Light efficiency:

27 Lumen/Watt

Light quality:

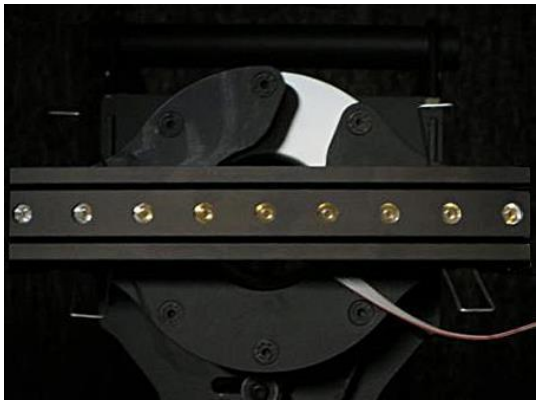
CRI: 91,7

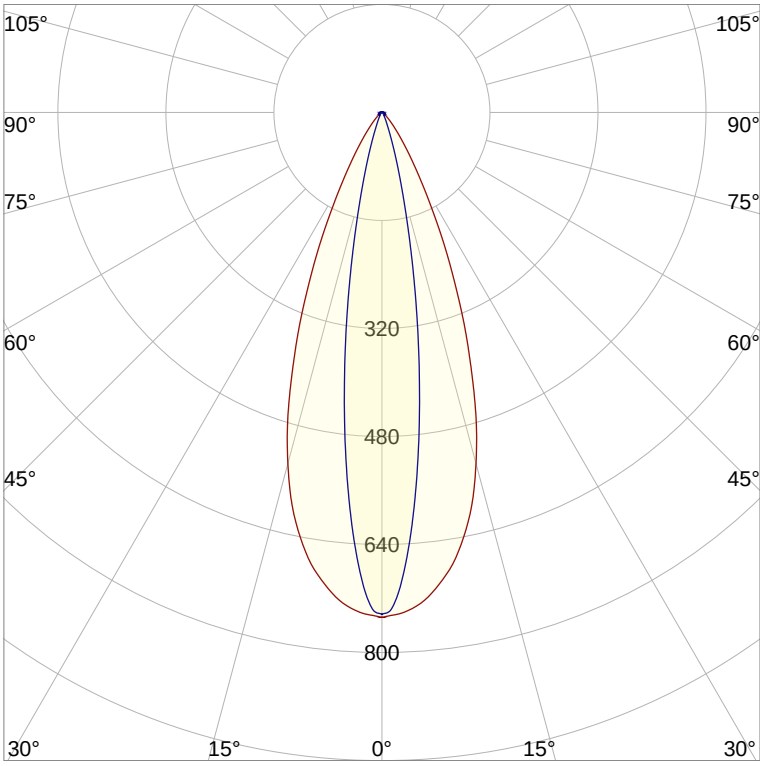
Color temperature:

2680 K

Output: 191 lm
Peak: 752 cd

Power: 7,0 W
PF: 0,82





CIE 1931
x: 0,462
y: 0,412

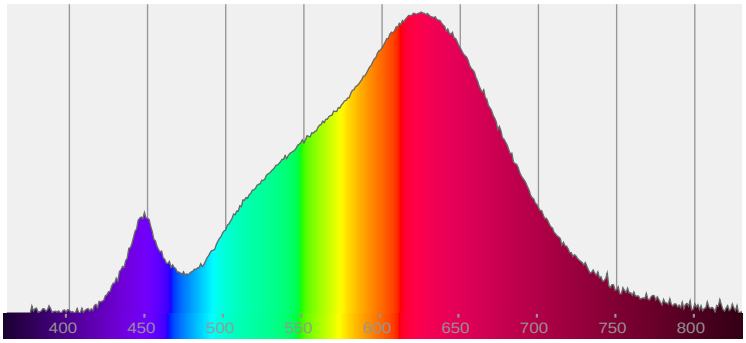
Product name:
FLNP-F4C-C-258-W-927-10774-ALA

Item number:
FLNP-F4C-C-258-W-927-10774-ALA

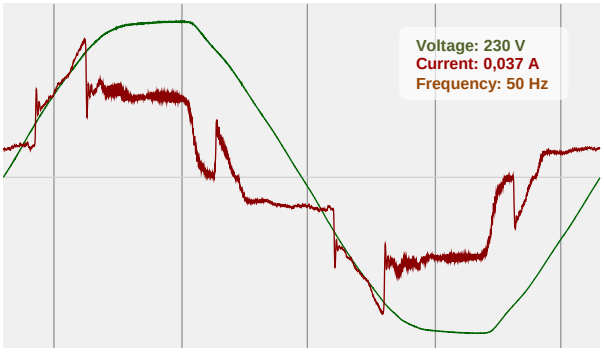
Date and time:
13.02.2019 09:30:25

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

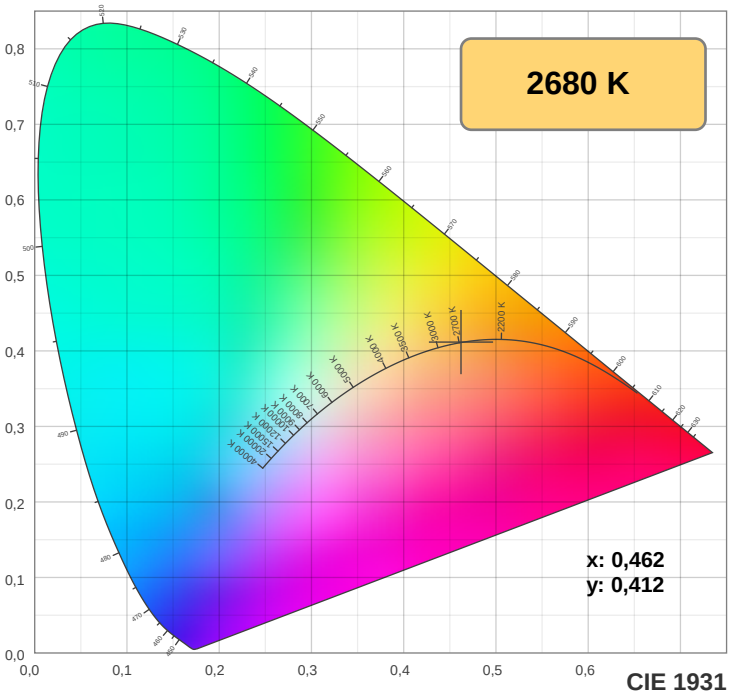
Spectra



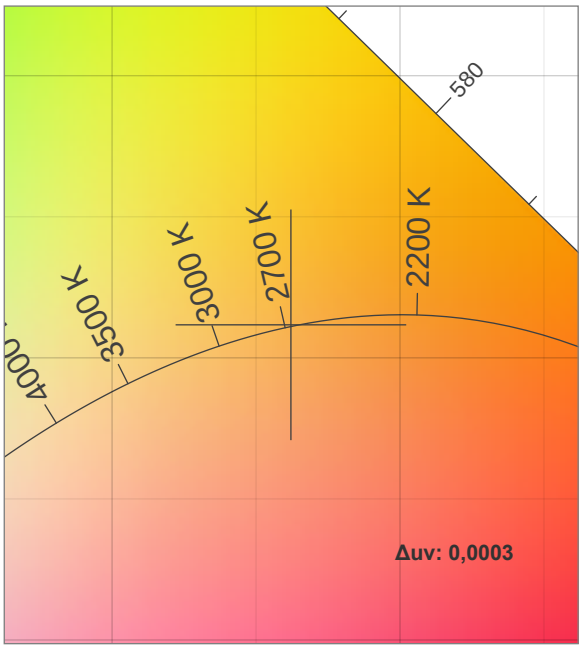
Power



Color details

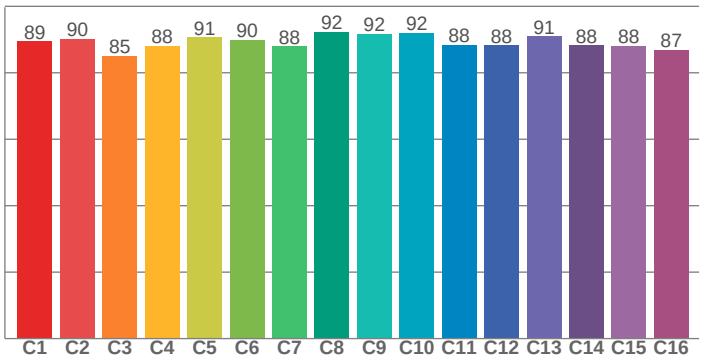


CIE 1931

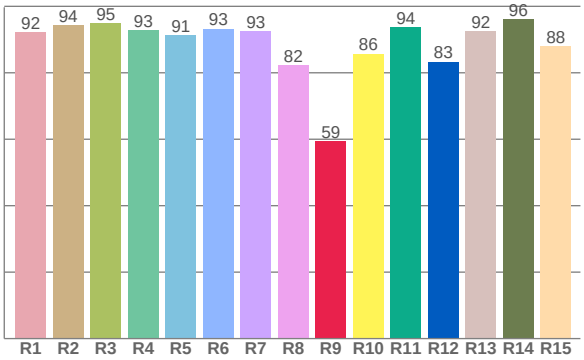


CIE 1931 ZOOM

TM30: 89,3



CRI: 91,7 (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
92,1	94,3	95,0	92,8	91,3	93,2	92,5	82,2	59,3	85,7	93,7	83,3	92,5	96,2	88,0

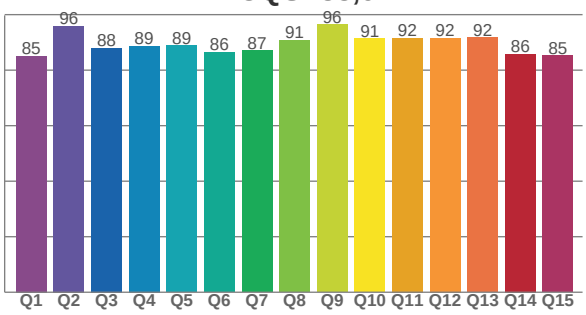
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
89,4	90,3	85,1	88,2	90,7	89,9	88,0	92,2	91,8	92,1	88,5	88,3	91,0	88,2	88,1	86,9

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
85,1	95,9	88,0	88,8	88,9	86,4	87,0	90,7	96,4	91,4	91,6	91,6	91,7	85,8	85,3

CQS: 88,9



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
2680 K	91,7	59,3	89,3	101,6	88,9	0,462	0,412	0,263	0,352	0,0003

TM30 details

Rf 89,3

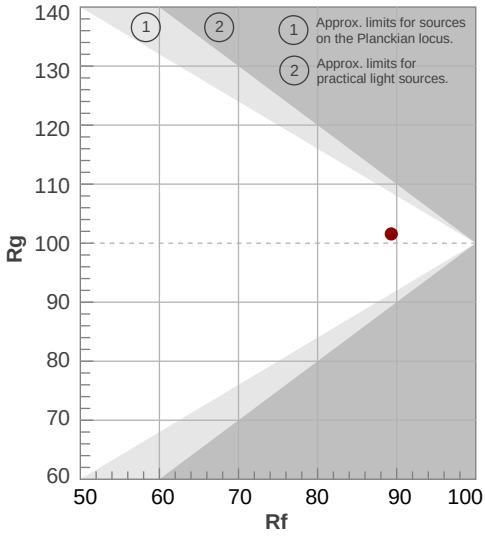
Fidelity index Rf

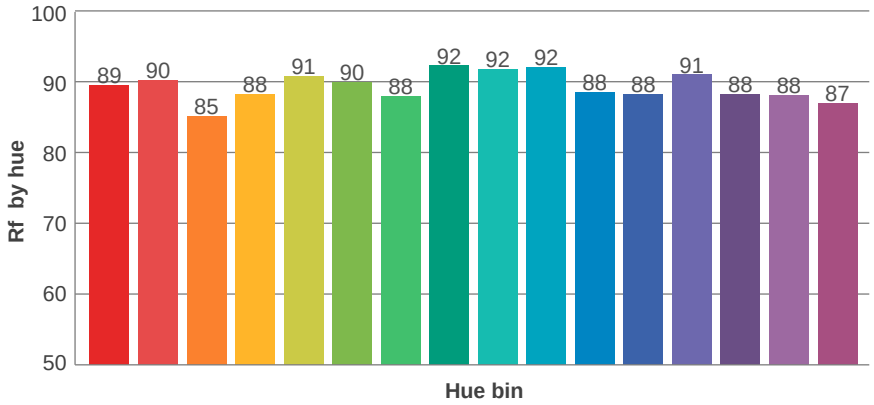
Rg 101,6

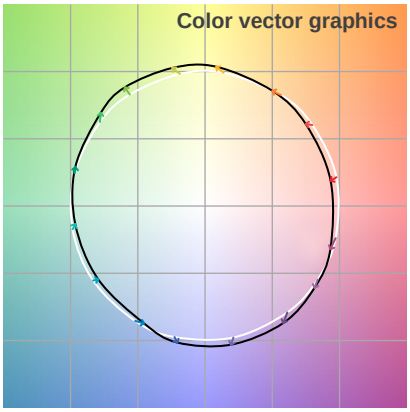
Gammut index Rg

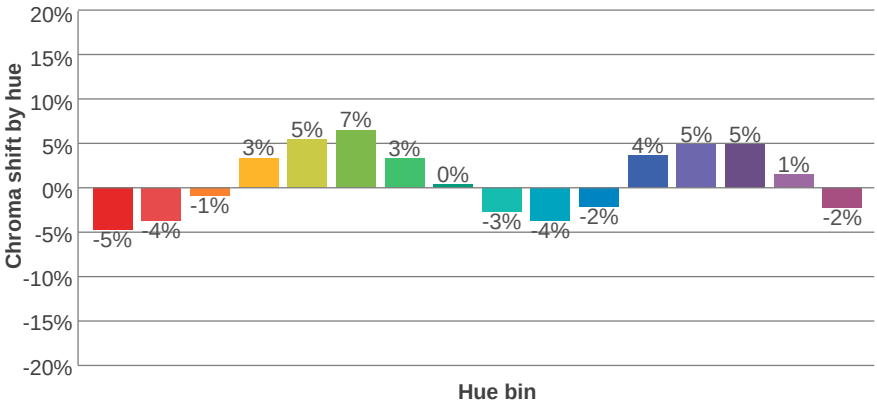
{TM30_BIN_VALUES_START}

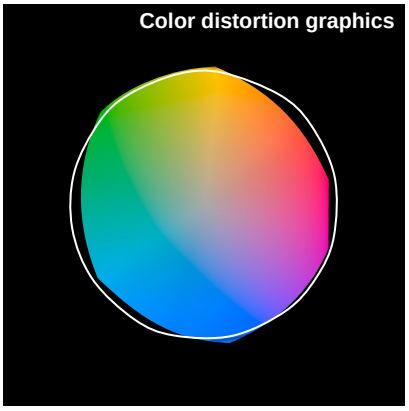
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1		%	%
2		%	%
3		%	%
4		%	%
5		%	%
6		%	%
7		%	%
8		%	%
9		%	%
10		%	%
11		%	%
12		%	%
13		%	%
14		%	%
15		%	%
16		%	%

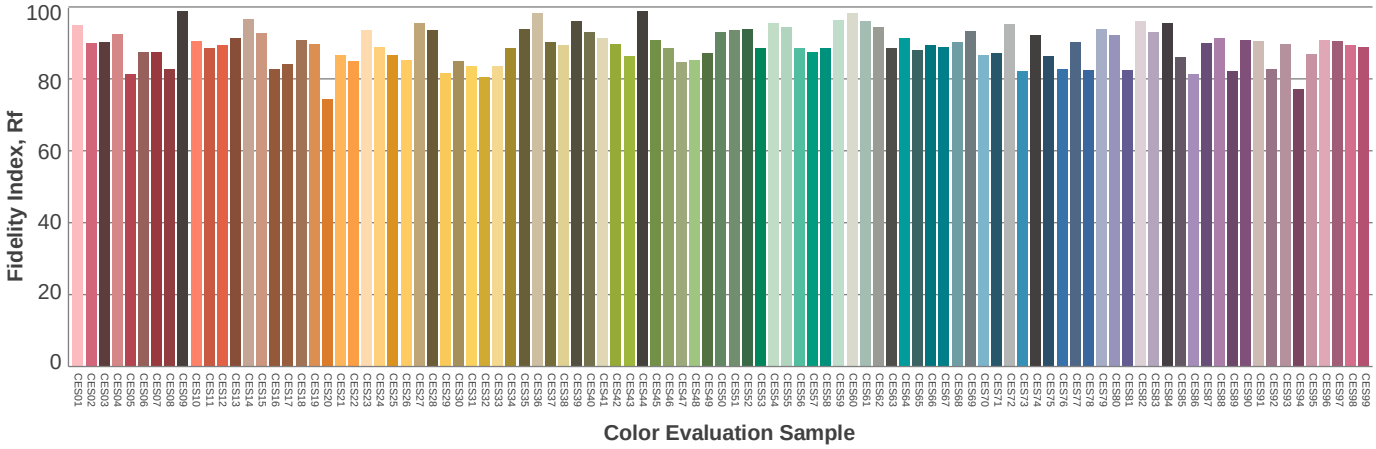






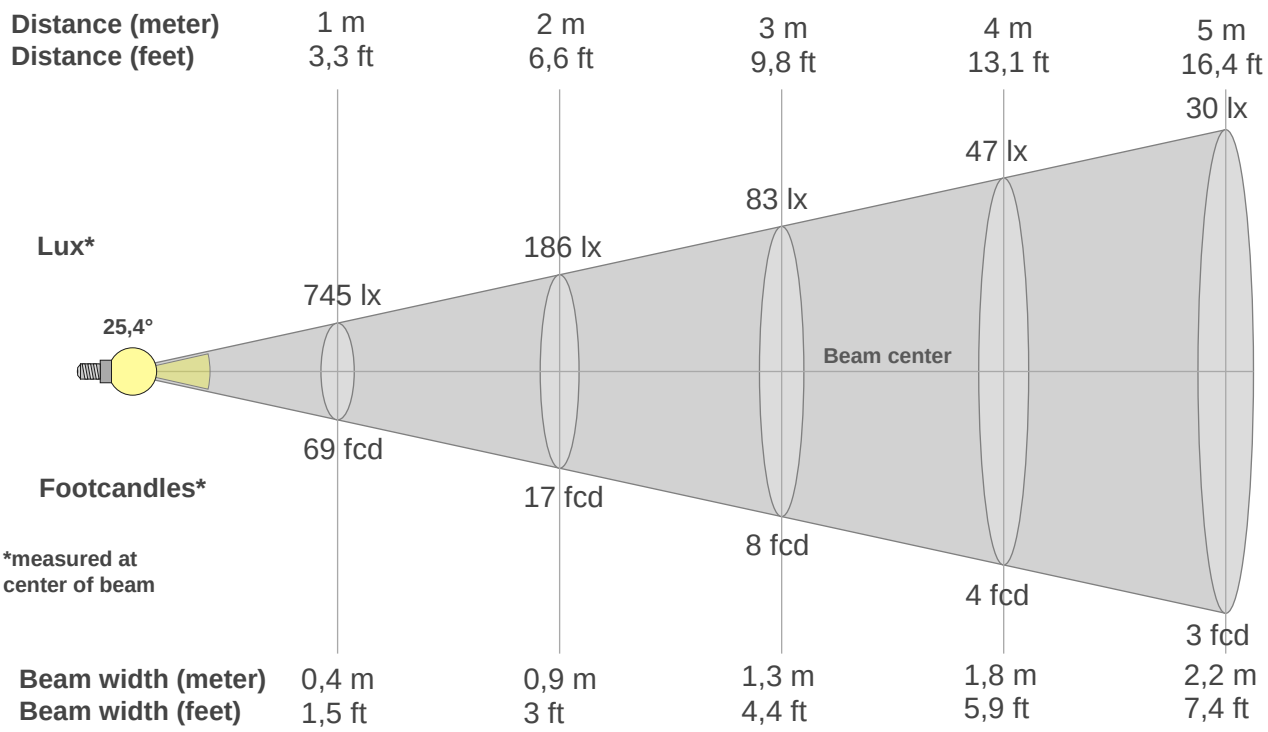






FLASHAAR

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°
745	743	733	715	690	658	617	567	509	443	375	311	250	195	148	112	85	64	48	36
100%	100%	98%	96%	93%	88%	83%	76%	68%	60%	50%	42%	34%	26%	20%	15%	11%	9%	6%	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°
745	710	621	512	398	293	203	134	87	56	36	23	17	12	9	7	6	5	4	4
100%	95%	83%	69%	54%	39%	27%	18%	12%	7%	5%	3%	2%	2%	1%	1%	1%	1%	1%	1%

Intensities in 180° c-plane

{INT_TABLE_180_START}

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

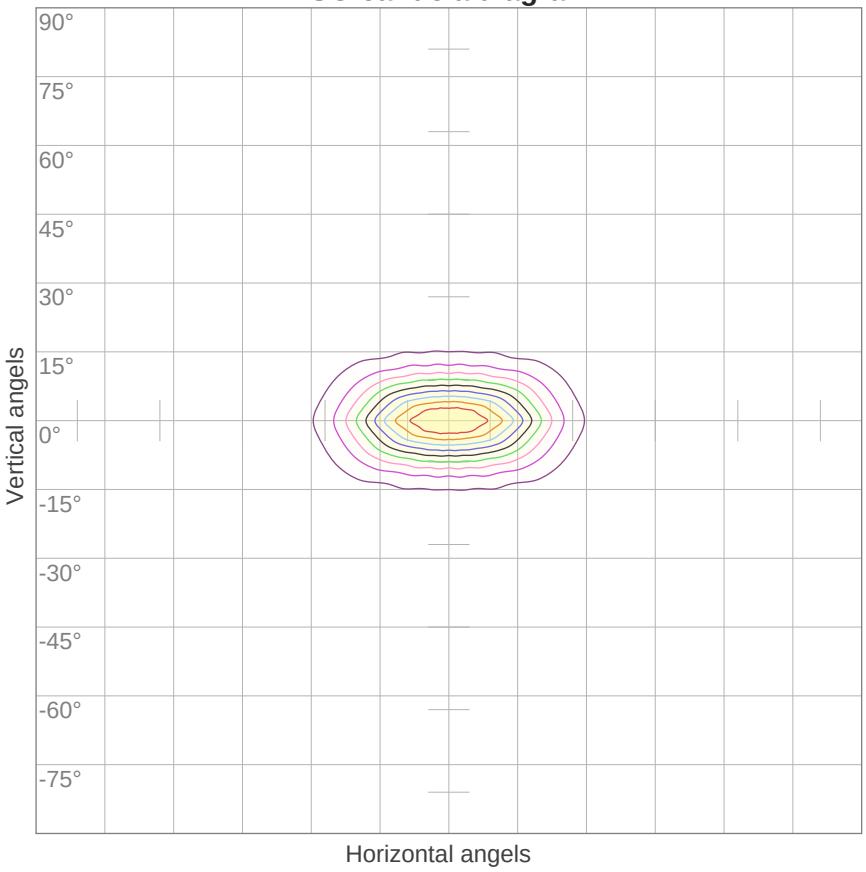
Intensities in 270° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
745	710	621	512	398	293	203	134	87	56	36	23	17	12	9	7	6	5	4	4
100%	95%	83%	69%	54%	39%	27%	18%	12%	7%	5%	3%	2%	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
25,4°	**46,6°**	**62,2°**	**97,4%**	**95,0%**

ISO Diagrams

ISO candela diagram



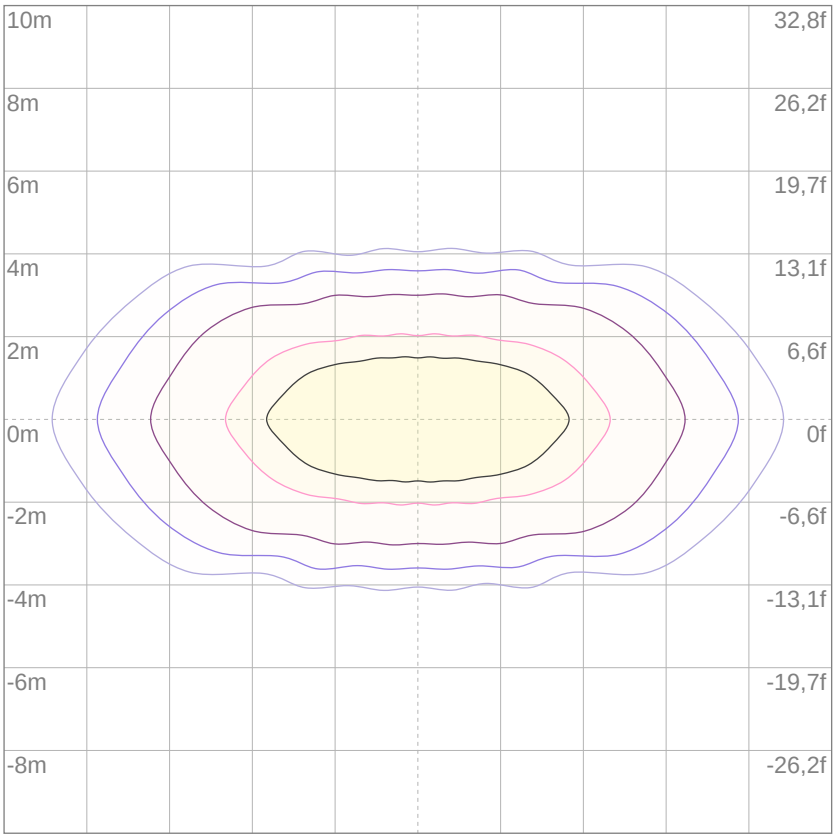
10%	74 cd
20%	149 cd
30%	223 cd
40%	298 cd
50%	372 cd
60%	447 cd
70%	521 cd
80%	596 cd
90%	670 cd

Conditions:

Number of c-planes: 16

Candela at center: 745 cd

ISO lux diagram



3%	0,223 lx
5%	0,372 lx
10%	0,745 lx
30%	2,23 lx
50%	3,72 lx

Conditions:

Number of c-planes: 16

Lux at center: 7,45 lx

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

UGR

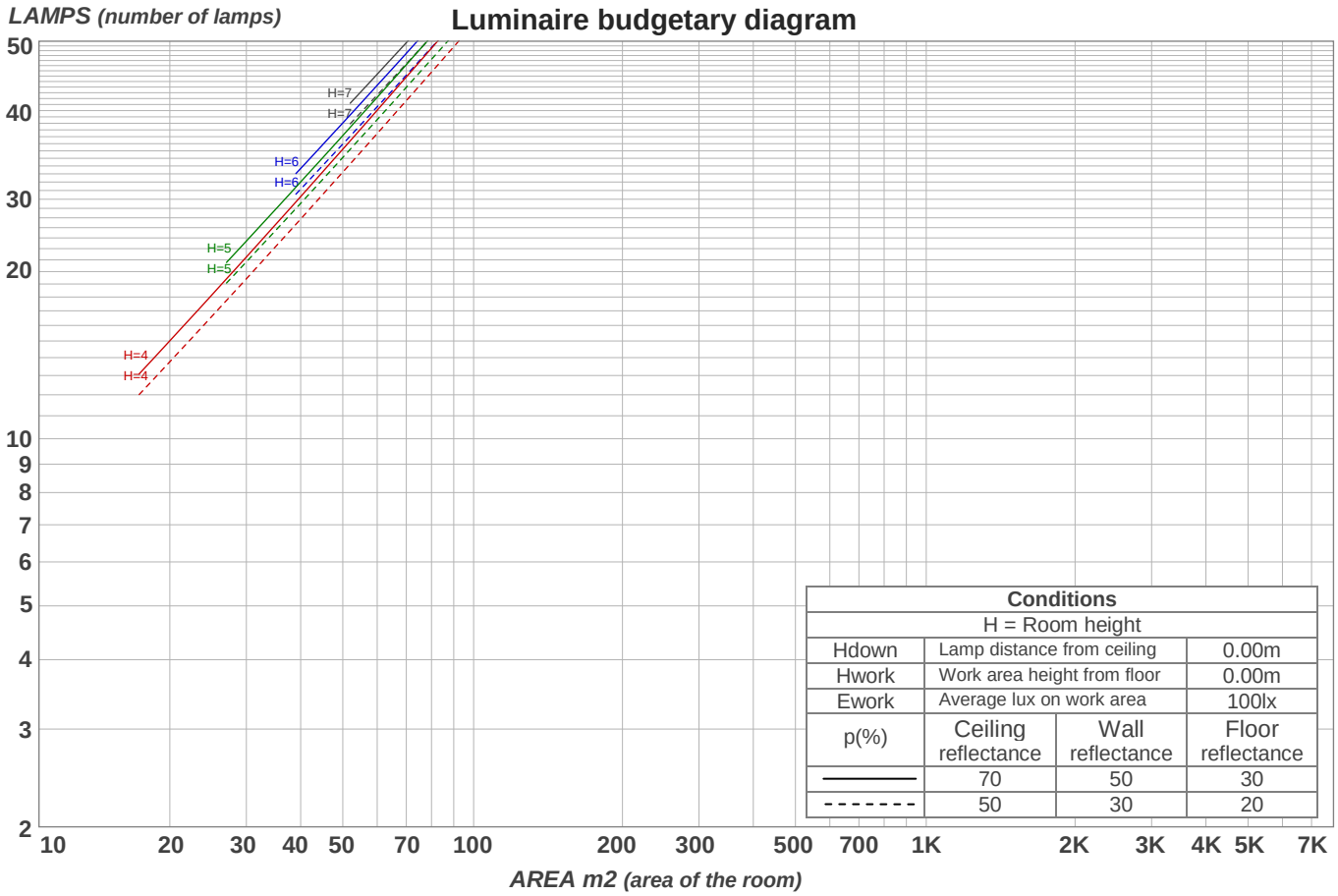
Glare Evaluation According to UGR

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	10,1	10,8	10,3	11,0	11,2	3,0	3,7	3,3	3,9	4,1
	3H	10,5	11,1	10,7	11,3	11,6	4,8	5,5	5,1	5,7	5,9
	4H	10,9	11,5	11,2	11,8	12,1	6,1	6,7	6,4	7,0	7,2
	6H	11,5	12,0	11,8	12,3	12,6	7,4	7,9	7,7	8,2	8,5
	8H	11,7	12,3	12,1	12,5	12,8	8,0	8,5	8,3	8,8	9,1
	12H	12,0	12,5	12,3	12,8	13,1	8,5	9,1	8,9	9,4	9,7
4H	2H	10,0	10,6	10,3	10,8	11,1	3,8	4,4	4,1	4,6	4,9
	3H	10,5	11,1	10,9	11,4	11,7	5,9	6,4	6,2	6,7	7,0
	4H	11,2	11,6	11,6	12,0	12,3	7,4	7,8	7,7	8,1	8,5
	6H	12,0	12,4	12,4	12,7	13,1	8,8	9,2	9,2	9,6	9,9
	8H	12,4	12,7	12,8	13,1	13,5	9,6	9,9	10,0	10,3	10,7
	12H	12,8	13,1	13,2	13,5	13,9	10,2	10,5	10,6	10,9	11,3
8H	4H	11,4	11,7	11,8	12,1	12,5	8,0	8,4	8,4	8,7	9,1
	6H	12,4	12,7	12,9	13,1	13,5	9,8	10,0	10,2	10,5	10,9
	8H	12,9	13,1	13,4	13,6	14,0	10,6	10,9	11,1	11,3	11,8
	12H	13,5	13,7	14,0	14,1	14,6	11,5	11,6	11,9	12,1	12,6
12H	4H	11,4	11,7	11,8	12,1	12,5	8,2	8,5	8,7	8,9	9,3
	6H	12,5	12,7	13,0	13,2	13,6	10,1	10,3	10,5	10,7	11,2
	8H	13,1	13,3	13,6	13,7	14,2	11,0	11,2	11,5	11,6	12,1
Variation of the observer position for the luminaire distance S											
S = 1,0H		+2,5 / -1,0					+0,1 / -0,1				
S = 1,5H		+4,6 / -1,2					+0,2 / -0,3				
S = 2,0H		+6,4 / -1,5					+0,3 / -0,6				
Standard table		---					BK10				
Correction summand		---					-6,2				
Corrected glare indices referring to 191 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	114	112	109	107	112	109	107	106	105	104	102	102	100	99	98	97	96	95
2	110	105	102	99	107	104	100	98	100	98	96	97	95	94	95	93	92	90
3	105	100	96	92	103	99	95	92	96	93	90	94	91	89	91	89	87	86
4	101	95	91	87	100	94	90	87	92	88	86	90	87	85	88	86	84	82
5	98	91	86	83	96	90	86	82	88	85	82	87	84	81	85	83	80	79
6	94	87	82	79	93	87	82	79	85	81	78	84	80	78	83	80	77	76
7	91	84	79	76	90	83	79	76	82	78	75	81	77	75	80	77	74	73
8	88	81	76	73	87	80	76	73	79	75	72	78	75	72	77	74	72	71
9	86	78	73	70	85	78	73	70	77	73	70	76	72	70	75	72	69	68
10	83	75	71	68	82	75	71	68	74	70	68	74	70	67	73	70	67	66

Luminaire budgetary diagram



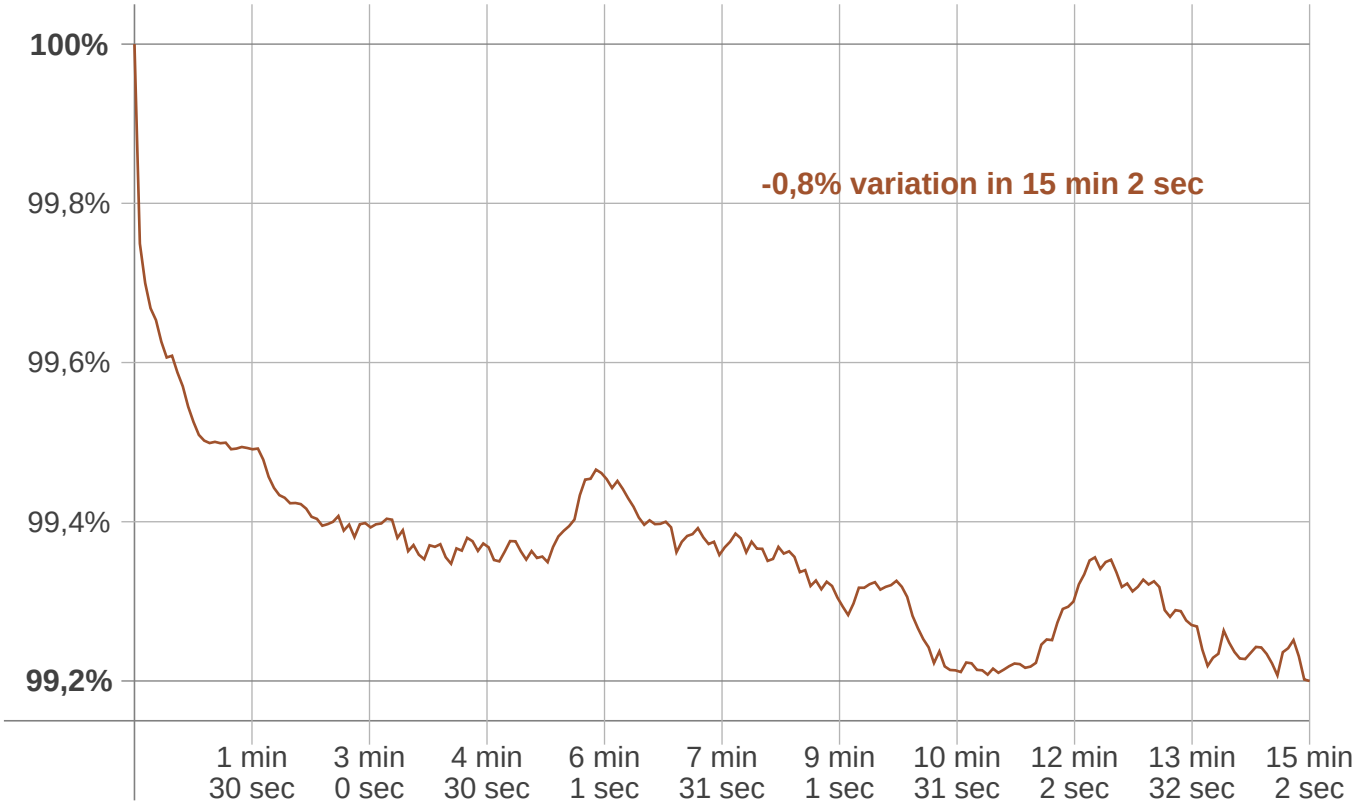
Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
54,9 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-	{LUM100-	0,119 lm	{LUM120-	{LUM130-	{LUM140-	{LUM150-	{LUM160-	{LUM170-

Stabilization

Warmup curve



Warmup result

Warmup time:	**15 min 2 sec**
Warmup variation	**-0,8%**

Warmup conditions

Stable period:	**15 min**
Stable change max:	**2,0%**
Minimum time:	**15 min**

Color temperature change

CCT start	CCT change	CCT end
2684 K	**{WU_CHNG_CCT} K**	**2680 K**

Output change

Output start	Output change	Output end
192 lm	**-1 lm**	**191 lm**