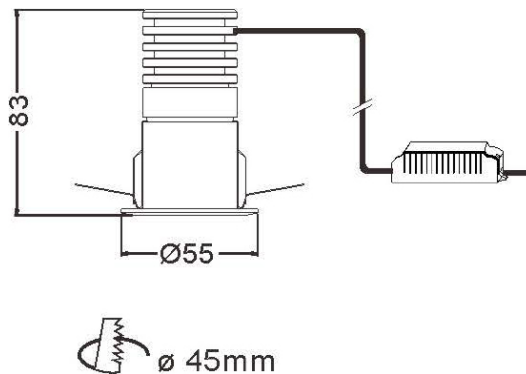


DARKLIGHT DESIGN

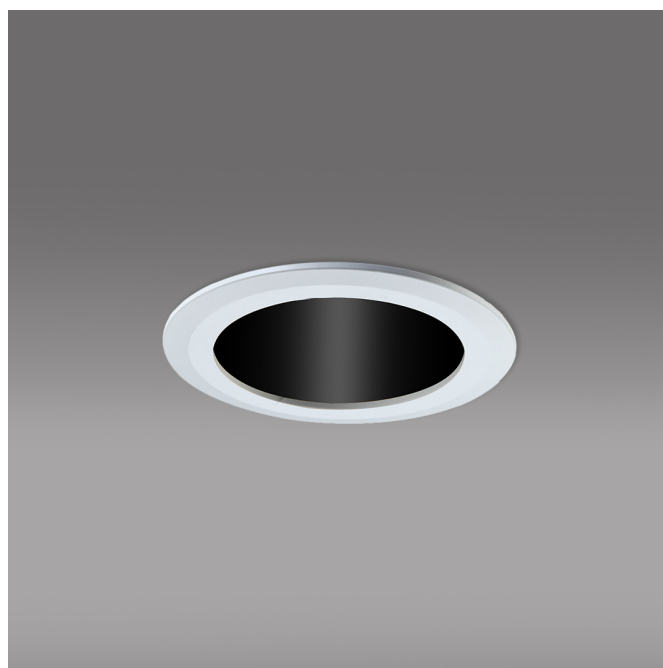
JUNO MINI LED FIXED RECESSED DOWNLIGHT

4061118FI



*complete with driver

- IP20
- 5W
- 20° and 30° beam angle
- 2700°K, 3000°K or 4000°K CCT
- Non dimmable, 1-10V dimmable or TRIAC dimmable
- CRI 80 or 90
- Circular 45mm cutout
- Optional firehood available
- In white or black external finish



* can be dimmed via compatible DALI, 0-10v, trailing edge or leading edge drivers. Please specify your preference at the time of ordering.

DARKLIGHT DESIGN

JUNO MINI LED
FIXED RECESSED DOWNLIGHT
4061118FI

PRODUCT OVERVIEW

Power	Beam	Flux	CCT	Non-DIM	1-10V DIM	Triac DIM
5W	20°	330lm	2700K	Y	Y	Y
5W	20°	343lm	3000K	Y	Y	Y
5W	30°	297lm	2700K	Y	Y	Y
5W	30°	308lm	3000K	Y	Y	Y

All the information in this document is provided in good faith. Darklight Design will not be held responsible for any losses due to inaccuracies within this document.

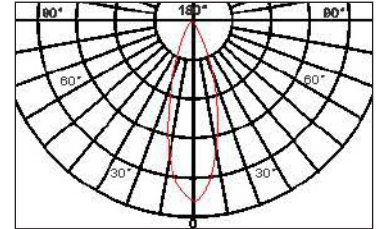
DARKLIGHT DESIGN

JUNO MINI LED
FIXED RECESSED DOWNLIGHT
4061118FI

LIGHTING DATA - 5W

LED COB 20°

Power	5W	5W
CCT	2700K	3000K
CRI	>80	>80
Output V.	24V DC	24V DC
I	180mA	180mA
Efficacy	66lm/W	68lm/W



5W 2700K - Flux 330lm

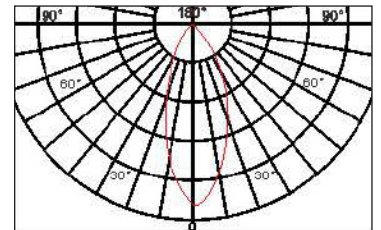
Lux			
h(m)	d(cm)	Em	E _{max}
1	37	1149	1420
2	75	287	355
3	113	127	157

5W 3000K - Flux 343lm

Lux			
h(m)	d(cm)	Em	E _{max}
1	38	1195	1500
2	76	299	389
3	115	133	173

LED COB 30°

Power	5W	5W
CCT	2700K	3000K
CRI	=80(min)	=80(min)
Output V.	24V DC	24V DC
I	180mA	180mA
Efficacy	59lm/W	61lm/W



5W 2700K - Flux 297lm

Lux			
h(m)	d(cm)	Em	E _{max}
1	45	794	1290
2	91	198	322
3	137	88	143

5W 3000K - Flux 308lm

Lux			
h(m)	d(cm)	Em	E _{max}
1	46	827	1360
2	92	207	340
3	138	92	151

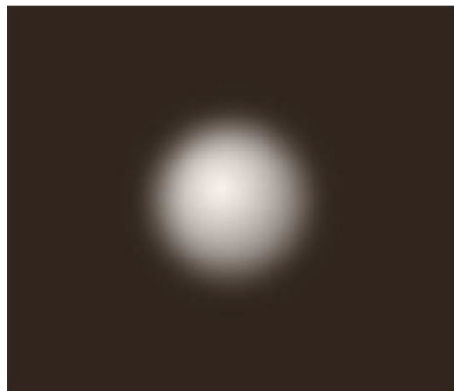
All the information in this document is provided in good faith. Darklight Design will not be held responsible for any losses due to inaccuracies within this document.

DARKLIGHT DESIGN

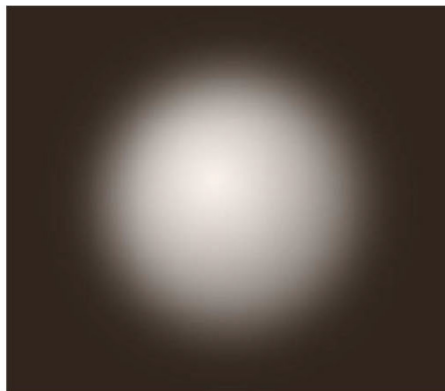
JUNO MINI LED
FIXED RECESSED DOWNLIGHT
4061118FI

ACCURATE LIGHT DISTRIBUTION AND CONTROL

Available with beam angles at 20° or 30° to cater for differing requirements.



20°



30°

All the information in this document is provided in good faith. Darklight Design will not be held responsible for any losses due to inaccuracies within this document.

T 01189 882294

W www.darklightdesign.com

E sales@darklightdesign.com

DARKLIGHT DESIGN

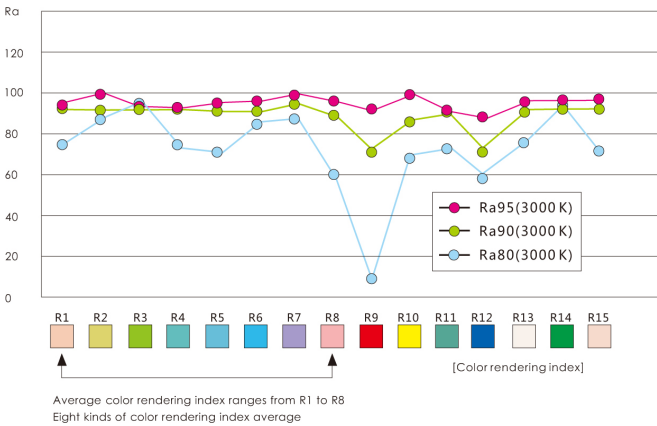
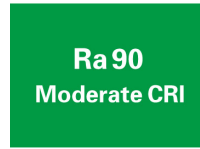
JUNO MINI LED
FIXED RECESSED DOWNLIGHT
4061118FI

HIGH CRI

Utilizing world class LED chips helps to create high colour rendering with RA > 90 and makes the subject natural and fresh in a way that few other LED products can.

Lighting in high power & high CRI results in higher definition of the colour and detail of the subject. Subsequently these fittings are ideal lighting solutions for both the retail sector and public spaces.

This fitting is available in CRI 80 or CRI 90.



AVERAGE RA EVALUATION INDEX

Ra Evaluation Index is applied to estimate the colour rendering index of the lighting product to see the reflection level of natural colour compared to those by conventional lighting fittings.

Average colour rendering index ranges from R1 to R8.

All the information in this document is provided in good faith. Darklight Design will not be held responsible for any losses due to inaccuracies within this document.

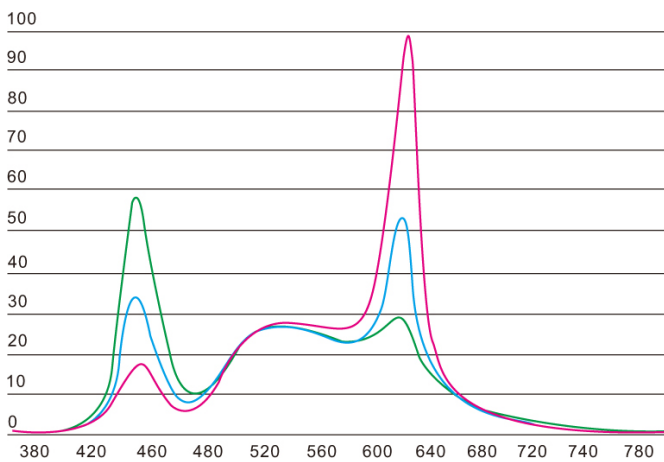
DARKLIGHT DESIGN

JUNO MINI LED
FIXED RECESSED DOWNLIGHT
4061118FI

AUTHENTIC LIGHTING

An advanced professional lighting solution provides an authentic illumination of goods and brands. First-class colour rendering enhances any product's brilliance, harmonizing content and intention.

The advanced LED technology utilized produces the right light even for fine textures and materials. Incorporating the latest advanced technology coupled with the use of top quality COB (chip-on-board) further enhances the light efficiency and perfect CRI.



GENTLE LIGHT FOR DELICATE GOODS

The LED light spectrum contains virtually no radiation in the infrared and ultraviolet regions, which can damage or fade sensitive goods. Conventional halogen and HID light contains strong infrared and ultraviolet radiation.

This means that besides excellent lighting quality, our lighting also meets all the requirements for providing gentle lighting without having to use additional filters.

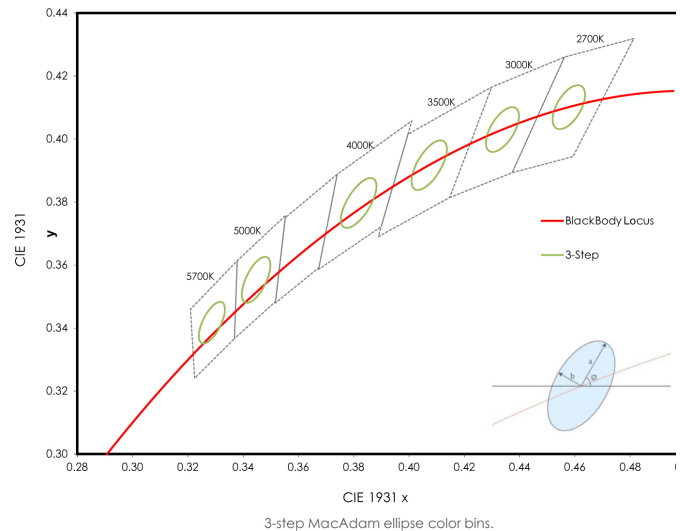
All the information in this document is provided in good faith. Darklight Design will not be held responsible for any losses due to inaccuracies within this document.

DARKLIGHT DESIGN

JUNO MINI LED FIXED RECESSED DOWNLIGHT 4061118FI

COLOUR TEMPERATURE CONSISTENCY

To meet the requirement of high colour temperature consistency across our entire range we use the highest standard of LED chips (SDCM<3) sourced from manufacturers such as CREE & Bridgelux. All LED chips are processed with the strictest scientific criteria to guarantee the LED chip consistency in one batch.



In the study of colour vision, MacAdam ellipses refer to the region on a chromaticity diagram which contains all colours which are indistinguishable, to the average human eye, from the colour at the center of the ellipse. The contour of the ellipse therefore represents the just noticeable differences of chromaticity.

Procedure

MacAdam set up an experiment in which a trained observer viewed two different colours at a fixed luminance of about 48cd/m². One of the colours (the "test" colour) was fixed, but the other was adjustable by the observer, and the observer was asked to adjust that colour until it matched the test colour. This match was not perfect, since the human eye (like any other instrument) has limited accuracy. It was found by MacAdam, however, that all of the matches made by the observer fell into an ellipse on the CIE 1931 chromaticity diagram. The measurements were made at 25 points on the chromaticity diagram, and it was found that the size and orientation of the ellipses on the diagram varied widely depending on the test colour. These 25 ellipses measured by MacAdam, for a particular observer are shown on the chromaticity diagram above.

Extension to three dimensions

A more general concept is that of "discrimination ellipsoids" in the entire three-dimensional colour space, which would include the ability of an observer to discriminate between two different luminances of the same colour. Such measurements were carried out, among others, by Brown and MacAdam in 1949, Davidson in 1951, Brown in 1957, and by Wyszecki and Fielder in 1971. It was found that the discrimination ellipsoids yielded relatively unchanging discrimination ellipses in chromaticity space for luminances between 3 and 30 cd/m².

Effects in colour theory

MacAdam's results confirmed earlier suspicions that colour difference could be measured using a metric in a chromaticity space. A number of attempts have been made to define a colour space which is not as distorted as the CIE XYZ space. The most notable of these are the CIELUV and CIELAB colour spaces. Although both of these spaces are less distorted than the CIE XYZ space, they are not completely free of distortion. This means that the MacAdam ellipses become nearly (but not exactly) circular in these spaces.

All the information in this document is provided in good faith. Darklight Design will not be held responsible for any losses due to inaccuracies within this document.