

Light efficiency:

67 Lumen/Watt

Light quality:

CRI: 91,8

Color temperature:

2593 K

Output: 86,1 lm

Peak: 316 cd

Power: 1,3 W

PF: 1,0



Product name:

PicoSpot³-927-LSMT-350mA

Item number:

FLNP/PS1C/C01/0108/927/LSMT/10995

Date and time:

28.07.2021 10:41:47

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:

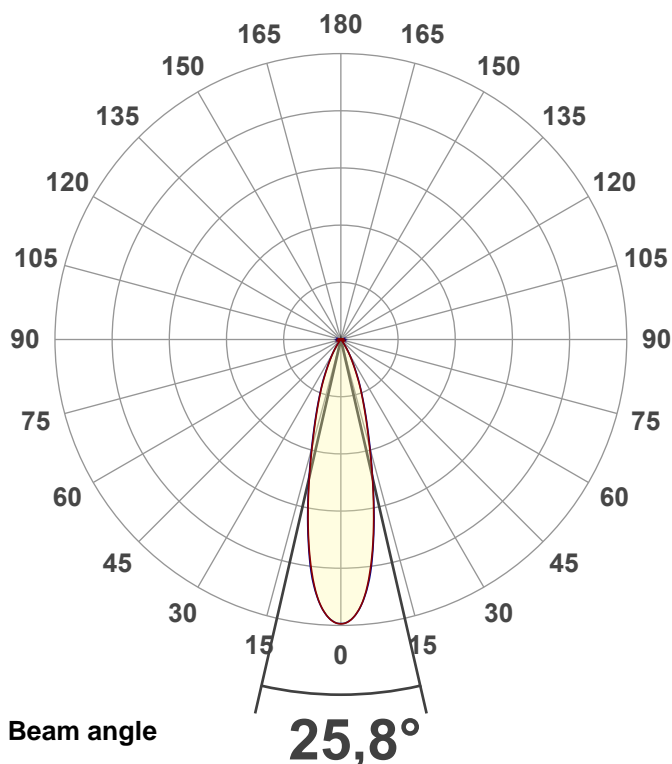
Peter Ulrich

Pruefort:

Lichtlabor

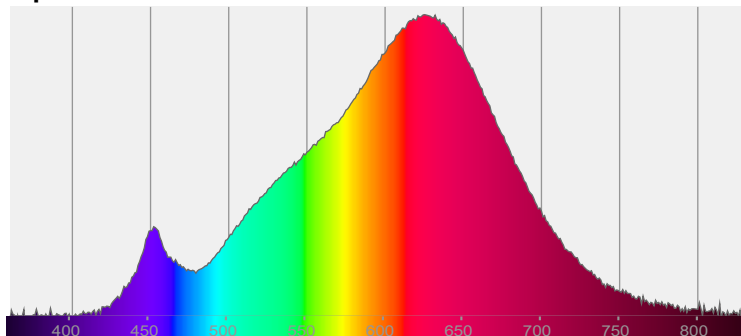
Gaustrasse13

55411 Bingen am Rhein

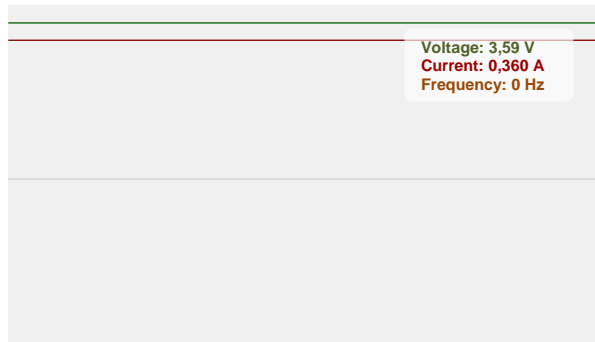


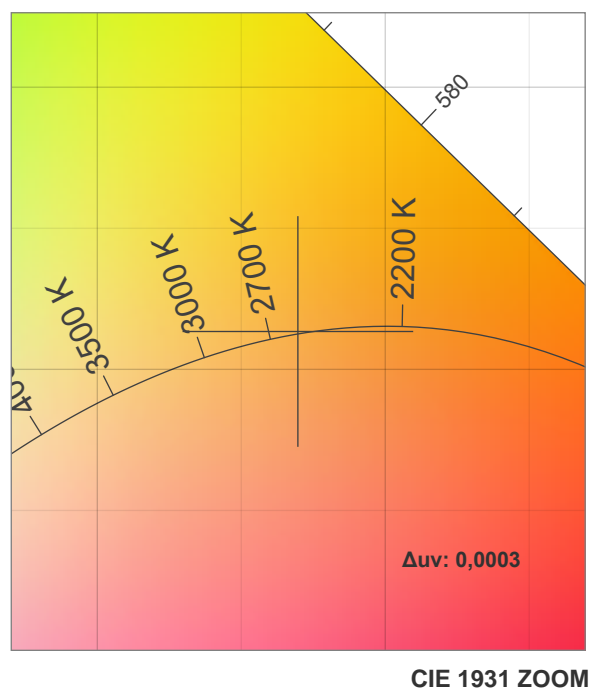
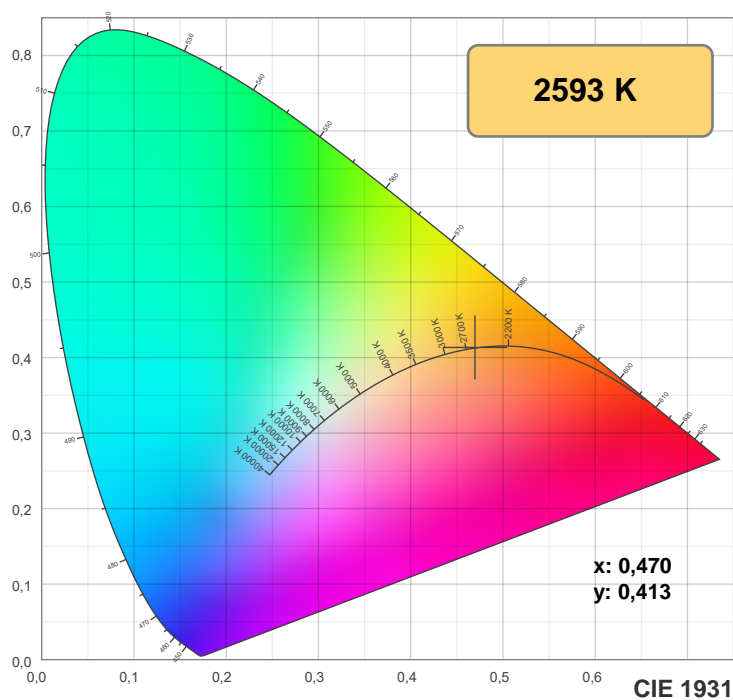
CIE 1931
x: 0,470
y: 0,413

Spectra

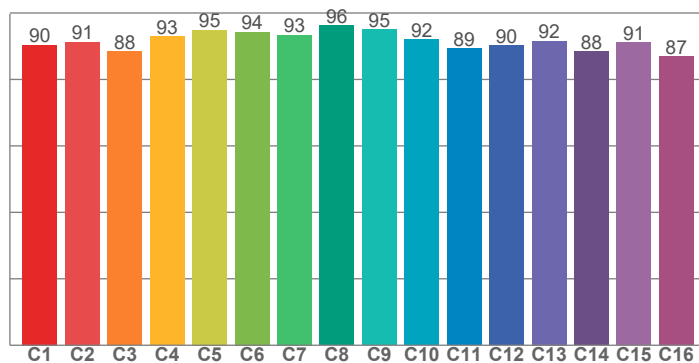


Power

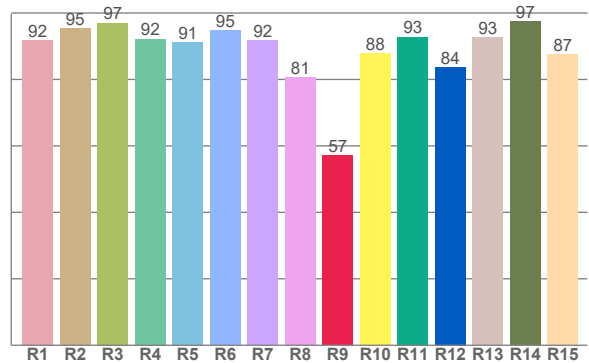




TM30: 91,6



CRI: 91,8 (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
91,8	95,3	97,1	92,2	91,3	94,7	91,8	80,6	57,1	87,9	92,8	83,7	92,7	97,4	87,4

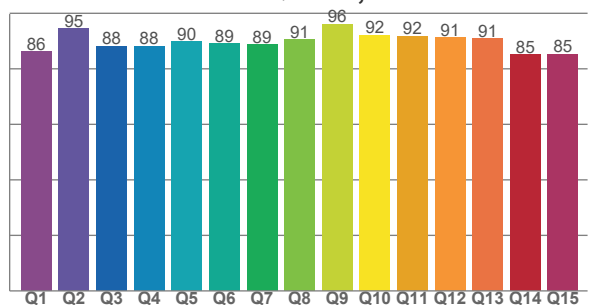
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
90,4	91,3	88,4	92,9	94,9	94,3	93,4	96,3	95,1	92,1	89,3	90,3	91,5	88,4	91,2	87,0

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
86,3	94,5	88,2	88,1	89,9	89,2	88,6	90,5	96,2	92,2	91,7	91,3	91,0	85,1	85,3

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
2593 K	91,8	57,1	91,6	99,9	89,3	0,470	0,413	0,268	0,353	0,0003

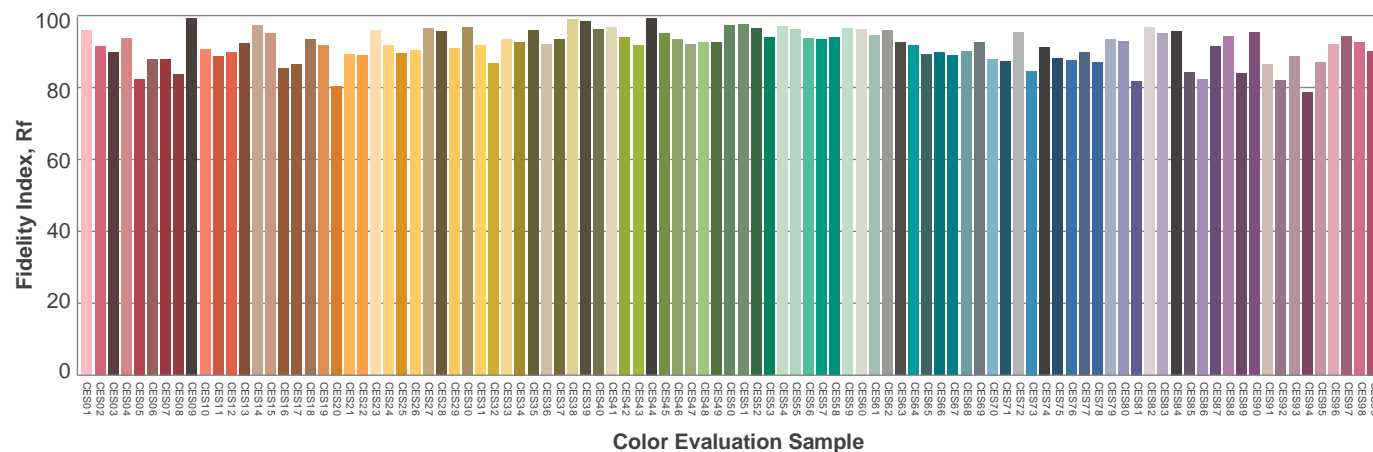
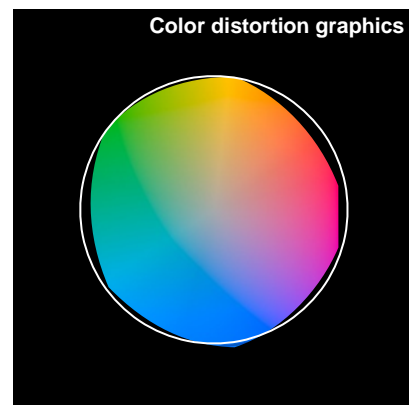
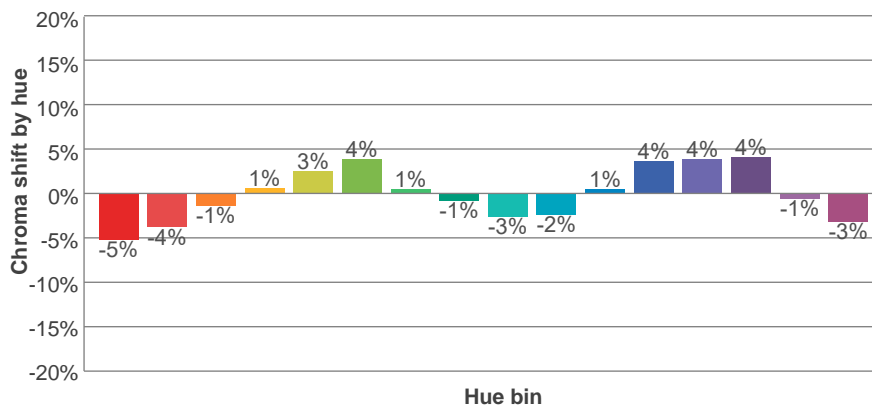
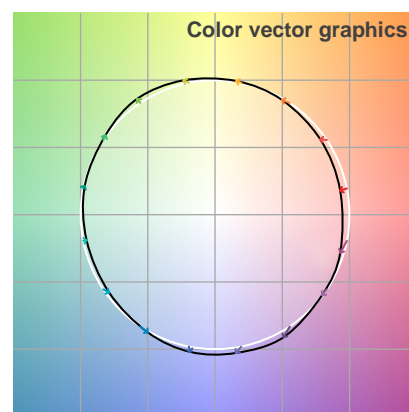
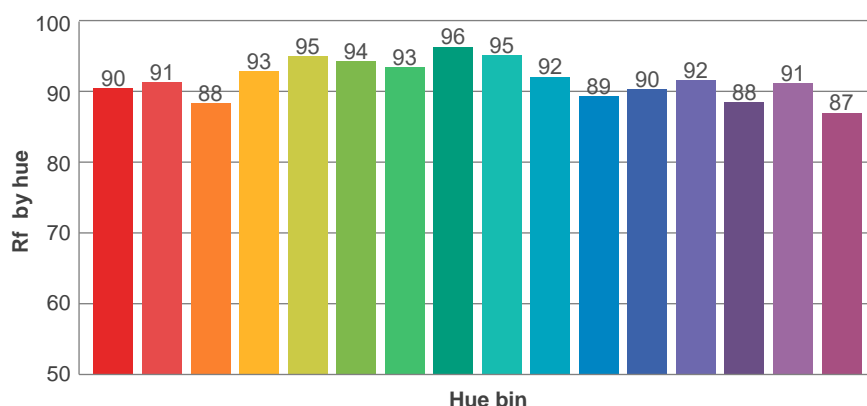
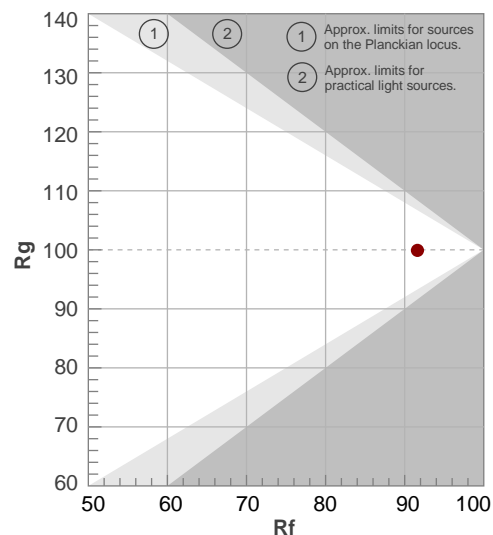
Rf 91,6

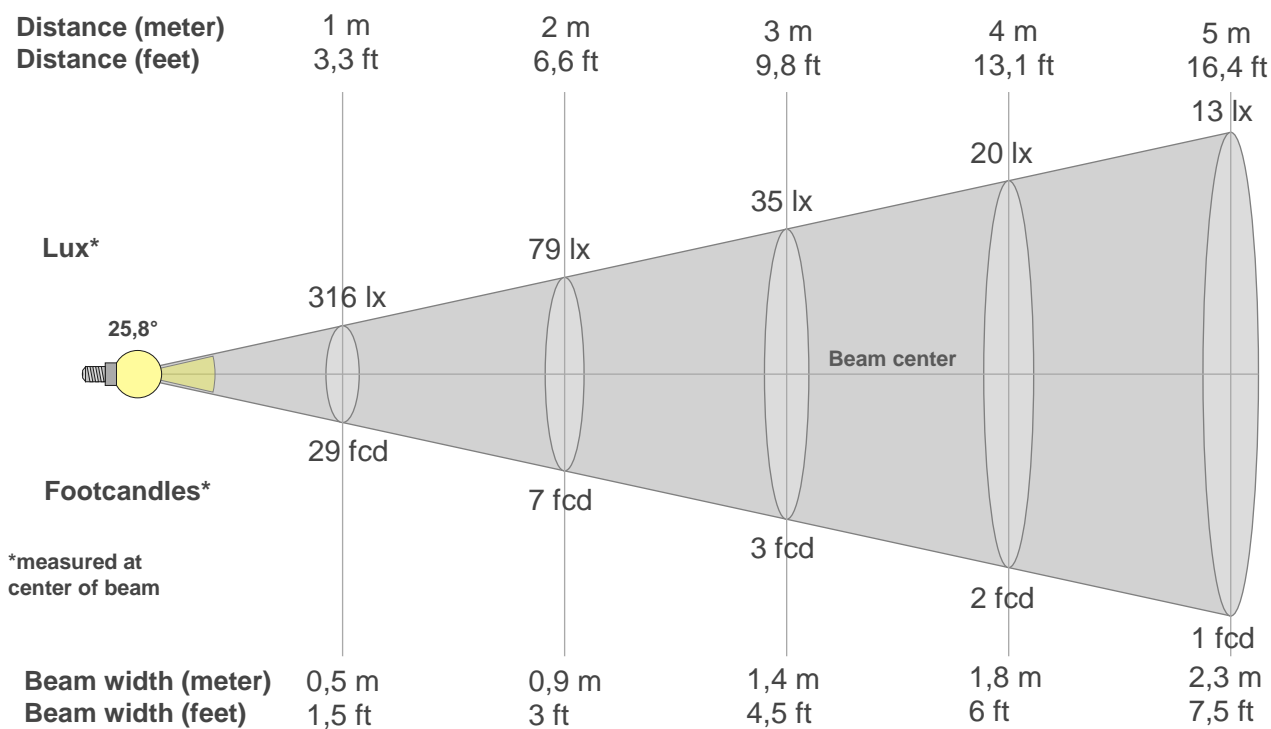
Fidelity index Rf

Rg 99,9

Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	90	-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	-1%	-5%
16	87	-3%	-9%





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
316lx	79lx	35lx	20lx	13lx	9lx	6lx	5lx	4lx	3lx	3lx	2lx	2lx	2lx	1lx	1lx	1lx	1lx	1lx	1lx
29,3fcd	7,3fcd	3,3fcd	1,8fcd	1,2fcd	0,8fcd	0,6fcd	0,5fcd	0,4fcd	0,3fcd	0,2fcd	0,2fcd	0,2fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	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°
316	312	299	277	246	209	173	138	110	88	71	57	44	33	25	19	13	8	5	3
100%	99%	95%	88%	78%	66%	55%	44%	35%	28%	22%	18%	14%	11%	8%	6%	4%	3%	2%	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°
316	311	299	278	248	212	174	140	113	90	73	58	46	35	26	19	13	8	5	3
100%	99%	95%	88%	79%	67%	55%	44%	36%	29%	23%	18%	15%	11%	8%	6%	4%	3%	2%	1%

Intensities in 180° c-plane

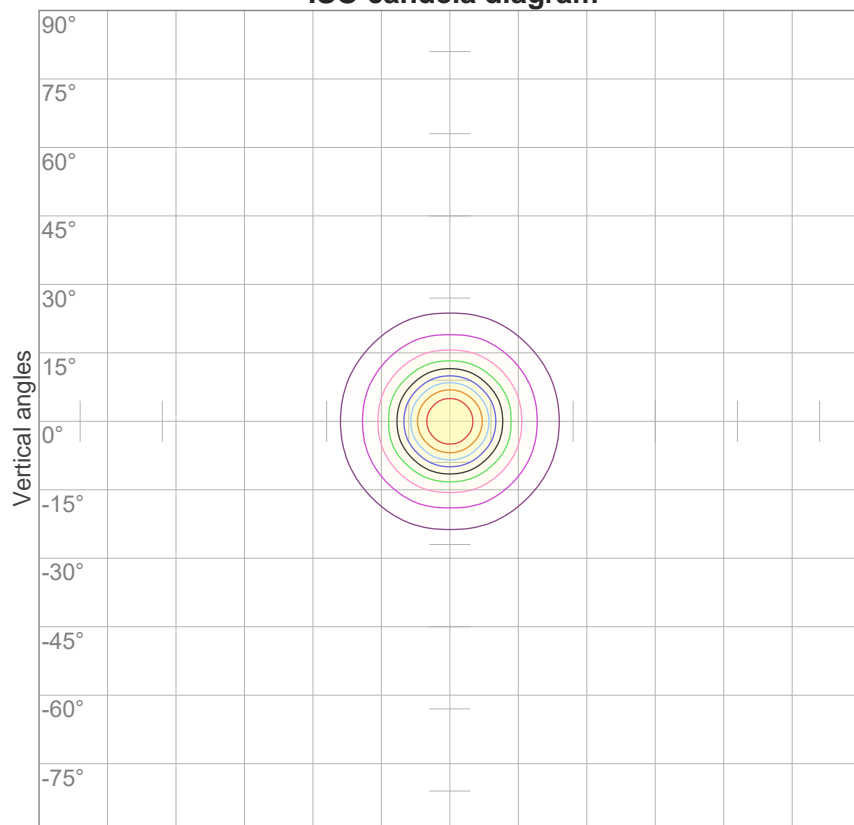
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
316	312	299	277	246	209	173	138	110	88	71	57	44	33	25	19	13	8	5	3
100%	99%	95%	88%	78%	66%	55%	44%	35%	28%	22%	18%	14%	11%	8%	6%	4%	3%	2%	1%

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°
316	311	299	278	248	212	174	140	113	90	73	58	46	35	26	19	13	8	5	3
100%	99%	95%	88%	79%	67%	55%	44%	36%	29%	23%	18%	15%	11%	8%	6%	4%	3%	2%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
25,8°	53,3°	68,5°	98,6%	97,7%

ISO candela diagram



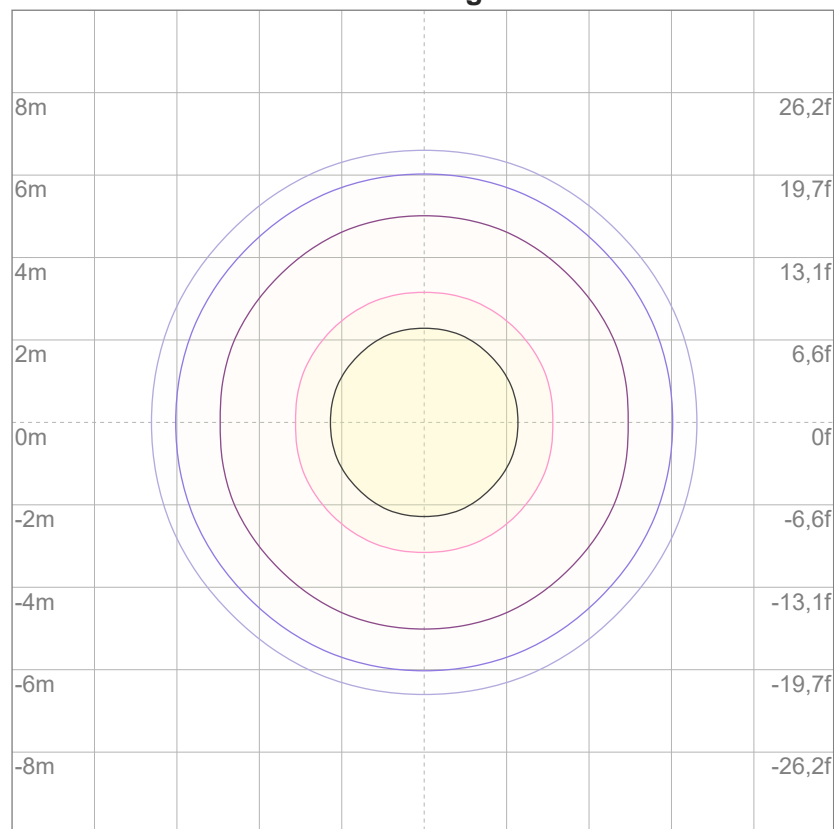
10%	32 cd
20%	63 cd
30%	95 cd
40%	126 cd
50%	158 cd
60%	189 cd
70%	221 cd
80%	253 cd
90%	284 cd

Conditions:

Number of c-planes: 16

Candela at center: 316 cd

ISO lux diagram



3%	94,7m lx
5%	0,158 lx
10%	0,316 lx
30%	0,947 lx
50%	1,58 lx

Conditions:

Number of c-planes: 16

Lux at center: 3,16 lx

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

Glare Evaluation According to UGR

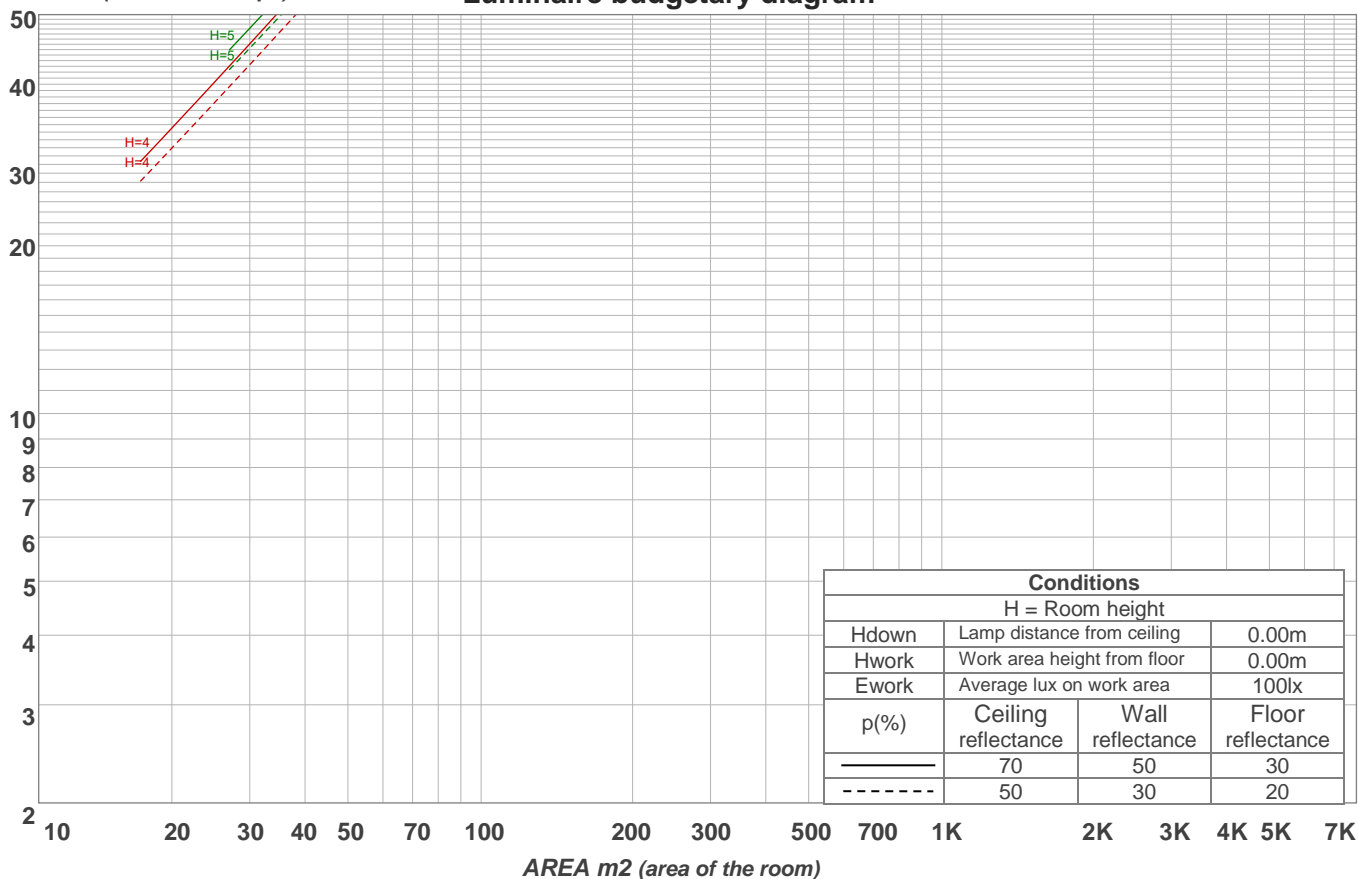
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	16,2	16,6	16,2	16,8	17,0	16,1	16,6	16,2	16,8	17,0
	3H	16,0	16,6	16,4	16,8	17,0	16,0	16,6	16,3	16,8	16,9
	4H	16,0	16,6	16,4	16,8	17,1	16,0	16,6	16,4	16,8	17,0
	6H	16,1	16,6	16,4	16,9	17,2	16,1	16,6	16,4	16,9	17,2
	8H	16,1	16,6	16,4	16,9	17,3	16,1	16,5	16,4	16,9	17,3
	12H	16,1	16,5	16,4	16,9	17,3	16,1	16,5	16,4	16,9	17,3
4H	2H	15,8	16,4	16,2	16,7	16,9	15,8	16,4	16,2	16,6	16,8
	3H	16,0	16,4	16,3	16,8	17,2	15,9	16,4	16,3	16,7	17,1
	4H	16,0	16,4	16,4	16,8	17,3	15,9	16,4	16,4	16,8	17,3
	6H	16,0	16,5	16,5	16,8	17,2	16,0	16,5	16,5	16,8	17,2
	8H	16,1	16,5	16,6	16,8	17,2	16,0	16,5	16,5	16,8	17,2
	12H	16,1	16,4	16,6	16,8	17,3	16,1	16,4	16,6	16,8	17,3
8H	4H	15,9	16,3	16,4	16,7	17,0	15,9	16,3	16,4	16,7	17,0
	6H	16,1	16,4	16,6	16,8	17,3	16,0	16,3	16,5	16,8	17,3
	8H	16,2	16,4	16,7	16,9	17,5	16,2	16,4	16,7	16,9	17,5
	12H	16,2	16,4	16,8	16,9	17,5	16,2	16,4	16,8	16,9	17,5
12H	4H	15,8	16,2	16,3	16,6	17,1	15,8	16,2	16,3	16,6	17,0
	6H	16,1	16,3	16,6	16,8	17,5	16,1	16,3	16,6	16,8	17,4
	8H	16,2	16,4	16,8	16,9	17,5	16,1	16,3	16,7	16,8	17,4
Variation of the observer position for the luminaire distance S											
S = 1.0H		5,5 / -3,9					5,4 / -3,9				
S = 1.5H		8,1 / -4,1					8,1 / -4,1				
S = 2.0H		10,1 / -4,4					10,0 / -4,3				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 86,1 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	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95
2	110	106	103	100	108	105	102	99	101	99	97	98	96	95	96	94	93	91
3	106	101	97	94	104	100	96	93	97	94	92	95	92	90	93	91	89	88
4	103	97	92	89	101	96	92	88	93	90	87	92	89	86	90	87	85	84
5	99	93	88	85	98	92	88	84	90	86	84	88	85	83	87	84	82	81
6	96	89	84	81	94	88	84	81	87	83	80	86	82	80	84	81	79	78
7	93	86	81	78	92	85	81	78	84	80	77	83	79	77	82	79	76	75
8	90	83	78	75	89	82	78	75	81	77	74	80	77	74	79	76	74	73
9	87	80	75	72	86	79	75	72	78	75	72	78	74	72	77	74	71	70
10	84	77	73	70	84	77	73	70	76	72	70	75	72	69	75	71	69	68

LAMPS (number of lamps)

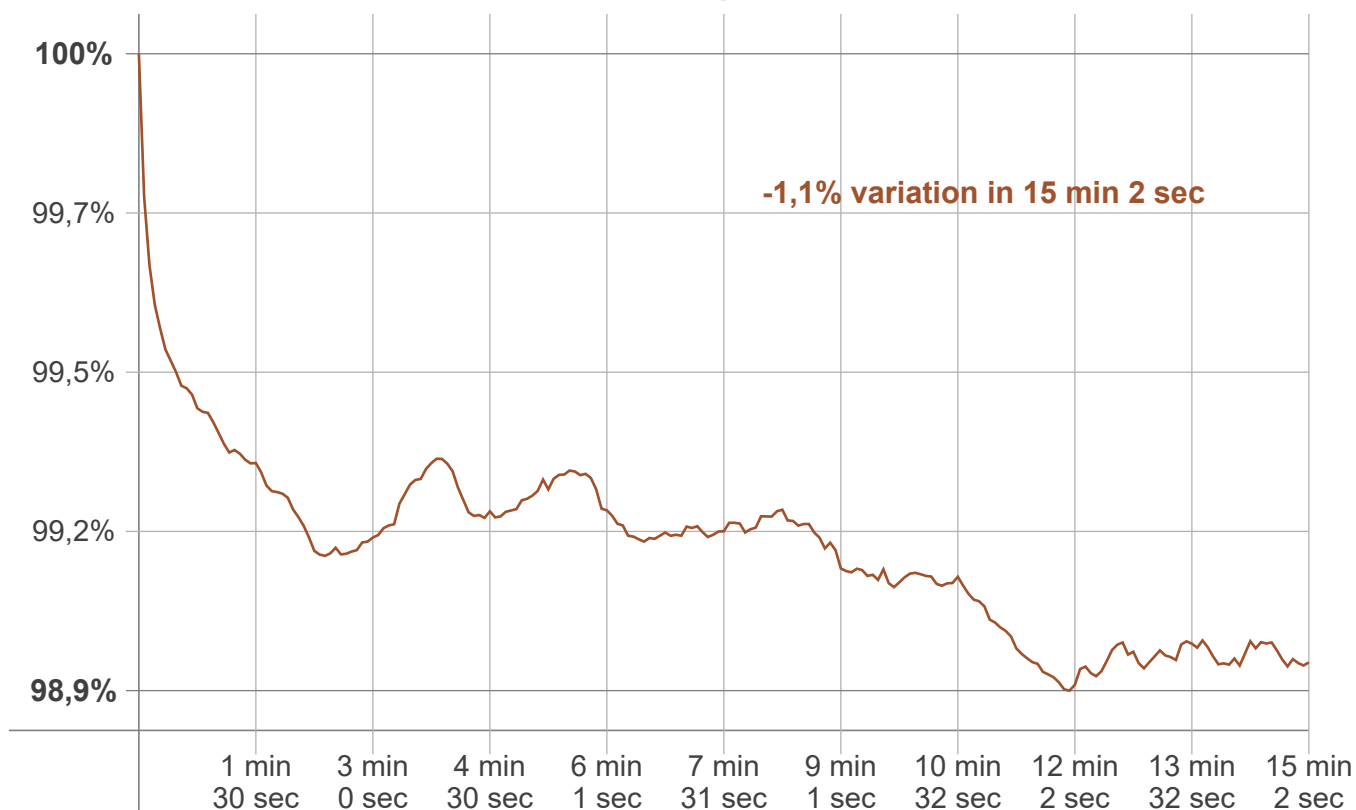
Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
25,0 lm	35,2 lm	18,7 lm	4,75 lm	0,776 lm	0,493 lm	0,384 lm	0,327 lm	0,215 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0,078 lm	0,074 lm	0,038 lm	0,028 lm	0,020 lm	0,013 lm	0,010 lm	0,006 lm	0,002 lm

Warmup curve



Warmup result

Warmup time:	Lamp stabilized in 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
2596 K	-3 K	2593 K

Output change

Output start	Output change	Output end
86,6 lm	-0,4 lm	86,1 lm