Light efficiency:

116 Lumen/Watt

Light quality:

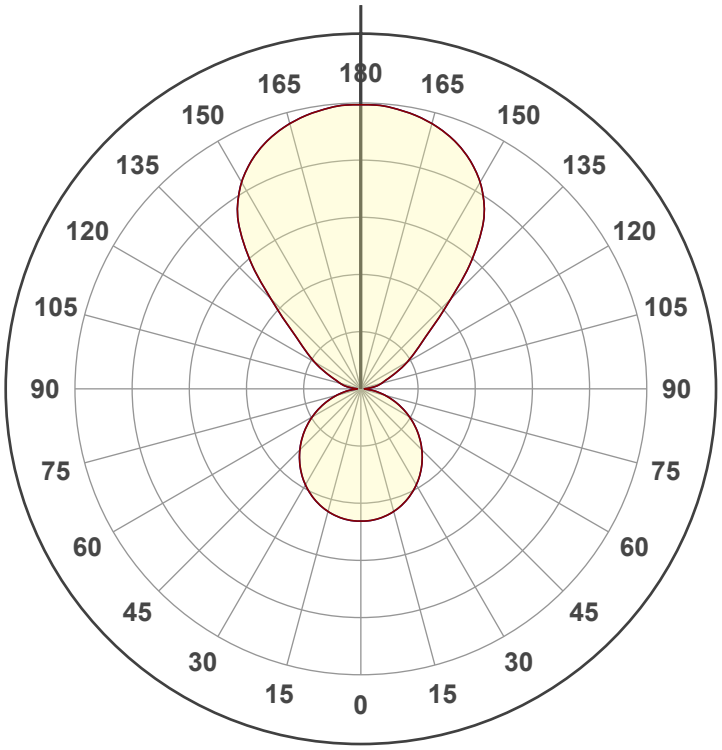
CRI: 83,9

Color temperature:

5000 K

Output: 4688 lm
Peak: 1385 cd

Power: 40,5 W
PF: 0,96



Beam angle **360°**

CIE 1931
x: 0,345
y: 0,352

Tracking number: VT240924-004628

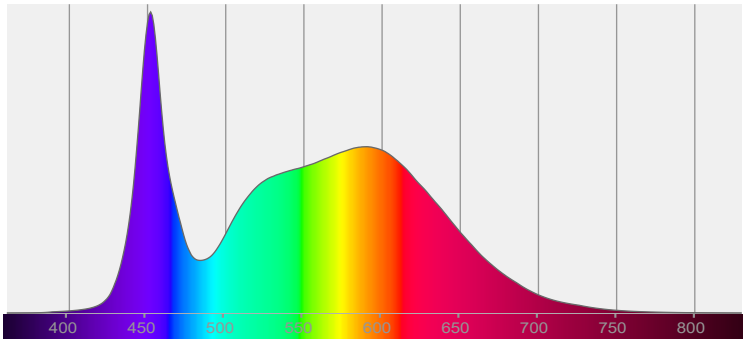
Product name:
277670-5000K-UP

Item number:
277670-5000K-UP

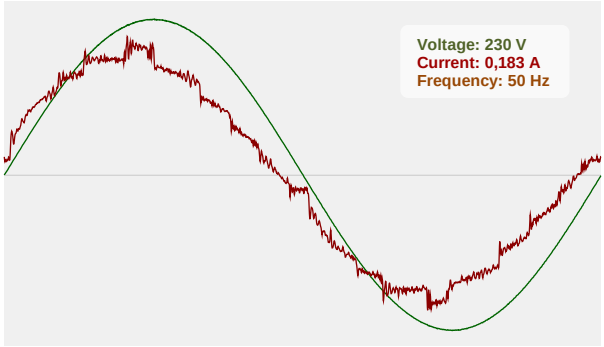
Date and time:
24-9-2024 13:06:19

Description:
LED PANEEL ROND | CCT | MET AFSTANDSBEDIENING

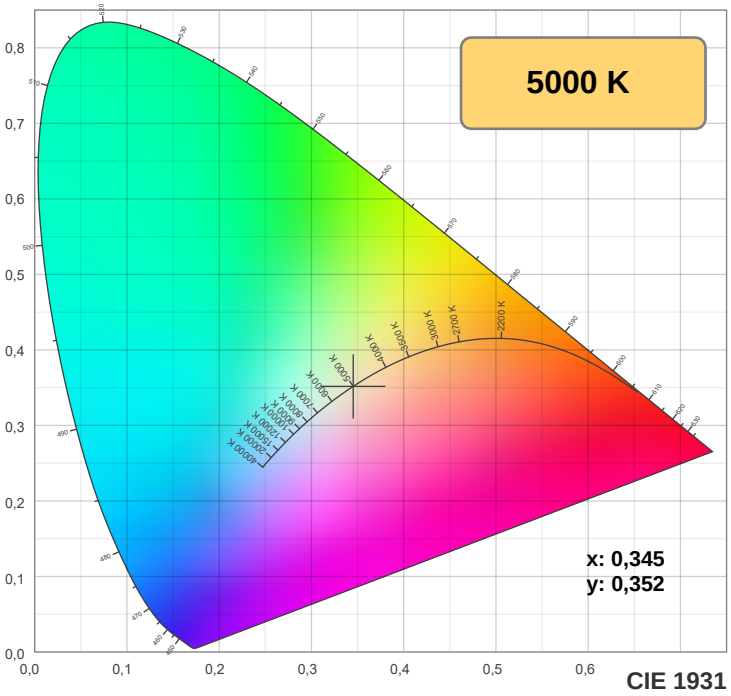
Spectra



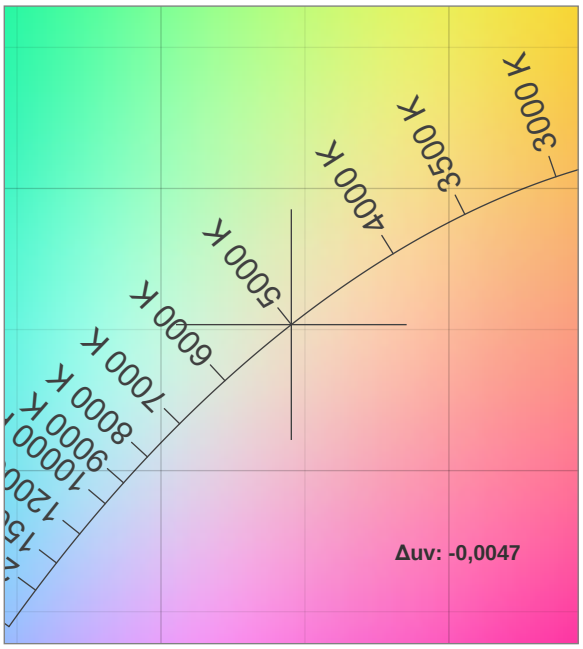
Power



Color details

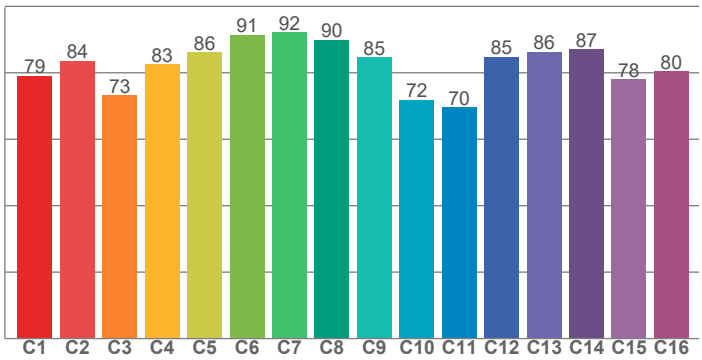


CIE 1931

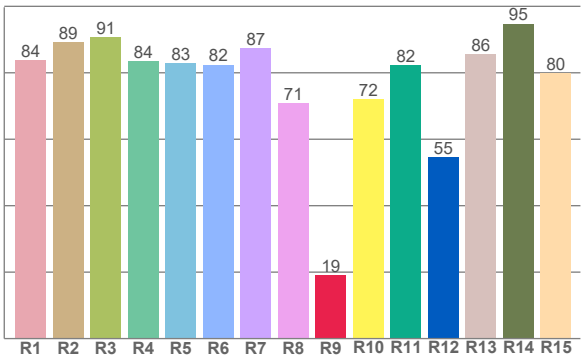


CIE 1931 ZOOM

TM-30: 81,8



CRI: 83,9 (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
83,8	89,3	90,7	83,6	82,9	82,4	87,5	70,8	19,0	72,1	82,2	54,7	85,6	94,8	80,0

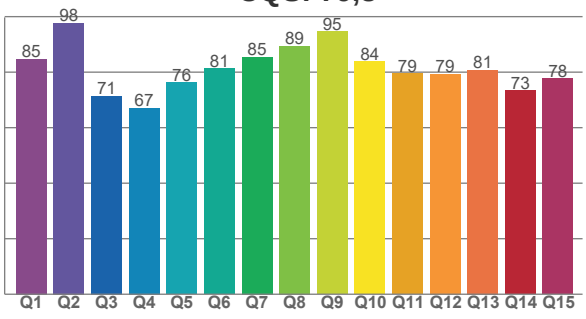
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
79,1	83,6	73,2	82,6	86,2	91,5	92,1	90,0	84,7	71,9	69,7	84,8	86,3	87,0	78,1	80,4

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
84,7	97,6	71,4	67,0	76,2	81,2	85,4	89,3	94,6	83,8	79,5	79,3	80,7	73,4	77,7

CQS: 79,8



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
5000 K	83,9	19,0	81,8	97,9	79,8	0,345	0,352	0,211	0,323	-0,0047

TM-30 details

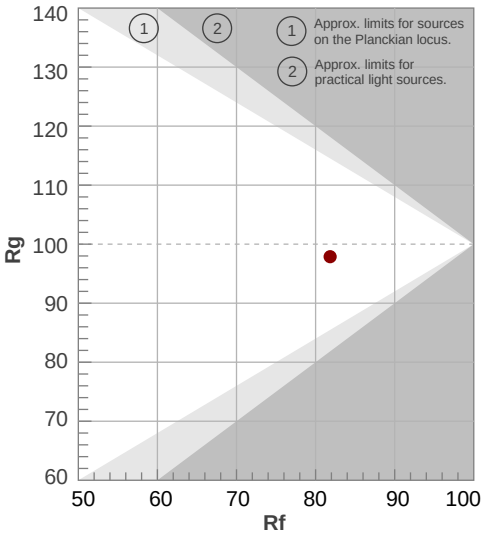
Rf 81,8

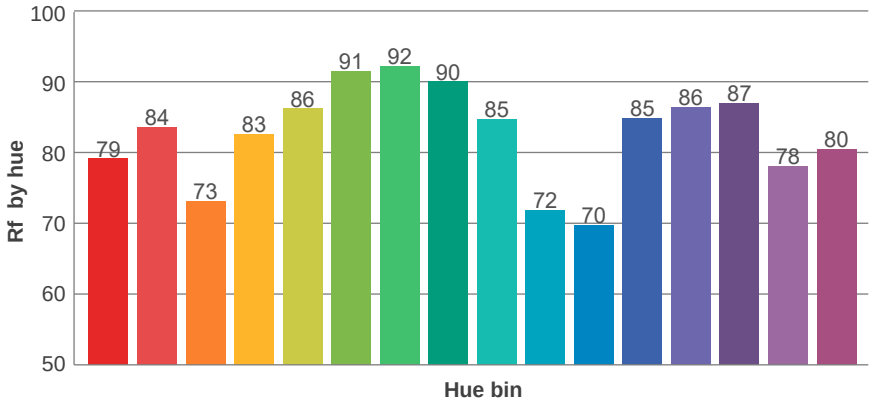
Fidelity index Rf

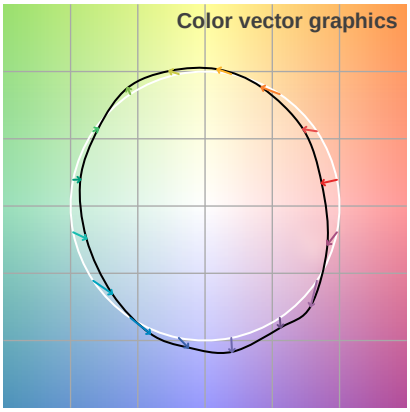
Rg 97,9

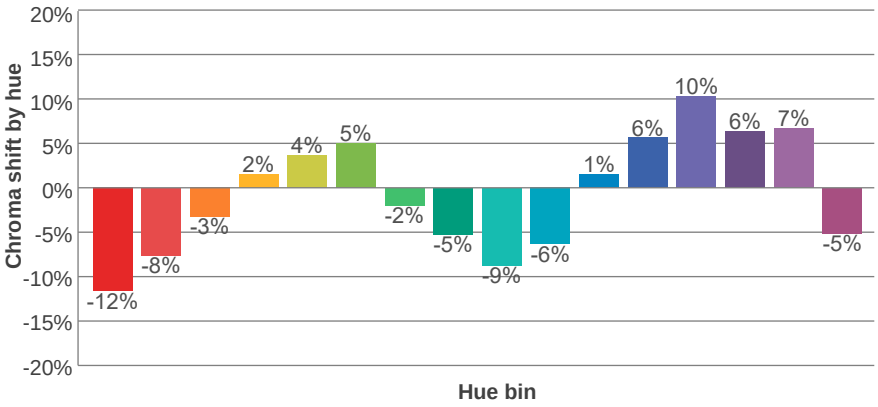
Gamut index Rg

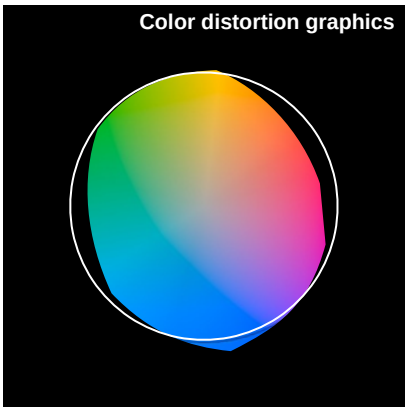
Hue Bin	R_f	Shifts (%) Chroma	Hue
1	79	-12%	0%
2	84	-8%	7%
3	73	-3%	14%
4	83	2%	11%
5	86	4%	6%
6	91	5%	-1%
7	92	-2%	-4%
8	90	-5%	-1%
9	85	-9%	7%
10	72	-6%	16%
11	70	1%	19%
12	85	6%	8%
13	86	10%	-1%
14	87	6%	-3%
15	78	7%	-18%
16	80	-5%	-10%

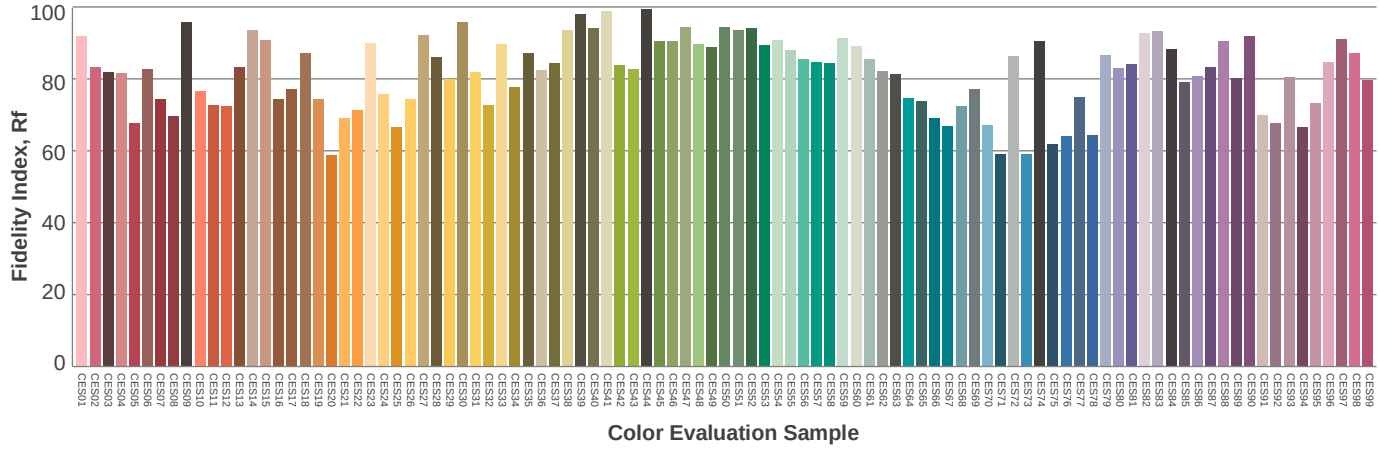




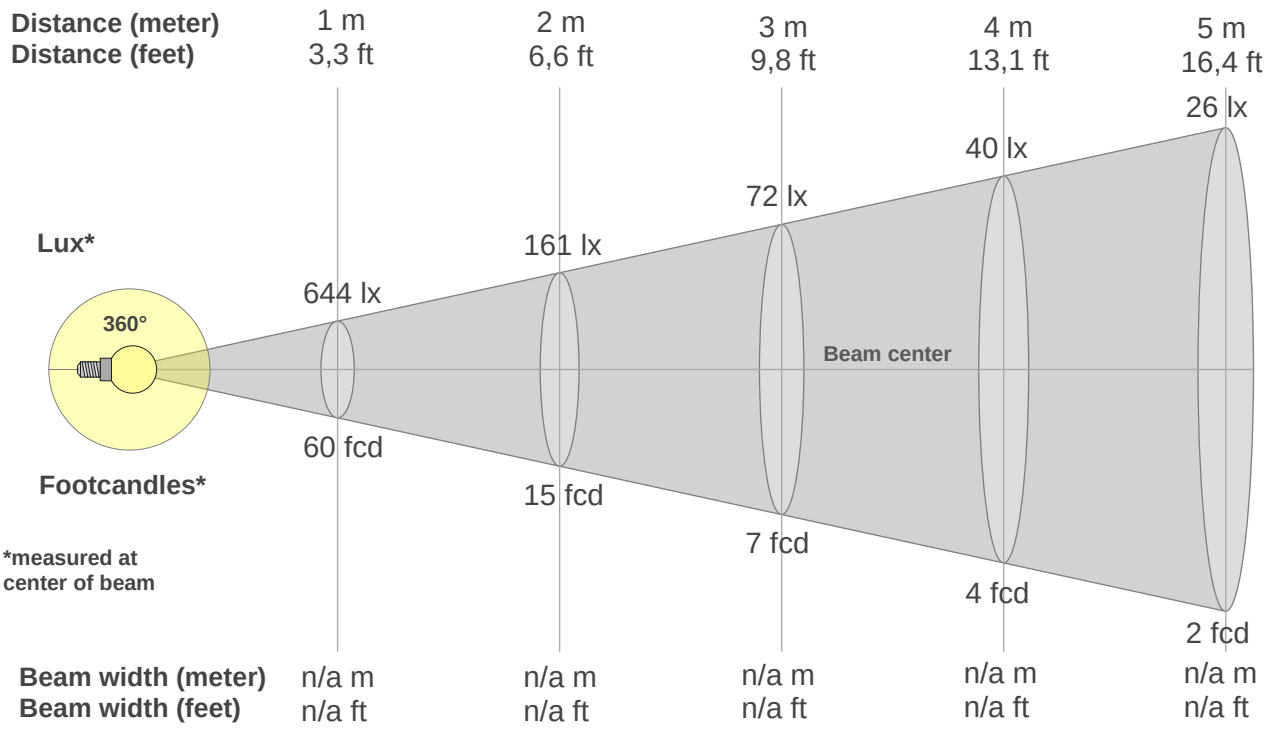








Beam details



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
644lx	161lx	72lx	40lx	26lx	18lx	13lx	10lx	8lx	6lx	5lx	4lx	4lx	3lx	3lx	3lx	2lx	2lx	2lx	2lx
59,9fcd	15fcd	6,7fcd	3,7fcd	2,4fcd	1,7fcd	1,2fcd	0,9fcd	0,7fcd	0,6fcd	0,5fcd	0,4fcd	0,4fcd	0,3fcd	0,3fcd	0,2fcd	0,2fcd	0,2fcd	0,2fcd	0,1fcd

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°
644	636	607	559	496	420	335	243	152	70	22	70	121	220	355	627	1017	1211	1315	1368
100%	99%	94%	87%	77%	65%	52%	38%	24%	11%	3%	11%	19%	34%	55%	97%	158%	188%	204%	212%

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°
644	636	607	559	496	420	335	243	152	70	22	70	121	220	355	627	1017	1211	1315	1368
100%	99%	94%	87%	77%	65%	52%	38%	24%	11%	3%	11%	19%	34%	55%	97%	158%	188%	204%	212%

Intensities in 180° c-plane

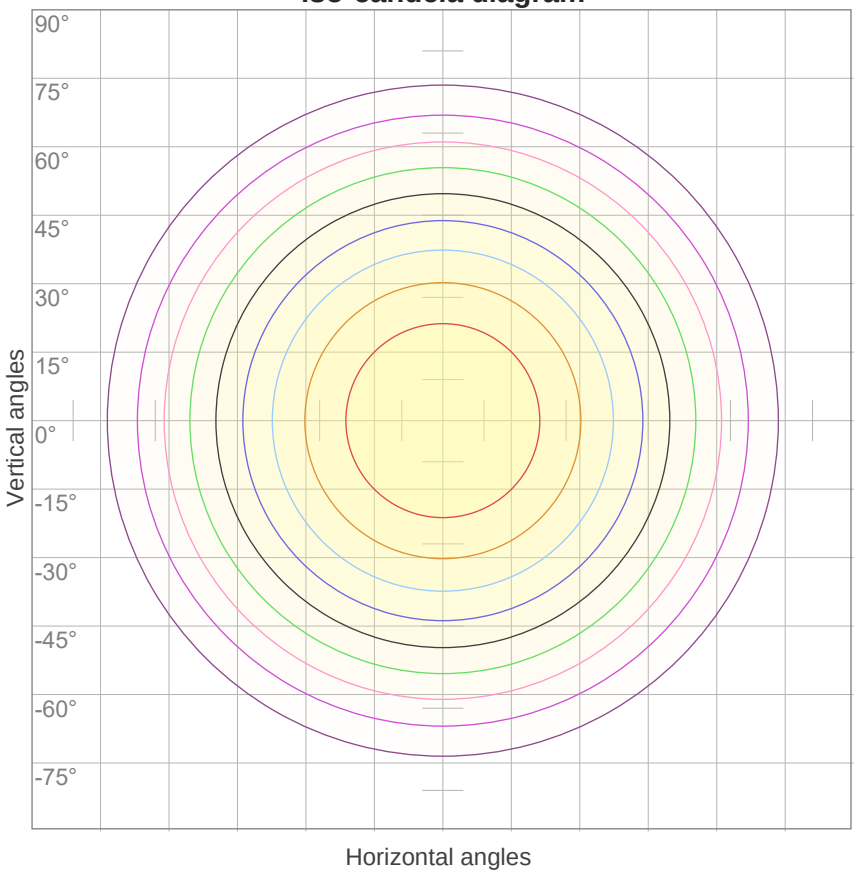
0°	9°	18°	27°	36°	45°	54°	63°	72°	81°	90°	99°	108°	117°	126°	135°	144°	153°	162°	171°
644	636	607	559	496	420	335	243	152	70	22	70	121	220	355	627	1017	1211	1315	1368
100%	99%	94%	87%	77%	65%	52%	38%	24%	11%	3%	11%	19%	34%	55%	97%	158%	188%	204%	212%

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°
644	636	607	559	496	420	335	243	152	70	22	70	121	220	355	627	1017	1211	1315	1368
100%	99%	94%	87%	77%	65%	52%	38%	24%	11%	3%	11%	19%	34%	55%	97%	158%	188%	204%	212%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
360°	360°	360°	30,5%	20,9%

iso-candela diagram



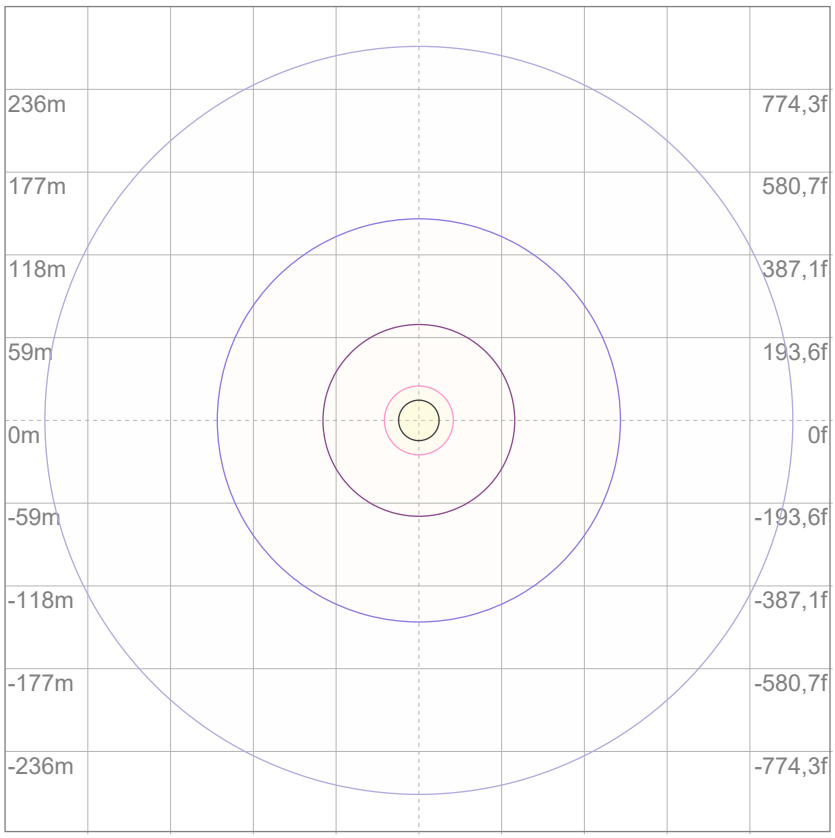
10%	64 cd
20%	129 cd
30%	193 cd
40%	258 cd
50%	322 cd
60%	387 cd
70%	451 cd
80%	516 cd
90%	580 cd

Conditions:

Number of c-planes: 12

Candela at center: 644 cd

iso-lux diagram



3%	0,193 lx
5%	0,322 lx
10%	0,644 lx
30%	1,93 lx
50%	3,22 lx

Conditions:

Number of c-planes: 12

Lux at center: 6,44 lx

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

Glare evaluation according to UGR

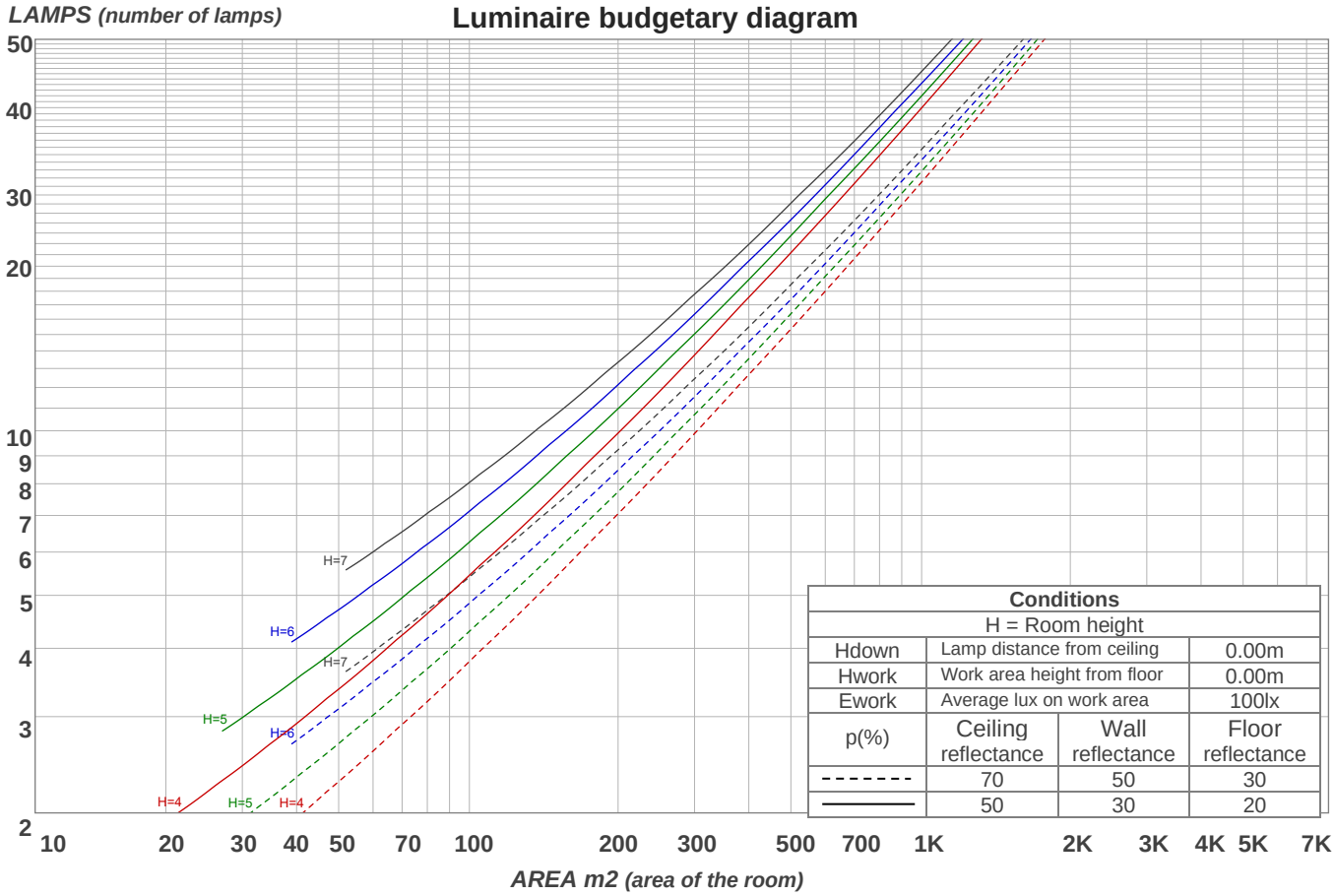
p Ceiling	70	70	50	50	30	70	70	50	50	30
p Walls	50	30	50	30	30	50	30	50	30	30
p Floor	20	20	20	20	20	20	20	20	20	20
Room size X Y	Viewing direction at right angles to lamp axis					Viewing direction parallel to lamp axis				
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Variation of the observer position for the luminaire distance S										
n/a	n/a					n/a				
n/a	n/a					n/a				
n/a	n/a					n/a				
CIE 117-1995. Corrected glare indices referring to 4688 lm total luminous flux										

UGR data could not be calculated due to missing dimensions. Goto Edit->Photometric->Dimensions and set the fixture/lamp dimensions.

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	104	104	104	104	95	95	95	95	77	77	77	61	61	61	46	46	46	39
1	95	91	87	83	86	83	79	76	67	65	63	53	52	50	40	39	38	32
2	86	79	73	68	78	72	67	62	59	55	52	47	44	42	35	34	32	27
3	79	69	62	56	71	63	57	52	52	47	43	41	38	35	31	29	27	23
4	72	61	53	47	65	56	49	44	46	41	37	36	33	30	28	25	23	19
5	66	54	46	40	60	50	43	37	41	36	32	33	29	26	25	22	20	17
6	61	49	41	35	55	45	38	32	37	31	27	29	26	23	23	20	18	15
7	56	44	36	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13
8	52	40	32	27	47	36	30	25	30	25	21	24	20	18	19	16	14	12
9	48	36	29	24	44	33	27	22	28	23	19	22	19	16	17	15	13	10
10	45	33	26	21	41	30	24	20	25	20	17	21	17	14	16	13	11	9

Luminaire budgetary diagram



Zonal Lumen Summary

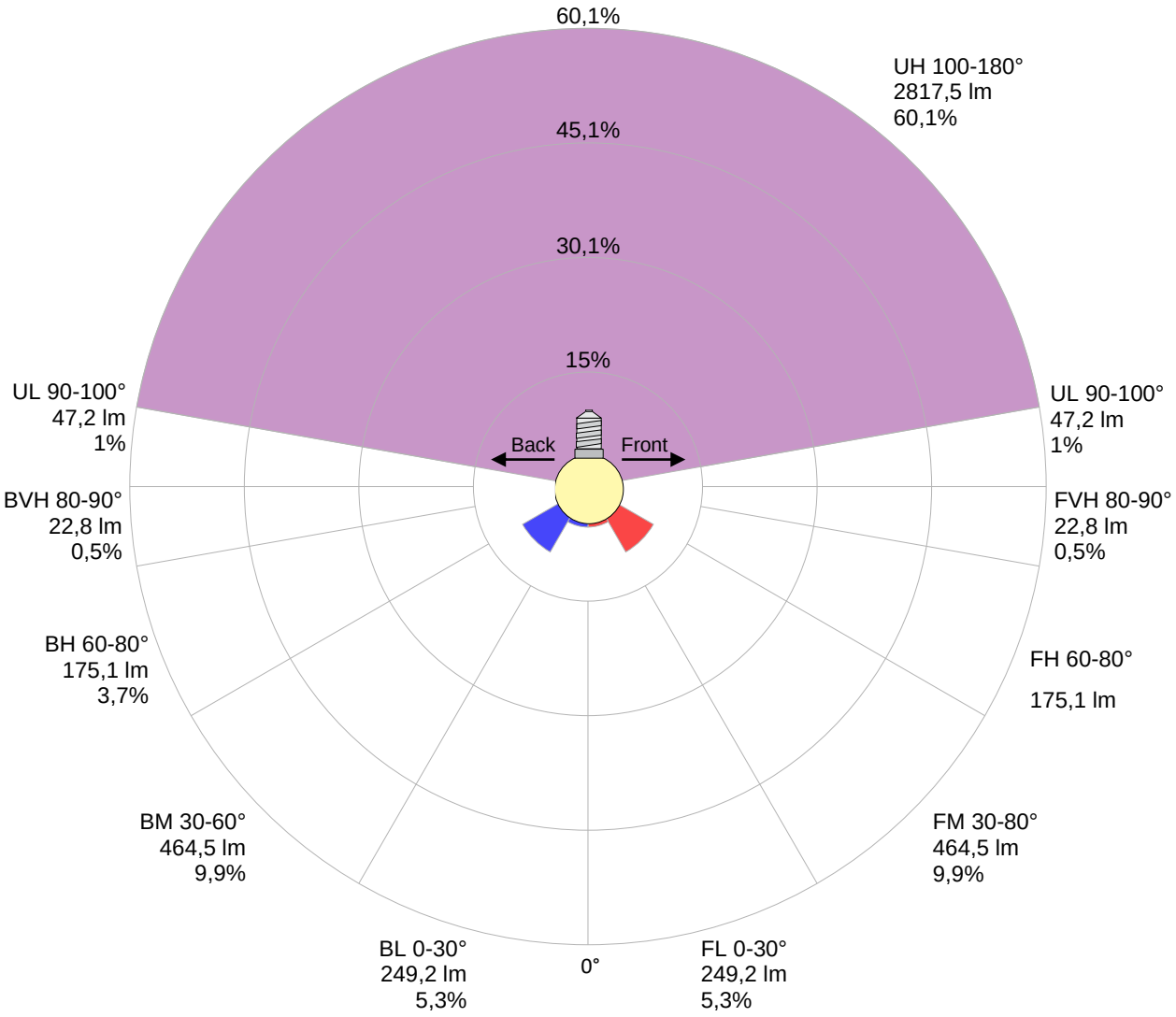
0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
{LUM0-10}	175 lm	263 lm	316 lm	324 lm	290 lm	220 lm	130 lm	43,2 lm

90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
47,1 lm	110 lm	193 lm	303 lm	488 lm	645 lm	570 lm	378 lm	131 lm

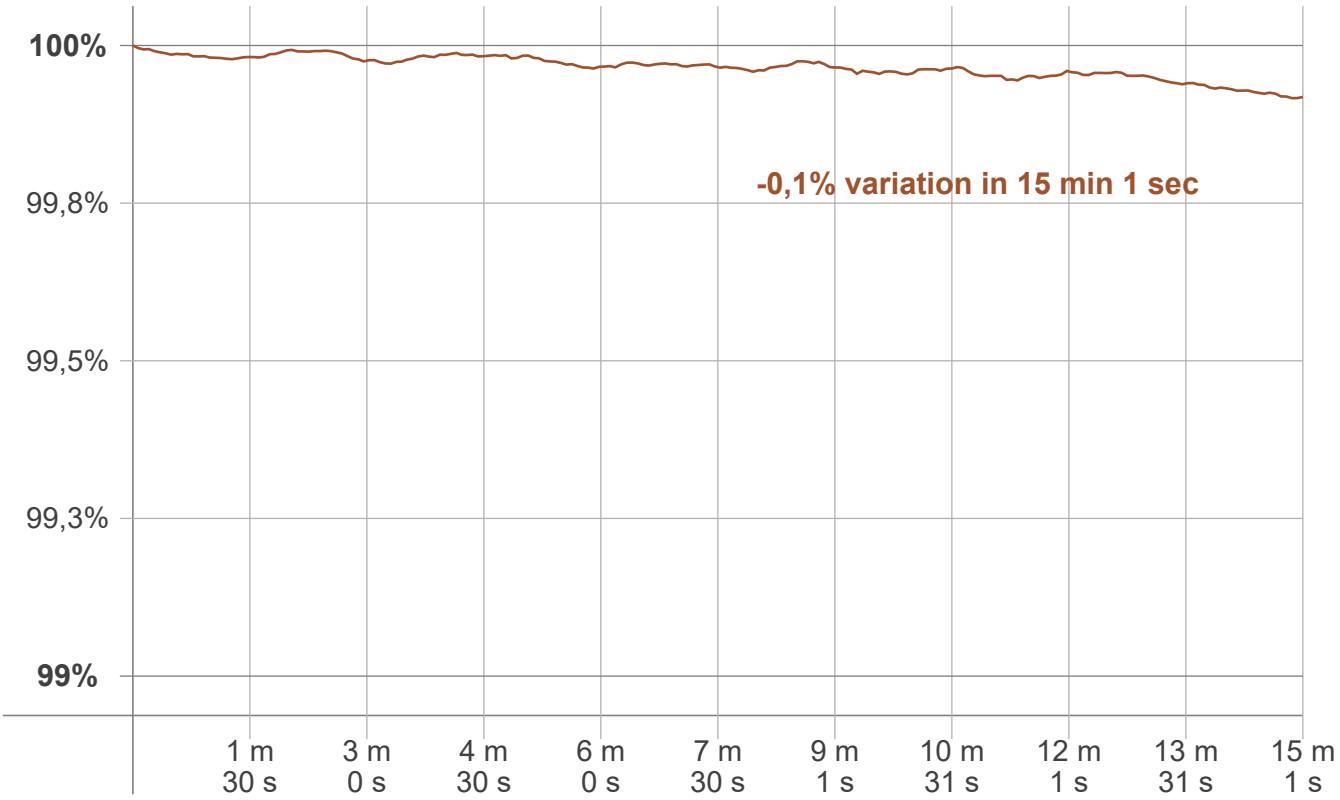
LCS table

BUG rating:	B1 U5 G1	
Forward light	Lumens	Lumens %
Low(0-30):	249,2	5,3%
Medium(30-60):	464,5	9,9%
High(60-80):	175,1	3,7%
Very high(80-90):	22,8	0,5%
Back light		
Low(0-30):	249,2	5,3%
Medium(30-60):	464,5	9,9%
High(60-80):	175,1	3,7%
Very high(80-90):	22,8	0,5%
Uplight		
Low(90-100):	47,2	1%
High(100-180):	2817,5	60,1%

LCS graph



Warmup curve



Warmup result

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

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
5002 K	-2 K	5000 K

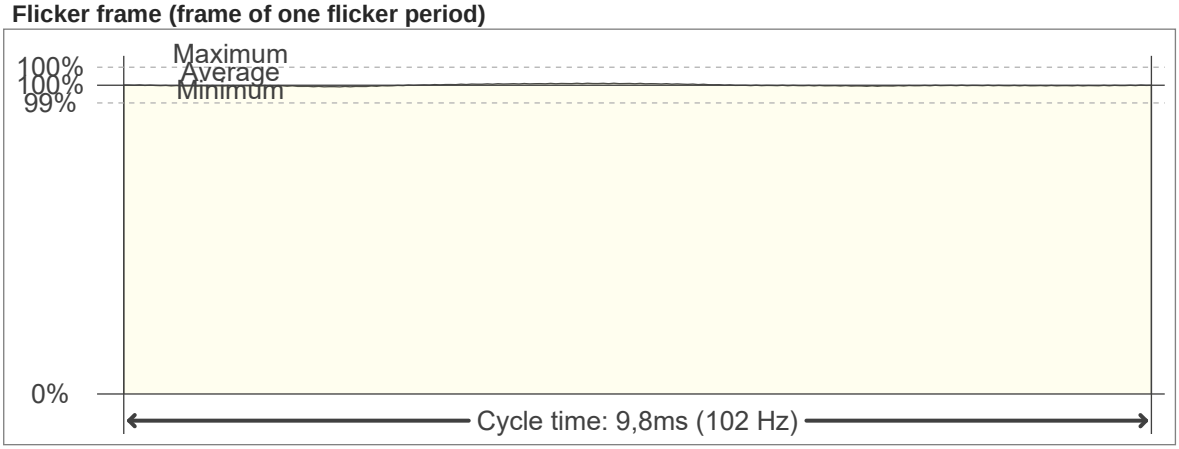
Output change

Output start	Output change	Output end
4692 lm	-4 lm	4688 lm

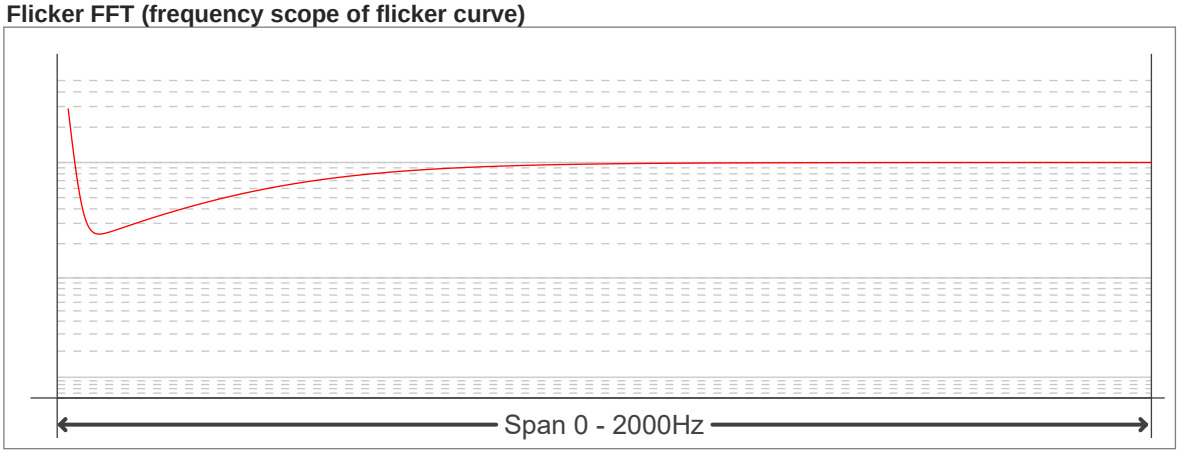
Flicker

Flicker curve (complete sampled flicker signal)

Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:		102,04 Hz	
Flicker index:	0	JA8/10 40Hz	0,02 %
Flicker percentage:	0,73 %	JA8/10 90Hz	0,02 %
SVM: (Visual flicker)	0,01	JA8/10 200Hz	0,35 %
PstLM	0,01	JA8/10 400Hz	0,52 %
Mp	0,01	JA8/10 1000Hz	0,55 %

Flicker conditions:

Sample rate:	20000 samples/second