

## **B – Price List 2024 – Services**

[€uro] – Validity July 1<sup>st</sup> 2024 – Rv14



# **Services for Lighting 2024**

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### Services for Lighting

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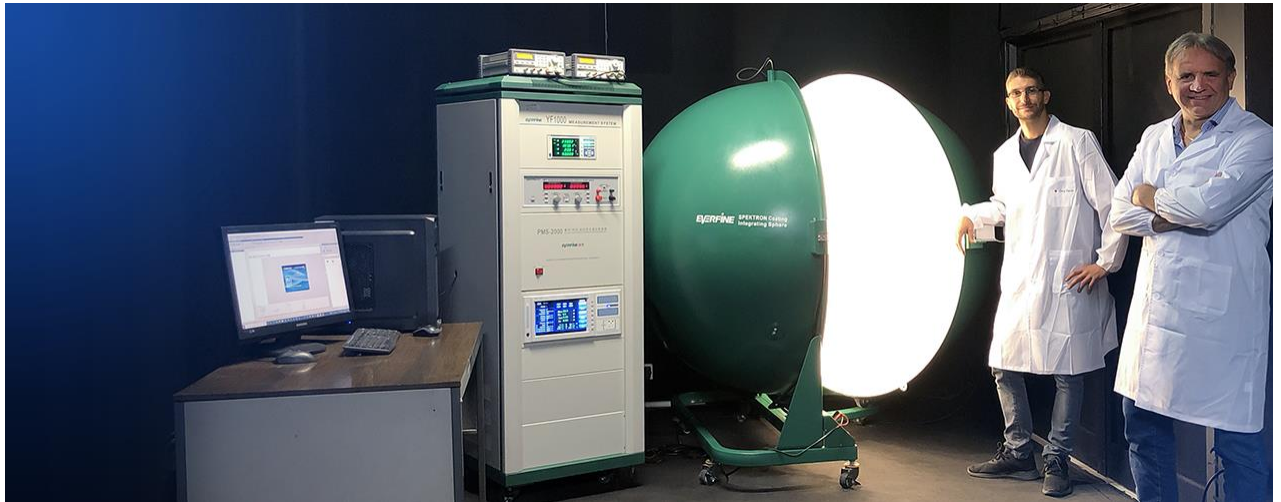
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### A – Goniophotometry and Goniospectrometry of LED Luminaires – Certified Tests according to EN 17025

#### A – Goniophotometry and Goniospectrometry according to EN 13032-4 + CIE S025/E

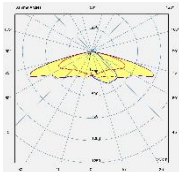
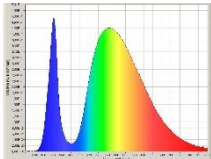
<p>Measurement of a luminaire on a rotating goniophotometer measurement including:</p> <ul style="list-style-type: none"> <li>▶ Goniophotometry</li> <li>▶ Goniospectrometry</li> </ul> <p>In collaboration with Asselum OxyTech Group - ENAC Accredited Laboratory ENAC accredited report included according to EN 17025</p> <p>Shipping costs to be paid by the customer</p>				
<b>Generic Luminaire</b>				
Code	Test Description	Via OXL File	With Report	
		[€]	[€]	
OX-SA1-01A	Goniophotometry C-γ (C-10° - γ-1°)	==	350	
OX-SA1-01B	Goniospectrometry C-γ (C-90° - γ-10°)	==	300	
OX-SA1-01C	Goniophotometry C-γ (C-10° - γ-1°) + Goniospectrometry C-γ (C-90° - γ-10°)	==	550	
OX-SA1-01D	Goniophotometry C-γ (C-10° - γ-1°) – 4 days	==	400	
OX-SA1-01E	Goniophotometry C-γ (C-10° - γ-1°) + Goniospectrometry C-γ (C-90° - γ-10°) – 4 days	==	600	
OX-SA1-01F	Goniophotometry C-γ (C-10° - γ-1°) + Goniospectrometry 1 Point	==	450	
<b>Floodlight Luminaire</b>				
Code	Test Description	Via OXL File	With Report	
		[€]	[€]	
OX-SA1-02A	Goniophotometry V-H (V-5° - H-1°)	==	450	
OX-SA1-02B	Goniospectrometry C-γ (C-90° - γ-10°)	==	300	
OX-SA1-02C	Goniophotometry V-H (V-5° - H-1°) + Goniospectrometry C-γ (C-90° - γ-10°)	==	650	
OX-SA1-02D	Goniophotometry V-H (V-5° - H-1°) – 4 days	==	550	
OX-SA1-02E	Goniophotometry V-H (V-5° - H-1°) + Goniospectrometry C-γ (C-90° - γ-10°) – 4 days	==	750	
OX-SA1-02F	Goniophotometry V-H (V-5° - H-1°) + Goniospectrometry 1 Point	==	550	
<b>Road Luminaire</b>				
Code	Test Description	Via OXL File	With Report	
		[€]	[€]	
OX-SA1-03A	Goniophotometry C-γ (C-10° - γ-1°)	==	350	
OX-SA1-03B	Goniospectrometry C-γ (C-90° - γ-10°)	==	300	
OX-SA1-03C	Goniophotometry C-γ (C-10° - γ-1°) + Goniospectrometry C-γ (C-90° - γ-10°)	==	550	
OX-SA1-03D	Goniophotometry C-γ (C-10° - γ-1°) – 4 days	==	400	
OX-SA1-03E	Goniophotometry C-γ (C-10° - γ-1°) + Goniospectrometry C-γ (C-90° - γ-10°) – 4 days	==	600	
OX-SA1-03F	Goniophotometry C-γ (C-10° - γ-1°) + Goniospectrometry 1 Point	==	450	

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### B – Goniophotometry and Goniospectrometry of LED Luminaires

#### B1 – Measurements according to EN 13032-4 + CIE S025/E

Goniophotometry and Goniospectrometry according to: <ul style="list-style-type: none"> <li>▶ EN 13032-4 Standard - Visible field (380-780 nm)</li> <li>▶ CIE S025/E Recommendation</li> </ul>			
<b>Generic Luminaire and Light Sources</b>			
Code	Test Description	Via OXL File	With Report
		[€]	[€]
OX-SB1-01A	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°)	240	260
OX-SB1-01B	Goniospectrometry C- $\gamma$ (C-90° - $\gamma$ 10°)	220	240
OX-SB1-01C	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°) + Goniospectrometry C- $\gamma$ (C-90° - $\gamma$ -10°)	330	350
OX-SB1-01D	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°) – 4 days	290	310
OX-SB1-01E	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°) + Goniospectrometry C- $\gamma$ (C-90° - $\gamma$ -10°) – 4 days	380	400
OX-SB1-01F	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°) + Goniospectrometry 1 Point	290	310
<b>Floodlight Luminaire</b>			
Code	Test Description	Via OXL File	With Report
		[€]	[€]
OX-SB1-02A	Goniophotometry V-H (V-5° - H-1°)	240	260
OX-SB1-02B	Goniospectrometry C- $\gamma$ (C-90° - $\gamma$ -10°)	220	240
OX-SB1-02C	Goniophotometry V-H (V-5° - H-1°) + Goniospectrometry C- $\gamma$ (C-90° - $\gamma$ -10°)	330	350
OX-SB1-02D	Goniophotometry V-H (V-5° - H-1°) – 4 days	290	310
OX-SB1-02E	Goniophotometry V-H (V-5° - H-1°) + Goniospectrometry C- $\gamma$ (C-90° - $\gamma$ -10°) – 4 days	380	400
OX-SB1-02F	Goniophotometry V-H (V-5° - H-1°) + Goniospectrometry 1 Point	290	310

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### B – Goniophotometry e Goniospectrometry Apparecchi e Moduli LED

#### B1 – Measurements according to EN 13032-4 + CIE S025/E

Road Luminaire			
Code	Test Description	Via OXL File	With Report
		[€]	[€]
OX-SB1-03G	Goniophotometry C- $\gamma$ (C-2.5° - $\gamma$ -1°)	310	330
OX-SB1-03H	Goniophotometry C- $\gamma$ (C-2.5° - $\gamma$ -1°) + Goniospectrometry C- $\gamma$ (22'5 C - $\gamma$ 10°)	490	510
OX-SB1-03I	Goniophotometry C- $\gamma$ (C-2.5° - $\gamma$ -1°) – 4 days	370	390
OX-SB1-03J	Goniophotometry C- $\gamma$ (C-2.5° - $\gamma$ -1°) + Goniospectrometry C- $\gamma$ (C-22.5° - $\gamma$ 5°) – 4 days	550	570
OX-SB1-03K	Goniophotometry C- $\gamma$ (C-2.5° - $\gamma$ -1°) + Goniospectrometry 1 Point	375	395
OX-SB1-03L	Goniophotometry C- $\gamma$ (C-5° - $\gamma$ -1°)	280	300
OX-SB1-03M	Goniophotometry C- $\gamma$ (C-5° - $\gamma$ -1°) + Goniospectrometry C- $\gamma$ (22'5 C - $\gamma$ 10°)	445	465
OX-SB1-03N	Goniophotometry C- $\gamma$ (C-5° - $\gamma$ -1°) – 4 days	340	360
OX-SB1-03O	Goniophotometry C- $\gamma$ (C-5° - $\gamma$ -1°) + Goniospectrometry C- $\gamma$ (C-22.5° - $\gamma$ 5°) – 4 days	500	520
OX-SB1-03P	Goniophotometry C- $\gamma$ (C-5° - $\gamma$ -1°) + Goniospectrometry 1 Point	340	360
OX-SB1-03A	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°)	240	260
OX-SB1-03B	Goniospectrometry C- $\gamma$ (C-22.5° - $\gamma$ 5°)	290	320
OX-SB1-03C	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°) + Goniospectrometry C- $\gamma$ (22'5 C - $\gamma$ 10°)	380	400
OX-SB1-03D	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°) – 4 days	290	310
OX-SB1-03E	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°) + Goniospectrometry C- $\gamma$ (C-22.5° - $\gamma$ 5°) – 4 days	430	450
OX-SB1-03F	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°) + Goniospectrometry 1 Point	290	310



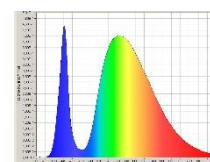
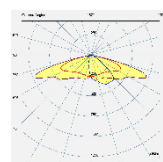
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### B2 – Measurements according to IES LM-79-08

Photometric test performed with a Goniophoto-spectroradiometer including:

- ▶ Goniophotometry and Goniospectrometry according to the IESNA LM-79-08 Standard in the visible field (380-780 nm)



#### Generic Luminaire and Light Sources

Code	Test Description	Via OXL File	With Report
		[€]	[€]
OX-SB2-01A	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°)	250	270
OX-SB2-01B	Goniospectrometry C- $\gamma$ (C-90° - $\gamma$ -10°)	240	260
OX-SB2-01C	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°) + Goniospectrometry C- $\gamma$ (C-90° - $\gamma$ -10°)	350	370
OX-SB2-01D	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°) – 4 days	300	320
OX-SB2-01E	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°) + Goniospectrometry C- $\gamma$ (C-90° - $\gamma$ -10°) – 4 days	400	420
OX-SB2-01F	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°) + Goniospectrometry 1 Point	300	320

#### Floodlight Luminaire

Code	Test Description	Via OXL File	With Report
		[€]	[€]
OX-SB2-02A	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°)	250	270
OX-SB2-02B	Goniospectrometry C- $\gamma$ (C-90° - $\gamma$ -10°)	240	260
OX-SB2-02C	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°) + Goniospectrometry C- $\gamma$ (C-90° - $\gamma$ -10°)	350	370
OX-SB2-02D	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°) – 4 days	300	320
OX-SB2-02E	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°) + Goniospectrometry C- $\gamma$ (C-90° - $\gamma$ -10°) – 4 days	400	420
OX-SB2-02F	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°) + Goniospectrometry 1 Point	300	320

#### Road Luminaire


Code	Test Description	Via OXL File	With Report
		[€]	[€]
OX-SB2-03A	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°)	250	270
OX-SB2-03B	Goniospectrometry C- $\gamma$ (C-22.5° - $\gamma$ 5°)	320	340
OX-SB2-03C	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°) + Goniospectrometry C- $\gamma$ (C-22.5° - $\gamma$ 5°)	410	430
OX-SB2-03D	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°) – 4 days	300	320
OX-SB2-03E	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°) + Goniospectrometry C- $\gamma$ (C-22.5° - $\gamma$ 5°) – 4 days	460	480
OX-SB2-03F	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°) + Goniospectrometry 1 Point	300	320




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### B3 – Photometric Measurements of Luminaires for Emergency Lighting according to EN 1838:2013

<p>Measurement of the luminances of the pictogram on a luminaire working in emergency lighting mode on the points described in the EN 1838:2013 standard, in particular:</p> <ul style="list-style-type: none"> <li>▶ luminance measurement on n points of the pictogram</li> <li>▶ measurement of the CIE chromaticity coordinates</li> </ul>			
Code	Test Description	Via OXL File	With Report
		[€]	[€]
OX-SB3-01A	Measurement of both, luminance on n points and chromaticity coordinates	===	350

### B4 – Measurements of Luminaires for Emergency Lighting - Assessment of the Luminous flux decay according to EN 60598-2-22:2015 Chapter 22-17

<p>Measurement including:</p> <ul style="list-style-type: none"> <li>▶ general photometric measurement C-<math>\gamma</math> (C-10° - <math>\gamma</math>-1°) with mains power supply for determining the luminous flux</li> <li>▶ luminous flux decay with battery/inverter power supply</li> <li>▶ measurement report</li> </ul>			
Code	Test Description	Via OXL File	With Report
		[€]	[€]
OX-SB4-01A	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°) and luminous flux decay measurement	===	390

### B5 – Measurement of LED Light Sources by using a Goniophotometer


<p>Measurement including:</p> <ul style="list-style-type: none"> <li>▶ generic measurement C-<math>\gamma</math> (C-10°-<math>\gamma</math> 1°) according to 13032-4 for determining the luminous flux</li> </ul>			
Code	Test Description	Via OXL File	With Report
		[€]	[€]
OX-SB5-01A	Goniophotometry C- $\gamma$ (C-10°- $\gamma$ 1°) and determination of the Energy Efficiency Class	220	250

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### C – Various Measurements - LED Light Sources

#### C1 – Spherospectrometry of LED Luminaires according to EN13032-4-15 or IES LM-79-19

		<b>New</b>	
Measurement of a LED luminaire and data processing according to EN 13032-4:2015 or IES LM-79-10, including: <ul style="list-style-type: none"> <li>▶ flux measurement in [lm]</li> <li>▶ colorimetric characteristics measurements</li> </ul>			
Code	Test Description	Via OXL File	With Report
		[€]	[€]
OX-SC1-01A	Measurement of photo-colorimetric parameters according to EN 13032-4:2015	===	250
OX-SC1-01B	Measurement of photo-colorimetric parameters according to IES LM-79-19	===	200
OX-SC1-01C	Measurement of photo-colorimetric parameters according to EN 13032-4:2015 and IES LM-79-19 with temperature control via Peltier cell at 25°C ±1°C	===	340
OX-SC1-01D	Trimmer calibration	100	===

#### C2 – Measurement of Luminaire Temperature and Data Processing according to IES TM-21

		<b>IES TM-21</b>	
Measurement of a luminaire and data processing according to IES TM-21, including: <ul style="list-style-type: none"> <li>▶ measurement of the luminaire temperatures from ignition to the fully thermal operational mode</li> <li>▶ report in a selected language according to IES TM-21 (the customer undertakes to provide LED data sheets according to IES LM-80)</li> </ul>			
Code	Test Description	Via OXL File	With Report
		[€]	[€]
OX-SC2-01A	Temperature Measurement according to IES TM-21	===	200

#### C3 – Measurement of Flicker and Stroboscopic Effect of Luminaires and Light Sources according to IEC TR 61547

		<b>Flicker IEC TR 61547</b>	
Flicker Measurement of lamps and luminaires according to IEC TR 61547 standard			
Code	Test Description	Via OXL File	With Report
		[€]	[€]
OX-SC3-01A	Flicker measurement according to IEC TR 61547	===	200

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### C4 – Photobiological Risk of Luminaires according to IEC 62741-7:2023

		<b>Photobiological Risk IEC 62741-7:2023</b>	
		Via OXL File	With Report
Code	Test Description	[€]	[€]
OX-SC4-01A	Photobiological Risk Measurement according to IEC 62741-7:2023	===	450

### C5 – Measurement of Parameters for EPREL Classification according to UE 2019-2020 EcoDesign and -2015

		<b>New</b>	
		Via OXL File	With Report
Code	Test Description	[€]	[€]
OX-SC5-01A	Measurement of Parameters for EPREL Classification by using an integrating sphere	===	340
OX-SC5-02A	Measurement of Parameters for EPREL Classification by using a goniophotometer (for directional sources only)	===	540


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### C6 – Photometric Measurements of Flashing Luminaires according to IES 53

		New	
Goniophotometry of Flashing Signaling Luminaires Measurement of the following paraments on flashing luminaires including: Il rilievo prevede la misura dei seguenti parametri con apparecchio in modalità flash: <ul style="list-style-type: none"> <li>▶ Absolute peak intensity (calculated based on energy in J)</li> <li>▶ Effective intensity (calculated based on energy in J)</li> <li>▶ Peak Intensity (calculated according to the IES standard)</li> <li>▶ Effective intensity (calculated according to the IES standard)</li> </ul>			
Code	Test Description	Via OXL File	With Report
		[€]	[€]
OX-SC6-01A	Goniophotometry of Flashing Signaling Luminare	===	280

### C7 – Photo-spectrometric Measurements of Heavy Rail Lamps according to EN 15153

		New	
Goniophoto-spectrometry of heavy rail lamps Measurement of the following parameters: <ul style="list-style-type: none"> <li>▶ kcolour</li> <li>▶ Luminous Intensity of Head Lamps</li> <li>▶ Luminous Intensity of Marker Lamps</li> <li>▶ Lumionious Intensity of Tail Lamps</li> </ul>			
Code	Test Description	Via OXL File	With Report
		[€]	[€]
OX-SC7-01A	Measurement of kcolour according to Table 5 of EN 15153-1:2020 Standard	===	320
OX-SC7-01B	Measurement of the Luminous Intensity in [cd] according to Table 2 of EN 15153-1:2020 Standard	===	180
OX-SC7-01C	Measurement of the Luminous Intensity in [cd] according to Table 6 of EN 15153-1:2020 Standard	===	210
OX-SC7-01D	Measurement of the Luminous Intensity in [cd] according to Table 8 of EN 15153-1:2020 Standard	===	210

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## D – Goniophotometry and Goniospectrometry - LED Luminaires for the Horticultural Field

### D1 – Measurements of Luminaires and LED Light Sources according to 13032-4 + ANSI/ASABE S640

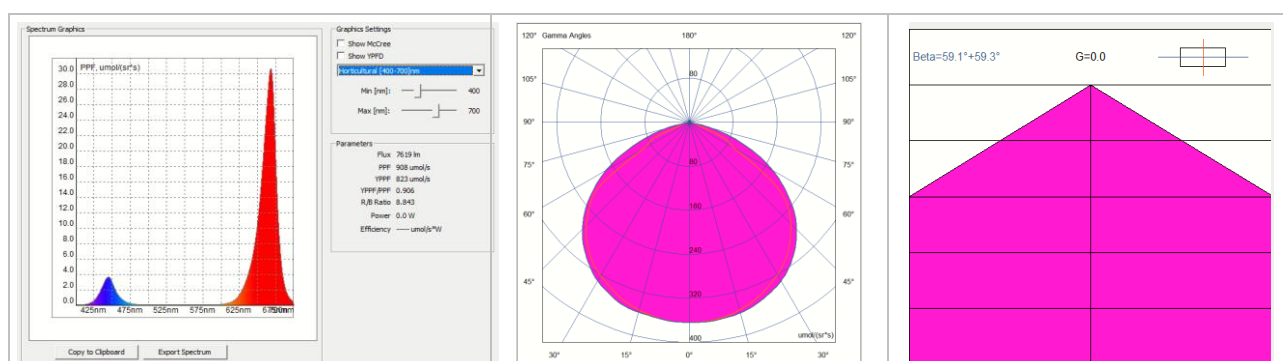
Goniophotometry and Goniospectrometry of LED luminaires for the assessment of the following parameters relevant to horticultural lighting:

- ▶ Luminous Flux [ $\Phi$ ]
- ▶ Polar Distribution of Intensities [cd]
- ▶ Photosynthetic Photon Flux PPF [ $\mu\text{mol/s}$ ]
- ▶ Photosynthetic Photon Flux Efficiency PPF/W [ $\mu\text{mol/J}$ ]
- ▶ Correlated Color Temperature (CCT) [K]
- ▶ R/B Ratio
- ▶ Photosynthetic Photon Flux Density PPFd [ $\mu\text{mol/m}^2\text{*s}$ ]
- ▶ YieldPhoton Flux Density YPFd [ $\mu\text{mol/m}^2\text{*s}$ ]



#### Generic Luminaire and Sources (Lamps)

Code	Test Description	Via OXL File	With Report
		[€]	[€]
OX-SD1-01A	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°) + Goniospectrometry C- $\gamma$ (C-90° - $\gamma$ -10°)	==	310
OX-SD1-01B	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ -1°) + Goniospectrometry C- $\gamma$ (C-90° - $\gamma$ -10°) – 4 days	==	360



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## E – Goniospectrometry - UV-IR Luminaires

### E1 – Measurements of UV or IR Luminaires

Goniospectrometry of for UV or IR rays luminaires for the assessment of the following parameters:

- ▶ Radiant Flux [W/nm]
- ▶ Radiant Intensity Polar Distribution [W/(nm + sr)]
- ▶ Radiant Intensity Matrix

In collaboration with Asselum OxyTech Group

Shipping costs to be paid by the customer

New

COMPLETE RADIOMETRIC CHARACTERIZATION

Via OXL File

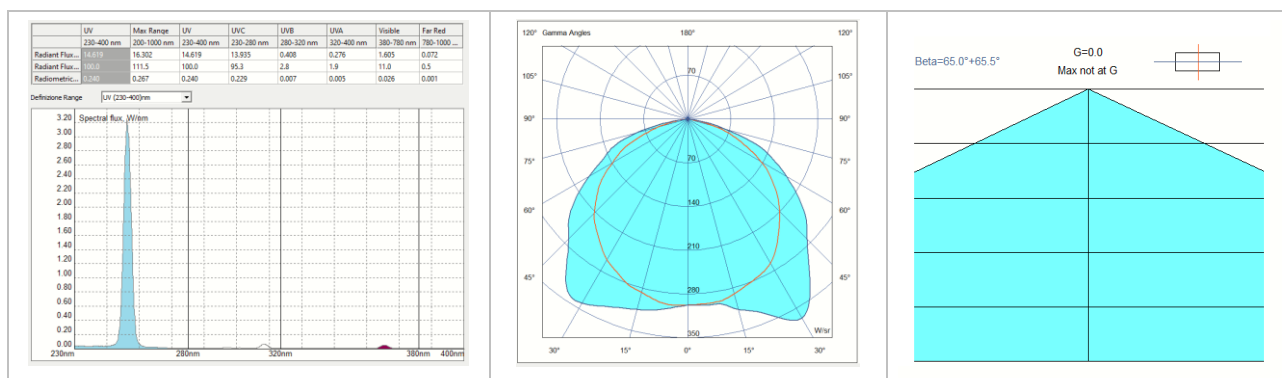
With Report

[€]

[€]

		==	400
		==	500

Code	Test Description	Via OXL File	With Report
		[€]	[€]
OX-SE1-01A	Goniospectrometry C-γ (C-90° - γ 5°)	==	400
OX-SE1-01B	Goniospectrometry C-γ (C-90° - γ 5°) – 4 days	==	500

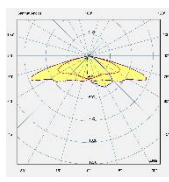
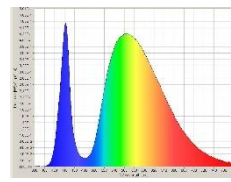


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### F – Goniophotometry and Goniospectrometry - Conventional Sources

#### F1 – Measurements of Luminaires and Light Sources according to secondo EN 13032-1 + -2 + -3


Measurement including: <ul style="list-style-type: none"> <li>▶ measurement on a goniophotometer according to EN 13032 and the steps required</li> </ul>			
<b>Generic Luminaire and Sources (Lamps)</b>			
Code	Test Description	Via OXL File	With Report
		[€]	[€]
OX-SF1-01A	Goniophotometry C- $\gamma$ (C-15° - $\gamma$ 1°)	250	280
OX-SF1-01B	Goniospectrometry C- $\gamma$ (C-90° - $\gamma$ -10°)	240	270
OX-SF1-01C	Goniophotometry C- $\gamma$ (C-15° - $\gamma$ 1°) + Goniospectrometry C- $\gamma$ (C-90° - $\gamma$ -10°)	350	390
OX-SF1-01D	Goniophotometry C- $\gamma$ (C-15° - $\gamma$ 1°) – 4 days	300	330
OX-SF1-01E	Goniophotometry C- $\gamma$ (C-15° - $\gamma$ 1°) + Goniospectrometry C- $\gamma$ (C-90° - $\gamma$ -10°) – 4 days	400	440
OX-SF1-01F	Goniophotometry C- $\gamma$ (C-15° - $\gamma$ 1°) + Goniospectrometry 1 Point	300	340
<b>Floodlight Luminaire</b>			
Code	Test Description	Via OXL File	With Report
		[€]	[€]
OX-SF1-02A	Goniophotometry V-H	310	340
OX-SF1-02B	Goniospectrometry C- $\gamma$ (C-90° - $\gamma$ -10°)	270	300
OX-SF1-02C	Goniophotometry V-H + Goniospectrometry C- $\gamma$ (C-90° - $\gamma$ -10°)	430	470
OX-SF1-02D	Goniophotometry V-H – 4 days	340	390
OX-SF1-02E	Goniophotometry V-H + Goniospectrometry C- $\gamma$ (C-90° - $\gamma$ -10°) – 4 days	480	520
OX-SF1-02F	Goniophotometry V-H + Goniospectrometry 1 Point	360	400
<b>Road Luminaire</b>			
Code	Test Description	Via OXL File	With Report
		[€]	[€]
OX-SF1-03A	Goniophotometry C- $\gamma$	290	320
OX-SF1-03B	Goniospectrometry C- $\gamma$ (C-90° - $\gamma$ -10°)	260	290
OX-SF1-03C	Goniophotometry C- $\gamma$ + Goniospectrometry C- $\gamma$ (C-90° - $\gamma$ -10°)	470	510
OX-SF1-03D	Goniophotometry C- $\gamma$ – 4 days	340	370
OX-SF1-03E	Goniophotometry C- $\gamma$ + Goniospectrometry C- $\gamma$ (C-90° - $\gamma$ -10°) – 4 days	520	560
OX-SF1-03F	Goniophotometry C- $\gamma$ + Goniospectrometry 1 Point	340	380




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### F2 – Photometric Measurements of Luminaires for Emergency Lighting according to EN 1838:2013

<p>Measurement of the luminances of the pictogram on an emergency lighting luminaire on the points described in the EN 1838:2013 standard, in particular:</p> <ul style="list-style-type: none"> <li>▶ lamp characterization for 100 hours or according to the standard</li> <li>▶ luminance measurement on n points of the pictogram</li> <li>▶ measurement of the CIE chromaticity coordinates</li> </ul>			
Code	Test Description	Via OXL File	With Report
		[€]	[€]
OX-SF2-01A	Measurement of both, luminance on n points and chromaticity coordinates	===	420

### F3 – Measurements of Emergency Lighting Luminaires: Assessment of the Luminous Flux Decay according to EN 60598-2-22:2015 Capitolo 22-17

<p>The measurement includes:</p> <ul style="list-style-type: none"> <li>▶ lamp characterization for 100 hours or according to the standard</li> <li>▶ generic photometric measurement C-<math>\gamma</math> (24 C- <math>\gamma</math> 1°) with mains power supply for determining the luminous flux</li> <li>▶ luminous flux decay with battery/inverter power supply</li> <li>▶ measurement report</li> </ul>			
Code	Test Description	Via OXL File	With Report
		[€]	[€]
OX-SF3-01A	Goniophotometry C- $\gamma$ (24 C- $\gamma$ 1°) and luminous flux decay measurement	===	410

### F4 – Measurements of Conventional Sources on Goniophotometer according to EN 13032-1 + -4 + UE 2019-2015 (Ecodesign)

<p>The measurement of the lamp includes:</p> <ul style="list-style-type: none"> <li>▶ lamp characterization for 100 hours (or according to the standard)</li> <li>▶ generic measurement C-<math>\gamma</math> (C-10° - <math>\gamma</math> 1°) according to EN 13032-1 + -2 + -3 for determining the luminous flux</li> <li>▶ determination of the Energy Efficiency Class according to standards UE 2019-2015 and 2019-2020</li> </ul>			
Code	Test Description	Via OXL File	With Report
		[€]	[€]
OX-SF4-01A	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ 1°) for determining both flux and Energy Class	290	320
OX-SF4-01B	Goniophotometry C- $\gamma$ (C-10° - $\gamma$ 1°) for determining both flux and Energy Class (*)	240	270

(\*) without source aging for 100 hours

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### G - Various Services

#### G1 – Laboratory Rental and Various Services

Code	Description	Price [€]
OX-SG1-01A	Laboratory Rental with OxyTech personnel Assistance - [per day/8 hours]	1.600
OX-SG1-02A	Measurement urgent service done within 4 days from luminaire delivery (per measurement)	50
OX-SG1-03A	Measurement Certification (Regional Law) – for each certification	80
OX-SG1-04A	Measurement report requested after the supply of the photometric file	30
OX-SG1-05A	Report in a language different from the first	40

#### G2 – OxyTech Assistance

Code	Description	Price [€]
OX-SG2-01A	Telephone Assistance on OxyTech Programs Use – Junior Assistance - [h]	30
OX-SG2-01B	Telephone Assistance on OxyTech Programs Use – Master Assistance - [h]	60
OX-SG2-02A	Assistance via e-mail on OxyTech Programs Use – Junior Assistance - [h]	30
OX-SG2-02B	Assistance via e-mail on OxyTech Programs Use – Master Assistance - [h]	60
OX-SG2-03A	Telephone Assistance on Lighting Design Standards – Master Assistance - [h]	60
OX-SG2-03B	Telephone Assistance on OxyTech Goniophotometers – Master Assistance - [h]	60
OX-SG2-04A	Unregistration of LITESTAR and LITESTAR 4D software activation code	20
OX-SG2-05A	Photo-colorimetric measurements at the Customer's Premises – Instruments provided by OxyTech - Junior Assistance – [h]	60
OX-SG2-05B	Photo-colorimetric measurements at the Customer's Premises – Instruments provided by OxyTech – Master Assistance – [h]	80
OX-SG2-05C	Processing of report Processing after photo-colorimetric measurements at the Customer's Premises – Junior Assistance – [h]	40
OX-SG2-06A	On-site assistance - Junior Staff – Without instruments – [h]	45
OX-SG2-06B	On-site assistance - Master Staff – Without instruments – [h]	65
OX-SG2-06C	On-site assistance - Junior Staff – With instruments – [h]	60
OX-SG2-06D	On-site assistance - Master Staff – With instruments – [h]	80
OX-SG2-07A	Travel Time – Junior Staff – [h]	45
OX-SG2-07B	Travel Time – Senior Staff – [h]	65
OX-SG2-07C	Travel Expenses – Senior/Junior Staff – < 50 km	Free of charge
OX-SG2-07D	Travel Expenses – Senior/Junior Staff – > 50 km – Per km	0.75
OX-SG2-07E	Board and Accommodation – Per day	250

#### G3 – Blocks of Assistance

Code	Description	Price [€]
OX-SG3-01A	300 € Block of Assistance	300
OX-SG3-01B	600 € Block of Assistance	600

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### G4 – Training Courses and Consultancy

Code	Description	Price [€]
OX-SG4-01A	Face-to-face Courses on OxyTech Programs - [h]	100
OX-SG4-01B	Face-to-face Courses on the Use of OxyTech Goniophotometers - [h]	100
OX-SG4-01C	Face-to-face Courses on Lighting Engineering - [h]	100
OX-SG4-01D	Additional person from the second participant (certificate of attendance issued)	200
OX-SG4-02A	Courses via Internet on OxyTech Programs – [h]	80
OX-SG4-02B	Courses via Internet on the Use of OxyTech Goniophotometers - [h]	80
OX-SG4-02C	Courses via Internet on Lighting Engineering - [h]	80
OX-SG4-02D	Additional person from the second participant (certificate of attendance issued)	200
OX-SG4-03A	Face-to-face Lighting Engineering Consultancy - [h]	100
OX-SG4-03B	Lighting Engineering Consultancy via Internet - [h]	80

**Remarks** – Face-to-face course are held at the Customer's or at OxyTech's Headquarters. Courses via Internet are held via Internet using the software GoToMeeting. A certificate of attendance will be issued to all participants to the courses. Minimum number of course hours: 4.

### G5 – Photometric and Spectrometric Data Processing

Code	Description	Price [€]
OX-SG5-01A	Basic Extrapolation of photometric data from from LDT, IES or OXL file – each It involves carrying out the extrapolation starting from 2 known flux values	30
OX-SG5-01B	Advanced Extrapolation of photometric data from LDT, IES or OXL file – each It provides for the realization of the extrapolation starting from 1 known flux value while the second is obtained with a goniophotometer by measuring the intensity value at Gamma 0° for the expected power supply conditions of the luminaire	120
OX-SG5-01C1	Extrapolation of photometric LDT and IES file via LTS4D Pv Batcher (from 1 to 100) - Per each photometric file	0,5
OX-SGx-01C2	Extrapolation of photometric LDT and IES file via LTS4D Pv Batcher (from 101 to 500) - Per each photometric file	0,35
OX-SGx-01C3	Extrapolation of photometric LDT and IES file via LTS4D Pv Batcher (over 500) - Per each photometric file	0,25
OX-SG5-02A	Photometry Symmetrization - each	10
OX-SG5-03A	Conversion of File FOTOM.FDB into OxyData.MDB – each photometry	60
OX-SG5-03B	Conversion of OXL format into LDT/IES – each	5
OX-SG5-04A	Relative Isocandle Curve – each	10
OX-SG5-04B	Isolux Curve – each	10
OX-SG5-04C	Relative Isolux Curve and Efficiency Graph – each	10
OX-SG5-04D	Glare Diagram CIE55/DIN5035/CIBSE TM5 – each	10
OX-SG5-04E	Beam Spread Diagram – each	10
OX-SG5-04F	Cartesian Diagram – each	10
OX-SG5-04G	Isocandle Diagram – each	10
OX-SG5-04H	Polar Diagram – each	10
OX-SG5-04I	International Photometric Classification CIE/DIN/UTE/NBN – each	10
OX-SG5-04J	Utilization Factors CIE40 – each	10
OX-SG5-04K	Road luminaire classif. IES TM-15 (BUG) – each	10
OX-SG5-04L	Road Classification THROW,ULOR,DLOR... – each.	10
OX-SG5-04M	Glare Assessment - UGR chart – each	10

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**Remarks** - Discounts:

- from 51 up to 100 - 50%
- from 101 ... - 75%

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### G6 – Project Processing

Code	Description	Price [€]
OX-SG6-01A	Project Processing – Junior Assistance - [h]	50
OX-SG6-01B	Project Processing – Master Assistance [h]	80

### G7 – Interactive Electronic Catalog Management for Liswin / WebCatalog

Code	Description	Price [€]
OX-SG7-01A	Creation of Webcatalog from BEF file (Bridge Excel File) – 250-item block	500
OX-SG7-01B	Creation of Webcatalog from photometric files (LDT, IES) – 250-item block	200
OX-SG7-02A	WebCatalog Publication via ftp in WebOxy	300
OX-SG7-03A	Update of Catalog Date in OxyTech MDB format – 250-item block	1.500

### G8 – Instrument Calibration

Code	Description	Price [€]
OX-SG8-01A	Luxmeter Calibration (portable/laboratory) – Third-party laboratory	290
OX-SG8-01B	Luxmeter Calibration (portable/laboratory) – Partial pre-delivery test	100
OX-SG8-01C	Luxmeter Calibration (portable/laboratory) – Full pre-delivery test	300
OX-SG8-01D	Luxmeter Calibration (portable/laboratory) – Freight shipping by air: OxyTech Laboratory – Supplier Laboratory – OxyTech Laboratory - Customer Headquarters in Europe	430
OX-SG8-01E	Luxmeter Calibration (portable/laboratory) – Freight shipping by road: OxyTech Laboratory – Supplier Laboratory – OxyTech Laboratory - Customer Headquarters in Europe	300
OX-SG8-02A	Wattmeter Calibration – Third-party laboratory	600
OX-SG8-03A	SpectraVal 1501 / Specbos 120 Spectroradiometer Calibration – Third-party laboratory	2.500
OX-SG8-03A	Specbos 1211 UV Spectroradiometer Calibration – Third-party laboratory	3.900
OX-SG8-03A	Device check-up (functionality, software, firmware status) mandatory for all devices that have not been serviced in the last 5 years	400
OX-SG8-03B	Spectroradiometer Calibration – Partial pre-delivery test	100
OX-SG8-03C	Spectroradiometer Calibration – Full pre-delivery test	300
OX-SG8-03D	Spectroradiometer Calibration – Freight shipping by air: OxyTech Laboratory – Supplier Laboratory – OxyTech Laboratory - Customer Headquarters in Europe	430
OX-SG8-03E	Spectroradiometer Calibration – Freight shipping by road: OxyTech Laboratory – Supplier Laboratory – OxyTech Laboratory - Customer Headquarters in Europe	240
OX-SG8-04A	Goniophotometer Calibration/Alignment	Upon request
OX-SG8-05A	Humidity - Temperature - Pressure - Air Speed - Indicator Calibration – Third-party laboratory	950
OX-SG8-05B	Humidity - Temperature - Pressure - Air Speed - Indicator Calibration – Partial pre-delivery test	100
OX-SG8-05C	Humidity - Temperature - Pressure - Air Speed - Indicator Calibration – Full pre-delivery test	300

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### G8 – Instrument Calibration

OX-SG8-05D	Humidity - Temperature - Pressure - Air Speed - Indicator Calibration – Freight shipping by air: OxyTech Laboratory – Supplier Laboratory – OxyTech Laboratory - Customer Headquarters in Europe	430
OX-SG8-05E	Humidity - Temperature - Pressure - Air Speed - Indicator Calibration – Freight shipping by road: OxyTech Laboratory – Supplier Laboratory – OxyTech Laboratory - Customer Headquarters in Europe	240
OX-SG8-06A	Universal Power Analyzer Calibration – Third-party Laboratory	900
OX-SG8-06B	Universal Power Analyzer Calibration – Partial pre-delivery test	100
OX-SG8-06C	Universal Power Analyzer Calibration – Full pre-delivery test	300
OX-SG8-06D	Universal Power Analyzer Calibration – Freight shipping by air: OxyTech Laboratory – Supplier Laboratory – OxyTech Laboratory - Customer Headquarters in Europe	430
OX-SG8-06E	Universal Power Analyzer Calibration – Freight shipping by road: OxyTech Laboratory – Supplier Laboratory – OxyTech Laboratory - Customer Headquarters in Europe	240

### G9 – Generation of BIM IFC and Generic Native Generic Files

Code	Description	Price [€]
OX-SG9-01A	Generation of BIM IFC file – single product	180
OX-SG9-01B	Generation of RFA file for Revit – single product	180

### G10 – Testing of a Road Tunnel Lighting System

Code	Description	Price [€]
OX-SG10-01A	Testing of a Road Tunnel Lighting System according to UNI 11095-2021 – Single Ark – Permanent Lighting	1.500
OX-SG10-01B	Testing of a Road Tunnel Lighting System according to UNI 11095-2021 – Single Ark – Reinforcement Lighting	2.500
OX-SG10-01C	Testing of a Road Tunnel Lighting System according to UNI 11095-2021 – Single Ark - Permanent Lighting + Reinforcement Lighting	3.500
OX-SG10-02A	Testing of a Pedestrian Crossing Lighting System according to UNI TS 11276 - Single Area	750
OX-SG10-03A	Testing of a M Class Road Lighting System according to EN 13201 – Single Road	850
OX-SG10-03B	Testing of a Green Area or Square Lighting System according to EN 13201 – Single Area	500
OX-SG10-04A	Travel Time – Junior Staff – [h]	45
OX-SG10-04B	Travel Time – Senior Staff – [h]	65
OX-SG10-04C	Travel Expenses – Senior/Junior Staff – < 50 km	Free of charge
OX-SG10-04D	Travel Expenses – Senior/Junior Staff – > 50 km – Per km	0.75
OX-SG10-04E	Board and Accommodation – Per day	250

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### Supply Conditions

#### Photometric measurements and Laboratory Tests

The current price list regard test samples delivered/returned carriage paid to/from our laboratories in via G.B. Vico 54, 20007 Cornaredo MI Italy unless otherwise agreed.

Samples are to be collected by the customer at their own expenses within 10 days from the consignment of the elaborations, after which, and should the customer fail to do so, OxyTech will dispose of the samples at the local refuse site and will charge the customer 20€ per luminaire.

Measurements of direct and indirect luminaires must be considered as two single measurements.

Supply includes delivery of the OXL file and/or of the measurement report together with the Polar or Cartesian diagram

Disputes: OxyTech agrees, in case of dispute, to carry out the measurements again as long as the original samples are available. Disputes will not be taken into consideration where the original samples marked by OxyTech are unavailable. Should the new tests give the same results as those effected before, these will be invoiced to the customer

#### Support Bracket

The luminaire support bracket on the goniophotometer is included in the price in the case of a normal mounting; in all other cases it will be estimated separately before carrying out measurements

#### Assistance

Telephone assistance is always calculated as given for periods of 15 minutes each even if shorter

#### Courses

Face-to-face training courses are to be carried out in the OxyTech offices and laboratories.

In the case of courses held in the customer's offices, expenses of travel, board and lodging of our personnel will be charged to the customer

#### Prices

The prices in this list are in €uros exclusive of VAT and may be altered without obligation of notice on the part of OxyTech

#### Discounts

- ▶ 20% discount on prices on this list to LITESTAR users with a Maintenance Contract for License B in force
- ▶ Block of 10 measurements: 3% - Block of 11-30 measurements: 5% - Block of 30-xx measurements: 7%

#### Customs and Bank Expenses

All customs and bank expenses are charged to the customer unless otherwise agreed

#### Extra Supply Conditions

Supplies are considered made according to our General Conditions of Supply of Products and Services

#### Changes to the Price List

OxyTech reserves the right to make changes to the current price list if necessary without obligation of communication..

