Light efficiency:

90 Lumen/Watt

Light quality:

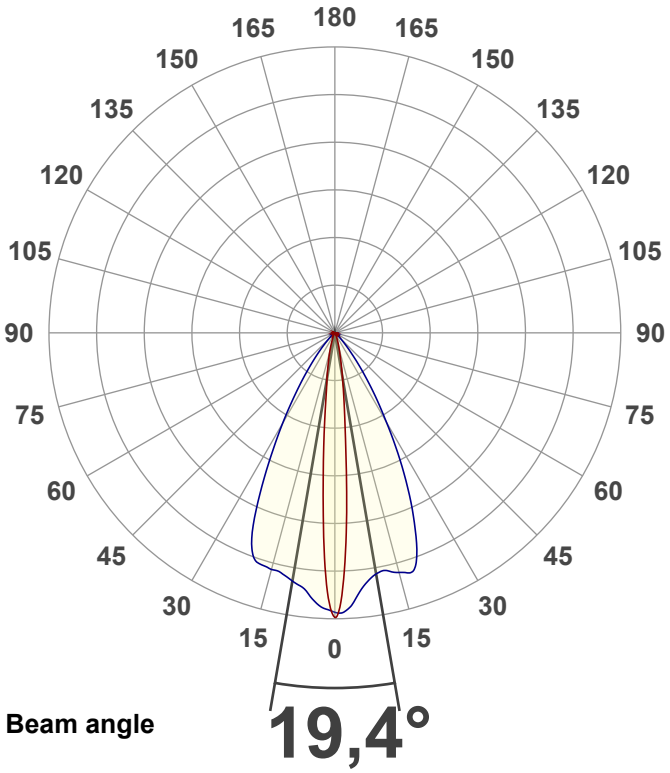
CRI: 0,0

Color temperature:

0 K

Output: 285 lm
Peak: 1271 cd

Power: 3,2 W
PF: 1,0



Beam angle

19,4°

CIE 1931
x: 0,690
y: 0,305

Product name:
F L-S O - 2-4 C -1 0 0-R-LATT-O90

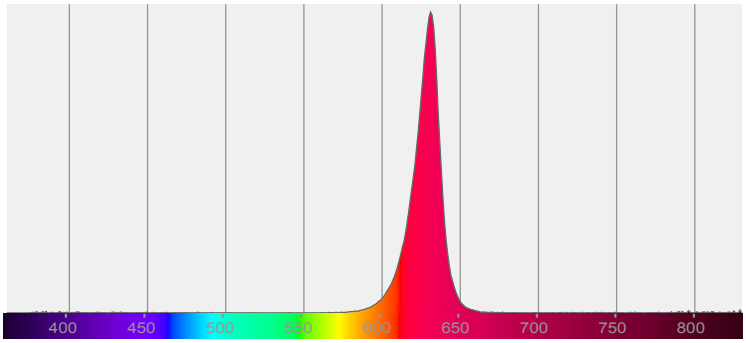
Item number:
F L / S O - 2 / 4 C / 1 0 0 / R/LATT/O90

Date and time:
08.04.2019 08:53:45

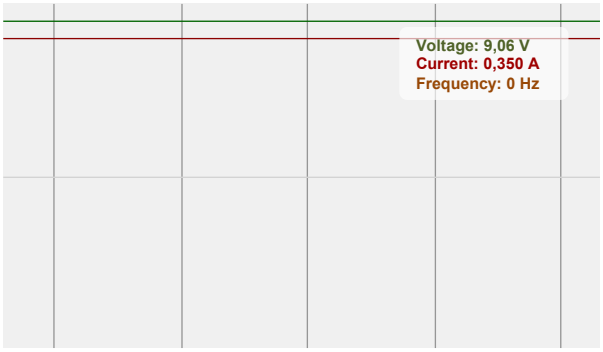
Description:

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

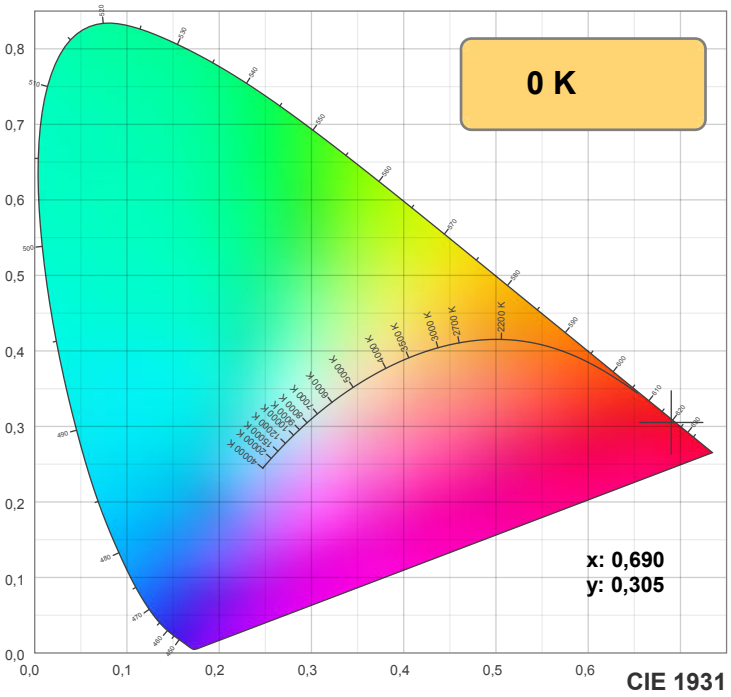
Spectra

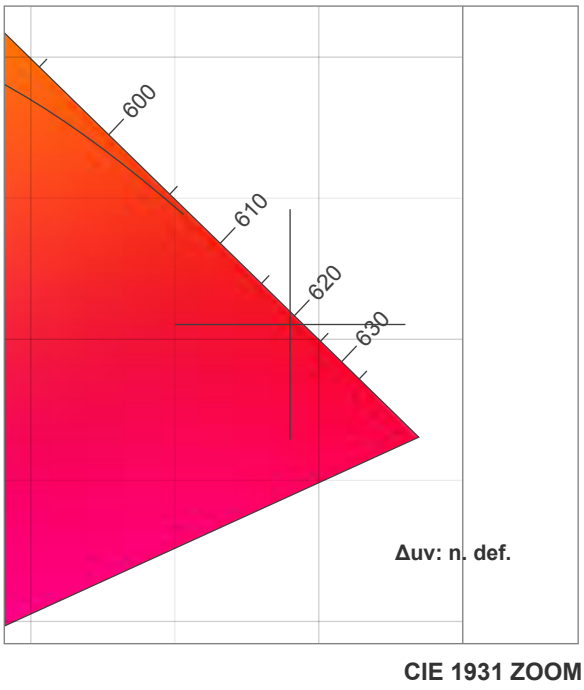


Power

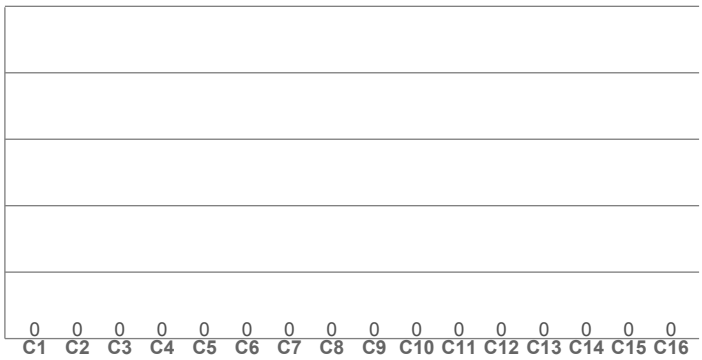


Color details

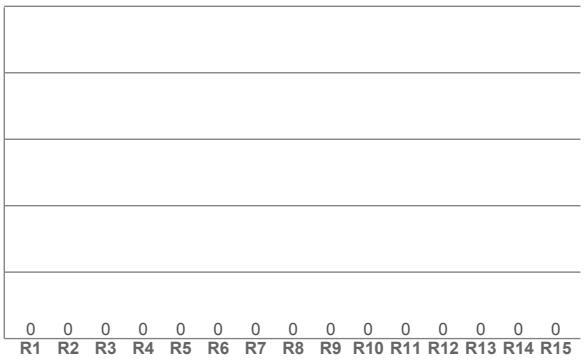




TM30: 0,0



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

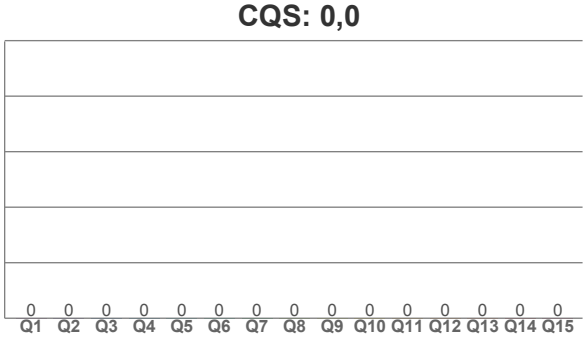
TM30 C values, 16 binned values out of total of 99 C values

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	0,690	0,305	0,522	0,347	n. def.

TM30 details

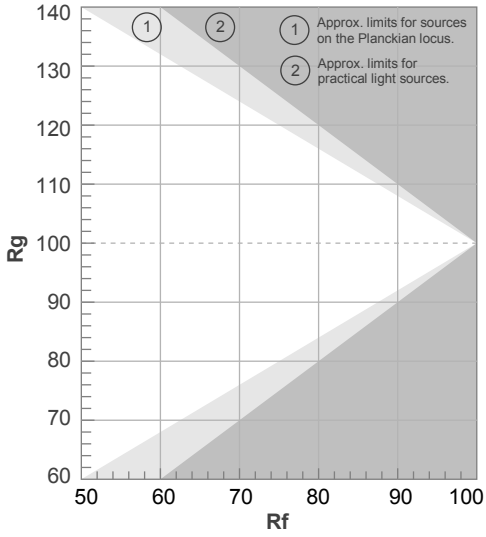
Rf 0,0

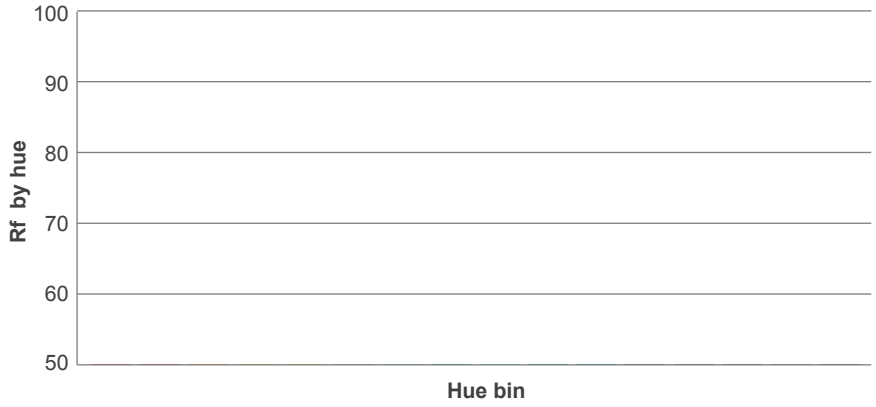
Fidelity index Rf

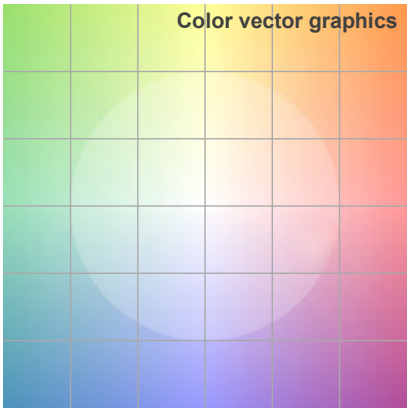
Rg 0,0

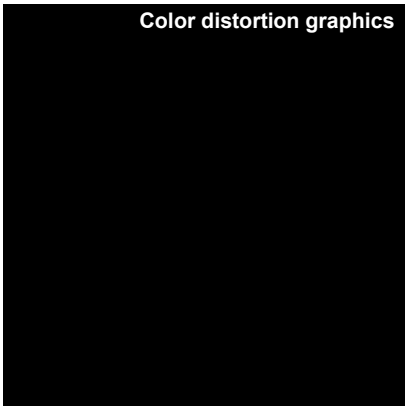
Gammut index Rg

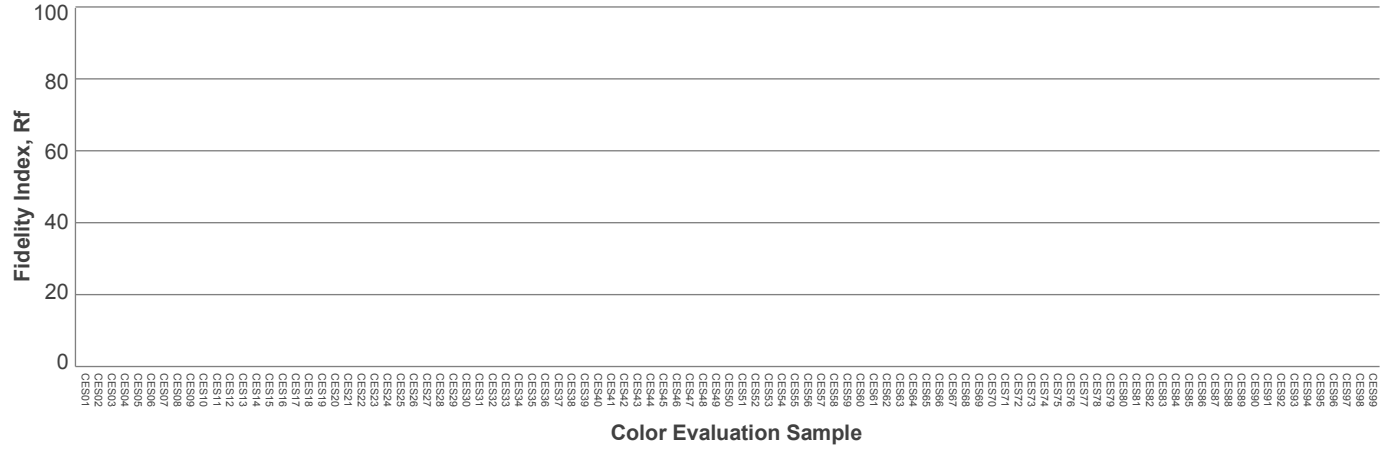
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	0	0%	0%
2	0	0%	0%
3	0	0%	0%
4	0	0%	0%
5	0	0%	0%
6	0	0%	0%
7	0	0%	0%
8	0	0%	0%
9	0	0%	0%
10	0	0%	0%
11	0	0%	0%
12	0	0%	0%
13	0	0%	0%
14	0	0%	0%
15	0	0%	0%
16	0	0%	0%





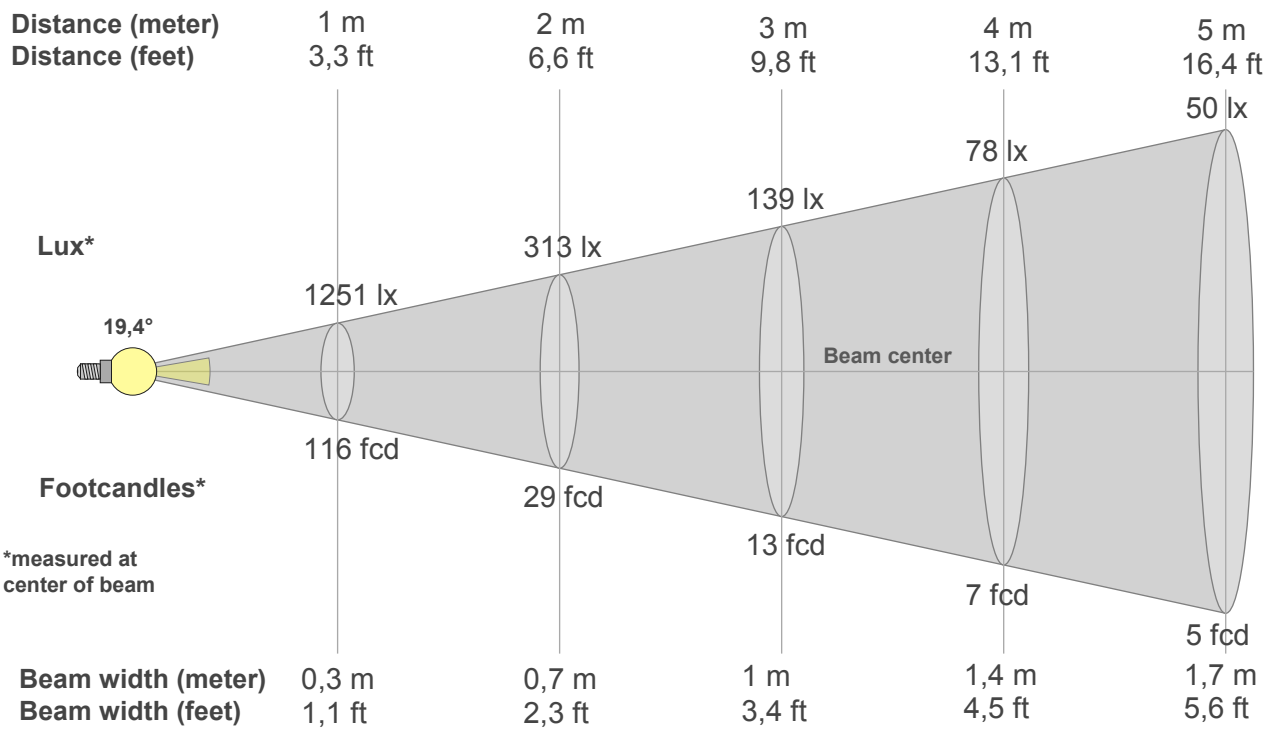






FLASHAAR

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
1251lx	313lx	139lx	78lx	50lx	35lx	26lx	20lx	15lx	13lx	10lx	9lx	7lx	6lx	6lx	5lx	4lx	4lx	3lx	3lx
116,3fc	29,1fcd	12,9fcd	7,3fcd	4,7fcd	3,2fcd	2,4fcd	1,8fcd	1,4fcd	1,2fcd	1fcd	0,8fcd	0,7fcd	0,6fcd	0,5fcd	0,5fcd	0,4fcd	0,4fcd	0,3fcd	0,3fcd

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°
1251	1094	752	445	284	189	128	88	63	43	31	20	16	14	11	10	9	8	7	7
100%	87%	60%	36%	23%	15%	10%	7%	5%	3%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%

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°
1251	1235	1196	1141	1104	1083	1078	1094	1105	1112	1059	955	835	706	579	457	358	272	201	142
100%	99%	96%	91%	88%	87%	86%	87%	88%	89%	85%	76%	67%	56%	46%	37%	29%	22%	16%	11%

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°
1251	1095	747	460	280	198	144	105	75	51	34	24	17	14	12	10	9	9	8	8
100%	88%	60%	37%	22%	16%	11%	8%	6%	4%	3%	2%	1%	1%	1%	1%	1%	1%	1%	1%

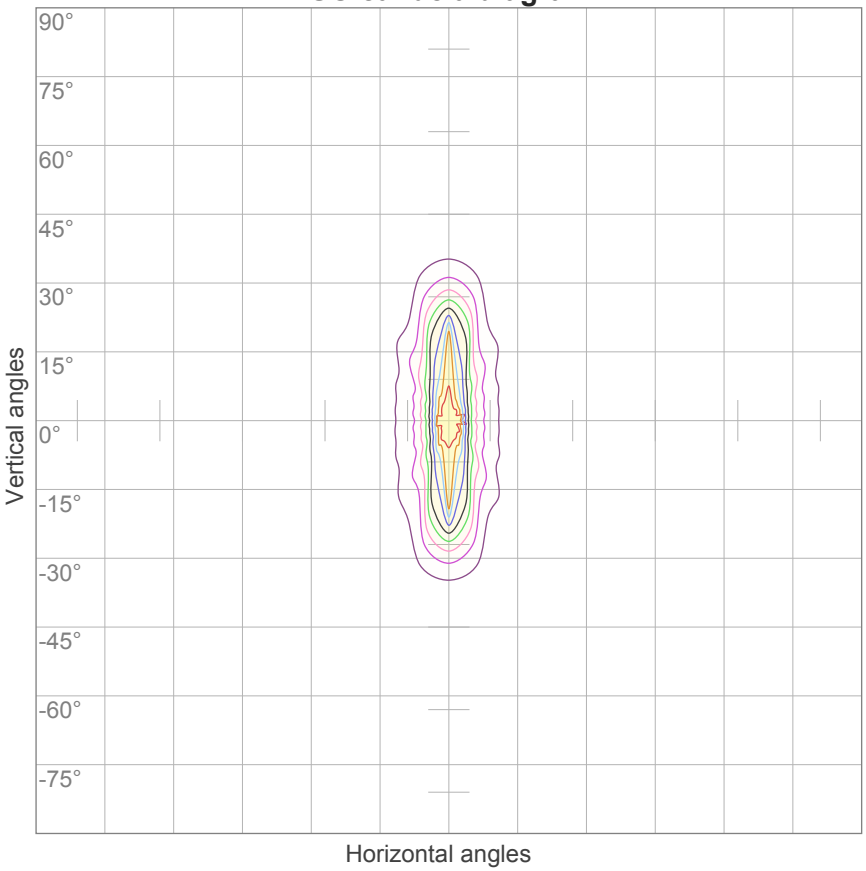
Intensities in 270° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
1251	1224	1199	1158	1131	1113	1096	1085	1082	1077	1055	983	857	713	578	463	361	277	207	151
100%	98%	96%	93%	90%	89%	88%	87%	86%	86%	84%	79%	68%	57%	46%	37%	29%	22%	17%	12%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
19,4°	40,5°	59,2°	95,4%	91,7%

ISO Diagrams

ISO candela diagram



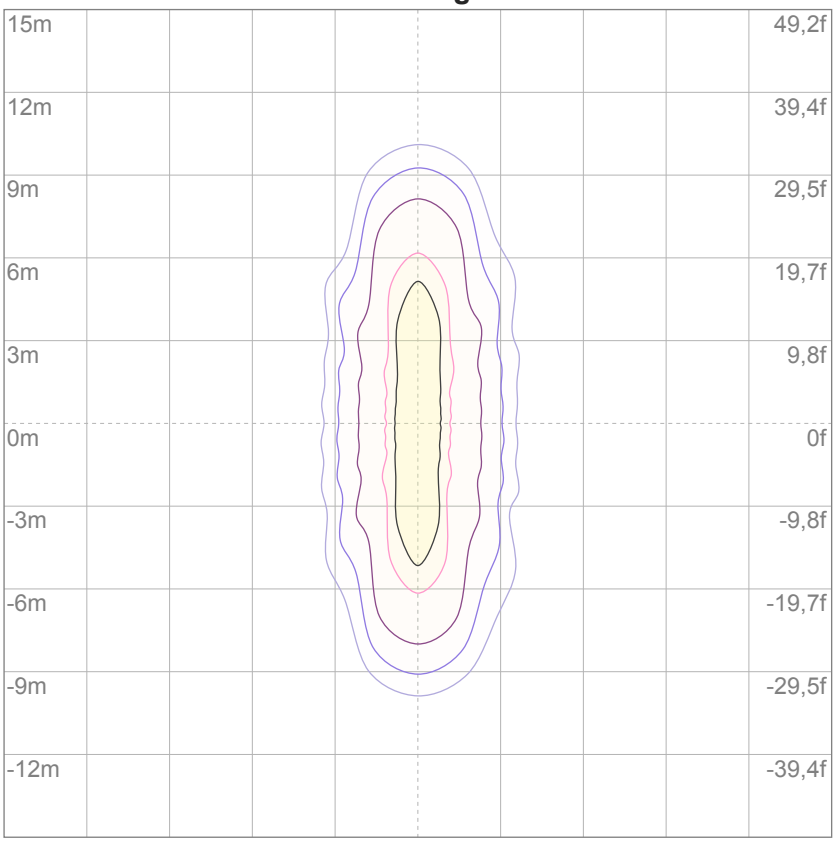
10%	125 cd
20%	250 cd
30%	375 cd
40%	501 cd
50%	626 cd
60%	751 cd
70%	876 cd
80%	1001 cd
90%	1126 cd

Conditions:

Number of c-planes: 16

Candela at center: 1251 cd

ISO lux diagram



3%	0,375 lx
5%	0,626 lx
10%	1,25 lx
30%	3,75 lx
50%	6,26 lx

Conditions:

Number of c-planes: 16

Lux at center: 12,5 lx

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

UGR

Glare Evaluation According to UGR

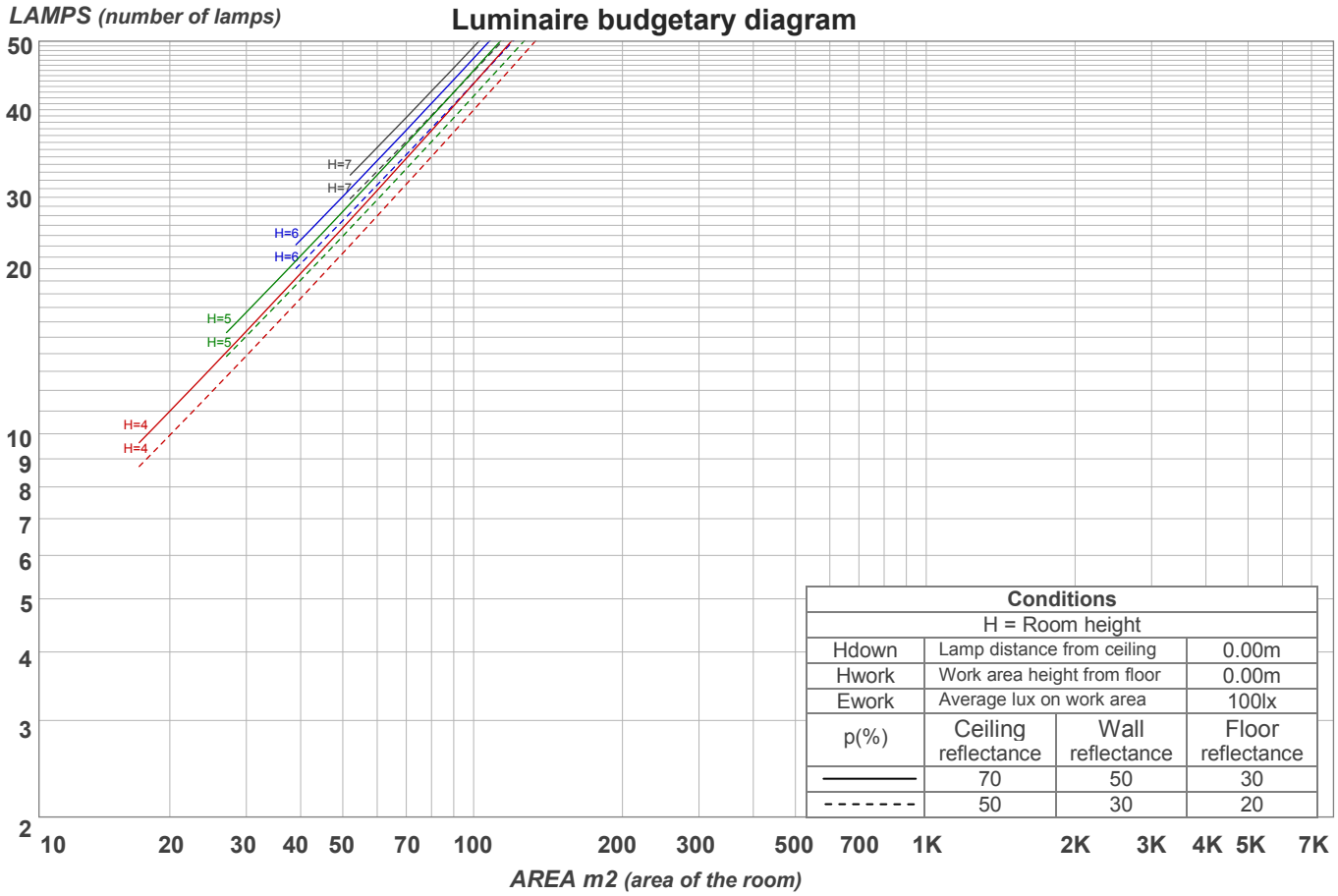
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X	Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	6,1	6,8	6,3	7,0	7,2	14,6	15,4	14,9	15,6	15,8
	3H	8,1	8,7	8,3	9,0	9,2	15,6	16,3	15,9	16,5	16,7
	4H	8,9	9,6	9,3	9,8	10,1	15,8	16,5	16,1	16,7	17,0
	6H	9,9	10,5	10,2	10,8	11,1	16,0	16,6	16,3	16,8	17,1
	8H	10,4	11,0	10,8	11,3	11,6	16,1	16,6	16,4	16,9	17,2
	12H	11,1	11,6	11,4	11,9	12,2	16,2	16,7	16,5	17,0	17,3
4H	2H	7,4	8,1	7,7	8,3	8,6	14,6	15,2	14,9	15,5	15,8
	3H	9,5	10,0	9,8	10,3	10,6	15,7	16,2	16,0	16,5	16,8
	4H	10,4	10,9	10,8	11,2	11,6	16,0	16,5	16,4	16,8	17,2
	6H	11,4	11,9	11,9	12,2	12,6	16,3	16,7	16,7	17,1	17,4
	8H	12,0	12,4	12,5	12,8	13,2	16,4	16,8	16,9	17,2	17,6
	12H	12,7	13,0	13,2	13,4	13,9	16,7	17,0	17,1	17,4	17,8
8H	4H	11,0	11,3	11,4	11,7	12,1	16,1	16,4	16,5	16,8	17,2
	6H	12,2	12,5	12,7	12,9	13,4	16,4	16,7	16,9	17,1	17,6
	8H	12,9	13,1	13,3	13,6	14,0	16,7	16,9	17,1	17,4	17,8
	12H	13,7	13,9	14,2	14,4	14,9	17,0	17,2	17,5	17,7	18,2
12H	4H	11,0	11,4	11,5	11,8	12,2	16,0	16,4	16,5	16,8	17,2
	6H	12,4	12,6	12,9	13,1	13,5	16,5	16,7	16,9	17,1	17,6
	8H	13,1	13,3	13,6	13,8	14,3	16,8	17,0	17,2	17,4	17,9
Variation of the observer position for the luminaire distance S											
S = 1,0H		+0,1 / -0,1					+3,3 / -1,2				
S = 1,5H		+0,2 / -0,3					+5,7 / -1,8				
S = 2,0H		+0,5 / -0,8					+7,6 / -1,9				
Standard table		BK09					BK03				
Correction summand		-3,7					-1,2				
Corrected glare indices referring to 285 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	113	111	108	106	111	108	106	104	104	103	101	101	99	98	97	96	95	93
2	108	103	99	96	106	102	98	95	98	95	93	95	93	91	93	91	89	87
3	103	97	92	89	101	96	91	88	93	89	86	91	88	85	88	86	84	82
4	99	92	87	83	97	91	86	82	88	84	81	87	83	80	85	82	79	78
5	95	87	82	78	93	86	81	77	84	80	77	83	79	76	81	78	75	74
6	91	83	77	73	89	82	77	73	81	76	73	79	75	72	78	74	72	70
7	87	79	74	70	86	78	73	70	77	73	69	76	72	69	75	71	68	67
8	84	76	70	67	83	75	70	66	74	69	66	73	69	66	72	68	66	64
9	81	72	67	64	80	72	67	64	71	67	63	70	66	63	69	66	63	62
10	78	70	64	61	77	69	64	61	68	64	61	68	64	61	67	63	61	59

Luminaire budgetary diagram



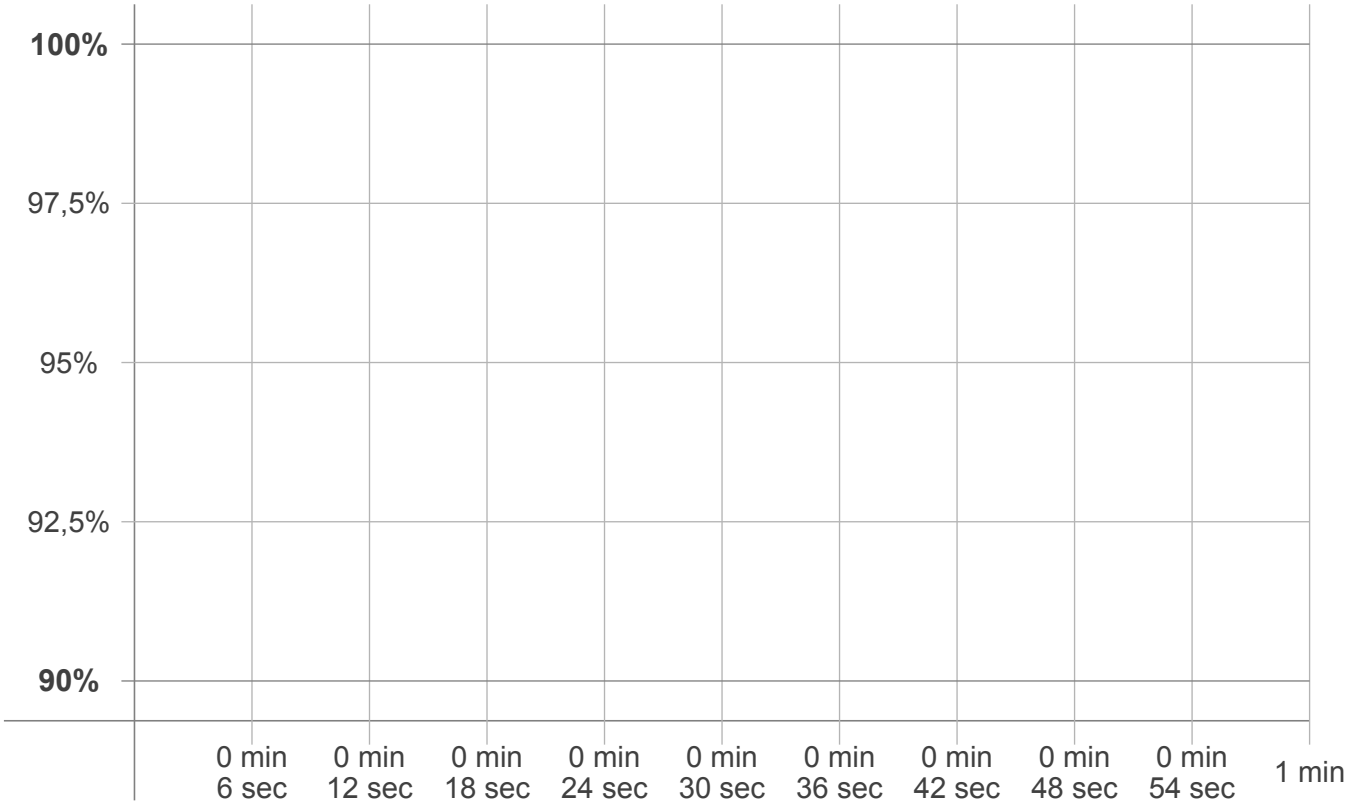
Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
{LUM0-10}	89,4 lm	67,2 lm	29,7 lm	10,5 lm	6,51 lm	6,73 lm	4,04 lm	2,16 lm

90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0,225 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:	**n/a**
Warmup variation	**n. def.%**

Warmup conditions

Stable period:	**n/a**
Stable change max:	**n/a%**
Minimum time:	**n/a**

Color temperature change

CCT start	CCT change	CCT end
n. def. K	n. def. K	0 K

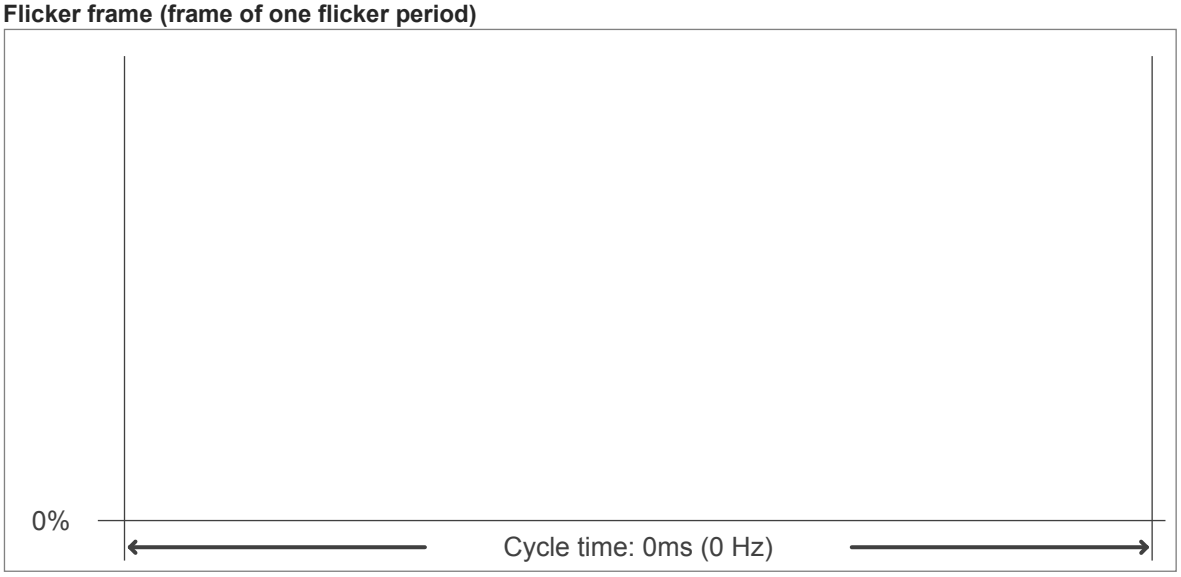
Output change

Output start	Output change	Output end
n. def. lm	n. def. lm	285 lm

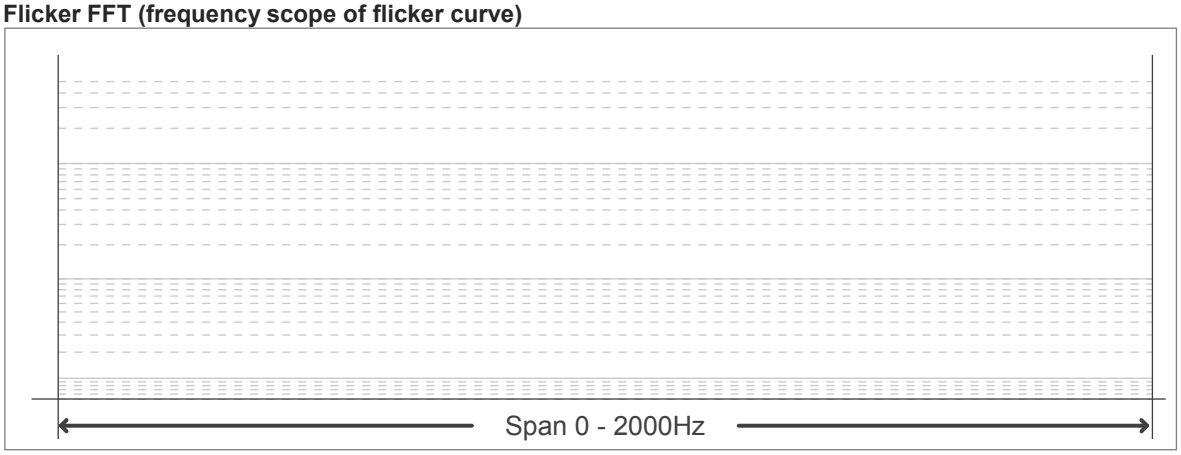
Flicker

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**