

137-023 4W 4000K specific configuration
Bulkhead | 3-CCT | IK10 | IP65

Introduction

Purpose of this Document

This document provides information for 137-023 4W 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

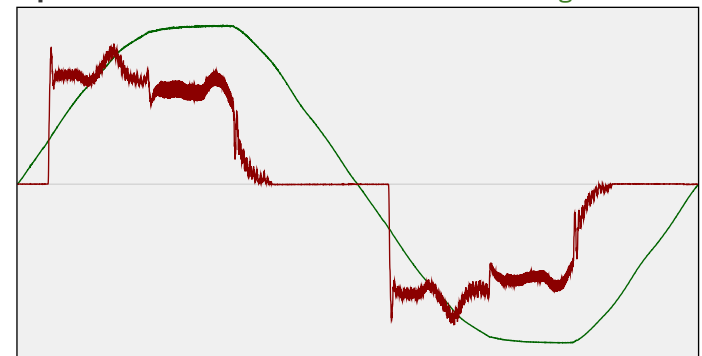
Total input power	3.6 W
Correlated Colour Temperature	4521 K
Total lumen output	310 lm
Efficiency	87 lm/W

Electrical measurement details

Input Power

RMS Input voltage feed. V_{RMS}	231 V
RMS Input current feed. I_{RMS}	0.018 A
Total input power	3.6 W
Frequency of input power	50 Hz
Power factor	0.84
Displacement power factor	0.9
Total harmonic distortion of the current	37.85%
Total harmonic distortion of the voltage	3.09%

Input Power Curve



Efficiency

Radiated power efficiency: 27.6%



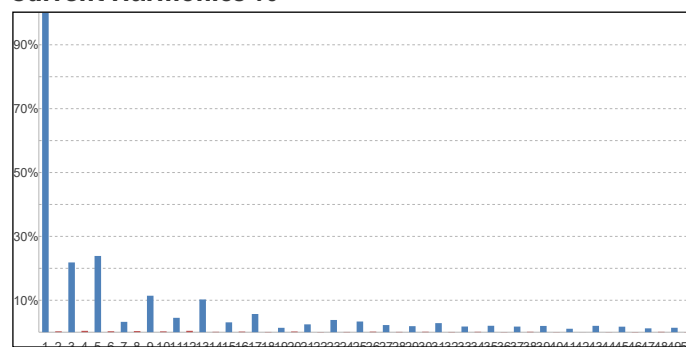
Lumen efficiency: 87 lm/W



Harmonics

3rd Harmonic	21.84%
5th Harmonic	23.88%
7th Harmonic	3.24%
9th Harmonic	11.42%
11th Harmonic	4.5%

Current Harmonics %



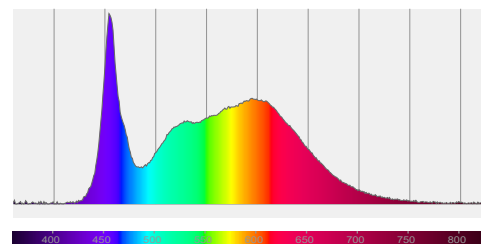
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Colour measurement details

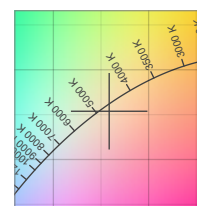
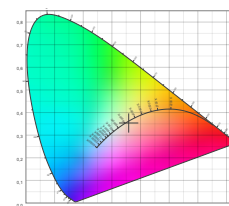
Total lumen output 310 lm
 Correlated Colour Temperature 4521 K
 Colour coordinates CIE 1931 (x;y) = (0.359;0.354)
 Colour deviation from BBL Duv = -0.0041

TM30-18 Colour Fidelity Index R_f 84.1
 TM30-18 Colour Gamut Index R_g 96.1
 Colour Rendering Index (Ra) CRI 87.2
 Colour Rendering Index. (red component) R_9 = 30.7

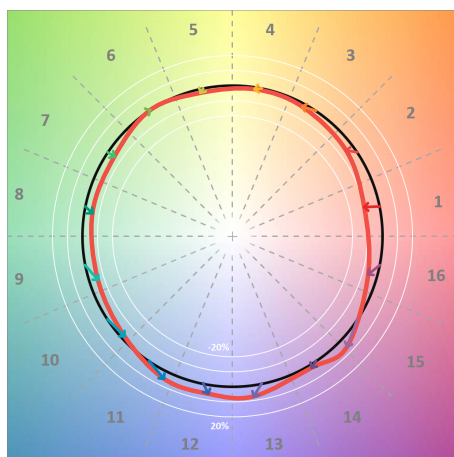
Colour Quality Scale CQS = 83.3
 Television Lighting Consistency Index TLCI = 77



Relative spectral power distribution



TM30 details

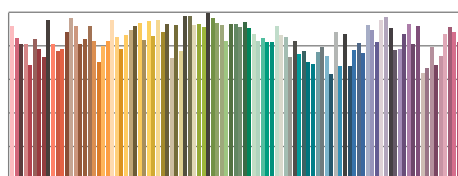


TM30 Colour vectors per hue bin

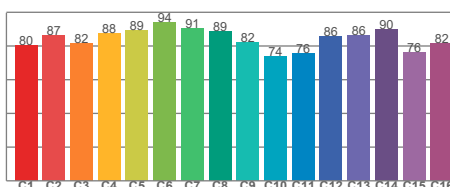


TM30 Colour distortion

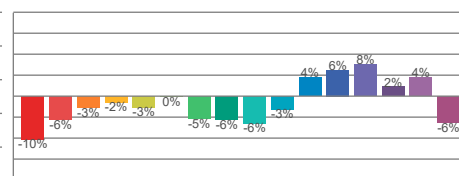
Hue Bin	R_f	Shifts (%)	
		Chroma	Hue
C1	80	-10%	2%
C2	87	-6%	5%
C3	82	-3%	9%
C4	88	-2%	5%
C5	89	-3%	2%
C6	94	0%	-1%
C7	91	-5%	0%
C8	89	-6%	3%
C9	82	-6%	11%
C10	74	-3%	16%
C11	76	4%	15%
C12	86	6%	5%
C13	86	8%	-7%
C14	90	2%	-5%
C15	76	4%	-19%
C16	82	-6%	-8%



TM30-18 R_f -values per reference colour

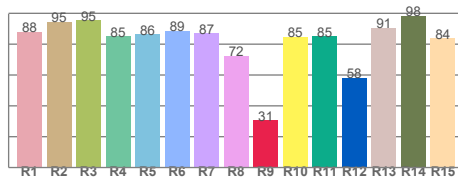


TM30-18 R_f -values per hue bin

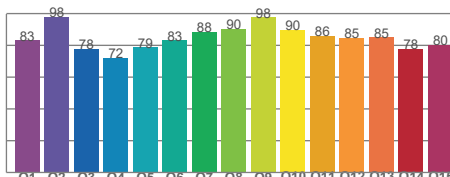


TM30 Chroma shift

Colour Quality details



Colour Rendering Index



Colour Quality Scale