

Light efficiency:

142 Lumen/Watt

Output: 25373 lm

Light quality:

CRI: 85.2

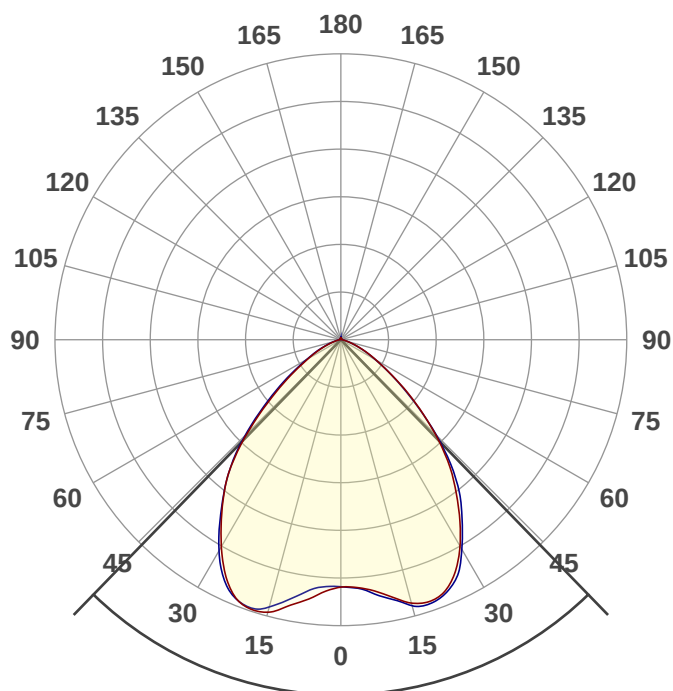
Peak: 13004 cd

Color temperature:

5211 K

Power: 178.6 W

PF: 1.0



Product name:

UHBDT-50K175H1-110-PR90

Date and time:

9/16/2020 2:16:38 PM

Beam angle

88.3°

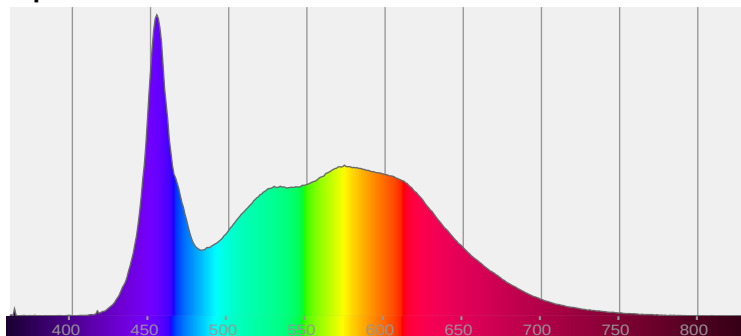


CIE 1931

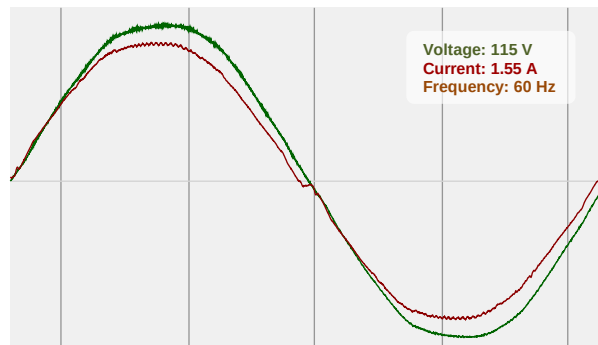
x: 0.339

y: 0.345

Spectra



Power



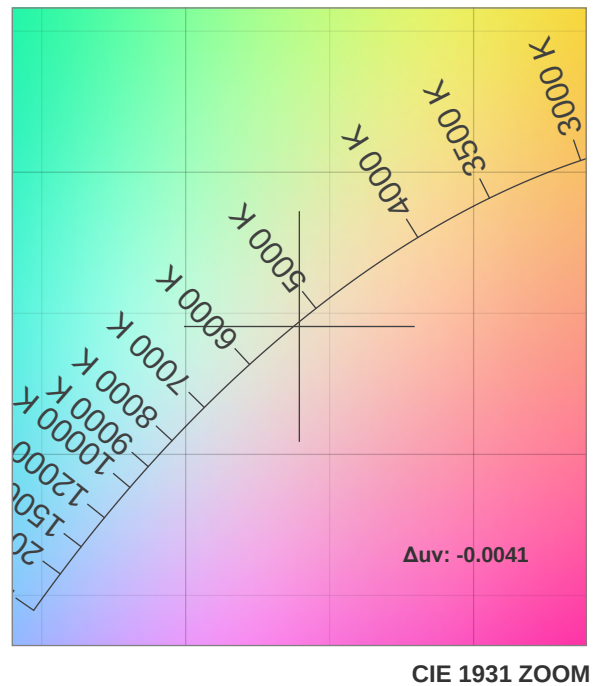
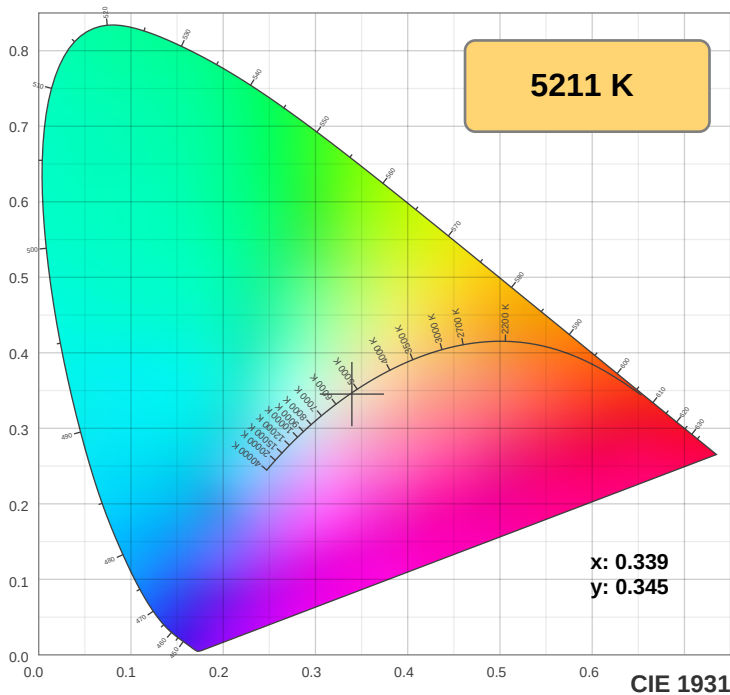
T 314.743.3067

F 314.972.6202

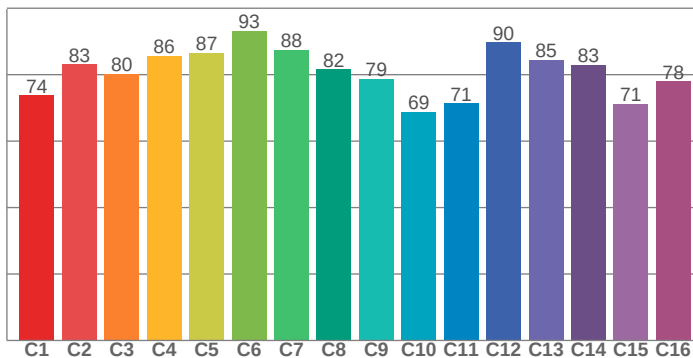
email: commercial-sales@superbrightleds.com

www.superbrightleds.com/

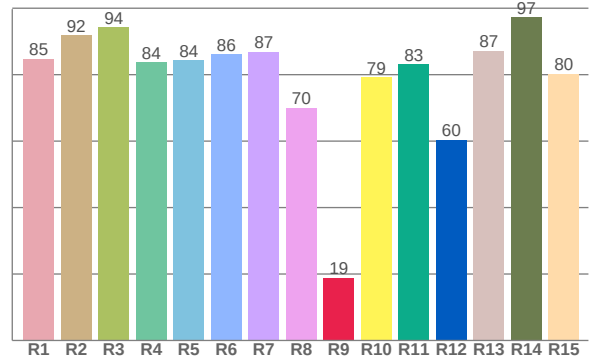
Color Specifications



TM30: 81.0



CRI: 85.2 (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
84.8	91.9	94.2	83.7	84.3	86.2	86.9	70.0	18.8	79.2	83.1	60.5	87.2	97.4	80.3

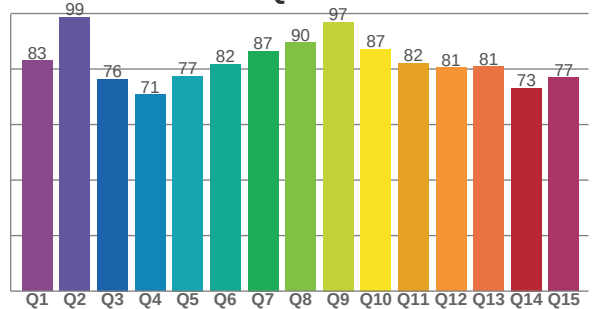
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
73.8	83.1	80.3	85.7	86.6	93.2	87.6	81.6	78.7	68.9	71.4	89.8	84.5	82.9	71.3	78.0

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
83.0	98.6	76.4	70.8	77.5	81.7	86.5	89.5	97.0	87.2	82.2	80.5	80.9	73.1	77.0

CQS: 81.2



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
5211 K	85.2	18.8	81.0	93.9	81.2	0.339	0.345	0.210	0.320	-0.0041



TM30 Report

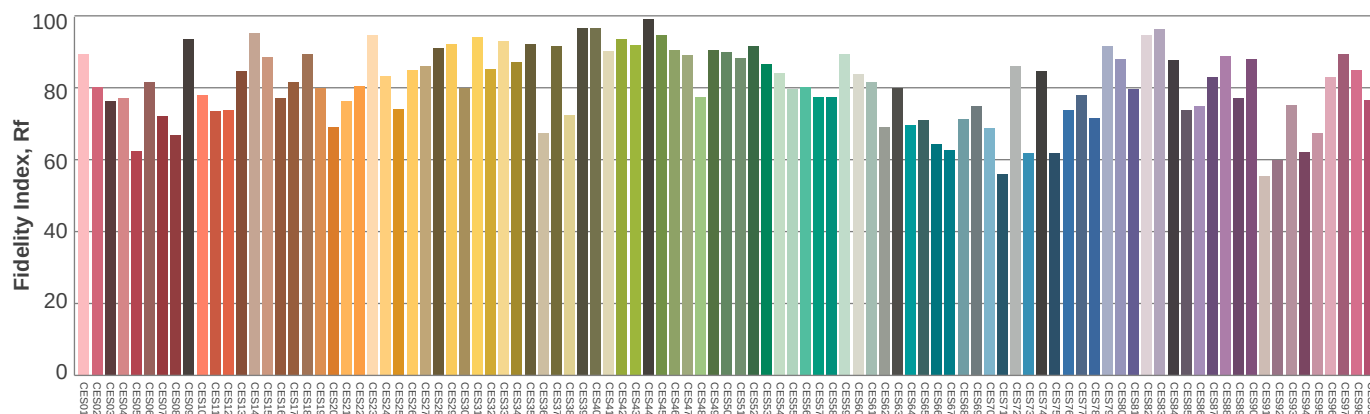
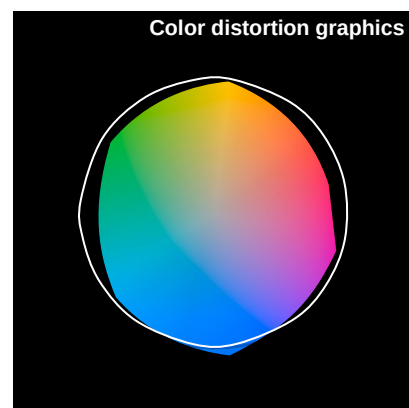
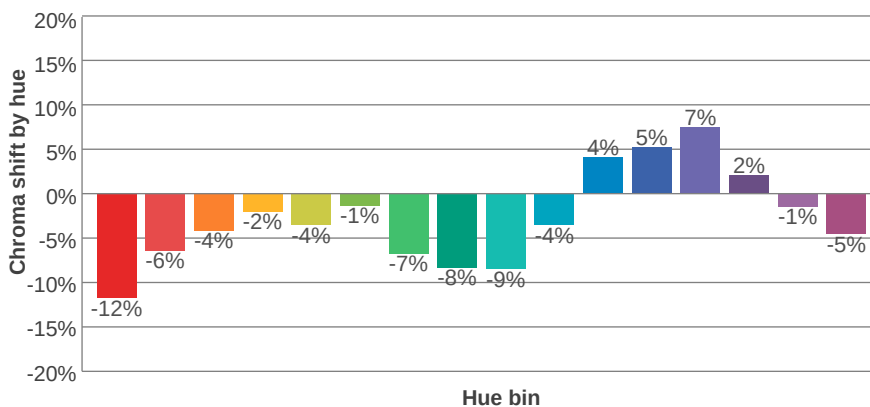
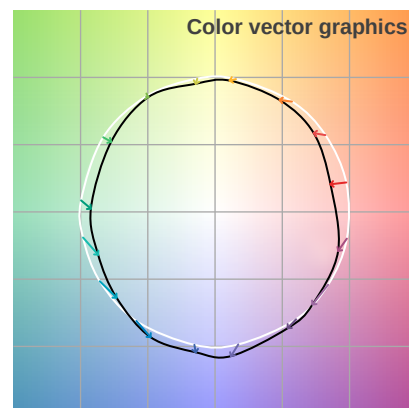
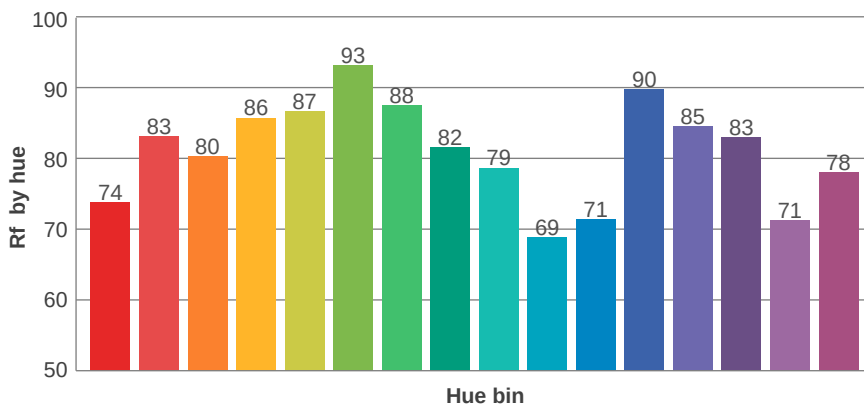
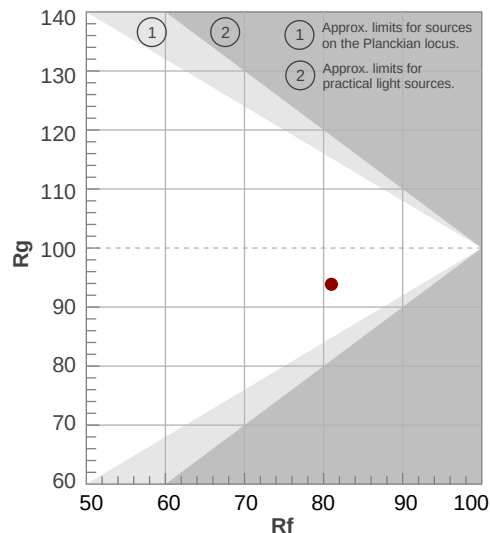
Rf 81.0

Fidelity index Rf

Rg 93.9

Gammut index Rg

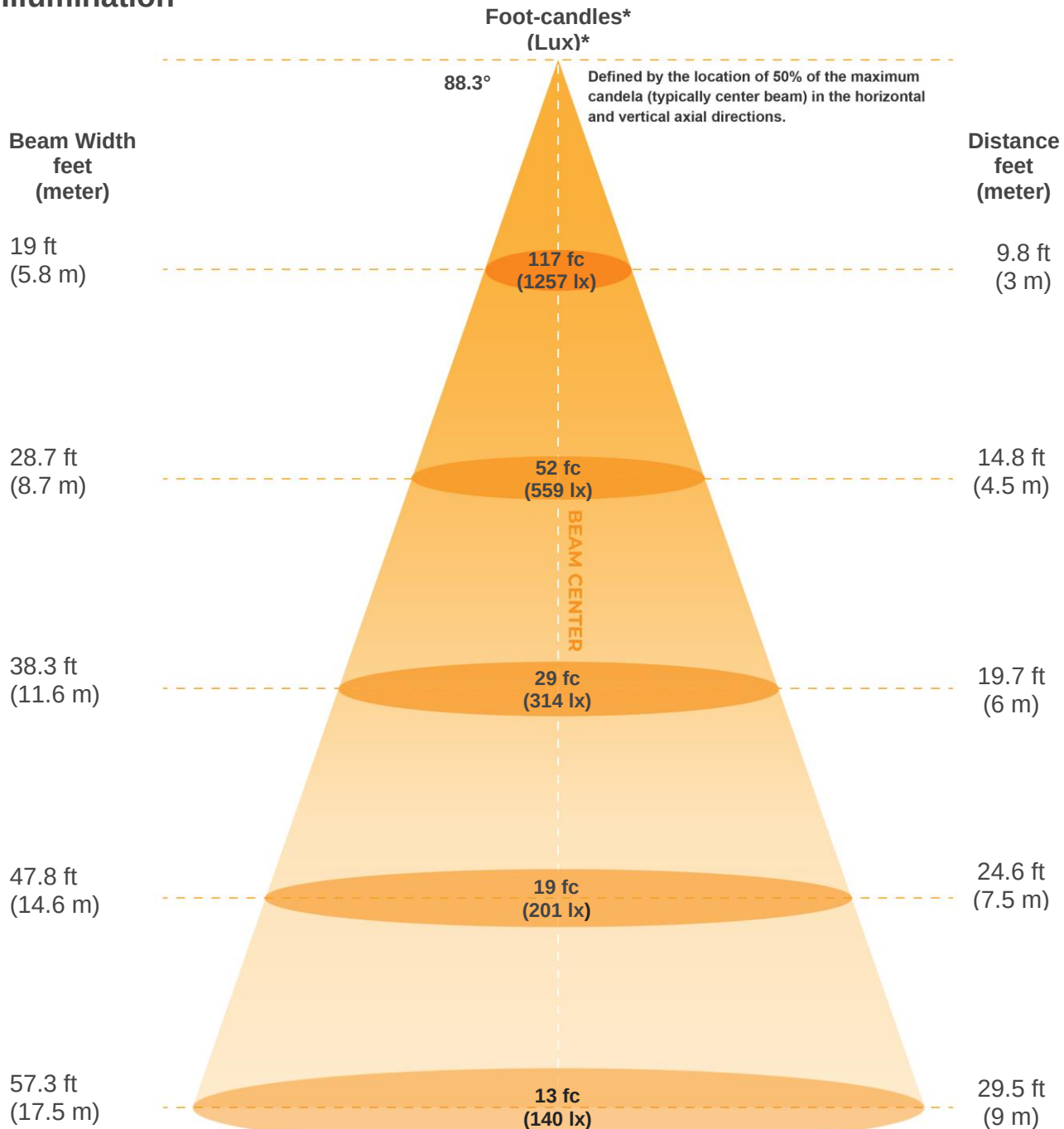
Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	74	-12%	1%
2	83	-6%	6%
3	80	-4%	8%
4	86	-2%	4%
5	87	-4%	2%
6	93	-1%	-1%
7	88	-7%	-1%
8	82	-8%	5%
9	79	-9%	15%
10	69	-4%	17%
11	71	4%	15%
12	90	5%	2%
13	85	7%	-7%
14	83	2%	-9%
15	71	-1%	-19%
16	78	-5%	-10%



Color Evaluation Sample



Illumination



Beam intensities from 1-20m

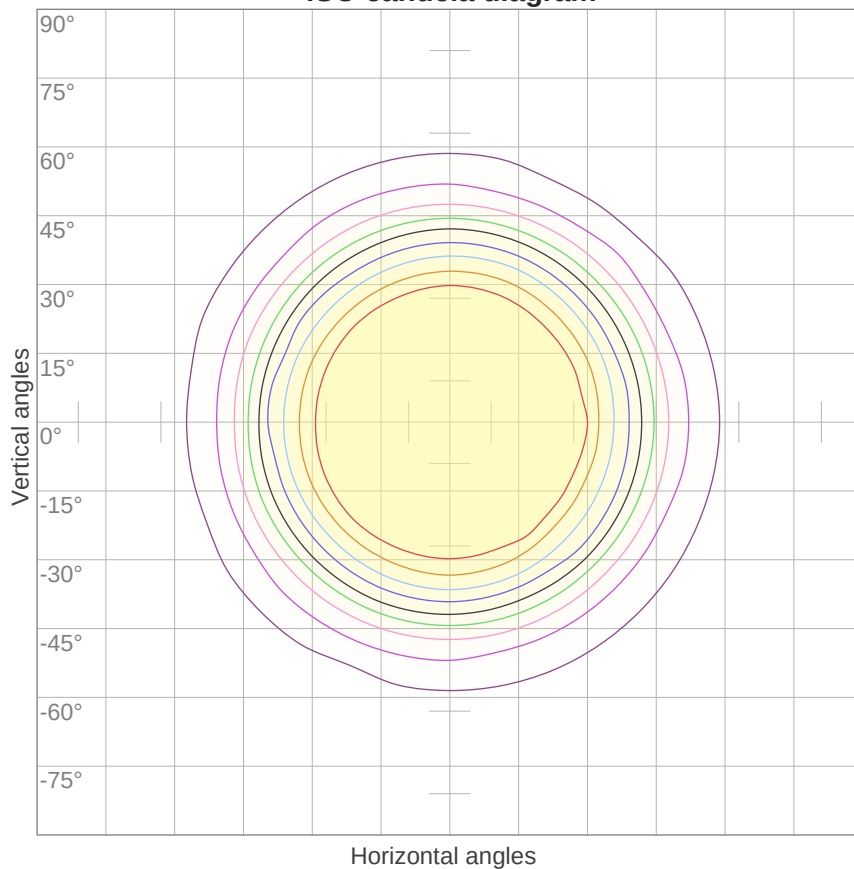
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
11316lx	2829lx	1257lx	707lx	453lx	314lx	231lx	177lx	140lx	113lx	94lx	79lx	67lx	58lx	50lx	44lx	39lx	35lx	31lx	28lx
1051.3f	262.8fcd	116.8fcd	65.7fcd	42.1fcd	29.2fcd	21.5fcd	16.4fcd	13fcd	10.5fcd	8.7fcd	7.3fcd	6.2fcd	5.4fcd	4.7fcd	4.1fcd	3.6fcd	3.2fcd	2.9fcd	2.6fcd

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
88.3°	127.2°	149.7°	92.6%	74.1%



ISO Diagrams

ISO candela diagram



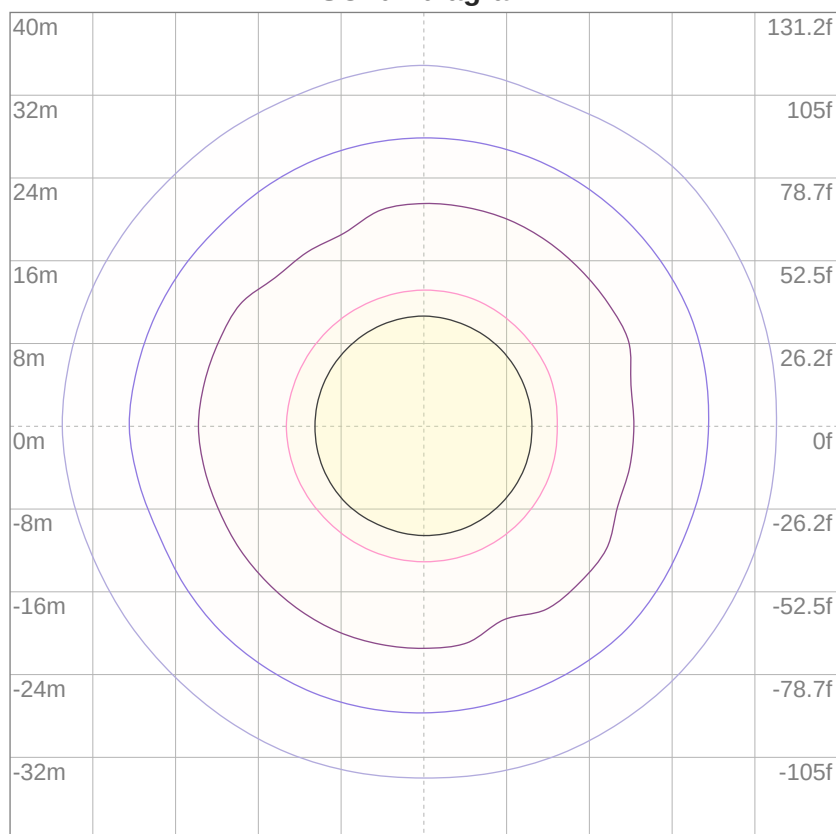
10%	1132 cd
20%	2263 cd
30%	3395 cd
40%	4526 cd
50%	5658 cd
60%	6790 cd
70%	7921 cd
80%	9053 cd
90%	10185 cd

Conditions:

Number of c-planes: 16

Candela at center: 11316 cd

ISO lux diagram



3%	3.39 lx
5%	5.66 lx
10%	11.3 lx
30%	33.9 lx
50%	56.6 lx

Conditions:

Number of c-planes: 16

Lux at center: 113 lx

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



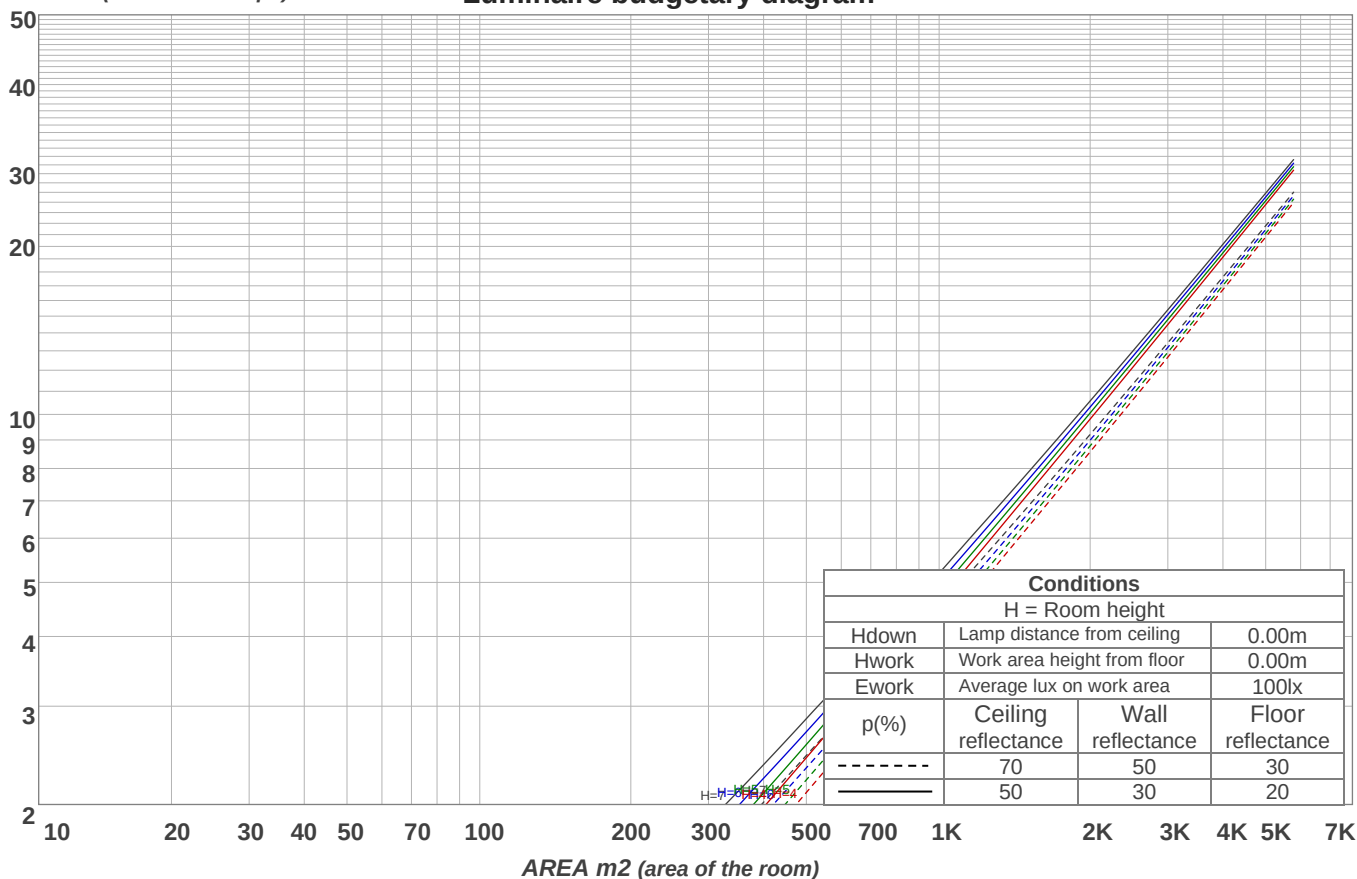
Light Planning

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	101	101	101	99
1	111	107	104	101	108	105	102	100	101	98	96	97	95	93	93	92	90	88
2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	82	80	78
3	96	87	81	75	93	86	80	75	83	78	73	80	76	72	77	74	71	69
4	89	79	72	66	87	78	71	66	75	69	65	73	68	64	71	66	63	61
5	83	72	64	59	81	71	64	58	69	62	57	67	61	57	65	60	56	54
6	77	66	58	52	75	65	57	52	63	56	51	61	55	51	60	54	51	49
7	72	60	52	47	70	59	52	47	58	51	46	56	50	46	55	50	46	44
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	45	41	40
9	63	51	44	39	62	50	43	39	49	43	38	48	42	38	47	42	38	36
10	59	47	40	35	58	47	40	35	46	39	35	45	39	35	44	39	35	33

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°
1114 lm	3569 lm	5573 lm	5926 lm	4706 lm	2601 lm	1134 lm	360 lm	112 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
40.0 lm	31.5 lm	34.1 lm	39.8 lm	40.5 lm	35.6 lm	29.2 lm	20.2 lm	6.75 lm

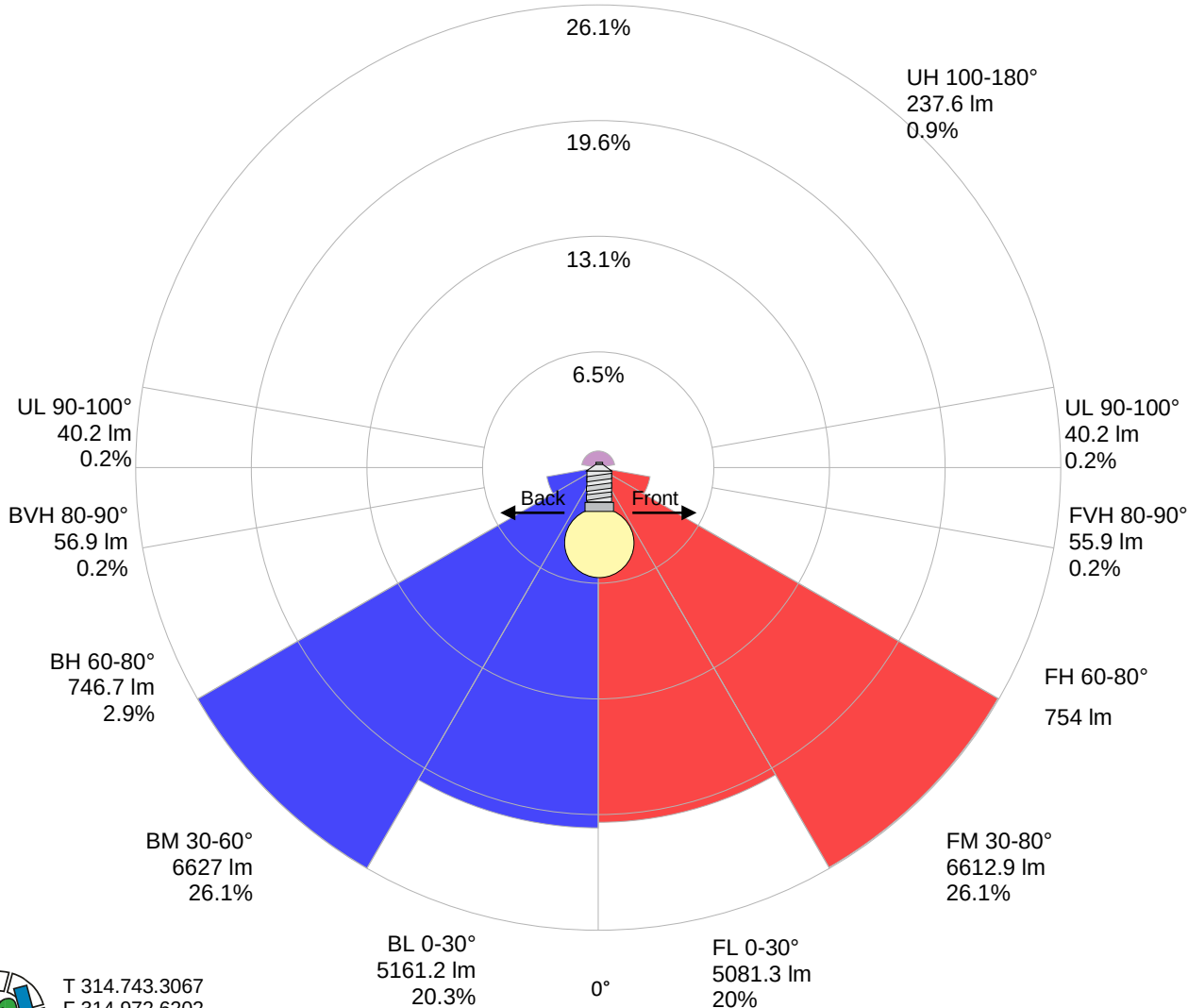


Road Report

LCS table

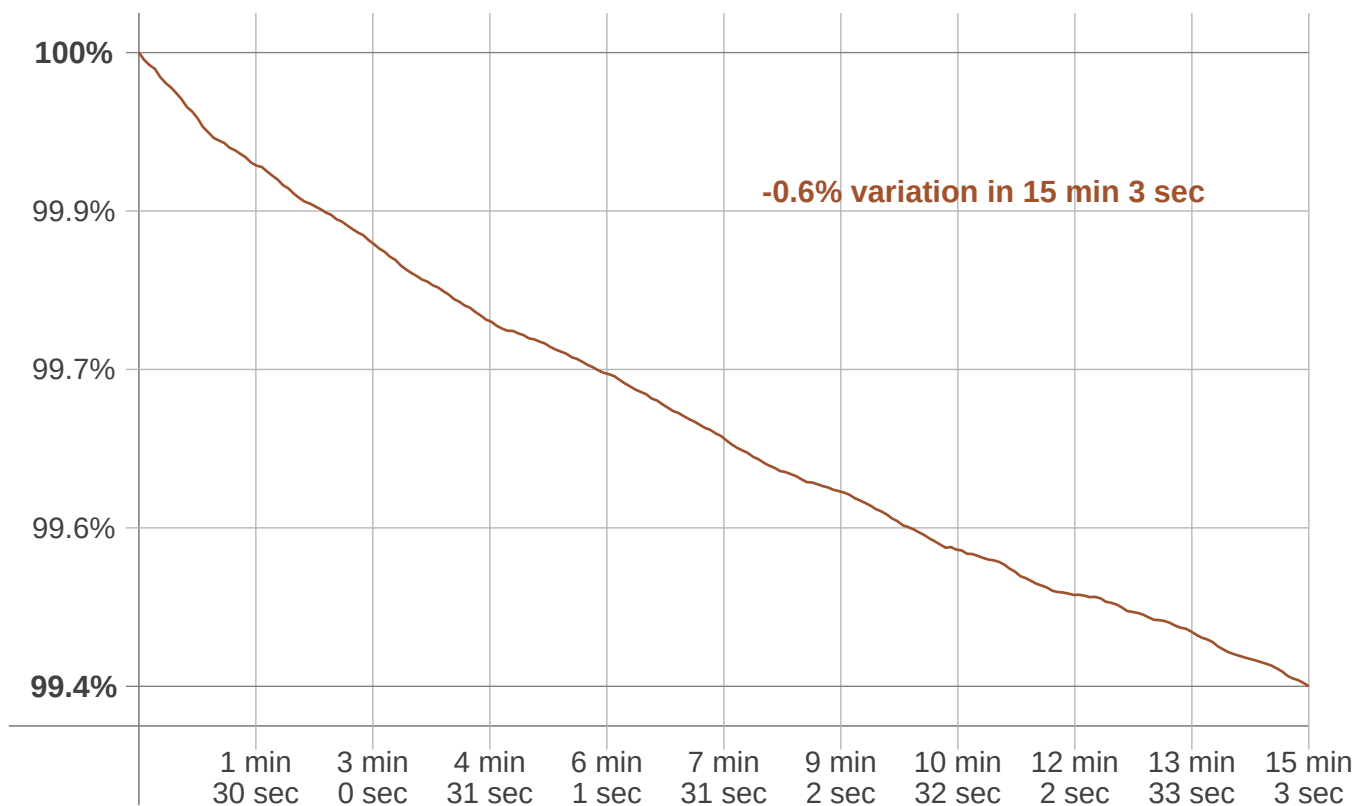
BUG rating:	B5 U3 G2	
Forward light	Lumens	Lumens %
Low(0-30):	5081.3	20%
Medium(30-60):	6612.9	26.1%
High(60-80):	754	3%
Very high(80-90):	55.9	0.2%
Back light		
Low(0-30):	5161.2	20.3%
Medium(30-60):	6627	26.1%
High(60-80):	746.7	2.9%
Very high(80-90):	56.9	0.2%
Uplight		
Low(90-100):	40.2	0.2%
High(100-180):	237.6	0.9%

LCS graph



Stabilization

Warmup curve



Warmup result

Warmup time:	15 min 3 sec
Warmup variation	-0.6%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
5193 K	+18 K	5211 K

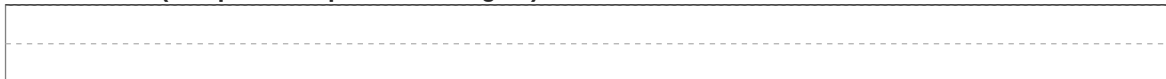
Output change

Output start	Output change	Output end
25513 lm	-139 lm	25373 lm

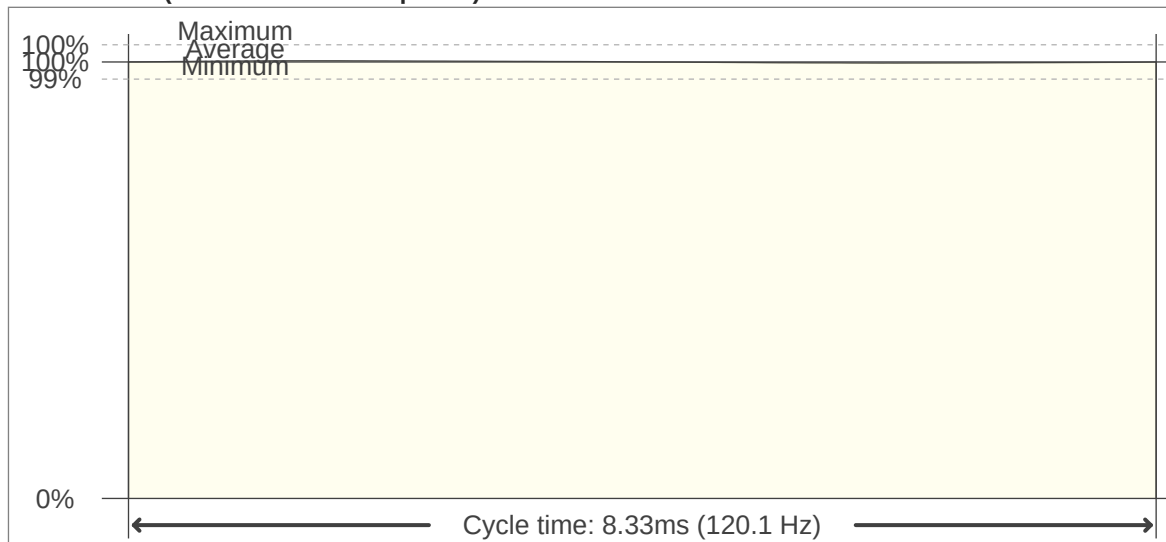


Flicker

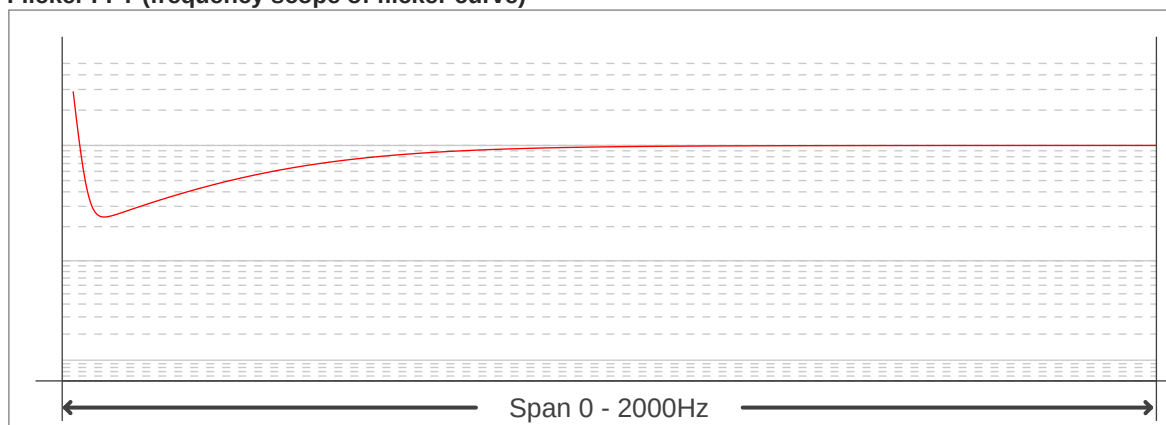
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:	120.12 Hz
Flicker index:	0
Flicker percentage:	0.29 %
SVM: (Visual flicker)	0.01

Flicker conditions:

Sample rate:	40000 samples/second
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