

Light efficiency:

45 Lumen/Watt

Light quality:

CRI: 96,5

Color temperature:

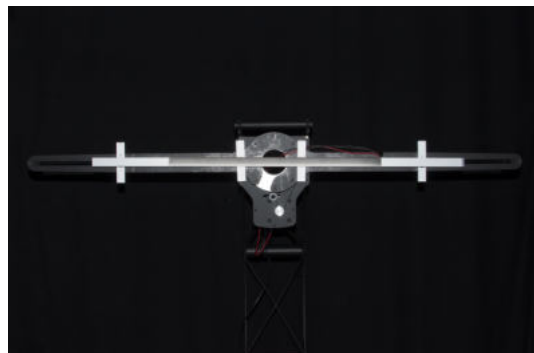
2666 K

Output: 515 lm

Peak: 214 cd

Power: 11,5 W

PF: 1,0



Product name:

Jago-2_510mm_927_Cover-Square-Grey

Item number:

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

Date and time:

20.07.2022 10:02:17

Description:

Rank: C80-AD-8GB

Tolerances:

Lumen +/-4%

Candela +/-2,5%

Colour Temp +/-35 Kelvin

CRI +/-0,7

Angular Resolution: 1 Degree Step

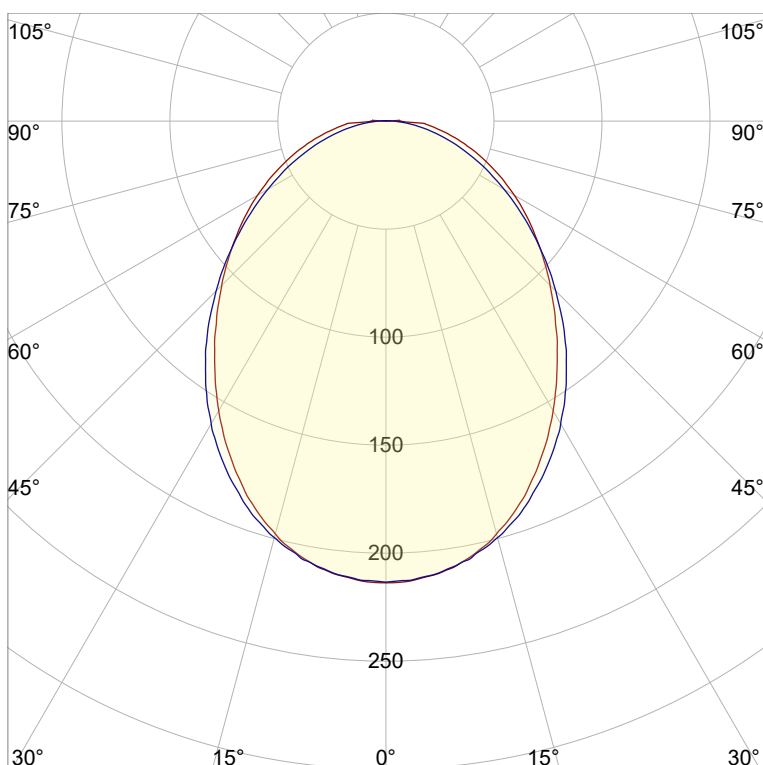
Last Calibration 20-09-2021

Tester: Peter Ulrich

Test Site: Lichtlabor

Gaustrasse 13

55411 Bingen am Rhein

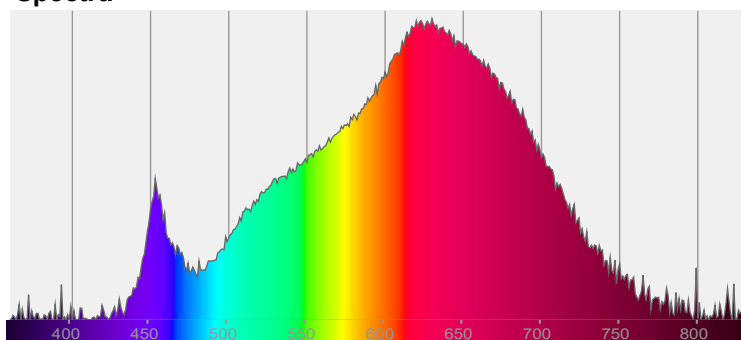


CIE 1931

x: 0,460

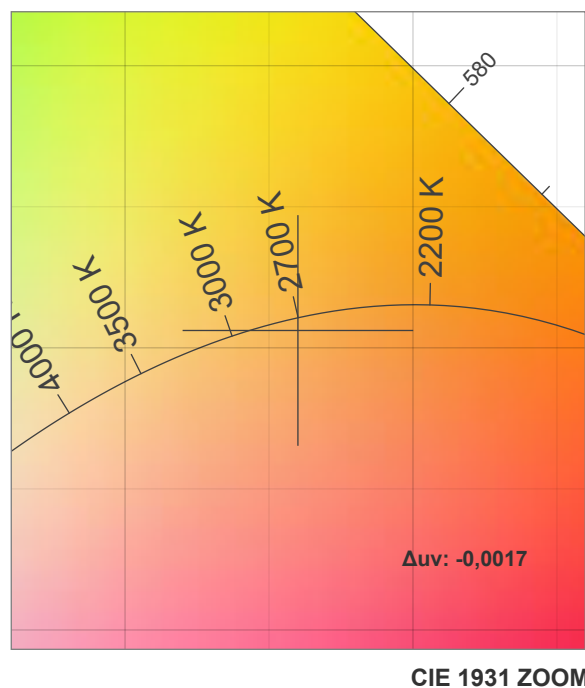
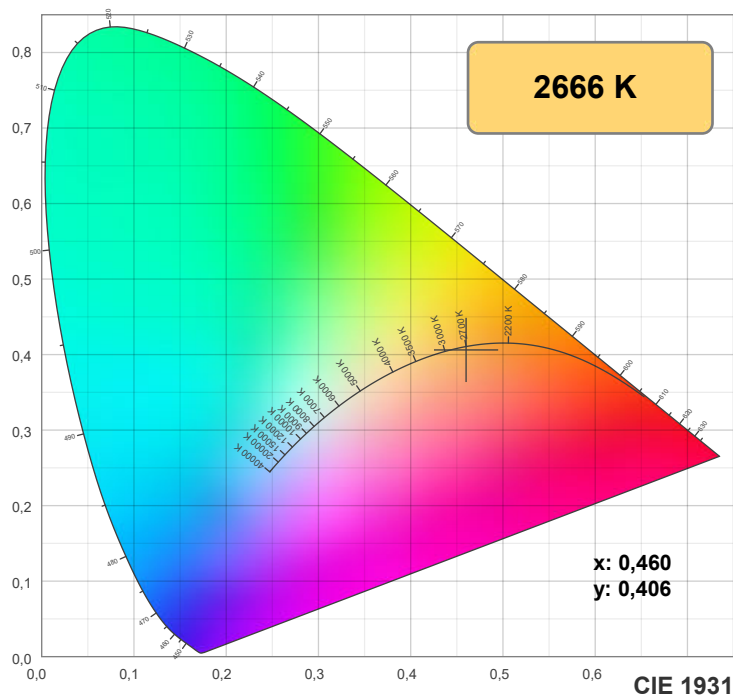
y: 0,406

Spectra

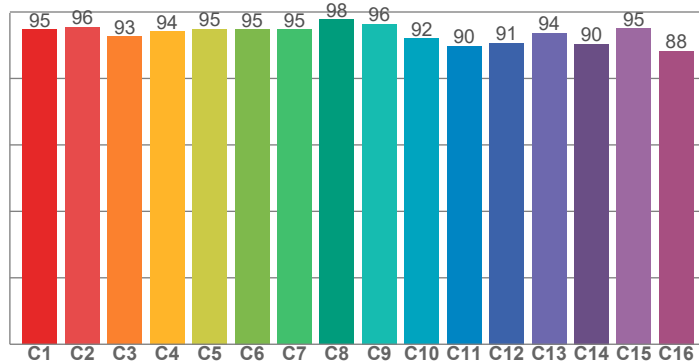


Power

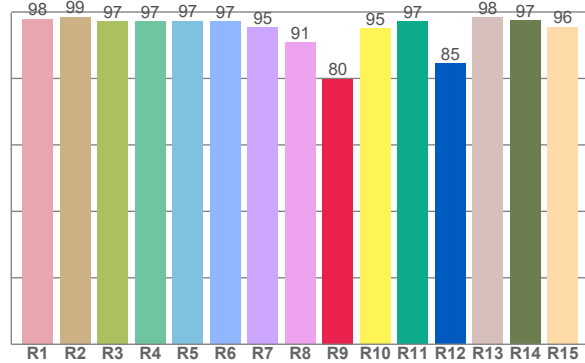
Voltage: 48,0 V
Current: 0,240 A
Frequency: 0 Hz



TM30: 93,4



CRI: 96,5 (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
98,0	98,5	97,3	97,2	97,4	97,1	95,3	90,9	79,9	95,1	97,1	84,5	98,4	97,5	95,5

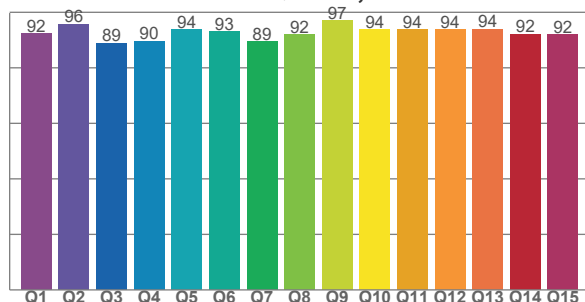
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
94,8	95,5	92,7	94,2	94,9	94,8	94,7	97,8	96,4	92,0	89,8	90,7	93,7	90,4	95,0	88,2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
92,2	95,8	88,9	89,7	93,7	93,1	89,5	92,0	97,0	93,8	93,8	93,8	94,0	92,1	92,0

CQS: 92,3



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
2666 K	96,5	79,9	93,4	101,7	92,3	0,460	0,406	0,265	0,350	-0,0017

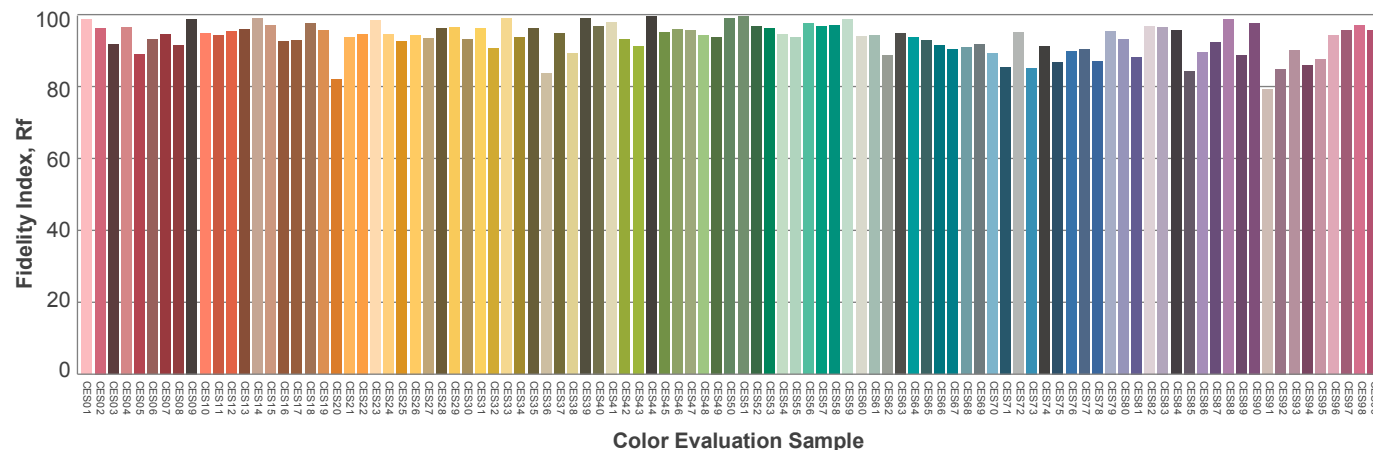
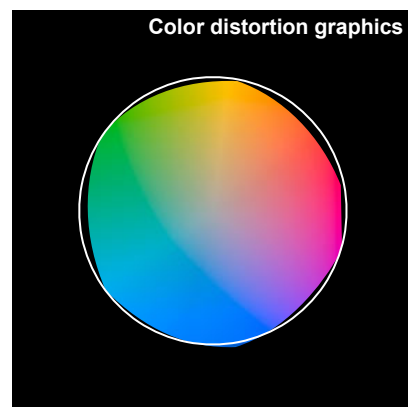
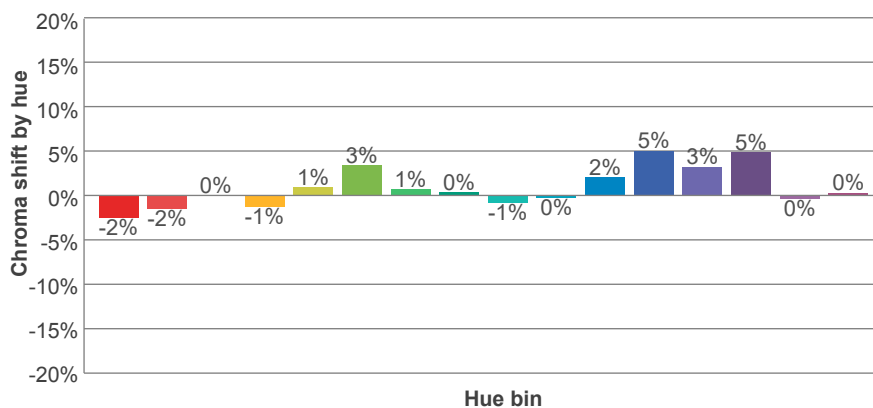
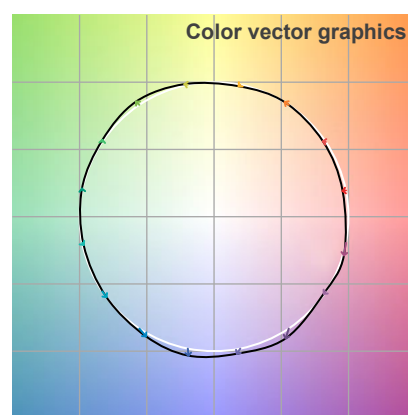
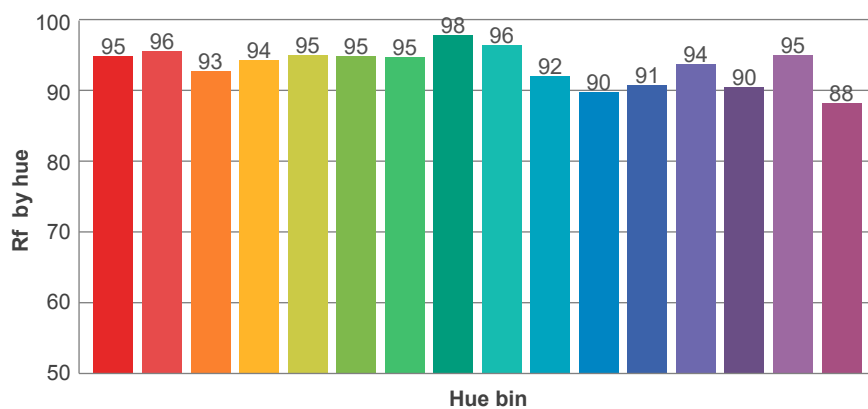
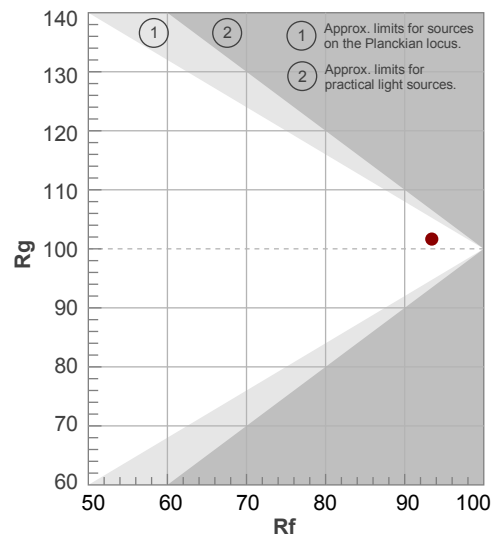
Rf 93,4

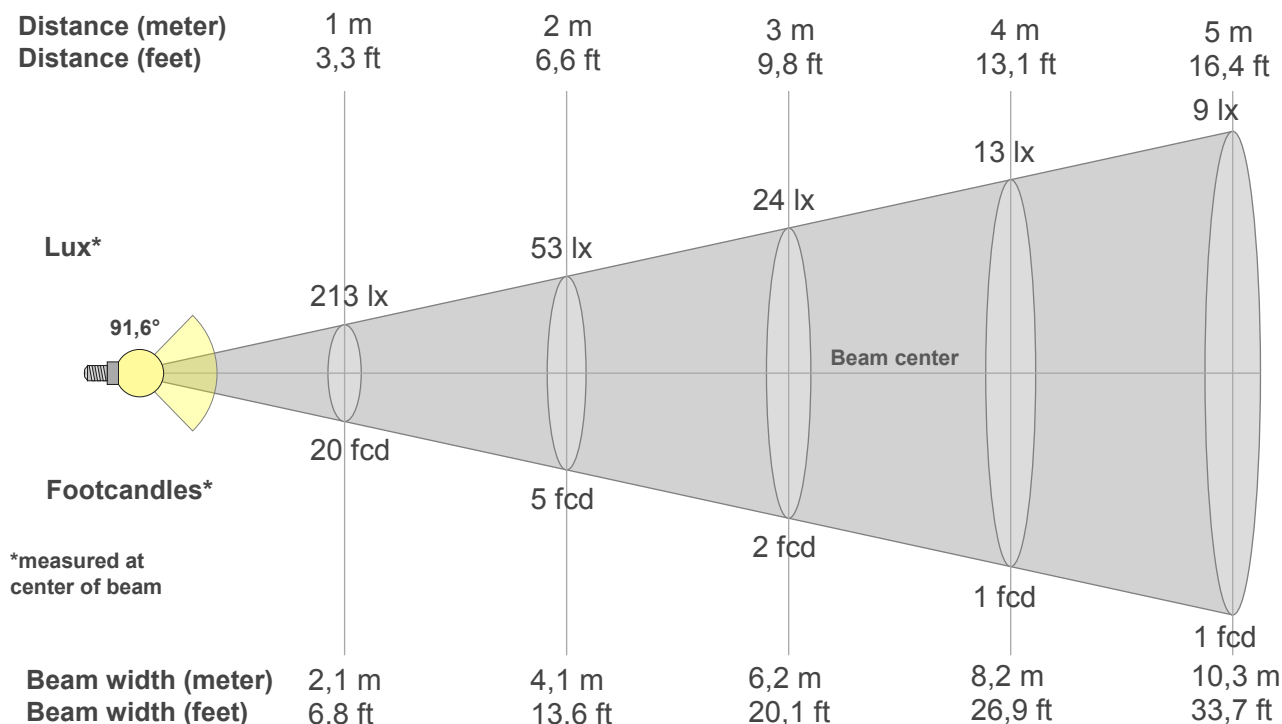
Fidelity index Rf

Rg 101,7

Gamut index Rg

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





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
213lx	53lx	24lx	13lx	9lx	6lx	4lx	3lx	3lx	2lx	2lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx
19,8fcd	5fcd	2,2fcd	1,2fcd	0,8fcd	0,6fcd	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	0fcd

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°
213	212	207	198	186	171	155	138	122	107	94	81	69	57	46	35	26	19	7	0
100%	99%	97%	93%	87%	80%	73%	65%	57%	50%	44%	38%	32%	27%	21%	17%	12%	9%	3%	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°
213	212	207	200	189	176	162	146	129	111	94	78	63	50	37	26	16	9	2	2
100%	99%	97%	94%	89%	83%	76%	68%	60%	52%	44%	37%	30%	23%	17%	12%	8%	4%	1%	1%

Intensities in 180° c-plane

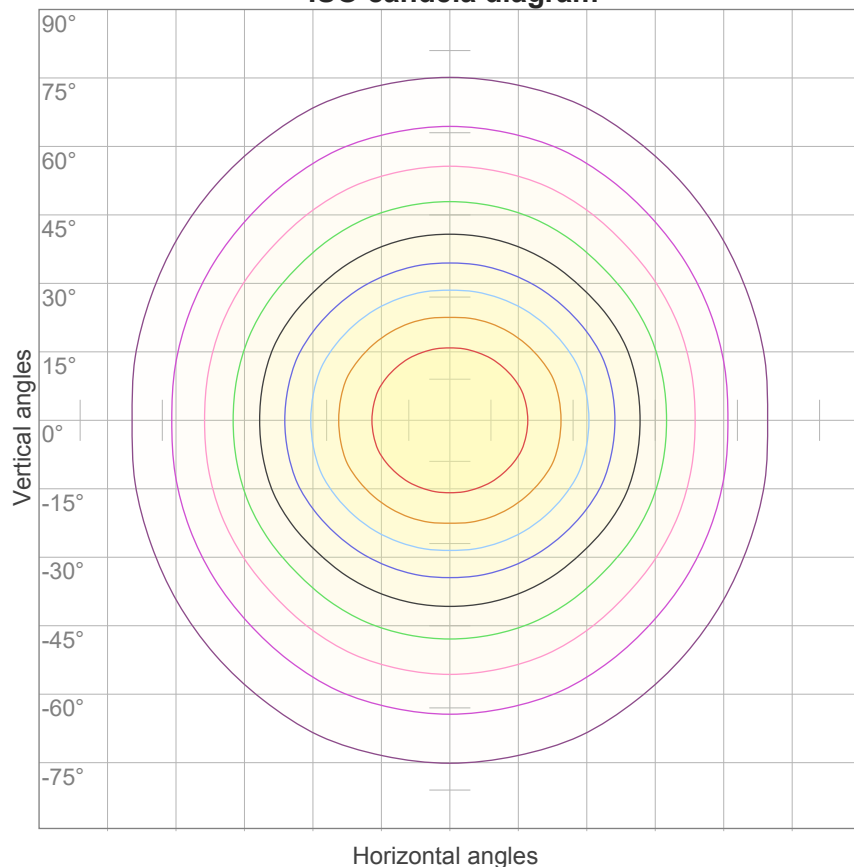
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
213	212	207	198	186	171	155	138	122	107	94	81	69	57	46	35	26	19	7	0
100%	99%	97%	93%	87%	80%	73%	65%	57%	50%	44%	38%	32%	27%	21%	17%	12%	9%	3%	0%

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°
213	212	207	200	189	176	162	146	129	111	94	78	63	50	37	26	16	9	2	2
100%	99%	97%	94%	89%	83%	76%	68%	60%	52%	44%	37%	30%	23%	17%	12%	8%	4%	1%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
91,6°	161,5°	205,5°	77,8%	56,0%

ISO candela diagram



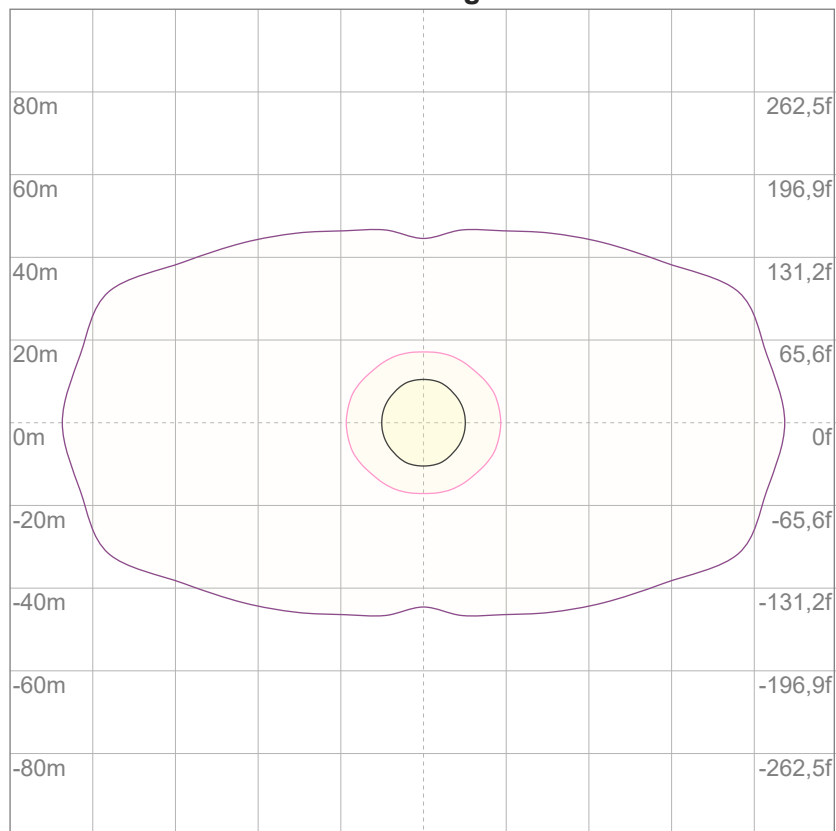
10%	21 cd
20%	43 cd
30%	64 cd
40%	85 cd
50%	107 cd
60%	128 cd
70%	149 cd
80%	171 cd
90%	192 cd

Conditions:

Number of c-planes: 16

Candela at center: 213 cd

ISO lux diagram



Mounting height: 10 meters (33 feet)

3%	64,0m lx
5%	0,107 lx
10%	0,213 lx
30%	0,640 lx
50%	1,07 lx

Conditions:

Number of c-planes: 16

Lux at center: 2,13 lx

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

Glare Evaluation According to UGR

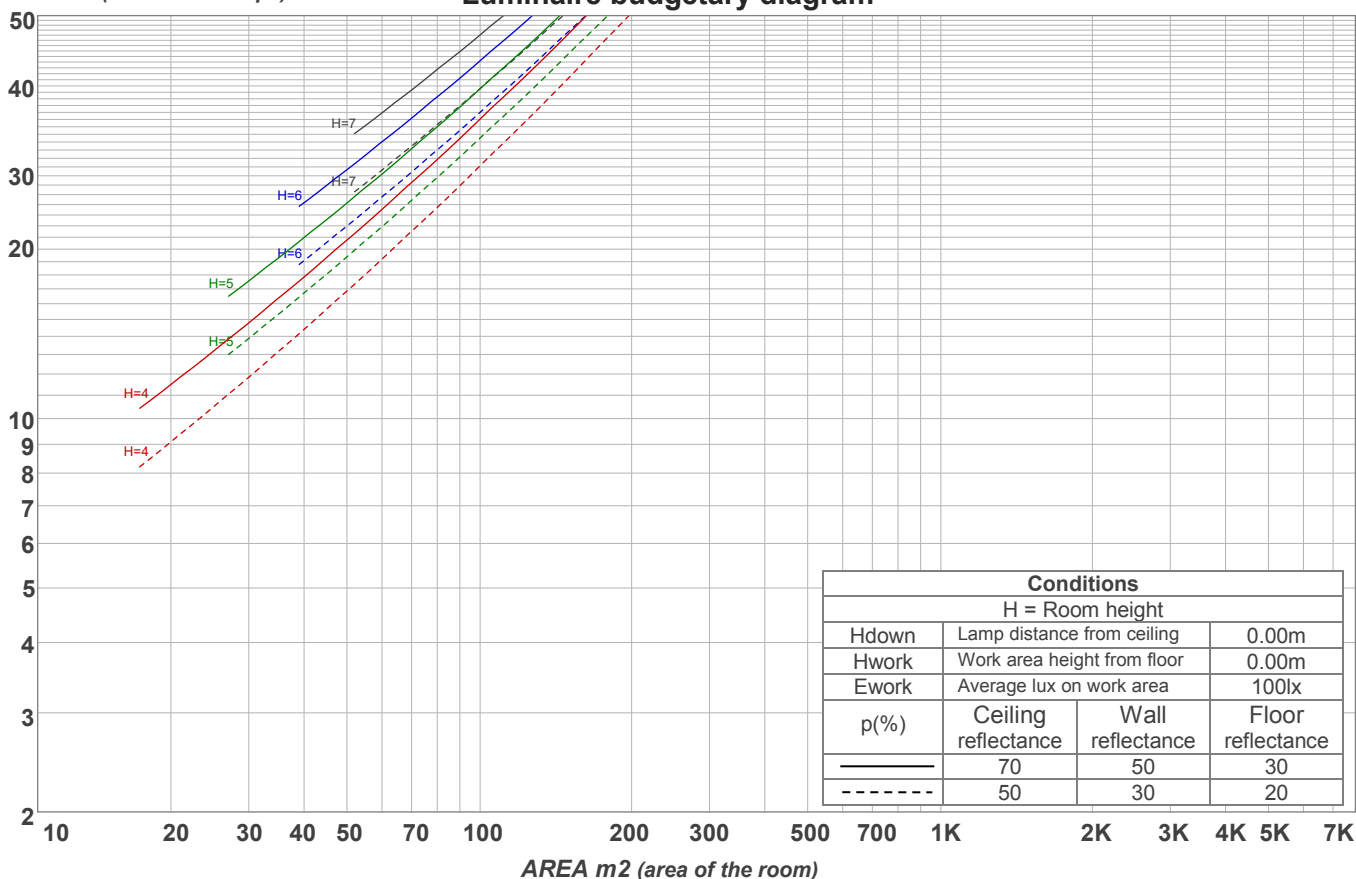
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	19,3	20,5	19,5	20,8	21,0	20,1	21,3	20,3	21,6	21,8
	3H	20,5	21,7	20,9	22,0	22,2	21,3	22,6	21,7	22,8	23,0
	4H	21,0	22,2	21,4	22,5	22,7	21,9	23,0	22,3	23,3	23,6
	6H	21,5	22,6	21,9	22,9	23,2	22,3	23,4	22,7	23,7	24,0
	8H	21,7	22,7	22,1	23,0	23,4	22,5	23,5	22,8	23,8	24,2
	12H	21,8	22,8	22,2	23,2	23,6	22,6	23,6	23,0	23,9	24,4
4H	2H	19,8	21,0	20,2	21,2	21,5	20,5	21,6	20,9	21,9	22,2
	3H	21,3	22,3	21,7	22,6	23,1	22,0	22,9	22,3	23,3	23,7
	4H	21,9	22,8	22,4	23,2	23,8	22,6	23,5	23,0	23,9	24,4
	6H	22,5	23,4	23,0	23,7	24,1	23,1	24,0	23,6	24,3	24,7
	8H	22,7	23,5	23,2	23,9	24,3	23,3	24,1	23,8	24,5	24,8
	12H	22,9	23,6	23,4	24,0	24,5	23,4	24,1	23,9	24,5	25,0
8H	4H	22,2	23,0	22,7	23,3	23,7	22,7	23,5	23,3	23,9	24,3
	6H	22,9	23,5	23,4	24,0	24,5	23,4	24,0	23,9	24,5	25,0
	8H	23,3	23,8	23,8	24,3	25,0	23,7	24,3	24,2	24,8	25,4
	12H	23,6	24,1	24,2	24,6	25,2	24,0	24,4	24,5	24,9	25,5
12H	4H	22,2	22,9	22,7	23,3	23,8	22,7	23,4	23,2	23,8	24,3
	6H	23,0	23,5	23,5	24,1	24,7	23,5	24,0	24,0	24,5	25,2
	8H	23,4	23,8	24,0	24,3	25,0	23,8	24,3	24,4	24,8	25,4
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,1 / -0,1					0,1 / -0,1				
S = 1.5H		0,2 / -0,3					0,3 / -0,4				
S = 2.0H		0,4 / -0,6					0,7 / -0,8				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 515 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	108	103	99	95	105	101	97	93	96	93	90	92	89	87	88	86	84	82
2	99	91	84	78	96	88	82	77	84	79	75	81	77	73	78	74	71	69
3	90	80	72	66	88	78	71	65	75	69	63	72	66	62	69	64	61	58
4	83	71	63	56	81	70	62	56	67	60	55	64	58	54	62	57	53	50
5	77	64	55	49	74	63	55	48	60	53	48	58	52	47	56	51	46	44
6	71	58	49	43	69	57	49	43	55	48	42	53	46	42	51	45	41	39
7	66	53	44	38	64	52	44	38	50	43	38	48	42	37	47	41	37	35
8	62	48	40	34	60	48	40	34	46	39	34	45	38	33	43	37	33	31
9	58	44	36	31	56	44	36	31	43	36	31	41	35	30	40	34	30	28
10	54	41	33	28	53	41	33	28	39	33	28	38	32	28	37	32	27	26

LAMPS (number of lamps)

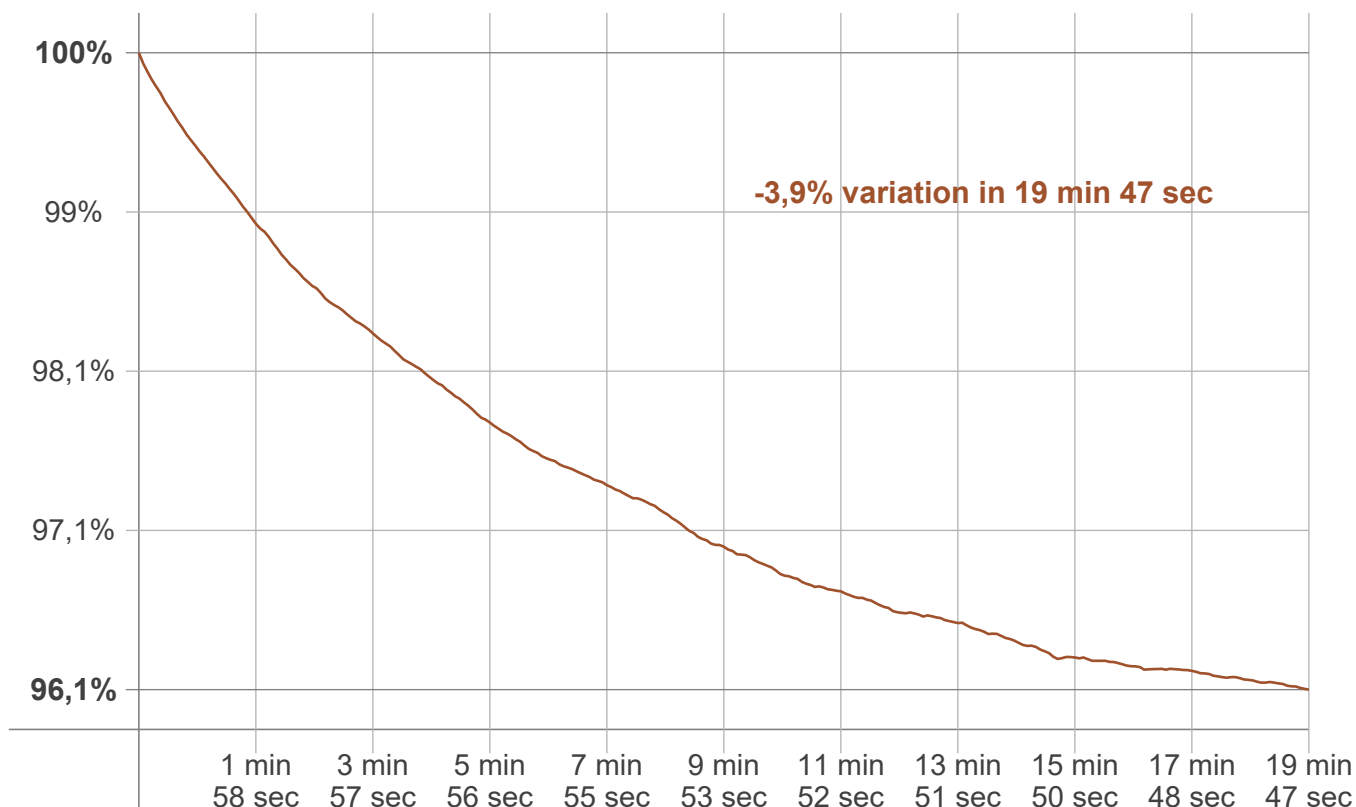
Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
20,1 lm	55,9 lm	80,0 lm	88,9 lm	84,4 lm	71,1 lm	53,0 lm	33,5 lm	15,1 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
5,52 lm	1,53 lm	1,43 lm	1,29 lm	0,999 lm	0,745 lm	0,549 lm	0,336 lm	0,113 lm

Warmup curve



Warmup result

Warmup time:	Lamp stabilized in 19 min 47 sec
Warmup variation	-3,9%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
2684 K	-18 K	2666 K

Output change

Output start	Output change	Output end
534 lm	-19 lm	515 lm