

Light efficiency:

71 Lumen/Watt

Light quality:

CRI: 33,9

Color temperature:

11176 K

Output: 610 lm

Peak: 1247 cd

Power: 8,6 W

PF: 1,0



Product name:

Defiant-0508-RGB-L3T

Item number:

FLNP/L22A0508/RGB/L3T

Date and time:

08.07.2020 08:55:49

Description:

Rank: R2G2B4/RC2GA2BA5/A

Toleranzen:

Lumen +/-4%

Candela +/-2,5%

Colour Temp +/-35 K

CRI +/-0,7

Angular Resolution 1 Grad Step

Last Calibration 20.05.2020

Pruefer:

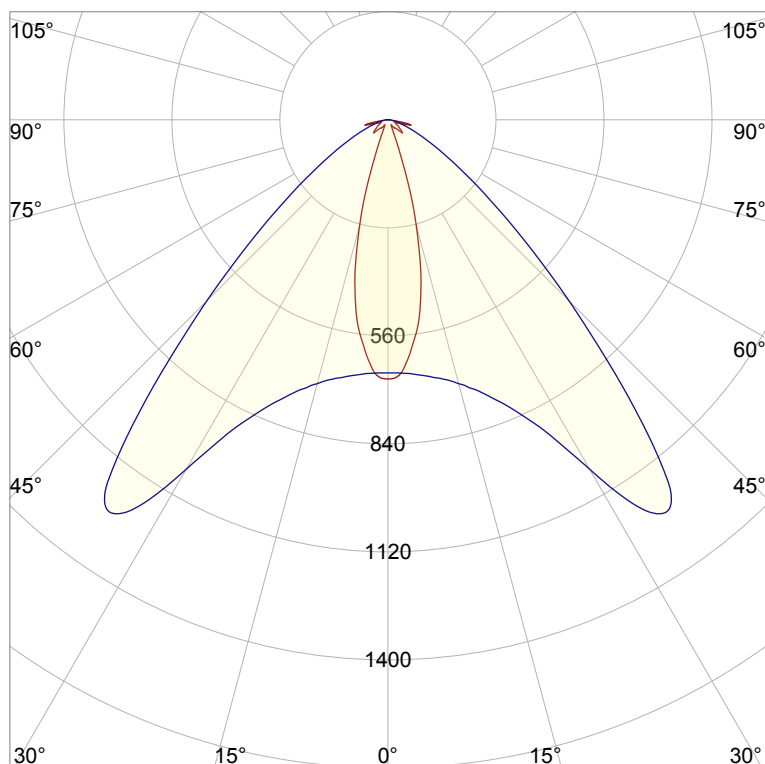
Peter Ulrich

Pruefort:

Lichtlabor

Gaustrasse 13

55411 Bingen am Rhein

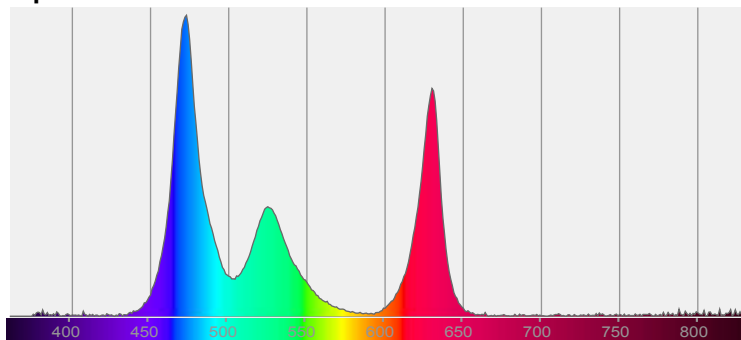


CIE 1931

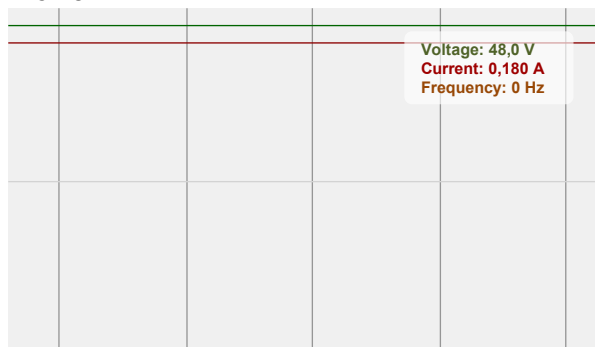
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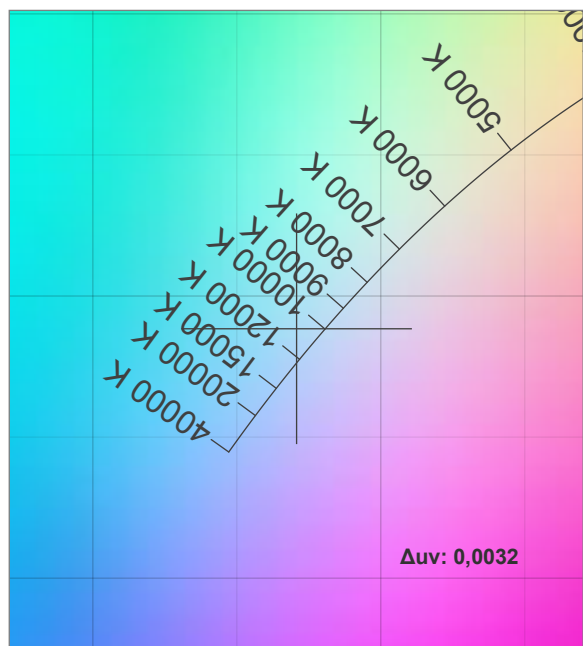
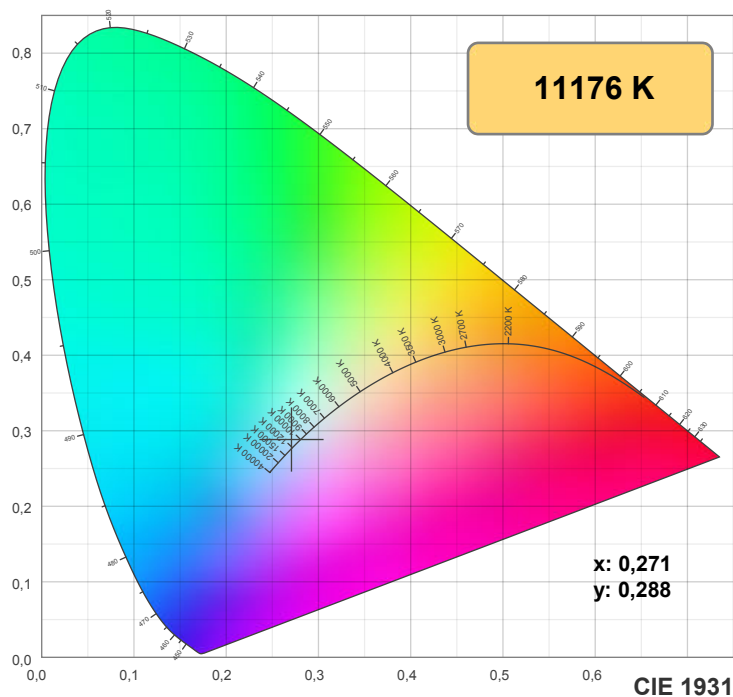
y: 0,288

Spectra



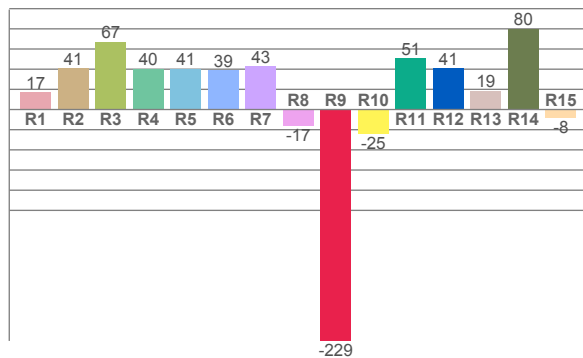
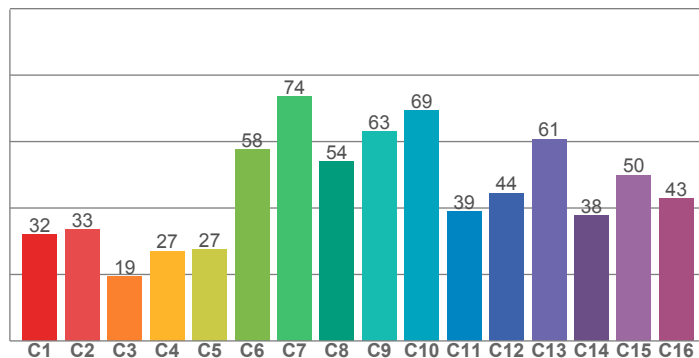
Power





TM30: 44,7

CRI: 33,9 (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
16,9	41,2	67,2	40,3	40,5	38,7	43,2	-16,5	-229,4	-24,7	50,8	41,1	18,8	80,0	-8,0

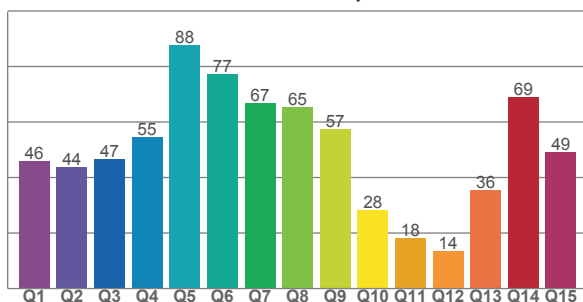
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
32,0	33,4	19,3	27,1	27,5	57,5	73,6	53,9	63,0	69,3	39,0	44,5	60,8	37,8	50,0	43,0

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
45,9	43,8	46,8	54,6	87,7	77,3	66,9	65,4	57,4	28,4	18,1	13,7	35,6	68,9	49,3

CQS: 46,1



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
11176 K	33,9	-229,4	44,7	88,7	46,1	0,271	0,288	0,183	0,292	0,0032

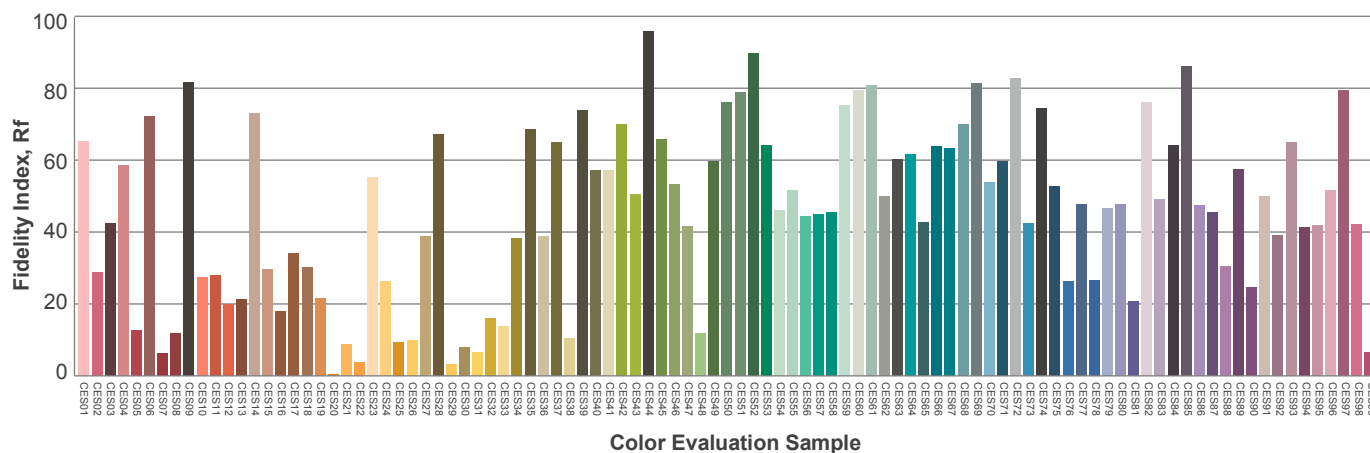
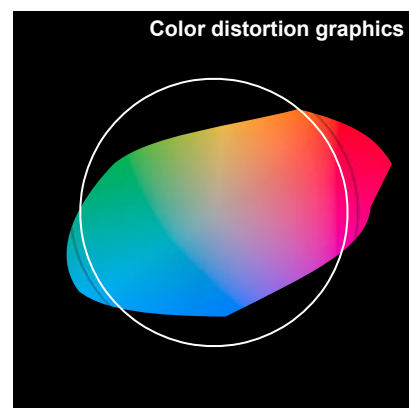
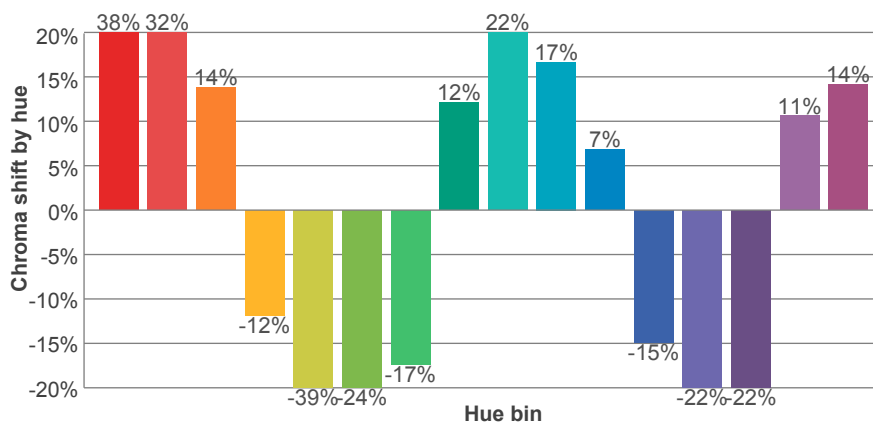
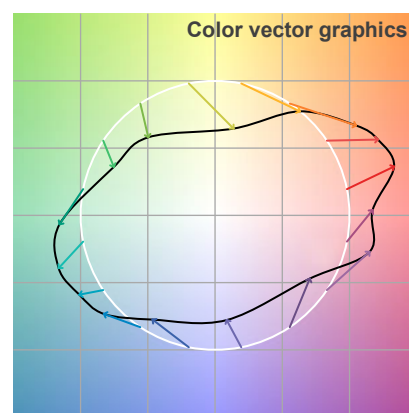
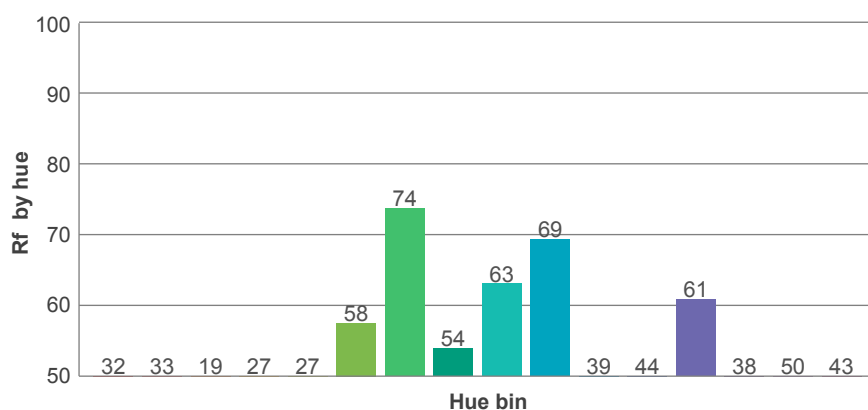
Rf 44,7

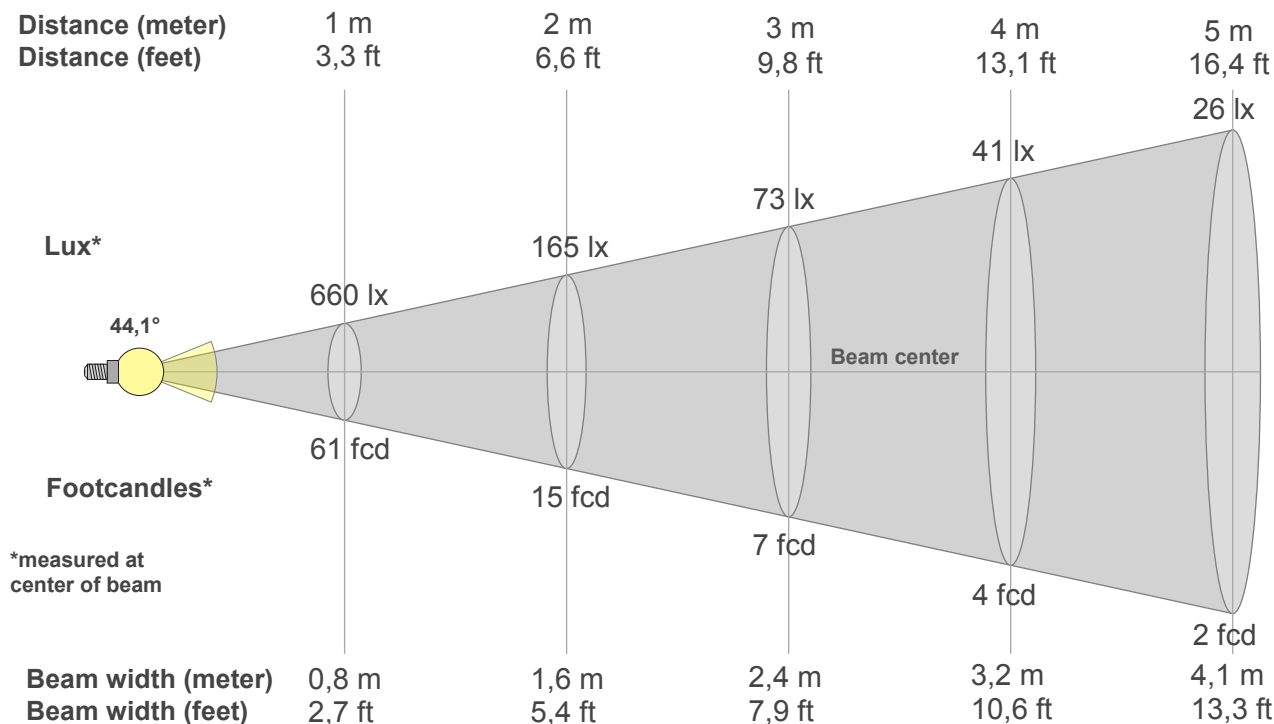
Fidelity index Rf

Rg 88,7

Gamut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	32	38%	10%
2	33	32%	-20%
3	19	14%	-50%
4	27	-12%	-47%
5	27	-39%	-26%
6	58	-24%	9%
7	74	-17%	12%
8	54	12%	29%
9	63	22%	16%
10	69	17%	-7%
11	39	7%	-28%
12	44	-15%	-30%
13	61	-22%	-7%
14	38	-22%	32%
15	50	11%	41%
16	43	14%	27%





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
660lx	165lx	73lx	41lx	26lx	18lx	13lx	10lx	8lx	7lx	5lx	5lx	4lx	3lx	3lx	3lx	2lx	2lx	2lx	2lx
61,3fcd	15,3fcd	6,8fcd	3,8fcd	2,5fcd	1,7fcd	1,3fcd	1fcd	0,8fcd	0,6fcd	0,5fcd	0,4fcd	0,4fcd	0,3fcd	0,3fcd	0,2fcd	0,2fcd	0,2fcd	0,2fcd	0,2fcd

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°
660	666	638	593	546	484	411	323	243	156	87	51	31	23	18	15	15	17	23	27
100%	101%	97%	90%	83%	73%	62%	49%	37%	24%	13%	8%	5%	4%	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°
660	656	659	663	670	678	687	700	716	736	762	792	831	881	951	1046	1154	1228	1241	1168
100%	99%	100%	100%	101%	103%	104%	106%	108%	111%	115%	120%	126%	133%	144%	158%	175%	186%	188%	177%

Intensities in 180° c-plane

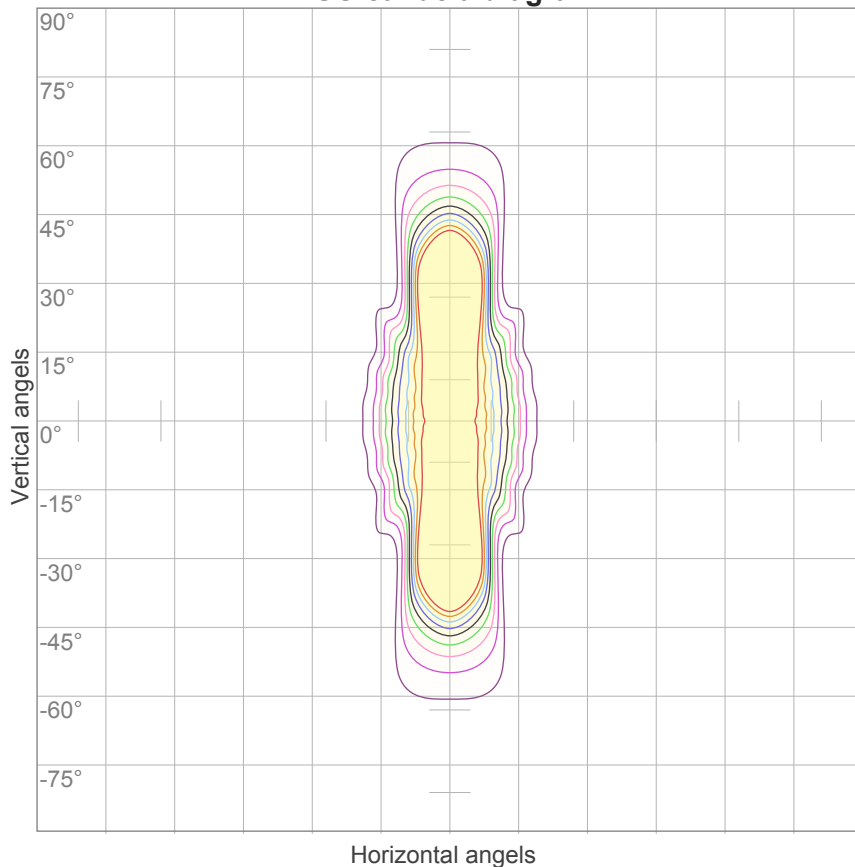
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
660	666	638	593	546	484	411	323	243	156	87	51	31	23	18	15	15	17	23	27
100%	101%	97%	90%	83%	73%	62%	49%	37%	24%	13%	8%	5%	4%	3%	2%	2%	3%	3%	4%

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°
660	656	659	663	670	678	687	700	716	736	762	792	831	881	951	1046	1154	1228	1241	1168
100%	99%	100%	100%	101%	103%	104%	106%	108%	111%	115%	120%	126%	133%	144%	158%	175%	186%	188%	177%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
44,1°	61°	157,7°	89,1%	74,1%

ISO candela diagram



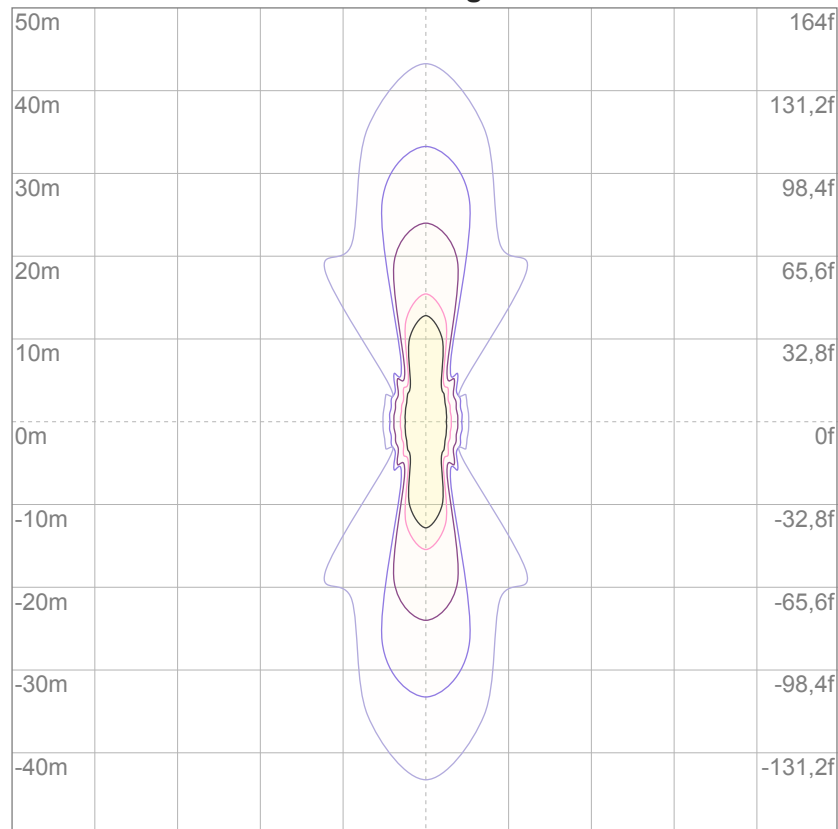
10%	66 cd
20%	132 cd
30%	198 cd
40%	264 cd
50%	330 cd
60%	396 cd
70%	462 cd
80%	528 cd
90%	594 cd

Conditions:

Number of c-planes: 16

Candela at center: 660 cd

ISO lux diagram



3%	0,198 lx
5%	0,330 lx
10%	0,660 lx
30%	1,98 lx
50%	3,30 lx

Conditions:

Number of c-planes: 16

Lux at center: 6,60 lx

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

Glare Evaluation According to UGR

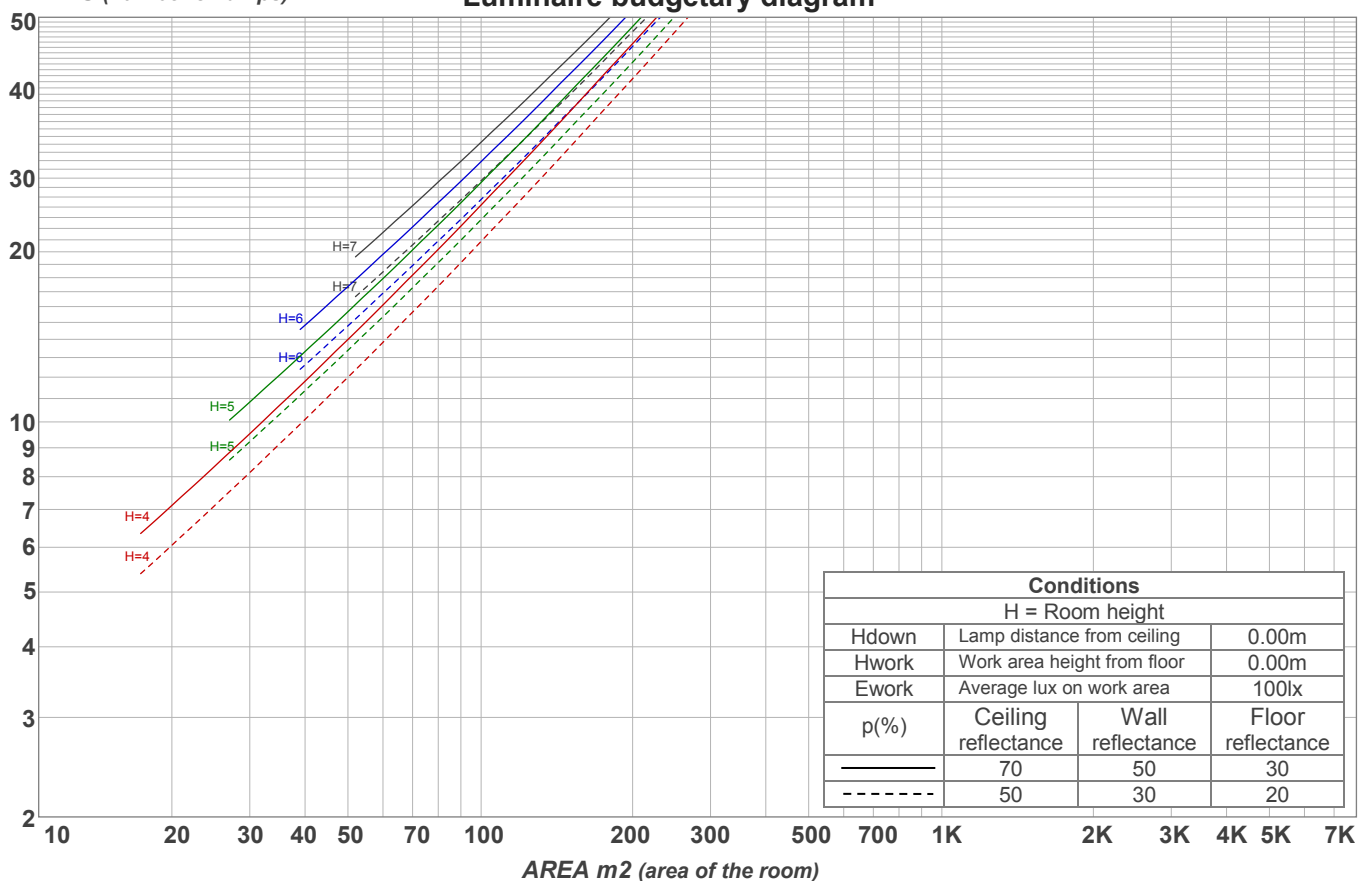
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	12,0	13,0	12,2	13,2	13,4	24,3	25,2	24,5	25,5	25,7
	3H	13,4	14,4	13,8	14,7	14,8	24,5	25,5	24,9	25,7	25,9
	4H	15,8	16,7	16,2	17,0	17,2	24,6	25,5	25,0	25,8	26,0
	6H	19,2	20,0	19,5	20,3	20,7	24,7	25,5	25,0	25,8	26,1
	8H	19,5	20,3	19,8	20,6	21,0	24,6	25,4	25,0	25,8	26,2
	12H	19,5	20,3	19,8	20,6	21,0	24,6	25,4	25,0	25,7	26,2
4H	2H	12,5	13,5	12,9	13,7	14,0	24,0	24,9	24,4	25,2	25,4
	3H	14,2	15,0	14,6	15,4	15,8	24,3	25,1	24,7	25,5	25,9
	4H	16,8	17,5	17,2	17,9	18,5	24,4	25,1	24,8	25,5	26,0
	6H	20,6	21,3	21,1	21,7	22,0	24,4	25,1	24,9	25,5	25,9
	8H	20,9	21,6	21,5	22,0	22,3	24,4	25,1	24,9	25,4	25,8
	12H	21,0	21,5	21,5	21,9	22,4	24,4	25,0	24,9	25,4	25,8
8H	4H	17,1	17,8	17,7	18,2	18,5	24,3	24,9	24,8	25,3	25,7
	6H	21,3	21,8	21,8	22,2	22,8	24,4	24,9	24,9	25,3	25,9
	8H	21,8	22,3	22,3	22,8	23,4	24,5	24,9	25,0	25,4	26,0
	12H	21,9	22,2	22,5	22,7	23,4	24,5	24,8	25,1	25,3	25,9
12H	4H	17,2	17,7	17,7	18,1	18,6	24,3	24,8	24,8	25,2	25,7
	6H	21,4	21,9	21,9	22,4	23,0	24,5	24,9	25,0	25,4	26,0
	8H	22,0	22,4	22,6	22,9	23,5	24,5	24,9	25,1	25,4	26,0
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,1 / -0,1					2,9 / -3,6				
S = 1.5H		0,2 / -0,2					5,2 / -5,0				
S = 2.0H		0,2 / -0,4					7,0 / -5,8				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 610 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	102	102	102	100
1	111	107	103	100	108	105	101	99	100	98	95	97	95	93	93	91	90	88
2	103	97	91	86	101	95	90	85	91	87	83	88	85	82	85	82	80	78
3	96	88	81	76	94	86	80	75	83	78	74	81	76	73	78	75	72	70
4	90	80	73	68	88	79	72	67	77	71	66	75	70	66	73	68	65	63
5	84	74	67	61	83	73	66	61	71	65	60	69	64	60	67	63	59	57
6	79	68	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53
7	75	64	56	51	73	63	56	51	61	55	51	60	55	50	59	54	50	48
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45
9	67	56	49	44	66	55	48	44	54	48	44	53	48	44	52	47	43	42
10	64	52	46	41	63	52	45	41	51	45	41	50	45	41	49	44	41	39

LAMPS (number of lamps)

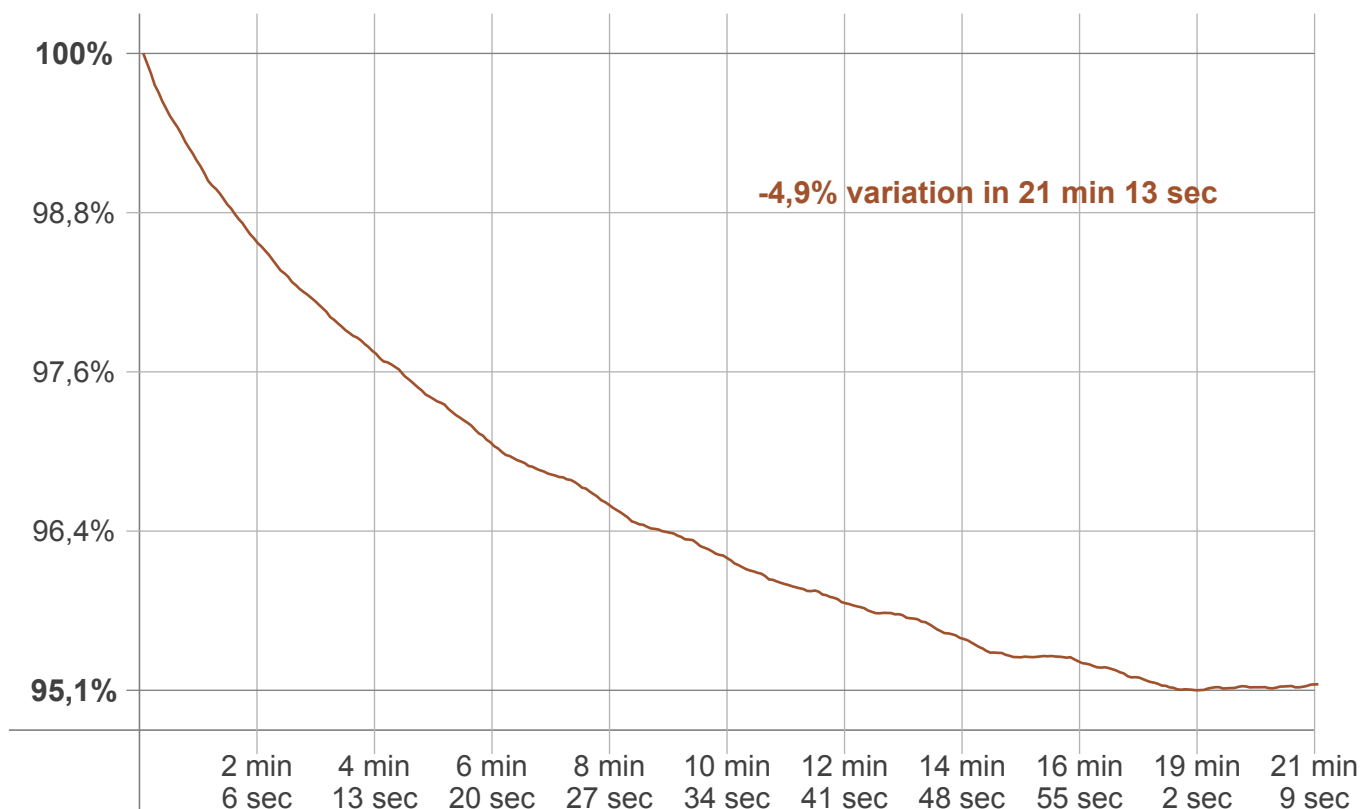
Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
60,2 lm	129 lm	107 lm	109 lm	84,3 lm	53,7 lm	29,3 lm	23,6 lm	13,7 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0,010 lm	0,000 lm	0,000 lm	0,000 lm	0,000 lm	0,000 lm	0,000 lm	0,000 lm	0,000 lm

Warmup curve



Warmup result

Warmup time:	21 min 13 sec
Warmup variation	-4,9%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
10467 K	+709 K	11176 K

Output change

Output start	Output change	Output end
640 lm	-30 lm	610 lm