



#### Light efficiency:

93 Lumen/Watt

#### Light quality:

CRI: 92,8

#### Color temperature:

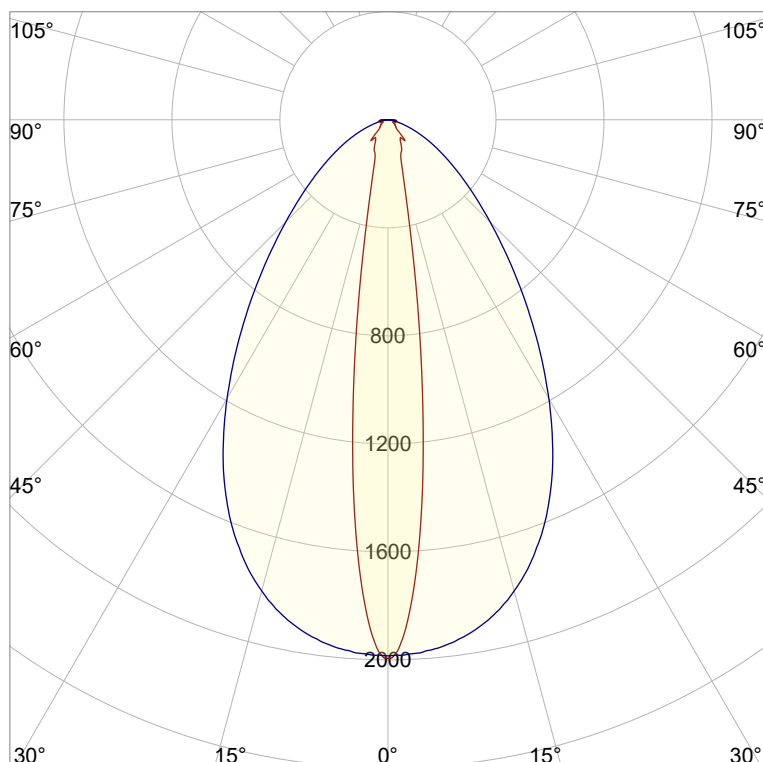
2778 K

Output: 1074 lm

Peak: 1993 cd

Power: 11,5 W

PF: 1,0



#### Product name:

Jago-2\_510mm\_927\_Inlay-Lens-15-Grad

#### Item number:

NP/L1C/19B/0510/927/IL1F

#### Date and time:

26.06.2025 11:29:01

#### Description:

Rank: C80-AC-8GB

Einschub unten

Tolerances:

Lumen +/-4%

Candela +/-2,5%

Colour Temp +/-35 Kelvin

CRI +/-0,7

Angular Resolution: 1 Degree Step

Last Calibration 13.10.2023

Tester: Peter Ulrich

Test Site: Lichtlabor

Gaustrasse 13

55411 Bingen am Rhein

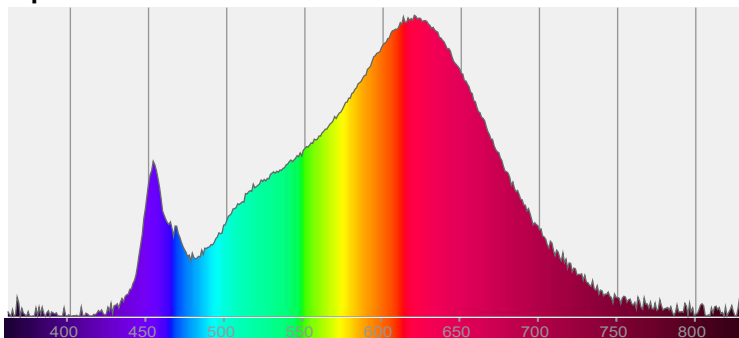


CIE 1931

x: 0,450

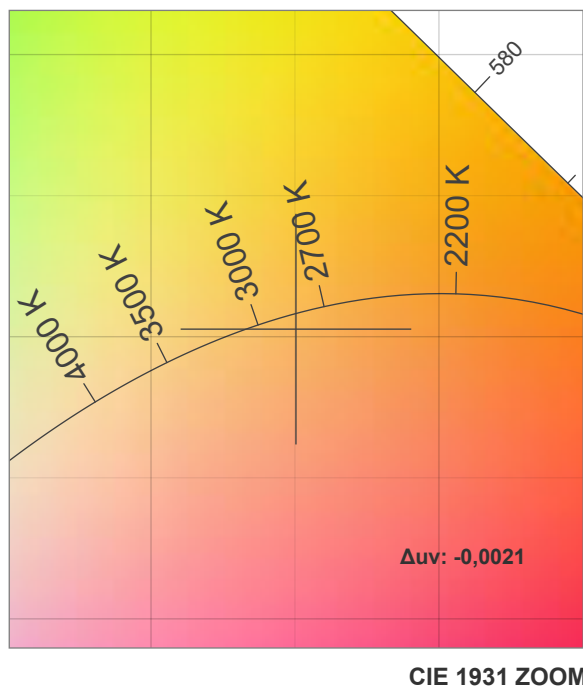
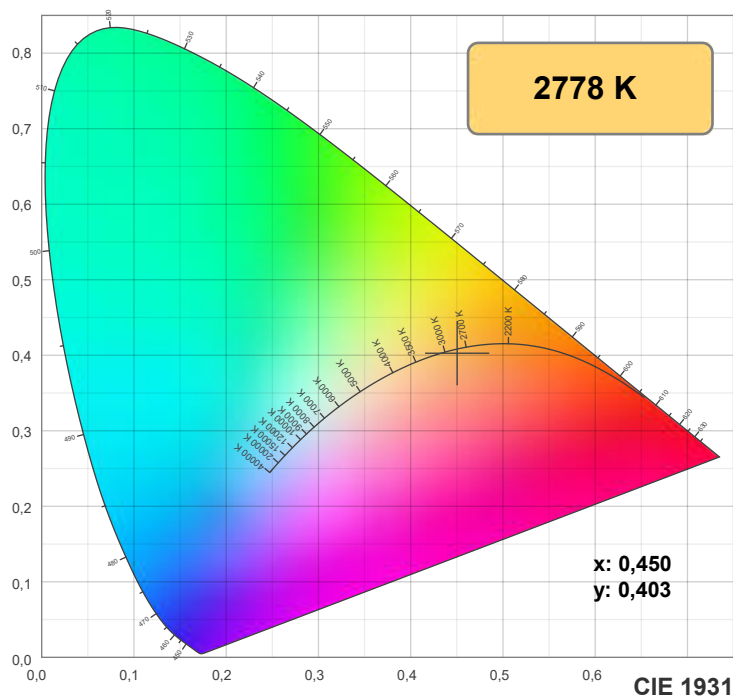
y: 0,403

#### Spectra

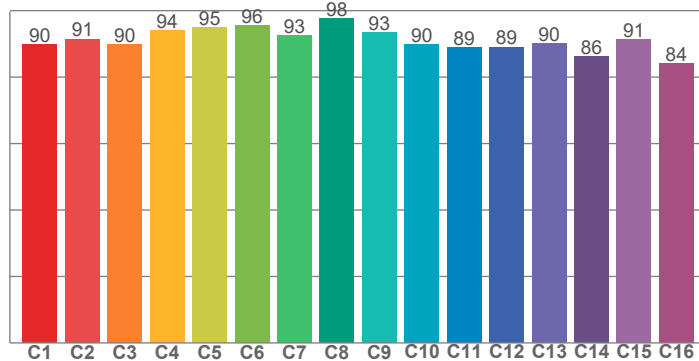


#### Power

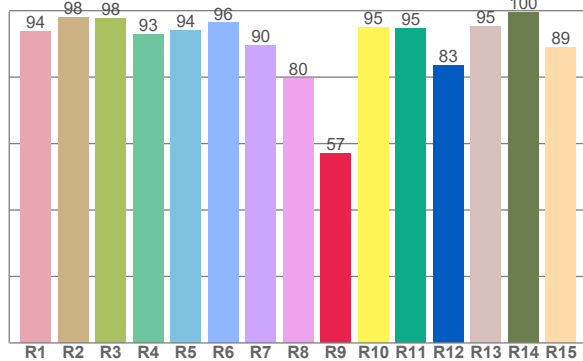
Voltage: 48,0 V  
Current: 0,240 A  
Frequency: 0 Hz



TM30: 91,1



CRI: 92,8 (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
93,9	98,1	97,7	93,0	94,0	96,3	89,7	79,6	57,1	94,9	94,7	83,5	95,4	99,6	89,0

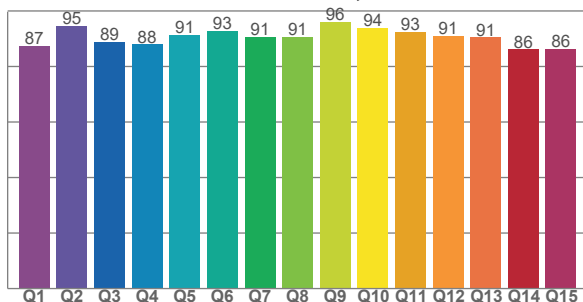
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
89,9	91,5	89,9	93,9	94,9	95,5	92,6	97,5	93,4	89,7	88,8	89,1	90,1	86,3	91,3	84,1

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
87,3	94,7	88,9	88,0	91,4	92,9	90,6	90,7	96,1	94,0	92,5	91,0	90,5	86,1	86,3

CQS: 90,2



## 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	$\Delta uv$
2778 K	92,8	57,1	91,1	99,2	90,2	0,450	0,403	0,260	0,349	-0,0021



## TM30 details



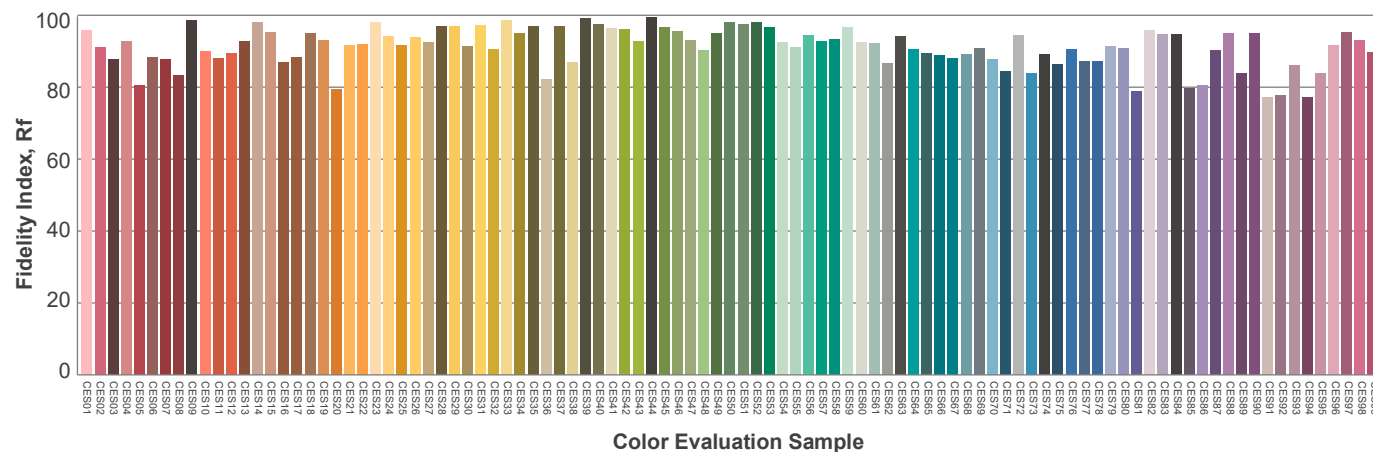
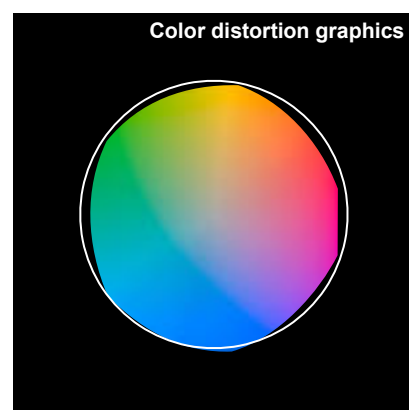
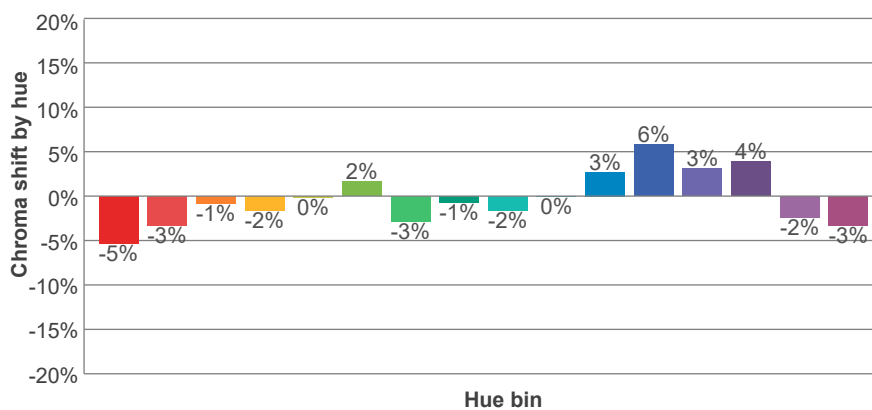
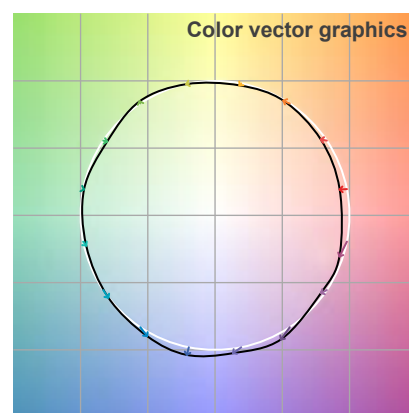
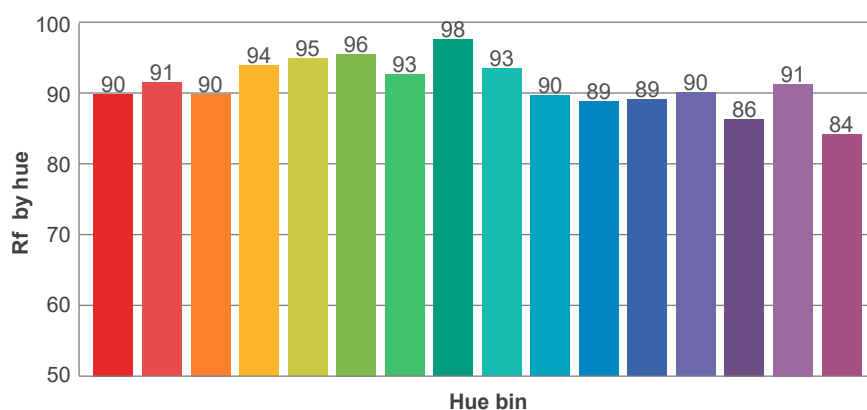
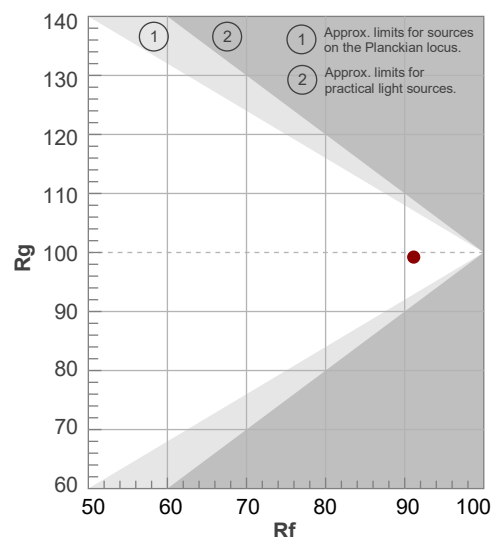
**Rf 91,1**

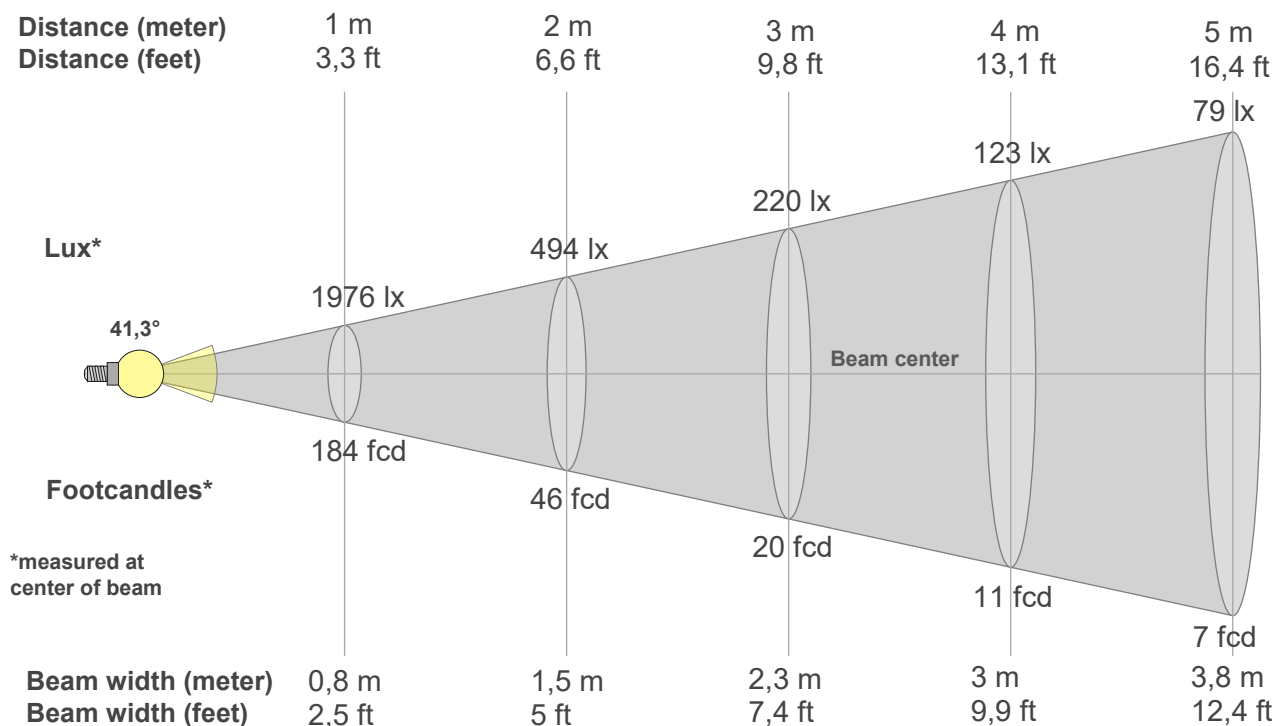
Fidelity index Rf

**Rg 99,2**

Gammut index Rg

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	90	-5%	1%
2	91	-3%	3%
3	90	-1%	5%
4	94	-2%	1%
5	95	0%	2%
6	96	2%	0%
7	93	-3%	-1%
8	98	-1%	0%
9	93	-2%	3%
10	90	0%	7%
11	89	3%	8%
12	89	6%	0%
13	90	3%	-7%
14	86	4%	-11%
15	91	-2%	-4%
16	84	-3%	-12%





## 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
1976lx	494lx	220lx	123lx	79lx	55lx	40lx	31lx	24lx	20lx	16lx	14lx	12lx	10lx	9lx	8lx	7lx	6lx	5lx	5lx
183,6fc	45,9fcd	20,4fcd	11,5fcd	7,3fcd	5,1fcd	3,7fcd	2,9fcd	2,3fcd	1,8fcd	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°
1976	1884	1608	1248	876	569	368	257	197	158	139	130	125	115	104	92	86	82	83	94
100%	95%	81%	63%	44%	29%	19%	13%	10%	8%	7%	7%	6%	6%	5%	5%	4%	4%	4%	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°
1976	1981	1973	1960	1939	1911	1876	1833	1779	1718	1649	1572	1485	1392	1293	1191	1090	990	893	803
100%	100%	100%	99%	98%	97%	95%	93%	90%	87%	83%	80%	75%	70%	65%	60%	55%	50%	45%	41%

## Intensities in 180° c-plane

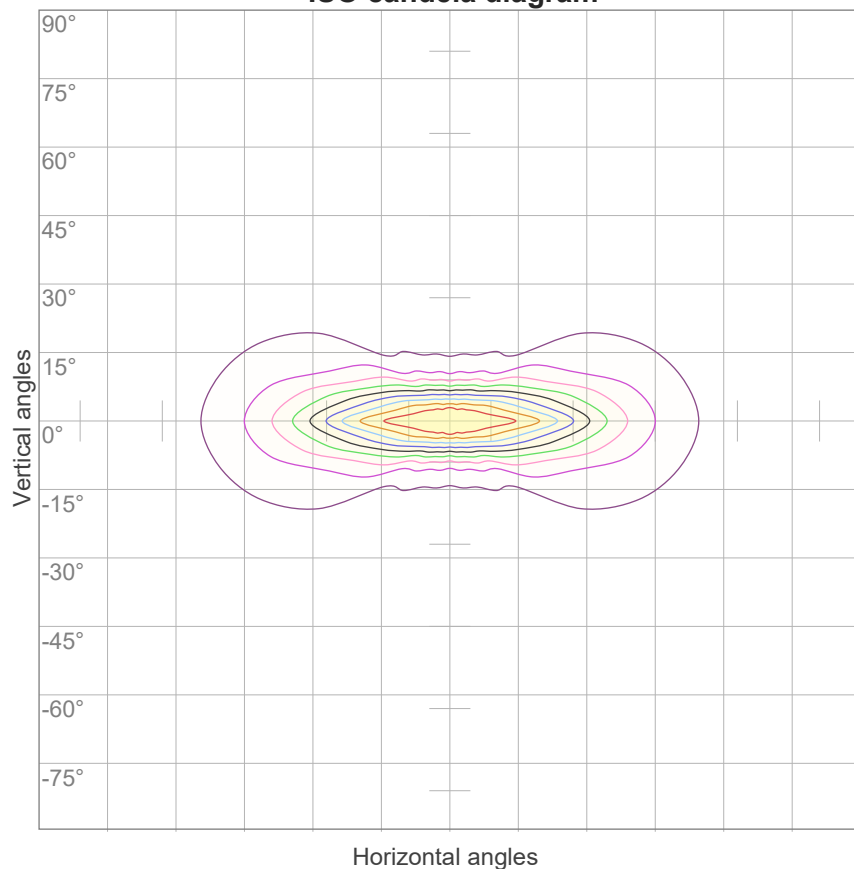
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
1976	1884	1608	1248	876	569	368	257	197	158	139	130	125	115	104	92	86	82	83	94
100%	95%	81%	63%	44%	29%	19%	13%	10%	8%	7%	7%	6%	6%	5%	5%	4%	4%	4%	5%

## 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°
1976	1981	1973	1960	1939	1911	1876	1833	1779	1718	1649	1572	1485	1392	1293	1191	1090	990	893	803
100%	100%	100%	99%	98%	97%	95%	93%	90%	87%	83%	80%	75%	70%	65%	60%	55%	50%	45%	41%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
41,3°	76,4°	117,7°	87,0%	72,8%

## ISO candela diagram



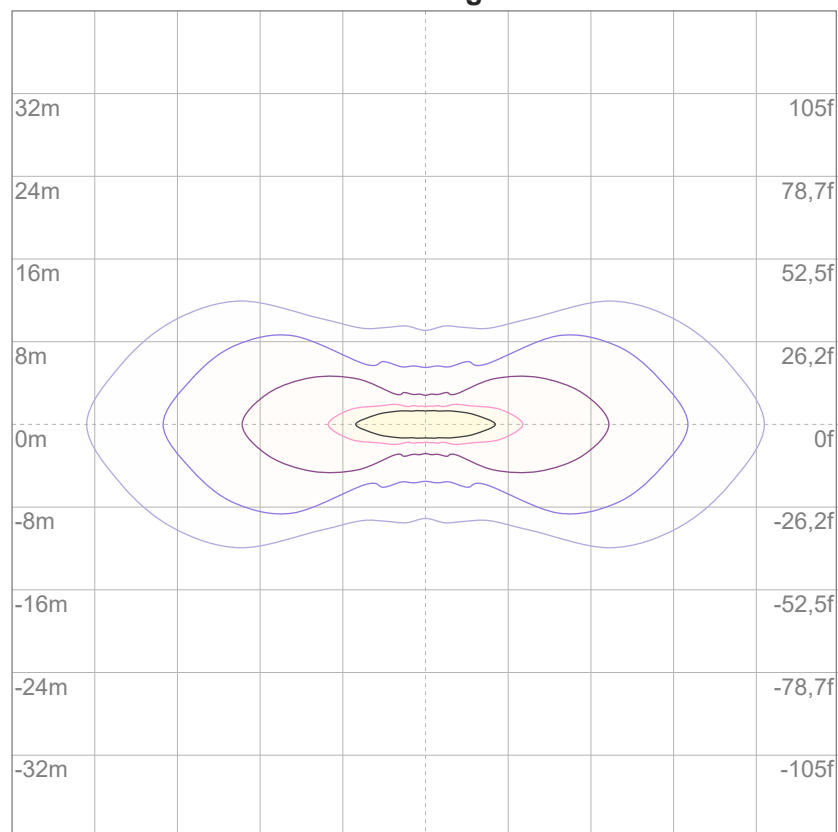
10%	198 cd
20%	395 cd
30%	593 cd
40%	790 cd
50%	988 cd
60%	1185 cd
70%	1383 cd
80%	1581 cd
90%	1778 cd

### Conditions:

Number of c-planes: 16

Candela at center: 1976 cd

## ISO lux diagram



3%	0,593 lx
5%	0,988 lx
10%	1,98 lx
30%	5,93 lx
50%	9,88 lx

### Conditions:

Number of c-planes: 16

Lux at center: 19,8 lx

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

### Glare Evaluation According to UGR

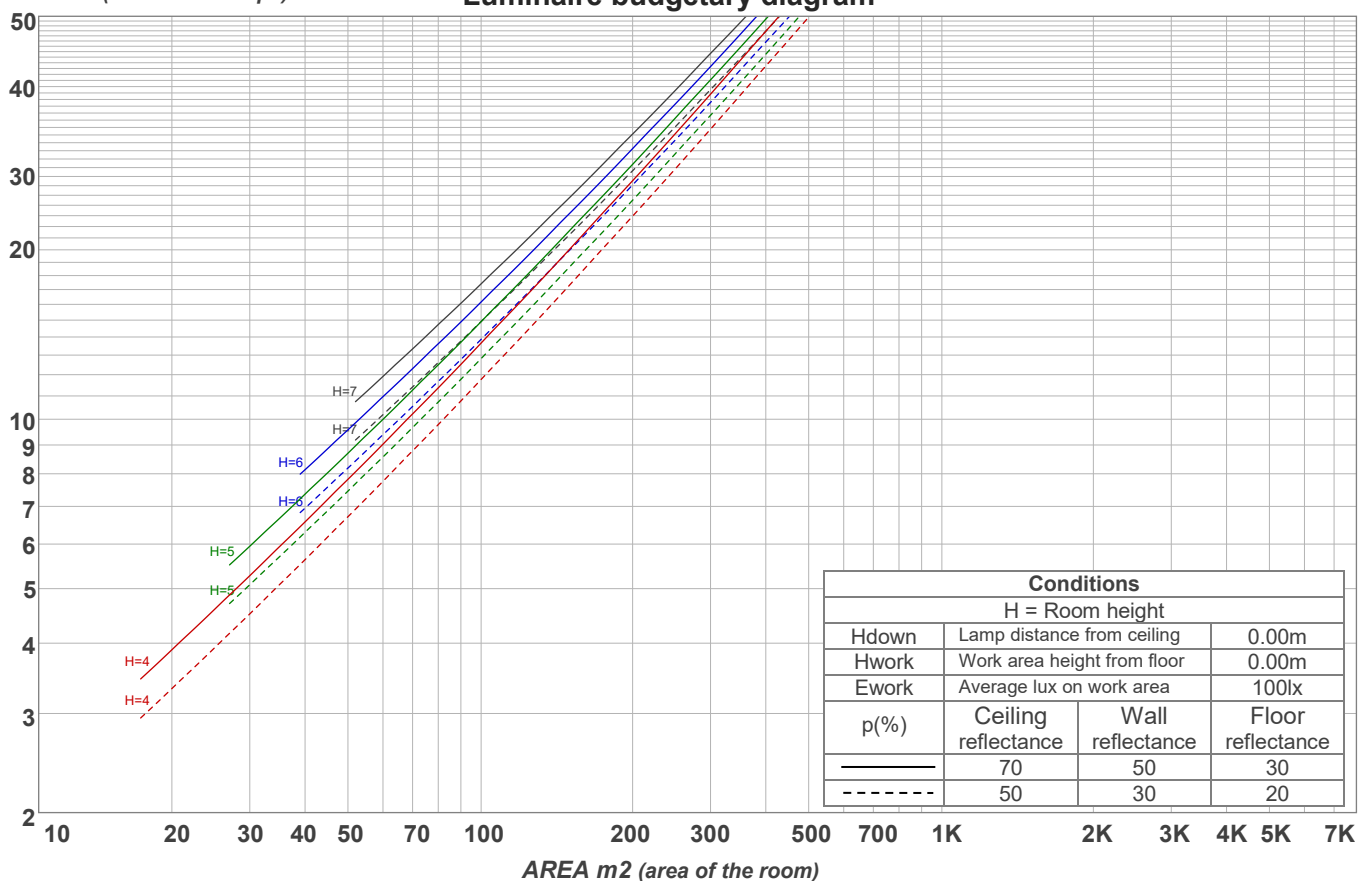
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X      Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	12,4	13,3	12,6	13,6	13,8	24,4	25,3	24,6	25,6	25,8
	3H	13,5	14,5	13,9	14,7	14,9	25,1	26,1	25,5	26,3	26,5
	4H	14,7	15,6	15,1	15,9	16,1	25,3	26,2	25,7	26,5	26,7
	6H	16,2	17,0	16,5	17,3	17,7	25,5	26,3	25,8	26,6	26,9
	8H	17,0	17,7	17,3	18,1	18,5	25,5	26,3	25,8	26,6	27,0
	12H	17,7	18,4	18,0	18,8	19,2	25,5	26,2	25,8	26,6	27,0
4H	2H	14,1	15,1	14,5	15,3	15,6	24,1	25,1	24,5	25,3	25,6
	3H	15,4	16,1	15,7	16,5	16,9	25,1	25,8	25,4	26,2	26,6
	4H	16,4	17,1	16,8	17,5	18,1	25,3	26,0	25,7	26,4	26,9
	6H	17,9	18,6	18,4	18,9	19,3	25,4	26,2	25,9	26,5	26,9
	8H	18,7	19,3	19,2	19,7	20,1	25,5	26,1	26,0	26,5	26,9
	12H	19,5	20,0	20,0	20,4	20,9	25,5	26,0	26,0	26,5	26,9
8H	4H	17,1	17,8	17,6	18,1	18,5	25,2	25,9	25,7	26,2	26,6
	6H	18,8	19,3	19,3	19,8	20,3	25,5	25,9	26,0	26,4	26,9
	8H	19,8	20,2	20,4	20,8	21,4	25,6	26,0	26,1	26,5	27,1
	12H	20,8	21,1	21,4	21,6	22,2	25,6	26,0	26,2	26,5	27,1
12H	4H	17,2	17,8	17,7	18,2	18,6	25,2	25,7	25,7	26,1	26,6
	6H	19,1	19,5	19,6	20,0	20,7	25,5	25,9	26,0	26,4	27,0
	8H	20,1	20,5	20,7	21,0	21,6	25,6	25,9	26,2	26,4	27,1
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,2 / -0,2					1,0 / -0,9				
S = 1.5H		0,3 / -0,2					2,3 / -2,1				
S = 2.0H		0,6 / -0,4					3,6 / -3,3				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 1074 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	100	100	100	98
1	110	107	103	100	108	104	101	98	100	97	95	95	93	92	92	90	88	86
2	103	97	91	87	100	95	90	85	91	87	83	87	84	81	84	81	79	77
3	96	88	82	76	94	86	80	76	83	78	74	80	76	73	78	74	71	69
4	90	81	74	68	88	79	73	68	77	71	67	74	70	66	72	68	65	63
5	85	75	67	62	83	73	67	62	71	65	61	69	64	60	67	63	59	58
6	80	69	62	57	78	68	62	57	66	60	56	65	59	55	63	58	55	53
7	76	65	58	53	74	64	57	52	62	56	52	61	55	51	59	55	51	49
8	72	61	54	49	70	60	53	49	58	53	48	57	52	48	56	51	48	46
9	68	57	50	46	67	56	50	46	55	49	45	54	49	45	53	48	45	43
10	65	54	47	43	64	53	47	43	52	47	43	51	46	42	50	46	42	41

LAMPS (number of lamps)

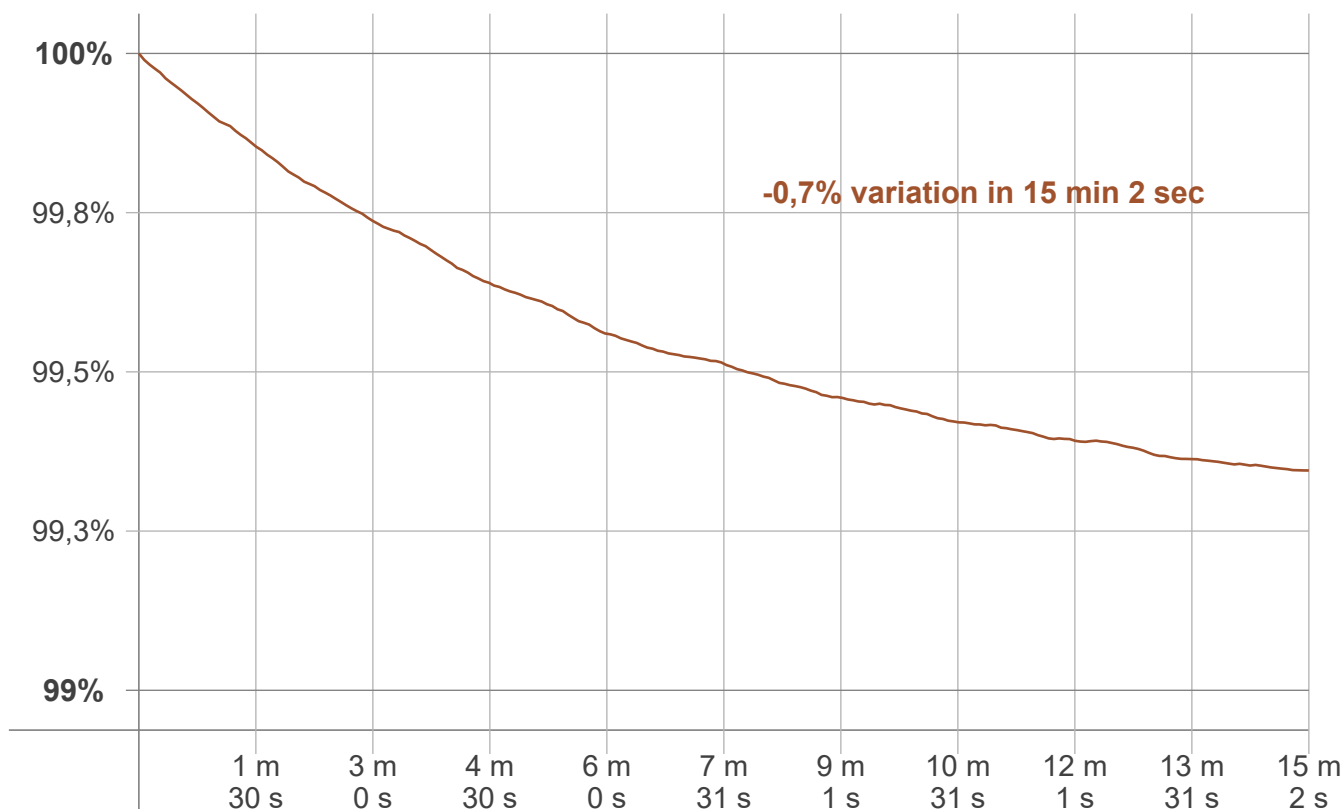
## Luminaire budgetary diagram



## Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
137 lm	213 lm	195 lm	167 lm	131 lm	91,4 lm	57,2 lm	34,8 lm	24,0 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
2,19 lm	6,25 lm	1,99 lm	1,80 lm	0,726 lm	0,000 lm	0,000 lm	0,000 lm	10,4 lm

## Warmup curve



## Warmup result

Warmup time:	Lamp stabilized in 15 min 2 sec
Warmup variation	-0,7%

## Warmup conditions

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

## Color temperature change

CCT start	CCT change	CCT end
2778 K	0 K	2778 K

## Output change

Output start	Output change	Output end
1081 lm	-7 lm	1074 lm