

169-293 4000K 60 degree specific configuration
Track spot | 3-phase | white | 20W | 930-935-940 | 45° | dim

Introduction

Purpose of this Document

This document provides information for 169-293 4000K 60 degree. 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	19.6 W
Correlated Colour Temperature	3980 K
Total lumen output	1599 lm
Efficiency	81 lm/W

Electrical measurement details

Input Power

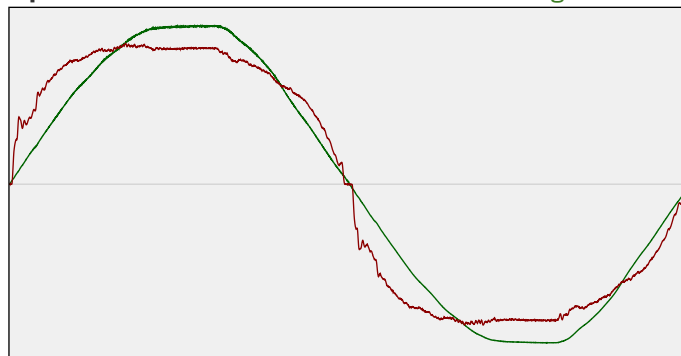
RMS Input voltage feed. V_{RMS}	230 V
RMS Input current feed. I_{RMS}	0.087 A
Total input power	19.6 W

Frequency of input power	50.1 Hz
Power factor	0.98
Displacement power factor	1.0

Total harmonic distortion of the current	18.27%
Total harmonic distortion of the voltage	2.61%

Input Power Curve

Voltage - Current



Efficiency

Radiated power efficiency: 24.6%



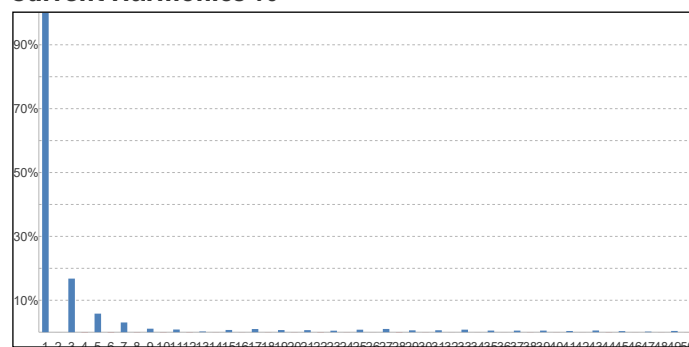
Lumen efficiency: 81 lm/W



Harmonics

3rd Harmonic	16.78%
5th Harmonic	5.81%
7th Harmonic	3.05%
9th Harmonic	1.1%
11th Harmonic	0.84%

Current Harmonics %



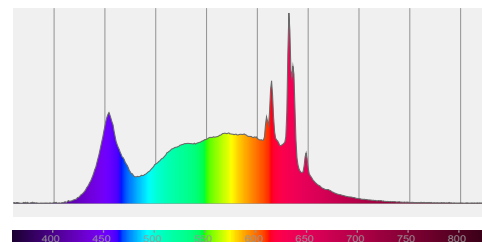
169-293 4000K 60 degree specific configuration

Colour measurement details

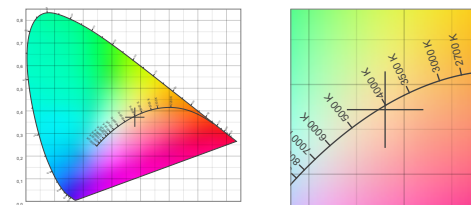
Total lumen output 1599 lm
 Correlated Colour Temperature 3980 K
 Colour coordinates CIE 1931 (x;y) = (0.380;0.372)
 Colour deviation from BBL Duv = -0.0021

TM30-18 Colour Fidelity Index R_f 89.2
 TM30-18 Colour Gamut Index R_g 99.2
 Colour Rendering Index (Ra) CRI 92.6
 Colour Rendering Index. (red component) $R_9 = 64.1$

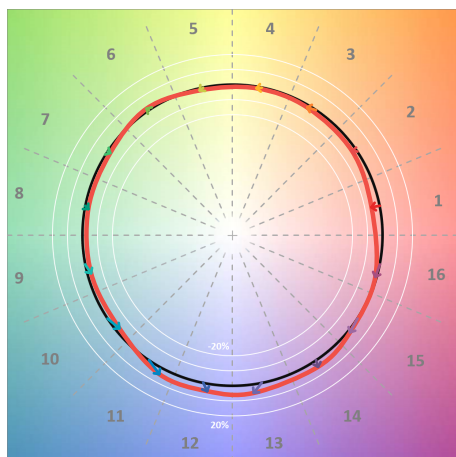
Colour Quality Scale CQS = 89.9
 Television Lighting Consistency Index TLCI = 86



Relative spectral power distribution



TM30 details

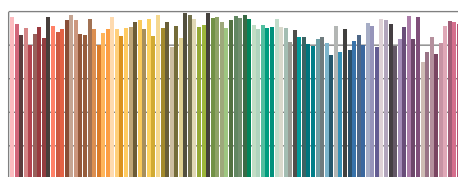


TM30 Colour vectors per hue bin

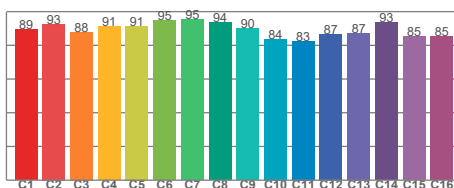


TM30 Colour distortion

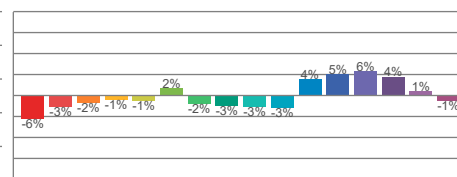
Hue Bin	R_f	Shifts (%)	
		Chroma	Hue
C1	89	-6%	0%
C2	93	-3%	2%
C3	88	-2%	6%
C4	91	-1%	3%
C5	91	-1%	3%
C6	95	2%	1%
C7	95	-2%	0%
C8	94	-3%	2%
C9	90	-3%	6%
C10	84	-3%	10%
C11	83	4%	11%
C12	87	5%	4%
C13	87	6%	-7%
C14	93	4%	-1%
C15	85	1%	-10%
C16	85	-1%	-9%



TM30-18 R_f -values per reference colour

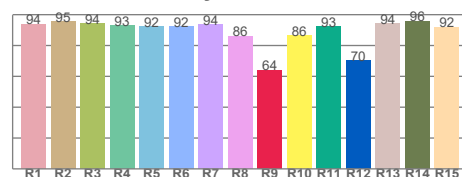


TM30-18 R_f -values per hue bin

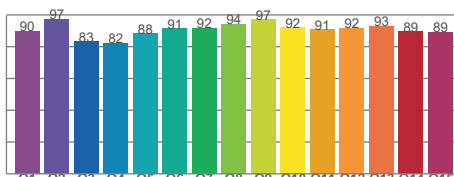


TM30 Chroma shift

Colour Quality details



Colour Rendering Index



Colour Quality Scale