

# Decorative MR16 LED Lamp

## Product Specification



### INTRODUCTION

The TerraLUX Decorative MR16 LED Lamp is the first LED MR16 replacement lamp that effectively solves the problem of one-directional light output in decorative fixtures.

Uniquely designed with LEDs in the front and the rear of the bulb, the TerraLUX Decorative MR16 LED Lamp produces warm light in all directions that is ideal for use in high-end decorative lighting fixtures that are commonly found in restaurants, bars, and in specialty glass scones and hanging pendants.

A replacement technology for 20-watt halogen MR16 bulbs, the 4-watt TerraLUX Decorative MR16 LED Lamp evenly illuminates glass fixtures even better than most halogen lamps, revealing the colors in the glass of the light fixture itself while still effectively illuminating the surfaces below.

### FEATURES

- Patented active back lighting system.
- Equivalent to 20W Halogen MR-16 lamps
- Compliant to MR-16 diameter and 2-pin GU5.3 connection.
- Dimmable with standard low-voltage phase-dimmers\*
- Compatible with low-voltage halogen magnetic & electronic transformers\*
- 3-year warranty
- UL Recognized Component (cURus) 
- FCC Compliant 
- RoHS Compliant
- Pb Free

\*See Transformer and Dimmer Compatibility List

TerraLUX




A Program of the U.S. DOE

<b>Light Output (Lumens)</b>	<b>230</b>
<b>Watts</b>	<b>4.795</b>
<b>Lumens per Watt (Efficacy)</b>	<b>48</b>

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<b>Color Accuracy</b>	<b>96</b>
Color Rendering Index (CRI)	

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<b>Light Color</b>	<b>2918 (Warm White)</b>
Correlated Color Temperature (CCT)	



<b>Warranty**</b>	<b>Yes</b>
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All results, except LED Lumen Maintenance, are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

\*\* See [www.lightingfacts.com/products](http://www.lightingfacts.com/products) for details.

Registration Number: KR2G-ZTS1J3 (3/18/2013)  
Model Number: TLL-R16A-A2030NFD (Tested at 12V AC)  
Type: Replacement Lamp - Directional (MR16)



## PERFORMANCES

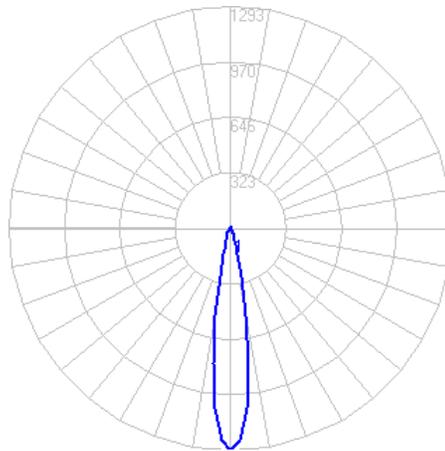
<b>Color Temperature</b>	<b>3000K</b>
CRI Minimum (typical)	90 [96]
Light Output [lm] @ 12V AC	230
Light Output [lm] @ 12V DC	300
Power [W] @ 12V AC	4.8
Power [W] @ 12V DC	5.5
Efficiency @ 12V AC [lm/W]	48
Efficiency @ 12V DC [lm/W]	55
Beam Angle	19°
Center Beam Candle Power [cd]	1300

**Notes:**

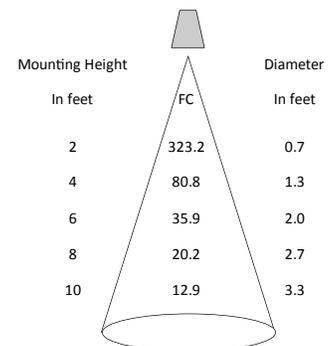
- 1) Typical Performance @ 25°C ambient temperature. All specifications subject to tolerance of ± 10%
- 2) All information consistent with IESNA LM-79-08 third party testing, completed by a qualified third party facility (report available upon request)
- 3) Power draw is affected by the input voltage and the type of transformer.

## PHOTOMETRY

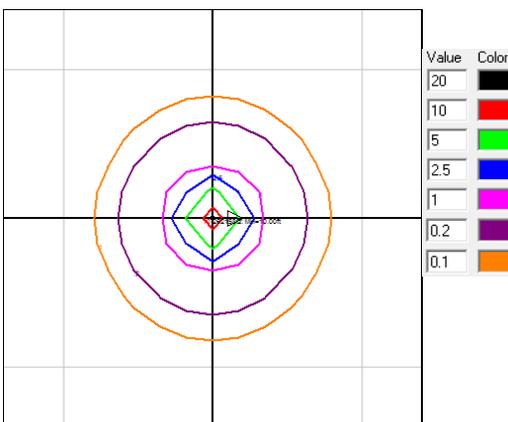
### Relative Candela Distribution



### Illuminance—Cone of Light

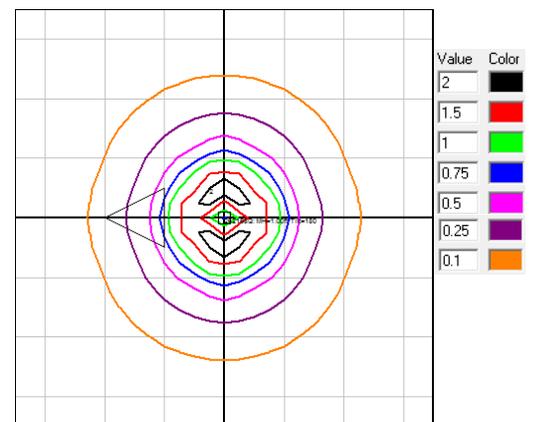


### Iso lines (Footcandles—FRONT) Plot



Mounting Height: 10ft  
1 square = 1 x MH

### Iso lines (Footcandles—BACK) Plot



Mounting Height: 1ft  
1 square = 1 x MH



**TESTS AND CERTIFICATIONS**

<b>Product Safety Certifications</b>	<ul style="list-style-type: none"> <li>• UL Standard 1993: Self Ballasted Lamps and Lamp Adaptors</li> <li>• UL Standard 8750: LED Light Sources for Use In Lighting Products</li> <li>• CSA C22.2 No. 1993-09: Self Ballasted Lamps and Lamp Adaptors</li> </ul>
<b>Radio Frequency Emissions</b>	<ul style="list-style-type: none"> <li>• FCC Part 15, Unintentional Radiators Class B. Sec 107, Conducted Emissions - 0.15MHz – 30MHz</li> <li>• Industry Canada Notice ICES-003: Class B Digital Apparatus</li> </ul>
<b>Reduction of Hazardous Substances (RoHS)</b>	European Council Directive 2002/95/EC, (including amendments 2005/618/EC, 2005/717/EC and 2005/747/EC) on the restriction of certain hazardous substances in electrical and electronic equipment.
<b>Electro-Static Discharge</b>	IEC 61000-4-2: 2001-04 Electromagnetic Compatibility (EMC) - Part 4: Testing and measurement Techniques - Section 2: Electrostatic Discharge (ESD) Immunity Test. <ul style="list-style-type: none"> <li>• ± 2kV and ± 4kV contact discharge to all exposed conductive (25 discharges each polarity)</li> <li>• ±6kV and ± 8kV air gap discharges to all non-conductive surfaces (25 discharges each polarity)</li> </ul>
<b>Power Factor</b>	0.67 @ 12 V AC/60Hz
<b>Shock</b>	<p>Operating - 82 G peak, 2 ms; Half sine, 1 shock per second 20 shocks per axis, both directions – total 120 shocks</p> <p><b>Non-Operating</b> - 120 G peak., 2 ms, Half sine, 1 shock/second, 3 shocks per axis, both directions – total of 18 shocks</p> <p>40 G Faired Square wave w/ velocity change of 62 in/sec. 1 shock per axis, both directions – total of 6 shocks</p>
<b>Vibration</b>	<p><b>Operating</b> - Random PSD Spectrum G, 1.0G RMS, 10-2000 Hz. 30 minutes per axis 3-500 Hz., 0.50 g peak, swept sine @ ½ octave/min per axis</p> <p><b>Non-Operating</b> - Random PSD, 5 G RMS, 15 minutes per axis 5-500-5 Hz, 1.0 g peak, Swept Sine @ ½ Octave per minute, per axis.</p>
<b>Shipping / Transit</b>	International Safe Transit Association (ISTA) Project 2A. Packaging details: <ul style="list-style-type: none"> <li>• 11" x 4.5" x 3", 1 layer, 10 units/box, weight = 1lbs 8oz</li> </ul>
<b>Operating Temperature</b>	-40°C to +55°C, 0 to 95% R.H. / 153 hr.
<b>Storage Temperature</b>	-40°C to +85°C / 60 hr. followed by 20°C to 85°C, 5 to 95% R.H. / 80 hr.
<b>Long Term Operation</b>	100 samples of the TLL-R16A operated continuously for a cumulative operating runtime equal to two times the 3 year warranty period, or 52,560 Hrs. During this test, a nominal 12Vac supply voltage was applied, and the samples were tested in a lab ambient temperature environment.
<b>Input Voltage Range</b>	9.6—14.4 V AC/DC

## PRODUCT SELECTION & PART NUMBER GUIDE

**1 2 3 4 5**

**TLL-R16A** - *A 20 30 NFD*

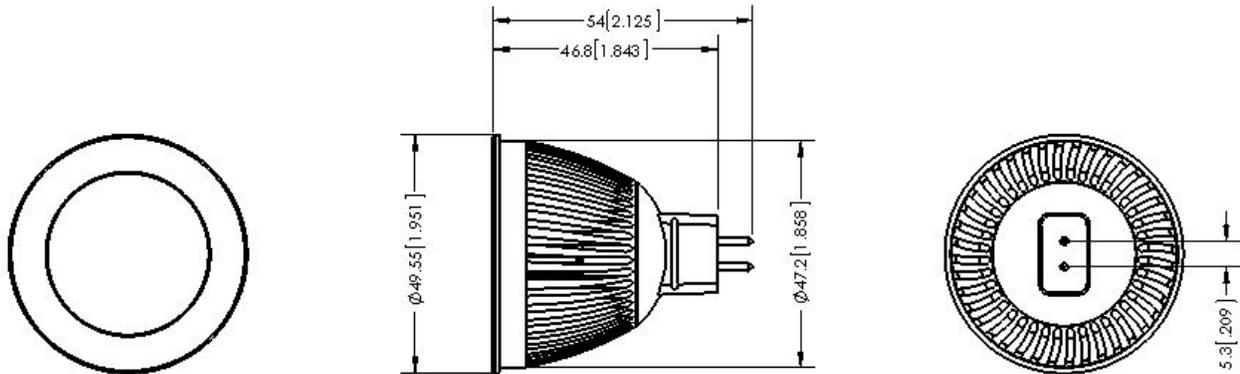
Model

Example

TLL-R16A -	<b>1</b>	<b>2</b>		<b>3</b>		<b>4</b>		<b>5</b>										
	Voltage		Light Level (1)		Color Temperature		Optic		Options									
<input type="checkbox"/>	<b>A</b>	12V AC/DC		<input type="checkbox"/>	<b>20</b>	20W Halogen equivalent		<input type="checkbox"/>	<b>30</b>	3000K		<input type="checkbox"/>	<b>NFD</b>	Narrow Flood (20°) - Diffuse		<input type="checkbox"/>	-	

1) Indicates the typical level of light output in "high" mode as compared to a Halogen source. See Product Specification Table on page 2 for specific lumen output and Center Intensity data.

## MECHANICAL DIMENSIONS



## CONTACT INFORMATION

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