

Light efficiency:



Light quality:



Color temperature:



Output: 1359 lm

Peak: 4880 cd

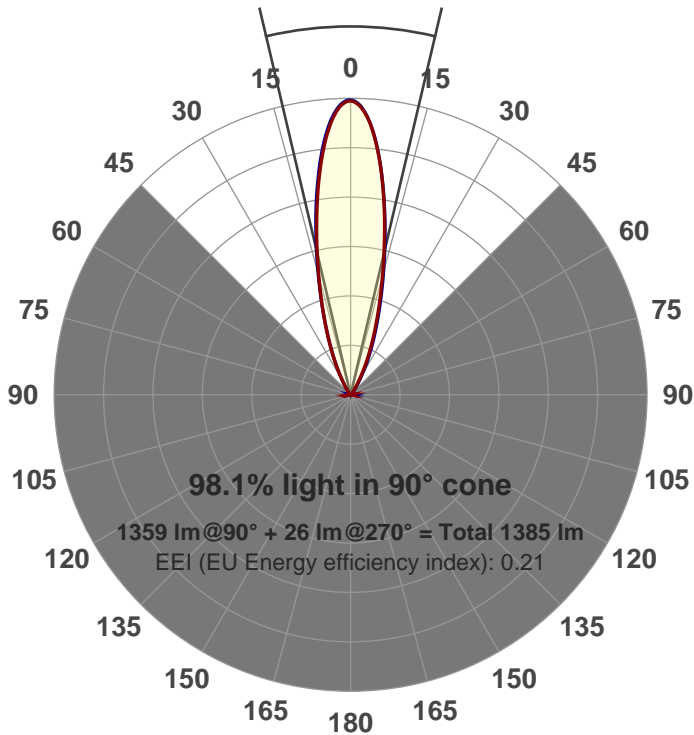
Power: 21.1 W

PF: 0.99



Beam angle

26.5°



Product name:

**GR-CZ20-NF-RD-91A**

Item number:

**GR-CZ20-NF-RD-91A**

Date and time:

**6/14/2017 12:34:02 PM**

Description:

**500 mA V6**

**LUM: 1359**

**PPF: 22.8**

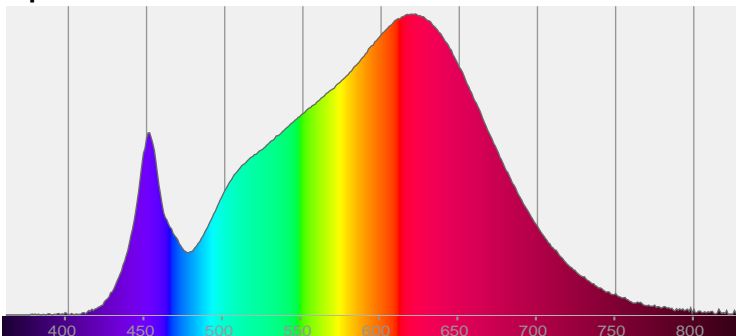


CIE 1931

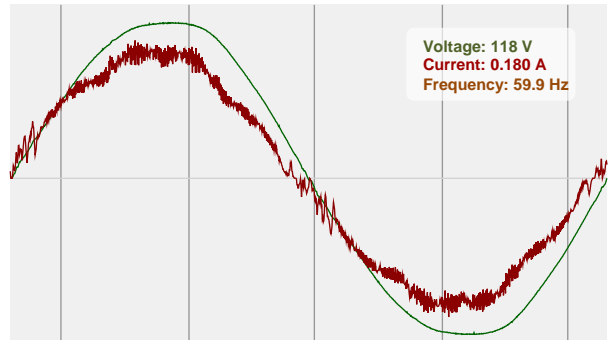
x: 0.429

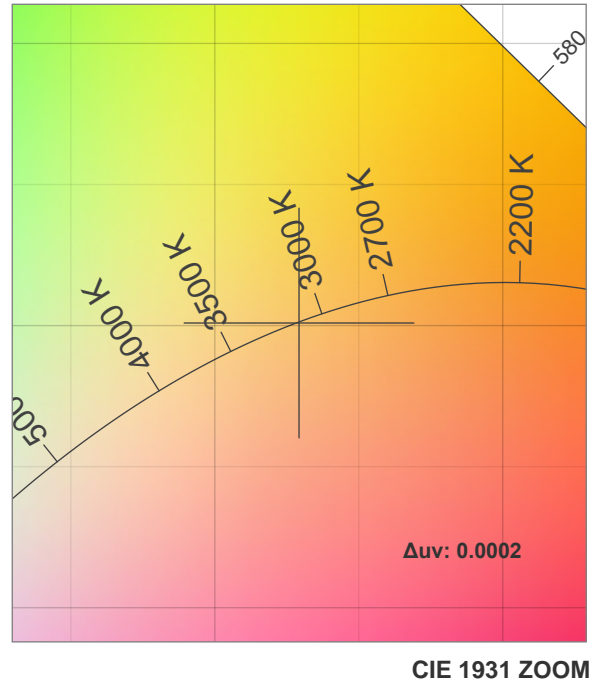
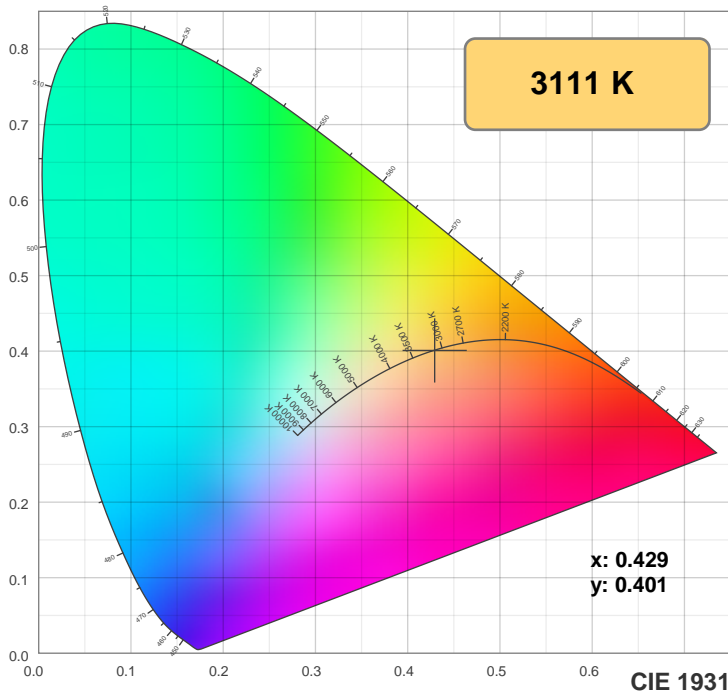
y: 0.401

Spectra

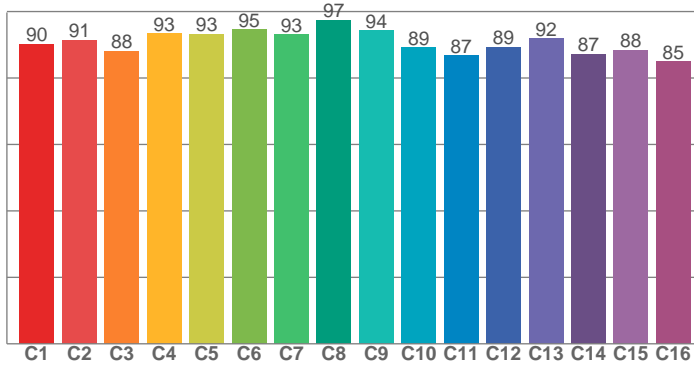


Power

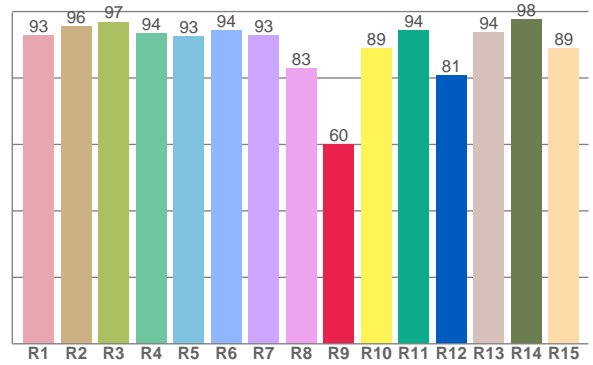




## TM30: 90.9



## 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
92.9	95.6	96.9	93.5	92.6	94.4	92.8	83.0	60.1	88.9	94.4	80.7	93.6	97.7	89.0

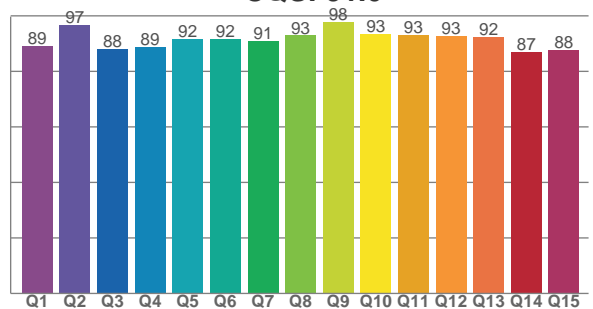
### TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
90.2	91.5	88.1	93.4	93.3	94.5	93.1	97.5	94.4	89.2	86.7	89.4	91.9	87.2	88.4	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	88.7	91.8	91.7	91.1	93.0	97.7	93.5	93.0	92.6	92.5	87.1	87.6

## CQS: 91.0



## Color parameters

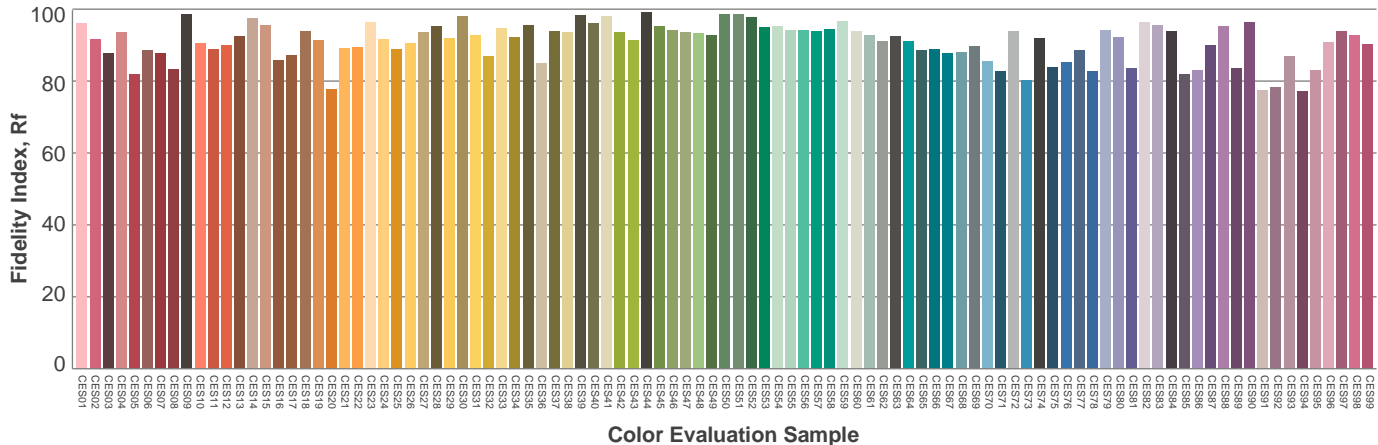
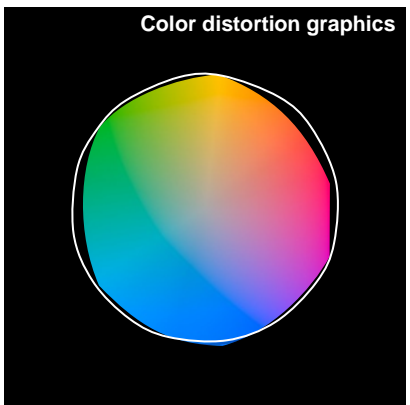
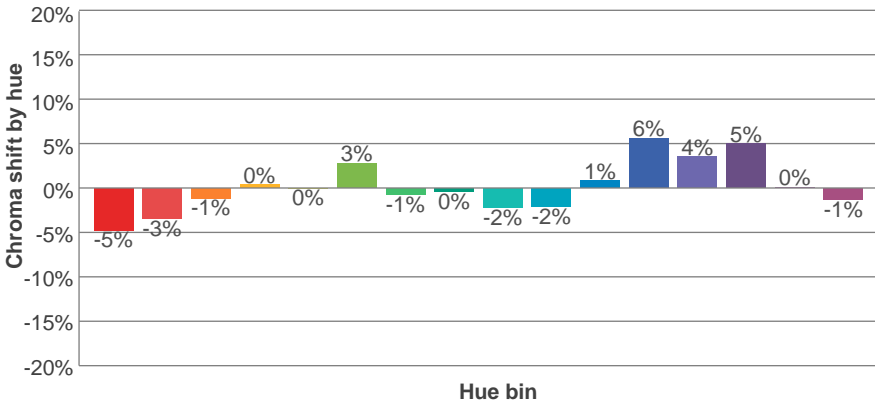
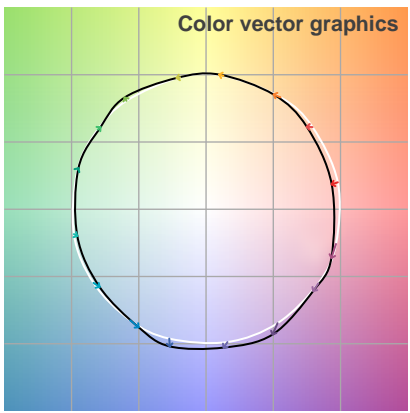
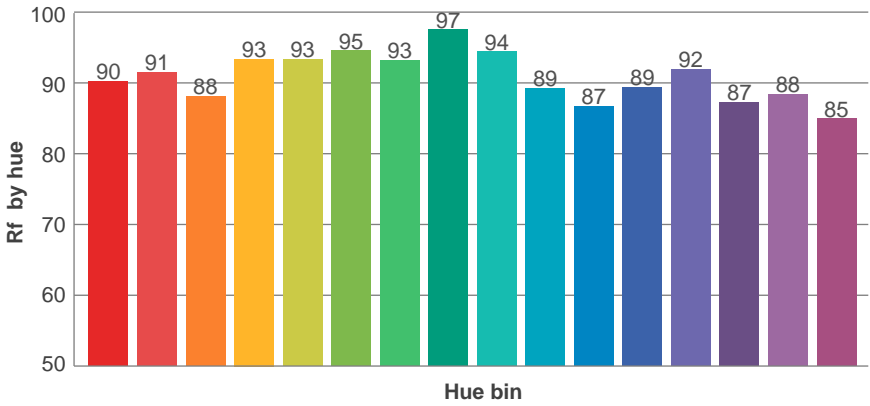
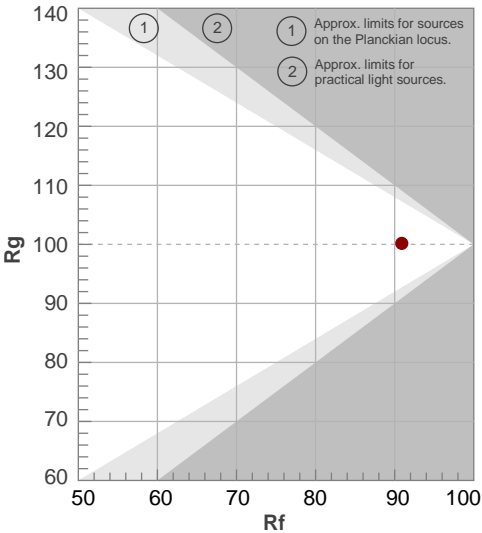
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3111 K	92.7	60.1	90.9	100.2	91.0	0.429	0.401	0.247	0.346	0.0002

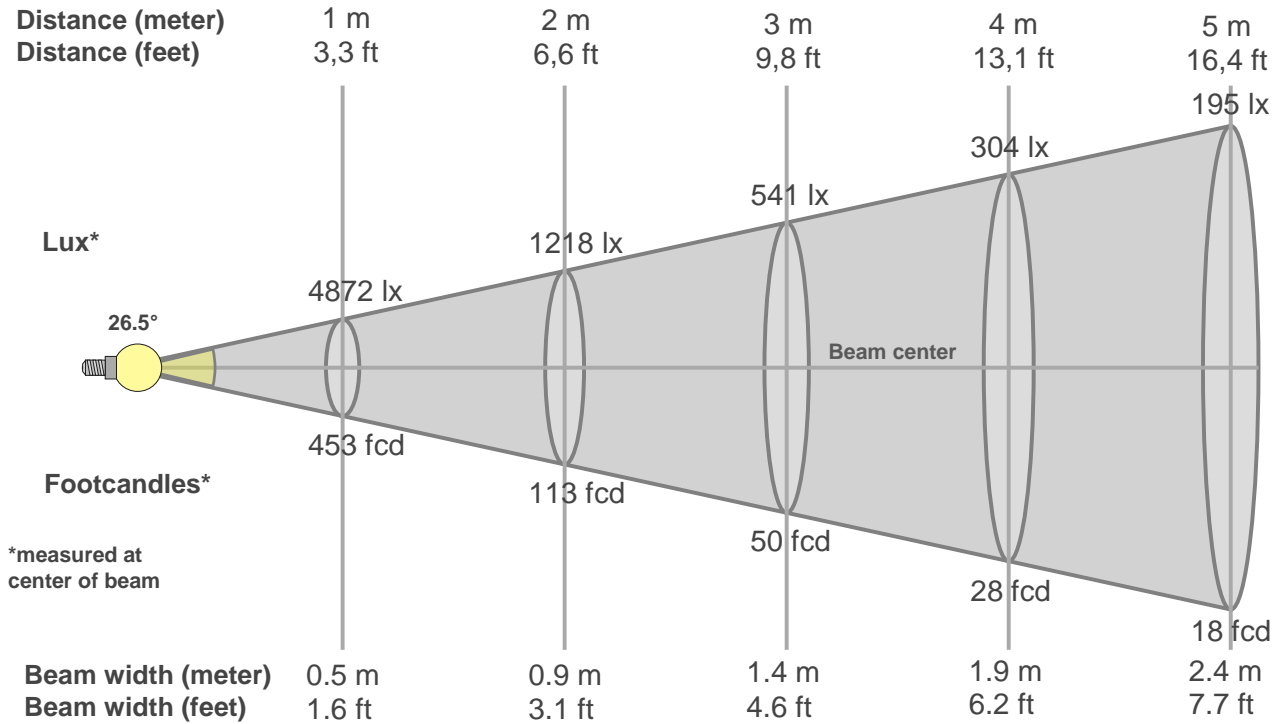
# TM30 details

**Rf 90.9**  
Fidelity index Rf

**Rg 100.2**  
Gammut index Rg

Hue Bin	R <sub>f</sub>	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%	-4%
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
4872lx	1218lx	541lx	304lx	195lx	135lx	99lx	76lx	60lx	49lx	40lx	34lx	29lx	25lx	22lx	19lx	17lx	15lx	13lx	12lx
452.6fcd	113.2fcd	50.3fcd	28.3fcd	18.1fcd	12.6fcd	9.2fcd	7.1fcd	5.6fcd	4.5fcd	3.7fcd	3.1fcd	2.7fcd	2.3fcd	2fcd	1.8fcd	1.6fcd	1.4fcd	1.3fcd	1.1fcd

### 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°
4872	4784	4535	4154	3693	3189	2702	2241	1848	1499	1205	950	737	554	403	283	194	139	101	75
100%	98%	93%	85%	76%	65%	55%	46%	38%	31%	25%	19%	15%	11%	8%	6%	4%	3%	2%	2%

### 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°
4872	4806	4575	4211	3757	3265	2763	2295	1864	1496	1178	919	699	518	372	262	186	135	100	76
100%	99%	94%	86%	77%	67%	57%	47%	38%	31%	24%	19%	14%	11%	8%	5%	4%	3%	2%	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°
4872	4768	4524	4139	3685	3192	2700	2250	1845	1507	1214	967	752	570	415	288	199	138	99	72
100%	98%	93%	85%	76%	66%	55%	46%	38%	31%	25%	20%	15%	12%	9%	6%	4%	3%	2%	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°
4872	4785	4525	4147	3693	3213	2745	2302	1918	1579	1292	1048	837	653	494	361	256	183	132	98
100%	98%	93%	85%	76%	66%	56%	47%	39%	32%	27%	22%	17%	13%	10%	7%	5%	4%	3%	2%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
<b>26.5°</b>	<b>54.2°</b>	<b>70.4°</b>	<b>1.0%</b>	<b>1.0%</b>



THIS PAGE INTENSIONALLY LEFT BLANK