



Installation Guide/Owner's Manual

Strait Ceiling Slot

Technical Support: 313-259-6400, Press 5

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1.0 OWNER/USER RESPONSIBILITY

It is the responsibility of the contractor, installer, buyer, owner and user to install, maintain, and operate this luminaire in accordance with all applicable laws, regulations and local electrical safety authority requirements.

This product is only to be installed by a qualified electrician.

IMPORTANT!

Thoroughly read the entire instructions guide and warnings before beginning installation. The instructions provided are intended to assist in the installation and service of the corresponding product. Failure to follow the instructions may result in product malfunction, damage, injury or death. Contact your Kirlin service representative for replacement parts and procedures.

2.0 SAFETY & IMPORTANT INFORMATION



Risk of fire or electric shock. Ensure all power is disconnected during installation process. Refer to wiring diagrams to prevent damages and malfunctions.



This luminaire may only be connected and installed by a qualified electrician. This luminaire requires knowledge of luminaires and electrical systems. If not qualified, do not attempt installation or maintenance. All applicable regulations, legislation, and building codes must be observed.



Connecting fixtures with power **ON** will “hot plug” the LEDs and cause damage.



When handling fixture, DO NOT touch diodes or LED board. Static and physical contact can damage LEDs.



To prevent wiring damage or abrasion, do not expose wiring to edges metal or other sharp objects.

3.0 STANDARDS & COMPLIANCE

UL Listed	UL 1598
Restriction of hazardous substances	RoHS Compliant

4.0 ELECTRICAL REQUIREMENTS

Nominal input voltage range AC	120 - 277V
Input frequency range	50 - 60Hz
Maximum wattage	16.2 W/ft (PRL-02SWM) 5.83 W/ft (PRL-02CCM all on)
Power factor at full load	> 0.95
Surge protection	1kV differential mode (DM) 2kV common mode (CM)

5.0 BEFORE YOU BEGIN

Before You Begin

- Shut **OFF** power at fuse box or circuit breaker before installation, inspection or removal.
- To reduce the risk of fire or electric shock, **NEVER** interconnect or short output terminations.

Environmental Conditions

Luminaire operating ambient temperature (Ta) range	-30°C to +60°C
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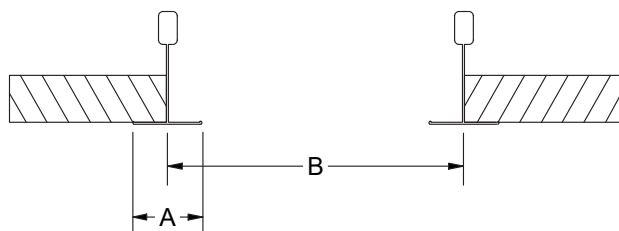
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6.0 GRID INSTALLATION

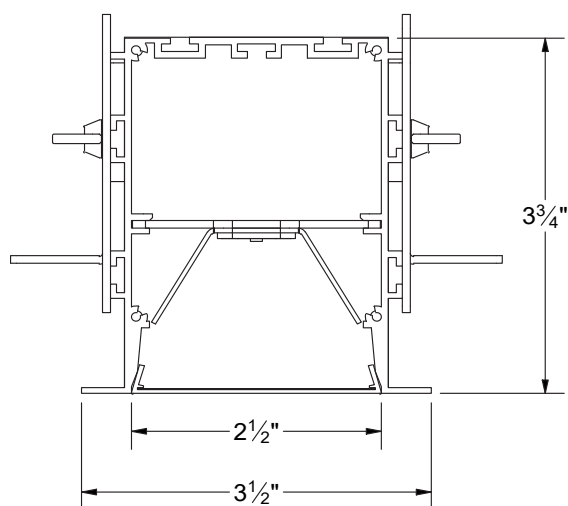
PRL-02 Installation Instructions

Grid Configuration

Grid Spacing - Width



Grid Size (A)	Grid Width Center to Center (B)
$\frac{9}{16}"$	$3\frac{5}{8}"$
$\frac{15}{16}"$	4"



Housing Size Reference

Grid Spacing - Length

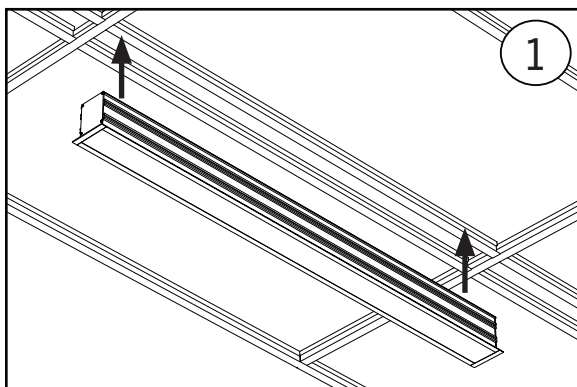
Fixture Length (Actual)	Grid Size (A)	Grid Length on Center
2 FT (23 $\frac{7}{8}"$)	$\frac{9}{16}"$	24"
	$\frac{15}{16}"$	24"
4 FT (47 $\frac{7}{8}"$)	$\frac{9}{16}"$	48"
	$\frac{15}{16}"$	48"
6 FT (71 $\frac{7}{8}"$)	$\frac{9}{16}"$	72"
	$\frac{15}{16}"$	72"
8 FT (95 $\frac{7}{8}"$)	$\frac{9}{16}"$	96"
	$\frac{15}{16}"$	96"
10 FT (119 $\frac{7}{8}"$)	$\frac{9}{16}"$	120"
	$\frac{15}{16}"$	120"
12 FT (143 $\frac{7}{8}"$)	$\frac{9}{16}"$	144"
	$\frac{15}{16}"$	144"

(For lengths longer than 12 FT contact factory)

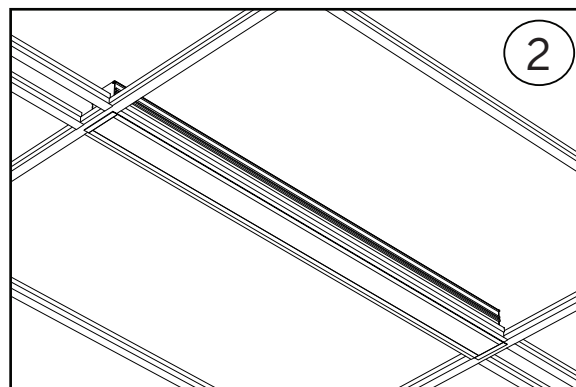
6.0 GRID INSTALLATION (Continued)

Grid Installation - From Below

- Installed occupancy side, flange fully visible from below
- For lengths over 4 ft, sections must be joined prior to being placed into ceiling (follow steps on pg. 7).



Prepare ceiling grid to the specified size. Then raise the fixture from below into the ceiling grid opening.

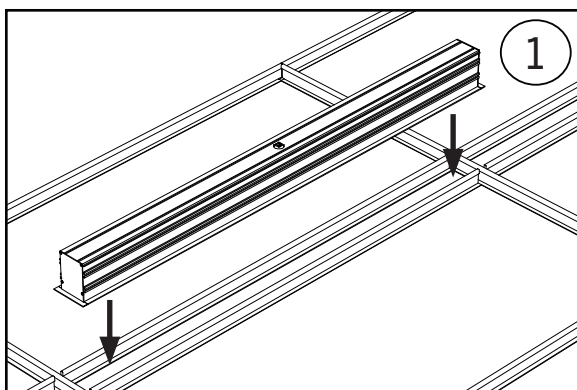


Support fixture from below ensuring trim sits flush against and square to the ceiling grid.

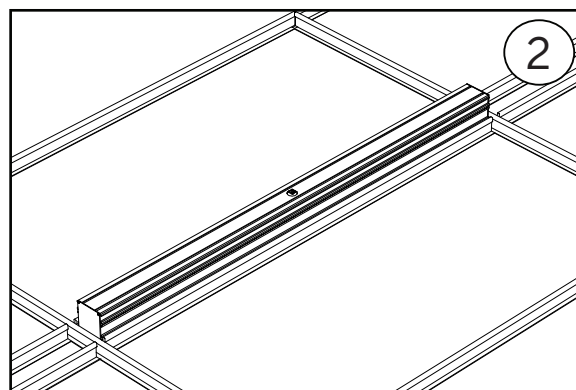
(Removing adjacent ceiling tiles is necessary to install fixture.)

Grid Installation - Drop-In

- Installed plenum side, flange mostly contained behind grid
- For lengths over 4 ft, sections must be joined prior to being placed into ceiling (follow steps on pg. 7).



Prepare ceiling grid to the specified size. Then lower the fixture from above into the ceiling grid opening.

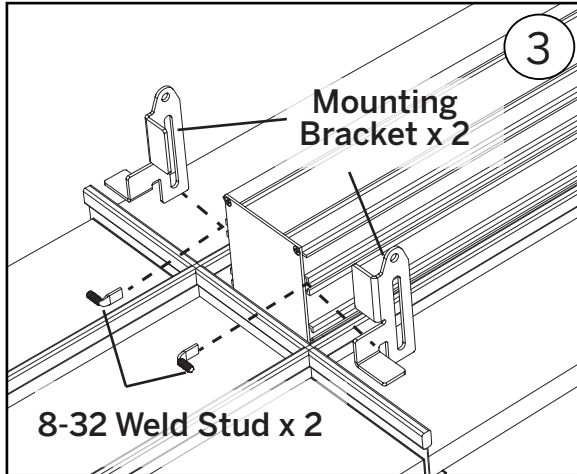


Ensure fixture trim sits flush on top of and square to ceiling grid.

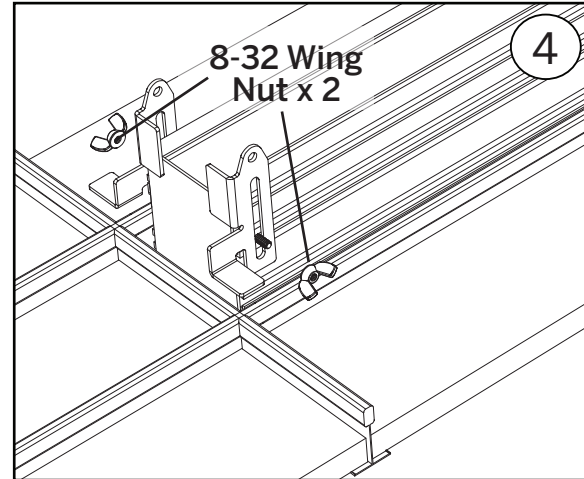
(Removing adjacent ceiling tiles is necessary to install fixture.)

6.0 GRID INSTALLATION (Continued)

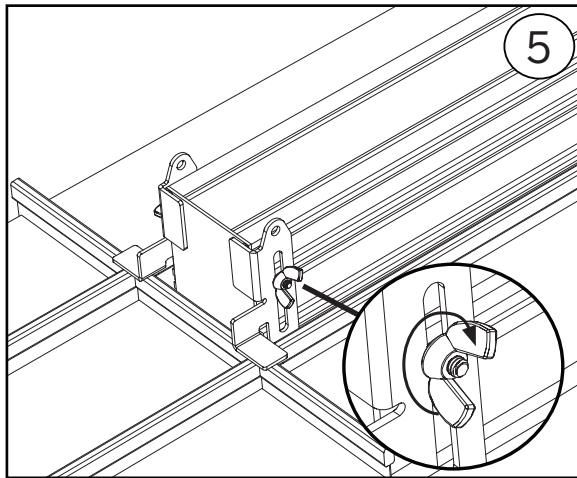
Fixture Bracket Mounting



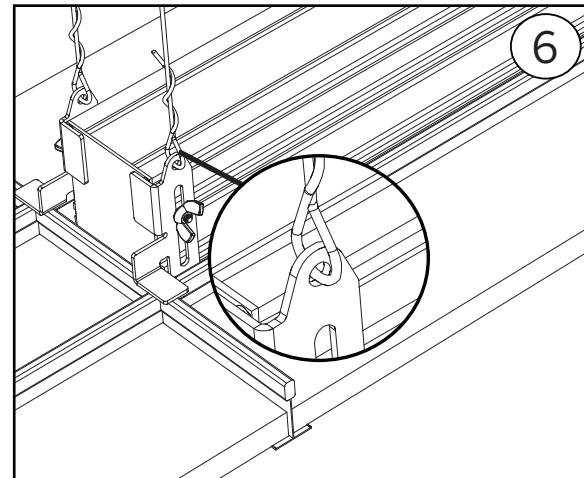
Insert 8-32 weld studs into housing channels (further from trim flange). Then place left and right mounting brackets onto housing with weld stud thread through slot.



Slide mounting bracket flanges against top of ceiling grid. Secure mounting brackets to fixture using supplied 8-32 wing nuts.



With the mounting bracket flanges on top of the ceiling grid, ensure fixture flange sits flush with ceiling substrate. Adjust as necessary and ensure wing nuts are fully tightened.

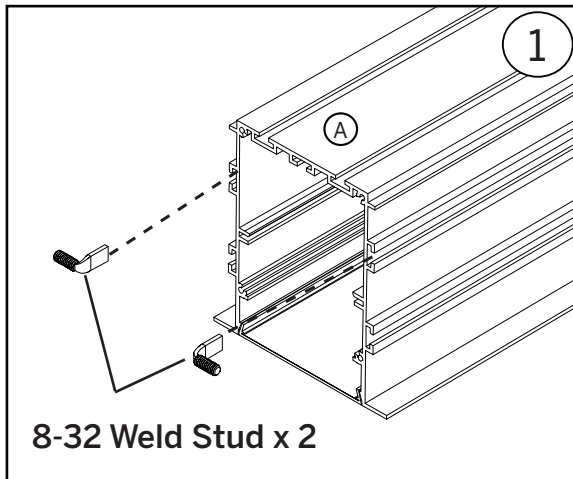


Secure fixture to ceiling above, as shown, using hanger wire (provided by others).

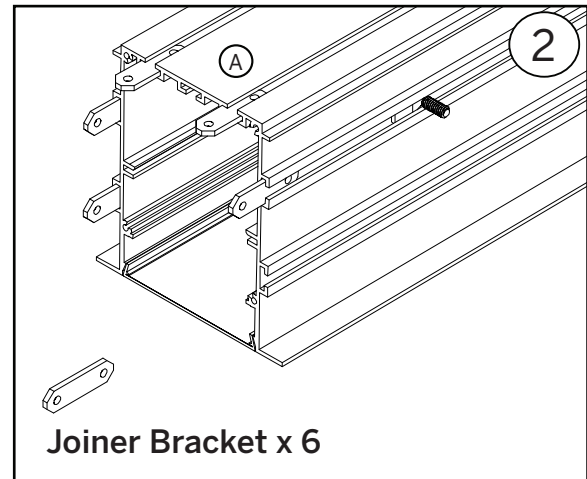
(REPEAT STEPS FOR BOTH ENDS OF FIXTURE)

7.0 JOINING SEGMENTS OVER 4 FOOT

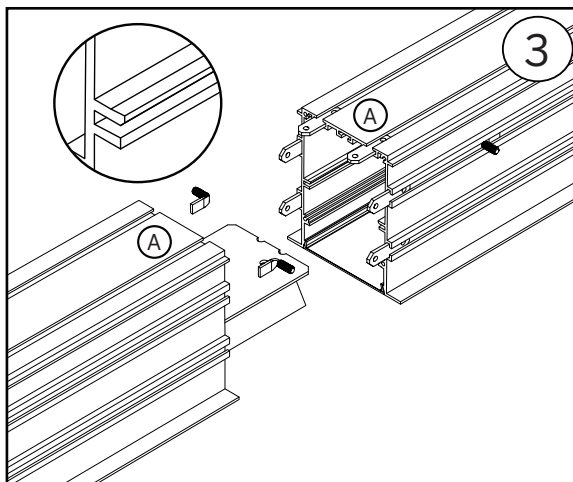
For lengths over 4 ft, sections must be joined prior to being placed into ceiling. Sections shall be joined together matching the letters marked on segments, for example: (A to A) and (B to B).



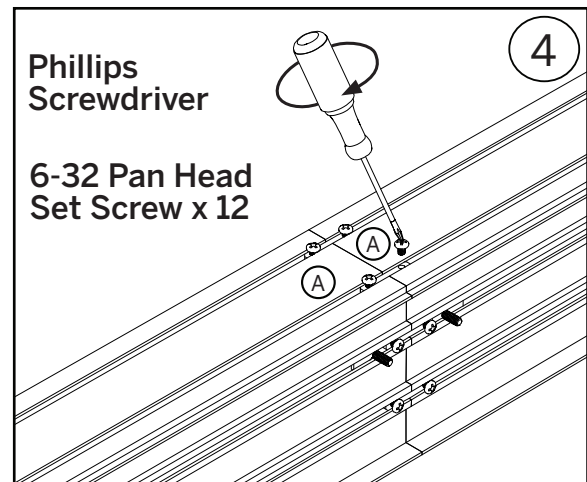
On the first section, slide 8-32 weld studs into the housing channels (further from trim flange).



Insert supplied joiner brackets x 6 halfway into all housing channels.



Slide 8-32 weld studs into the second section's housing channels (further from trim flange). Check that the proper housings are being joined (A to A). Then slide the two sections together inserting the LED liner into the interior channel. Slide all 6 joiner brackets into the opposite sections channels.

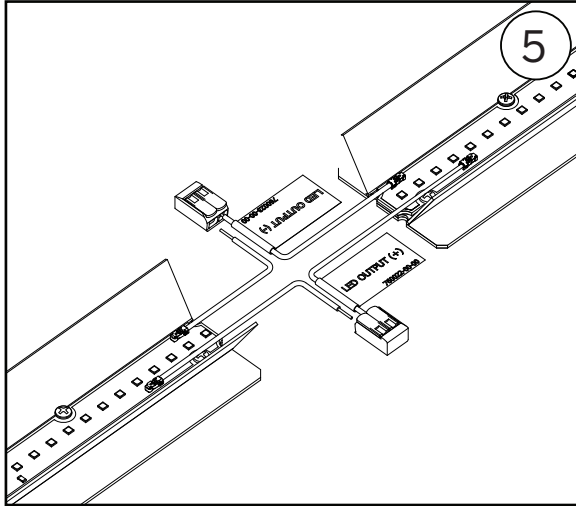


Ensure housing sections and interior LED liners sit flush together. Then check that joiner brackets are centered between both sections. Screw in and tighten supplied #6-32 Phillips-head screws x 12 into the joiner brackets.

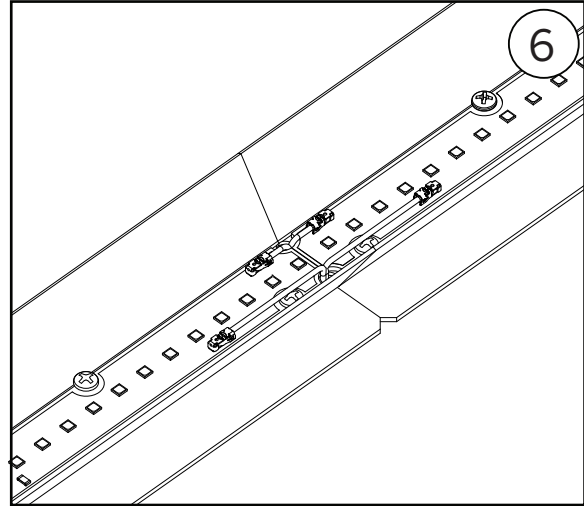
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7.0 JOINING SEGMENTS OVER 4 FOOT (Continued)

Static White Only



Make wire connections between LED boards. LED boards are wired in parallel, connect positive (+) to positive (+) and negative (-) to negative (-) using supplied lever nuts.

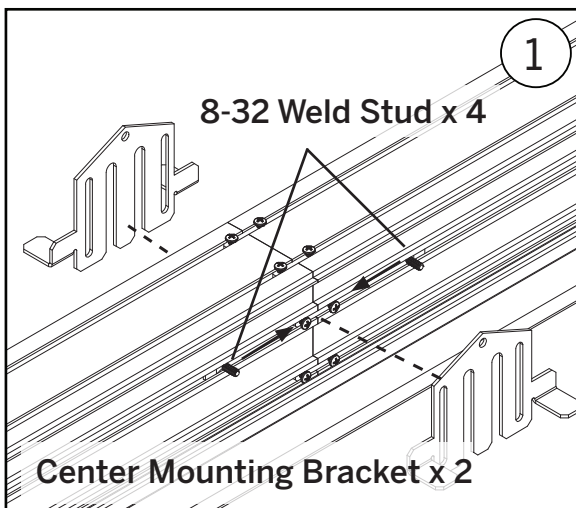


Store lever nuts and excess wire inside fixture when sliding LED liners together. Ensure wires are not pinched by LED liners. Ensure LED liners are flush together.

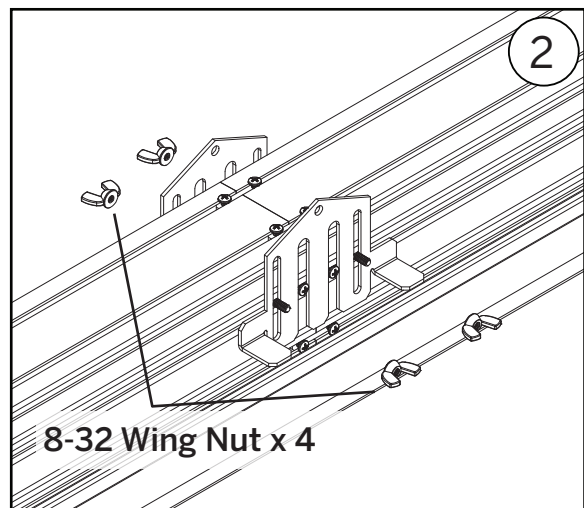
NOTE: When handling fixture, DO NOT touch diodes or LED board. Static and physical contact can damage LEDs.

(AFTER SECTIONS ARE JOINED FIXTURE CAN BE INSTALLED INTO CEILING)

Fixture Bracket Mounting: For Segments Over 4 Foot

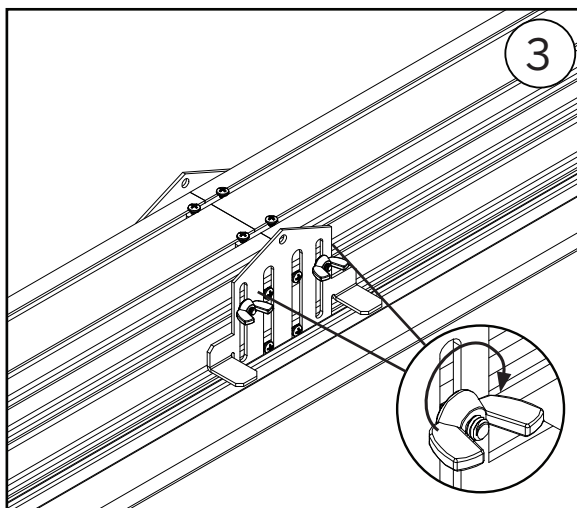


Slide 8-32 weld studs against joiner brackets. Then place center mounting brackets onto housing with weld stud thread through slots.

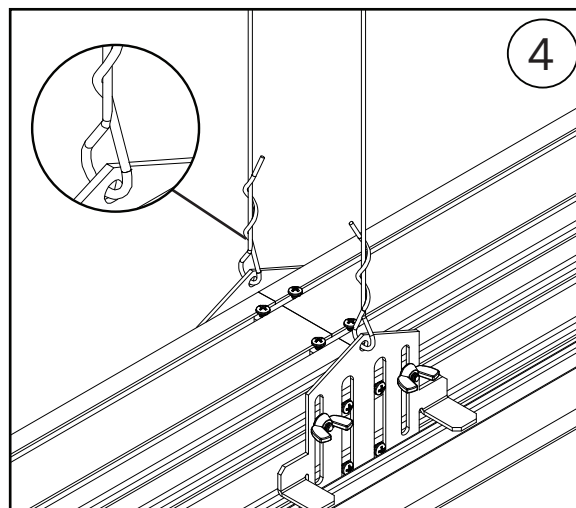


Secure mounting brackets to fixture using #8-32 wing nuts x 4. Slide mounting bracket flanges against top of ceiling grid.

7.0 JOINING SEGMENTS OVER 4 FOOT (Continued)

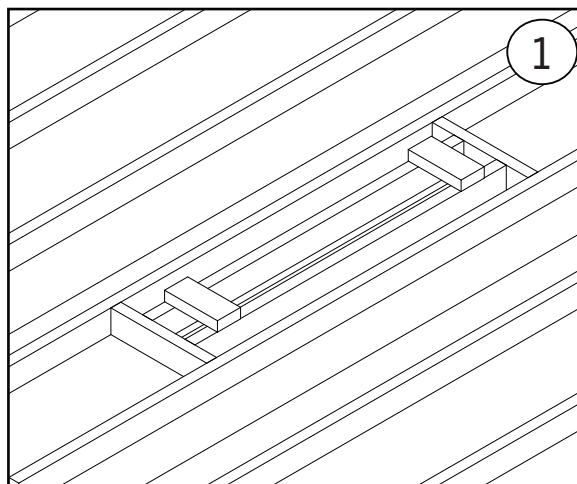


With the mounting bracket flanges on top of the ceiling grid, ensure flange trim sits flush with ceiling substrate. Fully tighten #8-32 wing nuts x 4 to lock fixture in place. Adjust as necessary and ensure wing nuts are fully tightened.



Secure fixture to ceiling above, as shown, using hanger wire (provided by others).

8.0 HARD LID/NEW CONSTRUCTION FRAMING

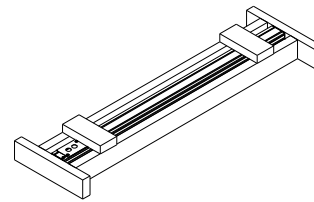
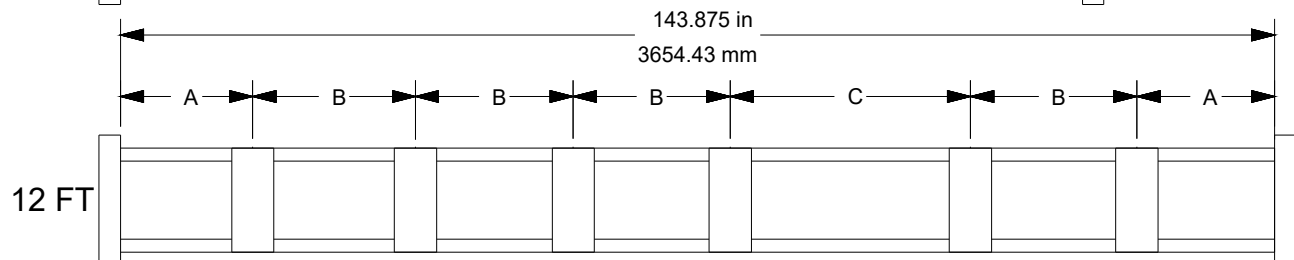
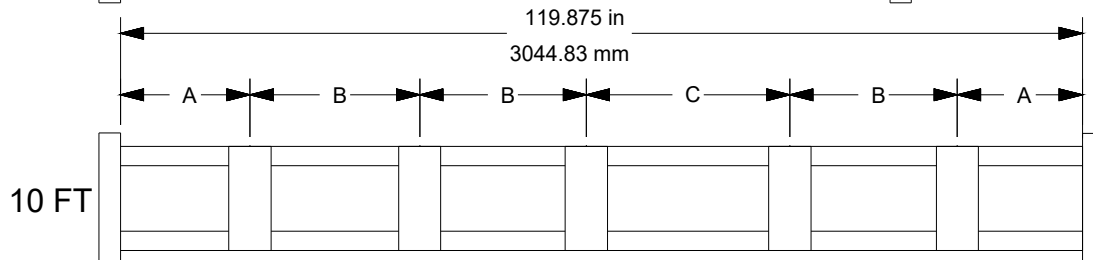
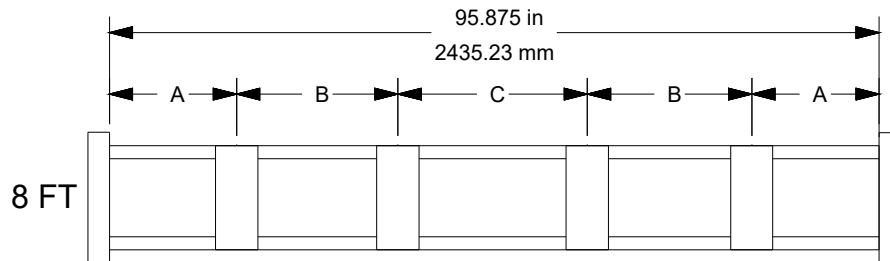
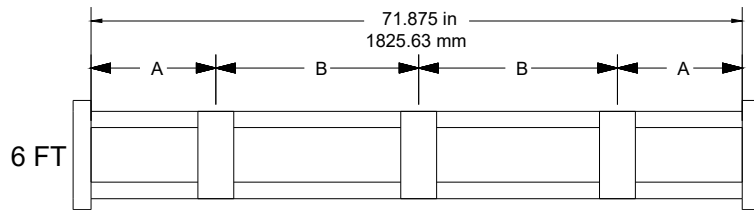
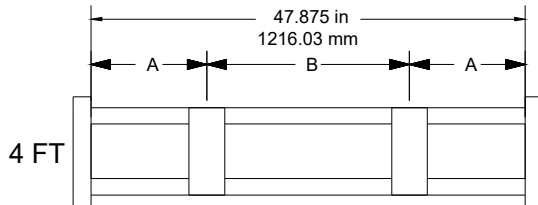
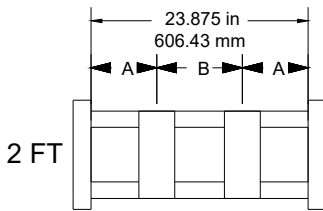


Prepare framing above ceiling according to fixture length.

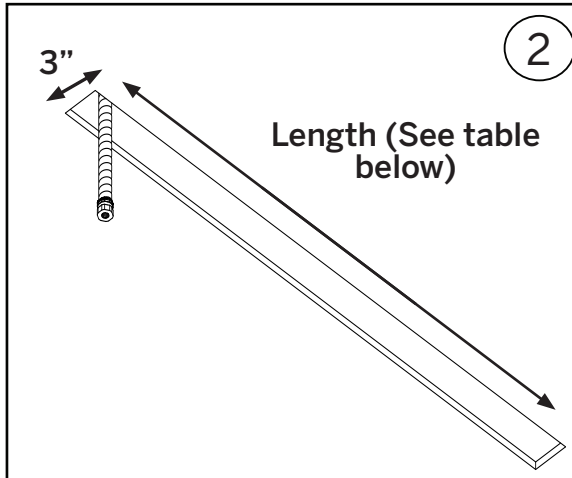
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8.0 HARD LID/NEW CONSTRUCTION FRAMING (Continued)

Stud to Stud Dimensions			
Fixture Length	A	B	C
2 ft	7"	9"	N/A
4 ft	12-1/2"	22"	N/A
6 ft	13-1/2"	22"	N/A
8 ft	11-3/4"	22"	27-1/2"
10 ft	12-3/4"	22"	27-1/2"
12 ft	13-3/4"	22"	27-1/2"

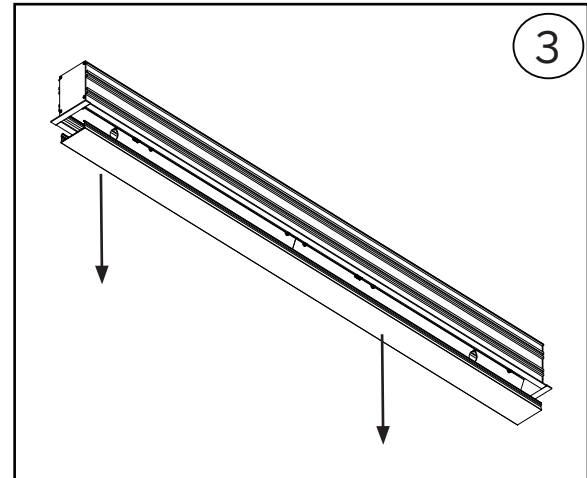


8.0 HARD LID/NEW CONSTRUCTION FRAMING (Continued)



Install hard ceiling with cutout of 3" x length (A) in location of framing. Drop wiring through cutout to attach fixture.

Fixture Length	Length (A)
2 ft	23.125"
4 ft	47.125"
6 ft	71.125"
8 ft	95.125"
10 ft	119.125"
12 ft	143.125"

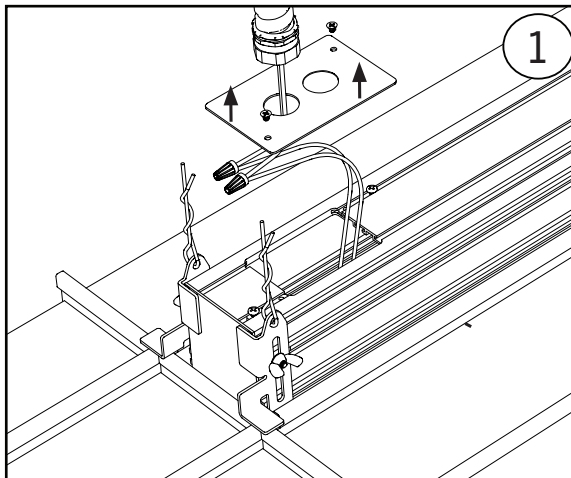


Prior to installing fixture, remove lens with included suction cup tool.

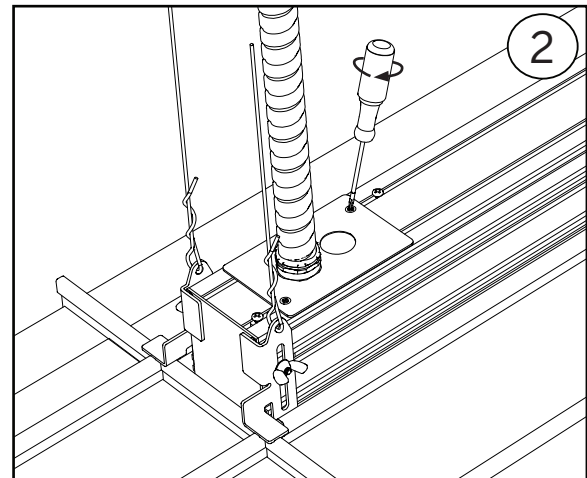
NOTE: When handling fixture, DO NOT touch diodes or LED board. Static and physical contact can damage LEDs.

9.0 WIRING

POWER MUST BE OFF. DO NOT POWER ON UNTIL SYSTEM IS FULLY WIRED!!



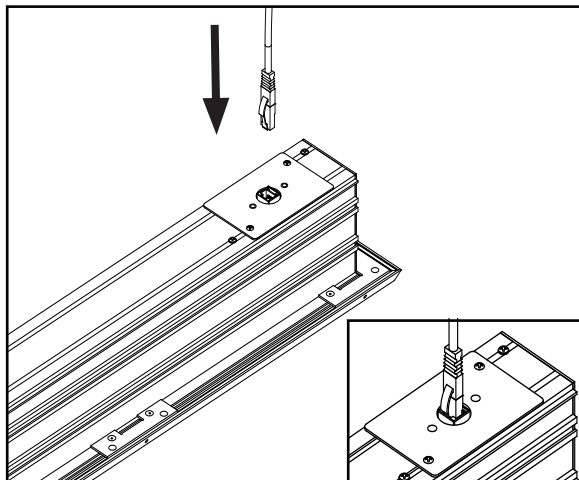
Loosen 6-32 pan head fasteners x 2 to remove wiring cover plate on backside of fixture. Connect power, ground, and any control wires. Store all wire connections inside fixture.



Connect conduit (supplied by others) to cover plate from incoming wires and remount plate to fixture.

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9.1 WIRING - DMX DATA - EXTERNAL DRIVER

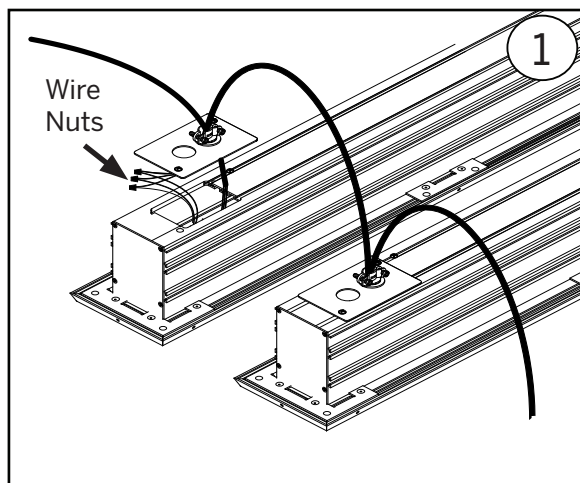


For driver-less fixtures, connect fixtures to remote drivers using the supplied shielded CAT cables.

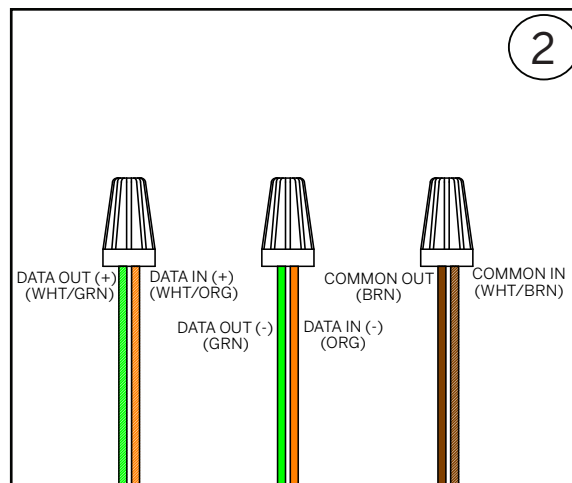
**REM-DMXPS to
PRL-02CCM-RD Configurations**

Driver Module	Maximum Capacity	Fixture Qty
REM-DMXPS-4FT	4 Foot Run	2ft + 2ft 4ft
REM-DMXPS-6FT	6 Foot Run	2ft + 2ft + 2ft 2ft + 4ft
REM-DMXPS-8FT	8 Foot Run	2ft + 2ft + 2ft + 2ft 2ft + 2ft + 4ft

9.2 WIRING - DMX DATA - INTERNAL DRIVER

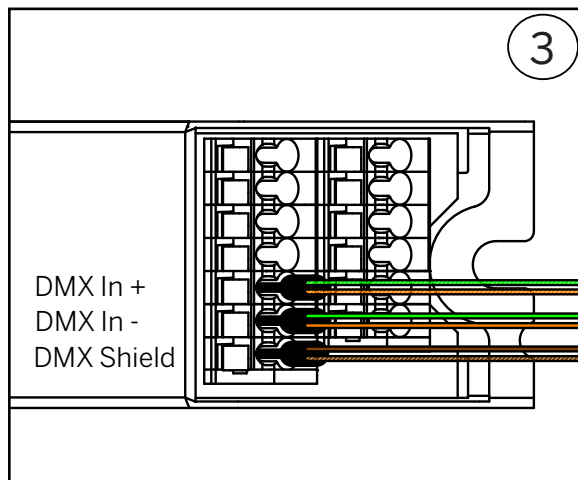


- When connecting multiple internal DMX driver fixtures together, ensure proper wiring of data cables using wire nuts (supplied by others). Use separate knockouts for through-branch wiring data and inline voltage wires.
- Ensure all wire connections are stored inside the fixtures and secured to 1/2" trade size knockouts using 1/2" trade size clamp connectors (supplied by others).



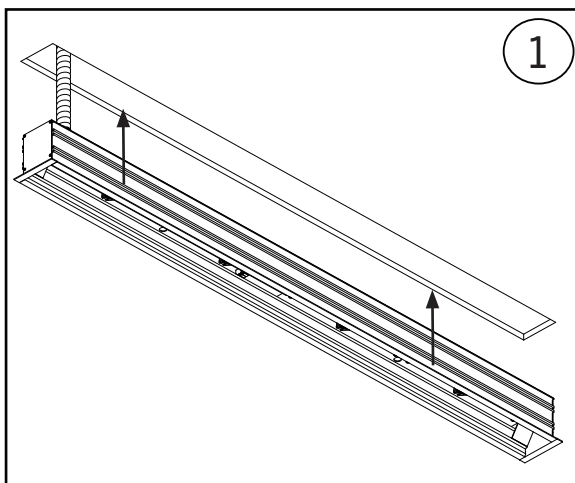
Ensure proper wiring of the positive, negative, and common data wires. Connect terminating 120 ohm resistor (supplied by others) at the end of the DMX chain.

9.2 WIRING - DMX DATA - INTERNAL DRIVER (Continued)



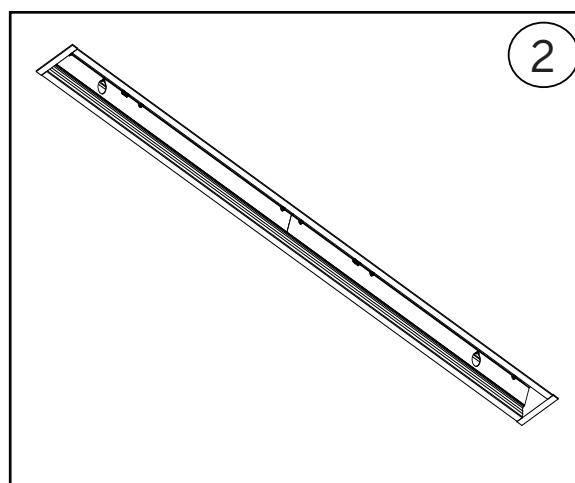
DMX wire locations on the driver.

10.0 HARD LID/NEW CONSTRUCTION INSTALLATION



Raise fixture into ceiling until trim sits flush against ceiling.

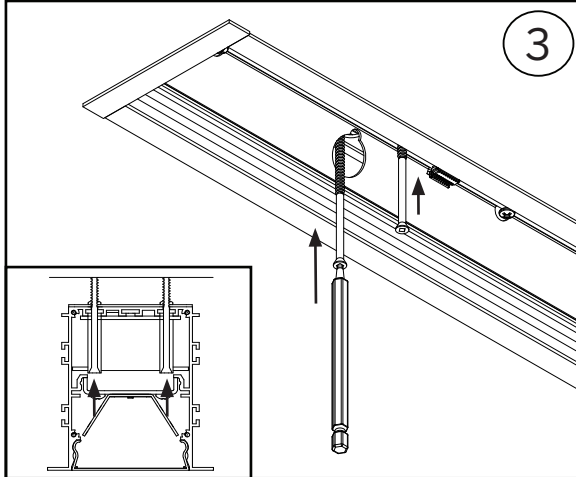
NOTE: When handling fixture, DO NOT touch diodes or LED board. Static and physical contact can damage LEDs.



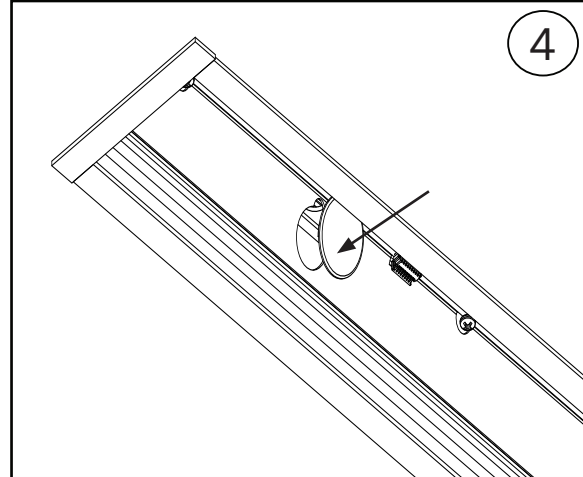
Support fixtures from below, ensuring trim sits flush against ceiling.

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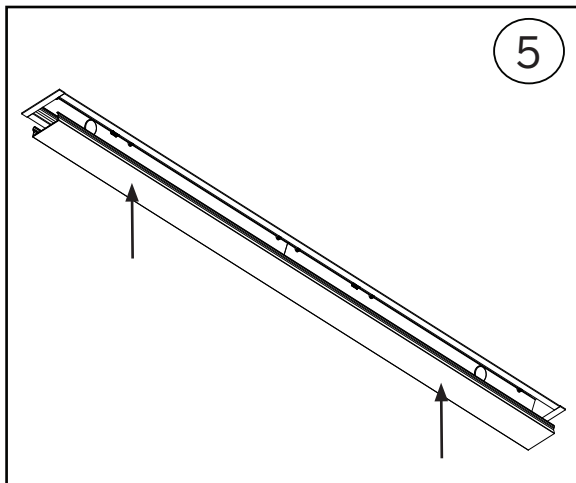
10.0 HARD LID/NEW CONSTRUCTION INSTALLATION (Continued)



Using the supplied drill bit, install #7 x 3" mounting screws into studs through openings in fixture. DO NOT overtighten, to prevent housing from bending.

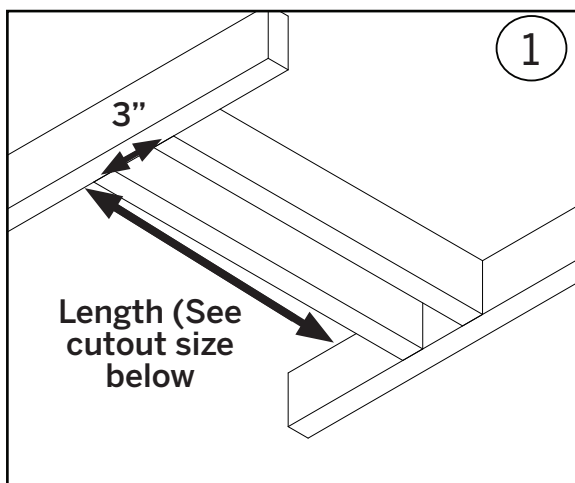


If applicable, push included hole plugs over each opening in fixture.



Reinstall lens. Ensure lens is fully pressed in along entire length of fixture.

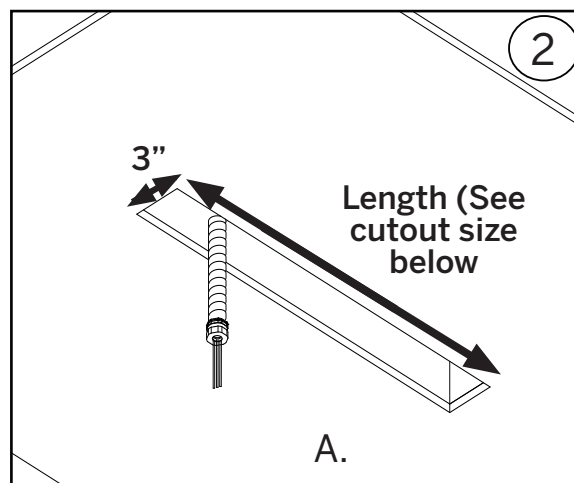
11.0 NSF & IP66 HARD LID FRAMING



Prepare framing in ceiling with an opening width of 3.0 inches and a length from the table below for the corresponding fixture length.

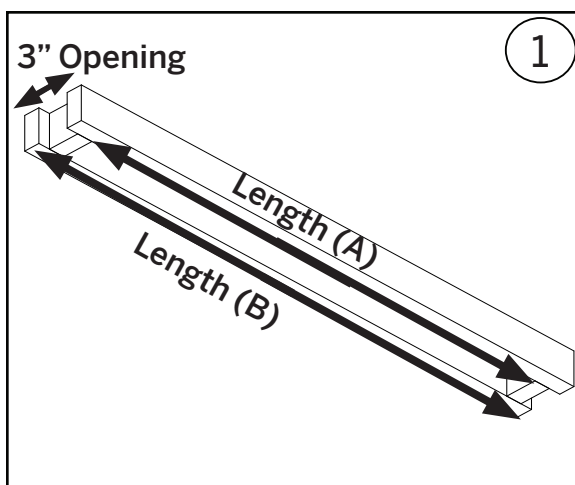
Fixture Length	Length
2 ft	23.25"
4 ft	47.25"
6 ft	71.25"

For other lengths, consult factory.



Install hard ceiling with cutout size with a width of 3.0 inches and a length from the table below for the corresponding fixture length. Drop conduit (supplied by others) through cutout to attach to the fixture.

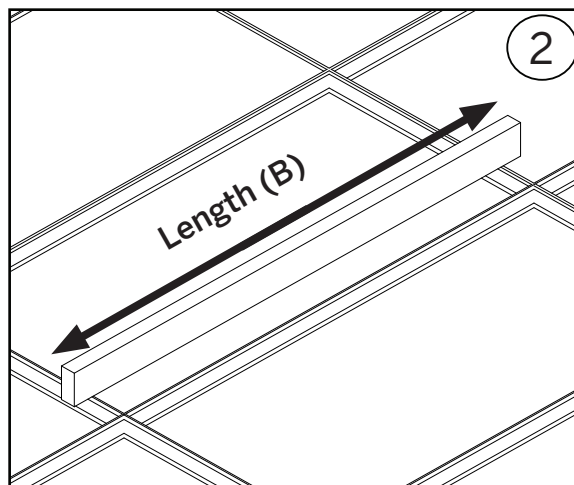
12.0 NSF & IP66 GRID FRAMING



Prepare framing in ceiling with an opening width of 3.0 inches and length (A) from the table below for the corresponding fixture length. Ensure that board length (B) is 4.0 inches longer than the grid spacing.

Fixture Length	Length
2 ft	23.25"
4 ft	47.25"
6 ft	71.25"

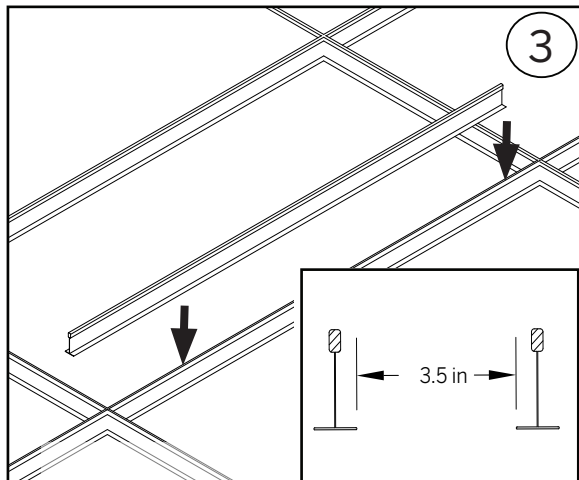
For other lengths, consult factory.



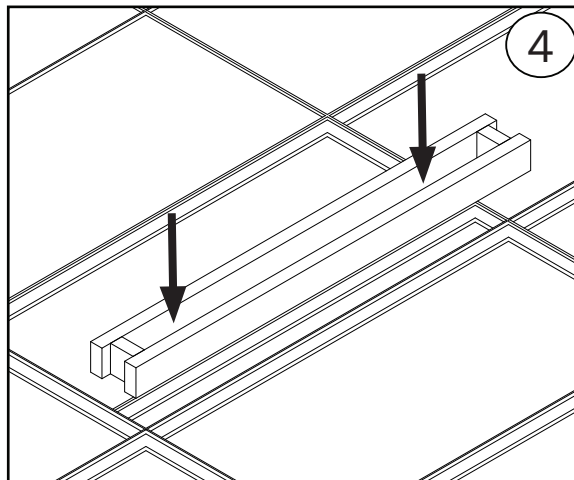
Ensure that board length (B) is 4.0 inches longer than the grid spacing.

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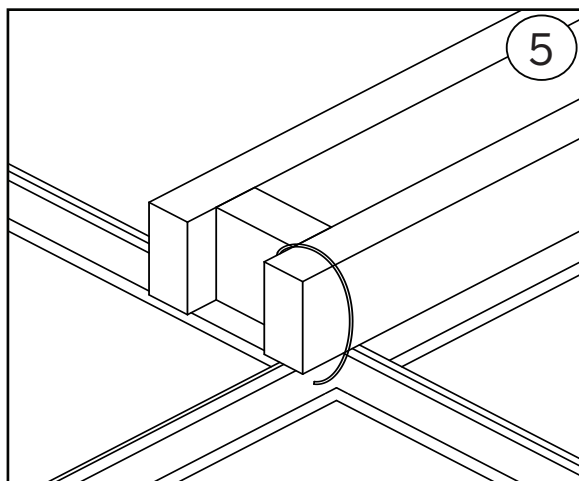
12.0 NSF & IP66 GRID FRAMING (Continued)



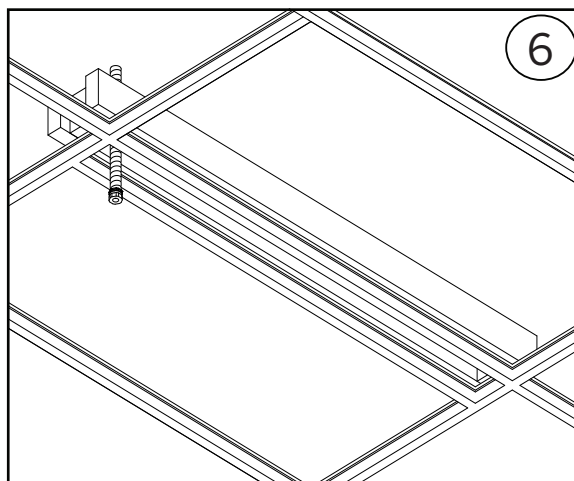
Set in grid cross brace with 3.5" spacing.



Set the joist box onto the grid in the desired fixture location. Ensure the joists sit flush to the top of the grid.



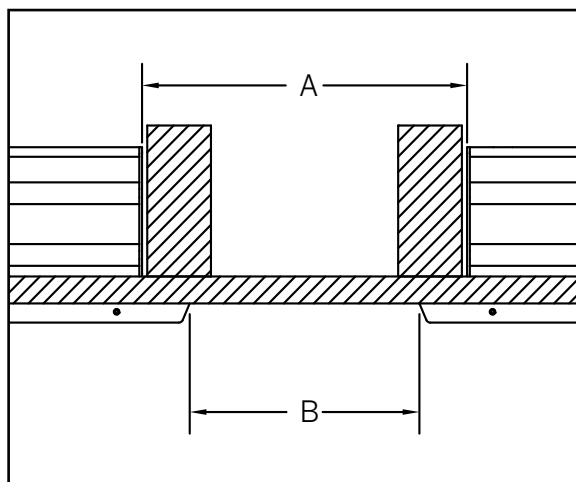
Brace all the corners of the framing to the grid and upper-ceiling or truss using typical galvanized steel straps and/or reinforced wires (supplied by others).



Drop conduit (supplied by others) through the joist box to attach to the fixture.

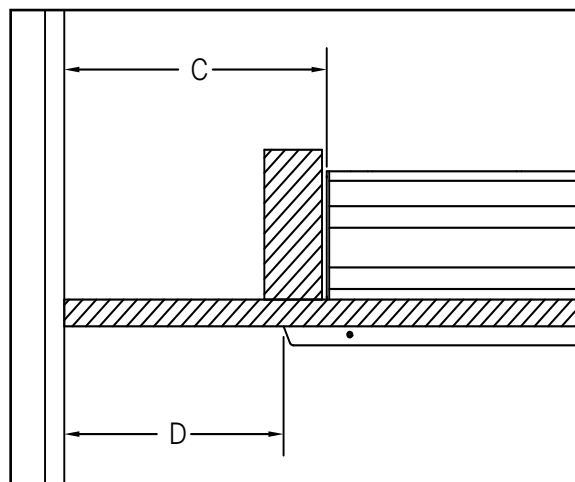
13.0 APPLICATION CLEARANCES

Fixture Frame to Fixture Frame



Minimum spacing between fixtures is dependent of tool usage. For closer fit and final tightening, use the provided L-key at the noted minimum dimensions. For quicker installation, use the provided flex drive and final tighten with L-key.

Fixture Frame to Wall

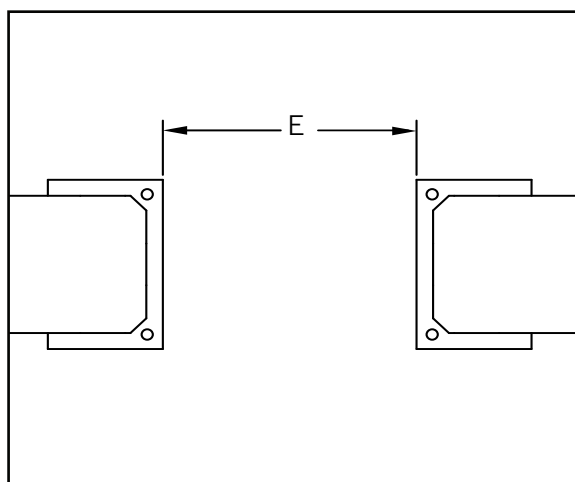


Minimum spacing between frame edges and walls.

Minimum Clearance - Tool Usage

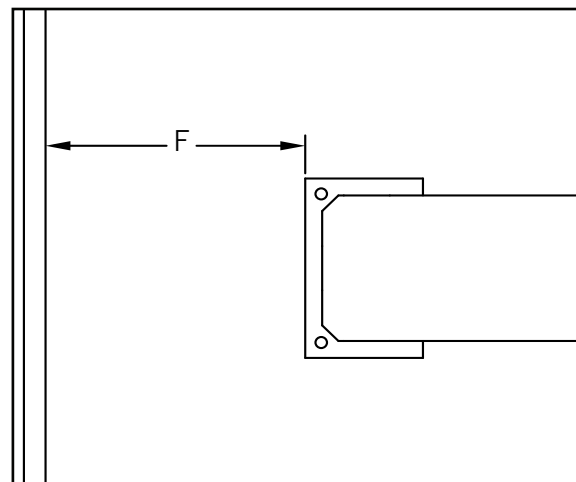
	Flex Drive	L-Key
A	8.75"	4"
B	6.5"	1.75"
C	7.125"	2.875"
D	6"	1.75"

Housing Bracket to Housing Bracket



Housing bracket dimensions for installation placement, fixture frames extend 1/4". Dimensions are dependent on tool usage.

Housing Bracket to Wall



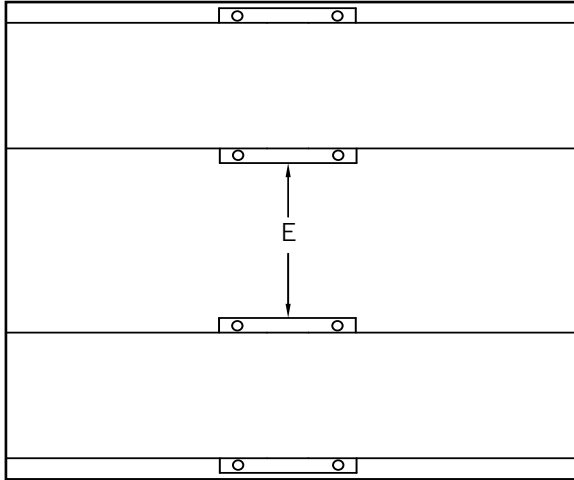
Minimum Clearance - Tool Usage

	Flex Drive	L-Key
E	7"	2.25"
F	6.25"	2"

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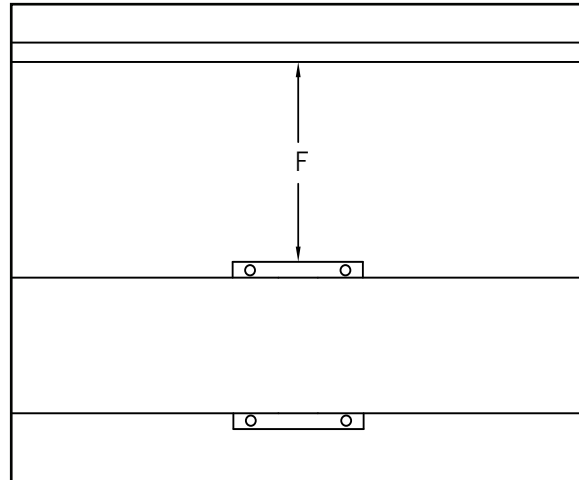
13.0 APPLICATION CLEARANCES (Continued)

Housing Edge to Housing Edge



Housing bracket dimensions for installation placement, fixture frames extend 1/4".
Dimensions are dependent on tool usage.

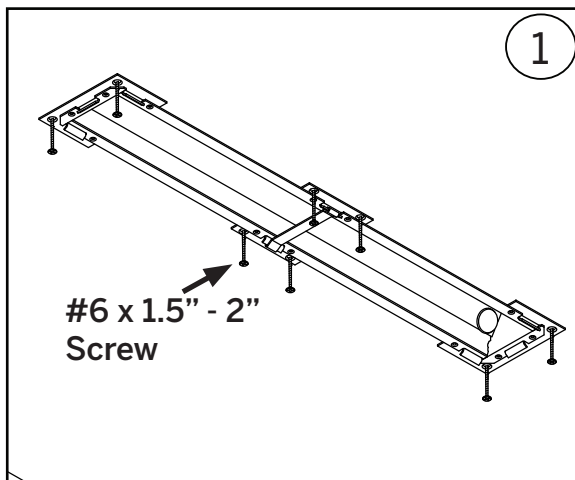
Housing Edge to Wall



Minimum Clearance - Tool Usage

	Flex Drive	L-Key
E	7"	2.25"
F	6.25"	2"

14.0 NSF & IP66 HARD LID INSTALLATION

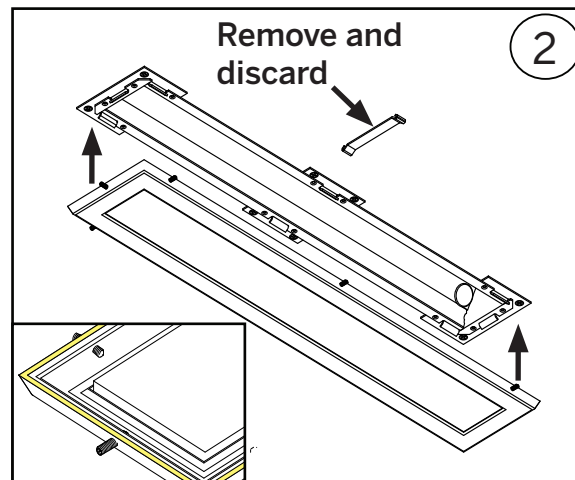


Insert the fixture into the hole in the ceiling and fasten with #6 x 1.5" - 2" drywall screws (supplied by others). Ensure fasteners are flush to brackets.

NOTE: DO NOT OVER TIGHTEN TO PREVENT BRACKETS FROM BENDING.

Drywall Hardware Qty.

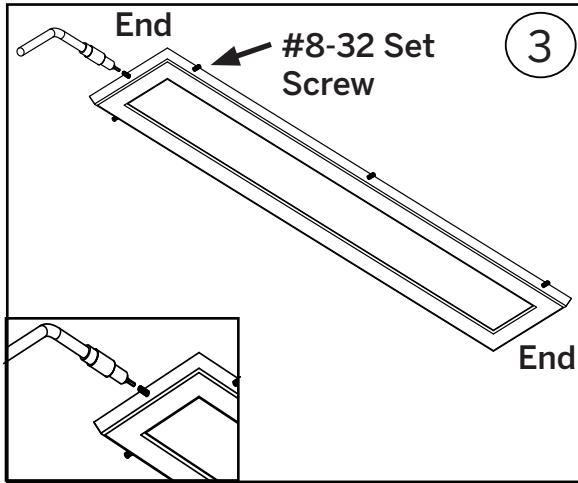
Fixture Length	Qty
2 ft	8
4 ft	16
6 ft	20



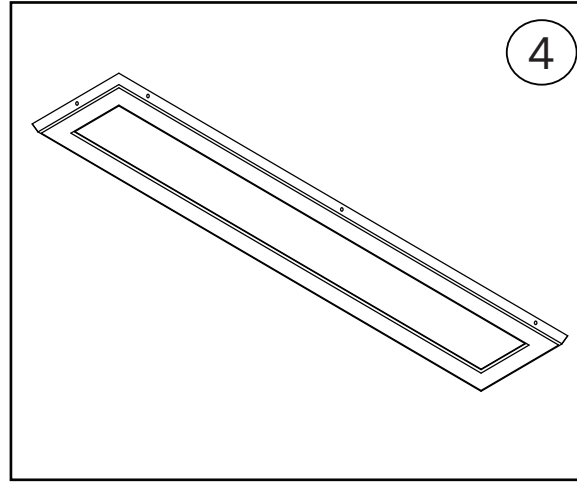
- A. The center support bracket is included and supplied on the fixture, and keeps the width of the housing uniform for proper frame fit. After fixture installation, remove center support bracket and discard.
- B. If using anti-pick caulking, apply to the highlighted surface.
- C. Line up the trim frame and lens onto the fixture. Trim frame will sit flush to the ceiling when sitting properly.

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14.0 NSF & IP66 HARD LID INSTALLATION (Continued)

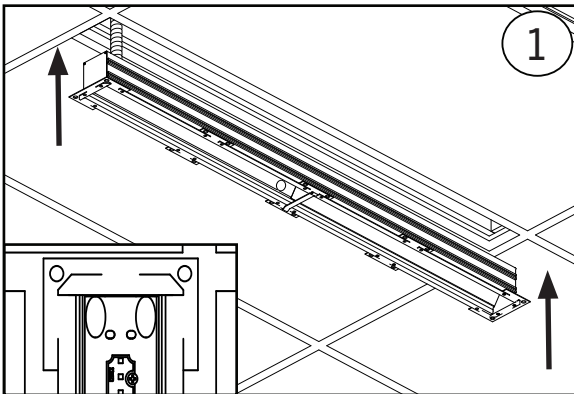


- A. Snug tighten end #8-32 set screws to hold trim frame in position using the provided flex bit.
- B. Gradually tighten each set screw, alternating sides, before fully fastening set screws using provided L-key for even installation. Set screws shall not extend from the trim frame when installed correctly.

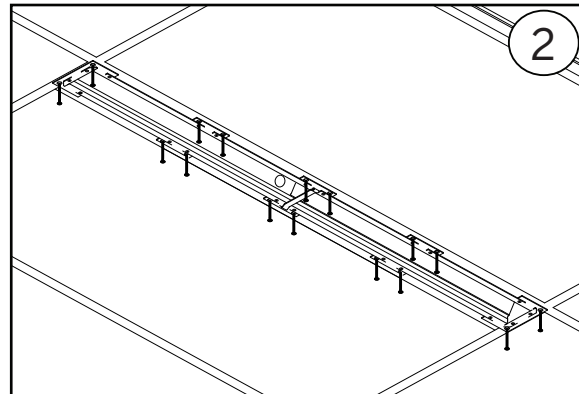


- A. Ensure fixture is sitting flush to the ceiling and all set screws are fully tightened into the trim frame.
- B. Wipe any excess caulking, if applicable.

15.0 NSF & IP66 GRID INSTALLATION



- A. Raise the fixture into the framed slot.
- B. Mark and drill holes with no larger than 1/8" drill bit through the grid cross supports at the fixture mounting hole locations on the brackets.



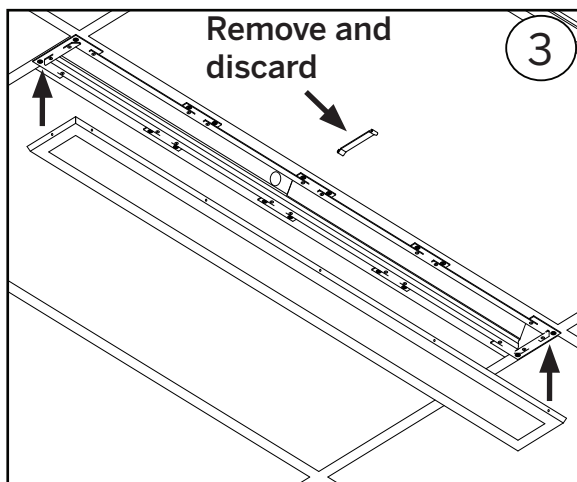
Support and fasten the fixture to framing with #6 drywall screws (supplied by others). Ensure fasteners are flush to the brackets.

NOTE: DO NOT OVER TIGHTEN TO PREVENT BRACKETS FROM BENDING.

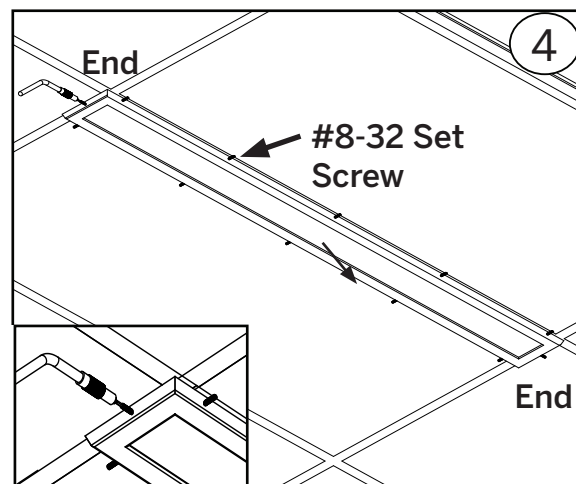
Drywall Hardware Qty.

Fixture Length	Qty
2 ft	8
4 ft	16
6 ft	20

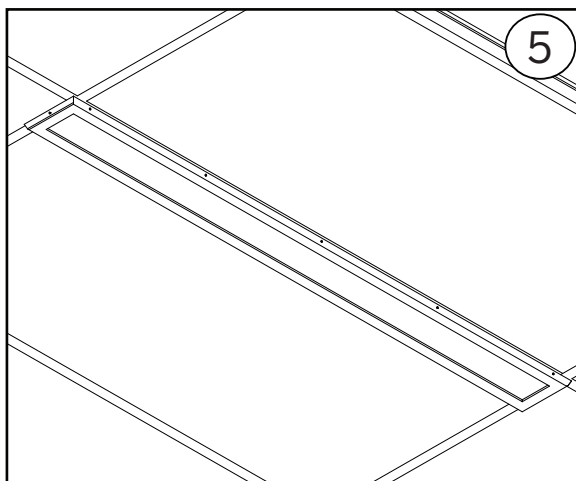
15.0 NSF & IP66 GRID INSTALLATION (Continued)



- A. The center support bracket is included and supplied on the fixture, and keeps the width of the housing uniform for proper frame fit. After fixture installation, remove center support bracket and discard.
- B. Line up the trim frame and lens onto the fixture. Trim frame will sit flush to the grid when sitting properly.



- A. Snug tighten end #8-32 set screws to hold trim frame in position using the provided flex bit.
- B. Gradually tighten each set screw, alternating sides, before fully fastening set screws using provided L-key for even installation. Set screws shall not extend from the trim frame when installed correctly.

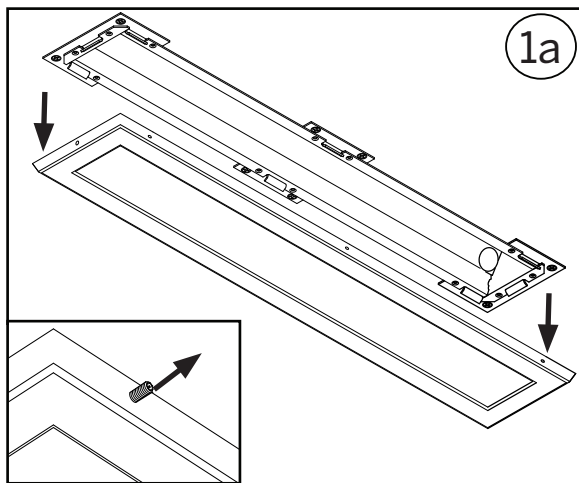


Ensure the fixture is sitting flush to the T-grid and all set screws are fully tightened into the frame.

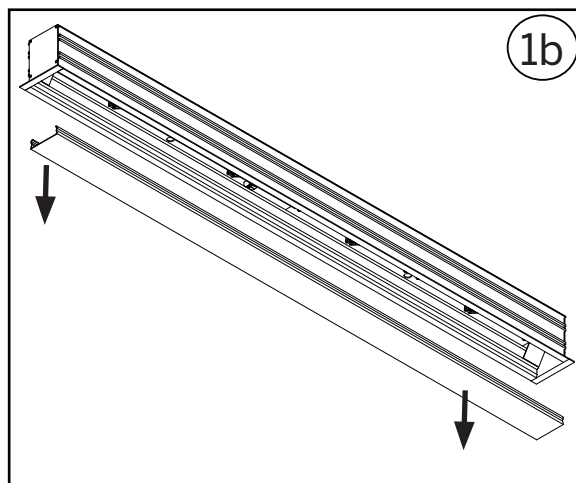
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16.0 SERVICING - LIGHT ENGINE REMOVAL

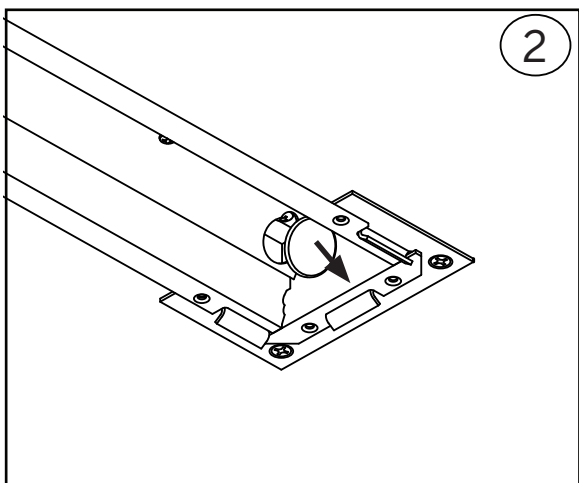
TURN OFF ALL POWER BEFORE PERFORMING SERVICE!!!



Ensure all power is disconnected to all fixtures. If NSF & IP66 housings, loosen all 8-32 set screws to remove frame and lens from fixture. Set screws do not need to be completely removed from threads. Break caulking seal and remove. Do not bend frame.

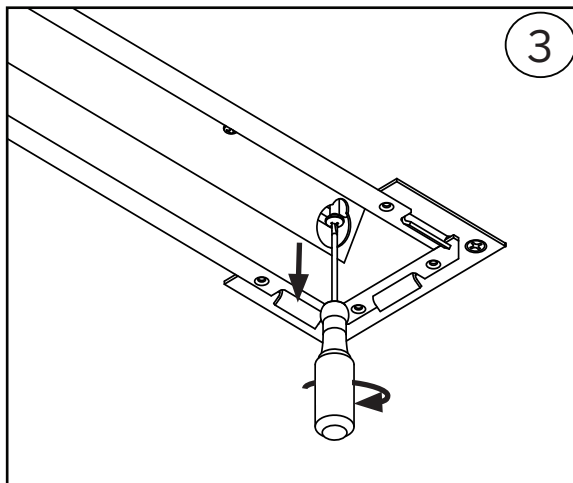


For standard housings, remove lens with included suction cup tool.



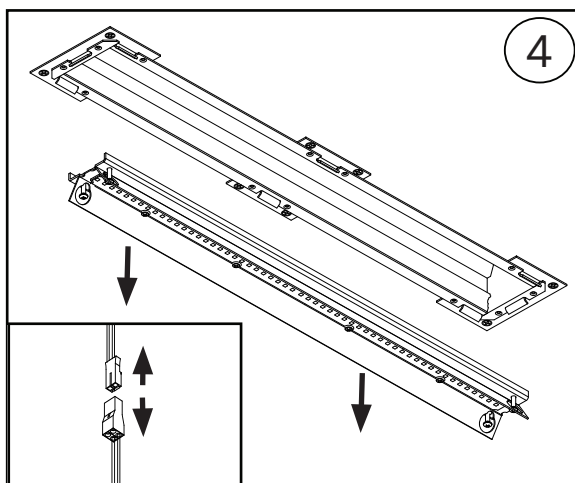
Remove each supplied hole plug x 4 to reveal mounting screw.

Set hole plugs aside for reinstallation.



- A. Loosen each mounting screw x 4 to remove the light engine from fixture. Mounting screws are captive; do not fully remove from light engine.
- B. Support the light engine while loosening screws to prevent light engine from falling or straining the wire leads. Avoid contact with LED boards to prevent damage.

16.0 SERVICING - LIGHT ENGINE REMOVAL (Continued)

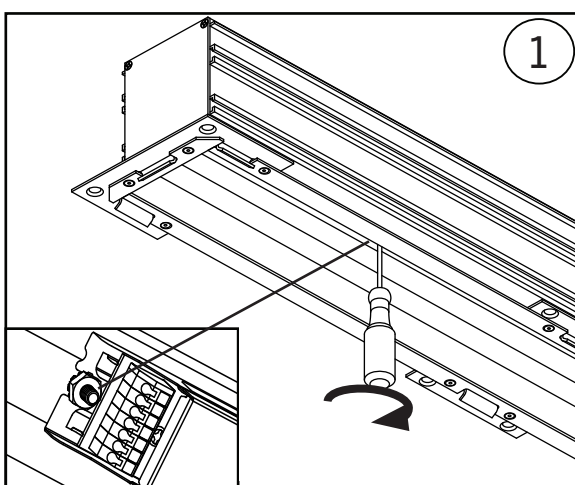


Note: When handling fixture, **DO NOT** touch diodes or LED board. Static and physical contact can damage LEDs.

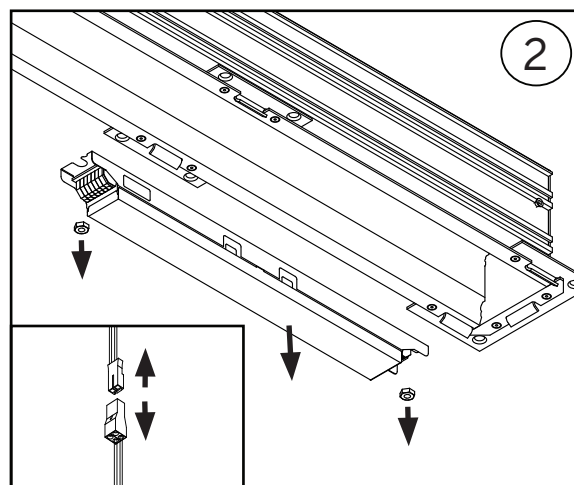
- A. Lower the light engine and disconnect wire plug to free the light engine. There may be multiple plugs depending on your fixture type.
- B. Repeat steps in reverse to re-install light engine.

16.1 SERVICING - DRIVER REMOVAL

TURN OFF ALL POWER BEFORE PERFORMING SERVICE!!!



- A. For driver service, continue from previous service steps. Remove the #8-32 driver mounting nuts x 2 from both ends of the driver to remove the driver from the housing.
- B. Support the driver while loosening nuts to prevent the driver from falling or straining wire leads.



- A. Lower the driver from the fixture and keep nuts for reinstallation.
- B. Make note of and disconnect any wire connections where necessary.
- C. Repeat steps in reverse order to reinstall driver.

17.0 USER NOTES