Light efficiency:

99 Lumen/Watt

Light quality:

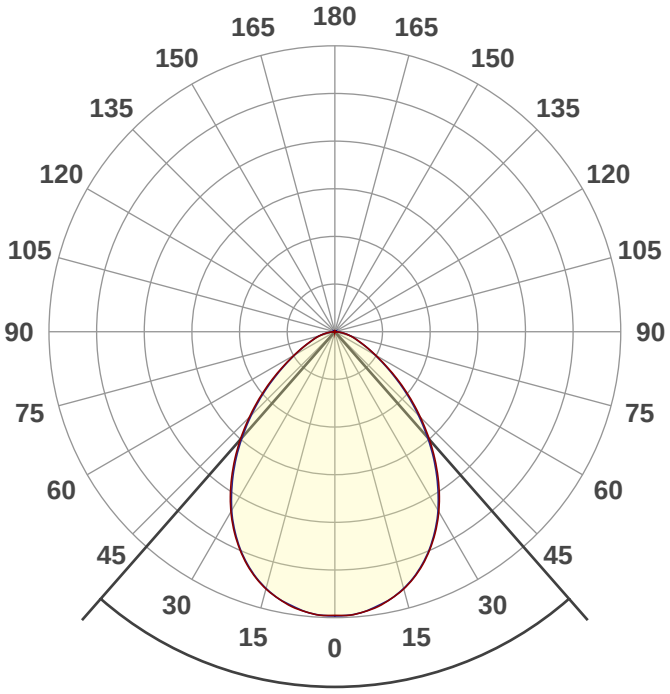
CRI: 83.6

Color temperature:

3976 K

Output: 1043 lm
Peak: 562 cd

Power: 10.5 W
PF: 0.99



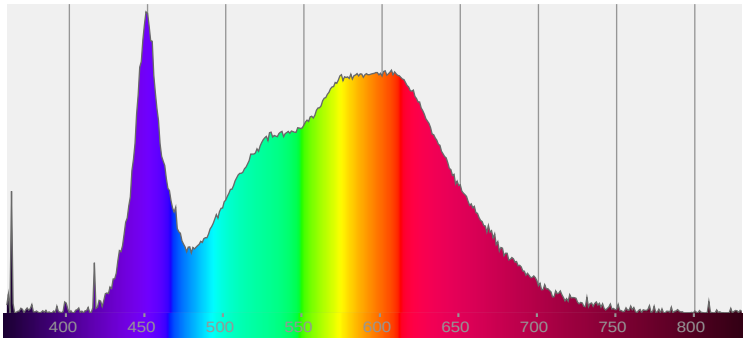
Beam angle **82.5°**

CIE 1931
x: 0.381
y: 0.373

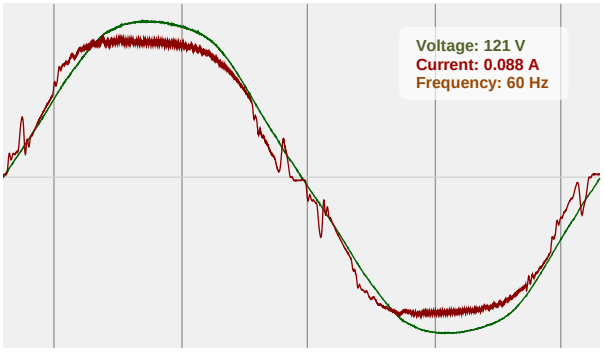
Product name:
CDL4D-SW3B-SP12W

Date and time:
12/2/2020 9:57:24 AM

Spectra



Power



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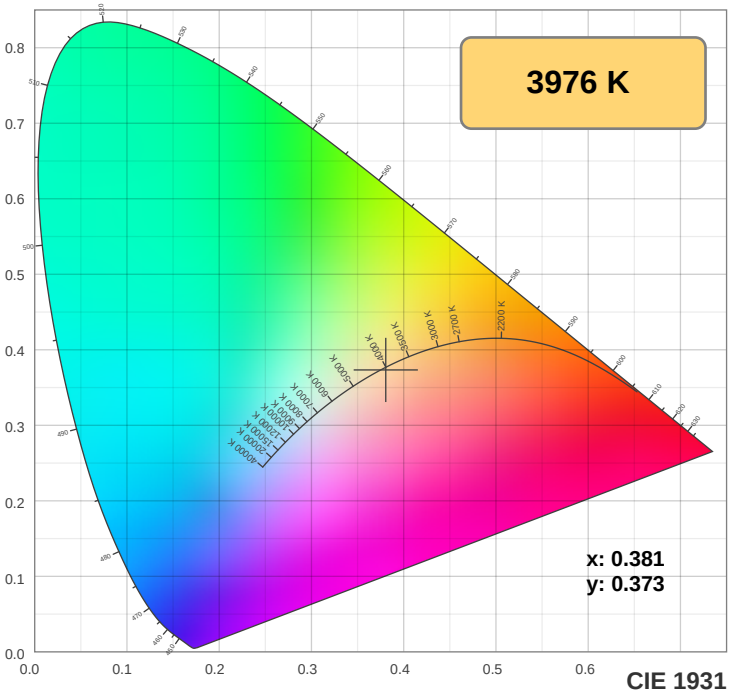
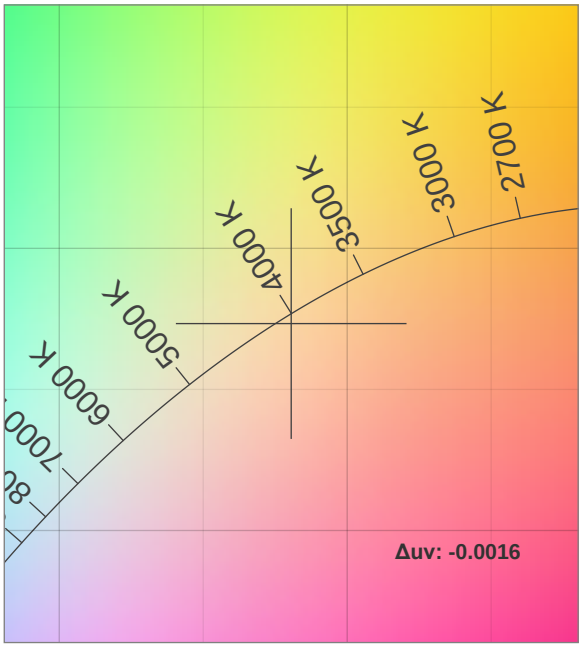
Color Specifications

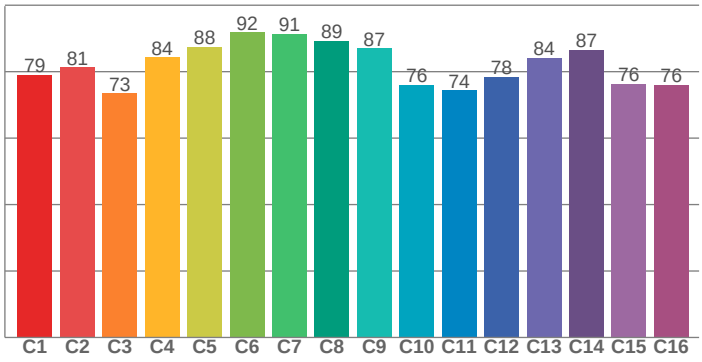


CIE 1931

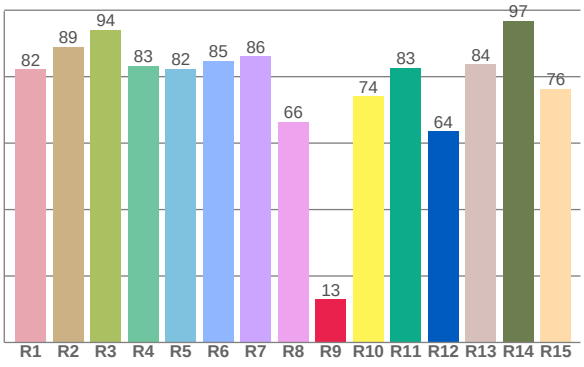


CIE 1931 ZOOM

TM30: 82.1



CRI: 83.6 (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
82.3	89.0	94.1	83.3	82.4	84.8	86.2	66.4	13.1	74.0	82.7	63.5	83.8	96.8	76.3

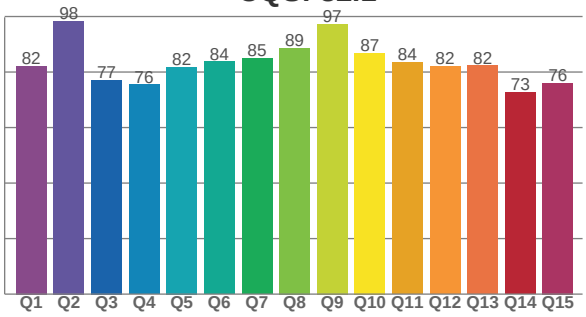
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
79.0	81.3	73.5	84.4	87.5	91.9	91.4	89.3	87.0	76.1	74.4	78.4	84.1	86.6	76.4	76.1

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
82.2	98.4	77.1	75.5	81.8	83.8	85.0	88.6	97.3	86.9	83.5	82.1	82.4	72.7	76.0

CQS: 82.1



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
3976 K	83.6	13.1	82.1	97.2	82.1	0.381	0.373	0.227	0.333	-0.0016

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TM30 Report

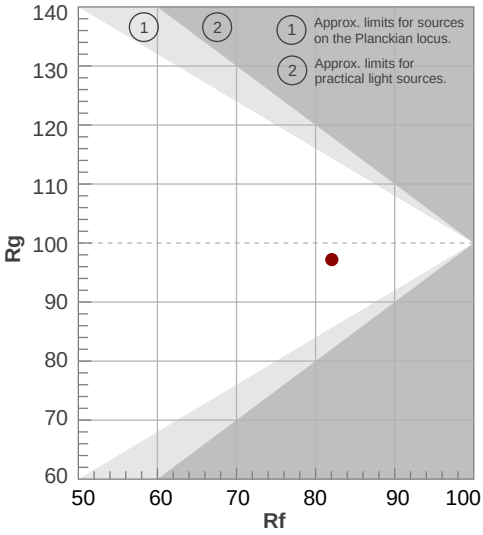
Rf 82.1

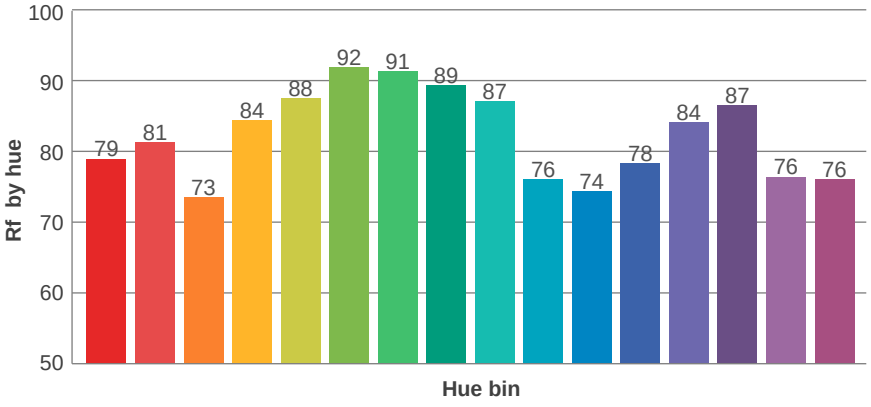
Fidelity index Rf

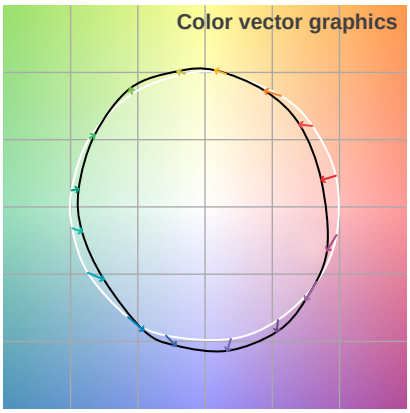
Rg 97.2

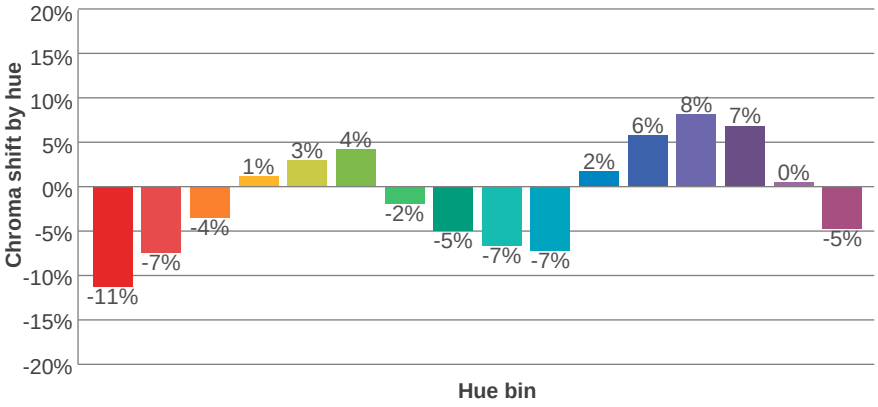
Gammut index Rg

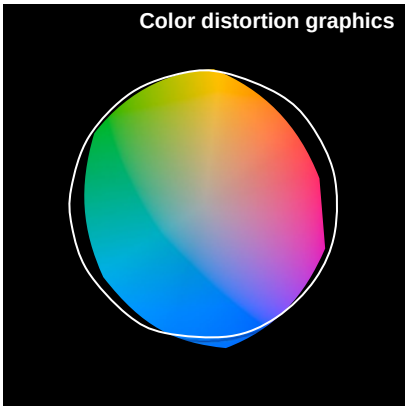
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	79	-11%	-1%
2	81	-7%	6%
3	73	-4%	12%
4	84	1%	9%
5	88	3%	5%
6	92	4%	-1%
7	91	-2%	-4%
8	89	-5%	-2%
9	87	-7%	4%
10	76	-7%	11%
11	74	2%	15%
12	78	6%	9%
13	84	8%	-4%
14	87	7%	-6%
15	76	0%	-16%
16	76	-5%	-13%

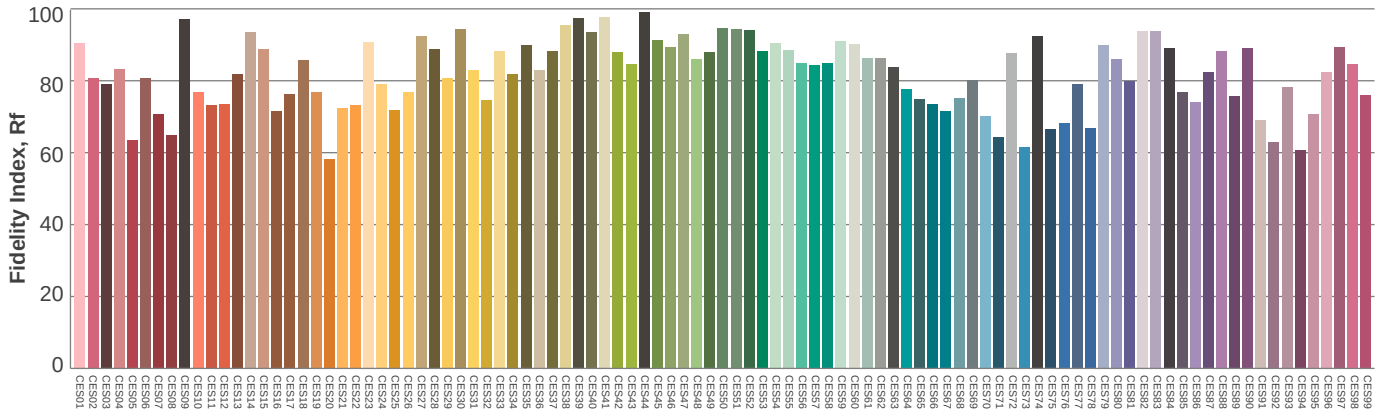












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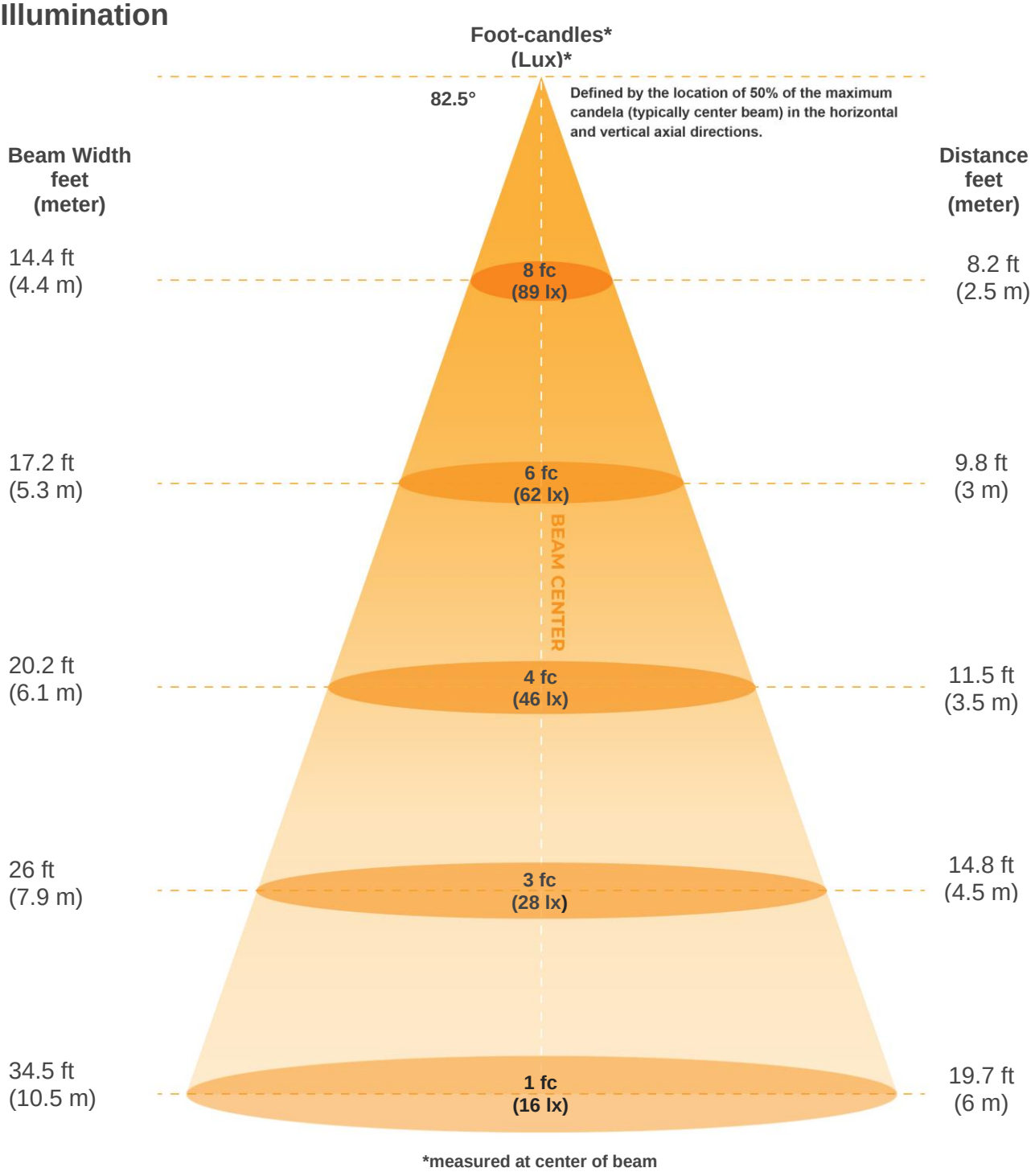
Illumination



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
559lx	140lx	62lx	35lx	22lx	16lx	11lx	9lx	7lx	6lx	5lx	4lx	3lx	3lx	2lx	2lx	2lx	2lx	2lx	1lx
51.9fcd	13fcd	5.8fcd	3.2fcd	2.1fcd	1.4fcd	1.1fcd	0.8fcd	0.6fcd	0.5fcd	0.4fcd	0.4fcd	0.3fcd	0.3fcd	0.2fcd	0.2fcd	0.2fcd	0.2fcd	0.1fcd	0.1fcd

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
82.5°	**134.2°**	**163.9°**	**89.0%**	**68.4%**

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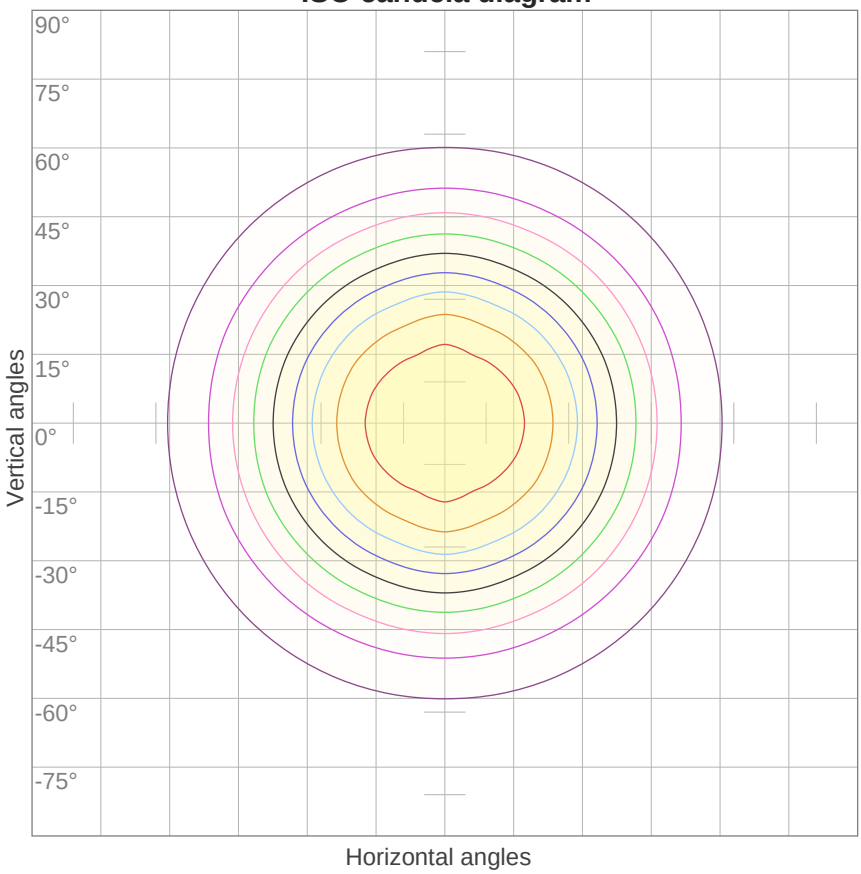
ISO Diagrams

ISO candela diagram



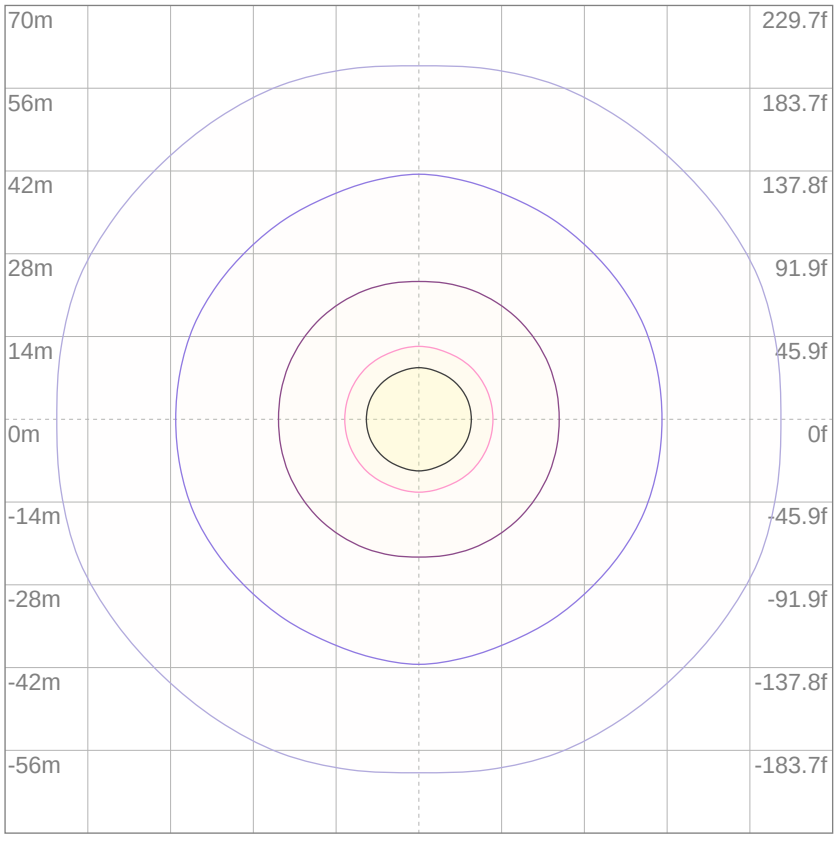
10%	56 cd
20%	112 cd
30%	168 cd
40%	224 cd
50%	280 cd
60%	335 cd
70%	391 cd
80%	447 cd
90%	503 cd

Conditions:

Number of c-planes: 16

Candela at center: 559 cd

ISO lux diagram



3%	0.168 lx
5%	0.280 lx
10%	0.559 lx
30%	1.68 lx
50%	2.80 lx

Conditions:

Number of c-planes: 16

Lux at center: 5.59 lx

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

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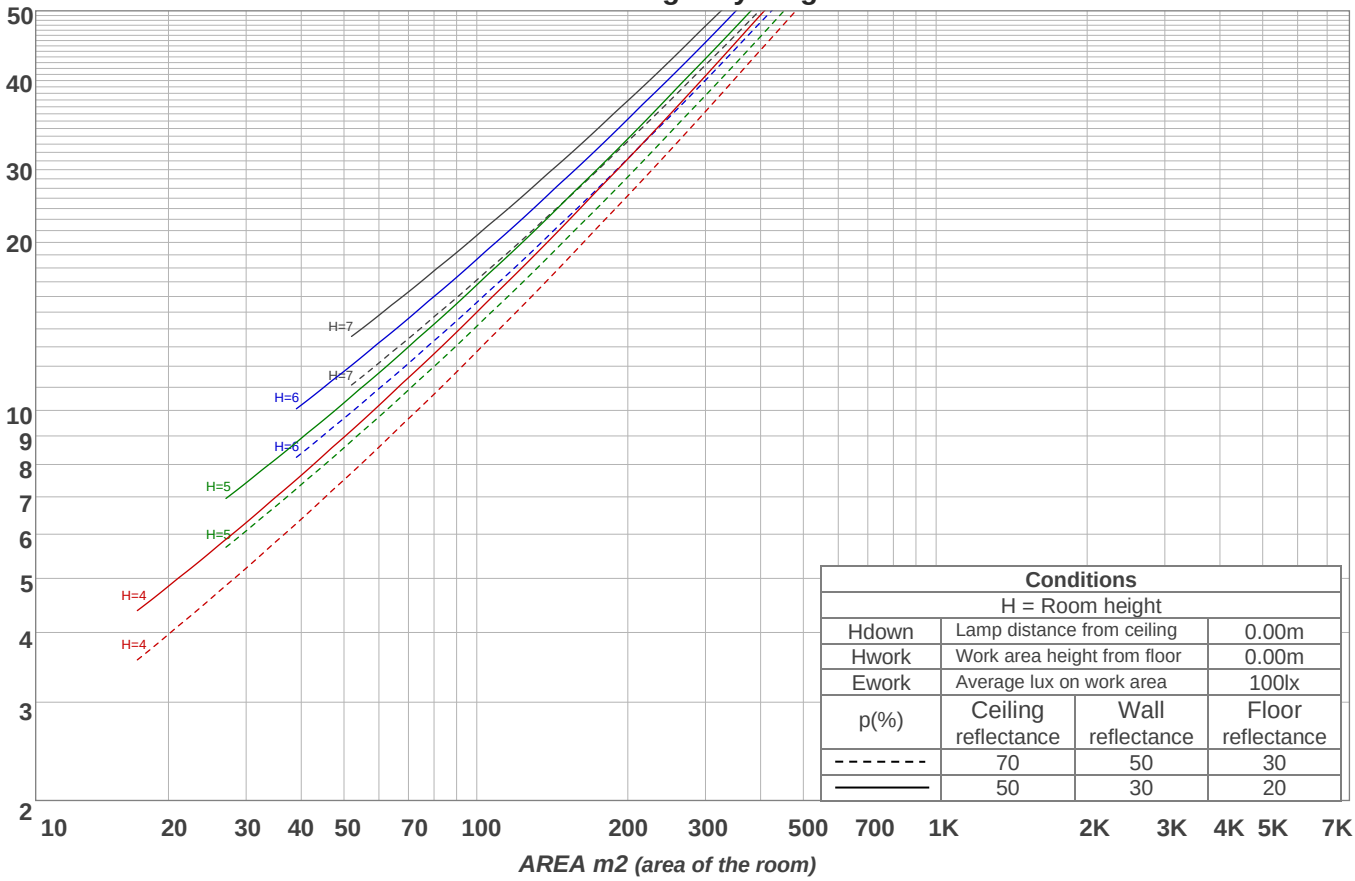
Light Planning

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	99
1	111	107	103	100	108	104	101	98	100	97	95	96	94	92	92	91	89	87
2	102	95	89	85	100	93	88	84	90	85	82	87	83	80	84	81	78	76
3	94	85	78	73	92	84	77	72	81	75	71	78	73	70	76	72	68	66
4	87	77	69	63	85	76	69	63	73	67	62	71	66	61	69	64	60	58
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	52	48	46
7	70	58	50	45	69	57	50	45	56	49	44	54	48	44	53	48	44	42
8	66	54	46	40	64	53	45	40	52	45	40	50	44	40	49	44	40	38
9	62	50	42	37	60	49	42	37	48	41	37	47	41	36	46	40	36	34
10	58	46	39	34	57	45	38	34	44	38	34	44	38	33	43	37	33	32

Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
46.6 lm	149 lm	201 lm	229 lm	177 lm	126 lm	63.8 lm	33.7 lm	10.6 lm

90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
1.02 lm	0.856 lm	0.845 lm	0.869 lm	0.787 lm	0.678 lm	0.595 lm	0.327 lm	0.134 lm

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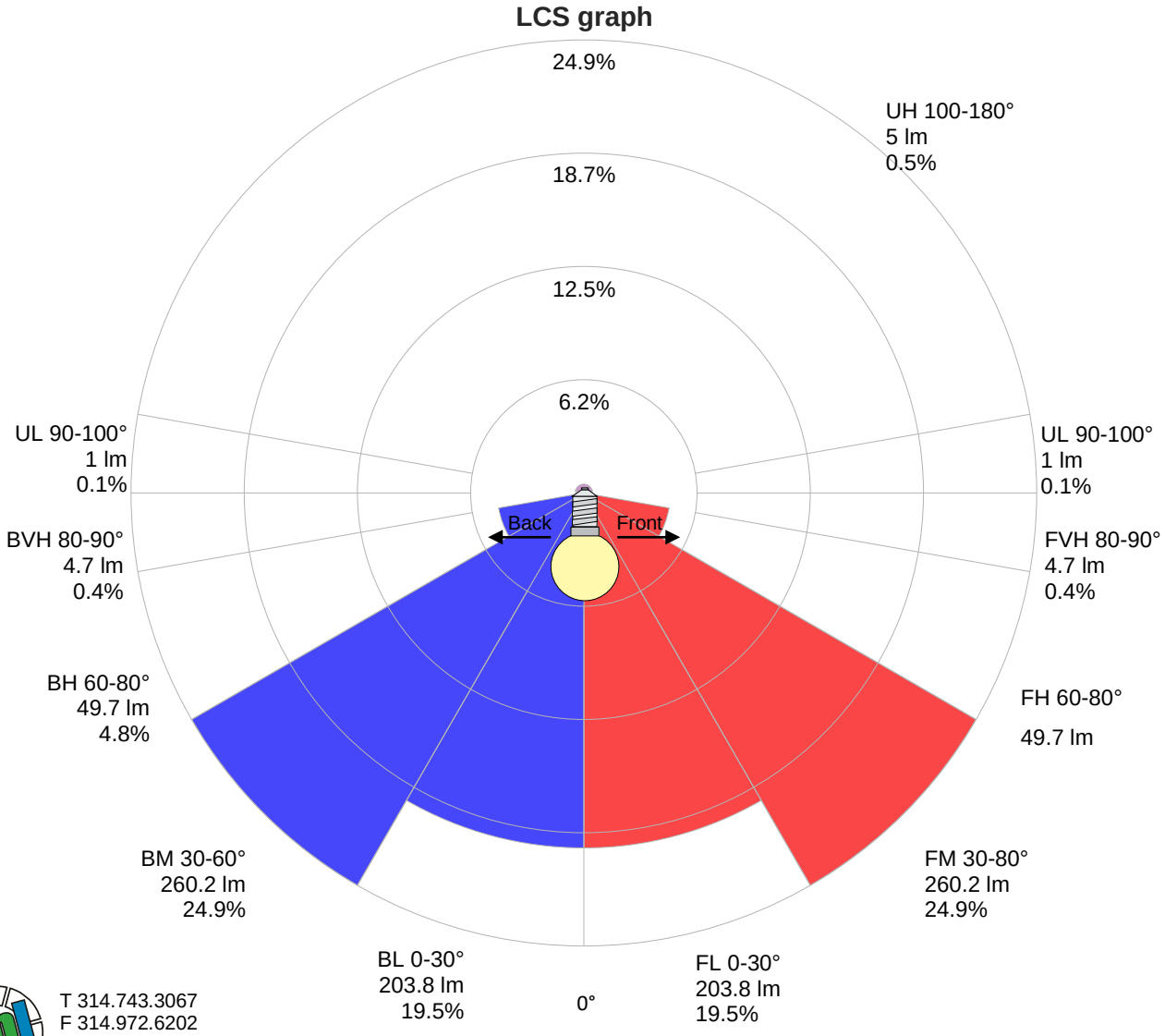
Road Report

LCS table

BUG rating:	B1 U1 G0	
Forward light	Lumens	Lumens %
Low(0-30):	203.8	19.5%
Medium(30-60):	260.2	24.9%
High(60-80):	49.7	4.8%
Very high(80-90):	4.7	0.4%
Back light		
Low(0-30):	203.8	19.5%
Medium(30-60):	260.2	24.9%
High(60-80):	49.7	4.8%
Very high(80-90):	4.7	0.4%
Uplight		
Low(90-100):	1	0.1%
High(100-180):	5	0.5%

LCS graph



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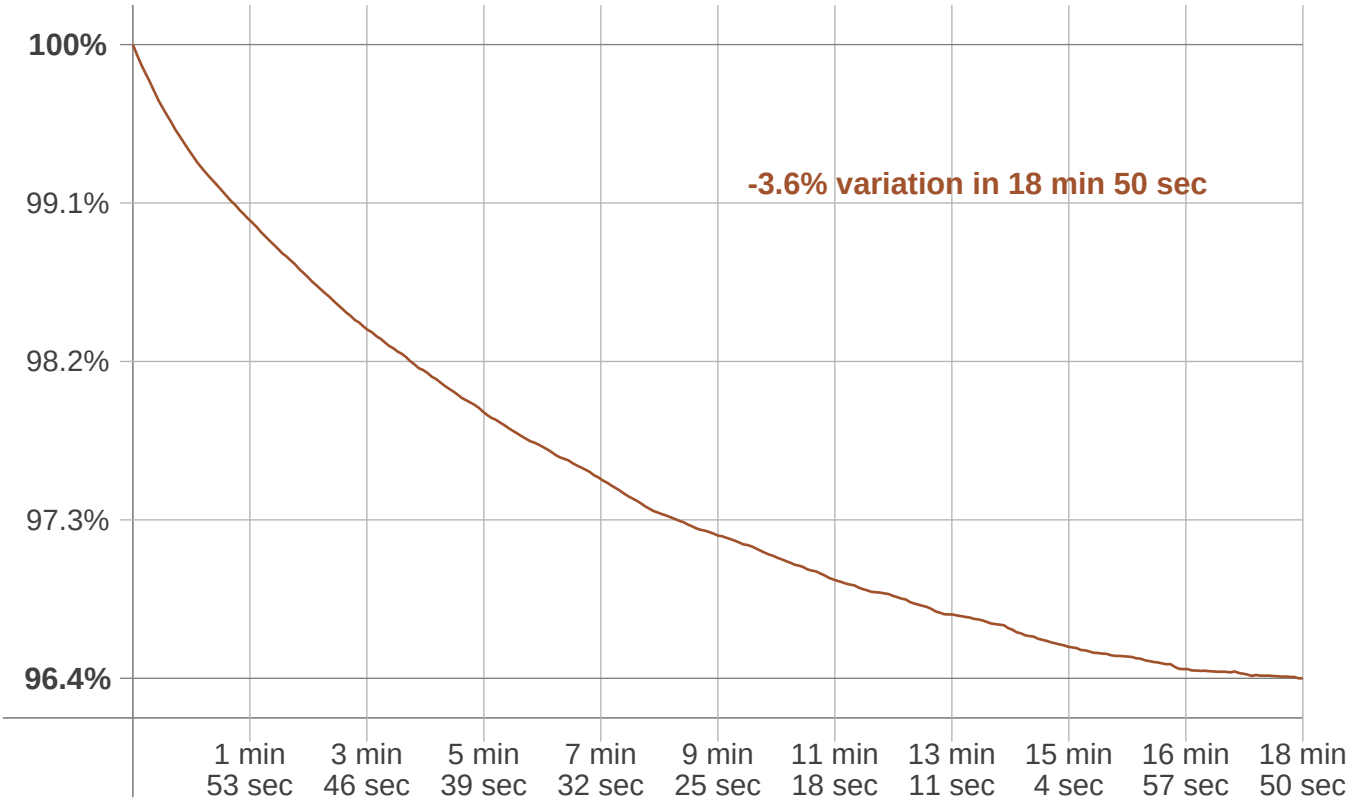
Stabilization

Warmup curve



Warmup result

Warmup time:	**18 min 50 sec**
Warmup variation	**-3.6%**

Warmup conditions

Stable period:	**15 min**
Stable change max:	**2.0%**
Minimum time:	**15 min**

Color temperature change

CCT start	CCT change	CCT end
3947 K	**+29 K**	**3976 K**

Output change

Output start	Output change	Output end
1079 lm	**-36 lm**	**1043 lm**

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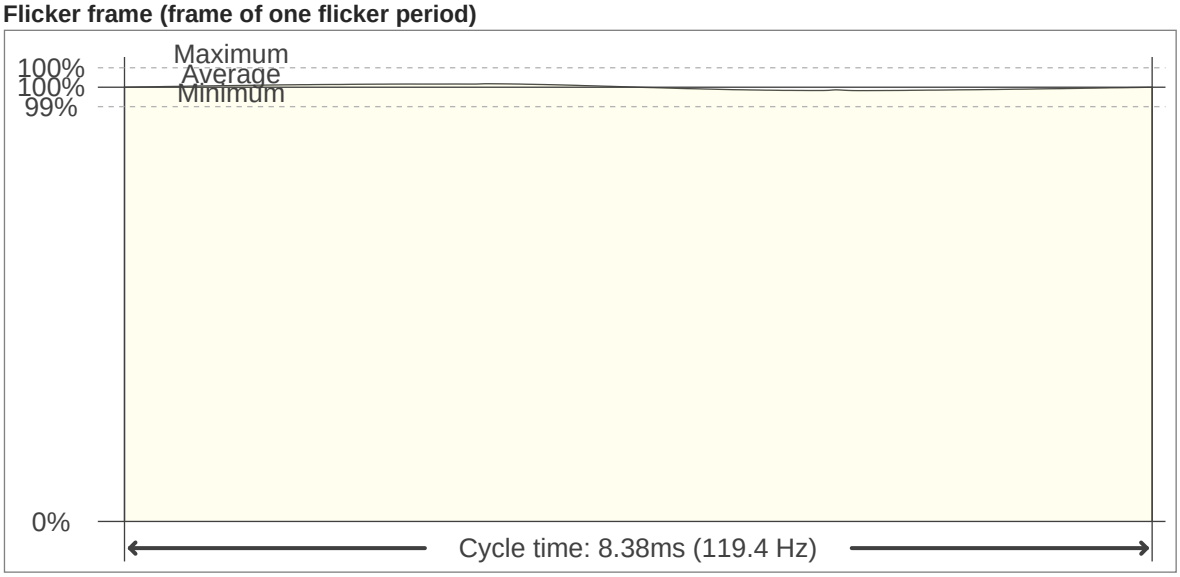
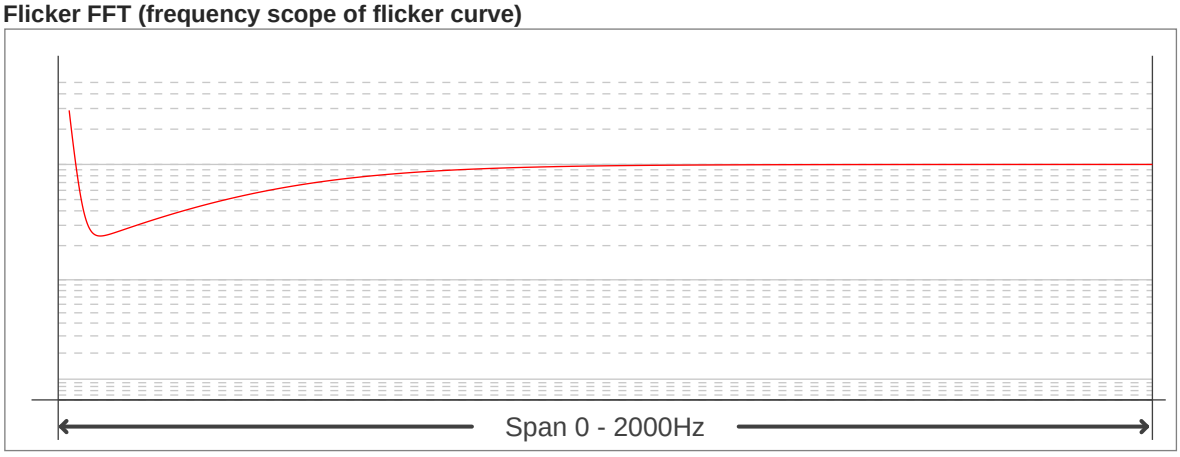
Flicker

Flicker curve (complete sampled flicker signal)

Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:	**119.4 Hz**
Flicker index:	**0**
Flicker percentage:	**0.82 %**
SVM: (Visual flicker)	**0.03**

Flicker conditions:

Sample rate:	**40000 samples/second**

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