

Light efficiency:

122 Lumen/Watt

Light quality:

CRI: 94,1

Color temperature:

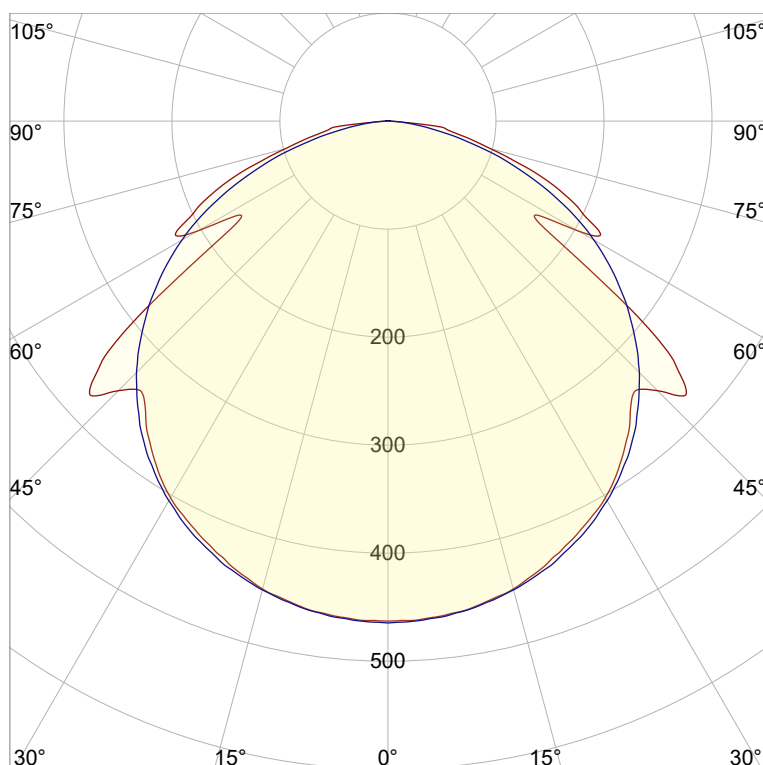
2733 K

Output: 1410 lm

Peak: 464 cd

Power: 11,5 W

PF: 1,0



Product name:

Jago-2_510mm_927_Cover-Square-Transparent

Item number:

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

Date and time:

19.07.2022 15:26:42

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

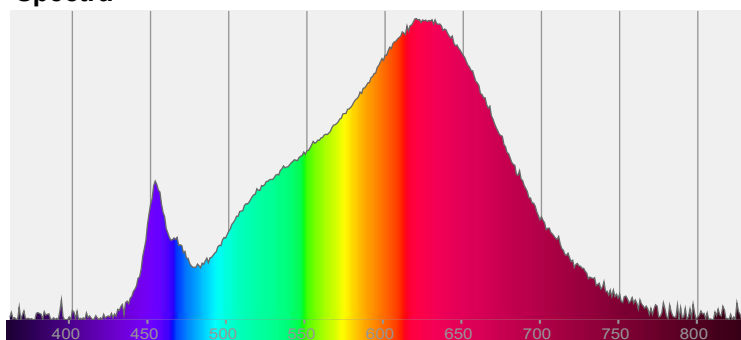


CIE 1931

x: 0,457

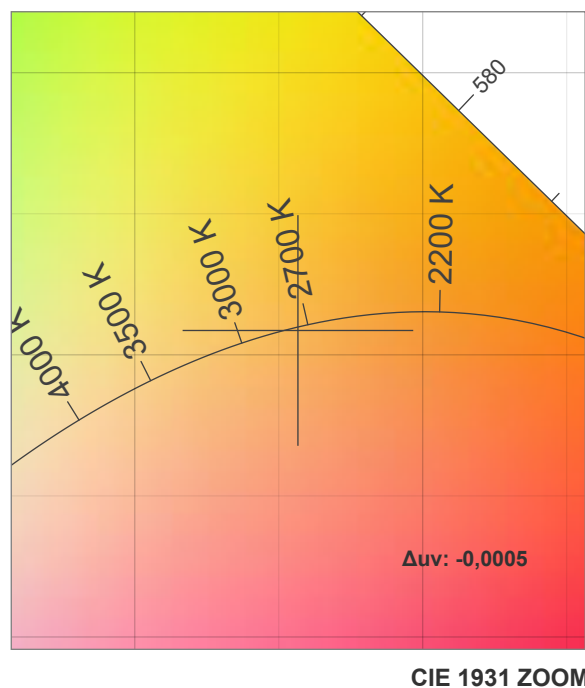
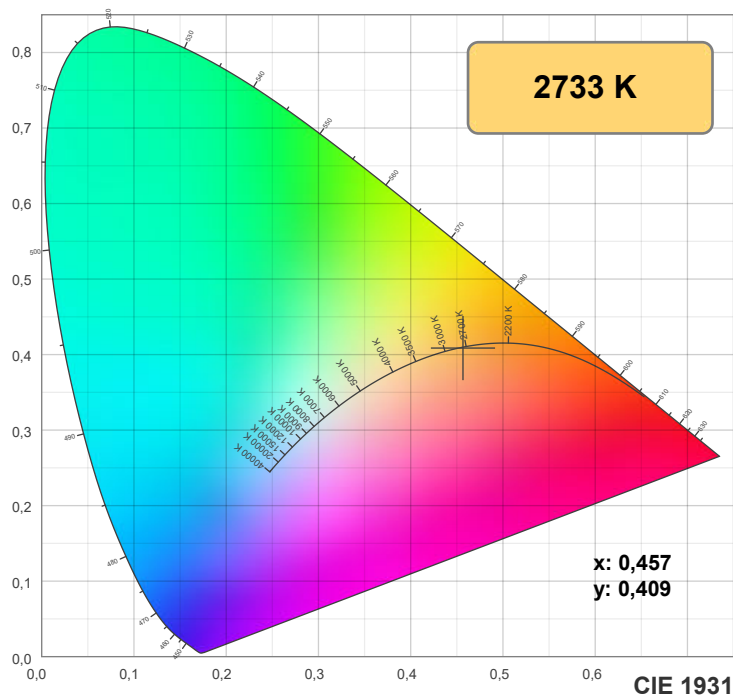
y: 0,409

Spectra

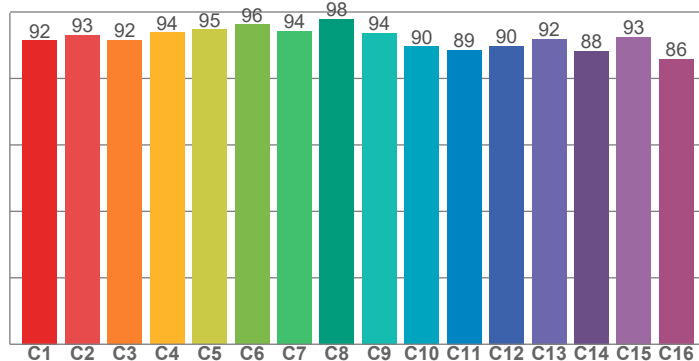


Power

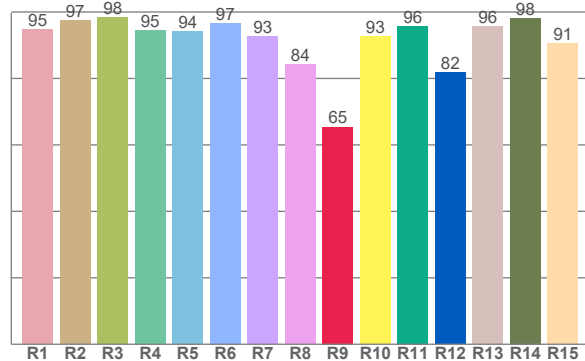
Voltage: 48,0 V
Current: 0,240 A
Frequency: 0 Hz



TM30: 91,9



CRI: 94,1 (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
94,7	97,4	98,3	94,5	94,3	96,6	92,7	84,2	65,4	92,7	95,8	81,8	95,6	98,2	90,7

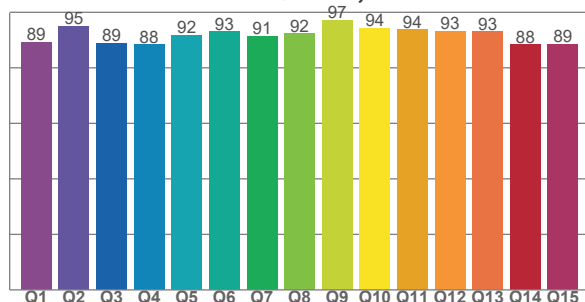
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
91,5	93,2	91,6	93,8	94,7	96,2	94,3	97,9	93,7	89,6	88,6	89,8	91,9	88,3	92,5	85,9

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
89,2	95,1	89,0	88,4	91,7	93,0	91,4	92,3	97,1	94,2	93,7	93,2	93,0	88,4	88,6

CQS: 91,3



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
2733 K	94,1	65,4	91,9	99,4	91,3	0,457	0,409	0,261	0,351	-0,0005

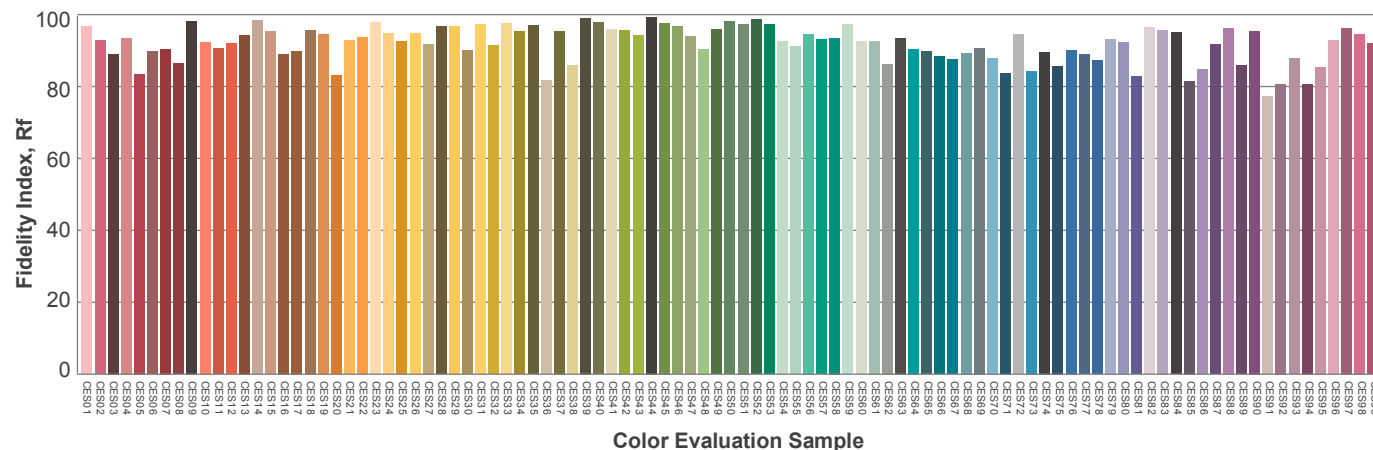
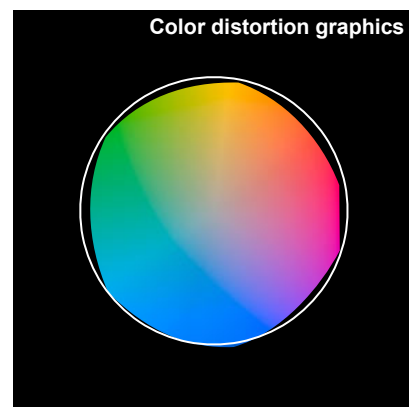
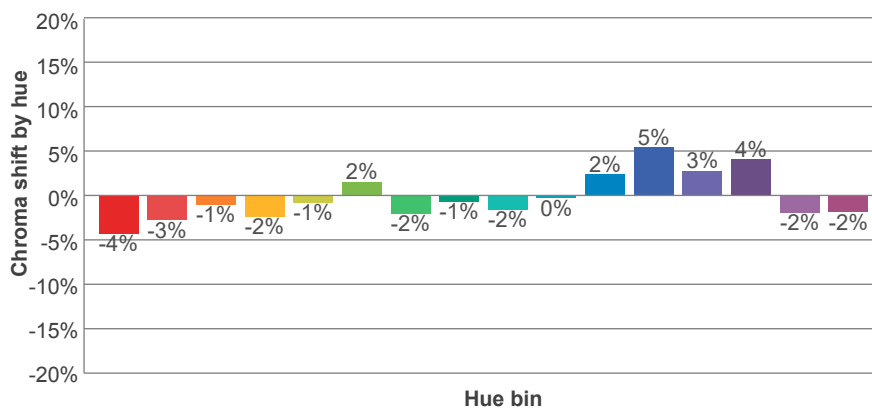
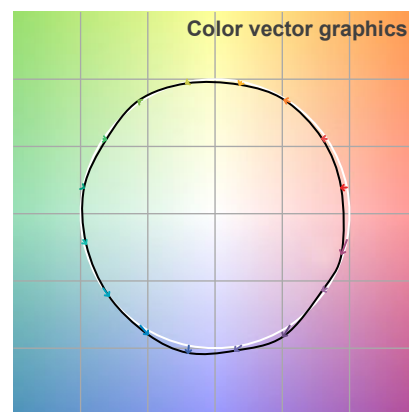
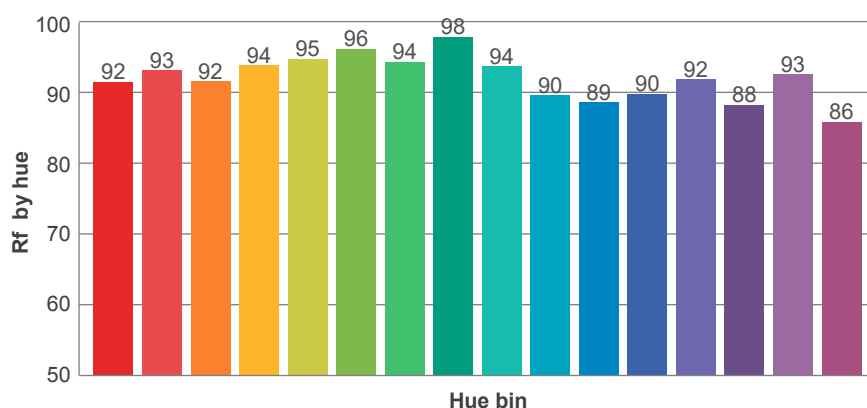
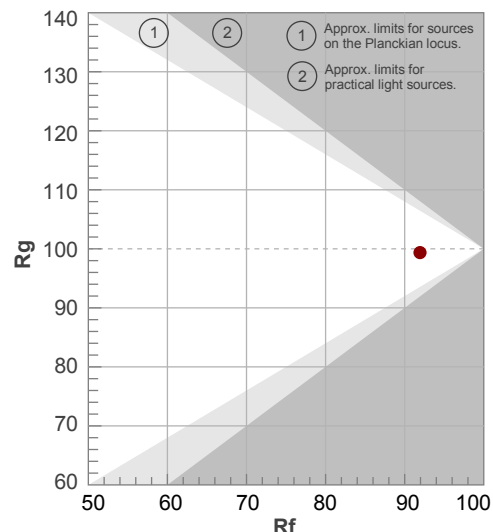
Rf 91,9

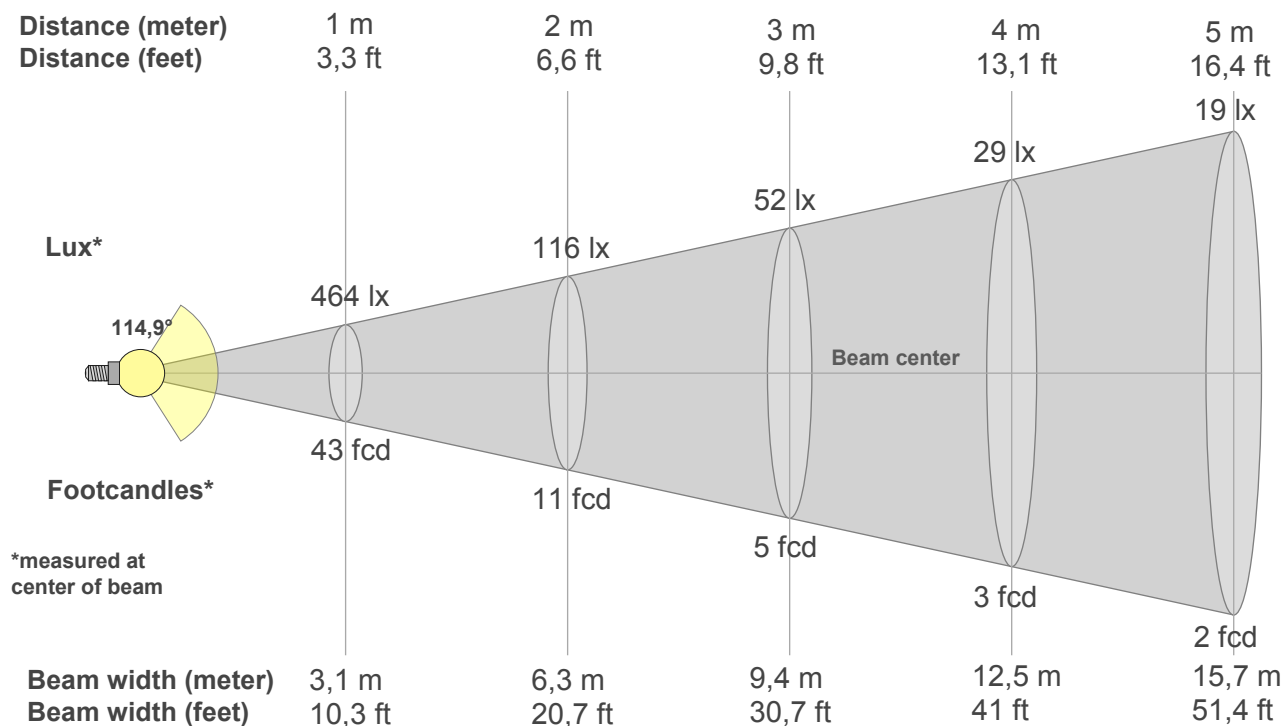
Fidelity index Rf

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	94	-2%	1%
5	95	-1%	2%
6	96	2%	1%
7	94	-2%	-1%
8	98	-1%	0%
9	94	-2%	3%
10	90	0%	7%
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
464lx	116lx	52lx	29lx	19lx	13lx	9lx	7lx	6lx	5lx	4lx	3lx	3lx	2lx	2lx	2lx	2lx	1lx	1lx	1lx
43,1fcd	10,8fcd	4,8fcd	2,7fcd	1,7fcd	1,2fcd	0,9fcd	0,7fcd	0,5fcd	0,4fcd	0,4fcd	0,3fcd	0,3fcd	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°
464	461	457	448	435	419	402	379	349	353	345	189	203	197	152	98	63	25	2	0
100%	100%	99%	97%	94%	90%	87%	82%	75%	76%	74%	41%	44%	42%	33%	21%	14%	5%	0%	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°
464	462	457	449	438	424	406	384	358	329	295	259	220	175	128	80	41	15	2	0
100%	100%	99%	97%	95%	91%	88%	83%	77%	71%	64%	56%	47%	38%	28%	17%	9%	3%	0%	0%

Intensities in 180° c-plane

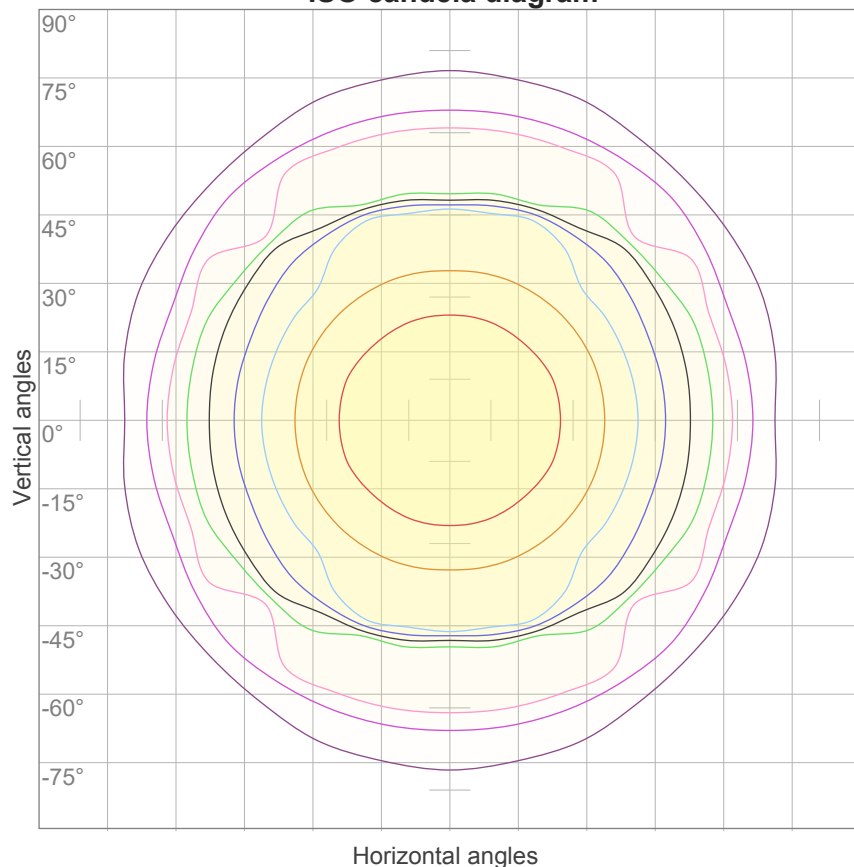
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
464	461	457	448	435	419	402	379	349	353	345	189	203	197	152	98	63	25	2	0
100%	100%	99%	97%	94%	90%	87%	82%	75%	76%	74%	41%	44%	42%	33%	21%	14%	5%	0%	0%

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°
464	462	457	449	438	424	406	384	358	329	295	259	220	175	128	80	41	15	2	0
100%	100%	99%	97%	95%	91%	88%	83%	77%	71%	64%	56%	47%	38%	28%	17%	9%	3%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
114,9°	164,9°	173,9°	77,3%	51,8%

ISO candela diagram



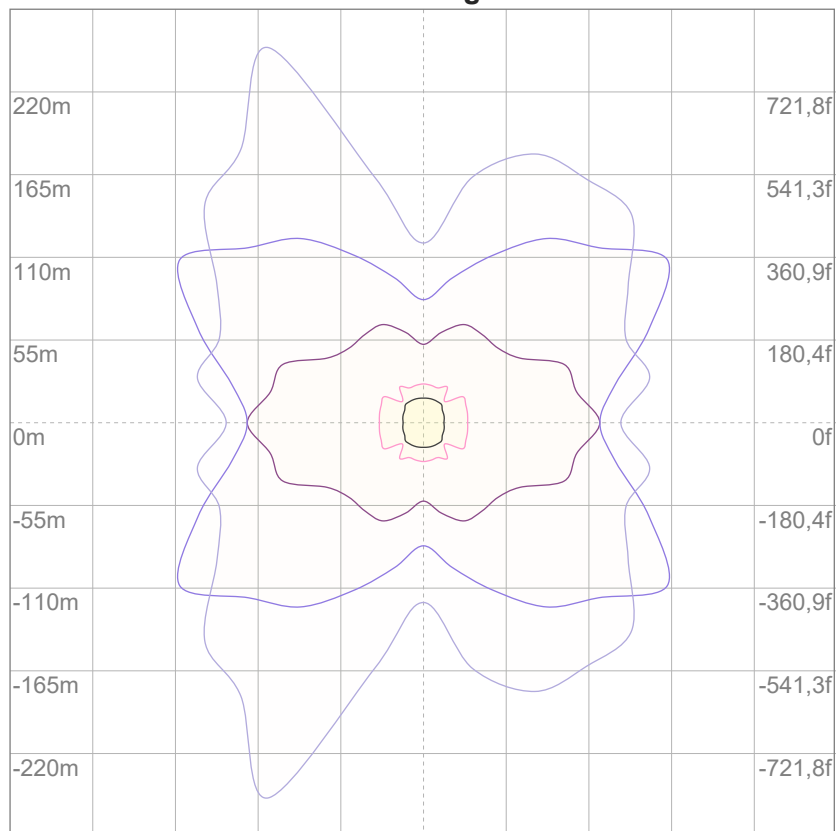
10%	46 cd
20%	93 cd
30%	139 cd
40%	185 cd
50%	232 cd
60%	278 cd
70%	324 cd
80%	371 cd
90%	417 cd

Conditions:

Number of c-planes: 16

Candela at center: 464 cd

ISO lux diagram



3%	0,139 lx
5%	0,232 lx
10%	0,464 lx
30%	1,39 lx
50%	2,32 lx

Conditions:

Number of c-planes: 16

Lux at center: 4,64 lx

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

Glare Evaluation According to UGR

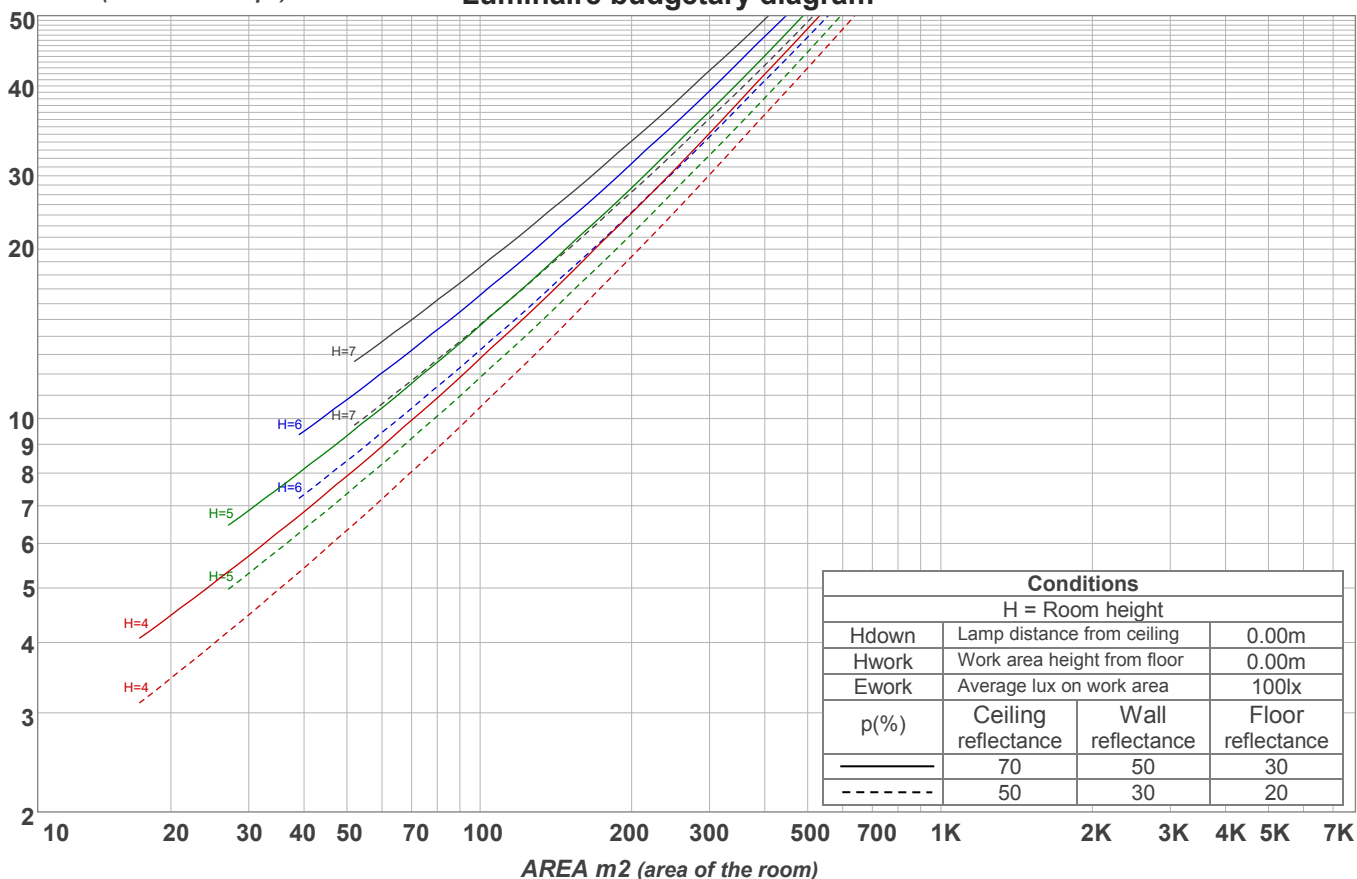
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	23,5	24,8	23,8	25,1	25,3	24,8	26,0	25,0	26,3	26,6
	3H	25,0	26,3	25,5	26,6	26,8	26,1	27,3	26,5	27,6	27,8
	4H	25,5	26,7	25,9	27,0	27,3	26,5	27,7	26,9	28,0	28,3
	6H	25,8	26,9	26,1	27,2	27,6	26,9	27,9	27,2	28,2	28,6
	8H	25,9	27,0	26,3	27,3	27,7	26,9	28,0	27,3	28,3	28,7
	12H	25,9	27,0	26,3	27,3	27,7	26,9	27,9	27,3	28,3	28,7
4H	2H	24,1	25,3	24,5	25,6	25,9	25,1	26,3	25,5	26,6	26,8
	3H	26,0	27,0	26,3	27,3	27,8	26,7	27,7	27,0	28,0	28,5
	4H	26,4	27,4	26,9	27,8	28,3	27,1	28,0	27,5	28,5	29,0
	6H	26,8	27,7	27,3	28,0	28,4	27,5	28,4	28,0	28,8	29,1
	8H	26,9	27,7	27,4	28,1	28,5	27,6	28,4	28,1	28,8	29,2
	12H	27,0	27,7	27,5	28,1	28,6	27,7	28,4	28,2	28,8	29,3
8H	4H	26,7	27,5	27,2	27,9	28,3	27,3	28,1	27,8	28,5	28,9
	6H	27,2	27,8	27,7	28,3	28,8	27,9	28,5	28,4	28,9	29,5
	8H	27,4	27,9	27,9	28,4	29,1	28,1	28,6	28,6	29,1	29,8
	12H	27,5	28,0	28,1	28,5	29,1	28,1	28,6	28,7	29,1	29,7
12H	4H	26,7	27,4	27,2	27,8	28,3	27,3	28,0	27,8	28,4	28,9
	6H	27,2	27,8	27,7	28,3	28,9	27,9	28,4	28,4	29,0	29,6
	8H	27,4	27,9	28,0	28,4	29,0	28,1	28,6	28,7	29,1	29,7
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,3 / -0,3					0,1 / -0,1				
S = 1.5H		0,6 / -0,8					0,3 / -0,4				
S = 2.0H		1,0 / -0,7					0,8 / -0,9				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 1410 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	111	111	111	106	106	106	101	101	101	99
1	108	103	99	95	105	101	97	93	97	93	90	92	90	87	89	87	84	82
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	77	74	70	68
3	89	79	70	64	87	77	69	63	74	67	62	71	65	61	68	63	59	57
4	82	70	61	54	79	68	60	53	65	58	52	63	57	52	61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45	56	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	39	51	44	39	49	43	39	36
7	64	50	42	35	62	50	41	35	48	40	35	46	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	42	36	31	41	35	31	29
9	56	42	34	28	54	41	34	28	40	33	28	39	32	28	38	32	27	26
10	52	39	31	26	51	38	31	25	37	30	25	36	30	25	35	29	25	23

LAMPS (number of lamps)

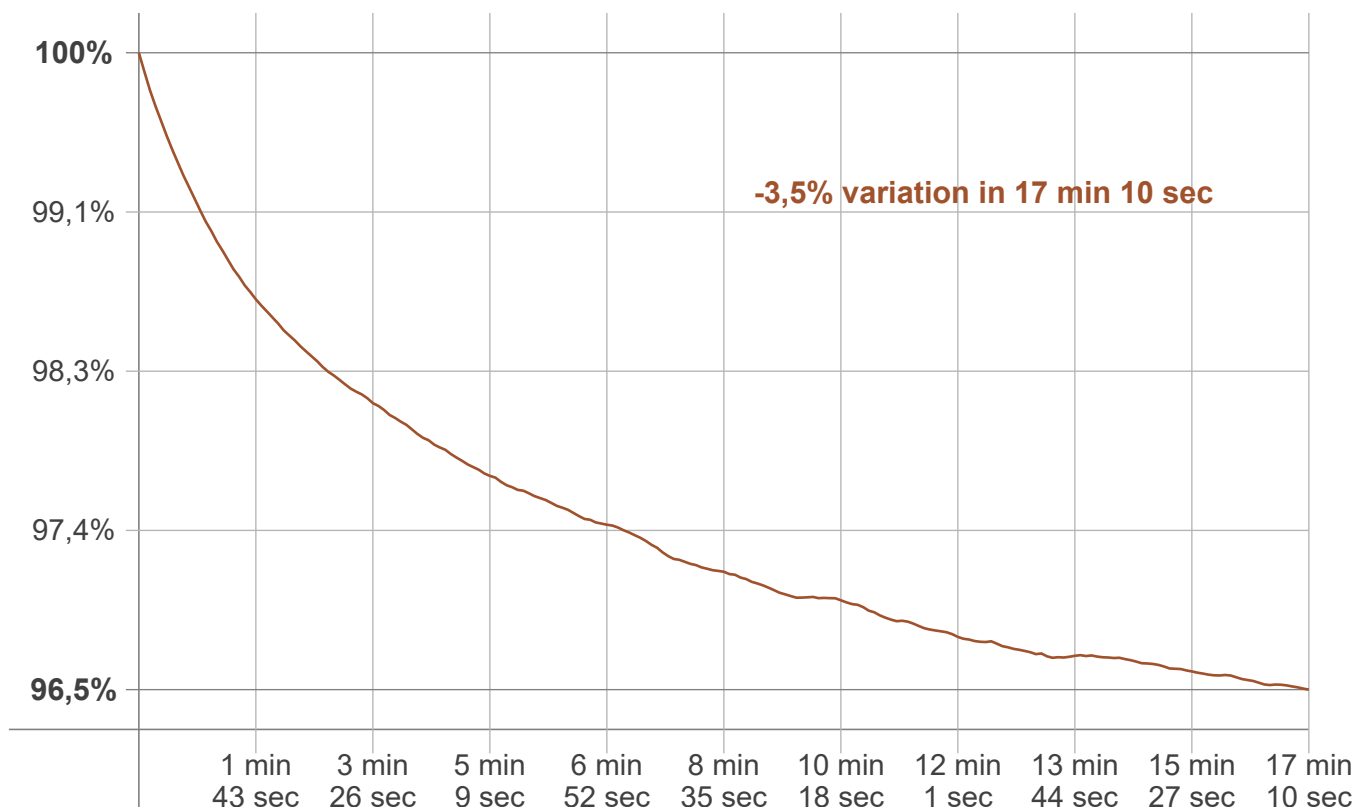
Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
43,9 lm	127 lm	194 lm	239 lm	258 lm	227 lm	173 lm	103 lm	30,5 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
5,99 lm	1,68 lm	1,57 lm	1,42 lm	1,22 lm	0,992 lm	0,731 lm	0,448 lm	0,151 lm

Warmup curve



Warmup result

Warmup time:	Lamp stabilized in 17 min 10 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
2739 K	-6 K	2733 K

Output change

Output start	Output change	Output end
1456 lm	-46 lm	1410 lm