# LED L-849(L) STYLE A/C/E REIL – SAMPLE SPECIFICATION

*Note: Modify the items in italics according to your specific job requirements.*

**ITEM L-125 INSTALLATION OF LED *{L-849(L) Style A} {L-849(L) Style C} {L- 849(L) Style E}* REIL**

# DESCRIPTION

125-1.1 This item shall consist of furnishing and installing the uni-directional LED L- 849(L) Runway End Identification Lights in accordance with these specifications.

This item shall also include all wire and cable connections, the furnishing and installing of all necessary conduits and fittings and all necessary mounting structures. It shall also include the testing of the installation and all incidentals necessary to place the lights in operation as completed units to the satisfaction of the Engineer.

# EQUIPMENT AND MATERIALS

125-2.1 L-849(L) STYLE *{A} {C} {E}*. The LED *{L-849(L) Style A} {L-849(L) Style C}*

*{L-849(L) Style E}* REIL shall conform to the requirements of FAA Advisory Circular 150/5345-51 “Specification for Runway Edge Identifier Lights” and FAA LED

“Engineering Brief No. 67” (current edition). The LED L-849(L) REIL shall be ETL certified. The LED L-849(L) REIL shall be as manufactured by AIRPORT LIGHTING COMPANY ([www.airportlightingcompany.com](http://www.airportlightingcompany.com/)) or approved equal.

125-2.2 EQUIPMENT SUPPLIED. The LED L-849(L) REIL system shall be supplied for the total quantity as shown on the plans. Each LED L-849(L) REIL system shall include one Instruction Manual. The manufacturer shall also have a downloadable electronic version of the manual available on their web site.

The LED REIL system shall consist of the following classifications:

1. Type.

*{L-849(L)V – REIL powered by airport voltage power source.*

## *or*

*L-849(L)I – REIL powered by an airfield series circuit.}*

1. Style.

*{Style A - Unidirectional, high intensity, one brightness step.*

## *or*

*Style C - Unidirectional, low intensity, one brightness step.*

## *or*

*Style E - Unidirectional, three brightness steps.}*

The LED REIL system must operate at temperatures from –40 to +131°F (–40 to +55°C).

125-2.3 REIL SYSTEM. The LED L-849(L) Style A *{L-849(L) Style C} {L-849(L) Style*

*E}* REIL shall provide a flashing visual indication to pilots of the runway threshold during an approach. To ensure reduced energy consumption, reduced maintenance requirements and elimination of costly xenon lamp replacement, the L-849(L) fixture light source shall be a Light Emitting Diode (LED) assembly. Xenon flashtubes or HID lamps will not be accepted. The Primary and Secondary REIL units shall have a flash rate of 120 flashes per minute ±10%. Both the Primary and Secondary REIL units shall flash simultaneously with no more than a 10-millisecond difference between them.

*{125-2.4 VOLTAGE POWERED REIL. The voltage powered REIL shall operate from a power supply of either 120/240V AC (3-wire with the center wire being neutral) or 240V AC (2-wire), ±10%, 50/60Hz.*

*[The L-849(L) Style A shall have a maximum total CCR load of 200VA.]*

## *or*

*[The L-849(L) Style C shall have a maximum total CCR load of 100VA.]*

## *or*

*[The L-849(L) Style E shall have a maximum total CCR load of 200VA.] }*

## *or*

*{125-2.4 CURRENT POWERED REIL. The series circuit powered LED REIL system shall operate from either a 3 or 5-step, 60Hz [50Hz] series lighting circuit.*

*[Each L-849(L) Style A cabinet shall be separately powered with a 6.6A secondary, 100W maximum isolation transformer.]*

# or

*[Each L-849(L) Style C cabinet shall be separately powered with a 6.6A secondary, 30/45W maximum isolation transformer.]*

# or

*[Each L-849(L) Style E cabinet shall be separately powered with a 6.6A secondary, 100W maximum isolation transformer.] }*

125-2.5 REIL OPERATION. *{To maximize maintenance personnel safety, there shall be no more than 240Vdc at any point inside either L-849(L)I control cabinet.}* **or** *{To maximize maintenance personnel safety, there shall be no more than 70Vdc at any point inside either L-849(L)V control cabinet.}* Each control cabinet shall include a door interlock switch that deactivates incoming power when the door is opened. DPDT dry relay output contact points shall be present to provide an external indication in case of a system fault. A system fault alarm shall be activated if 1.) There is a loss of input power,

2.) If more than 25% of the LEDs fail.

A flasher control board in the control cabinet shall generate a trigger signal, which shall be transmitted to the LED flasher assemblies in both Primary and Secondary control cabinets. The trigger signal shall be sufficiently robust such that the Primary to Secondary cable does not need to be shielded.

*{The LED L-849(L) REIL shall be available with either one- or three-step current sensing to allow automatic intensity selection based on the current sensed in a series circuit.}*

*{The L-849(L)V REIL Primary control cabinet shall have the capability to read series circuit current from the secondary of a 6.6A isolation transformer }* ***or*** *{The L-849(L)I REIL Primary control cabinet shall have the capability to read series circuit current from the secondary of the same isolation transformer that powers the Primary. Use of a separate isolation transformer shall not be required.}*

# CONSTRUCTION METHODS

125-3.1 PLACING THE LED L-849(L) REIL. The contractor shall furnish and install each L-849(L) REIL as specified in the proposal and shown in the plans. The L-849(L) REIL shall be mounted on a mounting device at the locations shown on the plans.

*{If current sensing used: The current sensing PCB shall be properly adjusted to activate the REIL at the appropriate CCR step settings}*

125-3.2 TESTS. The REIL shall be fully tested by continuous operation for not less than 24 hours as a completed system prior to acceptance.

*{If current sensing used:*

*With the REIL in Remote, the test shall include operating the constant current regulator in each step not less than 10 times at the beginning and end of the 24-hour test. The REIL shall illuminate properly during each portion of the test. At the end of this test, the REIL shall be checked for proper operation in Local control}*

*{If current sensing not used:*

*The test shall include operating the REIL in both Remote and Local in each step not less than 10 times at the beginning and end of the 24-hour test. The REIL shall illuminate properly during each portion of the test.}*

# METHOD OF MEASUREMENT

125-4.1 MEASUREMENT. The quantity of lights to be paid for under this item shall be for the total quantity of LED L-849(L) REIL units installed and one Instruction Manual (per system) and accepted as completed units, in place, ready for operation.

# BASIS FOR PAYMENT

125-5.1 **PAYMENT**. Payment will be made at the contract unit price for the completed total quantity of LED L-849(L) REIL units installed, in place by the Contractor, and accepted by the Engineer. This price shall be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete this item.

Payment will be made under:

Item L-125-5.1 LED L-849(L) REIL units, in Place—per each

**END OF ITEM L-125**