

Light efficiency:

151 Lumen/Watt

Output: 46824 lm

Light quality:

CRI: 84.3

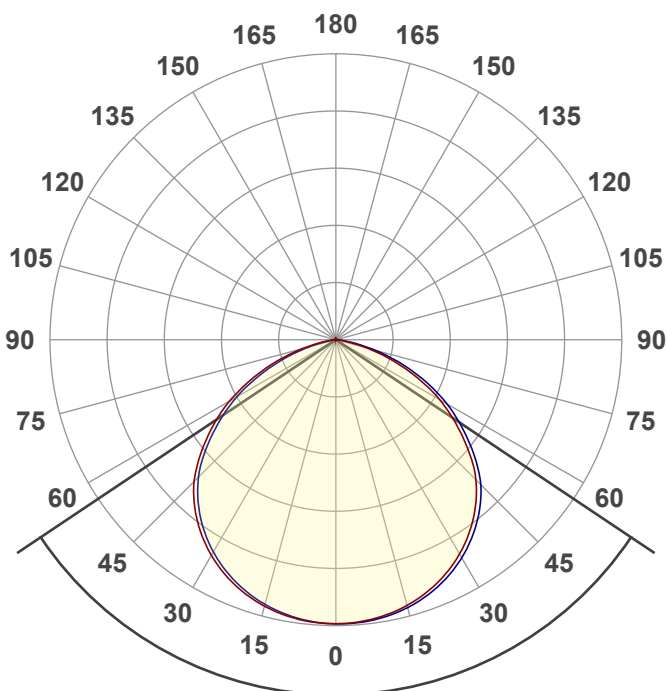
Peak: 16784 cd

Color temperature:

5122 K

Power: 310.7 W

PF: 1.0



Product name:

HBUD2-50K300D-C2

Date and time:

1/24/2022 11:56:25 AM

Beam angle

112.4°

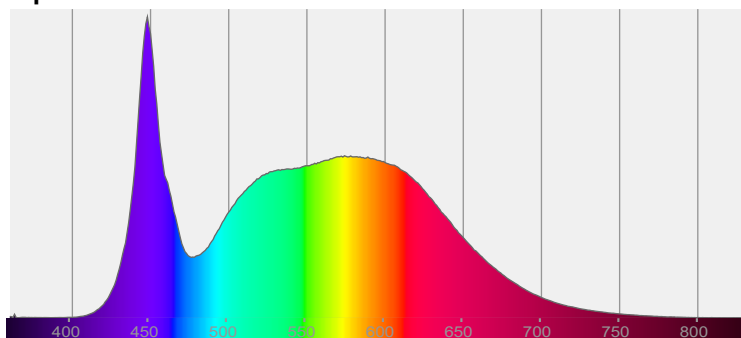


CIE 1931

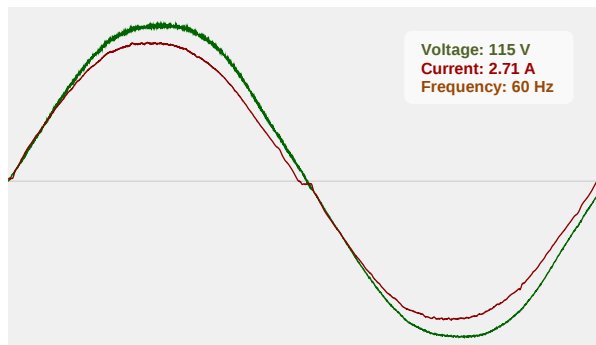
x: 0.342

y: 0.351

Spectra



Power



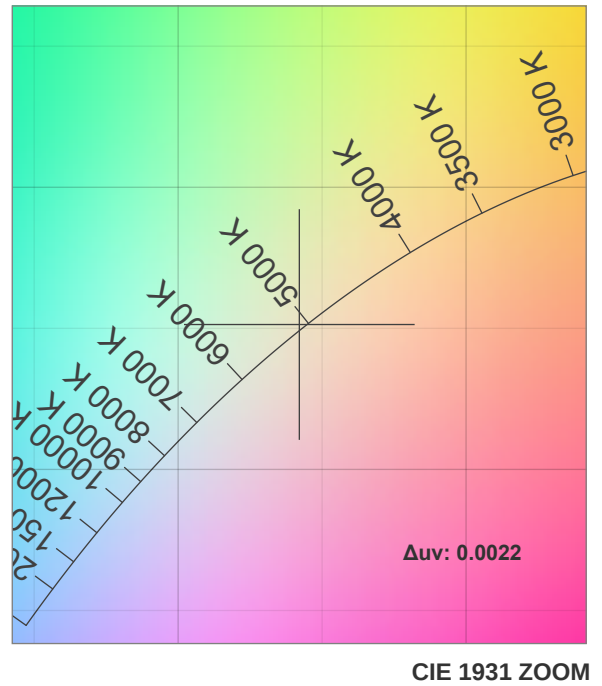
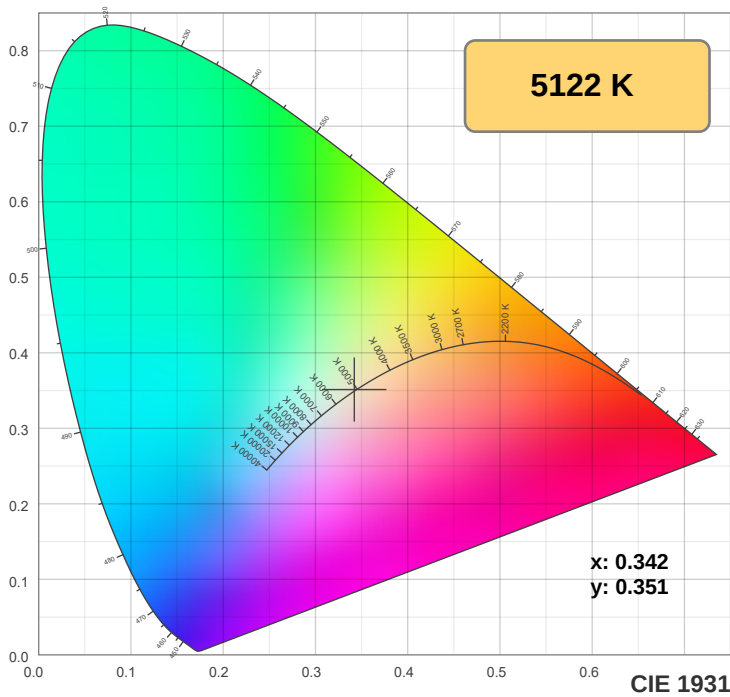
T 314.743.3067

F 314.972.6202

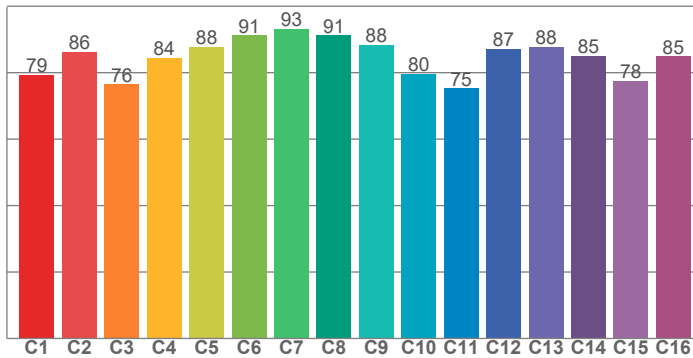
email: commercial-sales@superbrightleds.com

www.superbrightleds.com/

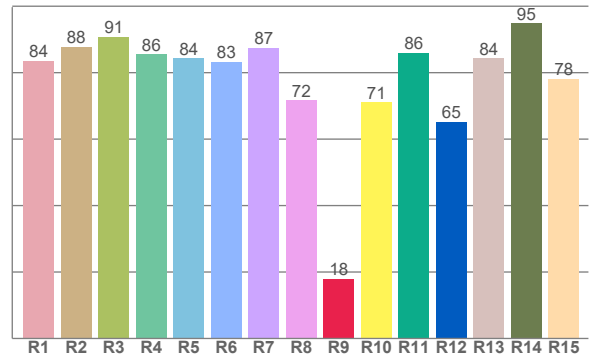
Color Specifications



TM30: 84.3



CRI: 84.3 (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
83.5	87.8	90.8	85.6	84.3	83.3	87.5	71.6	18.0	71.1	86.0	65.3	84.4	95.0	78.2

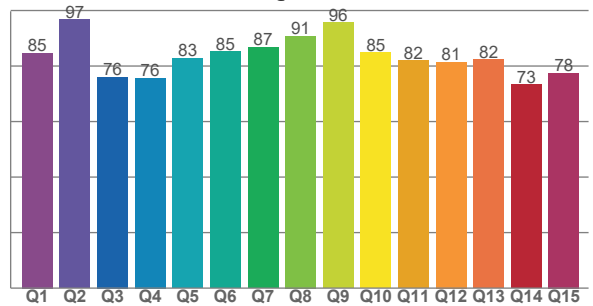
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
79.4	86.2	76.5	84.4	87.8	91.2	93.2	91.2	88.4	79.6	75.3	87.2	87.8	85.1	77.5	84.9

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
84.7	96.8	76.1	75.7	82.8	85.3	86.7	90.8	95.6	84.7	82.0	81.4	82.3	73.2	77.5

CQS: 82.4



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
5122 K	84.3	18.0	84.3	98.4	82.4	0.342	0.351	0.209	0.323	0.0022



TM30 Report

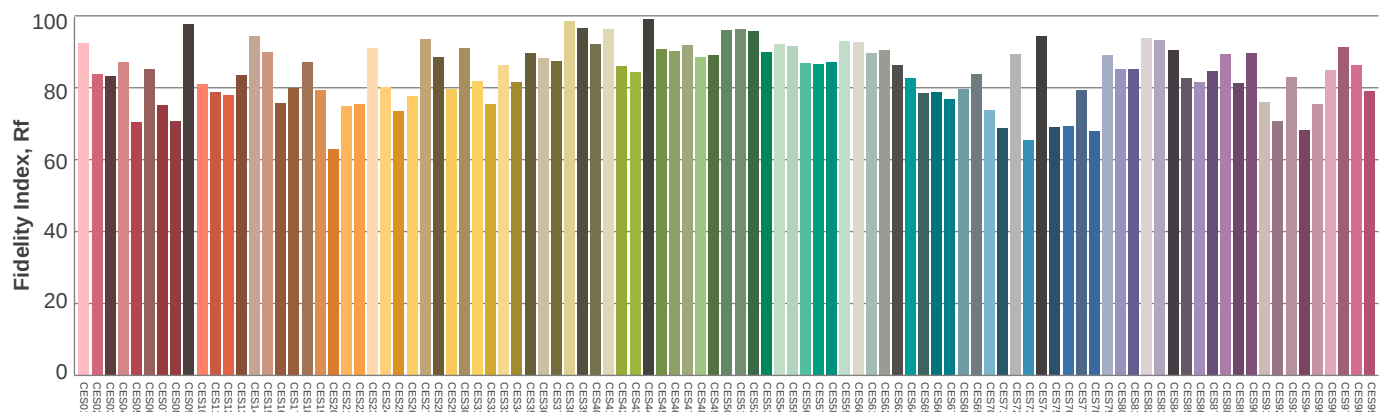
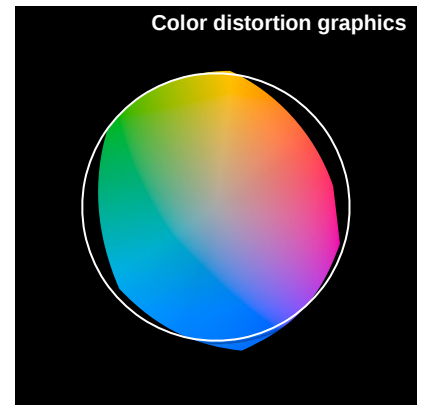
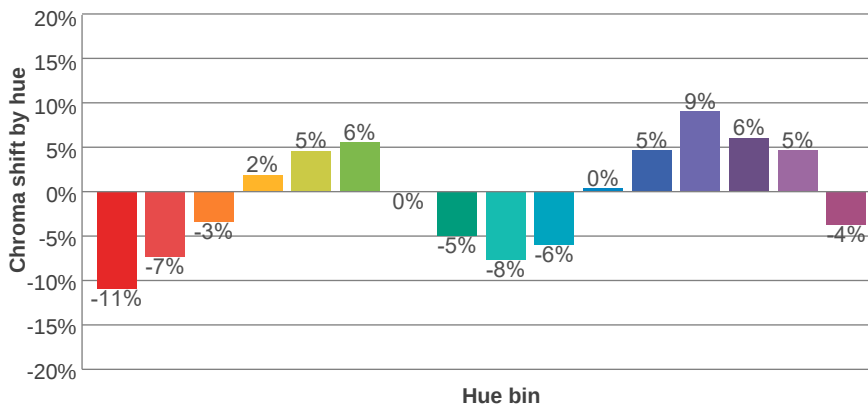
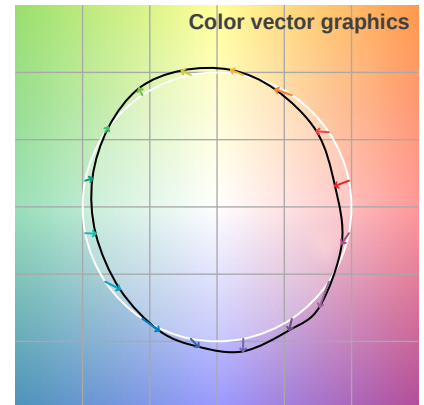
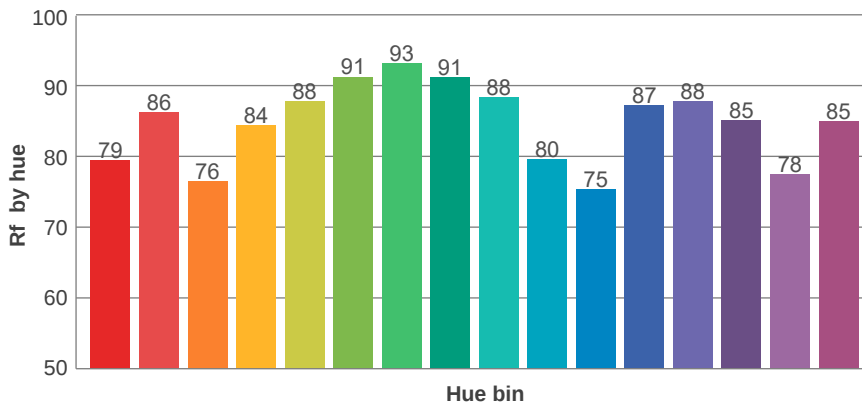
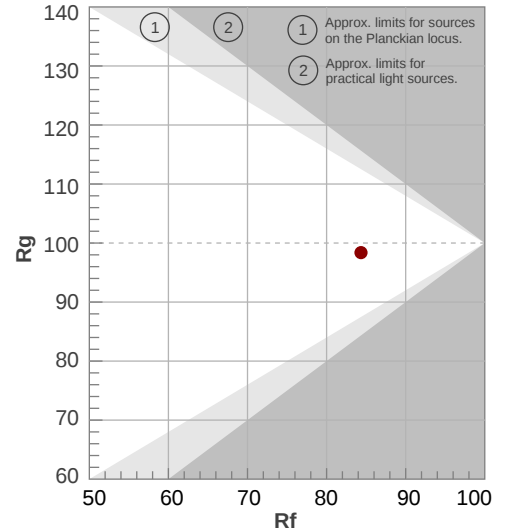
Rf 84.3

Fidelity index Rf

Rg 98.4

Gamut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	79	-11%	-2%
2	86	-7%	6%
3	76	-3%	12%
4	84	2%	10%
5	88	5%	6%
6	91	6%	-1%
7	93	0%	-4%
8	91	-5%	-3%
9	88	-8%	2%
10	80	-6%	11%
11	75	0%	15%
12	87	5%	7%
13	88	9%	-2%
14	85	6%	-6%
15	78	5%	-19%
16	85	-4%	-9%

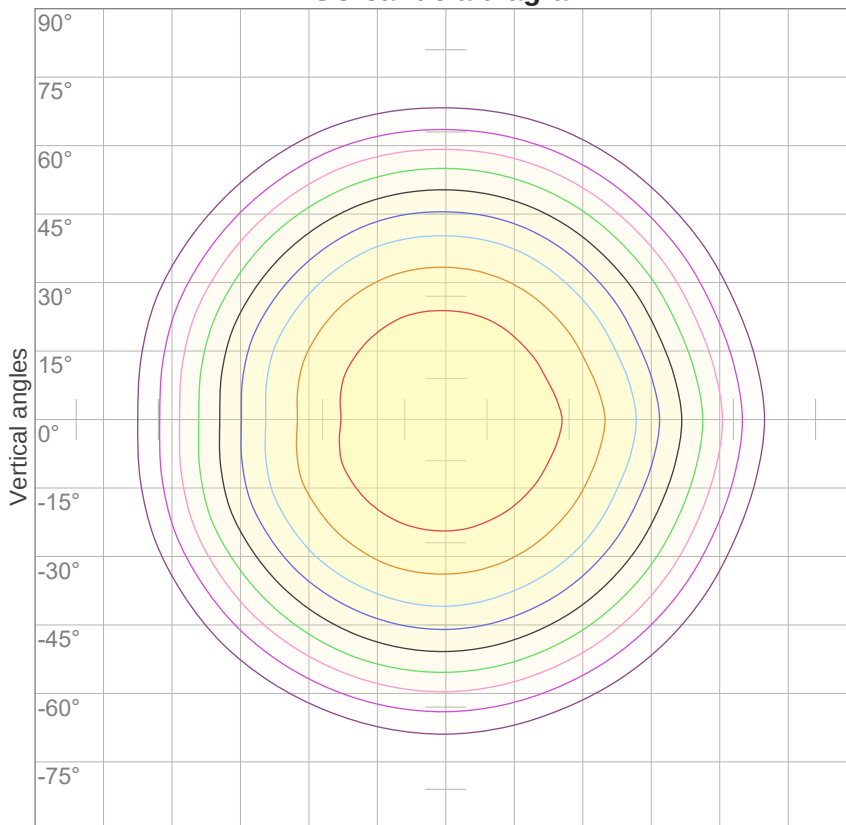


*measured at center of beam

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
112.4°	152.6°	165°	82.8%	56.6%

ISO Diagrams

ISO candela diagram



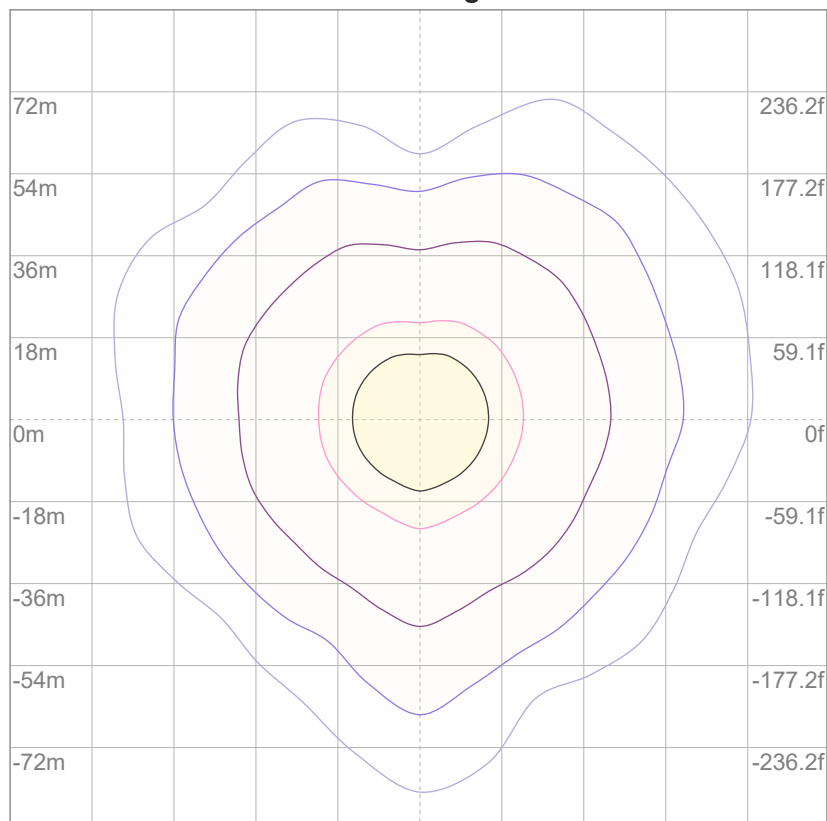
10%	1677 cd
20%	3353 cd
30%	5030 cd
40%	6707 cd
50%	8383 cd
60%	10060 cd
70%	11737 cd
80%	13413 cd
90%	15090 cd

Conditions:

Number of c-planes: 16

Candela at center: 16767 cd

ISO lux diagram



3%	5.03 lx
5%	8.38 lx
10%	16.8 lx
30%	50.3 lx
50%	83.8 lx

Conditions:

Number of c-planes: 16

Lux at center: 168 lx

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



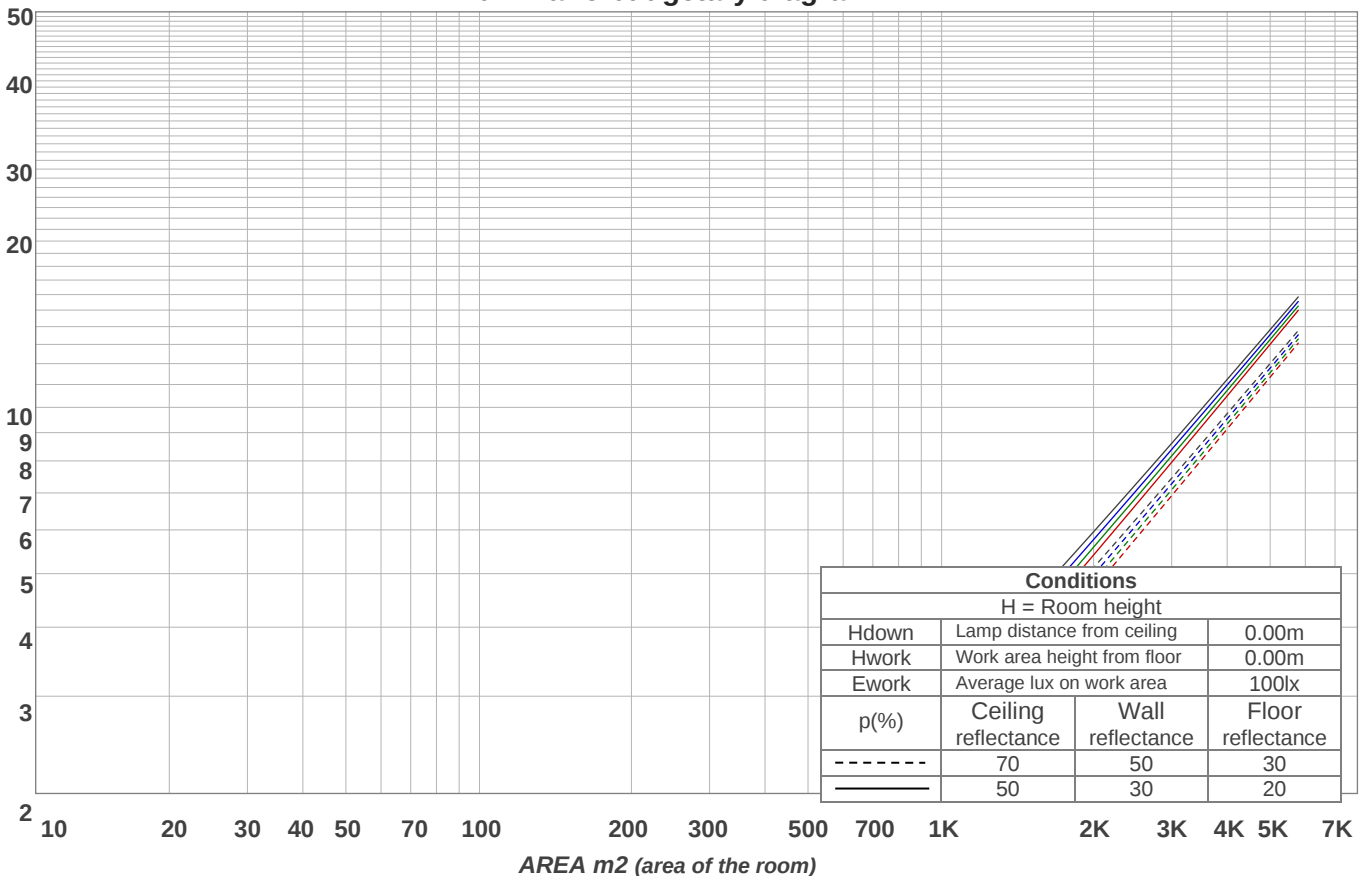
Light Planning

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	87	85
2	100	92	86	80	97	90	84	79	87	82	77	83	79	76	80	77	74	72
3	91	81	73	67	89	80	72	66	77	70	65	74	69	64	71	67	63	61
4	84	72	64	57	81	71	63	57	68	61	56	66	60	55	64	58	54	52
5	77	64	56	49	75	63	55	49	61	54	48	59	53	48	57	52	47	45
6	71	58	49	43	69	57	49	43	55	48	42	53	47	42	52	46	41	39
7	66	53	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35
8	61	48	39	34	60	47	39	34	46	39	33	45	38	33	43	37	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

LAMPS (number of lamps)

Luminaire budgetary diagram



Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
1591 lm	4597 lm	7069 lm	8665 lm	9038 lm	7826 lm	5343 lm	2211 lm	269 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
20.1 lm	24.9 lm	29.4 lm	32.8 lm	32.7 lm	30.3 lm	24.4 lm	15.8 lm	5.56 lm

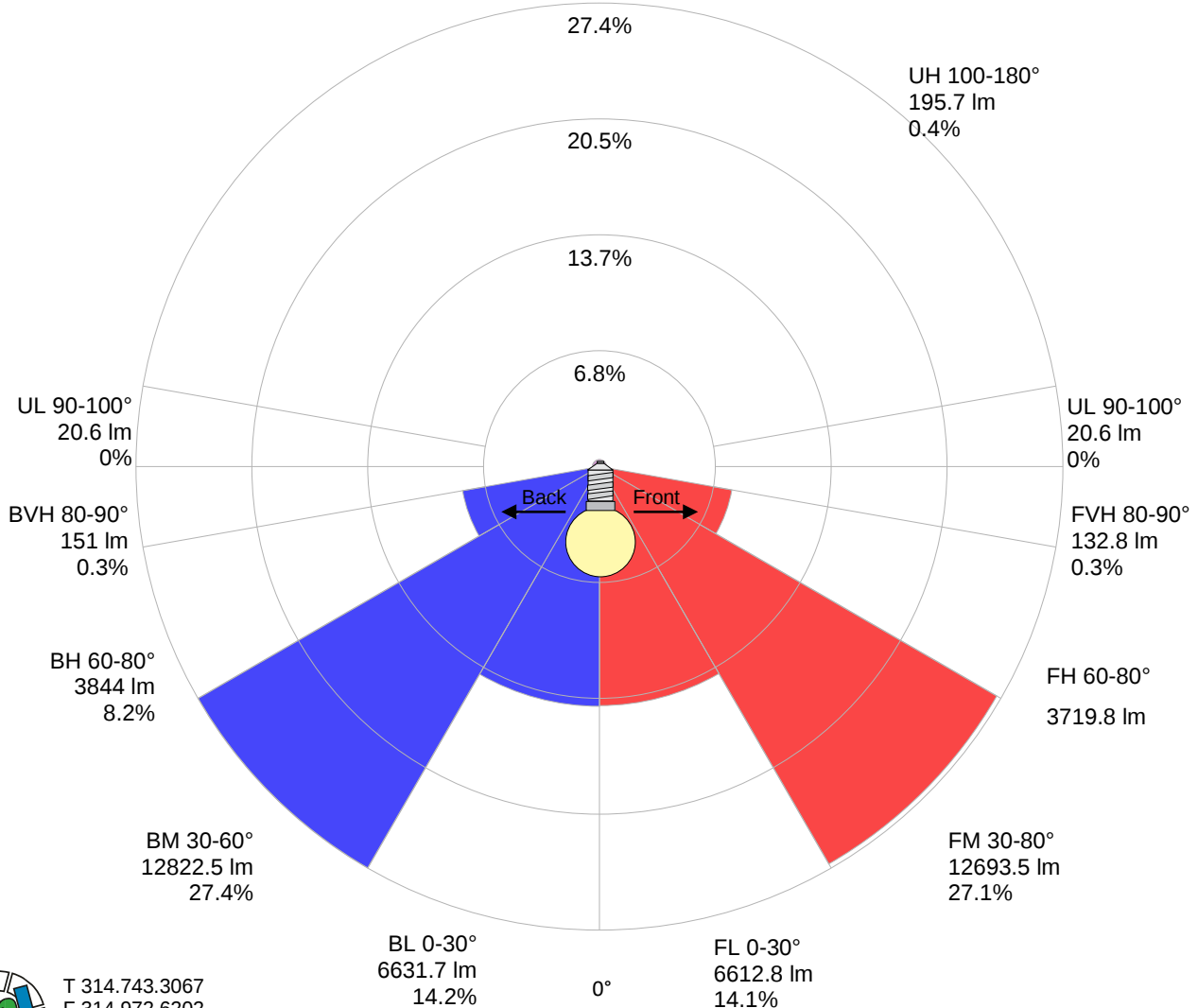


Road Report

LCS table

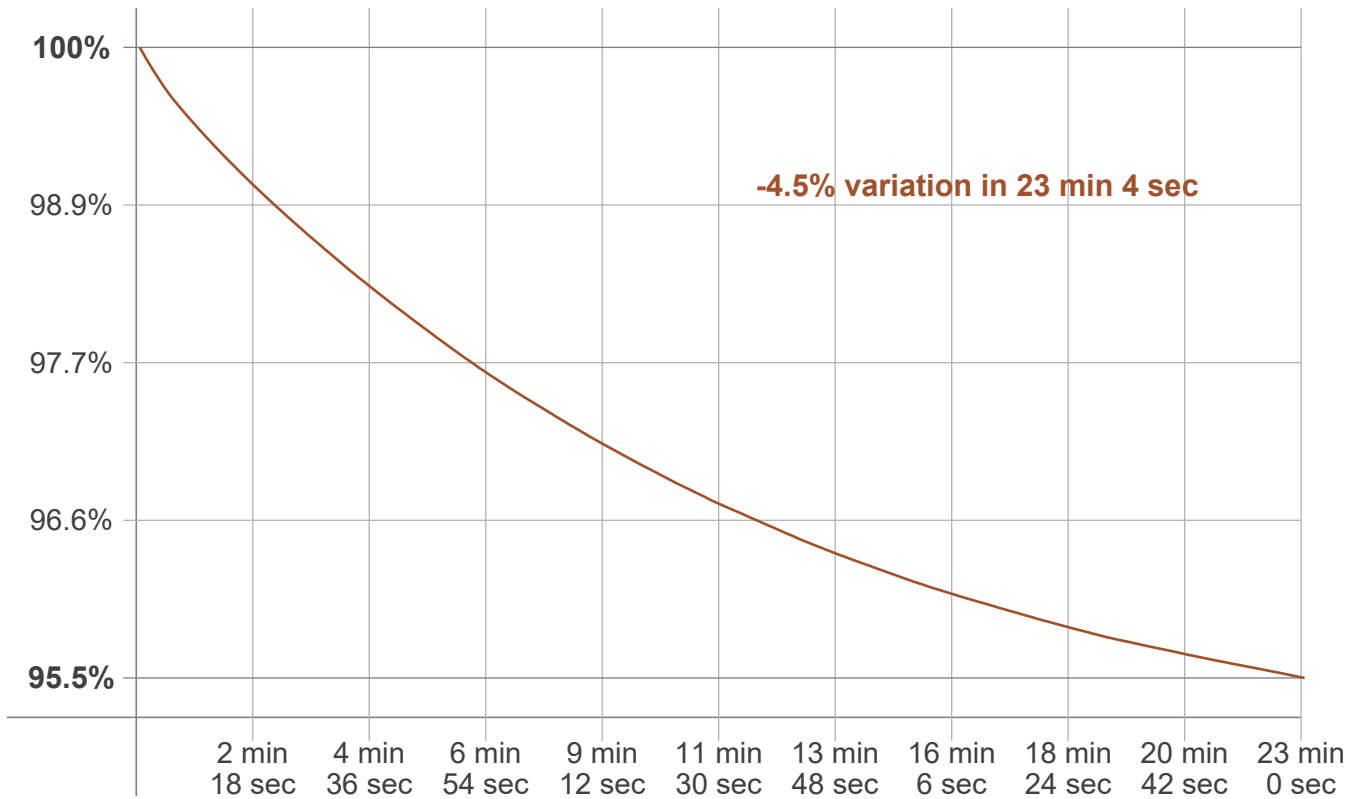
BUG rating:	B5 U3 G4	
Forward light	Lumens	Lumens %
Low(0-30):	6612.8	14.1%
Medium(30-60):	12693.5	27.1%
High(60-80):	3719.8	7.9%
Very high(80-90):	132.8	0.3%
Back light		
Low(0-30):	6631.7	14.2%
Medium(30-60):	12822.5	27.4%
High(60-80):	3844	8.2%
Very high(80-90):	151	0.3%
Uplight		
Low(90-100):	20.6	0%
High(100-180):	195.7	0.4%

LCS graph



Stabilization

Warmup curve



Warmup result

Warmup time:	Lamp stabilized in 23 min 4 sec
Warmup variation	-4.6%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
5018 K	+104 K	5122 K

Output change

Output start	Output change	Output end
49008 lm	-2184 lm	46824 lm

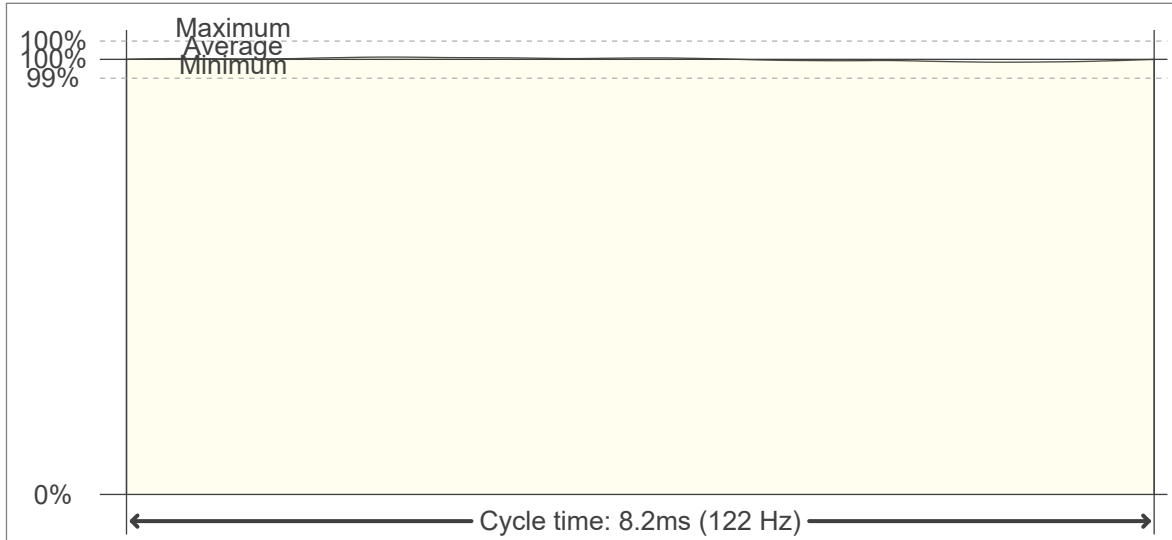


Flicker Specifications

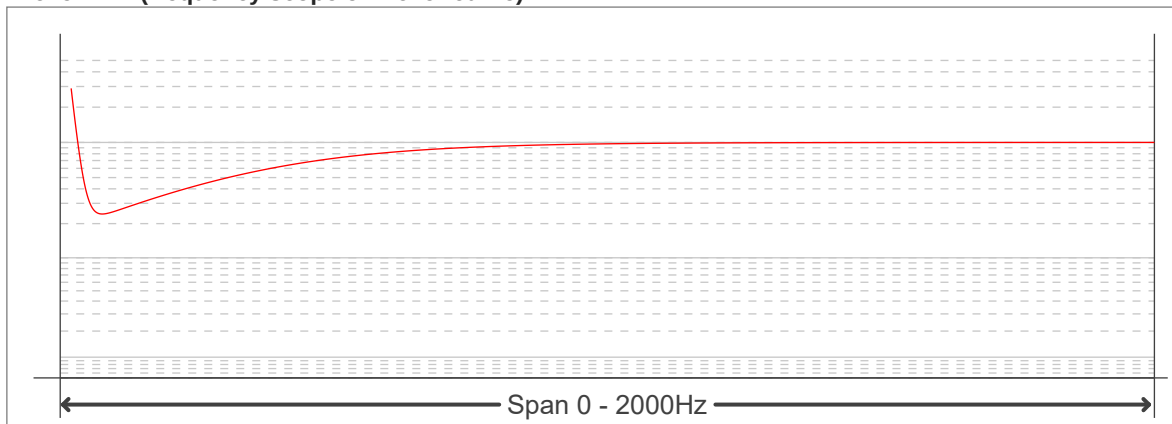
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:	121.95 Hz
Flicker index:	0
Flicker percentage:	0.66 %
SVM: (Visual flicker)	0.02

Flicker conditions:

Sample rate:	20000 samples/second
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