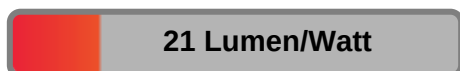


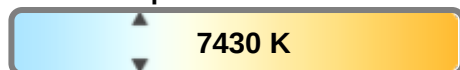
Light efficiency:



Light quality:



Color temperature:

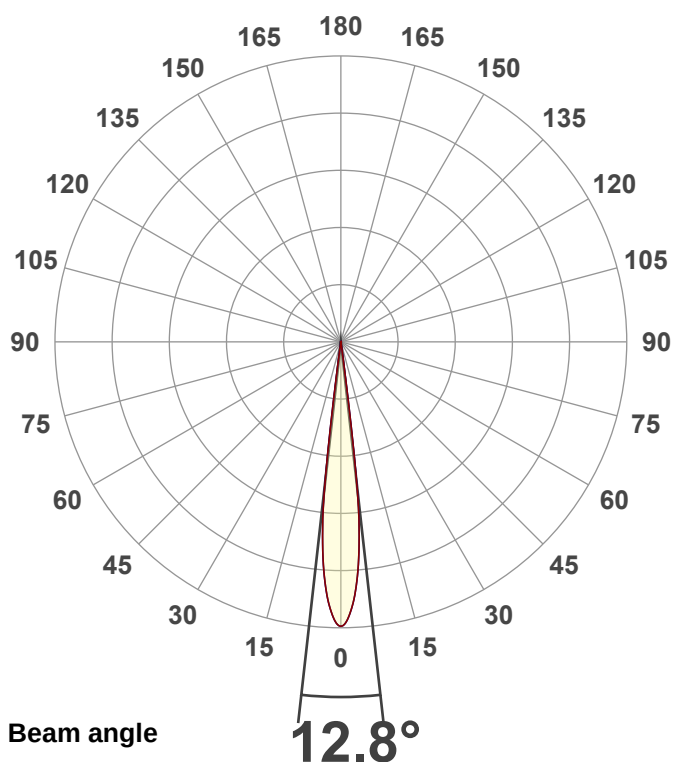


Output: 10534 lm
Peak: 275998 cd
Power: 509.1 W
PF: 1.0



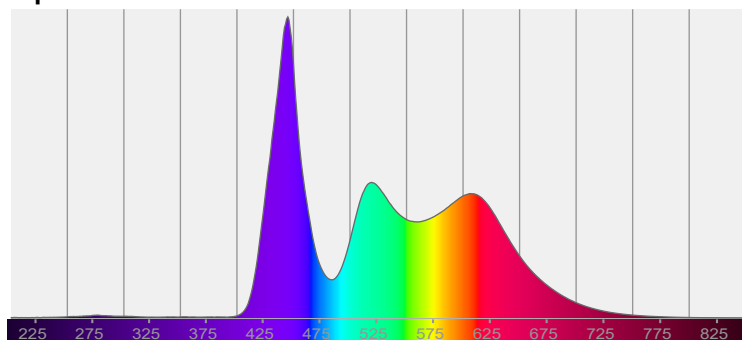
Product name:
Protege XM (Zoom 50%,High CRI)
Item number:

Date and time:
9/14/2026 2:29:07 PM

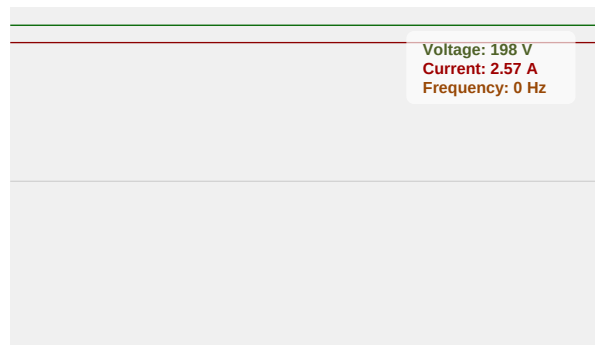


CIE 1931
x: 0.308
y: 0.286

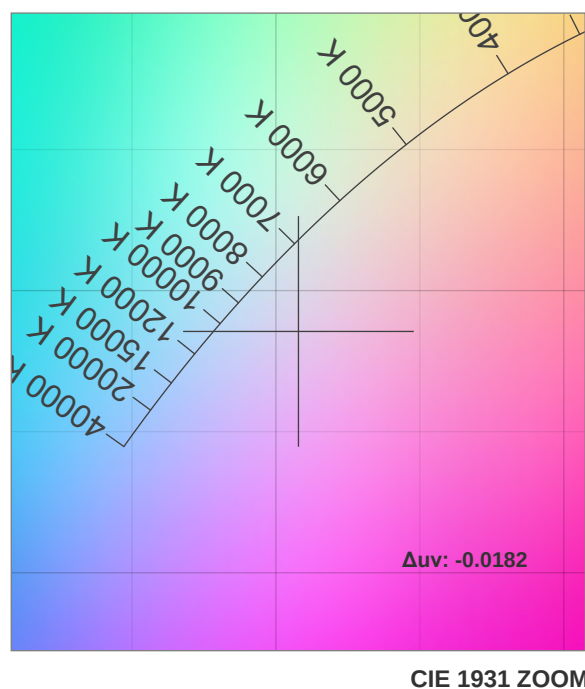
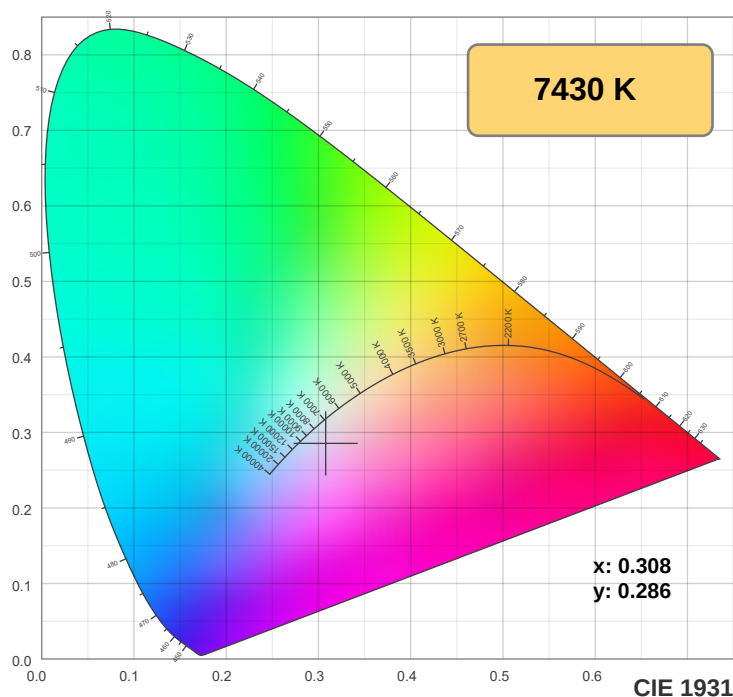
Spectra



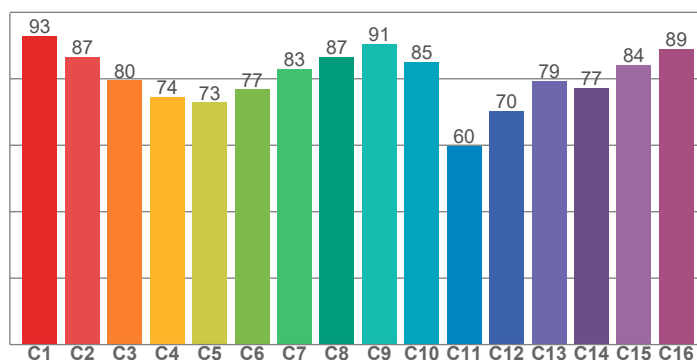
Power



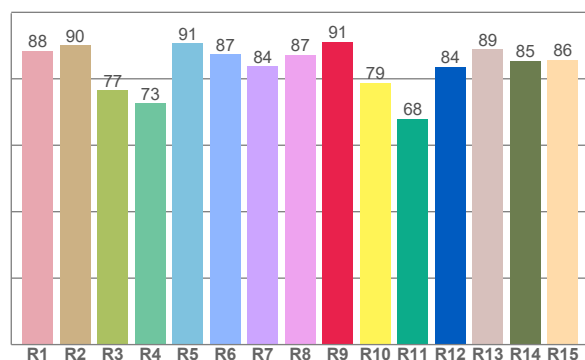
Color details



TM-30: 80.7



CRI: 84.6 (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
88.4	90.1	76.6	72.6	90.8	87.3	83.8	87.2	91.2	78.8	67.9	83.6	88.9	85.4	85.8

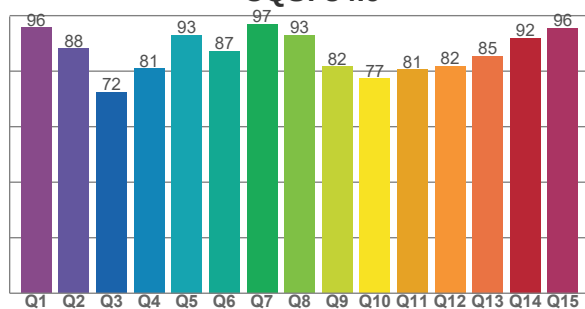
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
93.0	86.5	79.6	74.5	72.9	76.8	83.1	86.6	90.5	85.1	59.9	70.3	79.4	77.3	84.2	89.0

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
95.7	88.1	72.4	80.9	93.1	87.2	96.9	92.9	81.7	77.4	80.5	81.9	85.5	91.9	95.6

CQS: 84.9



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
7430 K	84.6	91.2	80.7	111.0	84.9	0.308	0.286	0.212	0.295	-0.0182

TM-30 details

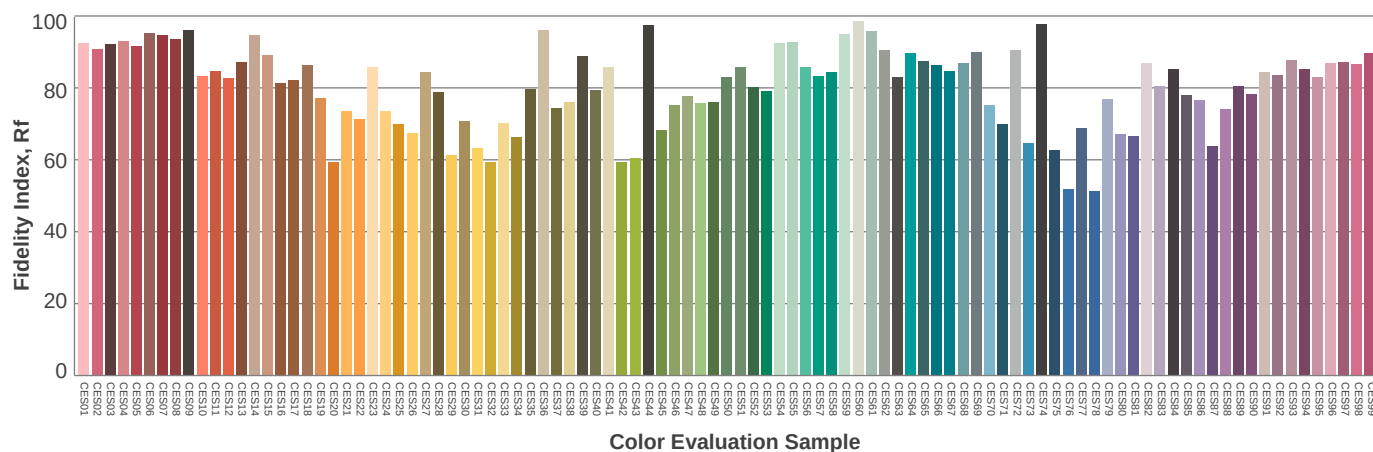
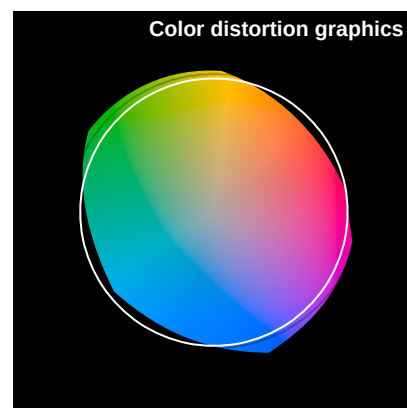
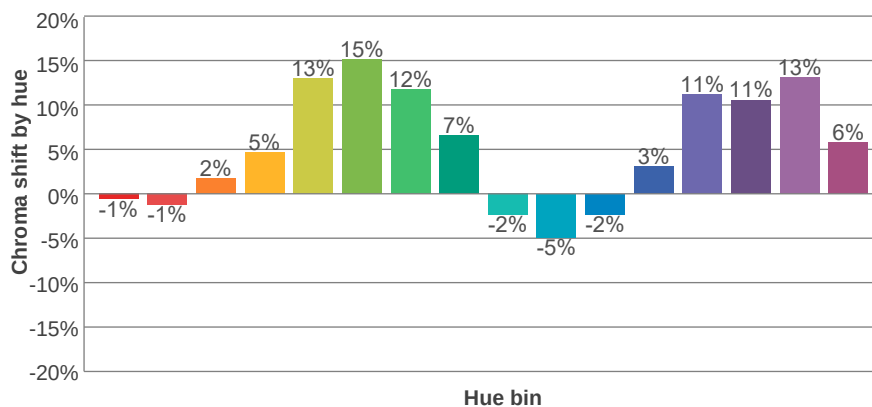
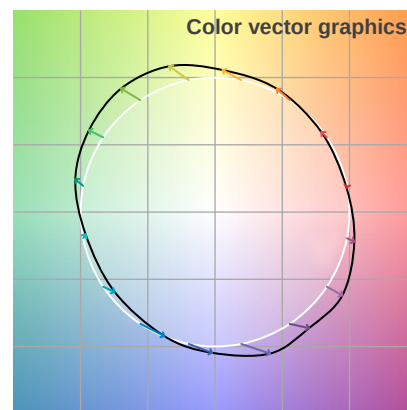
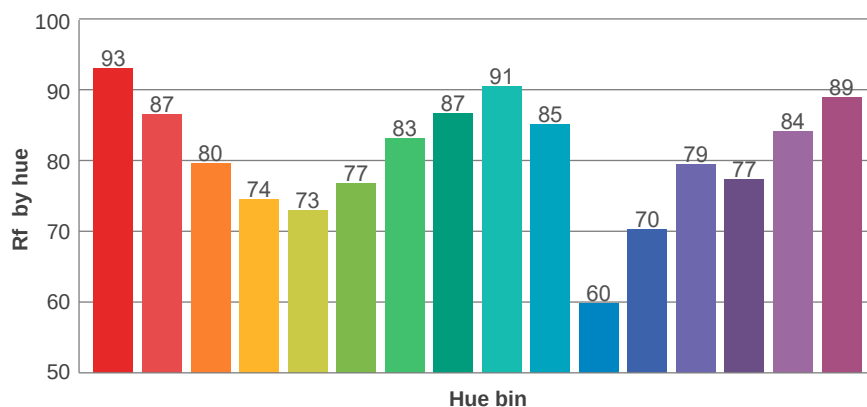
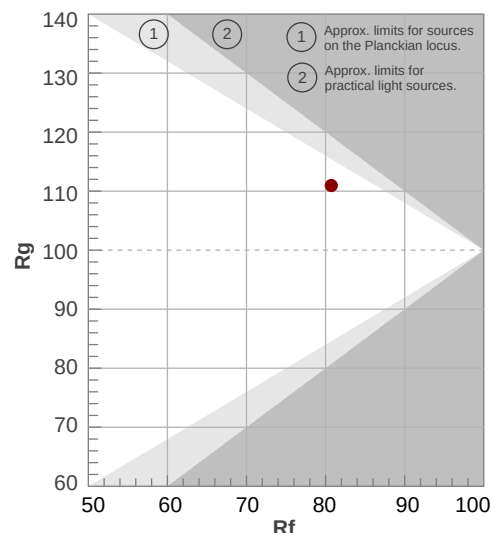
Rf 80.7

Fidelity index Rf

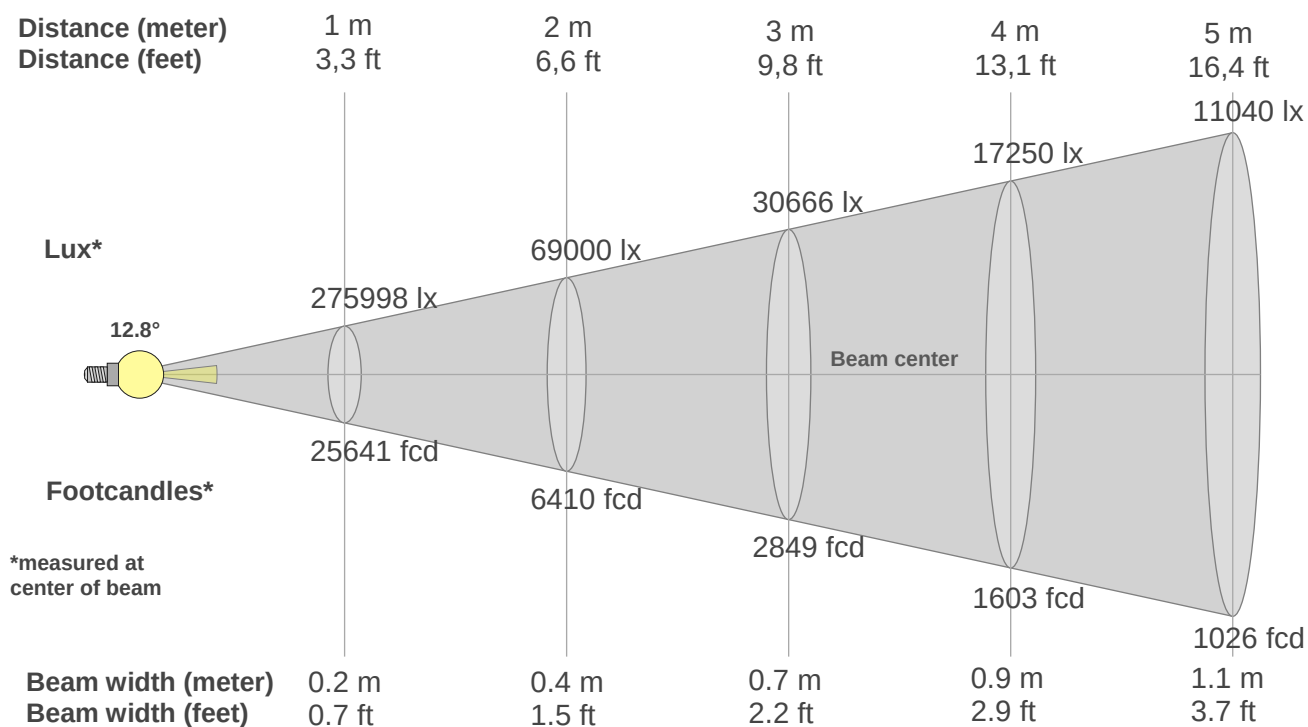
Rg 111.0

Gamut index Rg

Hue Bin	Ri	Shifts (%)	
		Chroma	Hue
1	93	-1%	-1%
2	87	-1%	5%
3	80	2%	13%
4	74	5%	15%
5	73	13%	12%
6	77	15%	7%
7	83	12%	2%
8	87	7%	-4%
9	91	-2%	-2%
10	85	-5%	8%
11	60	-2%	20%
12	70	3%	18%
13	79	11%	20%
14	77	11%	10%
15	84	13%	1%
16	89	6%	-1%



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
275998lx	69000lx	30666lx	17250lx	11040lx	7667lx	5633lx	4312lx	3407lx	2760lx	2281lx	1917lx	1633lx	1408lx	1227lx	1078lx	955lx	852lx	765lx	690lx
25641.1 fcd	6410.3 fcd	2849 fcd	1602.6 fcd	1025.6 fcd	712.3 fcd	523.3 fcd	400.6 fcd	316.6 fcd	256.4 fcd	211.9 fcd	178.1 fcd	151.7 fcd	130.8 fcd	114 fcd	100.2 fcd	88.7 fcd	79.1 fcd	71 fcd	64.1 fcd

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°
276k	273k	263k	249k	229k	202k	164k	80k	4k	0k	0k	0k	0k	0k	0k	0k	0k	0k	0k	0k
100%	99%	95%	90%	83%	73%	60%	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°
276k	273k	263k	249k	229k	202k	164k	80k	4k	0k	0k	0k	0k	0k	0k	0k	0k	0k	0k	0k
100%	99%	95%	90%	83%	73%	60%	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°
276k	273k	263k	249k	229k	202k	164k	80k	4k	0k	0k	0k	0k	0k	0k	0k	0k	0k	0k	0k
100%	99%	95%	90%	83%	73%	60%	29%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Intensities in 270° c-plane

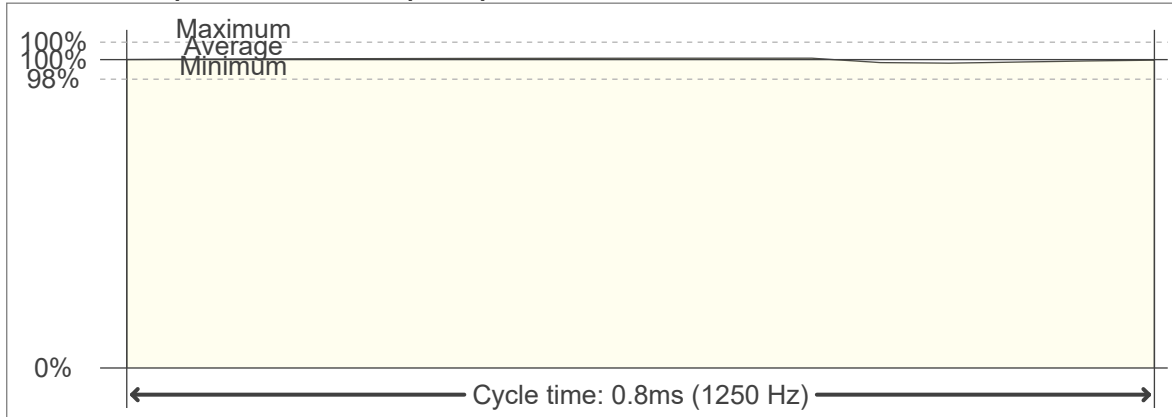
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
276k	273k	263k	249k	229k	202k	164k	80k	4k	0k	0k	0k	0k	0k	0k	0k	0k	0k	0k	0k
100%	99%	95%	90%	83%	73%	60%	29%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
12.8°	15.1°	15.7°	94.0%	92.9%

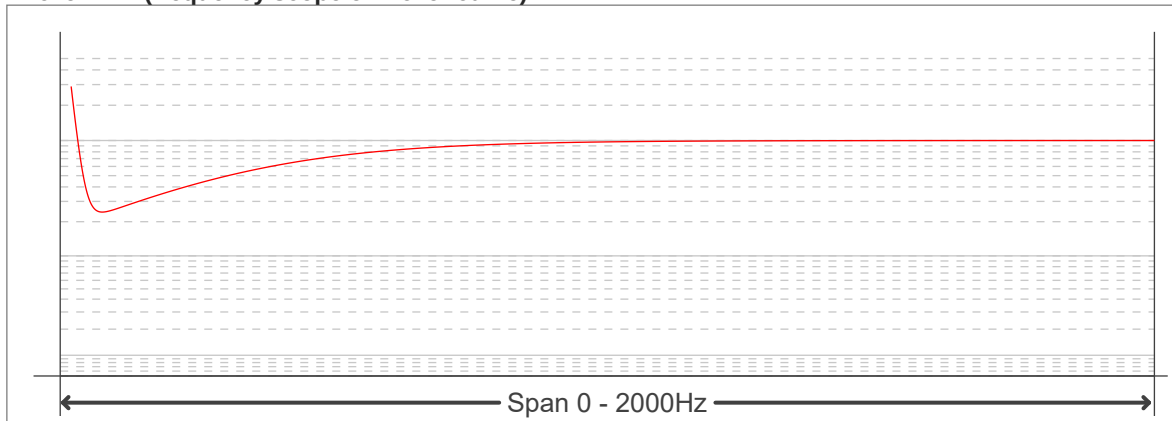
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:		1250 Hz	
Flicker index:	0	JA8/10 40Hz	0.24 %
Flicker percentage:	1.44 %	JA8/10 90Hz	0.27 %
SVM: (Visual flicker)	0.01	JA8/10 200Hz	0.55 %
PstLM	0	JA8/10 400Hz	0.55 %
Mp	0.11	JA8/10 1000Hz	0.57 %

Flicker conditions:

Sample rate:	20000 samples/second
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