

Light efficiency:

121 Lumen/Watt

Output: 6371 lm

Light quality:

CRI: 82.2

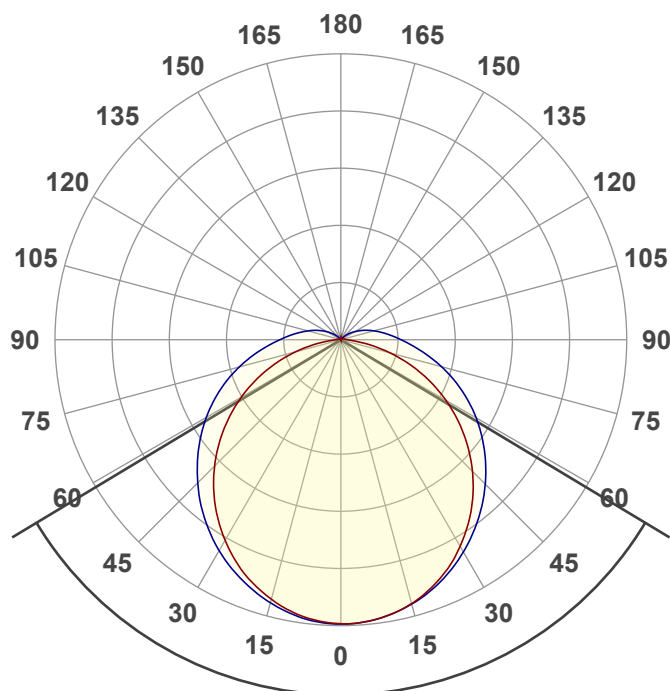
Peak: 1861 cd

Color temperature:

5078 K

Power: 52.6 W

PF: 0.99



Product name:

VTS4D-K1-50K60F

Date and time:

8/22/2022 10:41:52 AM

Beam angle

118°

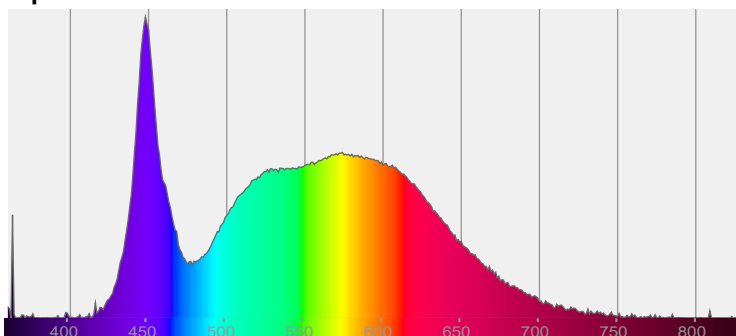


CIE 1931

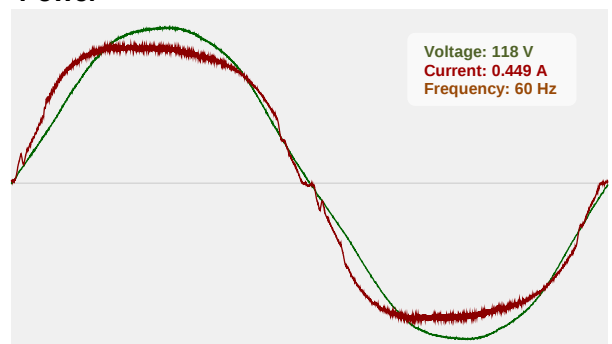
x: 0.344

y: 0.356

Spectra



Power



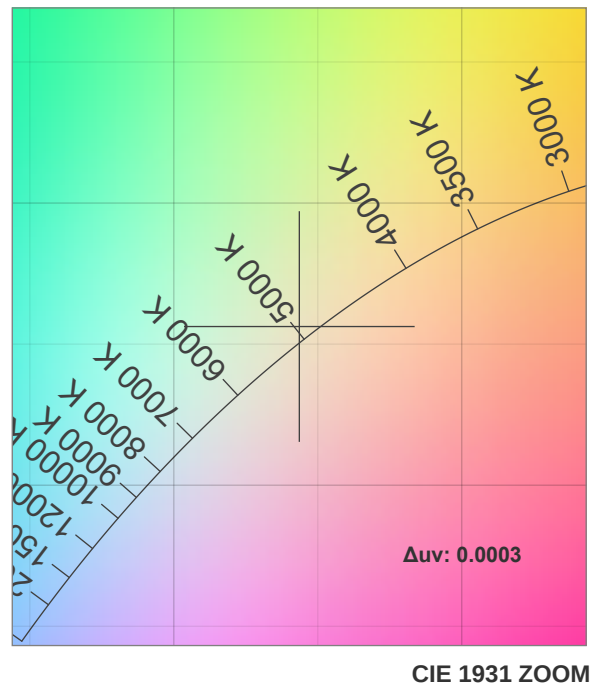
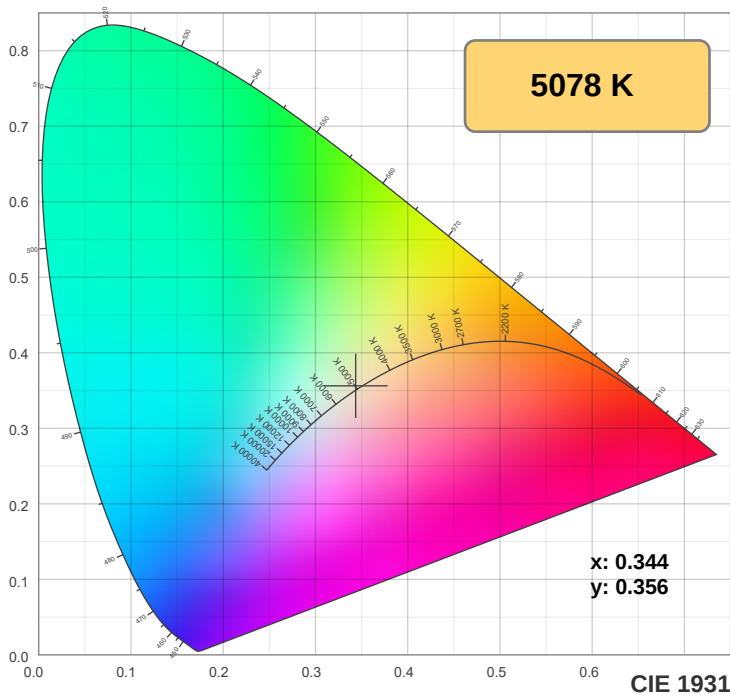
T 314.743.3067

F 314.972.6202

email: commercial-sales@superbrightleds.com

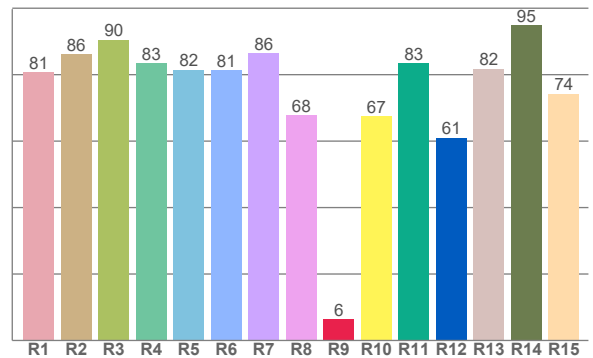
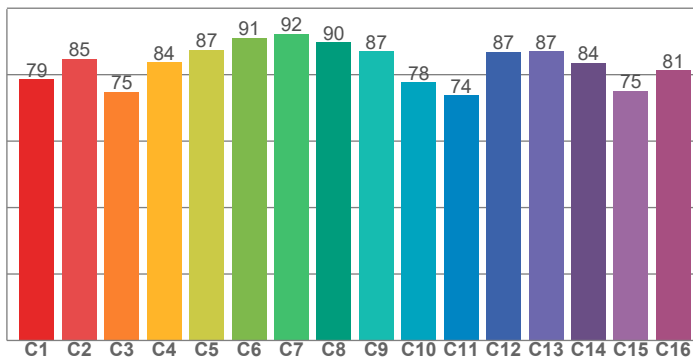
www.superbrightleds.com/

Color Specifications



TM30: 83.1

CRI: 82.2 (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
80.7	86.1	90.5	83.4	81.5	81.3	86.5	67.8	6.5	67.5	83.4	61.1	81.7	94.9	74.3

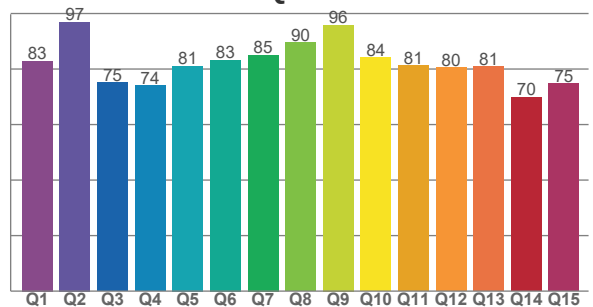
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
78.6	84.7	74.8	83.7	87.5	91.2	92.4	89.8	87.0	77.7	73.8	86.8	87.0	83.5	75.2	81.3

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
82.9	97.0	75.1	74.1	81.1	83.3	85.1	89.5	95.9	84.2	81.2	80.4	80.9	69.9	74.7

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
5078 K	82.2	6.5	83.1	97.5	80.9	0.344	0.356	0.209	0.324	0.0003



TM30 Report

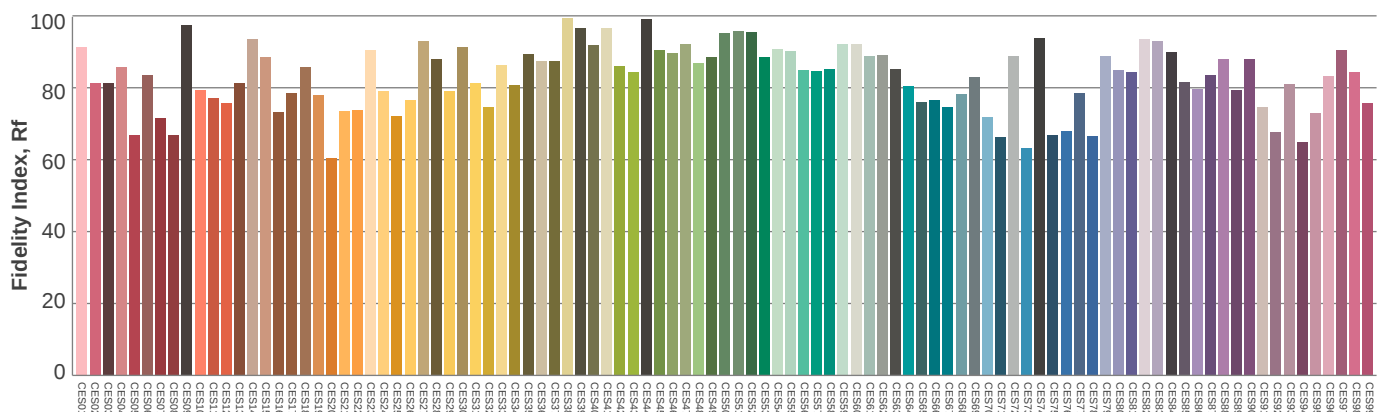
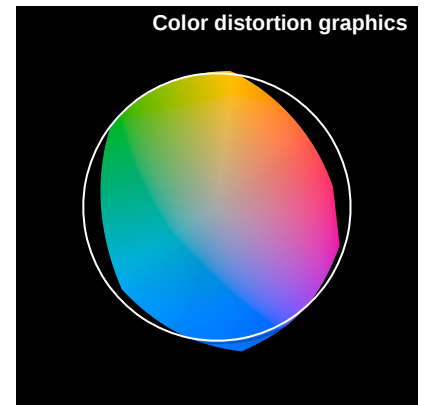
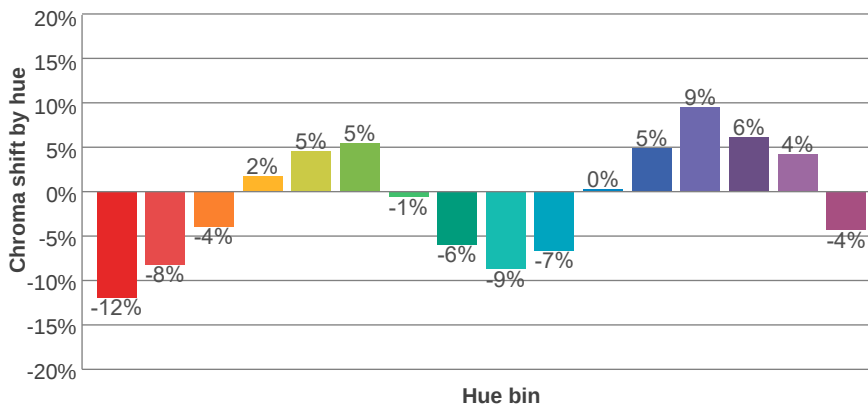
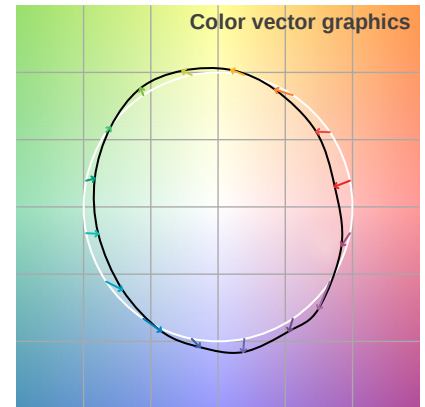
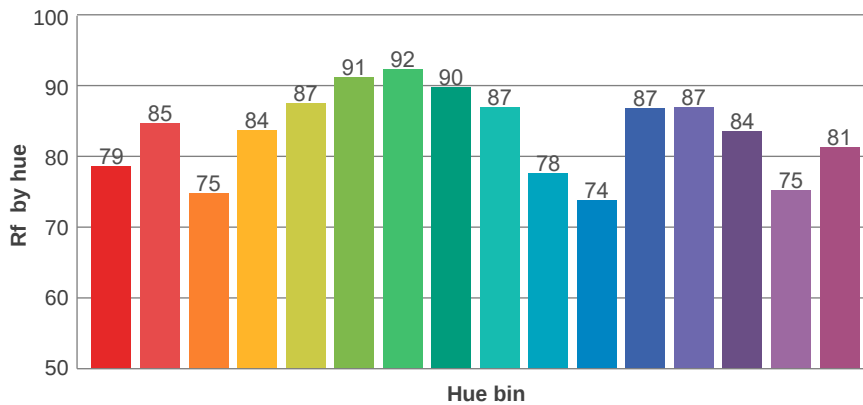
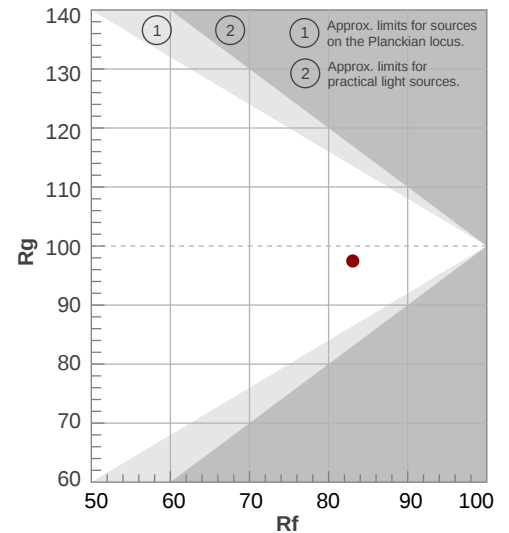
Rf 83.1

Fidelity index Rf

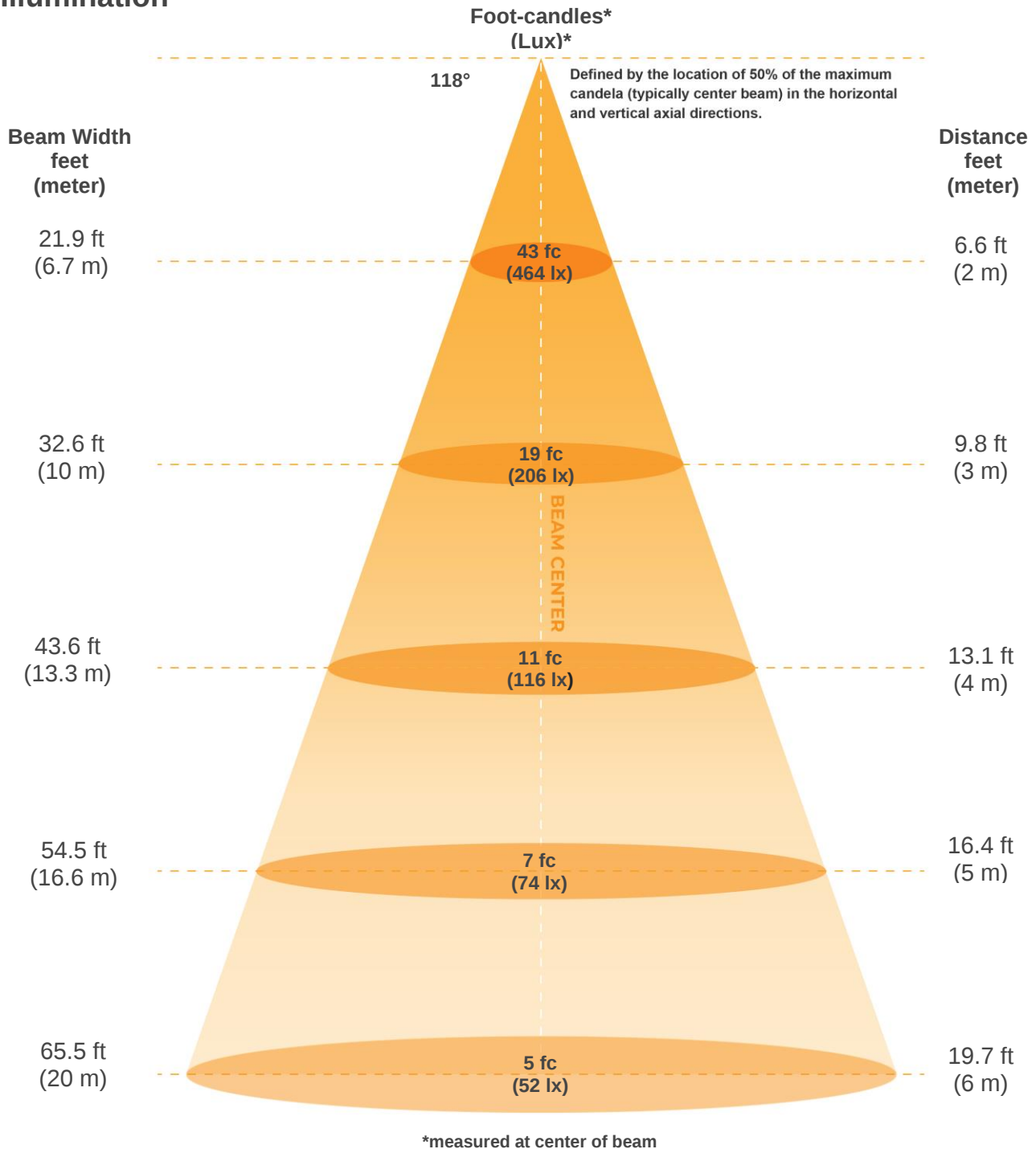
Rg 97.5

Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	79	-12%	-2%
2	85	-8%	6%
3	75	-4%	13%
4	84	2%	10%
5	87	5%	6%
6	91	5%	-1%
7	92	-1%	-5%
8	90	-6%	-3%
9	87	-9%	2%
10	78	-7%	12%
11	74	0%	16%
12	87	5%	7%
13	87	9%	-3%
14	84	6%	-7%
15	75	4%	-22%
16	81	-4%	-10%



Illumination



Beam intensities from 1-20m

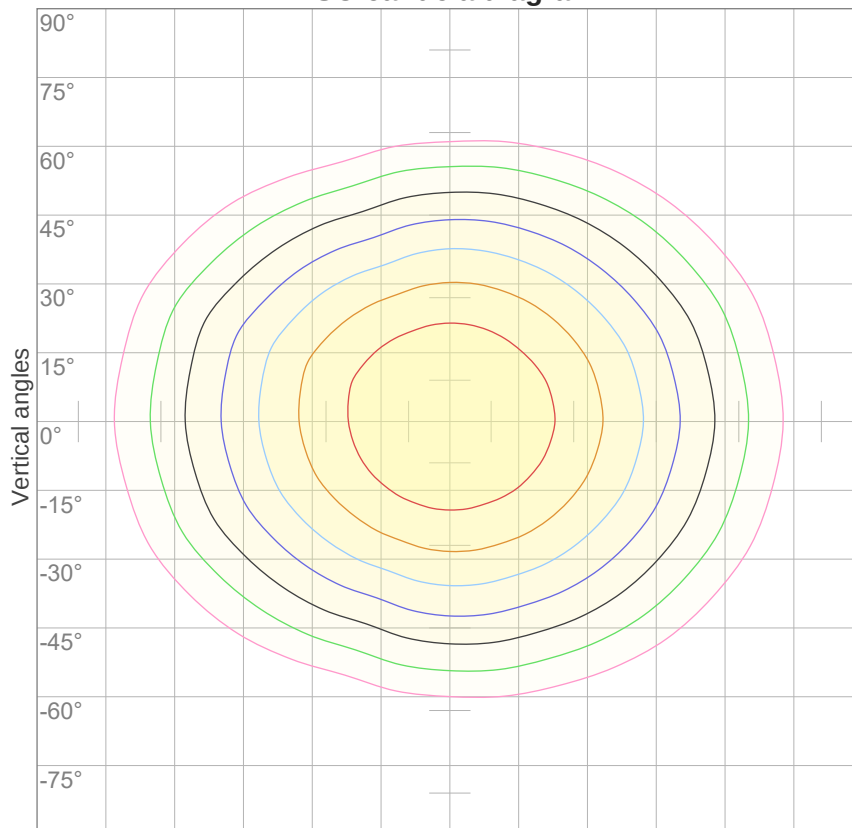
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
1857lx	464lx	206lx	116lx	74lx	52lx	38lx	29lx	23lx	19lx	15lx	13lx	11lx	9lx	8lx	7lx	6lx	6lx	5lx	5lx
172.5fc	43.1fcd	19.2fcd	10.8fcd	6.9fcd	4.8fcd	3.5fcd	2.7fcd	2.1fcd	1.7fcd	1.4fcd	1.2fcd	1fcd	0.9fcd	0.8fcd	0.7fcd	0.6fcd	0.5fcd	0.5fcd	0.4fcd

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
118°	192.6°	230.1°	66.5%	44.6%



ISO Diagrams

ISO candela diagram



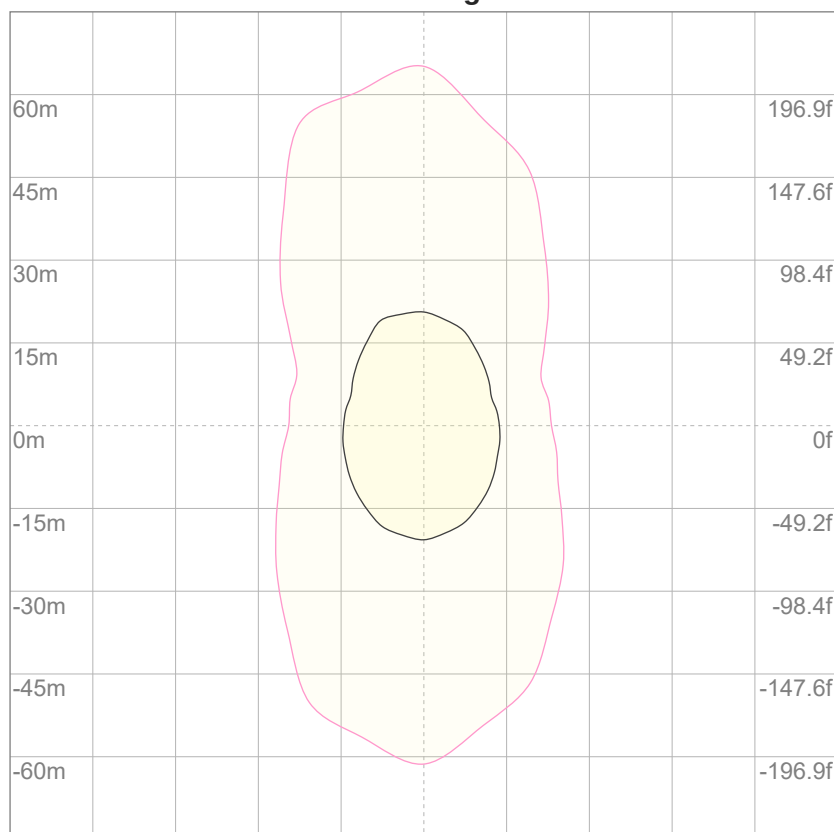
10%	186 cd
20%	371 cd
30%	557 cd
40%	743 cd
50%	929 cd
60%	1114 cd
70%	1300 cd
80%	1486 cd
90%	1671 cd

Conditions:

Number of c-planes: 16

Candela at center: 1857 cd

ISO lux diagram



3%	0.557 lx
5%	0.929 lx
10%	1.86 lx
30%	5.57 lx
50%	{LUX_10M50} lx

Conditions:

Number of c-planes: 16

Lux at center: 18.6 lx

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



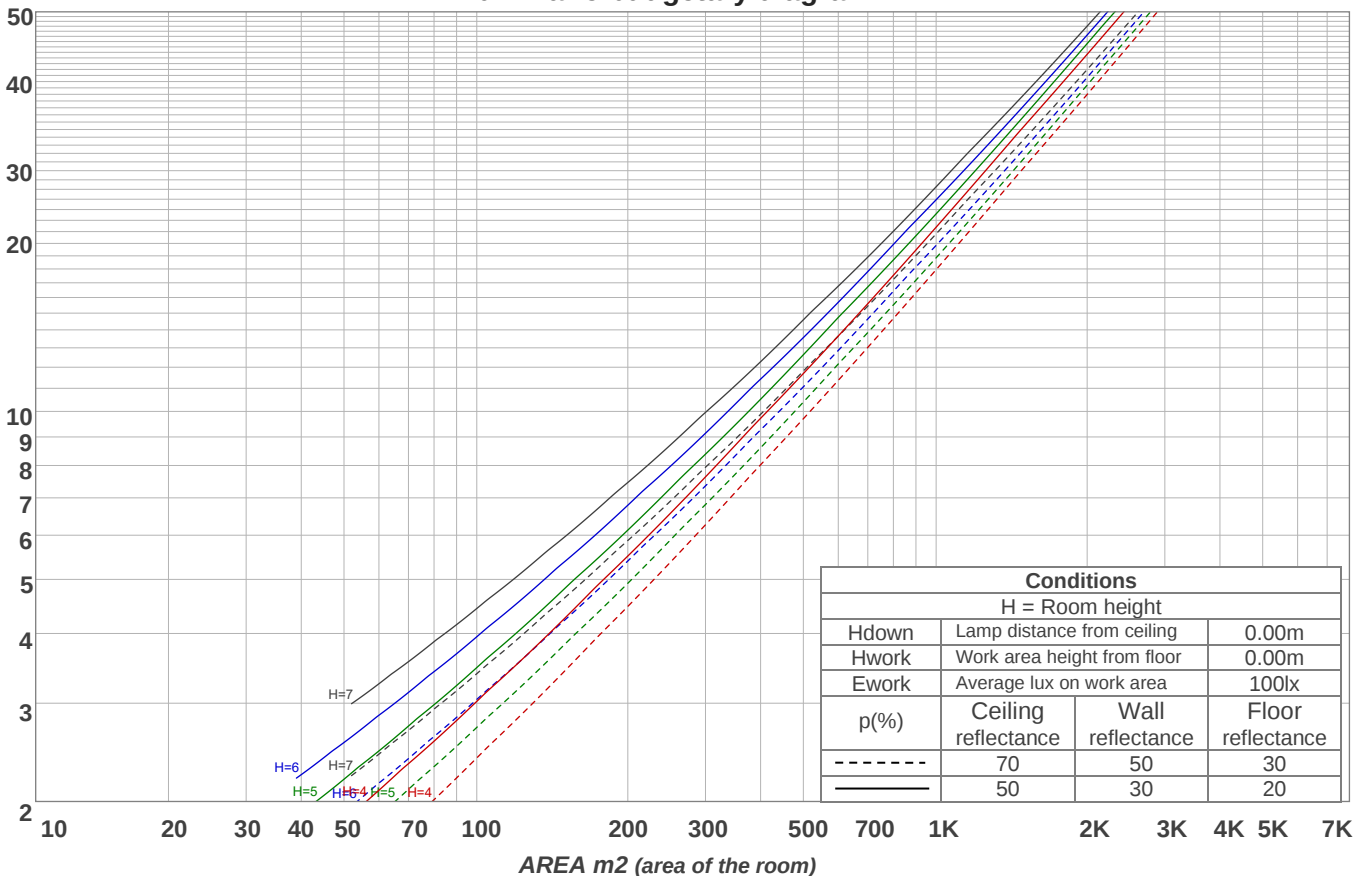
Light Planning

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	117	117	117	117	114	114	114	114	107	107	107	101	101	101	95	95	95	93
1	105	100	95	90	102	97	92	88	91	87	84	86	83	80	81	79	76	74
2	95	86	78	72	92	83	76	71	79	73	68	74	69	65	70	66	63	60
3	86	75	66	59	83	73	65	58	69	62	56	65	59	54	61	57	52	50
4	79	66	57	50	76	64	56	49	61	53	48	58	51	46	55	49	45	42
5	72	59	50	43	70	57	49	42	54	47	41	52	45	40	49	43	39	36
6	67	53	44	37	64	52	43	37	49	41	36	47	40	35	44	38	34	32
7	62	48	39	33	60	47	38	32	44	37	31	42	36	31	40	34	30	28
8	57	44	35	29	55	43	34	29	41	33	28	39	32	27	37	31	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24	22
10	50	37	29	23	49	36	28	23	35	28	23	33	27	22	32	26	22	20

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°
176 lm	503 lm	761 lm	920 lm	969 lm	911 lm	761 lm	553 lm	351 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
217 lm	131 lm	69.7 lm	30.7 lm	10.1 lm	4.12 lm	2.70 lm	1.53 lm	0.497 lm

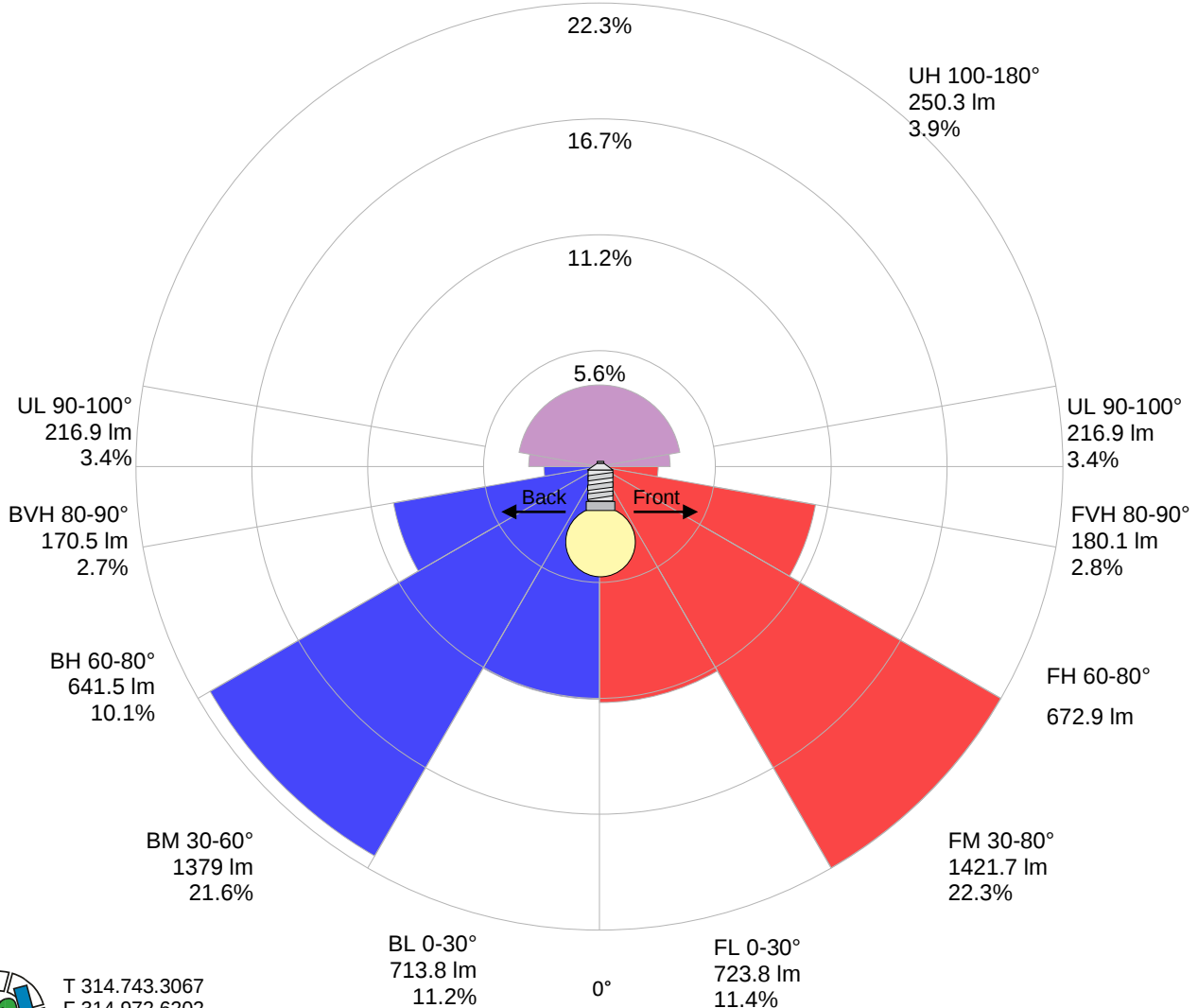


Road Report

LCS table

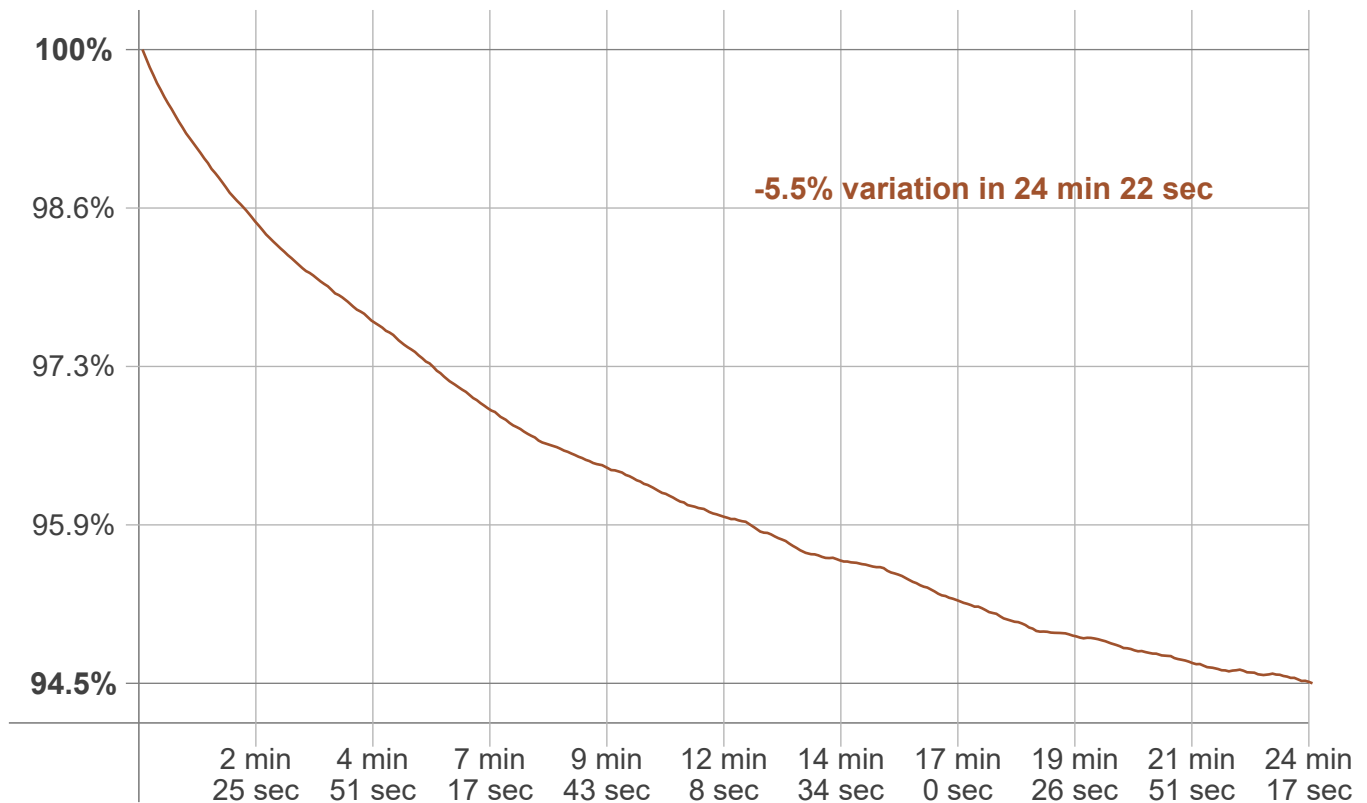
BUG rating:	B2 U3 G2	
Forward light	Lumens	Lumens %
Low(0-30):	723.8	11.4%
Medium(30-60):	1421.7	22.3%
High(60-80):	672.9	10.6%
Very high(80-90):	180.1	2.8%
Back light		
Low(0-30):	713.8	11.2%
Medium(30-60):	1379	21.6%
High(60-80):	641.5	10.1%
Very high(80-90):	170.5	2.7%
Uplight		
Low(90-100):	216.9	3.4%
High(100-180):	250.3	3.9%

LCS graph



Stabilization

Warmup curve



Warmup result

Warmup time:	Lamp stabilized in 24 min 22 sec
Warmup variation	-5.5%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
5021 K	+57 K	5078 K

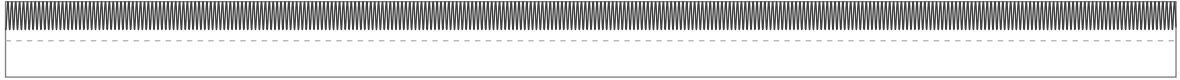
Output change

Output start	Output change	Output end
6727 lm	-356 lm	6371 lm

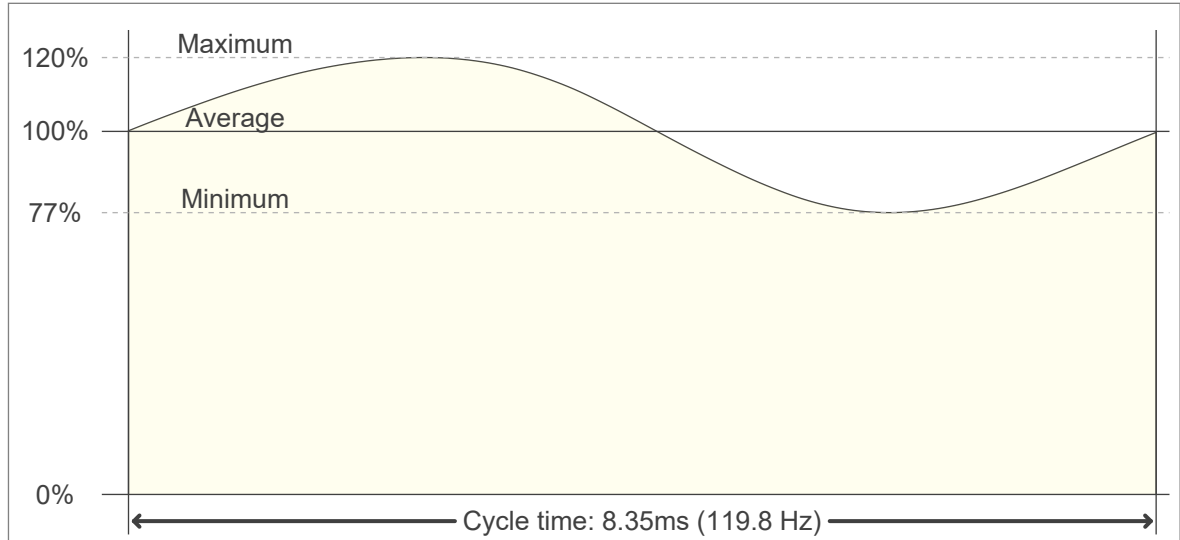


Flicker Specifications

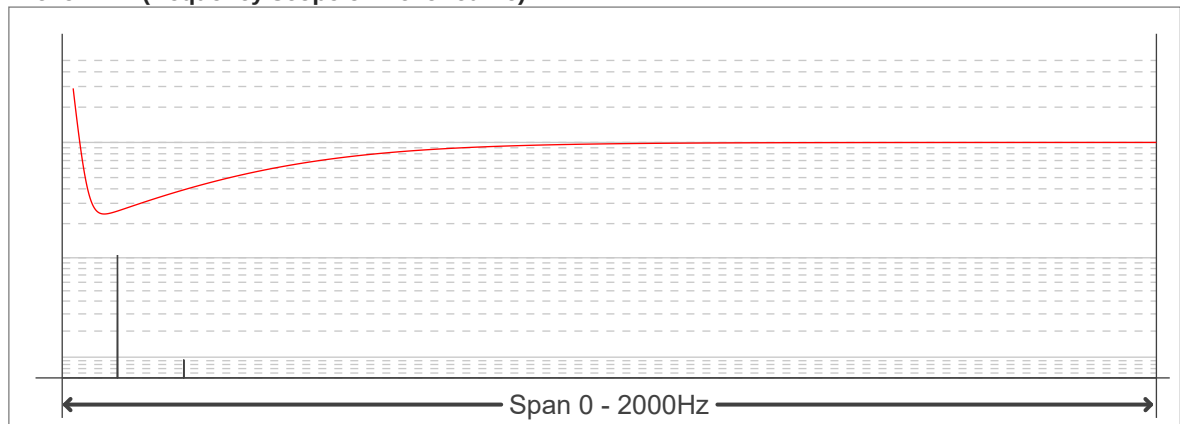
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:	119.76 Hz
Flicker index:	0.07
Flicker percentage:	21.73 %
SVM: (Visual flicker)	0.77

Flicker conditions:

Sample rate:	20000 samples/second
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