

Light efficiency:

126 Lumen/Watt

Output: 10399 lm

Light quality:

CRI: 83.4

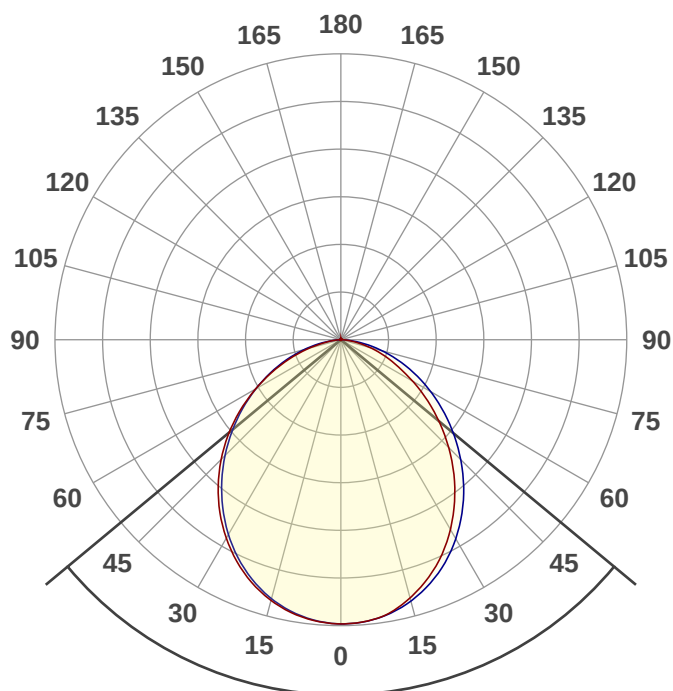
Peak: 4152 cd

Color temperature:

5343 K

Power: 82.6 W

PF: 0.99



Product name:

LHBD2-50K1-80W-H

Date and time:

5/26/2020 10:27:27 AM

Beam angle

100.6°

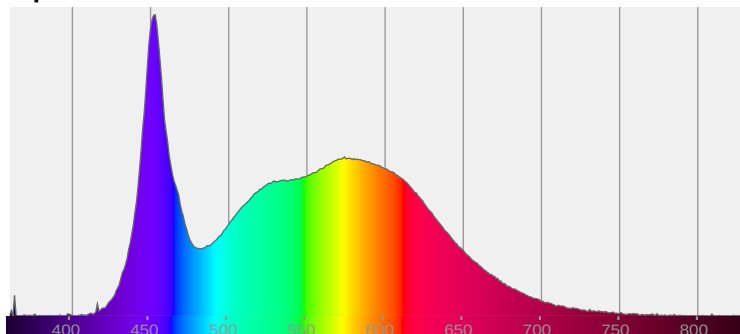


CIE 1931

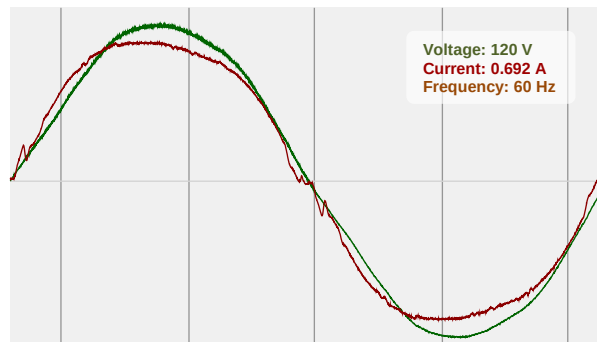
x: 0.336

y: 0.343

Spectra



Power



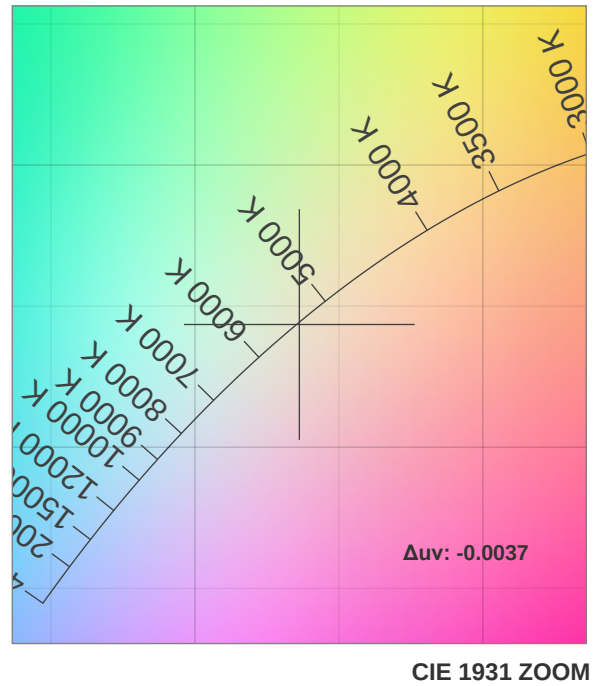
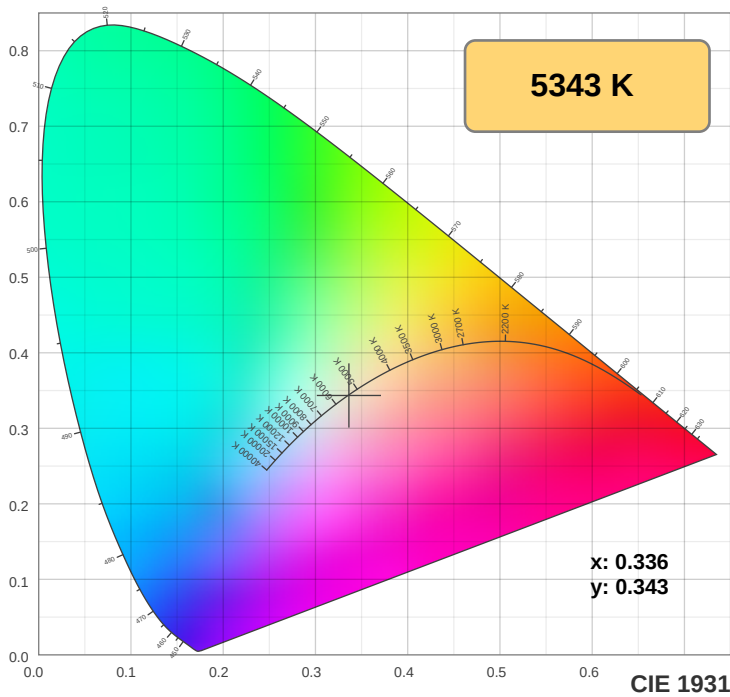
T 314.743.3067

F 314.972.6202

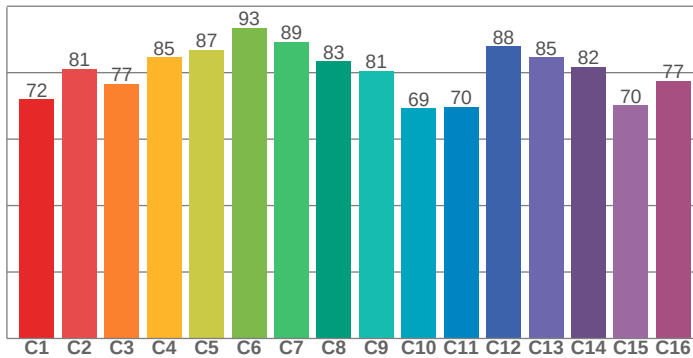
email: commercial-sales@superbrightleds.com

www.superbrightleds.com/

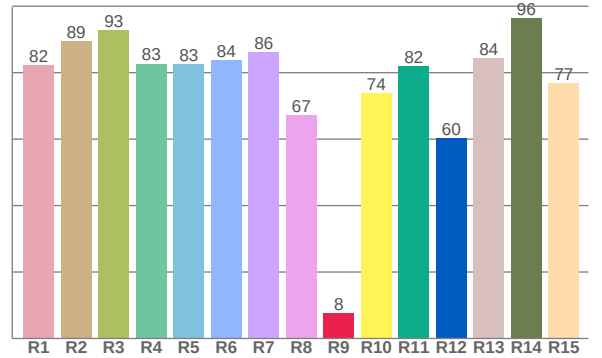
Color Specifications



TM30: 80.4



CRI: 83.4 (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
82.2	89.4	92.9	82.7	82.5	83.7	86.2	67.3	7.5	73.8	82.0	60.3	84.4	96.4	76.9

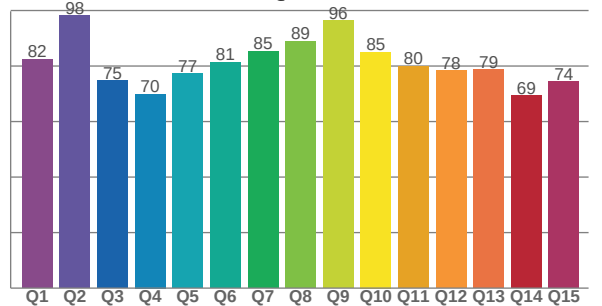
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
72.0	81.1	76.5	84.6	86.9	93.4	89.3	83.5	80.6	69.2	69.7	87.9	84.6	81.8	70.2	77.5

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
82.4	98.2	74.7	69.9	77.3	81.3	85.3	88.9	96.3	85.0	79.9	78.3	78.7	69.4	74.3

CQS: 79.6



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
5343 K	83.4	7.5	80.4	94.3	79.6	0.336	0.343	0.209	0.320	-0.0037



TM30 Report

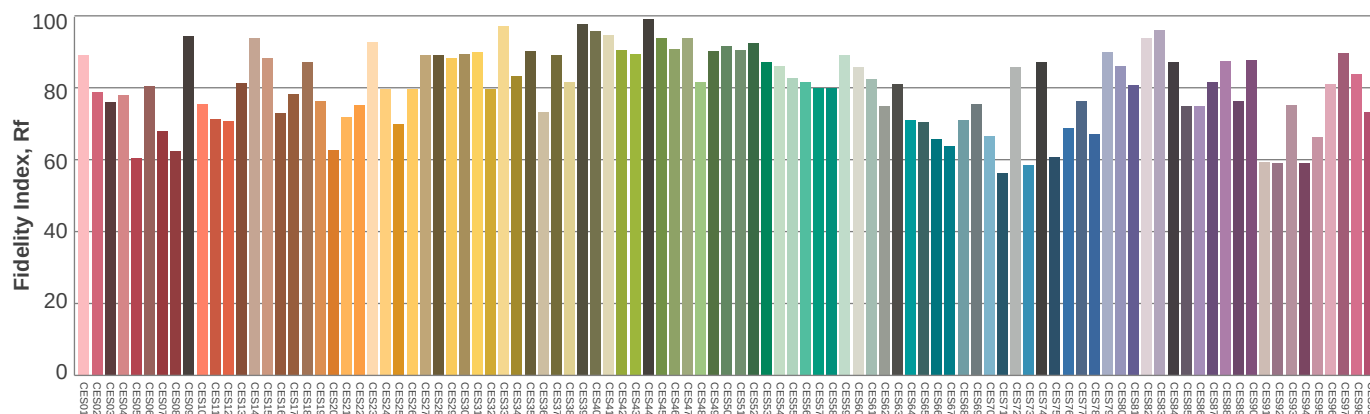
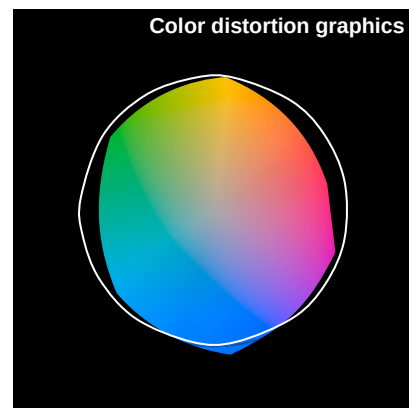
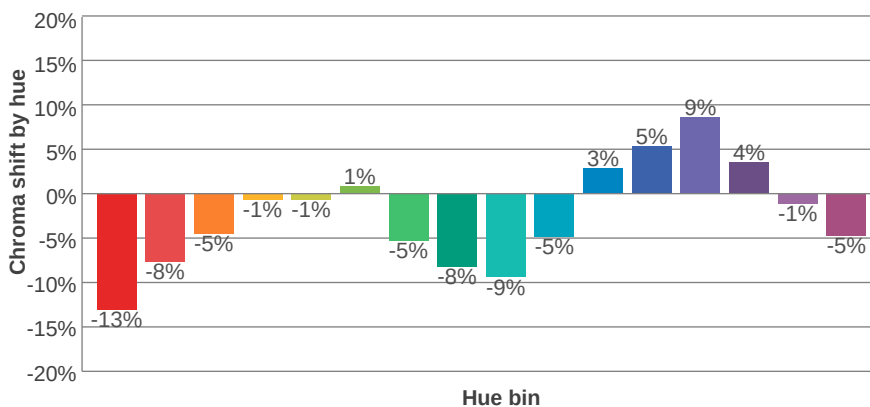
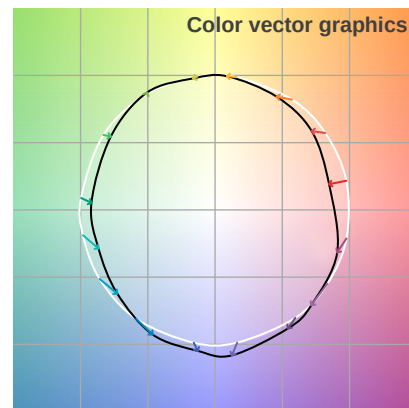
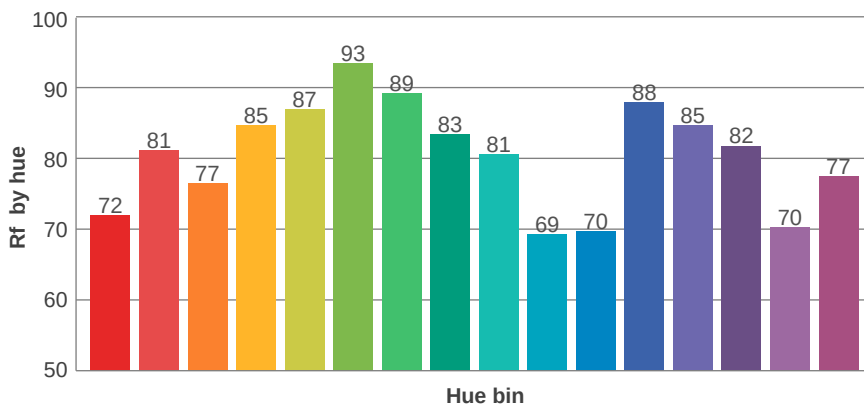
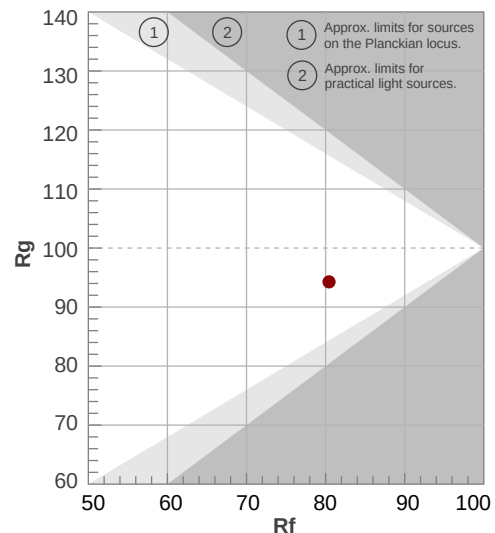
Rf 80.4

Fidelity index Rf

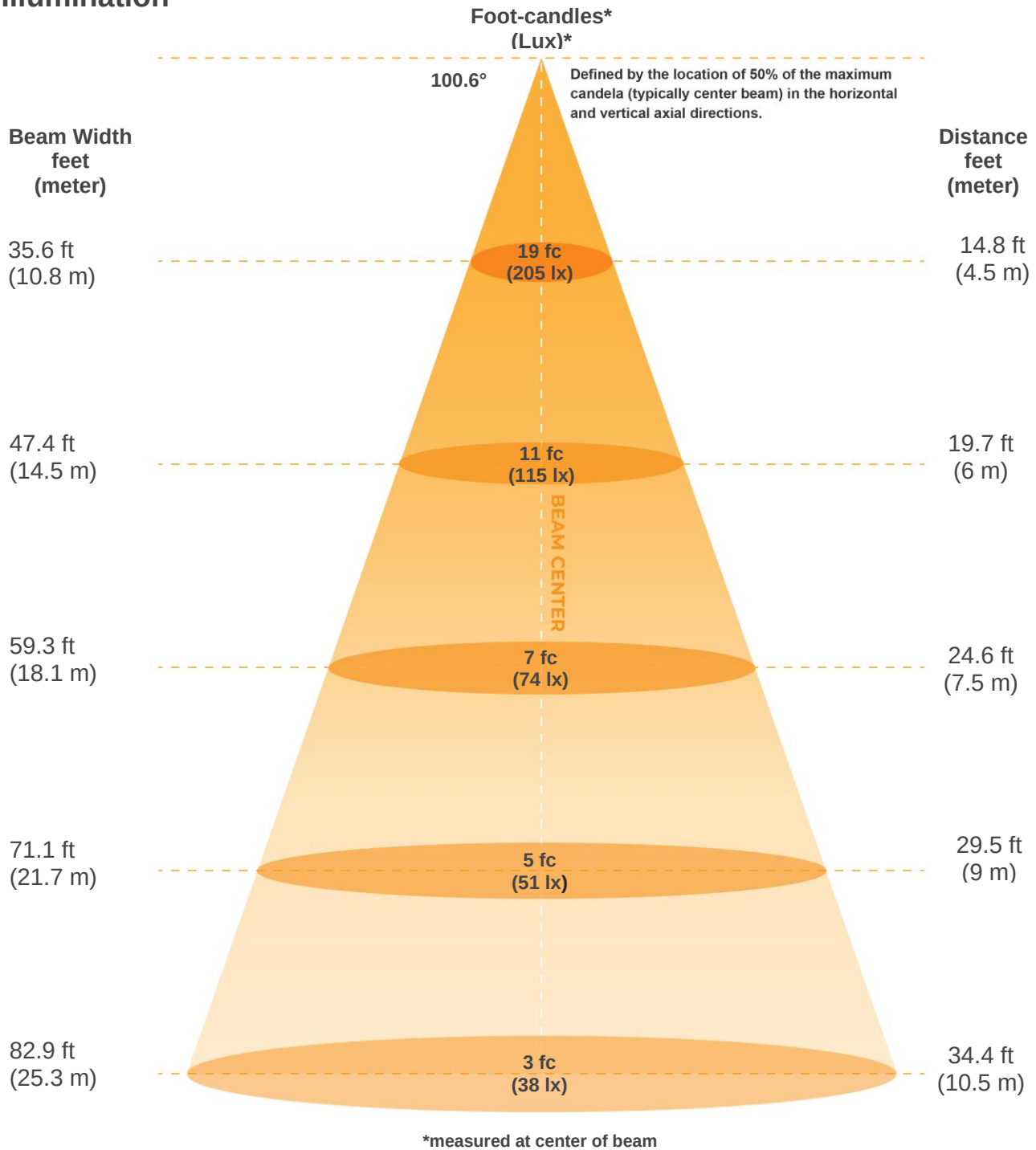
Rg 94.3

Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	72	-13%	0%
2	81	-8%	7%
3	77	-5%	11%
4	85	-1%	7%
5	87	-1%	3%
6	93	1%	-1%
7	89	-5%	-2%
8	83	-8%	2%
9	81	-9%	12%
10	69	-5%	16%
11	70	3%	17%
12	88	5%	4%
13	85	9%	-6%
14	82	4%	-9%
15	70	-1%	-20%
16	77	-5%	-11%



Illumination



Beam intensities from 1-20m

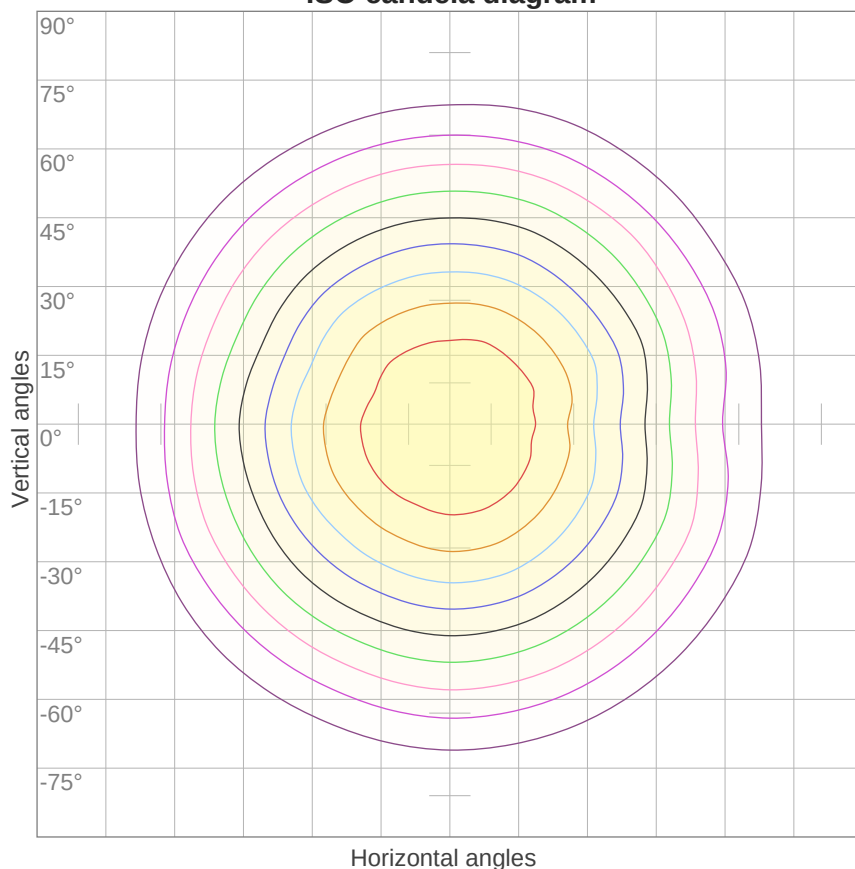
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
4148lx	1037lx	461lx	259lx	166lx	115lx	85lx	65lx	51lx	41lx	34lx	29lx	25lx	21lx	18lx	16lx	14lx	13lx	11lx	10lx
385.4fc	96.3fcd	42.8fcd	24.1fcd	15.4fcd	10.7fcd	7.9fcd	6fcd	4.8fcd	3.9fcd	3.2fcd	2.7fcd	2.3fcd	2fcd	1.7fcd	1.5fcd	1.3fcd	1.2fcd	1.1fcd	1fcd

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
100.6°	155.8°	171.4°	81.5%	57.6%



ISO Diagrams

ISO candela diagram



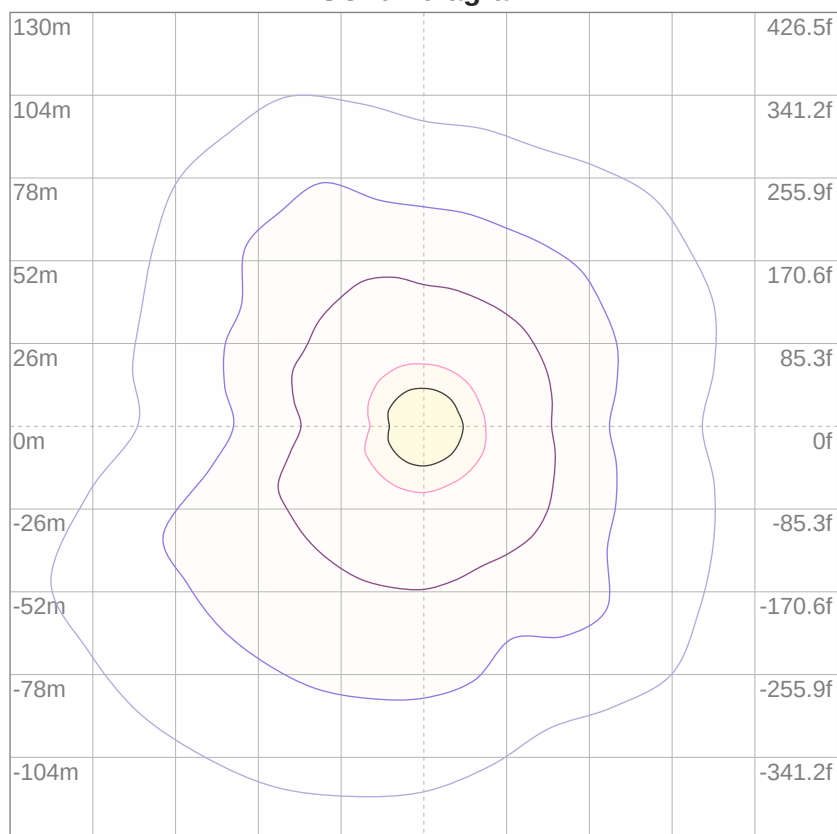
10%	415 cd
20%	830 cd
30%	1244 cd
40%	1659 cd
50%	2074 cd
60%	2489 cd
70%	2904 cd
80%	3318 cd
90%	3733 cd

Conditions:

Number of c-planes: 16

Candela at center: 4148 cd

ISO lux diagram



3%	1.24 lx
5%	2.07 lx
10%	4.15 lx
30%	12.4 lx
50%	20.7 lx

Conditions:

Number of c-planes: 16

Lux at center: 41.5 lx

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



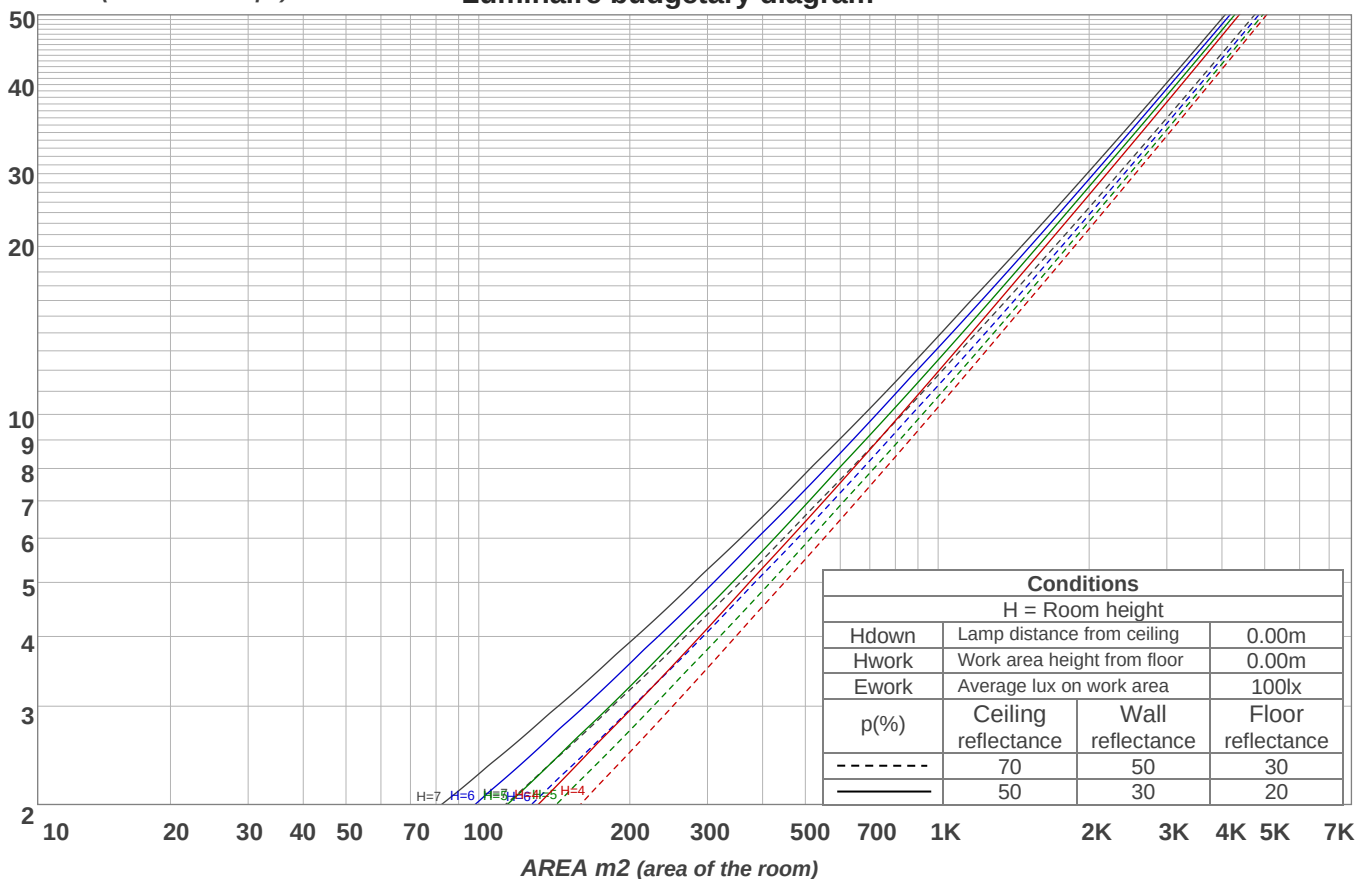
Light Planning

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	102	102	102	99
1	109	105	101	97	106	102	99	95	98	95	92	94	92	89	90	88	87	84
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	76	73	71
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	67	63	61
4	84	72	64	57	81	71	63	57	68	61	56	66	60	55	64	59	54	52
5	77	65	56	50	75	64	55	49	61	54	49	59	53	48	57	52	47	45
6	71	58	50	43	69	57	49	43	56	48	43	54	47	42	52	47	42	40
7	66	53	45	39	65	52	44	38	51	43	38	49	43	38	48	42	37	35
8	62	49	40	35	60	48	40	34	47	39	34	45	39	34	44	38	34	32
9	58	45	37	31	56	44	36	31	43	36	31	42	35	31	41	35	31	29
10	54	41	34	28	53	41	33	28	40	33	28	39	32	28	38	32	28	26

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°
391 lm	1108 lm	1637 lm	1898 lm	1866 lm	1578 lm	1120 lm	596 lm	147 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
8.04 lm	6.62 lm	7.56 lm	8.22 lm	8.04 lm	7.53 lm	6.06 lm	4.07 lm	1.44 lm

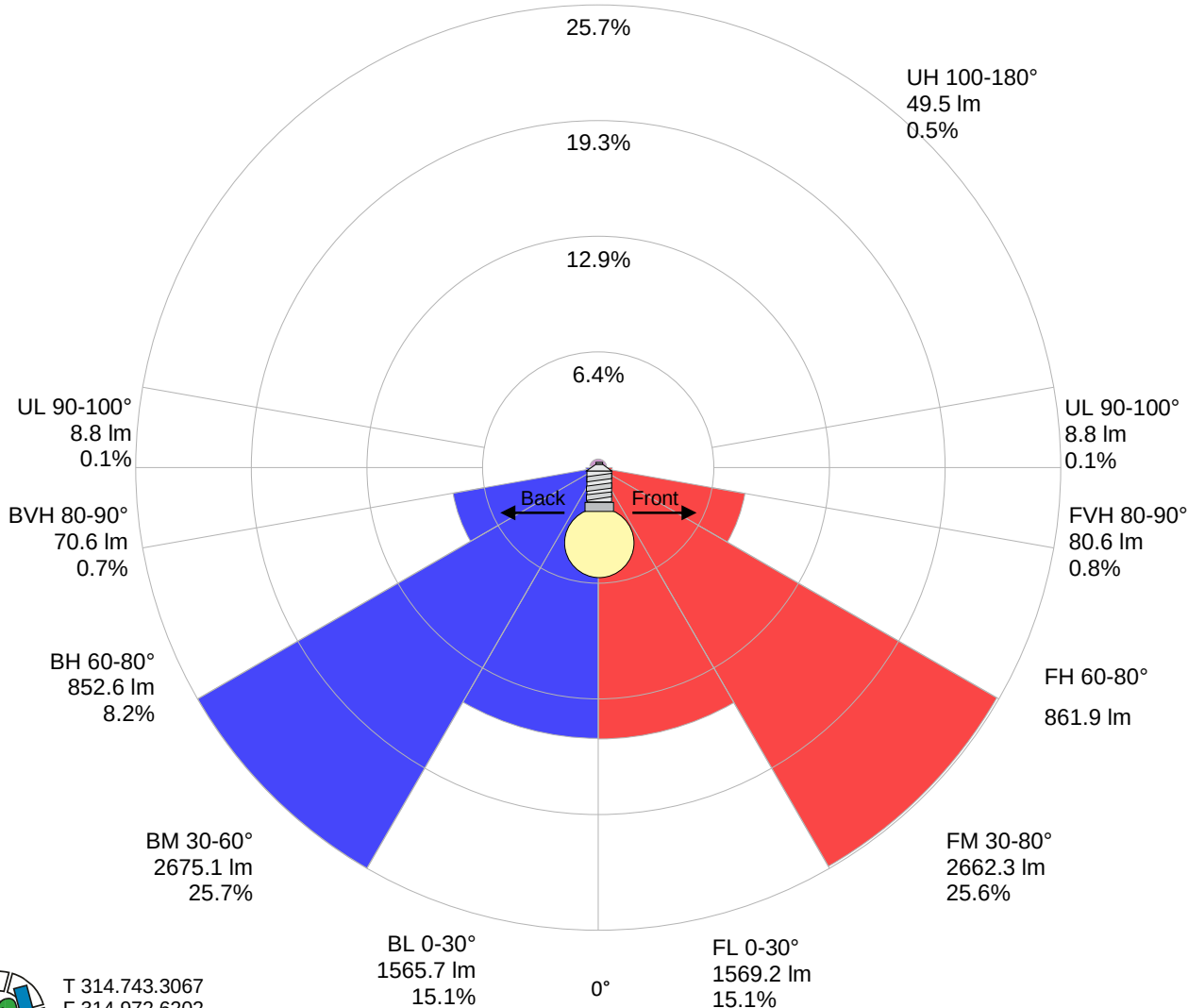


Road Report

LCS table

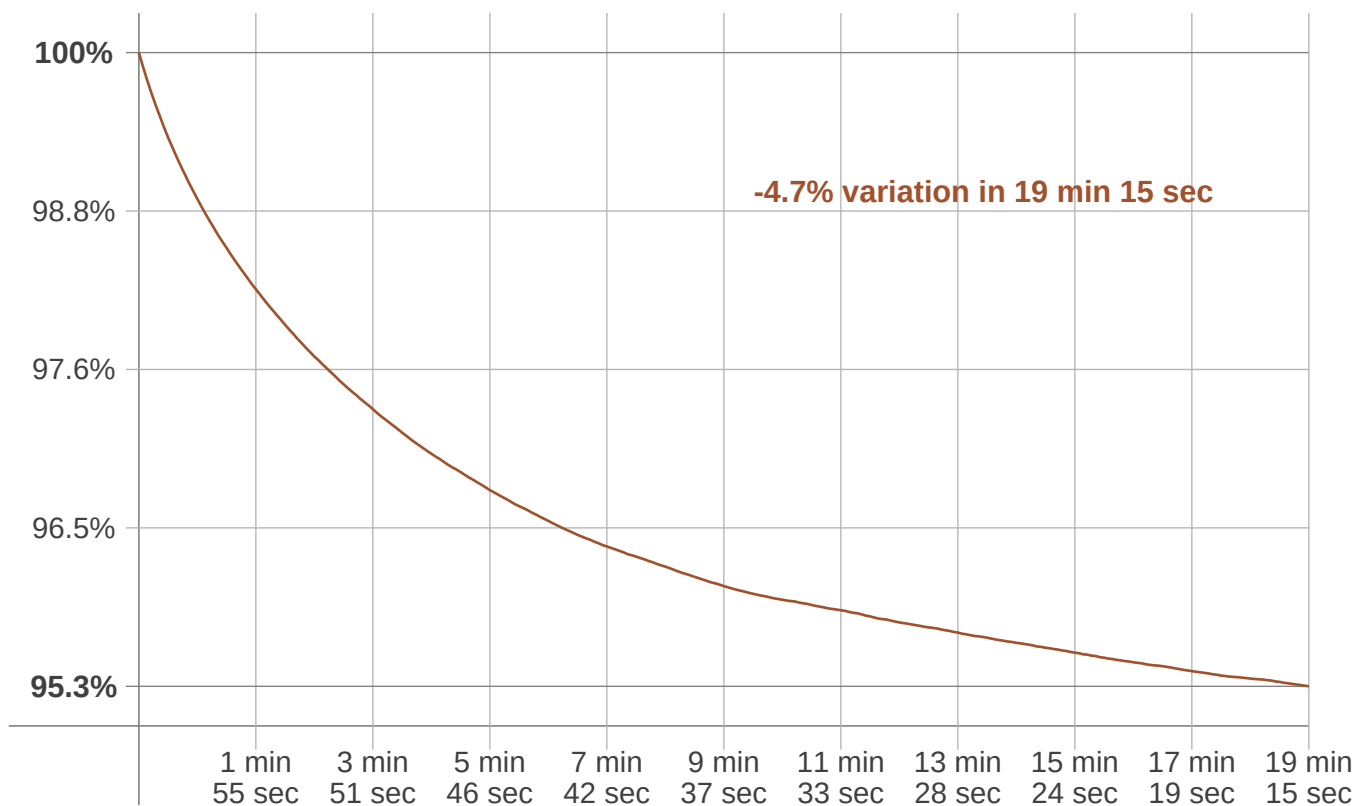
BUG rating:	B3 U2 G2	
Forward light	Lumens	Lumens %
Low(0-30):	1569.2	15.1%
Medium(30-60):	2662.3	25.6%
High(60-80):	861.9	8.3%
Very high(80-90):	80.6	0.8%
Back light		
Low(0-30):	1565.7	15.1%
Medium(30-60):	2675.1	25.7%
High(60-80):	852.6	8.2%
Very high(80-90):	70.6	0.7%
Uplight		
Low(90-100):	8.8	0.1%
High(100-180):	49.5	0.5%

LCS graph



Stabilization

Warmup curve



Warmup result

Warmup time:	19 min 15 sec
Warmup variation	-4.7%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
5234 K	+109 K	5343 K

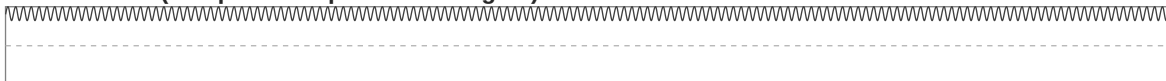
Output change

Output start	Output change	Output end
10882 lm	-483 lm	10399 lm

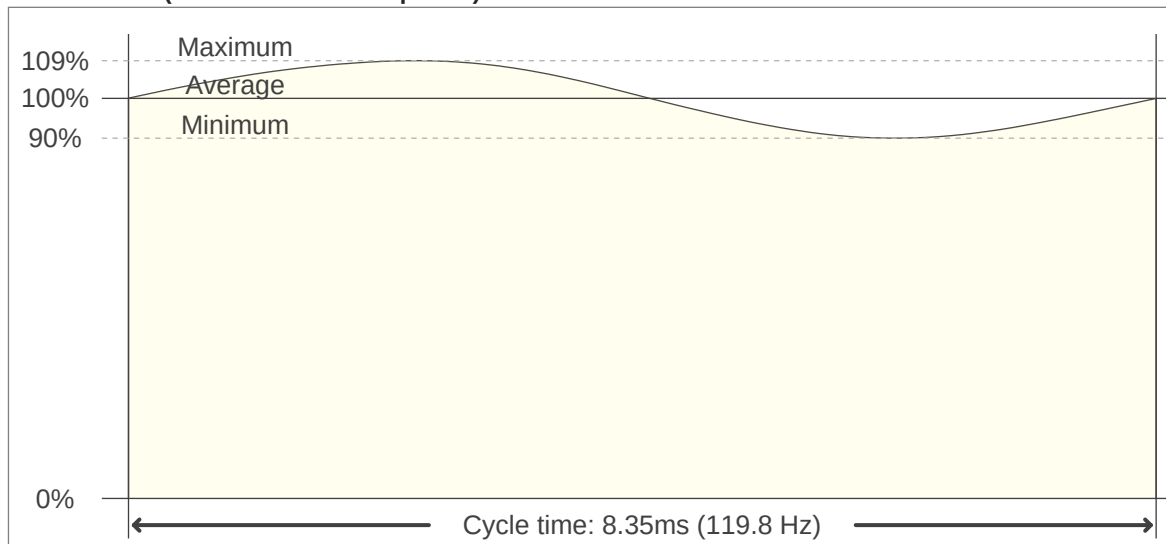


Flicker

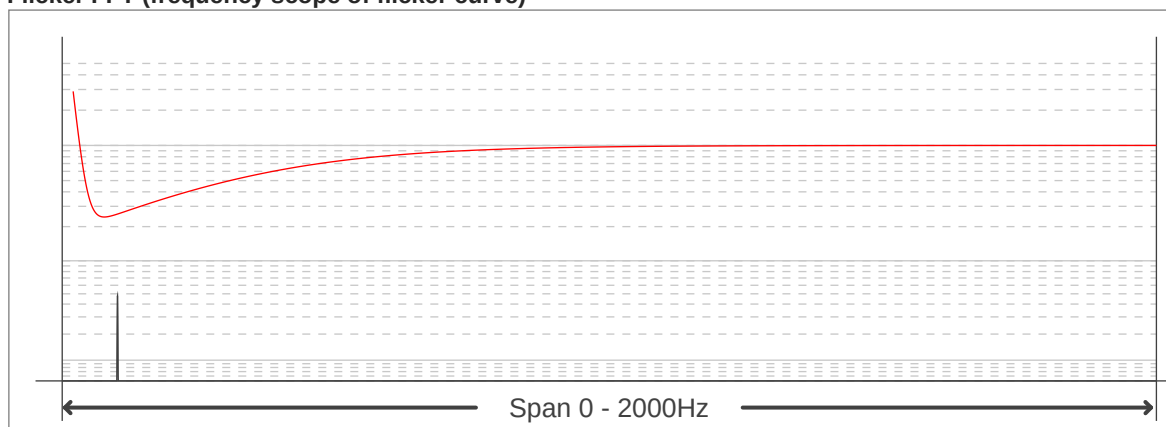
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:	119.76 Hz
Flicker index:	0.03
Flicker percentage:	9.74 %
SVM: (Visual flicker)	0.35

Flicker conditions:

Sample rate:	40000 samples/second
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