



SECTION 1 INTRODUCTION

Thank you for your purchase of a Lutron Quantum lighting system. The purpose of this manual is to provide the user with the necessary information to operate and maintain your Quantum lighting system. This manual includes the following information:

- **Section 2:** Service Contact List
- **Section 3:** General Safety Instructions Associated with the System and its Components
- **Section 4:** Quantum On-Site System Startup Procedure
 - Includes Quantum training visit summary
- **Section 5:** Routine Preventative Maintenance Requirements
- **Section 6:** Quantum Q-Admin Guide
- **Section 7:** Warranty Information

Specific descriptions of how the various system components were integrated into your specific location and how the overall system operates to control your building lighting needs can be obtained by contacting Lutron's Integrated Systems department at our world headquarters at 1.610.282.3800.

Thank you again for your purchase, and we hope that you enjoy your new Quantum Lighting Control System.

Job Name:

Job Number:



SECTION 2 SERVICE CONTACTS

This section will cover the warranty/repair process needed to coordinate service.

Items that will be asked for upon calling into Lutron either tech support or to schedule a visit:

- Lutron Job number
- Symptom of the issues occurring
- Point of contact with phone number

- Step 1 – Call Tech Support @ 800 523 9466 and perform basic troubleshooting.
 - 1st Level Warranty Initiation – Follow the voice prompts to speak to the Technical Support Hotline. Basic troubleshooting efforts should be attempted to return the system to normal operations. If the issue is not rectified the customer will proceed to 2nd Level Warranty Initiation.
 - Tech Support is staffed 24hrs/day – seven days a week. Tech Support is closed six days/year – Christmas Day, New Years Day, Memorial Day, Independence Day, Labor Day and Thanksgiving Day.

- Step 2 – Call Field Service Scheduling @ 800 523 9466 to schedule remote or on-site service visit.
 - 2nd Level Warranty Initiation – Follow the voice prompts “to schedule a service visit.” Customer will provide Lutron Job Number for system with issue and inform the Scheduling Department that they were unable to resolve the issue with the Technical Support team. Based upon the recommendations from our Tech Support group and the system type with the issue, Lutron Services Co. will either coordinate a remote diagnostics session (for applicable Quantum systems) or an on-site service call to continue the troubleshooting efforts. If system is returned to normal operation then warranty initiation will end. If the system is not returned to normal operation via remote diagnostic or is a non-Quantum type the Scheduling team will coordinate the local Field Service Engineer for a site visit.
 - Field Service Scheduling is open 8am-5pm EST, Monday to Friday.

- Emergency Service
 - Call Tech Support @ 800 523 9466 and state system issue

Job Name:

Job Number:



SECTION 3 SAFETY PRECAUTIONS

Safety information and/or precautions are strategically located throughout the “Hardware Manuals” that can be found in Section 6 of this O&M Manual. Please refer to these manuals for safety related information and instructions associated with each of the system’s components/devices.

Under no circumstances should Lutron-supplied safety information and instructions supersede, or be considered a substitute for, your local organization’s electrical safety procedures.

General Safety Precautions:

- Only personnel with the proper electrical safety training qualifications should be permitted to perform maintenance on Lutron lighting control equipment.
- Only personnel with sufficient training on, and knowledge of, Lutron Lighting Controls Equipment should be permitted to perform maintenance on this equipment.
- Always de-energize, Lockout, Tagout, and verify de-energized, all electrical equipment prior to performing work on that equipment. Perform these activities only in accordance with your local site’s safety procedures.
- Multiple circuits may feed some Lutron equipment. Locate and lock each supply breaker in the OFF position before performing maintenance work. Prior to performing maintenance on de-energized Lutron equipment, always test for the presence of voltage before beginning the maintenance work, even if you are certain that you have completely de-energized the equipment.
- If something unexpected occurs while performing maintenance work on Lutron Lighting Controls equipment, stop work immediately, secure the work site, and seek help.
- Use only Lutron approved replacement parts.

Job Name:

Job Number:

Quantum™ On-Site System Startup

Overview

Quantum lighting control system optimizes the use of light to improve comfort and productivity, simplify operations, and save energy. *Quantum* dims or switches all electric lighting and controls daylight using automated window shades.

Standard *Quantum* startup includes:

- Three visits to the job site during normal business hours. A pre-wire visit, a startup visit, and a final programming/training visit. These are three visits between the hours of 7 AM and 5 PM on a Monday through Friday that is not a Lutron holiday.
- Visits may require multiple days depending on the size of the system.
- Phased construction projects (requiring multiple visits) should verify this was included with the system provider.
- Visits can be made outside these hours for an additional charge.
- Lutron requires ten (10) business days notice to schedule a startup date. Additional charges may apply for expedited service inside ten (10) business days.
- If an integration meeting is required, verify that one was included with the system purchase.

A Lutron factory certified technician performs all system startup items.

All terminations will be done by the installing agency. A person from the installing agency needs to be present for the pre-wire and startup visits; this person should be familiar with the installation of the system.

System pre-wire inspection visit includes:

- Familiarize the electrical contractor, project manager, owner's representative, with wiring and mounting of system devices.
- Request the name and contact information of the person(s) who will work with Lutron to define the graphical user interface (if applicable).
- Understand the overall project schedule.
- Review preliminary mounting locations and wiring practices for PC/server, QS devices or shades, dimming/switching panels, local wall controls, ceiling mount controls/sensors, interface devices, ballasts, and *Quantum* hub(s).
- Review preliminary wiring plans of devices wired to ballasts (i.e., occupancy sensor xx is wired to fixture number xx). Ensure IR sensors are wired to ballasts on the same loop.
- Review preliminary drawings for proper hub to EcoSystem® loop wiring.
- Provide training to the appropriate parties in dipswitch overrides.
- Review preliminary Lutron network topology (i.e., CAT5 hub interconnections and/or Lutron PC/server).
- QS devices must be visible at time of startup.

Job Name: <input style="width: 100%; height: 20px;" type="text"/>	Toll Free 24/7 Tech Support Line 1.800.523.9466
Job Number: <input style="width: 100%; height: 20px;" type="text"/>	Field Service Scheduling 1.800.523.9466 ext. 4439

System startup includes:

- Verification that the *Quantum* system is installed according to Lutron specifications.
- Verify/set up system PC/Server (if applicable).
 - Verify proper wiring and operation of the EcoSystem® loops.
 - Verify *Quantum* hub and transfer system database.
 - Dimming/switching panels should be energized in bypass fully lamped and tested prior to our arrival.
 - Loads are checked for shorts and overloads and bypass jumpers are removed.
 - Verify proper wiring and operation of the *Quantum* controls.

Programming the dimming/switching panels includes:

- Panel addressing.
- Verify proper wiring and operation of control link.
- Proper load types assigned as installed or as per approved submittal drawings. As installed conditions take precedence. This may be a modular system, and if load types differ from the original design, additional/different equipment may be required.
- Circuit to button assignments as per approved submittal drawings. If no button information exists prior to startup, programming will be done according to written instructions from end user or end user's representative, contractor, or will be set up based on the field engineer's past experience, in that order of priority.
- Program emergency function per the installation guide for the system. This may not be applicable for every system.

Programming the wall controls/interfaces includes:

- Control addressing.
- Verify proper wiring and operation of control link.
- Set up controls to function as per approved submittal drawings. If no control functionality is included, controls will be programmed according to written instructions from end user or end user's representative, contractor, or will be set up based on the field engineer's past experience, in that order of priority.
- Test all buttons to assure proper operation.
- Set light levels and fade times on controls as per approved submittal drawings. If no information is provided, test scenes will be set to 100%, 75%, 50%, and 25%, and default fade times will be set to 2 seconds.
- Occupancy sensor:
 - Verification of proper installation and operation.
 - Unless otherwise noted, a rough calibration will be performed at system startup. Final calibration is the responsibility of the end user since it is very dependent on furniture placement, HVAC operation, and space usage.
- Daylight sensor:
 - Verification of proper installation and operation.
 - Unless otherwise noted, a rough calibration will be performed at system startup. Final calibration is the responsibility of the end user since it is very dependent on furniture placement, window treatments, outside weather conditions, and space usage.
- Timeclock setup:
 - Lutron will set up the system location, daylight savings, and time of day preparation for event programming.
 - Lutron will set up timeclock events as per the approved submittal drawings or written instructions from end user or end user's representative or contractor, in that order of priority.
 - In lieu of instructions, the timeclock will not be programmed.

Job Name: <input type="text"/>	Toll Free 24/7 Tech Support Line 1.800.523.9466
Job Number: <input type="text"/>	Field Service Scheduling 1.800.523.9466 ext. 4439

Items not included in standard on-site startup:

- Lutron service technicians will not perform work on non-Lutron equipment. Lutron will work with other manufacturers on integration of equipment by others.
- Programming or any other changes that are requested to be performed counter to the approved submittal drawings must be approved via the proper channels.
- Field wiring changes or corrections that delay the startup process such that additional time is required for Lutron to complete the startup will result in additional charges.
- Replacement of controls damaged due to miswires, incorrect installation, or any other related issue not covered under the Lutron warranty is the responsibility of the installer.
- Reprogramming of any functions after initial programming and sign-off.

End user training visit on overall system operation (typical training agenda is attached):

- It is the responsibility of the person scheduling the startup to ensure the appropriate end users are present for training. Lutron typically does not have these contacts.
- Additional charges will apply if additional visits are required for training the end user.
- Lutron does not provide video media for training sessions. This may be provided by “others” for turnover to the end user or job site documentation.
- Publish the graphical user interface (if applicable).
- System demonstration and sign-off by the end user.

Graphical floor plan design visit including (if applicable):

- Lutron Graphical User Project Specialist to work with the owner’s designated GUI designer to develop the Lutron Graphical User Interface.
- Owner’s GUI designer to provide the customer’s desired graphical images.
- Lutron Graphical User Project Specialist to work with the owner’s designated GUI designer to develop the control strategy and determine how each image will be used.
- Schedule the fine-tuning GUI visit.

Fine-tuning Graphical User Interface visit including (if applicable):

- Fine-tune the graphical images/control strategy with owner’s designated GUI designer.

Job Name:	Toll Free 24/7 Tech Support Line 1.800.523.9466
Job Number:	Field Service Scheduling 1.800.523.9466 ext. 4439

Additional items that are not included with standard startup, but may be purchased – check your quote to verify an item has been included with your quote. Additional details of each item are available from your Lutron representative.

- LSC-AF-VISIT. Aim and focus visit with design team or end user.
- LSC-SYSOPT. System optimization visit with end user.
- LSC-WALK. Startup agent or design team walk-through visit.
- LSC-SILV/GOLD/PLAT-IW. These are extended warranty part numbers for the system per the specification. Warranty information is supplied within the submittal documentation.
- LSC-TRAINING. This visit is for additional time on the job for training the end user.
- LSC-AH-SU. Afterhours startup.
- LSC-INT-VISIT. Integration meeting visit.
- LSC-Energy-AUD. Written assessment of facility-specific changes to optimize lighting energy usage.
- LSC-SCHD-MAINT. Scheduled maintenance visit.

Additional items listed below may be charged for job sites that are scheduled for startup, but not ready when field service engineer arrives.

- LSC-NS-TRAVEL. Non-standard travel arrangements
- LSC-SITE-RDY-CHG. Site ready charge. Job site not ready.

Job Name: <input type="text"/>	Toll Free 24/7 Tech Support Line 1.800.523.9466
Job Number: <input type="text"/>	Field Service Scheduling 1.800.523.9466 ext. 4439

Quantum Training Visit – Typical Agenda (duration – approximately 2 hours)

- Review system with end-user (control/sensor/lighting hub locations and functions).
- Discuss system model numbers.
- Discuss Lutron lexicon – what is a space, scene, group, fade time, etc.
- Review all system components:
 - EcoSystem® ballasts
 - Lighting Hub
 - Occupancy sensors
 - Daylight sensors
 - IR receivers
 - Wall controls
 - Sivoia® QED shades, controls
- Q-Manager™ and Q-Admin™:
 - Space tree
 - Summary and device tabs
 - Grouping
 - Floor plan screen
 - Timeclock programming
 - User setup
 - Alarms / Notifications:
 - › Lamp outage
 - › Load Shed
 - › Light levels
 - › Shade positions
 - › Ballast failure
 - › Daylight sensor status
 - › Occupied status
 - › Power threshold
 - Reports:
 - › Light level
 - › Power usage
 - › Alerts
 - › Time clock events
 - › User activity
- Quantum Green Glance® software.
- Troubleshooting of the system.
- Preventative maintenance.
- Warranty information.
- Technical support.
- Lutron Facility Managers EcoSystem® and Quantum Training
- Q/A

NOTE: All topics may not be relevant to every system. The topics listed above represent Lutron's standard training agenda. Agendas may be customized based on the needs of the attendees.

Job Name: <input type="text"/>	Toll Free 24/7 Tech Support Line 1.800.523.9466
Job Number: <input type="text"/>	Field Service Scheduling 1.800.523.9466 ext. 4439

SECTION 5

MAINTENANCE REQUIREMENTS

5.1.1 Maintenance

Lutron products are designed to have minimal maintenance requirements as detailed below:

5.1.1.1 Server & Routers

Visually inspect installation periodically. Keep air flow clear of obstructions. Server should be installed in a lockable, temperature controlled (50 – 75 degrees F) environment.

5.1.1.2 Processors

Clean the front cover as needed.

5.1.1.3 Wall Controls

Clean the front surface with a soft towel moistened with a mild soap solution (non-ammonia). Clean approximately every six months. Do not spray cleaning solution directly at any Wall Control. *Danger: Any liquid entering products with line (mains) voltage may reach components, cause personal injury, damage the equipment, and void the warranty.*

5.1.1.4 Sensors

No maintenance required.

5.1.1.5 Ballasts

No maintenance required.

5.1.1.6 Dimming & Switching Panels

Visually inspect installation periodically. Keep airflow clear of obstructions. Dimming & Switching Panels generally need 12 in. (300 mm) of clearance above, below, and in front of the enclosure.

Job Name:

Job Number:

5.1.1.7 Backroom Equipment

No maintenance required for Power Packs (standalone Fluorescent Ballast controllers), OMX-AV (Audio/Visual Contact Closure Control), or MX-RPTR (communications link extender) devices.

Job Name:

Job Number:

5.1.2 Replacement Procedures

Each product must be installed in accordance with the installation instructions shipped with the product. Reference instructions for each product can be found in the Product Information section of this manual. Below is a summary of the steps that will be followed when replacing products. These steps are not a substitute for the installation instructions shipped with the replacement product. A trained professional must install all products.

5.1.2.1 Q-Manager Server

First, the Q-Manager server must have the proper Quantum software version installed. Backup versions of the Design & Setup database and Floorplan Control & Monitor File must be restored to the server. Consult the Software User Guide in Section 07 for detailed procedures.

5.1.2.2 Routers

No special replacement procedures are required. Follow installation guide shipped with the replacement product.

5.1.2.3 Processors

Processors are installed in pre-built panels manufactured by Lutron. Contact Lutron Field Service for replacement.

5.1.2.3 Wall Controls - Keypads

Step 1: Follow all local safety precautions and safety precautions detailed in installation guide shipped with replacement product.

Step 2: Remove existing wall control.

Step 3: Set Address

Set replacement keypad address dipswitches to same address as on keypad being replaced (if applicable).

Step 4: Install Replacement

Follow installation guide shipped with replacement product (a reference copy can be found in the Product Information section of this manual).

Job Name:

Job Number:

5.1.2.4 Sensors

Step 1: Follow all local safety precautions and safety precautions detailed in installation guide shipped with replacement product.

Step 2: Remove existing sensor.

Step 3: Set configuration switches (if any) to same settings as product being replaced.

Step 4: Install Replacement

Follow installation guide shipped with replacement product (a reference copy can be found in the Product Information section of this manual).

5.1.2.5 Ballasts - EcoSystem

Step 1: Follow all local safety precautions and safety precautions detailed in installation guide shipped with replacement product.

Step 2: Remove existing Ballast (and Ballast Module Fluorescent interface if applicable). Disconnect low-voltage sensor connections if appropriate.

Step 3: Install Replacement

Follow installation guide shipped with replacement product. Reconnect sensors if appropriate.

Step 4: Set Address

Use the Q-Design software to set address of replacement device. Consult the Software User Guide for detailed procedures.

5.1.2.6 Dimming & Switching Panels

Dimming & Switching Panels are pre-built panels manufactured by Lutron. Contact Lutron Field Service for replacement.

Job Name:

Job Number:

5.1.2.7 Backroom Equipment – Power Packs (standalone Fluorescent Ballast controller)

Step 1: Follow all local safety precautions and safety precautions detailed in installation guide shipped with replacement product.

Step 2: Remove existing Power Pack. Disconnect low-voltage sensor connections if appropriate.

Step 3: Install Replacement

Follow installation guide shipped with replacement product (a reference copy can be found in the Product Information section of this manual). Reconnect sensors if appropriate.

5.1.2.8 Backroom Equipment – OMX-AV (Audio/Visual Contact Closure Control)

Step 1: Follow all local safety precautions and safety precautions detailed in installation guide shipped with product.

Step 2: Remove existing Power Pack. Disconnect low-voltage sensor connections.

Step 3: Install Replacement

Follow installation guide shipped with replacement product (a reference copy can be found in the Product Information section of this manual). Reconnect sensors.

5.1.2.9 MX-RPTR (communications link extender).

Processors are installed in pre-built panels manufactured by Lutron. Contact Lutron Field Service for replacement.

Job Name:

Job Number:

Quantum[®] Q-Admin[™] Guide



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How to Use This Guide

This guide is divided into manageable sections which will allow you to easily walk through the process of controlling and monitoring your building using the Q-Admin™ software.

You will notice that this guide contains text and corresponding pictures/screen shots. Also note the appearance of the “indicator hand”. It will help to guide you through the process from screen to screen. See example below:

Example Text:

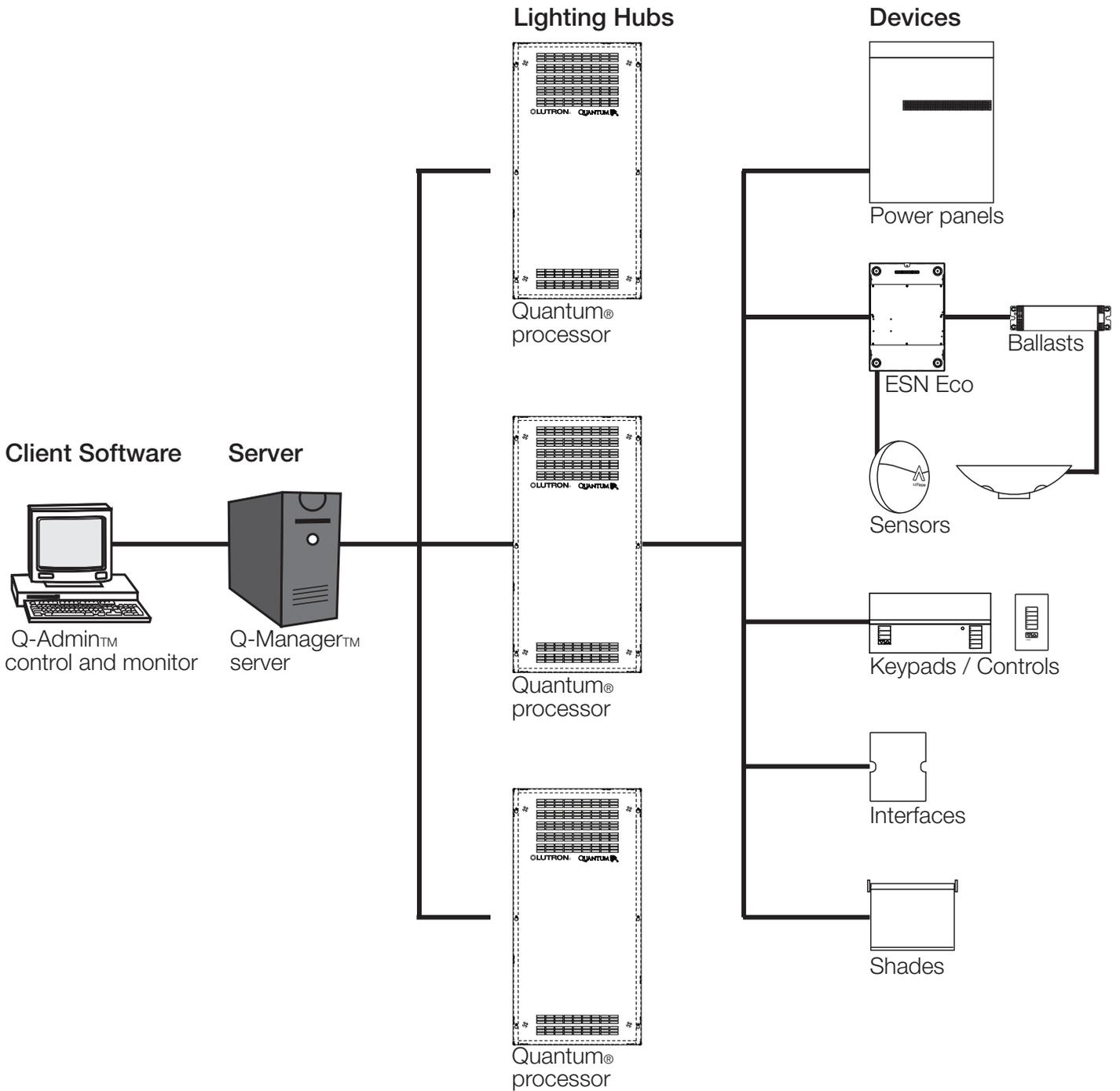
Login

Upon launching the Q-Admin application the Login screen will appear.

- Enter your username and password and click **Login**.
- Click **Advanced** to show two options, as shown on the right. These options will allow you to publish a new database or to change your password.
- To start Q-Admin in another language, click the **Language** hyperlink and choose a language.
- The default login is admin/admin1.
For more on users and passwords, please see the section Administration > Users.



Quantum® System Diagram



Login

Login

Upon launching the Q-Admin™ application the Login screen will appear.

1. Language Selection

To start Q-Admin™ in another language, click the *Language hyperlink* at the top right corner and choose a language.

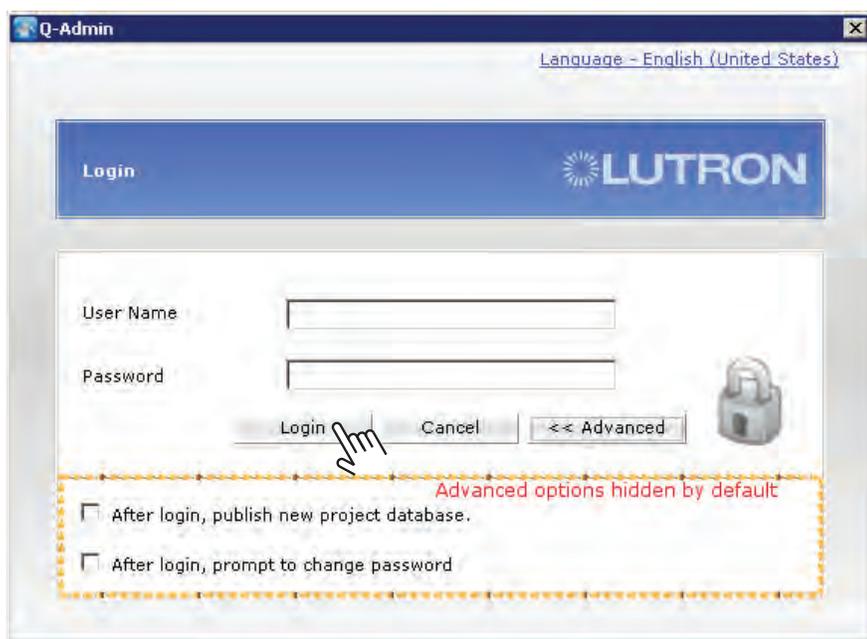
2. Login

Upon launching the Q-Admin™ application the Login screen will appear, prompting for your user name and password.

- The default login is user name “admin” and password “admin1”.
- For more on user accounts and passwords, please see the section Administration > Users.

3. Advanced Login Options

Click *Advanced* to show two options. These options will allow you to publish a new database or to change your password immediately after login.



Special Note to Administrator: Before launching the Q-Admin™ application, two modules must be launched on the lighting control server. The first module is Q-Runtime™; this is responsible for communicating to the Quantum® lighting processors to allow control and monitoring of the lighting system. The second module, Q-Reporting™, is optional, but is required to access reporting and Load Shedding features. Q-Runtime™ and Q-Reporting™ should be kept running at all times so system activity and energy usage will be logged. Also note that Q-Reporting™ may not have been purchased with your system. Contact Lutron if you are interested in purchasing additional features such as Q-Reporting™.

Q-Admin™ Overview

Overview

Q-Admin™ can run on a client or server PC (see Appendix for supported versions of Microsoft® Windows®). It communicates with the Runtime and Reporting modules on the Q-Manager™ server. The Runtime module manages communication between the Q-Manager™ server and the Quantum® lighting hubs, collecting all status information (e.g., lights on/off, areas occupied/unoccupied, etc.) from the system. The Reporting module logs system activity and power information used in reports and Green Glance®.

Up to 6 clients can access "Control & Monitoring" and "Reports" from Q-Admin™ at the same time.

Main Tabs and Program Features

The Q-Admin™ application is separated into three parts, as seen in the major tabs below:

The "Language" hyperlink at the top allows changing the language. The question mark icon to the right displays the current version of Q-Admin™, and the date it was released.



Control & Monitoring Overview

This tab includes features used both to control and to monitor the live state of various system features (e.g., lights and shades), as well as features to set up scheduled operation (Time Clock and Hyperion™ Solar Adaptive Shading), Load Shedding, and hardware diagnostics.



Reports Overview

Reports allow the building manager to gather real-time and historical information about the system.

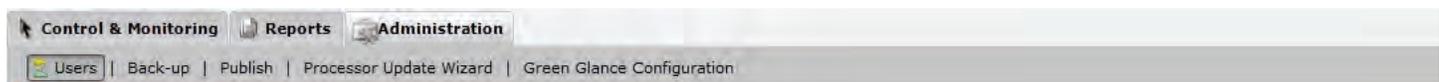
All reports can be saved, printed, and exported to a file. Exporting to Excel format (.xls) requires Microsoft® Excel® 2003 or newer to be installed; alternatively, reports may be exported in .csv format.



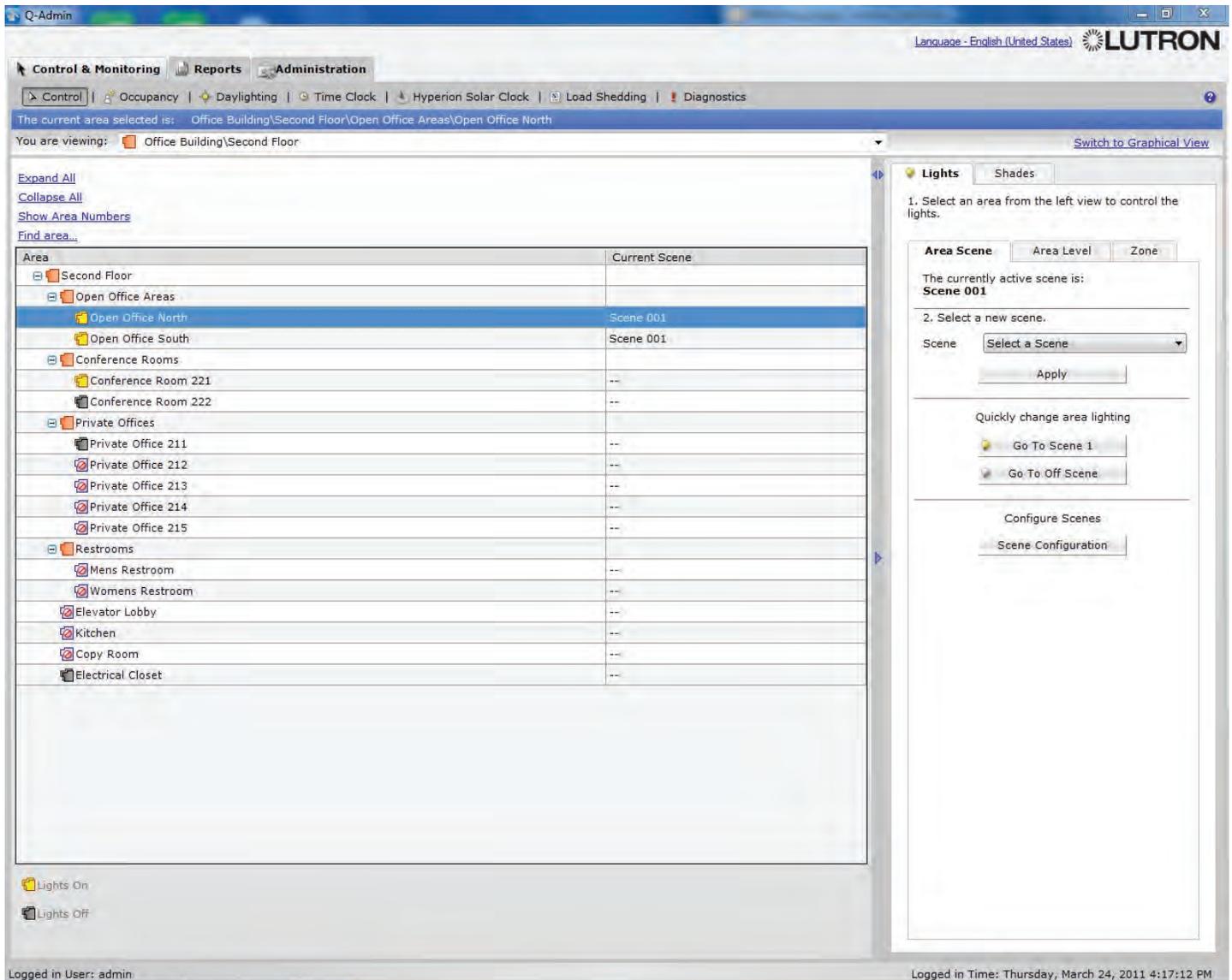
Administration Overview

The Administration tab provides functions for administrators to configure and commission the system, including user management, backup, publish and transfer, processor firmware upgrade, and Green Glance® configuration.

The Administration tab only appears for users who have been assigned the role "Admin".



Control and Monitoring: Tabular View



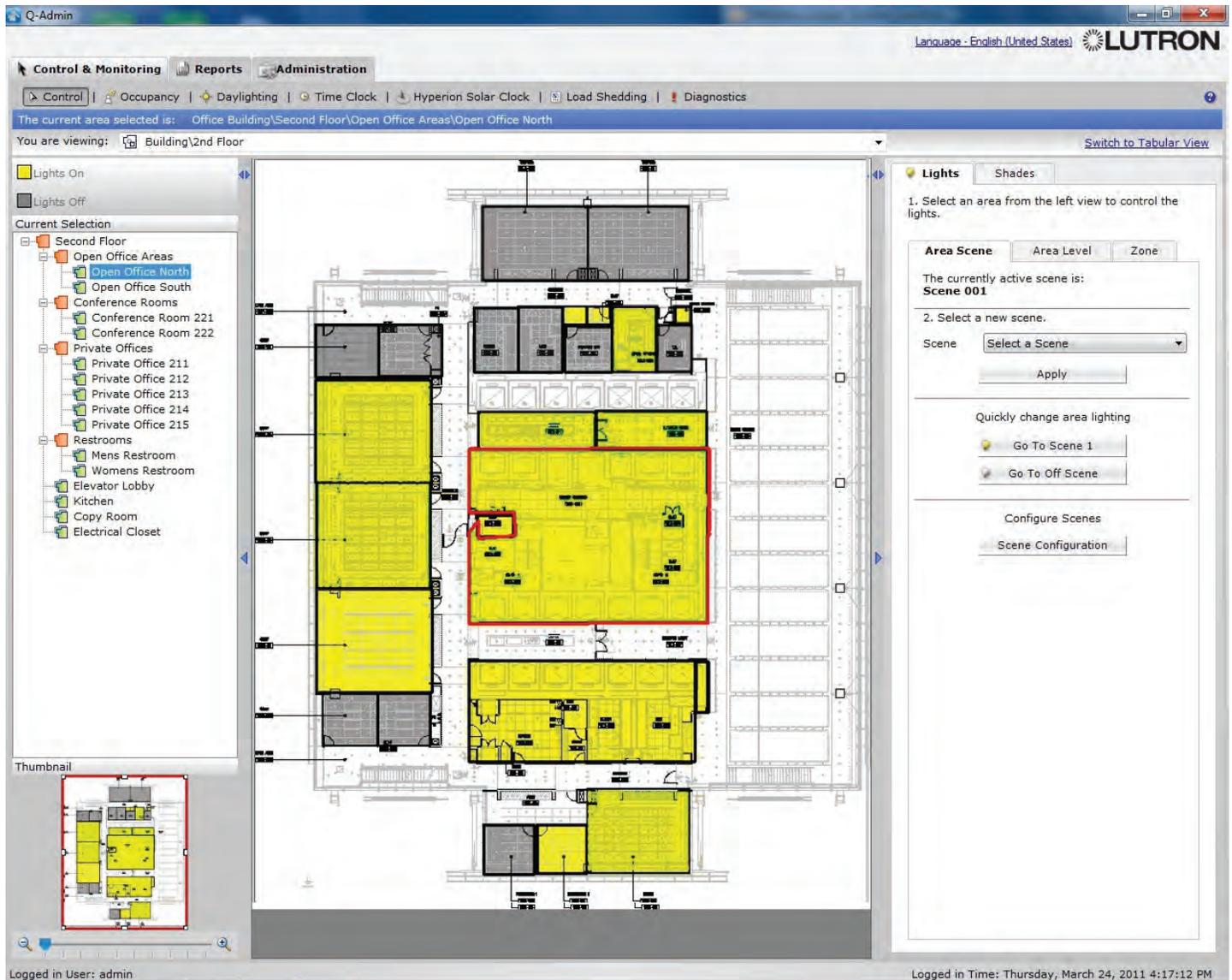
The three sub-tabs, Control, Occupancy, and Daylighting, use the same basic display, which has two options—tabular view or graphical view (optional).

Tabular view allows you to select/view areas by selecting from a hierarchical area tree, as shown.

To select an area in tabular view, simply click the area in the tree on the left.

To change the view, click the area at the top next to “You are viewing,” and select another area. Selecting an area under “You are viewing” will hide all other areas from the display. In the example shown, the user has selected to only display areas on the second floor.

Control and Monitoring: Graphical View



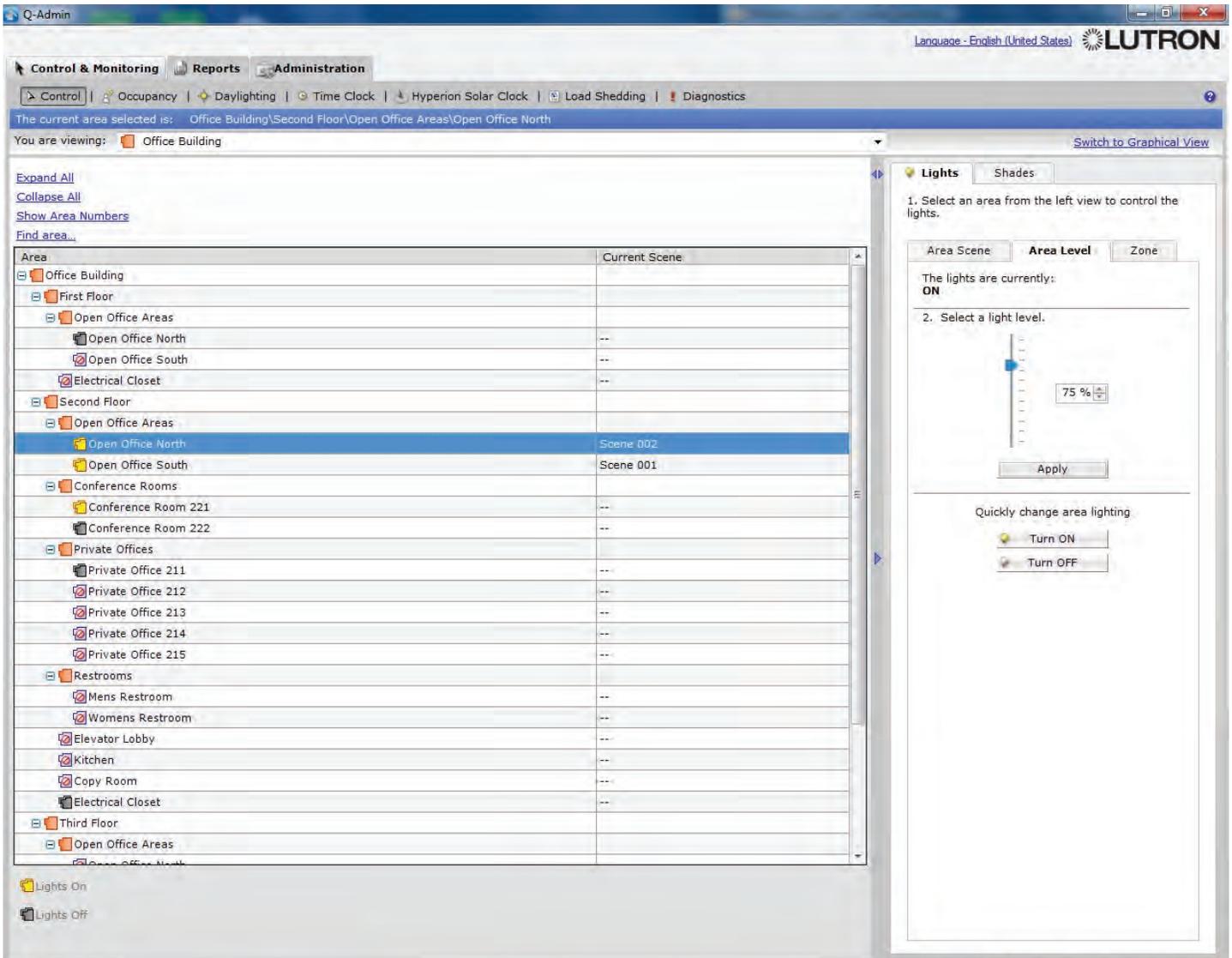
Graphical view allows the user to select/view areas by selecting within a graphical floorplan, as shown.

Multiple graphical pages can be used. Each page typically displays a floor in a building. Pages can be hotlinked to each other. For example, one graphical page might be a birds-eye view of a campus, with clickable regions for each individual building acting as hyperlinks. Each hyperlink would then take the user to another page, having images of each floor of a building, which would then have clickable regions linking the user to graphical pages consisting of a top view of a single floor; the user would then click on areas within the floor-view to select individual areas to control and monitor.

To change the view, click the dropdown menu at the top next to “You are viewing,” and select another page. In the example shown, the user has selected to display the second floor page and its associated areas.

The graphical floorplan view is an optional feature configured by Lutron. Contact Lutron Support at 1.800.523.9466 for details.

Control and Monitoring: Control



The Control screen allows the building manager to control and monitor the lighting system as follows:

Area lights can be monitored for on/off status.

All lights in an area can be turned on/off or sent to a specific level (0-100%).

To turn all lights in an area on or off:

1. Select an area.
2. On the right pane, select the Lights tab and the Area Level subtab.
3. Click "Turn ON" or "Turn OFF" under "Quickly change area lighting".

To send all lights in an area to a level:

1. Select an area.
2. On the right pane, select the Lights tab and the Area Level subtab.
3. Select a level by typing in the box, using the slider, or using the up/down arrows.
4. Click Apply.

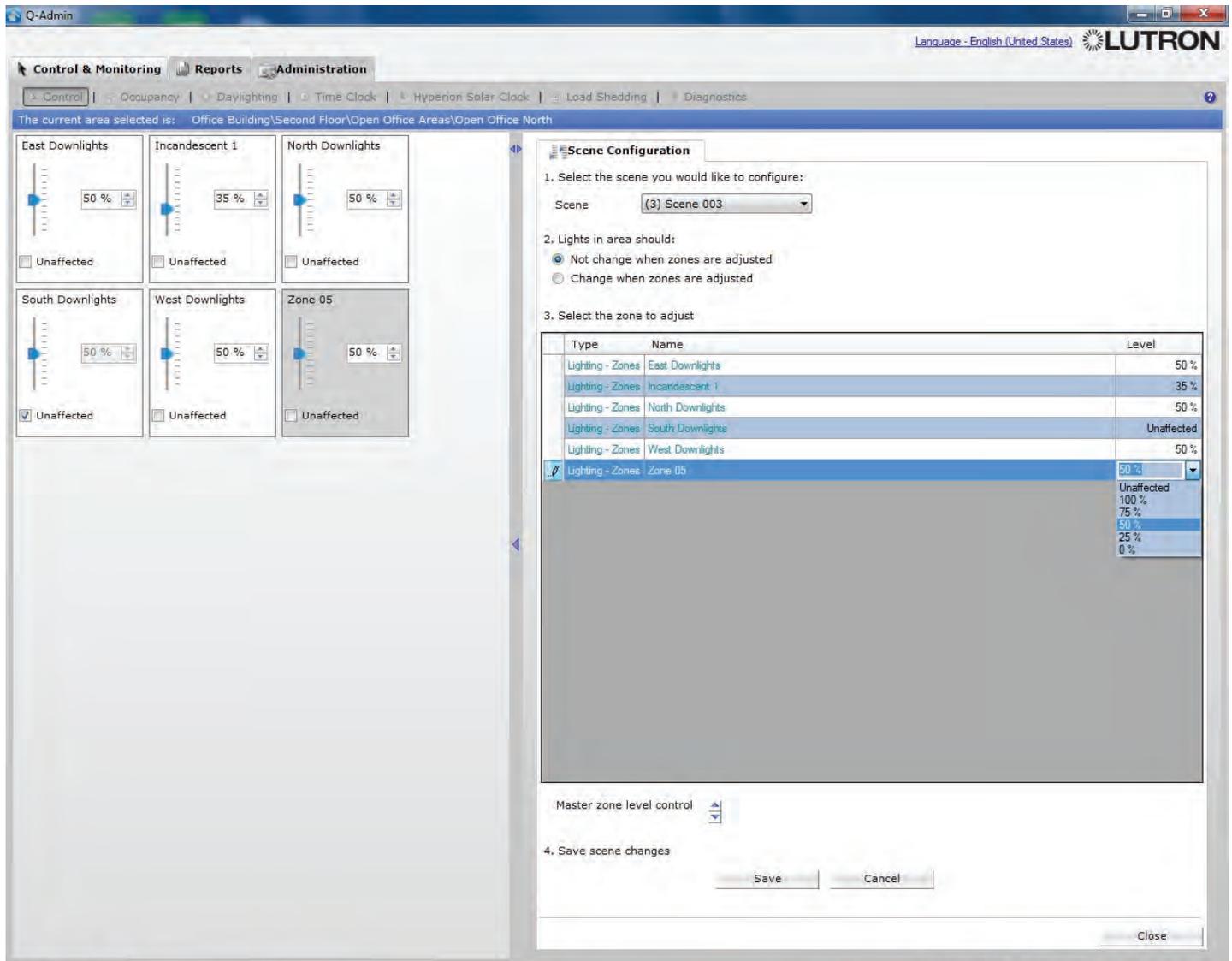
For areas that have been zoned:

Predefined lighting scenes can be controlled and monitored.

To send an area to a scene:

1. Select an area.
2. On the right pane, select the Lights tab and the Area Scene subtab.
3. Select a scene from the dropdown list.
4. Click Apply.

Control and Monitoring: Control



Area lighting scenes can be modified in real-time.

To modify an area's scenes:

1. Select an area.
2. In the right pane, click "Scene Configuration". The Scene Configuration window will open.
3. Select a scene to configure.
4. Choose whether or not zone levels should update in real-time as you are adjusting them, by selecting one of the radio button options.
5. Change the levels of zones within the scene. This can be done either through the sliders on the left or the grid on the right.
6. To adjust all zones in a scene at the same time, click the "Master zone level control" up/down arrows.
7. Click "Save" to save the updated scene to the system. Remember to backup the project to a .lut file (Administration>>Backup) to save a copy to disk.
8. When finished adjusting scenes within an area, click "Close".

NOTE: Dimmable zones can be set to any intensity from 0%-100%, or to "Unaffected", which means that the activation of the scene will not change the intensity of the zone. Non-dimmed (switched) zones can be set to On, Off, or Unaffected.

Control and Monitoring: Control

Q-Admin

Language - English (United States) LUTRON

Control & Monitoring Reports Administration

Control | Occupancy | Daylighting | Time Clock | Hyperion Solar Clock | Load Shedding | Diagnostics

The current area selected is: Office Building\Second Floor\Open Office Areas\Open Office North

You are viewing: Office Building

Expand All
Collapse All
Show Area Numbers
Find area...

Area	Current Scene
Office Building	
First Floor	
Open Office Areas	
Open Office North	--
Open Office South	--
Electrical Closet	--
Second Floor	
Open Office Areas	
Open Office North	--
Open Office South	Scene 001
Conference Rooms	
Conference Room 221	--
Conference Room 222	--
Private Offices	
Private Office 211	--
Private Office 212	--
Private Office 213	--
Private Office 214	--
Private Office 215	--
Restrooms	
Mens Restroom	--
Womens Restroom	--
Elevator Lobby	--
Kitchen	--
Copy Room	--
Electrical Closet	--
Third Floor	
Open Office Areas	

Lights On
Lights Off

Logged in User: admin

Logged in Time: Thursday, March 24, 2011 4:17:12 PM

Switch to Graphical View

Lights Shades

1. Select an area from the left view to control the lights.

2. Select a zone below to adjust its level.

Zone	Level
East Downlights	75 %
Incandescent 1	75 %
North Downlights	75 %
South Downlights	75 %
West Downlights	75 %
Zone 05	35 %

3. Select a light level.

35 %

Apply

Quickly change zone lighting

Turn ON
Turn OFF

Levels of individual zones can be controlled and monitored.

To change a zone's level:

1. Select an area.
2. In the right pane, select the Lights tab and the Zones subtab.
3. Select a zone.
4. Select the desired level using the slider or text box.
5. Click Apply.

Alternately, click "Turn ON" or "Turn OFF" to quickly send a zone to full on (100%) or full off (0%).

Control and Monitoring: Control

The screenshot shows the Lutron Q-Admin software interface. The top navigation bar includes 'Control & Monitoring', 'Reports', and 'Administration'. The 'Control & Monitoring' section is active, showing a breadcrumb trail: 'Control > Occupancy > Daylighting > Time Clock > Hyperion Solar Clock > Load Shedding > Diagnostics'. The current area selected is 'Office Building\Second Floor\Open Office Areas\Open Office North'. The interface is divided into a left pane showing a tree view of areas and a right pane for shade control. The left pane shows a tree view of areas, with 'Open Office North' selected. The right pane shows the 'Shades' tab with options to view status, select a preset, or set a shade to a position. A 'Shade Group' dropdown is set to 'Sunscreen', and a 'Preset' dropdown is set to 'Open'. There are 'Apply', 'Open', and 'Close' buttons. The status bar at the bottom indicates 'Logged in User: admin' and 'Logged in Time: Thursday, March 24, 2011 4:17:12 PM'.

For areas with shades, the position of shade groups can be controlled and monitored.

All shade groups in an area can be sent to open or close.

To send all shade groups in an area to open or close:

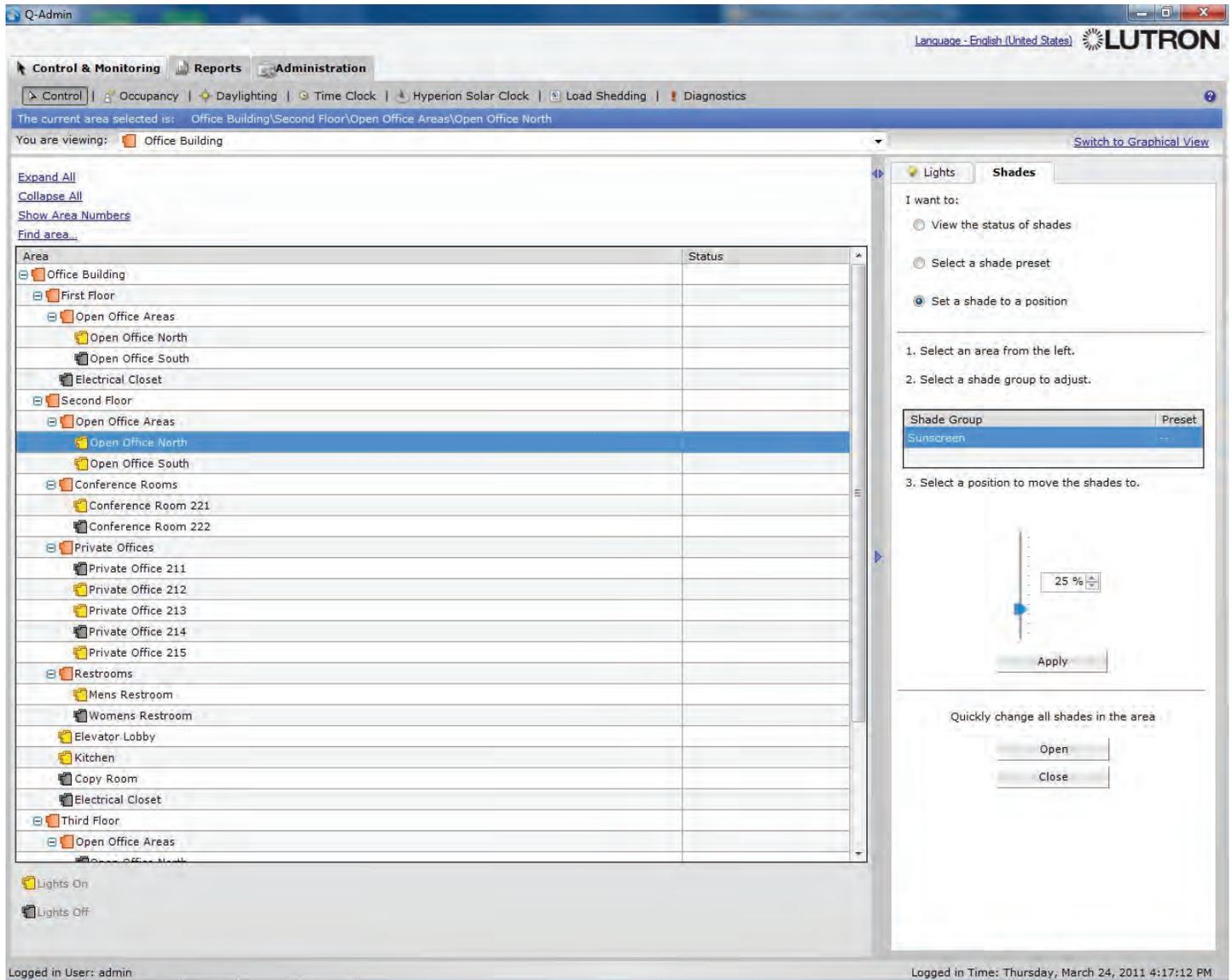
1. Select an area.
2. In the right pane, select the Shades tab.
3. Click "Select a shade preset".
4. Under "Quickly change all shades in the area," click Open or Close to open or close all shades.

Shade groups presets can be activated and monitored.

To activate a shade group preset:

1. Select an area.
2. In the right pane, select the Shades tab.
3. Click "Select a shade preset".
4. Choose a shade group.
5. In the Preset dropdown, choose the desired preset.
6. Click Apply.

Control and Monitoring: Control



Shade groups can be sent to a position.

To send a shade group to a position:

1. Select an area.
2. In the right pane, select the Shades tab.
3. Click "Set a shade to a position".
4. Choose a shade group.
5. Choose a position using the slider, text box, or up/down buttons.
6. Click Apply.

Many of the above actions can also be done with multiple areas selected (e.g., send all lights in multiple areas to a level, activate the same scene in multiple areas, move all shades in multiple areas, etc.).

To select multiple areas, hold the "ctrl" keyboard button and click multiple areas.

NOTE: When controlling shades, 0% implies that the shade is closed and 100% implies that the shade is fully open.

Control & Monitoring: Occupancy and After Hours

The Occupancy tab allows the user to view the current state of, and change settings for, occupancy and After Hours.

Areas with Occupancy Sensors

If an area has occupancy sensors, the possible states are occupied, unoccupied, and disabled. Areas can be grouped together, and dependency can be configured, during initial setup in Q-Design™. When at least one sensor in an occupancy group is occupied, all areas in the occupancy group go to their occupied level, and any dependent areas also go to their occupied level. When all sensors in all areas of an occupancy group go unoccupied, all areas in the occupancy group go to their unoccupied level.

If the occupancy state is disabled, occupancy events will not be processed.

Areas without Sensors: After Hours Mode

After Hours mode is used as an "intelligent off" setting for a lighting control system. It allows occupants in a space to continue using that space even after the prescribed "off" time while preventing the lights from being left on needlessly. When the lights are scheduled to turn off, the user is given a visual warning ("blink-warn sequence"), a few minutes before the lights are turned off. If occupants wish to continue using the space, they simply press a button to keep the lights on longer. Otherwise, the lights turn off until either the system is notified that the space is in use again or the system leaves the After Hours mode.

After Hours is useful when a space may be used after the time when the lights would normally turn off. An example of this is found in most office buildings: If the lights were originally programmed to turn off at 6:00 p.m., anyone staying past that time would be in the dark when the lights turn off. Automatic shutoff can be distracting and potentially dangerous if the occupants in a space are unexpectedly left in the dark. Additionally, lights could be left on all night if the occupants manually turn them back on and then forget to turn them off when they leave.

When the lighting control system has an After Hours mode, the situation is quite different: Wall controls installed throughout the space allow local control of the lights all day. At 6:00 p.m., the system time clock automatically triggers After Hours mode. The lights perform a blink-warn sequence to tell the occupants that the system is about to turn the lights off, and the off-delay timer starts. If the user operates one of the wall controls to indicate continued presence, the lights will go to the requested level, the warning time will reset, and the sequence will restart. If the off delay expires without a user operating one of the wall controls, the lights turn off. Operating a wall control after the lights turn off will bring the lights back on and restart the warning time.

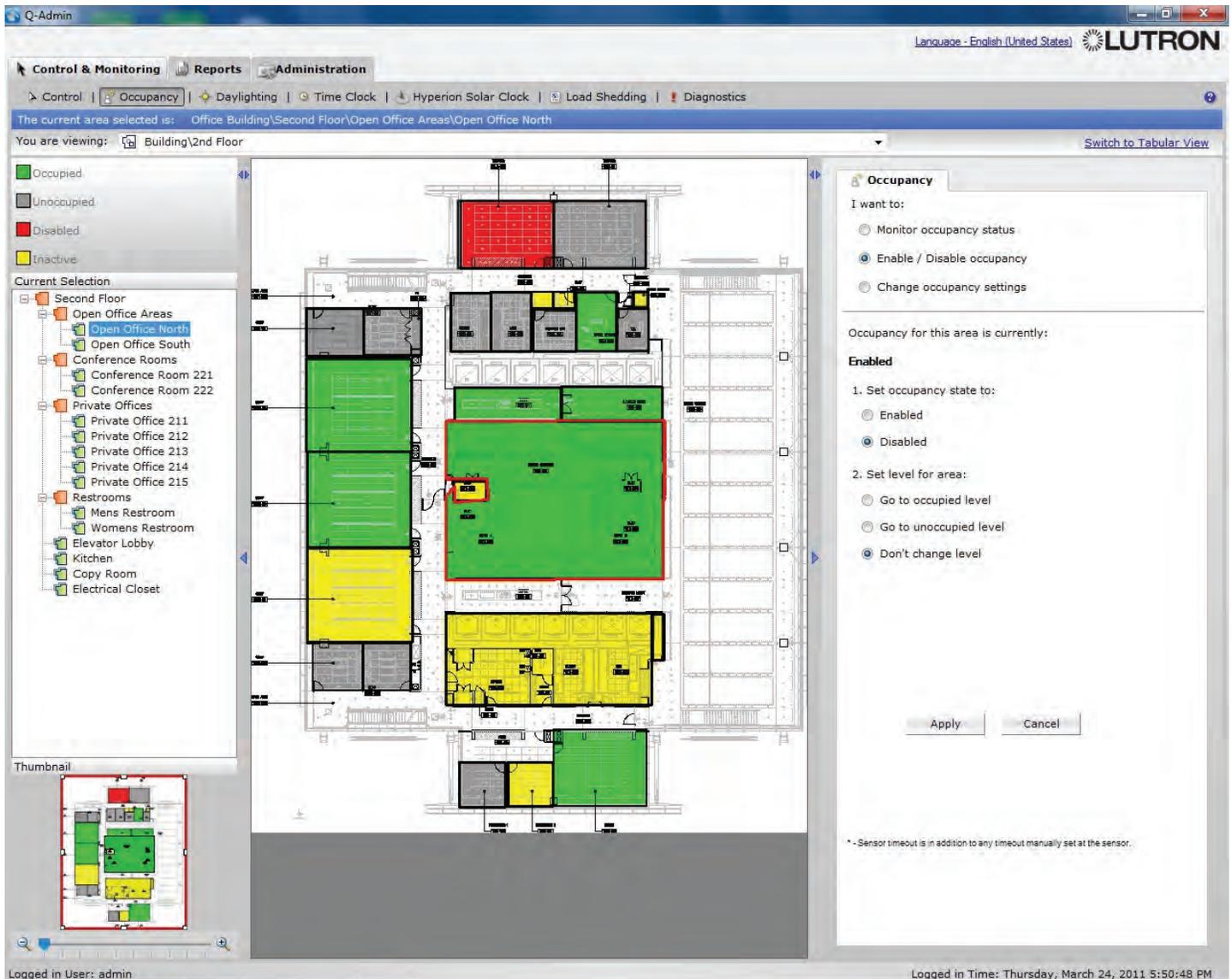
The possible After Hours states are occupied, unoccupied, disabled, and inactive.

If the state is disabled, then After Hours events are not processed.

After Hours is usually triggered from a Time Clock event, typically in the evening. The Time Clock event will change an area's occupancy mode to "After Hours Active".

After Hours is usually ended from a Time Clock, typically in the morning. The Time Clock event will change an area's occupancy mode to "After Hours Inactive". This will return the area to its "occupied" level for daytime operation. See Control & Monitoring > Time Clock for details on setting up After Hours time clock events.

Control & Monitoring: Occupancy and After Hours



The Occupancy screen allows the building manager (or security guard) to monitor the occupancy status of each area and make occupancy setting changes as follows:

Current area occupancy state can be monitored (occupied, unoccupied, disabled, inactive).

Area occupancy can be disabled (or re-enabled) to override occupancy control or in case of occupancy sensor problems.

To enable or disable occupancy:

1. Select an area.
2. In the right pane, click "Enable / Disable occupancy".
3. Select whether you want to enable or disable occupancy by choosing the appropriate radio button.
4. Select whether the area should immediately go to the occupied or unoccupied level, or do nothing.
5. Click Apply.

Control & Monitoring: Occupancy and After Hours

The screenshot displays the Q-Admin software interface. The main window shows a floor plan of the second floor with various rooms color-coded: green for occupied, grey for unoccupied, red for disabled, and yellow for inactive. A legend on the left identifies these colors. A tree view on the left lists the current selection: Second Floor, Open Office Areas, Open Office North, Open Office South, Conference Rooms (221, 222), Private Offices (211-215), Restrooms, Mens Restroom, Womens Restroom, Elevator Lobby, Kitchen, Copy Room, and Electrical Closet. The right pane is titled 'Occupancy' and contains the following settings:

- I want to:
 - Monitor occupancy status
 - Enable / Disable occupancy
 - Change occupancy settings
- 1. Select an area from the left.
 - Current settings for this area are:
 - Occupied Level: 75 %
 - Unoccupied Level: 0 %
 - After Hours Timeout: 60 Minutes
 - After Hours: 5 Minutes
- 2. Select New Settings
 - Occupied Level: 75 %
 - Unoccupied Level: 0 %
 - After Hours Timeout: 60 Minutes
 - Blink-Warn Timeout: 5 Minutes
- 3. Select how to apply
 - Apply and update area based on new levels.
 - Apply and wait for the next transition to take place to change light levels.

Buttons for 'Apply' and 'Cancel' are visible at the bottom of the right pane. The status bar at the bottom indicates 'Logged in User: admin' and 'Logged in Time: Thursday, March 24, 2011 5:50:48 PM'.

Area occupancy settings can be changed in real-time.

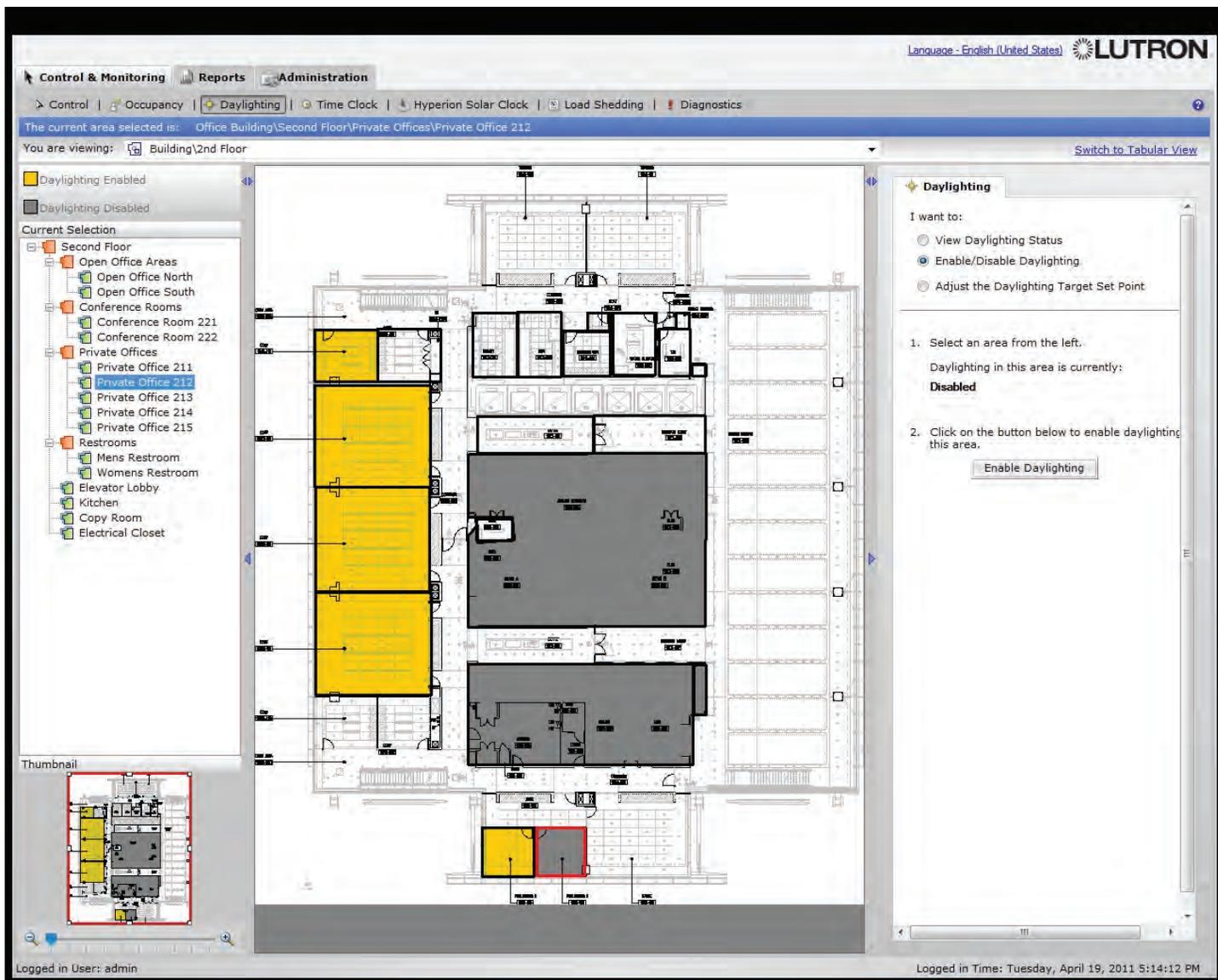
To change occupancy settings:

1. Select an area.
2. In the right pane, click "Change occupancy settings".
3. Type in the desired occupied level, unoccupied level.
4. If the area uses sensors, choose the sensor timeout. If the area does not use sensors, choose the After Hours Timeout and Blink-Warn Timeout.

The After Hours Timeout is the time the lights will remain on before performing a blink-warn to tell the occupant that lights are going to turn off shortly. The Blink-Warn Timeout is the time the lights will remain on after a blink-warn before going to off (or a custom unoccupied level) if the occupant does not press a button on a wall control.

5. Choose whether or not the settings should take effect immediately. For example, if the area is already occupied and you change the occupied level to 50%, should it go to 50% as soon as you click Apply, or only on the next occupied event?
6. Click Apply.

Control & Monitoring: Daylighting



The Daylighting screen allows a building manager to control and monitor daylighting for areas.

Daylighting is a feature in which the system changes the level of electric lights based on the amount of daylight present. Regardless of how much daylight is coming in, daylighting works to maintain a constant level of “total light” in a space. This “total light” is expressed as the daylighting target set point, which represents the maximum level the electric lights will achieve when no daylight is present. Electric lights will dim down from this target set point when daylight is present.

Quantum® also supports switched daylighting, in which an area is configured with a minimum light level. Once total light falls below the minimum light level, the system will switch on the electric lights. An area can either use dimmed daylighting or switched daylighting.

The Daylighting screen allows the building manager to control and monitor daylighting as follows:

Daylighting can be enabled or disabled.

To enable/disable daylighting:

1. Select an area.
2. In the right pane, click “Enable/Disable Daylighting”.
3. The right pane will display the selected area’s daylighting state, and will have a button to change it.
4. Click the “Enable Daylighting” or “Disable Daylighting” button.

Control & Monitoring: Daylighting

The screenshot displays the Lutron Q-Admin software interface. The main window shows a floor plan of the second floor with several areas highlighted in yellow. A sidebar on the left lists the current selection: 'Second Floor' > 'Private Offices' > 'Private Office 214'. The 'Daylighting' control panel is active, showing options to 'View Daylighting Status', 'Enable/Disable Daylighting', and 'Adjust the Daylighting Target Set Point'. The 'Adjust the Daylighting Target Set Point' option is selected. Below this, a slider and text box show the current target set point is 85%. An 'Apply' button is visible. The interface also shows a 'Thumbnail' view of the floor plan and a 'Logged in User: admin' status at the bottom left.

Dimmed daylighting: Daylight set points can be changed for each daylit area. This is particularly useful when new departments with different lighting requirements move into a space. The daylighting target set point for an area ranges from 0 to 100 percent.

To change the daylighting target level:

1. Select an area.
2. In the right pane, select "Adjust the Daylighting Target Set Point".
3. Change the level using the slider, text box, or up/down buttons.
4. Click Apply.

Control & Monitoring: Daylighting

The screenshot displays the Q-Admin software interface for controlling daylighting. The top navigation bar includes 'Control & Monitoring', 'Reports', and 'Administration'. The current area selected is 'Office Building\Second Floor\Conference Rooms\Conference Room 221'. The left sidebar shows a tree view of the building's layout, with 'Conference Room 221' selected. The central pane shows a floor plan with a yellow highlighted area representing the selected room. The right-hand pane, titled 'Daylighting', contains the following options:

- I want to:
 - View Daylighting Status
 - Enable/Disable Daylighting
 - Adjust the Daylighting Minimum Level
- 1. Select an area from the left.
The minimum light level for this area is:
40 Fc
- 2. Set the minimum light level for this area (Fc).
40 [up/down arrows]
- Do you want to Recommission Daylighting in this area?

Logged in User: admin
Logged in Time: Tuesday, April 19, 2011 5:14:12 PM

Switched daylighting: Switched daylighting is commissioned in Q-Admin™. Minimum light level can be viewed and set for each area.

To change the minimum light level:

1. Select an area.
2. In the right pane, select "Adjust the Daylighting Minimum Level".
3. Change the level using the text box or up/down buttons.
4. Click Apply.

Control & Monitoring: Daylighting

Q-Admin

Language - English (United States) LUTRON

Control & Monitoring | Reports | Administration

Control | Occupancy | Daylighting | Time Clock | Hyperion Solar Clock | Load Shedding | Diagnostics

Daylight Commissioning Wizard

Step 1: Overview

Step 2: Record Light Level with Lights On

Step 3: Record Light Level with Lights Off

Step 4: Set Minimum Light Level

Daylight Commissioning

You are working in area: Office Building\Second Floor\Conference Rooms\Conference Room 221

Commissioning must be done under the following conditions:

- There is no direct sunlight in the space.
- Daylight is reasonably constant (sunny, no fast moving clouds)
- The work plane illumination is greater than 20 fc of daylight.
- All work plane meter readings are done at the same place and are measured in FC

Click on 'Next' to advance to the next step.

< Back Next > Cancel

Logged in User: admin Logged in Time: Thursday, March 24, 2011 5:50:48 PM

To commission switched daylighting, click the “Recommission” button at the bottom of the right pane, and perform the steps in the wizard, as follows:

Step 1: Overview – Prerequisites to commissioning switched daylighting are explained.

Step 2: Record Light Level with Lights On – Click “Turn On Lights”. If necessary, click “Show Sensor Values”. Once sensor values are stabilized, click “Next” to continue.

Step 3: Record Light Level with Lights Off – This step requires a calibrated light meter. Click “Turn Off Lights” and type in light-meter reading(s).

Step 4: Set Minimum Light Level – Enter the minimum light level that the area will maintain at all times. If desired, use a light meter for reference.

Save: Click Save to commit the changes to the system. Remember to backup the project to a .lut file (Administration > Backup) to save a copy to disk.

Time Clocks

Time Clocks are defined to allow automated control of the system via programmed time clock events.

Multiple time clocks are used to separate control of different areas or different output types (lighting, shades, etc.)

You may, for example, define a separate time clock for each of the following:

- Campus Parking Lot Lights
- Shades
- Cafeteria Lights

Below is an example showing how you might define the "Campus Parking Lot Lights Time Clock":

Campus Parking Lot Lights Time Clock

1. Assign Outputs to Time Clock

I want to control all my exterior parking lot areas, which include:

- Exterior\Parking Lot 1
- Exterior\Parking Lot 2
- Exterior\Parking Lot 3

2. Define Weekly Events

During a normal week, I want my Campus Parking Lot Lights to operate as follows:

Time	Event Name	Days of the Week
One hour Before Sunrise	Turn Lights On	Monday – Friday
Sunrise	Turn Lights Off	Monday – Friday
Sunset	Turn Lights On	Monday – Friday
1:00 AM	Turn Lights Off	Monday – Friday

3. Define Special Events

During a holiday, I want my Campus Parking Lot Lights to operate as follows:

Time	Event Name
Sunset	Turn Lights On
10:30 PM	Turn Lights Off

Other Time Clock Applications

After Hours Time Clock

Time	Event Name	Days of the Week
7:00 AM	Begin After Hours	Monday – Friday
7:00 PM	End After Hours	Monday – Friday

Disable Nighttime Occupancy Time Clock

Time	Event Name	Days of the Week
7:00 AM	Disable Occupancy	Monday – Friday
7:00 PM	Enable Occupancy	Monday – Friday

Viewing Time Clocks

The screenshot shows the Lutron Q-Admin interface. At the top, there's a navigation bar with 'Control & Monitoring', 'Reports', and 'Administration'. Under 'Administration', 'Time Clock' is selected. Below this, there's a dropdown menu showing 'You are viewing: Change Occupancy Settings (Pending Changes)'. On the left, there's a calendar for March 2011 with the 24th selected. Below the calendar are options for 'Weekly', 'Holiday', and 'Special Routine'. In the center, there's a table of time clock events for Thursday, March 24, 2011. The table has columns for time, event name, and status. The events are listed from 7:00 AM to 7:00 PM. On the right, there's a sidebar with 'I want to:' and several options: 'View Events', 'Set Up Time Clock Events', 'Test Events', 'Enable/Disable Selected Time Clock', and 'Review Location Settings'. At the bottom, it says 'Logged in User: admin' and 'Logged in Time: Thursday, March 24, 2011 5:50:48 PM'.

To view Time Clocks, select “View Events” on the right side of the Time Clocks screen. Select a Time Clock in the “You are viewing:” dropdown, and select a day from the calendar on the left. By default, today is selected.

All the Time Clock events for the selected day will be listed in the middle-pane. Click a different day on the left to view that day’s Time Clock events. Click Expand All, or click the [+], to show details of all actions that will happen when a Time Clock event is executed. On the left is the output name, and on the right is the level the output will go to.

Creating/Modifying Time Clocks

The screenshot shows the Q-Admin interface with the following elements:

- Navigation:** Control & Monitoring, Reports, Administration. Sub-navigation: Control, Occupancy, Daylighting, Time Clock, Hyperion Solar Clock, Load Shedding, Diagnostics.
- Viewing:** You are viewing: After Hours [Pending Changes]
- Calendar:** Go To Today, < March 2011 >. A calendar grid shows the date 24 (Thursday) selected.
- Time Clock Events:**
 - 7:00 AM At Sunrise:** Office Building\Second Floor\Elevator Lobby (Occupancy Inactive), Office Building\Second Floor\Kitchen (Occupancy Inactive), Office Building\Second Floor\Copy Room (Occupancy Inactive), Office Building\Second Floor\Open Office Areas\Open Office South (Occupancy Inactive), Office Building\Second Floor\Electrical Closet (Occupancy Inactive), Office Building\First Floor\Open Office Areas\Open Office North (Occupancy Inactive), Office Building\First Floor\Open Office Areas\Open Office South (Occupancy Inactive), Office Building\Third Floor\Open Office Areas\Open Office North (Occupancy Inactive), Office Building\Third Floor\Open Office Areas\Open Office South (Occupancy Inactive), Office Building\Fourth Floor\Open Office Areas\Open Office North (Occupancy Inactive), Office Building\Fourth Floor\Open Office Areas\Open Office South (Occupancy Inactive), Office Building\Fourth Floor\Electrical Closet (Occupancy Inactive).
 - 6:00 PM 6:00 PM:** Office Building\Second Floor\Elevator Lobby (After Hours Active), Office Building\Second Floor\Kitchen (After Hours Active), Office Building\Second Floor\Copy Room (After Hours Active), Office Building\Second Floor\Open Office Areas\Open Office South (After Hours Active), Office Building\Second Floor\Electrical Closet (After Hours Active), Office Building\First Floor\Open Office Areas\Open Office North (After Hours Active), Office Building\First Floor\Open Office Areas\Open Office South (After Hours Active), Office Building\Third Floor\Open Office Areas\Open Office North (After Hours Active), Office Building\Third Floor\Open Office Areas\Open Office South (After Hours Active), Office Building\Fourth Floor\Open Office Areas\Open Office North (After Hours Active), Office Building\Fourth Floor\Open Office Areas\Open Office South (After Hours Active), Office Building\Fourth Floor\Electrical Closet (After Hours Active).
- Left Panel:** Weekly, Holidays, Special Routine 1, Special Routine 2, Special Routine 3, Special Routine 4.
- Day Settings:** Day Begins at: 12:00 AM, Sunrise: 7:00 AM, Sunset: 7:18 PM.
- Right Panel:** I want to: View Events, Set Up Time Clock Events (selected), Test Events, Enable/Disable Selected Time Clock, Review Location Settings. Time Clock Events may be scheduled to reoccur on a weekly basis or on specific dates. Click on button below to launch the Time Clock Wizard. The Time Clock Wizard will allow you to Add, Edit and Delete Time Clock Events on existing Time Clocks, or create new Time Clocks. The wizard will also allow you to choose which outputs (lights, shades, contact closure outputs) are controlled by each Time Clock. Launch Time Clock Wizard button.
- Status:** Logged in User: admin, Logged in Time: Thursday, March 24, 2011 5:50:48 PM

To create or modify a Time Clock, click “Set Up Time Clock Events” on the right, and click the “Launch Time Clock Wizard” button.

Use Back/Next to navigate through the wizard.

At any time, press “Save and Close Wizard” when complete. Any changes made in the wizard will be saved to the live database and to the system.

Note: After making changes, you should go to Administration and backup the project database to a file.

Step 1: Overview

Select “Show Example” to view an example Time Clock.

Creating/Modifying Time Clocks

The screenshot shows the Lutron Q-Admin interface. At the top, there is a navigation bar with tabs for 'Control & Monitoring', 'Reports', and 'Administration'. The 'Administration' tab is active, and a breadcrumb trail shows 'Control' > 'Occupancy' > 'Daylighting' > 'Time Clock'. The main content area is titled 'Time Clock Wizard' and is divided into a left sidebar and a main panel. The sidebar lists six steps: Step 1: Overview, Step 2: Add/Edit/Delete (highlighted), Step 3: Assign Output, Step 4: Define Weekly Events, Step 5: Define Special Events, and Step 6: Finish. The main panel is titled 'Add/Edit/Delete' and contains the following options: 'Choose the action you would like to perform:' with three radio buttons: 'Add New Time Clock' (unselected), 'Edit Existing Time Clock' (selected), and 'Delete Existing Time Clock' (unselected). Under 'Add New Time Clock', there is a text input field labeled 'Enter the name for the new time clock:' and a 'Time Clock' label. Under 'Edit Existing Time Clock', there is a list box containing 'Change Occupancy Settings', 'Project Time Clock', and 'After Hours'. Under 'Delete Existing Time Clock', there is a dropdown menu and a 'Delete' button. At the bottom of the main panel, there are three buttons: '< Back', 'Next >', and 'Save and Close Wizard'. The status bar at the bottom shows 'Logged in User: admin' and 'Logged in Time: Thursday, March 24, 2011 5:50:48 PM'.

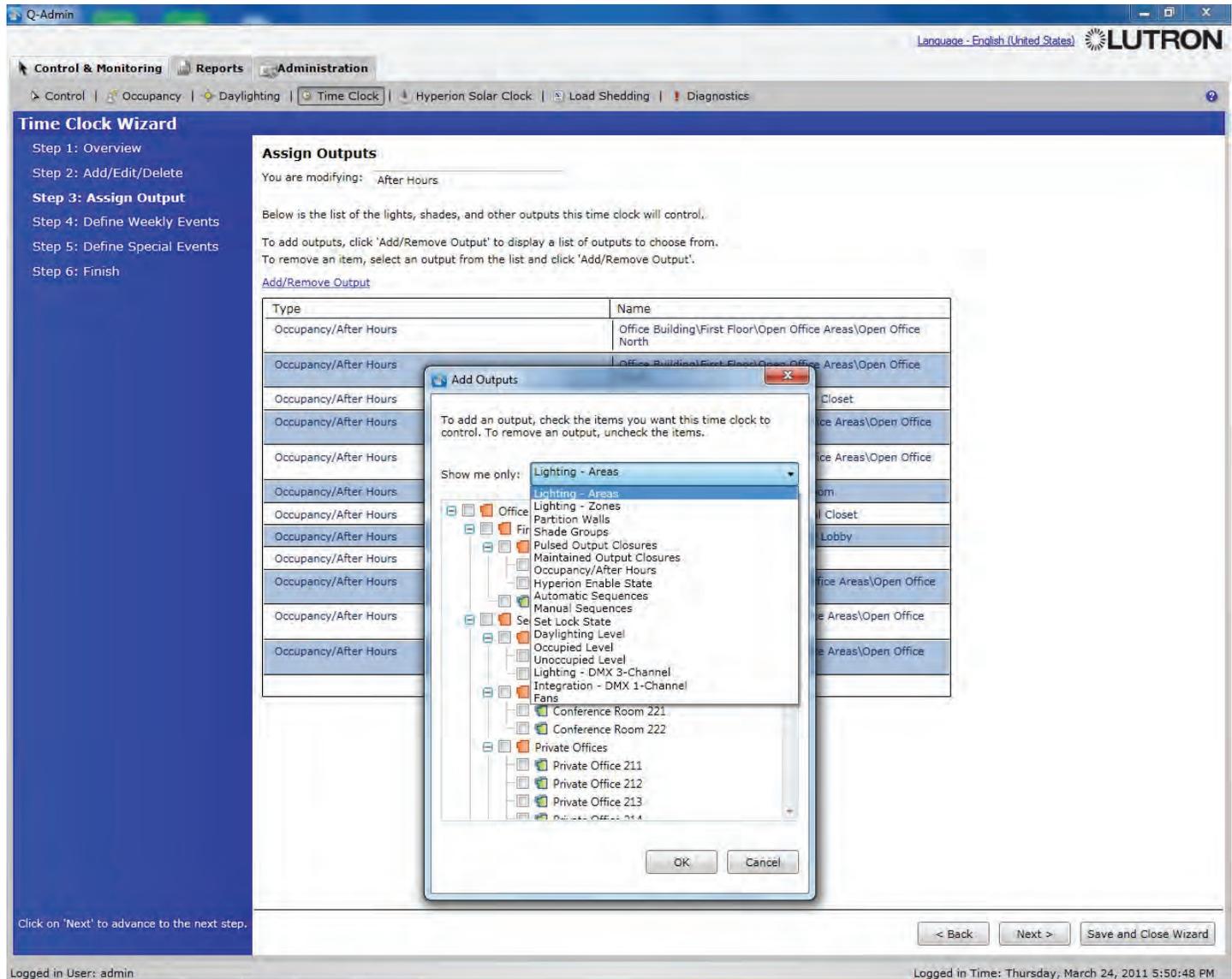
Step 2: Add/Edit/Delete: Add, edit, or delete Time Clocks.

Select whether you want to add, edit, or delete a Time Clock.

- To add a Time Clock, click the first radio button, type in the Time Clock name, and click Next.
- To modify a Time Clock, click the second radio button, click the Time Clock to modify, and click Next.

To delete a Time Clock, click the third radio button, select the Time Clock to delete from the dropdown menu, and click Delete.

Creating/Modifying Time Clocks



Step 3: Assign Outputs

Define which system loads, shades, and other outputs are controlled by the selected Time Clock. The text box at the top allows you to change the name of the Time Clock.

To assign outputs to a Time Clock:

1. Click "Add/Remove Output" to display a window with all controllable outputs in the project database.
2. To add outputs:
 - a. Select the type of output in the dropdown.
 - b. Navigate to the output in the area tree.
 - c. Check the output you want to add.
3. Click OK when finished.

The grid below the "Add/Remove Output" link shows what outputs are selected for control by the selected Time Clock.

Creating/Modifying Time Clocks

The screenshot shows the Q-Admin interface for defining weekly events. The sidebar on the left lists the steps of the Time Clock Wizard, with 'Step 4: Define Weekly Events' selected. The main content area is titled 'Define Weekly Events' and shows the configuration for an event named 'After Hours'. It includes a table for defining the weekly schedule, a 'Quickly Set Levels' dialog box, and a table for setting levels for various outputs.

Define Weekly Events

You are modifying: After Hours

Below is list of weekly time clock events defined for this time clock.
To edit an event, select the event and click on 'Edit Event'. To define a new event click on 'New Event'.

Time	Event	Weekly Schedule						
		Sun	Mon	Tue	Wed	Thur	Fri	Sat

Buttons: [New Event](#) [Edit Event](#) [Delete Event](#) [View Event](#)

1. Define when the new event will occur.

Name: Begin After Hours

Time: Fixed Time
6 : 00 PM

Weekdays: Sun Mon Tues Wed Thur Fri Sat

2. Set levels for the outputs. [Quickly Set Levels](#)

Type	Name	Level	Evaluate
Occupancy/After Hours	Office Building\First Floor\Open Office Areas\Open Office North	Unaffected	<input type="checkbox"/>
Occupancy/After Hours	Office Building\First Floor\Open Office Areas\Open Office South	Unaffected	<input type="checkbox"/>
Occupancy/After Hours	Office Building\Fourth Floor\Electrical Closet	Unaffected	<input type="checkbox"/>
Occupancy/After Hours	Office Building\Fourth Floor\Open Office Areas\Open Office North	Unaffected	<input type="checkbox"/>
Occupancy/After Hours	Office Building\Fourth Floor\Open Office Areas\Open Office South	Unaffected	<input type="checkbox"/>
Occupancy/After Hours	Office Building\Second Floor\Copy Room	Unaffected	<input type="checkbox"/>
Occupancy/After Hours	Office Building\Second Floor\Electrical Closet	Unaffected	<input type="checkbox"/>
Occupancy/After Hours	Office Building\Second Floor\Elevator Lobby	Unaffected	<input type="checkbox"/>

Buttons: [Save](#) [Cancel](#)

Click on 'Next' to advance to the next step.

Logged in User: admin
Logged in Time: Thursday, March 24, 2011 5:50:48 PM

Step 4: Define Weekly Events

Weekly events occur regularly every week, based on the selected weekdays—for example, an event can be set to occur every Monday, Wednesday, and Friday.

To add a new event:

1. Click “New Event”. The bottom of the screen will populate with event details. Each output assigned to the Time Clock will appear in the event list.
2. Define the event name, what days and times the event will happen on, and what actions will happen in the system when the event executes. The “time” dropdown allows you to choose either a fixed time (e.g., 5:41 p.m.) or an astronomic time (e.g., 12 minutes after sunset).
3. The grid in step 2 shows what level each output will be sent to. (The default, “unaffected,” means that output will not be affected by the Time Clock event.) To quickly set many different outputs to the same level (e.g., all areas to scene 1), click the “Quickly Set Levels” hyperlink. In the window that displays, choose the output type in the first dropdown menu, and choose the level in the second dropdown menu.
4. The evaluate checkbox is valid only for occupancy. If evaluate is checked the Time Clock event enables/disables occupancy, it will first re-evaluate if the area is occupied and go to the appropriate level; if unchecked, lights will not change until the next occupancy event (and if occupancy is enabled).
5. When finished adding an event, click “Save” (you may have to scroll down to see this button).

Creating/Modifying Time Clocks

Time Clock Wizard

Step 1: Overview
Step 2: Add/Edit/Delete
Step 3: Assign Output
Step 4: Define Weekly Events
Step 5: Define Special Events
Step 6: Finish

I want to:

- Use my normal weekly events on every day of the year.
- Define time clock events that will occur on holidays and other special dates, in place of normal weekly events.

1. Select the Special Schedule to define: **Holidays** [Rename Schedule](#)

2. To schedule special dates, click 'Show Special Calendar'. [Show Special Calendar](#)

Below is a list of time clock events defined for the **Holidays** special schedule.

To edit an event, click on the event name.

Special Calendar

Click on the dates on the calendar when the Holidays will occur

To remove a highlighted date, Click on it again.

Legend:

- Holidays
- Special Routine 1
- Special Routine 2
- Special Routine 3
- Special Routine 4

< 2011 >

January							February							March							April						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
						1																					
2	3	4	5	6	7	8	6	7	8	9	10	11	12	6	7	8	9	10	11	12	3	4	5	6	7	8	9
9	10	11	12	13	14	15	13	14	15	16	17	18	19	13	14	15	16	17	18	19	10	11	12	13	14	15	16
16	17	18	19	20	21	22	20	21	22	23	24	25	26	20	21	22	23	24	25	26	17	18	19	20	21	22	23
23	24	25	26	27	28	29	27	28						27	28	29	30	31			24	25	26	27	28	29	30
30	31																										
May							June							July							August						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
											1	2	3	4													
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9	7	8	9	10	11	12	13
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16	14	15	16	17	18	19	20
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23	21	22	23	24	25	26	27
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30	28	29	30	31			
September							October							November							December						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
						1							1														
4	5	6	7	8	9	10	2	3	4	5	6	7	8	6	7	8	9	10	11	12	4	5	6	7	8	9	10
11	12	13	14	15	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	19	11	12	13	14	15	16	17
18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	26	18	19	20	21	22	23	24
25	26	27	28	29	30		23	24	25	26	27	28	29	27	28	29	30				25	26	27	28	29	30	31

Save Cancel

Wizard

Logged in User: admin

Logged in Time: Thursday, March 24, 2011 5:50:48 PM

Step 5: Define Special Events

Special events are events that will occur on specific dates, such as holidays or once-a-month occurrences. Normal weekly events will still occur on days that are not part of a special schedule.

To define special events:

1. Click on “Show Special Calendar” to modify the schedule.
2. In the yearly calendar, select or unselect days by clicking them, to add or remove from the special schedule. A single day in the year may only be part of a single special schedule. Special schedules will recur on the same date every year.
3. After creating a special schedule, click “Save,” and then add events as before. Up to five special schedules can be defined. Special schedules are unique to the Time Clock they are defined in. E.g., the Holiday schedule in one Time Clock may be different than the Holiday schedule of another Time Clock.

Step 6: Click “Save and Close Wizard”

“Save and Close Wizard” will make the Time Clock changes to the live Quantum® system. To make the changes in the .lut file, remember to perform a project database backup in the Administration tab.

Testing Time Clocks

The screenshot shows the Lutron Q-Admin interface. At the top, there are navigation tabs for 'Control & Monitoring', 'Reports', and 'Administration'. The 'Administration' tab is active, and the 'Time Clock' sub-tab is selected. The page title is 'After Hours [Pending Changes]'. On the left, there is a calendar for March 2011 with the 24th highlighted. Below the calendar is a legend for 'Weekly', 'Holidays', and 'Special Routine 1-4'. The main content area shows a table of time clock events for Thursday, March 24, 2011. The table has two main sections: 'At Sunrise' and '6:00 PM'. The 'At Sunrise' section starts at 7:00 AM and lists various office areas with 'Occupancy Inactive' status. The '6:00 PM' section starts at 6:00 PM and lists the same office areas with 'After Hours Active' status. On the right side, there is a 'I want to:' section with radio buttons for 'View Events', 'Set Up Time Clock Events', 'Test Events' (which is selected), 'Enable/Disable Selected Time Clock', and 'Review Location Settings'. Below this is a text box explaining that test events simulate time clock events to confirm output control, followed by a 'Test Event' button. At the bottom, it shows 'Logged in User: admin' and 'Logged in Time: Thursday, March 24, 2011 5:50:48 PM'.

Time	Event Name	Status
7:00 AM	Office Building\Second Floor\Elevator Lobby	Occupancy Inactive
	Office Building\Second Floor\Kitchen	Occupancy Inactive
	Office Building\Second Floor\Copy Room	Occupancy Inactive
	Office Building\Second Floor\Open Office Areas\Open Office South	Occupancy Inactive
	Office Building\Second Floor\Electrical Closet	Occupancy Inactive
	Office Building\First Floor\Open Office Areas\Open Office North	Occupancy Inactive
	Office Building\First Floor\Open Office Areas\Open Office South	Occupancy Inactive
	Office Building\Third Floor\Open Office Areas\Open Office North	Occupancy Inactive
	Office Building\Third Floor\Open Office Areas\Open Office South	Occupancy Inactive
	Office Building\Fourth Floor\Open Office Areas\Open Office North	Occupancy Inactive
Office Building\Fourth Floor\Open Office Areas\Open Office South	Occupancy Inactive	
Office Building\Fourth Floor\Electrical Closet	Occupancy Inactive	
6:00 PM	Office Building\Second Floor\Elevator Lobby	After Hours Active
	Office Building\Second Floor\Kitchen	After Hours Active
	Office Building\Second Floor\Copy Room	After Hours Active
	Office Building\Second Floor\Open Office Areas\Open Office South	After Hours Active
	Office Building\Second Floor\Electrical Closet	After Hours Active
	Office Building\First Floor\Open Office Areas\Open Office North	After Hours Active
	Office Building\First Floor\Open Office Areas\Open Office South	After Hours Active
	Office Building\Third Floor\Open Office Areas\Open Office North	After Hours Active
	Office Building\Third Floor\Open Office Areas\Open Office South	After Hours Active
	Office Building\Fourth Floor\Open Office Areas\Open Office North	After Hours Active
Office Building\Fourth Floor\Open Office Areas\Open Office South	After Hours Active	
Office Building\Fourth Floor\Electrical Closet	After Hours Active	

Test Events allows you to simulate a Time Clock event live to confirm that it controls the outputs programmed to it.

To test a Time Clock event:

1. Select a Time Clock event in the grid.
2. Click the "Test Event" button.

Enable/Disable Selected Time Clocks

The screenshot shows the Q-Admin web interface. At the top, there's a navigation bar with 'Control & Monitoring', 'Reports', and 'Administration'. Below that, a breadcrumb trail shows 'Control' > 'Occupancy' > 'Daylighting' > 'Time Clock' > 'Hyperion Solar Clock' > 'Load Shedding' > 'Diagnostics'. The main content area is titled 'You are viewing: After Hours [Pending Changes]'. Below this, there's a 'Go To Today' button and a calendar for March 2011. A table shows the time clock schedule: 7:00 AM 'At Sunrise' (End After Hours) and 6:00 PM '6:00 PM' (Begin After Hours). On the right, there's a 'I want to:' section with radio buttons for 'View Events', 'Set Up Time Clock Events', 'Test Events', 'Enable/Disable Selected Time Clock' (selected), and 'Review Location Settings'. Below that, it says 'The After Hours is currently Enabled' and 'I want to disable the time clock:' with radio buttons for 'Until the End of the Day' and 'Until I Enable It Again' (selected). A 'Disable Time Clock' button is at the bottom of the right panel. The footer shows 'Logged in User: admin' and 'Logged in Time: Thursday, March 24, 2011 5:50:48 PM'.

Time Clocks can be enabled and disabled through the system (e.g., through keypad button presses, CCI toggle switches, or sequences). These are programmed in Q-Design after a Time Clock has been created in Q-Admin™. Once a Time Clock is disabled, all Time Clock events for the given Time Clock will stop occurring until that Time Clock is re-enabled.

To disable an enabled Time Clock indefinitely:

1. Choose a Time Clock in the “You are viewing:” dropdown.
2. Choose the “Enable/Disable Selected Time Clock” option in the right pane.
3. Choose the “Until I Enable It Again” option in the right pane.
4. Click “Disable Time Clock”. The Time Clock will remain disabled until explicitly re-enabled.

To disable an enabled Time Clock until the end of the day:

1. Choose a Time Clock in the “You are viewing:” dropdown.
2. Choose the “Enable/Disable Selected Time Clock” option in the right pane.
3. Choose the “Until the End of the Day” option in the right pane.
4. Click “Disable Time Clock”. The Time Clock will remain disabled until 11:59 p.m. It will then be automatically re-enabled.

To enable a disabled Time Clock:

1. Choose a Time Clock in the “You are viewing:” dropdown.
2. Choose the “Enable/Disable Selected Time Clock” option in the right pane.
3. Click “Enable Time Clock”.

Review/Edit Location Settings

The screenshot shows the Lutron Q-Admin software interface. The main window displays a calendar for March 2011 and a list of routines. The 'Location Settings' dialog is open, showing fields for Country (United States of America), State (Pennsylvania), City (Coopersburg), Latitude (40.5), Longitude (75.4), and Time Zone (Eastern Time). A 'Custom City' dialog is also open, showing fields for Country (United States of America), State (Pennsylvania), City (Northampton), Latitude (0), Longitude (0), and Time Zone (Eastern Time). The 'Custom City' dialog has a dropdown menu for 'Week' with options: First week, Second week, Third week, Fourth week, Last week.

The “Location Settings” display is used for configuring geographical position and time zone.

The following system features are affected by location settings:

- Night Lights – Can be programmed to begin or end based on sunrise/sunset.
- Time Clocks – Can be programmed to execute based on sunrise/sunset.
- Hyperion™ – Uses location settings and time zone information to determine the precise position of the sun.
- Green Glance® – Uses location settings for weather display.

The “Location Settings” display can be accessed from the Time Clock and Hyperion™ screens, by clicking “Edit Location Settings” in the right pane after selecting “Review Location Settings”.

To enter your location:

1. Click “Edit Location Settings,” and in the popup window, select your country, state/province, and city. This will automatically populate your latitude, longitude, time zone, and daylight savings information.
2. If your city is not available, click “Add City” and enter the appropriate details.
3. Click “Save” when completed. Remember to perform a database backup (see the Administration section for details) to save changes to disk.

Hyperion™ Solar Clock

Q-Admin

Language - English (United States) LUTRON

Control & Monitoring Reports Administration

Control | Occupancy | Daylighting | Time Clock | Hyperion Solar Clock | Load Shedding | Diagnostics

Area: Office Building\Second Floor\Open Office Areas\Open Office North (Enabled)

Go To Today

< May 2011 >

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Monday, May 30, 2011

Expand All
Collapse All

Time	Event Name	Sunscreen	Percentage
5:35 AM	Hyperion Event 1	Sunscreen	11 %
6:35 AM	Hyperion Event 2	Sunscreen	31 %
7:35 AM	Hyperion Event 3	Sunscreen	88 %
8:35 AM	Hyperion Event 4	Sunscreen	100 %
5:35 PM	Hyperion Event 5	Sunscreen	73 %
6:35 PM	Hyperion Event 6	Sunscreen	11 %

I want to:

- View settings
- Setup Hyperion
- Test Hyperion Events
- Enable/Disable Hyperion
- Review Location Settings

View the Hyperion events for the selected area in the grid at the left.

Hyperion settings for selected area:

Work surface height: 40 in.

Max sunlight penetration: 60 in.

Min time between movements: 60 min.

Logged in User: admin

Logged in Time: Thursday, March 24, 2011 5:50:48 PM

Overview

Hyperion™ is an automated shading system that adjusts Sivioia® QS shades throughout the day based on the sun's position. The shades reduce glare and solar heat gain in the space, creating a comfortable and productive work or learning environment. Hyperion™ maximizes the amount of available daylight entering a space, enhancing the energy-saving potential of daylight-harvesting lighting systems, and can also reduce energy costs associated with HVAC systems.

Screen Layout

The Hyperion™ Solar Clock screen allows the user to view and test the Hyperion™ schedule for any area, enable/disable Hyperion™, and to configure Hyperion™ settings.

The screen layout is similar to the Time Clock screen: On the left, a calendar is used to select different days. In the middle is a full list of Hyperion™ events for that day, which displays when shades move, and what level they move to. On the right pane, radio buttons are used to view settings, setup Hyperion™, test Hyperion™ events, enable/disable Hyperion™, and review location settings.

Hyperion™ Solar Clock

Q-Admin

Language - English (United States) LUTRON

Control & Monitoring Reports Administration

Control | Occupancy | Daylighting | Time Clock | Hyperion Solar Clock | Load Shedding | Diagnostics

Area: Office Building\Second Floor\Open Office Areas\Open Office North (Enabled)

Monday, May 30, 2011

Expand All
Collapse All

5:35 AM	Hyperion Event 1	Sunscreen	11 %
6:35 AM	Hyperion Event 2	Sunscreen	31 %
7:35 AM	Hyperion Event 3	Sunscreen	88 %
8:35 AM	Hyperion Event 4	Sunscreen	100 %
5:35 PM	Hyperion Event 5	Sunscreen	73 %
5:35 PM	Hyperion Event 6	Sunscreen	11 %

I want to:

- View settings
- Setup Hyperion
- Test Hyperion Events
- Enable/Disable Hyperion
- Review Location Settings

Testing Hyperion events allows you to simulate the selected Hyperion event right now to confirm that it controls the correct shade group(s) in the expected manner.

Select the desired Hyperion event at left and click on 'Test Hyperion Event'.

Test Hyperion Event

Logged in User: admin

Logged in Time: Thursday, March 24, 2011 5:50:48 PM

To view Hyperion™ Schedules:

1. Select “View settings” on the right side of the Hyperion™ screen.
2. Select an area in the area dropdown.
3. Select a day from the calendar on the left (by default, today is selected).

All the Hyperion™ events for the selected day will be listed in the middle-pane. Click a different day on the left to view that day’s Hyperion™ events. Click Expand All, or click the [+], to show details of all Hyperion™ shade movements that day.

To Test a Hyperion™ Event:

Testing Hyperion™ events allows the user to simulate the selected Hyperion™ event live to confirm that it controls the correct shade group(s) in the expected manner.

1. Choose the “Test Hyperion™ Events” in the right pane.
2. Select an area in the area dropdown.
3. Click the Hyperion™ event you want to test.
4. Click “Test Hyperion™ Event”. The shades in the area will go to the levels defined in the Hyperion™ event.

Hyperion™ Solar Clock

The screenshot shows the Q-Admin interface for the Hyperion Solar Clock. The main content area displays a table of Hyperion events for Monday, May 30, 2011. The table has columns for time, event name, and percentage. The events are:

Time	Event Name	Percentage
5:35 AM	Hyperion Event 1 Sunscreen	11 %
6:35 AM	Hyperion Event 2 Sunscreen	31 %
7:35 AM	Hyperion Event 3 Sunscreen	88 %
8:35 AM	Hyperion Event 4 Sunscreen	100 %
5:35 PM	Hyperion Event 5 Sunscreen	73 %
5:35 PM	Hyperion Event 6 Sunscreen	11 %

The right-hand panel, titled "I want to:", contains the following options:

- View settings
- Setup Hyperion
- Test Hyperion Events
- Enable/Disable Hyperion
- Review Location Settings

Below these options, it indicates "Hyperion is currently: Enabled" and provides three radio button options:

- Enable
- Disable Until End of Hyperion Schedule
- Disable indefinitely

At the bottom of the right panel are two buttons: "Apply to current area" and "Apply to all areas".

To Enable/Disable Hyperion™:

1. Choose "Enable/Disable Hyperion™" in the right pane.
2. Select an area in the area dropdown.
3. Select whether you want to enable Hyperion™, disable Hyperion™ until the end of day, or disable Hyperion™ until it is manually re-enabled.
4. Click "Apply to current area" to enable/disable only the selected area's Hyperion™ schedule, or "Apply to all areas" to enable/disable Hyperion™ for the entire project.

Shades controlled by Hyperion™ can also be controlled manually. Anytime a Hyperion™-controlled shade moves due to manual control, the Hyperion™ schedule is overridden temporarily.

Hyperion™ can also be enabled and disabled through the system (e.g., through keypad button presses, CCI toggle switches, Time Clock events, or sequences).

Hyperion™ Solar Clock

Q-Admin

Language - English (United States) LUTRON

Control & Monitoring Reports Administration

Control | Occupancy | Daylighting | Time Clock | Hyperion Solar Clock | Load Shedding | Diagnostics

Hyperion Wizard

Step 1: Overview and Defaults

Step 2: Facing Directions

Step 3: Window Types

Step 4: Area Setup

Step 5: Nighttime Settings

Step 6: Override Settings

Maximum Sunlight Penetration (at work surface height)

Work Surface Height

Select system-wide defaults for Hyperion below. These settings can all be overridden on an Area-by-Area basis if desired.

Work Surface Height (inches): 40

Maximum Sunlight Penetration (inches): 60

Minimum Time Between Shade Movements (minutes): 60

Click on 'Next' to advance to the next step.

< Back Next > Save and Close Wizard

Logged in User: admin

Logged in Time: Thursday, March 24, 2011 5:50:48 PM

Setup Hyperion™

To configure Hyperion™, select “Setup Hyperion™” in the right pane, and click “Launch Hyperion™ Wizard”. The Hyperion™ Wizard can be used to configure Hyperion™ in multiple areas.

Hyperion™ Wizard Step 1: Overview and Defaults

Set system-wide defaults for Hyperion™. This is a quick way to change the settings for all areas that use the defaults.

- Work-surface height and maximum sunlight penetration define how far into the space direct sunlight will be allowed to penetrate. Hyperion™ will continually adjust shades to ensure direct sunlight does not exceed the maximum sunlight penetration depth at the work-surface height.
- Minimum time between shade movements defines how often Hyperion™ moves shades automatically. To minimize distractions, the time between movements defaults to 60 minutes.

Hyperion™ Solar Clock

Q-Admin Language - English (United States) **LUTRON**

Control & Monitoring | Reports | Administration

Control | Occupancy | Daylighting | Time Clock | **Hyperion Solar Clock** | Load Shedding | Diagnostics

Hyperion Wizard

- Step 1: Overview and Defaults
- Step 2: Facing Directions**
- Step 3: Window Types
- Step 4: Area Setup
- Step 5: Nighttime Settings
- Step 6: Override Settings

Specify the different facing directions present in your building(s). These are the compass orientations of any sides of your building(s) that have shades controlled by Hyperion. The angle should be measured perpendicular to the windows, facing outward. Be sure to measure your facing directions using true north rather than magnetic north for best results.

Facing Direction Name	Direction (degrees)
North Facing	0
South Facing	180

Add New Delete...

Click on 'Next' to advance to the next step.

< Back Next > Save and Close Wizard

Logged in User: admin Logged in Time: Thursday, March 24, 2011 5:50:48 PM

Hyperion™ Wizard Step 2: Facing Directions

Specify the different facing directions present in your building(s). These are the various different compass orientations of any sides of your building(s) that will have shades controlled by Hyperion™. Facing directions are used to determine how the sun will penetrate into an area during any given time of a particular day. It is important to measure facing directions correctly, as all Hyperion™ shade movements will be based on these directions. For best results, be sure to measure your facing directions using true north rather than magnetic north.

Hyperion™ Solar Clock

Hyperion Wizard

- Step 1: Overview and Defaults
- Step 2: Facing Directions
- Step 3: Window Types**
- Step 4: Area Setup
- Step 5: Nighttime Settings
- Step 6: Override Settings

Shade Closed Height

Shade Open Height

Enter the different window types that are covered by shades that will be controlled by Hyperion. Select the most common window type as the default.

Window Type Name	Shade Closed Height (inches)	Shade Open Height (inches)	Default
Window Type 1	30	120	<input checked="" type="checkbox"/>
Window Type 2	20	120	<input type="checkbox"/>

Click on 'Next' to advance to the next step.

Logged in User: admin

Logged in Time: Thursday, March 24, 2011 5:50:48 PM

Hyperion™ Wizard Step 3: Window Types

In order to figure out how light will penetrate into each space, we need to know the size and relative position from the floor for each window. For most buildings, a few window sizes and positions are used. We call these "window types". Enter in the window types (Size and relative position from the floor) that will be used for Hyperion™-controlled spaces.

Hyperion™ Solar Clock

The screenshot shows the Hyperion Wizard Step 4: Area Setup interface. The left sidebar lists steps 1 through 6, with Step 4 highlighted. The main area contains a tree view of areas with shades, a table of shade groups, and configuration options for Hyperion settings.

Hyperion Wizard

- Step 1: Overview and Defaults
- Step 2: Facing Directions
- Step 3: Window Types
- Step 4: Area Setup**
- Step 5: Nighttime Settings
- Step 6: Override Settings

Areas with Shades

Areas with Shades	Facing Direction
Office Building	
Second Floor	
Open Office Areas	
Open Office North	North Facing
Open Office South	South Facing

Selected Area: Office Building\Second Floor\Open Office Areas\Open Office North [Hide Details](#)

Shade Group	Window Type	Facing Direction	Visor Position (%)	Affected by Hyperion?
Sunscreen	Window Type 1	North Facing	100	<input checked="" type="checkbox"/>

Use the default Hyperion settings.
 Customize the Hyperion settings for this area.

Work Surface Height (in.): 40
Max Sunlight Penetration (in.): 60
Min Time Between Movements (min): 60

Click on 'Next' to advance to the next step.

< Back Next > Save and Close Wizard

Logged in User: admin Logged in Time: Thursday, March 24, 2011 5:50:48 PM

Hyperion™ Wizard Step 4: Area Setup

For each area controlled by Hyperion™, choose the appropriate Facing Direction. For areas with multiple façades (e.g., a corner office), you can select a different facing direction for each shade group. For each shade group, select the window type covered by the shades. Additionally, a visor position can be set for each shade group. The visor position is the maximum open position shades should move to during the day. The default visor position is full open (100%). A visor position helps to reduce glare from other indirect light sources (e.g., a neighboring building).

To change Hyperion™ area settings:

1. Select each area in the top grid, and the bottom grid will be populated with that area's shade groups.
2. For each shade group in an area, set the checkbox at the right if the shade group will be affected by Hyperion™.
3. If a shade group is affected by Hyperion™, set the window type, facing direction, and visor position.

By default, the settings from step 1 will be used, but for any area, you may choose to use different settings by clicking "Customize the Hyperion™ settings for this area" at the bottom. This will allow you to choose a work-surface height, maximum sunlight penetration, and minimum time between movements specific to that area.

Hyperion™ Solar Clock

The screenshot shows the Q-Admin interface for the Hyperion Solar Clock. The top navigation bar includes 'Control & Monitoring', 'Reports', and 'Administration'. The 'Administration' tab is active, and the 'Hyperion Solar Clock' sub-tab is selected. The main content area is titled 'Hyperion Wizard' and shows 'Step 5: Nighttime Settings'. The wizard is currently on Step 5, with previous steps (Overview and Defaults, Facing Directions, Window Types, Area Setup) and the next step (Override Settings) visible in the left sidebar. The main content area contains the following settings:

- Nighttime Settings**
- Start of Hyperion Schedule: Specify the time of day (generally in the morning) when Hyperion should become active.
 - Time: Fixed Time (dropdown menu)
 - 7:00 AM (input field)
- End of Hyperion Schedule: Specify the time of day (generally in the evening) when Hyperion should become inactive.
 - Time: Astronomic (dropdown menu)
 - 00:30 (dropdown menu)
 - After (dropdown menu)
 - Sunset (dropdown menu)
- When the Hyperion schedule ends, the system should
 - Open all shades
 - Close sheers only
 - Close sheers and open blackouts
 - Leave the shades as they are

At the bottom of the wizard, there are three buttons: '< Back', 'Next >', and 'Save and Close Wizard'. A footer at the bottom of the page indicates 'Logged in User: admin' and 'Logged in Time: Thursday, March 24, 2011 5:50:48 PM'.

Hyperion™ Wizard Step 5: Nighttime Settings

Specify when the Hyperion™ schedule will begin and end every day. Outside of these times, Hyperion™ will not move the shades. Times can be set either as fixed times (e.g., 5:35 a.m.) or as astronomic times (e.g., at sunrise, 30 minutes before sunset, etc.).

Set what should happen when the Hyperion™ schedule ends every day: open all shades, close sheers (sunscreens) only, close sheers (sunscreens) and open blackouts, or leave shades unaffected (in which case shades will stay where they are when Hyperion™ ends).

Hyperion™ Solar Clock

The screenshot shows the Lutron Q-Admin interface. At the top, there is a navigation bar with tabs for Control & Monitoring, Reports, and Administration. Below this, a breadcrumb trail shows the path: Control > Occupancy > Daylighting > Time Clock > Hyperion Solar Clock > Load Shedding > Diagnostics. The main content area is titled "Hyperion Wizard" and shows "Step 6: Override Settings" as the current step. The wizard instructions state: "Specify what should happen to Hyperion in an area when a user manually controls the shades in that area." Below this, there are two radio button options: "Disabled for 30 minutes" (which is selected) and "Disabled until the end of the Hyperion schedule (nighttime settings will still take place)". At the bottom of the wizard, there are three buttons: "< Back", "Next >", and "Save and Close Wizard". The footer of the interface shows "Logged in User: admin" and "Logged in Time: Thursday, March 24, 2011 5:50:48 PM".

Hyperion™ Wizard Step 6: Override Settings

Any manual movement of a shade in an area will disable the Hyperion™ schedule in an area. Select whether to disable the Hyperion™ schedule for a fixed time, or for the rest of the day, when a manual override occurs.

Save and Close Wizard will save the Hyperion™ schedule to the live database and transfer the information to all processors in the system. To save changes to disk, see the “Administration > Backup” section.

Once finished, view and test the new schedule. If any changes are required, you may revisit the Hyperion™ Wizard and tweak any settings as desired.

Load Shedding

Building Lighting Power Usage
 Maximum Power Usage = 11.83 kW
 No Load Shed Power Usage = 3.76 kW
 Current Power Usage = 3.29 kW
 Current Load Shed Savings = 0.47 kW

Building Lighting Power Usage

Click to show/hide curves:

- Current Power Usage
- No Load Shed
- Demand Goal

Areas	Allow Load Shed	Current	Goal
CB 5	<input checked="" type="checkbox"/>	--%	--%
1ST FLOOR	<input checked="" type="checkbox"/>	--%	--%
119 - Equipment Room	<input type="checkbox"/>	0 %	N/A
116 - Cafeteria 116	<input checked="" type="checkbox"/>	20 %	20 %
North West Dining Area	<input checked="" type="checkbox"/>	20 %	20 %
West 1 Dining Area	<input checked="" type="checkbox"/>	20 %	20 %
West 2 Dining Area (Demo Area)	<input checked="" type="checkbox"/>	20 %	20 %
Projection Area	<input checked="" type="checkbox"/>	20 %	20 %
Private Dining	<input checked="" type="checkbox"/>	20 %	20 %
Town Square	<input checked="" type="checkbox"/>	20 %	20 %
Food Court	<input checked="" type="checkbox"/>	20 %	20 %
121A - Cafeteria Cue 121A	<input checked="" type="checkbox"/>	20 %	20 %

1. Set Demand Goal to: 7 kW

2. Adjust Load Shed Amount:
 To allow load shed, check the 'Allow Load Shed' check box for each area to be load shed. The current column will display the current load shed amount (0% to 90%). The higher the load shed amount, the more power will be saved. To change the load shed amount, type a new amount in the Goal column, click on Save. Note: load shedding must be enabled before saved settings are applied.

3. Load Shed is currently: **Enabled**

Logged in User: admin | Logged in Time: Wednesday, April 20, 2011 4:31:55 PM

Load shedding allows the building manager to monitor whole building lighting power usage and apply a load shed reduction to selected areas, thereby reducing a building's peak power usage. Load shedding can be done for the whole project, for groups of areas, or for individual areas, at levels between 0% and 90%. 0% is the same as no load shedding.

To change load shedding targets for areas:

1. Choose an area using the area tree in the grid on the right side.
2. Select the "Allow Load Shed" checkbox to load shed the area, or deselect it to prevent the area from being load shed.
3. Type a number (from 0 to 90) in the Goal column. This is the percentage of the lighting level you want to reduce the area by (0% = no reduction; 90% = maximum reduction).
4. Repeat for other areas for which you want to change load shedding.
5. Click "Save & Apply".

To enable/disable load shedding:

1. Click "Enable Load Shed" to enable load shedding for the entire project. The button text will change to "Disable Load Shed".
2. Click "Disable Load Shed" to disable load shedding for the entire project. The button text will change to "Enable Load Shed".

Typing a new number in the "Set Demand Goal to:" textbox changes the demand goal (red line). This represents a reference line for the building manager. When building power usage gets close to or above the line, adjust the load shedding for various areas to higher percentages to reduce demand.

Diagnostics

The system is waiting for a response...

The system will periodically refresh the state of all items displayed in the grid. To refresh the status of an item manually, right click on the item and select refresh.

Show Devices with Status:

OK Unknown Not in Database* Not Responding

Expand All
Collapse All
Show Area Numbers...

Show Report Customize Columns...

Device	Device Type	Firmware Available	Current/Available Rev
Office Building\Second Floor\Conference Rooms\Conference Room 221\QUANTUM PANEL CAFETERIA - Processor 1	Processor		
Link B (DBI Link)			
Office Building\Second Floor\Conference Rooms\Conference Room 221\QUANTUM PANEL CAFETERIA - DBI Loop 1	Digital Ballast Bus Controller	0.8.06/0.8.06	
Office Building\Second Floor\Conference Rooms\Conference Room 221\QUANTUM PANEL CAFETERIA - DBI Loop 2	Digital Ballast Bus Controller	0.8.06/0.8.06	
Office Building\Second Floor\Conference Rooms\Conference Room 221\2-1, Address: 1	EcoSystem Digital Ballast		
Office Building\Second Floor\Conference Rooms\Conference Room 221\2-2, Address: 2	EcoSystem Digital Ballast	0.4.12/0.4.12	
Office Building\Second Floor\Conference Rooms\Conference Room 221\2-3, Address: 3	EcoSystem Digital Ballast		
Office Building\Second Floor\Conference Rooms\Conference Room 221\2-4, Address: 4	EcoSystem Digital Ballast	0.4.12/0.4.12	
Office Building\Second Floor\Conference Rooms\Conference Room 221\2-5, Address: 5	EcoSystem Digital Ballast	0.4.12/0.4.12	
Office Building\Second Floor\Conference Rooms\Conference Room 221\2-6, Address: 6	EcoSystem Digital Ballast	0.4.12/0.4.12	
Office Building\Second Floor\Conference Rooms\Conference Room 221\2-7, Address: 7	EcoSystem Digital Ballast	0.4.12/0.4.12	
Office Building\Second Floor\Conference Rooms\Conference Room 221\2-8, Address: 8	EcoSystem Digital Ballast	0.4.12/0.4.12	
Office Building\Second Floor\Conference Rooms\Conference Room 221\2-9, Address: 9	EcoSystem Digital Ballast	0.4.12/0.4.12	
Office Building\Second Floor\Conference Rooms\Conference Room 221\2-10, Address: 10	EcoSystem Digital Ballast	0.4.12/0.4.12	
Office Building\Second Floor\Conference Rooms\Conference Room 221\2-11, Address: 11	EcoSystem Digital Ballast	0.4.12/0.4.12	
Office Building\Second Floor\Conference Rooms\Conference Room 221\2-12, Address: 12	EcoSystem Digital Ballast	0.4.12/0.4.12	
Office Building\Second Floor\Conference Rooms\Conference Room 221\QUANTUM PANEL CAFETERIA - DBI Loop 3	Digital Ballast Bus Controller	0.4.12/0.4.12	
Office Building\Second Floor\Open Office Areas\Open Office North\3-01, Address: 1	EcoSystem Digital Ballast	0.4.12/0.4.12	
Office Building\Second Floor\Open Office Areas\Open Office North\3-02, Address: 2	EcoSystem Digital Ballast	0.4.12/0.4.12	
Office Building\Second Floor\Open Office Areas\Open Office North\3-03, Address: 3	EcoSystem Digital Ballast	0.4.12/0.4.12	
Office Building\Second Floor\Open Office Areas\Open Office North\3-04, Address: 4	EcoSystem Digital Ballast	0.4.12/0.4.12	
Office Building\Second Floor\Open Office Areas\Open Office North\3-05, Address: 5	EcoSystem Digital Ballast	0.4.12/0.4.12	
Office Building\Second Floor\Open Office Areas\Open Office North\3-06, Address: 6	EcoSystem Digital Ballast	0.4.12/0.4.12	
Office Building\Second Floor\Open Office Areas\Open Office North\3-07, Address: 7	EcoSystem Digital Ballast	0.4.12/0.4.12	
Office Building\Second Floor\Open Office Areas\Open Office North\3-08, Address: 8	EcoSystem Digital Ballast	0.4.12/0.4.12	
Office Building\Second Floor\Open Office Areas\Open Office North\3-09, Address: 9	EcoSystem Digital Ballast	0.4.12/0.4.12	
Office Building\Second Floor\Open Office Areas\Open Office South\3-10, Address: 10	EcoSystem Digital Ballast	0.4.12/0.4.12	
Office Building\Second Floor\Open Office Areas\Open Office South\3-11, Address: 11	EcoSystem Digital Ballast	0.4.12/0.4.12	

* - Device that is responding does not appear in database.
- A device somewhere below this device has a problem.

New firmware available for this device

Logged in User: admin
Logged in Time: Wednesday, April 20, 2011 4:27:35 PM

Diagnostics allows the building manager to check on the status of all equipment in the lighting control system.

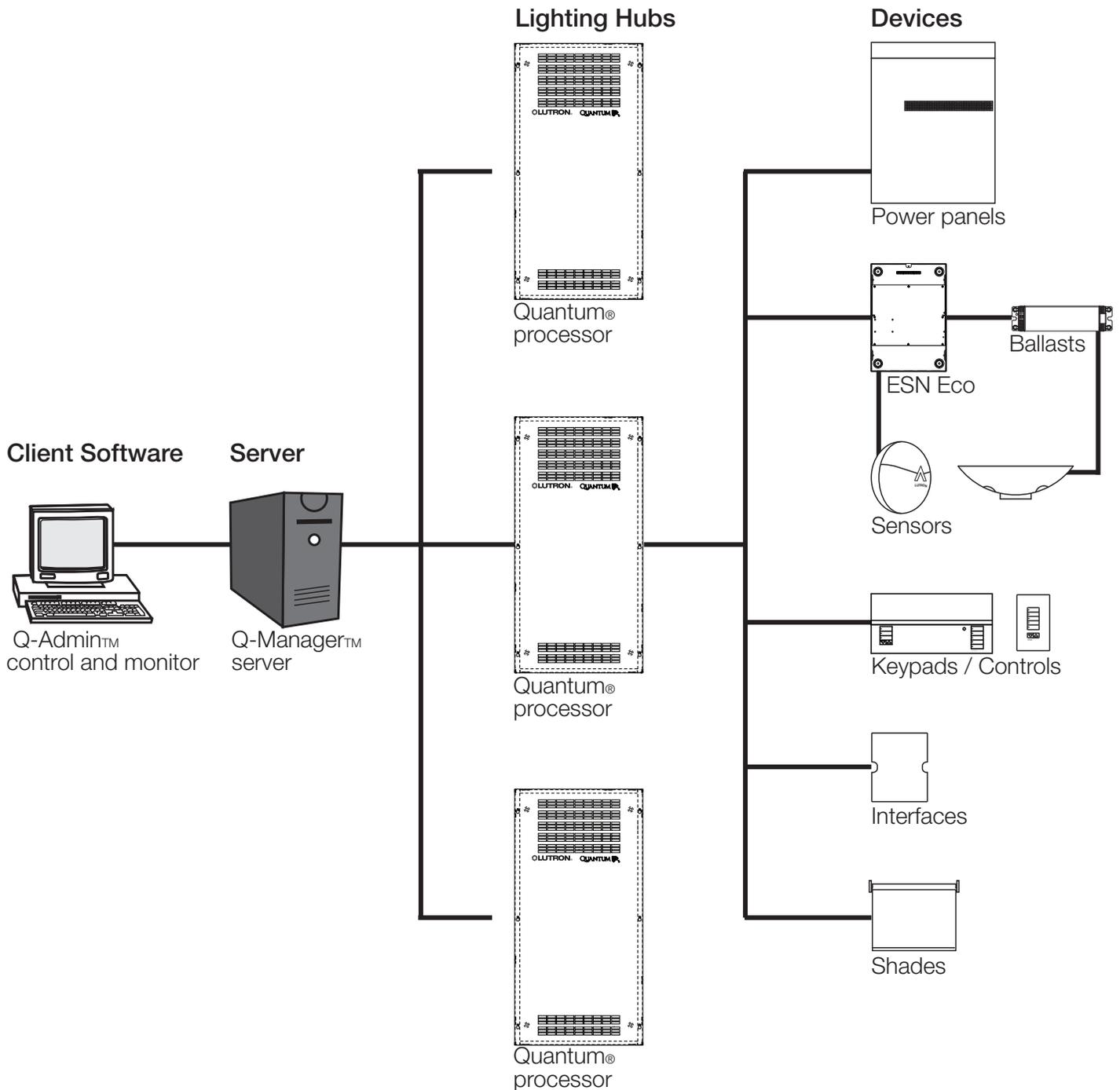
View Diagnostics

Devices will be listed with a reporting status of OK, missing, or unknown. Check or uncheck the filters above the grid (OK, Unknown, Not in Database, Not Responding) to show or hide devices with those states. At any time, click the “Show Report” link above the grid to show the same information in a report form, which can be saved, exported to Excel or .csv formats, and printed.

To view what devices are currently not responding:

1. Make sure the Not Responding checkbox is checked at the top of the screen. All other checkboxes can be unchecked to filter the list to only non-responding devices.
2. Use the diagnostics tree to navigate to which devices are currently Not Responding, or click Expand All to show all devices.
3. To generate a report that can be printed or saved, click on “Show Report”.

Diagnostics



Diagnostics are organized by communications connections to the system in the following hierarchy:

1. **Manager Server:** The Q-Manager™ server runs the Q-Admin™ software and connects to Quantum® hubs. These hubs are typically located in equipment closets on each floor of the building.
2. **Quantum® Hubs:** Quantum® hubs contain central processors that connect to lighting-control devices on each floor. These controls include backroom equipment installed in electrical closets, ceilings, or floors, such as ballast controllers, power panels, and integration interface equipment. Controls connected to the Quantum® hub that are located in the occupant space include wall controls and shades.
3. **Ballast Controllers:** Ballast controllers connect to ballasts and sensors located in fixtures throughout a section of a floor. Typically, one ballast controller will control up to 128 ballasts.

View DALI Emergency Status

The screenshot shows the Q-Admin software interface. At the top, there's a navigation menu with 'Control & Monitoring', 'Reports', and 'Administration'. Below this, there's a sub-menu with 'Control', 'Occupancy', 'Daylighting', 'Time Clock', 'Hyperion Solar Clock', 'Load Shedding', and 'Diagnostics'. The main content area displays a status alert: 'The system has detected one or more problems.' Below this, there's a calendar for May 2011. A table below the calendar shows the status of various devices. The table has columns for 'Device', 'Group#', and 'Problem'. The 'Device' column lists various office building components, including 'Second Floor Hub', 'Office Building\Second Floor\Electrical Closet\Processor Panel 001', 'Link B (QS Link)', 'Office Building\Second Floor\Electrical Closet\ESN 001 (Serial # 00002255)', 'Loop 1 (DALI)', and several 'Open Office North' units. The 'Group#' column shows values 4, 3, 1, and 2. The 'Problem' column shows 'Both Tests Past Due' for the last device. To the right, there's a 'Diagnostics' sidebar with options to 'View Diagnostics' and 'View DALI Emergency Status'. Below this, there's a 'Setup Wizard' section and a 'Manual Testing' section with 'Manual Test' and 'Stop All Tests' buttons. At the bottom, there's a legend for status icons: a question mark for 'Status Awaited', a warning triangle for 'A device somewhere below this device has a problem.', and a red square for 'Test is past due for this device.' The bottom of the window shows 'Logged in User: admin' and 'Logged in Time: Friday, April 29, 2011 3:49:57 PM'.

Device	Group#	Problem
⚠ Second Floor Hub		
⚠ Office Building\Second Floor\Electrical Closet\Processor Panel 001		
⚠ Link B (QS Link)		
⚠ Office Building\Second Floor\Electrical Closet\ESN 001 (Serial # 00002255)		
⚠ Loop 1 (DALI)		
✔ Office Building\First Floor\Open Office Areas\Open Office North\002, Address: 1	4	
✔ Office Building\First Floor\Open Office Areas\Open Office North\001, Address: 2	3	
✔ Office Building\Second Floor\Open Office Areas\Open Office North\005, Address: 3	1	
✘ Office Building\Second Floor\Conference Rooms\Conference Room 221\009, Address: 4	2	Both Tests Past Due

The “View DALI Emergency Status” section of the Diagnostics screen allows the user to configure and monitor tests for DALI emergency units.

This feature will be displayed if the Quantum® system includes DALI Emergency units.

Two types of tests are run for DALI emergency ballasts:

1. Functional Test – This is a short test that verifies emergency units are responding properly and lamps have not failed.
2. Duration Test – This is a longer test that verifies that batteries driving emergency units are operating properly.

The calendar shows all days in which test runs are scheduled. Hovering over a highlighted day shows what specific tests (functional, duration, or both) are happening for which ballast test groups.

To show the last date function or duration tests were run for each unit:

1. Click “Customize Columns...”
2. Select the columns you want to be displayed in the grid.

To define groups, click the “Setup Wizard” link on the Diagnostics screen. This will open the DALI Emergency Setup Wizard.

To view a printable report, click the “Show Report” link above the grid.

DALI Emergency Status Setup

Q-Admin

Language - English (United States) LUTRON

Control & Monitoring Reports Administration

Control | Occupancy | Daylighting | Time Clock | Hyperion Solar Clock | Load Shedding | Diagnostics

Setup Wizard - DALI Emergency Units

Step 1: Define Emergency Groups
Step 2: Setup Test Times
Step 3: Configure Prolong Time

Define Emergency Groups

Emergency groups define which emergency units are tested together at one time. Emergency groups should be defined as follows:

Automatically Choose Emergency Groups
 Let me Define Emergency Groups

For each emergency unit, define which group# (1 - 7) it is part of:

Area	Group #
First Floor	-
Open Office Areas	-
Open Office North	-
001	3
002	4
Open Office South	-
Electrical Closet	-
Second Floor	-

[Return to Diagnostics Screen](#) Next > Close

Logged in User: admin Logged in Time: Friday, April 29, 2011 3:49:57 PM

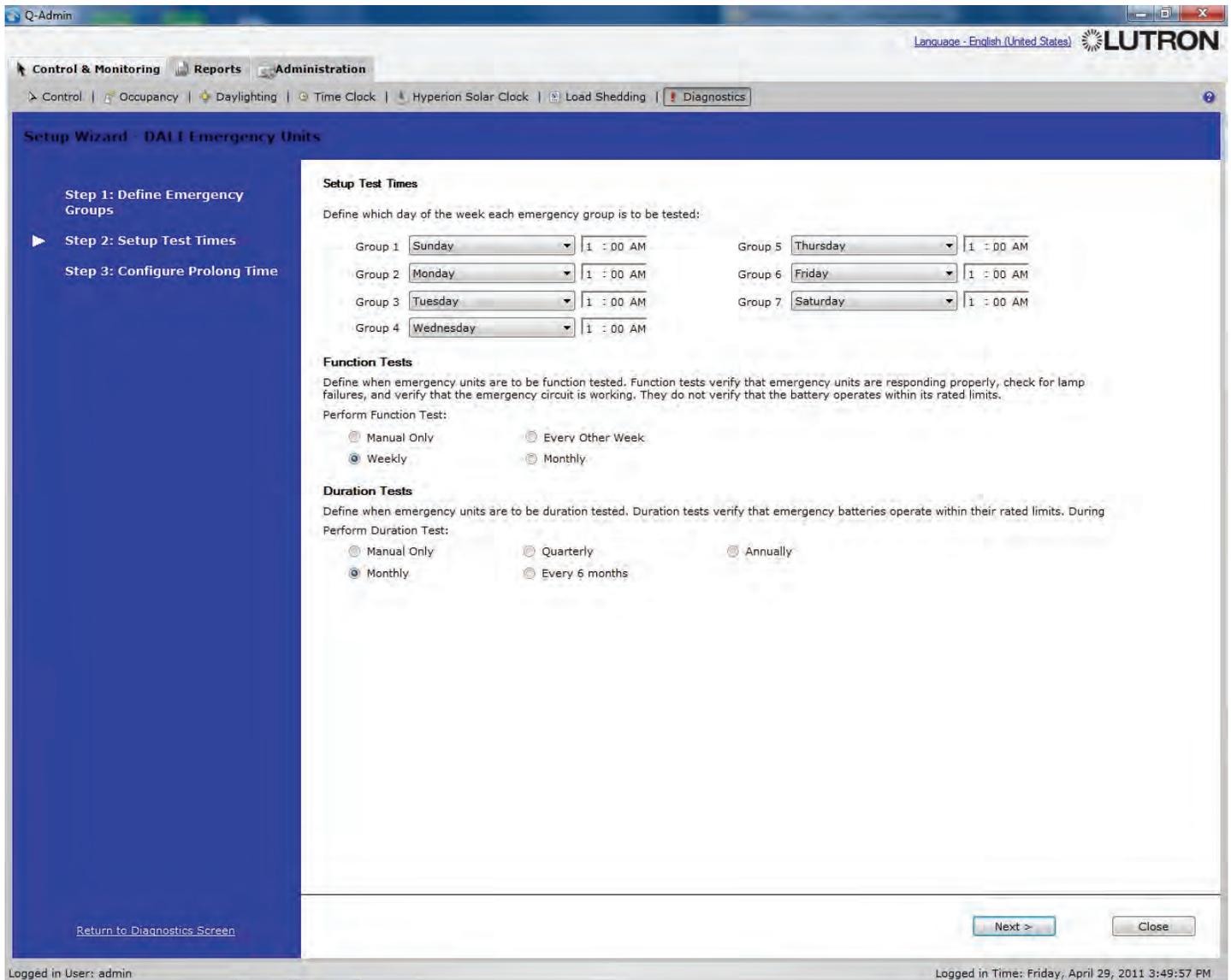
Step 1: Define Emergency Groups

The system provides seven groups of ballasts, which allows, for example, testing each group on a particular day of the week. The user can let the system define which ballasts are in which groups (default), or the user can define groups manually, by entering a group number for each ballast.

To add a ballast to a specific DALI emergency test group:

1. Select "Let me Define Emergency Groups".
2. Select a ballast in the grid.
3. Type in the group number from 1 to 7.

DALI Emergency Status Setup



Step 2: Setup Test Times

The Setup Test Times step determines what weekday and time of day each test group will be tested, and how often function and duration tests should be run.

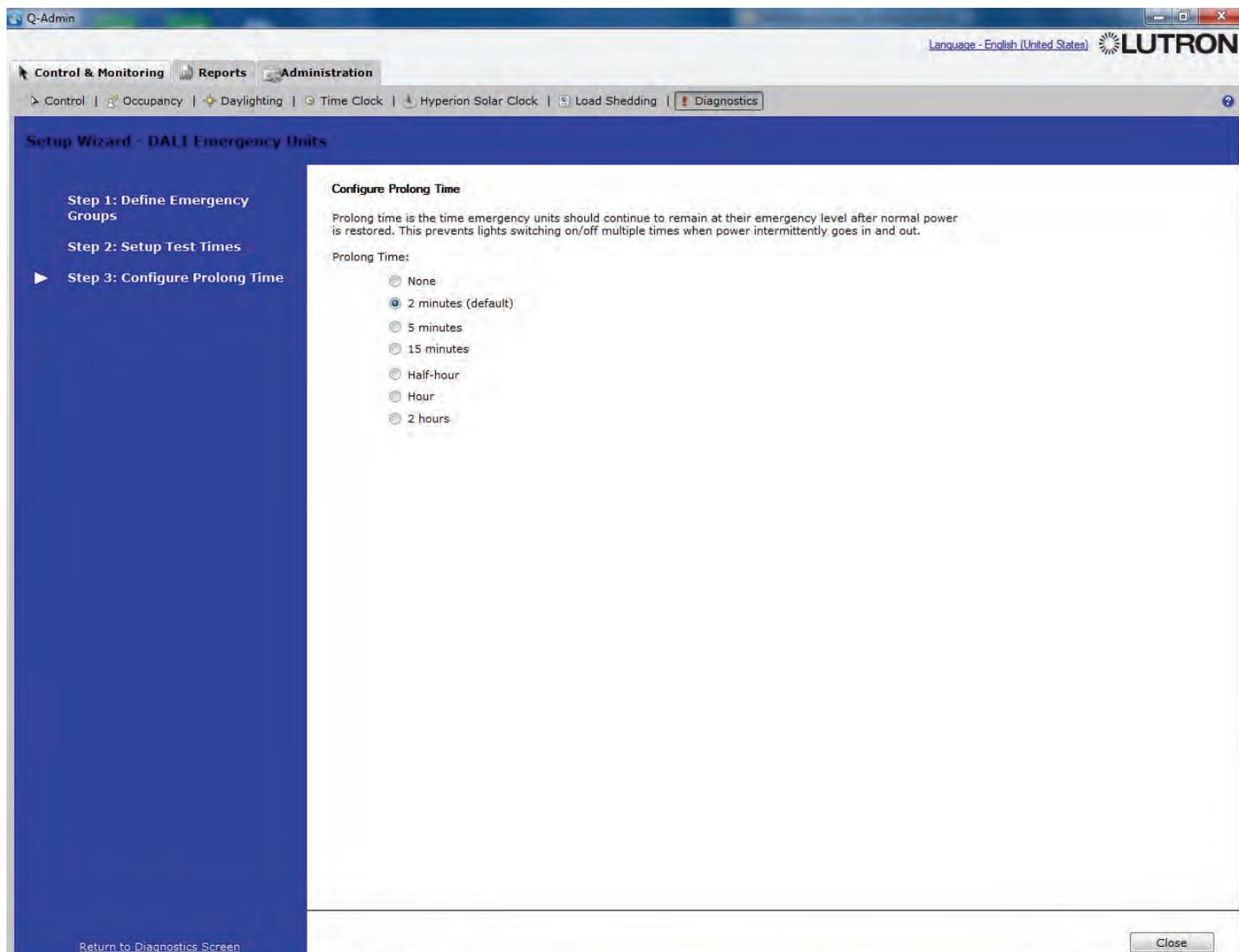
To define which day of the week each emergency group is to be tested:

1. Change the value in the weekday dropdown to choose which day of the week a group is tested.
2. Type in a time of day to determine what time a group is tested. Choose a day and time when the space is unlikely to be occupied. Light levels will be affected during function and duration tests.

To define how often function and duration tests should be run, select the appropriate radio button. Function tests can be set to run weekly (default), every other week, monthly, or manual only. Duration tests can be set to run monthly (default), quarterly, every 6 months, annually, or manual only.

If both a function and duration test are scheduled on the same day for a particular test group, only the duration test will run, as each duration test also performs a functional test.

DALI Emergency Status Setup

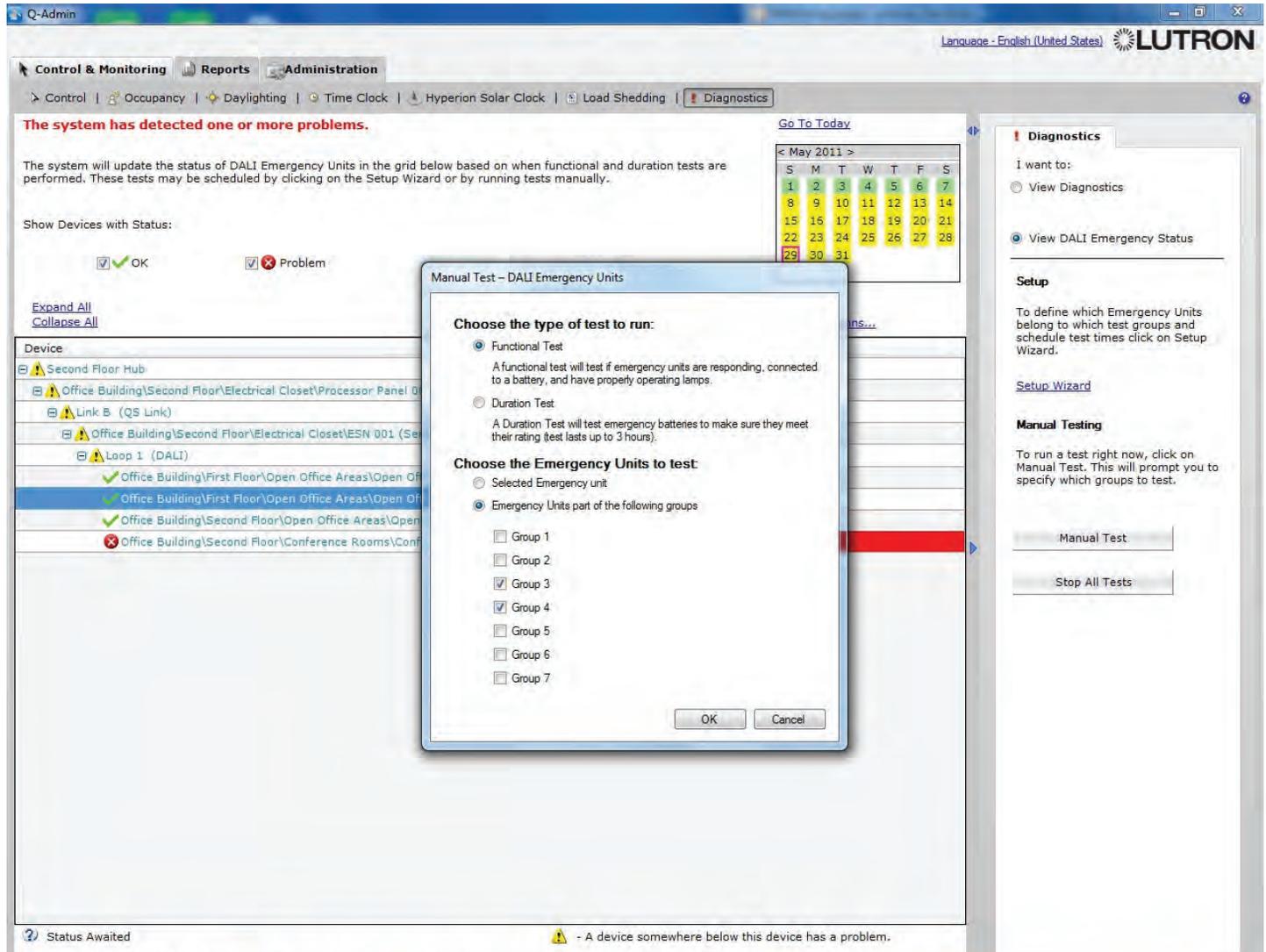


Step 3: Configure Prolong Time

Prolong time is the time emergency units should continue to remain at their emergency level after normal power is restored. This prevents lights switching on/off multiple times when power intermittently goes in and out.

To configure prolong time, select the radio button matching the desired prolong time.

Manual Tests



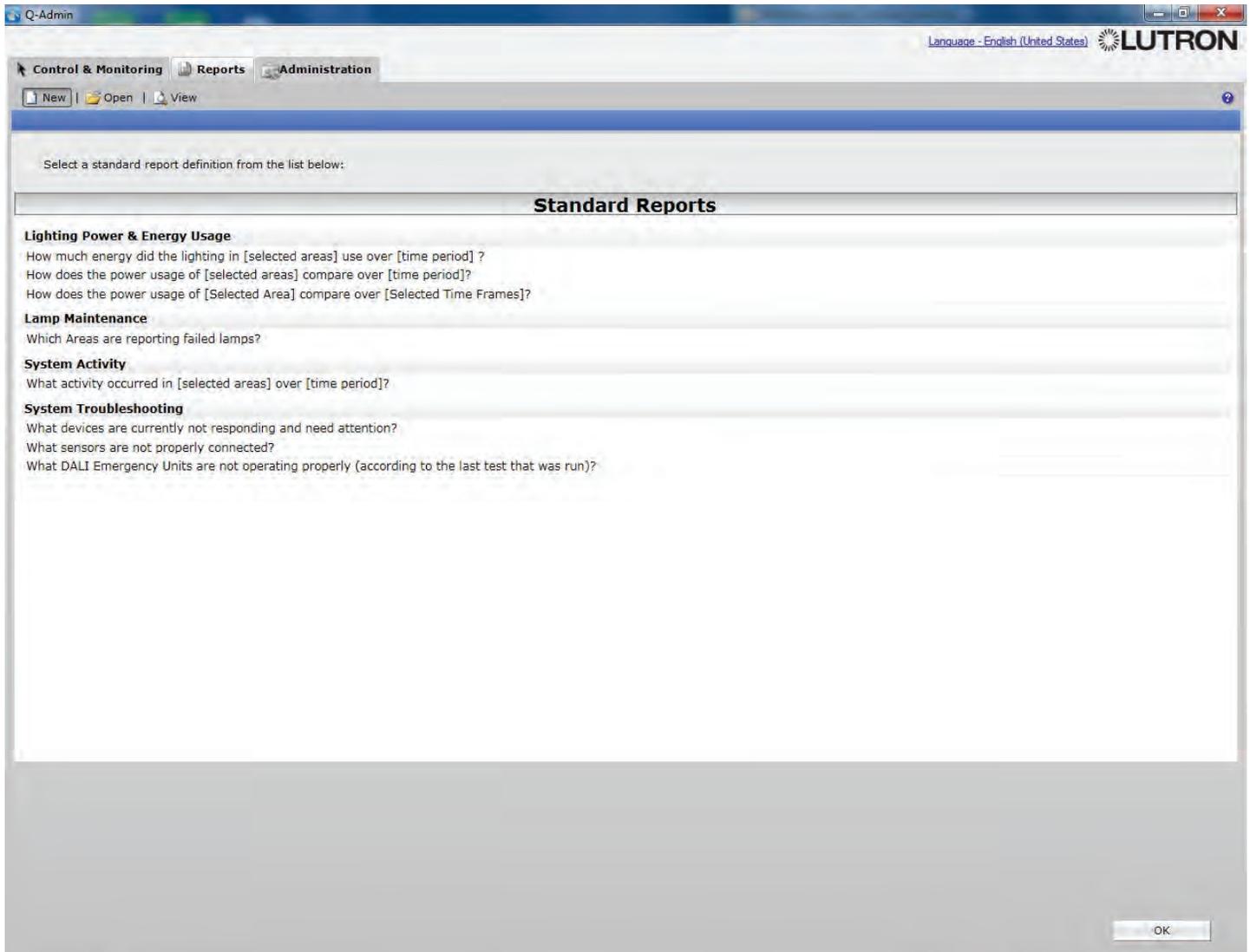
To run a manual test:

1. Select a ballast within the group in the grid (optional).
2. Click "Manual Test".
3. Select the type of test to run (function test or duration test).
4. Choose "Selected Emergency unit" to test the specified ballast (as selected on the diagnostics screen).
Otherwise, choose "Emergency Units part of the following groups" and check which groups to test.
5. Click "OK" to begin the test.

To stop any test on a group (manual or scheduled):

1. Click any ballast in the group.
2. Click "Stop All Tests".

Reports



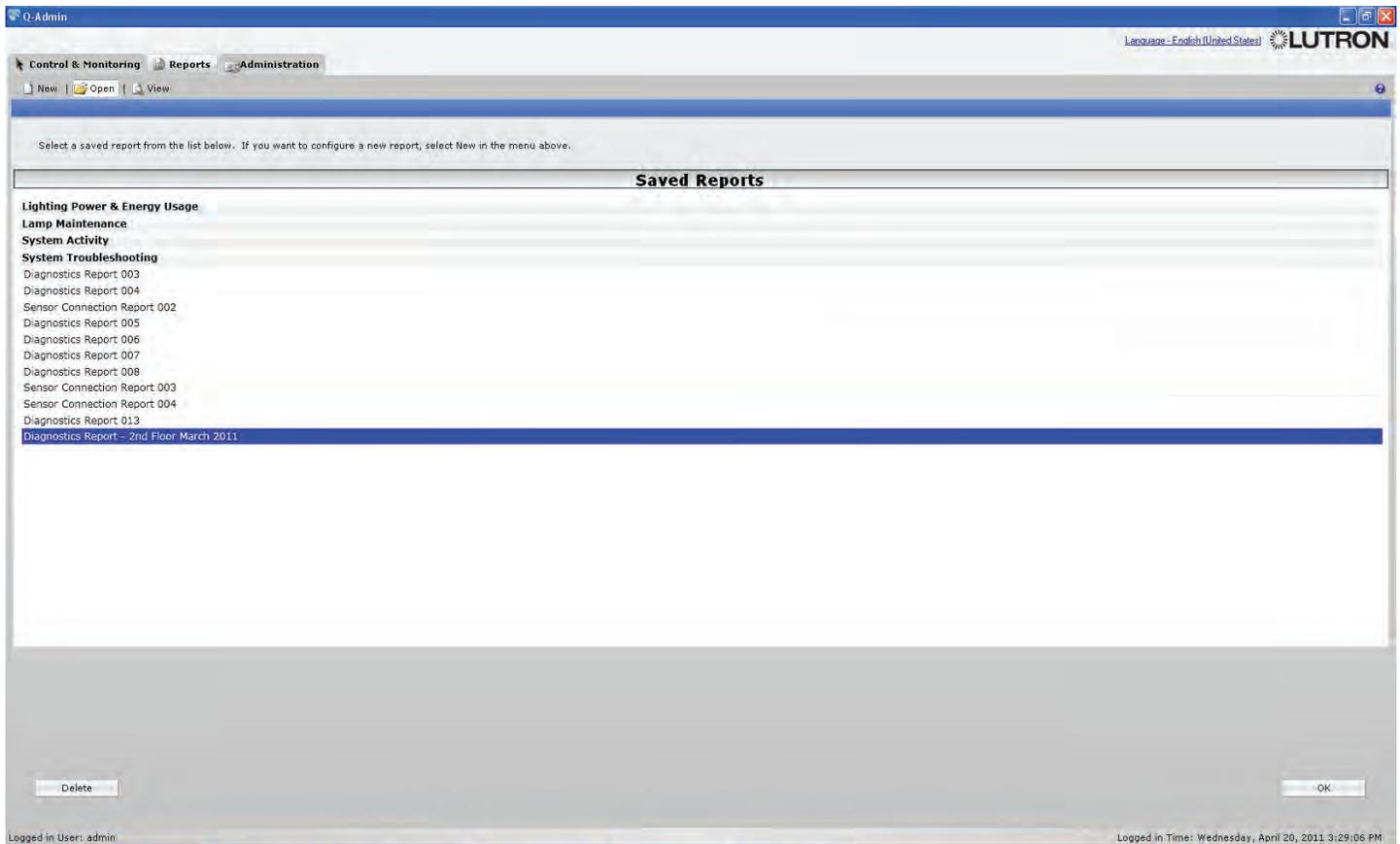
Creating New Reports

Reports allow the building manager to gather real-time and historical information about the system, including power usage, lamp, device, and sensor status, and system activity.

To run a new report:

1. Click "New" under the Reports tab.
2. Click the type of report desired in the "Standard Reports".
3. Click "OK". A new page will load for the new report.
4. Select the report options (filters) and click Apply.

Reports



Opening Reports

To open a saved report:

1. Click "Open" in the Reports tab.
2. Click the selected report.
3. Click "OK". The report will be loaded in a new subtab under the "View" tab.

Reports

Lighting Energy Usage Report 036

Report Generated on: Wednesday, April 20, 2011 3:38:40 PM

Area	Energy (kWh)
Office Building\Second Floor\Open Office Areas\Open Office North	53.9
Office Building\Second Floor\Open Office Areas\Open Office South	45.4
Office Building\Second Floor\Conference Rooms\Conference Room 221	49.7

Export Report Data

Choose the format in which you want the report data to be exported:

- Excel Sheet (*.xls)
- JPEG Document (*.jpg)
- Comma Separated Text Document (*.csv)

Export the report data at:

c:\data\energy_usage_report20110420.xls

Open file after Export

Lighting Energy Usage Report

Graphical View

Tabular View

How much energy did the lighting in...

[Click here to select Areas...](#)

No.	Areas
1	Office Building\Second Floor\Open Office Areas\...
2	Office Building\Second Floor\Open Office Areas\...
3	Office Building\Second Floor\Conference Rooms...

use over the...

Last 7 days

Logged in User: admin

Logged in Time: Wednesday, April 20, 2011 3:29:06 PM

Saving, Printing, and Exporting Reports

Reports can be printed and saved to files. Exporting to Excel format (.xls) requires Microsoft® Excel® 2003 or newer to be installed; alternatively, reports may be exported in .csv format. All reports can be exported in tabular format (to .xls or .csv). Only reports that have a graphical view can be exported to the .jpg image format.

To save a report that has been created:

1. Click “Save” or “Save As”.
2. If saving for the first time (or doing Save As), you will be prompted for the report name. Change the default name if desired, and click Save.

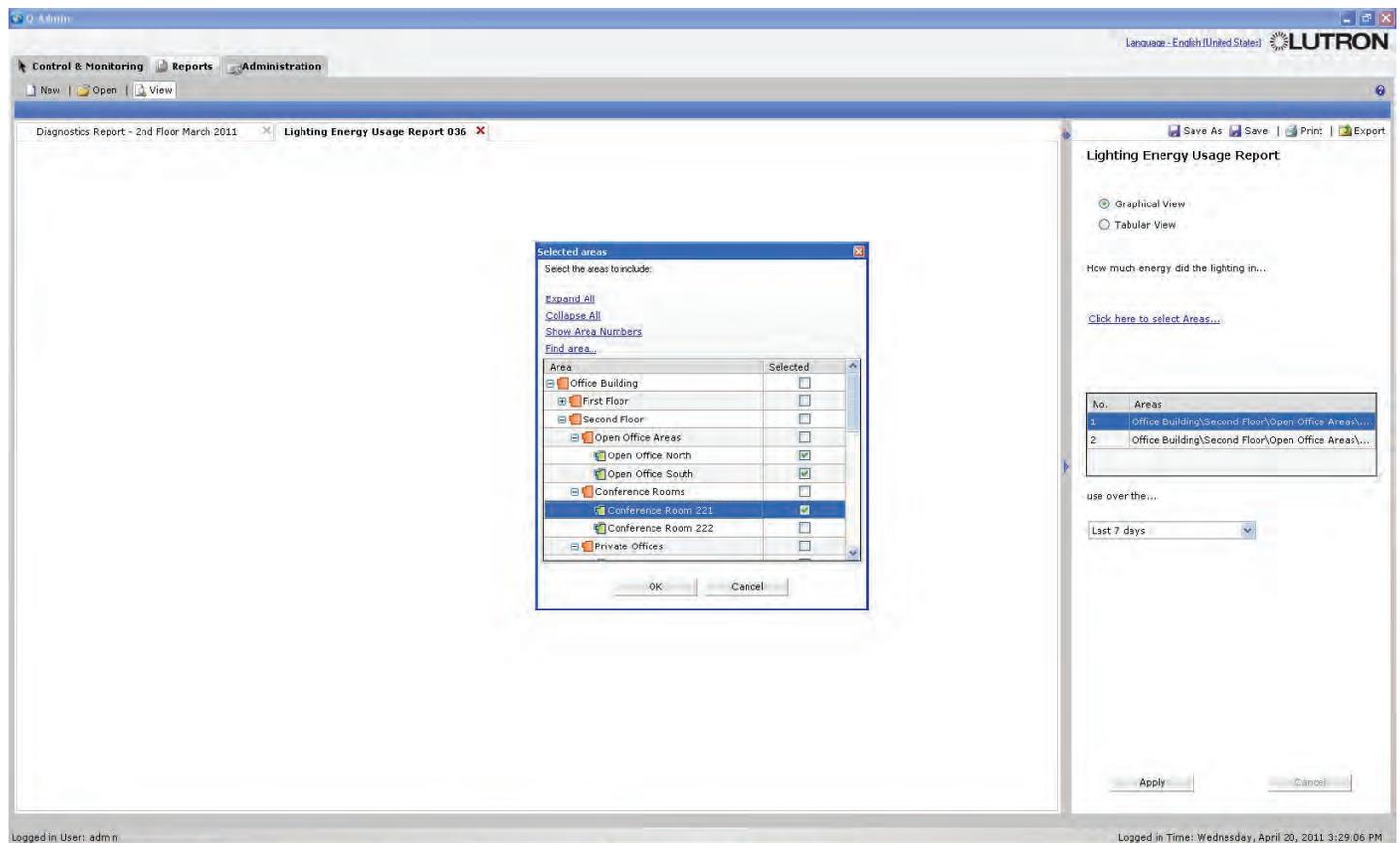
To print a report:

1. Click “Print”.
2. Select the desired printer, choose options if desired, and click “OK”.

To save a report to a file:

1. Click “Export”.
2. Select the desired output format (Excel spreadsheet, JPEG image, or CSV spreadsheet).
3. Choose the output filename by typing in the text box and/or using the “Browse...” button.
4. To open the file afterward in the default spreadsheet or image application, check “Open file after Export”.
5. Click “Export”.

Reports



Report Options

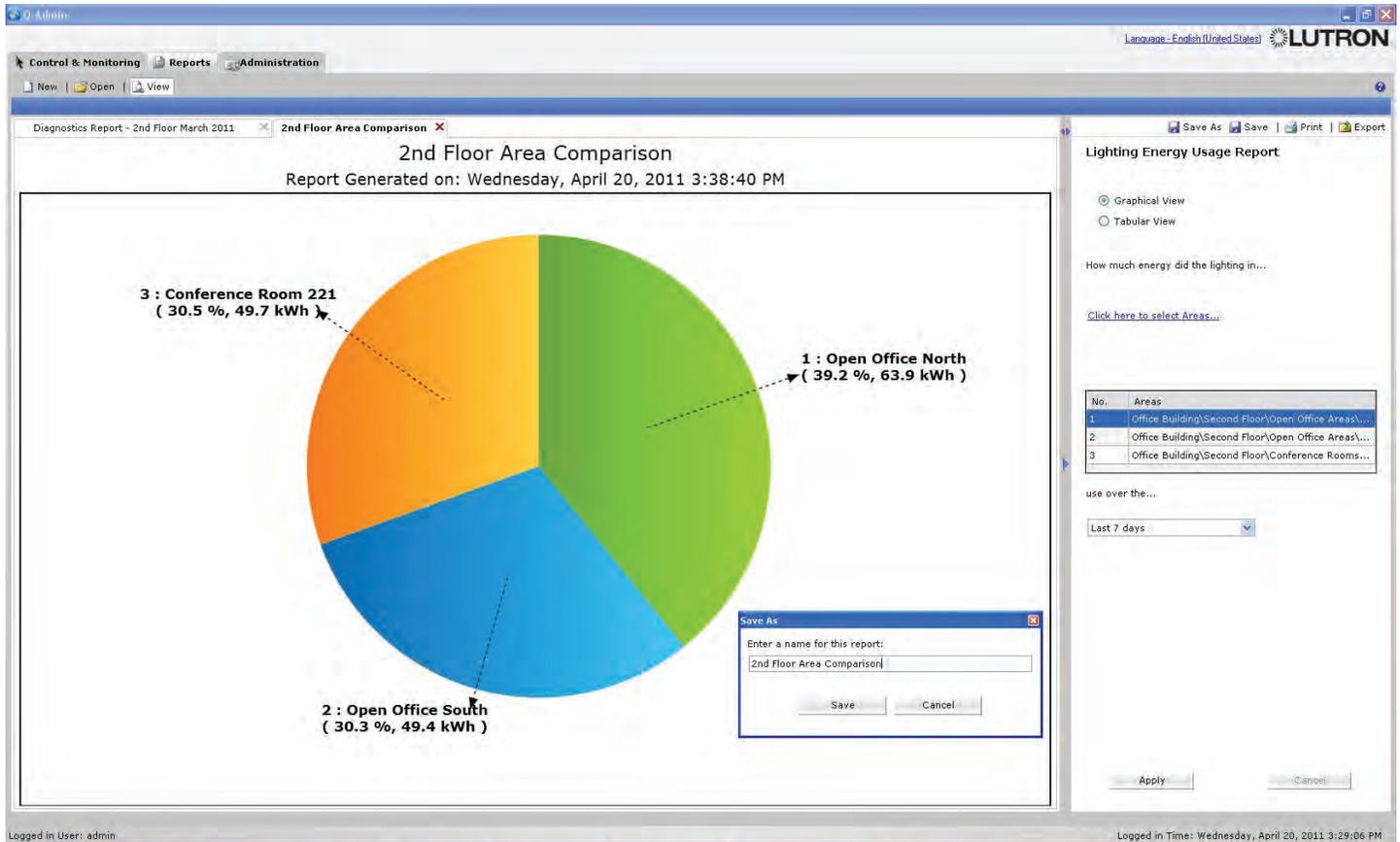
Reports can be run with different options—for example, the report above can be run for one or more areas over a specified time period.

To choose areas displayed in a report:

1. Click “Click here to select Areas...”
2. Check one or more areas in the area tree.
3. Click “OK”.

To change other options in reports, use the appropriate controls on the right panel. Available options vary by report.

Available Reports



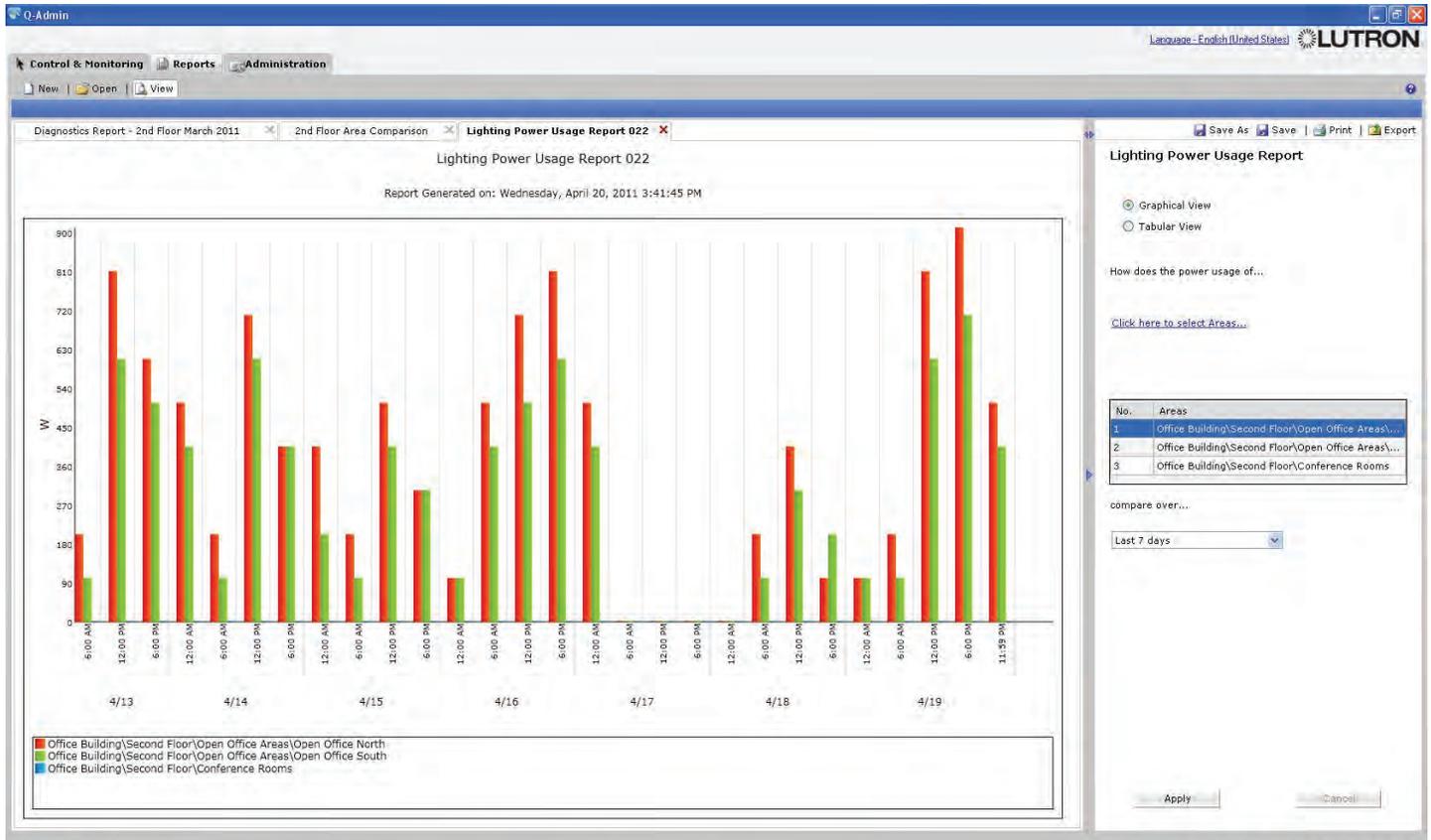
Lighting Energy Usage Report – “How much energy did the lighting in [selected areas] use over [time period]?”

This report shows a pie chart comparing multiple areas over time. It can be used to find which areas are using the most energy.

To create a Lighting Energy Usage Report:

1. Select the areas to compare by using the “Click here to select Areas...” link.
2. Choose the timeframe by using the dropdown menu on the right.
3. Click “Apply”.

Available Reports



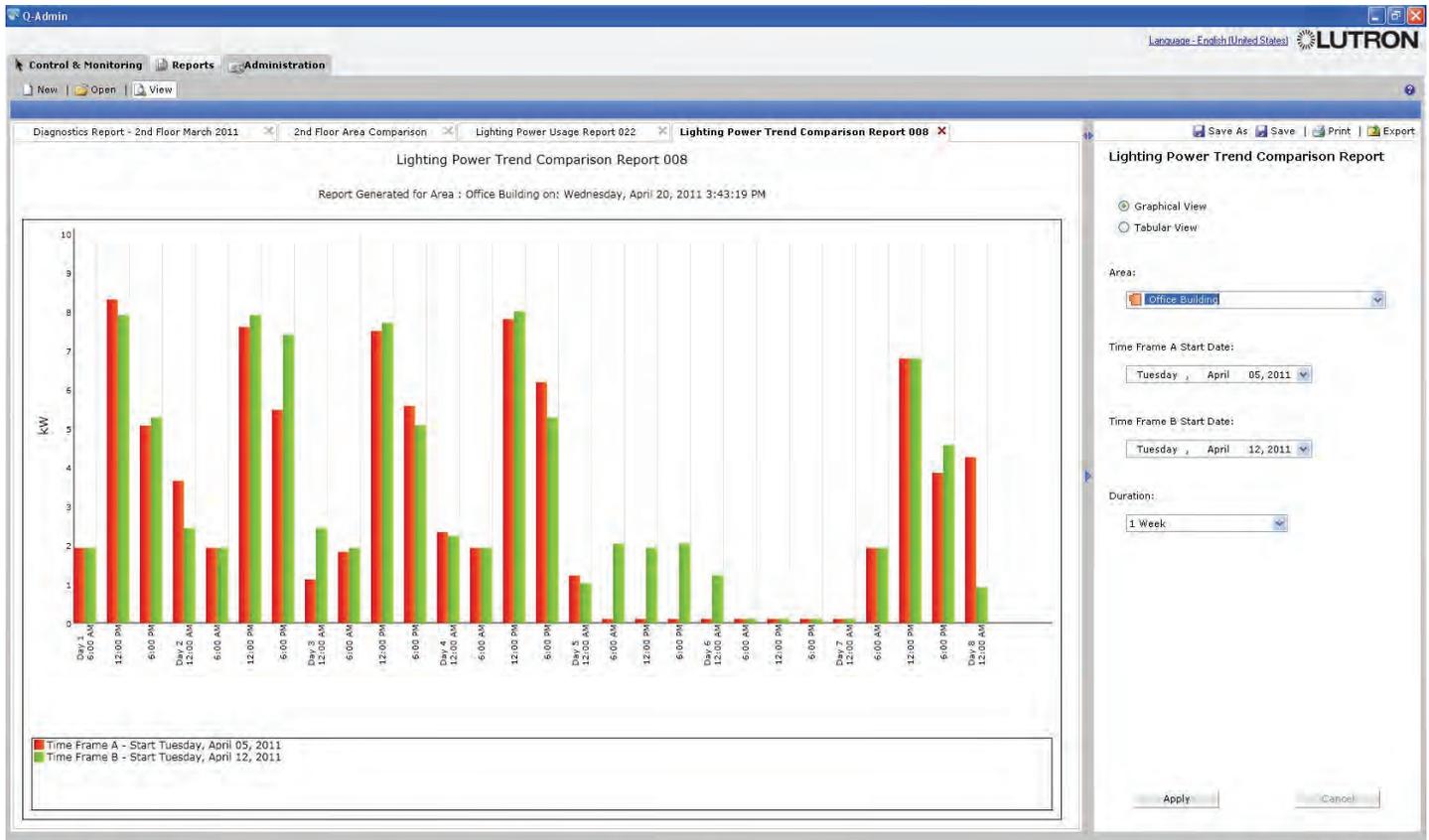
Lighting Power Usage Report – “How does the power usage of [selected areas] compare over [time period]?”

This report shows a bar graph comparing multiple areas’ energy usage over time.

To create a Lighting Power Usage Report:

1. Select the areas to compare by using the “Click here to select Areas...” link.
2. Choose the timeframe by using the dropdown menu on the right.
3. Click “Apply”.

Available Reports



Lighting Power Trend Comparison Report – “How does the power usage of [selected area] compare over [selected time frames]?”

This report shows power usage for a particular area over two different time spans. For example, this can be used to compare energy of this week with last week.

To create a Lighting Power Trend Comparison Report:

1. Select the area by using the dropdown menu on the right.
2. Choose the first date by using the “Time Frame A Start Date” dropdown menu.
3. Choose the second date by using the “Time Frame B Start Date” dropdown menu.
4. Select the time span in the “Duration” dropdown menu.
5. Click “Apply”.

Available Reports

The screenshot shows the Q-Admin interface with the 'Lamp Maintenance Report 001' window open. The window title is 'Lamp Maintenance Report 001' and the subtitle is 'Areas reporting failed lamps Thursday, June 09, 2011 3:44:29 PM'. The main content area contains a table with the following data:

Areas	# Failures
Office Building	2
Fourth Floor	2
Northwest Quad	2
Conference Rooms	2
Conference Room 46	1
Partitioned Conference Room 47	1
Partitioned Conference Room 47A	1

To the right of the table is a tree view of the office building structure. The tree view shows the following hierarchy:

- Office Building
 - First Floor
 - Second Floor
 - Open Office Areas
 - Open Office North
 - Open Office South
 - Conference Rooms
 - Private Offices
 - Restrooms
 - Elevator Lobby
 - Kitchen
 - Copy Room
 - Electrical Closet
 - Third Floor
 - Fourth Floor

Lamp Maintenance Report – “Which Areas are reporting failed lamps?”

This report, run against a specified area, lists the number of failed lamps in that area or (if it is a folder area), the number of failed lamps in each of its child areas. Areas with no failures are not displayed.

To create a Lamp Maintenance Report:

1. Select an area in the dropdown.
2. Click “Apply”.

Available Reports

System Activity Report – “What activity occurred in [selected areas] over [time period]?”

This report gives a list of activity that has happened in the Quantum® system (or in specified areas) over a given period of time. The report will display all events of the specified types that happened in the specified areas within the date range. Activity filters are as follows:

- Occupant Activity: Areas going occupied/unoccupied; wall controls being pressed
- Time Clock Activity: Time Clock events being executed
- Building Manager Activity: Q-Admin™ activity, including login/logout, and real-time changes to the lighting system.
- Status Activity: Zone level changes, area scene changes, etc.
- Device Failure Activity: Devices becoming unresponsive
- Lamp Failure Activity: Lamp failures reported by EcoSystem®/DALI ballasts
- Sensor Activity: Occupancy sensor state changes (occupied and unoccupied)
- Ballast Failure / Auto Replacement Activity: Shows when ballast failures have occurred or when new ballasts have been installed and auto-replaced
- System Errors: Error codes reported by the system
- BACnet Activity: Lights, shades, and other system objects changed through BACnet

To create a System Activity Report:

1. Select one or more areas by using the “Click here to select Areas...” link.
2. Choose the time span for which to display activity by using the “over the...” dropdown menu. If selecting “Custom,” specify the start date and end date.
3. Select the desired activity types to show by clicking the checkboxes under “Filter Events”.
4. Click “Apply”.

Available Reports

Q-Admin

Language: English (United States) LUTRON

Control & Monitoring Reports Administration

New Open View

Lighting Power Usage Report 022 Lighting Power Trend Comparison Report 008 Lamp Maintenance Report 013 System Activity Report 036 Diagnostics Report 014

Save As Save Print Export

Diagnostics Report 014

Report Generated on: Wednesday, April 20, 2011 3:52:08 PM

System	Device Name	Type	Status
Cafe	Office Building\Second Floor\Private Offices\121A - Private Office 214\Coffe Counter (Serial # 00240651)	QS Keypad (QS 3-Button Wallstation with Raise/Lower, no insert)	Unknown
Cafe	Office Building\Second Floor\Private Offices\121A - Private Office 214\KITCHEN DOOR (Serial # 0030049A)	QS Keypad (QS 2-Button Wallstation, insert)	Unknown

For devices in the following areas...

[Click here to select Areas...](#)

Areas

- Office Building\Second Floor\Private Offices\Private Offic...
- Office Building\Second Floor\Private Offices\Private Offic...

Show devices with status:

- Unknown
- Not Responding
- Not in Database
- OK

Apply Cancel

Logged in User: admin

Logged in Time: Wednesday, April 20, 2011 3:29:06 PM

Diagnostics Report – “What devices are currently not responding and need attention?”

The Diagnostics Report displays the same information found in the Diagnostics screen. Devices (e.g., keypads, shades, power panels) are listed with their current status (unknown, not responding, not in database, or OK).

To create a Diagnostics Report:

1. Select one or more areas by using the “Click here to select Areas...” link.
2. Select the desired status types to show by clicking the checkboxes under “Show devices with status”.
3. Click “Apply”.

Available Reports

Q-Admin

Language - English (United States) LUTRON

Control & Monitoring Reports Administration

New Open View

Sensor Connection Report 001

Save As Save Print Export

Sensor Connection Report

For sensors in the following areas...

[Click here to select Areas...](#)

Areas

- Office Building

Show Sensor whose Status is:

- Unknown
- Not Connected
- Not in Database
- Connected

Apply Cancel

System	Device Name	Type	Status
Second Floor Hub	Office Building\Second Floor\Conference Rooms\Conference Room 221\002, Address: 7	Infrared Sensor	Not Connected
Second Floor Hub	Office Building\Second Floor\Conference Rooms\Conference Room 221\004, Address: 9	Infrared Sensor	Not Connected
Second Floor Hub	Office Building\Second Floor\Open Office Areas\Open Office North\001, Address: 2	Photo Sensor	Not Connected
Second Floor Hub	Office Building\Second Floor\Open Office Areas\Open Office North\002, Address: 3	Infrared Sensor	Not Connected
Second Floor Hub	Office Building\Second Floor\Open Office Areas\Open Office South\001, Address: 2	Photo Sensor	Not Connected
Second Floor Hub	Office Building\Second Floor\Open Office Areas\Open Office South\003, Address: 1	Occupancy Sensor	Not Connected

Sensor Connection Report – “What sensors are not properly connected?”

This report shows the state of wired sensors (occupancy, IR, and photo), as unknown, not connected, not in database, or connected.

To create a Sensor Connection Report:

1. Select one or more areas by using the “Click here to select Areas...” link.
2. Select the desired status types to show by clicking the checkboxes under “Show Sensor whose Status is”.
3. Click “Apply”.

Available Reports

Emergency Units Report 001

Report Generated on: Friday, April 29, 2011 4:43:06 PM

System	Device Name	Date of Last Function Test	Date of Last Duration Test	Status
Second Floor Hub	Office Building\First Floor\Open Office Areas\Open Office North\002			Both Tests Past Due
Second Floor Hub	Office Building\First Floor\Open Office Areas\Open Office North\Zone...			Both Tests Past Due
Second Floor Hub	Office Building\Second Floor\Conference Rooms\Conference Room ...			Both Tests Past Due
Second Floor Hub	Office Building\Second Floor\Open Office Areas\Open Office North\Z...			Both Tests Past Due

Emergency Units Report

For devices in the following areas...

[Click here to select Areas...](#)

Areas

Office Building

Show devices with status:

Problem

OK

Apply Cancel

DALI Emergency Units Report

The DALI Emergency Units Report allows the user to view, export, and print the status of DALI emergency units.

To create a DALI Emergency Units Report:

1. Select one or more areas by using the “Click here to select Areas...” link.
2. Select the desired status types to show by clicking the checkboxes under “Show devices with status”.
3. Click “Apply”.

Administration: Users

The current user selected is: Joe (Joe User)

Login Id	First Name	Last Name	Role	Status
admin	Abraham	Admin	Admin	Active
Joe	Joe	User	Regular	Active
Kelly	Kelly	Smith	Admin	Active
dsmith	Dan	Smith	Regular	Active
Roger	Roger	Jackson	Regular	Inactive

User Profile

1. Select a user account on the left to view/edit profile details.

Login Id: Joe

First Name: Joe

Last Name: User

Role: Regular - Q-Admin (dropdown menu)

Ask for password change at next login.

User account active.

Reset account password.

New Password: _____

Confirm New Password: _____

Save Changes

Add Delete

The Users screen allows new user accounts to be created and existing user accounts to be edited. There are two user roles: Regular and Admin. Regular users do not have access to the Administration tab.

To create a new user:

1. Click "Add".
2. Fill in the text fields on the right. "First Name" and "Last Name" are optional.
3. Select the user's role.
4. Click "Reset account password".
5. Enter, and confirm, the desired password.
6. If desired, check "Ask for password change at next login".
7. Click "Save Changes".

...continued on next page

Administration: Users

The current user selected is: Joe (Joe User)

User Accounts:

Login Id	First Name	Last Name	Role	Status
admin	Abraham	Admin	Admin	Active
Joe	Joe	User	Regular	Active
Kelly	Kelly	Smith	Admin	Active
dsmith	Dan	Smith	Regular	Active
Roger	Roger	Jackson	Regular	Inactive

User Profile

1. Select a user account on the left to view/edit profile details.

Login Id: Joe

First Name: Joe

Last Name: User

Role: Regular - Q-Admin (dropdown menu)

Ask for password change at next login.

User account active.

Reset account password.

New Password: _____

Confirm New Password: _____

Save Changes

Add Delete

To delete a user:

1. Select an existing user in the grid.
2. Click "Delete".

To modify a user:

1. Select an existing user in the grid.
2. Fill in the text fields on the right. "First Name" and "Last Name" are optional.
3. Select the user's role.
4. Click "Reset account password".
5. Enter, and confirm, the desired password.
6. If desired, check "Ask for password change at next login".
7. Click "Save Changes".

To inactivate a user:

1. Select an existing user in the grid.
2. Uncheck "User account active".
3. Click "Save Changes".

Administration: Users

Q-Admin

Language - English (United States) LUTRON

Control & Monitoring Reports Administration

Users | Back-up | Publish | Processor Update Wizard | Green Glance Configuration

I want to back up the project database.

Specify the path and file name (*.lut) where you would like to save a copy of the Project Database.

D:\Quantum Projects\Building_Backup_2_0_25_May_4_2011.lut Browse...

I want to back up the graphical floor plan.

Save graphical floor plan file as:

D:\Quantum Projects\Building_Backup_2_0_25_May_4_2011.fpb Browse...

Save

The Backup screen allows an admin user to save the project database and/or graphical floorplan. It is very important, after making any configuration change, to perform a backup of the project database.

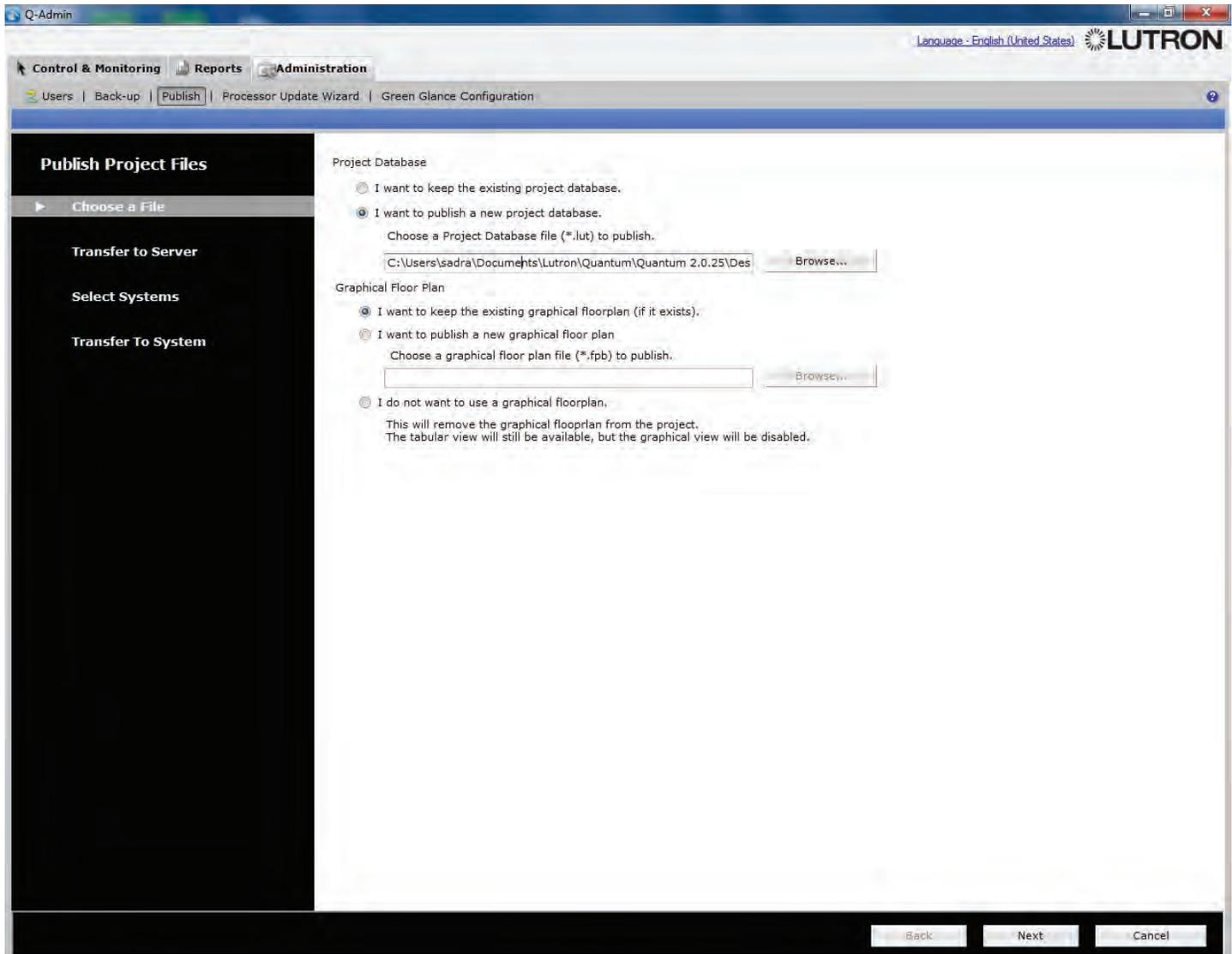
Actions that modify the project and require a backup to save changes include the following:

- Scene Configuration
- Changing default occupancy, After Hours, or daylighting levels
- Daylight commissioning
- Configuring Time Clocks
- Configuring Hyperion™
- Configuring DALI emergency tests
- Modifying user accounts
- Modifying Green Glance® Configuration

To backup the live project and/or graphical floorplan file:

1. Check “I want to back up the project database” (if desired).
2. Choose the destination file by using the “Browse...” button and/or typing in the textbox.
3. Check “I want to back up the graphical floor plan” (if desired).
4. Choose the destination file by using the “Browse...” button and/or typing in the textbox.
5. Click “Save”.

Administration: Publish



Publish Project Files: Choose a File

The Publish screen allows an administrator to publish a project (.lut file) to the lighting control system. The project file is created using Q-Design™ and contains the configuration for a system, including lighting zones, keypad programming, daylight settings, occupancy settings, nightlight settings, etc. The user can either republish the current file, which will simply perform a full transfer to the system, or the user can choose to publish a new file before transferring to the system. Note: When transferring a new configuration to the system, local controls (e.g., keypads, occupancy sensors, daylight sensors, etc.), will not function. Transfers typically take between 15 and 45 minutes to complete.

To choose a project to publish:

1. Under “Project Database,” choose the second radio button specify that you want to choose a file.
2. Choose the existing file to load by using the “Browse...” button and/or typing in the textbox.

To choose a graphical floorplan to publish:

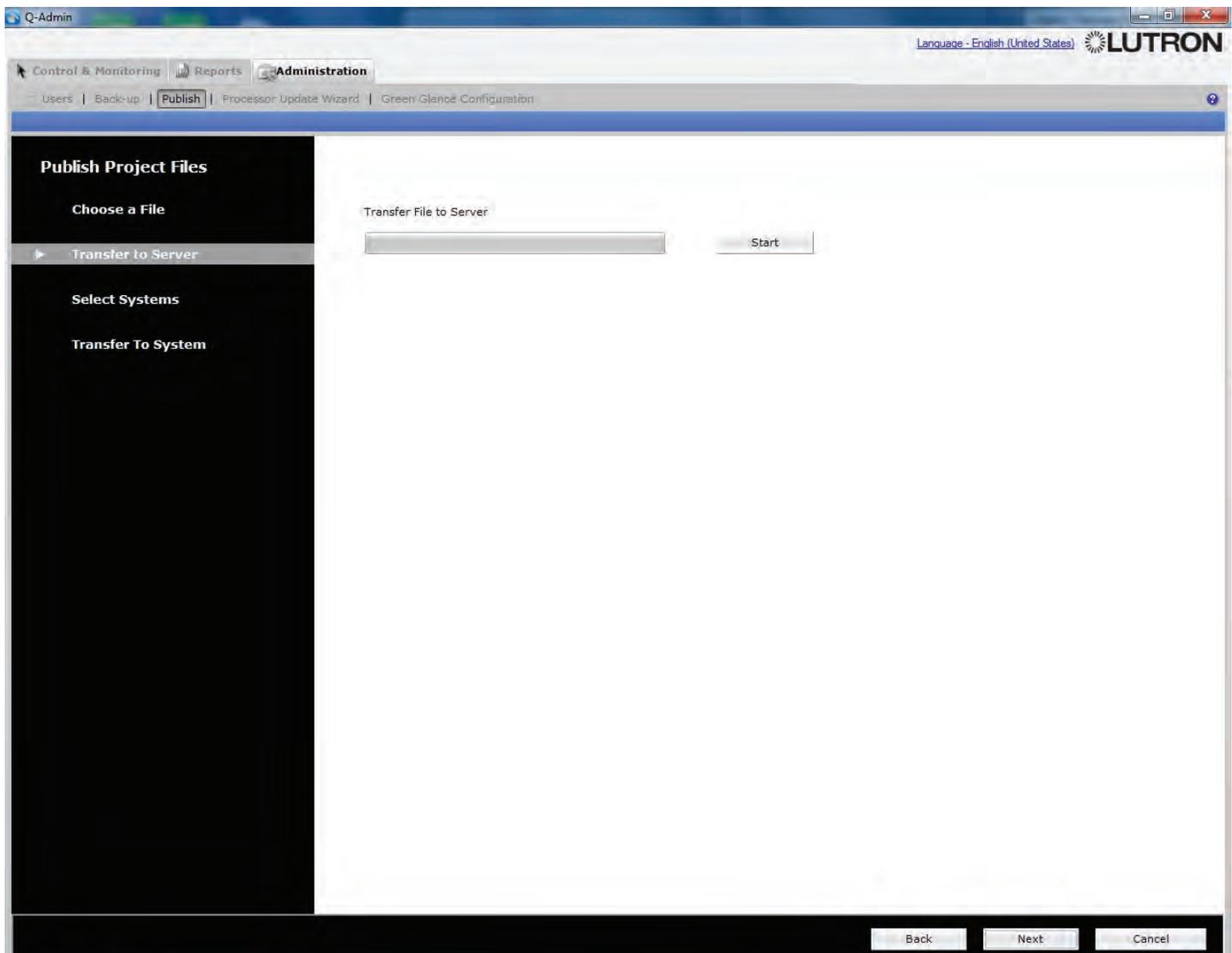
1. Under “Graphical Floor Plan,” choose the second radio button specify that you want to choose a file.
2. Choose the existing file to load by using the “Browse...” button and/or typing in the textbox.

By default, the first radio buttons are selected for both project and graphical floorplan. In this case, the published file will remain the same.

To choose to remove a published graphical floorplan:

1. Select the third radio button (“I do not want to use a graphical floorplan”).
2. To proceed with the publish, click “Next”.

Administration: Publish



Publish Project Files: Transfer to Server

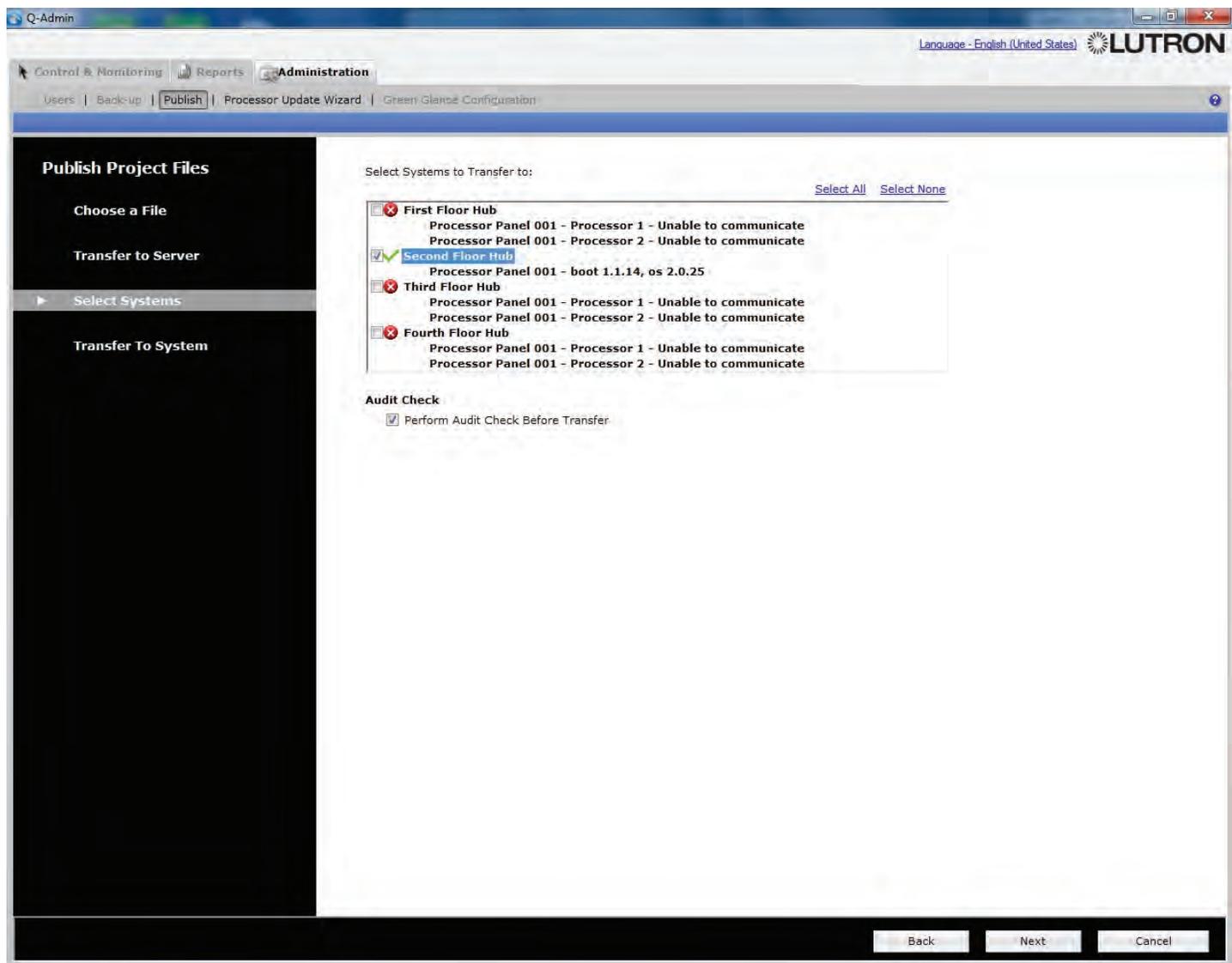
Publishing a database will cause all other clients (i.e., Q-Admin™ and Green Glance® on any clients, and the Reporting Server on the server) to restart.

Click “Start” to perform the publish. This will load the files to the runtime module on the server.

To perform a database transfer to the lighting system, click “Next” to proceed to the “Select Systems” screen.

If you do not wish to transfer to the lighting system, click “Cancel.” This will reload Q-Admin™ with the newly published file. This should only be done if changes have been made to the graphical floorplan.

Administration: Publish



Publish Project Files: Select Systems

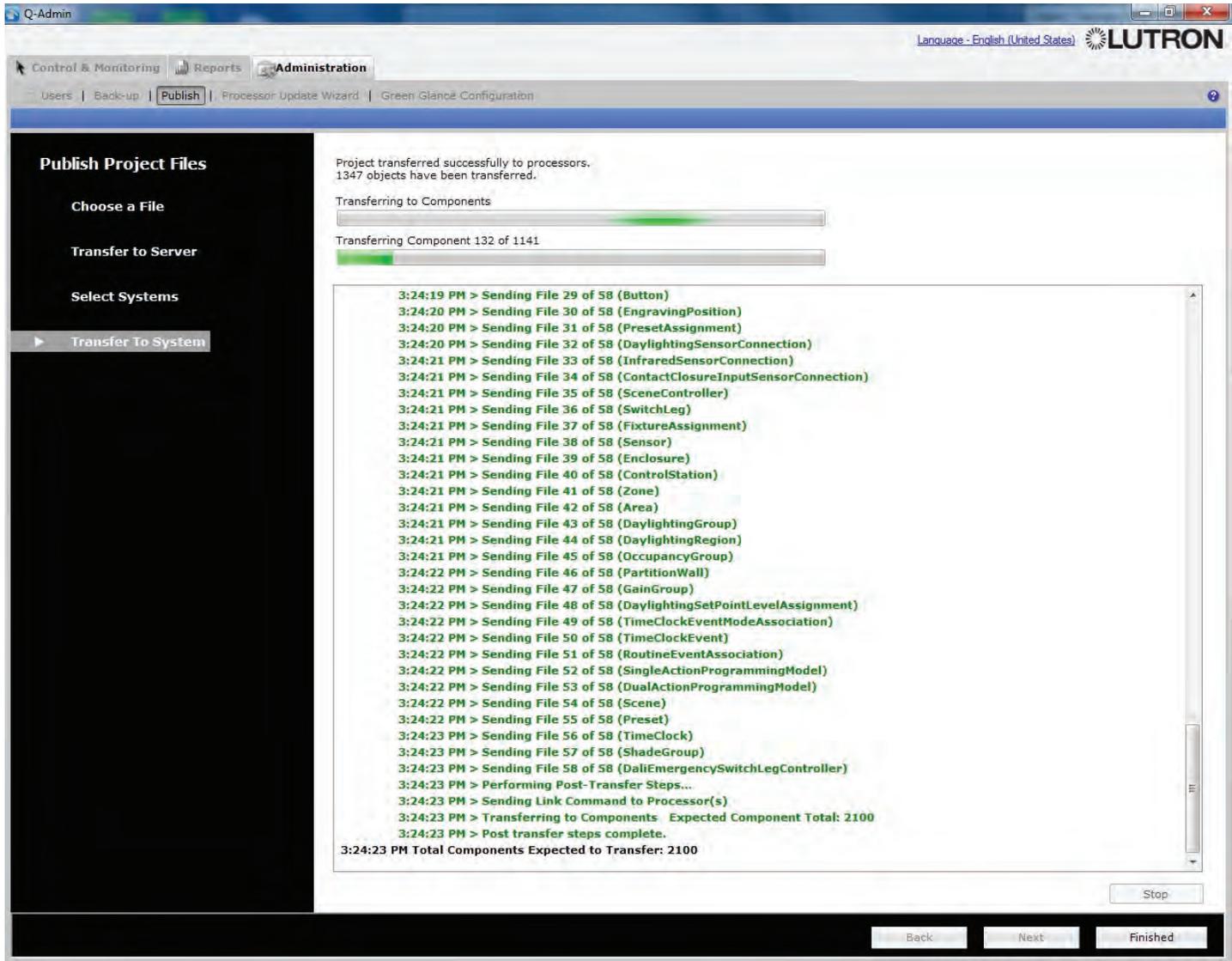
The Select Systems screen displays the state of the processors in the project, in preparation for a database transfer. All the processor systems (“hubs”) in the project file are listed, each with one of three states:

- A green checkbox indicates the processor hub is ready for transfer.
- A red “X” indicates at least one processor in the hub is unable to communicate.
- A yellow “!” indicates the processor hub needs to be upgraded to the latest firmware prior to transfer. To perform a processor upgrade, use the Processor Update Wizard screen.

If the “Audit Check” checkbox is checked, database programming will be checked for potential problems at the beginning of the transfer.

To select which processor systems to transfer to, check one or more responding systems and click “Next”.

Administration: Publish



Publish Project Files: Transfer to System

To begin the transfer process, click "Start". If the Audit Check is enabled, it will scan the database for both critical errors and warnings. If there are any problems detected, these will be displayed to the user in a popup, with options to print or export the details. If there are warnings but no critical errors, the user can choose to proceed with transfer or to cancel. A critical error in an audit check will prevent transfer.

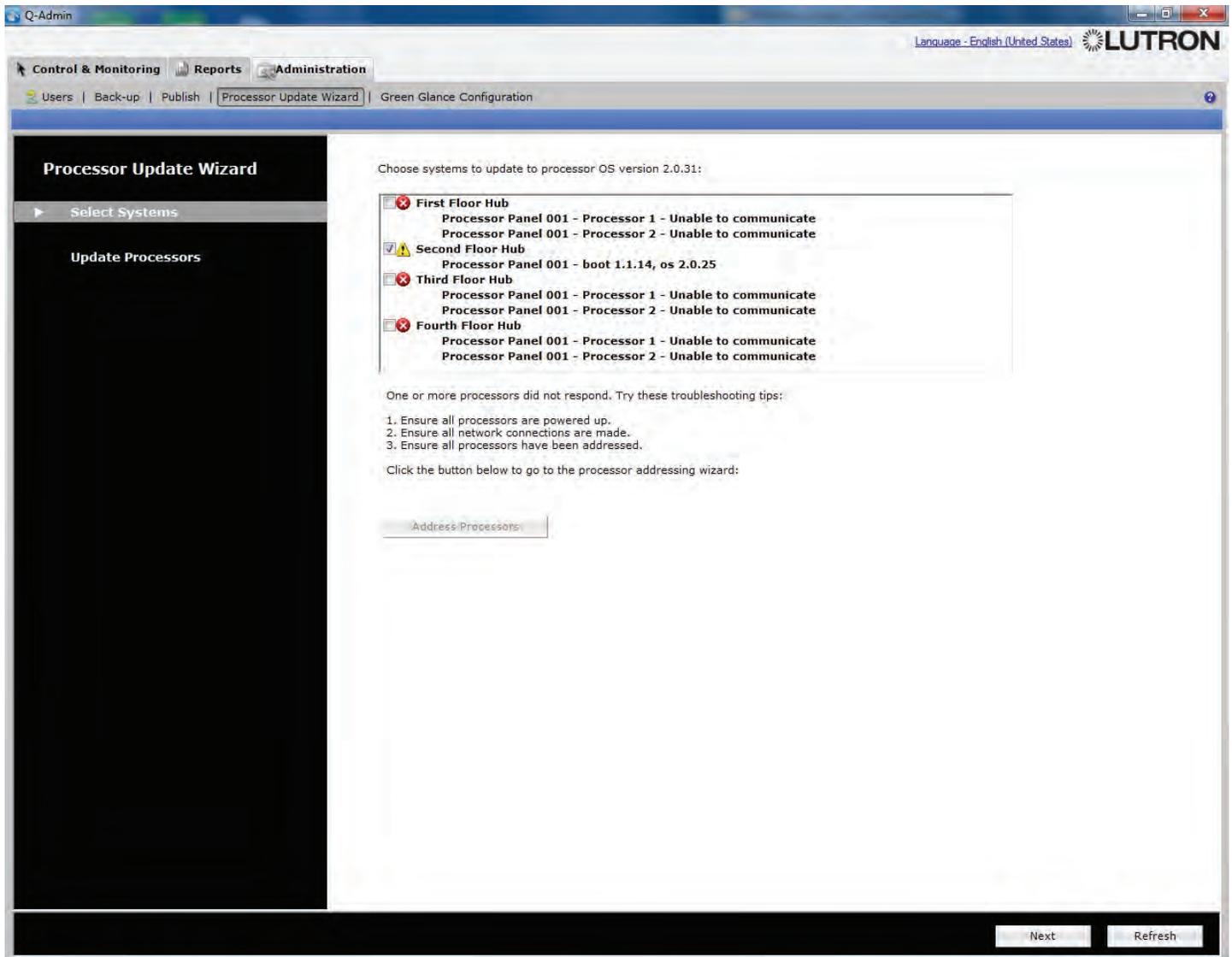
After the audit completes (if selected), the live database will be transferred (i.e., uploaded) to all the processor systems that were selected on the Select Systems page.

Note: When transferring a new configuration to the system, local controls (e.g., keypads, occupancy sensors, daylight sensors, etc.), will not function. Transfers typically take between 15 and 45 minutes to complete.

Once the transfer is complete, please review the display for any errors. If there are errors, you may need to check system wiring and configuration, or correct the project file in Q-Design™.

While the update is in progress, all other tabs will be disabled. After a publish or transfer, Q-Admin™ will need to be restarted.

Administration: Processor Update Wizard



Processor Update Wizard: Select Systems

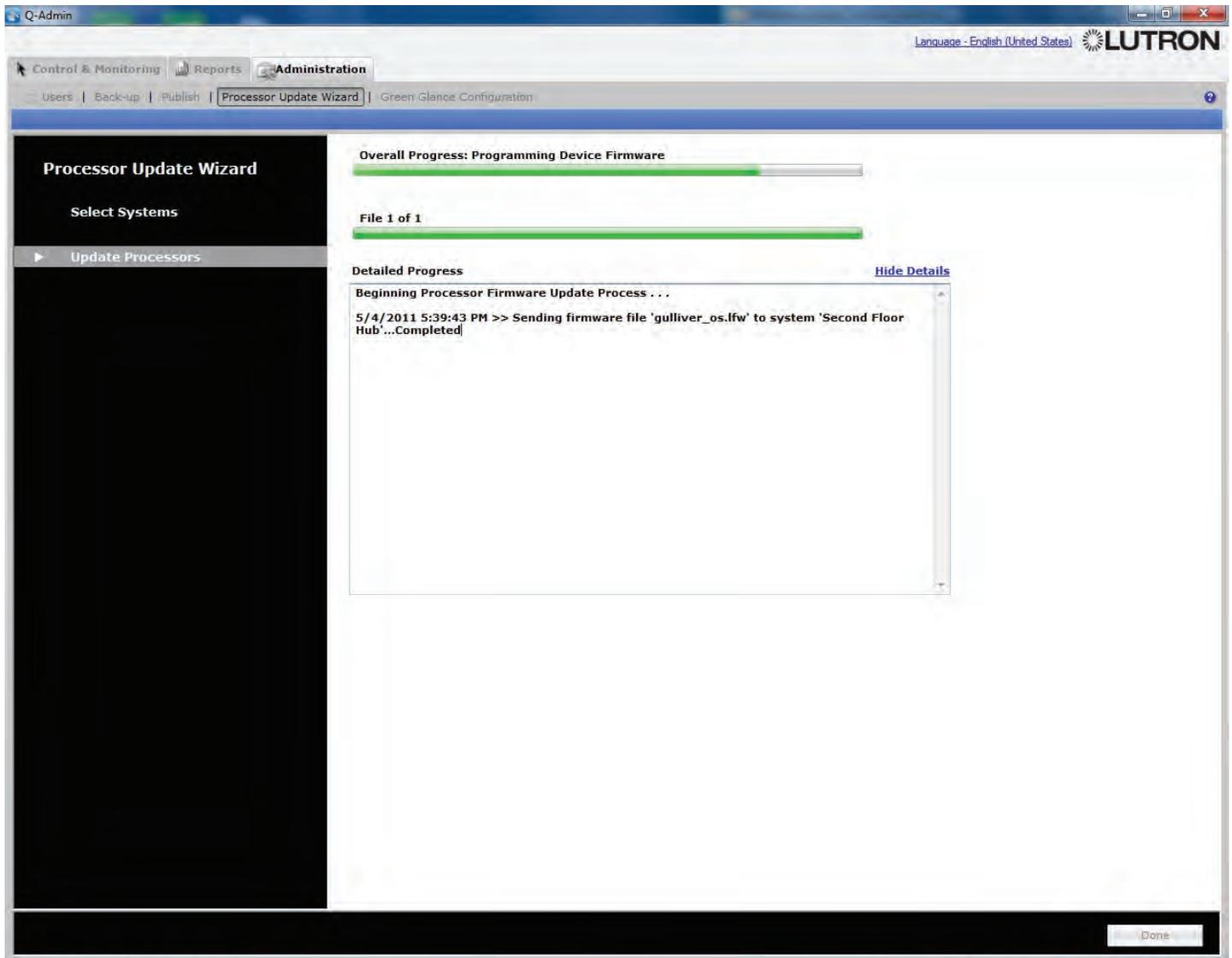
The Processor Update Wizard is used to update processors in the lighting control system to the latest firmware version. This is done when upgrading the lighting system to allow for new functionality and to support newly released Lutron products.

Note: During the processor firmware upgrade, local controls (e.g., keypads, occupancy sensors, daylight sensors, etc.), will not function. After the upgrade completes, a "publish" should be performed for the system to operate.

A system can only be upgraded if all the processors assigned to it are responding.

To update processor firmware, check one or more responding systems and click "Next."

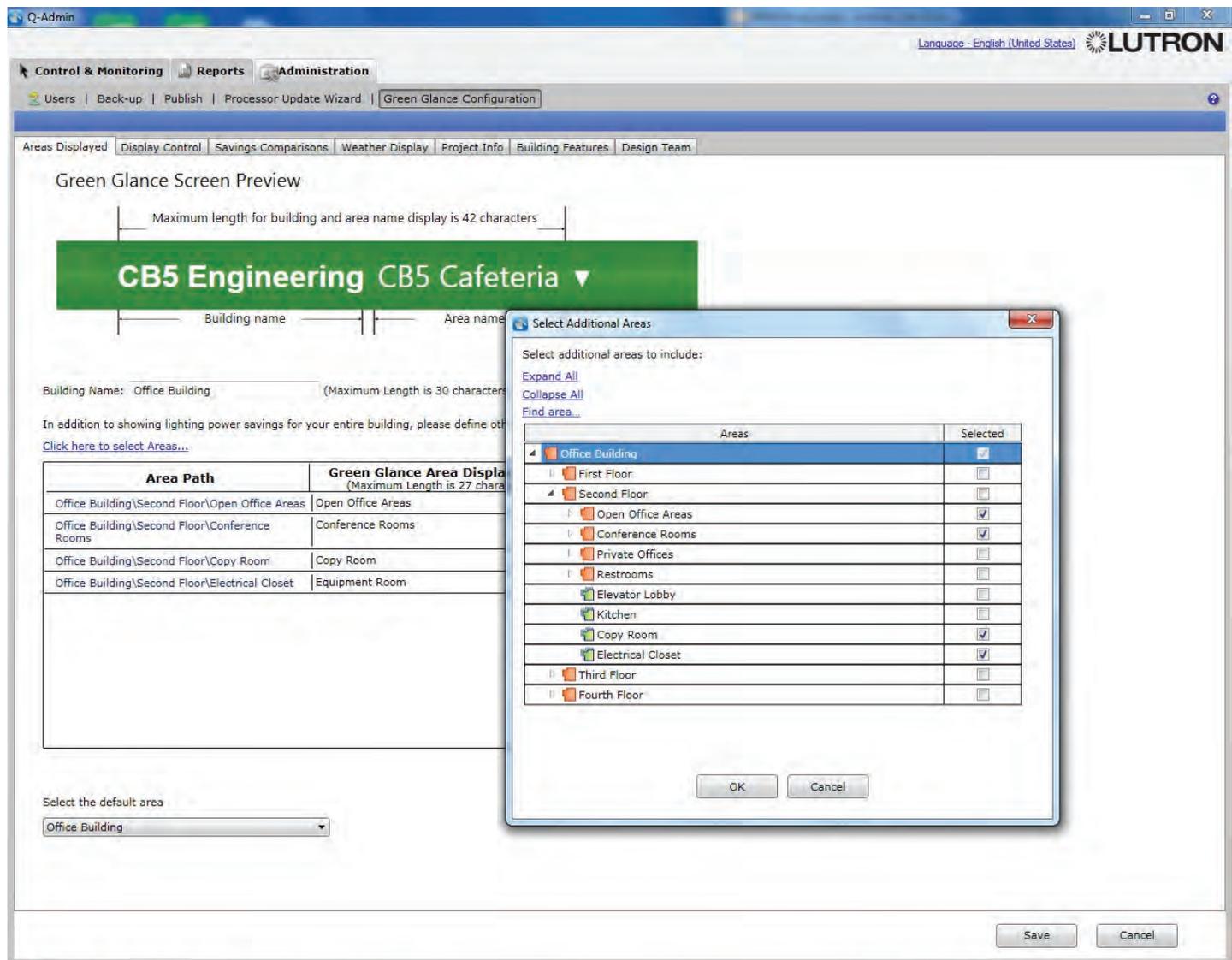
Administration: Processor Update Wizard



Processor Update Wizard: Update Processors

The “Update Processors” screen displays the progress of the processor firmware upgrade. While the update is in progress, all other tabs will be disabled.

Administration: Green Glance® Configuration



Administrators can use the Green Glance® Configuration to set up how the Green Glance® application will work. After any changes are saved, Green Glance® should be restarted.

Green Glance® Configuration: Areas Displayed

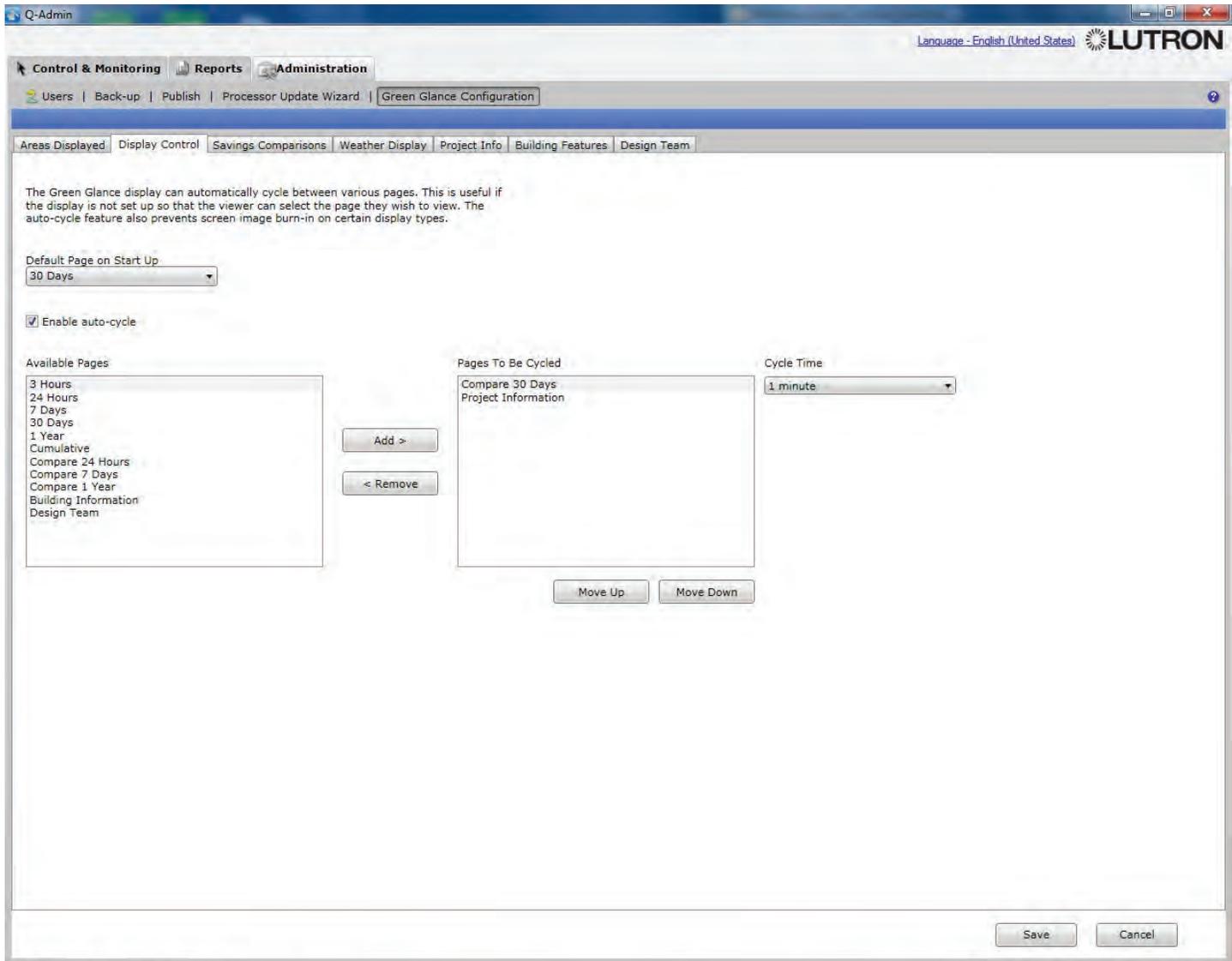
The “Areas Displayed” tab allows an administrator to define the areas to be displayed in Green Glance®. To change the name of the building as displayed in Green Glance®, type the desired name under “Building Name”.

To choose which areas are displayed in Green Glance®:

1. Click “Click here to select Areas...” The “Select Additional Areas” pop up will display, as shown.
2. Expand the area tree as necessary, and select the desired areas using the checkboxes.
3. Click “OK”.

To change the name of an area as displayed in Green Glance®, type the desired name in the column “Green Glance® Area Display Name”.

Administration: Green Glance® Configuration



Green Glance® Configuration: Display Control

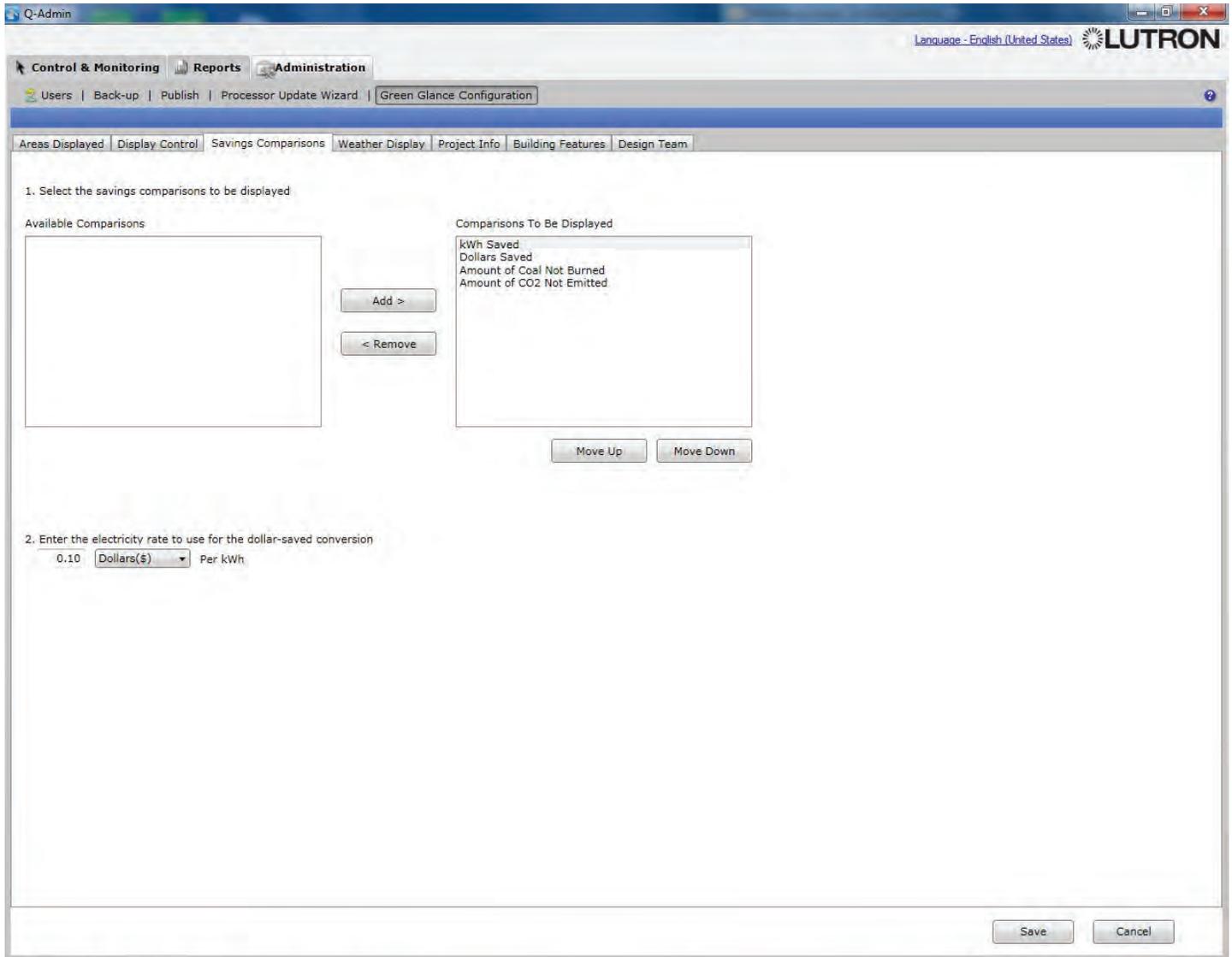
“Display Control” allows an administrator to configure Green Glance® default behavior.

To set the default page that loads when Green Glance® starts, select an option under “Default Page on Start Up”.

If “Enable auto-cycle” is checked, Green Glance® will automatically move from one screen to the next, based on the ordering of the pages listed in “Pages To Be Cycled”.

Select an option in the “Cycle Time” dropdown menu to choose how often Green Glance® should stay on each page while cycling.

Administration: Green Glance® Configuration

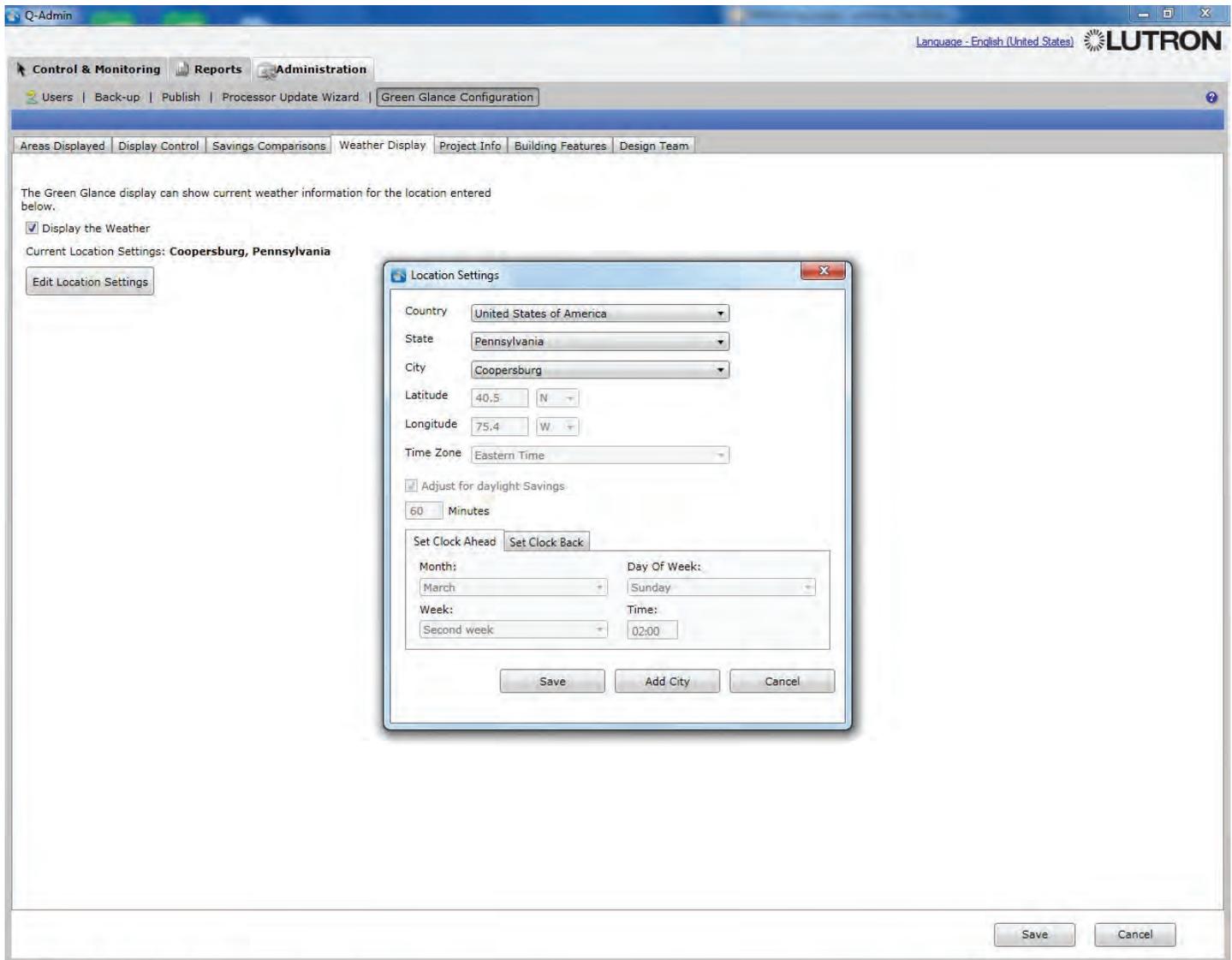


Green Glance® Configuration: Savings Comparison

Green Glance® displays energy savings in terms of kWh (real power), money, coal not burned, and carbon dioxide not emitted. Green Glance® can be set to use some, none, or all of these comparisons, based on which are in the “Comparisons To Be Displayed” box. Money saved is determined by price of electricity and unit of currency, which can be set at the bottom of the screen.



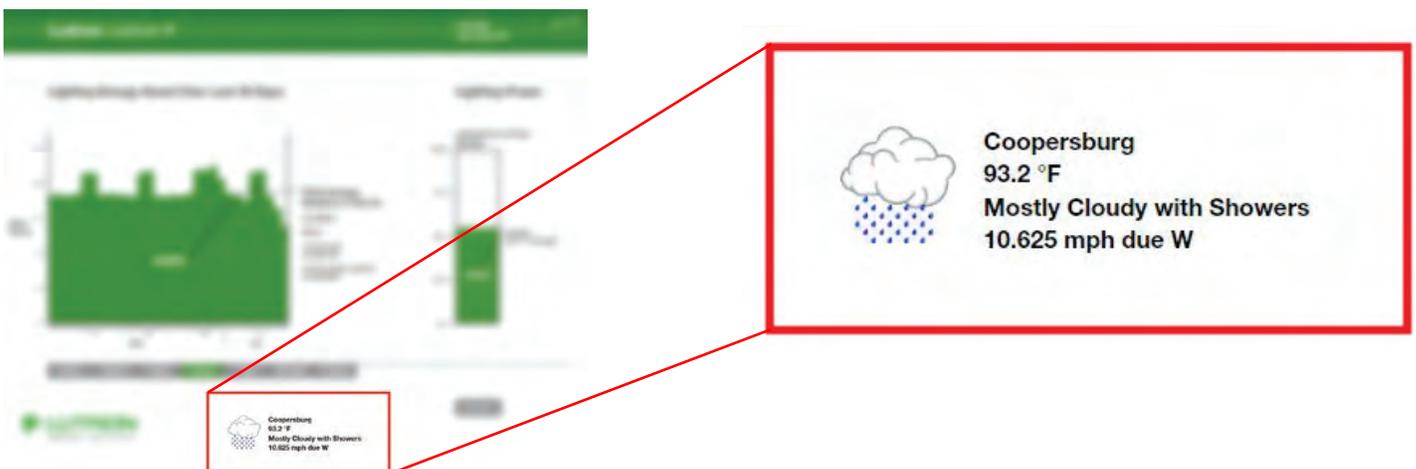
Administration: Green Glance® Configuration



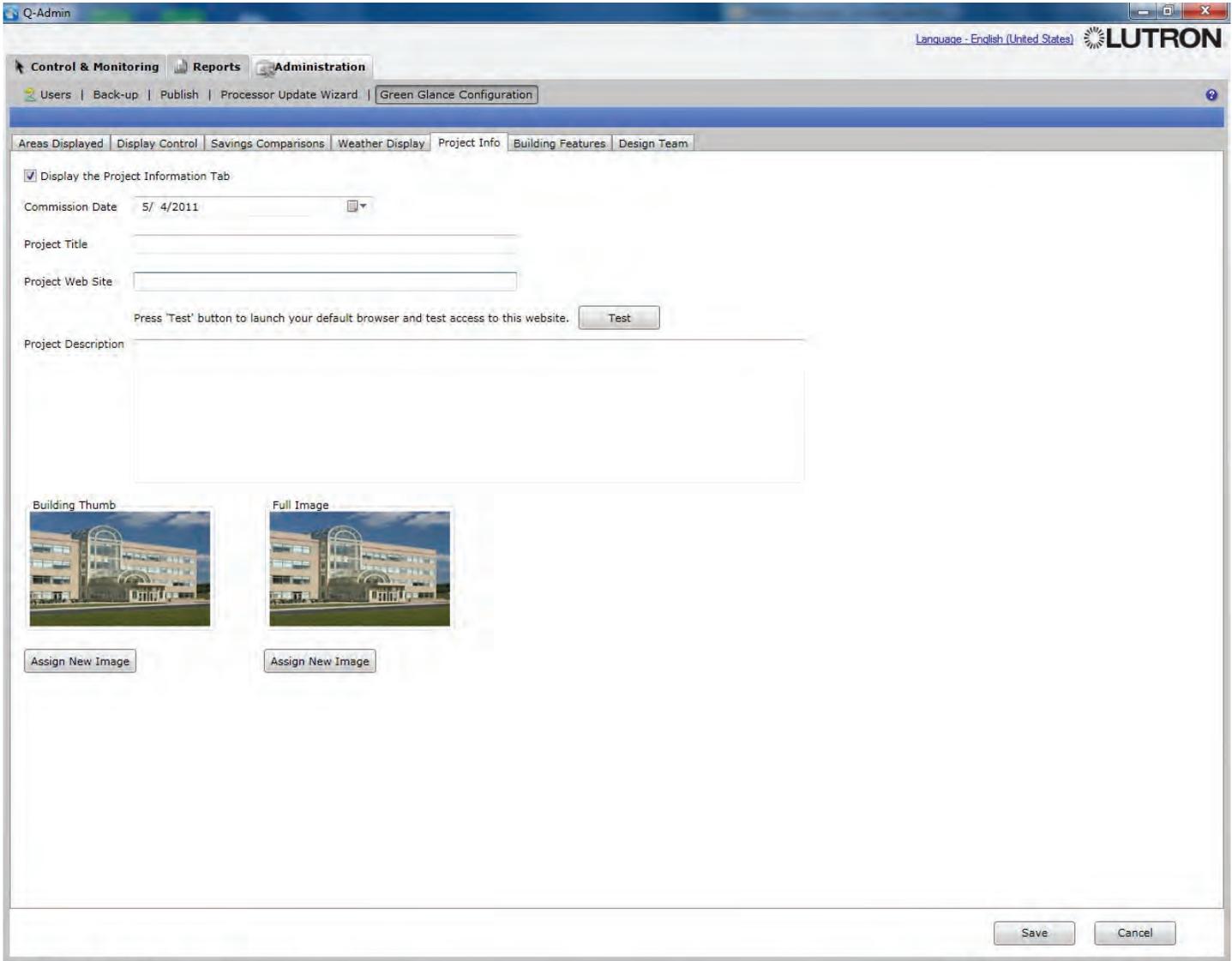
Green Glance® Configuration: Weather Display

Determine whether or not Green Glance® will display the current local weather, and set the project location using the “Edit Location Settings” button.

Weather display requires Internet connectivity in order to connect to the Lutron Weather Server.



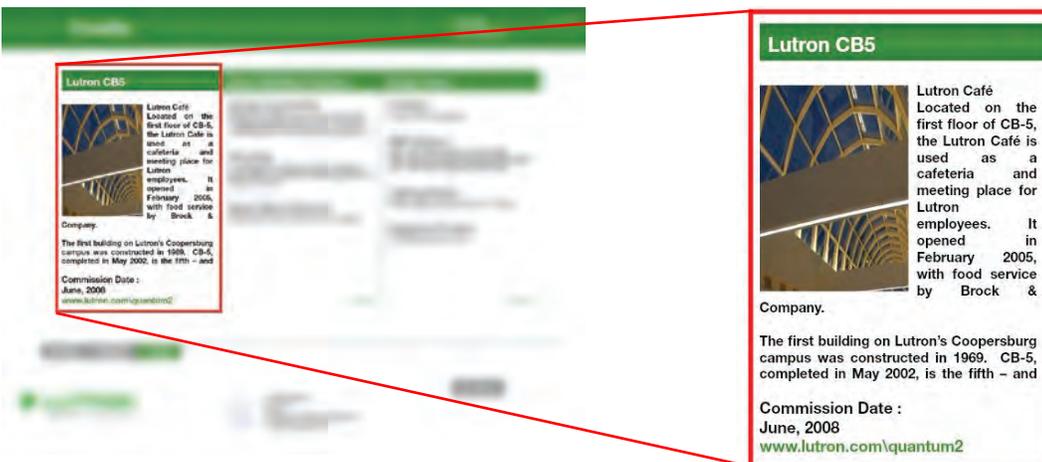
Administration: Green Glance® Configuration



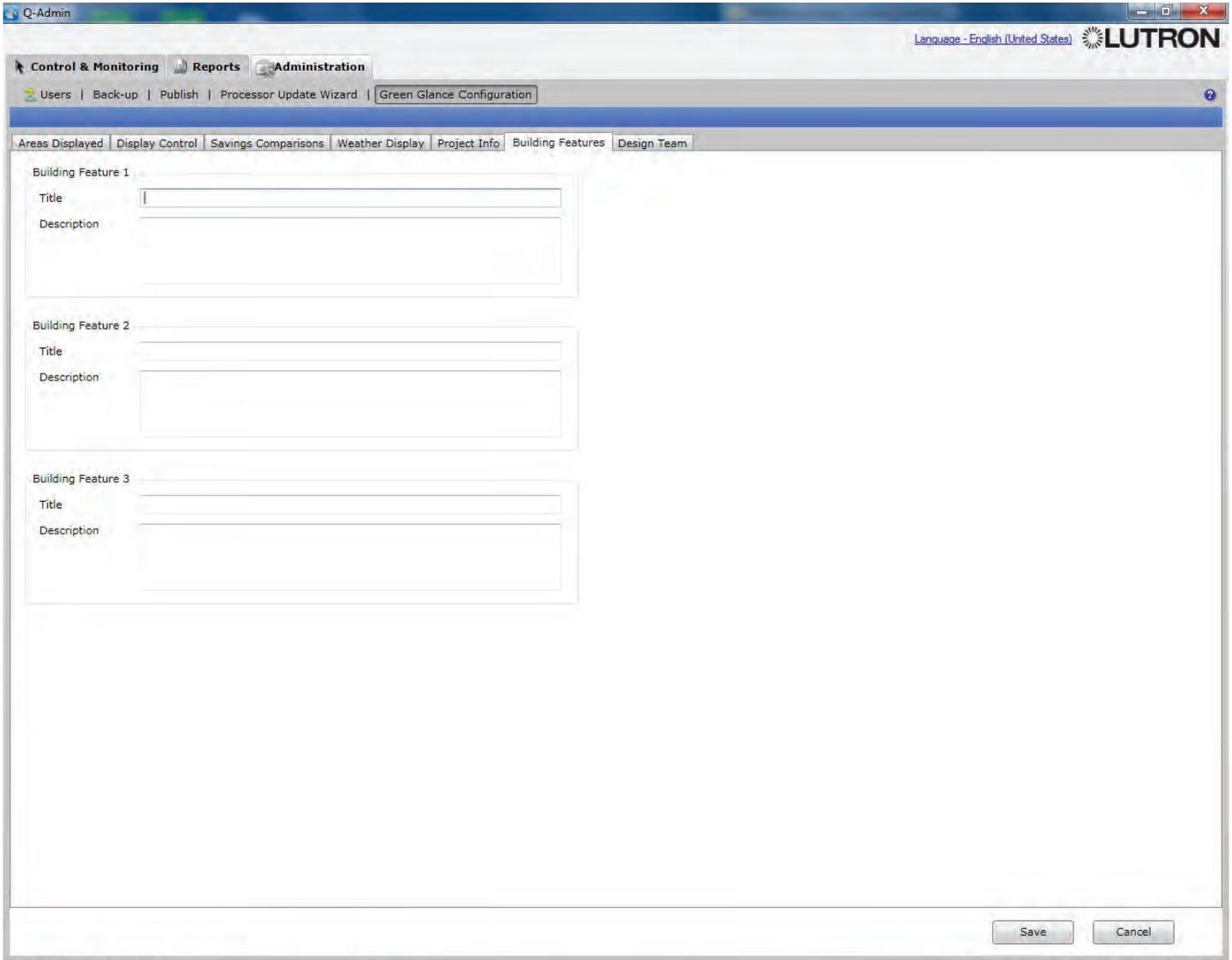
Project Info

Enter information relevant to the project, including commission date, title, website, and description; and upload a building thumbnail and image. These will be displayed to the user in the Project Information tab of Green Glance®, unless the user unchecks “Display the Project Information Tab”.

This information is displayed in Green Glance® for informational purposes.

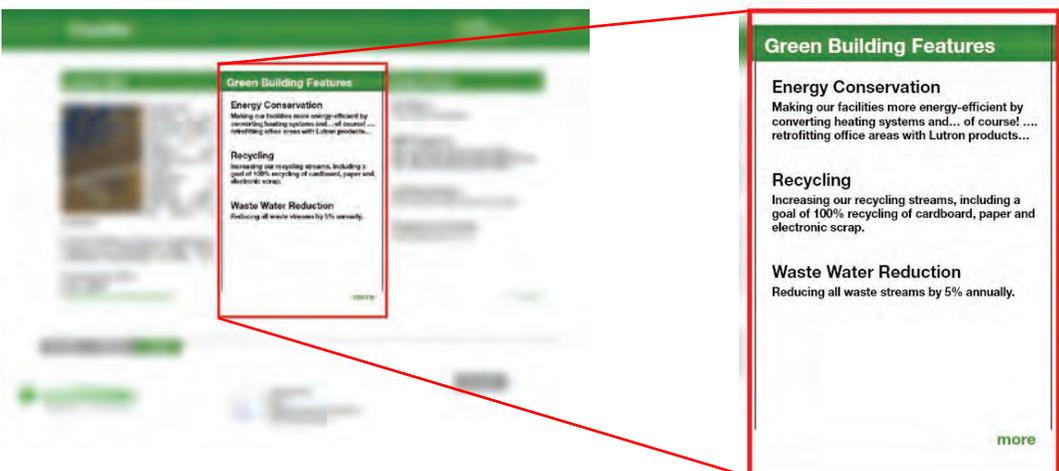


Administration: Green Glance® Configuration

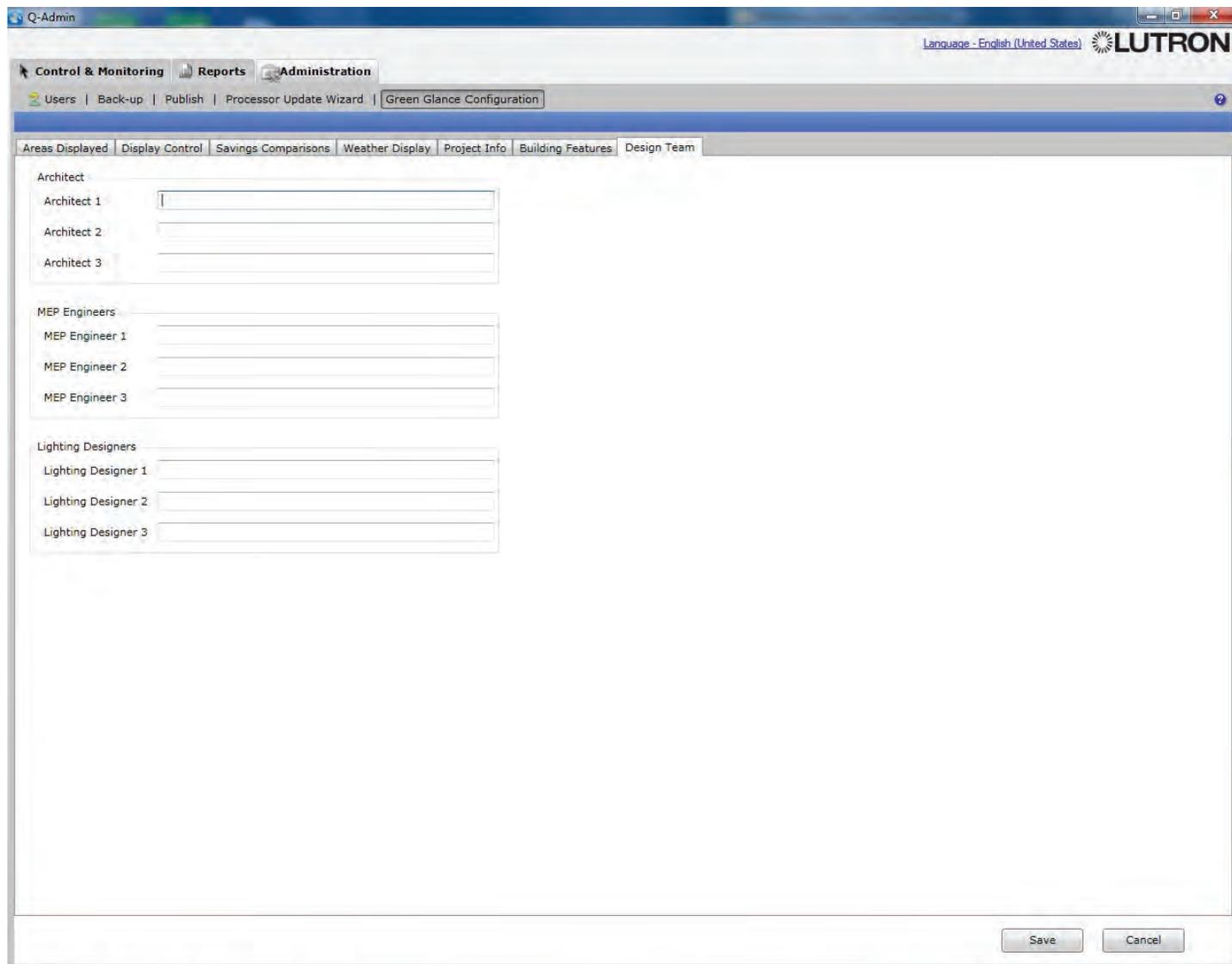


Building Features

The user can type in building features to display to the user in Green Glance®. This information is displayed in Green Glance® for informational purposes.

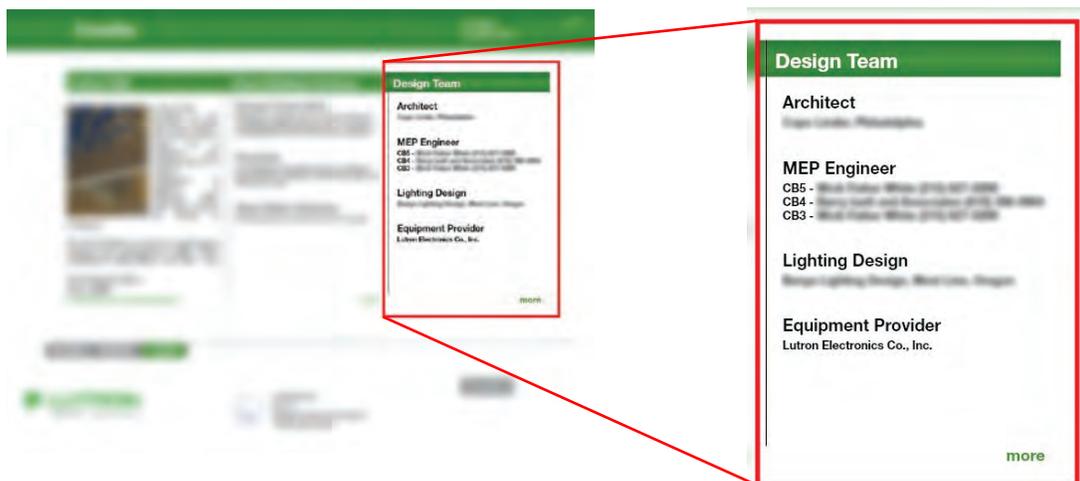


Administration: Green Glance® Configuration



Design Team

The user can type in the names of the building design team to display to the user in Green Glance®. This information is displayed in Green Glance® for informational purposes.



Notes

Appendix - Quantum® Overview

① Overview

Quantum® Total Light Management is a suite comprised of several applications, as follows:

- Q-Design™: - Used to set up and commission a lighting system.
- Q-Graphic™: - Used to overlay graphical floorplans onto Q-Design databases.
- Q-Admin™: - Used for daily control, monitoring, and reports on a lighting system.
- Green Glance®: - Used to monitor energy savings and compare trends.
- Q-Runtime™: – Allows Q-Admin™ to communicate to lighting system.
- Q-Reporting™: – Logs historical data. Required for Green Glance® to run, and for Q-Admin™ to use Load Shedding and Reports.

② System Hardware

Quantum® supports the following hardware:

- Quantum® processors
 - Two configurable device links per processor.
 - Maximum of 16 processors per “sub-system”. Typically each floor in a building is a sub-system.
 - Maximum of 128 “sub-systems” per Quantum® project.
- Lutron Digital Ballast Interfaces (DBI) to control EcoSystem® loads
- Lutron Power Panel devices (GP, LP, XP)
- Lutron wired QS Devices
 - Energi Savr Node™ (All varieties: DALI, EcoSystem®, 0-10V, and Switching)
 - Keypads
 - Keyswitches
 - Shades and shade power supplies
 - GRAFIK Eye® (Triac, EcoSystem, and DALI, both RF and non-RF)
 - NWK (Ethernet Interface)
 - IO (10 wired contact closure pins – 5 input, 5 output)
 - QSE-DMX
 - QSM (Wireless-only, wired-only, and wired+wireless combo units)
 - IR-Eye infrared sensor
- All Lutron EcoSystem® ballasts and drivers (with appropriate EcoSystem® hub)
- All DALI-compliant dimmable ballasts (with appropriate Lutron DALI hub)
- Lutron wired and wireless occupancy and daylight sensors
- Lutron wired IR sensors
- Lutron wireless Pico® controllers

③ Third-Party Interfacing

Quantum® supports several options for third-party interfacing:

- BACnet over IP
 - One Quantum® processor in each system exposes system objects (at user’s discretion) to third-party BACnet-compatible software.
 - Typically used to integrate Lutron lighting into third-party building management software.
- RS232/Ethernet Integration
 - QSE-CI-NWK in Quantum® system provides integration through RS232 (serial port) or Ethernet.
 - Typically used to receive commands from third-party devices, such as touchscreens.
- Contact closures
 - The QSE-IO device can send maintained or pulsed signals over its contact-closure outputs. A third-party system can take these as input.
 - The QSE-IO and QS keypad can receive maintained (open/close) inputs and perform various system actions accordingly.

Appendix - Quantum® Overview

④ Installation Prerequisites

Languages:

- Quantum® supports the following languages:
 - English (US)
 - Spanish
 - French
 - German
 - Chinese (Simplified)
 - Italian

Hardware Prerequisites (Server / Standalone):

- Any modern desktop/laptop CPU – Minimum Pentium® 4 or equivalent
- 2 GB RAM
- 5 GB free disk space

Hardware Prerequisites (Client):

- Any modern desktop/laptop CPU – Minimum Pentium® 4 or equivalent
- 1 GB RAM
- 1 GB free disk space

Software Prerequisites:

- 64-bit operating systems are supported in Quantum® 2.0 and newer.
- Supported operating systems:
 - Microsoft® Windows® XP
 - Microsoft® Windows® Vista
 - Microsoft® Windows® 7
 - Microsoft® Windows® Server 2003
 - Microsoft® Windows® Server 2008
 - Microsoft® Windows® Server 2008 R2
- The Quantum® installer, typically named “Quantum® A.B.CD.exe” (based on version number), will install all software prerequisites as necessary, including:
 - Microsoft® .NET Framework 3.5 SP1
 - Microsoft® SQL Server® 2005 Express SP1
 - Microsoft® Visual C++® Runtime
- The Quantum® installer does not require network connectivity.

Lutron recognizes that lighting is critical to your operations. In the event of a lighting disruption, you can always contact us. Call the number listed below to be connected directly to our Field Service scheduling group. Based upon your specific situation, our scheduling group will determine the best steps to take to correct the issue.

Lutron Services Company / Service Group

1.800.523.9466, option 2, option 3, option 1 (answered 24/7)

If you have any questions about additional services that Lutron offers, please visit our website at www.lutron.com/service .

Worldwide Technical and Sales Assistance

If you have questions concerning the installation or operation of this product, call the Lutron Technical Support Center.

Please provide the exact model number when calling.
Model number can be found on the product packaging.
Example: QSE-IO

U.S.A., Canada, and the Caribbean: 1.800.523.9466
Other countries call: +1.610.282.3800
Fax: +1.610.282.1243

Visit us on the web at www.lutron.com

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Made and printed in the U.S.A.
P/N 040-383 Rev. A 07/2011

 **LUTRON**[®]
Lutron Electronics Co., Inc.
7200 Suter Road
Coopersburg, PA 18036 USA

Lutron Standard Limited Warranty

Applies to all Lutron Products that are not purchased with Lutron Services Co., Inc. start-up.

Limited Warranty

Lutron warrants each new unit to be free from defects in materials and workmanship and to perform under normal use and service.

Lutron will, at its option, repair or replace any unit that is defective in materials or manufacture within one year after purchase. For Lutron ballasts, Lutron will repair or replace any unit that is defective in materials or manufacture within three years after purchase.

THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESS WARRANTIES, AND THE IMPLIED WARRANTY OF MERCHANTABILITY IS LIMITED TO ONE YEAR FROM PURCHASE. THIS WARRANTY APPLIES ONLY TO LUTRON HARDWARE AND DOES NOT INCLUDE LUTRON SOFTWARE, LUTRON PROVIDED SYSTEM SERVERS, LAPTOPS, PDAS, OR COMPUTERS PURCHASED WITH LUTRON CONTROL SYSTEMS. THIS WARRANTY DOES NOT COVER THE COST OF INSTALLATION, REMOVAL, OR REINSTALLATION, OR DAMAGE RESULTING FROM MISUSE, ABUSE, OR IMPROPER OR INCORRECT REPAIR, OR DAMAGE FROM IMPROPER WIRING OR INSTALLATION. THIS WARRANTY DOES NOT COVER INCIDENTAL, OR SPECIAL DAMAGES. THE PURCHASER ASSUMES AND WILL HOLD HARMLESS LUTRON IN RESPECT OF ALL SUCH LOSS. LUTRON'S LIABILITY ON ANY CLAIM FOR DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE MANUFACTURE, SALE, INSTALLATION, DELIVERY, OR USE OF THE UNIT SHALL NEVER EXCEED THE PURCHASE PRICE OF THE UNIT.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

For warranty service on returnable products (including Lutron ballasts), take the unit to the place of purchase or mail to:

Lutron
7200 Suter Rd.
Coopersburg, PA 18036-1299
(send postage pre-paid for proper handling)

For warranty service on non-returnable products, contact Lutron Technical Support Center at **1-800-523-9466**

Note - Although every attempt is made to ensure that catalog information is accurate and up-to-date, please check with Lutron before specifying or purchasing this equipment to confirm availability, exact specifications, and suitability for your application.

©2009 Lutron Electronics Co., Inc.

Job Name: <input style="width: 90%; height: 20px;" type="text"/>	Model Numbers: <input style="width: 95%; height: 20px;" type="text"/>	
Job Number: <input style="width: 100px; height: 20px;" type="text"/>	<input style="width: 95%; height: 20px;" type="text"/>	<input style="width: 95%; height: 20px;" type="text"/>

Lutron Electronics Co., Inc. Commercial Systems Limited Warranty

SCOPE

This limited warranty (“Warranty”) covers Lutron (a) commercial lighting control system panels, controls, processor panels, wall box products, and other Lutron components (collectively, “Hardware”), (b) ballasts supplied directly by Lutron (“Ballasts”), (c) provided computer (“Supplied Computer”), and (d) commercial systems eLumen software (“Software” and, with the Hardware, Ballasts and Supplied Computer, the “System”). Customer acknowledges and agrees that use of (i) the System, or any part thereof, constitutes acceptance of all terms and conditions of this Warranty and (ii) the Software is subject to the terms and conditions of Lutron’s Software License. Any subsequent addition to the System provided by Lutron will be governed by a separate warranty issued at the time of the purchase of the additional equipment.

The provisions of this Warranty applicable to the Supplied Computer and Software will not apply to Systems that do not include these components.

LIMITED WARRANTY

Subject to the exclusions and restrictions and for the periods of time described in this Warranty, Lutron warrants that the System will be free from manufacturing defects. If any manufacturing defect exists in any Hardware or Ballast during the period of time identified below from the date of start-up completion by Lutron or a Lutron approved third party, or the date of shipment by Lutron if such component was not purchased with Lutron start-up, so long as Customer promptly notifies Lutron of the defect and, if requested by Lutron, upon the return of the defective part(s), Lutron will, at its option, either repair the defective part(s) or issue a credit to the Customer against the purchase price of comparable replacement part(s) purchased from Lutron as follows:

Number of Years from Date of Start-up or Shipment, as applicable	Percentage of Part Price Credited by Lutron			
	Hardware		Ballasts	
	With Start-up	No Start-up	With Start-up	No Start-up
Up to 1	100%	100%	100%	100%
More than 1 but not more than 2	100%	0%	100%	100%
More than 2 but not more than 3	50%	0%	100%	100%
More than 3 but not more than 5	50%	0%	100%	0%
More than 5 but not more than 8	25%	0%	0%	0%
More than 8	0%	0%	0%	0%

If any manufacturing defect exists in the Supplied Computer or Software during the one year period from the date of start-up by Lutron or a Lutron approved third party, or the date of shipment by Lutron if component was not purchased with Lutron start-up, so long as Customer promptly notifies Lutron of the defect, upon the return of the defective part(s) as to the Supplied Computer, if requested by Lutron, or Lutron determining that a defect exists as to the Software, Lutron will, at its option, either repair the defective part(s) or provide comparable replacement part(s).

Replacement parts for the System provided by Lutron or, at its sole discretion, an approved vendor may be new, used, repaired, reconditioned, and/or made by a different manufacturer.

CUSTOMER OBLIGATIONS TO MAINTAIN LIMITED WARRANTY

This Warranty will be void, and Lutron will have no obligations under it unless Customer complies with all of the following:

1. The Supplied Computer must be installed and maintained in a secure location, within the

Job Name: <input style="width: 90%; height: 20px;" type="text"/>	Model Numbers: <input style="width: 95%; height: 20px;" type="text"/>
Job Number: <input style="width: 150px; height: 20px;" type="text"/>	<input style="width: 95%; height: 20px;" type="text"/>

temperature and relative humidity ranges specified in the documentation accompanying the Supplied Computer, and away from where it may be bumped, abused, or subjected to large amounts of dust or dirt.

2. The Supplied Computer must be connected to a reliable (and preferably generator or battery backed-up) power supply.
3. The Supplied Computer must be properly shutdown in the event of power loss to prevent damage to it or its data, either of which could prevent it from operating properly. Customer has sole responsibility to take all reasonable measures to prevent this from occurring.
4. No modification, alteration, adjustment or repair can be made to the Software except by, or at the express instruction of, Lutron.
5. The Software may not be used on any hardware except the Supplied Computer.
6. No third party software may be installed on the Supplied Computer.

Lutron does not warrant that the Software will operate in combination with any other software except as specified in the applicable Lutron documentation. Customer acknowledges that its use of the Software may not be uninterrupted or error-free.

To ensure optimal operating conditions for the System, Lutron recommends that the Supplied Computer (1) not be connected to a power source that is also supplying power to a motor or other load that causes significant conducted emissions; (2) be located to permit easy access to it; and (3) be placed on a dedicated circuit.

EXCLUSIONS AND RESTRICTIONS

This Warranty does not cover, and Lutron and its suppliers are not responsible for:

1. Damage, malfunction or inoperability diagnosed by Lutron or a Lutron approved third party as caused by normal wear and tear, abuse, misuse, incorrect installation, neglect, accident, interference or environmental factors, such as (a) use of incorrect

line voltages, fuses or circuit breakers; (b) failure to install, maintain and operate the System pursuant to the operating instructions provided by Lutron and the applicable provisions of the National Electrical Code and of the Safety Standards of Underwriter’s Laboratories; (c) use of incompatible devices or accessories; (d) improper or insufficient ventilation; (e) unauthorized repairs or adjustments; (f) vandalism; (g) failure to comply with the Customer Obligations listed above; (h) an act of God, such as fire, lightning, flooding, tornado, earthquake, hurricane or other problems beyond Lutron’s control; (i) moving the Supplied Computer to another geographic location; (j) a virus or computer hacker; or (k) failure to maintain equipment under specified ambient temperature.

2. On-site labor costs to diagnose issues with, and to remove, repair, replace, adjust, reinstall and/or reprogram the System or any of its components.
3. Components and equipment external to the System, such as, lamps; non-Lutron ballasts; OEM supplied Lutron ballasts, sockets, and fixtures; fixture wiring between ballasts and lamps; building wiring between the dimmer panels and lamps and between the controls and the control or dimmer panels; audio-visual equipment; and non-Lutron time clocks and motion detectors.
4. The cost of repairing or replacing other property that is damaged when the System does not work properly, even if the damage was caused by the System.
5. Any loss of software, including the Software, or data. Customer has sole responsibility to properly back up all data on the Supplied Computer’s hard disk drive and on any other storage device(s) in the System.
6. Repairs required due to malfunctions caused by non-Lutron supplied software.

EXCEPT AS EXPRESSLY PROVIDED IN THIS WARRANTY, THERE ARE NO EXPRESS OR IMPLIED WARRANTIES OF ANY TYPE, INCLUDING ANY IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY.

Job Name: <input style="width: 90%; height: 20px;" type="text"/>	Model Numbers: <input style="width: 95%; height: 20px;" type="text"/>	
Job Number: <input style="width: 80%; height: 20px;" type="text"/>	<input style="width: 95%; height: 20px;" type="text"/>	<input style="width: 95%; height: 20px;" type="text"/>

LUTRON DOES NOT WARRANT THAT THE SYSTEM WILL OPERATE WITHOUT INTERRUPTION OR BE ERROR FREE.

NO LUTRON AGENT, EMPLOYEE OR REPRESENTATIVE HAS ANY AUTHORITY TO BIND LUTRON TO ANY AFFIRMATION, REPRESENTATION OR WARRANTY CONCERNING THE SYSTEM.

UNLESS AN AFFIRMATION, REPRESENTATION OR WARRANTY MADE BY AN AGENT, EMPLOYEE OR REPRESENTATIVE IS SPECIFICALLY INCLUDED HEREIN, OR IN STANDARD PRINTED MATERIALS PROVIDED BY LUTRON, IT DOES NOT FORM A PART OF THE BASIS OF ANY BARGAIN BETWEEN LUTRON AND CUSTOMER AND WILL NOT IN ANY WAY BE ENFORCEABLE BY CUSTOMER.

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NOTWITHSTANDING ANY DAMAGES THAT CUSTOMER MIGHT INCUR FOR ANY REASON WHATSOEVER (INCLUDING, WITHOUT LIMITATION, ALL DIRECT DAMAGES AND ALL DAMAGES LISTED

ABOVE), THE ENTIRE LIABILITY OF LUTRON AND OF ALL OTHER PARTIES UNDER THIS WARRANTY ON ANY CLAIM FOR DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE MANUFACTURE, SALE, INSTALLATION, DELIVERY, USE, REPAIR, OR REPLACEMENT OF THE SYSTEM, OR ANY AGREEMENT INCORPORATING THIS WARRANTY, AND CUSTOMER'S SOLE REMEDY FOR THE FOREGOING, WILL BE LIMITED TO THE AMOUNT PAID TO LUTRON BY CUSTOMER FOR THE SYSTEM. THE FOREGOING LIMITATIONS, EXCLUSIONS AND DISCLAIMERS WILL APPLY TO THE MAXIMUM EXTENT ALLOWED BY APPLICABLE LAW, EVEN IF ANY REMEDY FAILS ITS ESSENTIAL PURPOSE.

TO MAKE A WARRANTY CLAIM

To make a warranty claim, promptly notify Lutron within the warranty periods described above by calling the Lutron Technical Support Center at 1-800-523-9466. Lutron, in its sole discretion, will determine what action, if any, is required under this Warranty. Most System problems can be corrected over the phone through close cooperation between Customer and a technician. To better enable Lutron to address a warranty claim, have the System's serial and model numbers, its current operating system version, and the brand names and models of any peripheral devices (such as a modem) used with the System available when making the call. Let the technician know what error message you get; when it occurs; what you were doing when the error occurred; and what steps you have already taken to solve the problem. Listen carefully to the technician and follow the technician's directions.

If Lutron, in its sole discretion, determines that an on-site visit or other remedial action is necessary, Lutron may send a Lutron Services Co. representative or coordinate the dispatch of a representative from a Lutron approved vendor, to Customer's site, and/or coordinate a warranty service call between Customer and a Lutron approved vendor. All on-site labor costs incurred to diagnose any problems with

Job Name: <input type="text"/>	Model Numbers: <input type="text"/>	
Job Number: <input type="text"/>	<input type="text"/>	<input type="text"/>

the System and to repair, replace or adjust (at Lutron’s option) the System to restore it to normal operation will be paid by customer at the then current service price unless covered by a Lutron Services Co. Support and Maintenance Plan.

REMOTE ACCESS

A dedicated analog phone line should be installed for the Supplied Computer to allow Lutron to remotely administer, troubleshoot, and support the System. Lutron does not recommended plugging the Supplied Computer into the analog phone line until

asked to do so by Lutron support personnel. During such support calls, Customer should disconnect the Supplied Computer from Customer’s local LAN. Lutron expressly disclaims all liability due to local LAN problems or if the phone line is connected to the Supplied Computer at any other time. Customer retains all responsibility for ensuring the security of the Supplied Computer from unauthorized access.

For more information, including preventative maintenance steps, see the Users Guide provided by the Lutron approved vendor of, and included with, the Supplied Computer.

Job Name: <input type="text"/>	Model Numbers: <input type="text"/>	
Job Number: <input type="text"/>	<input type="text"/>	<input type="text"/>