

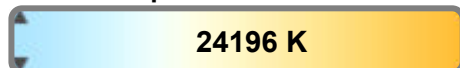
Light efficiency:



Light quality:



Color temperature:

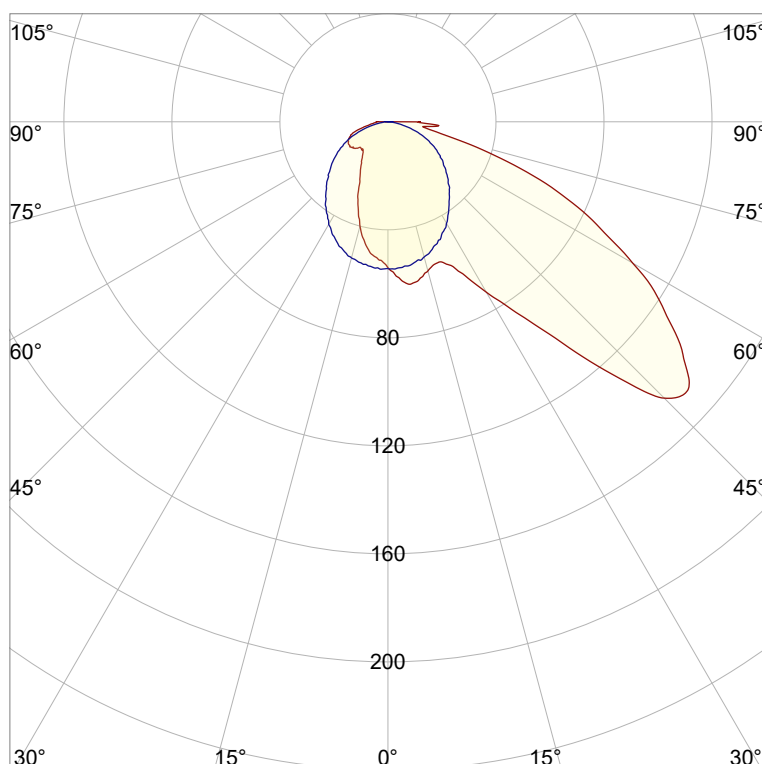


Output: 213 lm

Peak: 149 cd

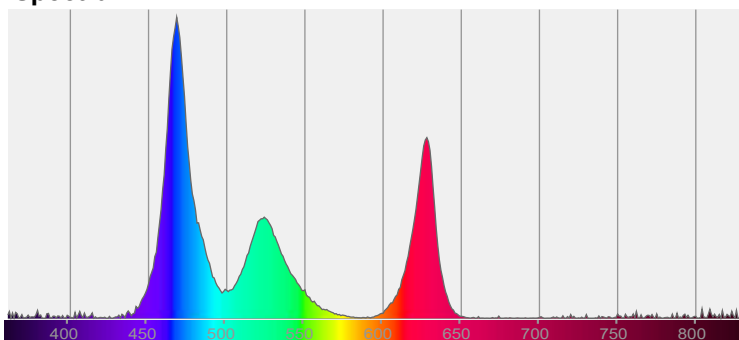
Power: 8,6 W

PF: 1,0

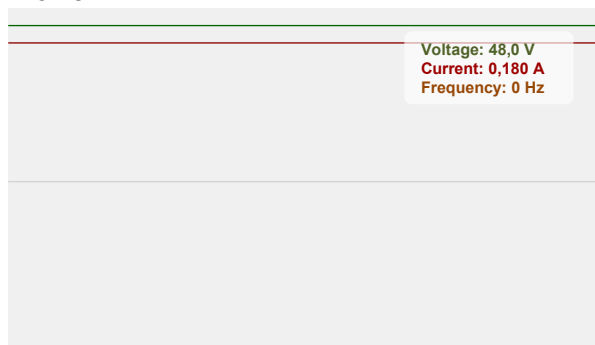


CIE 1931
x: 0,250
y: 0,256

Spectra



Power



Product name:

Defiant_510mm_RGB_Inlay-Lens-Asymmetric-Frosted_IP65

Item number:

FLNP/L22A0510/RGB/ILAF

Date and time:

14.09.2022 11:46:09

Description:

Rank: R2 G3 B3-RC1 GA1 BA4-AC AF AF

Toleranzen:

Lumen +/-4%

Candela +/-2,5%

Colour Temp +/-35 K

CRI +/-0,7

Angular Resolution 1 Grad Step

Last Calibration 20.05.2020

Pruefer:

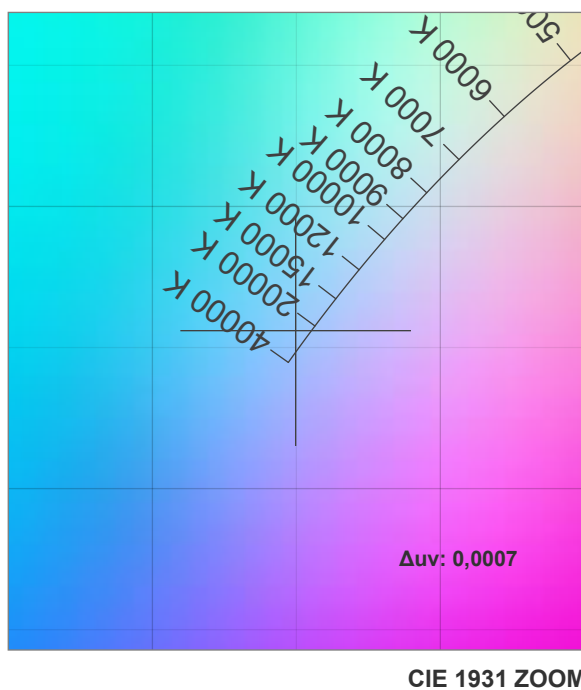
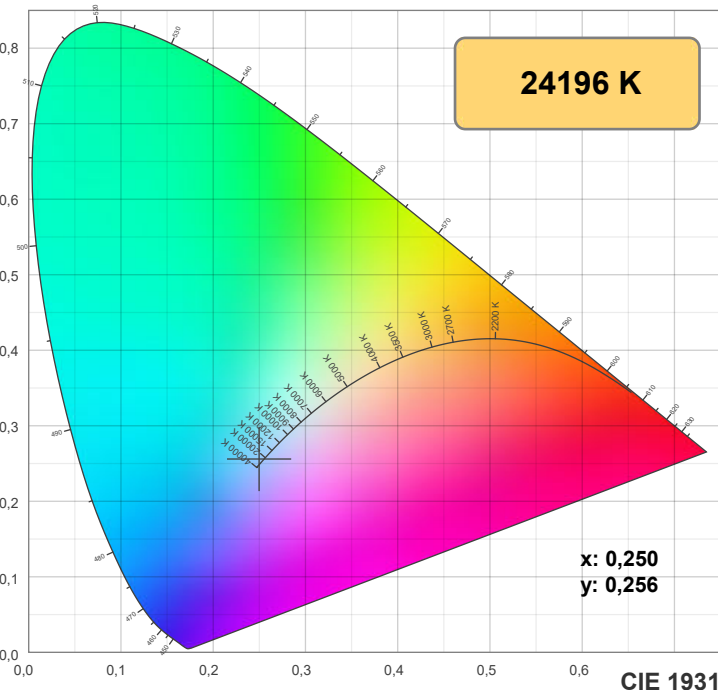
Peter Ulrich

Pruefort:

Lichtlabor

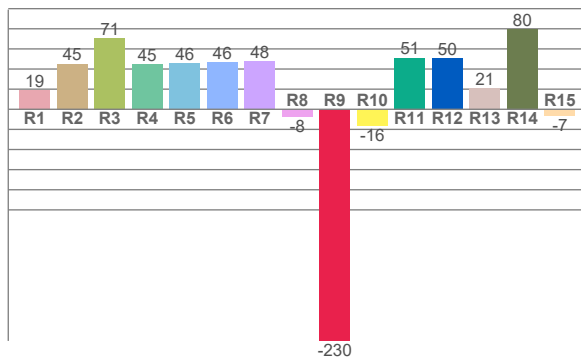
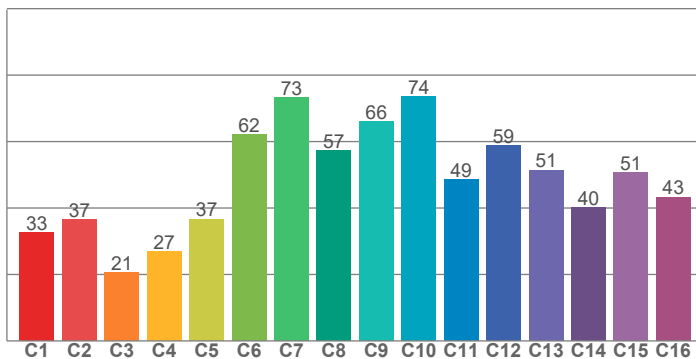
Gaustrasse 13

55411 Bingen am Rhein



TM30: 47,8

CRI: 39,0 (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
19,0	45,2	70,8	44,6	45,8	46,4	47,7	-7,6	-230,2	-16,4	51,2	50,3	20,9	79,5	-6,9

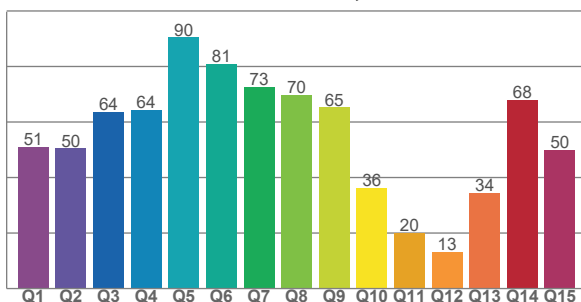
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
32,5	36,6	20,6	27,0	36,7	62,1	73,2	57,3	65,9	73,6	48,7	58,7	51,4	40,2	50,8	43,3

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
51,1	50,5	63,6	64,3	90,5	80,9	72,6	69,9	65,2	36,2	19,9	13,2	34,5	67,9	50,0

CQS: 50,1



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
24196 K	39,0	-230,2	47,8	94,6	50,1	0,250	0,256	0,179	0,276	0,0007

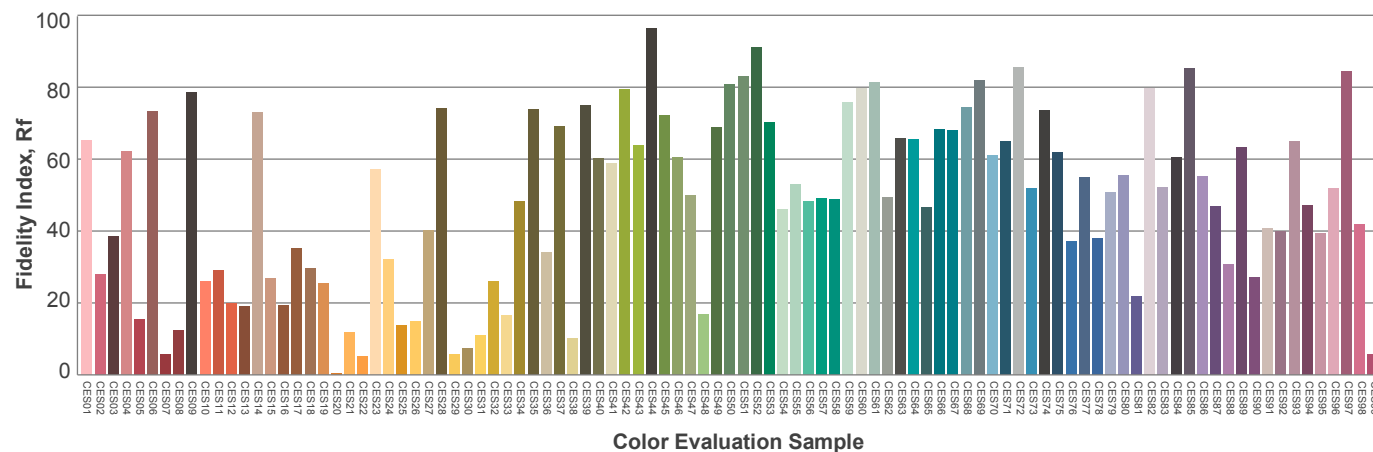
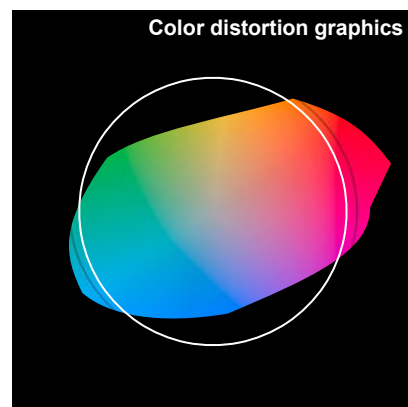
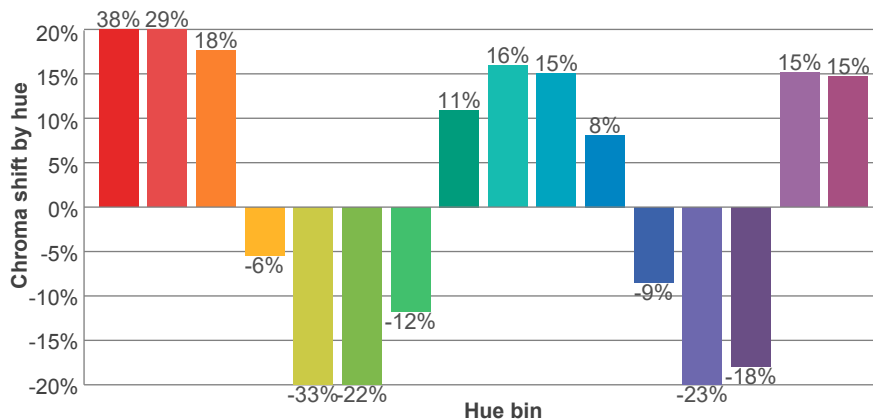
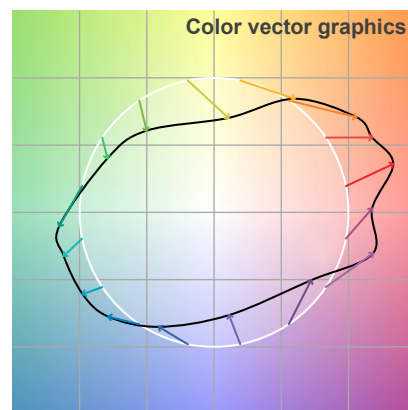
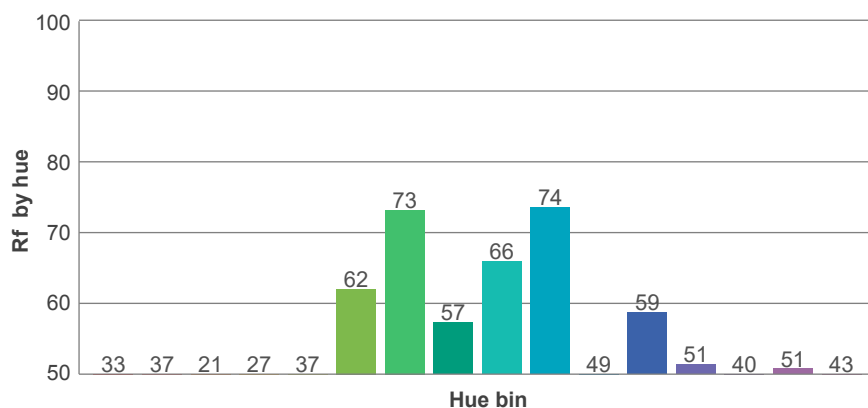
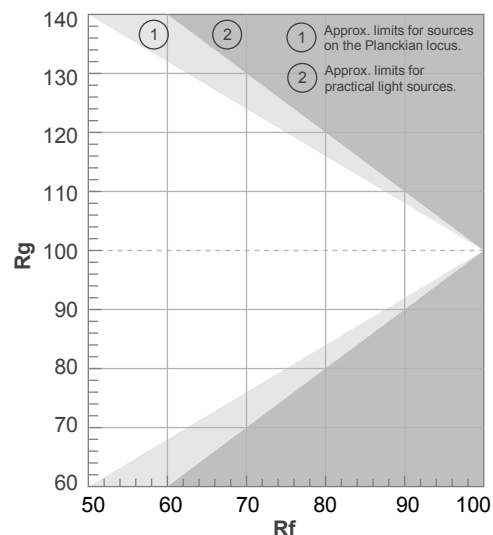
Rf 47,8

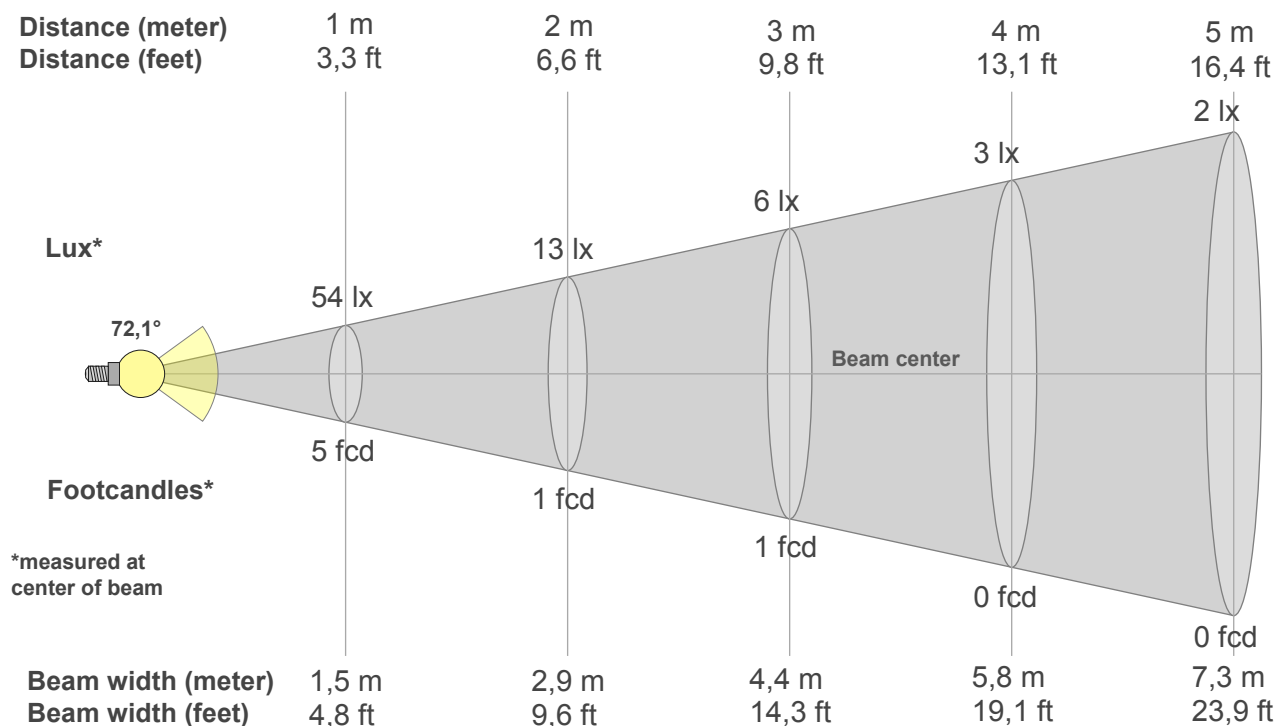
Fidelity index Rf

Rg 94,6

Gamut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	33	38%	9%
2	37	29%	-19%
3	21	18%	-49%
4	27	-6%	-42%
5	37	-33%	-24%
6	62	-22%	8%
7	73	-12%	11%
8	57	11%	33%
9	66	16%	10%
10	74	15%	-4%
11	49	8%	-22%
12	59	-9%	-24%
13	51	-23%	-4%
14	40	-18%	32%
15	51	15%	40%
16	43	15%	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
54lx	13lx	6lx	3lx	2lx	1lx	1lx	1lx	1lx	1lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx
5fcd	1,3fcd	0,6fcd	0,3fcd	0,2fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd

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°
54	59	60	57	55	61	73	89	115	145	145	126	105	81	55	29	15	18	3	0
100%	110%	112%	106%	103%	113%	135%	165%	214%	268%	269%	235%	194%	150%	102%	54%	28%	34%	5%	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°
53,8	54,2	53,3	51,8	49,3	46,7	43,4	39,3	35,4	31,5	28,0	24,5	20,7	16,6	12,1	7,4	3,6	1,3	0,5	0,0
100%	101%	99%	96%	92%	87%	81%	73%	66%	59%	52%	45%	38%	31%	22%	14%	7%	2%	1%	0%

Intensities in 180° c-plane

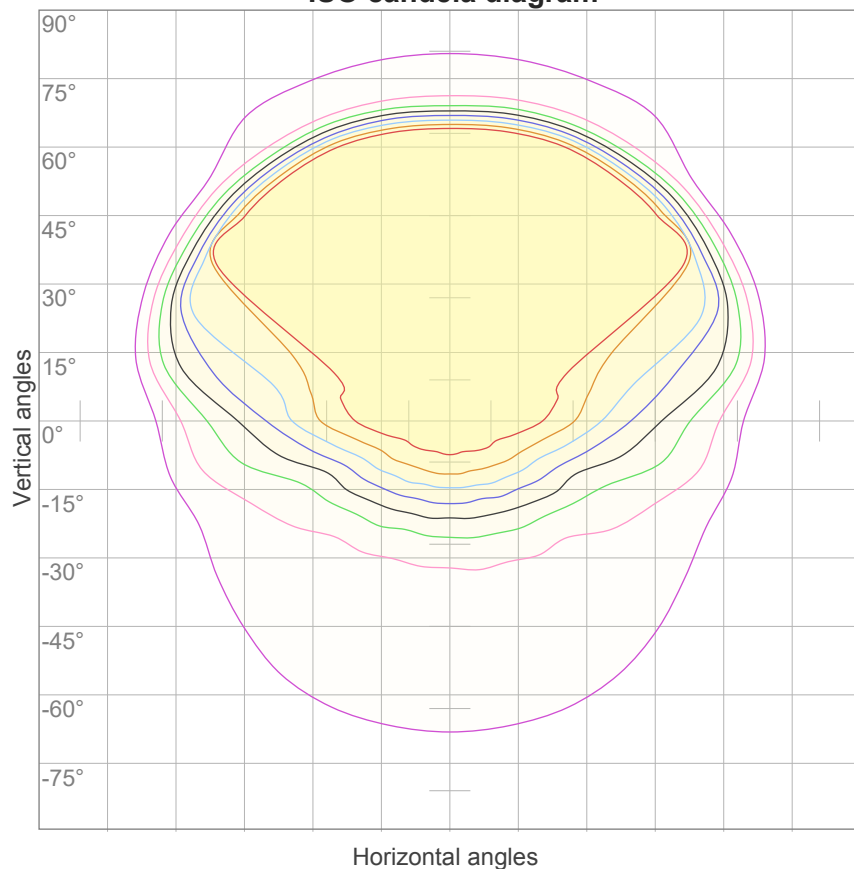
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
53,8	50,4	46,5	39,9	32,4	24,5	20,3	16,7	14,3	14,0	15,2	16,5	16,7	16,2	14,7	11,4	7,2	5,2	4,0	0,0
100%	94%	86%	74%	60%	46%	38%	31%	27%	26%	28%	31%	31%	30%	27%	21%	13%	10%	7%	0%

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°
53,8	54,4	53,5	52,1	49,9	47,0	43,8	39,8	35,8	32,0	28,0	24,5	20,6	16,6	12,1	7,7	3,7	1,4	0,1	0,0
100%	101%	99%	97%	93%	87%	81%	74%	67%	60%	52%	46%	38%	31%	22%	14%	7%	3%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
72,1°	159,9°	178,7°	69,9%	39,0%

ISO candela diagram



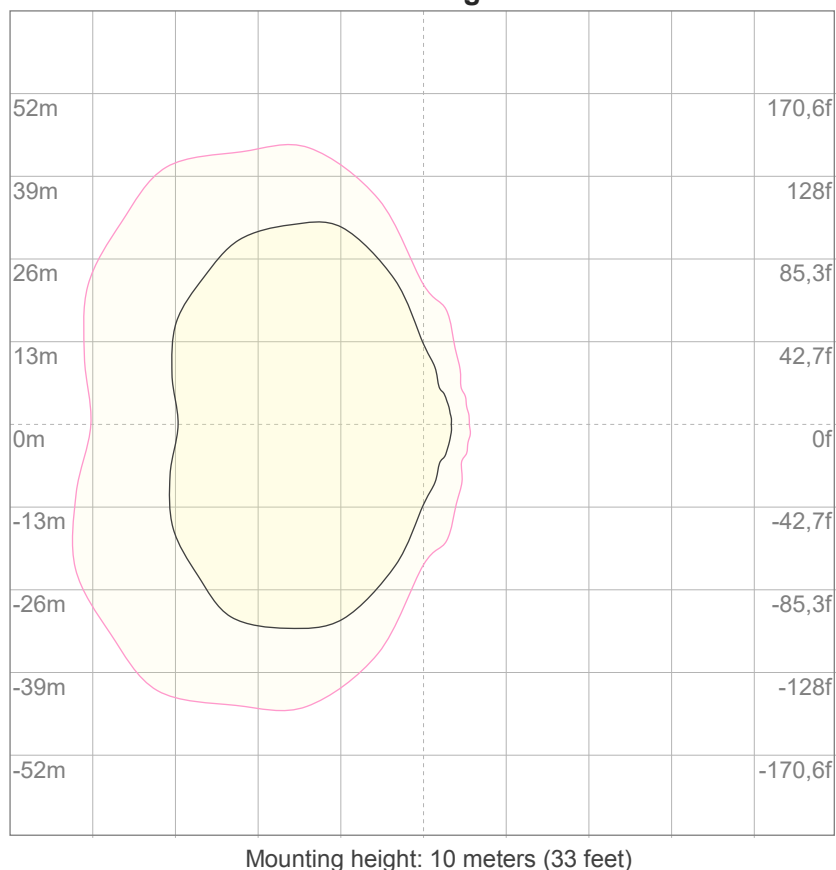
10%	5 cd
20%	11 cd
30%	16 cd
40%	22 cd
50%	27 cd
60%	32 cd
70%	38 cd
80%	43 cd
90%	48 cd

Conditions:

Number of c-planes: 16

Candela at center: 54 cd

ISO lux diagram



3%	16,2m lx
5%	26,9m lx
10%	53,8m lx
30%	0,162 lx
50%	0,269 lx

Conditions:

Number of c-planes: 16

Lux at center: 0,538 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				
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Variation of the observer position for the luminaire distance S										
n/a	n/a					n/a				
n/a	n/a					n/a				
n/a	n/a					n/a				
Standard table	n/a					n/a				
Correction summand	n/a					n/a				
Corrected glare indices referring to 213 lm total luminous flux										

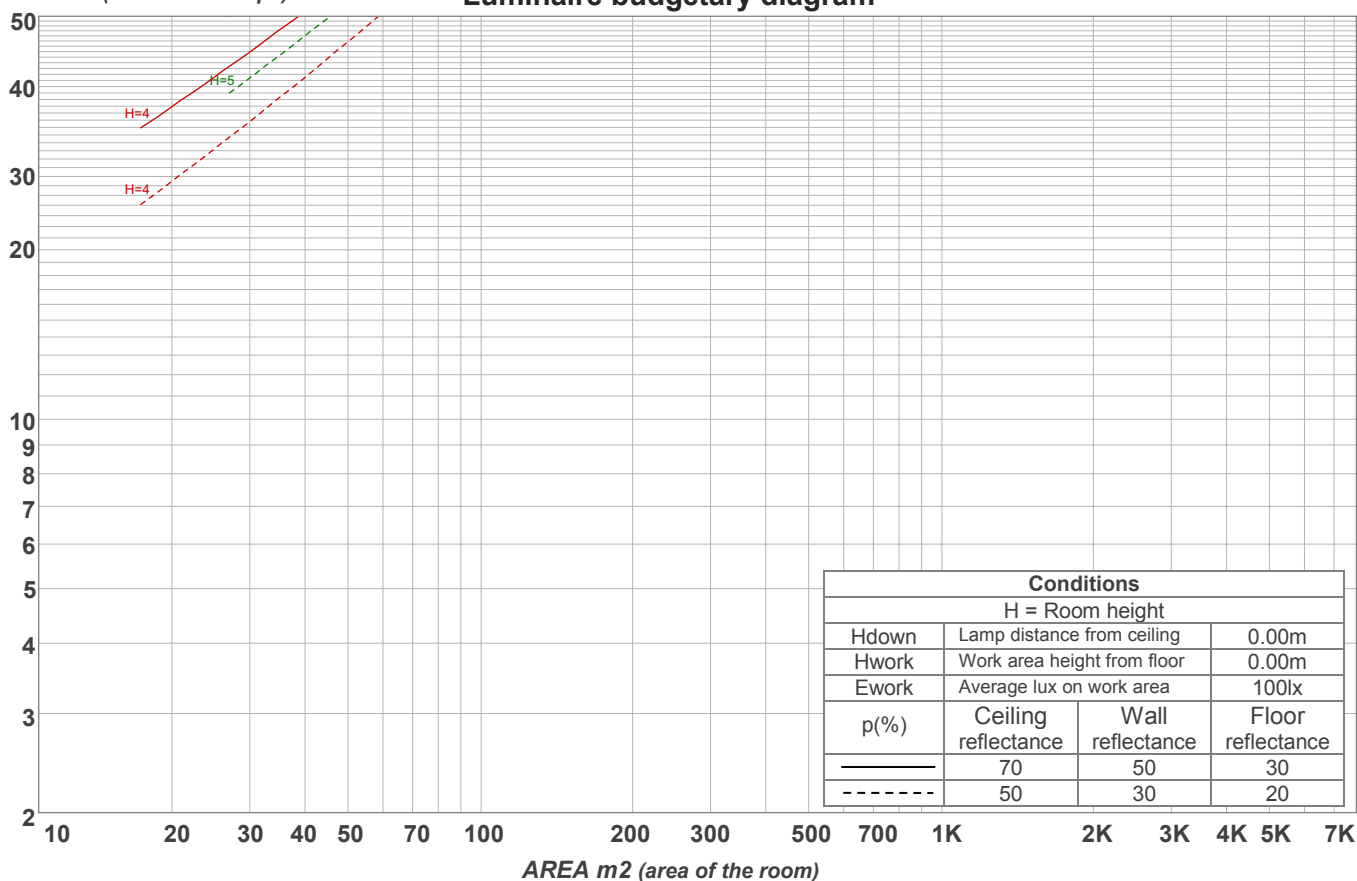
UGR data could not be calculated due to missing/wrong symmetry. Goto Edit->Photometric->Corrections and select Correct asymmetry.

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	107	101	96	92	104	99	94	90	95	91	87	91	87	85	87	84	82	80
2	96	86	78	72	93	84	77	71	81	74	69	77	72	67	74	70	66	64
3	86	74	65	57	83	72	64	57	69	62	56	66	60	55	64	58	54	51
4	78	64	55	47	75	63	54	47	60	52	46	58	51	45	56	50	45	42
5	71	57	47	39	69	55	46	39	53	45	39	51	44	38	49	43	38	35
6	65	50	41	33	63	49	40	33	47	39	33	46	38	33	44	37	32	30
7	60	45	36	29	58	44	35	29	43	34	29	41	34	28	40	33	28	26
8	55	41	32	25	54	40	31	25	39	31	25	37	30	25	36	30	25	23
9	52	37	28	22	50	37	28	22	35	28	22	34	27	22	33	27	22	20
10	48	34	26	20	47	34	25	20	33	25	20	32	25	20	31	24	20	18

LAMPS (number of lamps)

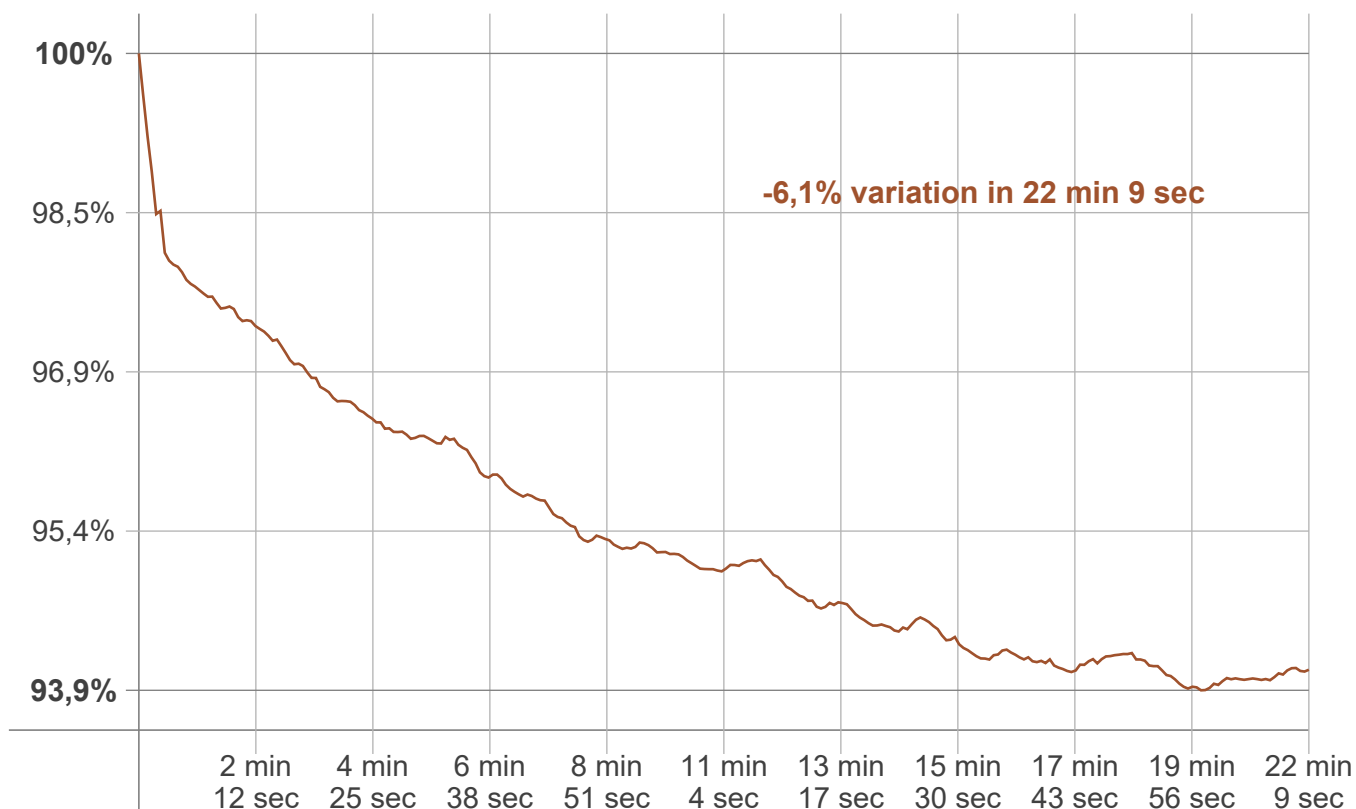
Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
5,17 lm	14,1 lm	20,0 lm	26,5 lm	38,2 lm	44,9 lm	36,8 lm	19,4 lm	7,95 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0,014 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:	Lamp stabilized in 22 min 9 sec
Warmup variation	-6,1%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
18451 K	+5745 K	24196 K

Output change

Output start	Output change	Output end
224 lm	-11 lm	213 lm