

Light efficiency:



Light quality:



Color temperature:



Output: 1091 lm

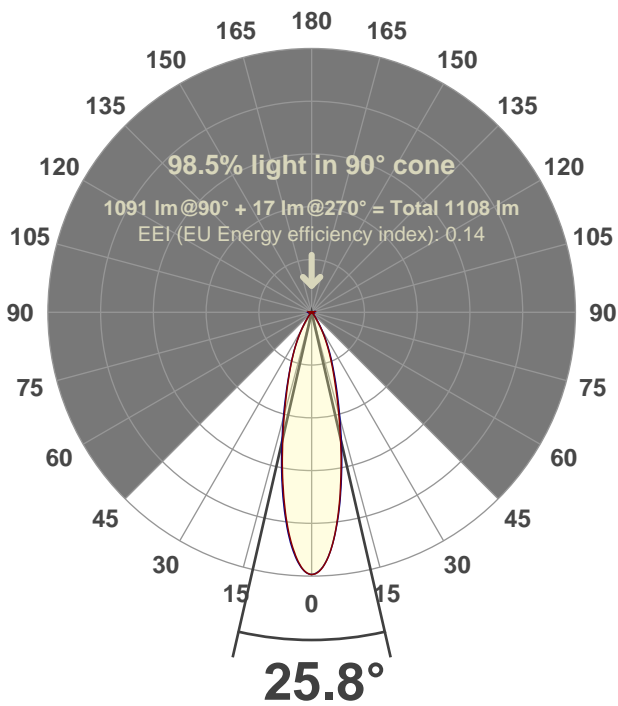
Peak: 3850 cd

Power: 14.6 W

PF: 0.99



Beam angle



Test number:

GRO-CZ14-NF-RD-91A

Luminaire Model:

GRO-CZ14-NF-RD-91A

Date and time:

6/14/2017 5:03:25 PM

LUM: 1091

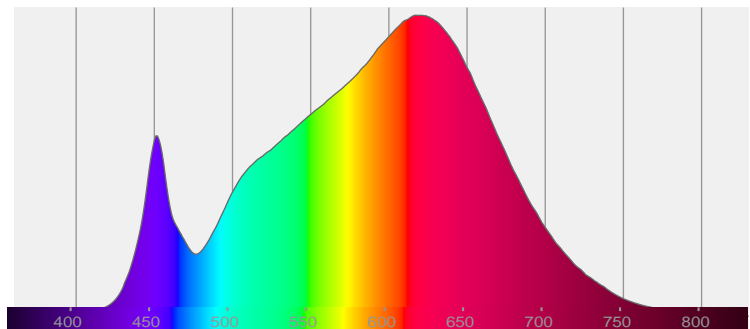
CIE 1931

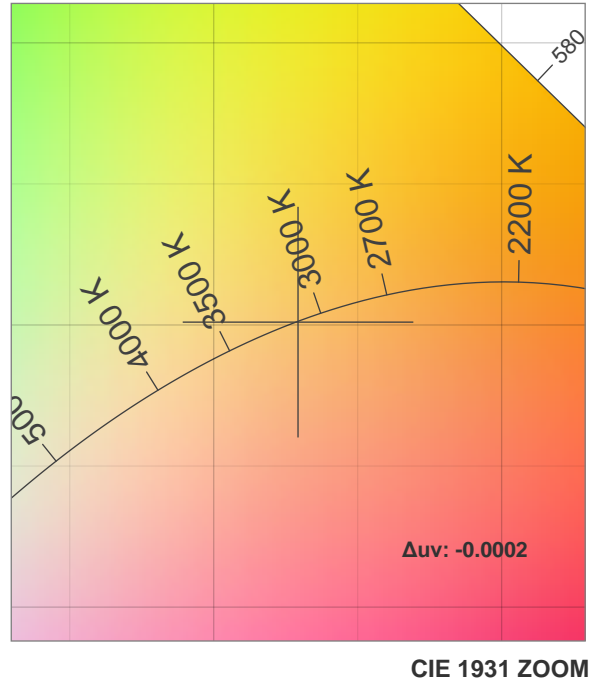
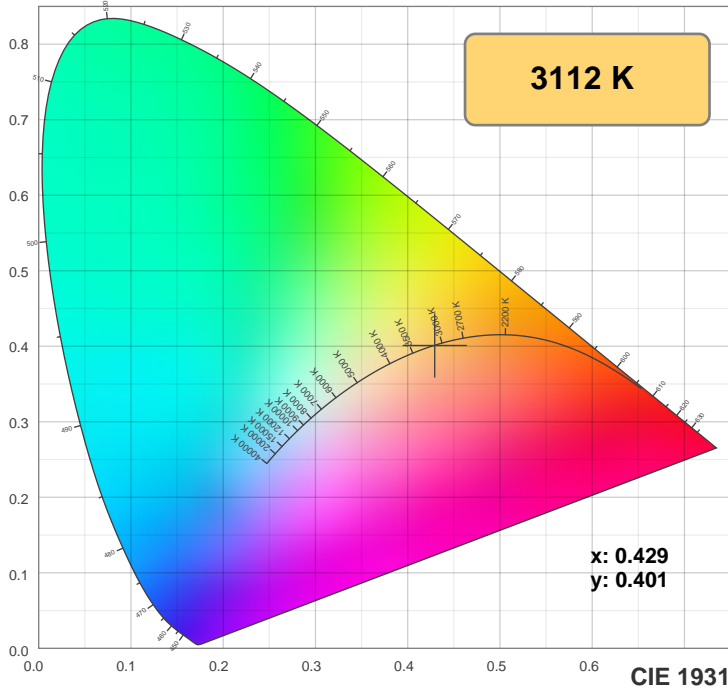
x: 0.429

y: 0.401



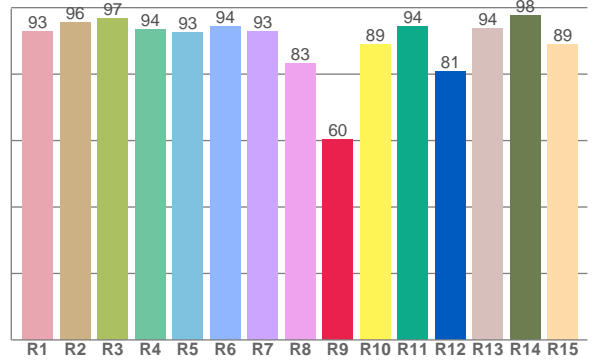
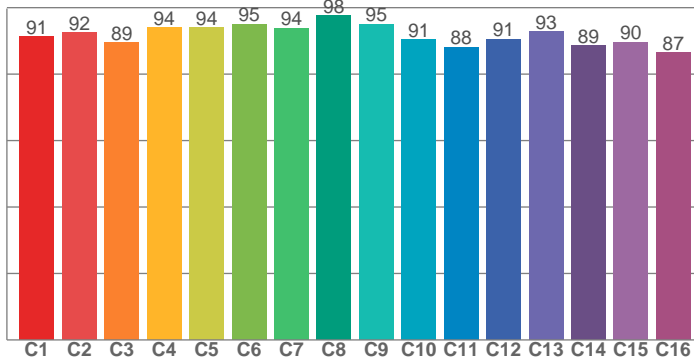
Spectra





TM30: 91.9

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	95.5	96.8	93.6	92.6	94.3	92.9	83.1	60.3	88.8	94.4	80.7	93.6	97.6	89.1

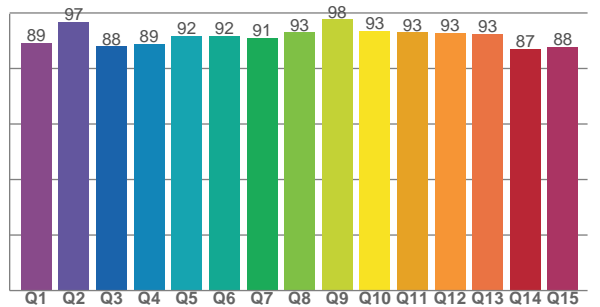
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
91.3	92.4	89.4	94.1	94.0	95.0	93.8	97.7	95.0	90.5	88.2	90.5	92.8	88.6	89.6	86.6

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	92.7	92.5	87.1	87.6

CQS: 91.0



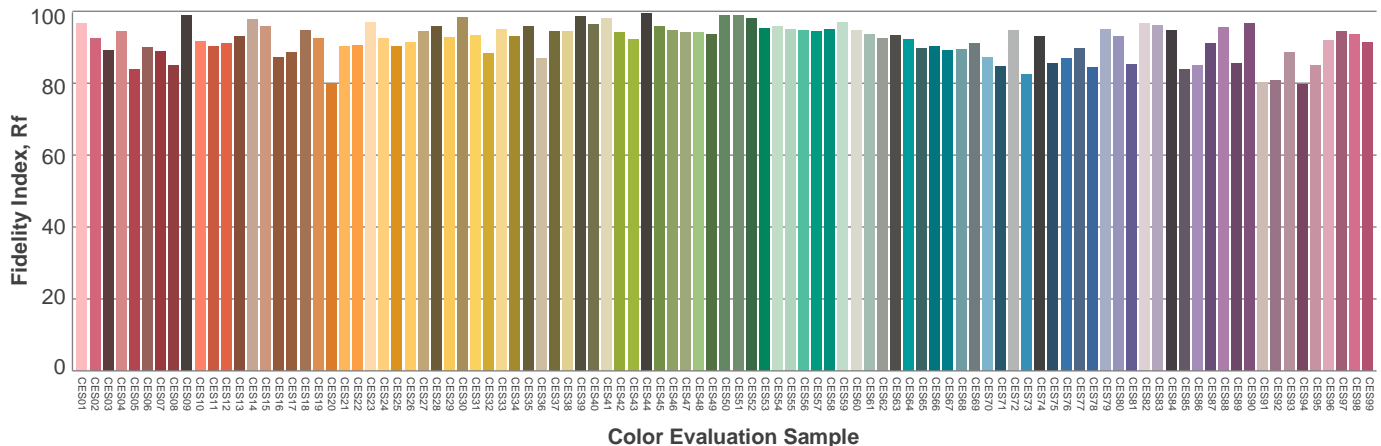
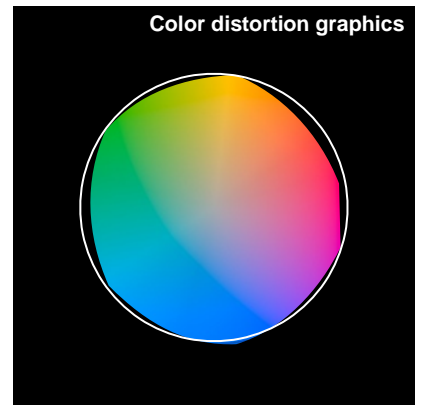
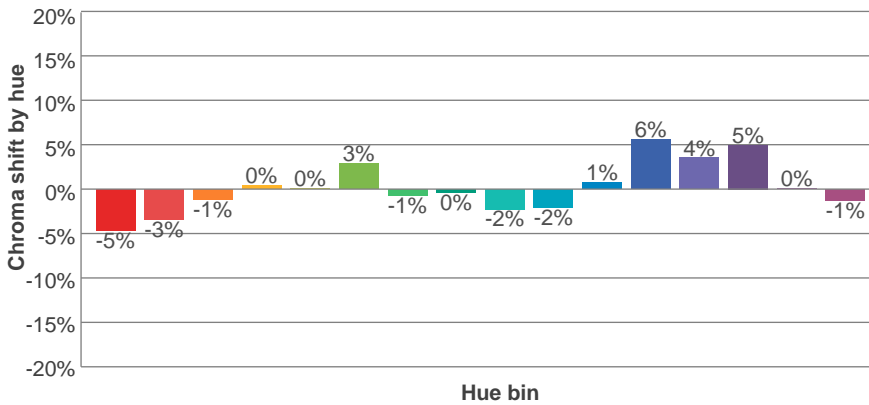
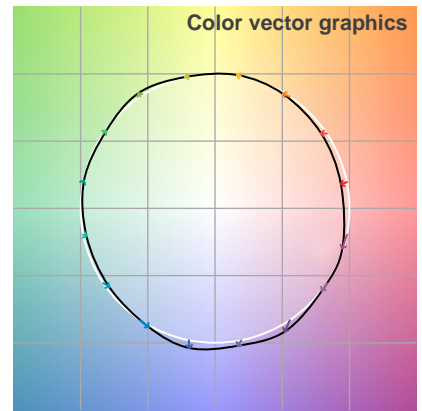
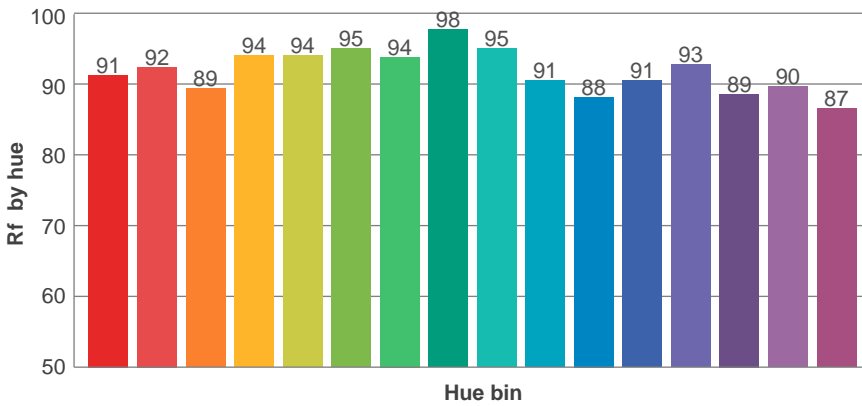
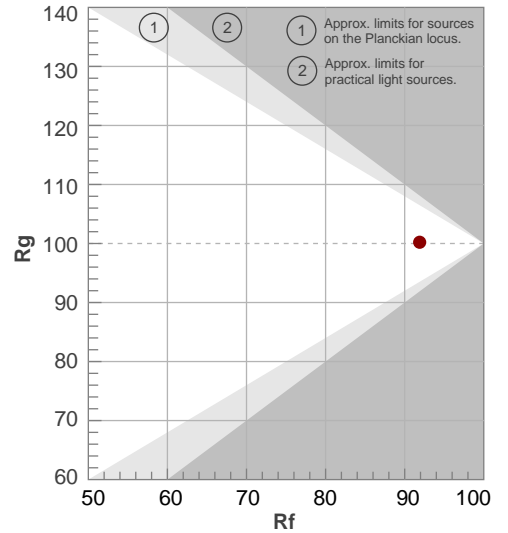
Color parameters

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
3112 K	92.7	60.3	91.9	100.2	91.0	0.429	0.401	0.247	0.346	-0.0002

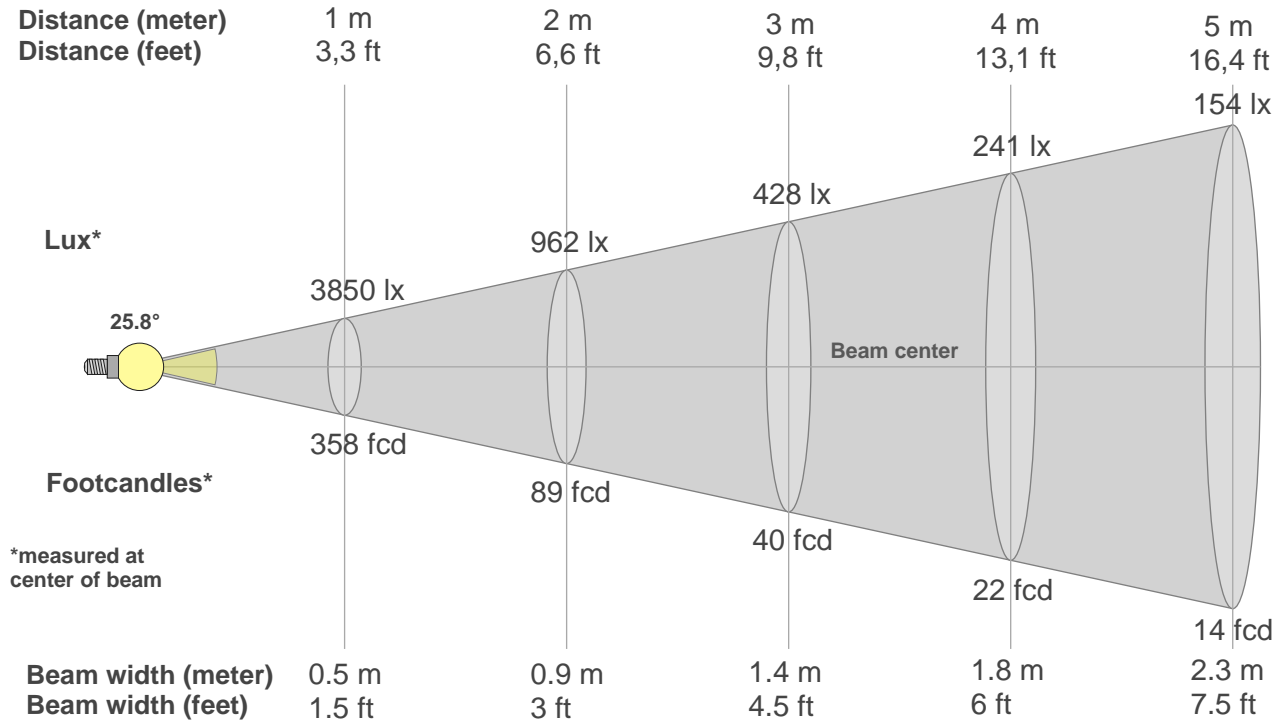
Rf 91.9
Fidelity index Rf

Rg 100.2
Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	91	-5%	-1%
2	92	-3%	3%
3	89	-1%	5%
4	94	0%	3%
5	94	0%	3%
6	95	3%	0%
7	94	-1%	-3%
8	98	0%	-1%
9	95	-2%	2%
10	91	-2%	5%
11	88	1%	8%
12	91	6%	2%
13	93	4%	-3%
14	89	5%	-8%
15	90	0%	-7%
16	87	-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
3850lx	962lx	428lx	241lx	154lx	107lx	79lx	60lx	48lx	38lx	32lx	27lx	23lx	20lx	17lx	15lx	13lx	12lx	11lx	10lx
357.6fcd	89.4fcd	39.7fcd	22.4fcd	14.3fcd	9.9fcd	7.3fcd	5.6fcd	4.4fcd	3.6fcd	3fcd	2.5fcd	2.1fcd	1.8fcd	1.6fcd	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°
3850	3784	3586	3272	2885	2470	2068	1698	1387	1126	922	754	611	484	374	274	191	129	86	58
100%	98%	93%	85%	75%	64%	54%	44%	36%	29%	24%	20%	16%	13%	10%	7%	5%	3%	2%	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°
3850	3778	3582	3278	2909	2507	2120	1758	1446	1185	971	797	648	516	400	299	216	152	104	73
100%	98%	93%	85%	76%	65%	55%	46%	38%	31%	25%	21%	17%	13%	10%	8%	6%	4%	3%	2%

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°
3850	3772	3548	3240	2856	2458	2060	1709	1403	1158	957	790	651	526	411	306	218	147	98	65
100%	98%	92%	84%	74%	64%	54%	44%	36%	30%	25%	21%	17%	14%	11%	8%	6%	4%	3%	2%

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°
3850	3775	3570	3272	2903	2512	2118	1763	1454	1189	973	801	651	518	402	302	217	152	106	75
100%	98%	93%	85%	75%	65%	55%	46%	38%	31%	25%	21%	17%	13%	10%	8%	6%	4%	3%	2%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
25.8°	56.4°	72.3°	99.5%	98.5%

This Page Intentionally Left Blank