

Light efficiency:



Light quality:



Color temperature:

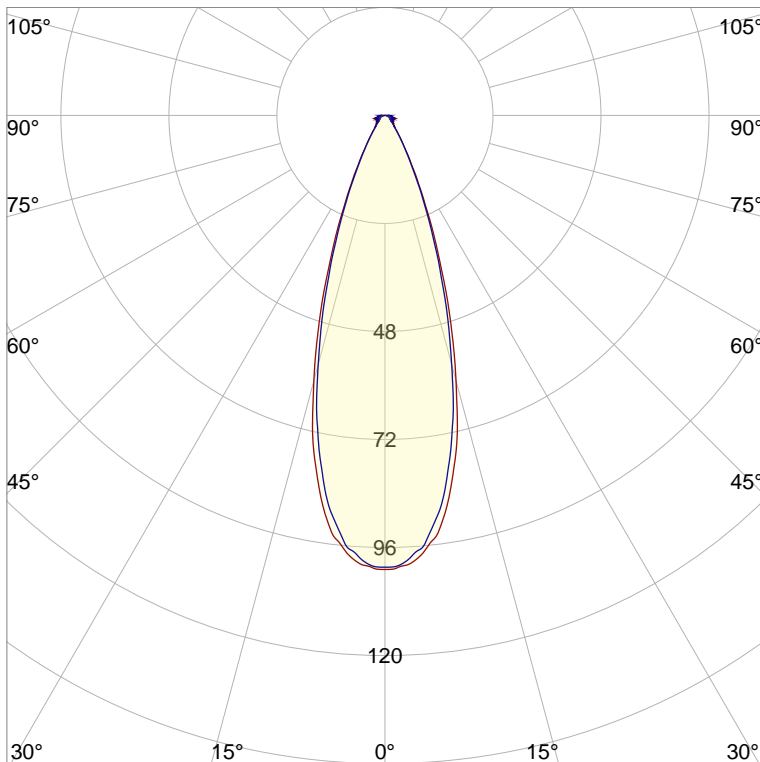
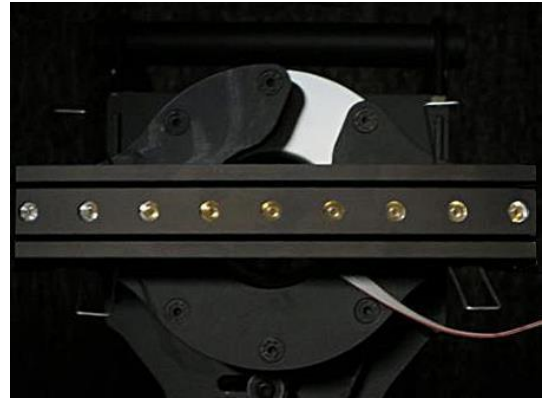


Output: 47,6 lm

Peak: 101 cd

Power: 7,0 W

PF: 0,82



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

Product name:

FLNP-F4C-C-258-B-927-10773-ALA

Item number:

FLNP-F4C-C-258-B-927-10773-ALA

Date and time:

12.02.2019 14:30:39

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

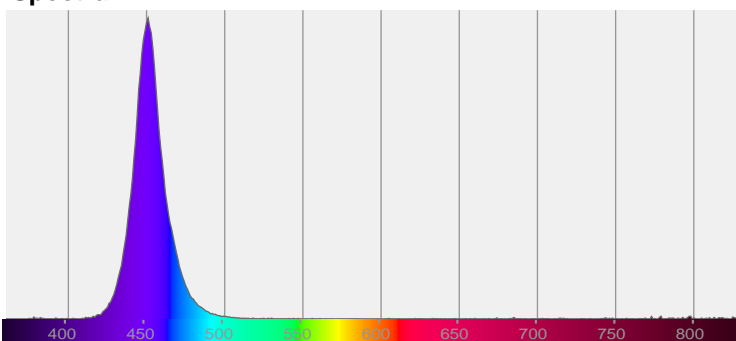
Pruefort:

Lichtlabor

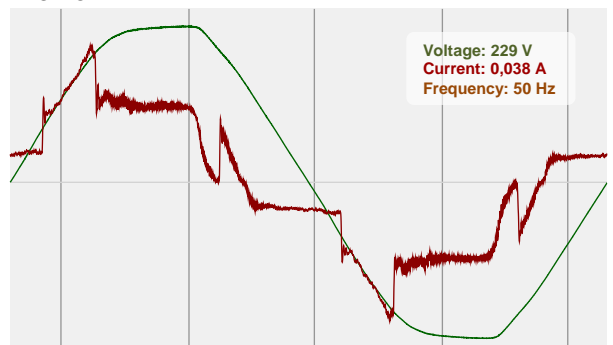
Gaustasse13-15

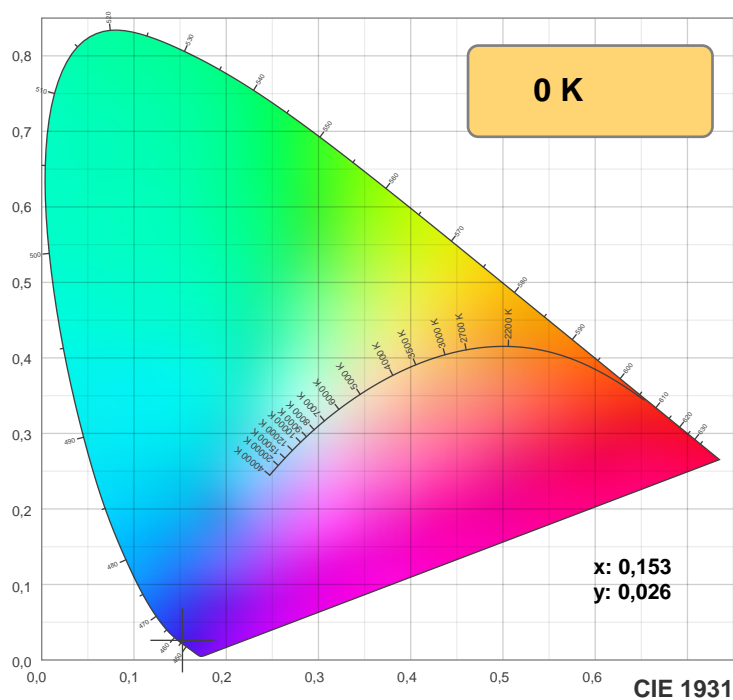
55411 Bingen am Rhein

Spectra

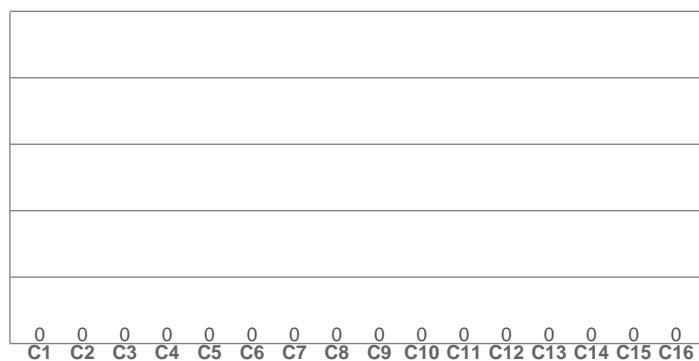


Power





TM30: 0,0



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

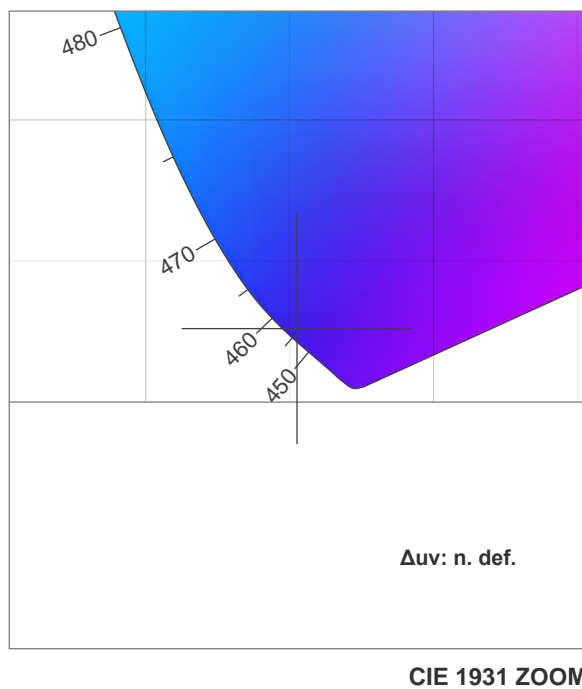
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

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

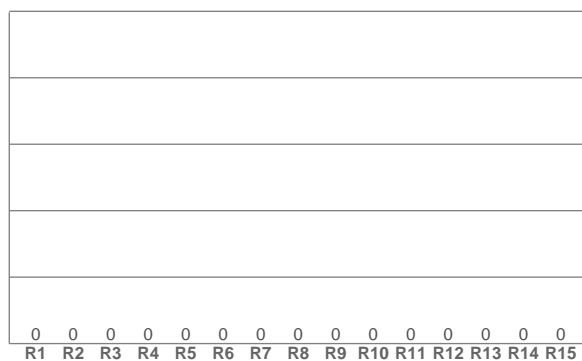
C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

CQS Q values

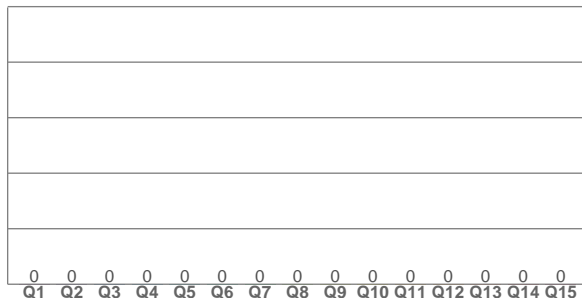
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0



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

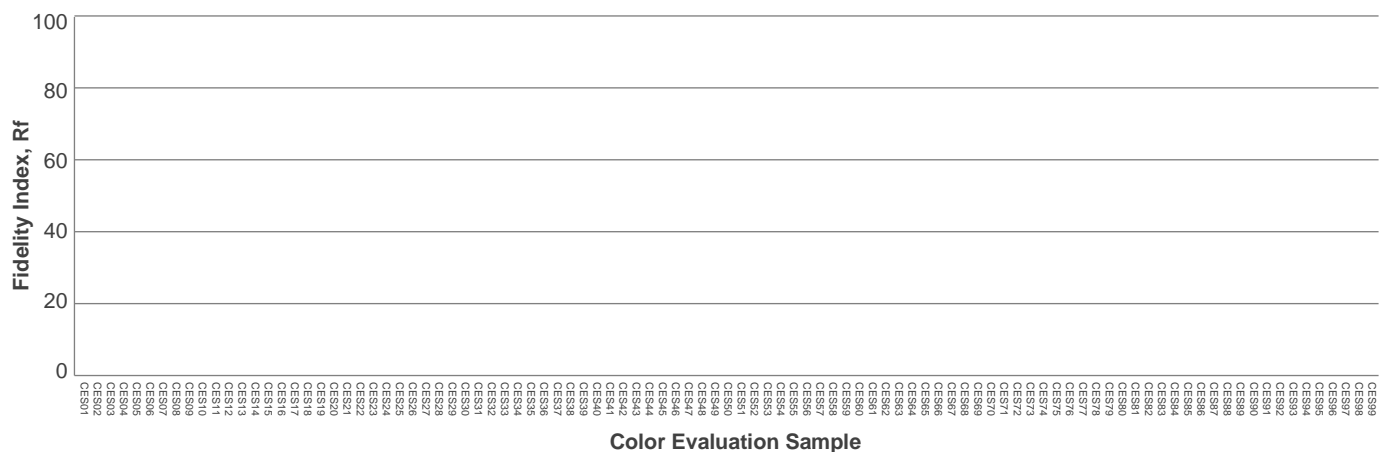
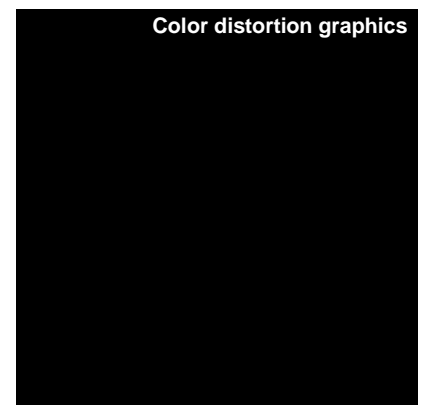
Rf 0,0

Fidelity index Rf

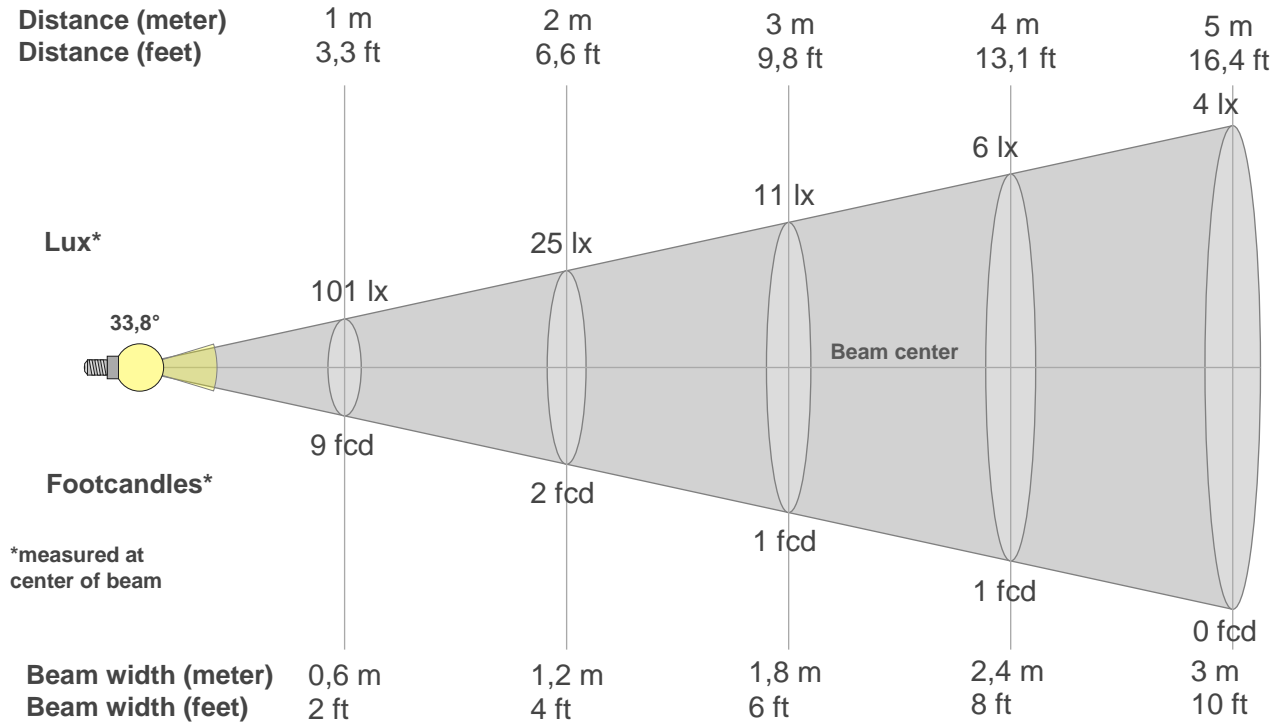
Rg 0,0

Gammut index Rg

(TM30_BN_VALUES_START)			
Graphic shifts (%)			
Hue Bin	R _f	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°
101	100	99	96	91	84	76	66	56	46	37	30	23	17	13	10	8	6	5	4
100%	100%	98%	95%	91%	84%	76%	66%	56%	46%	37%	29%	23%	17%	13%	10%	8%	6%	5%	4%

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°
101	100	97	94	88	80	72	62	52	44	35	28	21	17	13	10	8	6	5	4
100%	99%	97%	93%	88%	80%	71%	62%	52%	43%	35%	27%	21%	16%	12%	10%	8%	6%	5%	4%

Intensities in 180° c-plane

(INT_TABLE_180_START)

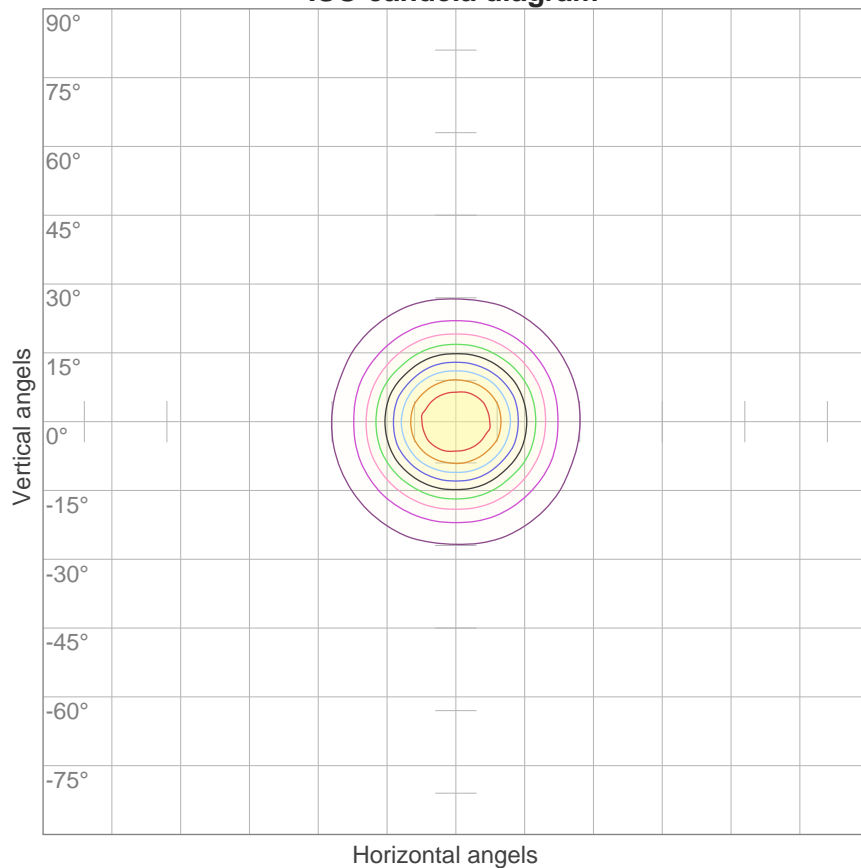
°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°	°
%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%

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°
101	100	97	94	88	80	72	62	52	44	35	28	21	17	13	10	8	6	5	4
100%	99%	97%	93%	88%	80%	71%	62%	52%	43%	35%	27%	21%	16%	12%	10%	8%	6%	5%	4%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
33,8°	60,3°	90°	87,4%	82,1%

ISO candela diagram



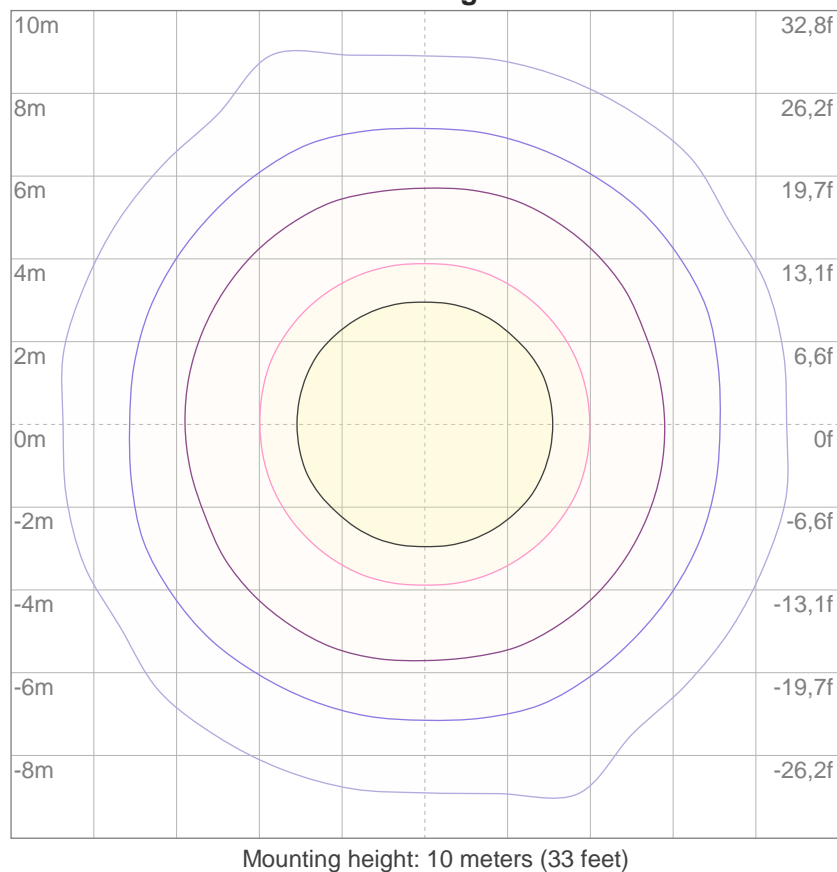
10%	10 cd
20%	20 cd
30%	30 cd
40%	40 cd
50%	50 cd
60%	60 cd
70%	70 cd
80%	81 cd
90%	91 cd

Conditions:

Number of c-planes: 16

Candela at center: 101 cd

ISO lux diagram



3%	30,2m lx
5%	50,3m lx
10%	0,101 lx
30%	0,302 lx
50%	0,503 lx

Conditions:

Number of c-planes: 16

Lux at center: 1,01 lx

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

Glare Evaluation According to UGR

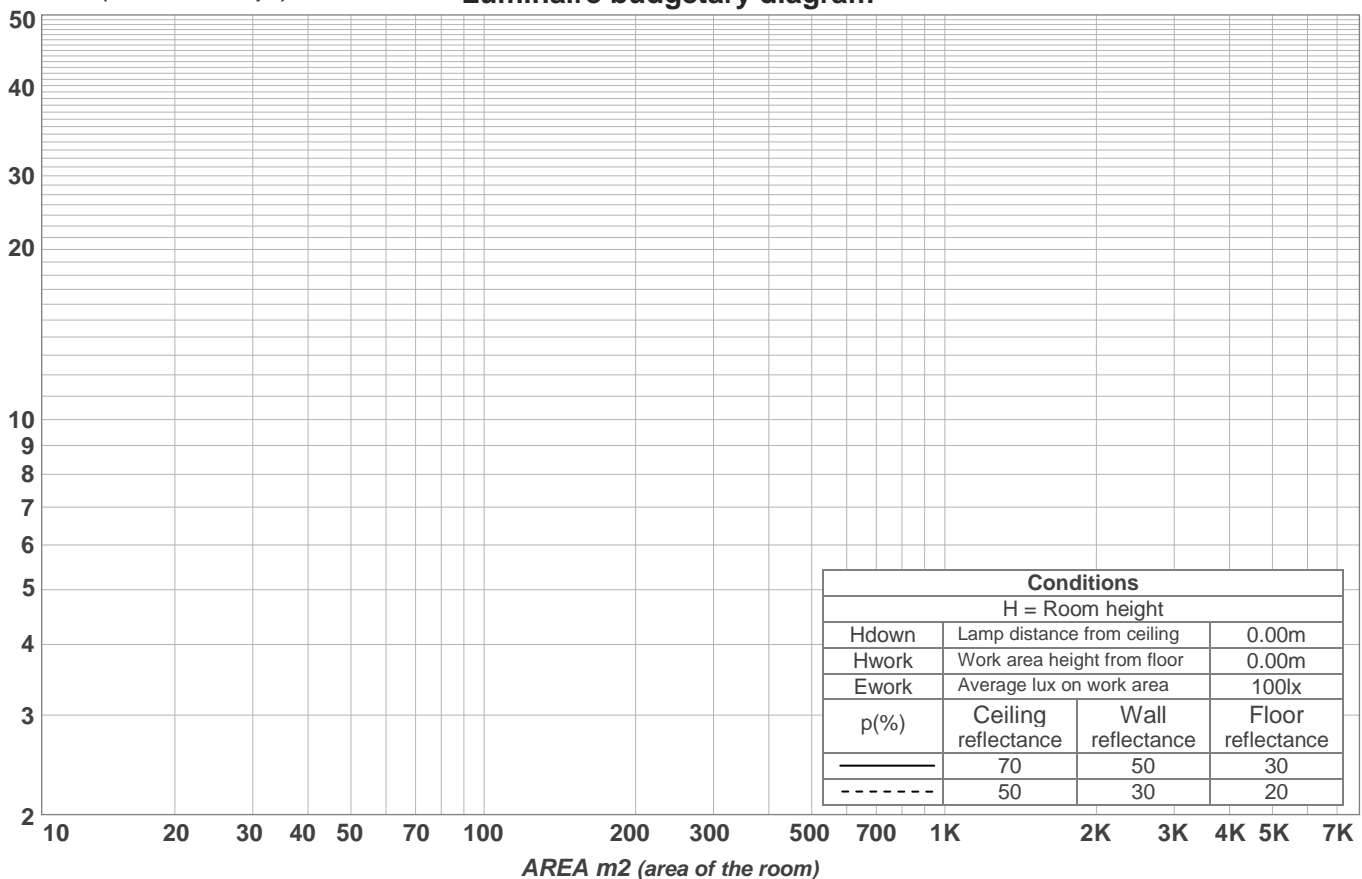
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	6,8	7,6	7,0	7,8	8,0	6,6	7,5	6,9	7,7	7,9
	3H	9,4	10,2	9,7	10,4	10,7	8,9	9,7	9,2	10,0	10,2
	4H	11,0	11,8	11,3	12,0	12,3	10,6	11,3	10,9	11,6	11,8
	6H	12,4	13,1	12,7	13,4	13,7	12,2	12,9	12,5	13,2	13,5
	8H	13,3	14,0	13,7	14,3	14,6	12,9	13,6	13,3	13,9	14,2
	12H	14,1	14,8	14,5	15,1	15,4	13,9	14,5	14,2	14,8	15,2
4H	2H	7,6	8,3	7,9	8,6	8,8	7,5	8,2	7,8	8,5	8,7
	3H	10,5	11,1	10,8	11,4	11,7	10,1	10,7	10,4	11,0	11,3
	4H	12,2	12,8	12,6	13,1	13,5	11,9	12,4	12,3	12,8	13,1
	6H	13,9	14,3	14,3	14,7	15,1	13,7	14,2	14,1	14,5	14,9
	8H	14,9	15,4	15,3	15,7	16,2	14,5	15,0	15,0	15,4	15,8
	12H	15,9	16,3	16,3	16,7	17,1	15,7	16,1	16,1	16,5	16,9
8H	4H	12,9	13,3	13,3	13,7	14,1	12,6	13,0	13,0	13,4	13,8
	6H	14,8	15,1	15,2	15,6	16,0	14,6	15,0	15,1	15,4	15,9
	8H	16,1	16,4	16,6	16,9	17,3	15,7	16,0	16,2	16,5	17,0
	12H	17,3	17,5	17,7	18,0	18,5	17,1	17,4	17,6	17,8	18,3
12H	4H	13,0	13,4	13,4	13,8	14,2	12,8	13,2	13,2	13,6	14,0
	6H	15,1	15,4	15,5	15,8	16,3	14,9	15,3	15,4	15,7	16,2
	8H	16,5	16,8	17,0	17,3	17,7	16,2	16,5	16,7	16,9	17,4
Variation of the observer position for the luminaire distance S											
S = 1,0H		+0,1 / -0,1					+0,1 / -0,1				
S = 1,5H		+0,3 / -0,3					+0,2 / -0,3				
S = 2,0H		+0,3 / -0,5					+0,4 / -0,4				
Standard table		BK12					BK12				
Correction summand		-0,0					-0,3				
Corrected glare indices referring to 47,6 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	99	99	99	97
1	111	108	105	102	108	105	102	100	100	98	96	96	94	93	92	91	89	87
2	105	100	95	91	103	97	93	90	94	90	87	90	87	85	87	85	83	81
3	100	93	87	83	97	91	86	82	88	84	80	85	82	79	82	79	77	75
4	95	87	81	77	93	86	80	76	83	78	75	81	77	74	78	75	72	71
5	91	82	76	72	89	81	75	71	79	74	70	77	73	69	75	71	68	67
6	87	78	72	68	85	77	71	67	75	70	66	73	69	66	72	68	65	64
7	83	74	68	64	82	73	68	64	72	67	63	70	66	63	69	65	62	61
8	80	71	65	61	78	70	64	61	68	64	60	67	63	60	66	62	59	58
9	77	67	62	58	75	67	61	58	66	61	57	65	60	57	64	60	57	55
10	74	65	59	55	73	64	59	55	63	58	55	62	58	55	61	57	54	53

LAMPS (number of lamps)

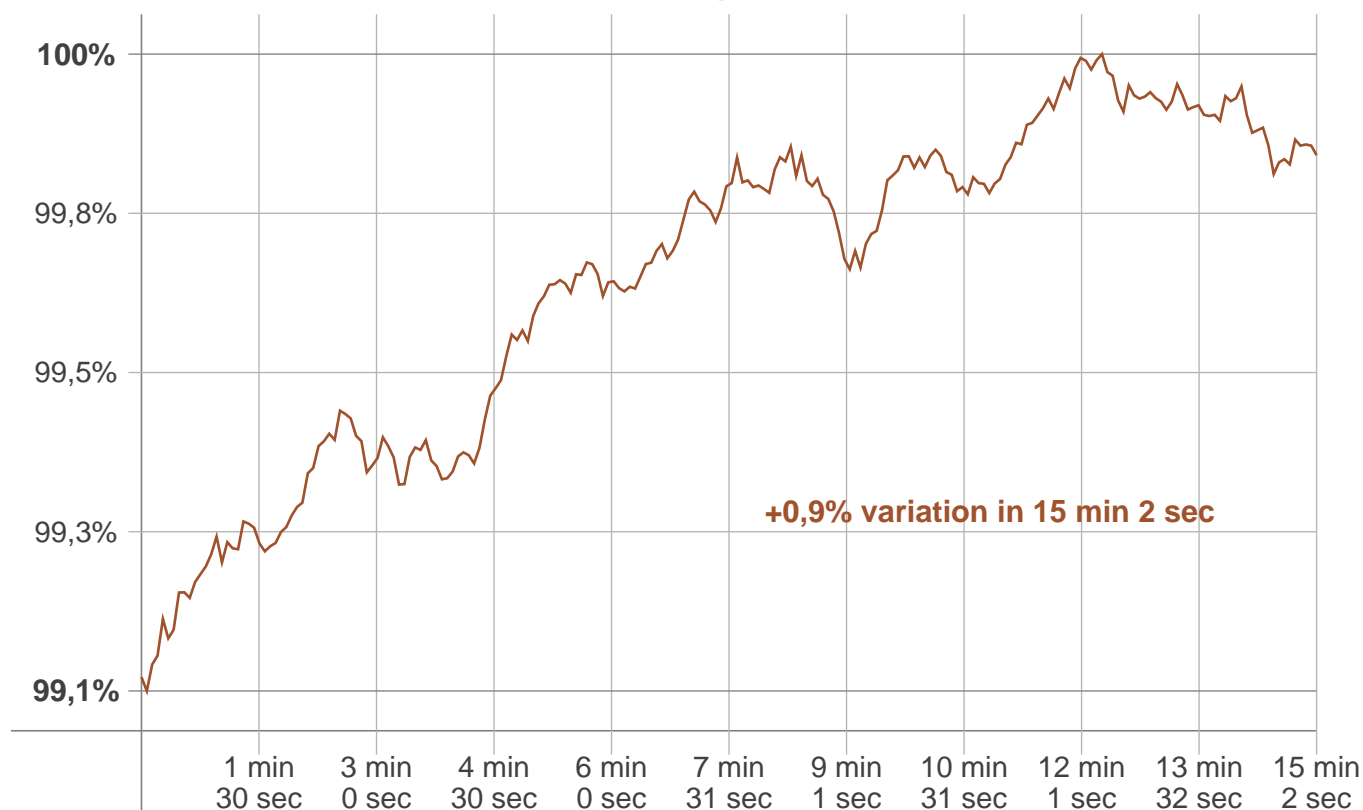
Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
8,79 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}	0,357 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	+0,9%

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
47,4 lm	+0,2 lm	47,6 lm