Light efficiency:

137 Lumen/Watt

Light quality:

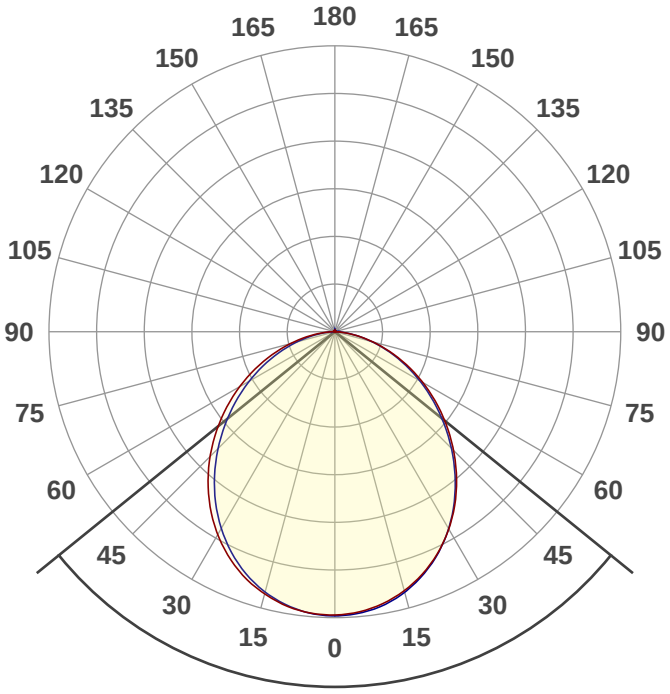
CRI: 83.7

Color temperature:

5361 K

Output: 40216 lm
Peak: 15686 cd

Power: 293.2 W
PF: 1.0



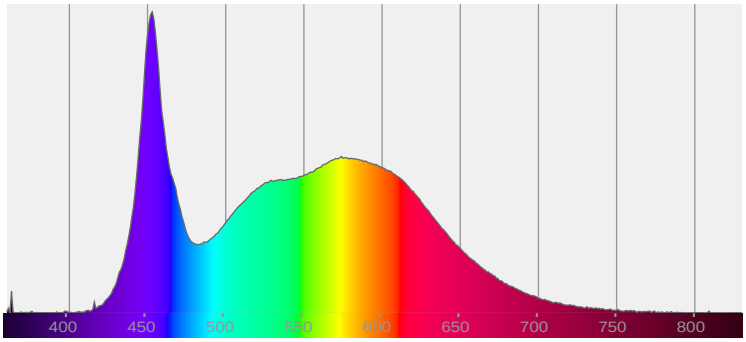
Beam angle **102°**

CIE 1931
x: 0.336
y: 0.343

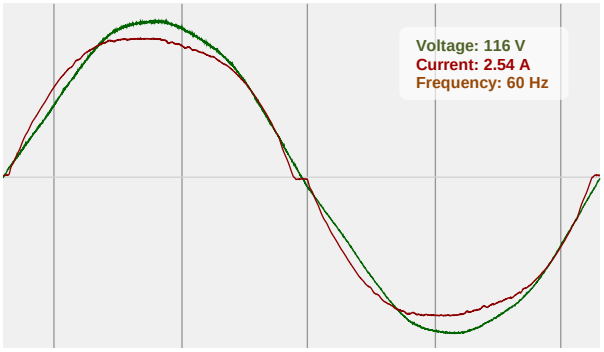
Product name:
LHBD2-50K5-300W-H

Date and time:
5/28/2020 3:39:09 PM

Spectra



Power



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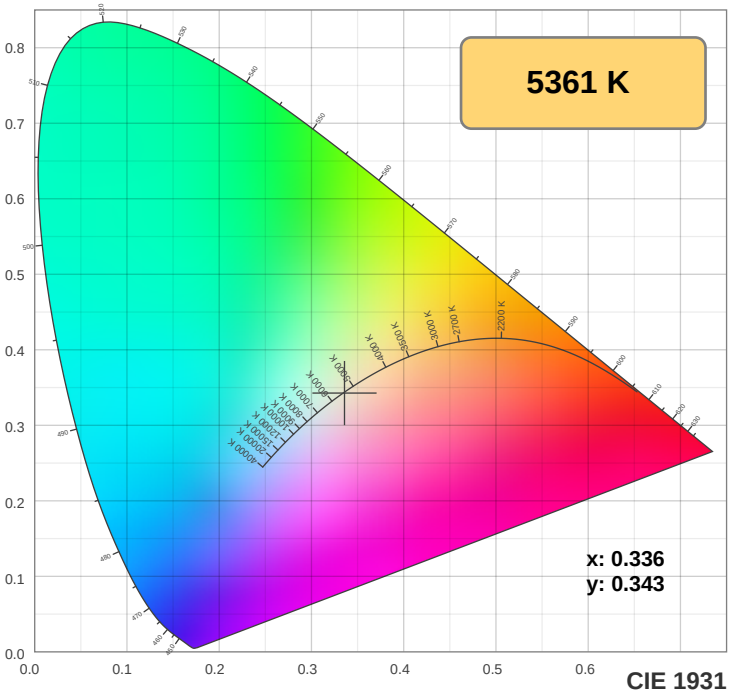
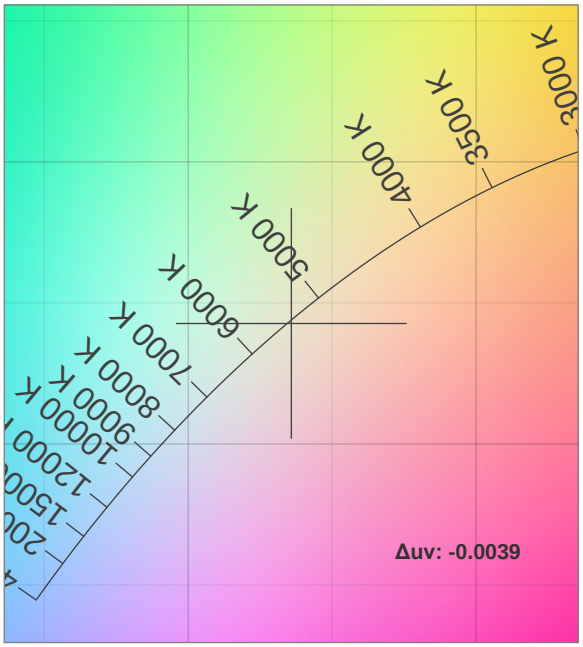
Color Specifications

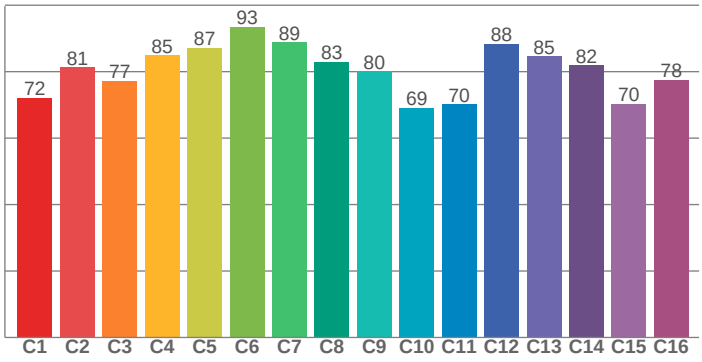


CIE 1931

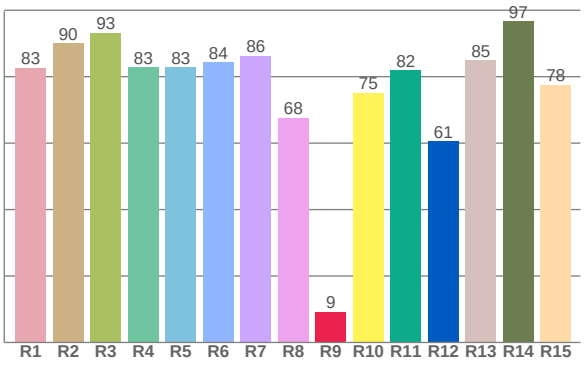


CIE 1931 ZOOM

TM30: 80.5



CRI: 83.7 (R1-R8)



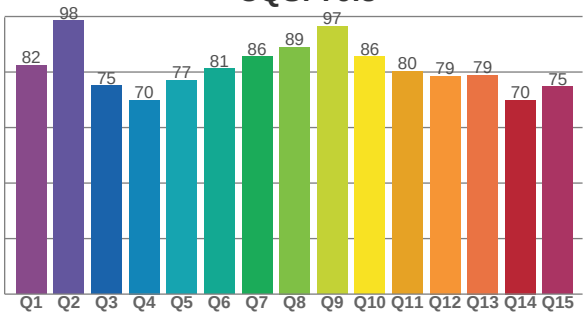
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
82.7	90.1	93.3	82.8	82.9	84.3	86.3	67.6	9.3	75.2	82.0	60.5	85.0	96.7	77.6

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
72.1	81.3	77.3	85.0	87.1	93.5	88.8	83.0	80.1	69.1	70.2	88.4	84.6	81.9	70.3	77.5

CQS: 79.8



CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
82.4	98.5	75.2	69.9	77.1	81.2	85.5	89.0	96.5	85.6	80.3	78.6	78.9	69.9	74.7

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
5361 K	83.7	9.3	80.5	94.1	79.8	0.336	0.343	0.209	0.319	-0.0039

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TM30 Report

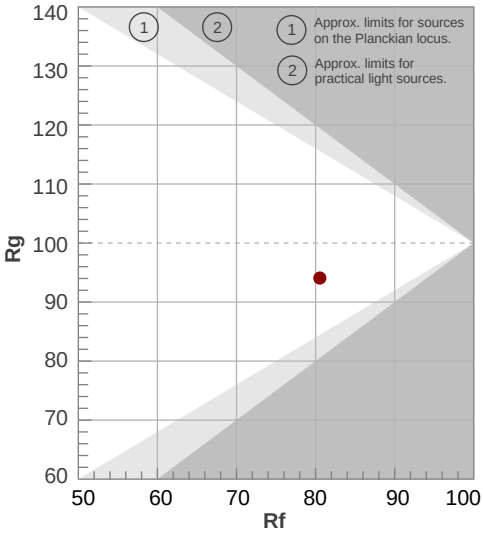
Rf 80.5

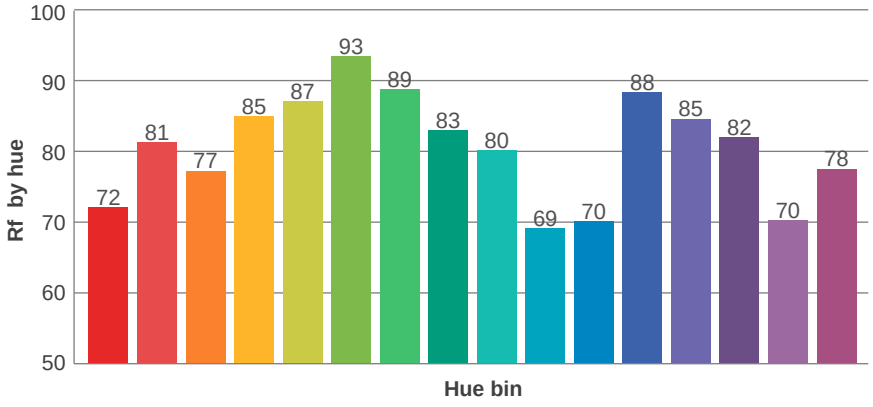
Fidelity index Rf

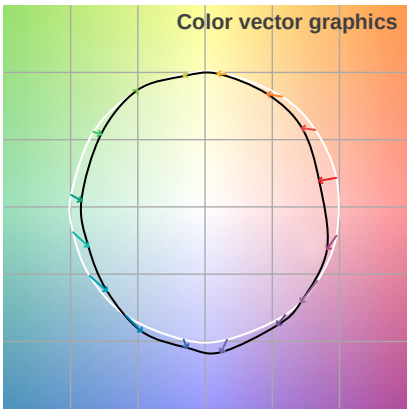
Rg 94.1

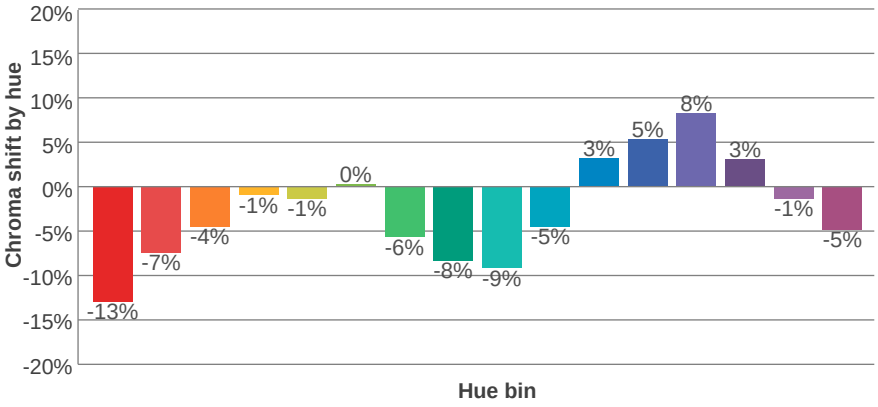
Gammut index Rg

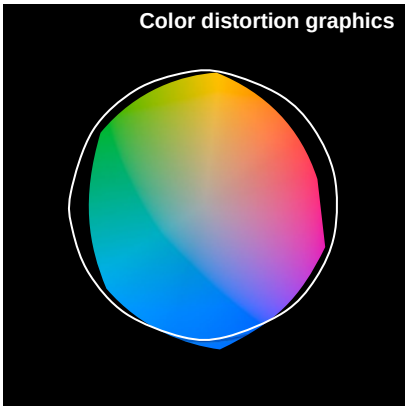
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	72	-13%	0%
2	81	-7%	7%
3	77	-4%	10%
4	85	-1%	6%
5	87	-1%	3%
6	93	0%	-1%
7	89	-6%	-2%
8	83	-8%	3%
9	80	-9%	13%
10	69	-5%	16%
11	70	3%	16%
12	88	5%	3%
13	85	8%	-6%
14	82	3%	-9%
15	70	-1%	-20%
16	78	-5%	-11%

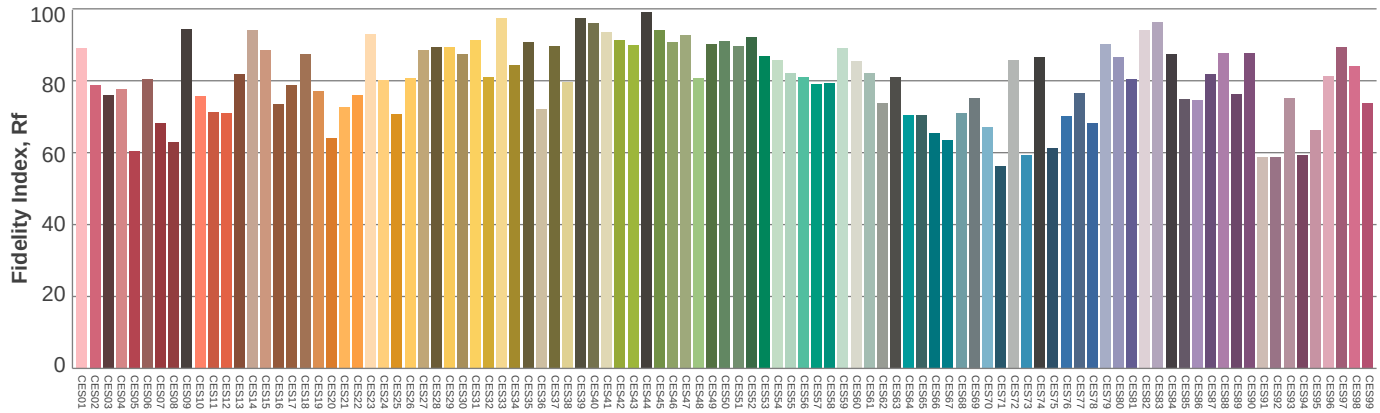












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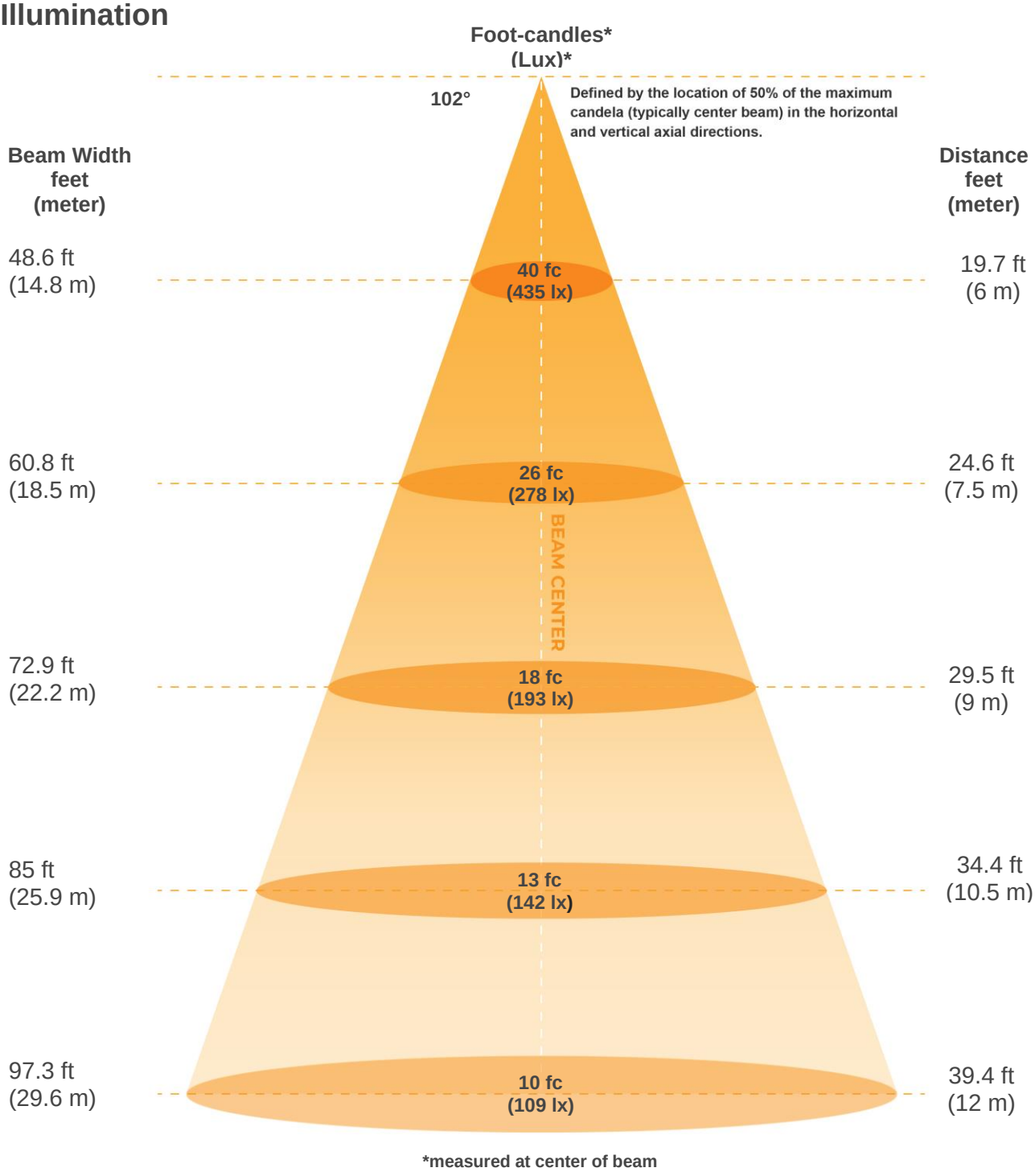
Illumination



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
15648lx	3912lx	1739lx	978lx	626lx	435lx	319lx	245lx	193lx	156lx	129lx	109lx	93lx	80lx	70lx	61lx	54lx	48lx	43lx	39lx
1453.8f	363.4fc	161.5fc	90.9fcd	58.2fcd	40.4fcd	29.7fcd	22.7fcd	17.9fcd	14.5fcd	12fcd	10.1fcd	8.6fcd	7.4fcd	6.5fcd	5.7fcd	5fcd	4.5fcd	4fcd	3.6fcd

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
102°	157.1°	172.6°	80.7%	56.7%

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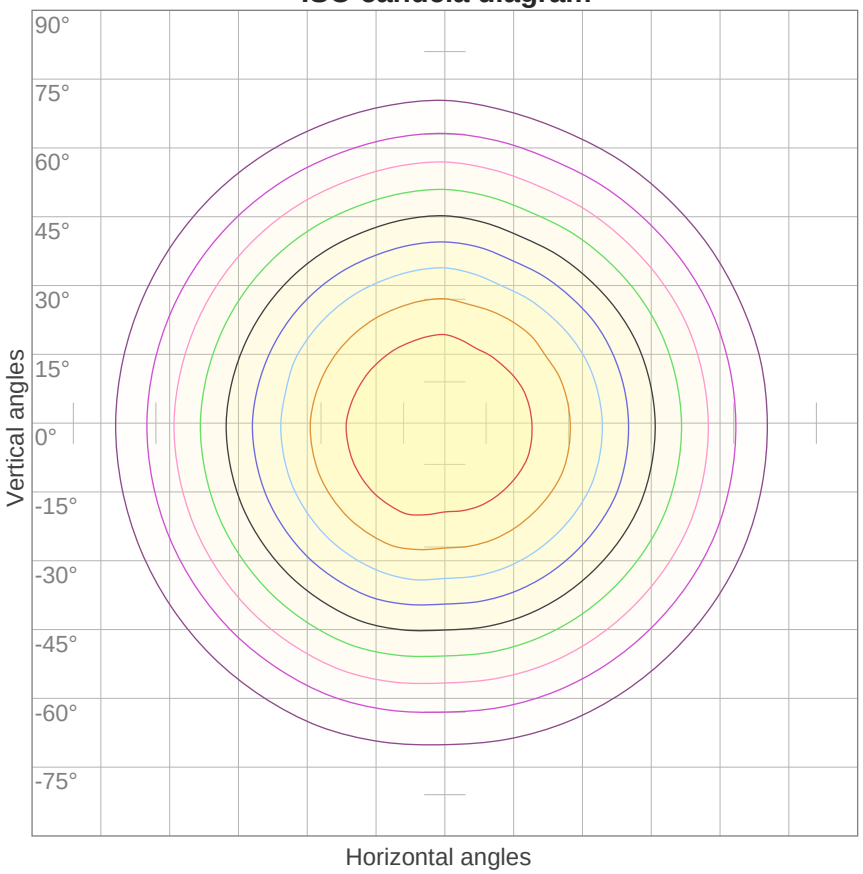
ISO Diagrams

ISO candela diagram



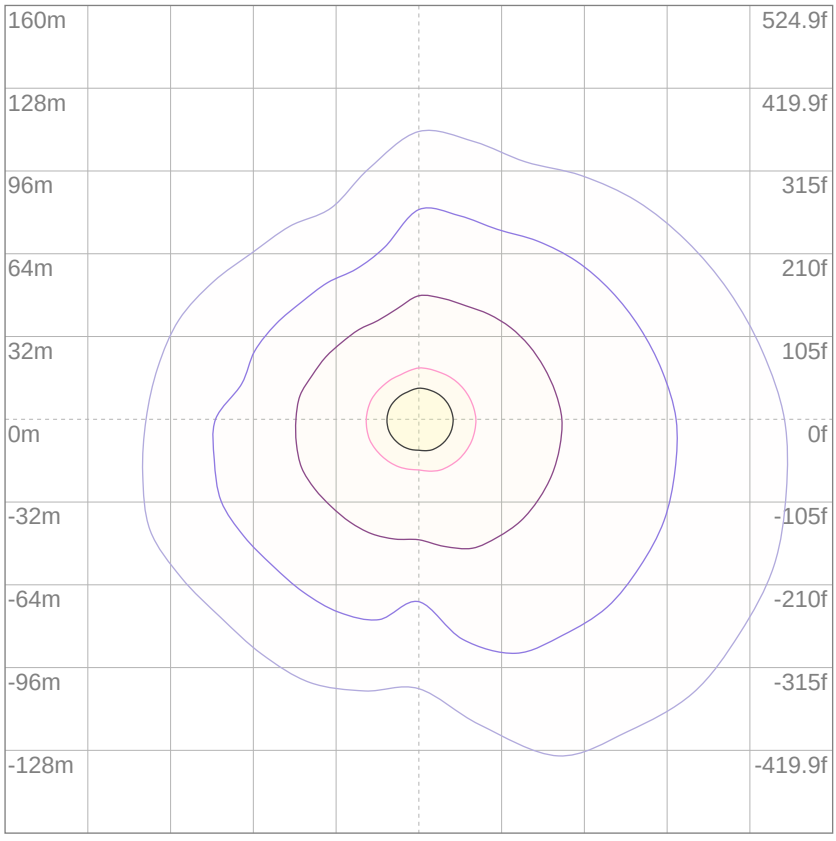
10%	1565 cd
20%	3130 cd
30%	4694 cd
40%	6259 cd
50%	7824 cd
60%	9389 cd
70%	10954 cd
80%	12518 cd
90%	14083 cd

Conditions:

Number of c-planes: 16

Candela at center: 15648 cd

ISO lux diagram



3%	4.69 lx
5%	7.82 lx
10%	15.6 lx
30%	46.9 lx
50%	78.2 lx

Conditions:

Number of c-planes: 16

Lux at center: 156 lx

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

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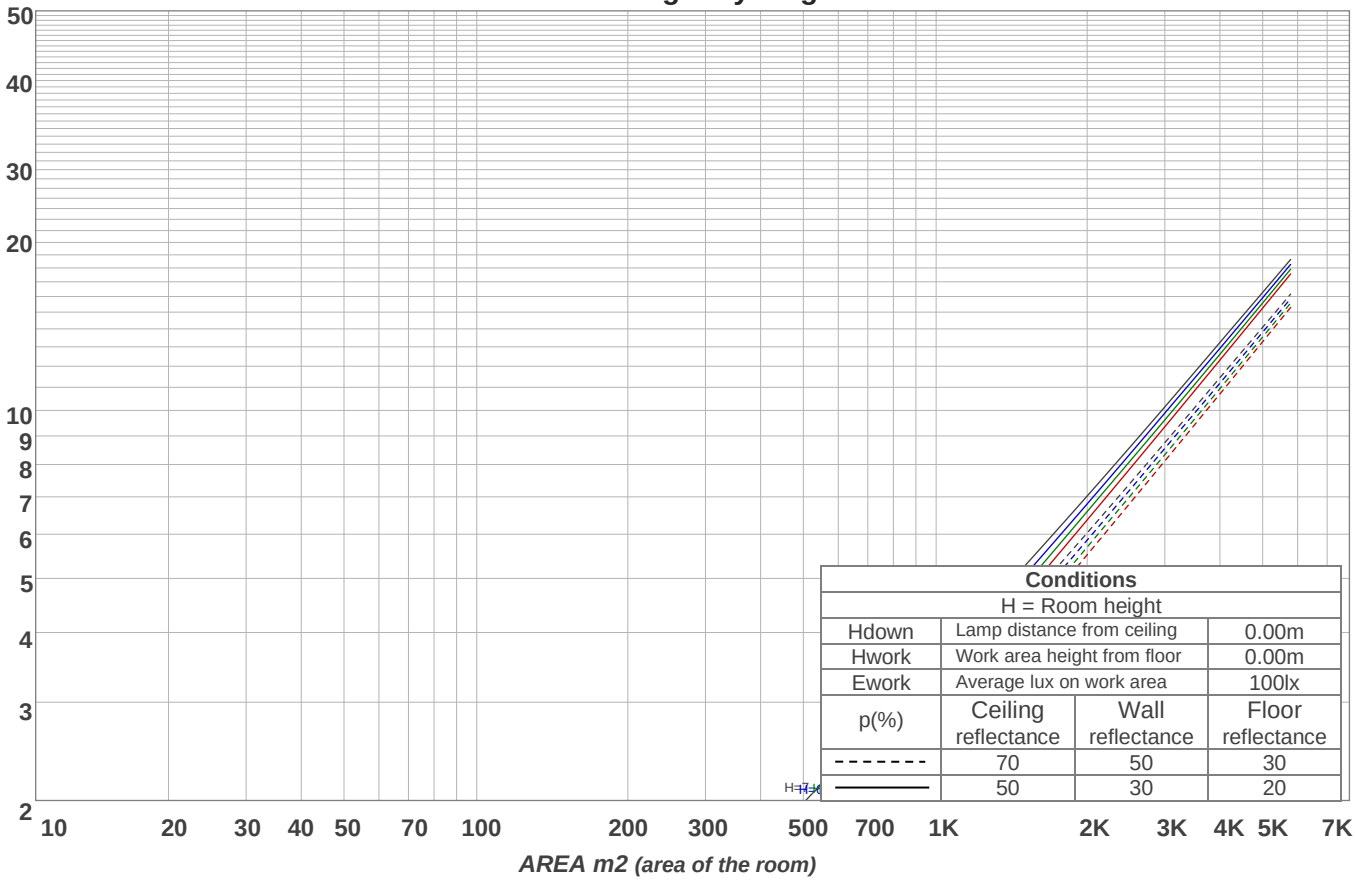
Light Planning

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	101	101	101	99
1	109	104	100	97	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	85	79	97	90	83	78	86	81	76	82	78	74	79	76	73	71
3	91	81	73	66	88	79	72	66	76	70	65	73	68	63	70	66	62	60
4	83	72	63	57	81	70	62	56	68	61	55	65	59	54	63	58	54	52
5	77	64	55	49	75	63	55	49	61	54	48	59	53	48	57	51	47	45
6	71	58	49	43	69	57	49	43	55	48	42	53	47	42	52	46	41	39
7	66	53	44	38	64	52	44	38	50	43	38	49	42	37	47	41	37	35
8	61	48	40	34	60	47	40	34	46	39	34	45	38	33	44	38	33	31
9	58	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	28	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°
1476 lm	4190 lm	6226 lm	7256 lm	7171 lm	6120 lm	4406 lm	2395 lm	637 lm

90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
52.6 lm	43.3 lm	45.7 lm	47.3 lm	46.1 lm	41.7 lm	33.3 lm	21.8 lm	7.61 lm

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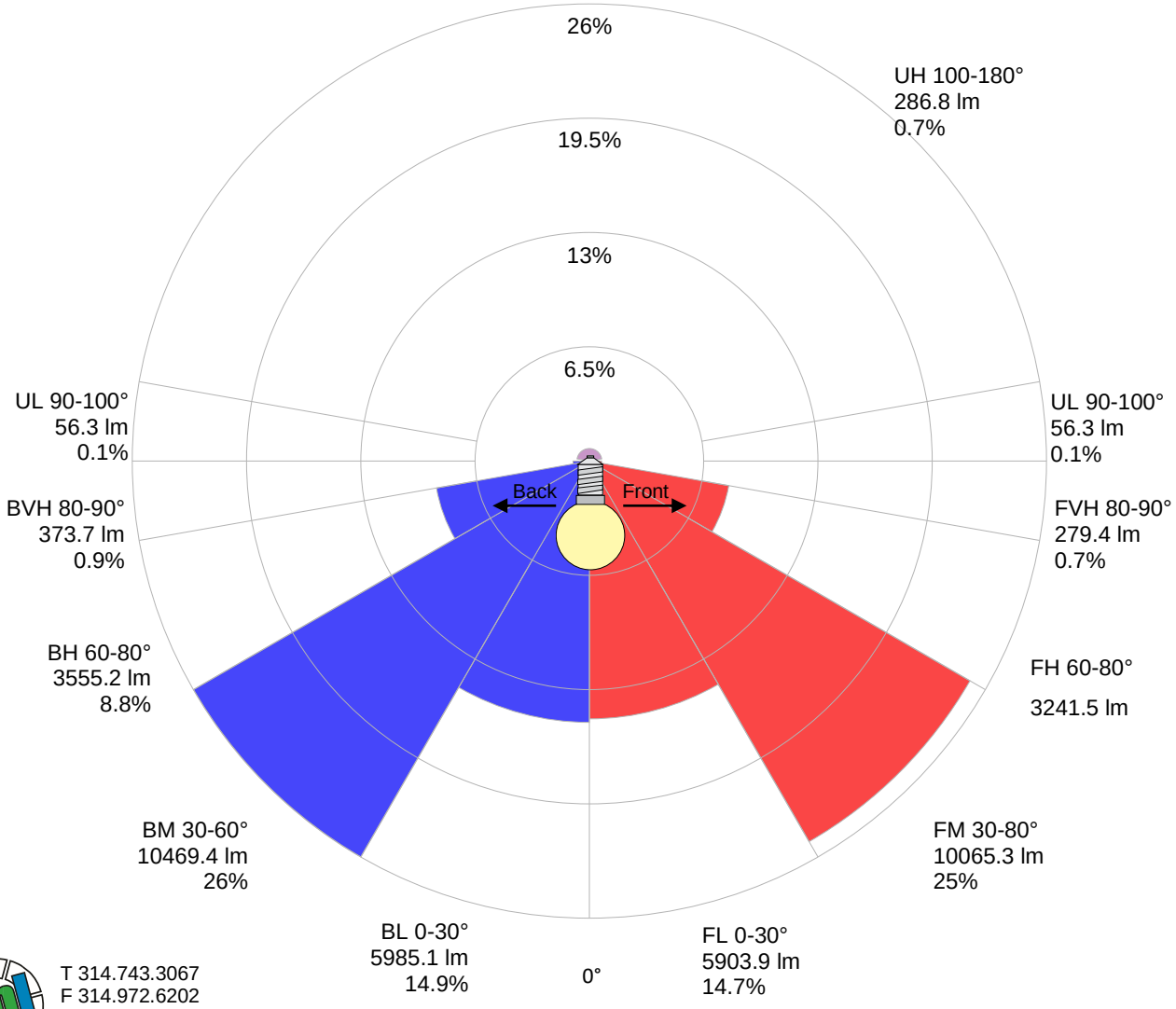
Road Report

LCS table

BUG rating:	B5 U3 G4	
Forward light	Lumens	Lumens %
Low(0-30):	5903.9	14.7%
Medium(30-60):	10065.3	25%
High(60-80):	3241.5	8.1%
Very high(80-90):	279.4	0.7%
Back light		
Low(0-30):	5985.1	14.9%
Medium(30-60):	10469.4	26%
High(60-80):	3555.2	8.8%
Very high(80-90):	373.7	0.9%
Uplight		
Low(90-100):	56.3	0.1%
High(100-180):	286.8	0.7%

LCS graph



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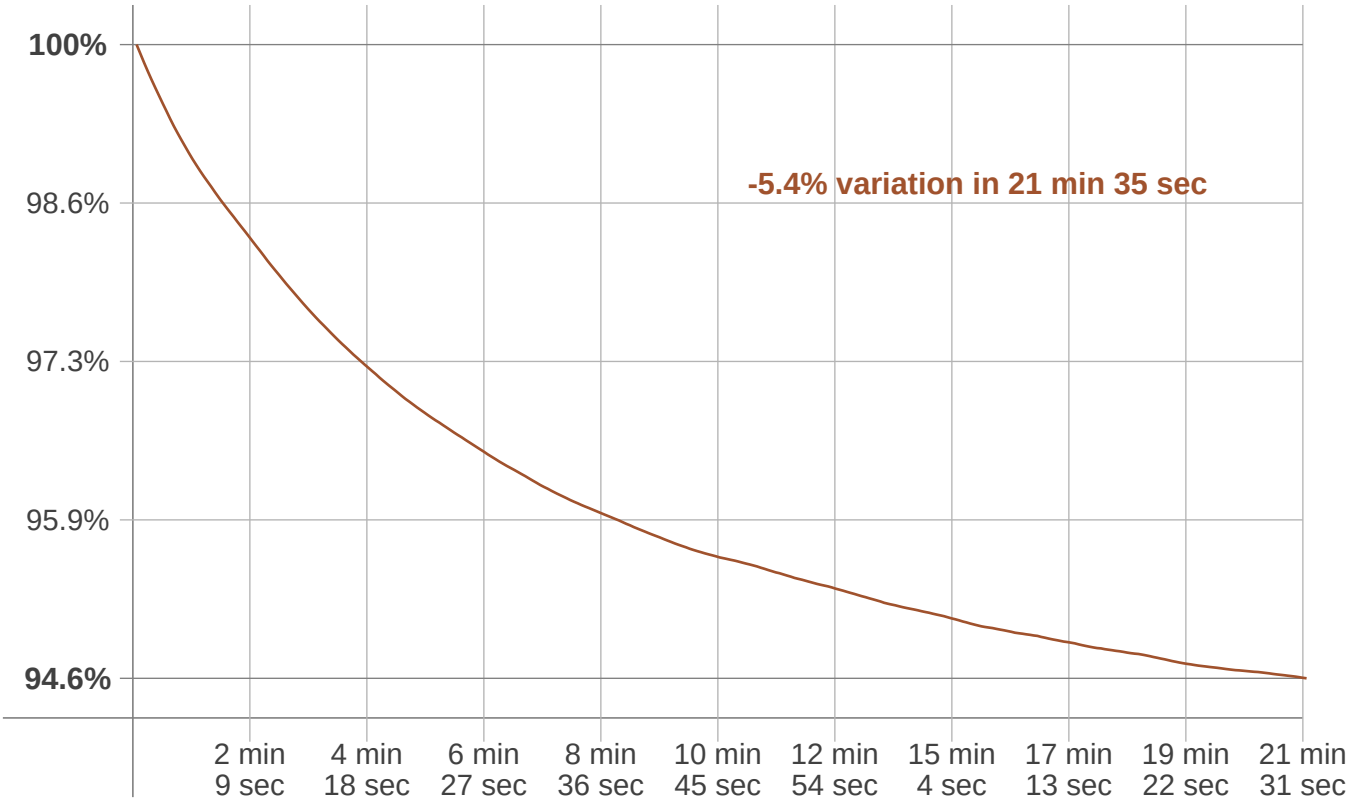
Stabilization

Warmup curve



Warmup result

Warmup time:	**21 min 35 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
5215 K	+146 K	5361 K

Output change

Output start	Output change	Output end
42487 lm	-2271 lm	40216 lm

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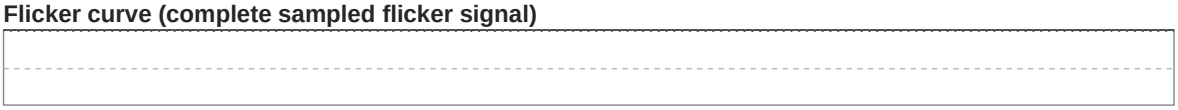
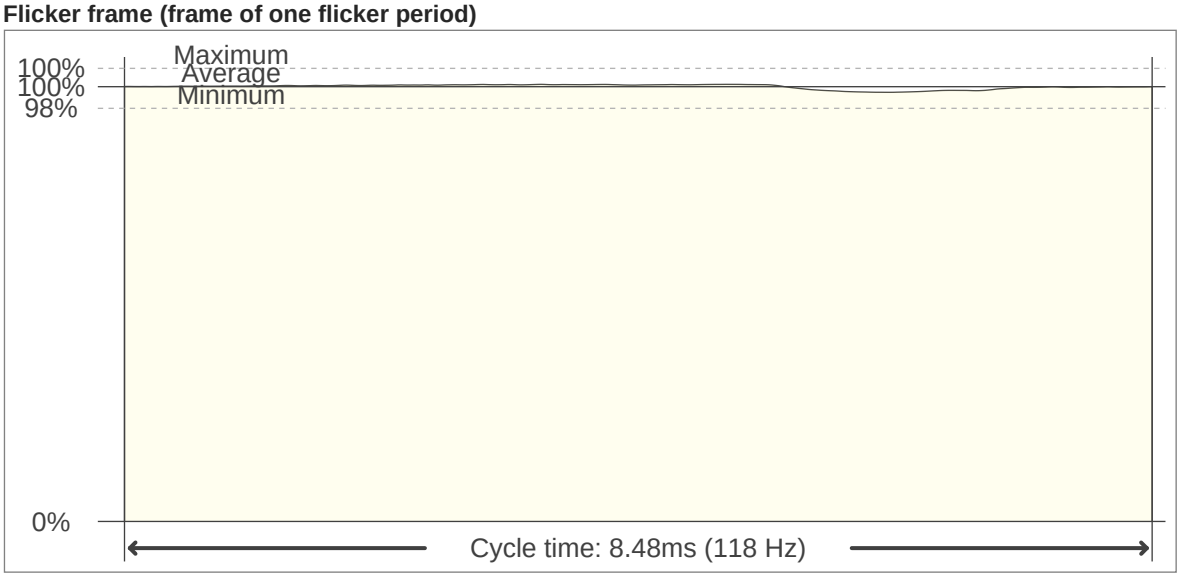
Flicker

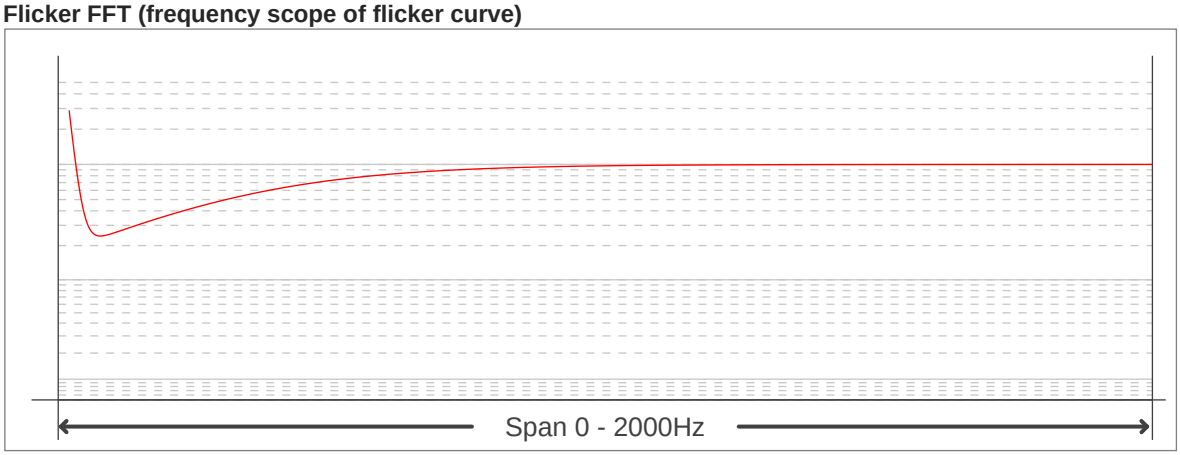
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:	**117.99 Hz**
Flicker index:	**0**
Flicker percentage:	**1.01 %**
SVM: (Visual flicker)	**0.02**

Flicker conditions:

Sample rate:	**40000 samples/second**

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