

## **L-852ABCD LED IN-PAVEMENT TAXIWAY CENTERLINE LIGHTS - SAMPLE SPECIFICATION**

### **ITEM L-150 INSTALLATION OF L-852ABCD LED IN-PAVEMENT TAXIWAY CENTERLINE LIGHTS**

#### **DESCRIPTION**

150-1.1 This item shall consist of furnishing and installing the L-852ABCD LED in-pavement centerline lights in accordance with this specification and the applicable FAA Advisory Circular. The fixtures 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, services and incidentals necessary to place the fixtures in operation as completed units to the satisfaction of the Engineer.

#### **EQUIPMENT AND MATERIALS**

##### **150-2.1 L-852ABCD LED IN-PAVEMENT CENTERLINE LIGHTS.**

- a. **EQUIPMENT CONFORMANCE REQUIREMENTS.** The L-852ABCD LED in-pavement centerline lights shall conform to the requirements of FAA Advisory Circular (AC) 150/5345-46 (current edition) "Specification for Runway and Taxiway Light Fixtures" and FAA LED "Engineering Brief No. 67" (current edition). The L-852ABCD LED in-pavement centerline lights shall be ETL certified. *{The fixture shall comply with ICAO Annex 14, Vol. 1, par. 5.3.12 and Appendix 2 Figure A2-7.}* The L-852ABCD LED in-pavement centerline lights shall be manufactured by Astronics DME or approved equal.
- b. **EQUIPMENT SUPPLIED.** The L-852ABCD LED in-pavement centerline lights 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 L-852ABCD LED in-pavement fixture light source shall be a Light Emitting Diode (LED) assembly. The average lifetime of the LED shall be a minimum of 50,000 hours at full intensity.

The color emitted by the fixture shall be unidirectional White (D fixture only), Yellow, and Green; bidirectional Green/Green, Green/Yellow, Yellow/Yellow and White/White (D fixture only), as indicated on the plans. The required color shall be obtained without the use of a color filter. It shall be possible to install the LED fixtures on existing series circuits in replacement of conventional quartz-incandescent lights without having to change any other element (CCR, primary and secondary cabling, series transformer, etc.).

- d. **POWER REQUIREMENTS.** The L-852ABCD LED in-pavement fixtures shall operate on either a 6.6A or 20A circuit at 60Hz *{50Hz}* using an appropriately-sized isolation

transformer. To minimize spare parts requirements, the fixture internal power supply circuit shall be the same for 3-step or 5-step, 50/60Hz series circuits.

An option for a heater shall be available for the fixture that complies with the arctic kit requirements in Engineering Brief No. 67 (current edition). To reduce overall energy consumption, the heater shall be thermostatically controlled.

The fixture bottom cover shall include an earth ground terminal.

- e. OTHER REQUIREMENTS. The L-852ABCD LED in-pavement centerline lights shall be 12-inch fixtures designed to mount on standard FAA L-868B light bases.

The L-852ABCD LED fixture shall be Style-3 ( $\leq \frac{1}{4}$  inch above grade). All renewal parts must be field replaceable. The L-852ABCD LED top cover shall be a 12-inch, single-piece construction and made from forged aluminum alloy. All components shall be corrosion proof without the use of environmentally hazardous metal protective coatings. The prisms shall be field-replaceable without the use of epoxy or other sealing compounds. Remke liquid-tight stainless steel connectors shall be used for the entry and sealing of L-823 cord set wire cables to the base, allowing for cord set replacement without the use of epoxy or other sealing compounds. A Schrader valve with removable cap shall be provided at the base of the fixture to allow for pressure testing after fixture overhaul.

## **CONSTRUCTION METHODS**

150-3.1 PLACING THE L-852ABCD LED IN-PAVEMENT CENTERLINE LIGHTS. The contractor shall furnish and install each L-852ABCD LED in-pavement fixture as specified in the proposal and shown in the plans. The L-852ABCD LED in-pavement fixtures shall be mounted on industry standard L-867B base cans.

150-3.2 TESTS. Each L-852ABCD LED fixture shall be connected to the series circuit using the manufacturer's recommended isolation transformer. The constant current regulator (CCR) shall then be tested to verify the correct output current is present at each step. The output current shall be checked with a True RMS meter using the CCR manufacturer's instructions. The entire circuit shall then be fully tested by continuous operation for not less than 24 hours prior to acceptance. The test shall include operating the CCR in each step (Local and Remote) not less than 10 times at the beginning and end of the 24-hour test.

## **METHOD OF MEASUREMENT**

150-4.1 MEASUREMENT. The quantity of lights to be paid for under this item shall be for the total quantity of L-852ABCD LED in-pavement centerline lights installed and accepted as completed units, 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 L-852ABCD LED in-pavement centerline lights 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 L-852ABCD LED In-pavement Taxiway Centerline Lights, in Place—per each

**END OF ITEM L-150**