

Light efficiency:



Light quality:



Color temperature:



Output: 121 lm
Peak: 49,7 cd
Power: 1,5 W
PF: 0,94



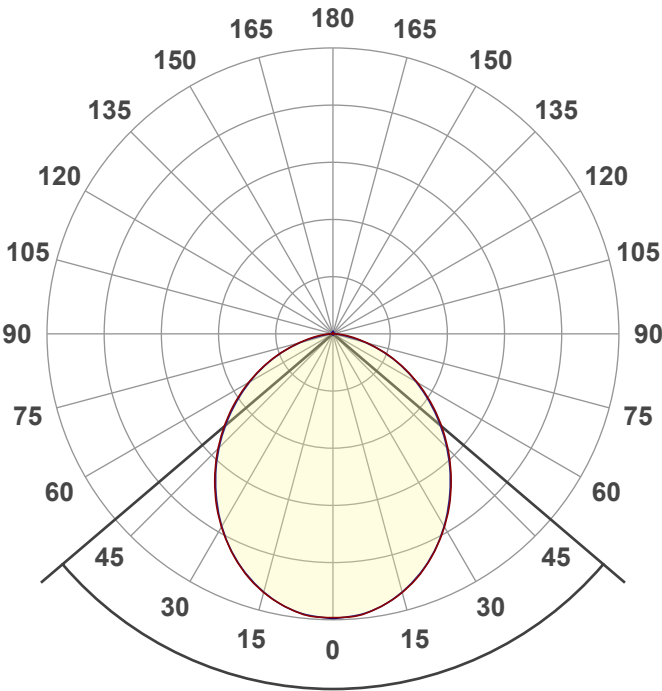
Tracking number: [VT240905-000570](#)

Product name:
271524

Item number:
271524

Date and time:
5-9-2024 15:09:18

Description:
**LED MINI INBOUWSPOT PHOBOS 1.5W
DIM ZILVER**

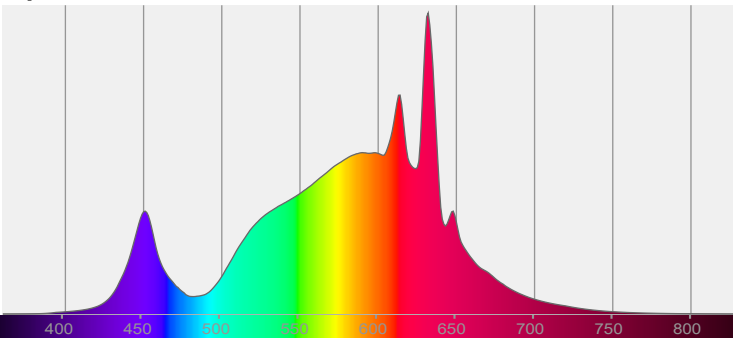


Beam angle **99,1°**

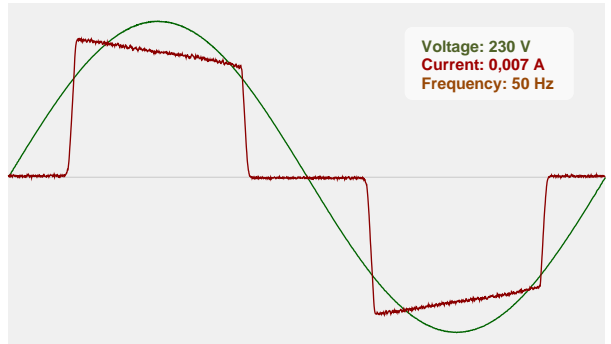


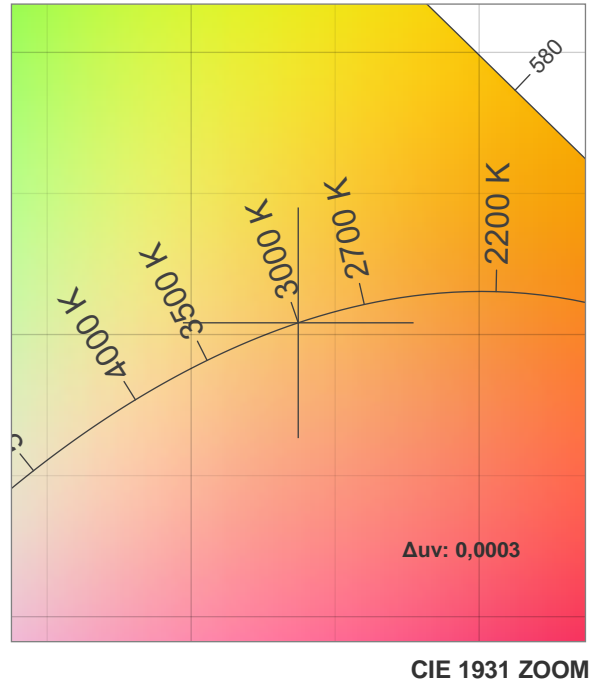
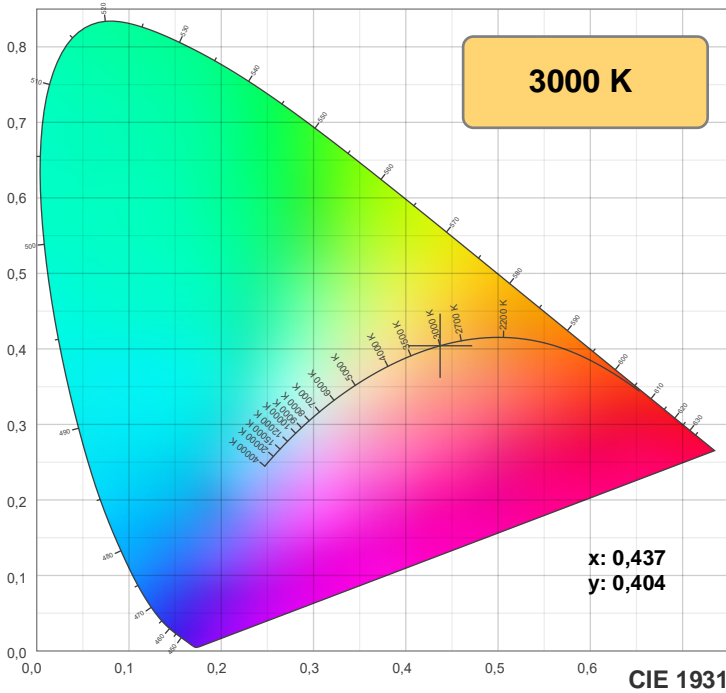
CIE 1931
x: 0,437
y: 0,404

Spectra



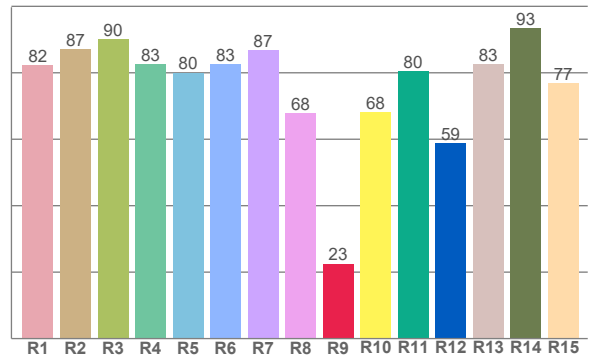
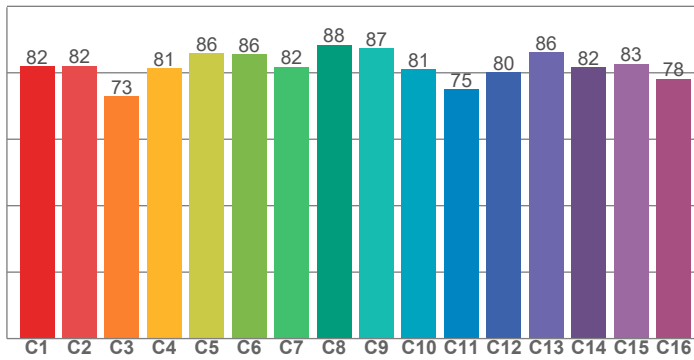
Power



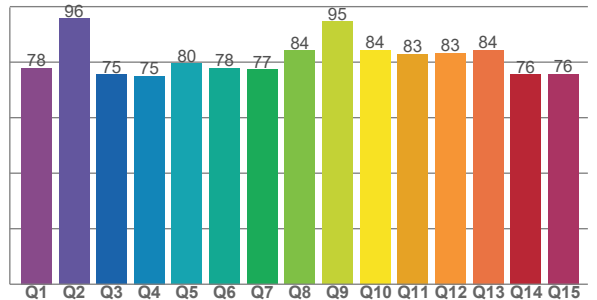


TM-30: 81,8

CRI: 82,4 (R1-R8)



CQS: 80,4



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
82,2	87,2	90,2	82,6	80,1	82,6	86,8	67,8	22,6	68,1	80,4	58,7	82,6	93,3	76,9

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
82,0	82,0	72,8	81,4	85,8	85,6	81,8	88,5	87,4	81,0	75,1	80,2	86,2	81,6	82,8	78,2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
78,0	95,8	75,5	75,0	79,6	77,9	77,4	84,1	94,7	84,4	82,9	83,2	84,3	75,6	75,7

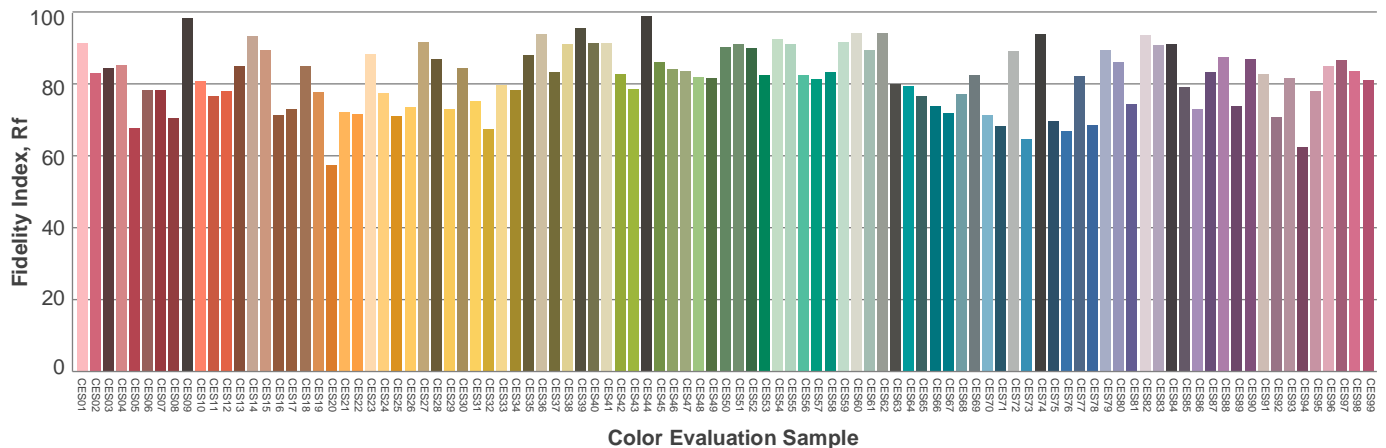
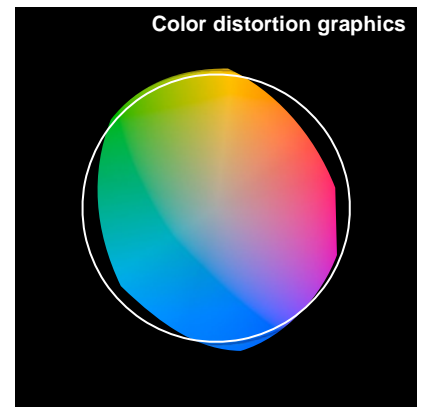
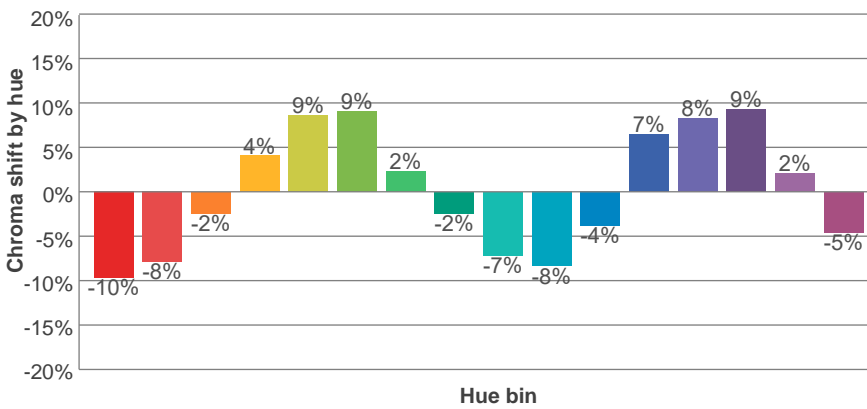
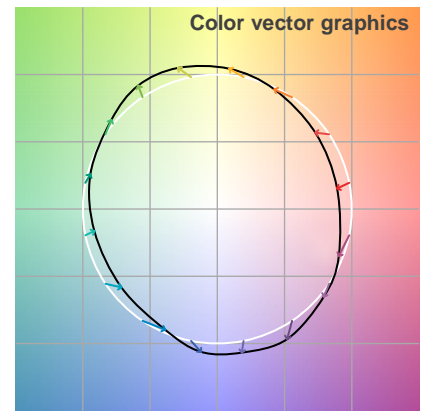
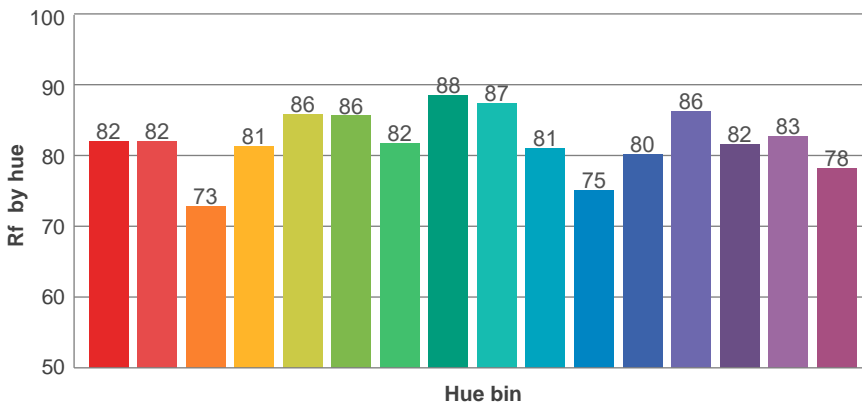
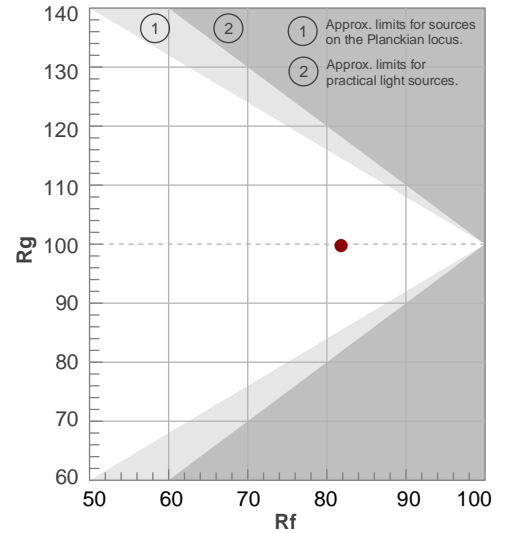
Color parameters

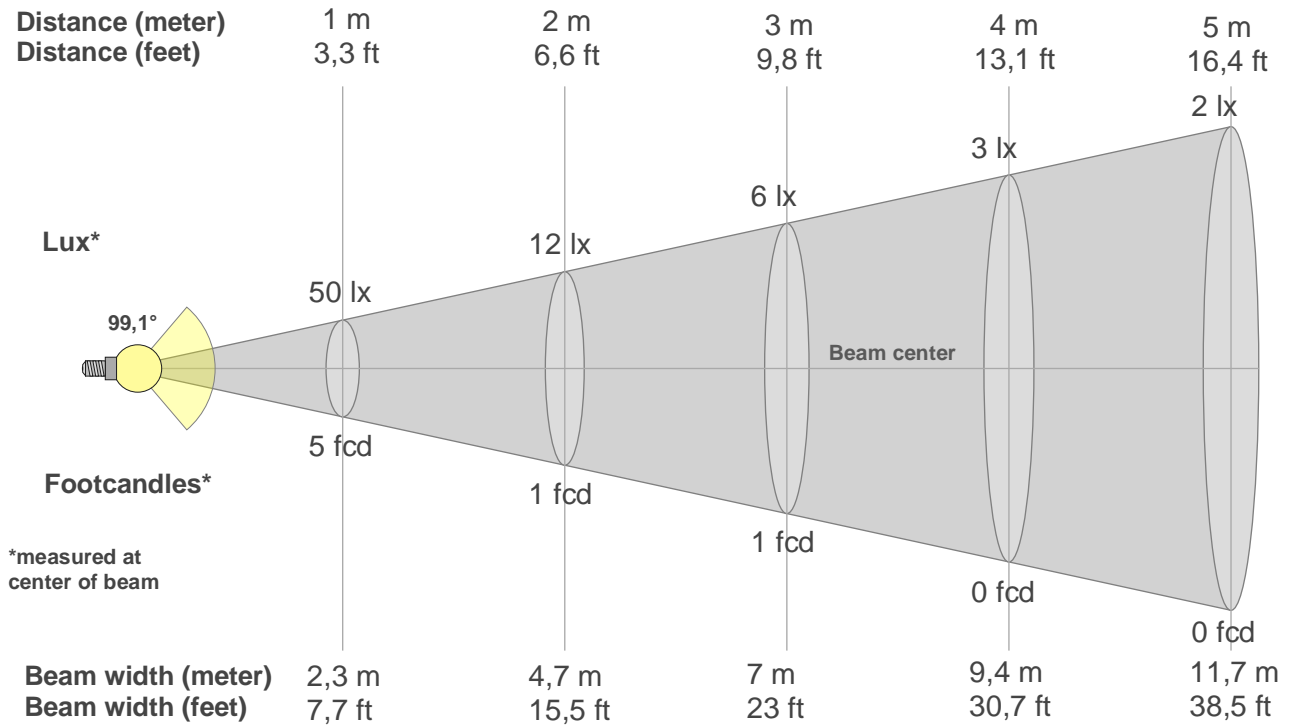
Color temperature	Color rendering Index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3000 K	82,4	22,6	81,8	99,8	80,4	0,437	0,404	0,251	0,348	0,0003

Rf 81,8
Fidelity index Rf

Rg 99,8
Gamut index Rg

Hue Bin	R _f	Shifts (%)	
		Chroma	Hue
1	82	-10%	-2%
2	82	-8%	7%
3	73	-2%	14%
4	81	4%	12%
5	86	9%	8%
6	86	9%	-2%
7	82	2%	-11%
8	88	-2%	-7%
9	87	-7%	-2%
10	81	-8%	9%
11	75	-4%	18%
12	80	7%	9%
13	86	8%	-3%
14	82	9%	-11%
15	83	2%	-10%
16	78	-5%	-17%





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
50lx	12lx	6lx	3lx	2lx	1lx	1lx	1lx	1lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx	0lx
4,6fcd	1,2fcd	0,5fcd	0,3fcd	0,2fcd	0,1fcd	0,1fcd	0,1fcd	0,1fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd	0fcd

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°
49,7	49,3	48,3	46,7	44,6	41,9	38,9	35,6	32,1	28,4	24,6	20,8	17,0	13,3	9,7	6,3	3,6	1,6	0,4	0,0
100%	99%	97%	94%	90%	84%	78%	72%	65%	57%	50%	42%	34%	27%	19%	13%	7%	3%	1%	0%

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°
49,7	49,3	48,3	46,6	44,5	41,8	38,8	35,4	31,8	28,1	24,3	20,5	16,8	13,1	9,5	5,9	2,7	0,7	0,1	0,0
100%	99%	97%	94%	89%	84%	78%	71%	64%	57%	49%	41%	34%	26%	19%	12%	5%	1%	0%	0%

Intensities in 180° c-plane

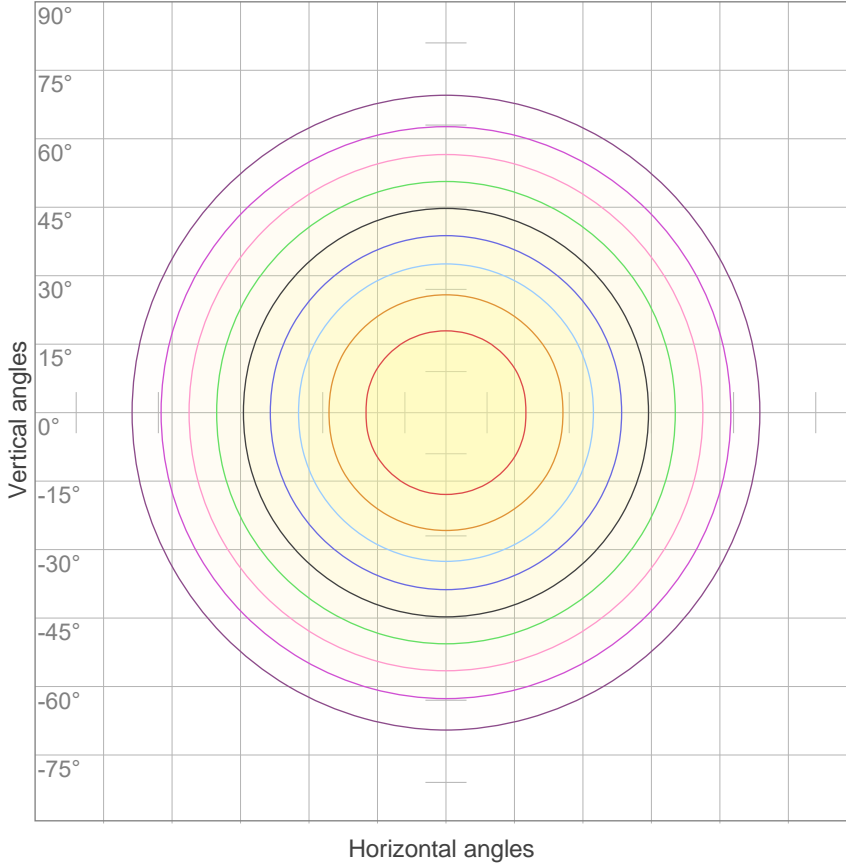
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
49,7	49,3	48,3	46,7	44,6	41,9	38,9	35,6	32,1	28,4	24,6	20,8	17,0	13,3	9,7	6,3	3,6	1,6	0,4	0,0
100%	99%	97%	94%	90%	84%	78%	72%	65%	57%	50%	42%	34%	27%	19%	13%	7%	3%	1%	0%

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°
49,7	49,3	48,3	46,6	44,5	41,8	38,8	35,4	31,8	28,1	24,3	20,5	16,8	13,1	9,5	5,9	2,7	0,7	0,1	0,0
100%	99%	97%	94%	89%	84%	78%	71%	64%	57%	49%	41%	34%	26%	19%	12%	5%	1%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
99,1°	153,4°	168,4°	82,5%	58,4%

iso-candela diagram

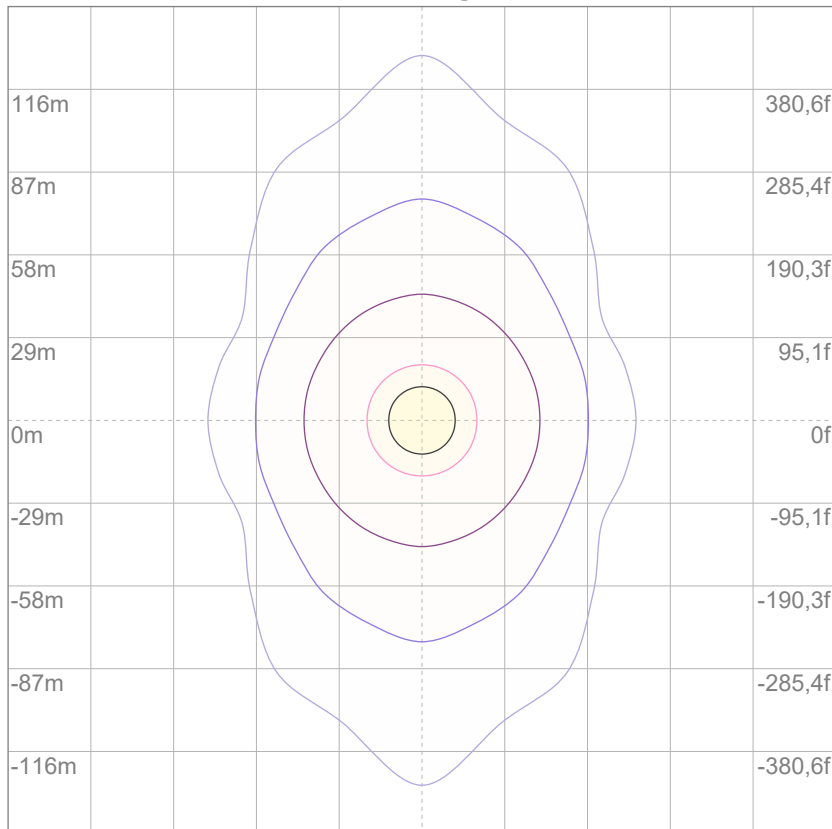


10%	5 cd
20%	10 cd
30%	15 cd
40%	20 cd
50%	25 cd
60%	30 cd
70%	35 cd
80%	40 cd
90%	45 cd

Conditions:

Number of c-planes: 12
Candela at center: 50 cd

iso-lux diagram



3%	14,9m lx
5%	24,8m lx
10%	49,7m lx
30%	0,149 lx
50%	0,248 lx

Conditions:

Number of c-planes: 12
Lux at center: 0,497 lx

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

Glare evaluation according to UGR

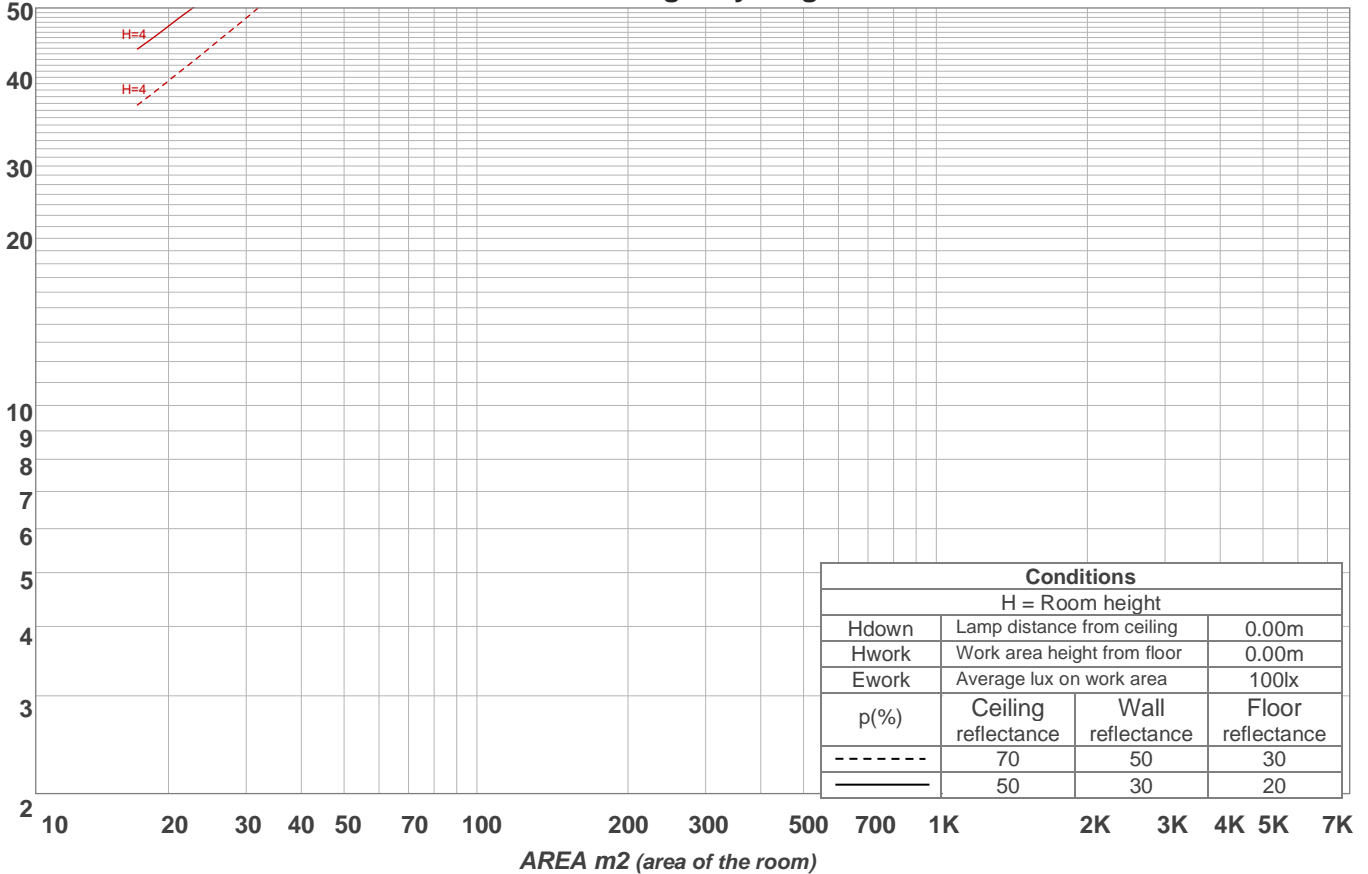
p Ceiling	70	70	50	50	30	70	70	50	50	30	
p Walls	50	30	50	30	30	50	30	50	30	30	
p Floor	20	20	20	20	20	20	20	20	20	20	
Room size X Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis					
2H	2H	27,0	28,2	27,2	28,5	28,7	27,0	28,1	27,2	28,4	28,7
	3H	27,9	29,1	28,3	29,4	29,6	27,8	29,0	28,2	29,3	29,5
	4H	28,2	29,3	28,6	29,6	29,8	28,1	29,2	28,5	29,5	29,8
	6H	28,4	29,4	28,7	29,6	30,0	28,2	29,2	28,5	29,5	29,9
	8H	28,4	29,3	28,7	29,6	30,1	28,2	29,2	28,5	29,5	29,9
	12H	28,3	29,3	28,7	29,6	30,1	28,2	29,1	28,5	29,4	29,9
4H	2H	27,4	28,6	27,8	28,8	29,1	27,4	28,5	27,8	28,8	29,0
	3H	28,5	29,5	28,9	29,8	30,3	28,5	29,4	28,9	29,8	30,2
	4H	28,8	29,7	29,3	30,1	30,7	28,8	29,6	29,2	30,0	30,6
	6H	29,0	29,9	29,5	30,2	30,6	28,9	29,7	29,4	30,1	30,5
	8H	29,1	29,8	29,6	30,2	30,6	28,9	29,6	29,4	30,0	30,4
	12H	29,1	29,7	29,6	30,1	30,6	28,9	29,5	29,4	29,9	30,4
8H	4H	28,9	29,7	29,4	30,1	30,4	28,9	29,6	29,4	30,0	30,4
	6H	29,2	29,8	29,7	30,2	30,8	29,1	29,6	29,6	30,1	30,6
	8H	29,3	29,8	29,8	30,3	30,9	29,1	29,6	29,6	30,1	30,8
	12H	29,3	29,7	29,9	30,2	30,9	29,1	29,5	29,7	30,0	30,6
12H	4H	28,9	29,5	29,4	29,9	30,4	28,8	29,5	29,3	29,9	30,4
	6H	29,2	29,7	29,7	30,2	30,9	29,1	29,6	29,6	30,1	30,7
	8H	29,3	29,7	29,9	30,2	30,8	29,1	29,5	29,7	30,0	30,6
Variation of the observer position for the luminaire distance S											
S = 1.0H	0,2 / -0,3					0,2 / -0,3					
S = 1.5H	0,4 / -0,7					0,4 / -0,7					
S = 2.0H	1,0 / -1,3					1,0 / -1,4					
CIE 117-1995. Corrected glare indices referring to 121 lm total luminous flux											

Coefficients of Utilization

Ceiling reflectance	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	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	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	92	86	80	97	90	84	79	87	82	78	84	79	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	63	61
4	84	73	64	58	82	71	63	57	69	62	57	66	61	56	64	59	55	53
5	78	65	56	50	75	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	35	46	39	34	45	39	34	32
9	58	45	37	32	57	44	37	32	43	36	31	42	36	31	41	35	31	29
10	55	42	34	29	53	41	34	29	40	33	29	39	33	28	38	32	28	27

LAMPS (number of lamps)

Luminaire budgetary diagram



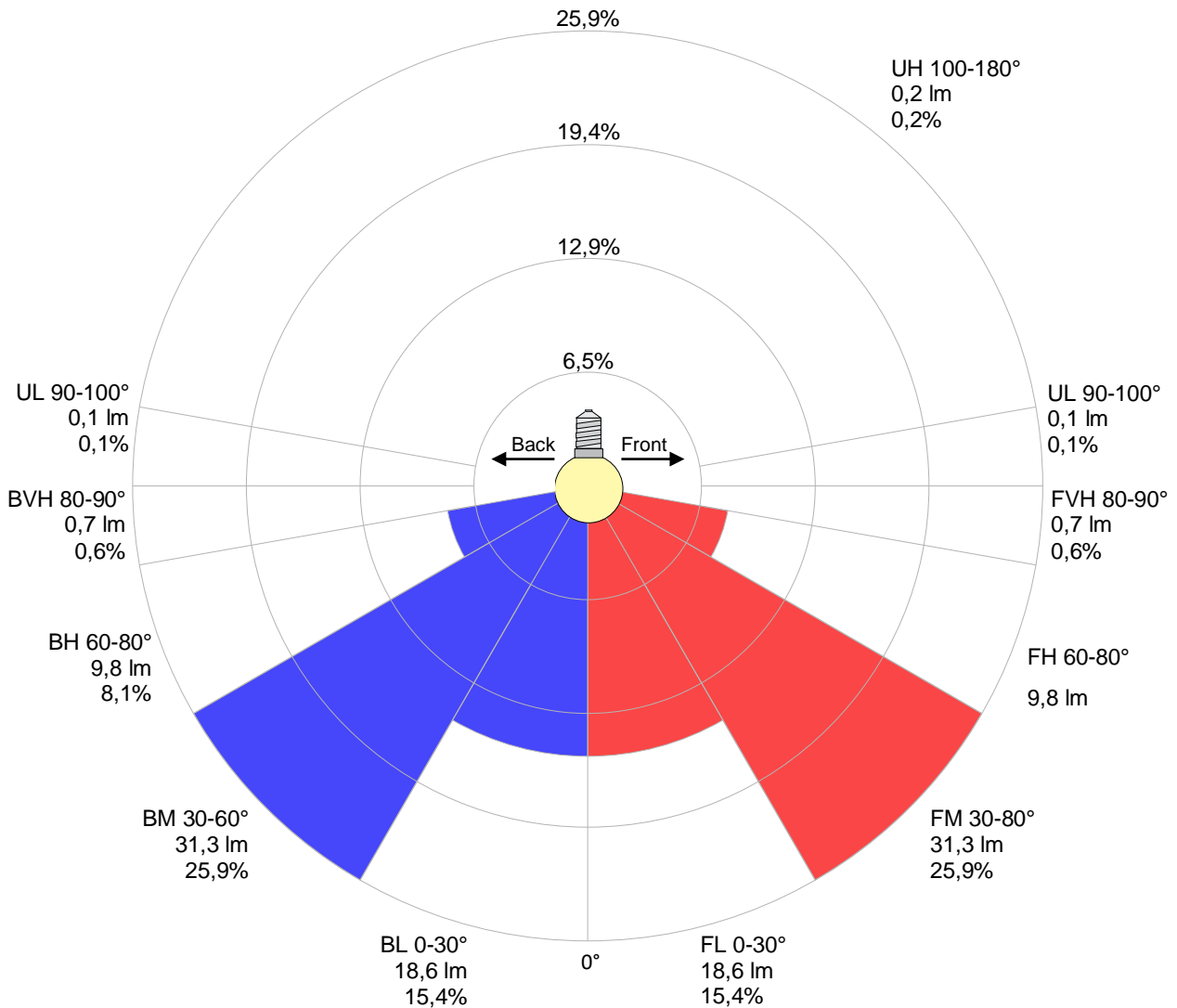
Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
{LUM0-10}	13,2 lm	19,3 lm	22,2 lm	21,8 lm	18,5 lm	13,1 lm	6,45 lm	1,26 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0,070 lm	0,048 lm	0,043 lm	0,037 lm	0,036 lm	0,029 lm	0,023 lm	0,015 lm	0,005 lm

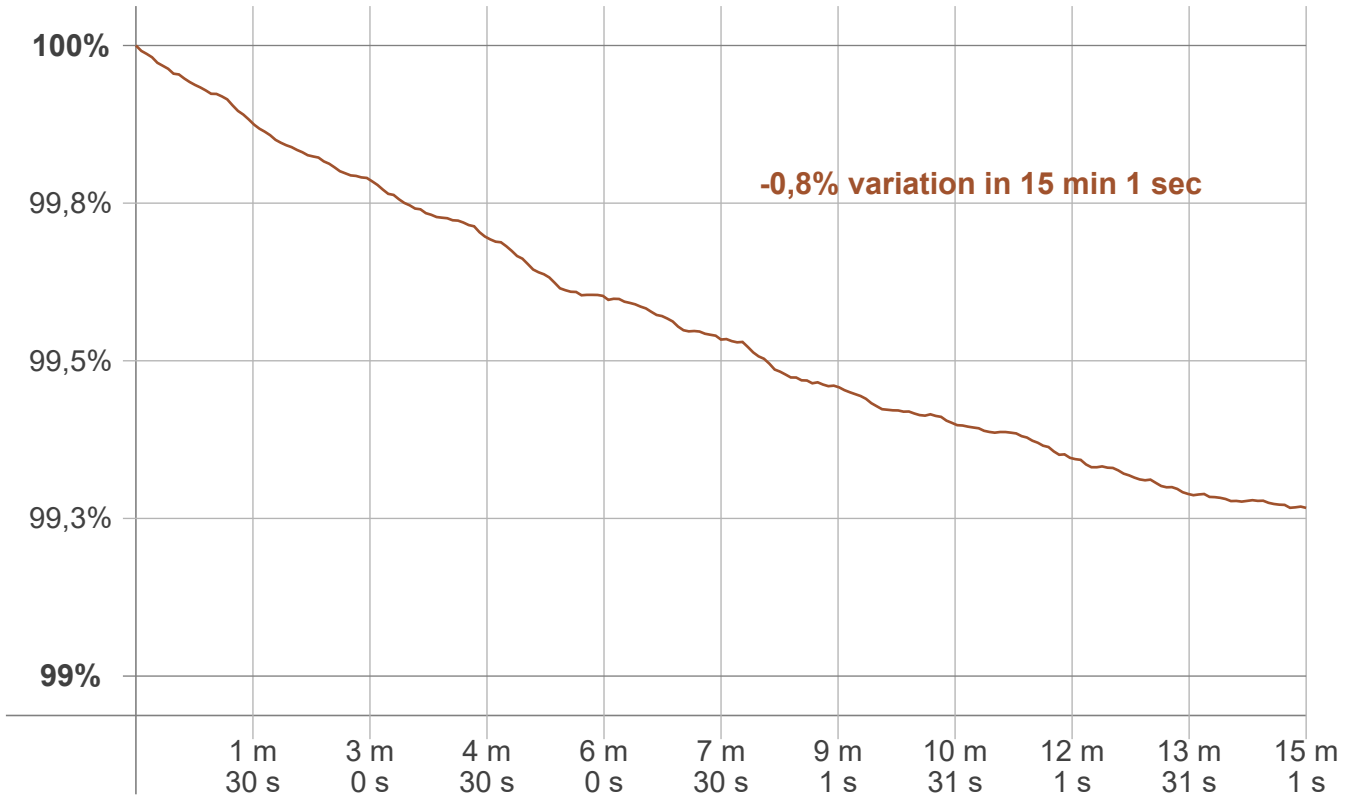
LCS table

BUG rating:	B0 U0 G0	
Forward light	Lumens	Lumens %
Low(0-30):	18,6	15,4%
Medium(30-60):	31,3	25,9%
High(60-80):	9,8	8,1%
Very high(80-90):	0,7	0,6%
Back light		
Low(0-30):	18,6	15,4%
Medium(30-60):	31,3	25,9%
High(60-80):	9,8	8,1%
Very high(80-90):	0,7	0,6%
Uplight		
Low(90-100):	0,1	0,1%
High(100-180):	0,2	0,2%

LCS graph



Warmup curve



Warmup result

Warmup time:	Lamp stabilized in 15 min 1 sec
Warmup variation	-0,8%

Warmup conditions

Stable period:	15 min
Stable change max:	2,0%
Minimum time:	15 min

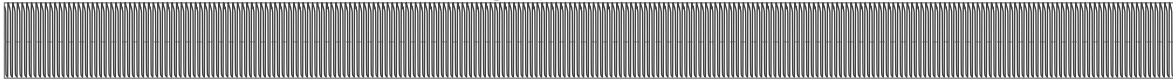
Color temperature change

CCT start	CCT change	CCT end
3006 K	-6 K	3000 K

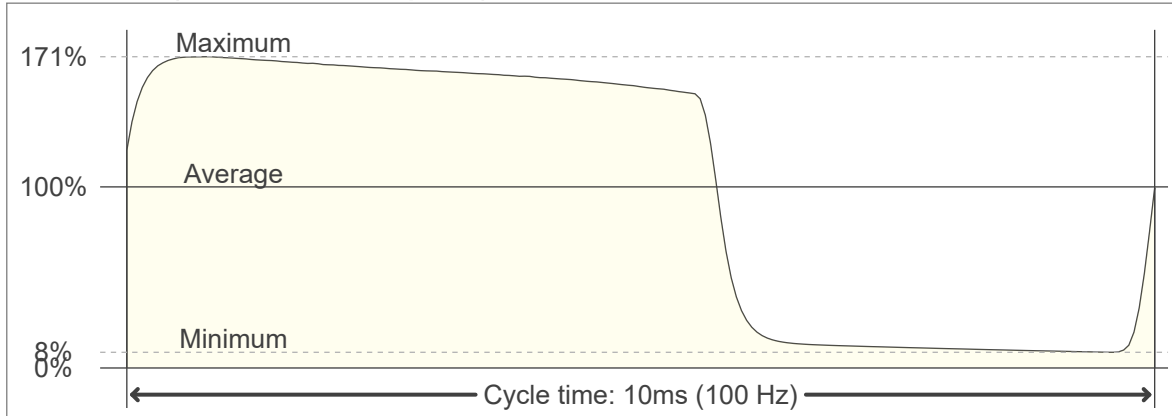
Output change

Output start	Output change	Output end
122 lm	-1 lm	121 lm

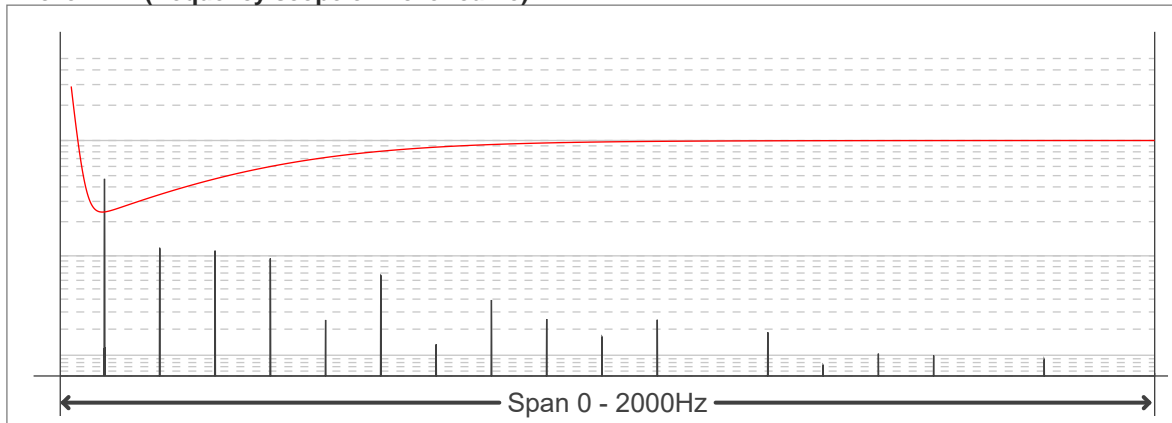
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:		100 Hz	
Flicker index:	0,35	JA8/10 40Hz	0,18 %
Flicker percentage:	90,43 %	JA8/10 90Hz	0,8 %
SVM: (Visual flicker)	3,67	JA8/10 200Hz	107,44 %
PstLM	0,08	JA8/10 400Hz	102,06 %
Mp	0,03	JA8/10 1000Hz	101,06 %

Flicker conditions:

Sample rate:	20000 samples/second
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