

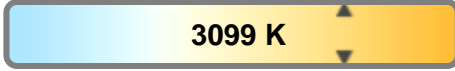
Light efficiency:



Light quality:



Color temperature:

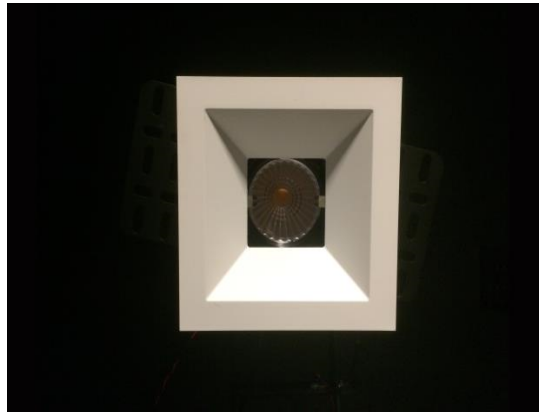


Output: 1322 lm

Peak: 5618 cd

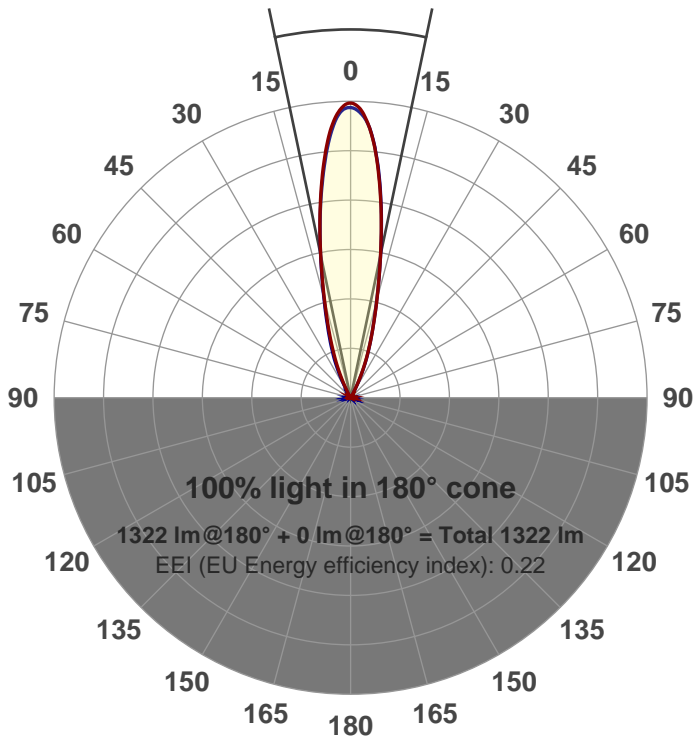
Power: 21.2 W

PF: 0.99



Beam angle

23.7°



Product name:

GR-CZ20-NF-SQ

Item number:

GR-CZ20-NF-SQ

Date and time:

3/8/2017 5:42:30 PM

Description:

LUM: 1322

PPF: 21.3

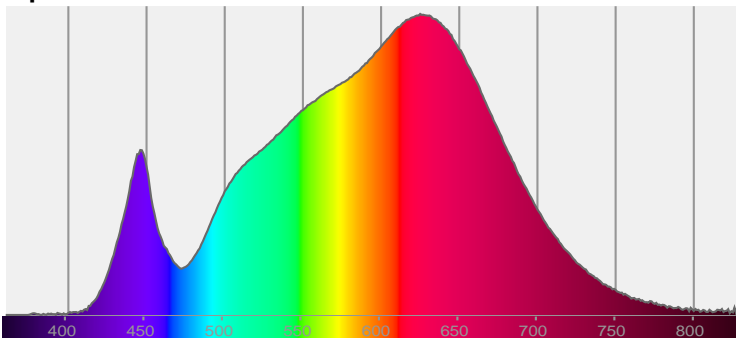


CIE 1931

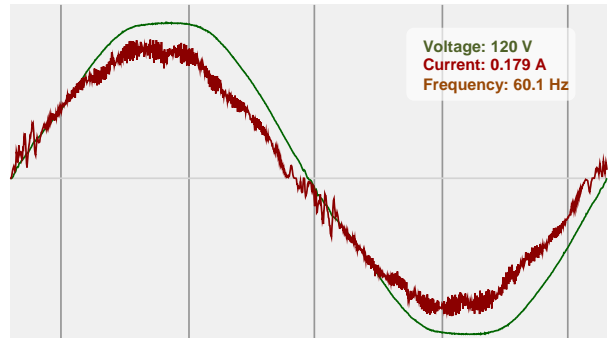
x: 0.429

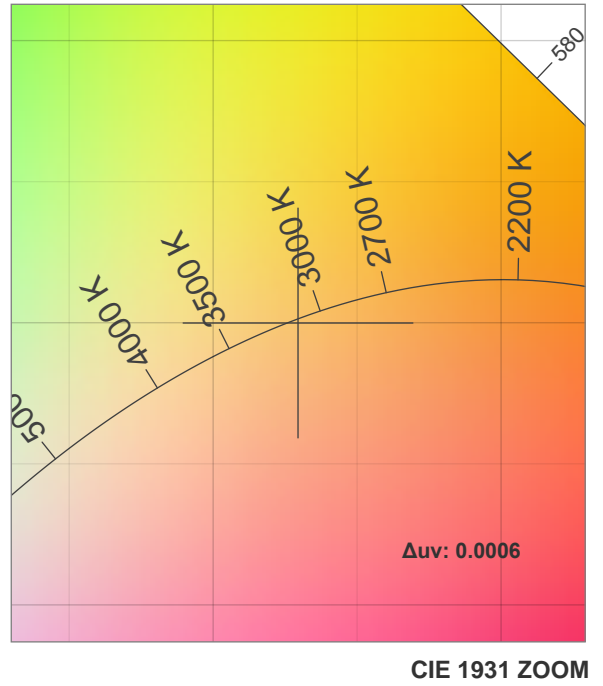
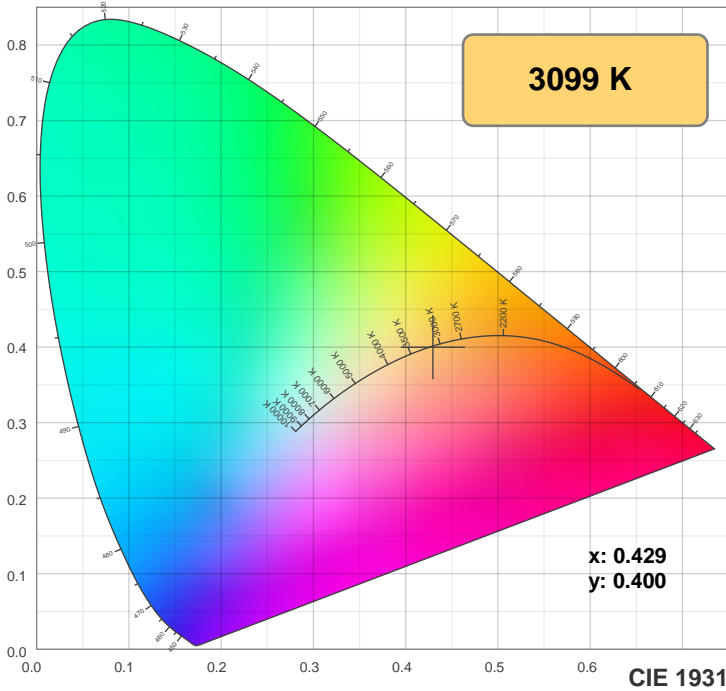
y: 0.400

Spectra



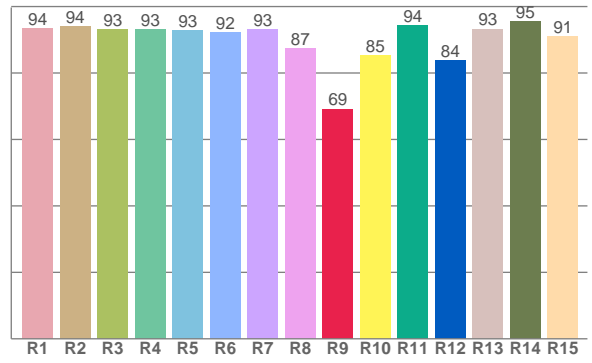
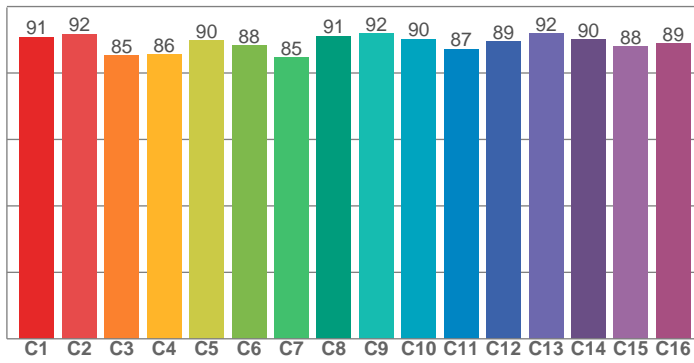
Power





**TM30: 89.2**

**CRI: 92.4 (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
93.6	94.0	93.0	93.1	92.8	92.2	93.2	87.3	69.2	85.4	94.2	83.7	93.3	95.4	90.9

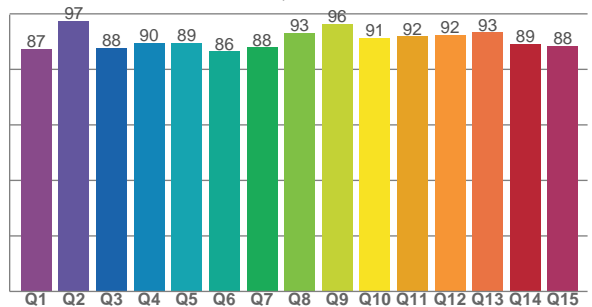
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
90.9	91.7	85.2	85.7	89.9	88.2	84.7	91.2	91.9	90.3	87.3	89.5	91.8	90.1	87.9	89.0

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
87.4	97.3	87.8	89.6	89.5	86.4	87.9	93.0	96.5	91.4	91.8	92.5	93.3	89.2	88.3

**CQS: 90.2**



## Color parameters

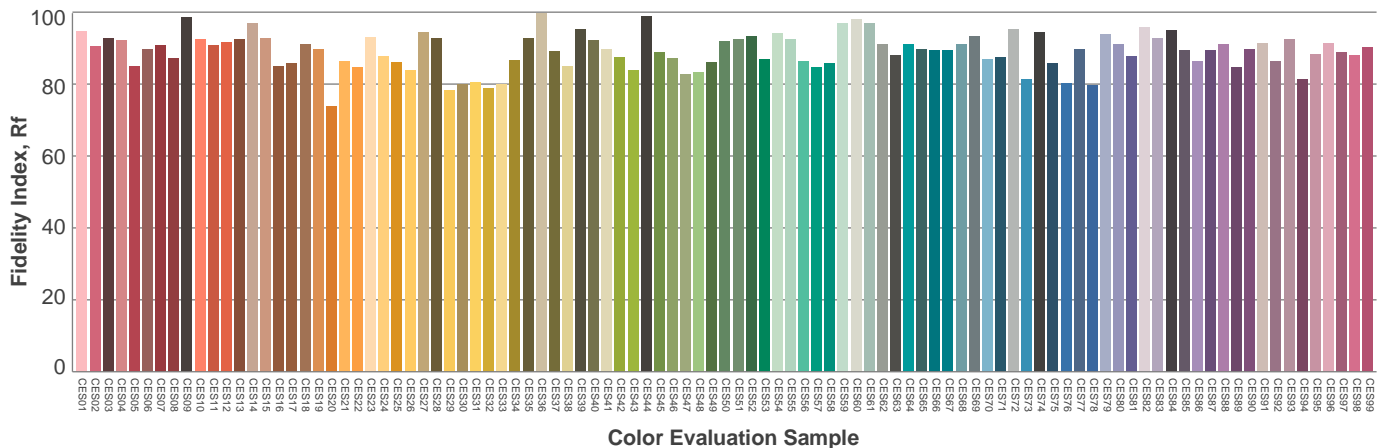
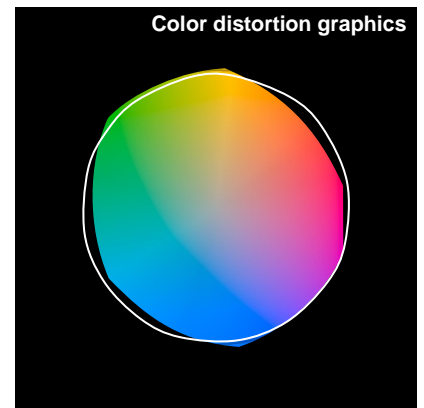
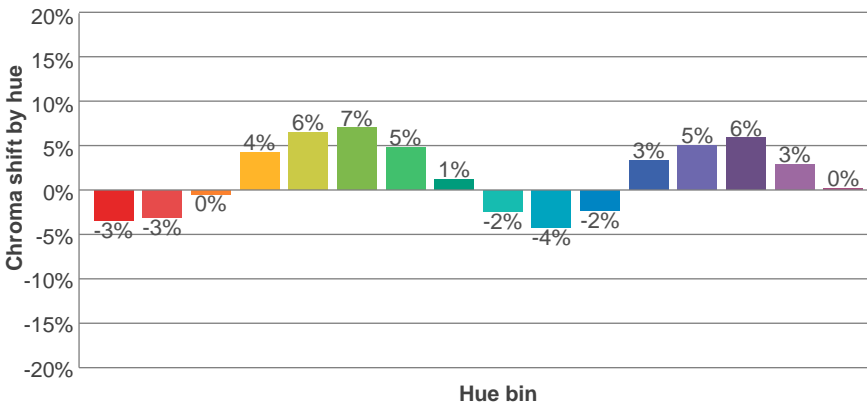
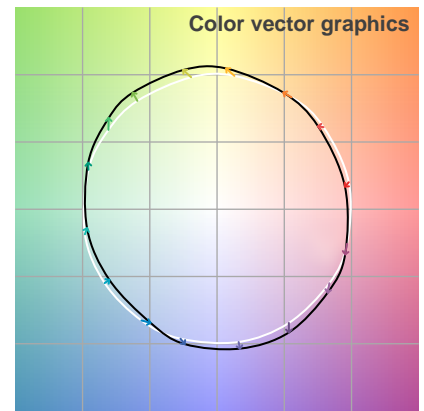
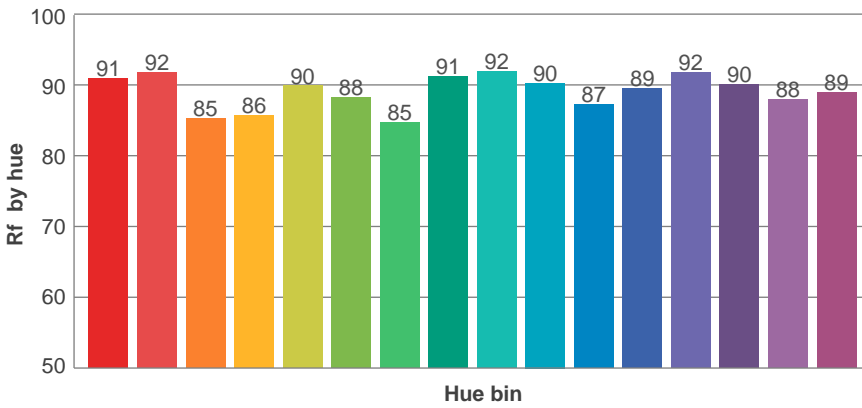
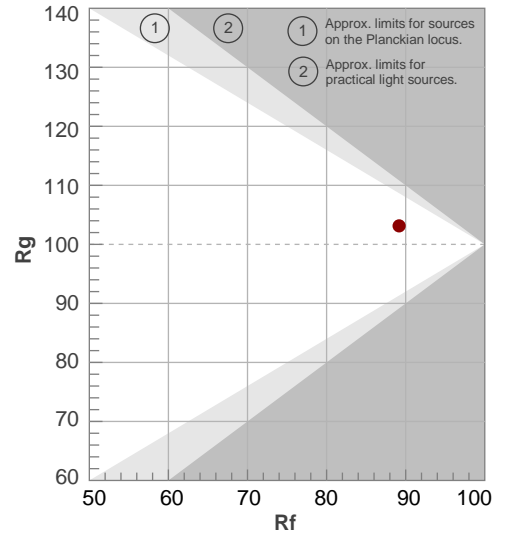
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
<b>CCT</b>	<b>CRI</b>	<b>CRI R9</b>	<b>TM30 Rf</b>	<b>TM30 Rg</b>	<b>CQS</b>	<b>x</b>	<b>y</b>	<b>u</b>	<b>v</b>	<b>Δuv</b>
<b>3099 K</b>	<b>92.4</b>	<b>69.2</b>	<b>89.2</b>	<b>103.1</b>	<b>90.2</b>	<b>0.429</b>	<b>0.400</b>	<b>0.248</b>	<b>0.346</b>	<b>0.0006</b>

# TM30 details

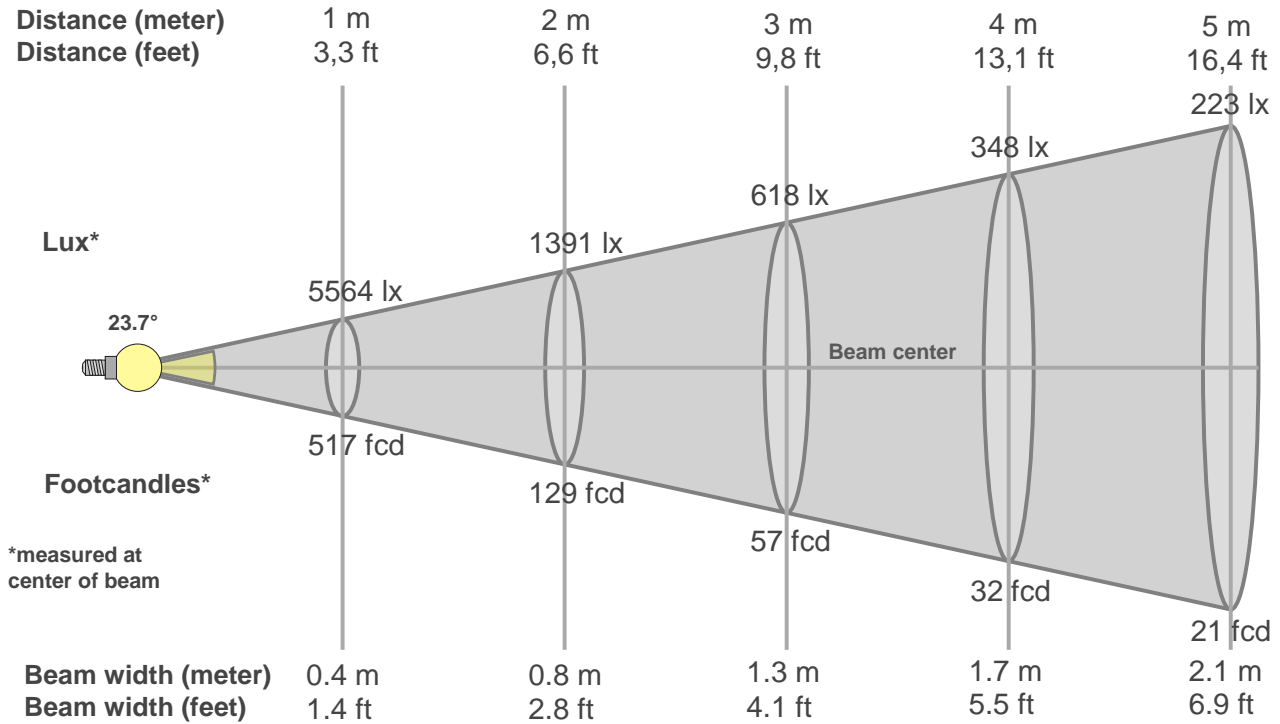
**Rf 89.2**  
Fidelity index Rf

**Rg 103.1**  
Gammut index Rg

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	91	-3%	-3%
2	92	-3%	3%
3	85	0%	7%
4	86	4%	7%
5	90	6%	5%
6	88	7%	0%
7	85	5%	-7%
8	91	1%	-5%
9	92	-2%	-4%
10	90	-4%	0%
11	87	-2%	7%
12	89	3%	4%
13	92	5%	0%
14	90	6%	-4%
15	88	3%	-6%
16	89	0%	-8%



# 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
5564lx	1391lx	618lx	348lx	223lx	155lx	114lx	87lx	69lx	56lx	46lx	39lx	33lx	28lx	25lx	22lx	19lx	17lx	15lx	14lx
516.9fcd	129.2fcd	57.4fcd	32.3fcd	20.7fcd	14.4fcd	10.5fcd	8.1fcd	6.4fcd	5.2fcd	4.3fcd	3.6fcd	3.1fcd	2.6fcd	2.3fcd	2fcd	1.8fcd	1.6fcd	1.4fcd	1.3fcd

## 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°
5564	5484	5163	4639	4014	3359	2723	2157	1689	1321	1008	746	502	287	136	63	48	39	33	27
100%	99%	93%	83%	72%	60%	49%	39%	30%	24%	18%	13%	9%	5%	2%	1%	1%	1%	1%	0%

## 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°
5564	5430	5094	4568	3966	3335	2731	2187	1752	1399	1125	882	653	422	214	77	46	39	32	26
100%	98%	92%	82%	71%	60%	49%	39%	31%	25%	20%	16%	12%	8%	4%	1%	1%	1%	1%	0%

## 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°
5564	5479	5141	4632	4008	3353	2724	2169	1717	1349	1047	788	548	331	148	67	49	40	33	27
100%	98%	92%	83%	72%	60%	49%	39%	31%	24%	19%	14%	10%	6%	3%	1%	1%	1%	1%	0%

## 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°
5564	5409	5142	4644	4034	3371	2730	2159	1698	1342	1051	806	561	333	147	58	44	37	31	25
100%	97%	92%	83%	73%	61%	49%	39%	31%	24%	19%	14%	10%	6%	3%	1%	1%	1%	1%	0%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
23.7°	52.5°	62.7°	1.0%	1.0%



