Light efficiency:

136 Lumen/Watt

Light quality:

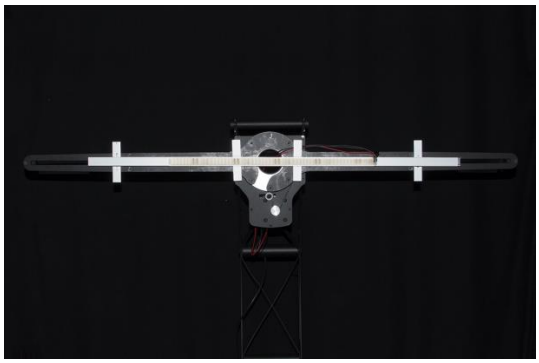
CRI: 81,8

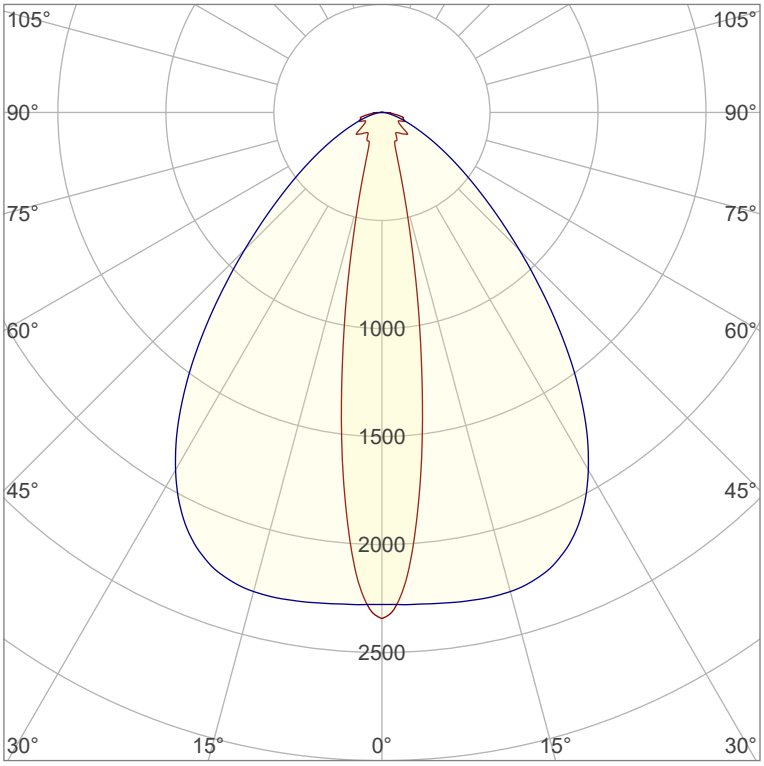
Color temperature:

2700 K

Output: 1567 lm
Peak: 2345 cd

Power: 11,5 W
PF: 1,0





CIE 1931
x: 0,460
y: 0,411

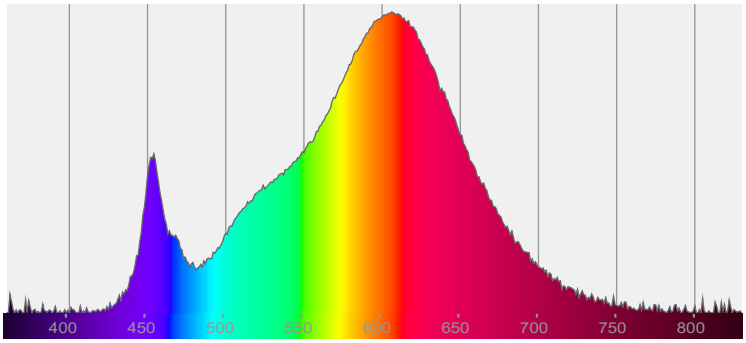
Product name:
Nova-6_510mm_827_Lens-15°-Frosted

Item number:
NP/L1C/06F/0510/827/L1F

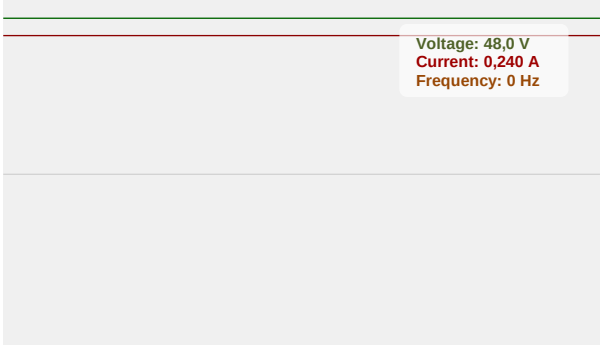
Date and time:
19.07.2022 11:04:44

Description:
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

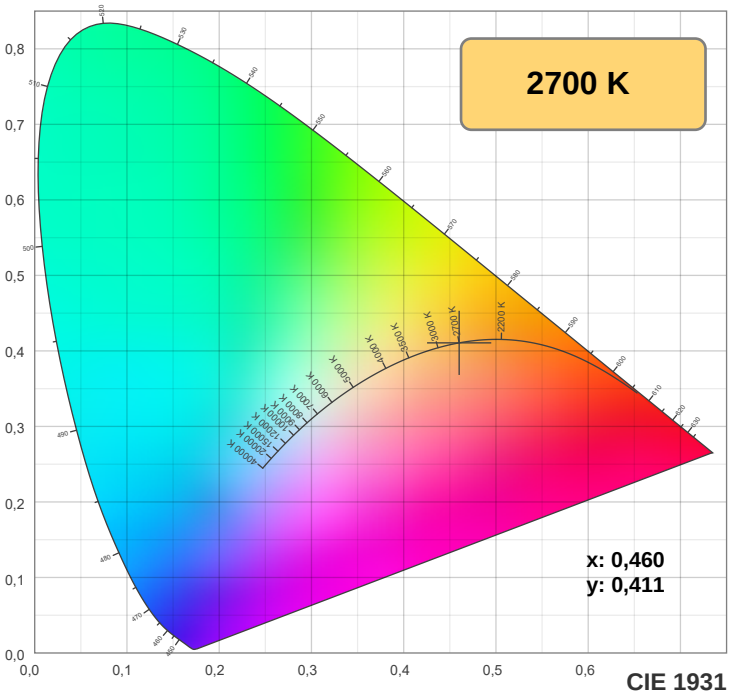
Spectra



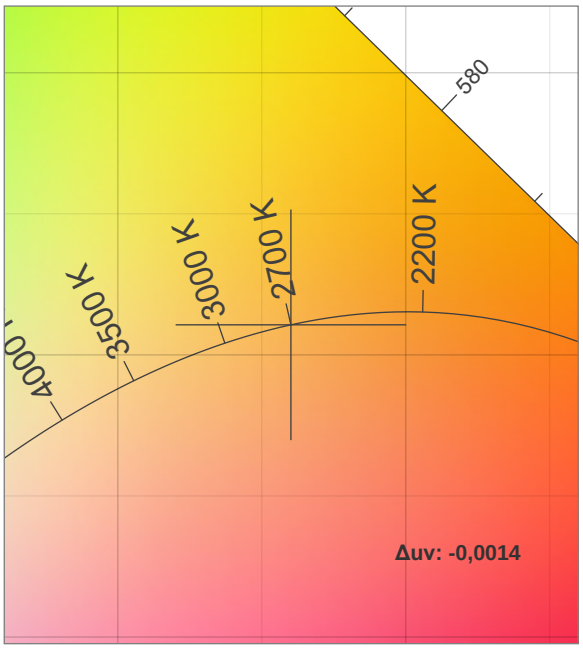
Power



Color details

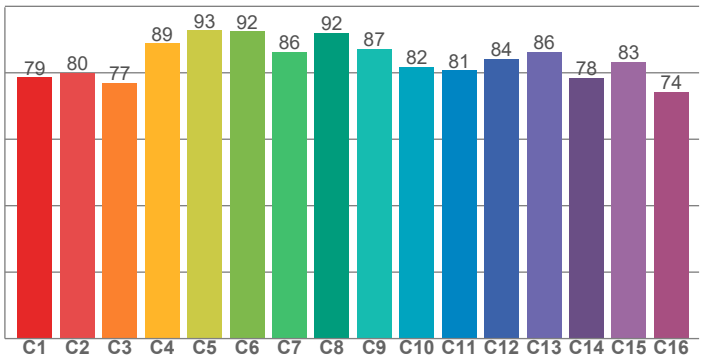


CIE 1931

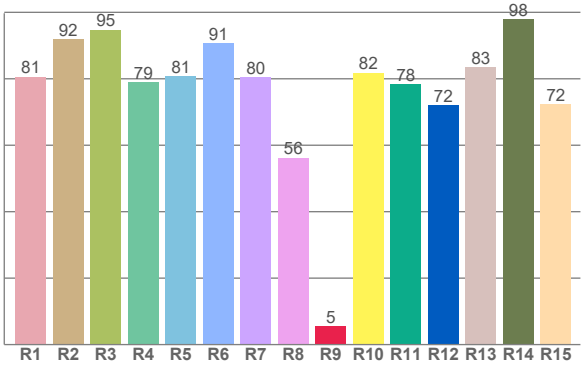


CIE 1931 ZOOM

TM30: 83,8



CRI: 81,8 (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
80,6	91,9	94,7	79,0	80,7	90,7	80,4	56,2	5,5	81,8	78,4	72,0	83,5	98,0	72,4

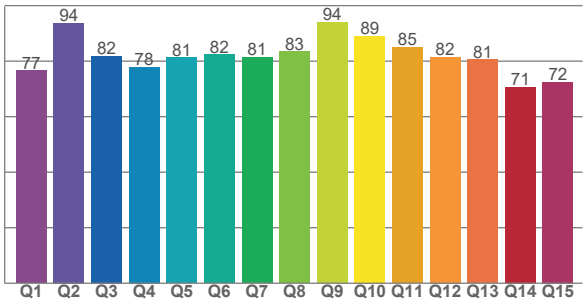
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
78,6	79,9	77,0	88,9	92,8	92,4	86,3	91,9	87,1	81,8	80,7	84,2	86,2	78,4	83,2	74,3

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
76,6	93,7	81,9	77,9	81,3	82,3	81,4	83,4	94,0	89,1	85,0	81,5	80,6	70,7	72,5

CQS: 80,9



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
2700 K	81,8	5,5	83,8	95,6	80,9	0,460	0,411	0,263	0,352	-0,0014

TM30 details

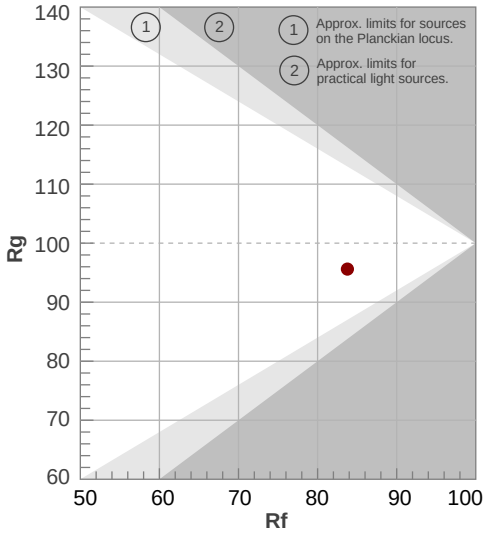
Rf 83,8

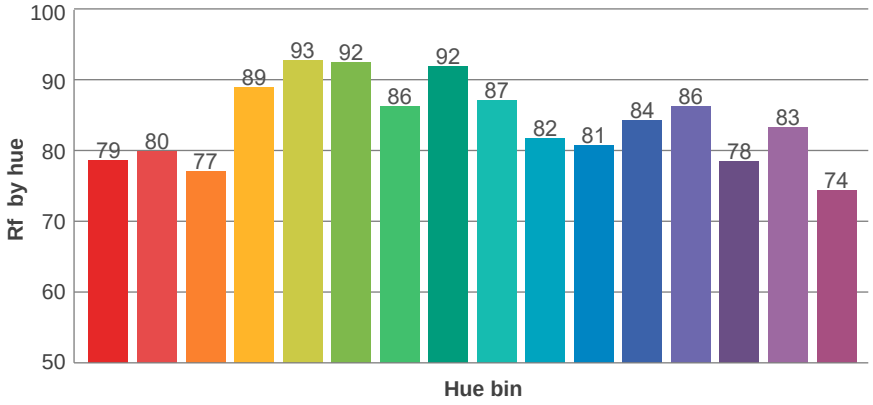
Fidelity index Rf

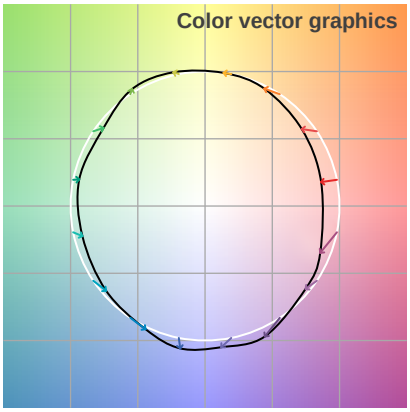
Rg 95,6

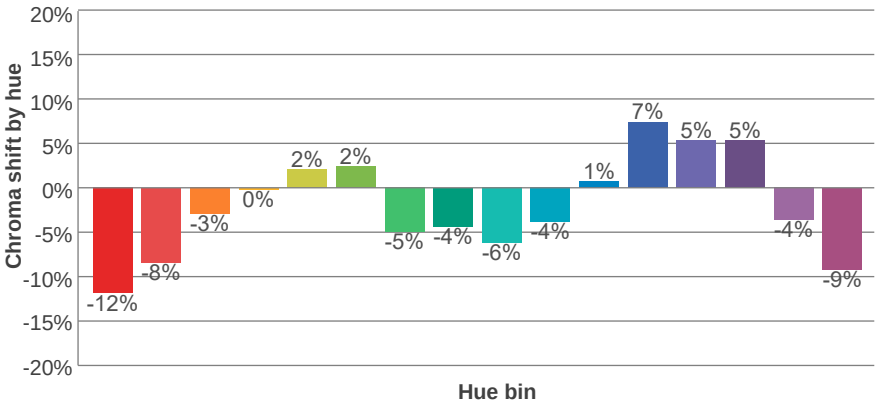
Gammut index Rg

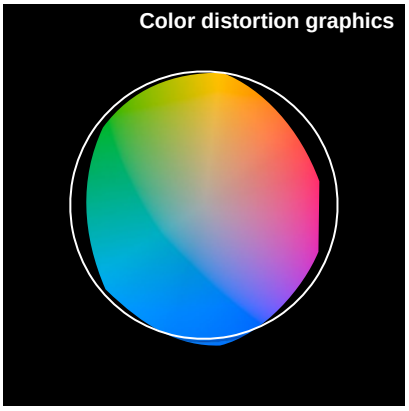
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	79	-12%	1%
2	80	-8%	8%
3	77	-3%	12%
4	89	0%	6%
5	93	2%	4%
6	92	2%	-3%
7	86	-5%	-6%
8	92	-4%	-1%
9	87	-6%	4%
10	82	-4%	11%
11	81	1%	14%
12	84	7%	3%
13	86	5%	-9%
14	78	5%	-17%
15	83	-4%	-10%
16	74	-9%	-17%

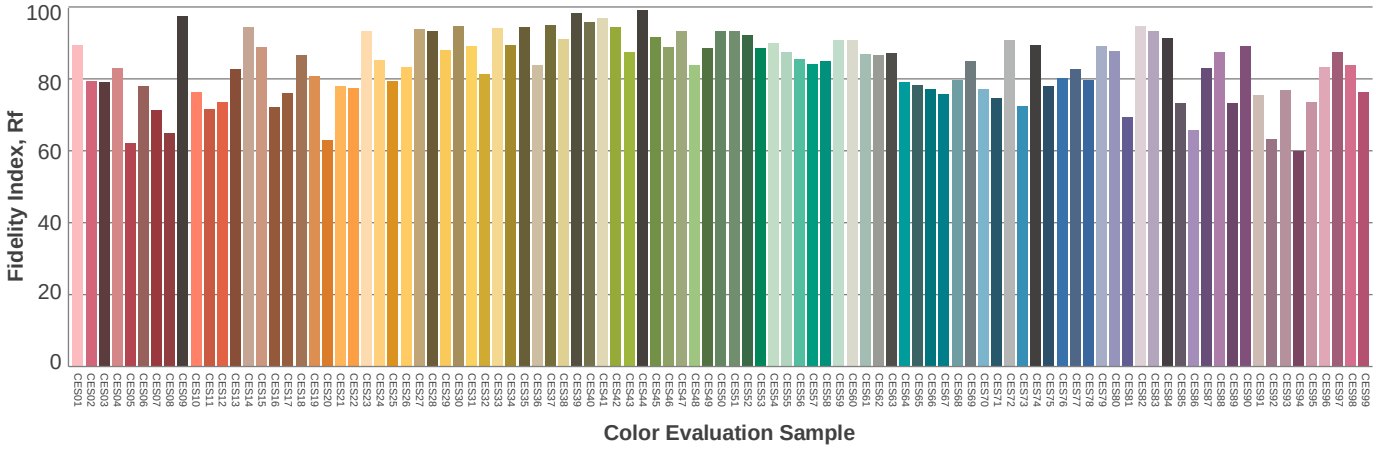




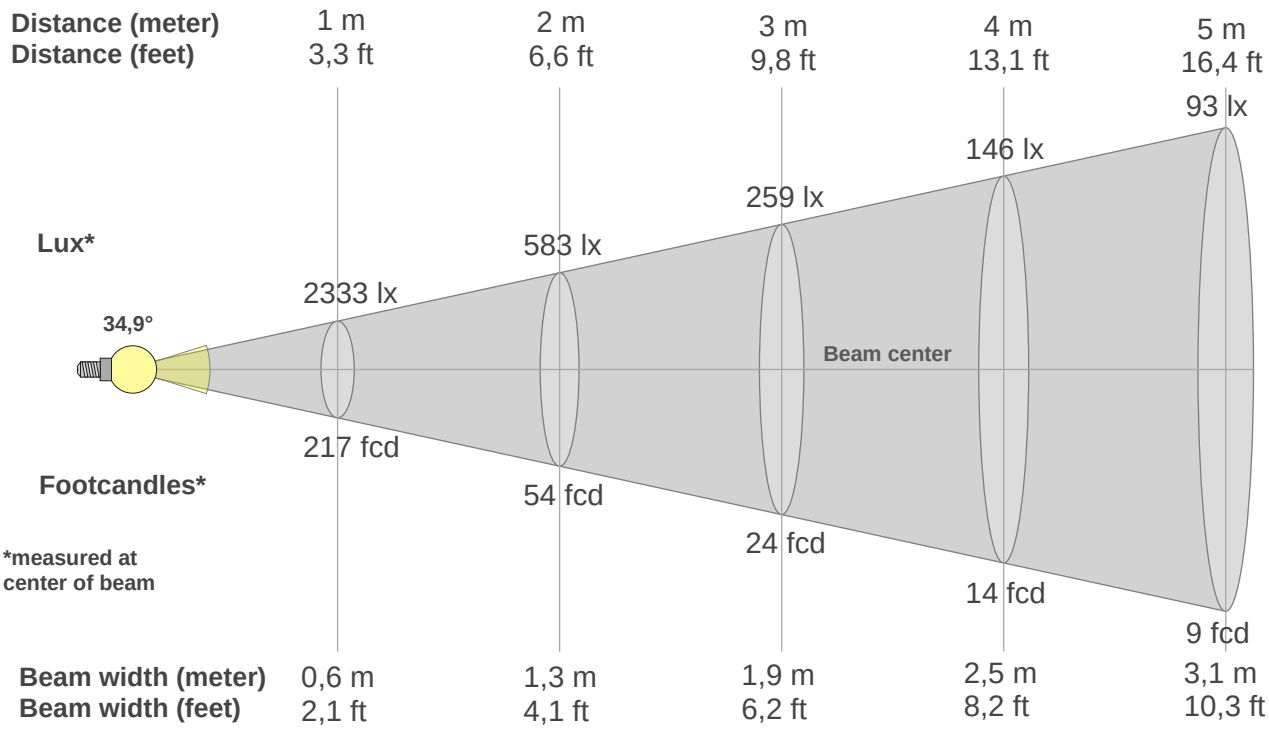








Beam details



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
2333lx	583lx	259lx	146lx	93lx	65lx	48lx	36lx	29lx	23lx	19lx	16lx	14lx	12lx	10lx	9lx	8lx	7lx	6lx	6lx
216,8fc	54,2fcd	24,1fcd	13,5fcd	8,7fcd	6fcd	4,4fcd	3,4fcd	2,7fcd	2,2fcd	1,8fcd	1,5fcd	1,3fcd	1,1fcd	1fcd	0,8fcd	0,8fcd	0,7fcd	0,6fcd	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°
2333	2256	2027	1705	1347	1004	711	489	341	247	191	160	147	146	146	137	124	115	116	119
100%	97%	87%	73%	58%	43%	30%	21%	15%	11%	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°
2333	2279	2282	2286	2291	2295	2299	2298	2292	2276	2253	2214	2162	2095	2010	1910	1797	1670	1533	1389
100%	98%	98%	98%	98%	98%	99%	98%	98%	98%	97%	95%	93%	90%	86%	82%	77%	72%	66%	60%

Intensities in 180° c-plane

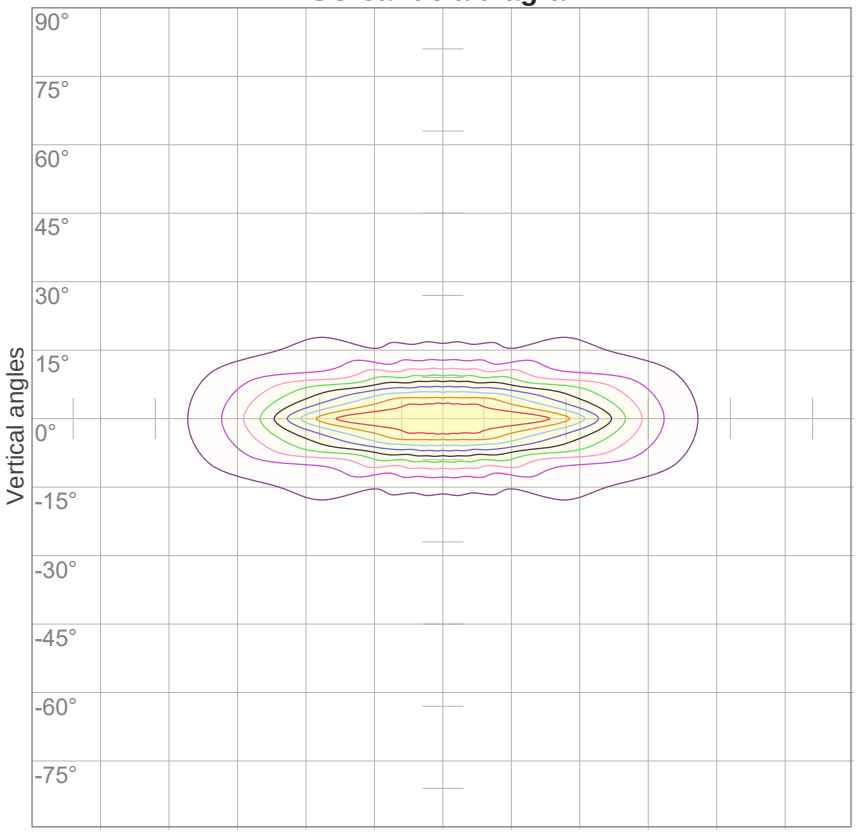
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
2333	2256	2027	1705	1347	1004	711	489	341	247	191	160	147	146	146	137	124	115	116	119
100%	97%	87%	73%	58%	43%	30%	21%	15%	11%	8%	7%	6%	6%	6%	6%	5%	5%	5%	5%

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°
2333	2279	2282	2286	2291	2295	2299	2298	2292	2276	2253	2214	2162	2095	2010	1910	1797	1670	1533	1389
100%	98%	98%	98%	98%	98%	99%	98%	98%	98%	97%	95%	93%	90%	86%	82%	77%	72%	66%	60%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
34,9°	**60°**	**162,6°**	**83,3%**	**68,6%**

ISO candela diagram



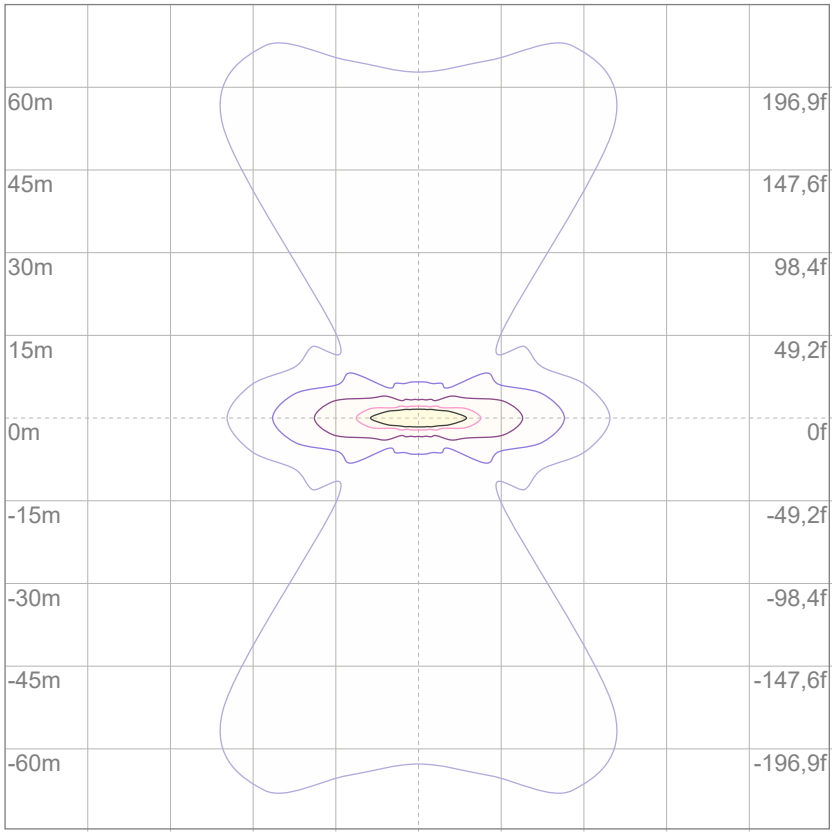
10%	233 cd
20%	467 cd
30%	700 cd
40%	933 cd
50%	1167 cd
60%	1400 cd
70%	1633 cd
80%	1867 cd
90%	2100 cd

Conditions:

Number of c-planes: 16

Candela at center: 2333 cd

ISO lux diagram



Mounting height: 10 meters (33 feet)

3%	0,700 lx
5%	1,17 lx
10%	2,33 lx
30%	7,00 lx
50%	11,7 lx

Conditions:

Number of c-planes: 16

Lux at center: 23,3 lx

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

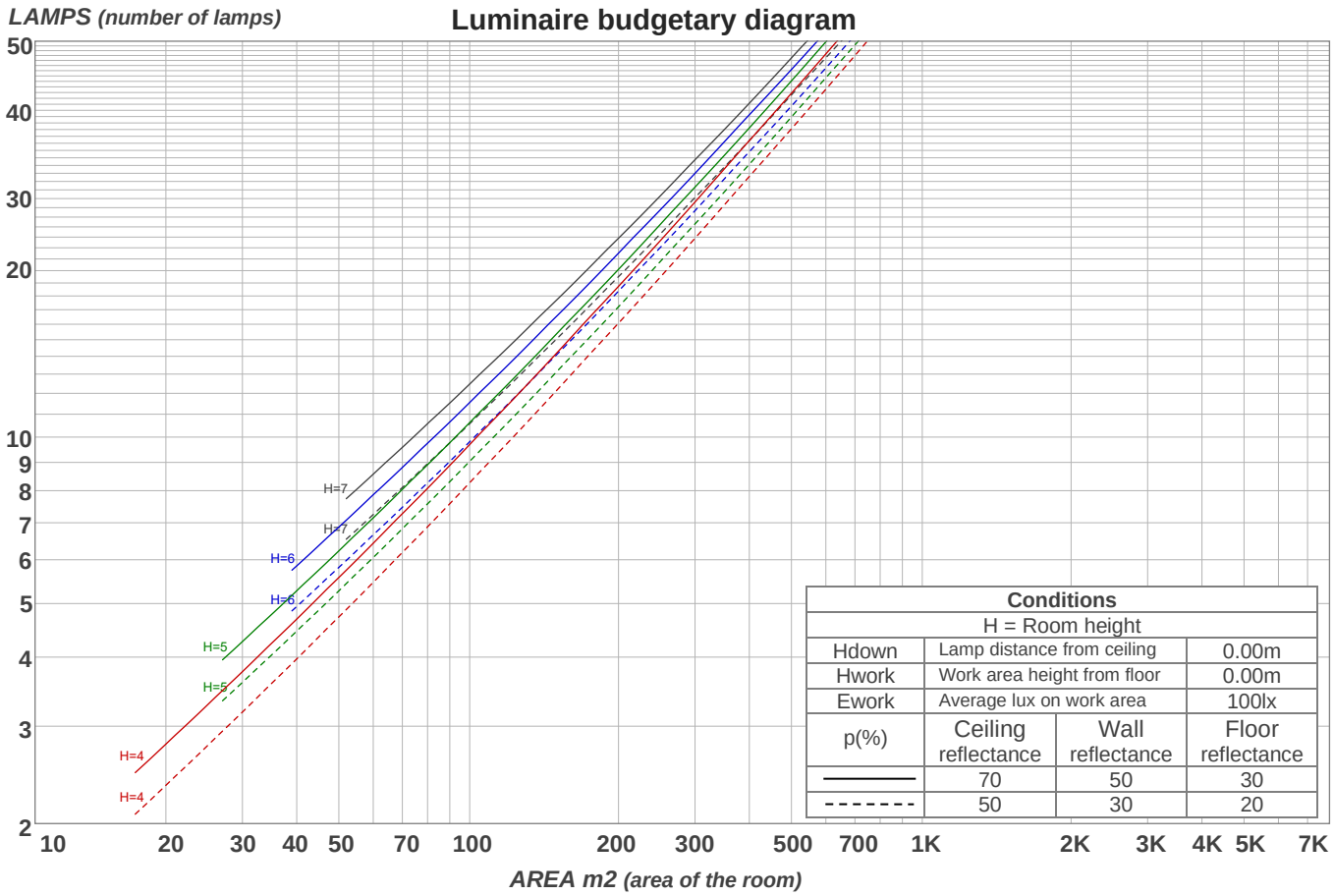
Glare Evaluation According to UGR

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	16,8	17,8	17,0	18,0	18,2	24,9	25,8	25,1	26,1	26,3
	3H	19,3	20,3	19,7	20,6	20,8	25,4	26,4	25,8	26,7	26,9
	4H	20,7	21,7	21,1	21,9	22,2	25,6	26,6	26,0	26,8	27,1
	6H	22,0	22,8	22,3	23,1	23,5	25,8	26,7	26,1	27,0	27,3
	8H	22,3	23,1	22,6	23,4	23,8	25,9	26,7	26,2	27,0	27,4
	12H	22,4	23,3	22,8	23,6	24,0	25,9	26,7	26,2	27,0	27,5
4H	2H	17,4	18,4	17,8	18,7	18,9	24,6	25,6	25,0	25,9	26,1
	3H	20,3	21,1	20,6	21,4	21,9	25,4	26,2	25,7	26,5	27,0
	4H	21,8	22,5	22,2	23,0	23,5	25,6	26,3	26,0	26,8	27,3
	6H	23,2	23,9	23,7	24,3	24,6	25,8	26,6	26,3	26,9	27,3
	8H	23,6	24,3	24,1	24,6	25,0	25,9	26,6	26,4	27,0	27,3
	12H	23,8	24,4	24,3	24,8	25,3	26,0	26,5	26,5	27,0	27,4
8H	4H	22,2	22,8	22,7	23,2	23,6	25,6	26,3	26,1	26,7	27,0
	6H	23,8	24,3	24,3	24,8	25,3	26,0	26,5	26,5	26,9	27,5
	8H	24,4	24,8	24,9	25,4	26,0	26,2	26,6	26,7	27,1	27,8
	12H	24,8	25,2	25,4	25,7	26,3	26,3	26,7	26,9	27,2	27,8
12H	4H	22,2	22,7	22,7	23,2	23,6	25,6	26,2	26,1	26,6	27,1
	6H	23,9	24,4	24,5	24,9	25,5	26,1	26,5	26,6	27,0	27,6
	8H	24,6	25,0	25,2	25,5	26,1	26,3	26,6	26,8	27,1	27,7
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,0 / 0,0					1,4 / -1,4				
S = 1.5H		0,2 / -0,2					3,0 / -2,2				
S = 2.0H		0,3 / -0,2					4,5 / -2,9				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 1567 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	110	105	102	98	107	103	100	96	98	95	93	94	92	89	90	88	86	84
2	102	95	89	84	99	93	88	83	89	84	81	85	82	78	82	79	76	74
3	95	86	79	74	92	84	78	73	81	76	71	78	74	70	75	71	68	66
4	89	79	71	66	86	77	70	65	74	69	64	72	67	63	70	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	60	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	53	49	45	43
9	66	55	48	43	65	54	48	43	53	47	43	52	46	42	51	46	42	40
10	63	52	45	41	62	51	45	40	50	44	40	49	44	40	48	43	40	38

Luminaire budgetary diagram

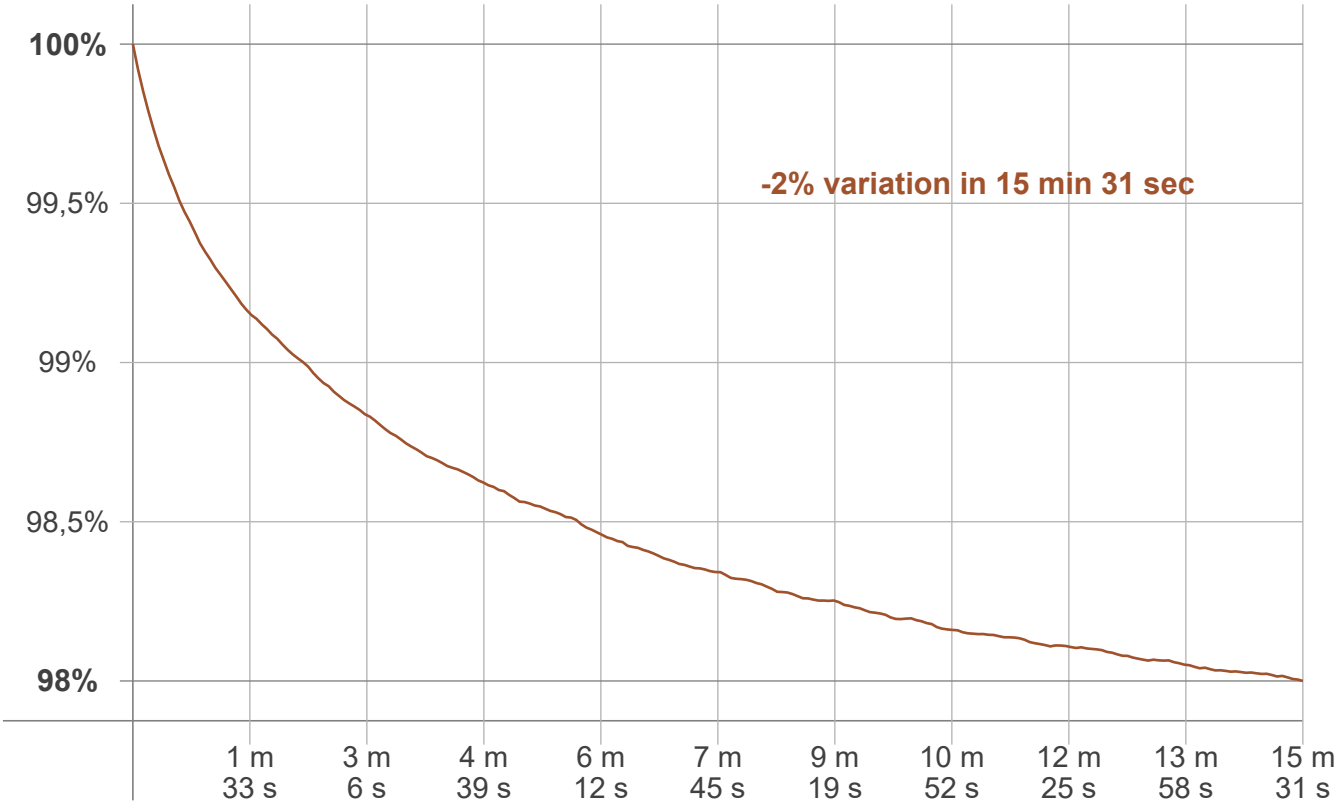


Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
171 lm	312 lm	264 lm	231 lm	188 lm	138 lm	94,4 lm	74,6 lm	42,6 lm

90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
12,0 lm	9,03 lm	4,03 lm	3,64 lm	1,86 lm	0,880 lm	0,649 lm	0,397 lm	18,4 lm

Warmup curve



Warmup result

Warmup time:	**Lamp stabilized in 15 min 31 sec**
Warmup variation	**-2,0%**

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
2694 K	+6 K	2700 K

Output change

Output start	Output change	Output end
1602 lm	-35 lm	1567 lm