

Light efficiency:



Light quality:



Color temperature:

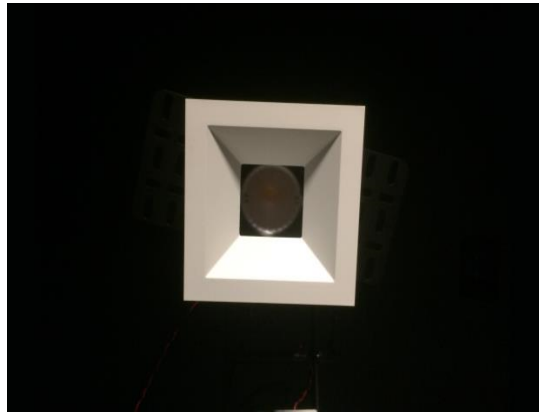


Output: 1361 lm

Peak: 7389 cd

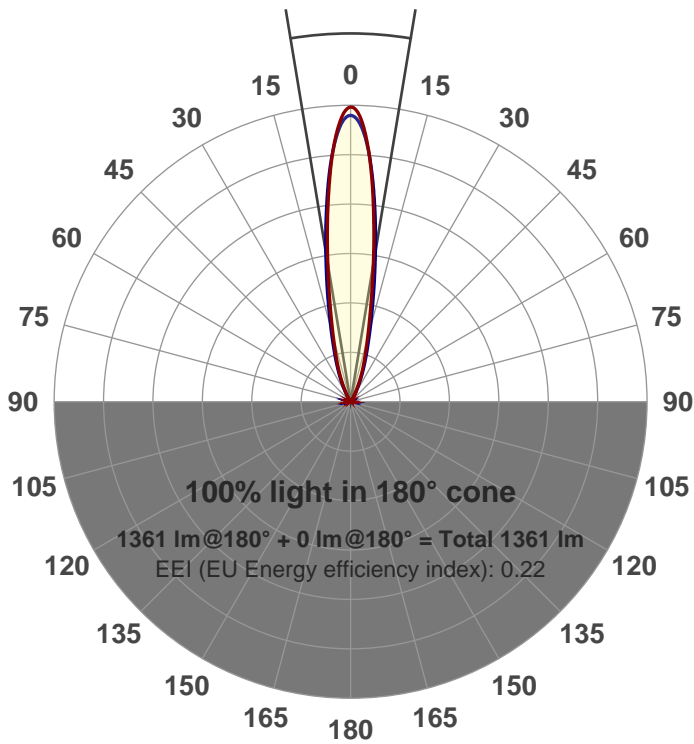
Power: 21.2 W

PF: 0.99



Beam angle

18.8°



Product name:
GR-CZ20-SP-SQ-91A

Item number:
GR-CZ20-SP-SQ-91A

Date and time:
3/8/2017 4:37:55 PM

Description:

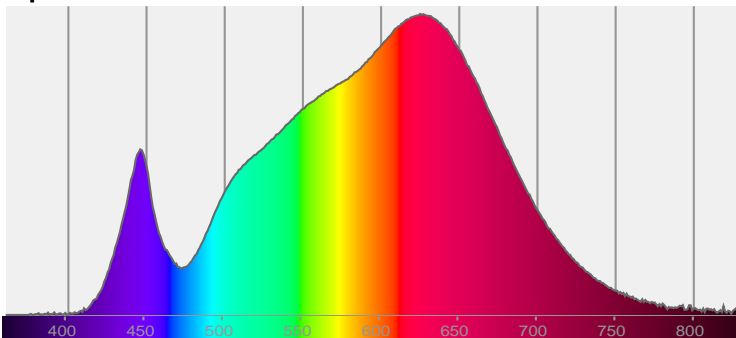
LUM: 1361

PPF: 21.9

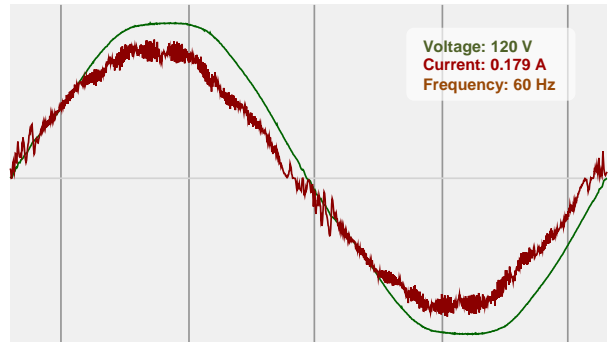


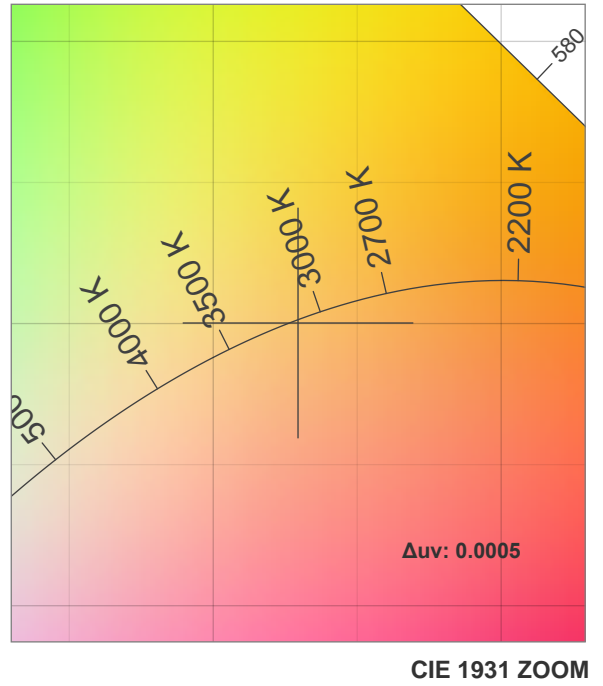
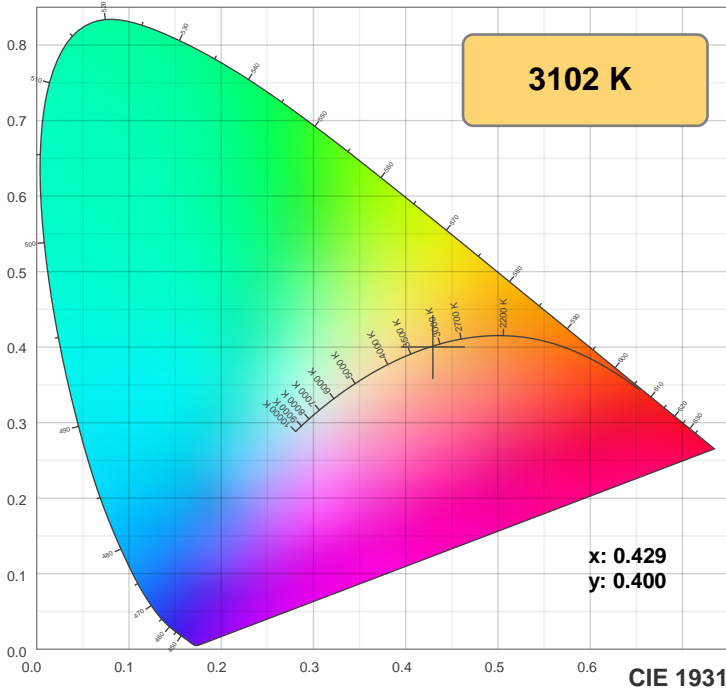
CIE 1931
x: 0.429
y: 0.400

Spectra



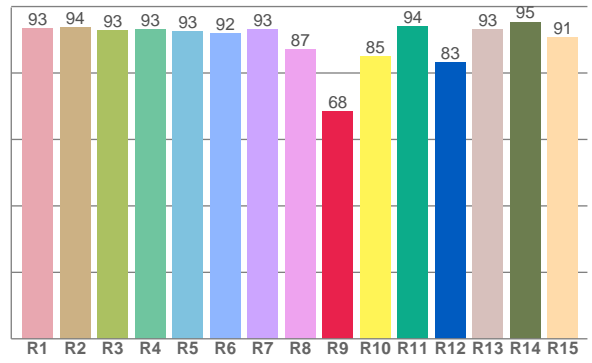
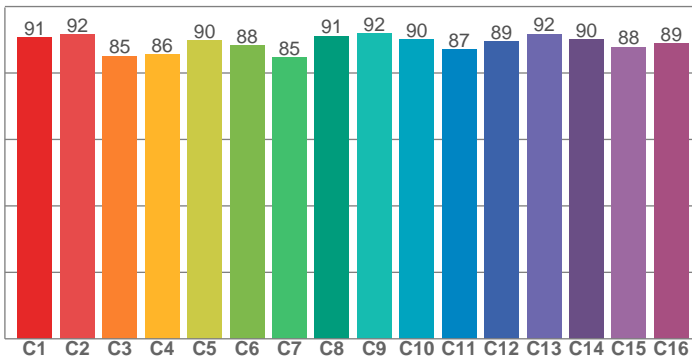
Power





TM30: 89.1

CRI: 92.2 (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
93.4	93.8	93.0	93.0	92.6	92.0	93.2	87.1	68.5	85.0	94.1	83.3	93.1	95.4	90.7

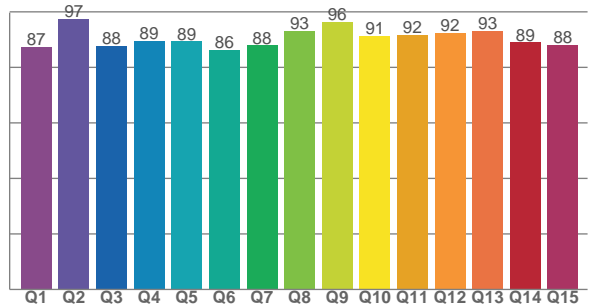
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
90.7	91.6	85.1	85.6	89.8	88.2	84.6	91.2	91.8	90.1	87.1	89.4	91.8	90.0	87.8	88.9

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
87.3	97.3	87.7	89.5	89.4	86.4	87.9	93.0	96.5	91.3	91.8	92.4	93.2	89.0	88.2

CQS: 90.1



Color parameters

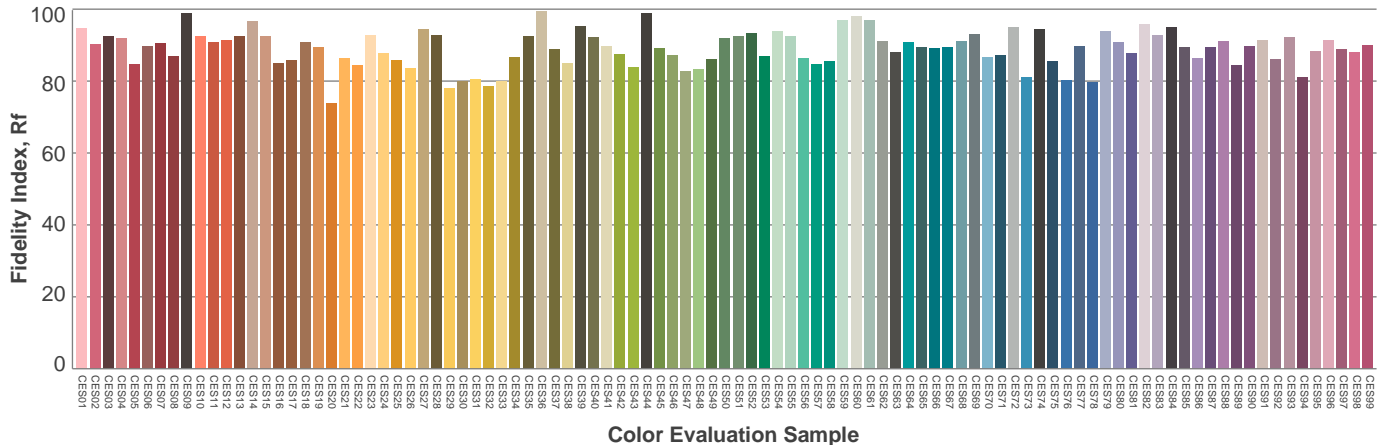
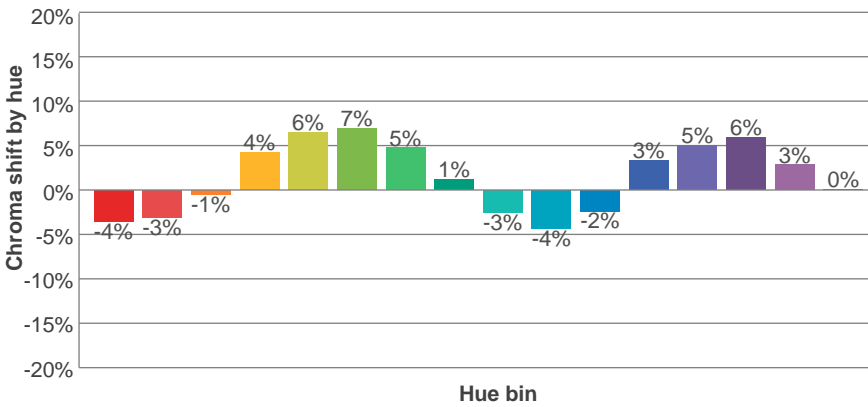
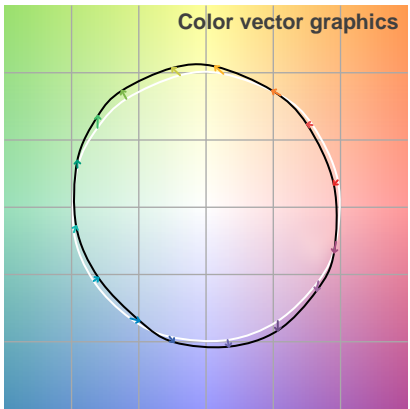
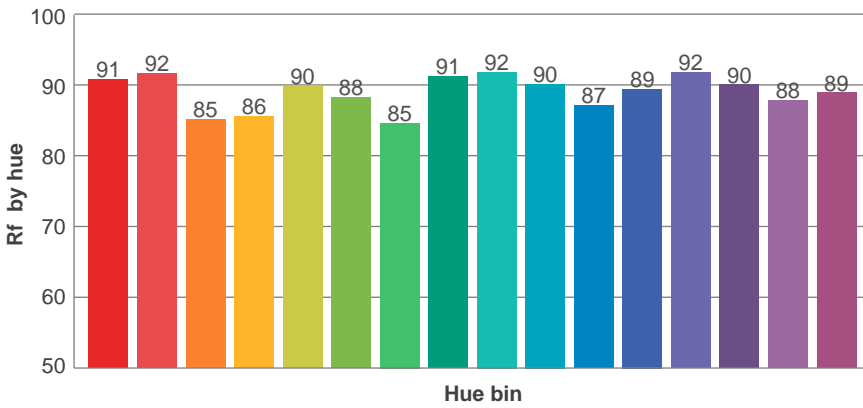
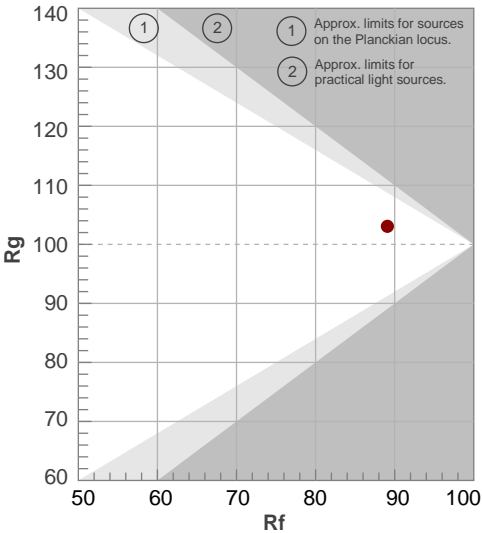
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3102 K	92.2	68.5	89.1	103.1	90.1	0.429	0.400	0.247	0.346	0.0005

TM30 details

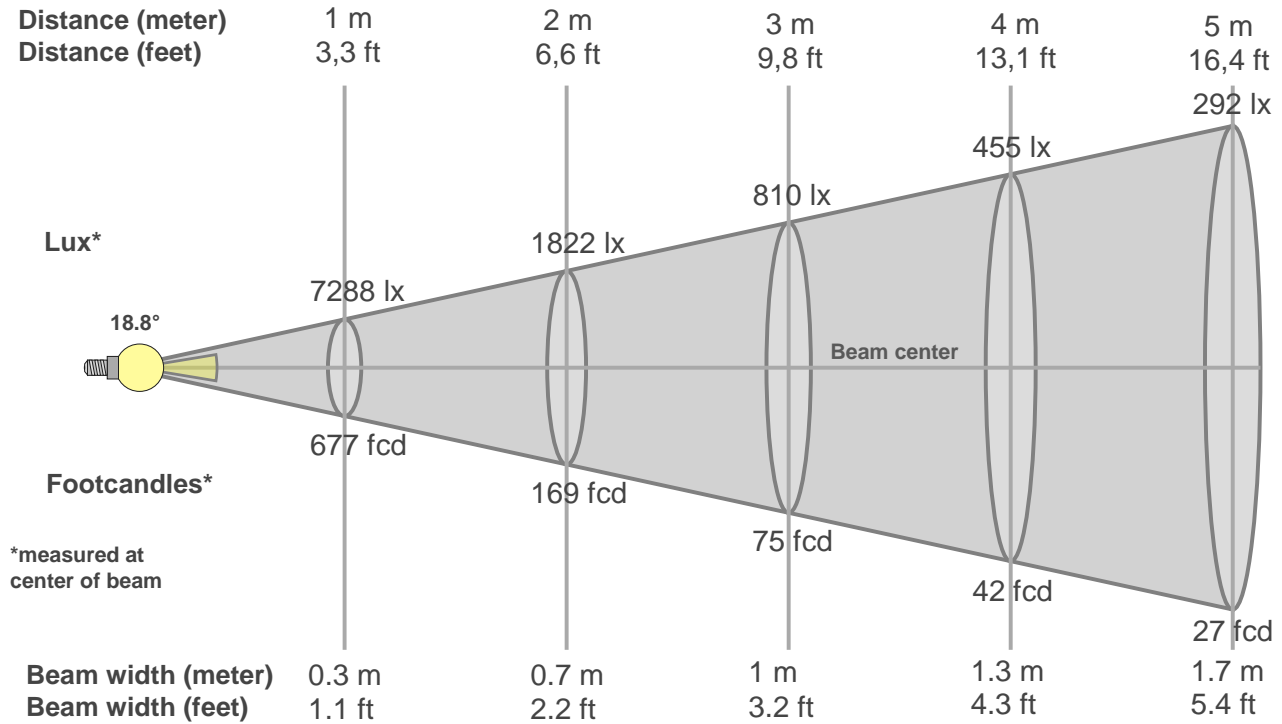
Rf 89.1
Fidelity index Rf

Rg 103.1
Gammut index Rg

Hue Bin	R _f	Graphic shifts (%)	
		Chroma	Hue
1	91	-4%	-3%
2	92	-3%	3%
3	85	-1%	7%
4	86	4%	7%
5	90	6%	5%
6	88	7%	0%
7	85	5%	-7%
8	91	1%	-5%
9	92	-3%	-4%
10	90	-4%	0%
11	87	-2%	7%
12	89	3%	4%
13	92	5%	0%
14	90	6%	-4%
15	88	3%	-7%
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
7288lx	1822lx	810lx	455lx	292lx	202lx	149lx	114lx	90lx	73lx	60lx	51lx	43lx	37lx	32lx	28lx	25lx	22lx	20lx	18lx
677.1fc	169.3fc	75.2fcd	42.3fcd	27.1fcd	18.8fcd	13.8fcd	10.6fcd	8.4fcd	6.8fcd	5.6fcd	4.7fcd	4fcd	3.5fcd	3fcd	2.6fcd	2.3fcd	2.1fcd	1.9fcd	1.7fcd

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°
7288	7049	6293	5242	4178	3223	2459	1887	1463	1151	898	686	491	330	209	128	81	54	38	30
100%	97%	86%	72%	57%	44%	34%	26%	20%	16%	12%	9%	7%	5%	3%	2%	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°
7288	6926	6288	5395	4433	3521	2766	2138	1671	1308	1026	793	590	424	289	192	128	87	58	39
100%	95%	86%	74%	61%	48%	38%	29%	23%	18%	14%	11%	8%	6%	4%	3%	2%	1%	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°
7288	7095	6335	5281	4185	3196	2426	1851	1438	1135	897	692	502	341	210	127	79	52	40	30
100%	97%	87%	72%	57%	44%	33%	25%	20%	16%	12%	9%	7%	5%	3%	2%	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°
7288	6927	6309	5412	4448	3519	2745	2131	1655	1304	1024	798	596	433	298	196	129	88	60	42
100%	95%	87%	74%	61%	48%	38%	29%	23%	18%	14%	11%	8%	6%	4%	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
18.8°	46.8°	64.1°	1.0%	1.0%

