

Light efficiency:



Light quality:



Color temperature:



Output: 1587 lm

Peak: 3747 cd

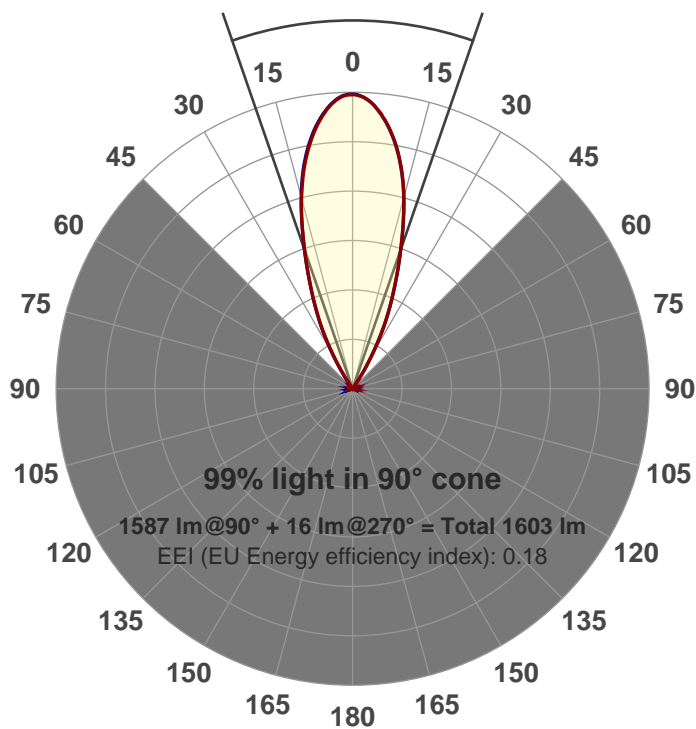
Power: 21.0 W

PF: 0.99



Beam angle

38.2°



Product name:
GRO-CZ20-FL-RD
Item number:
GRO-CZ20-FL-RD
Date and time:
6/14/2017 5:17:09 PM
Description:
V6

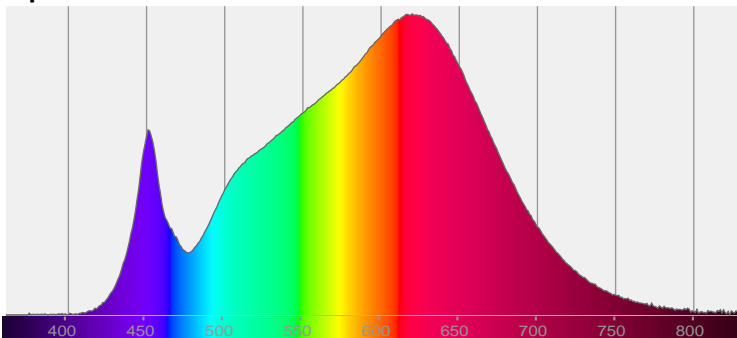
LUM: 1587

PPF: 26.6

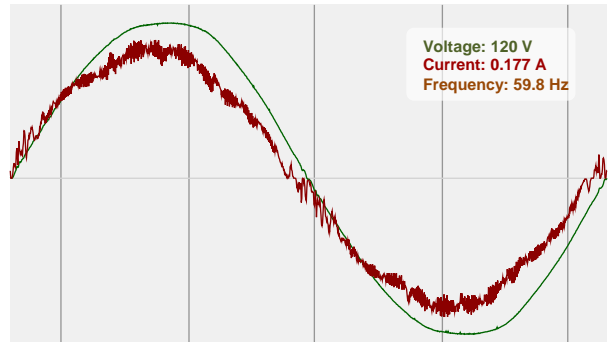


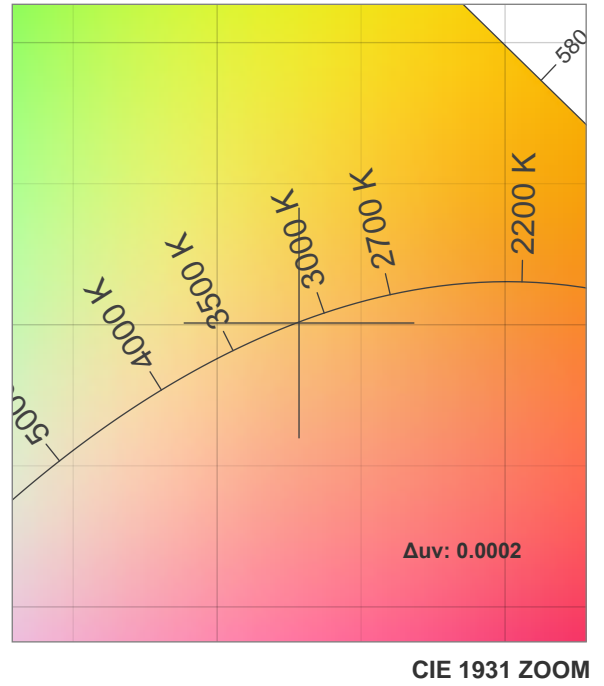
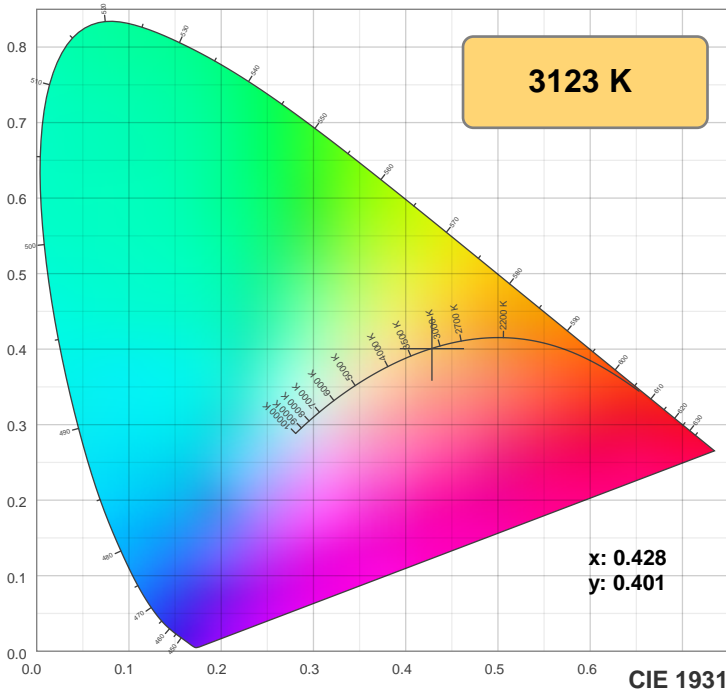
CIE 1931
x: 0.428
y: 0.401

Spectra

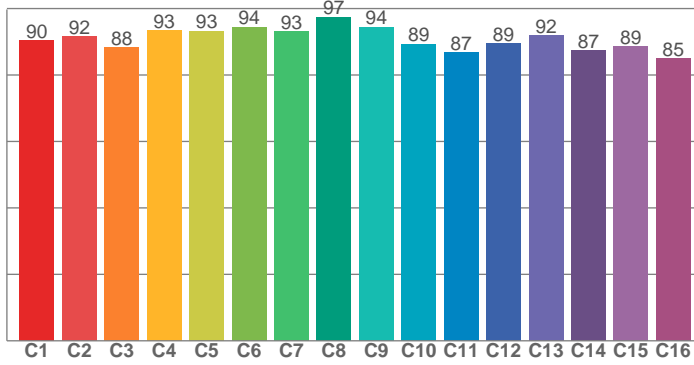


Power

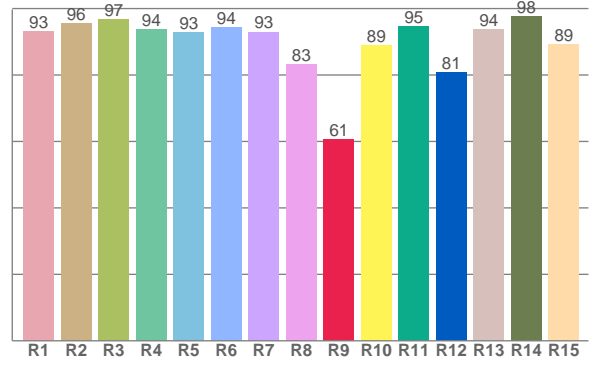




TM30: 91.0



CRI: 92.8 (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
93.1	95.6	96.8	93.7	92.7	94.3	93.0	83.3	60.7	89.0	94.5	80.7	93.7	97.6	89.2

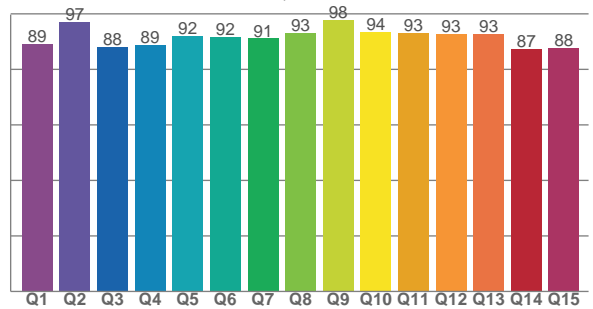
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
90.4	91.6	88.2	93.4	93.3	94.5	93.2	97.5	94.5	89.4	86.7	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
89.2	96.9	88.0	88.8	91.9	91.7	91.1	93.1	97.7	93.5	93.1	92.8	92.6	87.3	87.8

CQS: 91.1



Color parameters

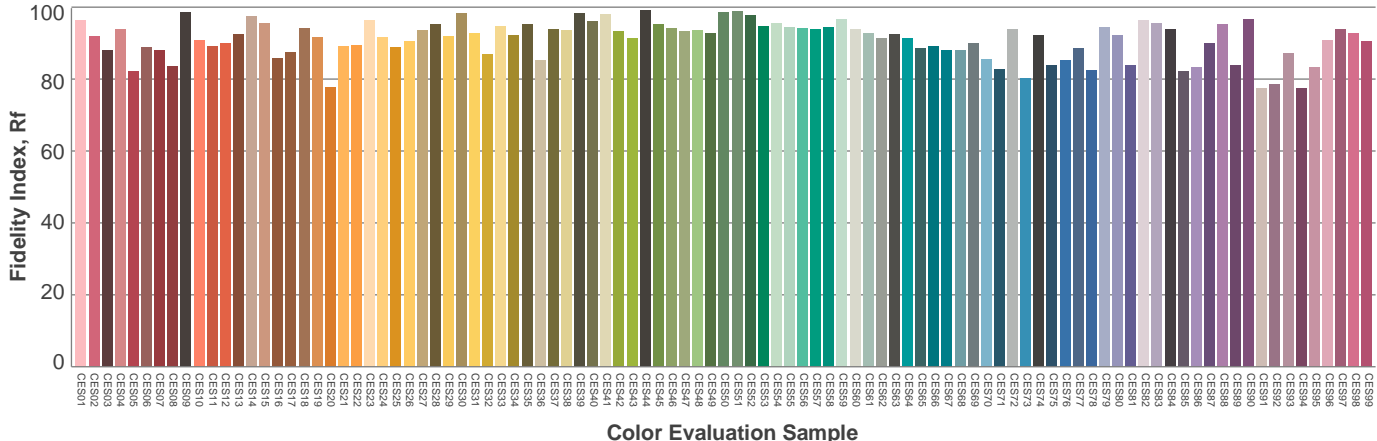
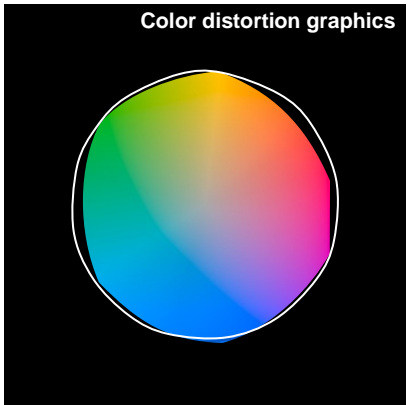
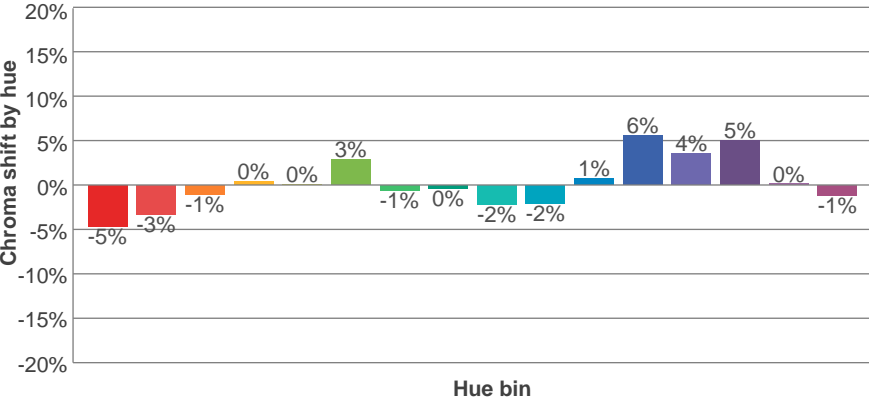
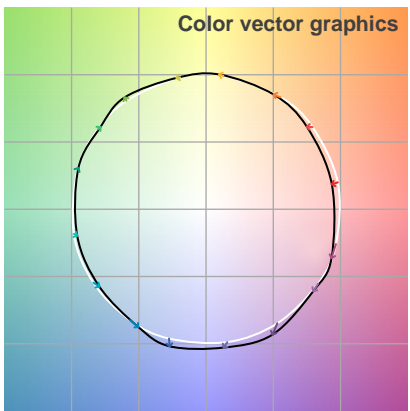
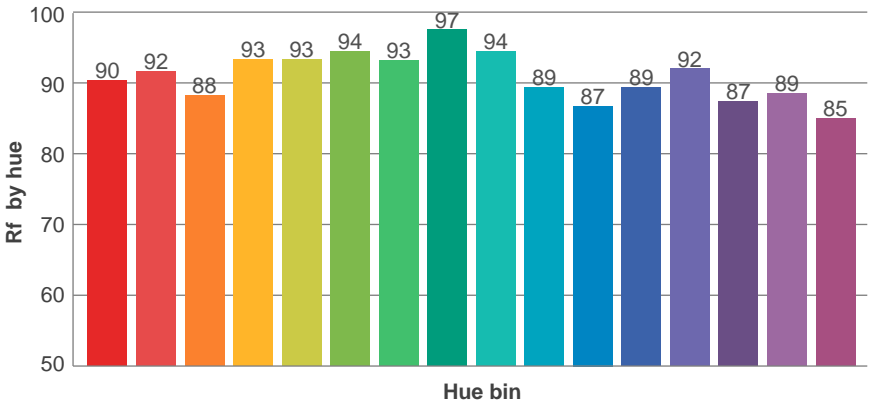
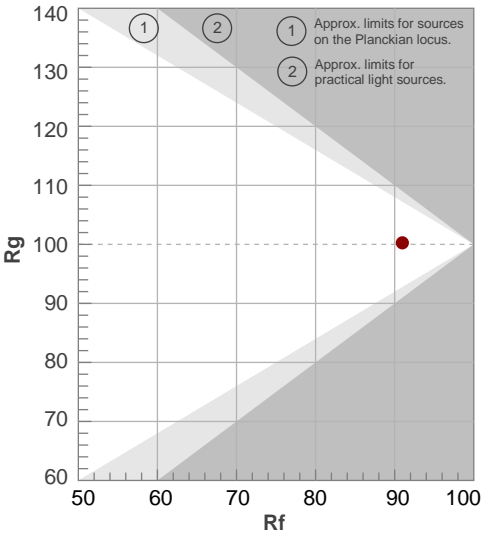
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3123 K	92.8	60.7	91.0	100.3	91.1	0.428	0.401	0.247	0.346	0.0002

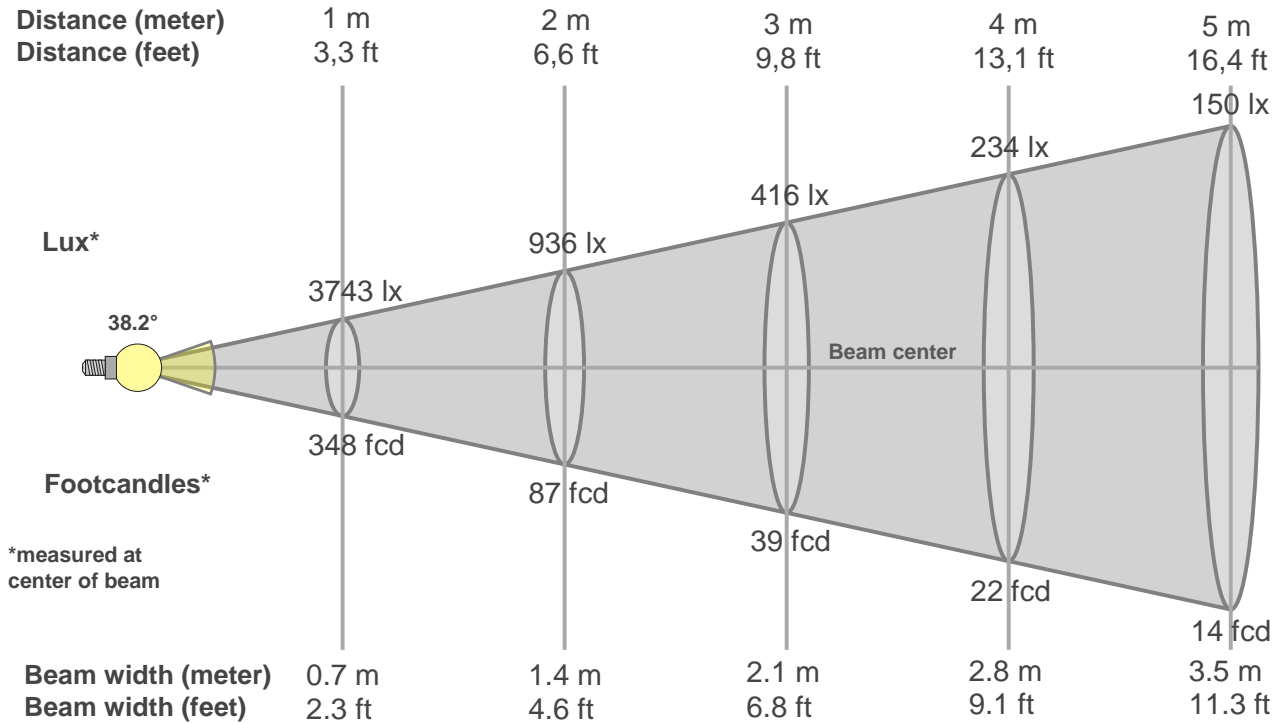
TM30 details

Rf 91.0
Fidelity index Rf

Rg 100.3
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	94	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	4%	-3%
14	87	5%	-8%
15	89	0%	-7%
16	85	-1%	-11%





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
3743lx	936lx	416lx	234lx	150lx	104lx	76lx	58lx	46lx	37lx	31lx	26lx	22lx	19lx	17lx	15lx	13lx	12lx	10lx	9lx
347.8fcd	86.9fcd	38.6fcd	21.7fcd	13.9fcd	9.7fcd	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°
3743	3719	3641	3511	3347	3147	2918	2651	2358	2035	1732	1445	1195	961	717	479	273	75	43	36
100%	99%	97%	94%	89%	84%	78%	71%	63%	54%	46%	39%	32%	26%	19%	13%	7%	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°
3743	3727	3647	3524	3366	3172	2945	2675	2368	2042	1735	1450	1198	970	741	507	297	138	45	38
100%	100%	97%	94%	90%	85%	79%	71%	63%	55%	46%	39%	32%	26%	20%	14%	8%	4%	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°
3743	3712	3633	3512	3349	3156	2929	2665	2356	2039	1731	1450	1195	966	727	489	282	111	46	38
100%	99%	97%	94%	89%	84%	78%	71%	63%	54%	46%	39%	32%	26%	19%	13%	8%	3%	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°
3743	3715	3630	3500	3340	3147	2917	2658	2361	2044	1738	1454	1199	953	701	463	253	65	44	37
100%	99%	97%	93%	89%	84%	78%	71%	63%	55%	46%	39%	32%	25%	19%	12%	7%	2%	1%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
38.2°	62°	67.9°	1.0%	1.0%

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