

Light efficiency:

112 Lumen/Watt

Light quality:

CRI: 94,2

Color temperature:

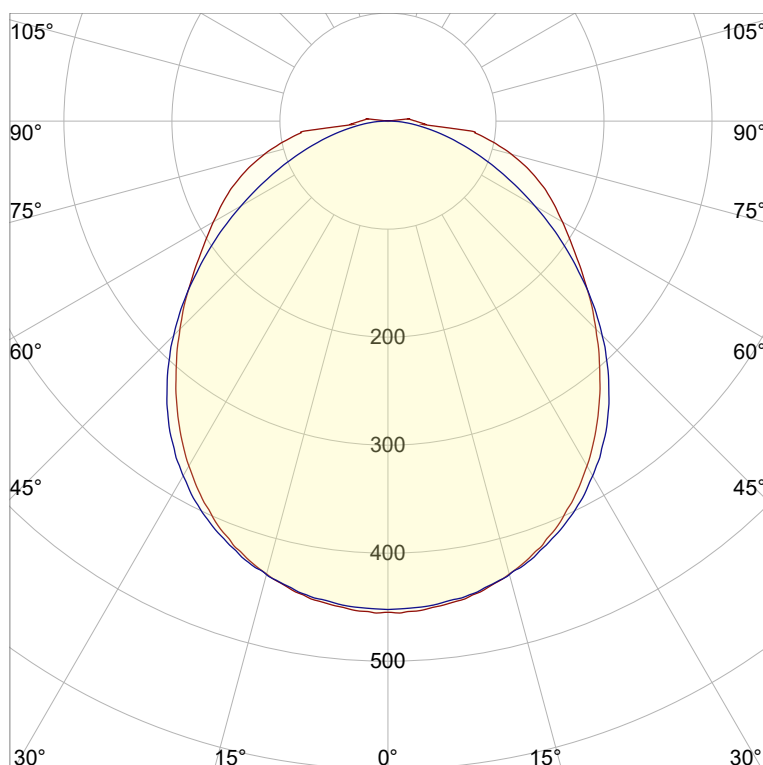
2728 K

Output: 1292 lm

Peak: 455 cd

Power: 11,5 W

PF: 1,0



Product name:

Jago-2_510mm_927_Cover-Square-Frosted

Item number:

NP/L1C/19B/G1/L1C/0510/927/CSF

Date and time:

19.07.2022 16:06:48

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

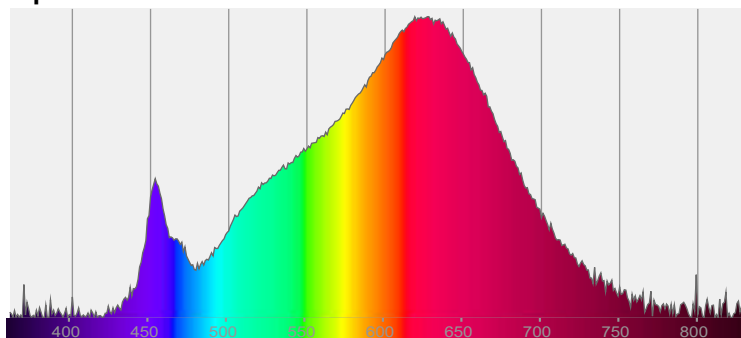


CIE 1931

x: 0,456

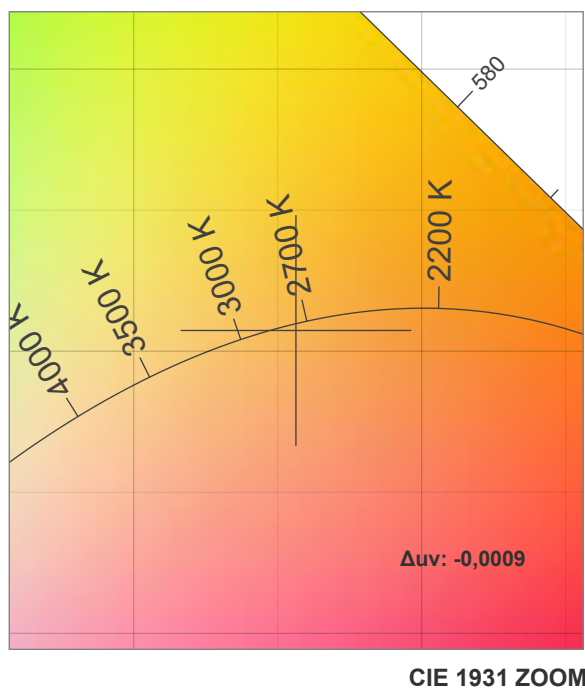
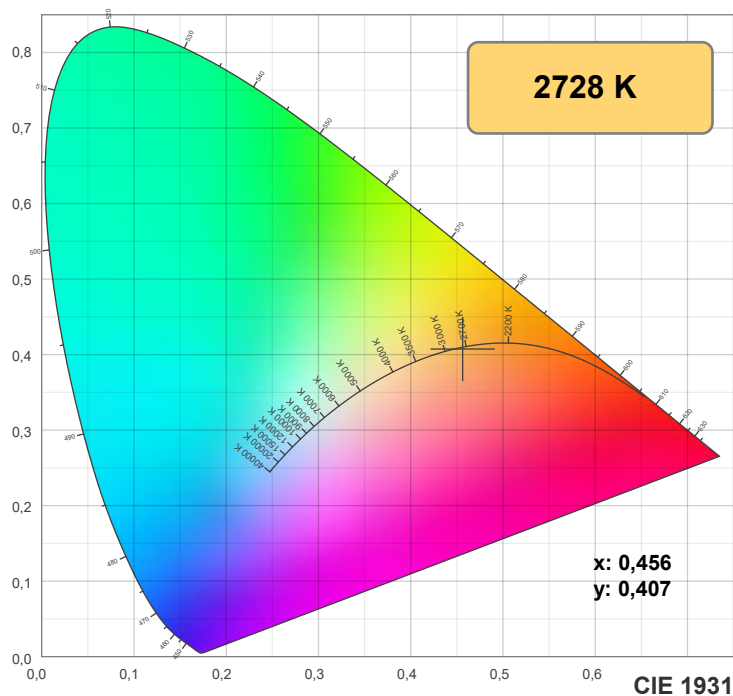
y: 0,407

Spectra

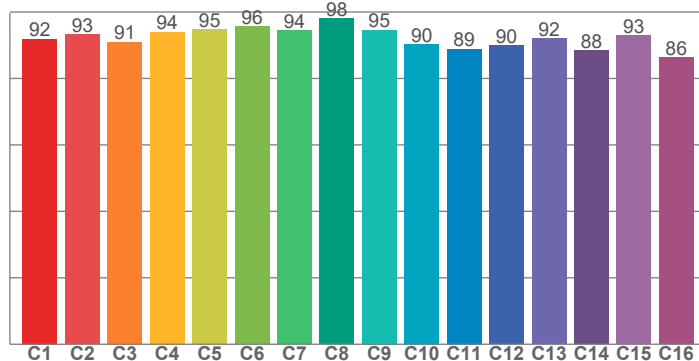


Power

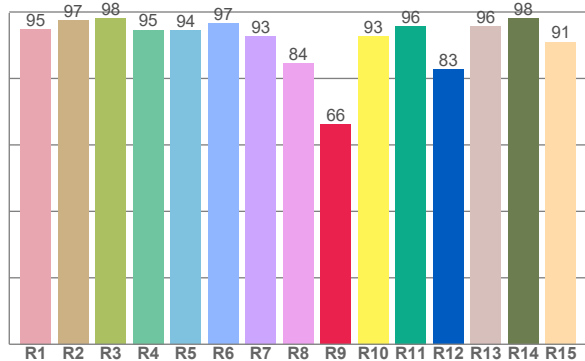
Voltage: 48,0 V
Current: 0,240 A
Frequency: 0 Hz



TM30: 92,1



CRI: 94,2 (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
94,9	97,4	98,1	94,6	94,4	96,6	92,7	84,5	66,1	92,7	95,7	82,6	95,7	98,1	91,0

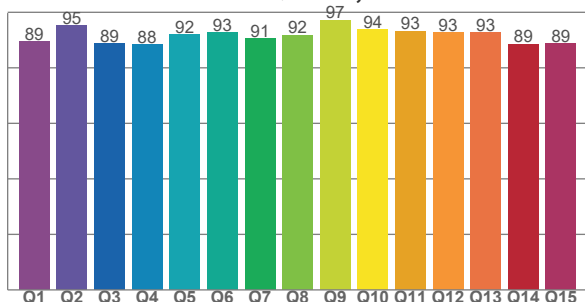
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
91,9	93,2	91,0	94,0	94,7	95,6	94,4	98,0	94,6	90,3	88,9	89,9	92,0	88,5	92,9	86,3

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
89,4	95,2	88,7	88,4	91,9	92,8	90,5	91,8	97,1	93,8	93,2	92,8	92,7	88,6	88,7

CQS: 91,2



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
2728 K	94,2	66,1	92,1	99,9	91,2	0,456	0,407	0,262	0,350	-0,0009

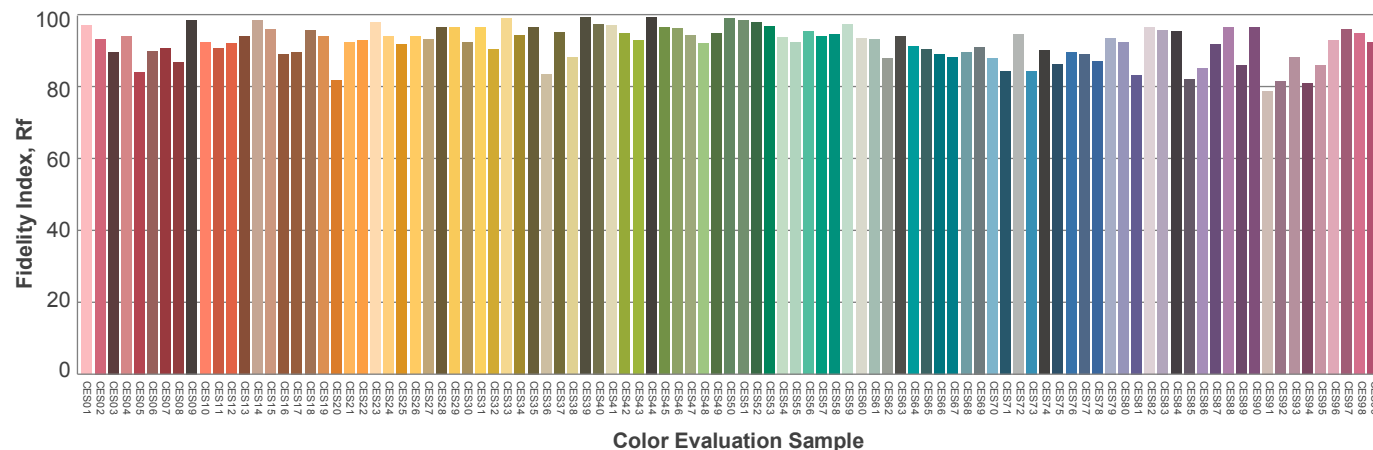
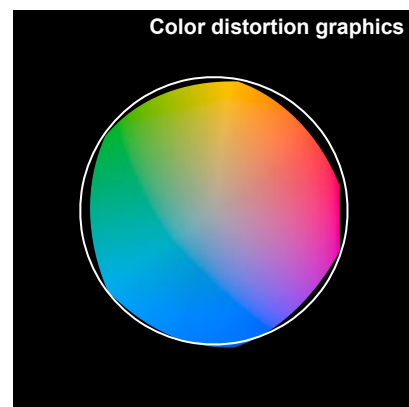
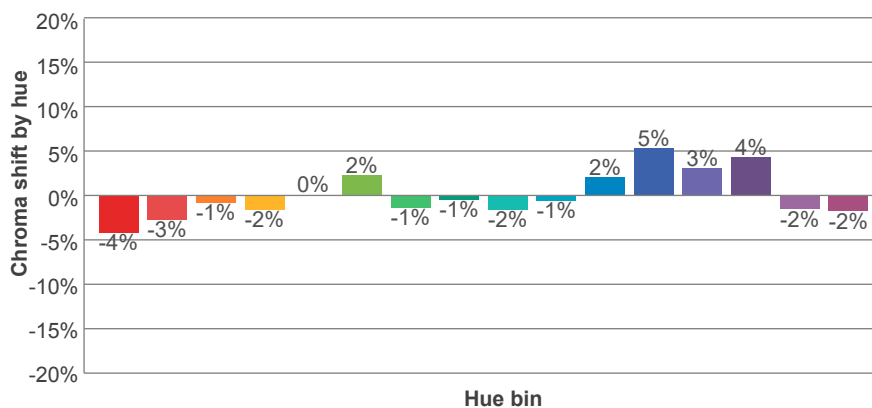
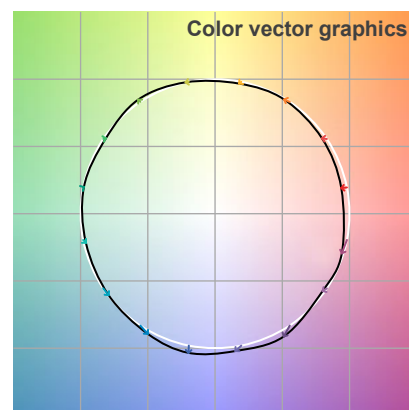
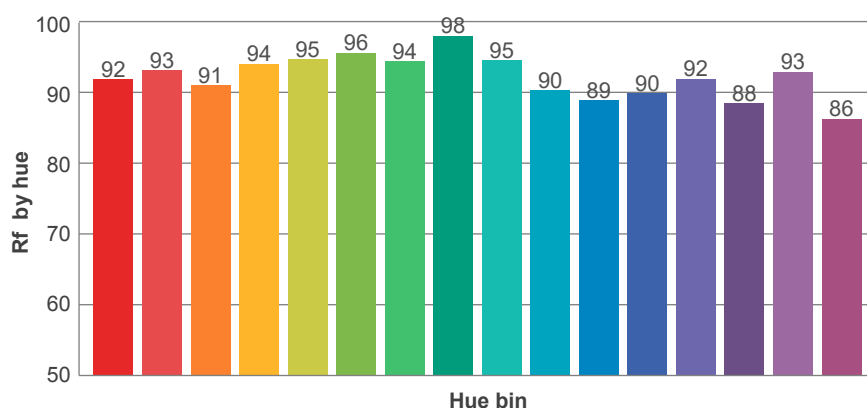
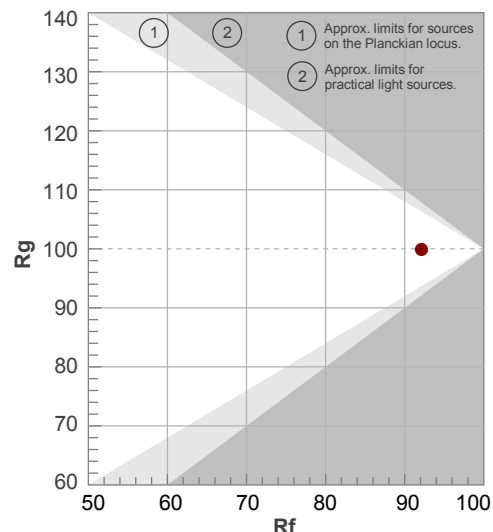
Rf 92,1

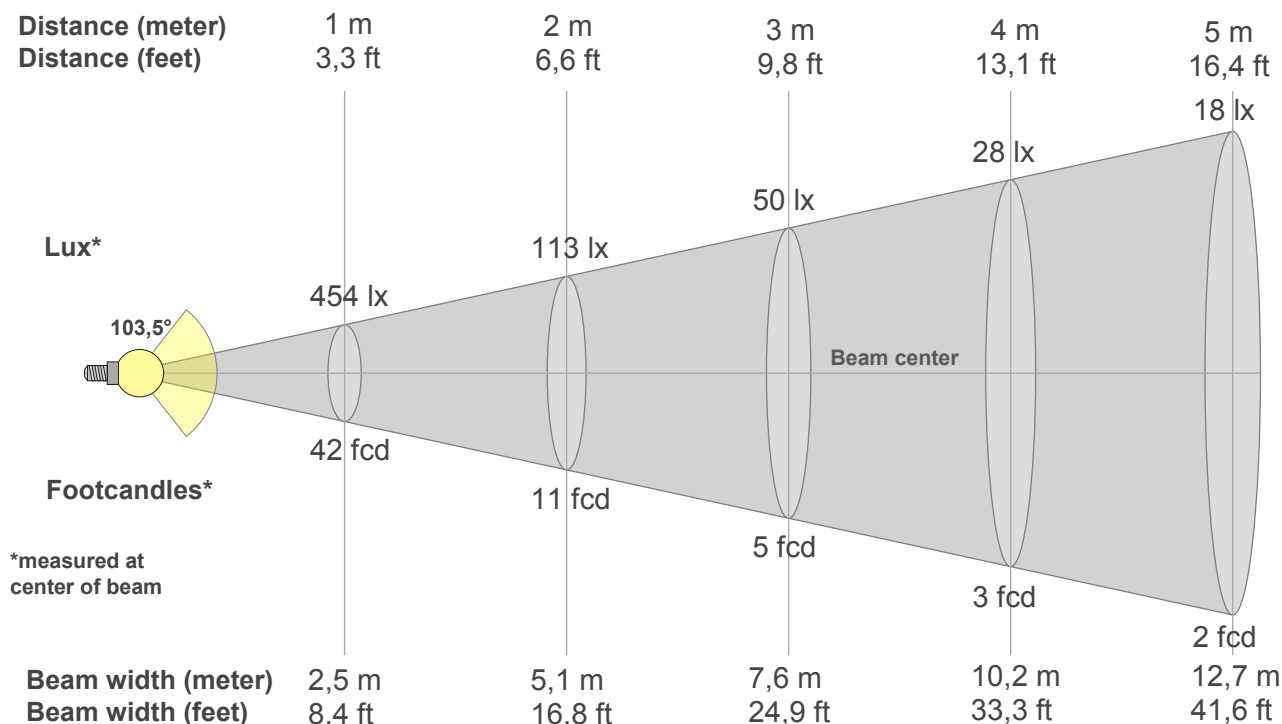
Fidelity index Rf

Rg 99,9

Gamut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	92	-4%	0%
2	93	-3%	2%
3	91	-1%	4%
4	94	-2%	1%
5	95	0%	2%
6	96	2%	0%
7	94	-1%	-2%
8	98	-1%	0%
9	95	-2%	3%
10	90	-1%	6%
11	89	2%	8%
12	90	5%	1%
13	92	3%	-5%
14	88	4%	-8%
15	93	-2%	-3%
16	86	-2%	-11%





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
454lx	113lx	50lx	28lx	18lx	13lx	9lx	7lx	6lx	5lx	4lx	3lx	3lx	2lx	2lx	2lx	2lx	1lx	1lx	1lx
42,1fcd	10,5fcd	4,7fcd	2,6fcd	1,7fcd	1,2fcd	0,9fcd	0,7fcd	0,5fcd	0,4fcd	0,3fcd	0,3fcd	0,2fcd	0,2fcd	0,2fcd	0,2fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd

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°
454	452	446	434	418	395	369	338	305	272	240	211	187	165	143	118	92	35	26	20
100%	100%	98%	96%	92%	87%	81%	75%	67%	60%	53%	46%	41%	36%	31%	26%	20%	8%	6%	4%

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°
454	450	445	435	420	402	379	352	318	280	240	198	157	119	86	58	34	16	2	0
100%	99%	98%	96%	93%	89%	84%	78%	70%	62%	53%	44%	35%	26%	19%	13%	7%	4%	1%	0%

Intensities in 180° c-plane

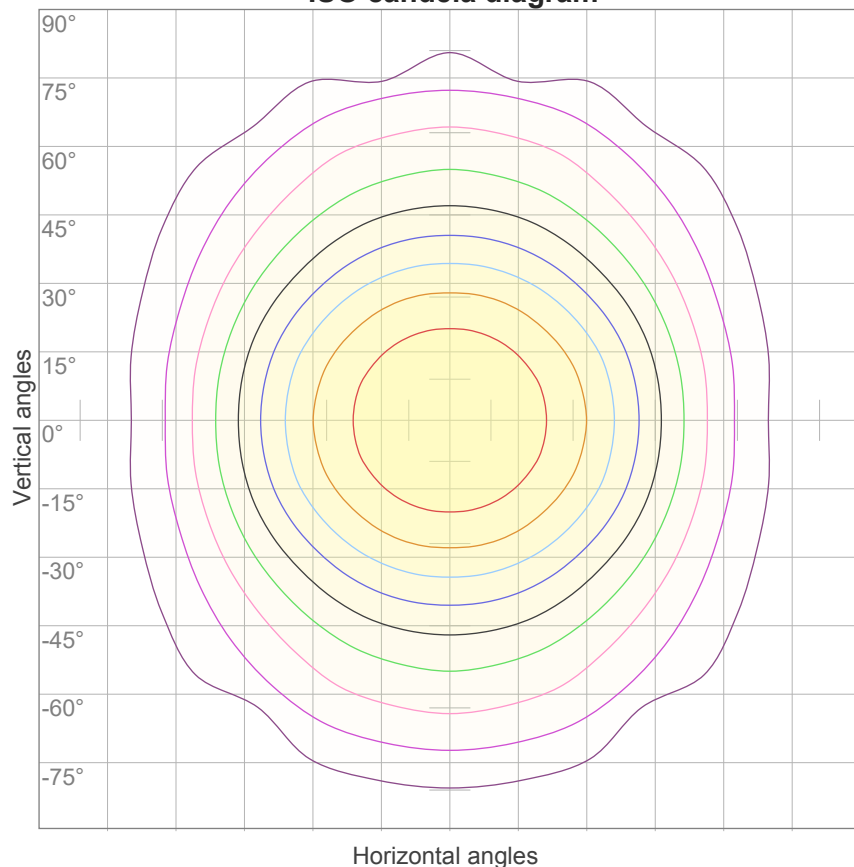
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
454	452	446	434	418	395	369	338	305	272	240	211	187	165	143	118	92	35	26	20
100%	100%	98%	96%	92%	87%	81%	75%	67%	60%	53%	46%	41%	36%	31%	26%	20%	8%	6%	4%

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°
454	450	445	435	420	402	379	352	318	280	240	198	157	119	86	58	34	16	2	0
100%	99%	98%	96%	93%	89%	84%	78%	70%	62%	53%	44%	35%	26%	19%	13%	7%	4%	1%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
103,5°	166,3°	210°	74,3%	52,1%

ISO candela diagram



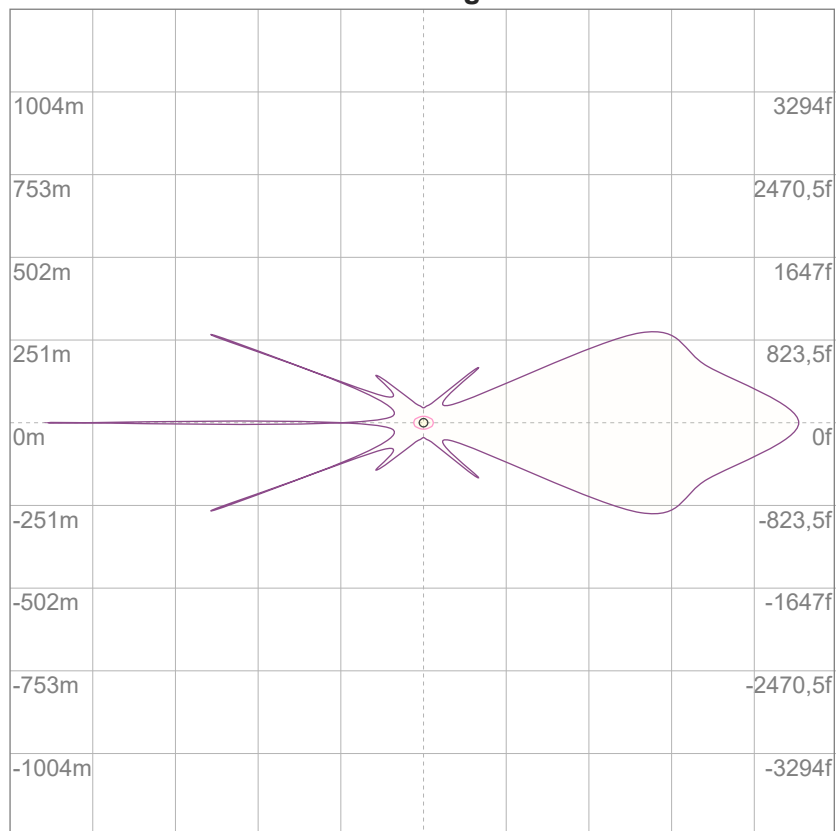
10%	45 cd
20%	91 cd
30%	136 cd
40%	181 cd
50%	227 cd
60%	272 cd
70%	318 cd
80%	363 cd
90%	408 cd

Conditions:

Number of c-planes: 16

Candela at center: 454 cd

ISO lux diagram



3%	0,136 lx
5%	0,227 lx
10%	0,454 lx
30%	1,36 lx
50%	2,27 lx

Conditions:

Number of c-planes: 16

Lux at center: 4,54 lx

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

Glare Evaluation According to UGR

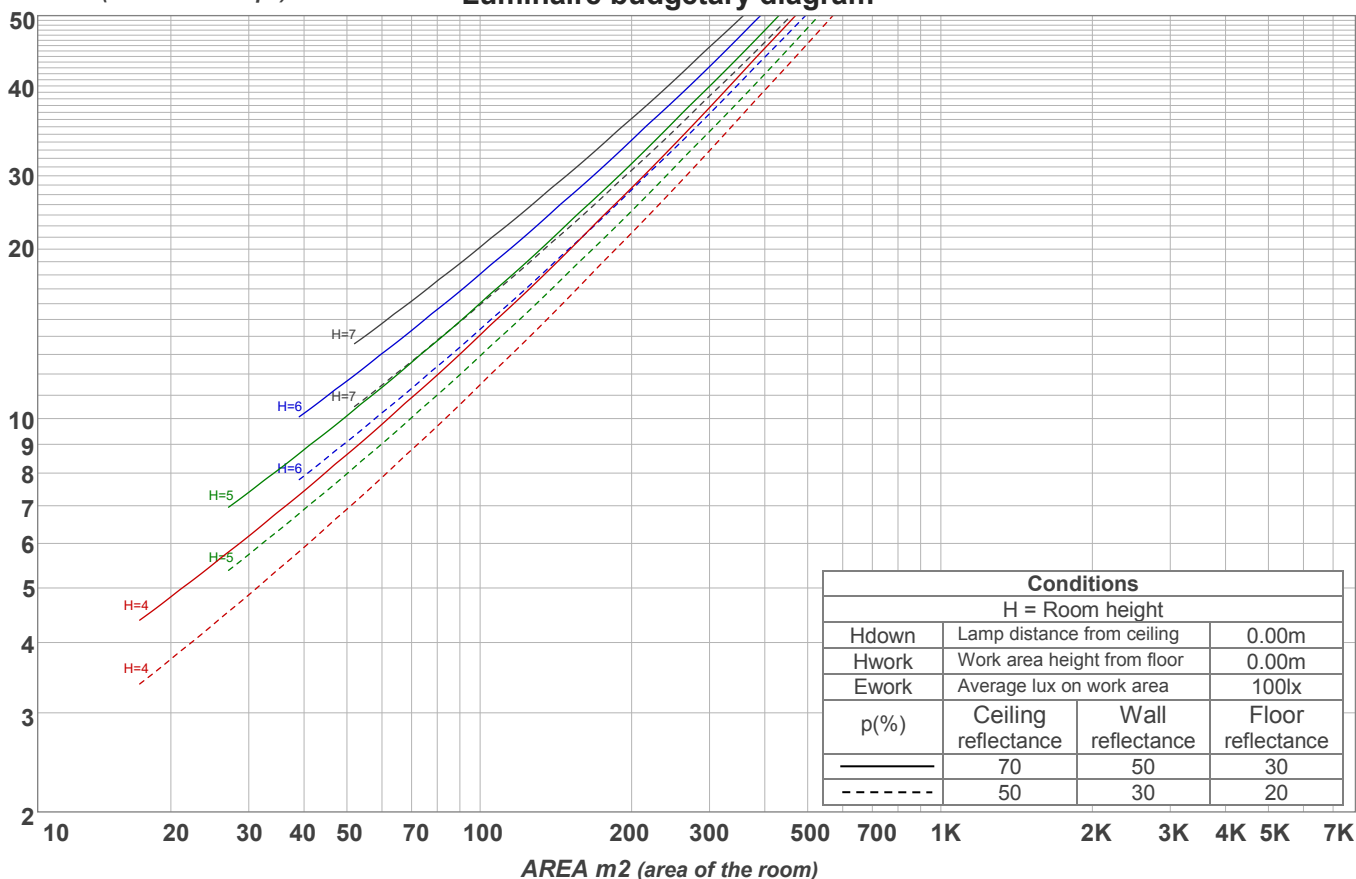
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	22,8	24,0	23,0	24,3	24,5	23,3	24,5	23,5	24,8	25,1
	3H	24,3	25,6	24,7	25,9	26,1	24,4	25,7	24,8	26,0	26,2
	4H	25,1	26,3	25,5	26,6	26,8	24,9	26,1	25,3	26,4	26,6
	6H	25,8	26,9	26,1	27,2	27,5	25,3	26,4	25,6	26,6	27,0
	8H	26,1	27,1	26,4	27,4	27,8	25,4	26,4	25,7	26,7	27,1
	12H	26,2	27,2	26,5	27,5	28,0	25,4	26,5	25,8	26,8	27,2
4H	2H	23,3	24,5	23,7	24,8	25,0	23,7	24,9	24,1	25,2	25,5
	3H	25,2	26,2	25,6	26,5	27,0	25,1	26,2	25,5	26,5	26,9
	4H	26,0	27,0	26,5	27,4	27,9	25,7	26,6	26,1	27,0	27,6
	6H	26,8	27,7	27,3	28,1	28,5	26,1	27,0	26,6	27,4	27,7
	8H	27,2	28,0	27,7	28,4	28,8	26,3	27,1	26,8	27,5	27,9
	12H	27,3	28,0	27,8	28,5	28,9	26,4	27,1	26,9	27,5	28,0
8H	4H	26,3	27,1	26,8	27,5	27,9	26,0	26,8	26,5	27,2	27,5
	6H	27,3	28,0	27,8	28,4	29,0	26,6	27,2	27,1	27,7	28,2
	8H	27,8	28,4	28,3	28,9	29,5	26,9	27,4	27,4	28,0	28,6
	12H	28,1	28,5	28,6	29,0	29,6	27,1	27,6	27,7	28,1	28,7
12H	4H	26,3	27,0	26,8	27,4	27,9	26,0	26,7	26,5	27,1	27,6
	6H	27,4	28,0	27,9	28,5	29,1	26,7	27,3	27,2	27,8	28,5
	8H	27,9	28,4	28,5	28,9	29,5	27,0	27,5	27,6	28,0	28,6
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 / -0,2					0,3 / -0,4				
S = 2.0H		0,3 / -0,4					0,7 / -0,8				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 1292 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	104	104	104	99	99	99	96
1	107	102	98	94	104	100	95	92	95	91	88	90	87	85	86	84	82	79
2	97	89	82	76	94	87	80	75	83	77	73	79	74	70	75	72	68	66
3	89	78	70	63	86	76	69	63	73	66	61	70	64	59	67	62	58	56
4	81	69	61	54	79	68	60	53	65	58	52	62	56	51	59	54	50	48
5	75	62	53	46	73	61	52	46	58	51	45	56	49	44	54	48	44	41
6	69	56	47	41	67	55	46	40	53	45	40	51	44	39	49	43	38	36
7	64	51	42	36	62	50	42	36	48	41	35	46	40	35	45	39	34	32
8	60	46	38	32	58	46	38	32	44	37	32	42	36	31	41	35	31	29
9	56	43	34	29	54	42	34	29	40	33	28	39	33	28	38	32	28	26
10	53	39	32	26	51	39	31	26	37	31	26	36	30	26	35	29	25	24

LAMPS (number of lamps)

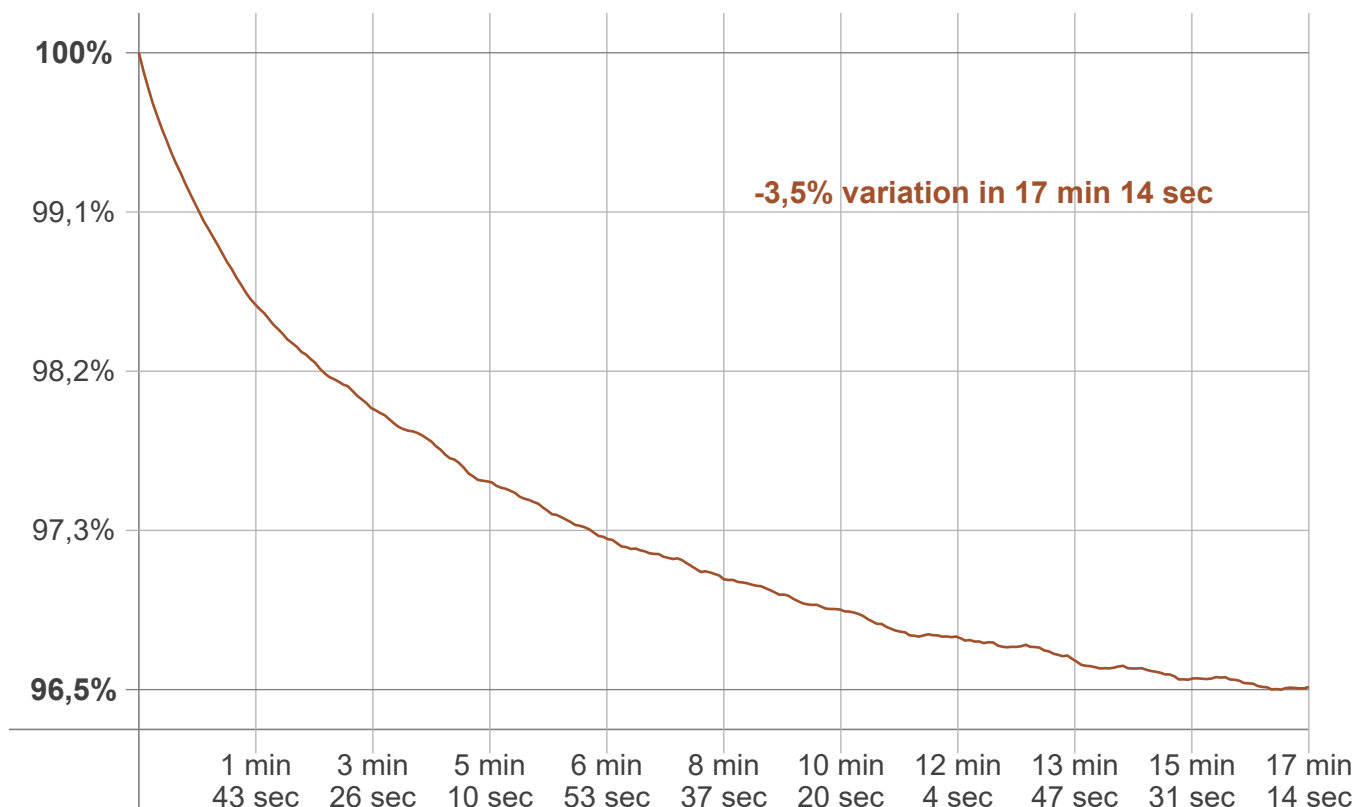
Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
42,9 lm	123 lm	184 lm	215 lm	213 lm	183 lm	141 lm	96,7 lm	44,7 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
21,5 lm	5,55 lm	5,21 lm	4,71 lm	4,07 lm	3,30 lm	2,43 lm	1,49 lm	0,501 lm

Warmup curve



Warmup result

Warmup time:	Lamp stabilized in 17 min 14 sec
Warmup variation	-3,5%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
2735 K	-7 K	2728 K

Output change

Output start	Output change	Output end
1335 lm	-43 lm	1292 lm