Light efficiency:

165 Lumen/Watt

Light quality:

CRI: 81.5

Color temperature:

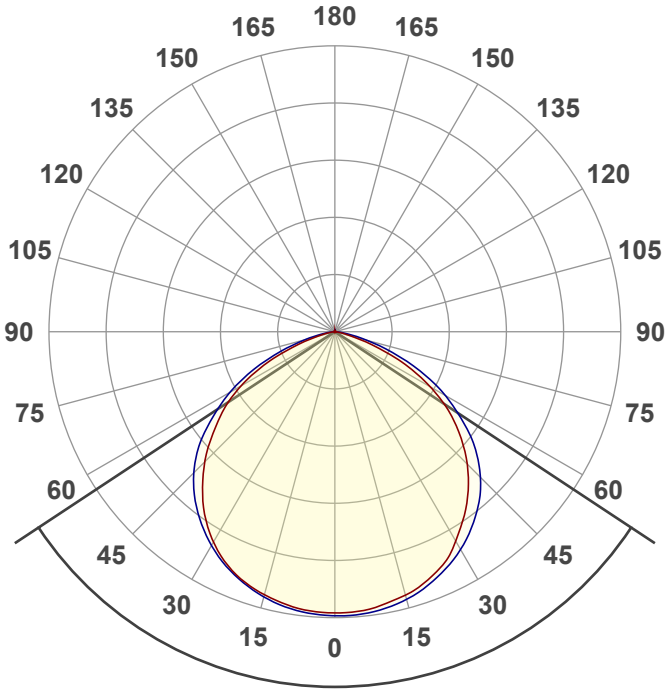
4990 K

Output: **21678 lm**

Peak: **7898 cd**

Power: **131.3 W**

PF: **1.0**



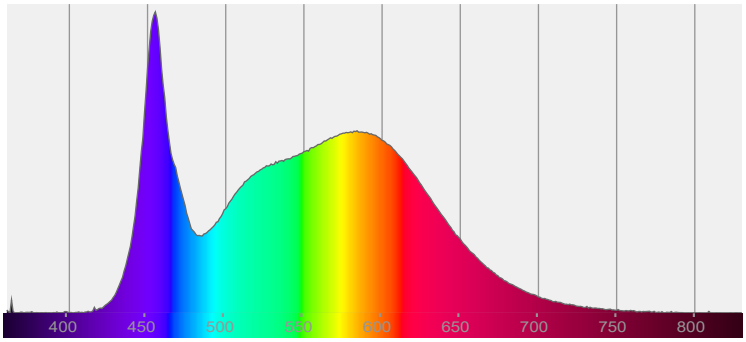
Beam angle **113.1°**

Product name:
LCS16-50K150

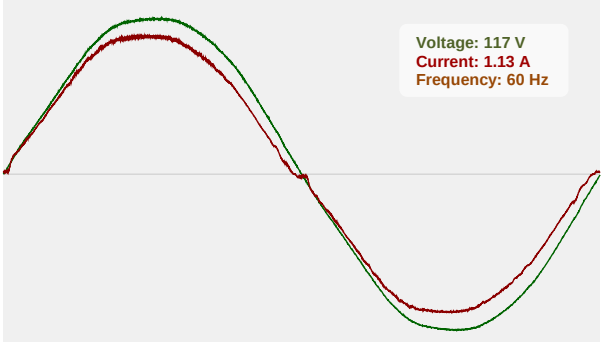
Date and time:
7/12/2023 1:16:53 PM

CIE 1931
x: 0.346
y: 0.360

Spectra



Power



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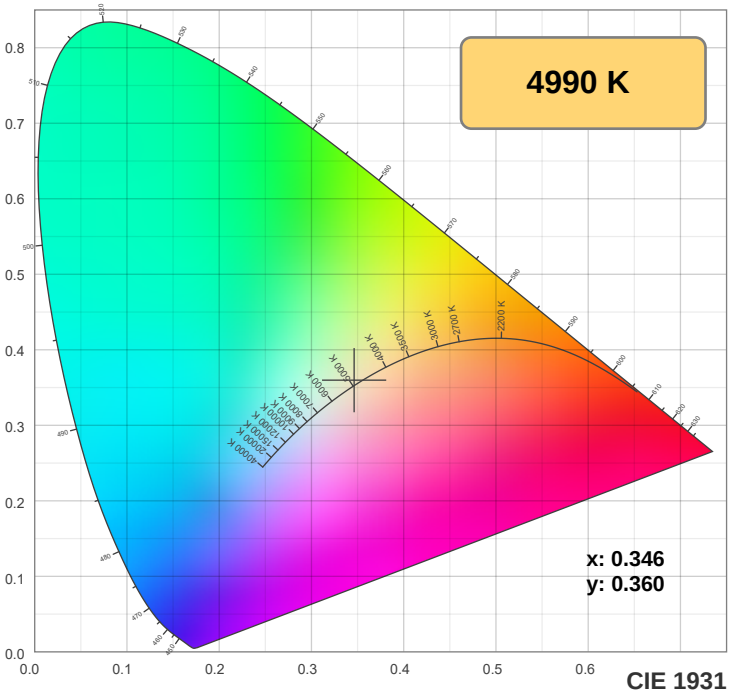
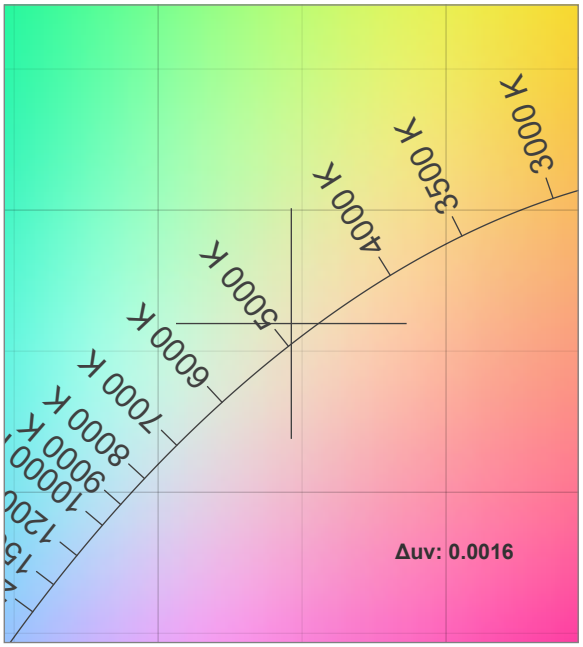
Color Specifications

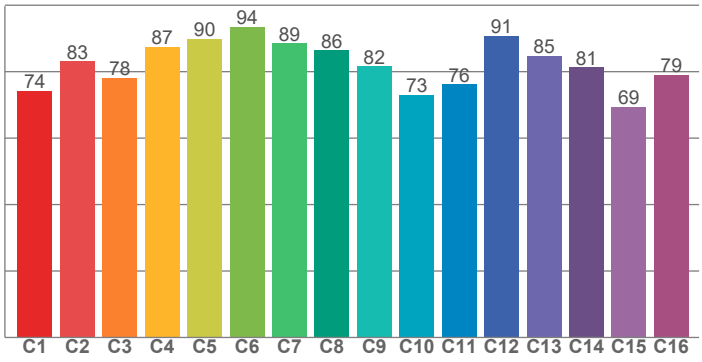


CIE 1931

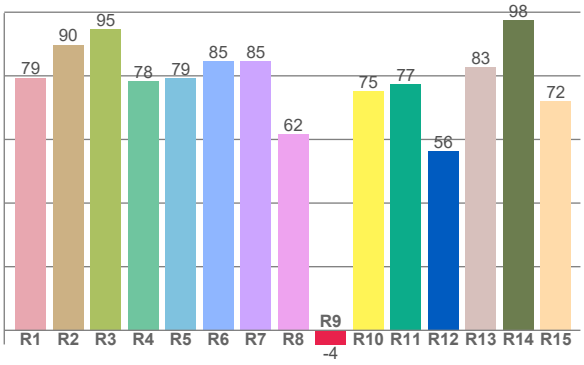


CIE 1931 ZOOM

TM30: 82.2



CRI: 81.5 (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
79.4	89.8	94.6	78.3	79.3	84.6	84.6	61.7	-4.5	75.1	77.2	56.2	82.7	97.6	72.0

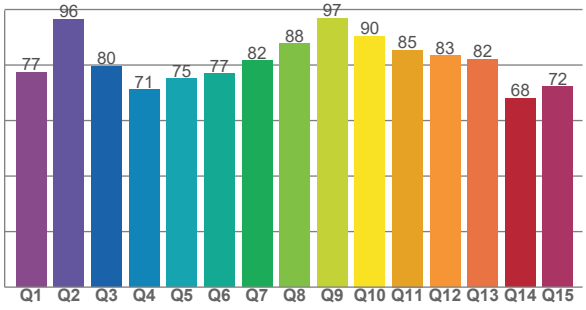
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
74.3	83.1	78.2	87.4	89.9	93.5	88.5	86.4	81.6	73.1	76.2	90.8	84.8	81.2	69.5	79.0

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
77.4	96.5	79.6	71.2	75.2	77.0	81.6	87.7	96.8	90.4	85.4	83.4	82.1	68.1	72.3

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
4990 K	81.5	-4.5	82.2	92.7	79.8	0.346	0.360	0.209	0.326	0.0016

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TM30 Report

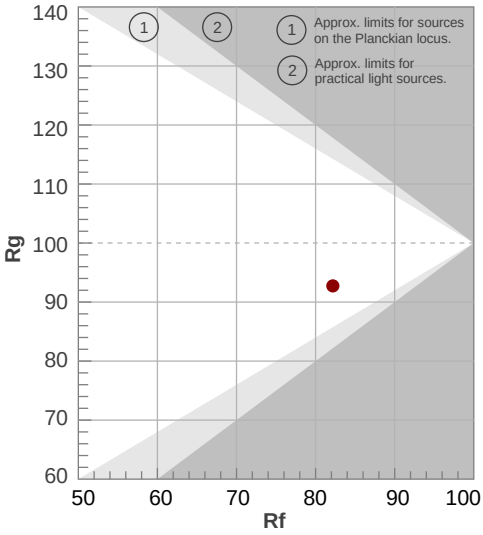
Rf 82.2

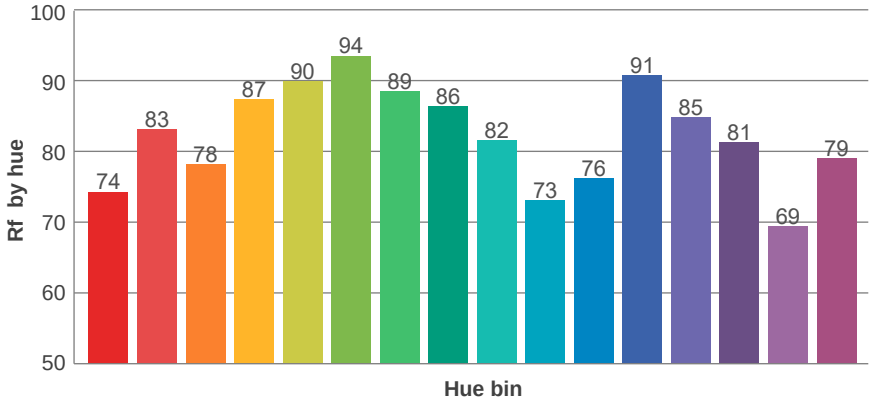
Fidelity index Rf

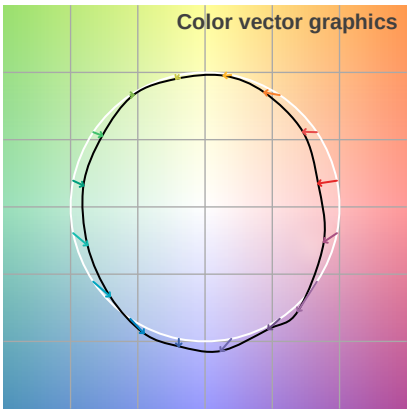
Rg 92.7

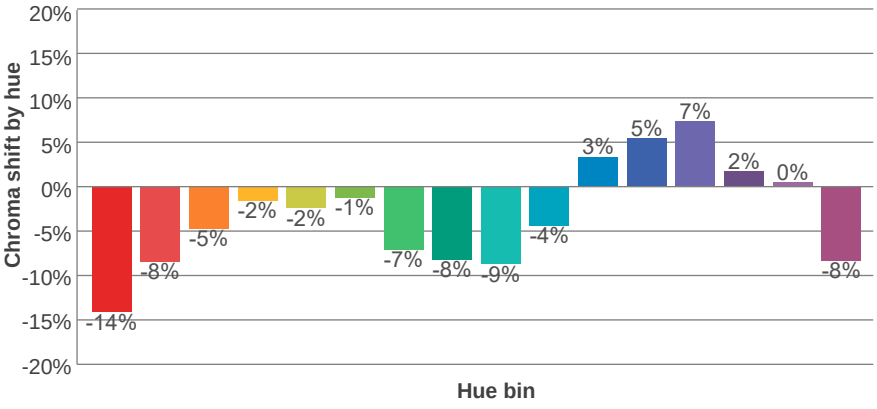
Gamut index Rg

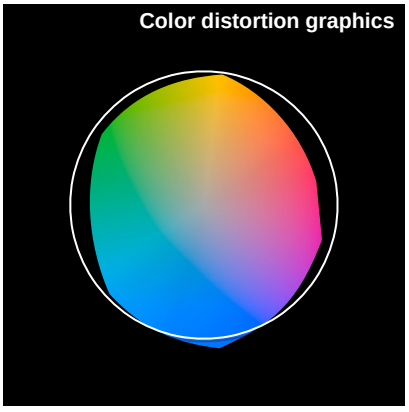
		Graphic shifts (%)	
Hue Bin	R_f	Chroma	Hue
1	74	-14%	1%
2	83	-8%	6%
3	78	-5%	11%
4	87	-2%	5%
5	90	-2%	2%
6	94	-1%	-2%
7	89	-7%	-2%
8	86	-8%	2%
9	82	-9%	11%
10	73	-4%	16%
11	76	3%	14%
12	91	5%	1%
13	85	7%	-10%
14	81	2%	-11%
15	69	0%	-26%
16	79	-8%	-8%

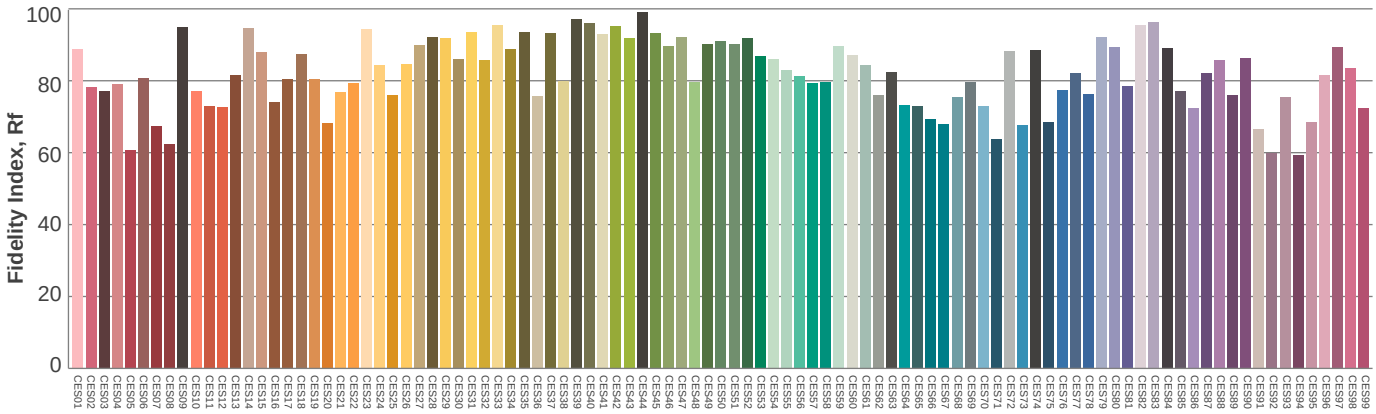












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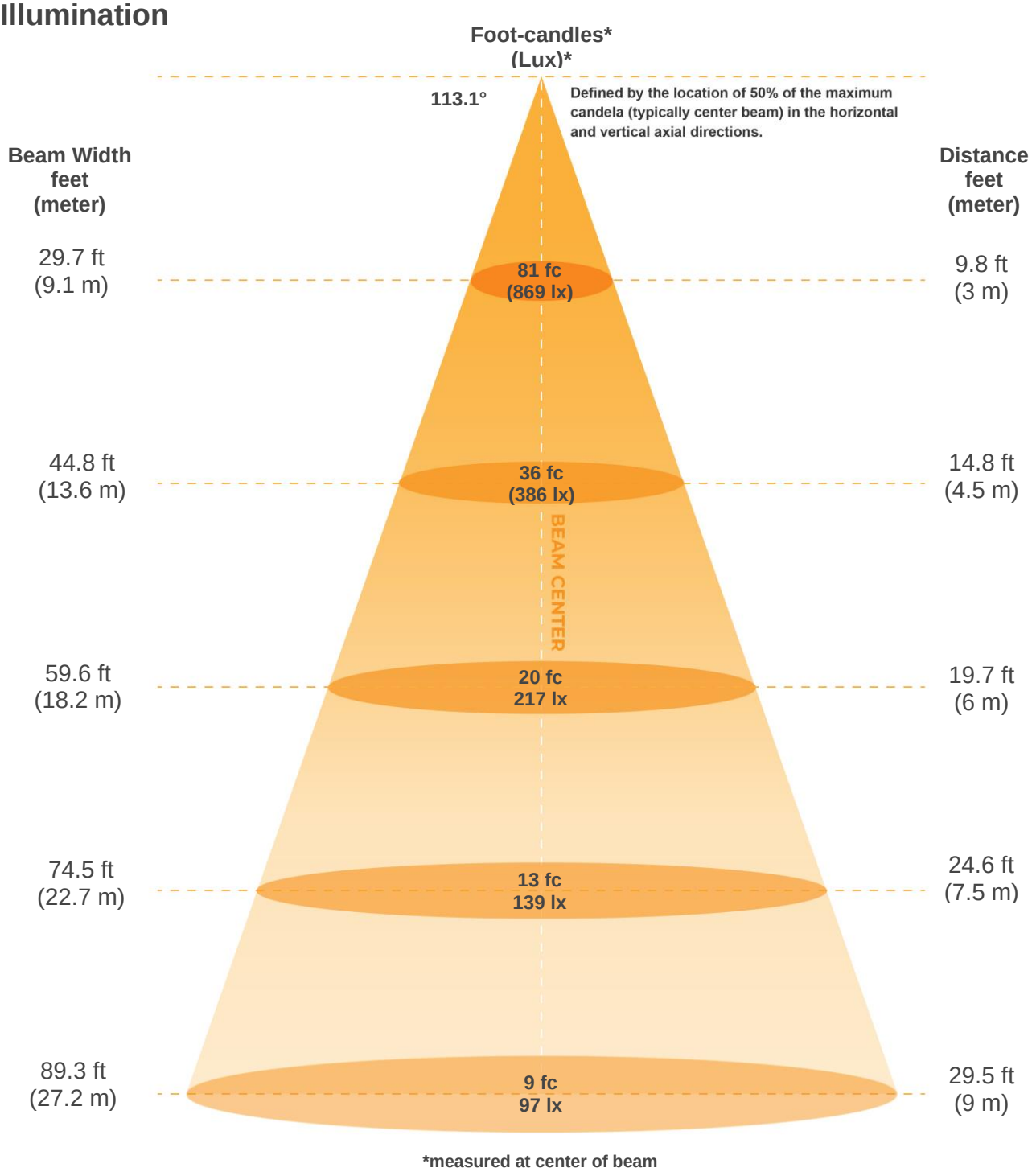
Illumination



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
7819lx	1955lx	869lx	489lx	313lx	217lx	160lx	122lx	97lx	78lx	65lx	54lx	46lx	40lx	35lx	31lx	27lx	24lx	22lx	20lx
726.4fc	181.6fc	80.7fcd	45.4fcd	29.1fcd	20.2fcd	14.8fcd	11.4fcd	9fcd	7.3fcd	6fcd	5fcd	4.3fcd	3.7fcd	3.2fcd	2.8fcd	2.5fcd	2.2fcd	2fcd	1.8fcd

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
113.1°	**150.4°**	**164.6°**	**83.6%**	**56.9%**

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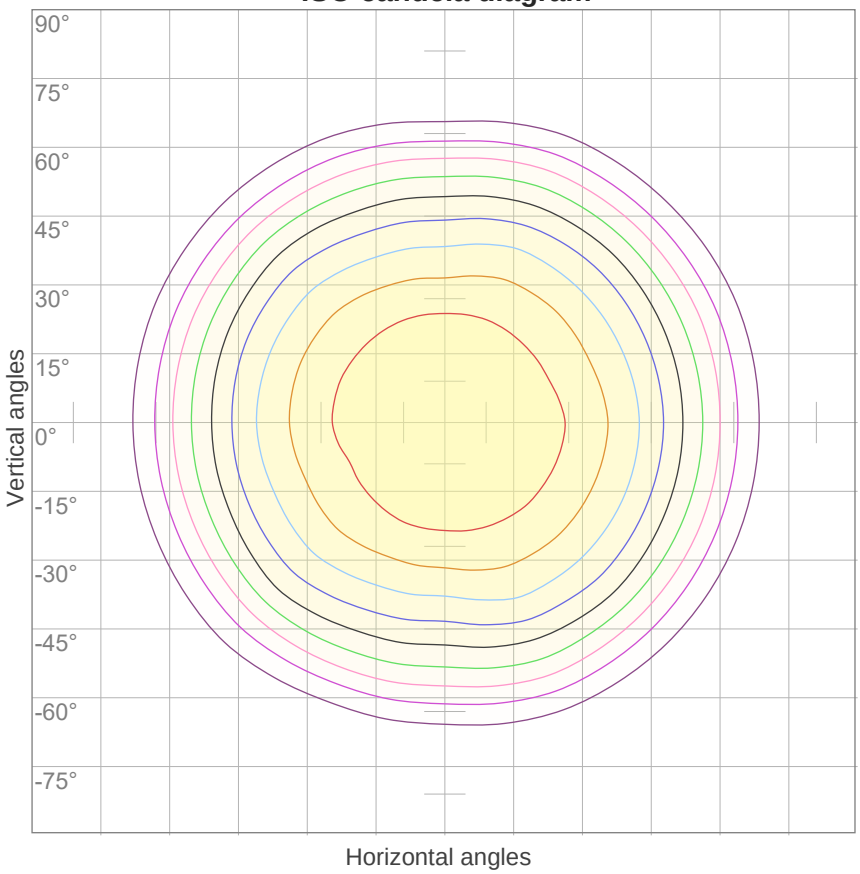
ISO Diagrams

ISO candela diagram



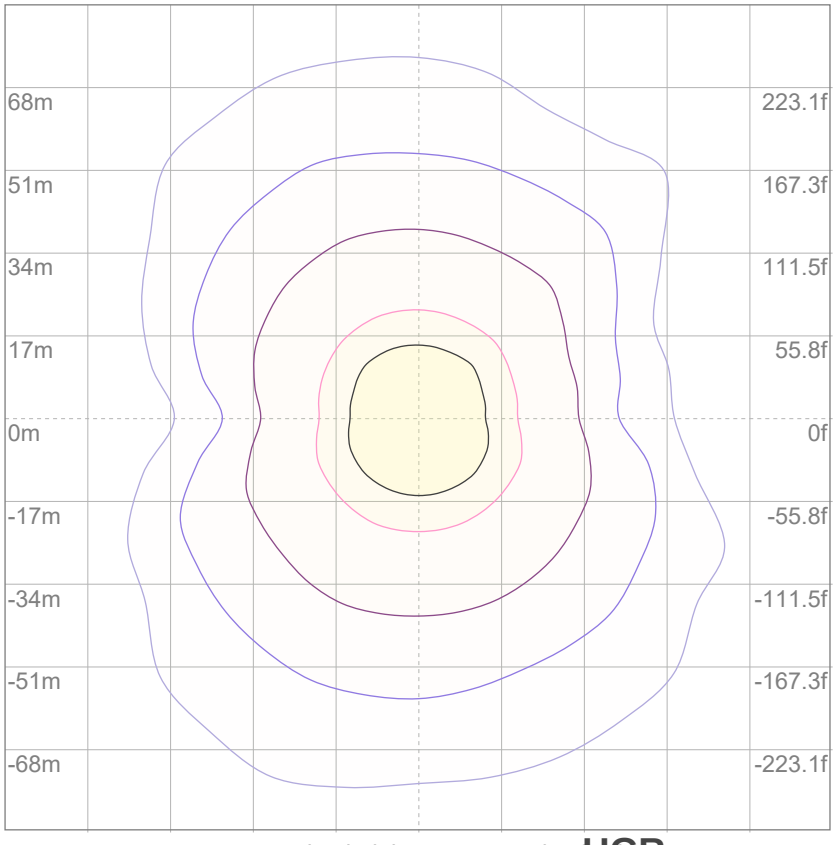
10%	782 cd
20%	1564 cd
30%	2346 cd
40%	3128 cd
50%	3910 cd
60%	4692 cd
70%	5474 cd
80%	6255 cd
90%	7037 cd

Conditions:

Number of c-planes: 16

Candela at center: 7819 cd

ISO lux diagram



3%	2.35 lx
5%	3.91 lx
10%	7.82 lx
30%	23.5 lx
50%	39.1 lx

Conditions:

Number of c-planes: 16

Lux at center: 78.2 lx

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

UGR

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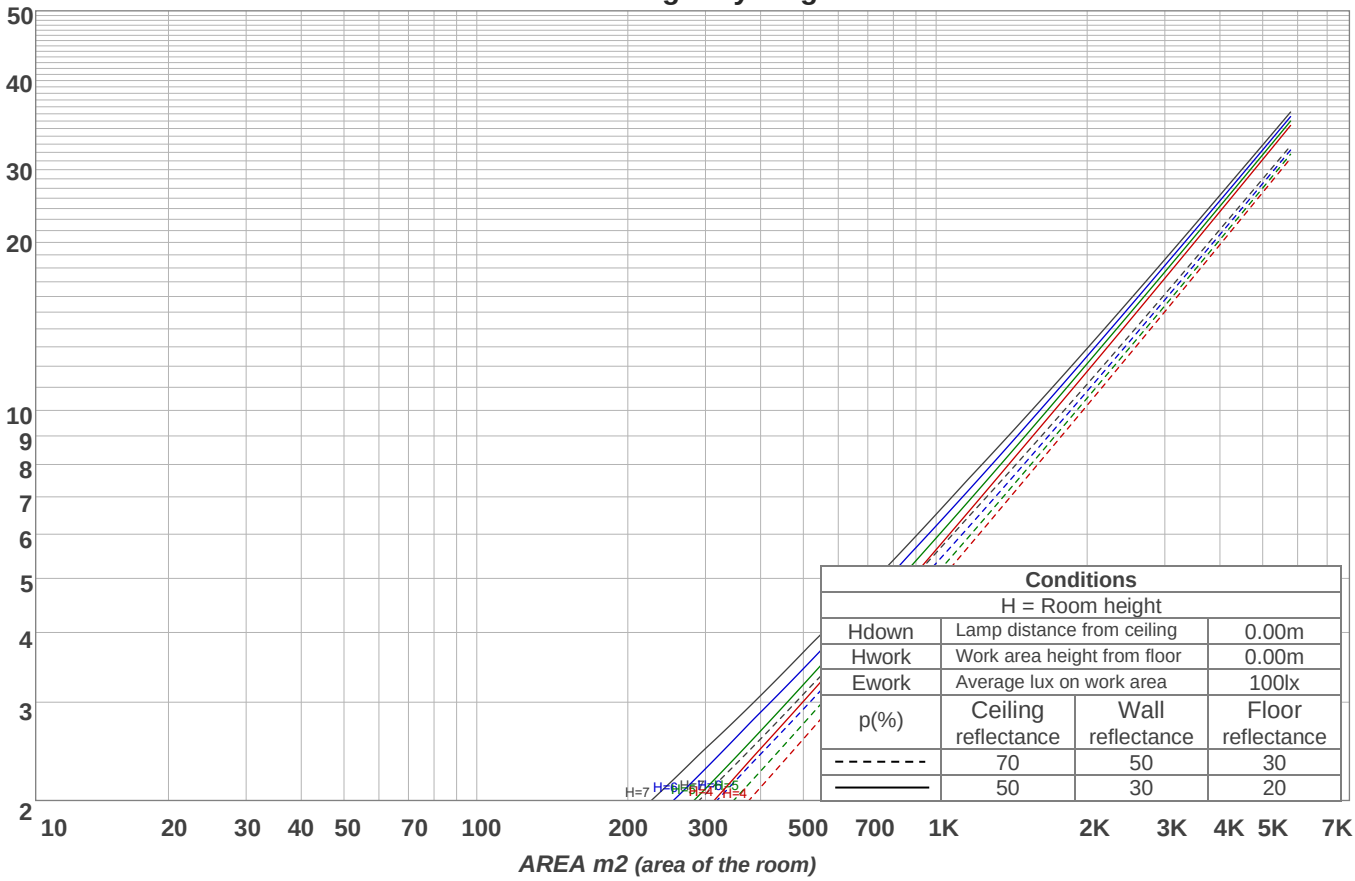
Light Planning

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	100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	88	85
2	100	92	86	81	98	91	85	80	87	82	78	84	80	76	81	77	74	72
3	92	81	74	67	89	80	73	67	77	71	66	74	69	64	72	67	63	61
4	84	72	64	57	82	71	63	57	68	62	56	66	60	55	64	59	55	52
5	77	65	56	49	75	63	55	49	61	54	49	59	53	48	57	52	47	45
6	71	58	49	43	69	57	49	43	55	48	43	54	47	42	52	46	42	40
7	66	53	44	38	64	52	44	38	50	43	38	49	42	37	47	42	37	35
8	61	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	52	40	33	28	39	32	27	38	32	27	37	31	27	25

Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
742 lm	2143 lm	3295 lm	4030 lm	4217 lm	3702 lm	2440 lm	905 lm	131 lm

90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
7.56 lm	7.98 lm	9.61 lm	10.8 lm	11.1 lm	10.3 lm	8.36 lm	5.58 lm	1.94 lm

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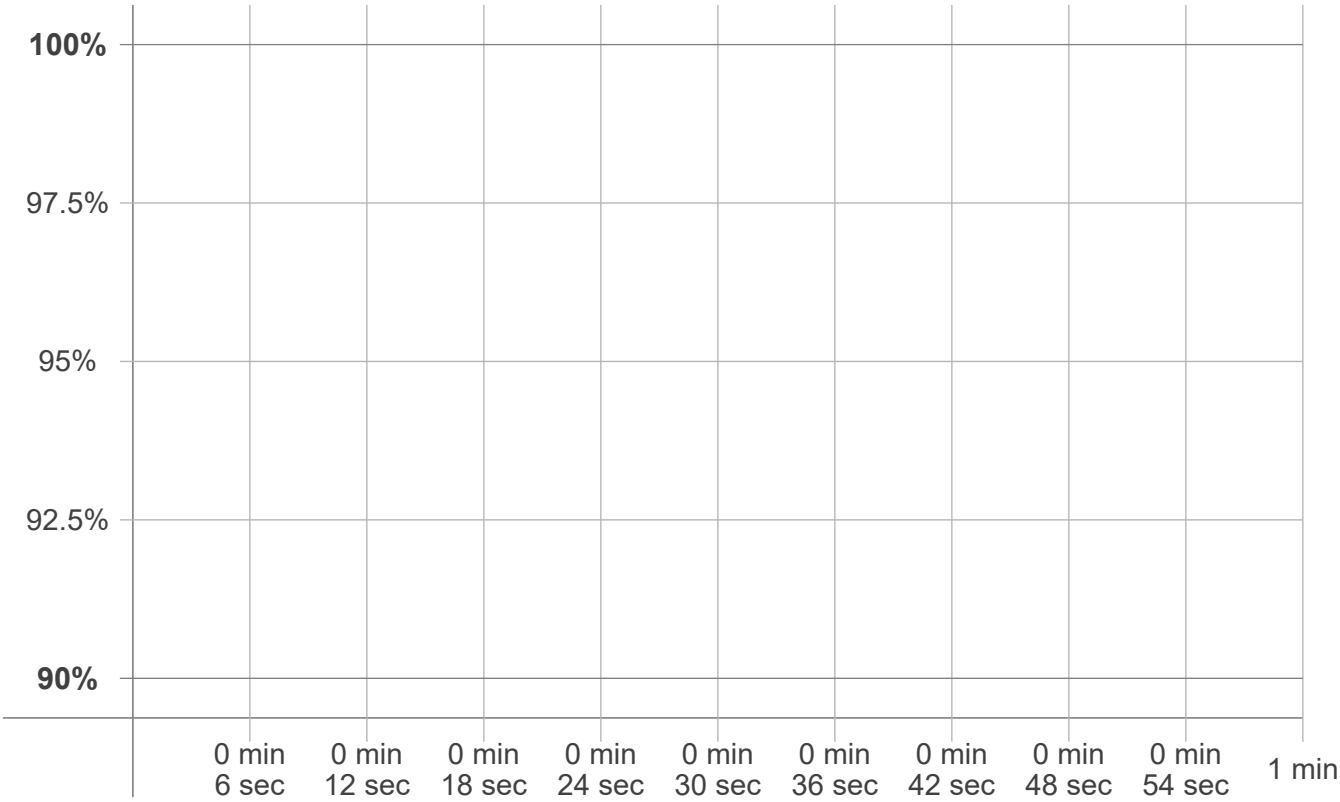
Stabilization

Warmup curve



Warmup result

Warmup time:	**n/a**
Warmup variation	**n/a%**

Warmup conditions

Stable period:	**n/a**
Stable change max:	**n/a%**
Minimum time:	**n/a**

Color temperature change

CCT start	CCT change	CCT end
n/a K	n/a K	4990 K

Output change

Output start	Output change	Output end
n/a lm	n/a lm	21678 lm

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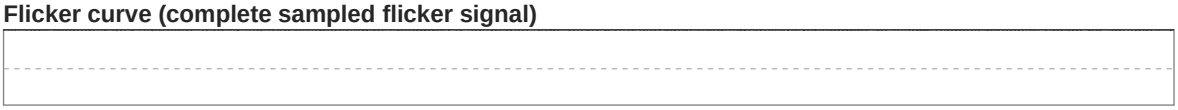
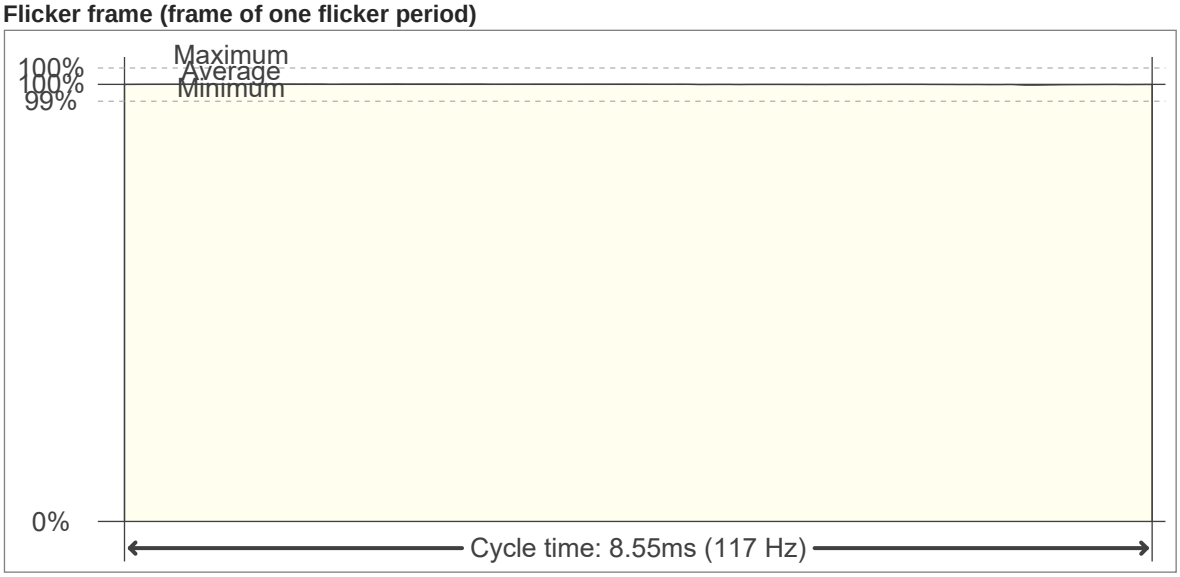
Flicker Specifications

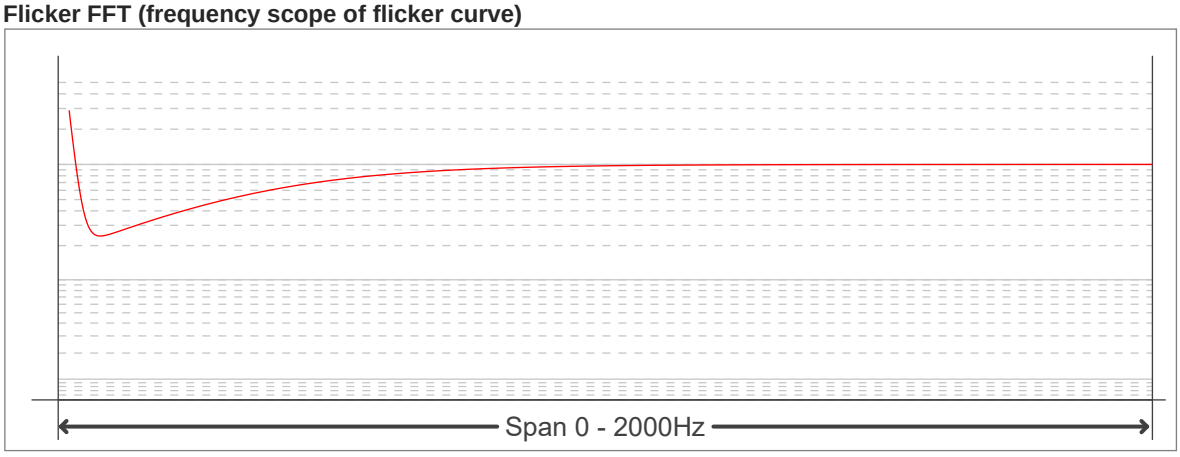
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:	**116.96 Hz**
Flicker index:	**0**
Flicker percentage:	**0.42 %**
SVM: (Visual flicker)	**0**

Flicker conditions:

Sample rate:	**20000 samples/second**

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