

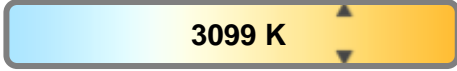
Light efficiency:



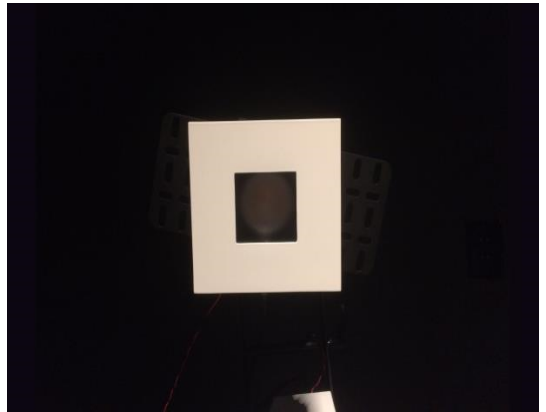
Light quality:



Color temperature:

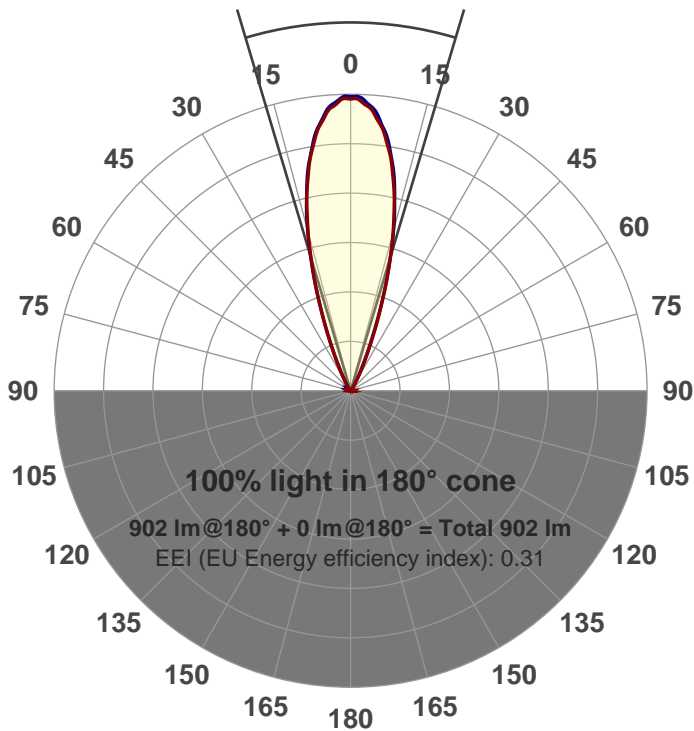


Output: 902 lm
Peak: 2755 cd
Power: 21.2 W
PF: 0.99



Beam angle

33.2°



Product name:
GRF-CZ20-FL-SQ-91A
Item number:
GRF-CZ20-FL-SQ-91A
Date and time:
4/3/2017 1:52:22 PM
Description:

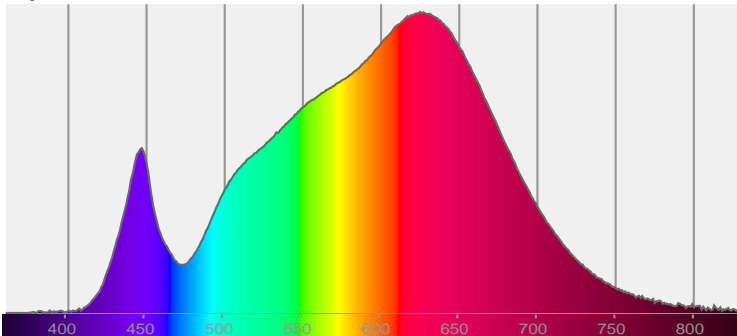
LUM: 902

PPF: 14.6

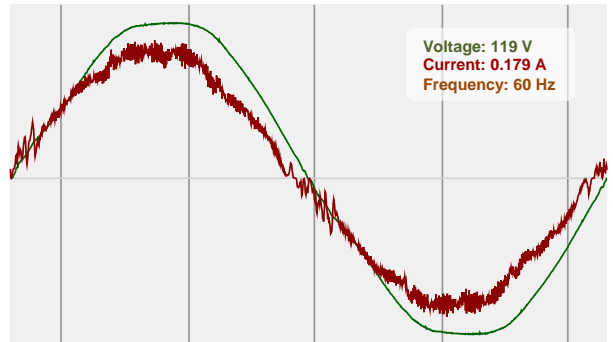


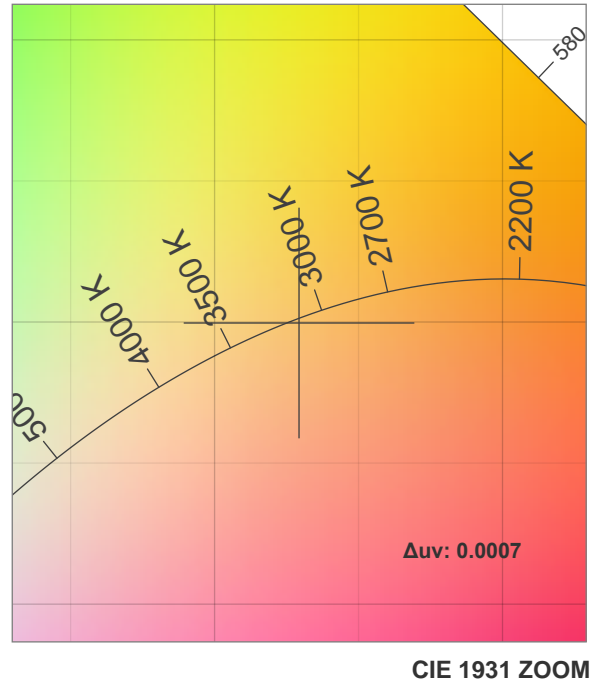
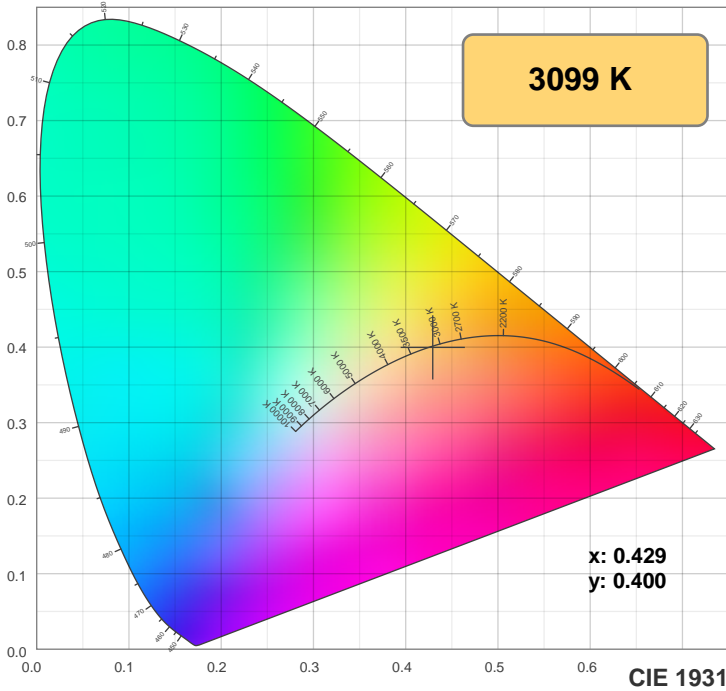
CIE 1931
x: 0.429
y: 0.400

Spectra



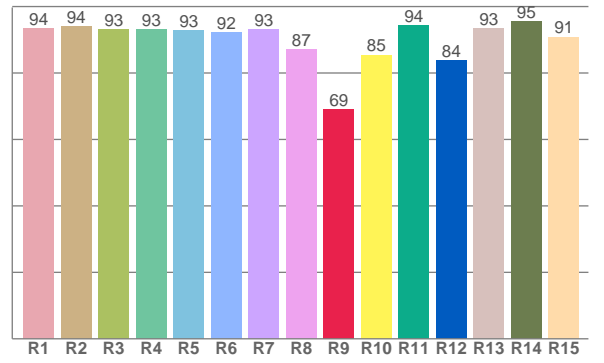
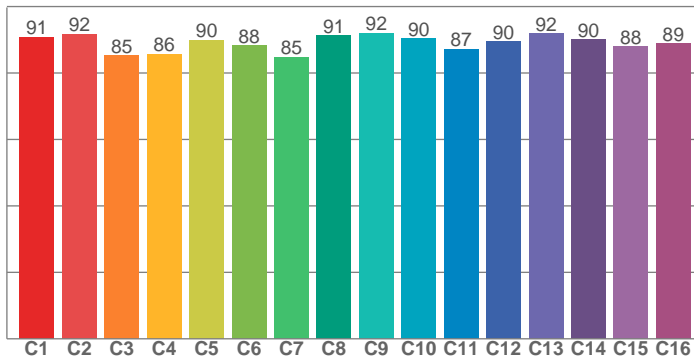
Power





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	94.0	93.1	93.1	92.8	92.3	93.2	87.2	68.9	85.5	94.2	83.8	93.3	95.5	90.9

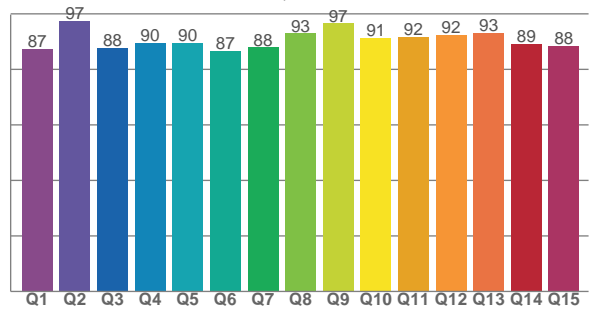
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
90.9	91.7	85.2	85.7	89.9	88.3	84.8	91.2	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	92.9	96.5	91.4	91.8	92.4	93.2	89.1	88.3

CQS: 90.2



Color parameters

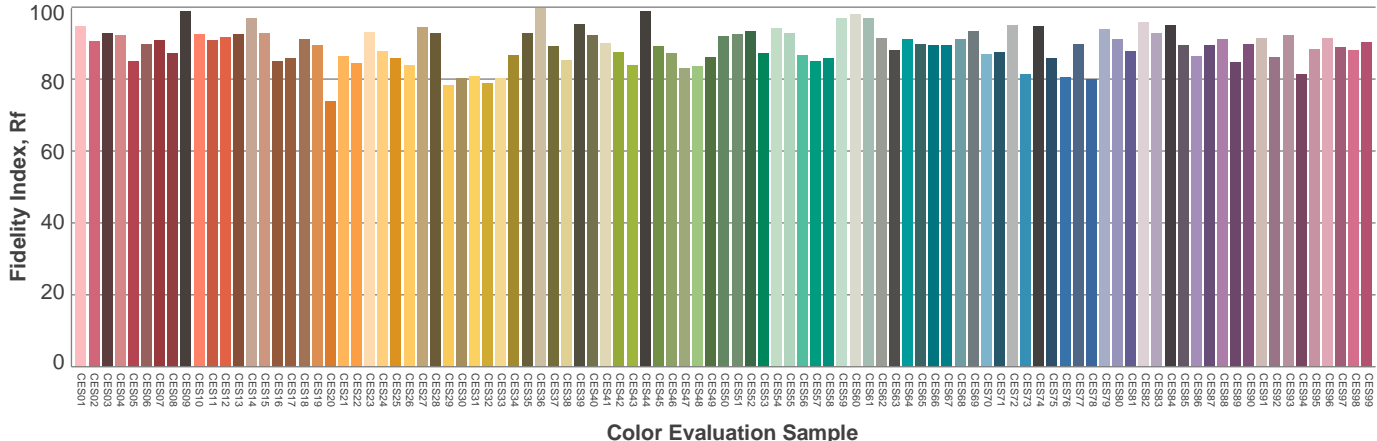
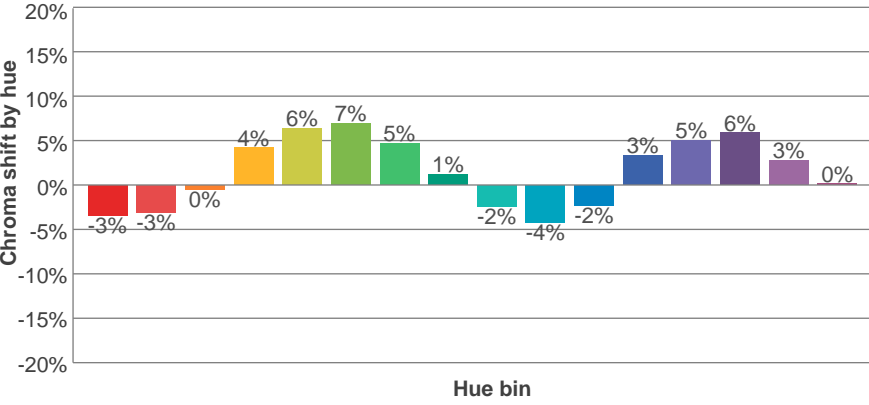
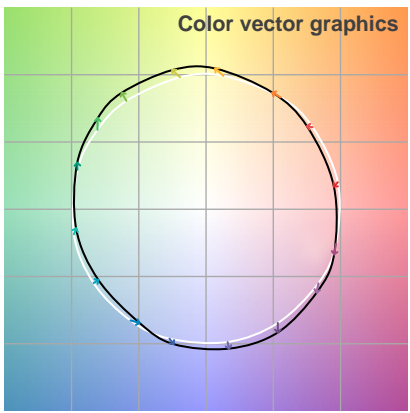
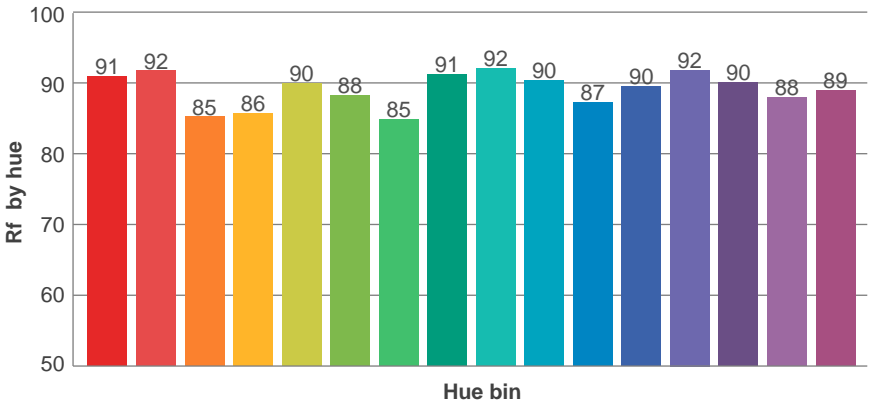
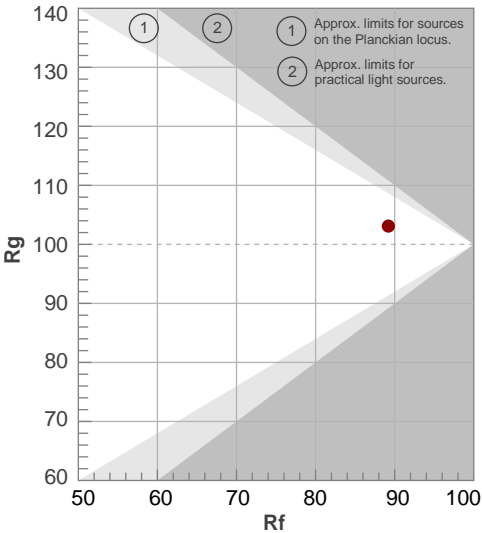
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3099 K	92.4	68.9	89.2	103.1	90.2	0.429	0.400	0.248	0.346	0.0007

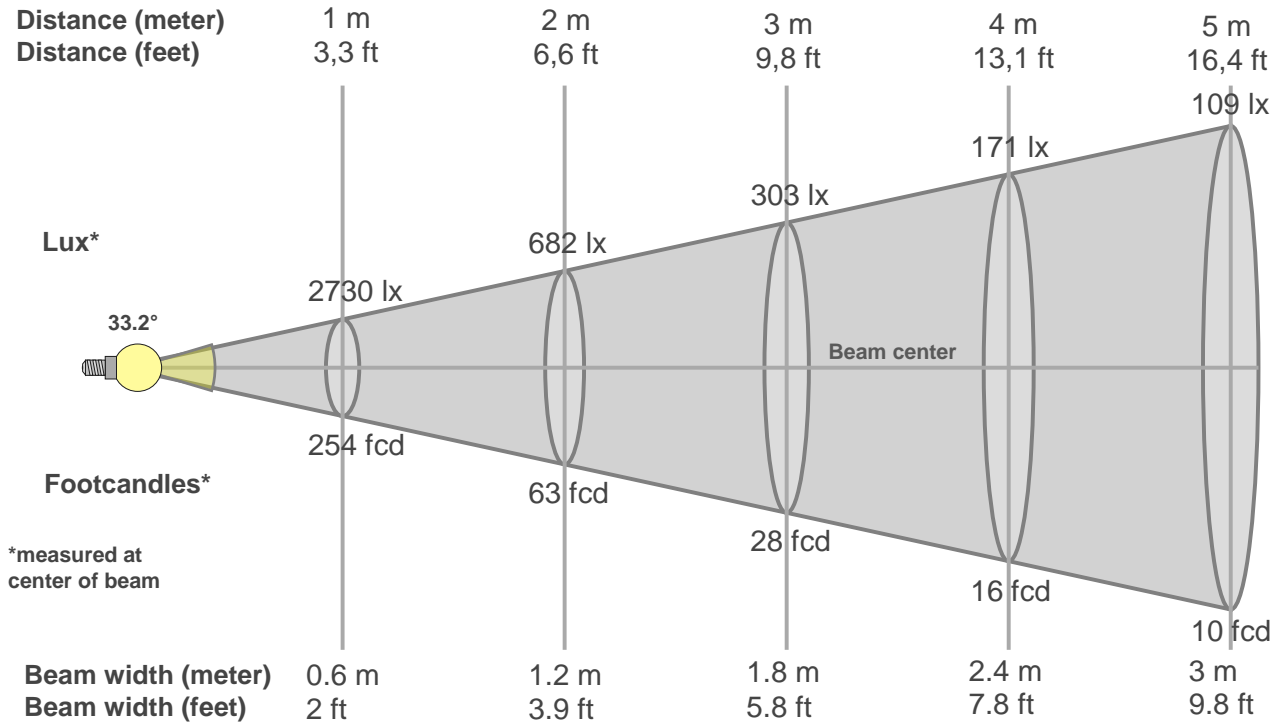
TM30 details

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	90	3%	4%
13	92	5%	0%
14	90	6%	-4%
15	88	3%	-6%
16	89	0%	-8%





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
2730lx	682lx	303lx	171lx	109lx	76lx	56lx	43lx	34lx	27lx	23lx	19lx	16lx	14lx	12lx	11lx	9lx	8lx	8lx	7lx
253.6fcd	63.4fcd	28.2fcd	15.9fcd	10.1fcd	7fcd	5.2fcd	4fcd	3.1fcd	2.5fcd	2.1fcd	1.8fcd	1.5fcd	1.3fcd	1.1fcd	1fcd	0.9fcd	0.8fcd	0.7fcd	0.6fcd

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°
2730	2706	2640	2522	2373	2180	1942	1667	1388	1092	812	577	396	266	175	113	74	50	36	26
100%	99%	97%	92%	87%	80%	71%	61%	51%	40%	30%	21%	15%	10%	6%	4%	3%	2%	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°
2730	2723	2662	2541	2398	2192	1959	1694	1387	1090	799	555	366	232	146	92	60	42	30	23
100%	100%	98%	93%	88%	80%	72%	62%	51%	40%	29%	20%	13%	8%	5%	3%	2%	2%	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°
2730	2698	2636	2514	2362	2175	1936	1666	1387	1098	816	583	403	272	178	116	75	50	35	25
100%	99%	97%	92%	87%	80%	71%	61%	51%	40%	30%	21%	15%	10%	7%	4%	3%	2%	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°
2730	2731	2658	2550	2402	2196	1965	1689	1387	1085	793	541	356	228	142	90	58	40	29	21
100%	100%	97%	93%	88%	80%	72%	62%	51%	40%	29%	20%	13%	8%	5%	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
33.2°	52.7°	65°	1.0%	1.0%

