

City of Los Angeles
Bureau of Street Lighting
LED Equipment Evaluation Procedures

7/1/2011

- **Request for Equipment Evaluation**

In order for LED equipment to be evaluated by the Bureau of Street Lighting, interested parties must meet the **Minimum Requirements for Testing and Evaluation of LED Equipment as posted in our Web page**. You MUST submit a request (**LED Street Lighting Energy Efficiency Program contact information**) to the Bureau through the BSL Internet web page: <http://www.lacity.org/bsl/>

- **Review of Engineering and Technical Documentation**

After making the initial request, interested parties will be asked to provide engineering and technical information related to the product. This information must show that the equipment meets the **Minimum Requirements for Testing and Evaluation of LED Equipment**. At this time, a meeting or presentation may be arranged to present the equipment and its technology to the Bureau.

- **Sample Equipment**

One sample luminaire shall be submitted to the Energy Efficiency Division. Only complete units will be tested. Luminaires to be installed in the field shall be able to mount on a standard 2.4" diameter arm. They shall also be capable of accepting a PE cell without modification. Supplier shall be notified that the equipment will be opened and may not be returned in original condition. BSL will provide labor to evaluate the equipment, but will not be financially responsible for equipment damaged during the testing period.

Components such as drivers and LED assemblies will not be accepted unless they are delivered in a standard commercially available housing. The complete assembly shall be identifiable by a factory catalog number.

- **Perform Lab Evaluation**

All equipment submitted for lab testing shall be evaluated based on four different sets of criteria.

1. Electrical performance
2. Mechanical performance
3. Ease of Maintenance
4. Aesthetics

- **Perform Field Evaluation**

When deemed appropriate by the Testing Engineer, the lighting supplier will be asked to submit three additional fixtures for field testing. The fixtures will be lab tested for power consumption, then moved to the field for further testing. The fixtures shall be installed with either a dimmable control module (DCM) or a Remote Monitoring Device (RMD) such as “ROAM”, so that electrical performance data can be collected and reviewed.

A test location may be located either in the controlled environment of the Field Operations Division (FOD) yard, or on an existing street lighting pole on a City street.

If installed on a City street the following criteria should be used in identifying a suitable location:

1. Every effort shall be made to ensure public safety.
2. Fixture shall be installed as to minimize light pollution from other sources.
3. Pole height shall be “typical” so as to get the most relevant illumination readings.
4. Site should be chosen so as to minimize FOD construction work.
5. Test site shall be evaluated for possible negative impact on residents.

The test site shall remain in place for a minimum of 12 weeks. The Testing Engineer shall visit the site at the end of the 4th and 10th weeks.

Field Check Week 4

The Testing Engineer shall visit the site after dark in order to ensure that the fixtures are operating as intended, and to take several types of lighting readings. Readings shall be taken at increments between 5’ and 10’ in a grid pattern on both the sidewalk and street. The size of the grid shall be determined based on a “typical” spacing. In the case of LED fixtures, condition of individual LED’s in the fixtures will be checked for normal operation.

Field Check Week 10

The Testing Engineer shall return to the site to ensure that the fixtures are still operating as intended. At this point the Testing Engineer shall request that the FOD remove the test equipment and re-install the pre-existing street lighting equipment.

- **Perform Follow-up Lab Evaluation**

The Testing Engineer shall evaluate the equipment’s field performance. Data collected through the remote monitoring equipment will be reviewed and compared to the initial lab results. Also, the equipment shall be evaluated for any damage caused by the environment.

- **Return of Equipment (if requested by supplier)**

The supplier shall be contacted regarding the conclusion of testing. Arrangements shall be made for the return of the equipment to the supplier. BSL will ship the fixture back to supplier using the suppliers shipping account. Otherwise, the fixture will be available for pick-up at FOD.

- **Prepare and Distribute Report**

The Testing Engineer shall prepare a report per BSL standards.