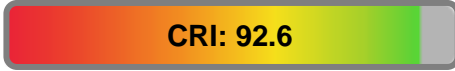


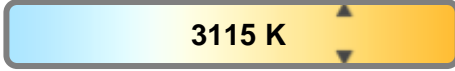
Light efficiency:



Light quality:



Color temperature:

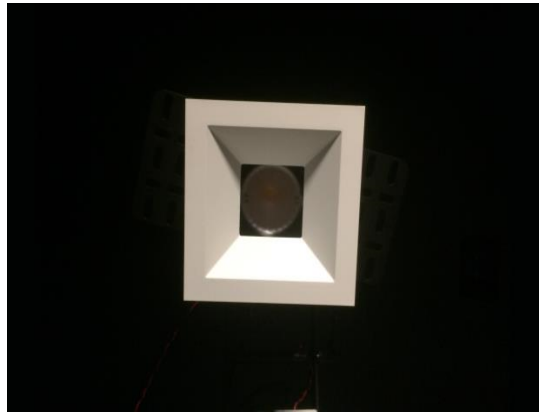


Output: 915 lm

Peak: 1255 cd

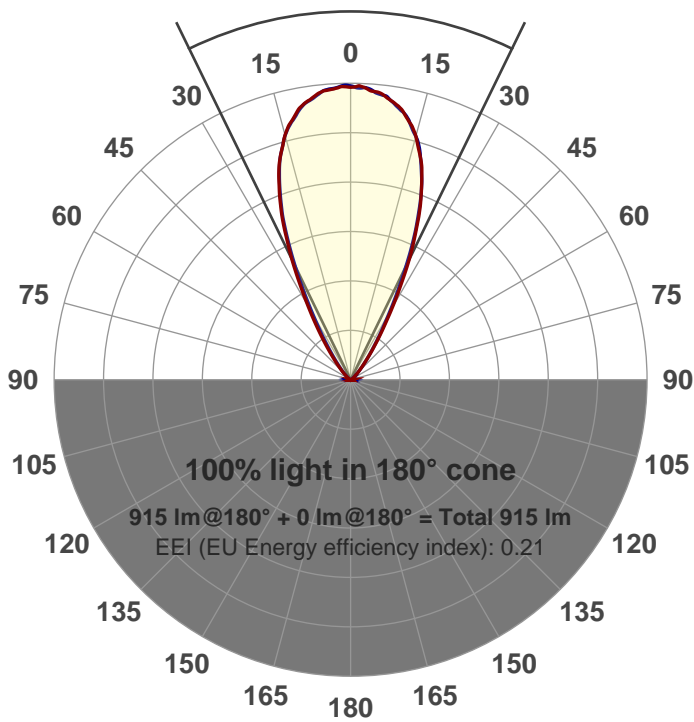
Power: 14.8 W

PF: 0.97



Beam angle

52°



Product name:  
**GR-CZ14-WF-SQ-91A**

Item number:  
**GR-CZ14-WF-SQ-91A**

Date and time:  
**3/31/2017 3:11:26 PM**

Description:

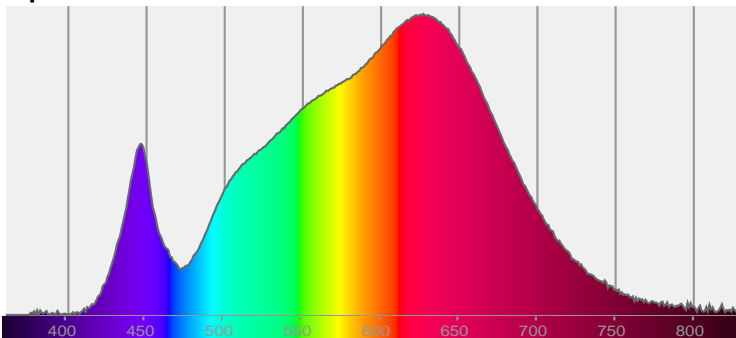
**LUM: 915**

**PPF: 14.8**

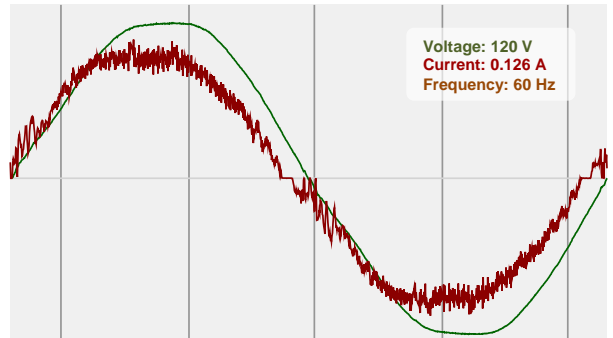


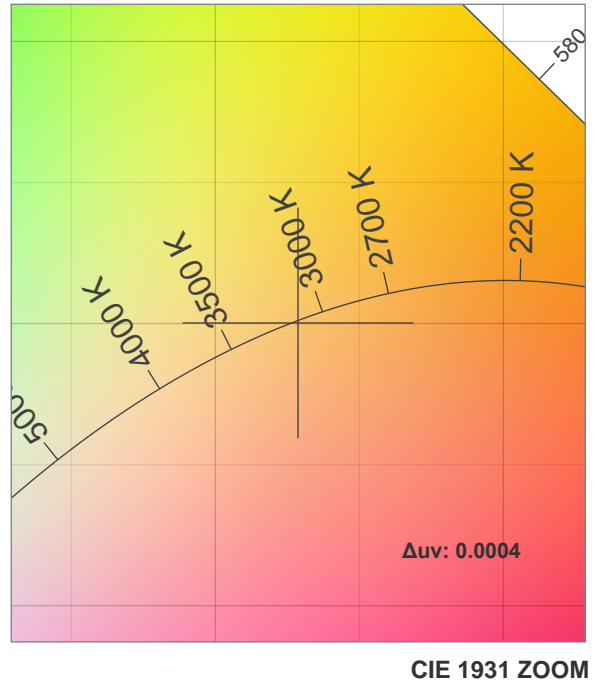
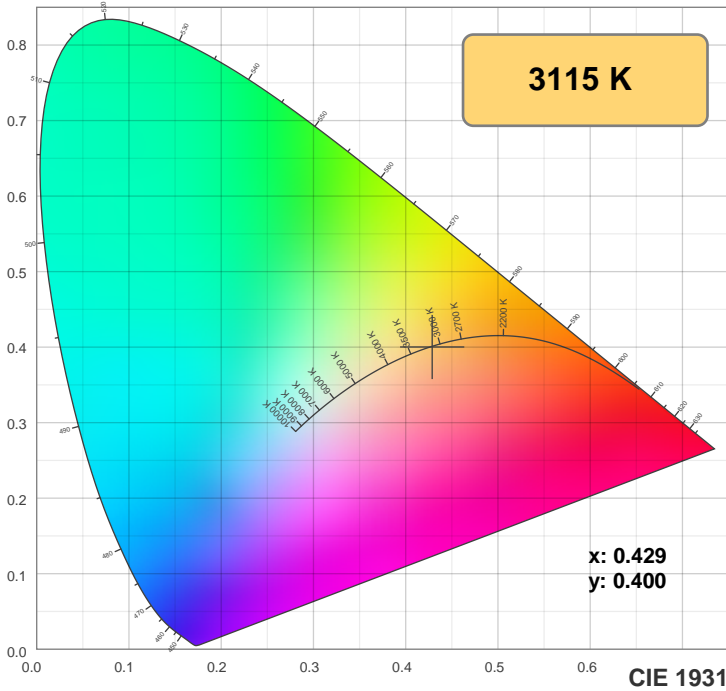
CIE 1931  
x: 0.429  
y: 0.400

Spectra



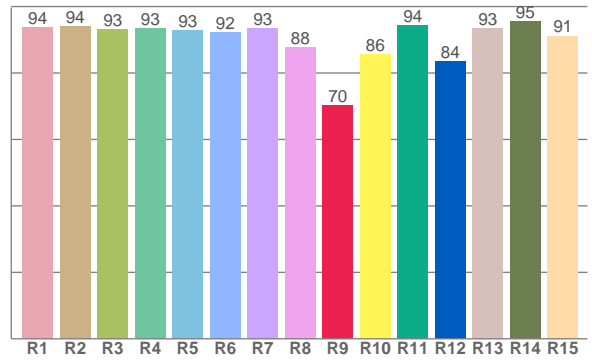
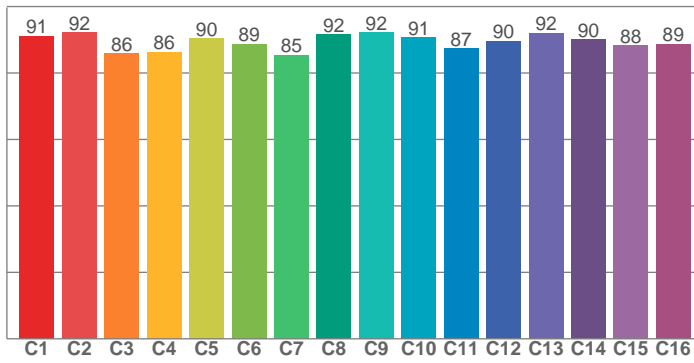
Power





**TM30: 89.5**

**CRI: 92.6 (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
93.7	94.0	93.0	93.3	92.9	92.2	93.5	87.8	70.2	85.5	94.4	83.5	93.4	95.4	91.2

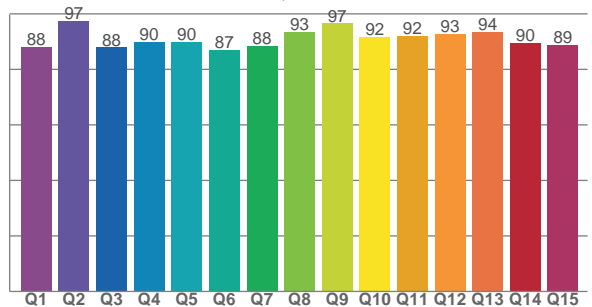
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
91.2	92.1	85.8	86.4	90.3	88.7	85.5	91.7	92.3	90.6	87.4	89.6	92.0	90.1	88.2	88.8

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
87.9	97.4	87.9	89.8	89.8	86.8	88.4	93.3	96.5	91.7	92.2	92.8	93.6	89.5	88.8

**CQS: 90.5**



## Color parameters

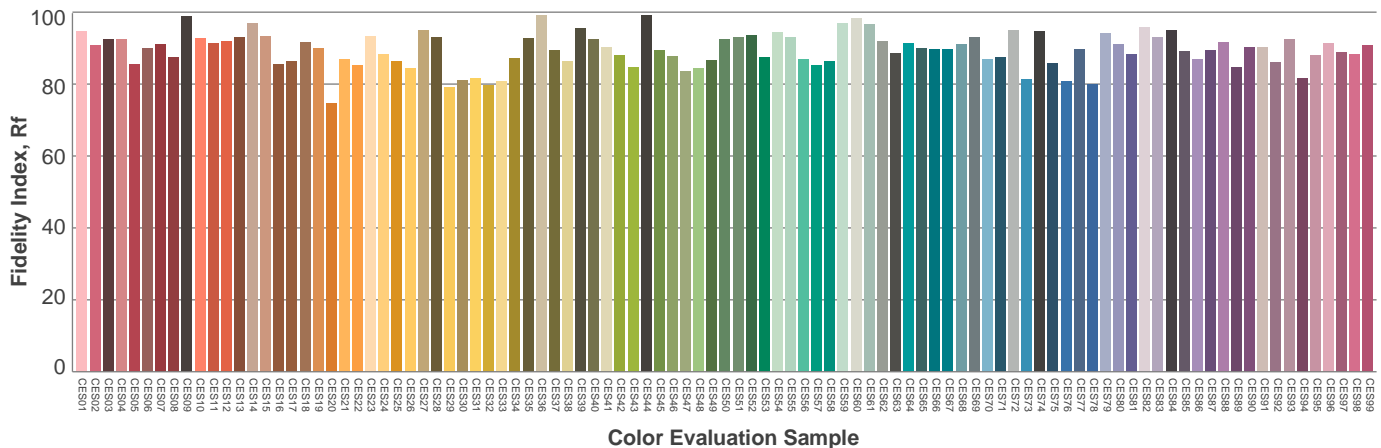
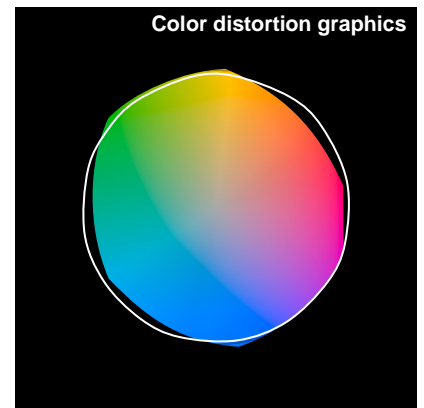
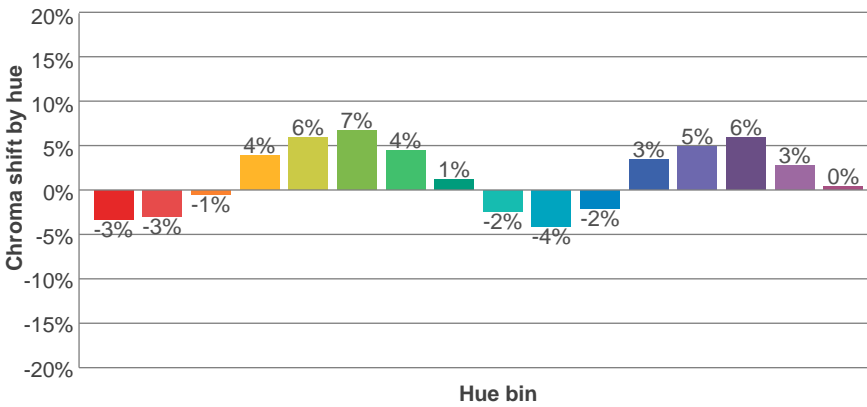
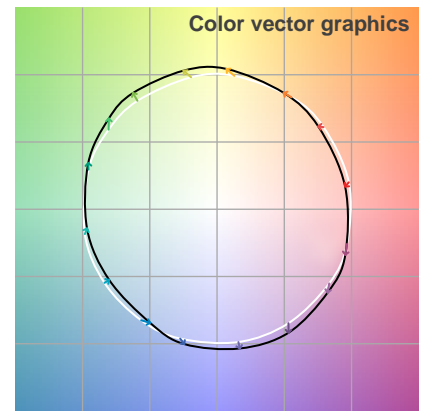
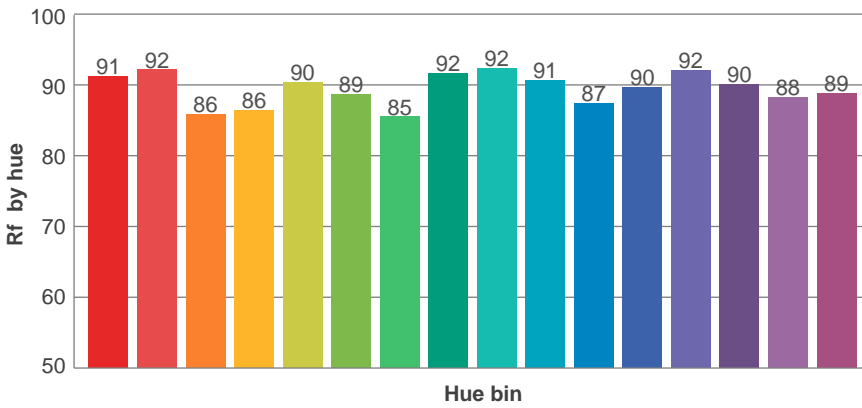
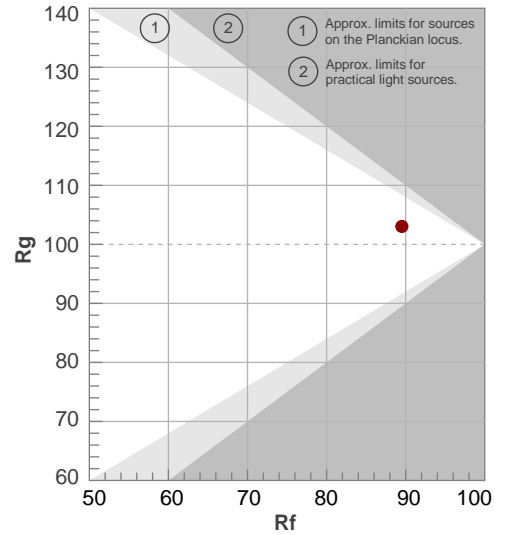
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3115 K	92.6	70.2	89.5	103.0	90.5	0.429	0.400	0.247	0.346	0.0004

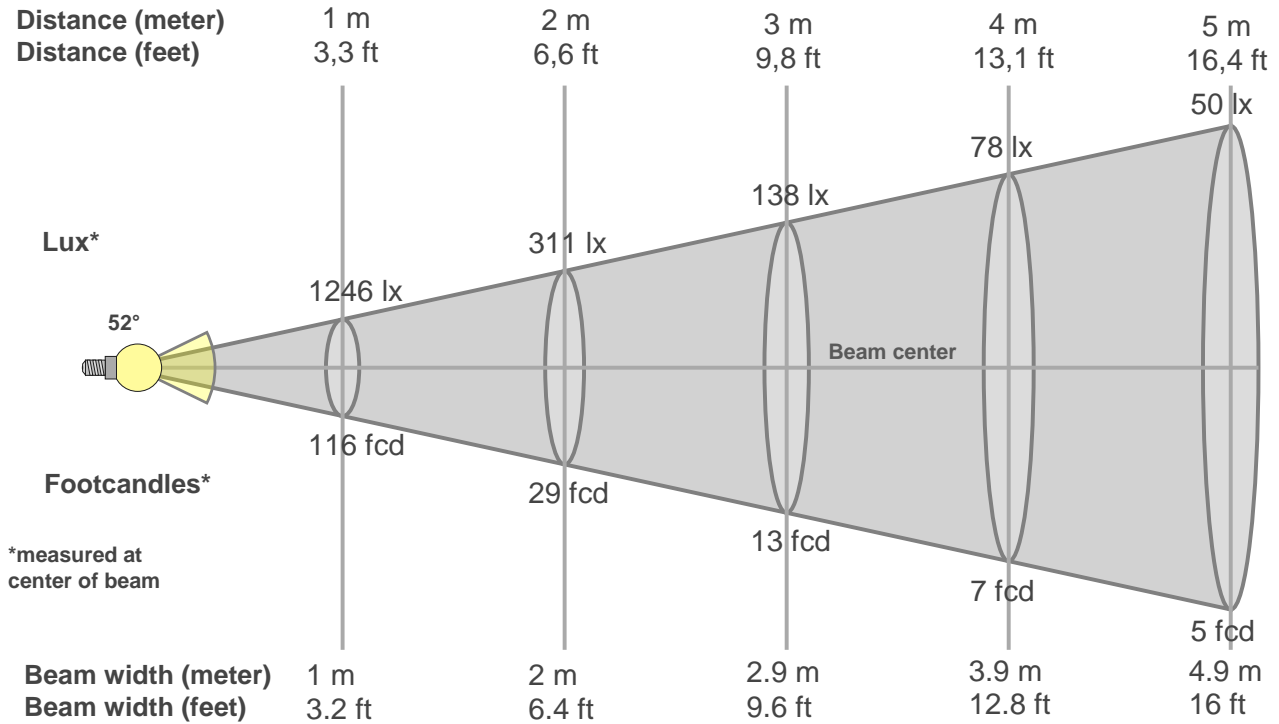
# TM30 details

**Rf 89.5**  
Fidelity index Rf

**Rg 103.0**  
Gammut index Rg

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	91	-3%	-3%
2	92	-3%	3%
3	86	-1%	7%
4	86	4%	7%
5	90	6%	5%
6	89	7%	0%
7	85	4%	-7%
8	92	1%	-5%
9	92	-2%	-4%
10	91	-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
1246lx	311lx	138lx	78lx	50lx	35lx	25lx	19lx	15lx	12lx	10lx	9lx	7lx	6lx	6lx	5lx	4lx	4lx	3lx	3lx
115.7fc	28.9fcd	12.9fcd	7.2fcd	4.6fcd	3.2fcd	2.4fcd	1.8fcd	1.4fcd	1.2fcd	1fcd	0.8fcd	0.7fcd	0.6fcd	0.5fcd	0.5fcd	0.4fcd	0.4fcd	0.3fcd	0.3fcd

### 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°
1246	1242	1233	1225	1203	1180	1142	1101	1039	974	887	790	680	567	456	361	282	217	165	125
100%	100%	99%	98%	97%	95%	92%	88%	83%	78%	71%	63%	55%	46%	37%	29%	23%	17%	13%	10%

### 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°
1246	1244	1236	1223	1199	1177	1137	1097	1039	971	879	778	660	536	419	318	241	180	136	102
100%	100%	99%	98%	96%	95%	91%	88%	83%	78%	71%	62%	53%	43%	34%	26%	19%	14%	11%	8%

### 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°
1246	1244	1227	1221	1198	1176	1137	1096	1033	969	880	786	674	566	452	354	272	210	159	120
100%	100%	99%	98%	96%	94%	91%	88%	83%	78%	71%	63%	54%	45%	36%	28%	22%	17%	13%	10%

### 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°
1246	1237	1233	1216	1198	1170	1141	1090	1042	965	880	774	659	536	423	328	254	196	149	114
100%	99%	99%	98%	96%	94%	92%	87%	84%	77%	71%	62%	53%	43%	34%	26%	20%	16%	12%	9%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
52°	76.8°	95.6°	1.0%	1.0%



