

Light efficiency:

141 Lumen/Watt

Output: 14234 lm

Light quality:

CRI: 83.0

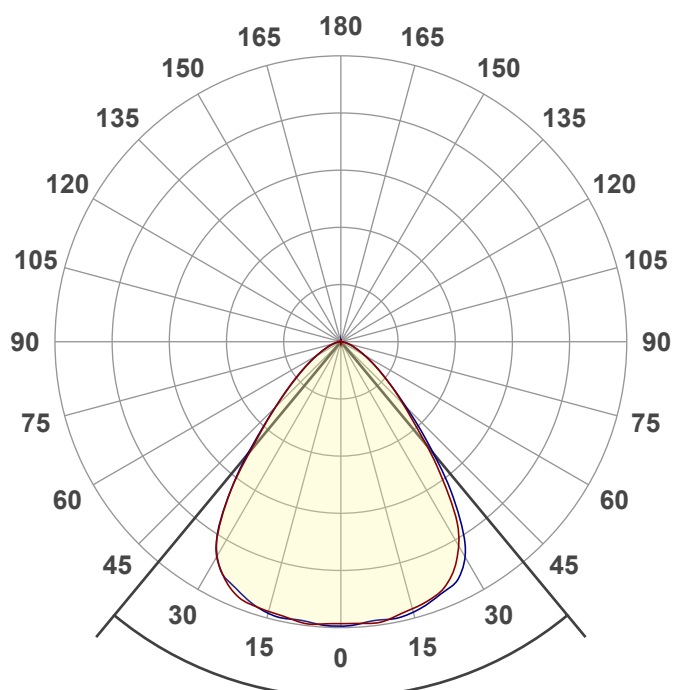
Peak: 8264 cd

Color temperature:

5153 K

Power: 101 W

PF: 1.0



Product name:

UHBD-S1-50K100-80H

Date and time:

12/1/2022 11:10:39 AM

Beam angle

79.3°

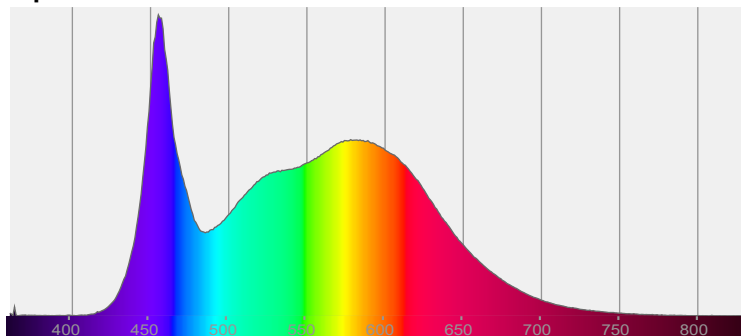


CIE 1931

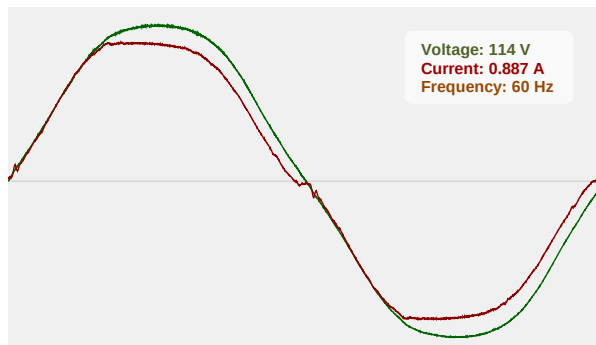
x: 0.341

y: 0.351

Spectra



Power



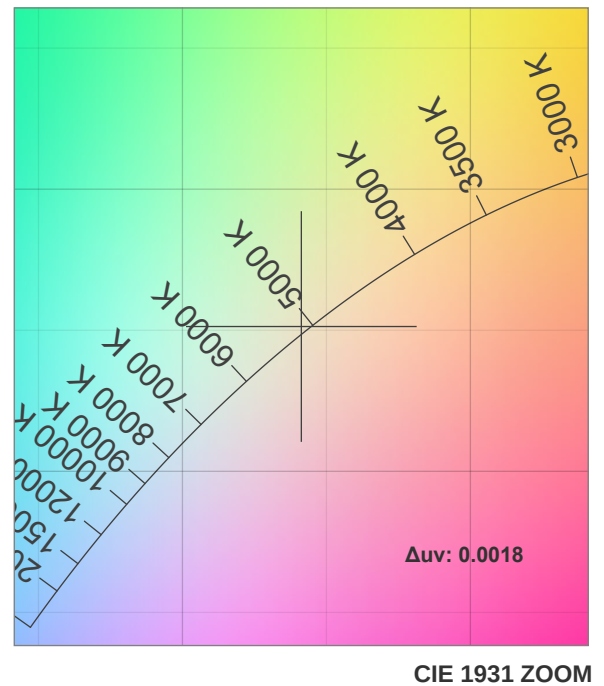
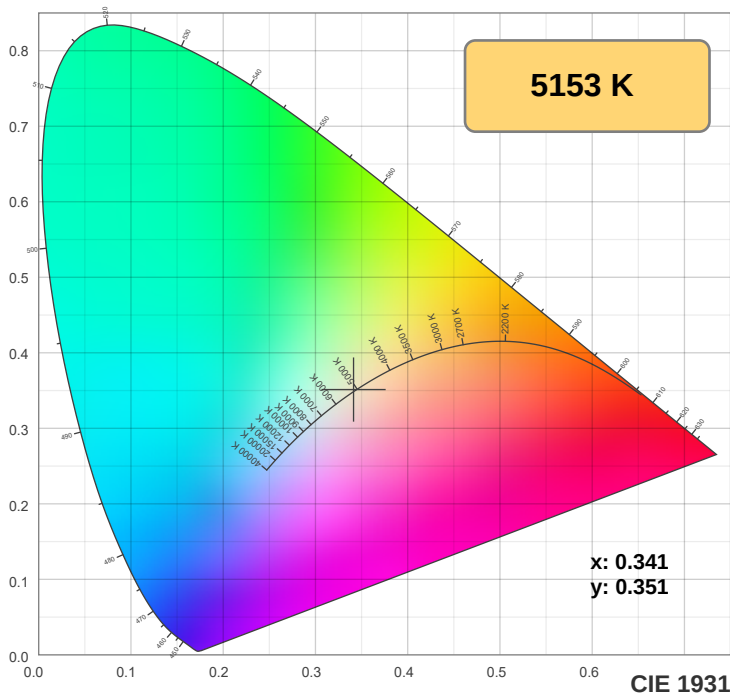
T 314.743.3067

F 314.972.6202

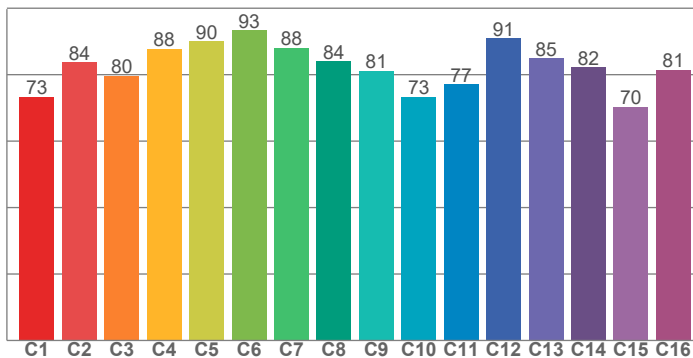
email: commercial-sales@superbrightleds.com

www.superbrightleds.com/

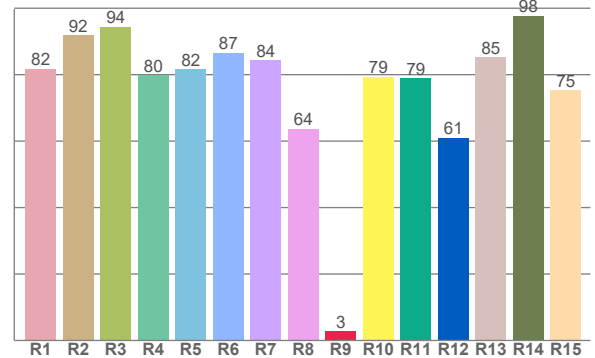
Color Specifications



TM30: 82.6



CRI: 83.0 (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
81.8	91.8	94.4	79.8	81.7	86.6	84.3	63.7	2.8	79.4	79.0	61.1	85.2	97.7	75.4

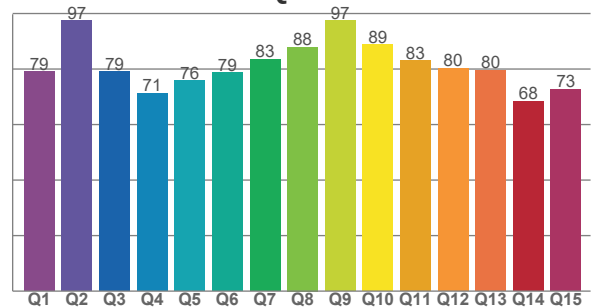
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
73.3	83.7	79.7	87.8	90.0	93.3	88.0	84.0	81.1	73.3	77.1	91.0	84.9	82.2	70.3	81.4

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
79.1	97.5	79.0	71.3	75.9	78.7	83.5	87.9	97.4	88.9	82.9	80.3	79.5	68.4	72.7

CQS: 79.8



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
5153 K	83.0	2.8	82.6	92.6	79.8	0.341	0.351	0.209	0.323	0.0018



TM30 Report

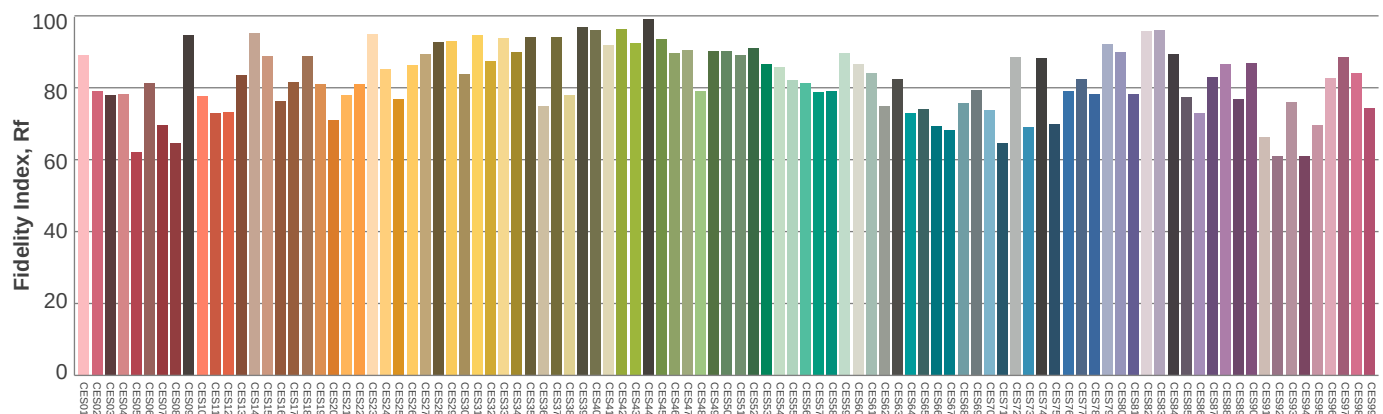
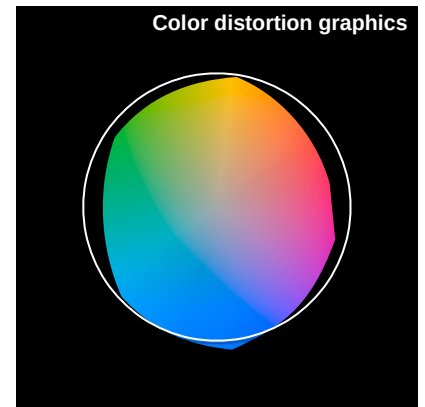
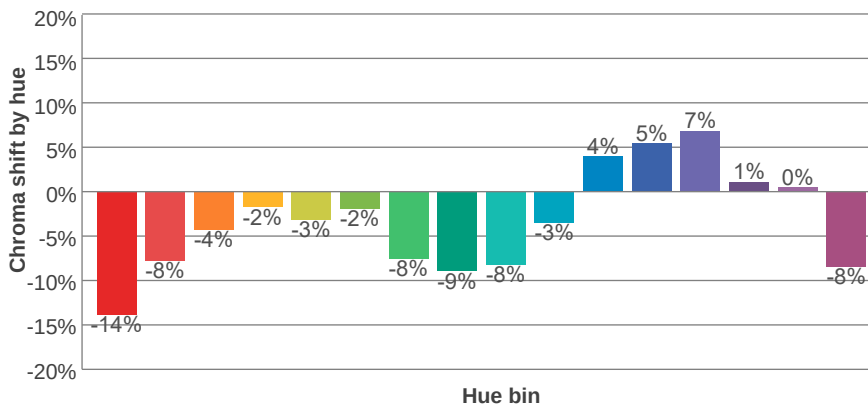
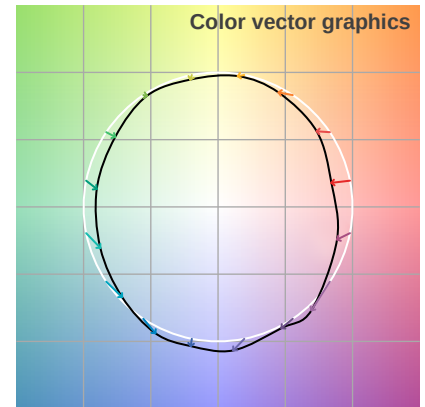
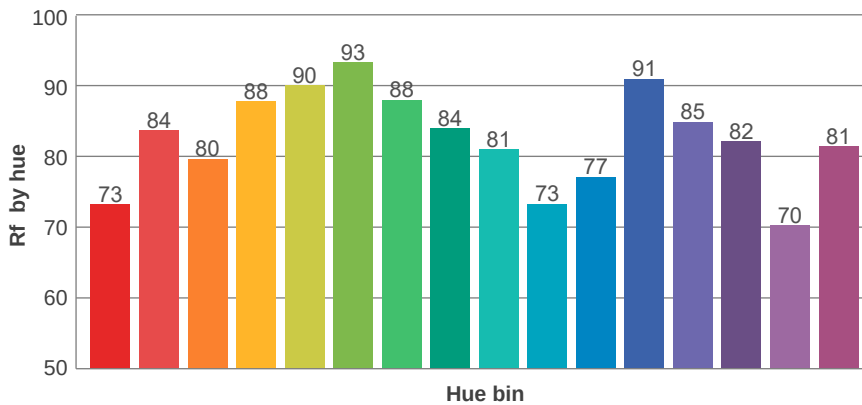
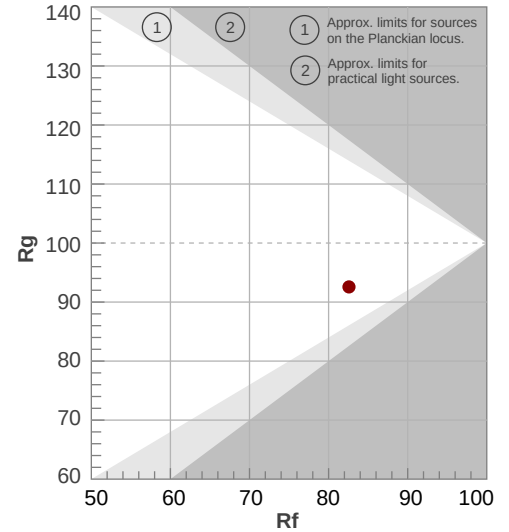
Rf 82.6

Fidelity index Rf

Rg 92.6

Gammut index Rg

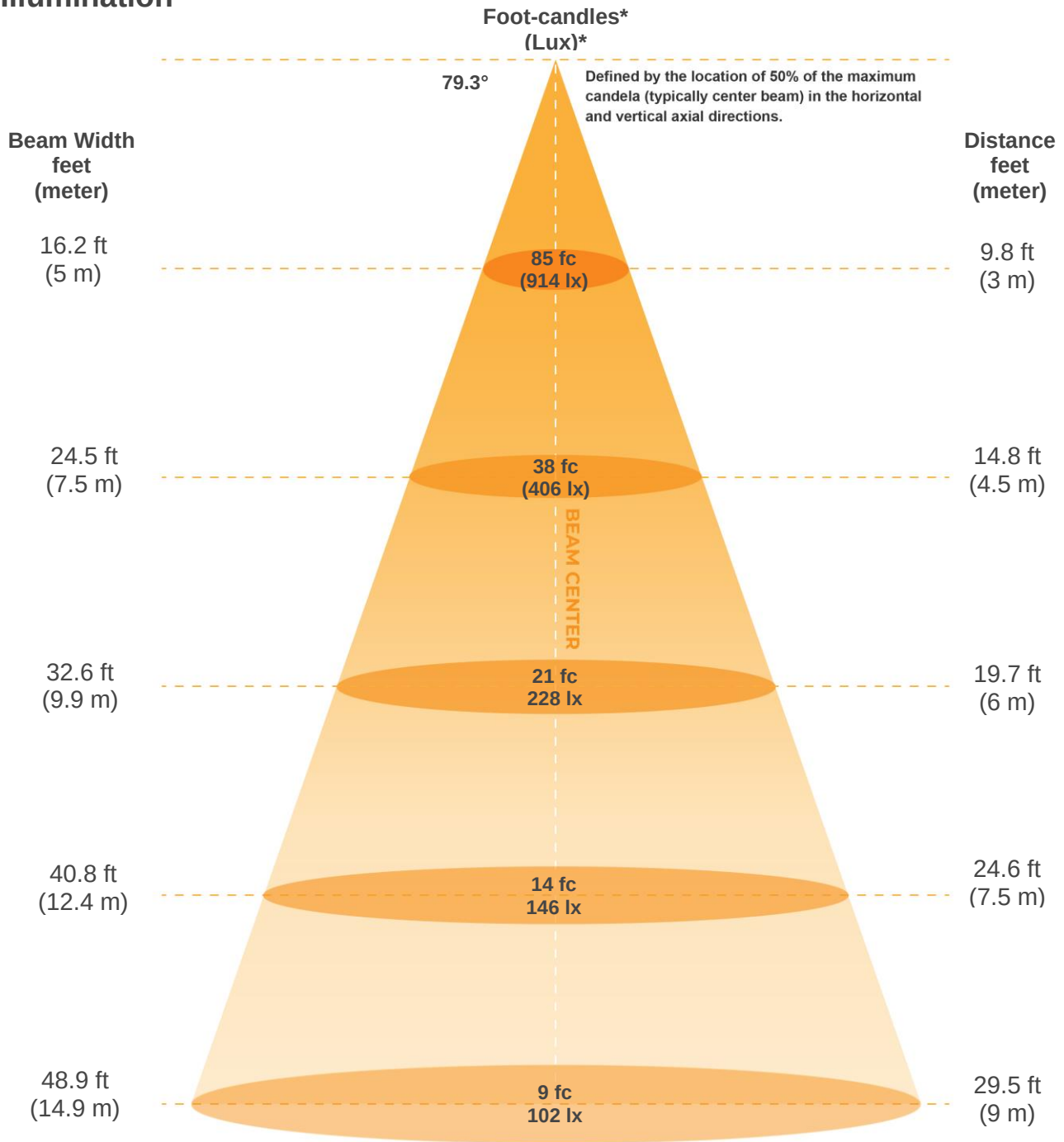
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	73	-14%	1%
2	84	-8%	6%
3	80	-4%	10%
4	88	-2%	5%
5	90	-3%	2%
6	93	-2%	-2%
7	88	-8%	-1%
8	84	-9%	4%
9	81	-8%	13%
10	73	-3%	16%
11	77	4%	13%
12	91	5%	0%
13	85	7%	-10%
14	82	1%	-11%
15	70	0%	-25%
16	81	-8%	-7%



Color Evaluation Sample



Illumination



*measured at center of beam

Beam intensities from 1-20m

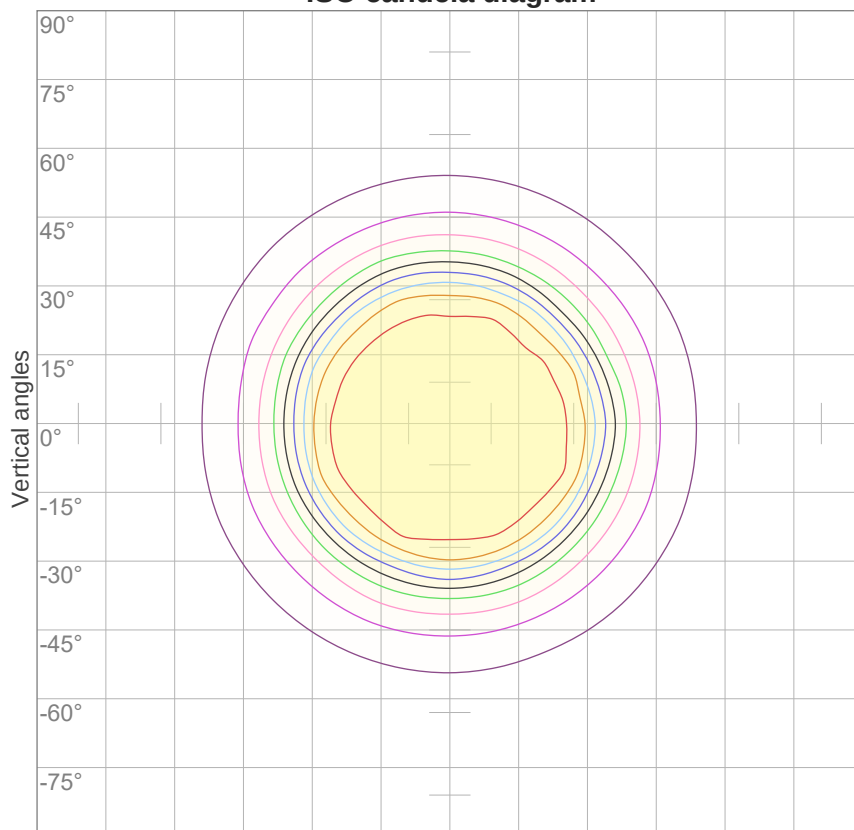
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
8222lx	2056lx	914lx	514lx	329lx	228lx	168lx	128lx	102lx	82lx	68lx	57lx	49lx	42lx	37lx	32lx	28lx	25lx	23lx	21lx
763.9fc	191fcd	84.9fcd	47.7fcd	30.6fcd	21.2fcd	15.6fcd	11.9fcd	9.4fcd	7.6fcd	6.3fcd	5.3fcd	4.5fcd	3.9fcd	3.4fcd	3fcd	2.6fcd	2.4fcd	2.1fcd	1.9fcd

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
79.3°	120.3°	150.6°	93.9%	79.6%



ISO Diagrams

ISO candela diagram



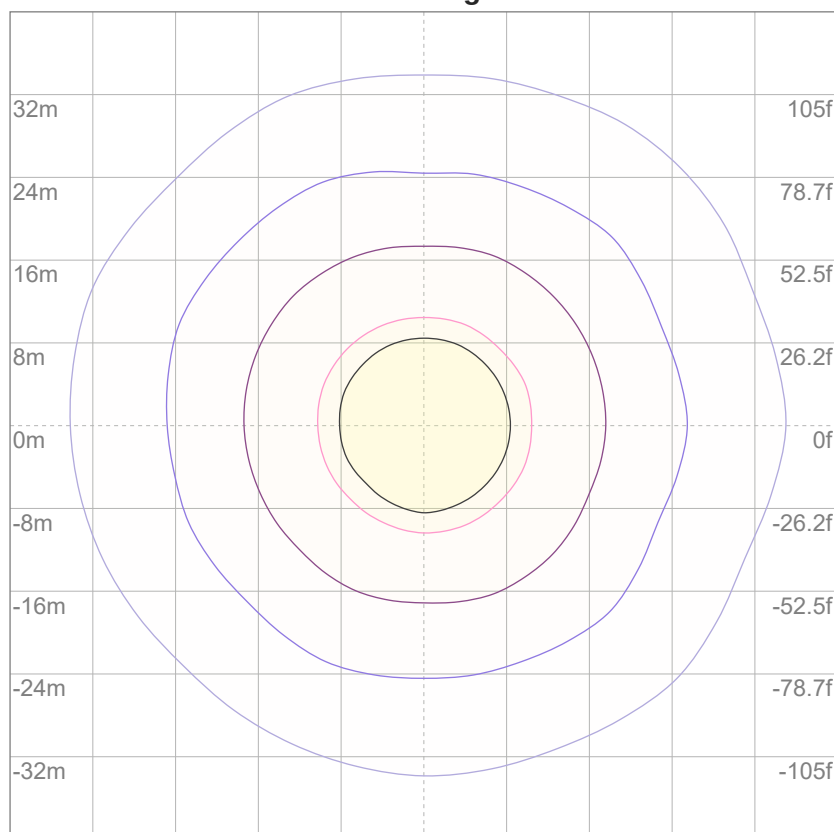
10%	822 cd
20%	1644 cd
30%	2467 cd
40%	3289 cd
50%	4111 cd
60%	4933 cd
70%	5756 cd
80%	6578 cd
90%	7400 cd

Conditions:

Number of c-planes: 16

Candela at center: 8222 cd

ISO lux diagram



3%	2.47 lx
5%	4.11 lx
10%	8.22 lx
30%	24.7 lx
50%	41.1 lx

Conditions:

Number of c-planes: 16

Lux at center: 82.2 lx

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



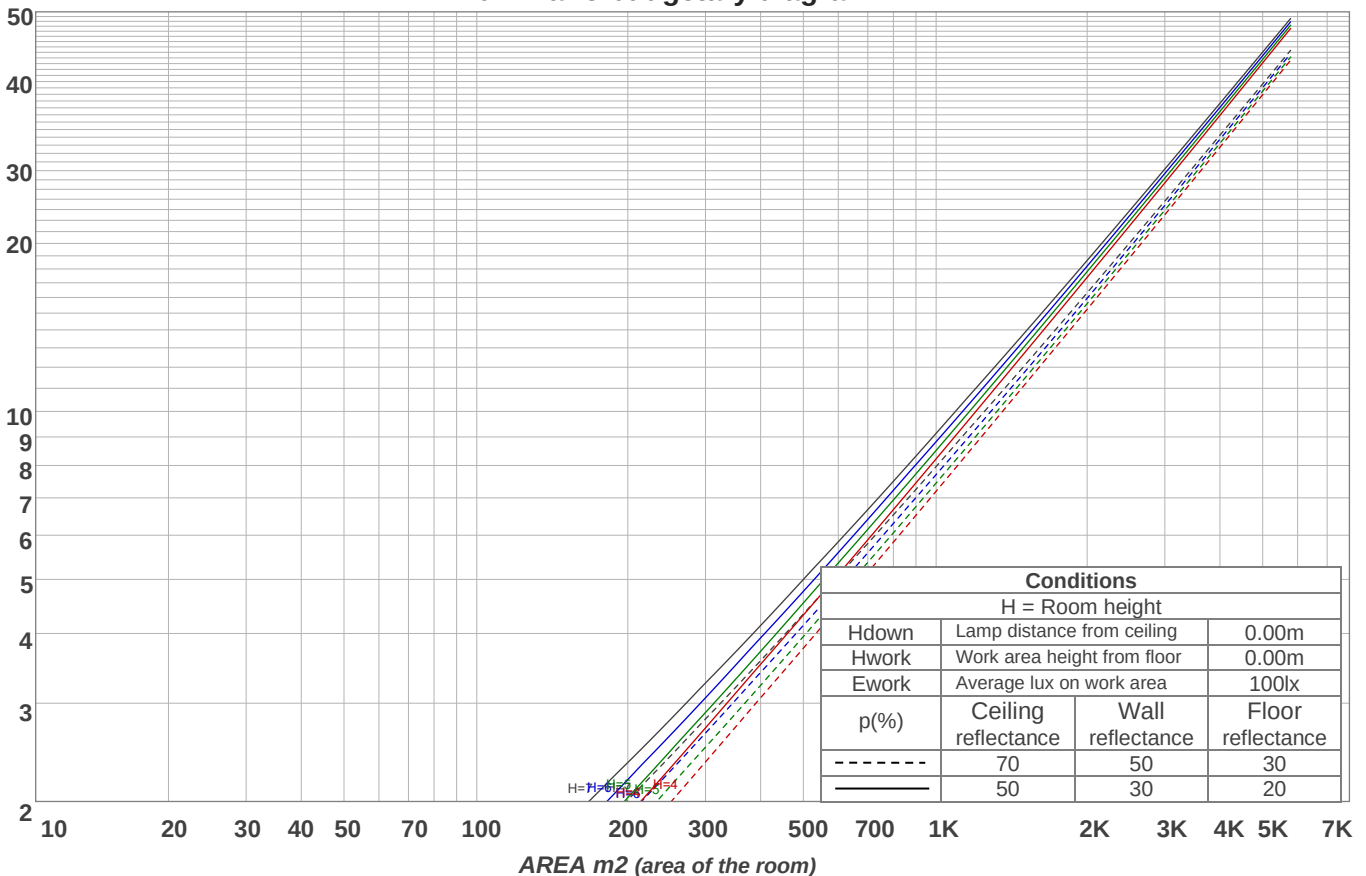
Light Planning

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	112	108	105	102	109	106	103	101	102	99	97	98	96	94	94	93	92	90
2	104	98	93	89	102	96	91	87	93	89	85	90	86	84	87	84	82	80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71
4	91	81	74	69	89	80	73	68	78	72	67	75	71	67	73	69	66	64
5	85	74	67	62	83	73	66	61	71	65	61	69	64	60	68	63	59	58
6	79	68	61	55	77	67	60	55	66	59	55	64	59	54	63	58	54	52
7	74	63	55	50	73	62	55	50	61	54	50	59	54	49	58	53	49	47
8	70	58	51	46	68	57	51	46	56	50	45	55	49	45	54	49	45	43
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40
10	62	50	43	39	61	50	43	39	49	43	38	48	42	38	47	42	38	37

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°
782 lm	2292 lm	3519 lm	3537 lm	2101 lm	1133 lm	548 lm	230 lm	49.8 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
2.95 lm	3.61 lm	4.27 lm	5.38 lm	6.36 lm	7.02 lm	6.27 lm	4.53 lm	1.66 lm

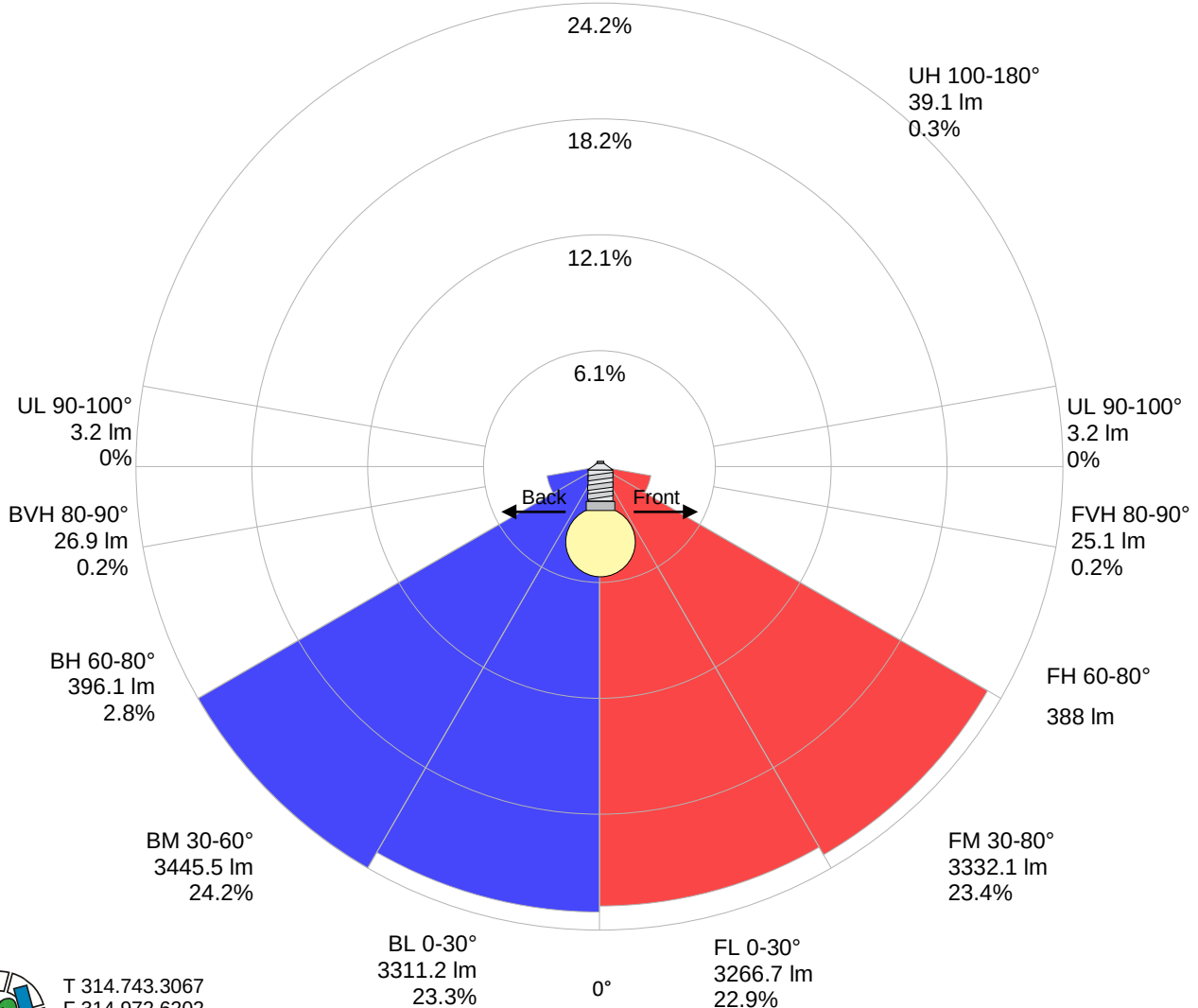


Road Report

LCS table

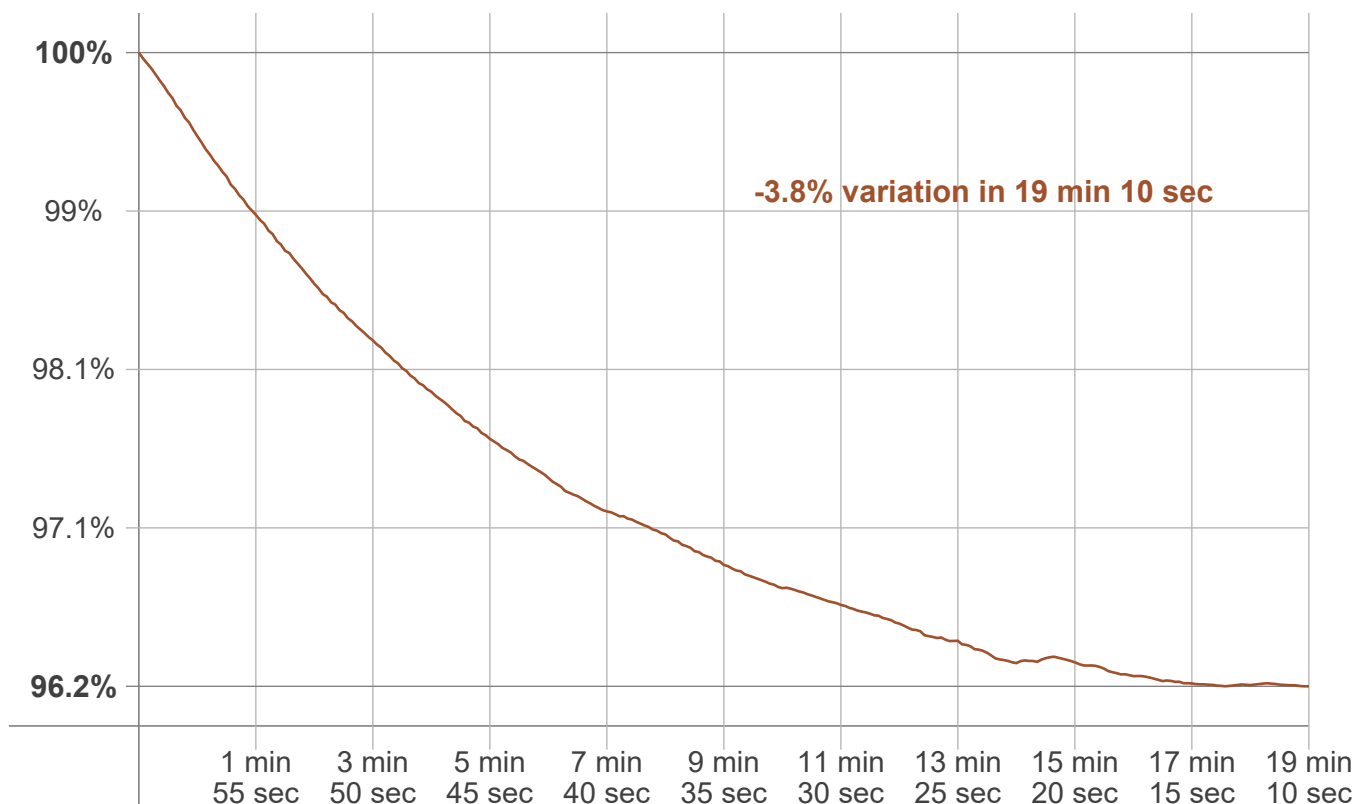
BUG rating:	B4 U2 G1	
Forward light	Lumens	Lumens %
Low(0-30):	3266.7	22.9%
Medium(30-60):	3332.1	23.4%
High(60-80):	388	2.7%
Very high(80-90):	25.1	0.2%
Back light		
Low(0-30):	3311.2	23.3%
Medium(30-60):	3445.5	24.2%
High(60-80):	396.1	2.8%
Very high(80-90):	26.9	0.2%
Uplight		
Low(90-100):	3.2	0%
High(100-180):	39.1	0.3%

LCS graph



Stabilization

Warmup curve



Warmup result

Warmup time:	Lamp stabilized in 19 min 10 sec
Warmup variation	-3.8%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
5059 K	+94 K	5153 K

Output change

Output start	Output change	Output end
14772 lm	-538 lm	14234 lm

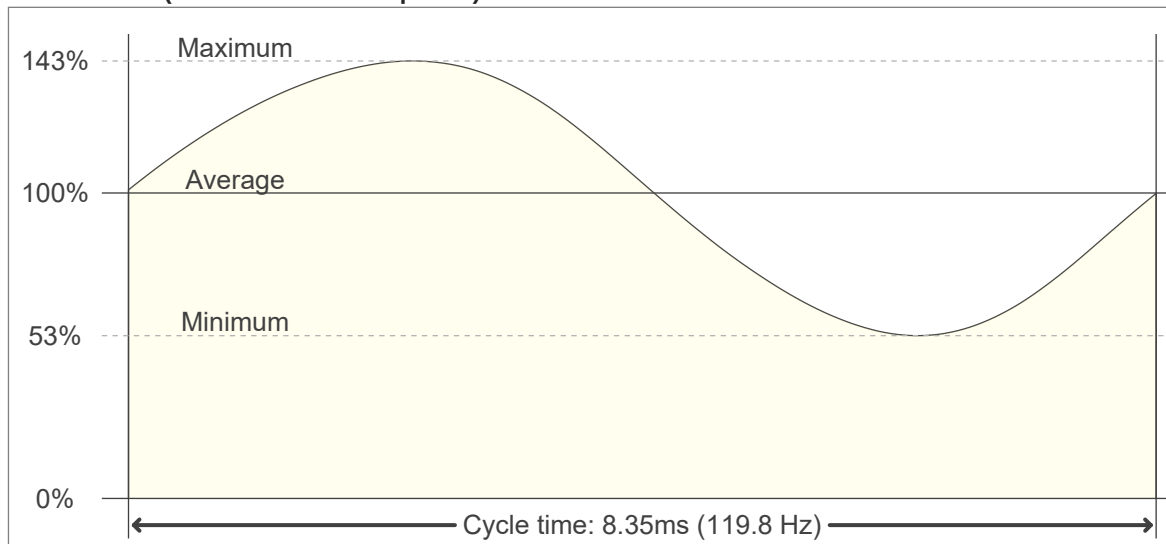


Flicker Specifications

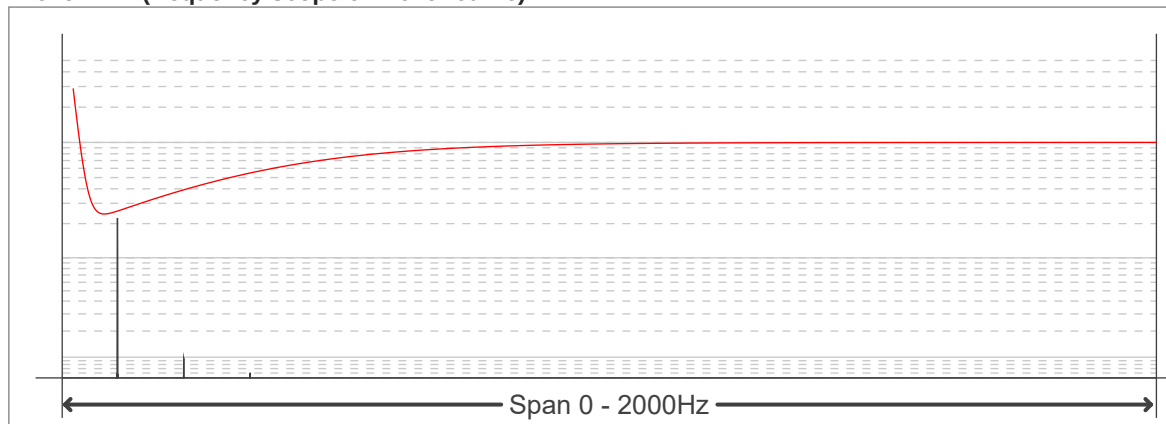
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:	119.76 Hz
Flicker index:	0.14
Flicker percentage:	45.83 %
SVM: (Visual flicker)	1.63

Flicker conditions:

Sample rate:	20000 samples/second
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