

Light efficiency:



Light quality:



Color temperature:



Output: 1575 lm

Peak: 8122 cd

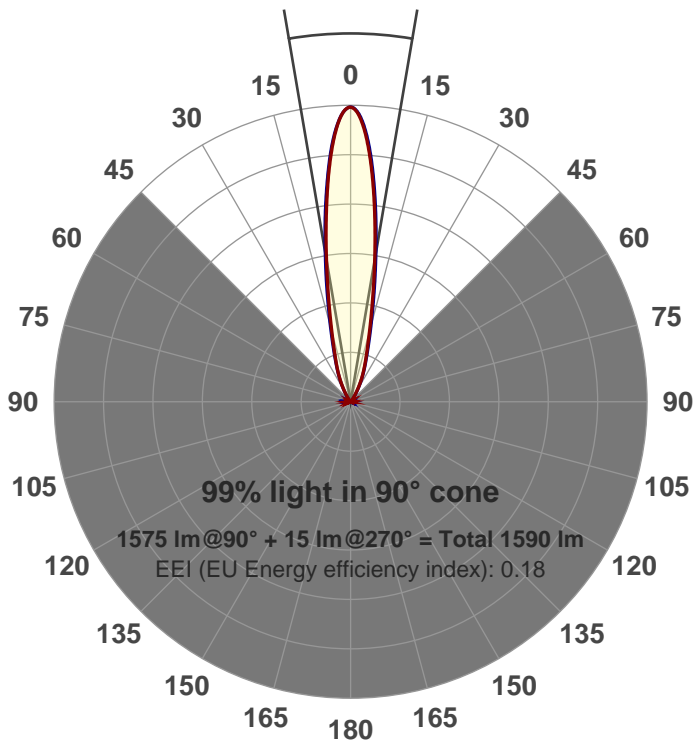
Power: 21.0 W

PF: 0.99



Beam angle

19.3°



Product name:

GRO-CZ20-SP-RD-91A

Item number:

GRO-CZ20-SP-RD-91A

Date and time:

6/14/2017 4:41:29 PM

Description:

V6

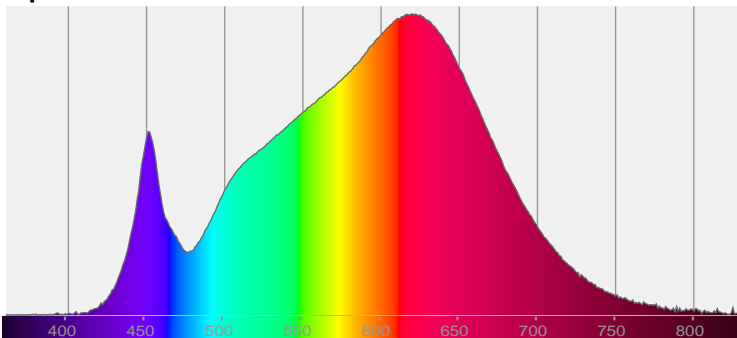
LUM: 1575

PPF: 26.4

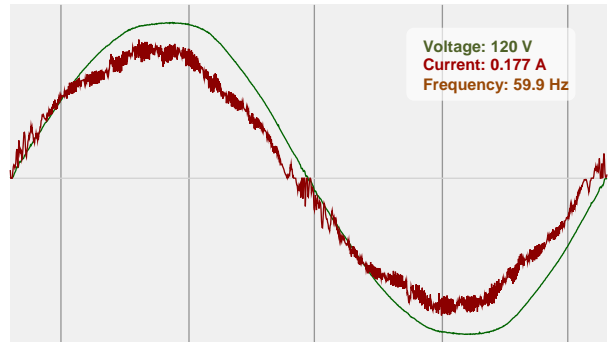


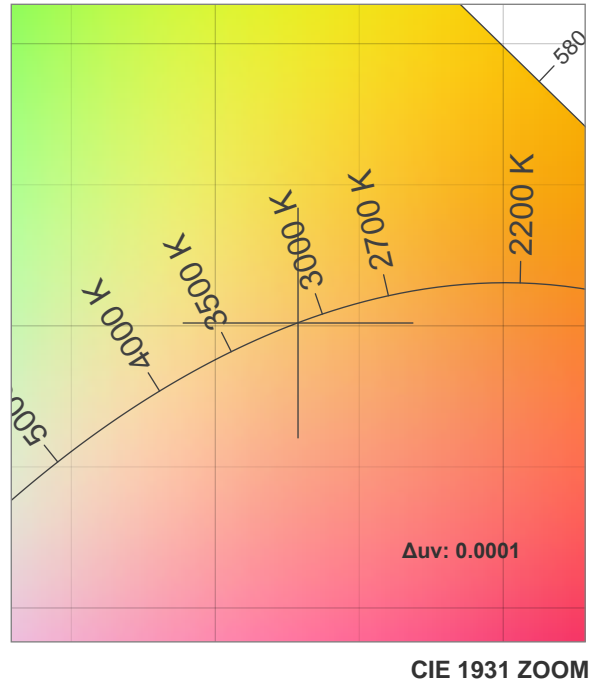
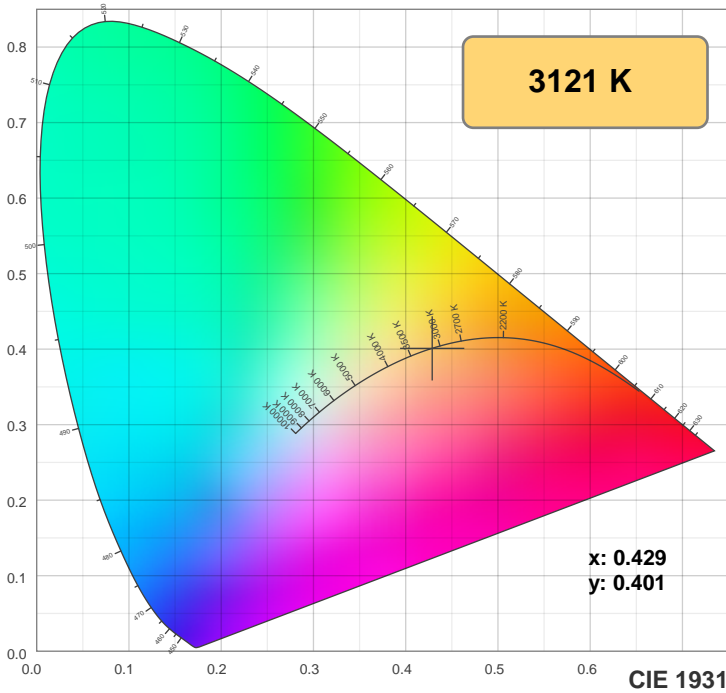
CIE 1931
x: 0.429
y: 0.401

Spectra

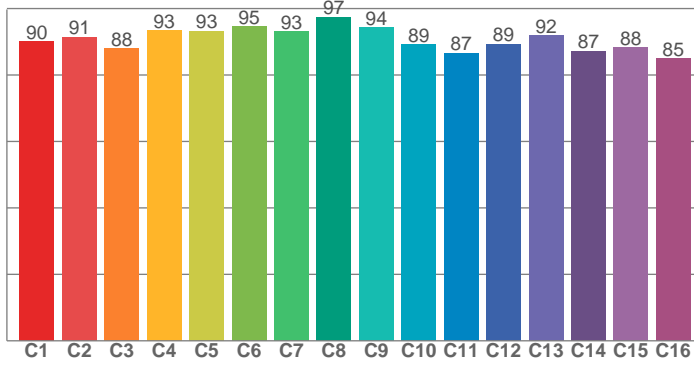


Power

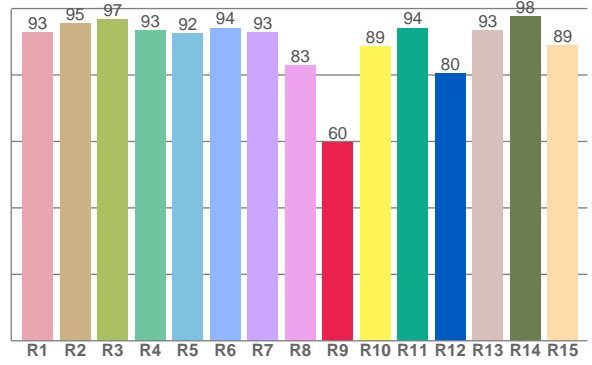




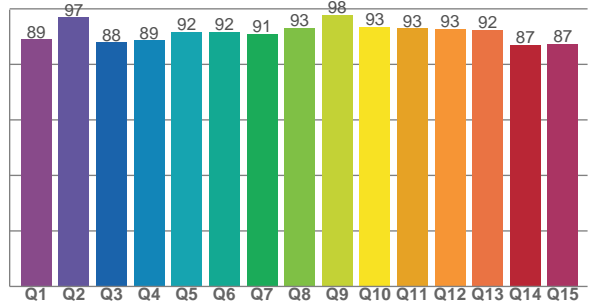
TM30: 90.8



CRI: 92.6 (R1-R8)



CQS: 90.9



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
92.8	95.4	96.8	93.4	92.4	94.2	92.9	82.9	59.6	88.6	94.2	80.4	93.4	97.6	88.8

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
90.1	91.4	88.1	93.3	93.3	94.5	93.1	97.4	94.3	89.1	86.6	89.4	91.9	87.2	88.3	84.9

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
89.0	96.9	87.9	88.6	91.7	91.6	91.1	93.0	97.7	93.4	92.9	92.6	92.5	86.9	87.5

Color parameters

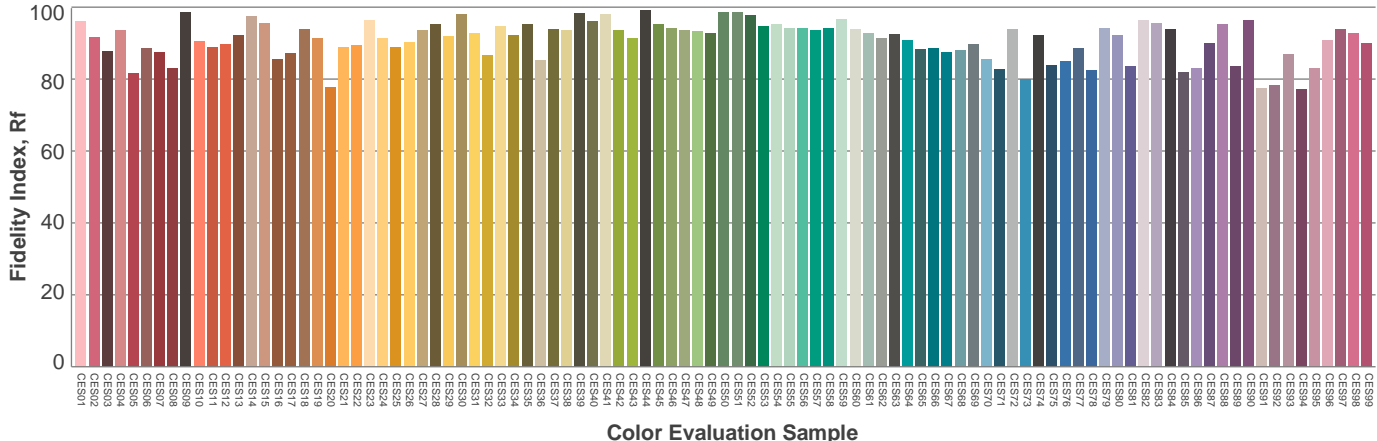
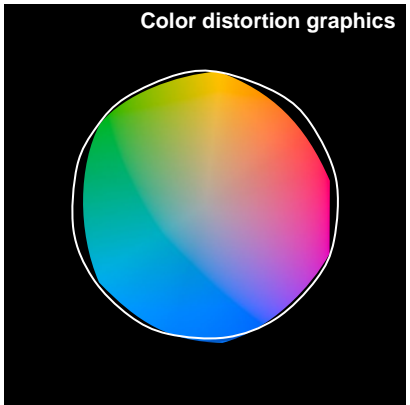
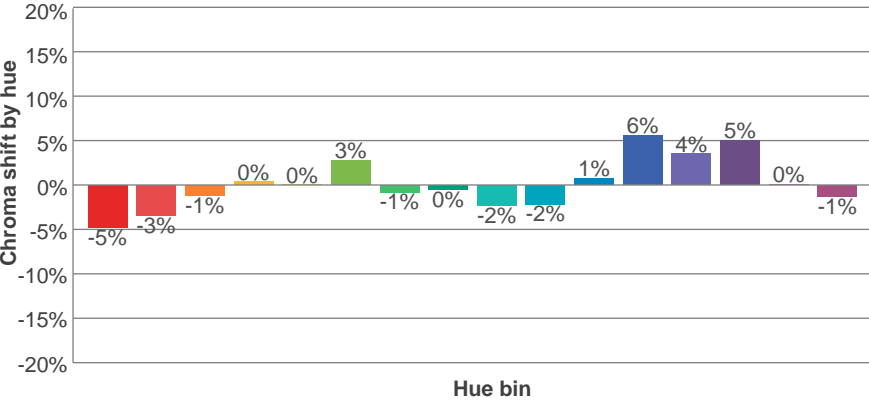
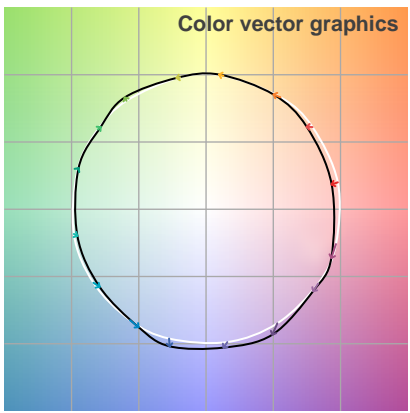
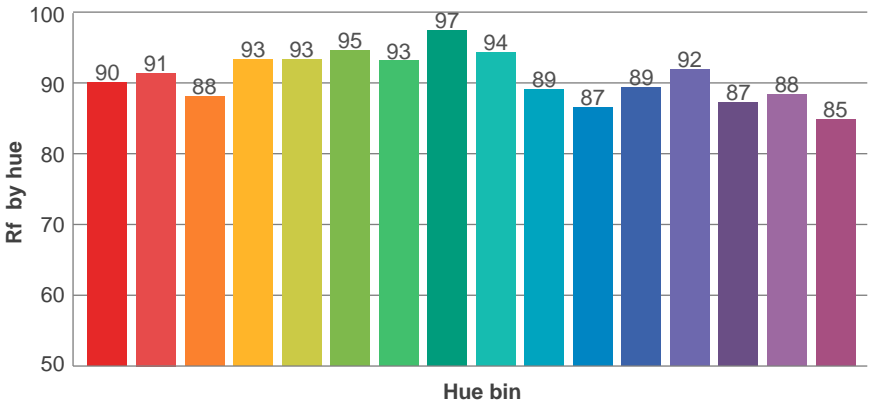
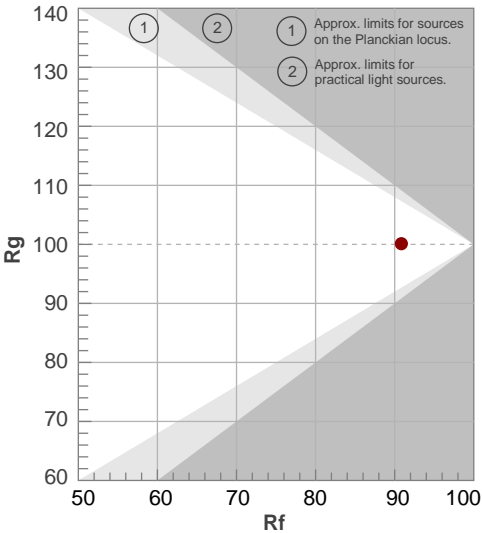
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color diviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3121 K	92.6	59.6	90.8	100.1	90.9	0.429	0.401	0.247	0.346	0.0001

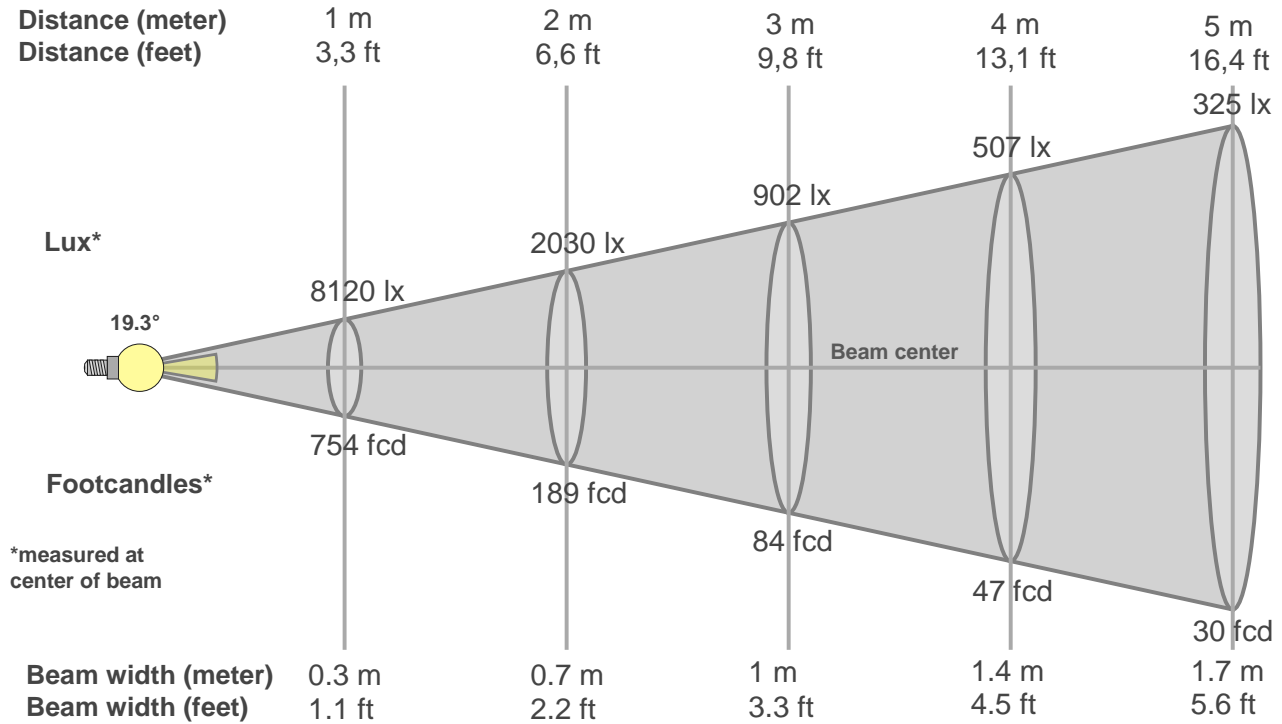
TM30 details

Rf 90.8
Fidelity index Rf

Rg 100.1
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	4%	-3%
14	87	5%	-8%
15	88	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
8120lx	2030lx	902lx	507lx	325lx	226lx	166lx	127lx	100lx	81lx	67lx	56lx	48lx	41lx	36lx	32lx	28lx	25lx	22lx	20lx
754.4fcd	188.6fcd	83.8fcd	47.1fcd	30.2fcd	21fcd	15.4fcd	11.8fcd	9.3fcd	7.5fcd	6.2fcd	5.2fcd	4.5fcd	3.8fcd	3.4fcd	2.9fcd	2.6fcd	2.3fcd	2.1fcd	1.9fcd

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°
8120	7857	7096	6022	4856	3792	2927	2259	1782	1427	1175	971	794	629	482	351	241	160	103	67
100%	97%	87%	74%	60%	47%	36%	28%	22%	18%	14%	12%	10%	8%	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°
8120	7864	7156	6133	5033	3985	3113	2414	1891	1511	1219	998	807	635	483	353	252	174	118	80
100%	97%	88%	76%	62%	49%	38%	30%	23%	19%	15%	12%	10%	8%	6%	4%	3%	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°
8120	7807	7025	5962	4839	3802	2933	2285	1794	1458	1204	998	820	655	499	360	248	161	103	64
100%	96%	87%	73%	60%	47%	36%	28%	22%	18%	15%	12%	10%	8%	6%	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°
8120	7852	7120	6106	5009	3980	3119	2434	1919	1538	1255	1035	848	675	520	385	270	183	123	82
100%	97%	88%	75%	62%	49%	38%	30%	24%	19%	15%	13%	10%	8%	6%	5%	3%	2%	2%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
19.3°	48.1°	66.3°	1.0%	1.0%

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