

Light efficiency:

63 Lumen/Watt

Light quality:

CRI: 94,5

Color temperature:

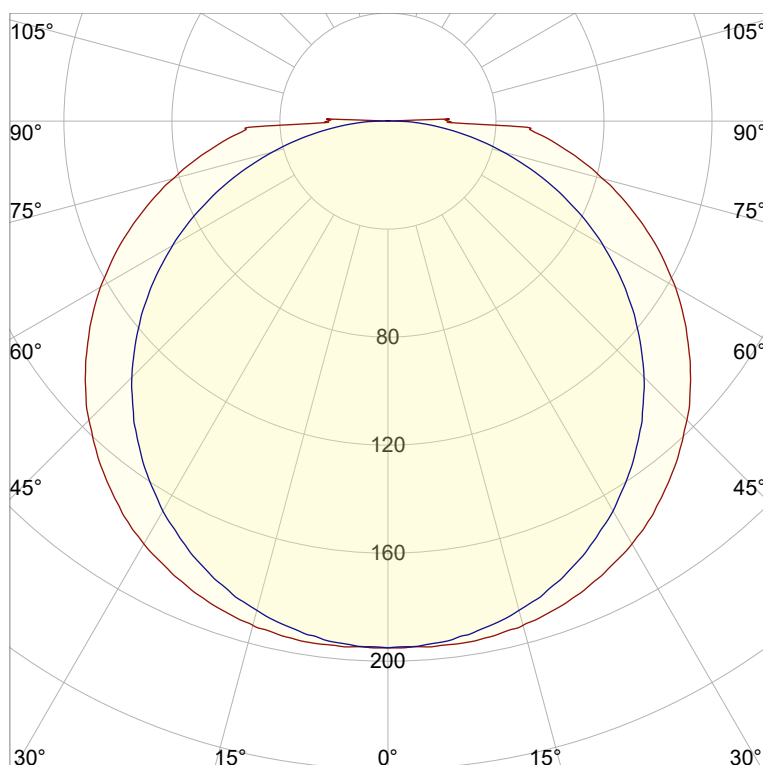
2670 K

Output: 726 lm

Peak: 195 cd

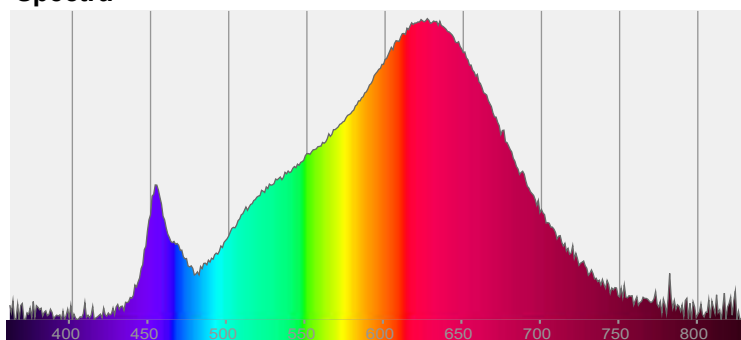
Power: 11,5 W

PF: 1,0



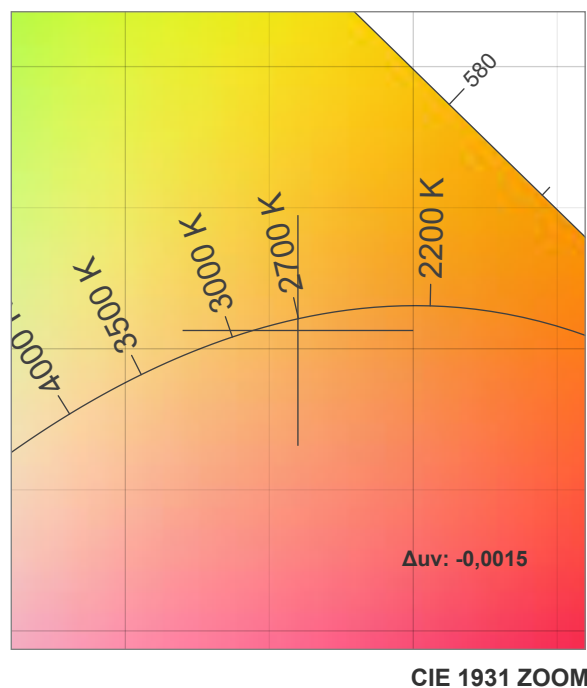
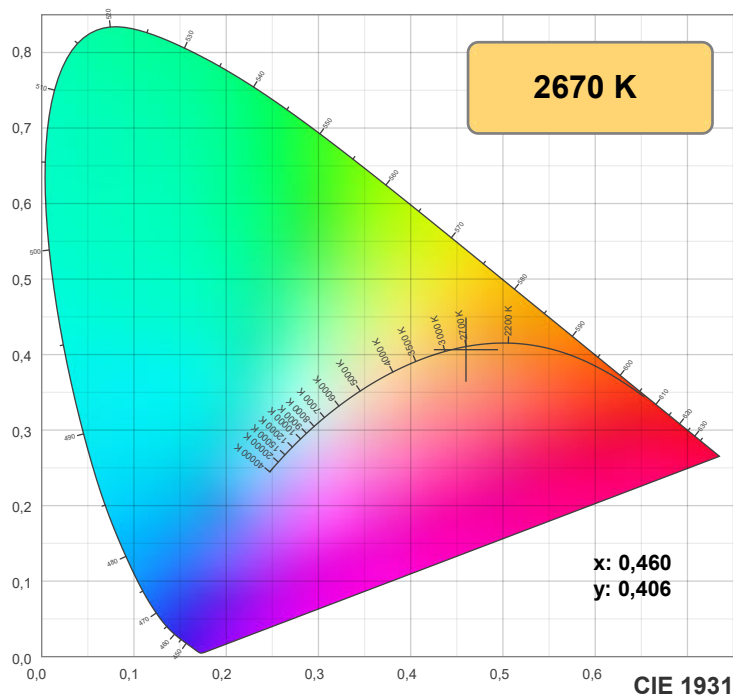
CIE 1931
x: 0,460
y: 0,406

Spectra

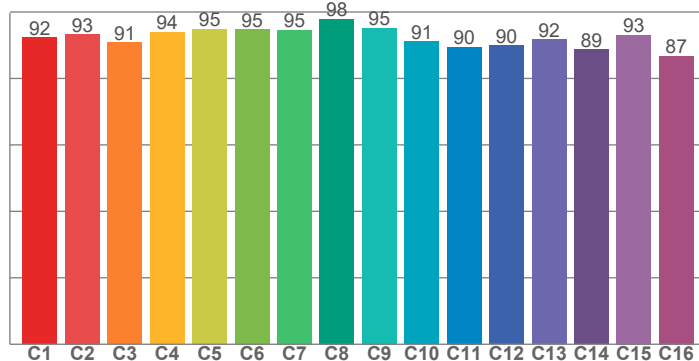


Power

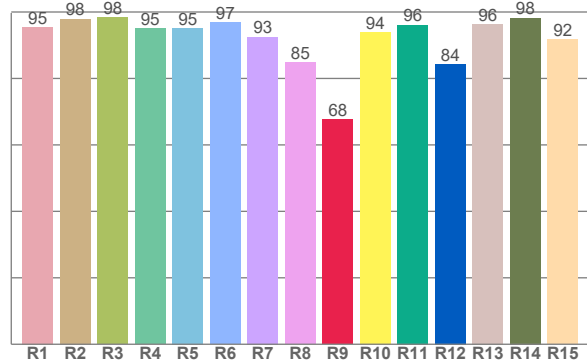
Voltage: 48,0 V
Current: 0,240 A
Frequency: 0 Hz



TM30: 92,3



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
95,4	97,9	98,3	95,0	95,2	96,9	92,5	84,8	67,6	93,9	96,1	84,3	96,4	98,2	91,7

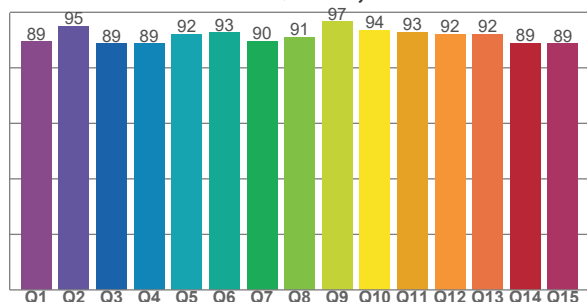
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
92,3	93,3	90,8	94,0	94,9	94,8	94,6	97,9	95,3	91,1	89,5	89,9	91,8	88,7	93,1	86,8

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
89,4	95,0	88,7	88,7	92,2	92,7	89,6	91,0	96,7	93,5	92,8	92,2	92,2	88,8	88,8

CQS: 91,0



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
2670 K	94,5	67,6	92,3	100,5	91,0	0,460	0,406	0,264	0,351	-0,0015

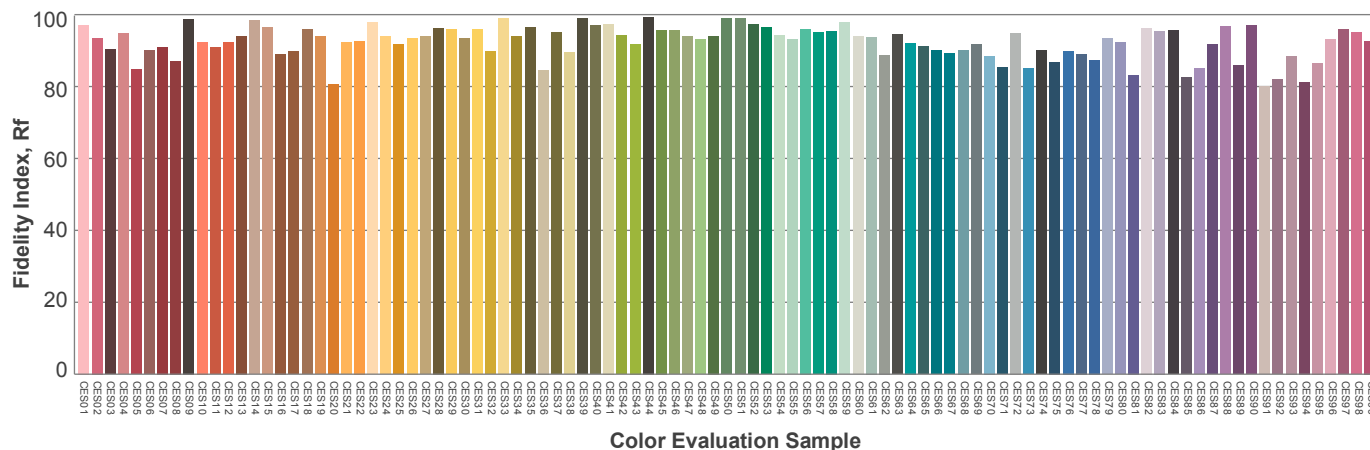
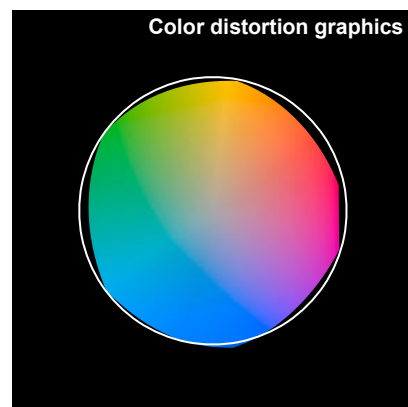
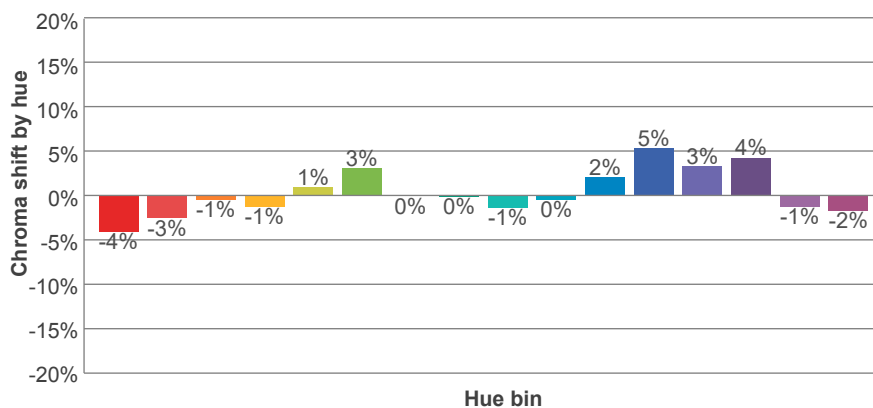
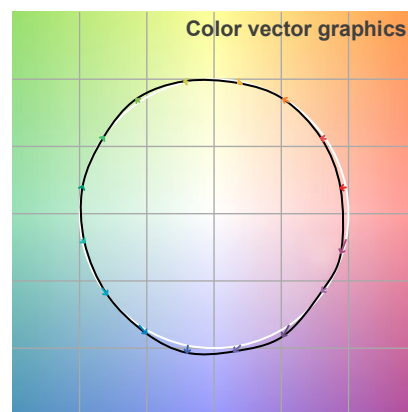
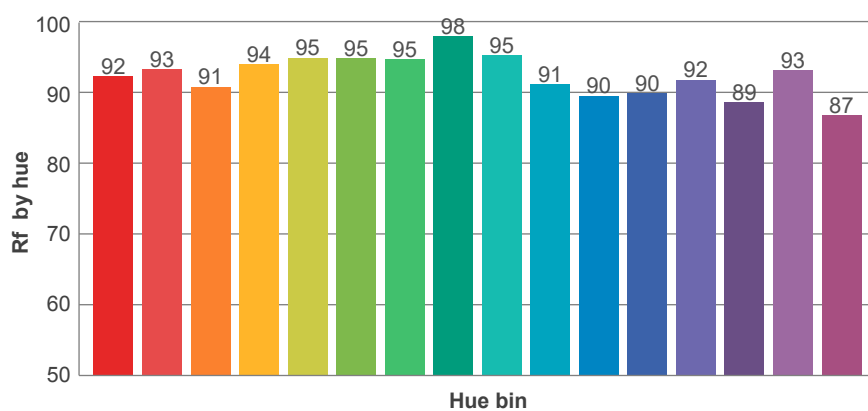
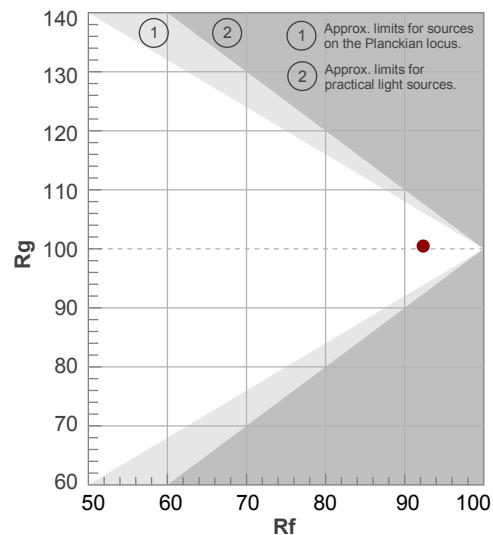
Rf 92,3

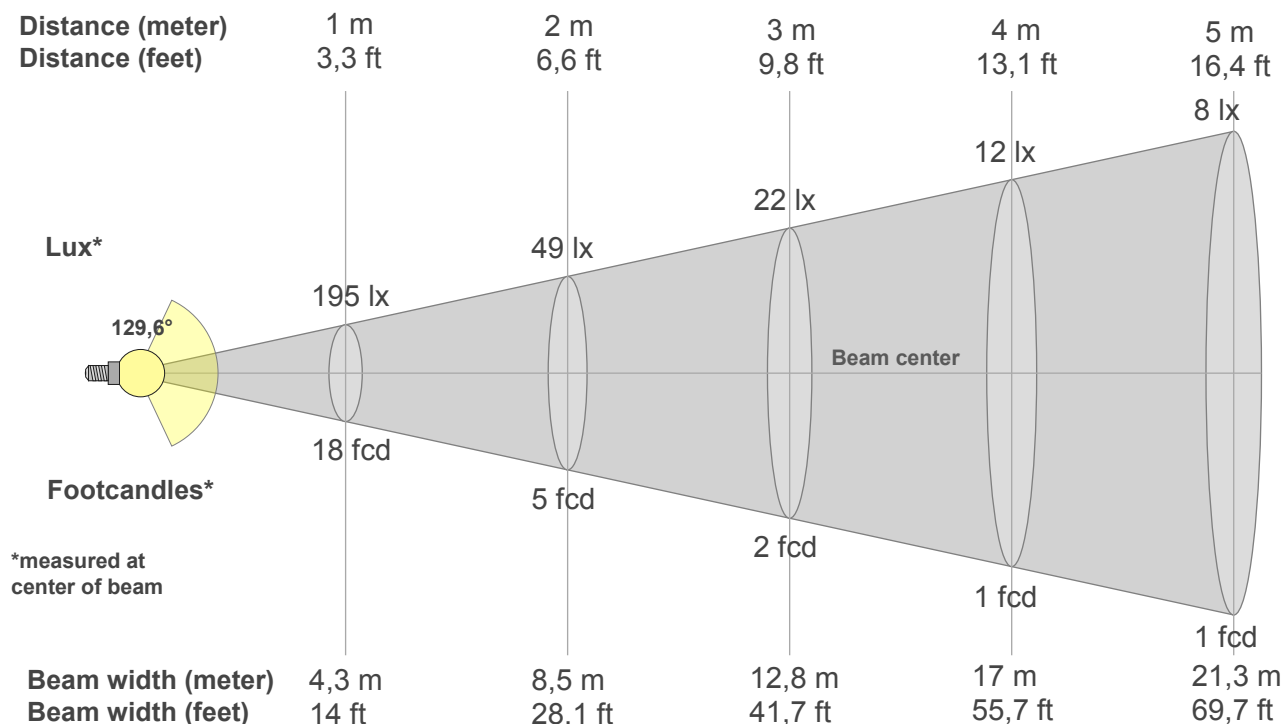
Fidelity index Rf

Rg 100,5

Gamut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	92	-4%	0%
2	93	-3%	3%
3	91	-1%	5%
4	94	-1%	1%
5	95	1%	2%
6	95	3%	1%
7	95	0%	-2%
8	98	0%	-1%
9	95	-1%	2%
10	91	0%	6%
11	90	2%	8%
12	90	5%	1%
13	92	3%	-5%
14	89	4%	-8%
15	93	-1%	-4%
16	87	-2%	-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
195lx	49lx	22lx	12lx	8lx	5lx	4lx	3lx	2lx	2lx	2lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx	0lx
18,1fcd	4,5fcd	2fcd	1,1fcd	0,7fcd	0,5fcd	0,4fcd	0,3fcd	0,2fcd	0,2fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0fcd

Intensities in 0° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
195	195	192	184	172	157	137	115	91	66	22	0	0	0	0	0	0	0	0	0
100%	100%	98%	94%	88%	80%	70%	59%	47%	34%	12%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Intensities in 90° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
195	192	185	172	155	134	110	83	54	26	3	3	2	2	2	1	1	1	1	0
100%	99%	95%	88%	79%	69%	56%	42%	28%	13%	1%	1%	1%	1%	1%	1%	1%	0%	0%	0%

Intensities in 180° c-plane

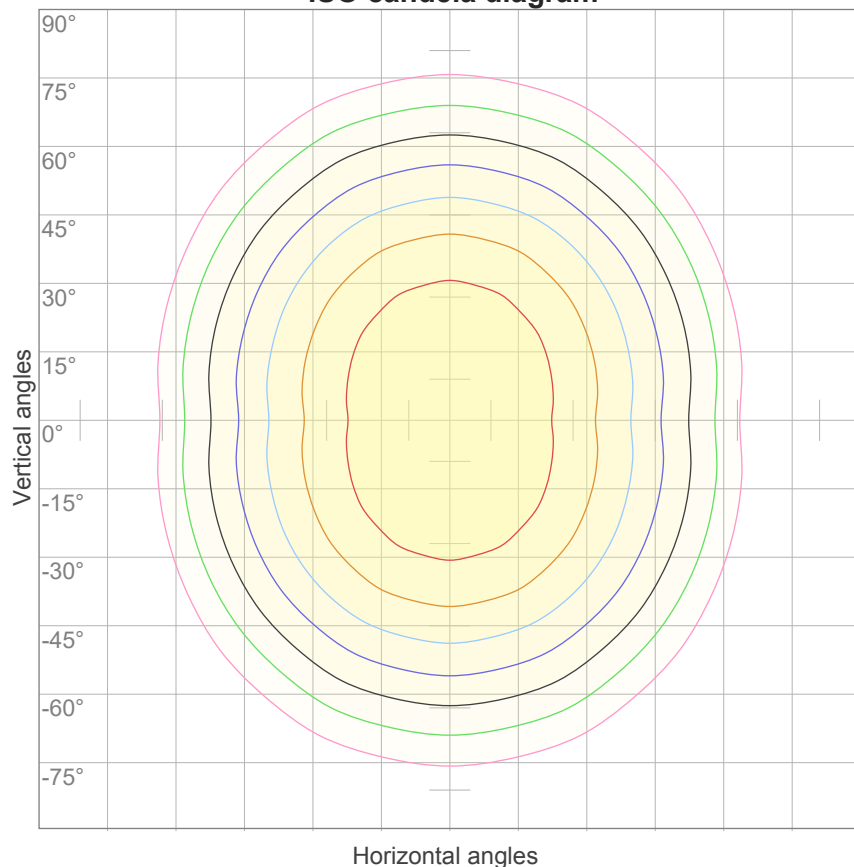
0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
195	195	192	184	172	157	137	115	91	66	22	0	0	0	0	0	0	0	0	0
100%	100%	98%	94%	88%	80%	70%	59%	47%	34%	12%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Intensities in 270° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
195	192	185	172	155	134	110	83	54	26	3	3	2	2	2	1	1	1	1	0
100%	99%	95%	88%	79%	69%	56%	42%	28%	13%	1%	1%	1%	1%	1%	1%	1%	0%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
129,6°	202,5°	214,7°	66,8%	43,7%

ISO candela diagram



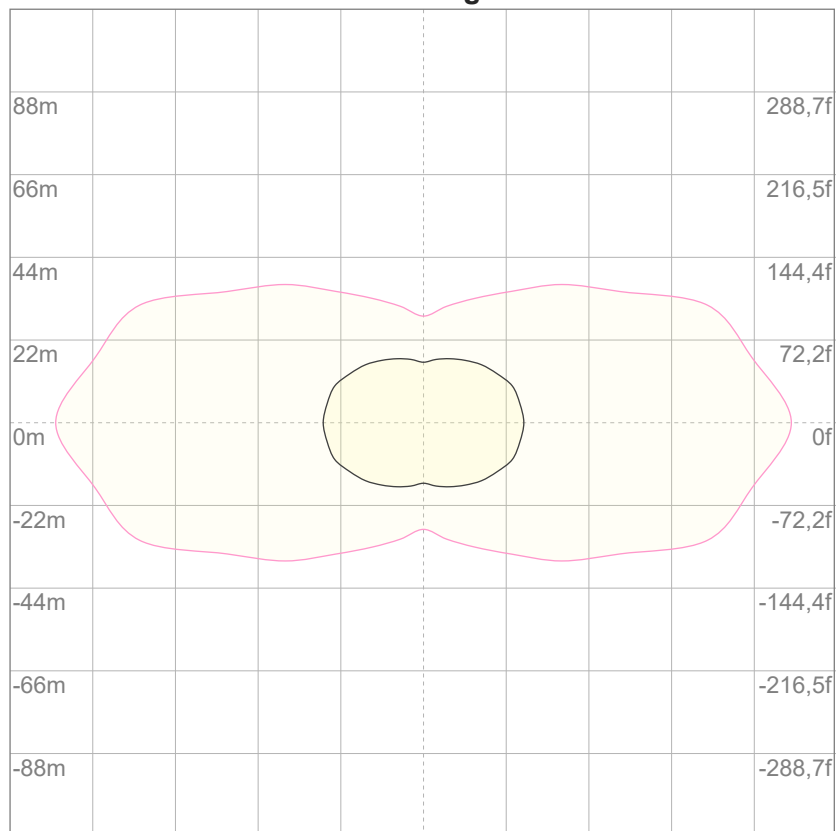
10%	19 cd
20%	39 cd
30%	58 cd
40%	78 cd
50%	97 cd
60%	117 cd
70%	136 cd
80%	156 cd
90%	175 cd

Conditions:

Number of c-planes: 16

Candela at center: 195 cd

ISO lux diagram



3%	58,5m lx
5%	97,5m lx
10%	0,195 lx
30%	0,585 lx
50%	0,975 lx

Conditions:

Number of c-planes: 16

Lux at center: 1,95 lx

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

Glare Evaluation According to UGR

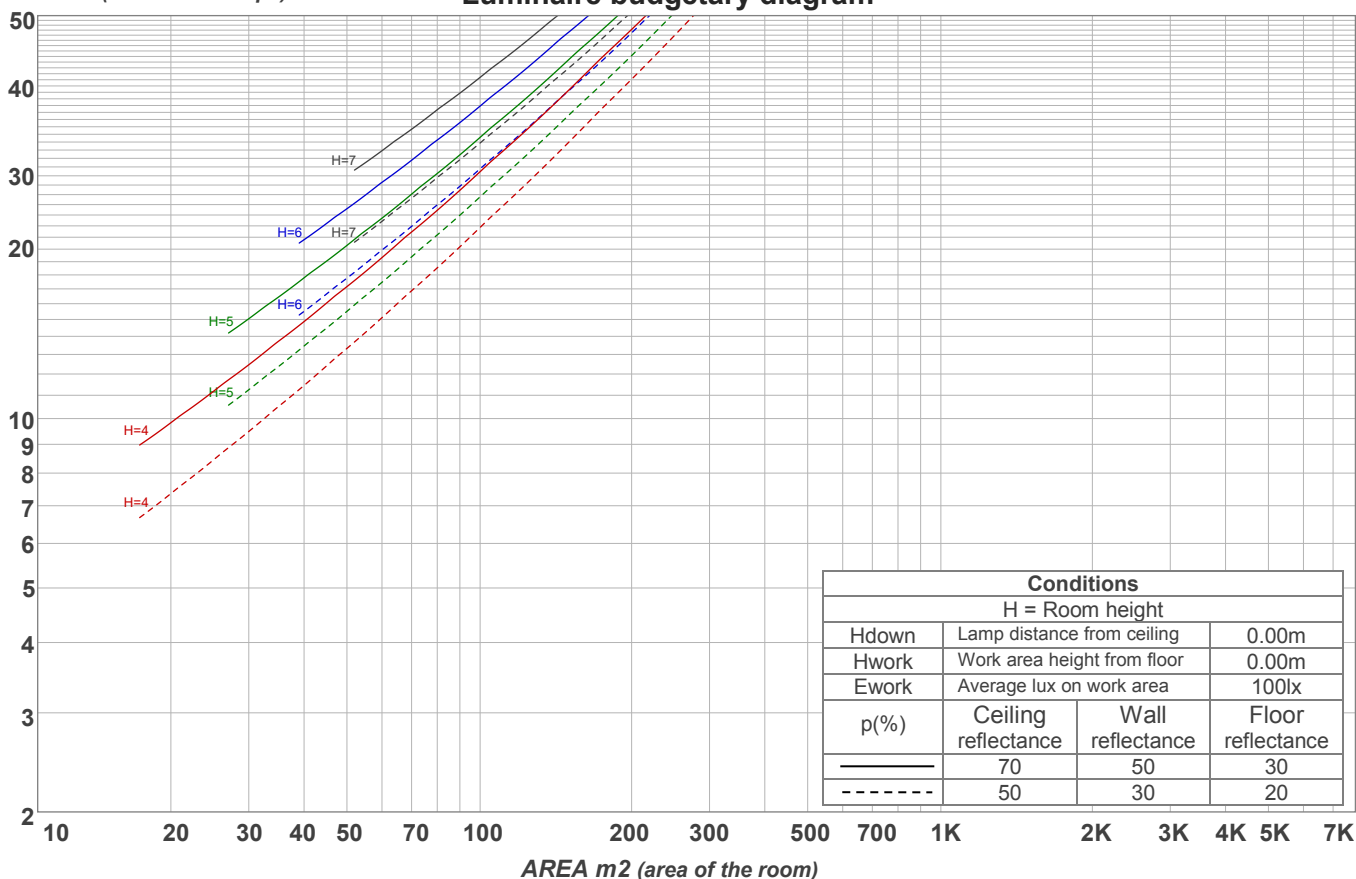
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	21,5	22,9	21,8	23,2	23,4	21,4	22,8	21,7	23,1	23,3
	3H	23,3	24,7	23,7	25,0	25,2	23,1	24,4	23,5	24,7	25,0
	4H	24,2	25,5	24,6	25,8	26,1	23,8	25,1	24,2	25,4	25,7
	6H	25,0	26,2	25,4	26,5	26,9	24,4	25,6	24,8	25,9	26,3
	8H	25,4	26,5	25,7	26,8	27,3	24,6	25,8	25,0	26,1	26,5
	12H	25,7	26,8	26,1	27,2	27,6	24,8	25,9	25,2	26,2	26,7
4H	2H	22,2	23,5	22,6	23,8	24,0	22,1	23,4	22,5	23,7	24,0
	3H	24,3	25,4	24,7	25,7	26,2	24,0	25,2	24,4	25,5	26,0
	4H	25,2	26,3	25,7	26,7	27,2	24,8	25,9	25,3	26,3	26,8
	6H	26,2	27,2	26,7	27,6	27,9	25,6	26,5	26,1	26,9	27,3
	8H	26,6	27,5	27,1	27,9	28,3	25,8	26,7	26,3	27,1	27,5
	12H	27,1	27,8	27,5	28,3	28,7	26,1	26,8	26,5	27,3	27,7
8H	4H	25,6	26,5	26,1	26,9	27,3	25,3	26,2	25,8	26,5	26,9
	6H	26,8	27,5	27,3	28,0	28,5	26,2	26,9	26,7	27,4	27,9
	8H	27,4	28,0	27,9	28,5	29,2	26,6	27,2	27,1	27,8	28,4
	12H	28,0	28,5	28,5	29,0	29,6	26,9	27,5	27,5	28,0	28,6
12H	4H	25,6	26,4	26,1	26,8	27,3	25,3	26,1	25,8	26,5	27,0
	6H	26,9	27,6	27,4	28,1	28,7	26,3	27,0	26,9	27,5	28,2
	8H	27,6	28,1	28,1	28,6	29,2	26,8	27,4	27,4	27,9	28,5
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,1 / -0,1					0,1 / -0,1				
S = 1.5H		0,1 / -0,1					0,1 / -0,1				
S = 2.0H		0,2 / -0,3					0,3 / -0,3				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 726 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	109	109	109	103	103	103	98	98	98	95
1	105	100	95	90	102	97	92	88	92	88	84	87	84	81	83	80	78	75
2	95	86	78	71	92	83	76	70	79	73	68	75	70	65	71	67	63	61
3	86	74	65	58	83	72	64	57	69	62	56	65	59	54	62	57	53	50
4	78	65	56	49	76	64	55	48	60	53	47	58	51	46	55	49	45	42
5	72	58	48	41	69	57	48	41	54	46	40	51	45	39	49	43	38	36
6	66	52	43	36	64	51	42	35	48	41	35	46	39	34	44	38	33	31
7	61	47	38	31	59	46	37	31	44	36	30	42	35	30	40	34	29	27
8	57	43	34	28	55	42	33	28	40	32	27	38	32	27	37	31	26	24
9	53	39	31	25	51	38	30	25	37	29	24	35	29	24	34	28	24	22
10	50	36	28	22	48	35	28	22	34	27	22	33	26	22	32	26	21	19

LAMPS (number of lamps)

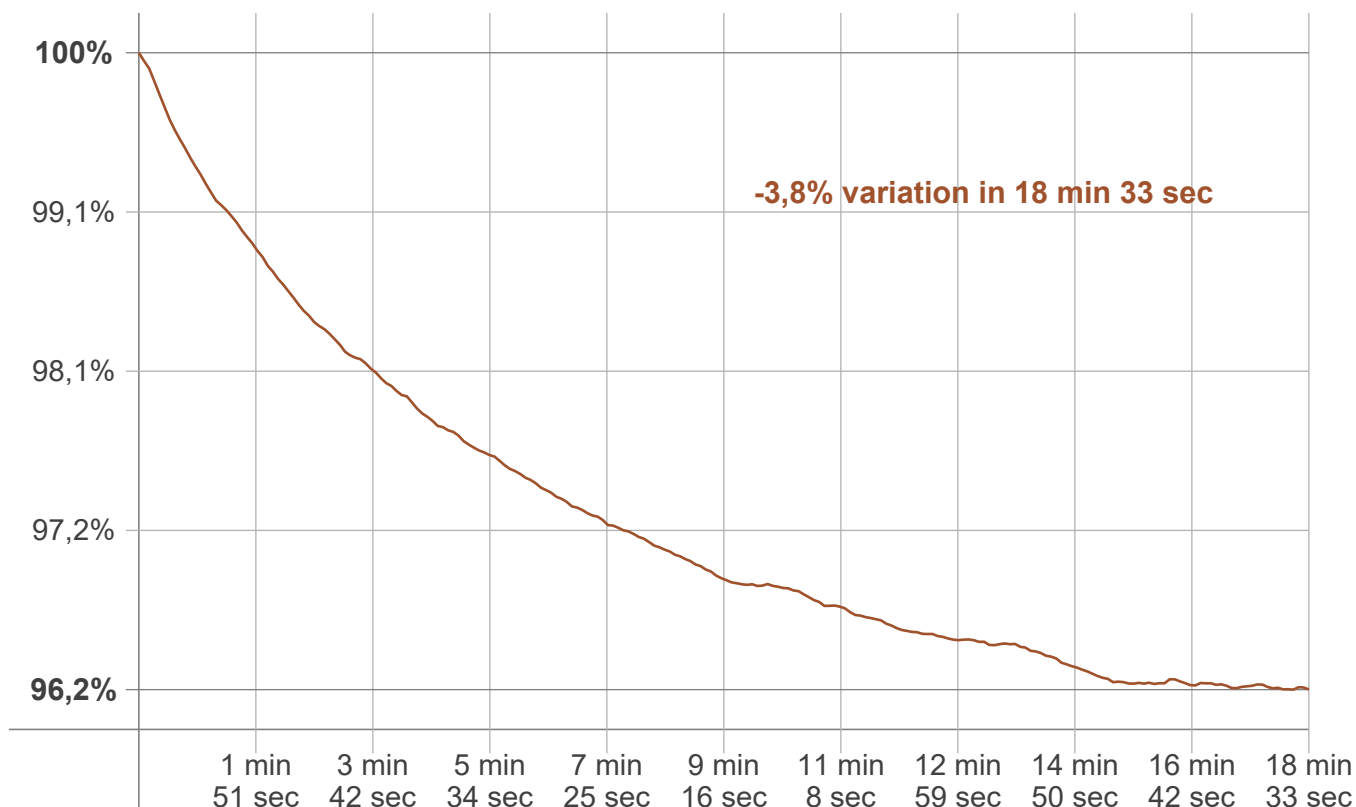
Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
18,6 lm	53,9 lm	83,7 lm	104 lm	114 lm	111 lm	95,5 lm	71,2 lm	41,1 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
15,1 lm	4,02 lm	3,55 lm	3,21 lm	2,61 lm	2,02 lm	1,49 lm	0,911 lm	0,307 lm

Warmup curve



Warmup result

Warmup time:	Lamp stabilized in 18 min 33 sec
Warmup variation	-3,8%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
2675 K	-5 K	2670 K

Output change

Output start	Output change	Output end
753 lm	-27 lm	726 lm