Light efficiency:

59 Lumen/Watt

Light quality:

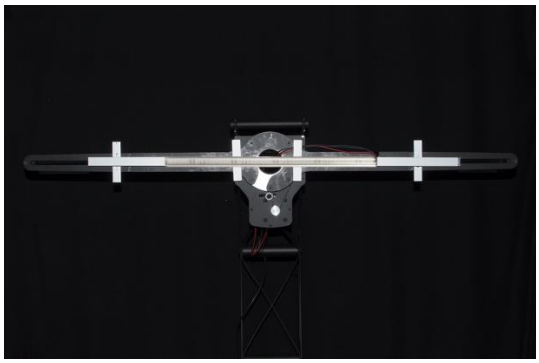
CRI: 35,9

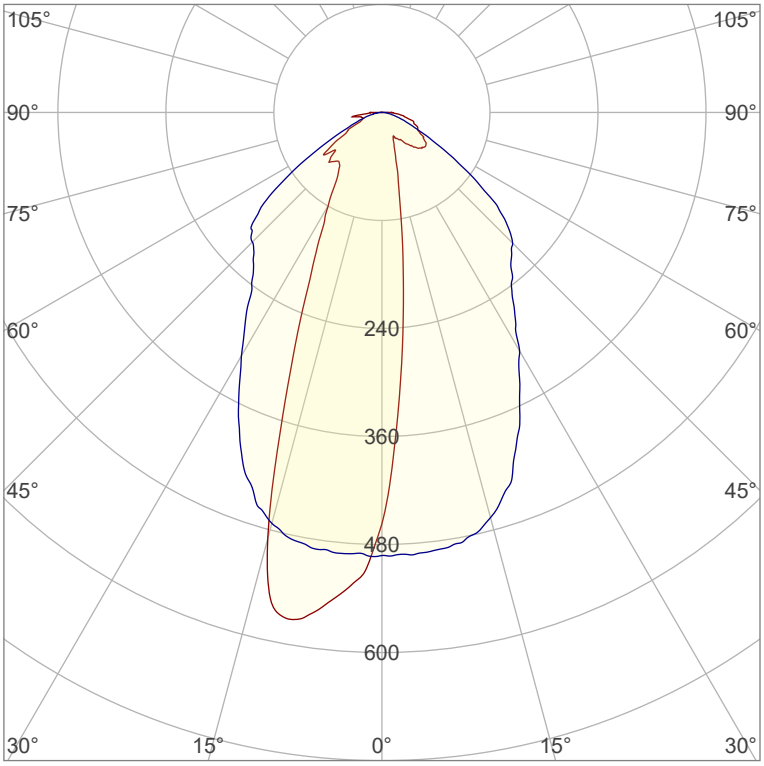
Color temperature:

12123 K

Output: 535 lm
Peak: 613 cd

Power: 9,1 W
PF: 1,0





CIE 1931
x: 0,266
y: 0,286

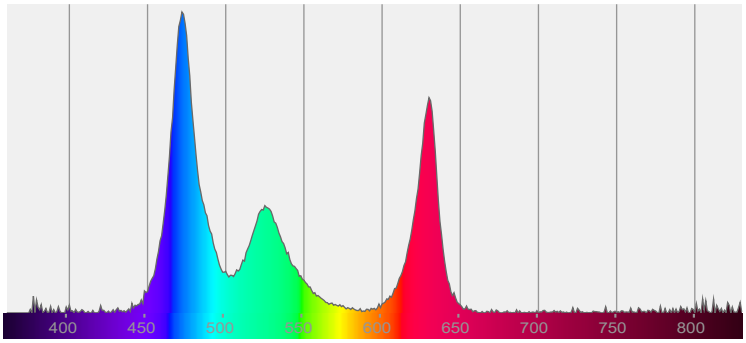
Product name:
Defiant-3_510mm_RGB_Lens-Asymmetric-Frosted-2

Item number:
NP/L3C/22C/0510/RGB/LAF-2

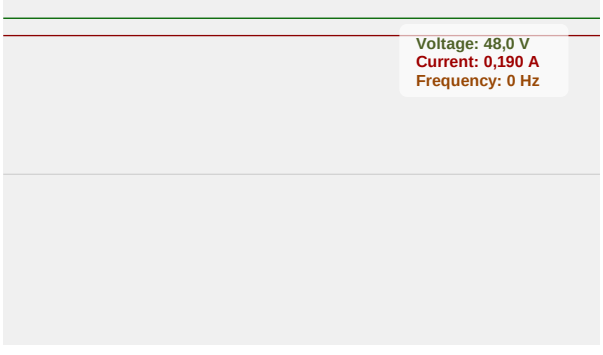
Date and time:
10.07.2020 09:49:19

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

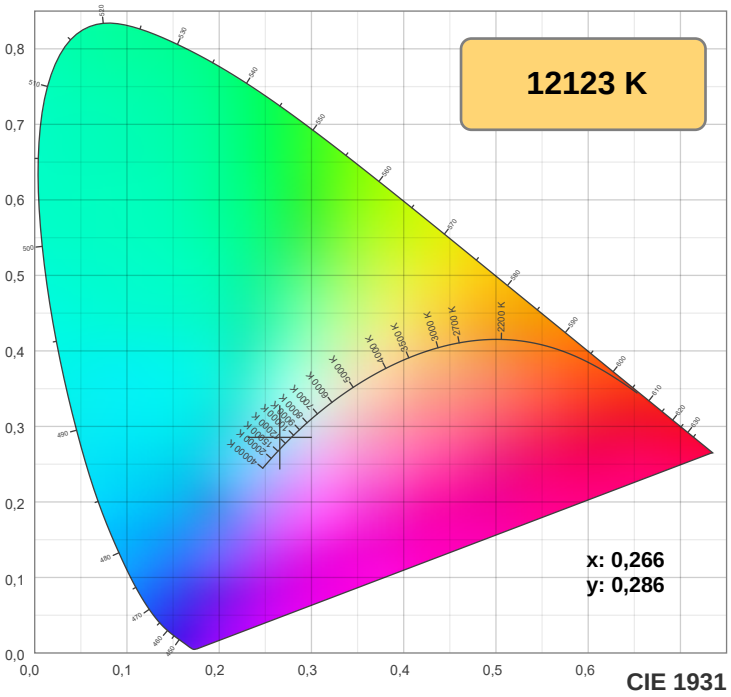
Spectra



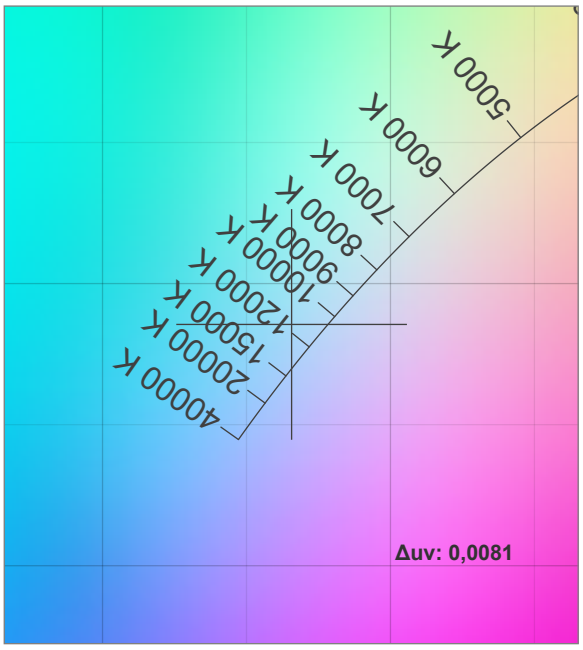
Power



Color details

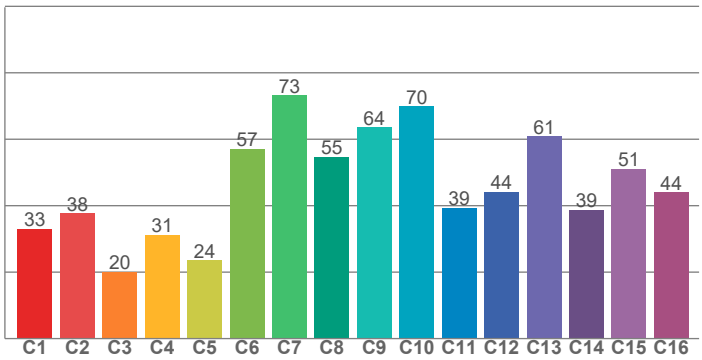


CIE 1931

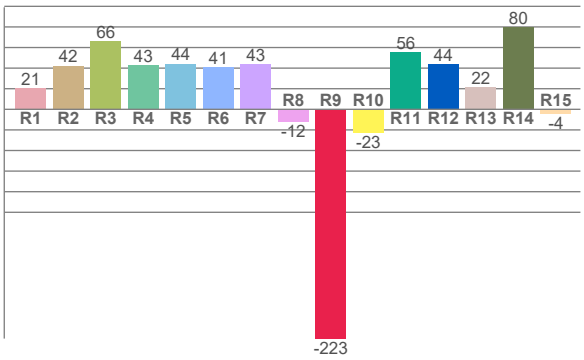


CIE 1931 ZOOM

TM30: 45,0



CRI: 35,9 (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
20,7	42,2	66,0	42,6	44,1	40,5	43,4	-12,2	-222,6	-23,0	55,7	43,7	21,7	79,8	-4,4

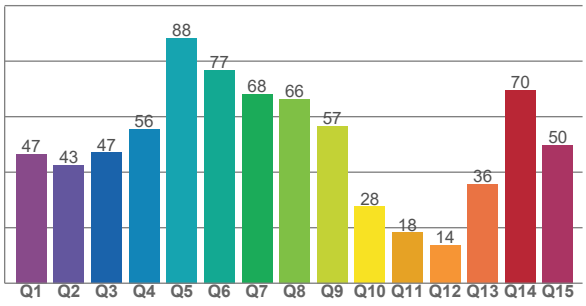
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
33,0	37,7	20,0	31,3	23,5	57,1	73,2	54,7	63,6	69,9	39,3	44,1	60,8	38,8	51,1	44,0

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
46,5	42,7	47,0	55,6	88,4	76,8	68,1	66,4	56,7	27,6	18,2	13,7	35,7	69,6	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
12123 K	35,9	-222,6	45,0	87,8	46,2	0,266	0,286	0,180	0,291	0,0081

TM30 details

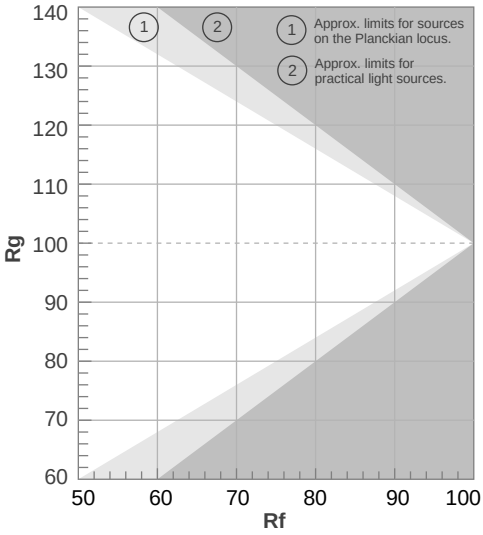
Rf 45,0

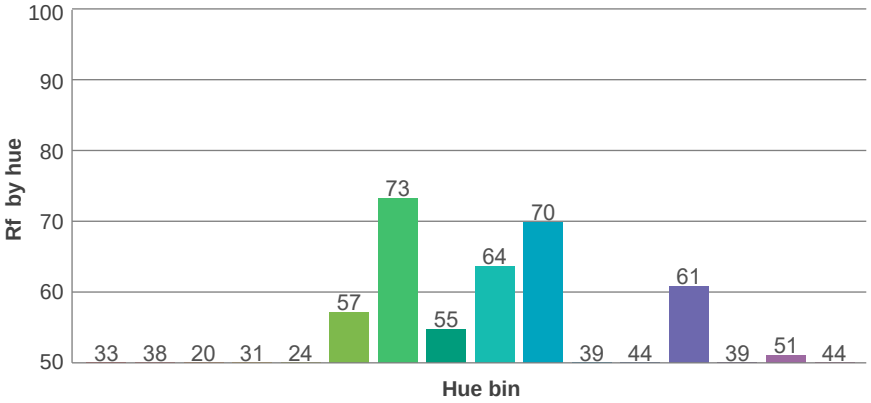
Fidelity index Rf

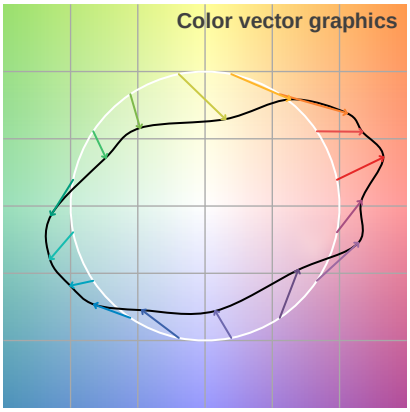
Rg 87,8

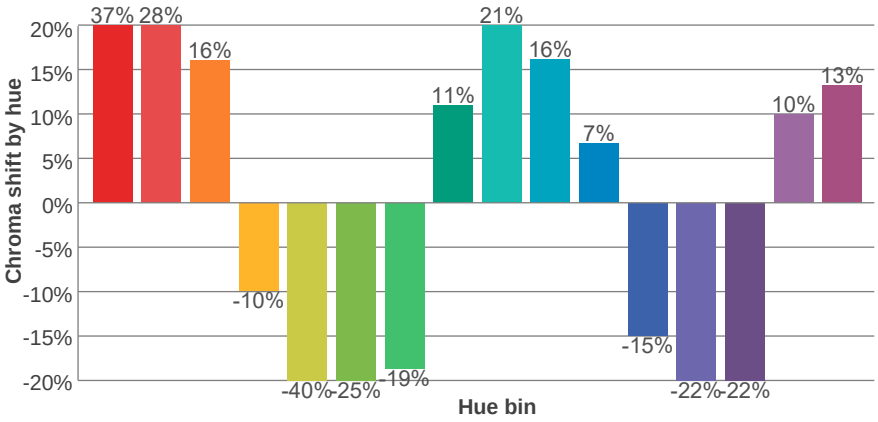
Gammut index Rg

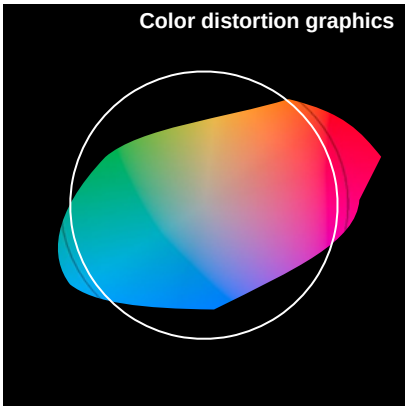
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	33	37%	10%
2	38	28%	-19%
3	20	16%	-49%
4	31	-10%	-47%
5	24	-40%	-27%
6	57	-25%	8%
7	73	-19%	11%
8	55	11%	29%
9	64	21%	16%
10	70	16%	-6%
11	39	7%	-28%
12	44	-15%	-31%
13	61	-22%	-8%
14	39	-22%	31%
15	51	10%	41%
16	44	13%	26%

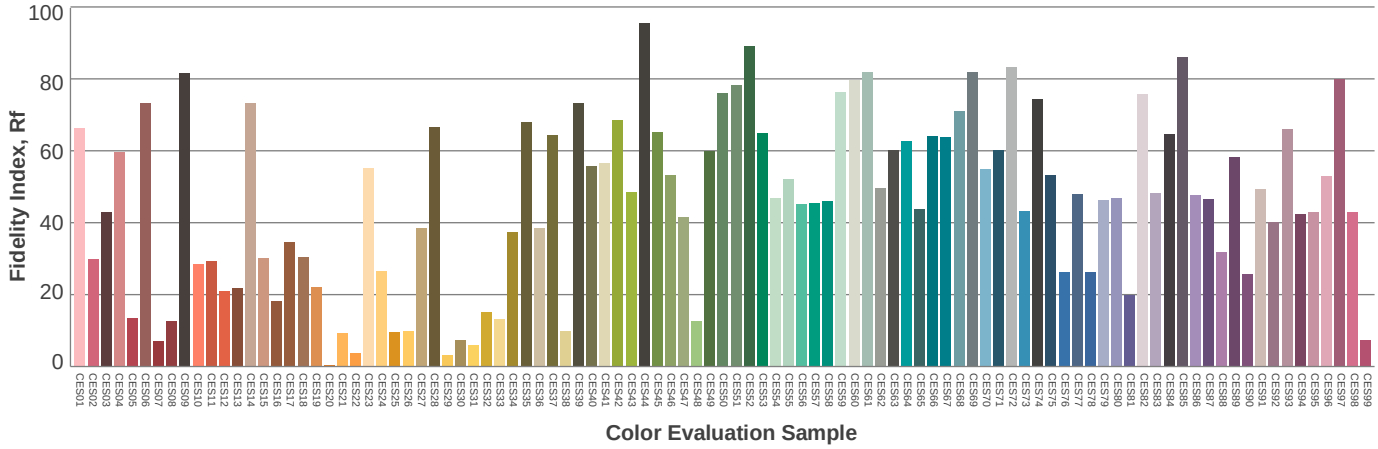




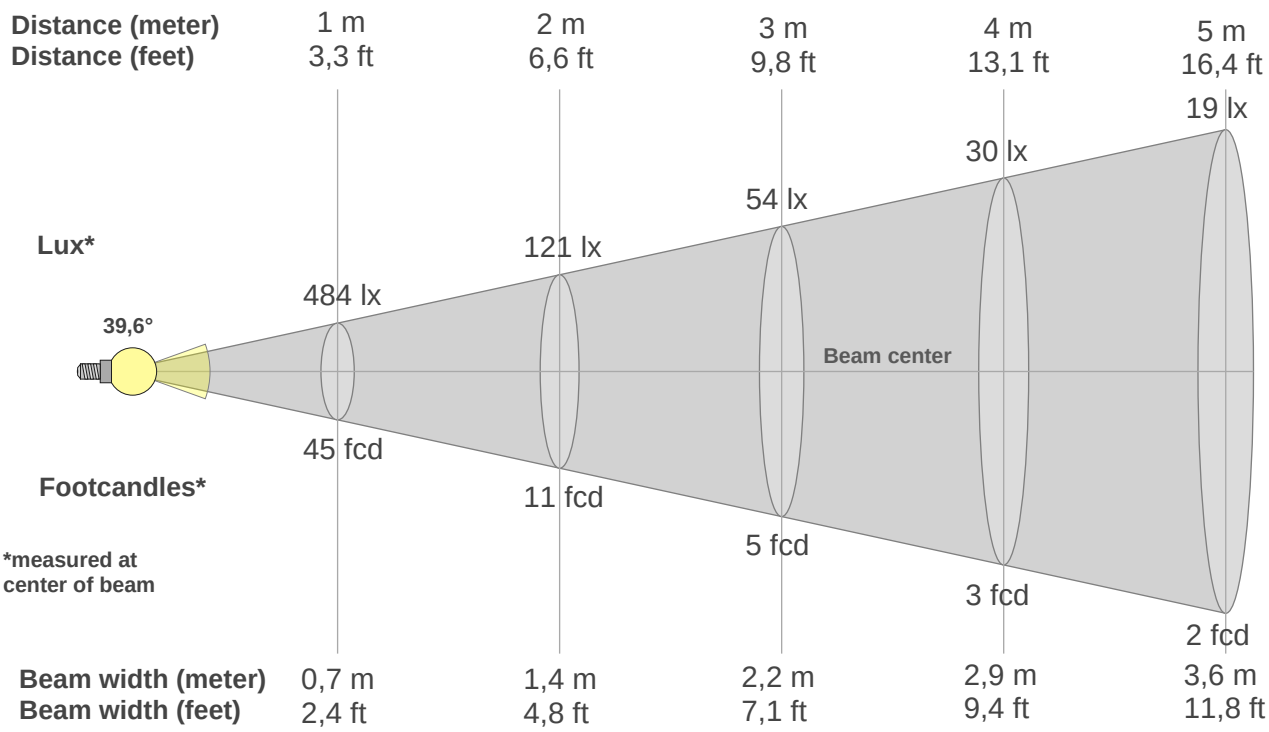








Beam details



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
484lx	121lx	54lx	30lx	19lx	13lx	10lx	8lx	6lx	5lx	4lx	3lx	3lx	2lx	2lx	2lx	2lx	1lx	1lx	1lx
45fcd	11,2fcd	5fcd	2,8fcd	1,8fcd	1,2fcd	0,9fcd	0,7fcd	0,6fcd	0,4fcd	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°
484	378	297	227	169	125	93	74	58	47	39	34	31	30	32	33	35	36	40	44
100%	78%	61%	47%	35%	26%	19%	15%	12%	10%	8%	7%	6%	6%	7%	7%	7%	7%	8%	9%

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°
484	492	493	491	489	486	480	472	460	443	424	399	377	349	324	306	281	263	246	235
100%	102%	102%	101%	101%	100%	99%	97%	95%	91%	88%	82%	78%	72%	67%	63%	58%	54%	51%	49%

Intensities in 180° c-plane

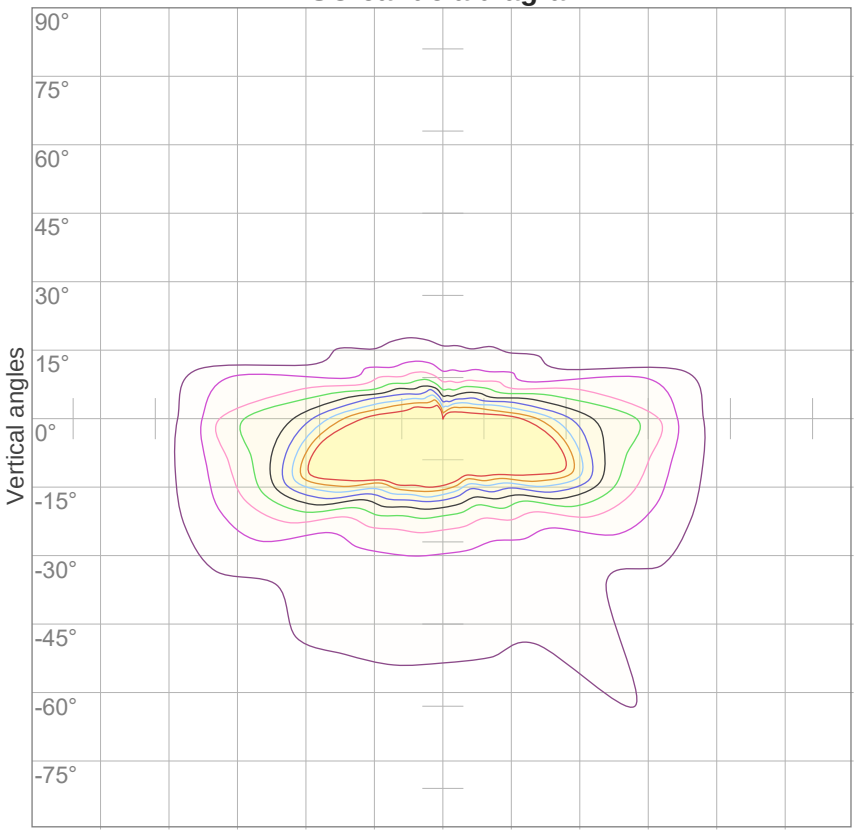
0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
484	507	529	546	562	571	566	525	447	359	289	234	191	161	136	119	104	90	82	77
100%	105%	109%	113%	116%	118%	117%	109%	92%	74%	60%	48%	39%	33%	28%	25%	21%	19%	17%	16%

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°
484	492	491	492	490	487	484	476	467	454	434	414	389	363	336	312	289	269	247	234
100%	102%	101%	102%	101%	101%	100%	98%	96%	94%	90%	86%	80%	75%	69%	64%	60%	56%	51%	48%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
39,6°	**94°**	**171,2°**	**84,1%**	**66,3%**

ISO candela diagram



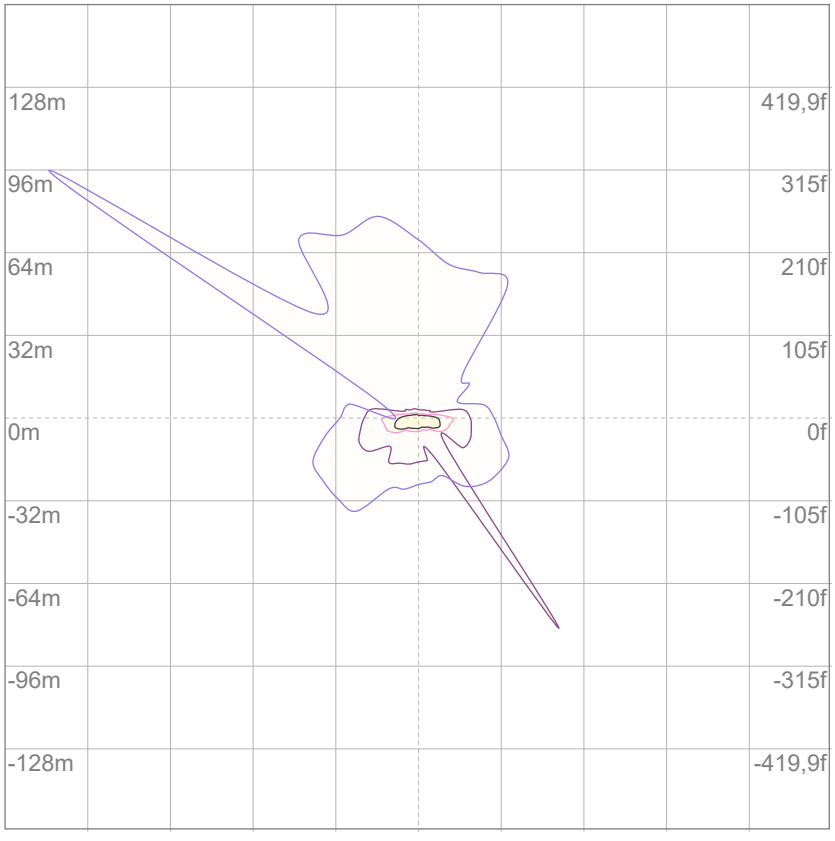
10%	48 cd
20%	97 cd
30%	145 cd
40%	194 cd
50%	242 cd
60%	290 cd
70%	339 cd
80%	387 cd
90%	436 cd

Conditions:

Number of c-planes: 16

Candela at center: 484 cd

ISO lux diagram



Mounting height: 10 meters (33 feet)

3%	0,145 lx
5%	0,242 lx
10%	0,484 lx
30%	1,45 lx
50%	2,42 lx

Conditions:

Number of c-planes: 16

Lux at center: 4,84 lx

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

Glare Evaluation According to UGR

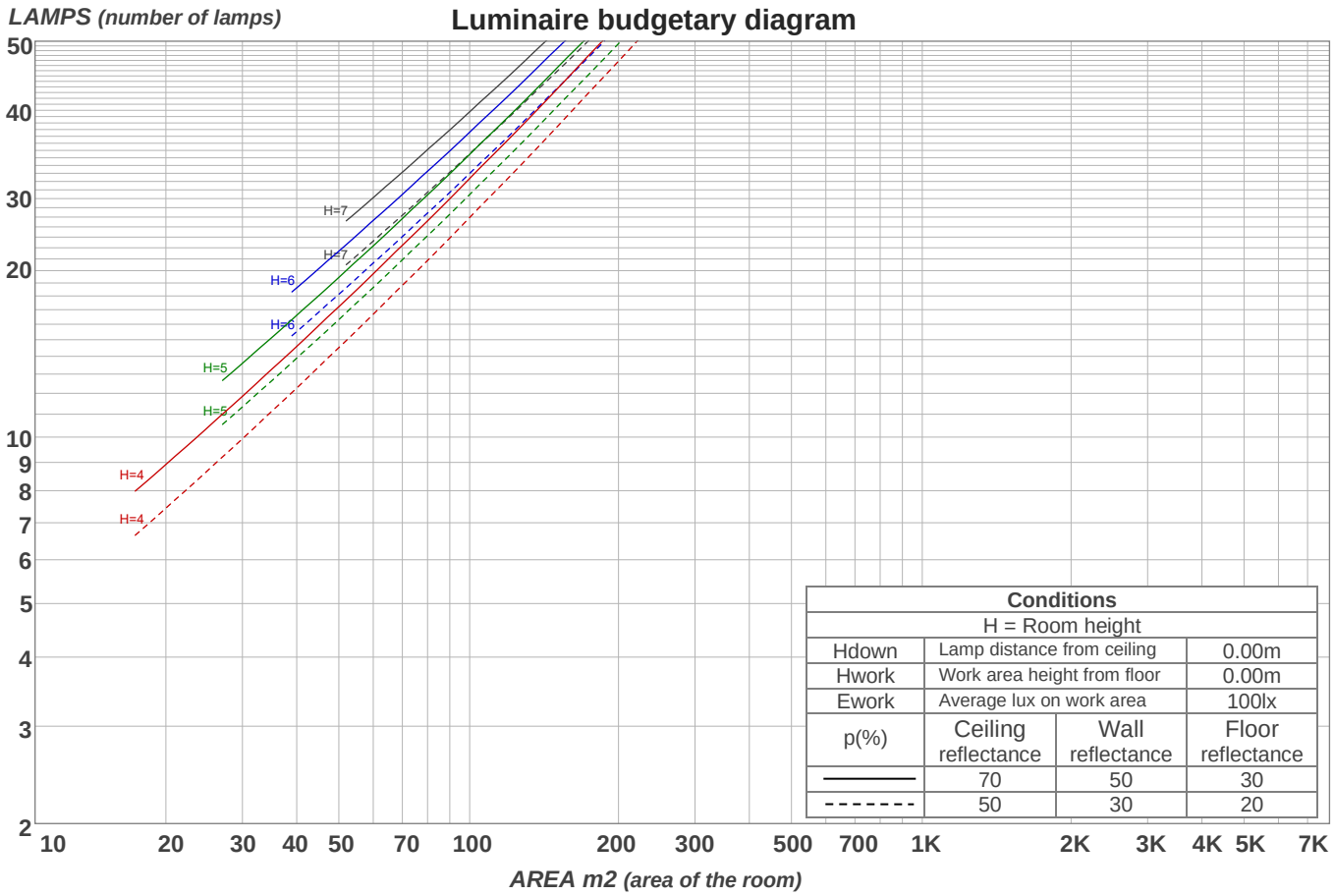
p Ceiling	70	70	50	50	30	70	70	50	50	30
p Walls	50	30	50	30	30	50	30	50	30	30
p Floor	20	20	20	20	20	20	20	20	20	20
Room size X Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	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
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 535 lm total luminous flux										

UGR data could not be calculated due to missing/wrong symmetry. Go to Edit -> Photometric -> Corrections and select Correct asymmetry (UGR not defined for asymmetrical distributions)..

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	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	88	85
2	101	94	88	83	99	92	86	82	89	84	80	85	82	78	82	79	76	74
3	94	85	77	72	92	83	76	71	80	74	70	78	73	69	75	71	67	65
4	87	77	69	63	85	75	68	63	73	67	62	71	65	61	69	64	60	58
5	82	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	53
6	76	65	57	51	75	64	56	51	62	55	50	60	54	50	59	54	50	48
7	72	60	52	46	70	59	52	46	57	51	46	56	50	46	55	50	45	44
8	68	56	48	43	66	55	48	43	54	47	42	52	47	42	51	46	42	40
9	64	52	45	40	63	51	44	39	50	44	39	49	43	39	48	43	39	37
10	60	49	42	37	59	48	41	37	47	41	37	46	41	36	45	40	36	35

Luminaire budgetary diagram

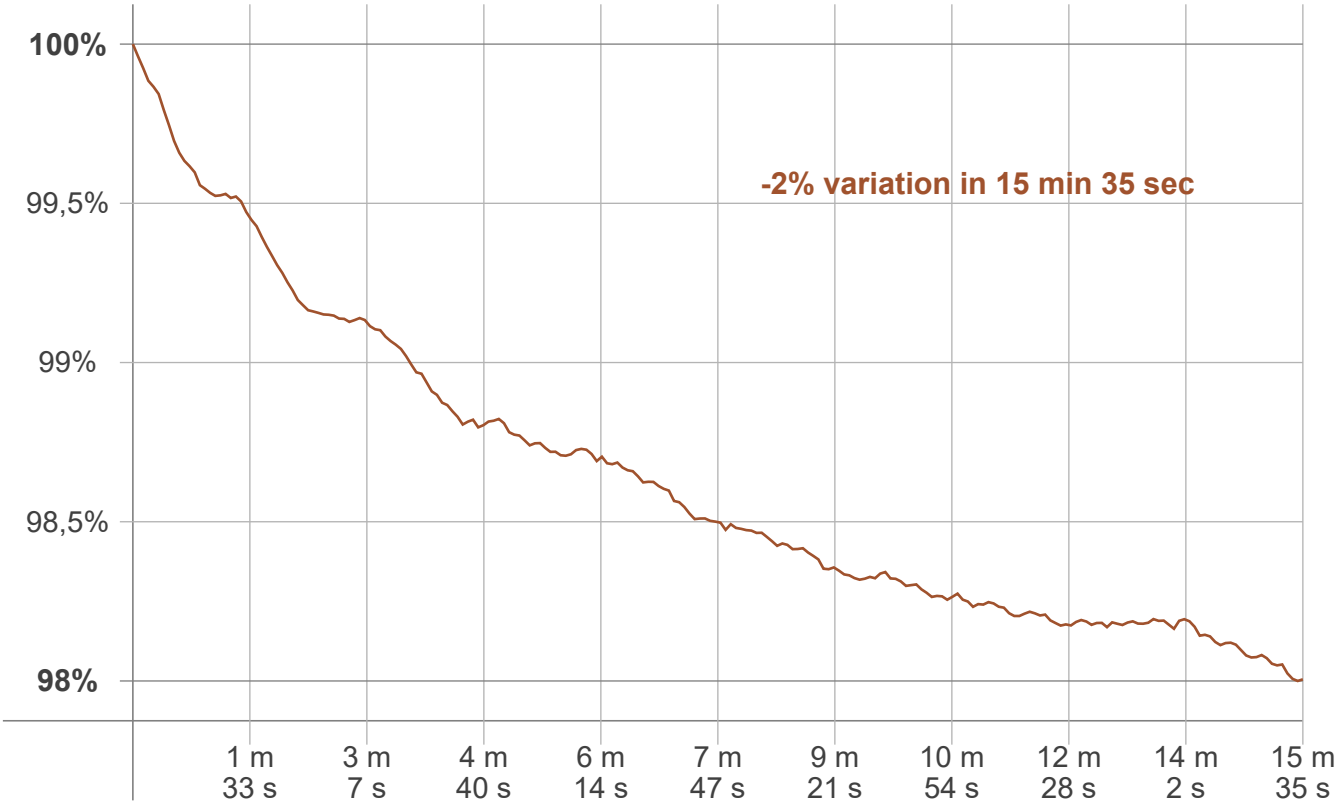


Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
41,8 lm	96,3 lm	98,8 lm	82,2 lm	70,7 lm	60,0 lm	39,9 lm	26,5 lm	18,8 lm

90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0,044 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 15 min 35 sec**
Warmup variation	**-2,0%**

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
11829 K	**+294 K**	**12123 K**

Output change

Output start	Output change	Output end
546 lm	**-11 lm**	**535 lm**