

Light efficiency:

122 Lumen/Watt

Light quality:

CRI: 82.0

Color temperature:

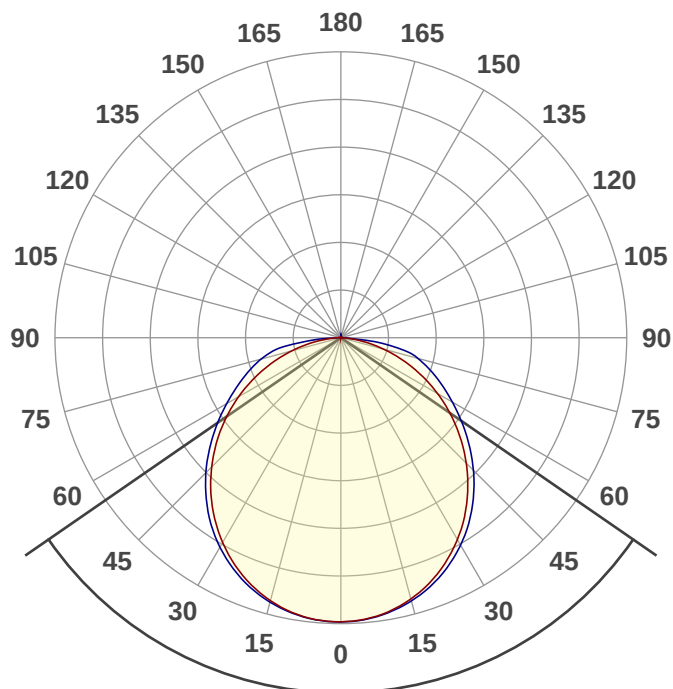
4034 K

Output: 4973 lm

Peak: 1716 cd

Power: 40.8 W

PF: 0.99



Product name:

TLFD-40K-22-40W-B

Date and time:

10/2/2019 1:55:08 PM

Beam angle

110.8°

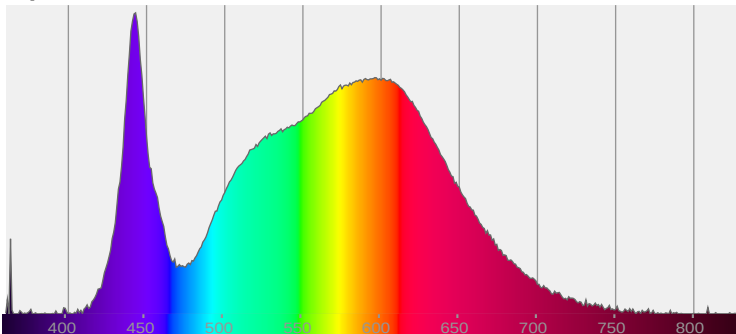


CIE 1931

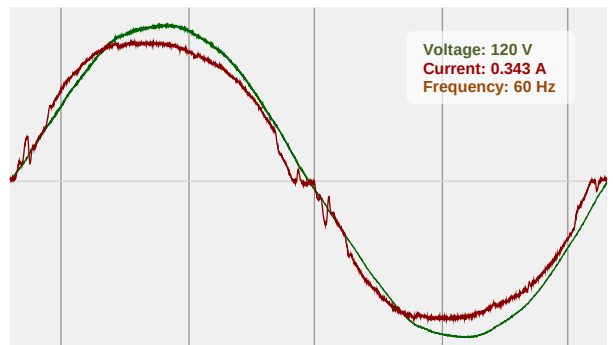
x: 0.379

y: 0.376

Spectra



Power



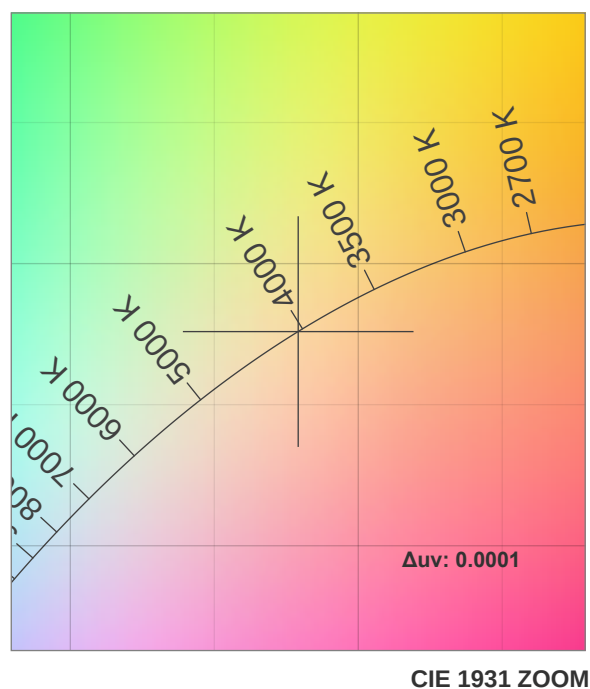
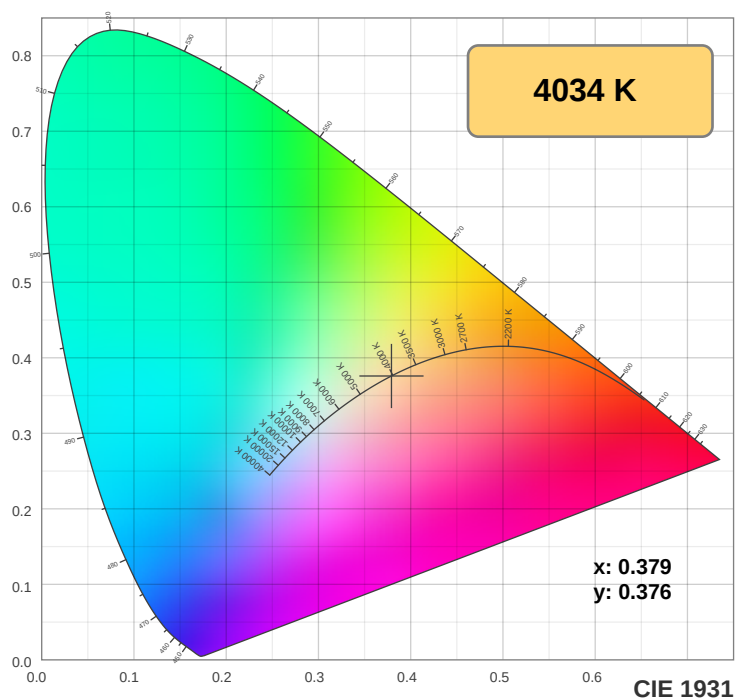
T 314.743.3067

F 314.972.6202

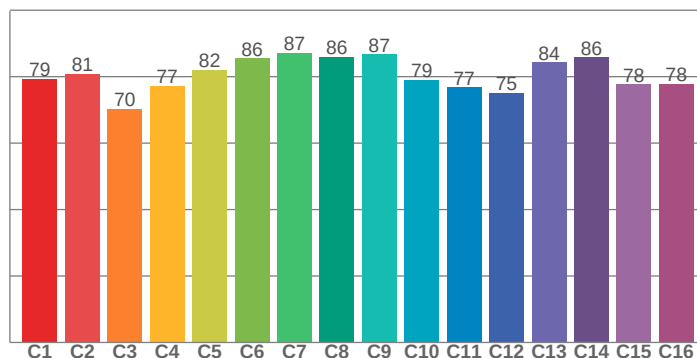
email: commercial-sales@superbrightleds.com

www.superbrightleds.com/

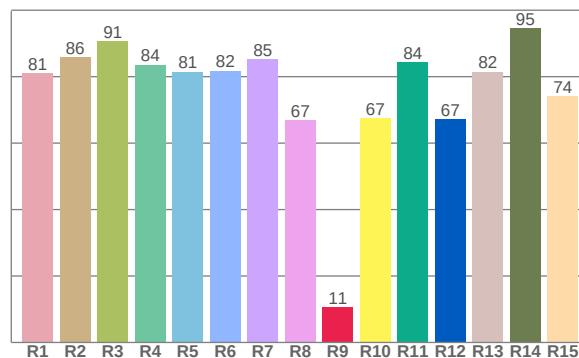
Color Specifications



TM30: 80.5



CRI: 82.0 (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
81.0	85.8	90.6	83.5	81.5	81.8	85.3	66.9	10.6	67.4	84.3	67.3	81.5	94.6	74.1

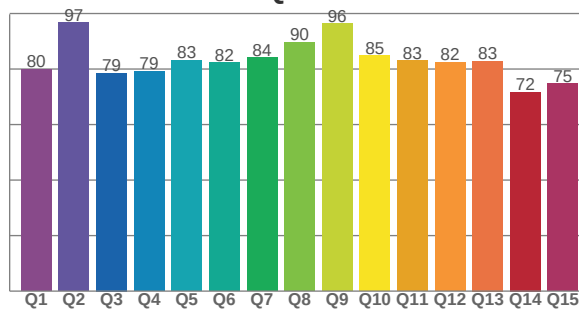
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
79.4	80.8	70.3	77.2	82.1	85.5	87.2	86.0	86.7	79.1	76.7	75.2	84.3	85.8	77.7	77.8

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
79.9	96.6	78.6	79.2	83.2	82.3	84.1	89.6	96.4	84.9	83.1	82.5	82.9	71.8	74.8

CQS: 82.1



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
4034 K	82.0	10.6	80.5	99.4	82.1	0.379	0.376	0.225	0.334	0.0001



TM30 Report

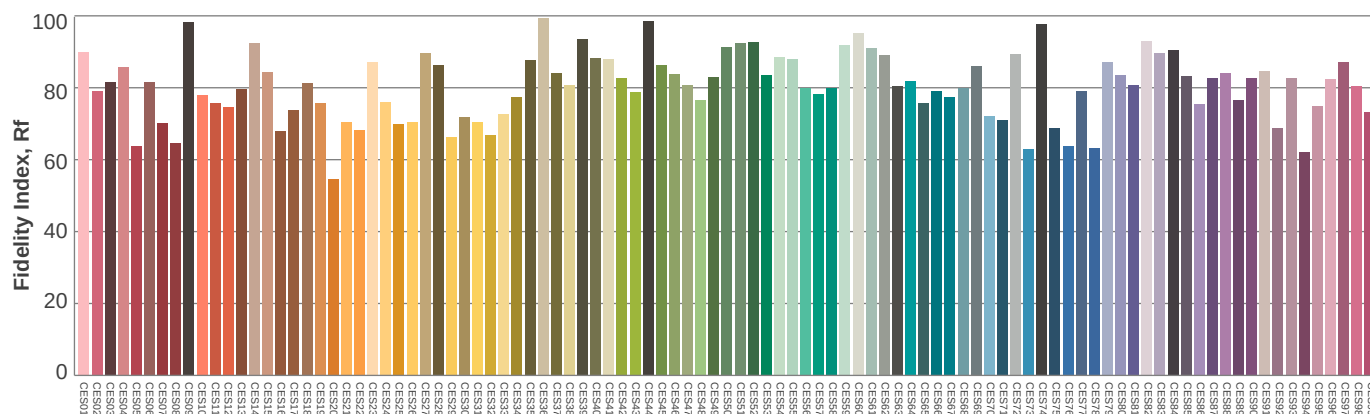
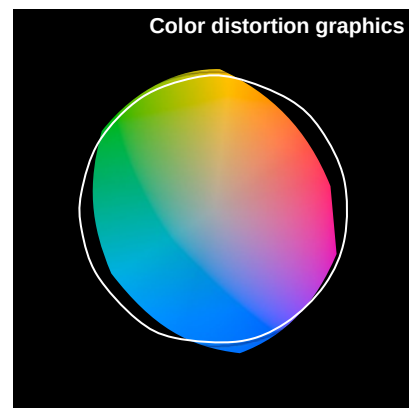
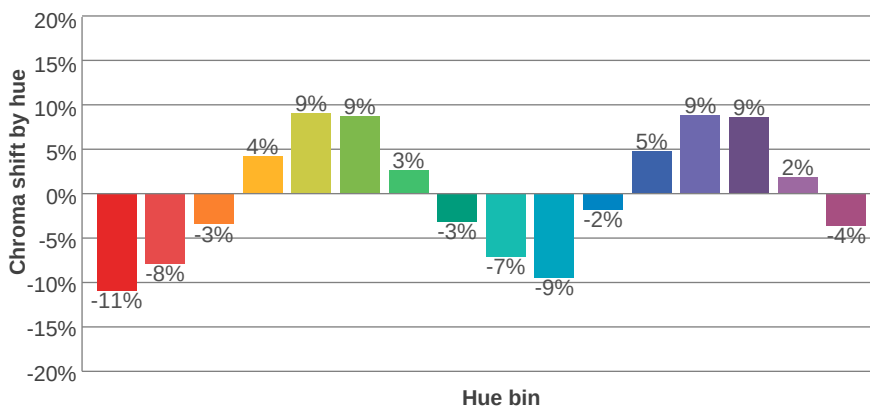
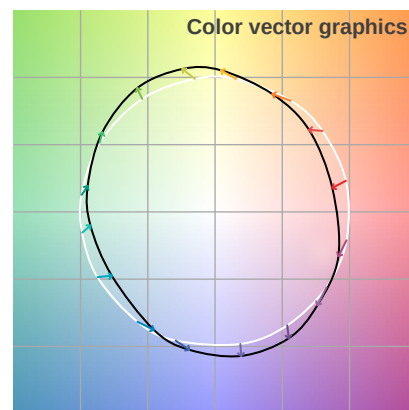
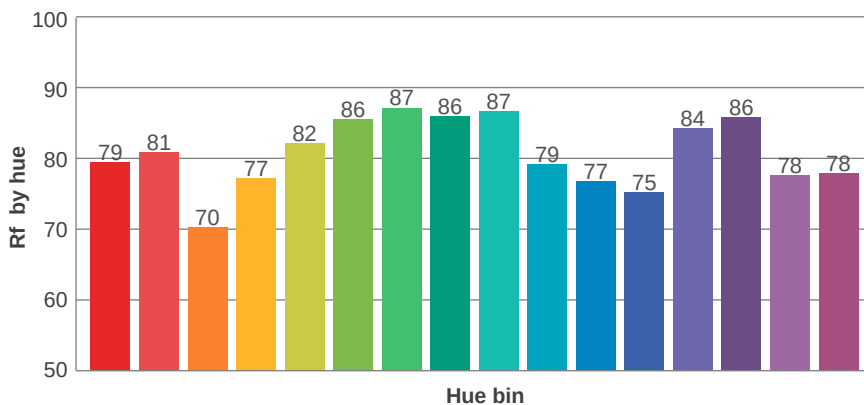
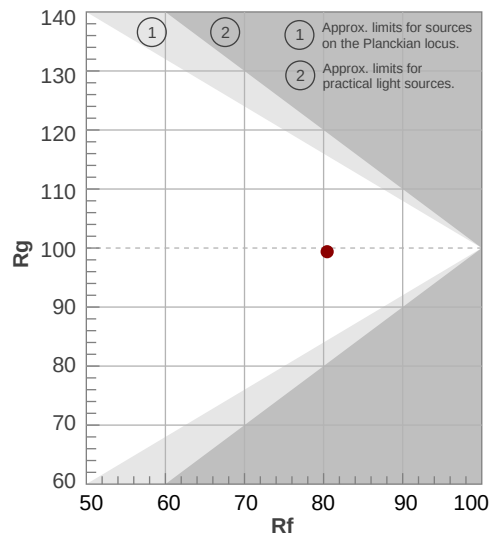
Rf 80.5

Fidelity index Rf

Rg 99.4

Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	79	-11%	-3%
2	81	-8%	6%
3	70	-3%	14%
4	77	4%	12%
5	82	9%	8%
6	86	9%	-1%
7	87	3%	-7%
8	86	-3%	-7%
9	87	-7%	-4%
10	79	-9%	5%
11	77	-2%	13%
12	75	5%	11%
13	84	9%	-1%
14	86	9%	-4%
15	78	2%	-15%
16	78	-4%	-13%



Color Evaluation Sample



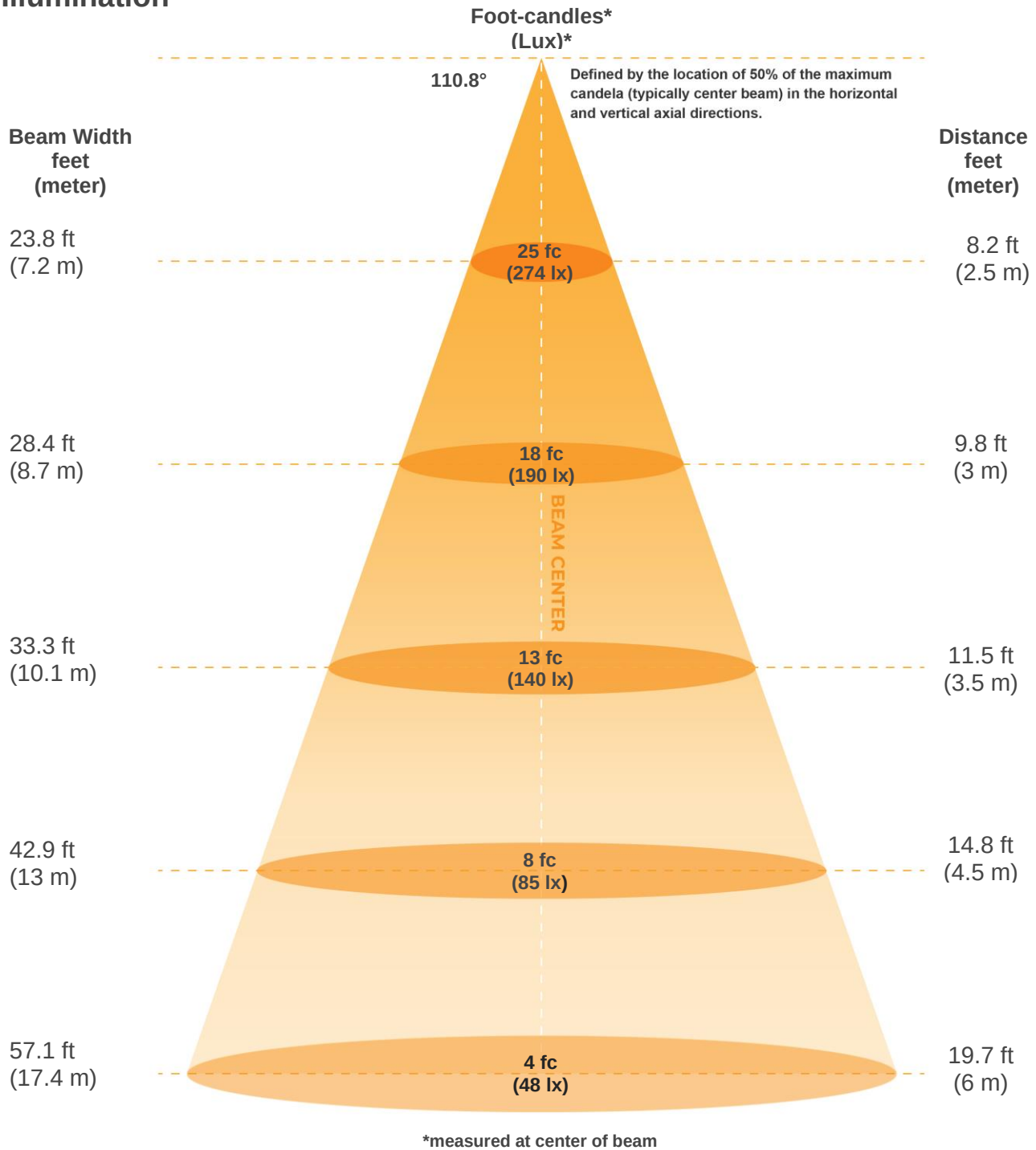
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Illumination



Beam intensities from 1-20m

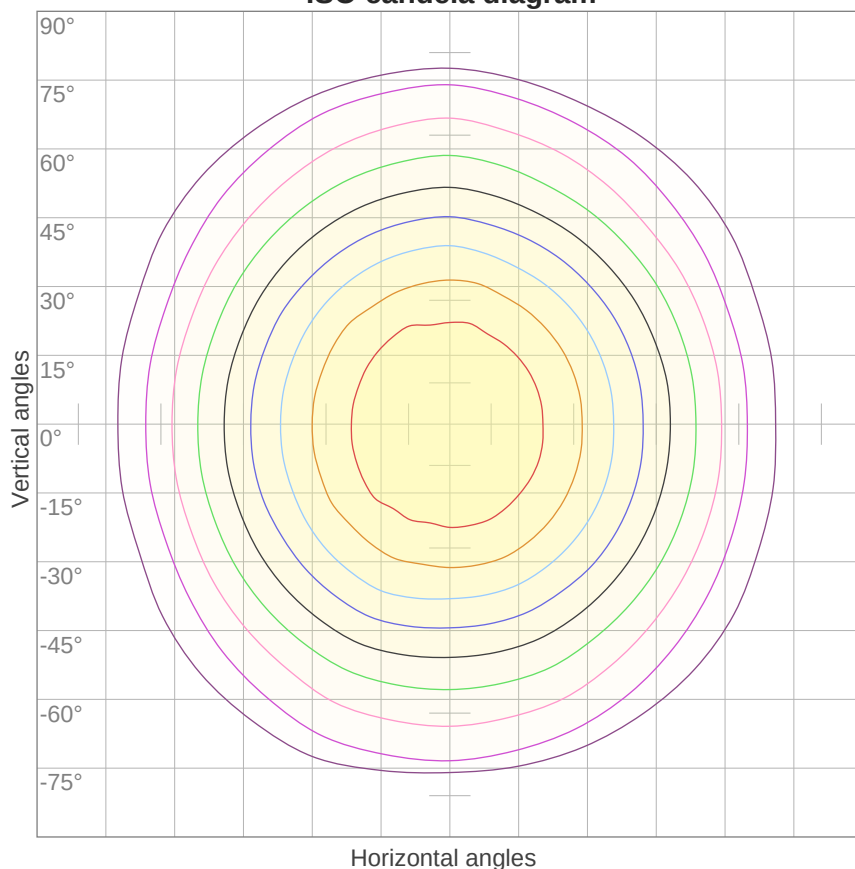
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
1714lx	428lx	190lx	107lx	69lx	48lx	35lx	27lx	21lx	17lx	14lx	12lx	10lx	9lx	8lx	7lx	6lx	5lx	5lx	4lx
159.2fc	39.8fcd	17.7fcd	10fcd	6.4fcd	4.4fcd	3.2fcd	2.5fcd	2fcd	1.6fcd	1.3fcd	1.1fcd	0.9fcd	0.8fcd	0.7fcd	0.6fcd	0.6fcd	0.5fcd	0.4fcd	0.4fcd

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
110.8°	166.2°	176.5°	76.4%	52.2%



ISO Diagrams

ISO candela diagram



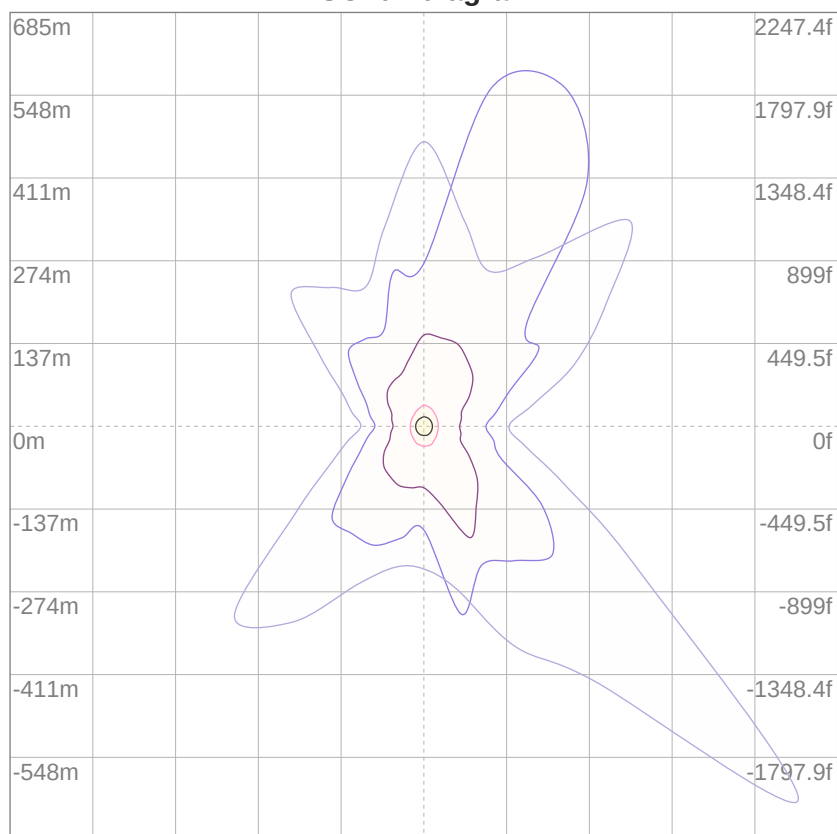
10%	171 cd
20%	343 cd
30%	514 cd
40%	685 cd
50%	857 cd
60%	1028 cd
70%	1200 cd
80%	1371 cd
90%	1542 cd

Conditions:

Number of c-planes: 16

Candela at center: 1714 cd

ISO lux diagram



3%	0.514 lx
5%	0.857 lx
10%	1.71 lx
30%	5.14 lx
50%	8.57 lx

Conditions:

Number of c-planes: 16

Lux at center: 17.1 lx

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



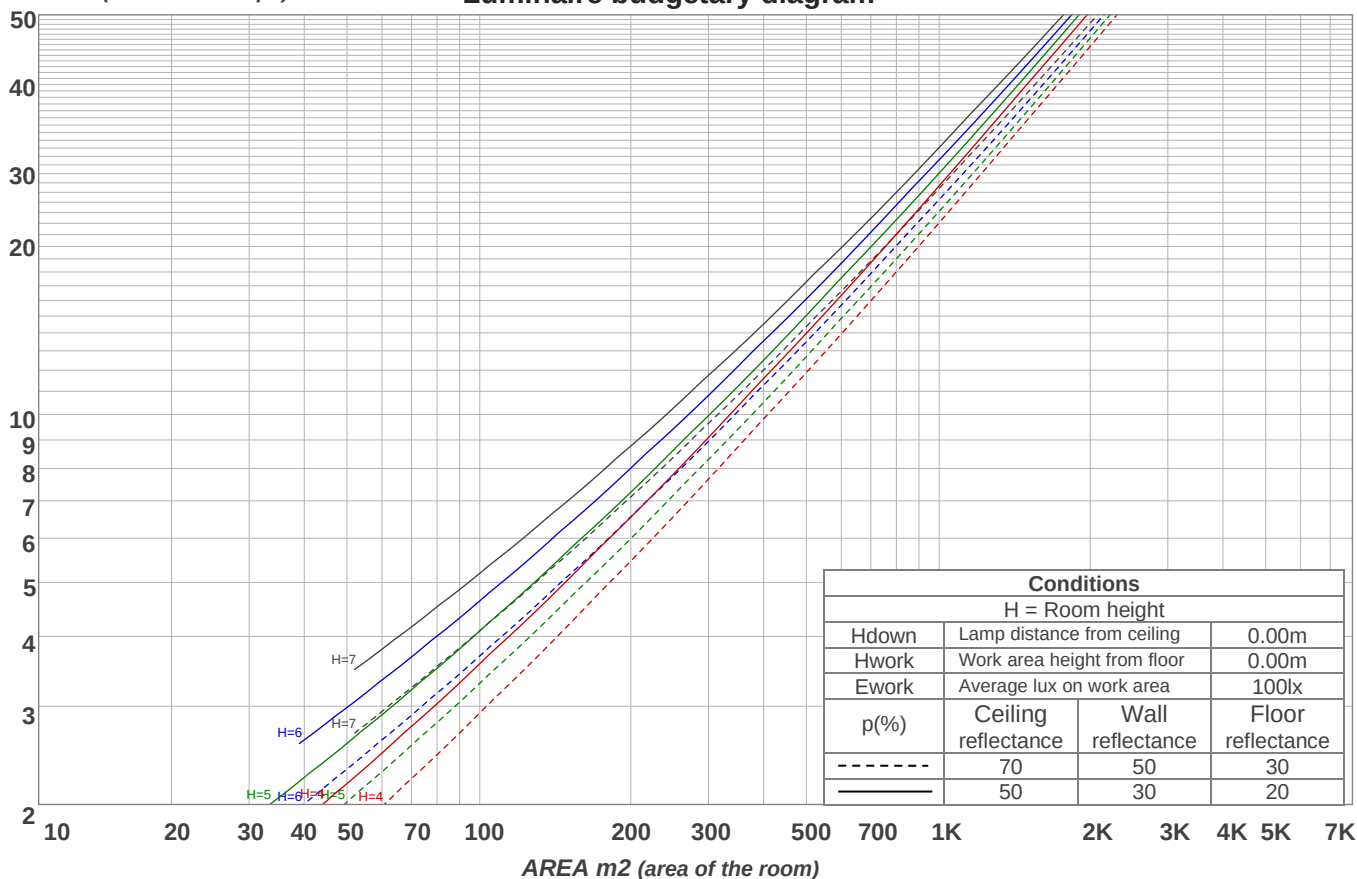
Light Planning

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	100
1	108	103	98	94	105	101	97	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	81	75	84	78	74	80	76	72	77	74	70	68
3	89	78	70	63	87	77	69	63	74	67	61	71	65	60	68	63	59	57
4	82	69	60	53	79	68	60	53	65	58	52	63	57	51	61	55	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	39	51	44	39	50	43	39	37
7	64	50	42	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	26	37	30	25	36	30	25	23

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°
162 lm	464 lm	700 lm	838 lm	860 lm	775 lm	611 lm	409 lm	143 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
2.45 lm	1.58 lm	1.65 lm	1.73 lm	1.57 lm	1.42 lm	1.13 lm	0.722 lm	0.251 lm

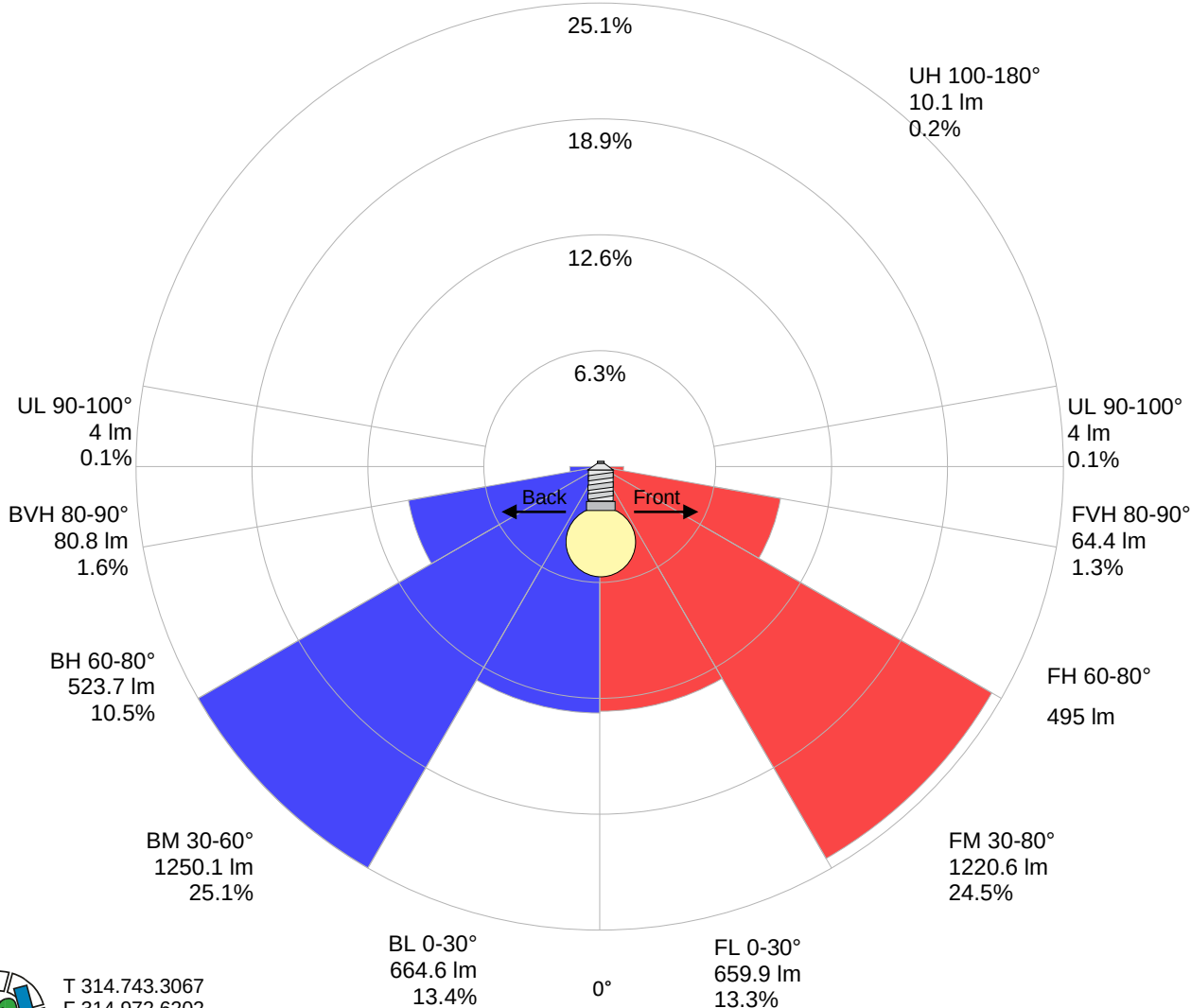


Road Report

LCS table

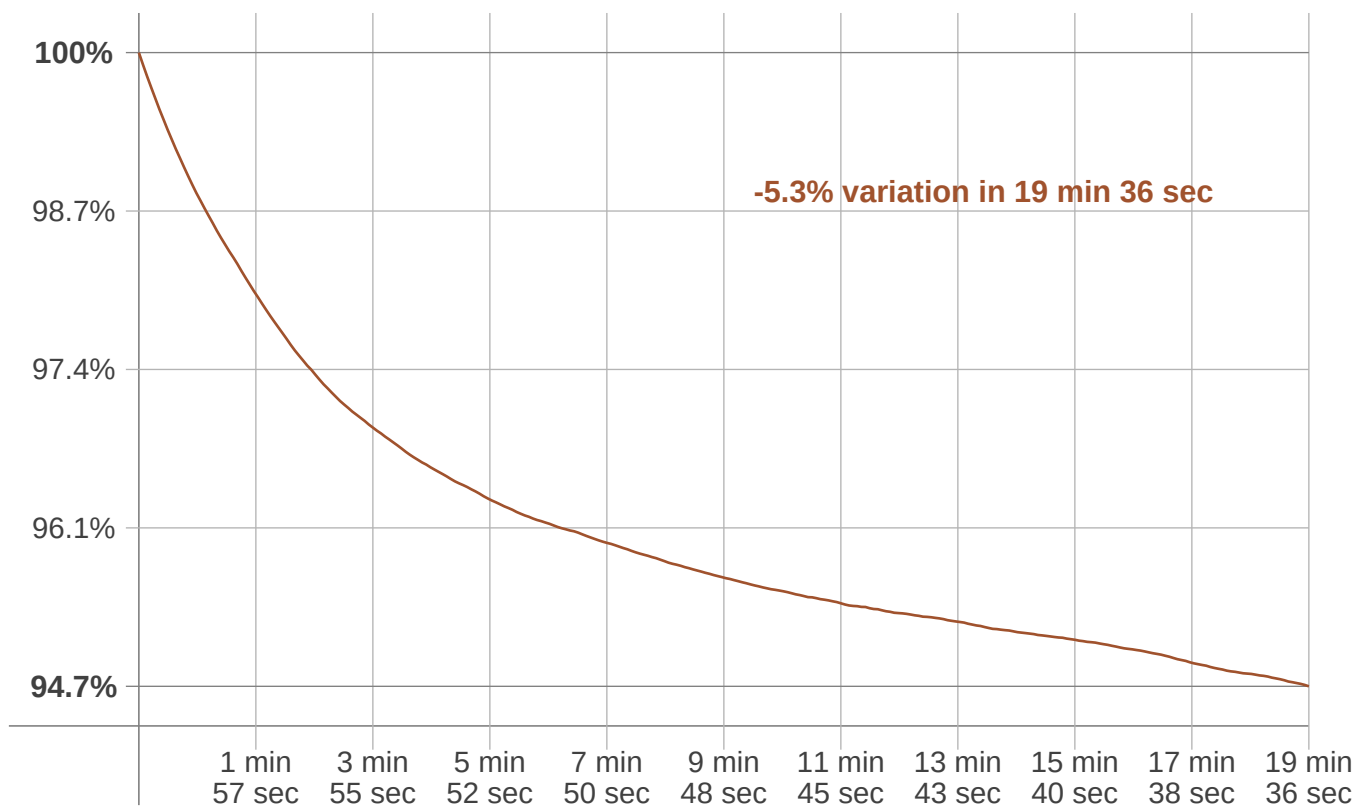
BUG rating:	B2 U2 G2	
Forward light	Lumens	Lumens %
Low(0-30):	659.9	13.3%
Medium(30-60):	1220.6	24.5%
High(60-80):	495	10%
Very high(80-90):	64.4	1.3%
Back light		
Low(0-30):	664.6	13.4%
Medium(30-60):	1250.1	25.1%
High(60-80):	523.7	10.5%
Very high(80-90):	80.8	1.6%
Uplight		
Low(90-100):	4	0.1%
High(100-180):	10.1	0.2%

LCS graph



Stabilization

Warmup curve



Warmup result

Warmup time:	19 min 36 sec
Warmup variation	-5.3%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
4010 K	+24 K	4034 K

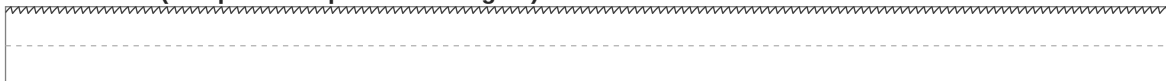
Output change

Output start	Output change	Output end
5237 lm	-264 lm	4973 lm

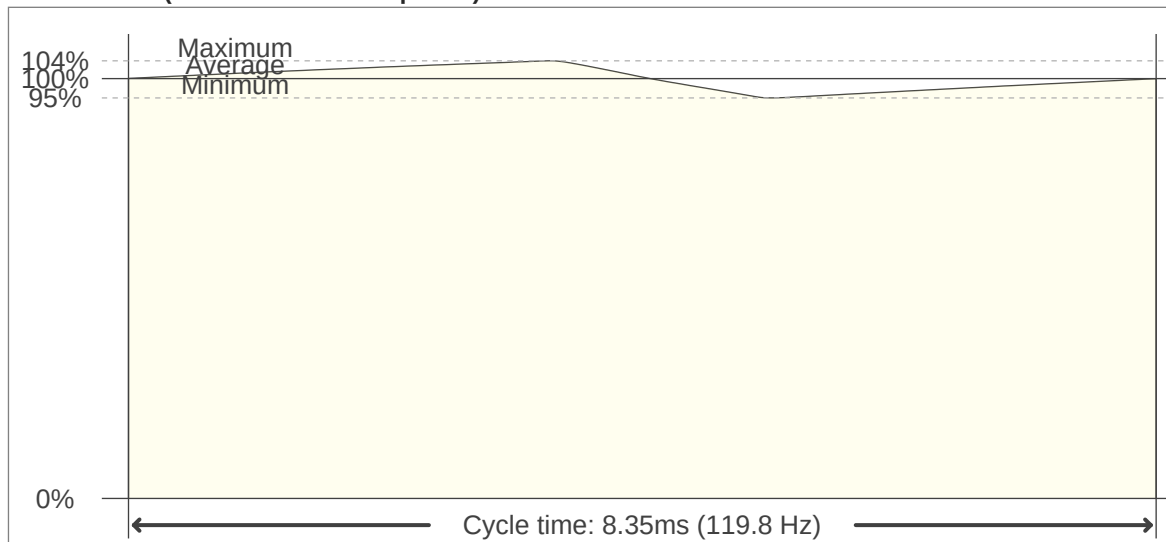


Flicker

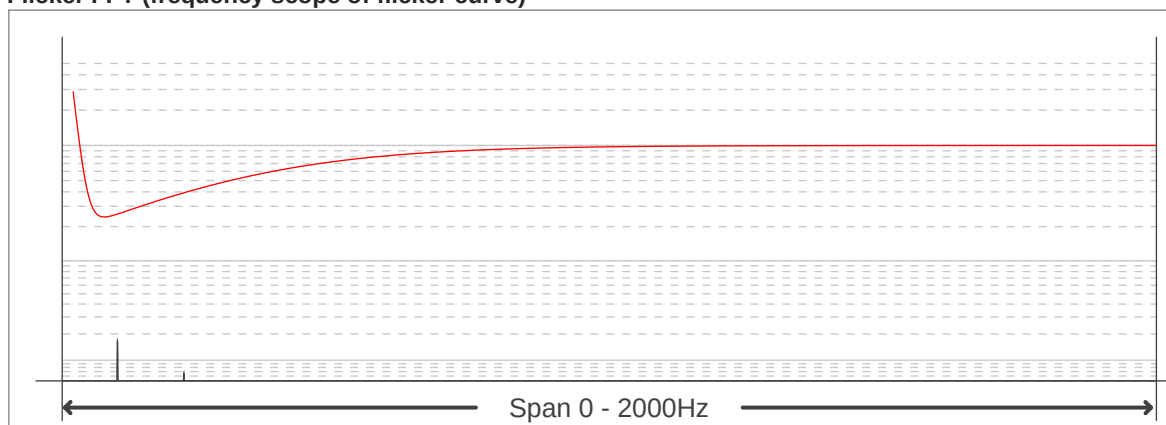
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:	119.76 Hz
Flicker index:	0.01
Flicker percentage:	4.46 %
SVM: (Visual flicker)	0.12

Flicker conditions:

Sample rate:	40000 samples/second
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