

Light efficiency:



Light quality:



Color temperature:

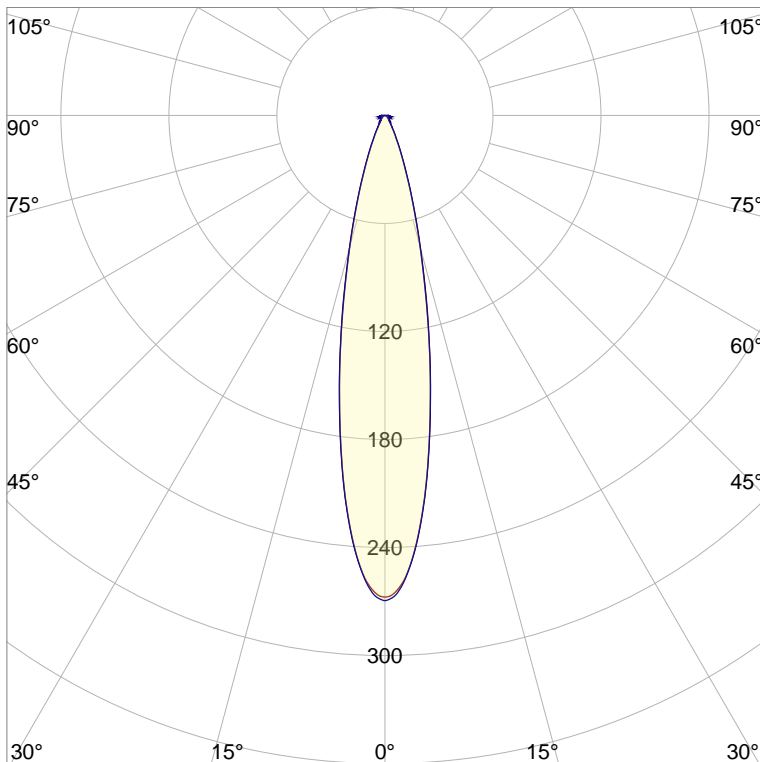
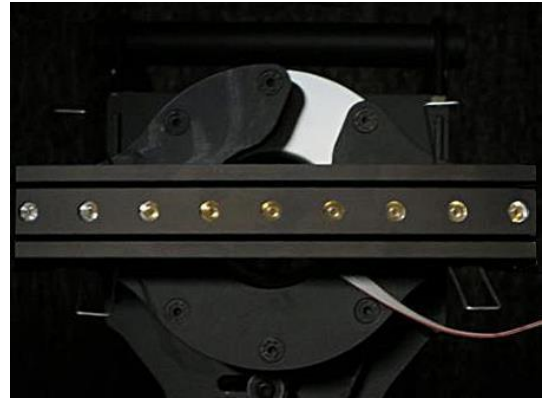


Output: 65,1 lm

Peak: 269 cd

Power: 7,0 W

PF: 0,82



CIE 1931  
x: 0,153  
y: 0,026

Product name:

**FLNP-F4C-C-258-B-927-10772-ALA**

Item number:

**FLNP-F4C-C-258-B-927-10772-ALA**

Date and time:

**12.02.2019 09:43:55**

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**

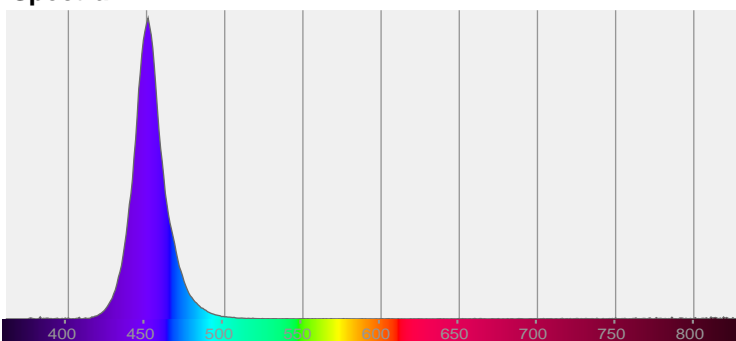
**Pruefort:**

**Lichtlabor**

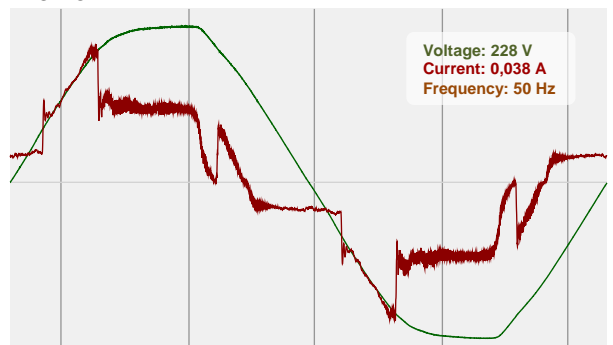
**Gaustasse13-15**

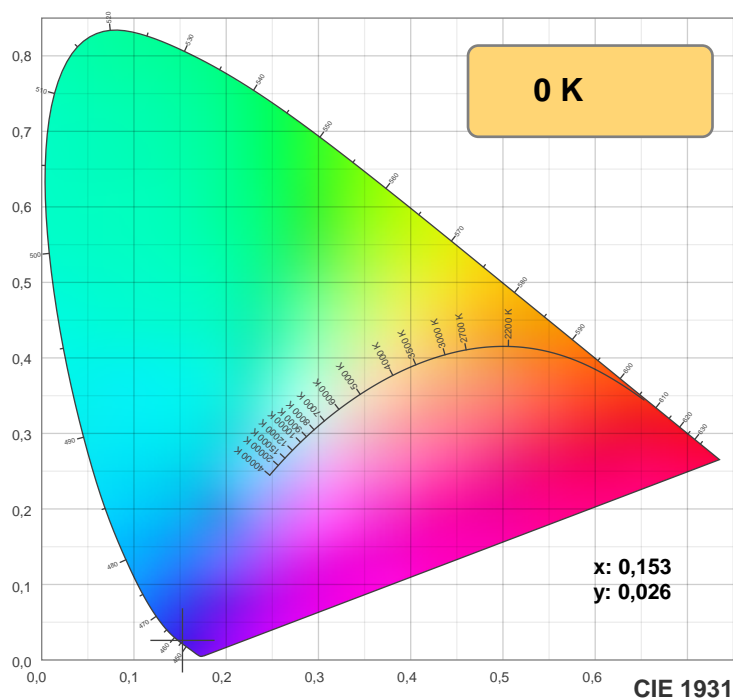
**55411 Bingen am Rhein**

Spectra



Power





TM30: 0,0



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

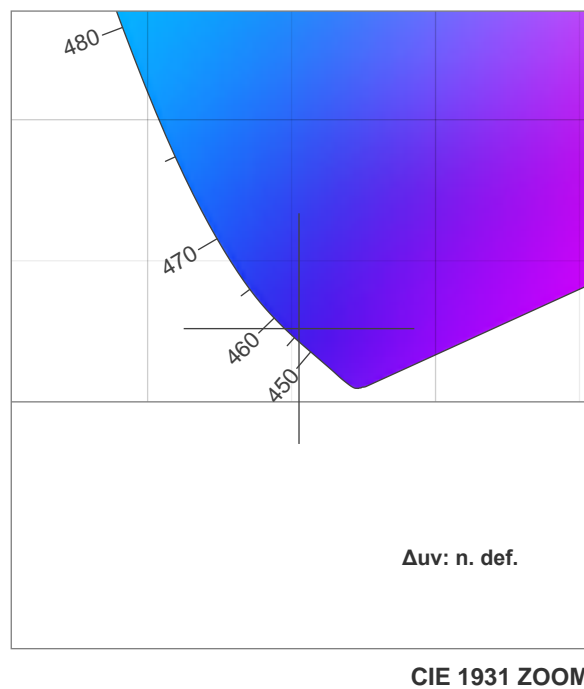
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

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

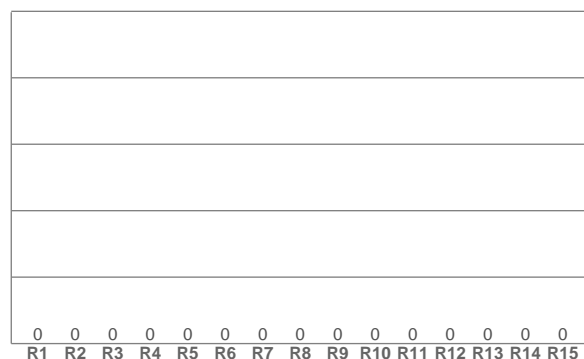
C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

CQS Q values

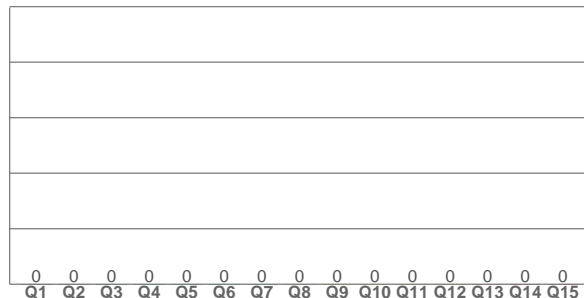
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0



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	0,153	0,026	0,203	0,052	n. def.

## TM30 details

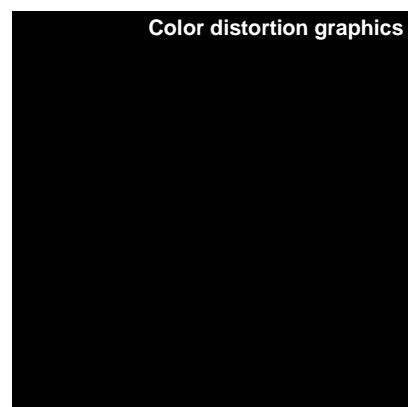
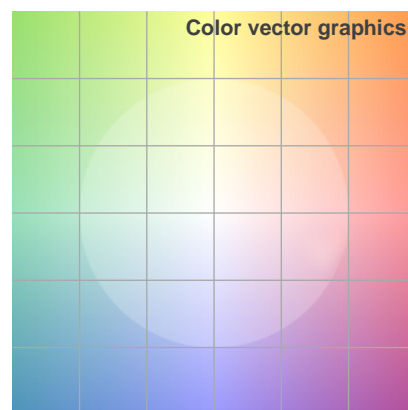
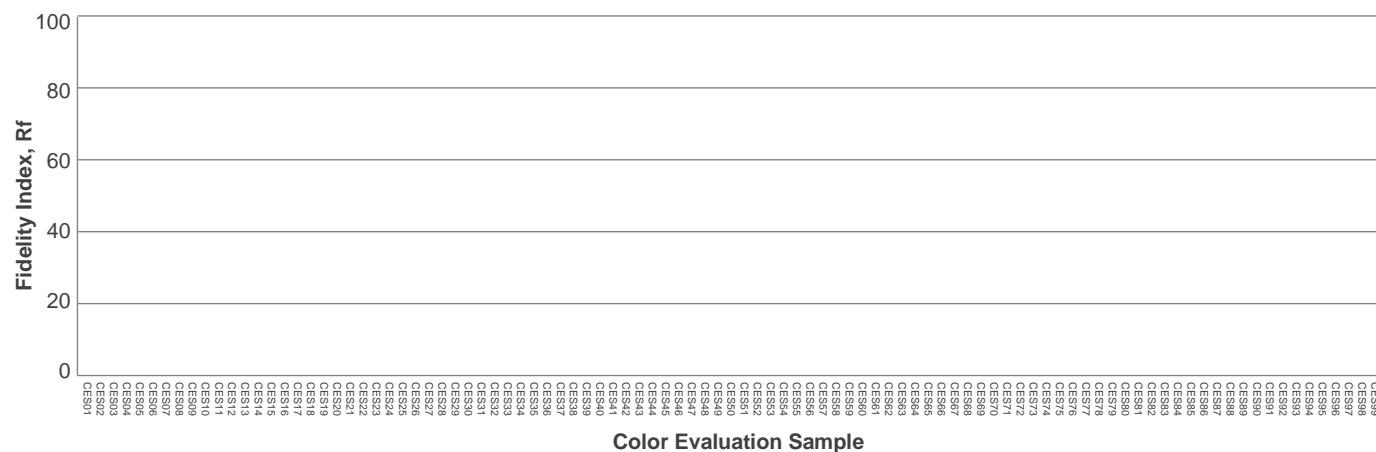
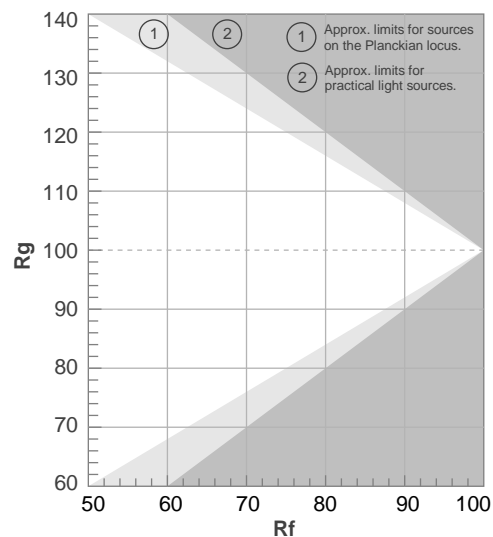
**Rf 0,0**

Fidelity index Rf

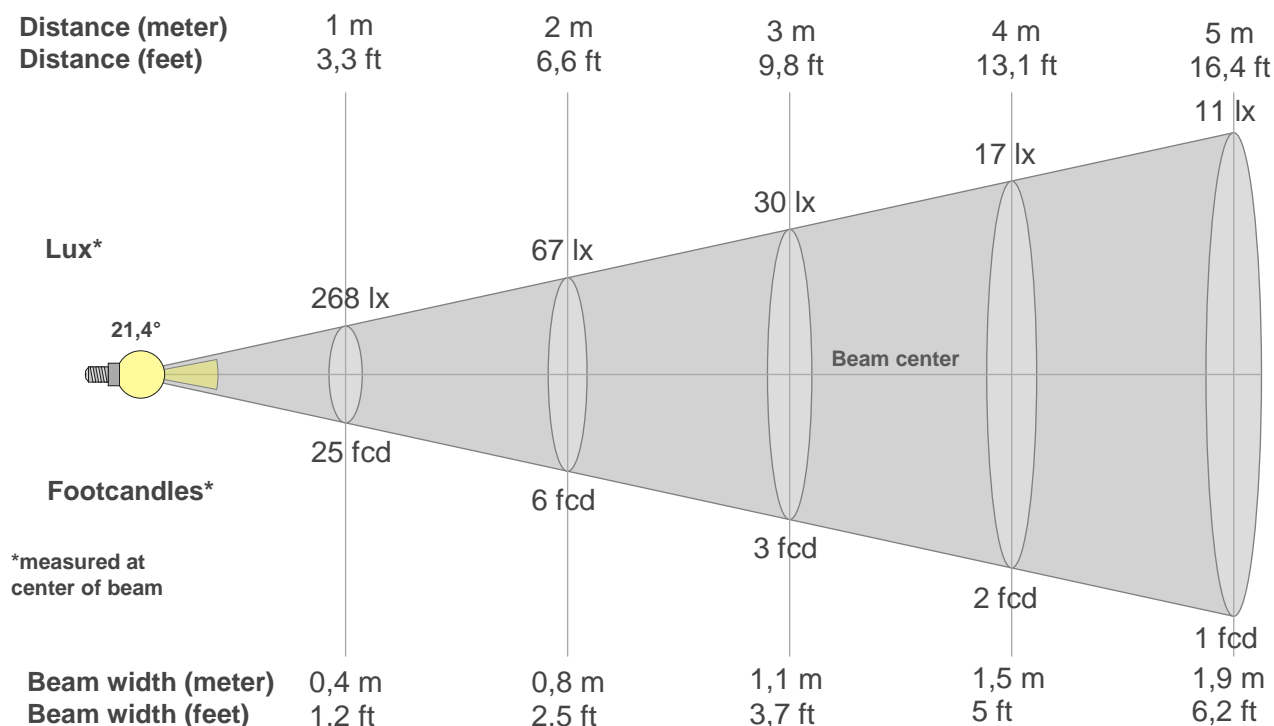
**Rg 0,0**

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°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
268	260	241	212	178	145	114	87	66	49	36	26	20	15	11	8	7	6	5	4
100%	97%	90%	79%	66%	54%	43%	33%	25%	18%	13%	10%	7%	6%	4%	3%	3%	2%	2%	2%

### Intensities in 90° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
268	262	241	212	179	145	114	87	66	49	36	27	20	14	12	9	7	5	5	4
100%	98%	90%	79%	67%	54%	42%	32%	24%	18%	13%	10%	7%	5%	4%	3%	2%	2%	2%	2%

### Intensities in 180° c-plane

(INT\_TABLE\_180\_START)

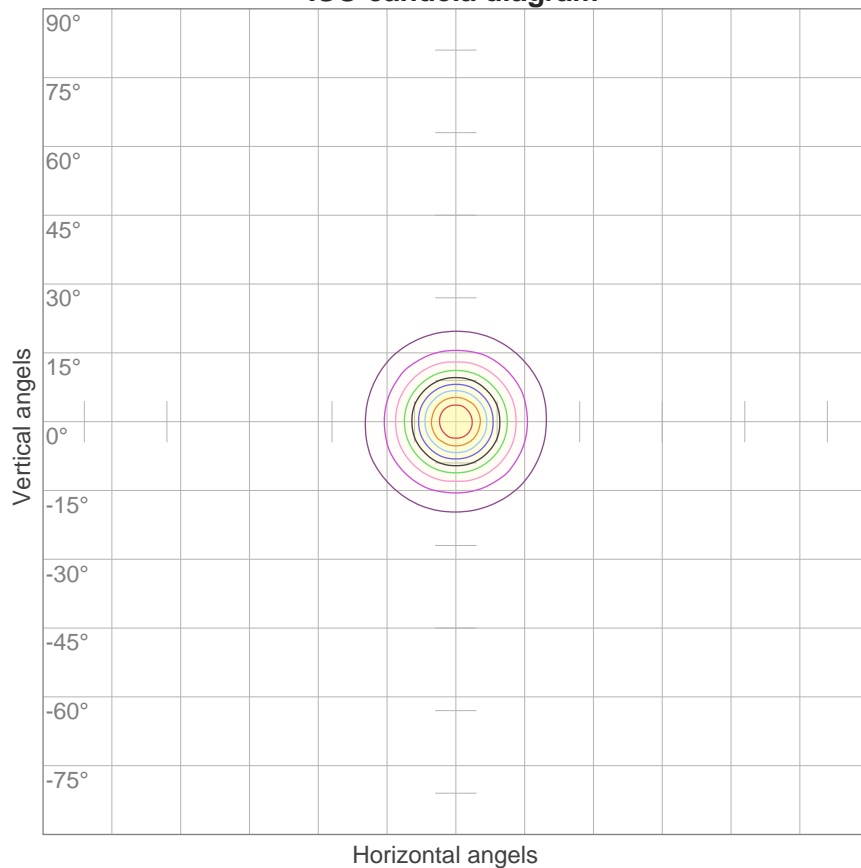
°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%

### Intensities in 270° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
268	262	241	212	179	145	114	87	66	49	36	27	20	14	12	9	7	5	5	4
100%	98%	90%	79%	67%	54%	42%	32%	24%	18%	13%	10%	7%	5%	4%	3%	2%	2%	2%	2%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
21,4°	44,2°	64,6°	87,5%	82,3%

ISO candela diagram



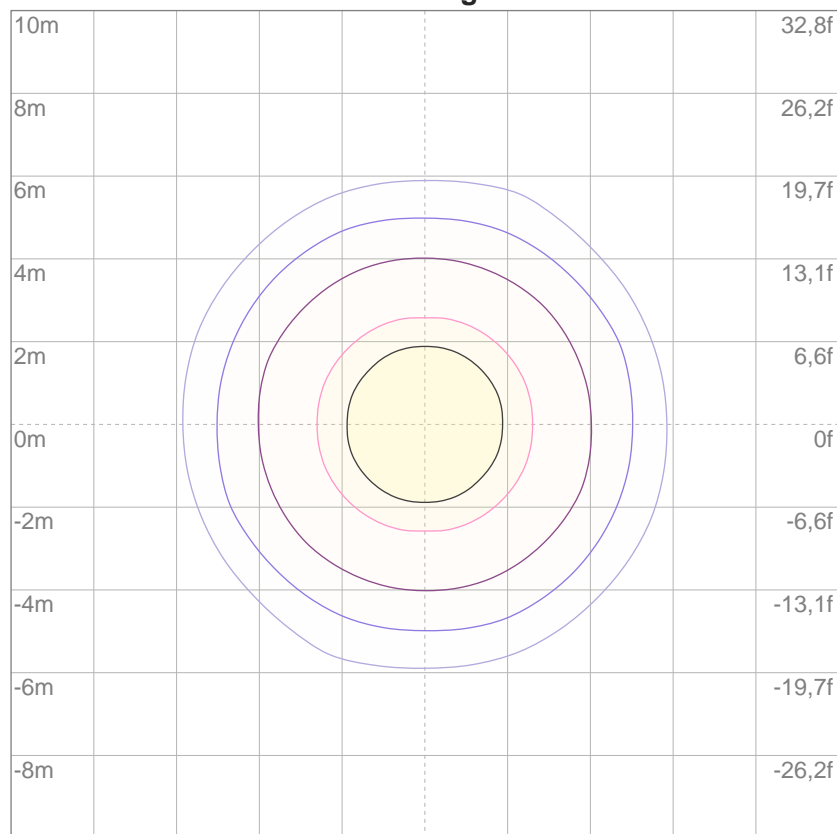
10%	27 cd
20%	54 cd
30%	80 cd
40%	107 cd
50%	134 cd
60%	161 cd
70%	188 cd
80%	215 cd
90%	241 cd

Conditions:

Number of c-planes: 16

Candela at center: 268 cd

ISO lux diagram



3%	80,4m lx
5%	0,134 lx
10%	0,268 lx
30%	0,804 lx
50%	1,34 lx

Conditions:

Number of c-planes: 16

Lux at center: 2,68 lx

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

## Glare Evaluation According to UGR

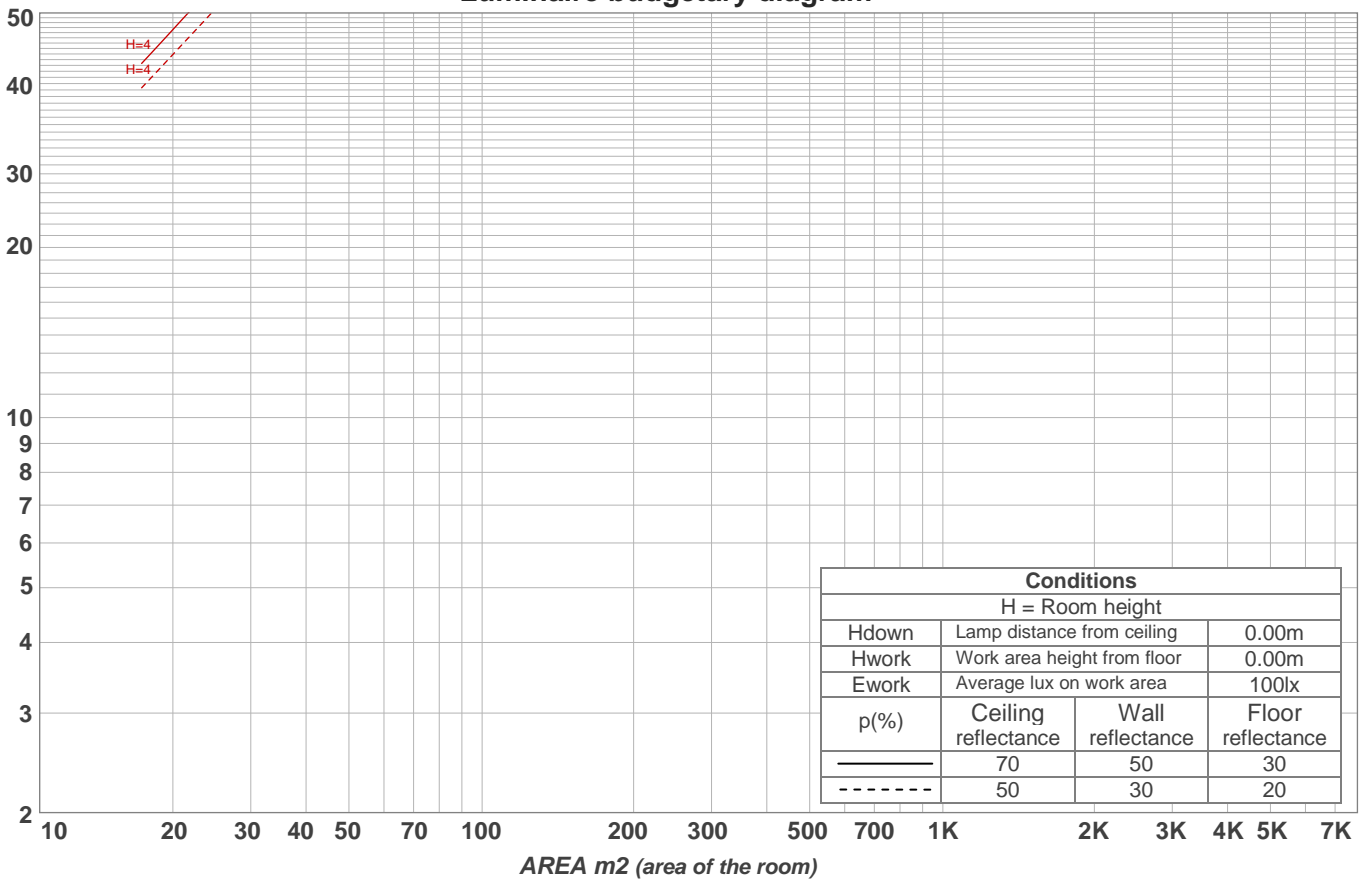
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X      Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	7,5	8,4	7,8	8,6	8,8	7,3	8,1	7,5	8,3	8,5
	3H	10,3	11,1	10,6	11,3	11,6	10,0	10,8	10,3	11,0	11,3
	4H	12,1	12,9	12,4	13,1	13,4	11,6	12,4	11,9	12,6	12,9
	6H	14,0	14,8	14,4	15,0	15,3	13,7	14,4	14,0	14,6	14,9
	8H	15,0	15,7	15,3	16,0	16,3	14,7	15,4	15,1	15,7	16,0
	12H	16,0	16,7	16,4	17,0	17,3	15,8	16,4	16,1	16,7	17,0
4H	2H	8,5	9,3	8,8	9,5	9,8	8,3	9,1	8,6	9,3	9,6
	3H	11,5	12,2	11,9	12,5	12,8	11,3	11,9	11,6	12,3	12,6
	4H	13,6	14,2	14,0	14,5	14,8	13,1	13,6	13,4	14,0	14,3
	6H	15,8	16,3	16,2	16,6	17,0	15,2	15,7	15,6	16,1	16,5
	8H	16,8	17,3	17,2	17,6	18,0	16,4	16,9	16,8	17,2	17,6
	12H	17,9	18,4	18,4	18,8	19,2	17,6	18,0	18,0	18,4	18,8
8H	4H	14,4	14,8	14,8	15,2	15,6	13,9	14,4	14,4	14,8	15,2
	6H	16,8	17,2	17,3	17,6	18,1	16,3	16,7	16,8	17,1	17,5
	8H	18,1	18,4	18,5	18,8	19,3	17,6	17,9	18,1	18,4	18,8
	12H	19,4	19,7	19,9	20,2	20,7	19,0	19,3	19,5	19,8	20,3
12H	4H	14,6	15,0	15,0	15,4	15,8	14,2	14,6	14,6	15,0	15,4
	6H	17,1	17,4	17,6	17,9	18,3	16,6	17,0	17,1	17,4	17,9
	8H	18,4	18,7	18,9	19,2	19,7	18,0	18,3	18,5	18,8	19,3
Variation of the observer position for the luminaire distance S											
S = 1,0H		+0,2 / -0,1					+0,1 / -0,1				
S = 1,5H		+0,3 / -0,4					+0,3 / -0,3				
S = 2,0H		+0,6 / -0,5					+0,4 / -0,4				
Standard table		---					---				
Correction summand		---					---				
Corrected glare indices referring to 65,1 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	112	108	105	102	109	106	103	101	101	99	97	97	95	94	93	92	91	89
2	106	100	96	92	103	99	94	91	95	92	89	92	89	86	89	86	84	82
3	101	94	89	85	99	93	88	84	90	86	83	87	84	81	85	82	79	78
4	97	89	84	79	95	88	83	79	86	81	78	83	80	77	81	78	75	74
5	93	85	79	75	91	84	79	75	82	77	74	80	76	73	78	75	72	71
6	89	81	75	71	88	80	75	71	79	74	71	77	73	70	76	72	69	68
7	86	78	72	68	85	77	72	68	76	71	68	74	70	67	73	69	67	65
8	83	75	69	66	82	74	69	66	73	68	65	72	68	65	71	67	64	63
9	81	72	67	63	80	72	67	63	71	66	63	70	66	63	69	65	62	61
10	78	70	65	61	77	69	65	61	68	64	61	68	64	61	67	63	61	59

LAMPS (number of lamps)

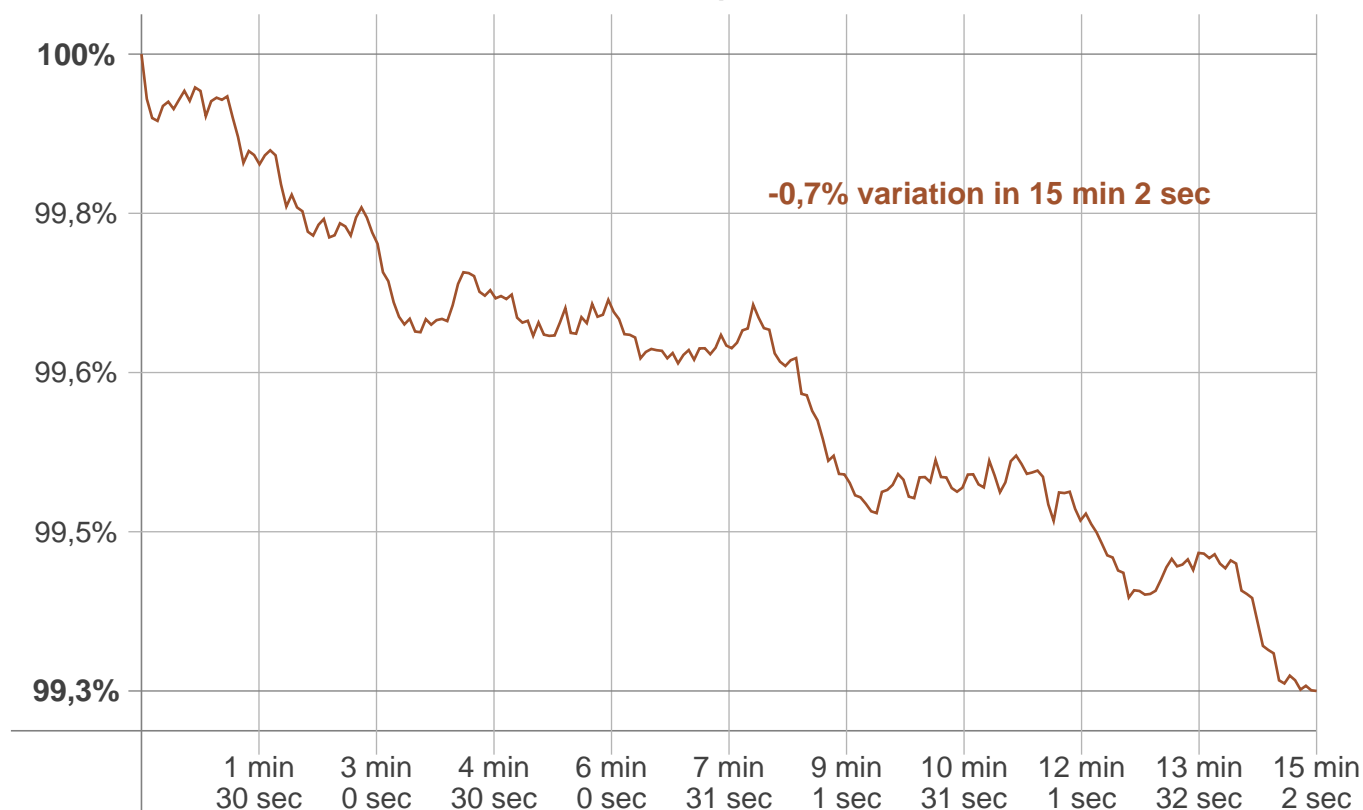
## Luminaire budgetary diagram



## Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
19,0 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}	0,294 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	-0,7%

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
65,3 lm	-0,2 lm	65,1 lm