Light efficiency:

92 Lumen/Watt

Light quality:

CRI: 0,0

Color temperature:

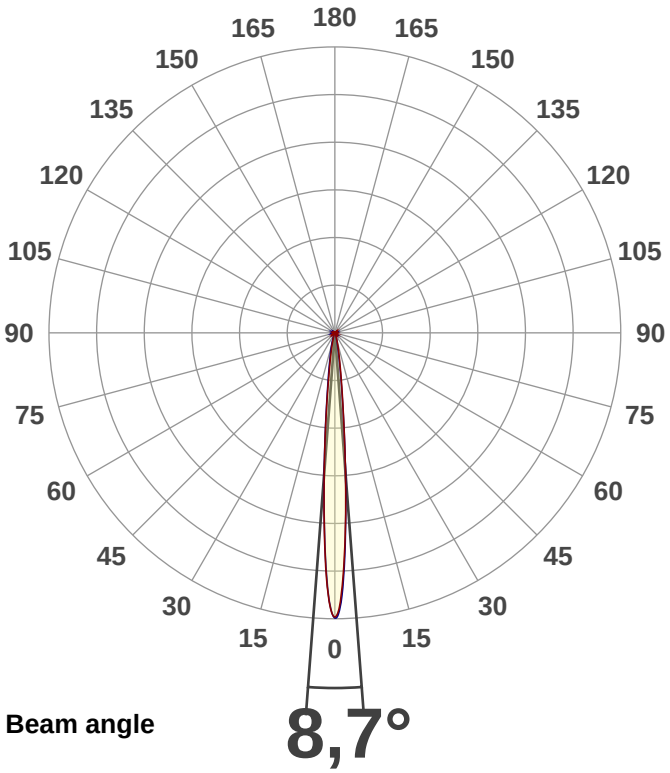
0 K

Output: 423 lm

Peak: 9359 cd

Power: 4,6 W

PF: 1,0



Beam angle

8,7°

CIE 1931
x: 0,167
y: 0,714

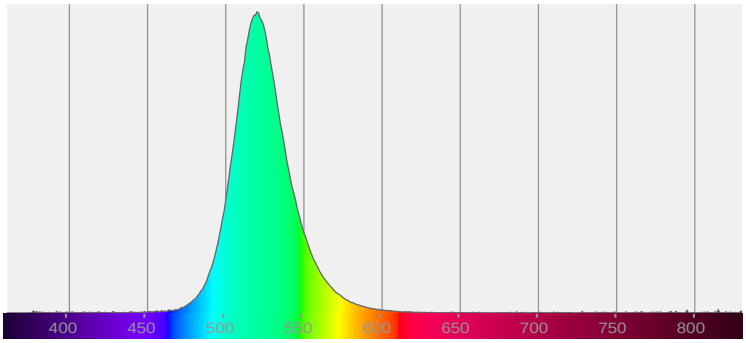
Product name:
F L-S O - 2-4 C -1 0 0-G-LSST-D

Item number:
F L / S O - 2 / 4 C / 1 0 0 / G/LSST/D

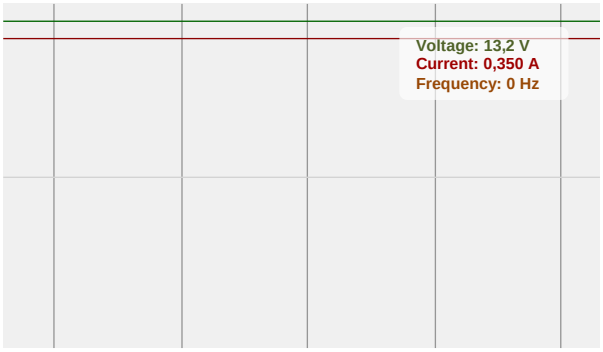
Date and time:
15.03.2019 14:27:22

Description:
HEIDI.D8°
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

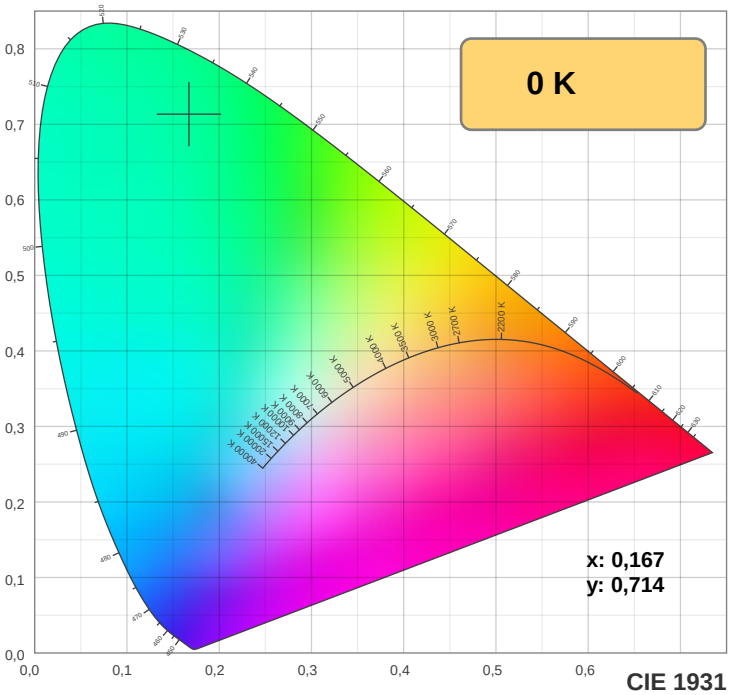
Spectra

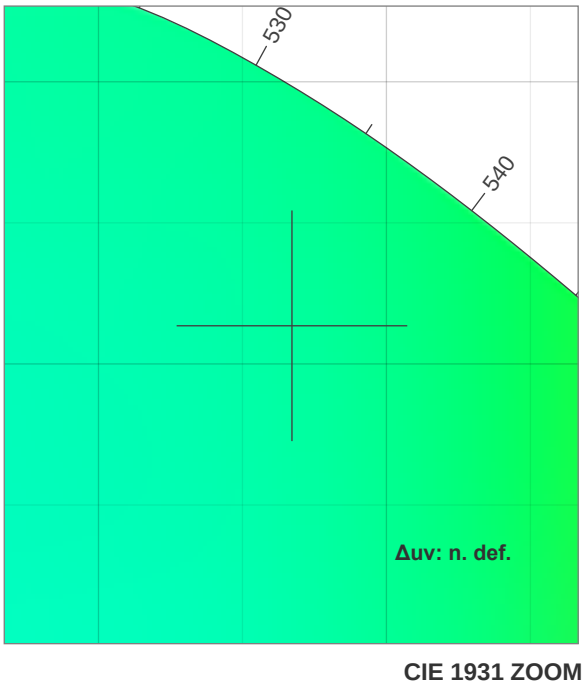


Power

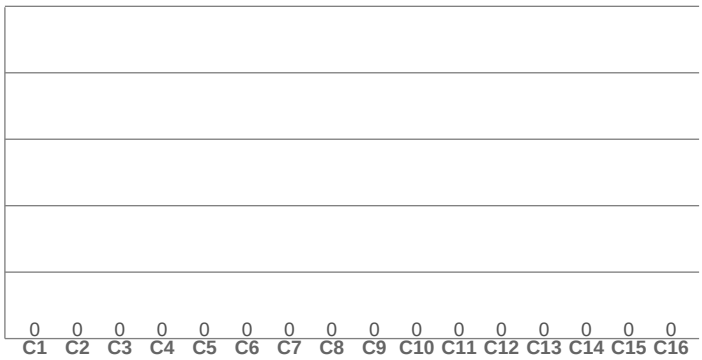


Color details

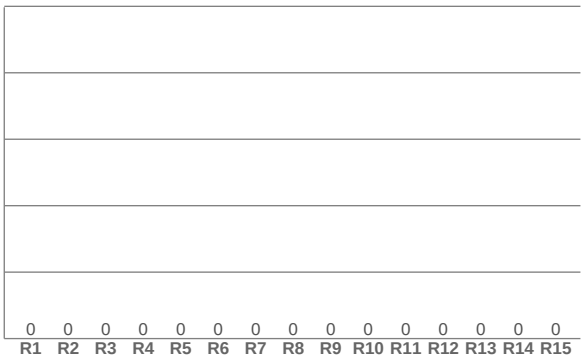




TM30: 0,0



CRI: 0,0 (R1-R8)



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

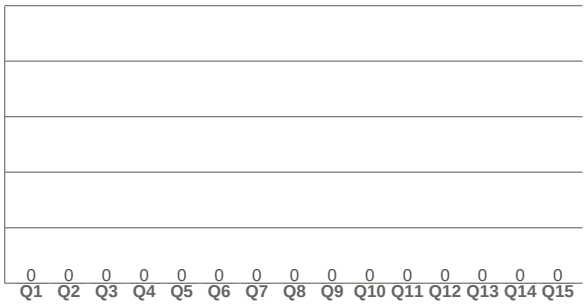
TM30 C values, 16 binned values out of total of 99 C values

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

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 diviation 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	0,167	0,714	0,060	0,381	n. def.

TM30 details

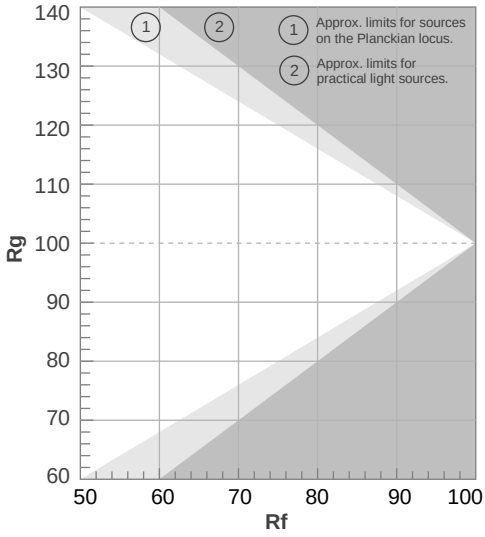
Rf 0,0

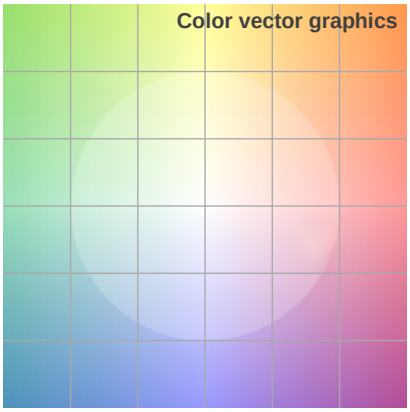
Fidelity index Rf

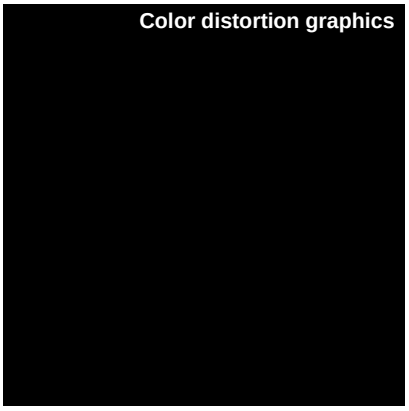
Rg 0,0

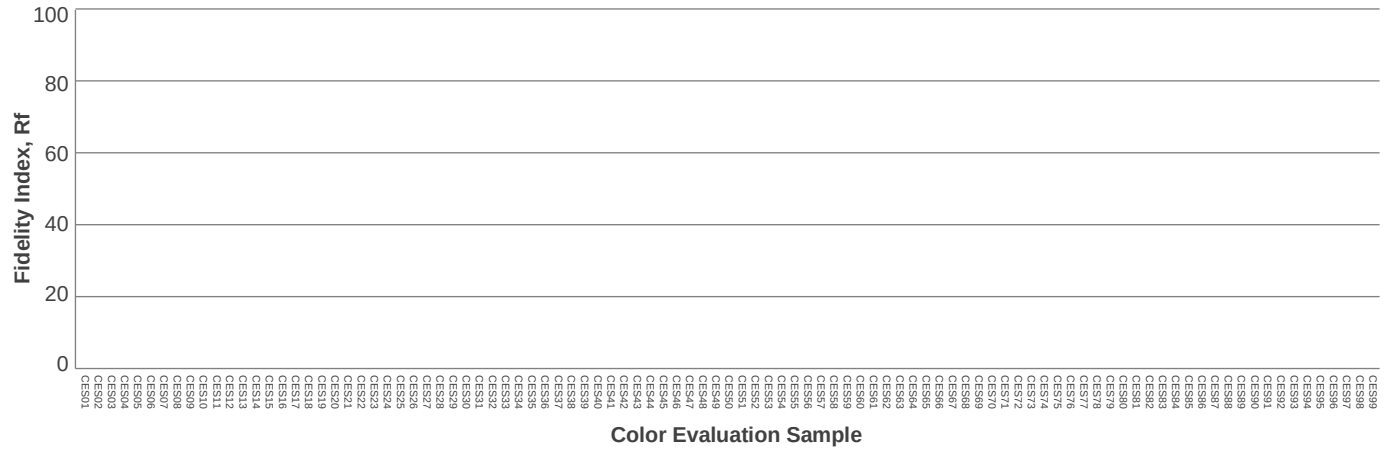
Gammut index Rg

		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%



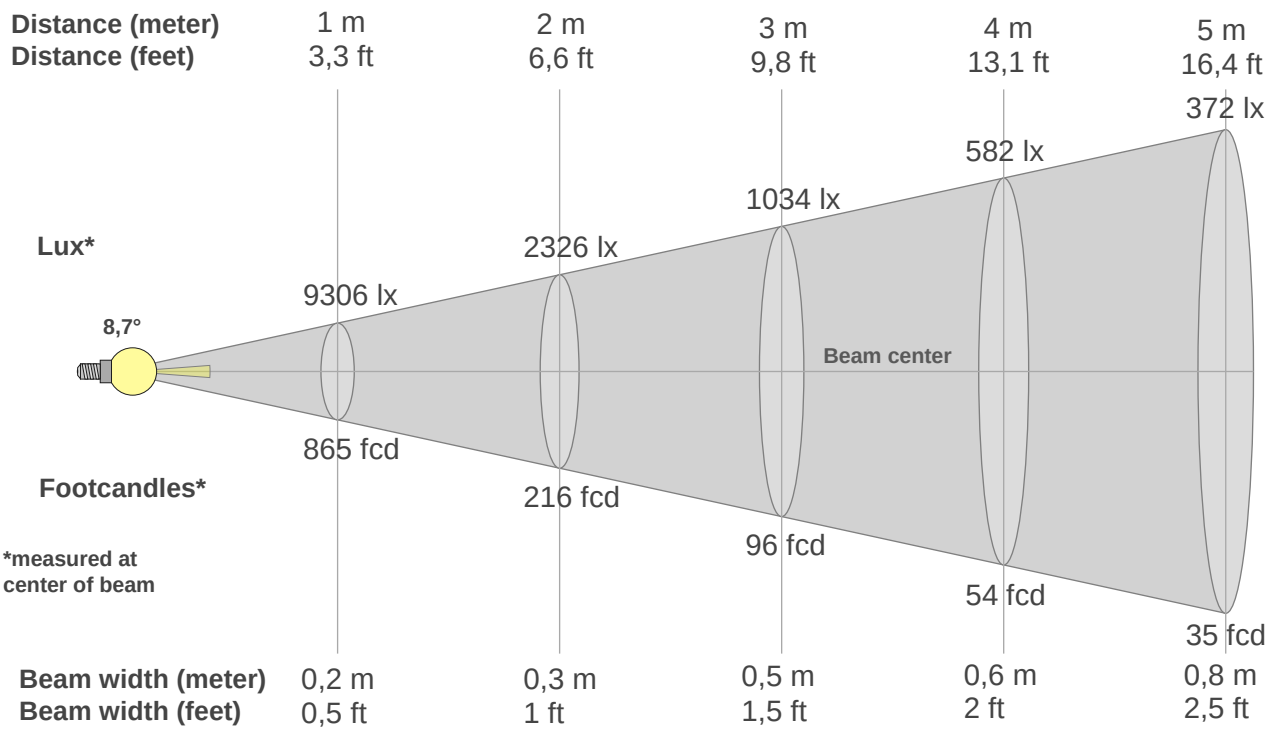






FLASHAAR

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
9306lx	2326lx	1034lx	582lx	372lx	258lx	190lx	145lx	115lx	93lx	77lx	65lx	55lx	47lx	41lx	36lx	32lx	29lx	26lx	23lx
864,5fcd	216,1fcd	96,1fcd	54fcd	34,6fcd	24fcd	17,6fcd	13,5fcd	10,7fcd	8,6fcd	7,1fcd	6fcd	5,1fcd	4,4fcd	3,8fcd	3,4fcd	3fcd	2,7fcd	2,4fcd	2,2fcd

Intensities in 0° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
9306	8981	7931	6568	5127	3759	2699	1982	1484	1120	870	692	554	441	352	285	232	191	156	129
100%	97%	85%	71%	55%	40%	29%	21%	16%	12%	9%	7%	6%	5%	4%	3%	2%	2%	2%	1%

Intensities in 90° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
9306	9034	8075	6655	5142	3765	2635	1829	1289	917	662	492	376	293	230	186	156	134	115	99
100%	97%	87%	72%	55%	40%	28%	20%	14%	10%	7%	5%	4%	3%	2%	2%	2%	1%	1%	1%

Intensities in 180° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
9306	9010	8033	6592	5092	3811	2768	1967	1420	1072	827	639	505	404	325	258	210	173	143	118
100%	97%	86%	71%	55%	41%	30%	21%	15%	12%	9%	7%	5%	4%	3%	3%	2%	2%	2%	1%

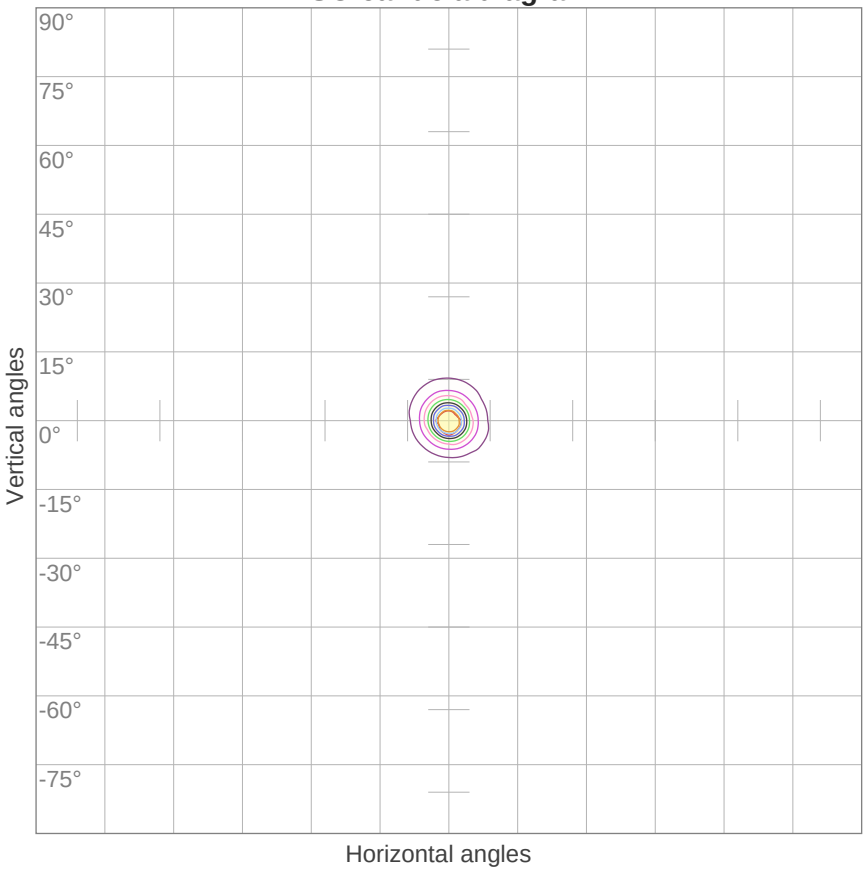
Intensities in 270° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
9306	8908	7894	6516	5111	3870	2857	2121	1625	1279	1020	832	697	588	487	402	335	281	231	192
100%	96%	85%	70%	55%	42%	31%	23%	17%	14%	11%	9%	7%	6%	5%	4%	4%	3%	2%	2%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
8,7°	19,5°	32,6°	97,8%	95,9%

ISO Diagrams

ISO candela diagram



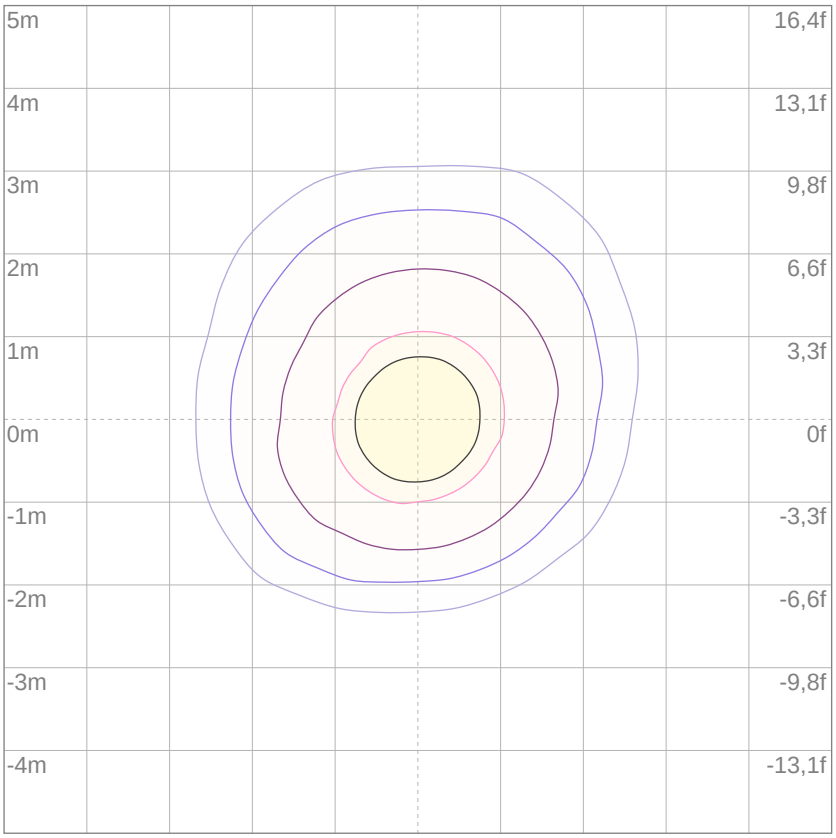
10%	931 cd
20%	1861 cd
30%	2792 cd
40%	3722 cd
50%	4653 cd
60%	5583 cd
70%	6514 cd
80%	7445 cd
90%	8375 cd

Conditions:

Number of c-planes: 16

Candela at center: 9306 cd

ISO lux diagram



Mounting height: 10 meters (33 feet)

3%	2,79 lx
5%	4,65 lx
10%	9,31 lx
30%	27,9 lx
50%	46,5 lx

Conditions:

Number of c-planes: 16

Lux at center: 93,1 lx

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

Glare Evaluation According to UGR

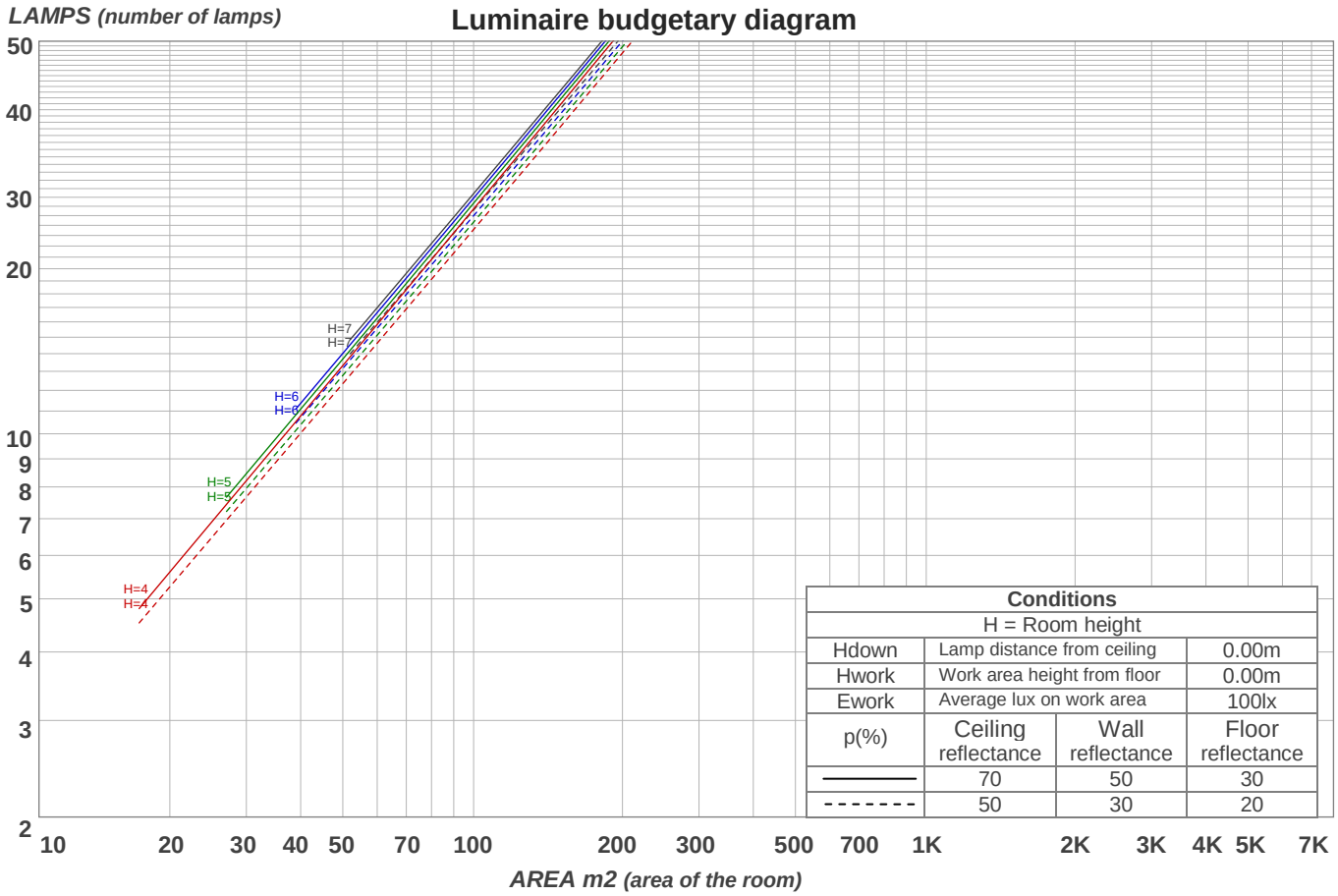
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X	Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	4,4	5,1	4,7	5,3	5,5	4,3	5,0	4,6	5,2	5,4
	3H	6,0	6,6	6,3	6,8	7,1	5,9	6,6	6,2	6,8	7,0
	4H	7,1	7,7	7,4	8,0	8,2	6,9	7,5	7,2	7,8	8,0
	6H	8,3	8,8	8,6	9,1	9,4	7,9	8,5	8,3	8,8	9,0
	8H	8,8	9,3	9,1	9,6	9,9	8,8	9,3	9,1	9,6	9,9
	12H	9,2	9,7	9,6	10,0	10,3	9,4	9,9	9,7	10,2	10,5
4H	2H	5,0	5,6	5,3	5,9	6,1	4,9	5,5	5,2	5,8	6,0
	3H	6,9	7,4	7,2	7,7	8,0	6,7	7,2	7,1	7,5	7,9
	4H	8,1	8,6	8,5	8,9	9,2	8,0	8,5	8,4	8,8	9,1
	6H	9,4	9,8	9,8	10,1	10,5	9,2	9,6	9,6	10,0	10,3
	8H	10,0	10,4	10,5	10,7	11,1	10,2	10,5	10,6	10,9	11,3
	12H	10,6	10,9	11,0	11,3	11,7	10,9	11,2	11,4	11,6	12,0
8H	4H	8,6	8,9	9,0	9,3	9,7	8,6	8,9	9,0	9,3	9,7
	6H	10,0	10,3	10,5	10,7	11,1	10,0	10,3	10,5	10,7	11,1
	8H	10,9	11,1	11,4	11,6	12,0	11,2	11,4	11,7	11,9	12,3
	12H	11,6	11,7	12,1	12,2	12,7	12,1	12,2	12,6	12,7	13,2
12H	4H	8,7	9,0	9,1	9,4	9,8	8,7	9,0	9,1	9,4	9,8
	6H	10,2	10,4	10,7	10,9	11,4	10,2	10,4	10,7	10,9	11,3
	8H	11,2	11,4	11,7	11,9	12,4	11,5	11,7	12,0	12,1	12,6
Variation of the observer position for the luminaire distance S											
S = 1,0H		+0,1 / -0,2					+0,2 / -0,3				
S = 1,5H		+0,3 / -0,3					+0,2 / -0,3				
S = 2,0H		+0,4 / -0,5					+0,4 / -0,6				
Standard table		BK09					BK09				
Correction summand		-5,9					-5,9				
Corrected glare indices referring to 423 lm total luminous flux											

UGR data could be incorrect as lamp output is not symmetrical. Goto Edit->Photometric->Corrections and select Correct asymmetry.

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	115	113	111	110	113	111	109	108	107	106	105	103	102	102	100	99	99	97
2	112	108	106	103	110	107	104	102	104	102	100	101	99	98	98	97	96	94
3	109	105	101	99	107	103	100	98	101	98	96	99	97	95	97	95	94	92
4	106	101	98	95	105	100	97	95	99	96	94	97	94	93	95	93	92	91
5	104	99	95	93	103	98	95	92	96	94	91	95	93	91	94	92	90	89
6	102	96	93	90	101	96	92	90	94	92	89	93	91	89	92	90	88	87
7	100	94	91	88	99	94	91	88	93	90	88	92	89	87	91	89	87	86
8	98	93	89	87	97	92	89	87	91	88	86	90	88	86	90	87	86	85
9	96	91	88	85	96	91	87	85	90	87	85	89	87	85	89	86	85	84
10	95	90	86	84	94	89	86	84	89	86	84	88	85	84	87	85	84	83

Luminaire budgetary diagram



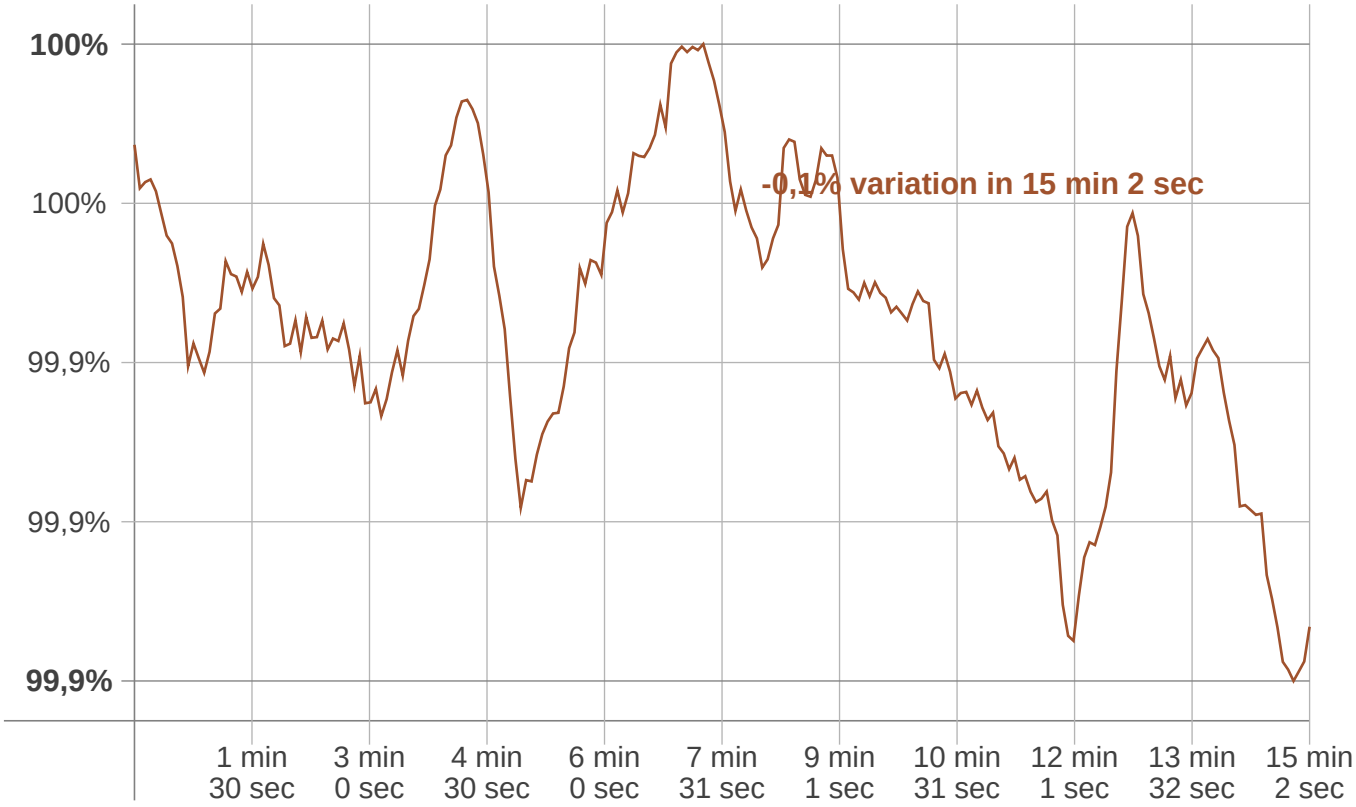
Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
{LUM0-10}	92,4 lm	26,9 lm	11,0 lm	7,00 lm	5,13 lm	3,85 lm	2,98 lm	1,78 lm

90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0,596 lm	0,000 lm	0,000 lm	0,000 lm	0,000 lm	0,000 lm	0,000 lm	0,000 lm	0,000 lm

Stabilization

Warmup curve



Warmup result

Warmup time:	**15 min 2 sec**
Warmup variation	**-0,1%**

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

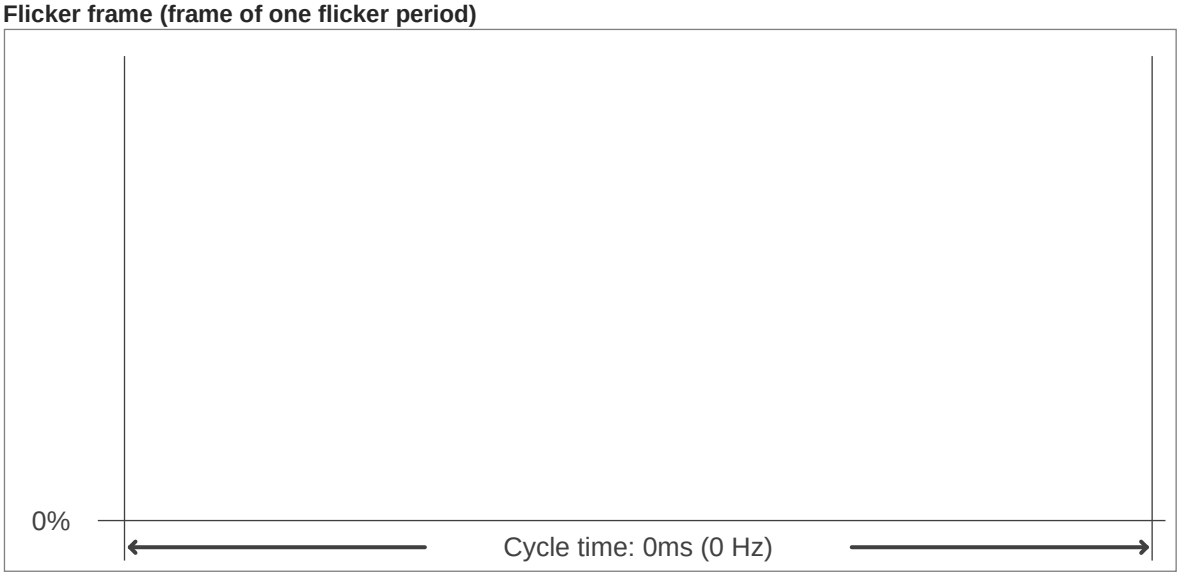
Output change

Output start	Output change	Output end
423 lm	lm	423 lm

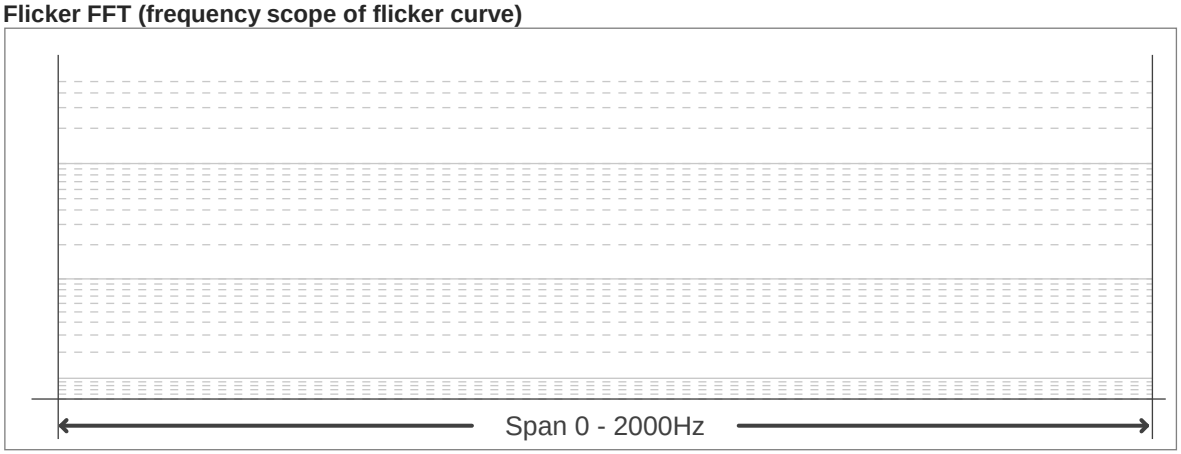
Flicker

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**