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Experience the Sky

Lighting equipment

# CoeLux<sup>®</sup> 45 HC

## CoeLux 45 HC\_P

## CoeLux 45 HC\_P\_M



User manual

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# 1 INTRODUCTION



## N.B.:

This manual is intended specifically for the technicians in charge of installation.

The operators appointed to assemble and install CoeLux products must read the entire contents of this manual carefully not only before assembling, installing and starting the unit, but also before carrying out any maintenance. This manual must always be used and kept safely for any future eventuality. It is forbidden to remove, tear or arbitrarily modify its parts. The illustrations and drawings are to be used only for general reference and do not necessarily provide every precise detail.

The images and technical specifications in the manual are not binding and may be changed without prior warning.

This manual consists of a total of 13 pages.

## 1.1 CONVENTIONAL SYMBOLS USED IN THE MANUAL



### WARNING!

This indicates that the operator must pay maximum attention to avoid causing injuries to the personnel and/or any damage, breaks or fires to the unit.



### CAUTION:

This indicates the operator must act cautiously to avoid disturbing personnel and/or possible damage or malfunctioning of the unit.



## N.B.:

This indicates special, technical guidelines or highlights important information.



This indicates a link to parts of the manual or its annexes, or the need to read other separate documentation.

Other additional symbols may also be used as required.

## 1.2 ABBREVIATIONS

Sect.	= section
Chap.	= chapter
Para.	= paragraph
Pag.	= page
Fig.	= figure
Tab.	= table

## 1.3 COMMERCIAL NAMES

CoeLux HE: this refers to the *High End* product family.

45 HC Systems: this refers to the CoeLux HE product sub-family, consisting of CoeLux<sup>®</sup> 45 HC, CoeLux 45 HC\_P and CoeLux 45 HC\_P\_M.

## 2 PRODUCT SPECIFICATIONS

CoeLux HE systems are built-in lighting equipment: partially hidden by the false ceiling, it is capable of artificially simulating natural light from the sky, sun and the moon (not all products), even in a completely closed space.

They consist of a LED light source, glass optical components and a CoeLux® plastic plate, all housed in a single, metal structure.



### CAUTION:


The 45 HC systems are designed exclusively for installation and use in internal rooms, which comply with the requisites listed in the table below. The use of the unit in any way other than what is described in this manual is prohibited and may cause not only risks to the health and safety of people, pets and/or goods, but also product malfunction. CoeLux cannot be held liable for damages to people, goods and animals arising from the incorrect installation and/or use or which differs from what is described in this manual.

If the rooms are subject to particularly difficult environmental conditions (a daily rise in temperature of over 15°C and with a maximum relative humidity of over 60%), additional support equipment will be required for internal air conditioning: in this case, please contact us.

### 2.1 PRODUCT TECHNICAL DATA, SPECIFICATIONS AND IDENTIFICATION

Specifications	Unit of measurement	Value	
MECHANICAL		CoeLux® 45 HC	CoeLux 45 HC_P CoeLux 45 HC_P_M
Product dimensions	mm in	3,761 x 2,274 x 968 148.1 x 89.5 x 38.1	3,698 x 2,274 x 949 145.6 x 89.5 x 37.4
Dimensions of the artificial window	mm in	1,724 x 870 67.9 x 34.3	
Product weight	kg lb	300 660	
ELECTRICAL			
Supply voltage (frequency)	V (Hz)	100 - 240 (50/60)	
Connections	-	Phase + Neutral + Earth	
Maximum (typical) absorbed power	W	300 (270)	
Insulation class	<i>IEC Definitions</i>	Class I	
Mark		CE, UL, FCC, CB	
ENVIRONMENTAL ( <u>equipment intended for indoor use</u> )			
Operating temperature	°C	25°C	
Maximum operating relative humidity	%	95 (non-condensative)	

Tab. 1 Product data and specifications

The 45 HC systems have an external, aluminium structure. Different versions are available according to the projector specifications and whether the moon module is or is not present (Tab. 3). They can also be installed on surfaces which are normally inflammable. 



For all technical lighting data, please refer to the product technical sheet. Contact Coelux S.r.l to receive it directly or to receive further product details and clarifications.

System Code:	74-00015-01	74-00074-01	74-00075-01	74-00076-01	74-00077-01
Product Name	Coelux® 45 HC	Coelux 45 HC_P CE	Coelux 45 HC_P_M CE	Coelux 45 HC_P UL	Coelux 45 HC_P_M UL
Marks	CE, UL, CB, KC, FCC	CE, CB	CE, CB	UL, FCC	UL, FCC
LED projector	74-00013-01	74-00062-01	74-00062-01	74-00063-01	74-00063-01
Projector cooling	Active	Passive	Passive	Passive	Passive
Moon Module	/	/	74-00064-01	/	74-00064-01

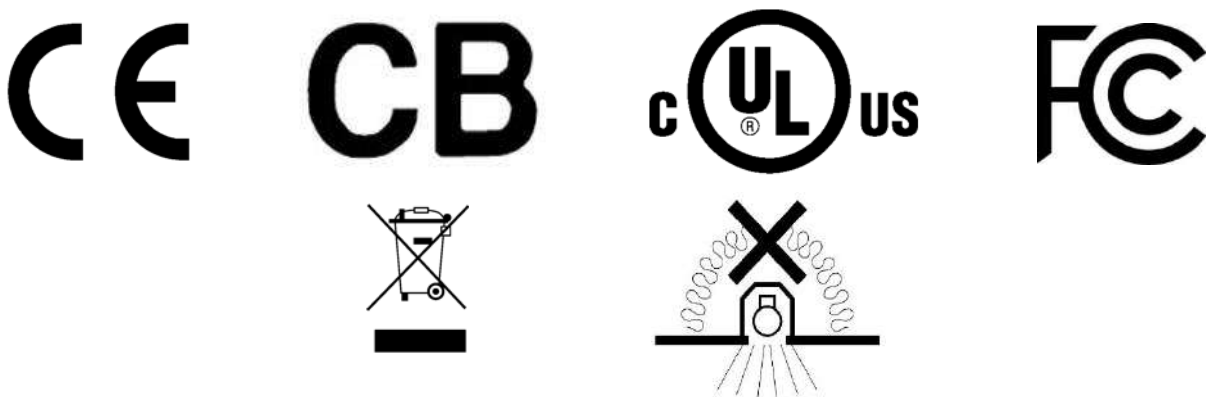
Tab. 2 Versions of 45 HC systems

The LED projector has a label with the Serial Number (SN) and Part Number (PN); please give Coelux S.r.l. these numbers for any query.



Fig. 1 Label with Part Number and Serial Number

The relevant standards have been applied to ensure the 45 HC systems comply with the essential requisites of the Directives 2014/35/EU, 2014/30/EU, 2011/65/EC and 2012/19/EU. The 45 HC systems also hold UL certification for Canada and the U.S.A. (File E476417) and are FCC certified (in accordance with CFR 47 part 15 – Subpart B- 15.107 and 15.109).



## 2.2 GENERAL SAFETY WARNINGS

### WARNING!



Read the entire manual, as it contains important information to install and operate the unit correctly.

To avoid accidents or injuries, follow the procedures described in this manual to install and use the unit. If you do not follow the instructions and warnings given in this manual, the guarantee will no longer be valid.

Furthermore, CoeLux S.r.l. will not accept any liability for any damages to objects, people and animals, which may arise from the failure to comply with the instructions and warnings given in this manual. CoeLux S.r.l. will not be held liable for the incorrect installation and/or assembly or which does not comply with what is described in the installation manual.

### WARNING!



All assembly, installation and testing operations must be carried out only by CoeLux qualified personnel. The operations to fasten the product to the existing structure must be carried out by qualified personnel (CoeLux does not deal with this qualification).

### N.B.:



Some details regarding how to switch on the product or how to operate it in general may depend on the choices made during assembly and/or installation.


- The product is not a toy and must be kept out of children's reach! Install the product where children are unable to reach it.
- Take care not to leave the packaging material unguarded, as it could be dangerous for children to play with it.
- The product can be installed and used only in closed, dry, internal rooms, which are not exposed to condensation and wet.

### CAUTION:



- Do not install the equipment in dirty (dusty) rooms, where gas, steam or dust is, or may be present! Risk of explosion!



- Do not cover the system with thermal insulation materials:  More specifically, in order to maintain the UL certification, the distance between each surface of the product and any insulating material present in the ceiling must exceed 76 mm (3 in).
- The product must not be subjected to extreme temperatures, strong vibrations or mechanical stress.
- If you think it is unsafe to operate the product, you must switch it off at the mains and prevent any incorrect actions. Ask expert personnel to supervise. You should consider it is impossible to operate when:
  - the product is visibly damaged;
  - the product does not work or does not work correctly (flickering light, release of smoke or bad smell, audible crackle, discolouring of the product or the surrounding surfaces);

- the product has been stored in unsuitable conditions;
  - the product appears worn or damaged after transport.
- If you have any further questions, please do not hesitate to contact CoeLux S.r.l (see last page in this manual).

### 2.2.1 OPERATIONS TO AVOID

- Carry out even partial modifications to the unit or its parts, unless expressly agreed with and authorised in writing by the manufacturer. Any unauthorised modifications made by the purchaser and/or installer and/or assembler and/or any other third parties to the unit will entail the loss of the CE mark and any other certifications. In this event, the guarantee and liabilities of CoeLux are no longer valid.
- Open the case before disconnecting from the mains supply.
- Carry out any improper, hazardous operations.
- Obstruct the vents or heat dissipation outlets.
- Use inflammable liquids near the equipment.
- Install or repair without using qualified personnel.
- Walk on the system, lean on it or hang on to it throughout the unit's working life.
- Repeatedly switch the unit on and off over a period of 30 seconds.

## 2.3 STORAGE

Store unassembled unit in a closed room, protected from the weather, with the following environmental characteristics:

- Temperature between -20 °C and +50 °C.
- Relative humidity less than 30% at 40 °C and 90% at 20 °C and, in any case, non-condensing.
- Atmosphere with clean air, without acids, corrosive gases, salts, etc.

The unit must be carefully protected against dust and direct sunlight (using an adequate protective cover) and protected against potential accidental collisions.

### 3 HOW TO OPERATE AND USE

The 45 HC systems are innovative lighting equipment. They use a LED source, an optical system and the CoeLux<sup>®</sup> panel to produce an artificial window to light the room naturally, as though it were a real sunlit window.

Read the technical sheet and information provided by CoeLux S.r.l. to exploit the product potential to its best.

#### WARNING!

You must not install light controlling equipment (dimmers, colour control, etc.).

If you look directly at the LED light source, you may be dazzled. To avoid being dazzled, take special care NOT to look inside the window when the unit is being switched on.

If installed correctly, 45 HC systems are not hazardous for the human eye and sight.

#### CAUTION:

The LED light source is classified as RG1 according to the EN 62471 standard due to the blue light it emits. However, no hazard signs are required according to the IEC/TR 62471-2 standard. To prevent any irritating reactions (dazzling, after image, etc.) which are, nevertheless, temporary and normal, we recommend you do not stare at the light source for a long time, and do not allow people with limited cognitive ability or mobility (children, elderly, disabled, bedridden, etc.) to do the same.

#### 3.1 LIGHT INTENSITY CONTROL (ONLY PROJECTORS 74-00062-01/74-00063-01)

Once connected and switched on, the projectors 74-00062-01 and 74-00063-01 are preset to emit 100% of the permitted light intensity. It is, however, possible to control the light intensity (permitted range 50% - 100%) of the 45 HC systems with these projectors using the DALI standard.



#### N.B.:

Only the intensity and not colour of the light can be changed in any way.



Two cables for the DALI signal can be connected via the terminals inside the special junction box (paragraph 6.2.15.1).

Some DALI parameters have been preset on the projectors:

To avoid any discomfort, CoeLux recommends setting the fade-time for the change in intensity to over 2 sec.

In the event of installations of HC and LC systems side by side in the same room, in order to obtain a similar light from the sky and beam projected to the ground we recommend you configure the intensity of switch on and/or of the same DALI scenario as follows: LC systems 70%, HC systems 85%.



### 3.1.1 THE MOON SCENARIO

If you have purchased and correctly installed module 74-00064-01 (paragraph 6.2.15 OPTION 2), you can obtain the moon scenario using the DALI standard. This scenario is preset inside the projector as the third scene (if the scenario numbering begins from 0, it can be found as scene 2) and it cannot be modified or reset to other scenes.

The table below shows the preset scenarios:

Scene	Level	Modifiable	Fading
1	50%	Yes	Yes
2	100%	Yes	Yes
3	MOON	No	No
4	Off	Yes	No

Tab. 3 Versions of 45 HC systems

### 3.1.2 CONTROLLER

A DALI controller is supplied with the moon module (74-00064-01) which, when connected to the system, allows you to control light intensity and the first four preset scenarios (scenes 1, 2, 3, 4 in the preceding table). To connect to the projector, follow the instructions given inside the controller packaging and those regarding the DALI connection in paragraph 6.2.15.1 in this manual.

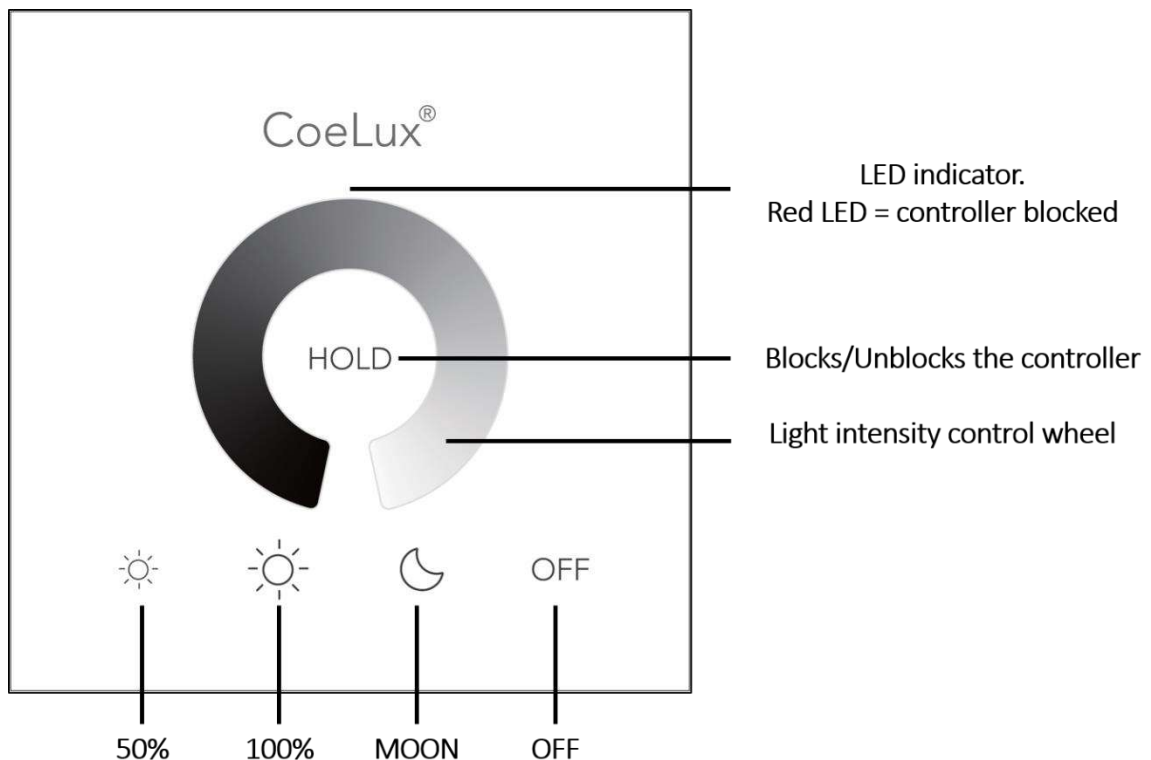


Fig. 2 Controller supplied with the product: front part

## 4 MAINTENANCE



### CAUTION !

- Before beginning any routine or extraordinary work on the unit, cut off the unit from the electric power mains.
- To access the highest parts of the unit, use appropriate means to perform the work. Do not climb on unit's parts since delicate and not designed to support people.
- Never leave tools, equipment or other improper materials on or inside the unit.

The manufacturer is not liable for inobservance of the listed recommendations. Warranty is void and null if are not carried out ordinary and extraordinary maintenance operations in compliance with prescriptions reported in the present guide. Moreover, the warranty is void and null for using of non-original spare parts or maintenance operations performed by unauthorized person of CoeLux s.r.l.

### 4.1 GENERAL INSTRUCTIONS

CoeLux<sup>®</sup> 45 HC is designed for continuous use for a long period of time and requires minimal supervision. In adequate operating conditions that follow environmental prescriptions of *table 1*, maintenance needs are minimal; ordinary maintenance by qualified personnel especially depend on the environmental conditions in the room where CoeLux<sup>®</sup> 45 HC is installed. Always contact CoeLux S.r.l. or an authorized installer for service and repairs.

### 4.2 ORDINARY AND SCHEDULED MAINTENANCE

#### 4.2.1 CLEANING

To minimize the need for cleaning, keep the room as clean as possible following standard procedures.

Vacuum dust in both the compartment where the product is housed (if accessible) and in the space where the light is projected. Routine cleaning is essential to maintain product performance. Limit temperature changes and rising humidity. Humidity condensation events, even after installation, null and void the warranty and facilitate the formation of dirt that cannot always be removed.

#### 4.2.2 OTHER WORK

Clean every month the CoeLux<sup>®</sup> panel (if necessary) and replace Silica-gel every 12 months (asking to CoeLux S.r.l for a new kit).

If operating or specific installation conditions are especially severe, we recommend more frequent controls. If large amounts of dirt or dust are found, continuously or even within limited periods of time, perform more frequent controls and ask to CoeLux for a supervision. In the event of high humidity or temperature changes, check product performance. In the event of visible water leaks, immediately cut off power, dry all accessible wet components and call for service by qualified personnel of CoeLux s.r.l.

### 4.2.3 REPLACEMENT PROCEDURE OF SILICA GEL

Open the door [41] that enable the access to exhausted silica gel. Open the package containing 18 new silica gel bags and put them into the compartment in place of the exhausted ones. Than close the compartment using the door [41].

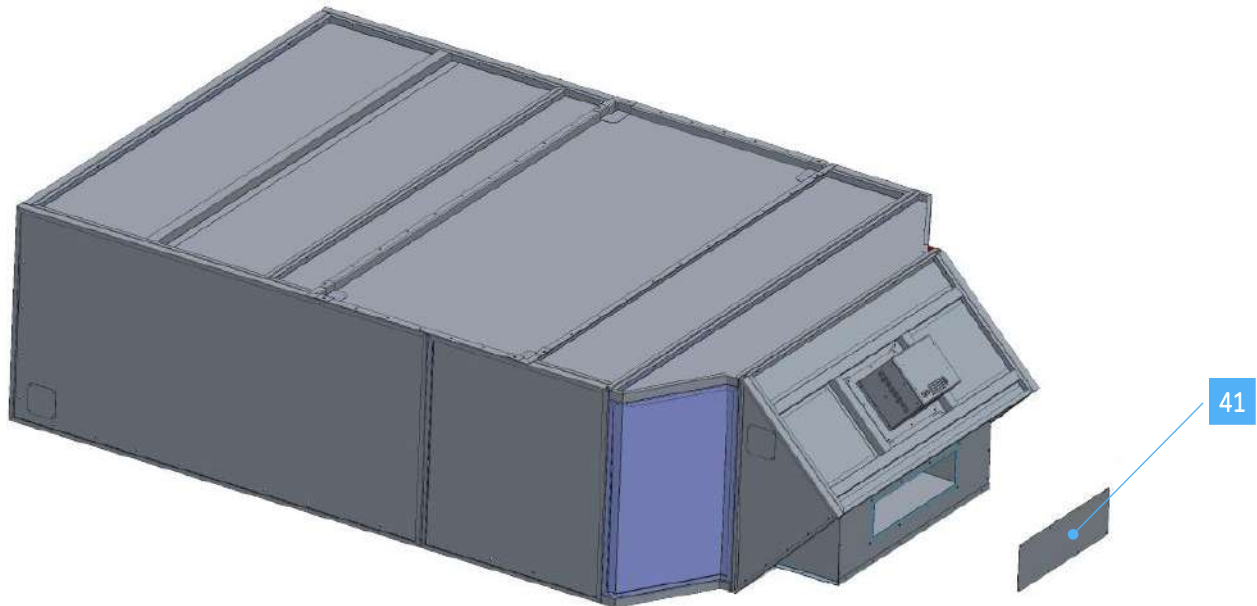


Fig. 3 Replacement of silica gel

## 4.3 EXTRAORDINARY MAINTENANCE



### WARNING:

Warranty is null and void in case of extraordinary maintenance performed without authorization of CoeLux S.r.l. or authorised technician.

In the event of product contamination:

- cut off device power;
- be careful that wires and electrical parts do not come into contact with water or detergent;
- follow the initial cleaning instructions.

If necessary:

- Clean fans.
- Clean the CoeLux<sup>®</sup> panel.
- Clean mirrors.
- Check hanging system.
- Remove internal dirt.
- Realign mirrors.
- Realign the structure.
- Repaint internal parts.
- Replace the LED projector.
- Replace the CoeLux<sup>®</sup> panel.

Restart the product proceeding as with initial assembly.

## 4.4 TROUBLESHOOTING

Symptom	Possible cause	Recommended action
The product does not emit light.	Mains supply fault.	Make sure the product is correctly powered.
	The room temperature is too high.	Let air circulate to cool down the light source. Do not obstruct the air circulation vents.
	For other cases.	Contact CoeLux S.r.l. for replacement.
The amount of light varies in time.	The room temperature is too high.	Make sure room temperature is within the admitted limits, otherwise contact CoeLux S.r.l.

Tab. 4 Troubleshooting

## 4.5 REINSTALLATION AND REUSE


To assess the possibility and convenience of reinstalling and reusing the product, contact CoeLux S.r.l.

## 4.6 DEMOLITION AND DISPOSAL

CoeLux 45HC meets directive 2012/19/UE regarding management and disposal of electrical and electronical equipment waste.

When the product has exhausted its life cycle, will not have to be disposed as domestic urban waste. Municipalities organize properly collection centers for electrical and electronic waste from whom you can dispose the product for free at the end of its life. If you purchase a new equivalent product you may decide to return to the vendor the usage unit; the vendor will provide the free withdrawal and disposal. To avoid dispersion of hazardous materials in the environment (that may cause negative effect to the same environment and to human health), we recommend respecting scrupulously all usage and disposal regulations of the product. Moreover, respecting these regulations you promote sustainable reuse of materials.



Symbol of the crossed trash  indicates that CoeLux 45 HC is recyclable and is subject to the different collection of electrical product waste.

Contact municipalities or local waste disposal service or distributor for information on treatment, recovery and recycling of this product.

All packaging is completely recyclable, and it is marked with recyclable symbol. Keep out of reach of children and animals packaging materials because potentially dangerous.

## 5 CONTACTS

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CoeLux<sup>®</sup> 45 HC is also covered by patents: visit the site [www.coelux.com](http://www.coelux.com) for more information.

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