

Light efficiency:



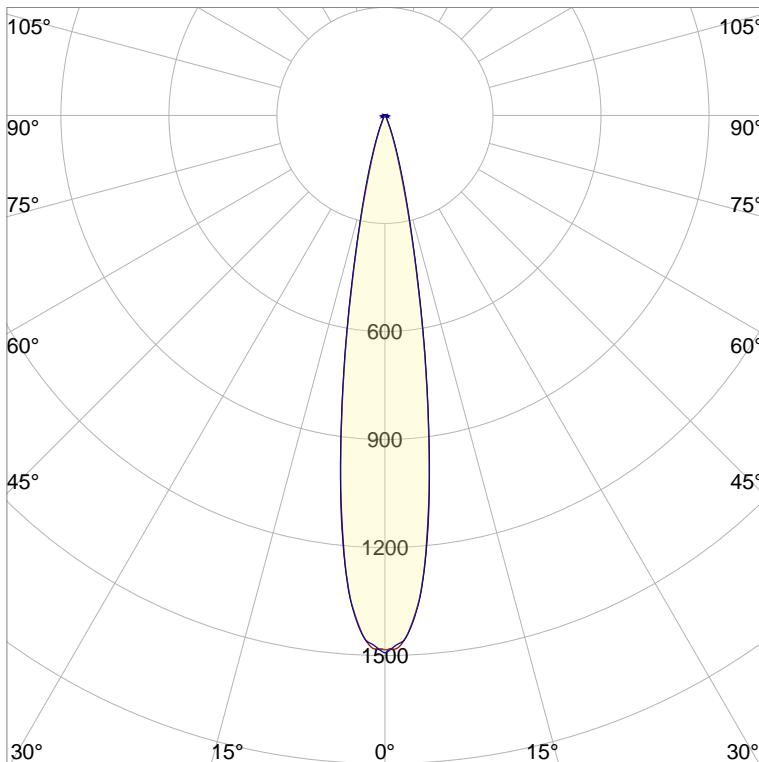
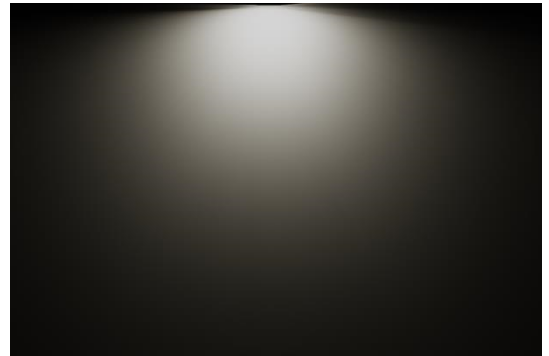
Light quality:



Color temperature:



**Output:** 197 lm  
**Peak:** 1490 cd  
**Power:** 6,2 W  
**PF:** 0,79



CIE 1931  
x: 0,692  
y: 0,302

Product name:

**FLNP-F4C-C-258-R-927-10770-ALA**

Item number:

**FLNP-F4C-C-258-R-927-10770-ALA**

Date and time:

**13.02.2019 14:39:09**

Description:

**Toleranzen:**

**Lumen +/-4%**

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

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

**CRI +/-0,7**

**Angular Resolution 1 Grad step**

**Last Calibration 06-06-2018**

**Pruefer:**

**Mourad Benzineb**

**Master of Engineering**

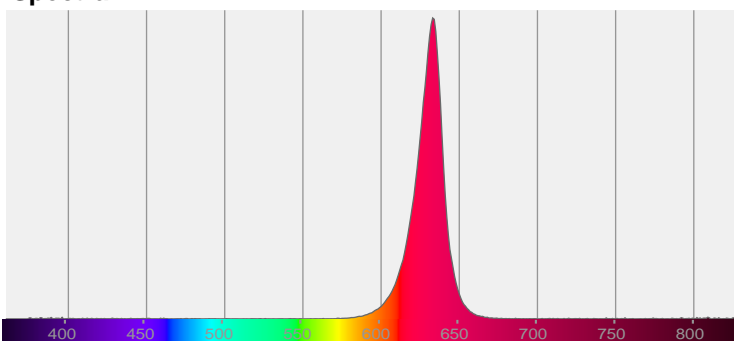
**Pruefort:**

**Lichtlabor**

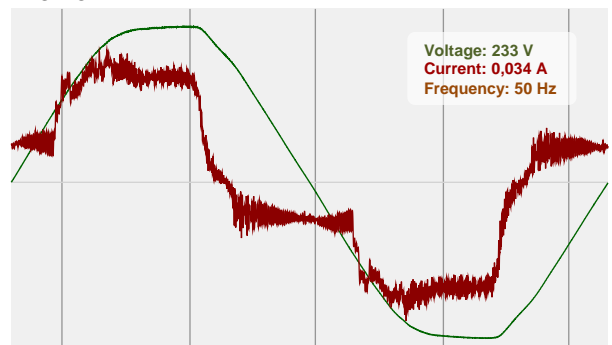
**Gaustasse13-15**

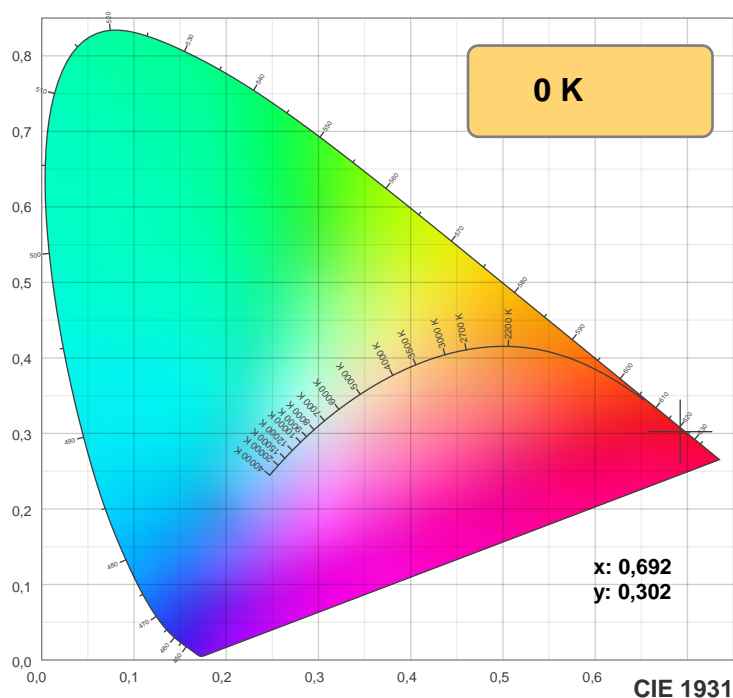
**55411 Bingen am Rhein**

Spectra



Power





TM30: 0,0



CRI R values, only R1-R8 are used to calculate final CRI value

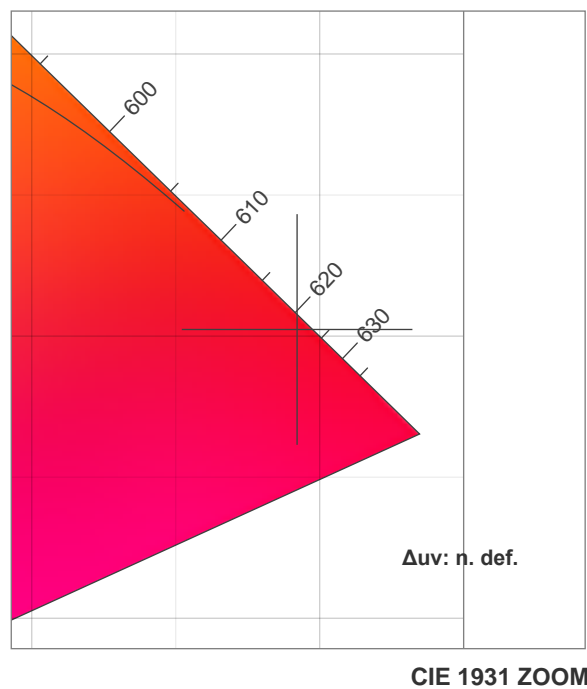
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

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

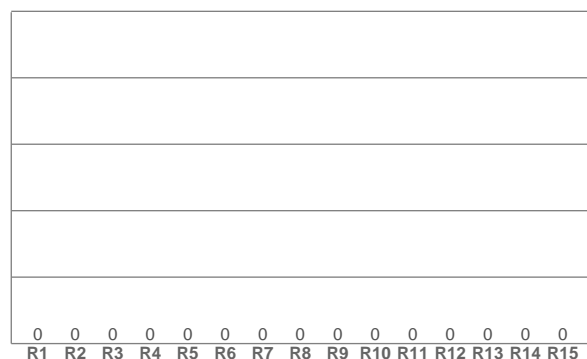
C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

CQS Q values

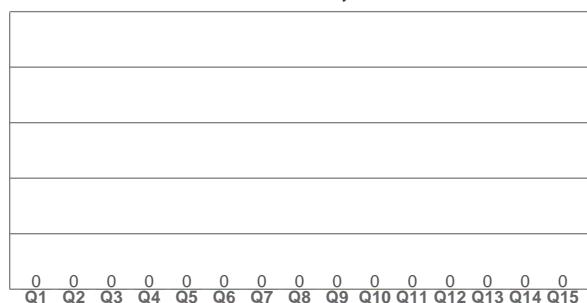
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0



CRI: 0,0 (R1-R8)



CQS: 0,0



## 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
0 K	0,0	0,0	0,0	0,0	0,0	0,692	0,302	0,528	0,346	n. def.

## TM30 details

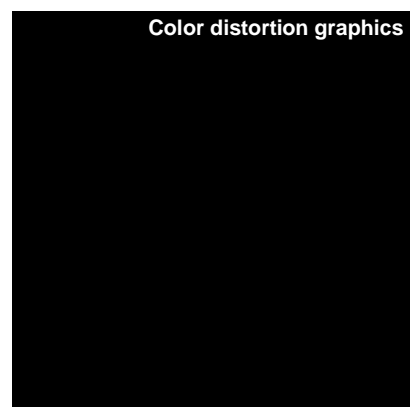
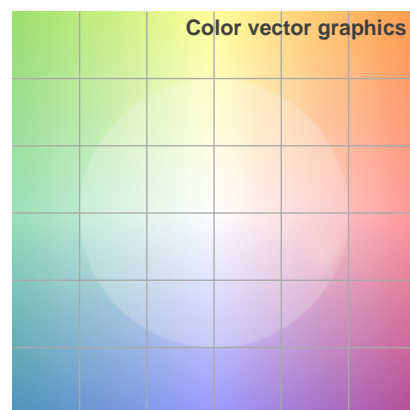
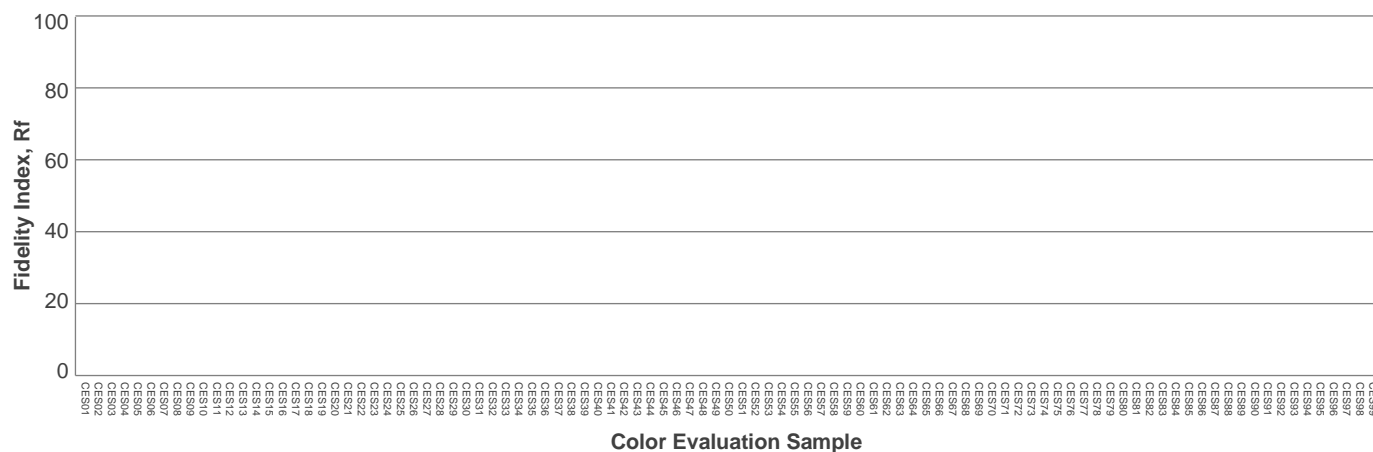
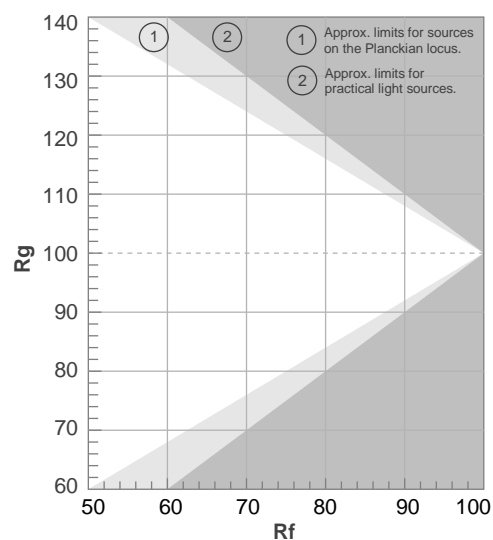
**Rf 0,0**

Fidelity index Rf

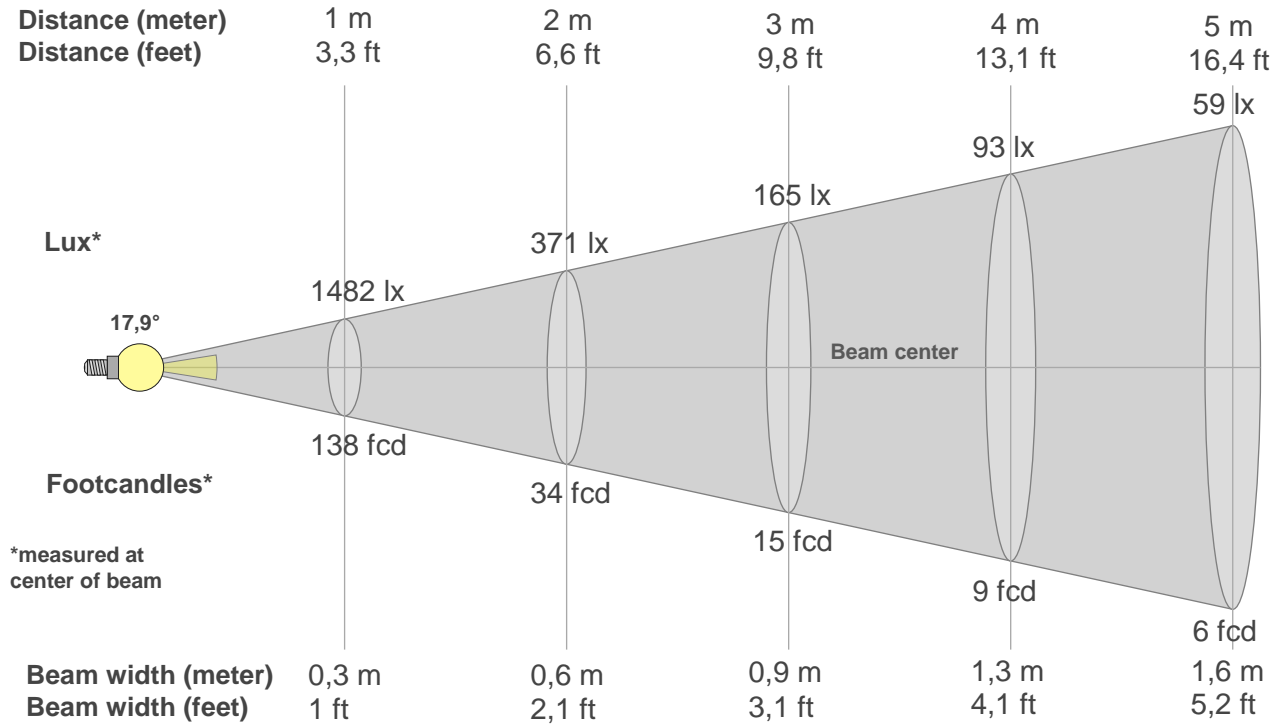
**Rg 0,0**

Gammut index Rg

(TM30_BN_VALUES_START)			
Graphic shifts (%)			
Hue Bin	R <sub>f</sub>	Chroma	Hue
1		%	%
2		%	%
3		%	%
4		%	%
5		%	%
6		%	%
7		%	%
8		%	%
9		%	%
10		%	%
11		%	%
12		%	%
13		%	%
14		%	%
15		%	%
16		%	%



## Beam details



### Beam intensities from 1-20m

m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
lx	lx	lx	lx	lx	lx	lx	lx	lx	lx	lx	lx	lx	lx	lx	lx	lx	lx	lx	lx
fcd	fcd	fcd	fcd	fcd	fcd	fcd	fcd	fcd	fcd	fcd	fcd	fcd	fcd	fcd	fcd	fcd	fcd	fcd	fcd

(BEAM\_INT\_TABLE\_END)

### Intensities in 0° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
1482	1481	1459	1413	1350	1258	1144	1009	869	733	606	489	388	304	237	184	145	115	92	73
100%	100%	98%	95%	91%	85%	77%	68%	59%	49%	41%	33%	26%	21%	16%	12%	10%	8%	6%	5%

### Intensities in 90° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
1482	1475	1458	1416	1352	1258	1138	1012	871	735	607	486	390	313	252	203	162	129	102	81
100%	100%	98%	96%	91%	85%	77%	68%	59%	50%	41%	33%	26%	21%	17%	14%	11%	9%	7%	5%

### Intensities in 180° c-plane

(INT\_TABLE\_180\_START)

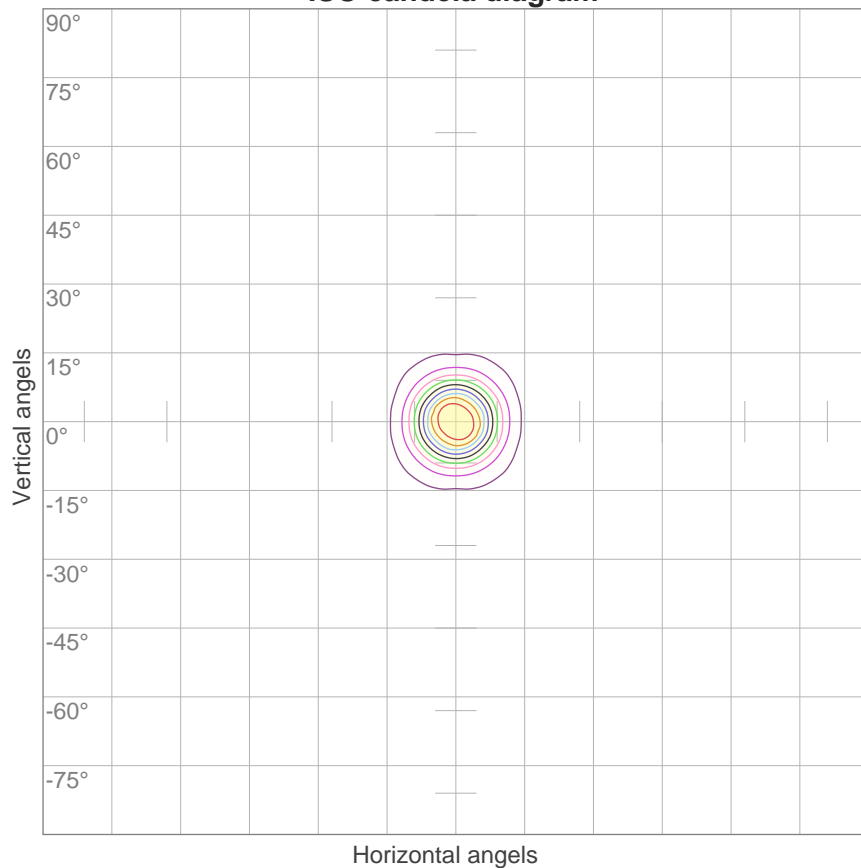
°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%

### Intensities in 270° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
1482	1475	1458	1416	1352	1258	1138	1012	871	735	607	486	390	313	252	203	162	129	102	81
100%	100%	98%	96%	91%	85%	77%	68%	59%	50%	41%	33%	26%	21%	17%	14%	11%	9%	7%	5%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
17,9°	33,2°	46,4°	94,0%	91,4%

ISO candela diagram



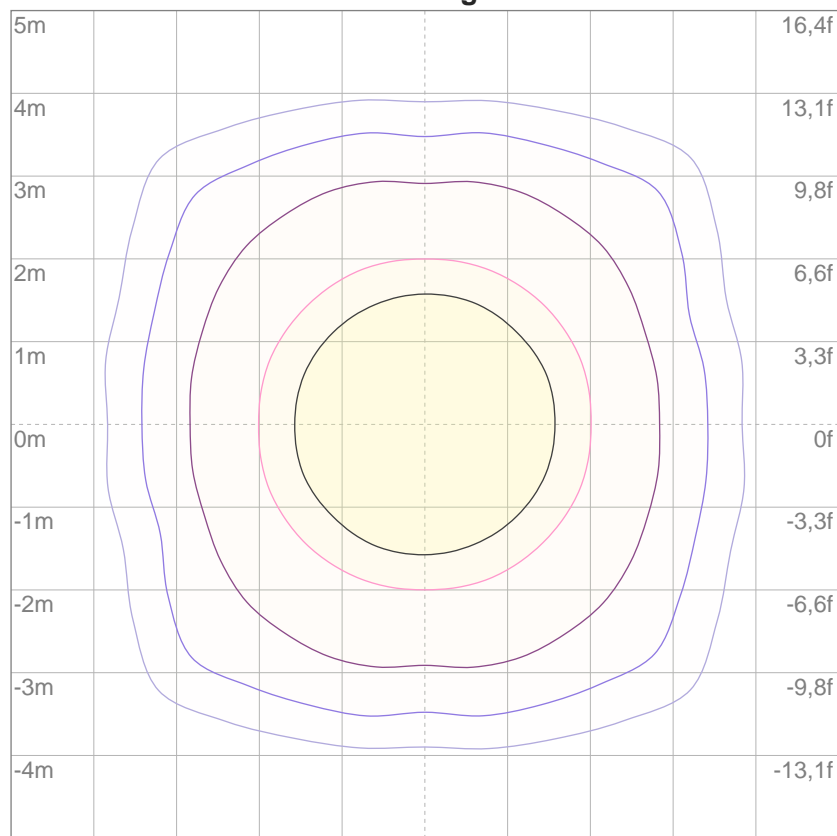
10%	148 cd
20%	296 cd
30%	445 cd
40%	593 cd
50%	741 cd
60%	889 cd
70%	1037 cd
80%	1186 cd
90%	1334 cd

Conditions:

Number of c-planes: 16

Candela at center: 1482 cd

ISO lux diagram



3%	0,445 lx
5%	0,741 lx
10%	1,48 lx
30%	4,45 lx
50%	7,41 lx

Conditions:

Number of c-planes: 16

Lux at center: 14,8 lx

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

## Glare Evaluation According to UGR

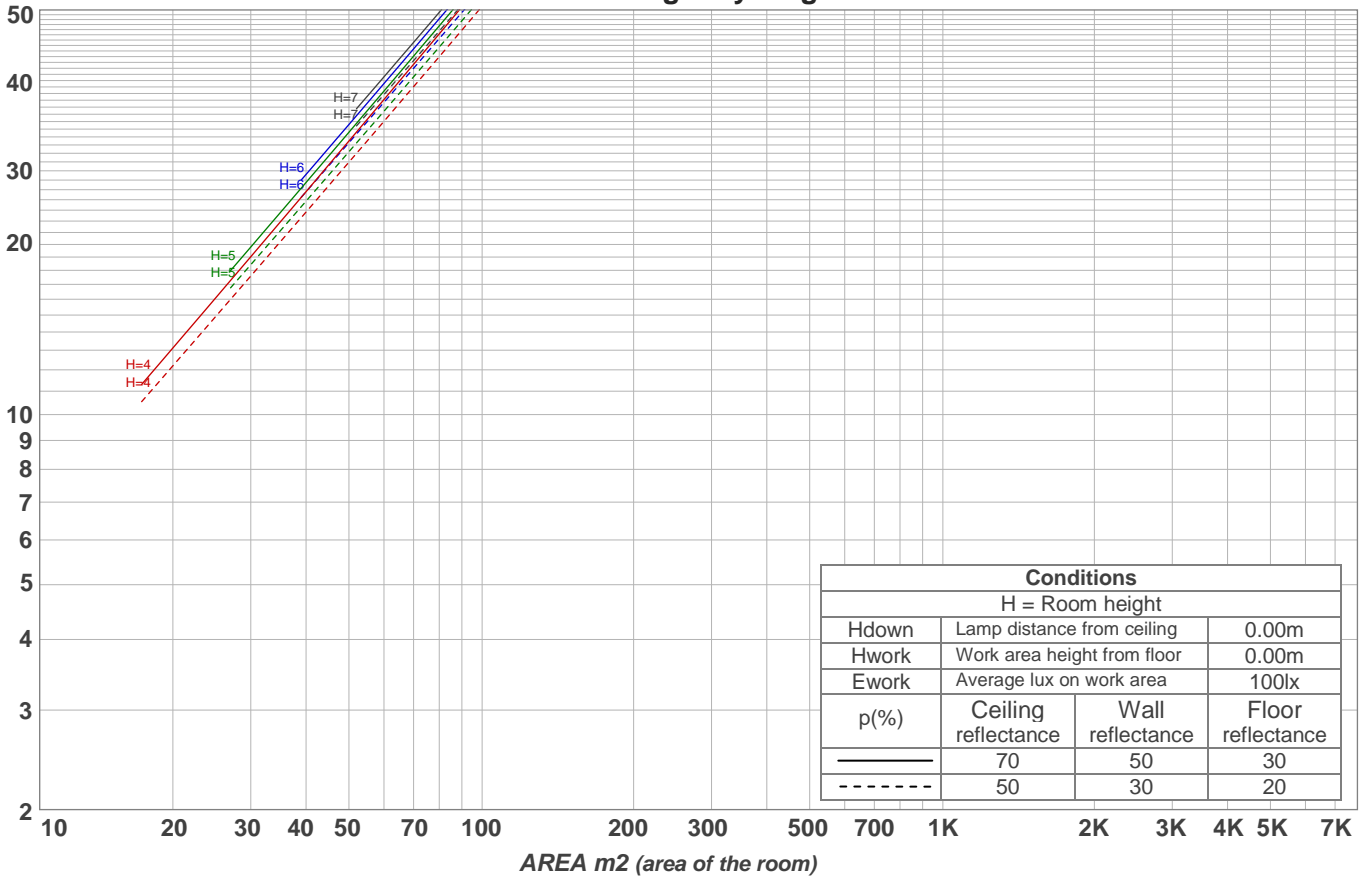
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X      Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	6,2	6,9	6,4	7,1	7,3	6,2	6,9	6,4	7,1	7,3
	3H	9,2	9,8	9,5	10,1	10,3	8,9	9,6	9,2	9,8	10,0
	4H	10,8	11,5	11,1	11,7	12,0	10,5	11,1	10,8	11,4	11,7
	6H	12,8	13,4	13,1	13,6	13,9	12,6	13,2	12,9	13,5	13,8
	8H	13,6	14,1	13,9	14,4	14,7	13,5	14,0	13,8	14,3	14,6
	12H	14,7	15,3	15,1	15,6	15,9	14,6	15,1	14,9	15,4	15,7
4H	2H	7,2	7,9	7,5	8,1	8,4	7,3	7,9	7,6	8,2	8,4
	3H	10,4	10,9	10,7	11,2	11,5	10,2	10,7	10,5	11,0	11,3
	4H	12,2	12,6	12,5	13,0	13,3	12,0	12,5	12,4	12,8	13,1
	6H	14,3	14,7	14,7	15,0	15,4	14,2	14,6	14,6	15,0	15,3
	8H	15,2	15,6	15,6	16,0	16,4	15,2	15,5	15,6	15,9	16,3
	12H	16,5	16,8	16,9	17,2	17,6	16,4	16,7	16,8	17,1	17,5
8H	4H	12,8	13,2	13,2	13,6	14,0	12,7	13,1	13,1	13,4	13,8
	6H	15,2	15,5	15,7	15,9	16,4	15,1	15,4	15,6	15,8	16,3
	8H	16,4	16,6	16,8	17,0	17,5	16,3	16,6	16,8	17,0	17,5
	12H	17,9	18,1	18,4	18,5	19,0	17,8	18,0	18,3	18,4	18,9
12H	4H	13,0	13,3	13,5	13,7	14,2	12,9	13,2	13,3	13,6	14,1
	6H	15,5	15,7	16,0	16,2	16,7	15,4	15,7	15,9	16,1	16,6
	8H	16,8	17,0	17,3	17,4	17,9	16,8	17,0	17,2	17,4	17,9
Variation of the observer position for the luminaire distance S											
S = 1,0H		+0,2 / -0,2					+0,2 / -0,2				
S = 1,5H		+0,3 / -0,4					+0,3 / -0,3				
S = 2,0H		+0,5 / -0,5					+0,5 / -0,5				
Standard table		---					---				
Correction summand		---					---				
Corrected glare indices referring to 197 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	106	106	106	101	101	101	99
1	114	111	109	107	111	109	107	105	105	103	102	101	100	99	97	97	96	94
2	110	106	102	100	108	104	101	98	101	98	96	98	96	94	95	93	92	90
3	106	101	97	94	104	100	96	93	97	94	92	95	92	90	92	91	89	87
4	103	98	93	90	102	96	93	90	94	91	89	92	90	87	90	88	86	85
5	100	94	90	87	99	93	89	87	92	88	86	90	87	85	89	86	84	83
6	98	92	87	84	97	91	87	84	89	86	83	88	85	83	87	84	82	81
7	95	89	85	82	94	88	85	82	87	84	81	86	83	81	85	82	80	79
8	93	87	83	80	92	86	83	80	85	82	80	84	81	79	84	81	79	78
9	91	85	81	78	90	85	81	78	84	80	78	83	80	78	82	79	77	76
10	90	83	79	77	89	83	79	77	82	79	76	81	78	76	81	78	76	75

LAMPS (number of lamps)

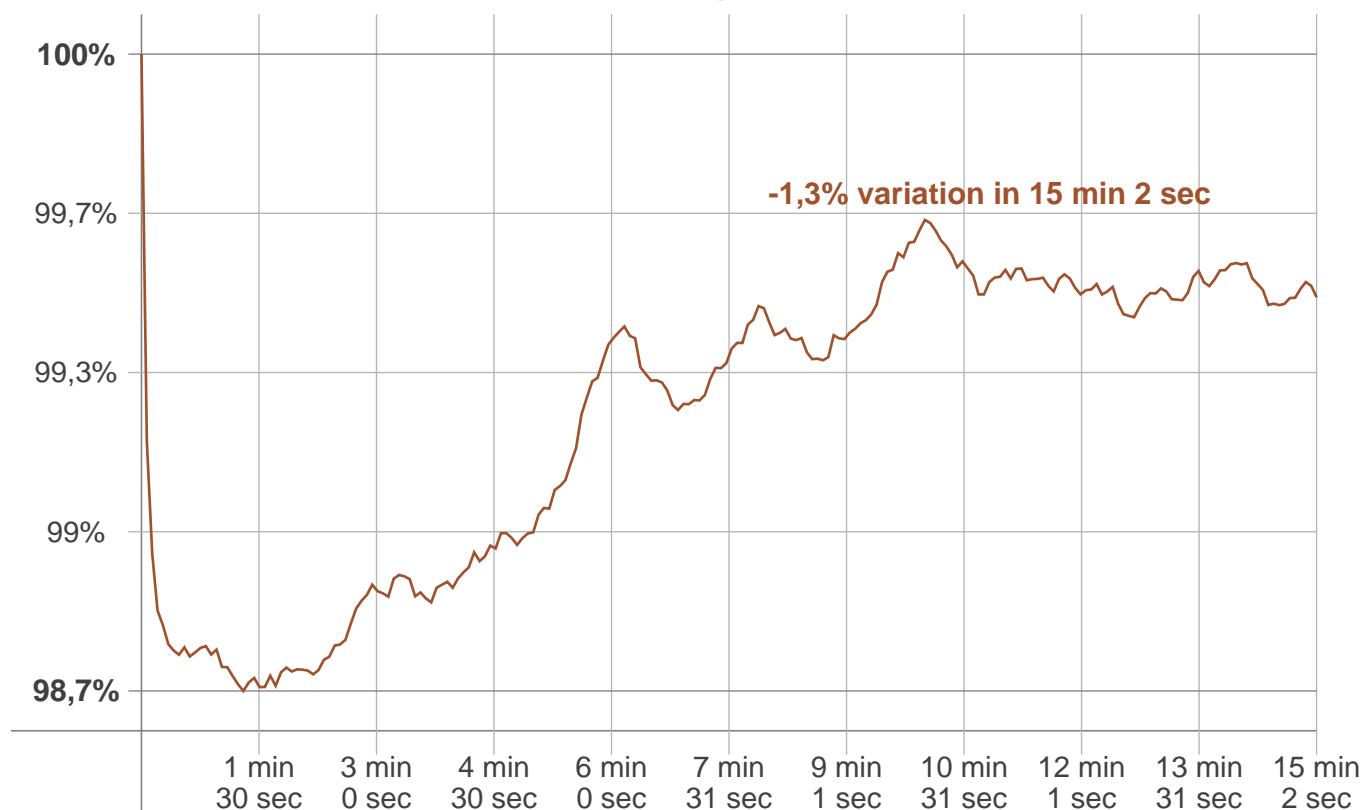
## Luminaire budgetary diagram



## Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
97,5 lm	{LUM10-20}	{LUM20-30}	{LUM30-40}	{LUM40-50}	{LUM50-60}	{LUM60-70}	{LUM70-80}	{LUM80-90}
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
{LUM90-100}	{LUM100-110}	0,473 lm	{LUM120-130}	{LUM130-140}	{LUM140-150}	{LUM150-160}	{LUM160-170}	{LUM170-180}

Warmup curve



Warmup result

Warmup time:	15 min 2 sec
Warmup variation	+1,3%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
0 K	{WU_CHNG_CCT} K	0 K

Output change

Output start	Output change	Output end
198 lm	-1 lm	197 lm