

136-511 13W 2700K specific configuration
Downlight | Ø140mm | white | 5-CCT | 6~15W | EU plug

Introduction

Purpose of this Document

This document provides information for 136-511 13W 2700K. During measurement, the product is used in a different mode where output power, colour temperature and/or beam angle are changed from factory standard. These adjustments can be made without altering the product and are designed to be set by the installer. In most cases, the options are set through switches on the product.

Results

Total input power	11.8 W
Correlated Colour Temperature	2724 K
Total lumen output	1150 lm
Efficiency	98 lm/W

Electrical measurement details

Input Power

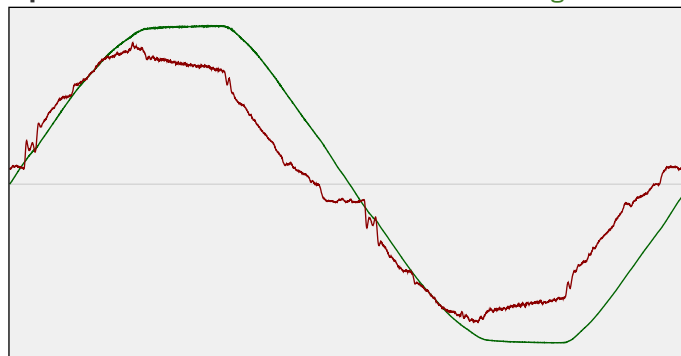
RMS Input voltage feed. V_{RMS}	229 V
RMS Input current feed. I_{RMS}	0.054 A
Total input power	11.8 W

Frequency of input power	50 Hz
Power factor	0.95
Displacement power factor	0.96

Total harmonic distortion of the current	11.47%
Total harmonic distortion of the voltage	2.93%

Input Power Curve

Voltage - Current



Efficiency

Radiated power efficiency: 30.6%



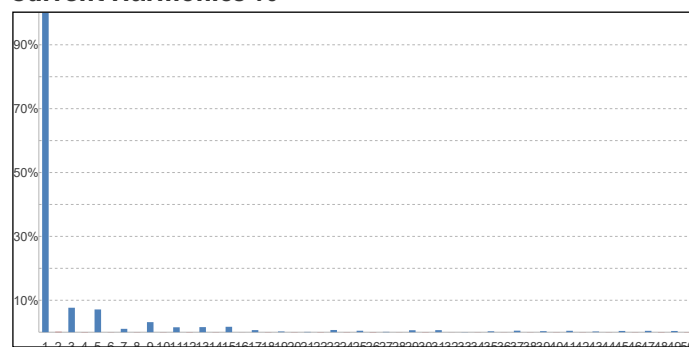
Lumen efficiency: 98 lm/W



Harmonics

3rd Harmonic	7.66%
5th Harmonic	7.12%
7th Harmonic	1.06%
9th Harmonic	3.15%
11th Harmonic	1.54%

Current Harmonics %



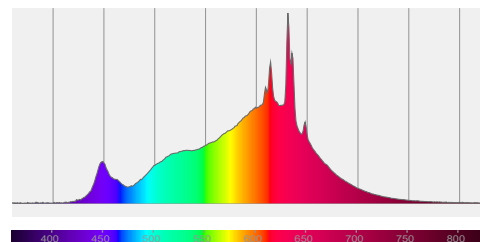
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Colour measurement details

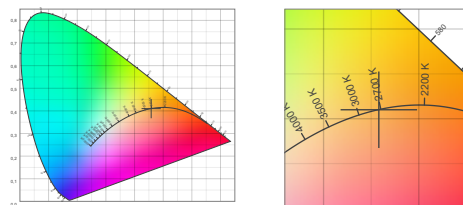
Total lumen output 1150 lm
 Correlated Colour Temperature 2724 K
 Colour coordinates CIE 1931 (x;y) = (0.458;0.410)
 Colour deviation from BBL Duv = -0.0001

TM30-18 Colour Fidelity Index R_f 92.4
 TM30-18 Colour Gamut Index R_g 99.4
 Colour Rendering Index (Ra) CRI 93.3
 Colour Rendering Index. (red component) R_9 = 50.9

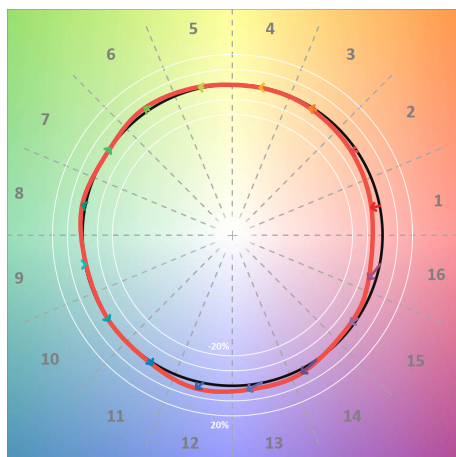
Colour Quality Scale CQS = 90.9
 Television Lighting Consistency Index TLCI = 83



Relative spectral power distribution



TM30 details

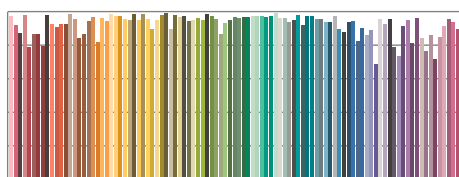


TM30 Colour vectors per hue bin

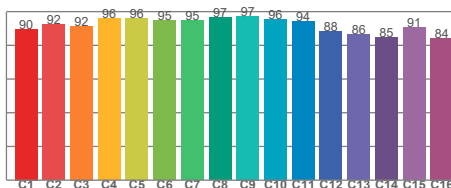


TM30 Colour distortion

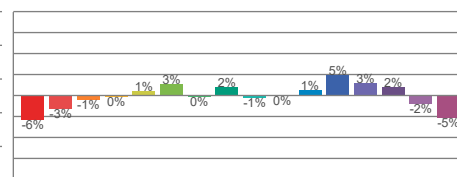
Hue Bin	R_f	Shifts (%)	
		Chroma	Hue
C1	90	-6%	0%
C2	92	-3%	3%
C3	92	-1%	4%
C4	96	0%	1%
C5	96	1%	3%
C6	95	3%	2%
C7	95	0%	-3%
C8	97	2%	0%
C9	97	-1%	0%
C10	96	0%	2%
C11	94	1%	3%
C12	88	5%	-4%
C13	86	3%	-10%
C14	85	2%	-13%
C15	91	-2%	-5%
C16	84	-5%	-11%



TM30-18 R_f -values per reference colour

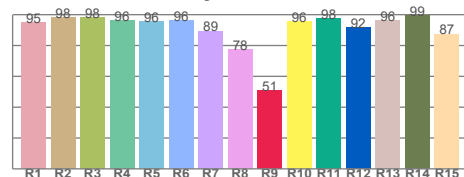


TM30-18 R_f -values per hue bin

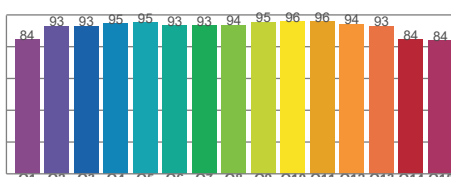


TM30 Chroma shift

Colour Quality details



Colour Rendering Index



Colour Quality Scale