Light efficiency:

115 Lumen/Watt

Light quality:

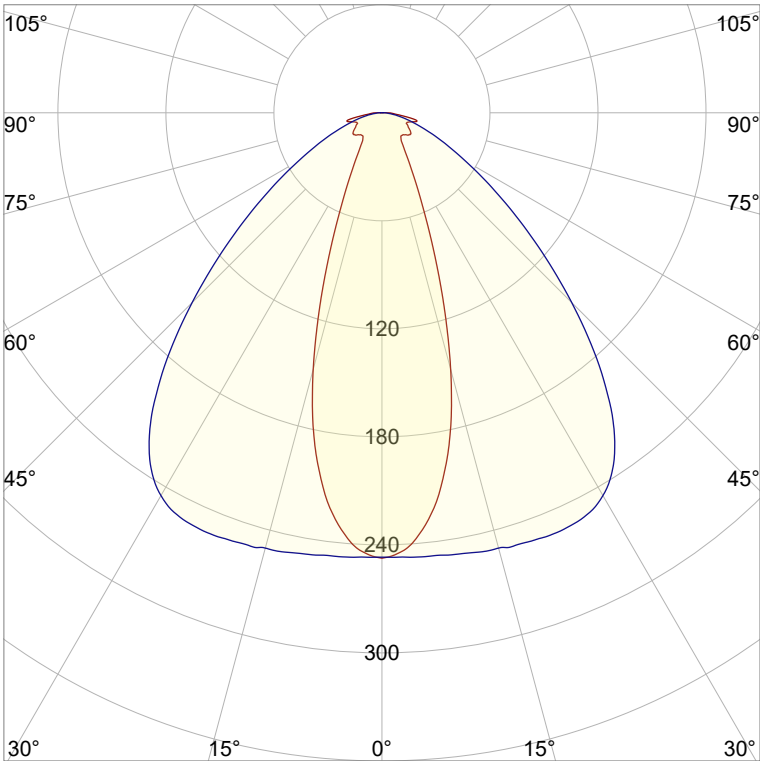
CRI: 94,3

Color temperature:

2711 K

Output: 276 lm
Peak: 253 cd

Power: 2,4 W
PF: 1,0



Product name:
Sta-Maria-6_510mm_927_Lens-30°-Frosted

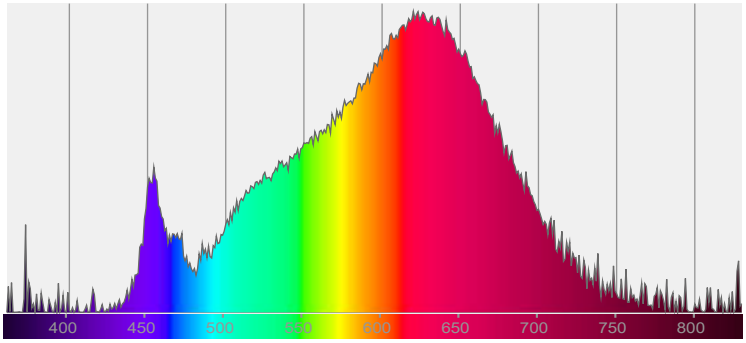
Item number:
NP/L1C/01E/G1/L1C/0510/927/L3F

Date and time:
29.06.2022 11:39:17

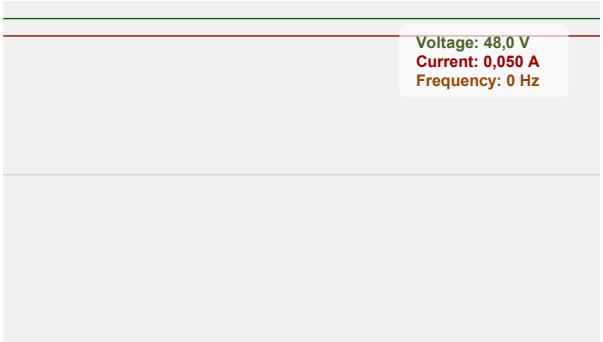
Description:
Rank: C80-AD-8GB
Tolerances:
Lumen +/-4%
Candela +/-2,5%
Colour Temp +/-35 Kelvin
CRI +/-0,7
Angular Resolution: 1 Degree Step
Last Calibration 20-09-2021
Tester: Peter Ulrich
Test Site: Lichtlabor
Gaustrasse 13
55411 Bingen am Rhein

CIE 1931
x: 0,459
y: 0,410

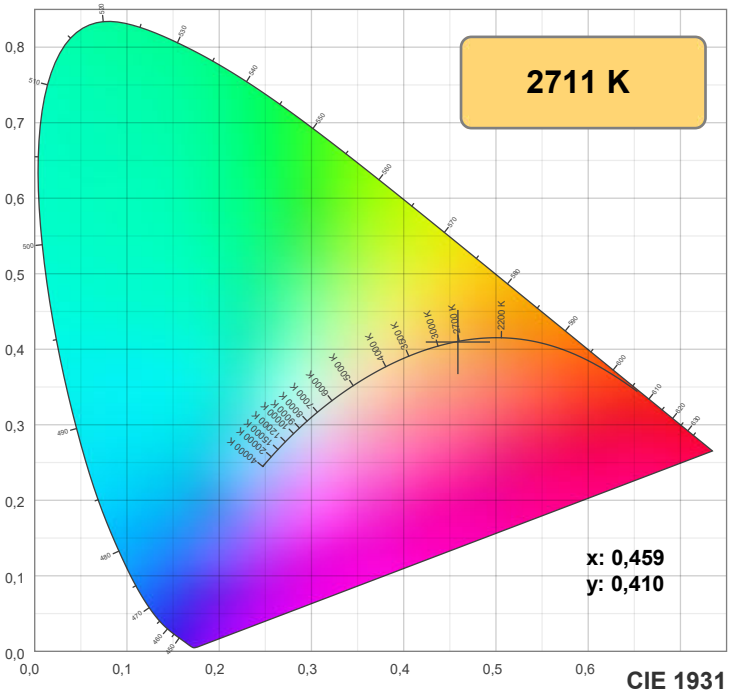
Spectra

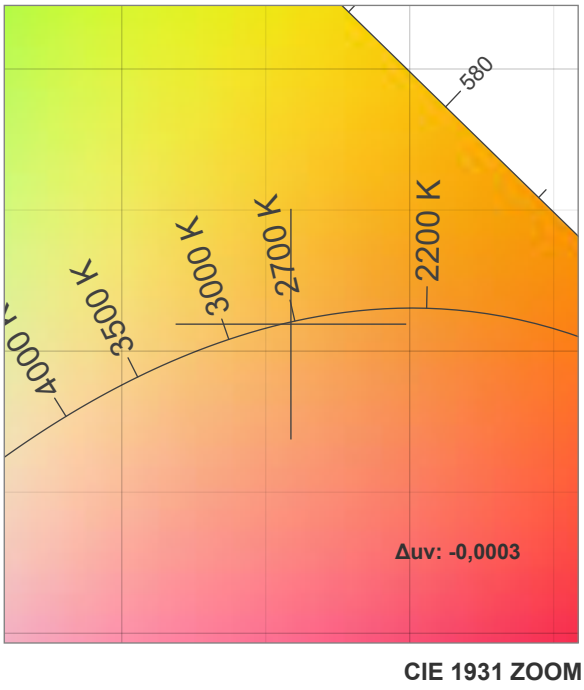


Power

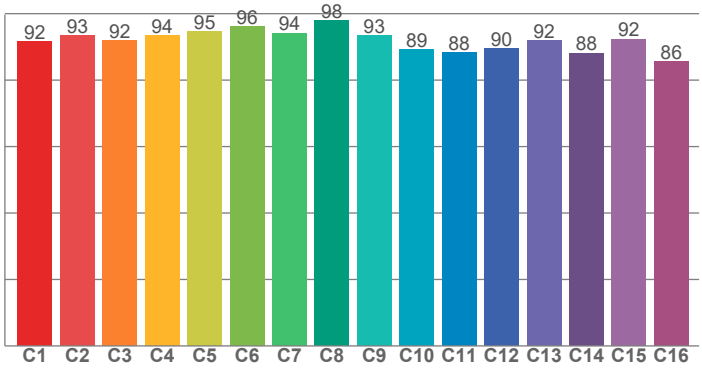


Color details

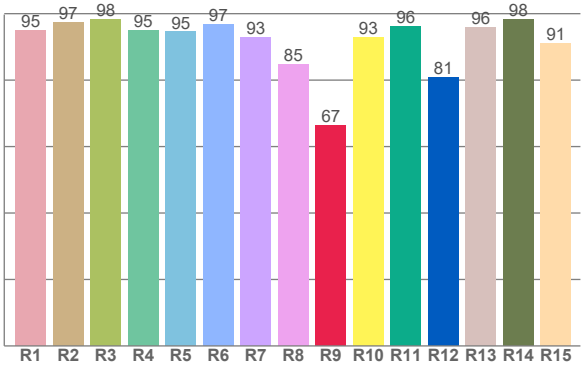




TM30: 91,8



CRI: 94,3 (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
95,0	97,5	98,3	94,9	94,5	96,7	92,9	84,7	66,5	92,9	96,3	80,9	95,8	98,1	90,9

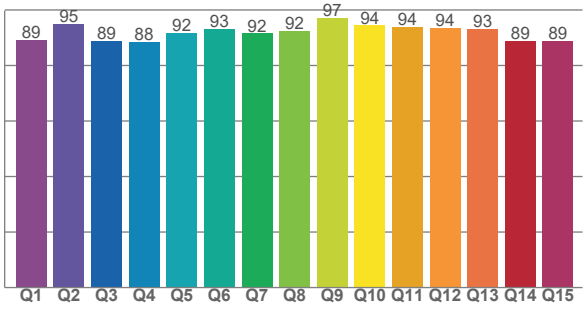
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
91,6	93,3	91,9	93,5	94,6	96,2	94,1	97,9	93,3	89,2	88,3	89,6	91,8	88,1	92,4	85,6

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
89,2	94,9	88,8	88,4	91,8	93,2	91,5	92,4	97,1	94,4	94,0	93,6	93,2	88,7	88,8

CQS: 91,4



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
2711 K	94,3	66,5	91,8	99,4	91,4	0,459	0,410	0,262	0,351	-0,0003

TM30 details

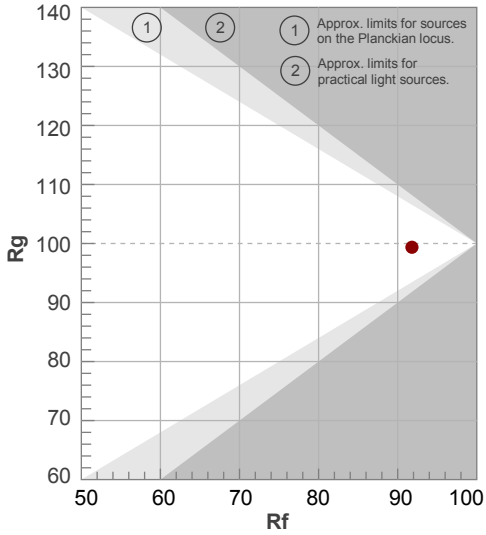
Rf 91,8

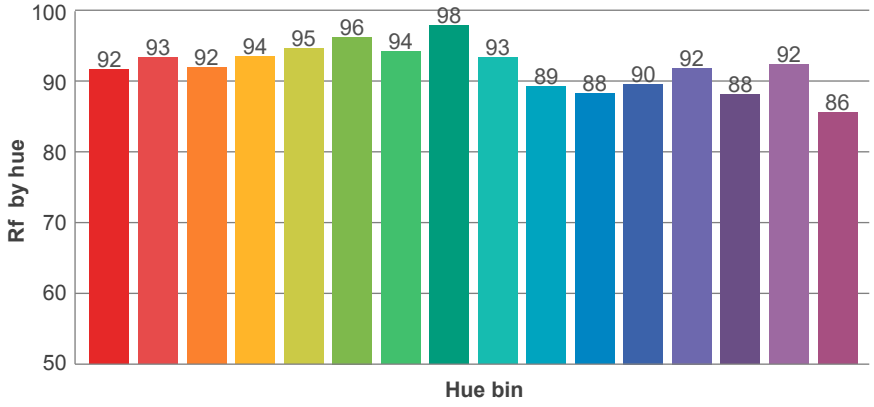
Fidelity index Rf

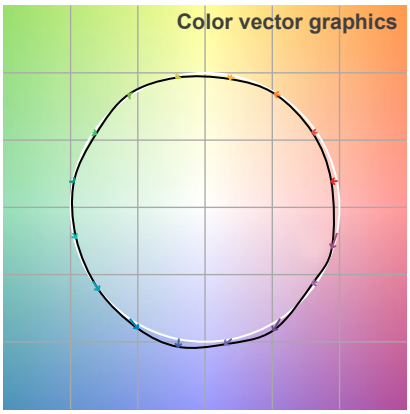
Rg 99,4

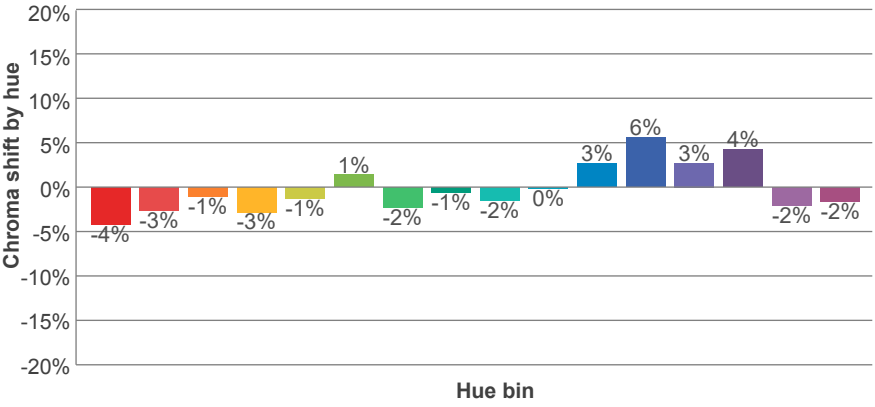
Gammut index Rg

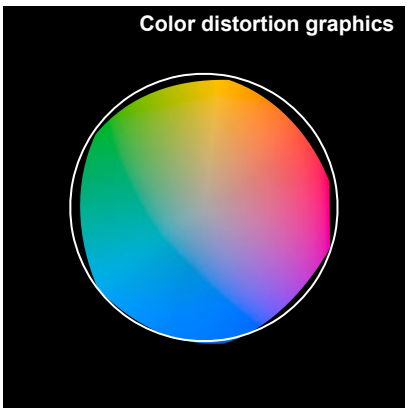
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	92	-4%	1%
2	93	-3%	2%
3	92	-1%	4%
4	94	-3%	0%
5	95	-1%	2%
6	96	1%	1%
7	94	-2%	0%
8	98	-1%	0%
9	93	-2%	4%
10	89	0%	7%
11	88	3%	8%
12	90	6%	1%
13	92	3%	-5%
14	88	4%	-9%
15	92	-2%	-3%
16	86	-2%	-11%

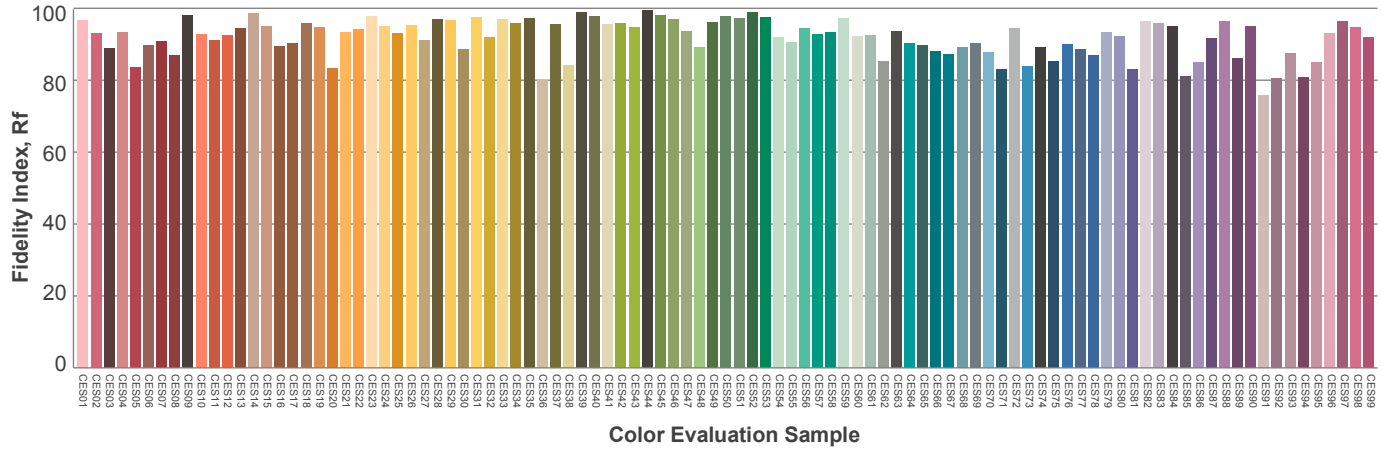




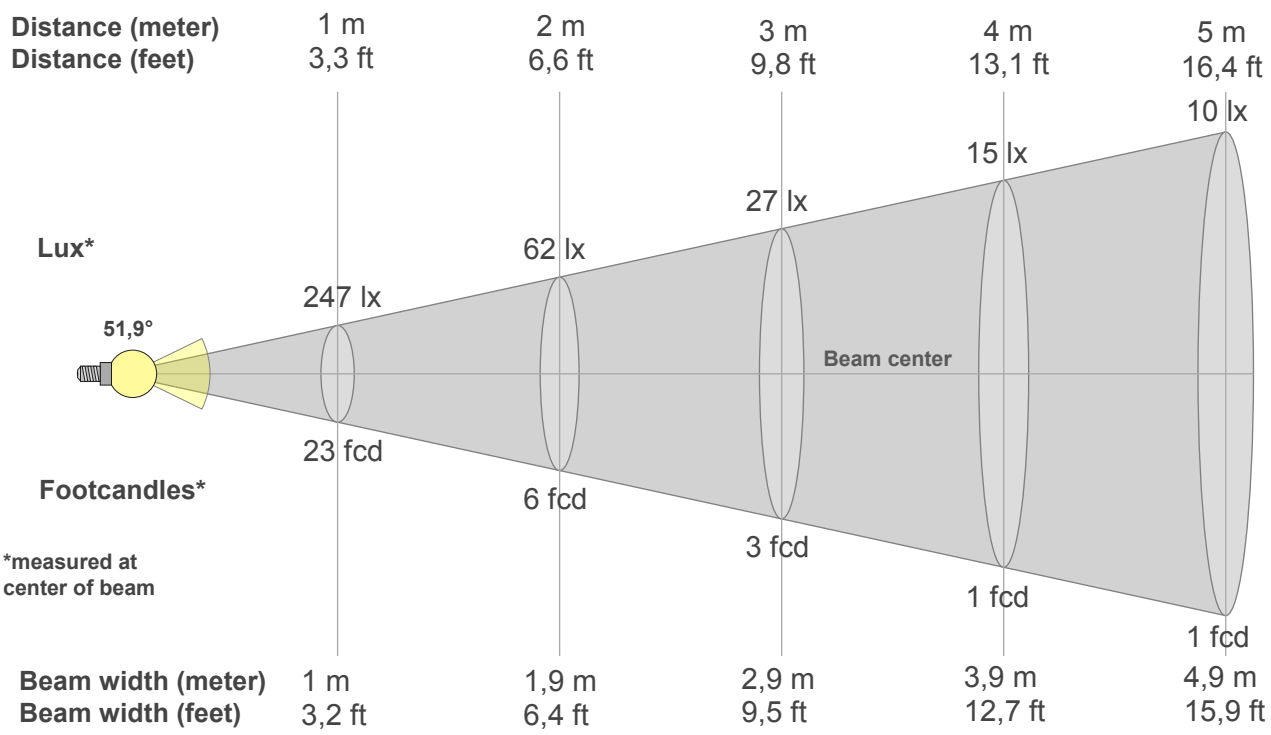








Beam details



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
247lx	62lx	27lx	15lx	10lx	7lx	5lx	4lx	3lx	2lx	2lx	2lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx
23fcd	5,7fcd	2,6fcd	1,4fcd	0,9fcd	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	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°
247	245	240	230	218	201	182	159	135	110	88	69	54	42	34	27	23	20	18	17
100%	99%	97%	93%	88%	81%	74%	65%	55%	45%	36%	28%	22%	17%	14%	11%	9%	8%	7%	7%

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°
247	247	247	248	248	249	250	250	251	252	252	253	252	251	250	245	239	231	220	206
100%	100%	100%	100%	100%	101%	101%	101%	102%	102%	102%	102%	102%	102%	101%	99%	97%	93%	89%	83%

Intensities in 180° c-plane

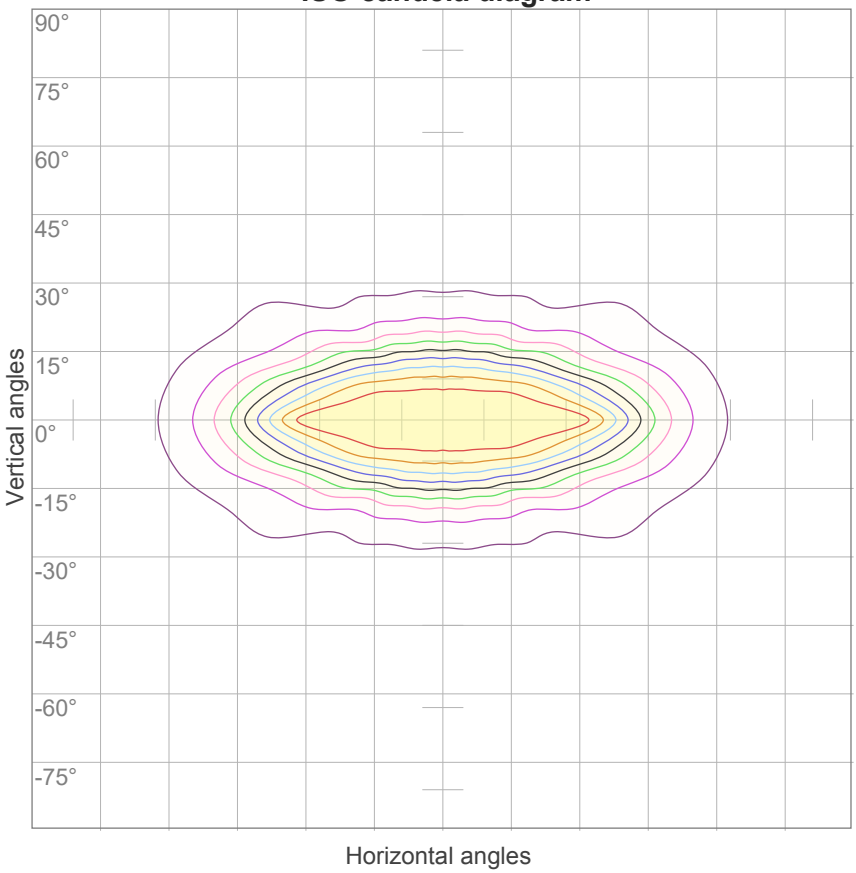
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
247	245	240	230	218	201	182	159	135	110	88	69	54	42	34	27	23	20	18	17
100%	99%	97%	93%	88%	81%	74%	65%	55%	45%	36%	28%	22%	17%	14%	11%	9%	8%	7%	7%

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°
247	247	247	248	248	249	250	250	251	252	252	253	252	251	250	245	239	231	220	206
100%	100%	100%	100%	100%	101%	101%	101%	102%	102%	102%	102%	102%	102%	101%	99%	97%	93%	89%	83%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
51,9°	**89,1°**	**171°**	**83,7%**	**69,4%**

ISO candela diagram



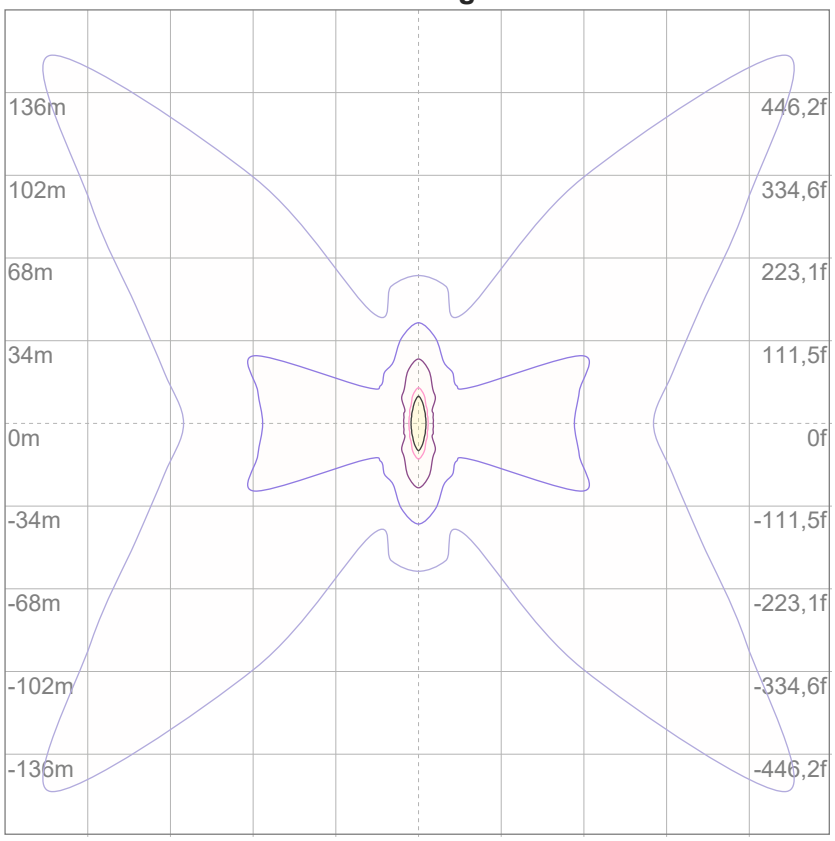
10%	25 cd
20%	49 cd
30%	74 cd
40%	99 cd
50%	124 cd
60%	148 cd
70%	173 cd
80%	198 cd
90%	222 cd

Conditions:

Number of c-planes: 16

Candela at center: 247 cd

ISO lux diagram



3%	74,1m lx
5%	0,124 lx
10%	0,247 lx
30%	0,741 lx
50%	1,24 lx

Conditions:

Number of c-planes: 16

Lux at center: 2,47 lx

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

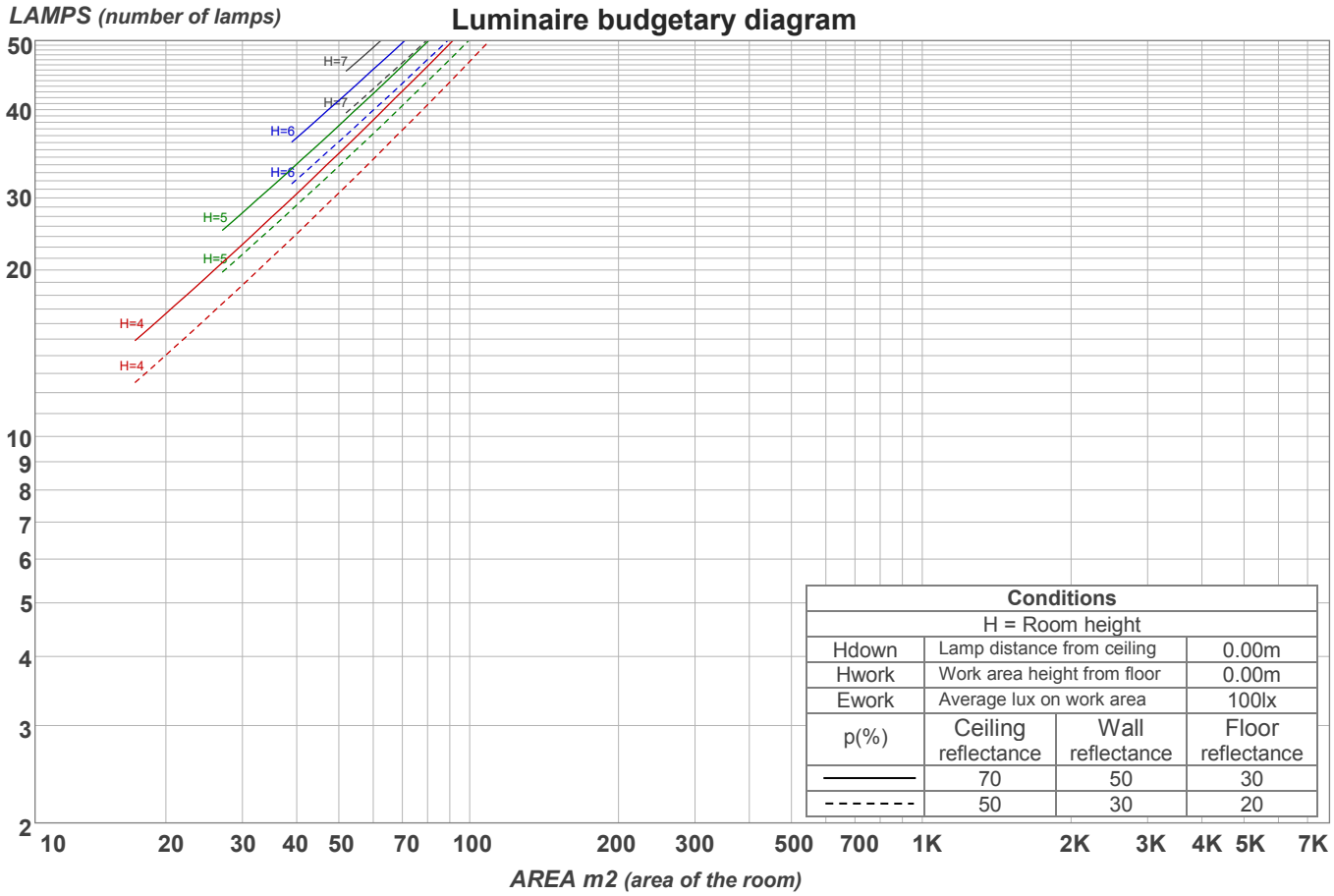
Glare Evaluation According to UGR

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	10,9	11,8	11,1	12,1	12,3	19,2	20,1	19,3	20,4	20,6
	3H	12,9	14,0	13,3	14,3	14,4	19,9	20,9	20,3	21,2	21,4
	4H	14,7	15,7	15,1	15,9	16,2	20,2	21,2	20,6	21,5	21,7
	6H	16,4	17,3	16,7	17,6	18,0	20,5	21,4	20,8	21,7	22,1
	8H	16,8	17,6	17,1	18,0	18,4	20,6	21,4	20,9	21,8	22,2
	12H	17,0	17,8	17,3	18,1	18,6	20,6	21,5	21,0	21,8	22,2
4H	2H	11,6	12,6	12,0	12,9	13,1	18,9	19,9	19,3	20,2	20,4
	3H	14,0	14,9	14,4	15,2	15,6	19,9	20,7	20,2	21,0	21,5
	4H	15,8	16,6	16,3	17,0	17,6	20,2	21,0	20,6	21,4	21,9
	6H	17,8	18,5	18,3	18,9	19,2	20,6	21,3	21,1	21,7	22,0
	8H	18,2	18,9	18,7	19,3	19,6	20,7	21,4	21,2	21,7	22,1
	12H	18,4	19,0	18,9	19,4	19,9	20,8	21,4	21,3	21,8	22,2
8H	4H	16,3	17,0	16,8	17,3	17,7	20,2	20,9	20,7	21,3	21,7
	6H	18,5	19,0	19,0	19,4	20,0	20,7	21,2	21,2	21,7	22,2
	8H	19,1	19,5	19,6	20,0	20,7	20,9	21,4	21,4	21,9	22,5
	12H	19,4	19,8	20,0	20,3	20,9	21,1	21,5	21,7	22,0	22,6
12H	4H	16,3	16,9	16,8	17,3	17,8	20,2	20,8	20,7	21,2	21,7
	6H	18,6	19,1	19,1	19,6	20,2	20,8	21,2	21,3	21,8	22,4
	8H	19,2	19,6	19,8	20,1	20,7	21,0	21,4	21,6	21,9	22,5
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,1 / -0,1					1,0 / -1,0				
S = 1.5H		0,1 / -0,1					2,4 / -1,9				
S = 2.0H		0,2 / -0,2					3,7 / -2,6				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 276 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	118	118	118	118	115	115	115	115	110	110	110	105	105	105	100	100	100	98
1	110	105	102	98	107	103	100	96	98	96	93	94	92	90	90	88	87	85
2	102	95	89	84	99	93	87	83	89	84	81	85	82	78	82	79	76	74
3	95	86	79	73	92	84	78	72	81	75	71	78	73	70	75	71	68	66
4	88	78	71	65	86	77	70	64	74	68	63	72	66	62	69	65	61	59
5	83	72	64	58	81	71	63	58	68	62	57	66	61	57	64	60	56	54
6	78	66	59	53	76	65	58	53	63	57	52	62	56	52	60	55	51	49
7	73	61	54	49	71	61	53	48	59	53	48	57	52	48	56	51	47	45
8	69	57	50	45	67	57	50	45	55	49	44	54	48	44	53	47	44	42
9	65	54	46	42	64	53	46	42	52	46	41	51	45	41	49	44	41	39
10	62	50	43	39	61	50	43	39	49	43	39	48	42	38	47	42	38	37

Luminaire budgetary diagram

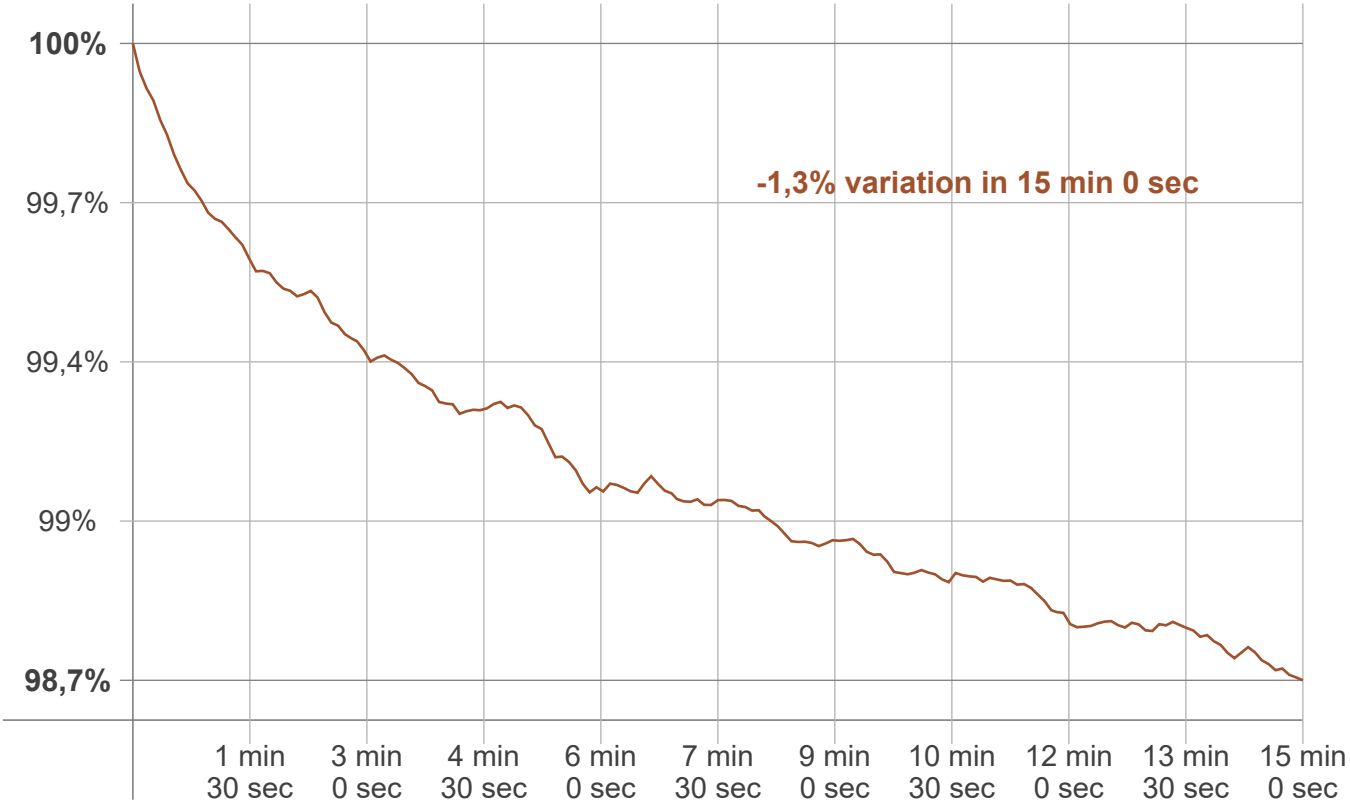


Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
22,5 lm	53,8 lm	54,8 lm	43,1 lm	32,4 lm	24,5 lm	17,2 lm	13,6 lm	7,68 lm

90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
2,16 lm	1,05 lm	0,896 lm	0,810 lm	0,559 lm	0,375 lm	0,276 lm	0,169 lm	0,057 lm

Warmup curve



Warmup result

Warmup time:	**Lamp stabilized in 15 min 0 sec**
Warmup variation	**-1,3%**

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
2713 K	-2 K	2711 K

Output change

Output start	Output change	Output end
279 lm	-3 lm	276 lm