

Light efficiency:

132 Lumen/Watt

Output: 4631 lm

Light quality:

CRI: 71.4

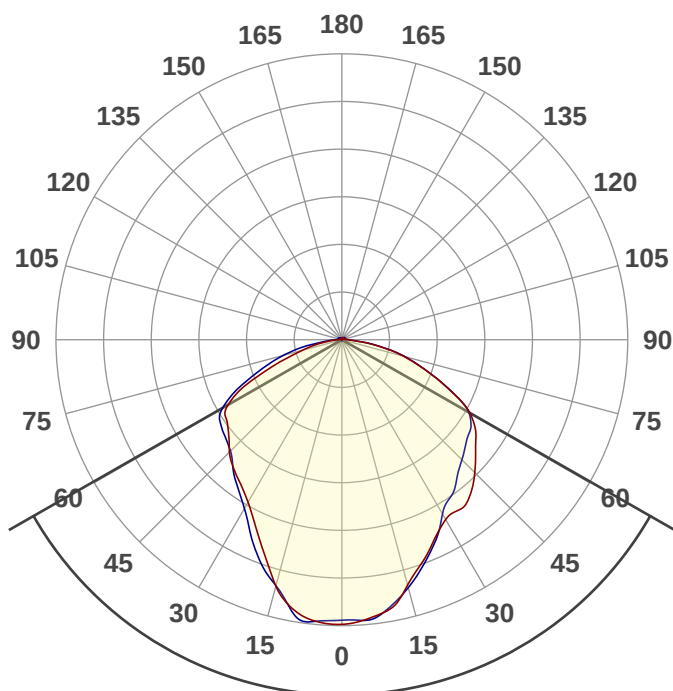
Peak: 1641 cd

Color temperature:

4060 K

Power: 35.0 W

PF: 0.99



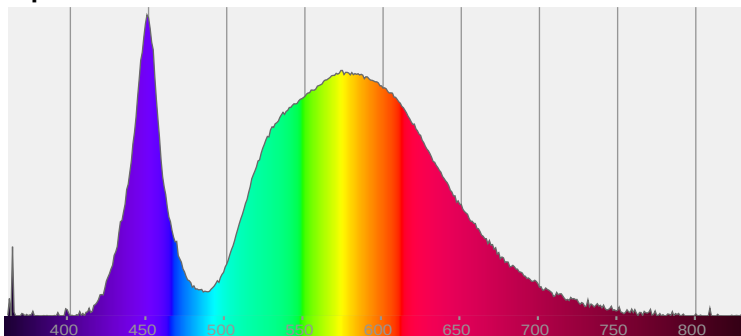
Beam angle

120.5°

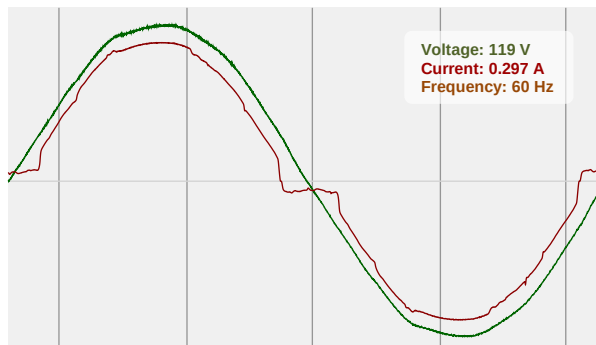


CIE 1931
x: 0.379
y: 0.379

Spectra

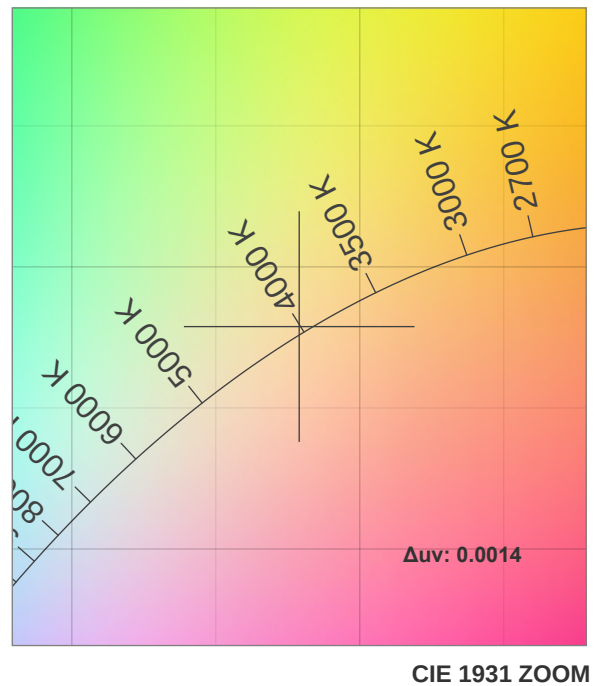
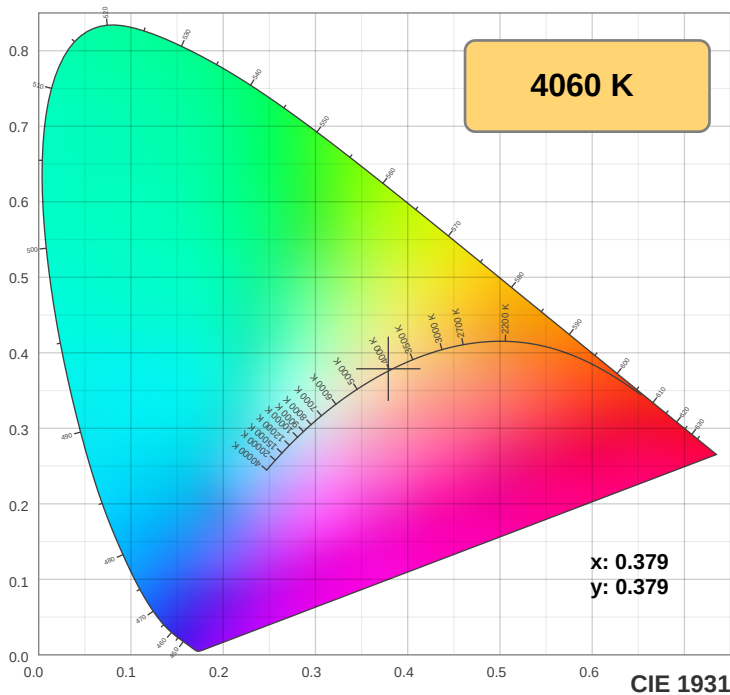


Power

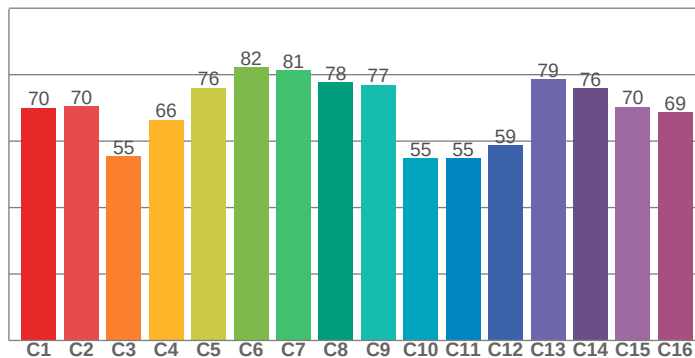


T 314.743.3067
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www.superbrightleds.com/

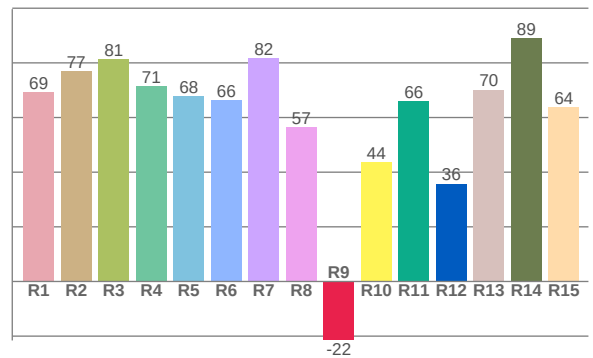
Color Specifications



TM30: 69.6



CRI: 71.4 (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
69.3	76.9	81.4	71.4	67.8	66.3	81.7	56.5	-21.6	43.6	65.9	35.8	70.1	89.1	63.7

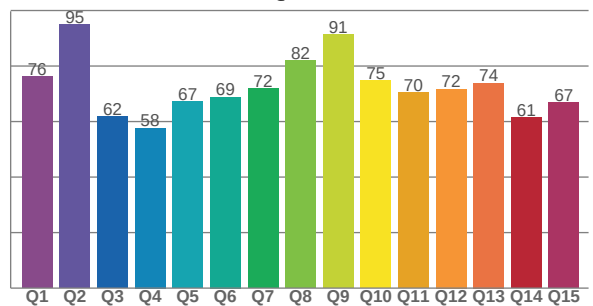
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
70.1	70.5	55.4	66.5	76.0	82.2	81.4	77.7	77.0	54.8	54.8	58.7	78.6	75.9	70.3	68.7

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
76.2	95.0	61.8	57.7	67.1	68.9	71.9	82.0	91.3	74.8	70.3	71.7	73.9	61.3	66.8

CQS: 70.9



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
4060 K	71.4	-21.6	69.6	94.8	70.9	0.379	0.379	0.223	0.335	0.0014



TM30 Report

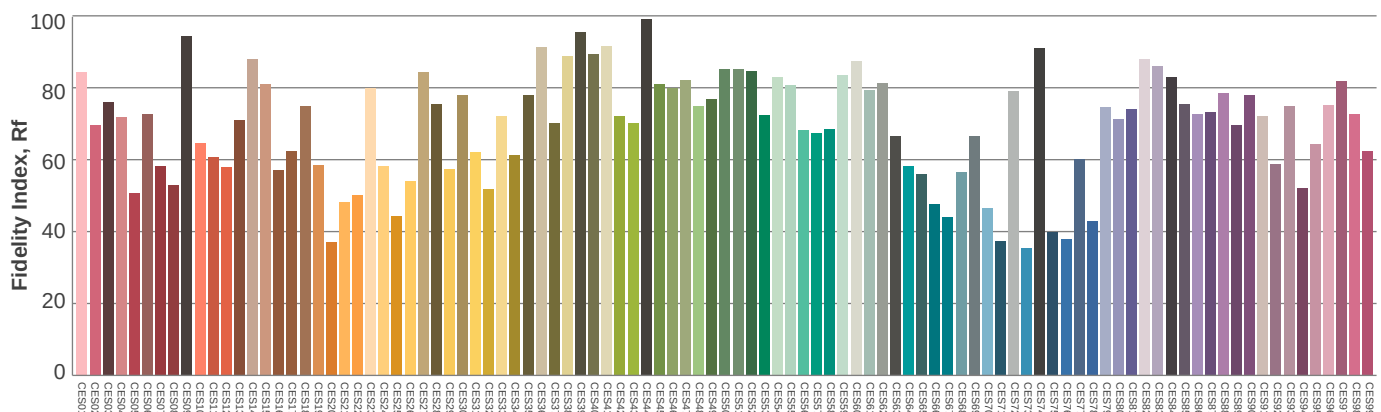
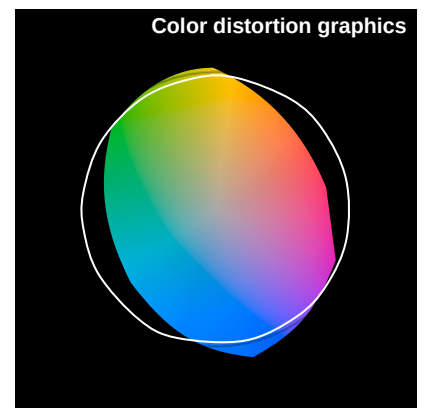
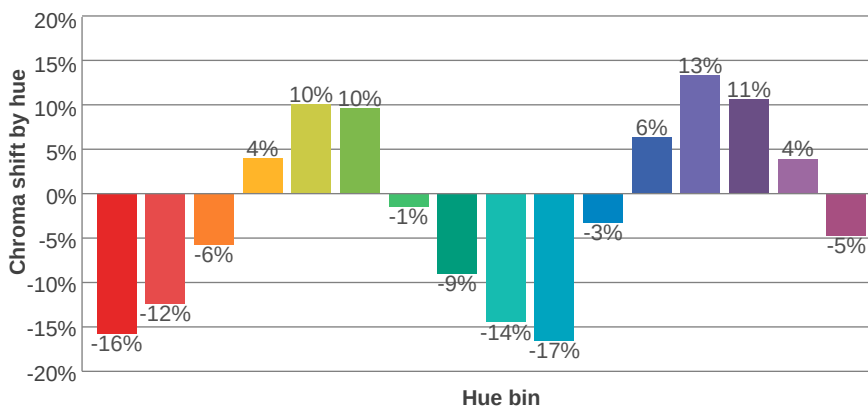
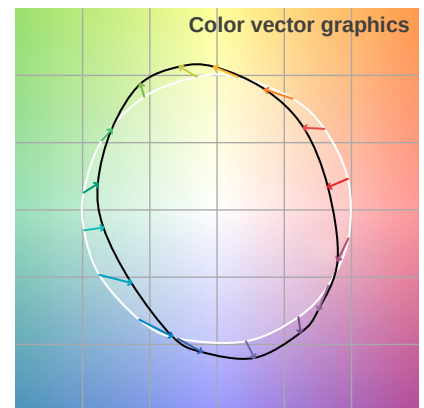
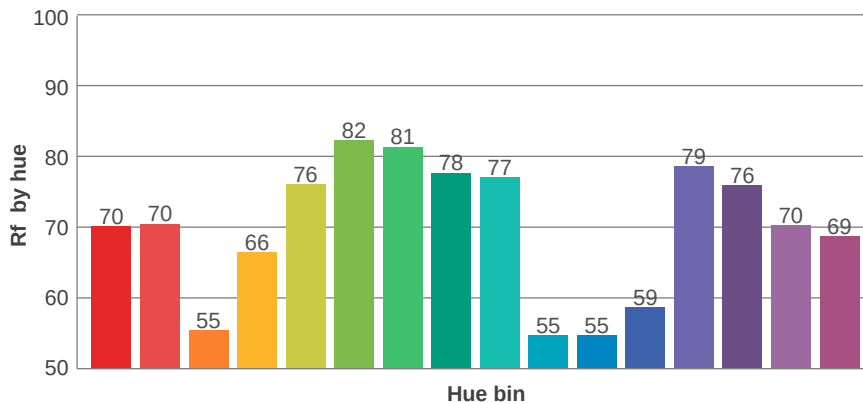
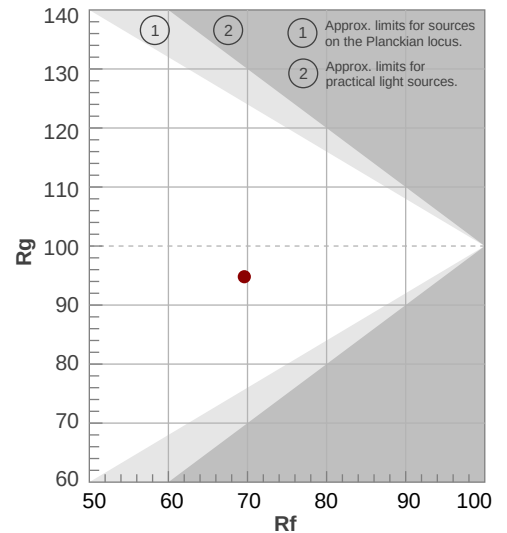
Rf 69.6

Fidelity index Rf

Rg 94.8

Gamut index Rg

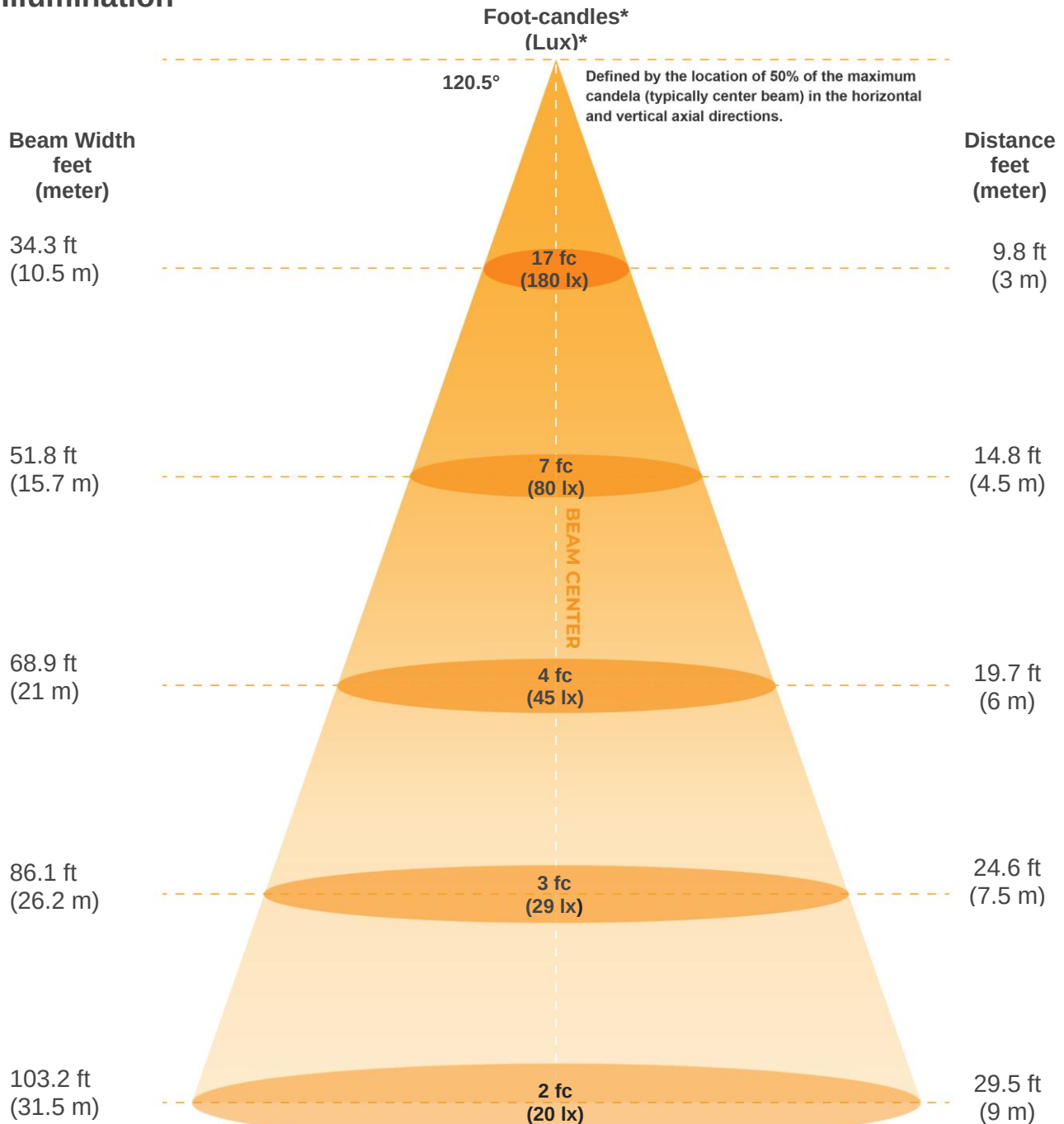
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	70	-16%	-3%
2	70	-12%	9%
3	55	-6%	21%
4	66	4%	19%
5	76	10%	11%
6	82	10%	-3%
7	81	-1%	-11%
8	78	-9%	-9%
9	77	-14%	1%
10	55	-17%	18%
11	55	-3%	27%
12	59	6%	20%
13	79	13%	4%
14	76	11%	-5%
15	70	4%	-19%
16	69	-5%	-18%



Color Evaluation Sample



Illumination



*measured at center of beam

Beam intensities from 1-20m

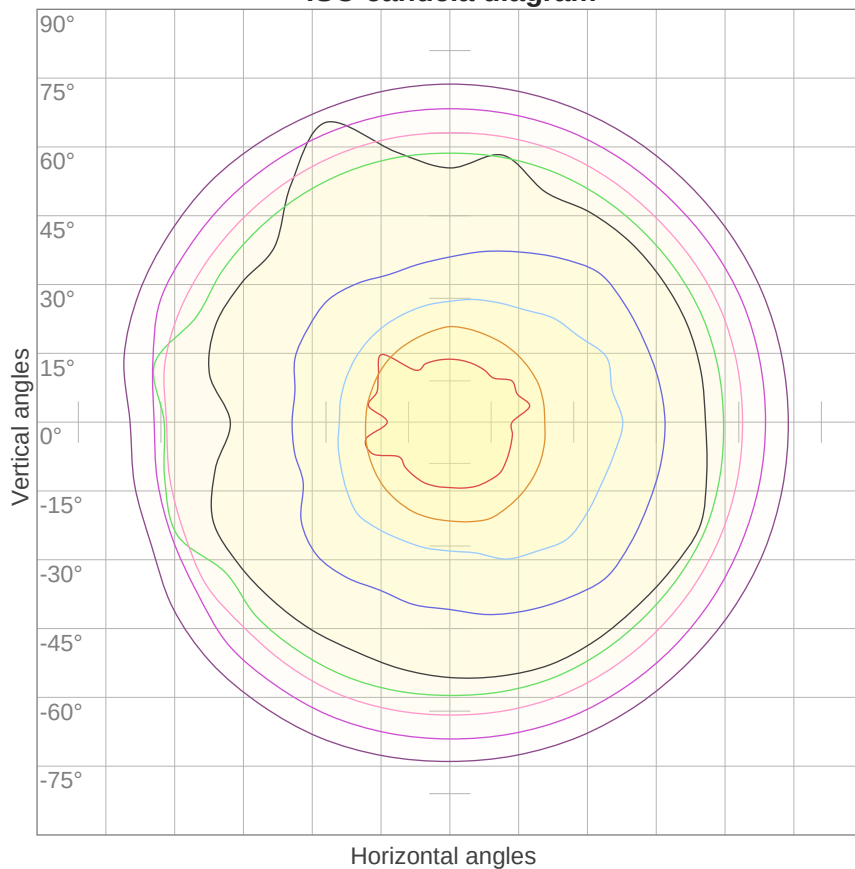
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
1623lx	406lx	180lx	101lx	65lx	45lx	33lx	25lx	20lx	16lx	13lx	11lx	10lx	8lx	7lx	6lx	6lx	5lx	4lx	4lx
150.8fc	37.7fcd	16.8fcd	9.4fcd	6fcd	4.2fcd	3.1fcd	2.4fcd	1.9fcd	1.5fcd	1.2fcd	1fcd	0.9fcd	0.8fcd	0.7fcd	0.6fcd	0.5fcd	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
120.5°	163.2°	178.4°	73.3%	47.6%



ISO Diagrams

ISO candela diagram



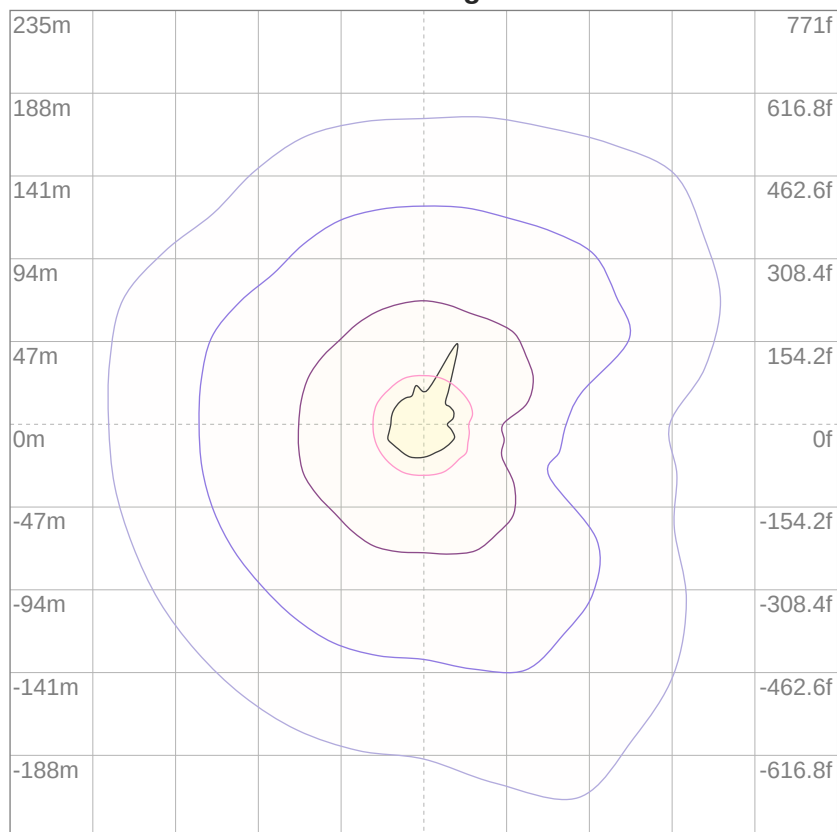
10%	162 cd
20%	325 cd
30%	487 cd
40%	649 cd
50%	811 cd
60%	974 cd
70%	1136 cd
80%	1298 cd
90%	1461 cd

Conditions:

Number of c-planes: 16

Candela at center: 1623 cd

ISO lux diagram



3%	0.487 lx
5%	0.811 lx
10%	1.62 lx
30%	4.87 lx
50%	8.11 lx

Conditions:

Number of c-planes: 16

Lux at center: 16.2 lx

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



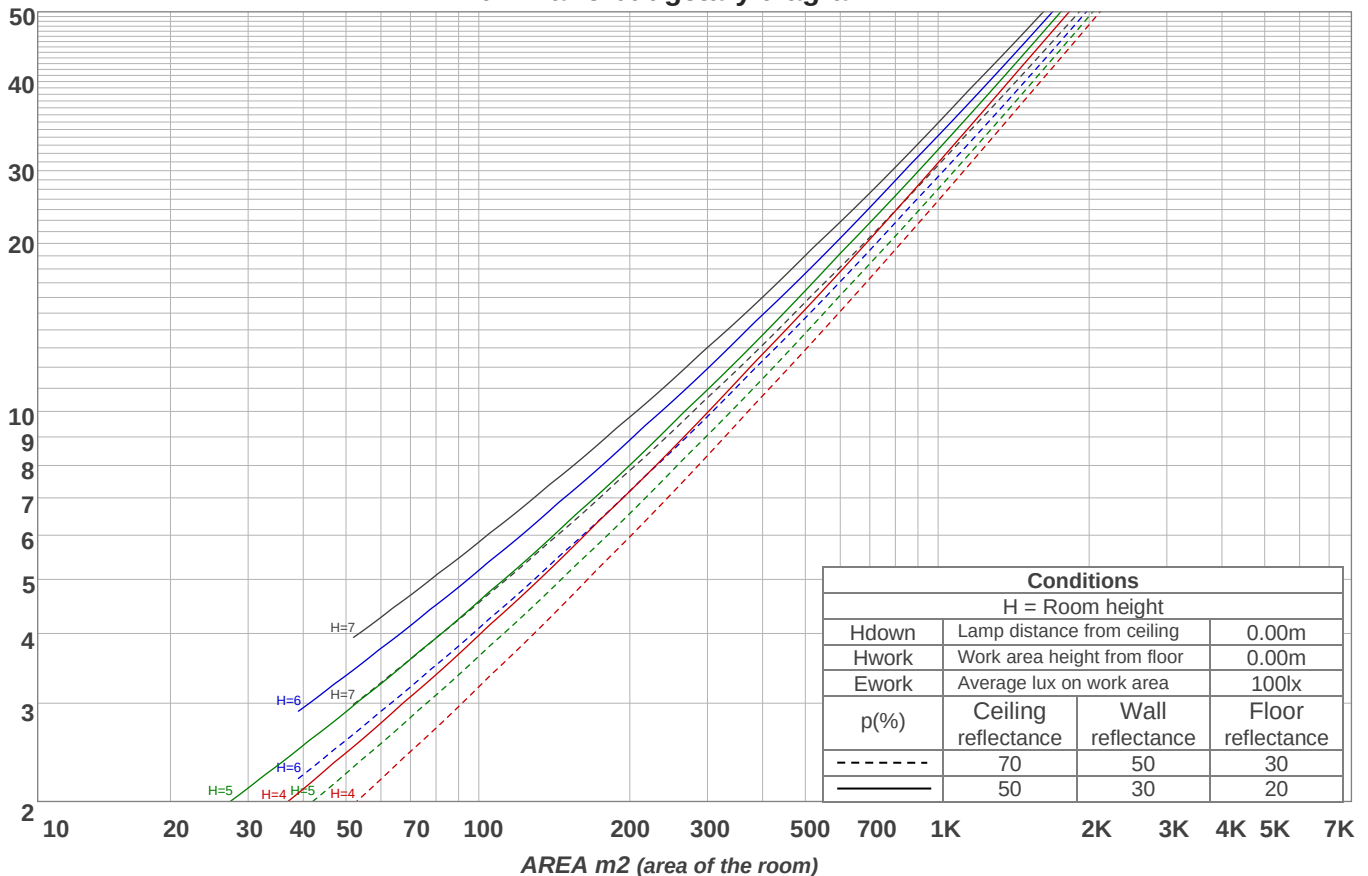
Light Planning

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	110	110	110	105	105	105	100	100	100	98
1	108	103	98	94	105	100	96	92	95	92	89	91	88	86	87	85	83	81
2	97	89	81	75	94	86	80	74	83	77	72	79	74	70	76	72	68	66
3	88	77	69	62	86	75	68	61	72	65	60	69	63	58	66	61	57	55
4	80	68	59	52	78	66	58	51	64	56	50	61	55	49	59	53	49	46
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	49	42	37	47	41	37	34
7	63	49	40	34	61	48	40	34	46	39	33	45	38	33	43	37	32	30
8	59	45	36	30	57	44	36	30	42	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	30	24	36	29	24	35	29	24	34	28	24	22

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°
154 lm	413 lm	575 lm	688 lm	764 lm	801 lm	667 lm	371 lm	108 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
25.3 lm	17.4 lm	18.9 lm	11.0 lm	9.21 lm	5.59 lm	1.96 lm	0.729 lm	0.247 lm

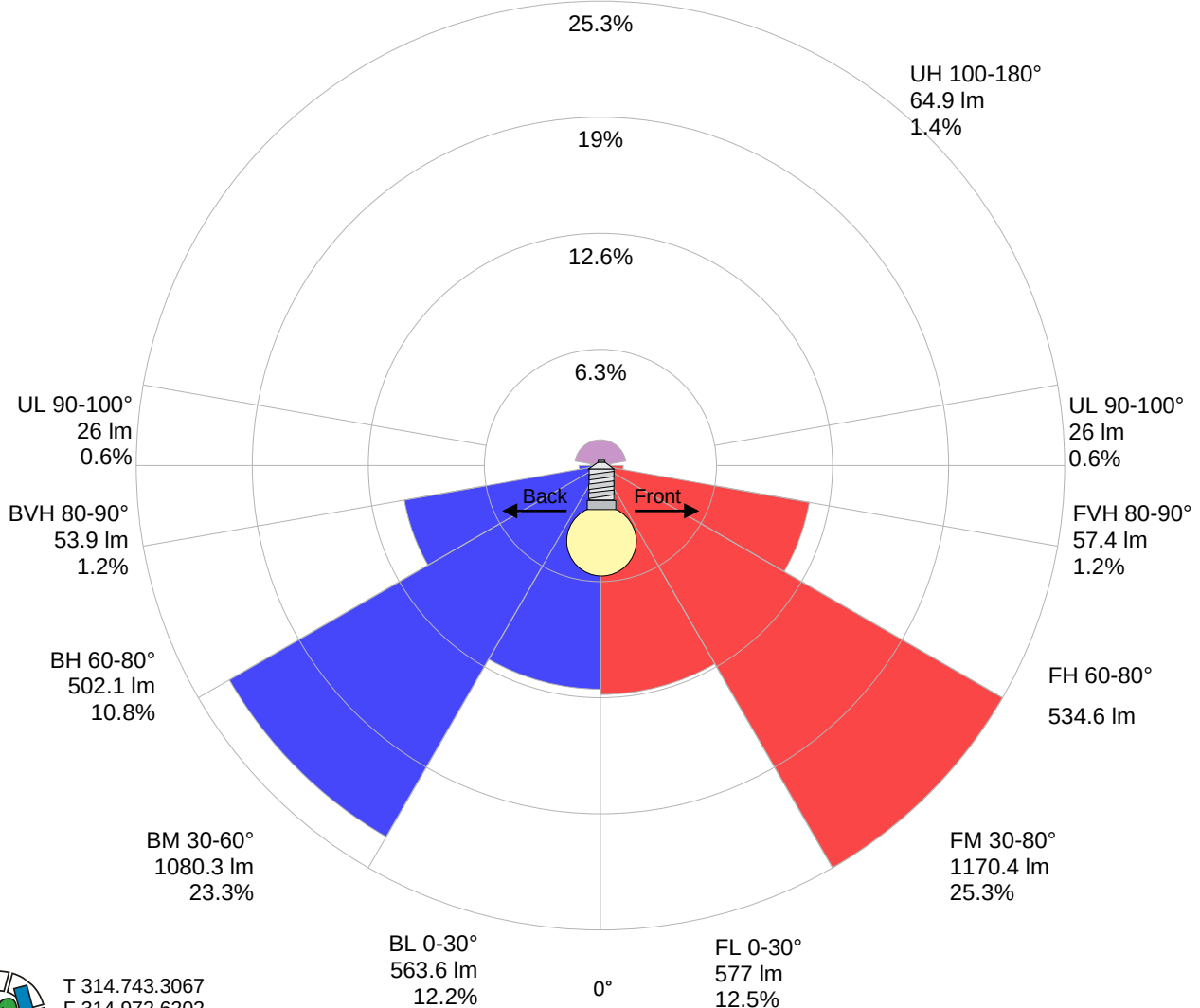


Road Report

LCS table

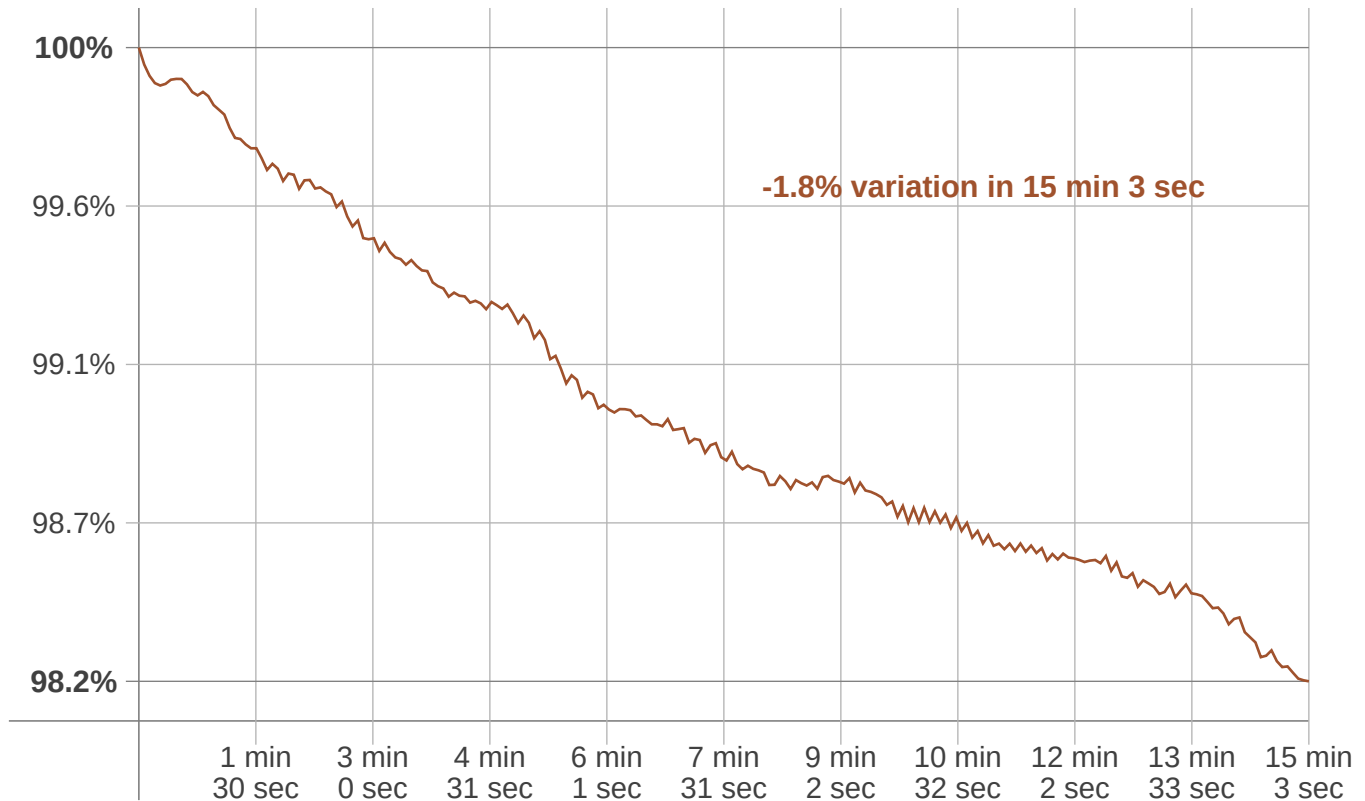
BUG rating:	B2 U3 G2	
Forward light	Lumens	Lumens %
Low(0-30):	577	12.5%
Medium(30-60):	1170.4	25.3%
High(60-80):	534.6	11.5%
Very high(80-90):	57.4	1.2%
Back light		
Low(0-30):	563.6	12.2%
Medium(30-60):	1080.3	23.3%
High(60-80):	502.1	10.8%
Very high(80-90):	53.9	1.2%
Uplight		
Low(90-100):	26	0.6%
High(100-180):	64.9	1.4%

LCS graph



Stabilization

Warmup curve



Warmup result

Warmup time:	15 min 3 sec
Warmup variation	-1.8%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
4050 K	+10 K	4060 K

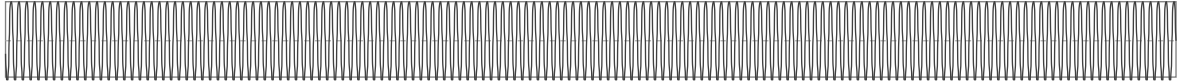
Output change

Output start	Output change	Output end
4699 lm	-67 lm	4631 lm

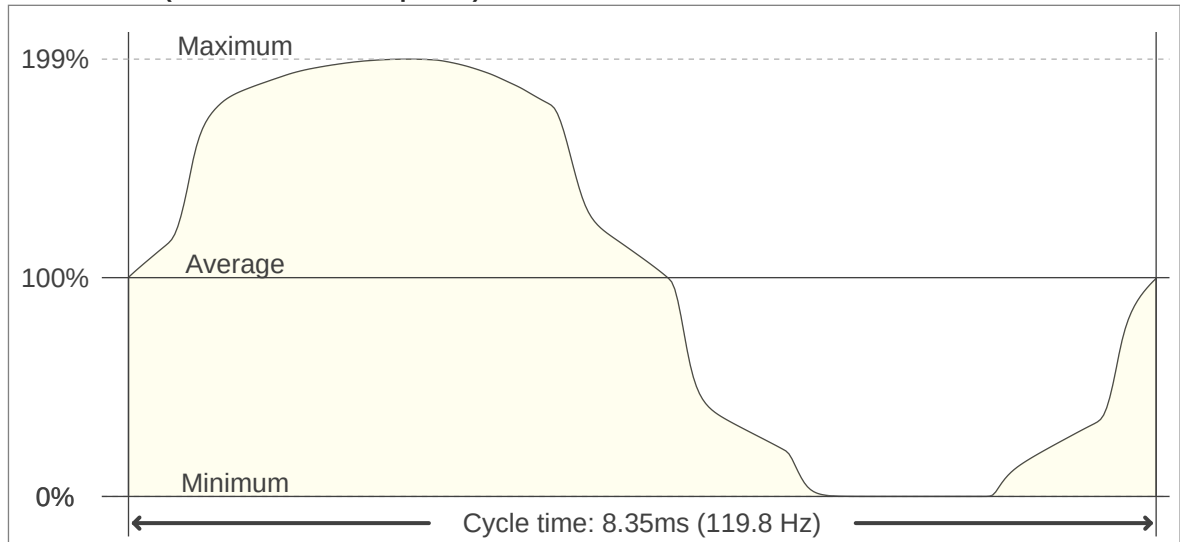


Flicker

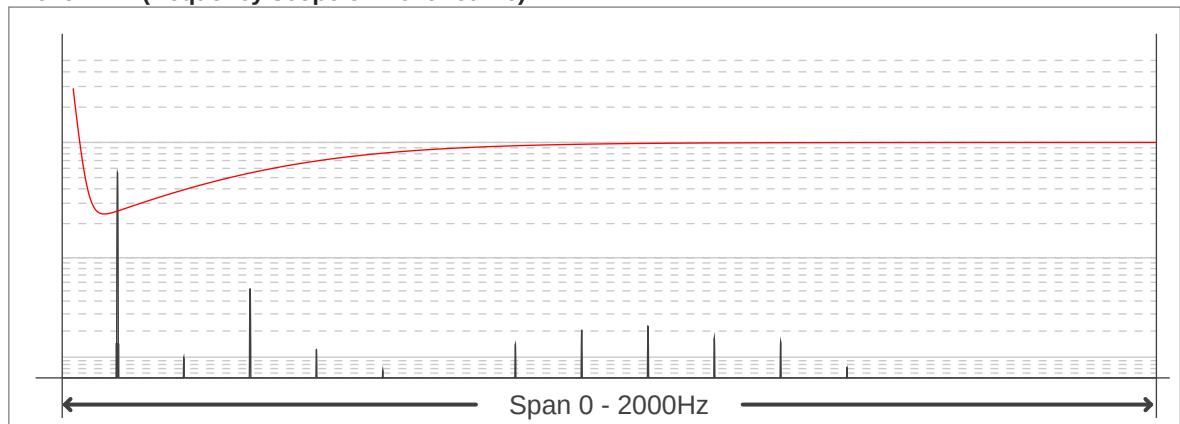
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:	119.76 Hz
Flicker index:	0.36
Flicker percentage:	100 %
SVM: (Visual flicker)	4

Flicker conditions:

Sample rate:	40000 samples/second
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