Light efficiency:

141 Lumen/Watt

Light quality:

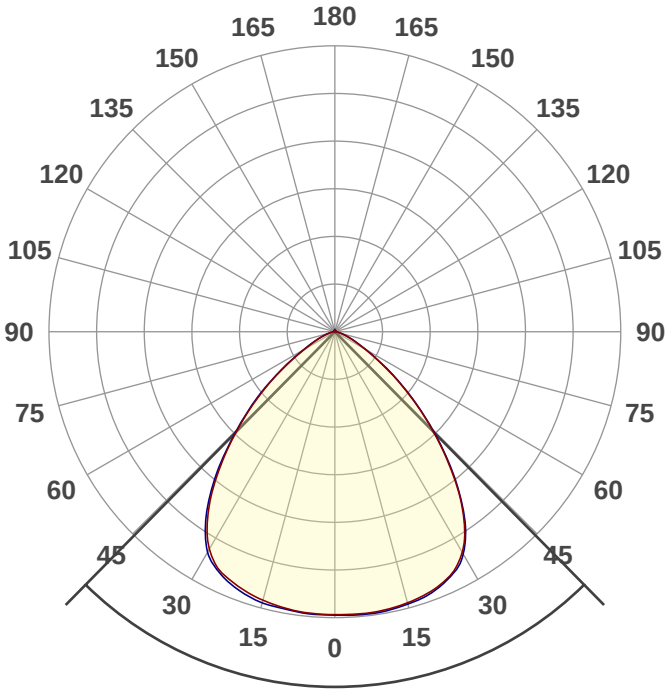
CRI: 85.3

Color temperature:

5234 K

Output: 18928 lm
Peak: 9421 cd

Power: 134.6 W
PF: 1.0



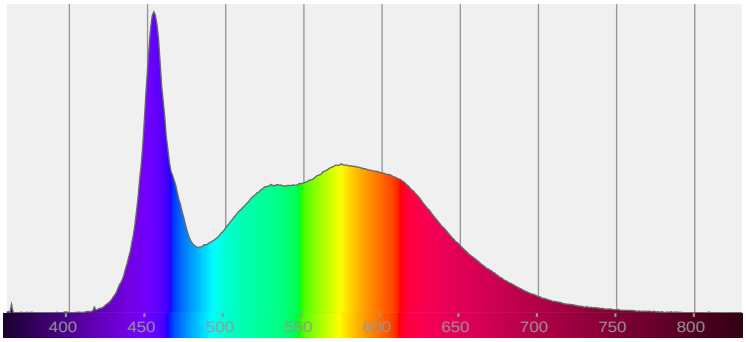
Beam angle **89.1°**

CIE 1931
x: 0.339
y: 0.345

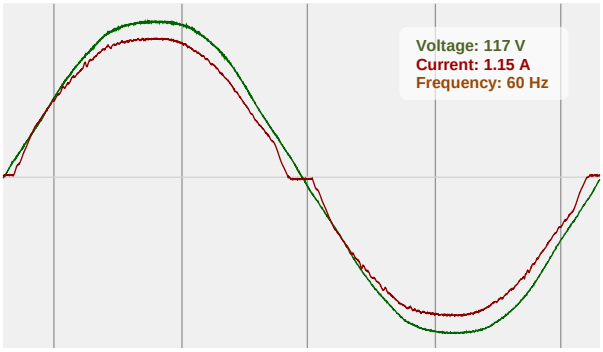
Product name:
UHBDT-50K135H1-110-PR90

Date and time:
9/16/2020 12:20:05 PM

Spectra



Power



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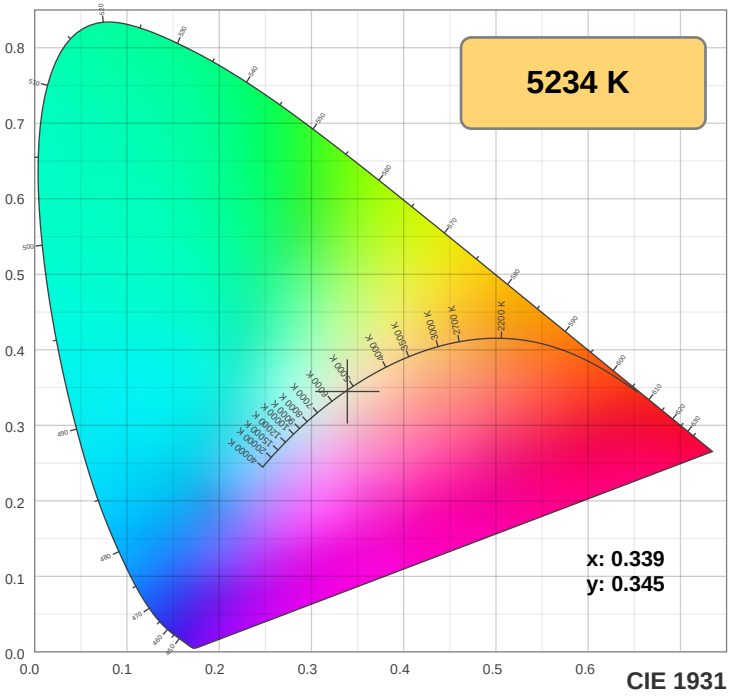
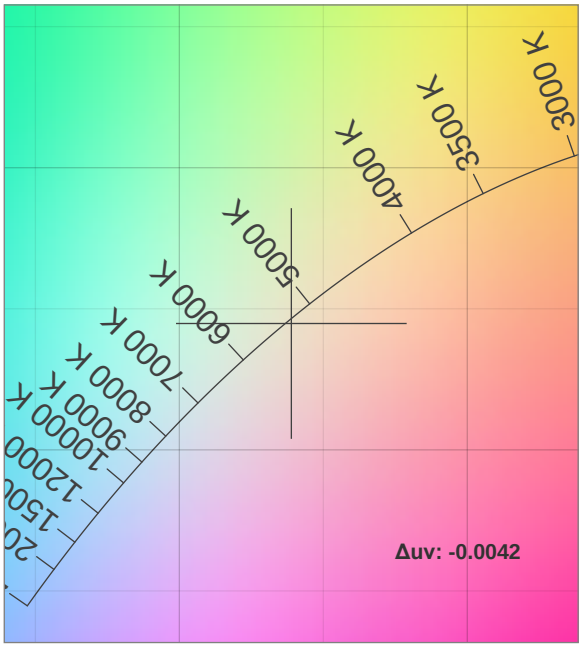
Color Specifications

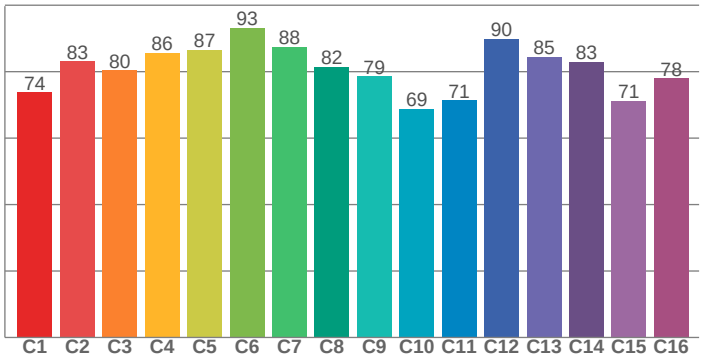


CIE 1931

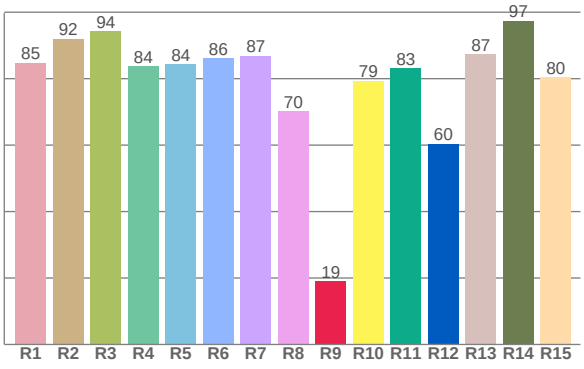


CIE 1931 ZOOM

TM30: 81.0



CRI: 85.3 (R1-R8)



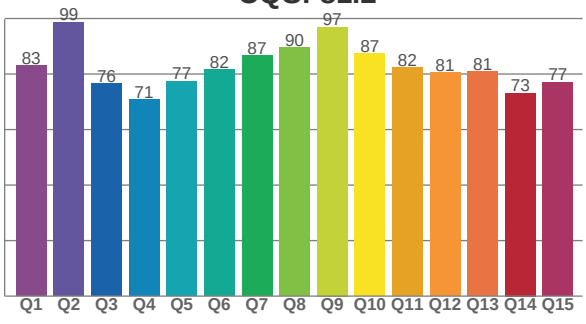
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
84.9	92.0	94.2	83.7	84.4	86.2	86.9	70.1	19.1	79.4	83.1	60.4	87.4	97.4	80.4

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
73.8	83.1	80.4	85.8	86.6	93.1	87.5	81.5	78.6	68.9	71.4	89.8	84.5	82.9	71.3	78.0

CQS: 81.2



CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83.0	98.6	76.5	70.8	77.4	81.6	86.6	89.6	97.0	87.3	82.3	80.5	80.9	73.2	77.0

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
5234 K	85.3	19.1	81.0	93.8	81.2	0.339	0.345	0.210	0.320	-0.0042

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TM30 Report

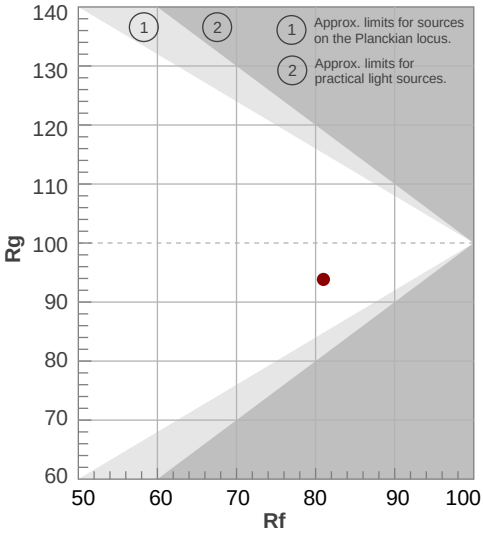
Rf 81.0

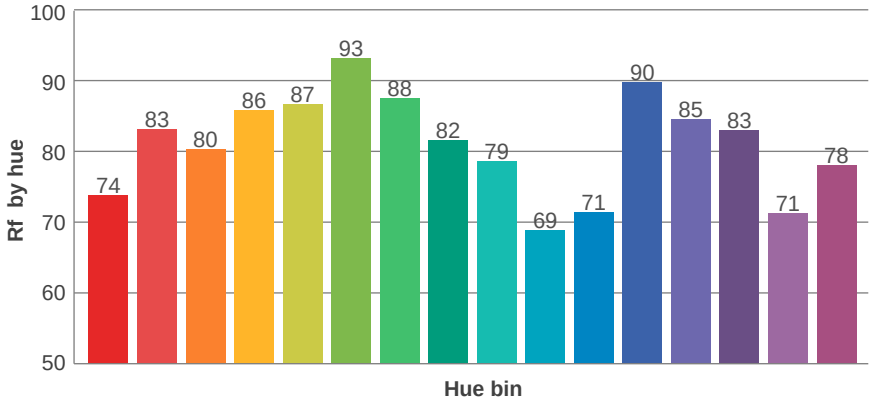
Fidelity index Rf

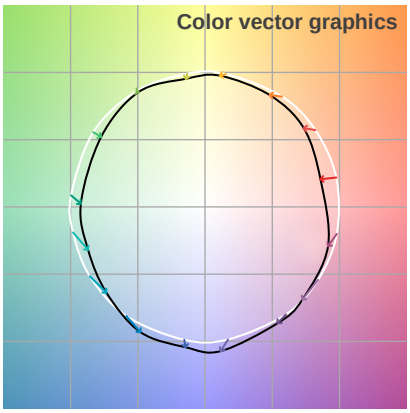
Rg 93.8

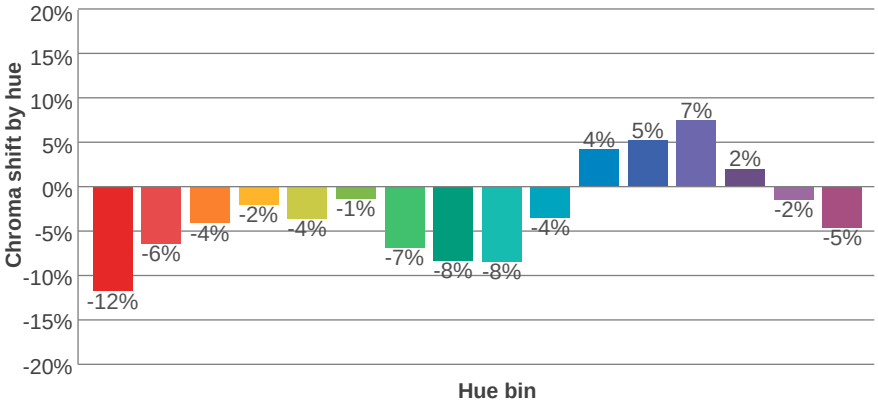
Gamut index Rg

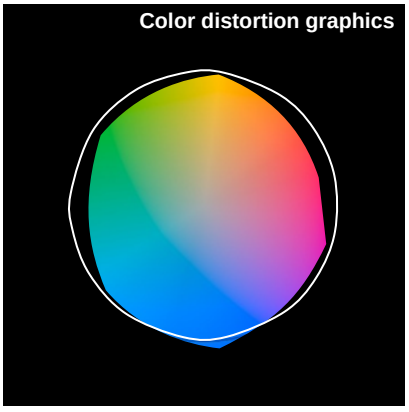
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	74	-12%	1%
2	83	-6%	6%
3	80	-4%	8%
4	86	-2%	4%
5	87	-4%	2%
6	93	-1%	-1%
7	88	-7%	0%
8	82	-8%	5%
9	79	-8%	15%
10	69	-4%	17%
11	71	4%	15%
12	90	5%	2%
13	85	7%	-7%
14	83	2%	-9%
15	71	-2%	-19%
16	78	-5%	-10%

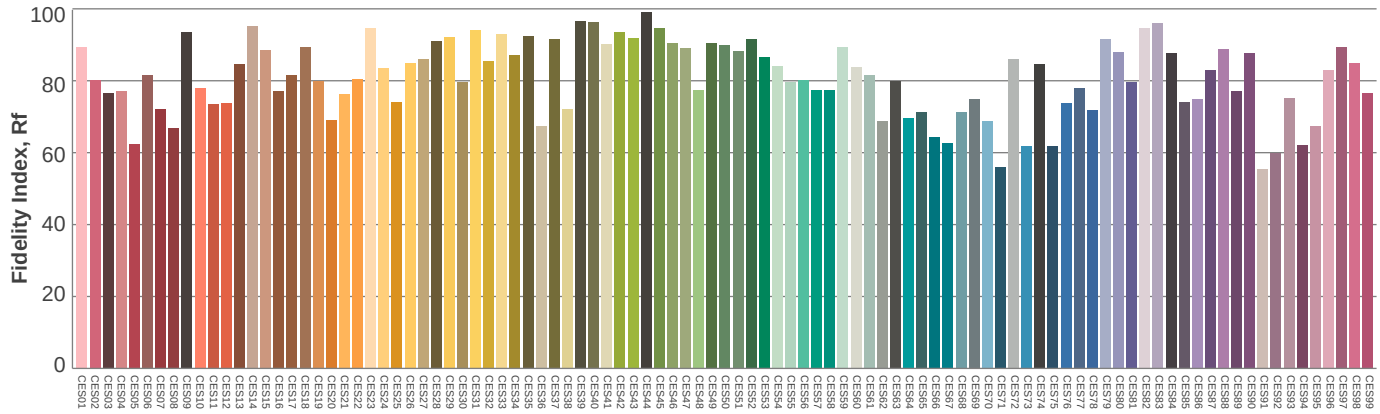












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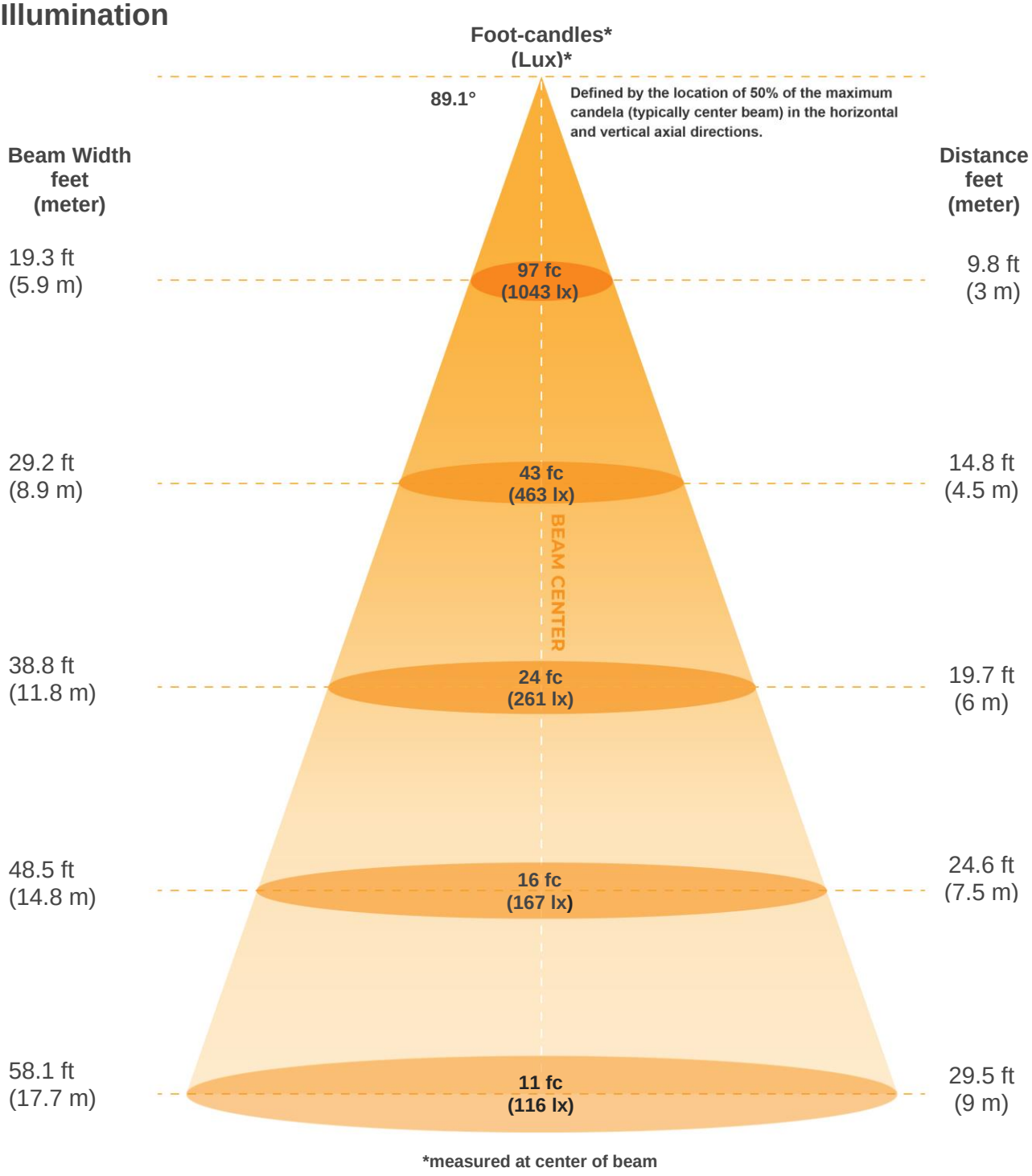
Illumination



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
9385lx	2346lx	1043lx	587lx	375lx	261lx	192lx	147lx	116lx	94lx	78lx	65lx	56lx	48lx	42lx	37lx	32lx	29lx	26lx	23lx
871.9fc	218fcd	96.9fcd	54.5fcd	34.9fcd	24.2fcd	17.8fcd	13.6fcd	10.8fcd	8.7fcd	7.2fcd	6.1fcd	5.2fcd	4.4fcd	3.9fcd	3.4fcd	3fcd	2.7fcd	2.4fcd	2.2fcd

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
89.1°	**124.8°**	**149.3°**	**93.2%**	**75.0%**

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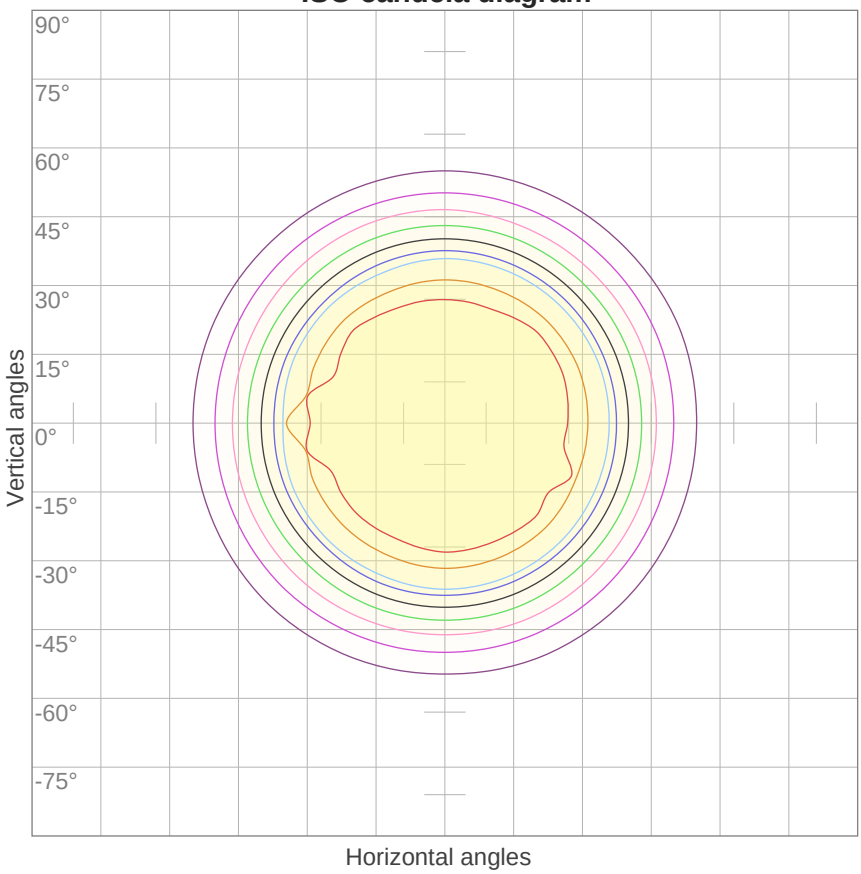
ISO Diagrams

ISO candela diagram



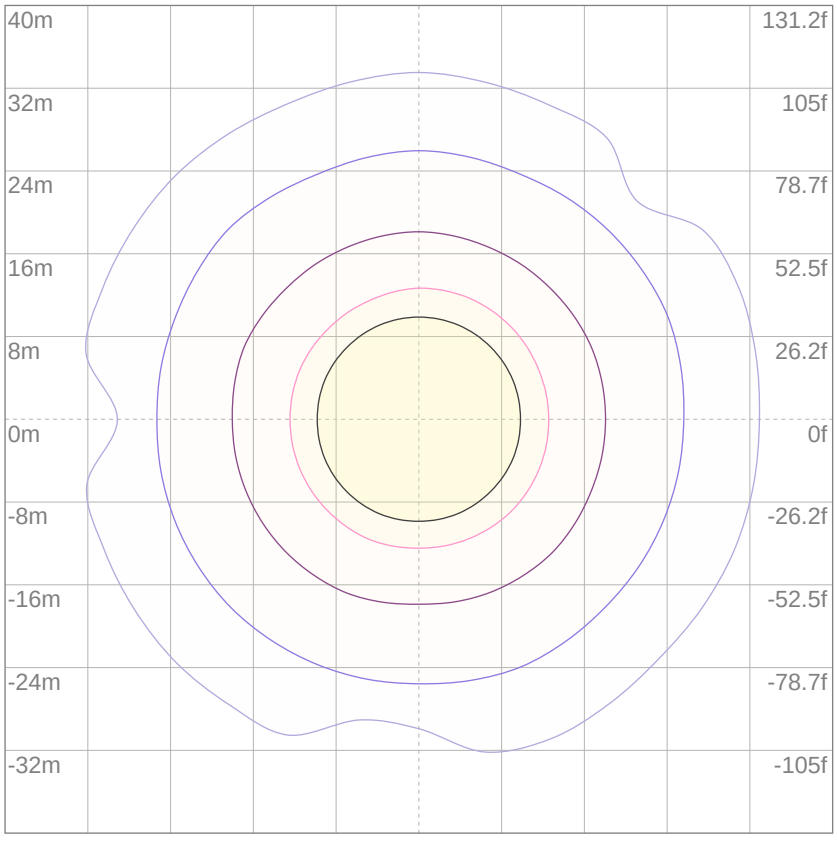
10%	939 cd
20%	1877 cd
30%	2816 cd
40%	3754 cd
50%	4693 cd
60%	5631 cd
70%	6570 cd
80%	7508 cd
90%	8447 cd

Conditions:

Number of c-planes: 16

Candela at center: 9385 cd

ISO lux diagram



3%	2.82 lx
5%	4.69 lx
10%	9.39 lx
30%	28.2 lx
50%	46.9 lx

Conditions:

Number of c-planes: 16

Lux at center: 93.9 lx

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

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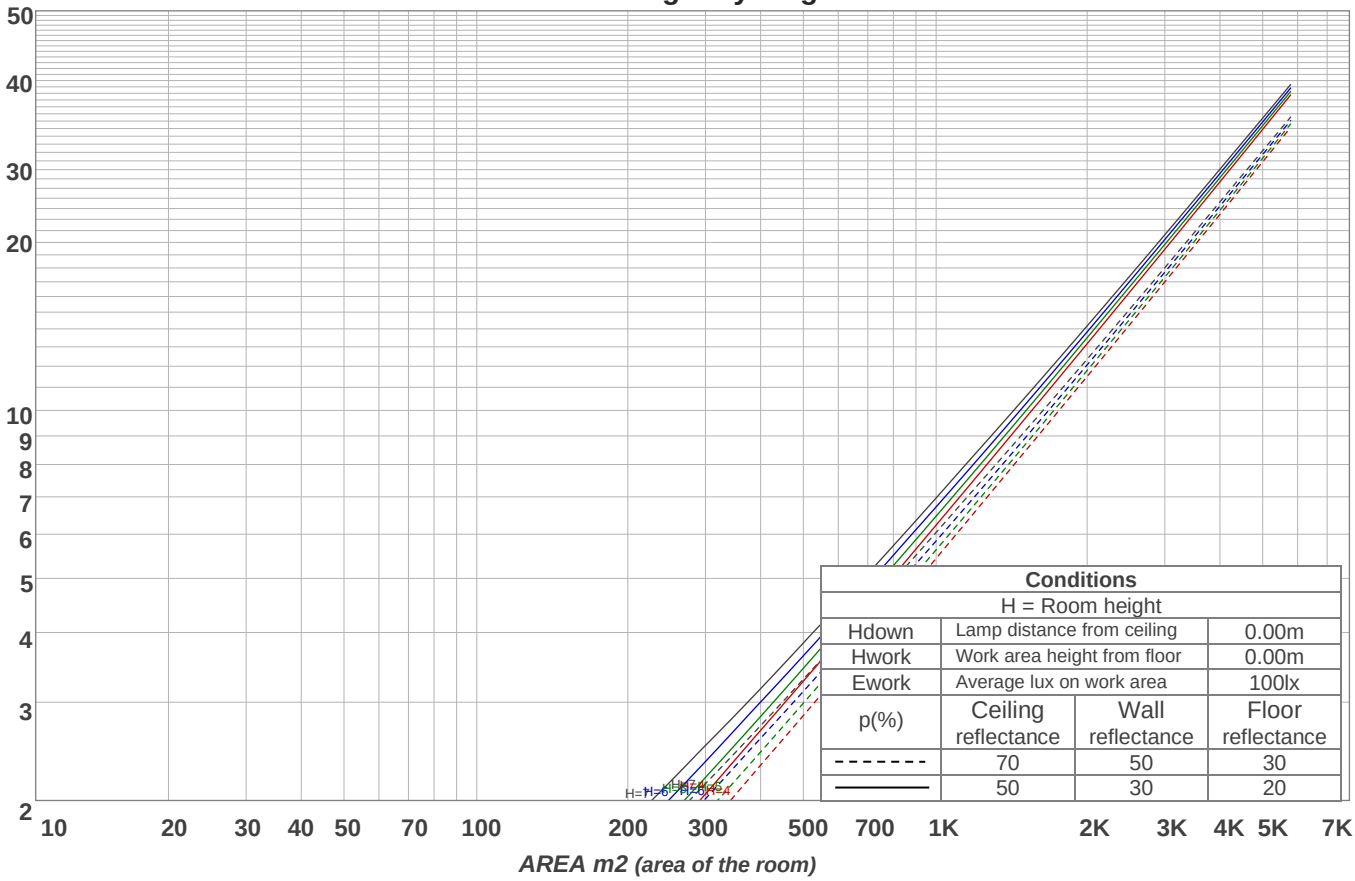
Light Planning

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	110	110	110	105	105	105	101	101	101	99
1	111	108	104	101	109	105	102	100	101	99	96	97	95	93	93	92	90	88
2	103	97	92	87	101	95	90	86	92	87	84	88	85	82	85	82	80	78
3	96	88	81	76	94	86	80	75	83	78	74	80	76	72	78	74	71	69
4	89	79	72	67	87	78	71	66	76	70	65	73	68	64	71	67	63	61
5	83	72	65	59	81	71	64	59	69	63	58	67	62	57	65	60	57	55
6	77	66	58	53	76	65	58	52	63	57	52	61	56	51	60	55	51	49
7	72	60	53	47	71	60	52	47	58	52	47	57	51	46	55	50	46	44
8	68	56	48	43	66	55	48	43	54	47	42	52	46	42	51	46	42	40
9	63	51	44	39	62	51	44	39	50	43	39	48	43	38	47	42	38	37
10	60	48	40	36	58	47	40	36	46	40	35	45	39	35	44	39	35	33

Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
895 lm	2628 lm	4110 lm	4599 lm	3526 lm	1876 lm	730 lm	249 lm	70.3 lm

90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
32.2 lm	34.3 lm	38.1 lm	36.9 lm	34.0 lm	27.9 lm	21.4 lm	14.7 lm	5.43 lm

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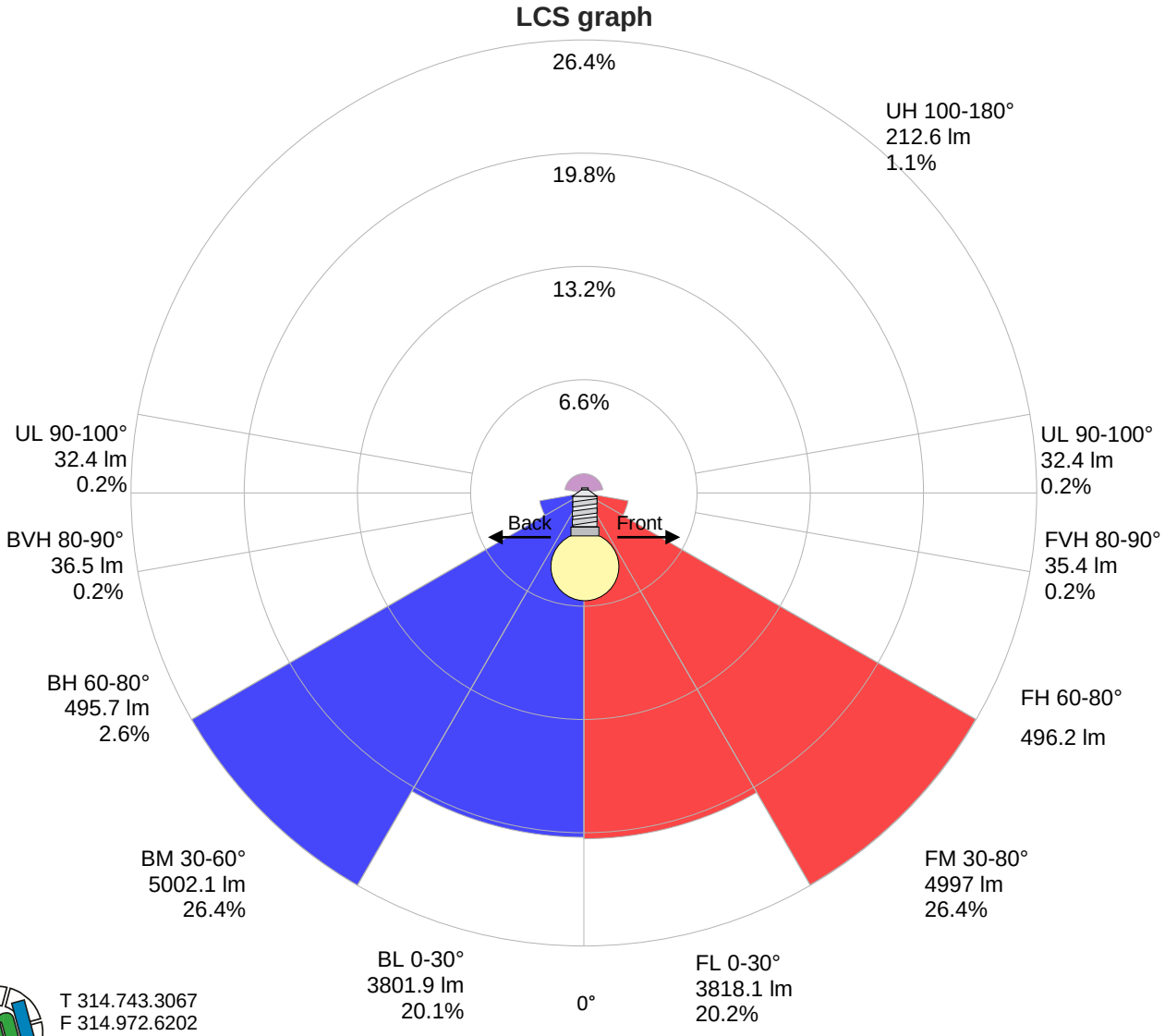
Road Report

LCS table

BUG rating:	B4 U3 G1	
Forward light	Lumens	Lumens %
Low(0-30):	3818.1	20.2%
Medium(30-60):	4997	26.4%
High(60-80):	496.2	2.6%
Very high(80-90):	35.4	0.2%
Back light		
Low(0-30):	3801.9	20.1%
Medium(30-60):	5002.1	26.4%
High(60-80):	495.7	2.6%
Very high(80-90):	36.5	0.2%
Uplight		
Low(90-100):	32.4	0.2%
High(100-180):	212.6	1.1%

LCS graph



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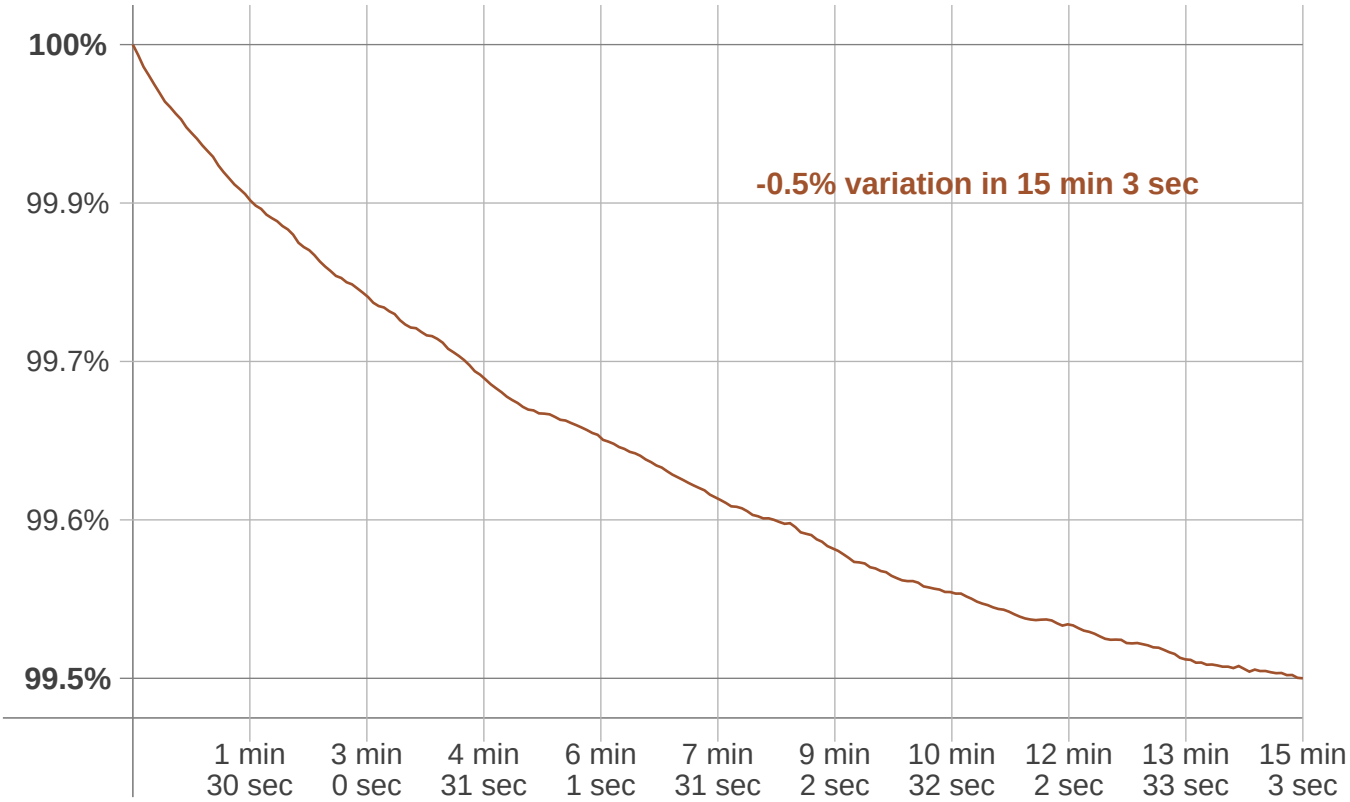
Stabilization

Warmup curve



Warmup result

Warmup time:	**15 min 3 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
5217 K	+17 K	5234 K

Output change

Output start	Output change	Output end
19019 lm	-90 lm	18928 lm

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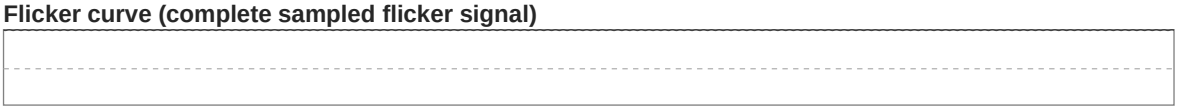
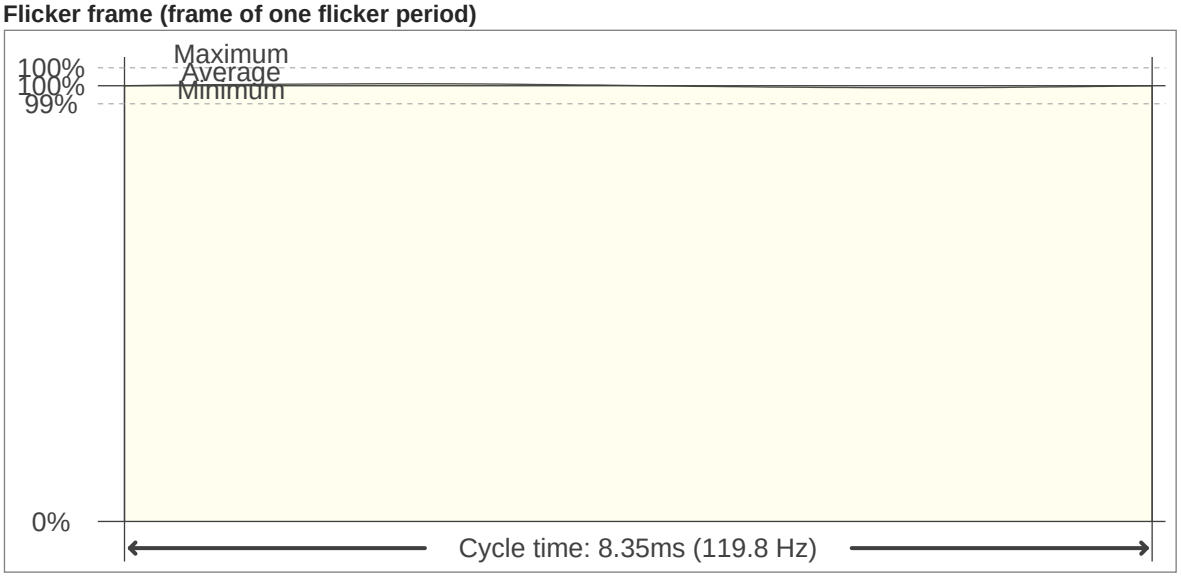
Flicker

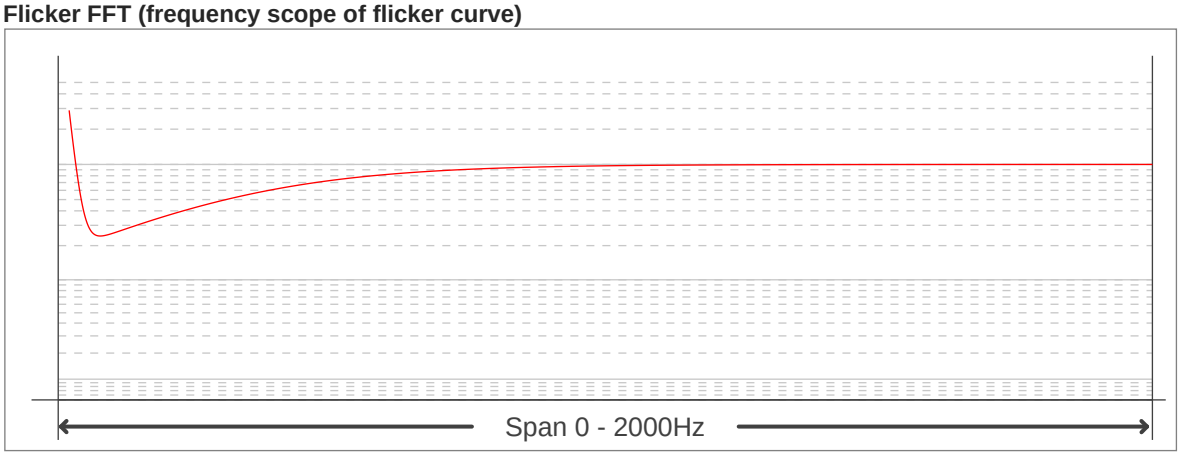
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:	**119.76 Hz**
Flicker index:	**0**
Flicker percentage:	**0.49 %**
SVM: (Visual flicker)	**0.02**

Flicker conditions:

Sample rate:	**40000 samples/second**

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