

# Uncertainty Analysis Services

Have confidence in every lamp and luminaire you measure

Parameter	Value	Expand. Uncert., k=2	Expand. Uncert., k=2, %
$\Phi$ (W)	2.786	0.0074	0.4%
$\phi$ (lumens)	821.82	3.018	0.3%
x	0.4569	0.0132	2.9%
y	0.4049	0.0135	3.3%
u'	0.2631	0.0106	4.0%
v'	0.5247	0.0021	0.4%
CCT, K	2693	22	0.8%
CRI	82	1.7	2.1%

### Have confidence in your reports

Uncertainty is inherent in every measurement. To better understand the value of a measurement, analyzing the uncertainty is required and instills confidence in the measured values.

### Pass your audits the first time

Labsphere is a recognized leader in the field of light metrology. Let us analyze the uncertainty of your lamps and luminaires in a Labsphere total spectral flux light measurement system.

# For each lamp or luminaire, our Uncertainty Analysis Report provides:

## Type A and Type B Uncertainty Contributions including:

Reference lamp standard spectral flux uncertainty <sup>1</sup>	Current to the reference lamp(s)
Aging of the reference lamps	Wavelength accuracy of the spectrometer
Noise contributions	Stray light
Near field absorption	Sphere uniformity response
Non-linearity	Opening and closing of sphere
Temperature	Degrees of freedom for each contribution factor
Combined uncertainties	Spectral flux uncertainty every 5 nm
Expanded uncertainty	

<sup>1</sup>Included with Labsphere's ISO/IEC 17025 NVLAP Lab Code 200951-0 Accredited Lamp Standards

## Order Information

### Model

IPU-FL illumia®Plus Uncertainty  
(first lamp)

### Description

Spectral Flux and Color Uncertainty Report  
for a single lamp type measured in a  
Labsphere illumia®Plus system

IPU-AL illumia®Plus Uncertainty  
(each additional lamp)

Spectral Flux and Color Uncertainty Report for  
each additional lamp type measured in a Labsphere  
illumia®Plus system with the purchase of the initial  
lamp uncertainty analysis (IPU-FL)

