RXD

The Cooper Lighting RXD downlight is the first truly viable LED alternative to traditional compact fluorescent downlights, providing a valuable energy saving lighting solution. The RXD can deliver energy savings of up to 62% over traditional compact fluorescent downlights without compromising on light levels or quality of light. To ensure suitability in a variety of applications, the RXD is available with a choice of 2900K warm white or 5000K cool white illumination, round or square bezels that can be specified in 4 different finishes and a wide attachment range to cater for both decorative and function driven installations. The RXD is compact and lightweight, with a body height of only 86mm, which enables it to be used in restricted ceiling voids.

- Multi-die LED technology
- Heat pipe thermal management system
- Maintenance free
- 10-12 years typical commercial life
- 62% less energy consumption than compact fluorescent equivalent

RXD

Advanced LED Technology

LED light sources have offered major advantages for some time - extremely long life, maintenance free reliability and significant energy saving. But these benefits have been typically restricted to decorative and ambient applications. The RXD's innovative design now breaks through this barrier.

Incorporating the very latest in LED technology - multi-die LED's - the RXD now provides a new alternative to traditional fluorescent sources in commercial applications.

Unlike conventional high output LED's, multi-die technology incorporates multiple LED's in one package providing increased light output in a smaller space and a wider spread of light. Available in 2900K warmwhite or 5000K coolwhite, each with a colour rendering index of over 80 CRI, the RXD breaks new boundaries to deliver high quality light and performance with the major advantage of low energy consumption and a maintenance free life.

Energy Saving

We're all looking to reduce energy consumption in an effort to combat both climate change and increasing energy costs. As lighting is one of the largest users of electricity in a typical building, efficiency improvements in our light sources will have a significant impact. The RXD now provides the solution.

Example

25 luminaires running for 50,000 hours

	RXD1 25W LED	2X26W CFL	RXD2 15W LED	2x18W CFL
Total Circuit Watts	25W	57W	15W	39W
Total Kwh	31,250	71,250	18,750	48,750
Energy Saving	56%		62%	

Thermal Management

Obtaining optimum performance and long life from LED's requires accurate thermal management, i.e. the heat generated by the LED must be drawn away from it's junction. In simple terms, the cooler the LED, the better the performance and life.

To generate the best from its LED, the RXD uses advanced heat pipe cooling technology compared to traditional heat sink methods.

Heat pipes work on the principle that as a liquid evaporates, energy - in the form of heat - must be taken from the environment. Therefore, an evaporating liquid will cool the surrounding area.

This is how the RXD's purpose designed pure water filled heat pipes draw and conduct the heat from the LED to the cooling fins. This advanced cooling method accurately maintains the thermal requirements of the LED without the need for large, heavy heat sinks.

Long Life

In terms of service life LED's are truly advanced. Over 70% of their initial light output is maintained after 50,000 hours compared to typically 10,000 hours practical life offered by fluorescent sources. This translates into significant cost reductions in through life maintenance.
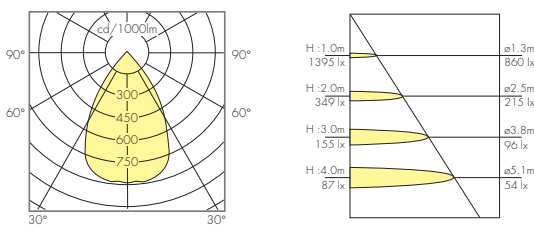
Based on 10 hours use per day, the RXD will last maintenance free for 13.7 years. A 2x26W compact fluorescent will last only 2.7 years before lamp failure, therefore requiring 5 lamp changes in total to match the life performance of the RXD.
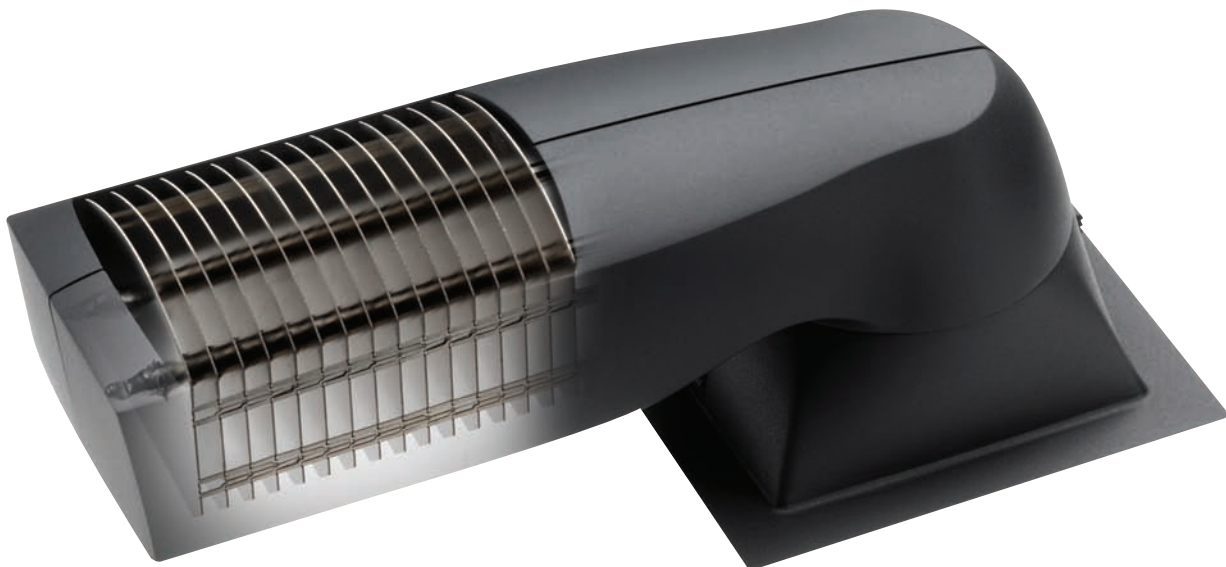
Performance

	RXD1 25W, fixed output		RXD2, 15W fixed output & 1-10v dimming	
	Warm White	Cool white	Warm White	Cool White
LED Chip lumens	1490 lm	1597 lm	989 lm	1066 lm
LOR	96.0%	96.0%	96.0%	96.0%
Total Circuit Watts	25.0W	25.0W	15.0W	15.0W
Lumens per Circuit Watt	57.2 lm/cw	61.0 lm/cw	63.3 lm/cw	68.2 lm/cw

Photometric Data

cd/1000lm
90° 90°
60° 60°
300
450
600
750
30° 30°

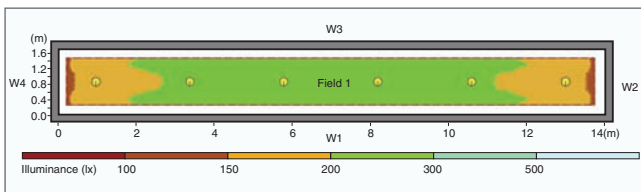| H : 1.0m | ø1.3m |
1395 lx	860 lx
H : 2.0m	ø2.5m
349 lx	215 lx
H : 3.0m	ø3.8m
155 lx	96 lx
H : 4.0m	ø5.1m
87 lx	54 lx

Visit www.artandsciencecombined.com to download photometric data.

Performance Comparison

Corridor 1.7m x 14.0m x 2.8m, 70/50/20 reflectances

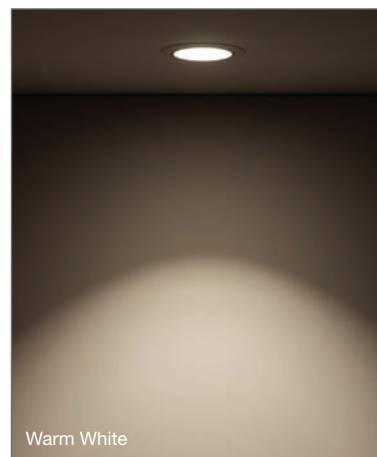### 2 x 26W CFL Downlight, 0.8 Maintenance Factor

Illuminance (lx) 100   150   200   300   500

Eav   196lx
Emin   139lx
Emax   211lx
Uniformity 0.71

RXD LED Downlight, 0.9 Maintenance Factor

Illuminance (lx) 100   150   200   300   500
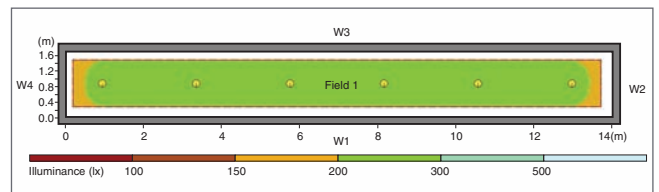
Eav   222lx
Emin   168lx
Emax   241lx
Uniformity 0.76

Cool White

Warm White

CE | IP20 | IP44 | IP54 | DIMMING

RXD
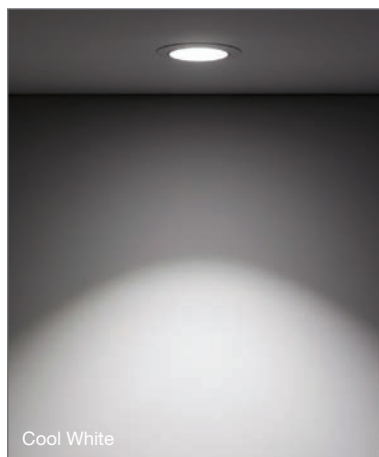
Downlights

LED and Driver
- 15W, 25W LED
- 5000K Coolwhite or 3000K Warmwhite
- >80 CRI
- Fixed output driver as standard
- Dimming options available including 1-10V and DALI

Materials
- Body - injection moulded fire retardant polycarbonate, black finish
- Ceiling clips - spring steel self finish
- Bezel - injection moulded fire retardant ABS
- Bezel finish - RAL9016 White, RAL9006 Silver, Chrome plated
- Reflector - injection moulded fire retardant polycarbonate, satin finish

Options
- Integral emergency conversion
- Suitable for use on defined escape routes

Installation Notes
- Shallow profile allows installation in ceiling voids as low as 110mm
- Prewired remote gearbox provides ease of positioning in restricted voids
- Gearbox and luminaire fit through ceiling cut out
- Luminaire is securely retained by 2 tool less ratchet spring clips
- Reflector simply clips in to place

Specification
To specify state: Multi-die LED downlight with heat pipe thermal management system, 86mm overall height, square/round bezel in white/silver/chrome/trimless finish and retrofit attachment facility as Cooper Lighting RXD range, part no._____

Dimensions

Gearbox   Square   Round

Catalogue Numbers
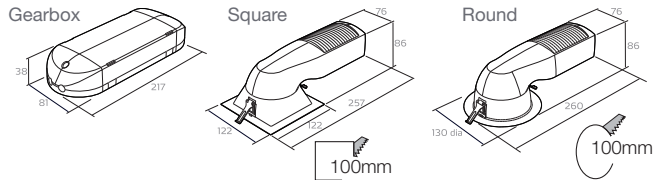
Wattage	Bezel	Finish	Cat No Cool White	Cat No Warm White	Weight (kg)	Emergency Cat No Cool white	Emergency Cat No Warm White	Weight (kg)
RXD1 25W	Round	White	RXD1-RWS-CW	RXD1-RWS-WW	0.5	EBRXD1-RWS-CW	EBRXD1-RWS-WW	1.1
		Silver	RXD1-RSS-CW	RXD1-RSS-WW	0.5	EBRXD1-RSS-CW	EBRXD1-RSS-WW	1.1
		Chrome	RXD1-RCS-CW	RXD1-RCS-WW	0.5	EBRXD1-RCS-CW	EBRXD1-RCS-WW	1.1
		Trimless	RXD1-RTS-CW	RXD1-RTS-WW	0.5	EBRXD1-RTS-CW	EBRXD1-RTS-WW	1.1
	Square	White	RXD1-SWS-CW	RXD1-SWS-WW	0.5	EBRXD1-SWS-CW	EBRXD1-SWS-WW	1.1
		Silver	RXD1-SSS-CW	RXD1-SSS-WW	0.5	EBRXD1-SSS-CW	EBRXD1-SSS-WW	1.1
		Chrome	RXD1-SCS-CW	RXD1-SCS-WW	0.5	EBRXD1-SCS-CW	EBRXD1-SCS-WW	1.1
		Trimless	RXD1-STS-CW	RXD1-STS-WW	0.5	EBRXD1-STS-CW	EBRXD1-STS-WW	1.1
RXD2 15W	Round	White	RXD2-RWS-CW	RXD2-RWS-WW	0.5	EBRXD2-RWS-CW	EBRXD2-RWS-WW	1.1
		Silver	RXD2-RSS-CW	RXD2-RSS-WW	0.5	EBRXD2-RSS-CW	EBRXD2-RSS-WW	1.1
		Chrome	RXD2-RCS-CW	RXD2-RCS-WW	0.5	EBRXD2-RCS-CW	EBRXD2-RCS-WW	1.1
		Trimless	RXD2-RTS-CW	RXD2-RTS-WW	0.5	EBRXD2-RTS-CW	EBRXD2-RTS-WW	1.1
	Square	White	RXD2-SWS-CW	RXD2-SWS-WW	0.5	EBRXD2-SWS-CW	EBRXD2-SWS-WW	1.1
		Silver	RXD2-SSS-CW	RXD2-SSS-WW	0.5	EBRXD2-SSS-CW	EBRXD2-SSS-WW	1.1
		Chrome	RXD2-SCS-CW	RXD2-SCS-WW	0.5	EBRXD2-SCS-CW	EBRXD2-SCS-WW	1.1
		Trimless	RXD2-STS-CW	RXD2-STS-WW	0.5	EBRXD2-STS-CW	EBRXD2-STS-WW	1.1

For 1-10V dimming option, add **R** character, eg. RXD1-RWS-CW becomes RXD1-RWS-CW-**R**

For DALI dimming option, add **DD** character, eg. RXD1-RWS-CW becomes RXD1-RWS-CW-**DD**

Emergency versions available with automatic test functionality - see page 303 for system features

Primary product for an optimised efficient lighting solution

Attachments

Materials
- Bezel assembly - injection moulded fire retardant ABS
- Bezel finish - RAL9016 White, RAL9006 Silver, Chrome plated
- Panels - injection moulded fire retardant polycarbonate
- Halo - injection moulded acrylic with chrome plated steel fixings

Installation Notes
- Fixing collar threads over downlight and locates on rear of downlight bezel
- Downlight is then installed as normal
- Fixing collar then provides facility to fix attachments to the downlight face
- Round attachments fix with 1/4 turn
- Square attachments fix with slide action left to right
- No tools required, all accessories are pre-assembled for quick installation

Specification
To specify state: Frosted Halo/Polycarbonate Opal Lens/Polycarbonate Clear Lens/Polycarbonate Wall Wash Optic/IP44/IP54 retrofit downlight attachment as Cooper Lighting RXD attachment range, part no._____

Dimensions
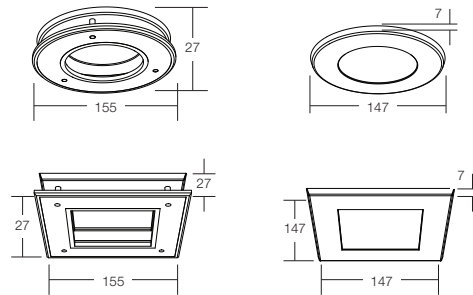
Catalogue Numbers

Description	Bezel Finish			Weight (kg)
	White	Silver	Chrome	
Round Halo	RXD-RHW	RXD-RHS	RXD-RHC	0.3
Round Opal Lens IP44	RXD-ROW44	RXD-ROS44	RXD-ROC44	0.2
Round Opal Lens IP54	RXD-ROW54	RXD-ROS54	RXD-ROC54	0.2
Round Clear Lens IP44	RXD-RCW44	RXD-RCS44	RXD-RCC44	0.2
Round Clear Lens IP54	RXD-RCW54	RXD-RCS54	RXD-RCC54	0.2
Round Wall Wash Optic	RXD-RWW	RXD-RWS	RXD-RWC	0.2
Square Halo	RXD-SHW	RXD-SHS	RXD-SHC	0.3
Square Opal Lens IP44	RXD-SOW44	RXD-SOS44	RXD-SOC44	0.2
Square Opal Lens IP54	RXD-SOW54	RXD-SOS54	RXD-SOC54	0.2
Square Clear Lens IP44	RXD-SCW44	RXD-SCS44	RXD-SCC44	0.2
Square Clear Lens IP54	RXD-SCW54	RXD-SCS54	RXD-SCC54	0.2
Square Wall Wash Optic	RXD-SWW	RXD-SWS	RXD-SWC	0.2

Round Halo   Round opal lens IP44/54   Square Halo   Square opal lens IP44/54

Round clear lens IP44/54   Round wallwash optic   Square clear lens IP44/54   Square wallwash optic