

Light efficiency:

41 Lumen/Watt

Light quality:

CRI: 0,0

Color temperature:

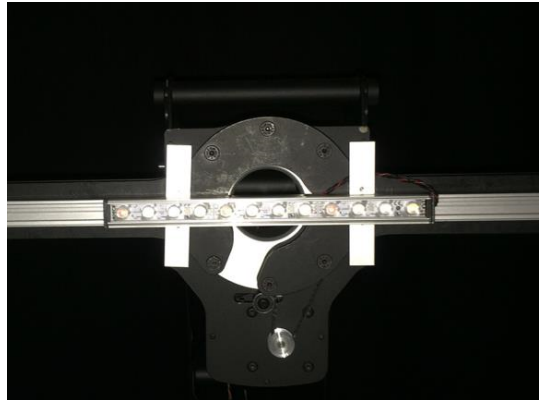
0 K

Output: 287 lm

Peak: 519 cd

Power: 7,1 W

PF: 0,81



Product name:

FLNP-F4CH-C-258-G-927-10773

Item number:

FLNP-F4CH-C-258-G-927-10773

Date and time:

15.02.2019 12:15:02

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

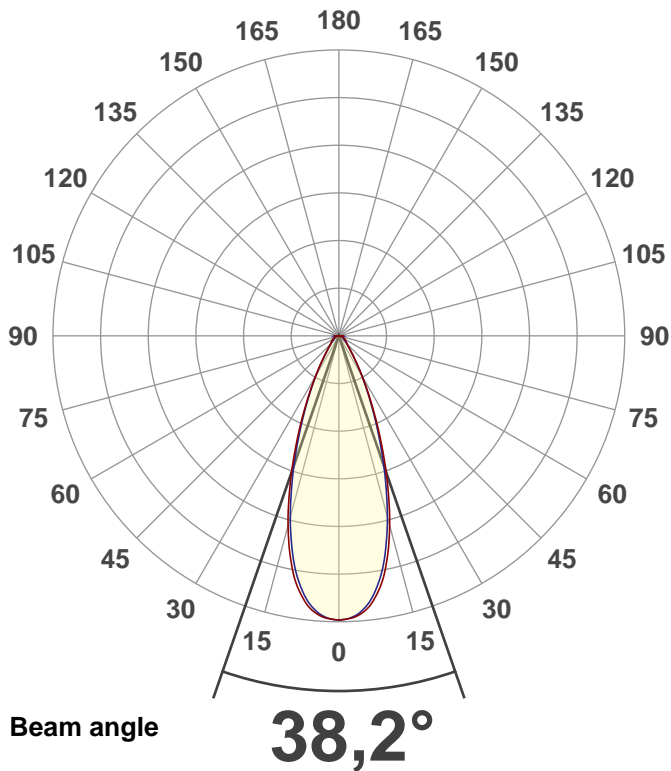
Master of Engineering

Pruefort:

Lichtlabor

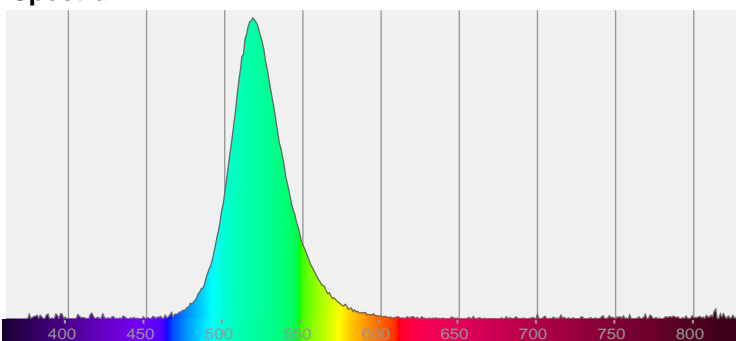
Gaustrasse13-15

55411 Bingen am Rhein

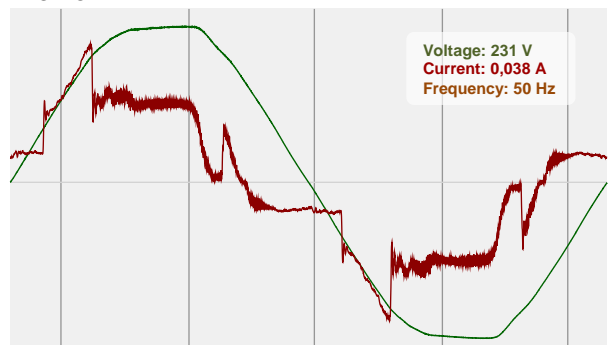


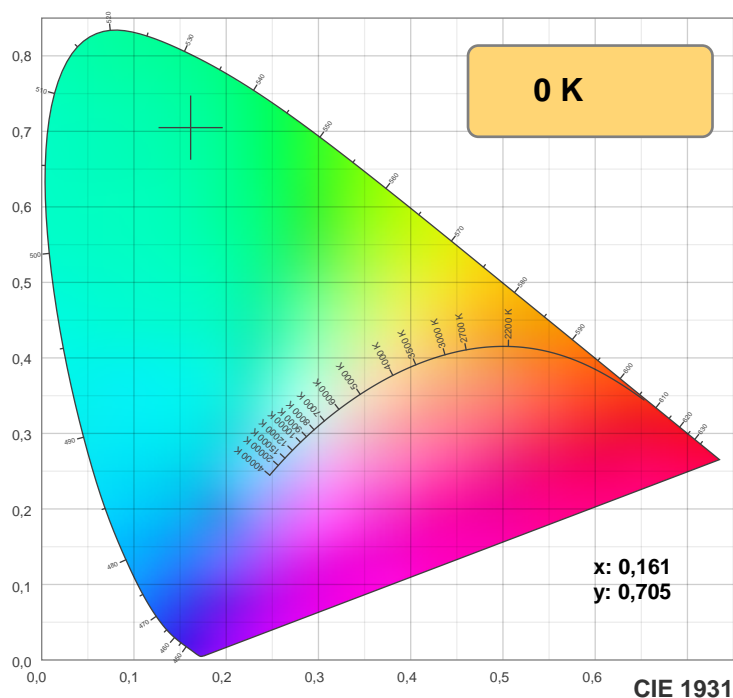
CIE 1931
x: 0,161
y: 0,705

Spectra

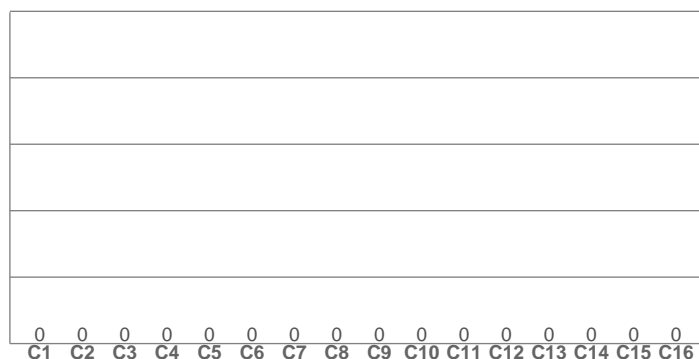


Power





TM30: 0,0



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

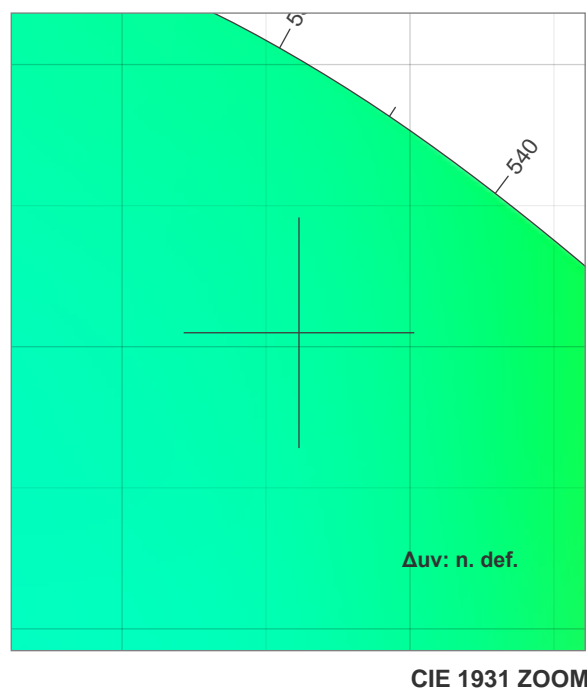
R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

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

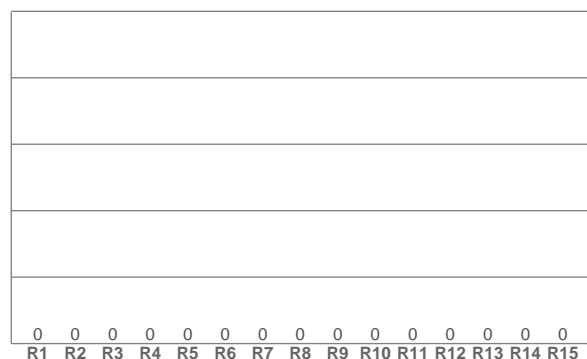
C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0

CQS Q values

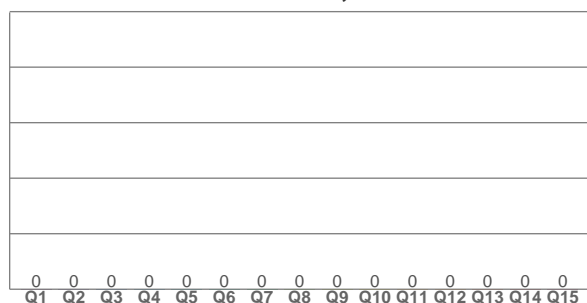
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0



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	0,161	0,705	0,058	0,380	n. def.

TM30 details

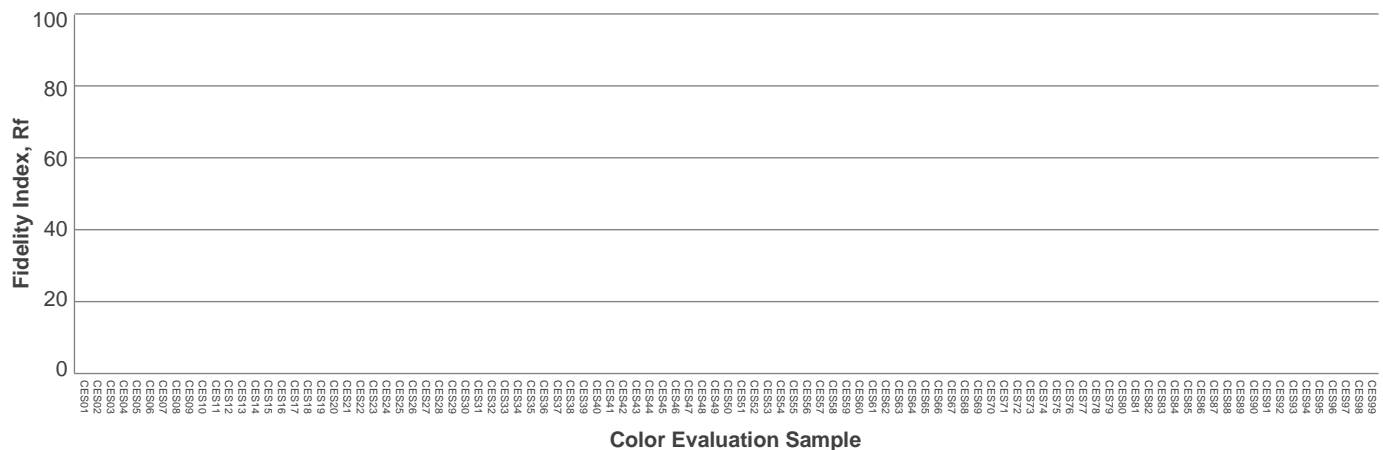
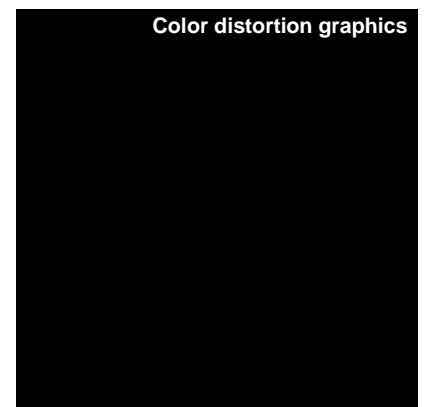
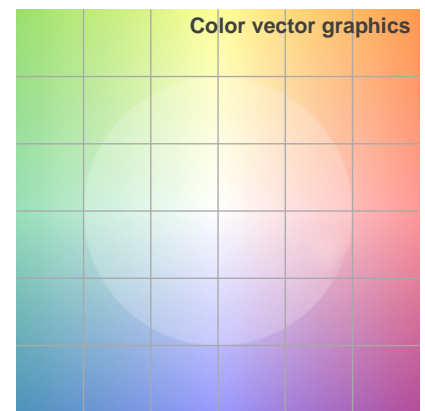
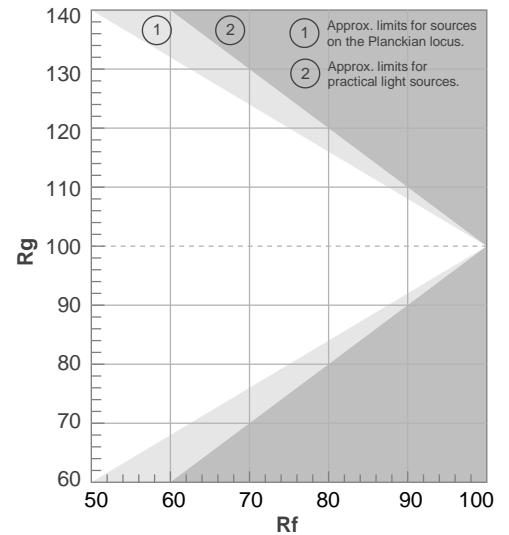
Rf 0,0

Fidelity index Rf

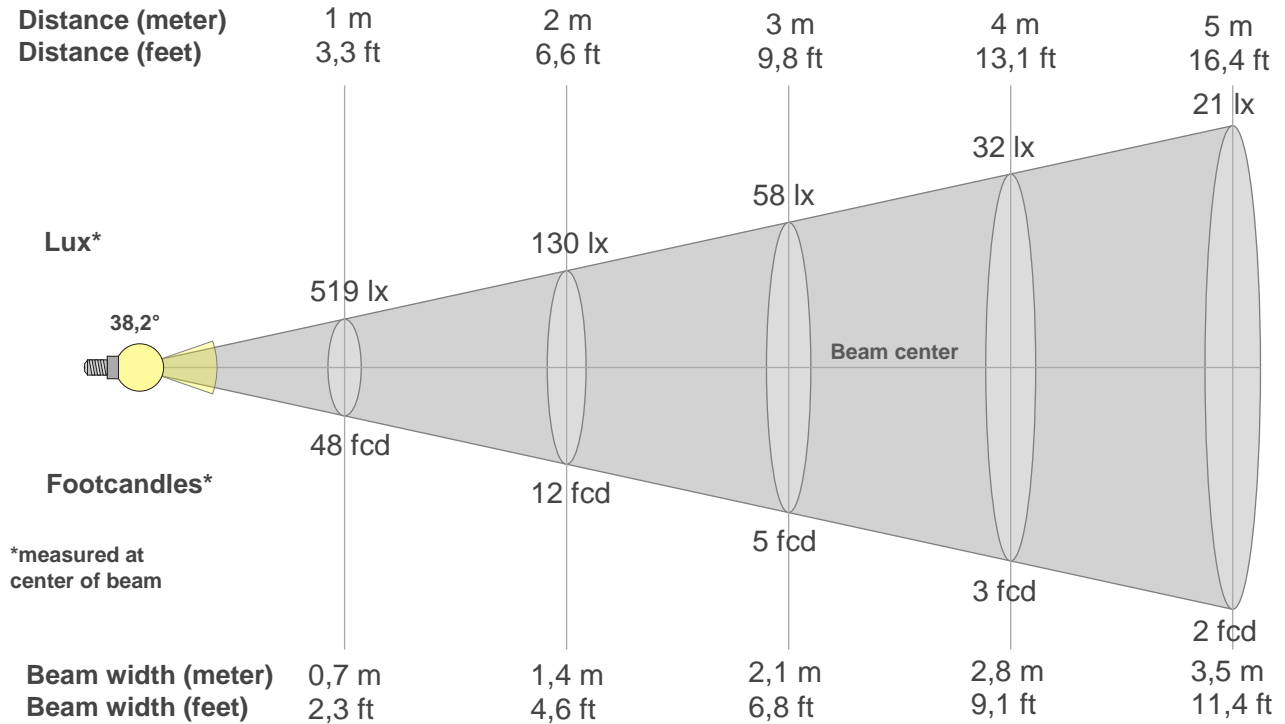
Rg 0,0

Gammut index Rg

		Graphic shifts (%)	
Hue Bin	R _f	Chroma	Hue
1	0	0%	0%
2	0	0%	0%
3	0	0%	0%
4	0	0%	0%
5	0	0%	0%
6	0	0%	0%
7	0	0%	0%
8	0	0%	0%
9	0	0%	0%
10	0	0%	0%
11	0	0%	0%
12	0	0%	0%
13	0	0%	0%
14	0	0%	0%
15	0	0%	0%
16	0	0%	0%



Beam details



Beam intensities from 1-20m

1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	19,7ft	23ft	26,2ft	29,5ft	32,8ft	36,1ft	39,4ft	42,7ft	45,9ft	49,2ft	52,5ft	55,8ft	59,1ft	62,3ft	65,6ft
519lx	130lx	58lx	32lx	21lx	14lx	11lx	8lx	6lx	5lx	4lx	4lx	3lx	3lx	2lx	2lx	2lx	2lx	1lx	1lx
48,2fcd	12,1fcd	5,4fcd	3fcd	1,9fcd	1,3fcd	1fcd	0,8fcd	0,6fcd	0,5fcd	0,4fcd	0,3fcd	0,3fcd	0,2fcd	0,2fcd	0,2fcd	0,2fcd	0,1fcd	0,1fcd	0,1fcd

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°
519	517	512	501	481	456	421	380	336	289	244	203	166	134	107	85	68	55	45	36
100%	100%	99%	97%	93%	88%	81%	73%	65%	56%	47%	39%	32%	26%	21%	16%	13%	11%	9%	7%

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°
519	517	509	495	473	444	407	365	320	275	232	193	158	128	104	83	66	53	42	35
100%	100%	98%	95%	91%	85%	78%	70%	62%	53%	45%	37%	30%	25%	20%	16%	13%	10%	8%	7%

Intensities in 180° c-plane

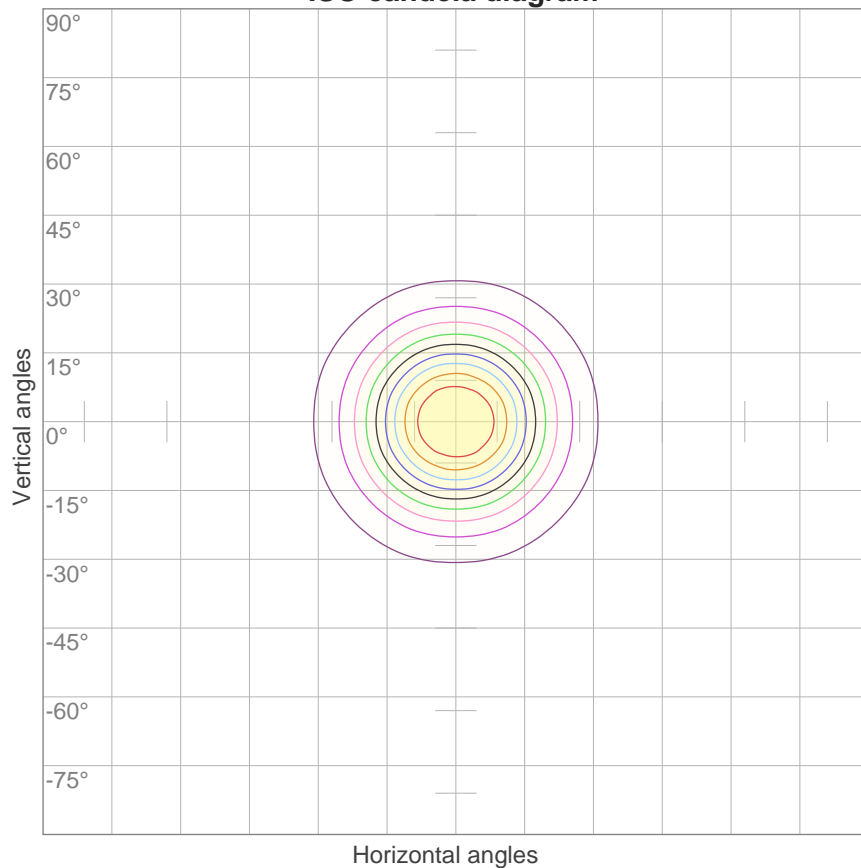
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
519	517	512	501	481	456	421	380	336	289	244	203	166	134	107	85	68	55	45	36
100%	100%	99%	97%	93%	88%	81%	73%	65%	56%	47%	39%	32%	26%	21%	16%	13%	11%	9%	7%

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°
519	517	509	495	473	444	407	365	320	275	232	193	158	128	104	83	66	53	42	35
100%	100%	98%	95%	91%	85%	78%	70%	62%	53%	45%	37%	30%	25%	20%	16%	13%	10%	8%	7%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
38,2°	69,1°	108,9°	94,4%	87,9%

ISO candela diagram



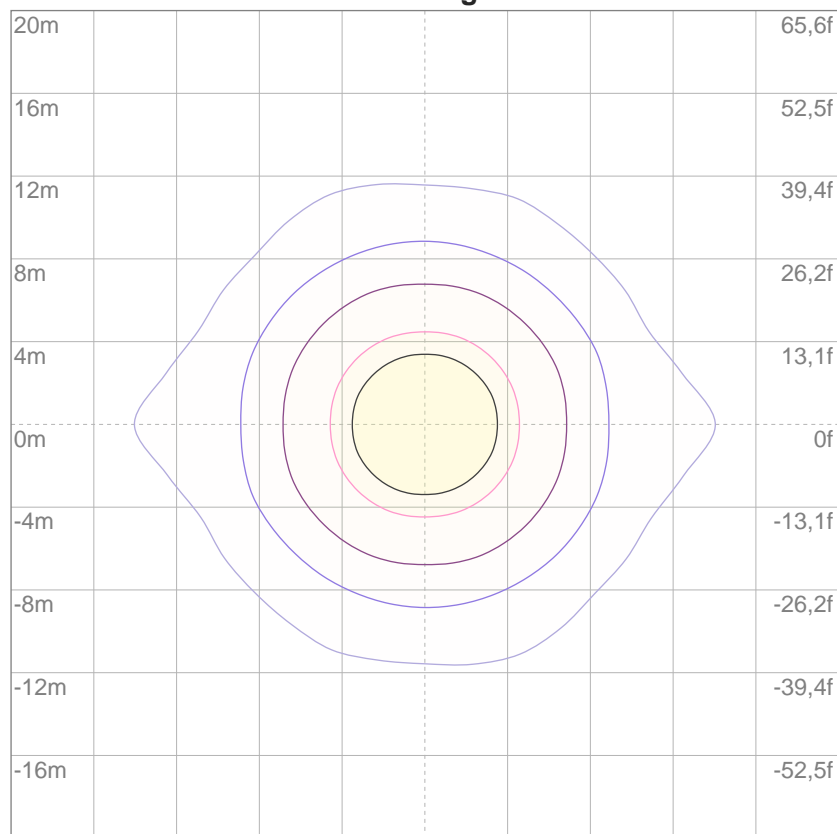
10%	52 cd
20%	104 cd
30%	156 cd
40%	208 cd
50%	260 cd
60%	311 cd
70%	363 cd
80%	415 cd
90%	467 cd

Conditions:

Number of c-planes: 16

Candela at center: 519 cd

ISO lux diagram



3%	0,156 lx
5%	0,260 lx
10%	0,519 lx
30%	1,56 lx
50%	2,60 lx

Conditions:

Number of c-planes: 16

Lux at center: 5,19 lx

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

Glare Evaluation According to UGR

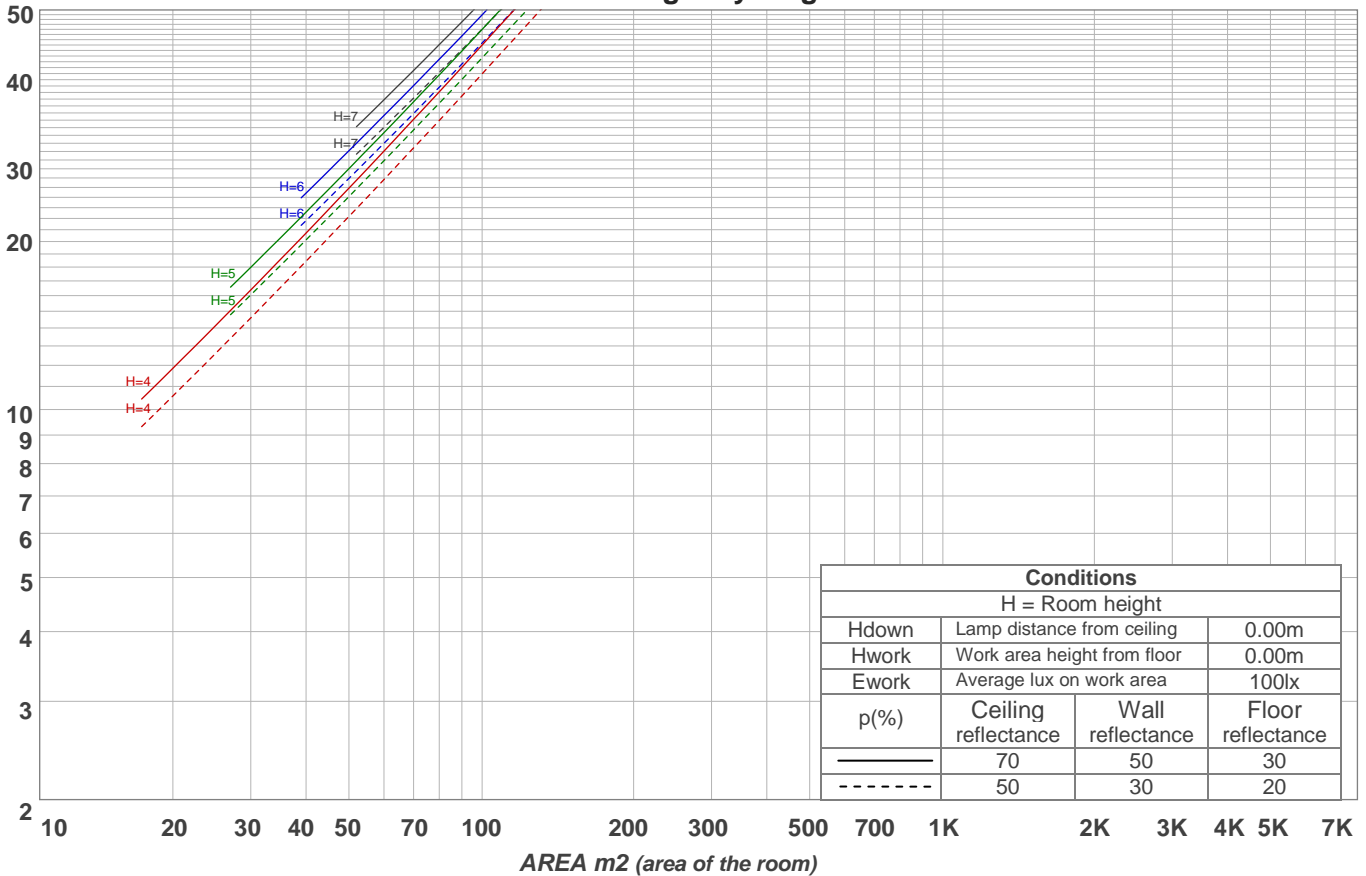
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	14,3	15,1	14,5	15,3	15,5	13,6	14,4	13,8	14,6	14,8
	3H	15,5	16,3	15,8	16,5	16,7	14,7	15,5	15,0	15,7	16,0
	4H	16,0	16,7	16,3	16,9	17,2	15,2	15,9	15,6	16,2	16,5
	6H	16,2	16,9	16,6	17,2	17,5	15,6	16,2	15,9	16,5	16,8
	8H	16,3	16,9	16,7	17,2	17,5	15,7	16,3	16,1	16,6	16,9
	12H	16,4	17,0	16,7	17,3	17,6	15,9	16,5	16,2	16,8	17,1
4H	2H	14,7	15,4	15,0	15,7	15,9	14,1	14,8	14,4	15,1	15,3
	3H	16,2	16,8	16,5	17,1	17,4	15,6	16,2	15,9	16,5	16,8
	4H	16,8	17,3	17,2	17,6	18,0	16,2	16,7	16,6	17,1	17,4
	6H	17,2	17,6	17,6	18,0	18,4	16,7	17,1	17,1	17,5	17,9
	8H	17,4	17,7	17,8	18,1	18,5	16,8	17,2	17,3	17,6	18,0
	12H	17,5	17,8	17,9	18,2	18,6	17,1	17,4	17,5	17,8	18,2
8H	4H	17,1	17,5	17,5	17,8	18,2	16,5	16,9	17,0	17,3	17,7
	6H	17,7	18,0	18,1	18,4	18,8	17,1	17,4	17,6	17,9	18,3
	8H	17,9	18,1	18,4	18,6	19,1	17,4	17,6	17,8	18,1	18,5
	12H	18,1	18,3	18,6	18,8	19,3	17,6	17,8	18,1	18,3	18,8
12H	4H	17,1	17,4	17,5	17,8	18,2	16,6	16,9	17,0	17,3	17,7
	6H	17,7	18,0	18,2	18,4	18,9	17,2	17,5	17,7	17,9	18,4
	8H	18,0	18,2	18,5	18,7	19,2	17,5	17,7	18,0	18,2	18,7
Variation of the observer position for the luminaire distance S											
S = 1,0H		+0,6 / -0,3					+0,6 / -0,4				
S = 1,5H		+1,3 / -0,4					+1,4 / -0,6				
S = 2,0H		+2,2 / -0,8					+2,3 / -1,0				
Standard table		BK05					BK05				
Correction summand		0,3					-0,3				
Corrected glare indices referring to 287 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	102	102	102	100
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	92
2	107	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	85
3	102	95	90	86	100	94	89	85	91	87	84	88	85	82	86	83	81	79
4	97	89	83	79	95	88	83	79	86	81	78	84	80	77	82	78	76	74
5	92	84	78	73	90	83	77	73	81	76	72	79	75	72	78	74	71	70
6	88	79	73	69	86	78	73	69	77	72	68	75	71	68	74	70	67	66
7	84	75	69	65	83	74	69	65	73	68	64	72	67	64	71	67	64	62
8	80	71	65	61	79	71	65	61	69	64	61	68	64	61	67	63	60	59
9	77	68	62	58	76	67	62	58	66	61	58	65	61	58	65	60	57	56
10	74	65	59	55	73	64	59	55	63	59	55	63	58	55	62	58	55	54

LAMPS (number of lamps)

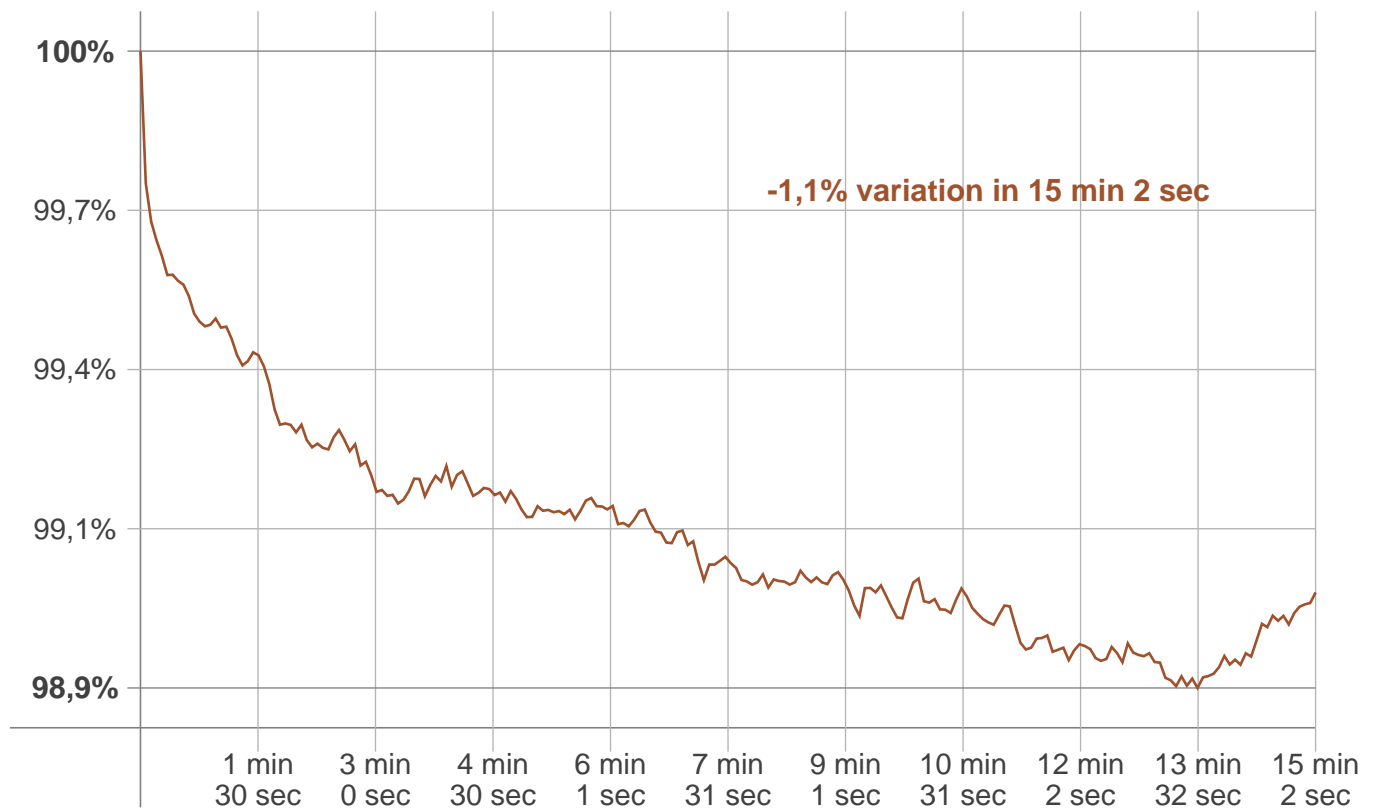
Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
{LUM0-10}	95,9 lm	68,6 lm	32,1 lm	16,3 lm	11,5 lm	8,86 lm	5,11 lm	1,72 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0,155 lm	0,084 lm	0,078 lm	0,071 lm	0,031 lm	0,000 lm	0,000 lm	0,000 lm	0,000 lm

Warmup curve



Warmup result

Warmup time:	15 min 2 sec
Warmup variation	-1,1%

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	0 K	0 K

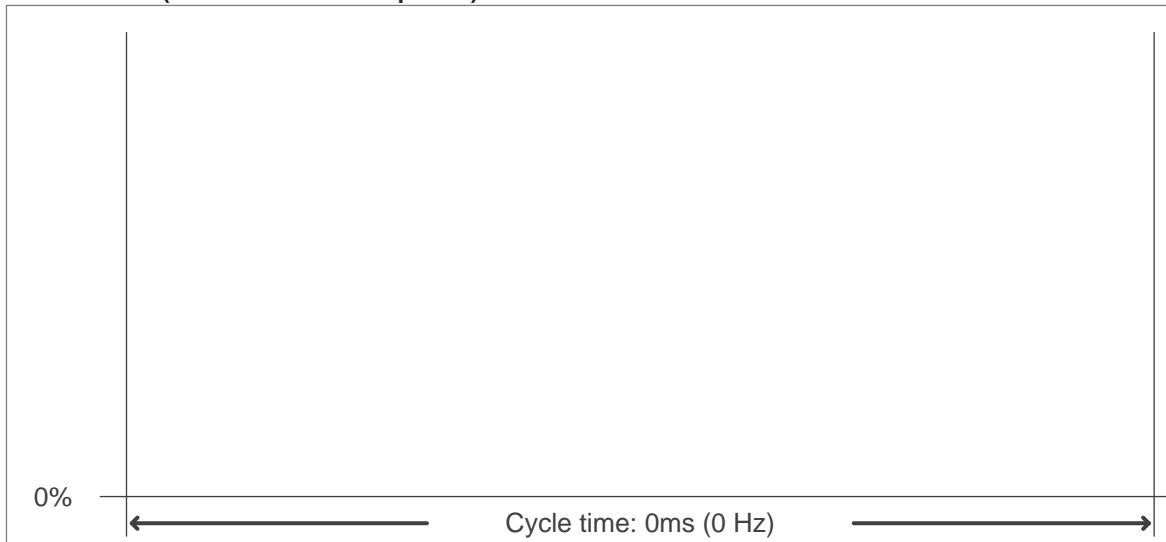
Output change

Output start	Output change	Output end
288 lm	-1 lm	287 lm

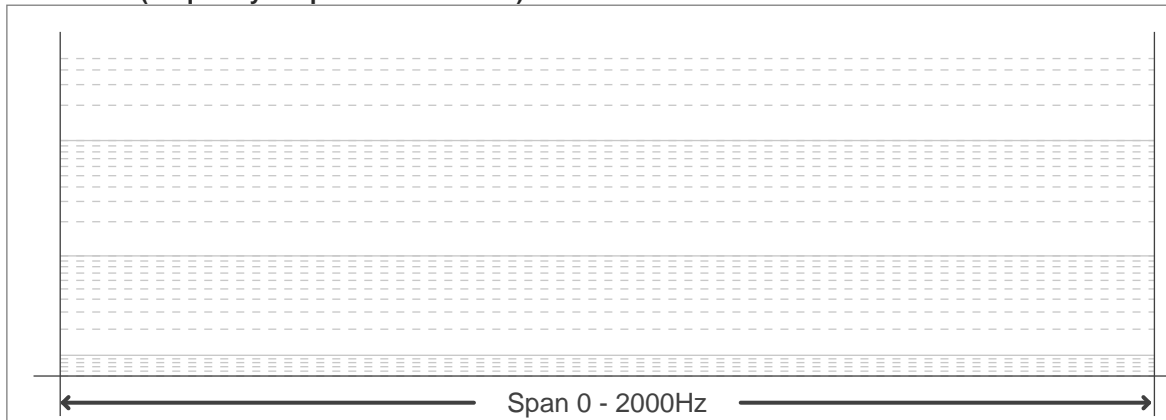
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:	n/a Hz
Flicker index:	n/a
Flicker percentage:	n/a %
SVM: (Visual flicker)	n/a

Flicker conditions:

Sample rate:	60.000 samples/second
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