

Light efficiency:

150 Lumen/Watt

Output: 26698 lm

Light quality:

CRI: 84.7

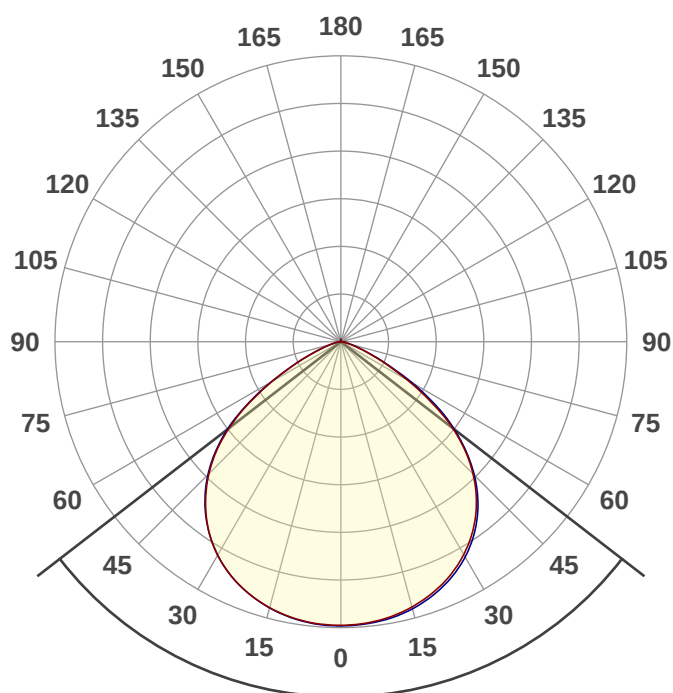
Peak: 11089 cd

Color temperature:

5165 K

Power: 178.6 W

PF: 1.0



Product name:

UHBDT-50K175H1-110

Date and time:

9/16/2020 1:28:06 PM

Beam angle

104.6°

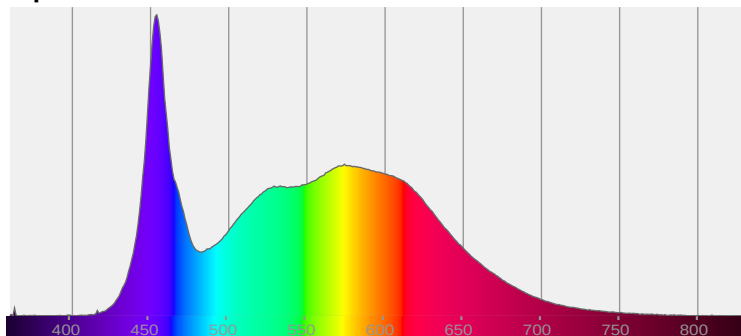


CIE 1931

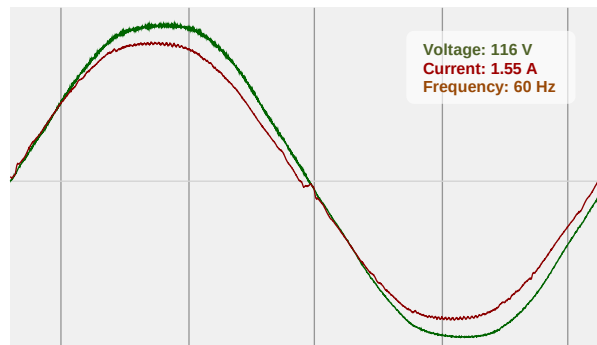
x: 0.341

y: 0.347

Spectra



Power



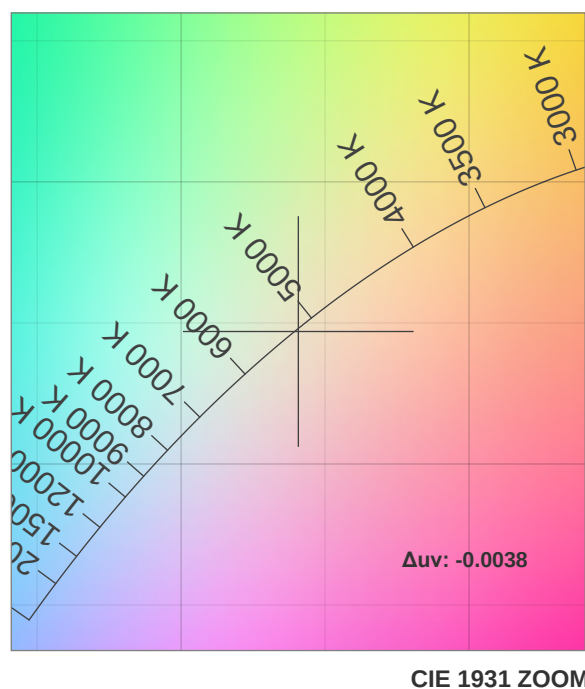
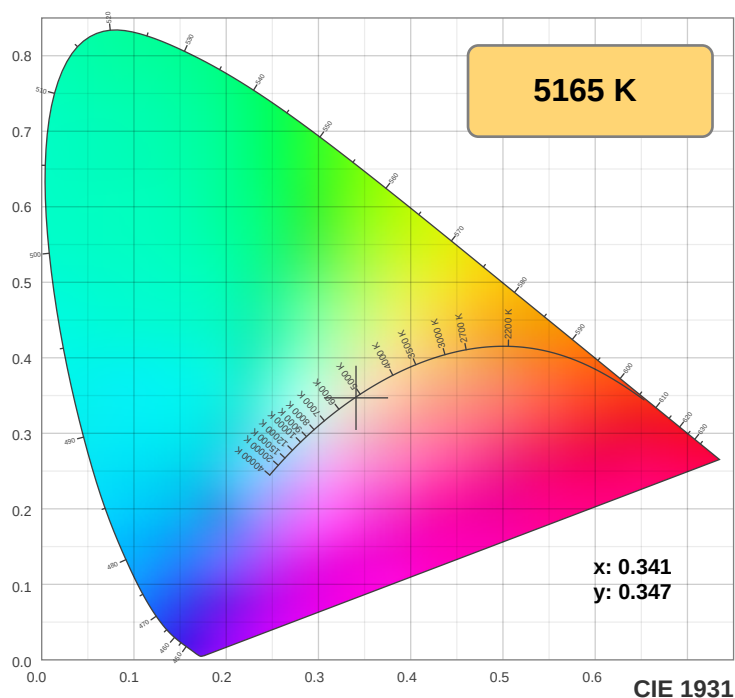
T 314.743.3067

F 314.972.6202

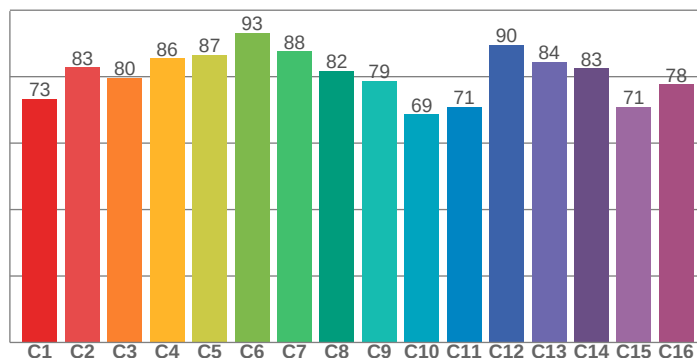
email: commercial-sales@superbrightleds.com

www.superbrightleds.com/

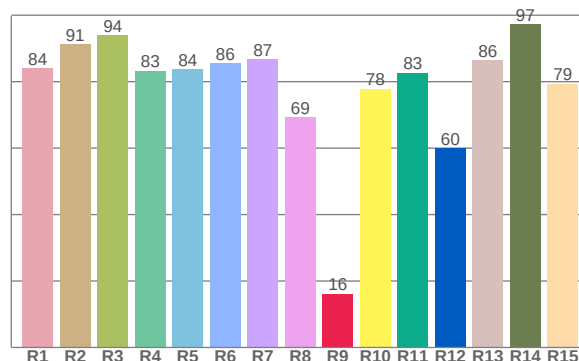
Color Specifications



TM30: 80.8



CRI: 84.7 (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
84.1	91.3	94.0	83.3	83.8	85.6	86.7	69.2	16.2	77.9	82.7	59.9	86.5	97.2	79.4

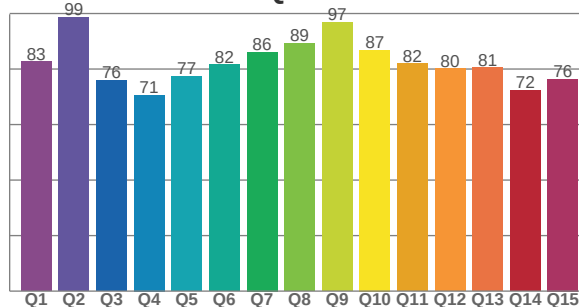
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
73.4	82.8	79.7	85.5	86.6	93.2	87.7	81.7	78.7	68.6	70.9	89.6	84.4	82.5	70.8	77.7

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
82.7	98.6	76.0	70.6	77.4	81.6	86.1	89.2	96.9	86.8	81.9	80.2	80.5	72.4	76.4

CQS: 80.8



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
5165 K	84.7	16.2	80.8	93.8	80.8	0.341	0.347	0.210	0.321	-0.0038



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TM30 Report

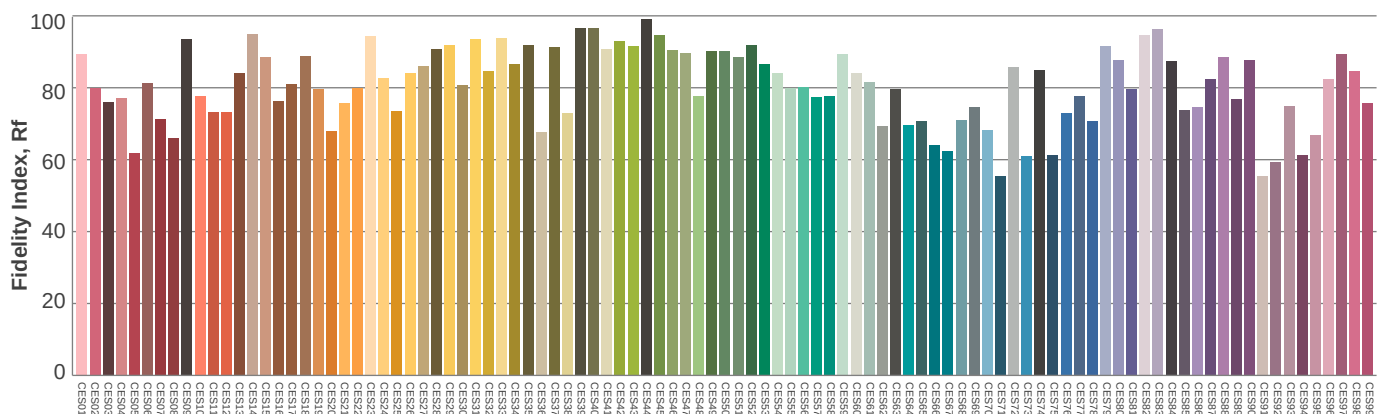
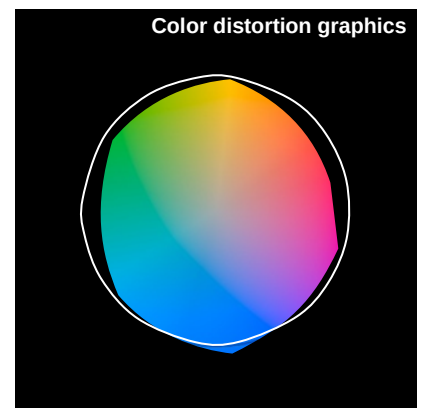
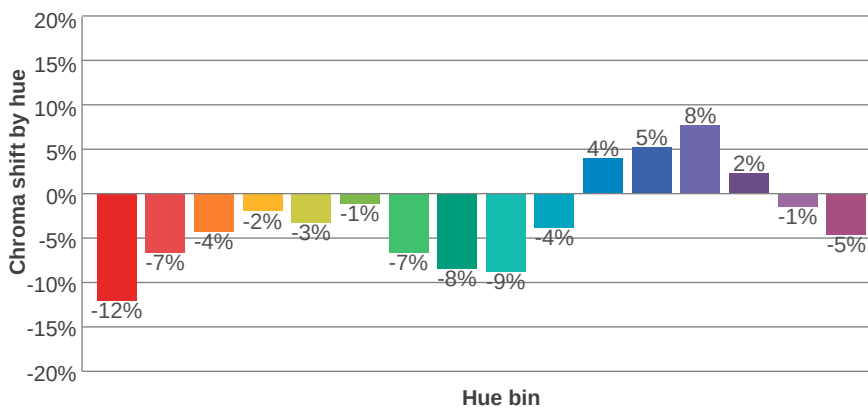
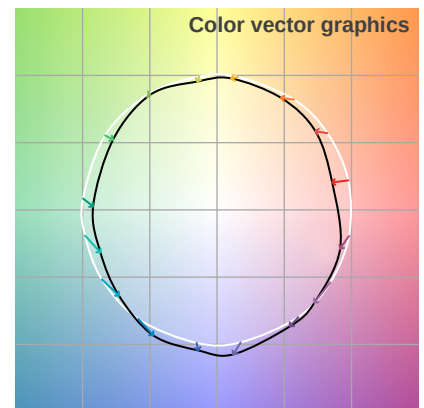
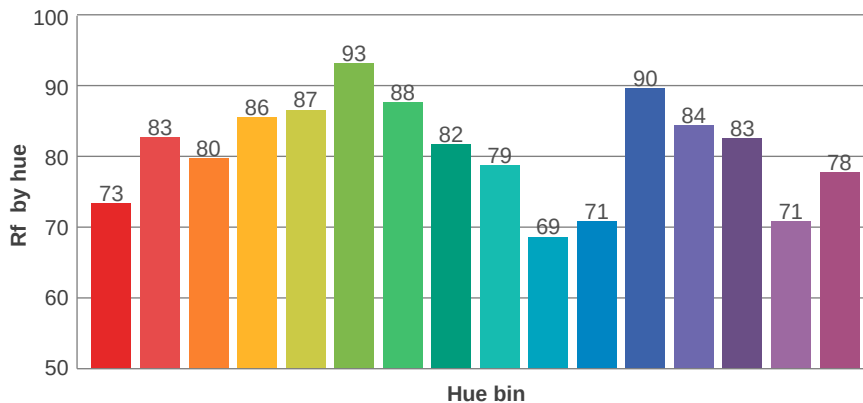
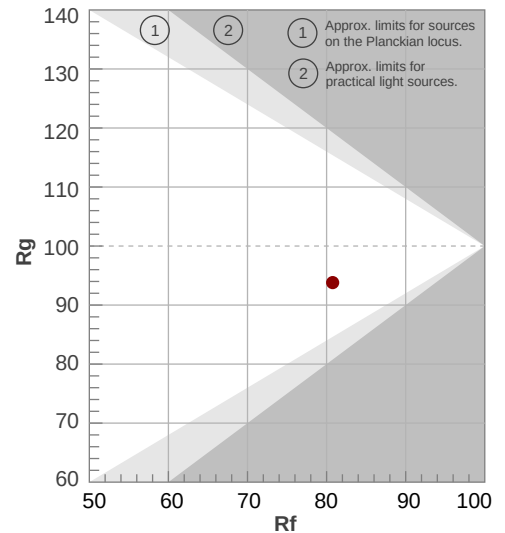
Rf 80.8

Fidelity index Rf

Rg 93.8

Gamut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	73	-12%	1%
2	83	-7%	6%
3	80	-4%	9%
4	86	-2%	5%
5	87	-3%	2%
6	93	-1%	-1%
7	88	-7%	-1%
8	82	-8%	4%
9	79	-9%	14%
10	69	-4%	17%
11	71	4%	16%
12	90	5%	2%
13	84	8%	-7%
14	83	2%	-9%
15	71	-1%	-19%
16	78	-5%	-11%



Color Evaluation Sample



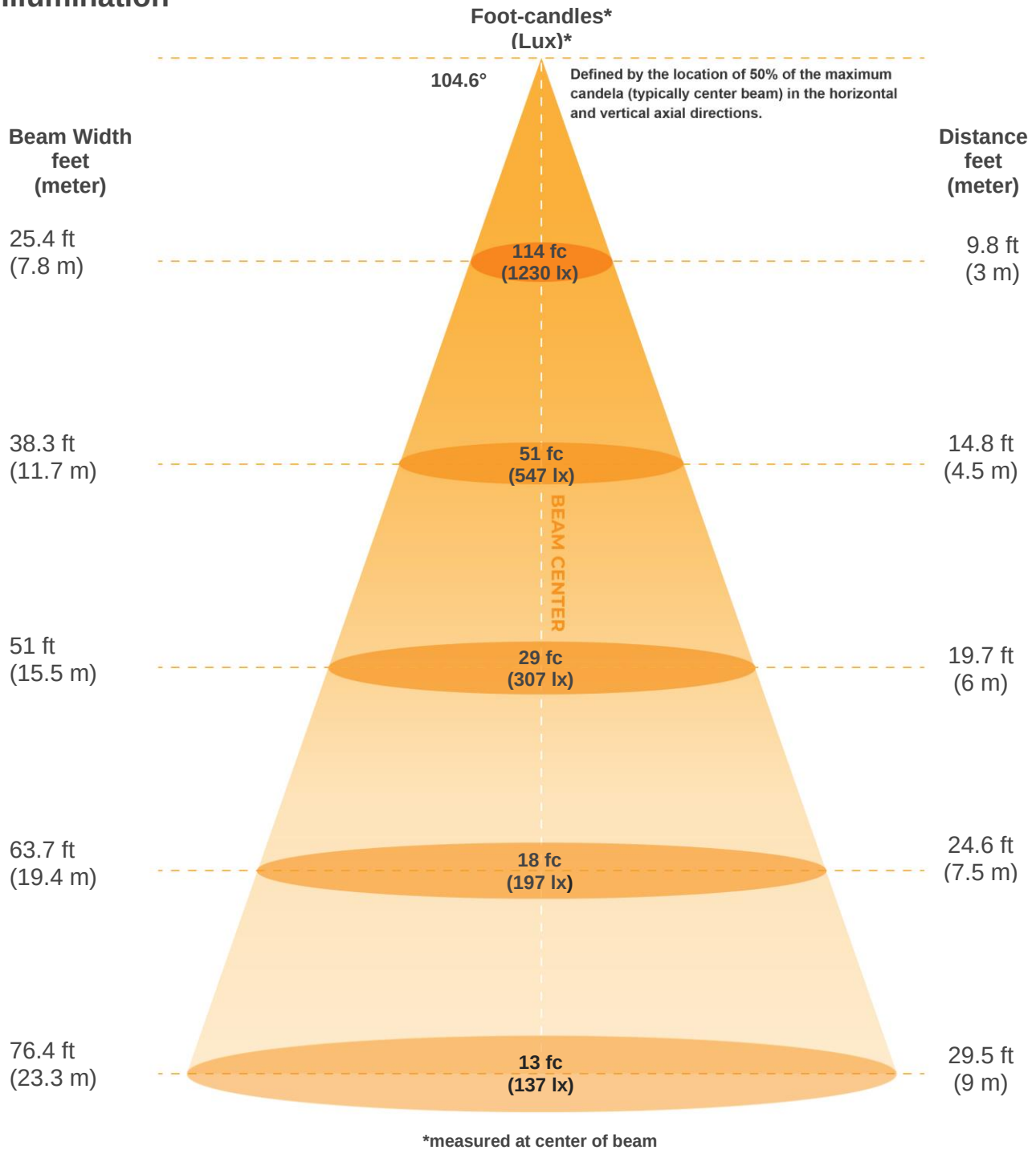
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Illumination



Beam intensities from 1-20m

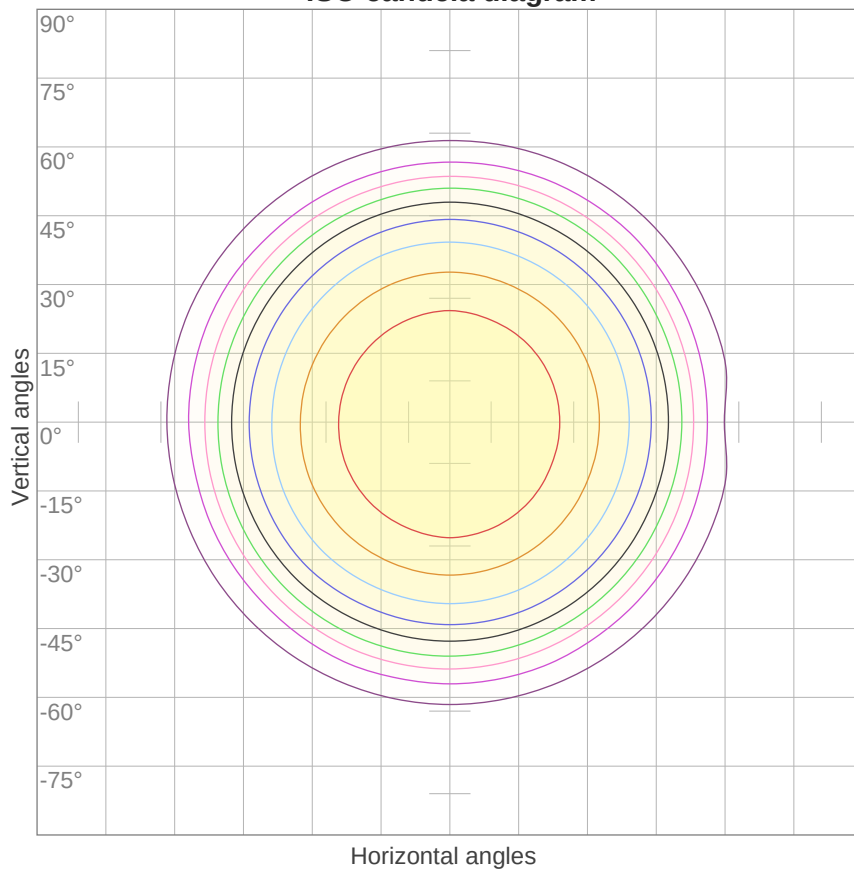
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
11069lx	2767lx	1230lx	692lx	443lx	307lx	226lx	173lx	137lx	111lx	91lx	77lx	65lx	56lx	49lx	43lx	38lx	34lx	31lx	28lx
1028.4f	257.1fc	114.3fc	64.3fcd	41.1fcd	28.6fcd	21fcd	16.1fcd	12.7fcd	10.3fcd	8.5fcd	7.1fcd	6.1fcd	5.2fcd	4.6fcd	4fcd	3.6fcd	3.2fcd	2.8fcd	2.6fcd

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
104.6°	136.8°	155.1°	90.6%	64.6%



ISO Diagrams

ISO candela diagram



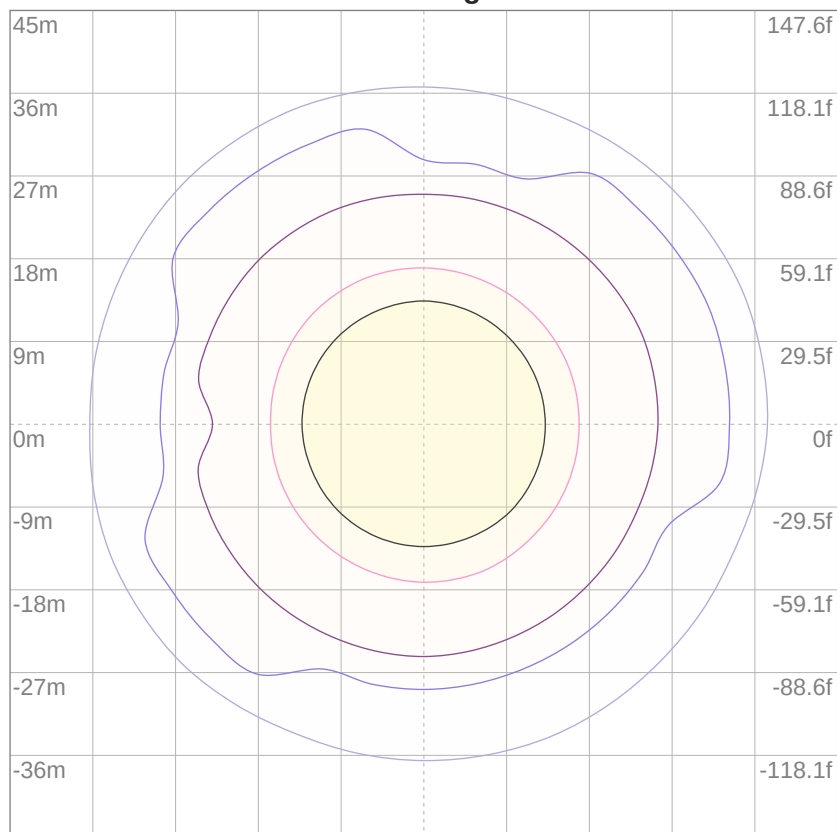
10%	1107 cd
20%	2214 cd
30%	3321 cd
40%	4428 cd
50%	5535 cd
60%	6642 cd
70%	7749 cd
80%	8856 cd
90%	9963 cd

Conditions:

Number of c-planes: 16

Candela at center: 11069 cd

ISO lux diagram



3%	3.32 lx
5%	5.53 lx
10%	11.1 lx
30%	33.2 lx
50%	55.3 lx

Conditions:

Number of c-planes: 16

Lux at center: 111 lx

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



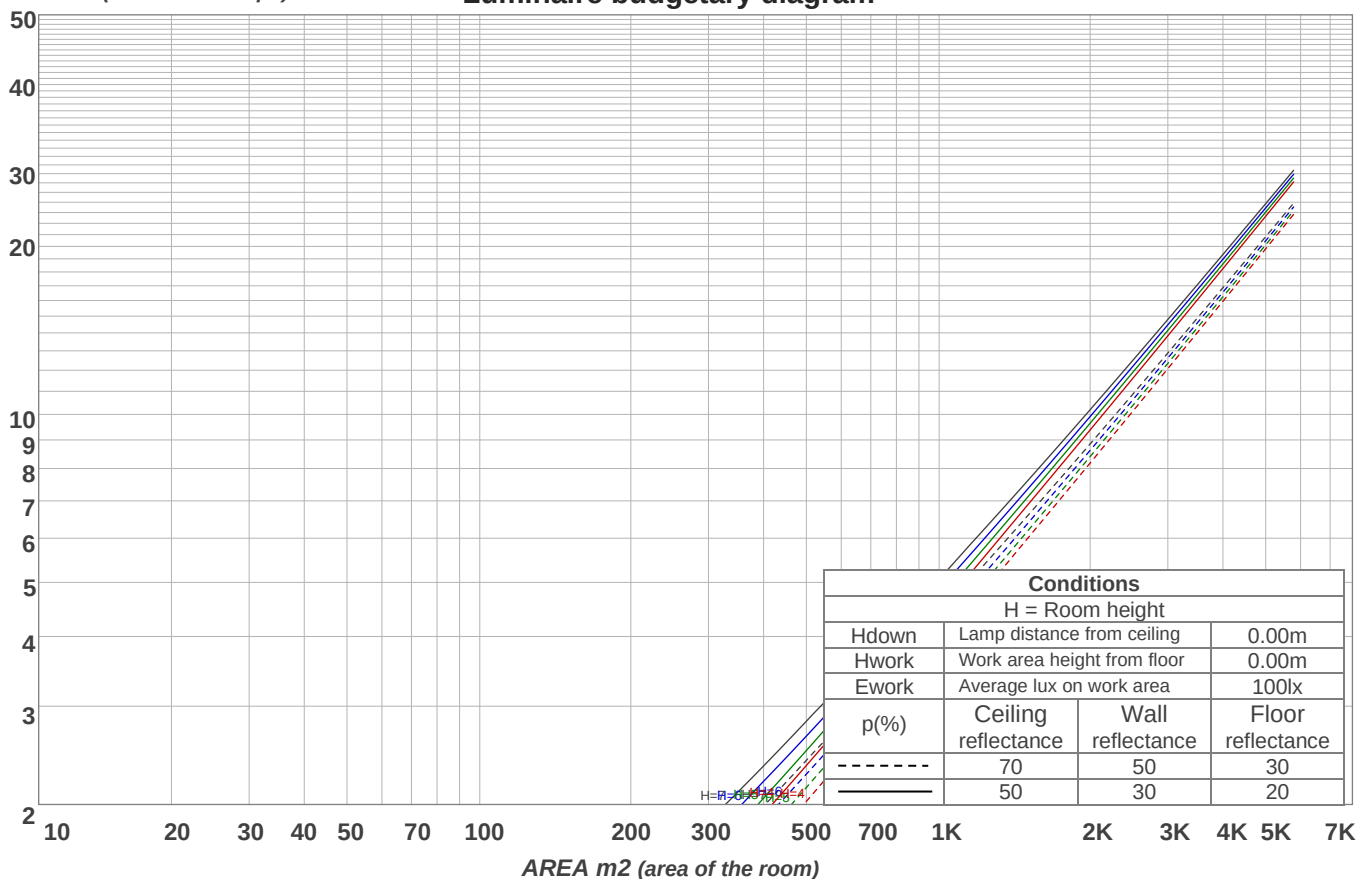
Light Planning

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	101	101	101	99
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	87
2	102	95	89	84	100	93	88	83	90	85	81	86	83	79	83	80	78	76
3	94	85	78	72	92	83	77	71	80	75	70	77	73	69	75	71	67	65
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57
5	80	68	60	54	78	67	59	54	65	58	53	63	57	52	61	56	52	50
6	74	62	53	47	72	61	53	47	59	52	47	57	51	46	56	50	46	44
7	69	56	48	42	67	55	48	42	54	47	42	52	46	41	51	45	41	39
8	64	51	43	38	63	51	43	38	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	58	47	39	34	45	39	34	44	38	34	43	38	33	32
10	56	44	36	31	55	43	36	31	42	35	31	41	35	31	40	34	30	29

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°
1050 lm	3035 lm	4655 lm	5629 lm	5614 lm	4202 lm	1804 lm	464 lm	87.2 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
13.8 lm	17.4 lm	21.6 lm	23.7 lm	24.1 lm	22.4 lm	18.2 lm	12.1 lm	4.36 lm

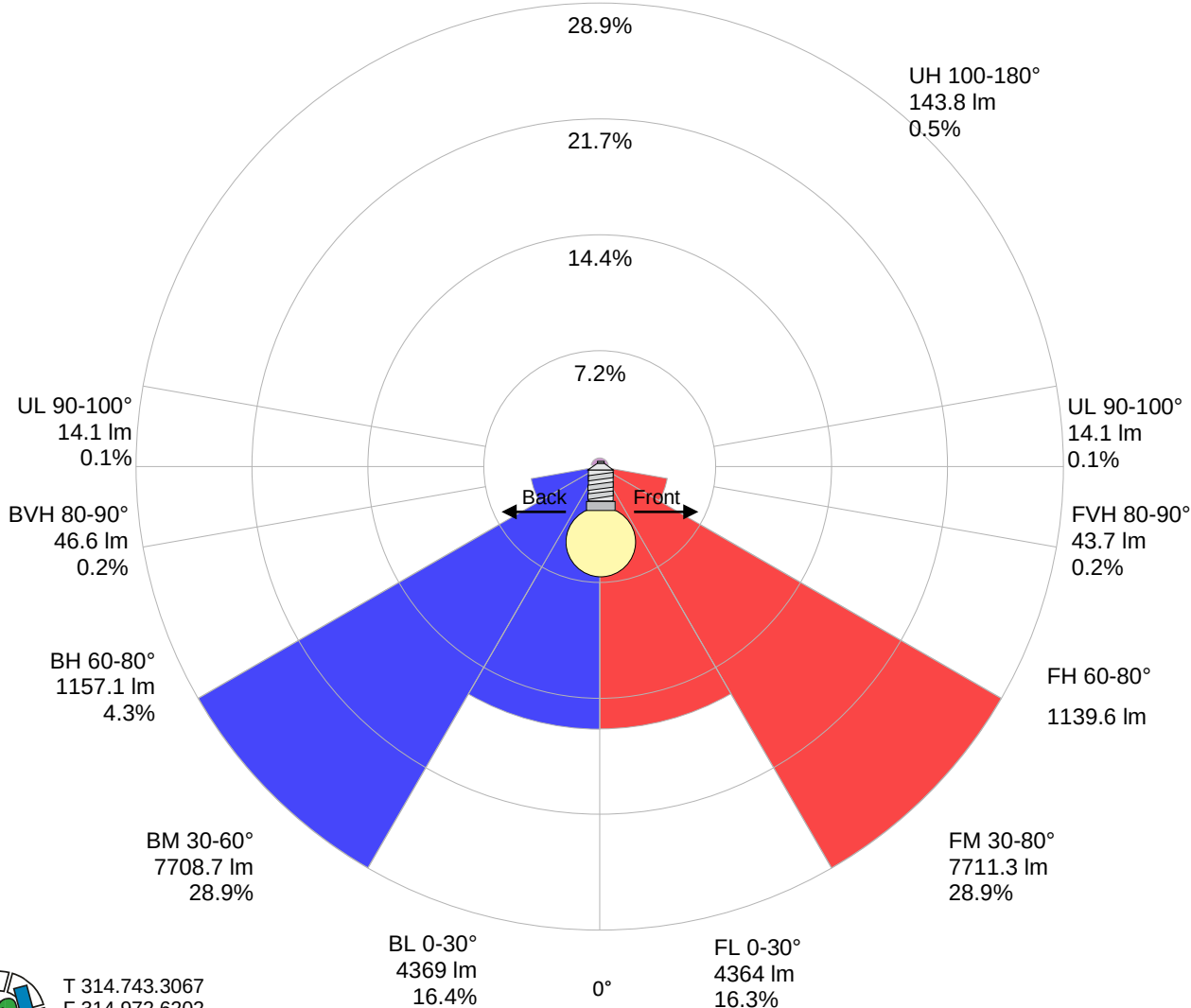


Road Report

LCS table

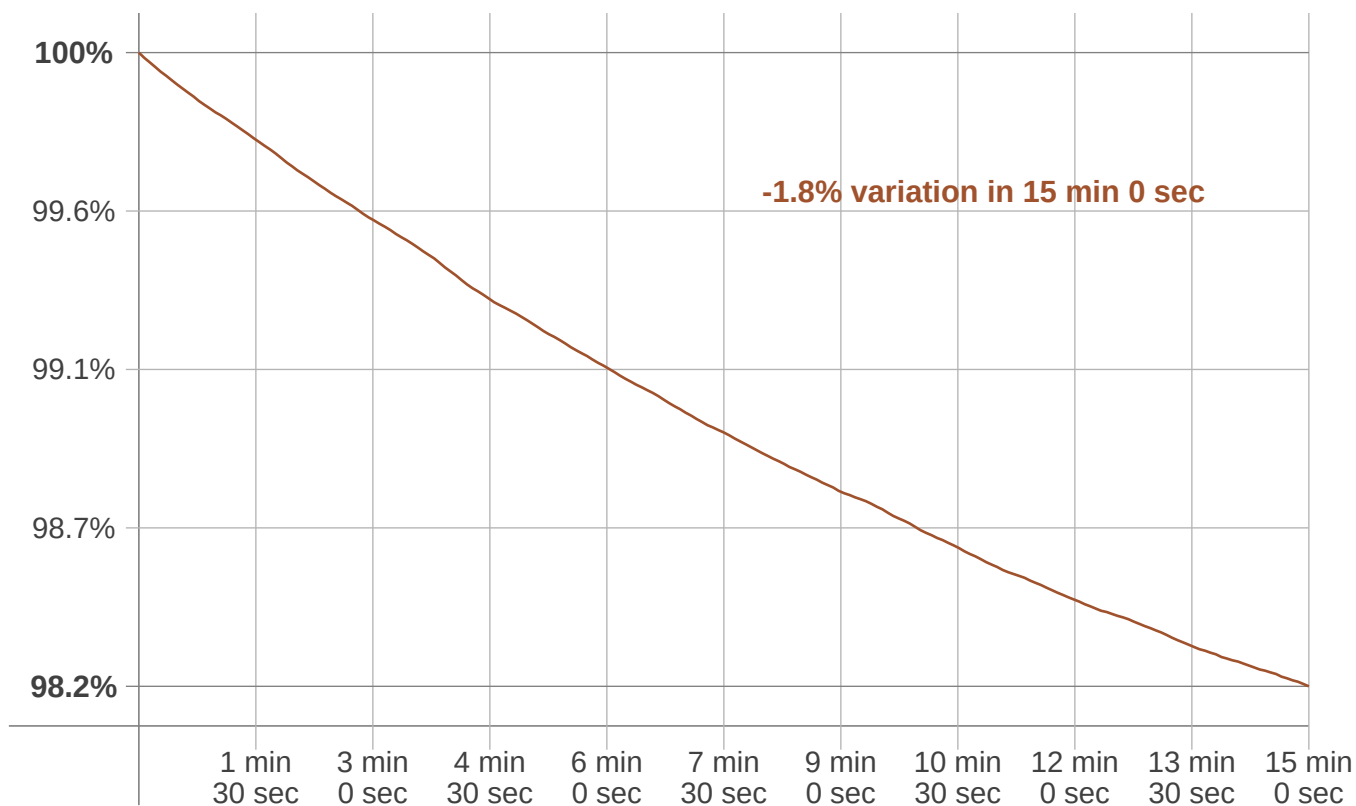
BUG rating:	B4 U3 G3	
Forward light	Lumens	Lumens %
Low(0-30):	4364	16.3%
Medium(30-60):	7711.3	28.9%
High(60-80):	1139.6	4.3%
Very high(80-90):	43.7	0.2%
Back light		
Low(0-30):	4369	16.4%
Medium(30-60):	7708.7	28.9%
High(60-80):	1157.1	4.3%
Very high(80-90):	46.6	0.2%
Uplight		
Low(90-100):	14.1	0.1%
High(100-180):	143.8	0.5%

LCS graph



Stabilization

Warmup curve



Warmup result

Warmup time:	15 min 0 sec
Warmup variation	-1.8%

Warmup conditions

Stable period:	15 min
Stable change max:	2.0%
Minimum time:	15 min

Color temperature change

CCT start	CCT change	CCT end
5107 K	+58 K	5165 K

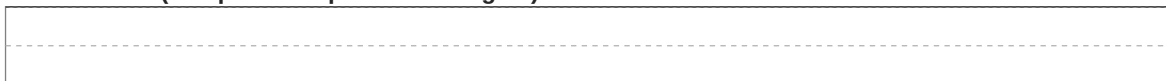
Output change

Output start	Output change	Output end
27169 lm	-471 lm	26698 lm

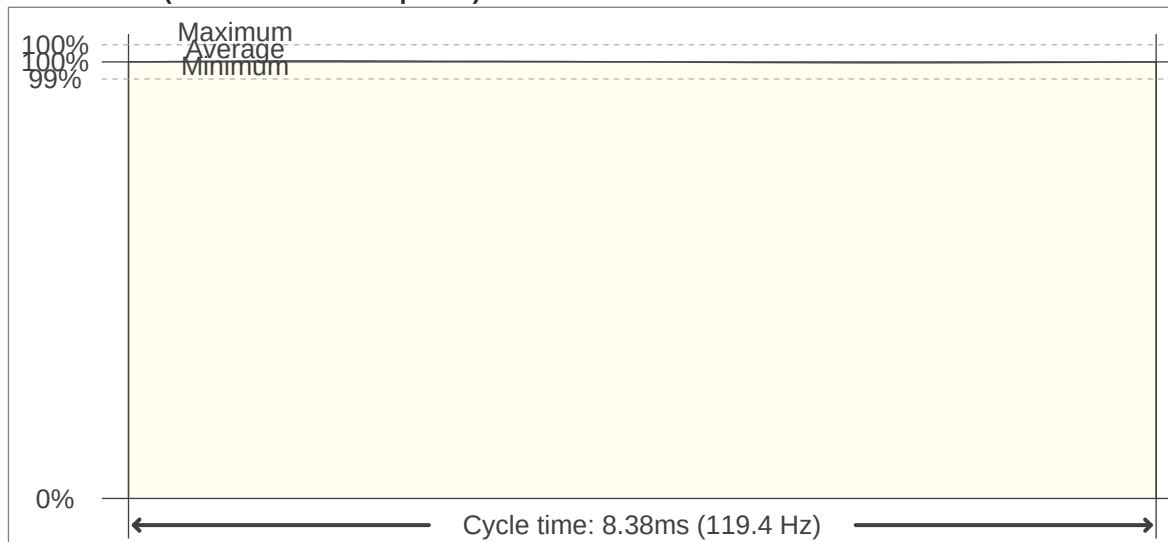


Flicker

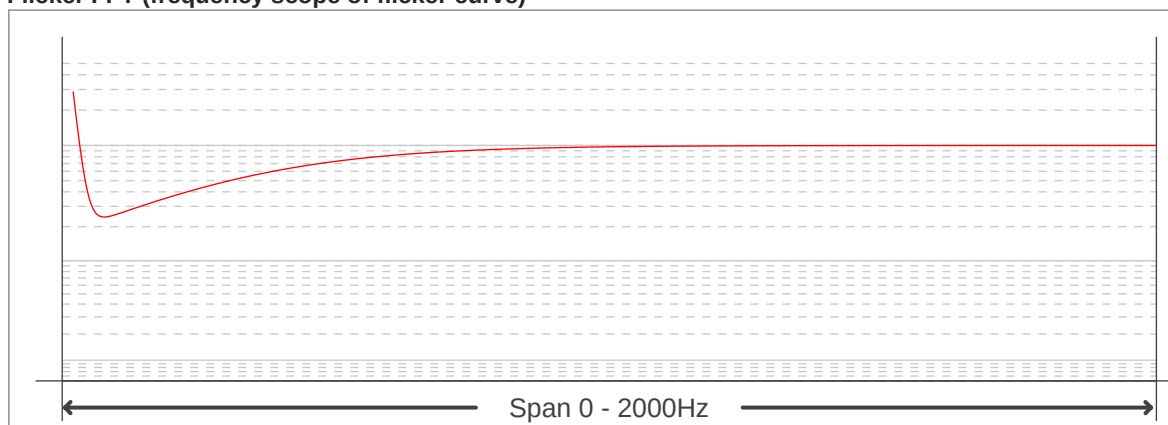
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:	119.4 Hz
Flicker index:	0
Flicker percentage:	0.27 %
SVM: (Visual flicker)	0.01

Flicker conditions:

Sample rate:	40000 samples/second
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