

136-448 22W 5700K specific configuration

Refl downl | white | Ø280mm | 60° | 3-CCT | 18~30W | EU plug

## Introduction

### Purpose of this Document

This document provides information for 136-448 22W 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	20.0 W
Correlated Colour Temperature	5845 K
Total lumen output	2210 lm
Efficiency	110 lm/W

## Electrical measurement details

### Input Power

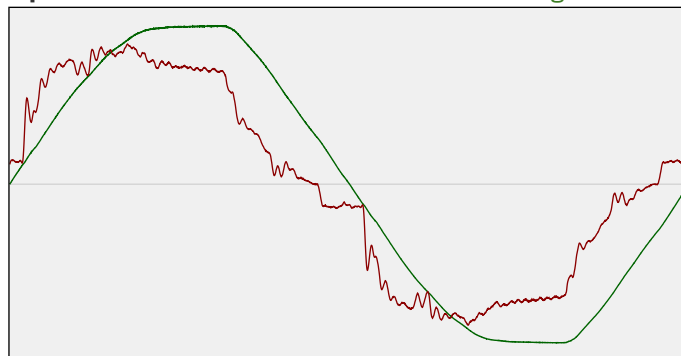
RMS Input voltage feed. $V_{RMS}$	232 V
RMS Input current feed. $I_{RMS}$	0.095 A
Total input power	20.0 W

Frequency of input power	50 Hz
Power factor	0.91
Displacement power factor	0.92

Total harmonic distortion of the current	13.82%
Total harmonic distortion of the voltage	3.14%

### Input Power Curve

Voltage - Current



### Efficiency

Radiated power efficiency: 35.2%



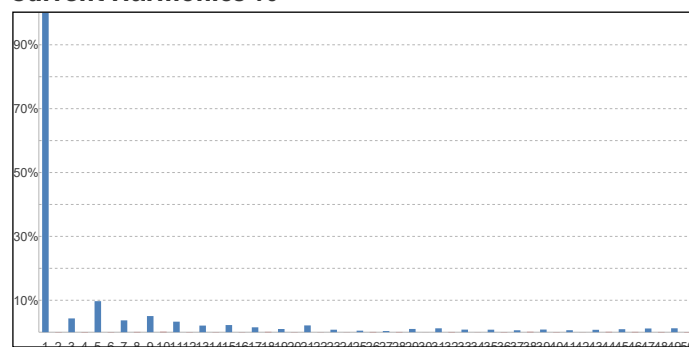
Lumen efficiency: 110 lm/W



### Harmonics

3rd Harmonic	4.32%
5th Harmonic	9.72%
7th Harmonic	3.71%
9th Harmonic	5.05%
11th Harmonic	3.3%

### Current Harmonics %



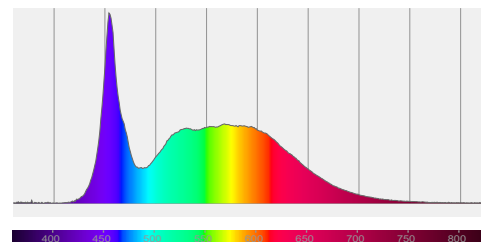
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### Colour measurement details

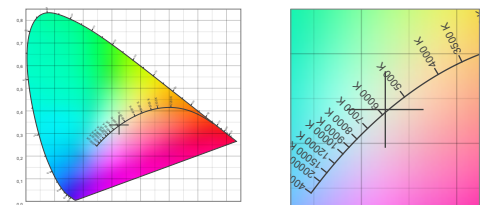
Total lumen output 2210 lm  
 Correlated Colour Temperature 5845 K  
 Colour coordinates CIE 1931 (x;y) = (0.325;0.338)  
 Colour deviation from BBL Duv = 0.0017

TM30-18 Colour Fidelity Index  $R_f$  82.4  
 TM30-18 Colour Gamut Index  $R_g$  93.8  
 Colour Rendering Index (Ra) CRI 84.5  
 Colour Rendering Index. (red component)  $R_9 = 16.2$

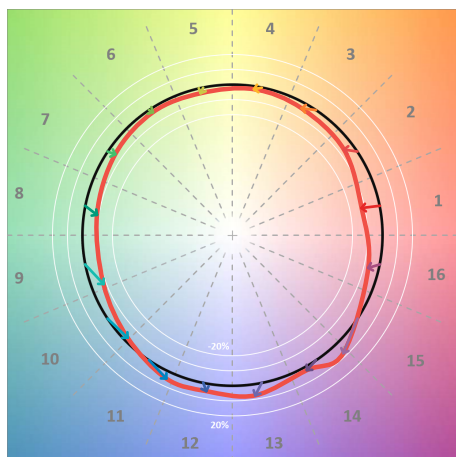
Colour Quality Scale CQS = 80.5  
 Television Lighting Consistency Index TLCI = 75



Relative spectral power distribution



### TM30 details

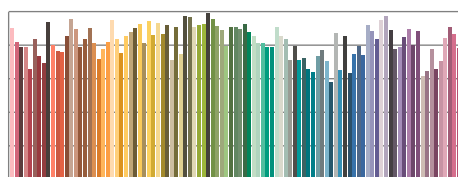


TM30 Colour vectors per hue bin

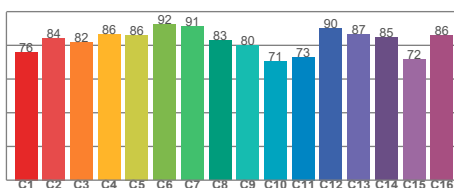


TM30 Colour distortion

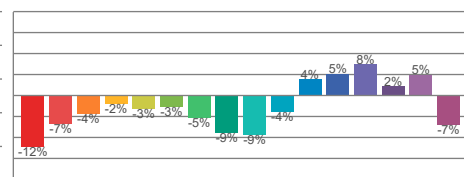
Hue Bin	$R_f$	Shifts (%)	
		Chroma	Hue
C1	76	-12%	1%
C2	84	-7%	6%
C3	82	-4%	9%
C4	86	-2%	5%
C5	86	-3%	2%
C6	92	-3%	-1%
C7	91	-5%	-1%
C8	83	-9%	4%
C9	80	-9%	15%
C10	71	-4%	18%
C11	73	4%	16%
C12	90	5%	3%
C13	87	8%	-6%
C14	85	2%	-9%
C15	72	5%	-24%
C16	86	-7%	-4%



TM30-18  $R_f$ -values per reference colour

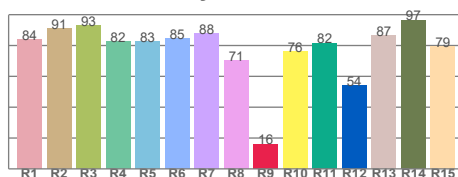


TM30-18  $R_f$ -values per hue bin

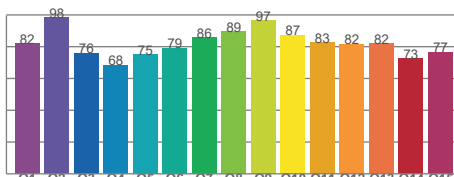


TM30 Chroma shift

### Colour Quality details



Colour Rendering Index



Colour Quality Scale