

Light efficiency:

140 Lumen/Watt

Output: 16378 lm

Light quality:

CRI: 84.2

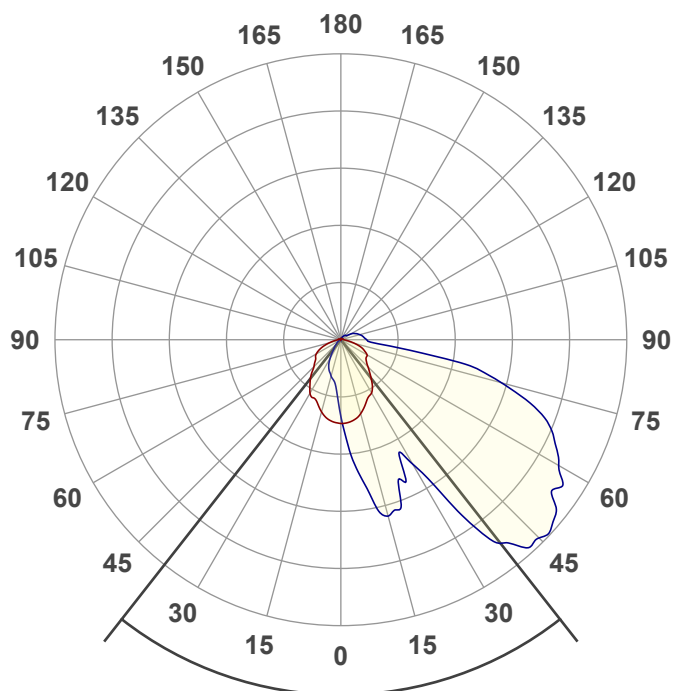
Peak: 9560 cd

Color temperature:

5070 K

Power: 116.9 W

PF: 1.0



Product name:

WPGL-50K120-H

Date and time:

5/19/2021 4:25:28 PM

Beam angle

76.2°

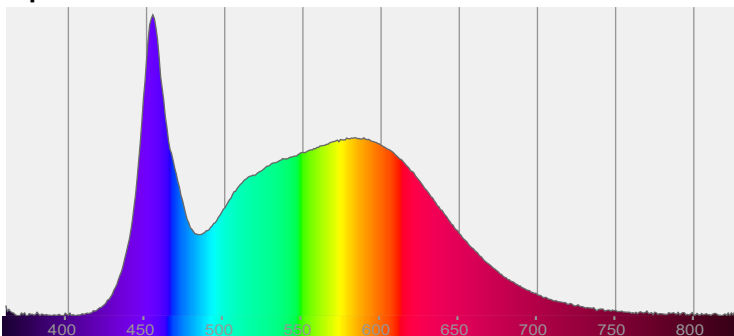


CIE 1931

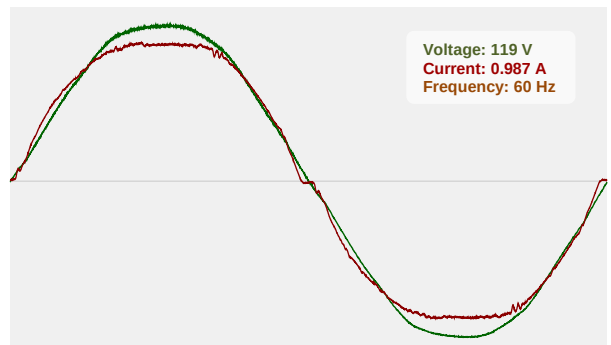
x: 0.344

y: 0.355

Spectra



Power



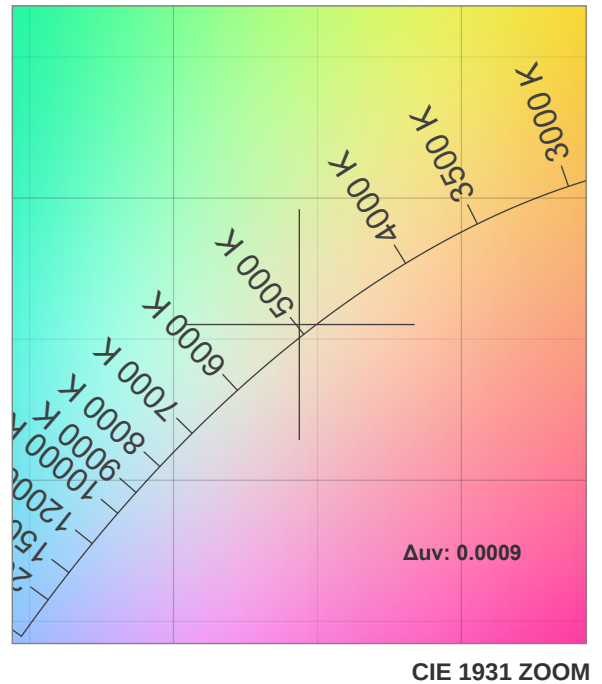
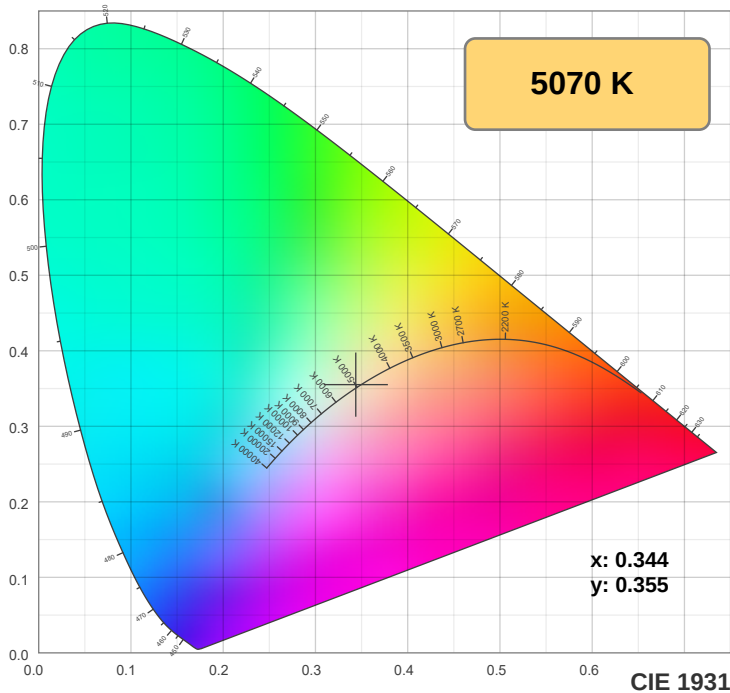
T 314.743.3067

F 314.972.6202

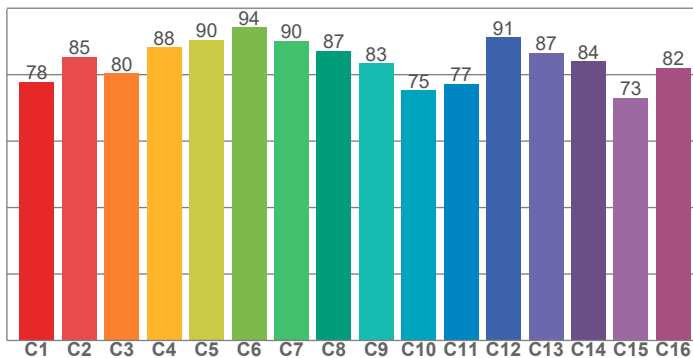
email: commercial-sales@superbrightleds.com

www.superbrightleds.com/

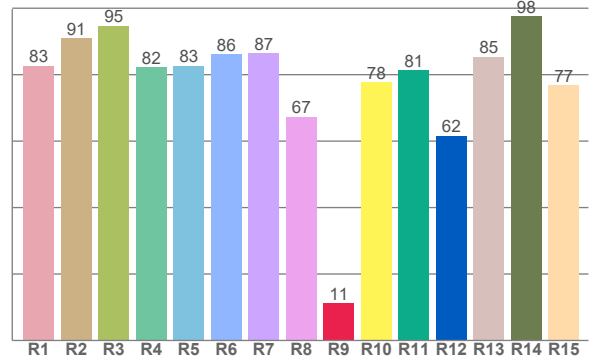
Color Specifications



TM30: 84.0



CRI: 84.2 (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
82.7	91.0	94.7	82.2	82.7	86.2	86.5	67.4	11.3	77.7	81.4	61.6	85.4	97.6	76.9

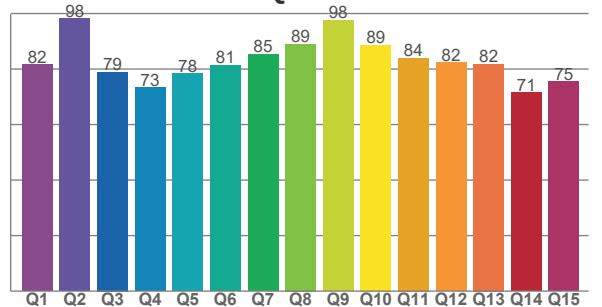
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
77.9	85.3	80.4	88.2	90.5	94.2	90.2	87.1	83.4	75.3	77.3	91.2	86.6	84.0	73.0	82.1

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
81.6	98.2	79.0	73.3	78.4	81.3	85.3	89.0	97.5	88.7	84.0	82.3	81.9	71.5	75.5

CQS: 81.6



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
5070 K	84.2	11.3	84.0	94.3	81.6	0.344	0.355	0.209	0.324	0.0009



TM30 Report

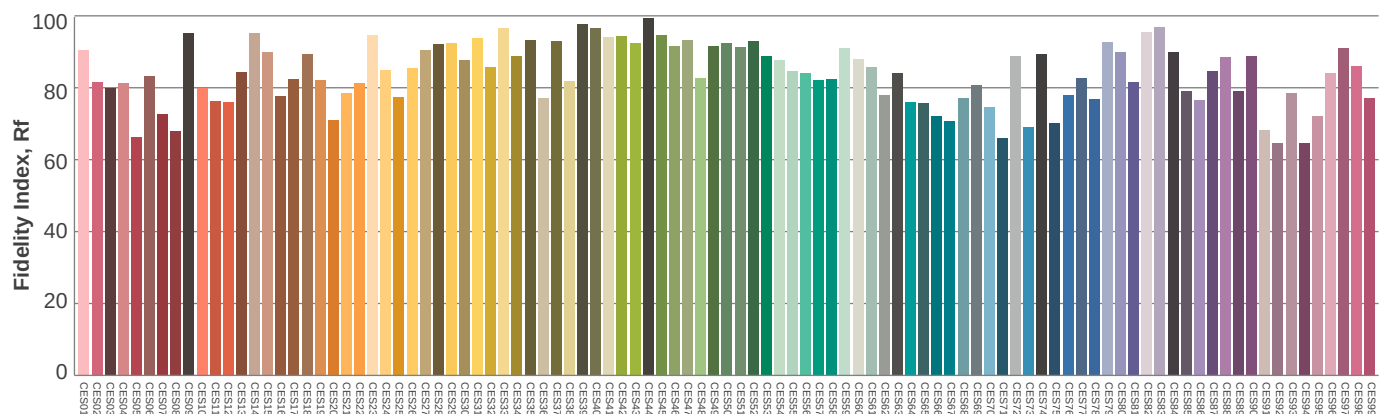
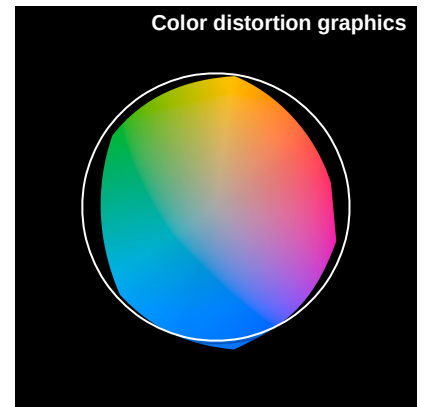
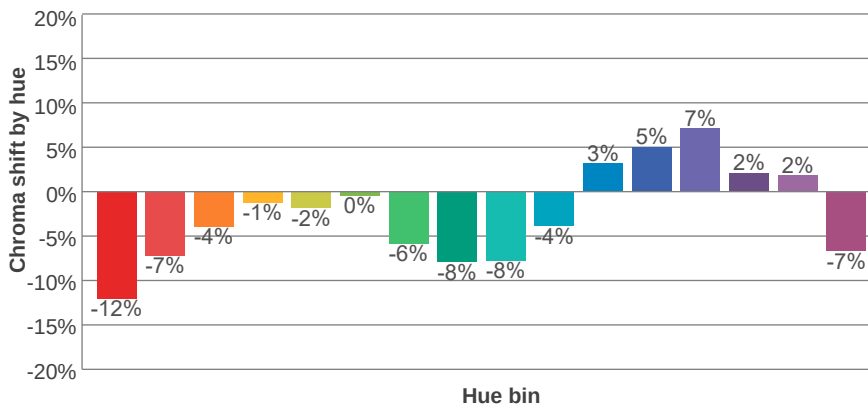
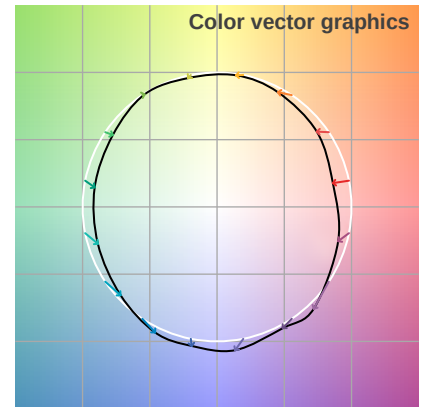
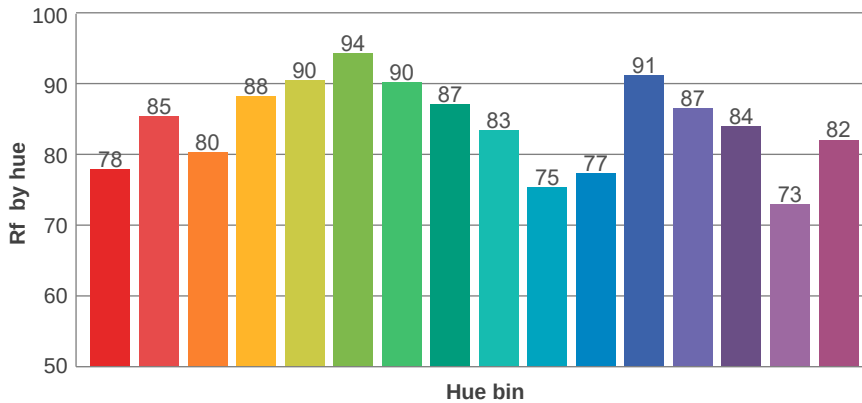
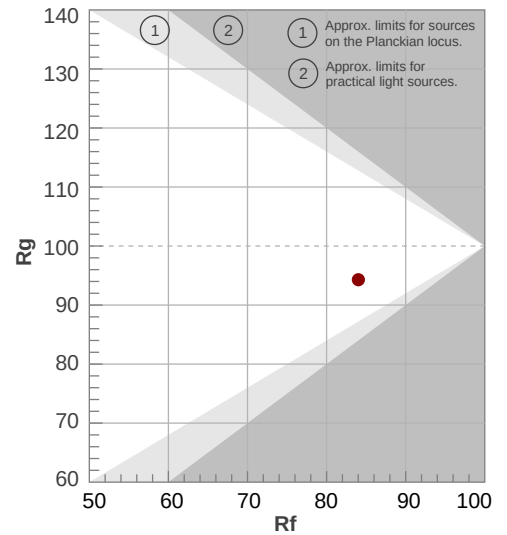
Rf 84.0

Fidelity index Rf

Rg 94.3

Gamut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	78	-12%	1%
2	85	-7%	5%
3	80	-4%	10%
4	88	-1%	5%
5	90	-2%	2%
6	94	0%	-2%
7	90	-6%	-1%
8	87	-8%	3%
9	83	-8%	10%
10	75	-4%	15%
11	77	3%	14%
12	91	5%	2%
13	87	7%	-8%
14	84	2%	-9%
15	73	2%	-23%
16	82	-7%	-7%



Color Evaluation Sample



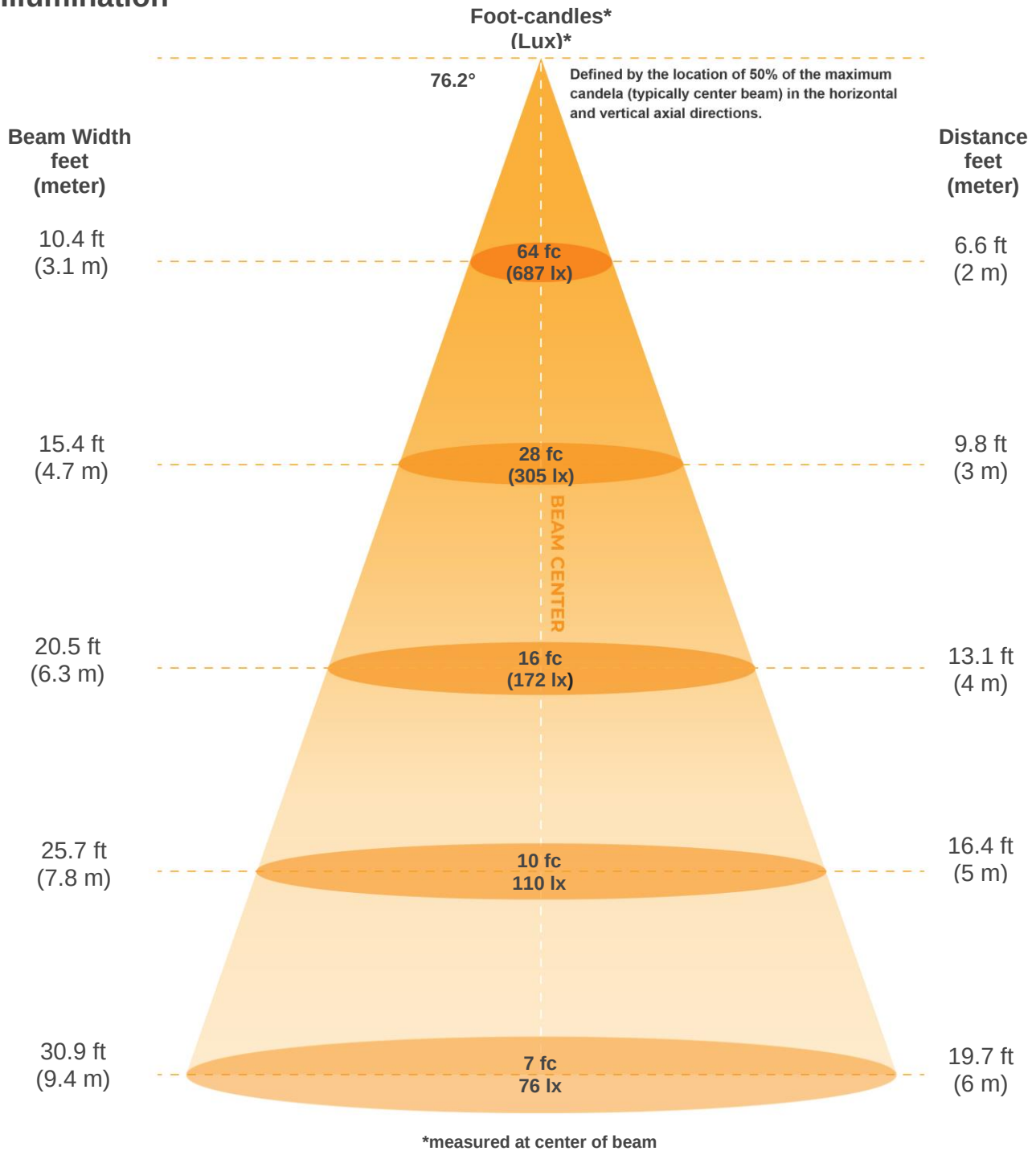
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Illumination



Beam intensities from 1-20m

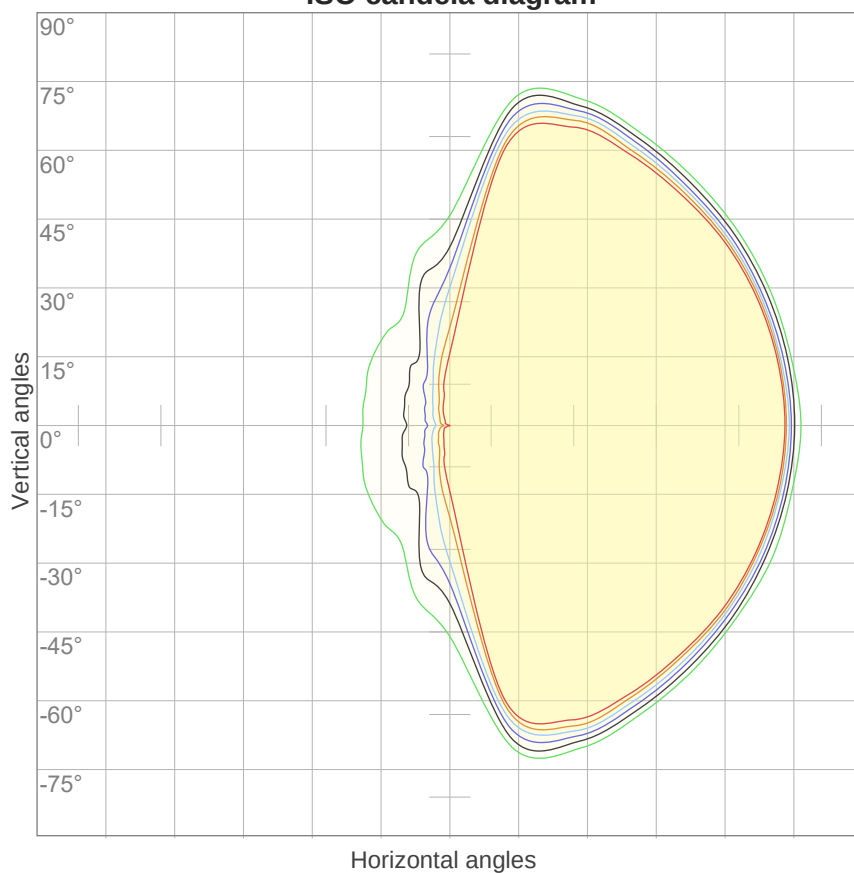
1m	2m	3m	4m	5m	6m	7m	8m	9m	10m	11m	12m	13m	14m	15m	16m	17m	18m	19m	20m
3.3ft	6.6ft	9.8ft	13.1ft	16.4ft	19.7ft	23ft	26.2ft	29.5ft	32.8ft	36.1ft	39.4ft	42.7ft	45.9ft	49.2ft	52.5ft	55.8ft	59.1ft	62.3ft	65.6ft
2747lx	687lx	305lx	172lx	110lx	76lx	56lx	43lx	34lx	27lx	23lx	19lx	16lx	14lx	12lx	11lx	10lx	8lx	8lx	7lx
255.2fcd	63.8fcd	28.4fcd	15.9fcd	10.2fcd	7.1fcd	5.2fcd	4fcd	3.2fcd	2.6fcd	2.1fcd	1.8fcd	1.5fcd	1.3fcd	1.1fcd	1fcd	0.9fcd	0.8fcd	0.7fcd	0.6fcd

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
76.2°	134.9°	197°	60.1%	34.0%



ISO Diagrams

ISO candela diagram



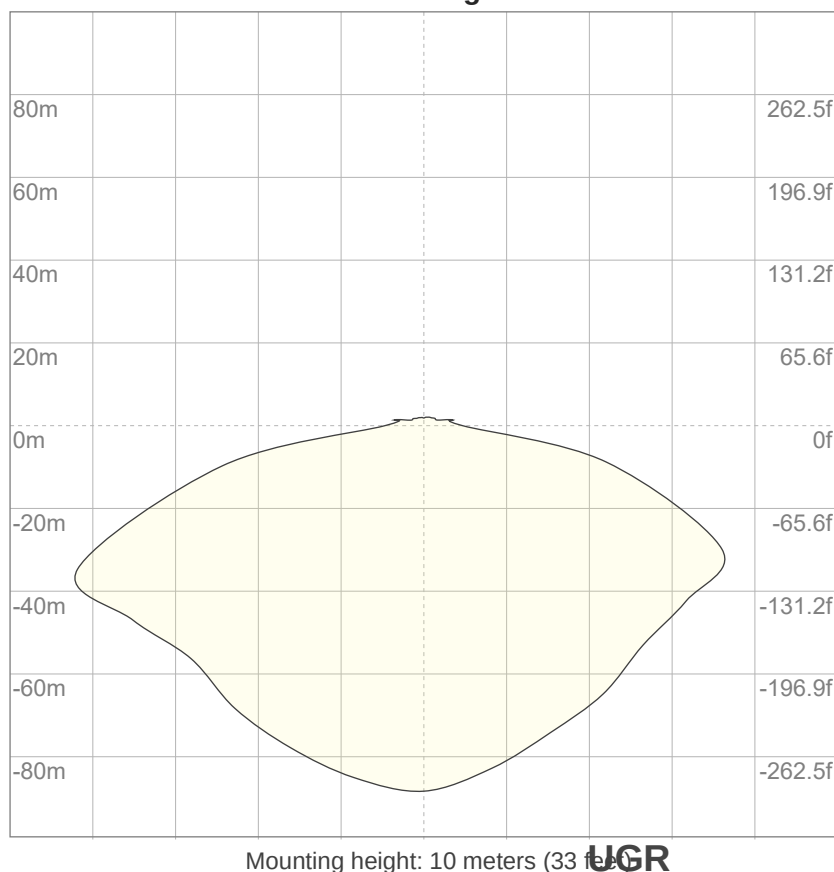
10%	275 cd
20%	549 cd
30%	824 cd
40%	1099 cd
50%	1373 cd
60%	1648 cd
70%	1923 cd
80%	2197 cd
90%	2472 cd

Conditions:

Number of c-planes: 16

Candela at center: 2747 cd

ISO lux diagram



3%	0.824 lx
5%	1.37 lx
10%	2.75 lx
30%	8.24 lx
50%	13.7 lx

Conditions:

Number of c-planes: 16

Lux at center: 27.5 lx

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



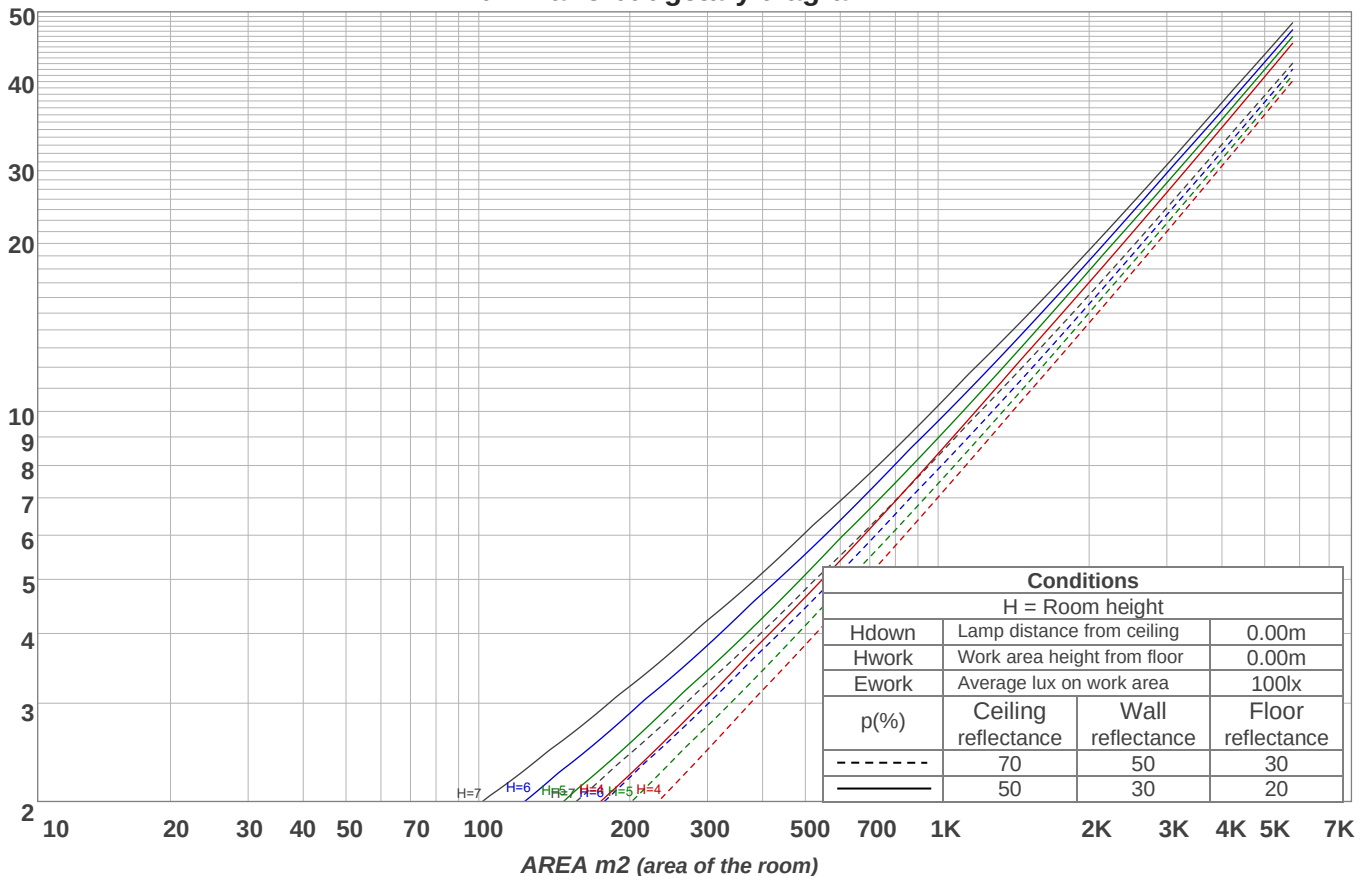
Light Planning

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	118	118	118	118	114	114	114	114	108	108	108	102	102	102	97	97	97	94
1	105	99	94	89	101	96	91	87	90	86	83	85	82	79	81	78	76	73
2	93	83	75	68	90	81	73	67	76	70	64	72	67	62	68	64	60	57
3	83	71	62	54	80	69	60	53	65	58	51	61	55	50	58	53	48	45
4	75	62	52	44	72	60	50	43	56	48	42	53	46	41	50	44	39	37
5	69	54	44	37	66	53	43	36	50	41	35	47	40	34	44	38	33	31
6	63	48	38	31	60	47	37	31	44	36	30	42	35	29	40	33	28	26
7	58	43	33	27	56	42	33	26	40	32	26	38	30	25	36	29	24	22
8	54	39	30	23	52	38	29	23	36	28	22	34	27	22	33	26	21	19
9	50	35	26	21	48	34	26	20	33	25	20	31	24	19	30	24	19	17
10	47	32	24	18	45	32	24	18	30	23	18	29	22	17	28	21	17	15

LAMPS (number of lamps)

Luminaire budgetary diagram



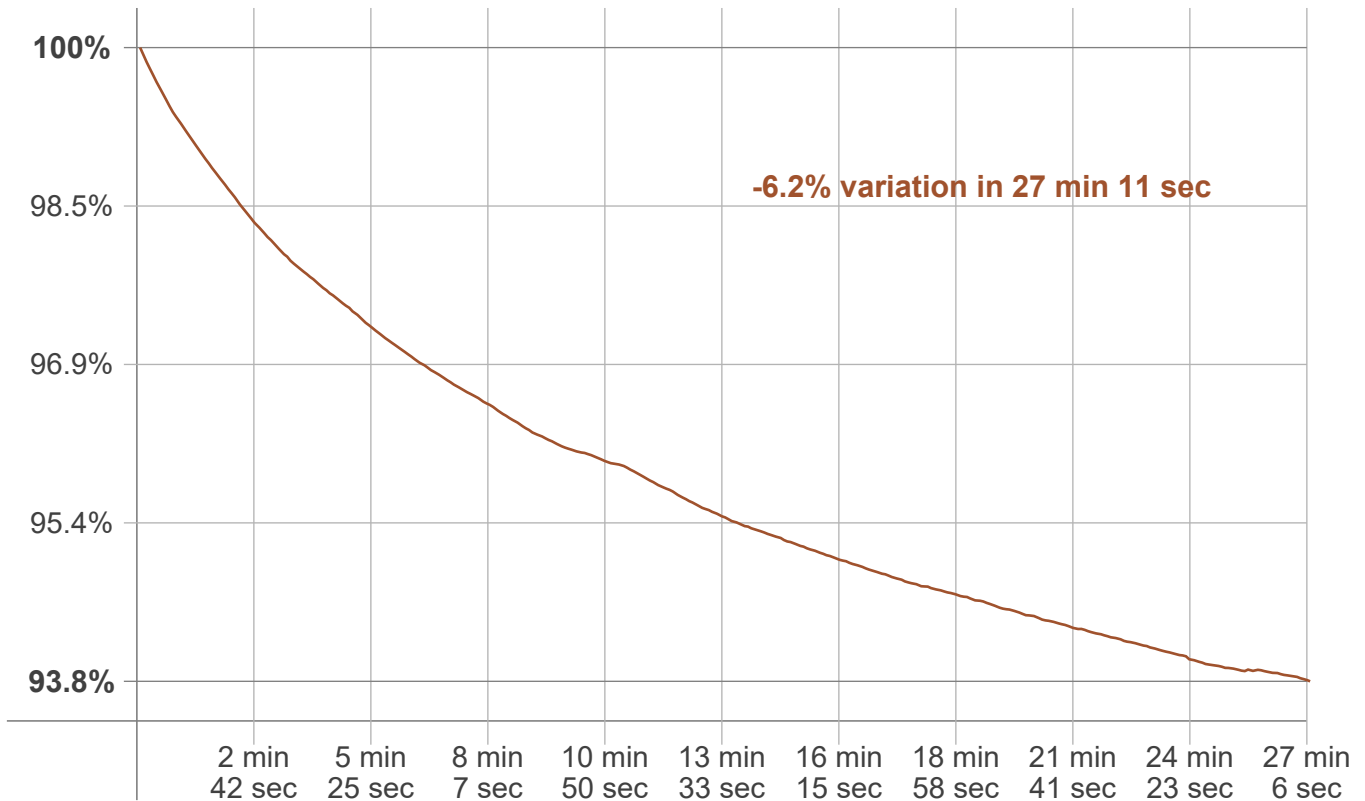
Zonal Lumen Summary

0°-10°	10°-20°	20°-30°	30°-40°	40°-50°	50°-60°	60°-70°	70°-80°	80°-90°
277 lm	907 lm	1341 lm	1843 lm	2557 lm	2924 lm	2882 lm	2040 lm	620 lm
90°-100°	100°-110°	110°-120°	120°-130°	130°-140°	140°-150°	150°-160°	160°-170°	170°-180°
330 lm	252 lm	173 lm	108 lm	65.1 lm	35.4 lm	15.7 lm	5.17 lm	1.36 lm



Stabilization

Warmup curve



Warmup result

Warmup time:	Lamp stabilized in 27 min 11 sec
Warmup variation	-6.3%

Warmup conditions

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

Color temperature change

CCT start	CCT change	CCT end
4961 K	+109 K	5070 K

Output change

Output start	Output change	Output end
17392 lm	-1014 lm	16378 lm

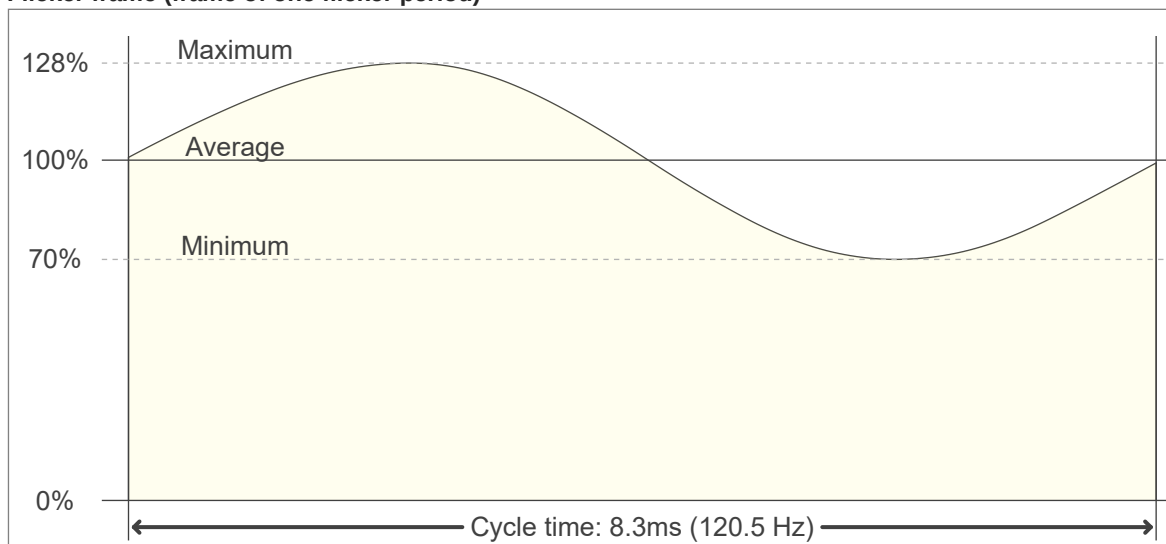


Flicker Specifications

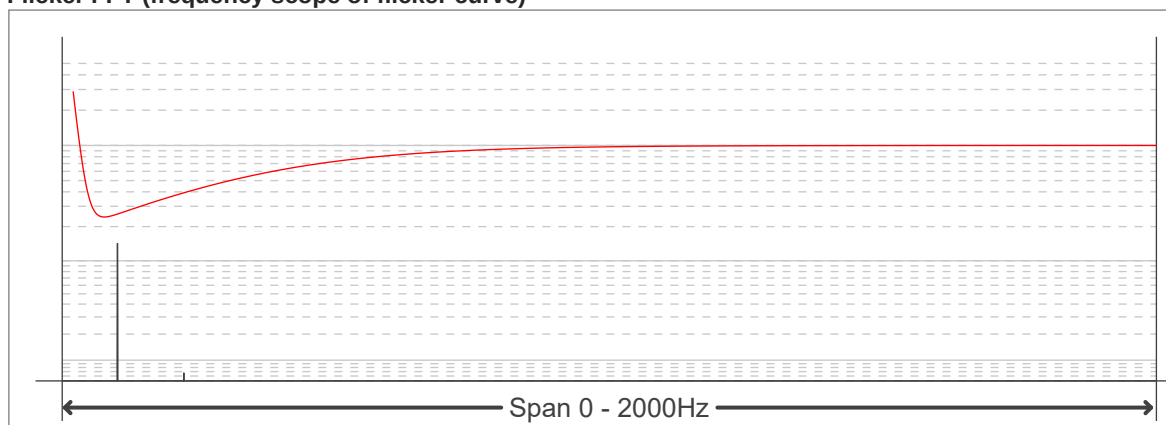
Flicker curve (complete sampled flicker signal)



Flicker frame (frame of one flicker period)



Flicker FFT (frequency scope of flicker curve)



Flicker results:

Flicker frequency:	120.48 Hz
Flicker index:	0.09
Flicker percentage:	29.05 %
SVM: (Visual flicker)	1.04

Flicker conditions:

Sample rate:	20000 samples/second
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