

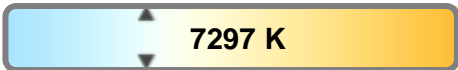
#### Light efficiency:



#### Light quality:



#### Color temperature:



**Output:** 9751 lm  
**Peak:** 560165 cd  
**Power:** 570 W  
**PF:** n/a



Tracking number: [n/a](#)

Product name:

**Hydro Hybrid**

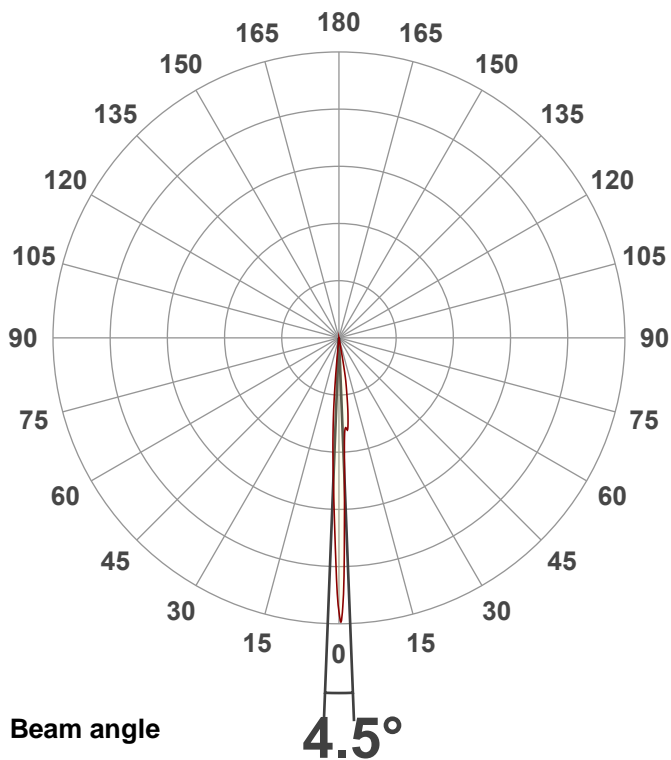
Item number:

**Zoom 50 Frost**

Date and time:

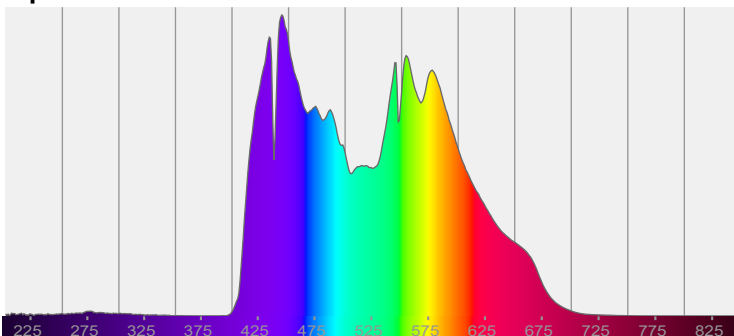
**8/1/2024 12:43:35 PM**

Description:

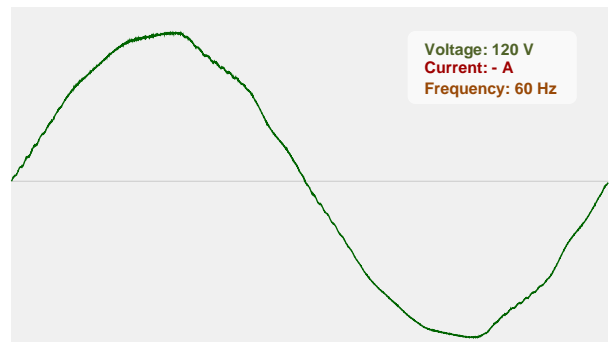


CIE 1931  
x: 0.302  
y: 0.318

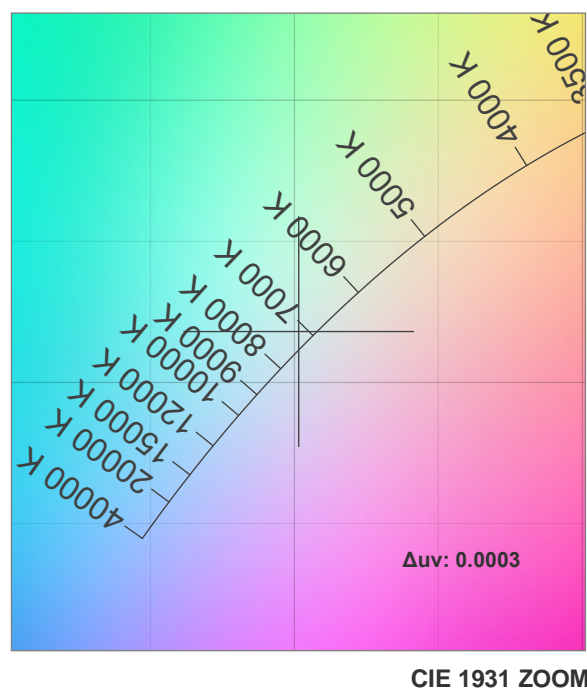
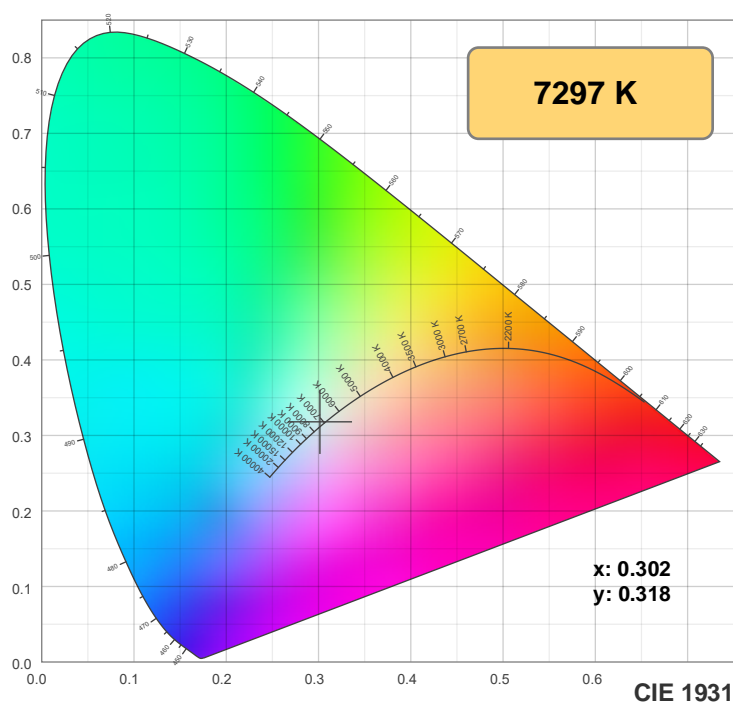
#### Spectra



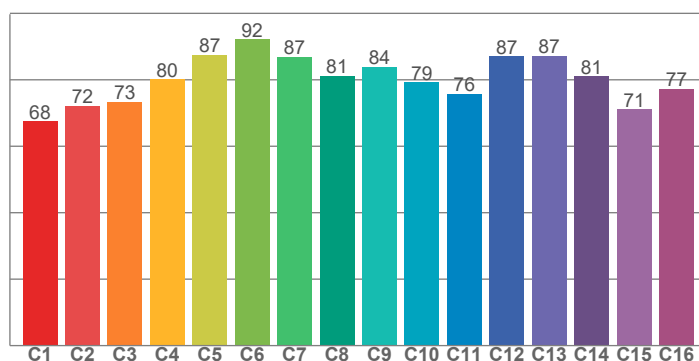
#### Power



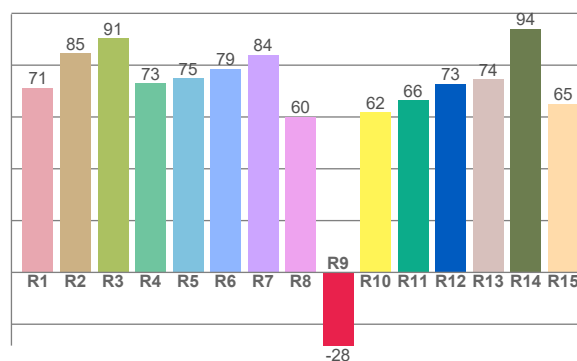
## Color details



**TM-30: 80.5**



**CRI: 77.1 (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
71.2	84.5	90.5	73.0	75.0	78.6	84.0	60.1	-28.3	61.8	66.4	72.8	74.5	94.1	65.1

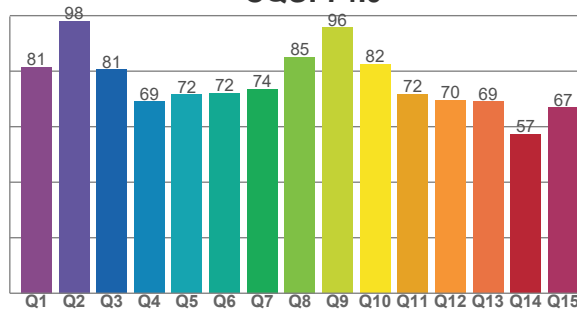
**TM30 C values, 16 binned values out of total of 99 C values**

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
67.5	72.1	73.4	80.2	87.4	92.1	86.9	81.2	83.8	79.2	75.7	87.0	87.2	81.1	71.1	77.3

**CQS Q values**

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
81.5	98.1	80.5	69.0	71.6	72.0	73.6	85.1	95.7	82.5	71.9	69.6	69.0	57.3	66.8

**CQS: 74.0**



### 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
7297 K	77.1	-28.3	80.5	90.6	74.0	0.302	0.318	0.194	0.307	0.0003

# TM-30 details

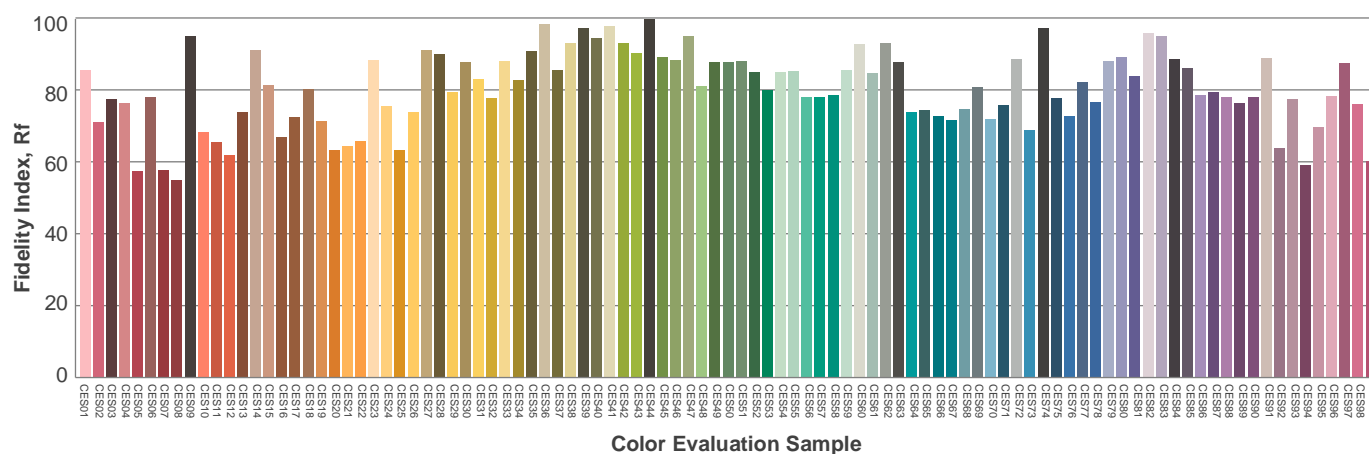
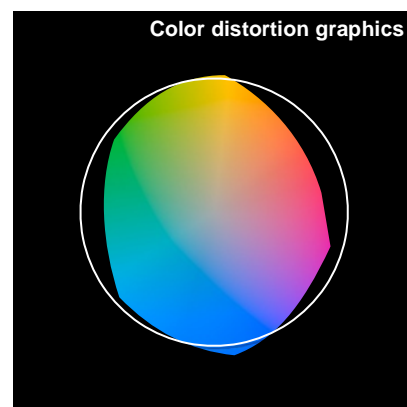
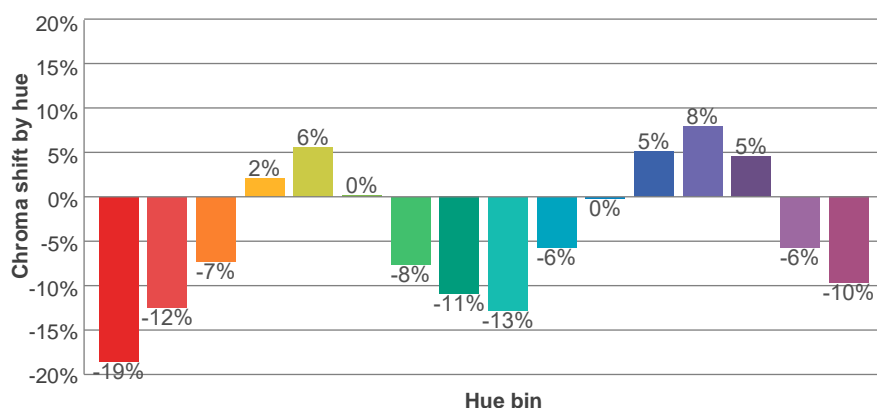
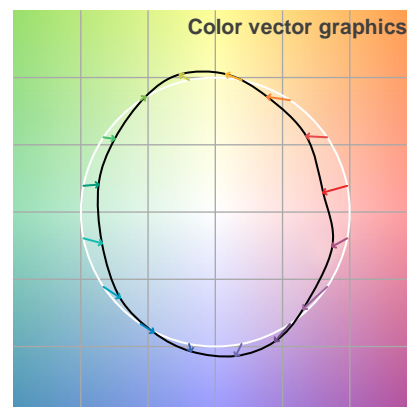
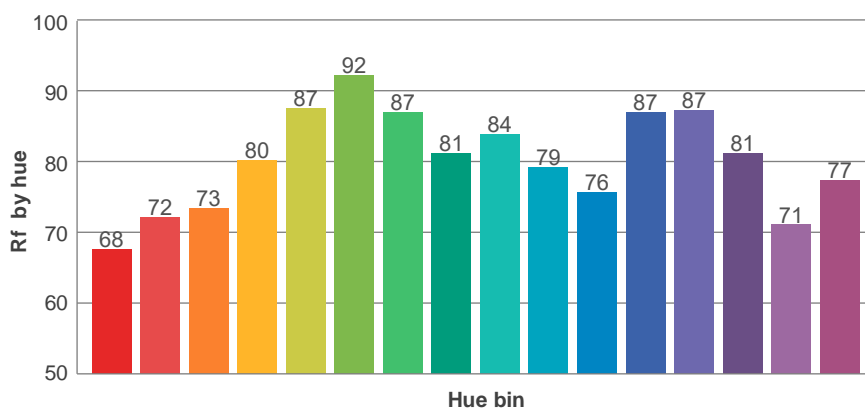
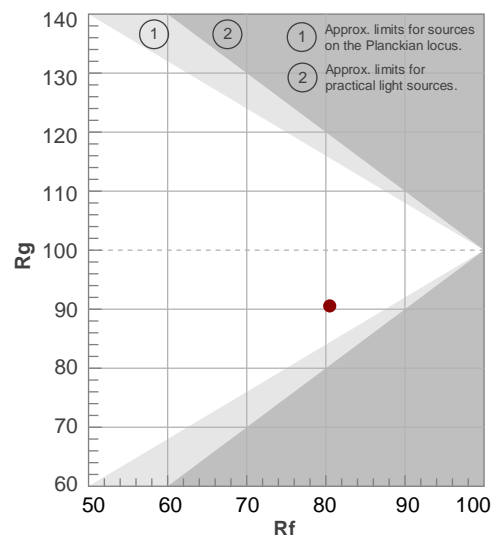
**Rf 80.5**

Fidelity index Rf

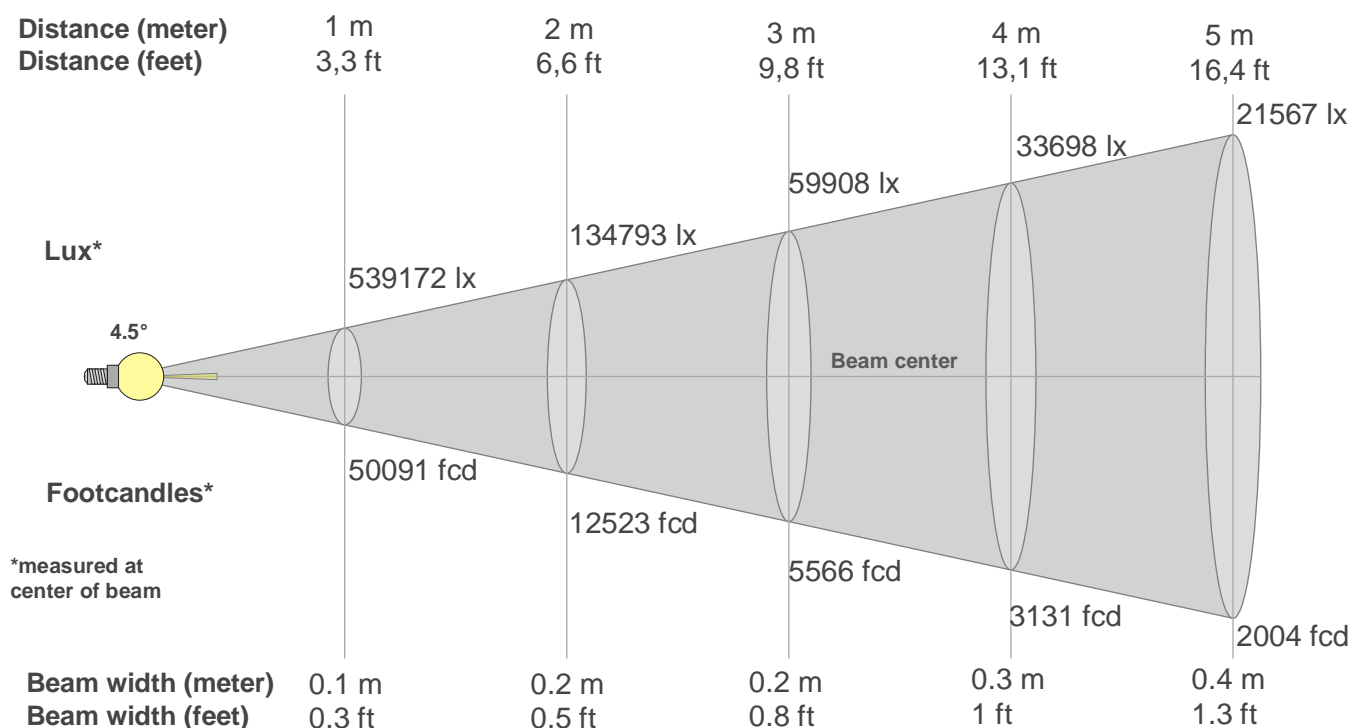
**Rg 90.6**

Gamut index Rg

Hue Bin	Ri	Shifts (%)	
		Chroma	Hue
1	68	-19%	-1%
2	72	-12%	9%
3	73	-7%	15%
4	80	2%	12%
5	87	6%	6%
6	92	0%	-4%
7	87	-8%	-4%
8	81	-11%	-3%
9	84	-13%	6%
10	79	-6%	14%
11	76	0%	12%
12	87	5%	2%
13	87	8%	-6%
14	81	5%	-16%
15	71	-6%	-24%
16	77	-10%	-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
539172lx	134793lx	59908lx	33698lx	21567lx	14977lx	11004lx	8425lx	6656lx	5392lx	4456lx	3744lx	3190lx	2751lx	2396lx	2106lx	1866lx	1664lx	1494lx	1348lx
50090.8fcd	12522.7fcd	5565.6fcd	3130.7fcd	2003.6fcd	1391.4fcd	1022.3fcd	782.7fcd	618.4fcd	500.9fcd	414fcd	347.9fcd	296.4fcd	255.6fcd	222.6fcd	195.7fcd	173.3fcd	154.6fcd	138.8fcd	125.2fcd

### Intensities in 0° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
539K	503K	313K	208K	179K	181K	171K	144K	112K	85K	33K	0K	0K	0K	0K	0K	0K	0K	0K	0K
100%	93%	58%	39%	33%	34%	32%	27%	21%	16%	6%	0%	0%	0%	0%	0%	0%	0%	0%	0%

### Intensities in 90° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
539K	503K	313K	208K	179K	181K	171K	144K	112K	85K	33K	0K	0K	0K	0K	0K	0K	0K	0K	0K
100%	93%	58%	39%	33%	34%	32%	27%	21%	16%	6%	0%	0%	0%	0%	0%	0%	0%	0%	0%

### Intensities in 180° c-plane

0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
539K	413K	301K	227K	156K	72K	5K	0K	0K	0K	0K	0K	0K	0K	0K	0K	0K	0K	0K	0K
100%	77%	56%	42%	29%	13%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

### Intensities in 270° c-plane

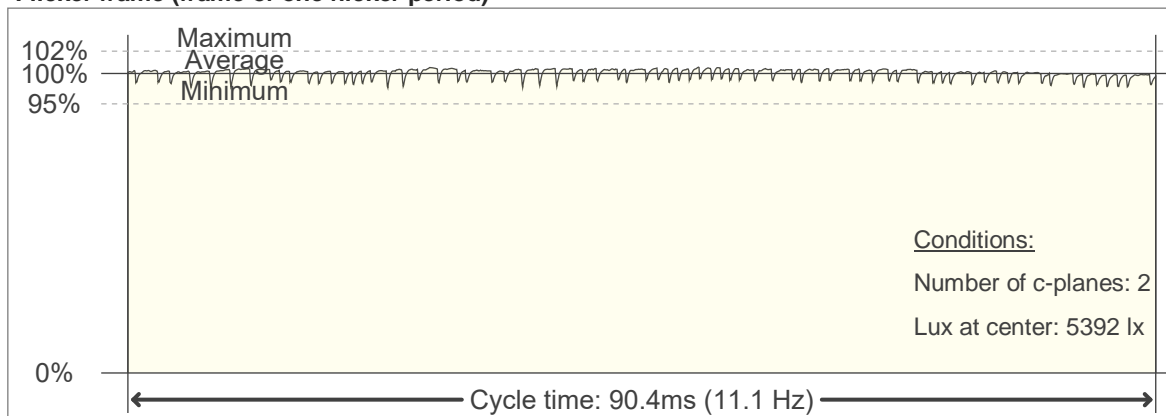
0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°	11°	12°	13°	14°	15°	16°	17°	18°	19°
539K	413K	301K	227K	156K	72K	5K	0K	0K	0K	0K	0K	0K	0K	0K	0K	0K	0K	0K	0K
100%	77%	56%	42%	29%	13%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
4.5°	14.8°	16.1°	100.0%	100.0%

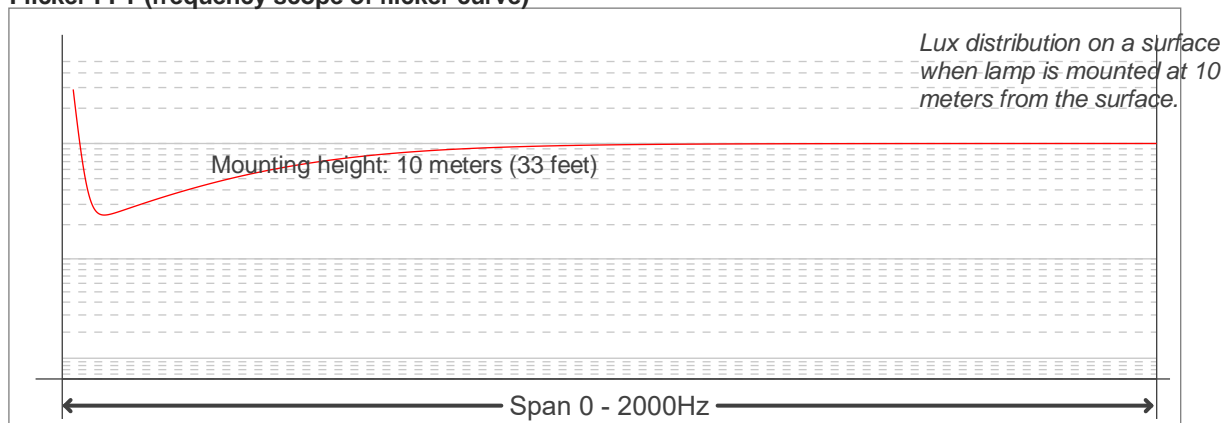
## Flicker

**Flicker curve (complete sampled flicker signal)**

**Flicker frame (frame of one flicker period)**



**Flicker FFT (frequency scope of flicker curve)**



**Flicker results:**

Flicker frequency:		11.06 Hz	
Flicker index:	0.01	JA8/10 40Hz	2.32 %
Flicker percentage:	5.43 %	JA8/10 90Hz	2.53 %
SVM: (Visual flicker)	0.01	JA8/10 200Hz	2.61 %
PstLM	1.76	JA8/10 400Hz	2.97 %
Mp	1.25	JA8/10 1000Hz	4.34 %

**Flicker conditions:**

Sample rate:	20000 samples/second
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