



Light efficiency:

74 Lumen/Watt

Light quality:

CRI: 95,3

Color temperature:

2720 K

Output: 178 lm

Peak: 117 cd

Power: 2,4 W

PF: 1,0



Product name:

**Sta-Maria-6\_510mm\_927\_Inlay-Lens-Asymmetric-Frosted\_IP65P**

Item number:

**NP/L1C/01E/G1/L1C/0510/927/ILAF/IP65P**

Date and time:

**12.09.2022 12:59:33**

Description:

**Rank: C80-AD-8GB**

**Tolerances:**

**Lumen +/-4%**

**Candela +/-2,5%**

**Colour Temp +/-35 Kelvin**

**CRI +/-0,7**

**Angular Resolution: 1 Degree Step**

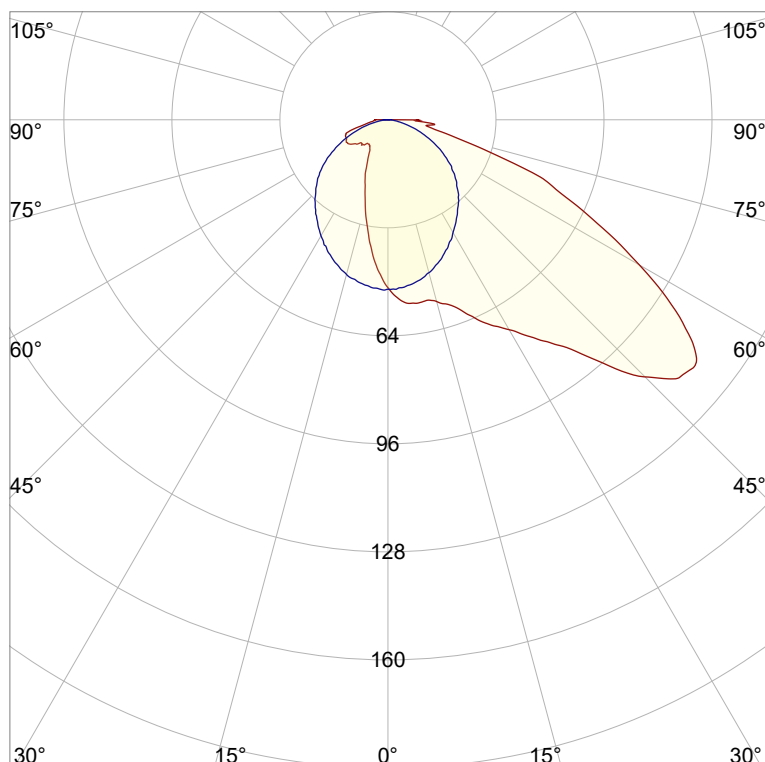
**Last Calibration 20-09-2021**

**Tester: Peter Ulrich**

**Test Site: Lichtlabor**

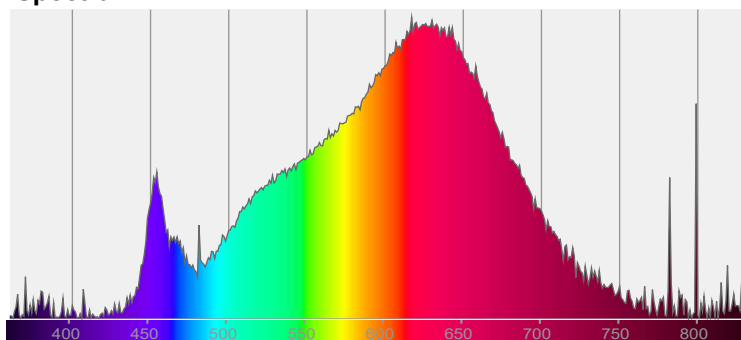
**Gaustrasse 13**

**55411 Bingen am Rhein**



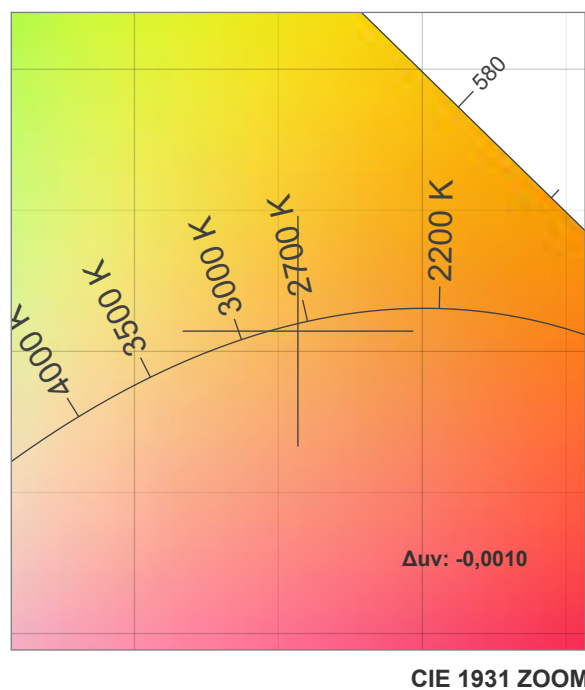
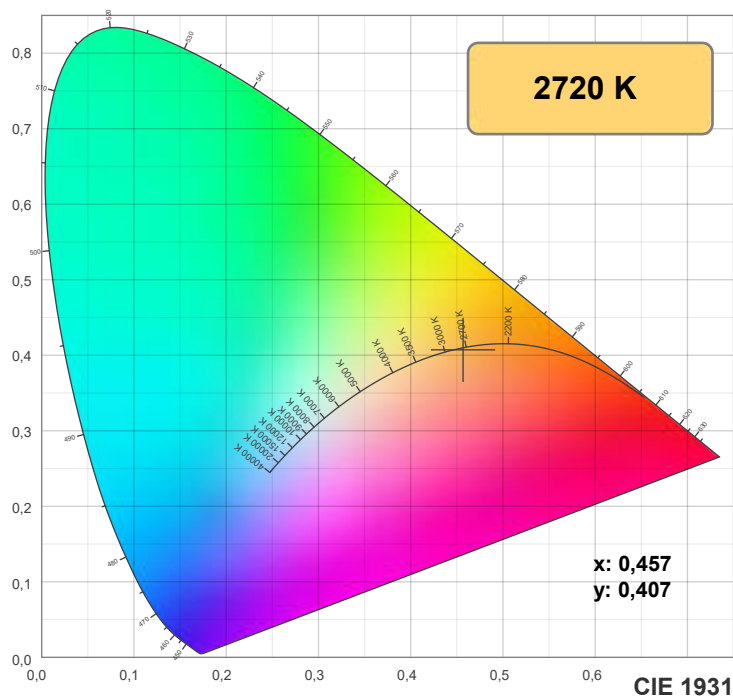
CIE 1931  
x: 0,457  
y: 0,407

Spectra

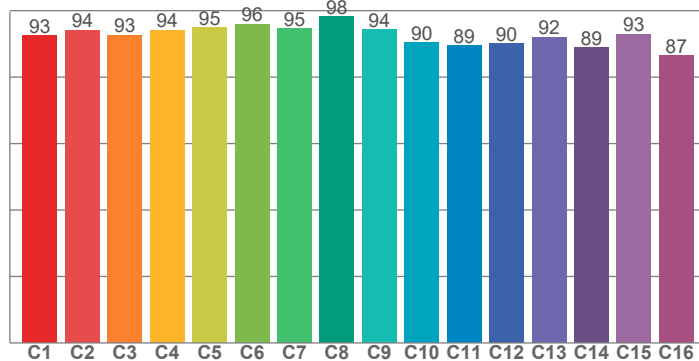


Power

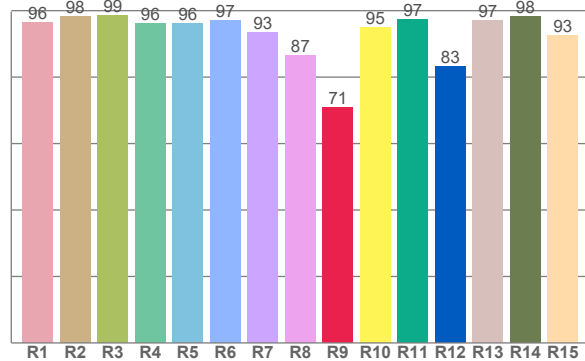
Voltage: 48,0 V  
Current: 0,050 A  
Frequency: 0 Hz



**TM30: 92,5**



**CRI: 95,3 (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
96,4	98,4	98,5	96,1	96,0	97,0	93,3	86,5	70,9	94,9	97,3	83,1	97,2	98,3	92,6

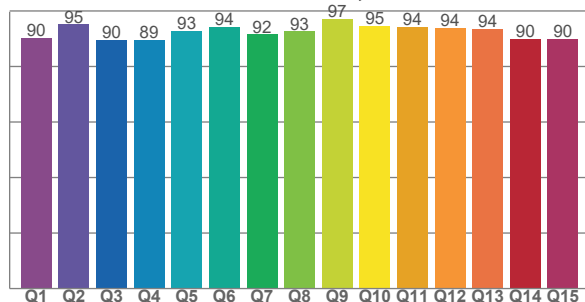
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
92,6	94,2	92,7	94,2	94,9	96,0	94,6	98,2	94,3	90,5	89,4	90,1	92,1	88,9	93,0	86,6

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
90,1	95,1	89,5	89,4	92,9	94,2	91,6	92,6	97,2	94,6	94,3	93,8	93,5	89,9	89,9

**CQS: 92,1**



## 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
2720 K	95,3	70,9	92,5	100,0	92,1	0,457	0,407	0,262	0,350	-0,0010



## TM30 details



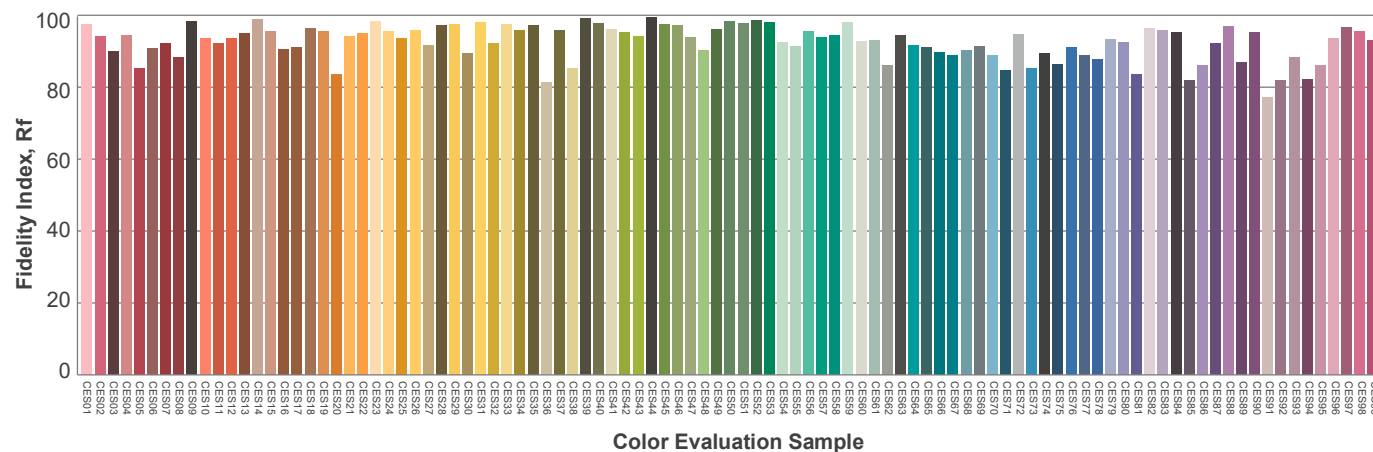
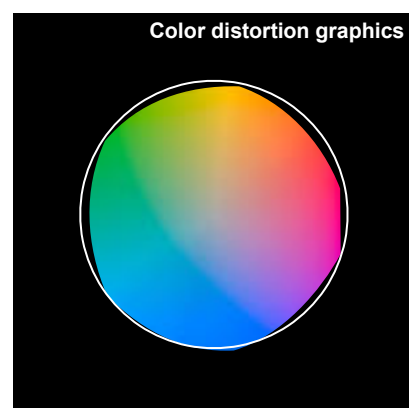
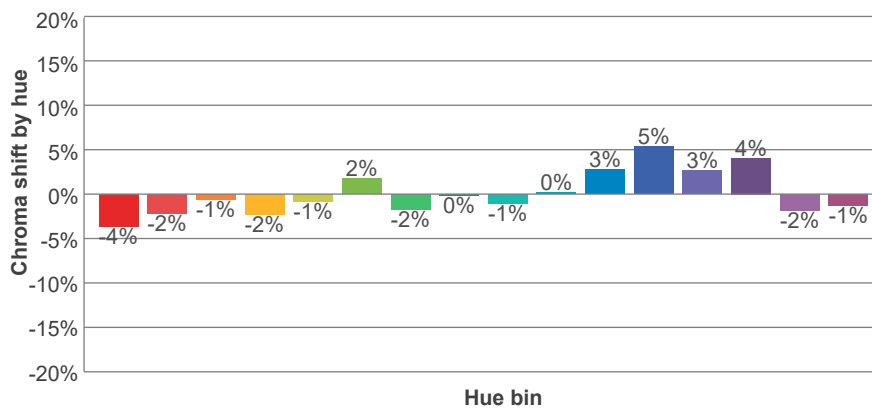
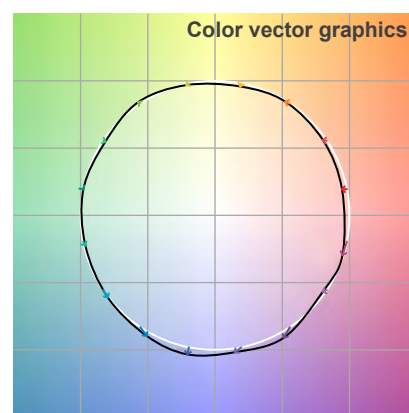
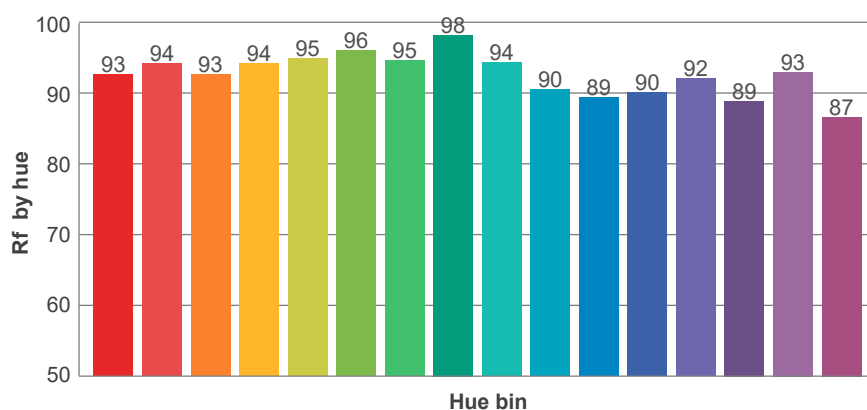
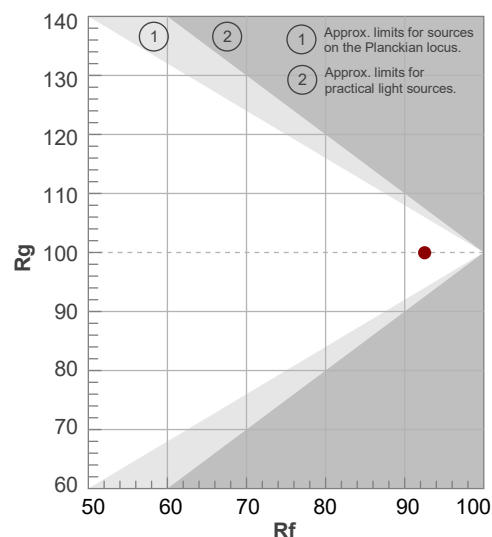
**Rf 92,5**

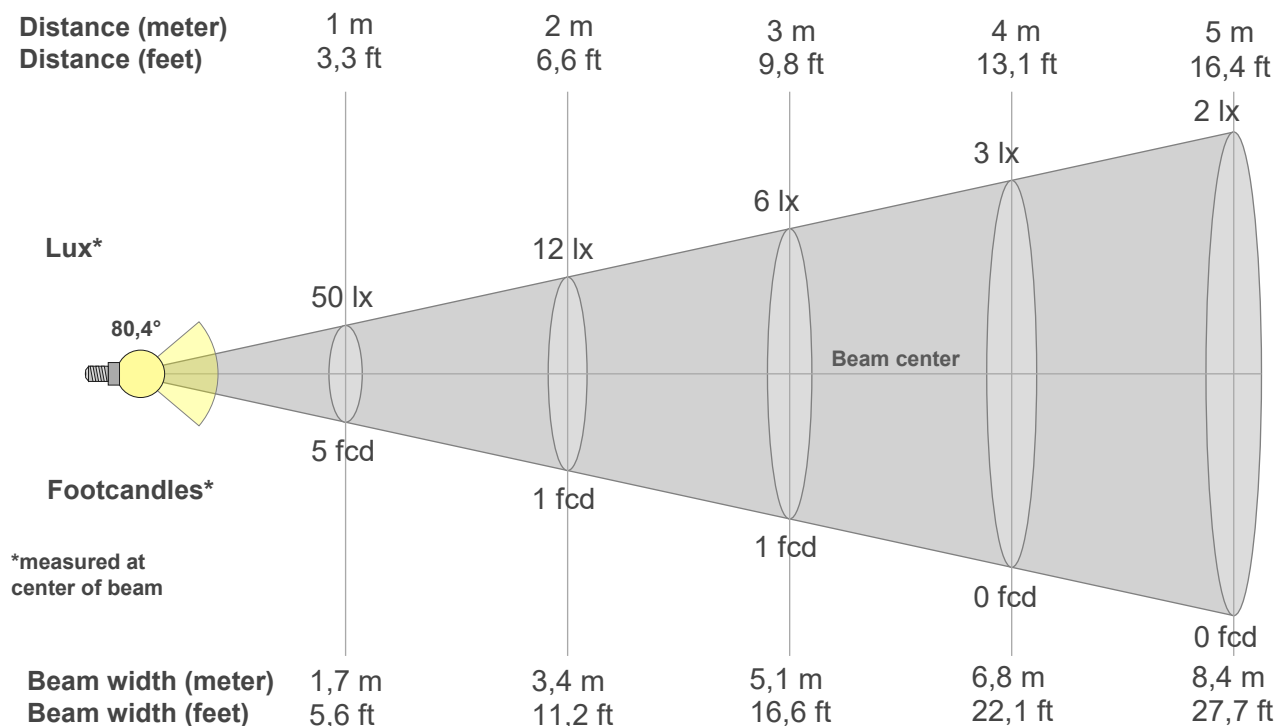
Fidelity index Rf

**Rg 100,0**

Gammut index Rg

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	93	-4%	1%
2	94	-2%	2%
3	93	-1%	3%
4	94	-2%	0%
5	95	-1%	2%
6	96	2%	1%
7	95	-2%	0%
8	98	0%	0%
9	94	-1%	3%
10	90	0%	6%
11	89	3%	8%
12	90	5%	0%
13	92	3%	-5%
14	89	4%	-8%
15	93	-2%	-3%
16	87	-1%	-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
50lx	12lx	6lx	3lx	2lx	1lx	1lx	1lx	1lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx
4,6fcd	1,2fcd	0,5fcd	0,3fcd	0,2fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd

## Intensities in 0° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
50	54	55	56	59	66	72	80	91	108	116	108	86	64	45	22	12	13	2	0
100%	109%	111%	112%	119%	133%	144%	161%	184%	217%	233%	216%	173%	128%	90%	43%	25%	27%	3%	0%

## Intensities in 90° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
49,7	49,9	48,7	46,9	44,6	41,8	38,6	35,5	32,4	29,2	25,9	22,1	18,0	13,7	9,6	5,8	3,0	1,2	0,3	0,0
100%	100%	98%	94%	90%	84%	78%	71%	65%	59%	52%	44%	36%	28%	19%	12%	6%	2%	1%	0%

## Intensities in 180° c-plane

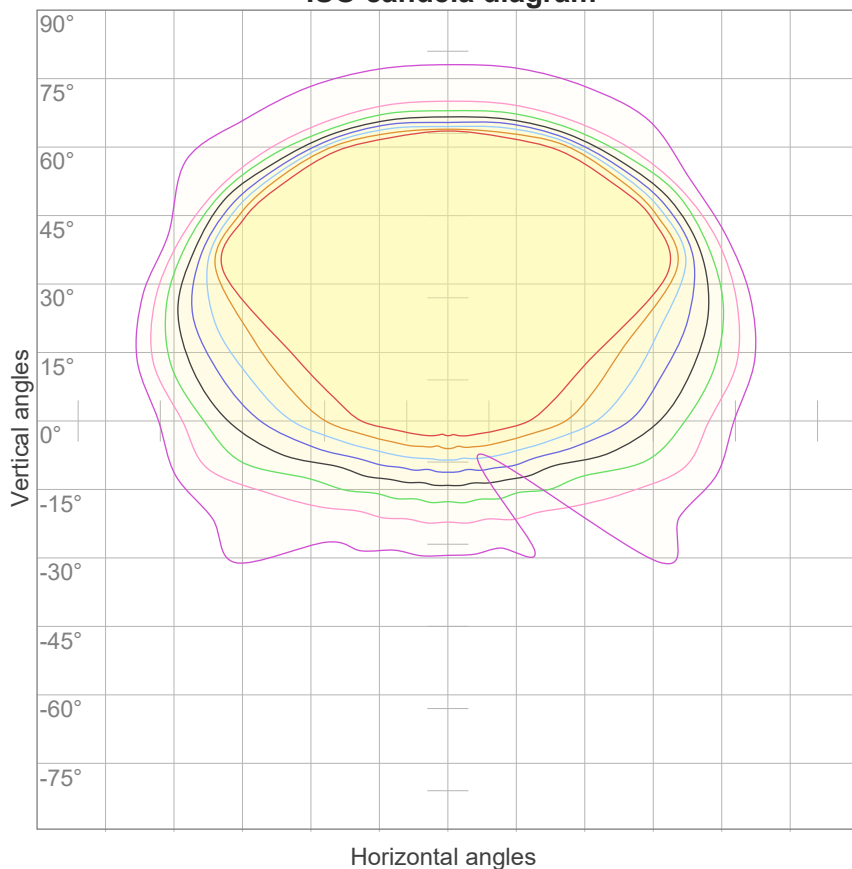
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
49,7	42,6	33,8	25,9	19,8	14,7	10,9	9,4	9,2	10,4	10,6	12,5	13,8	13,5	13,4	10,4	6,3	4,4	2,3	0,0
100%	86%	68%	52%	40%	30%	22%	19%	19%	21%	21%	25%	28%	27%	27%	21%	13%	9%	5%	0%

## Intensities in 270° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
49,7	50,0	48,9	47,4	45,2	42,6	39,7	36,5	33,5	30,2	27,2	23,4	19,0	14,7	10,3	6,5	3,4	1,4	0,1	0,0
100%	101%	98%	95%	91%	86%	80%	73%	67%	61%	55%	47%	38%	30%	21%	13%	7%	3%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
80,4°	161,5°	178,7°	70,6%	41,0%

## ISO candela diagram



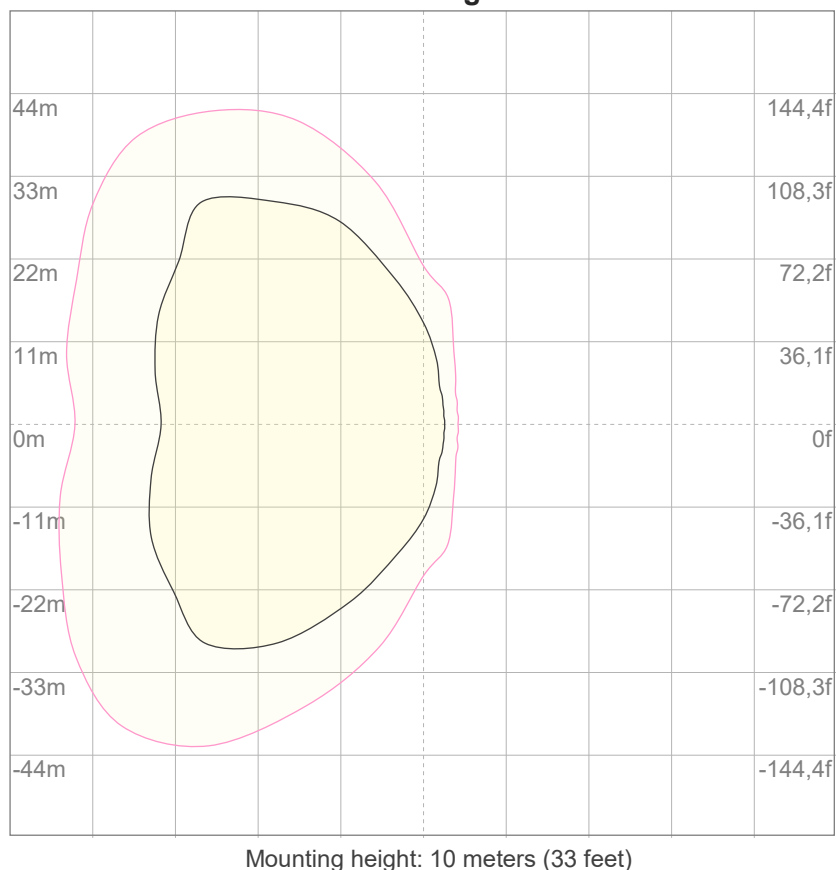
10%	5 cd
20%	10 cd
30%	15 cd
40%	20 cd
50%	25 cd
60%	30 cd
70%	35 cd
80%	40 cd
90%	45 cd

### Conditions:

Number of c-planes: 16

Candela at center: 50 cd

## ISO lux diagram



3%	14,9m lx
5%	24,9m lx
10%	49,7m lx
30%	0,149 lx
50%	0,249 lx

### Conditions:

Number of c-planes: 16

Lux at center: 0,497 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				
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Variation of the observer position for the luminaire distance S										
n/a	n/a					n/a				
n/a	n/a					n/a				
n/a	n/a					n/a				
Standard table	n/a					n/a				
Correction summand	n/a					n/a				
Corrected glare indices referring to 178 lm total luminous flux										

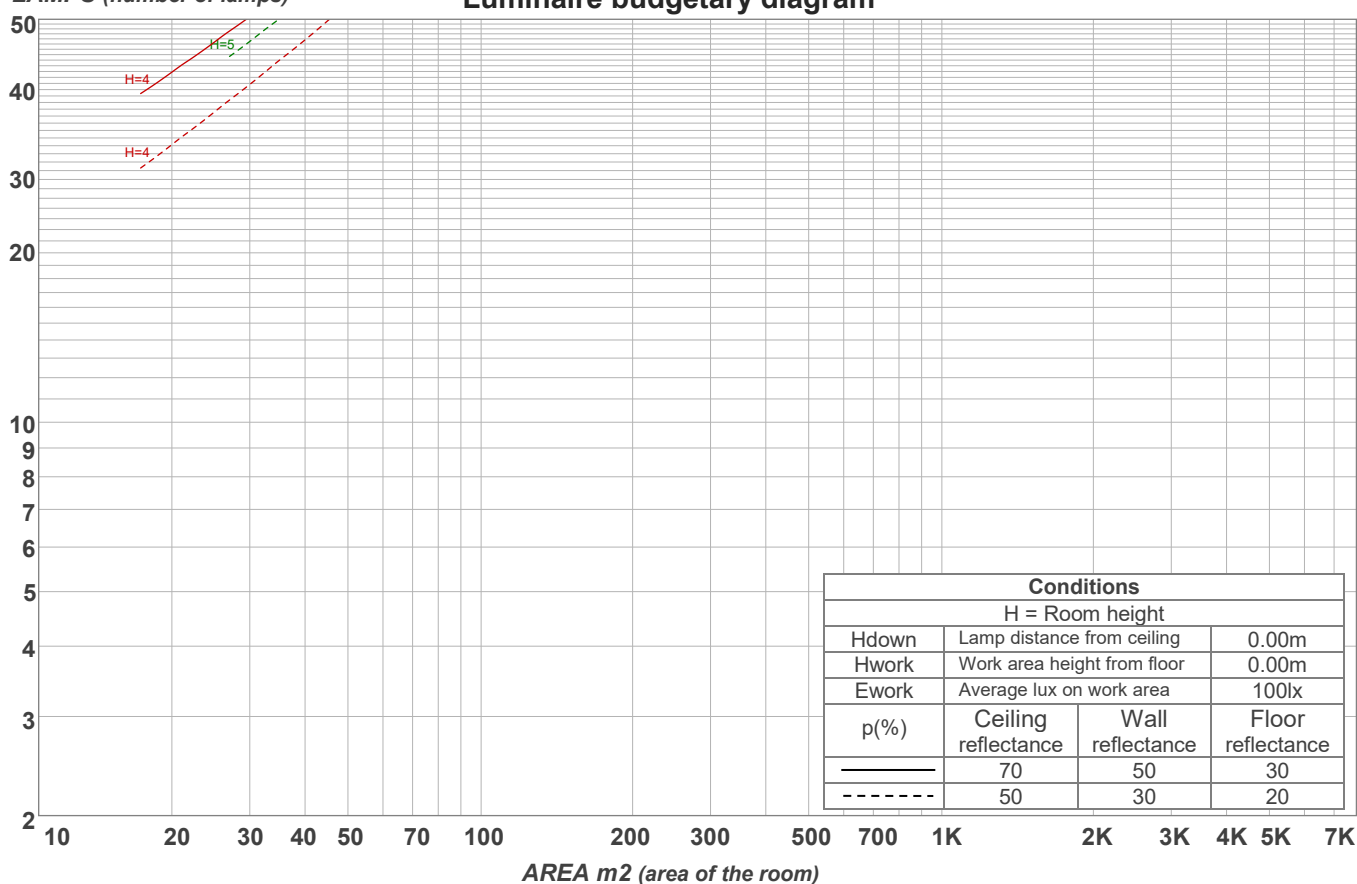
UGR data could not be calculated due to missing/wrong symmetry. Goto Edit->Photometric->Corrections and select Correct asymmetry.

## 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	107	101	96	92	104	99	95	90	95	91	88	91	88	85	87	85	82	80
2	96	87	79	72	93	85	77	71	81	75	70	78	72	68	74	70	66	64
3	86	75	65	58	84	73	64	58	70	63	57	67	61	55	64	59	54	52
4	78	65	55	48	76	64	55	47	61	53	47	59	52	46	56	50	45	43
5	71	57	47	40	69	56	47	40	54	46	39	52	45	39	50	44	38	36
6	66	51	41	34	64	50	41	34	48	40	34	46	39	33	45	38	33	31
7	60	46	36	30	59	45	36	30	43	35	29	42	35	29	40	34	29	27
8	56	42	32	26	54	41	32	26	39	31	26	38	31	26	37	30	25	23
9	52	38	29	23	51	37	29	23	36	28	23	35	28	23	34	27	23	21
10	49	35	26	21	47	34	26	21	33	26	21	32	25	21	31	25	20	19

LAMPS (number of lamps)

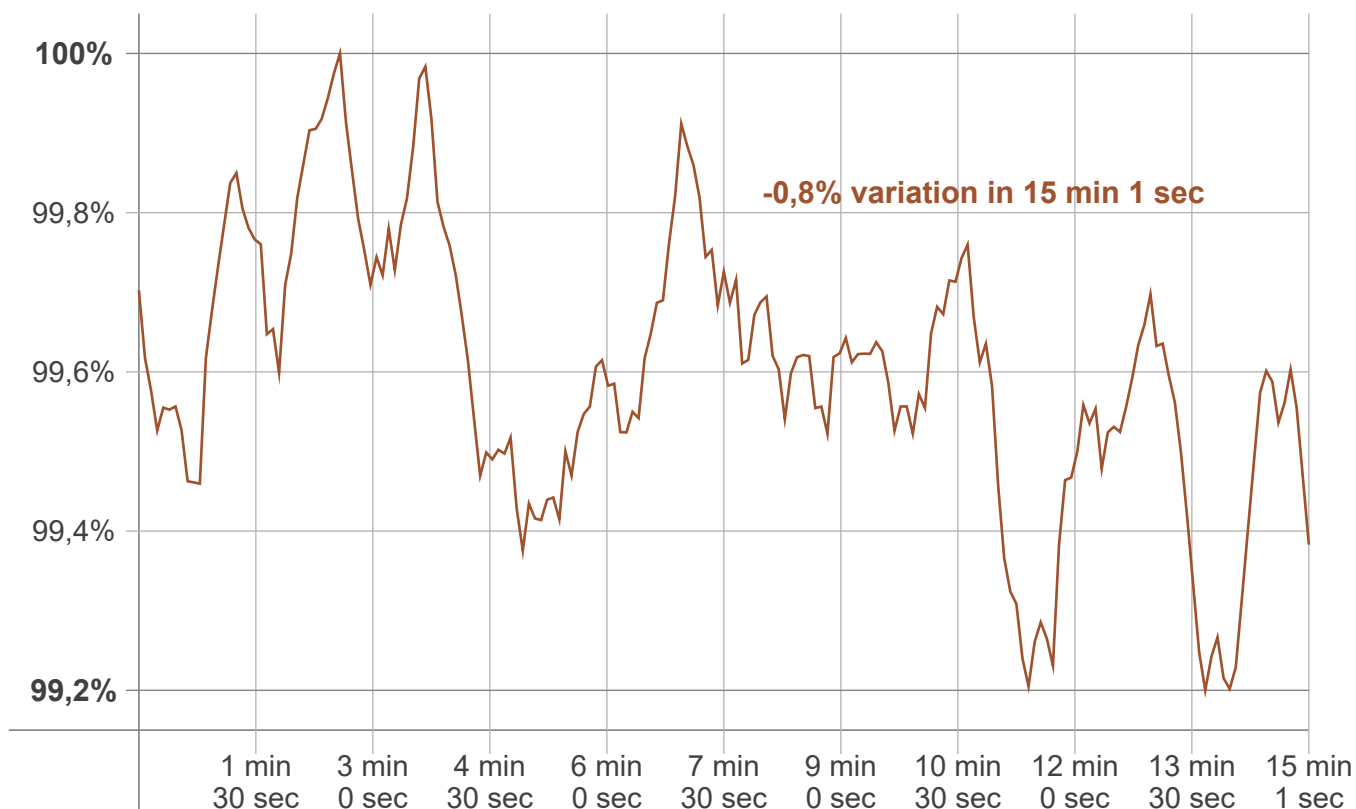
Luminaire budgetary diagram



## Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
4,58 lm	12,2 lm	18,1 lm	23,6 lm	31,0 lm	36,1 lm	29,8 lm	16,1 lm	6,53 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0,004 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

## Warmup curve



## Warmup result

Warmup time:	Lamp stabilized in 15 min 1 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
2720 K	+0 K	2720 K

## Output change

Output start	Output change	Output end
178 lm	+ lm	178 lm