

Light efficiency:



Light quality:



Color temperature:

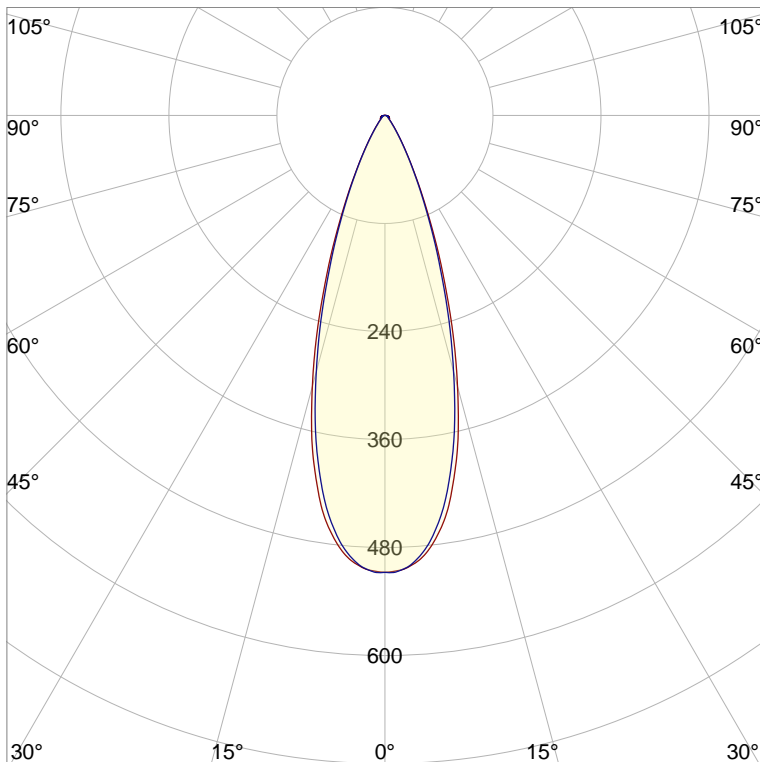
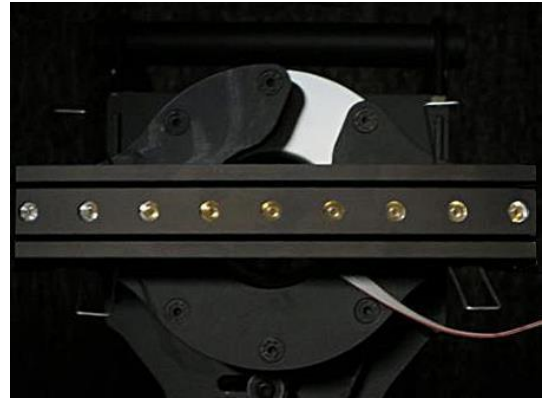


Output: 211 lm

Peak: 508 cd

Power: 7,0 W

PF: 0,82



CIE 1931  
x: 0,162  
y: 0,705

Product name:

**FLNP-F4C-C-258-G-927-10773-ALA**

Item number:

**FLNP-F4C-C-258-G-927-10773-ALA**

Date and time:

**12.02.2019 13:52:32**

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**

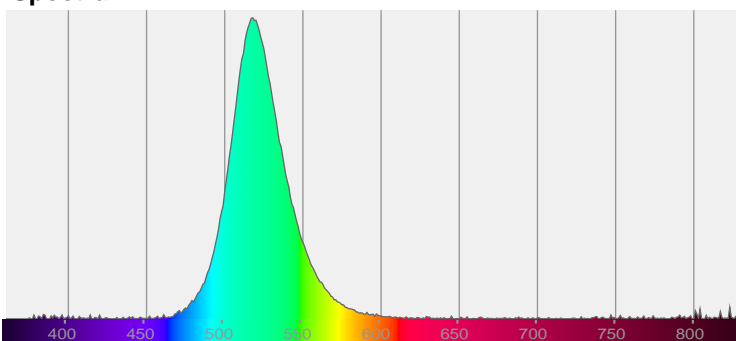
**Pruefort:**

**Lichtlabor**

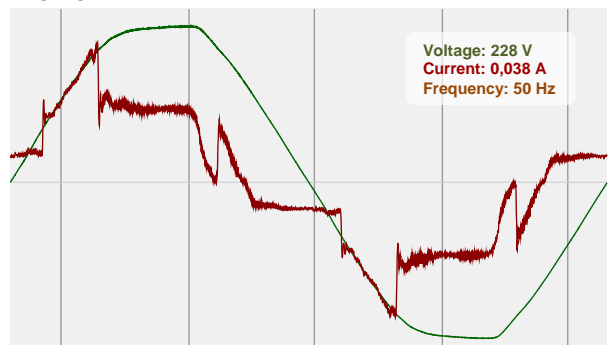
**Gaustasse13-15**

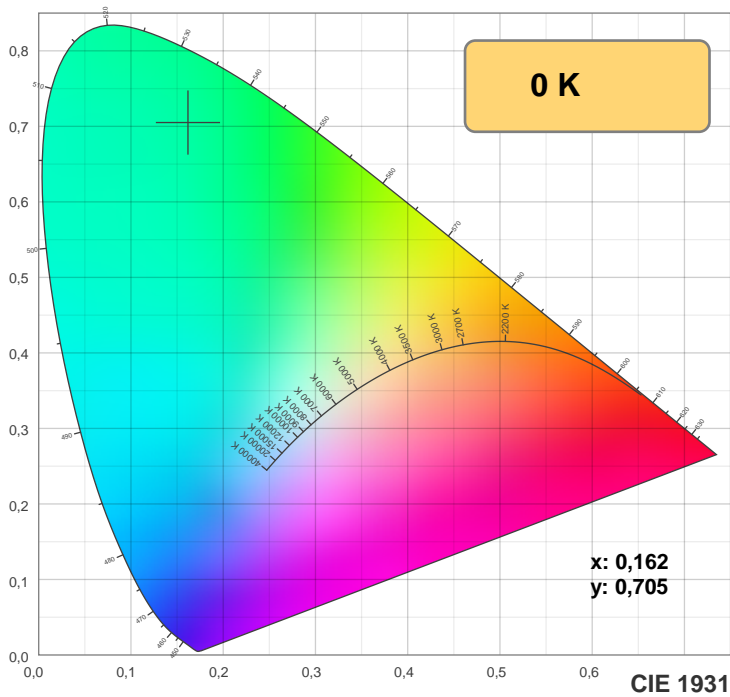
**55411 Bingen am Rhein**

Spectra

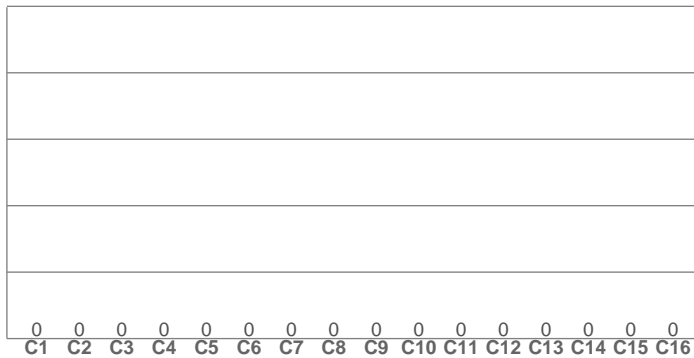


Power





TM30: 0,0



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

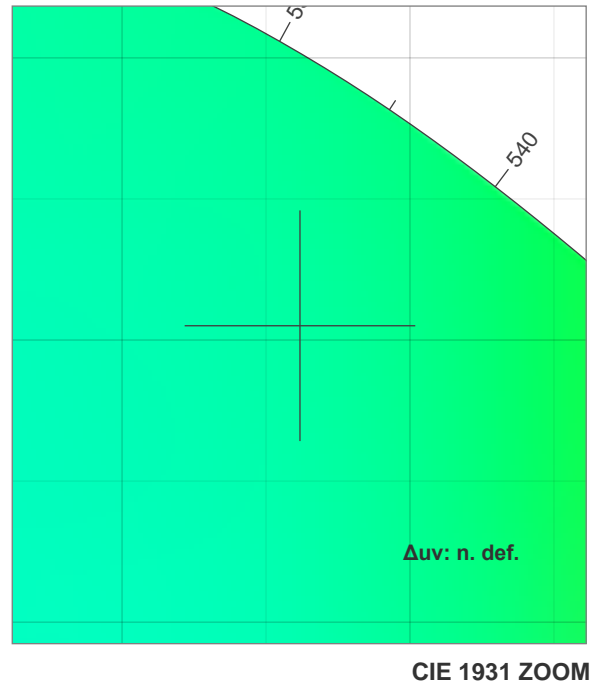
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

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

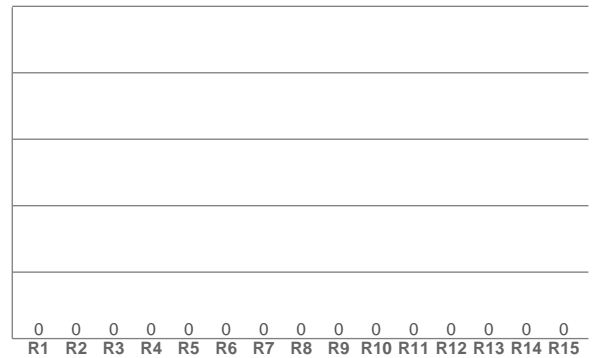
C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

CQS Q values

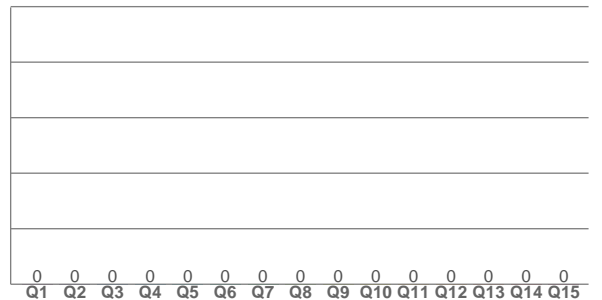
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0



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
<b>0 K</b>	<b>0,0</b>	<b>0,0</b>	<b>0,0</b>	<b>0,0</b>	<b>0,0</b>	<b>0,162</b>	<b>0,705</b>	<b>0,058</b>	<b>0,380</b>	<b>n. def.</b>

## TM30 details

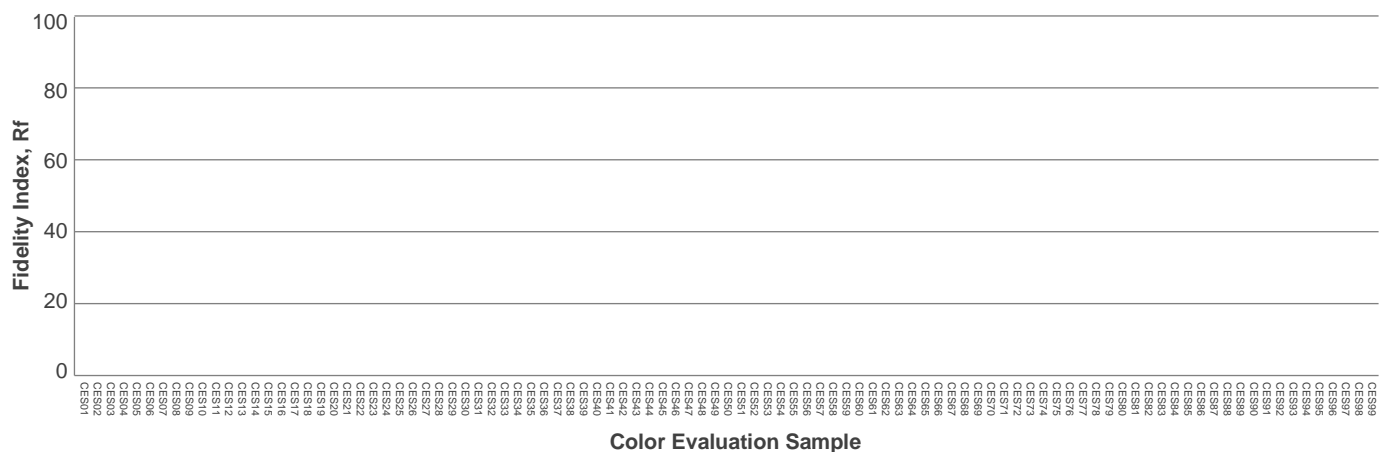
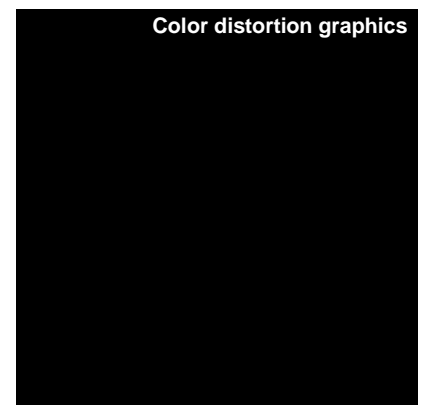
**Rf 0,0**

Fidelity index Rf

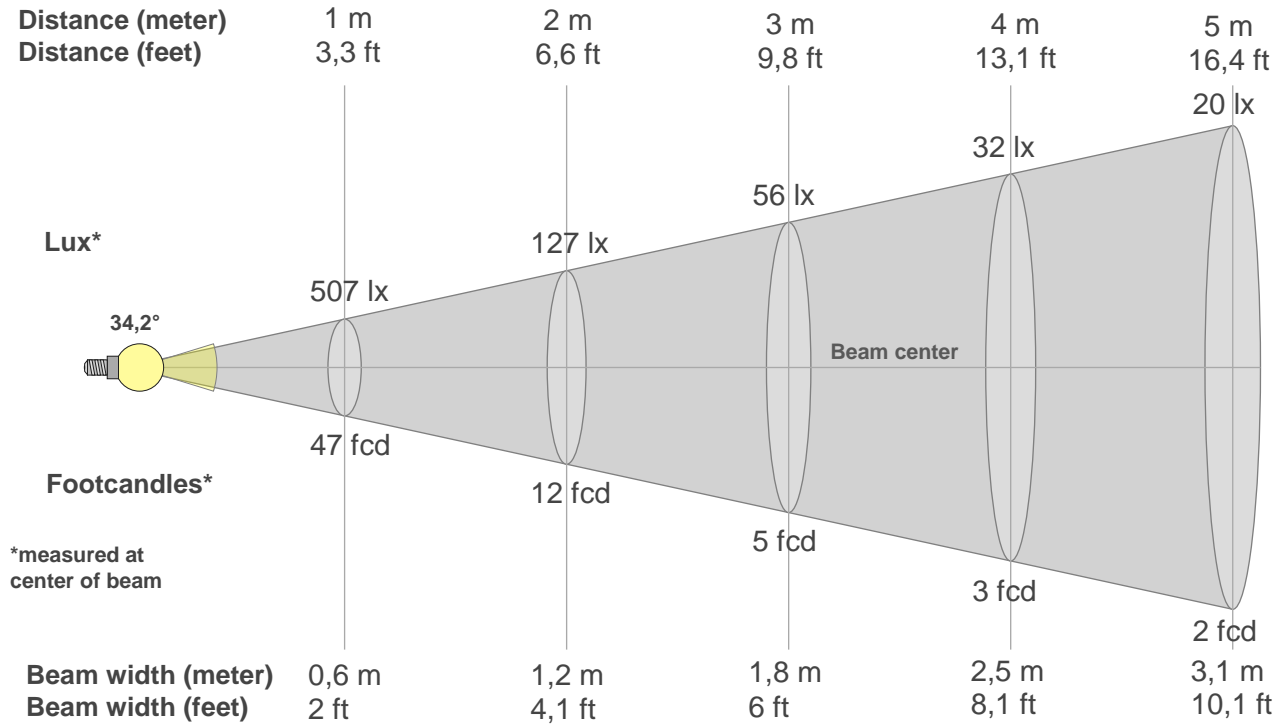
**Rg 0,0**

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°
507	505	497	482	459	425	385	336	287	237	190	148	113	85	63	47	36	27	21	16
100%	100%	98%	95%	91%	84%	76%	66%	57%	47%	37%	29%	22%	17%	13%	9%	7%	5%	4%	3%

### 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°
507	505	495	476	448	411	368	319	270	223	178	141	108	82	62	46	35	26	20	16
100%	100%	98%	94%	88%	81%	73%	63%	53%	44%	35%	28%	21%	16%	12%	9%	7%	5%	4%	3%

### Intensities in 180° c-plane

(INT\_TABLE\_180\_START)

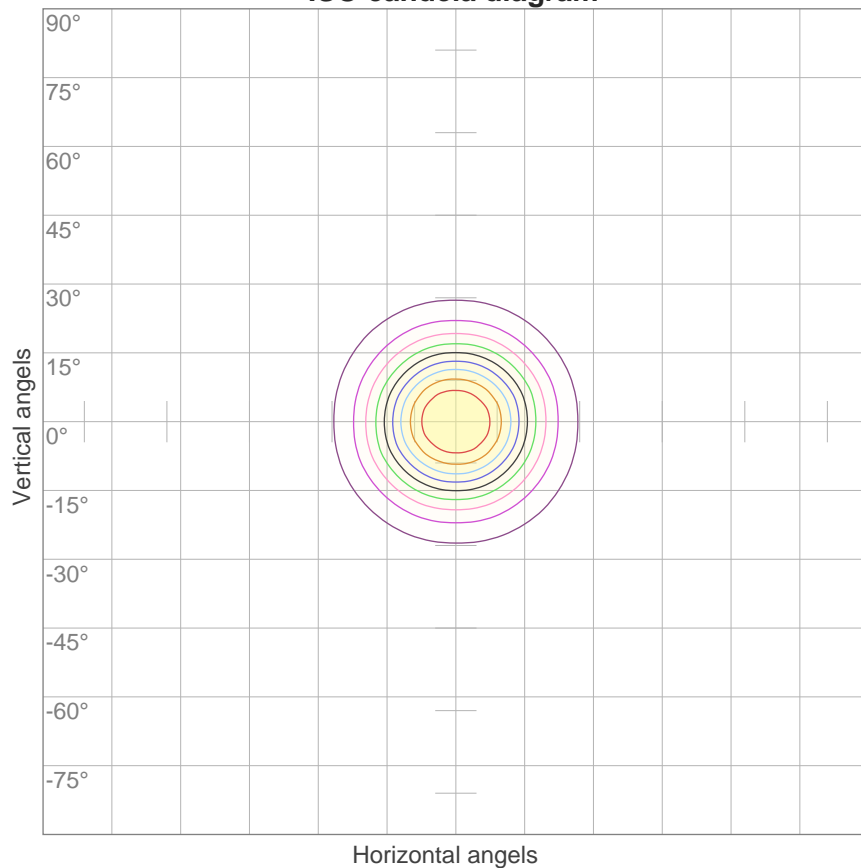
°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%

### 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°
507	505	495	476	448	411	368	319	270	223	178	141	108	82	62	46	35	26	20	16
100%	100%	98%	94%	88%	81%	73%	63%	53%	44%	35%	28%	21%	16%	12%	9%	7%	5%	4%	3%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
34,2°	59,5°	80,5°	95,1%	91,9%

ISO candela diagram



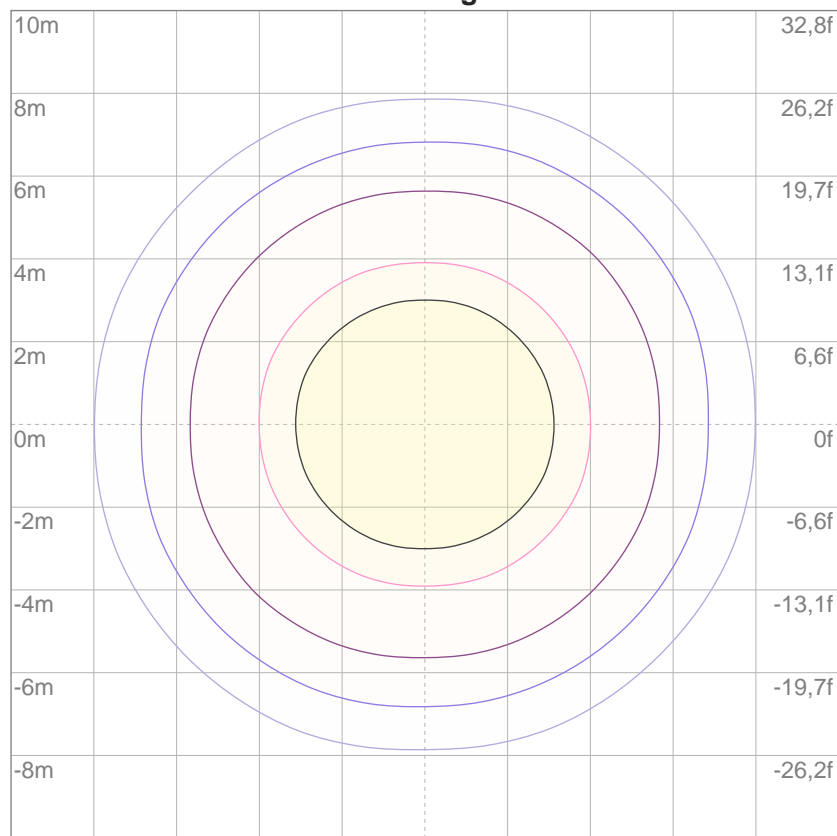
10%	51 cd
20%	101 cd
30%	152 cd
40%	203 cd
50%	253 cd
60%	304 cd
70%	355 cd
80%	405 cd
90%	456 cd

Conditions:

Number of c-planes: 16

Candela at center: 507 cd

ISO lux diagram



3%	0,152 lx
5%	0,253 lx
10%	0,507 lx
30%	1,52 lx
50%	2,53 lx

Conditions:

Number of c-planes: 16

Lux at center: 5,07 lx

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

## Glare Evaluation According to UGR

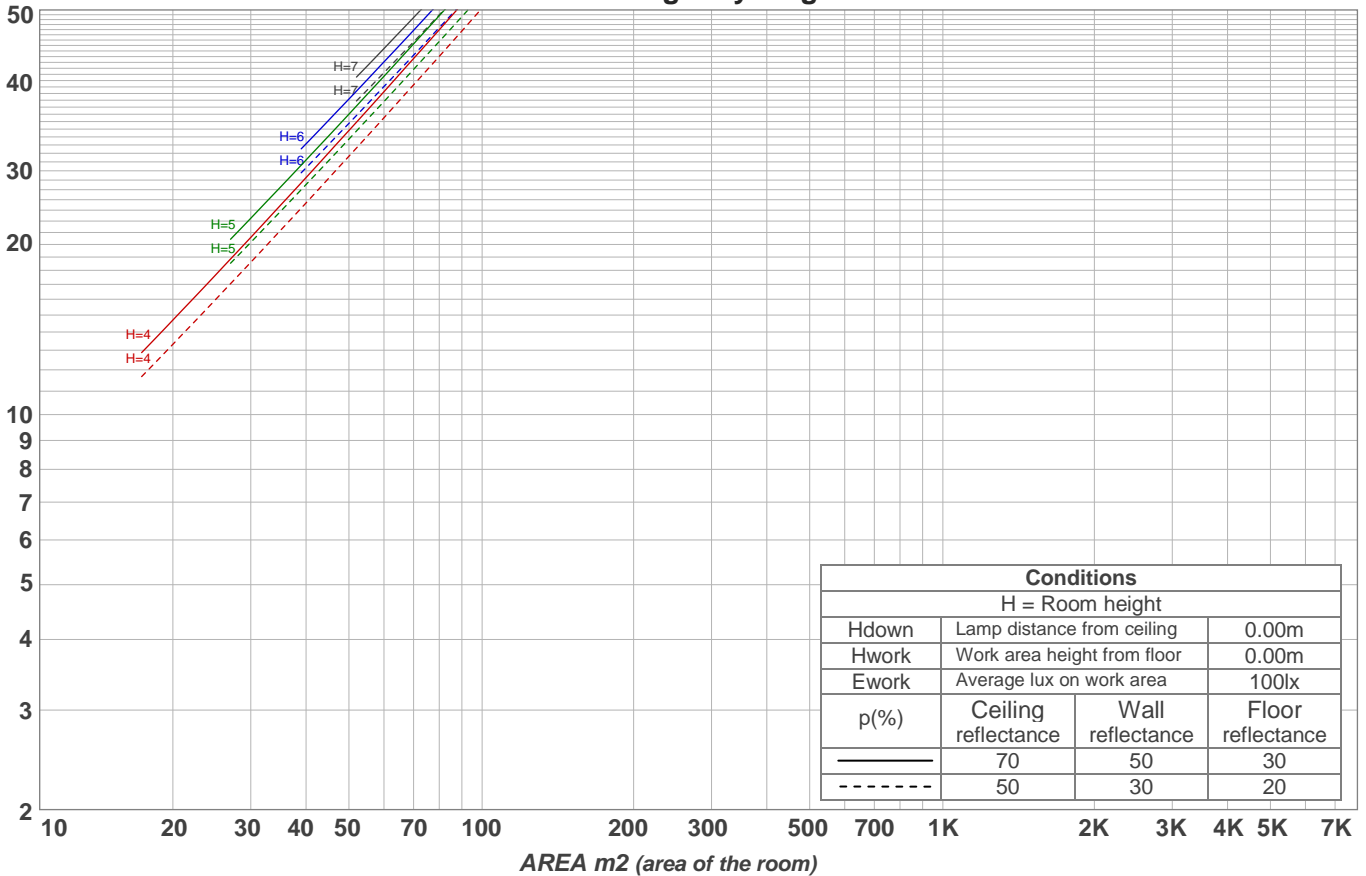
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X      Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	9,1	9,8	9,3	10,0	10,2	8,8	9,5	9,0	9,7	9,9
	3H	10,9	11,6	11,2	11,8	12,1	10,4	11,1	10,7	11,3	11,5
	4H	12,0	12,7	12,3	12,9	13,2	11,4	12,0	11,7	12,3	12,5
	6H	13,2	13,7	13,5	14,0	14,3	12,5	13,1	12,8	13,4	13,7
	8H	13,7	14,2	14,0	14,5	14,8	13,0	13,5	13,3	13,8	14,1
	12H	14,0	14,5	14,3	14,8	15,2	13,4	13,9	13,7	14,2	14,5
4H	2H	9,5	10,2	9,8	10,4	10,7	9,3	9,9	9,6	10,2	10,4
	3H	11,6	12,2	12,0	12,5	12,8	11,2	11,8	11,6	12,1	12,4
	4H	12,9	13,4	13,3	13,7	14,1	12,4	12,9	12,8	13,2	13,6
	6H	14,4	14,8	14,8	15,1	15,5	13,8	14,2	14,2	14,6	15,0
	8H	15,0	15,3	15,4	15,7	16,1	14,4	14,8	14,8	15,1	15,5
	12H	15,4	15,7	15,8	16,1	16,5	14,9	15,2	15,3	15,6	16,0
8H	4H	13,4	13,8	13,9	14,2	14,6	13,0	13,4	13,4	13,8	14,2
	6H	15,1	15,4	15,6	15,8	16,3	14,7	14,9	15,1	15,4	15,8
	8H	15,9	16,1	16,3	16,5	17,0	15,4	15,6	15,9	16,1	16,5
	12H	16,4	16,6	16,9	17,1	17,6	16,0	16,2	16,5	16,6	17,1
12H	4H	13,6	13,9	14,0	14,3	14,7	13,2	13,5	13,6	13,9	14,3
	6H	15,3	15,5	15,8	16,0	16,5	14,9	15,1	15,4	15,6	16,0
	8H	16,1	16,3	16,6	16,8	17,3	15,7	15,9	16,2	16,3	16,8
Variation of the observer position for the luminaire distance S											
S = 1,0H		+0,4 / -0,2					+0,4 / -0,2				
S = 1,5H		+0,9 / -0,4					+1,0 / -0,4				
S = 2,0H		+1,7 / -0,5					+1,7 / -0,5				
Standard table		BK09					BK09				
Correction summand		-1,1					-1,5				
Corrected glare indices referring to 211 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	101	101	101	99
1	113	111	108	106	111	108	106	104	104	102	101	100	99	98	97	96	95	93
2	108	103	100	96	106	102	98	95	98	95	93	95	93	91	92	91	89	87
3	103	97	93	89	101	96	92	88	93	90	87	91	88	85	89	86	84	82
4	99	92	87	83	97	91	86	83	89	85	82	87	83	81	85	82	80	78
5	95	88	82	78	94	87	82	78	85	81	77	83	79	77	82	78	76	74
6	91	83	78	74	90	83	78	74	81	77	73	80	76	73	78	75	72	71
7	88	80	74	71	87	79	74	70	78	73	70	77	73	70	75	72	69	68
8	85	76	71	67	83	76	71	67	75	70	67	74	70	67	73	69	66	65
9	82	73	68	65	81	73	68	65	72	67	64	71	67	64	70	66	64	63
10	79	70	65	62	78	70	65	62	69	65	62	68	64	62	68	64	61	60

LAMPS (number of lamps)

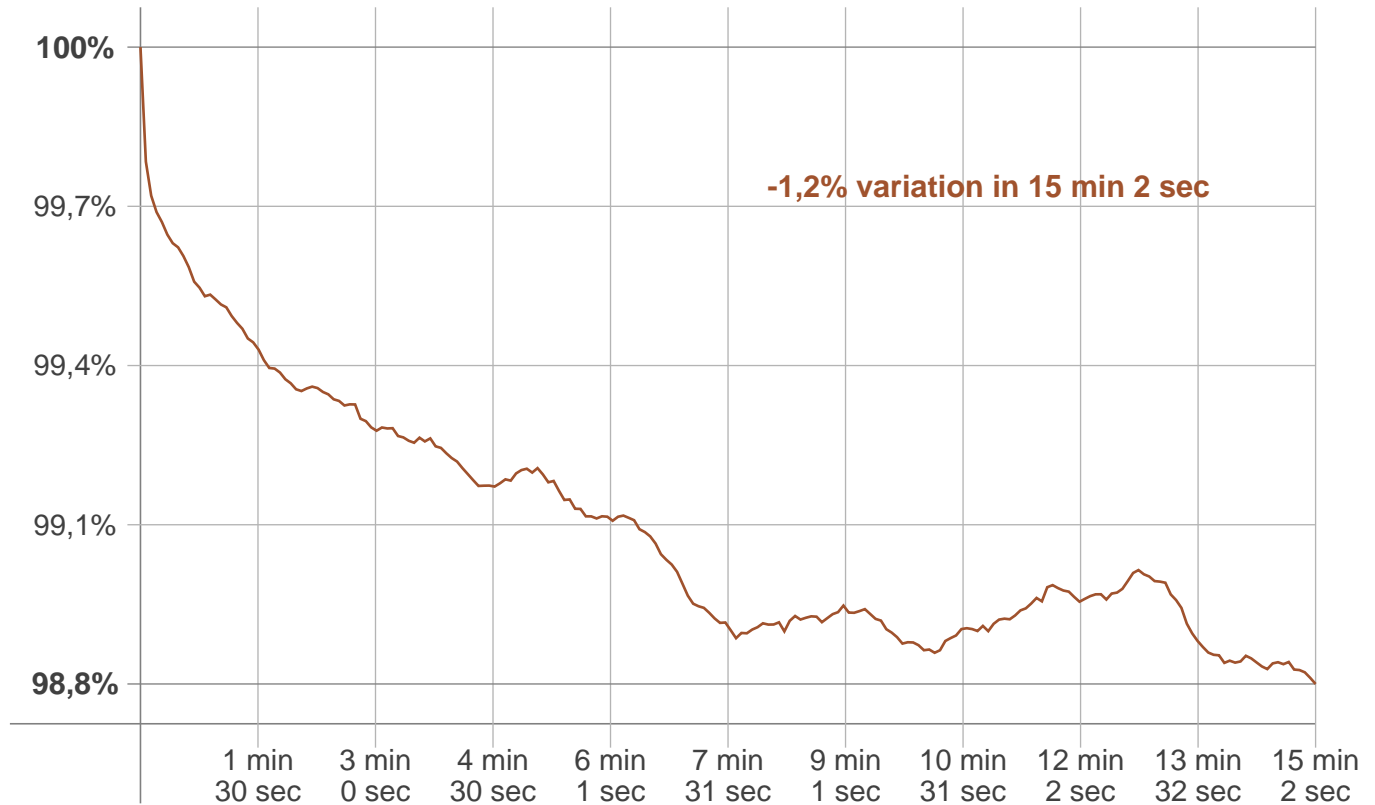
## Luminaire budgetary diagram



## Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
44,4 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}	0,376 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	-1,2%

Warmup conditions

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

Color temperature change

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

Output change

Output start	Output change	Output end
212 lm	-1 lm	211 lm