

# Tex-1150-T, Photometric Characteristics of Lighting Assemblies

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## **Section 1**

### **Overview**

Effective Dates: August 1999–April 2008.

This method describes the apparatus and procedures used to determine the photometric characteristics of lighting assemblies as measured directly on the type surface to be illuminated.

The photometric characteristics of a lighting assembly are obtained by taking direct light level measurements with measurements taken in accordance with the pertinent specification.

This method replaces Test Method "Tex-871-B, Photometric Characteristics of Lighting Assemblies."

## **Section 2**

### **Apparatus**

The following apparatus is required:

- ◆ Transformer, variable with volt-amp-watt meter, as described in Test Method "Tex-1130-T, Ballasts of Lighting Assemblies"
- ◆ Light meter, portable, cosine corrected with a spectral response within 2% of the CIE photopic curve, and accurate within 5.5% of National Bureau of Standards (NBS) standards
- ◆ Probe cart, a hand-propelled vehicle equipped with a self-leveling gimbal ring
- ◆ Test area, level, and located in a dark area, marked off in a grid, with one point directly under the lamp. This is zero-zero (0,0) with the line through this point and the pole being one axis. The other axis is through this point and perpendicular to the pole.
- ◆ Pole, capable of raising the assembly to the specified height.

**Section 3**  
**Safety Note**

Refer to 'Safety Note' in the "Overview" of this manual.

## Section 4 Preparation

The following table details the steps for preparing the assembly and apparatus for testing the photometric characteristics.

<b>Preparing Assembly for Photometric Testing</b>	
<b>Step</b>	<b>Action</b>
1	Remove all power from test area.
2	Mount and level fixture on pole.
3	Determine correct line voltage for the lighting assembly ballast.
4	Following all safety precautions, turn on power to test bench.
5	Slowly adjust the transformer voltage to apply center-rated operating voltage to the lighting assembly.
6	Move the assembly to correct mounting height.
7	Operate lamp continuously for a minimum of 30 minutes prior to photometric testing.
8	Verify that the only light in the area is from the lighting assembly under test. Extraneous light should not exceed 0.43 lux (0.04 foot-candles).

## Section 5 Testing Procedure

The following table details the steps for testing the assembly against specification requirements.

<b>Photometric Testing</b>	
<b>Step</b>	<b>Action</b>
1	Record the wattage reading of lighting assembly on test sheet.
2	With the meter and probe mounted on the cart, move the cart so that the probe is positioned over the points specified for the particular type of lighting assembly.
3	Measure lux (foot-candle) falling on the probe as per instrument manufacturer's operating instructions.
4	Record lux (foot-candle) readings on the test sheet for all points on the test grid.
5	Sign and complete each test sheet.
6	Turn transformer knob to zero as indicated on the reference dial.
7	Remove power from test bench.

## **Section 6**

### **Completing Lighting Assemblies**

Follow 'Tagging/Labeling, Documenting and Shipping General Requirements' as detailed in the "Overview" of this manual. In addition to general requirements:

- ◆ Calculate maximum versus minimum ratio and/or calculation indicated in specification.

**Section 7**  
**Failure of Assemblies**

Any assembly that fails to meet specification will be rejected and the lot represented by that assembly shall also be rejected.