

Light efficiency:

63 Lumen/Watt

Light quality:

CRI: 35,7

Color temperature:

11847 K

Output: 544 lm

Peak: 505 cd

Power: 8,6 W

PF: 1,0



Product name:

Defiant-0508-RGB-L3F

Item number:

FLNP/L22A0508/RGB/L3F

Date and time:

08.07.2020 13:03:06

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:

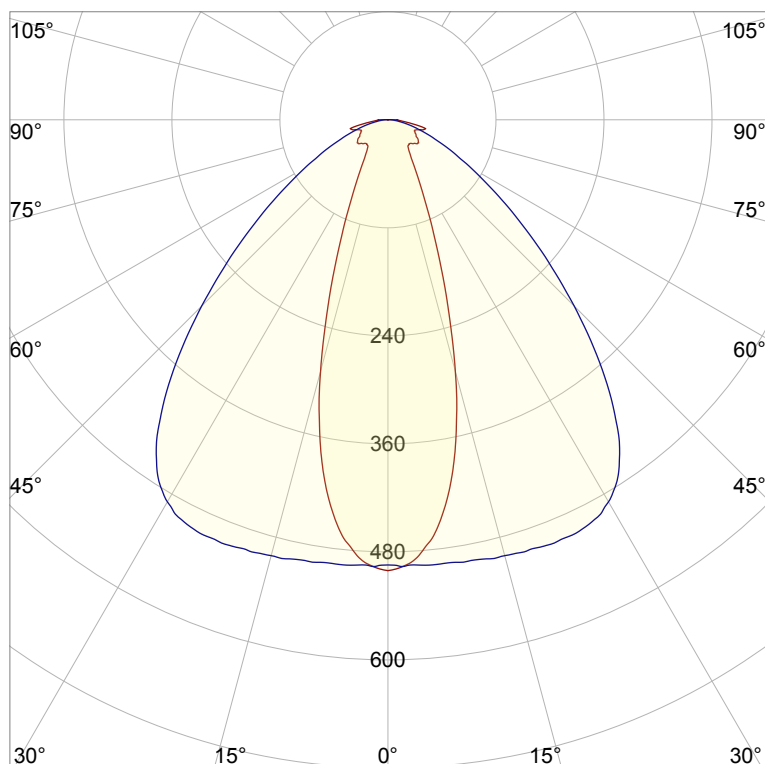
Peter Ulrich

Pruefort:

Lichtlabor

Gaustrasse 13

55411 Bingen am Rhein

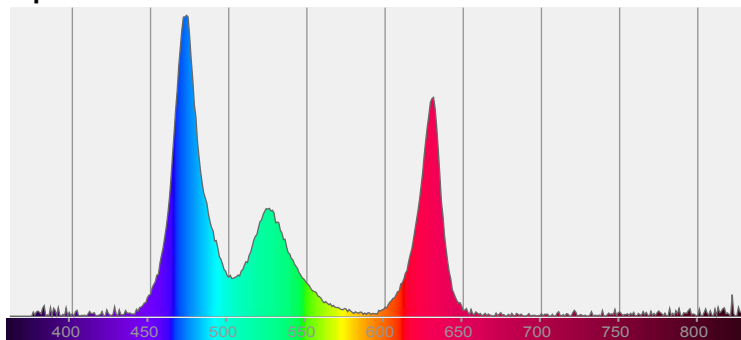


CIE 1931

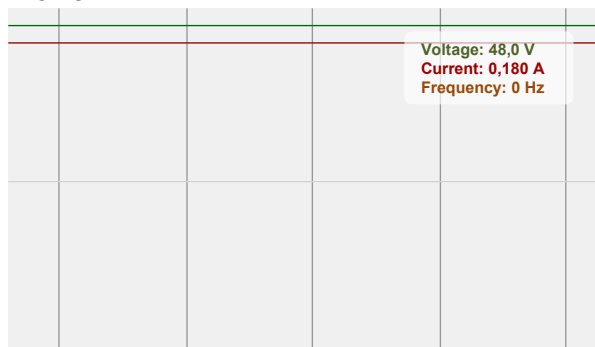
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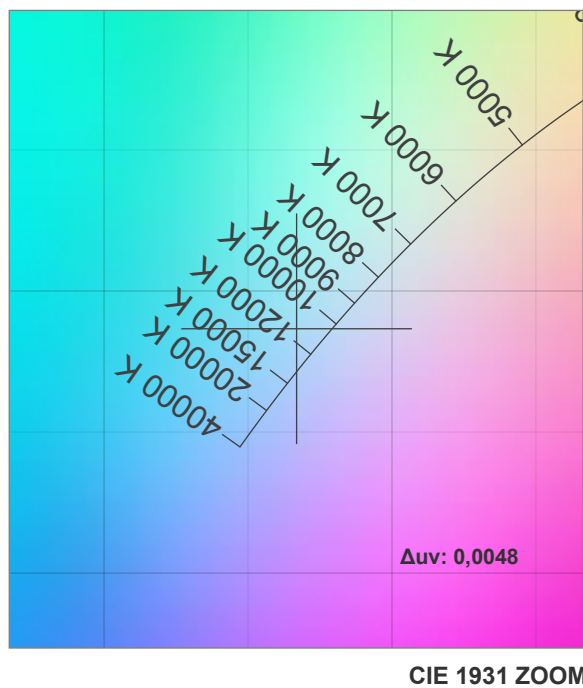
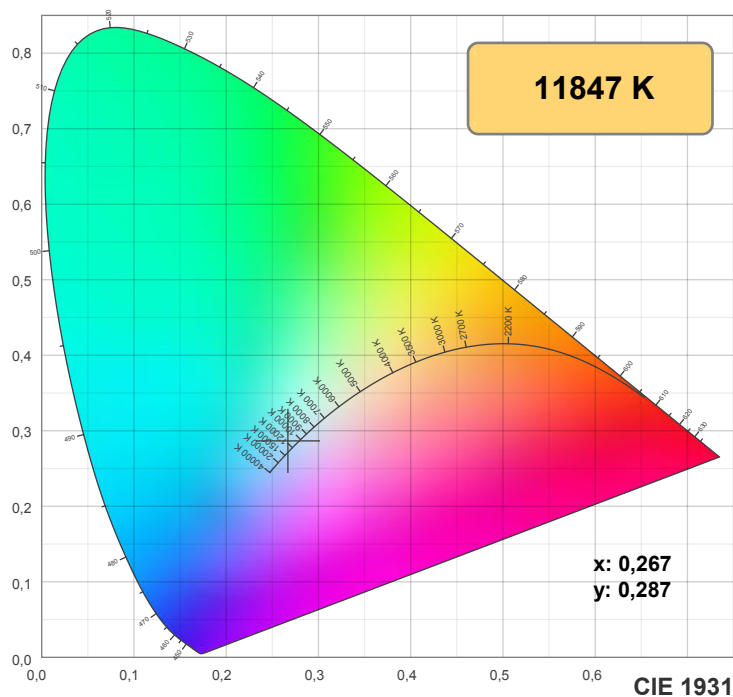
y: 0,287

Spectra



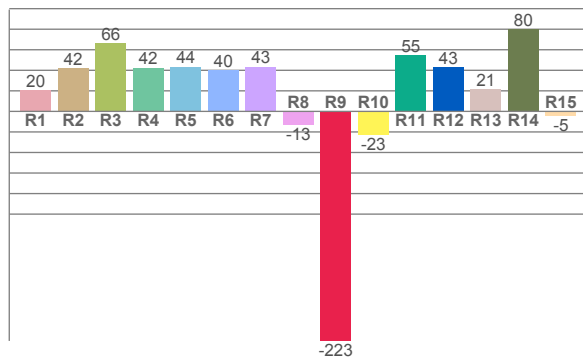
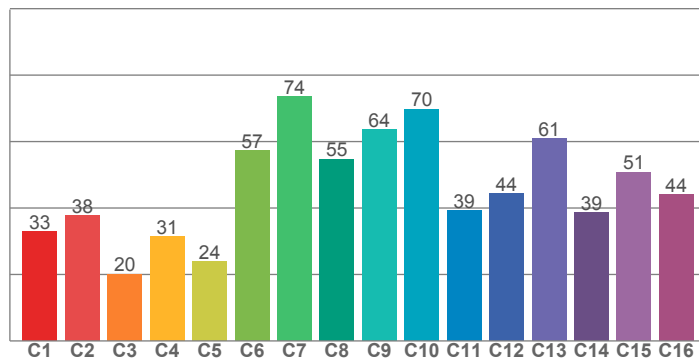
Power





TM30: 45,1

CRI: 35,7 (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
20,3	42,2	66,3	42,4	43,6	40,3	43,5	-12,9	-223,4	-23,0	54,9	43,2	21,5	79,9	-4,8

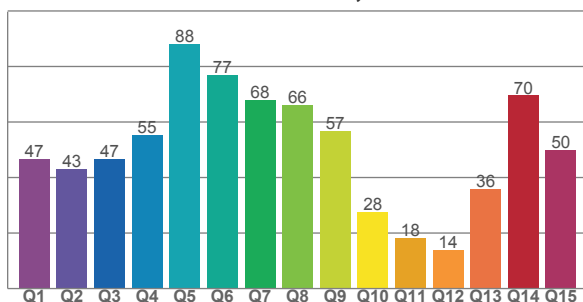
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
32,9	37,6	20,1	31,4	23,9	57,3	73,5	54,7	63,7	69,8	39,2	44,4	60,9	38,7	50,8	44,0

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
46,6	43,0	46,7	55,2	88,2	76,9	67,8	66,2	56,8	27,7	18,3	13,9	35,8	69,6	49,8

CQS: 46,2



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	Δuv
11847 K	35,7	-223,4	45,1	88,1	46,2	0,267	0,287	0,181	0,291	0,0048

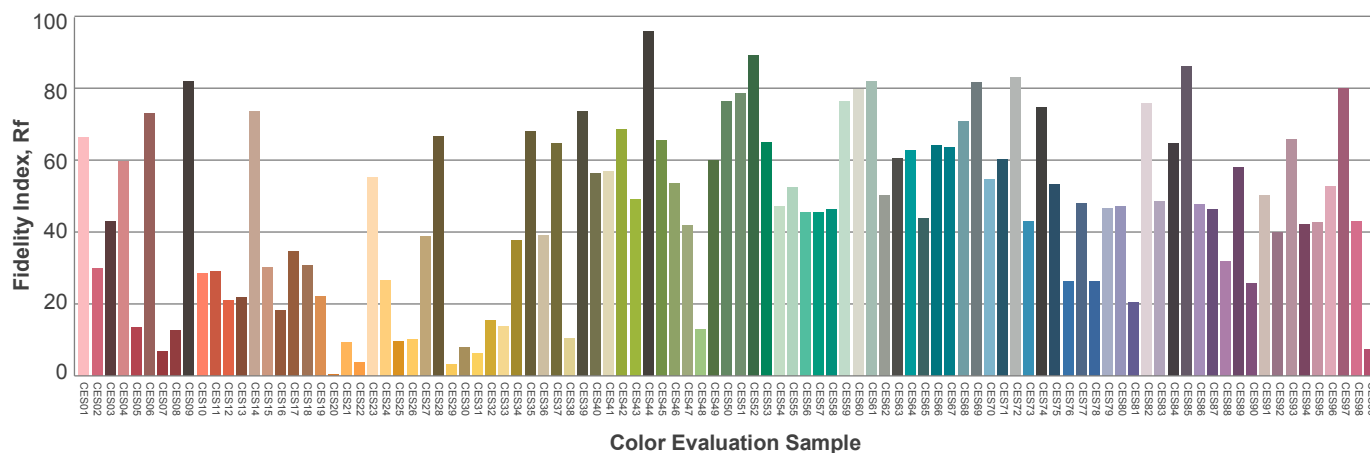
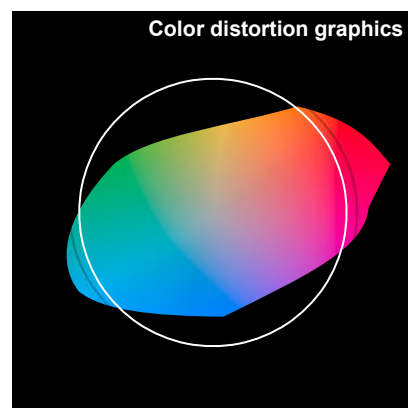
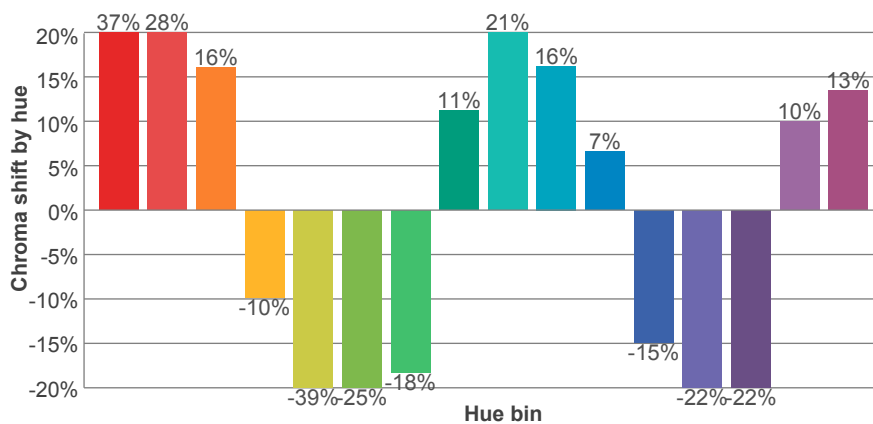
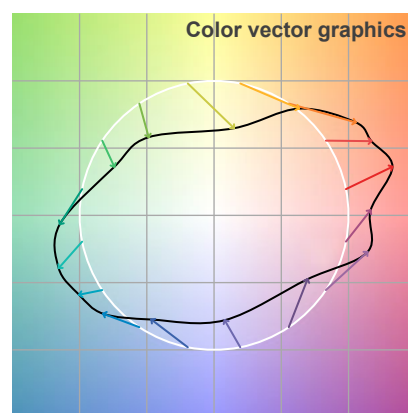
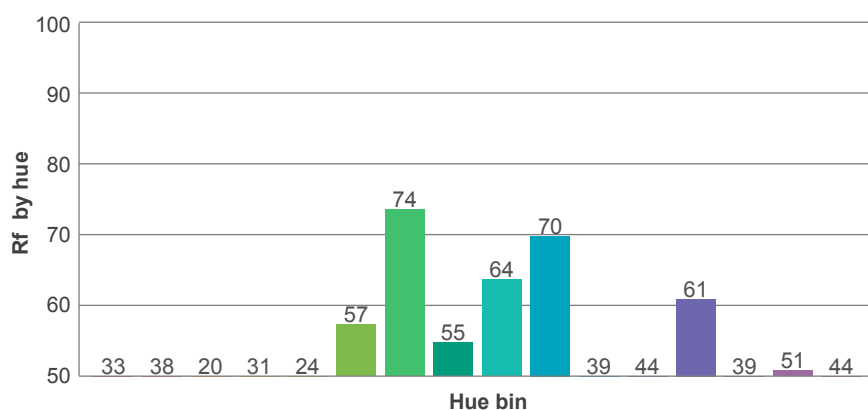
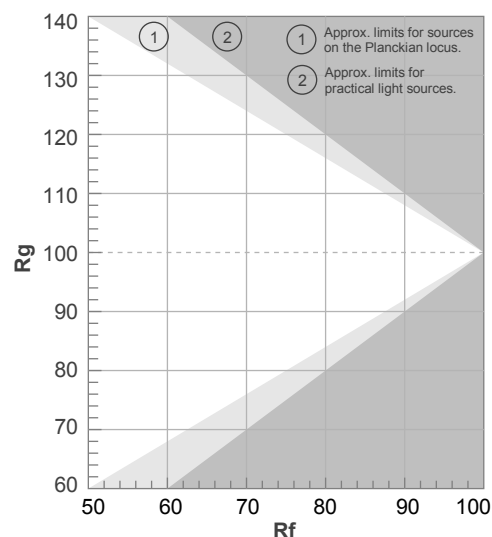
Rf 45,1

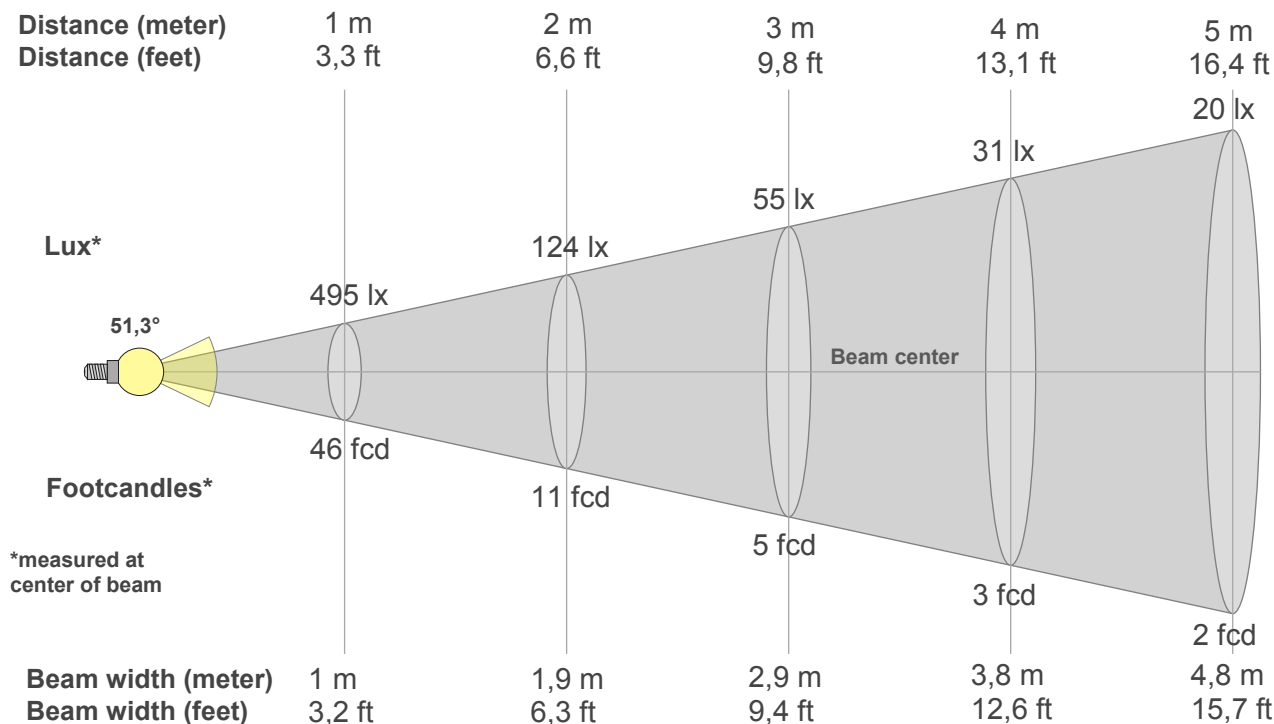
Fidelity index Rf

Rg 88,1

Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	33	37%	10%
2	38	28%	-19%
3	20	16%	-49%
4	31	-10%	-46%
5	24	-39%	-27%
6	57	-25%	8%
7	74	-18%	11%
8	55	11%	29%
9	64	21%	16%
10	70	16%	-7%
11	39	7%	-28%
12	44	-15%	-31%
13	61	-22%	-7%
14	39	-22%	31%
15	51	10%	41%
16	44	13%	26%





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
495lx	124lx	55lx	31lx	20lx	14lx	10lx	8lx	6lx	5lx	4lx	3lx	3lx	3lx	2lx	2lx	2lx	2lx	1lx	1lx
46fcd	11,5fcd	5,1fcd	2,9fcd	1,8fcd	1,3fcd	0,9fcd	0,7fcd	0,6fcd	0,5fcd	0,4fcd	0,3fcd	0,3fcd	0,2fcd	0,2fcd	0,2fcd	0,2fcd	0,1fcd	0,1fcd	0,1fcd

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°
495	496	486	468	440	406	363	315	263	214	170	134	106	85	69	56	48	42	38	36
100%	100%	98%	94%	89%	82%	73%	64%	53%	43%	34%	27%	21%	17%	14%	11%	10%	8%	8%	7%

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°
495	496	496	497	497	498	499	501	502	503	504	505	505	502	498	490	478	460	436	407
100%	100%	100%	100%	100%	101%	101%	101%	101%	102%	102%	102%	102%	101%	101%	99%	97%	93%	88%	82%

Intensities in 180° c-plane

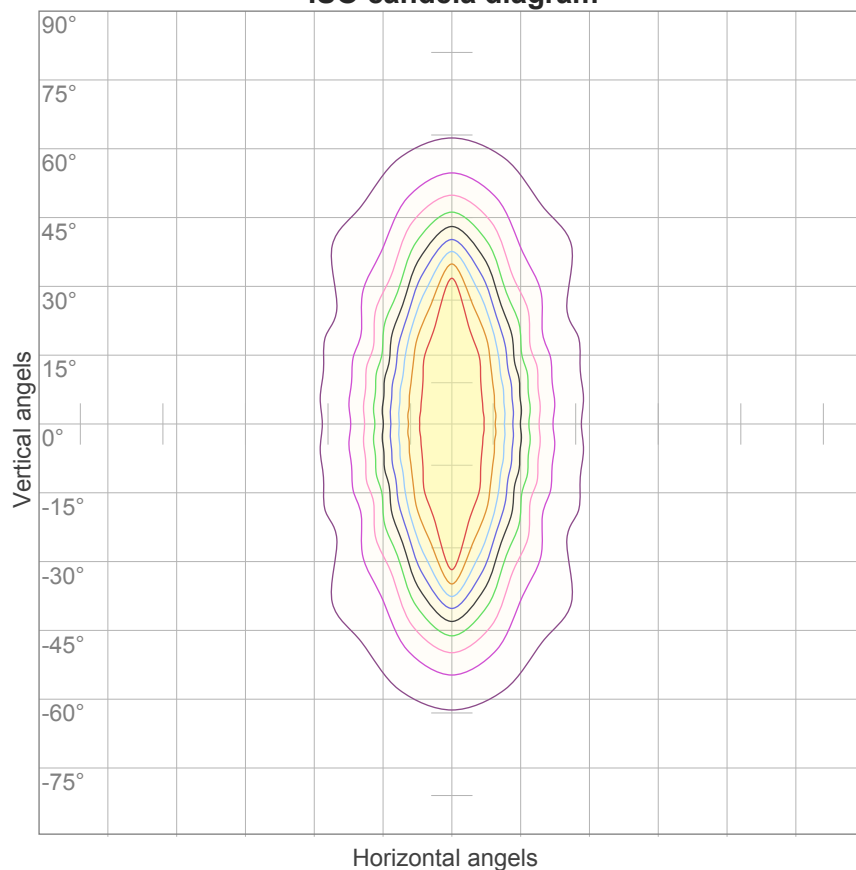
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
495	496	486	468	440	406	363	315	263	214	170	134	106	85	69	56	48	42	38	36
100%	100%	98%	94%	89%	82%	73%	64%	53%	43%	34%	27%	21%	17%	14%	11%	10%	8%	8%	7%

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°
495	496	496	497	497	498	499	501	502	503	504	505	505	502	498	490	478	460	436	407
100%	100%	100%	100%	100%	101%	101%	101%	101%	102%	102%	102%	102%	101%	101%	99%	97%	93%	88%	82%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
51,3°	90,3°	173,1°	85,1%	70,2%

ISO candela diagram



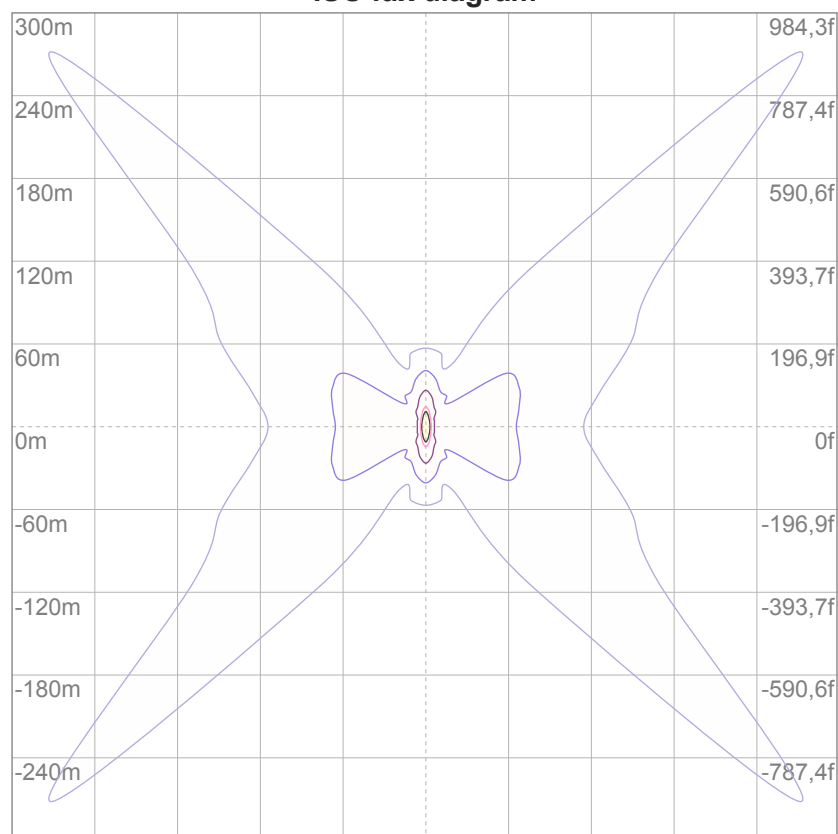
10%	49 cd
20%	99 cd
30%	148 cd
40%	198 cd
50%	247 cd
60%	297 cd
70%	346 cd
80%	396 cd
90%	445 cd

Conditions:

Number of c-planes: 16

Candela at center: 495 cd

ISO lux diagram



3%	0,148 lx
5%	0,247 lx
10%	0,495 lx
30%	1,48 lx
50%	2,47 lx

Conditions:

Number of c-planes: 16

Lux at center: 4,95 lx

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

Glare Evaluation According to UGR

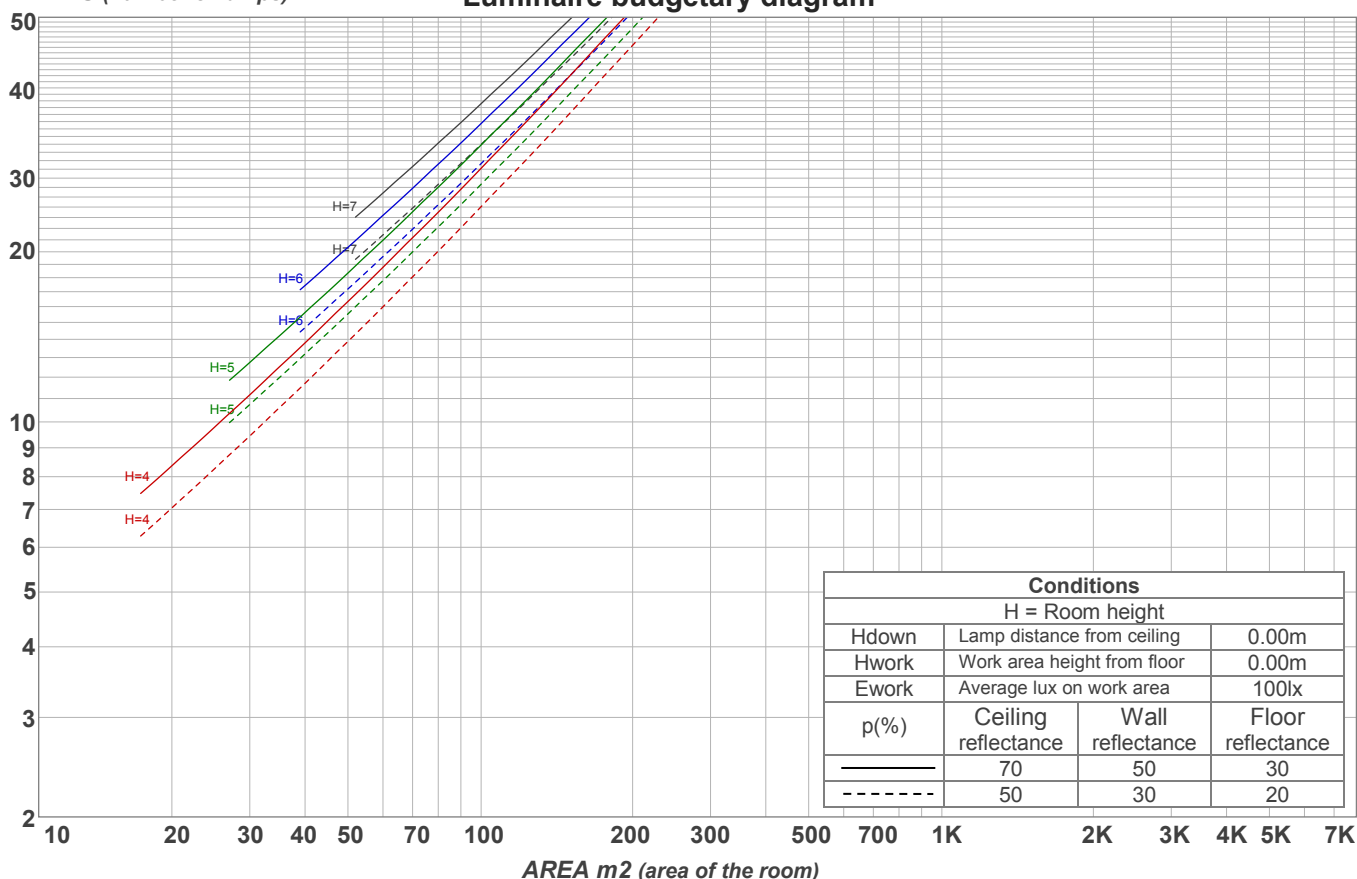
p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	13,7	14,7	13,9	15,0	15,2	21,6	22,6	21,8	22,8	23,0
	3H	15,9	17,0	16,3	17,2	17,4	22,3	23,4	22,7	23,6	23,8
	4H	17,7	18,7	18,1	18,9	19,2	22,6	23,7	23,0	23,9	24,2
	6H	19,3	20,2	19,6	20,5	20,8	22,9	23,8	23,3	24,1	24,5
	8H	19,6	20,5	20,0	20,8	21,2	23,0	23,9	23,3	24,2	24,6
	12H	19,8	20,7	20,2	21,0	21,4	23,0	23,9	23,4	24,2	24,7
4H	2H	14,5	15,5	14,9	15,8	16,0	21,3	22,4	21,8	22,6	22,9
	3H	17,0	17,8	17,3	18,2	18,6	22,3	23,2	22,7	23,5	24,0
	4H	18,8	19,6	19,3	20,0	20,6	22,7	23,4	23,1	23,9	24,4
	6H	20,6	21,4	21,1	21,7	22,1	23,0	23,8	23,5	24,1	24,5
	8H	21,0	21,7	21,5	22,1	22,5	23,1	23,8	23,6	24,2	24,6
	12H	21,3	21,8	21,8	22,3	22,7	23,2	23,8	23,7	24,2	24,7
8H	4H	19,2	19,9	19,7	20,3	20,7	22,7	23,4	23,2	23,8	24,2
	6H	21,3	21,8	21,8	22,3	22,8	23,2	23,7	23,7	24,2	24,7
	8H	21,9	22,3	22,4	22,8	23,5	23,4	23,9	23,9	24,4	25,0
	12H	22,2	22,6	22,8	23,1	23,7	23,6	24,0	24,2	24,5	25,1
12H	4H	19,3	19,9	19,8	20,3	20,8	22,7	23,3	23,2	23,7	24,2
	6H	21,4	21,9	21,9	22,4	23,0	23,3	23,7	23,8	24,2	24,9
	8H	22,0	22,4	22,6	22,9	23,5	23,5	23,9	24,1	24,4	25,0
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,1 / 0,0					1,0 / -0,9				
S = 1.5H		0,1 / -0,1					2,3 / -1,8				
S = 2.0H		0,2 / -0,2					3,6 / -2,5				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 544 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	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	102	95	89	84	99	93	88	83	90	85	81	86	83	79	83	80	78	76
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67
4	88	78	71	65	86	77	70	65	75	69	64	72	67	63	70	66	62	60
5	83	72	64	58	81	71	64	58	69	62	58	67	61	57	65	60	56	55
6	78	66	59	53	76	65	58	53	64	57	53	62	56	52	61	56	52	50
7	73	62	54	49	72	61	54	49	59	53	48	58	52	48	57	52	48	46
8	69	57	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44	42
9	65	54	47	42	64	53	46	42	52	46	41	51	45	41	50	45	41	40
10	62	50	44	39	61	50	43	39	49	43	39	48	43	39	47	42	38	37

LAMPS (number of lamps)

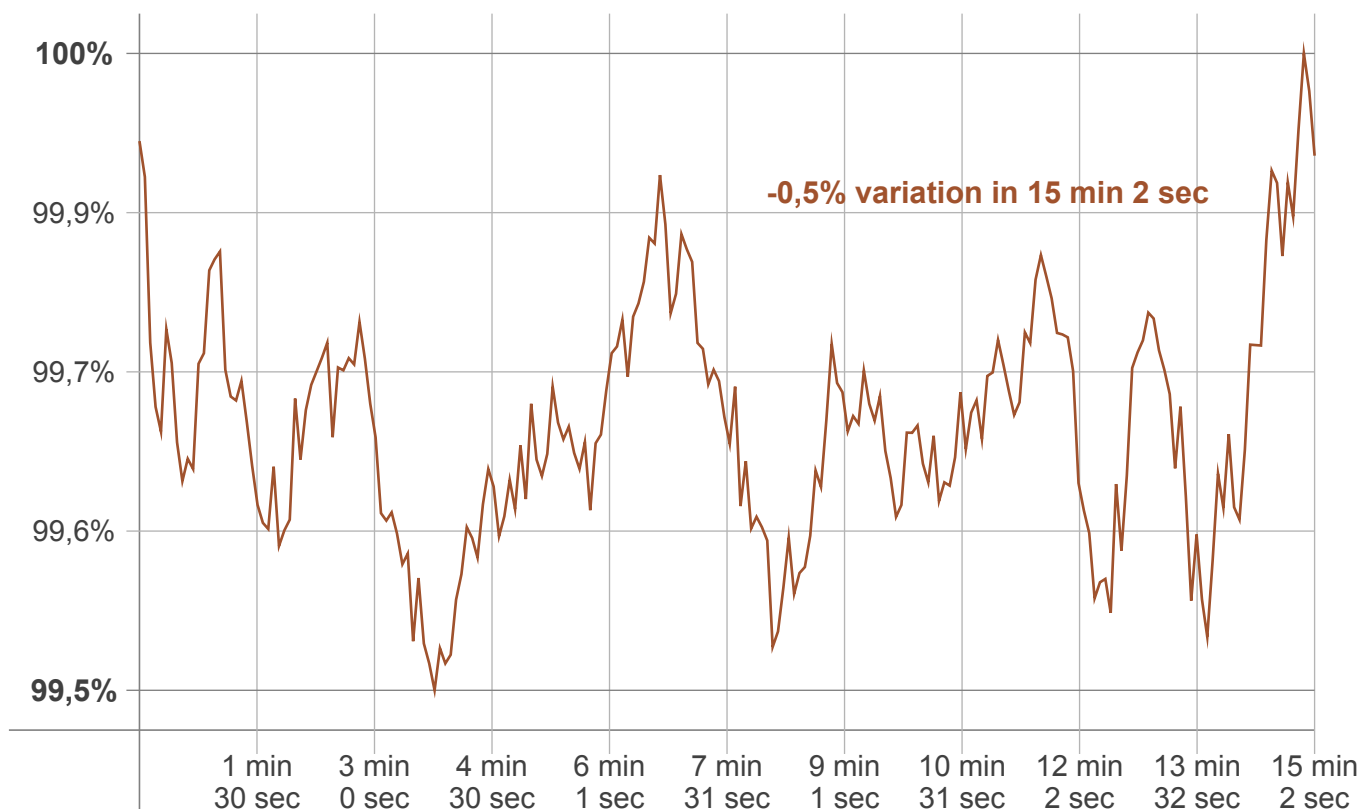
Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
45,1 lm	107 lm	109 lm	86,5 lm	65,7 lm	50,2 lm	35,8 lm	28,6 lm	16,9 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0,026 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:	15 min 2 sec
Warmup variation	+0,5%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
11831 K	+16 K	11847 K

Output change

Output start	Output change	Output end
545 lm	-1 lm	544 lm