

Light efficiency:

150 Lumen/Watt

Output: 36582 lm

Light quality:

CRI: 83.0

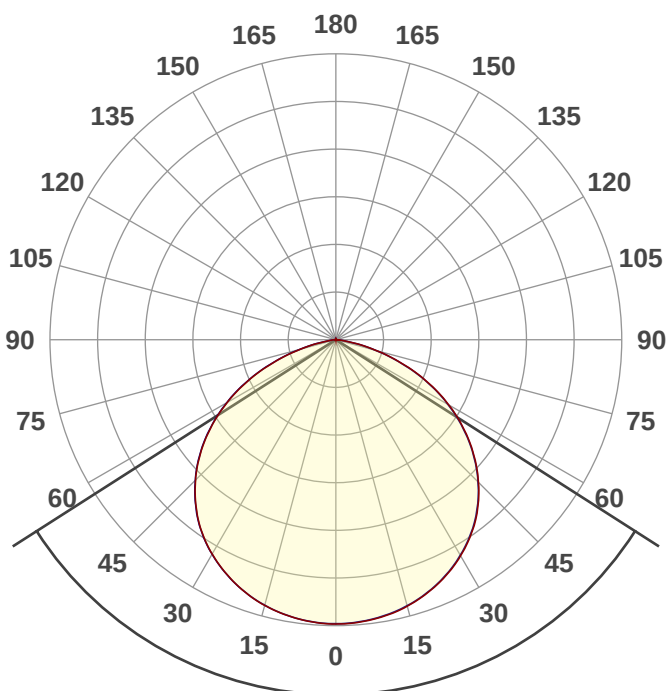
Peak: 12803 cd

Color temperature:

5351 K

Power: 243.7 W

PF: 0.99



Product name:

UDSR-50K240-ACBKM

Date and time:

1/9/2020 11:16:10 AM

Beam angle

114.8°

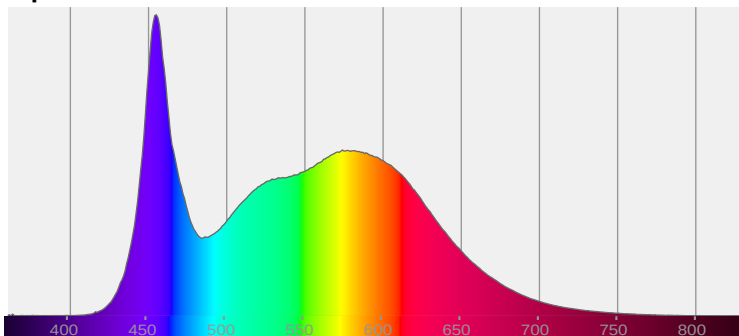


CIE 1931

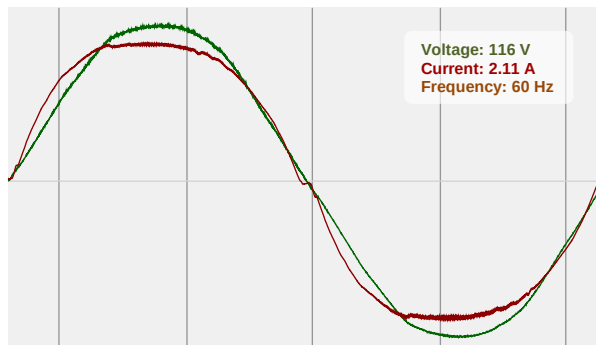
x: 0.336

y: 0.345

Spectra



Power



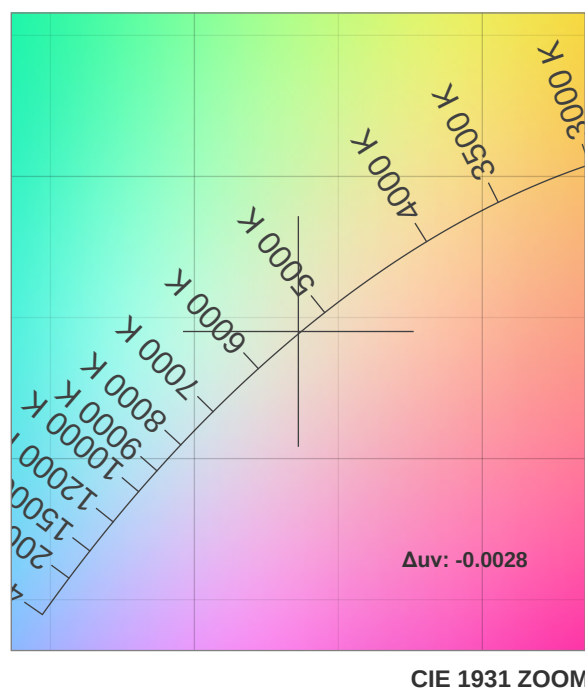
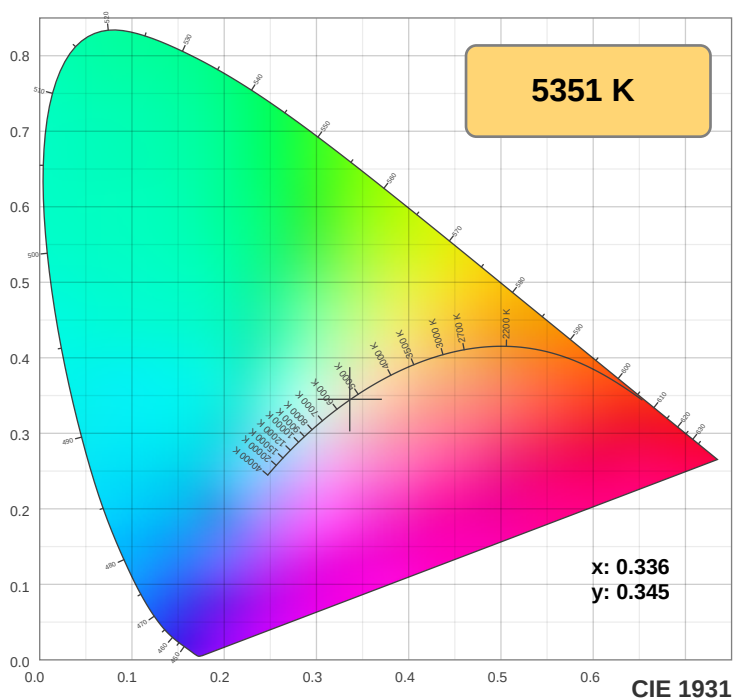
T 314.743.3067

F 314.972.6202

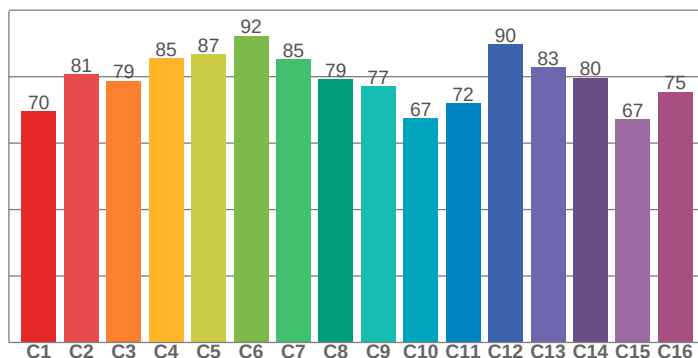
email: commercial-sales@superbrightleds.com

www.superbrightleds.com/

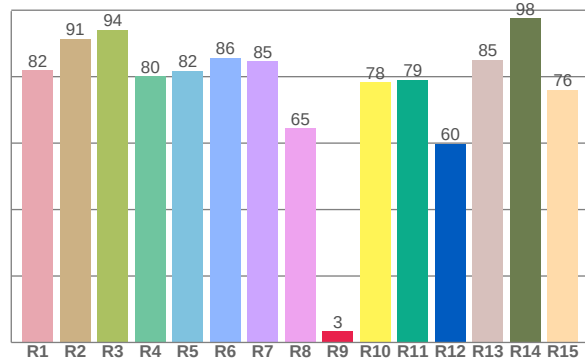
Color Specifications



TM30: 79.4



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
81.9	91.4	94.2	80.1	81.7	85.7	84.6	64.6	3.3	78.2	79.1	59.8	85.2	97.6	76.0

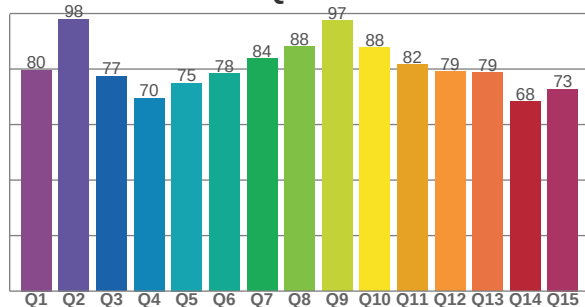
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
69.6	80.7	78.7	85.5	86.7	92.2	85.2	79.2	77.1	67.4	71.9	89.7	82.8	79.7	67.2	75.4

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
79.7	98.0	77.4	69.6	75.0	78.4	83.7	88.0	97.4	87.7	81.5	79.1	78.7	68.2	72.8

CQS: 79.2



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
5351 K	83.0	3.3	79.4	91.9	79.2	0.336	0.345	0.208	0.320	-0.0028



TM30 Report

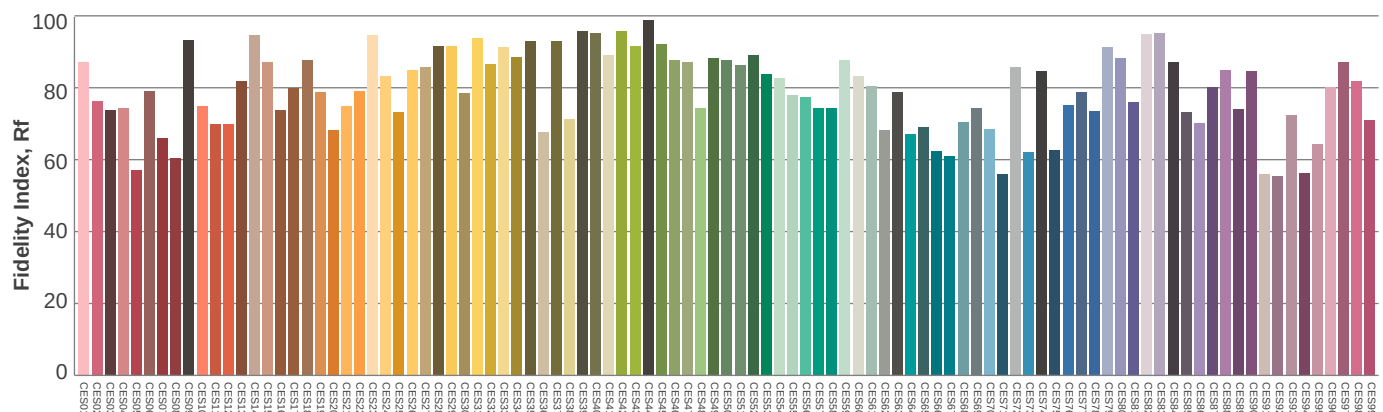
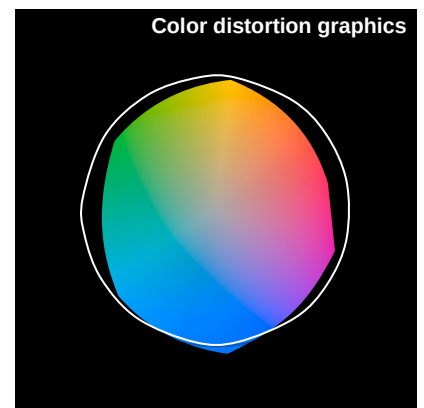
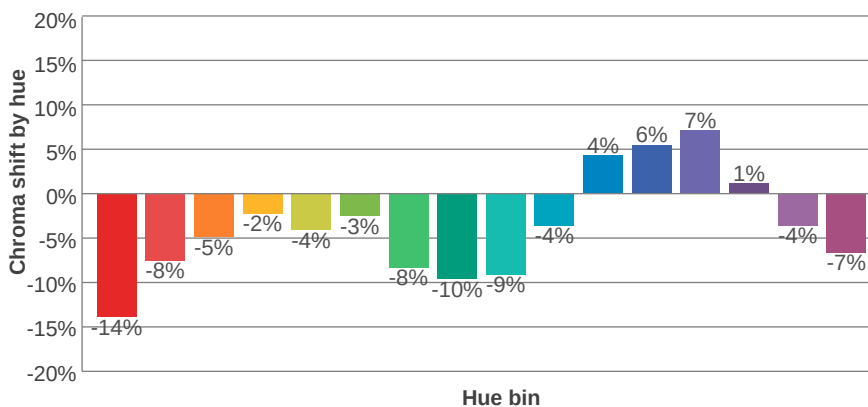
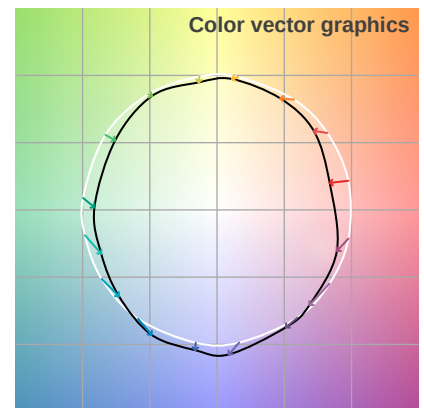
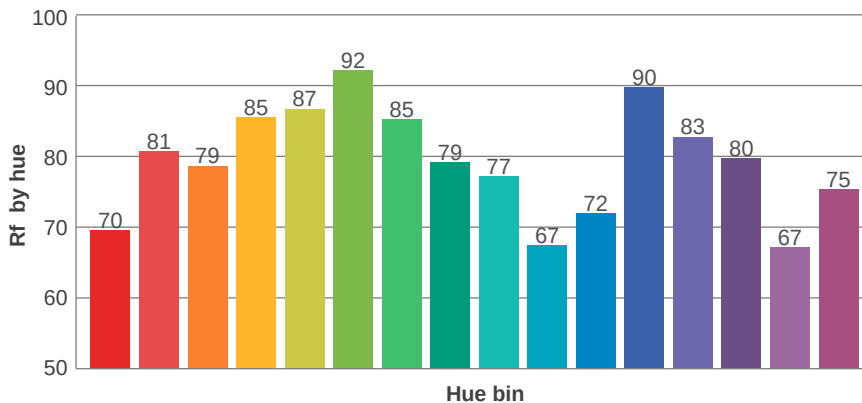
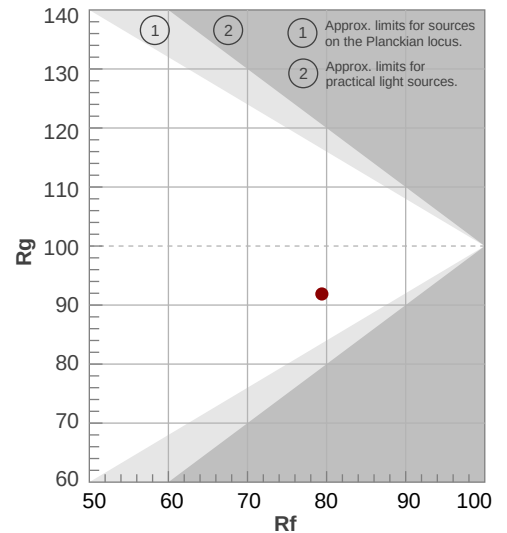
Rf 79.4

Fidelity index Rf

Rg 91.9

Gammut index Rg

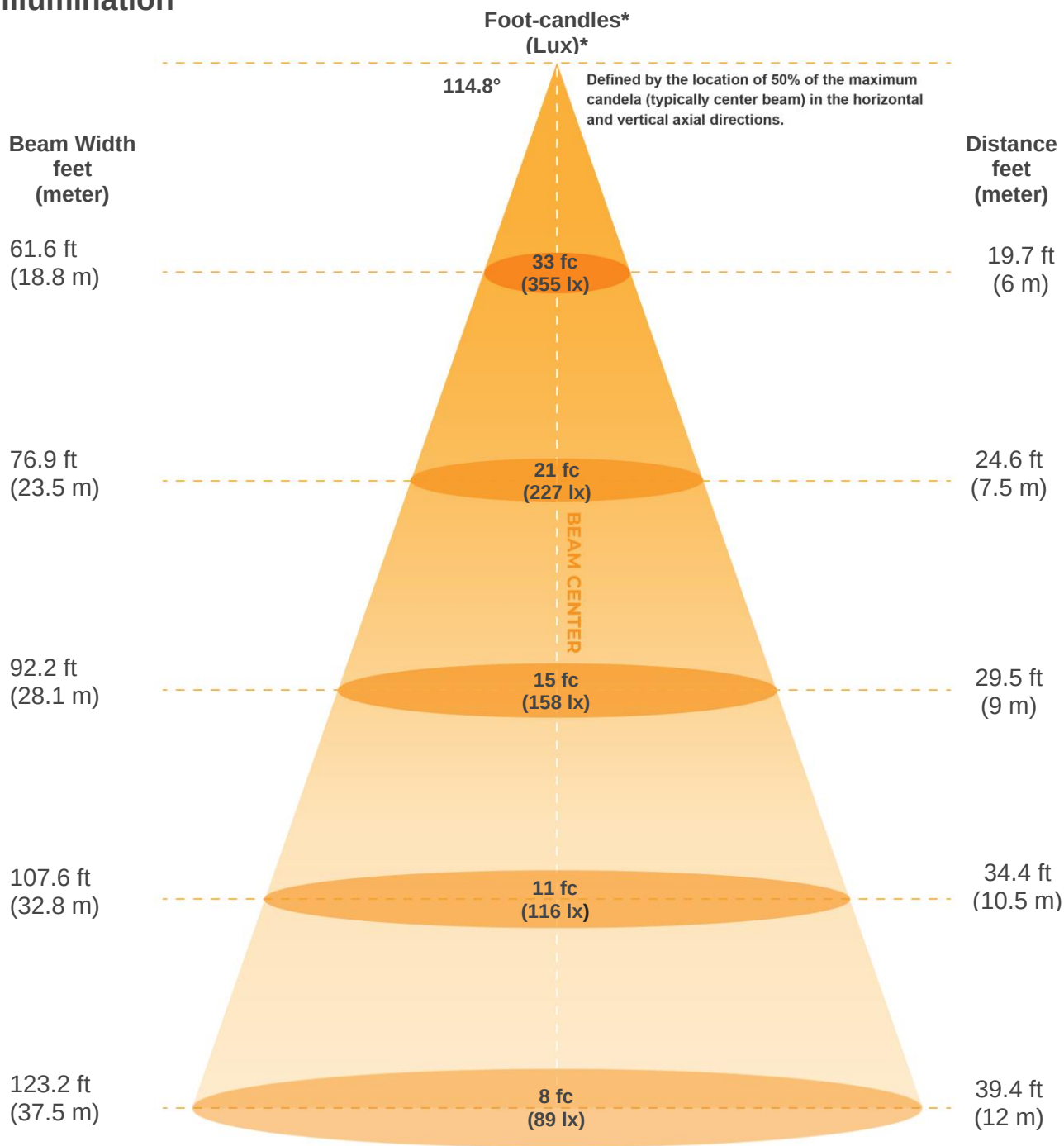
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	70	-14%	1%
2	81	-8%	7%
3	79	-5%	9%
4	85	-2%	4%
5	87	-4%	1%
6	92	-3%	-2%
7	85	-8%	-1%
8	79	-10%	5%
9	77	-9%	16%
10	67	-4%	18%
11	72	4%	15%
12	90	6%	1%
13	83	7%	-9%
14	80	1%	-11%
15	67	-4%	-21%
16	75	-7%	-11%



Color Evaluation Sample



Illumination



*measured at center of beam

Beam intensities from 1-20m

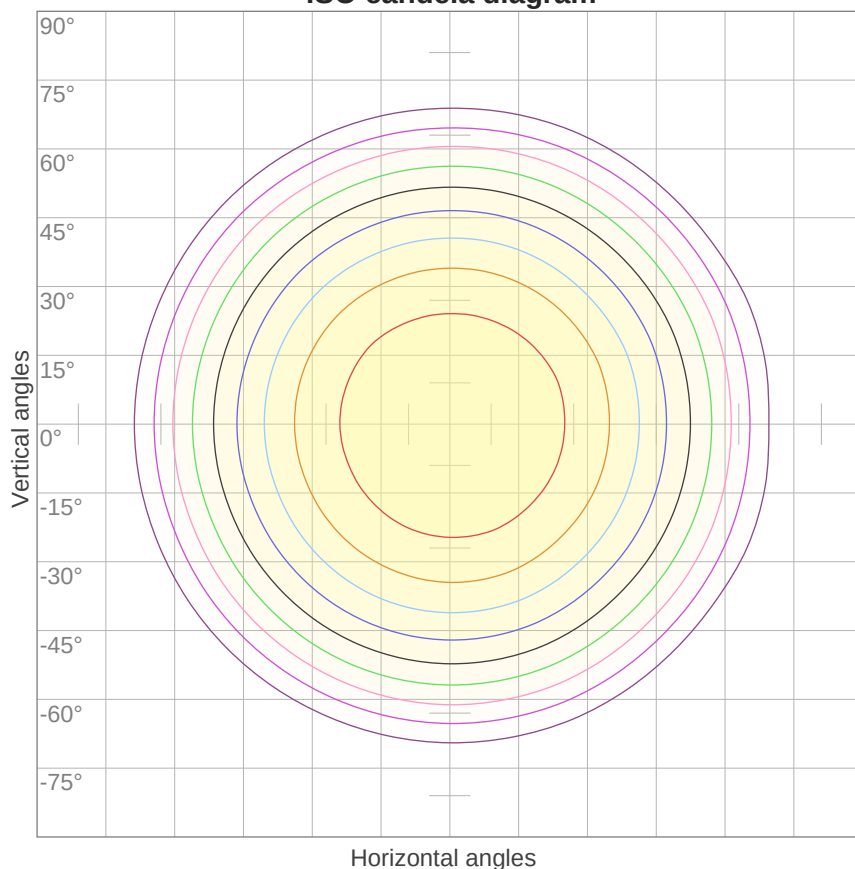
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
12790lx	3198lx	1421lx	799lx	512lx	355lx	261lx	200lx	158lx	128lx	106lx	89lx	76lx	65lx	57lx	50lx	44lx	39lx	35lx	32lx
1188.2fcd	297.1fcd	132fcd	74.3fcd	47.5fcd	33fcd	24.2fcd	18.6fcd	14.7fcd	11.9fcd	9.8fcd	8.3fcd	7fcd	6.1fcd	5.3fcd	4.6fcd	4.1fcd	3.7fcd	3.3fcd	3fcd

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
114.8°	154.6°	165.8°	81.7%	55.3%



ISO Diagrams

ISO candela diagram



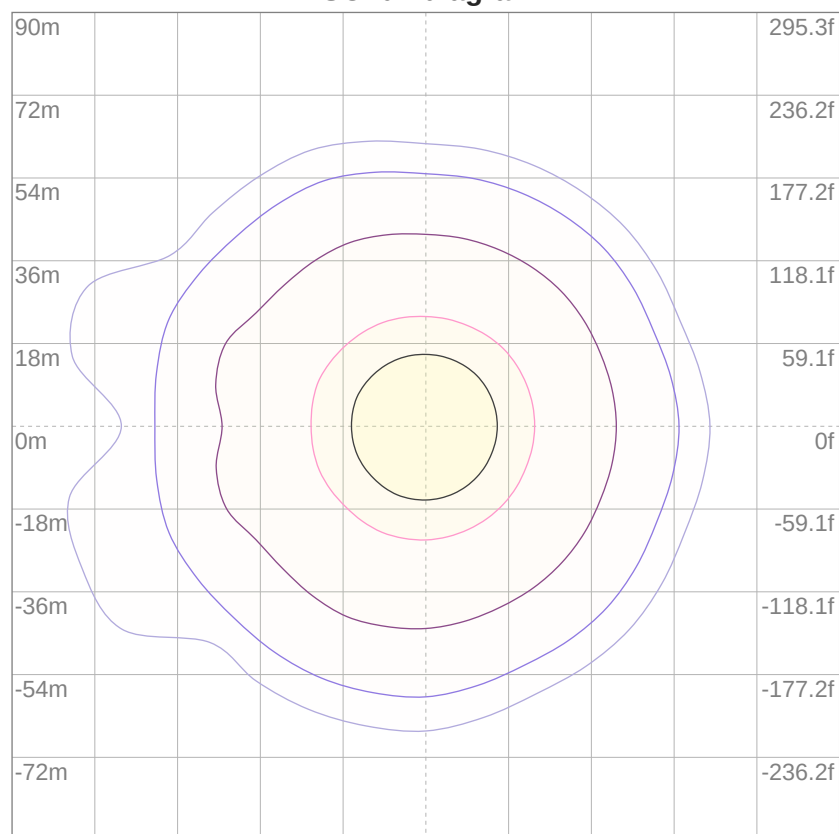
10%	1279 cd
20%	2558 cd
30%	3837 cd
40%	5116 cd
50%	6395 cd
60%	7674 cd
70%	8953 cd
80%	10232 cd
90%	11511 cd

Conditions:

Number of c-planes: 16

Candela at center: 12790 cd

ISO lux diagram



3%	3.84 lx
5%	6.40 lx
10%	12.8 lx
30%	38.4 lx
50%	64.0 lx

Conditions:

Number of c-planes: 16

Lux at center: 128 lx

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



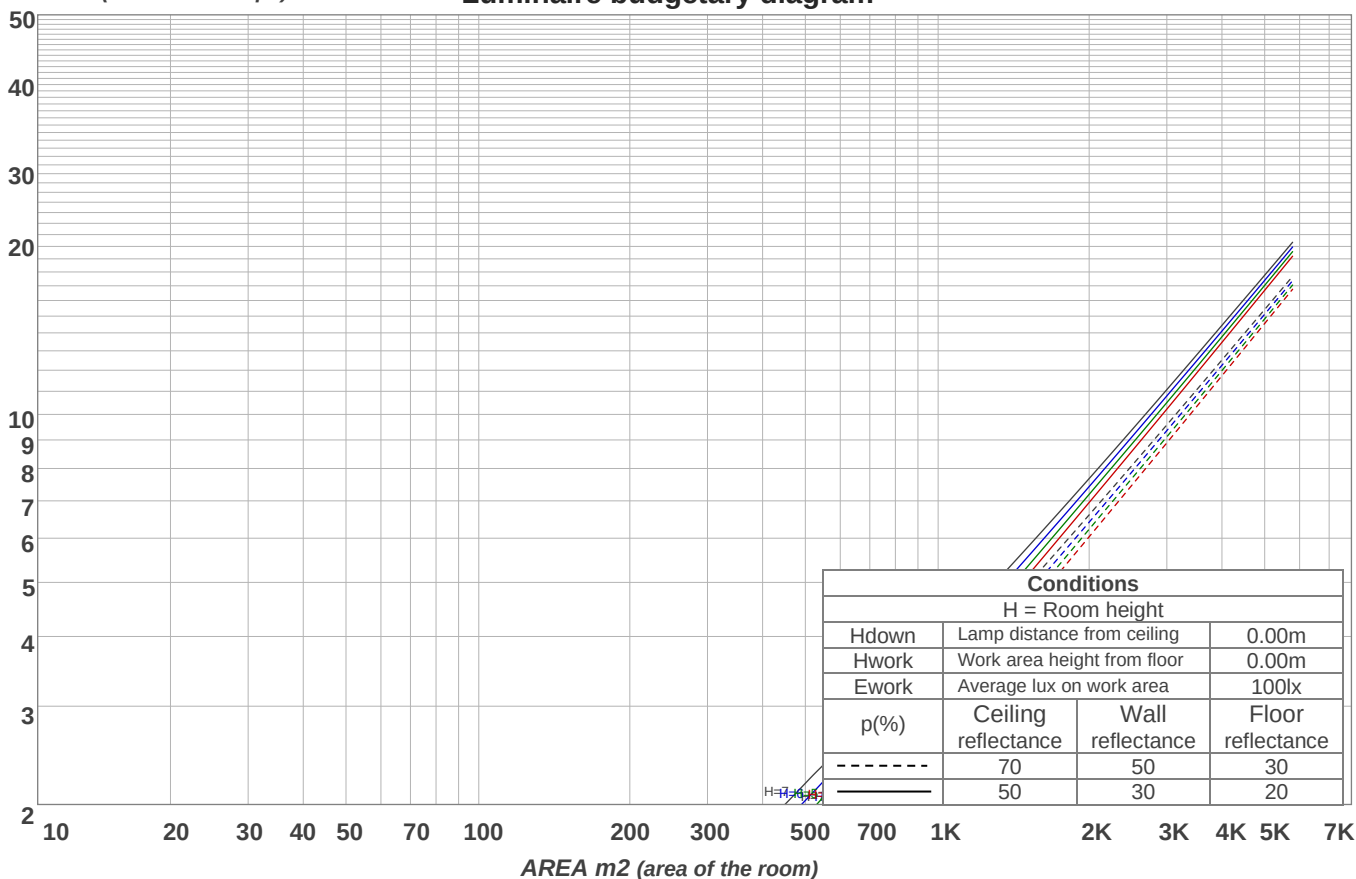
Light Planning

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	109	105	101	97	107	103	99	96	98	95	93	94	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	76	73	71
3	91	81	73	66	88	79	72	66	76	70	65	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	60	53	48	58	52	47	57	51	46	44
6	71	57	48	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	33	29	27
10	53	40	32	27	52	39	32	27	38	31	27	38	31	27	37	31	26	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°
1213 lm	3505 lm	5391 lm	6628 lm	6952 lm	6211 lm	4424 lm	1941 lm	216 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
12.8 lm	9.82 lm	12.4 lm	14.6 lm	15.5 lm	14.0 lm	11.5 lm	7.62 lm	2.65 lm

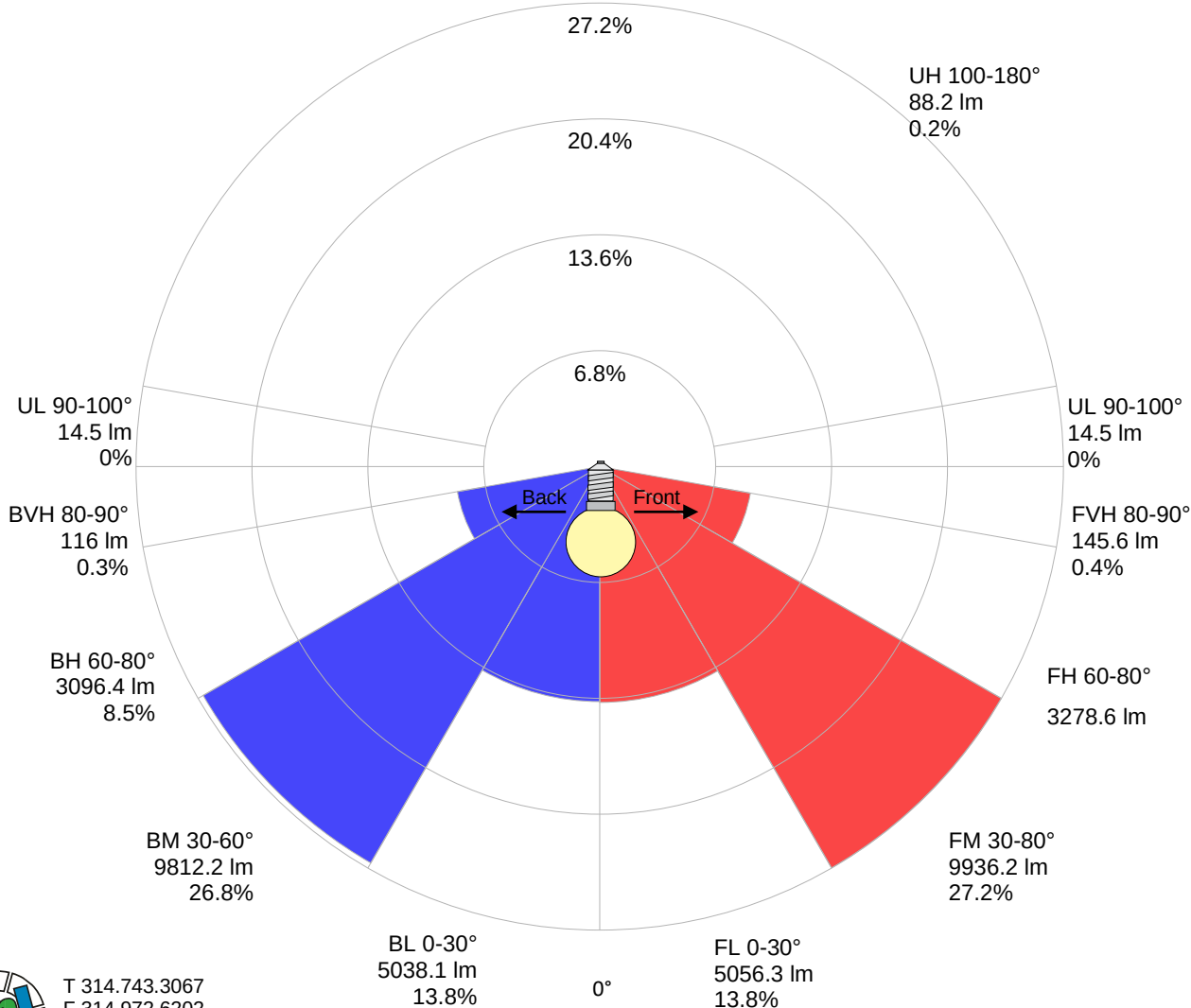


Road Report

LCS table

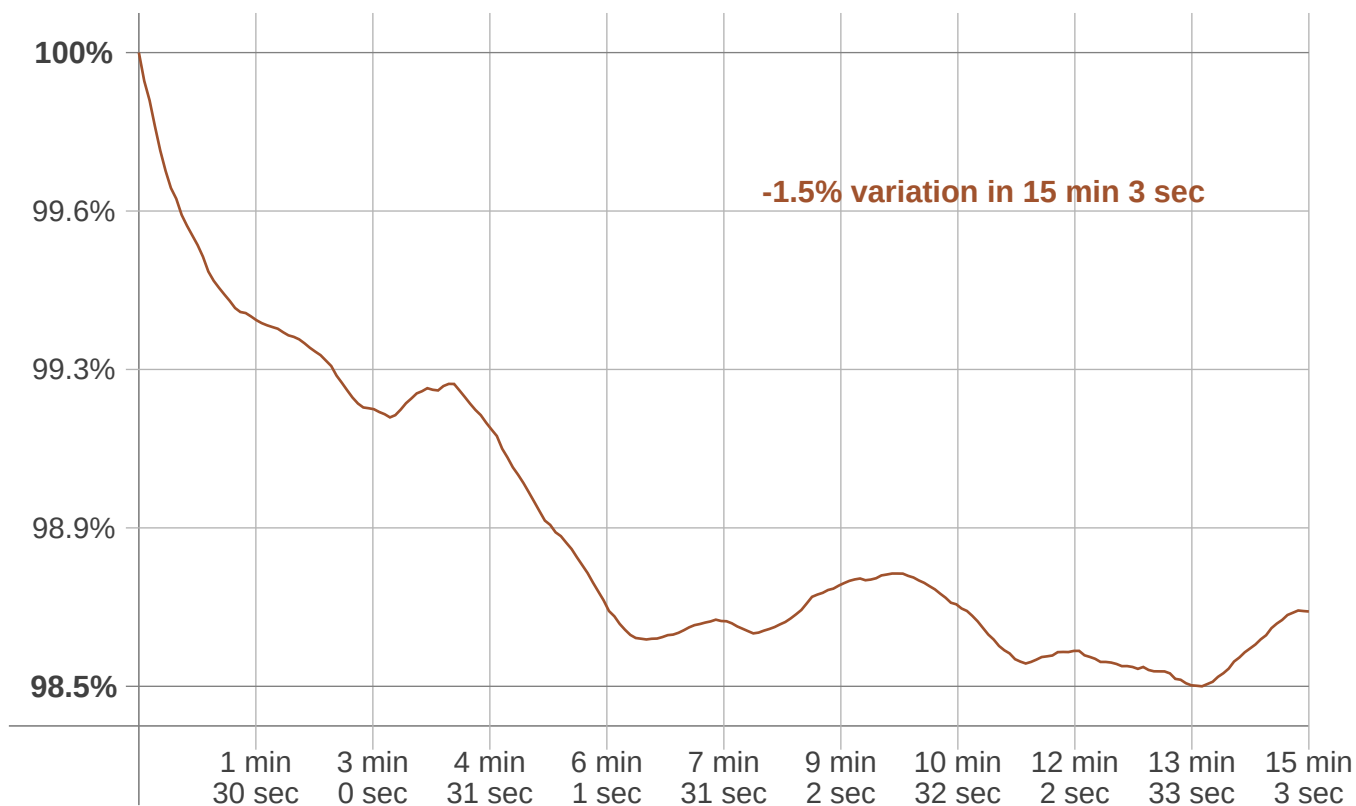
BUG rating:	B5 U3 G4	
Forward light	Lumens	Lumens %
Low(0-30):	5056.3	13.8%
Medium(30-60):	9936.2	27.2%
High(60-80):	3278.6	9%
Very high(80-90):	145.6	0.4%
Back light		
Low(0-30):	5038.1	13.8%
Medium(30-60):	9812.2	26.8%
High(60-80):	3096.4	8.5%
Very high(80-90):	116	0.3%
Uplight		
Low(90-100):	14.5	0%
High(100-180):	88.2	0.2%

LCS graph



Stabilization

Warmup curve



Warmup result

Warmup time:	15 min 3 sec
Warmup variation	-1.5%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
5330 K	+21 K	5351 K

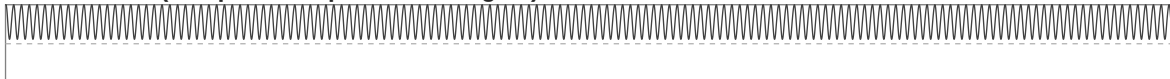
Output change

Output start	Output change	Output end
37020 lm	-438 lm	36582 lm

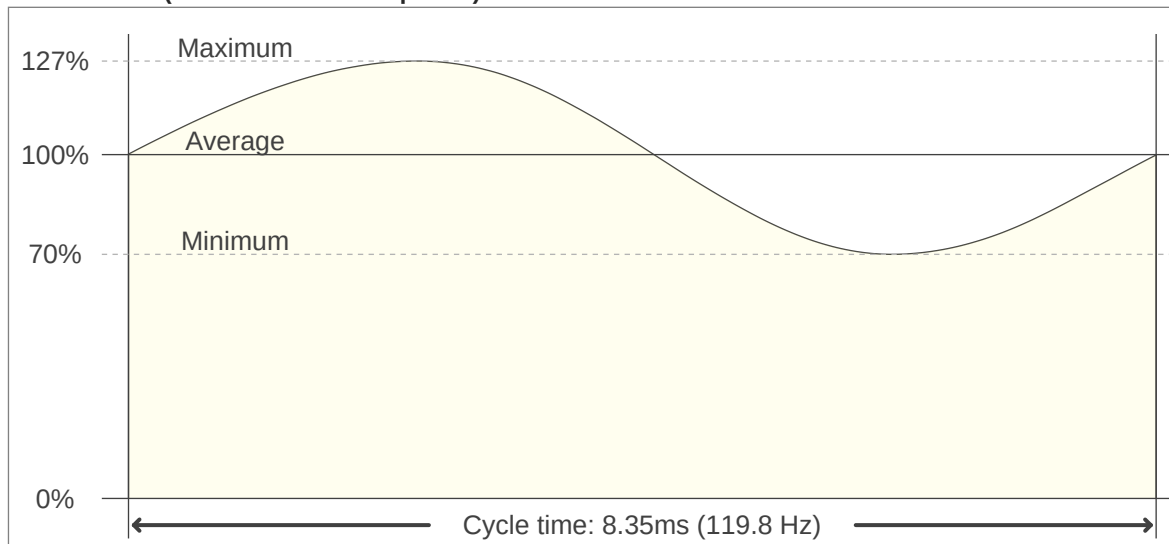


Flicker

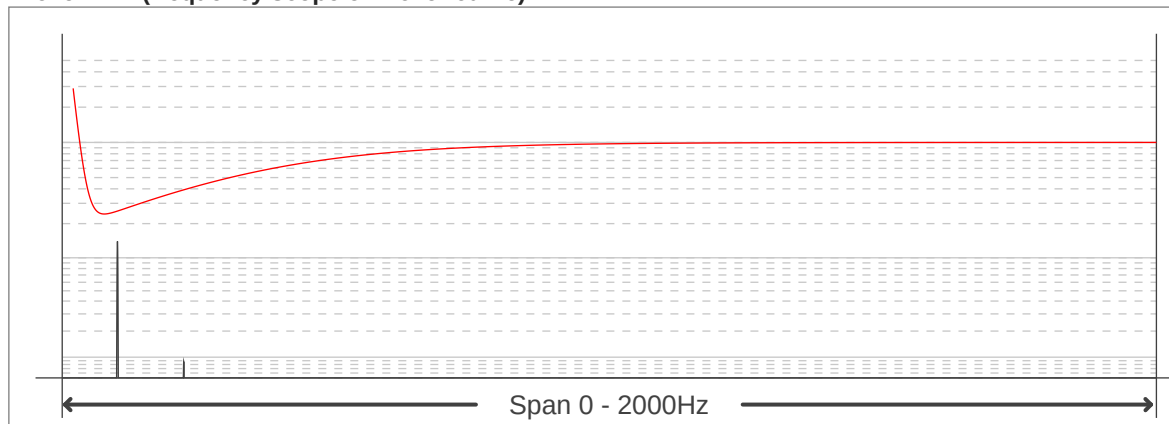
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:	119.76 Hz
Flicker index:	0.09
Flicker percentage:	28.44 %
SVM: (Visual flicker)	1.01

Flicker conditions:

Sample rate:	40000 samples/second
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