

Overview:

EcoSystem is a revolutionary lighting control system comprised of digital electronic dimming ballasts, controls, and environmental sensors. *EcoSystem* can generate energy savings of 50% to 70%, increase occupant comfort, improve space flexibility, and reduce maintenance costs. *EcoSystem* can also work together with the security, HVAC, and other building management systems to provide the appropriate lighting for every situation. *EcoSystem* is programmed using the handheld *EcoSystem* programmer. Using a stylus, users make on screen selections and transmit programming instructions to the system.

Standard EcoSystem Start-up Includes:

- Verification that the system is installed according to Lutron specifications.
- Wall Controls/Interfaces to Include:
 - Ballast addressing.
 - Verification of proper wiring and operation of control link.
 - Set-up of 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-users representative, contractor, or will be set up based on the field engineers past experience, in that order of priority.
 - Testing of all buttons and IR inputs to assure proper operation.
- Occupancy Sensors to Include:
 - Verification of proper installation and operation.
 - Unless otherwise noted, a rough calibration will be performed at system start-up. Final calibration is the responsibility of the end-user since it is very dependent on furniture placement, HVAC operation, and space usage.
- Daylight Sensors to Include:
 - Verification of proper installation and operation.
 - A preliminary calibration will be performed at system start-up. Unless specifications are provided to the Lutron technician prior to beginning calibration of daylighting feature, the system will be programmed to the following specification: 50 ft. cd. minimum light levels at a height of 30 in. off of the floor, or as close to this specification as lighting conditions permit. Final adjustments may need to be made by the end-user if the lighting or job site conditions are unfavorable for calibration during the site visit (calibration is very dependent upon furniture placement, window treatments, outside weather conditions and space usage).

Additional Start-up Details:

- A Lutron factory certified technician performs all system start-up items.
- One visit to the job site during normal business hours. This is one visit between the hours of 7 AM and 5 PM on a Monday through Friday that is not a Lutron Holiday.
- This visit may require multiple days, depending on the size of the system.
- Visits can be made outside of these hours for an additional charge. (See LSC-AH-SU)
- Phased construction projects requiring multiple visits should verify that a phased start-up was included by the system provider.
- Lutron requires ten (10) business days notice to schedule a start-up date. Shorter notices may incur expedite fees.

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- All terminations will be done by the installing agency prior to start-up visit. A person from the installing agency needs to be present for the start-up. This person should be familiar with the installation of the system.
- Note: Daylighting calibration will be performed during the start-up visit to the greatest extent possible given the lighting conditions present during this visit. Final adjustments may need to be made by the end-user if the lighting or jobsite conditions are unfavorable for calibration during the site visit (calibration is very dependent upon furniture placement, window treatments, outside weather conditions, and space usage). Additional site visits to adjust daylighting calibration will be an additional charge.

End-user Training on Overall System Operation:

- This system is not typically sold with a separate visit for the training of the end-user. Check with purchasing agent if this is required. (See LSC-TRAINING)
- It is the responsibility of the person scheduling the start-up to ensure the appropriate end-users are present for system training. Lutron typically does not have these contacts.
- Video media is not provided by Lutron for training sessions. This may be provided by “others” for turnover to the end-user or job site documentation.
- System demonstration and sign-off by the end-user.

EcoSystem Training Visit – Typical Agenda (duration – approximately 1 hour)

- **NOTE:** All topics may not be relevant to every system. The topics listed below represent Lutron’s standard training agenda. Agendas may be customized based on the needs of the attendees.
- Review system with end-user (control/sensor/bus supply location and function)
- Discuss system model numbers
- Discuss Lutron lexicon (i.e., what is a scene, group, fade time)
- Review all system components
 - Bus supply
 - Ballasts
 - Occupancy sensors
 - Photo sensors
 - IR receivers
 - Wall controls
- Review EcoSystem Programmer
 - Lighting control
 - Device Setup
 - Daylight Sensors
 - Occupancy Sensors
 - Wall Controls
 - Grouping
 - Ballast diagnostics, configuration, and replacement

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- Discuss
 - System Troubleshooting
 - Preventative Maintenance
 - Warranty Information
 - Technical Support
 - Q/A

Items Not Included in Standard On-site Start-up:

- 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 in writing via the proper channels.
- Field wiring changes or corrections that delay the start-up process such that additional time is required for Lutron to complete the start-up will result in additional charges.
- Replacement of controls damaged due to miswires or 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.

Additional items that are not included with standard start-up, 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. Start-up 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. After-hours start-up.
- 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.
- LSC-LEED-DOC. LEED documentation.

Additional items listed below may be charged for job sites that are scheduled for start-up, 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.

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