

Light efficiency:

67 Lumen/Watt

Light quality:

CRI: 92,0

Color temperature:

2606 K

Output: 86,3 lm

Peak: 152 cd

Power: 1,3 W

PF: 1,0



Product name:

PicoSpot³-927-LSWT-350mA

Item number:

FLNP/PS1C/C01/0108/927/LSWT/10996

Date and time:

28.07.2021 11:24:28

Description:

Toleranzen:

Lumen +/-4%

Candela +/-2,5%

Colour Temp +/-35 Grad K

CRI +/-0,7

Angular Resolution 1 Grad Step

Last Calibration 21.05.2021

Pruefer:

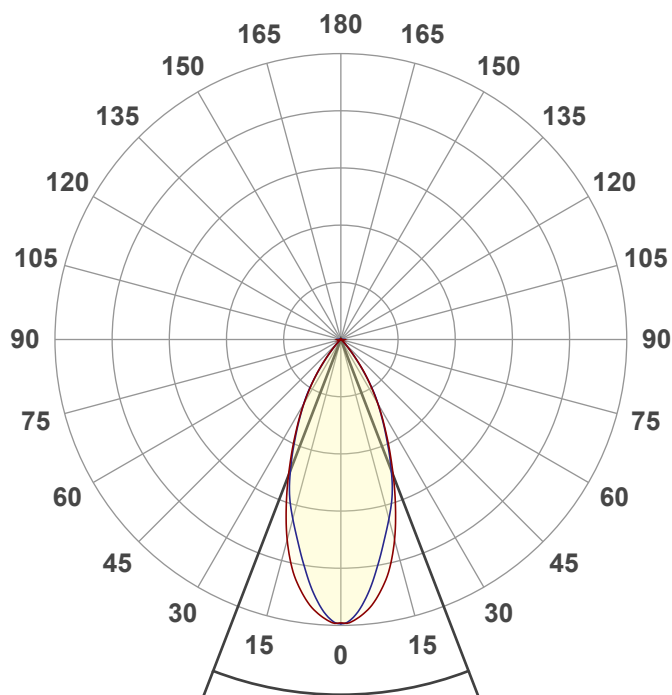
Peter Ulrich

Pruefort:

Lichtlabor

Gaustrasse13

55411 Bingen am Rhein



Beam angle

42,1°

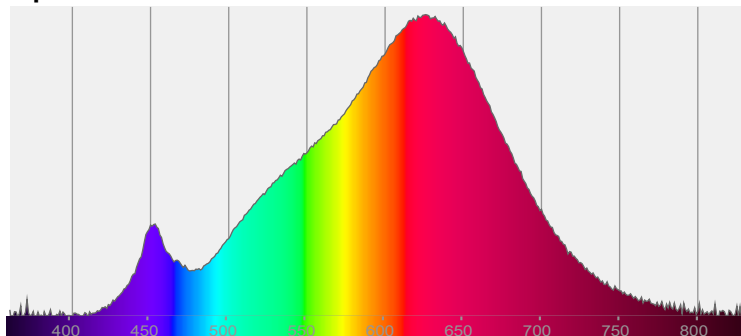


CIE 1931

x: 0,468

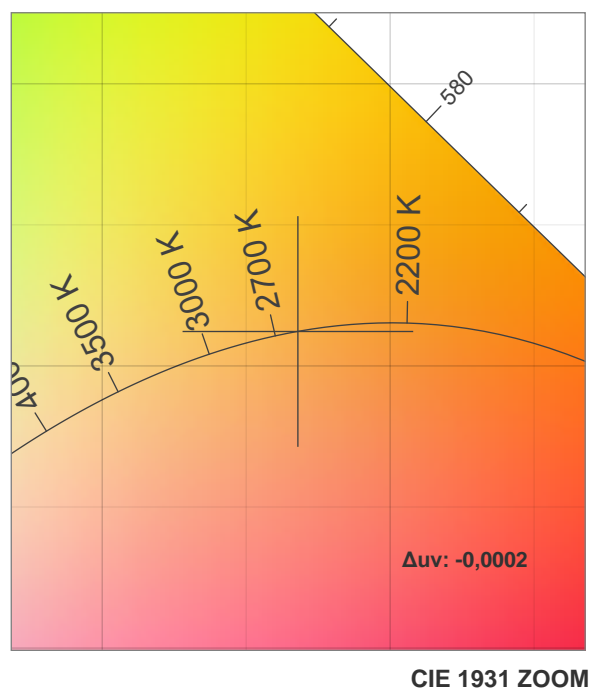
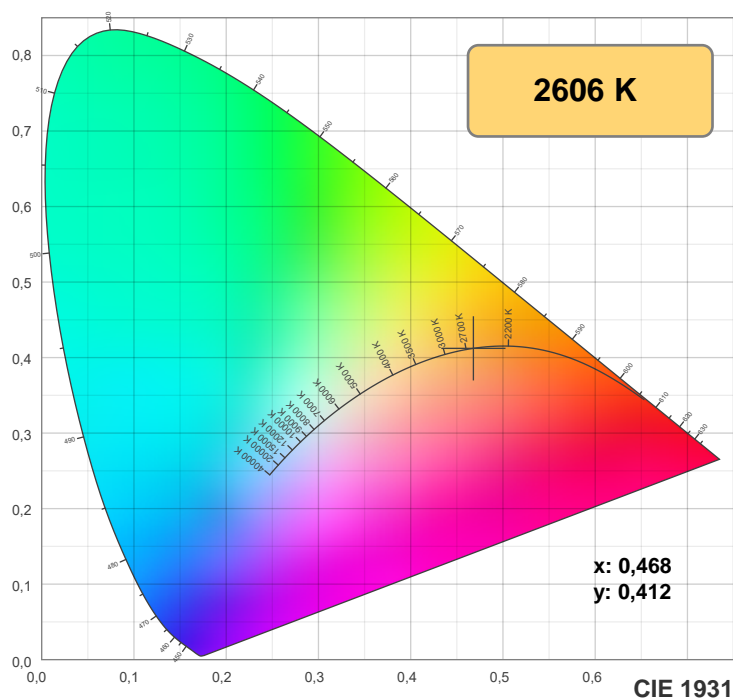
y: 0,412

Spectra

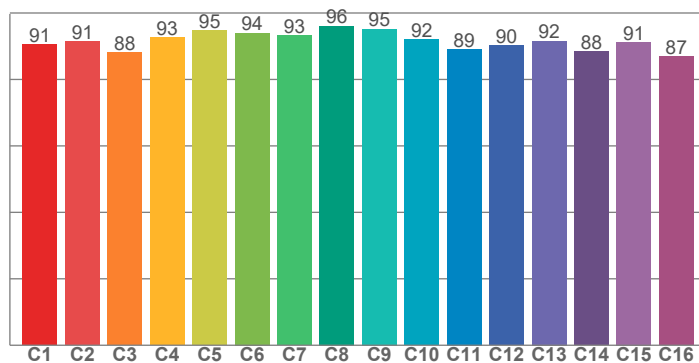


Power

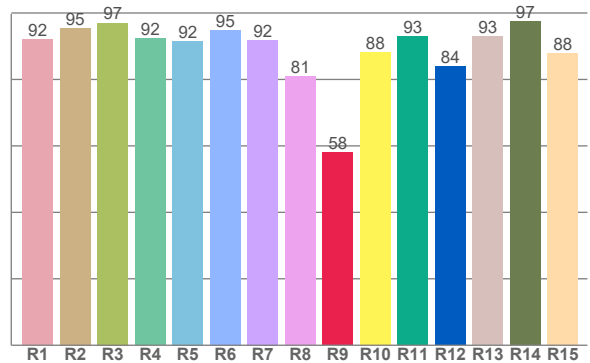
Voltage: 3,58 V
Current: 0,360 A
Frequency: 0 Hz



TM30: 91,5



CRI: 92,0 (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
92,1	95,5	97,0	92,3	91,5	94,8	91,8	80,9	58,0	88,2	92,9	83,9	92,9	97,4	87,8

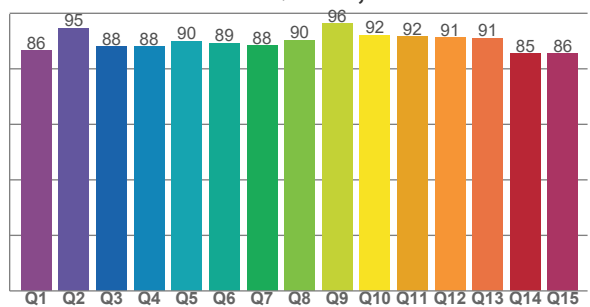
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
90,6	91,4	88,2	92,7	94,8	94,0	93,2	96,1	95,2	92,0	89,1	90,2	91,5	88,4	91,2	86,9

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
86,5	94,7	88,0	88,0	90,0	89,2	88,4	90,3	96,3	92,1	91,5	91,2	91,0	85,5	85,6

CQS: 89,3



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
2606 K	92,0	58,0	91,5	100,2	89,3	0,468	0,412	0,267	0,353	-0,0002

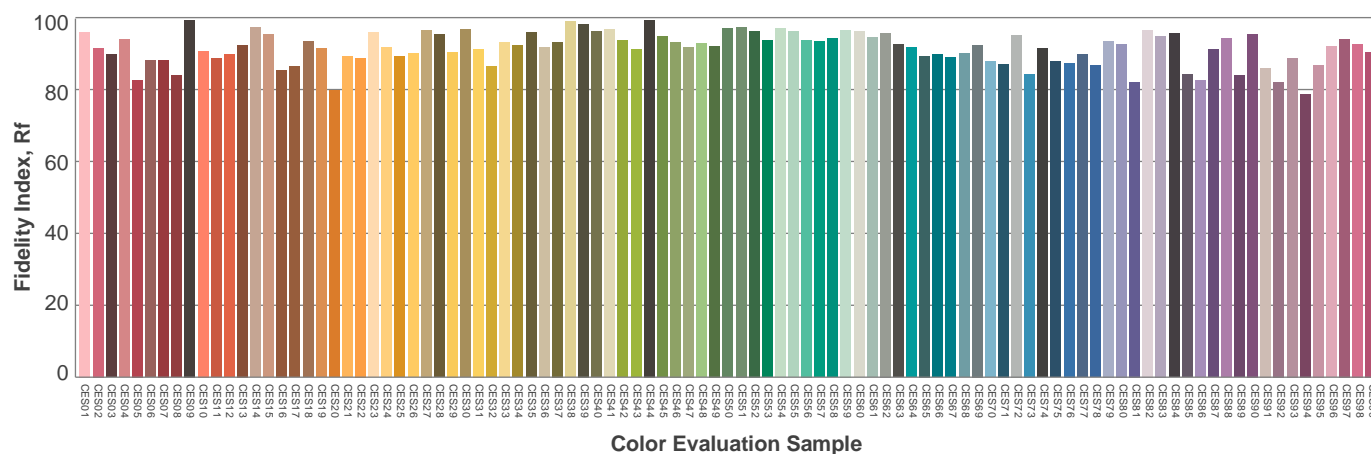
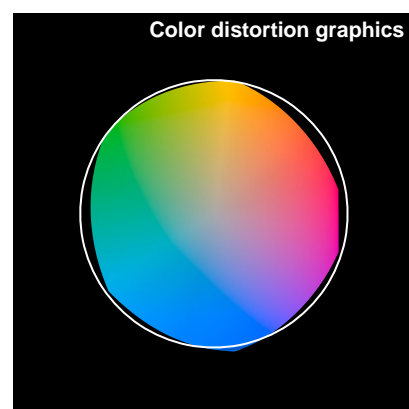
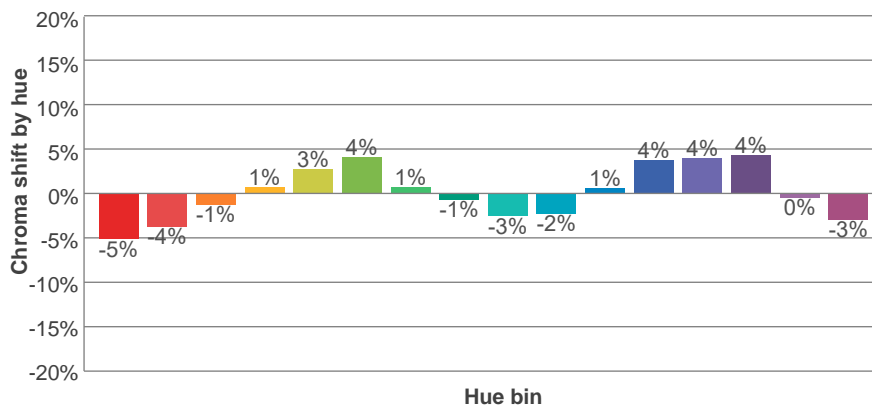
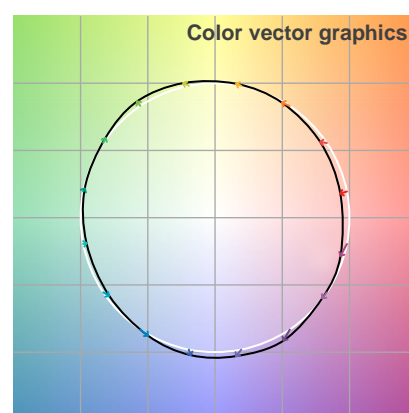
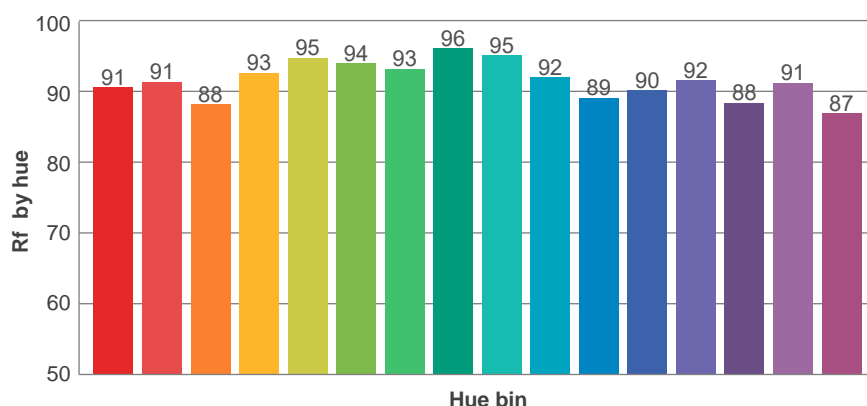
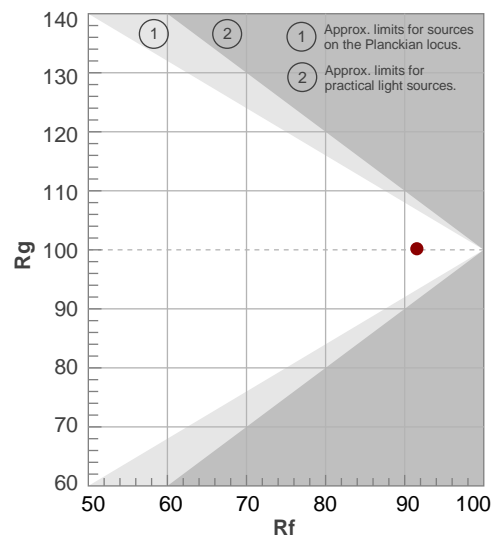
Rf 91,5

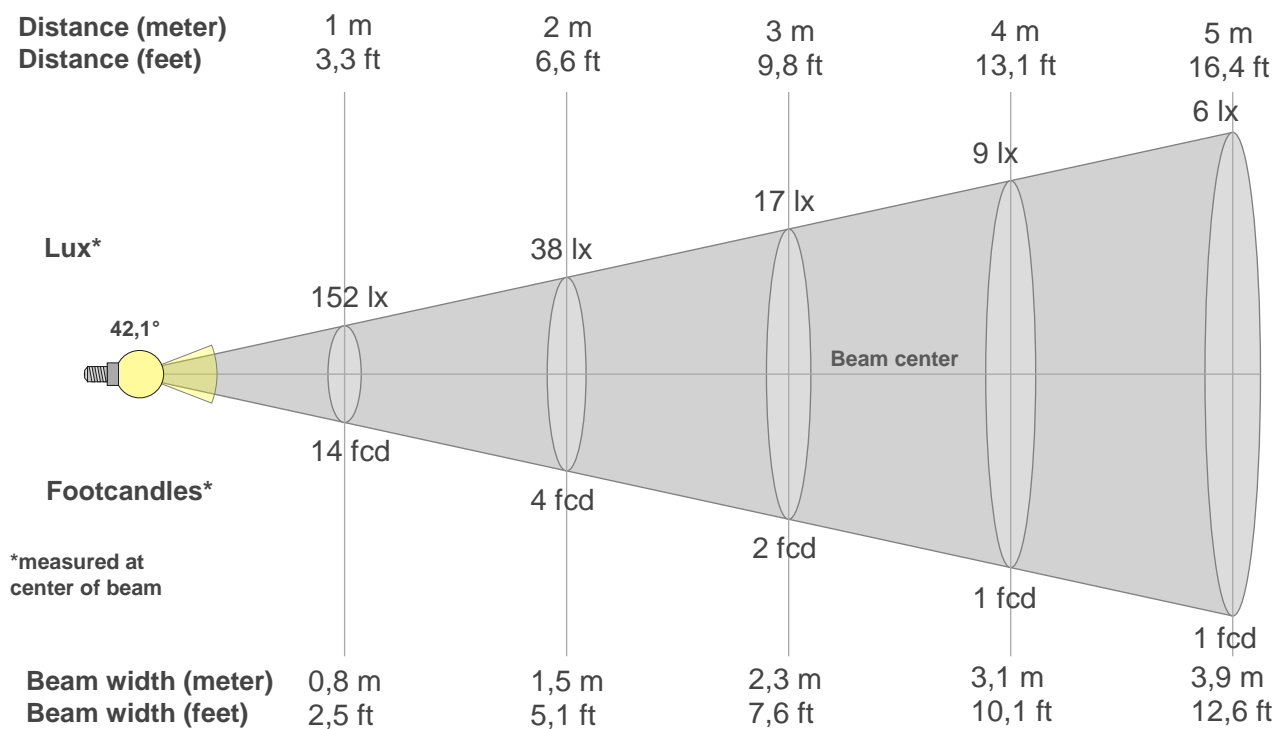
Fidelity index Rf

Rg 100,2

Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	91	-5%	-1%
2	91	-4%	3%
3	88	-1%	6%
4	93	1%	4%
5	95	3%	4%
6	94	4%	0%
7	93	1%	-4%
8	96	-1%	-2%
9	95	-3%	0%
10	92	-2%	4%
11	89	1%	7%
12	90	4%	2%
13	92	4%	-5%
14	88	4%	-8%
15	91	0%	-5%
16	87	-3%	-10%





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
152lx	38lx	17lx	9lx	6lx	4lx	3lx	2lx	2lx	2lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx	0lx	0lx	0lx
14,1fcd	3,5fcd	1,6fcd	0,9fcd	0,6fcd	0,4fcd	0,3fcd	0,2fcd	0,2fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0fcd	0fcd	0fcd	0fcd

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°
152	150	148	144	139	132	125	115	105	94	83	73	63	54	47	39	32	26	20	14
100%	99%	97%	95%	91%	87%	82%	76%	69%	62%	55%	48%	42%	36%	31%	26%	21%	17%	13%	9%

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°
152	149	144	136	128	119	110	102	95	88	80	70	61	53	46	39	33	26	19	13
100%	99%	95%	90%	84%	78%	73%	68%	63%	58%	53%	46%	41%	35%	30%	26%	22%	17%	12%	8%

Intensities in 180° c-plane

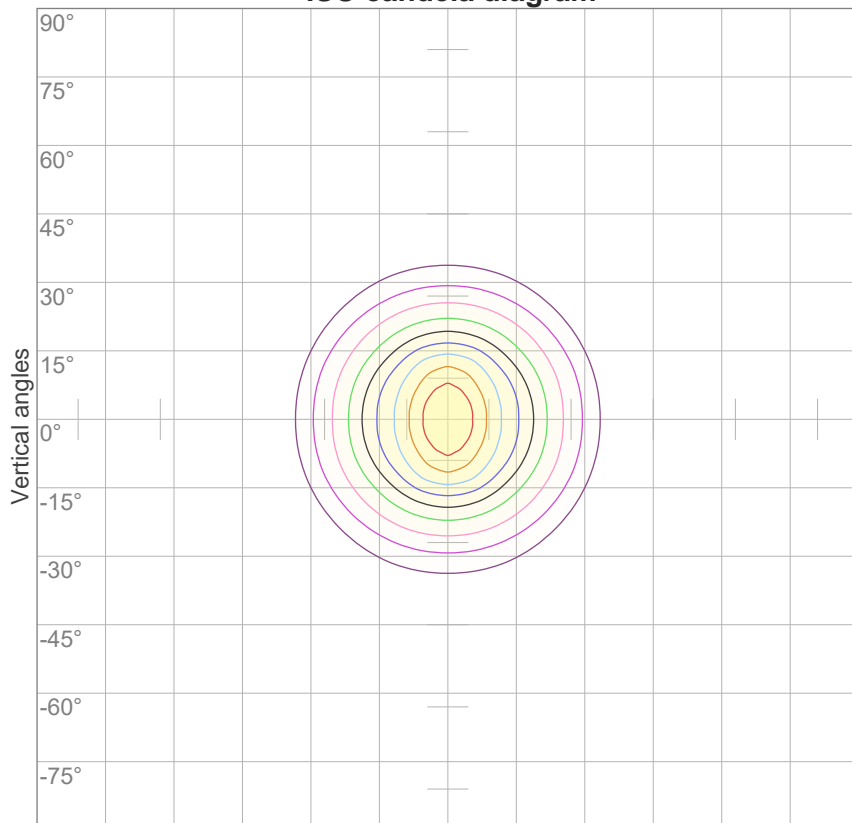
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
152	150	148	144	139	132	125	115	105	94	83	73	63	54	47	39	32	26	20	14
100%	99%	97%	95%	91%	87%	82%	76%	69%	62%	55%	48%	42%	36%	31%	26%	21%	17%	13%	9%

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°
152	149	144	136	128	119	110	102	95	88	80	70	61	53	46	39	33	26	19	13
100%	99%	95%	90%	84%	78%	73%	68%	63%	58%	53%	46%	41%	35%	30%	26%	22%	17%	12%	8%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
42,1°	74,8°	86,9°	99,3%	98,0%

ISO candela diagram



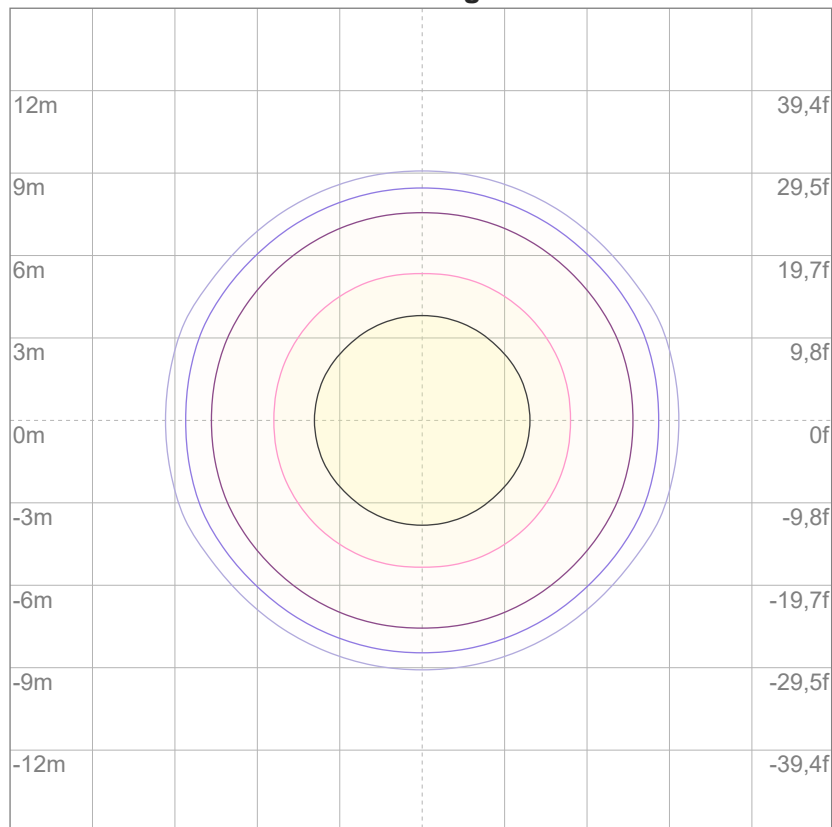
10%	15 cd
20%	30 cd
30%	45 cd
40%	61 cd
50%	76 cd
60%	91 cd
70%	106 cd
80%	121 cd
90%	136 cd

Conditions:

Number of c-planes: 16

Candela at center: 152 cd

ISO lux diagram



3%	45,5m lx
5%	75,8m lx
10%	0,152 lx
30%	0,455 lx
50%	0,758 lx

Conditions:

Number of c-planes: 16

Lux at center: 1,52 lx

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

Glare Evaluation According to UGR

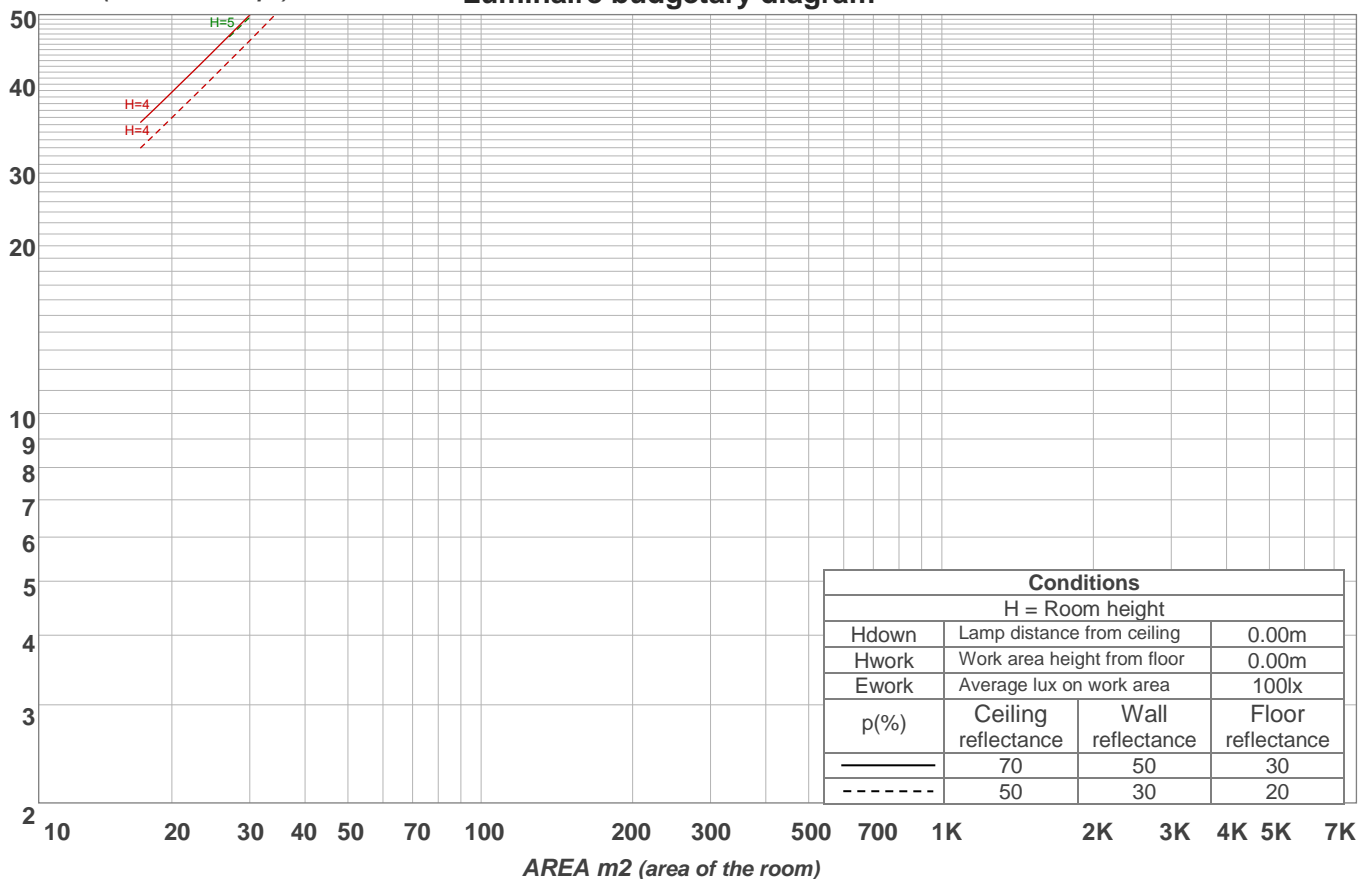
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	23,2	23,8	23,3	24,0	24,2	23,2	23,7	23,3	24,0	24,1
	3H	22,9	23,6	23,3	23,8	24,0	22,8	23,6	23,2	23,8	23,9
	4H	22,8	23,5	23,2	23,7	24,0	22,8	23,5	23,2	23,7	23,9
	6H	22,8	23,4	23,1	23,7	24,0	22,8	23,3	23,1	23,6	24,0
	8H	22,8	23,3	23,1	23,6	24,0	22,7	23,3	23,0	23,6	24,0
	12H	22,7	23,2	23,1	23,6	24,0	22,7	23,2	23,0	23,6	24,0
4H	2H	22,8	23,5	23,2	23,7	24,0	22,8	23,5	23,2	23,7	23,9
	3H	22,7	23,2	23,1	23,6	24,0	22,7	23,2	23,0	23,6	24,0
	4H	22,6	23,1	23,0	23,5	24,0	22,5	23,0	23,0	23,5	24,0
	6H	22,5	23,0	23,0	23,4	23,7	22,5	23,0	23,0	23,3	23,7
	8H	22,4	22,9	23,0	23,3	23,6	22,4	22,9	22,9	23,2	23,6
	12H	22,4	22,8	22,9	23,2	23,6	22,3	22,7	22,8	23,1	23,6
8H	4H	22,4	22,9	23,0	23,3	23,6	22,4	22,9	22,9	23,2	23,6
	6H	22,4	22,7	22,9	23,2	23,7	22,3	22,7	22,8	23,1	23,7
	8H	22,4	22,6	22,9	23,2	23,8	22,3	22,6	22,9	23,1	23,7
	12H	22,3	22,5	22,9	23,0	23,6	22,3	22,5	22,9	23,0	23,6
12H	4H	22,4	22,8	22,9	23,2	23,6	22,3	22,7	22,8	23,1	23,6
	6H	22,4	22,6	22,9	23,1	23,8	22,3	22,6	22,8	23,1	23,7
	8H	22,3	22,5	22,9	23,0	23,6	22,3	22,5	22,9	23,0	23,6
Variation of the observer position for the luminaire distance S											
S = 1.0H		5,7 / -13,5					5,9 / -14,0				
S = 1.5H		8,4 / -14,4					8,6 / -15,0				
S = 2.0H		10,4 / -14,7					10,6 / -15,0				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 86,3 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	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94
2	109	104	100	97	107	103	99	96	99	96	94	96	94	92	94	92	90	89
3	104	98	93	90	102	97	92	89	94	90	87	92	89	86	89	87	85	83
4	99	92	87	83	97	91	86	83	89	85	82	87	84	81	85	82	80	78
5	95	87	82	78	93	86	81	77	84	80	77	83	79	76	81	78	75	74
6	91	82	77	73	89	82	76	73	80	76	72	79	75	72	77	74	71	70
7	87	78	73	69	85	77	72	69	76	72	68	75	71	68	74	70	67	66
8	83	74	69	65	82	74	68	65	73	68	64	72	67	64	71	67	64	63
9	79	71	65	61	78	70	65	61	69	64	61	68	64	61	67	64	61	60
10	76	67	62	58	75	67	62	58	66	61	58	65	61	58	65	61	58	57

LAMPS (number of lamps)

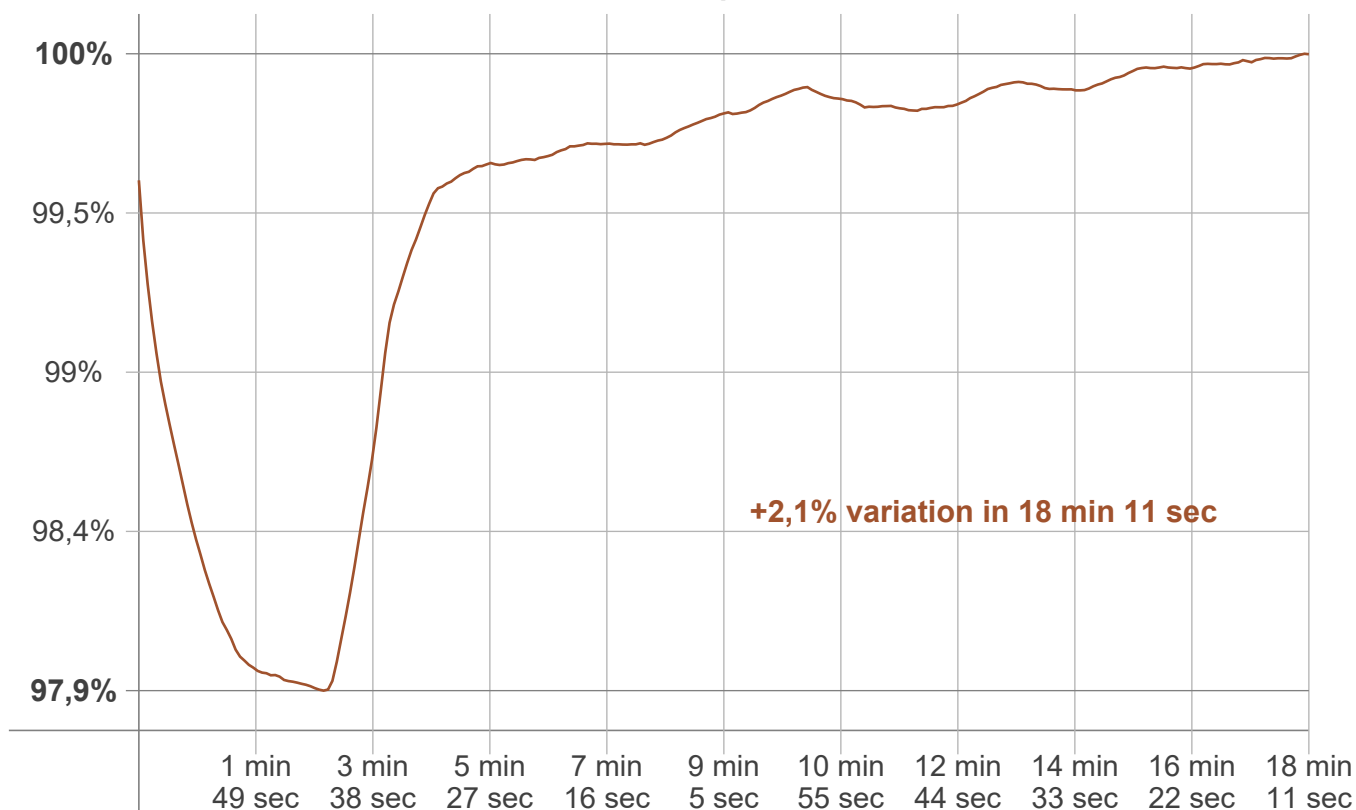
Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
13,0 lm	28,8 lm	26,7 lm	14,2 lm	2,50 lm	0,452 lm	0,233 lm	0,175 lm	0,099 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0,039 lm	0,011 lm	0,010 lm	0,009 lm	0,008 lm	0,006 lm	0,005 lm	0,003 lm	0,001 lm

Warmup curve



Warmup result

Warmup time:	Lamp stabilized in 18 min 11 sec
Warmup variation	+2,1%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
2617 K	-11 K	2606 K

Output change

Output start	Output change	Output end
86,5 lm	-0,2 lm	86,3 lm