




	Test report	602-QL24-R02 ver. 0	 <small>LAB N° 1235 L</small> <small>Membro degli Accordi di Mutuo Riconoscimento EA, IAF e ILAC</small> <small>Signatory of EA, IAF and ILAC Mutual Recognition Agreements</small>
	Applicant	LARES di Claudio Lerici Regione Viazzi, 6 15010 - Castelletto d'Erro (AL) - Italy	
	Type	SC_04 (IEN 7121)	

TEST REPORT 602-QL24-R02 ver. 0



Dates and authorization Date e autorizzazioni		
Report Date Data emissione rapporto di prova	21/05/2024	
Written by Preparato da	Matteo Roncali	
Authorized by Autorizzato da	Ing. Michele Peschiera	
Data declared under the sole responsibility of the applicant Dati dichiarati dal richiedente e sotto la sua responsabilità		
Applicant Richiedente	LARES di Claudio Lerici - Regione Viazzi, 6 - 15010 - Castelletto d'Erro (AL) - Italy	
Manufacturer Produttore	Same as applicant/Come il richiedente	
Sample description Descrizione campione	Diffuse light source	
Type Modello	SC_04 (IEN 7121)	
Light source Sorgente luminosa	Not declared	
Multimeter Multimetro	Keysight U1253B sn MY61060043	
Illuminant A current Corrente per illuminante A	I_A : 4,0758 A	
Applicable Standard Norme applicabili		
	CIE 15:2018 Colorimetry and CIE 70:1987 Measurement of absolute luminous intensity distribution	

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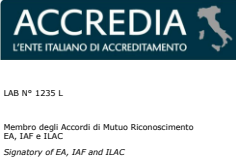
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Annex Annesso	Test Name Identificazione prova	Test Method Metodo di prova	Test Requirement Requisito di prova	Verdict / Result Esito / Risultato
I	Maximum light intensity at 10 m with 4,000 A setting	The sample was mounted (with the support provided by the applicant) on the goniometer and powered with the constant current of 4,000 A measured with the multimeter provided by the applicant. The light intensity distribution at 10 m was measured and the maximum light intensity was determined	Not applicable	$I_{\max}[\text{cd}] = 77,1 \text{ cd}$ $-1,20^\circ \text{ H}; -0,25^\circ \text{ V}$
II	CCT measurement with I_A setting	The sample was mounted on the goniometer; correlated color temperature was measured in the optical axis at the current I_A declared and measured with the multimeter provided by the applicant	Not applicable	$CCT = 2856 \text{ K}$
III	Maximum light intensity at 10 m with I_A setting	The sample was mounted (with the support provided by the applicant) on the goniometer and powered with the constant current I_A measured with the multimeter provided by the applicant. The light intensity distribution at 10 m was measured and the maximum light intensity was determined	Not applicable	$I_{\max_A}[\text{cd}] = 86,0 \text{ cd}$ $-1,75^\circ \text{ H}; 0,20^\circ \text{ V}$
IV	Photographs	-	-	-

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Uncertainty Incertezza	
Photometric parameter Parametri fotometrici	Coefficient of retroreflection/Coefficiente areico di intensità luminosa = 3,3 %
Color coordinates Coordinate cromatiche	$x = 0,0007$ $y = 0,0009$
Sample mounting precision Precisione montaggio dispositivo	$\pm 0,5^\circ$
Statement Dichiarazione	<p>The measured value (y) and the associated expanded uncertainty (U) represent the interval ($y \pm U$) which contains the value of the measured quantity with a probability of approximately 95 % and a coverage factor $k = 2$.</p> <p>The values into the different annex have the maximum significant figures managed by the measurement software.</p> <p>Il valore misurato (y) e l'incertezza estesa associata (U) rappresentano l'intervallo ($y \pm U$) che contiene il valore della grandezza misurata con una probabilità di circa il 95 % e un fattore di copertura $k = 2$.</p> <p>I valori negli annessi sono riportati con il massimo numero di cifre significative gestite dal software della strumentazione.</p>


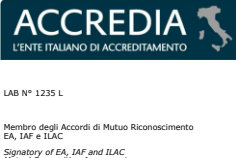
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ANNEX I		Maximum light intensity at 10 m with 4,000 A setting
Test method	CIE 70:1987	
Sample identification	602-QL24-S02 SC_04 (IEN 7121)	
Place of testing	Qualilab Srl - Via Trento, 87 - 25020 - Capriano del Colle (BS) - Italy	
Test date	16/05/2024	
Environmental conditions	Temperature 23 °C ± 3 °C	
Instruments	Temperature-humidity datalogger QL-IN-018 Temperature-humidity datalogger QL-IN-020 Photogoniometer QL-IN-002 Multimeter Keysight U1253B sn MY61060043 (Applicant's instrument)	
Test description	The sample was mounted (with the support provided by the applicant) on the goniometer and powered with the constant current of 4,000 A measured with the multimeter provided by the applicant. The light intensity distribution at 10 m was measured and the maximum light intensity was determined.	
Test requirements	Not applicable	
VERDICT / RESULT		

Program:	max E scan		
max E scan			
Name:	LARES 602-QL24 SC.04 (IEN 7121) max E 2024 4.0000 A		
Number:			
Report:			
Test no.:			
Lamp type:			
Lamp no:	SC.02		
Lamp flux:	0 lm	Operator:	Qualilab
Voltage:	12,7300 V	Date:	16/05/2024 09:13:34
Current:	4,00000 A	File:	LARES 602-QL24 SC.04 (IEN 7121) max E 2024 4.0000 A
Comment:	Keysight U1253B sn MY61060043		

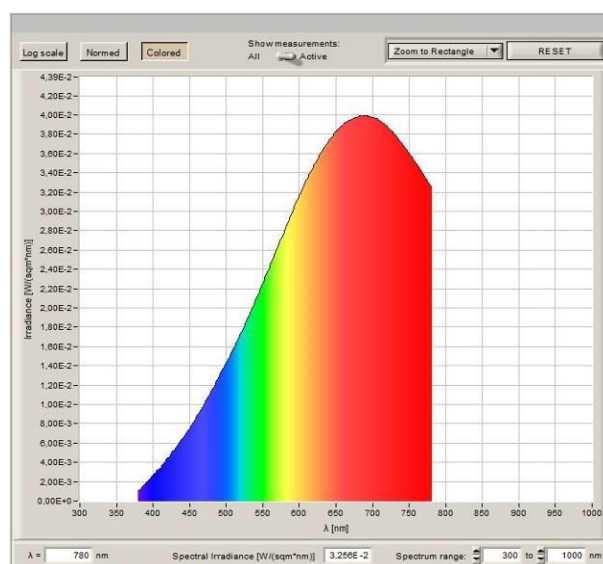
max E scan


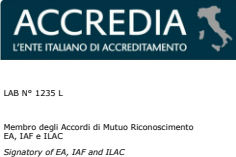
Function	Mean	Max	I [cd]	H [°]	V [°]	N.O.K.
2L to 2R - 2D to 2U (0.10)	0	0	77,1	-1,20	-0,25	

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ANNEX II		CCT measurement with I_A setting
Test method	CIE 15:2018	
Sample identification	602-QL24-S02 SC_04 (IEN 7121)	
Place of testing	Qualilab Srl - Via Trento, 87 - 25020 - Capriano del Colle (BS) - Italy	
Test date	16/05/2024	
Environmental conditions	Temperature 23 °C ± 3 °C	
Instruments	Temperature-humidity datalogger QL-IN-021 Spectrometer QL-IN-009 Multimeter Keysight U1253B sn MY61060043 (Applicant's instrument)	
Test description	The sample was mounted on the goniometer; correlated color temperature was measured in the optical axis at the current I_A declared and measured with the multimeter provided by the applicant. The sample was set into the pivot point of the goniometer and the optical axis was installed perpendicular to the spectrometer head.	
Test requirements	Not applicable	
VERDICT / RESULT		

CCT [K]		Chromaticity coordinates	
		x	y
2856		0,4497	0,4115




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ANNEX III		Maximum light intensity at 10 m with I_A setting
Test method	CIE 70:1987	
Sample identification	602-QL24-S02 SC_04 (IEN 7121)	
Place of testing	Qualilab Srl - Via Trento, 87 - 25020 - Capriano del Colle (BS) - Italy	
Test date	16/05/2024	
Environmental conditions	Temperature 23 °C \pm 3 °C	
Instruments	Temperature-humidity datalogger QL-IN-018 Temperature-humidity datalogger QL-IN-020 Photogoniometer QL-IN-002 Multimeter Keysight U1253B sn MY61060043 (Applicant's instrument)	
Test description	The sample was mounted (with the support provided by the applicant) on the goniometer and powered with the constant current I_A measured with the multimeter provided by the applicant. The light intensity distribution at 10 m was measured and the maximum light intensity was determined	
Test requirements	Not applicable	
Test measurement		
VERDICT / RESULT		

Program:	max E scan		
max E scan			
Name:	LARES 602-QL24 SC.04 (IEN 7121) max E 2024 4.0758 A		
Number:			
Report:			
Test no.:			
Lamp type:			
Lamp no:	SC.02		
Lamp flux:	0 lm	Operator:	Qualilab
Voltage:	12,9100 V	Date:	16/05/2024 09:42:06
Current:	4,07580 A	File:	LARES 602-QL24 SC.04 (IEN 7121) max E 2024 4.0758 A
Comment:	Keysight U1253B sn MY61060043		

max E scan

Function	Mean	Max	I [cd]	H [°]	V [°]	N.O.K.
2L to 2R - 2D to 2U (0.10)	0	0	86,0	-1,75	0,20	

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ANNEX IV

Photographs



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