

Light efficiency:

118 Lumen/Watt

Output: 13382 lm

Light quality:

CRI: 82.6

Peak: 4775 cd

Color temperature:

5253 K

Power: 113.1 W

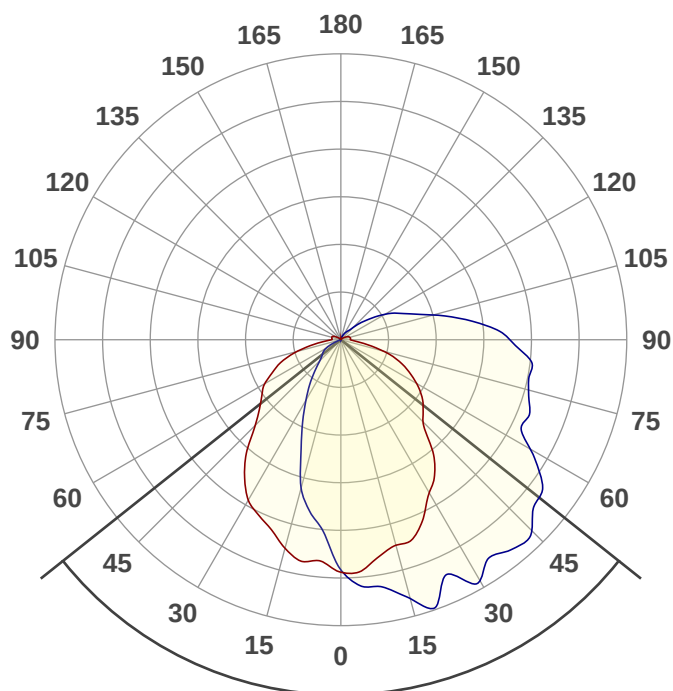
PF: 1.0

Product name:

WPG-50K120W-S

Date and time:

9/27/2019 9:55:46 AM



Beam angle

103°

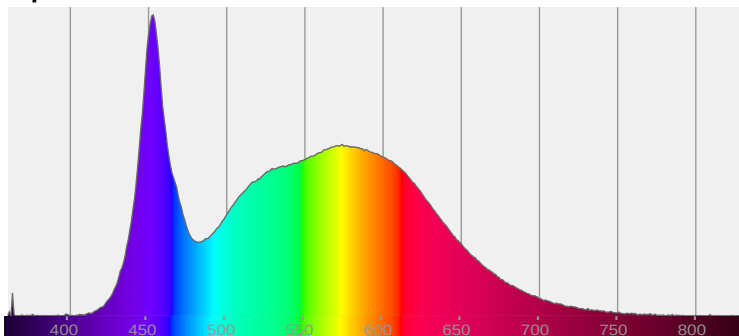


CIE 1931

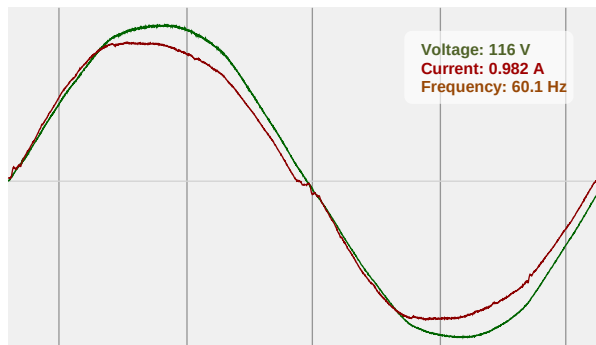
x: 0.339

y: 0.351

Spectra



Power



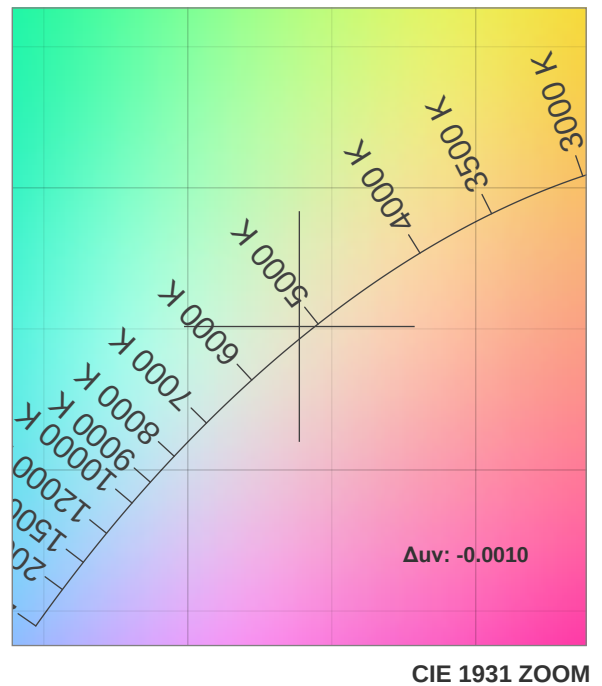
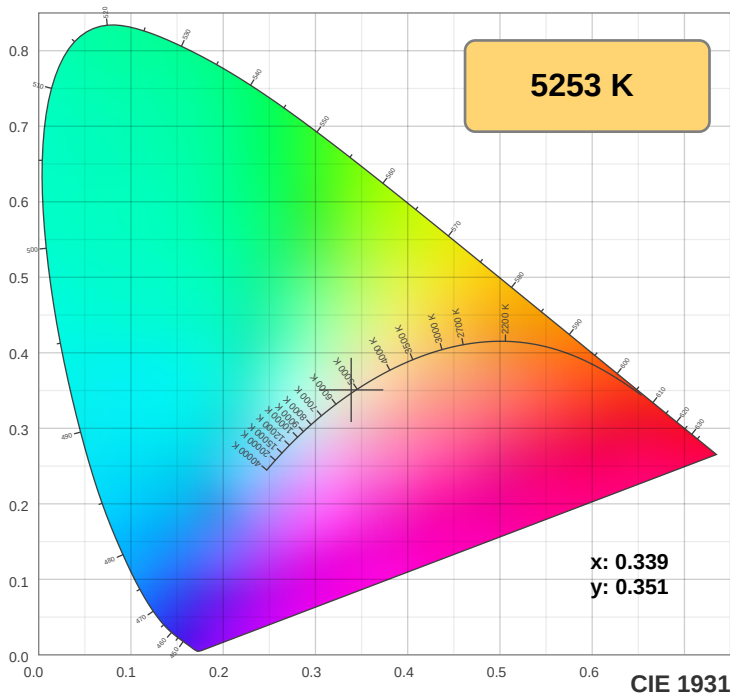
T 314.743.3067

F 314.972.6202

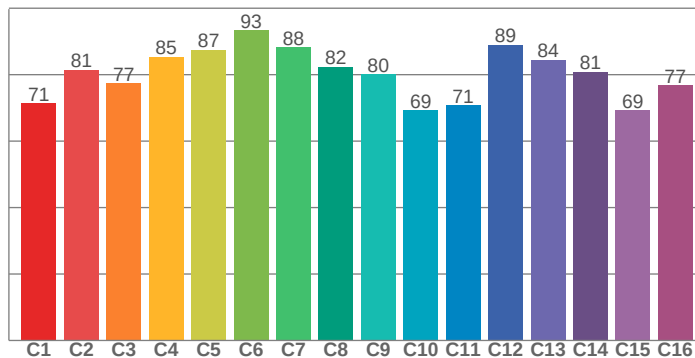
email: commercial-sales@superbrightleds.com

www.superbrightleds.com/

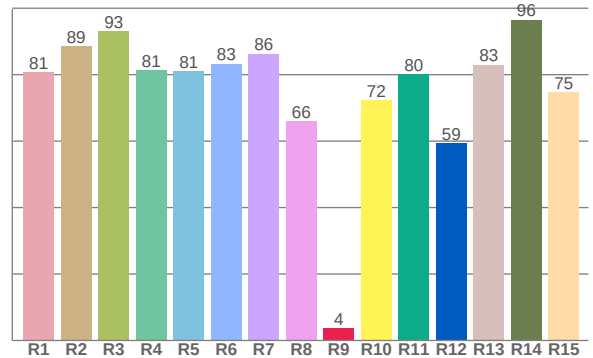
Color Specifications



TM30: 80.4



CRI: 82.6 (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
80.7	88.6	93.1	81.4	81.0	83.2	86.4	66.0	3.7	72.3	80.2	59.4	83.0	96.5	74.8

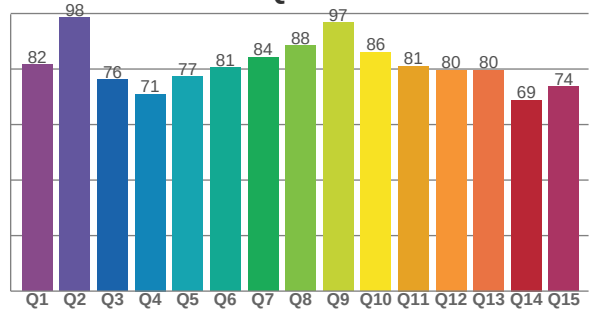
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
71.3	81.5	77.4	85.3	87.4	93.4	88.2	82.4	80.1	69.3	70.7	89.0	84.5	80.8	69.2	76.8

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
81.6	98.5	76.1	71.0	77.3	80.5	84.2	88.4	96.8	86.0	81.1	79.6	79.7	68.8	73.7

CQS: 79.9



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
5253 K	82.6	3.7	80.4	93.3	79.9	0.339	0.351	0.207	0.322	-0.0010



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TM30 Report

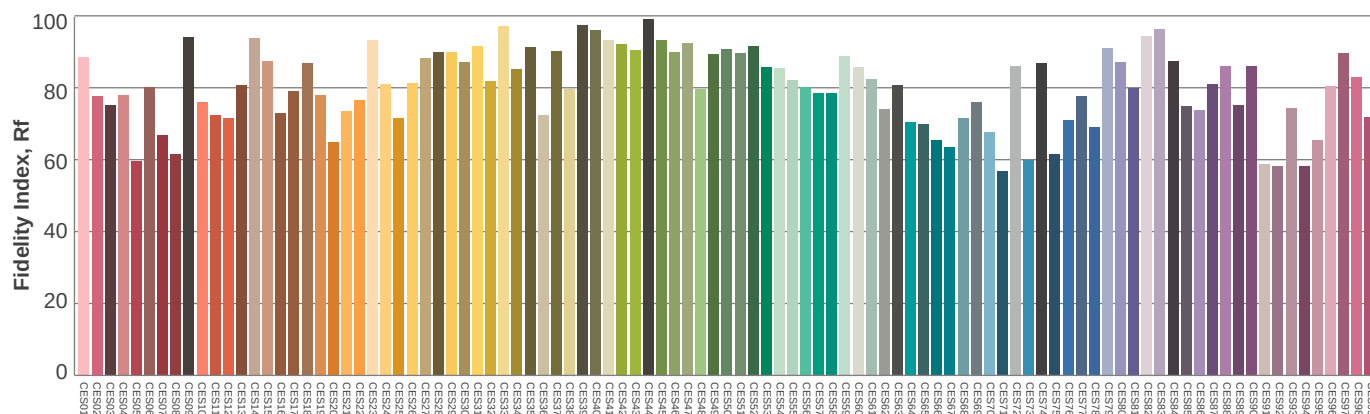
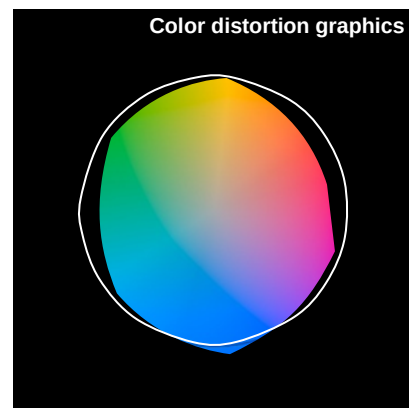
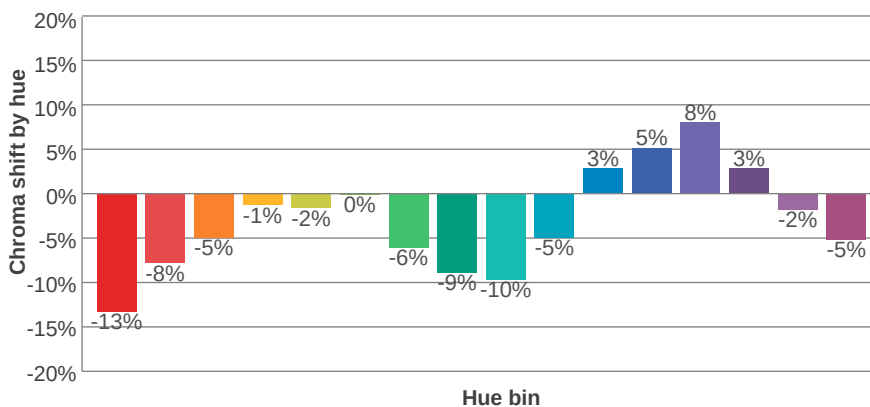
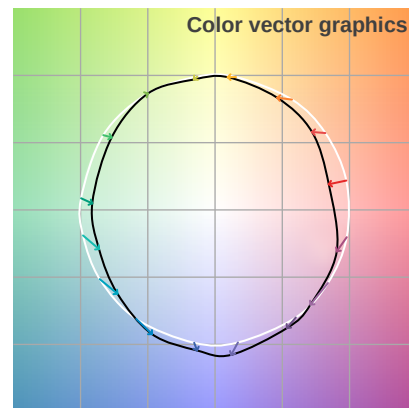
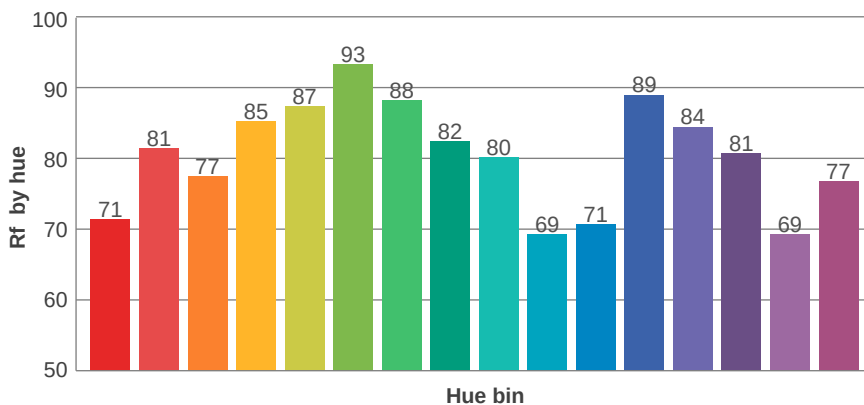
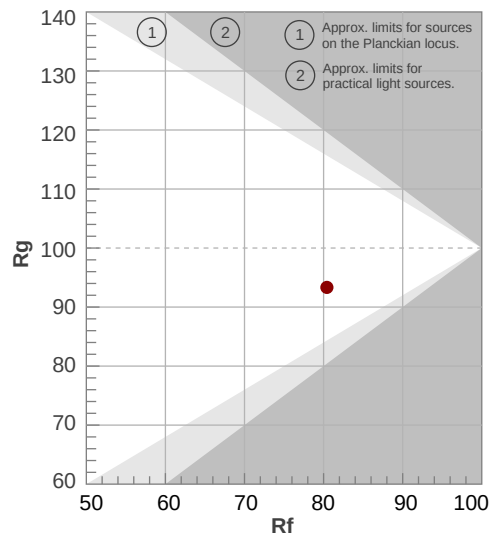
Rf 80.4

Fidelity index Rf

Rg 93.3

Gammut index Rg

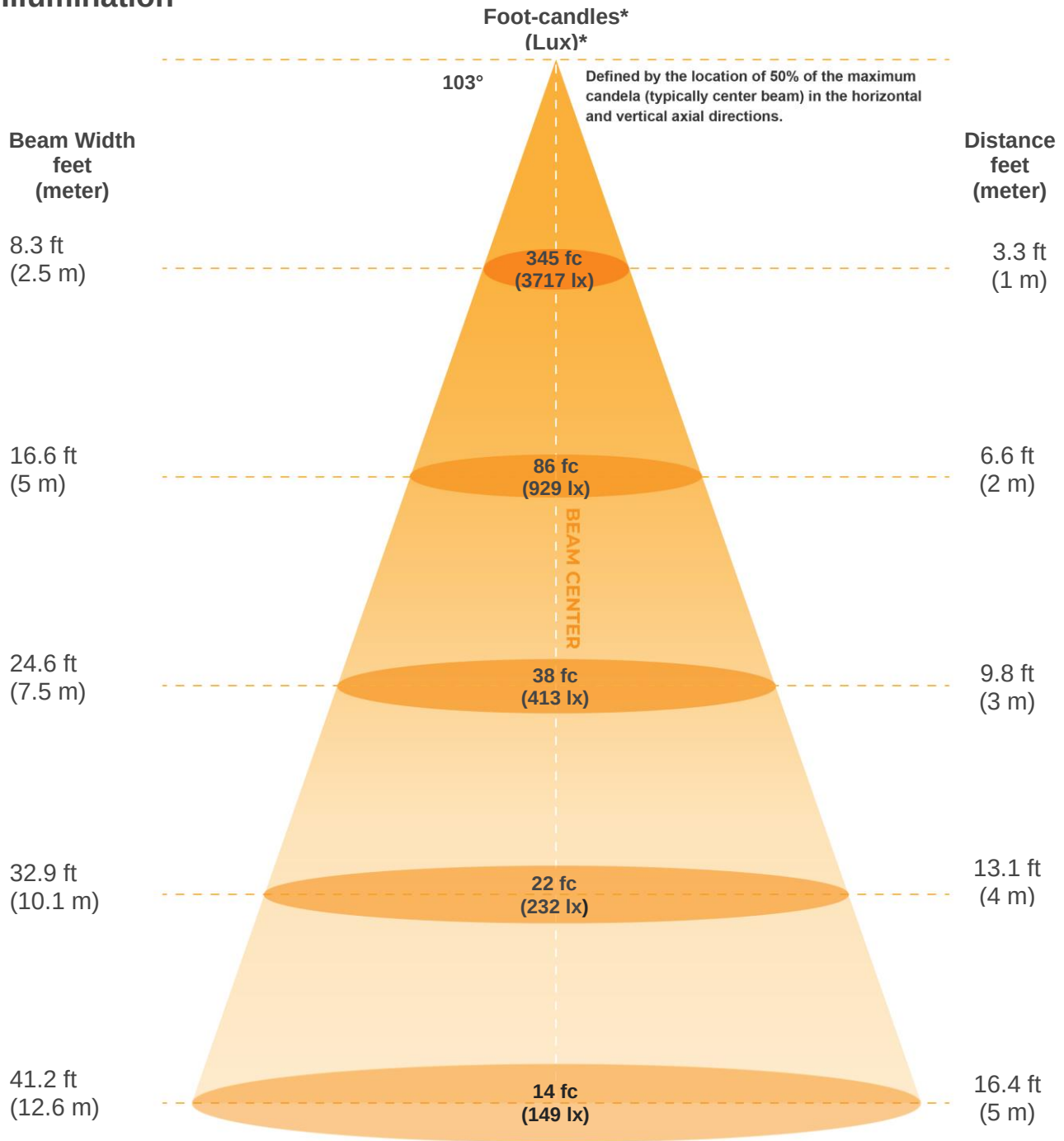
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	71	-13%	0%
2	81	-8%	6%
3	77	-5%	10%
4	85	-1%	6%
5	87	-2%	3%
6	93	0%	-1%
7	88	-6%	-2%
8	82	-9%	2%
9	80	-10%	12%
10	69	-5%	16%
11	71	3%	16%
12	89	5%	3%
13	84	8%	-7%
14	81	3%	-10%
15	69	-2%	-21%
16	77	-5%	-12%



Color Evaluation Sample



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
3717lx	929lx	413lx	232lx	149lx	103lx	76lx	58lx	46lx	37lx	31lx	26lx	22lx	19lx	17lx	15lx	13lx	11lx	10lx	9lx
345.3fc	86.3fcd	38.4fcd	21.6fcd	13.8fcd	9.6fcd	7fcd	5.4fcd	4.3fcd	3.5fcd	2.9fcd	2.4fcd	2fcd	1.8fcd	1.5fcd	1.3fcd	1.2fcd	1.1fcd	1fcd	0.9fcd

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
103°	173.3°	223.3°	57.6%	38.7%



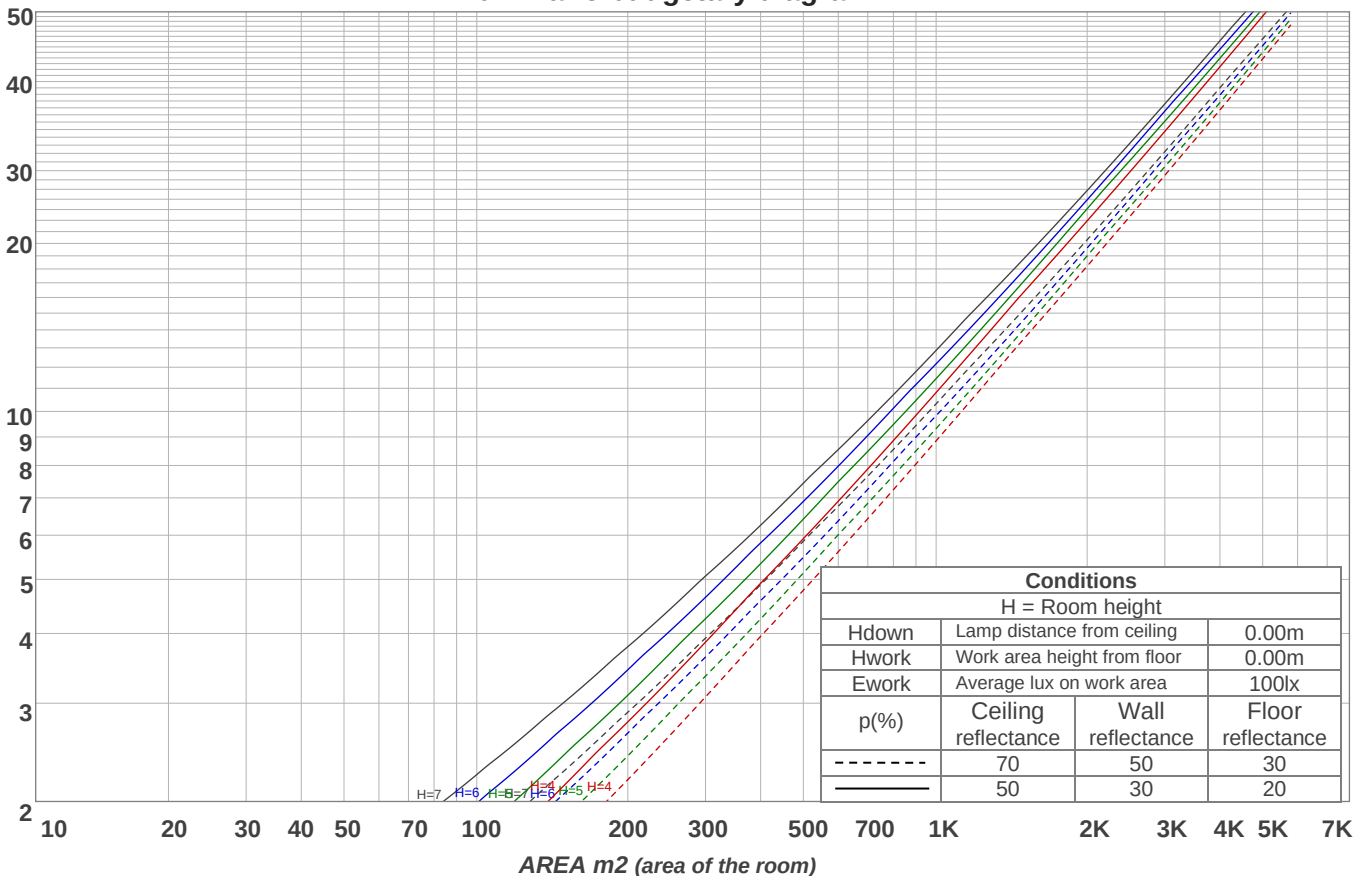
Light Planning

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	116	116	116	116	111	111	111	111	103	103	103	96	96	96	89	89	89	86
1	103	97	91	86	98	93	88	84	86	82	78	80	76	73	74	71	69	66
2	92	83	75	68	88	80	73	67	74	68	63	68	64	59	63	59	56	53
3	84	72	63	56	80	69	61	55	64	57	52	60	54	49	55	51	47	44
4	76	64	54	47	73	61	53	46	57	50	44	53	47	42	49	44	40	37
5	70	57	47	40	67	55	46	39	51	43	38	47	41	36	44	39	34	32
6	65	51	42	35	62	49	40	34	46	38	33	43	36	31	40	34	30	28
7	60	46	37	31	57	44	36	30	42	34	29	39	33	28	36	31	27	24
8	56	42	33	27	53	41	32	27	38	31	26	36	29	25	34	28	24	22
9	52	38	30	24	50	37	29	24	35	28	23	33	27	22	31	25	21	19
10	49	35	27	22	47	34	27	22	32	26	21	31	24	20	29	23	19	18

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°
339 lm	948 lm	1378 lm	1652 lm	1725 lm	1660 lm	1482 lm	1258 lm	1059 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
788 lm	499 lm	309 lm	168 lm	73.1 lm	30.4 lm	11.5 lm	2.63 lm	0.756 lm

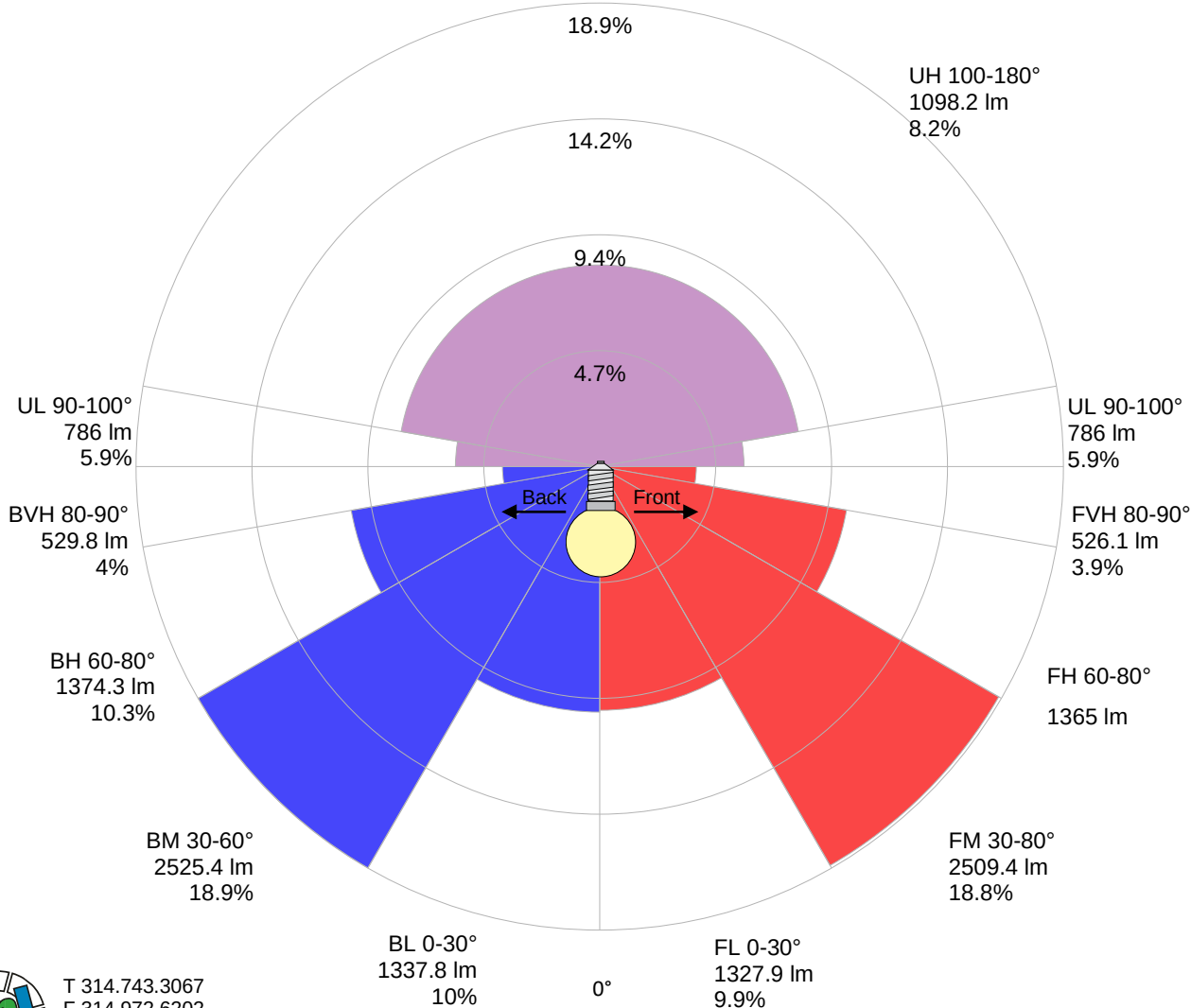


Road Report

LCS table

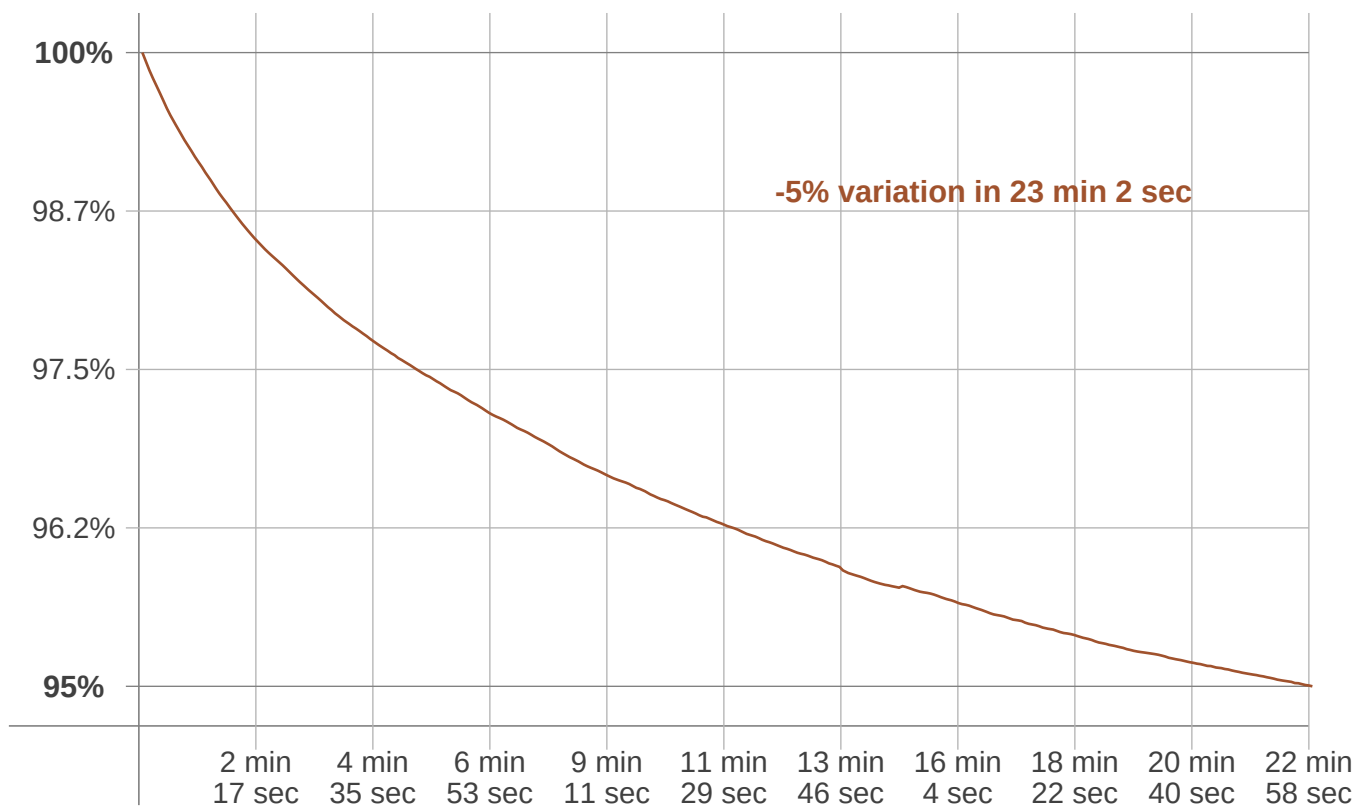
BUG rating:	B3 U5 G4	
Forward light	Lumens	Lumens %
Low(0-30):	1327.9	9.9%
Medium(30-60):	2509.4	18.8%
High(60-80):	1365	10.2%
Very high(80-90):	526.1	3.9%
Back light		
Low(0-30):	1337.8	10%
Medium(30-60):	2525.4	18.9%
High(60-80):	1374.3	10.3%
Very high(80-90):	529.8	4%
Uplight		
Low(90-100):	786	5.9%
High(100-180):	1098.2	8.2%

LCS graph



Stabilization

Warmup curve



Warmup result

Warmup time:	23 min 2 sec
Warmup variation	-5.1%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
5144 K	+109 K	5253 K

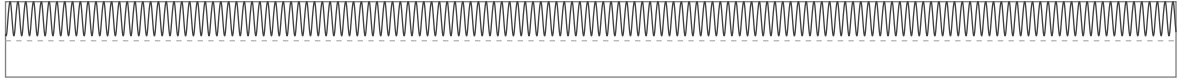
Output change

Output start	Output change	Output end
14064 lm	-682 lm	13382 lm

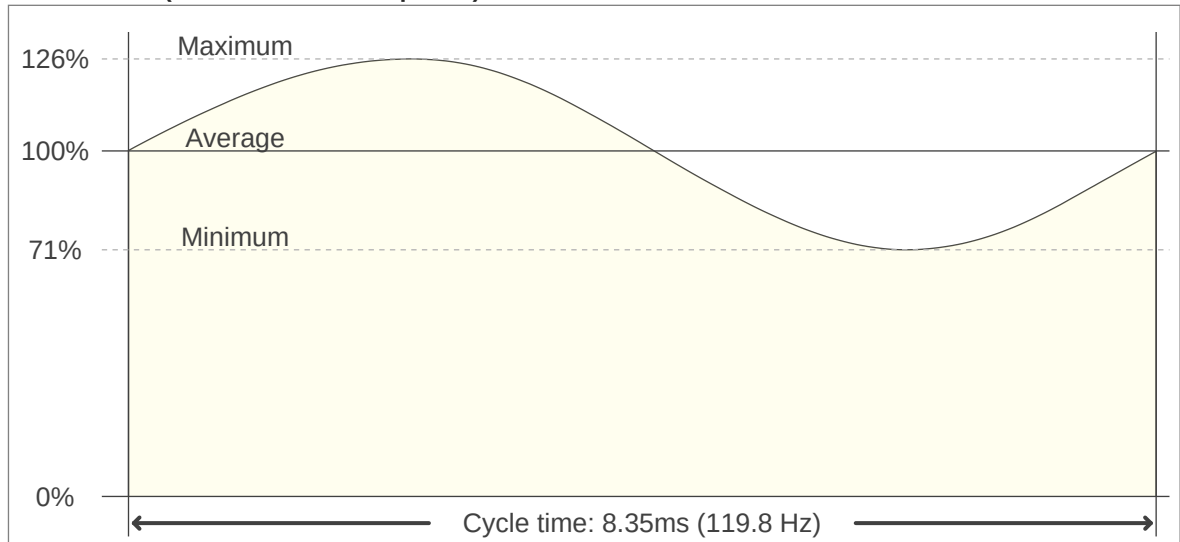


Flicker

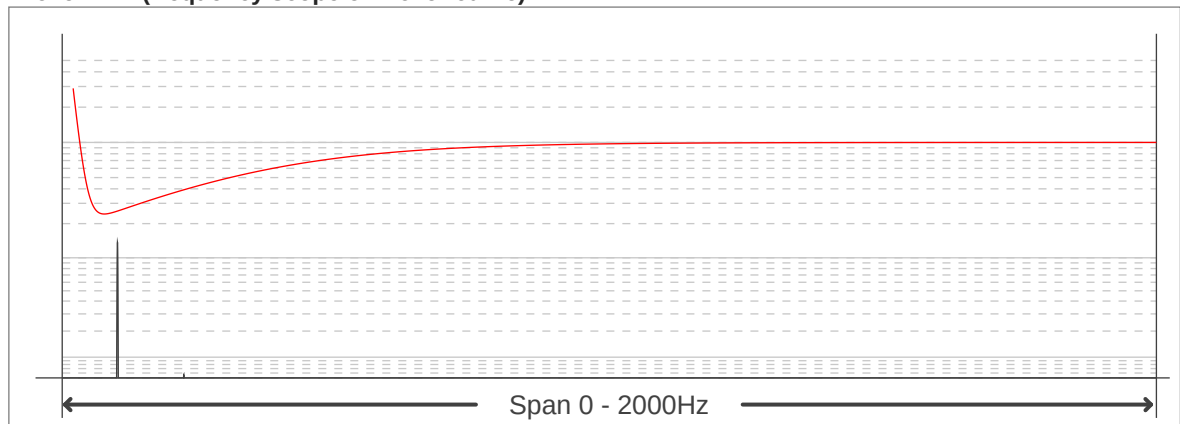
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:	119.76 Hz
Flicker index:	0.09
Flicker percentage:	27.95 %
SVM: (Visual flicker)	0.99

Flicker conditions:

Sample rate:	40000 samples/second
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