

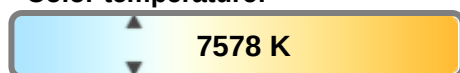
Light efficiency:



Light quality:



Color temperature:

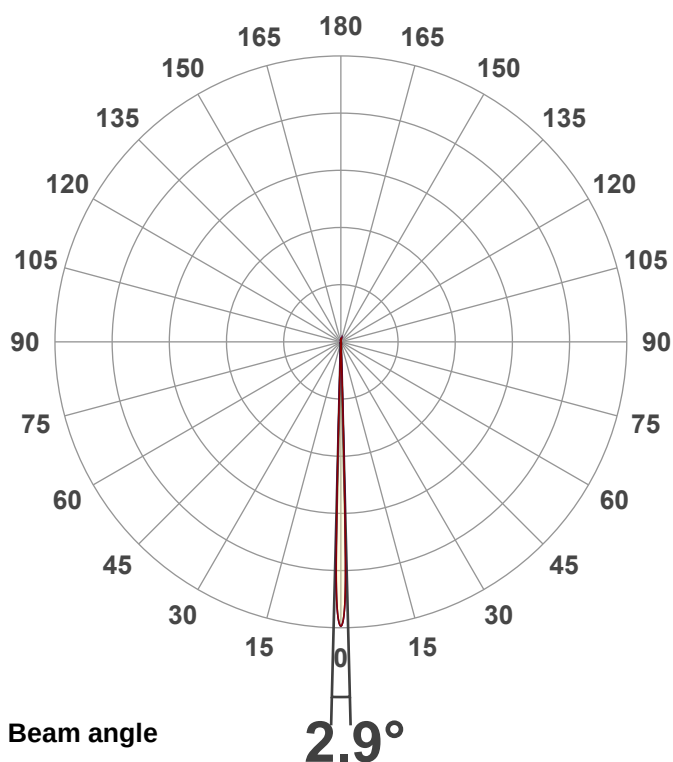


Output: 8629 lm
Peak: 2250138 cd
Power: 517.9 W
PF: 1.0



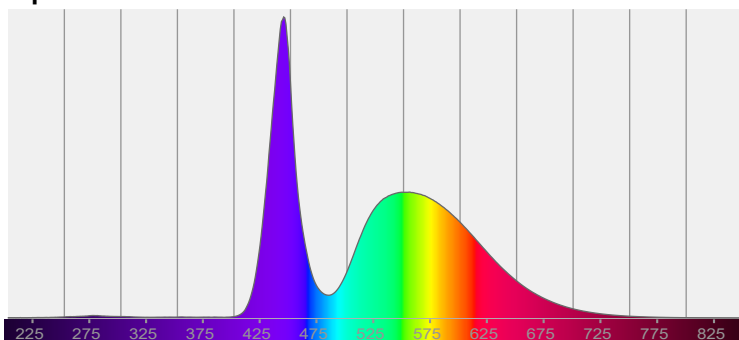
Product name:
Protege XM (Zoom Narrow,Full On)
Item number:

Date and time:
9/14/2026 12:58:42 PM

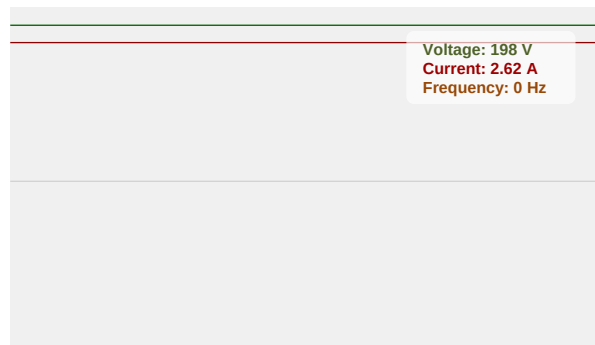


CIE 1931
x: 0.302
y: 0.302

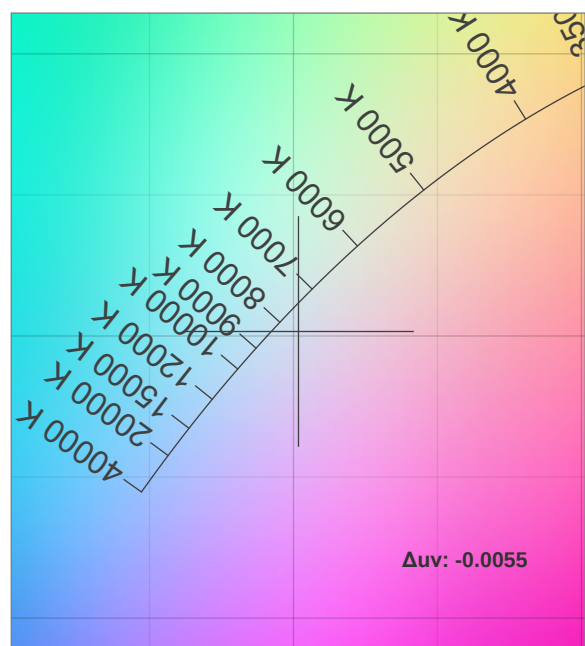
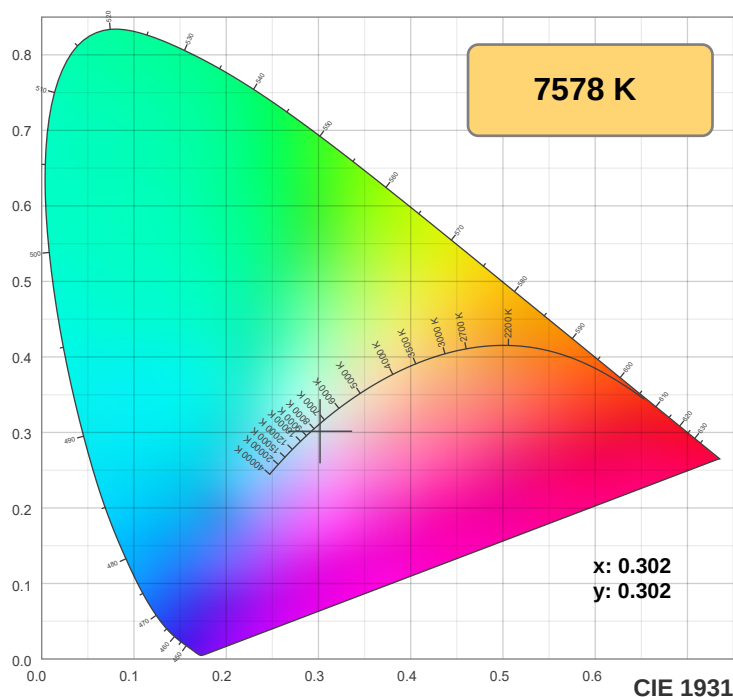
Spectra



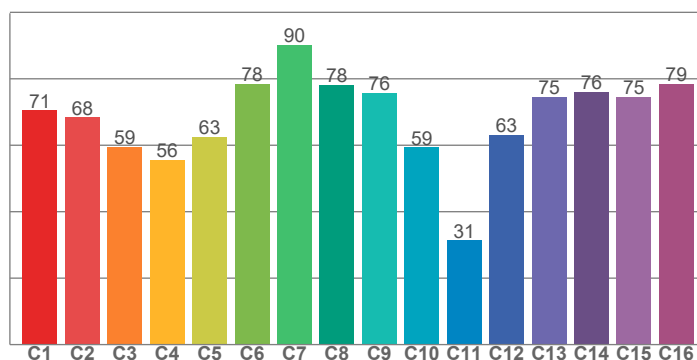
Power



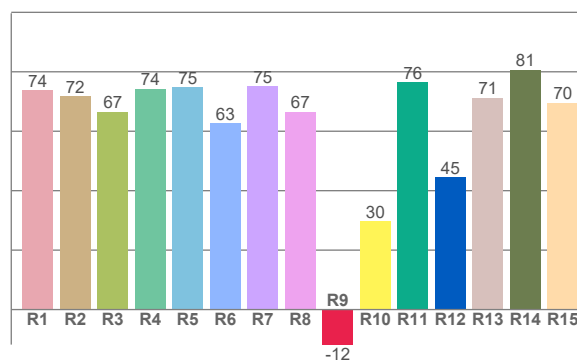
Color details



TM-30: 67.7



CRI: 70.7 (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
73.9	71.7	66.6	74.3	74.9	62.6	75.0	66.5	-11.8	29.6	76.5	44.5	71.2	80.7	69.5

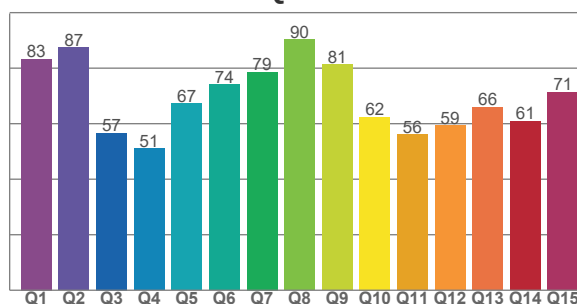
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
70.6	68.4	59.5	55.6	62.6	78.5	90.2	78.2	75.8	59.4	31.3	63.1	74.5	76.0	74.6	78.5

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83.4	87.4	56.7	51.1	67.2	74.1	78.7	90.3	81.2	62.5	56.1	59.4	65.9	60.8	71.3

CQS: 67.5



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
7578 K	70.7	-11.8	67.7	97.3	67.5	0.302	0.302	0.201	0.301	-0.0055

TM-30 details

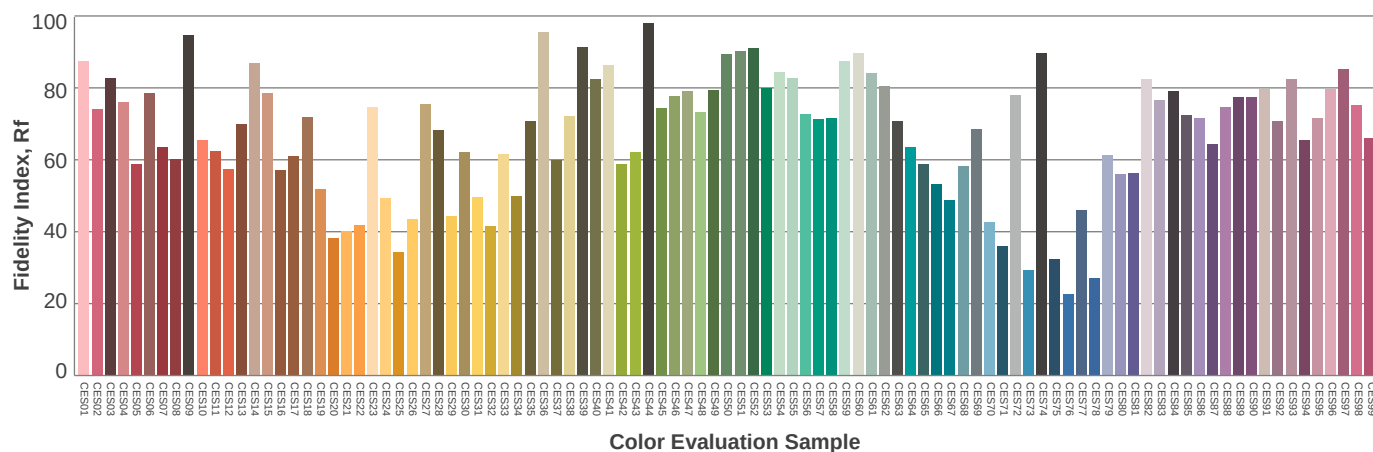
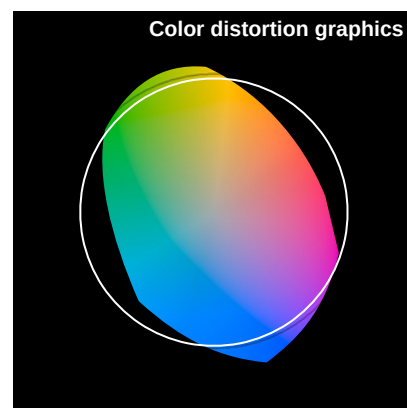
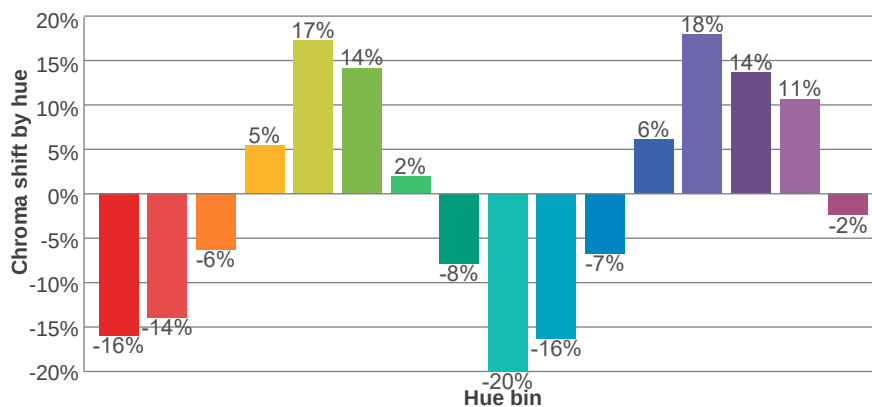
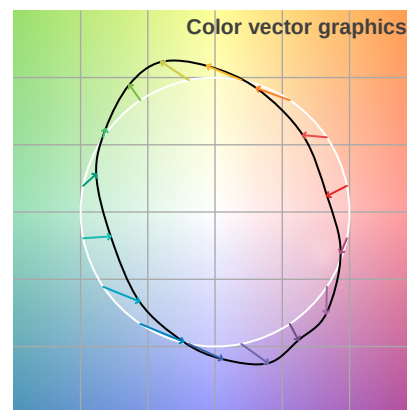
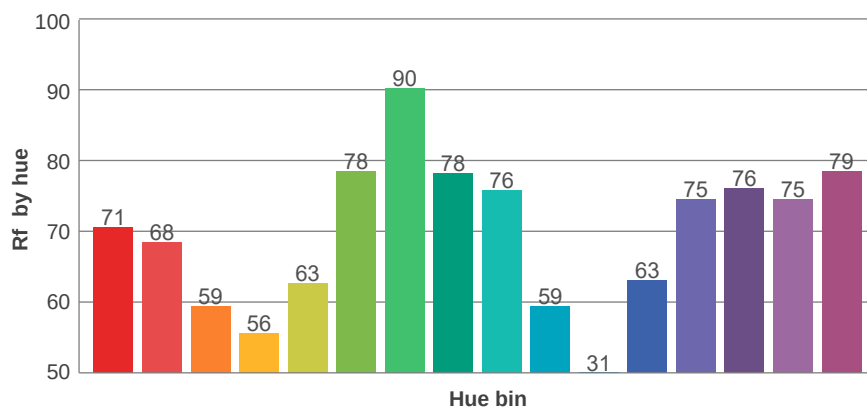
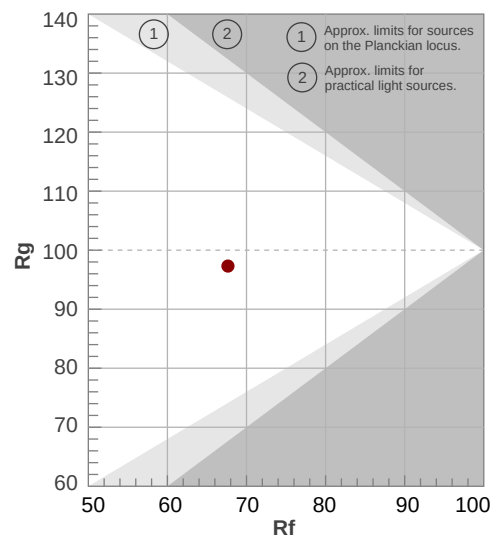
Rf 67.7

Fidelity index Rf

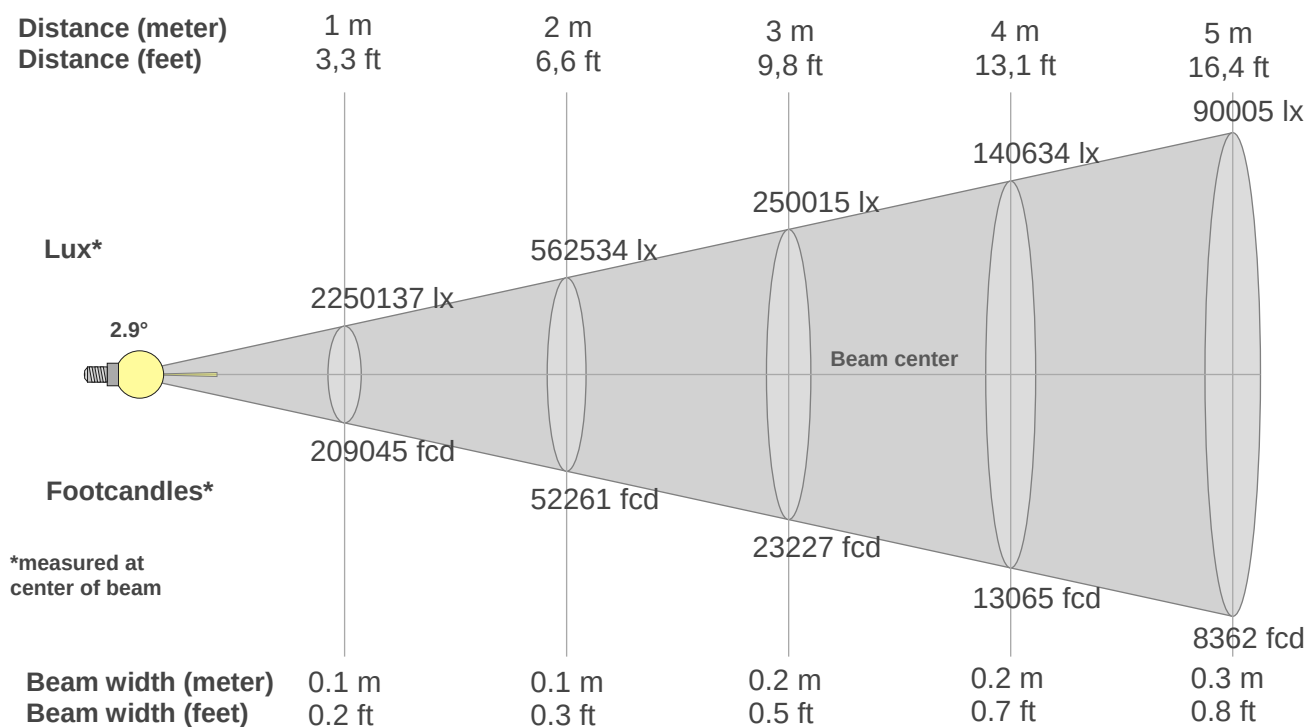
Rg 97.3

Gamut index Rg

Hue Bin	R _i	Shifts (%)	
		Chroma	Hue
1	71	-16%	-5%
2	68	-14%	11%
3	59	-6%	26%
4	56	5%	27%
5	63	17%	17%
6	78	14%	0%
7	90	2%	-6%
8	78	-8%	-10%
9	76	-20%	3%
10	59	-16%	24%
11	31	-7%	34%
12	63	6%	27%
13	75	18%	17%
14	76	14%	-1%
15	75	11%	-17%
16	79	-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
225013	562534	250015	140634	90005lx	62504lx	45921lx	35158lx	27779lx	22501lx	18596lx	15626lx	13314lx	11480lx	10001lx	8790lx	7786lx	6945lx	6233lx	5625lx
209044	52261.2	23227.2	13065.3	8361.8f	5806.8f	4266.2f	3266.3f	2580.8f	2090.4f	1727.6f	1451.7f	1237fcd	1066.6f	929.1fc	816.6fc	723.3fc	645.2fc	579.1fc	522.6fc

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°
2.3M	2.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M
100%	88%	2%	0%	0%	0%	0%	0%	0%	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°
2.3M	2.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M
100%	88%	2%	0%	0%	0%	0%	0%	0%	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°
2.3M	2.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M
100%	88%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Intensities in 270° c-plane

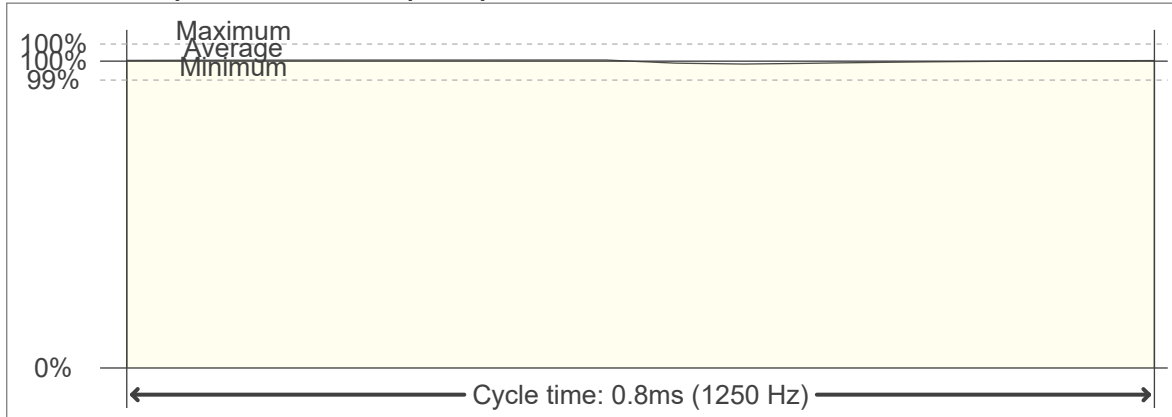
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
2.3M	2.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M	0.0M
100%	88%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
2.9°	3.7°	3.9°	65.1%	60.0%

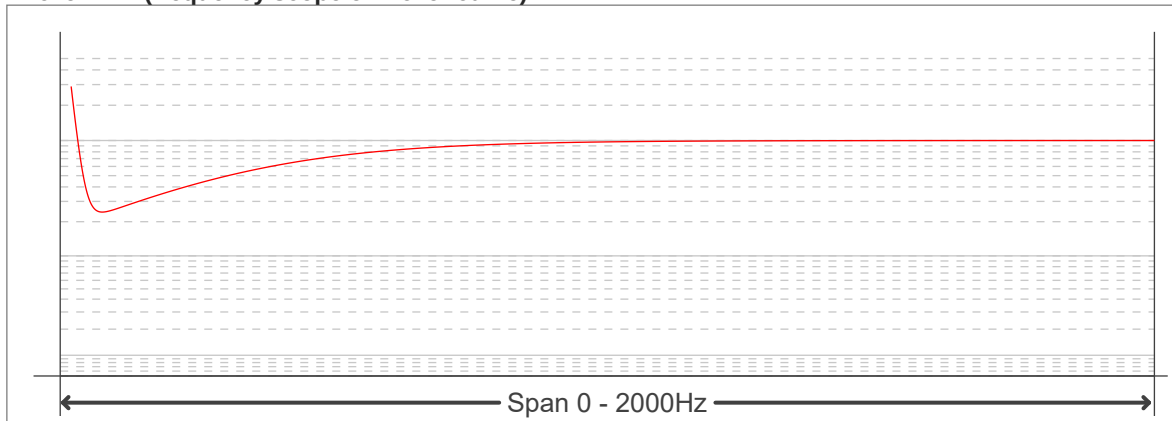
Flicker curve (complete sampled flicker signal)



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	0.92 %
Flicker percentage:	1.83 %	JA8/10 90Hz	1.05 %
SVM: (Visual flicker)	0.01	JA8/10 200Hz	1.16 %
PstLM	0	JA8/10 400Hz	1.17 %
Mp	0.58	JA8/10 1000Hz	1.17 %

Flicker conditions:

Sample rate:	20000 samples/second
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