

Light efficiency:

36 Lumen/Watt

Light quality:

CRI: 69.9

Color temperature:

7729 K

Output: 18698 lm

Peak: 486741 cd

Power: 518 W

PF: 1.0



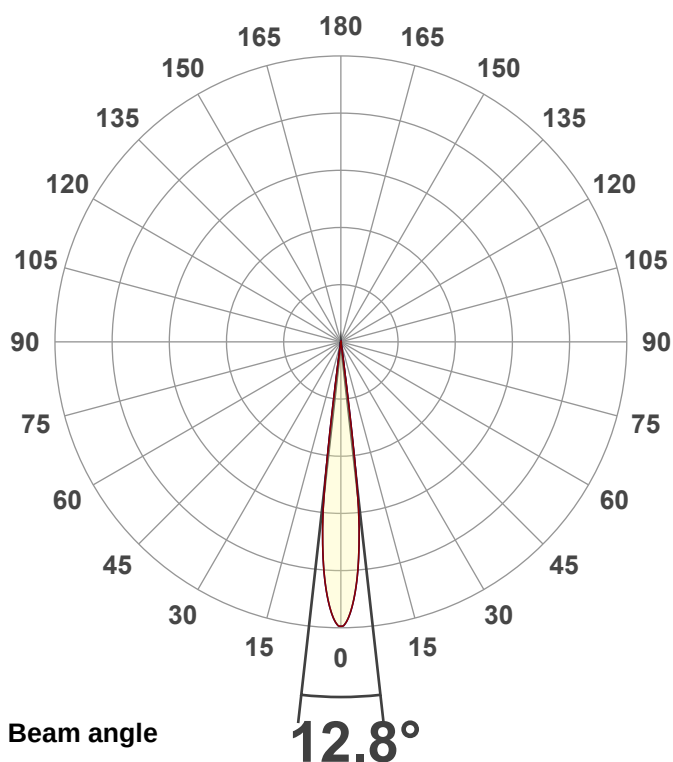
Product name:

Protege XM (Zoom 50%,Full On)

Item number:

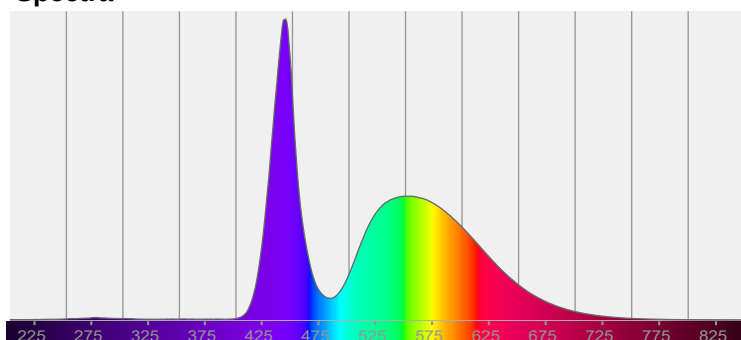
Date and time:

9/14/2026 1:48:42 PM



CIE 1931
x: 0.300
y: 0.300

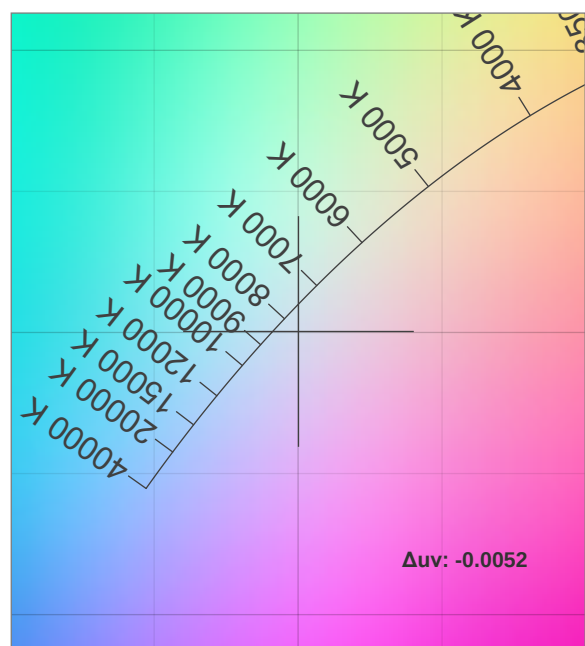
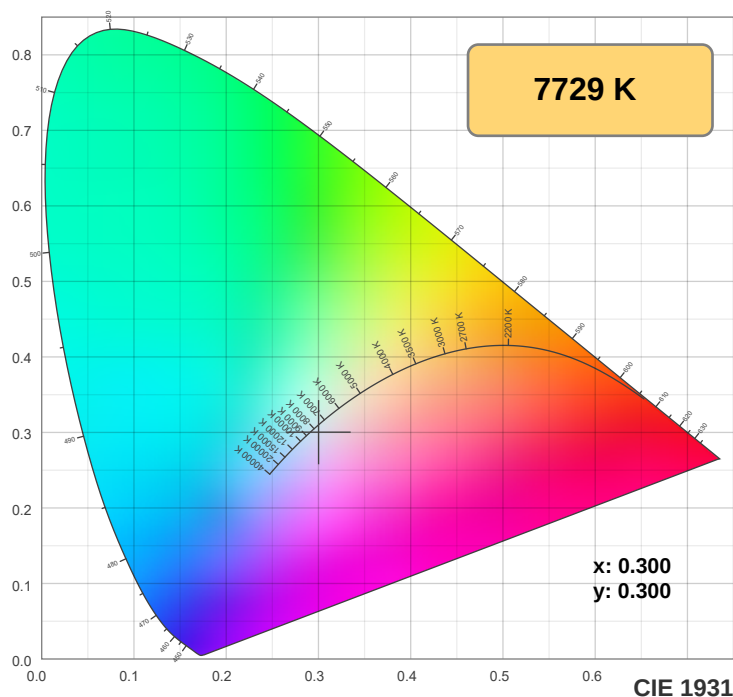
Spectra



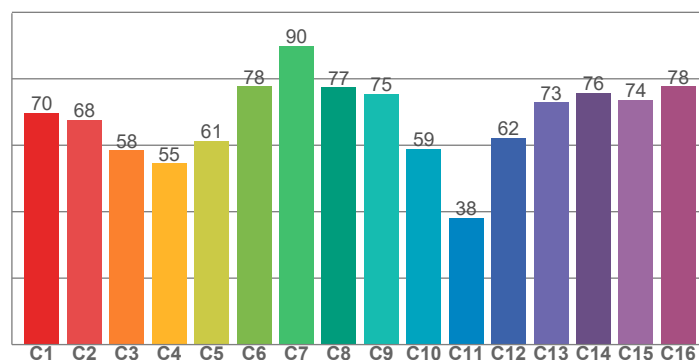
Power

Voltage: 199 V
Current: 2.60 A
Frequency: 0 Hz

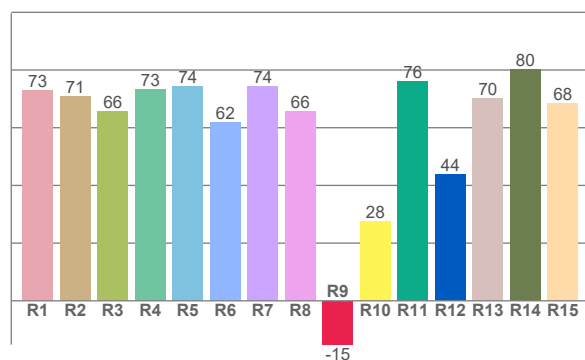
Color details



TM-30: 66.9



CRI: 69.9 (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
73.1	70.7	65.7	73.4	74.3	61.8	74.2	65.7	-15.2	27.6	76.0	43.9	70.3	80.2	68.4

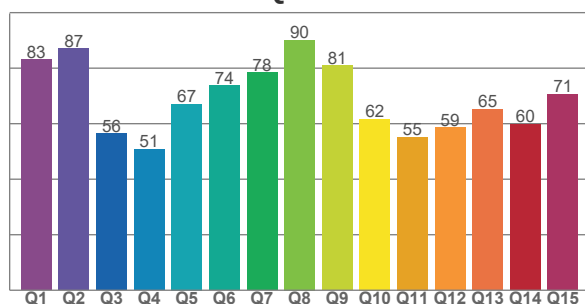
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
69.8	67.7	58.5	54.5	61.3	77.8	89.9	77.5	75.4	58.9	38.2	62.2	72.9	75.8	73.7	77.7

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83.1	87.1	56.5	50.8	67.0	73.8	78.4	90.2	81.0	61.7	55.2	58.5	65.2	59.8	70.6

CQS: 67.0



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
7729 K	69.9	-15.2	66.9	96.9	67.0	0.300	0.300	0.200	0.300	-0.0052

TM-30 details

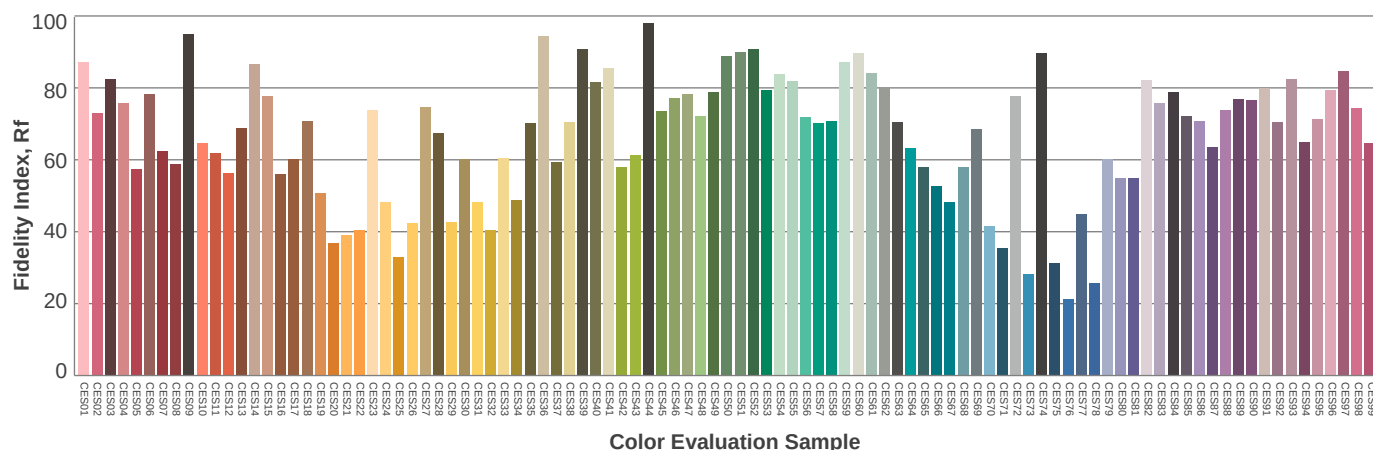
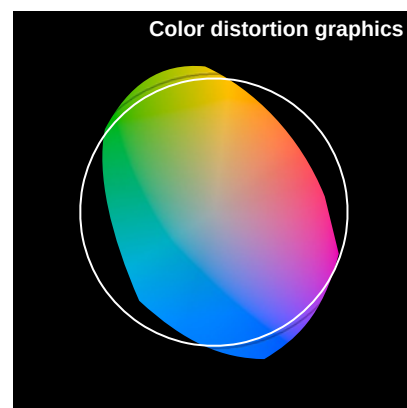
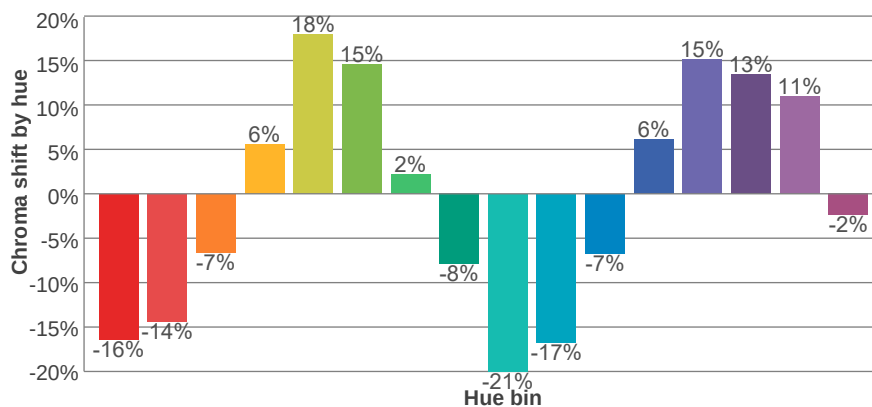
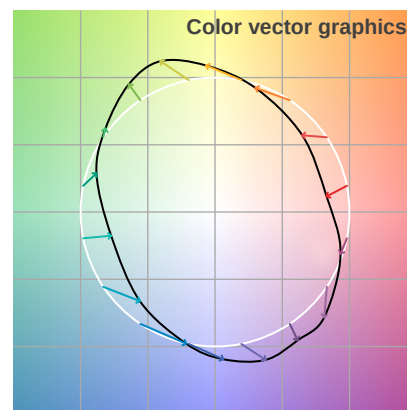
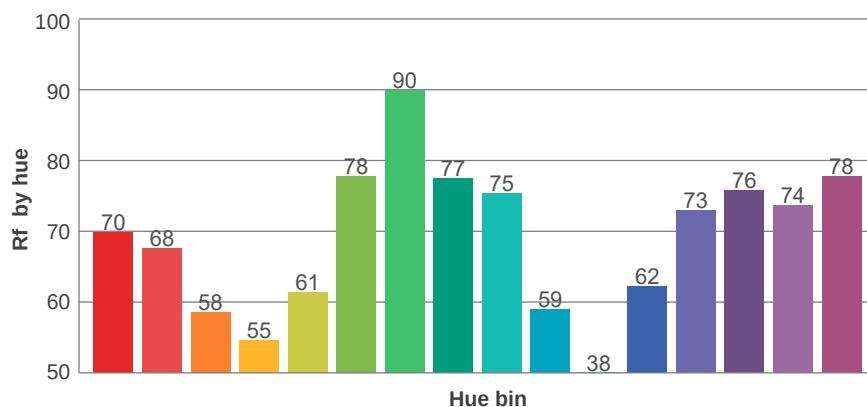
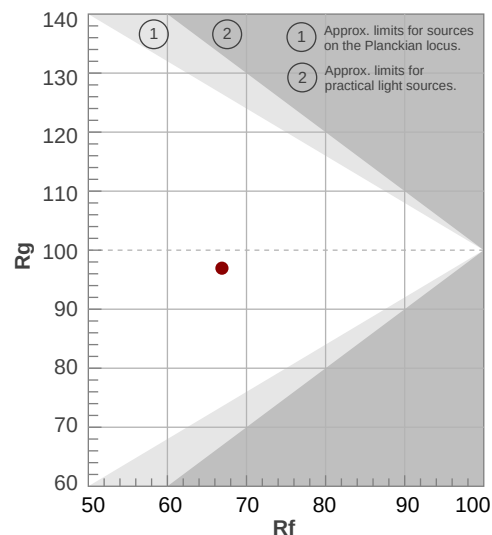
Rf 66.9

Fidelity index Rf

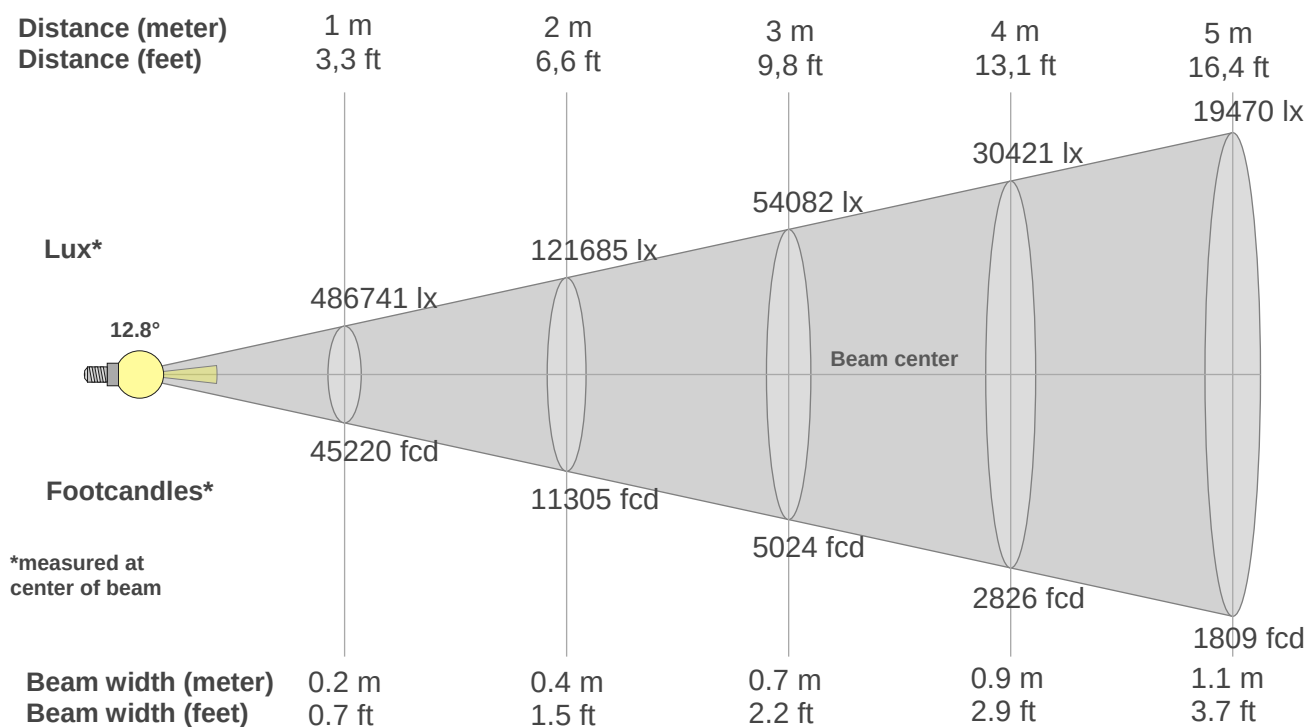
Rg 96.9

Gamut index Rg

Hue Bin	R _f	Shifts (%)	
		Chroma	Hue
1	70	-16%	-5%
2	68	-14%	11%
3	58	-7%	26%
4	55	6%	28%
5	61	18%	18%
6	78	15%	1%
7	90	2%	-6%
8	77	-8%	-11%
9	75	-21%	2%
10	59	-17%	24%
11	38	-7%	37%
12	62	6%	27%
13	73	15%	16%
14	76	13%	-2%
15	74	11%	-20%
16	78	-2%	-12%



Beam details



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
486741lx	121685lx	54082lx	30421lx	19470lx	13521lx	9933lx	7605lx	6009lx	4867lx	4023lx	3380lx	2880lx	2483lx	2163lx	1901lx	1684lx	1502lx	1348lx	1217lx
45219.7fcd	11304.9fcd	5024.4fcd	2826.2fcd	1808.8fcd	1256.1fcd	922.9fcd	706.6fcd	558.3fcd	452.2fcd	373.7fcd	314fcd	267.6fcd	230.7fcd	201fcd	176.6fcd	156.5fcd	139.6fcd	125.3fcd	113fcd

Intensities in 0° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
487k	481k	464k	438k	403k	355k	287k	143k	8k	1k	0k	0k	0k	0k	0k	0k	0k	0k	0k	0k
100%	99%	95%	90%	83%	73%	59%	29%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Intensities in 90° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
487k	481k	464k	438k	403k	355k	287k	143k	8k	1k	0k	0k	0k	0k	0k	0k	0k	0k	0k	0k
100%	99%	95%	90%	83%	73%	59%	29%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Intensities in 180° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
487k	481k	464k	438k	403k	355k	287k	143k	8k	1k	0k	0k	0k	0k	0k	0k	0k	0k	0k	0k
100%	99%	95%	90%	83%	73%	59%	29%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Intensities in 270° c-plane

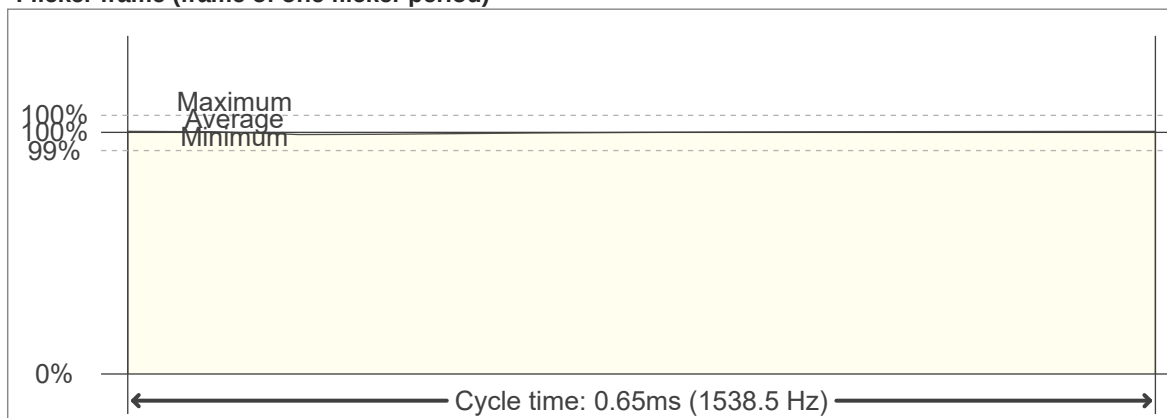
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
487k	481k	464k	438k	403k	355k	287k	143k	8k	1k	0k	0k	0k	0k	0k	0k	0k	0k	0k	0k
100%	99%	95%	90%	83%	73%	59%	29%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
12.8°	15.1°	15.9°	93.8%	92.7%

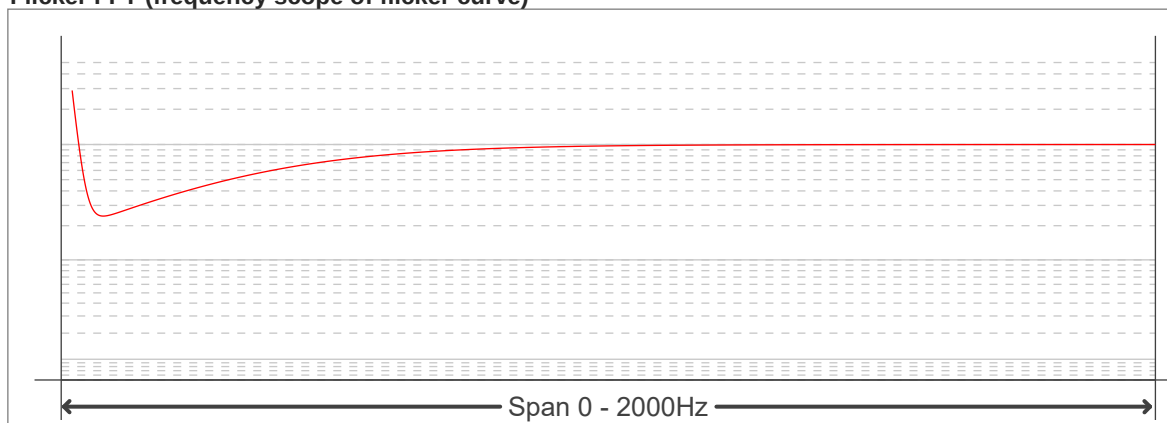
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:		1538.46 Hz	
Flicker index:	0	JA8/10 40Hz	22.69 %
Flicker percentage:	23.56 %	JA8/10 90Hz	23.05 %
SVM: (Visual flicker)	0.01	JA8/10 200Hz	23.27 %
PstLM	0	JA8/10 400Hz	23.34 %
Mp	1.64	JA8/10 1000Hz	23.36 %

Flicker conditions:

Sample rate:	20000 samples/second
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