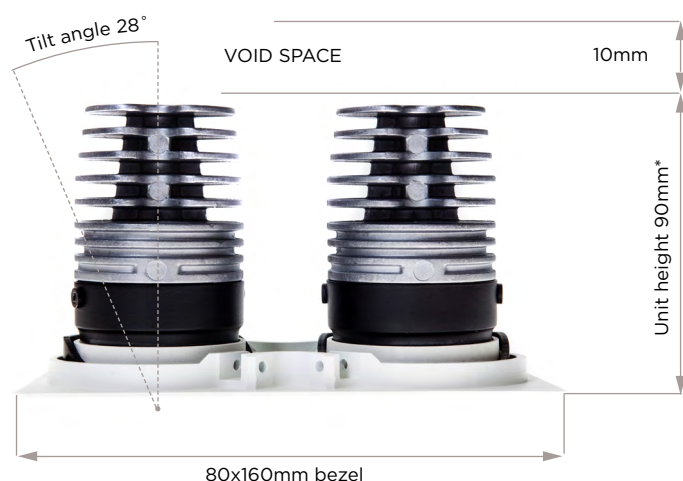


# Detail Mini Square Tilt & Rotate Twin



\*Low void option available to give a unit height of 76mm.

2x  $\varnothing$ 72mm cut out (80mm centres).

Orluna's Detail Twin downlighters give the designer added versatility as well as providing a solution for lighting walls and pictures.

Part of the Detail Mini family, these excellent low glare LED downlighters have 18mm deep full-length comfort baffle to the front of the bezel. They offer full 360° rotation and a tilt angle of 28°.

The machined square bezel trims have crisp clean lines and a depth of only 1mm before paint. Combined with our unique QUAD LED engines, this product is an excellent example of original British design and engineering.

## Data Specification

<b>Beam angle</b> 10°/20°/30°/46°	<b>Lifetime</b> 70,000hrs	<b>LOR</b> 81%
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<b>Colour consistency</b> 1.5 MacAdam Ellipse
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## SPARKLE

Our patented mixing chamber pairs a metalised reflector with a prismatic glass lens to mimic the stunning effect achieved with halogen dichroic. We are not aware of any other product in the market which achieves this, making our products well-known for their sparkle.

## COLOUR CONSISTENCY

Our colour temperature consistency is guaranteed to be less than a young human eye can differentiate. At 1.5 MacAdam ellipse our consistency is the best available in the market - including remote phosphor products.

## MAKING IT SIMPLE

To make choosing Orluna even simpler, our range is entirely modular so all our light engines work with all our bezels.

## LOW VOID INSTALLATIONS

A low-void heatsink option is available - please see dimension drawing above for clearance measurements.

## FIRE-RATING

All the products in our range are available with an independent 60 minute fire-rating, using either our patented FirePlate technology, or an approved fire hood.

## IP-RATING

All products are IP44 as a minimum. Our fixed products are available with IP65 rating. Additionally, our DMR is available with an IP65 gaiter to provide IP65 rating without reducing the adjustability of the bezel.

## ORLUNA DECOR - BESPOKE FINISHES

We offer a full range of standard and bespoke finish options for the whole luminaire. Our standard White is RAL9010 fine texture with 20% gloss, however we can offer any other RAL colour.

Products are available in Polished Chrome, Brushed Chrome, Polished Brass, Antique Brass, Polished Copper, Antique Copper and Antique Bronze. Additionally the anti glare baffle can be any RAL paint, Anodise or Plated finish



# Engines

## TM-30-15 Rf90 Rg98

### 95CRI Engines

Engine	CCT	CRI	T <sub>J</sub> <sup>1</sup>	Beam Angle	Peak Intensity (Cd)	Power (W)	Circuit Power (W)	Initial Lumens (lm)	Delivered Lumens (lm) <sup>2</sup>	Efficacy (lm/cW) <sup>3</sup>	Dim to Dark <sup>4</sup>
<b>10DEG-C</b>	2700K 2938K	<b>95</b>	<b>60°C</b>	10°	9556	8	8.8	765	544	<b>87 (62)</b>	<b>0.1% Lux</b>
<b>QUAD50-C</b>	2500K 2700K 2938K	<b>95</b>	<b>60°C</b>	20/30/46°	2953 / 1803 / 952	8.3	9.2	899	684	<b>98 (75)</b>	<b>0.1% Lux</b>
<b>QUAD70-C</b>	2500K 2700K 2938K	<b>95</b>	<b>65°C</b>	20/30/46°	4153 / 2812 / 1338	10.3	11.4	1157	962	<b>101 (84)</b>	<b>0.1% Lux</b>

### 85CRI Engines

Engine	CCT	CRI	T <sub>J</sub> <sup>1</sup>	Beam Angle	Peak Intensity (Cd)	Power (W)	Circuit Power (W)	Initial Lumens (lm)	Delivered Lumens (lm) <sup>2</sup>	Efficacy (lm/cW) <sup>3</sup>	Dim to Dark <sup>4</sup>
<b>10DEG</b>	2700K 2938K	<b>85</b>	<b>60°C</b>	10°	9556	8	8.8	765	544	<b>87 (62)</b>	<b>0.1% Lux</b>
<b>QUAD50</b>	2500K 2700K 2938K	<b>85</b>	<b>60°C</b>	20/30/46°	3005 / 1845 / 968	8.3	9.2	885	696	<b>96 (76)</b>	<b>0.1% Lux</b>
<b>QUAD70</b>	2500K 2700K 2938K 4000K	<b>85</b>	<b>65°C</b>	20/30/46°	4093 / 2513 / 1319	10.3	11.4	1151	948	<b>101 (83)</b>	<b>0.1% Lux</b>
<b>QUAD90</b>	2500K 2700K 2938K	<b>85</b>	<b>65°C</b>	20/30/46°	5392 / 3311 / 1738	10.3	11.4	1493	1249	<b>131 (110)</b>	<b>0.1% Lux</b>

<sup>1</sup>Junction temperatures are measured in-house and independently.

<sup>2</sup>Delivered lumens is measured post-optic and certified by LUX-TSI Ltd.

<sup>3</sup>Two efficacy figures are provided for clarity. The first figure represents initial lumens per circuit watt, and the second represents delivered lumens per circuit watt.

<sup>4</sup>Dim to Dark. All of our products have been tested for light output at the lowest dim level on our LED driver rather than power output.

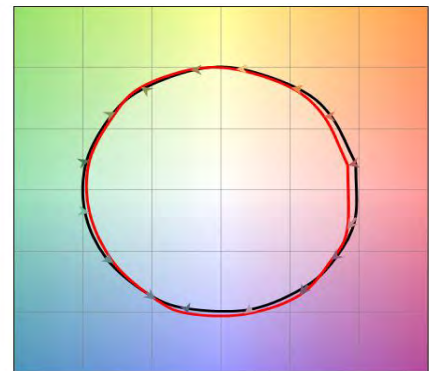
NOTE: Unlike most manufacturers, our engines don't vary their lumen output based on CCT. We use strict flux binning to ensure that every colour temperature provides the same lumen output. All data is certified by LUX-TSI Ltd.

## TM-30-15

TM-30-15 is a standard of colour rendering that allows more accurate visual description of colour. It takes into account gamut, whilst expanding fidelity to 99 colour swatches from the eight measured for Ra. Orluna has embraced this standard as the future of colour rendering, and strives to achieve the best performance possible. Orluna 95CRI luminaires feature a fidelity of Rf90 and a gamut of Rg98.

This plot shows the average chromaticity shift for the samples within each of the 16 hues. The values are normalised so that the reference is a circle.

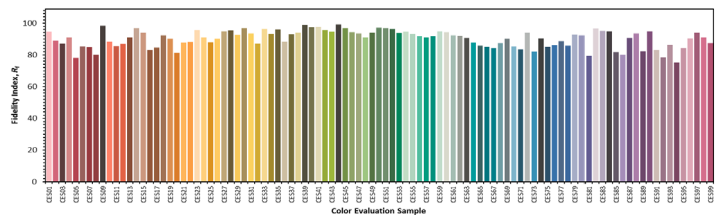
For full test reporting and further information, please see 'TM-30-15 Engine Data'.



— Reference Source — Test Source

### Red, Typical 87

Red values for LEDs can be misleading. Typically, an LED's ability to render red tones successfully is only based upon the CRI R9 value. This reference colour is a single tone of red. TM30 measures 99 colours, of which 12 are red tones, and Orluna shows the typical value for these 12 red values as a measurement for red rendering quality.



# Dimming

## ANY BEZEL. ANY ENGINE. ANY DRIVER.

Every Orluna bezel is compatible with every engine option, and those combine with any of our drivers to provide dimming to 0.1% of lux output.

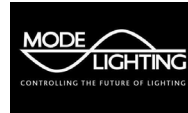
## OUR PHILOSOPHY

Orluna's Expert Focus means that we can take care of, control of, and responsibility for all dimming details to give:

- Guaranteed Driver Performance - All Orluna luminaires come with a PSU which dims to 0.1% of lux output. We have mains dimming, 0-10V (eldoLED SOLOdrive as standard) and DALI (eldoLED SOLOdrive as standard)
- Guaranteed Control Performance - Dimming is only as good as the control compatibility. Orluna's Expert Focus means we have tested dimming on all mains control systems. Orluna offers crisp advice on compatibility and we certify any listed project to guarantee compatibility, so that if it isn't perfect we take responsibility.
- Every Orluna driver can be paired with an Emergency Pack for 3 hour maintained emergency lighting. We also offer self-test and DALI addressable versions.

## COMPATIBILITY

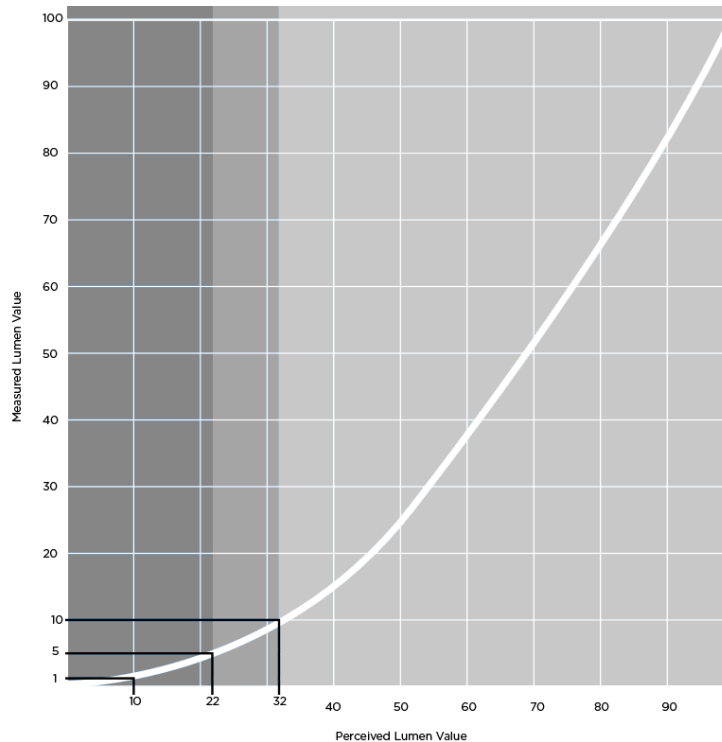
Orluna has compatibility test results for most dimming control interfaces including:



## THE IMPORTANCE OF LOW END DIMMING

Orluna understands the reality of low end dimming and the need for true low end dim.

Below is a diagram showing the correlation between perceived lumen value and measured lumen value. At low light levels the human eye compensates its focus, much like a camera, and this adjustment makes the perceived amount of light appear brighter. As a guide, 10% measured lumens will be the equivalent of 32% perceived lumens. Because all Orluna LED drivers dim to at least 0.1%, the eye will see a dim level that will appear low when measured at a low level.



# Codes

5 - DMSR2 - 29M30 - W - BB - 44

## LIGHT ENGINE

QUAD50-C	5C
QUAD70-C	7C
10DEG-C	1C
QUAD50	5
QUAD70	7
QUAD90	9
10DEG	1

## BEZEL

Detail Fixed 96mm	DF
Detail Tilt & Rotate 96mm	DR
Detail Mini Fixed 80mm	DMF
Detail Mini Tilt & Rotate 80mm	DMR
Detail Mini Square Fixed 80mm	DMSF
Detail Mini Square Tilt & Rotate 80mm	DMSR
Detail Mini Square Tilt & Rotate Twin 80mm	DMSR2
Detail Mini Tilt & Rotate Twin 80mm	DMR2

## COLOUR TEMPERATURE

2500K (not available for 10DEG/10DEG-C)	25
2700K (any light engine)	27
2938K (any light engine)	29
4000K (only QUAD70)	40

## POWER SUPPLY UNIT

Non-dimmable	N
Dim-to-Dark Mains Dimmable (0.1% lux)	M
Dim-to-Dark 0-10V EldoLED SOLOdrive (0.1% lux) (Increased void required)	O
Dim-to-Dark DALI EldoLED SOLOdrive (0.1% lux) (Increased void required)	D

## BEAM ANGLE

10 Degree	10
20 Degree	20
30 Degree	30
46 Degree	46

## BEZEL FINISH

PAINTED	
White RAL 9010 (As Standard)	W
White RAL 9003	D
White RAL 9016	E
Black RAL 9005	B
DECOR	
Brass Antique	F
Brass Polished	G
Bronze Antique	J
Chrome Antique	K
Chrome Polished	L
Copper Antique	H
Copper Polished	I
CUSTOM	
Any RAL or Any Plated - Please call	C

## BAFFLE FINISH

Black RAL9005 (As Standard)	BB
White RAL9010	WB
Gold Anodised	GB
Any RAL or Any Plated - Please call	CB

## ORLUNA BESPOKE

IP44 Rating (As Standard)	44
60 Minute Fire Rating (Approved Hood)	F
Low Profile Heat Sink	L
Lockable Tilt & Rotate	T
3hr Emergency Pack	EM
Honeycomb Louvre	H

