

Light efficiency:

138 Lumen/Watt

Output: 28513 lm

Light quality:

CRI: 83.4

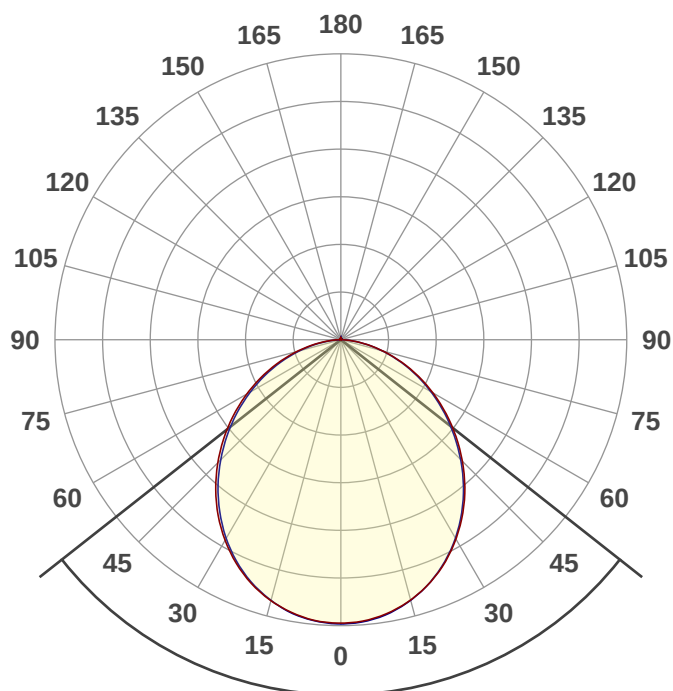
Peak: 10902 cd

Color temperature:

5313 K

Power: 207.2 W

PF: 1.0



Product name:

LHBD2-50K5-225W-H

Date and time:

5/28/2020 2:38:18 PM

Beam angle

103.5°

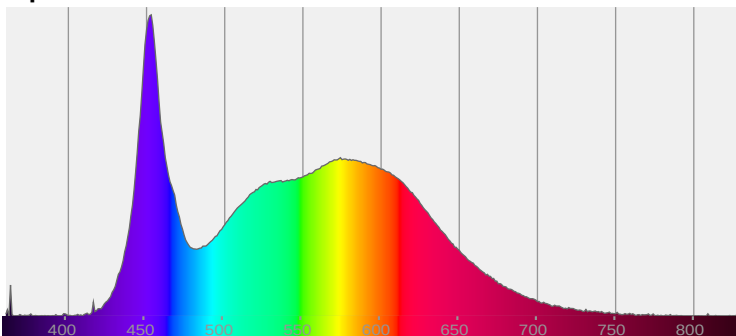


CIE 1931

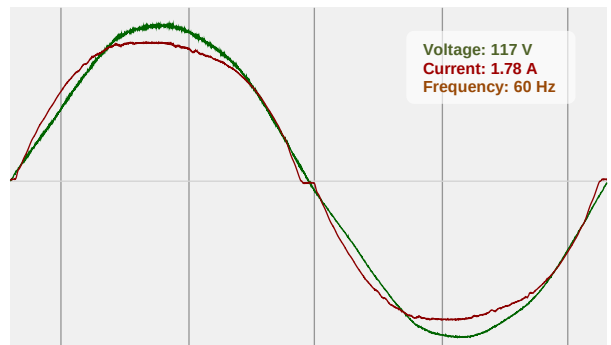
x: 0.337

y: 0.344

Spectra



Power



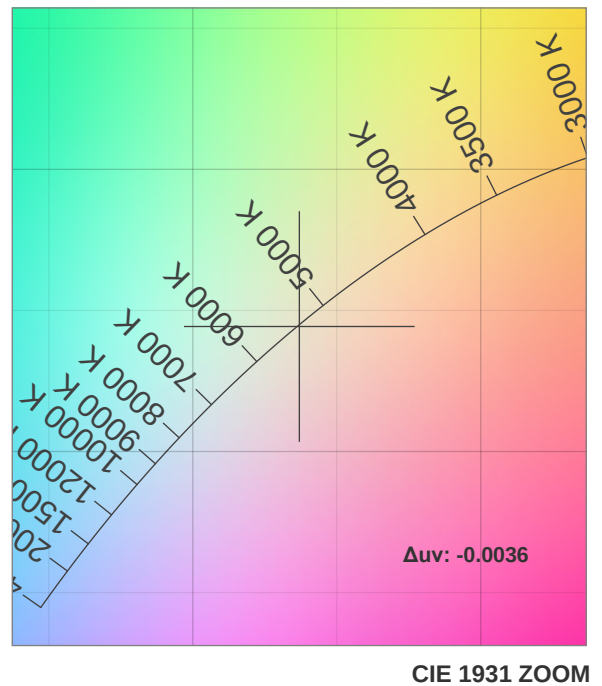
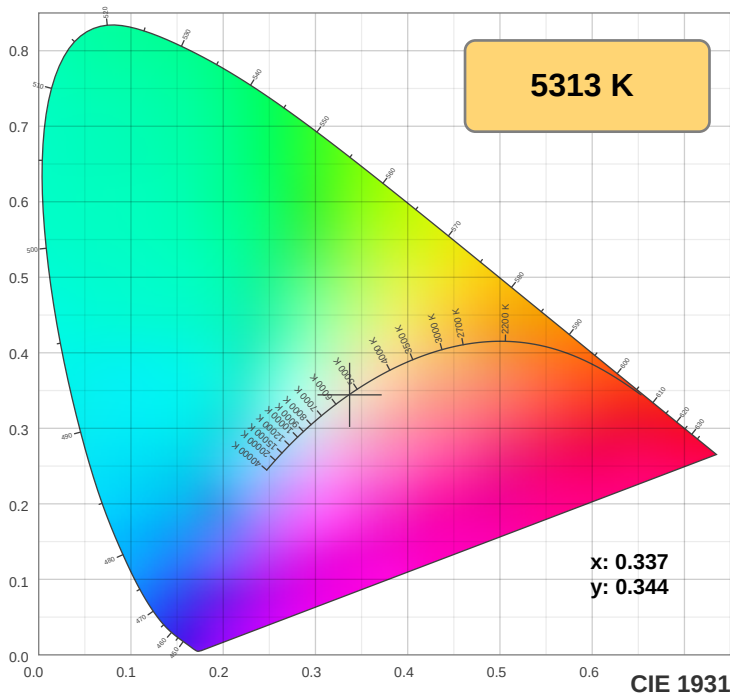
T 314.743.3067

F 314.972.6202

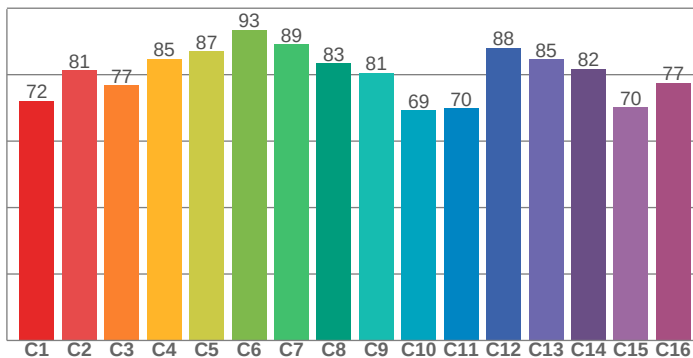
email: commercial-sales@superbrightleds.com

www.superbrightleds.com/

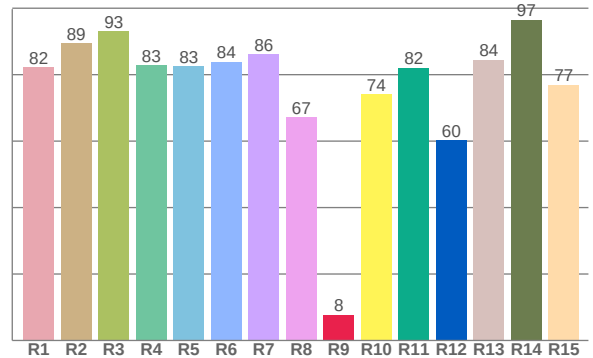
Color Specifications



TM30: 80.5



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
82.3	89.5	93.0	82.8	82.6	83.9	86.2	67.2	7.8	74.1	82.1	60.3	84.5	96.5	76.9

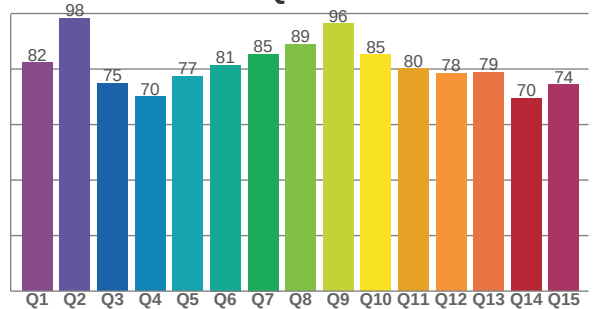
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
72.0	81.3	76.8	84.8	87.0	93.4	89.2	83.4	80.5	69.3	69.8	88.1	84.6	81.8	70.1	77.5

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
82.4	98.3	74.9	70.1	77.4	81.4	85.4	88.9	96.4	85.2	80.1	78.5	78.9	69.5	74.4

CQS: 79.7



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
5313 K	83.4	7.8	80.5	94.2	79.7	0.337	0.344	0.209	0.320	-0.0036



TM30 Report

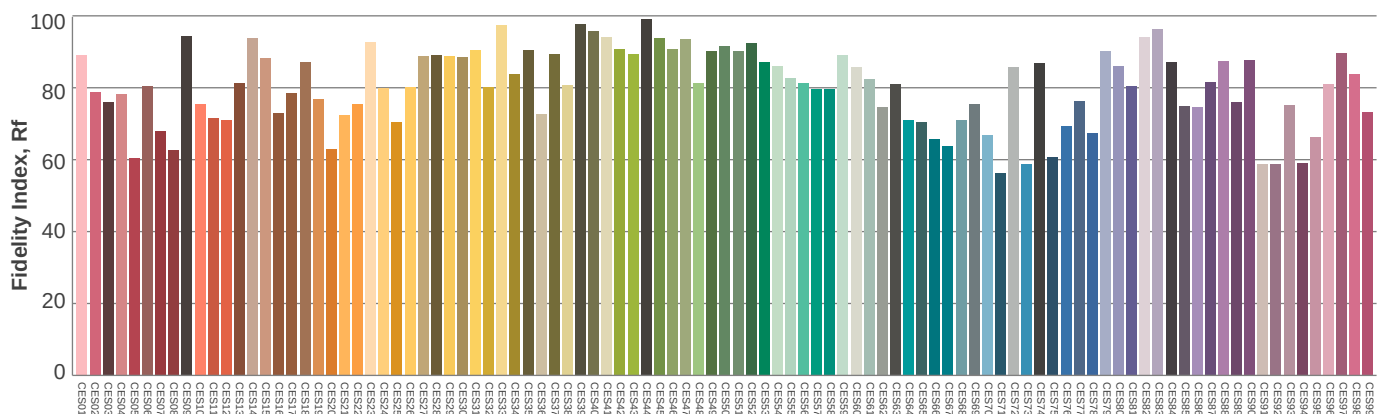
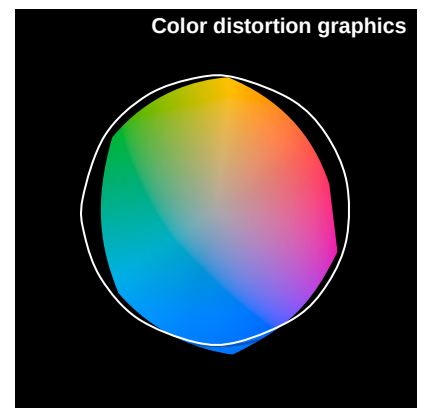
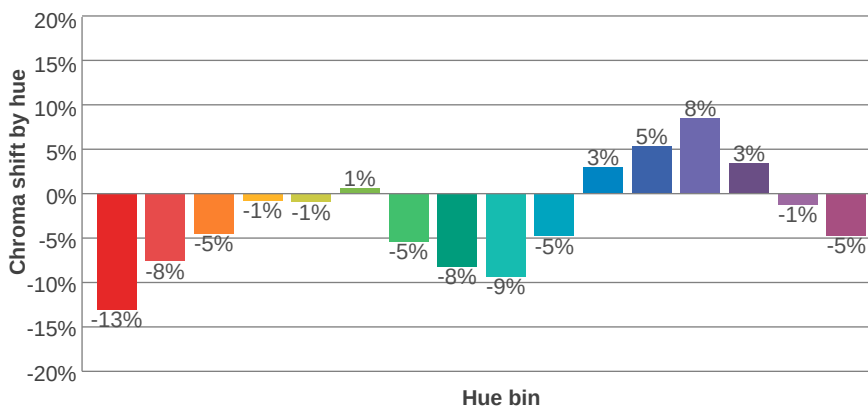
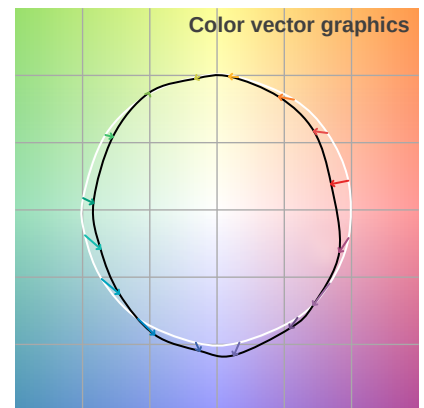
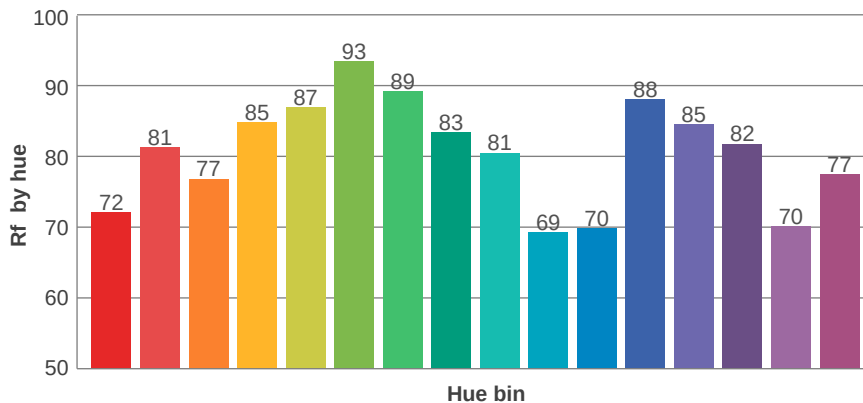
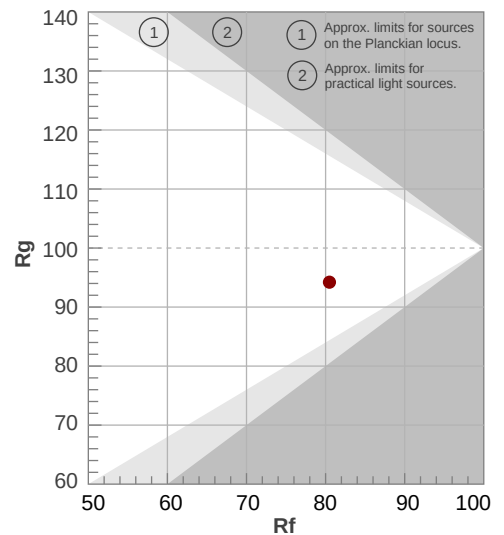
Rf 80.5

Fidelity index Rf

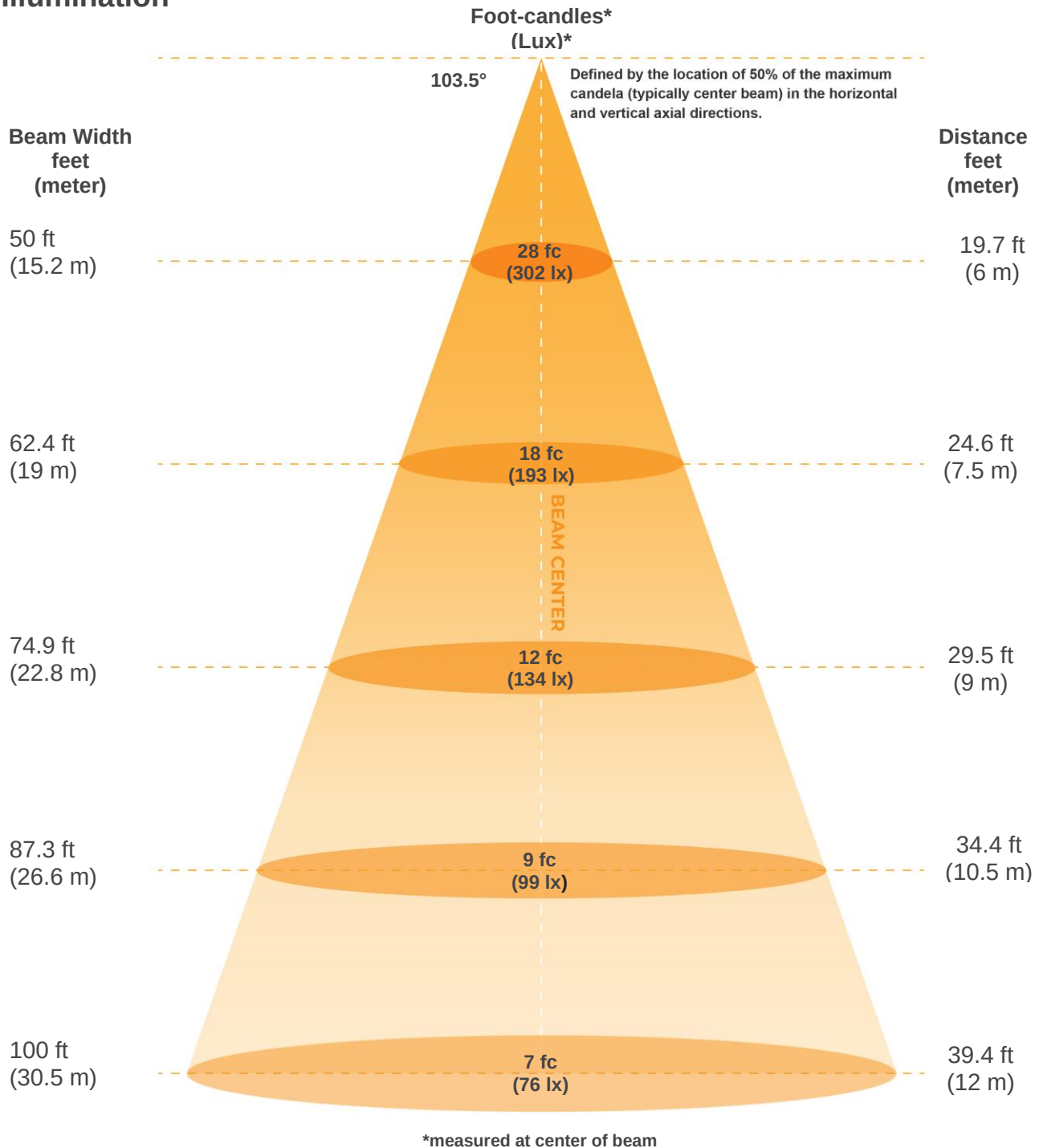
Rg 94.2

Gamut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	72	-13%	0%
2	81	-8%	7%
3	77	-5%	10%
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	8%	-6%
14	82	3%	-9%
15	70	-1%	-20%
16	77	-5%	-11%



Illumination



Beam intensities from 1-20m

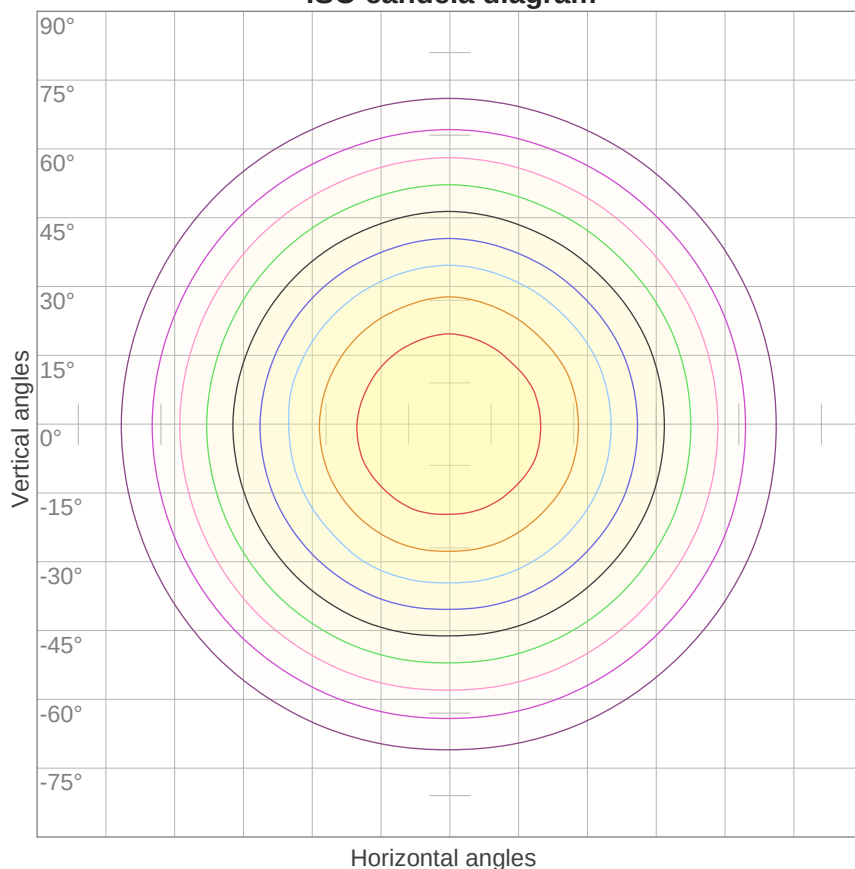
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
10877lx	2719lx	1209lx	680lx	435lx	302lx	222lx	170lx	134lx	109lx	90lx	76lx	64lx	55lx	48lx	42lx	38lx	34lx	30lx	27lx
1010.5f	252.6fc	112.3fc	63.2fcd	40.4fcd	28.1fcd	20.6fcd	15.8fcd	12.5fcd	10.1fcd	8.4fcd	7fcd	6fcd	5.2fcd	4.5fcd	3.9fcd	3.5fcd	3.1fcd	2.8fcd	2.5fcd

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
103.5°	158.5°	173.2°	80.0%	55.9%



ISO Diagrams

ISO candela diagram



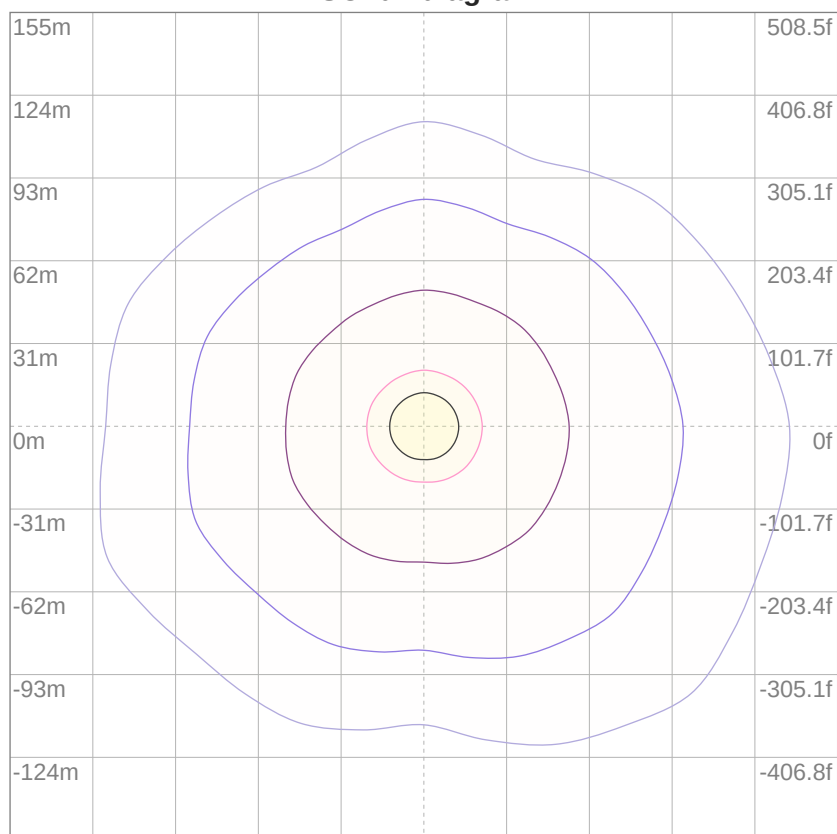
10%	1088 cd
20%	2175 cd
30%	3263 cd
40%	4351 cd
50%	5438 cd
60%	6526 cd
70%	7614 cd
80%	8701 cd
90%	9789 cd

Conditions:

Number of c-planes: 16

Candela at center: 10877 cd

ISO lux diagram



3%	3.26 lx
5%	5.44 lx
10%	10.9 lx
30%	32.6 lx
50%	54.4 lx

Conditions:

Number of c-planes: 16

Lux at center: 109 lx

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



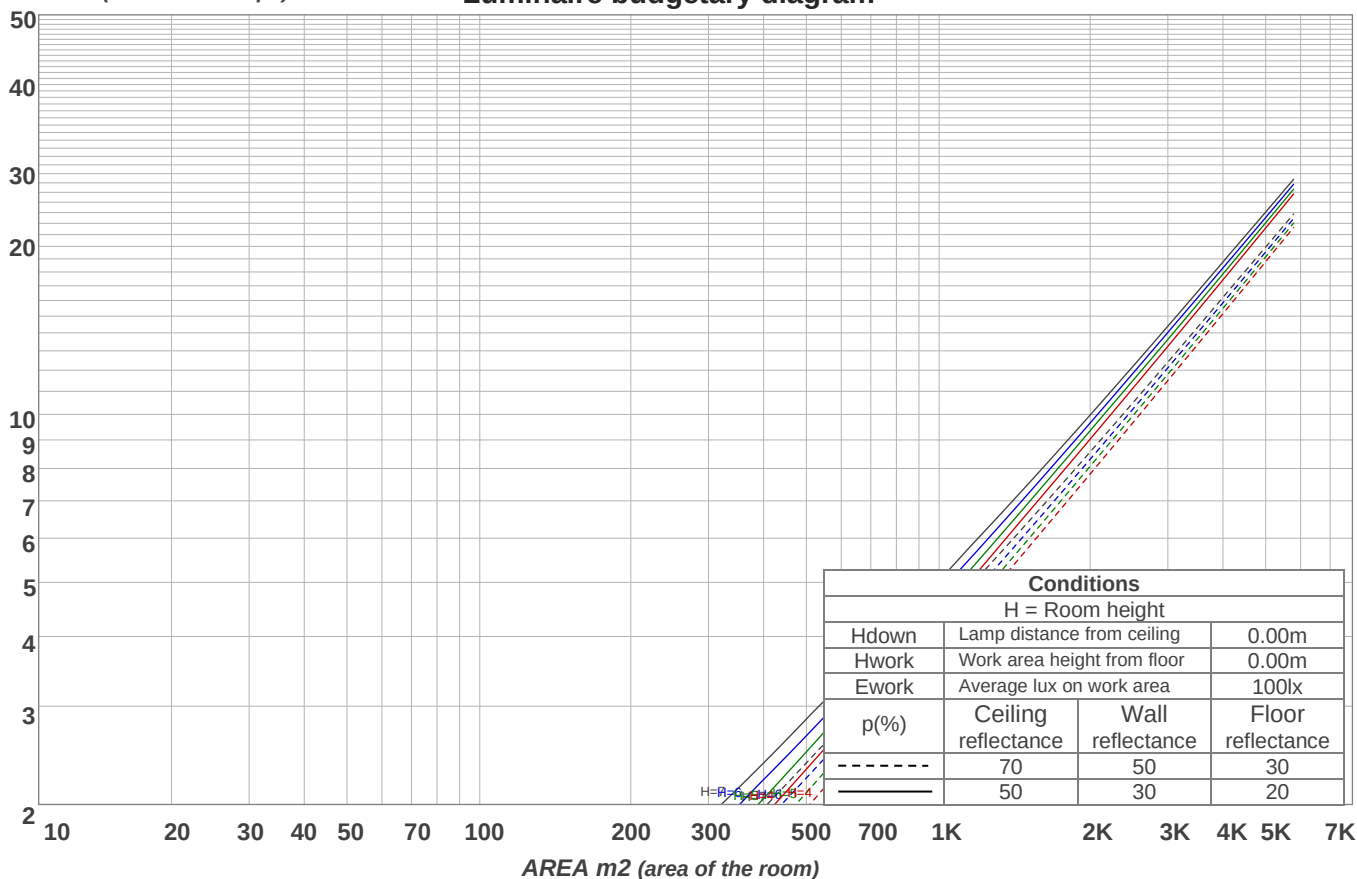
Light Planning

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	109	104	100	96	106	102	98	95	97	94	91	93	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	75	72	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	59
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	57	53	51
5	77	64	55	49	74	63	54	48	61	53	48	58	52	47	57	51	46	44
6	71	58	49	42	69	57	48	42	55	47	42	53	46	41	51	46	41	39
7	66	52	44	38	64	51	43	37	50	43	37	48	42	37	47	41	36	34
8	61	48	39	34	60	47	39	34	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	34	30	40	34	30	28
10	54	41	33	28	52	40	33	27	39	32	27	38	32	27	37	31	27	25

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°
1026 lm	2914 lm	4336 lm	5078 lm	5064 lm	4379 lm	3208 lm	1781 lm	476 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
37.7 lm	32.9 lm	34.7 lm	35.2 lm	34.1 lm	30.2 lm	24.6 lm	15.9 lm	5.55 lm

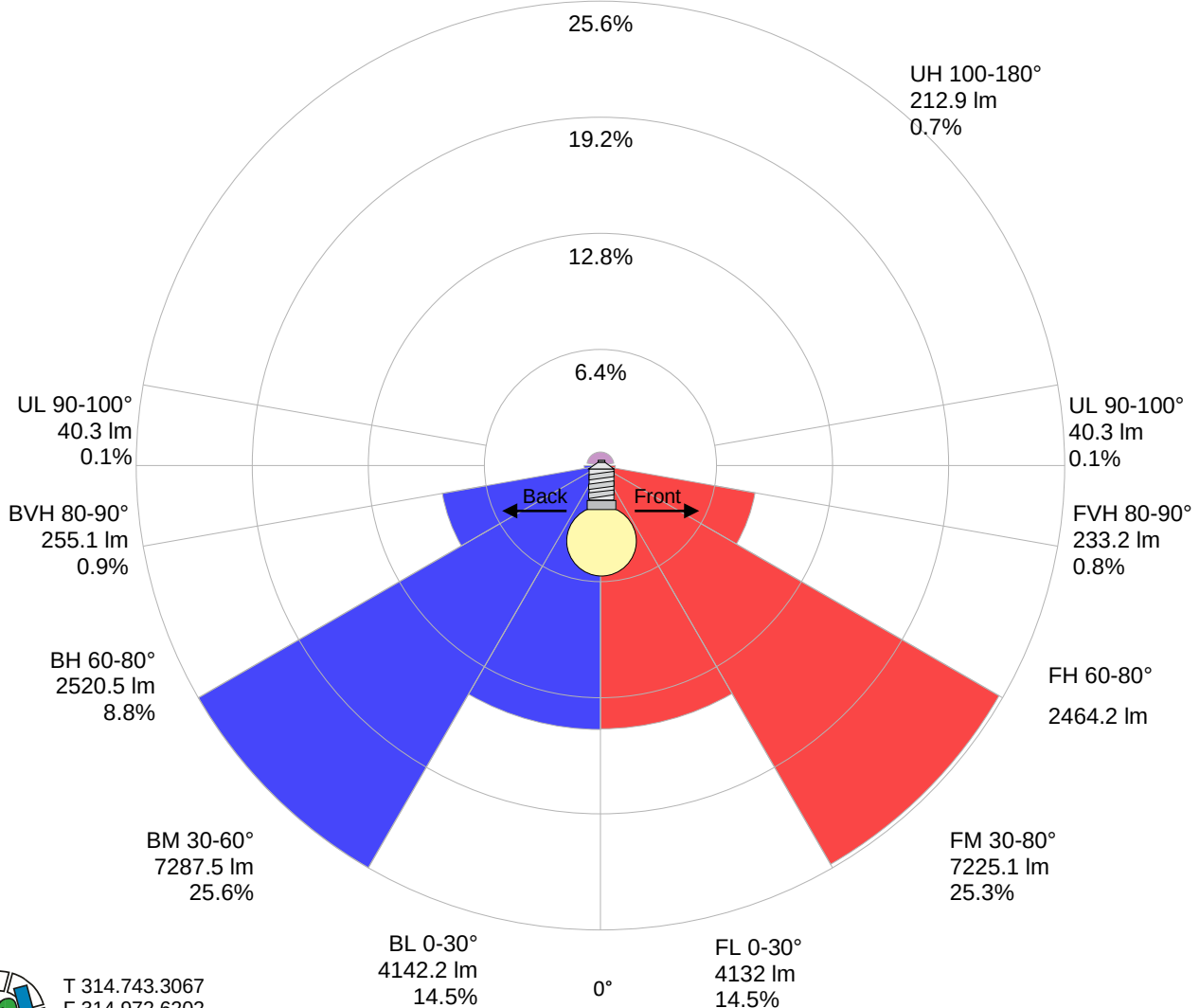


Road Report

LCS table

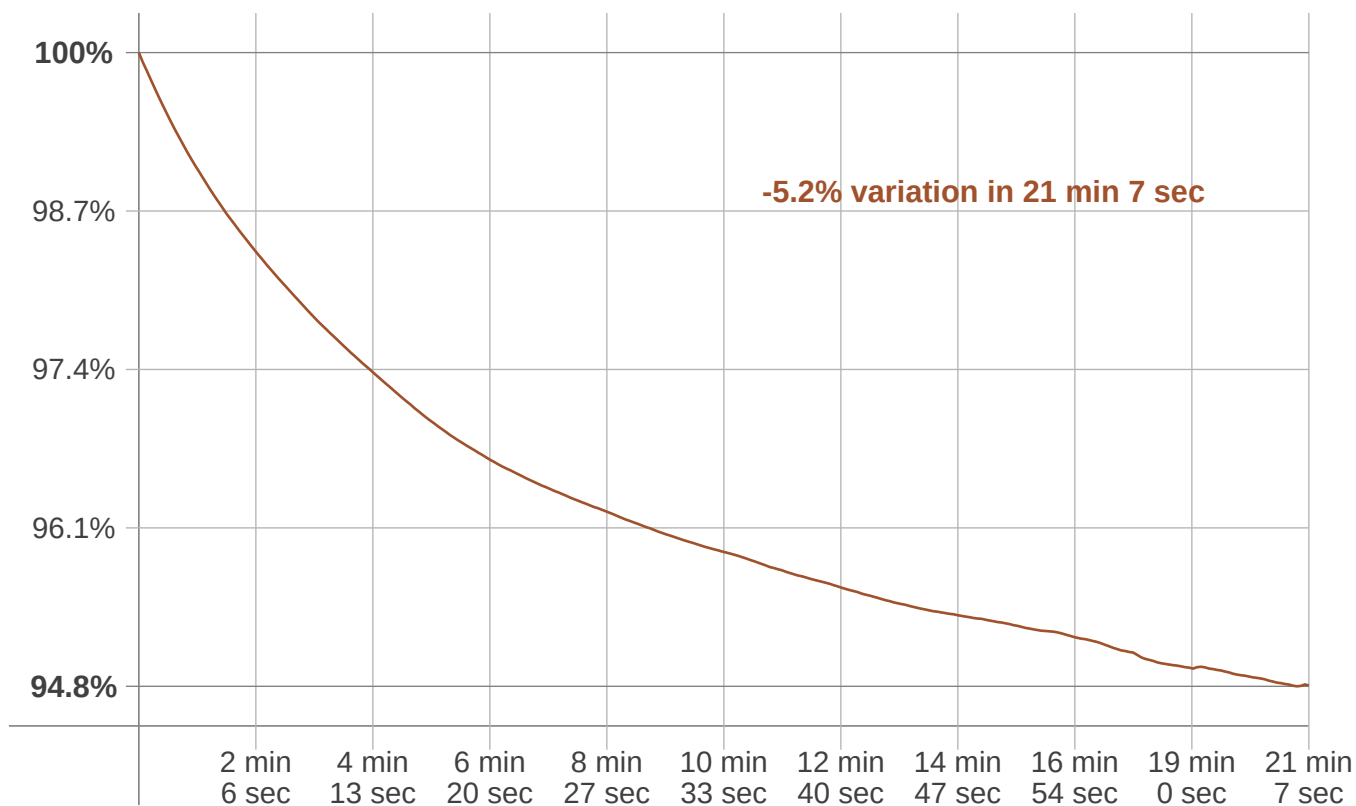
BUG rating:	B4 U3 G4	
Forward light	Lumens	Lumens %
Low(0-30):	4132	14.5%
Medium(30-60):	7225.1	25.3%
High(60-80):	2464.2	8.6%
Very high(80-90):	233.2	0.8%
Back light		
Low(0-30):	4142.2	14.5%
Medium(30-60):	7287.5	25.6%
High(60-80):	2520.5	8.8%
Very high(80-90):	255.1	0.9%
Uplight		
Low(90-100):	40.3	0.1%
High(100-180):	212.9	0.7%

LCS graph



Stabilization

Warmup curve



Warmup result

Warmup time:	21 min 7 sec
Warmup variation	-5.2%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
5201 K	+112 K	5313 K

Output change

Output start	Output change	Output end
29981 lm	-1468 lm	28513 lm

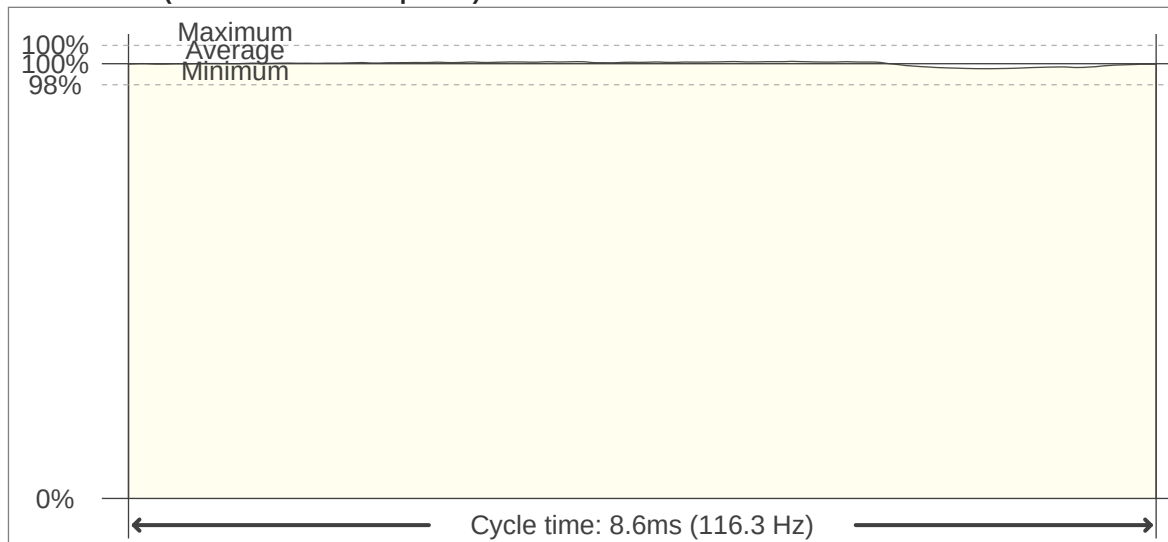


Flicker

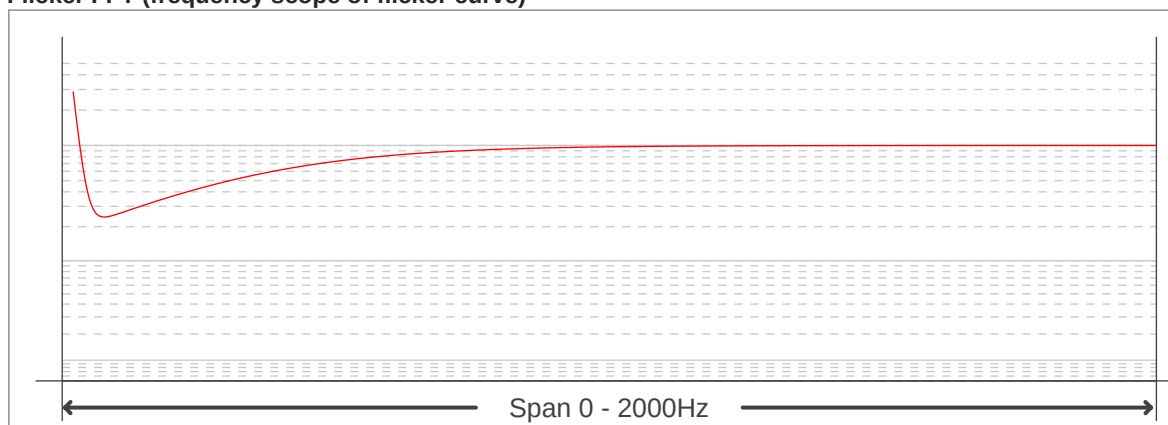
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:	116.28 Hz
Flicker index:	0
Flicker percentage:	0.99 %
SVM: (Visual flicker)	0.02

Flicker conditions:

Sample rate:	40000 samples/second
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