## TAXIWAY LIGHTING

# **SCDL**

Incandescent & LED Runway Centerline and Simulated Carrier Deck Light
NAVY TYPE VII AND VIII



## **Compliance with Standards**

FAA: Manufactured to applicable requirements in AC

150/5345-46 (Current Edition), and the FAA Engineering

Brief No. 67.

**US Navy:** NAVAIR 5150AAA-2, WP 006-04, WP 004-06

#### Uses

#### FAA L-852N

- Provides visual guidance for simulated carrier deck landings and manufactured to resist damage from aircraft tail hooks.
- For runway centerline applications that have a large percentage of the landings by aircraft equipped with arresting hooks — available in uni- and bidirectional configurations — are resistant to arresting hook damage.

## **Features**

- · Incandescent or LED version available.
- Low LED wattage: Single 3 W LED with only 14 VA maximum fixture load for unidirectional applications, making L-852N LED fixtures more than twice as efficient as traditional 45 W unidirectional fixtures.
- Narrow light channel and hardened stainless steel top cover to resist tail hook damage. Stainless steel for the top cover conforms to ASTM A747 with a Rockwell Hardness of C40  $\pm$  5.
- Low protrusion above ground (≤ 0.375 inch) reduces vibrations caused by aircraft landing gear in both the light fixture and the landing gear. Protrusion is 25% lower than traditional L-852N (0.5 inch) fixtures.
- Smooth outer surface of light cover and low protrusion height prevent tire damage and minimize risk of snowplow damage
- Average LED life of uni- and bidirectional fixtures is 100,000 hours under high-intensity conditions and more than 200,000 hours under actual operating conditions, which significantly reduces ongoing maintenance costs and periodic re-lamping expenses, resulting in lower life cycle costs
- Very low power rating for LED lights contributes to a lower life cycle cost. Limits cost for supporting equipment, such as isolation transformers and CCRs, to strict minimum.
- Can be installed on existing 6.6 A or 20 A series circuits with no modifications to existing CCR or isolation transformer

- Operates on either 3- or 5-step ferroresonant or thyristor CCRs that are designed in compliance with FAA requirements
- LED photometric performance will be maintained longer due to a cleaner lens. Lower lens temperature prevents the "baking effect" that causes contaminants to stick to the lens surface.
- Smart electronics control current to LED, so light output matches existing incandescent fixtures.
- Many components are common to all F-Range lights, which reduces spare parts stock
- Field replaceable L-823 cord sets are mechanically clamped to the bottom cover and provide a watertight seal without the use of sealing compounds or resins
- Outer prisms are mechanically clamped to light cover. Prism replacement is fast, easy, and does not require sealing compound, resin, or setting jigs.
- No optical adjustment required after replacement of any optical components
- Plug for pressure-testing of fixture after maintenance
- Resists corrosion without the use of environmentally damaging coatings
- Narrow light channel in front of prism window protects prism from damage and prevents rubber buildup thereby maintaining optimal light output
- Designed to exceed lightning protection requirements of ANSI/ IEEE C62.41-1991 Category C1
- Rugged lightning protection complies with ANSI/IEEE C62.41-1991 Location Category C2 given in FAA Eng. Brief 67. Category C2 is defined as a  $1.2/50\mu S$   $8/20 \mu S$  combination wave, with a peak voltage of 10,000 V and a peak current of 5,000 A.
- Includes a UL 467 rated ground lug, which accepts an AWG 6 earth ground wire

Note: Front cover image: 10-inch model shown

## **Operating Conditions**

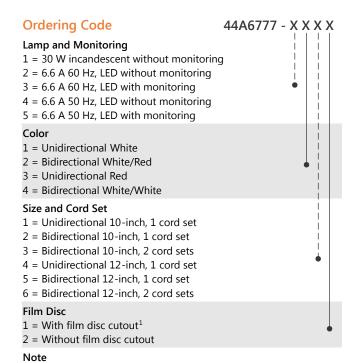
Temperature:  $-40 \,^{\circ}\text{F}$  to  $+131 \,^{\circ}\text{F}$  /  $-40 \,^{\circ}\text{C}$  to  $+55 \,^{\circ}\text{C}$  Altitude: Sea level to 10,000 feet / 3,050 m

Humidity: 0 to 100%



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## **Power Supply**

L-852N LED fixture is designed to work with any FAA-compliant transformer up to 100 W without affecting the performance or lifetime of the light fixture or transformer. See data sheet 3033 for more details on recommended isolation transformers specified below.

1. Film disc cutout is only used on incandescent option

L-852N LED Isolation Fixture Transformer	Fixture Load
Unidirectional 10/15 W	14 VA
Bidirectional <sup>1</sup> 20/25 W	17 VA
Bidirectional <sup>2</sup> 10/15 W per side	14 VA per side (28 VA total)

#### Notes

- <sup>1</sup> One cord set
- <sup>2</sup> One cord set per side (2 total)



12-inch model shown

### Installation

The light assembly is designed for connection to a 6.6 A series lighting circuit via an L-830 (60 Hz) or L-831 (50 Hz) isolation transformer. When required, multiple fixtures can be connected in series using an appropriately-sized isolation transformer.

L-852N fixtures can be installed on 10- or 12-inch diameter deep base cans



12-inch model with optional snow plow ring shown

## **Dimensions**

10-inch fixture		
Outside diameter:	9.98 in / 25.35 cm	
Bolt-circle diameter (L-868A <sup>1</sup> ):	9.25 in / 23.5 cm	
12-inch fixture		
Outside diameter:	11.94 in / 30.33 cm	
Bolt-circle diameter (L-868B):	11.25 in / 28.58 cm	
Packaging		
In cardboard box:	13 × 13 × 7 in / 33 × 33 × 17.8 cm	
Weight		
10-inch fixture	18.5 lb / 8.4 kg	
12-inch fixture	28.5 lb / 12.9 kg	
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#### Notes

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Refers to older style 10-inch L-868A base can compliant to AC 150/5345-42C. 10-inch base cans are no longer specified in the current FAA Advisory Circular.