

LED L-849I STYLE A/C/E REIL SYSTEM - SAMPLE SPECIFICATION

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

ITEM L-150 INSTALLATION OF LED L-849I *{STYLE A}* *{STYLE C}* *{STYLE E}* REIL SYSTEM

DESCRIPTION

150-1.1 This item shall consist of furnishing and installing the LED L-849I *{Style A}* *{Style C}* *{Style E}* REIL System in accordance with this specification and the applicable FAA Advisory Circular. The system shall be installed at the specified location and in accordance with the dimensions, design, and details shown in the plans.

This item shall include the furnishing of all equipment, materials and incidentals necessary to place the system in operation to the satisfaction of the Engineer.

EQUIPMENT AND MATERIALS

150-2.1 LED L-849I *{STYLE A}* *{STYLE C}* *{STYLE E}* REIL SYSTEM.

- a. EQUIPMENT CONFORMANCE REQUIREMENTS. The LED L-849I REIL System shall conform to the requirements of FAA Advisory Circular 150/5345-51 (current edition) "Specification for Discharge-Type Flashing Light Equipment" and FAA LED "Engineering Brief No. 67" (current edition). The LED L-849I REIL System shall be ETL certified. *{The system shall comply with ICAO Annex 14, Vol. I, Section 5.3.8.}* The LED L-849I REIL System shall be manufactured by Astronics DME or approved equal.
- b. EQUIPMENT SUPPLIED. The LED L-849I REIL System shall be supplied for the total quantity as shown on the plans. The manufacturer shall have a downloadable electronic version of the manual available on their web site.
- c. LIGHT SOURCE REQUIREMENTS. The LED L-849I REIL System shall provide a flashing visual indication to pilots of the runway threshold during an approach. To reduce maintenance requirements and eliminate costly xenon lamps, the L-849I REIL light source shall be a Light Emitting Diode (LED) assembly. To insure maximum reduced energy consumption of the LED L-849I REIL System, no more than twenty-four Light Emitting Diodes (LEDs) shall be used in each Identifier Unit Assembly (IUA) light source. The L-849I REIL System shall consist of a primary IUA with LED flasher assembly and a secondary IUA with LED flasher assembly. The secondary IUA shall be virtually identical to the primary IUA except that timing signals shall originate from the primary IUA. The REIL IUAs shall have a flash rate of 120 flashes per minute $\pm 10\%$. Both REIL IUAs shall flash simultaneously with no more than a 20 millisecond difference between them.

- d. **POWER REQUIREMENTS.** The LED L-849I REIL System shall operate from either a 1-, 3- or 5-step, 60Hz [50Hz] series lighting circuit. Each L-849I *{Style A} {Style E}* IUA shall be separately powered with a 6.6A secondary, 150W maximum isolation transformer. *{Each L-849I Style C IUA shall be separately powered with a 6.6A secondary, 30/45W maximum isolation transformer.}*
- e. **OPERATIONAL REQUIREMENTS.** To maximize maintenance personnel safety, there shall be no more than 45Vdc at any point inside either of the IUAs. Each IUA shall include a door interlock switch that deactivates incoming power when the door is opened. If 25% or more of the LEDs fail, the system shall shut down and cease flashing. When power is cycled, or first applied, there shall be a 15 second warm up delay, after which the unit will begin to flash for approximately 2 minutes before detecting the failed LEDs and shutting down again.

The primary IUA shall generate a trigger signal, which shall be transmitted to the secondary IUA for flash synchronization.

The LED L-849I REIL System 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.

- f. **OTHER REQUIREMENTS.**

The LED L-849I REIL System shall consist of the following classification: L-849I (constant current power source), *{Style A (unidirectional, high intensity, one brightness step)}*, *{Style C (unidirectional, low intensity, one brightness step)}* or *{Style E (unidirectional with three brightness steps)}*.

The Style (A, C or E) of the LED L-849I REIL System shall be field-configurable via a jumper setting, allowing the Style setting to be modified to meet the airport's requirements.

Each IUA of the LED L-849I REIL System shall be NEMA 4X equivalent.

The LED L-849I REIL System must operate at temperatures from -40 to +131°F (-40 to +55°C).

CONSTRUCTION METHODS

150-3.1 PLACING THE LED L-849I *{STYLE A} {STYLE C} {STYLE E}* REIL SYSTEM. The contractor shall furnish and install each LED L-849I REIL System as specified in the applicable Advisory Circulars. The LED L-849I REIL System shall be mounted on a mounting device at the locations shown on the plans.

150-3.2 TESTING THE LED L-849I *{STYLE A}* *{STYLE C}* *{STYLE E}* REIL SYSTEM. The LED L-849I REIL System shall be fully tested by continuous operation for not less than 24 hours as a completed system prior to acceptance.

METHOD OF MEASUREMENT

150-4.1 MEASUREMENT. The quantity of LED L-849I *{Style A}* *{Style C}* *{Style E}* REIL Systems to be paid for under this item shall be for the total quantity of LED L-849I *{Style A}* *{Style C}* *{Style E}* REIL Systems installed and accepted as completed systems, in place, ready for operation and accepted by the Engineer.

BASIS FOR PAYMENT

150-5.1 PAYMENT. Payment will be made at the contract unit price for the completed total quantity of LED L-849I *{Style A}* *{Style C}* *{Style E}* REIL Systems 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-150-5.1 LED L-849I *{STYLE A}* *{STYLE C}* *{STYLE E}* REIL SYSTEM,
in Place—per each

END OF ITEM L-150