

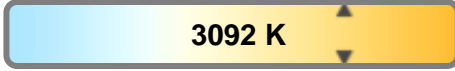
Light efficiency:



Light quality:



Color temperature:

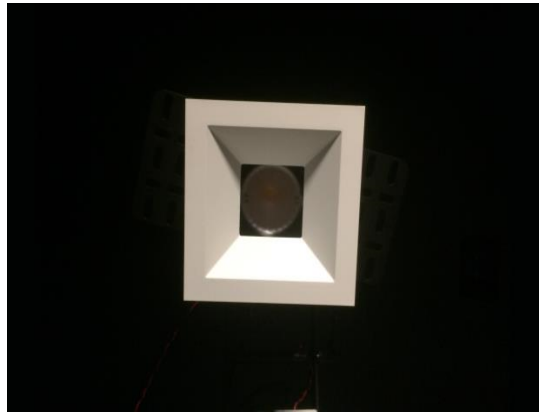


Output: 1236 lm

Peak: 4542 cd

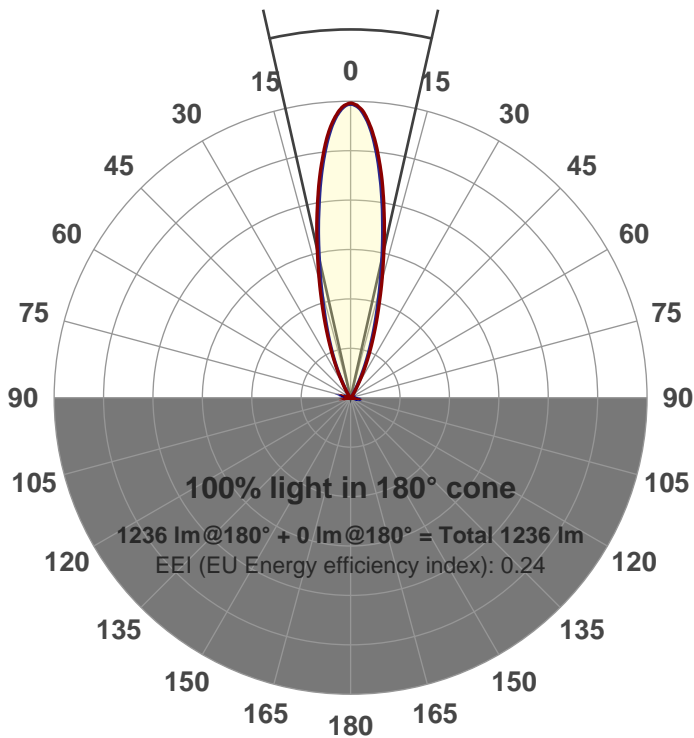
Power: 21.3 W

PF: 0.99



Beam angle

25.4°



Product name:

GR-CZ20-NF-SQ-91A

Item number:

GR-CZ20-NF-SQ-91A

Date and time:

3/31/2017 12:32:22 PM

Description:

LUM: 1236

PPF: 19.9

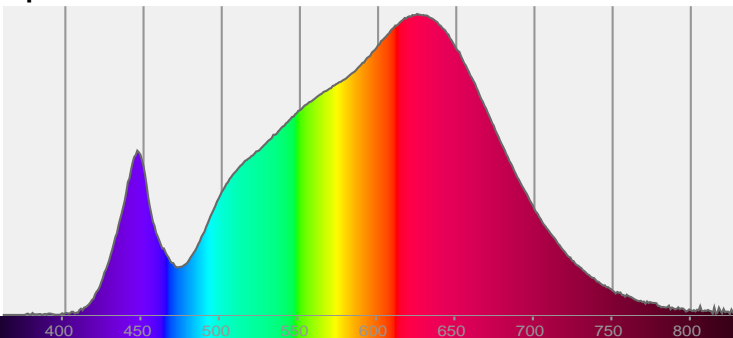


CIE 1931

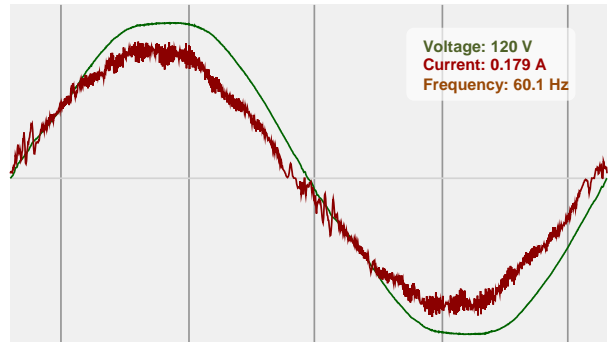
x: 0.430

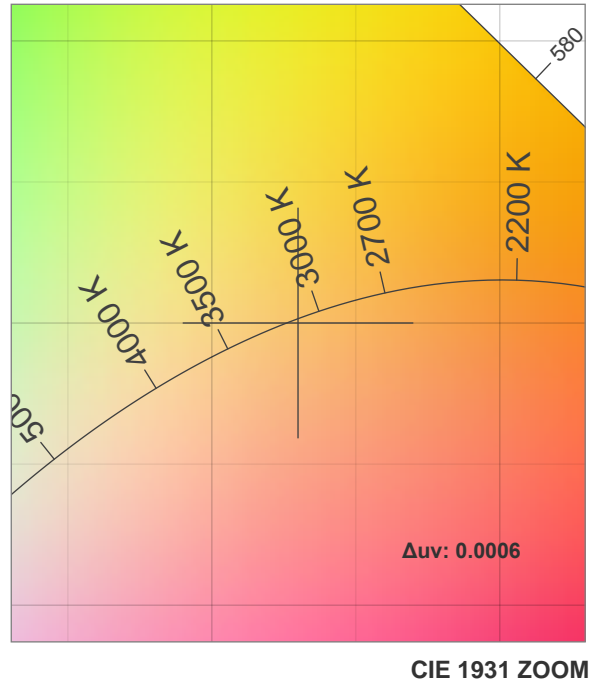
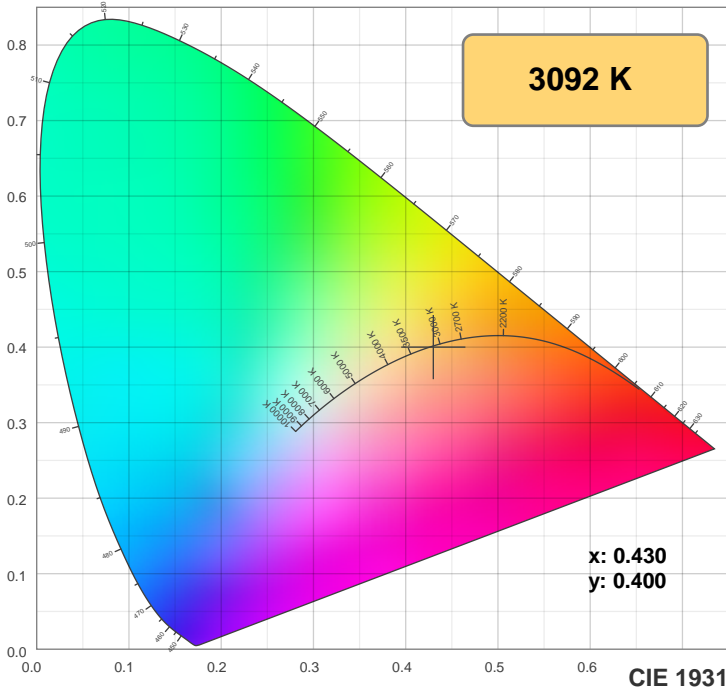
y: 0.400

Spectra



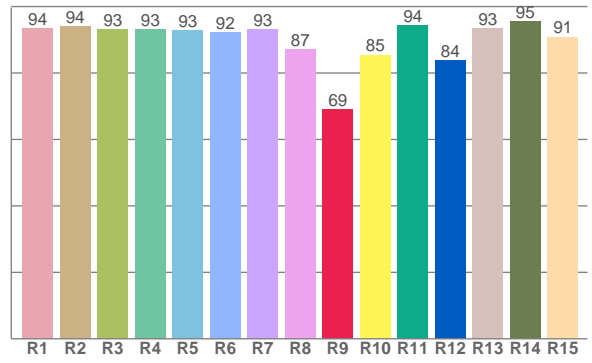
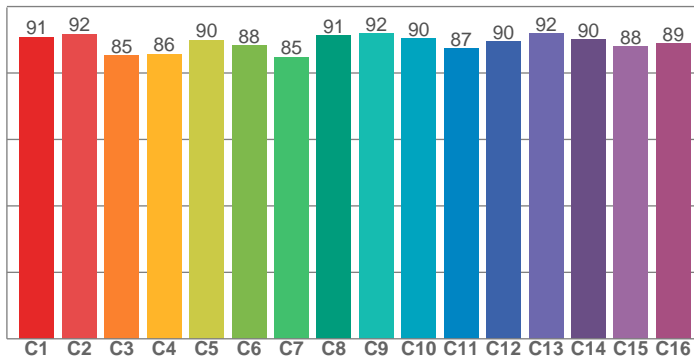
Power



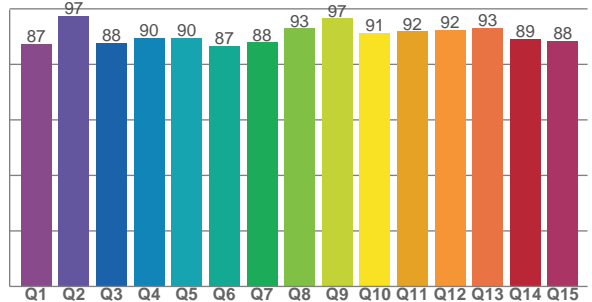


**TM30: 89.2**

**CRI: 92.4 (R1-R8)**



**CQS: 90.2**



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	93.1	93.2	92.8	92.3	93.2	87.2	69.0	85.5	94.3	83.8	93.3	95.5	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	85.3	85.8	90.0	88.3	84.8	91.2	92.0	90.3	87.3	89.5	91.8	90.1	87.9	88.9

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	86.5	87.9	93.0	96.5	91.4	91.8	92.4	93.3	89.1	88.3

## Color parameters

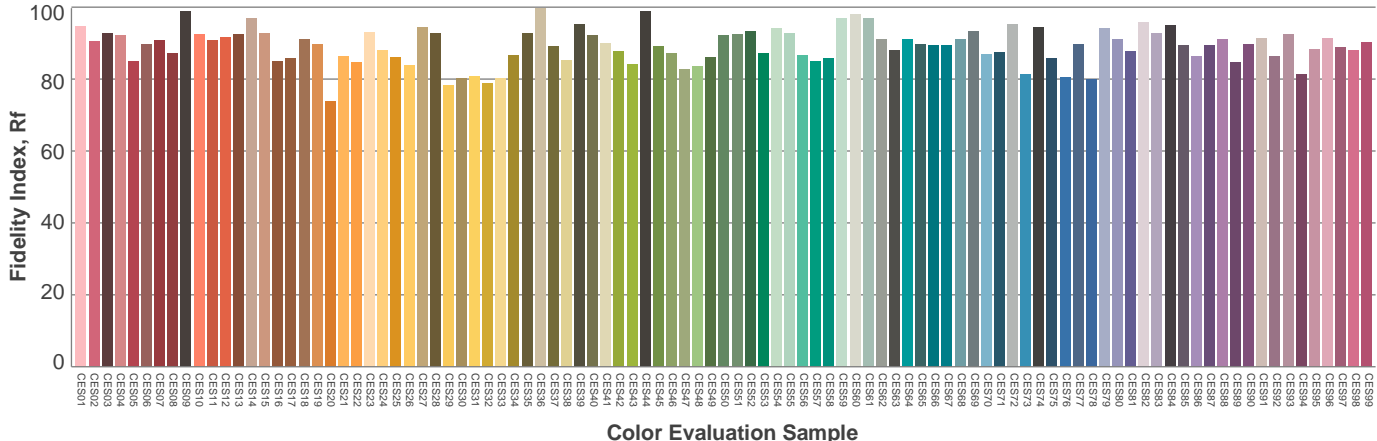
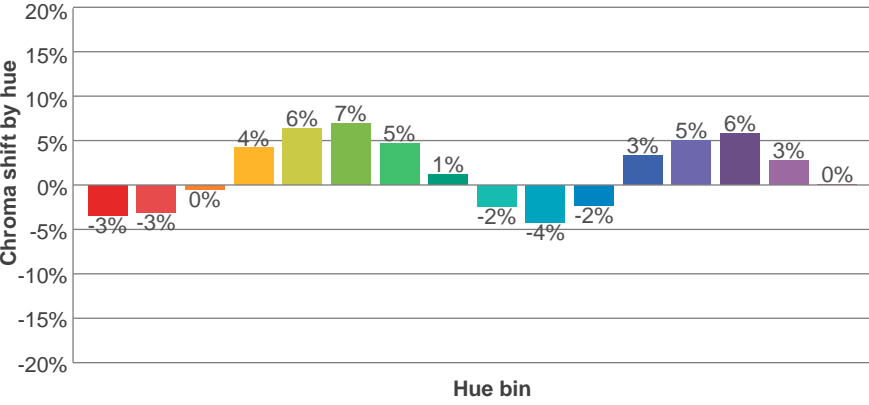
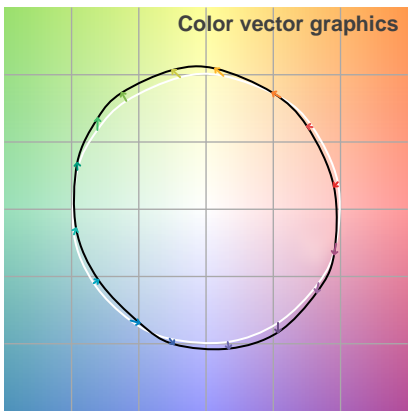
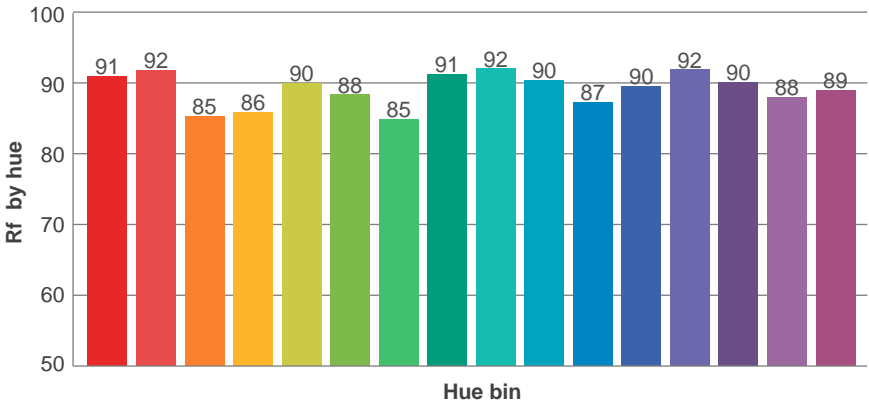
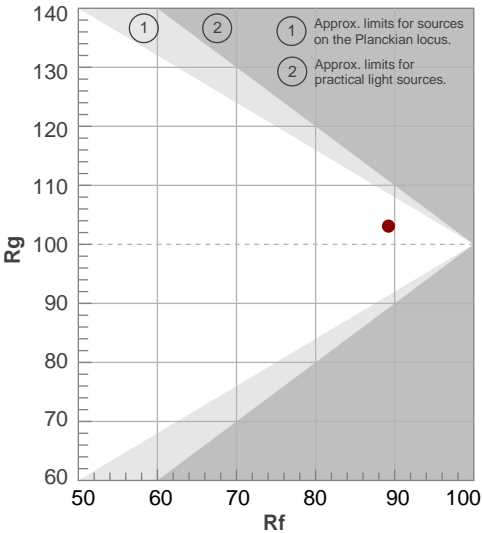
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
<b>CCT</b>	<b>CRI</b>	<b>CRI R9</b>	<b>TM30 Rf</b>	<b>TM30 Rg</b>	<b>CQS</b>	<b>x</b>	<b>y</b>	<b>u</b>	<b>v</b>	<b>Δuv</b>
<b>3092 K</b>	<b>92.4</b>	<b>69.0</b>	<b>89.2</b>	<b>103.1</b>	<b>90.2</b>	<b>0.430</b>	<b>0.400</b>	<b>0.248</b>	<b>0.346</b>	<b>0.0006</b>

# TM30 details

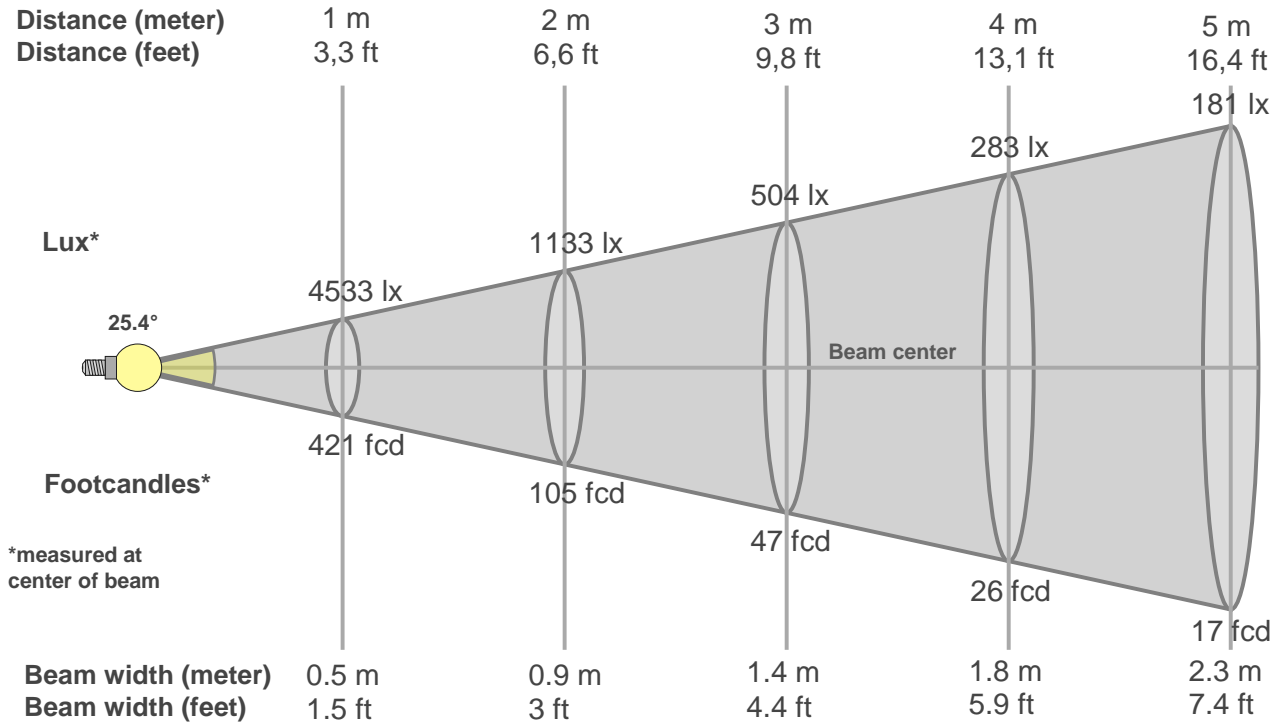
**Rf 89.2**  
Fidelity index Rf

**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	90	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
4533lx	1133lx	504lx	283lx	181lx	126lx	93lx	71lx	56lx	45lx	37lx	31lx	27lx	23lx	20lx	18lx	16lx	14lx	13lx	11lx
421.1fcd	105.3fcd	46.8fcd	26.3fcd	16.8fcd	11.7fcd	8.6fcd	6.6fcd	5.2fcd	4.2fcd	3.5fcd	2.9fcd	2.5fcd	2.1fcd	1.9fcd	1.6fcd	1.5fcd	1.3fcd	1.2fcd	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°
4533	4453	4223	3866	3431	2958	2495	2059	1677	1346	1061	819	613	442	301	202	137	96	66	46
100%	98%	93%	85%	76%	65%	55%	45%	37%	30%	23%	18%	14%	10%	7%	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°
4533	4431	4182	3795	3332	2836	2354	1923	1543	1233	970	748	552	384	247	155	100	68	49	38
100%	98%	92%	84%	74%	63%	52%	42%	34%	27%	21%	17%	12%	8%	5%	3%	2%	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°
4533	4460	4221	3871	3440	2960	2490	2060	1679	1349	1069	835	632	461	318	213	142	98	68	48
100%	98%	93%	85%	76%	65%	55%	45%	37%	30%	24%	18%	14%	10%	7%	5%	3%	2%	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°
4533	4440	4187	3799	3333	2835	2354	1913	1537	1219	948	716	518	351	221	136	89	62	46	36
100%	98%	92%	84%	74%	63%	52%	42%	34%	27%	21%	16%	11%	8%	5%	3%	2%	1%	1%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
25.4°	54.2°	68.6°	1.0%	1.0%



