

136-513 13W 5700K specific configuration

Refl downl eco | Ø192mm | white | 5-CCT | 6~15W | EU plug

## Introduction

### Purpose of this Document

This document provides information for 136-513 13W 5700K. 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	12.0 W
Correlated Colour Temperature	5605 K
Total lumen output	1385 lm
Efficiency	115 lm/W

## Electrical measurement details

### Input Power

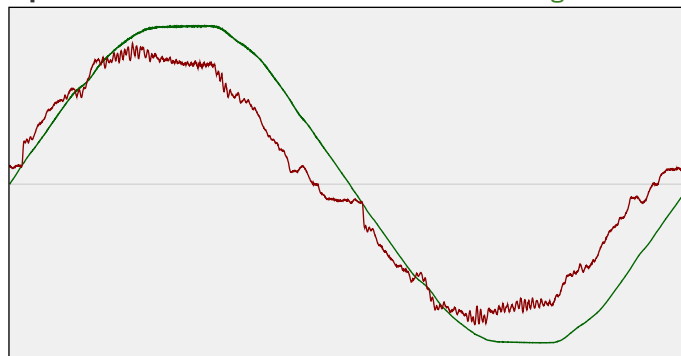
RMS Input voltage feed. $V_{RMS}$	234 V
RMS Input current feed. $I_{RMS}$	0.054 A
Total input power	12.0 W

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

Total harmonic distortion of the current	9.34%
Total harmonic distortion of the voltage	2.12%

### Input Power Curve

Voltage - Current



### Efficiency

Radiated power efficiency: 36.2%



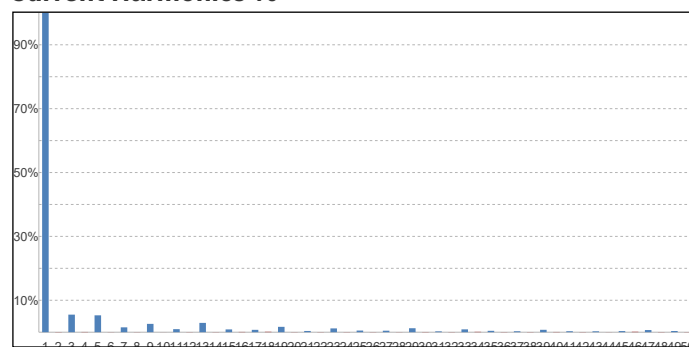
Lumen efficiency: 115 lm/W



### Harmonics

3rd Harmonic	5.5%
5th Harmonic	5.28%
7th Harmonic	1.52%
9th Harmonic	2.61%
11th Harmonic	0.96%

### Current Harmonics %



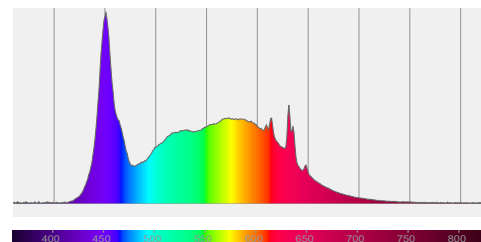
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### Colour measurement details

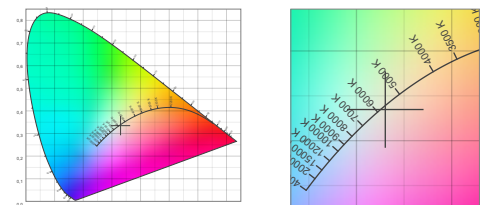
Total lumen output 1385 lm  
 Correlated Colour Temperature 5605 K  
 Colour coordinates CIE 1931 (x;y) = (0.330;0.335)  
 Colour deviation from BBL Duv = -0.0023

TM30-18 Colour Fidelity Index  $R_f$  84.0  
 TM30-18 Colour Gamut Index  $R_g$  96.9  
 Colour Rendering Index (Ra) CRI 85.8  
 Colour Rendering Index. (red component)  $R_9 = 21.5$

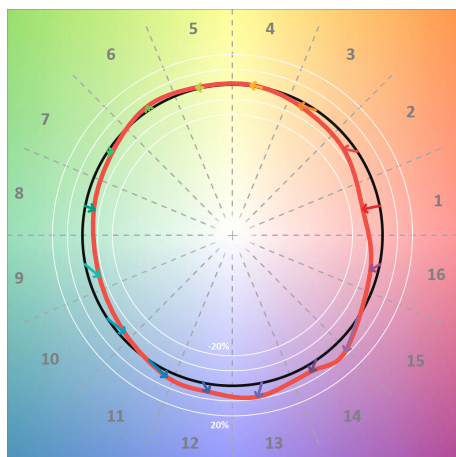
Colour Quality Scale CQS = 81.4  
 Television Lighting Consistency Index TLCI = 76



Relative spectral power distribution



### TM30 details

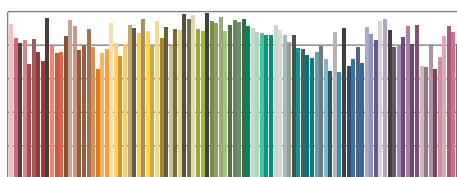


TM30 Colour vectors per hue bin

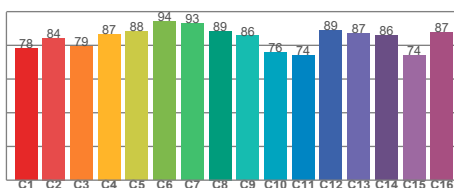


TM30 Colour distortion

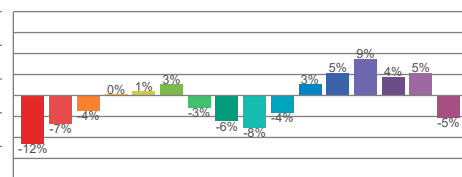
Hue Bin	$R_f$	Shifts (%)	
		Chroma	Hue
C1	78	-12%	0%
C2	84	-7%	7%
C3	79	-4%	11%
C4	87	0%	7%
C5	88	1%	4%
C6	94	3%	0%
C7	93	-3%	-2%
C8	89	-6%	1%
C9	86	-8%	9%
C10	76	-4%	14%
C11	74	3%	16%
C12	89	5%	5%
C13	87	9%	-4%
C14	86	4%	-7%
C15	74	5%	-22%
C16	87	-5%	-5%



TM30-18  $R_f$ -values per reference colour

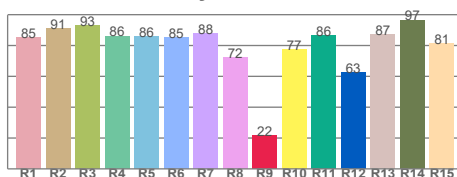


TM30-18  $R_f$ -values per hue bin

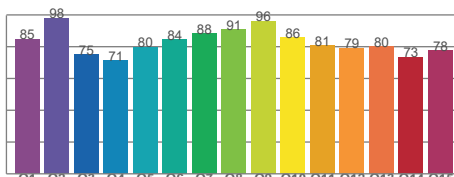


TM30 Chroma shift

### Colour Quality details



Colour Rendering Index



Colour Quality Scale