Light efficiency:

63 Lumen/Watt

Light quality:

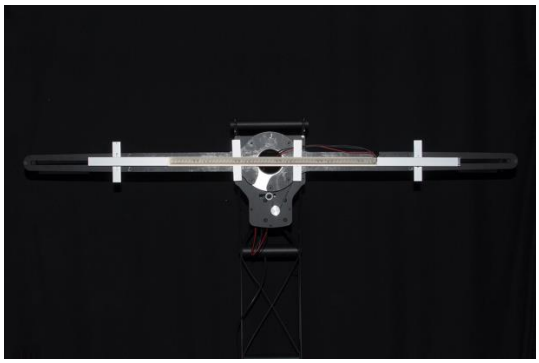
CRI: 35,8

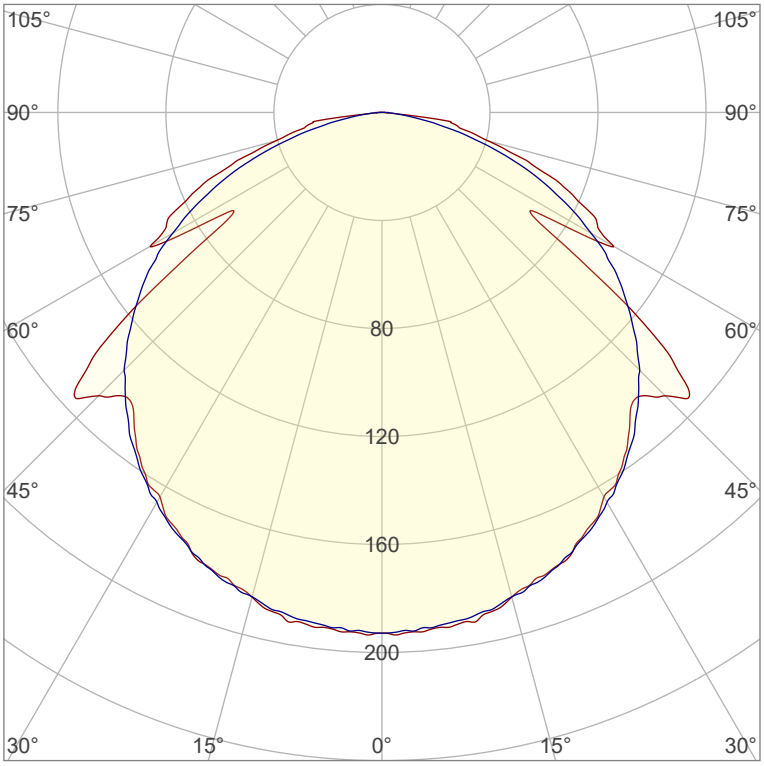
Color temperature:

12108 K

Output: 579 lm
Peak: 194 cd

Power: 9,1 W
PF: 1,0





Product name:
Defiant-3_510mm_RGB_Cover-Square-Transparent

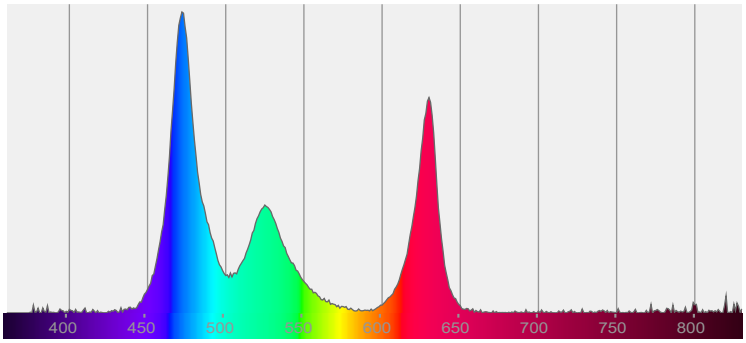
Item number:
NP/L3C/22C/0510/RGB/CST

Date and time:
30.06.2020 11:55:35

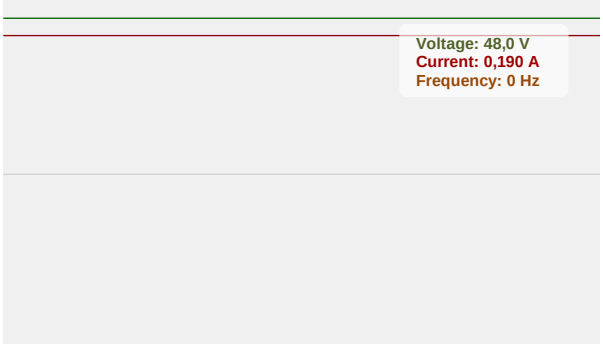
Description:
Toleranzen:
Lumen +/-4%
Candela +/-2,5%
Colour Temp +/-35 K
CRI +/-0,7
Angular Resolution 1 Grad Step
Last Calibration 20.05.2020
Pruefer:
Peter Ulrich
Pruefort:
Lichtlabor
Gaustrasse 13
55411 Bingen am Rhein

CIE 1931
x: 0,266
y: 0,285

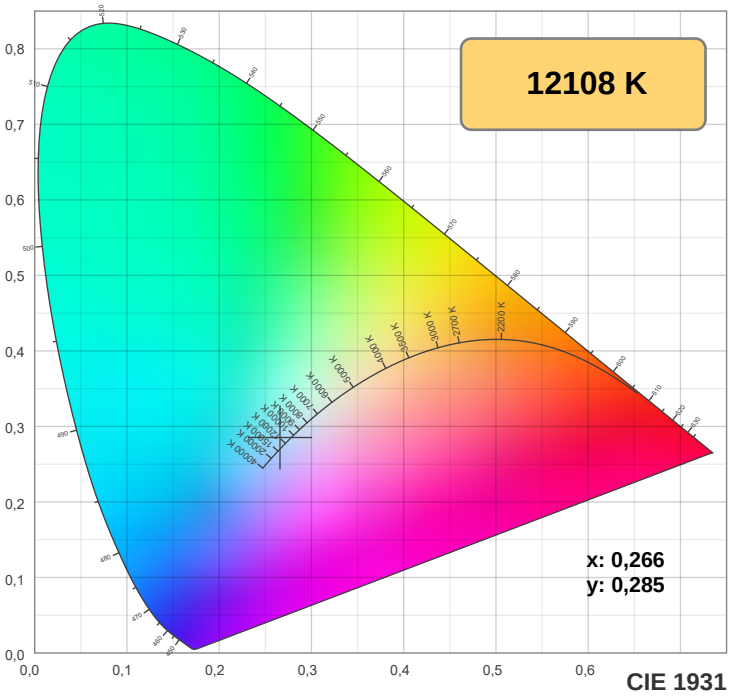
Spectra



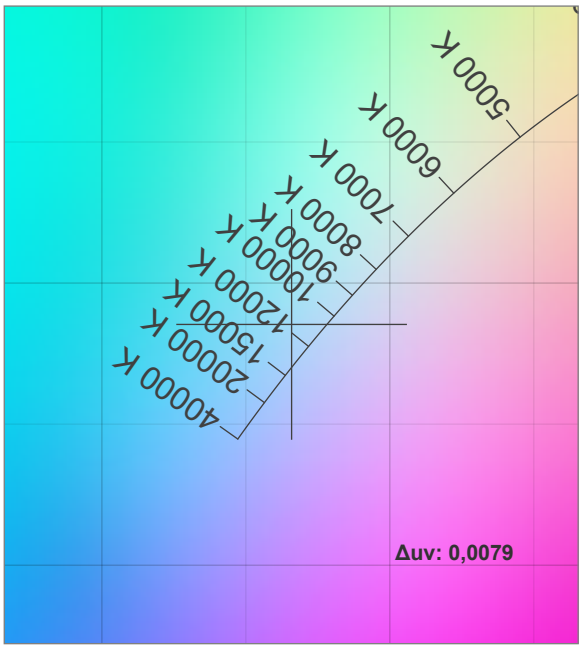
Power



Color details

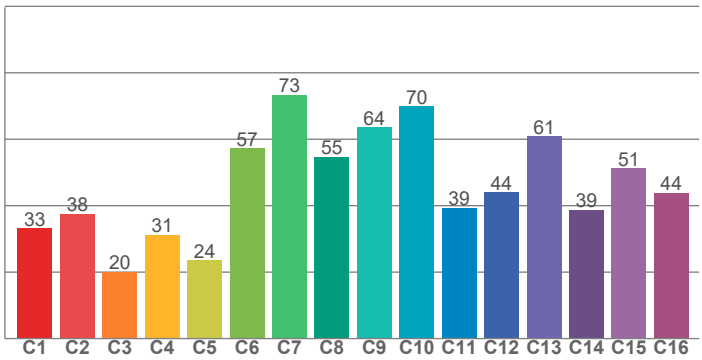


CIE 1931

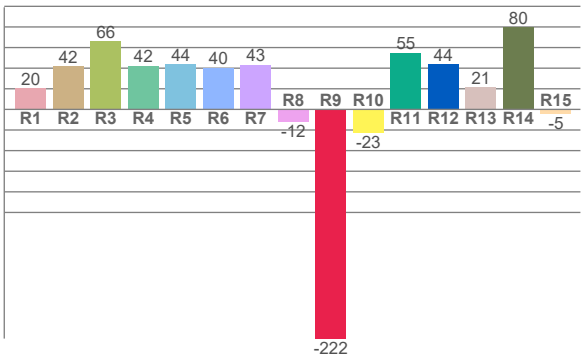


CIE 1931 ZOOM

TM30: 45,1



CRI: 35,8 (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
20,2	42,2	66,1	42,4	43,8	40,3	43,4	-12,2	-222,4	-23,1	55,0	43,6	21,4	79,7	-4,8

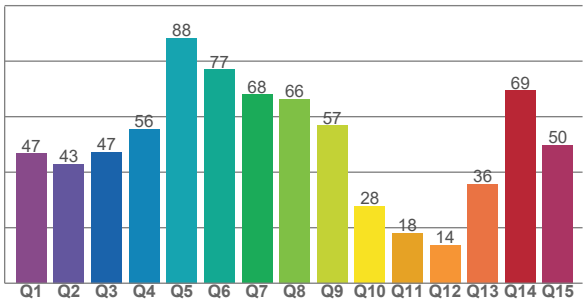
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
33,1	37,6	20,0	31,3	23,6	57,3	73,3	54,6	63,6	69,9	39,4	44,0	60,9	38,8	51,2	43,9

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
46,7	42,9	47,3	55,5	88,3	76,9	68,0	66,4	56,8	27,7	18,1	13,7	35,7	69,5	49,7

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 diviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
12108 K	35,8	-222,4	45,1	88,0	46,2	0,266	0,285	0,180	0,291	0,0079

TM30 details

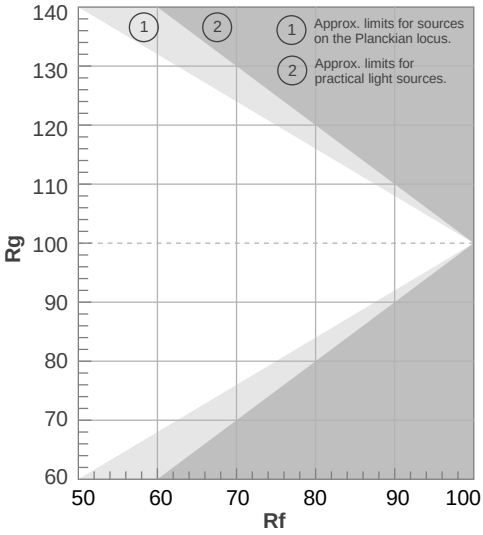
Rf 45,1

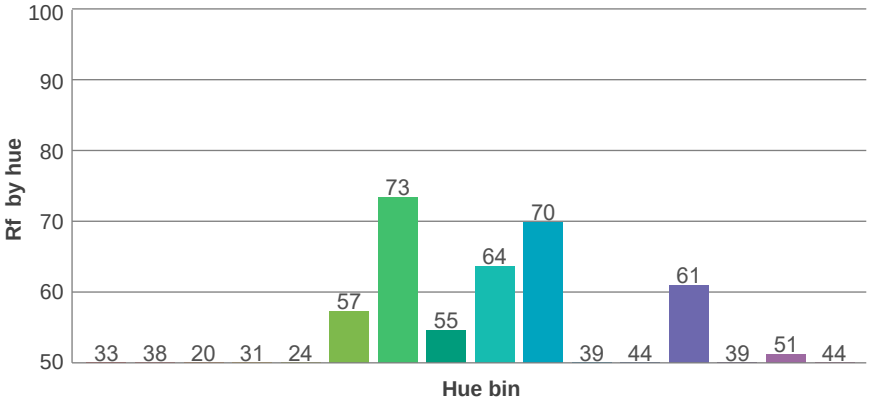
Fidelity index Rf

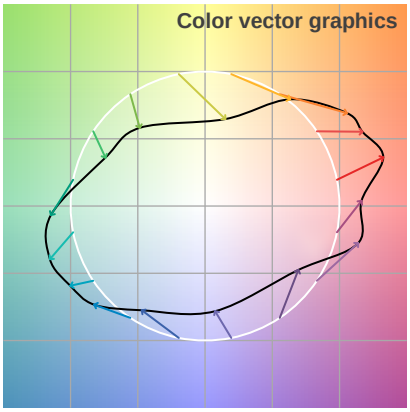
Rg 88,0

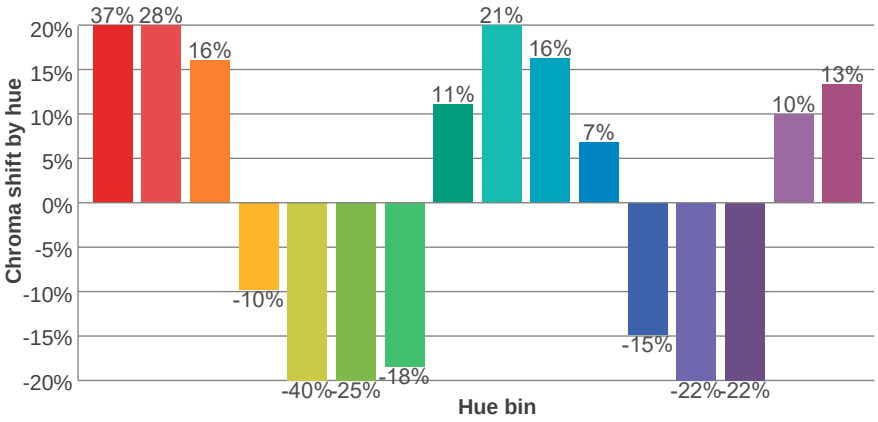
Gammut index Rg

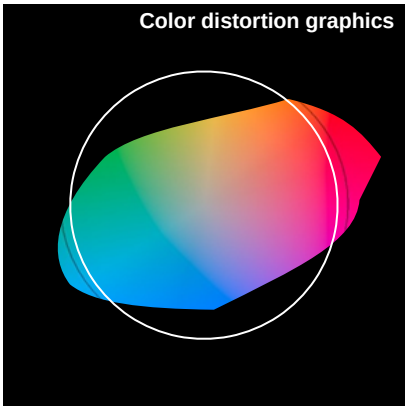
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	33	37%	10%
2	38	28%	-19%
3	20	16%	-49%
4	31	-10%	-47%
5	24	-40%	-27%
6	57	-25%	8%
7	73	-18%	11%
8	55	11%	29%
9	64	21%	16%
10	70	16%	-6%
11	39	7%	-28%
12	44	-15%	-31%
13	61	-22%	-8%
14	39	-22%	31%
15	51	10%	40%
16	44	13%	26%

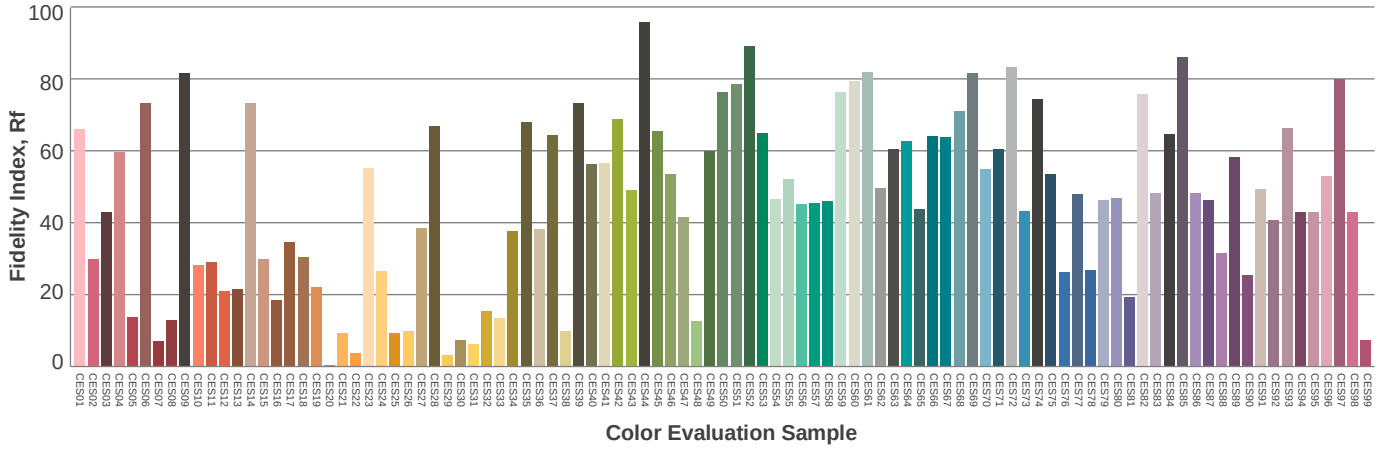




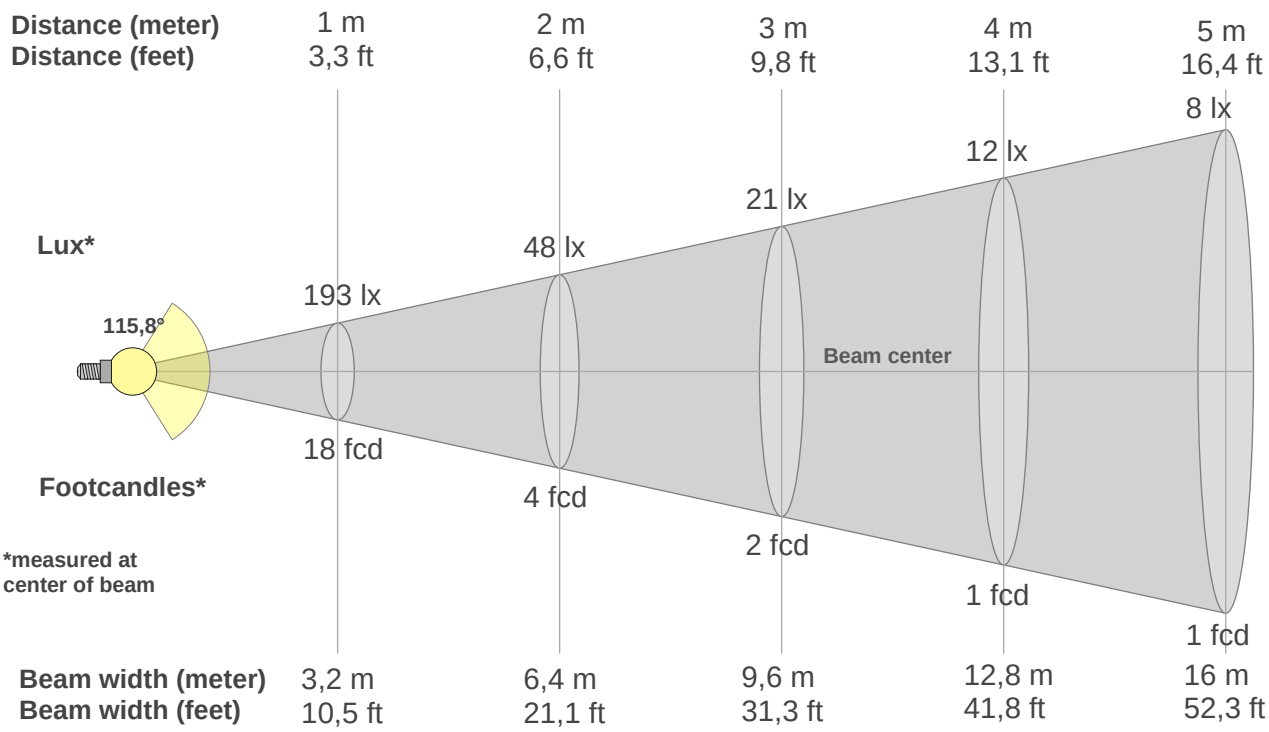








Beam details



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
193lx	48lx	21lx	12lx	8lx	5lx	4lx	3lx	2lx	2lx	2lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx	0lx
17,9fcd	4,5fcd	2fcd	1,1fcd	0,7fcd	0,5fcd	0,4fcd	0,3fcd	0,2fcd	0,2fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	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°
193	193	192	186	181	174	165	156	143	148	138	72	98	83	62	41	28	4	1	0
100%	100%	99%	96%	94%	90%	85%	81%	74%	77%	71%	37%	51%	43%	32%	21%	15%	2%	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°
193	192	190	186	181	175	167	158	147	135	121	107	89	71	51	32	15	5	1	1
100%	99%	98%	96%	94%	90%	86%	82%	76%	70%	63%	55%	46%	37%	27%	16%	8%	2%	0%	0%

Intensities in 180° c-plane

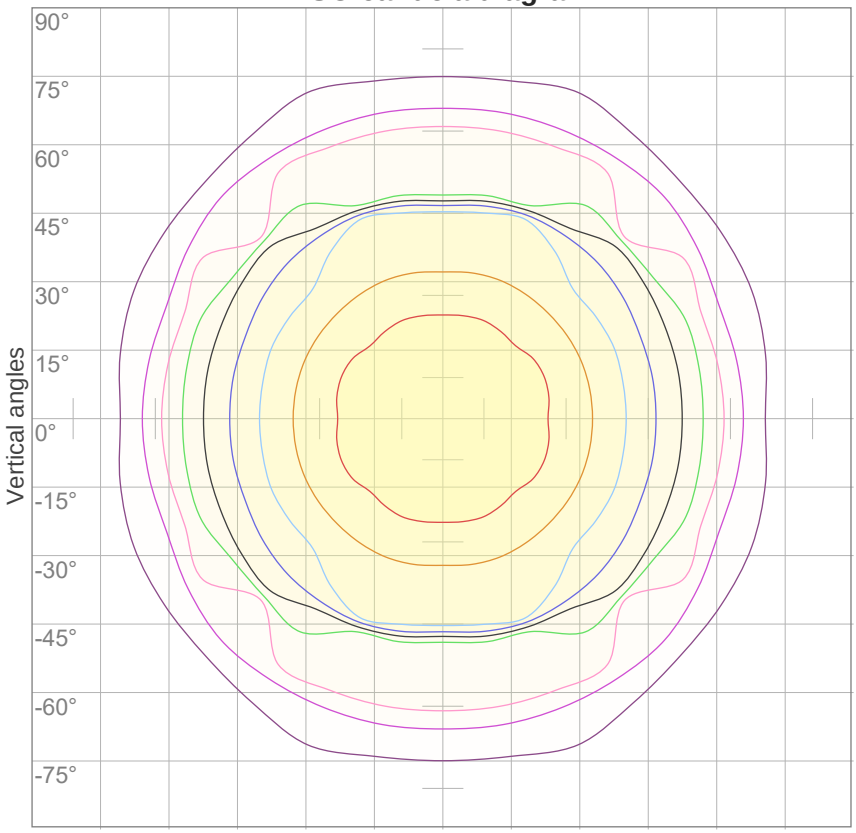
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
193	193	192	186	181	174	165	156	143	148	138	72	98	83	62	41	28	4	1	0
100%	100%	99%	96%	94%	90%	85%	81%	74%	77%	71%	37%	51%	43%	32%	21%	15%	2%	0%	0%

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°
193	192	190	186	181	175	167	158	147	135	121	107	89	71	51	32	15	5	1	1
100%	99%	98%	96%	94%	90%	86%	82%	76%	70%	63%	55%	46%	37%	27%	16%	8%	2%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
115,8°	**163,9°**	**173,1°**	**77,6%**	**52,2%**

ISO candela diagram



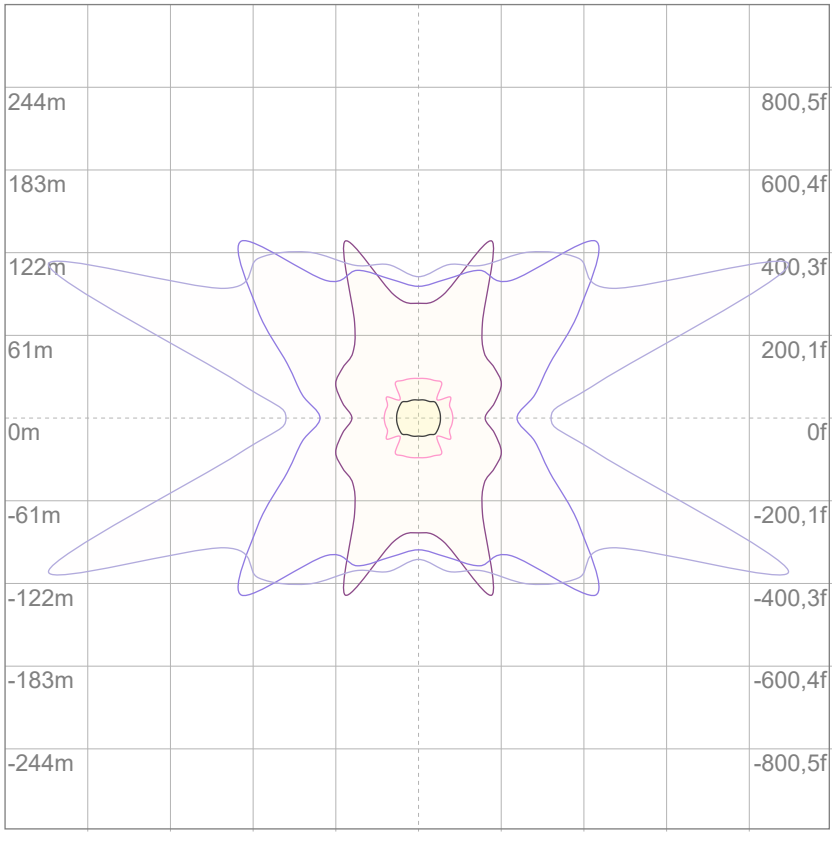
10%	19 cd
20%	39 cd
30%	58 cd
40%	77 cd
50%	97 cd
60%	116 cd
70%	135 cd
80%	154 cd
90%	174 cd

Conditions:

Number of c-planes: 16

Candela at center: 193 cd

ISO lux diagram



Mounting height: 10 meters (33 feet)

3%	57,9m lx
5%	96,6m lx
10%	0,193 lx
30%	0,579 lx
50%	0,966 lx

Conditions:

Number of c-planes: 16

Lux at center: 1,93 lx

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

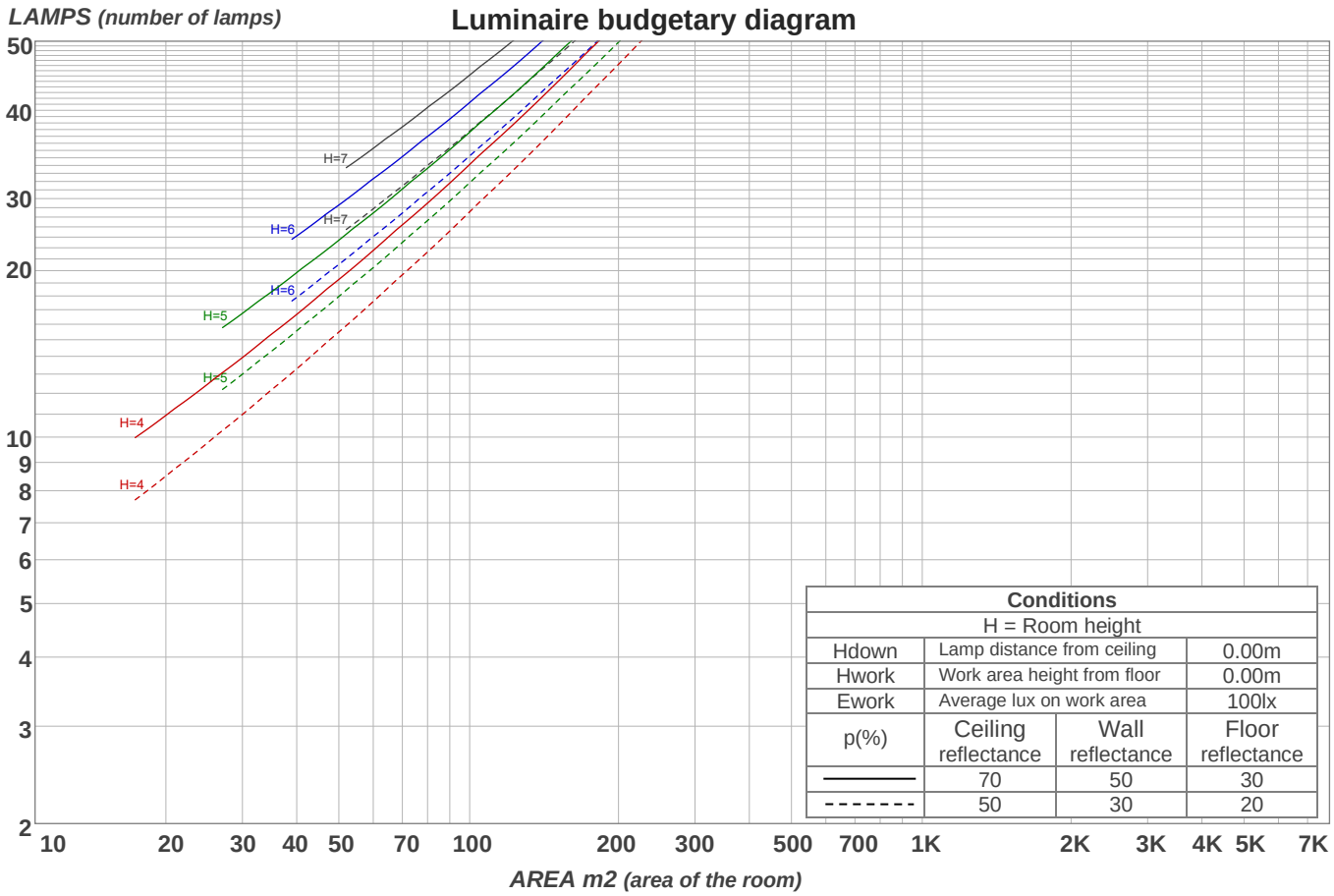
Glare Evaluation According to UGR

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	20,6	21,8	20,8	22,1	22,3	21,7	22,9	21,9	23,3	23,5
	3H	22,1	23,3	22,5	23,6	23,8	22,9	24,2	23,4	24,5	24,7
	4H	22,5	23,7	22,9	24,0	24,3	23,4	24,6	23,8	24,9	25,1
	6H	22,9	23,9	23,2	24,2	24,6	23,7	24,8	24,0	25,0	25,4
	8H	23,0	24,0	23,3	24,3	24,7	23,7	24,8	24,1	25,1	25,5
	12H	23,0	24,0	23,3	24,3	24,8	23,7	24,7	24,1	25,1	25,5
4H	2H	21,1	22,3	21,5	22,6	22,9	22,0	23,2	22,4	23,5	23,8
	3H	23,0	24,0	23,4	24,3	24,8	23,6	24,6	24,0	24,9	25,4
	4H	23,5	24,4	23,9	24,8	25,4	24,0	24,9	24,4	25,3	25,9
	6H	23,8	24,7	24,3	25,1	25,5	24,4	25,3	24,9	25,6	26,0
	8H	24,0	24,8	24,5	25,2	25,6	24,5	25,3	25,0	25,6	26,0
	12H	24,0	24,7	24,5	25,1	25,6	24,5	25,2	25,0	25,6	26,1
8H	4H	23,7	24,5	24,2	24,9	25,3	24,2	25,0	24,7	25,4	25,8
	6H	24,2	24,8	24,7	25,3	25,8	24,7	25,3	25,2	25,8	26,3
	8H	24,5	25,0	25,0	25,5	26,2	24,9	25,4	25,4	25,9	26,6
	12H	24,5	25,0	25,1	25,5	26,1	24,9	25,4	25,5	25,9	26,5
12H	4H	23,7	24,4	24,2	24,8	25,3	24,2	24,9	24,7	25,3	25,8
	6H	24,3	24,8	24,8	25,3	26,0	24,8	25,3	25,3	25,8	26,5
	8H	24,5	25,0	25,1	25,5	26,1	24,9	25,4	25,5	25,9	26,5
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,3 / -0,3					0,1 / -0,1				
S = 1.5H		0,6 / -0,6					0,3 / -0,4				
S = 2.0H		0,9 / -0,7					0,8 / -0,9				
Standard table		n/a					n/a				
Correction summand		n/a					n/a				
Corrected glare indices referring to 579 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	99
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	69	63	74	68	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	58	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	62	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	35	29	25	23

Luminaire budgetary diagram

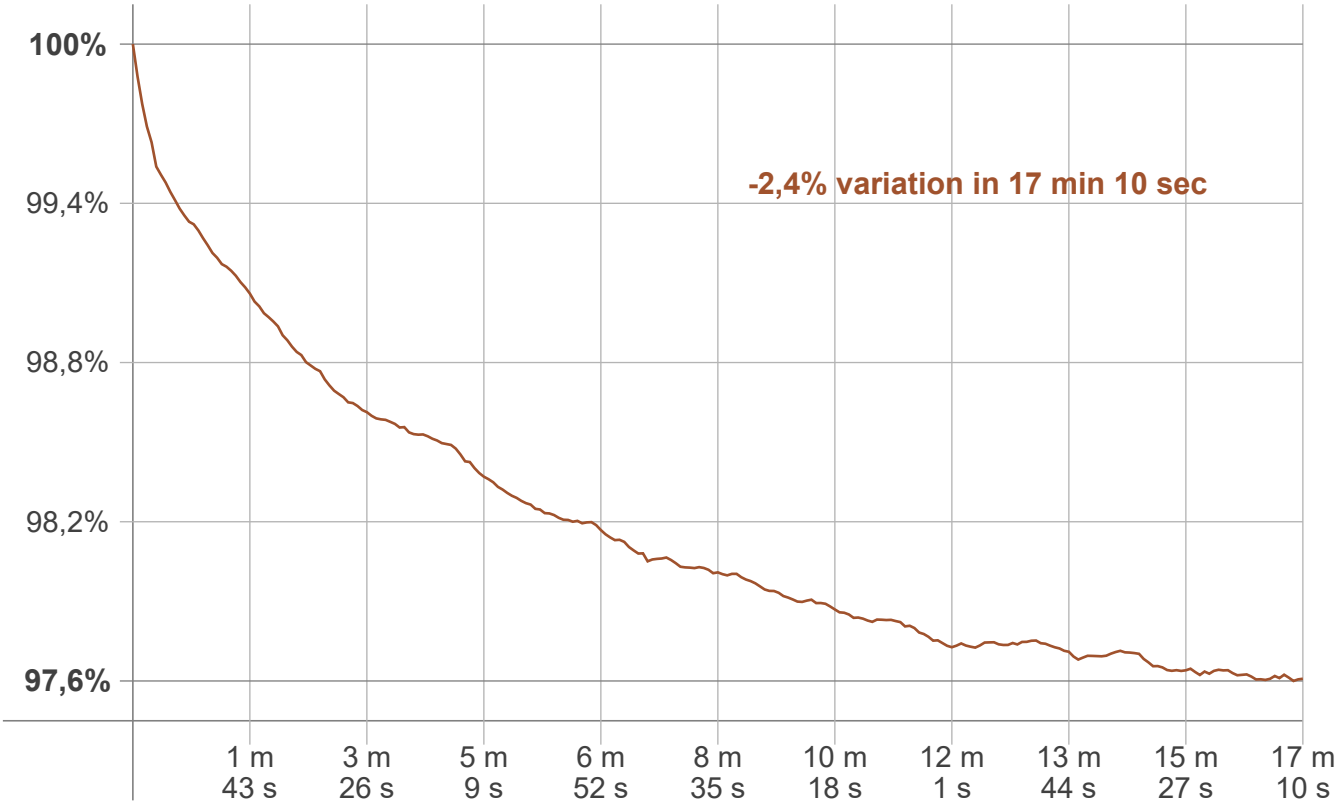


Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
18,3 lm	52,7 lm	80,6 lm	98,3 lm	107 lm	92,7 lm	72,9 lm	42,2 lm	11,7 lm

90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0,814 lm	0,768 lm	0,427 lm	0,308 lm	0,227 lm	0,156 lm	0,115 lm	0,070 lm	0,024 lm

Warmup curve



Warmup result

Warmup time:	**Lamp stabilized in 17 min 10 sec**
Warmup variation	**-2,4%**

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
11498 K	+610 K	12108 K

Output change

Output start	Output change	Output end
597 lm	-18 lm	579 lm