NICOR®

NLC Commissioning

www.nicorlighting.com



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NICOR **NLC Overview**

NICOR's Network Lighting Controls (NLC) is a wireless network of components comprised of passive infrared (PIR) motion/daylight sensors, load controllers, power packs, wall controls, and system nodes. Each component utilizes Bluetooth Low Energy (BLE) Mesh to remotely control and operate luminaires separately or together as a zone. The NLC system can control up to 100 luminaires per zone across multiple rooms with NICOR's NLC app. Available to download on IOS and Andoid the NICOR NLC app provides total system control with energy usage statistics. The NLC system is certified UL Gold 1376 and acts as a localized network with encryption (128-bit) and protection from outside sources. Whether you're in the design or remodel phase, NICOR's Network Lighting Controls system is designed to fit any new or existing framework with easy scaling solutions. Take control of your lighting today.





NLC **Features and Benefits**

FEATURES

OCCUPANCY / VACANCY
Completely adjustable, dual-time delays with light level reduction can help save energy in unoccupied rooms/ zones. Settings can be adjusted from anywhere using the NLC App.

DIMMING
Full-range dimming with smooth transitions on select 0-10V NLC controlled luminaires and devices.

DAYLIGHT HARVESTING
Continuous dimming technology automatically adjusts light levels while factoring in the natural lighting in the space. This helps provide energy savings while reducing the need for artificial lighting during daylight hours.

THE NLC NETWORK
Utilizing a Bluetooth Low Energy (BLE) Mesh network, the NLC Network can connect to existing frameworks, devices, and building management systems.

GROUPS
Create groups of luminaires or devices that share similar settings to quickly configure rooms or spaces. Integrate groups within zones for easy scaling with no limit to the number of groups that can exist.

ZONES
NLC Luminaires can be grouped together in unlimited configurations within zones. The NLC Network can accommodate unlimited zones with the ability to scale up to provide coverage for entire sites. Each zone can control up to 100 devices.

TASK/TRIM TUNING
Light levels can be adjusted to match predetermined visual requirements of a given space. Each NLC enabled luminaire can be adjusted to limit its maximum lumen output to save on energy costs.

SCENES
Create preset lighting scenes within the NLC app to apply specific brightness and color temperatures stored in the NLC network. Scenes can be controlled with the app or NLC connected wall switches.

SCHEDULES
Set-up your lighting system according to your schedule. Create simple on/off automations at certain times of the day or week to eliminate unnecessary energy consumption.

TEMPLATES
Templates are reusable configurations that store sensor settings, scenes, and schedules, allowing you to quickly apply consistent lighting behavior across similar areas.

SECURITY
The NLC system meets UL's Gold (1376) level IoT security rating to protect each connected device on the network. The Bluetooth Low Energy (BLE) Mesh features 128-bit data encryption and acts as a localized network, eliminating the need for a hub, gateway, or internet connection.

BENEFITS

LIMITLESS CONFIGURATIONS
Each individual NLC luminaire or device acts independently from the next. This allows for a limitless combination of settings and features to meet any application requirement.

WIDE COMPATIBILITY
Whether you're in the design or remodel phase, NICOR's Network Lighting Controls system is designed to fit any new or existing framework with added security measures.

COMPLETE CONTROL
Control every zone, luminaire, wall switch, and sensor directly from your phone with NICOR's NLC app. Available on Android and iOS.

ENERGY SAVINGS
The NLC System uses advanced features such as Daylight Harvesting, Task/Trim Tuning, and Occupancy /Vacancy Detection settings to optimize lighting. This can help reduce energy consumption to ultimately save on energy costs.

Commissioning **Procedure**

1 Preparation Work
- Define Control Narrative and SOO
- Install Lights and Test Power

2 Set Lights, Groups and Scenes
- Create Zones/Generate QR Code
- Connect Lights to App
- Group Lights Together
- Create Scene Settings
- Add a Device Control

3 Set Sensor Lights
- Fix Sensor Parameters
- Configure Light Linkage Levels
- Set Auto Light Levels
- Create Templates

4 Project Delivery
- Share QR Code



Download the NICOR NLC App

GET IT ON Google Play

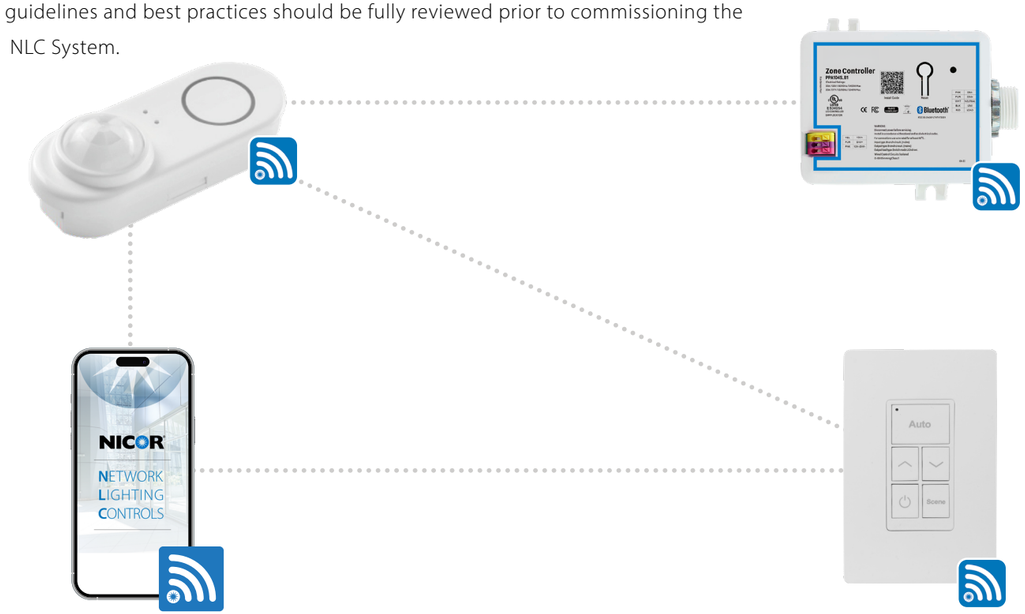
Download on the App Store

Scan QR code or click on buttons to download the NICOR NLC App. NICOR NLC App will need access to network and Bluetooth. Accept prompt to allow access to photos for QR codes to be automatically saved in your album.

Commissioning **Procedure**

SYSTEM PLANNING

System planning will ensure the user has the best benefits from the NICOR NLC. The guidelines and best practices should be fully reviewed prior to commissioning the NLC System.



HOW TO PUT IT ALL TOGETHER

Simple Application Rules

- Determine whether Room/Zone or individual luminaire Control (LLLC)
- Maximum of 100 network devices per group/zone
- Maximum of 75' distance between devices

1 Identify your Room Requirements

- Sequence of Operation
- Sensor Requirements
- User Interface Requirement
- Load Schedule

2 Select the Appropriate Controller

- Room/Zone Controller
- Additional ceiling sensors can be added for coverage
- LLLC - Select the NLC enabled luminaire for individual control

3 Select your Load Controller for plug loads

4 Select your User Interface(s)

- Use one or more of the following:
  - 3 button wireless, battery wall station - ON/OFF, Raise, Lower
  - 5 button wireless, battery wall station - AUTO, Raise, Lower, On/OFF, Scene

5 For energy monitoring, connect zones with the dongle

Commissioning **Procedure**

SYSTEM PREPARATION

Define a system Control Narrative with a Sequence of Operation (SOO) for each lighting controls project. Preparation should begin with a layout or floor plan of the entire space. The control narrative should include the following:

- Zones
- Group
- Luminaires

It is suggested to divide the site into zones according to their lighting functions. Make sure each zone contains no more than 100 lights and that no objects will block the wireless signal transmission, such as concrete walls or large metal objects. The size of a zone should not reach outside the limit of the wireless coverage. For interior application, keep node distance less than 100ft and the zone diameter less than 150ft.

EXAMPLE OF A CONTROL NARRATIVE

Space Type	Daylight Sensor	Manual Switch	Occupancy Sensor	Auto Schedule
Conference	X	X	X	
Equipment Room	X		X	
Office - Open	X		X	X
Office - Private	X	X	X	
Restrooms			X	

EXAMPLE OF A SEQUENCE OF OPERATION

Area: Open Office

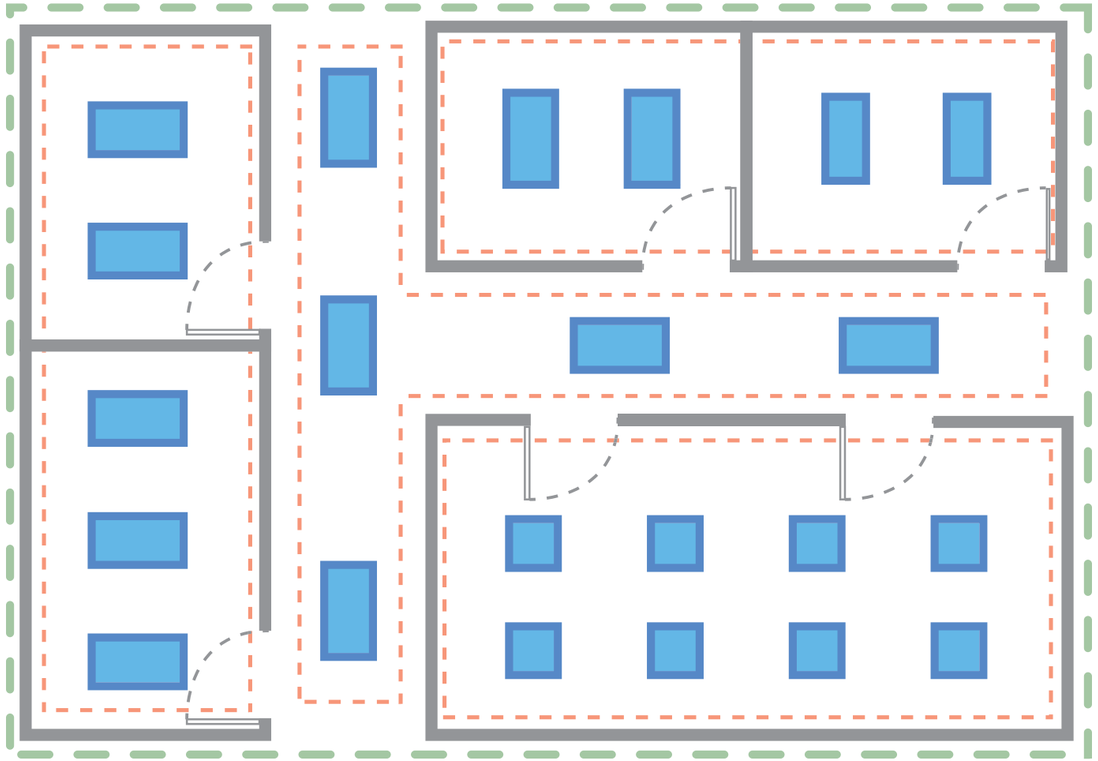
Lighting and Controls	Lights	Zones (A) - (D)	Fully dimmable lights controlled in this area
	Occupancy Zones	Zones (A) - (D)	Lights to dim 50% after 15 minutes and turn off 5 minutes later
	Daylight Zones	Zones (A) - (B)	Daylight rows 1 and 3 will dim independently; Lights will automatically adjust to daylight, maintaining recommended 30FC on task surfaces
	Manual Switch	Zones (A), (B), (C), (D)	User can select scenes, turn lights ON/OFF, or dim lights in each independent zone

Commissioning **Procedure**

SYSTEM INSTALLATION

An installation layout presents a clear map of where NLC components will be placed into the physical space of the room or floor. This also allows an easy identification of groups within a zone, scene areas, and wall switches. Design an installation layout by dividing the floor plan into groups according to the room's operational needs.

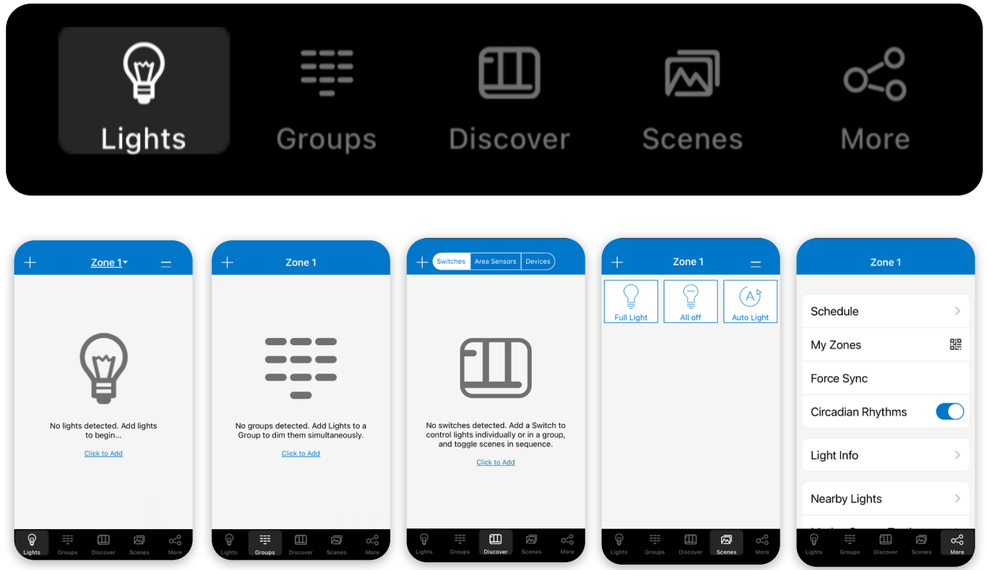
EXAMPLE OF AN INSTALLATION LAYOUT



App **Navigation**

APP PAGES

NICOR NLC app has five (5) tab pages you can switch between that gives you better control on your lights. They can be found on the bottom menu bar of the screen. Below is a brief description of each tab pages of the app.



1. **"Lights"** shows all connected lights to the app. Allows user to view and control individual lights.
2. **"Groups"** allows user to create and manage groups.
3. **"Discover"** displays all switches, area sensors, and devices connected to the app. Allows users to view / edit. Contains three pages: "Switches", "Area Sensors, "Devices."
4. **"Scenes"** allows user to create and manage scenes.
5. **"More"** allows user to view Schedules, Zones, Light Info, and other additional settings.

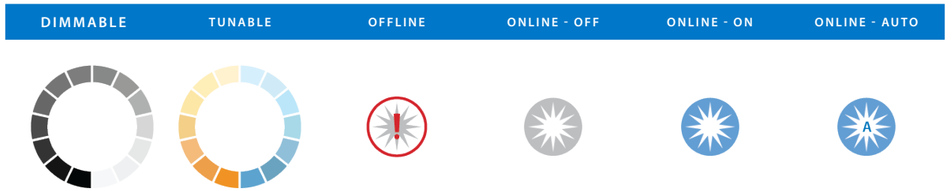
Navigation for each pages will be explained in their corresponding sections of the guide.

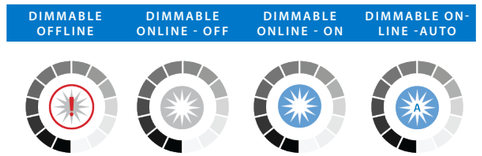
App **Navigation**

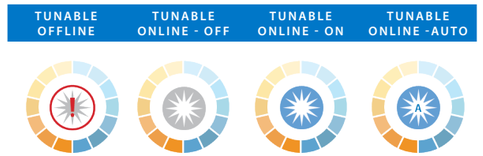
LIGHT ICONS

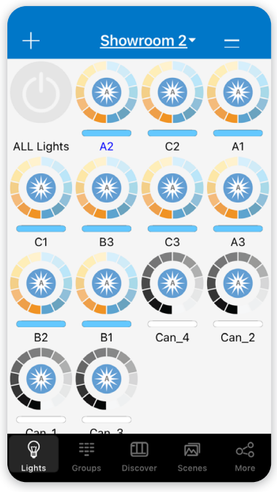
Lights connected to the app will be listed on the **Lights** page.

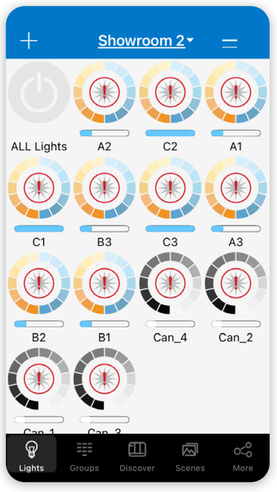
Refer to the icons below to check the status of each individual light.











App **Navigation**

MORE MENU

Schedule — Set a schedule for individual lights, groups and/or scenes

My Zones — Create, edit and delete zones. Generate and share QR codes

Force Sync — Sync data and settings across devices

Circadian Rhythms — Enable or disable circadian lighting

Light Info — Check info on all connected lights, groups and scenes in a zone

Nearby Lights — See a list of all online lights nearby

Motion Sensor Testing — Test settings for motion sensors

Auto Calibration — Auto calibrate brightness and temperature of lighting groups

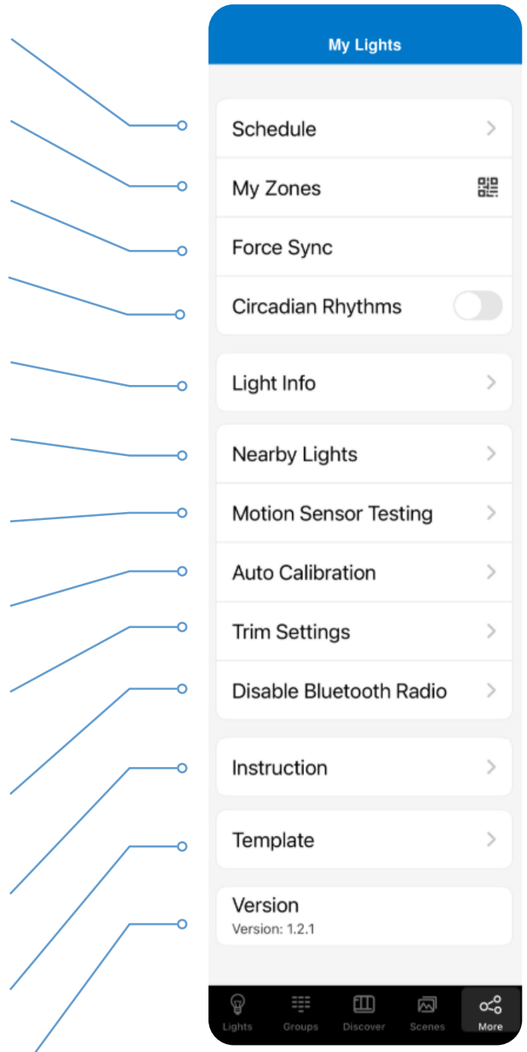
Trim Settings — Adjust trim settings of lights or groups

Disable Bluetooth Radio — Disables all bluetooth connections to the app for quick control transfer

Instruction — Quick link to the app commissioning guide for instructions

Template — Templates are set configurations that enable you to quickly commission groups.

Version — Displays current app version



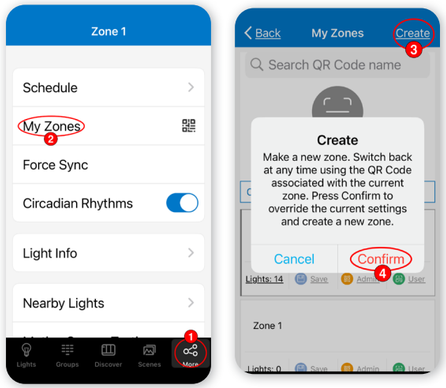
Zones

CREATING, RENAMING, DELETING

A zone will automatically be created named "My Lights" upon first opening the app. A zone can control groups of lights in a huge area. Each zone is assigned a unique QR code for easy access to light controls between different users. If you allowed access to your phone's photos, QR codes for both the admin and user will automatically be saved in your albums.

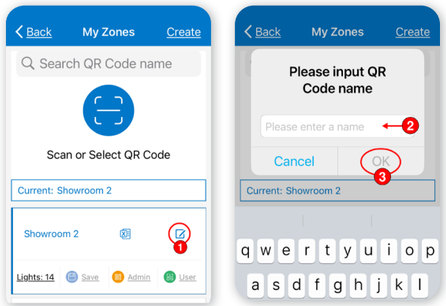
Creating Zones / Generating a QR Code

1. Press "**More**" located on the lower right menu bar.
2. Press "**My Zones**".
3. Press "**Create**" on the top-right corner of the screen.
4. Press "**Confirm**".
5. Type in a name for the Zone/QR Code and then press "**OK**".
6. Switch between zones by tapping on them.



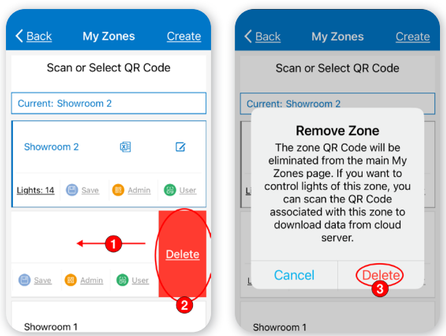
Renaming Zones

1. On the My Zones page, press the edit button located to the right of the zone name.
2. Enter preferred zone name as prompted.
3. Press "**OK**" to save.



Deleting Zones

1. Choose which zone to delete and slide finger to the left.
2. Press the red "**Delete**" button that appears.
3. Press "**delete**" to confirm.



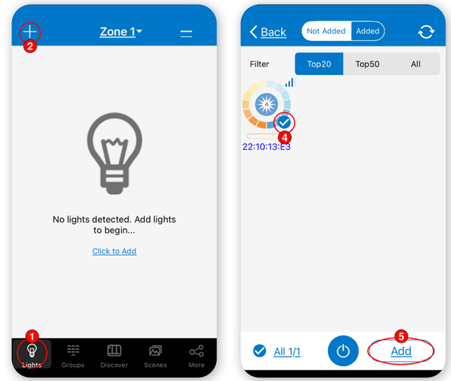
Lights

CONNECTING, DIMMING, TUNING

The Lights page will be the first page you'll see whenever you open the app. It is the main page for controlling individual lights. Add lights per zone and do not turn on more than 100 lights at the same time. To prevent wireless communication jamming, turn off lights that are not in the current zone.

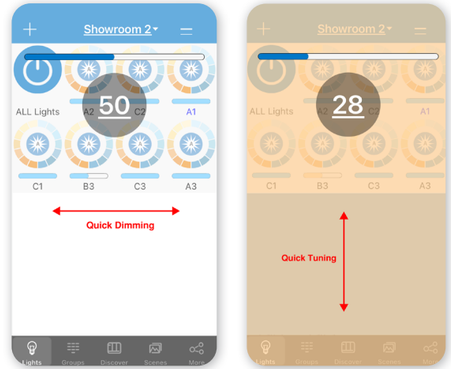
Connected Lights to App

1. Switch to the "**Lights**" page of the app.
2. Press the "**+**" button on the top left corner.
3. App will scan for applicable lights that can be added to the zone. Locate the lights by pressing the icons to turn it ON/OFF.
4. Select the lights you want to add by pressing the check mark located on the bottom right corner of the icons.
5. Press "**Add**" to add all the selected lights into the zone.
6. Confirm by tapping the "**Add**" button again. Light will blink to indicate a successful connection.
7. Press the "**Back**" Button to return to the Lights page.
8. Check and confirm all lights have been added and successfully connected with the app.



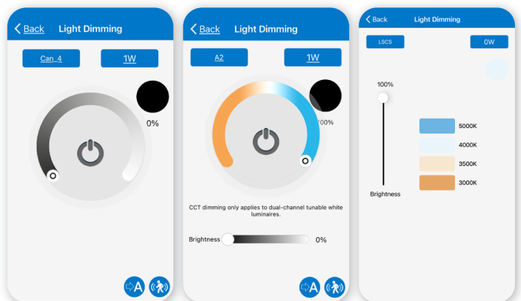
Quick Dimming and Tuning

1. Choose which light to change the dimming or tuning levels.
2. Lightly tap the light icon and quickly slide finger **left or right** to adjust brightness.
3. Lightly tap the light icon and quickly slide finger **up or down** to change the color temperature.



Accessing Light Dimming Settings

1. Select a light. Press and hold icon to access the Light Dimming settings.
2. The Light Dimming settings page will vary according to the light.
3. Set dimming and tuning according to preferences. Press the "**Back**" button to save settings.



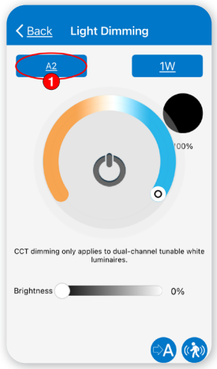
Dimmable Light | Tunable, Dimmable Light | Selectable, Dimmable Light

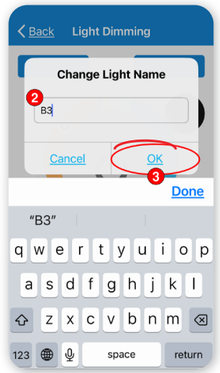
Lights

RENAMING, DELETING, SENSOR SETTINGS

Renaming Lights

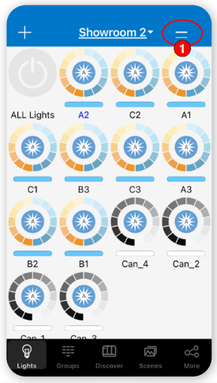
1. On the Lights Dimming page, press the light name located on the upper left of the dimming/tuning slider.
2. Enter light name as prompted.
3. Press "**OK**" to save.

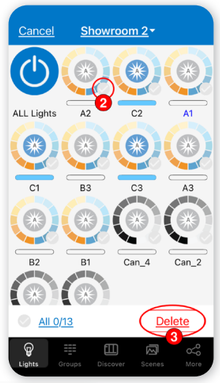




Deleting Lights

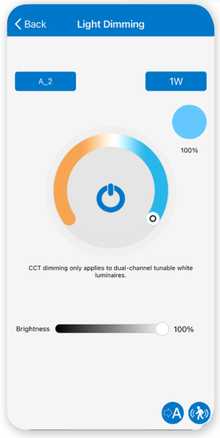
1. Press the "-" button on the top right corner of the Lights page.
2. Select the lights you want to delete.
3. Press "**delete**" to confirm.

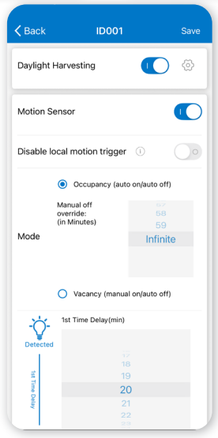


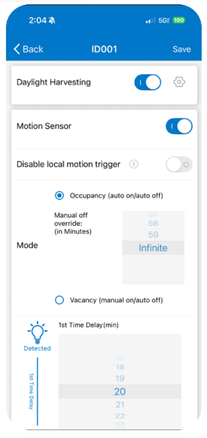


Sensor Settings

1. On the Light Dimming settings, press the "**Sensor Settings**" icon located on the lower right of the screen.
2. Enable or disable motion sensors and set parameters according to preferences.
3. Press the "**Save**" button on the top right corner to save sensor settings.







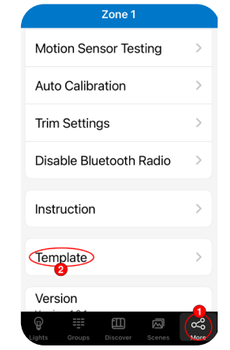
Templates

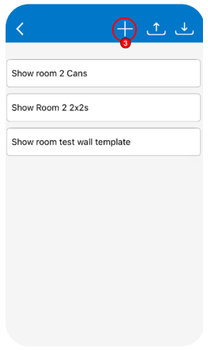
CREATING, DELETING

Templates are sets of reusable configurations that store sensor settings, scenes, and schedules for a space. They are saved on your mobile device, can be shared, and can be applied to a group to quickly configure all member lights at once. Use templates to quickly apply consistent lighting behavior across similar areas and streamline the commissioning process.

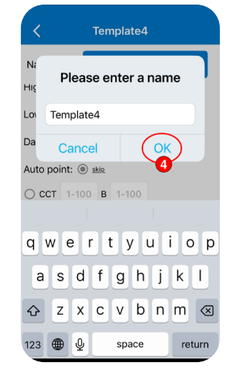
Templates are only available on NICOR NLC iOS app at this time.

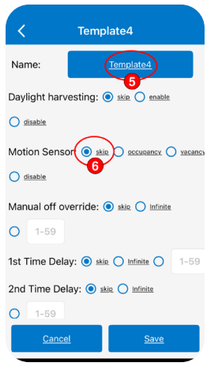
1. Press **"More"** located on the lower right menu bar.
2. Click **"templates"**
3. Press "+" to add a new template.



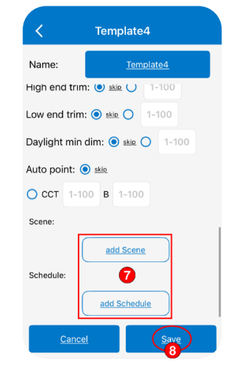


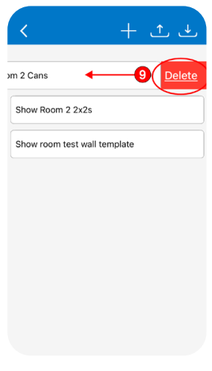
4. Enter a name for the template and press **"OK".**
5. Template names can be edited by clicking on the current name.
6. Select the desired settings from the available options. Selecting "Skip" will leave the settings unchanged.





7. Scenes and Schedules can be added to a template by selecting "add Scene" or "add Schedule".
8. Click **"Save"** when finished.
9. Templates can be deleted from the template list by swiping left on a template and selecting "Delete".



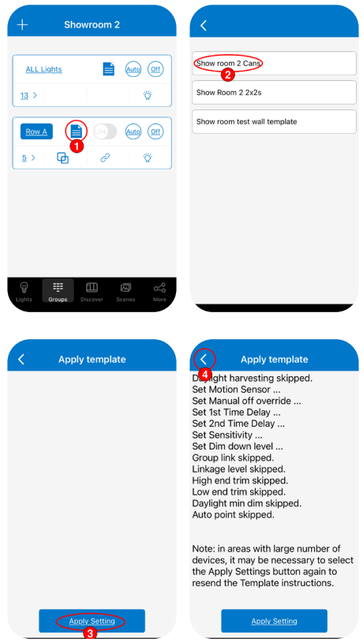


Templates

APPLYING, EXPORTING, IMPORTING

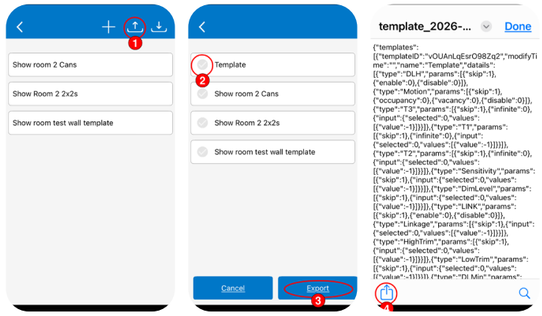
Applying Templates

1. In your "Groups" page, a template icon can be found next to each group. Select this to open available templates.
2. Select a template from the Template List.
3. Select "Apply Setting".
4. After settings have been applied or skipped, press the back arrow "<" to return to previous screen.



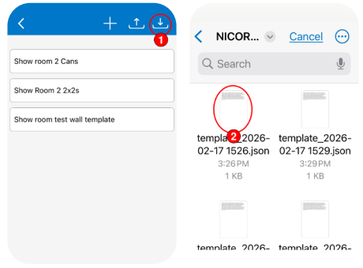
Export Templates

1. Press the export icon and then select all templates to be exported.
2. Pressing "Export" will generate a .JSON file.
3. This file can be shared with other users (iOS only) or saved locally on your device.



Import Templates

1. Press the import icon and then select a .JSON template file from your save location to be imported.
2. A message will pop-up if the template was successfully imported. The imported template will now be available on your template list.



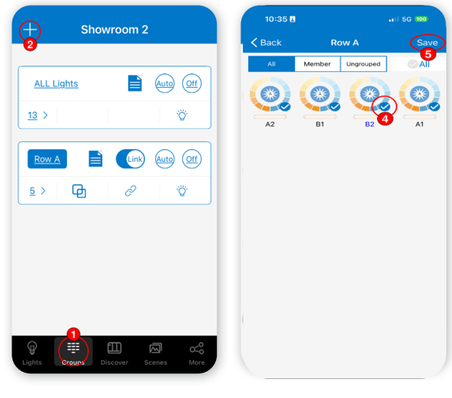
Groups

CREATING, RENAMING, DELETING

Groups simplify control by grouping lights in a small area together. There will be a default group named "All Lights" which gives user control over all lights in the zone.

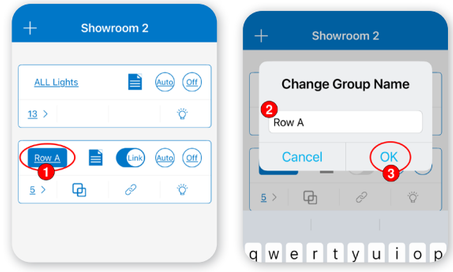
Creating Groups

1. Switch to the "**Groups**" page screen of the app.
2. Press the "+" button on the top left corner.
3. Input the group name as prompted then press "**OK**".
4. Select the lights you want to add in the group.
5. Press "**Save**" to save group settings.



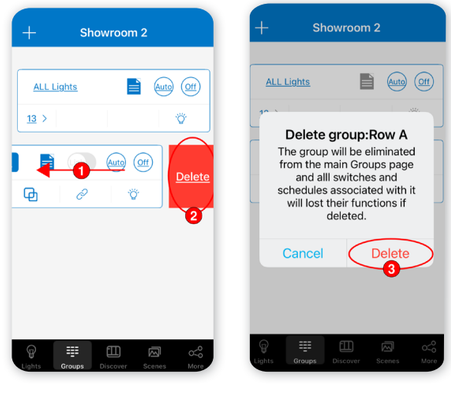
Renaming Groups

1. Tap the group you wish to rename.
2. Enter new group name as prompted
3. Press "**OK**" to confirm.



Deleting Groups

1. Choose which group to delete and swipe finger to the left.
2. Press the red "**Delete**" button that appears.
3. Press "**delete**" to confirm.

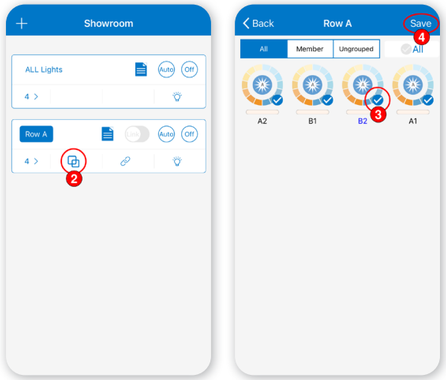


Groups

ADDING/REMOVING, LINKAGE, DIMMING AND WATTAGE

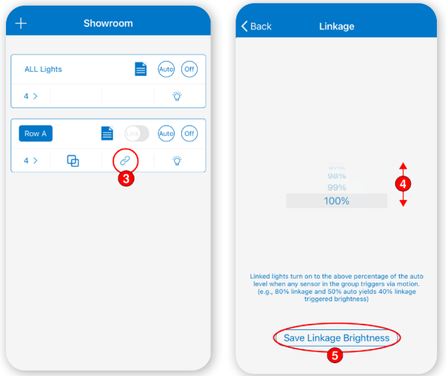
Adding/Removing Lights

1. Choose which group to add/remove lights.
2. Tap "**Members**" to see all current lights in the group.
3. Select which lights you want to add/remove.
4. Press "**Save**" to confirm changes.



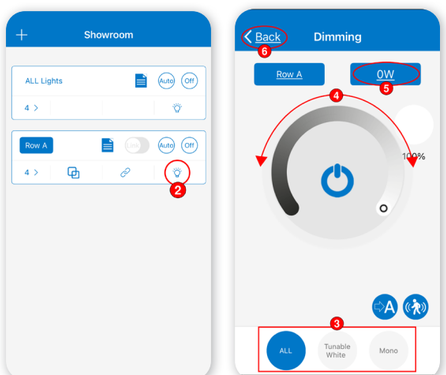
Change Group Linkage Levels

1. If a sensor detects motion it turns on to the set occupied brightness level. All other lights in the group turn on to the linkage brightness percent of the occupied brightness level.
2. Choose which group to change linkage settings.
3. Tap "**Linkage**" to access the group linkage controls.
4. Set linkage brightness level according to preference.
5. Press "**Save Linkage Brightness**" to confirm changes.



Change Group Dimming and Wattage Levels

1. Choose which group to change dimming settings.
2. Tap "**Dimming**" to access group dimming controls.
3. Select which dimming settings to change.
4. Set dimming and/or tuning levels according to preference.
5. Set wattage levels according to preference.
6. Press "**Back**" to save changes.



Groups

GROUP CONTROLS, ALL LIGHTS CONTROLS

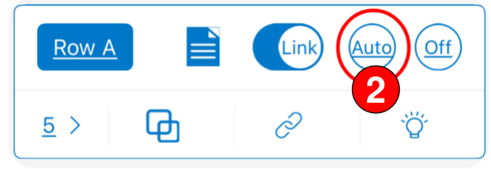
Enable/Disable Group Linkage

1. Choose which group to change linkage settings.
2. Toggle the "**Link**" button to enable/disable linkage.



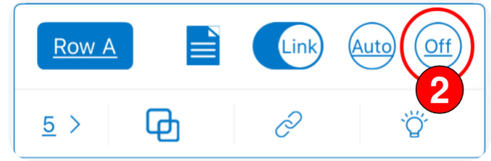
Enable Group Linkage

1. Choose which group to switch to Auto Mode.
2. Tap the "**Auto**" button above the Dimming button.



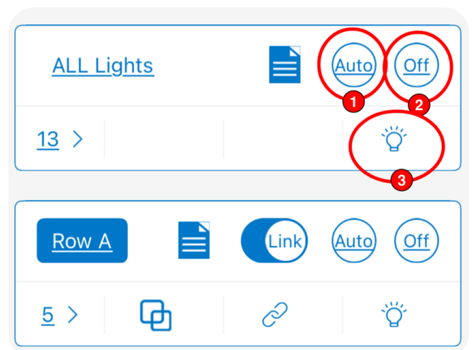
Turn Group lights OFF

1. Choose which group to turn OFF.
2. Tap the OFF switch above the Dimming button.



All Lights Control

1. Tap "Auto" button to turn on Auto Mode on all lights.
2. Tap the "Off" button to turn OFF all the lights.
3. Press the "Dimming" button to access Dimming Settings of all lights.



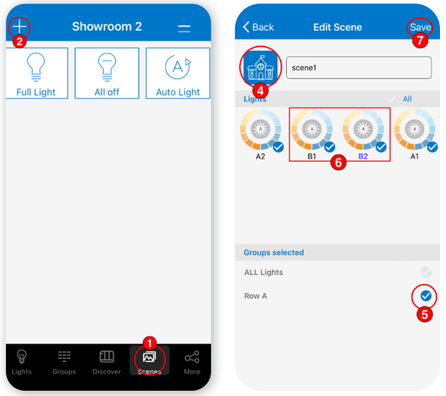
Scenes

CREATING, PROGRAMMING, DELETING

Scenes are pre-programmed light settings that users can manually set. Triggering a scene will cause all members (individual lights or groups) to change their settings to the applied scene. The app comes with three default scenes: **Full Light, All Off,** and **Auto Light.**

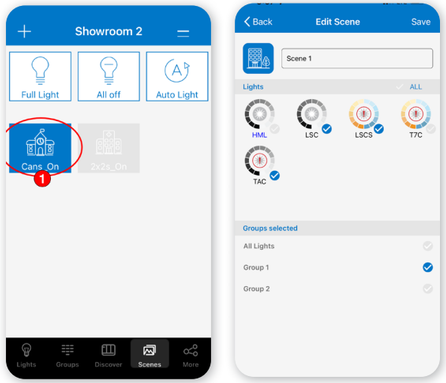
Creating Scenes

1. Switch to the "**Scenes**" page of the app.
2. Press the "+" button on the top left corner.
3. Type the scene name as prompted then press "**OK**".
4. Select an appropriate icon to use as the scene icon.
5. Select individual lights or groups to add to the scene.
6. Press and hold on a fixture or group to edit brightness or CCT (if applicable.) If fixture or group needs to be off set brightness to 0%.
7. Press and hold on a fixture or group to edit brightness or CCT (if applicable). If fixture or group needs to be off set brightness to 0%.



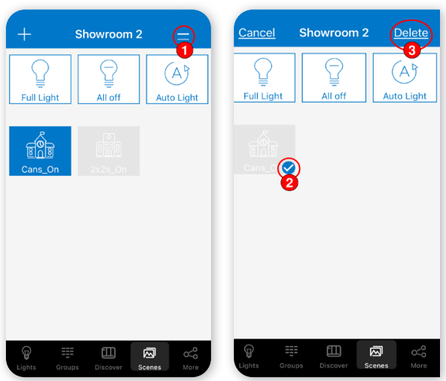
Programming Scenes

1. Select which scene to program.
2. Press and hold scene icon to access scene settings.
3. To program scenes, press and hold Lights/Groups and adjust settings according to scene preferences.
4. Press "**Save**" to save scene settings.



Deleting Scenes

1. Press the "-" button on the top right corner.
2. Select which scenes to delete.
3. Press "**delete**" to confirm.



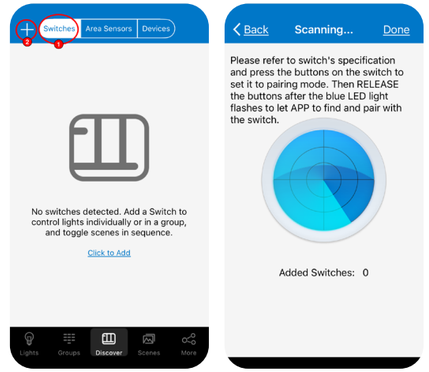
Discover

PAIRING SWITCHES, ASSIGNING SWITCHES, SCENE SWITCHES

The Discover page has three tabs: Switches, Area Sensors, and Devices. These tabs are used to add switches, area sensors, and other control devices to the NLC zones.

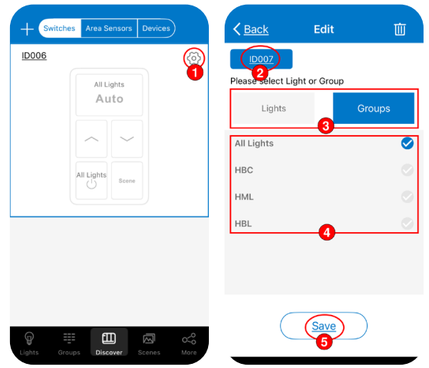
Pairing Switches

1. Select the Switches tab in the Discover page.
2. Select the "+" on the top left corner to scan for switches.
3. The app will begin scanning for nearby switches.
4. Refer to Appendix A or the installation instructions for step-by-step to set your switch into pairing mode.



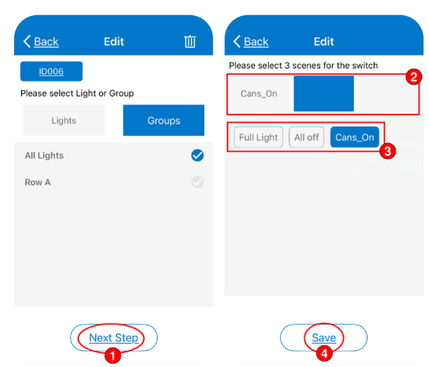
Assigning Switches

1. To edit the switch settings, click on the gear icon.
2. The current switch name is displayed on the top left of the settings menu, select this to enter a new name.
3. Select "Lights" to assign individual lights (or zone controllers) to a switch or "Groups" to assign light groups to a switch.
4. Select all lights or light groups that will be assigned to this switch. Then press "Save" to complete switch assignments.



Scene Switches

1. If a switch has scene capabilities, a "Next Step" button will appear instead of "Save". Select it to continue.
2. Up to three scene slots are available for use.
3. Select up to three scenes from your list.
4. Select "Save" to complete scene assignments.

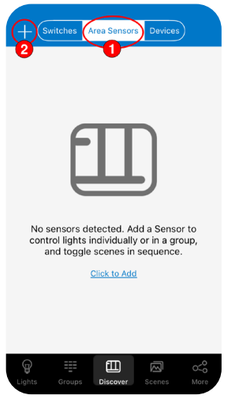


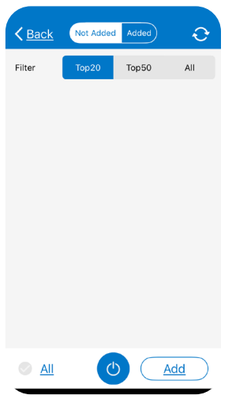
Discover

AREA SENSORS, DEVICES

Area Sensors

1. Select the Area Sensors tab in the Discover page.
2. Select the "+" on the top left corner to scan for Area Sensors.
3. The app will begin scanning for nearby Area Sensors.
4. Refer to the installation instructions for step-by-step to set your Area Sensors into pairing mode.





Devices

1. Select the Devices tab in the Discover page.
2. Select the "+" on the top left corner to scan for other devices.
3. The app will begin scanning for nearby devices.
4. Refer to the installation instructions for step-by-step to set your Device into pairing mode.

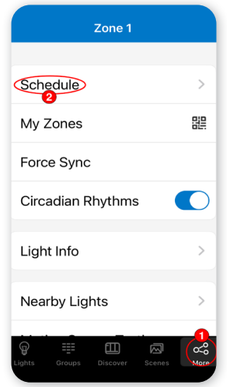
Schedules

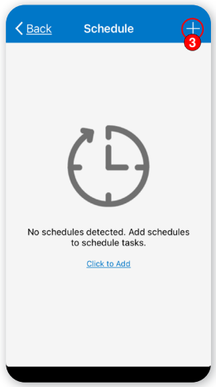
CREATING, ASSIGNING, SCHEDULING

Schedules allow users to set a specified date and time for lights to function.
Users can set schedules to an individual light, a group or a scene.

Creating a Schedule

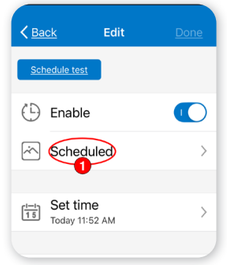
1. Press "**More**" to access additional settings of the app.
2. Press "**Schedule**".
3. Press **"+"** on the top right corner.
4. Type in a name for the schedule as prompted.
5. Press "**OK**" to continue.

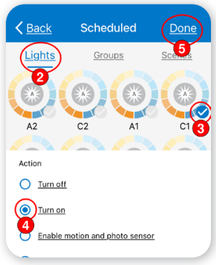




Assigning Schedule to Lights, Groups, or Scenes

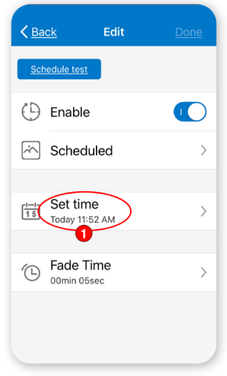
1. On the Edit screen of a selected schedule, press "**Scheduled**".
2. Choose between "**Lights**", "**Groups**", or "**Scenes**".
3. Select **one** light/group/scene to schedule.
4. Press "**Done**" to continue.

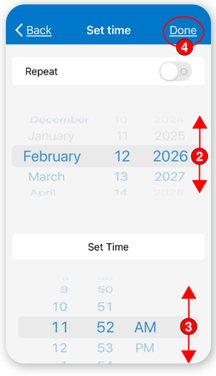




Set Schedule Date and Time

1. On the Edit screen of a selected schedule, press "**Set time**".
2. Choose preferred date for the schedule.
3. Choose preferred time for the schedule.
4. Press "**Done**" to continue.



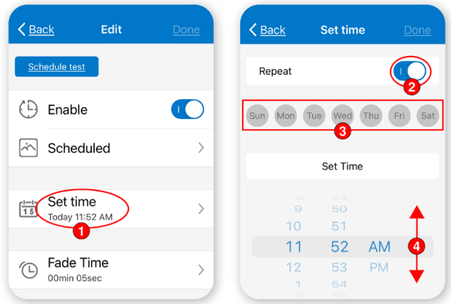


Schedules

REPEATING, FADE TIME, DELETING

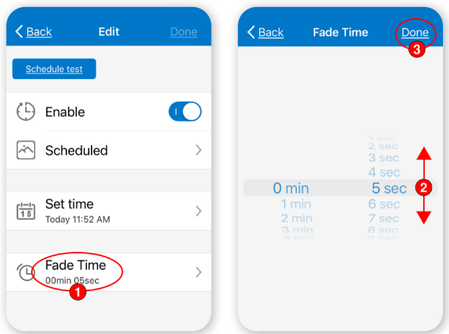
Set a Repeating Schedule

1. On the Edit screen of a selected schedule, press **"Set time".**
2. Toggle switch to enable **Repeat.**
3. Choose the days of the week you want the schedule to repeat.
4. Set preferred time for the schedule.
5. Press **"Done"** to continue.



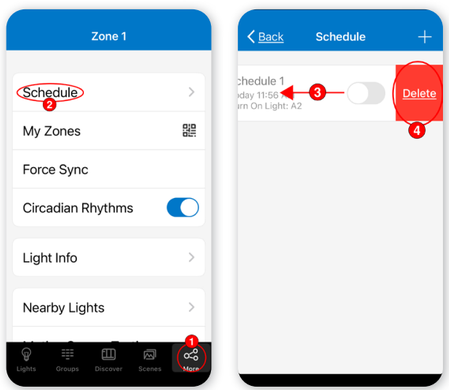
Set Schedule Fade Time

1. On the Edit screen of a selected schedule, press **"Fade Time".**
2. Set Fade Time according to preference.
3. Press **"Done"** to continue.



Deleting a Schedule

1. Press "**More**" to access additional settings of the app.
2. Press **"Schedule"** to see a list of all schedules.
3. Choose which schedule to delete and swipe finger to the left.
4. Press the red **"Delete"** button that appears.
5. Press **"Delete"** to confirm.



QR Codes

SCANNING, SAVING, SHARING

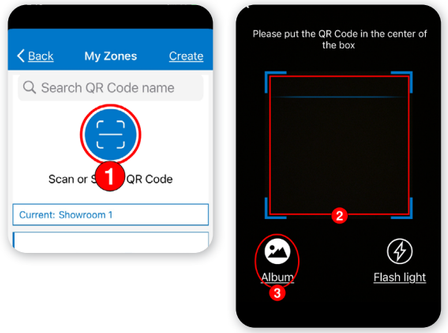
A QR code represents a zone and the lights, switches, and groups inside the zone. By creating a zone, a QR code is automatically generated for both an admin and user. While the User QR code is limited only to lighting controls, an Admin QR codes allows any user to control and edit all settings in the app.

Admin QR code

User QR code

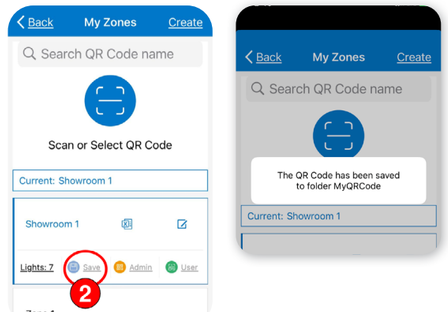
Scanning QR Codes

1. On the **"My Zones"** page, press **"Scan or Select QR code".**
2. Place QR code inside the boxed camera area to scan.
3. You can also select QR codes saved in phone by pressing the **"Album"** button.
4. App will automatically add Zone after QR code has been scanned.



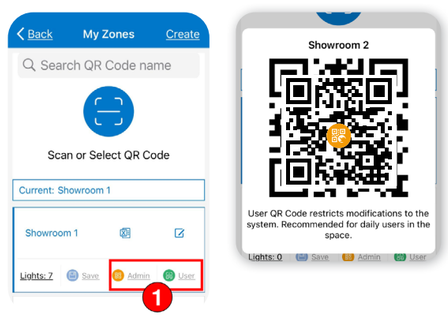
Saving QR Codes

1. Allow access to photos for QR codes to be saved to phone.
2. Press the **"Save"** button located under the zone name.
3. QR codes will be saved on an auto-generated album folder **"MyQRCode".**



Sharing QR Codes

1. Choose between Admin or User level QR codes then press to share.
2. A QR code will be displayed on the app for scanning.
3. If a User QR code is scanned while having Admin permissions, Admin permissions will be overridden. Ensure a copy of the Admin QR code is saved.



Auto Mode

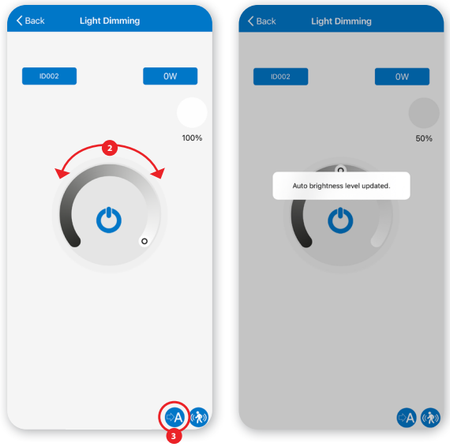
AUTO BRIGHTNESS, AUTO CALIBRATION

Light levels are automatically controlled by sensors in Auto Mode. There will be an "A" in the middle of the light's icon to indicate that it has been set to Auto Mode. Light sensors that can harvest daylight will record data so sensors can fully control the light's brightness accordingly. There are two ways to set auto light levels in the app: **Auto Calibration** and **Auto Brightness.**

Adjust Auto Brightness Level

Auto Brightness sets the maximum brightness level of a light after recovering from a passive state. By default, the auto brightness level is 100%.

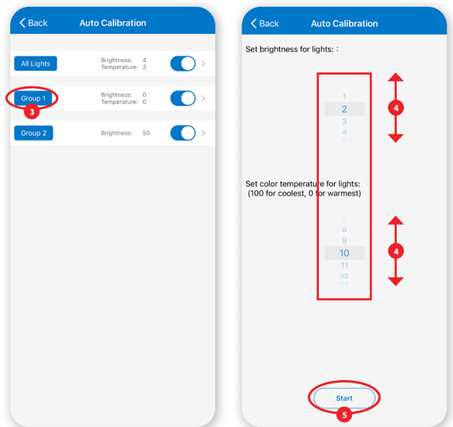
1. Press and hold a light icon to access the **"Light Dimming"** settings.
2. Adjust the dimming levels according to preferences.
3. Enable Auto Mode by pressing the **Auto** button on the lower right.
4. A confirmation will appear that the Auto Brightness level has been updated.



Enable Auto Calibration

Auto Calibration automatically removes the ambient light interference by a self-learning process to determine the appropriate auto light levels. During calibration process, lights will turn on and off several times.

1. Press **"More"** to access additional settings of the app.
2. Press **"Auto Calibrate".**
3. Choose which group to auto calibrate.
4. Adjust parameters according to preference.
5. Press the **"Start"** button to start calibration.

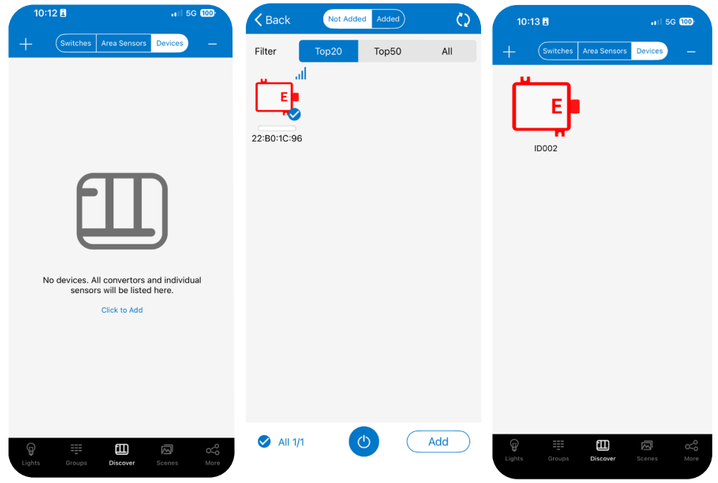


NLCEMUL924 Commissioning Guide

Add NLCEMUL924 to Mesh Network

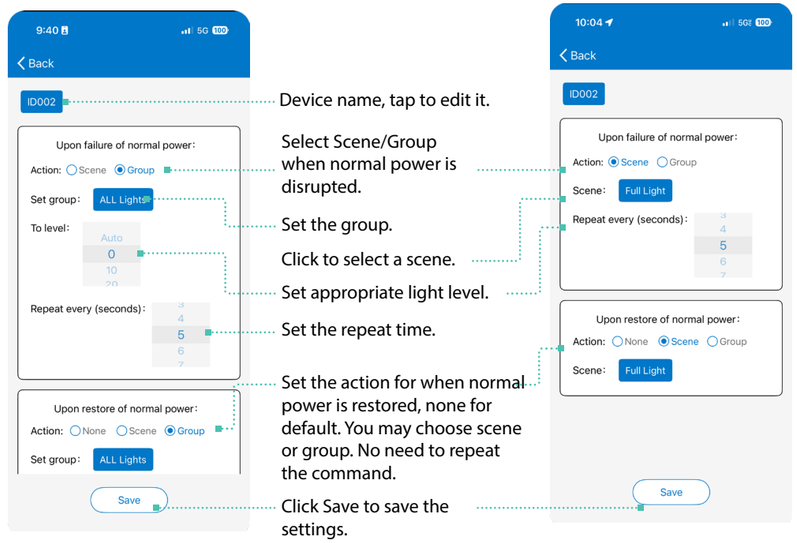
Please add NLCEMUL924 to mesh network with the app after installing it properly and powering it on. The NLCEMUL924 is to be added to a mesh network as a device.

1. From the discover page select devices.
2. Press "+" to have the app search for the new device.
3. Select the NLCEMUL924 device to create the check mark.
4. Select "Add" at the bottom of the page.
5. Select "Add" in the dialog box to confirm.
6. From the discover menu select "devices".
7. Long press the NLCEMUL924 device icon to get to the configuration page.



Parameter Configuration

You may check the NLCEMUL924 in the device page of the app after adding it to network. Long pressing the icon opens the configuration page.

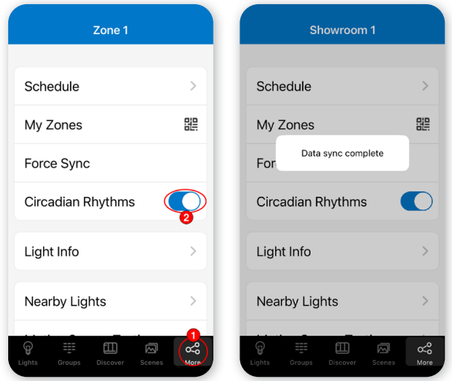


Additional **Settings**

Enable/Disable Circadian Rhythm

Circadian Rhythm auto syncs all the lights' color temperature according to the time of the day to simulate natural light. This can only be applied to **tunable white** lights that is set to **Auto Mode.**

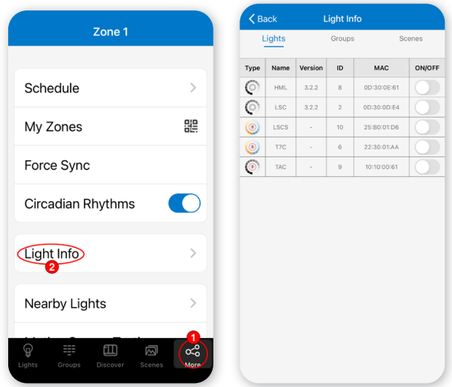
1. Press "**More**" to access additional settings of the app.
2. Toggle the button to the right to enable/disable Circadian Rhythm.
3. Upon enabling/dsabling, settings will automatically be synced across devices.



Checking Light Information

The **Light Info** tab give users a list of all information on lights, groups and scenes in a zone.

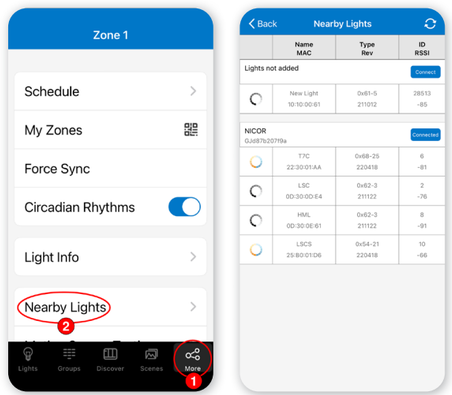
1. Press "**More**" to access additional settings of the app.
2. Press "**Light Info**".
3. Switch between **Lights**, **Groups**, or **Scenes** to display needed info.



Checking Nearby Lights

Nearby Lights tab helps the commissioning process by listing all online lights that are connected and not connected to the app.

1. Press "**More**" to access additional settings of the app.
2. Press "**Nearby Lights**".
3. Press the **Refresh** button if lights don't show up.

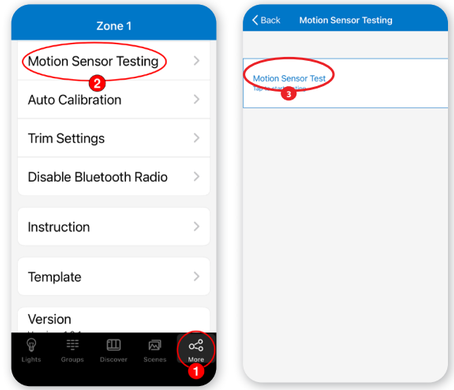


Additional **Settings**

Motion Sensor Testing

Motion Sensor Testing allows users to test if motion sensors work properly. Lights must first be set to **Auto Mode** before running the test.

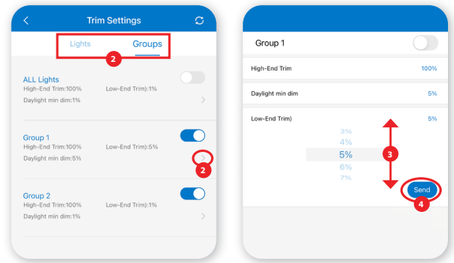
1. Press "**More**" to access additional settings of the app.
2. Press "**Motion Sensor Testing**".
3. Tap to start the test. Lights should turn off as soon as the test is started.
4. Walk around to test sensors and trigger lights.



Trim Settings

Trim Settings allows users to set the minimum and maximum power output of lights and groups to save energy.

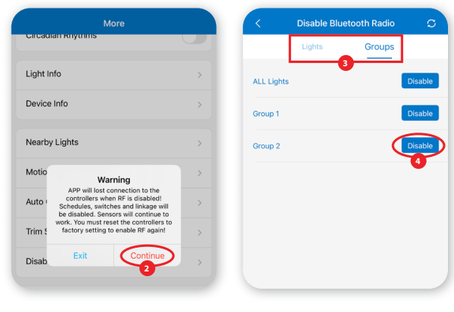
1. Press "**More**" to access additional settings of the app then tap "**Trim Settings**".
2. Select Lights or Groups to change settings.
3. Adjust parameters according to preferences.
4. Press "**Send**" to send settings to light.



Disable Bluetooth Radio

Disabling Bluetooth Radio disconnects all lights' bluetooth connection to the app for easy transfer of controls. To restore, sensors will need to be reset.

1. Press "**More**" to access additional settings of the app then tap "**Disable Bluetooth Radio**".
2. A warning prompt will appear. Press "**Continue**" to accept.
3. Select which Lights or Groups to disable bluetooth connection.
4. Press "**Disable**". App will automatically refresh and sync settings.



Restore **Factory Settings**

There are multiple options for restoring a device back to factory settings. If a device is currently assigned to an NLC zone, removing the device from the zone will automatically restore the device to factory settings. Some NLC devices include a physical reset button. Press and hold the button for 5 seconds to perform a factory reset. Factory settings can also be restored for multiple devices simultaneously by cycling power at the breaker multiple times. This process will restore factory settings for all NLC devices connected to the selected breaker.

1. Turn off power at breaker and make sure the lights are off.
2. Turn on power for 8 seconds; then turn the power off for 10 seconds.
3. Immediately turn the power on and off, then wait for another 10 seconds. Repeat 3 times.
4. Turn the power on for 8 seconds, then turn the power off for another 10 seconds. Repeat 2 times.
5. Turn the power back on. Blinking lights indicate a succesful factory reset. All previous settings made in the app will be deleted.

Note: Waiting for at least 10 seconds will ensure that the fixture is completely powered off.
The duration will vary depending on the driver and the power supply. If the driver can cut power to the fixture within 3 seconds, then you may change the waiting period from 10 to 3 seconds to facilitate a faster reset time.

System **Capacity**

Luminaires	Up to 100 lights in a zone. Please divide to different zones if you have more than 100 lights.
Luminaire/Group	Lights can be added up to 20 groups and will automatically be removed from the first group after.
Scenes (per light)	You may have up to 32 scenes assigned per node.
Scenes (per zone)	You may have up to 66 scenes per zone.
Schedule	Up to 32 schedules can be set per zone.
Switch	Up to 32 switches per zone.
Zones	Unlimited number of zones can be added to the app.
Data Persistence	All settings (sensor, group, scene, parameters and switch) are saved on individual luminaire controllers so the system can run without network connection or after a power outage.

Contact NLC Support at **engineeringqa@nicorlighting.com** for any questions or concerns.

Appendix **A**

LIGHT FLASH INDICATIONS

Light Flash Indications

Operation	**Flash indication**
IR remote disable BLE signal	*Slow flash 3 times*
IR remote enable BLE signal	*Slow flash 3 times*
IR remote reset lights to factory setting	*Slow flash 3 times*
Add lights	*Reboot light*
Delete Lamps	*Slow flash 3 times*
Manual reset to factory setting	*Slow flash 3 times*
OTA success	*Slow flash 3 times*
OTA failure	*Quick flash 10 times*
Delete from group	*Slow flash 3 times*
Add to group	*Slow flash 3 times*
Add a schedule	*Slow flash 3 times*
Add a schedule with incorrect parameters	*Quick flash 3 times*
Add a schedule failure of other reasons	*No indication*
Add scene	*Slow flash 3 times*
Delete Scene	*Slow flash 3 times*
Bind to a switch	*Slow flash 3 times*
Auto calibration	*Turn on/off 4–8 times during the process*
Auto calibration failure	*Quick flash 10 times*
Sensor settings	*Slow flash 1 times*

Light flash indications show what operation is being indicated by the flash code.

Appendix **A**

DEFAULT SENSOR SETTINGS, AREA SENSOR DEFAULT SETTINGS

Default sensor settings, area sensor default settings

Default Sensor Settings

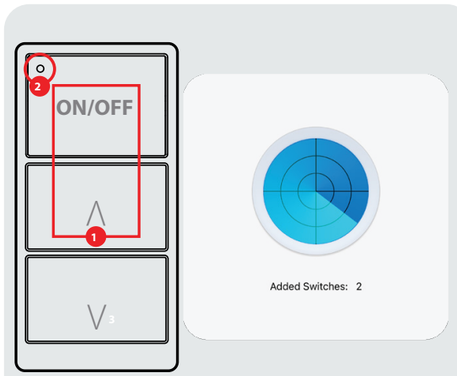
Parameter	Integrated Sensor Models	Sensor-Ready Controllers Models	Integrated Sensors (Wet Location)	NLCPC2
	NLCSPIHW1WH, NLCSPEW1WH-LHW, NLCSPEJ1WH-LHW, NLCSPSS1WH, NLCSPCW1WH, SENSORMWBT1KIT	*NLCPPA104SB1, NLCPC1*	*NLCEFS106-WHBL*	*NLCPC2*
Motion	*ON*	*OFF*	*ON*	*OFF*
Daylight harvesting	*ON**	*OFF*	*-*	*-*
T1	*20 min*	*20 min*	*20 min*	*20 min*
T2	*1 min*	*1 min*	*1 min*	*1 min*
Manual off override	*infinite*	*infinite*	*infinite*	*infinite*
Dim Level	*50%*	*50%*	*50%*	*50%*
Sensitivity	*100%*	*100%*	*100%*	*100%*
Occupancy / Vacancy	*Occupancy*	*Occupancy*	*Occupancy*	*Occupancy*
Linkage	*OFF*	*OFF*	*OFF*	*OFF*
Linkage level	*100%*	*100%*	*100%*	*100%*
Photocell	*-*	*-*	*ON*	*-*
Photocell ON threshold	*-*	*-*	*5 FC (50 Lux)*	*-*
Photocell OFF threshold	*-*	*-*	*55 FC (550 Lux)*	*-*
High trim	*100%*	*100%*	*100%*	*100%*
Low end trim	*1% or 10% (depends on product)*	*1% or 10% (depends on product)*	*1% or 10% (depends on product)*	*1% or 10% (depends on product)*
Daylight min dim	*Low end trim*	*Low end trim*	*Low end trim*	*Low end trim*

Daylight harvesting is enabled by default, but the task level is not set by default. Sensors will not begin dimming for daylight harvesting until they are commissioned and configured.

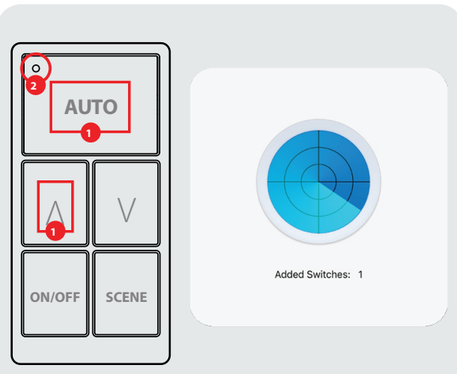
Appendix **A**

PAIRING INSTRUCTIONS

Pairing Instructions



1. Press and hold the "ON/OFF" and "^" buttons at the same time*.
2. Release buttons after 3 seconds or when the LED light indicator blinks.
3. App will automatically add switches as soon as it's detected.
4. Press "Back" to confirm changes.



1. Press and hold the "ON/OFF" and "^" buttons at the same time*.
2. Release buttons after 3 seconds or when teh LED light indicator blinks.
3. App will automatically add switches as soon as it's detected.
4. Press "Back" to confirm changes.

**for early models, press and hold the "ON/OFF" and "V" buttons.*