

Light efficiency:



Light quality:



Color temperature:

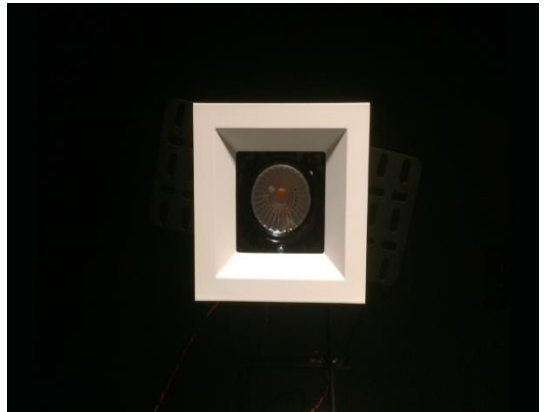


Output: 1403 lm

Peak: 1819 cd

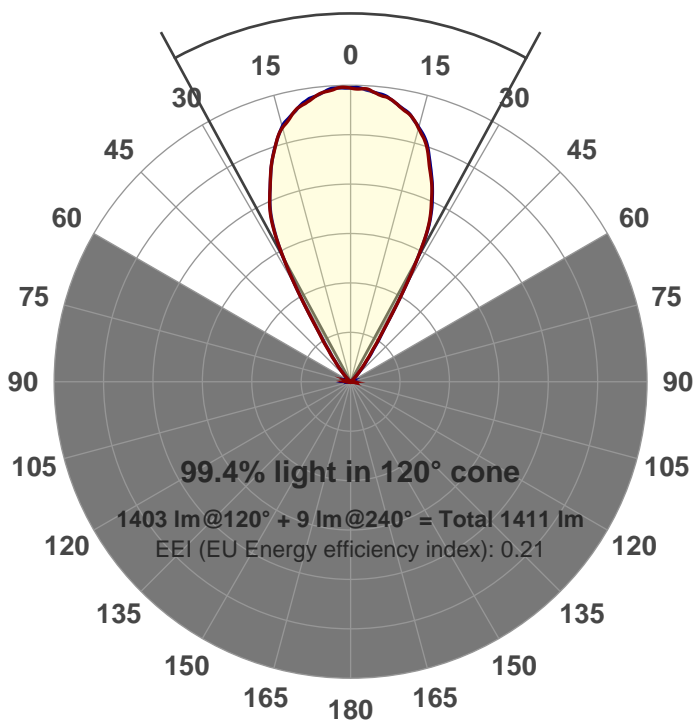
Power: 21.1 W

PF: 0.99



Beam angle

57°



Product name:
GRO-CZ20-WF-SQ
Item number:
GRO-CZ20-WF-SQ
Date and time:
3/31/2017 2:11:34 PM
Description:

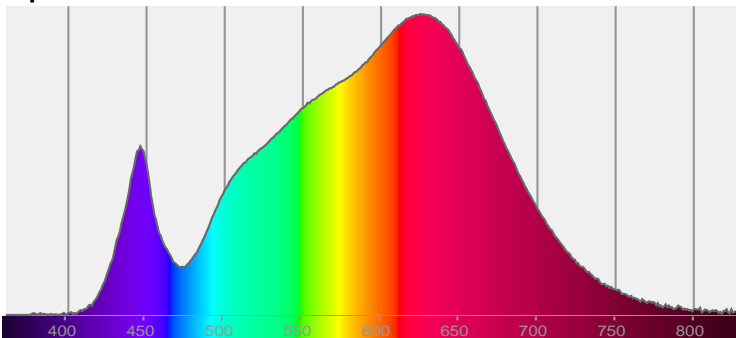
LUM: 1403

PPF: 22.6

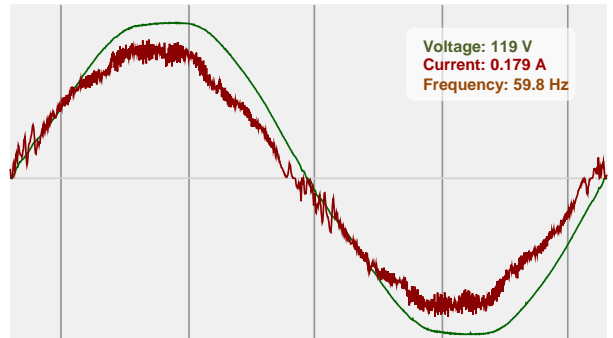


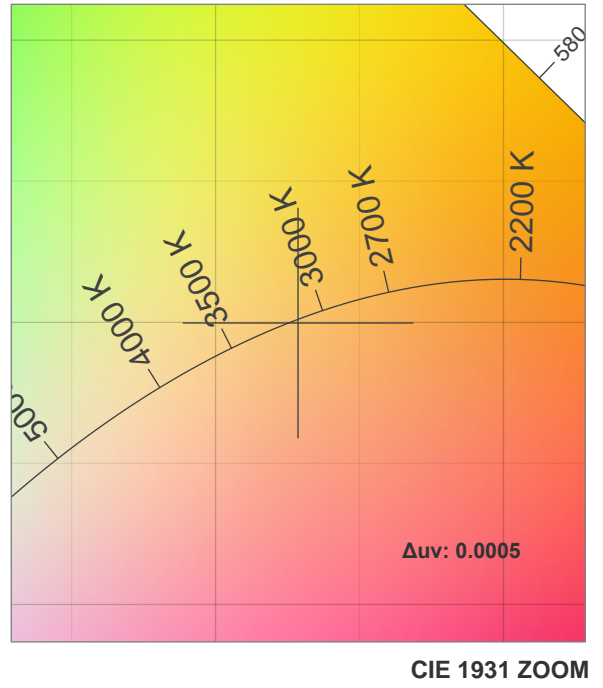
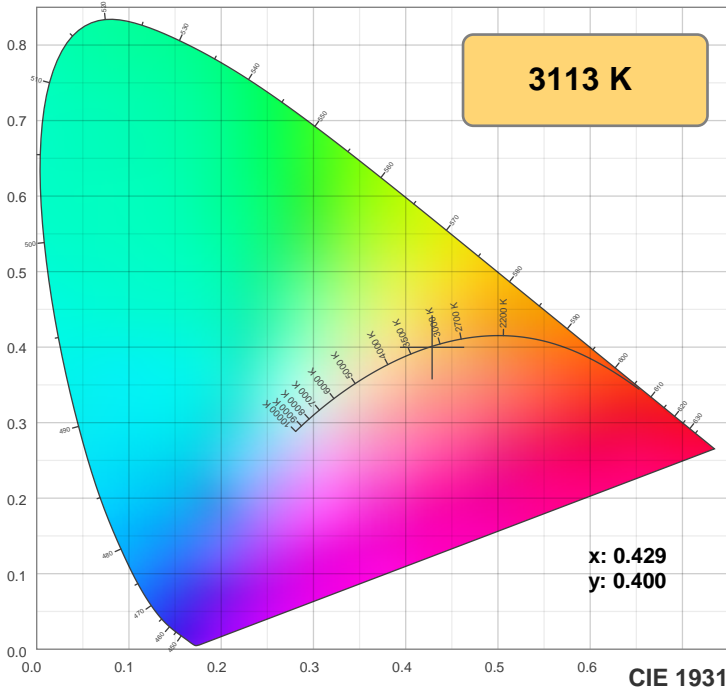
CIE 1931
x: 0.429
y: 0.400

Spectra



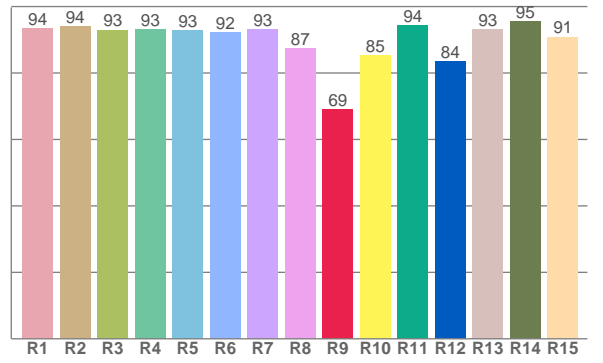
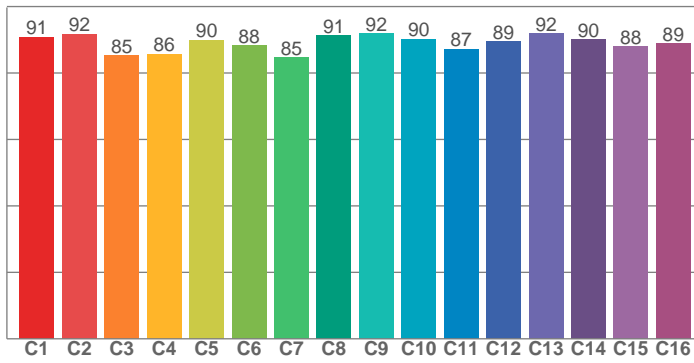
Power





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	93.0	93.1	92.7	92.1	93.2	87.4	69.2	85.2	94.2	83.5	93.2	95.4	90.9

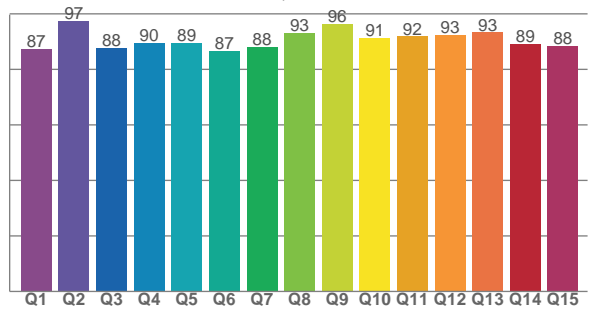
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
90.9	91.8	85.3	85.7	89.9	88.3	84.8	91.2	91.9	90.3	87.2	89.5	91.8	90.1	88.0	89.0

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
87.5	97.3	87.8	89.6	89.5	86.5	88.0	93.1	96.5	91.4	91.9	92.5	93.3	89.2	88.4

CQS: 90.2



Color parameters

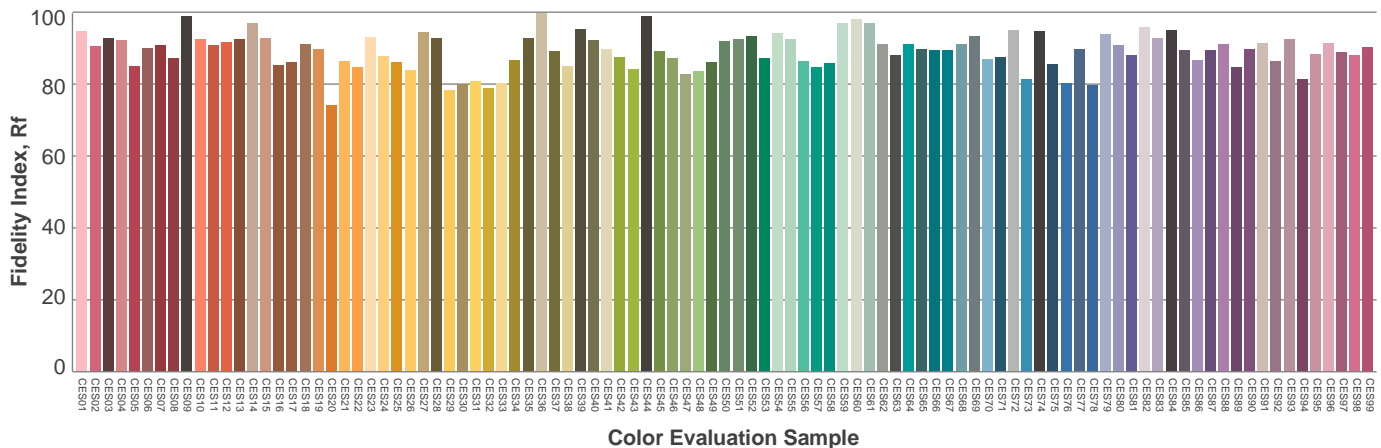
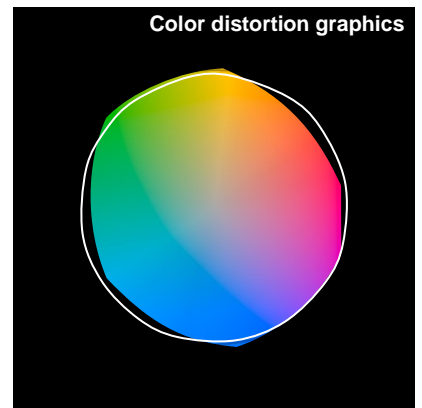
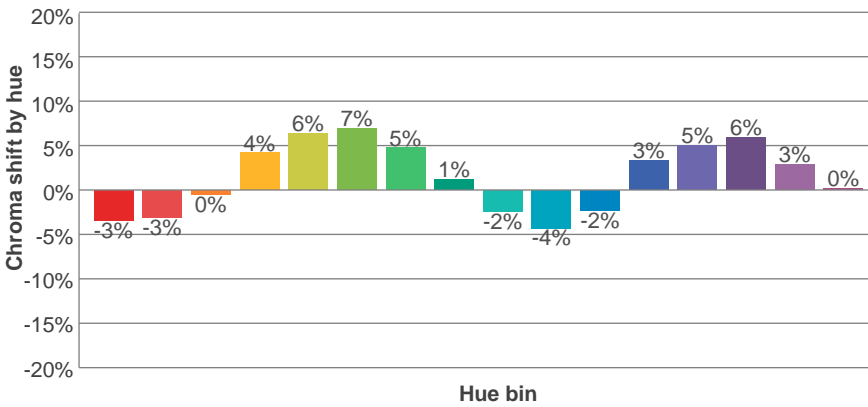
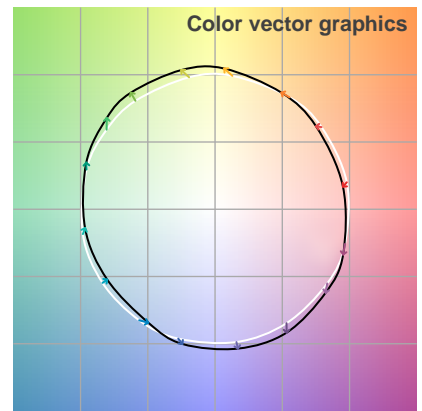
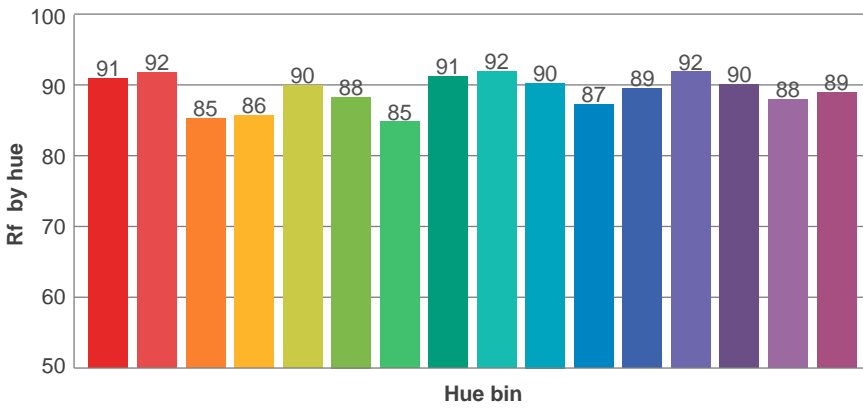
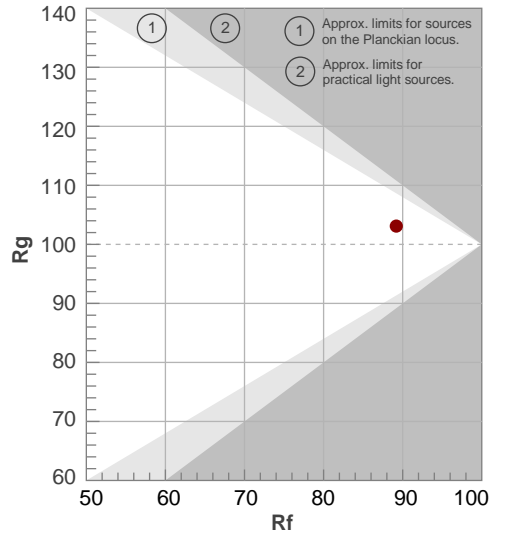
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color diviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3113 K	92.4	69.2	89.2	103.1	90.2	0.429	0.400	0.247	0.346	0.0005

TM30 details

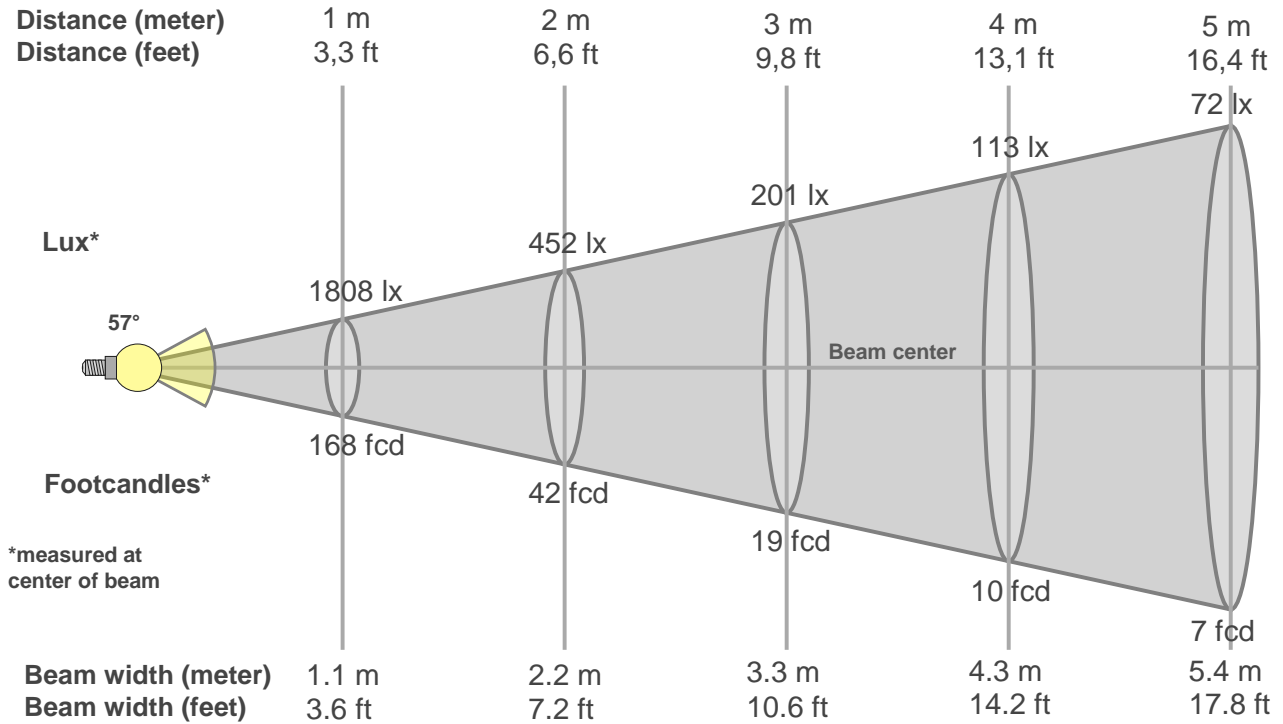
Rf 89.2
Fidelity index Rf

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
1808lx	452lx	201lx	113lx	72lx	50lx	37lx	28lx	22lx	18lx	15lx	13lx	11lx	9lx	8lx	7lx	6lx	6lx	5lx	5lx
168fcd	42fcd	18.7fcd	10.5fcd	6.7fcd	4.7fcd	3.4fcd	2.6fcd	2.1fcd	1.7fcd	1.4fcd	1.2fcd	1fcd	0.9fcd	0.7fcd	0.7fcd	0.6fcd	0.5fcd	0.5fcd	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°
1808	1810	1794	1782	1751	1725	1691	1638	1590	1508	1422	1319	1224	1112	921	674	428	299	210	144
100%	100%	99%	99%	97%	95%	94%	91%	88%	83%	79%	73%	68%	62%	51%	37%	24%	17%	12%	8%

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°
1808	1807	1805	1779	1762	1733	1689	1650	1589	1510	1420	1318	1220	1101	923	666	413	272	191	130
100%	100%	100%	98%	97%	96%	93%	91%	88%	84%	79%	73%	67%	61%	51%	37%	23%	15%	11%	7%

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°
1808	1801	1794	1770	1755	1720	1690	1646	1583	1516	1415	1328	1224	1110	922	665	426	284	199	139
100%	100%	99%	98%	97%	95%	93%	91%	88%	84%	78%	73%	68%	61%	51%	37%	24%	16%	11%	8%

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°
1808	1806	1790	1778	1755	1722	1694	1644	1594	1527	1429	1336	1235	1119	924	665	425	305	217	152
100%	100%	99%	98%	97%	95%	94%	91%	88%	84%	79%	74%	68%	62%	51%	37%	23%	17%	12%	8%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
57°	76°	89.3°	1.0%	1.0%

