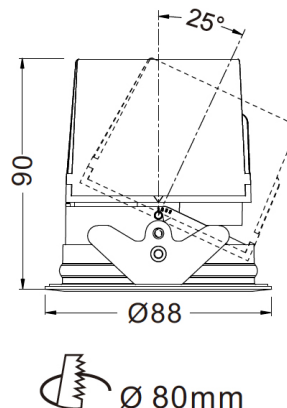


# DARKLIGHT DESIGN

## DARKLIGHT DESIGN SILO LED ADJUSTABLE RECESSED DOWNLIGHT 8062018FI



\*complete with TRIAC dimmable driver

- IP44
- 13W
- 25° adjustable tilt
- 350° adjustable rotation
- 14°, 24° and 35° beam angle
- 2700°K, 3000°K or 4000°K CCT
- H.90 mm. Diameter 88 mm.
- Including dimmable driver
- Circular 80mm cutout
- Fire hood available to suit
- Outer bezel finishes in white or black
- Inner baffle finishes in mirror aluminium, champagne gold, white or black
- Installation frame is separate from the fitting, allowing for easy maintenance without damaging the ceiling



Mirror aluminium



Champagne gold



White



Black

# DARKLIGHT DESIGN

DARKLIGHT DESIGN SILO LED  
ADJUSTABLE RECESSED DOWNLIGHT  
8062018FI

## PRODUCT OVERVIEW

Power	Beam	Flux	CCT	Non-DIM	1-10V DIM	Triac DIM
13W	14°	757lm	2700K	Y	Y	Y
13W	14°	770lm	3000K	Y	Y	Y
13W	14°	813lm	4000K	Y	Y	Y
13W	24°	704lm	2700K	Y	Y	Y
13W	24°	709lm	3000K	Y	Y	Y
13W	24°	778lm	4000K	Y	Y	Y
13W	35°	609lm	2700K	Y	Y	Y
13W	35°	649lm	3000K	Y	Y	Y
13W	35°	678lm	4000K	Y	Y	Y

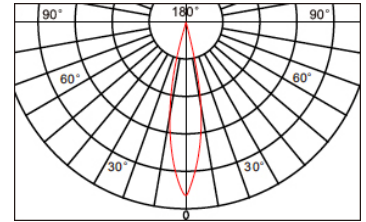
# DARKLIGHT DESIGN

## DARKLIGHT DESIGN SILO LED ADJUSTABLE RECESSED DOWNLIGHT 8062018FI

### LIGHTING DATA - 13W

#### LED COB 14°

Power	13W	13W	13W
CCT	2700K	3000K	4000K
CRI	>80	>80	>80
Output V.	32V DC	32V DC	32V DC
I	350mA	350mA	350mA
Efficacy	60lm/W	60lm/W	64lm/W



#### 13W 2700K - Flux 757lm

Lux	h(m)	d(cm)	Em	Emax
	1	24	4702	7510
	2	49	1175	1820
	3	73	522	834

#### 13W 3000K - Flux 770lm

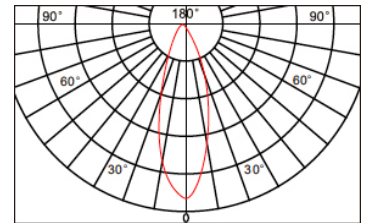
Lux	h(m)	d(cm)	Em	Emax
	1	23	4949	7750
	2	46	1237	2020
	3	69	549	861

#### 13W 4000K - Flux 813lm

Lux	h(m)	d(cm)	Em	Emax
	1	23	5100	8950
	2	47	1275	2240
	3	71	566	994

#### LED COB 24°

Power	13W	13W	13W
CCT	2700K	3000K	4000K
CRI	>80	>80	>80
Output V.	32V DC	32V DC	32V DC
I	350mA	350mA	350mA
Efficacy	55lm/W	55lm/W	60lm/W



#### 13W 2700K - Flux 704lm

Lux	h(m)	d(cm)	Em	Emax
	1	42	1776	2550
	2	85	444	671
	3	128	197	283

#### 13W 3000K - Flux 709lm

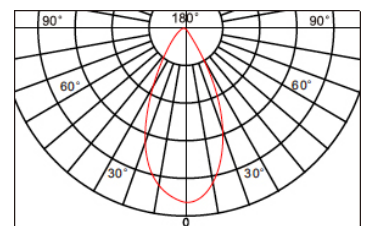
Lux	h(m)	d(cm)	Em	Emax
	1	42	1826	2740
	2	84	456	744
	3	126	202	304

#### 13W 4000K - Flux 778lm

Lux	h(m)	d(cm)	Em	Emax
	1	41	2017	3180
	2	82	504	820
	3	124	224	353

#### LED COB 35°

Power	13W	13W	13W
CCT	2700K	3000K	4000K
CRI	>80	>80	>80
Output V.	32V DC	32V DC	32V DC
I	350mA	350mA	350mA
Efficacy	47lm/W	50lm/W	52lm/W



#### 13W 2700K - Flux 609lm

Lux	h(m)	d(cm)	Em	Emax
	1	64	839	1310
	2	128	209	345
	3	192	93	145

#### 13W 3000K - Flux 646lm

Lux	h(m)	d(cm)	Em	Emax
	1	64	902	1430
	2	128	225	377
	3	192	100	158

#### 13W 4000K - Flux 678lm

Lux	h(m)	d(cm)	Em	Emax
	1	64	944	1630
	2	128	236	436
	3	192	104	181

# DARKLIGHT DESIGN

DARKLIGHT DESIGN SILO LED  
ADJUSTABLE RECESSED DOWNLIGHT  
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## COB (chip-on-board)

COB (chip-on-board) technology generates the light evenly over the surface like that of an incandescent lamp, but without double image. The light generated from the fitting with COB makes the subject look natural and clean compared to a fitting with a single-LED-chip, which has a double image.



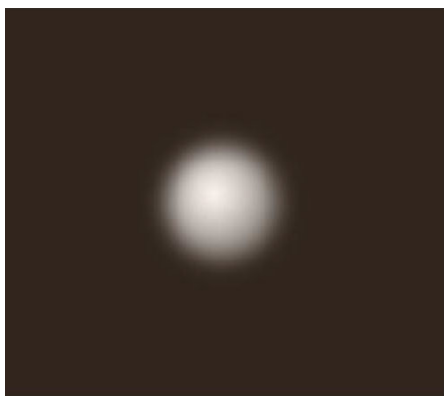
Fitting with COB generates the light even and soft, making the subject natural and clean and consequently creating strong stereoscopic feel.



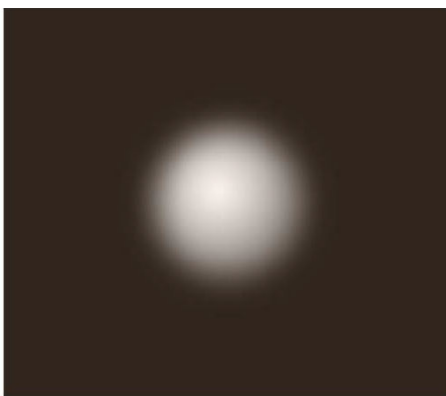
Fitting with single LED chip generates the light from the scattered chips, making the subject blur and unclear in boundary with double image and consequently creating weak stereoscopic feel.

## ACCURATE LIGHT DISTRIBUTION AND CONTROL

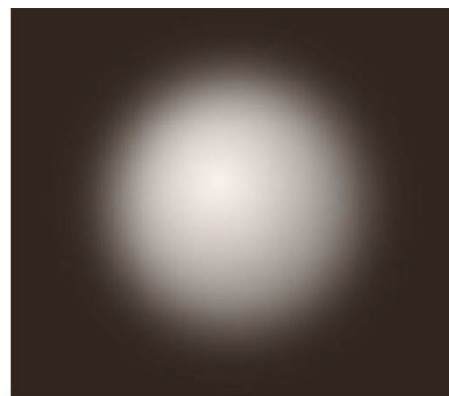
Available with beam angles at 14°, 24° or 35° to cater for differing requirements.



14°



24°



35°

# DARKLIGHT DESIGN

## DARKLIGHT DESIGN SILO LED ADJUSTABLE RECESSED DOWNLIGHT 8062018FI

### HIGH CRI

The Darklight Design range Utilizes world class LED chips which create a high Colour Rendering Index (CRI) of RA > 90. This makes the subject appear natural and fresh in a way that few other LED products can do at present.

Lighting in high power & high CRI results in higher definition of the colour and detail of the subject. Subsequently this fitting is an ideal lighting solution for both the retail sector and public spaces.

This fitting is available in CRI 80 or CRI 90.

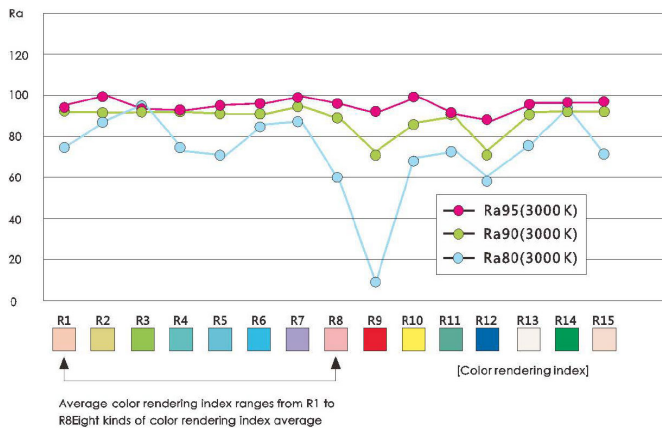
**Ra 95**  
**High CRI**



**Ra 90**  
**Moderate CRI**



**Ra 80**  
**Standard CRI**



### AVERAGE RA EVALUATION INDEX

Ra Evaluation Index is applied to estimate the Colour Rendering Index (CRI) of the lighting product. This allows the user to see the reflection level of natural colour compared to those by conventional lighting.

Average colour rendering index ranges from R1 to R8.

# DARKLIGHT DESIGN

## RA CONSISTENCY

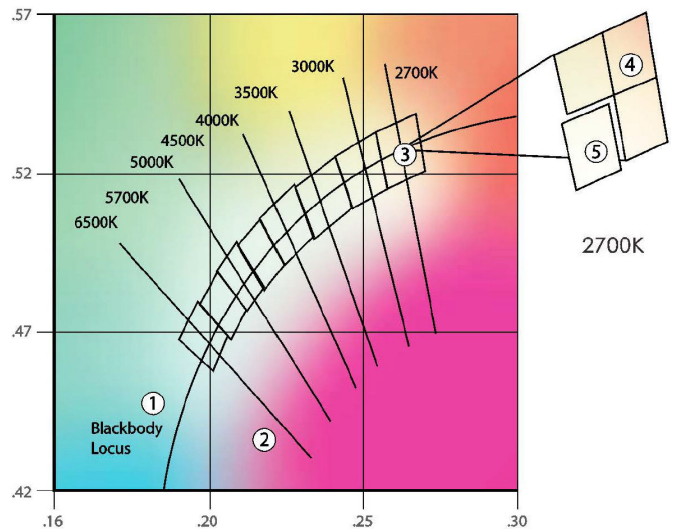
The requirement of lighting manufacturers to source LED chips of a high Ra consistency is challenging in a market where colour temperature inconsistency exists. For this purpose our LED chips are sourced at a high consistency (SDCM<3) from the best LED chip manufacturers. All LED chips are sorted out, stored and processed to a strict and scientific criterion to guarantee the batch consistency of our LEDs.

When LEDs are manufactured, the most challenging part is producing consistent and precise white colour. Binning is the process of sorting the white LEDs into groups of similar white colours. The regulation of this process is outlined by the ANSI standards for tolerances of white colour variations to fit within a colour temperature group, or bin. Some LED manufacturers have adapted a more stringent process of sorting called micro-bins which allows for much smaller white colour variations.

Our LEDs exceed the ANSI binning standards, giving our fittings optimal colour matching. When white LEDs are created, whether they be on the warm or cool end of the spectrum, there are always slight inconsistencies with regards to specific colour temperatures.

Although there is a cost associated with consistency, various LED chip manufacturers now make smaller bins available. Micro-bin sizes vary between chip manufacturers and while micro-bins allow for better consistency by batch, there is commonly a colour variation between batches.

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1. The arced black line in the graph represents the white colour spectrum.
2. These long intersecting lines represent the range, from one end of the line to the other, of variation in colour for each corresponding colour temperature.
3. In order to keep the range of each temperature as close to the same colour as possible, ANSI created tolerance zones. Only the LEDs that fall into this range are used for that particular colour temperature, these are referred to as "bins".
4. This bin still has plainly visible variations throughout. ANSI tolerance zones are adjacent to account for the challenges around manufacturing LED chips consistently.
5. Once divided into smaller bins, the differences in colour are much less, allowing for minimal variation when two or more LEDs are used together.

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.