Light efficiency:

96 Lumen/Watt

Light quality:

CRI: 91,1

Color temperature:

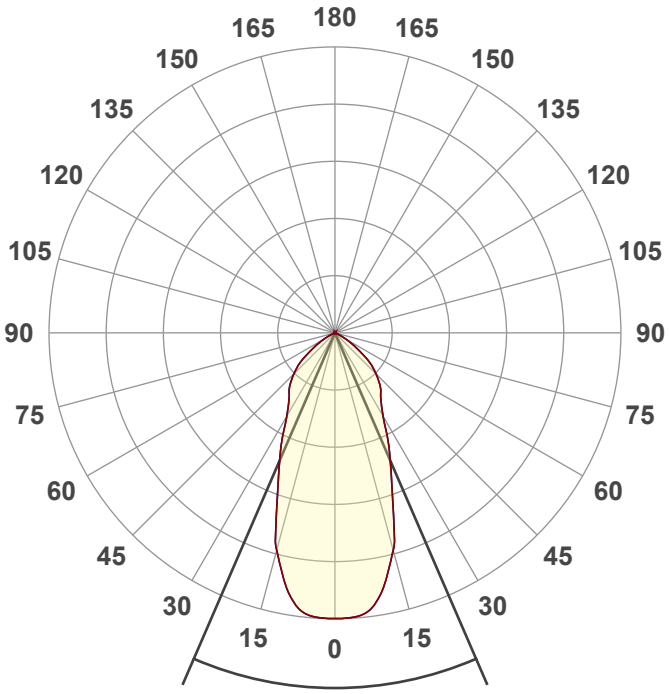
3000 K

Output: 560 lm

Peak: 583 cd

Power: 5,8 W

PF: 0,78



Beam angle **46,8°**

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

Tracking number: VT240906-008752

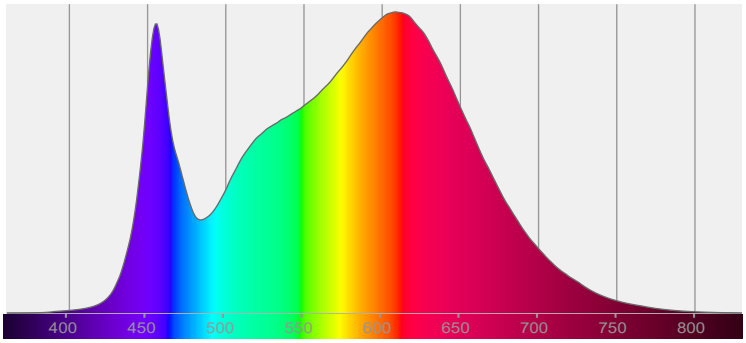
Product name:
807504

Item number:
807504

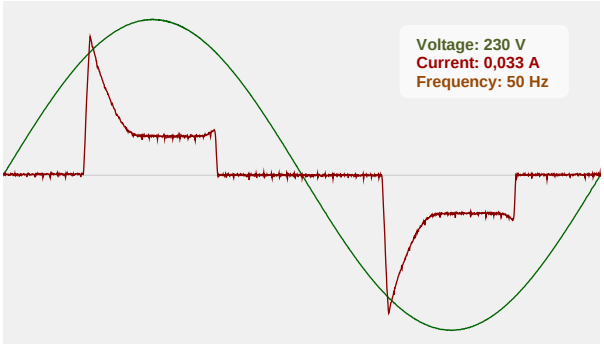
Date and time:
6-9-2024 11:58:52

Description:
LED AR70 | GU10 | SPOT | 45° | 6W | ZWART | D2W

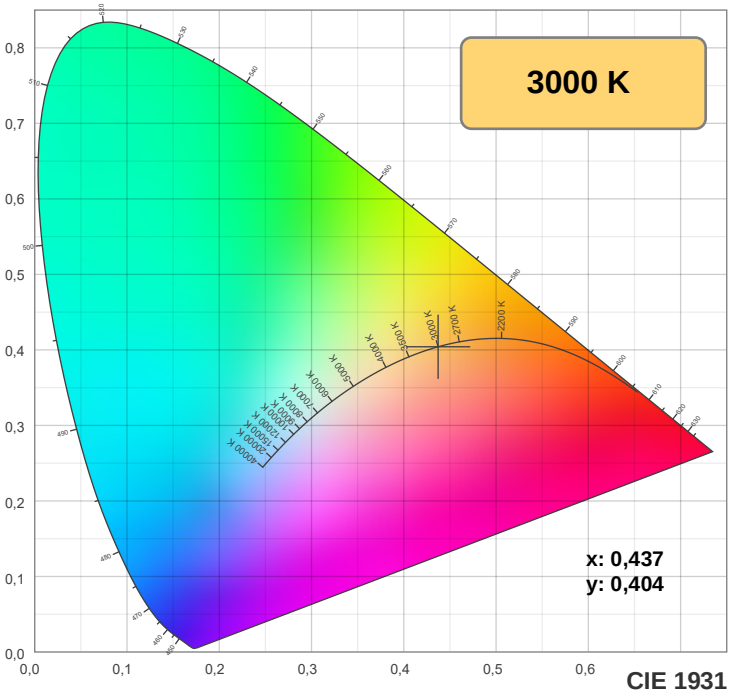
Spectra



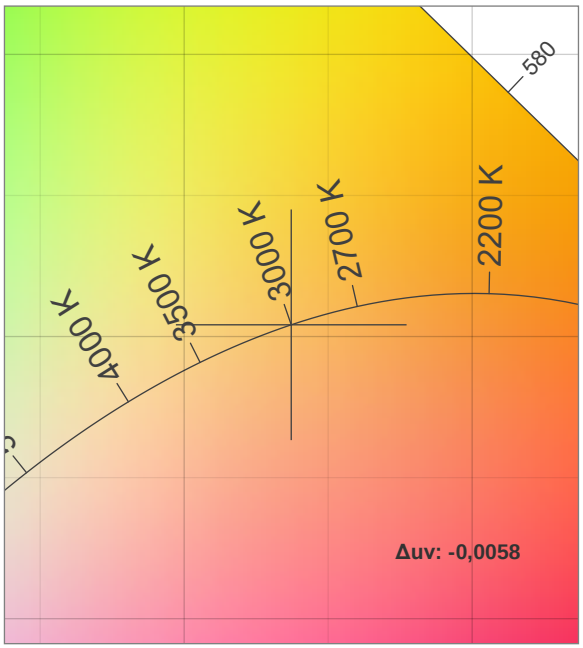
Power



Color details

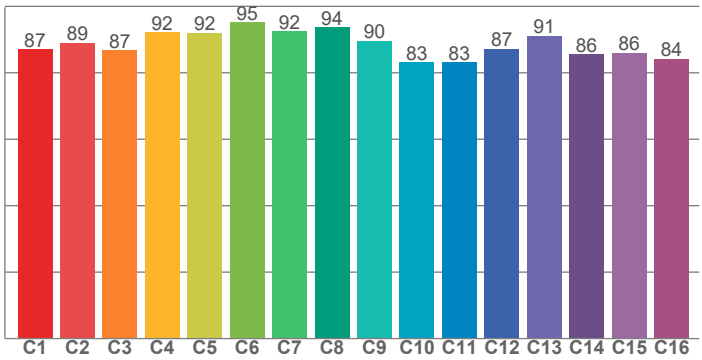


CIE 1931

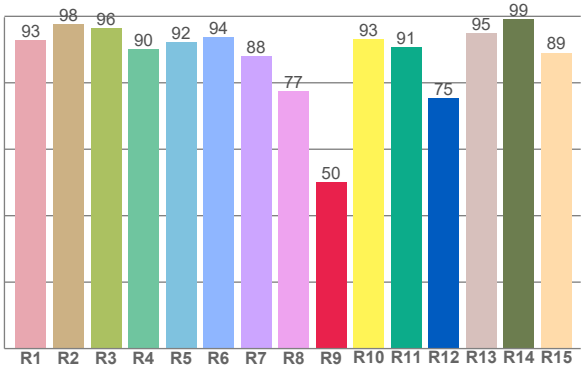


CIE 1931 ZOOM

TM-30: 88,5



CRI: 91,1 (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
92,8	97,6	96,5	90,2	92,3	93,8	88,1	77,4	50,1	93,2	90,7	75,4	94,8	99,2	89,0

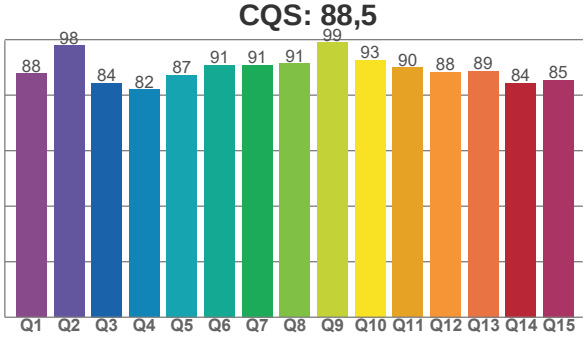
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
87,0	89,0	86,8	92,1	92,0	95,1	92,5	93,8	89,6	83,2	83,2	87,3	91,1	85,6	86,0	84,2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
87,7	98,0	84,4	82,1	87,3	90,9	90,9	91,4	99,0	92,7	90,0	88,4	88,6	84,4	85,5

CQS: 88,5



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
3000 K	91,1	50,1	88,5	98,2	88,5	0,437	0,404	0,251	0,348	-0,0058

TM-30 details

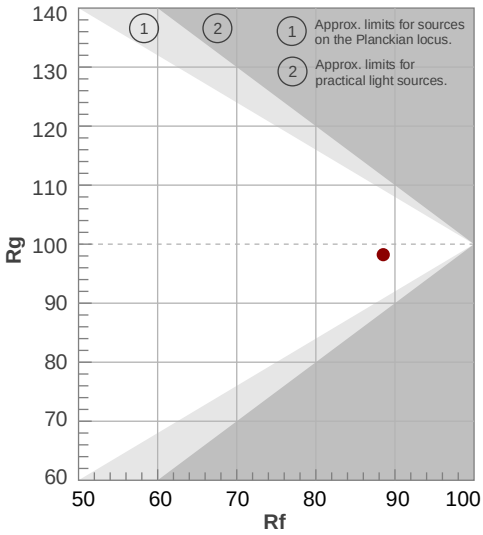
Rf 88,5

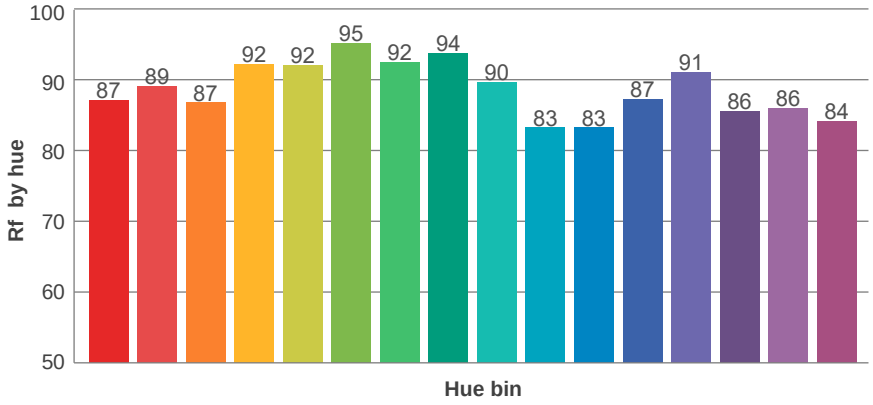
Fidelity index Rf

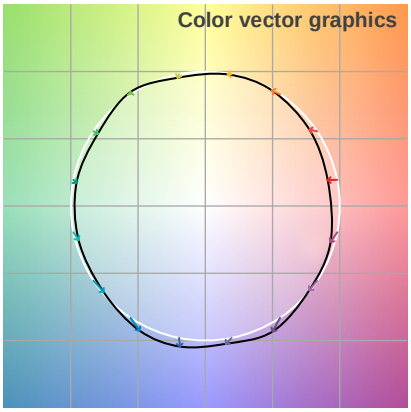
Rg 98,2

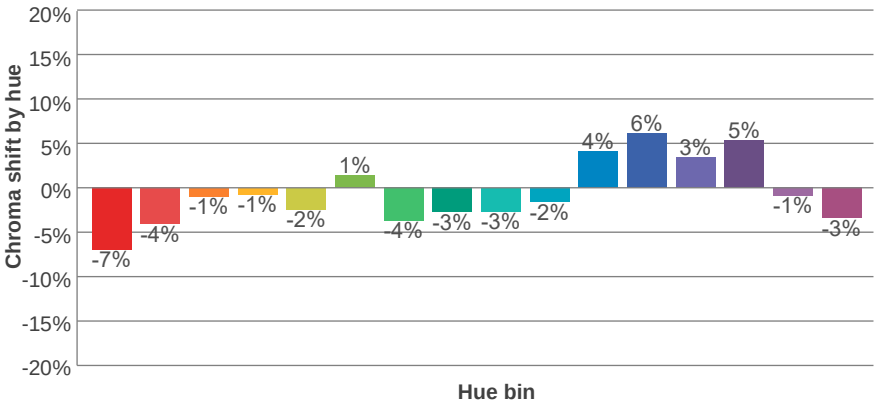
Gamut index Rg

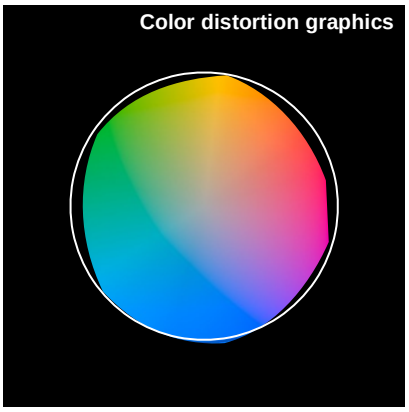
Hue Bin	R_f	Shifts (%) Chroma	Hue
1	87	-7%	1%
2	89	-4%	4%
3	87	-1%	7%
4	92	-1%	3%
5	92	-2%	2%
6	95	1%	-1%
7	92	-4%	0%
8	94	-3%	2%
9	90	-3%	6%
10	83	-2%	11%
11	83	4%	11%
12	87	6%	2%
13	91	3%	-5%
14	86	5%	-10%
15	86	-1%	-9%
16	84	-3%	-8%

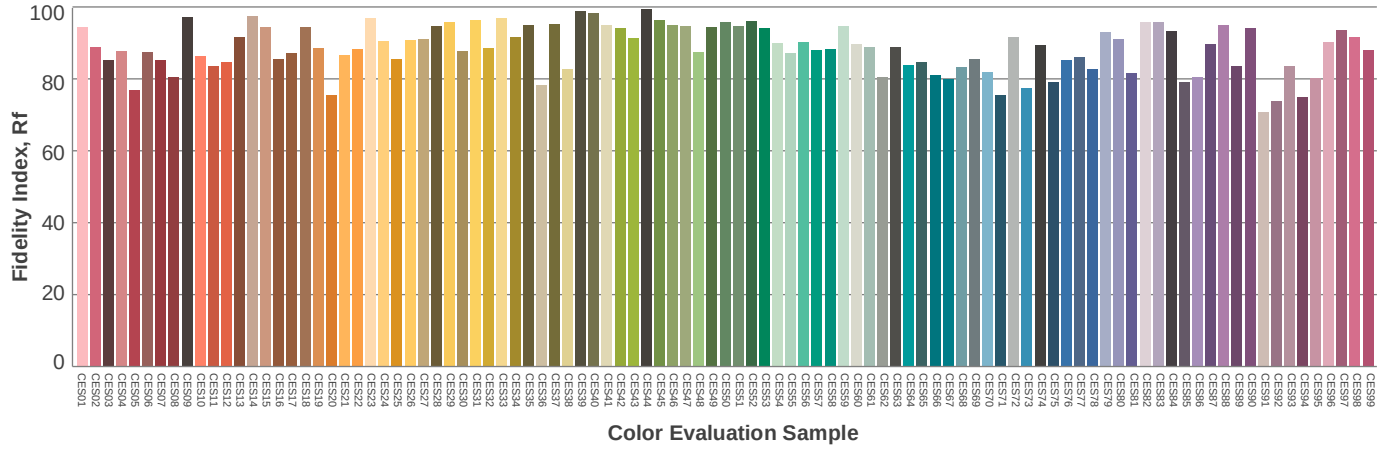




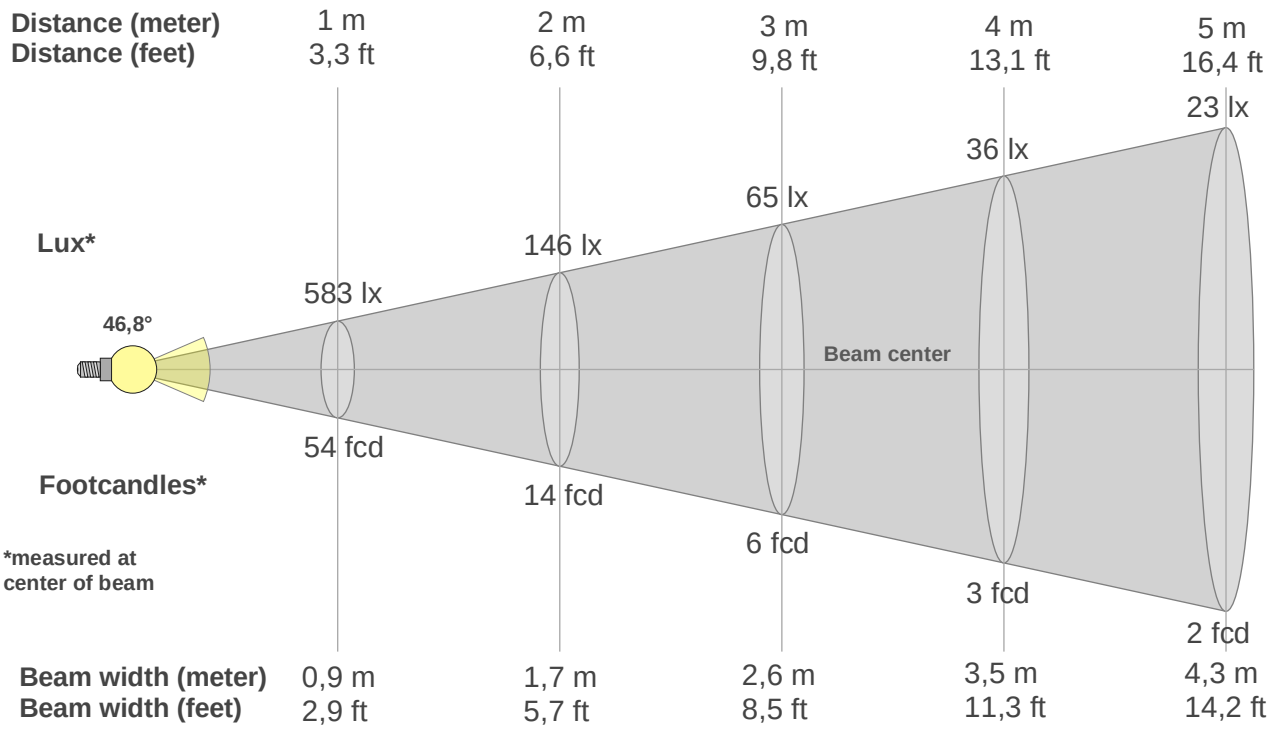








Beam details



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
583lx	146lx	65lx	36lx	23lx	16lx	12lx	9lx	7lx	6lx	5lx	4lx	3lx	3lx	3lx	2lx	2lx	2lx	2lx	1lx
54,2fcd	13,5fcd	6fcd	3,4fcd	2,2fcd	1,5fcd	1,1fcd	0,8fcd	0,7fcd	0,5fcd	0,4fcd	0,4fcd	0,3fcd	0,3fcd	0,2fcd	0,2fcd	0,2fcd	0,2fcd	0,2fcd	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°
583	582	543	460	359	263	198	164	145	119	91	53	27	8	3	1	0	0	0	0
100%	100%	93%	79%	62%	45%	34%	28%	25%	20%	16%	9%	5%	1%	0%	0%	0%	0%	0%	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°
583	582	543	460	359	263	198	164	145	119	91	53	27	8	3	1	0	0	0	0
100%	100%	93%	79%	62%	45%	34%	28%	25%	20%	16%	9%	5%	1%	0%	0%	0%	0%	0%	0%

Intensities in 180° c-plane

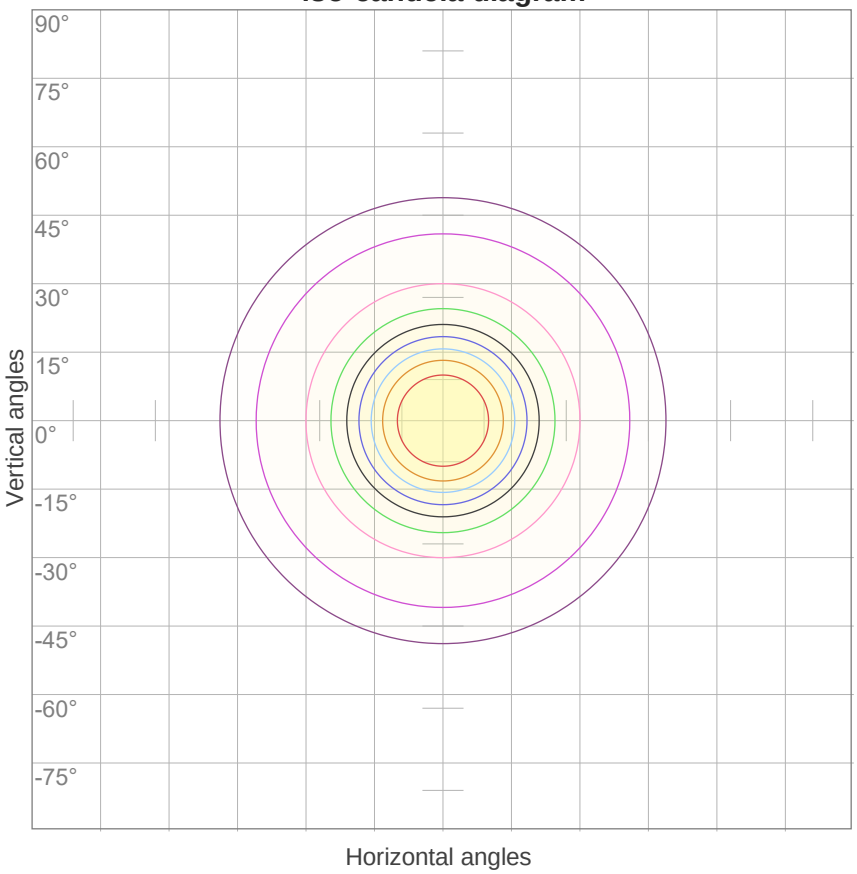
0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°
583	582	543	460	359	263	198	164	145	119	91	53	27	8	3	1	0	0	0	0
100%	100%	93%	79%	62%	45%	34%	28%	25%	20%	16%	9%	5%	1%	0%	0%	0%	0%	0%	0%

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°
583	582	543	460	359	263	198	164	145	119	91	53	27	8	3	1	0	0	0	0
100%	100%	93%	79%	62%	45%	34%	28%	25%	20%	16%	9%	5%	1%	0%	0%	0%	0%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
46,8°	**108,5°**	**126,3°**	**97,7%**	**81,3%**

iso-candela diagram



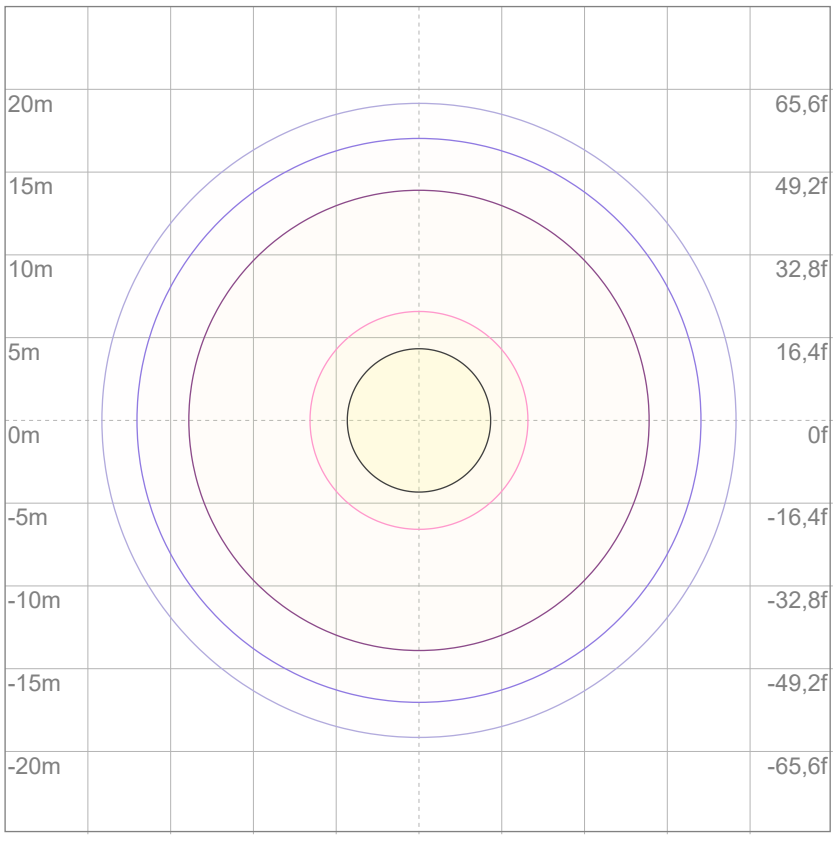
10%	58 cd
20%	117 cd
30%	175 cd
40%	233 cd
50%	291 cd
60%	350 cd
70%	408 cd
80%	466 cd
90%	525 cd

Conditions:

Number of c-planes: 72

Candela at center: 583 cd

iso-lux diagram



3%	0,175 lx
5%	0,291 lx
10%	0,583 lx
30%	1,75 lx
50%	2,91 lx

Conditions:

Number of c-planes: 72

Lux at center: 5,83 lx

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

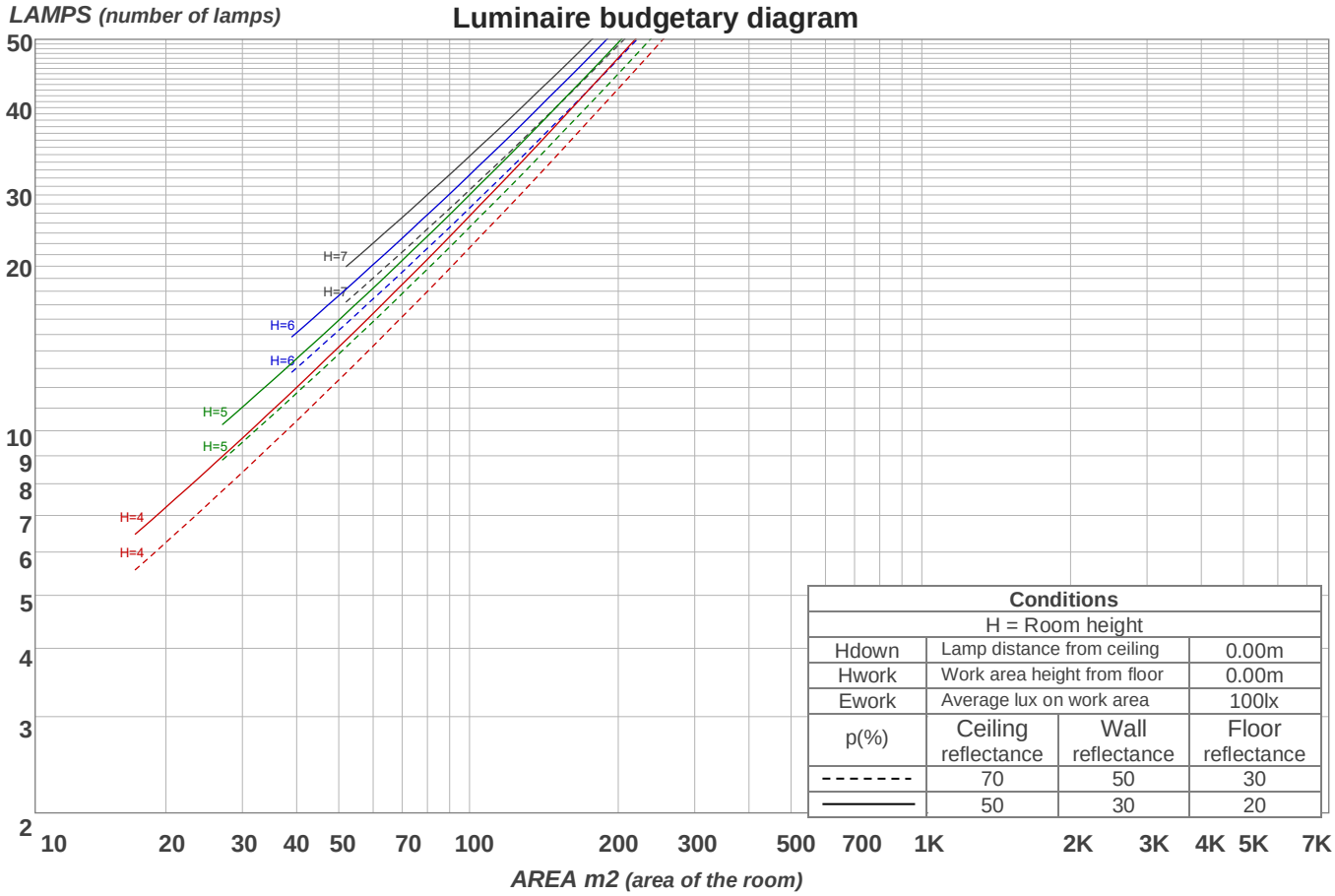
Glare evaluation according to UGR

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	23,3	24,1	23,4	24,4	24,6	23,3	24,1	23,4	24,4	24,6
	3H	23,0	23,9	23,4	24,2	24,4	23,0	23,9	23,4	24,2	24,4
	4H	23,0	23,8	23,4	24,1	24,3	23,0	23,8	23,4	24,1	24,3
	6H	23,0	23,7	23,3	24,0	24,3	23,0	23,7	23,3	24,0	24,3
	8H	22,9	23,6	23,2	23,9	24,3	22,9	23,6	23,2	23,9	24,3
	12H	22,9	23,5	23,2	23,9	24,3	22,9	23,5	23,2	23,9	24,3
4H	2H	23,1	24,0	23,5	24,2	24,5	23,1	24,0	23,5	24,2	24,5
	3H	23,0	23,7	23,4	24,1	24,5	23,0	23,7	23,4	24,1	24,5
	4H	22,9	23,5	23,3	23,9	24,5	22,9	23,5	23,3	23,9	24,5
	6H	22,8	23,5	23,3	23,8	24,2	22,8	23,5	23,3	23,8	24,2
	8H	22,8	23,4	23,3	23,7	24,1	22,8	23,4	23,3	23,7	24,1
	12H	22,7	23,2	23,2	23,6	24,1	22,7	23,2	23,2	23,6	24,1
8H	4H	22,8	23,4	23,3	23,7	24,1	22,8	23,4	23,3	23,7	24,1
	6H	22,7	23,1	23,2	23,6	24,1	22,7	23,1	23,2	23,6	24,1
	8H	22,7	23,0	23,2	23,6	24,2	22,7	23,0	23,2	23,6	24,2
	12H	22,6	22,9	23,2	23,4	24,0	22,6	22,9	23,2	23,4	24,0
12H	4H	22,7	23,2	23,2	23,6	24,1	22,7	23,2	23,2	23,6	24,1
	6H	22,7	23,0	23,2	23,6	24,2	22,7	23,0	23,2	23,6	24,2
	8H	22,6	22,9	23,2	23,4	24,0	22,6	22,9	23,2	23,4	24,0
Variation of the observer position for the luminaire distance S											
S = 1.0H		0,8 / -1,9					0,8 / -1,9				
S = 1.5H		2,4 / -7,6					2,4 / -7,6				
S = 2.0H		4,1 / -13,7					4,1 / -13,7				
CIE 117-1995. Corrected glare indices referring to 560 lm total luminous flux											

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	102	102	102	100
1	113	109	107	104	110	107	105	102	103	101	99	99	98	96	96	95	93	92
2	106	100	95	92	103	98	94	90	95	92	88	92	89	87	89	87	85	83
3	99	92	86	81	97	90	85	81	88	83	79	85	81	78	83	80	77	75
4	93	84	78	73	91	83	77	73	81	76	72	79	74	71	77	73	70	68
5	88	78	71	66	86	77	71	66	75	69	65	73	68	65	72	67	64	62
6	82	72	65	60	81	71	65	60	70	64	60	68	63	59	67	62	59	57
7	78	67	60	55	76	66	60	55	65	59	55	64	59	55	63	58	54	53
8	73	63	56	51	72	62	56	51	61	55	51	60	55	51	59	54	50	49
9	70	59	52	48	68	58	52	48	57	51	47	56	51	47	55	51	47	46
10	66	55	49	44	65	55	49	44	54	48	44	53	48	44	52	47	44	43

Luminaire budgetary diagram



Zonal Lumen Summary

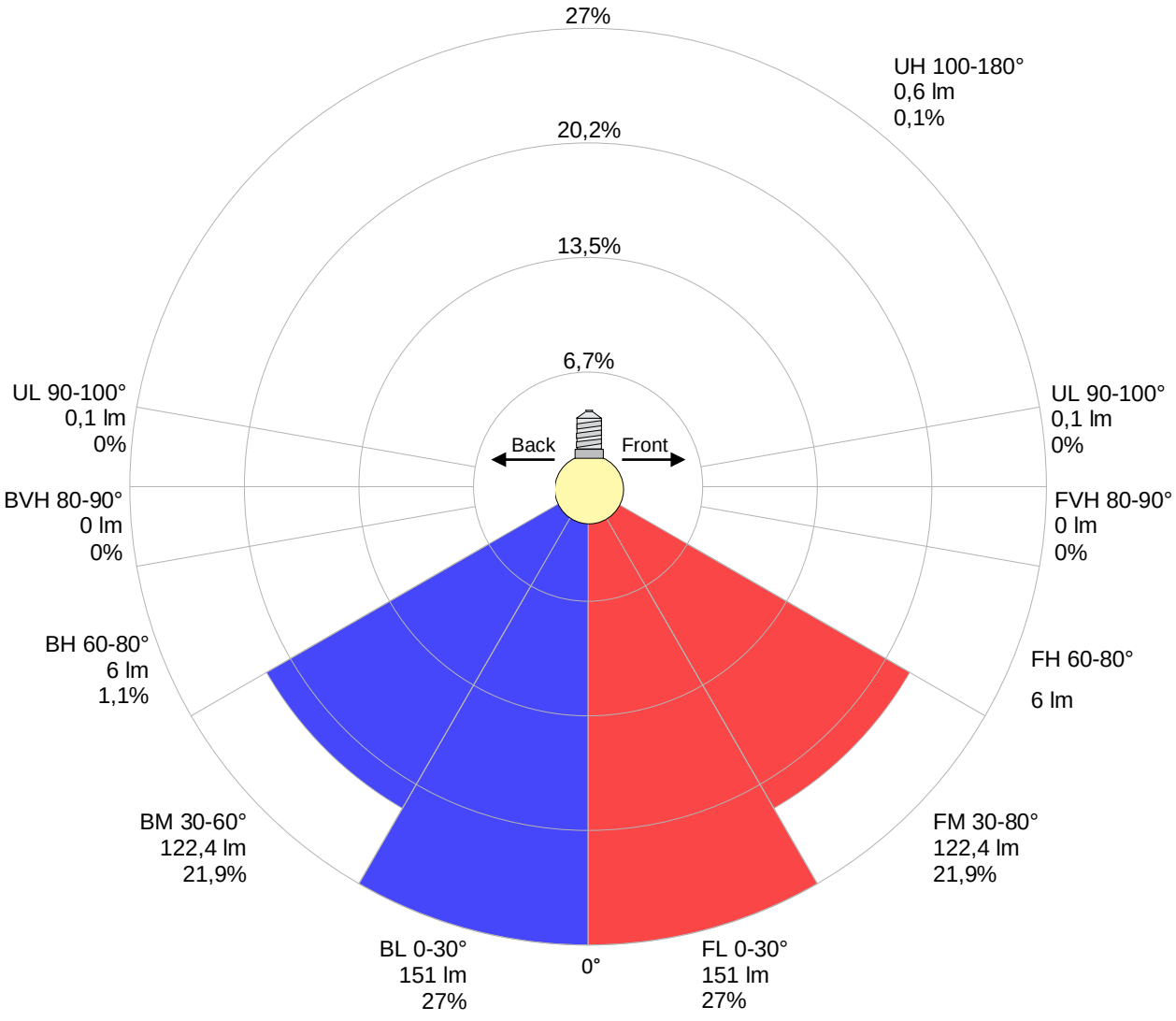
0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
{LUM0-10}	130 lm	118 lm	105 lm	91,1 lm	49,5 lm	11,0 lm	1,01 lm	0,088 lm

90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
0,094 lm	0,097 lm	0,092 lm	0,102 lm	0,093 lm	0,089 lm	0,087 lm	0,056 lm	0,020 lm

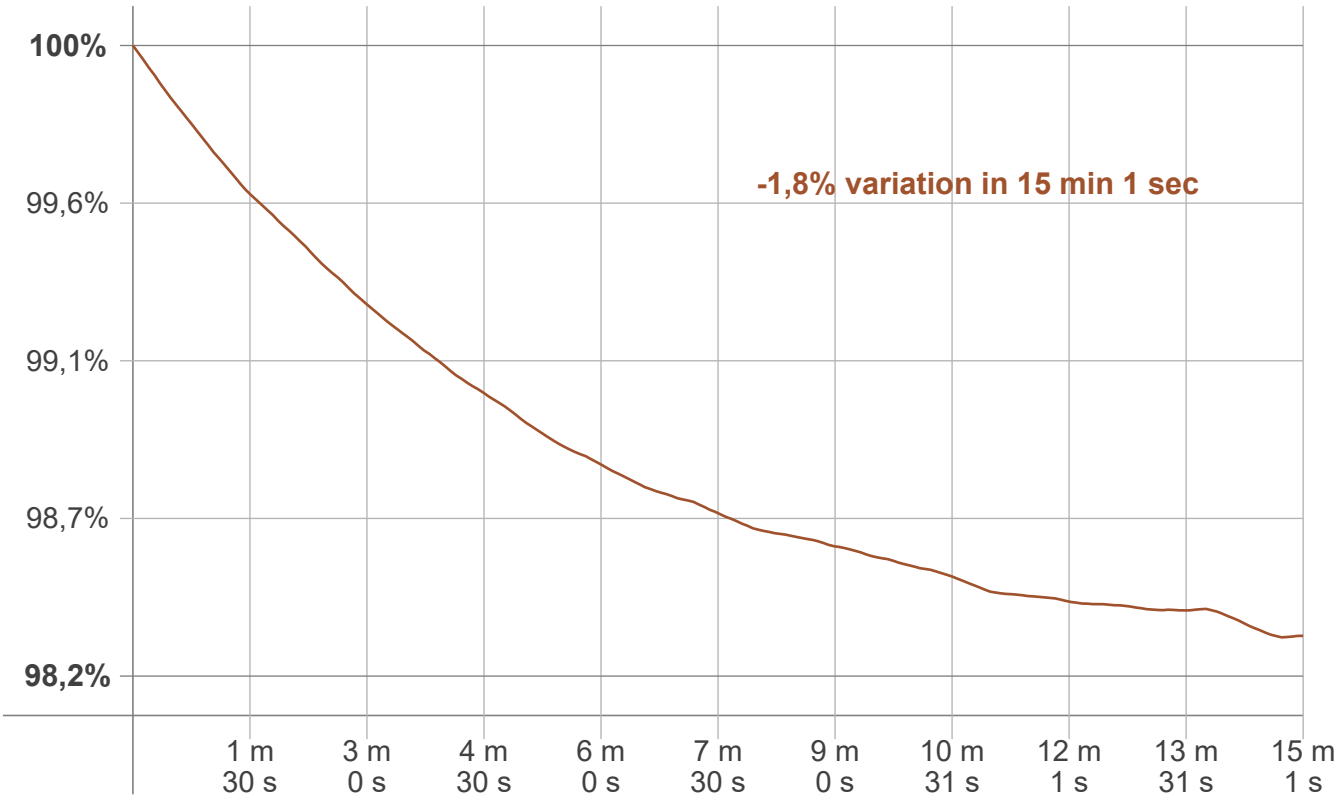
LCS table

BUG rating:	B1 U1 G0	
Forward light	Lumens	Lumens %
Low(0-30):	151	27%
Medium(30-60):	122,4	21,9%
High(60-80):	6	1,1%
Very high(80-90):	0	0%
Back light		
Low(0-30):	151	27%
Medium(30-60):	122,4	21,9%
High(60-80):	6	1,1%
Very high(80-90):	0	0%
Uplight		
Low(90-100):	0,1	0%
High(100-180):	0,6	0,1%

LCS graph



Warmup curve



Warmup result

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

Warmup conditions

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

Color temperature change

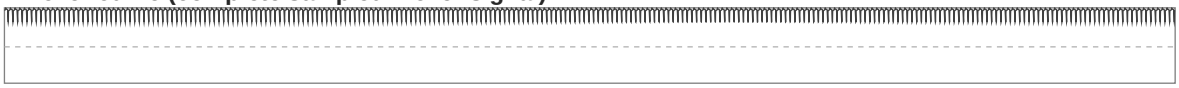
CCT start	CCT change	CCT end
2993 K	+7 K	3000 K

Output change

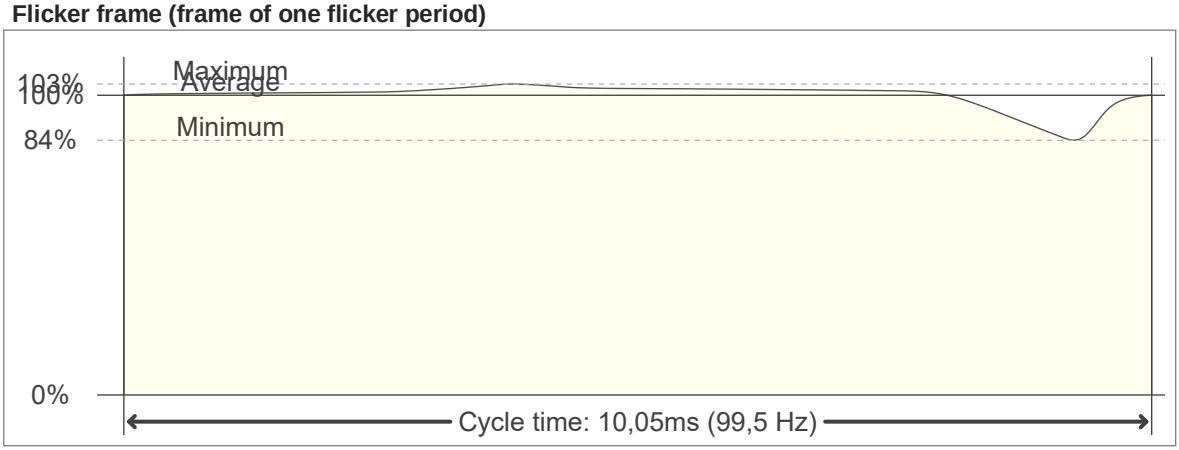
Output start	Output change	Output end
569 lm	-10 lm	560 lm

Flicker

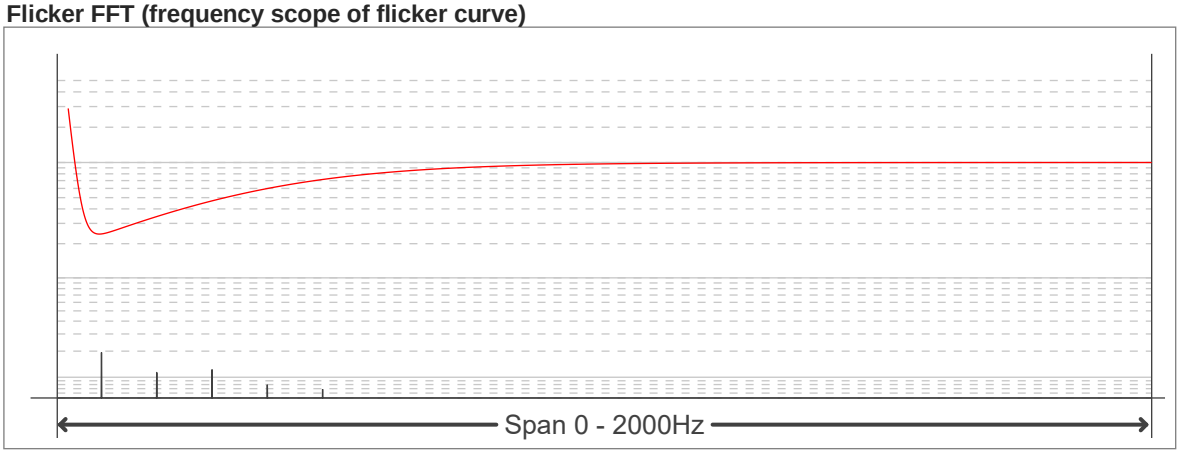
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:		99,5 Hz	
Flicker index:	0,01	JA8/10 40Hz	0,1 %
Flicker percentage:	10,08 %	JA8/10 90Hz	0,11 %
SVM: (Visual flicker)	0,15	JA8/10 200Hz	4,21 %
PstLM	0,08	JA8/10 400Hz	6,73 %
Mp	0,07	JA8/10 1000Hz	9,42 %

Flicker conditions:

Sample rate:	20000 samples/second