



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

KONICA MINOLTA, INC.

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CALIBRATION

Valid To: February 29, 2024

Certificate Number: 3903.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations<sup>1,4</sup>:

I. Optical Qualities

Parameter/Equipment	Range	CMC <sup>2,3,5,6</sup>	Comments
Luminance – Measure and Measuring Equipment	(8 to 250) cd/m <sup>2</sup>	1.4 %	Luminance coefficient standards and illuminance standards with luminance meter master bodies
Coefficient	(0.1 to 0.25) sr <sup>-1</sup>	0.66 %	
Spectral Reflectance of Working White Plate –			White reflection standards with:
Model CM-3700A (di: 8°, de: 8° Optical Geometry) (80 to 100) %	360 nm (370 to 390) nm (400 to 470) nm (480 to 740) nm	0.84 % <i>R</i> 0.62 % <i>R</i> 0.56 % <i>R</i> 0.50 % <i>R</i>	CM-3700A white master body
Model CM-700d, CM-600d (di: 8°, de: 8° Optical Geometry) (80 to 100) %	(400 to 470) nm (480 to 700) nm	0.56 % <i>R</i> 0.50 % <i>R</i>	CM-700d white master body

Parameter/Equipment	Range	CMC <sup>2, 3, 5</sup>	Comments
Spectral Reflectance of Working White Plate – (cont)			White reflection standards with:
Model CM-2500c (45° a: 0° Optical Geometry) (80 to 100) %	360 nm (370 to 390) nm (400 to 740) nm	0.76 % <i>R</i> 0.71 % <i>R</i> 0.68 % <i>R</i>	CM-2500c white master body
Model CM-2600d, CM-2500d (di: 8°, de: 8° Optical Geometry) (80 to 100) %	360 nm (370 to 390) nm (400 to 470) nm (480 to 740) nm	0.85 % <i>R</i> 0.63 % <i>R</i> 0.58 % <i>R</i> 0.51 % <i>R</i>	CM-2600d white master body
Model CM-3600A, CM-3610A (di: 8°, de: 8° Optical Geometry) (80 to 100) %	360 nm (370 to 390) nm (400 to 470) nm (480 to 740) nm	0.85 % <i>R</i> 0.63 % <i>R</i> 0.56 % <i>R</i> 0.50 % <i>R</i>	CM-3600A white master body
Model CM-5 (di: 8°, de: 8° Optical Geometry) (80 to 100) %	360 nm (370 to 390) nm (400 to 470) nm (480 to 740) nm	0.84 % <i>R</i> 0.62 % <i>R</i> 0.56 % <i>R</i> 0.50 % <i>R</i>	CM-5 white master body
Model CM-25cG (45° c: 0° Optical Geometry) (80 to 100) %	360 nm (370 to 390) nm (400 to 740) nm	0.76 % <i>R</i> 0.71 % <i>R</i> 0.68 % <i>R</i>	CM-25cG white master body
Model CM-26d, CM-26dG, CM-25d, CM-23d (di: 8°, de: 8° Optical Geometry) (80 to 100) %	360 nm (370 to 390) nm (400 to 470) nm (480 to 740) nm	0.84 % <i>R</i> 0.62 % <i>R</i> 0.56 % <i>R</i> 0.50 % <i>R</i>	CM-26d white master body
Model CM-36d, CM-36dG, CM-36dGV (di: 8°, de: 8° Optical Geometry) (80 to 100) %	360 nm (370 to 390) nm (400 to 470) nm (480 to 740) nm	0.84 % <i>R</i> 0.62 % <i>R</i> 0.56 % <i>R</i> 0.50 % <i>R</i>	CM-36dG white master body
Spectral Reflectance of White Plate –			White reflection standards with:
Model CM-3700A (di: 8°, de: 8° Optical Geometry) (80 to 100) %	360 nm (370 to 390) nm (400 to 470) nm (480 to 740) nm	0.84 % <i>R</i> 0.62 % <i>R</i> 0.56 % <i>R</i> 0.50 % <i>R</i>	CM-3700A white master body
Model CM-700d, CM-600d (di: 8°, de: 8° Optical Geometry) (80 to 100) %	(400 to 470) nm (480 to 700) nm	0.57 % <i>R</i> 0.51 % <i>R</i>	CM-700d white master body

Parameter/Equipment	Range	CMC <sup>2, 3, 5</sup>	Comments
Spectral Reflectance of White Plate – (cont)			White reflection standards with:
Model CM-2500c (45° a: 0° Optical Geometry) (80 to 100) %	360 nm (370 to 390) nm (400 to 740) nm	0.78 % <i>R</i> 0.73 % <i>R</i> 0.69 % <i>R</i>	CM-2500c white master body
Model CM-2600d, CM-2500d (di: 8°, de: 8° Optical Geometry) (80 to 100) %	360 nm (370 to 390) nm (400 to 470) nm (480 to 740) nm	0.86 % <i>R</i> 0.64 % <i>R</i> 0.59 % <i>R</i> 0.53 % <i>R</i>	CM-2600d white master body
Model CM-3600A, CM-3610A (di: 8°, de: 8° Optical Geometry) (80 to 100) %	360 nm (370 to 390) nm (400 to 470) nm (480 to 740) nm	0.86 % <i>R</i> 0.65 % <i>R</i> 0.57 % <i>R</i> 0.51 % <i>R</i>	CM 3600A white master body
Model CM-5 (di: 8°, de: 8° Optical Geometry) (80 to 100) %	360 nm (370 to 390) nm (400 to 470) nm (480 to 740) nm	0.86 % <i>R</i> 0.64 % <i>R</i> 0.56 % <i>R</i> 0.50 % <i>R</i>	CM-5 white master body
Model CM-25cG (45° c: 0° Optical Geometry) (80 to 100) %	360 nm (370 to 390) nm (400 to 740) nm	0.76 % <i>R</i> 0.72 % <i>R</i> 0.69 % <i>R</i>	CM-25cG white master body
Model CM-26d, CM-26dG, CM-25d, CM-23d (di: 8°, de: 8° Optical Geometry) (80 to 100) %	360 nm (370 to 390) nm (400 to 470) nm (480 to 740) nm	0.85 % <i>R</i> 0.62 % <i>R</i> 0.56 % <i>R</i> 0.50 % <i>R</i>	CM-26d white master body
Model CM-36d, CM-36dG, CM-36dGV (di: 8°, de: 8° Optical Geometry) (80 to 100) %	360 nm (370 to 390) nm (400 to 470) nm (480 to 740) nm	0.85 % <i>R</i> 0.62 % <i>R</i> 0.56 % <i>R</i> 0.51 % <i>R</i>	CM-36dG white master body
Spectral Reflectance of –			Working white plate for:
Model CM-3700A (di: 8°, de: 8° Optical Geometry) (80 to 100) %	360nm (370 to 390) nm (400 to 470) nm (480 to 740) nm	0.85 % <i>R</i> 0.62 % <i>R</i> 0.56 % <i>R</i> 0.50 % <i>R</i>	Model CM-3700A
Model CM-700d, CM-600d (di: 8°, de: 8° Optical Geometry) (80 to 100) %	(400 to 470) nm (480 to 700) nm	0.57 % <i>R</i> 0.51 % <i>R</i>	Model CM-700d, CM-600d

Parameter/Equipment	Range	CMC <sup>2, 3, 5</sup>	Comments
Spectral Reflectance of – (cont)			Working white plate for:
Model CM-2500c (45° a: 0° Optical Geometry) (80 to 100) %	360 nm (370 to 390) nm (400 to 740) nm	0.79 % <i>R</i> 0.74 % <i>R</i> 0.70 % <i>R</i>	Model CM-2500c
Model CM-2600d, CM-2500d (di: 8°, de: 8° Optical Geometry) (80 to 100) %	360 nm (370 to 390) nm (400 to 470) nm (480 to 740) nm	0.87 % <i>R</i> 0.66 % <i>R</i> 0.61 % <i>R</i> 0.54 % <i>R</i>	Model CM-2600d, CM-2500d
Model CM-3600A, CM-3610A (di: 8°, de: 8° Optical Geometry) (80 to 100) %	360 nm (370 to 390) nm (400 to 470) nm (480 to 740) nm	0.87 % <i>R</i> 0.66 % <i>R</i> 0.57 % <i>R</i> 0.51 % <i>R</i>	Model CM-3600A, CM-3610A
Model CM-5 (di: 8°, de: 8° Optical Geometry) (80 to 100) %	360 nm (370 to 390) nm (400 to 470) nm (480 to 740) nm	0.87 % <i>R</i> 0.65 % <i>R</i> 0.56 % <i>R</i> 0.51 % <i>R</i>	Model CM-5
Model CM-25cG (45° c: 0° Optical Geometry) (80 to 100) %	360 nm (370 to 390) nm (400 to 740) nm	0.77 % <i>R</i> 0.72 % <i>R</i> 0.69 % <i>R</i>	Model CM-25cG
Model CM-26d, CM-26dG, CM-25d, CM-23d (di: 8°, de: 8° Optical Geometry) (80 to 100) %	360 nm (370 to 390) nm (400 to 470) nm (480 to 740) nm	0.85 % <i>R</i> 0.62 % <i>R</i> 0.57 % <i>R</i> 0.51 % <i>R</i>	Model CM-26d, CM-26dG, CM-25d, CM-23d
Model CM-36d, CM-36dG, CM-36dGV (di: 8°, de: 8° Optical Geometry) (80 to 100) %	360 nm (370 to 390) nm (400 to 470) nm (480 to 740) nm	0.85 % <i>R</i> 0.63 % <i>R</i> 0.57 % <i>R</i> 0.51 % <i>R</i>	Model CM-36d, CM-36dG, CM-36dGV
Gloss Value of Working Gloss Plate and Gloss Plate – 60°	(0 to 10) GU (10 to 20) GU (45 to 65) GU (90 to 98) GU	± 0.66 GU ± 0.88 GU ± 0.92 GU ± 0.86 GU	Gloss standards with gloss master bodies
Gloss Value of Glossmeter and Spectrophotometer with Gloss function – 60°	(0 to 10) GU (10 to 20) GU (45 to 65) GU (90 to 98) GU	± 0.66 GU ± 0.88 GU ± 0.96 GU ± 0.88 GU	Working gloss plates

<sup>1</sup> This laboratory offers commercial calibration services.

<sup>2</sup> Calibration and Measurement Capability Uncertainty (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. CMCs represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of  $k = 2$ . The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.

<sup>3</sup> In the statement of CMC,  $R$  is the reflectance.

<sup>4</sup> This scope meets A2LA's *P112 Flexible Scope Policy*.

<sup>5</sup> In the statement of CMC, percentages are to be read as percent of reading unless otherwise noted.

<sup>6</sup> The type of instrument or material being calibrated is defined by the parameter. This indicates the laboratory is capable of calibrating instruments that measure or generate the values in the ranges indicated for the listed measurement parameter.



# Accredited Laboratory

A2LA has accredited

**KONICA MINOLTA, INC.**

*Osaka, JAPAN*

for technical competence in the field of

**Calibration**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets R205 – Specific Requirements: Calibration Laboratory Accreditation Program. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 19<sup>th</sup> day of November 2021.

A blue ink signature of the Vice President of Accreditation Services.

Vice President, Accreditation Services  
For the Accreditation Council  
Certificate Number 3903.01  
Valid to February 29, 2024

*For the calibrations to which this accreditation applies, please refer to the laboratory's Calibration Scope of Accreditation.*