LED Recessed Trimless Downlights

12 W LED Round: Fixed or Tilt Trimless Downlights 12 W LED Square: Fixed or Tilt Trimless Downlights



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LUMINAIRE IMAGES

ROUND FIXED

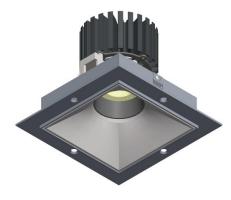


ROUND TILT



Note: Shown installed in a plaster ring. Fiber mesh ring not shown.

SQUARE FIXED



SQUARE TILT



PRINCIPAL LUMINAIRE FEATURES

- LED luminaire, 93 CRI, 800 lumens typical
- 2 step MacAdam Ellipses color consistency.
- Standard Lutron LED Driver delivers continuous, flicker-free dimming from 100% down to 1% of measured light output.
- 50 000 hours rated LED system life (LED and driver).
- Standard white anti-glare baffle. Black baffle optional.
- 2 700, 3 000 and 3 500 K CCT
- 12°, 26°, 51° and Wall Wash available.
- Fixed and Tilt configurations available (25° maximum tilt, 360° rotation).
- CE Compliant
- IP20 standard with IP65* options available.
- Fixture includes plaster ring and fiber mesh ring.

- Field replaceable components (driver and luminaire).
- Includes EcoSystem and DALI 1.0 compatible LED driver.
- Not designed for contact with insulation.
- Fire rated accessory available (sold seperately).
- 60 Im/W (typical with white baffle) meets Part L Building Regulations for commercial and residential applications.
- Meets or exceeds Energy Efficiency Index (EEI) for Ecodesign directive within the current European Union Regulation.**
- Ten (10) years or 50 000 hours luminaire and dimming warranty.

LUMINAIRE SPECIFICATIONS

Operating Temperature: 0 °C to 40 °C Decibel Rating: Quiet in a 24 dB room Minimum Ceiling Void Depth: 120 mm

Ceiling Cutout: 102 mm

Shipping Weight: 1.4 kg (luminaire and driver)

COMPATIBLE CONTROLS

Visit www.lutron.com/cefinire or see Lutron Application Note #607 (P/N 048607 at www.lutron.com)

- *IP65 rated for bezel side of luminaire only.
- **EU Regulation 1194/2012, phase 3; Ecodesign directive 2009/125/EC.

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ORDERING GUIDES

BASE UNIT CONFIGURATION

Select appropriate code in each column to complete model number. LED driver included.

Example:

FRF9	X	<u>Z</u>	<u>27</u>	<u>12</u>	<u>WH</u>	<u>EU</u>	\overline{XX}
SERIES	OUTPUT	TRIM TYPE	CCT*	BEAM	FINISH	CONTROL	OPTIONS
FRF9 Finiré Round Fixed 95 mm Downlight	X Standard 12 W, 800 lm, 93 CRI*	Z Trimless	27 2 700 K	12 12°	WH White	EU Lutron EcoSystem and DALI	XX None
FRT9 Finiré Round Tilt 95 mm Downlight			30 3 000 K	26 26°	WB White with Black Baffle		I6 IP65**
FSF9 Finiré Square Fixed 95 mm Downlight			35 3 500 K	51 51°			
FST9 Finiré Square Tilt 95 mm Downlight				ww Wall Wash†			

^{*}All wattage, lumen, CCT, and CRI values are typical values, tested with white baffles. For exact values, reference the photometric data on page 4 or contact Lutron Customer Service.

ACCESSORY

Fire hood

Model Number: FINIRE9-FH

See the Finire Firehood Installation Guide (P/N 041576 at www.lutron.com)f

NOTES:

Additional options available:

- Black, gold, and silver finishes
- Custom options and other finishes
- Linear spread lens for fixed options (20° x 60° optic)

For more information, please contact Fixture Customer Service at +44(0)207.702.0657 or eacustsvc@lutron.com

^{**}IP65 only available in fixed series. IP20 standard for all series. IP65 rated for bezel side of the luminaire only.

[†]Only available for tilt luminaires (FRT9 and FST9), and only with white baffles (WH).

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LED DRIVER SPECIFICATIONS

Dimming Range: 100% to 1%

Dimming Method: Constant-current reduction. Refer to Lutron

Application Note #360 (P/N 048360 at

www.lutron.com) for details.

Operating Voltage: 220–240 V \sim at 50/60 Hz

Lifetime: 50 000 hours at 40 °C ambient **Thermal Protection:** Thermal foldback protection.

Dimmed Level: LED lighting turns on to any dimmed level without

flashing to full brightness.

Non-volatile Memory: Restores all driver settings after power failure.

Power Factor: $\lambda > 0.88$ at 9 W maximum power **Typical Standby Power Consumption:** 0.5 W

Harmonics: Meets Harmonics requirements for IEC-61000-3-2.

Open Circuit: Output open circuit protected.

Short Circuit: Output short circuit and overload protected. **Turn-on time:** < 100 ms typical from electronic off.

Sound Rated: Inaudible in 24 dB ambient

Relative Humidity: Maximum 90% non-condensing Maximum Case Temperature: $t_c = 75$ °C at 12 W

Maximum Number of Drivers on Miniature Circuit Breaker:

16 A Type B: 20 drivers16 A Type C: 34 drivers

REGULATORY APPROVALS

- CE compliant and ENEC certified
 Safety: IEC/EN 61347-2-13
 - Emissions: CISPR15/EN55015, IEC 61000-3-2, 3-3
 - Immunity: IEC/EN 61547,

IEC/EN 61000-4-2, -4-3, -4-4, -4-6, -4-11

- Performance: IEC/EN 62384
- RoHS 2006 Compliant
- IEC 60529, IP20 Rating
- DALI 1.0 Compatible
- Compliant with IEC62386-207
- Lutron Quality Systems registered to ISO 9001
- Manufacturing facilities employ ESD reduction practices that comply with the requirements of ANSI/ESD S20.20.

INSTALLATION DETAILS

- Drivers must be installed per national and local electrical codes.
- Provide adequate space to ensure convective cooling of LED driver.
- Remove any insulation or heat generating equipment or obstruction within 150 mm of the LED driver.

Note: Lead lengths from driver to LED light engine must not exceed 15 m.

Note: Ground/earth termination not provided. Terminate ground/earth in compliance with local electric codes

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Fixed Series

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PHOTOMETRIC DATA - DOWNLIGHT

	Fixed Series		
MODEL NUMBER	FRF9XZ3051WHEUXX		
BEAM ANGLE	51°		
LIGHT OUTPUT (Im)	780		
WATTAGE (W)	11.7*		
EFFICACY (Im/W)	66.9		
COLOR ACCURACY CRI	91.2		
COLOR TEMPERATURE	3 000 K		
CANDELA PLOT (NADIR) 0° plane 90° plane	90° 90° 450 60° 30° 900 0° 0°		

	CONE OF LUMINANCE		
H = DISTANCE FROM CEILING (m)	Nadir (lux)	50% Lighted Diameter (m)	
1.22	634	1.03	
1.83	282	1.54	
2.44	158	2.05	
3.05	101	2.57	
3.66	/71	3.08	
4.27	52	3.60	
4.88	40	4.11	

MODEL NUMBER	FRF9XZ2751WHEUXX		
BEAM ANGLE	51°		
LIGHT OUTPUT (Im)	732		
WATTAGE (W)	11.93*		
EFFICACY (Im/W)	62.6		
COLOR ACCURACY CRI	92.4		
COLOR TEMPERATURE	2 700 K		
CANDELA PLOT (NADIR) O° plane Po° plane	90° 90° 225 60° 450 30° 900 0°°		

	CONE OF LUMINANCE		
H = DISTANCE FROM CEILING (m)	Nadir (lux)	50% Lighted Diameter (m)	
1.22	631	0.99	
1.83	280	1.49	
2.44	157	1.98	
3.05	101	2.48	
3.66	/70	2.97	
4.27	51	3.47	
4.88	39	3.96	

^{*} Total system power including LED driver.

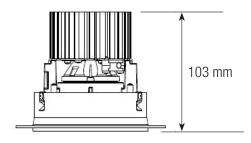
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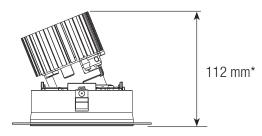
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LUMINAIRE DIMENSIONS

ROUND FIXED: Side View

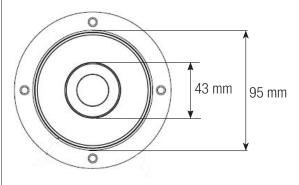


SQUARE TILT: Side View

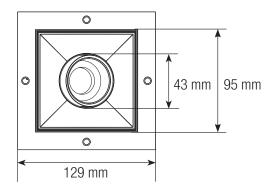


^{*103} mm when in down/nadir position

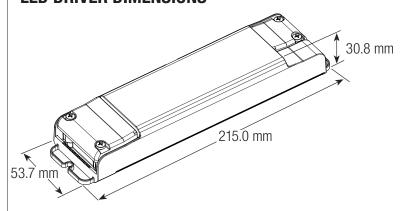
ROUND FIXED: Bottom View



SQUARE TILT: Bottom View

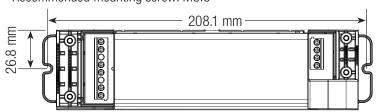


LED DRIVER DIMENSIONS



MOUNTING CENTERS

Recommended mounting screw: M3.5



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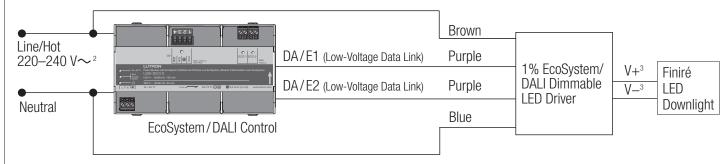
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CIRCUIT DIAGRAMS

EU: EcoSystem / DALI DIGITAL CONTROL (220 – 240 V~)1



- See product specification submittal for specific wiring diagrams.
- ² Refer to the specific Lutron control specifications for exact input voltage rating of the product.
- ³ Class III fitting provided with low-voltage wires attached. If additional wire length is required, maximum lamp-to-driver wire length is 15 m using 0.50 to 1.50 mm² (20 to 16 AWG) wire.
- Contact Fixture Customer Service for custom options at +44(0)207.702.0657 or eacustsvc@lutron.com
- For a list of compatible controls and control ratings, visit www.lutron.com/cefinire or see Lutron Application Note #607 (P/N 048607 at www.lutron.com)



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For limited 10-year warranty details, see

 $www.lutron.com/Technical Document Library/CE_Fixtures_Warranty.pdf$

Specification subject to change without notice