

INVITATION TO BID

ITB 4240

LED DECORATIVE POST TOP FIXTURES

 COPY



Due Date: June 11, 2012 by 10:00 AM

Issued By:  
City of Ann Arbor  
Procurement Unit  
301 E. Huron Street  
Ann Arbor, MI 48104

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ADVERTISEMENT TO BID  
CITY OF ANN ARBOR  
LED DECORATIVE POST TOP FIXTURES  
ITB 4240

Sealed Bids will be received by the City of Ann Arbor Procurement Unit, Fifth (5<sup>th</sup>) Floor, Guy Larcom City Hall, on or before June 11, 2012 by 10:00 AM for the purchase of LED Decorative Post Top Fixtures. Bids will be publicly opened and read aloud at this time.

Awarded vendor will supply LED Decorative Post Top Fixtures to be provided as specified in this document.

Bid documents, specifications, plans and addendum shall be downloaded by vendors at either of the following web sites, Michigan Inter-governmental Trade Network (MITN) [www.mitn.info](http://www.mitn.info) or City of Ann Arbor web site [www.A2gov.org](http://www.A2gov.org).

Precondition for entering into a contract with the City of Ann Arbor: (i) compliance with "Nondiscrimination by City Contractors" in Chapter 112 of Title IX of the Code of the City of Ann Arbor. Further information is outlined in the bid documents.

After the time of opening, no Bid may be withdrawn for a period of 90 days.

The City reserves the right to accept any Bid, to reject any or all Bids, to waive irregularities and/or informalities in any Bid, and to make the award in any manner the City believes to be in its best interest.

Any further information may be obtained from the Ann Arbor Procurement Office,  
(734) 794-6576

CITY OF ANN ARBOR PROCUREMENT UNIT

## INSTRUCTIONS TO BIDDERS

### General

The City of Ann Arbor's Procurement Office is soliciting bids for the purchase of soliciting bids for one hundred and twenty five (125) LED Decorative Post Top Fixture to be configured as specified in this document.

Any Bid which does not conform fully to these instructions may be rejected.

### Preparation of Bids

Each section and sub-section of each item must be marked clearly as to it meeting the City's specifications completely or not.

Bids shall be written in ink or typewritten. No erasures are permitted. Mistakes may be crossed out and corrected and must be initialed and dated in ink by the person signing the Bid.

Bids must be submitted on "Bid Forms" provided with each blank properly filled in. If forms are not fully completed it may disqualify the bid.

Each person signing the Bid certifies that he/she is the person in the Bidder's firm/organization responsible for the decision as to the fees being offered in the Bid and has not and will not participated in any action contrary to the terms of this provision.

### Questions or Clarification on ITB Specifications

All questions regarding this ITB shall be submitted via email. Emailed questions and inquires will be accepted from any and all prospective Bidders in accordance with the terms and conditions of the ITB.

All questions shall be due on or before June 6, 2012 by 3:00 p.m. and should be addressed as follows:

Specification questions emailed to Chuck Fojtik, Sign/signal Communications Supervisor at: [Cfojtik@a2gov.org](mailto:Cfojtik@a2gov.org).

Bid Process and HR Compliance questions emailed to Linda Newton, Procurement Officer at: [Lnewton@a2gov.org](mailto:Lnewton@a2gov.org).

### Addenda

If it becomes necessary to revise any part of the ITB, notice of the Addendum will be posted to Michigan Inter-governmental Trade Network (MITN) [www.mitn.info](http://www.mitn.info) and/or City of Ann Arbor web site [www.A2gov.org](http://www.A2gov.org) for all parties to download.

Each Bidder must in its Bid, to avoid any miscommunications, acknowledge all addenda which it has received, but the failure of a Bidder to receive, or acknowledge receipt of; any addenda shall not relieve the Bidder of the responsibility for complying with the terms thereof.

The City will not be bound by oral responses to inquiries or written responses other than written addenda.

## **Bid Submission**

All Bids are due and must be delivered to the City of Ann Arbor Procurement Unit on or before June 11, 2012 by 10:00 AM. Bids submitted late or via oral, telephonic, telegraphic, electronic mail or facsimile **will not** be considered or accepted.

Each Bidder must submit one (1) original Bid and one (1) Bid copy in a sealed envelope clearly marked: **ITB 4240 – LED Decorative Post Top Fixture.**

### **Bids must be addressed and delivered to:**

City of Ann Arbor  
Procurement Unit, 5<sup>th</sup> Floor  
301 East Huron Street  
P.O. Box 8647  
Ann Arbor, MI 48107

All Bids received on or before the Due Date will be publicly opened and recorded immediately. No immediate decisions are rendered.

Bids should be date/time stamped/signed at the address above in order to be considered. Normal business hours are 8:00 a.m. to 3:00 p.m. Monday through Friday. The City will not be liable to any Bidder for any unforeseen circumstances, delivery or postal delays. Postmarking to the Due Date will not substitute for receipt of the Bid. Each Bidder is responsible for submission of their Bid.

Additional time will not be granted to a single Bidder; however, additional time may be granted to all Bidders when the City determines that circumstances warrant it.

## **Human Rights Information**

When the City spends \$10,000 or more annually with a vendor they must comply with human rights City ordinances. To establish compliance with these Ordinances, the Bidder should complete and return with its bid completed copies of the Human Rights Division Living Wage form in Appendix B and Contract Compliance Forms in Appendix C (or EEO Report). In the event forms are not submitted with bids they must be provided within 24 hours of notice.

## **Award**

The City intends to award a Contract/Purchase Order to the lowest responsible Bidder. The City may also utilize alternatives offered in the Bid Forms, if any, to determine the lowest responsible Bidder.

Responsible bidder means a bid submitted, which conforms in all aspects of the requirements set forth in the invitation to bid. All aspects could include price, quality, references, past experience, past performance, and qualifications.

## **Official Documents**

The City of Ann Arbor shall accept no changes to the bid documents made by the Bidder unless those changes are set forth in the "Alternate" section of Bid form.

The City of Ann Arbor officially distributes bid documents from the Procurement Unit or through the Michigan Intergovernmental Trade Network (MITN). Copies of the bid documents obtained

from any other source are not considered Official copies. Only those Bidders who obtain bid documents from MITN system are guaranteed access to receive addendum information if any issued. If you obtained City of Ann Arbor Bid documents from other sources, it is recommended that you register on [www.MITN.info](http://www.MITN.info) and obtain an official Bid

### **Certification**

All specification, warranty, and testing compliance and certification documentation must accompany your bid. Failure to submit requested documentation will result grounds for rejection of your bid.

### **Withdrawal of Bids**

After the time of opening, no Bid may be withdrawn for the period of 90 days.

### **Delivery**

Materials must be delivered by August 1, 2012. If delivery schedule cannot be met, bid will be disqualified.

## GENERAL TERMS

### Shipping

Product will be shipped FOB (destination prepaid by vendor) on an AS NEEDED basis.

### Warranty

The successful bidder shall provide a copy of their warranty agreement, which must include the following provisions:

1. That all parts, workmanship and labor shall be fully guaranteed against defects in performance or construction for at least seven years from the date of installation and acceptance.
2. That any materials, parts, workmanship, labor or equipment which is found to be defective within the 7-year warranty period shall be repaired or removed at the manufactures expense regardless of any previous inspection or final acceptance by the City.
3. That any Warranty Work must be initiated by the Supplier within 48 hours following the Supplier's notification of the warranty claim or repair request.

In the event that, in the Opinion of the City, the failure of any parts, equipment, material, or workmanship, within the warranty period constitutes a failure to meet the requirements of the detailed specifications, or failure to perform satisfactorily in service, such failure shall be adequate cause for rejection of any or all equipment furnished under these listed specifications.

### Insurance

The Vendor has ten (10) days after award notice to provide the City with their insurance documentation. Contractor agrees to procure and maintain in effect insurance policies in the amount and with the type of coverage shown below:

1. Workers Compensation insurance in the form and amount required by Michigan Law.
2. Commercial General Liability insurance on an "Occurrence Basis" with limits of liability not less than \$1,000,000 per occurrence and/or aggregate combined single limit, personal injury, bodily injury and property damage.
3. Motor Vehicle Liability, including Michigan No-Fault coverage, with limits of liability not less than \$1,000,000 per occurrence combined single-limit bodily injury and property damage. Coverage shall include all owned vehicles, all non-owned vehicles, and all hired vehicles.
4. To the fullest extent permitted by law, for any loss not covered by insurance under this contract, the Contractor shall indemnify, defend and hold the City, its officers, employees and agents harmless from all suits, claims, judgments and expenses including attorney's fees resulting or alleged to result, to its proportionate extent, from any negligent, grossly negligent, reckless and/or intentional wrongful or tortuous acts or omissions by the Contractor or its employees and agents occurring in the performance of this agreement.

Certificates showing the Contractor has the required insurance shall be filed with the Procurement Division before any services are performed. Certificates shall provide not less than 30 days prior written notice to the Administering Department cancellation, non-renewal, reduction in the amount of insurance or material change of terms of the policy. The certificate for the insurance shall name the City as an additional insured party and provide for notice to the Administering Department during the term of this contract for any action taken in accordance with this provision. If any of the above coverage expires by their terms during the term of this Contract, the Contractor shall deliver renewal certificates and/or policies to the Administering department at least ten days prior to the expiration date. The insurer must be satisfactory to the City attorney.

Contractor will maintain all required insurance of the parties as specified during the existence of this agreement, including renewals.

## **Human Rights Compliance**

### **A. Compliance Requirements**

If total costs of all services rendered by the Respondent to the City of Ann Arbor in the last 12 months exceed \$10,000 in combination with this Proposal, Respondent will be required to comply with the City Living Wage Ordinance. Human Rights compliance is required for all services valued over \$10,000. If total costs of all services rendered in connection with this Proposal to the City by the Respondent exceed \$25,000, City Council approval will be required.

#### **1. Non-Discrimination by City Contractor(s)**

All contractors proposing to do business with the City of Ann Arbor, except those specifically exempted by regulations promulgated by the Administrator and approved by City Council, shall receive approval from the Human Resources Director prior to entering into a professional services agreement with the City. Said firms shall take affirmative action to insure that applicants are employed and that employees are treated during employment in a manner which provides equal employment opportunity and tends to eliminate inequality based upon race, national origin or sex. See Appendix C.

#### **2. Living Wage**

All contractors proposing to do business with the City of Ann Arbor, except those specifically exempted by City Code, agree to comply with the living wage provisions of Chapter 23 of the Ann Arbor City Code and, if a "covered employer" as defined therein to pay those employees providing services to the City under this agreement a "living wage" as defined in Chapter 23 of the Ann Arbor City Code; and, if requested by the City, provide documentation to verify compliance. See Appendix B.

## **Debarment**

Submission of a Bid in response to this ITB is certification that the Bidder is not currently debarred, suspended, proposed for debarment, and declared ineligible or voluntarily excluded from participation in this transaction by any State or Federal departments or agency. Submission is also agreement that the City will be notified of any changes in this status.



## **Disclosures**

All information in a submitter's bid is subjected to disclosure under the provisions of Public Act No. 442 of 1976 know as the "Freedom of Information Act". This act also provides for the complete disclosure of contracts and attachments thereto except where specifically exempted under the Freedom of Information Act.

## **Bid Protest**

All Bid protests must be in writing and filed with the Purchasing Agent within five (5) business days of the award action. The vendor must clearly state the reasons for the protest. If a vendor contacts a City Service Area/Unit and indicates a desire to protest an award, the Service Area/Unit shall refer the vendor to the Purchasing Agent. The Purchasing Agent will provide the vendor with the appropriate instructions for filing the protest. The protest shall be reviewed by the City Administrator or designee who's decision shall be final.

## **Assignments**

The successful bidder agrees not to assign or transfer this contract or any part thereof without the written permission of the City of Ann Arbor, acting through the Public Services Administrator or her authorized representative. Any unauthorized assignment may subject the contract to immediate termination.

## **Vendor's Responsibility**

The basic unit and all required components shall be compatible and are recommended for use in combination by the manufacturer. It shall be the vendor's responsibility to insure that all components operate according to manufacturer's recommendations in regard to operation speed, imposed load, etc., and to deliver a functionally complete unit, complying with good engineering and accepted commercial practice and in accordance with the intent and details of the specifications.

## **Errors, Omissions, Discrepancies**

Any error, omissions or discrepancies in the specification discovered by a prospective contractor and/or service provider shall be brought to the attention of Linda Newton, Procurement Officer, at [Lnewton@a2gov.org](mailto:Lnewton@a2gov.org) as soon after discovery as possible. Further, the contractor and/or service provide shall not be allowed to take advantage of errors, omissions or discrepancies in the specifications.

## **Indemnification**

To the fullest extent permitted by law, for any loss not covered by insurance under this contract, Contractor shall indemnify, defend and hold harmless the City, its officers, employees and agents harmless from all suits, claims, judgments and expenses including attorney's fees resulting or alleged to result, in whole or in part, from any act or omission, which is in any way connected or associated with this contract, by the Contractor or anyone acting on the Contractor's behalf under this contract. Contractor shall not be responsible to indemnify the City for losses or damages caused by or resulting from the City's sole negligence.

**Failure To Fulfill Guarantee**

In the event of the failure of any equipment within the guarantee period to meet the requirements of the detailed specifications, or failure to perform satisfactorily in service, such failure shall be adequate cause and justification for rejection of any or all equipment furnished under these "specifications."

**Inspection**

Any materials, workmanship, or equipment, which may be discovered to be defective within the guarantee period, shall be removed and made good by the contractor at their expense regardless of any previous inspection or final acceptance.

If any campaign change made necessary by improper material, improper installation or material or faulty designs, the campaign change shall be made and the cost shall be borne by the manufacturer.

**Choice of Law**

This Contract shall be construed, governed, and enforced in accordance with the laws of the State of Michigan. By executing this agreement, the Contractor and the City agree to venue in a court of appropriate jurisdiction sitting within Washtenaw County for purposes of any action arising under this Contract.

Whenever possible, each provision of the contract will be interpreted in a manner as to be effective and valid under applicable law. The prohibition or invalidity, under applicable law, of any provision will not invalidate the remainder of the contract.

**Termination for Cause**

In the event the Vendor fails, at any time, to comply with, fully perform strictly adhere to any covenant, condition or representation contained within the Contract, all requirements contained within the ITB and the Vendor's Proposal, whether it be performed by the Vendor, its agents, or employees, the City shall have the right to give written notice to Vendor of such failure. If such failure is not cured to the City's satisfaction within ten (10) business days from the time of receipt of such notice the City shall have the right to terminate immediately without the requirement of a further notice.

**Termination for Convenience**

Notwithstanding the above, the City, on at least thirty (30) days advance notice to the Vendor, may terminate the contract, or any portion thereof, for any reason, including convenience, without incurring any penalty, expense or liability to the Vendor except the obligation to pay for services actually performed under the Contract before the termination date.

**Termination for Non Appropriations**

In the event that public funds are unavailable and not appropriated for the performance of City's obligations under this contract, then this contract shall automatically expire without penalty to City thirty (30) days after written notice to Vendor of the unavailability and non-appropriation of public funds. It is expressly agreed that City shall not activate this non-appropriation provision for its convenience or to circumvent the requirements of this contract, but only as a fiscal measure.

**Reservation of Rights**

The City of Ann Arbor reserves the right to accept any bid or alternative bid proposed in whole or in part, to reject any or all bids or alternatives bids in whole or in part and to waive irregularity and/or informalities in any bid and to make the award in any manner deemed in the best interest of the City.

## INVITATION TO BID

City of Ann Arbor  
Guy C. Larcom Municipal Building  
Ann Arbor, Michigan 48107

Ladies and Gentlemen:

The undersigned, as Bidder, declares that this Bid is made in good faith, without fraud or collusion with any person or persons bidding on the same Contract; that this Bidder has carefully read and examined the bid documents, including Advertisement, Human Rights Division Contract Compliance Forms, Instructions to Bidders, Bid, Bid Forms, General Conditions, Standard Specifications, Detailed Specifications, all Addenda, and understands them. The Bidder also declares that it has extensive experience in supplying products/materials similar to the ITB specifications.

The Bidder acknowledges that it has not received or relied upon any representations or warrants of any nature whatsoever from the City of Ann Arbor, its agents or employees, and that this Bid is based solely upon the Bidder's own independent business judgment.

In accordance with these bid documents, and Addenda numbered ITB-4240, the undersigned, as Bidder, proposes to supply products/materials following the ITB specification included herein for the amounts set forth in the Bid Forms.

In submitting this Bid, it is understood that the right is reserved by the City to accept any Bid, to reject any or all Bids, to waive irregularities and/or informalities in any Bid, and to make the award in any manner the City believes to be in its best interest.

The undersigned agrees that if the bid is accepted by the City of Ann Arbor a binding Contract or Purchase order will be in effect for the delivery of the goods in accordance with the bid.

SIGNED THIS 8TH DAY OF JUNE, 2012.

CANIFF ELECTRIC SUPPLY

Bidder's Name  
2001 CANIFF AVE.  
HAMTRAMCK, MI 48212

Official Address

(313) 365-8144

Telephone Number

  
Authorized Signature of Bidder

DAVID L. BEMIS

Print Name of Signer Above

DLBEMIS@CANIFF.COM

Email Address

**LEGAL STATUS OF BIDDER**

(The Bidder shall fill out the appropriate form and strike out the other two.)

Bidder declares that it is:

\* A corporation organized and doing business under the laws of the state of MICHIGAN, for whom DAVID L. BEMIS, bearing the office title of OPERATIONS MGR, whose signature is affixed to this Bid, is authorized to execute contracts.

~~\* A partnership, list all members and the street and mailing address of each:~~

~~Also identify the County and State where partnership papers are filed:~~

~~County of \_\_\_\_\_, State of \_\_\_\_\_~~

~~\* An individual, whose signature with address, is affixed to this Bid: \_\_\_\_\_  
(initial here)~~

**SPECIFICATION  
FOR  
LED DECORATIVE POST TOP FIXTURES**

**DESCRIPTION**

This specification covers the performance and construction requirements for LED decorative post top fixtures.

**PERFORMANCE**

The LED post top fixture shall provide efficacy of no less than 50 lumens per watt, with a minimum total luminous output of 2,900 lumens and a total wattage draw of 60 watts maximum.

The manufacturer shall provide documentation via a photometric layout that their LED post top fixture meets photometric performance requirements for roadway and sidewalk lighting as follows:

Parameters: Double-headed fixtures, type V distribution, 80-ft. pole spacing, 2 rows staggered, 14-ft. mounting height, 48-ft. wide roadway (4 lanes), 14-in. setback. Sidewalk: 7-ft width, no green space between sidewalk and roadway. LLF = 0.855. Separate photometric grids for roadway and sidewalk. Photometric point spacing per standard practice.

Roadway Requirements: 0.9 fc minimum average horizontal illuminance, and an avg/min uniformity ratio of 4.0 or less.

Sidewalk Requirements: 0.9 fc minimum average horizontal illuminance, and an avg/min uniformity ratio of 4.0 or less.

**TESTING COMPLIANCE AND CERTIFICATIONS**

**1. Thermal Management**

The manufacturer shall be required to submit test data obtained from an Energy Star qualified independent test lab to verify in-situ LED temperature. The temperature is to be measured at the  $T_S$ ,  $T_{SP}$ , or  $TMP_{LED}$  point indicated on the LED by the LED manufacturer. The testing is to be performed per the Energy Star SSL program methodology. The manufacturer must demonstrate with the resulting data that the  $T_{SP}$  temperature of the innermost LED is no more than 45°C.

**2. Luminaire Lifetime**

The manufacturer shall submit documentation of the calculated life expectancy of their LED light engine. The documentation provided shall be based upon in-situ  $T_{SP}$  temperature data from an independent Energy Star qualified lab (as described in the "Thermal Management" section of this specification) and the LM-80 lumen maintenance data provided by the luminaire manufacturer's LED supplier. The resulting calculated L70 lifetime of the luminaire shall be no less than 70,000 hours.

**3. Photometrics**

Photometric performance of the LED fixture is to have been evaluated per LM-79 by a qualified independent photometric testing laboratory, and the manufacturer shall be required to submit the resulting data in .ies format and the associated photometric test report. Additionally, a photometric layout demonstrating performance to the stated parameters in Section B of this specification shall be submitted by the manufacturer.

## CONSTRUCTION

### 1. Light Engine

Each LED light engine panel shall consist of a circuit board of (2) Cree XP-G LEDs or equivalent. The board shall be adhered to the heat sink via thermal epoxy or tape.

### 2. Power Supply

A single wide range (120V to 277V) 100 Watt, regulated DC power supply shall be used. The power supply shall be compliant with UL 1012 or 1310.

The power supply performance shall meet the following electrical characteristics:

THD:	Less than 20%
PF:	Greater than 0.90 @ 120v
Max Power:	Should be 100 Watts or less (total including power supply losses)

### 3. General

The cooling fins of the heat sink are to be exposed to the outside air in order to maximize cooling effectiveness through passive means. LED kits that are contained entirely within the globe will not be considered. Solutions that utilize electronic cooling fans will likewise not be considered. Fixture must fit on a 3 inch round by 6 inch tall tenon and all mounting bracket or mounting hardware must be included. Finial painted black must be included.

## DOMESTIC CONTENT

The manufacturer shall submit documentation certifying compliance to the "Made in the USA" requirements as specified by the Federal Trade Commission.

## ENVIRONMENTAL ASSURANCE

All LED panels shall be environmentally friendly and 100% recyclable. They shall be certified by the manufacturer as conforming to the Restriction of Hazardous Substances Directive (RoHS) adopted in February 2003 by the European Union. The manufactured product will not contain lead, mercury or hazardous substances.

## WARRANTY - LIGHT ENGINE and POWER SUPPLY

The manufacturer shall provide a 7-year warranty for the proposed LED luminaire. The warranty shall state that the LED array(s) will maintain a minimum of 70% of original light output, as documented in the LM-79 report provided, for the warranty period from date of manufacture, and that it shall be free of defects in materials and workmanship. It shall also state that no more than 5% of the LEDs in the luminaire can have failed catastrophically. The manufacturer shall also guarantee the power supply for a minimum period of seven (7) years against failure.

1. The successful bidder shall guarantee delivery on or before August 1<sup>st</sup> 2012. If this delivery schedule cannot be met, please provide an alternate delivery schedule. The City of Ann Arbor reserves the right to reject bids which offer an unsatisfactory delivery schedule. Delivery shall be made to the following address:

City of Ann Arbor  
Field Operations Unit  
Sign/Signal, Communications  
4251 Stone School  
Ann Arbor, MI 48108

The successful bidder shall arrange, in advance, a mutually satisfactory schedule with the City for delivery.

**ITB 4240 - BID FORM**

**Vendor Name** CANIFF ELECTRIC SUPPLY

**Quantity** – 125 LED Decorative Post Top Fixtures.

**Price** – Vendors must complete all boxes within the price section. In the event information is missing bids shall be disqualified.

	<b>LED Decorative Post Tops Fixtures</b>	<b>Price (US Dollars/each)</b>
Manufacturer	LUMECON	579.99/each
IC Model #	ROF G2 T5 120V FITTER FINIAL 8-B-5-1-A-NW-8-S-X W/ PERFORATED LTG LID AT NO CHARGE (IF NEEDED)	
Auto Sampler Model #		

**Delivery** - Materials must be delivered by August 1, 2012.

- Yes, we can deliver by August 1, 2012
- No, we cannot deliver by August 1, 2012. We can provide by \_\_\_\_\_

**Invoice Terms** - Discount of 0 % or \$ 0 will be allowed for payment of invoice Thirty (30) days from day of delivery and acceptance.

**References** - Please provide at minimum, three (3) references, preferably municipal government where your company has supplied LED DECORATIVE POST TOP FIXTURES. Failure to list references may result in disqualification.

CITY OF HAZEL PARK	BID#1925 PO#ALTDG	SHELLEY 248-546-4060
Company	Contract Name	Phone Number
CITY OF LIVONIA	CITY OF LIVONIA	STEVE 734-466-2643
Company	Contract Name	Phone Number
DETROIT TIGERS	COMERICA PARK	AL 810-241-0477
Company	Contract Name	Phone Number



# APPENDIX A

## FAIR EMPLOYMENT PRACTICE

The consultant, its agents or sub-contractors, shall comply with all requirements of Chapter 112 of Title IX of the Code of the City of Ann Arbor and in particular the following excerpts there from:

### 9:161 NONDISCRIMINATION BY CITY CONTRACTORS

- (1) All contractors proposing to do business with the City of Ann Arbor shall satisfy the nondiscrimination administrative policy adopted by the City Administrator in accordance with the guidelines of this section. All contractors shall receive approval from the Director prior to entering into a contract with the City, unless specifically exempted by administrative policy. All City contractors shall take affirmative action to insure that applicants are employed and that employees are treated during employment in a manner which provides equal employment opportunity and tends to eliminate inequality based upon race, national origin or sex.
- (2) Each prospective contractor shall submit to the City data showing current total employment by occupational category, sex and minority group. If, after verifying this data, the Director concludes that it indicates total minority and female employment commensurate with their availability within the contractor's labor recruitment area, i.e., the area from which the contractor can reasonably be expected to recruit, said contractor shall be accepted by the Director as having fulfilled affirmative action requirements for a period of one year at which time the Director shall conduct another review. Other contractors shall develop an affirmative action program in conjunction with the Director. Said program shall include specific goals and timetables for the hiring and promotion of minorities and females. Said goals shall reflect the availability of minorities and females within the contractor's labor recruitment area. In the case of construction contractors, the Director shall use for employment verification the labor recruitment area of the Ann Arbor-Ypsilanti standard metropolitan statistical area. Construction contractors determined to be in compliance shall be accepted by the Director as having fulfilled affirmative action requirements for a period of six (6) months at which time the Director shall conduct another review.
- (3) In hiring for construction projects, contractors shall make good faith efforts to employ local persons, so as to enhance the local economy.
- (4) All contracts shall include provisions through which the contractor agrees, in addition to any other applicable Federal or State labor laws:
  - (a) To set goals, in conference with the Human Resources Director, for each job category or division of the work force used in the completion of the City work;
  - (b) To provide periodic reports concerning the progress the contractor has made in meeting the affirmative action goals it has agreed to;

- (c) To permit the Director access to all books, records and accounts pertaining to its employment practices for the purpose of determining compliance with the affirmative action requirements.
- (5) The Director shall monitor the compliance of each contractor with the nondiscrimination provisions of each contract. The Director shall develop procedures and regulations consistent with the administrative policy adopted by the City Administrator for notice and enforcement of non-compliance. Such procedures and regulations shall include a provision for the posting of contractors not in compliance.
- (6) All City contracts shall provide further that breach of the obligation not to discriminate shall be a material breach of the contract for which the City shall be entitled, at its option, to do any or all of the following:
  - (a) To cancel, terminate, or suspend the contract in whole or part and/or refuse to make any required periodic payments under the contract;
  - (b) Declare the contractor ineligible for the award of any future contracts with the City for a specified length of time;
  - (c) To recover liquidated damages of a specified sum, said sum to be that percentage of the labor expenditure for the time period involved which would have accrued to minority group members had the affirmative action not been breached;
  - (d) Impose for each day of non-compliance, liquidated damages of a specified sum, based upon the following schedule:

Contract Amount	Assessed Damages Per Day of Non-Compliance
\$ 10,000 - 24,999	\$ 25.00
25,000 - 99,999	50.00
100,000 - 199,999	100.00
200,000 - 499,999	150.00
500,000 - 1,499,999	200.00
1,500,000 - 2,999,999	250.00
3,000,000 - 4,999,999	300.00
5,000,000 - and above	500.00

- (e) In addition the contractor shall be liable for any costs or expenses incurred by the City of Ann Arbor in obtaining from other sources the work and services to be rendered or performed or the goods or properties to be furnished or delivered to the City under this contract.

**APPENDIX B – LIVING WAGE FORMS**

**City of Ann Arbor  
LIVING WAGE ORDINANCE  
DECLARATION OF COMPLIANCE**

The Ann Arbor Living Wage Ordinance (Section 1:811-1:821 of Chapter 23 of Title I of the Code) requires that employers providing services to the City or recipients of grants for financial assistance (in amounts greater than \$10,000 in a twelve-month period of time) pay their employees who are working on the City project or grant, a minimum level of compensation known as the Living Wage. This wage must be paid to the employees for the length of the contract/project.

*Companies employing fewer than 5 persons and non-profits employing fewer than 10 persons are exempt from the Ordinance. If this exemption applies to your firm, please check below:*

\_\_\_\_\_ This **company** is exempt due to the fact that we employ or contract with fewer than 5 individuals.

\_\_\_\_\_ This **non-profit agency** is exempt due to the fact that we employ or contract with fewer than 10 employees.

The Ordinance requires that all contractors/vendors and/or grantees agree to the following terms:

- a) To pay each of its employees performing work on any covered contract or grant with the City, no less than the living wage, which is defined as \$12.17/hour when health care is provided, or no less than \$13.57/hour for those employers that do *not* provide health care. It is understood that the Living Wage will be adjusted each year on April 30, and covered employers will be required to pay the adjusted amount thereafter. The rates stated above include any adjustment for 2012.
- b) Please check the boxes below which apply to your workforce:
  - Employees who are assigned to *any covered* City project or grant will be paid at or above the applicable living wage without health benefits Yes \_\_\_\_\_ No \_\_\_\_\_
- OR**
- Employees who are assigned to *any covered* City project or grant will be paid at or above the applicable living wage with health benefits Yes \_\_\_\_\_ No \_\_\_\_\_
- c) To post a notice approved by the City regarding the Living Wage Ordinance in every work place or other location in which employees or other persons contracting for employment are working.
- d) To provide the City payroll records or other documentation as requested; and,
- e) To permit access to work sites to City representatives for the purposes of monitoring compliance, investigating complaints or non-compliance.

The undersigned authorized representative hereby obligates the contractor/vendor or grantee to the above stated conditions under penalty of perjury and violation of the Ordinance.

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Address City State Zip

\_\_\_\_\_  
Signature of Authorized Representative

\_\_\_\_\_  
Phone (area code)

\_\_\_\_\_  
Type or Print Name and Title

\_\_\_\_\_  
Email address

\_\_\_\_\_  
Date signed

**Questions about this form? Please contact:**  
Procurement Office City of Ann Arbor Phone: 734/794-6576

## CITY OF ANN ARBOR

**RATE EFFECTIVE MAY 1, 2012 - ENDING APRIL 30, 2013**

**\$12.17 per hour**

If the employer provides health care benefits\*

**\$13.57 per hour**

If the employer does **NOT** provide health care benefits\*

Employers providing services to or for the City of Ann Arbor or recipients of grants or financial assistance from the City of Ann Arbor for a value of more than \$10,000 in a twelve-month period of time must pay those employees performing work on a City of Ann Arbor contract or grant, the above living wage.

### ENFORCEMENT

**The City of Ann Arbor may recover back wages either administratively or through court action for the employees that have been underpaid in violation of the law. Persons denied payment of the living wage have the right to bring a civil action for damages in addition to any action taken by the City.**

Violation of this Ordinance is punishable by fines of not more than \$500/violation plus costs, with each day being considered a separate violation. Additionally, the City of Ann Arbor has the right to modify, terminate, cancel or suspend a contract in the event of a violation of the Ordinance.

\* Health Care benefits include those paid for by the employer or making an employer contribution toward the purchase of health care. The employee contribution must not exceed \$.50 an hour for an average work week; and the employer cost or contribution must equal no less than \$1/hr for the average work week.

For Additional Information or to File a Complaint Contact:

Linda Newton, Procurement Officer  
734/794-6576 or [Lnewton@a2gov.org](mailto:Lnewton@a2gov.org).

The Law Requires Employers to Display This Poster Where Employees  
Can Readily See It.

## APPENDIX C - CONTRACT COMPLIANCE FORMS

### City of Ann Arbor Procurement Office INSTRUCTIONS FOR CONTRACTORS

#### For Completing CONTRACT COMPLIANCE FORM

##### City Policy

The "non discrimination in contracts" provision of the City Code, (Chapter 112, Section 9:161) requires contractors/vendors/grantees doing business with the City not to discriminate on the basis of actual or perceived race, color, religion, national origin, sex, age, condition of pregnancy, marital status, physical or mental limitations, source of income, family responsibilities, educational association, sexual orientation, gender identity or HIV status against any of their employees, any City employee working with them, or any applicant for employment. It also requires that the contractors/vendors/grantees include a similar provision in all subcontracts that they execute for City work or programs.

This Ordinance further requires that each prospective contractor/vendor submit employment data to the City showing current total employee breakdown by occupation, race and gender. This allows the Human Rights Office to determine whether or not the contractor/vendor has a workforce that is reflective of the availability of women and under-represented minorities within the contractor's labor recruitment area (the area where they can reasonably be expected to recruit employees). *This data is provided to the City on the Human Rights Contract Compliance Forms (attached).*

##### To complete the form:

- 1) **If a company has more than one location, then that company must complete 2 versions of the form.**
  - **Form #1** should contain the employment data for the **entire corporation.**
  - **Form #2** should contain the employment data for those employees:
    - who will be working on-site;
    - in the office responsible for completing the contract; or,
    - in the case of non-profit grantees, those employees working on the project funded by the City grant(s).
- 2) If the company has only one location, fill out Form #1 only.
- 3) Complete all data in the upper section of the form including the name of the person who completes the form and the name of the company/organization's president.
- 4) Complete the Employment Data in the remainder of the form. Please be sure to complete all columns including the Total Columns on the far right side of the form, and the Total row and Previous Year Total row at the bottom of the form.
- 5) Return the completed form(s) to your contact in the City Department for whom you will be conducting the work.

**For assistance in completing the form, contact:**  
Procurement Office of the City of Ann Arbor  
(734) 794-6576

If a contractor is determined to be out of compliance, the Procurement Office will work with them to assist them in coming into compliance.

**CITY OF ANN ARBOR HUMAN RIGHTS OFFICE  
CONTRACT COMPLIANCE FORM**  
*Entire Organization (Totals for All Locations where applicable)*

Name of Company/Organization \_\_\_\_\_ Date Form Completed \_\_\_\_\_  
 Name and Title of Person Completing this Form \_\_\_\_\_ Name of President \_\_\_\_\_  
 Address (Street address) \_\_\_\_\_ (City) \_\_\_\_\_ (State) \_\_\_\_\_ County \_\_\_\_\_ Phone # \_\_\_\_\_ (Area Code) \_\_\_\_\_  
 Fax# \_\_\_\_\_ (Area Code) \_\_\_\_\_ Email Address \_\_\_\_\_

Job Categories	EMPLOYMENT DATA Number of Employees (Report employees in only one category)											TOTAL COLUMNS A-L				
	Male						Female									
	White A	Black or African American B	Asian C	Hispanic or Latino D	Native Hawaiian or Other Pacific Islander E	American Indian or Alaska Native F	White G	Black or African American H	Asian I	Hispanic Latino J	Native Hawaiian or Other Pacific Islander K		American Indian or Alaska Native L			
Exec/Sr. Level Officials																
Supervisors																
Professionals																
Technicians																
Sales																
Admin. Support																
Craftspeople																
Operatives																
Service Workers																
Laborers/Helper																
Apprentices																
Other																
<b>TOTAL</b>																
<b>PREVIOUS YEAR TOTAL</b>																

Questions about this form? Call (734)794-6576

**CITY OF ANN ARBOR HUMAN RIGHTS OFFICE  
CONTRACT COMPLIANCE FORM**

*Local Office (Only those employees that will do local or on-site work, if applicable)*

Name of Company/Organization \_\_\_\_\_ Date Form Completed \_\_\_\_\_  
 Name and Title of Person Completing this Form \_\_\_\_\_ Name of President \_\_\_\_\_  
 Address (Street address) \_\_\_\_\_ (City) \_\_\_\_\_ (State) \_\_\_\_\_ County \_\_\_\_\_ Phone # \_\_\_\_\_ (Area Code) \_\_\_\_\_  
 Fax# \_\_\_\_\_ Email Address \_\_\_\_\_

**EMPLOYMENT DATA**

Number of Employees  
(Report employees in only one category)

Job Categories	Male						Female				TOTAL COLUMNS A-L		
	White	Black or African American	Asian	Hispanic or Latino	Native Hawaiian or Other Pacific Islander	American Indian or Alaska Native	White	Black or African American	Asian	Hispanic or Latino		Native Hawaiian or Other Pacific Islander	American Indian or Alaska Native
	A	B	C	D	E	F	G	H	I	J		K	L
Exec./Sr. Level Officials													
Supervisors													
Professionals													
Technicians													
Sales													
Admin. Support													
Craftspeople													
Operatives													
Service Workers													
Laborers/Helper													
Apprentices													
Other													
<b>TOTAL</b>													
<b>PREVIOUS YEAR TOTAL</b>													

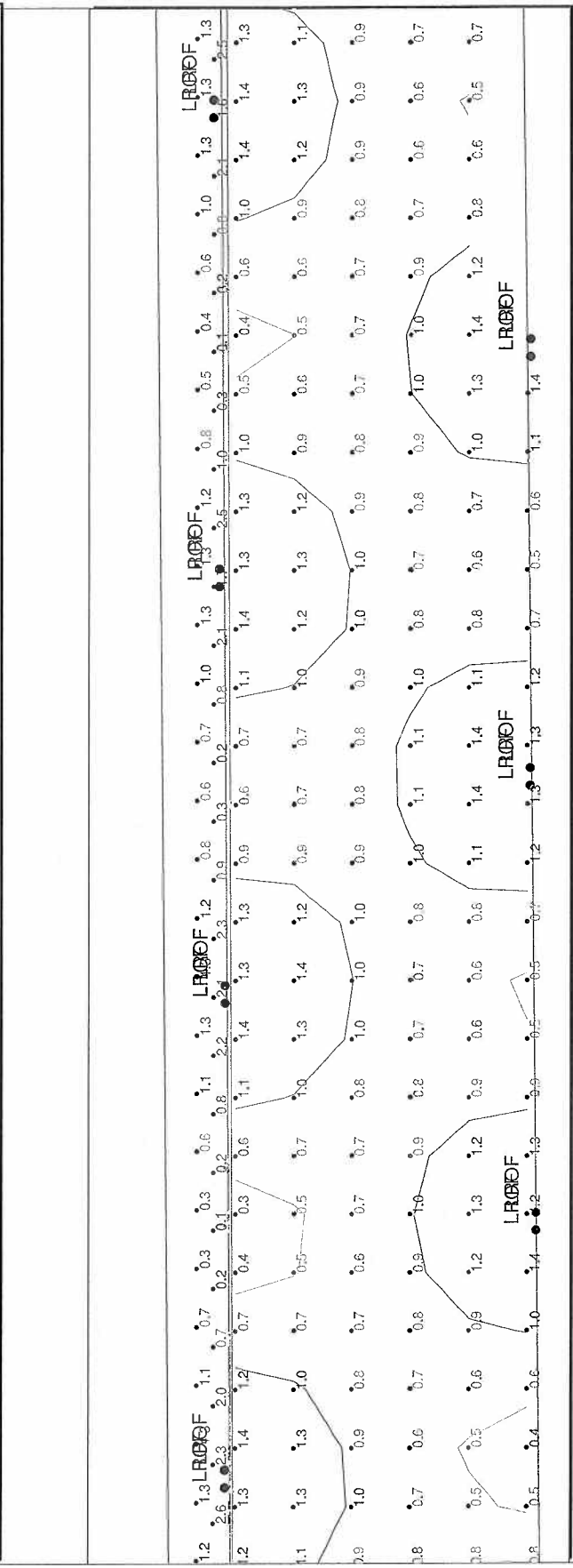
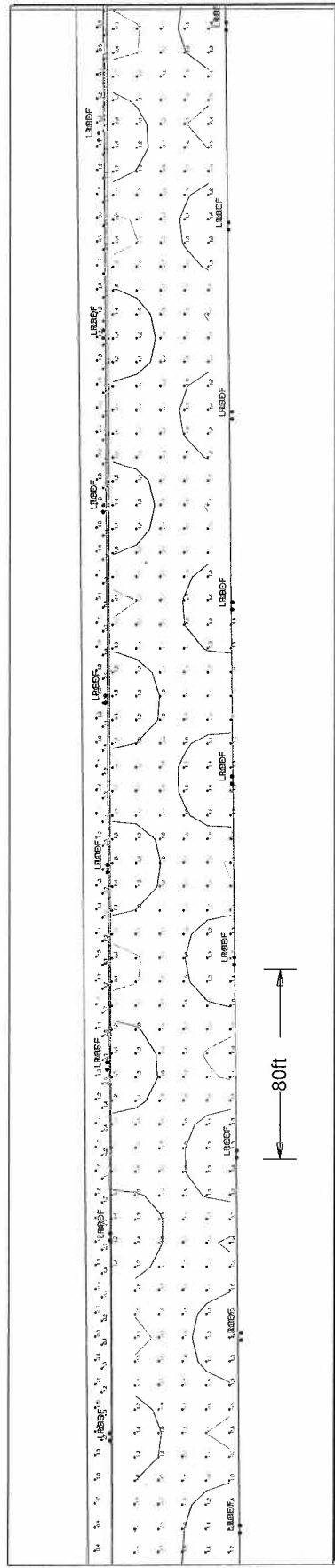
Questions about this form? Call 734-794-6576

#	Date	Comments

Revisions

Drawn By: M. Woznick  
 Checked By:  
 Date: 5/22/12  
 Scale:

**Broadway Bridge**  
**Lumecon Ring of Fire**



**Illuminance Values**

- 0.2 - 0.29 fc
- 0.3 - 0.49 fc
- 0.5 - 0.99 fc
- 1.0 - 1.99 fc
- 2.0 - 5.0 fc

THE ENGINEER HAS CONDUCTED VISUAL INSPECTIONS OF THE LAYOUT TO DETERMINE WHETHER FIELD CONDITIONS, THE LIGHTING LAYOUT THEREIN UNDER CONTROLLED CONDITIONS BY ACCORDANCE WITH ALL APPLICABLE STANDARDS AND REGULATIONS, MAY VARY DUE TO VARIATION IN ELECTRICAL WIRING, INSURANCE, AND/OR UNUSUAL ASPECTS OF THE LAYOUT. THESE VISUAL INSPECTIONS ARE NOT A SUBSTITUTE FOR THE FIELD CONDITIONS. THE ARCHITECT IS RESPONSIBLE TO REVIEW FOR ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.

**Fixtures: Lumecon Ring of Fire decoratives**  
 59 watts; 2,951 lumens  
 Mounting height: 14 ft

Luminaires Schedule	Label	Arrangement	Lumens	LLF	Description
76	LR00F	SINGLE	N.A.	0.855	Ring of Fire Type 5

Calculation Summary	Calc Type	Units	Avg	Max	Min	Avg/Min	Max/Min
Bridge Top	Illuminance	Fc	0.96	3.3	0.3	3.20	11.00
Sidewalk Top	Illuminance	Fc	0.97	3.2	0.3	3.23	10.67
Vertical/Walkway	Illuminance	Fc	1.20	2.7	0.1	12.00	27.00





## REPORT

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Project No. G100478255

Date: August 11, 2011

REPORT NO. 100478255CRT-001T

IN SITU TEST OF LED Street lights

LAMP MODEL NO.  
LED Ring of Fire

LED MODEL NO. Cree XLamp XP

### RENDERED TO

Lumecon  
23107 Commerce Dr.  
Farmington Hills, MI 48335

TEST: In-Situ test to the Energy Star Manufacturer Guide V2.0

LABORATORY NOTE: The laboratory that conducted the testing detailed in this report has been Qualified, Verified, and Recognized for LM-79 Testing for ENERGY STAR for SSL by US DOE's CALIPER program.

AUTHORIZATION: The testing performed was authorized by signed quote number 500321312.

STANDARDS USED: The following Test Guides were used in part or totally to test each specimen:

Energy Star Version 1.3 (2011): Program Requirements for Solid-State Lighting Luminaires  
Energy Star Manufacturer's Guide Version 2.1 (2009): Guide for Qualifying Solid State Lighting Luminaires

DESCRIPTION OF SAMPLE: The client submitted one sample of each model shown above. The sample was received by Intertek on August 5, 2011, in undamaged condition, and one sample was tested as received. The sample control numbers were 232837 and 232836.

DATES OF TESTS: August 8, 2011.



SUMMARY

Lamp Model No.:	LED Ring of Fire
LED Model No.:	Cree XLamp XP
Description:	LED Fixture

Criteria	In-Situ Max Temp (°C)	Result
In-Situ Maximum Temperature on LED Ring of Fire	44.5	Complies

\* Adjusted to 25°C Ambient

EQUIPMENT LIST

Equipment Used	Model Number	Control Number	Last Calibration Date	Calibration Due Date
Fluke Temperature Meter	34970A	A307	10/20/10	10/20/11
Fluke Multimeter	87	M211	08/13/10	08/13/11

TEST METHODS

In-Situ Maximum LED Source Point Temperature

Led source operating temperature measurements were taken on one test sample per model with a thermocouple and Fluke temperature meter. The SSL sample was allowed to reach thermal equilibrium for seven hours before measurements were taken. Source temperature measurements were measured at the  $T_{MP_{PS}}$  or  $T_S$  point as indicated by the included diagram in accordance with manufacturers declared hot spot location. The maximum temperature was recorded for the sample. A simulated ceiling or other enclosure may be used in accordance to UL 1598 as applicable.



RESULTS OF TESTS

In-Situ Maximum Measured LED Source Temperature

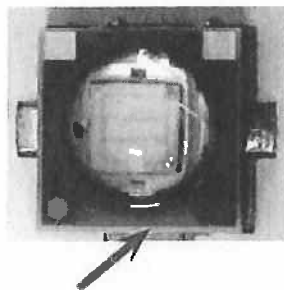
Manufacturer Supplied Documentation:

LED identified as Cree XLamp XP

TC Diagram showing Manufacturer specified location to attach TC to LED: (actual)

**CASE TEMPERATURE (T<sub>s</sub>) MEASUREMENT POINT**

XLamp XP Family LED case temperature (T<sub>s</sub>) should be measured on the PCB surface, as close to the LED's thermal pad as possible. This measurement point is shown in the picture below.



LED Spec info showing thermal resistance, max Junction temperature, and max forward voltage: (actual)

**CHARACTERISTICS**

Characteristics	Unit	Minimum	Typical	Maximum
Thermal resistance, junction to solder point	°C/W		6	
Viewing angle (FWHM)	degrees		125	
Temperature coefficient of voltage	mV/°C		-2.1	
ESD classification (HBM per Mil-Std-883D)			Class 2	
DC forward current	mA			1500
Reverse voltage	V			5
Forward voltage (@ 350 mA)	V		3.0	3.75
Forward voltage (@ 700 mA)	V		3.2	
Forward voltage (@ 1000 mA)	V		3.3	
LED junction temperature	°C			150

\* The increase of maximum forward current to 1500 mA for XLamp XP-G Cool White is retroactive and applies to all XLamp XP-G Cool White LEDs produced by Cree. The increase is the result of more extensive qualification testing that was performed after the initial product launch.



RESULTS OF TESTS (cont'd)

In-Situ Maximum Measured LED Source Temperature

Maximum Junction Temperature from LED specification ( $T_j$ ) = 150 °C  
Thermal Resistance Formula from LED specification = 6.0 °C /W  
Maximum Forward Voltage ( $V_f$ ) from LED specification = 3.75 V

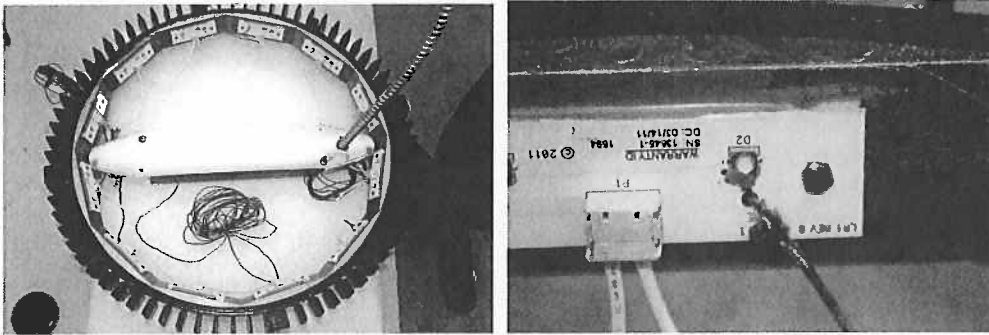
Model LED Ring of Fire

Ambient Temp: 23.7 °C  
Measured LED Current, output at driver = 700 mAdc  
Calculated current per LED; 1 series LED circuit: 700 mAdc  
Calculated LED Wattage =  $V_f \times$  Measured LED Current = 2.63 W  
Maximum Source Temperature ( $T_s$ ) =  $T_j - (LED \text{ Wattage} \times \text{Thermal Resistance}) = 134^\circ\text{C}$

Maximum Measured Manufacturer Designated Source Temperature

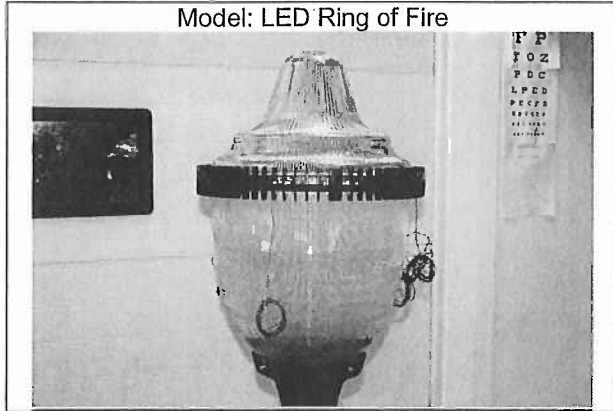
Sample No.	Model	Maximum Measured Source Temperature (°C)	Adjusted to 25°C ambient	Maximum Rated Source Temperature (°C)
232837, 232836	LED Ring of Fire	43.3	44.5	134

In-Situ Picture – Testing picture showing TC location on LED:



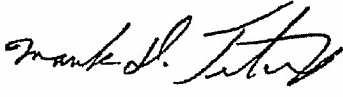

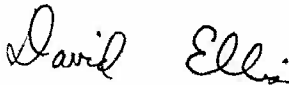


Fixture Pictures (not to scale)




CONCLUSION

The results tabulated in this report are representative of the actual test samples submitted for this report only. The data is provided to the client for further evaluation. Compliance to the referenced specification requirements was not determined in this report.

Conducting Tests:	In Charge Of Tests:	Report Reviewed By:
 Mark Titus Associate Engineer Lighting Division	 Aaron Oldweiler Project Engineer Lighting Division	 David Ellis Senior Project Engineer Lighting Division

### Calculating L70 – Ring of Fire

- Uses LED chip manufacturers long-term lumen depreciation data, LM-80.
- Regression and linear modeling yield curves that predict L70 performance at given drive currents and junction temperatures.


www.lumecon.com 

### Calculating L70 – Ring of Fire

- Uses the product-specific In-Situ LED temp test (Energy Star method).
- Requires calculation of LED junction temperature:

$$T_j = T_{sp} + ( [R_{th\ j-sp}] \times [V_f] \times [I_f] )$$

In-Situ Temp
LED thermal resistance factor = 8°C/w
Forward voltage Across LED
Forward current Across LED


www.lumecon.com 

### Ring of Fire

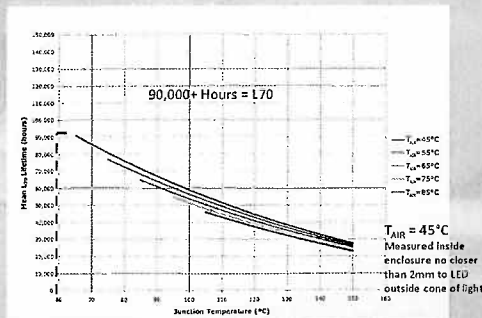
$$T_j = T_{sp} + ( [R_{th\ j-sp}] \times [V_f] \times [I_f] )$$


$$T_j = 44.5 + ( [5.0] \times [3.4] \times [.700] )$$

$$T_j = 56.4^{\circ}\text{C}$$

www.lumecon.com 

### Ring of Fire



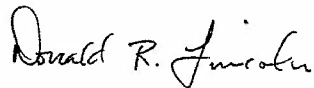
www.lumecon.com 

**Statement of Compliance**

June 1, 2012

To Whom It May Concern:

This letter is the certification that the Lumecon Ring of Fire ("ROF") product meets the "Buy America" provisions of ARRA section 1605, and also meets the requirements for the "Made in the USA" designation as defined by the Federal Trade Commission. Furthermore, the LED ring casting, prismatic acrylic globes, metal support brackets, and all assembly operations are sourced within the State of Michigan.



Donald R. Lincoln  
Product and Operations Manager  
Lumecon LLC

**LUMECON LLC  
LIMITED WARRANTY POLICY**

Lumecon LLC (“Lumecon”) warrants for the warranty period, with the limitations below, to the first user that all Products manufactured by Lumecon, when properly installed and maintained under normal conditions, are free from defects in material and workmanship.

The Products covered by this warranty are products manufactured by Lumecon in the USA that are used for purposes as defined by Lumecon LLC.

The warranty period begins on the date of manufacture labeled on the Product and ends seven (7) years thereafter for LED arrays (including LEDs, circuit boards, and associated hardware), and seven (7) years for power supplies.

A defect will be deemed to exist in a Product only if either (a) there has been a greater than 30% degradation in light output over the Warranty Period; or (b) more than 5% of the LEDs have totally failed.

**LIMITATIONS OF WARRANTY**

This Warranty does not apply to parts or assemblies that have been subjected to abuse, misuse, improper installation, abnormal service, accident, fire, improper repair or maintenance, tampering, or abuse, nor to parts or assemblies that have incurred extraordinary weather conditions. In particular, but without limitation, this warranty does not apply if the Product or LED array fails by reason of hurricane, tornado, or other catastrophic natural event.

**EXCLUSIVE REMEDY**

Lumecon’s sole liability under this warranty is limited to the repair or replacement (at Lumecon’s option) of the defective Product or LED array. Under no circumstances will Lumecon be responsible for any other loss or expense whatsoever, including but not limited to charges or claims for labor, lost business, lost time, lost profits, loss of use or any kind of incidental, consequential or punitive damages, however denominated or described.



## EXCLUSION OF ALL OTHER WARRANTIES

**THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES OF ANY KIND, WHETHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE.**

## PROCEDURE FOR CLAIMS

Any person desiring to make a claim under this warranty shall promptly notify Lumecon in writing, addressed to:

Lumecon LLC  
Warranty Claims  
23107 Commerce Dr.  
Farmington Hills, MI 48335

If Lumecon desires to examine the Product prior to disposition of any claim, Lumecon will specify a destination to which the claimed defective Product should be shipped, freight prepaid. In any event, the user will not dispose of the claimed defective Product until the claim has been resolved.

Upon receipt of the claimed defective Product, Lumecon will undertake such examinations of the Product as it deems necessary or desirable. If Lumecon concurs that the Product incurred a defect within the warranty period, Lumecon will repair or replace the Product and return it, freight prepaid.

Lumecon may request from the user installation, maintenance and repair records related to the claimed defective Product. If such records do not show that appropriate installation, maintenance, or repair occurred, or if there are no such records, the claim may be denied. The burden of showing appropriate installation, maintenance and repair is on the user.

If the Product reviewed by Lumecon does not meet the requirements of the Warranty, Lumecon will so notify the user and the user will promptly notify Lumecon that either (a) Lumecon is to repair or replace the Product at the user's cost, with the return to the user being freight collect; or (b) that Lumecon is to dispose of the Product at the user's cost.