

136-129 20W 4000K specific configuration Downlight 3-CCT | cut out Ø168-178mm | 14/20W

Introduction

Purpose of this Document

This document provides information for 136-129 20W 4000K. 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	19.1 W
Correlated Colour Temperature	4364 K
Total lumen output	2264 lm
Efficiency	118 lm/W

Electrical measurement details

Input Power

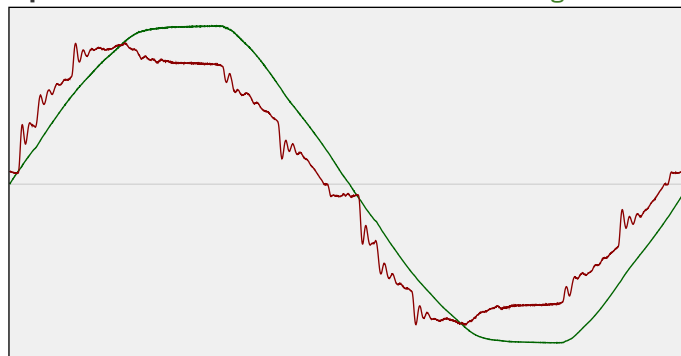
RMS Input voltage feed. V_{RMS}	228 V
RMS Input current feed. I_{RMS}	0.087 A
Total input power	19.1 W

Frequency of input power	50 Hz
Power factor	0.96
Displacement power factor	0.97

Total harmonic distortion of the current	10.78%
Total harmonic distortion of the voltage	2.81%

Input Power Curve

Voltage - Current



Efficiency

Radiated power efficiency: 37.9%



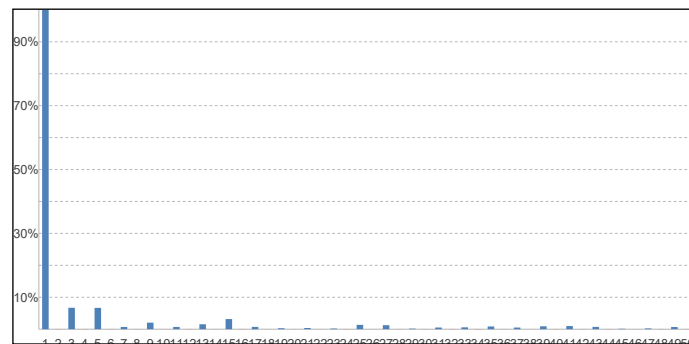
Lumen efficiency: 118 lm/W



Harmonics

3rd Harmonic	6.72%
5th Harmonic	6.68%
7th Harmonic	0.7%
9th Harmonic	2.05%
11th Harmonic	0.71%

Current Harmonics %



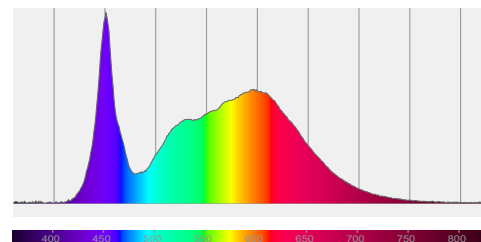
136-129 20W 4000K specific configuration

Colour measurement details

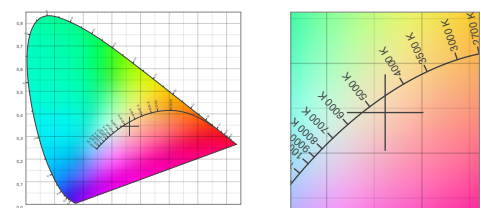
Total lumen output 2264 lm
 Correlated Colour Temperature 4364 K
 Colour coordinates CIE 1931 (x;y) = (0.361;0.345)
 Colour deviation from BBL Duv = -0.0095

TM30-18 Colour Fidelity Index R_f 82.2
 TM30-18 Colour Gamut Index R_g 99.8
 Colour Rendering Index (Ra) CRI 85.6
 Colour Rendering Index. (red component) $R_9 = 26.8$

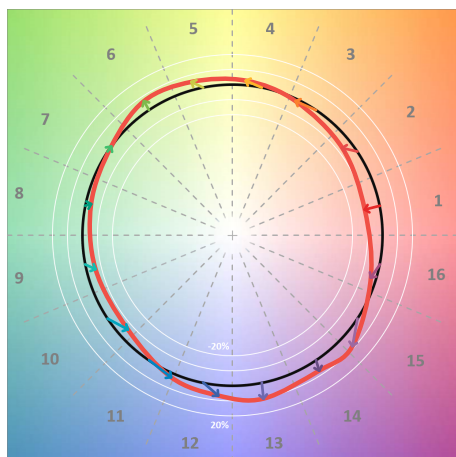
Colour Quality Scale CQS = 80.4
 Television Lighting Consistency Index TLCI = 69



Relative spectral power distribution



TM30 details

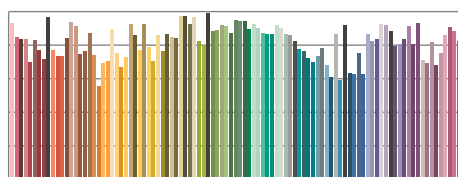


TM30 Colour vectors per hue bin

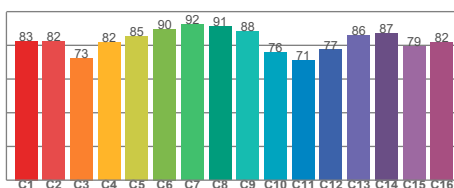


TM30 Colour distortion

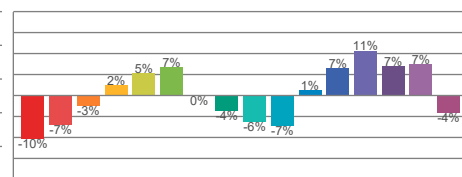
Hue Bin	R_f	Shifts (%)	
		Chroma	Hue
C1	83	-10%	-1%
C2	82	-7%	8%
C3	73	-3%	15%
C4	82	2%	11%
C5	85	5%	7%
C6	90	7%	-1%
C7	92	0%	-4%
C8	91	-4%	-2%
C9	88	-6%	4%
C10	76	-7%	14%
C11	71	1%	19%
C12	77	7%	11%
C13	86	11%	-1%
C14	87	7%	-2%
C15	79	7%	-17%
C16	82	-4%	-10%



TM30-18 R_f -values per reference colour

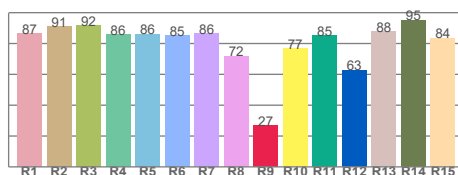


TM30-18 R_f -values per hue bin

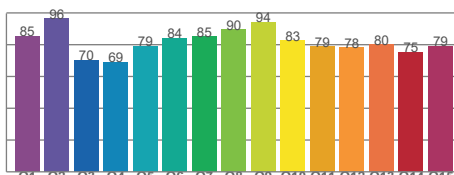


TM30 Chroma shift

Colour Quality details



Colour Rendering Index



Colour Quality Scale