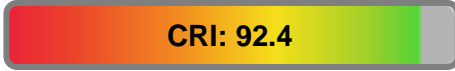


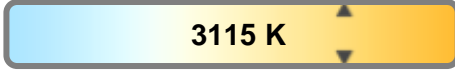
Light efficiency:



Light quality:



Color temperature:

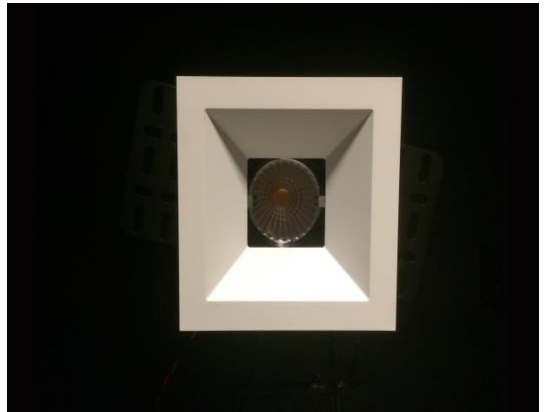


Output: 1328 lm

Peak: 1873 cd

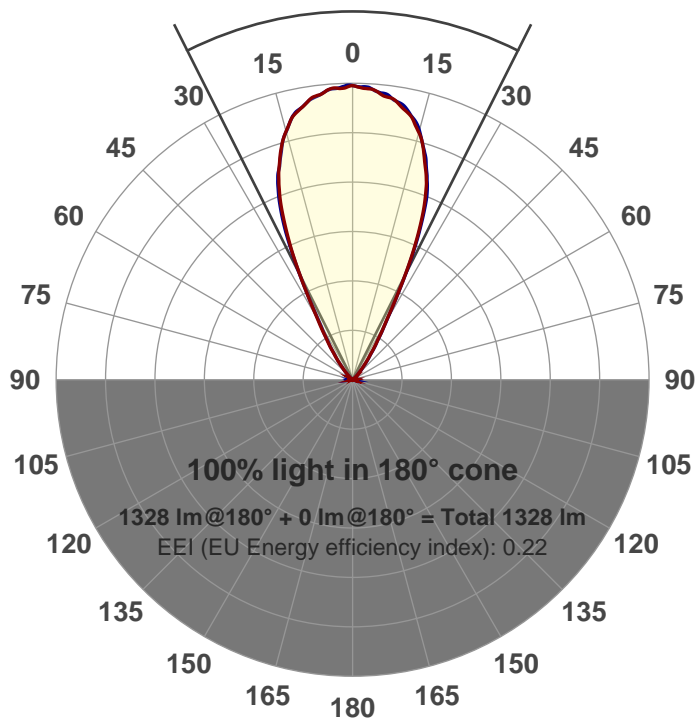
Power: 21.3 W

PF: 0.99



Beam angle

53.3°



Product name:

GR-CZ20-WF-SQ

Item number:

GR-CZ20-WF-SQ

Date and time:

3/8/2017 2:56:30 PM

Description:

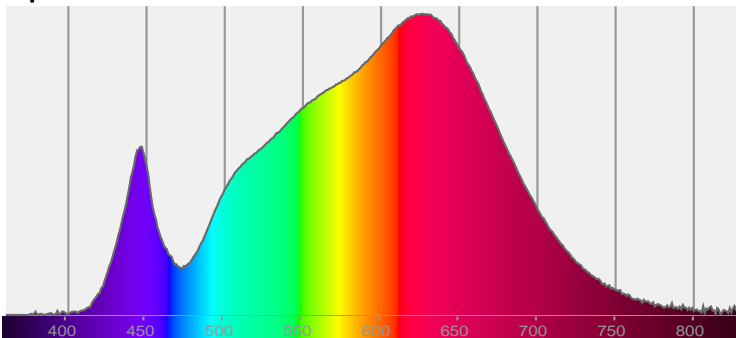
LUM: 1328

PPF: 21.4

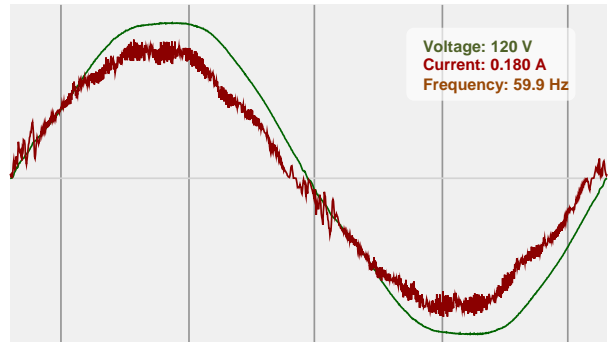


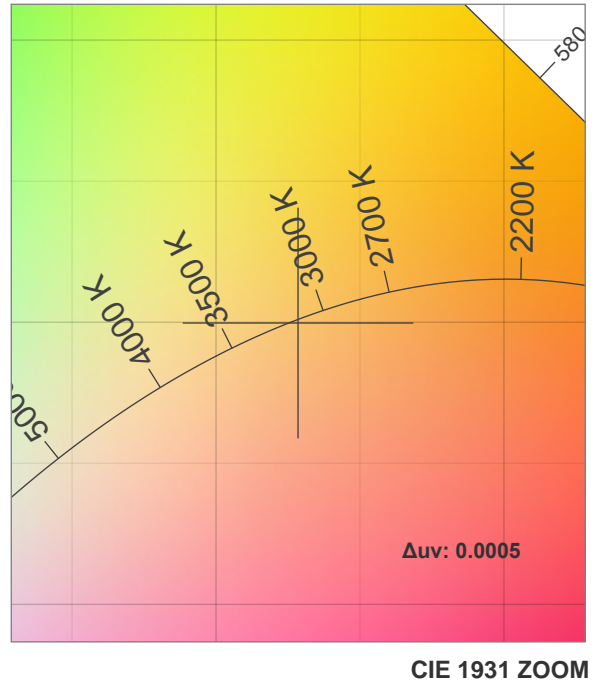
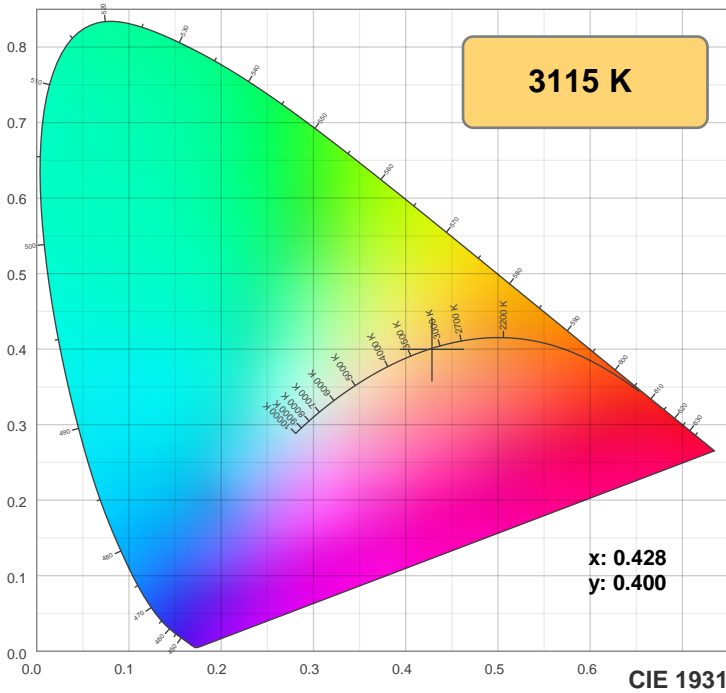
CIE 1931
x: 0.428
y: 0.400

Spectra



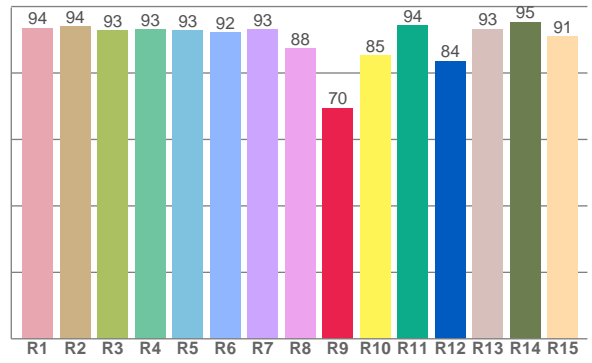
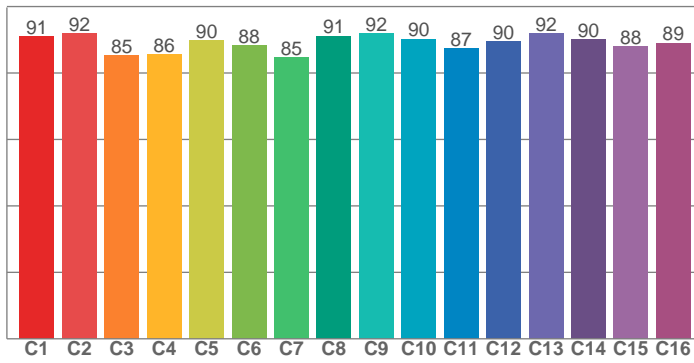
Power





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
93.6	93.9	93.0	93.1	92.8	92.1	93.2	87.5	69.5	85.3	94.3	83.7	93.3	95.4	91.0

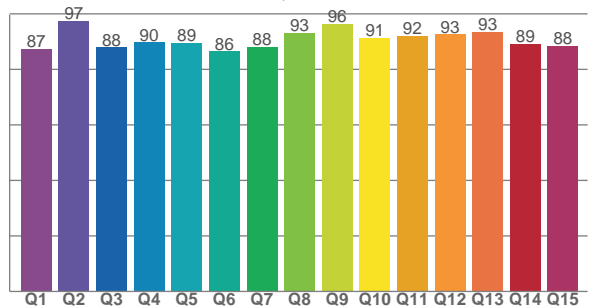
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
90.9	91.8	85.3	85.6	89.8	88.2	84.6	91.1	91.8	90.2	87.3	89.5	91.9	90.2	88.0	89.1

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
87.5	97.3	87.9	89.7	89.5	86.4	88.0	93.2	96.5	91.5	91.9	92.6	93.4	89.3	88.4

CQS: 90.2



Color parameters

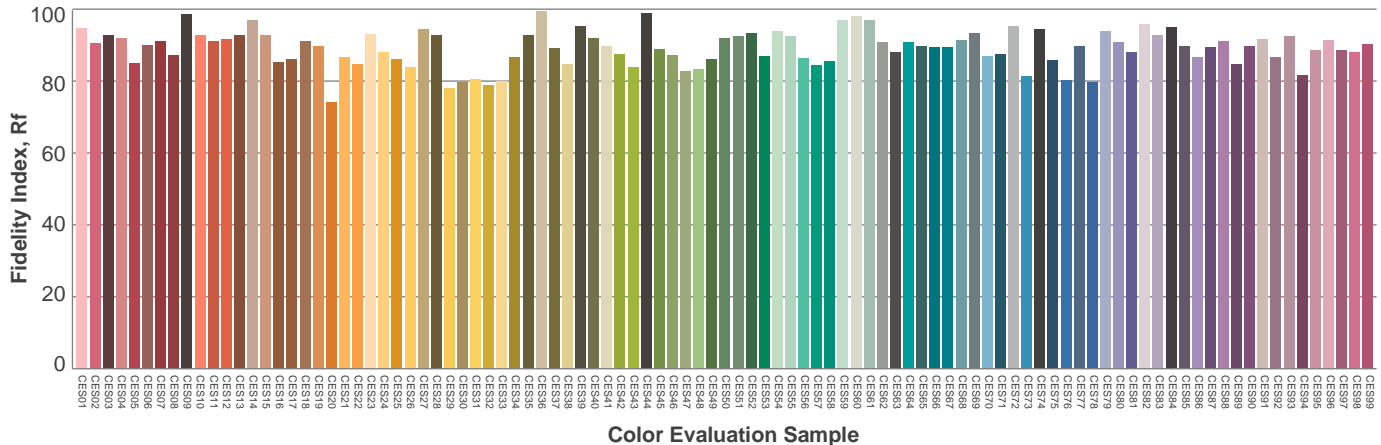
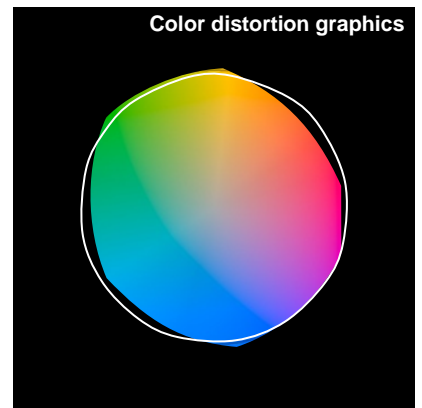
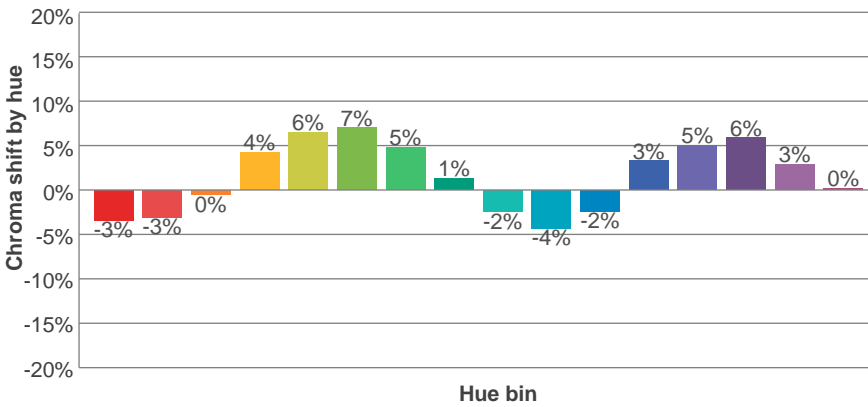
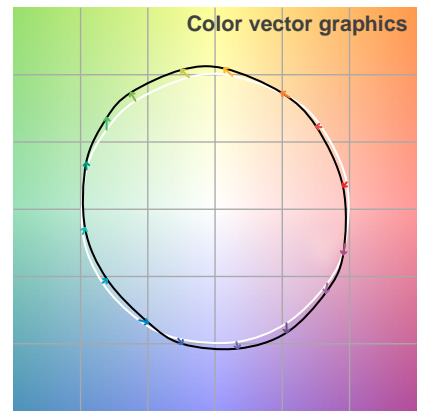
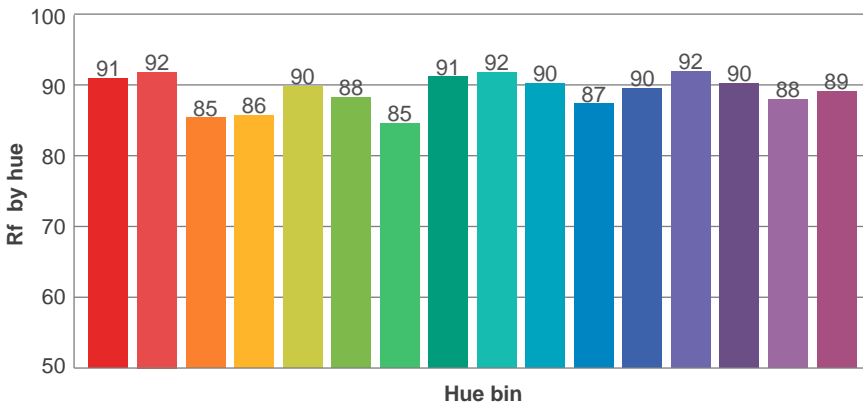
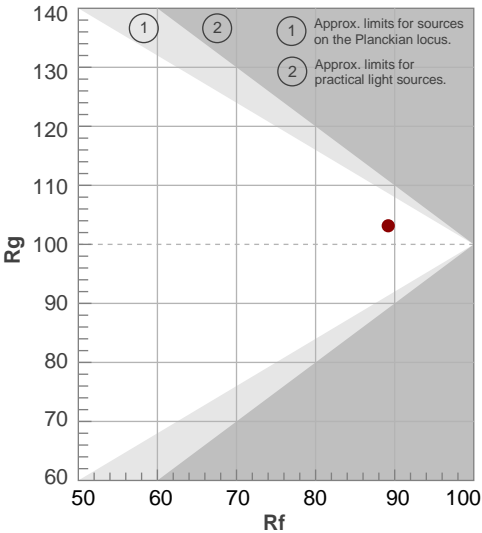
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color diviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3115 K	92.4	69.5	89.2	103.2	90.2	0.428	0.400	0.247	0.346	0.0005

TM30 details

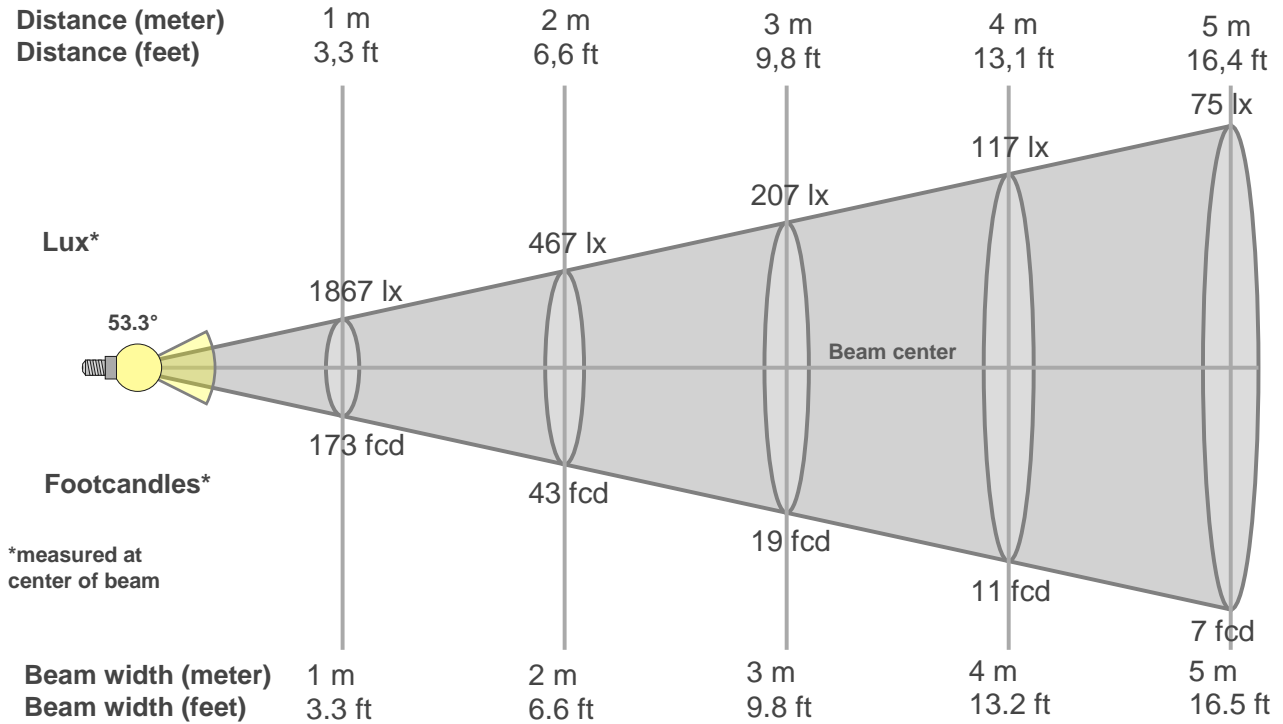
Rf 89.2
Fidelity index Rf

Rg 103.2
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%	6%
12	90	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
1867lx	467lx	207lx	117lx	75lx	52lx	38lx	29lx	23lx	19lx	15lx	13lx	11lx	10lx	8lx	7lx	6lx	6lx	5lx	5lx
173.5fcd	43.4fcd	19.3fcd	10.8fcd	6.9fcd	4.8fcd	3.5fcd	2.7fcd	2.1fcd	1.7fcd	1.4fcd	1.2fcd	1fcd	0.9fcd	0.8fcd	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°
1867	1854	1857	1830	1814	1771	1733	1672	1595	1493	1373	1225	1032	822	607	445	337	260	195	147
100%	99%	99%	98%	97%	95%	93%	90%	85%	80%	74%	66%	55%	44%	32%	24%	18%	14%	10%	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°
1867	1864	1854	1831	1808	1772	1739	1671	1594	1485	1388	1252	1067	829	599	420	323	250	183	137
100%	100%	99%	98%	97%	95%	93%	90%	85%	80%	74%	67%	57%	44%	32%	23%	17%	13%	10%	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°
1867	1855	1849	1818	1806	1765	1726	1661	1589	1477	1369	1226	1037	819	594	421	316	241	178	130
100%	99%	99%	97%	97%	95%	92%	89%	85%	79%	73%	66%	56%	44%	32%	23%	17%	13%	10%	7%

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°
1867	1864	1849	1832	1805	1782	1735	1681	1590	1497	1383	1259	1060	830	598	427	321	248	181	137
100%	100%	99%	98%	97%	95%	93%	90%	85%	80%	74%	67%	57%	44%	32%	23%	17%	13%	10%	7%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
53.3°	73.5°	88.3°	1.0%	1.0%

