

Light efficiency:

120 Lumen/Watt

Light quality:

CRI: 94,2

Color temperature:

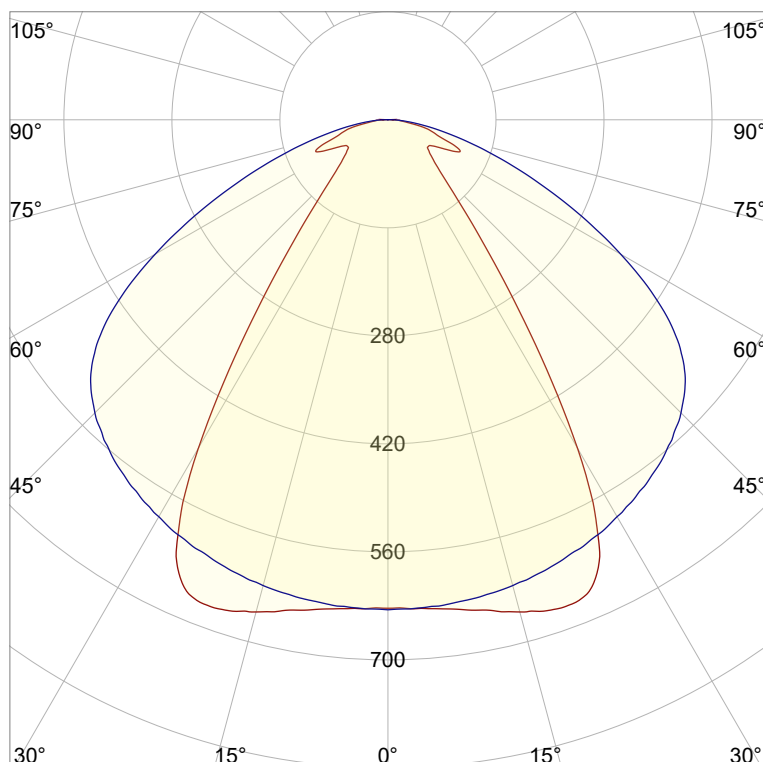
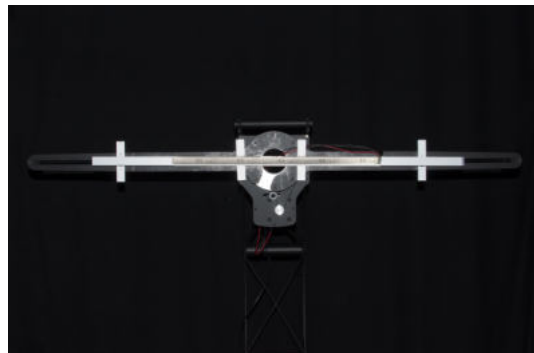
2730 K

Output: 1378 lm

Peak: 671 cd

Power: 11,5 W

PF: 1,0



Product name:

Jago-2_510mm_927_Lens-60°-Frosted

Item number:

NP/L1C/19B/G1/L1C/0510/927/L6F

Date and time:

21.07.2022 10:52:31

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

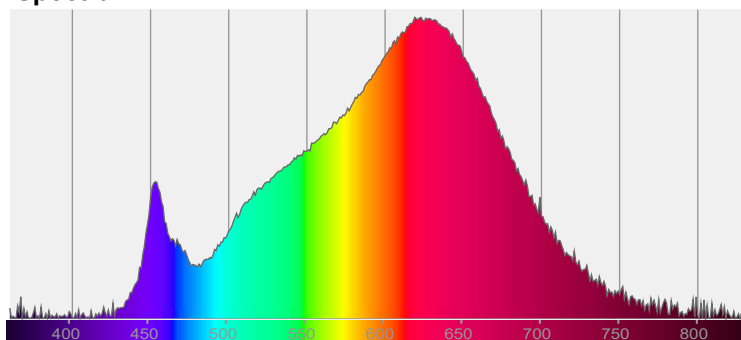


CIE 1931

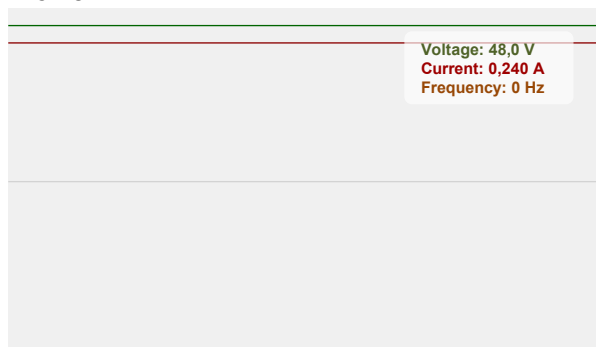
x: 0,456

y: 0,408

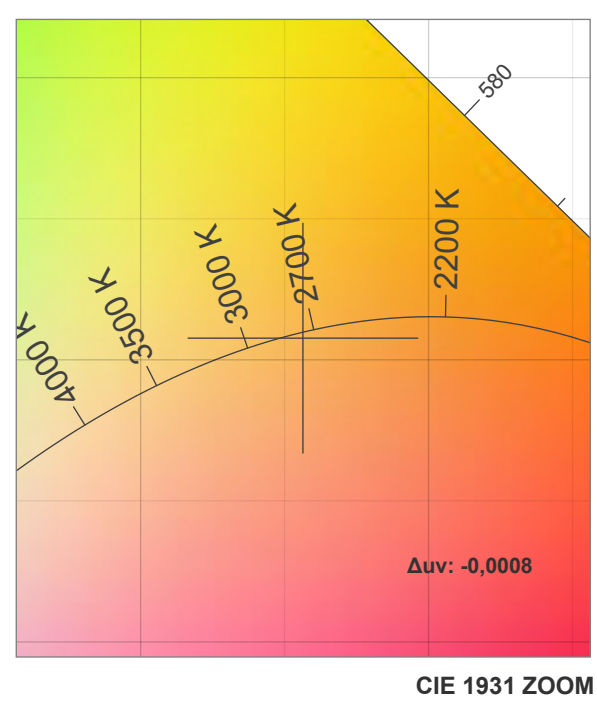
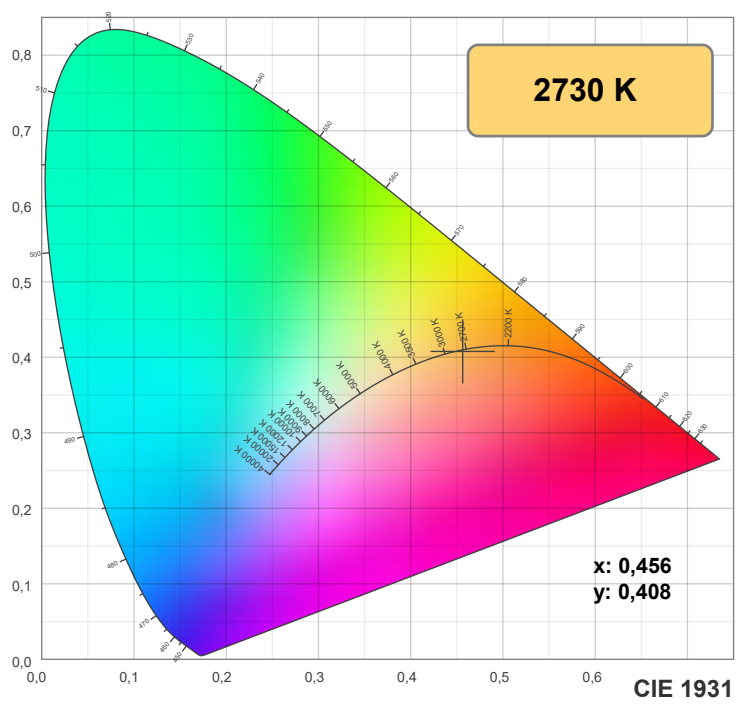
Spectra



Power

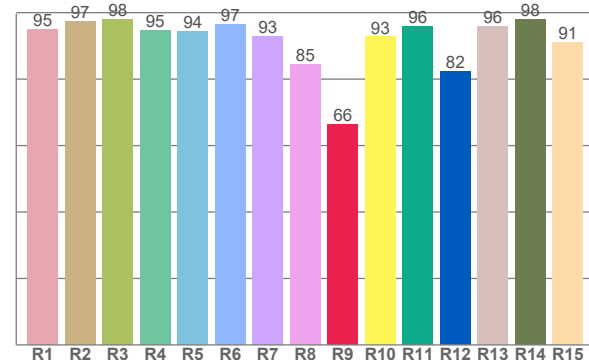
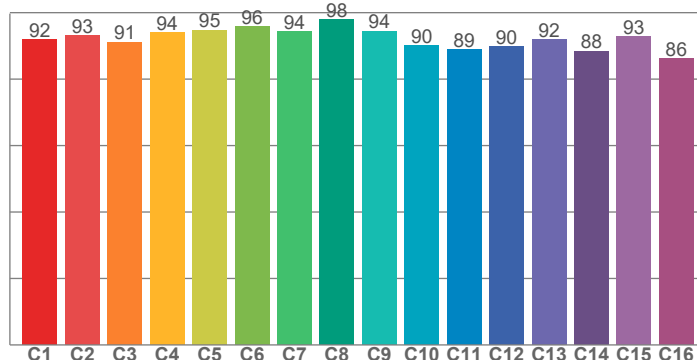


Voltage: 48,0 V
Current: 0,240 A
Frequency: 0 Hz



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	92,8	84,5	66,2	92,7	95,7	82,4	95,7	98,1	91,0

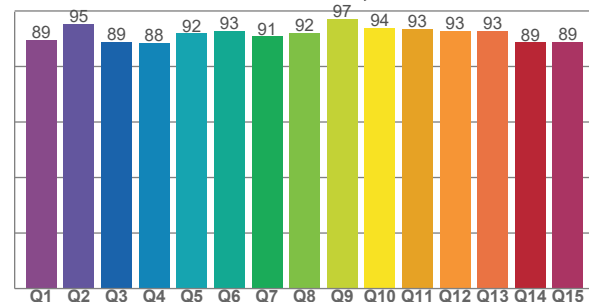
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
91,9	93,2	91,2	94,0	94,8	95,7	94,4	98,0	94,4	90,2	88,9	89,9	92,0	88,5	92,9	86,2

CQS Q values

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

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
2730 K	94,2	66,2	92,1	99,8	91,3	0,456	0,408	0,262	0,350	-0,0008

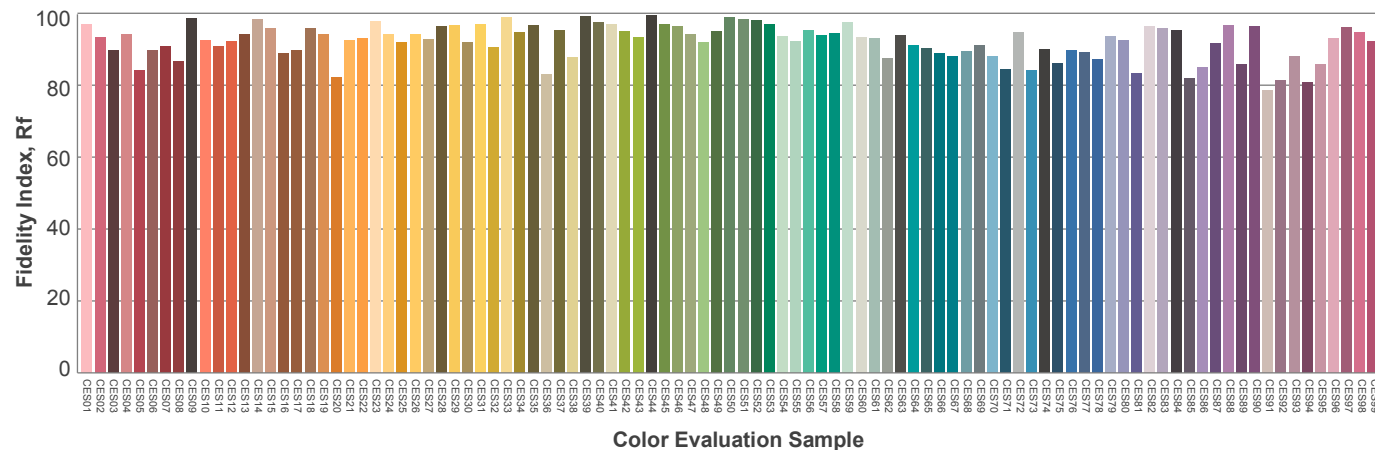
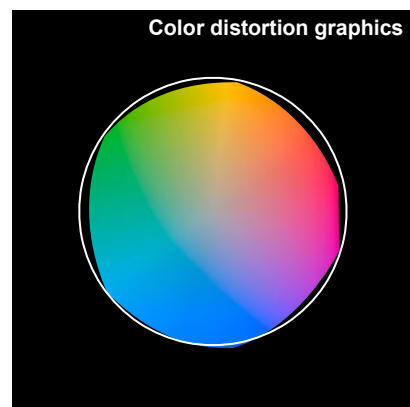
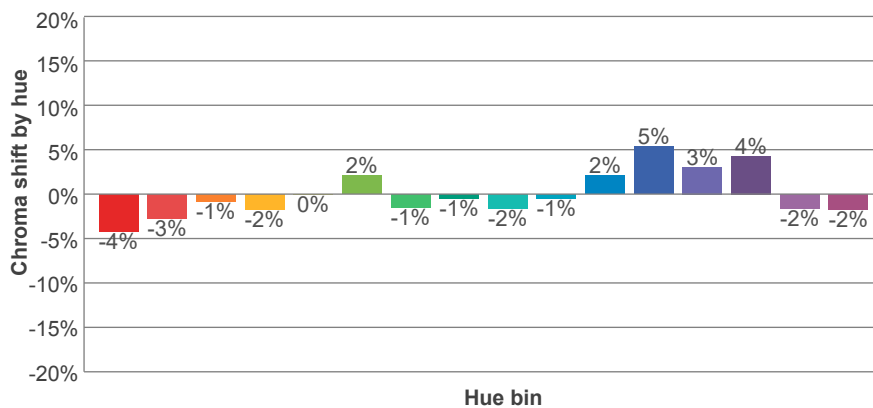
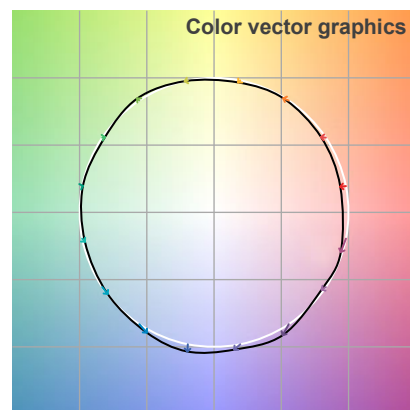
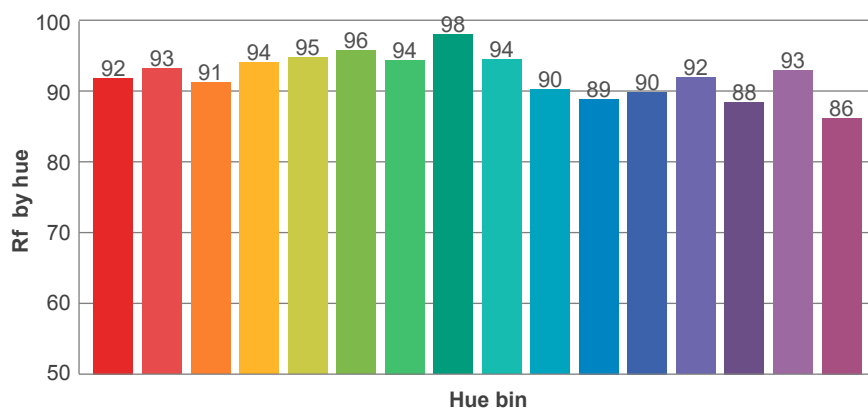
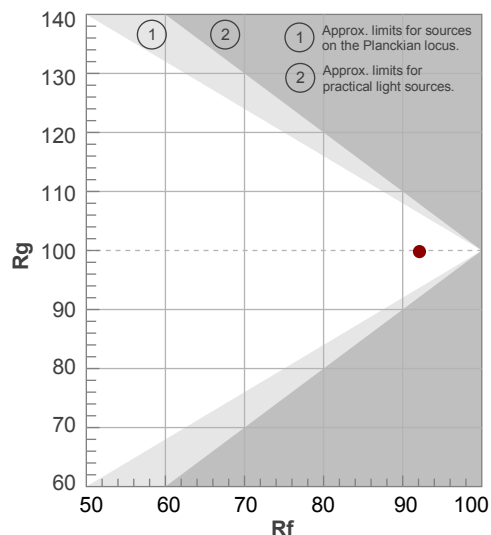
Rf 92,1

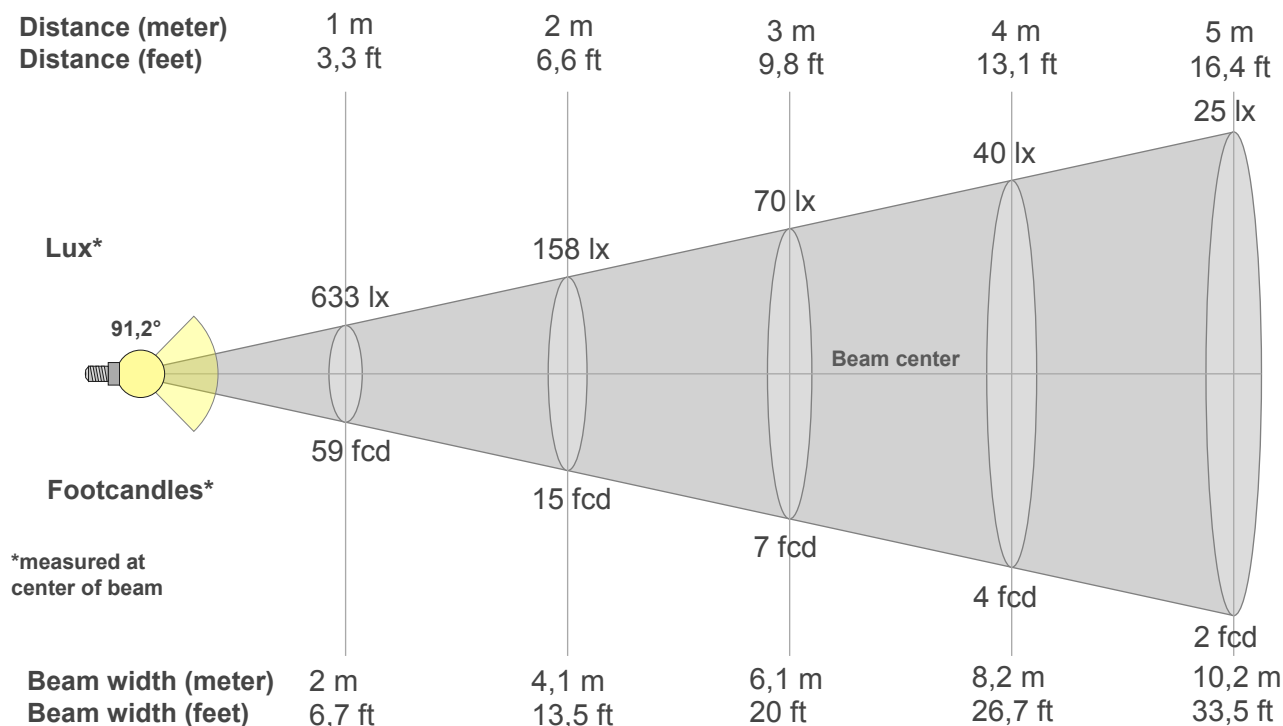
Fidelity index Rf

Rg 99,8

Gammut 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%	-1%
8	98	-1%	0%
9	94	-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
633lx	158lx	70lx	40lx	25lx	18lx	13lx	10lx	8lx	6lx	5lx	4lx	4lx	3lx	3lx	2lx	2lx	2lx	2lx	2lx
58,8fcd	14,7fcd	6,5fcd	3,7fcd	2,4fcd	1,6fcd	1,2fcd	0,9fcd	0,7fcd	0,6fcd	0,5fcd	0,4fcd	0,3fcd	0,3fcd	0,3fcd	0,2fcd	0,2fcd	0,2fcd	0,2fcd	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°
633	636	645	660	671	643	490	283	155	97	74	63	68	98	83	59	35	17	6	0
100%	100%	102%	104%	106%	102%	77%	45%	24%	15%	12%	10%	11%	15%	13%	9%	6%	3%	1%	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°
633	633	630	625	617	607	594	580	561	537	501	439	348	252	168	102	55	23	4	4
100%	100%	100%	99%	97%	96%	94%	92%	89%	85%	79%	69%	55%	40%	27%	16%	9%	4%	1%	1%

Intensities in 180° c-plane

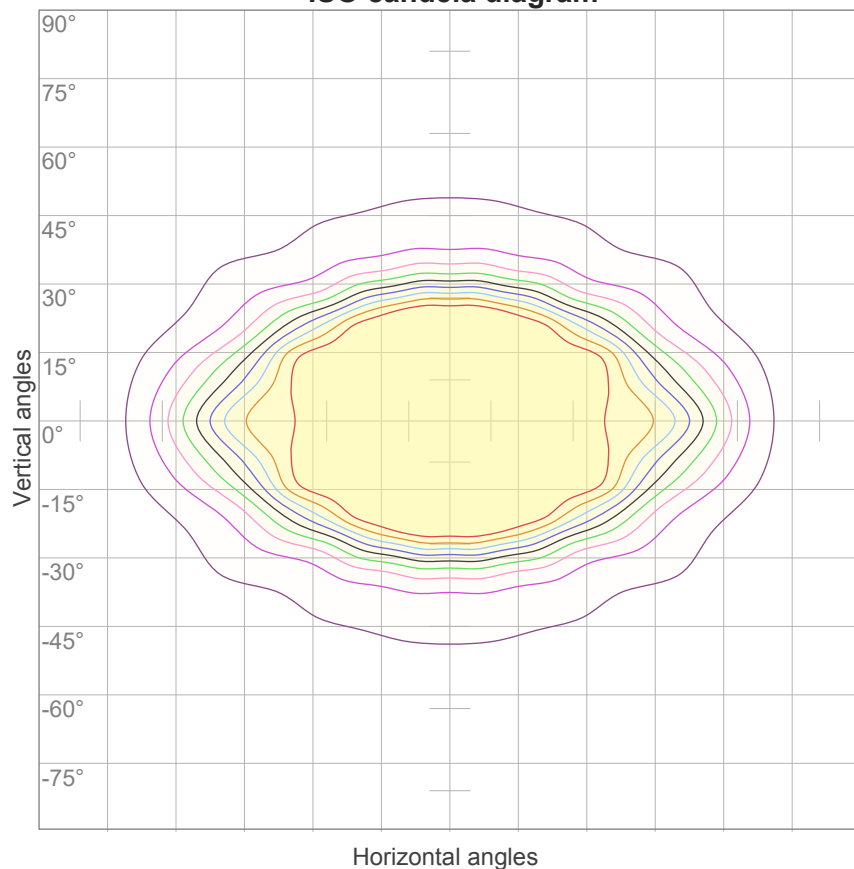
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
633	636	645	660	671	643	490	283	155	97	74	63	68	98	83	59	35	17	6	0
100%	100%	102%	104%	106%	102%	77%	45%	24%	15%	12%	10%	11%	15%	13%	9%	6%	3%	1%	0%

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°
633	633	630	625	617	607	594	580	561	537	501	439	348	252	168	102	55	23	4	4
100%	100%	100%	99%	97%	96%	94%	92%	89%	85%	79%	69%	55%	40%	27%	16%	9%	4%	1%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
91,2°	146,1°	174,8°	84,7%	68,4%

ISO candela diagram



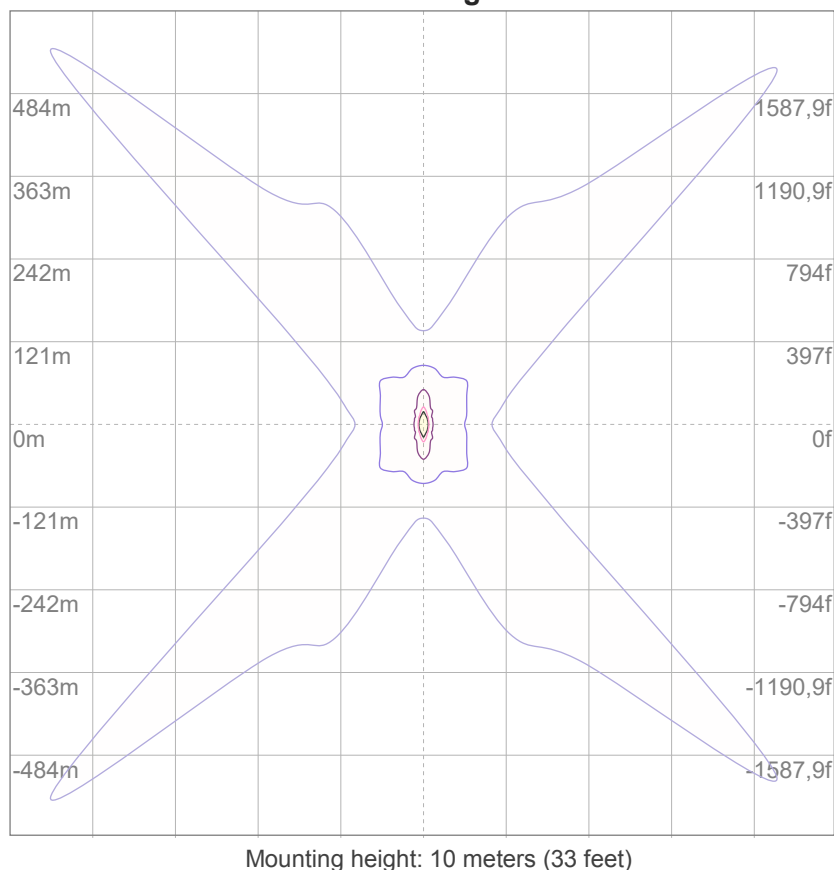
10%	63 cd
20%	127 cd
30%	190 cd
40%	253 cd
50%	317 cd
60%	380 cd
70%	443 cd
80%	507 cd
90%	570 cd

Conditions:

Number of c-planes: 16

Candela at center: 633 cd

ISO lux diagram



3%	0,190 lx
5%	0,317 lx
10%	0,633 lx
30%	1,90 lx
50%	3,17 lx

Conditions:

Number of c-planes: 16

Lux at center: 6,33 lx

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

Glare Evaluation According to UGR

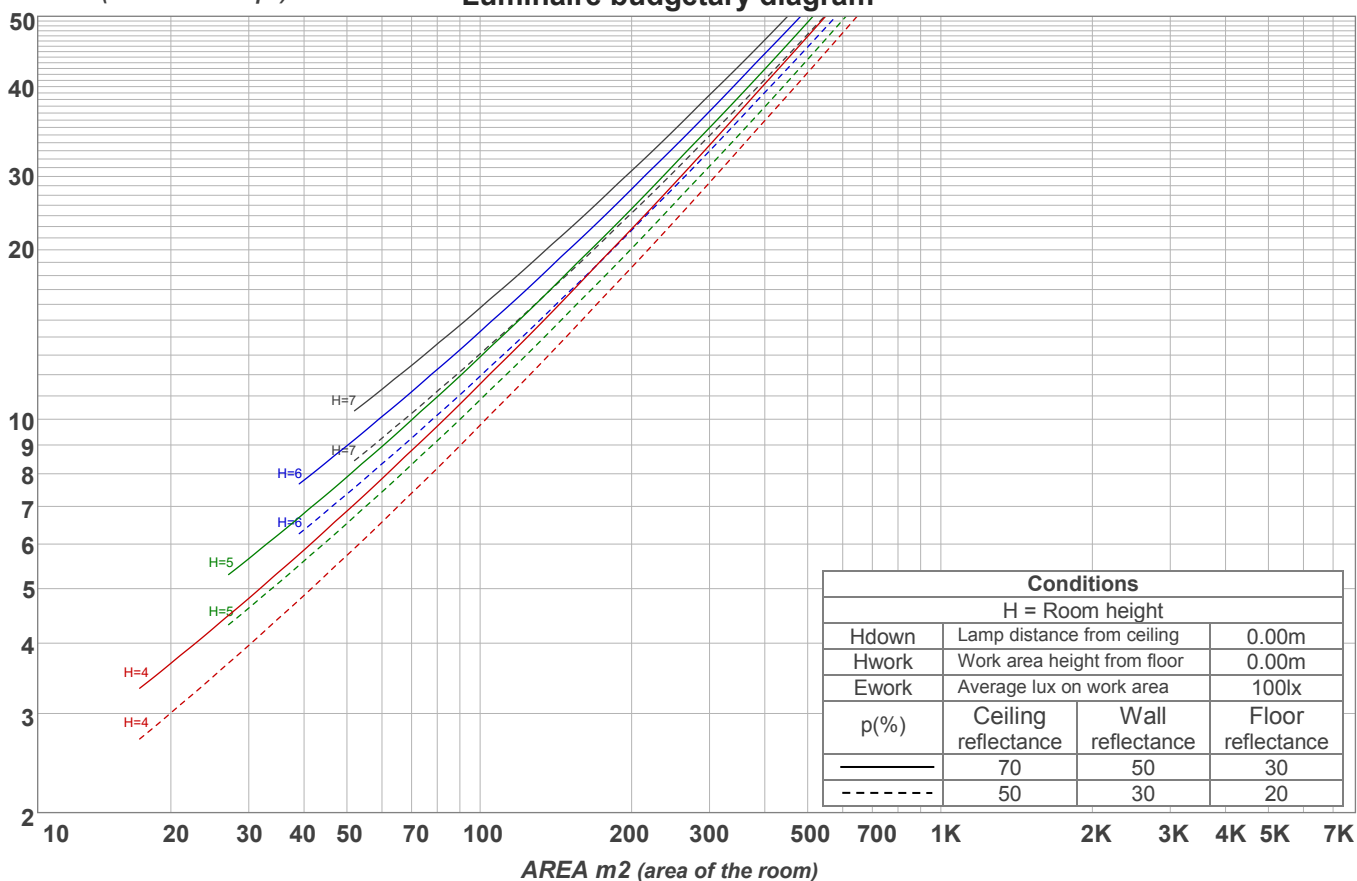
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	17,4	18,5	17,6	18,8	19,0	25,6	26,7	25,8	27,0	27,2
	3H	19,7	20,8	20,1	21,1	21,3	26,7	27,8	27,1	28,1	28,3
	4H	20,5	21,5	20,9	21,8	22,0	27,2	28,2	27,6	28,5	28,7
	6H	21,0	21,9	21,3	22,2	22,6	27,5	28,5	27,8	28,7	29,1
	8H	21,1	22,0	21,4	22,3	22,7	27,6	28,5	28,0	28,8	29,2
	12H	21,1	22,0	21,5	22,4	22,8	27,7	28,5	28,0	28,9	29,3
4H	2H	18,0	19,1	18,4	19,3	19,6	25,4	26,4	25,8	26,7	26,9
	3H	20,7	21,6	21,1	21,9	22,3	26,7	27,5	27,0	27,9	28,3
	4H	21,5	22,3	21,9	22,7	23,2	27,1	27,9	27,5	28,3	28,8
	6H	22,1	22,9	22,6	23,2	23,6	27,5	28,3	28,0	28,6	29,0
	8H	22,2	23,0	22,7	23,3	23,7	27,7	28,4	28,2	28,7	29,1
	12H	22,3	22,9	22,8	23,3	23,8	27,8	28,4	28,3	28,8	29,3
8H	4H	21,9	22,6	22,4	23,0	23,3	27,1	27,8	27,6	28,2	28,5
	6H	22,7	23,2	23,2	23,6	24,2	27,6	28,1	28,1	28,6	29,1
	8H	22,9	23,4	23,4	23,9	24,5	27,8	28,3	28,3	28,8	29,4
	12H	23,0	23,4	23,6	23,9	24,5	28,0	28,4	28,6	28,9	29,5
12H	4H	21,9	22,5	22,4	22,9	23,4	27,0	27,6	27,5	28,1	28,5
	6H	22,8	23,2	23,3	23,8	24,4	27,6	28,0	28,1	28,6	29,2
	8H	23,0	23,4	23,6	23,9	24,5	27,8	28,2	28,4	28,7	29,3
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,5 / -0,2					0,5 / -0,8				
S = 1.5H		1,2 / -0,7					1,5 / -1,9				
S = 2.0H		1,9 / -0,8					2,7 / -3,0				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 1378 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	98
1	110	105	102	98	107	103	100	96	99	96	93	94	92	90	91	89	87	85
2	101	94	88	83	99	92	86	82	88	84	80	85	81	78	82	79	76	74
3	94	84	77	71	91	83	76	71	79	74	69	77	72	68	74	70	66	64
4	87	76	68	62	84	75	67	62	72	66	61	70	64	60	67	63	59	57
5	80	69	61	55	78	68	60	55	66	59	54	64	58	53	62	57	53	51
6	75	63	55	49	73	62	54	49	60	53	48	58	52	48	57	51	47	45
7	70	58	50	44	68	57	49	44	55	48	44	54	48	43	52	47	43	41
8	66	53	45	40	64	52	45	40	51	44	40	50	44	39	48	43	39	37
9	62	49	42	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31

LAMPS (number of lamps)

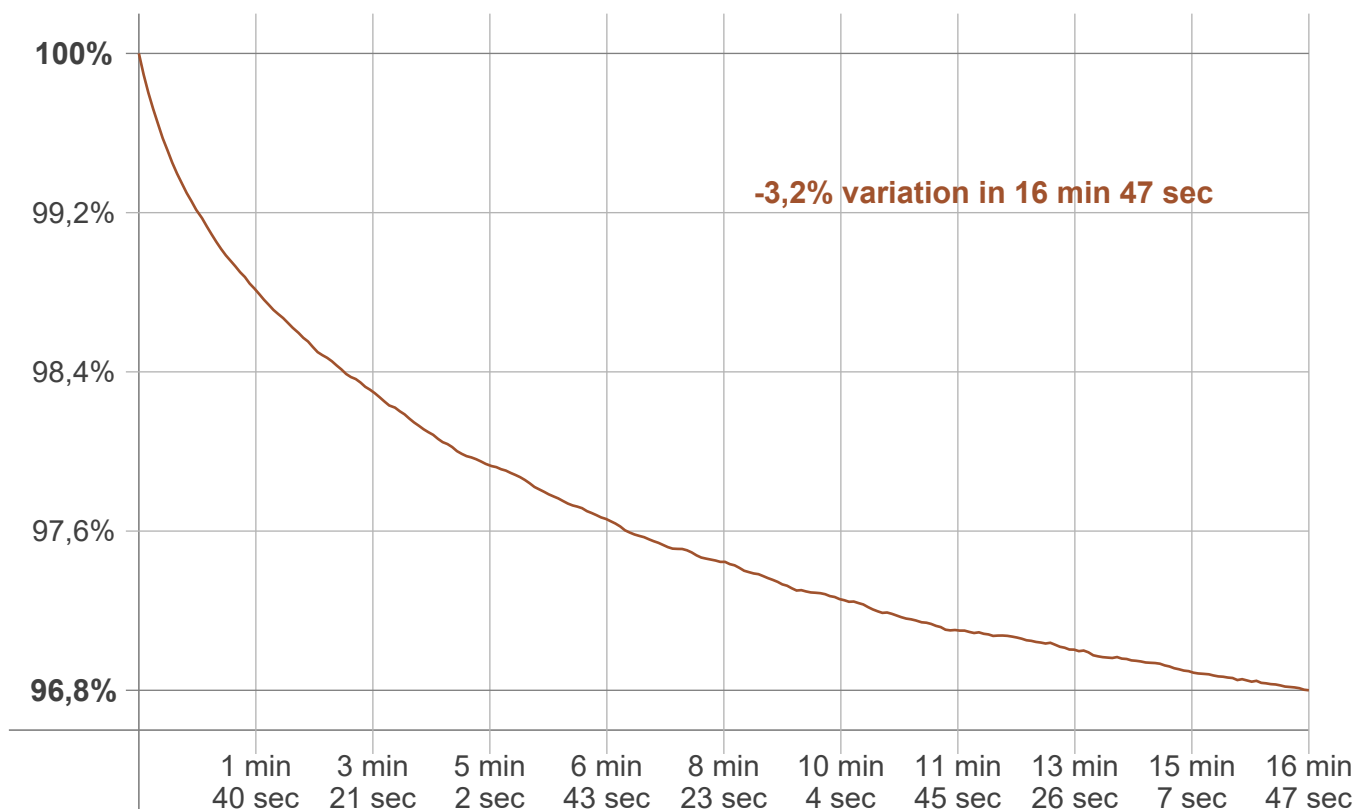
Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
60,4 lm	182 lm	291 lm	294 lm	207 lm	133 lm	96,9 lm	65,7 lm	26,2 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
6,63 lm	4,39 lm	1,99 lm	1,80 lm	1,33 lm	0,921 lm	0,678 lm	0,415 lm	3,66 lm

Warmup curve



Warmup result

Warmup time:	Lamp stabilized in 16 min 47 sec
Warmup variation	-3,2%

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	-5 K	2730 K

Output change

Output start	Output change	Output end
1418 lm	-40 lm	1378 lm