



# ACCREDITATION AREA

## TESTING LABORATORY (GOST ISO/IEC 17025-2019)

**Limited liability company "RUSSIAN LIGHTING RESEARCH INSTITUTE named after Sergey Vavilov"**

Name of the testing laboratory

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**POCC RU.0001.21MЛ65**

Number in the register of accredited bodies

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**1. 129626, Russian Federation, Moscow City, 1<sup>st</sup> Rizhsky sidestreet, house 6 block 4.**

addresses of places of operation activity

**2. 129626, Russian Federation, Moscow City, 1<sup>st</sup> Rizhsky sidestreet, house 6 block 2, rooms 601, 602, 603, 604, 605, 606, 608, 611, 701, 718.**

addresses of places of operation activity

For compliance with the requirements

GOST ISO/IEC 17025-2019 General requirements for the competence of testing and calibration laboratories. GOST ISO/IEC 17025-2019

the name and details of the interstate or national standard

129626, Russian Federation, Moscow City, 1<sup>st</sup> Rizshsky sidestreet, house 6 block 4.

addresses of places of operation activities

№ p/p	Documents establishing the rules and methods of research (tests) and measurements	Name of the object	OKPD 2 CODE	THE EAEU HS CODE	The defined characteristic (Indicator)	Definition range
1. Testing (research) methods, product measurements						
1.1.	GOST IEC 60598-1, section 12 "Endurance test and Thermal test" pp.12.4 - 12.7, Annex D, Annex E and Annex K; Measurement of parameters of physical factors; temperature measurement	Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment	27.40.2; 27.40.3	9405	Visual inspection	conformed/ not conformed -

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1.1.					surface temperature	from 0 to 260 (°C)
					Ambient temperature	- from 10 to 50 (°C)
					Rated test voltage	- from 10 to 500 (V)
					Availability of live parts	available/not available -
1.2.	GOST 34819, p. 6.3 " Luminous flux measurement" pp. 6.3.1 (luminous flux measurement in the photometric sphere); Optical tests; determination of lighting parameters	Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment	27.40.2; 27.40.3	9405	Luminous flux	- from 0 to 250000 (lm)

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1. Testing (research) methods, product measurements						
1.1.	GOST IEC 62471, section 5 «Measurement of parameters of lamps and lamp systems»; Automated methods; other automated methods	Incandescent or gas discharge lamps; arc lamps; LED lamps; Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment; Parts of lamps and lighting equipment;	27.40.1; 27.40.2; 27.40.3; 27.40.4	8541; 9405	Irradiance	compliance/not compliance -
					Radiance	conformed/not conformed -
1.2.	GOST IEC 62471, p.4.3.1 (Actinic UV hazard exposure limit for the skin and eye); Optical tests; other research methods (tests) to determine optical properties	Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment; Incandescent or gas discharge lamps; arc lamps; LED lamps; Parts of lamps and lighting equipment;	27.40.2; 27.40.3; 27.40.1; 27.40.4	9405; 8541	Spectrum distribution	- from 200 to 400 (nm)
					Exposure time	- from 8 to 8 (h)

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1.2.					Weighted spectral radiant exposure	The calculated indicator: acceptable/ dangerous upto 30 (J/m <sup>2</sup> )
1.3.	GOST IEC 62471, p.4.3.2 (Near-UV hazard exposure limit for eye); Optical tests; other research methods (tests) to determine optical properties	Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment; Incandescent or gas discharge lamps; arc lamps; LED lamps; Parts of lamps and lighting equipment;	27.40.2; 27.40.3; 27.40.1; 27.40.4	9405; 8541	Spectrum distribution	- from 315 to 400 (nm)
					Radiant exposure	acceptable/ dangerous upto 10000 (J/m <sup>2</sup> ) upto 10000 (s)
					Irradiance in the wavelength range (400- 315) nm (UV-A)	acceptable/ dangerous upto 1 (W/m <sup>2</sup> ) from 10000 to 30000 (s)
1.4.	GOST IEC 62471, p.4.3.3 (Retinal blue light hazard exposure limit); Optical tests; other research methods (tests) to determine optical properties	Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment; Incandescent or gas discharge lamps; arc lamps; LED lamps;	27.40.2; 27.40.3; 27.40.1; 27.40.4	9405; 8541	Spectrum distribution	- from 300 to 700 (nm)

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1.4.		Parts of lamps and lighting equipment;			Radiance	acceptable/ dangerous upto 100 (W/(sr*m <sup>2</sup> )) upto 10000 (s)
1.5.	GOST IEC 62471, p.4.3.4 (Retinal blue light hazard exposure limit - small source); Optical tests; other research methods (tests) to determine optical properties	Incandescent or gas discharge lamps; arc lamps; LED lamps; Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment; Parts of lamps and lighting equipment;	27.40.1; 27.40.2; 27.40.3; 27.40.4	8541; 9405	Spectrum distribution	- from 300 to 700 (nm)
					Solid angle	- upto 0,011 (rad)
					Irradiance	acceptable/dangerous upto 1 (W/m <sup>2</sup> )
					Exposure time	- equal or more than 100 (s)

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1.6.	GOST IEC 62471, p.4.3.5 (Retinal thermal hazard exposure limit); Optical tests; other research methods (tests) to determine optical properties	Incandescent or gas discharge lamps; arc lamps; LED lamps; Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment; Parts of lamps and lighting equipment;	27.40.1; 27.40.2; 27.40.3; 27.40.4	8541; 9405	Spectrum distribution	- from 380 to 1400 (nm)
					Exposure time	- from 10 to 10000000 (µs)
					Solid angle	- from 0,0017 to 0,1 (rad)
					Radiance	The calculated indicator: acceptable/dangerous -
1.7.	GOST IEC 62471, p.4.3.6 (Retinal thermal hazard exposure limit – weak visual stimulus); Optical tests; other research methods (tests) to determine optical properties	Incandescent or gas discharge lamps; arc lamps; LED lamps; Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment;	27.40.1; 27.40.2; 27.40.3; 27.40.4	8541; 9405	Spectrum distribution	- from 780 to 1400 (nm)

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1.7.		Parts of lamps and lighting equipment;			luminance of light stimuli  Solid angle  Exposure time  Radiance	- from 0 to 10 (cd/m <sup>2</sup> )  - from 0,011 to 0,1 (rad)  - equal or more than 10 (s)  The calculated indicator: acceptable/dangerous  -
1.8.	GOST IEC 62471, p.4.3.7 (Infrared radiation hazard exposure limits for the eye); Optical tests; other research methods (tests) to determine optical properties	Incandescent or gas discharge lamps; arc lamps; LED lamps; Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment;	27.40.1; 27.40.2; 27.40.3; 27.40.4	8541; 9405	Spectrum distribution	- from 780 to 3000 (nm)



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1.8.		Parts of lamps and lighting equipment;			Exposure time	-  from 1 to 1000 (s)
					Irradiance	acceptable/dangerous from 100 to 18000 (W/m <sup>2</sup> )
1.9.	GOST IEC 62471, p.4.3.8 (Thermal hazard exposure limit for the skin); Optical tests; other research methods (tests) to determine optical properties	Incandescent or gas discharge lamps; arc lamps; LED lamps; Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment; Parts of lamps and lighting equipment;	27.40.1; 27.40.2; 27.40.3; 27.40.4	8541; 9405	Spectrum distribution	conformed/ not conformed from 380 to 3000 (nm)
					Spectral radiant exposure	The calculated indicator: acceptable/ dangerous from 20000 to 35560 (J/m <sup>2</sup> ) from 1 to 10 (s)
1.10.	GOST IEC 62471, section 6 «Lamps classification»; Calculation method; calculation method	Incandescent or gas discharge lamps; arc lamps; LED lamps; Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment	27.40.1; 27.40.2; 27.40.3; 27.40.4	8541; 9405	Hazardous situations classification	The calculated indicator: acceptable/dangerous from harmless to risk group 3

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1.10.		Parts of lamps and lighting equipment;				
1.11.	CIE S 025:2015, p. 4.3.2; Electrophysical measurements; electrophysical measurements	Incandescent or gas discharge lamps; arc lamps; LED lamps; Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment; Parts of lamps and lighting equipment;	27.40.1; 27.40.2; 27.40.3; 27.40.4	8541; 8539; 9405	<p>Rated supply voltage</p> <p>Electrical power consumption</p> <p>Current consumption</p>	<p>- from 0 to 600 (V)</p> <p>- from 0 to 12000 (W)</p> <p>- from 0 to 20 (A)</p>
1.12.	CIE S 025:2015, p. 6.2, p. 6.3; Optical tests; determination of lighting parameters	Incandescent or gas discharge lamps; arc lamps; LED lamps; Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment; Parts of lamps and lighting equipment;	27.40.1; 27.40.2; 27.40.3; 27.40.4	8541; 8539; 9405	Luminous flux	- from 0 to 250000 (lm)

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1.13.	CIE S 025:2015, p. 6.4; Optical tests; determination of lighting parameters	Incandescent or gas discharge lamps; arc lamps; LED lamps; Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment; Parts of lamps and lighting equipment;	27.40.1; 27.40.2; 27.40.3; 27.40.4	8541; 9405	Luminous efficacy	The calculated indicator: -
1.14.	CIE S 025:2015, p. 6.5; Optical tests; determination of lighting parameters	Incandescent or gas discharge lamps; arc lamps; LED lamps; Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment; Parts of lamps and lighting equipment;	27.40.1; 27.40.2; 27.40.3; 27.40.4	8541; 9405	Luminous intensity distribution	- from 0 to 150000 (cd)

№ p/p	Documents establishing the rules and methods of research (tests) and measurements	Name of the object	OKPD 2 CODE	THE EAEU HS CODE	The defined characteristic (Indicator)	Definition range
1.15.	CIE S 025:2015, p.6.7; Optical tests; determination of lighting parameters	Incandescent or gas discharge lamps; arc lamps; LED lamps; Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment; Parts of lamps and lighting equipment;	27.40.1; 27.40.2; 27.40.3; 27.40.4	8541; 9405	Luminance	- from 0 to 100 000 (cd/m <sup>2</sup> )
1.16.	CIE S 025:2015, p.7; Optical tests; determination of lighting parameters	Incandescent or gas discharge lamps; arc lamps; LED lamps; Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment; Parts of lamps and lighting equipment;	27.40.1; 27.40.2; 27.40.3; 27.40.4	8541; 9405	Chromaticity coordinate X	- from 0,004 to 0,734
					Chromaticity coordinate Y	- from 0,005 to 0,834
					Correlated colour temperature (CCT)	- from 0 to 16000 (K)

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1.16.					Spectrum distribution	- from 380 to 780 (nm)
					Colour rendering index (CRI)	- from 0 to 100
					General color rendering index	- from partial from - 50 to 100 (relative unit)
1.17.	GOST 34819, p. 6.2 «Measurement of luminous intensity» pp. 6.2.4 (measurement of luminous intensity on the near-field goniophotometer); Optical tests; determination of lighting parameters	Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment (floodlights);	27.40.2; 27.40.3	9405	Luminous intensity	- from 1 to 150000 (cd)
1.18.	GOST 34819, p. 6.3 «Measurement of luminous flux on illuminance distribution on a conditional spherical surface» pp. 6.3.3; Optical tests;	Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment (floodlights);	27.40.2; 27.40.3	9405	Luminous flux	- from 0 to 250000 (lm)

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1.18.	determination of lighting parameters					
1.19.	GOST 34819, p. 6.4 "Determination of the luminous distribution class of luminaries»; Optical tests; determination of lighting parameters	Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment (floodlights);	27.40.2; 27.40.3	9405	Share of light flux to the lower hemisphere	- from 0 to 1 (relative unit)
Luminous distribution class					- from II, H, P to B, O (dimensionless value)	
Luminous flux					- from 0 to 250000 (lm)	
1.20.	GOST 34819, p. 6.5 «Determination of the type of luminous intensity distribution curve of luminaries in the meridional plane»; Optical tests; determination of lighting parameters	Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment (floodlights);	27.40.2; 27.40.3	9405	Light curve shape factor	conformed/ not conformed -

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1.20.					Angle of the observation direction  Type of luminous intensity distribution curve in the meridional plane  Luminous intensity	- from 0 to 90 (...°)  - from K, Γ, Д, Л to III, M, C (dimensionless value)  - from 0 to 150000 (cd)
1.21.	GOST 34819, p. 6.6 «Determination of the luminous intensity in the blind spot area for utilitarian outdoor lighting»; Optical tests; determination of lighting parameters	Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment (floodlights);	27.40.2; 27.40.3	9405	Luminous intensity  Angle of the observation direction	- from 1 to 150000 (cd)  - from 80 to 90 (...°)

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1.22.	GOST 34819, p. 6.7 «Determination of the angles of divergence of luminous flux of floodlights»; Optical tests; determination of lighting parameters	Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment (floodlights);	27.40.2; 27.40.3	9405	Luminous intensity	- from 1 to 150000 (cd)
					Angle of divergence	- from 0 to 180 (...°)
1.23.	GOST 34819, p. 6.8 «Determination of the shielding angle of luminaries» pp. 6.8.2; Optical tests; determination of lighting parameters	Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment (floodlights);	27.40.2; 27.40.3	9405	Shielding angle (conditional shielding angle)	- from 0 to 360 (...°)
1.24.	GOST 34819, p. 6.9 «Determination of the dimensional luminance and luminaire luminance uniformity » pp. 6.9.1 and 6.9.2; Optical tests; determination of lighting parameters	Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment (floodlights);	27.40.2; 27.40.3	9405	Dimensional luminance	- from 0 to 100000 (cd/m <sup>2</sup> )
					Luminance distribution uniformity	- equal or more than 1 (relative unit)



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1.25.	GOST 34819, p. 6.12 «Determination of the efficiency factor of luminaries»; Optical tests; determination of lighting parameters	Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment (floodlights);	27.40.2; 27.40.3	9405	Efficiency factor	- from 0 to 100 (%)
					Luminous flux	- from 0 to 250000 (lm)
1.26.	GOST 34819, p. 6.13 «Determination of the luminous efficacy of luminaries»; Optical tests; determination of lighting parameters	Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment (floodlights);	27.40.2; 27.40.3	9405	Luminous efficacy	- from 0 to 300 (lm/W)
					Electrical power consumption	- from 0 to 1500 (W)
					Luminous flux	- from 0 to 250000 (lm)

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1.27.	GOST 34819, p. 6.14 «Determination of the Correlated colour temperature of white LED luminaries» pp. 6.14.1; Optical tests; determination of lighting parameters	Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment (floodlights);	27.40.2; 27.40.3	9405	Chromaticity coordinate Y	- from 0,005 to 0,834
					Chromaticity coordinate X	- from 0,004 to 0,734
					Correlated colour temperature (CCT)	- from 0 to 16000 (K)
1.28.	GOST 34819, p. 6.15 «Determination of the general color rendering index of white LED luminaries»; Optical tests; determination of lighting parameters	Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment (floodlights);	27.40.2; 27.40.3	9405	General color rendering index	- from partial from -50 to 100 (relative unit)
					Colour rendering index (CRI)	- from 0 to 100 (relative unit)

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1.29.	GOST 34819, p. 6.16 «Determination of the reduction of the luminous flux of LED luminaries to the luminous flux stabilization moment»; Optical tests; determination of lighting parameters	Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment (floodlights);	27.40.2; 27.40.3	9405	Luminous flux stabilization	observed/ not observed -
					Luminous flux	- from 0 to 250000 (lm)
					Reduction of the luminous flux	- from 0 to 100 (%)
1.30.	GOST 34819, p. 6.18 «Measurement of luminous flux pulsation coefficient of luminaries» pp.6.18.1; Optical tests; determination of lighting parameters	Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment (floodlights);	27.40.2; 27.40.3	9405	Luminous flux pulsation coefficient	- from 0 to 100 (%)
					Luminous flux	- from 0 to 250000 (lm)

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1.31.	GOST P 55705, p. 7.4.2; Electrophysical measurements; Electrophysical measurements	Luminaries and electrical lighting equipment; Other luminaries and electrical lighting equipment (floodlights);	27.40.2; 27.40.3	8536; 8536	Power factor	- from 0 to 1
					Electric power consumption	- from 0 to 12000 (W)
					Current consumption	- from 0 to 20 (A)

General Director

Shahparunyants A.G.

position of the authorized person

signature of the authorized person

initials, surname of the authorized person