

# ECO Lines™ F80/F150 User Manual

Thank you for choosing an ECO Lines™ Virtual Line LED Projector. ECO Lines projectors are designed to project a highly visible virtual line in industrial environments, thus eliminating the need for painted or taped lines. These F-Series models are focusable for optimal line appearance and brightness.

**ECO Lines F150**



**ECO Lines F80**



## Package Contents

Projector with projection lens, mounting yokes, power cord, two (2) line limiters and mounting pivot.

## Compliance

**⚠ Projectors must be secured with a safety cable in the event the fastening mechanism fails.**

The installer and/or operator of ECO Lines projection systems is responsible for compliance with local and national codes, regulations, requirements, and laws.

## Line Colors

The projectors come pre-configured with a color LED array. The colors cannot be changed without replacing the LED array. Standard colors: Yellow, Green, Red, Blue, Amber White

## Line Length and Projection Lenses

The projected line length depends on the projection distance and the lens angle.

- The shorter the line, the brighter it will project.
- The larger the projection distance, the longer the line.
- The wider the lens angle, the longer the line.

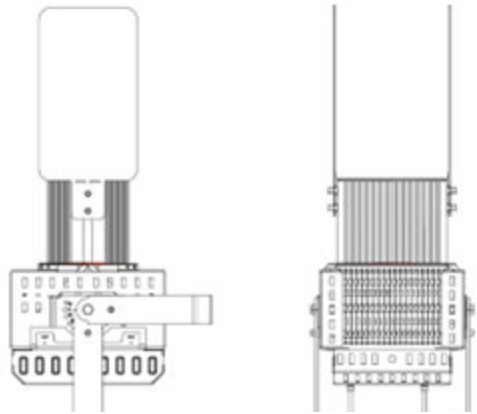
The projectors come with pre-installed projection lenses. Lenses can be interchanged to optimize the line length and brightness in relation to the projector mounting height.

### Line Limiter Option

In certain circumstances, it may be necessary to shorten the projected line on one or both sides to achieve the desired line length.

Therefore, the projectors can be equipped with optional line length limiters. These are “flaps”, that can be mounted on one or both sides of the projector. The line length is adjusted by bending the limiters in or out. Line Limiters also help to achieve a more refined line end.

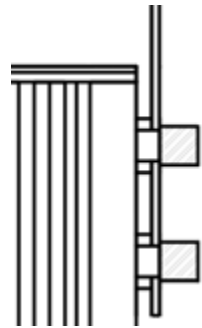
**Note: The minimum achievable line length is approx. 30% of the max. line length. For example, a 30ft line can be limited to approx. 10ft. These values may vary.**



*Line Limiters, mounted to the EL-F150*

The line limiters are attached to the sides of the projector with the provided hardware. The front two holes on each side are spaced to accommodate fasteners for the limiters.

Once the limiters are installed on the desired side(s) of the projector, they can be bent inwards or outwards, along the slotted perforation, to shorten or extend the line, respectively.



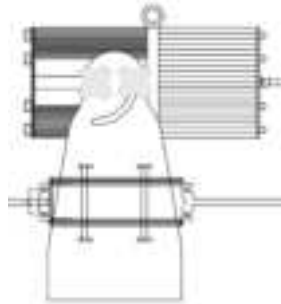
### Mounting

**⚠ Projectors must be secured with a safety cable in the event the fastening mechanism fails.**

The projectors come equipped with yokes for mounting and alignment. Ideally, the fixtures should be mounted perpendicular and centered above the projected line. Since this is rarely the case, the fixture is equipped with a yoke and pivot to position the projected line.

The **EL-F150** comes without the yoke attached. Attach it to the projector by using the provided mounting hardware.

The **EL-F80** has an external driver. It can be attached to the mounting structure or to the yoke, through the designated slots with zip ties or metal bands.



### Pivot

The yoke allows for alignment in two dimensions. To cover all possible angles, the projector comes with a pivot. It is especially handy if the projected line needs to be adjusted sideways.



### Focusing

**EL-F80 and EL-F150 projectors come pre-focused to a standard projection distance of 26ft. (8m).** The focus can easily be adjusted during installation and field maintenance.

**For distances that deviate more than 5ft. (1.5m) from the pre-set distance, we recommend focusing it for a crisper line appearance.**

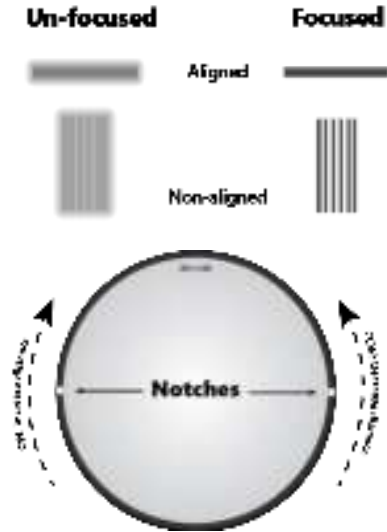
The lens barrel assembly is secured in place with a collar, with thumbscrews facing outwards. Adjusting the focus distance of the projector requires no tools.

**Adjustment:**

The projected line will be in focus every half rotation. It is expected that focal length will increase or decrease 4ft. (1.2m) with every half rotation. For example, a change in projection distance from the pre-set distance of 26ft. to 34ft. will require a full clockwise rotation (two half rotations).

To adjust the projection distance of the lens assembly:

- To increase the distance: turn the lens barrel clockwise (in)
- To decrease the distance: turn the barrel counterclockwise (out)



To release the lens barrel for adjustment, loosen the four (4) black thumbscrews. Once the front collar is no longer firmly fastened to the enclosure, the lens barrel will be free to rotate. Turning the barrel counterclockwise, facing the front of the lens, will move the barrel outward.

**Once the projected line has been properly focused, re-tighten the thumbscrews to secure the front collar which locks and seals the lens barrel and prevents moisture intrusion.**

### Maintenance and Cleaning

In general, the projectors are maintenance-free. In dusty environments, they can be dusted off with compressed air.

Do not try to clean the lens with any chemicals or paper towels as they can scratch it. Instead, use compressed air from a spray can. If you need to wipe the lens, use a soft microfiber cloth.

### Warranty

Two years from Date of Purchase. Keep your receipt for reference and contact your reseller in case of warranty issues.

**For further technical information, please refer to the ECO Lines Spec Sheets.**