UNITED KINGDOM CONFORMITY ASSESSMENT

1 **UK TYPE EXAMINATION CERTIFICATE**

2 Equipment Intended for use in Potentially Explosive Atmospheres

UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

3 Certificate Number: **CSAE 24UKEX1065X** Issue: **0**

4 Product: **LED Explosion-proof Floodlight; Model number: BLX- * - 100-277 - * - * - * - X1 - * - * - * - * - *****

5 Manufacturer: **Red Sky Lighting LLC**

6 Address: Room 516, No.8 Hengfei Road, Nanjing Economic and Technological Development Zone,Nanjing 210046, Jiangsu, China

7 This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 CSA Group Testing UK Limited, Approved Body number 0518, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations. The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018 EN 60079-7:2015+A1:2018 EN 60079-18:2015+A1:2017 EN IEC 60079-31:2024

Except in respect of those requirements listed at Section 16 of the schedule to this certificate. The above standards may not appear on the UKAS Scope of Accreditation, but have been added through flexible scope of accreditation, which is available on request.

10 If the sign 'X' is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This UK TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of this product shall be in accordance with Regulation 41 and include the following:

Model BLX-7L/15L (Standard & Emergency)

II 2G
II 2D
Ex eb mb IIC T5 Gb
Ex tb IIIC T85°C Db
IP 66/67
-20 °C ≤ Tamb ≤ +55 °C (Standard)
0 °C ≤ Tamb ≤ +55 °C (Emergency)

Model BLX-20L/25L/30L (Standard)

II 2G
II 2D
Ex eb mb IIC T4 Gb
Ex tb IIIC T85°C Db
IP 66/67
-20 °C ≤ Tamb ≤ +55 °C (Standard)

Name: M Halliwell
Title: Senior Director of Operations

SCHEDULE

UK TYPE EXAMINATION CERTIFICATE **CSAE 24UKEX1065X**
Issue 0

13 **DESCRIPTION OF PRODUCT**

The BLX Series LED Explosion-proof Floodlight comprises an Aluminium alloy enclosure and a 5mm thickness glass window. The glass window is secured within the enclosure by the compression of the body cover. Internally, the following may be fitted: a LED PCB assembly, up to 118 LEDs, a wiring PCB assembly, LED drivers, terminal fixed brackets and internal connectors. LEDs are encapsulated with the optics part which is made of plastic, and the LED board is potted by compound and installed inside the light source housing.

The equipment utilises four M25 or M20 entries in the tank enclosure for the use of suitably approved cable entry devices or blanking elements with suitable IP code. The equipment may optionally be fitted with an aluminium shield, with a stainless protective Net.

The equipment can be mounted via hook, loop, chain mount or mounting bracket with different installation angles range through 0° to 90°.

The Ni-CD battery packs are used in model BLX-7L/15L-***-EM(Emergency), which is installed inside the tank body. The specification of battery packs is 9.6Vdc/6Ah.

Breakdown of the model number of BLX Series is as follows:

Type designation key	BLX- * - 100-277 - * - * - * - X1 - * - * - * - * - * - * 1 2 3 4 5 6 7 8 9 10 11 12
1st character: Designate basic luminaire model series	BLX
2nd character: Lumen Level	7L:7,000Lm 15L:15,000Lm 20L:20,000Lm 25L:25,000Lm 30L:30,000Lm
3rd character: Rated voltage	100 - 277 Vac
4th character: Designates LED Color temperature	57K:5700K 4K:4000K 3K:3000K
5th character: Designates internal code	Blank HAR XXX-custom. Each "X" stands any one from A to Z
6th character: Designates Optic Beam Angle	30:30° 60:60° 90:90° 120:120°
7th character: Rating	X1-Zone1,21
8th character: Designates Lens type:	CG: Clear Glass DG: Diffuse Glass * *Diffuse Glass only available for 7L and 15L

SCHEDULE

UK TYPE EXAMINATION CERTIFICATE **CSAE 24UKEX1065X**
Issue 0

Type designation key	BLX- * - 100-277 - * - * - * - * - X1 - * - * - * - * - * - * 1 2 3 4 5 6 7 8 9 10 11 12
9th character: Designates Color of Enclosure	GRY: Grey BLK: Black WHT: White BRZ: Bronze
10th character: Designates Mount type	SYK: Straight Yoke AYK: Angled Yoke
11th character: Battery	Blank: non-emergency (Standard) EM01: emergency 01 ** EM02: emergency 02 ** **EM only available for 7L and 15L
12th character: Cable entries	M20: 4 X M20 M25: 4 X M25

Rating and Temperature class are as follows:

Model	Voltage (Vac)	Power(W@220Vac)	Ambient temperature:	T-code
BLX-7L	100-277, 50Hz/60Hz	40W	-20 to +55°C	T5/T85°C
BLX-7L-***-EM	100-277, 50Hz/60Hz	40W	0°C to +55°C	T5/T85°C
BLX-15L	100-277, 50Hz/60Hz	90W	-20 to +55°C	T5/T85°C
BLX-15L-***-EM	100-277, 50Hz/60Hz	90W	0°C to +55°C	T5/T85°C
BLX-20L	100-277, 50Hz/60Hz	115W	-20 to +55°C	T4/T85°C
BLX-25L	100-277, 50Hz/60Hz	145W	-20 to +55°C	T4/T85°C
BLX-30L	100-277, 50Hz/60Hz	180W	-20 to +55°C	T4/T85°C

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Reports and Certificate History

Issue	Date	Report number	Comment
0	15 January 2025	R80215163A	The release of the prime certificate.

15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)

15.1 The equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. In addition, the equipment shall only be cleaned with a damp cloth.

15.2 All cable entry holes shall be fitted with either an UKEX certified cable gland or an UKEX certified stopping plug that is suitable for the application.

15.3 The input terminals shall only be fitted with wires that have cross sectional area falling within the following limitations:

- Type-221-482 series terminals: finely stranded and standard: min. 1 mm^2 to 4 mm^2 or AWG 18 to AWG 12.

- Type-221-483 series terminals: finely stranded and standard: min. 1 mm^2 to 4 mm^2 or AWG 18 to AWG 12.
- Type-221-485 series terminals: finely stranded and standard: min. 1 mm^2 to 4 mm^2 or AWG 18 to AWG 12.

15.4 The tighten torque of the screws used to fix the tank cover shall be equal to 6N.m.

15.5 The equipment shall be installed such that the supply cable is protected from mechanical damage. The cable shall not be subjected to tension or torque. If the cable is to be terminated within an explosive atmosphere then the free end shall be terminated in a suitably certified termination facility.

15.6 Clean the luminaire regularly to prevent dust accumulation.

15.7 The stop plug shall be used where a protection against rise of mechanical damage is provided.

15.8 When assembly, operation and maintenance, the operator should follow the requirements of EN 60079-14 Explosive atmospheres-part 14: Electrical installations design, selection and erection, beside of the manufacturer's operating instructions.

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS (REGULATIONS SCHEDULE 1)

In addition to the Essential Health and Safety Requirements covered by the standards listed in Section 9, all other requirements are demonstrated in the relevant reports.

17 PRODUCTION CONTROL

17.1 Holders of this certificate are required to comply with production control requirements defined in Schedule 3A, as applicable, and CSA Group Testing UK Regulations for Certificate Holders

17.2 The equipment shall be subjected to a visual inspection. No damage shall be evident, such as cracks in the compound, exposure of the encapsulated parts, flaking, inadmissible shrinkage, swelling, decomposition, failure of adhesion (separation of any adhered parts) or softening, as required by clause 9.1 of EN 60079-18:2015+A1:2017.

17.3 The LED board and Wire PCB of model BLX-7L/15L/7L-EM/15L-EM shall be subjected to a dielectric strength test with 500 Vac or 700 Vdc for least 60 s without dielectric breakdown occurring between input circuit and metallic enclosure, and between input circuit and the surface of the compound separately, as required by clause 9.2 of EN 60079-18:2015+A1:2017. Alternatively, the above LED board and Wire PCB shall be subjected to a batch test with 1.5 times the above test voltage in according to Annex C of EN 60079-18:2015+A1:2017.

17.4 The LED board and Wire PCB of model BLX-20L/25L/30L shall be subjected to a dielectric strength test with 1500 Vac or 2100 Vdc for least 60 s without dielectric breakdown occurring between input circuit and metallic enclosure, and between input circuit and the surface of the compound separately, as required by clause 9.2 of EN 60079-18:2015+A1:2017. Alternatively, the above LED board and Wire PCB shall be subjected to a batch test with 1.5 times the above test voltage in according to Annex C of EN 60079-18:2015+A1:2017.

17.5 The battery pack shall be subjected to a dielectric strength test at 500 Vac or 700 Vdc for at least 60 s without dielectric breakdown occurring between input circuit and metallic enclosure, and between input circuit and the surface of the compound separately, as required by clause 9.2 of EN 60079-

18:2015+A1:2017. Alternatively, the battery pack shall be subjected to a batch test with 1.5 times the above test voltage in according to Annex C of EN 60079-18:2015+A1:2017.

17.6 In according with EN 60079-7:2015+A1:2018 clause 7.1, the equipment shall be subjected to a dielectric strength test at 1554 Vac or 2200 Vdc for at least 60 s without dielectric breakdown occurring between input terminal of luminaire and metal enclosure. Alternatively, the test may be carried out at 1865 Vac or 2638 Vdc for at least 100 ms.

17.7 The equipment covered by this certificate incorporates previously certified devices which is listed in section 3.12 of the assessment report, it is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with these devices, and the manufacturer shall inform CSA of any modifications of the devices that may impinge upon the explosive safety design of their products.

17.8 The specific conditions of use detailed in the individual certificates of the terminal blocks, stopping plug and LED drives that forms part of the equipment shall be adhered to.

Certificate Annexe

Certificate Number: **CSAE 24UKEX1065X**

Product: **LED Explosion-proof Floodlight; Model number: BLX- * - 100-277 - * - * - * - X1 - * - * - * - * - * - ***

Manufacturer: **Red Sky Lighting LLC**

Issue 0

Drawing	Sheets	Rev.	Date (Stamp)	Title
RSL-BLX-15L-V01.01	1 of 1	A1	05 Nov 24	BLX-STD Assembly Drawing for BLX-7L/15L
RSL-BLX-30L-V01.01	1 of 1	A1	05 Nov 24	BLX-STD Assembly Drawing for BLX-20L/25L/30L
RSL-BLX-15L-EM-V01.01	1 of 1	A1	05 Nov 24	BLX-EM Assembly Drawing for BLX-7L-***-EM/15L-***-EM
RSL-BLX-***-V01.001	1 to 32	A1	05 Nov 24	Parts Drawing
RSL-BLX-EM-Circuit Diagram-V01	1 of 1	A0	05 Nov 24	Circuit Diagram for BLX-7L-***-EM/15L-***-EM
RSL-BLX-5050-5P14S-V01.1	1 of 1	A0	05 Nov 24	LED Schematic Diagram for BLX-7L/15L/7L-***-EM/15L-***-EM
RSL-BLX-5050-5P14S-V01	1 of 1	A0	05 Nov 24	LED PCB Layout for BLX-7L/15L/7L-***-EM/15L-***-EM
RSL-BLX-Circuit Diagram-V01	1 of 1	A0	05 Nov 24	Circuit Diagram for BLX-7L/15L
RSL-BLX-Circuit Diagram-V02	1 of 1	A0	05 Nov 24	Circuit Diagram for BLX-20L/25L/30L
RSL-BLX-5050-(4P2S+3P17S)2-V01.1	1 of 1	A0	05 Nov 24	LED Schematic Diagram for BLX-20L/25L/30L
RSL-BLX-5050-(4P2S+3P17S)2-V01	1 of 1	A0	05 Nov 24	LED PCB Layout for BLX-20L/25L/30L
RSL-BLX-LED-V01	1 of 1	A0	05 Nov 24	Wiring PCB Layout
RSL-BLX-30L-V01.14	1 of 1	A1	05 Nov 24	Nameplate