

Catalog # :

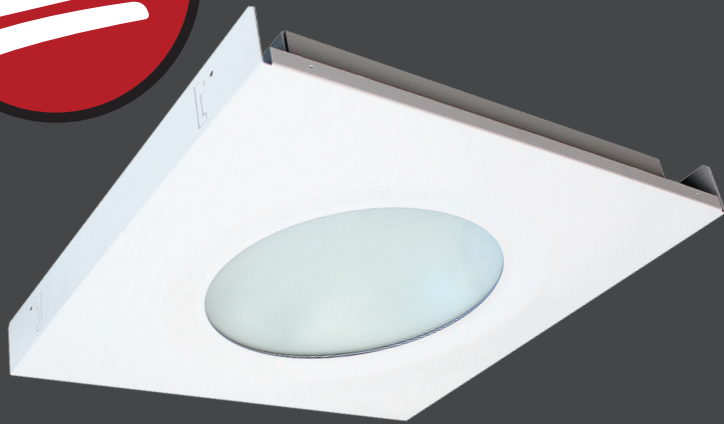
Project :

Prepared By :

Date :



# XIRR 2x2 Round Recessed LED Luminaire



The elegant XIRR round recessed LED luminaire was designed to provide unparalleled visual comfort, while delivering maximum performance. The XIRR's high lumen packages allow for savings from a reduced fixture count compared with standard can lighting, while also enhancing the application environment. Intended applications are for high ceiling areas 14-35'.

## Features & Specifications

### Optical System

- High transmission impact resistant diffuse acrylic lens eliminates bright spots from individual LED's and provides high vertical illumination and visual comfort.
- Use of closely spaced high brightness LED chips minimizes pixelation and provides uniform lens luminance.
- Available in 5000K, 4000K and 3500K color temperatures.
- Minimum CRI of 80.

### Electrical

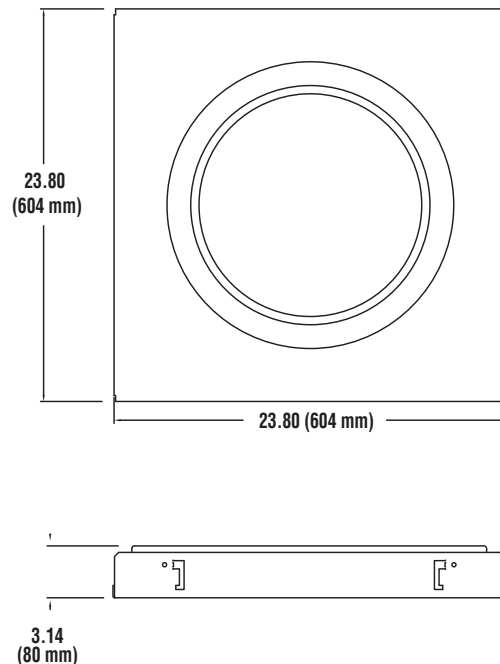
- High-performance driver features over-voltage, under voltage, short-circuit and over temperature protection.
- 0-10 volt dimming (1% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High voltage (347 Vac).
- L70 Calculated Life: >75k Hours (See Lumen Maintenance on Page 2)
- Total harmonic distortion: <20%
- Operating temperature: - -40°C to +40°C (-40°F to +104°F) 30°C (86°F) when equipped with EM option.
- Power factor: >.95
- Input power stays constant over life.
- Optional 120v-277v integral emergency battery pack is available to meet critical life-safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code compliance. A test switch/indicator button is installed on the housing for ease of maintenance.

### Controls

- Optional integral passive infrared motion and daylight sensor activates switching of luminaire light levels (see page 3 for more details).



## Dimensions





Features & Specifications (Cont.)

**Construction**

- Rigid housing is die-formed thick gauge aluminum for consistency and strength.
- Mounting pan comes equipped with integral NEC compliant earthquake clips.
- Ultra-thin 3.14" luminaire height and lightweight design effectively target a broad range of plenum spaces and allow for easy installations.
- Luminaire is proudly assembled in the U.S.
- All metal parts are painted after fabrication following treatment with phosphate rust inhibitor. Finish coating of housing reflecting surfaces is with high-reflectance (minimum 92%) polyester powder.
- Shipping weight: 20lbs in carton.

**Installation**

- Luminaire installs by lifting it through grid ceiling and resting it on the T-bars.
- Wiring access/strain relief plate attaches with one screw, allowing connections to be made from below the ceiling.
- Luminaire installs onto standard 15/16" and narrow 9/16" T-grid ceiling systems.
- An accessory flange kit is available for installing into drywall or plaster.

**Warranty**

- LSI LED Fixtures carry a 5-year warranty.
- 1 Year warranty on optional Battery Back Up. Test regularly in accordance with local codes.

**Listings**

- Listed to UL 1598 and UL 8750.
- RoHS Compliant.
- State of California Title 24.
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at [www.designlights.org/QPL](http://www.designlights.org/QPL) to confirm which versions are qualified.
- American Recovery and Reinvestment Act Funding Compliant.
- Lighting Facts Approved.
- Suitable For Damp Locations.

Performance

DELIVERED LUMENS*				
Output	5000K	4000K	3500K	Wattage
12L	12646	12056	11929	113
18L	18594	17929	17324	168

\*LED Chips are frequently updated therefore values may increase.

ELECTRICAL DATA*					
Lumens	120V	208V	240V	277V	347V
12L	0.94A	0.54A	0.47A	0.41A	0.33A
18L	1.4A	0.81A	0.70A	0.61A	0.48A

\*Electrical data at 25C (77F). Actual wattage may differ by +/-10%.

RECOMMENDED LUMEN MAINTENANCE <sup>1</sup>				
Ambient	Initial <sup>2</sup>	25K hr <sup>2</sup>	50K hr <sup>2</sup>	75K hr <sup>3</sup>
0 C (32 F)	1.02	0.93	0.85	0.79
5 C (41 F)	1.02	0.92	0.84	0.77
10 C (50 F)	1.02	0.91	0.83	0.76
15 C (59 F)	1.01	0.89	0.82	0.74
20 C (68 F)	1.01	0.89	0.81	0.74
25 C (77 F)	1.00	0.89	0.81	0.74
30 C (86 F)	0.99	0.88	0.80	0.73
35 C (95 F)	0.98	0.86	0.79	0.72

1 - Lumen maintenance values at 25°C are calculated per TM-21 based on LM-80 data and in-situ luminaire testing.

2 - In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip).

3 - In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip).

APPLICATION REFERENCE*						
Mounting Ht.	Spacing	Lumens	LPW	W/FT <sup>2</sup>	Avg Fc	# of Luminaires
22	12'x12'	18L	107	1.07	84	16
22	12'x16'	18L	107	0.8	63	12
22	16'x16'	18L	107	0.6	47	9
16	12'x12'	12L	108	0.72	65	12
16	12'x16'	12L	108	0.54	49	9
16	16'x16'	12L	108	0.4	36	6

\*Based on 4K, 80/50/20 reflectances, 2.5' work plane, LLF:1.0, 50'x50' Room



# XIRR 2x2 Round Recessed LED Luminaire

## Luminaire Ordering Guide

TYPICAL ORDER EXAMPLE: **XIRR S LED 18L 40 UE 2x2 WHT EM**

Luminaire Prefix	Distribution	Light Source	Lumens (Nominal)	Color Temp	Line Voltage	Mounting	Finish	Options
XIRR	S - Symmetric	LED	12L - 12,000 18L - 18,000	35 - 3500K 40 - 4000K 50 - 5000K	UE - Universal Voltage (120-277V)  347- 347 V	2x2 - 2x2 T-Bar Grid Ceilings	WHT - White BLK - Black <sup>1</sup>	EM - Emergency Battery <sup>2</sup> IMS - Integral Motion Sensor

**FOOTNOTES:**

- 1 - Above ceiling plane will be painted white.
- 2 - Not available with 347 Voltage.

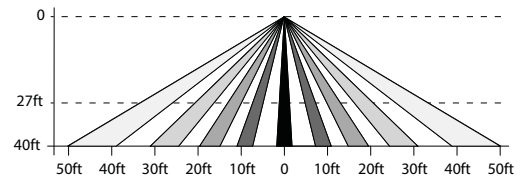
## Controls

### Occupancy Sensor / Daylight Sensor (IMS)

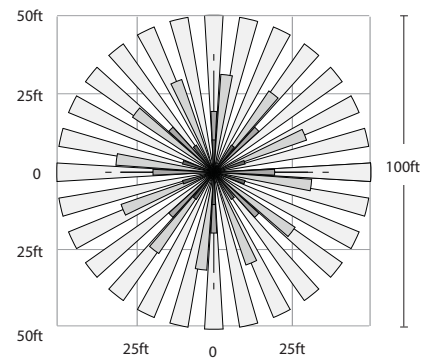
- Optional integral passive infrared motion and daylight sensor activates switching of luminaire light levels. Standard Factory settings: High level light is activated and increased to full bright upon detection of motion. Low light level (30% maximum drive current) is activated when target zone is absent of motion activity for ~5 minutes. Sensor has a detection cone of approximately 45°, see coverage diagram. Optional configurator tool allows for easy and safe programming of each luminaire from the ground level.

### Optional IMS Coverage Diagram

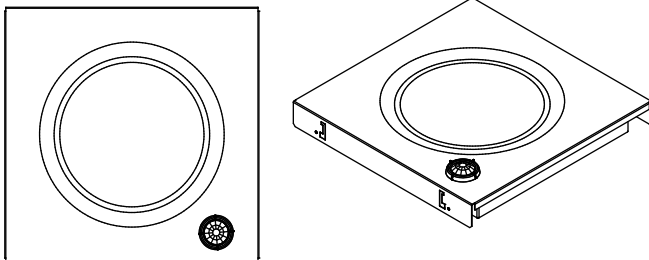
SIDE VIEW



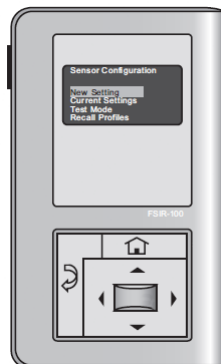
TOP VIEW



### Fixture Shown with IMS



### IMS/PC Remote Configurator Tool



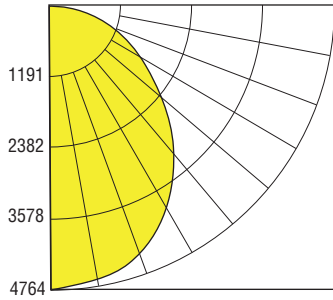


## Photometry

### XIRR S LED 12L 40 XX

Luminaire photometry has been conducted by a NVLAP accredited testing laboratory in accordance with IESNA LM-79-08. As specified by IESNA LM-79-08 the entire luminaire is tested as the source resulting in a luminaire efficiency of 100%.

See <http://www.lsi-industries.com/products/led-lighting-solutions.aspx> for detailed photometric data.



ZONAL LUMEN SUMMARY		
ZONE	LUMENS	% OF LUMINAIRE
0-30	3,644.7	30.2%
0-40	5,851.8	48.6%
0-60	9,848.2	81.7%
60-90	2,203.6	18.3%
70-100	877.2	7.3%
90-120	0	0%
0-90	12,051.8	100%
90-180	0	0%
0-180	12,051.8	100%