Light efficiency:

114 Lumen/Watt

Light quality:

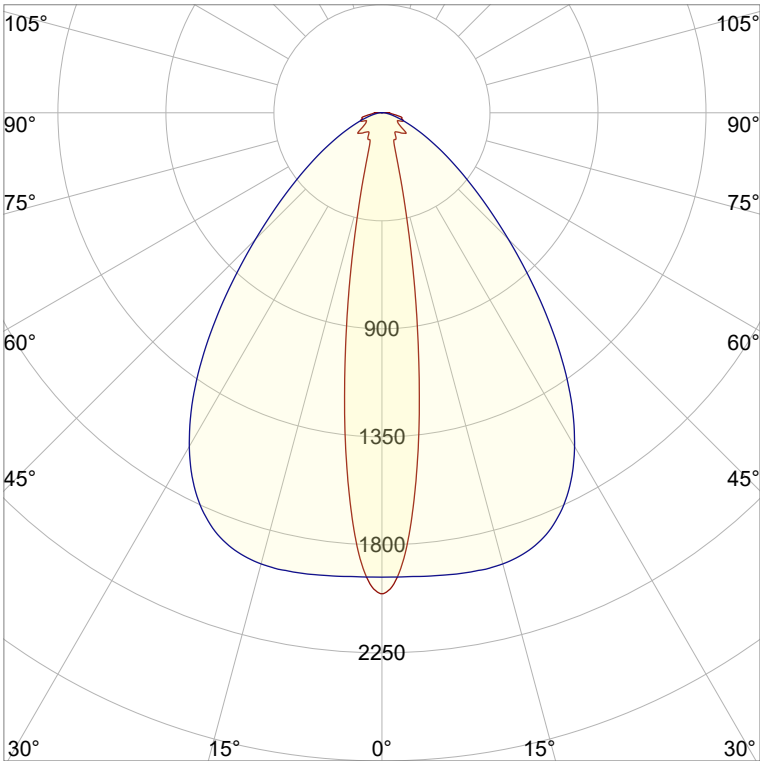
CRI: 94,1

Color temperature:

2730 K

Output: 1313 lm
Peak: 2006 cd

Power: 11,5 W
PF: 1,0



Product name:
Jago-2_510mm_927_Lens-15°-Frosted

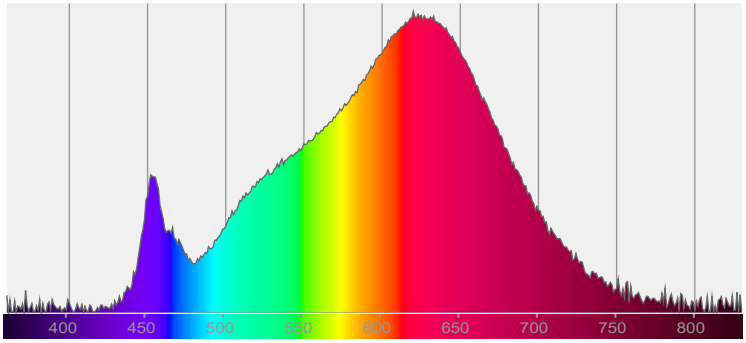
Item number:
NP/L1C/19B/G1/L1C/0510/927/L1F

Date and time:
21.07.2022 14:59:20

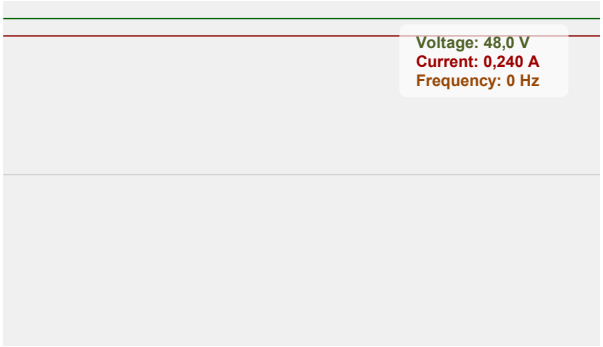
Description:
Rank: C80-AD-8GB
Tolerances:
Lumen +/-4%
Candela +/-2,5%
Colour Temp +/-35 Kelvin
CRI +/-0,7
Angular Resolution: 1 Degree Step
Last Calibration 20-09-2021
Tester: Peter Ulrich
Test Site: Lichtlabor
Gaustrasse 13
55411 Bingen am Rhein

CIE 1931
x: 0,456
y: 0,407

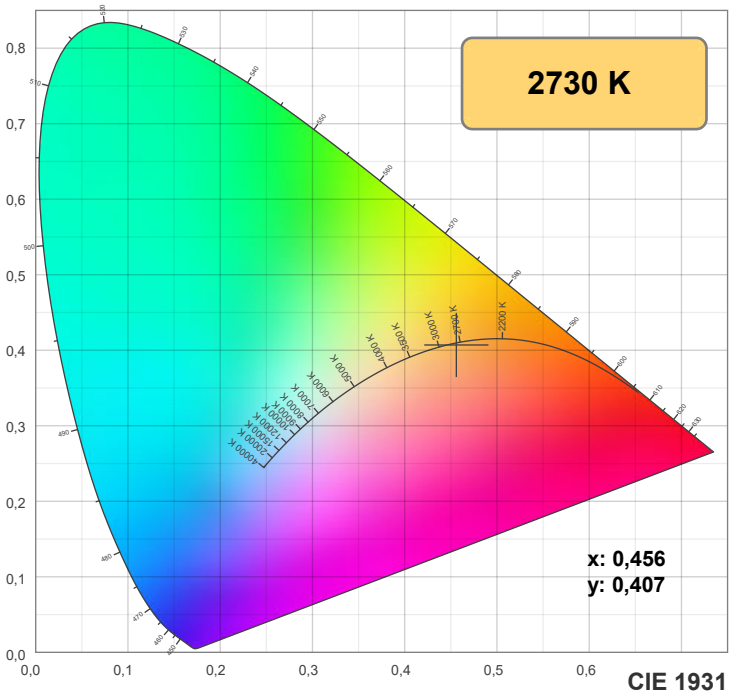
Spectra

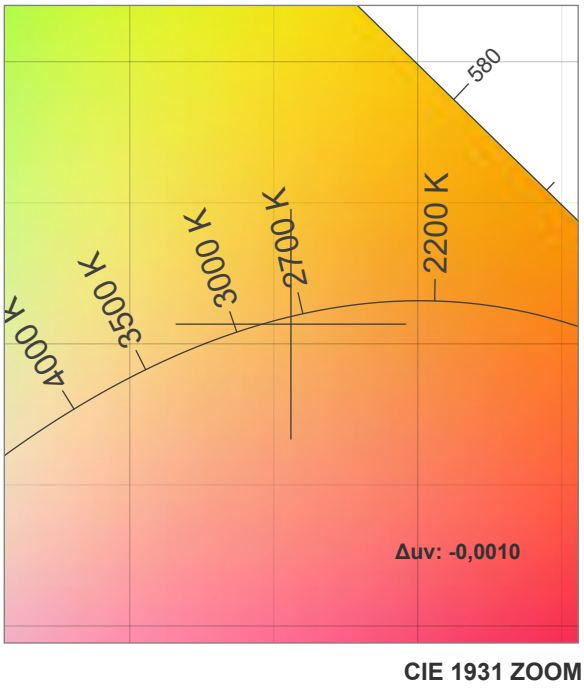


Power

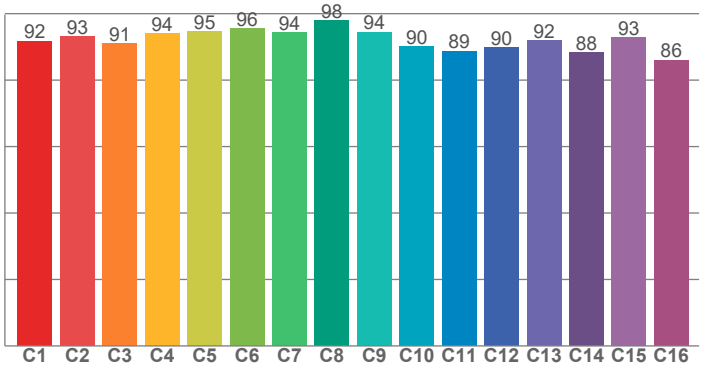


Color details

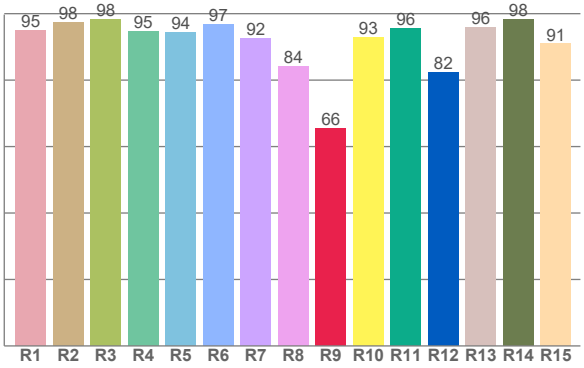




TM30: 92,0



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
94,8	97,5	98,2	94,5	94,5	96,6	92,5	84,1	65,6	92,9	95,7	82,4	95,8	98,2	90,9

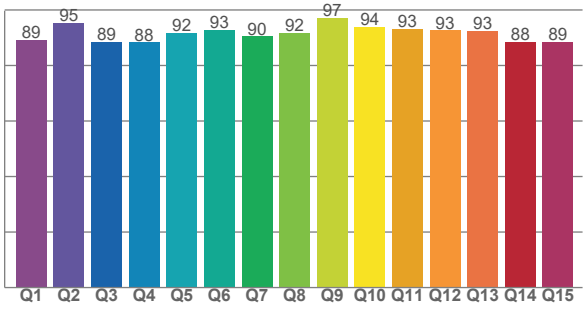
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
91,7	93,0	90,9	94,0	94,7	95,6	94,2	98,0	94,5	90,2	88,8	89,7	91,8	88,3	92,8	86,1

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
89,3	95,2	88,6	88,3	91,9	92,8	90,5	91,7	97,1	93,8	93,2	92,6	92,5	88,4	88,5

CQS: 91,1



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 diviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
2730 K	94,1	65,6	92,0	99,9	91,1	0,456	0,407	0,262	0,350	-0,0010

TM30 details

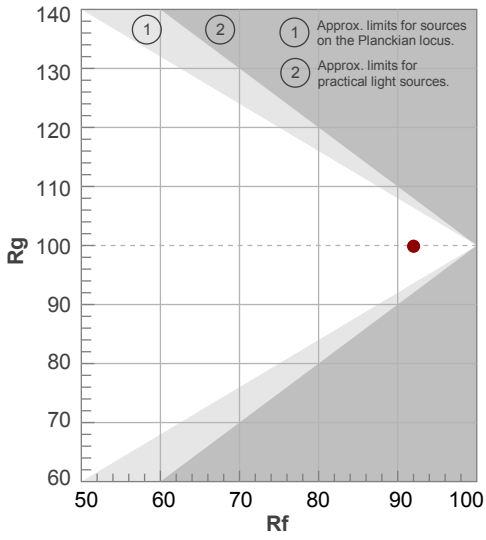
Rf 92,0

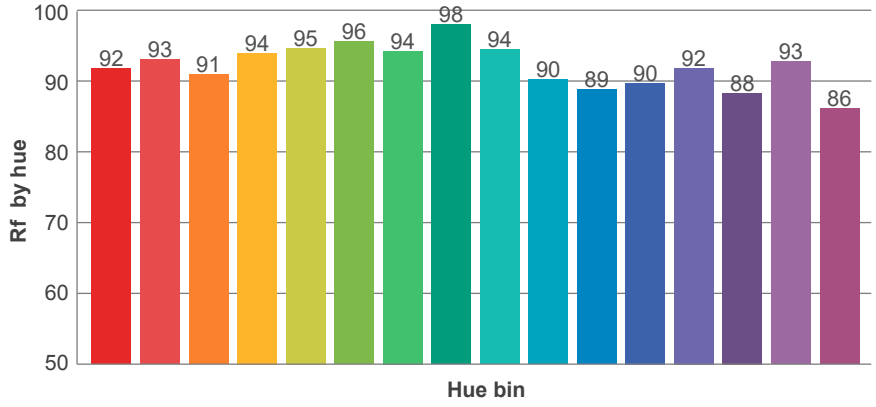
Fidelity index Rf

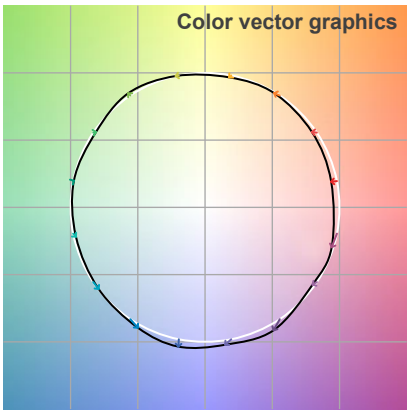
Rg 99,9

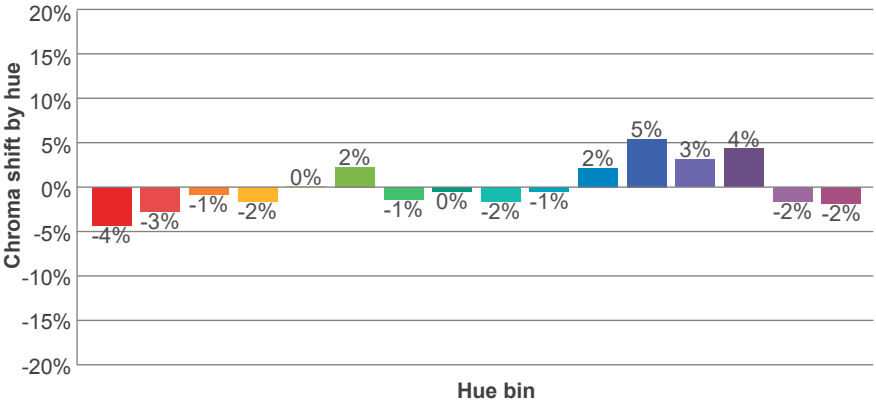
Gammut index Rg

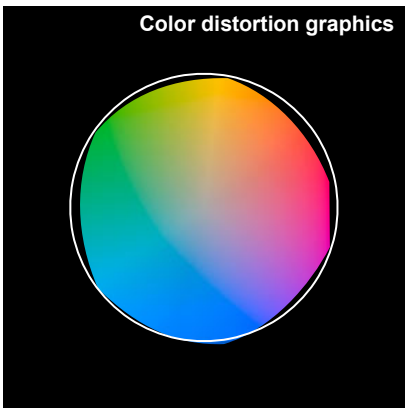
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	92	-4%	0%
2	93	-3%	2%
3	91	-1%	4%
4	94	-2%	1%
5	95	0%	2%
6	96	2%	0%
7	94	-1%	-2%
8	98	0%	0%
9	94	-2%	3%
10	90	-1%	6%
11	89	2%	8%
12	90	5%	1%
13	92	3%	-5%
14	88	4%	-8%
15	93	-2%	-3%
16	86	-2%	-11%

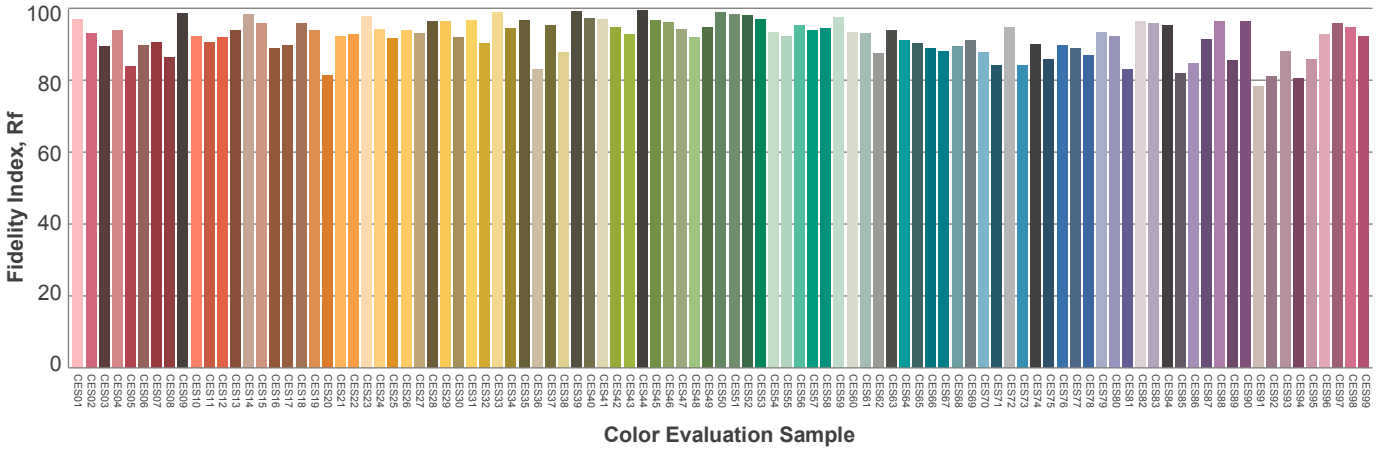




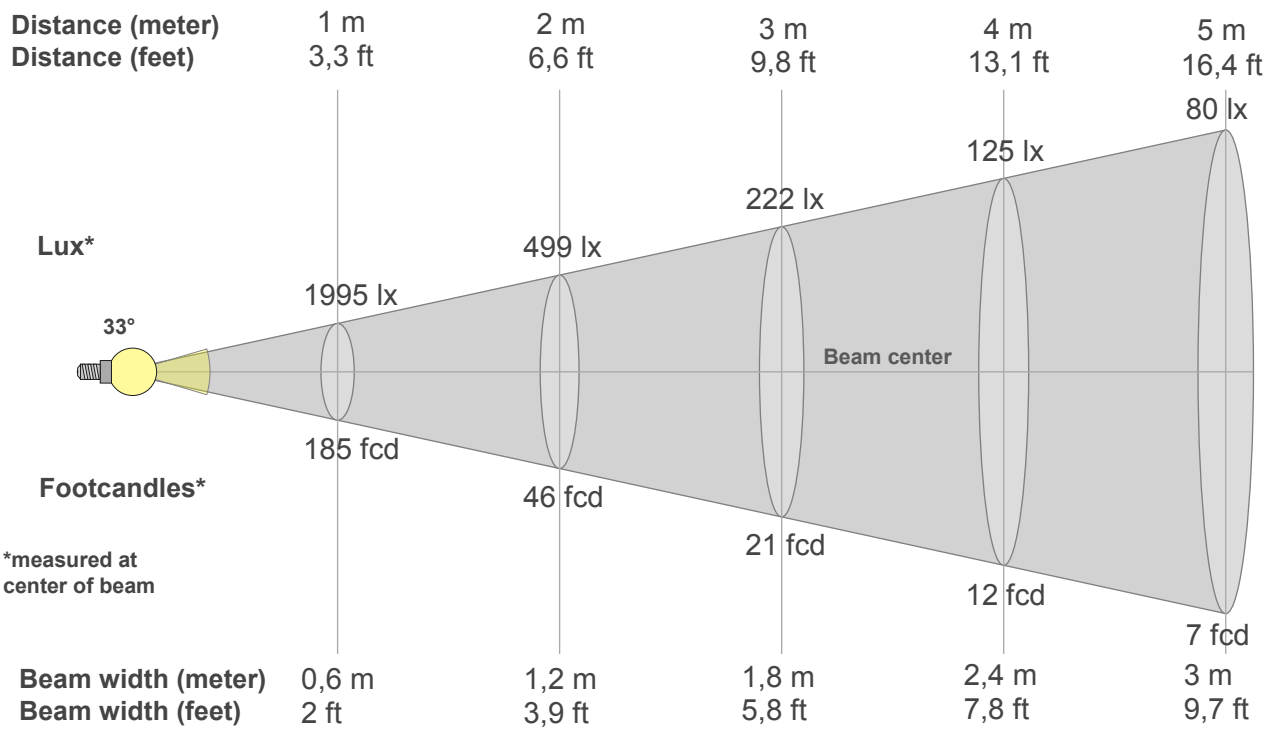








Beam details



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
1995lx	499lx	222lx	125lx	80lx	55lx	41lx	31lx	25lx	20lx	16lx	14lx	12lx	10lx	9lx	8lx	7lx	6lx	6lx	5lx
185,3fcd	46,3fcd	20,6fcd	11,6fcd	7,4fcd	5,1fcd	3,8fcd	2,9fcd	2,3fcd	1,9fcd	1,5fcd	1,3fcd	1,1fcd	0,9fcd	0,8fcd	0,7fcd	0,6fcd	0,6fcd	0,5fcd	0,5fcd

Intensities in 0° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
1995	1926	1719	1430	1114	821	572	393	276	201	157	133	123	124	124	115	103	97	98	101
100%	97%	86%	72%	56%	41%	29%	20%	14%	10%	8%	7%	6%	6%	6%	6%	5%	5%	5%	5%

Intensities in 90° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
1995	1935	1936	1940	1944	1947	1948	1948	1941	1928	1905	1871	1824	1765	1692	1605	1506	1397	1279	1155
100%	97%	97%	97%	97%	98%	98%	98%	97%	97%	96%	94%	91%	88%	85%	80%	75%	70%	64%	58%

Intensities in 180° c-plane

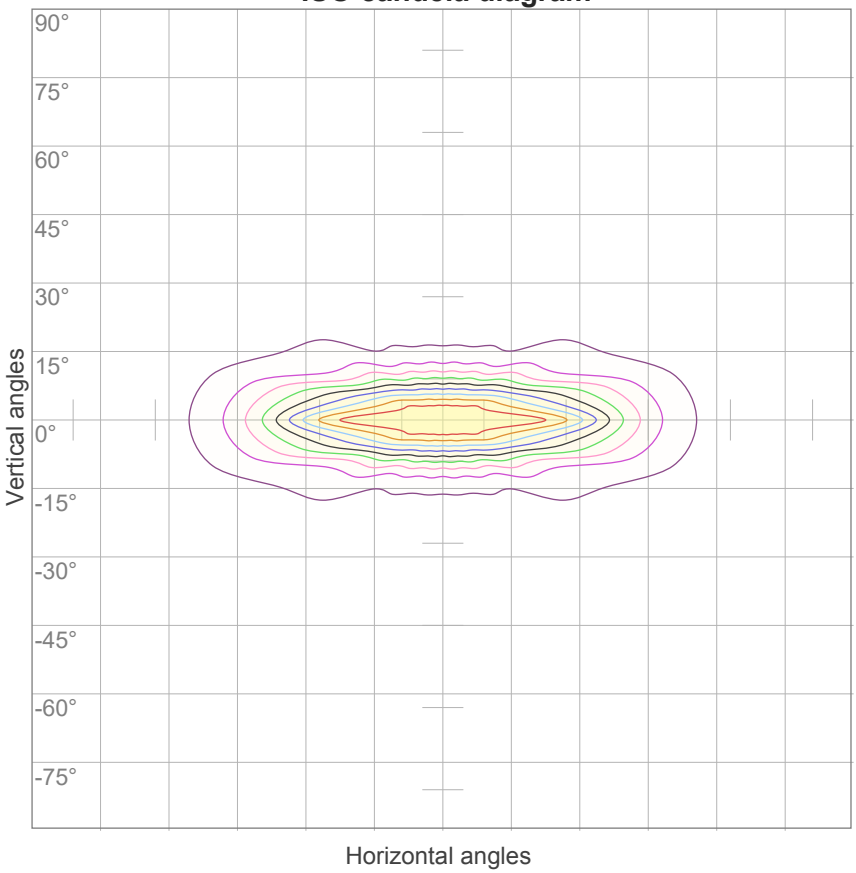
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
1995	1926	1719	1430	1114	821	572	393	276	201	157	133	123	124	124	115	103	97	98	101
100%	97%	86%	72%	56%	41%	29%	20%	14%	10%	8%	7%	6%	6%	6%	6%	5%	5%	5%	5%

Intensities in 270° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
1995	1935	1936	1940	1944	1947	1948	1948	1941	1928	1905	1871	1824	1765	1692	1605	1506	1397	1279	1155
100%	97%	97%	97%	97%	98%	98%	98%	97%	97%	96%	94%	91%	88%	85%	80%	75%	70%	64%	58%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
33°	62,9°	157,8°	83,0%	68,5%

ISO candela diagram



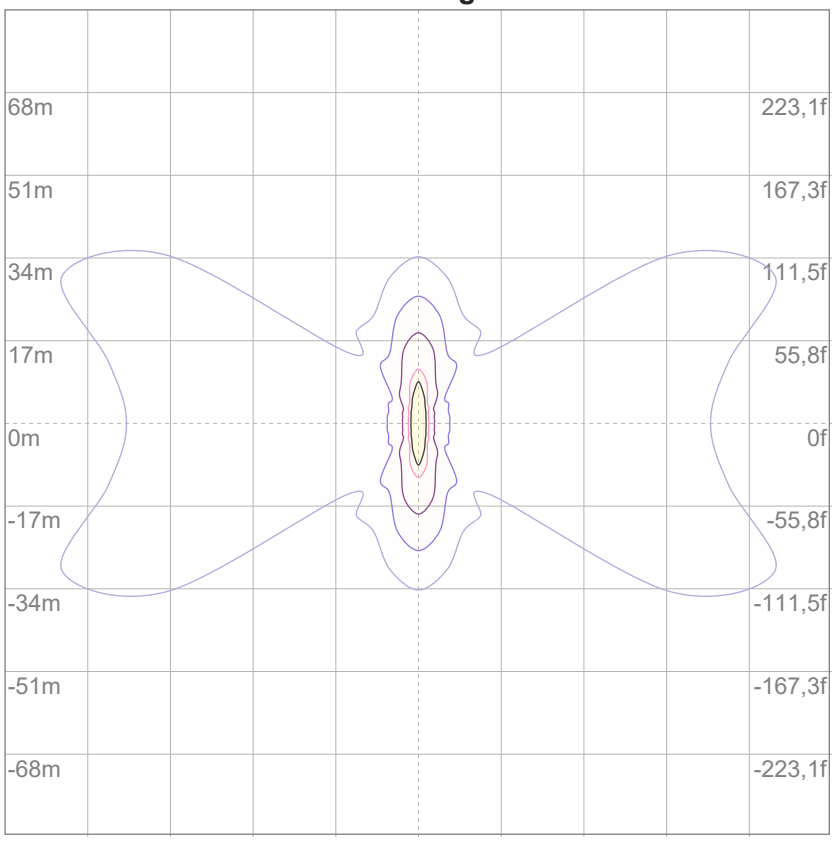
10%	199 cd
20%	399 cd
30%	598 cd
40%	798 cd
50%	997 cd
60%	1197 cd
70%	1396 cd
80%	1596 cd
90%	1795 cd

Conditions:

Number of c-planes: 16

Candela at center: 1995 cd

ISO lux diagram



Mounting height: 10 meters (33 feet)

3%	0,598 lx
5%	0,997 lx
10%	1,99 lx
30%	5,98 lx
50%	9,97 lx

Conditions:

Number of c-planes: 16

Lux at center: 19,9 lx

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

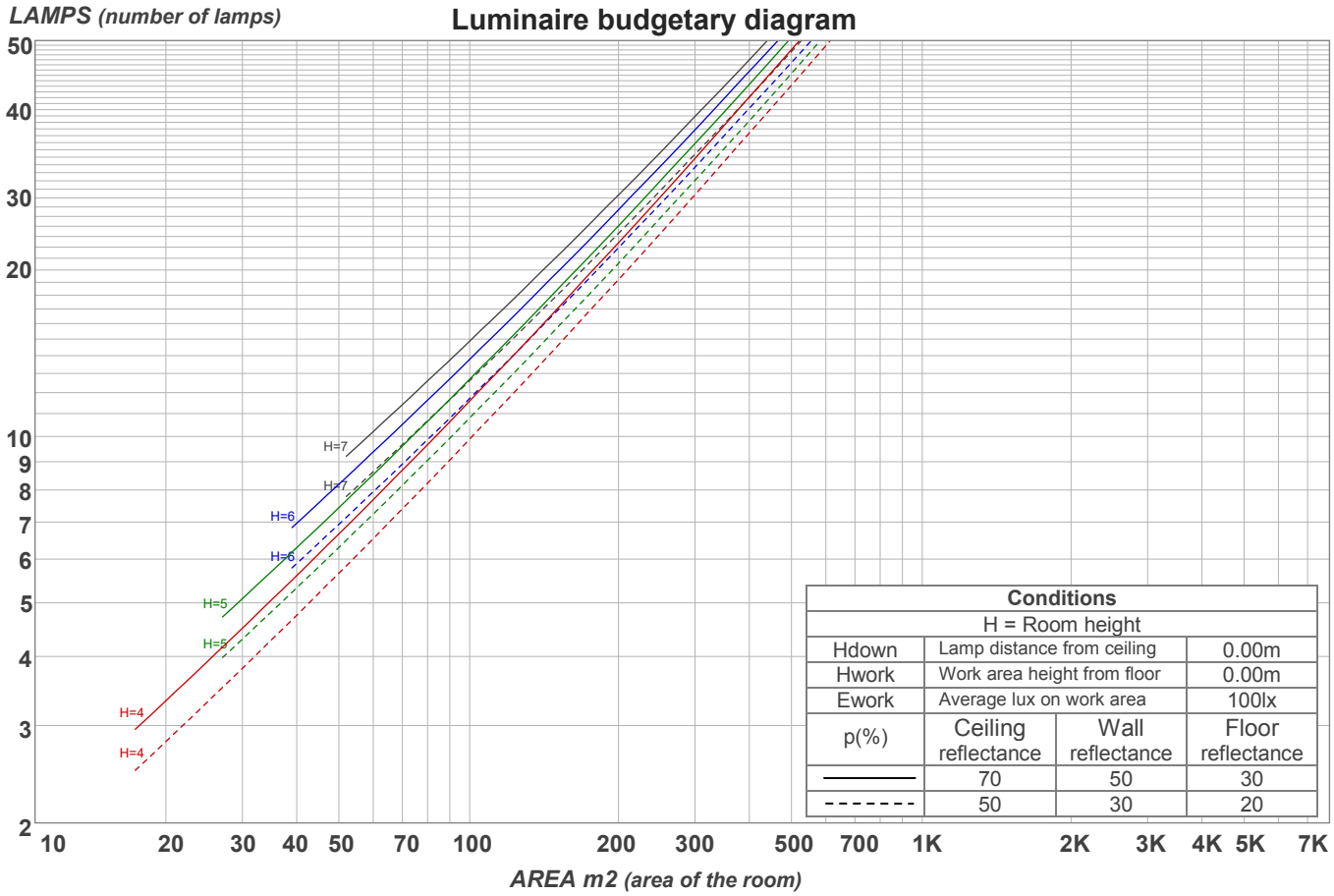
Glare Evaluation According to UGR

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	16,2	17,2	16,4	17,4	17,7	24,2	25,1	24,4	25,4	25,6
	3H	18,7	19,8	19,1	20,0	20,2	24,7	25,8	25,1	26,0	26,2
	4H	20,1	21,1	20,5	21,4	21,6	24,9	25,9	25,3	26,2	26,4
	6H	21,4	22,2	21,7	22,5	22,9	25,2	26,0	25,5	26,3	26,7
	8H	21,7	22,5	22,0	22,8	23,2	25,2	26,1	25,6	26,4	26,8
	12H	21,9	22,7	22,2	23,0	23,5	25,3	26,1	25,6	26,4	26,9
4H	2H	16,9	17,9	17,3	18,1	18,4	23,9	24,9	24,3	25,2	25,4
	3H	19,7	20,5	20,1	20,9	21,3	24,7	25,5	25,1	25,9	26,3
	4H	21,2	22,0	21,7	22,4	22,9	24,9	25,7	25,4	26,1	26,6
	6H	22,6	23,3	23,1	23,7	24,1	25,2	26,0	25,7	26,3	26,7
	8H	23,0	23,7	23,5	24,0	24,4	25,3	26,0	25,8	26,4	26,7
	12H	23,2	23,8	23,7	24,2	24,7	25,4	26,0	25,9	26,4	26,9
8H	4H	21,6	22,3	22,1	22,7	23,0	25,0	25,7	25,5	26,0	26,4
	6H	23,2	23,8	23,7	24,2	24,8	25,4	25,9	25,9	26,3	26,9
	8H	23,8	24,3	24,3	24,8	25,4	25,6	26,0	26,1	26,5	27,2
	12H	24,2	24,6	24,8	25,1	25,7	25,8	26,1	26,3	26,6	27,2
12H	4H	21,6	22,2	22,1	22,6	23,1	25,0	25,6	25,5	26,0	26,4
	6H	23,4	23,8	23,9	24,3	25,0	25,5	25,9	26,0	26,4	27,1
	8H	24,0	24,4	24,6	24,9	25,5	25,7	26,1	26,3	26,6	27,2
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,0 / 0,0					1,3 / -1,3				
S = 1.5H		0,2 / -0,2					2,9 / -2,1				
S = 2.0H		0,3 / -0,2					4,3 / -2,7				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 1313 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	97
1	109	105	102	98	106	103	99	96	98	95	93	94	91	89	90	88	86	84
2	102	95	89	84	99	93	87	83	89	84	81	85	81	78	82	79	76	74
3	95	86	79	74	92	84	78	73	81	76	71	78	73	70	75	71	68	66
4	89	79	71	66	86	77	70	65	74	69	64	72	67	63	69	65	62	60
5	83	72	65	59	81	71	64	59	69	63	58	67	61	57	65	60	56	55
6	78	67	60	54	76	66	59	54	64	58	53	62	57	53	61	56	52	50
7	74	62	55	50	72	62	55	50	60	54	49	58	53	49	57	52	48	46
8	70	58	51	46	68	58	51	46	56	50	46	55	49	45	54	49	45	43
9	66	55	48	43	65	54	48	43	53	47	43	52	46	43	51	46	42	41
10	63	52	45	41	62	51	45	41	50	44	40	49	44	40	48	43	40	38

Luminaire budgetary diagram

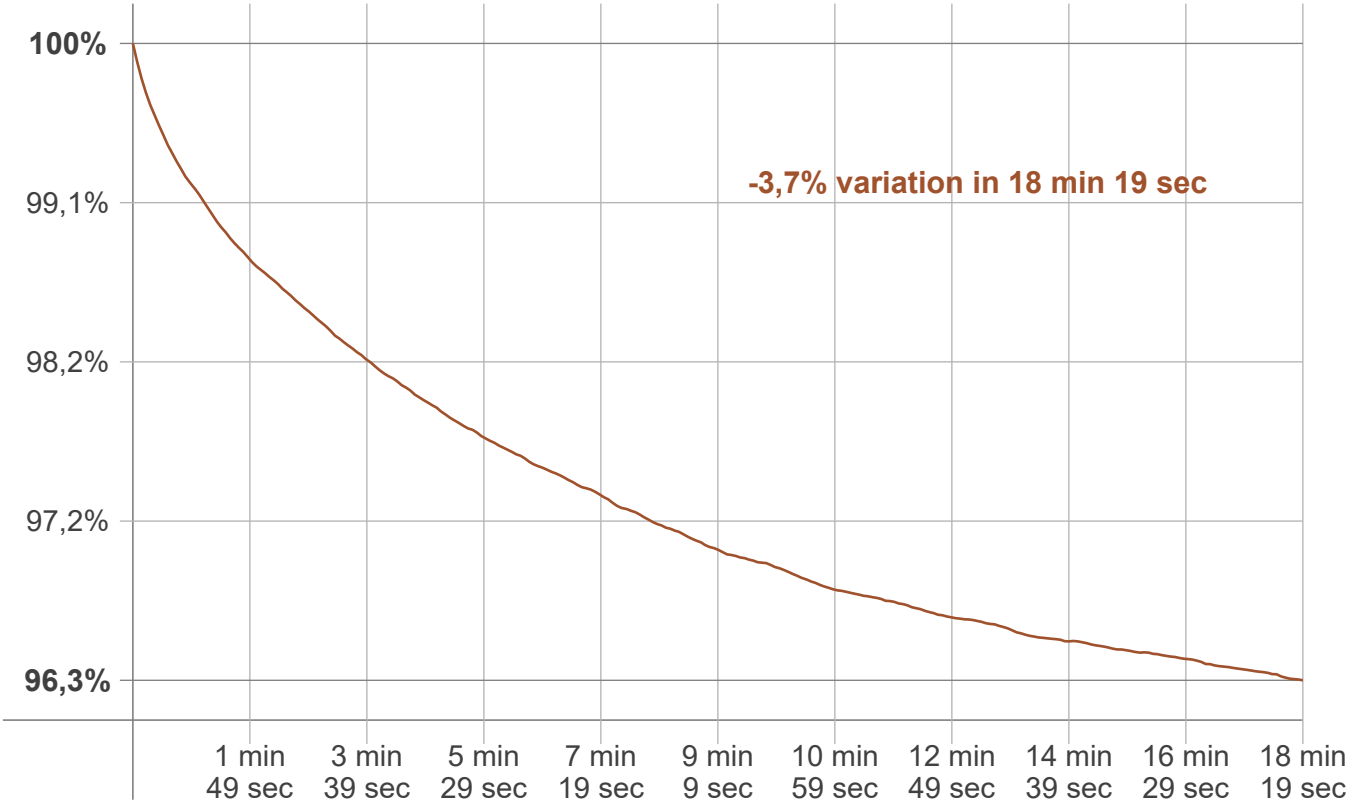


Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
154 lm	251 lm	220 lm	191 lm	156 lm	117 lm	78,4 lm	63,8 lm	39,6 lm

90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
16,6 lm	6,28 lm	5,28 lm	4,77 lm	3,46 lm	2,26 lm	1,66 lm	1,02 lm	0,343 lm

Warmup curve



Warmup result

Warmup time:	**Lamp stabilized in 18 min 19 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
2736 K	-6 K	2730 K

Output change

Output start	Output change	Output end
1359 lm	-45 lm	1313 lm