

Light efficiency:



Light quality:



Color temperature:

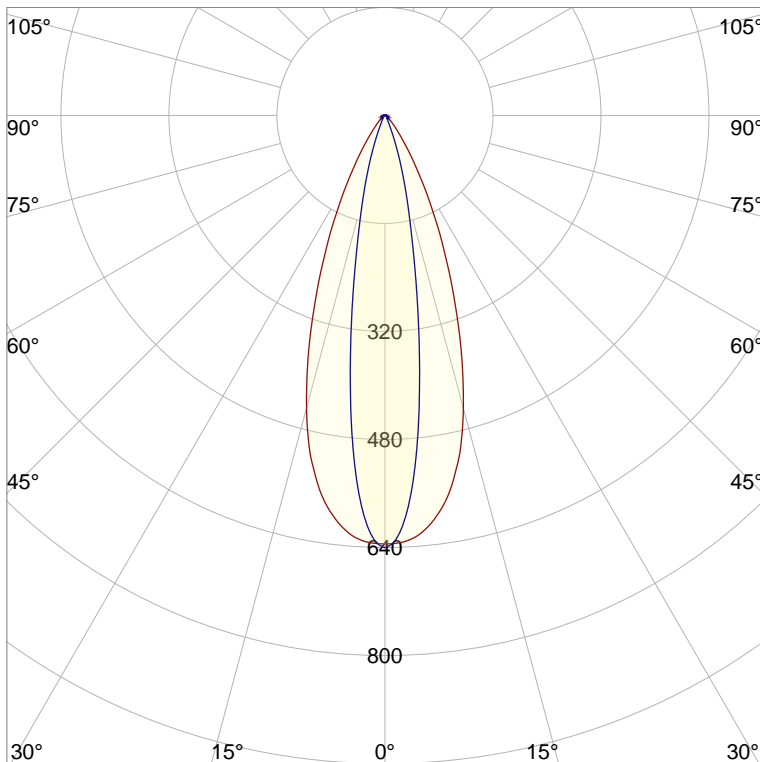
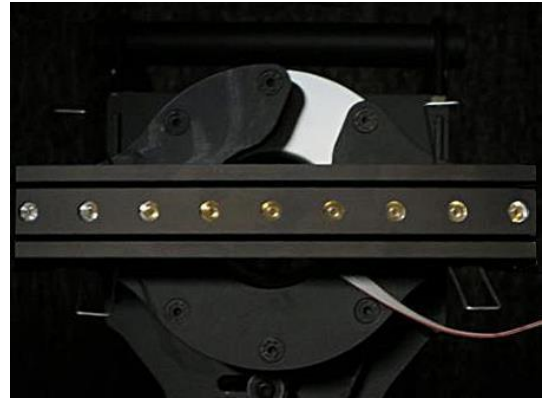


Output: 185 lm

Peak: 639 cd

Power: 6,2 W

PF: 0,78



CIE 1931
x: 0,690
y: 0,302

Product name:

FLNP-F4C-C-258-R-927-10774-ALA

Item number:

FLNP-F4C-C-258-R-927-10774-ALA

Date and time:

12.02.2019 15:58:43

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

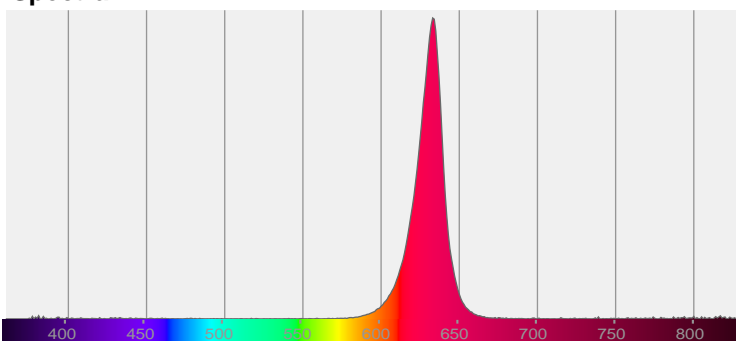
Pruefort:

Lichtlabor

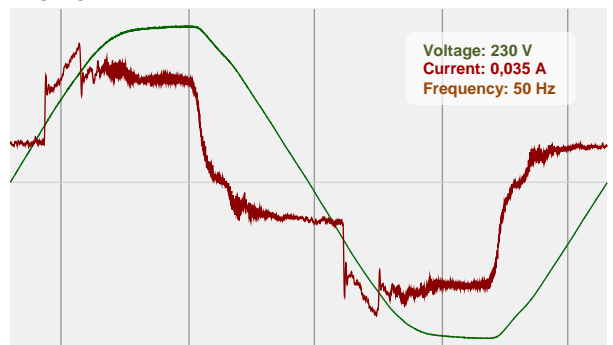
Gaustasse13-15

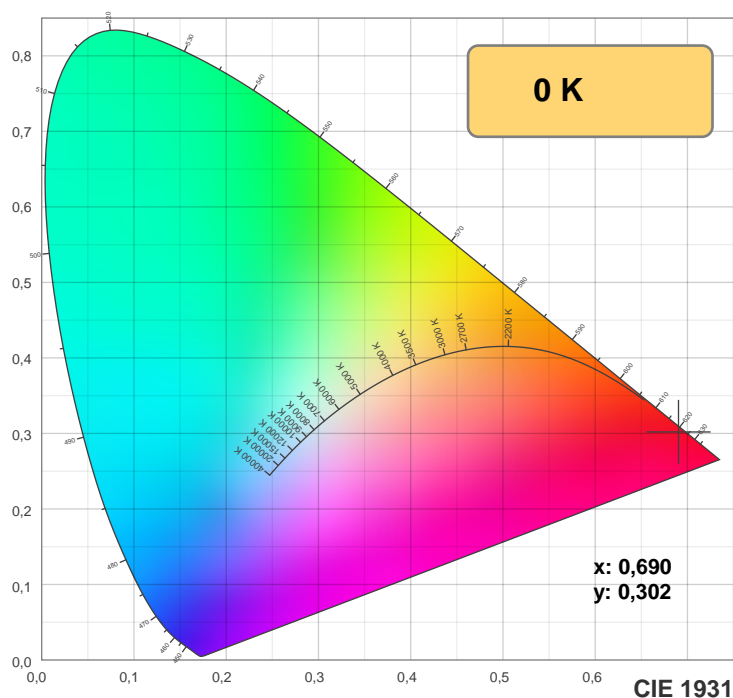
55411 Bingen am Rhein

Spectra

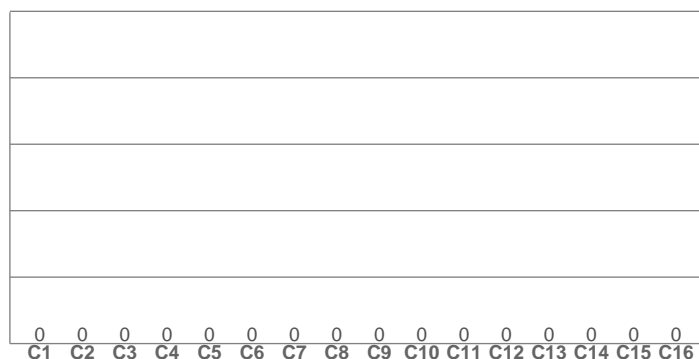


Power





TM30: 0,0



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

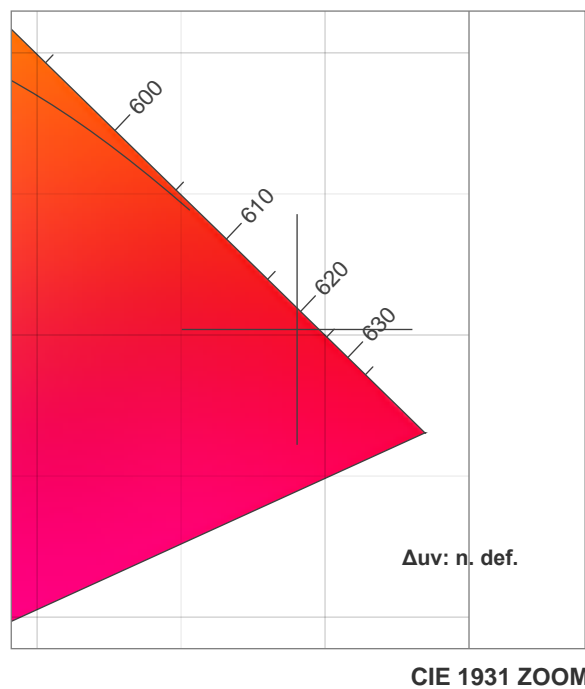
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

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

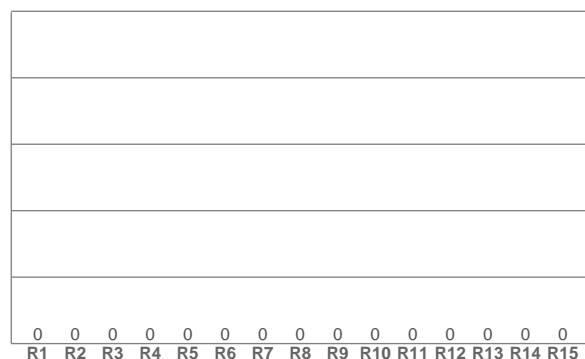
C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

CQS Q values

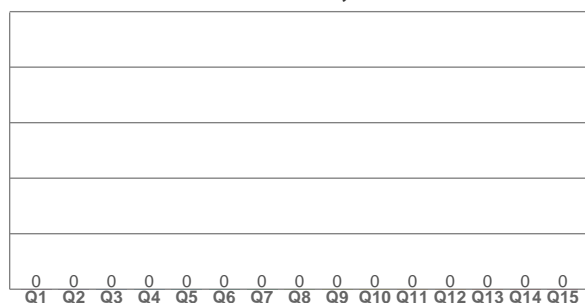
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0



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	0,690	0,302	0,527	0,346	n. def.

TM30 details

Rf 0,0

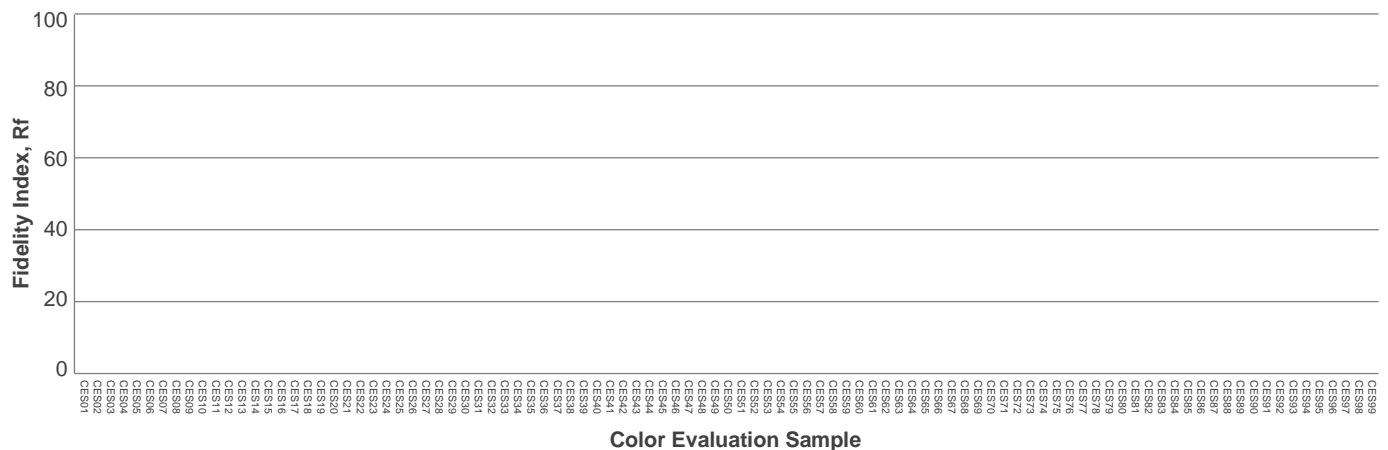
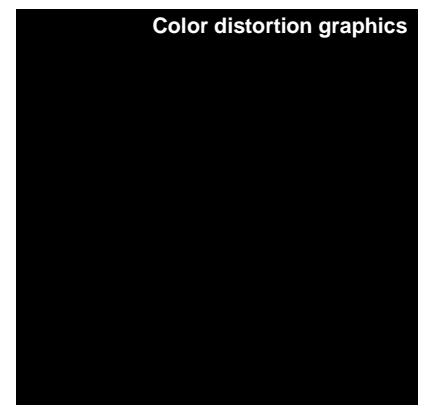
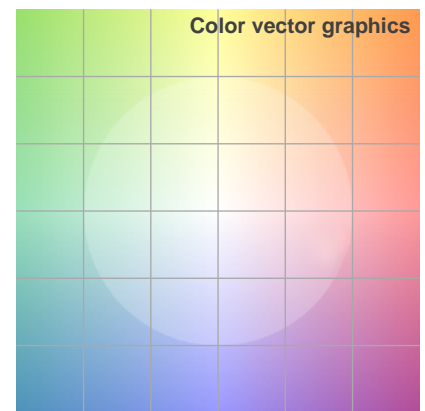
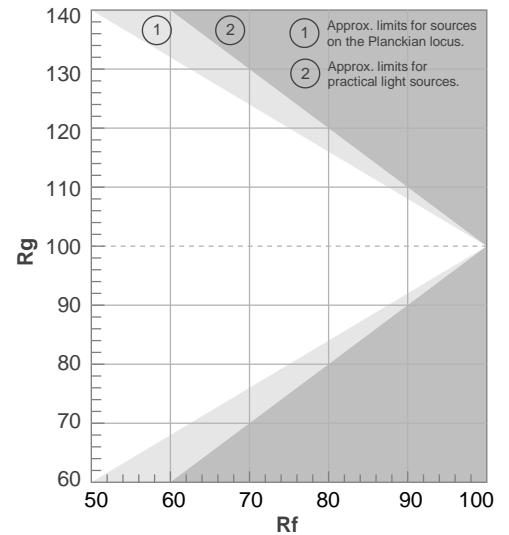
Fidelity index Rf

Rg 0,0

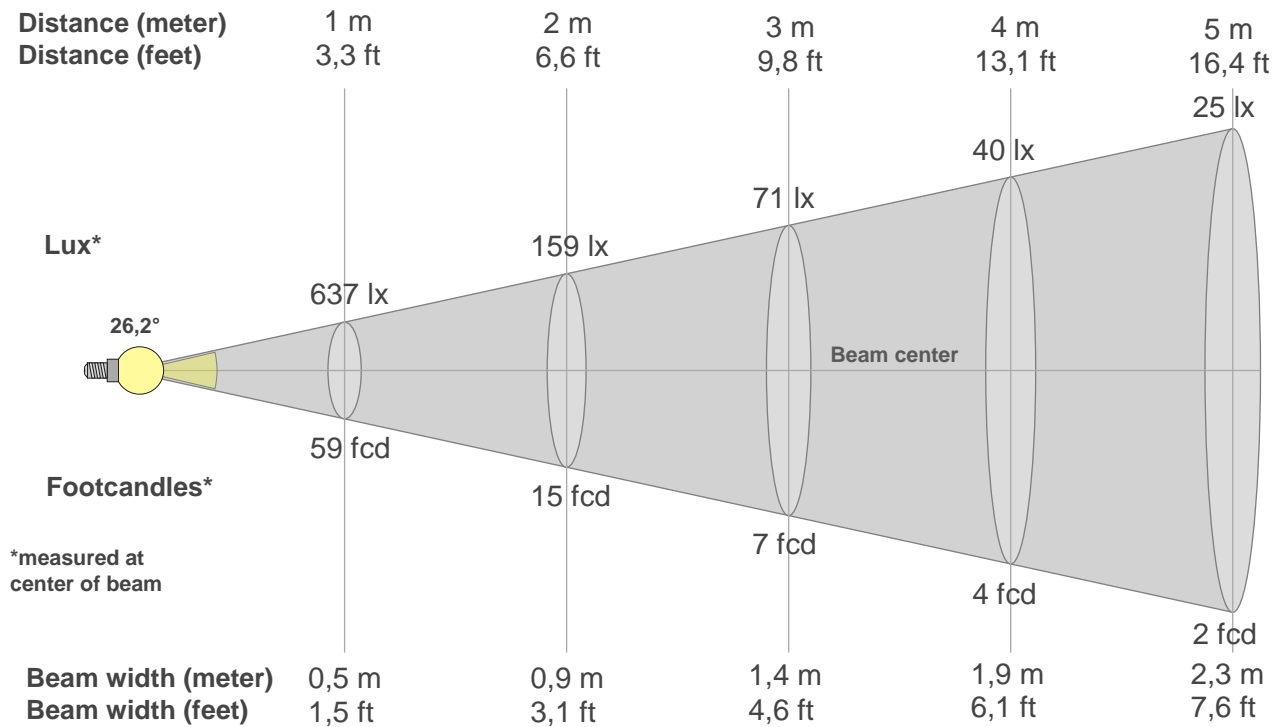
Gammut index Rg

(TM30_BIN_VALUES_START)

Hue Bin	R _f	Graphic shifts (%)	
		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°
637	633	626	612	590	561	522	475	421	365	309	258	211	169	133	102	78	59	44	33
100%	99%	98%	96%	93%	88%	82%	75%	66%	57%	49%	40%	33%	27%	21%	16%	12%	9%	7%	5%

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°
637	618	558	469	368	274	199	145	104	73	48	30	19	13	9	8	7	6	5	5
100%	97%	88%	74%	58%	43%	31%	23%	16%	11%	8%	5%	3%	2%	1%	1%	1%	1%	1%	1%

Intensities in 180° c-plane

(INT_TABLE_180_START)

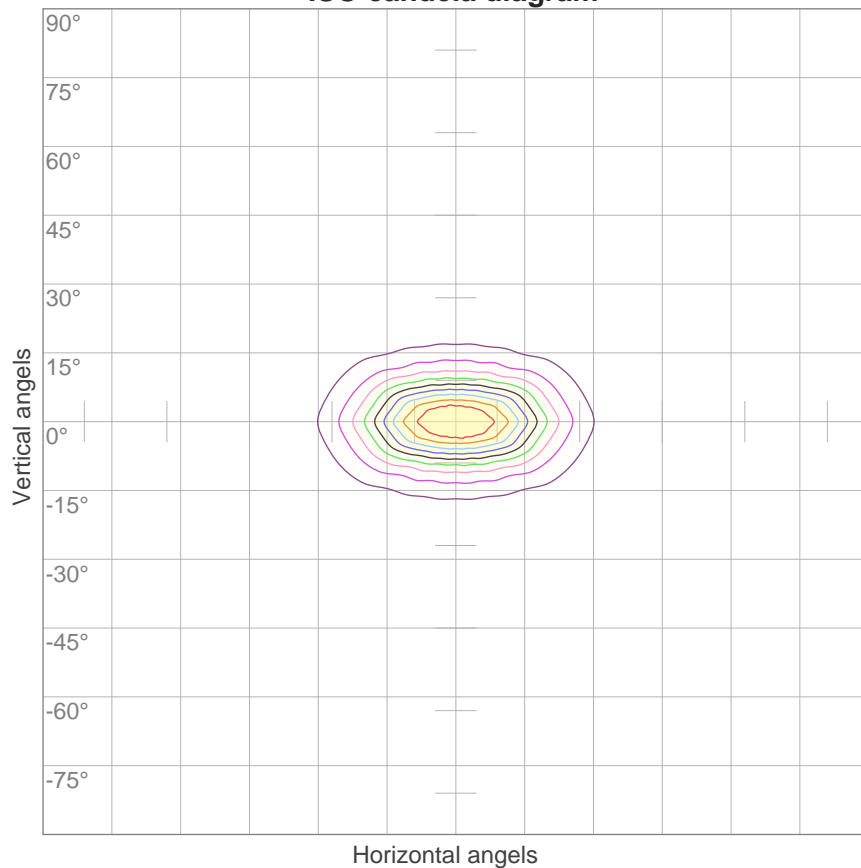
°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%

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°
637	618	558	469	368	274	199	145	104	73	48	30	19	13	9	8	7	6	5	5
100%	97%	88%	74%	58%	43%	31%	23%	16%	11%	8%	5%	3%	2%	1%	1%	1%	1%	1%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
26,2°	49,3°	66°	94,1%	91,0%

ISO candela diagram



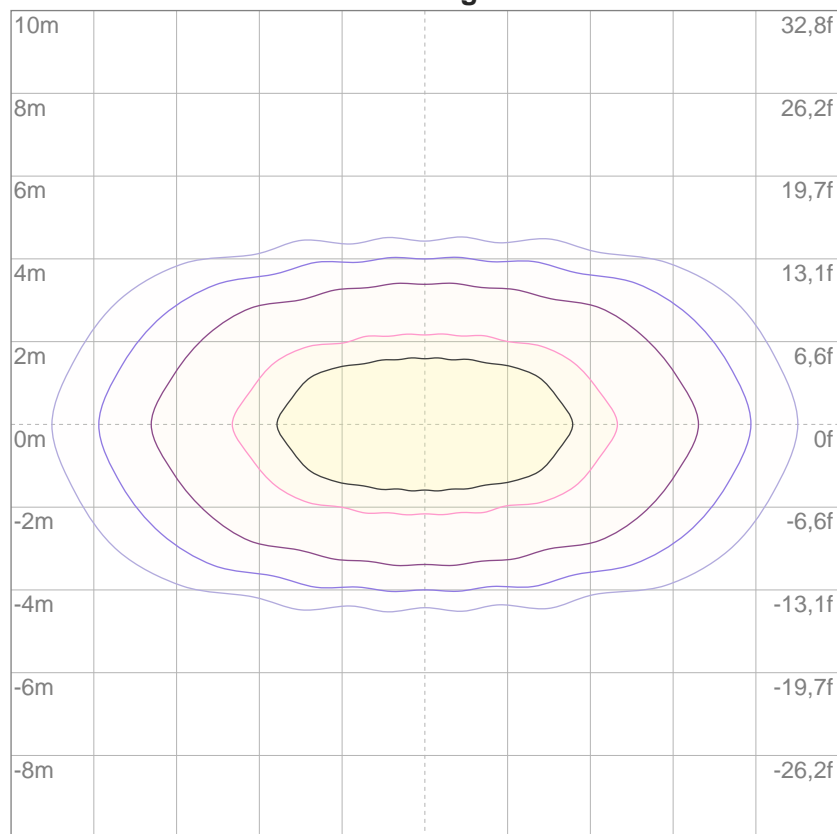
10%	64 cd
20%	127 cd
30%	191 cd
40%	255 cd
50%	318 cd
60%	382 cd
70%	446 cd
80%	509 cd
90%	573 cd

Conditions:

Number of c-planes: 16

Candela at center: 637 cd

ISO lux diagram



3%	0,191 lx
5%	0,318 lx
10%	0,637 lx
30%	1,91 lx
50%	3,18 lx

Conditions:

Number of c-planes: 16

Lux at center: 6,37 lx

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

Glare Evaluation According to UGR

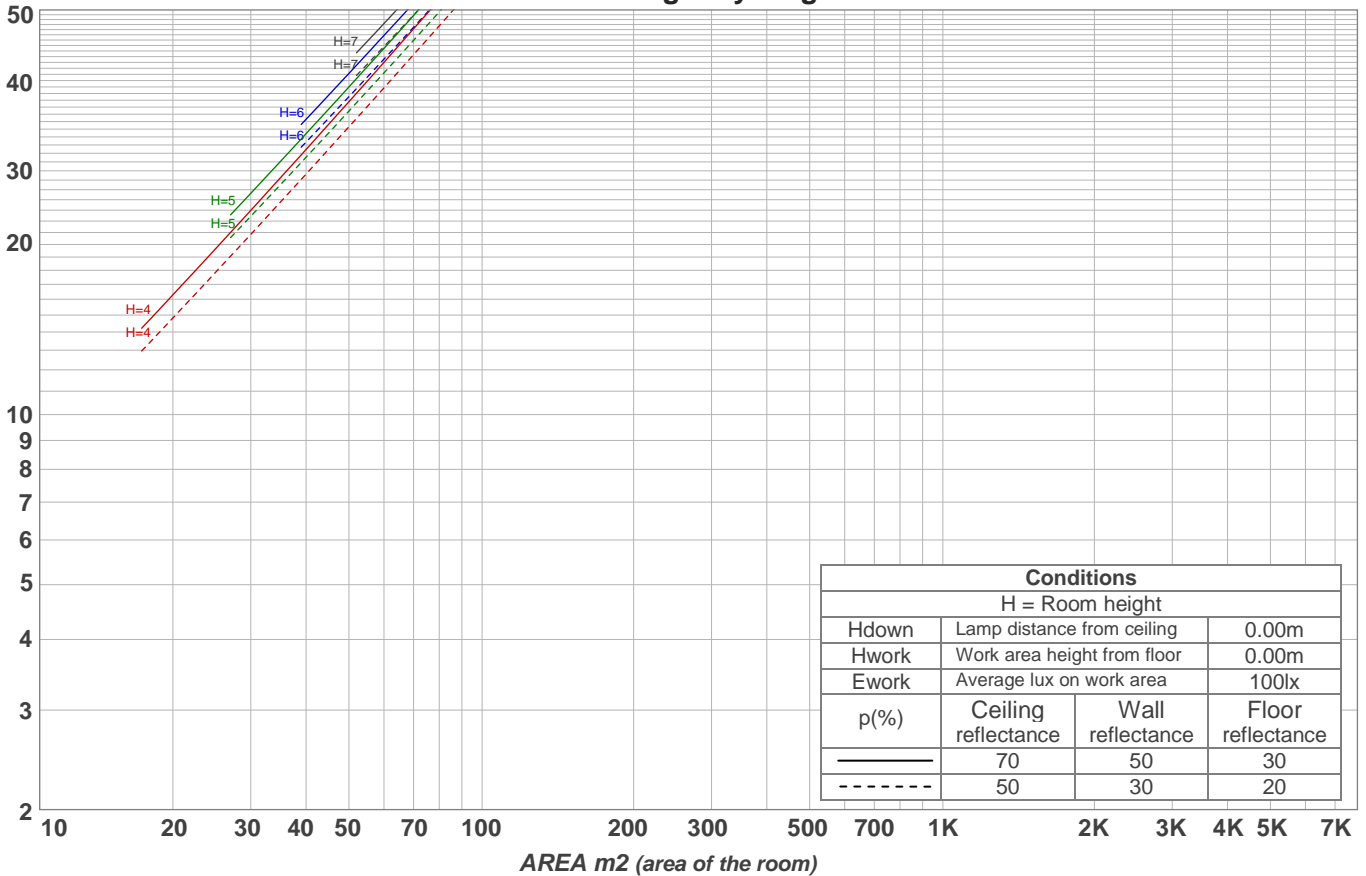
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	10,6	11,3	10,9	11,5	11,7	5,5	6,2	5,7	6,4	6,6
	3H	11,5	12,2	11,8	12,4	12,7	8,2	8,9	8,5	9,1	9,3
	4H	12,3	13,0	12,6	13,2	13,5	9,8	10,4	10,1	10,7	11,0
	6H	13,4	14,0	13,8	14,3	14,6	11,4	12,0	11,8	12,3	12,6
	8H	14,1	14,7	14,5	15,0	15,3	12,3	12,9	12,6	13,2	13,5
	12H	14,8	15,3	15,1	15,6	15,9	13,2	13,8	13,6	14,1	14,4
4H	2H	10,7	11,4	11,0	11,6	11,9	6,5	7,2	6,8	7,4	7,7
	3H	12,0	12,5	12,3	12,8	13,1	9,4	10,0	9,8	10,3	10,6
	4H	13,0	13,5	13,4	13,8	14,2	11,2	11,7	11,6	12,1	12,4
	6H	14,5	14,9	14,9	15,3	15,6	13,1	13,5	13,5	13,8	14,2
	8H	15,4	15,7	15,8	16,1	16,5	14,0	14,4	14,4	14,8	15,2
	12H	16,2	16,5	16,6	16,9	17,3	15,0	15,4	15,5	15,8	16,2
8H	4H	13,5	13,8	13,9	14,2	14,6	12,0	12,4	12,5	12,8	13,2
	6H	15,2	15,5	15,7	15,9	16,4	14,1	14,4	14,6	14,8	15,3
	8H	16,3	16,5	16,8	17,0	17,5	15,2	15,4	15,7	15,9	16,3
	12H	17,4	17,6	17,9	18,1	18,6	16,4	16,6	16,9	17,0	17,5
12H	4H	13,6	13,9	14,0	14,3	14,7	12,2	12,6	12,7	13,0	13,4
	6H	15,4	15,7	15,9	16,1	16,6	14,4	14,7	14,9	15,1	15,6
	8H	16,6	16,8	17,1	17,3	17,8	15,6	15,8	16,1	16,2	16,7
Variation of the observer position for the luminaire distance S											
S = 1,0H		+1,0 / -0,3					+0,1 / -0,1				
S = 1,5H		+2,1 / -0,5					+0,2 / -0,3				
S = 2,0H		+3,4 / -0,8					+0,4 / -0,5				
Standard table		---					BK12				
Correction summand		---					-0,9				
Corrected glare indices referring to 185 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	101	101	101	99
1	113	110	108	106	111	108	106	104	104	102	100	100	98	97	96	95	94	92
2	108	104	100	97	106	102	98	95	98	95	93	95	93	91	92	90	89	87
3	104	98	93	90	102	96	92	89	94	90	87	91	88	86	89	86	84	83
4	100	93	88	84	98	92	87	84	89	86	82	87	84	81	85	83	80	79
5	96	89	83	80	94	88	83	79	86	82	78	84	80	78	82	79	77	75
6	92	85	79	76	91	84	79	76	82	78	75	81	77	74	79	76	74	72
7	89	81	76	72	88	80	76	72	79	75	72	78	74	71	77	73	71	70
8	86	78	73	70	85	77	73	69	76	72	69	75	71	69	74	71	68	67
9	83	75	70	67	82	75	70	67	74	69	66	73	69	66	72	68	66	65
10	81	72	68	64	80	72	67	64	71	67	64	70	67	64	70	66	64	63

LAMPS (number of lamps)

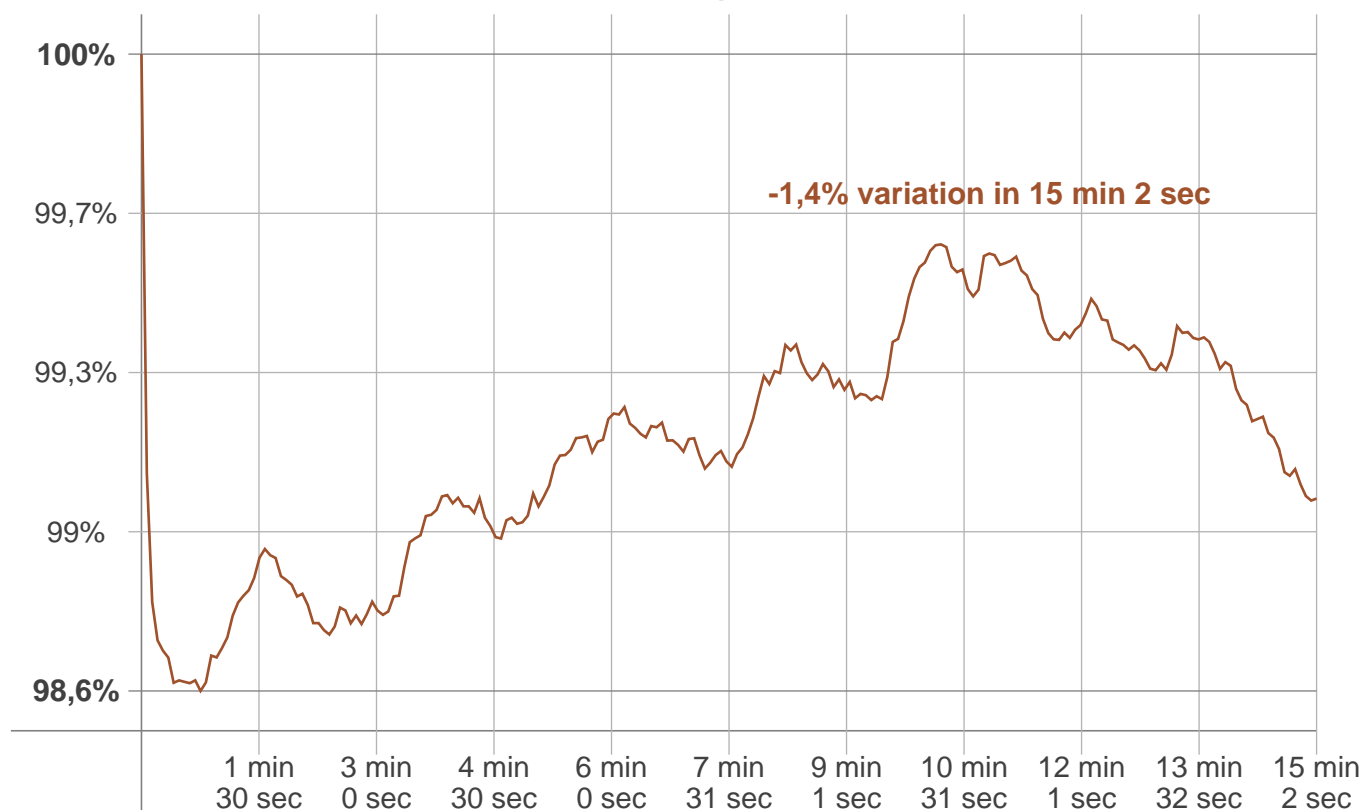
Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
48,8 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}	0,609 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	-1,4%

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
185 lm	-1 lm	185 lm