

Light efficiency:

146 Lumen/Watt

Output: 19830 lm

Light quality:

CRI: 84.9

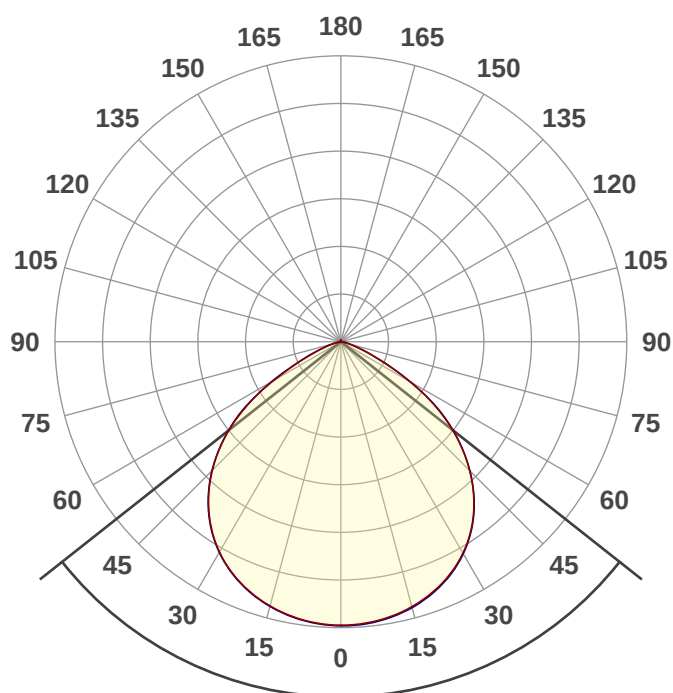
Peak: 8419 cd

Color temperature:

5204 K

Power: 135.4 W

PF: 1.0



Product name:

UHBDT-50K135H1-110

Date and time:

9/16/2020 11:30:29 AM

Beam angle

103.4°

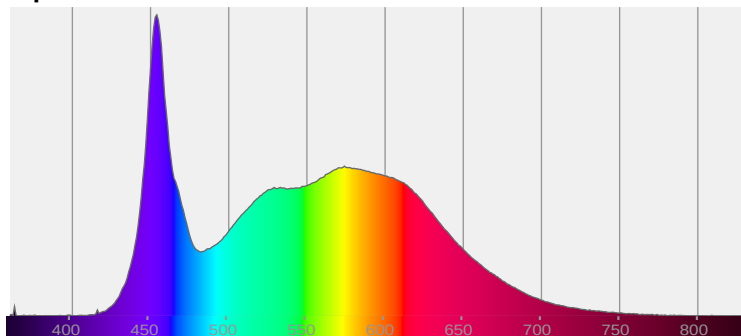


CIE 1931

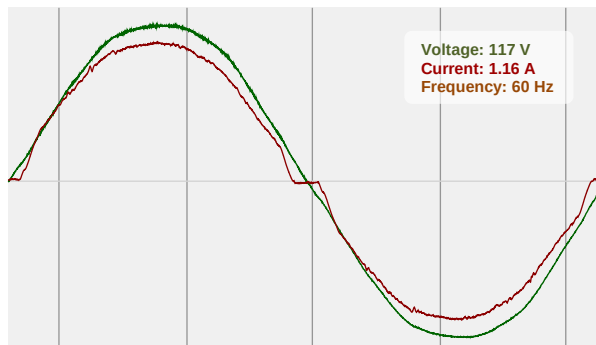
x: 0.340

y: 0.346

Spectra



Power



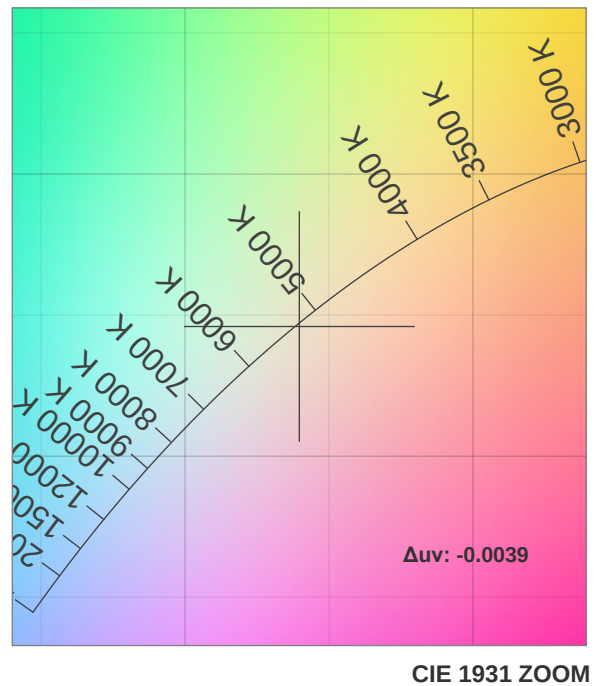
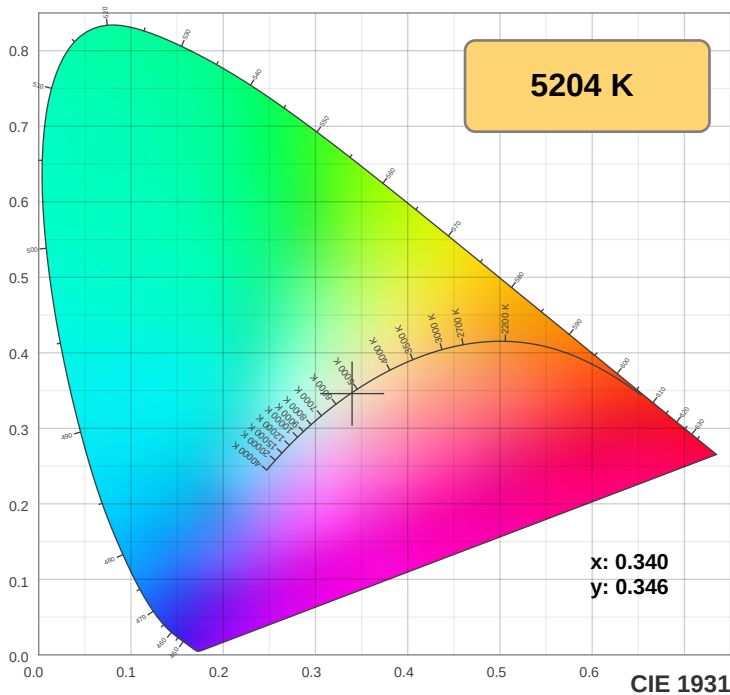
T 314.743.3067

F 314.972.6202

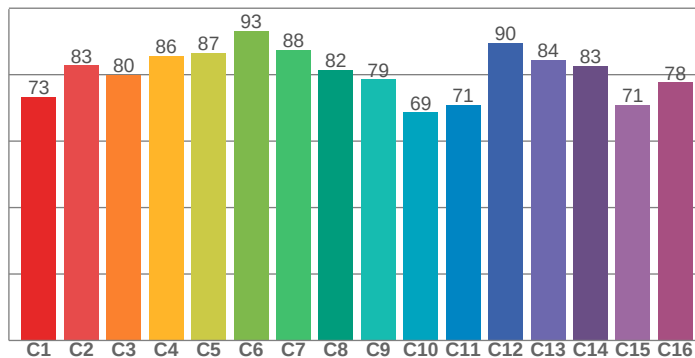
email: commercial-sales@superbrightleds.com

www.superbrightleds.com/

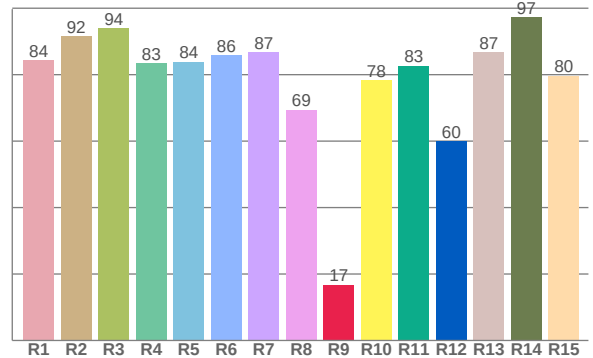
Color Specifications



TM30: 80.8



CRI: 84.9 (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
84.3	91.5	94.1	83.4	83.9	85.8	86.8	69.4	16.8	78.4	82.7	59.9	86.7	97.3	79.7

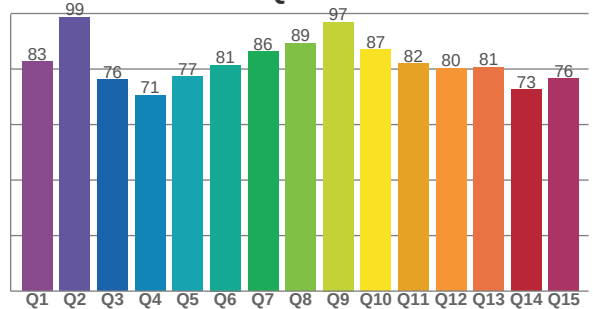
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
73.4	82.8	79.9	85.6	86.6	93.1	87.6	81.5	78.6	68.6	71.0	89.6	84.4	82.6	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	76.1	70.6	77.3	81.5	86.2	89.3	96.9	87.0	82.0	80.3	80.6	72.5	76.5

CQS: 80.9



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
5204 K	84.9	16.8	80.8	93.8	80.9	0.340	0.346	0.210	0.321	-0.0039



TM30 Report

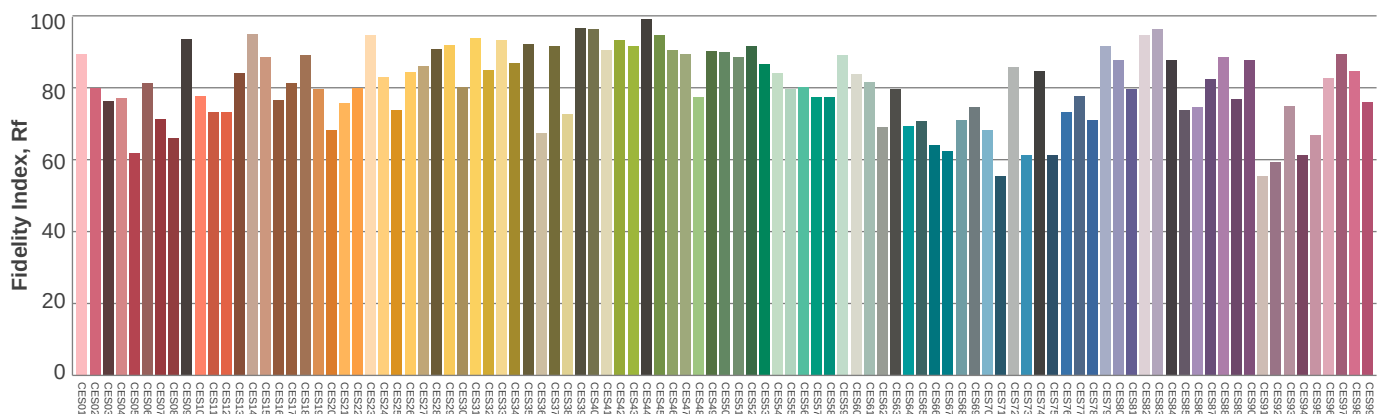
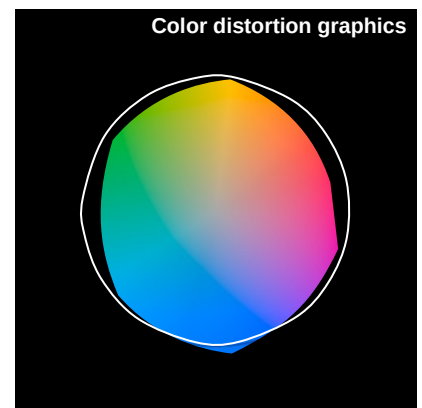
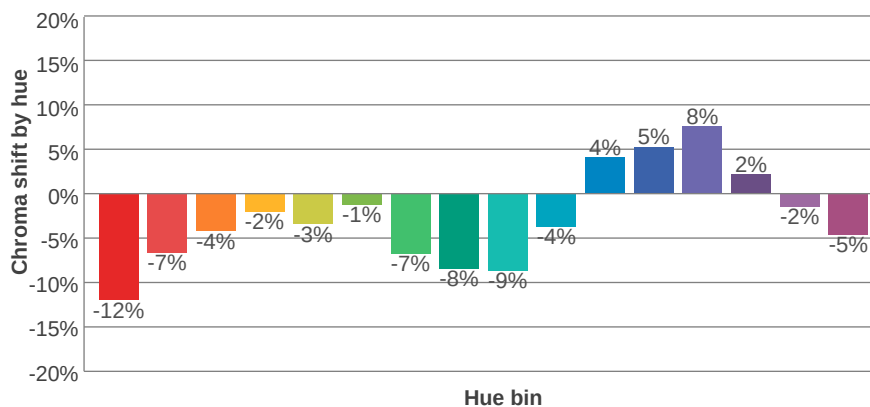
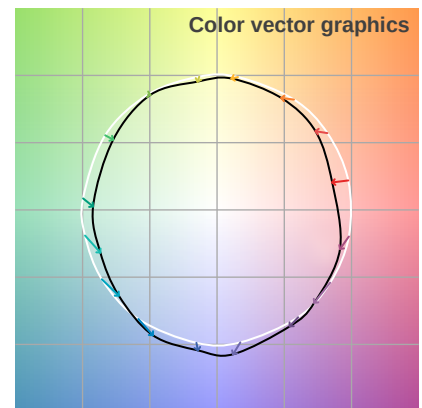
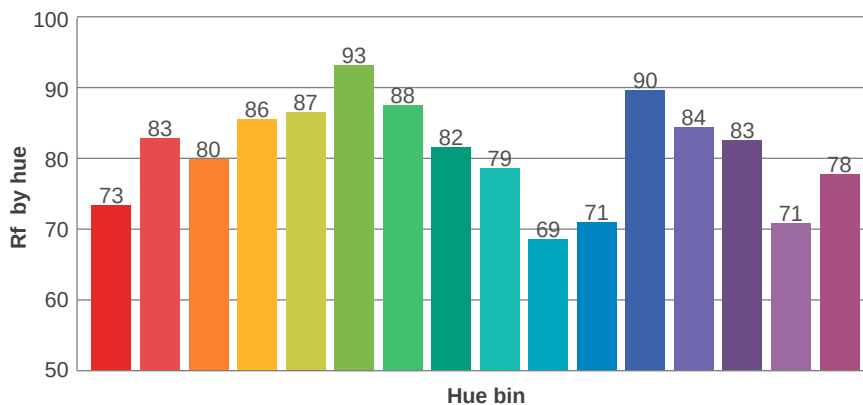
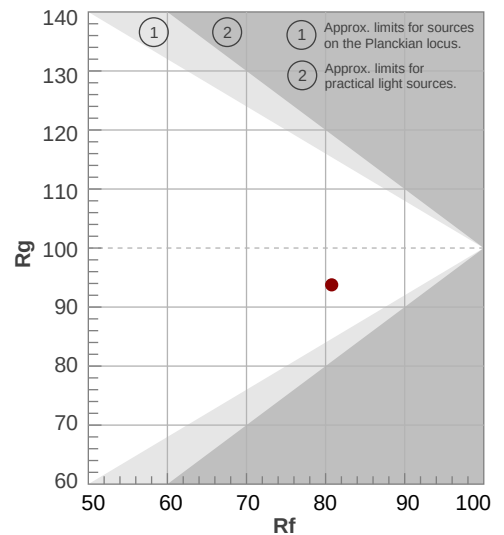
Rf 80.8

Fidelity index Rf

Rg 93.8

Gamut index Rg

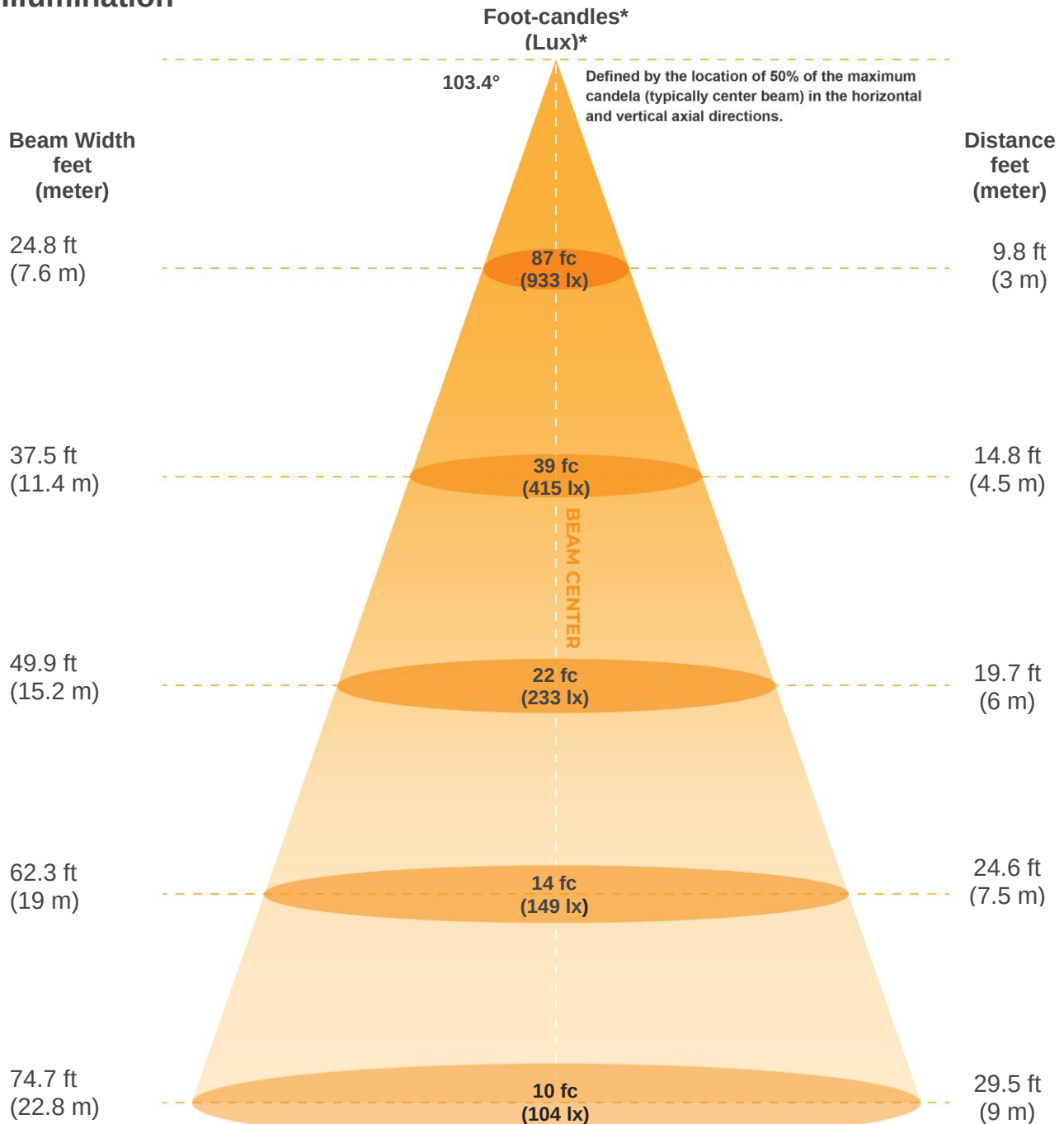
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	73	-12%	1%
2	83	-7%	6%
3	80	-4%	8%
4	86	-2%	5%
5	87	-3%	2%
6	93	-1%	-1%
7	88	-7%	-1%
8	82	-8%	4%
9	79	-9%	15%
10	69	-4%	17%
11	71	4%	16%
12	90	5%	2%
13	84	8%	-7%
14	83	2%	-9%
15	71	-2%	-19%
16	78	-5%	-10%



Color Evaluation Sample



Illumination



Beam intensities from 1-20m

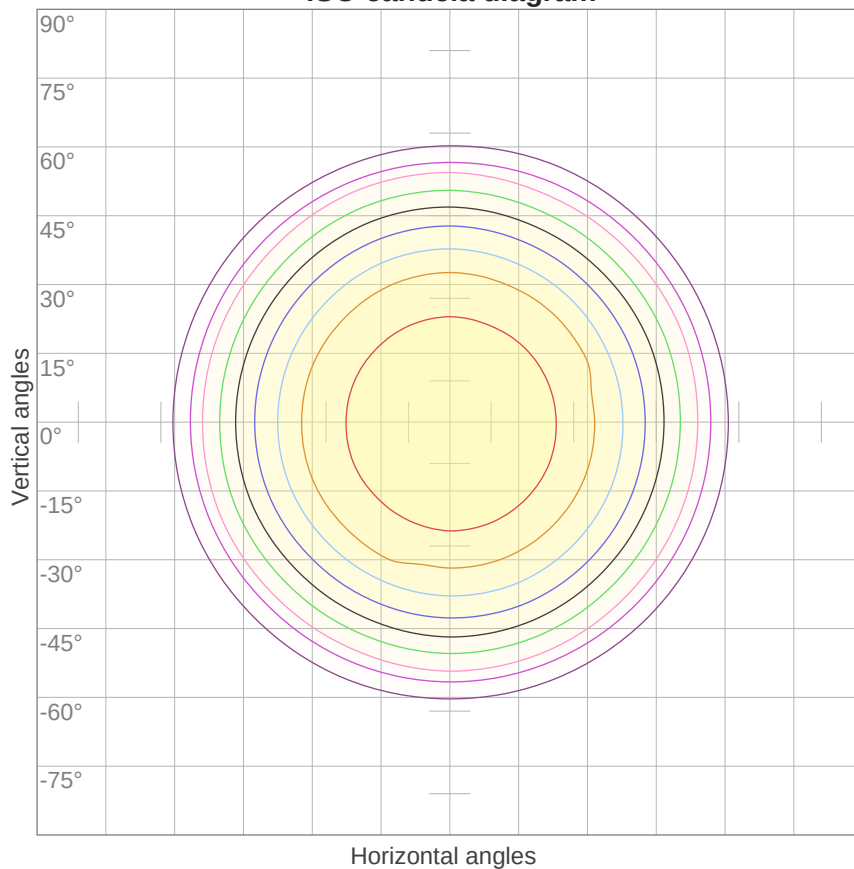
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
8400lx	2100lx	933lx	525lx	336lx	233lx	171lx	131lx	104lx	84lx	69lx	58lx	50lx	43lx	37lx	33lx	29lx	26lx	23lx	21lx
780.3fc	195.1fc	86.7fcd	48.8fcd	31.2fcd	21.7fcd	15.9fcd	12.2fcd	9.6fcd	7.8fcd	6.4fcd	5.4fcd	4.6fcd	4fcd	3.5fcd	3fcd	2.7fcd	2.4fcd	2.2fcd	2fcd

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
103.4°	136.1°	153°	91.0%	65.2%



ISO Diagrams

ISO candela diagram



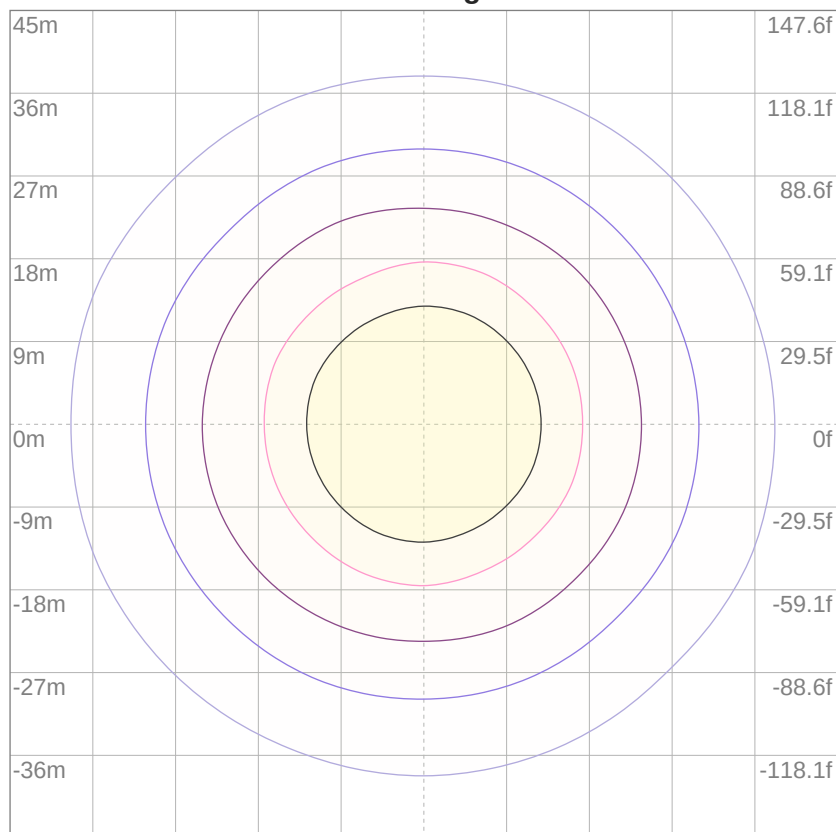
10%	840 cd
20%	1680 cd
30%	2520 cd
40%	3360 cd
50%	4200 cd
60%	5040 cd
70%	5880 cd
80%	6720 cd
90%	7560 cd

Conditions:

Number of c-planes: 16

Candela at center: 8400 cd

ISO lux diagram



3%	2.52 lx
5%	4.20 lx
10%	8.40 lx
30%	25.2 lx
50%	42.0 lx

Conditions:

Number of c-planes: 16

Lux at center: 84.0 lx

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



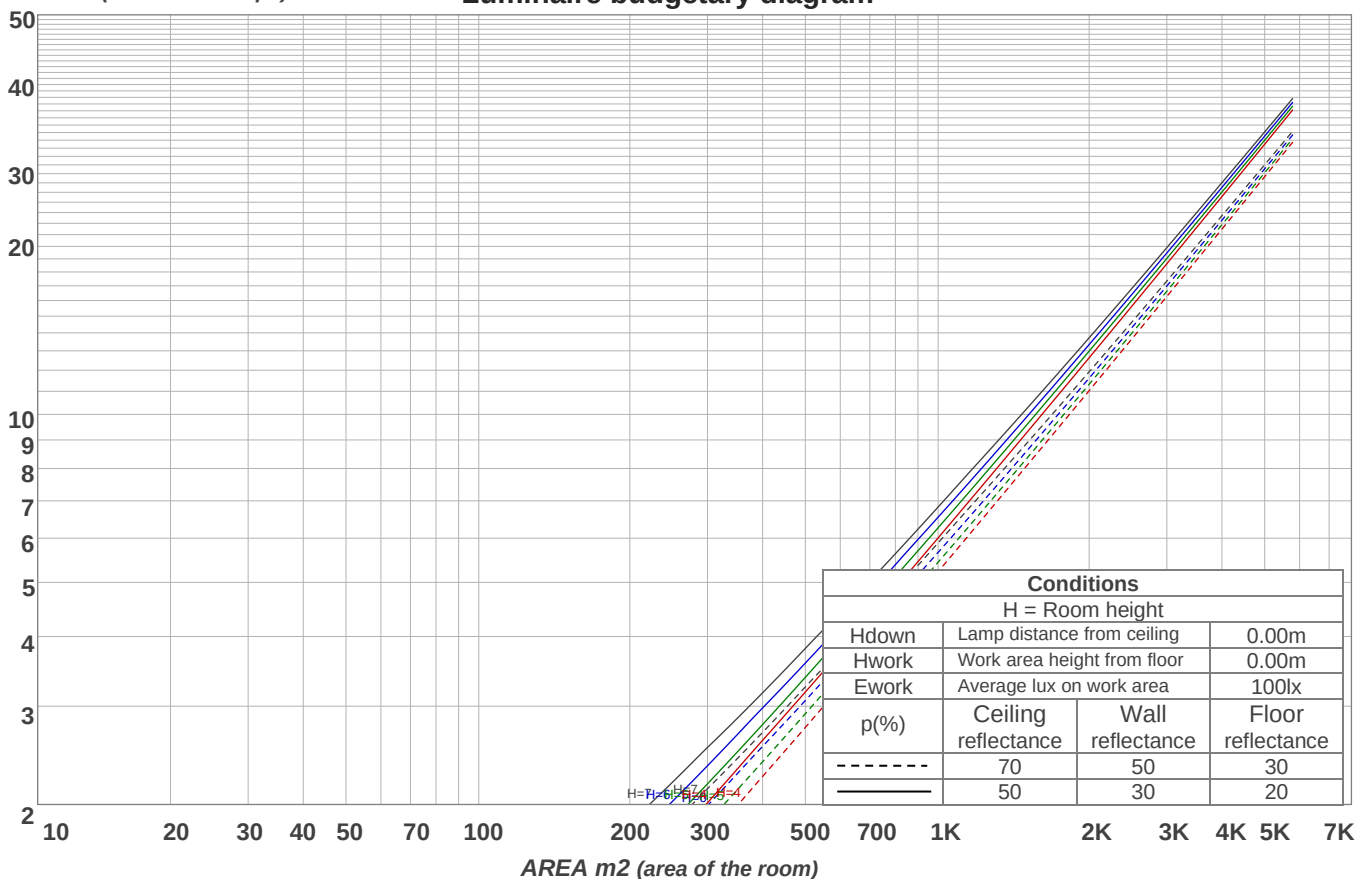
Light Planning

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	111	107	103	100	108	105	102	99	100	98	95	96	94	93	93	91	90	88
2	102	95	89	85	100	93	88	84	90	85	82	87	83	80	84	81	78	76
3	94	85	78	72	92	83	77	72	80	75	70	78	73	69	75	71	68	66
4	87	76	68	62	85	75	67	62	72	66	61	70	65	60	68	63	59	57
5	80	68	60	54	78	67	60	54	65	59	53	63	57	53	62	56	52	50
6	74	62	54	48	72	61	53	48	59	52	47	58	51	47	56	51	46	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	41	40
8	64	52	44	38	63	51	43	38	50	43	38	48	42	37	47	41	37	35
9	60	47	40	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	40	35	31	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°
796 lm	2294 lm	3502 lm	4197 lm	4138 lm	3127 lm	1329 lm	311 lm	35.2 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
7.84 lm	10.8 lm	13.6 lm	15.3 lm	16.0 lm	15.0 lm	12.5 lm	8.41 lm	3.01 lm

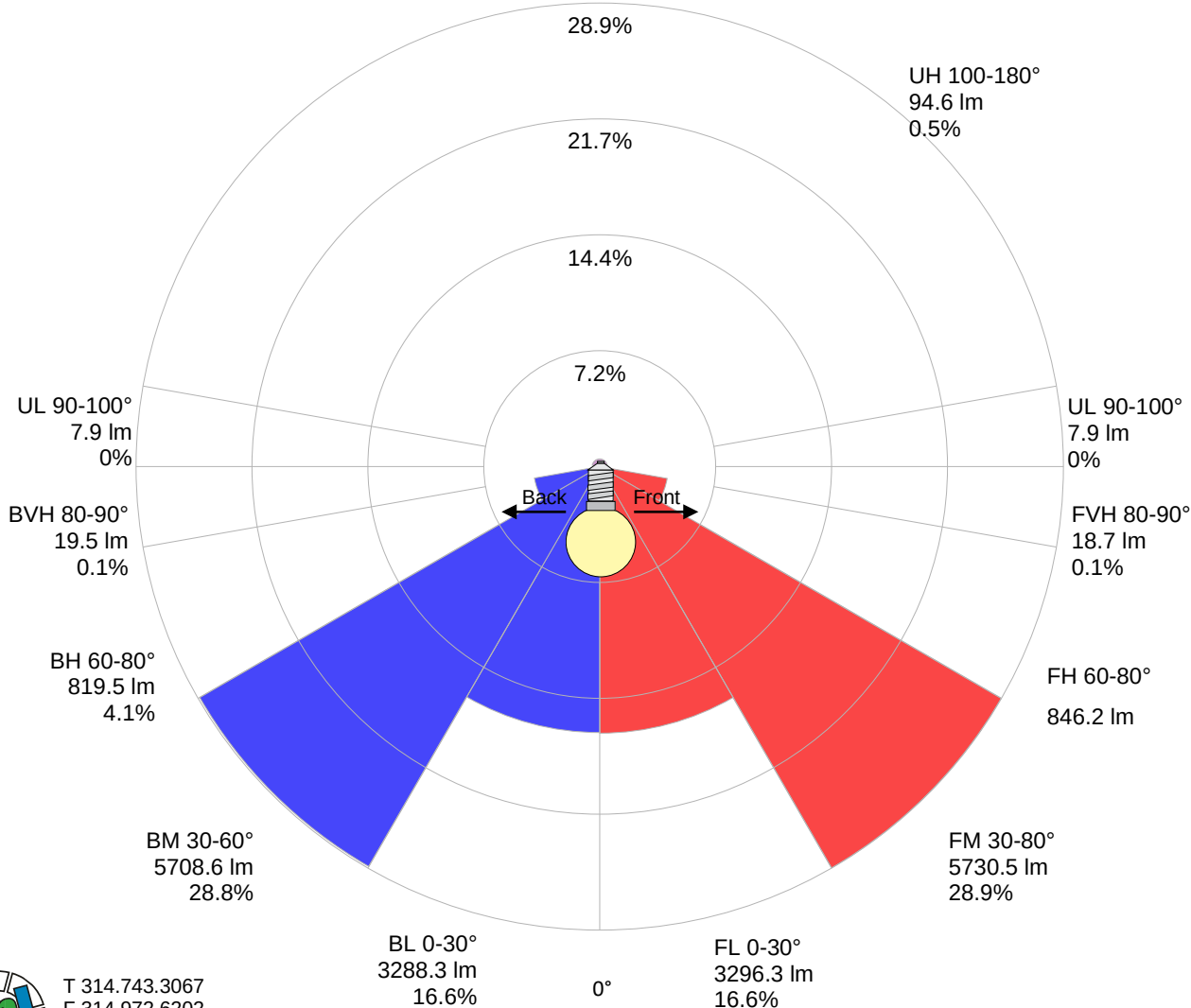


Road Report

LCS table

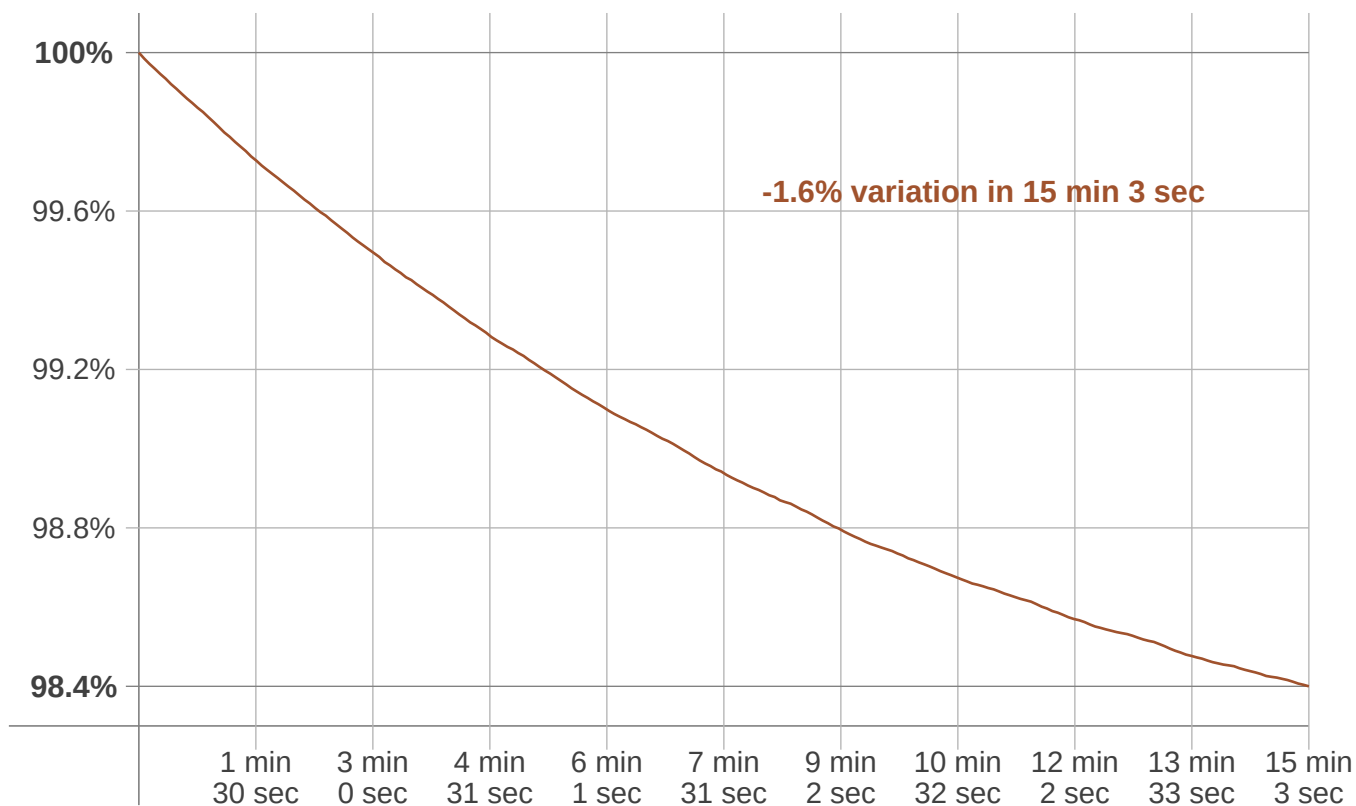
BUG rating:	B4 U3 G2	
Forward light	Lumens	Lumens %
Low(0-30):	3296.3	16.6%
Medium(30-60):	5730.5	28.9%
High(60-80):	846.2	4.3%
Very high(80-90):	18.7	0.1%
Back light		
Low(0-30):	3288.3	16.6%
Medium(30-60):	5708.6	28.8%
High(60-80):	819.5	4.1%
Very high(80-90):	19.5	0.1%
Uplight		
Low(90-100):	7.9	0%
High(100-180):	94.6	0.5%

LCS graph



Stabilization

Warmup curve



Warmup result

Warmup time:	15 min 3 sec
Warmup variation	-1.6%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
5145 K	+59 K	5204 K

Output change

Output start	Output change	Output end
20149 lm	-319 lm	19830 lm

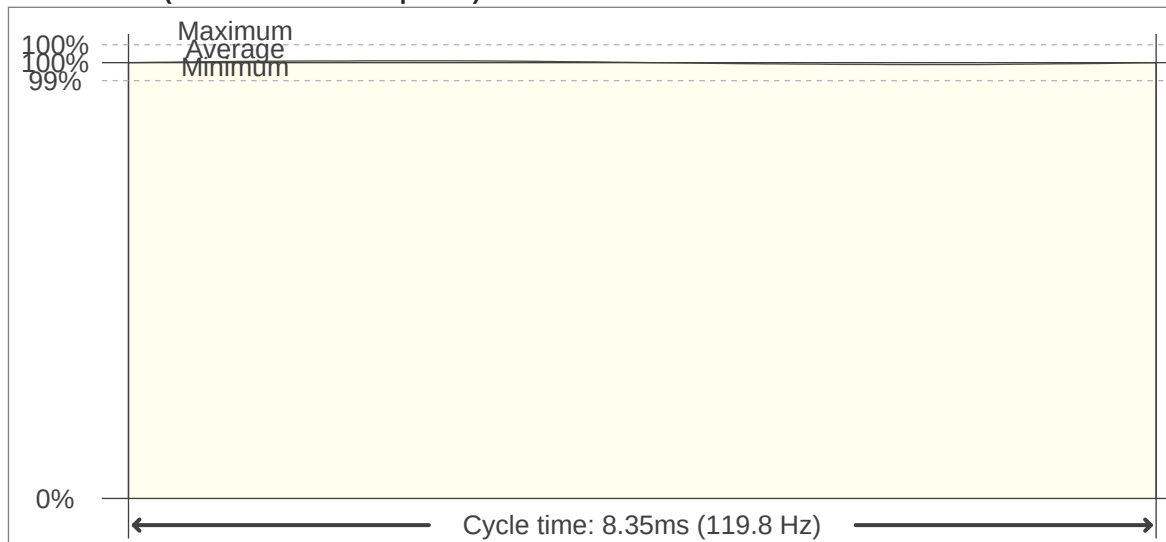


Flicker

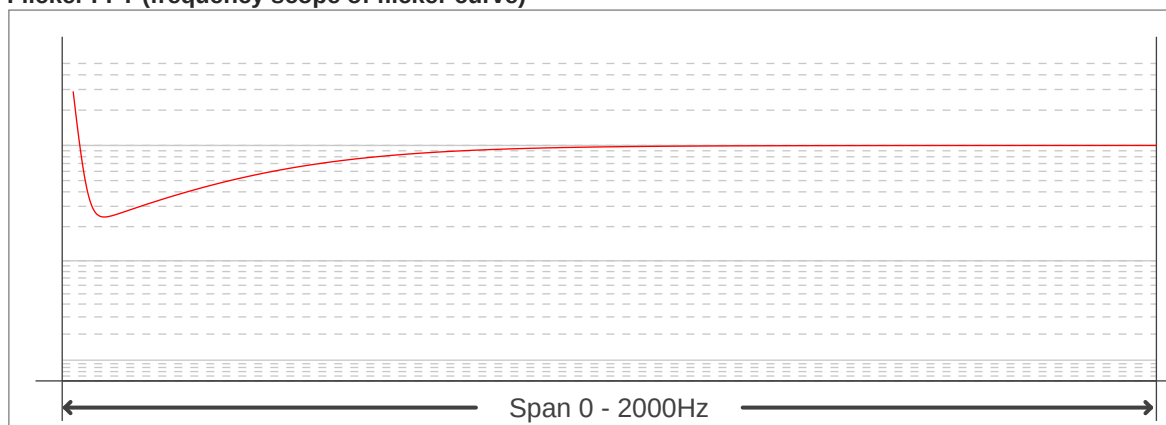
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:	119.76 Hz
Flicker index:	0
Flicker percentage:	0.48 %
SVM: (Visual flicker)	0.02

Flicker conditions:

Sample rate:	40000 samples/second
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