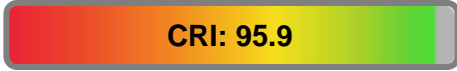


Light efficiency:



Light quality:



Color temperature:

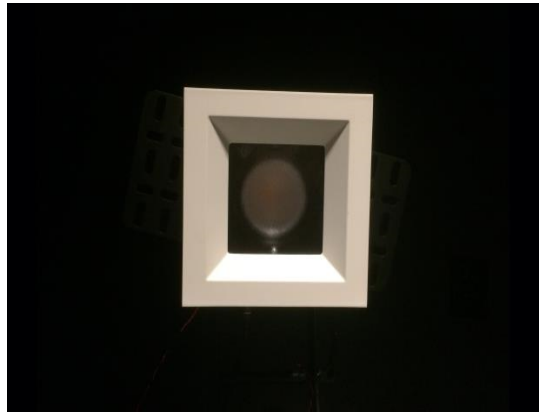


Output: 785 lm

Peak: 3893 cd

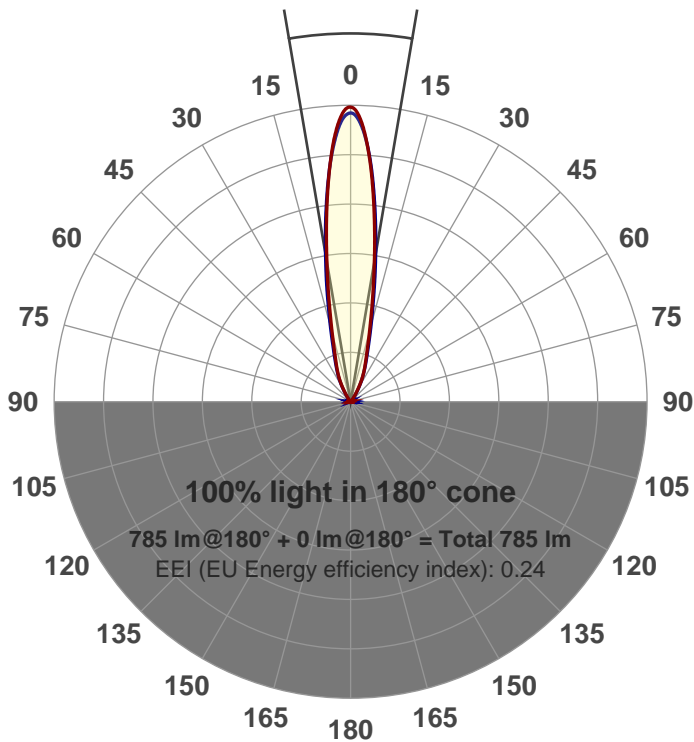
Power: 15.0 W

PF: 0.97



Beam angle

19.3°



Product name:

GRO-AD-SP-SQ-91A

Item number:

GRO-AD-SP-SQ-91A

Date and time:

3/2/2017 12:29:02 PM

Description:

LUM: 785

PPF: 13.2

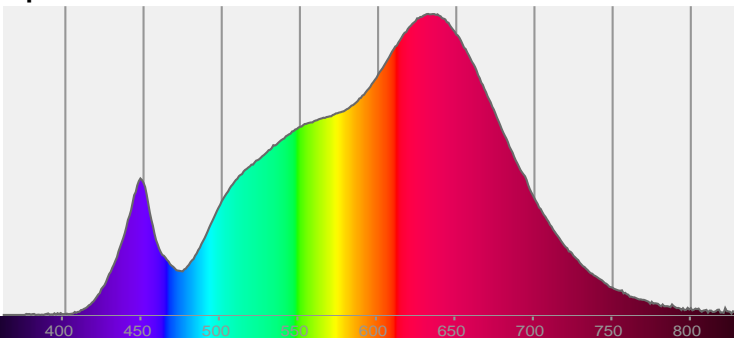


CIE 1931

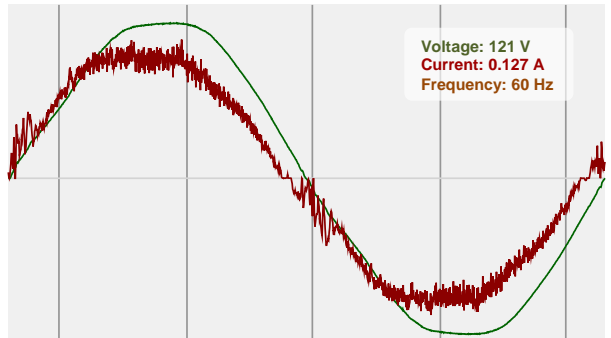
x: 0.438

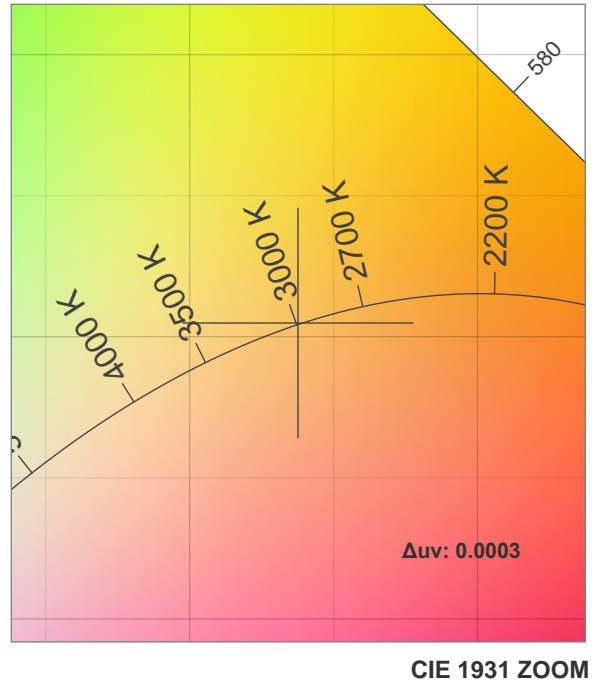
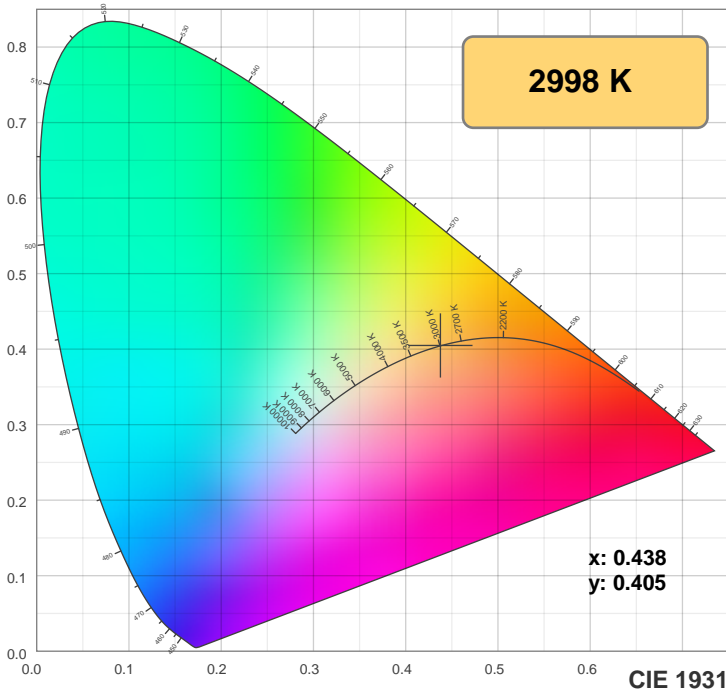
y: 0.405

Spectra

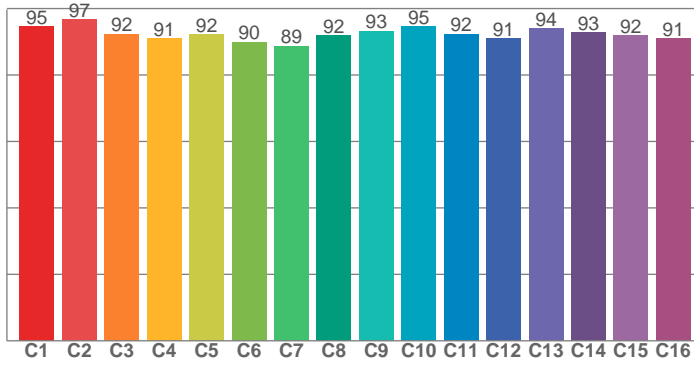


Power

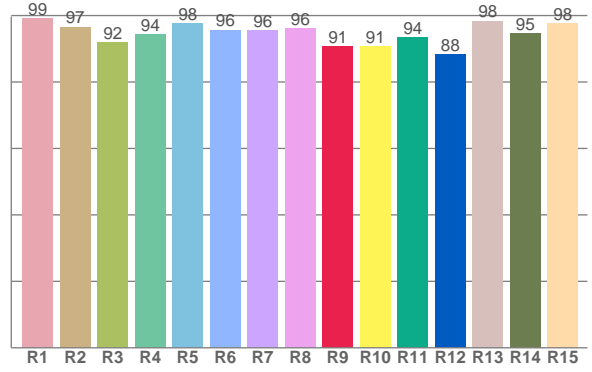




**TM30: 92.7**



**CRI: 95.9 (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
99.2	96.6	91.9	94.4	97.5	95.7	95.5	96.2	90.6	90.8	93.5	88.4	98.4	94.5	97.6

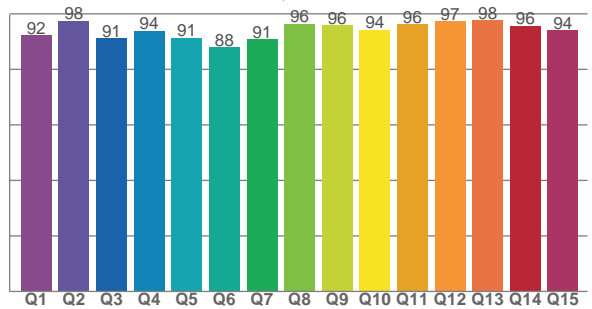
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
94.7	96.8	92.4	91.0	92.2	90.0	88.7	92.0	93.3	94.5	92.3	90.9	94.0	92.7	91.9	91.0

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
92.2	97.5	91.1	93.7	91.4	87.9	90.8	96.3	95.8	94.2	96.2	97.3	97.6	95.7	94.0

**CQS: 93.3**



## Color parameters

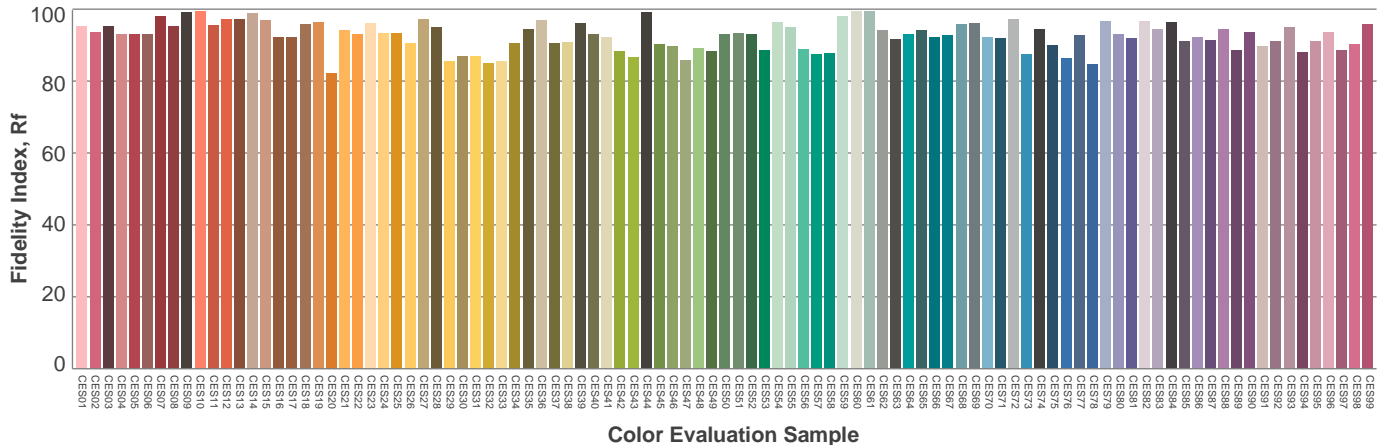
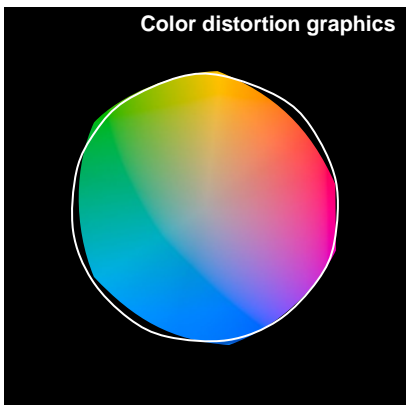
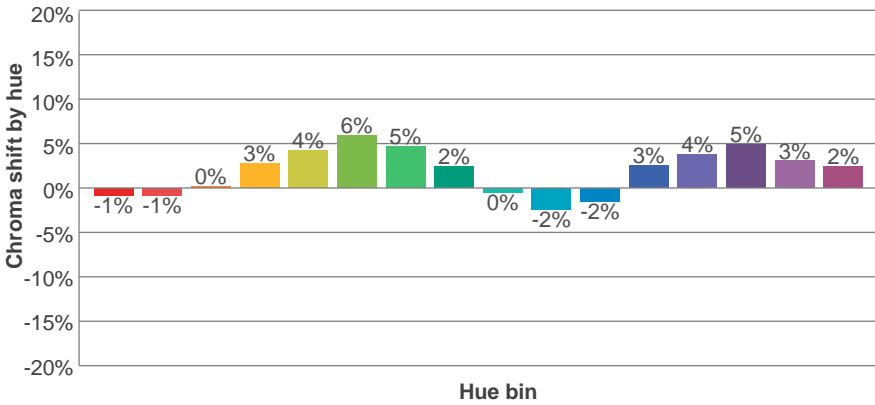
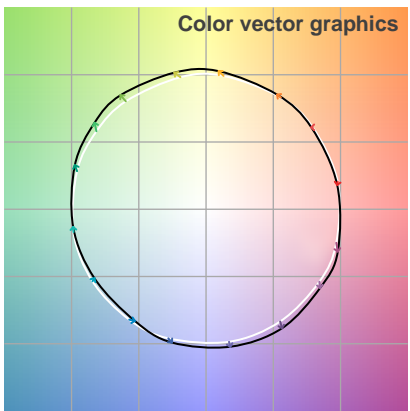
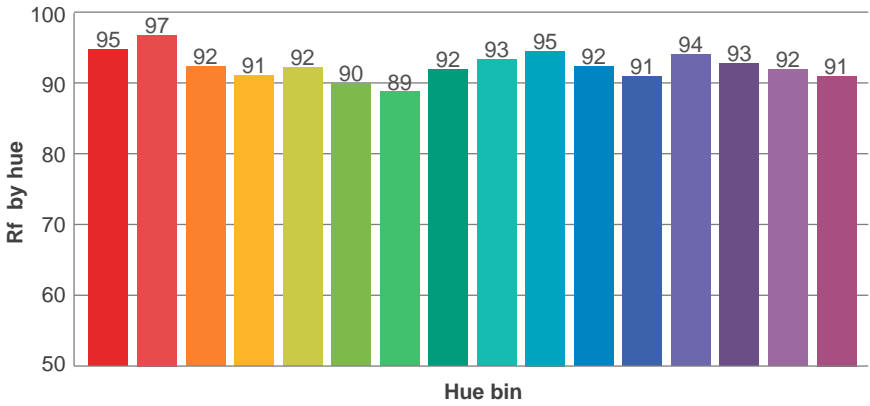
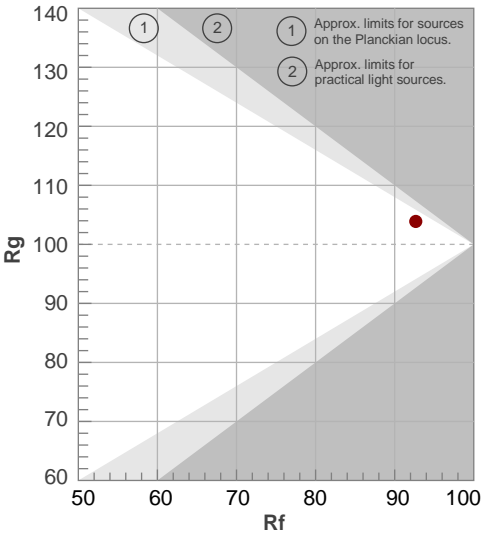
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	$\Delta uv$
2998 K	95.9	90.6	92.7	103.9	93.3	0.438	0.405	0.251	0.348	0.0003

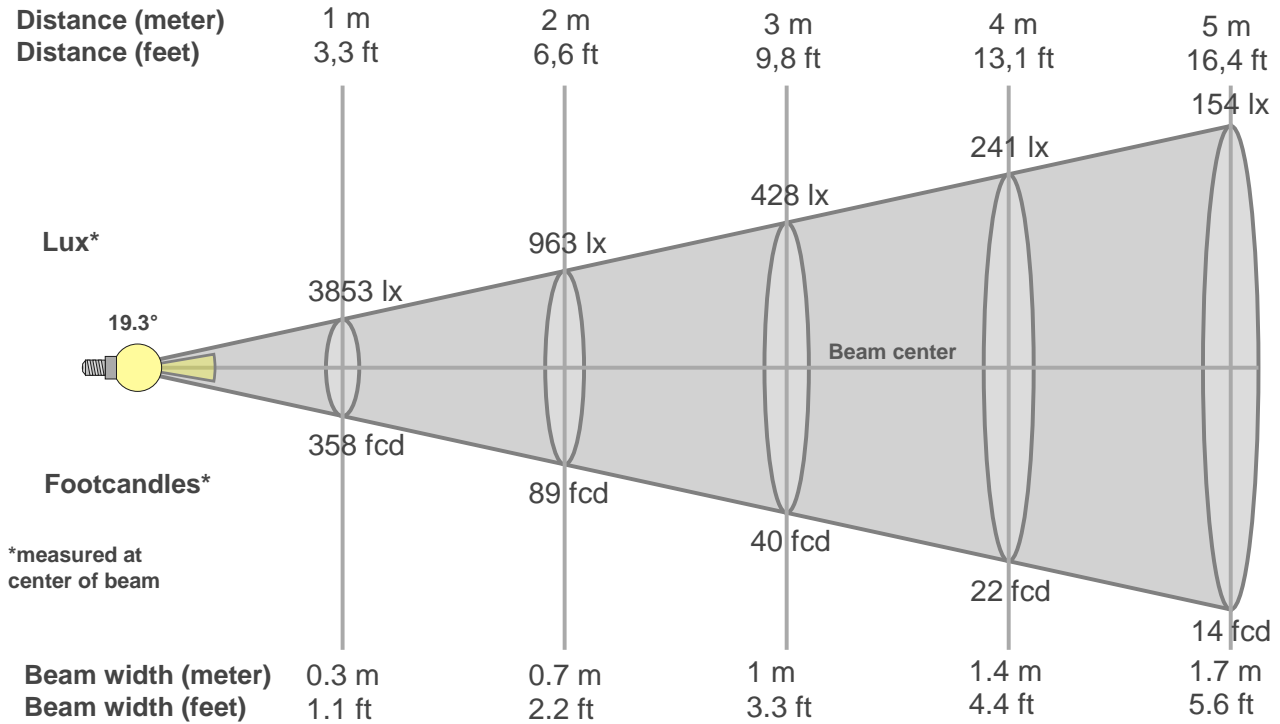
# TM30 details

**Rf 92.7**  
Fidelity index Rf

**Rg 103.9**  
Gammut index Rg

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	95	-1%	-2%
2	97	-1%	1%
3	92	0%	3%
4	91	3%	4%
5	92	4%	4%
6	90	6%	1%
7	89	5%	-4%
8	92	2%	-4%
9	93	0%	-4%
10	95	-2%	-1%
11	92	-2%	4%
12	91	3%	3%
13	94	4%	0%
14	93	5%	-2%
15	92	3%	-4%
16	91	2%	-6%





### 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
3853lx	963lx	428lx	241lx	154lx	107lx	79lx	60lx	48lx	39lx	32lx	27lx	23lx	20lx	17lx	15lx	13lx	12lx	11lx	10lx
358fcd	89.5fcd	39.8fcd	22.4fcd	14.3fcd	9.9fcd	7.3fcd	5.6fcd	4.4fcd	3.6fcd	3fcd	2.5fcd	2.1fcd	1.8fcd	1.6fcd	1.4fcd	1.2fcd	1.1fcd	1fcd	0.9fcd

### 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°
3853	3763	3387	2855	2298	1789	1376	1060	834	680	569	484	408	338	264	192	129	84	54	34
100%	98%	88%	74%	60%	46%	36%	28%	22%	18%	15%	13%	11%	9%	7%	5%	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°
3853	3694	3352	2882	2375	1894	1492	1159	916	736	609	512	430	355	279	206	141	94	63	43
100%	96%	87%	75%	62%	49%	39%	30%	24%	19%	16%	13%	11%	9%	7%	5%	4%	2%	2%	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°
3853	3735	3335	2816	2279	1792	1399	1089	868	703	592	505	429	353	275	201	137	88	55	33
100%	97%	87%	73%	59%	46%	36%	28%	23%	18%	15%	13%	11%	9%	7%	5%	4%	2%	1%	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°
3853	3683	3343	2871	2367	1894	1488	1169	929	749	621	521	431	354	281	212	149	103	70	49
100%	96%	87%	74%	61%	49%	39%	30%	24%	19%	16%	14%	11%	9%	7%	5%	4%	3%	2%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
19.3°	50.1°	67.6°	1.0%	1.0%



