

Light efficiency:

142 Lumen/Watt

Light quality:

CRI: 82,1

Color temperature:

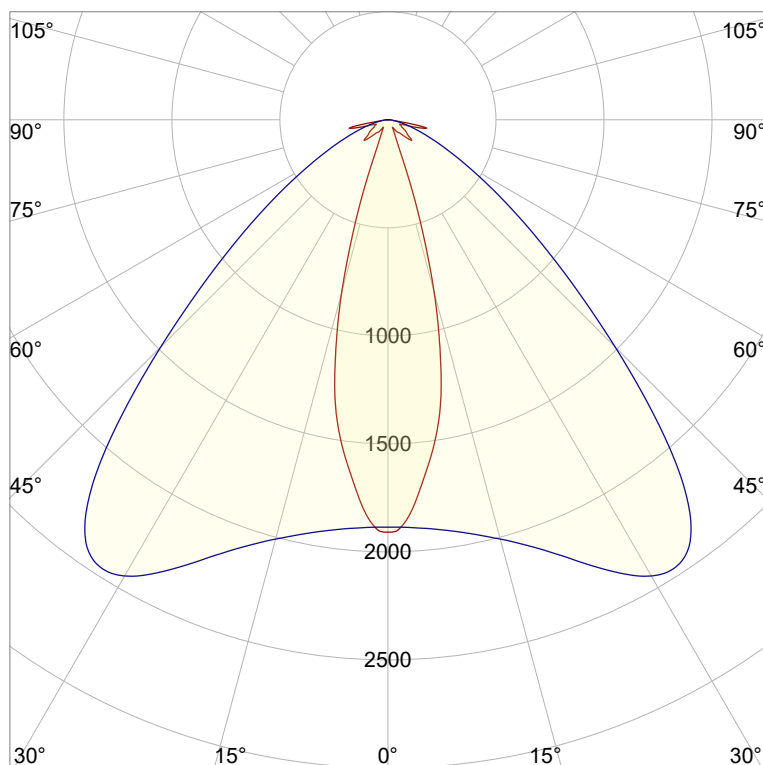
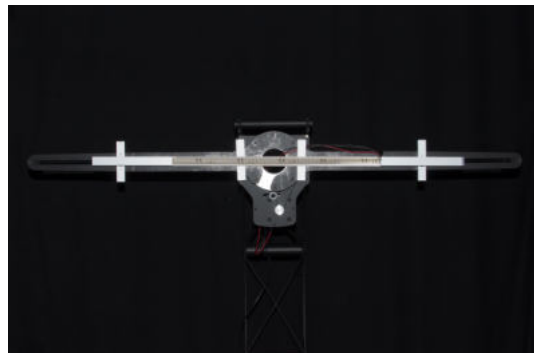
2790 K

Output: 1642 lm

Peak: 2462 cd

Power: 11,5 W

PF: 1,0



Product name:

Nova-6_510mm_827_Lens-30°-Transparent

Item number:

NP/L1C/06F/G1/L1C/0510/827/L3T

Date and time:

19.07.2022 09:51:29

Description:

Rank: D60-AC-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

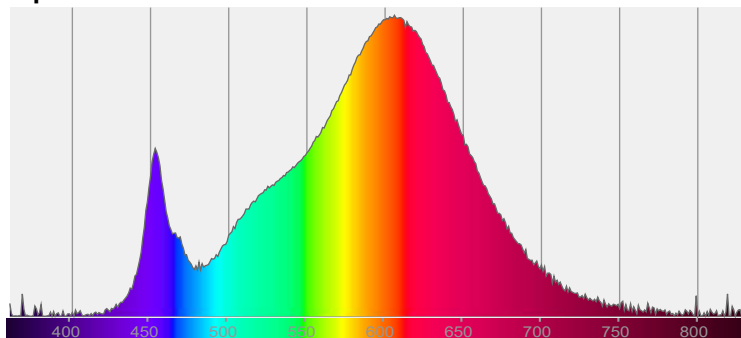


CIE 1931

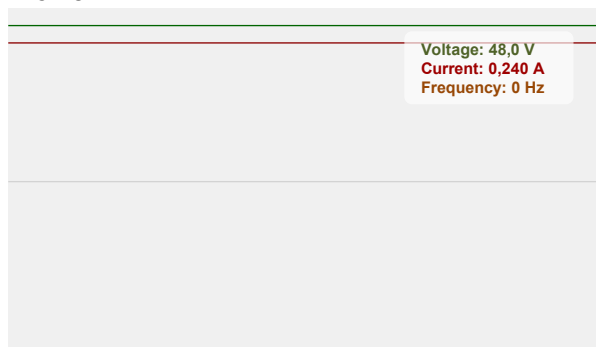
x: 0,450

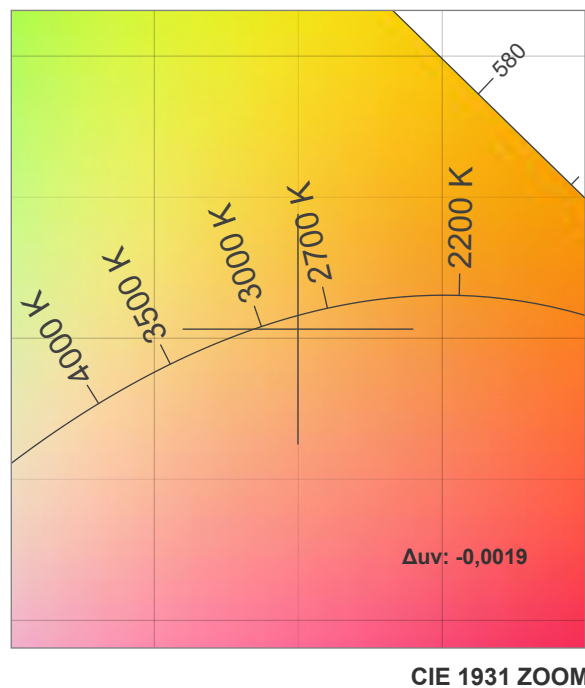
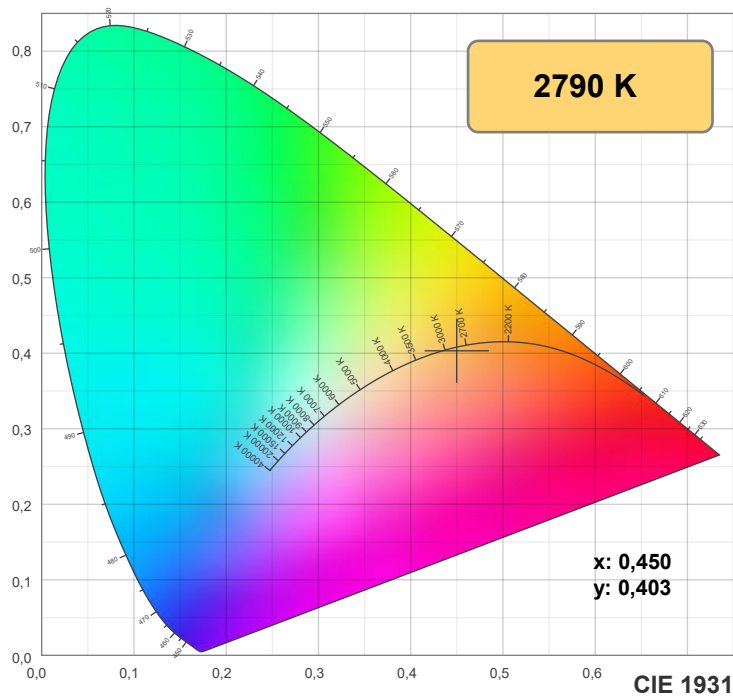
y: 0,403

Spectra



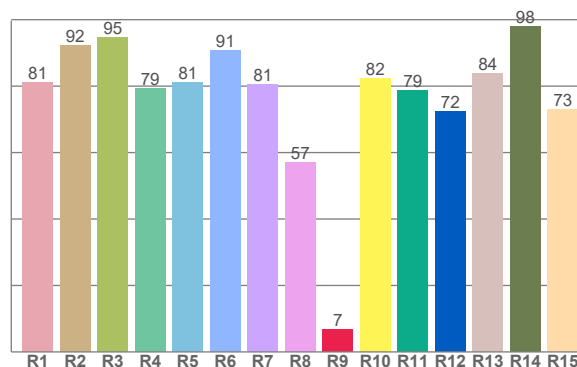
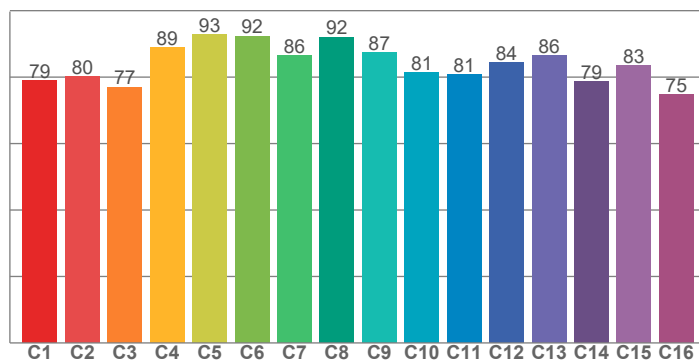
Power





TM30: 83,9

CRI: 82,1 (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
81,1	92,2	94,7	79,3	81,1	90,8	80,6	56,9	6,8	82,2	78,7	72,5	83,9	98,0	73,1

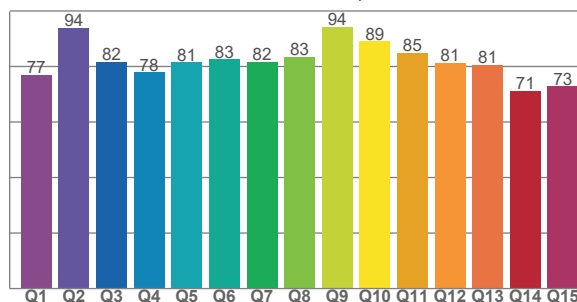
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
79,0	80,2	77,0	88,8	92,7	92,3	86,4	92,0	87,4	81,3	80,7	84,3	86,5	78,8	83,5	74,7

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
77,0	94,0	81,7	77,8	81,4	82,6	81,5	83,4	94,2	89,0	84,8	81,4	80,6	71,1	72,8

CQS: 81,0



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
2790 K	82,1	6,8	83,9	95,8	81,0	0,450	0,403	0,259	0,349	-0,0019

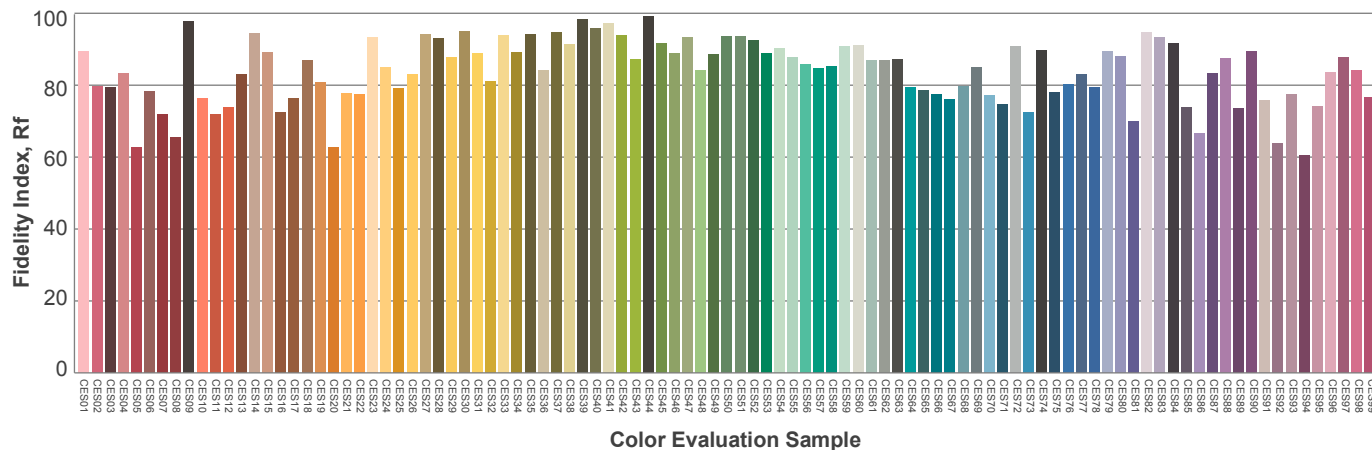
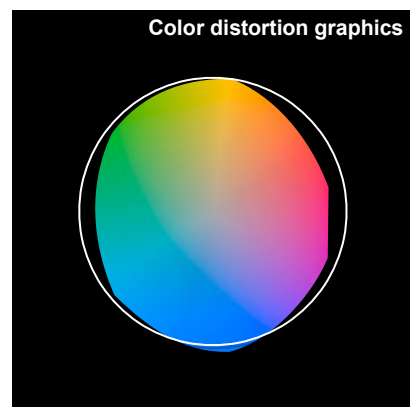
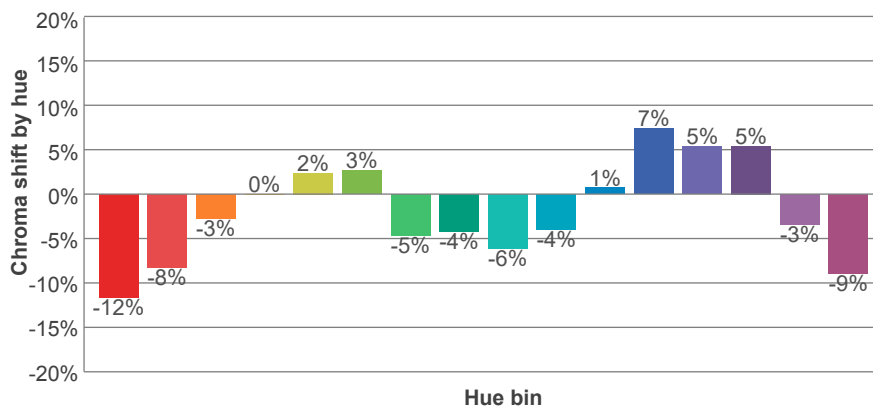
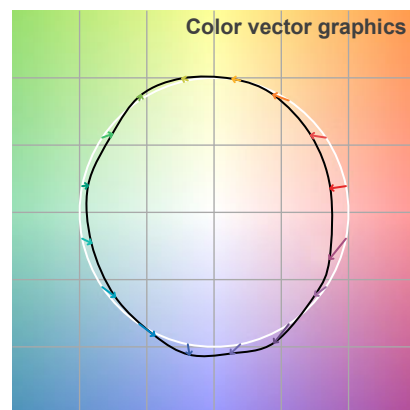
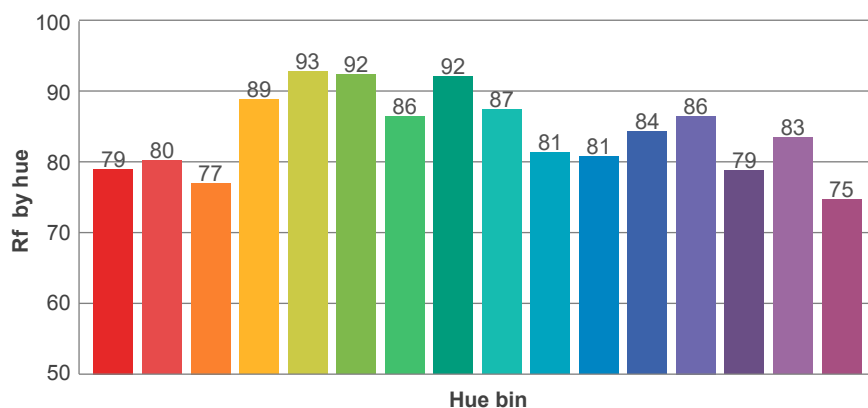
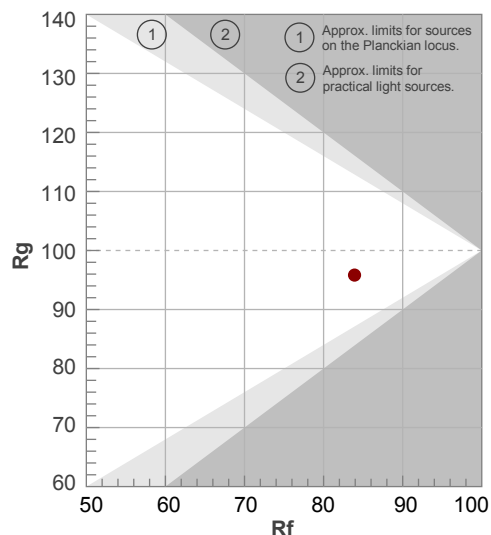
Rf 83,9

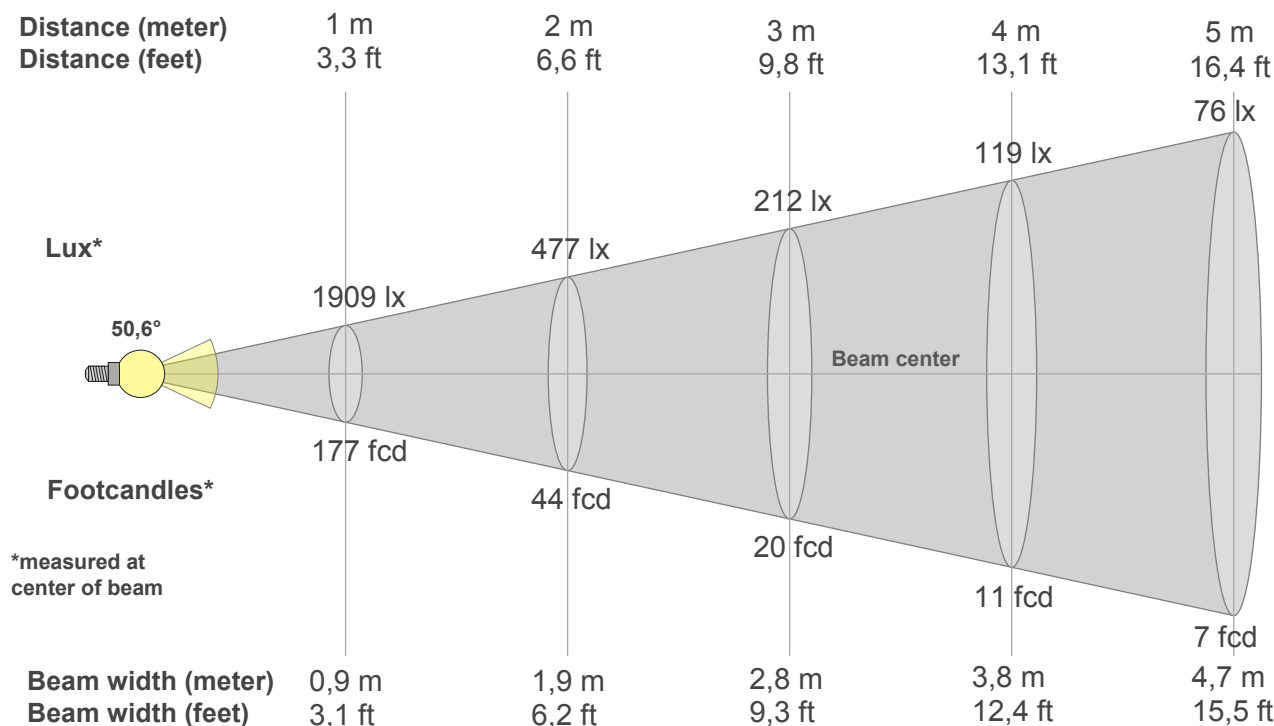
Fidelity index Rf

Rg 95,8

Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	79	-12%	1%
2	80	-8%	8%
3	77	-3%	12%
4	89	0%	6%
5	93	2%	4%
6	92	3%	-3%
7	86	-5%	-6%
8	92	-4%	-1%
9	87	-6%	5%
10	81	-4%	11%
11	81	1%	14%
12	84	7%	3%
13	86	5%	-8%
14	79	5%	-17%
15	83	-3%	-10%
16	75	-9%	-17%





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
1909lx	477lx	212lx	119lx	76lx	53lx	39lx	30lx	24lx	19lx	16lx	13lx	11lx	10lx	8lx	7lx	7lx	6lx	5lx	5lx
177,3fcd	44,3fcd	19,7fcd	11,1fcd	7,1fcd	4,9fcd	3,6fcd	2,8fcd	2,2fcd	1,8fcd	1,5fcd	1,2fcd	1fcd	0,9fcd	0,8fcd	0,7fcd	0,6fcd	0,5fcd	0,5fcd	0,4fcd

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°
1909	1880	1780	1649	1523	1377	1178	947	694	449	236	121	85	65	53	43	42	50	63	73
100%	98%	93%	86%	80%	72%	62%	50%	36%	24%	12%	6%	4%	3%	3%	2%	2%	3%	3%	4%

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°
1909	1887	1894	1903	1918	1938	1963	1993	2027	2070	2121	2180	2249	2319	2385	2437	2461	2447	2383	2257
100%	99%	99%	100%	101%	102%	103%	104%	106%	108%	111%	114%	118%	122%	125%	128%	129%	128%	125%	118%

Intensities in 180° c-plane

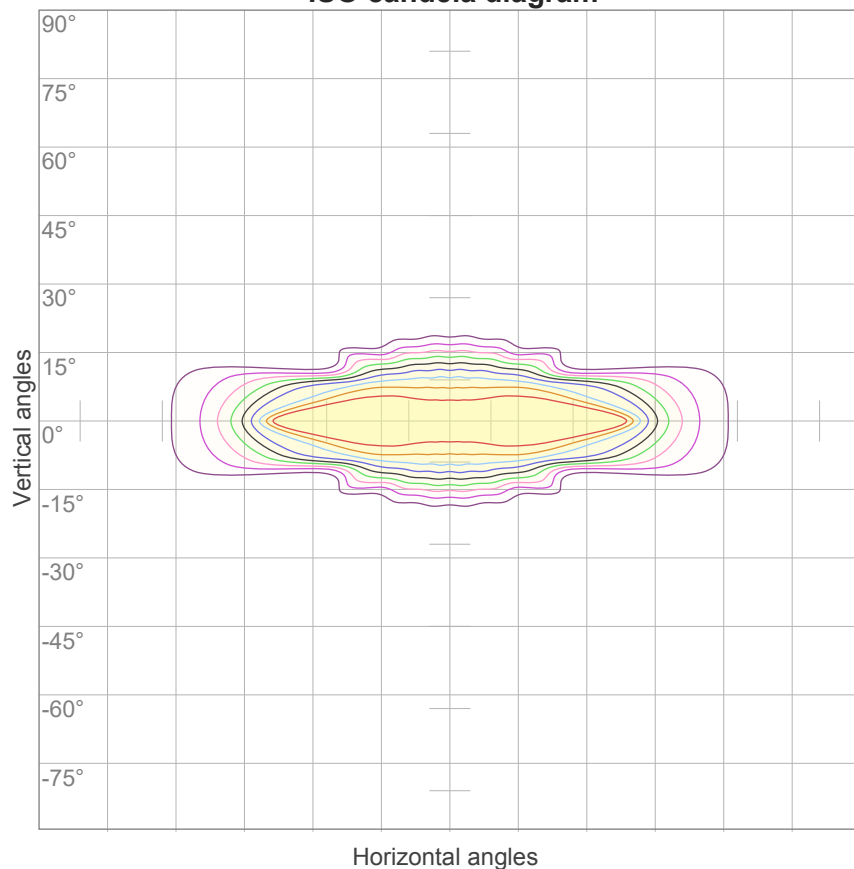
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
1909	1880	1780	1649	1523	1377	1178	947	694	449	236	121	85	65	53	43	42	50	63	73
100%	98%	93%	86%	80%	72%	62%	50%	36%	24%	12%	6%	4%	3%	3%	2%	2%	3%	3%	4%

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°
1909	1887	1894	1903	1918	1938	1963	1993	2027	2070	2121	2180	2249	2319	2385	2437	2461	2447	2383	2257
100%	99%	99%	100%	101%	102%	103%	104%	106%	108%	111%	114%	118%	122%	125%	128%	129%	128%	125%	118%

Beam angle 50°	Field angle 10°	Cutoff angle 2,5°	Intensity ratio in 120° cone	Intensity ratio in 90° cone
50,6°	67,6°	156,8°	86,7%	71,8%

ISO candela diagram



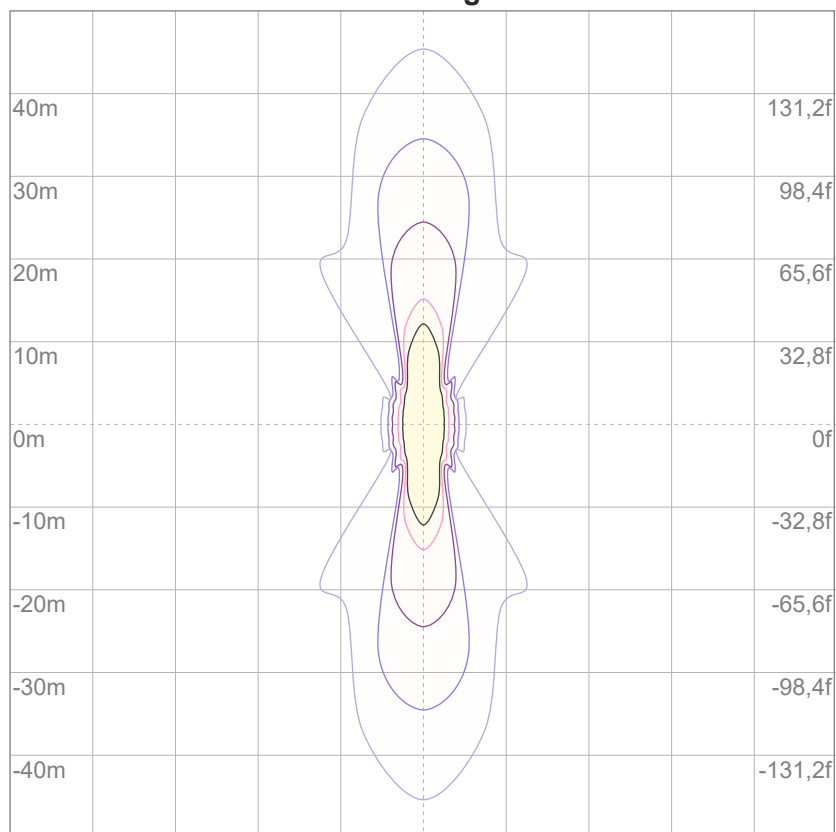
10%	191 cd
20%	382 cd
30%	573 cd
40%	763 cd
50%	954 cd
60%	1145 cd
70%	1336 cd
80%	1527 cd
90%	1718 cd

Conditions:

Number of c-planes: 16

Candela at center: 1909 cd

ISO lux diagram



3%	0,573 lx
5%	0,954 lx
10%	1,91 lx
30%	5,73 lx
50%	9,54 lx

Conditions:

Number of c-planes: 16

Lux at center: 19,1 lx

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

Glare Evaluation According to UGR

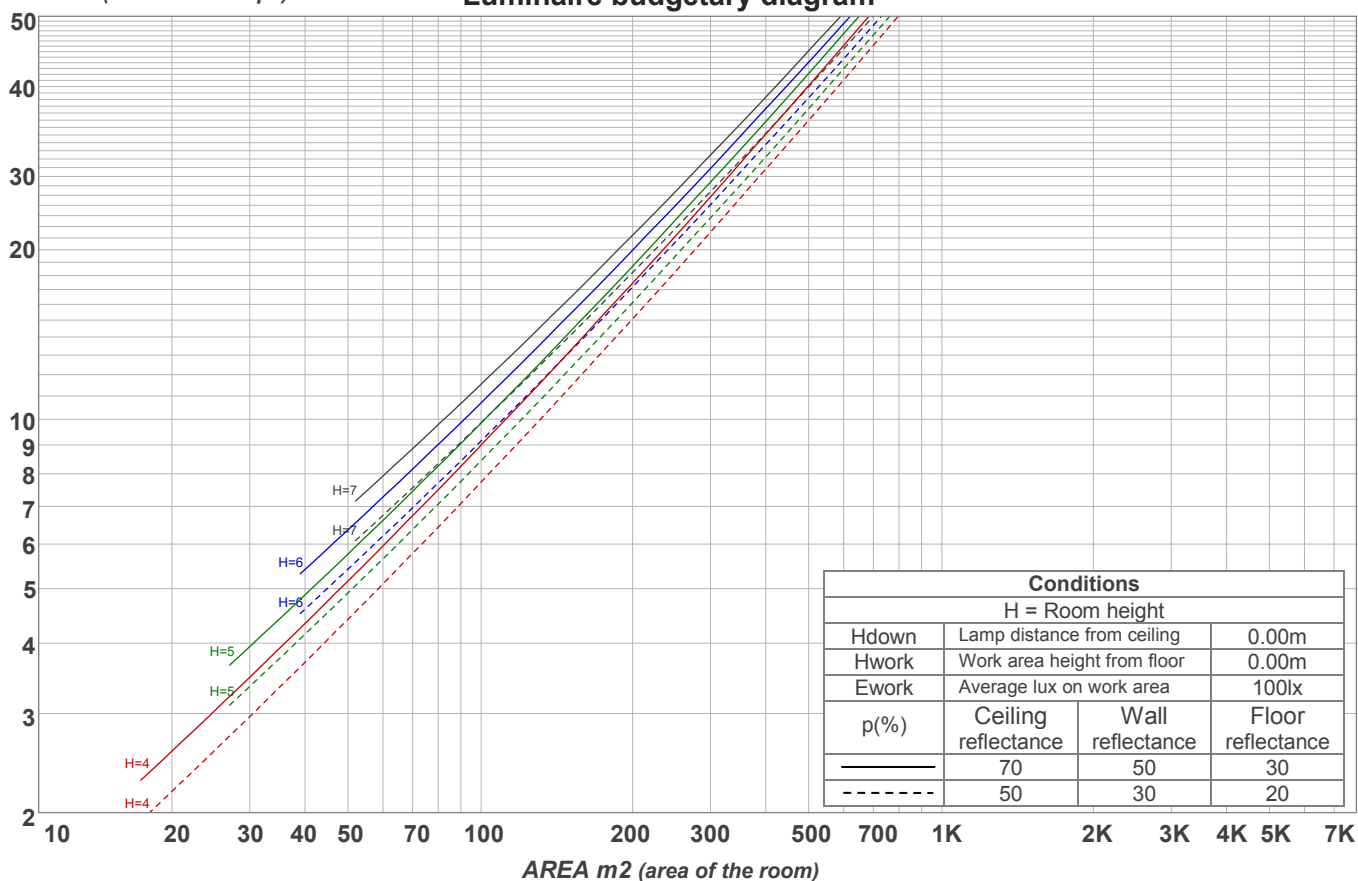
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	16,0	17,0	16,2	17,2	17,4	27,0	27,9	27,2	28,2	28,4
	3H	17,4	18,4	17,8	18,7	18,9	27,4	28,4	27,8	28,7	28,8
	4H	20,0	20,9	20,4	21,2	21,4	27,6	28,5	28,0	28,8	29,0
	6H	23,4	24,3	23,7	24,5	24,9	27,7	28,6	28,0	28,9	29,2
	8H	23,6	24,4	23,9	24,7	25,1	27,7	28,5	28,1	28,9	29,3
	12H	23,5	24,3	23,9	24,7	25,1	27,7	28,5	28,1	28,8	29,3
4H	2H	16,5	17,5	16,9	17,8	18,0	26,7	27,6	27,1	27,9	28,1
	3H	18,3	19,1	18,6	19,4	19,8	27,3	28,1	27,6	28,4	28,8
	4H	21,1	21,8	21,5	22,2	22,7	27,4	28,1	27,8	28,6	29,1
	6H	24,8	25,5	25,3	25,9	26,2	27,5	28,3	28,0	28,6	29,0
	8H	25,0	25,7	25,5	26,0	26,4	27,6	28,2	28,1	28,6	29,0
	12H	25,0	25,5	25,5	26,0	26,4	27,6	28,1	28,1	28,6	29,0
8H	4H	21,4	22,1	21,9	22,5	22,8	27,3	28,0	27,8	28,4	28,7
	6H	25,5	26,0	26,0	26,4	27,0	27,5	28,0	28,0	28,5	29,0
	8H	25,9	26,3	26,4	26,8	27,4	27,7	28,1	28,2	28,6	29,2
	12H	25,9	26,2	26,4	26,7	27,3	27,7	28,1	28,3	28,6	29,2
12H	4H	21,5	22,0	22,0	22,4	22,9	27,3	27,9	27,8	28,3	28,8
	6H	25,6	26,0	26,1	26,5	27,2	27,7	28,1	28,2	28,6	29,2
	8H	26,0	26,4	26,6	26,9	27,5	27,8	28,1	28,4	28,6	29,2
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,1 / -0,1					2,1 / -2,6				
S = 1.5H		0,1 / -0,1					4,0 / -3,8				
S = 2.0H		0,3 / -0,3					5,7 / -4,6				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 1642 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	99
1	110	106	103	100	108	104	101	98	100	97	95	96	93	91	92	90	89	87
2	103	96	90	86	100	94	89	85	91	86	83	87	84	81	84	81	79	77
3	96	87	81	76	94	86	80	75	83	78	73	80	76	72	77	74	71	69
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62
5	84	74	66	61	82	73	66	61	71	65	60	69	63	59	67	62	59	57
6	79	68	61	56	78	67	61	56	66	60	55	64	59	55	63	58	54	52
7	75	64	57	51	73	63	56	51	61	55	51	60	55	50	59	54	50	48
8	71	60	53	48	69	59	52	48	58	52	47	56	51	47	55	50	47	45
9	67	56	49	45	66	55	49	44	54	48	44	53	48	44	52	47	44	42
10	64	53	46	42	63	52	46	42	51	45	41	50	45	41	50	45	41	40

LAMPS (number of lamps)

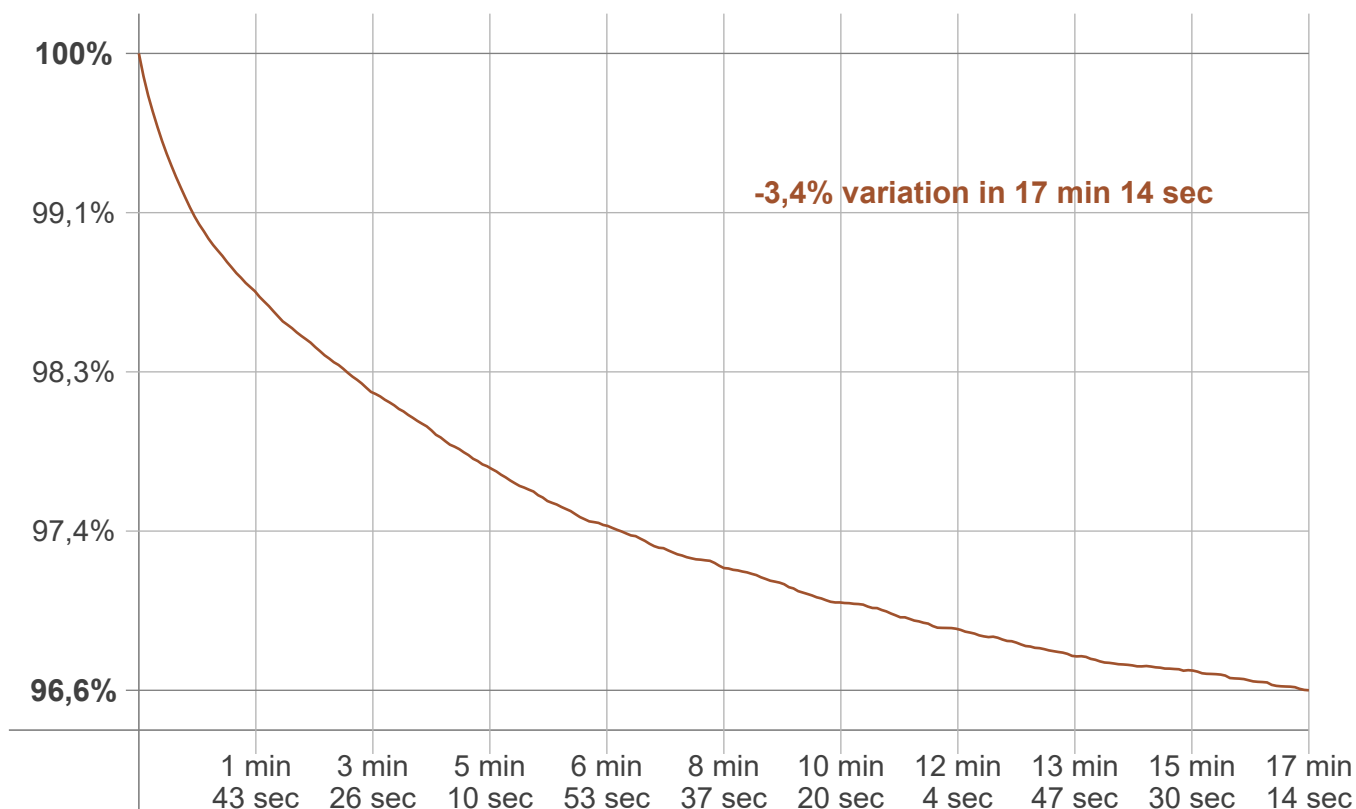
Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
167 lm	364 lm	309 lm	233 lm	202 lm	149 lm	88,1 lm	69,7 lm	38,8 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
8,08 lm	2,28 lm	2,12 lm	1,92 lm	1,51 lm	1,14 lm	0,839 lm	0,514 lm	2,83 lm

Warmup curve



Warmup result

Warmup time:	Lamp stabilized in 17 min 14 sec
Warmup variation	-3,4%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
2784 K	+6 K	2790 K

Output change

Output start	Output change	Output end
1693 lm	-51 lm	1642 lm