

Light efficiency:



Light quality:



Color temperature:

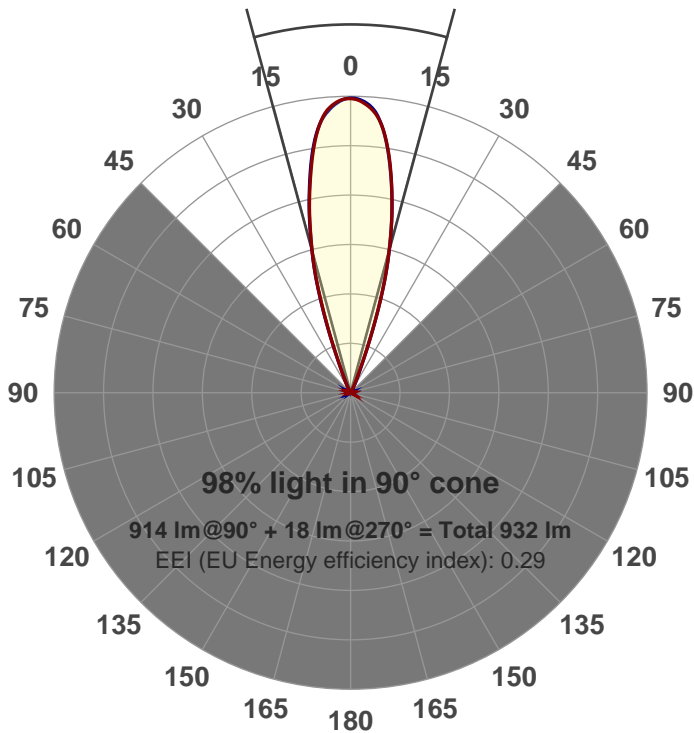


Output: 914 lm
Peak: 3738 cd
Power: 21.0 W
PF: 0.99



Beam angle

30.4°



Product name:
GRF-CZ20-FL-RD
Item number:
GRF-CZ20-FL-RD
Date and time:
6/14/2017 5:32:31 PM
Description:
V6

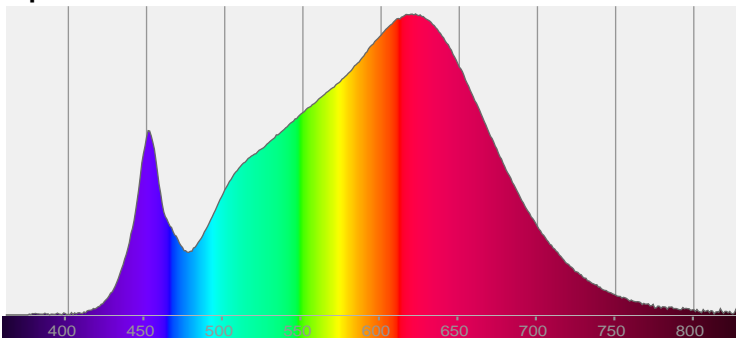
LUM: 914

PPF: 15.4

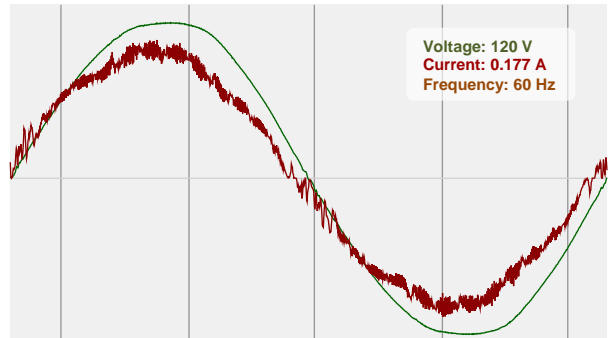


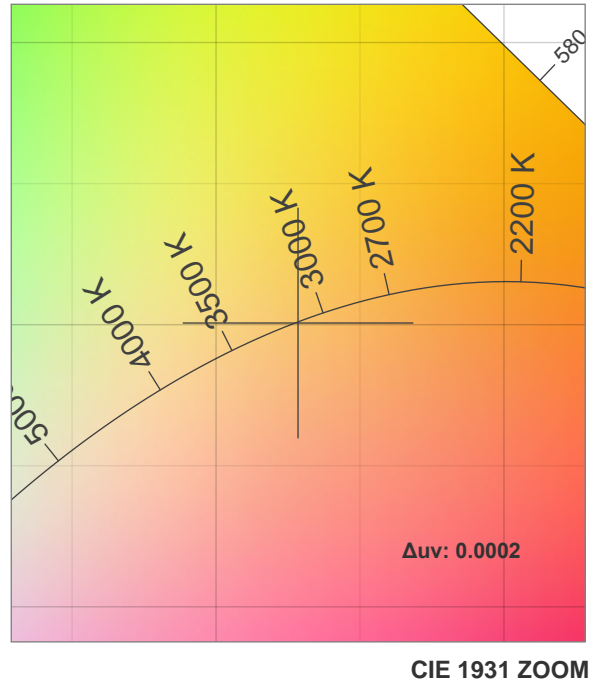
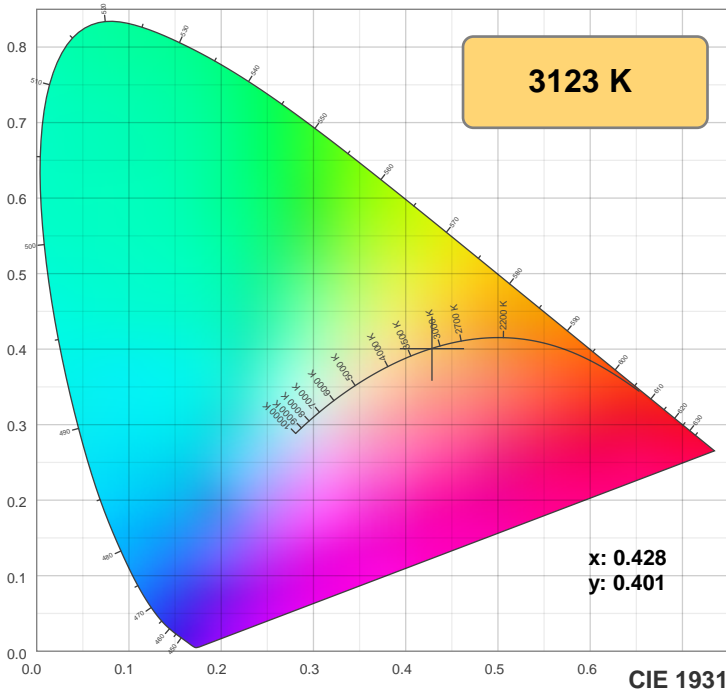
CIE 1931
x: 0.428
y: 0.401

Spectra

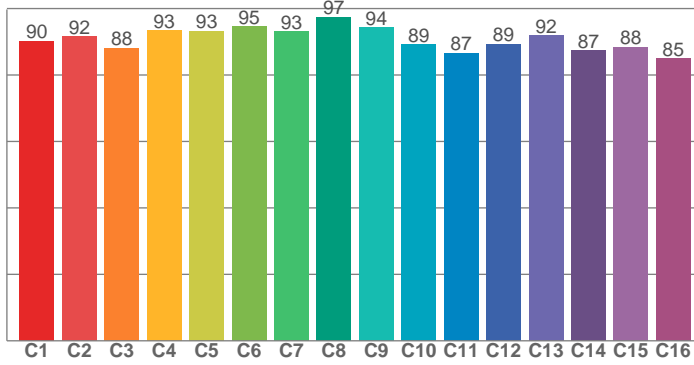


Power

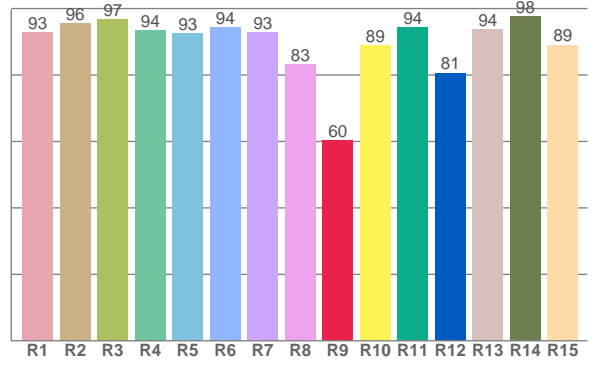




TM30: 90.9



CRI: 92.7 (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	96.9	93.5	92.6	94.3	92.9	83.1	60.3	88.9	94.4	80.6	93.6	97.7	89.1

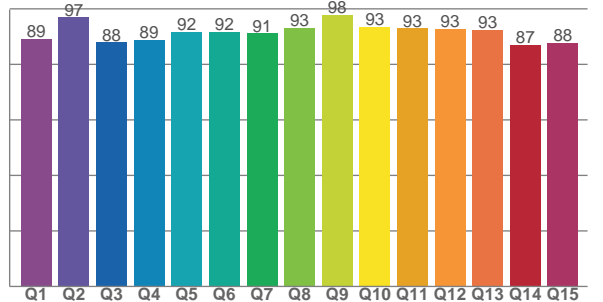
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
90.3	91.5	88.1	93.4	93.3	94.5	93.2	97.5	94.4	89.2	86.6	89.4	92.0	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	92.6	92.5	87.1	87.6

CQS: 91.0



Color parameters

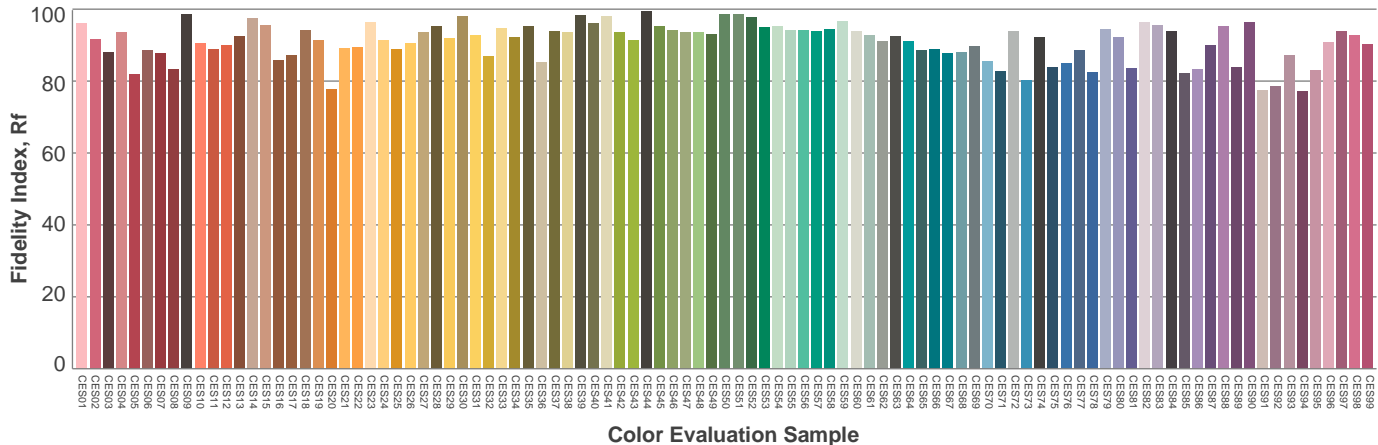
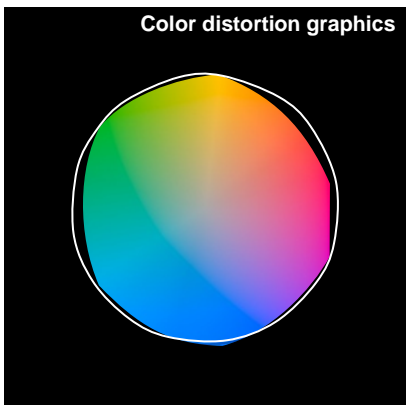
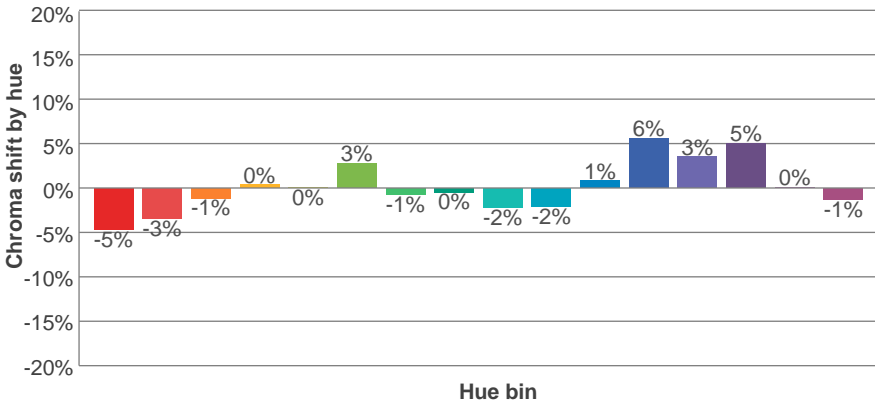
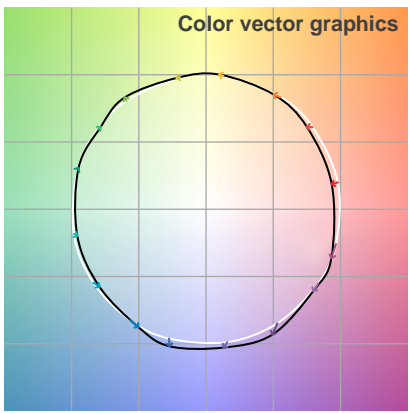
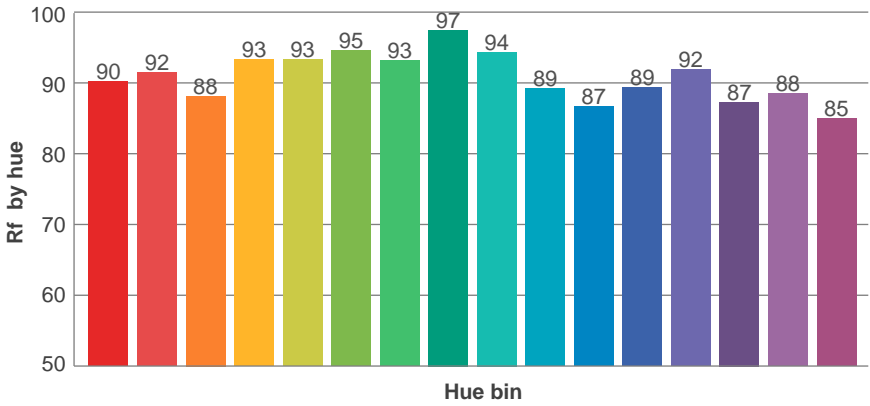
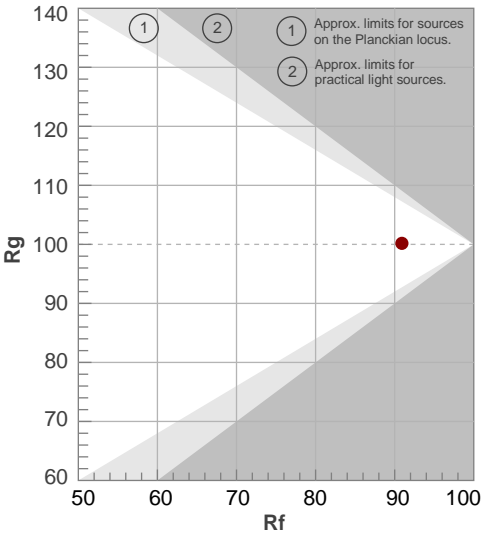
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3123 K	92.7	60.3	90.9	100.2	91.0	0.428	0.401	0.247	0.346	0.0002

TM30 details

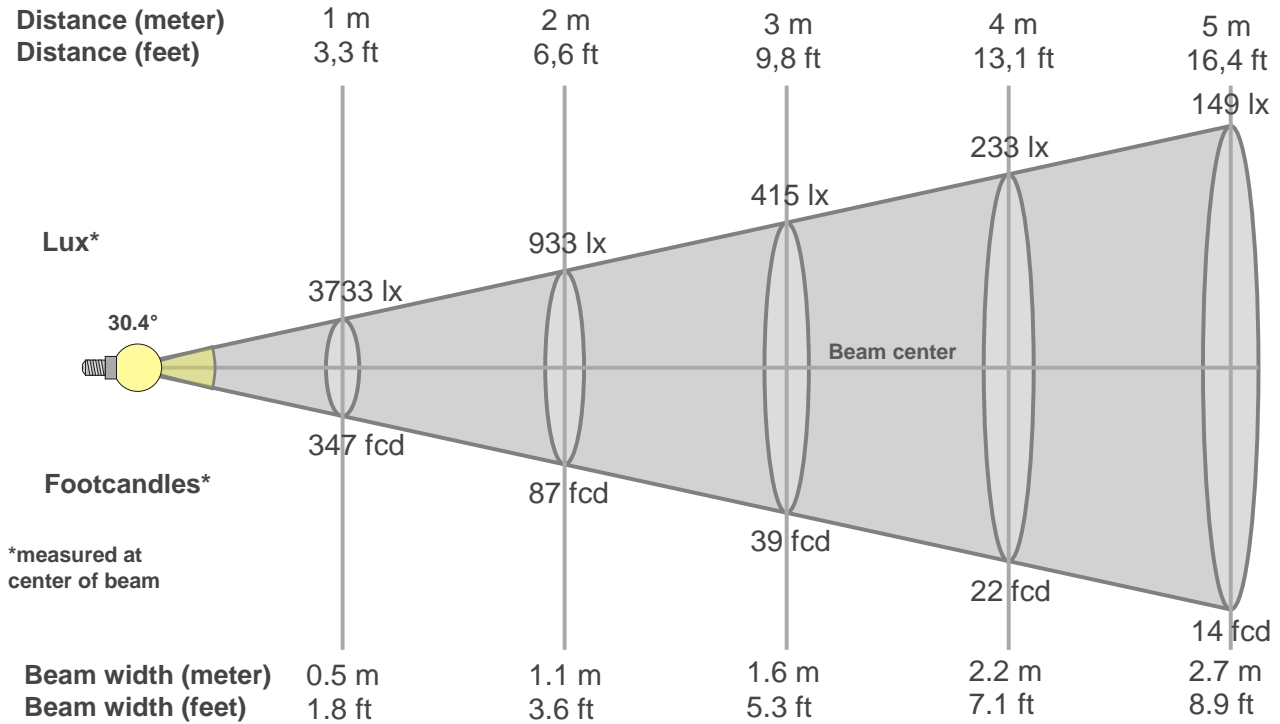
Rf 90.9
Fidelity index Rf

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	95	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	3%	-3%
14	87	5%	-8%
15	88	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
3733lx	933lx	415lx	233lx	149lx	104lx	76lx	58lx	46lx	37lx	31lx	26lx	22lx	19lx	17lx	15lx	13lx	12lx	10lx	9lx
346.8fcd	86.7fcd	38.5fcd	21.7fcd	13.9fcd	9.6fcd	7.1fcd	5.4fcd	4.3fcd	3.5fcd	2.9fcd	2.4fcd	2.1fcd	1.8fcd	1.5fcd	1.4fcd	1.2fcd	1.1fcd	1fcd	0.9fcd

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°
3733	3712	3637	3488	3230	2880	2507	2104	1698	1192	702	344	203	120	66	36	22	17	13	10
100%	99%	97%	93%	87%	77%	67%	56%	45%	32%	19%	9%	5%	3%	2%	1%	1%	0%	0%	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°
3733	3703	3617	3479	3245	2912	2528	2117	1697	1214	702	325	166	94	52	30	22	16	13	10
100%	99%	97%	93%	87%	78%	68%	57%	45%	33%	19%	9%	4%	3%	1%	1%	1%	0%	0%	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°
3733	3698	3618	3477	3233	2904	2523	2120	1689	1196	698	323	176	99	54	30	22	17	13	11
100%	99%	97%	93%	87%	78%	68%	57%	45%	32%	19%	9%	5%	3%	1%	1%	1%	0%	0%	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°
3733	3714	3641	3484	3226	2890	2518	2122	1688	1185	681	364	212	130	73	39	24	18	14	11
100%	100%	98%	93%	86%	77%	67%	57%	45%	32%	18%	10%	6%	3%	2%	1%	1%	0%	0%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
30.4°	43.5°	53.1°	1.0%	1.0%

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