

# **REQUEST FOR QUOTATION**

## **LAMP STANDARDS FOR CALIBRATING GONIOPHOTOMETERS**

### **FOR GONIOPHOTOMETER CALIBRATION – CANDELA CALIBRATION METHOD**

**Omni-Directional 4PI\* Candela lamp standards (with calibrated candela value at a single vertical and lateral angle selected by ITL):**

- One - NIST traceable Omni-directional 4PI candela lamp standard
- \*Set of three - NIST traceable Omni-directional 4PI candela lamp standards of same lamp type
- Optional – Include pricing for total lumen output calibration of the same lamp.

**Directional 2PI\* Candela lamp standards (with calibrated candela values in 1 degree vertical increments for two lateral planes (0 and 90 degrees)).**

- One - NIST traceable directional 2PI candela lamp standard
- \*Set of three - NIST traceable directional 2PI candela lamp standards of same lamp type
- Optional – Include pricing for total lumen output calibration of the same lamp.

### **FOR GONIOPHOTOMETER CALIBRATION – TOTAL FLUX (LUMEN) CALIBRATION METHOD**

**Omni Directional 4PI\* Lumen lamp standards:**

- One - NIST traceable lumen lamp standard
- \*Set of three - NIST traceable lumen lamp standards of same lamp type

### **FOR COLOR CAPABLE GONIOPHOTOMETERS - CALIBRATION USING TRISTIMULUS LAMP STANDARDS**

**Omni-Directional 4PI\* Tristimulus lamp standards (for calibrating goniophotometer systems with color measurement capabilities):**

- One - NIST traceable tristimulus lamp standard with lumen calibration
- \*Set of three- NIST traceable tristimulus lamp standards of same lamp type with lumen calibrations

**NOTE: Since tungsten halogen incandescent lamps do not generate much light in the blue end of the visible spectrum, ITL recommends using 1000 Watt lamps so an adequate amount of light is available in the blue end of the spectrum for an accurate calibration of the tristimulus detector.**

**\*Sets of three lamps allow user to verify the performance of any one of the 3 lamps by comparing to the performance of the other two. This allows you to be sure that any change in your goniophotometer and/or sphere calibration is not due to degradation of your standard lamp.**

**\*4PI as listed above indicates lamps with distributions that produce similar flux in both hemispheres, and 2PI as listed above indicates lamps that produce most of their flux in one hemisphere.**

### **AVAILABLE LAMP TYPES, PLEASE SELECT ONE OR MORE BELOW:**

- 1000 Watt FEL Tungsten Halogen with a G9.5 Medium Bipin Base
- 75 Watt Tungsten Halogen with an E11 Miniature Candelabra Screw Base
- PLEASE CHECK THIS BOX IF YOU WISH TO HAVE AN ITL ENGINEER CONTACT YOU TO DISCUSS WHAT LAMP TYPE WILL BEST MEET YOUR NEEDS, OR IF YOU WISH TO HAVE ITL ACQUIRE AND CALIBRATE A SPECIFIC LAMP MODEL THAT YOU DESIRE.
- PLEASE CHECK THIS BOX IF YOU (ITL'S CUSTOMER) IS PLANNING TO SUPPLY THE LAMPS, LAMP TYPE YOU WILL BE PROVIDING \_\_\_\_\_