

Light efficiency:

151 Lumen/Watt

Light quality:

CRI: 81,9

Color temperature:

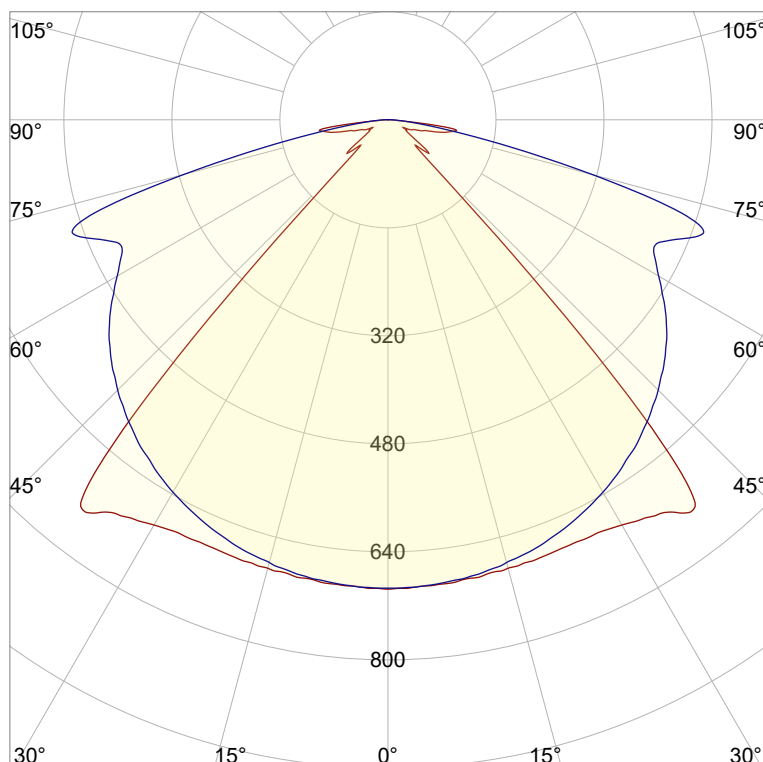
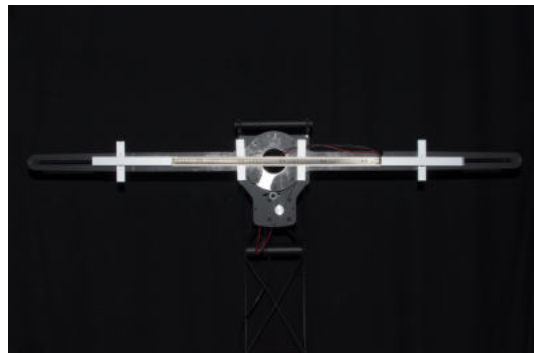
2764 K

Output: 1739 lm

Peak: 742 cd

Power: 11,5 W

PF: 1,0



Product name:

Nova-6_510mm_827_Lens-90°-Transparent

Item number:

NP/L1C/06F/G1/L1C/0510/827/L9T

Date and time:

18.07.2022 12:52:44

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

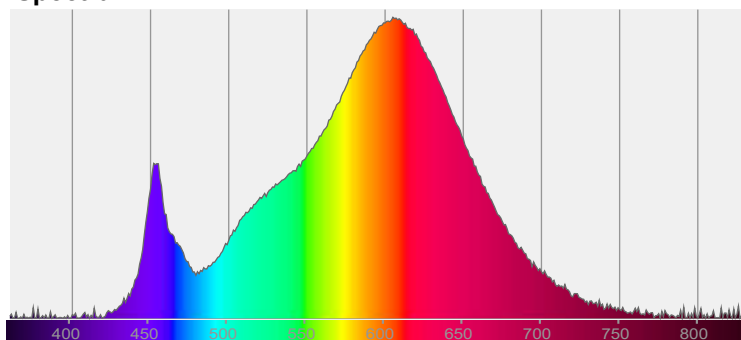


CIE 1931

x: 0,453

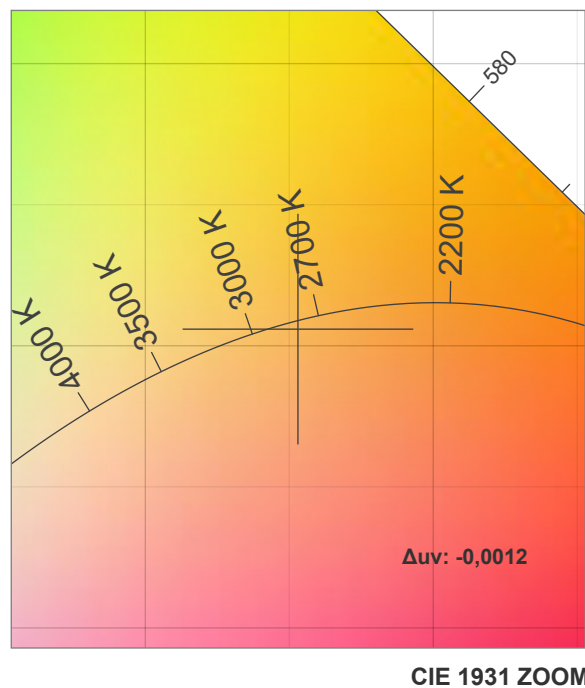
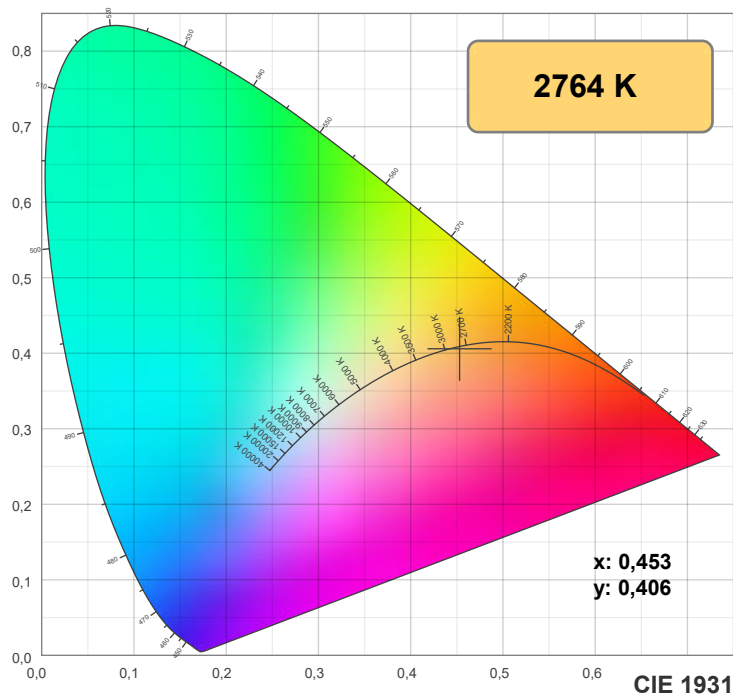
y: 0,406

Spectra



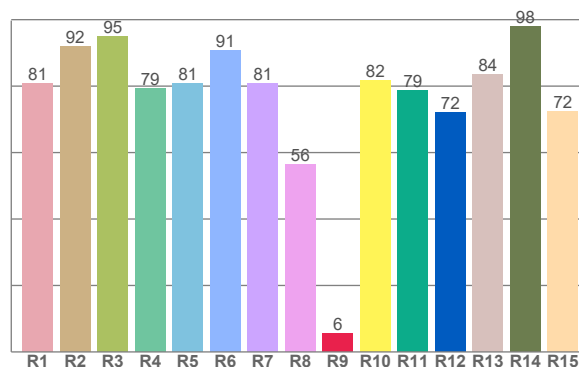
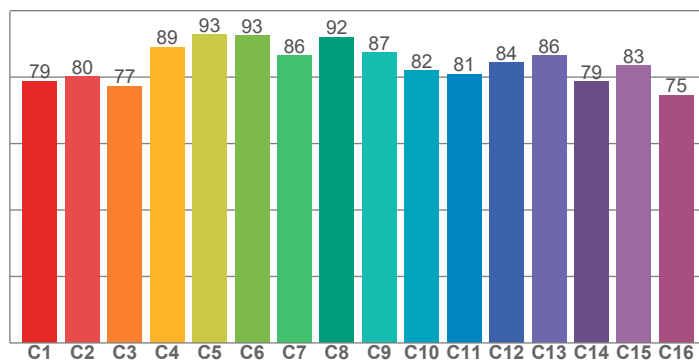
Power

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



TM30: 84,0

CRI: 81,9 (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
80,8	91,9	95,0	79,2	80,8	90,6	80,7	56,5	5,7	81,6	78,7	72,0	83,5	98,1	72,5

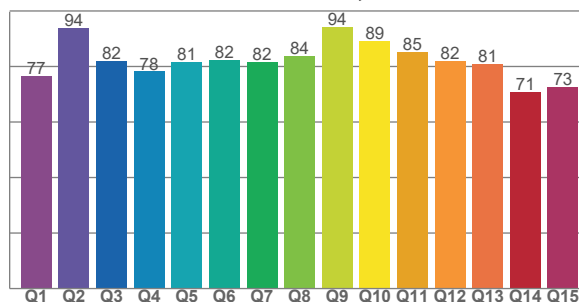
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
78,8	80,2	77,3	89,1	92,9	92,6	86,4	92,1	87,3	82,0	80,9	84,4	86,4	78,7	83,4	74,6

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
76,7	93,7	82,1	78,2	81,5	82,5	81,6	83,7	94,2	89,3	85,3	81,9	80,9	70,8	72,6

CQS: 81,1



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 deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
2764 K	81,9	5,7	84,0	95,6	81,1	0,453	0,406	0,260	0,350	-0,0012

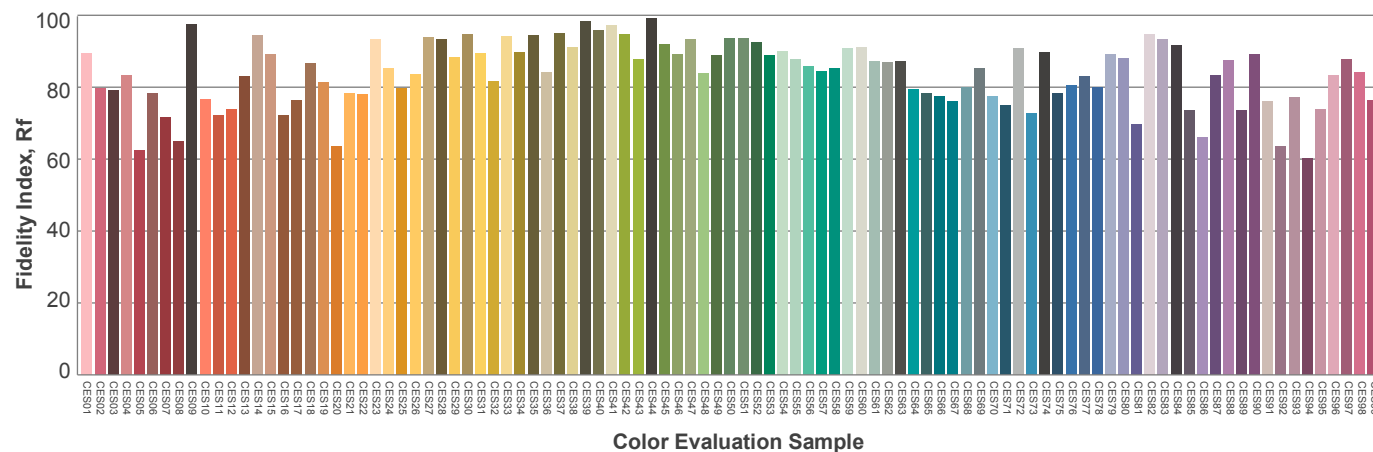
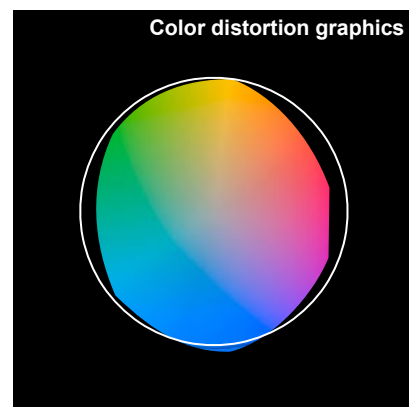
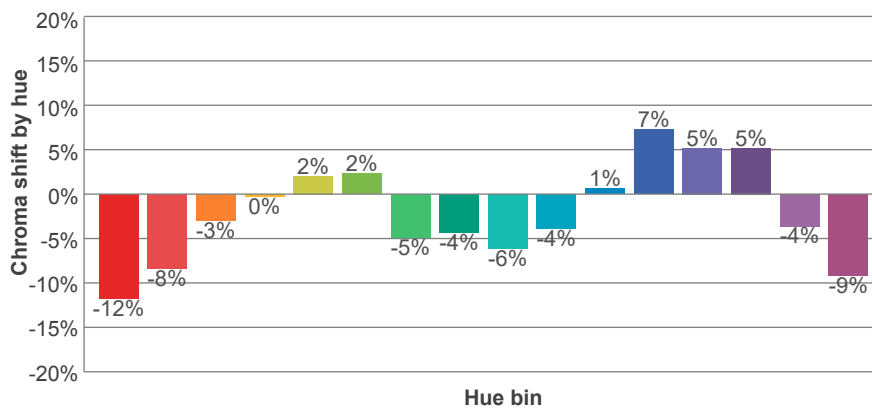
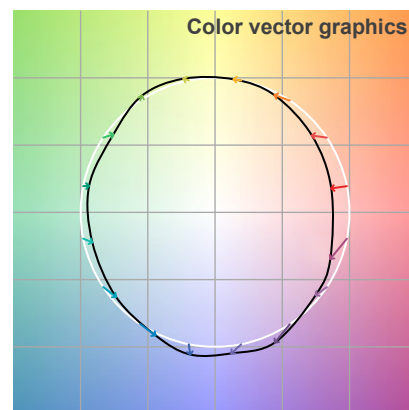
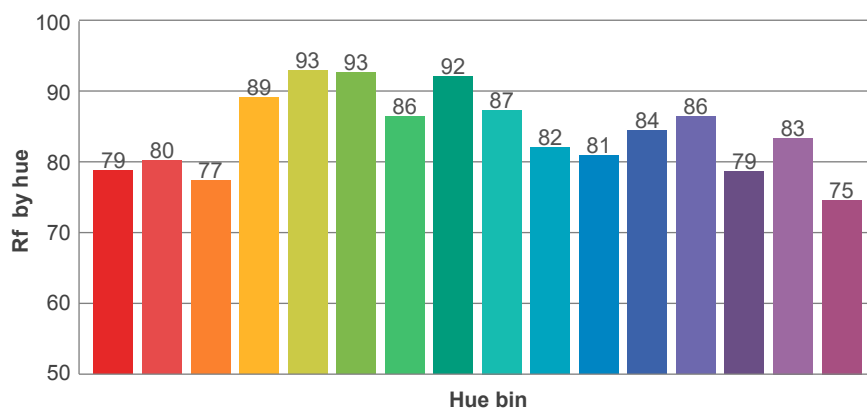
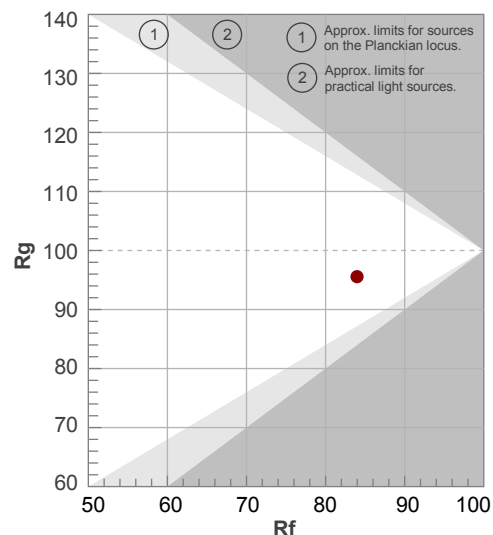
Rf 84,0

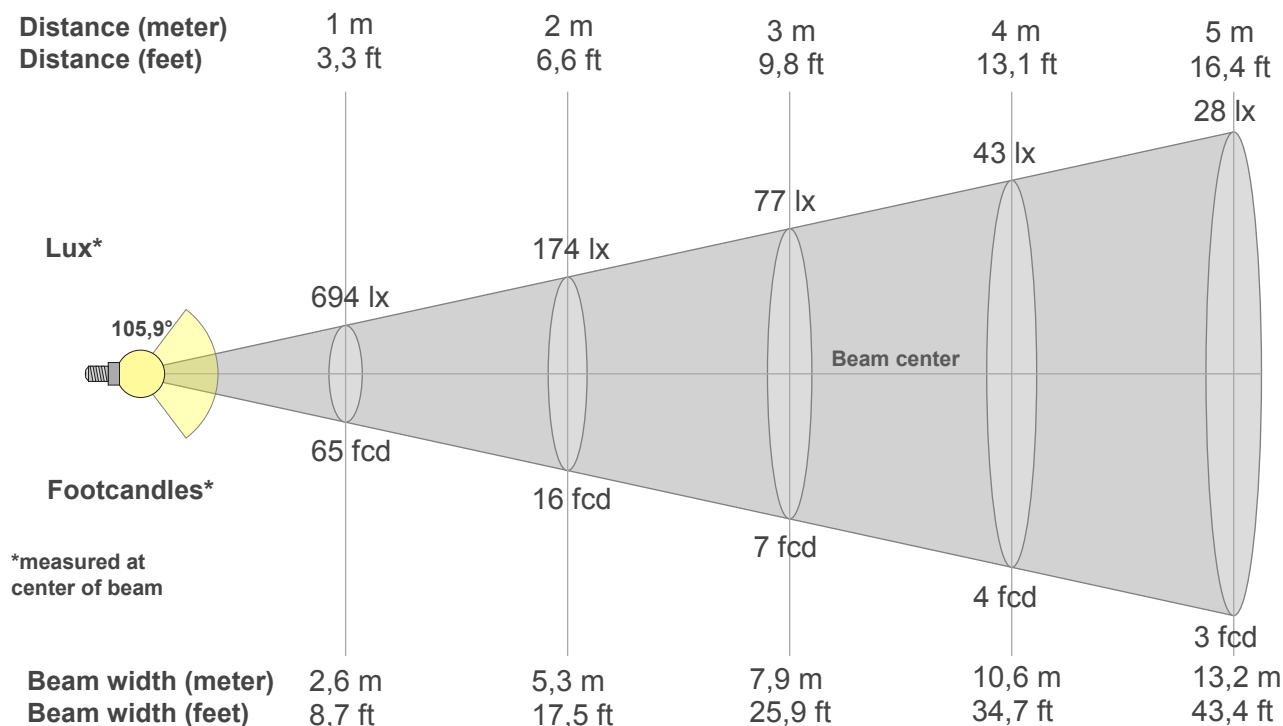
Fidelity index Rf

Rg 95,6

Gamut 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	93	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	79	5%	-17%
15	83	-4%	-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
694lx	174lx	77lx	43lx	28lx	19lx	14lx	11lx	9lx	7lx	6lx	5lx	4lx	4lx	3lx	3lx	2lx	2lx	2lx	2lx
64,5fcd	16,1fcd	7,2fcd	4fcd	2,6fcd	1,8fcd	1,3fcd	1fcd	0,8fcd	0,6fcd	0,5fcd	0,4fcd	0,4fcd	0,3fcd	0,3fcd	0,3fcd	0,2fcd	0,2fcd	0,2fcd	0,2fcd

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°
694	693	690	688	686	686	693	711	653	81	74	45	31	32	43	66	98	23	1	0
100%	100%	99%	99%	99%	99%	100%	102%	94%	12%	11%	6%	5%	5%	6%	10%	14%	3%	0%	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°
694	692	688	679	669	654	637	615	592	566	537	502	463	438	494	313	99	24	3	0
100%	100%	99%	98%	96%	94%	92%	89%	85%	82%	77%	72%	67%	63%	71%	45%	14%	4%	0%	0%

Intensities in 180° c-plane

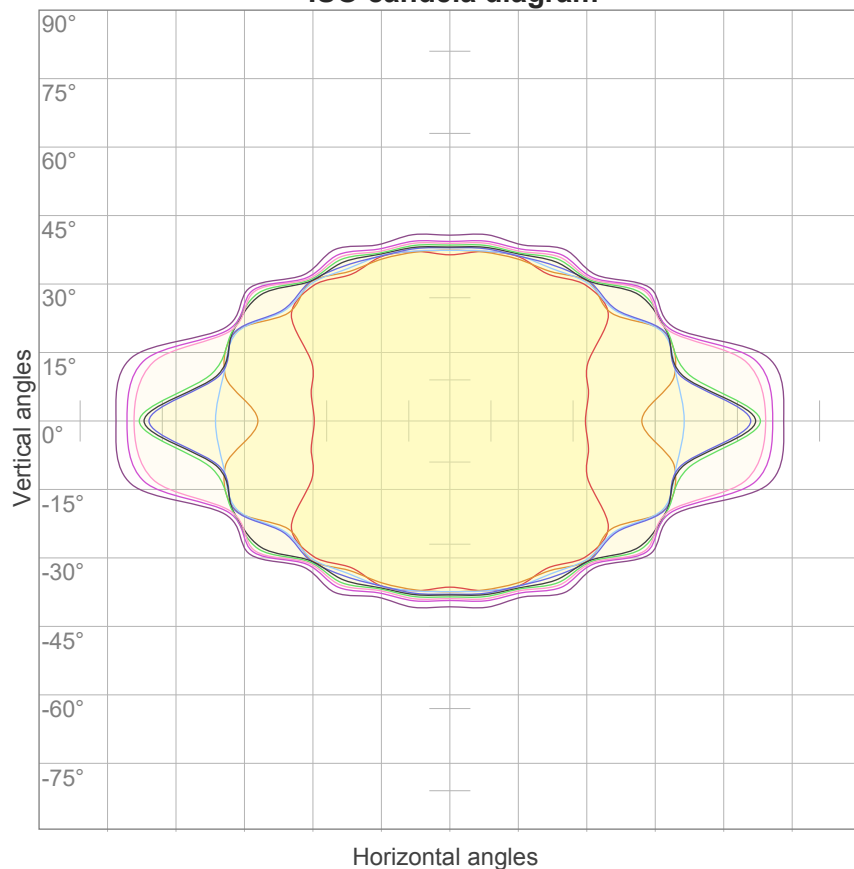
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
694	693	690	688	686	686	693	711	653	81	74	45	31	32	43	66	98	23	1	0
100%	100%	99%	99%	99%	99%	100%	102%	94%	12%	11%	6%	5%	5%	6%	10%	14%	3%	0%	0%

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°
694	692	688	679	669	654	637	615	592	566	537	502	463	438	494	313	99	24	3	0
100%	100%	99%	98%	96%	94%	92%	89%	85%	82%	77%	72%	67%	63%	71%	45%	14%	4%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
105,9°	150,9°	160,8°	88,3%	68,4%

ISO candela diagram



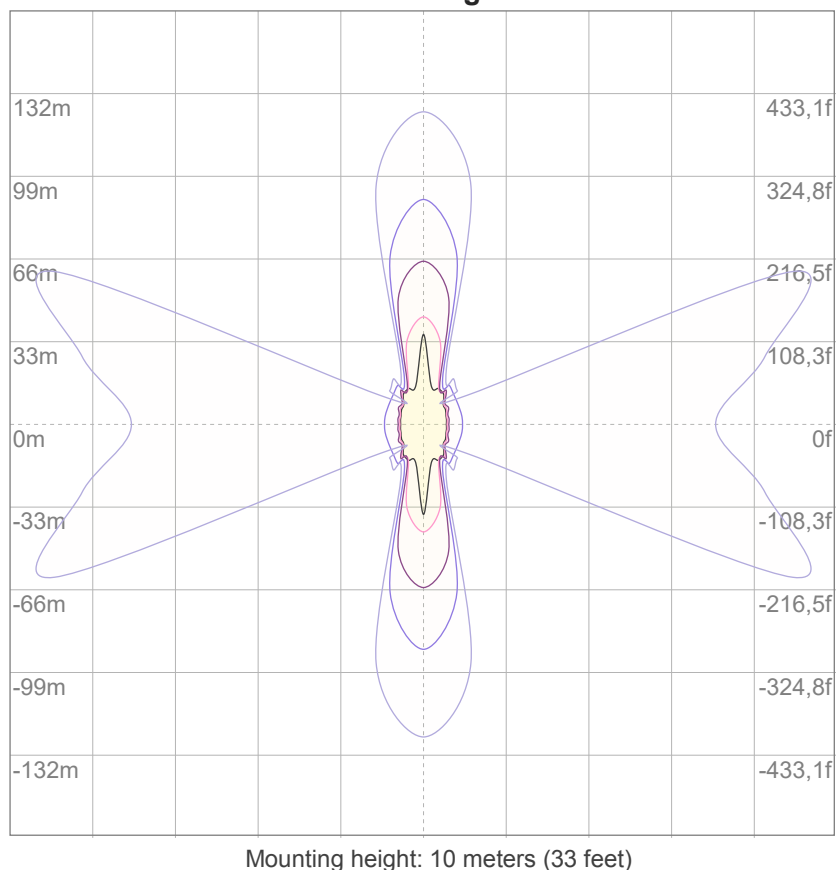
10%	69 cd
20%	139 cd
30%	208 cd
40%	278 cd
50%	347 cd
60%	417 cd
70%	486 cd
80%	555 cd
90%	625 cd

Conditions:

Number of c-planes: 16

Candela at center: 694 cd

ISO lux diagram



3%	0,208 lx
5%	0,347 lx
10%	0,694 lx
30%	2,08 lx
50%	3,47 lx

Conditions:

Number of c-planes: 16

Lux at center: 6,94 lx

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

Glare Evaluation According to UGR

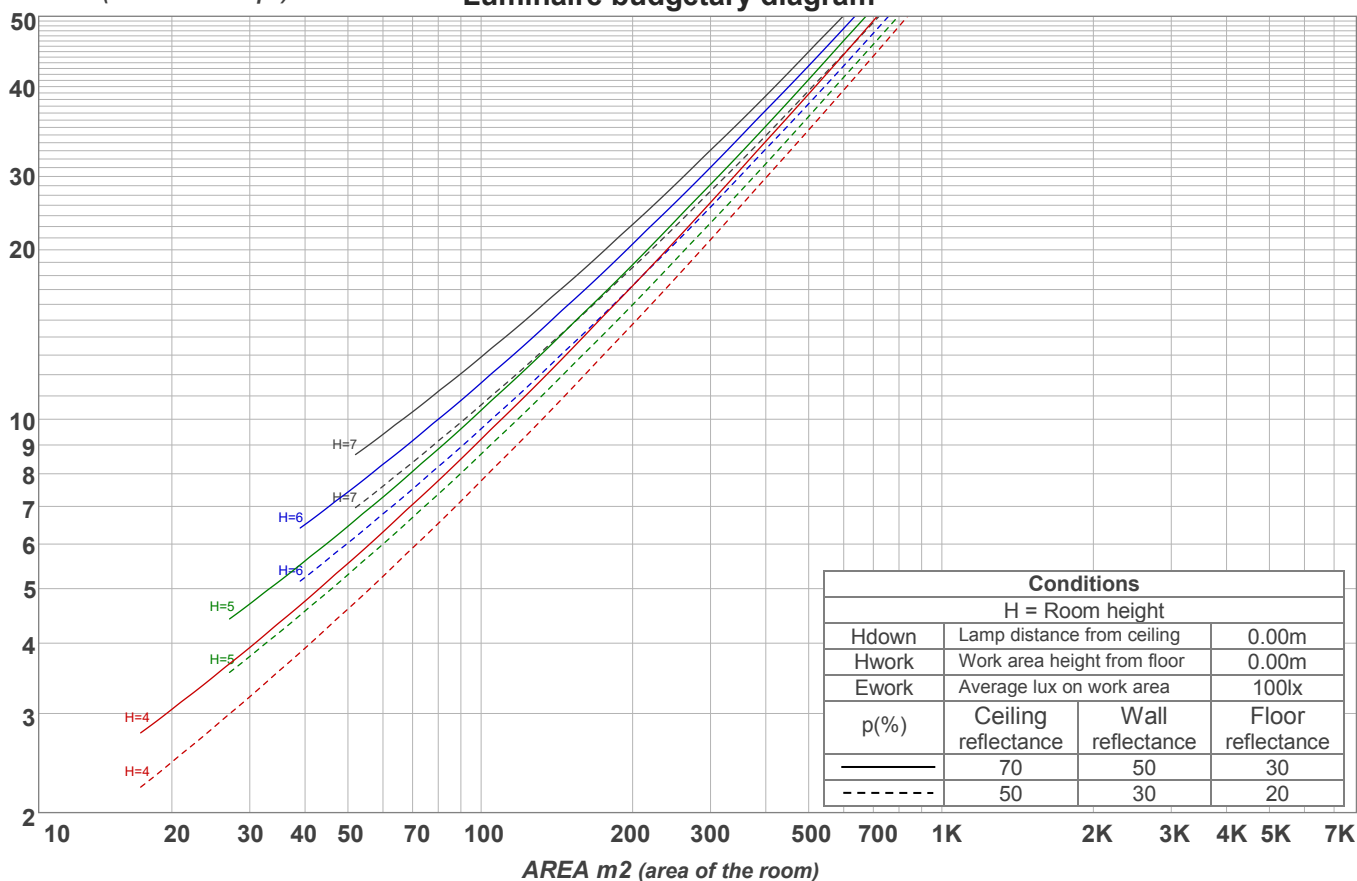
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	20,7	21,7	20,9	22,0	22,2	27,3	28,4	27,5	28,7	28,9
	3H	20,6	21,7	21,0	22,0	22,2	29,4	30,6	29,8	30,8	31,0
	4H	21,0	22,1	21,4	22,4	22,6	30,7	31,7	31,1	32,0	32,2
	6H	22,4	23,3	22,7	23,6	24,0	31,1	32,0	31,4	32,3	32,7
	8H	23,2	24,1	23,5	24,4	24,8	31,1	32,0	31,5	32,3	32,8
	12H	23,5	24,3	23,8	24,7	25,1	31,1	32,0	31,5	32,3	32,8
4H	2H	20,8	21,8	21,2	22,1	22,3	27,0	28,1	27,4	28,3	28,6
	3H	20,9	21,8	21,3	22,1	22,6	29,3	30,1	29,6	30,5	30,9
	4H	21,4	22,2	21,8	22,6	23,2	30,4	31,2	30,9	31,7	32,2
	6H	23,1	23,9	23,6	24,3	24,6	30,8	31,6	31,3	32,0	32,3
	8H	24,2	24,9	24,7	25,3	25,7	30,9	31,6	31,4	32,0	32,3
	12H	24,6	25,2	25,1	25,6	26,1	30,9	31,5	31,4	31,9	32,4
8H	4H	21,4	22,1	21,9	22,5	22,9	30,3	31,0	30,8	31,4	31,8
	6H	23,5	24,1	24,0	24,5	25,1	30,8	31,3	31,3	31,8	32,3
	8H	25,0	25,4	25,5	25,9	26,6	30,8	31,3	31,4	31,8	32,5
	12H	25,6	26,0	26,2	26,5	27,1	30,9	31,2	31,4	31,7	32,4
12H	4H	21,4	22,0	21,9	22,4	22,9	30,3	30,9	30,8	31,3	31,8
	6H	23,6	24,1	24,1	24,6	25,2	30,8	31,2	31,3	31,7	32,4
	8H	25,1	25,5	25,7	26,0	26,6	30,8	31,2	31,4	31,7	32,3
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,7 / -0,6					0,6 / -1,1				
S = 1.5H		1,4 / -0,7					2,1 / -3,4				
S = 2.0H		2,5 / -0,8					3,0 / -6,3				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 1739 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	101	101	101	99
1	110	106	102	98	107	103	100	97	99	96	93	95	93	91	91	89	88	86
2	101	94	88	83	99	92	87	82	88	84	80	85	81	78	82	79	76	74
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	66	64
4	86	75	68	61	84	74	67	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	54	65	58	53	63	57	52	61	56	52	50
6	74	62	54	48	72	61	53	47	59	52	47	57	51	46	56	50	46	44
7	69	56	48	42	67	55	48	42	54	47	42	52	46	42	51	46	41	39
8	64	52	44	38	63	51	43	38	50	43	38	48	42	37	47	41	37	35
9	60	47	40	34	59	47	39	34	46	39	34	45	38	34	43	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	40	35	31	29

LAMPS (number of lamps)

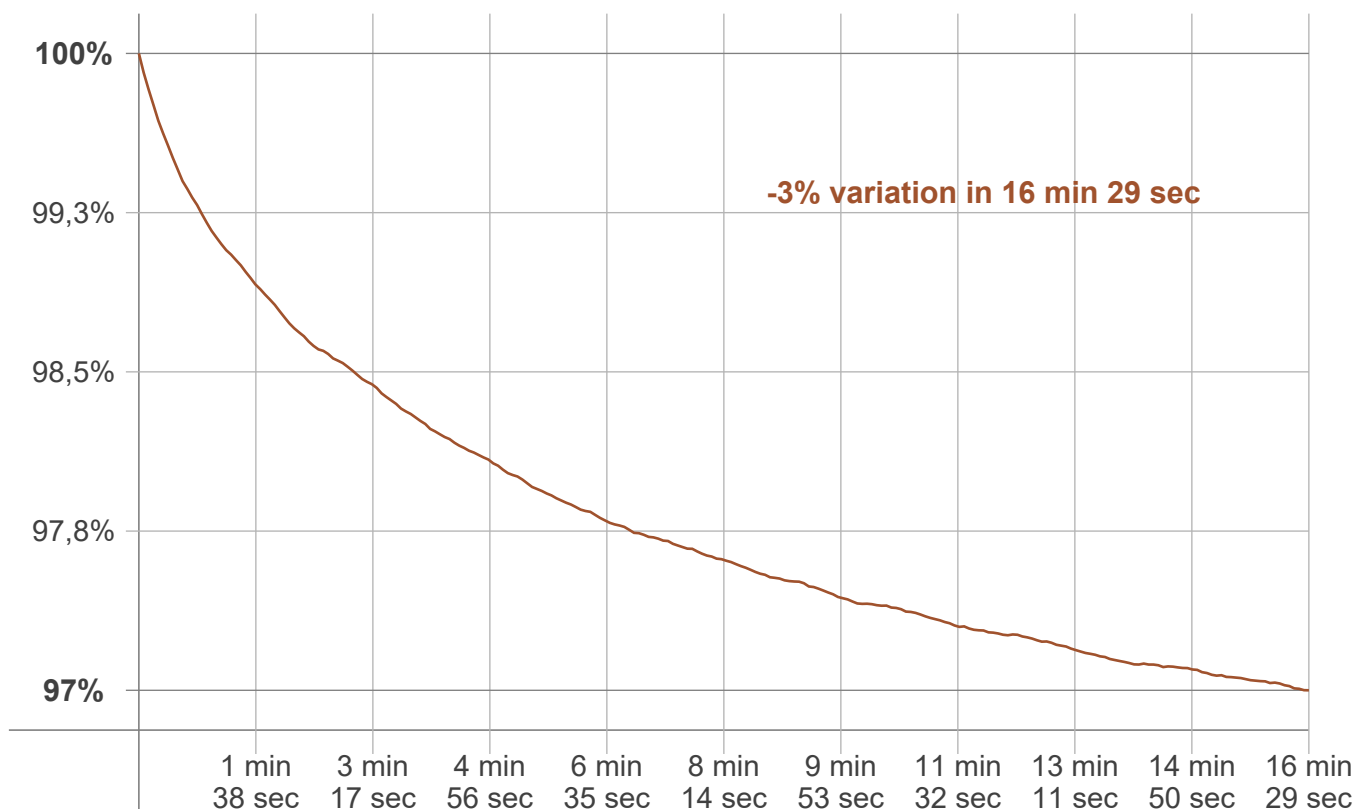
Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
65,5 lm	192 lm	308 lm	415 lm	361 lm	193 lm	81,2 lm	72,7 lm	37,3 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
1,60 lm	4,25 lm	0,428 lm	0,387 lm	0,334 lm	0,271 lm	0,200 lm	0,122 lm	5,19 lm

Warmup curve



Warmup result

Warmup time:	Lamp stabilized in 16 min 29 sec
Warmup variation	-3,0%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
2758 K	+6 K	2764 K

Output change

Output start	Output change	Output end
1787 lm	-48 lm	1739 lm