

Light efficiency:



Light quality:



Color temperature:



Output: 1567 lm

Peak: 6546 cd

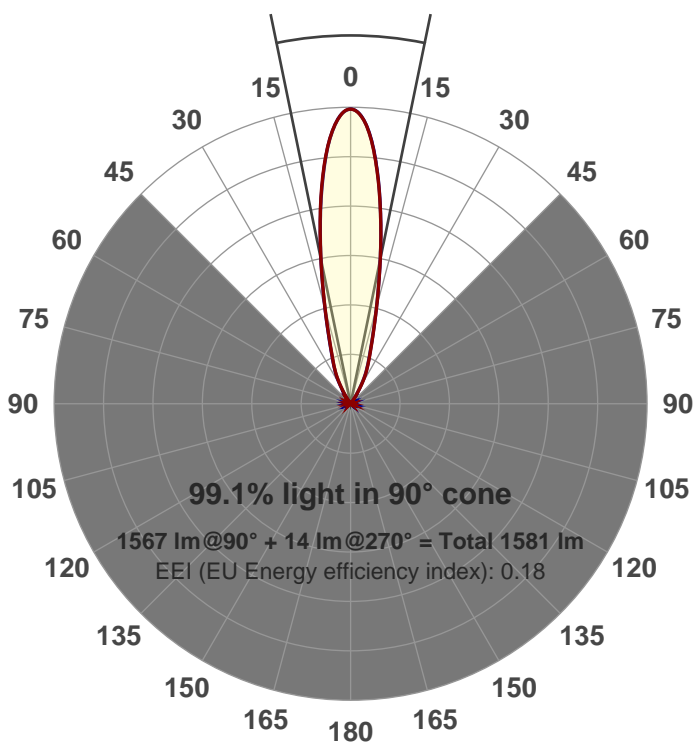
Power: 21.0 W

PF: 0.99



Beam angle

23.2°



Product name:
GRO-CZ20-NF-RD
Item number:
GRO-CZ20-NF-RD
Date and time:
6/14/2017 5:11:14 PM
Description:
V6

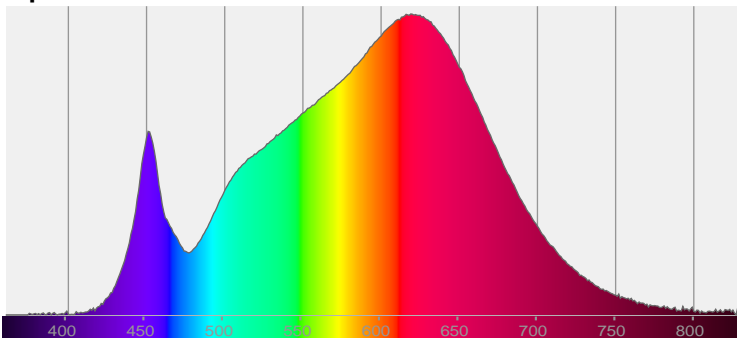
LUM: 1567

PPF: 26.4

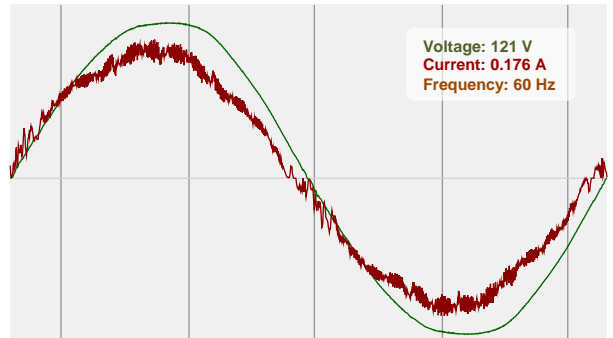


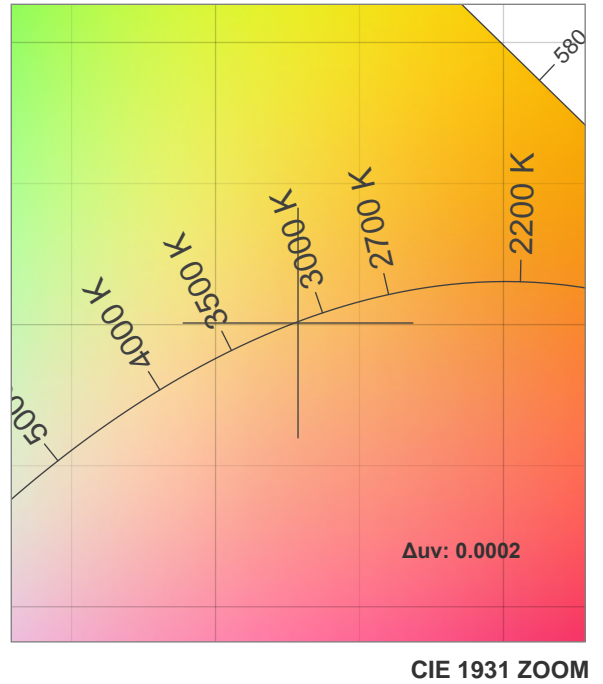
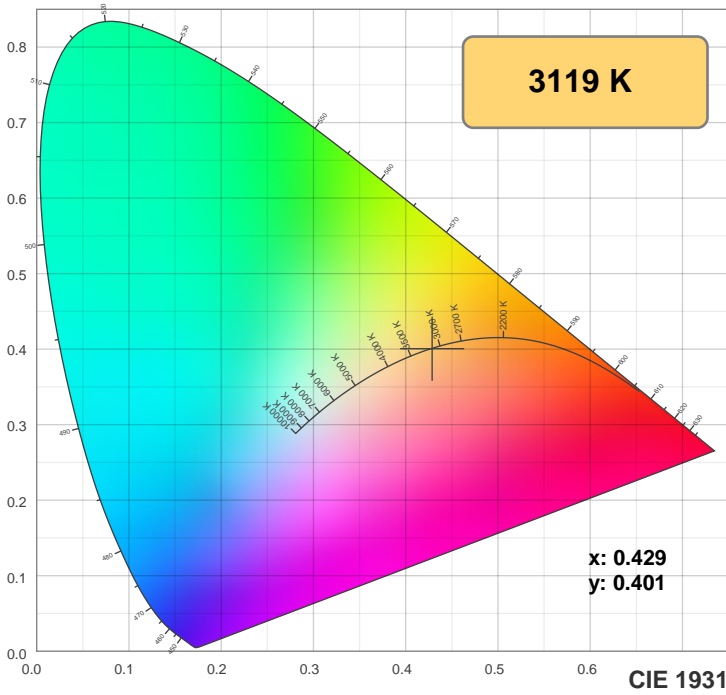
CIE 1931
x: 0.429
y: 0.401

Spectra

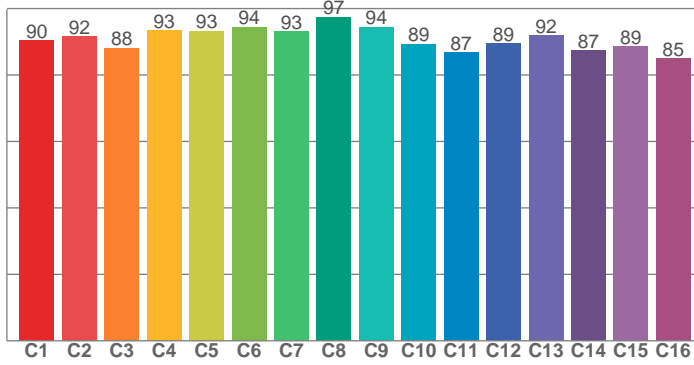


Power

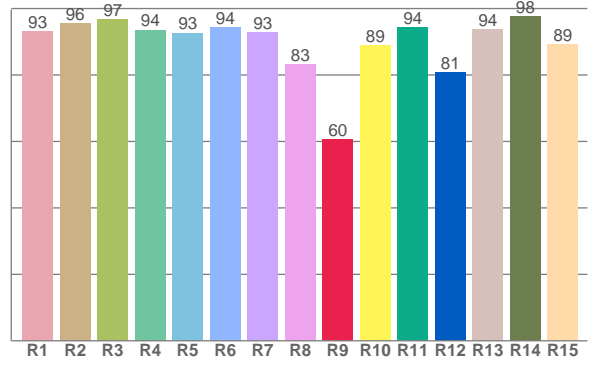




TM30: 90.9



CRI: 92.8 (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
93.0	95.6	96.8	93.6	92.7	94.4	92.9	83.2	60.5	89.0	94.4	80.8	93.7	97.7	89.1

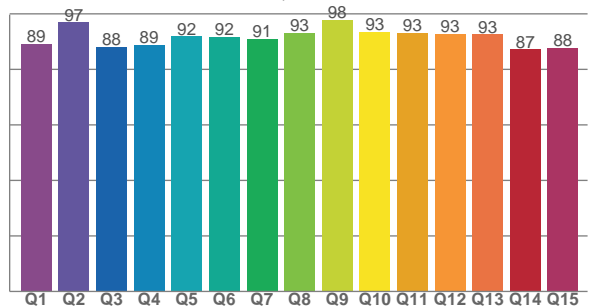
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
90.3	91.6	88.2	93.3	93.3	94.5	93.2	97.5	94.4	89.3	86.7	89.4	91.9	87.3	88.5	85.0

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
89.1	96.9	87.9	88.7	91.8	91.7	91.1	93.0	97.7	93.5	93.0	92.7	92.6	87.2	87.7

CQS: 91.0



Color parameters

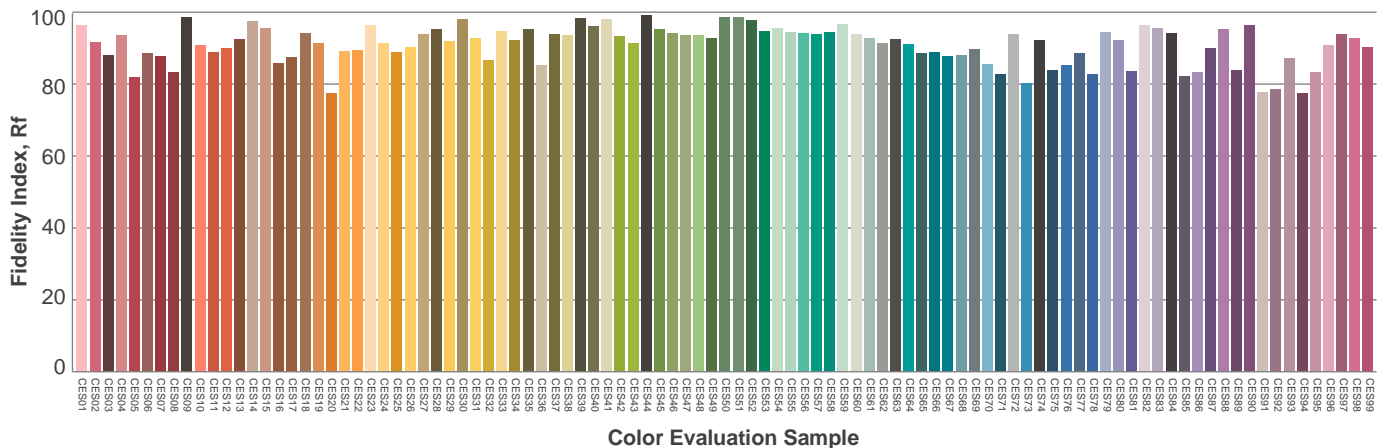
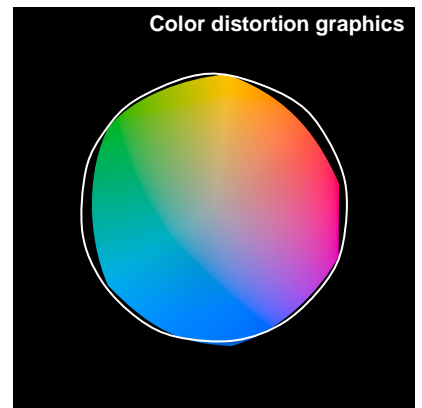
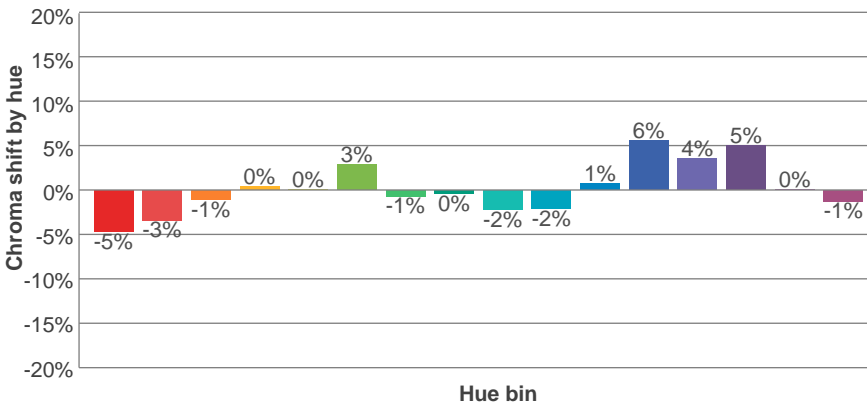
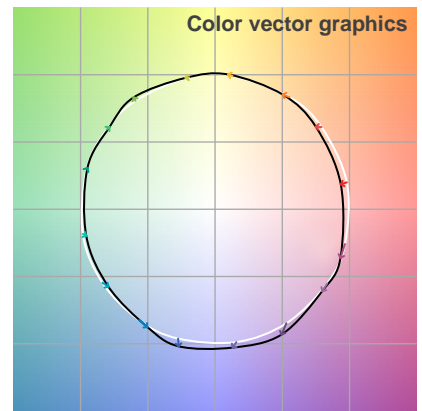
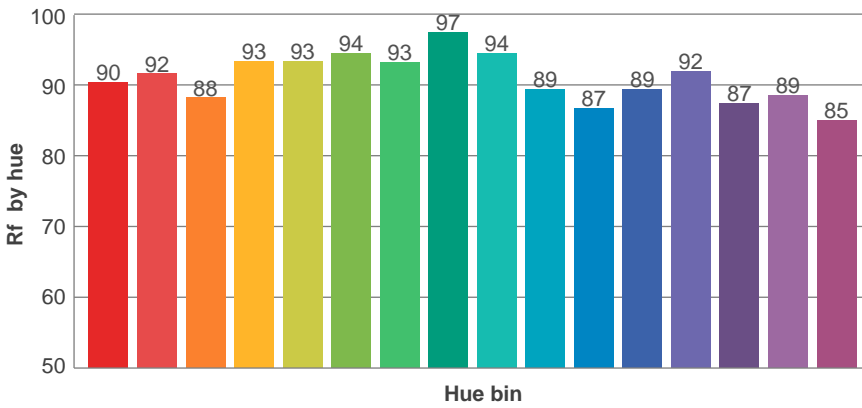
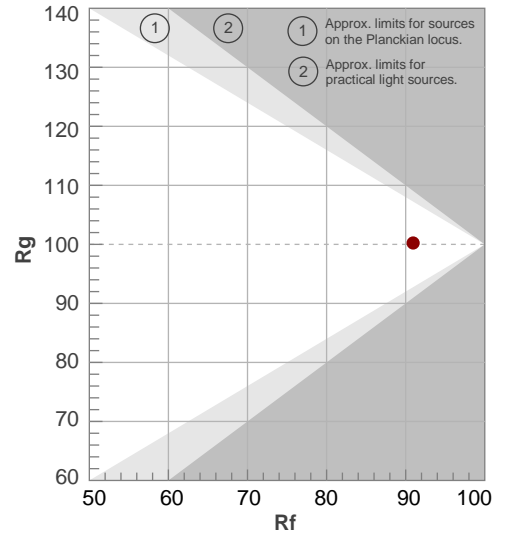
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3119 K	92.8	60.5	90.9	100.2	91.0	0.429	0.401	0.247	0.346	0.0002

TM30 details

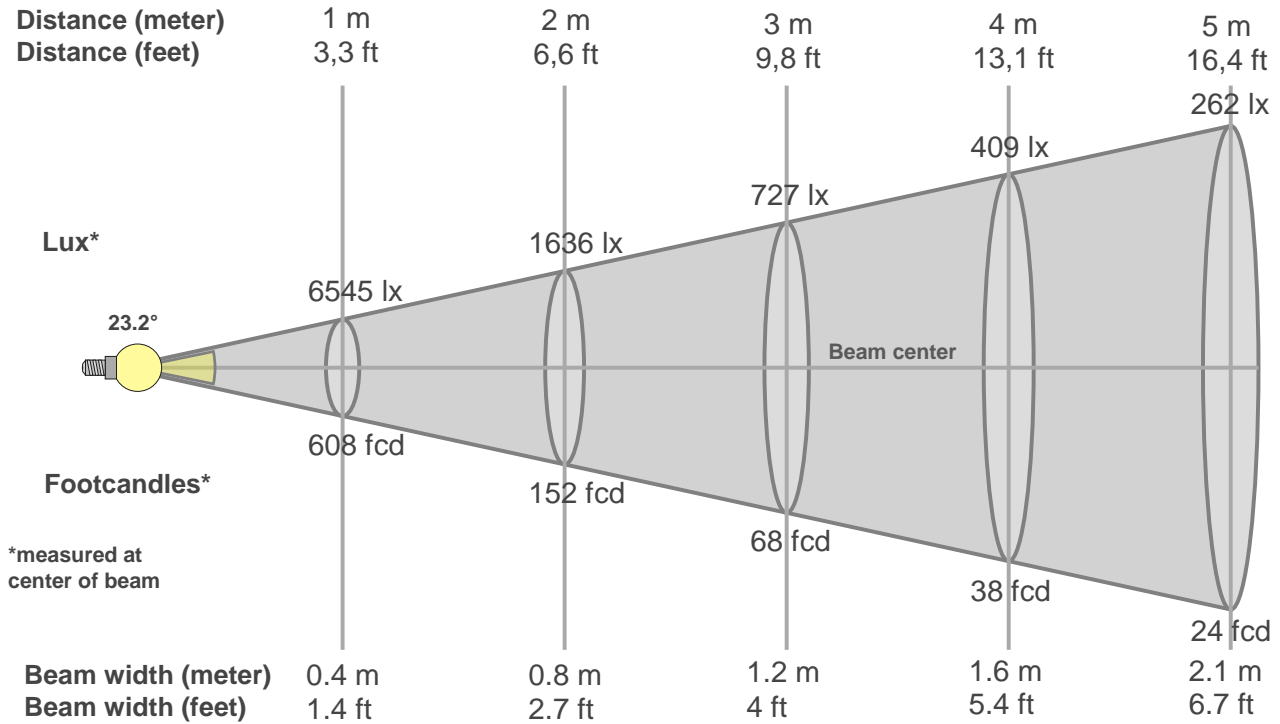
Rf 90.9
Fidelity index Rf

Rg 100.2
Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	90	-5%	-1%
2	92	-3%	3%
3	88	-1%	5%
4	93	0%	3%
5	93	0%	3%
6	94	3%	0%
7	93	-1%	-3%
8	97	0%	-1%
9	94	-2%	2%
10	89	-2%	5%
11	87	1%	8%
12	89	6%	2%
13	92	4%	-3%
14	87	5%	-8%
15	89	0%	-7%
16	85	-1%	-11%



Beam details



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
6545lx	1636lx	727lx	409lx	262lx	182lx	134lx	102lx	81lx	65lx	54lx	45lx	39lx	33lx	29lx	26lx	23lx	20lx	18lx	16lx
608.1fcd	152fcd	67.6fcd	38fcd	24.3fcd	16.9fcd	12.4fcd	9.5fcd	7.5fcd	6.1fcd	5fcd	4.2fcd	3.6fcd	3.1fcd	2.7fcd	2.4fcd	2.1fcd	1.9fcd	1.7fcd	1.5fcd

Intensities in 0° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
6545	6410	6031	5441	4702	3897	3134	2468	1947	1540	1257	1051	892	740	569	393	227	56	38	30
100%	98%	92%	83%	72%	60%	48%	38%	30%	24%	19%	16%	14%	11%	9%	6%	3%	1%	1%	0%

Intensities in 90° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
6545	6413	6023	5416	4672	3878	3131	2476	1958	1564	1276	1068	904	757	595	419	247	61	37	29
100%	98%	92%	83%	71%	59%	48%	38%	30%	24%	19%	16%	14%	12%	9%	6%	4%	1%	1%	0%

Intensities in 180° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
6545	6405	6008	5378	4639	3872	3135	2510	1996	1616	1328	1117	946	797	638	460	288	128	41	31
100%	98%	92%	82%	71%	59%	48%	38%	30%	25%	20%	17%	14%	12%	10%	7%	4%	2%	1%	0%

Intensities in 270° c-plane

0°	2°	4°	6°	8°	10°	12°	14°	16°	18°	20°	22°	24°	26°	28°	30°	32°	34°	36°	38°
6545	6414	6019	5397	4648	3865	3131	2493	1984	1590	1304	1092	922	770	598	418	251	115	41	32
100%	98%	92%	82%	71%	59%	48%	38%	30%	24%	20%	17%	14%	12%	9%	6%	4%	2%	1%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
23.2°	54.8°	66.1°	1.0%	1.0%

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