HOWARD LIGHTING PRODUCTS

INSTALLATION INSTRUCTIONS

LSR8 Series LED Strip Retrofit Kit

IMPORTANT:

- Read all instructions carefully before attempting installation. If you do not understand these instructions, please consult your local distributor.
- Thoroughly inspect the fixture for any freight damage; freight damage should be reported to the delivery carrier.

CONTENTS:

(2) 48” Geartrays with LED boards & LED Driver (Power Supply)
(12) #8x1/2” TEK screws (4) Geartray Tethers
(2) Lens (included with -SD kits only)
(2) Lens Endcaps (included with -SD kits only)
(1) Lens Coupler (included with -SD kits only)
(4) #8x1” Endcap screws (included with -SD kits only)

⚠ SAFETY:

- This fixture must be wired in accordance with the National Electric Code and applicable local codes or ordinances.
- All work should be performed by a qualified electrician.
- To insure personal safety, proper grounding is required (connect green fixture lead to supply ground).

48” Geartray (LED light engine side)

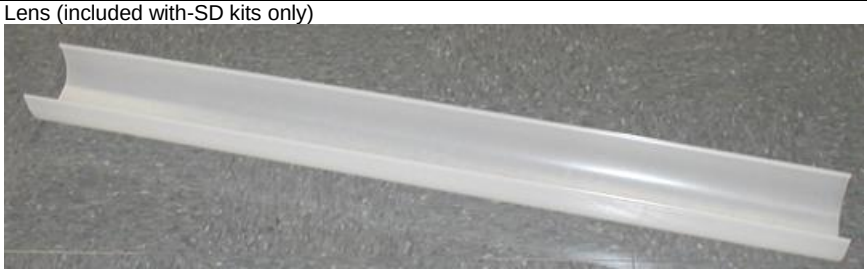
#8 x ½” TEK Screw

#8x1” Endcap Screw
(incl. with -SD kits only)

48” Geartray (LED Driver side)

Geartray Tether

Lens (included with-SD kits only)



Lens Endcap (left) Lens Coupler (right)
(Endcap & Coupler included with -SD kits only)

⚠ WARNINGS:

- WARNING - Risk of fire or electric shock. Luminaire wiring and electrical parts may be damaged when drilling for installation of LED retrofit kit. Check for enclosed wiring and components.
- WARNING - Risk of fire or electric shock. Install this kit only in luminaires that have the construction features and dimensions shown in the photographs and/or drawings and where the input rating of the retrofit kit does not exceed the input rating of the luminaire.
- WARNING - Risk of fire or electric shock. LED Retrofit Kit installation requires knowledge of luminaire electrical systems. If not qualified, do not attempt installation. Contact a qualified electrician.
- WARNING - To prevent wiring damage or abrasion, do not expose wiring to edges of sheet metal or other sharp objects.
- 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.
- Do not make or alter any open holes in an enclosure of wiring or electrical components during kit installation.
- This kit is intended for use with Surface Mounted luminaires.

Required Size of Existing Fixture

Length: 96.0-96.5”
Depth: 1.25” (minimum)
Width : 4.20-4.30”

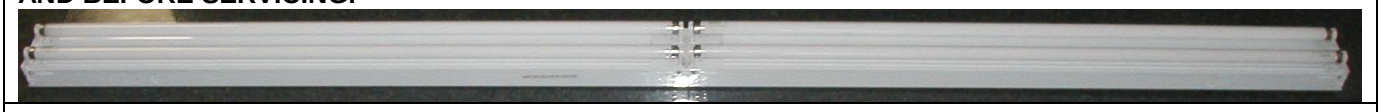
LSR Geartray Dimensions

Length: 48.0” (each)
Width: 4.70” w/o Lens
5.25” with Lens and Endcaps

LED Strip Retrofit Kit

INSTALLATION

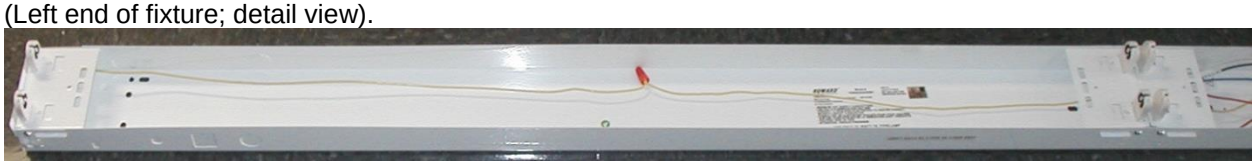
WARNING: DISCONNECT POWER TO EXISTING FLUORESCENT FIXTURE DURING INSTALLATION AND BEFORE SERVICING.



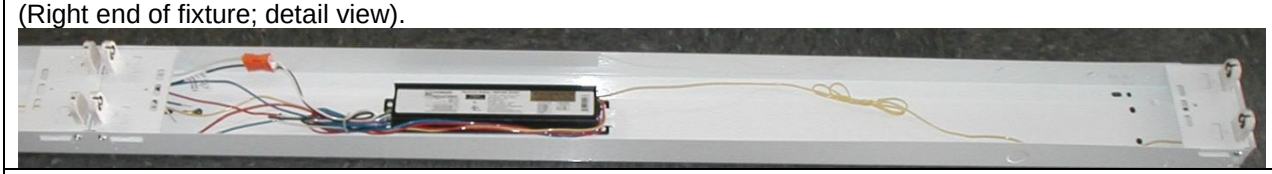
STEP 1 – PREP FIXTURE FOR RETROFIT

Remove existing lamp(s) and ballast cover.

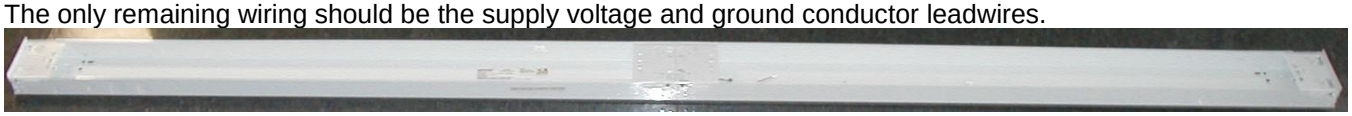
(Left end of fixture; detail view).



(Right end of fixture; detail view).



Disconnect and remove existing ballast, lampholders, and lampholder wiring.
The only remaining wiring should be the supply voltage and ground conductor leadwires.



(Left end of fixture; detail view).

(Right end of fixture; detail view).

Note: Socket plates may also need to be removed (see **STEP 5**).

INSTALLATION (CONTINUED)

STEP 2 – TETHER INSTALLATION

On each end of the existing fixture: Thread one #8 TEK screw through the ring of the Tether and drive it into the fixture. The length of the Tether serves as a template for placement of screw. The screw should be driven one Tether length from the end of the fixture [see **DIAGRAM 1A**]. The use of an electric drill with a magnetic socket is highly recommended.

At middle of existing fixture: Thread one #8 TEK screw through the ring of the Tether and drive it into the fixture. The screw should be driven one Tether length from the center of the fixture [see **DIAGRAM 1B**]. Install tethers on both left and right of center. The use of an electric drill with a magnetic socket is highly recommended.

Once all Tethers are installed, thread the "T" head of each Tether into the oblong slots of the Geartrays [see **DIAGRAM 2**].

Geartrays are labelled **THIS END TO FIXTURE CENTER** to identify correct orientation.

DIAGRAM 1A

DIAGRAM 1B

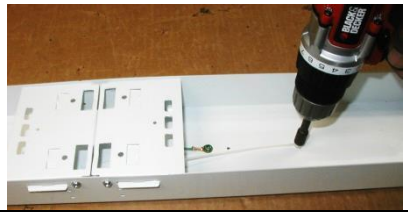
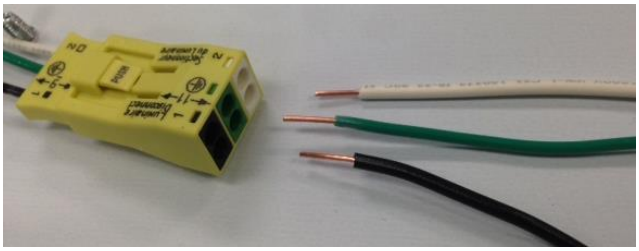


DIAGRAM 2

STEP 3 – SUPPLY POWER CONNECTIONS

Insert incoming power into Luminaire Disconnect Plug (LDP) [see **DIAGRAM 3**]. Insert the black supply wire (LINE) into the black hole of the LDP. Insert the white supply wire (NEUTRAL) into the white hole of the LDP. Insert the green supply wire (GROUND) into the green hole of the LDP.
The LDP is not designed to accept stranded wire. To connect LDP to stranded wire, insert solid conductor wires into the LDP then connect stranded wire to solid with a wire nut (not included with kit).

DIAGRAM 3



STEP 4 – SECURE FIRST GEARTRAY TO FIXTURE

Close the first Geartray, ensuring that no wires are pinched. Affix the Geartray to the fixture by driving #8 TEK screws through (4) mounting holes. It is recommended to use at least (2) of the (3) holes that are provided on each end of the geartray [see **DIAGRAM 4**].
Note: This method is valid only when socket plates are present.

Alternatively, Geartrays can be affixed to the fixture body using #8 TEK screws through each of the holes (total 4) that are provided on the sides of the geartray [see **DIAGRAM 5**].

DIAGRAM 4

DIAGRAM 5

STEP 5 – GEARTRAY CONNECTIONS

To complete the LED light engine circuit, connect the orange connector plug as shown in **DIA-6** and **DIA-7**.

DIAGRAM 6
(LED CONNECTORS)

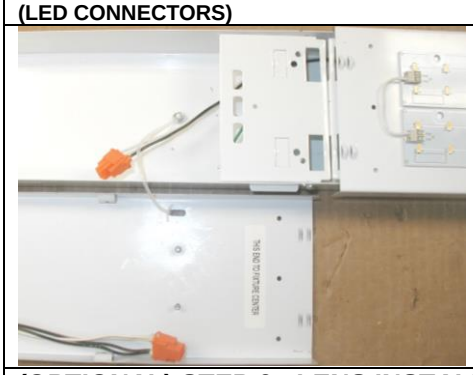


DIAGRAM 7
(LED CONNECTORS PLUGGED)

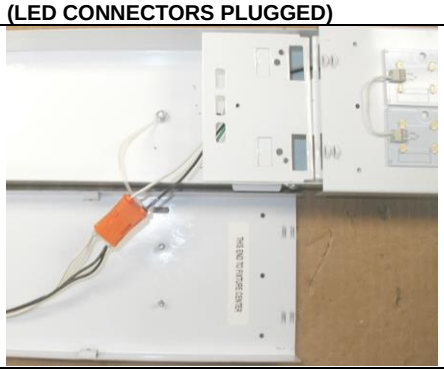
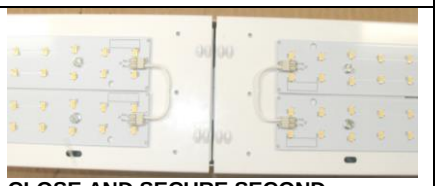


DIAGRAM 8



CLOSE AND SECURE SECOND GEARTRAY USING #8 TEK SCREWS AS PER STEP 4.

RETROFIT ASSEMBLY IS NOW COMPLETE. IF NO LENS IS USED, REAPPLY POWER TO FIXTURE.

(OPTIONAL) STEP 6 - LENS INSTALLATION

DO NOT install both endcaps before attaching lens.

DIAGRAM 9
Mounting location for endcap.

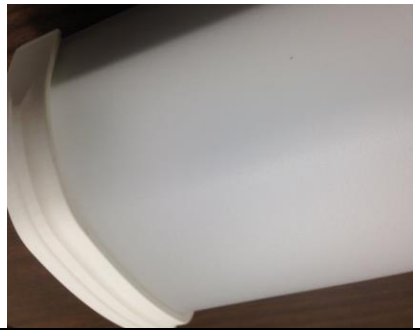
DIAGRAM 10
Endcap with screw holes.

DIAGRAM 11
Attach Endcap with two #8x1" screws.

DIAGRAM 12
Alternate view showing correct #8x1" screw engagement into Geartray.

DIAGRAM 13
Attach Lens onto edges of Geartray as shown.

DIAGRAM 14
Slide Lens into the Endcap.

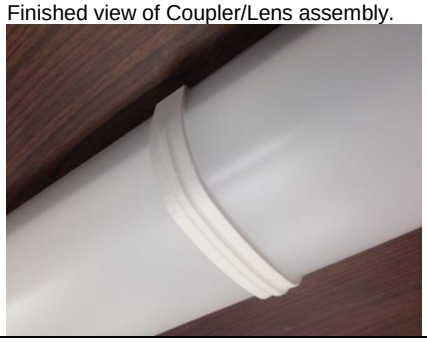


REPEAT ENDCAP AND LENS ASSEMBLY (DIAGRAMS 9 THRU 14) FOR OPPOSITE END OF FIXTURE.

Use Lens Coupler to cover joint between lenses at middle of fixture [see **Diagrams 14 – 15**].

DIAGRAM 14
Slide coupler between lenses.

DIAGRAM 15
Finished view of Coupler/Lens assembly.



RETROFIT ASSEMBLY IS NOW COMPLETE.

REAPPLY POWER TO FIXTURE.