

Light efficiency:



Light quality:



Color temperature:

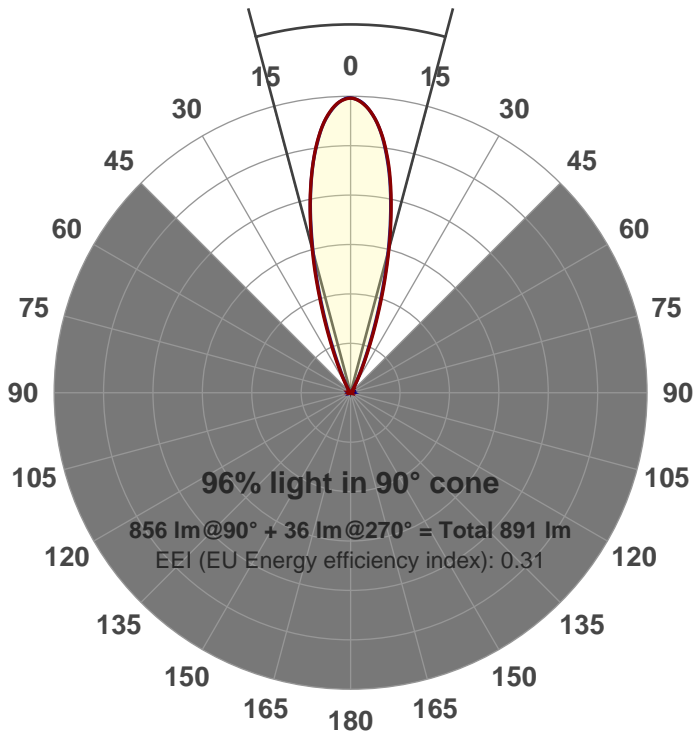


Output: 856 lm
Peak: 3180 cd
Power: 21.0 W
PF: 0.99



Beam angle

29.8°



Product name:
GRF-CZ20-FL-RD-91A
Item number:
GRF-CZ20-FL-RD-91A
Date and time:
6/14/2017 5:29:55 PM
Description:
V6

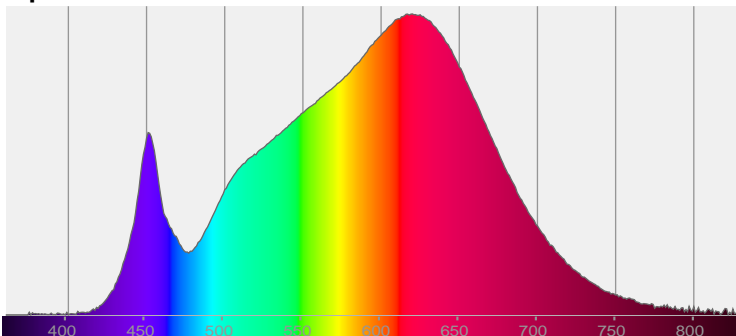
LUM: 856

PPF: 14.4

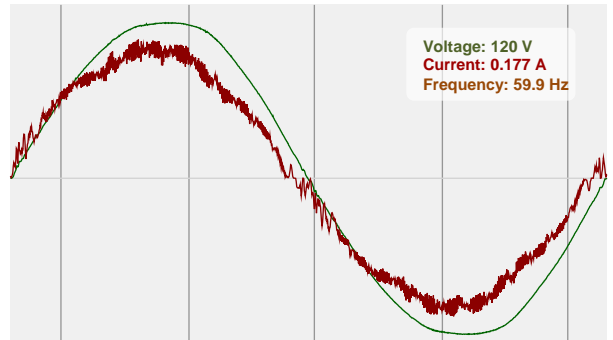


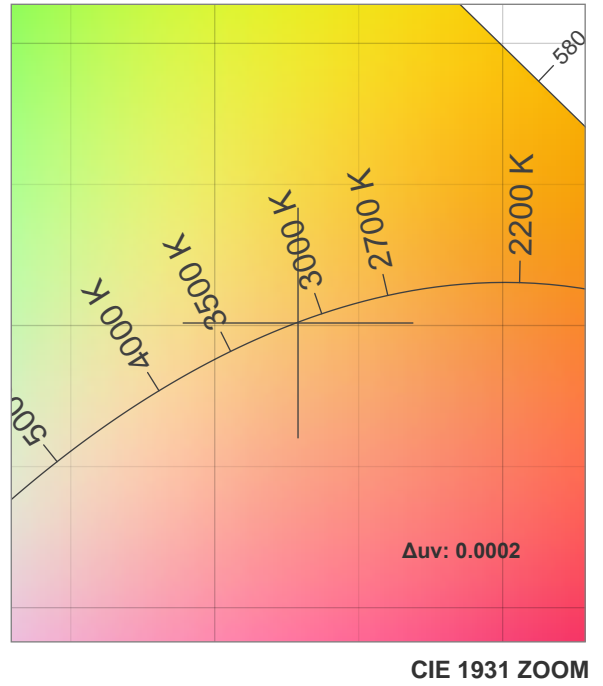
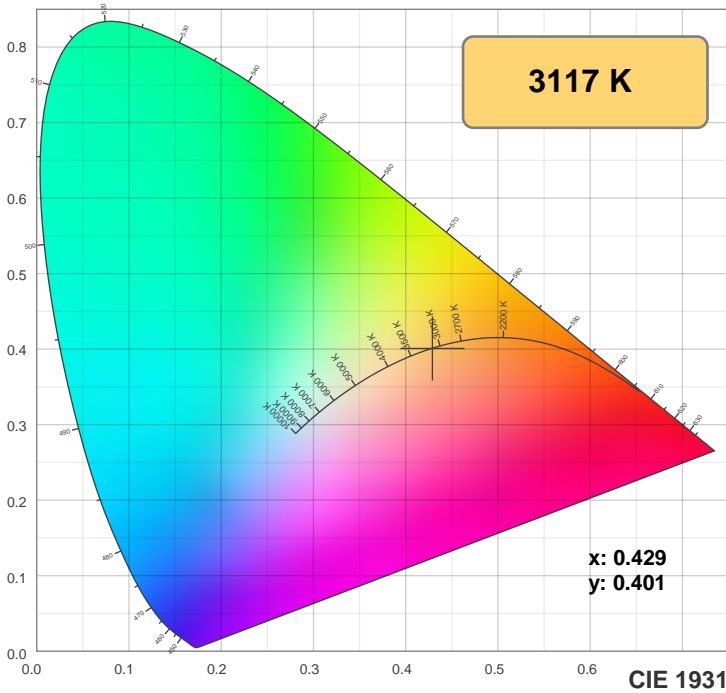
CIE 1931
x: 0.429
y: 0.401

Spectra

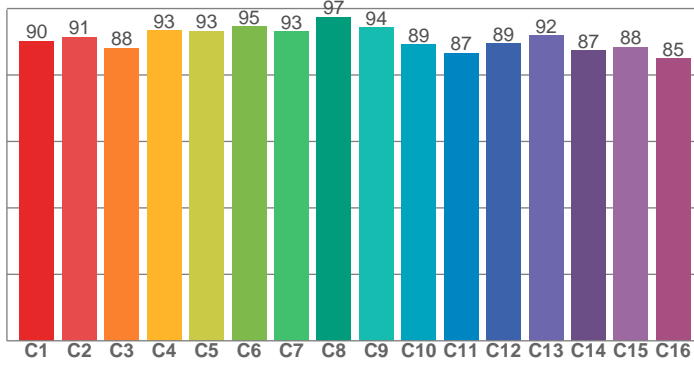


Power

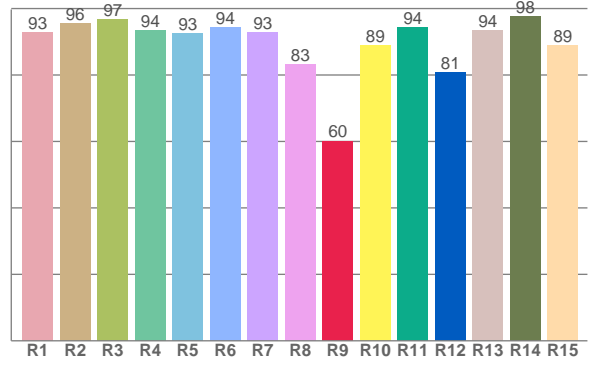




TM30: 90.9



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
92.9	95.5	96.8	93.5	92.6	94.3	92.9	83.1	60.2	88.8	94.3	80.7	93.6	97.7	89.0

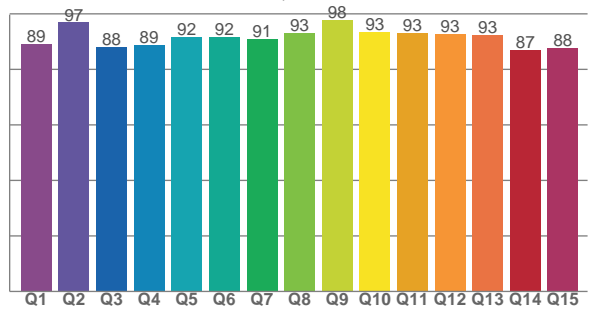
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
90.2	91.5	88.1	93.4	93.3	94.5	93.2	97.5	94.4	89.2	86.7	89.4	91.9	87.3	88.4	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	91.7	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

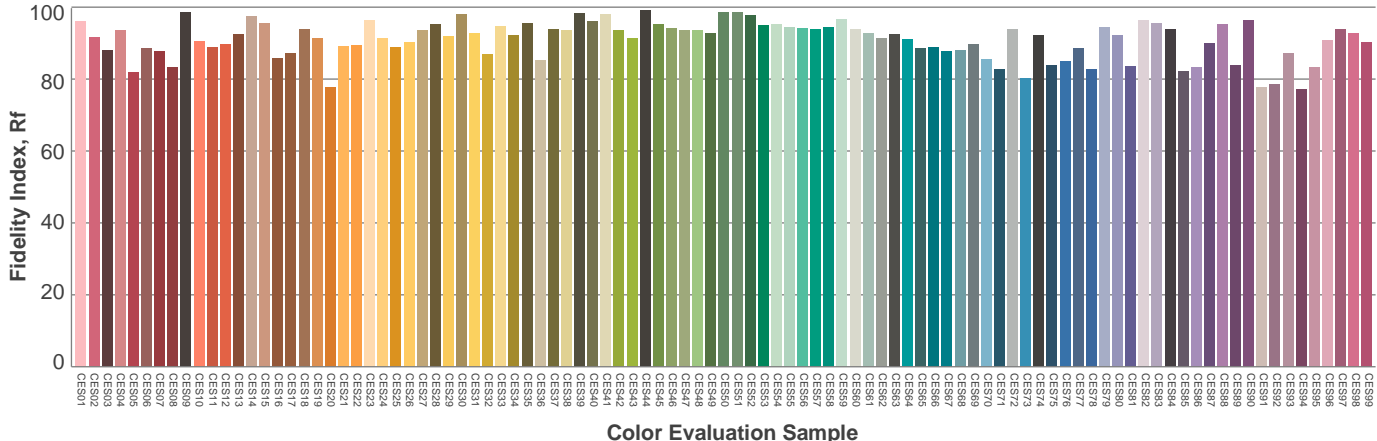
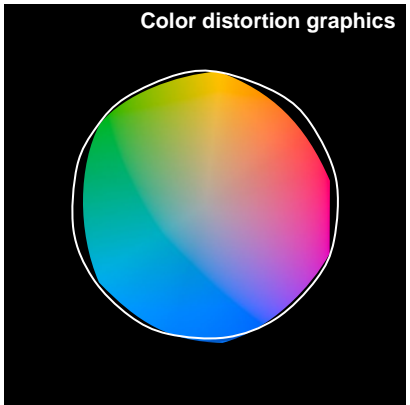
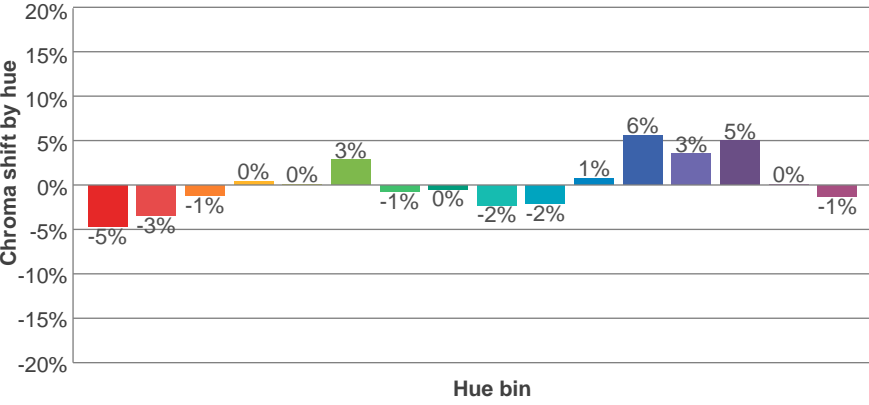
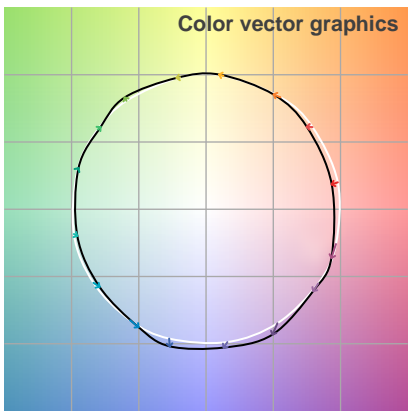
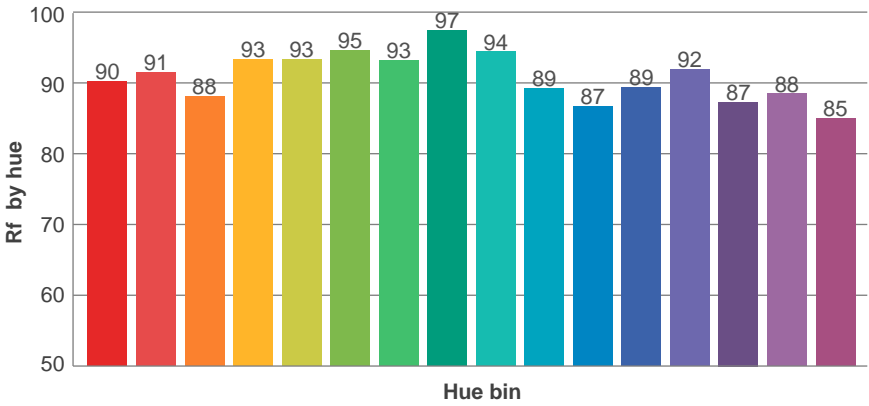
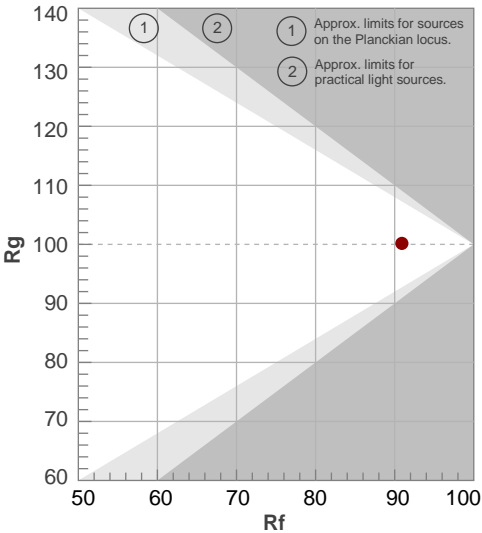
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3117 K	92.7	60.2	90.9	100.2	91.0	0.429	0.401	0.247	0.346	0.0002

TM30 details

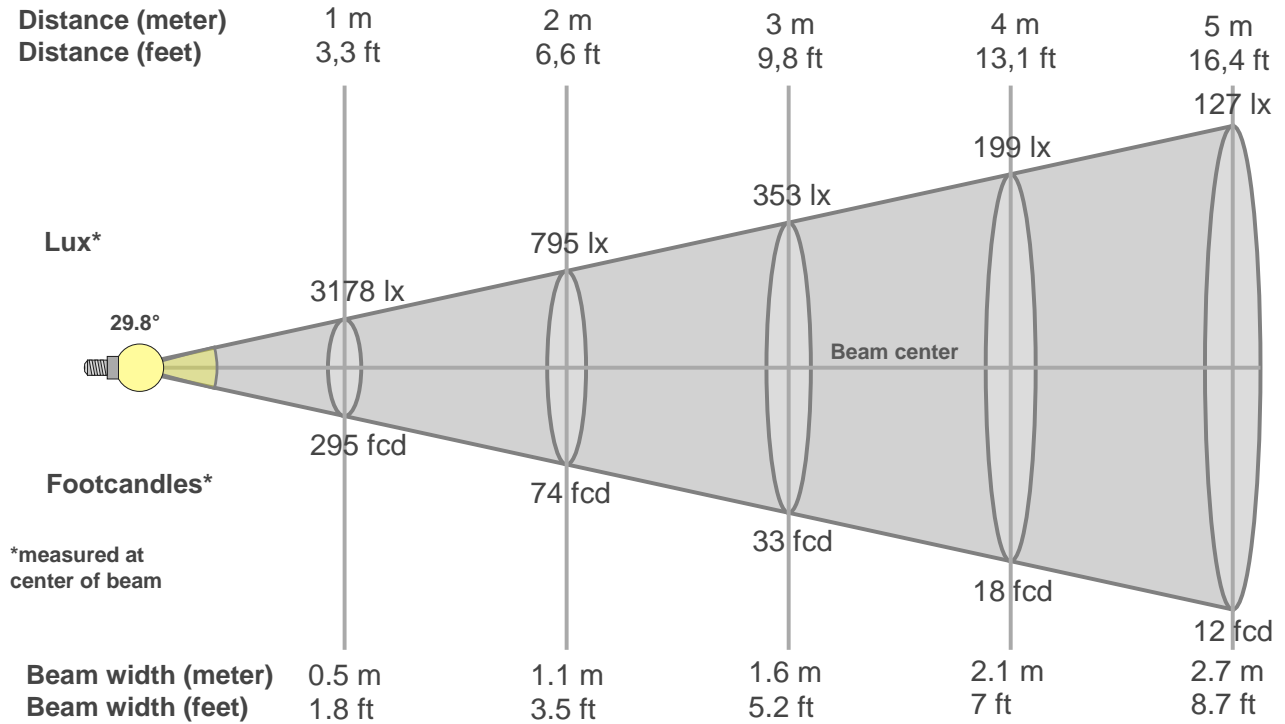
Rf 90.9
Fidelity index Rf

Rg 100.2
Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	90	-5%	-1%
2	91	-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
3178lx	795lx	353lx	199lx	127lx	88lx	65lx	50lx	39lx	32lx	26lx	22lx	19lx	16lx	14lx	12lx	11lx	10lx	9lx	8lx
295.3fcd	73.8fcd	32.8fcd	18.5fcd	11.8fcd	8.2fcd	6fcd	4.6fcd	3.6fcd	3fcd	2.4fcd	2.1fcd	1.7fcd	1.5fcd	1.3fcd	1.2fcd	1fcd	0.9fcd	0.8fcd	0.7fcd

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°
3178	3146	3052	2897	2680	2409	2100	1763	1425	1084	790	548	372	245	160	103	68	46	32	24
100%	99%	96%	91%	84%	76%	66%	55%	45%	34%	25%	17%	12%	8%	5%	3%	2%	1%	1%	1%

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°
3178	3145	3046	2893	2671	2403	2087	1736	1379	1031	722	474	301	188	117	73	47	32	24	18
100%	99%	96%	91%	84%	76%	66%	55%	43%	32%	23%	15%	9%	6%	4%	2%	1%	1%	1%	1%

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°
3178	3139	3044	2891	2680	2417	2103	1766	1418	1086	788	546	366	240	155	99	64	43	31	22
100%	99%	96%	91%	84%	76%	66%	56%	45%	34%	25%	17%	12%	8%	5%	3%	2%	1%	1%	1%

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°
3178	3143	3042	2889	2668	2400	2080	1735	1378	1033	729	491	321	206	130	84	55	38	28	21
100%	99%	96%	91%	84%	76%	65%	55%	43%	33%	23%	15%	10%	6%	4%	3%	2%	1%	1%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
29.8°	48.6°	61.1°	1.0%	1.0%

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