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Registration No. CNAS L4679

Accreditation Criteria: ISO/IEC 17025, requirements of EPA ENERGY STAR® Program and relevant requirements of CHINA NATIONAL ACCREDITATION SERVICE FOR CONFORMITY ASSESSMENT

CNAS

SCHEDULE OF ACCREDITATION CERTIFICATE

Date of Issue: 2017-10-25 Date of Expiry: 2022-08-11

SCHEDULE 6 ACCREDITED ENERGY STAR TESTING SCOPE

T.C	Test Object	Item/Parameter		Standard or Method	N-4-
Nº		№	Item/ Parameter	Standard of Method	Note
Energy	star				
		1	Luminous Efficacy	Electrical and Photometric Measurements of Solid-State Lighting Products IES LM-79-08 11	
1	LED Directional lamp	2	Light Output	Electrical and Photometric Measurements of Solid-State Lighting Products IES LM-79-08 9.1	Except for: Integrating sphere 2 π geometry test methods for total luminous flux measurem ent



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D C	Tost Object		Item/Parameter	Standard or Method	Note
№	Test Object	№	Item/ Parameter	Standard of Method	Note
	СНІ	NA NA	Elevated Temperature Light Output Ratio	ENERGY STAR Elevated Temperature Light Output Ratio Test Method (2015)	Except for: Integrating sphere 2 π geometry test methods for total luminous flux measurem ent
		4	Center Beam Intensity	Electrical and Photometric Measurements of Solid-State Lighting Products IES LM-79-08 10	
		5	Center Beam Intensity	Photometric Testing of Reflector - Type lamps IES LM-20-13	
		6	ССТ	Electrical and Photometric Measurements of Solid-State Lighting Products IES LM-79-08 12	
		7	ССТ	Colorimetry CIE Pub.No.15:2004	
		8	CRI	Electrical and Photometric Measurements of Solid-State Lighting Products IES LM-79-08 12	
		9	CRI	Method of Measuring and Specifying Color Rendering of Light Sources CIE Pub.No.13.3-1995	R. L.
		10	Color Maintenance	Electrical and Photometric Measurements of Solid-State Lighting Products IES LM-79-08 12	集
		11	Color Angular Uniformity	Electrical and Photometric Measurements of Solid-State Lighting Products IES LM-79-08 12	HUX
		12	Lumen Maintenance	IES Approved Method: Measuring Luminous Flux and Color Maintenance of LED Packages, Arrays and Modules IES LM-80-15	5川早



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20	Test Object	Item/Parameter			
№		№	Item/ Parameter	Standard or Method	Note
		13	Lumen Maintenance	Characterization of LED Light Engines and LED Lamps for Electrical and Photometric Properties as a Function of Temperature IES LM-82-12	
	0111	14	Lumen Maintenance	Energy Conservation Program: Test Procedures for Integrated Light- Emitting Diode Lamps US DOE 81 FR 43403	5
	CHI	NA NA 15	Power Factor DULE OF	American National Standard for Lighting Equipment -Harmonic Emission Limits—Related Power Quality Requirements ANSI C82.77- 10-2014	
	G	16	Frequency	ENERGY STAR® Program RequirementsProduct Specification for Lamps (Light Bulbs), Version 2.1 11.3	
		17	Start Time	ENERGY STAR Start Time Test Method (2015)	
		18	Transient Protection	IEEE Recommended Practice on Characterization of Surges in Low Voltage (1000V and Less) AC Power Circuits C62.41.2-2002 5	
		19	Standby Power Consumption	Household electrical appliances -Measurement of standby power IEC 62301:2011 5	
		1	Luminous Efficacy	Electrical and Photometric Measurements of Solid-State Lighting Products IES LM-79-08 11	
2	LED Omnidirectional and Decorative Lamps	2	Light Output	Electrical and Photometric Measurements of Solid-State Lighting Products IES LM-79-08 9.1	Except for: Integrating sphere 2 π geometry test methods for total luminous flux measurem ent
	<u>_</u>	3	Luminous Intensity Distribution	Electrical and Photometric Measurements of Solid-State Lighting Products IES LM-79-08 10	O.H.

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20	Test Object	Item/Parameter			
№		№	Item/ Parameter	Standard or Method	Note
		4	Center Beam Intensity	Electrical and Photometric Measurements of Solid-State Lighting Products IES LM-79-08 10	
		5	Center Beam Intensity	Photometric Testing of Reflector - Type lamps IES LM-20-13	
	CHI	NA NA	CCT SCHEDULE OF	Electrical and Photometric Measurements of Solid-State Lighting Products IES LM-79-08-12	
		7	ССТ	Colorimetry CIE Pub.No.15:2004	
		8	CRI	Electrical and Photometric Measurements of Solid-State Lighting Products IES LM-79-08 12	
		9	CRI	Method of Measuring and Specifying Color Rendering of Light Sources CIE Pub.No.13.3-1995	
		10	Color Maintenance	Electrical and Photometric Measurements of Solid-State Lighting Products IES LM-79-08 12	
		11	Lumen Maintenance,Lifetime	Characterization of LED Light Engines and LED Lamps for Electrical and Photometric Properties as a Function of Temperature IES LM-82-12	
		12	Lumen Maintenance	IES Approved Method: Measuring Luminous Flux and Color Maintenance of LED Packages, Arrays and Modules IES LM-80-15	
		13	Lumen Maintenance	Energy Conservation Program: Test Procedures for Integrated Light- Emitting Diode Lamps US DOE 81 FR 43403	
		14	Power Factor	American National Standard for Lighting Equipment -Harmonic Emission Limits—Related Power Quality Requirements ANSI C82.77-10-2014	家山山
		15	Frequency	ENERGY STAR® Program RequirementsProduct Specification for Lamps (Light Bulbs), Version 2.1 11.3	展
		16	Start Time	ENERGY STAR Start Time Test Method (2015)	ATT ATT
		17	Transient Protection	IEEE Recommended Practice on Characterization of Surges in Low Voltage (1000V and Less) AC Power Circuits C62.41.2-2002 5.3	7川早



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D.C.	Test Object		Item/Parameter		NI-4-
Nº		N₂	Item/ Parameter	Standard or Method	Note
		18	Standby Power Consumption	Household electrical appliances -Measurement of standby power IEC 62301:2011 5	
		1	Luminous Efficacy	Electrical and Photometric Measurements of Solid-State Lighting Products IES LM-79-08 11	
	CHI	NA NA	SCHEDULE OF	ACCREDITATION CERTIFICATE	Except for: Integrating sphere 2 π
	LED Directional	2	Light Output	Electrical and Photometric Measurements of Solid-State Lighting Products IES LM-79-08 9.1	geometry test methods for total luminous flux measurem ent
3	luminaires and subcomponents	3	ССТ	Electrical and Photometric Measurements of Solid-State Lighting Products IES LM-79-08 12	
		4	CCT	Colorimetry CIE Pub.No.15:2004	
		5	CRI	Electrical and Photometric Measurements of Solid-State Lighting Products IES LM-79-08 12	
		6	CRI	Method of Measuring and Specifying Color Rendering of Light Sources CIE Pub.No.13.3-1995	Ry W
		7	Color Angular Uniformity	Electrical and Photometric Measurements of Solid-State Lighting Products IES LM-79-08 12	朱
		8	Color Angular Uniformity	Guide to Spectroradiometric Measurements IES LM-58-13	HHA
		9	Color Angular Uniformity	Colorimetry CIE Pub.No.15:2004	₹川早



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The scope of the accreditation in Chinese remains the definitive version.

	№	Test Object	Item/Parameter			NI 4
•			№	Item/ Parameter	Standard or Method	Note
			10	Lumen Maintenance	IES Approved Method: Measuring Luminous Flux and Color Maintenance of LED Packages, Arrays and Modules IES LM-80-08	
			11	Lumen Maintenance	Lumen Maintenance Projection Method IES TM-21-11 + Addendum B	
		CHI	NA NA 12	Color Maintenance	IES Approved Method: Measuring Luminous Flux and Color Maintenance of LED Packages, Arrays and Modules IES LM-80-08	
			13	Color Maintenance	Measuring Luminous Flux and Color Maintenance of LED Lamps, Light Engines, and Luminaires IES LM-84-14	
			14	Source Start Time	ENERGY STAR Start Time Test Method (2015)	
			15	Power Factor	American National Standard for Lighting Equipment -Harmonic Emission Limits—Related Power Quality Requirements ANSI C82.77-10-2014 5	
			16	Transient Protection	IEEE Recommended Practice on Characterization of Surges in Low Voltage (1000V and Less) AC Power Circuits C62.41.2-2002	5
			17	Standby Power Consumption	Household electrical appliances -Measurement of standby power IEC 62301:2011 5	
			18	Frequency	ENERGY STAR® Program Requirements Product Specification for Luminaires (Light Fixtures) Version 2.0 11.6	
	4	LED Non-Directional luminaires and	1	Luminous Efficacy	Electrical and Photometric Measurements of Solid-State Lighting Products IES LM-79-08 11	
		subcomponents			10000000000000000000000000000000000000	W 2/

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	20	Test Object	Item/Parameter		Standard or Method	NI
	№		Nº	Item/ Parameter	Standard or Method	Note
		СНІ	NA NA	TIONAL ACCREDITATIONAL ACCREDITATIONAL ACCREDITATIONAL ACCREDITATION AND ACCREDITATION ACCREDITATION AND ACCREDITATION A	ON SERVICE FOR CONFORMITY ASSESSMENT Electrical and Photometric Measurements of Solid-State Lighting Products IES LM-79-08 9.1	Except for: Integrating sphere 2 π geometry test methods for total luminous flux measurem ent
			3	Light Output	Characterization of LED Light Engines and LED Lamps for Electrical and Photometric Properties as a Function of Temperature IES LM-82-12	
			4	ССТ	Electrical and Photometric Measurements of Solid-State Lighting Products IES LM-79-08 12	5
			5	ССТ	Characterization of LED Light Engines and LED Lamps for Electrical and Photometric Properties as a Function of Temperature IES LM-82-12	
			6	CCT	Colorimetry CIE Pub.No.15:2004	
			7	CRI	Characterization of LED Light Engines and LED Lamps for Electrical and Photometric Properties as a Function of Temperature IES LM-82-12	
			8	CRI	Method of Measuring and Specifying Color Rendering of Light Sources CIE Pub.No.13.3-1995	RY W
			9	Lumen Maintenance	IES Approved Method: Measuring Luminous Flux and Color Maintenance of LED Packages, Arrays and Modules IES LM-80-08	機
			10	Lumen Maintenance	Lumen Maintenance Projection Method IES TM-21-11+Addendum B	AK AK
9			11	Color Maintenance	IES Approved Method: Measuring Luminous Flux and Color Maintenance of LED Packages, Arrays and Modules IES LM-80-08	V 州早



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The scope of the accreditation in Chinese remains the definitive version.

№	Test Object	Item/Parameter		Carl L. M. d. J.	NI
		№	Item/ Parameter	Standard or Method	Note
		12	Color Maintenance	Measuring Luminous Flux and Color Maintenance of LED Lamps, Light Engines, and Luminaires IES LM-84-14	
		13	Source Start Time	ENERGY STAR Start Time Test Method (2015)	
	CHI	NA NA	TIONAL ACCREDITATI	American National Standard for Lighting Equipment -Harmonic	
		14	Power Factor DULE OF	Emission Limits—Related Power Quality Requirements ANSI C82.77-10-2014 5	
		15	Transient Protection	IEEE Recommended Practice on Characterization of Surges in Low Voltage (1000V and Less) AC Power Circuits C62.41.2-2002 11.4	
		16	Standby Power Consumption	Household electrical appliances -Measurement of standby power IEC 62301:2011 5	
		17	Frequency	ENERGY STAR® Program Requirements Product Specification for Luminaires (Light Fixtures) Version 2.0 11.6	

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