Light efficiency:

136 Lumen/Watt

Light quality:

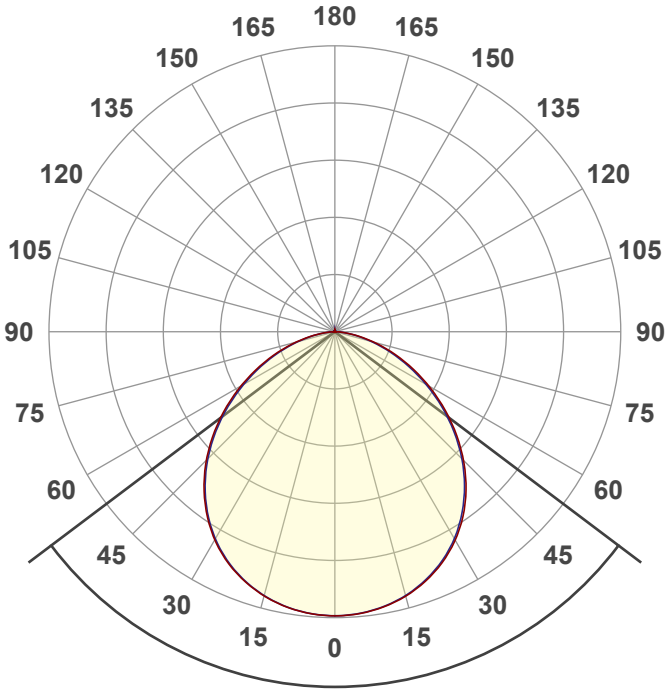
CRI: 80.2

Color temperature:

5142 K

Output: 29104 lm
Peak: 10962 cd

Power: 214.6 W
PF: 1.0



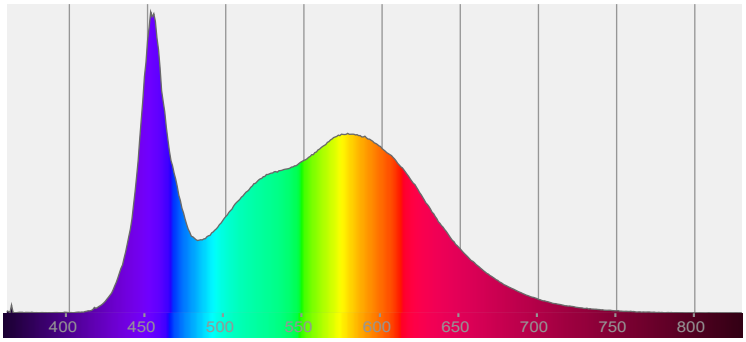
Beam angle 106°

CIE 1931
x: 0.342
y: 0.350

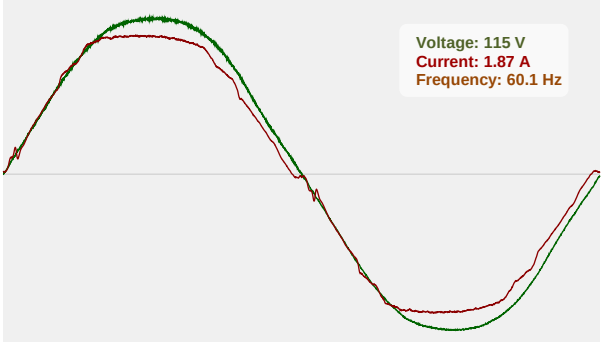
Product name:
LHBDP3-xK210

Date and time:
10/3/2022 10:54:29 AM

Spectra

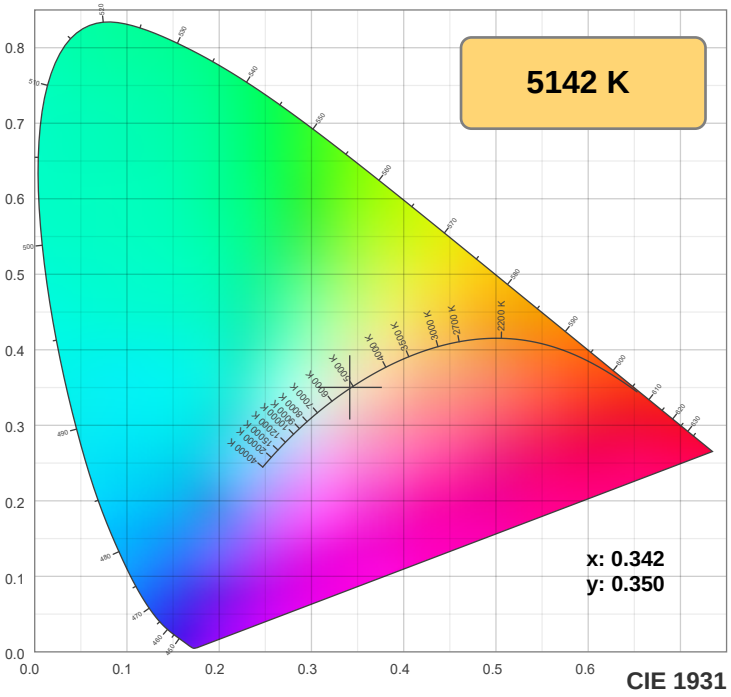


Power

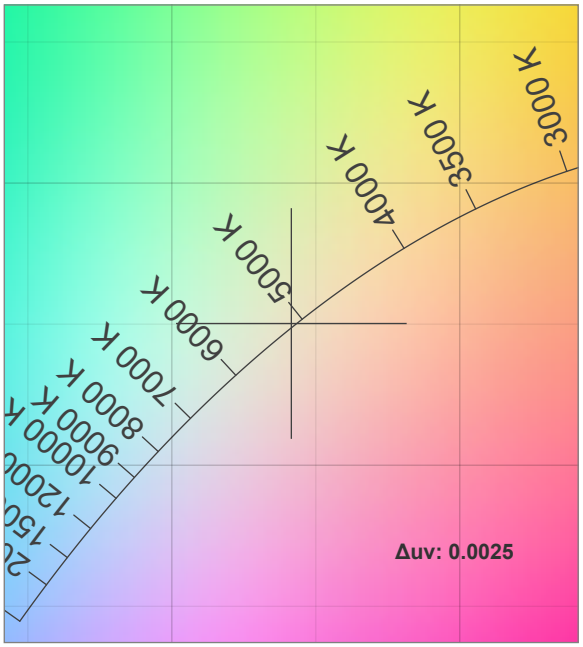


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Color Specifications

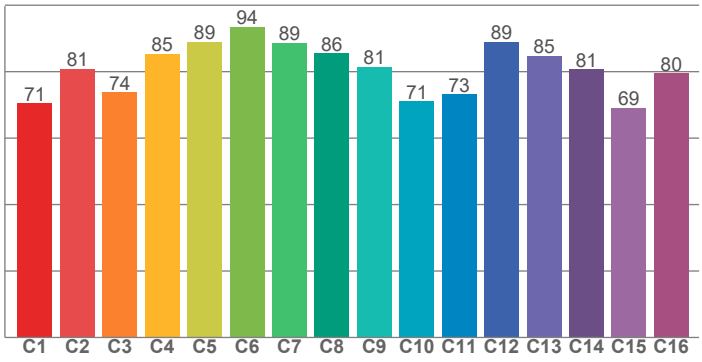


CIE 1931

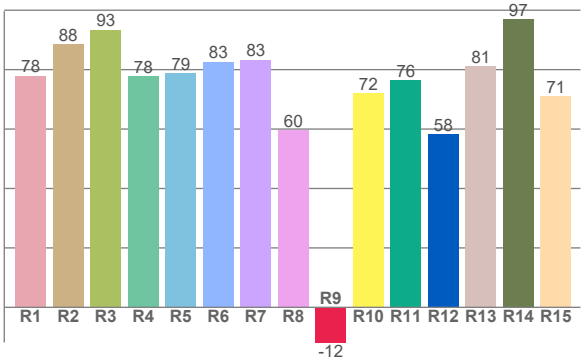


CIE 1931 ZOOM

TM30: 80.8



CRI: 80.2 (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
78.0	88.4	93.4	77.9	78.7	82.6	83.3	59.6	-11.8	72.0	76.4	58.2	81.1	96.9	71.1

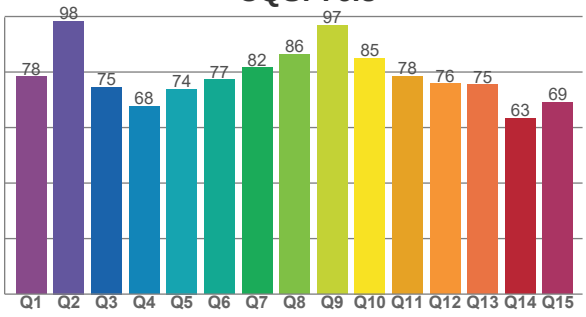
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
70.5	80.9	73.8	85.3	89.0	93.5	88.8	85.5	81.4	71.1	73.2	88.9	84.8	80.8	69.1	79.6

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
78.4	98.4	74.6	67.6	73.9	77.3	81.5	86.4	96.9	85.0	78.5	75.8	75.4	63.3	69.1

CQS: 76.8



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 diviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
5142 K	80.2	-11.8	80.8	92.9	76.8	0.342	0.350	0.210	0.322	0.0025

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TM30 Report

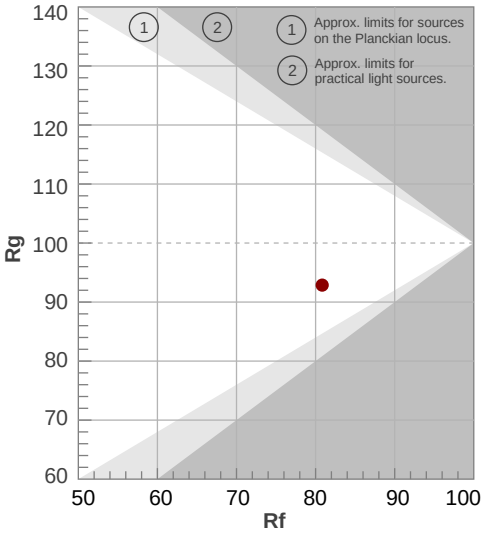
Rf 80.8

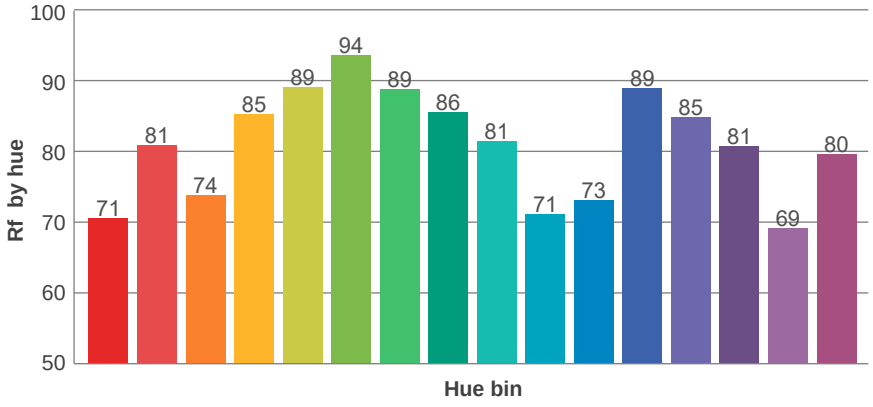
Fidelity index Rf

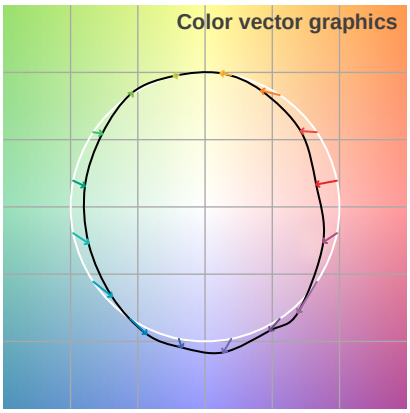
Rg 92.9

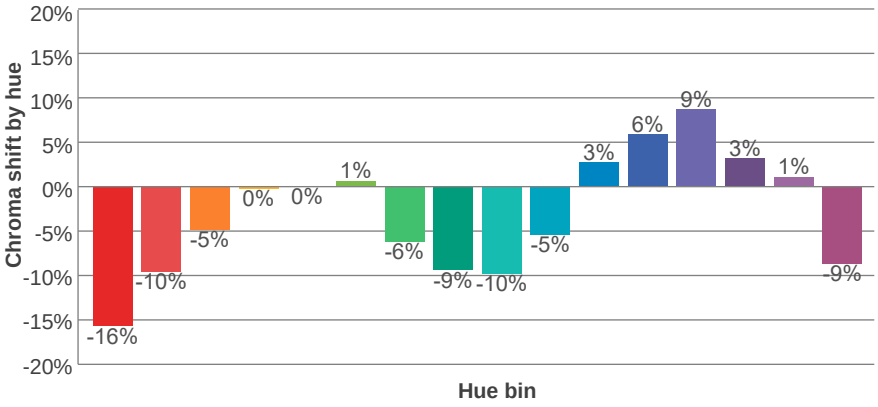
Gammut index Rg

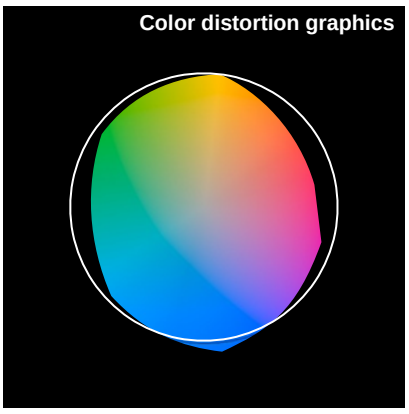
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	71	-16%	0%
2	81	-10%	7%
3	74	-5%	13%
4	85	0%	8%
5	89	0%	4%
6	94	1%	-2%
7	89	-6%	-3%
8	86	-9%	2%
9	81	-10%	10%
10	71	-5%	17%
11	73	3%	16%
12	89	6%	3%
13	85	9%	-8%
14	81	3%	-11%
15	69	1%	-27%
16	80	-9%	-9%

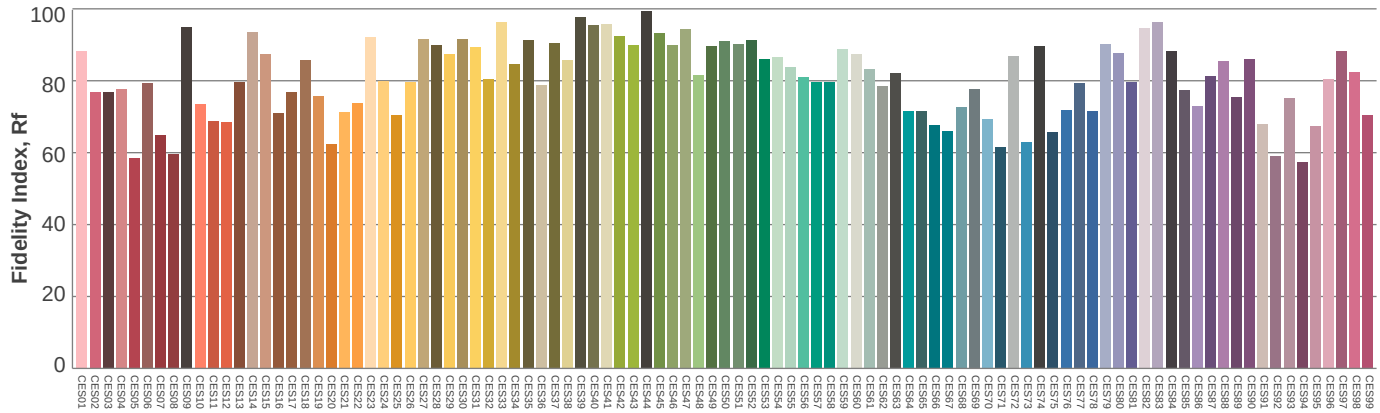






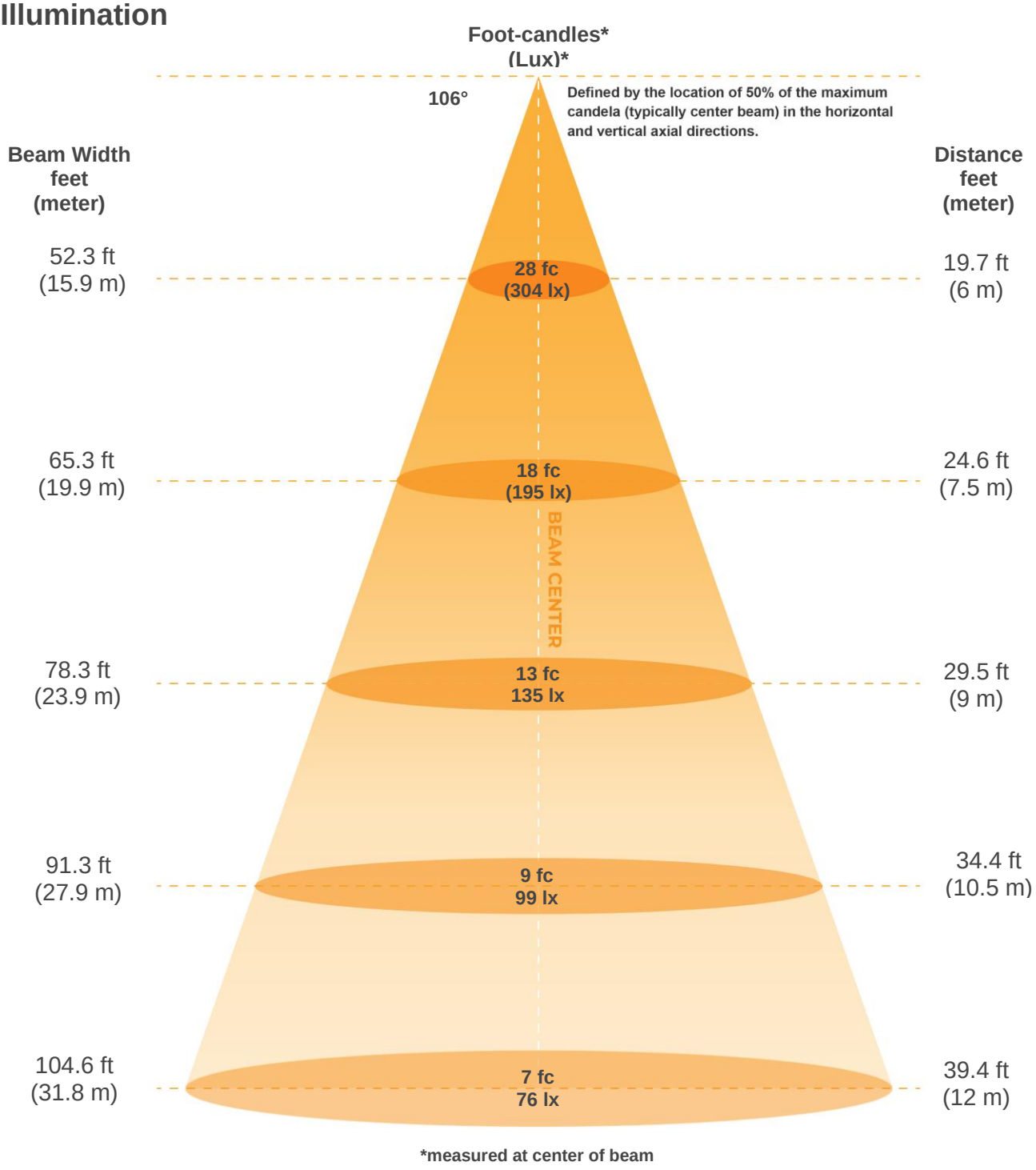






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Illumination



Beam intensities from 1-20m

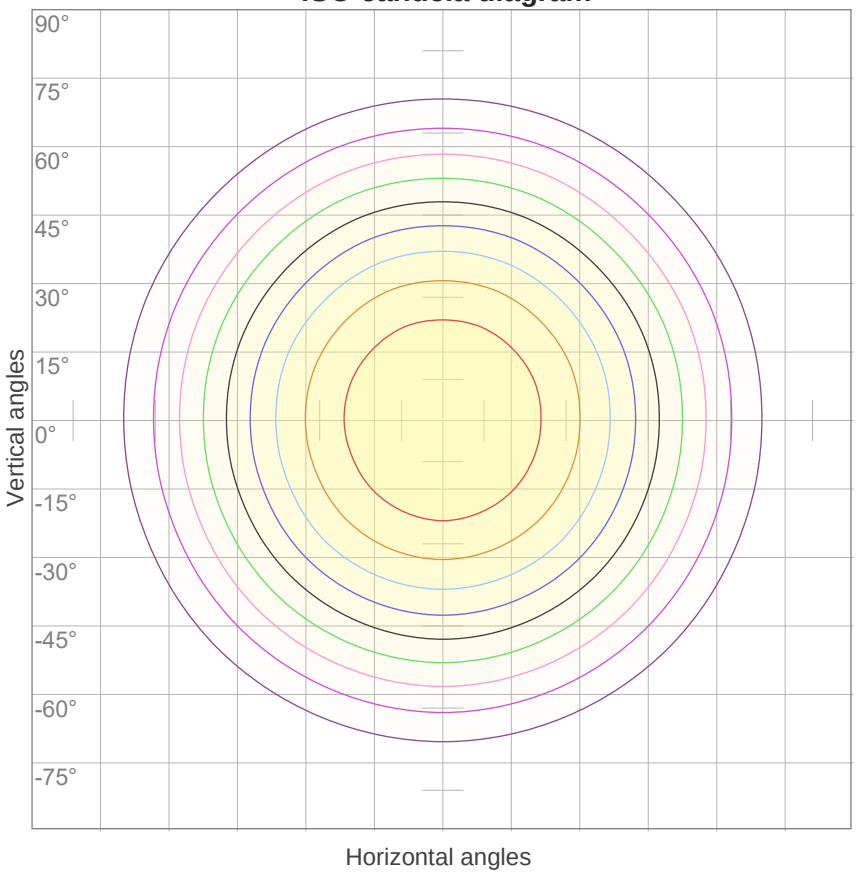
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
10955lx	2739lx	1217lx	685lx	438lx	304lx	224lx	171lx	135lx	110lx	91lx	76lx	65lx	56lx	49lx	43lx	38lx	34lx	30lx	27lx
1017.7f	254.4fc	113.1fc	63.6fcd	40.7fcd	28.3fcd	20.8fcd	15.9fcd	12.6fcd	10.2fcd	8.4fcd	7.1fcd	6fcd	5.2fcd	4.5fcd	4fcd	3.5fcd	3.1fcd	2.8fcd	2.5fcd

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
106°	156°	171.4°	81.8%	57.1%

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ISO Diagrams

ISO candela diagram



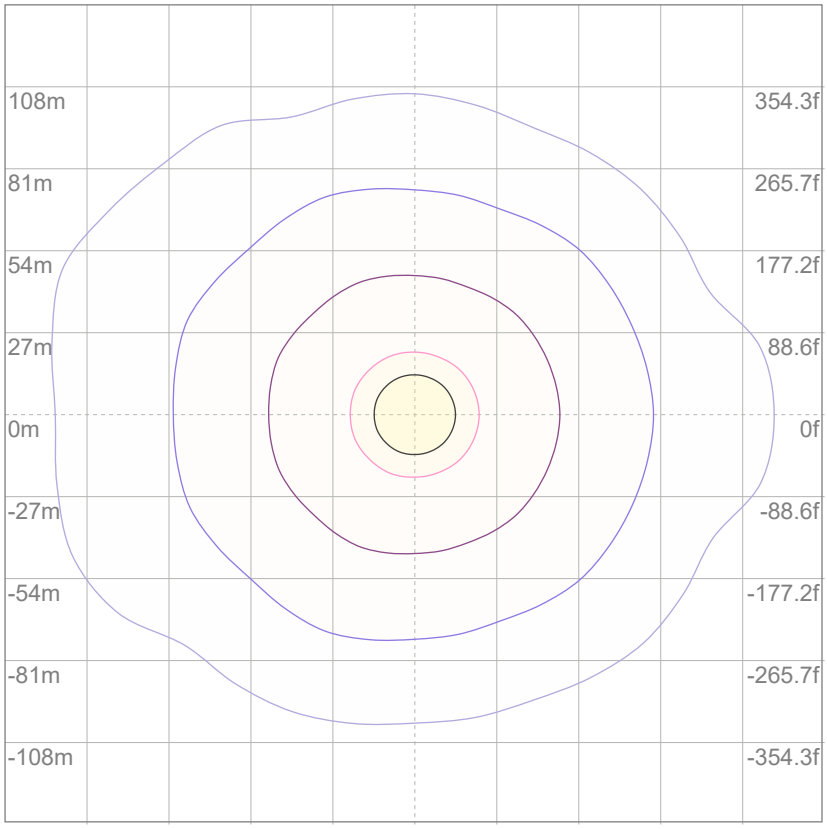
10%	1095 cd
20%	2191 cd
30%	3286 cd
40%	4382 cd
50%	5477 cd
60%	6573 cd
70%	7668 cd
80%	8764 cd
90%	9859 cd

Conditions:

Number of c-planes: 16

Candela at center: 10955 cd

ISO lux diagram



3%	3.29 lx
5%	5.48 lx
10%	11.0 lx
30%	32.9 lx
50%	54.8 lx

Conditions:

Number of c-planes: 16

Lux at center: 110 lx

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

UGR

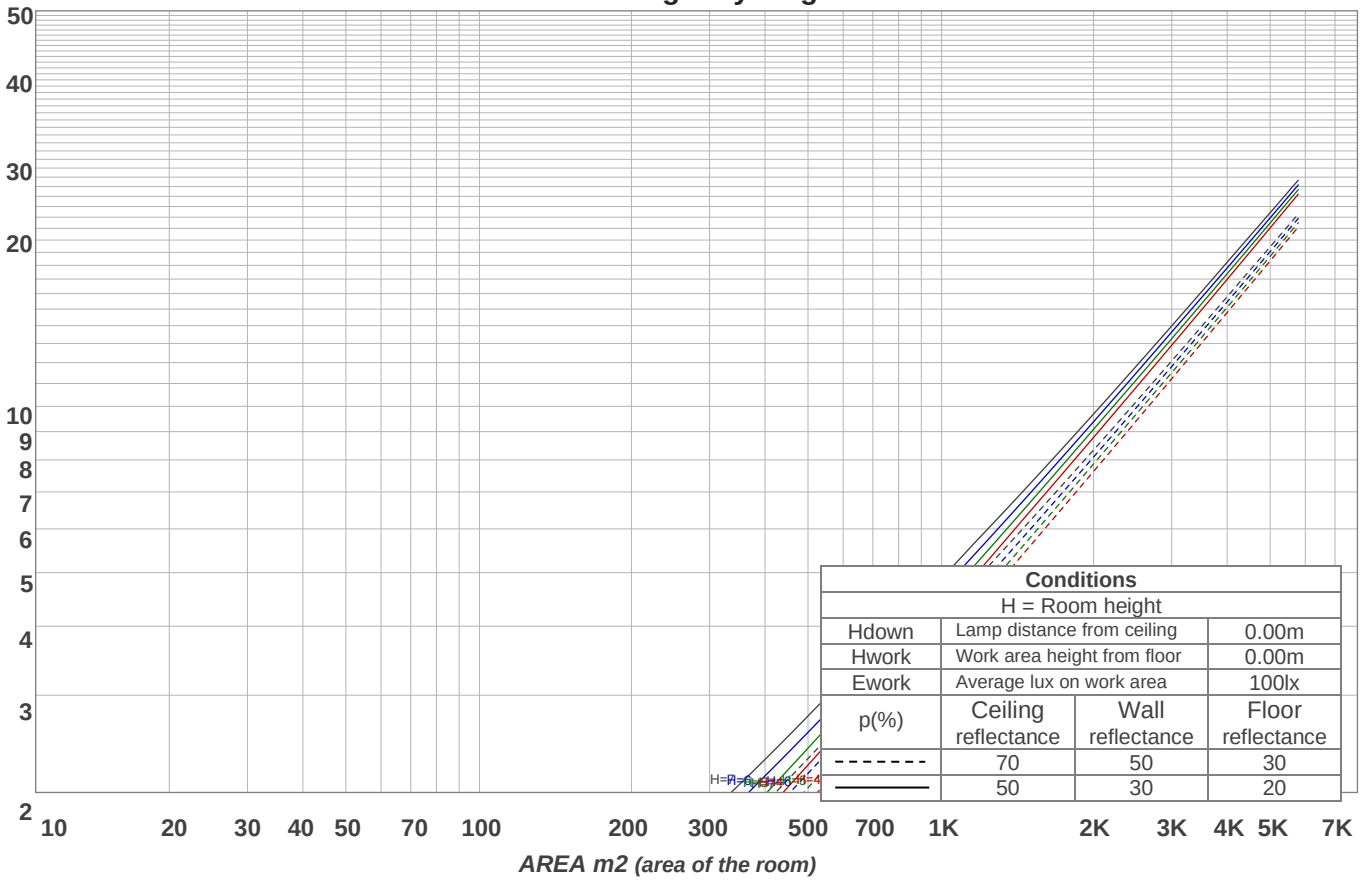
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Light Planning

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	106	102	99	95	98	95	92	94	92	89	90	88	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	67	89	79	72	66	76	70	65	74	68	64	71	66	63	60
4	84	72	63	57	81	71	63	56	68	61	56	66	60	55	63	58	54	52
5	77	64	56	49	75	63	55	49	61	54	48	59	53	48	57	52	47	45
6	71	58	49	43	69	57	49	43	55	48	42	54	47	42	52	46	42	40
7	66	53	44	38	64	52	44	38	50	43	38	49	42	37	47	42	37	35
8	62	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31
9	57	44	36	31	56	44	36	31	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	28	38	32	27	37	32	27	26

Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
1036 lm	2973 lm	4503 lm	5364 lm	5372 lm	4550 lm	3171 lm	1623 lm	389 lm

90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
17.6 lm	12.0 lm	15.4 lm	17.3 lm	18.5 lm	17.3 lm	13.9 lm	8.35 lm	2.68 lm

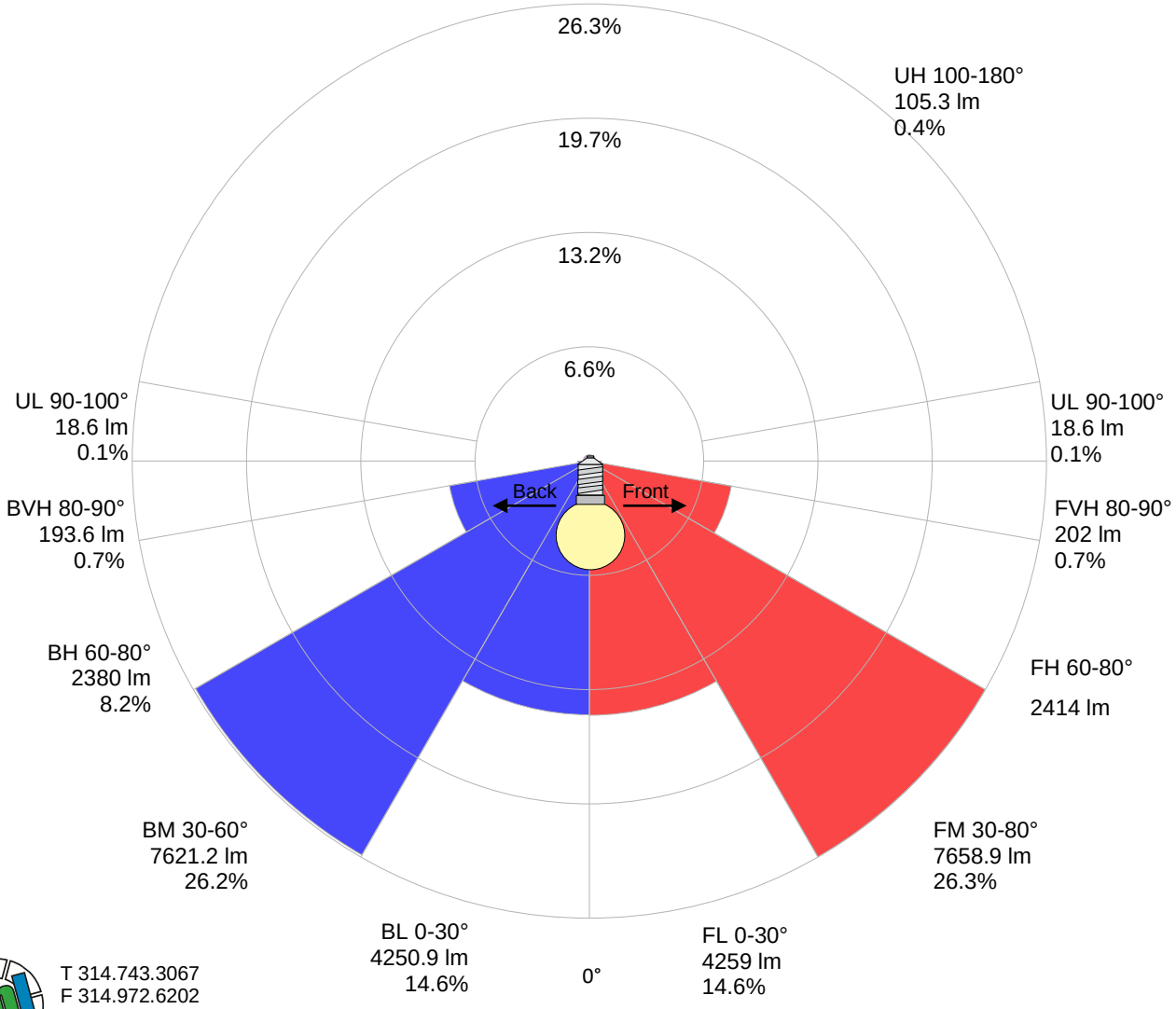
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Road Report

LCS table

BUG rating:	B4 U3 G3	
Forward light	Lumens	Lumens %
Low(0-30):	4259	14.6%
Medium(30-60):	7658.9	26.3%
High(60-80):	2414	8.3%
Very high(80-90):	202	0.7%
Back light		
Low(0-30):	4250.9	14.6%
Medium(30-60):	7621.2	26.2%
High(60-80):	2380	8.2%
Very high(80-90):	193.6	0.7%
Uplight		
Low(90-100):	18.6	0.1%
High(100-180):	105.3	0.4%

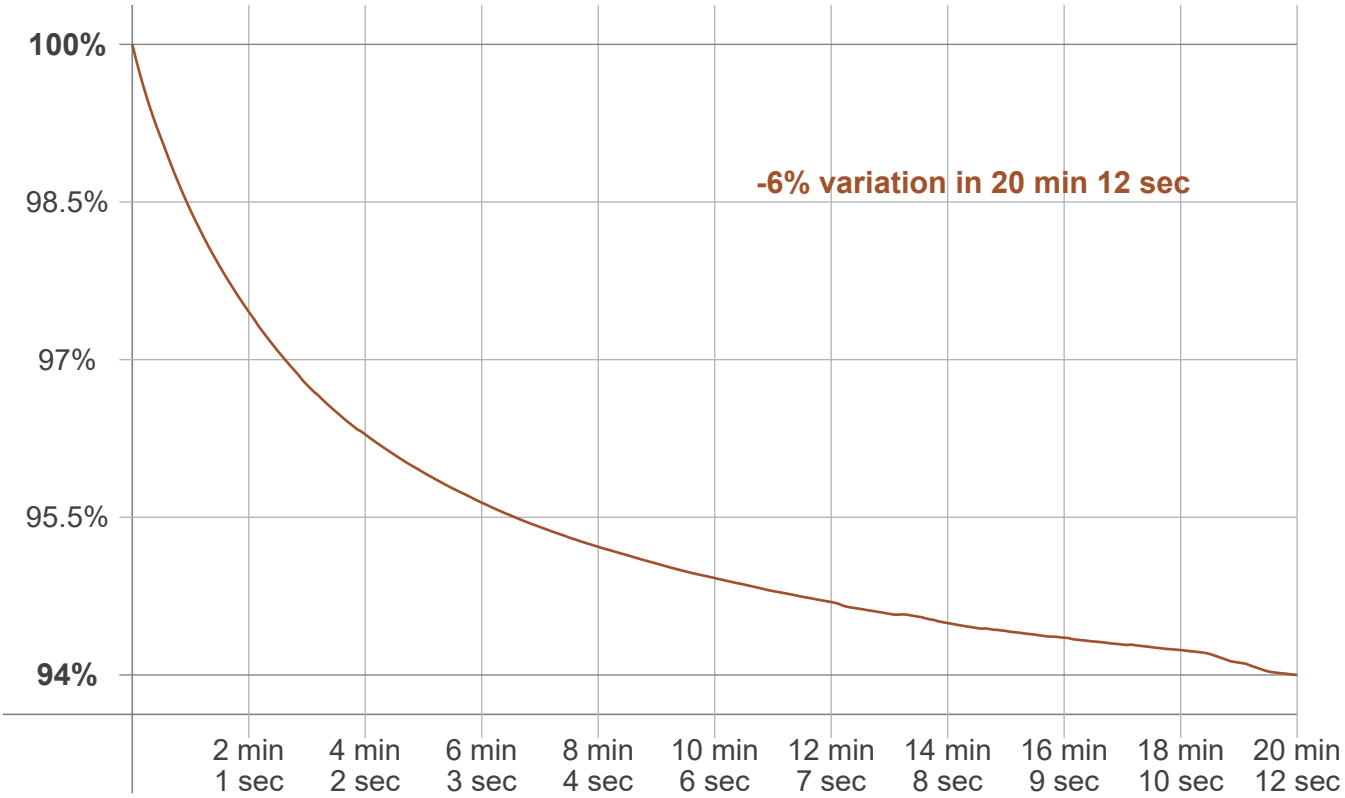
LCS graph



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Stabilization

Warmup curve



Warmup result

Warmup time:	**Lamp stabilized in 20 min 12 sec**
Warmup variation	**-6.0%**

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
5046 K	+96 K	5142 K

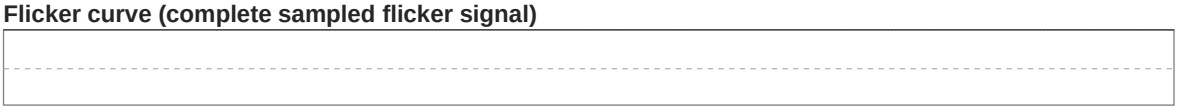
Output change

Output start	Output change	Output end
30832 lm	-1727 lm	29104 lm

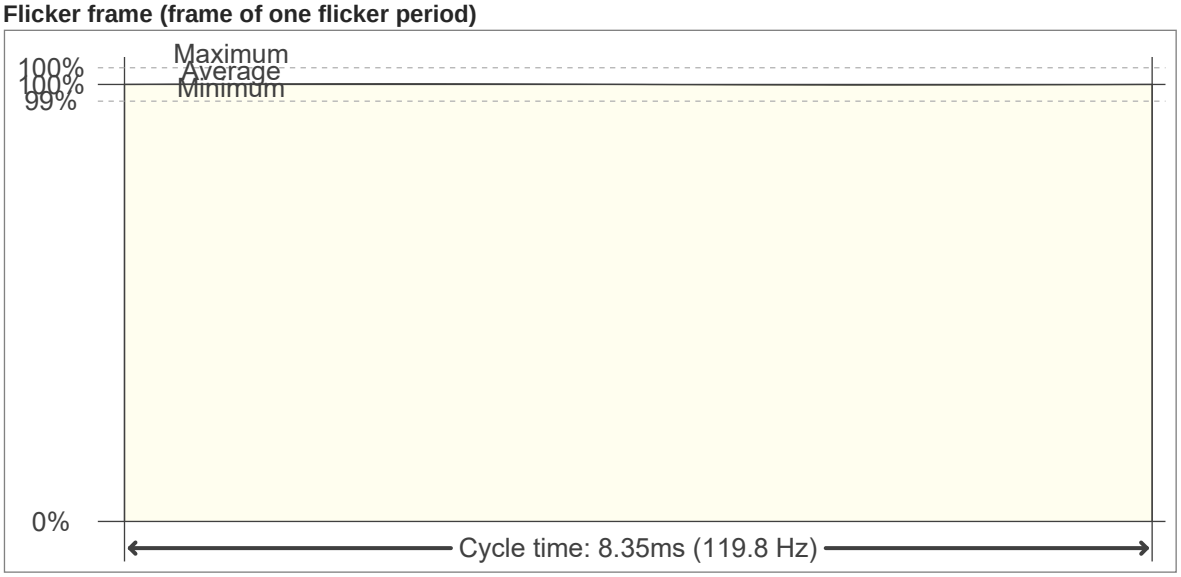
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Flicker Specifications

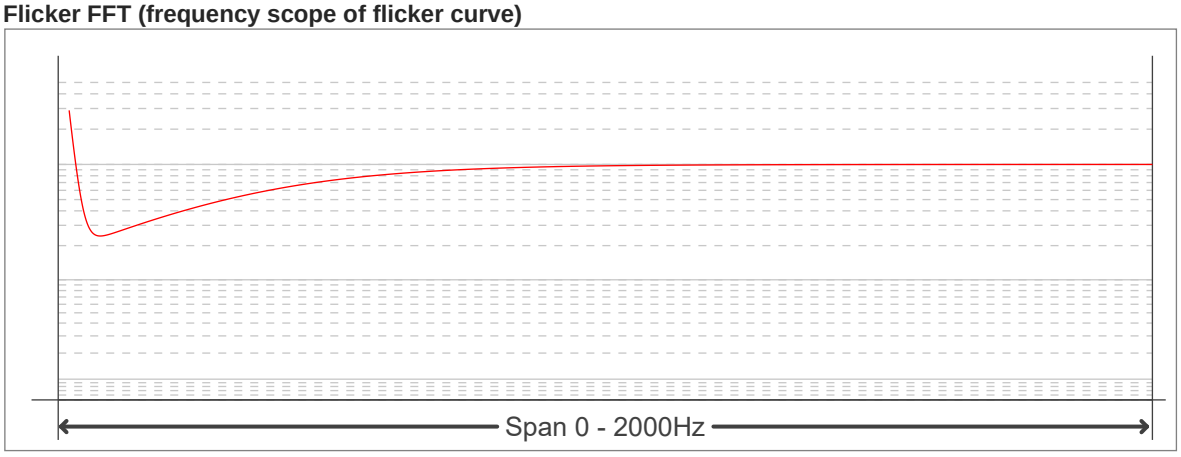
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:	**119.76 Hz**
Flicker index:	**0**
Flicker percentage:	**0.18 %**
SVM: (Visual flicker)	**0.01**

Flicker conditions:

Sample rate:	**20000 samples/second**

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