

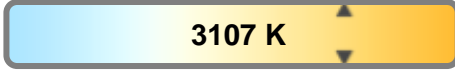
Light efficiency:



Light quality:



Color temperature:

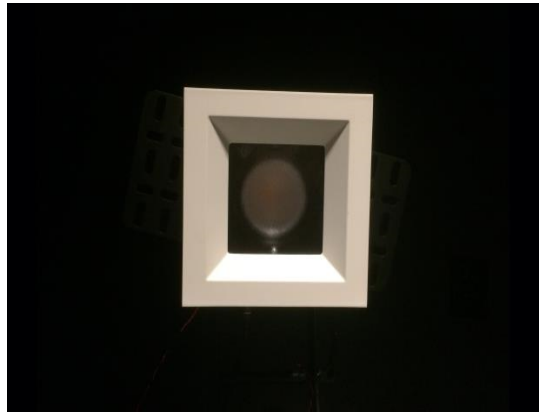


Output: 1312 lm

Peak: 1659 cd

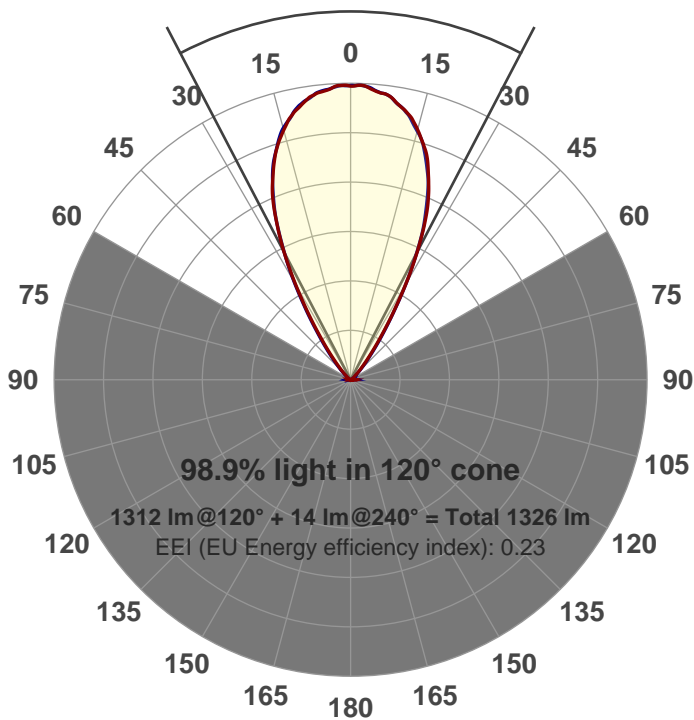
Power: 21.2 W

PF: 0.99



Beam angle

55.1°



Product name:

GRO-CZ20-WF-SQ-91A

Item number:

GRO-CZ20-WF-SQ-91A

Date and time:

3/31/2017 2:20:09 PM

Description:

LUM: 1312

PPF: 21.1

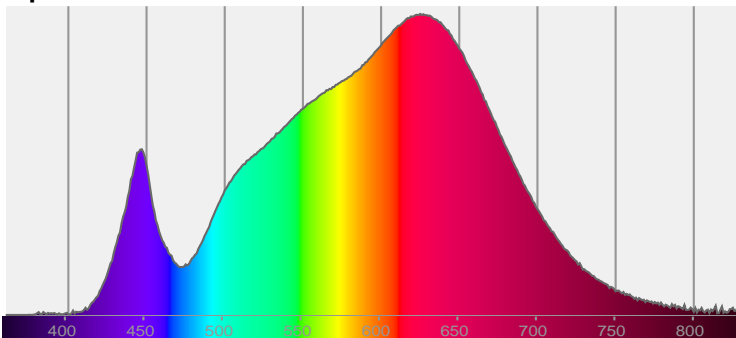


CIE 1931

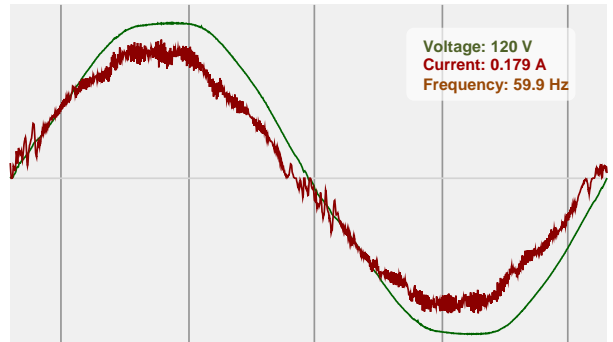
x: 0.429

y: 0.400

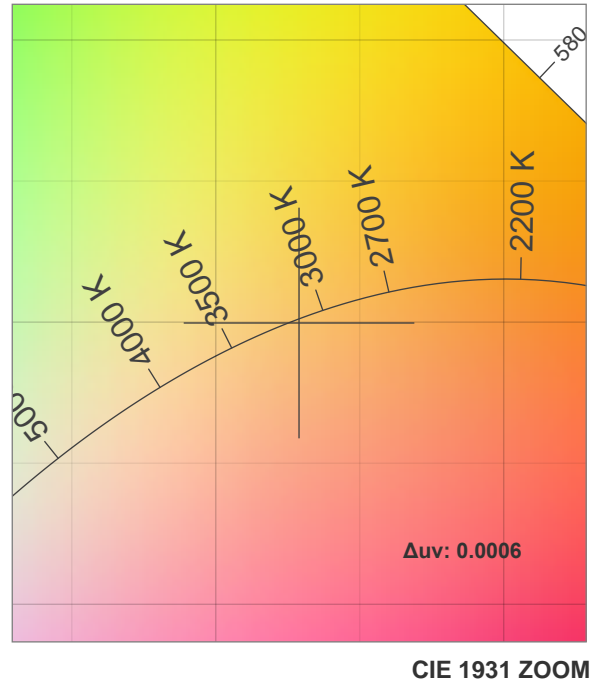
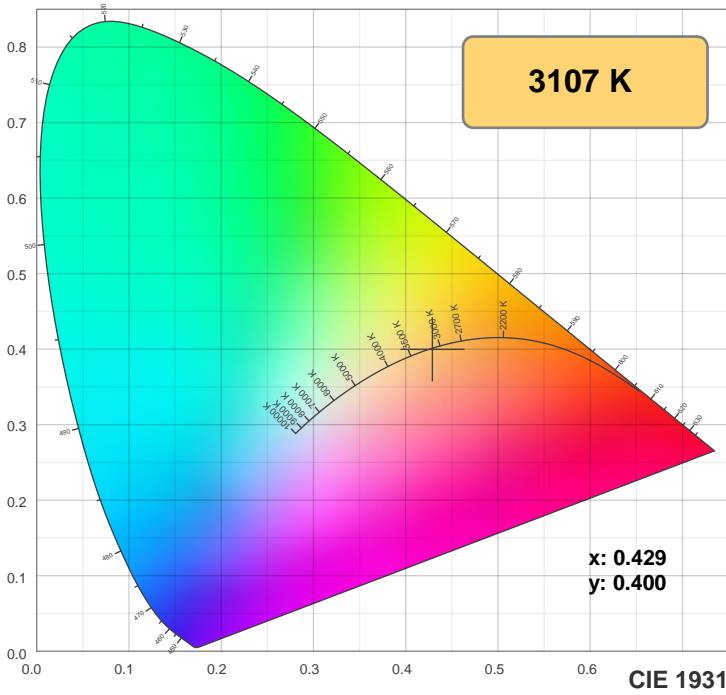
Spectra



Power

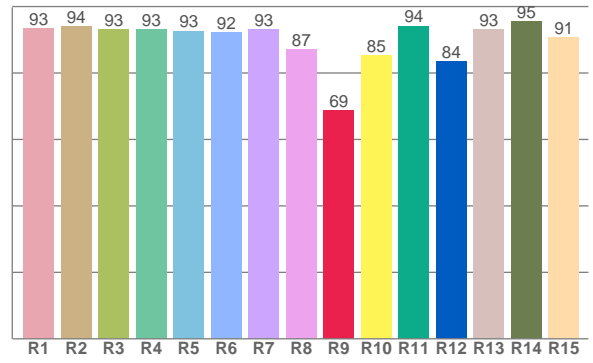
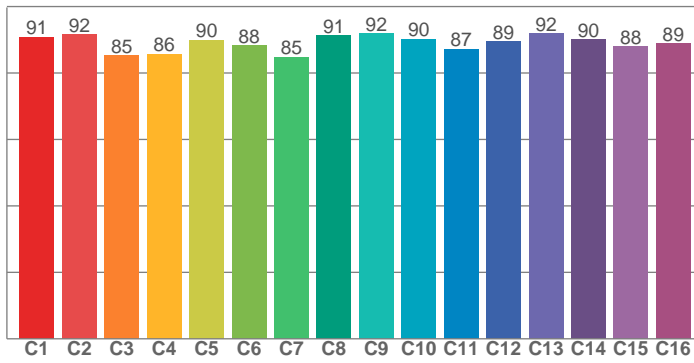


Color details



TM30: 89.2

CRI: 92.4 (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
93.5	93.9	93.1	93.1	92.7	92.2	93.2	87.2	68.8	85.3	94.2	83.6	93.2	95.5	90.8

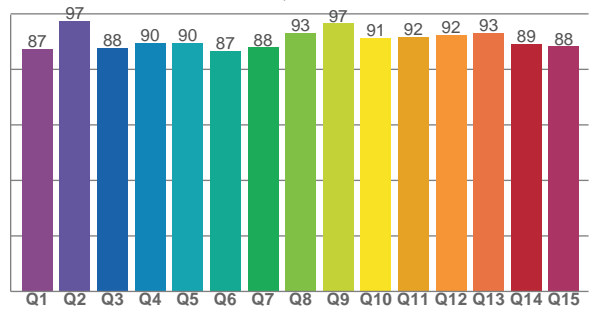
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
90.8	91.7	85.2	85.7	89.9	88.3	84.8	91.3	92.0	90.3	87.2	89.5	91.8	90.0	87.9	88.9

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
87.4	97.3	87.7	89.5	89.5	86.5	87.9	93.0	96.5	91.4	91.8	92.4	93.2	89.1	88.3

CQS: 90.2



Color parameters

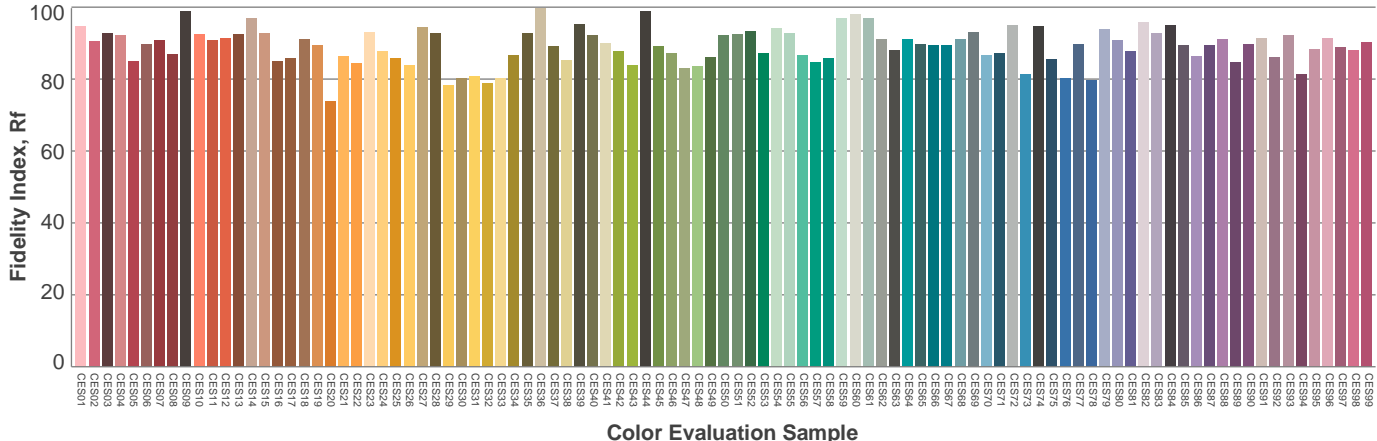
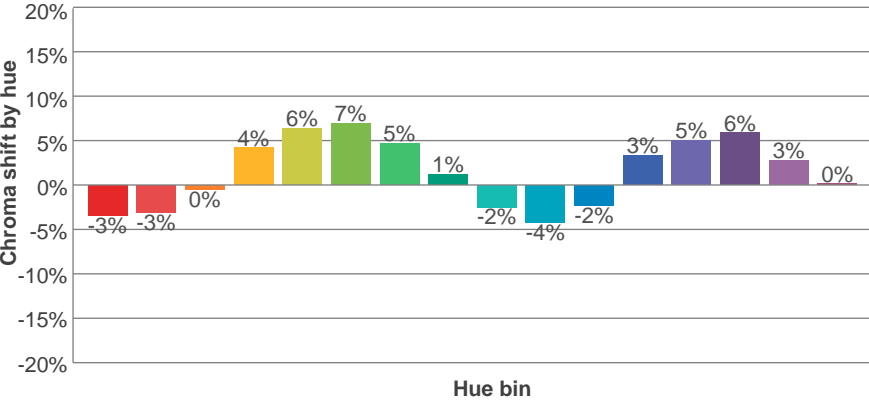
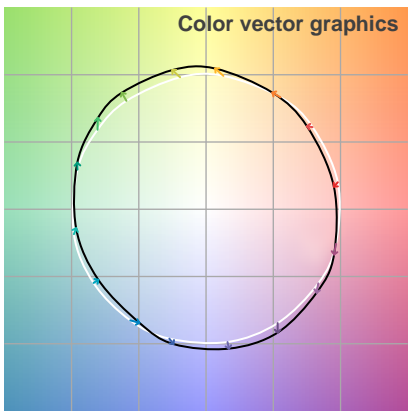
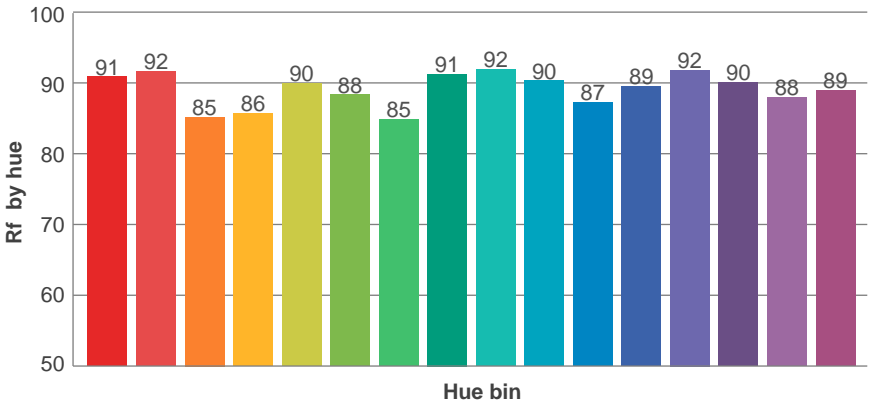
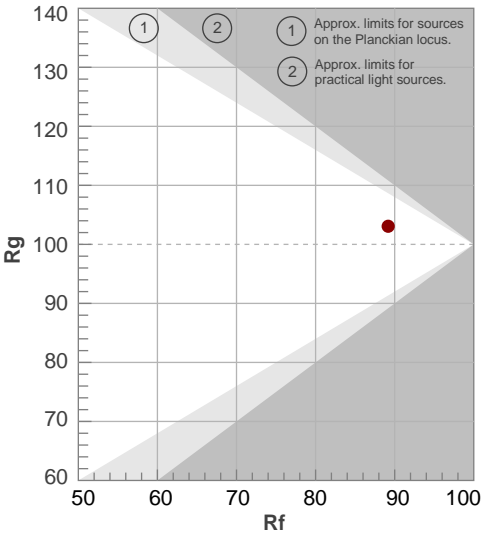
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color diviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3107 K	92.4	68.8	89.2	103.1	90.2	0.429	0.400	0.247	0.346	0.0006

TM30 details

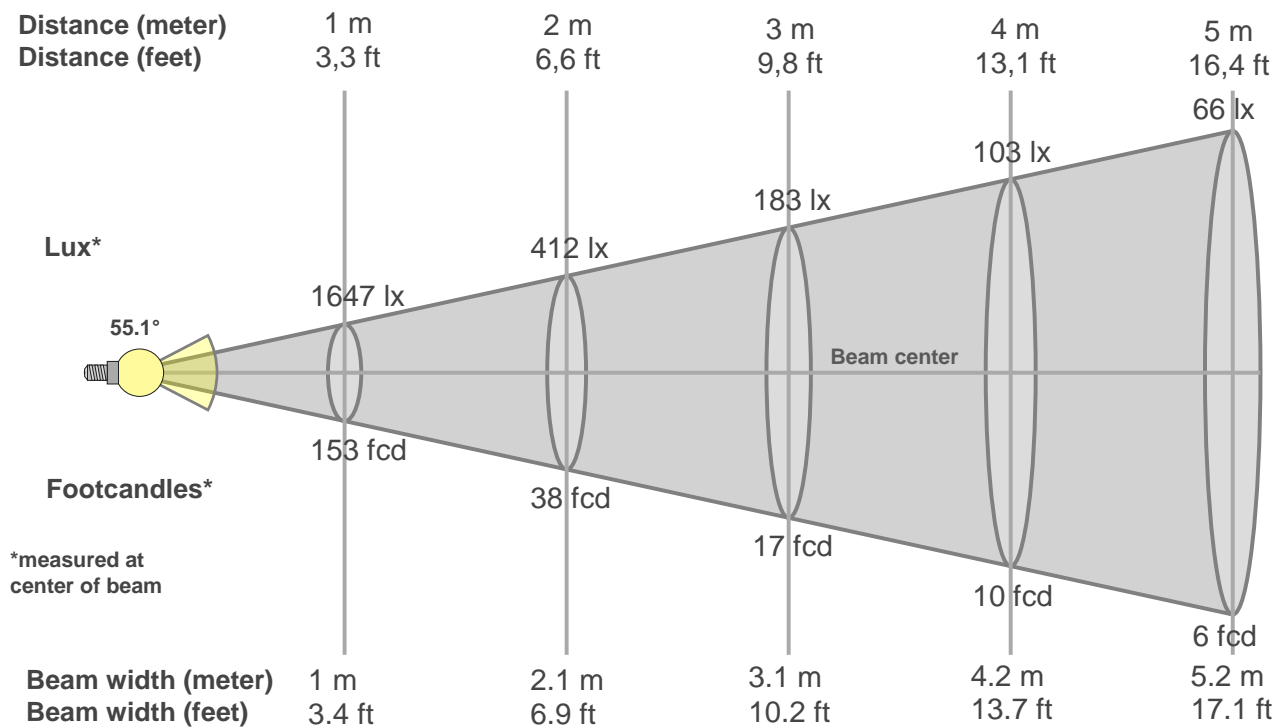
Rf 89.2
Fidelity index Rf

Rg 103.1
Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	91	-3%	-3%
2	92	-3%	3%
3	85	0%	7%
4	86	4%	7%
5	90	6%	5%
6	88	7%	0%
7	85	5%	-7%
8	91	1%	-5%
9	92	-2%	-4%
10	90	-4%	0%
11	87	-2%	7%
12	89	3%	4%
13	92	5%	0%
14	90	6%	-4%
15	88	3%	-6%
16	89	0%	-8%



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
1647lx	412lx	183lx	103lx	66lx	46lx	34lx	26lx	20lx	16lx	14lx	11lx	10lx	8lx	7lx	6lx	6lx	5lx	5lx	4lx
153fcd	38.2fcd	17fcd	9.6fcd	6.1fcd	4.2fcd	3.1fcd	2.4fcd	1.9fcd	1.5fcd	1.3fcd	1.1fcd	0.9fcd	0.8fcd	0.7fcd	0.6fcd	0.5fcd	0.5fcd	0.4fcd	0.4fcd

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°
1647	1647	1631	1617	1600	1564	1527	1476	1414	1347	1260	1168	1054	916	769	616	474	354	260	189
100%	100%	99%	98%	97%	95%	93%	90%	86%	82%	77%	71%	64%	56%	47%	37%	29%	21%	16%	11%

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°
1647	1646	1632	1622	1596	1570	1531	1480	1426	1349	1269	1162	1046	910	770	630	492	378	285	214
100%	100%	99%	98%	97%	95%	93%	90%	87%	82%	77%	71%	64%	55%	47%	38%	30%	23%	17%	13%

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°
1647	1648	1631	1613	1599	1560	1526	1478	1416	1352	1267	1166	1058	922	769	617	470	350	255	184
100%	100%	99%	98%	97%	95%	93%	90%	86%	82%	77%	71%	64%	56%	47%	37%	29%	21%	15%	11%

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°
1647	1647	1636	1614	1598	1559	1522	1466	1414	1339	1252	1156	1035	913	763	617	477	363	274	204
100%	100%	99%	98%	97%	95%	92%	89%	86%	81%	76%	70%	63%	55%	46%	37%	29%	22%	17%	12%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
55.1°	80.2°	98°	1.0%	1.0%

