

Light efficiency:

145 Lumen/Watt

Output: 65284 lm

Light quality:

CRI: 82.3

Peak: 22711 cd

Color temperature:

5184 K

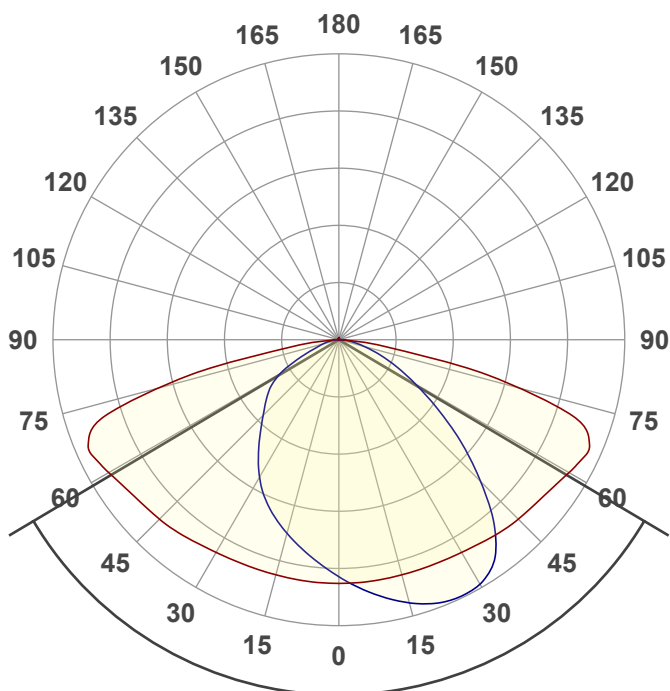
Power: 450 W

Product name:

PLLD4-50K450-xLT3BR1

Date and time:

6/30/2022 2:31:33 PM



Beam angle

118.6°

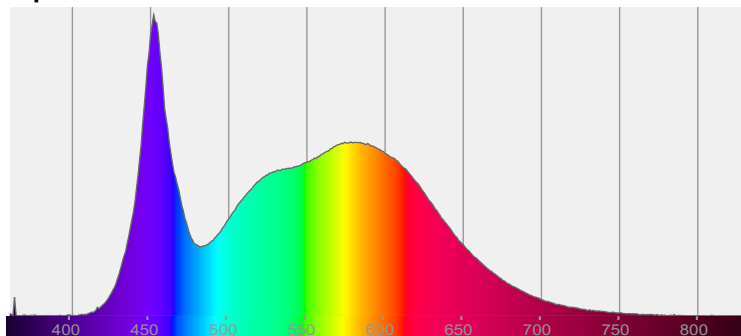


CIE 1931

x: 0.340

y: 0.347

Spectra



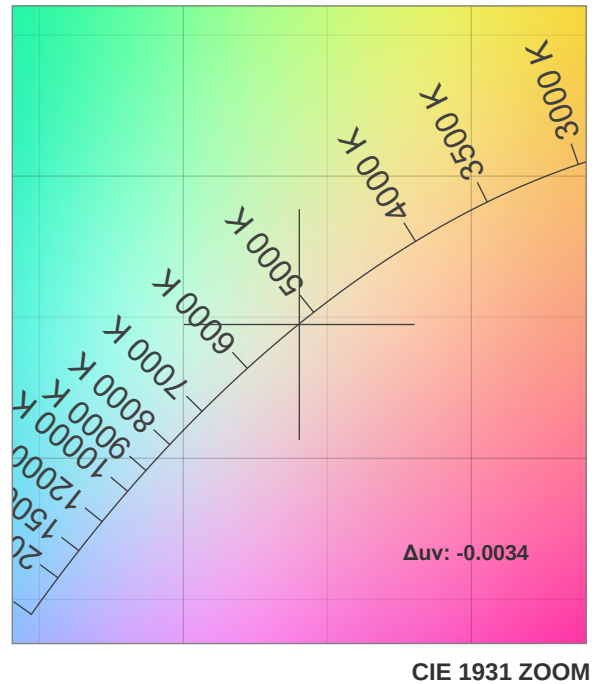
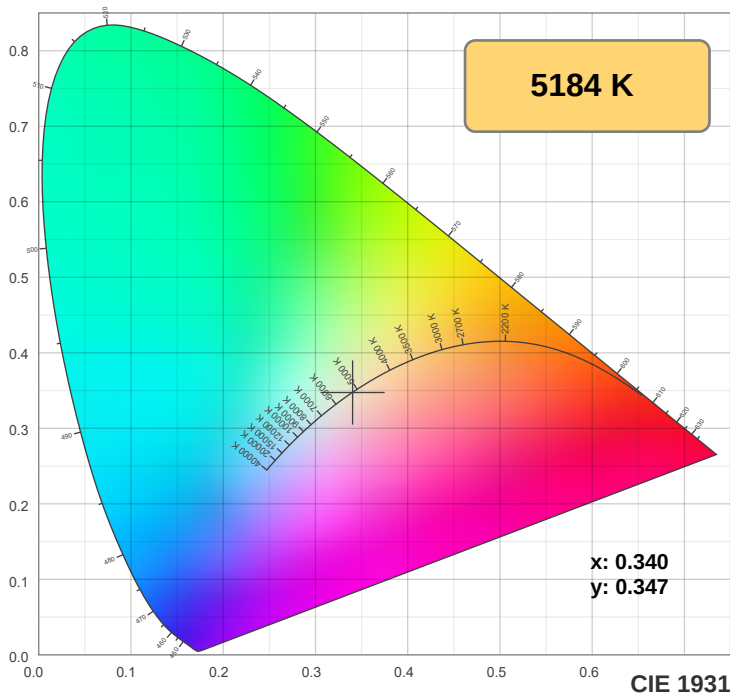
T 314.743.3067

F 314.972.6202

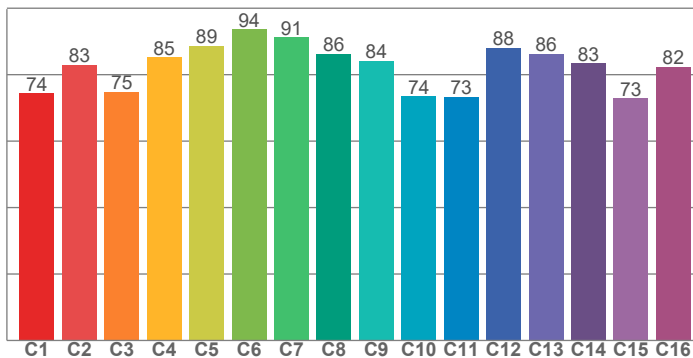
email: commercial-sales@superbrightleds.com

www.superbrightleds.com/

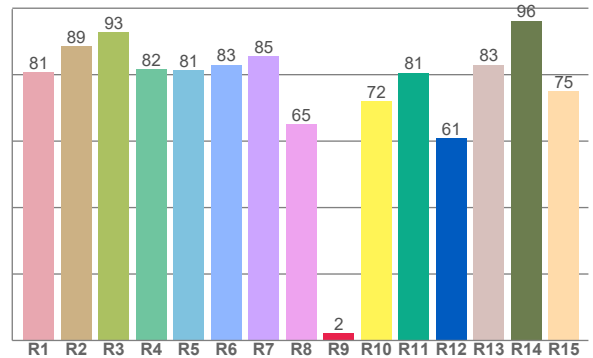
Color Specifications



TM30: 82.4



CRI: 82.3 (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
80.8	88.6	92.7	81.6	81.4	83.0	85.5	65.2	2.1	72.0	80.6	60.8	83.0	96.3	75.0

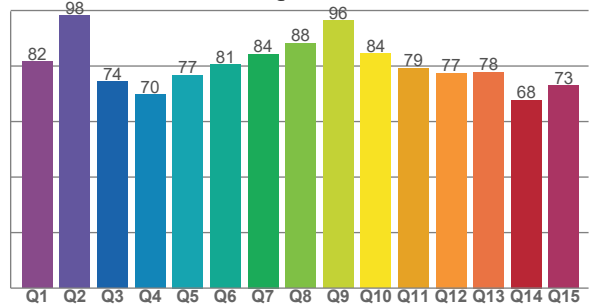
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
74.3	83.0	74.8	85.2	88.6	93.6	91.2	86.3	84.1	73.5	73.4	88.1	86.3	83.4	72.8	82.4

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
81.6	98.1	74.4	69.7	76.8	80.6	84.3	88.2	96.3	84.4	79.2	77.5	77.8	67.7	72.9

CQS: 78.9



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
5184 K	82.3	2.1	82.4	95.1	78.9	0.340	0.347	0.210	0.321	-0.0034



TM30 Report

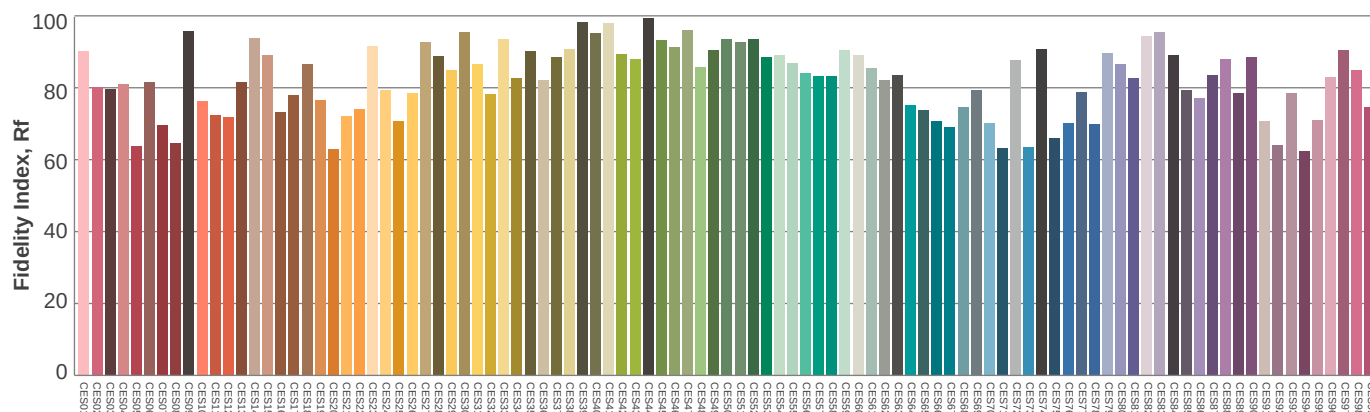
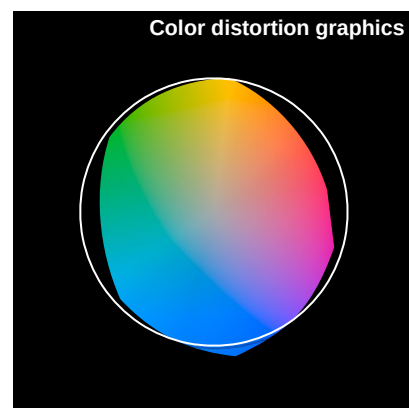
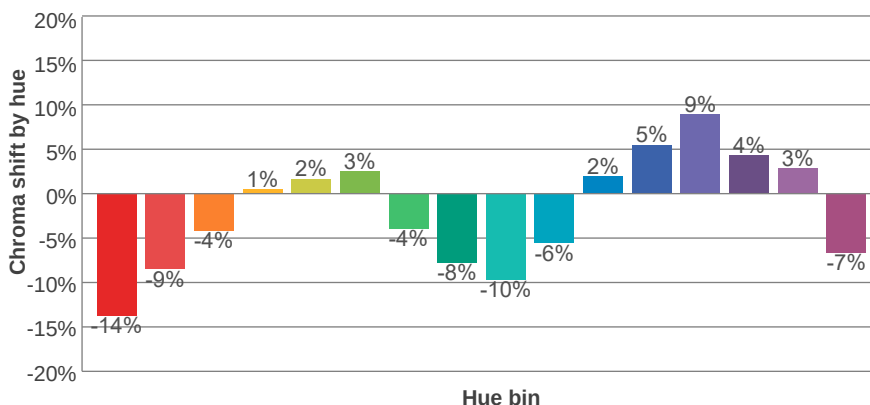
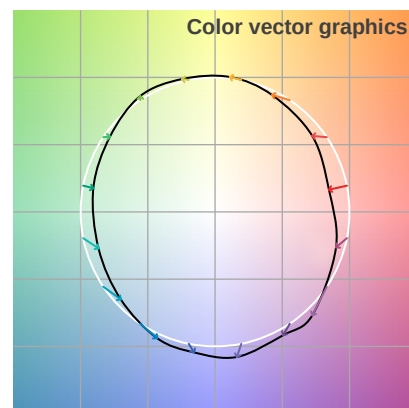
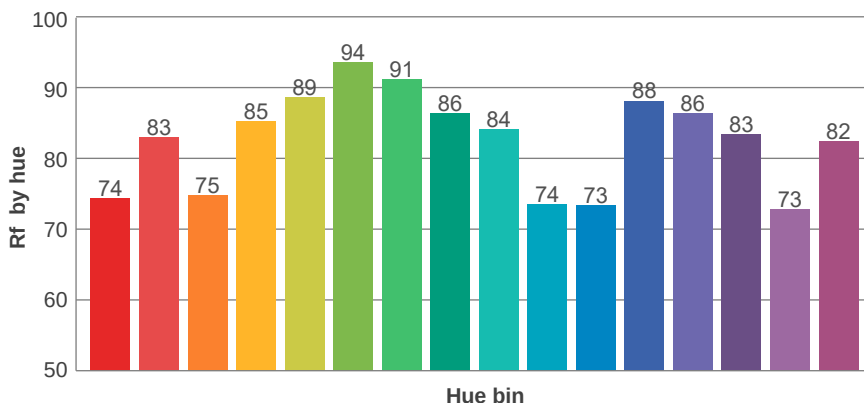
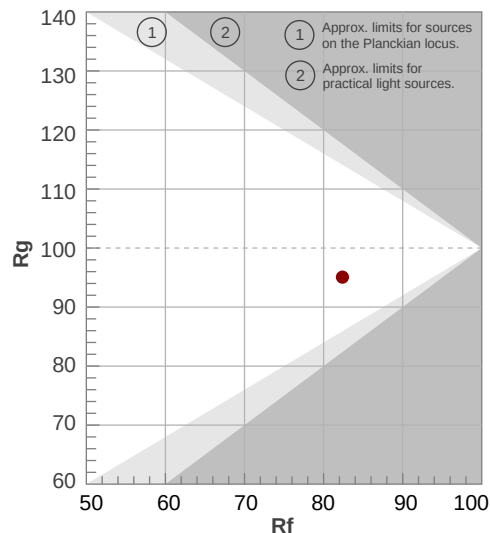
Rf 82.4

Fidelity index Rf

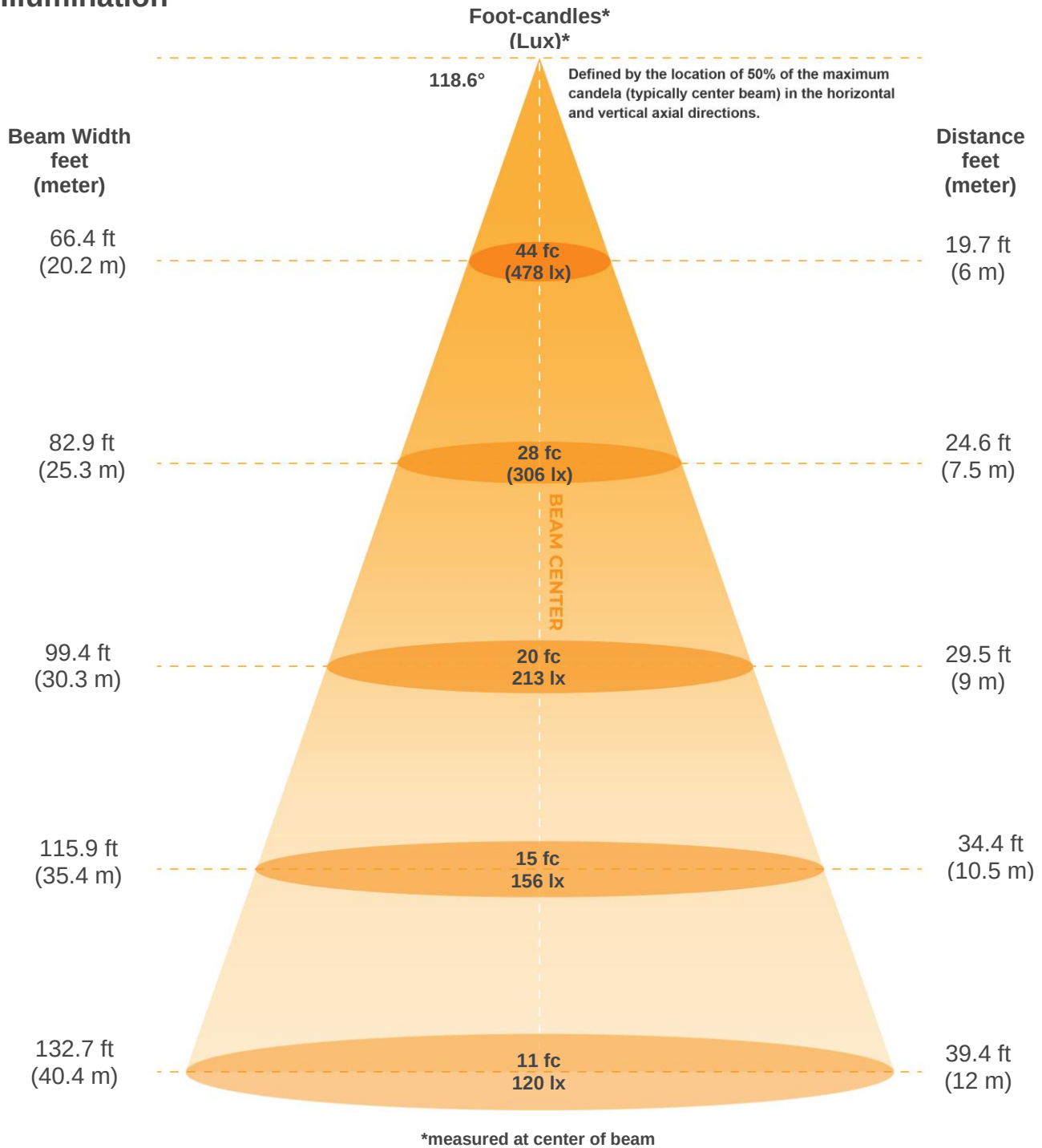
Rg 95.1

Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	74	-14%	0%
2	83	-9%	7%
3	75	-4%	13%
4	85	1%	9%
5	89	2%	5%
6	94	3%	-2%
7	91	-4%	-3%
8	86	-8%	0%
9	84	-10%	10%
10	74	-6%	15%
11	73	2%	16%
12	88	5%	5%
13	86	9%	-5%
14	83	4%	-9%
15	73	3%	-24%
16	82	-7%	-8%



Illumination



Beam intensities from 1-20m

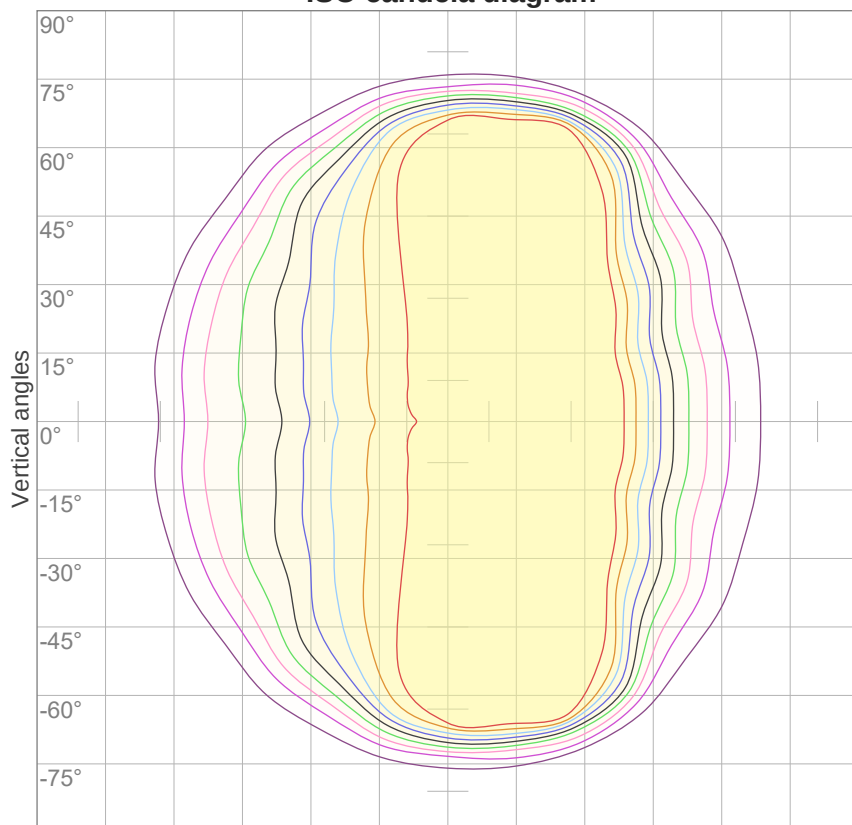
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
17225lx	4306lx	1914lx	1077lx	689lx	478lx	352lx	269lx	213lx	172lx	142lx	120lx	102lx	88lx	77lx	67lx	60lx	53lx	48lx	43lx
1600.3fc	400.1fc	177.8fc	100fcd	64fcd	44.5fcd	32.7fcd	25fcd	19.8fcd	16fcd	13.2fcd	11.1fcd	9.5fcd	8.2fcd	7.1fcd	6.3fcd	5.5fcd	4.9fcd	4.4fcd	4fcd

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
118.6°	156.6°	171.5°	71.6%	45.4%



ISO Diagrams

ISO candela diagram



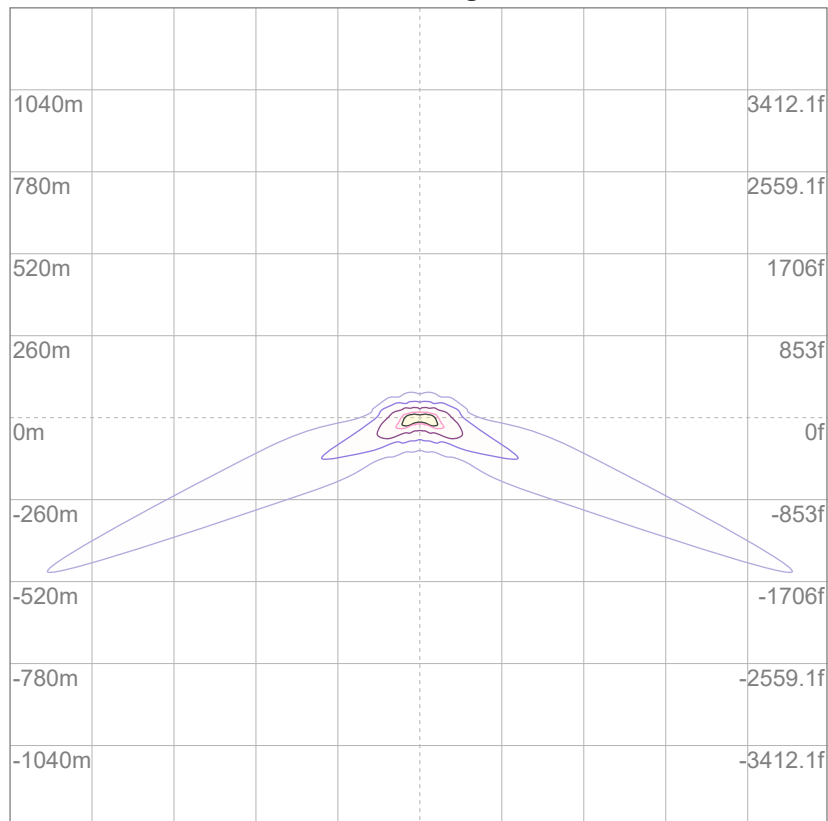
10%	1723 cd
20%	3445 cd
30%	5168 cd
40%	6890 cd
50%	8613 cd
60%	10335 cd
70%	12058 cd
80%	13780 cd
90%	15503 cd

Conditions:

Number of c-planes: 16

Candela at center: 17225 cd

Horizontal angles
ISO lux diagram



3%	5.17 lx
5%	8.61 lx
10%	17.2 lx
30%	51.7 lx
50%	86.1 lx

Conditions:

Number of c-planes: 16

Lux at center: 172 lx

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

Mounting height: 10 meters (33 feet)



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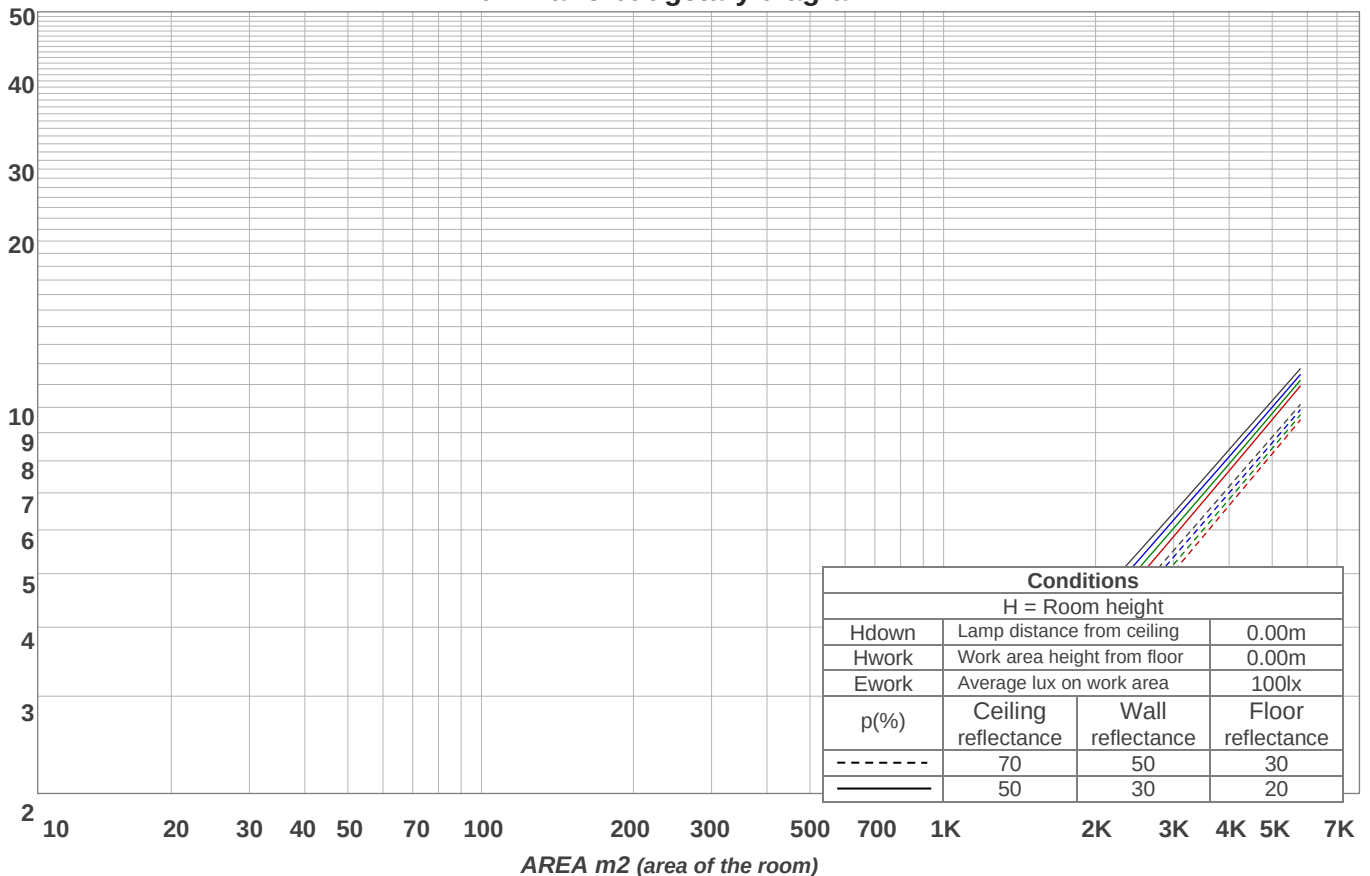
Light Planning

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	101	101	101	99
1	107	102	97	93	105	100	95	91	95	92	88	91	88	86	88	85	83	81
2	97	87	80	74	94	85	79	73	82	76	71	78	73	69	75	71	67	65
3	87	76	67	60	84	74	66	59	71	64	58	68	62	57	65	60	56	53
4	79	66	57	49	77	65	56	49	62	54	48	60	53	47	57	51	47	44
5	72	58	49	42	70	57	48	41	55	47	41	53	46	40	51	45	40	38
6	66	52	43	36	64	51	42	36	49	41	35	47	40	35	46	39	34	32
7	61	47	38	31	59	46	37	31	44	36	31	43	36	30	41	35	30	28
8	57	43	34	27	55	42	33	27	40	33	27	39	32	27	38	31	27	25
9	53	39	30	24	51	38	30	24	37	29	24	36	29	24	35	28	24	22
10	50	36	27	22	48	35	27	22	34	27	22	33	26	22	32	26	21	20

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°
1450 lm	4601 lm	7550 lm	9957 lm	11801 lm	11360 lm	10227 lm	6558 lm	1378 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
64.6 lm	52.2 lm	55.4 lm	56.1 lm	53.5 lm	50.4 lm	39.0 lm	22.2 lm	9.21 lm

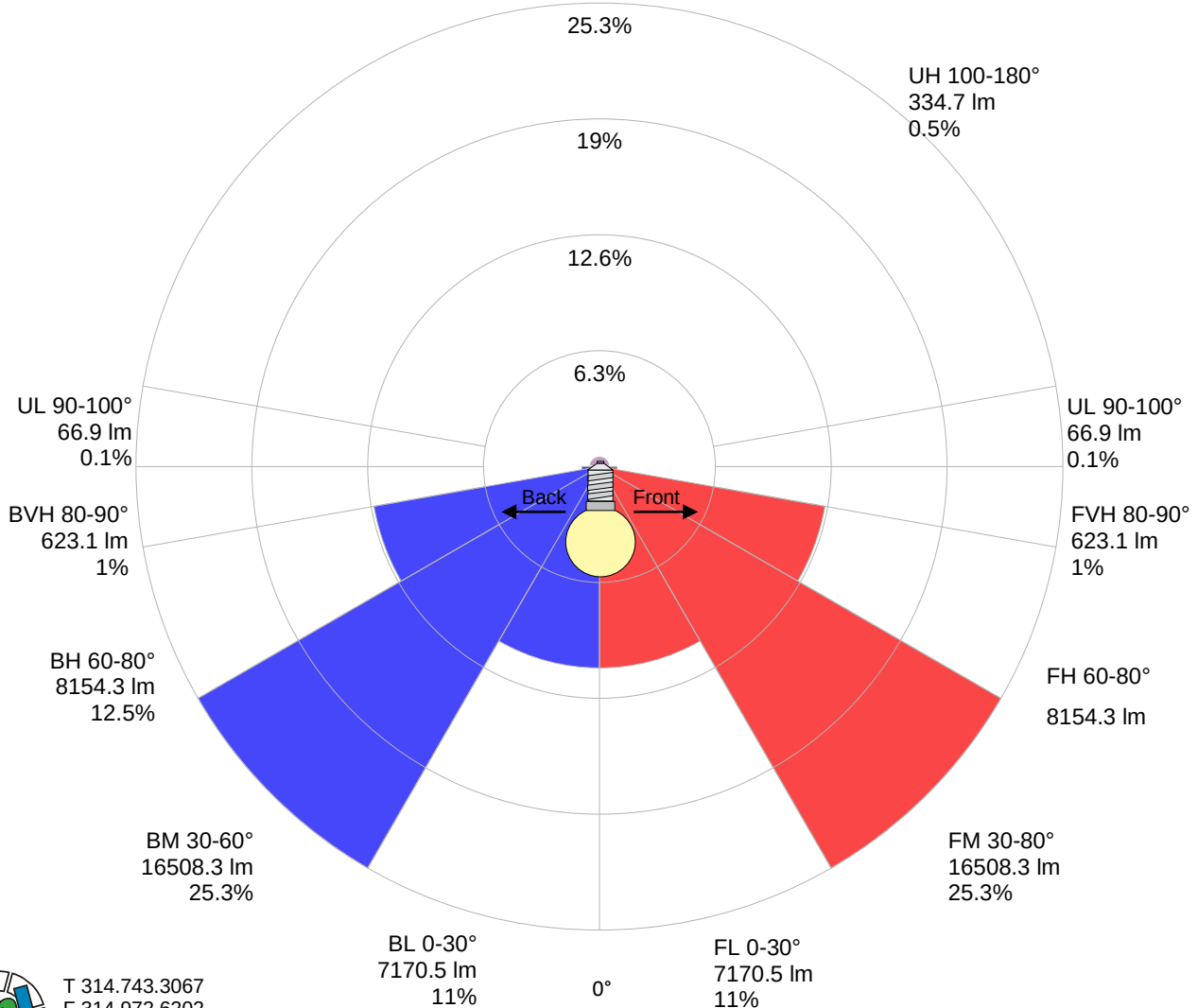


Road Report

LCS table

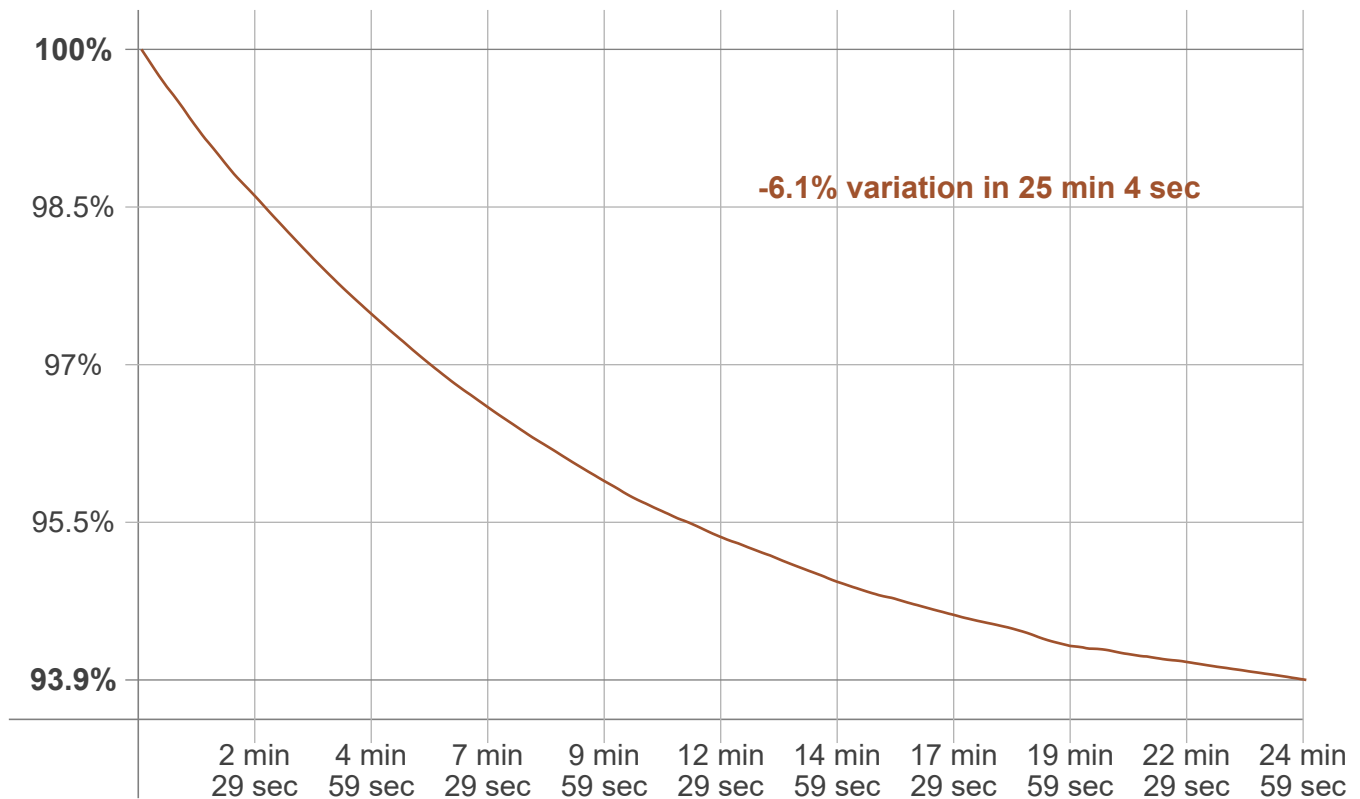
BUG rating:	B5 U3 G5	
Forward light	Lumens	Lumens %
Low(0-30):	7170.5	11%
Medium(30-60):	16508.3	25.3%
High(60-80):	8154.3	12.5%
Very high(80-90):	623.1	1%
Back light		
Low(0-30):	7170.5	11%
Medium(30-60):	16508.3	25.3%
High(60-80):	8154.3	12.5%
Very high(80-90):	623.1	1%
Uplight		
Low(90-100):	66.9	0.1%
High(100-180):	334.7	0.5%

LCS graph



Stabilization

Warmup curve



Warmup result

Warmup time:	Lamp stabilized in 25 min 4 sec
Warmup variation	-6.1%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
5062 K	+122 K	5184 K

Output change

Output start	Output change	Output end
69418 lm	-4134 lm	65284 lm

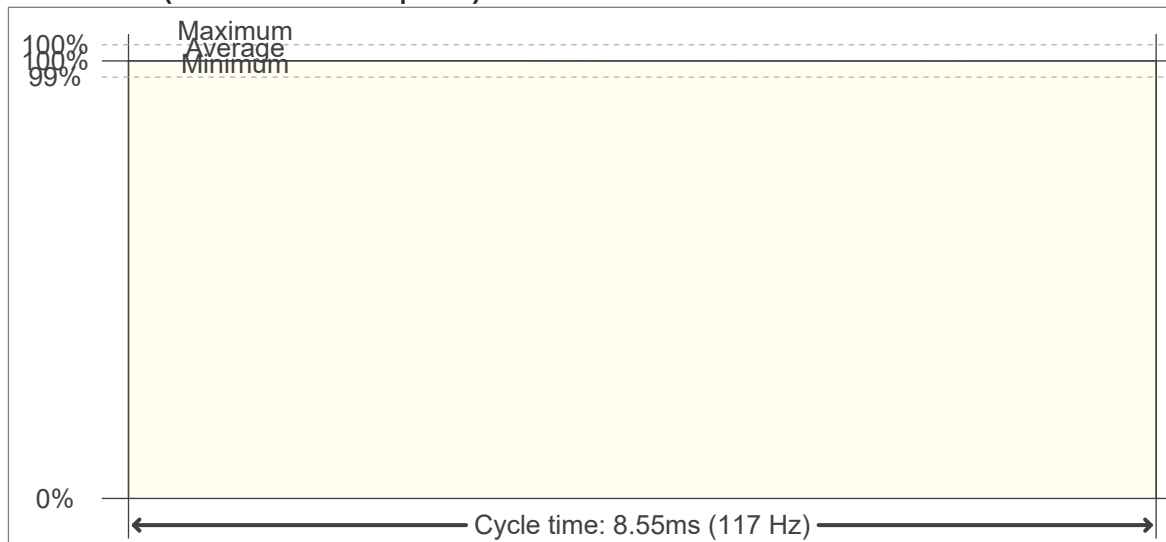


Flicker Specifications

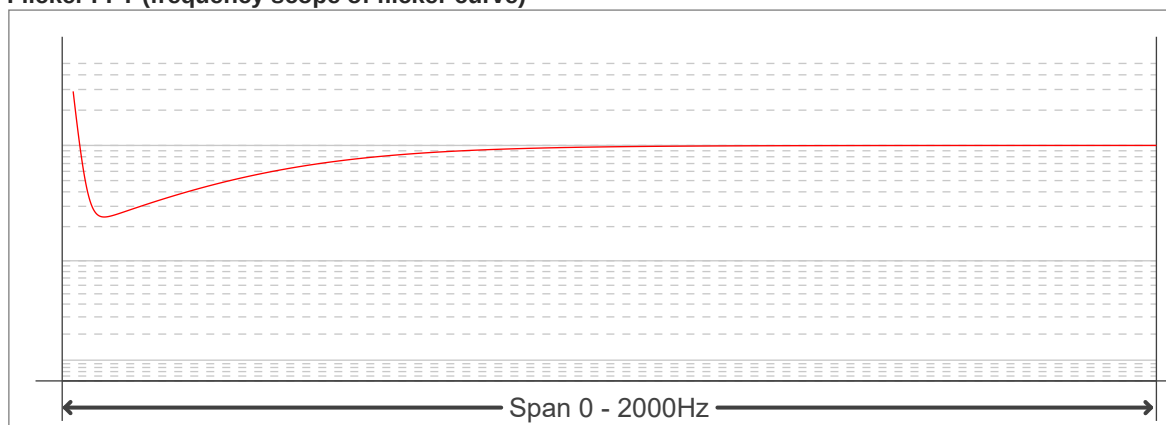
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:	116.96 Hz
Flicker index:	0
Flicker percentage:	0.06 %
SVM: (Visual flicker)	0

Flicker conditions:

Sample rate:	20000 samples/second
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