




	Test report	602-QL24-R01 ver. 0	
	Applicant	LARES di Claudio Lerici Regione Viazzi, 6 15010 - Castelletto d'Erro (AL) - Italy	
	Type	Reflecting sheets O03, R03, W03	

TEST REPORT 602-QL24-R01 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	Reflecting sheets	
Type Modello	LARES O03 - Amber LARES W03 - White LARES R03 - Red	
Applicable Standard Norme applicabili		
	CIE 54.2:2001 - Retroreflection: definition and measurement, Addendum 149: UN Regulation No. 150 Amendment 5 "Uniform provisions concerning the approval of retro-reflective devices and markings for power driven vehicles and their trailers" up to Suppl. 05 to 00 dated: 24/12/23 (hereinafter called Regulation No. 150), FMVSS 108:2023 (hereinafter called FMVSS 108)	

The test results and observations indicated in this test report refer exclusively to the samples as received and tested. It is not permitted to transfer the results to other systems or configurations. The partial publication or duplication of this test report without a written consent of the test laboratory is not permitted. The test laboratory not assumes any liability to any party for any loss, expense or damage occasioned by the use of this report. Any use of the laboratories name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by the test laboratory. In case of a multilingual test report, the English version is the only official version.

I risultati e le osservazioni indicate in questo rapporto di prova sono riferiti esclusivamente ai campioni così come ricevuti e testati. Non è permesso utilizzare i risultati e le osservazioni di questo rapporto di prova per altri sistemi o configurazioni. Non è permessa la pubblicazione o la duplicazione parziale di questo rapporto di prova senza un consenso scritto da parte del laboratorio di prova. Il laboratorio di prova non si assume responsabilità nei confronti di terzi per danni o eventuali costi derivanti dall'utilizzo dei dati presenti in questo rapporto di prova. Ogni uso del nome del laboratorio di prova e dei suoi marchi per la vendita o per pubblicizzare il prodotto testato deve essere prima approvato in forma scritta dal laboratorio di prova. In caso di rapporto di prova con più lingue, la versione inglese è da considerarsi quella ufficiale.



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LAB N° 1235 L


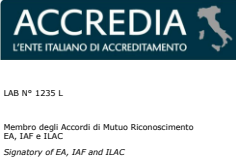
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EA, IAF e ILAC
Signatory of EA, IAF and ILAC
Mutual Recognition Agreements

Annex Annesso	Test Name Identificazione prova	Test Method Metodo di prova	Test Requirement Requisito di prova	Verdict / Result Esito / Risultato
I	LARES O03	CIL measurement in accordance to CIE 54.2:2001, Regulation No. 150 and FMVSS 108	Not applicable	See Annex I
II	LARES W03	CIL measurement in accordance to CIE 54.2:2001, Regulation No. 150 and FMVSS 108	Not applicable	See Annex II
III	LARES R03	CIL measurement in accordance to CIE 54.2:2001, Regulation No. 150 and FMVSS 108	Not applicable	See Annex III
IV	Photographs	-	-	-



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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	Type	Reflecting sheets O03, R03, W03	



ANNEX I		LARES O03 - Amber																																																					
Test method	CIE 54.2:2001, Regulation No. 150 and FMVSS108																																																						
Sample identification	LARES O03																																																						
Place of testing	Qualilab Srl - Via Trento, 87 - 25020 - Capriano del Colle (BS) - Italy																																																						
Test date	02/05/2024																																																						
Environmental conditions	Temperature 23 °C ± 3 °C																																																						
Instruments	Temperature-humidity datalogger QL-IN-018 Temperature-humidity datalogger QL-IN-020 Goniophotometer QL-IN-002 Retroreflection Unit QL-IN-008																																																						
Test description	The sample was prepared, stabilized and measured like defined in Regulation No. 150 and FMVSS 108																																																						
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ANNEX II		LARES W03 - White																																																					
Test method	CIE 54.2:2001, Regulation No. 150 and FMVSS108																																																						
Sample identification	LARES W03																																																						
Place of testing	Qualilab Srl - Via Trento, 87 - 25020 - Capriano del Colle (BS) - Italy																																																						
Test date	02/05/2024																																																						
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ANNEX III		LARES R03 - Red																																																					
Test method	CIE 54.2:2001, Regulation No. 150 and FMVSS 108																																																						
Sample identification	LARES R03																																																						
Place of testing	Qualilab Srl - Via Trento, 87 - 25020 - Capriano del Colle (BS) - Italy																																																						
Test date	02/05/2024																																																						
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LAB N° 1235 L

Membro degli Accordi di Mutuo Riconoscimento
EA, IAF e ILAC
Signatory of EA, IAF and ILAC
Mutual Recognition Agreements

ANNEX IV

Photographs

