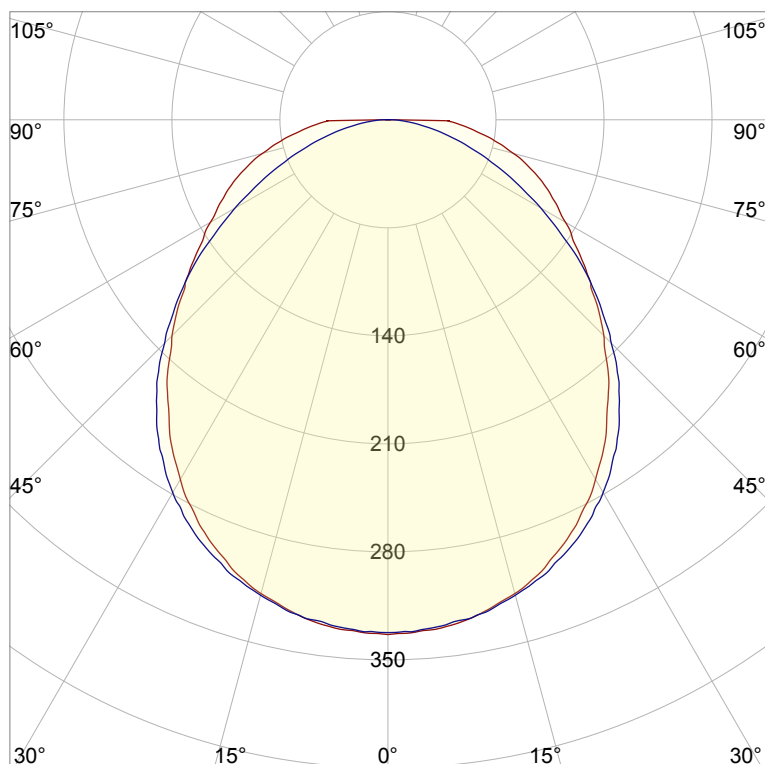
**Last Calibration 20-05-2020**

**Pruefer: Peter Ulrich**

**Pruefort: Lichtlabor**

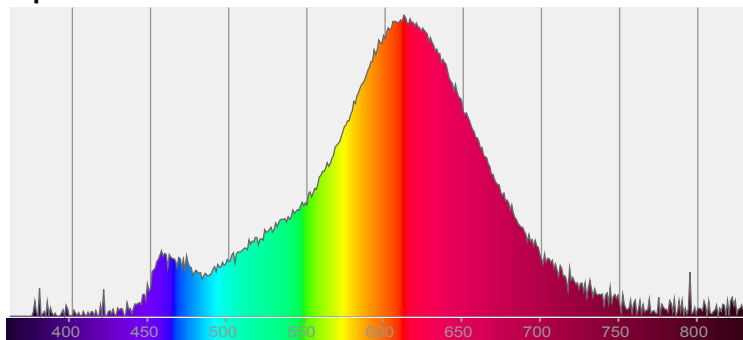
**Gaustrasse13-15**

**55411 Bingen am Rhein**

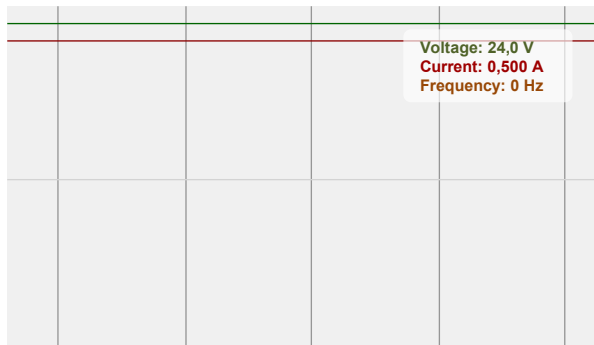


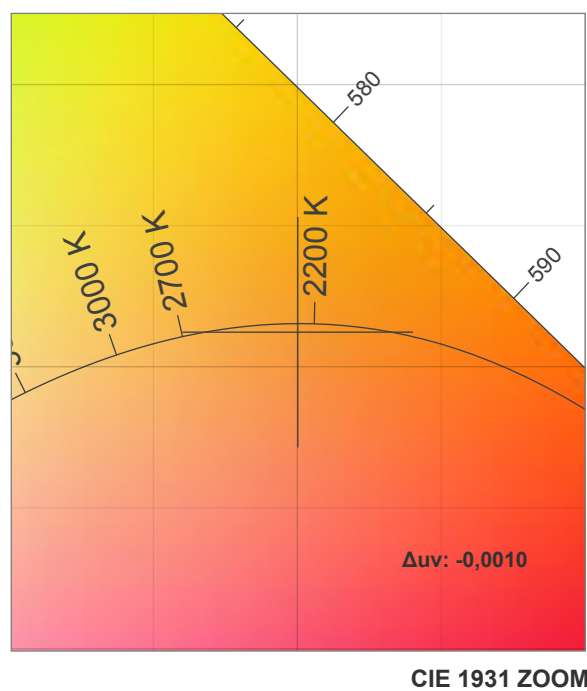
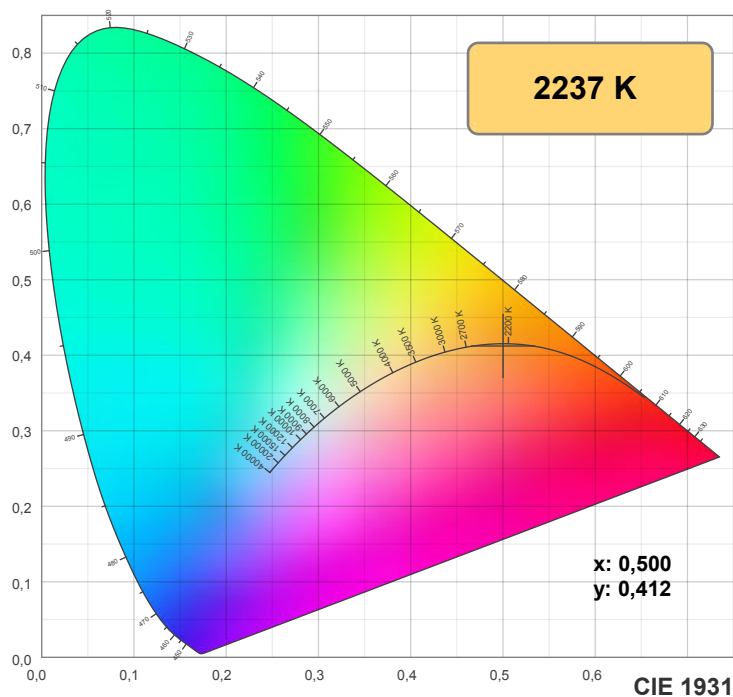
**CIE 1931**  
**x: 0,500**  
**y: 0,412**

### Spectra

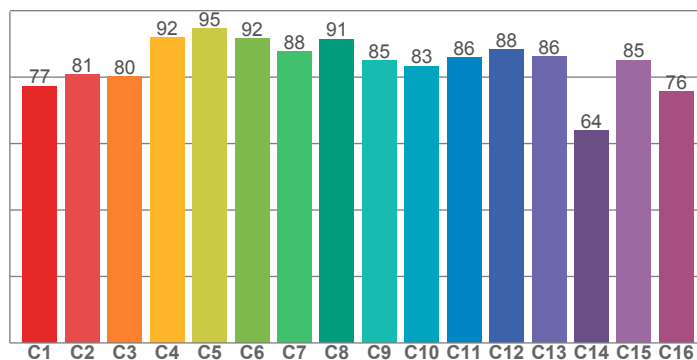


### Power

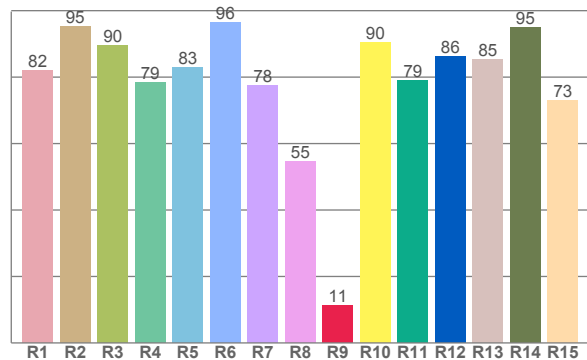




**TM30: 84,7**



**CRI: 82,1 (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  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 81,9 | 95,1 | 89,5 | 78,5 | 82,8 | 96,4 | 77,5 | 54,6 | 11,4 | 90,3 | 79,0 | 86,3 | 85,2 | 95,0 | 73,0 |

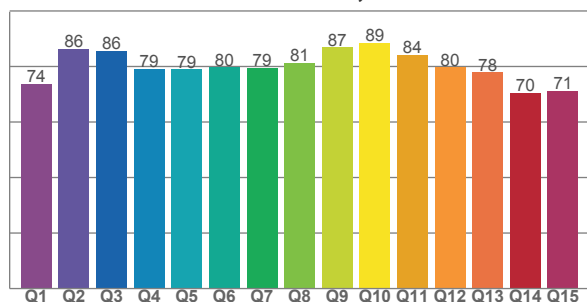
TM30 C values, 16 binned values out of total of 99 C values

| C1   | C2   | C3   | C4   | C5   | C6   | C7   | C8   | C9   | C10  | C11  | C12  | C13  | C14  | C15  | C16  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 77,3 | 80,8 | 80,2 | 91,9 | 94,6 | 91,5 | 87,7 | 91,5 | 84,9 | 83,3 | 85,9 | 88,2 | 86,2 | 63,9 | 85,2 | 75,6 |

CQS Q values

| Q1   | Q2   | Q3   | Q4   | Q5   | Q6   | Q7   | Q8   | Q9   | Q10  | Q11  | Q12  | Q13  | Q14  | Q15  |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 73,8 | 86,4 | 85,5 | 79,1 | 79,0 | 79,7 | 79,4 | 81,1 | 86,9 | 88,5 | 84,1 | 79,7 | 77,9 | 70,4 | 71,2 |

**CQS: 79,1**



## 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                | $\Delta uv$                     |
| 2237 K            | 82,1                  | 11,4          | 84,7           | 94,1        | 79,1                | 0,500                     | 0,412                     | 0,288            | 0,356            | -0,0010                         |

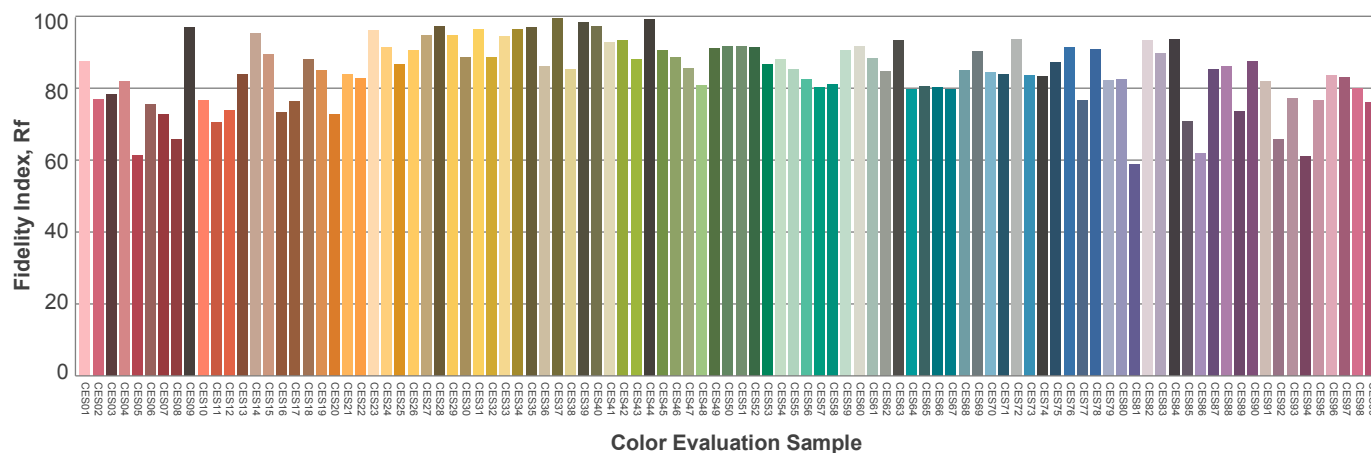
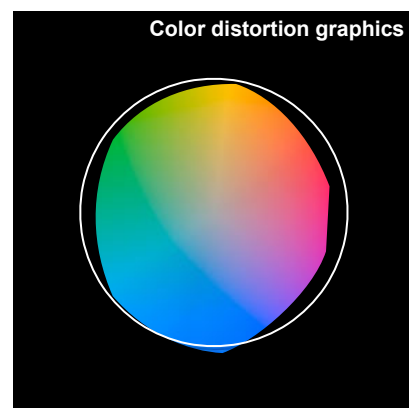
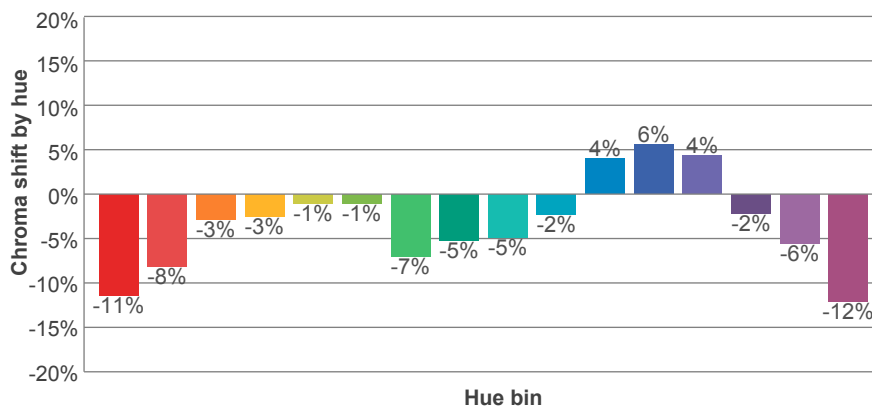
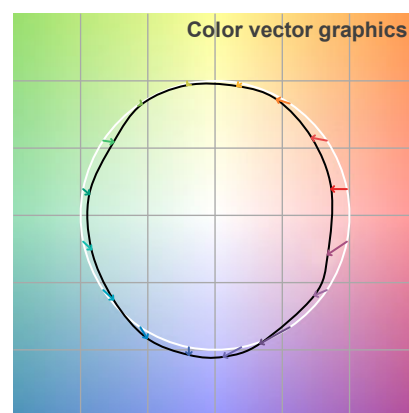
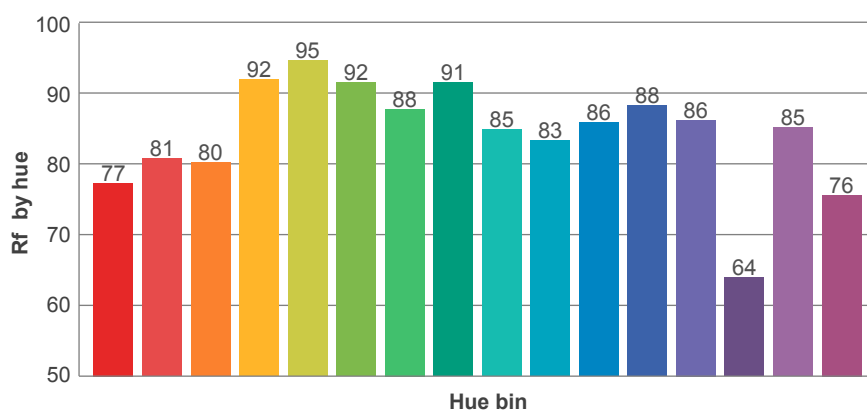
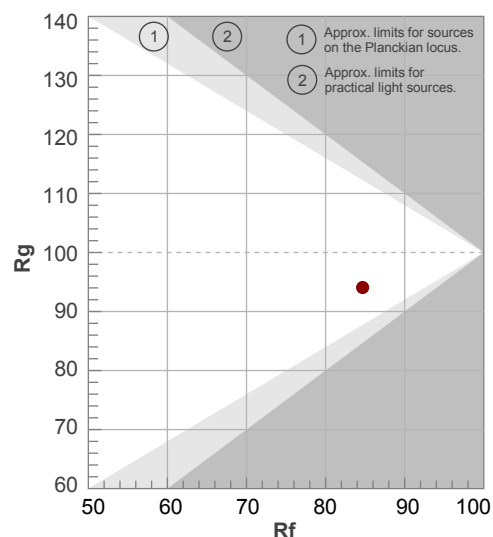
**Rf 84,7**

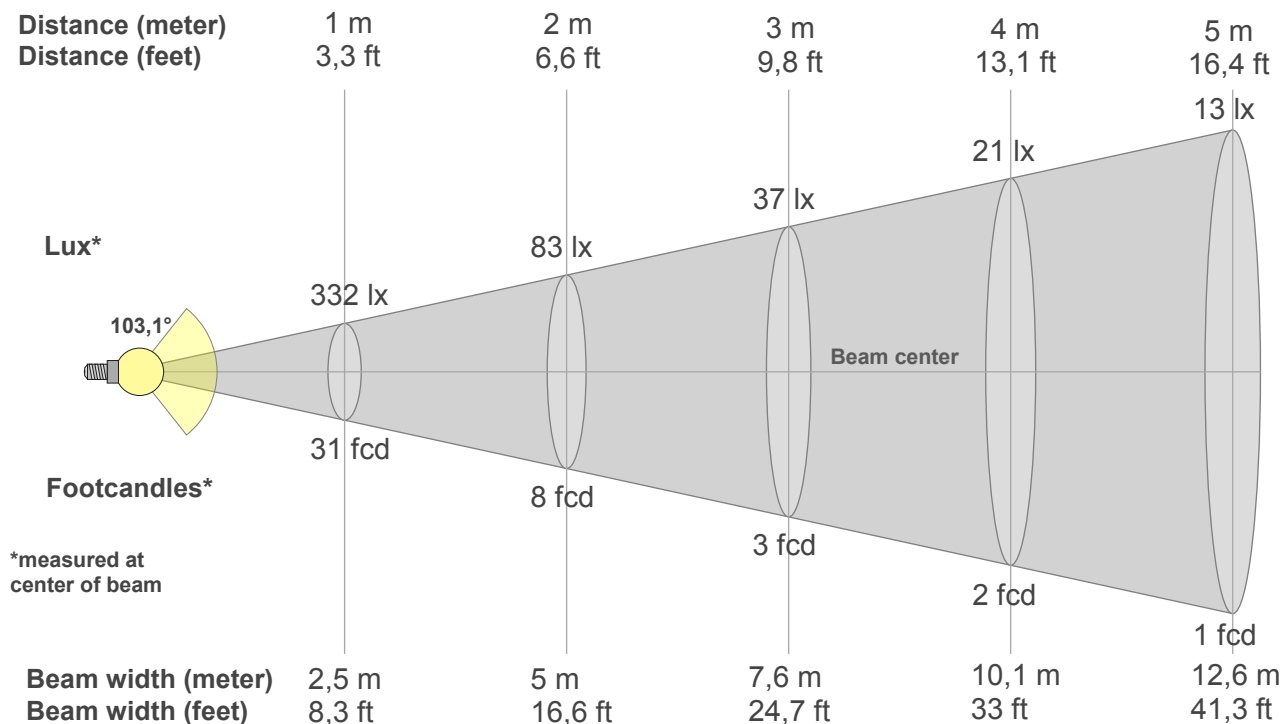
Fidelity index Rf

**Rg 94,1**

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       | 92             | -3%                | 3%   |
| 5       | 95             | -1%                | 1%   |
| 6       | 92             | -1%                | -1%  |
| 7       | 88             | -7%                | -3%  |
| 8       | 91             | -5%                | 3%   |
| 9       | 85             | -5%                | 7%   |
| 10      | 83             | -2%                | 10%  |
| 11      | 86             | 4%                 | 9%   |
| 12      | 88             | 6%                 | 1%   |
| 13      | 86             | 4%                 | -14% |
| 14      | 64             | -2%                | -25% |
| 15      | 85             | -6%                | -8%  |
| 16      | 76             | -12%               | -12% |





## 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 |
| 332lx   | 83lx   | 37lx   | 21lx   | 13lx   | 9lx    | 7lx    | 5lx    | 4lx    | 3lx    | 3lx    | 2lx    | 2lx    | 2lx    | 1lx    | 1lx    | 1lx    | 1lx    | 1lx    | 1lx    |
| 30,9fcd | 7,7fcd | 3,4fcd | 1,9fcd | 1,2fcd | 0,9fcd | 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 | 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° |
|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 332  | 332  | 327 | 318 | 305 | 289 | 269 | 247 | 223 | 198 | 173 | 152 | 133 | 117 | 102 | 84  | 67  | 50  | 21  | 20  |
| 100% | 100% | 98% | 96% | 92% | 87% | 81% | 74% | 67% | 60% | 52% | 46% | 40% | 35% | 31% | 25% | 20% | 15% | 6%  | 6%  |

## 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° |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 332  | 330 | 326 | 319 | 309 | 296 | 279 | 258 | 233 | 205 | 176 | 145 | 114 | 87  | 62  | 41  | 23  | 11  | 2   | 2   |
| 100% | 99% | 98% | 96% | 93% | 89% | 84% | 78% | 70% | 62% | 53% | 44% | 34% | 26% | 19% | 12% | 7%  | 3%  | 1%  | 1%  |

## Intensities in 180° c-plane

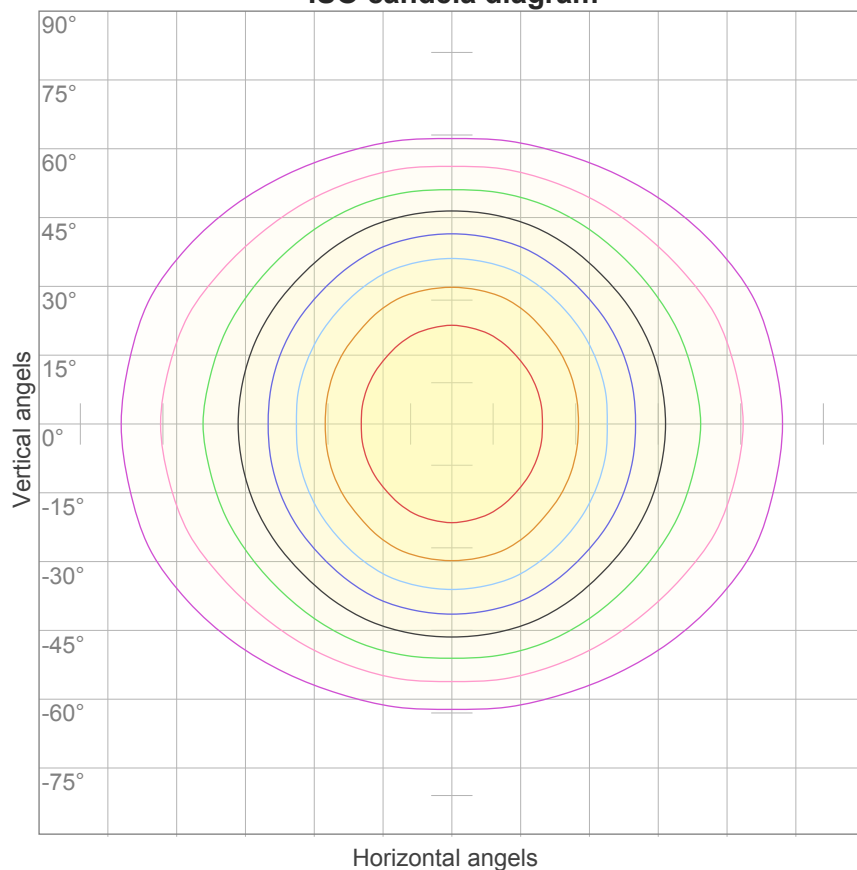
| 0°   | 5°   | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° | 95° |
|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 332  | 332  | 327 | 318 | 305 | 289 | 269 | 247 | 223 | 198 | 173 | 152 | 133 | 117 | 102 | 84  | 67  | 50  | 21  | 20  |
| 100% | 100% | 98% | 96% | 92% | 87% | 81% | 74% | 67% | 60% | 52% | 46% | 40% | 35% | 31% | 25% | 20% | 15% | 6%  | 6%  |

## 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° |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 332  | 330 | 326 | 319 | 309 | 296 | 279 | 258 | 233 | 205 | 176 | 145 | 114 | 87  | 62  | 41  | 23  | 11  | 2   | 2   |
| 100% | 99% | 98% | 96% | 93% | 89% | 84% | 78% | 70% | 62% | 53% | 44% | 34% | 26% | 19% | 12% | 7%  | 3%  | 1%  | 1%  |

| Beam angle 50% | Field angle 10% | Cutoff angle 2,5% | Intensity ratio in 120° cone | Intensity ratio in 90° cone |
|----------------|-----------------|-------------------|------------------------------|-----------------------------|
| 103,1°         | 169,7°          | 197,4°            | 74,2%                        | 52,2%                       |

### ISO candela diagram



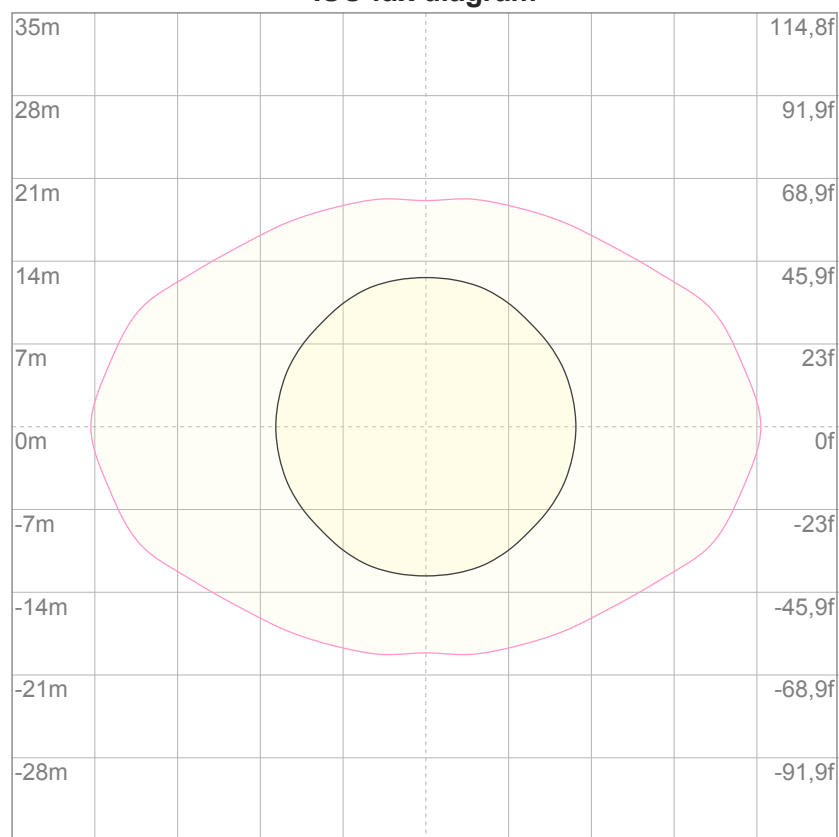
|     |        |
|-----|--------|
| 10% | 33 cd  |
| 20% | 66 cd  |
| 30% | 100 cd |
| 40% | 133 cd |
| 50% | 166 cd |
| 60% | 199 cd |
| 70% | 233 cd |
| 80% | 266 cd |
| 90% | 299 cd |

#### Conditions:

Number of c-planes: 16

Candela at center: 332 cd

### ISO lux diagram



|     |          |
|-----|----------|
| 3%  | 99,7m lx |
| 5%  | 0,166 lx |
| 10% | 0,332 lx |
| 30% | 0,997 lx |
| 50% | 1,66 lx  |

#### Conditions:

Number of c-planes: 16

Lux at center: 3,32 lx

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

### Glare Evaluation According to UGR

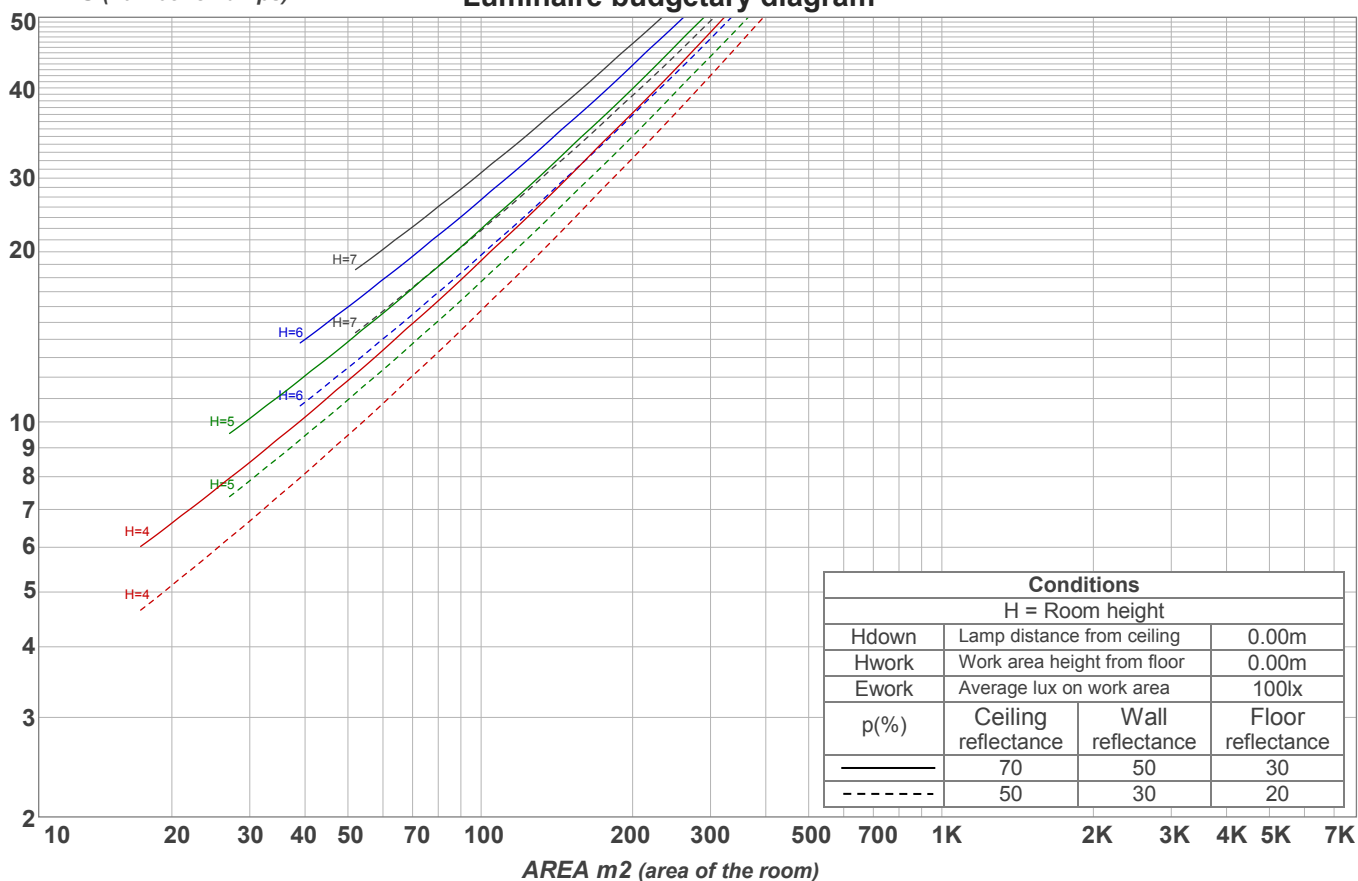
|   |     |   |      |      |      |      |   |      |      |      |      |
|---|-----|---|------|------|------|------|---|------|------|------|------|
| p Ceiling   |     | 70  | 70   | 50   | 50   | 30   | 70                                      | 70   | 50   | 50   | 30   |
| p Walls   |     | 50  | 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  | 21,6  | 22,8 | 21,8 | 23,1 | 23,3 | 22,2                                    | 23,4 | 22,5 | 23,8 | 24,0 |
|   | 3H  | 23,1  | 24,4 | 23,5 | 24,6 | 24,8 | 23,3                                    | 24,6 | 23,7 | 24,9 | 25,1 |
|   | 4H  | 23,8  | 25,1 | 24,2 | 25,3 | 25,6 | 23,7                                    | 25,0 | 24,2 | 25,2 | 25,5 |
|   | 6H  | 24,6  | 25,6 | 24,9 | 25,9 | 26,3 | 24,1                                    | 25,2 | 24,4 | 25,5 | 25,9 |
|   | 8H  | 24,8  | 25,9 | 25,2 | 26,2 | 26,6 | 24,2                                    | 25,3 | 24,6 | 25,6 | 26,0 |
|   | 12H | 25,1  | 26,1 | 25,4 | 26,4 | 26,9 | 24,3                                    | 25,3 | 24,6 | 25,6 | 26,1 |
| 4H  | 2H  | 22,1  | 23,3 | 22,5 | 23,6 | 23,9 | 22,6                                    | 23,8 | 23,0 | 24,1 | 24,4 |
|   | 3H  | 23,9  | 25,0 | 24,3 | 25,3 | 25,8 | 24,0                                    | 25,0 | 24,4 | 25,4 | 25,8 |
|   | 4H  | 24,8  | 25,7 | 25,2 | 26,1 | 26,7 | 24,5                                    | 25,4 | 24,9 | 25,9 | 26,4 |
|   | 6H  | 25,6  | 26,5 | 26,1 | 26,9 | 27,2 | 24,9                                    | 25,8 | 25,4 | 26,2 | 26,6 |
|   | 8H  | 25,9  | 26,8 | 26,5 | 27,1 | 27,5 | 25,1                                    | 25,9 | 25,6 | 26,3 | 26,7 |
|   | 12H | 26,3  | 27,0 | 26,8 | 27,4 | 27,9 | 25,2                                    | 25,9 | 25,7 | 26,3 | 26,8 |
| 8H  | 4H  | 25,0  | 25,9 | 25,5 | 26,2 | 26,6 | 24,8                                    | 25,6 | 25,3 | 26,0 | 26,4 |
|   | 6H  | 26,1  | 26,7 | 26,6 | 27,2 | 27,7 | 25,4                                    | 26,0 | 25,9 | 26,5 | 27,1 |
|   | 8H  | 26,6  | 27,1 | 27,1 | 27,7 | 28,3 | 25,7                                    | 26,2 | 26,2 | 26,7 | 27,4 |
|   | 12H | 27,0  | 27,5 | 27,6 | 28,0 | 28,6 | 25,8                                    | 26,3 | 26,4 | 26,8 | 27,4 |
| 12H   | 4H  | 25,0  | 25,7 | 25,5 | 26,2 | 26,7 | 24,8                                    | 25,5 | 25,3 | 26,0 | 26,4 |
|   | 6H  | 26,2  | 26,7 | 26,7 | 27,2 | 27,9 | 25,5                                    | 26,1 | 26,0 | 26,6 | 27,3 |
|   | 8H  | 26,7  | 27,2 | 27,3 | 27,7 | 28,3 | 25,8                                    | 26,3 | 26,4 | 26,8 | 27,4 |
| Variation of the observer position for the luminaire distance S |     |   |      |      |      |      |   |      |      |      |      |
| S = 1.0H  |     | 0,1 / -0,1  |      |      |      |      | 0,1 / -0,1                              |      |      |      |      |
| S = 1.5H  |     | 0,1 / -0,2  |      |      |      |      | 0,3 / -0,4                              |      |      |      |      |
| S = 2.0H  |     | 0,3 / -0,4  |      |      |      |      | 0,8 / -0,8                              |      |      |      |      |
| Standard table  |     | n/a   |      |      |      |      | n/a                                     |      |      |      |      |
| Correction<br>summand   |     | n/a   |      |      |      |      | n/a                                     |      |      |      |      |
| Corrected glare indices referring to 945 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                   | 118  | 118 | 118 | 118 | 115 | 115 | 115 | 115 | 109 | 109 | 109 | 104 | 104 | 104 | 98 | 98 | 98 | 96 |
| 1                   | 107  | 102 | 97  | 93  | 104 | 99  | 95  | 91  | 94  | 91  | 88  | 90  | 87  | 84  | 86 | 83 | 81 | 79 |
| 2                   | 97   | 89  | 82  | 76  | 94  | 87  | 80  | 75  | 82  | 77  | 72  | 79  | 74  | 70  | 75 | 71 | 68 | 66 |
| 3                   | 89   | 78  | 70  | 63  | 86  | 76  | 69  | 62  | 73  | 66  | 61  | 69  | 64  | 59  | 66 | 62 | 58 | 55 |
| 4                   | 81   | 69  | 61  | 54  | 79  | 68  | 60  | 53  | 65  | 58  | 52  | 62  | 56  | 51  | 59 | 54 | 50 | 48 |
| 5                   | 75   | 62  | 53  | 46  | 73  | 61  | 52  | 46  | 58  | 51  | 45  | 56  | 49  | 44  | 54 | 48 | 43 | 41 |
| 6                   | 69   | 56  | 47  | 41  | 67  | 55  | 46  | 40  | 53  | 45  | 40  | 51  | 44  | 39  | 49 | 43 | 38 | 36 |
| 7                   | 64   | 51  | 42  | 36  | 62  | 50  | 42  | 36  | 48  | 41  | 35  | 46  | 40  | 35  | 45 | 39 | 34 | 32 |
| 8                   | 60   | 46  | 38  | 32  | 58  | 46  | 38  | 32  | 44  | 37  | 32  | 42  | 36  | 31  | 41 | 35 | 31 | 29 |
| 9                   | 56   | 43  | 35  | 29  | 54  | 42  | 34  | 29  | 41  | 33  | 28  | 39  | 33  | 28  | 38 | 32 | 28 | 26 |
| 10                  | 53   | 39  | 32  | 26  | 51  | 39  | 31  | 26  | 38  | 31  | 26  | 36  | 30  | 26  | 35 | 29 | 25 | 24 |

LAMPS (number of lamps)

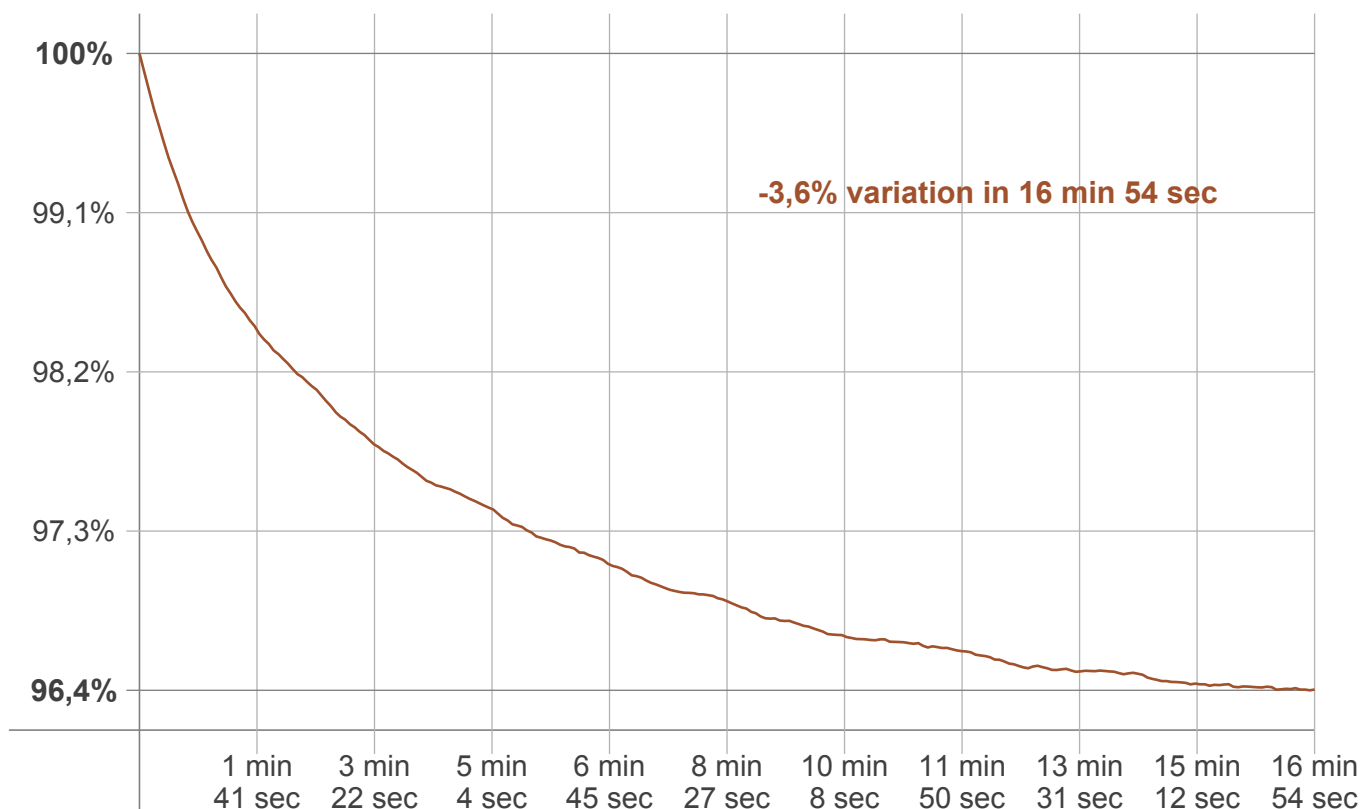
## Luminaire budgetary diagram



## Zonal Lumen Summary

| 0°-10°   | 10°-20°   | 20°-30°   | 30°-40°   | 40°-50°   | 50°-60°   | 60°-70°   | 70°-80°   | 80°-90°   |
|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 31,4 lm  | 89,8 lm   | 135 lm    | 158 lm    | 155 lm    | 133 lm    | 101 lm    | 68,7 lm   | 36,9 lm   |
| 90°-100° | 100°-110° | 110°-120° | 120°-130° | 130°-140° | 140°-150° | 150°-160° | 160°-170° | 170°-180° |
| 12,0 lm  | 6,50 lm   | 5,64 lm   | 5,10 lm   | 3,13 lm   | 1,77 lm   | 1,30 lm   | 0,798 lm  | 0,269 lm  |

### Warmup curve



### Warmup result

|                  |               |
|------------------|---------------|
| Warmup time:     | 16 min 54 sec |
| Warmup variation | -3,6%         |

### Warmup conditions

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

### Color temperature change

| CCT start | CCT change | CCT end |
|-----------|------------|---------|
| 2236 K    | +1 K       | 2237 K  |

### Output change

| Output start | Output change | Output end |
|--------------|---------------|------------|
| 976 lm       | -31 lm        | 945 lm     |