

Light efficiency:

71 Lumen/Watt

Light quality:

CRI: 93.8

Color temperature:

2996 K

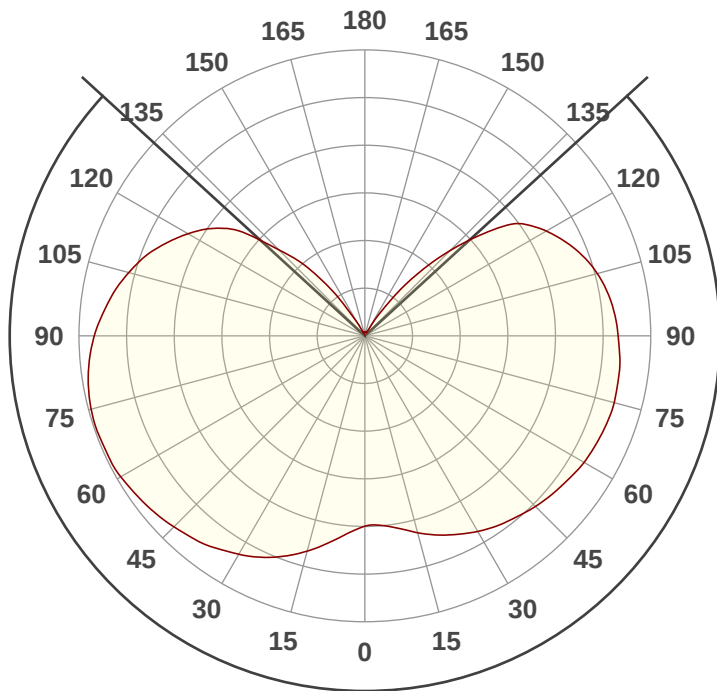
Output: 392 lm

Peak: 41.7 cd

Power: 5.5 W

PF: 1.0

No photo



Tracking number: [n/a](#)

Product name:

3021-02 LONG 1C PLANE GONIO TEST

Item number:

Date and time:

4/22/2020 12:12:52 PM

Description:

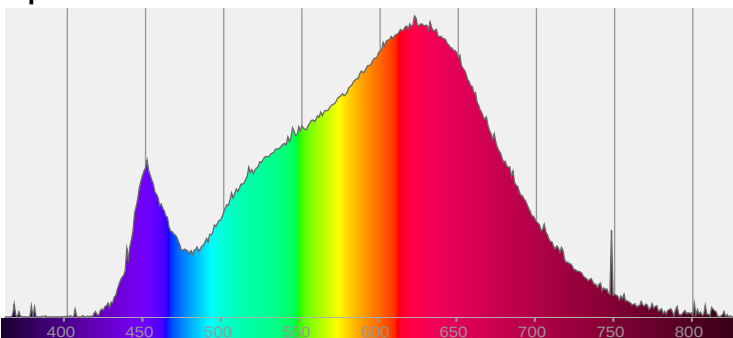
Beam angle

264.9°

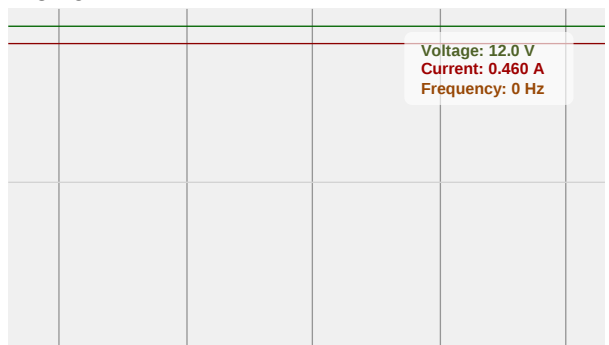


CIE 1931
x: 0.436
y: 0.401

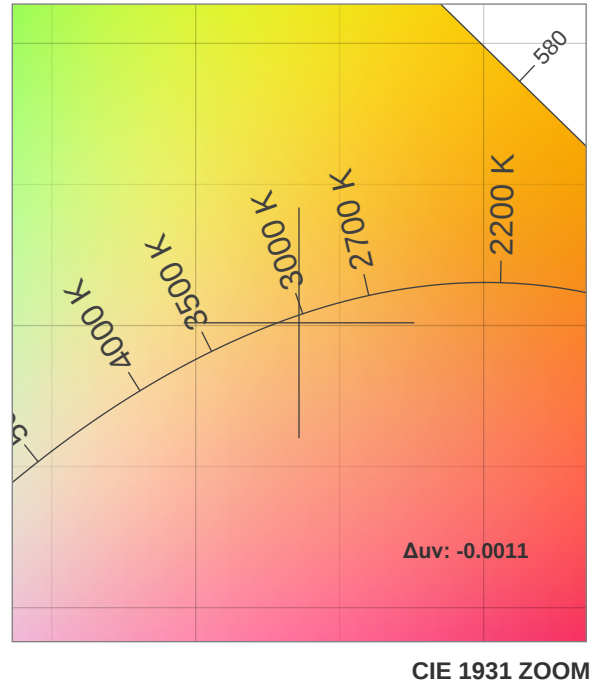
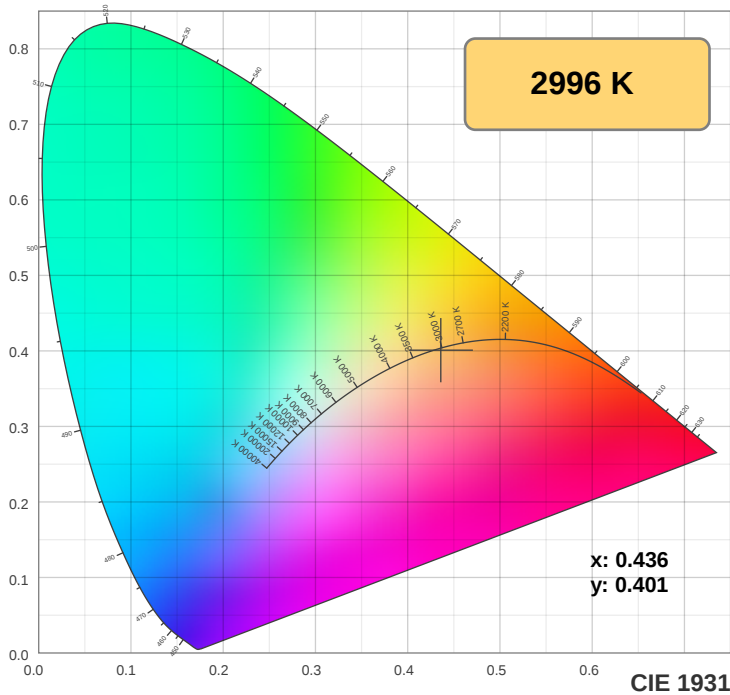
Spectra



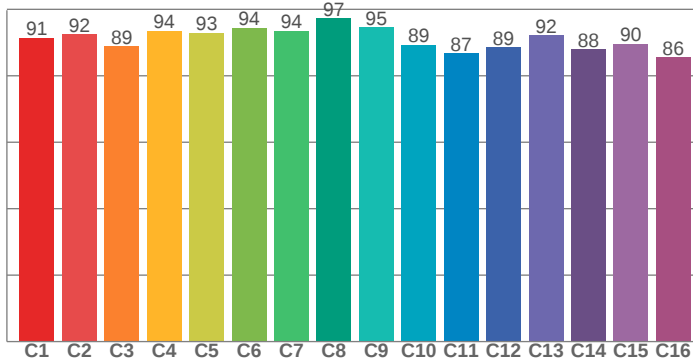
Power



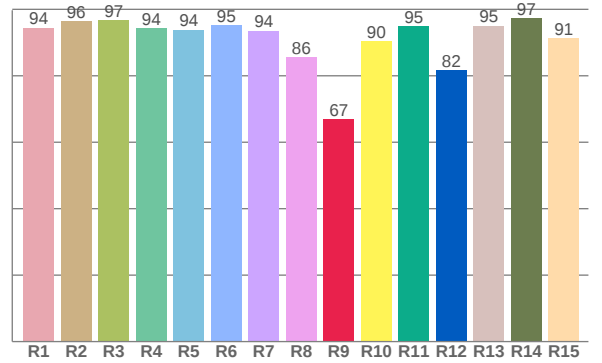
Voltage: 12.0 V
Current: 0.460 A
Frequency: 0 Hz



TM30: 91.2



CRI: 93.8 (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
94.4	96.5	96.7	94.3	93.9	95.2	93.5	85.6	66.9	90.5	94.9	81.6	95.1	97.4	91.2

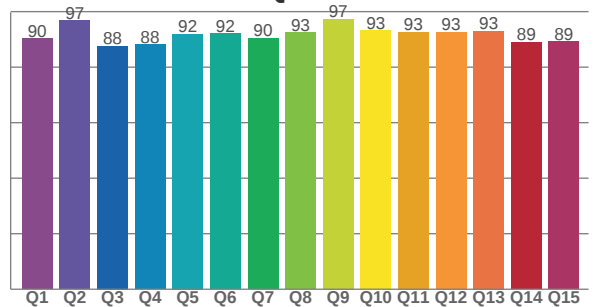
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
91.4	92.4	88.9	93.5	92.9	94.4	93.5	97.2	94.5	89.3	86.7	88.5	92.2	87.9	89.5	85.5

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
90.3	96.8	87.6	88.2	91.9	92.1	90.4	92.5	97.4	93.2	92.7	92.7	93.0	89.0	89.2

CQS: 91.3



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
2996 K	93.8	66.9	91.2	100.6	91.3	0.436	0.401	0.251	0.347	-0.0011

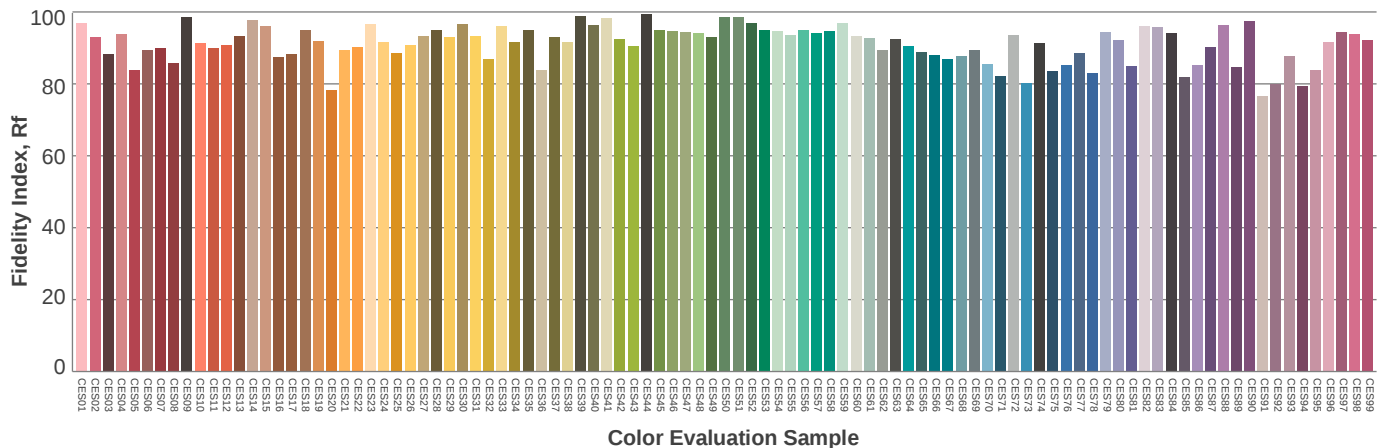
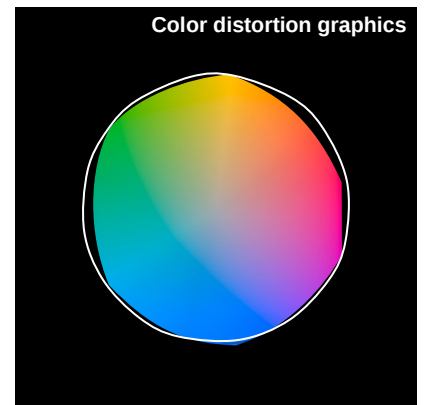
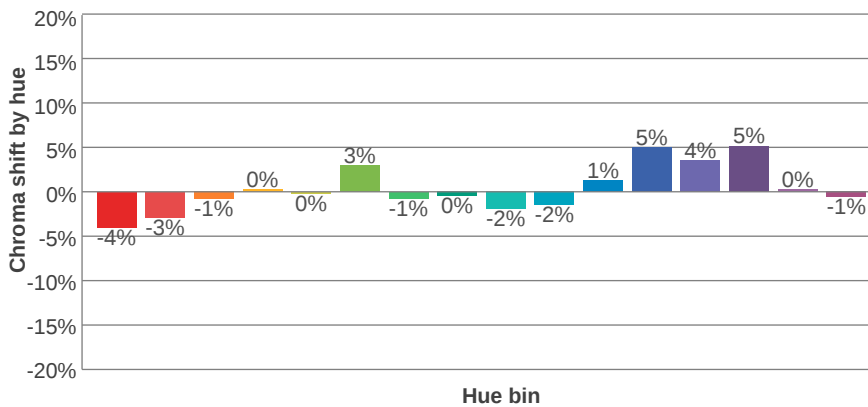
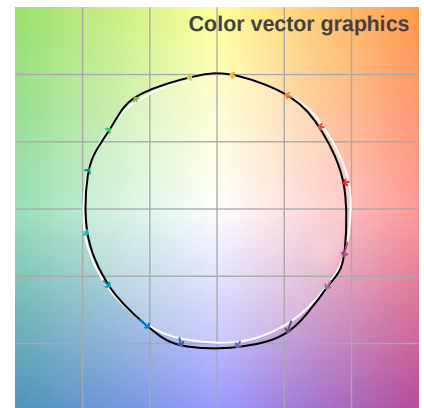
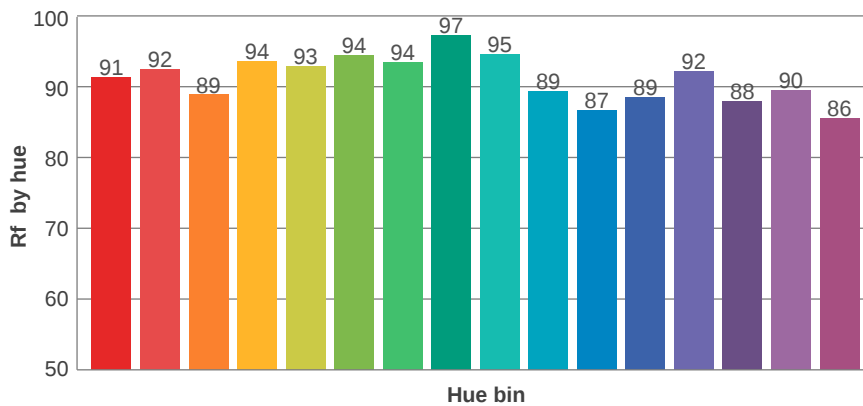
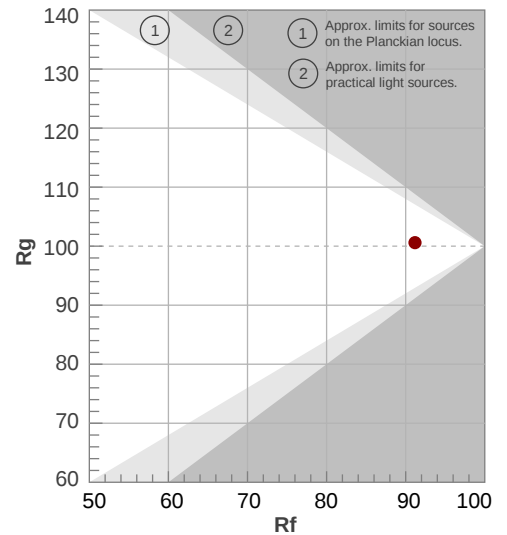
Rf 91.2

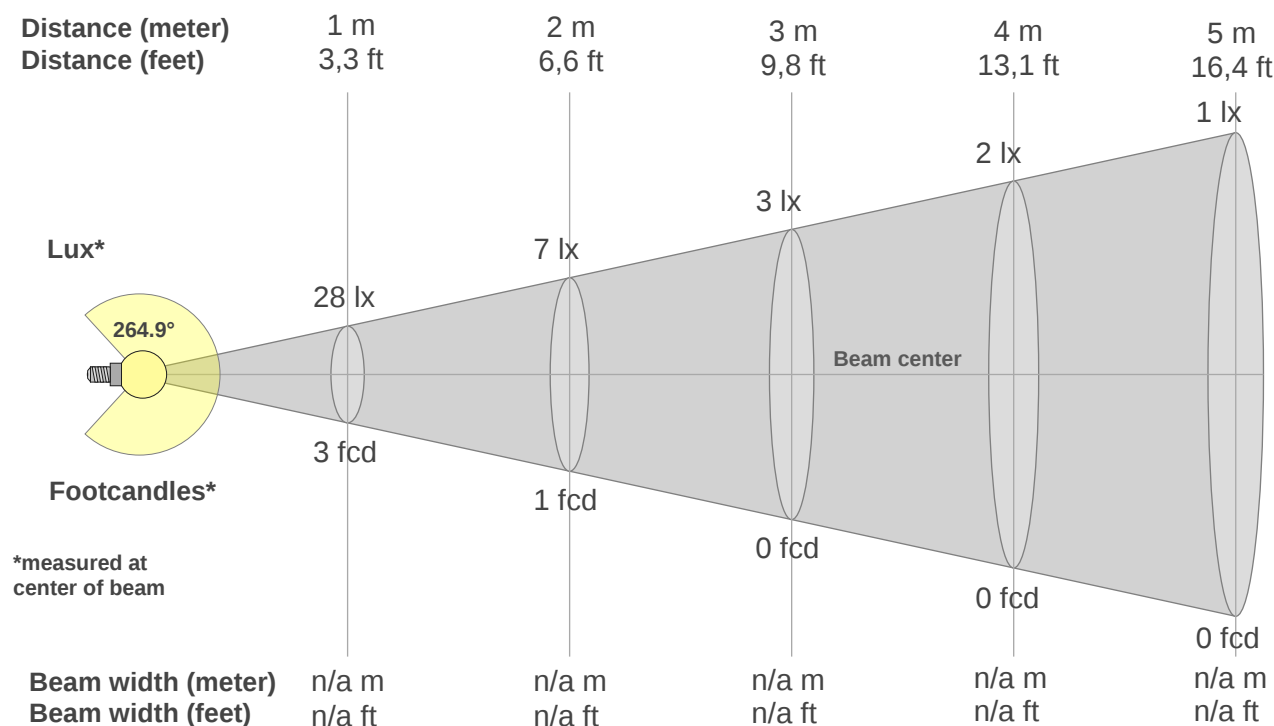
Fidelity index Rf

Rg 100.6

Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	91	-4%	0%
2	92	-3%	2%
3	89	-1%	5%
4	94	0%	3%
5	93	0%	3%
6	94	3%	0%
7	94	-1%	-2%
8	97	0%	-1%
9	95	-2%	2%
10	89	-2%	6%
11	87	1%	9%
12	89	5%	3%
13	92	4%	-3%
14	88	5%	-7%
15	90	0%	-6%
16	86	-1%	-10%




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
28lx	7lx	3lx	2lx	1lx	1lx	1lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx
2.6fcd	0.7fcd	0.3fcd	0.2fcd	0.1fcd	0.1fcd	0.1fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd

Intensities in 0° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
28.0	28.5	30.6	32.5	34.1	35.4	36.4	37.3	37.8	37.7	37.2	36.3	34.6	31.8	27.8	17.7	6.9	0.7	0.5	0.6
100%	102%	109%	116%	122%	126%	130%	133%	135%	135%	133%	130%	124%	114%	99%	63%	25%	2%	2%	2%

Intensities in 90° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
28.0	28.5	30.6	32.5	34.1	35.4	36.4	37.3	37.8	37.7	37.2	36.3	34.6	31.8	27.8	17.7	6.9	0.7	0.5	0.6
100%	102%	109%	116%	122%	126%	130%	133%	135%	135%	133%	130%	124%	114%	99%	63%	25%	2%	2%	2%

Intensities in 180° c-plane

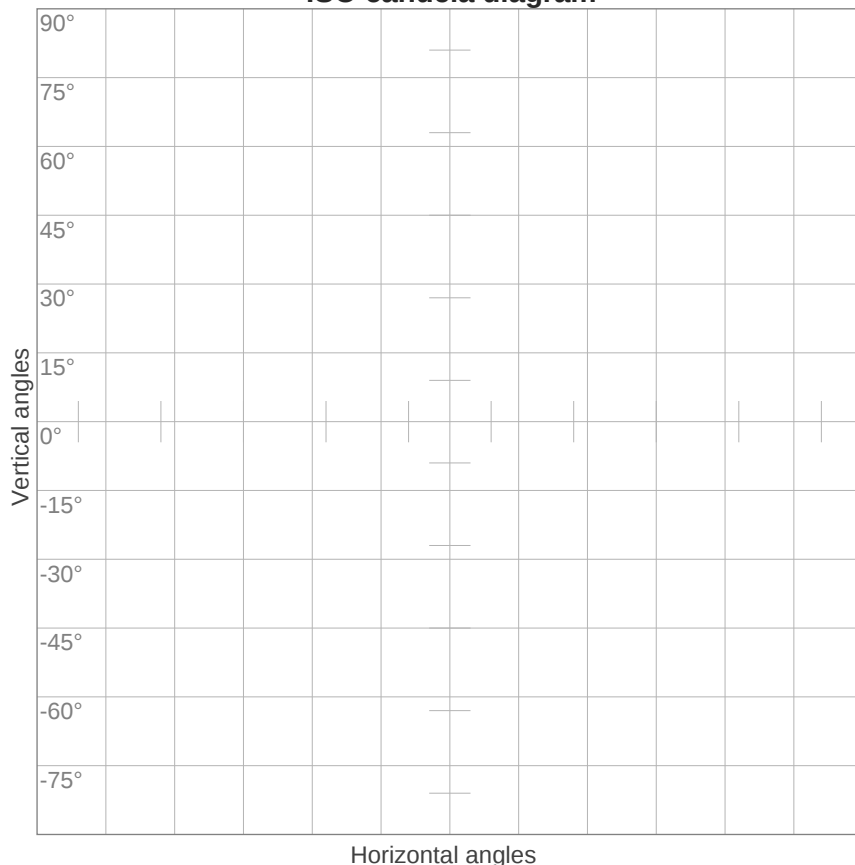
0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
28.0	30.5	33.7	36.3	38.2	39.6	40.7	41.5	41.7	41.1	39.7	37.6	34.9	31.3	26.7	17.9	8.4	1.0	0.5	0.6
100%	109%	120%	130%	136%	141%	145%	148%	149%	147%	142%	134%	125%	112%	95%	64%	30%	4%	2%	2%

Intensities in 270° c-plane

0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
28.0	30.5	33.7	36.3	38.2	39.6	40.7	41.5	41.7	41.1	39.7	37.6	34.9	31.3	26.7	17.9	8.4	1.0	0.5	0.6
100%	109%	120%	130%	136%	141%	145%	148%	149%	147%	142%	134%	125%	112%	95%	64%	30%	4%	2%	2%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
264.9°	294.2°	303.9°	29.0%	16.3%

ISO candela diagram



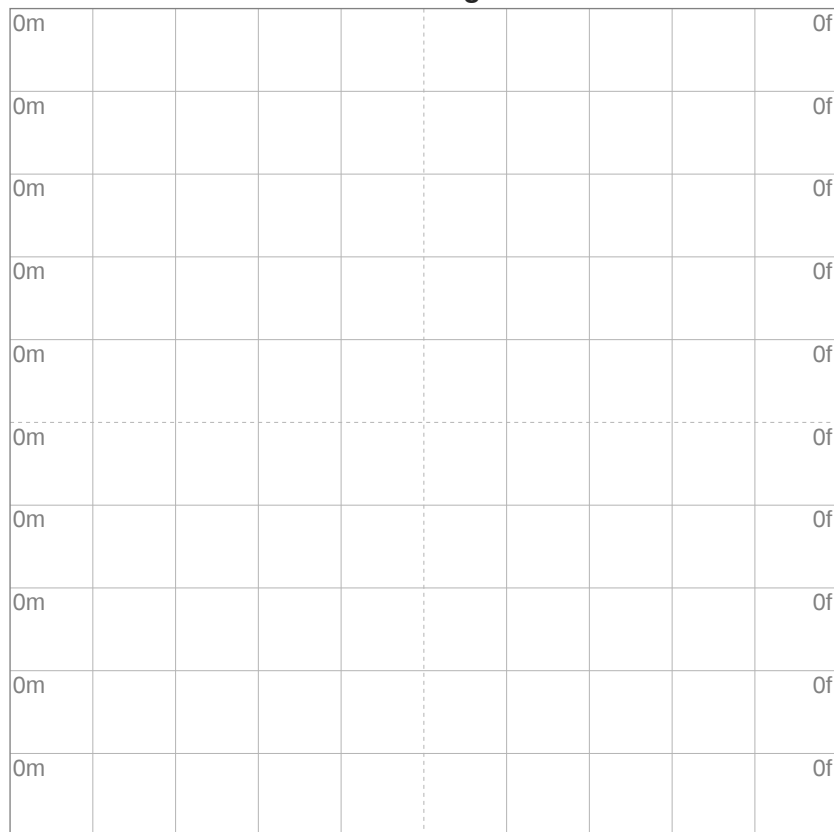
10%	3 cd
20%	6 cd
30%	8 cd
40%	11 cd
50%	14 cd
60%	17 cd
70%	20 cd
80%	22 cd
90%	25 cd

Conditions:

Number of c-planes: 2

Candela at center: 28 cd

ISO lux diagram



Mounting height: 10 meters (33 feet)

3%	8.40m lx
5%	14.0m lx
10%	28.0m lx
30%	84.0m lx
50%	0.140 lx

Conditions:

Number of c-planes: 2

Lux at center: 0.280 lx

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

Glare Evaluation According to UGR

p Ceiling		70	70	50	50	30	70	70	50	50	30
p Walls		50	30	50	30	30	50	30	50	30	30
p Floor		20	20	20	20	20	20	20	20	20	20
Room size X Y		Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
2H	2H	-5.6	-4.5	-4.8	-3.7	-2.7	-5.6	-4.5	-4.8	-3.7	-2.7
	3H	-5.9	-4.9	-5.1	-4.0	-3.0	-5.9	-4.9	-5.1	-4.0	-3.0
	4H	-6.0	-5.1	-5.2	-4.2	-3.2	-6.0	-5.1	-5.2	-4.2	-3.2
	6H	-6.2	-5.3	-5.3	-4.4	-3.3	-6.2	-5.3	-5.3	-4.4	-3.3
	8H	-6.2	-5.4	-5.4	-4.5	-3.4	-6.2	-5.4	-5.4	-4.5	-3.4
	12H	-6.3	-5.5	-5.5	-4.6	-3.5	-6.3	-5.5	-5.5	-4.6	-3.5
4H	2H	-6.0	-5.1	-5.2	-4.2	-3.2	-6.0	-5.1	-5.2	-4.2	-3.2
	3H	-6.3	-5.5	-5.5	-4.6	-3.5	-6.3	-5.5	-5.5	-4.6	-3.5
	4H	-6.5	-5.7	-5.6	-4.8	-3.7	-6.5	-5.7	-5.6	-4.8	-3.7
	6H	-6.6	-5.9	-5.7	-5.0	-3.9	-6.6	-5.9	-5.7	-5.0	-3.9
	8H	-6.7	-6.1	-5.8	-5.1	-4.0	-6.7	-6.1	-5.8	-5.1	-4.0
	12H	-6.7	-6.2	-5.8	-5.2	-4.1	-6.7	-6.2	-5.8	-5.2	-4.1
8H	4H	-6.7	-6.1	-5.8	-5.1	-4.0	-6.7	-6.1	-5.8	-5.1	-4.0
	6H	-6.8	-6.3	-5.9	-5.4	-4.2	-6.8	-6.3	-5.9	-5.4	-4.2
	8H	-6.9	-6.4	-5.9	-5.5	-4.3	-6.9	-6.4	-5.9	-5.5	-4.3
	12H	-6.9	-6.5	-6.0	-5.6	-4.4	-6.9	-6.5	-6.0	-5.6	-4.4
12H	4H	-6.7	-6.2	-5.8	-5.2	-4.1	-6.7	-6.2	-5.8	-5.2	-4.1
	6H	-6.9	-6.4	-5.9	-5.5	-4.3	-6.9	-6.4	-5.9	-5.5	-4.3
	8H	-6.9	-6.5	-6.0	-5.6	-4.4	-6.9	-6.5	-6.0	-5.6	-4.4
Variation of the observer position for the luminaire distance S											
S = 1.0H		+0.0 / 0.0					+0.0 / 0.0				
S = 1.5H		+0.0 / 0.0					+0.0 / 0.0				
S = 2.0H		+0.0 / 0.0					+0.0 / 0.0				
Standard table		BK00					BK00				
Correction summand		-23.3					-23.3				
Corrected glare indices referring to 392 lm total luminous flux											

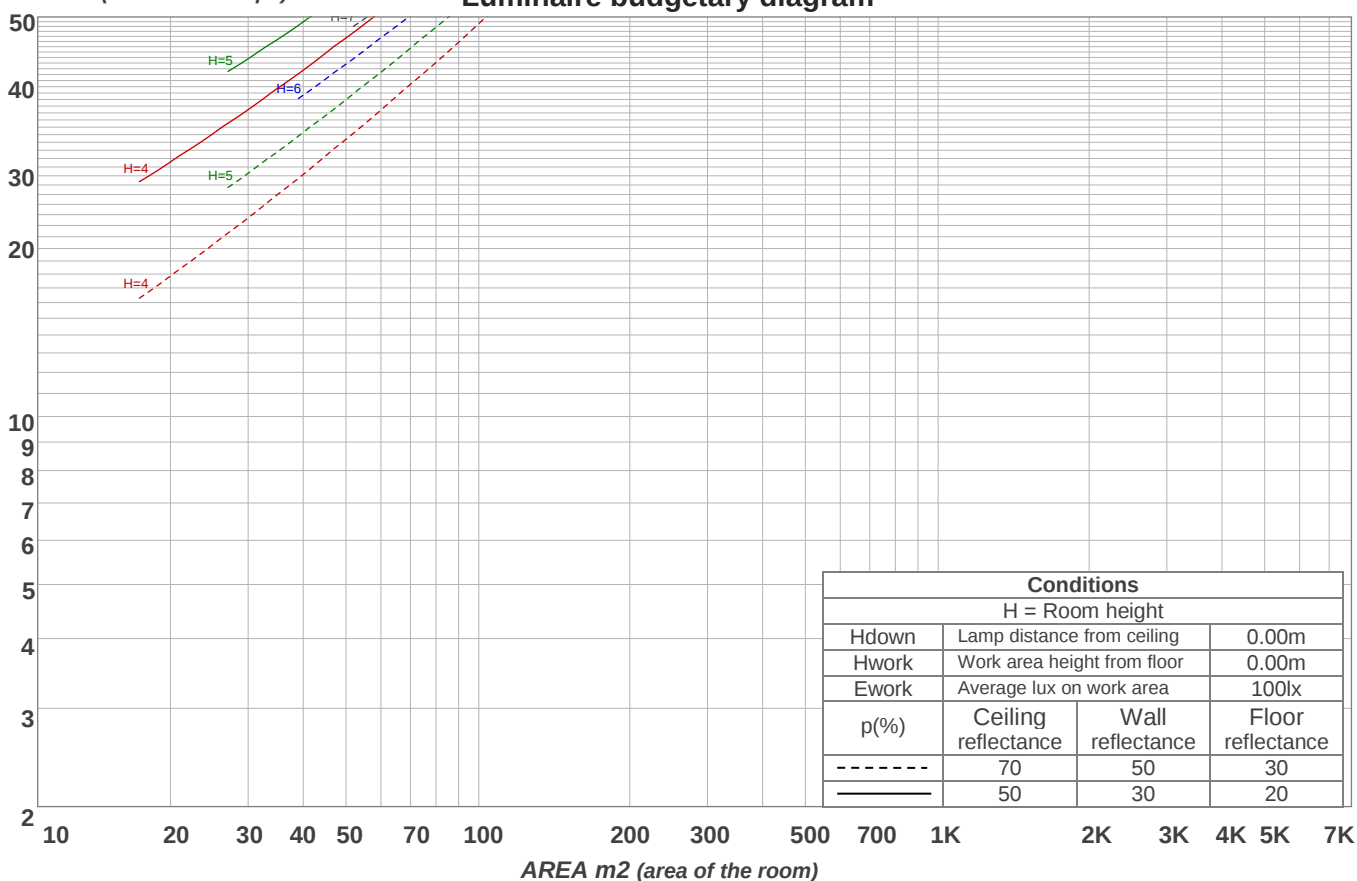
UGR data could be incorrect as lamp output is not symmetrical. Goto Edit->Photometric->Corrections and select Correct asymmetry.

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	110	110	110	110	103	103	103	103	89	89	89	77	77	77	66	66	66	61
1	95	88	82	77	88	82	76	72	70	66	62	60	56	53	50	47	45	40
2	84	74	66	58	78	69	61	55	59	53	47	49	45	40	41	37	34	29
3	76	63	54	46	70	59	50	43	50	43	38	42	37	32	34	30	27	23
4	68	55	45	38	63	51	42	35	44	36	31	36	31	26	30	25	22	18
5	62	48	39	32	57	45	36	30	38	31	26	32	26	22	26	22	18	15
6	57	43	34	27	53	40	31	25	34	27	22	29	23	18	24	19	15	12
7	53	39	29	23	49	36	27	22	31	24	19	26	20	16	21	17	13	10
8	49	35	26	20	45	32	24	19	28	21	16	24	18	14	19	15	12	9
9	45	32	23	18	42	29	22	16	25	19	14	22	16	12	18	13	10	8
10	42	29	21	16	39	27	20	15	23	17	13	20	15	11	17	12	9	7

LAMPS (number of lamps)

Luminaire budgetary diagram



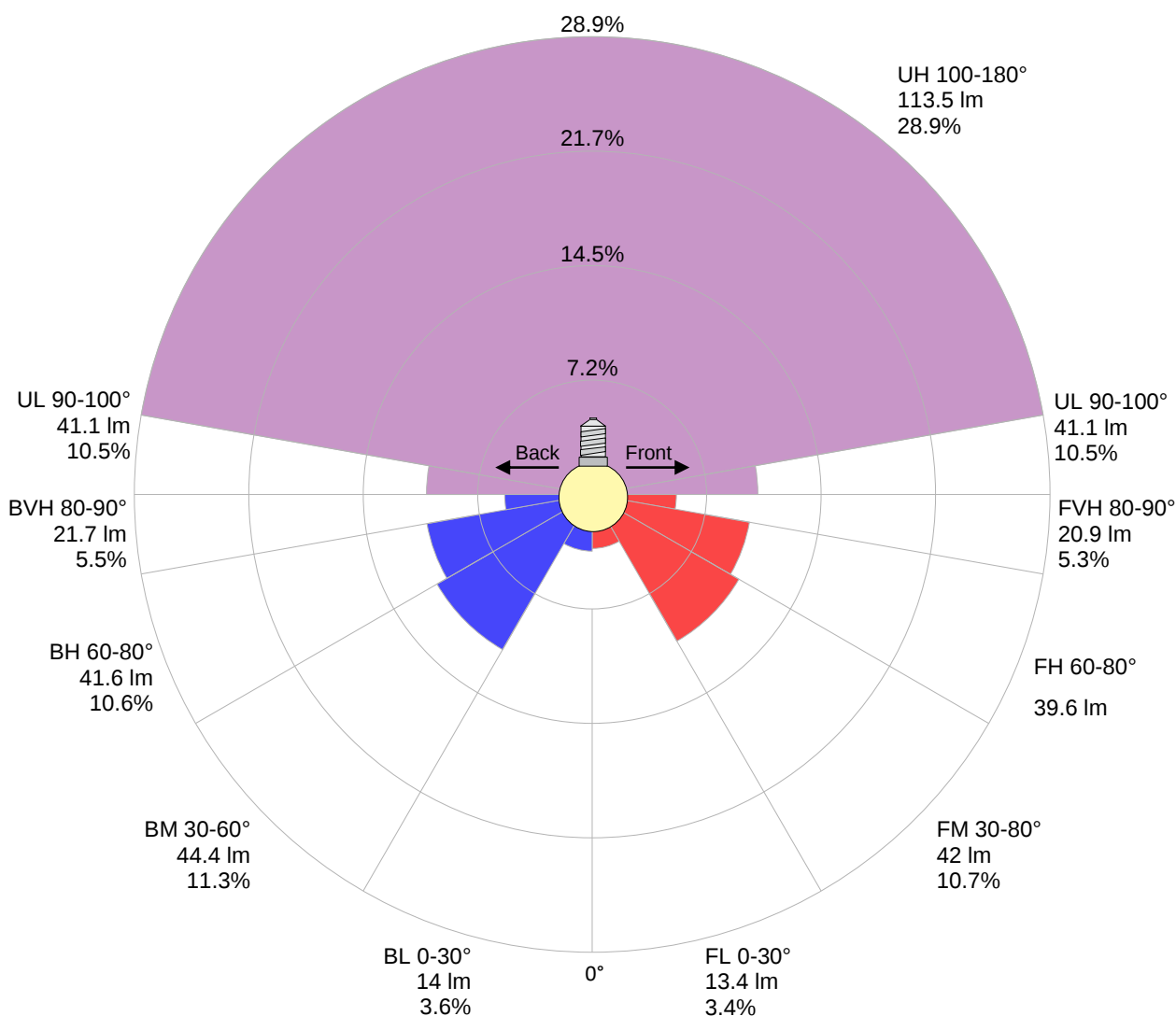
Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
2.77 lm	8.91 lm	15.7 lm	22.6 lm	29.0 lm	34.7 lm	39.2 lm	42.0 lm	42.6 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
41.1 lm	37.6 lm	32.1 lm	24.9 lm	14.0 lm	4.31 lm	0.363 lm	0.157 lm	0.057 lm

LCS table

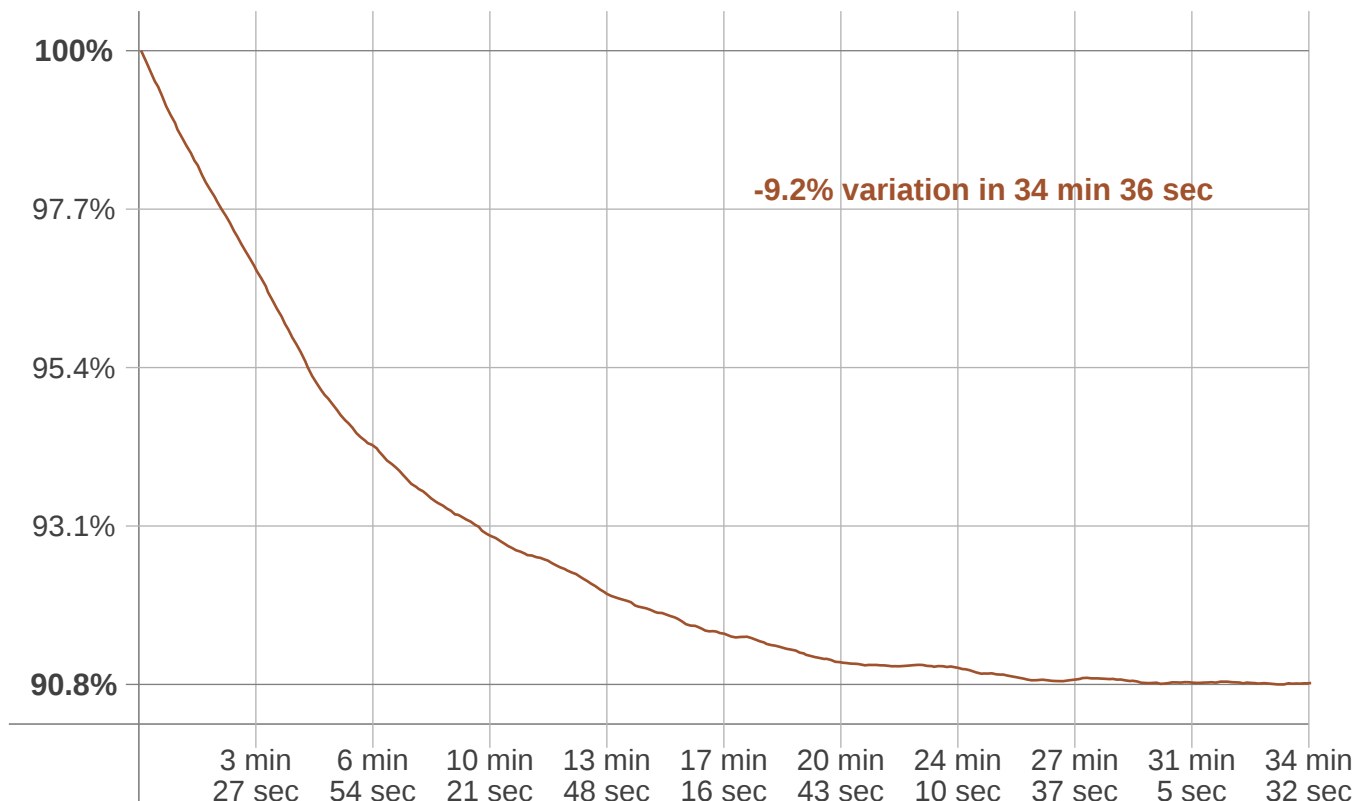
BUG rating:	B0 U3 G1	
Forward light	Lumens	Lumens %
Low(0-30):	13.4	3.4%
Medium(30-60):	42	10.7%
High(60-80):	39.6	10.1%
Very high(80-90):	20.9	5.3%
Back light		
Low(0-30):	14	3.6%
Medium(30-60):	44.4	11.3%
High(60-80):	41.6	10.6%
Very high(80-90):	21.7	5.5%
Uplight		
Low(90-100):	41.1	10.5%
High(100-180):	113.5	28.9%

LCS graph



Stabilization

Warmup curve



Warmup result

Warmup time:	34 min 36 sec
Warmup variation	-9.3%

Warmup conditions

Stable period:	15 min
Stable change max:	0.5%
Minimum time:	30 min

Color temperature change

CCT start	CCT change	CCT end
2996 K	0 K	2996 K

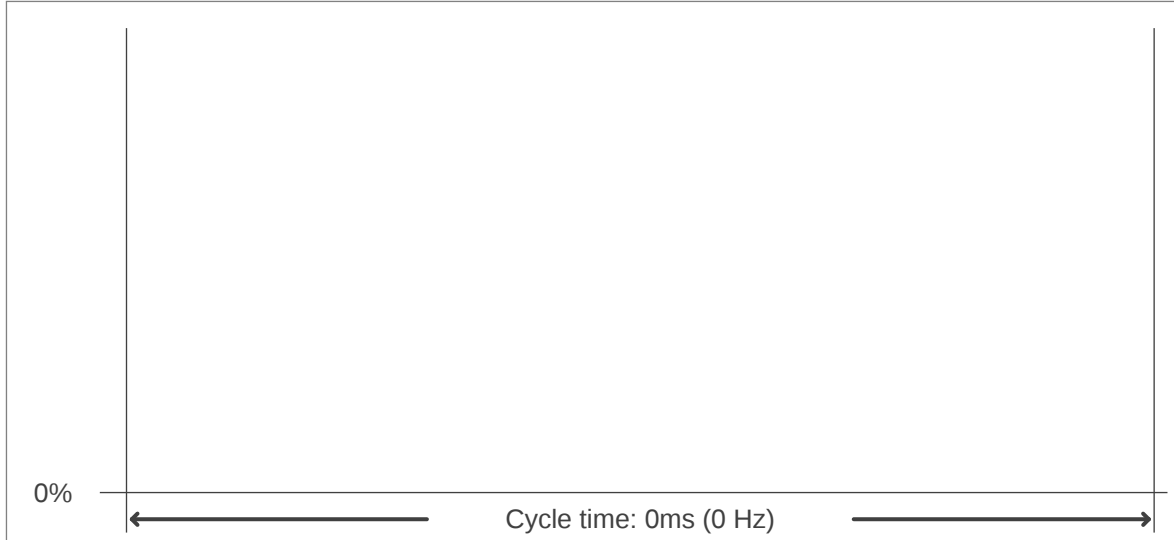
Output change

Output start	Output change	Output end
431 lm	-39 lm	392 lm

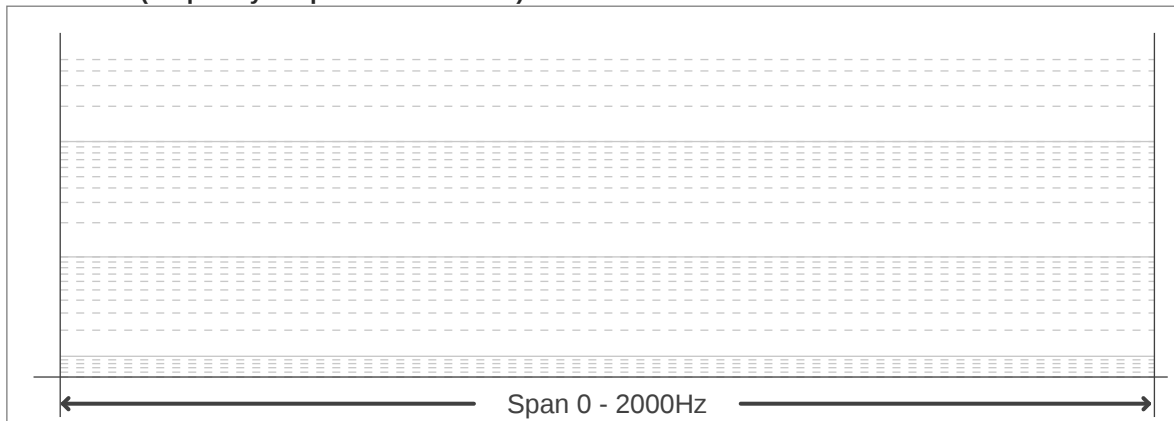
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:	n/a Hz
Flicker index:	n/a
Flicker percentage:	n/a %
SVM: (Visual flicker)	n/a

Flicker conditions:

Sample rate:	0 samples/second
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