



Light efficiency:

97 Lumen/Watt

Light quality:

CRI: 94,5

Color temperature:

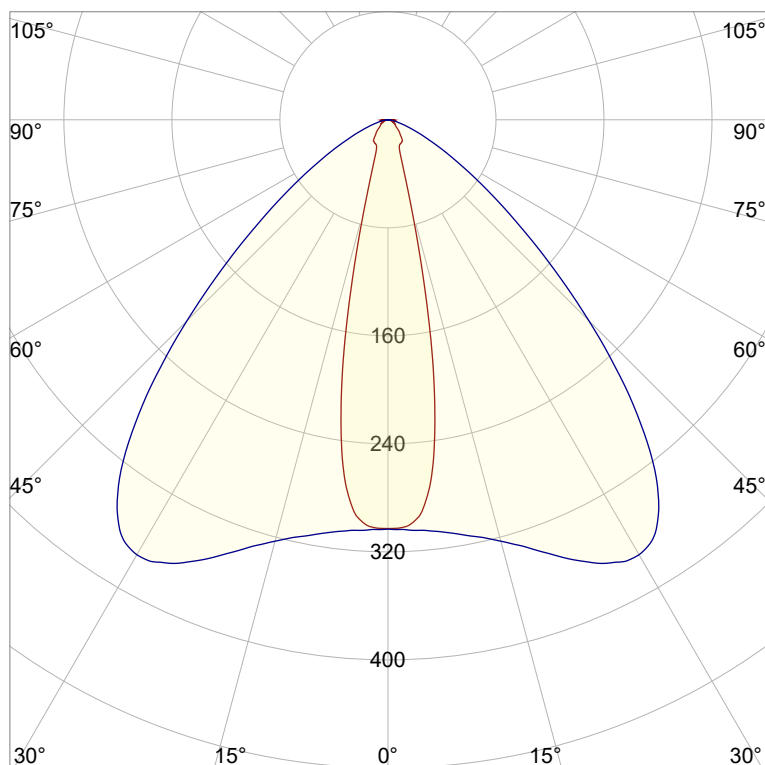
2754 K

Output: 232 lm

Peak: 372 cd

Power: 2,4 W

PF: 1,0



Product name:

Sta-Maria-6_510mm_927_Inlay-Lens-30-Grad

Item number:

NP/L1C/01E/0510/927/IL3F

Date and time:

17.07.2025 14:51:06

Description:

Rank: C80-AC-8GB

Tolerances:

Lumen +/-4%

Candela +/-2,5%

Colour Temp +/-35 Kelvin

CRI +/-0,7

Angular Resolution: 1 Degree Step

Last Calibration 13.10.2023

Tester: Peter Ulrich

Test Site: Lichtlabor

Gaustrasse 13

55411 Bingen am Rhein

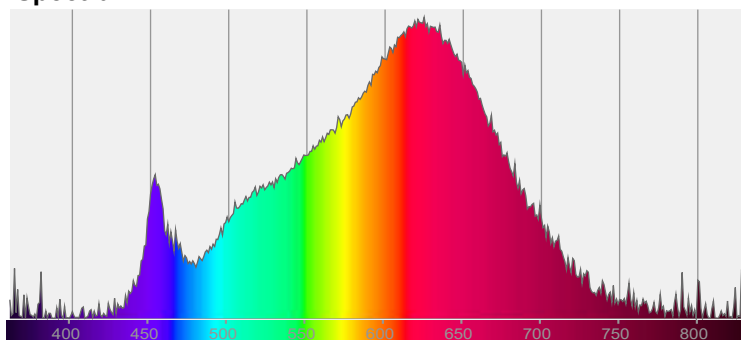


CIE 1931

x: 0,454

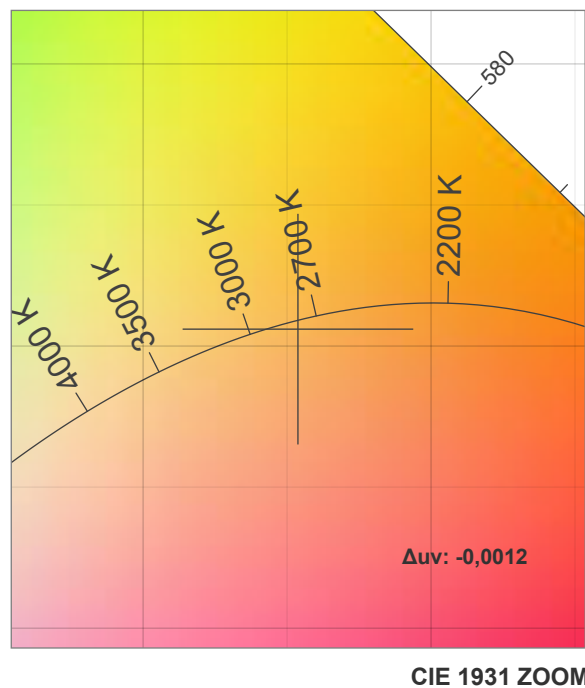
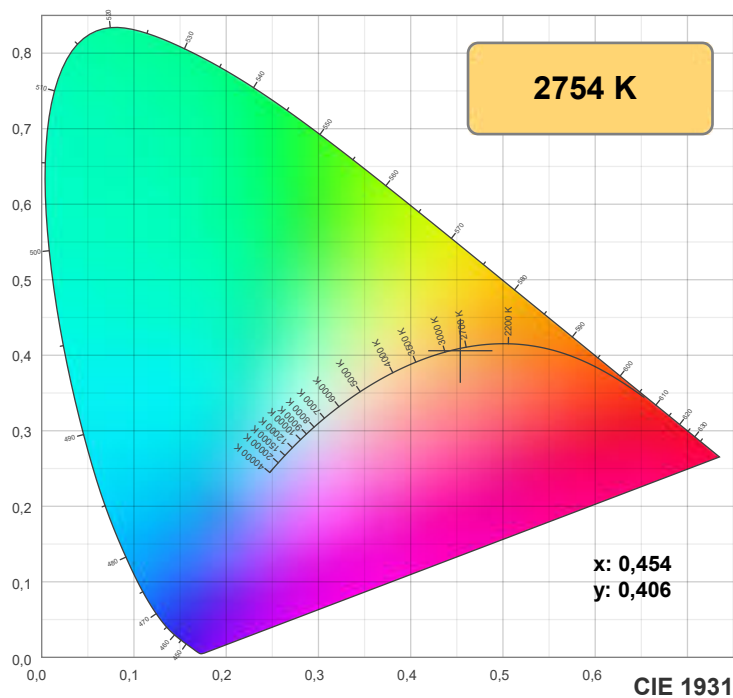
y: 0,406

Spectra

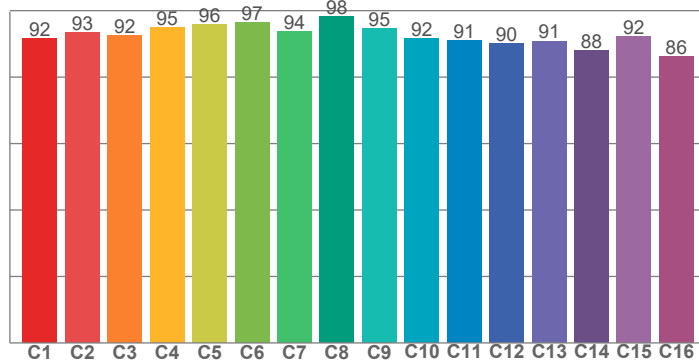


Power

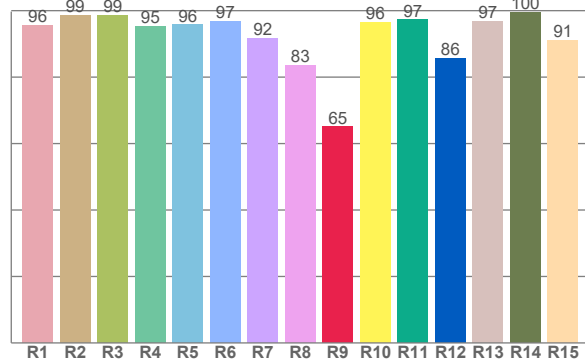
Voltage: 48,0 V
Current: 0,050 A
Frequency: 0 Hz



TM30: 92,7



CRI: 94,5 (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
95,5	98,7	98,6	95,3	95,7	96,9	91,6	83,4	65,0	96,4	97,2	85,8	96,7	99,5	91,1

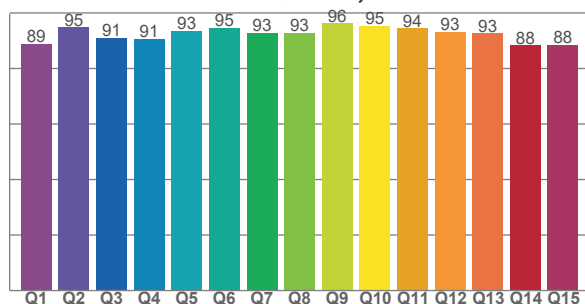
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
91,7	93,5	92,4	95,1	95,7	96,5	93,8	98,1	94,7	91,8	91,0	90,2	90,9	87,9	92,3	86,2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
88,9	94,8	90,9	90,6	93,4	94,6	92,7	92,8	96,3	95,4	94,5	93,3	92,7	88,4	88,4

CQS: 92,0



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
2754 K	94,5	65,0	92,7	99,4	92,0	0,454	0,406	0,261	0,350	-0,0012



TM30 details



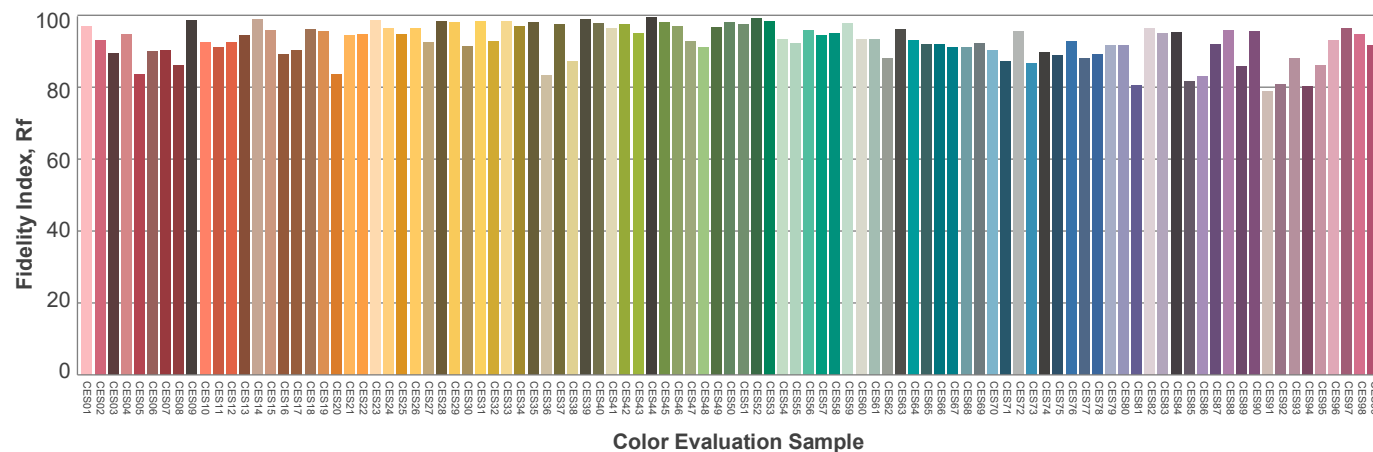
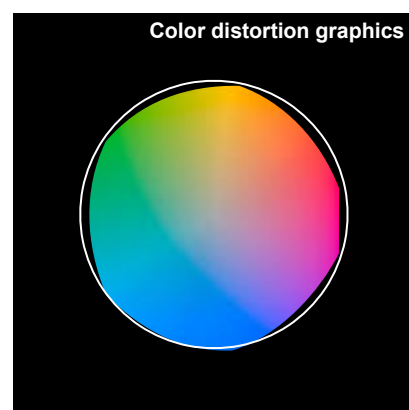
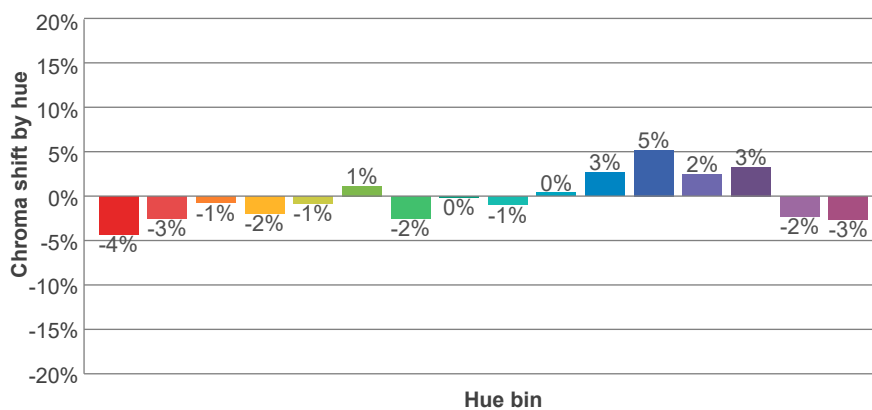
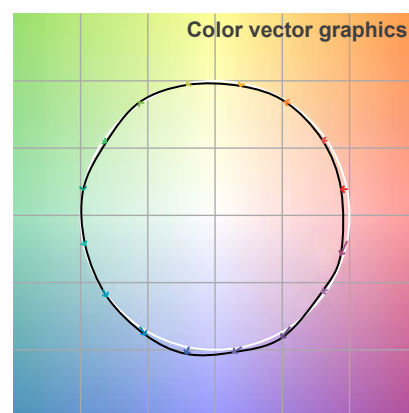
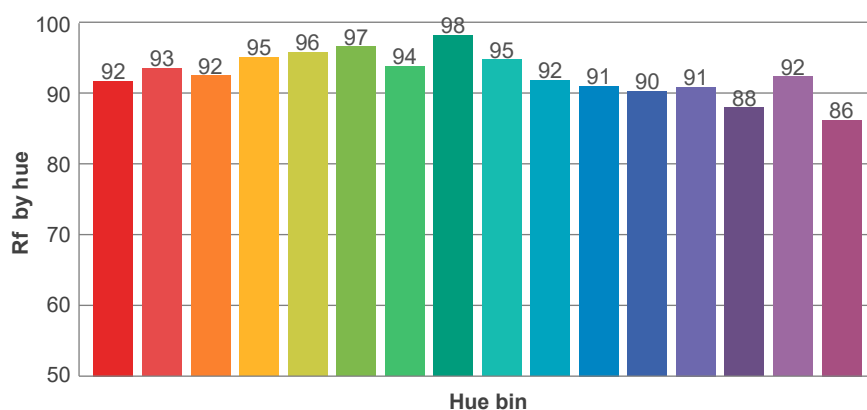
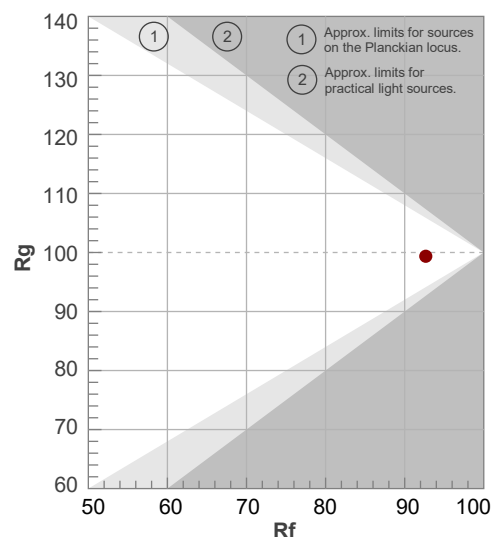
Rf 92,7

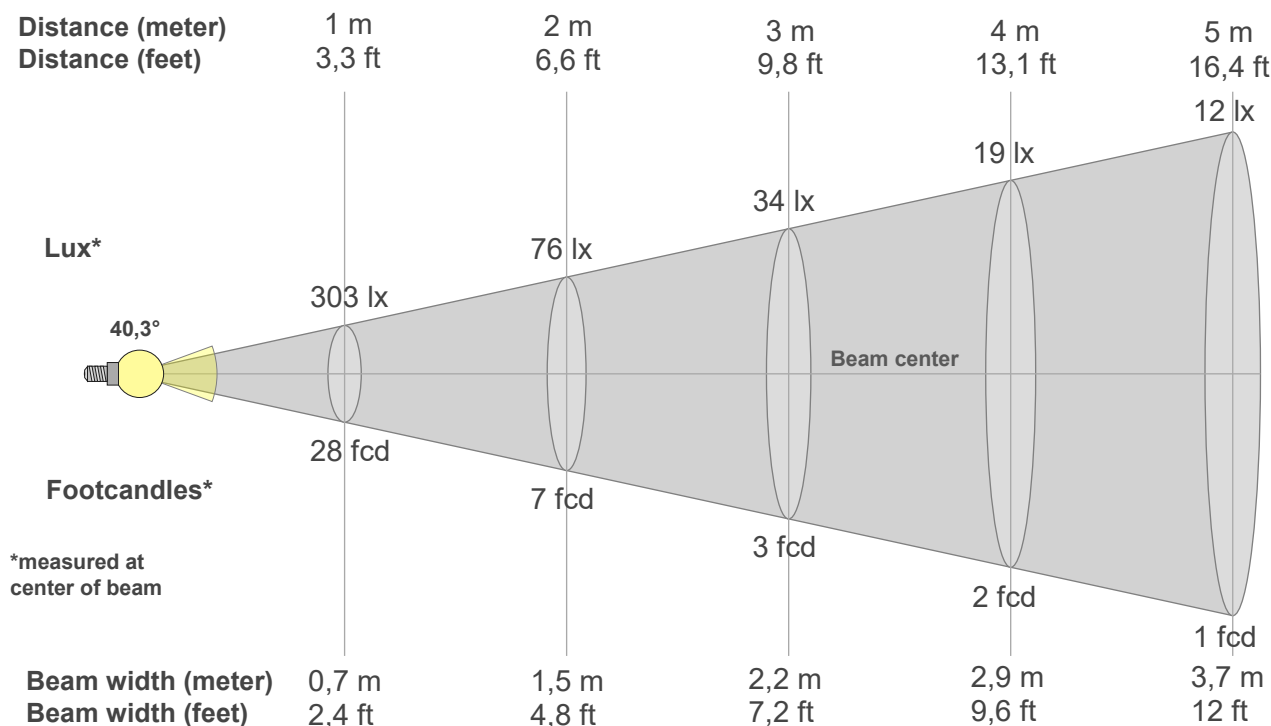
Fidelity index Rf

Rg 99,4

Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	92	-4%	1%
2	93	-3%	2%
3	92	-1%	4%
4	95	-2%	0%
5	96	-1%	2%
6	97	1%	0%
7	94	-2%	0%
8	98	0%	1%
9	95	-1%	3%
10	92	0%	5%
11	91	3%	6%
12	90	5%	-1%
13	91	2%	-7%
14	88	3%	-9%
15	92	-2%	-3%
16	86	-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
303lx	76lx	34lx	19lx	12lx	8lx	6lx	5lx	4lx	3lx	3lx	2lx	2lx	2lx	1lx	1lx	1lx	1lx	1lx	1lx
28,1fcd	7fcd	3,1fcd	1,8fcd	1,1fcd	0,8fcd	0,6fcd	0,4fcd	0,3fcd	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°
303	302	297	279	246	196	138	86	53	35	26	23	21	20	20	20	19	19	18	16
100%	100%	98%	92%	81%	65%	45%	28%	17%	12%	9%	7%	7%	7%	7%	7%	6%	6%	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°
303	304	305	306	309	312	316	320	326	333	341	350	358	365	371	372	368	357	340	317
100%	100%	101%	101%	102%	103%	104%	106%	108%	110%	113%	116%	118%	121%	122%	123%	122%	118%	112%	105%

Intensities in 180° c-plane

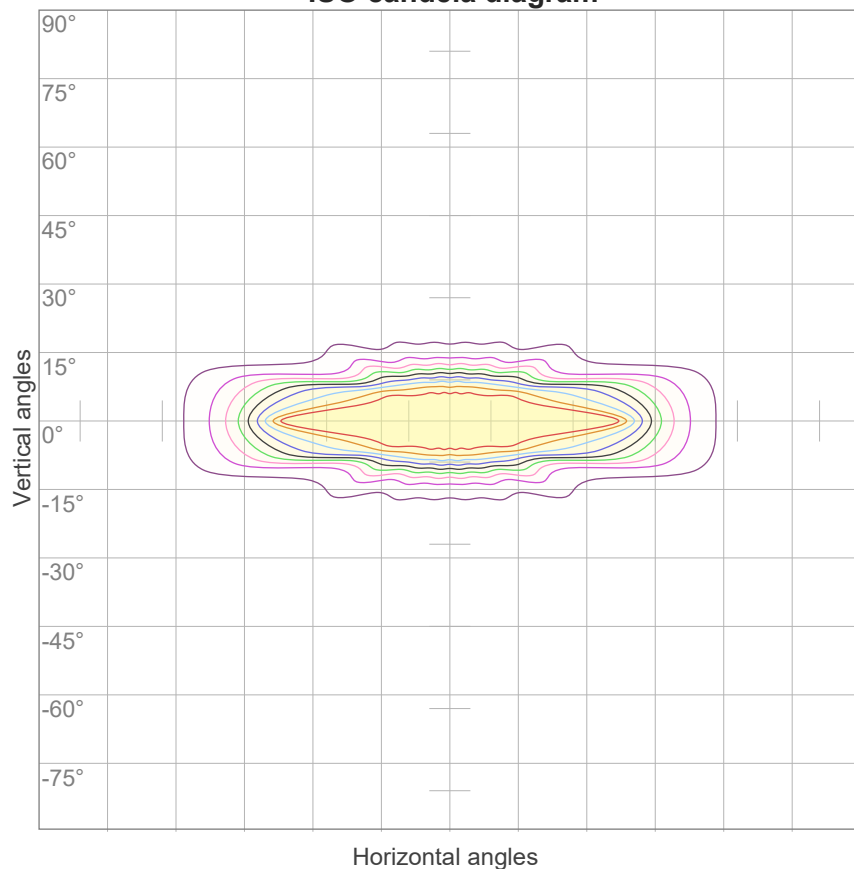
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
303	302	297	279	246	196	138	86	53	35	26	23	21	20	20	20	19	19	18	16
100%	100%	98%	92%	81%	65%	45%	28%	17%	12%	9%	7%	7%	7%	7%	7%	6%	6%	6%	5%

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°
303	304	305	306	309	312	316	320	326	333	341	350	358	365	371	372	368	357	340	317
100%	100%	101%	101%	102%	103%	104%	106%	108%	110%	113%	116%	118%	121%	122%	123%	122%	118%	112%	105%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
40,3°	61,7°	125,7°	90,2%	76,5%

ISO candela diagram



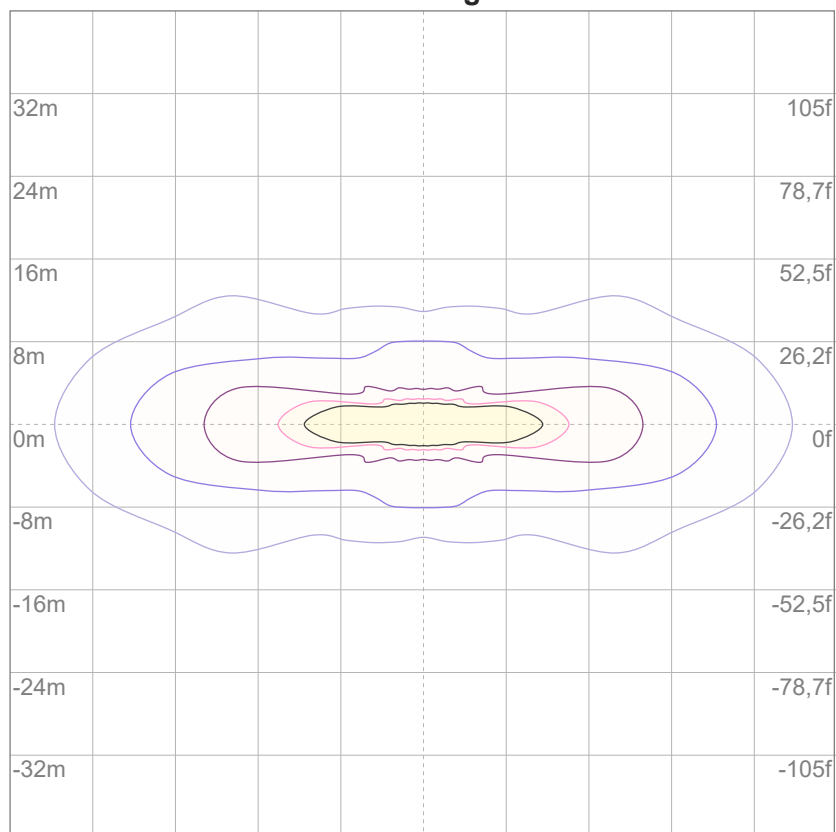
10%	30 cd
20%	61 cd
30%	91 cd
40%	121 cd
50%	151 cd
60%	182 cd
70%	212 cd
80%	242 cd
90%	272 cd

Conditions:

Number of c-planes: 16

Candela at center: 303 cd

ISO lux diagram



3%	90,8m lx
5%	0,151 lx
10%	0,303 lx
30%	0,908 lx
50%	1,51 lx

Conditions:

Number of c-planes: 16

Lux at center: 3,03 lx

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

Glare Evaluation According to UGR

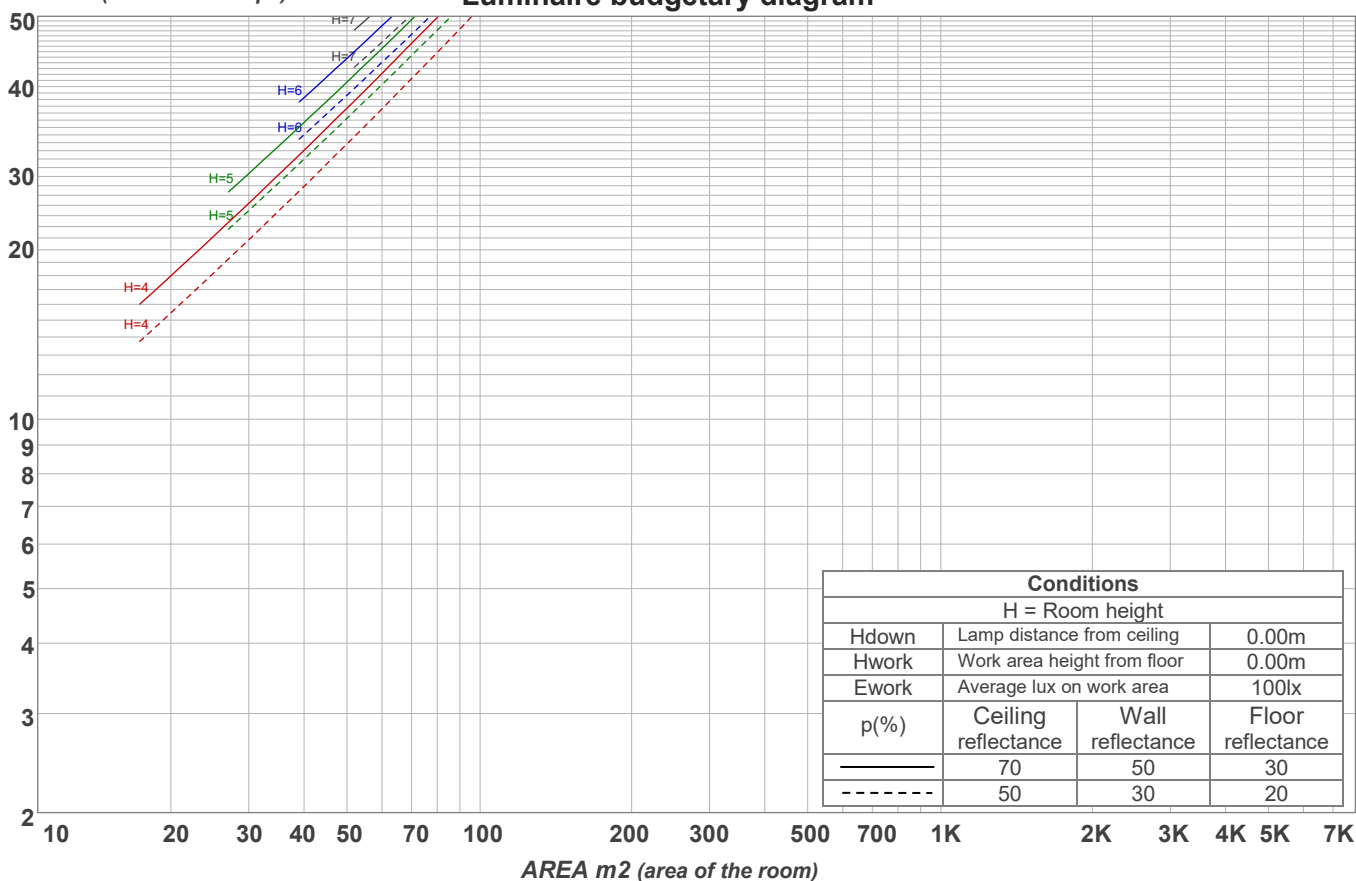
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	6,2	7,0	6,3	7,3	7,5	20,2	21,1	20,4	21,3	21,5
	3H	6,9	7,9	7,3	8,1	8,3	20,5	21,4	20,9	21,7	21,9
	4H	7,6	8,5	8,0	8,7	9,0	20,6	21,5	21,0	21,8	22,0
	6H	8,6	9,4	8,9	9,7	10,0	20,7	21,5	21,0	21,8	22,1
	8H	9,3	10,0	9,6	10,3	10,7	20,7	21,4	21,0	21,8	22,2
	12H	10,0	10,7	10,3	11,0	11,5	20,6	21,4	21,0	21,7	22,2
4H	2H	7,4	8,3	7,8	8,6	8,8	19,9	20,8	20,3	21,1	21,3
	3H	8,4	9,2	8,8	9,5	10,0	20,4	21,1	20,7	21,5	21,9
	4H	9,1	9,8	9,5	10,2	10,7	20,5	21,1	20,9	21,6	22,1
	6H	10,1	10,8	10,6	11,1	11,5	20,5	21,2	21,0	21,6	21,9
	8H	10,8	11,5	11,3	11,8	12,2	20,5	21,2	21,1	21,5	21,9
	12H	11,6	12,1	12,1	12,5	13,0	20,5	21,0	21,0	21,5	21,9
8H	4H	9,8	10,4	10,3	10,8	11,2	20,4	21,0	20,9	21,3	21,7
	6H	11,1	11,5	11,6	12,0	12,5	20,5	20,9	21,0	21,4	21,9
	8H	11,9	12,3	12,4	12,8	13,5	20,6	20,9	21,1	21,5	22,1
	12H	12,9	13,2	13,4	13,7	14,3	20,6	20,9	21,2	21,4	22,0
12H	4H	9,9	10,4	10,4	10,8	11,3	20,3	20,8	20,8	21,2	21,7
	6H	11,3	11,7	11,9	12,2	12,9	20,5	20,9	21,0	21,4	22,0
	8H	12,2	12,6	12,8	13,1	13,7	20,5	20,9	21,1	21,4	22,0
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,1 / -0,2					2,3 / -3,0				
S = 1.5H		0,3 / -0,3					4,4 / -4,2				
S = 2.0H		0,3 / -0,5					6,1 / -5,1				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 232 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	110	110	110	105	105	105	101	101	101	99
1	111	108	104	101	108	105	102	100	101	98	96	97	95	93	93	92	90	88
2	104	98	93	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	76	73	71
4	91	82	75	70	89	81	75	70	78	73	69	76	71	68	74	70	67	65
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	69	65	61	59
6	81	70	63	58	79	70	63	58	68	62	58	66	61	57	65	60	56	55
7	76	66	59	54	75	65	58	54	63	57	53	62	57	53	61	56	52	51
8	72	62	55	50	71	61	54	50	60	54	49	58	53	49	57	52	49	47
9	69	58	51	47	67	57	51	47	56	50	46	55	50	46	54	49	46	44
10	65	55	48	44	64	54	48	44	53	47	43	52	47	43	51	47	43	42

LAMPS (number of lamps)

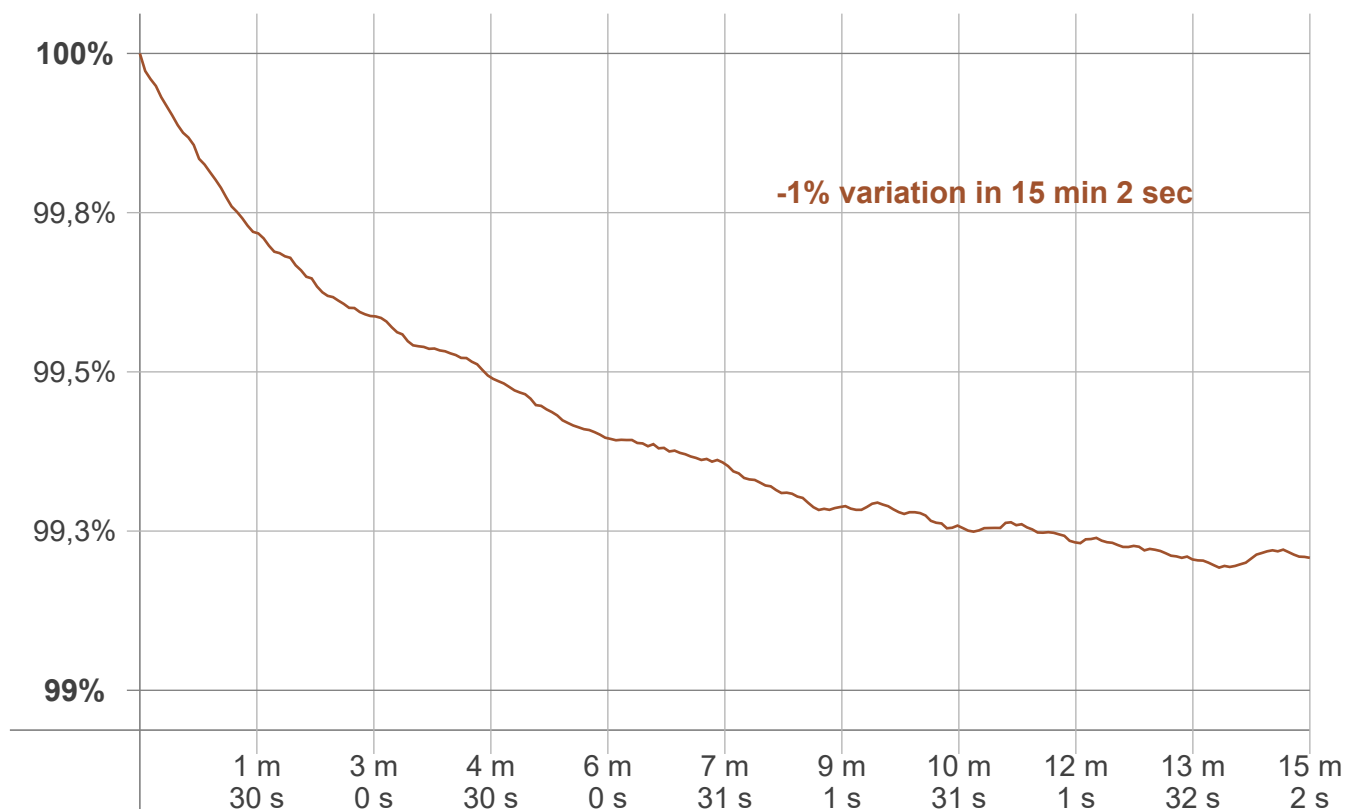
Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
27,3 lm	50,2 lm	43,1 lm	39,8 lm	30,3 lm	18,3 lm	10,3 lm	5,62 lm	3,62 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
1,46 lm	0,349 lm	0,308 lm	0,278 lm	0,240 lm	0,195 lm	0,144 lm	0,088 lm	0,030 lm

Warmup curve



Warmup result

Warmup time:	Lamp stabilized in 15 min 2 sec
Warmup variation	-1,0%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
2754 K	0 K	2754 K

Output change

Output start	Output change	Output end
234 lm	-2 lm	232 lm