

Light efficiency:

97 Lumen/Watt

Output: 3985 lm

Light quality:

CRI: 81.1

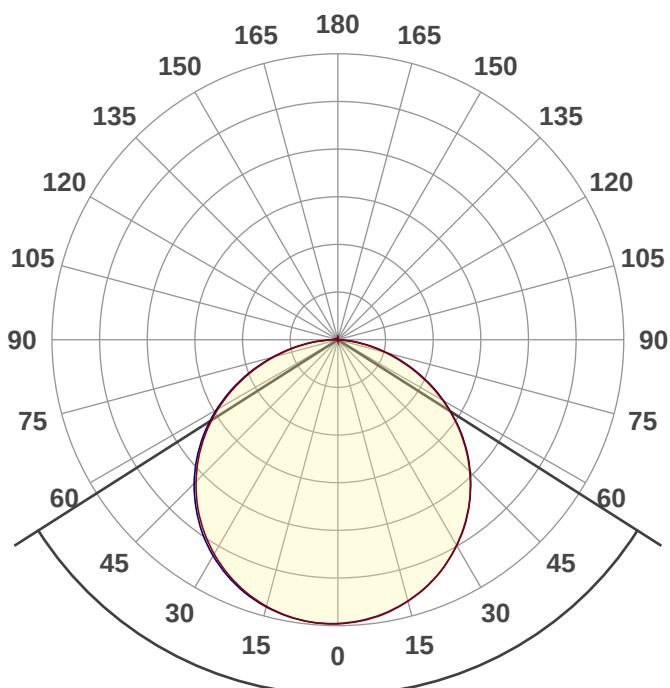
Peak: 1347 cd

Color temperature:

4077 K

Power: 41.2 W

PF: 0.99



Product name:

LPD-TWR22-40

Date and time:

5/8/2019 2:54:12 PM

Beam angle

115°

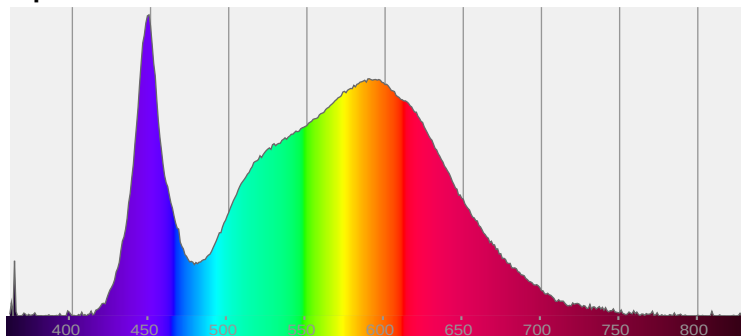


CIE 1931

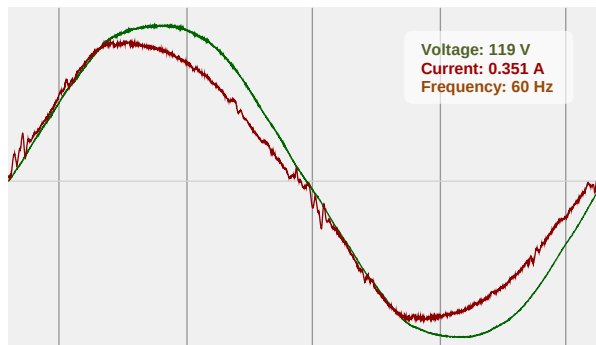
x: 0.376

y: 0.371

Spectra



Power



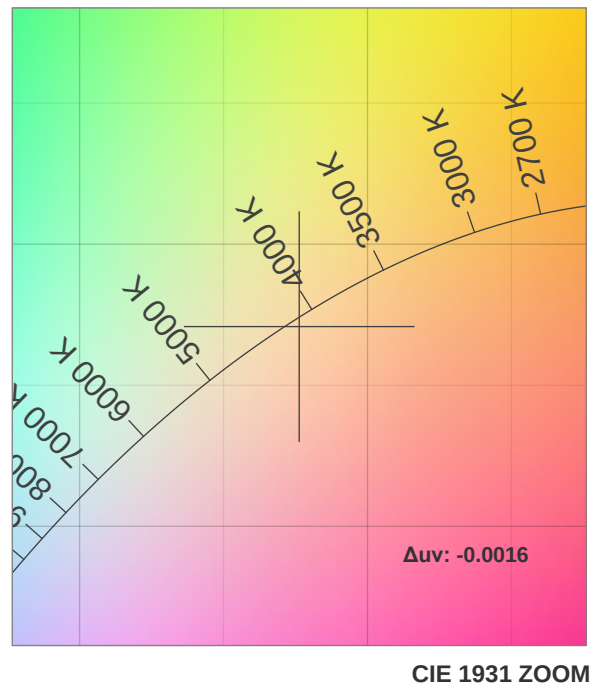
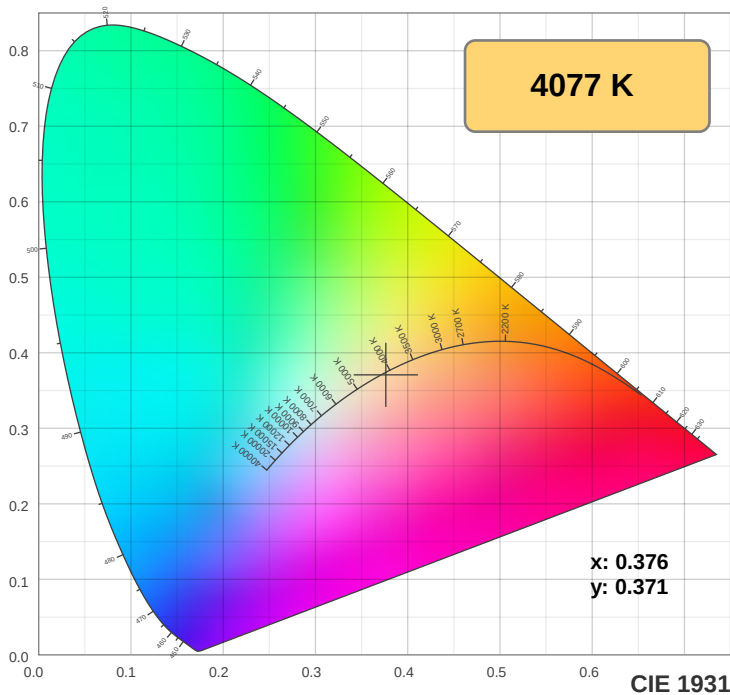
T 314.743.3067

F 314.972.6202

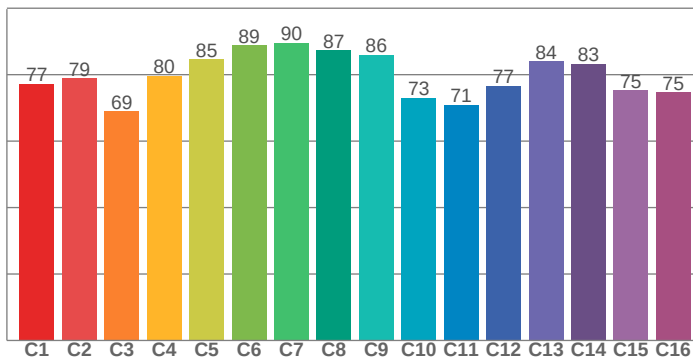
email: commercial-sales@superbrightleds.com

www.superbrightleds.com/

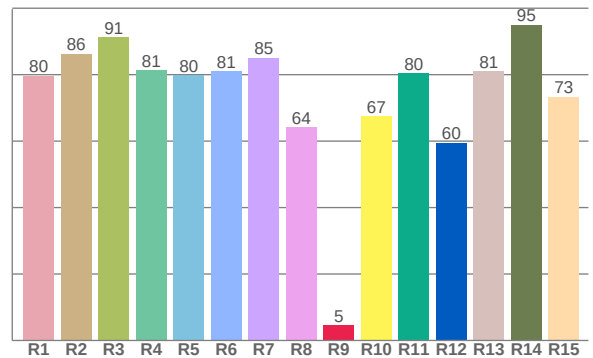
Color Specifications



TM30: 79.5



CRI: 81.1 (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
79.7	86.3	91.2	81.4	79.7	81.0	85.1	64.2	4.7	67.5	80.5	59.6	81.0	95.1	73.3

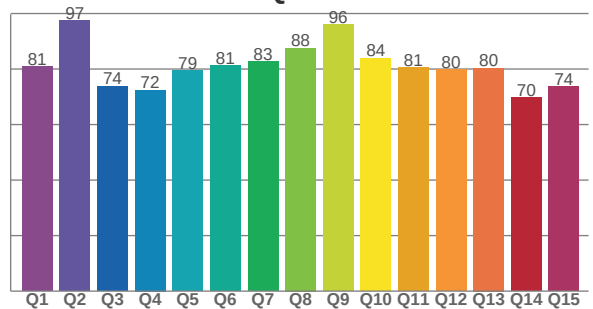
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
77.3	78.9	69.0	79.7	84.6	88.8	89.5	87.4	86.1	73.1	70.9	76.7	84.0	83.3	75.2	74.6

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
80.8	97.4	73.8	72.5	79.5	81.2	82.6	87.6	96.0	83.9	80.5	79.8	80.4	69.8	73.7

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 deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
4077 K	81.1	4.7	79.5	97.4	79.8	0.376	0.371	0.225	0.332	-0.0016



TM30 Report

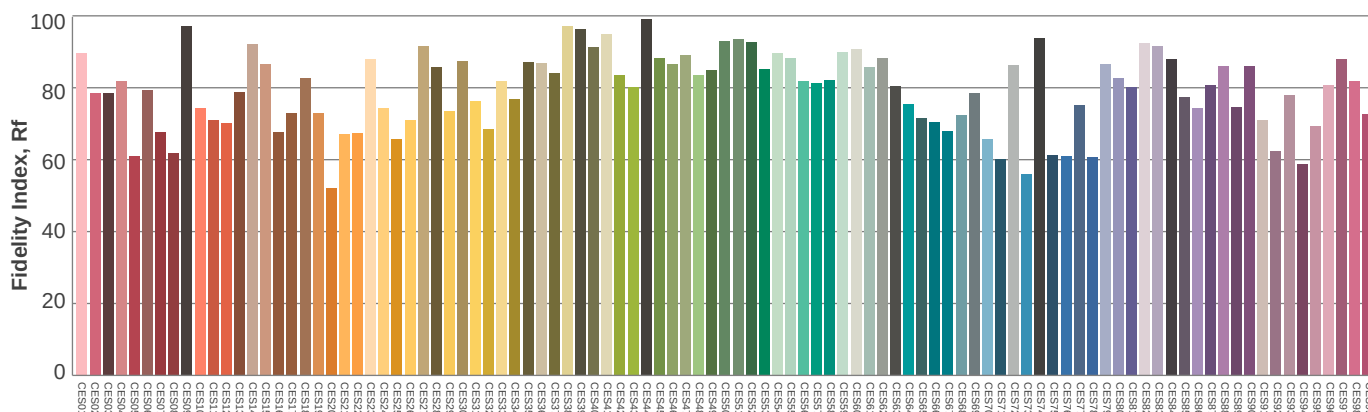
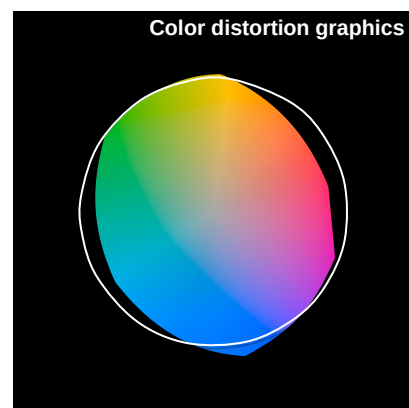
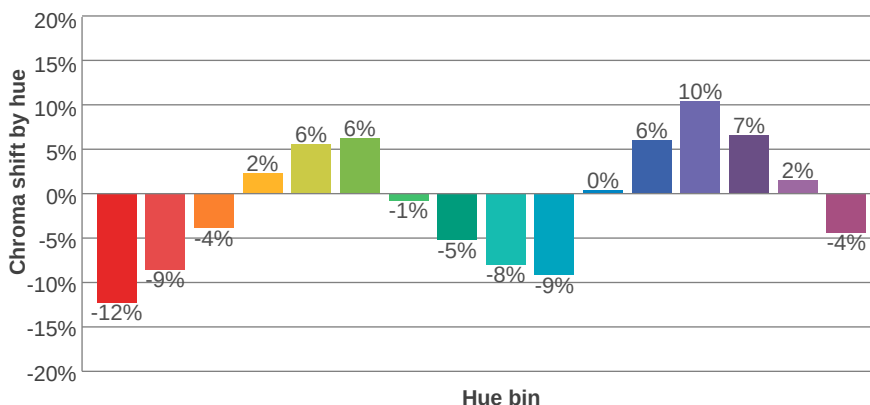
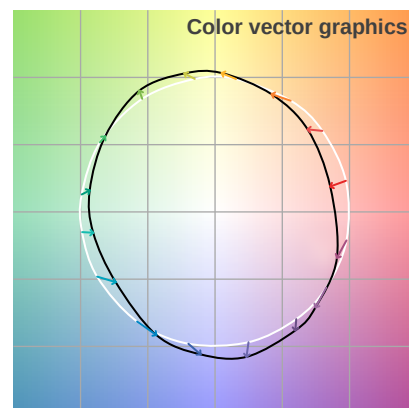
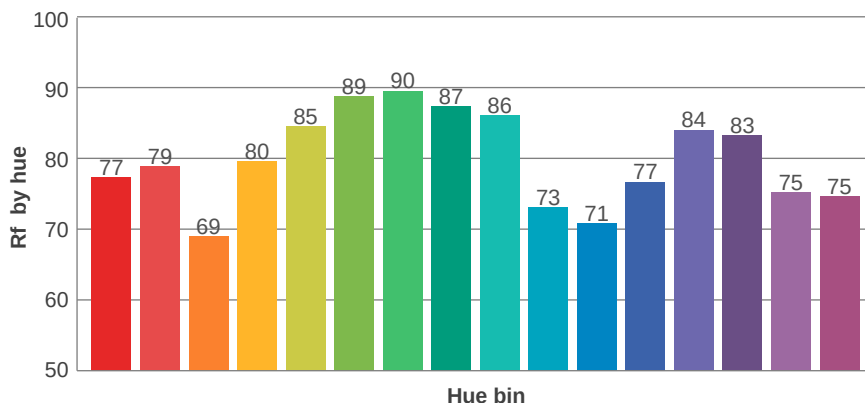
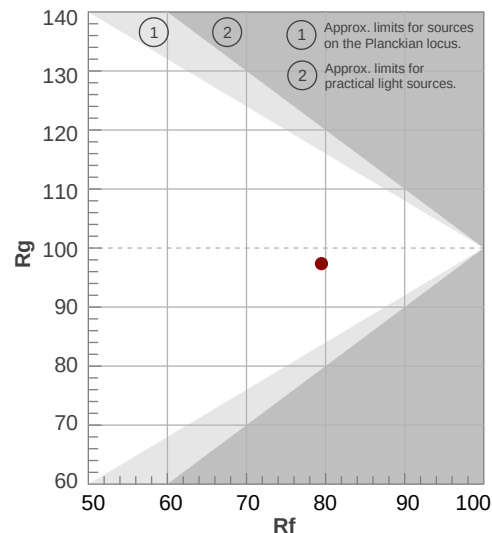
Rf 79.5

Fidelity index Rf

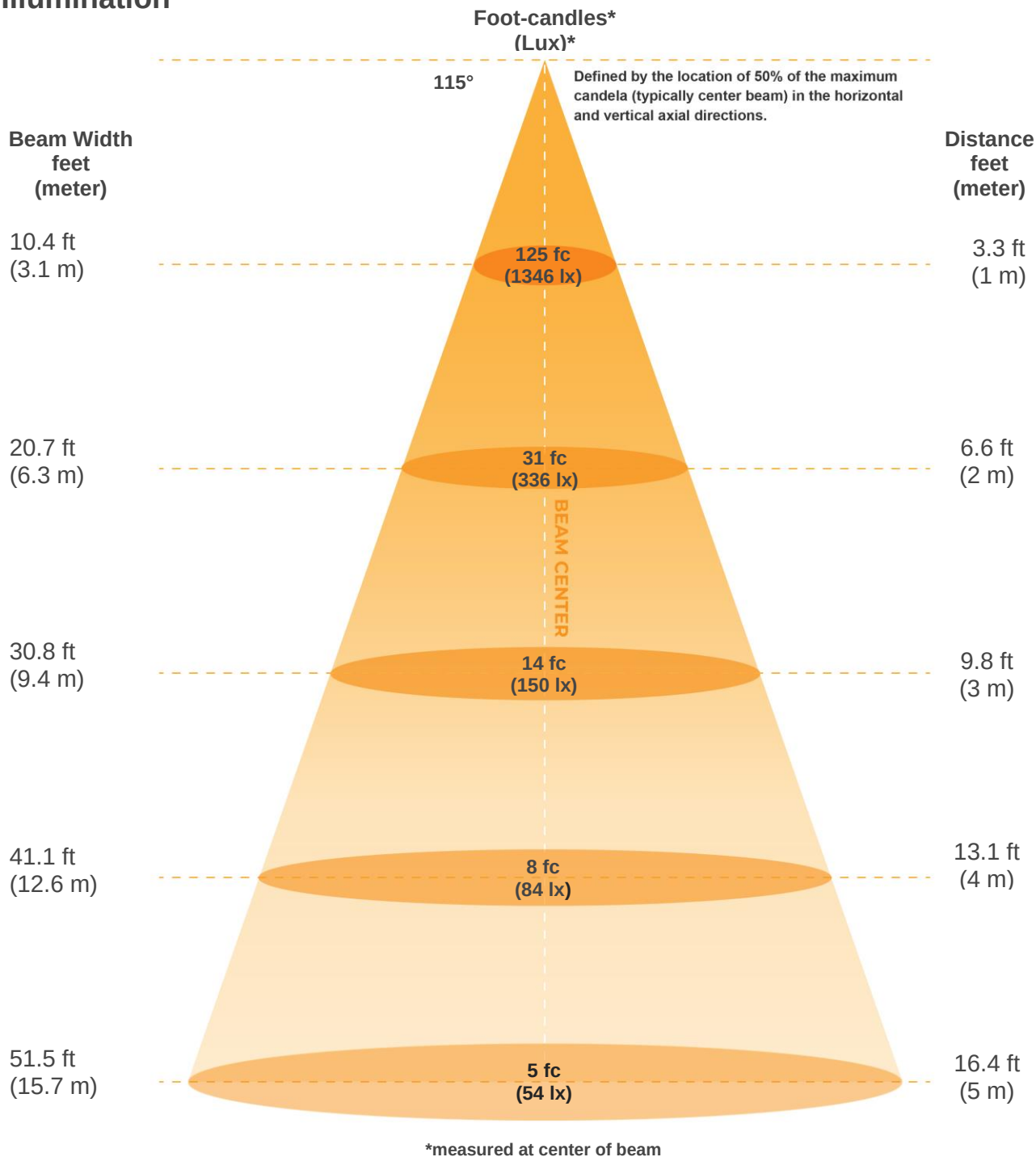
Rg 97.4

Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	77	-12%	-2%
2	79	-9%	7%
3	69	-4%	14%
4	80	2%	11%
5	85	6%	7%
6	89	6%	-2%
7	90	-1%	-6%
8	87	-5%	-4%
9	86	-8%	2%
10	73	-9%	11%
11	71	0%	17%
12	77	6%	10%
13	84	10%	-4%
14	83	7%	-5%
15	75	2%	-17%
16	75	-4%	-14%



Illumination



Beam intensities from 1-20m

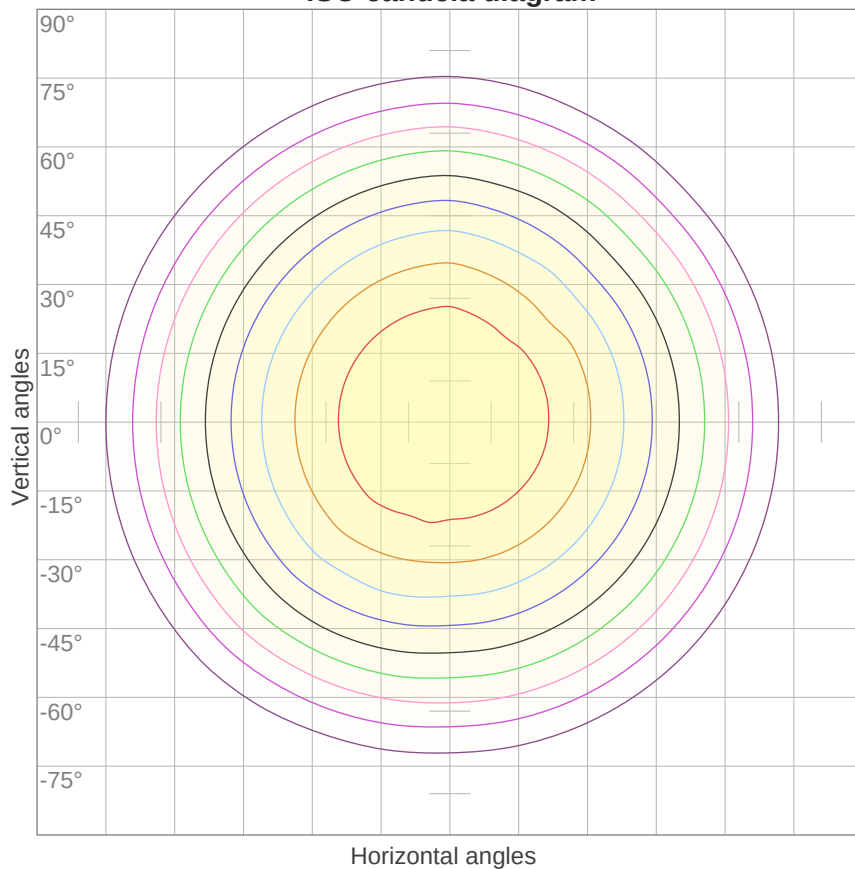
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
1346lx	336lx	150lx	84lx	54lx	37lx	27lx	21lx	17lx	13lx	11lx	9lx	8lx	7lx	6lx	5lx	5lx	4lx	4lx	3lx
125fcd	31.3fcd	13.9fcd	7.8fcd	5fcd	3.5fcd	2.6fcd	2fcd	1.5fcd	1.3fcd	1fcd	0.9fcd	0.7fcd	0.6fcd	0.6fcd	0.5fcd	0.4fcd	0.4fcd	0.3fcd	0.3fcd

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
115°	163.7°	175.9°	77.5%	52.4%



ISO Diagrams

ISO candela diagram



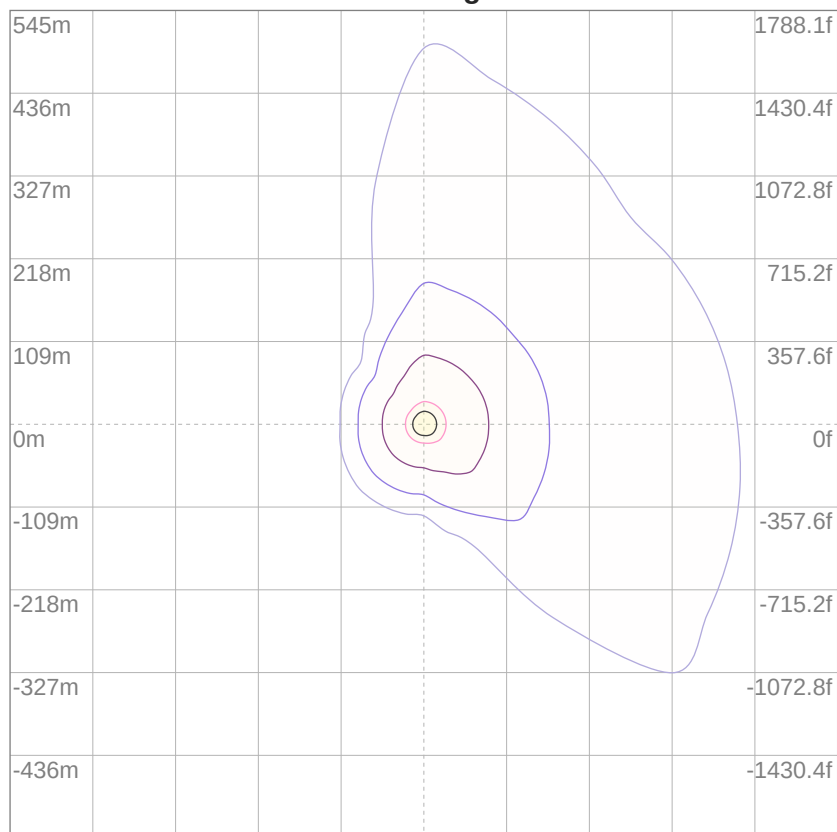
10%	135 cd
20%	269 cd
30%	404 cd
40%	538 cd
50%	673 cd
60%	807 cd
70%	942 cd
80%	1077 cd
90%	1211 cd

Conditions:

Number of c-planes: 8

Candela at center: 1346 cd

ISO lux diagram



3%	0.404 lx
5%	0.673 lx
10%	1.35 lx
30%	4.04 lx
50%	6.73 lx

Conditions:

Number of c-planes: 8

Lux at center: 13.5 lx

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



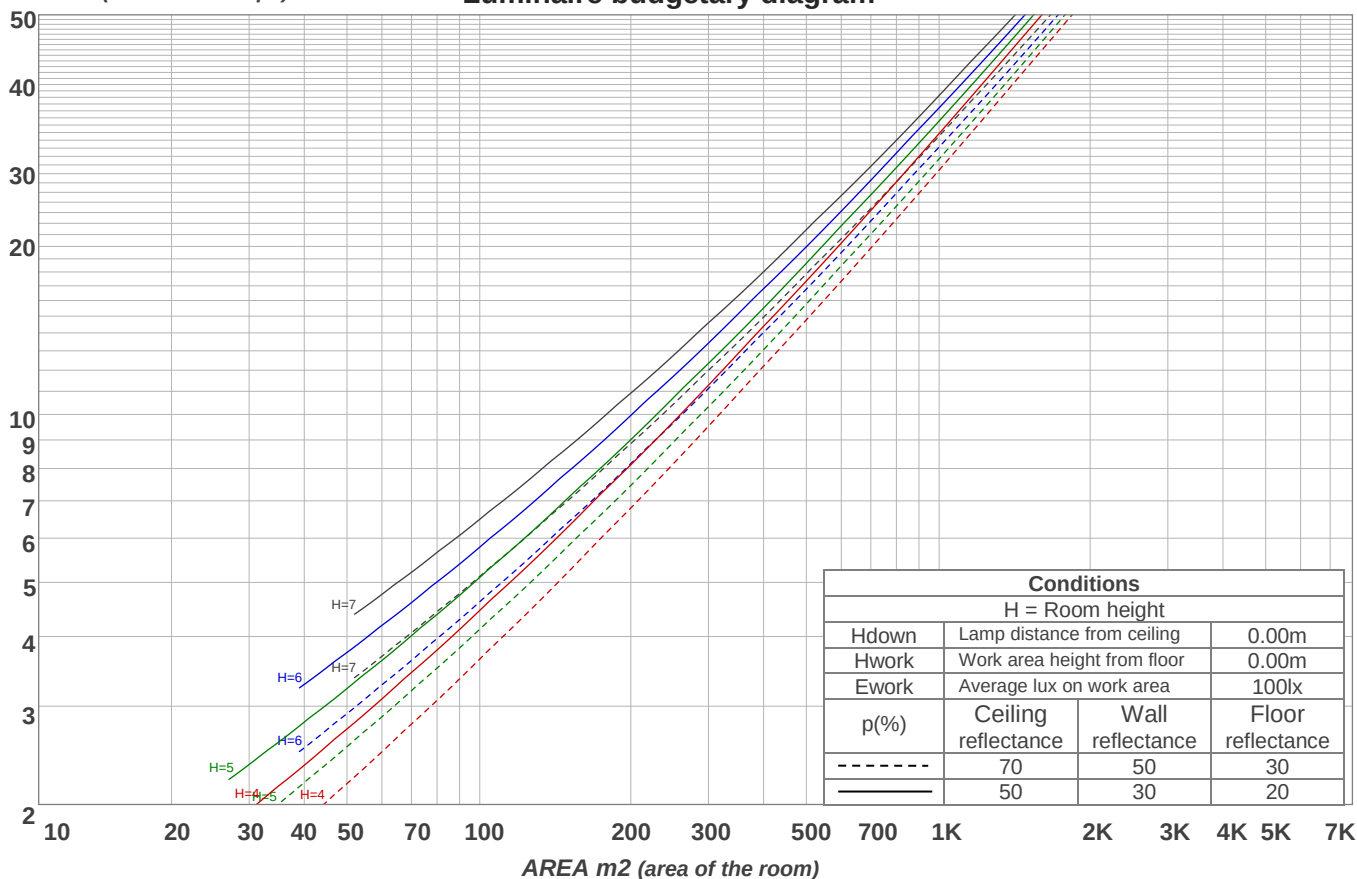
Light Planning

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	108	103	99	95	106	101	97	93	97	94	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	79	68	60	53	66	58	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	62	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23

LAMPS (number of lamps)

Luminaire budgetary diagram



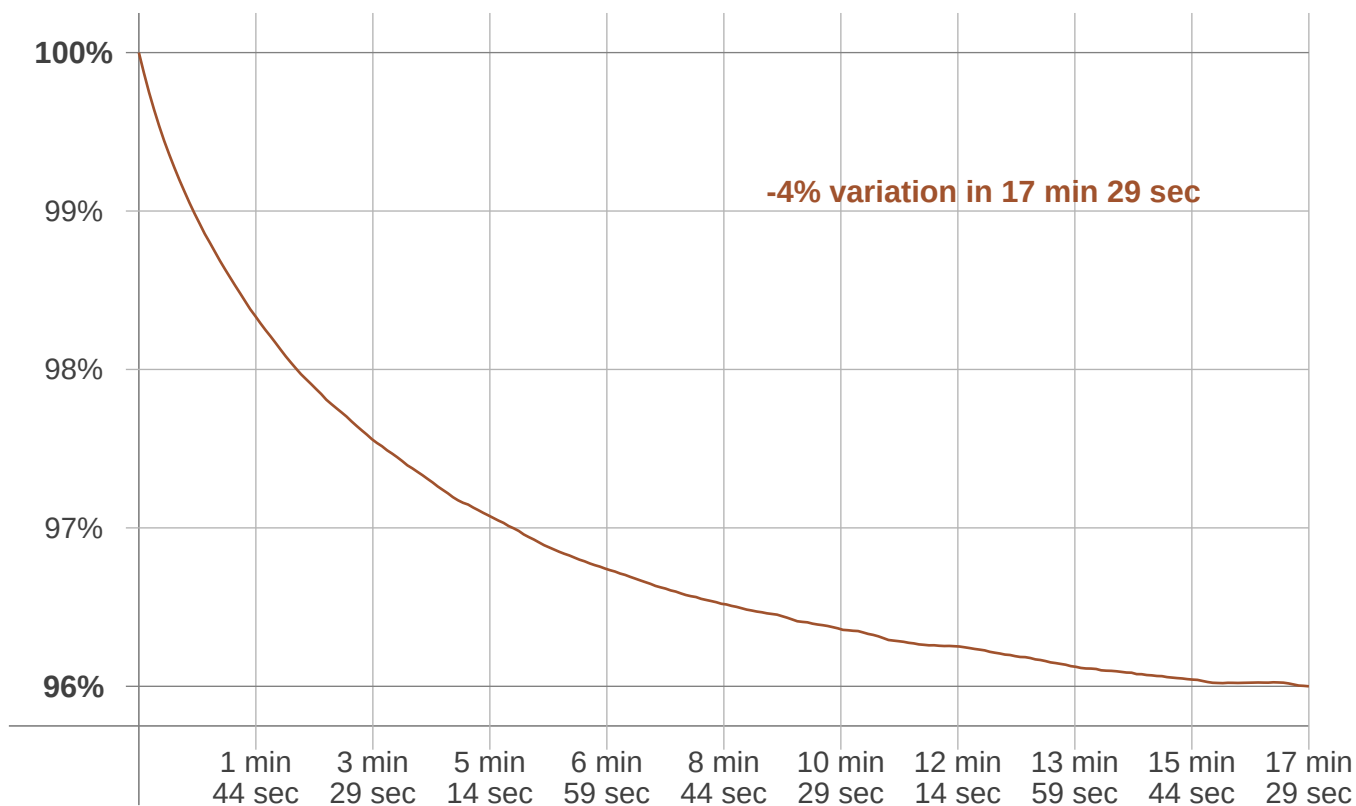
Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
127 lm	366 lm	558 lm	678 lm	711 lm	649 lm	501 lm	295 lm	88.8 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
3.62 lm	1.24 lm	1.26 lm	1.35 lm	1.29 lm	1.16 lm	0.956 lm	0.579 lm	0.199 lm



Stabilization

Warmup curve



Warmup result

Warmup time:	17 min 29 sec
Warmup variation	-4.0%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
4027 K	+50 K	4077 K

Output change

Output start	Output change	Output end
4134 lm	-150 lm	3985 lm

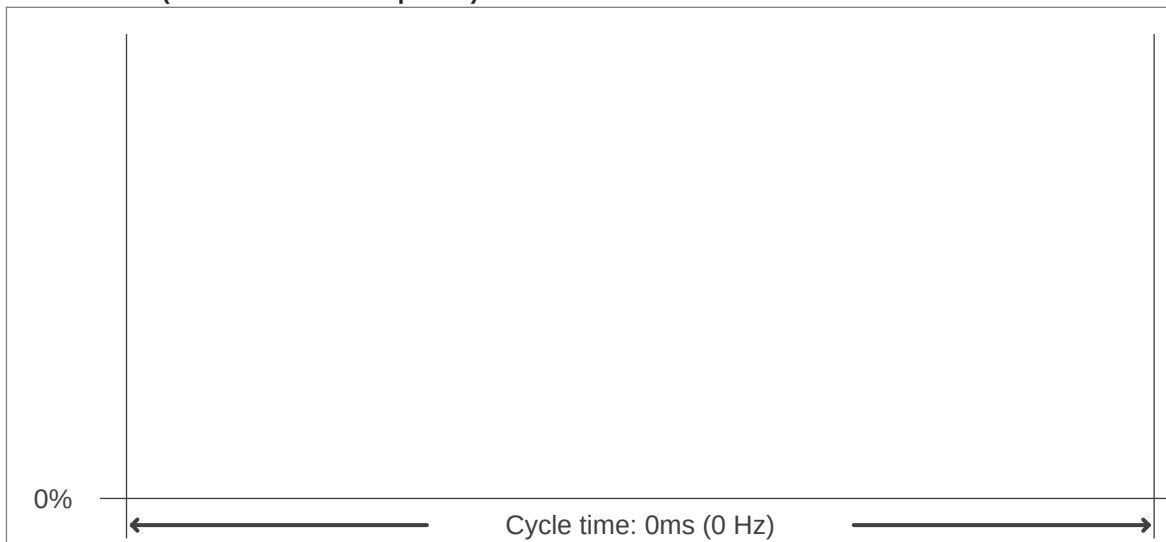


Flicker

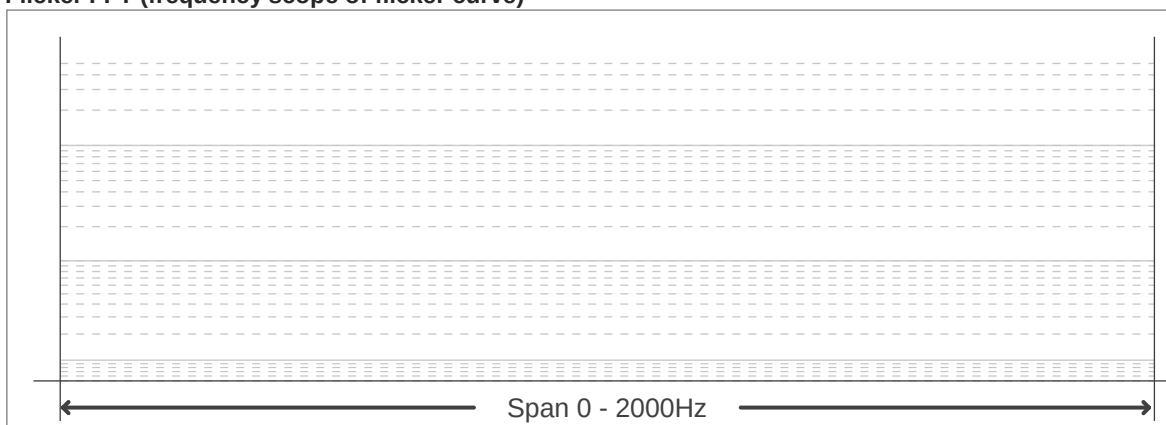
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:	n/a Hz
Flicker index:	n/a
Flicker percentage:	n/a %
SVM: (Visual flicker)	n/a

Flicker conditions:

Sample rate:	0 samples/second
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