

Light efficiency:



Light quality:



Color temperature:



Output: 929 lm

Peak: 3202 cd

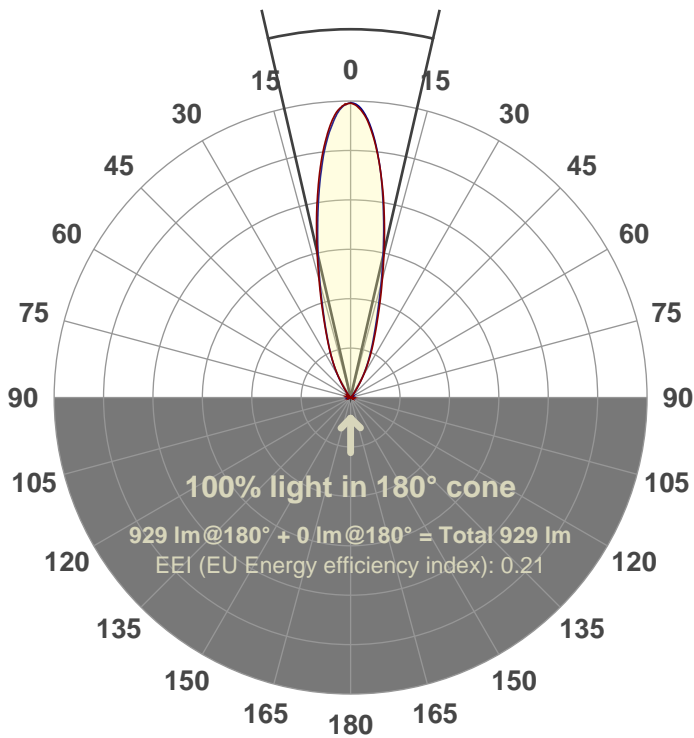
Power: 15.0 W

PF: 0.98



Beam angle

25.9°



Test number:

GRO-AD-NF-RD-91A

Luminaire Model:

GRO-AD-NF-RD-91A

Date and time:

8/10/2017 1:10:36 PM

Description:

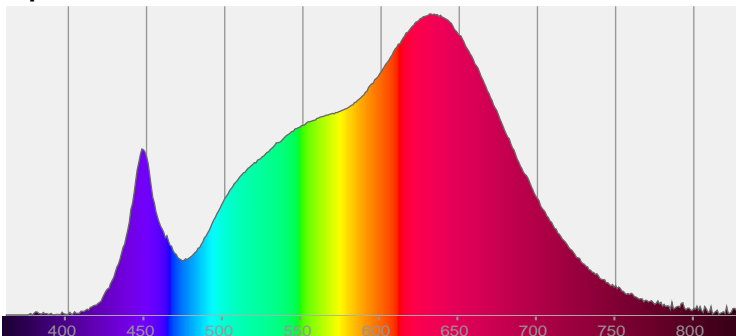
LUM: 929

PPF: 17.5

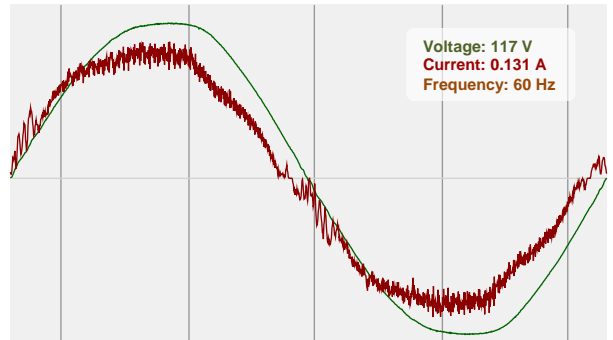


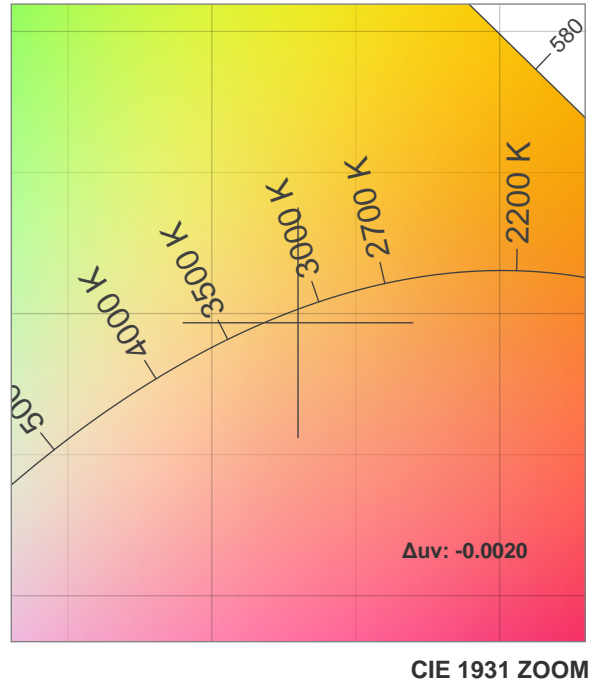
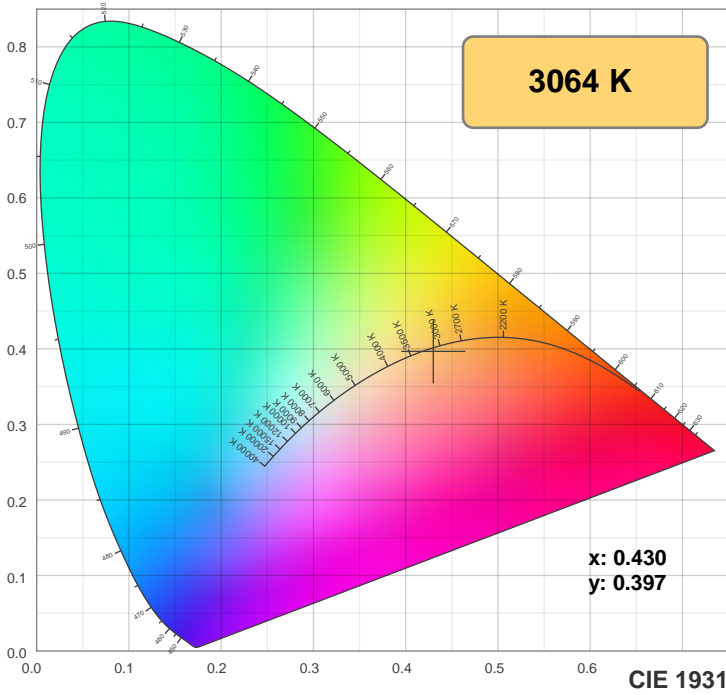
CIE 1931  
x: 0.430  
y: 0.397

Spectra

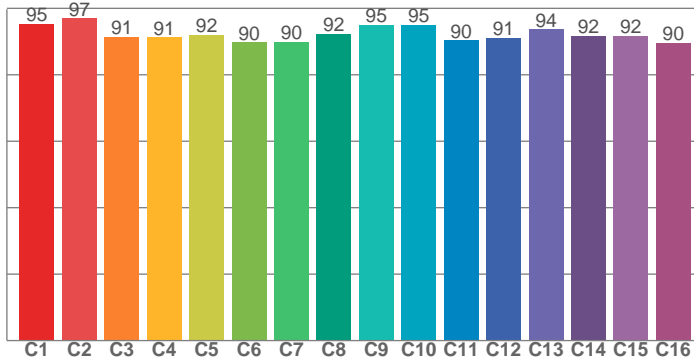


Power

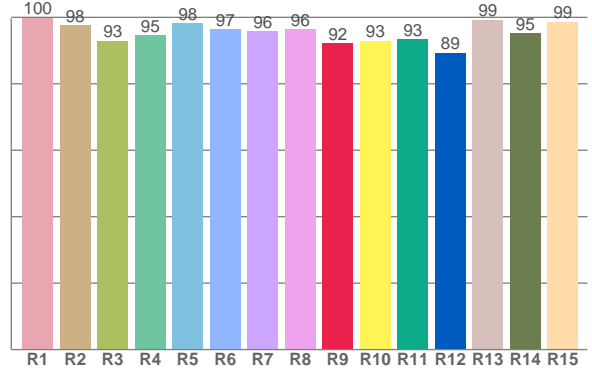




**TM30: 92.6**



**CRI: 96.5 (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
99.9	97.6	93.0	94.5	98.3	96.5	95.8	96.5	92.2	93.0	93.4	89.4	99.3	95.1	98.6

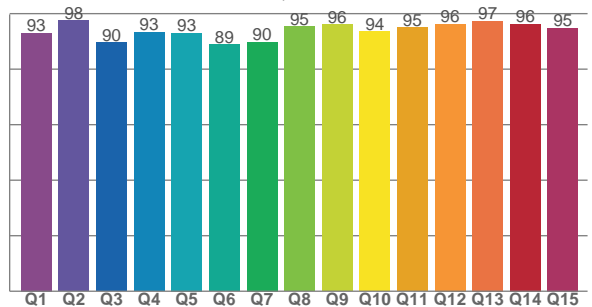
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
95.3	97.0	91.4	91.2	92.1	89.8	90.0	92.4	95.1	95.0	90.4	91.2	93.7	91.8	91.7	89.6

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
93.1	97.5	89.5	93.3	93.0	88.8	89.9	95.3	96.0	93.6	94.9	96.3	97.4	96.2	94.9

**CQS: 93.2**



## Color parameters

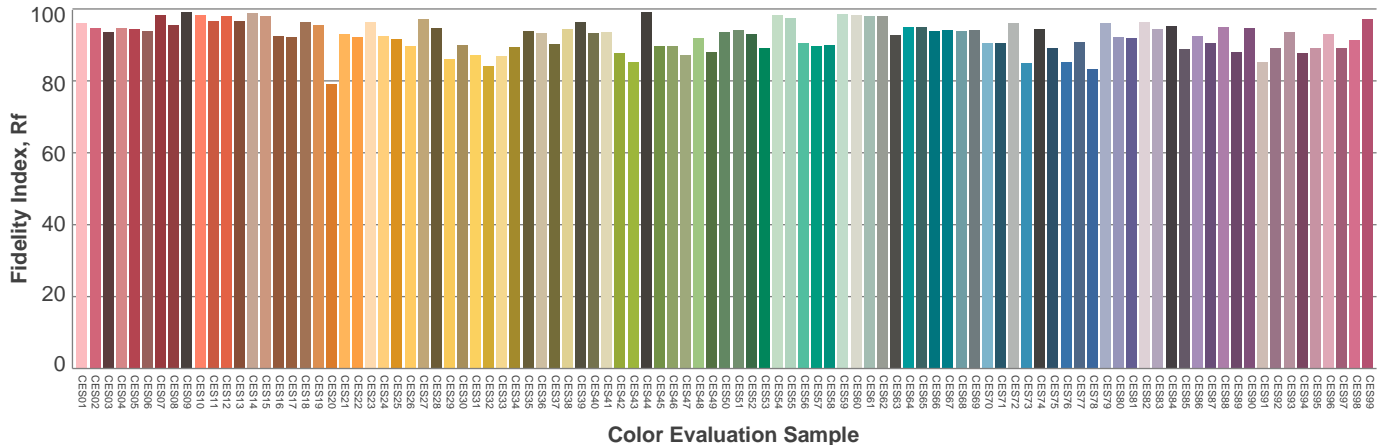
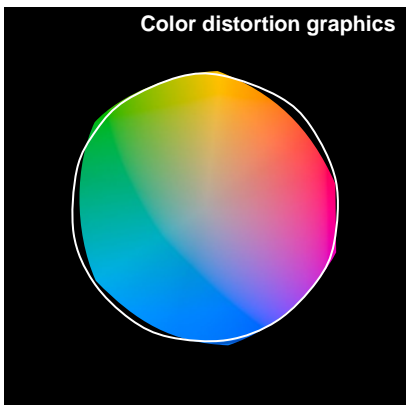
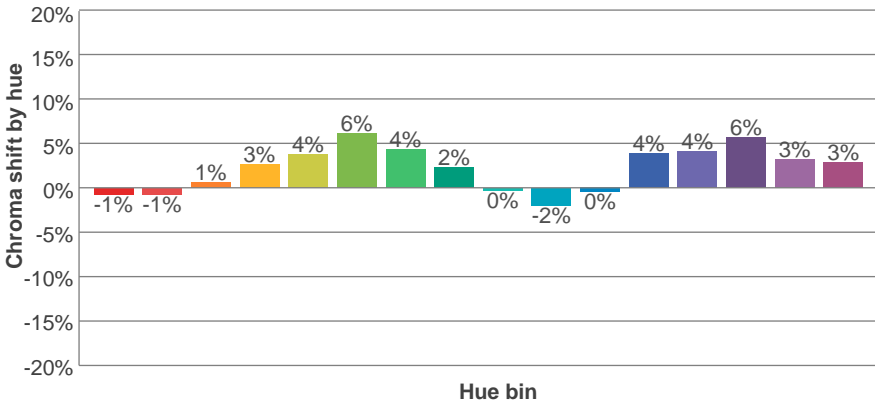
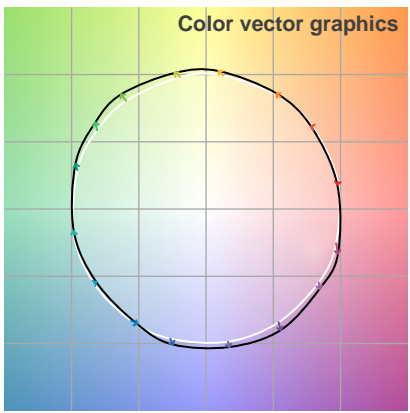
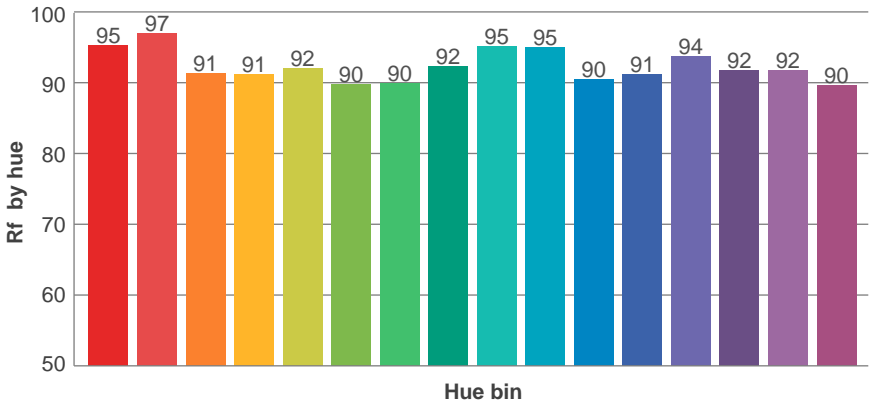
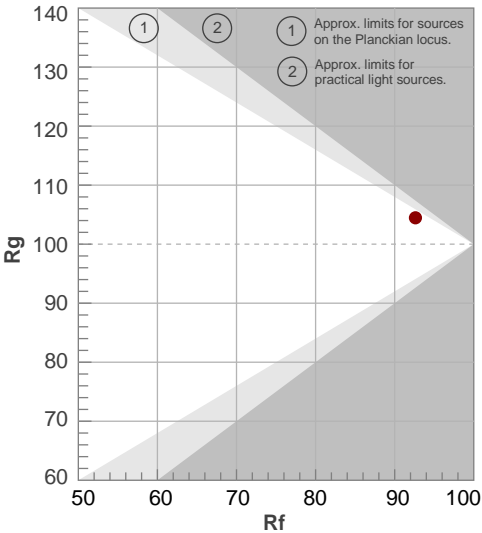
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Color coordinate cie 1931	Color coordinate cie 1931	Color coordinate	Color coordinate	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	x	y	u	v	Δuv
3064 K	96.5	92.2	92.6	104.5	93.2	0.430	0.397	0.249	0.345	-0.0020

# TM30 details

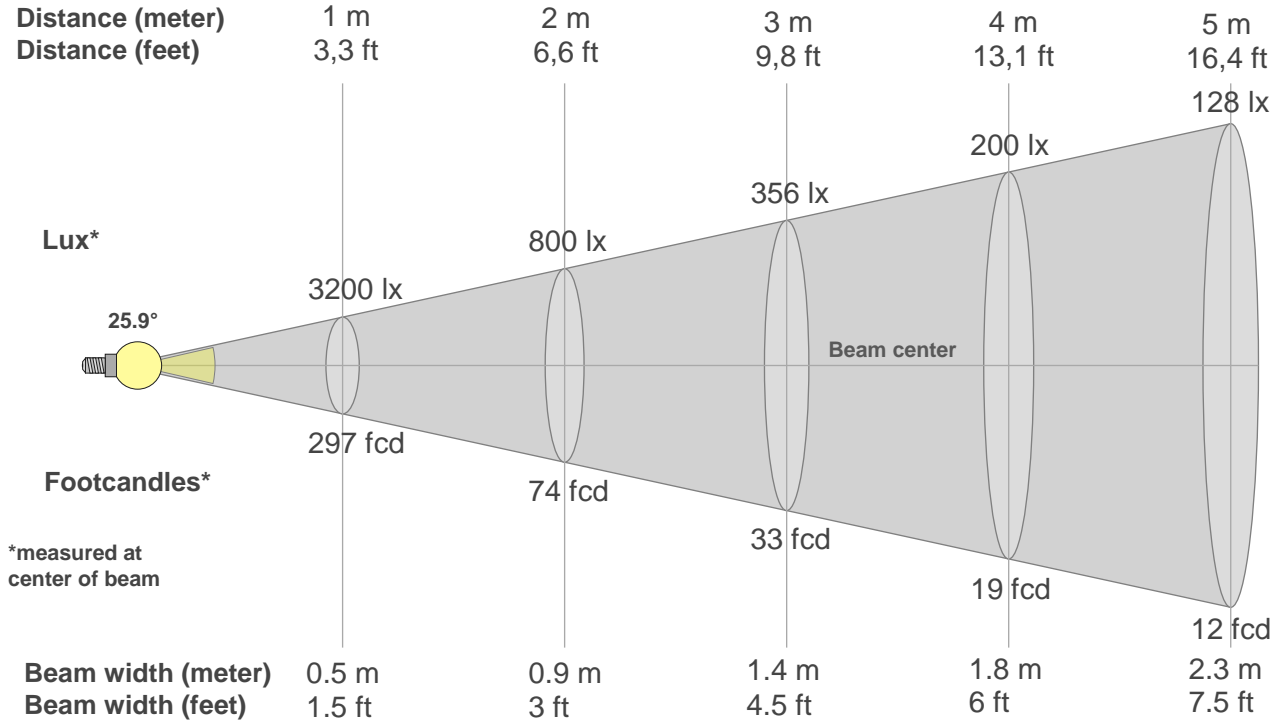
**Rf 92.6**  
Fidelity index Rf

**Rg 104.5**  
Gammut index Rg

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



# 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
3200lx	800lx	356lx	200lx	128lx	89lx	65lx	50lx	40lx	32lx	26lx	22lx	19lx	16lx	14lx	13lx	11lx	10lx	9lx	8lx
297.3fcd	74.3fcd	33fcd	18.6fcd	11.9fcd	8.3fcd	6.1fcd	4.6fcd	3.7fcd	3fcd	2.5fcd	2.1fcd	1.8fcd	1.5fcd	1.3fcd	1.2fcd	1fcd	0.9fcd	0.8fcd	0.7fcd

### 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°
3200	3152	2997	2747	2441	2110	1775	1464	1199	980	805	667	552	448	357	273	196	132	87	58
100%	98%	94%	86%	76%	66%	55%	46%	37%	31%	25%	21%	17%	14%	11%	9%	6%	4%	3%	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°
3200	3139	2957	2705	2384	2046	1721	1418	1162	949	783	650	545	451	363	277	196	129	81	51
100%	98%	92%	85%	74%	64%	54%	44%	36%	30%	24%	20%	17%	14%	11%	9%	6%	4%	3%	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°
3200	3129	2959	2705	2408	2088	1768	1469	1211	994	818	678	563	454	360	275	199	135	91	62
100%	98%	92%	85%	75%	65%	55%	46%	38%	31%	26%	21%	18%	14%	11%	9%	6%	4%	3%	2%

### 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°
3200	3147	2978	2718	2401	2055	1720	1415	1150	934	767	639	529	432	342	258	178	114	73	45
100%	98%	93%	85%	75%	64%	54%	44%	36%	29%	24%	20%	17%	14%	11%	8%	6%	4%	2%	1%

Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
<b>25.9°</b>	<b>57.6°</b>	<b>72.3°</b>	<b>99.4%</b>	<b>98.8%</b>



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