

Light efficiency:

41 Lumen/Watt

Light quality:

CRI: 90.4

Color temperature:

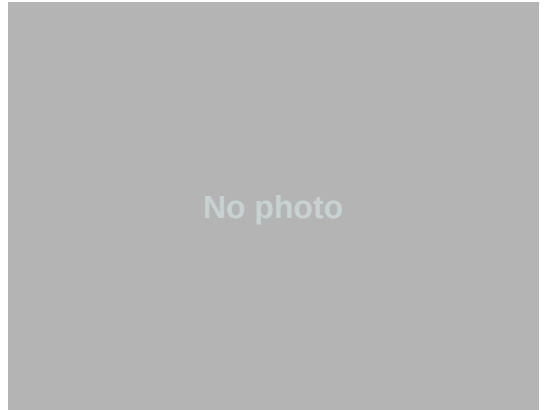
2879 K

Output: 579 lm

Peak: 281 cd

Power: 14.0 W

PF: 0.95



No photo

Tracking number: [n/a](#)

Product name:

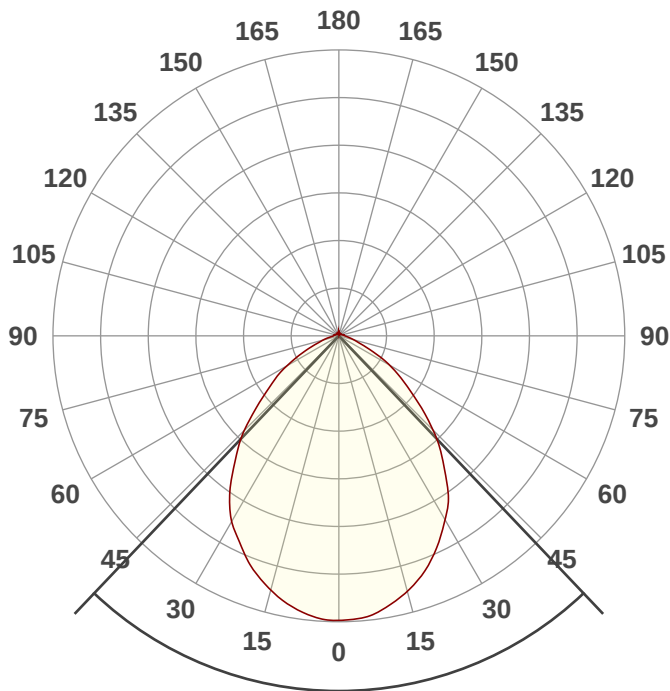
**SPHERE FLUSHMOUNT 1C PLANE
GONIO TEST**

Item number:

Date and time:

4/21/2020 2:36:08 PM

Description:



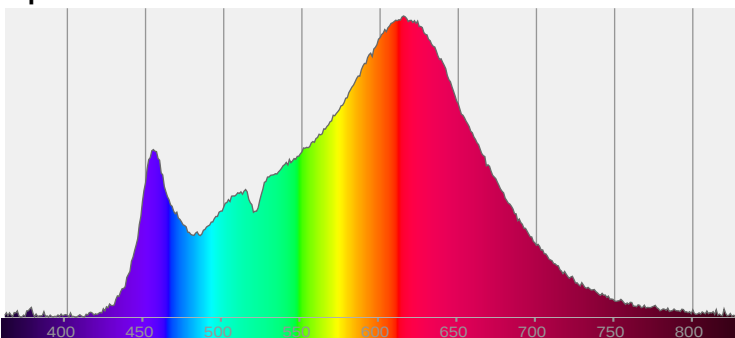
Beam angle

87.1°

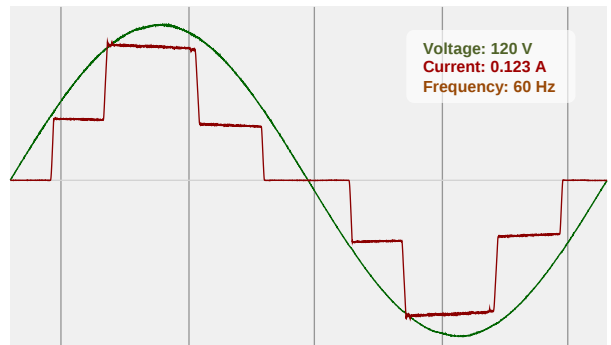


CIE 1931
x: 0.437
y: 0.389

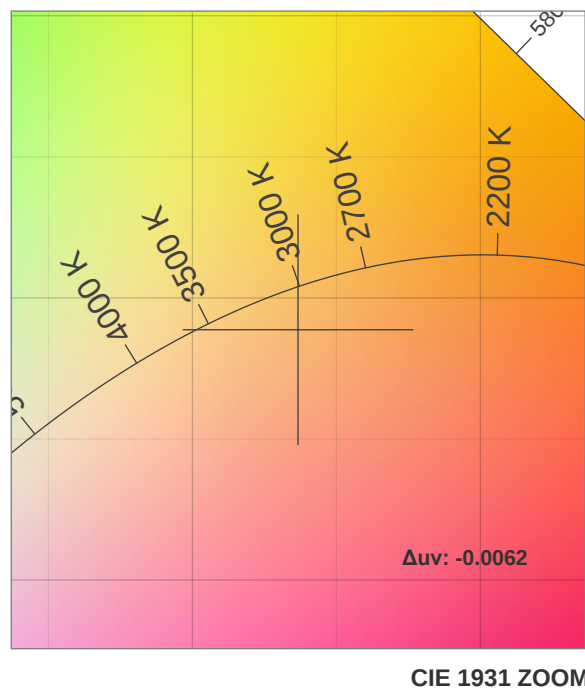
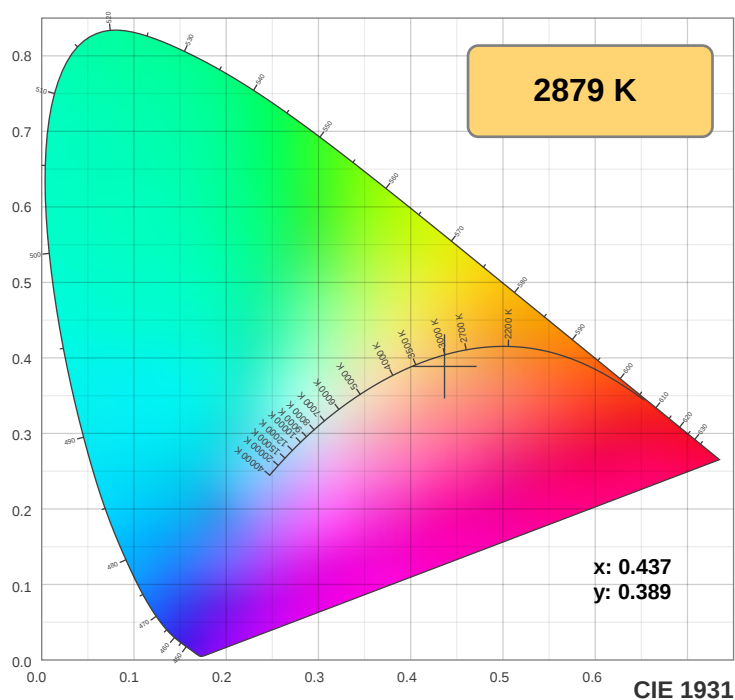
Spectra



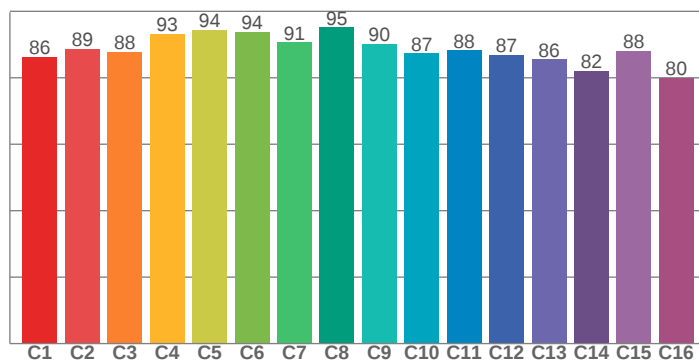
Power



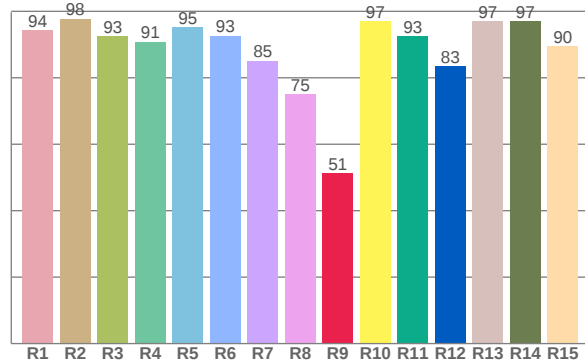
Voltage: 120 V
Current: 0.123 A
Frequency: 60 Hz



TM30: 88.8



CRI: 90.4 (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
94.3	97.8	92.5	90.8	95.2	92.6	85.2	75.1	51.3	97.0	92.5	83.4	96.9	97.0	89.5

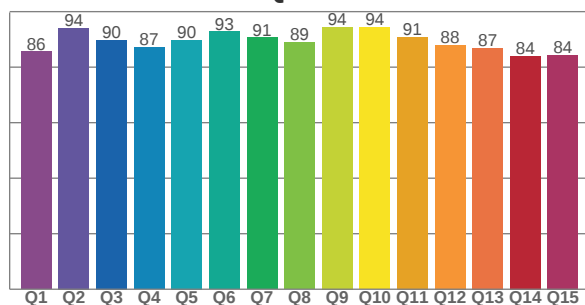
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
86.4	88.6	87.7	93.2	94.5	93.8	90.6	95.2	90.2	87.4	88.3	86.8	85.6	82.1	88.0	80.0

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
85.6	94.0	89.8	87.1	89.8	92.8	90.7	89.0	94.5	94.4	90.8	88.0	87.0	84.1	84.3

CQS: 88.8



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 deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
2879 K	90.4	51.3	88.8	98.5	88.8	0.437	0.389	0.257	0.343	-0.0062

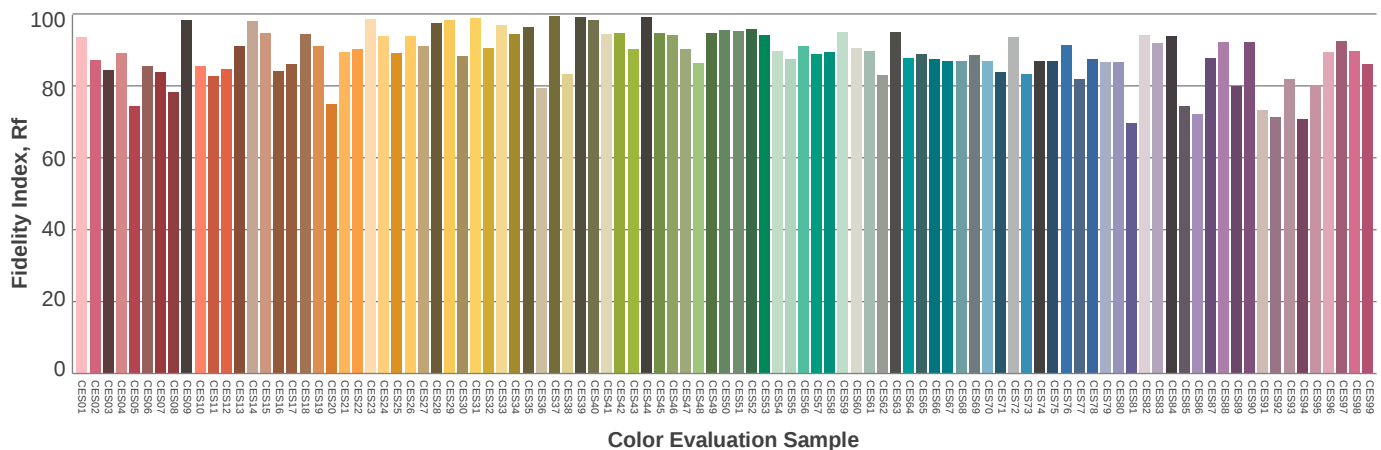
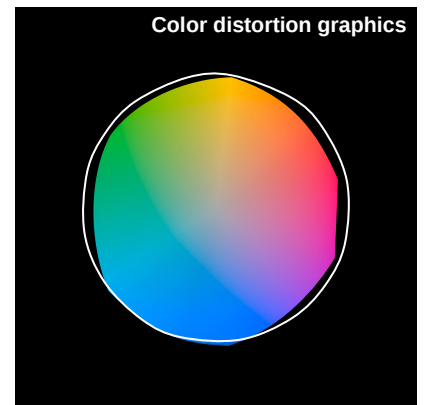
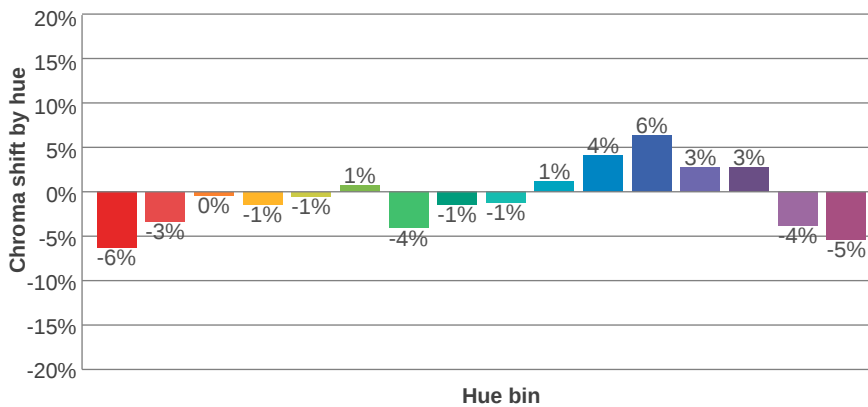
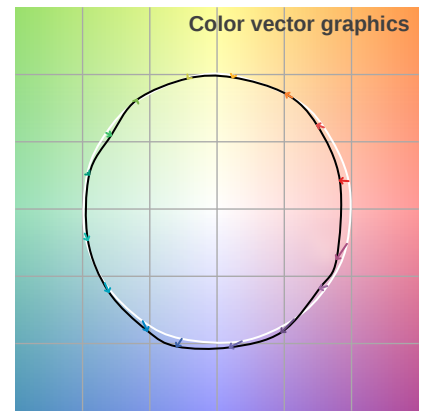
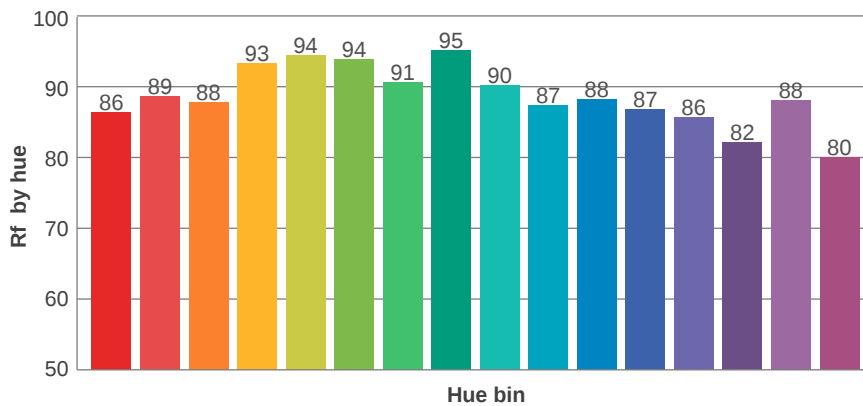
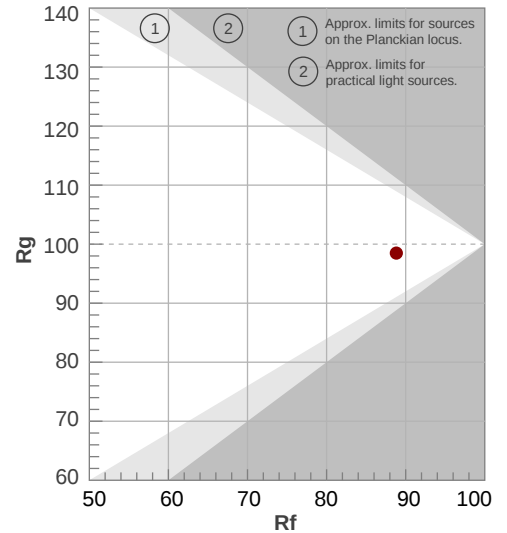
Rf 88.8

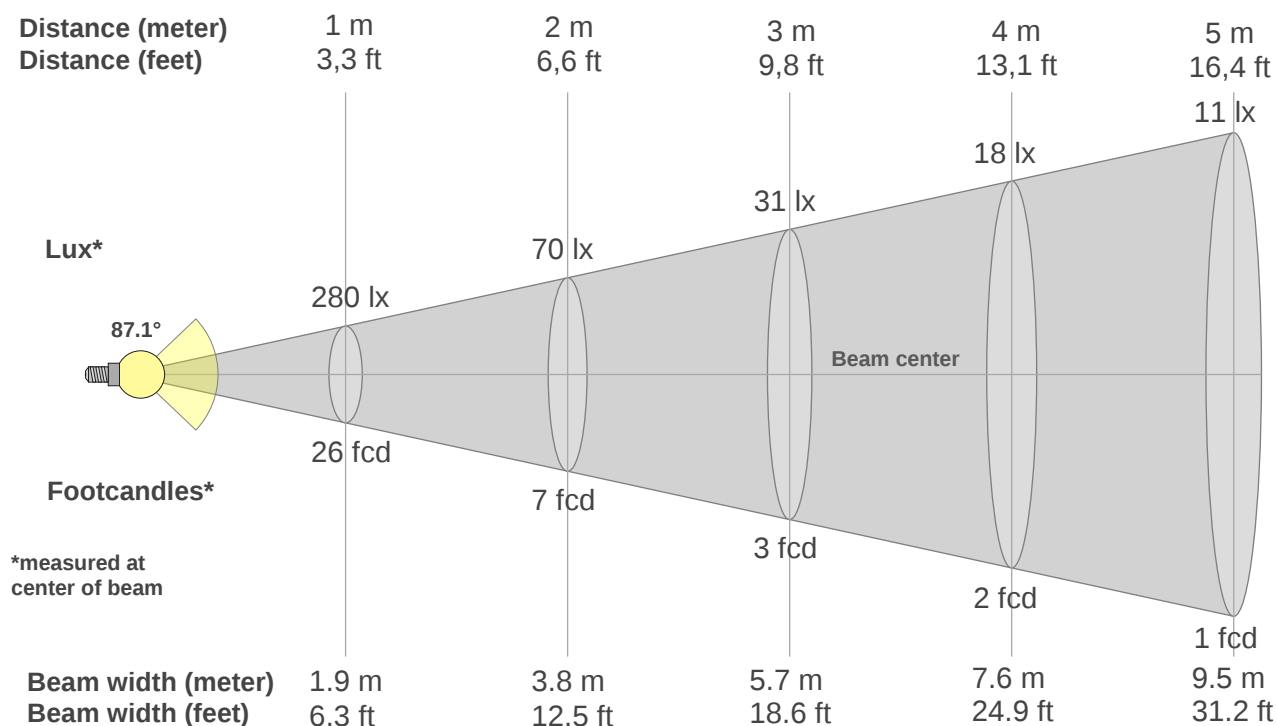
Fidelity index Rf

Rg 98.5

Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	86	-6%	2%
2	89	-3%	4%
3	88	0%	6%
4	93	-1%	0%
5	94	-1%	1%
6	94	1%	-1%
7	91	-4%	-1%
8	95	-1%	1%
9	90	-1%	5%
10	87	1%	7%
11	88	4%	7%
12	87	6%	-3%
13	86	3%	-10%
14	82	3%	-13%
15	88	-4%	-5%
16	80	-5%	-13%




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
280lx	70lx	31lx	18lx	11lx	8lx	6lx	4lx	3lx	3lx	2lx	2lx	2lx	1lx	1lx	1lx	1lx	1lx	1lx	1lx
26.1fcd	6.5fcd	2.9fcd	1.6fcd	1fcd	0.7fcd	0.5fcd	0.4fcd	0.3fcd	0.3fcd	0.2fcd	0.2fcd	0.2fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd	0.1fcd

Intensities in 0° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
280	279	272	261	247	230	210	188	159	132	102	78	58	38	23	16	11	8	6	5
100%	99%	97%	93%	88%	82%	75%	67%	57%	47%	37%	28%	21%	14%	8%	6%	4%	3%	2%	2%

Intensities in 90° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
280	279	272	261	247	230	210	188	159	132	102	78	58	38	23	16	11	8	6	5
100%	99%	97%	93%	88%	82%	75%	67%	57%	47%	37%	28%	21%	14%	8%	6%	4%	3%	2%	2%

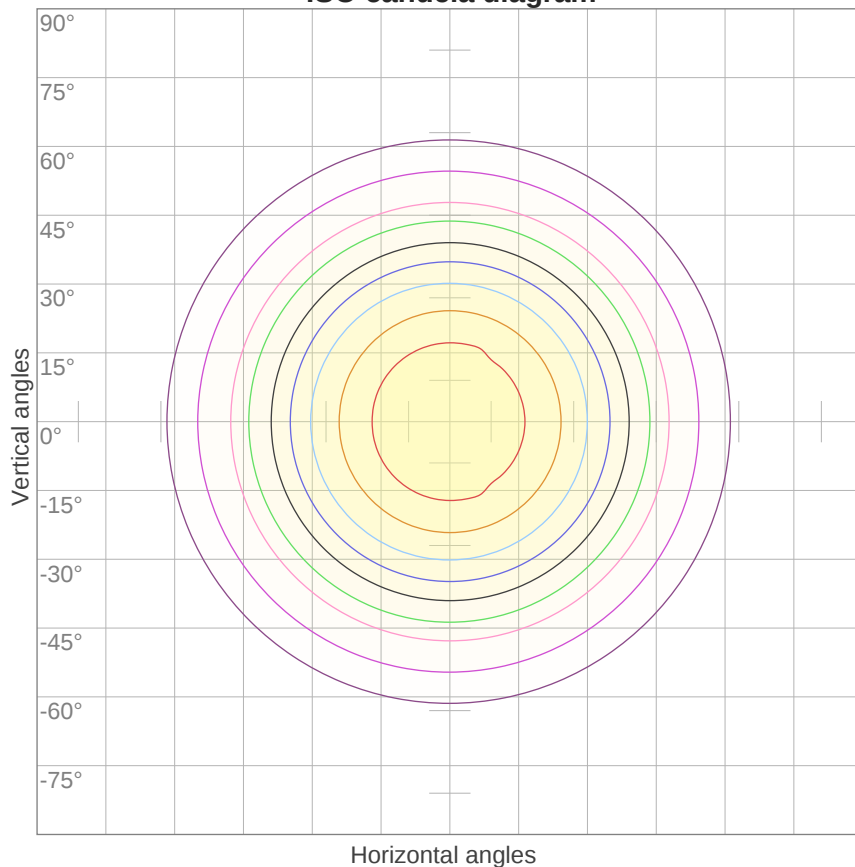
Intensities in 180° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
280	278	271	260	246	229	211	188	159	132	103	79	60	40	25	16	11	7	5	5
100%	99%	96%	93%	88%	82%	75%	67%	57%	47%	37%	28%	21%	14%	9%	6%	4%	2%	2%	2%

Intensities in 270° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
280	278	271	260	246	229	211	188	159	132	103	79	60	40	25	16	11	7	5	5
100%	99%	96%	93%	88%	82%	75%	67%	57%	47%	37%	28%	21%	14%	9%	6%	4%	2%	2%	2%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
87.1°	137°	172°	85.2%	64.9%

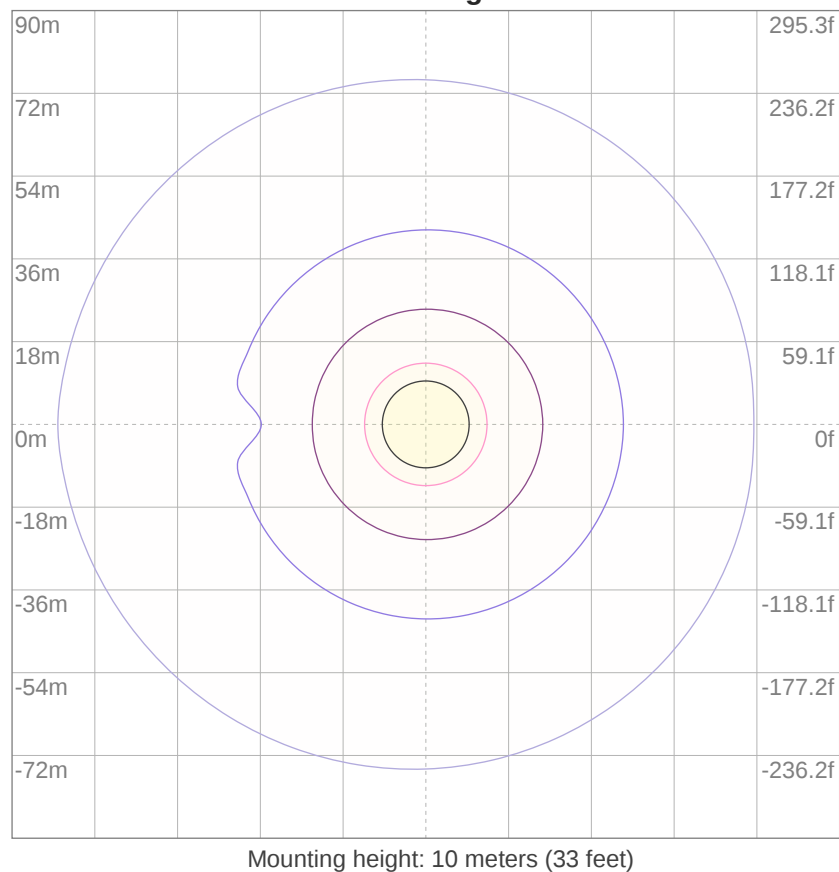
ISO candela diagram


10%	28 cd
20%	56 cd
30%	84 cd
40%	112 cd
50%	140 cd
60%	168 cd
70%	196 cd
80%	224 cd
90%	252 cd

Conditions:

Number of c-planes: 2

Candela at center: 280 cd

ISO lux diagram


3%	84.1m lx
5%	0.140 lx
10%	0.280 lx
30%	0.841 lx
50%	1.40 lx

Conditions:

Number of c-planes: 2

Lux at center: 2.80 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	-3.4	-2.3	-3.1	-2.0	-1.7	-3.4	-2.3	-3.1	-2.0	-1.7
	3H	-3.6	-2.6	-3.2	-2.3	-2.0	-3.6	-2.6	-3.2	-2.3	-2.0
	4H	-3.7	-2.8	-3.3	-2.4	-2.1	-3.7	-2.8	-3.3	-2.4	-2.1
	6H	-3.8	-2.9	-3.4	-2.5	-2.2	-3.8	-2.9	-3.4	-2.5	-2.2
	8H	-3.8	-3.0	-3.4	-2.6	-2.2	-3.8	-3.0	-3.4	-2.6	-2.2
	12H	-3.8	-3.1	-3.4	-2.7	-2.3	-3.8	-3.1	-3.4	-2.7	-2.3
4H	2H	-3.7	-2.8	-3.3	-2.4	-2.1	-3.7	-2.8	-3.3	-2.4	-2.1
	3H	-3.8	-3.1	-3.4	-2.7	-2.3	-3.8	-3.1	-3.4	-2.7	-2.3
	4H	-3.9	-3.2	-3.5	-2.8	-2.4	-3.9	-3.2	-3.5	-2.8	-2.4
	6H	-4.0	-3.4	-3.5	-3.0	-2.5	-4.0	-3.4	-3.5	-3.0	-2.5
	8H	-4.0	-3.5	-3.6	-3.0	-2.6	-4.0	-3.5	-3.6	-3.0	-2.6
	12H	-4.1	-3.6	-3.6	-3.1	-2.6	-4.1	-3.6	-3.6	-3.1	-2.6
8H	4H	-4.0	-3.5	-3.6	-3.0	-2.6	-4.0	-3.5	-3.6	-3.0	-2.6
	6H	-4.1	-3.7	-3.6	-3.2	-2.7	-4.1	-3.7	-3.6	-3.2	-2.7
	8H	-4.2	-3.8	-3.6	-3.3	-2.7	-4.2	-3.8	-3.6	-3.3	-2.7
	12H	-4.2	-3.9	-3.7	-3.4	-2.8	-4.2	-3.9	-3.7	-3.4	-2.8
12H	4H	-4.1	-3.6	-3.6	-3.1	-2.6	-4.1	-3.6	-3.6	-3.1	-2.6
	6H	-4.2	-3.8	-3.6	-3.3	-2.7	-4.2	-3.8	-3.6	-3.3	-2.7
	8H	-4.2	-3.9	-3.7	-3.4	-2.8	-4.2	-3.9	-3.7	-3.4	-2.8
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		-21.9					-21.9				
Corrected glare indices referring to 579 lm total luminous flux											

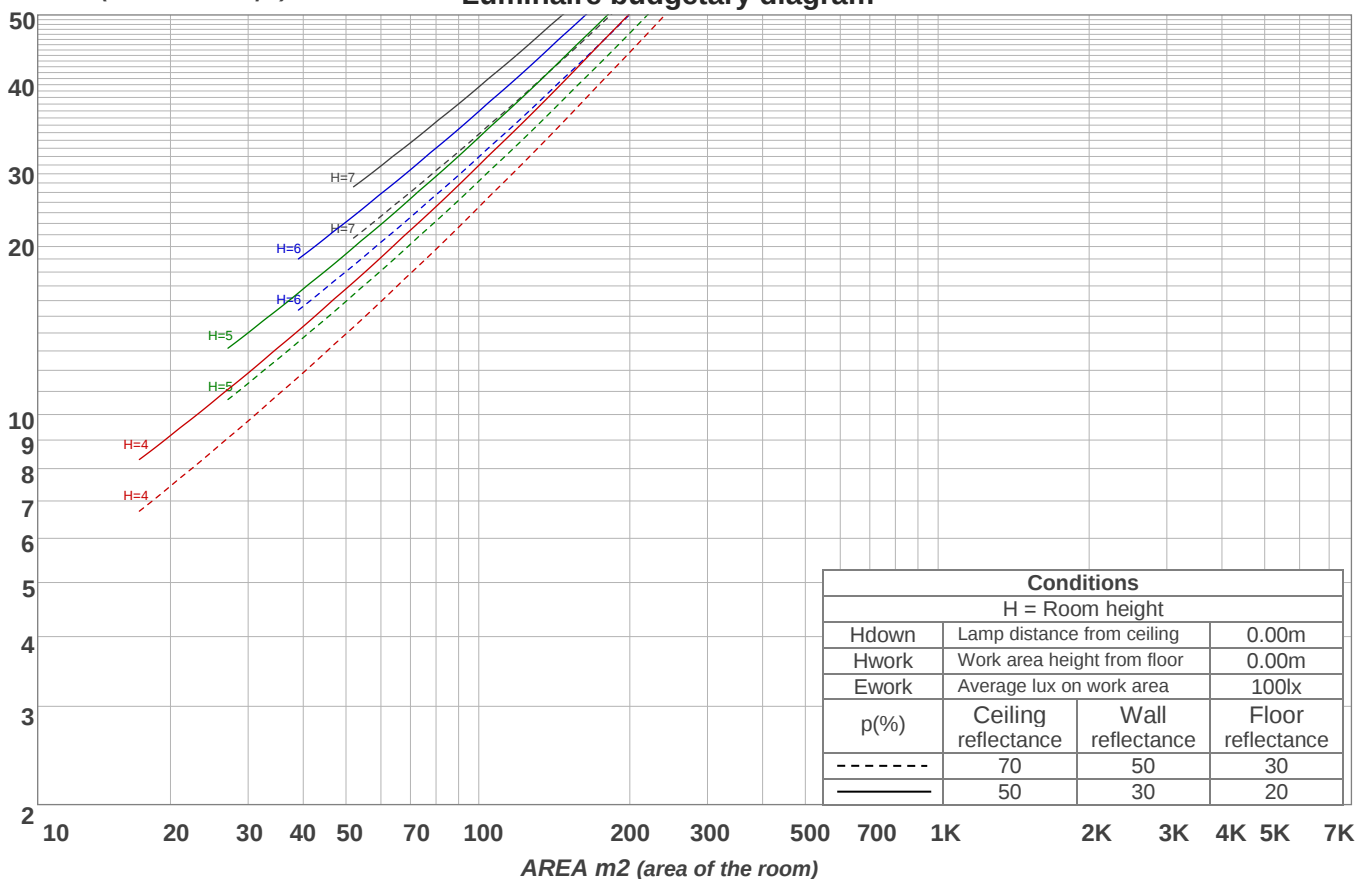
UGR data could be incorrect as lamp output is not symmetrical. Goto Edit->Photometric->Corrections and select Correct asymmetry.

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	118	118	118	118	115	115	115	115	109	109	109	104	104	104	99	99	99	96
1	109	105	102	98	106	103	99	96	98	95	93	94	91	89	89	88	86	84
2	101	94	88	83	98	92	86	82	88	83	79	84	80	77	81	78	75	73
3	93	84	77	71	91	82	76	70	79	73	69	76	71	67	73	69	65	63
4	86	76	68	62	84	74	67	61	71	65	60	68	63	59	66	61	58	56
5	80	68	60	54	78	67	59	54	65	58	53	62	57	52	60	55	51	49
6	74	62	54	48	72	61	53	48	59	52	47	57	51	47	55	50	46	44
7	69	57	49	43	67	56	48	43	54	47	42	52	46	42	51	45	41	39
8	65	52	44	39	63	51	44	39	50	43	38	48	42	38	47	42	37	36
9	61	48	41	35	59	47	40	35	46	39	35	45	39	35	44	38	34	32
10	57	45	37	32	56	44	37	32	43	36	32	42	36	32	41	35	31	30

LAMPS (number of lamps)

Luminaire budgetary diagram



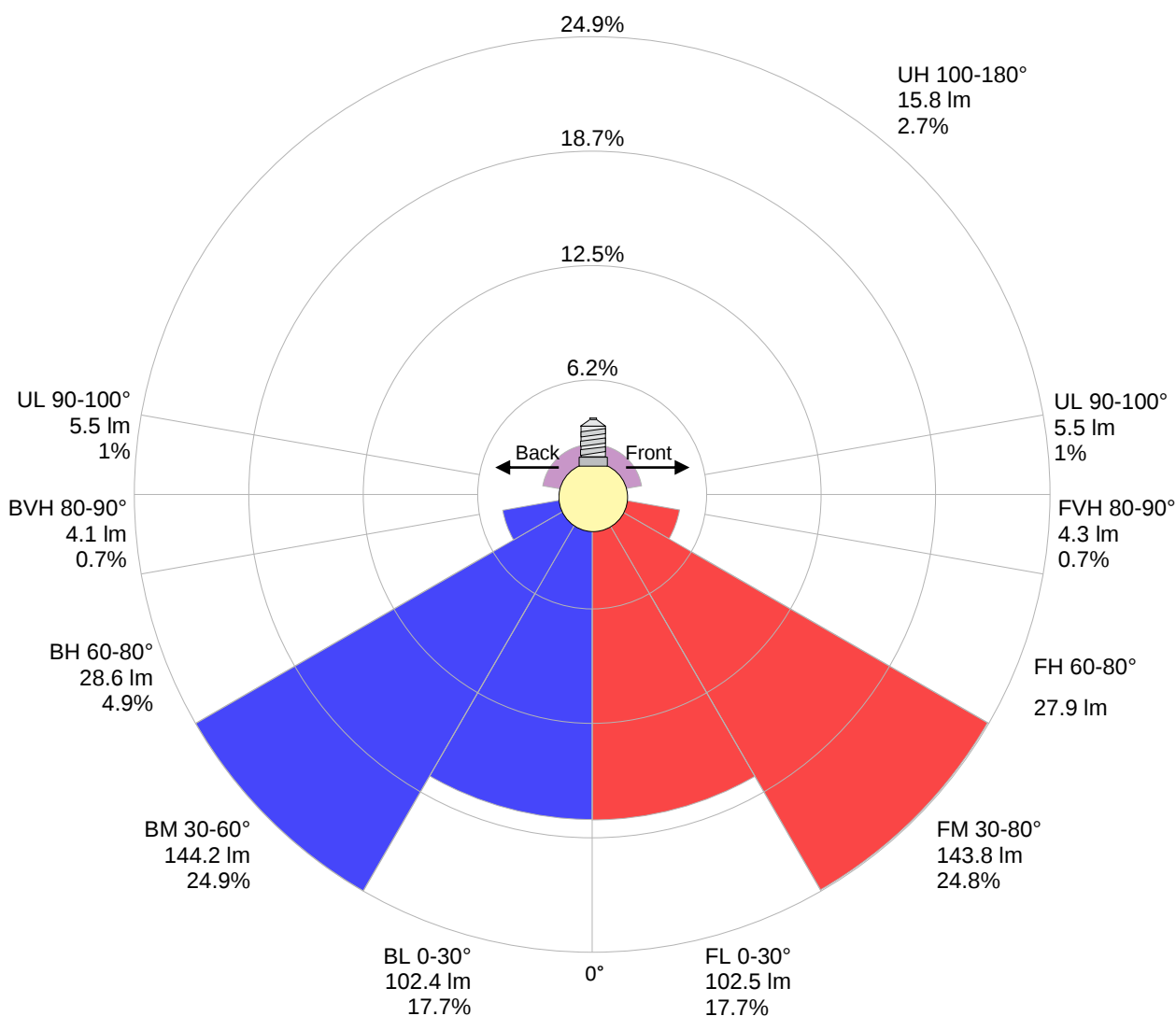
Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
26.4 lm	73.2 lm	105 lm	116 lm	101 lm	70.6 lm	38.9 lm	17.0 lm	8.34 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
5.50 lm	4.54 lm	2.87 lm	2.43 lm	2.12 lm	1.51 lm	1.22 lm	0.804 lm	0.307 lm

LCS table

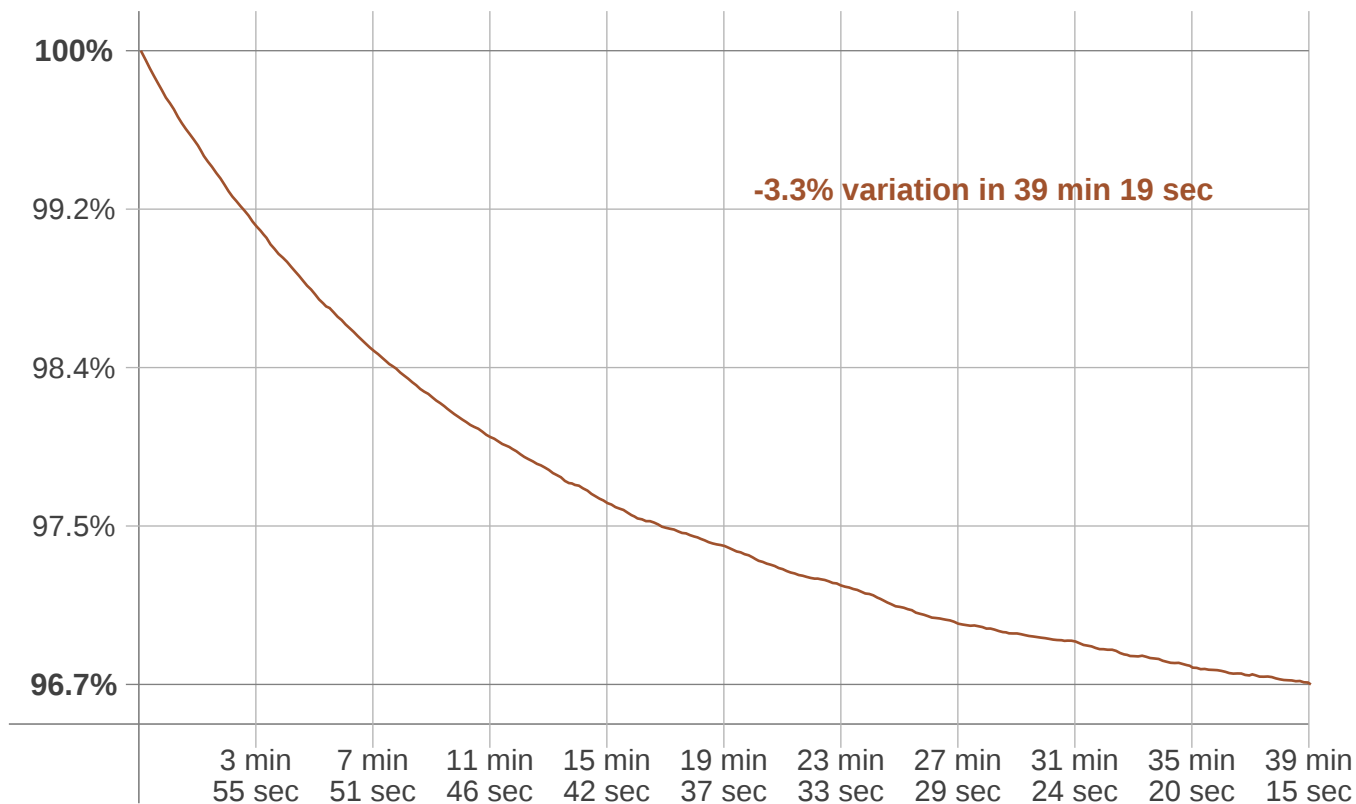
BUG rating:	B0 U2 G0	
Forward light	Lumens	Lumens %
Low(0-30):	102.5	17.7%
Medium(30-60):	143.8	24.8%
High(60-80):	27.9	4.8%
Very high(80-90):	4.3	0.7%
Back light		
Low(0-30):	102.4	17.7%
Medium(30-60):	144.2	24.9%
High(60-80):	28.6	4.9%
Very high(80-90):	4.1	0.7%
Uplight		
Low(90-100):	5.5	1%
High(100-180):	15.8	2.7%

LCS graph



Stabilization

Warmup curve



Warmup result

Warmup time:	39 min 19 sec
Warmup variation	-3.3%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
2863 K	+16 K	2879 K

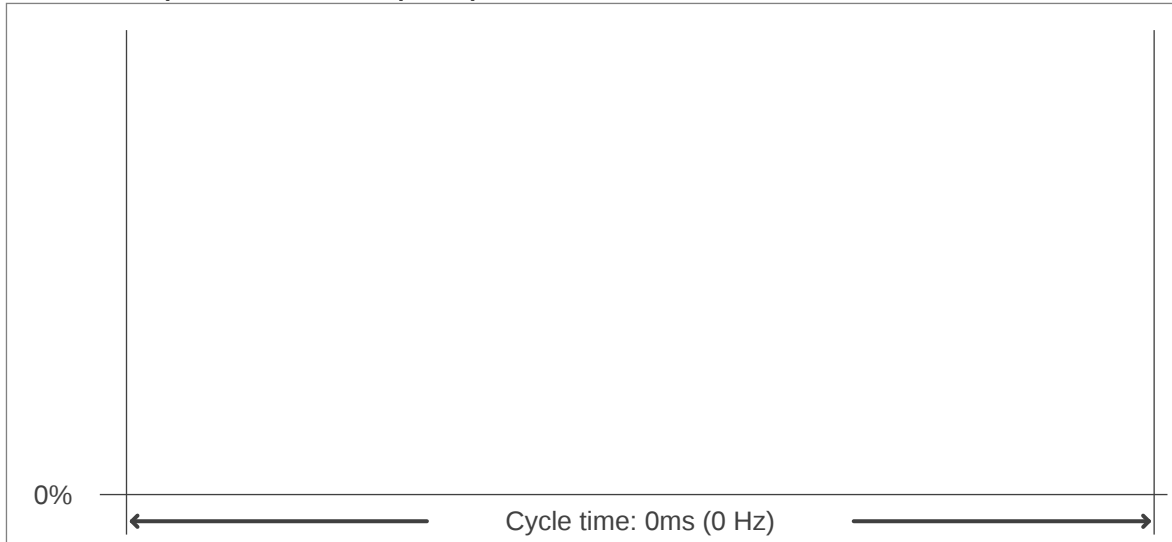
Output change

Output start	Output change	Output end
597 lm	-18 lm	579 lm

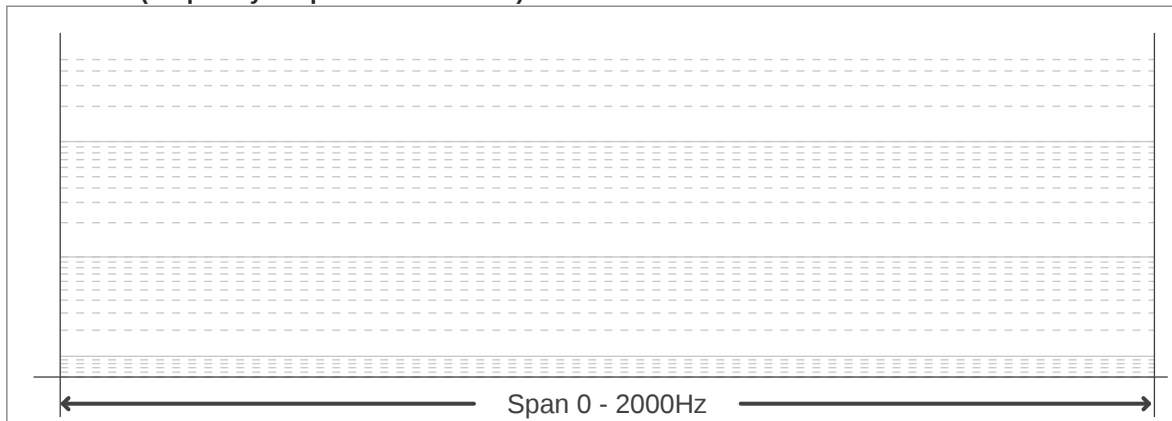
Flicker curve (complete sampled flicker signal)



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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