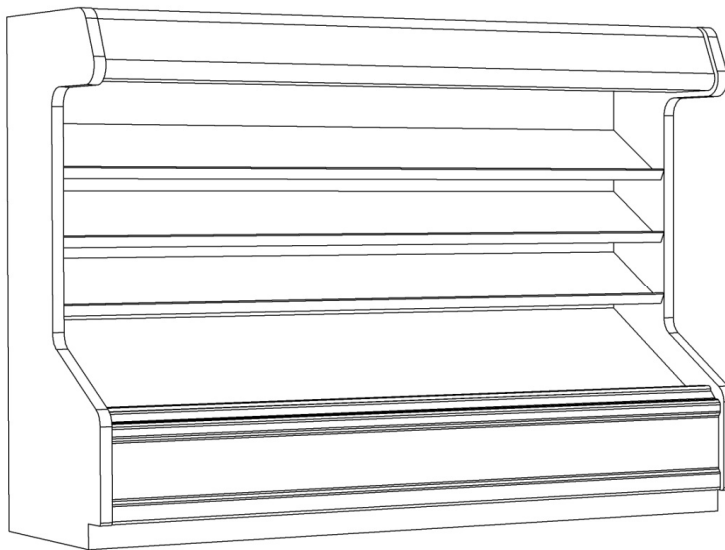




**Installation Guide**  
**Innovative Lighting® R-Series Under Shelf**  
**LED Conversion Kits**  
**For Commercial Refrigerated Multi-Deck**  
**Display Cases**



	<b>BEFORE YOU BEGIN INSTALLATION</b>	
Read these instructions carefully. Failure to follow these instructions will invalidate the warranty on this product.		

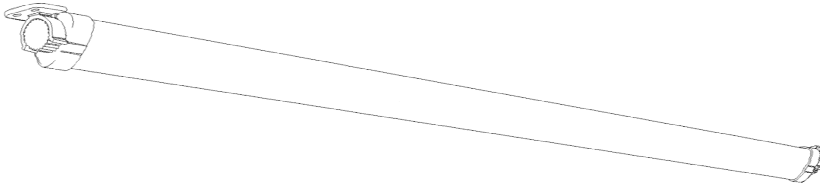
	<b>WARNING</b>
Risk of fire or electrical shock. Disconnect power before installing or servicing product.	

	<b>CAUTION</b>
Use caution when handling a power tool. Always wear protective eyewear.	

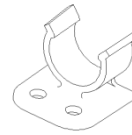
Save these instructions for reference



**Innovative Lighting® R-Series Under Shelf LED Conversion Kits** allow commercial refrigerated multi-deck display cases to be converted to using energy efficient Innovative Lighting® LED lighting systems. Kits include one, two, or more under shelf LED light fixtures, a low voltage power supply, and mounting clips. The under shelf LED light fixtures are completely assembled modules that can be mounted in the same location as the existing light source. Innovative Lighting® R-Series Under Shelf LED Light Fixtures are available in 4' and 6' lengths and in both warm white (3500K) and neutral white (4000K) color temperatures (CCT).



**R-Series Under Shelf LED Light Fixture (780 Series)**



**Mounting Clip**



***WARNING – Risk of fire or electric shock. Innovative Lighting® R-Series Under Shelf LED Conversion Kits are only intended for use in replacing existing light fixtures in Listed commercial refrigerated multi-deck display cases having the construction features shown in the photographs and/or drawings.***



Several Innovative Lighting® R-Series Under Shelf LED Conversion Kits are available. See the kit description below for LED light fixture length and quantity. Verify the contents of the conversion kit before installation.

**1x 4' Under Shelf LED Conversion Kit - 780-X148-4**

- (1) 4' Under Shelf LED Light Fixture (PN 780-X148-1)
- (1) 12VDC Class 2 Power Supply (PN 750-9995-1)
- (2) Mounting Clips (PN 780-0040-1)

**2x 4' Under Shelf LED Conversion Kit - 780-X148-4-2**

- (2) 4' Under Shelf LED Light Fixture (PN 780-X148-1)
- (1) 12VDC Class 2 Power Supply (PN 750-9995-1)
- (4) Mounting Clips (PN 780-0040 -1)

**3x 4' Under Shelf LED Conversion Kit - 780-X148-4-3**

- (3) 4' Under Shelf LED Light Fixture (PN 780-X148-1)
- (1) 12VDC Class 2 Power Supply (PN 750-9995-1)
- (6) Mounting Clips (PN 780-0040 -1)

**4x 4' Under Shelf LED Conversion Kit - 780-X148-4-4**

- (4) 4' Under Shelf LED Light Fixture (PN 780-X148-1)
- (1) 12VDC Class 2 Power Supply (PN 750-9995-1)
- (8) Mounting Clips (PN 780-0040 -1)

**5x 4' Under Shelf LED Conversion Kit - 780-X148-4-5**

- (5) 4' Under Shelf LED Light Fixture (PN 780-X148-1)
- (1) 12VDC Class 2 Power Supply (PN 750-9995-1)
- (10) Mounting Clips (PN 780-0040 -1)

**6x 4' Under Shelf LED Conversion Kit - 780-X148-4-6**

- (6) 4' Under Shelf LED Light Fixture (PN 780-X148-1)
- (1) 12VDC Class 2 Power Supply (PN 750-9995-1)
- (12) Mounting Clips (PN 780-0040 -1)

**1x 6' Under Shelf LED Conversion Kit - 780-X172-4**

- (1) 6' Under Shelf LED Light Fixture (PN 780-X172-1)
- (1) 12VDC Class 2 Power Supply (PN 750-9995-1)
- (2) Mounting Clips (PN 780-0040 -1)

**2x 6' Under Shelf LED Conversion Kit - 780-X172-4-2**

- (2) 6' Under Shelf LED Light Fixture (PN 780-X172-1)
- (1) 12VDC Class 2 Power Supply (PN 750-9995-1)
- (4) Mounting Clips (PN 780-0040 -1)

**3x 6' Under Shelf LED Conversion Kit - 780-X172-4-3**

- (3) 6' Under Shelf LED Light Fixture (PN 780-X172-1)
- (1) 12VDC Class 2 Power Supply (PN 750-9995-1)
- (6) Mounting Clips (PN 780-0040 -1)

**4x 6' Under Shelf LED Conversion Kit - 780-X172-4-4**

- (4) 6' Under Shelf LED Light Fixture (PN 780-X172-1)
- (1) 12VDC Class 2 Power Supply (PN 750-9995-1)
- (8) Mounting Clips (PN 780-0040 -1)

**Required tools and components**

- Tape Measure
- Pencil
- Power Drill
- Screwdriver Bit or Standard Screwdriver
- 3/16" Drill Bit
- Wire Stripper
- Electrical Tape or Cable Ties
- Listed Wire Nuts or Other Listed Connectors
- #8-32 Sheet Metal Screws
- #8-32 Nuts

Where:

X indicates the CCT of the LEDs in the included light fixtures: 0 = warm white (3500K), 5 = neutral white (4000K).



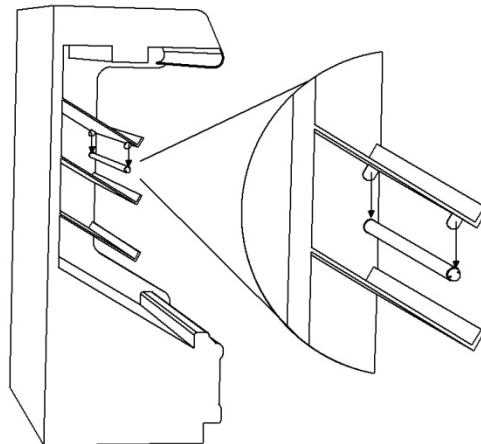
**WARNING – Risk of fire or electric shock. Innovative Lighting® R-Series Under Shelf LED Conversion Kit installation requires knowledge of luminaire electrical systems. If not qualified, do not attempt installation. Contact a licensed electrician.**



**WARNING – Innovative Lighting® R-Series Under Shelf LED Conversion Kits are for use in converting commercial refrigerated multi-deck display cases supplied by 110VAC or 240VAC only. Do not use with commercial refrigerated multi-deck display cases supplied by 277VAC.**

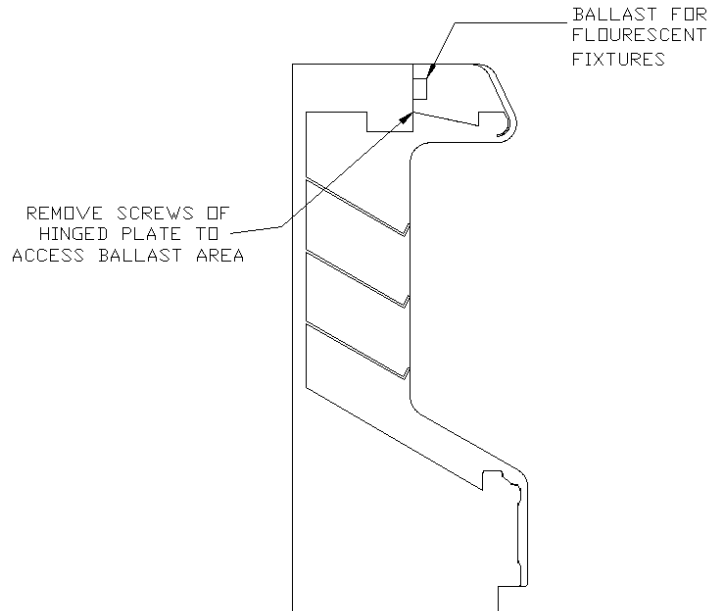
#### **Removal of Existing Components:**

- 1. TURN OFF POWER TO THE COMMERCIAL REFRIGERATED MULTI-DECK DISPLAY CASE AT THE SERVICE PANEL AND FOLLOW APPROPRIATE LOCK OUT / TAG OUT SAFETY PROCEDURES. DO NOT ATTEMPT INSTALLATION UNTIL IT IS VERIFIED THAT THE POWER IS OFF.**
2. Remove the existing light sources, such as fluorescent lamps, from below the shelves of the multi-deck display case. Properly dispose of these after installing the conversion kit.

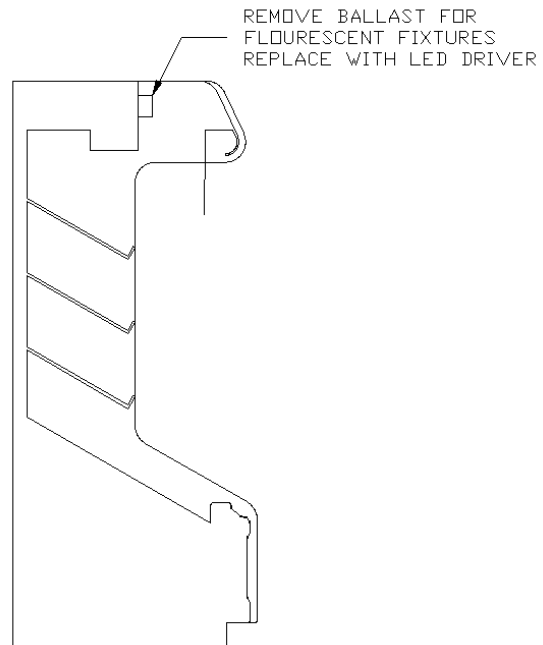


3. Disconnect the existing lampholders from their wiring.

4. Open the covers of the electrical raceways enclosing the ballasts and their associated primary and secondary wiring. These are typically located above the canopy, running the length of the multi-deck display case.



5. Disconnect the wiring from the ballasts and remove the ballasts from the electrical raceways along with the secondary wiring.





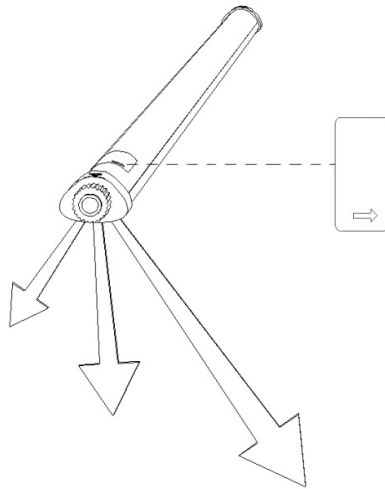
**WARNING – Risk of fire or electric shock. Prior to drilling, ensure that there are no components behind the mounting surface in the areas marked off for the mounting holes.**



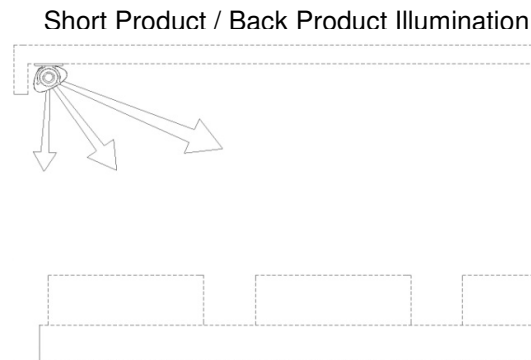
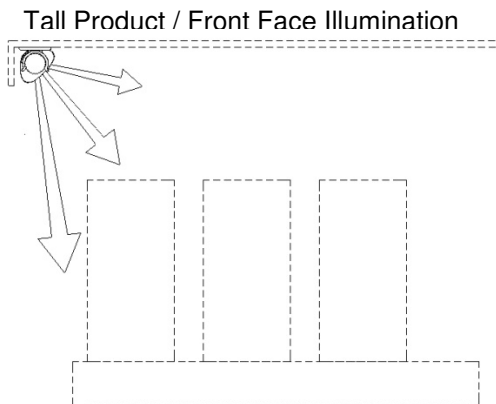
**Only those open holes indicated in the photographs and/or drawings may be made or altered as a result of kit installation. Do not leave any other open holes in an enclosure of wiring or electrical components.**

#### Installation of New Components:

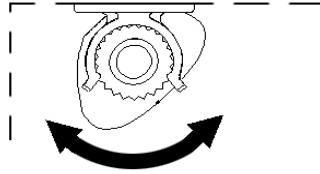
- When installing Innovative Lighting® R-Series Under Shelf LED Light Fixtures, consider the orientation of the light fixtures. R-Series Under Shelf LED Light Fixtures have a directional light output with more light directed out one side of the light fixture than the other. The arrow on the label on the back of the under shelf LED light fixture indicates the direction of higher light output.



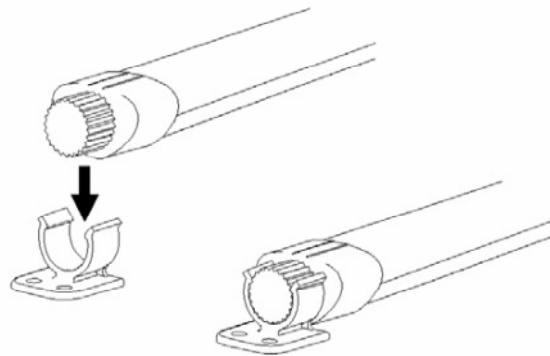
- The mounting orientation of the R-Series Under Shelf LED Light Fixtures will depend on the height of the product relative to the depth and spacing of the shelves. Following are illustrated guidelines to help determine the best configuration prior to installation.



8. R-Series Under Shelf LED Light Fixtures are adjustable after installation to fine tune the light orientation.

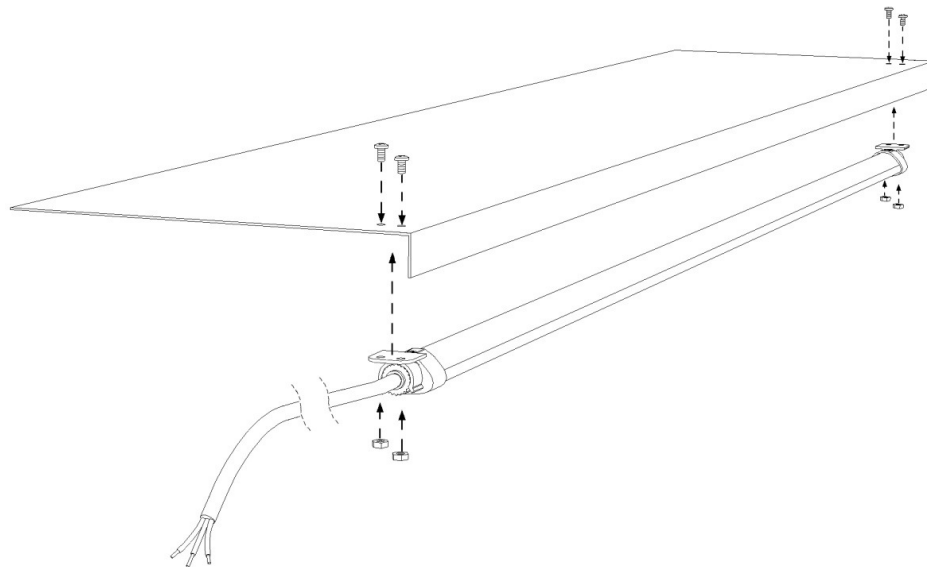


9. Inspect the shelf location where a new Innovative Lighting® R-Series Under Shelf LED Light Fixture is to be installed and determine the location of the mounting clips. Attach one mounting clip (PN 780-0040-1) to each end of the under shelf LED light fixture as shown below:



10. Hold the R-Series Under Shelf LED Light Fixture in the desired location. Use a pencil to mark all mounting clip hole locations on the mounting surface.

11. Drill a 3/16" diameter pilot hole into the mounting surface at each of the marks made in step 10. Use the pilot holes to attach the mounting clips with #8-32 sheet metal screws and nuts. See the figure below:



12. Snap the ends of the R-Series Under Shelf LED Light Fixture into the mounting clips.



**All wiring must be in compliance with NEC and local codes. This light fixture is suitable for damp locations. When used in a damp location, ensure that all connection points are sealed for damp location using the appropriate method per the NEC or local electrical code.**

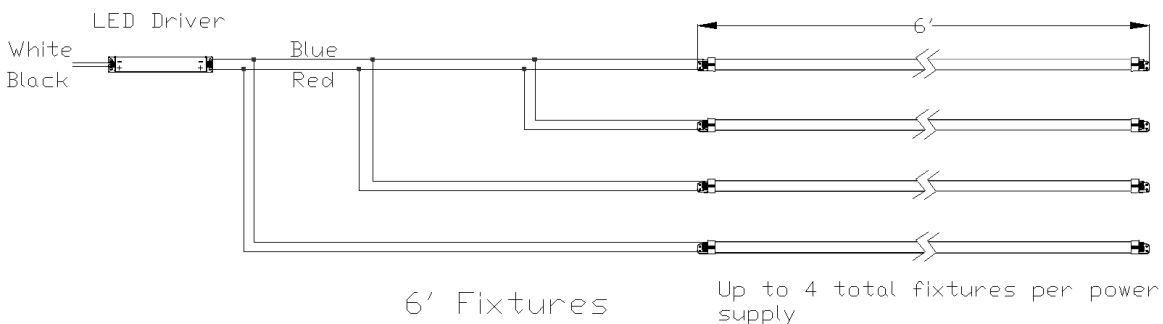
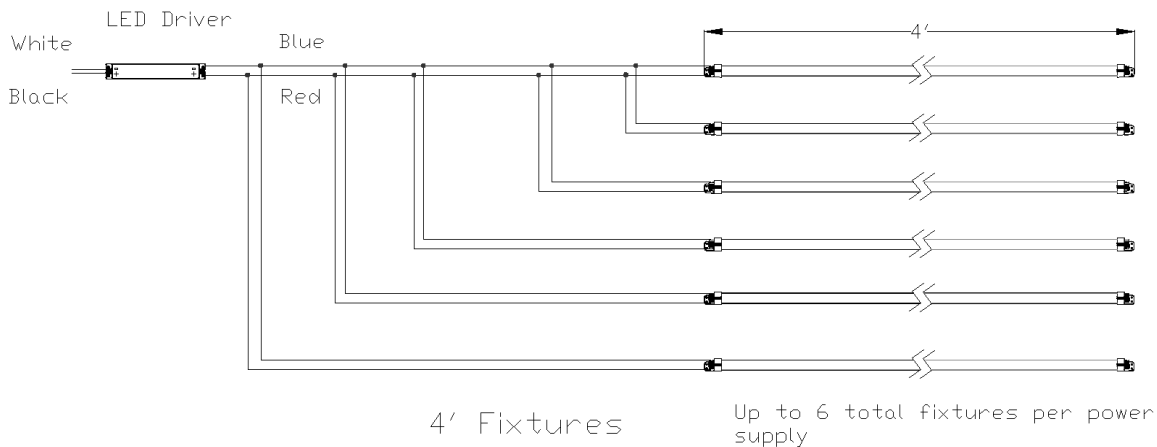


**WARNING – To prevent wiring damage or abrasion, do not expose wiring to edges of sheet metal or other sharp objects.**

13. Each Innovative Lighting® R-Series Under Shelf LED Conversion Kit comes with a regulated 12VDC Class 2 power supply (PN 750-9995-1) suitable for driving the under shelf LED light fixtures that come with that kit. Each power supply has an output of 12VDC and can support up to a 5A load when supplied by a 100-240VAC input. Each regulated 12VDC Class 2 power supply should be placed in a location previously occupied by one of the ballasts. Secure each power supply using #8 sheet metal screws through the mounting holes at the ends of each power supply.

**One regulated 12VDC Class 2 power supply will drive the following number of R-Series Under Shelf LED Light Fixtures :**

- (1 to 6) 4' Under Shelf LED Light Fixtures
- (1 to 4) 6' Under Shelf LED Light Fixtures





14. Connect the AC input wires of each regulated 12VDC Class 2 power supply to the AC primary wires previously connected to the input of the ballast. Use UL Listed wire nuts, quick disconnect connectors, or other Listed connectors following the connector manufacturer's instructions. Terminate any unused AC primary wires with a UL Listed wire nut or other Listed connector so that they are not exposed.

**Regulated 12VDC Class 2 Power Supply Primary Side Connections:**

- Black** wire - Connect to AC Line wire.
- White** wire - Connect to AC Neutral wire.

15. Run new secondary wiring through the electrical raceways between each regulated 12VDC Class 2 power supply and the Innovative Lighting® R-Series Under Shelf LED Light Fixtures that it is intended to power. Connect the DC output wires of each regulated 12VDC Class 2 power supply to the new secondary wires using a UL Listed wire nut or other Listed connector.

**Regulated 12VDC Class 2 Power Supply Secondary Side Connections:**

- Red** wire - Connect to positive (+) secondary wire.
- Blue** wire - Connect to negative (-) secondary wire.

Each regulated 12VDC Class 2 Power Supply should be connected as shown:



16. Connect the input wires of each R-Series Under Shelf LED Light Fixture to the new secondary wires that have been run to the light fixture through the electrical raceways using UL Listed wire nuts or other Listed connectors.

**R-Series Under Shelf LED Light Fixture Input Wire Connections:**

- Red** wire - Connect to positive (+) secondary wire.
- Green/Yellow** wire - Connect to negative (-) secondary wire.
- Blue** wire – Terminate with UL Listed wire nut or other Listed connector.

**Optional Linear Dimming Control:**

An optional 0-10V dimming module may be installed between the regulated 12VDC Class 2 power supply and the R-Series Under Shelf LED Light Fixtures to provide linear dimming. Dimming modules sold separately.

**Optional Occupancy Sensor Control:**

An optional power pack may be installed before the regulated 12VDC Class 2 power supply for controlling the R-Series Under Shelf LED Light Fixtures with an occupancy sensor or other control input. Power packs and occupancy sensors sold separately.

17. Gather any slack wires and secure them together with electrical tape or cable ties.
18. Close the covers of the electrical raceways enclosing the regulated 12VDC Class 2 power supplies and their associated primary and secondary wiring. Be sure no wires are pinched or touch sharp edges and all high voltage AC primary wiring is enclosed within the electrical raceways. Secure the covers.
19. Place the label stating that the original luminaire has been modified near the light fixtures where it will be readily visible during normal maintenance. This label is included with the conversion kit.
20. Turn the power back on to the multi-deck display case at the service panel and verify that all R-Series Under Shelf LED Light Fixtures are powered and operating properly.



## Cleaning

If an R-Series Under Shelf LED Light Fixture requires cleaning, follow the procedure below.

- Switch off or disconnect the power to the R-Series Under Shelf LED Light Fixture.
- Remove the R-Series Under Shelf LED Light Fixture from the mounting clips if necessary.
- Wipe surfaces with a clean, soft cloth lightly dampened in a mixture of warm water and mild dish soap.
- Wipe surfaces again with a clean, soft cloth lightly dampened in warm water.
- Dry all surfaces completely with a clean, soft cloth.
- Reattach the light fixture to the mounting clips and switch on/reconnect power.



*Do not use abrasive cleaners, scouring pads, or paper towels to clean or dry the lamp. Do not use bleach, alcohol, or other chemicals to clean the lamp. Some chemicals and abrasive products may scratch and damage the surfaces. Do not submerge the lamp or use overly wet cloths as it may cause damage to internal electrical components.*

## **CANADIAN INSTALLATIONS:**

THE RETROFIT KIT IS ACCEPTABLE AS A COMPONENT OF A LUMINAIRE WHERE THE SUITABILITY OF THE COMBINATION SHALL BE DETERMINED BY CSA OR AUTHORITIES HAVING JURISDICTION.

**Save these instructions for reference**



Purchase Date: \_\_\_\_\_  
Warranty Expiration Date: \_\_\_\_\_

Thank you for your purchase of an Innovative Lighting® R-Series Under Shelf LED Conversion Kit. Please keep the top portion of this page for your records and mail the bottom portion to the address provided to register your product.

**WARRANTY INFORMATION**

Innovative Lighting LLC., Limited Product Warranty is FIVE (5) YEARS from date of purchase on R-Series Under Shelf LED Conversion Kits and their components. Any product developing such defect in material or workmanship within this period will be repaired or replaced with a like product, at our option (IL) providing it is sent to us, transportation charges prepaid. Proof-of-Purchase date must accompany return to IL at our Roland, Iowa facility. IL does not warrant contractor’s installation work or performance.

This warranty is void if the product warranted has been damaged by accident or unreasonable use, neglect, improper installation or service, or other cause not arising out of defects in material or workmanship.

This FIVE (5) YEAR limited product warranty is not transferable and applies to the original installation of the R-Series Under Shelf LED Conversion Kits for as long as the original purchaser owns them.

**SHIPPING DAMAGE**

The Innovative Lighting® R-Series Under Shelf LED Conversion Kits should be examined for shipping damage upon receipt. The components in the kits have been carefully inspected before shipment. Any claim for loss or damage must be made to the carrier, which will provide any necessary inspection reports and/or claim forms.

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**PRODUCT REGISTRATION**

**PRODUCT INFORMATION**

R-Series Under Shelf LED Conversion Kit Model: \_\_\_\_\_  
R-Series Under Shelf LED Light Fixture Date Code (YYMMDD on lamp label): \_\_\_\_\_

Date of Purchase: \_\_\_\_\_  
Number of units purchased: \_\_\_\_\_

**OWNER INFORMATION**

Name: \_\_\_\_\_  
Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_  
Zip: \_\_\_\_\_ Phone: \_\_\_\_\_  
E-mail: \_\_\_\_\_  
Owner Signature: \_\_\_\_\_

**INSTALLER INFORMATION**

Name: \_\_\_\_\_  
Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_  
Zip: \_\_\_\_\_ Phone: \_\_\_\_\_  
E-mail: \_\_\_\_\_  
Installer Signature: \_\_\_\_\_

Mail to: Innovative Lighting, LLC., P.O. Box 366, Roland, Iowa 50236