

Light efficiency:

118 Lumen/Watt

Light quality:

CRI: 94,3

Color temperature:

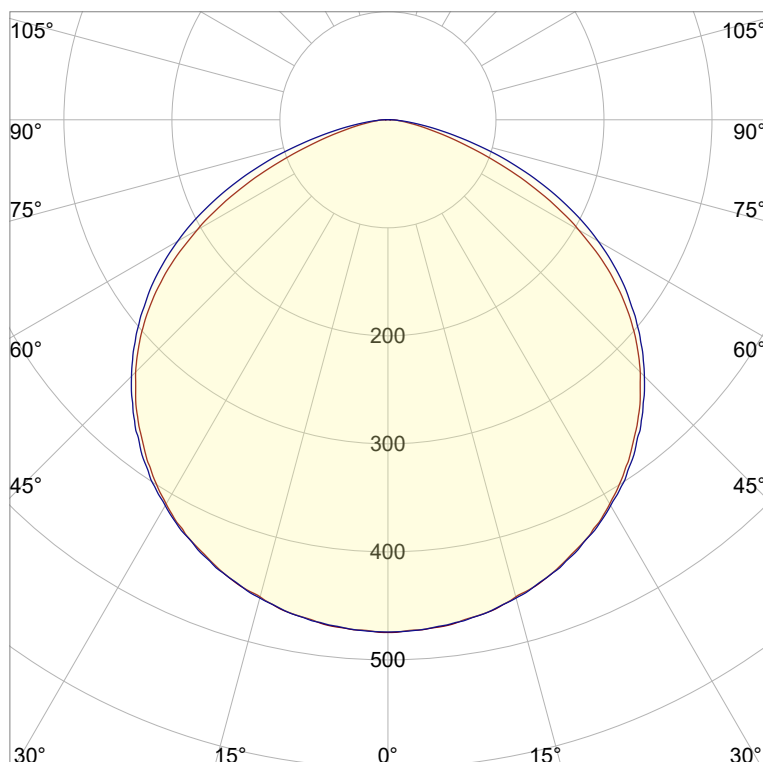
2736 K

Output: 1360 lm

Peak: 475 cd

Power: 11,5 W

PF: 1,0



Product name:

**Jago-2\_510mm\_927\_Cover-Flat-Transparent**

Item number:

**NP/L1C/19B/G1/L1C/0510/927/CFT**

Date and time:

**20.07.2022 15:04:27**

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**

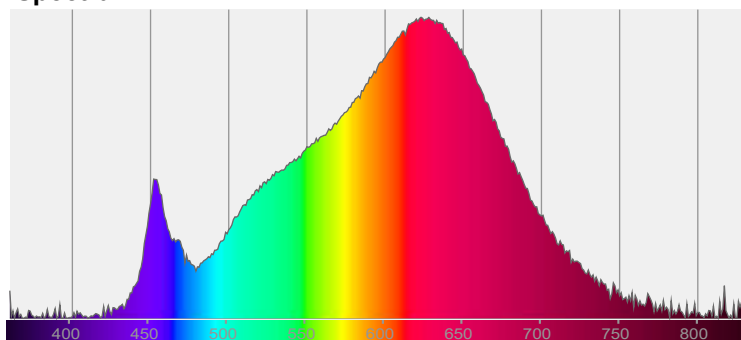


CIE 1931

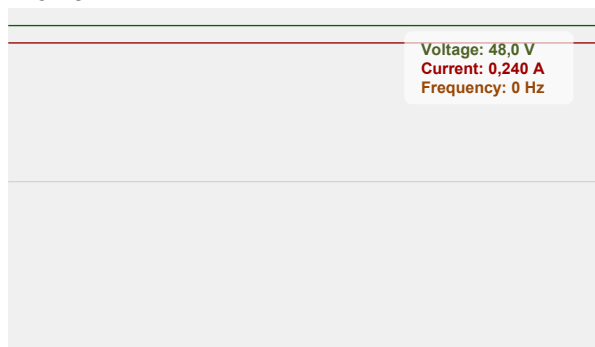
x: 0,456

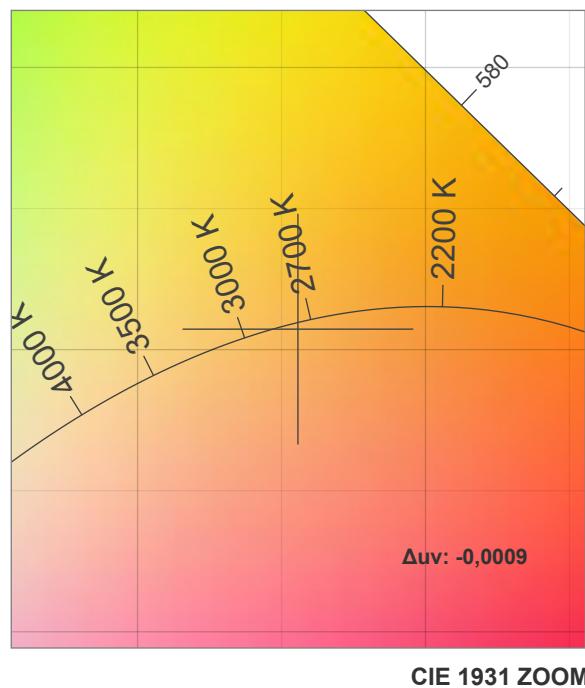
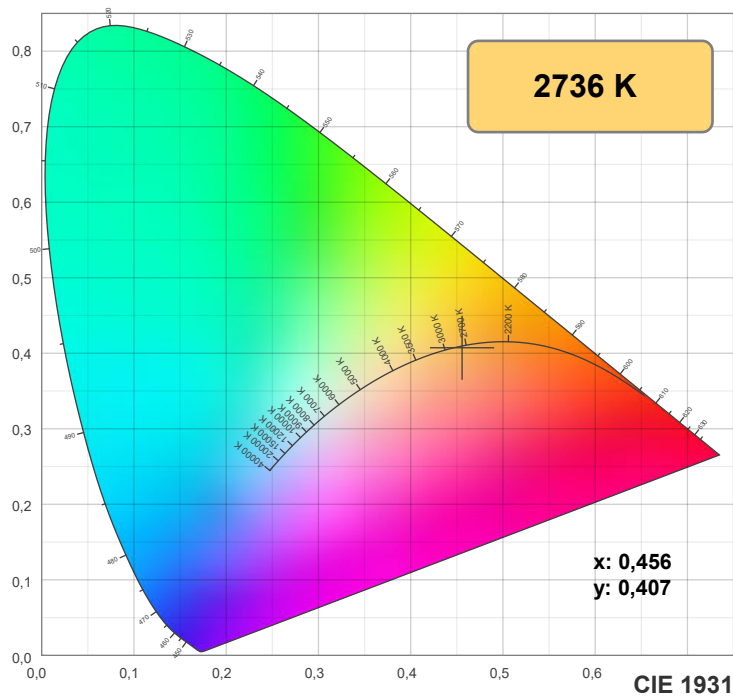
y: 0,407

Spectra

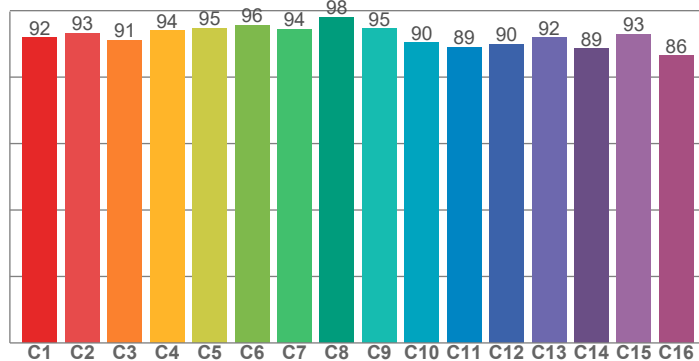


Power

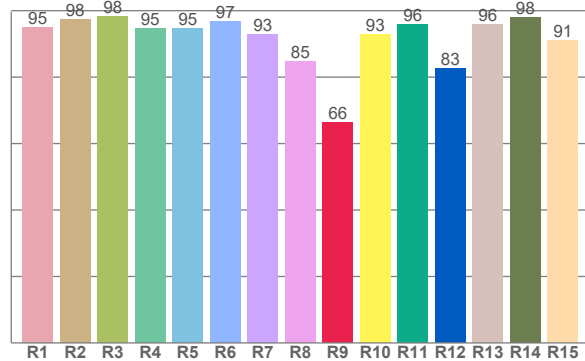




**TM30: 92,2**



**CRI: 94,3 (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
95,0	97,5	98,2	94,8	94,6	96,7	92,8	84,6	66,5	92,9	95,9	82,7	95,9	98,1	91,1

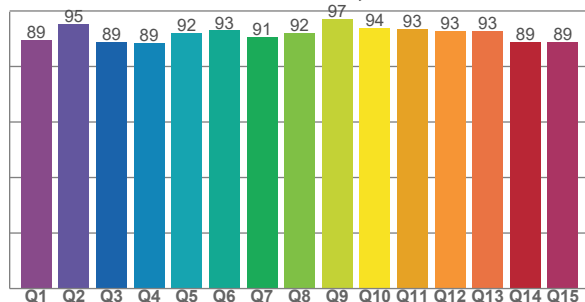
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
92,0	93,3	91,2	94,1	94,8	95,7	94,4	98,1	94,6	90,4	89,0	89,9	92,0	88,6	93,0	86,4

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
89,5	95,2	88,8	86,6	92,1	92,9	90,7	91,9	97,1	93,9	93,4	92,9	92,8	88,7	88,8

**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	$\Delta uv$
2736 K	94,3	66,5	92,2	99,9	91,3	0,456	0,407	0,261	0,350	-0,0009

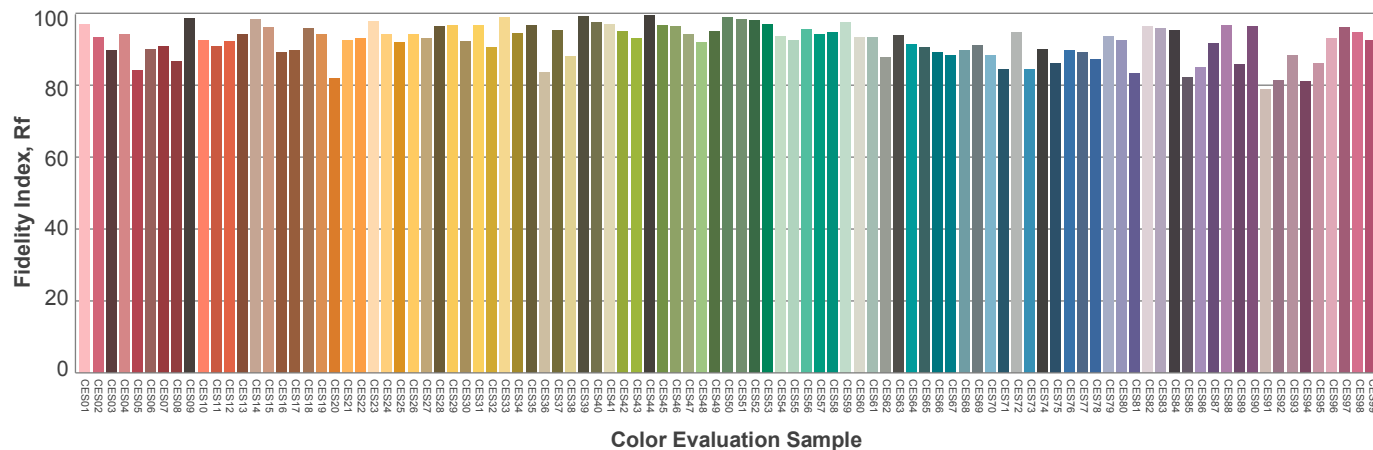
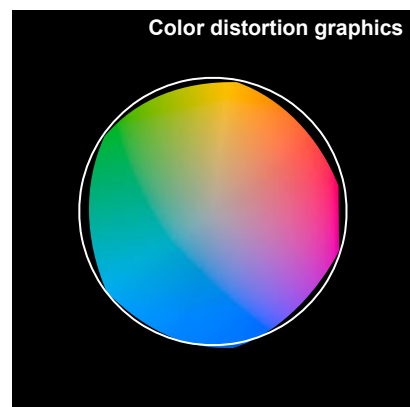
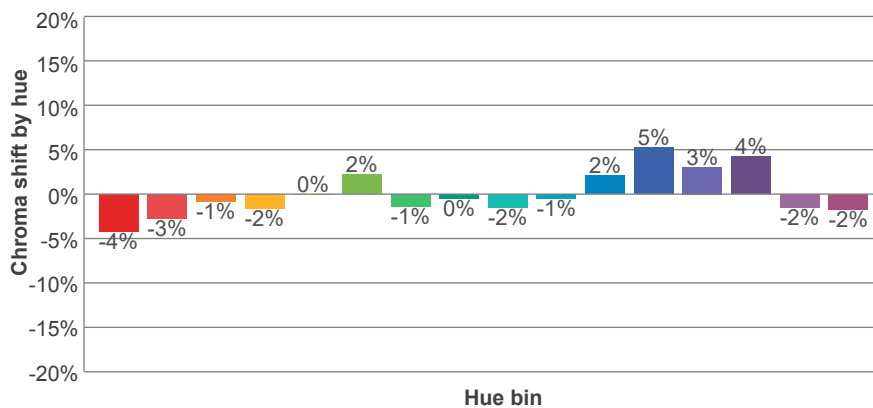
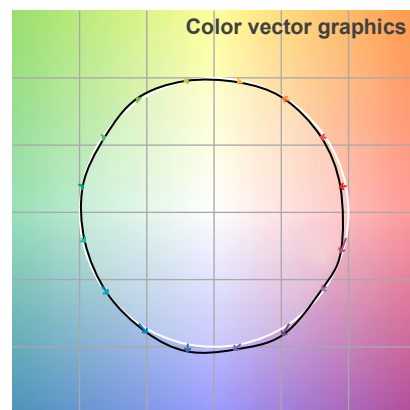
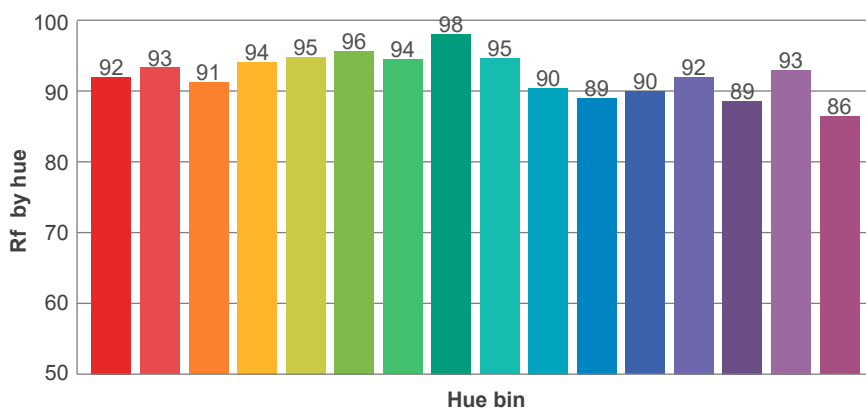
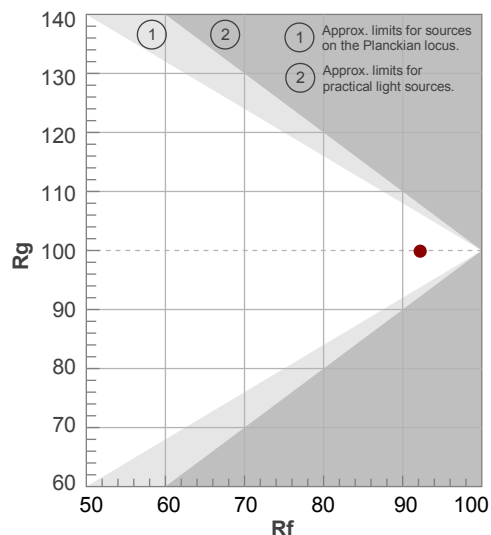
## Rf 92,2

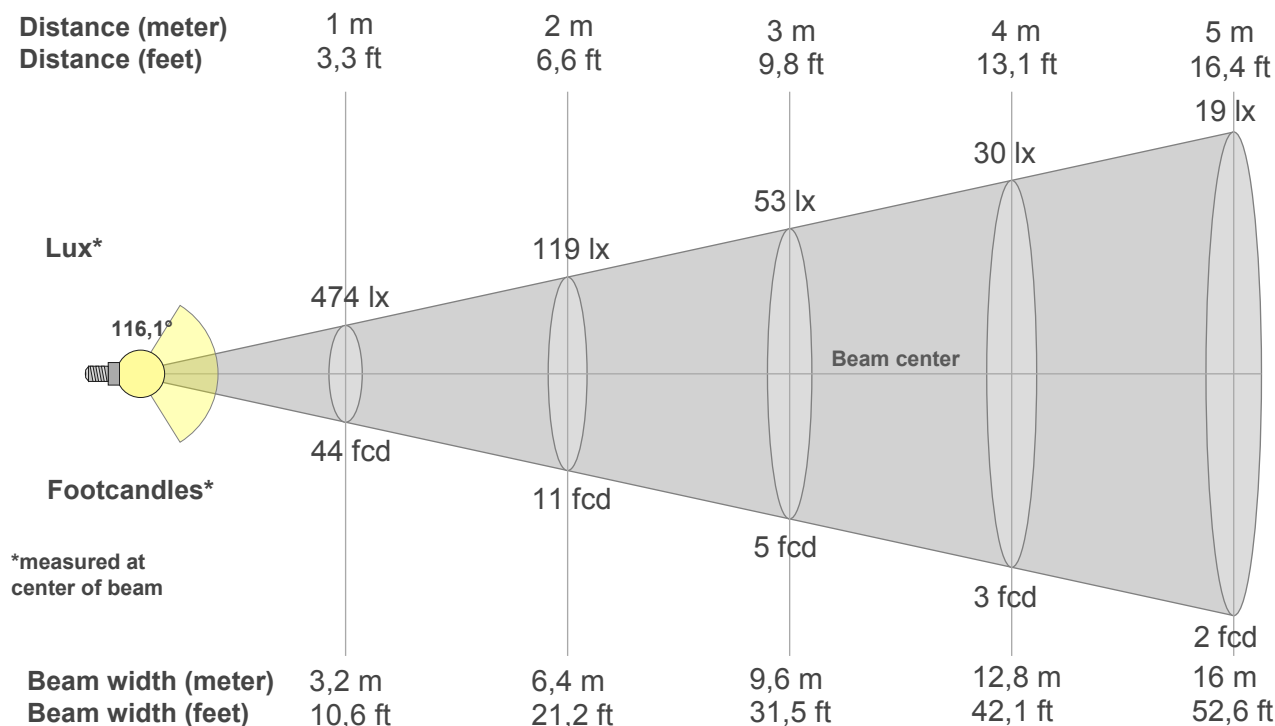
Fidelity index Rf

## Rg 99,9

Gammut index Rg

Hue Bin	R <sub>f</sub>	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	0%	0%
9	95	-2%	3%
10	90	-1%	6%
11	89	2%	8%
12	90	5%	1%
13	92	3%	-5%
14	89	4%	-8%
15	93	-2%	-3%
16	86	-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
474lx	119lx	53lx	30lx	19lx	13lx	10lx	7lx	6lx	5lx	4lx	3lx	3lx	2lx	2lx	2lx	2lx	1lx	1lx	1lx
44fcd	11fcd	4,9fcd	2,8fcd	1,8fcd	1,2fcd	0,9fcd	0,7fcd	0,5fcd	0,4fcd	0,4fcd	0,3fcd	0,3fcd	0,2fcd	0,2fcd	0,2fcd	0,2fcd	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°
474	472	467	457	446	430	411	387	360	330	295	253	204	150	95	51	25	10	2	0
100%	100%	98%	96%	94%	91%	87%	82%	76%	70%	62%	53%	43%	32%	20%	11%	5%	2%	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°
474	472	467	458	446	431	412	391	365	336	303	266	225	178	128	78	39	14	2	0
100%	100%	98%	97%	94%	91%	87%	82%	77%	71%	64%	56%	47%	38%	27%	17%	8%	3%	0%	0%

## Intensities in 180° c-plane

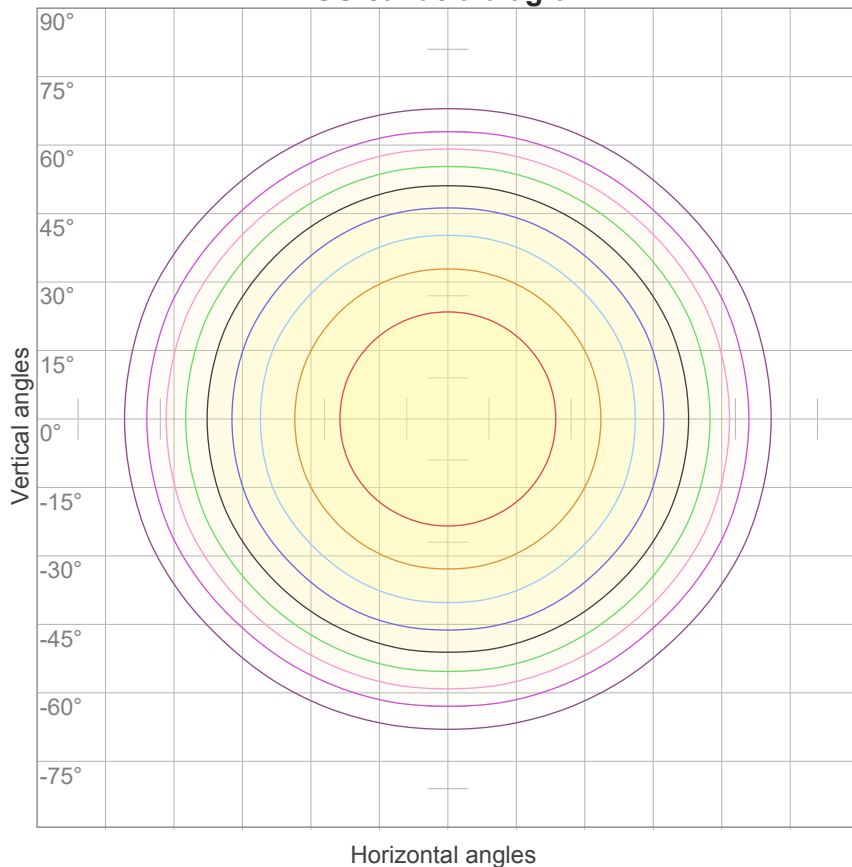
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
474	472	467	457	446	430	411	387	360	330	295	253	204	150	95	51	25	10	2	0
100%	100%	98%	96%	94%	91%	87%	82%	76%	70%	62%	53%	43%	32%	20%	11%	5%	2%	1%	0%

## 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°
474	472	467	458	446	431	412	391	365	336	303	266	225	178	128	78	39	14	2	0
100%	100%	98%	97%	94%	91%	87%	82%	77%	71%	64%	56%	47%	38%	27%	17%	8%	3%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
116,1°	155,6°	171,2°	80,8%	54,3%

## ISO candela diagram



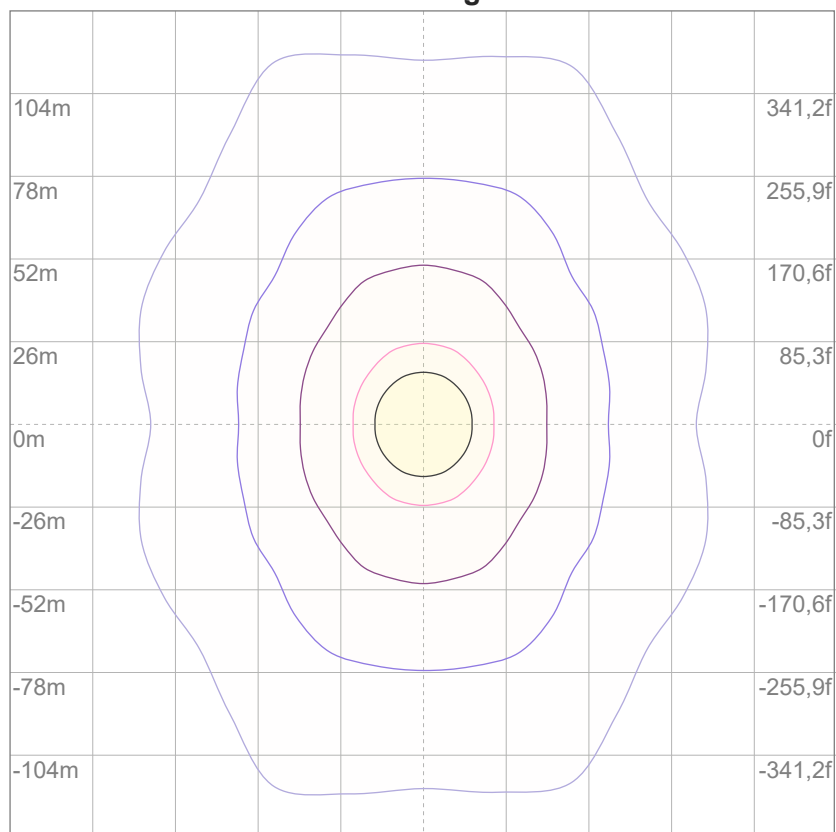
10%	47 cd
20%	95 cd
30%	142 cd
40%	190 cd
50%	237 cd
60%	284 cd
70%	332 cd
80%	379 cd
90%	427 cd

### Conditions:

Number of c-planes: 16

Candela at center: 474 cd

## ISO lux diagram



Mounting height: 10 meters (33 feet)

3%	0,142 lx
5%	0,237 lx
10%	0,474 lx
30%	1,42 lx
50%	2,37 lx

### Conditions:

Number of c-planes: 16

Lux at center: 4,74 lx

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

### Glare Evaluation According to UGR

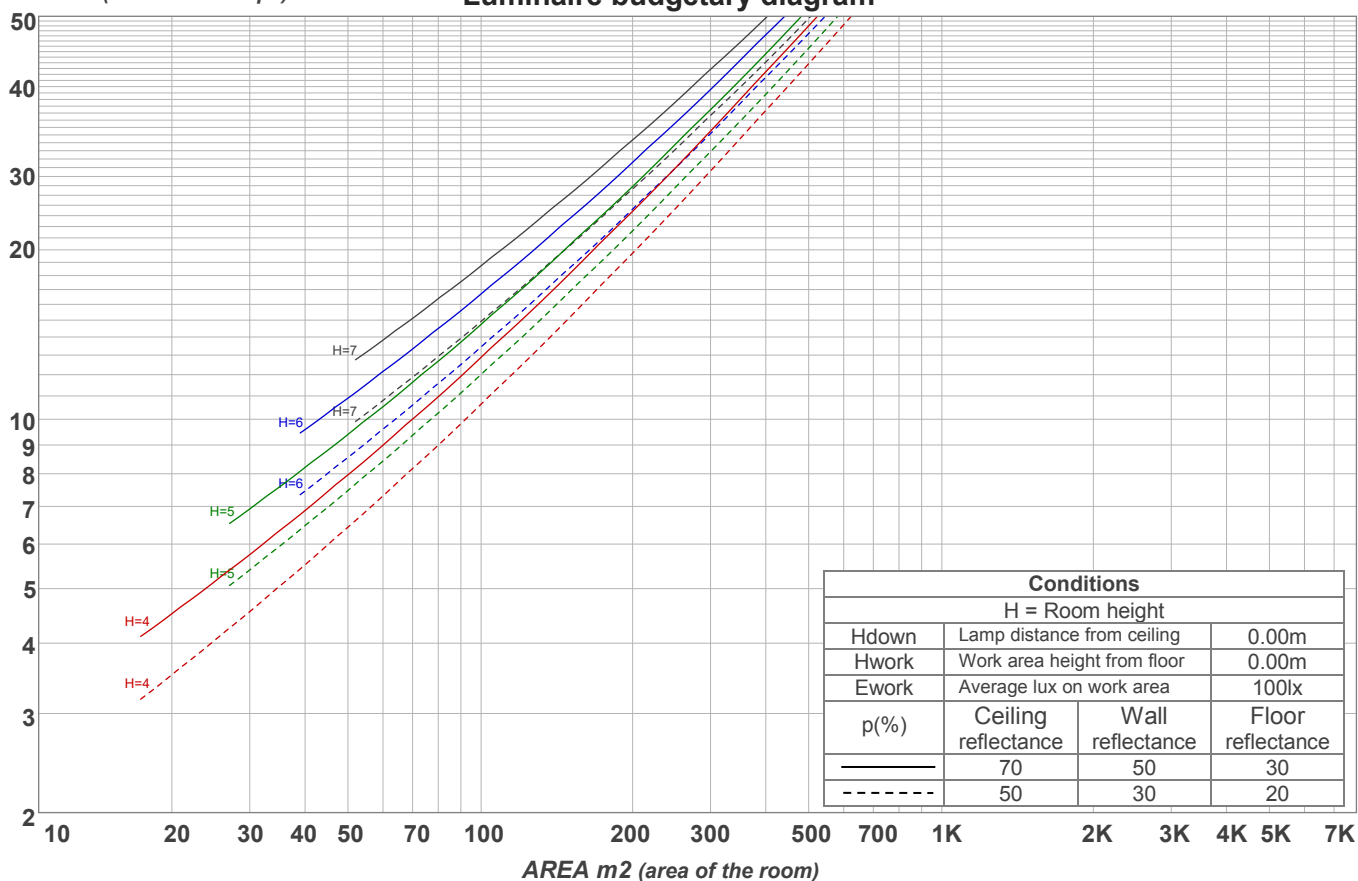
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X      Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	24,6	25,8	24,8	26,1	26,3	25,5	26,7	25,7	27,0	27,2
	3H	25,4	26,6	25,8	26,9	27,1	26,8	28,0	27,2	28,3	28,5
	4H	25,6	26,7	26,0	27,0	27,3	27,2	28,4	27,6	28,6	28,9
	6H	25,7	26,7	26,0	27,0	27,4	27,5	28,5	27,8	28,8	29,2
	8H	25,7	26,7	26,0	27,0	27,4	27,5	28,5	27,9	28,8	29,2
	12H	25,6	26,6	26,0	26,9	27,4	27,5	28,5	27,9	28,8	29,3
4H	2H	25,2	26,3	25,6	26,6	26,9	25,8	27,0	26,3	27,3	27,6
	3H	26,2	27,2	26,6	27,5	27,9	27,4	28,4	27,8	28,7	29,2
	4H	26,3	27,2	26,8	27,7	28,2	27,8	28,7	28,3	29,1	29,7
	6H	26,4	27,3	26,9	27,6	28,0	28,1	29,0	28,6	29,3	29,7
	8H	26,4	27,2	26,9	27,6	28,0	28,2	29,0	28,7	29,3	29,7
	12H	26,4	27,1	26,9	27,5	28,0	28,2	28,9	28,7	29,3	29,8
8H	4H	26,5	27,3	27,0	27,6	28,0	27,9	28,7	28,4	29,0	29,4
	6H	26,6	27,2	27,1	27,7	28,2	28,3	28,8	28,8	29,3	29,9
	8H	26,7	27,2	27,2	27,7	28,4	28,4	28,9	28,9	29,4	30,1
	12H	26,7	27,1	27,3	27,6	28,2	28,5	28,9	29,0	29,4	30,0
12H	4H	26,5	27,1	27,0	27,5	28,0	27,8	28,5	28,3	28,9	29,4
	6H	26,7	27,2	27,2	27,7	28,3	28,3	28,8	28,8	29,3	29,9
	8H	26,7	27,1	27,3	27,6	28,2	28,4	28,8	29,0	29,3	29,9
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,1 / -0,2					0,1 / -0,1				
S = 1.5H		0,4 / -0,7					0,2 / -0,3				
S = 2.0H		1,0 / -1,5					0,7 / -1,0				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 1360 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	102	102	102	100
1	109	105	100	97	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76	82	78	74	79	76	73	70
3	91	80	72	66	88	79	71	65	75	69	64	73	67	63	70	65	62	59
4	83	71	62	56	80	70	61	55	67	60	54	65	58	53	62	57	53	51
5	76	63	54	48	74	62	54	47	60	52	47	58	51	46	56	50	46	44
6	70	57	48	41	68	56	47	41	54	46	41	52	46	40	51	45	40	38
7	65	51	43	36	63	51	42	36	49	41	36	48	41	36	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

LAMPS (number of lamps)

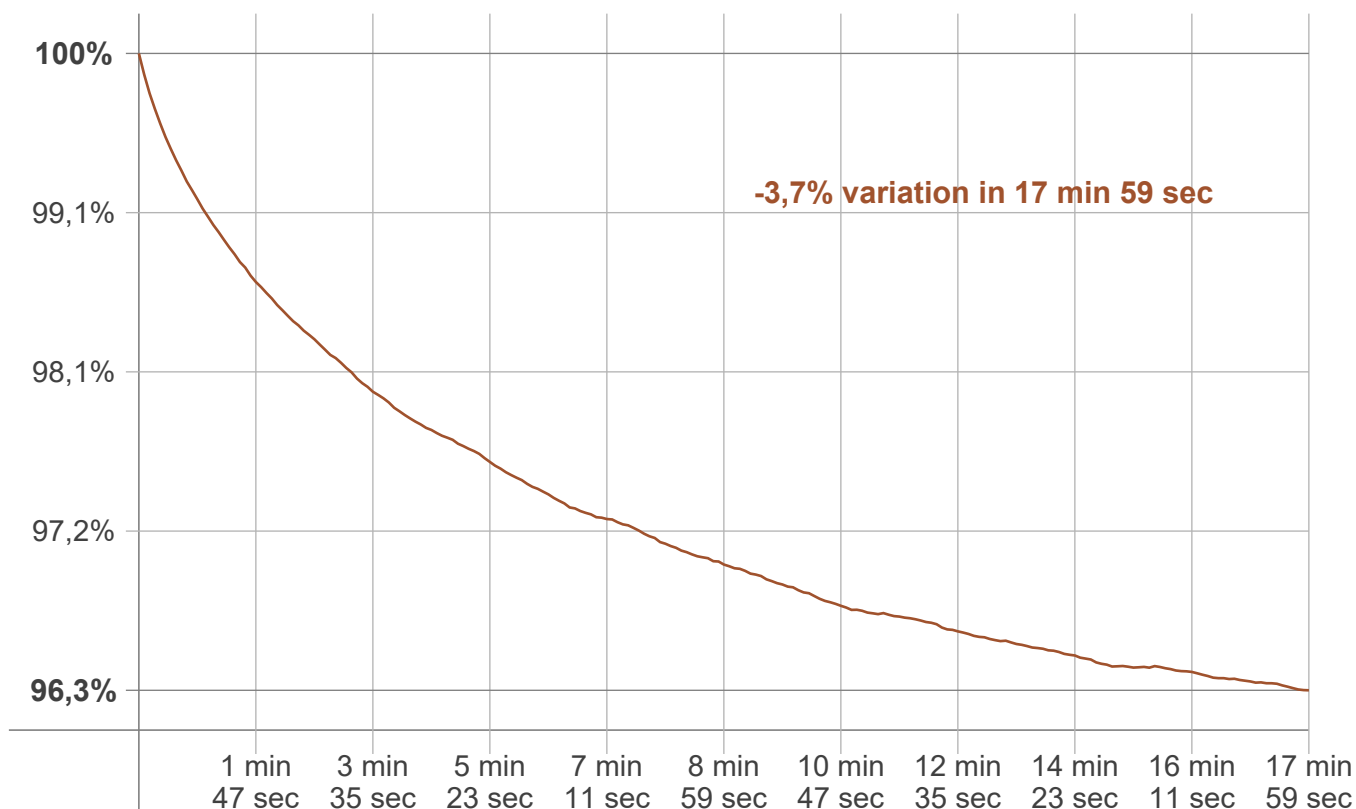
## Luminaire budgetary diagram



## Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
41,2 lm	129 lm	196 lm	245 lm	251 lm	237 lm	167 lm	72,3 lm	15,8 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
1,11 lm	1,28 lm	0,199 lm	0,180 lm	0,155 lm	0,126 lm	0,093 lm	0,057 lm	2,58 lm

### Warmup curve



### Warmup result

Warmup time:	Lamp stabilized in 17 min 59 sec
Warmup variation	-3,7%

### Warmup conditions

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

### Color temperature change

CCT start	CCT change	CCT end
2743 K	-7 K	2736 K

### Output change

Output start	Output change	Output end
1407 lm	-47 lm	1360 lm