

Light control solutions

Small- and medium-sized conference rooms



Total Light Management™ in conference rooms

Conference rooms are multifunctional spaces that benefit from various lighting scenes, and support AV presentations.

The challenge: Create unique lighting scenes for different activities by controlling multiple zones of light.

The opportunity: Utilize energy-saving light control strategies. Enhance the use and quality of light while saving energy.

Functions:

- Meetings
- AV presentations
- Teleconferences
- Group project work space

Requirements:

- Meet energy code requirement for automatic shut-off
- Provide multiple preset lighting conditions
- Single point of control at entry door
- Comply with ASHRAE/IES 90.1 -2007 Lighting Power Density (LPD) requirements of 1.23 W/sq.ft

Conference room examples

Control functionality		Basic - switching	Basic - dimming
Define the space	Activities	<ul style="list-style-type: none"> • Meetings • Teleconferences • Informal work sessions 	<ul style="list-style-type: none"> • Meetings • Teleconferences • Informal work sessions
	Typical interior finish level	Class C building (Basic finish level)	Class C building (Basic finish level)
	Lights and shades - Zones - Types	2 switched lighting zones <ul style="list-style-type: none"> • Recessed parabolic fluorescent fixture 	2 dimmed lighting zones <ul style="list-style-type: none"> • Recessed parabolic fluorescent fixture
Light control strategies	Code-required strategies	Occupancy sensor	Occupancy sensor
	Additional strategies	n/a	Manual 10% fluorescent dimming
	Optional enhancements		

Note: Use the Lutron® PowPak™ CCO module to integrate Radio Powr Savr™ sensors with HVAC and other building systems, and to maximize energy savings. For information, contact your Lutron representative, or visit www.lutron.com/EnergiTriPak

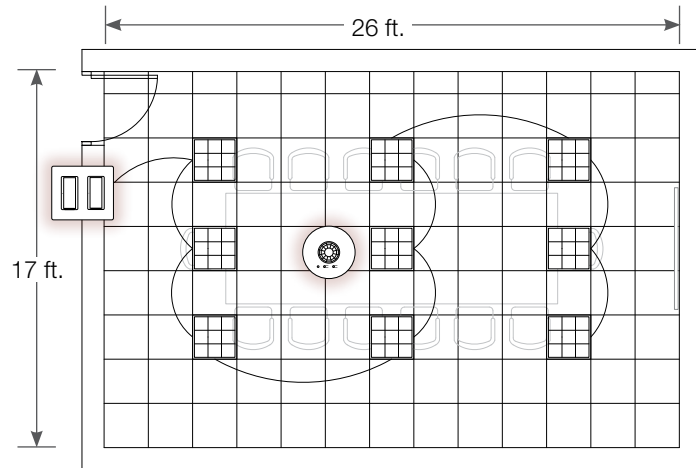
	Intermediate	Advanced
	<ul style="list-style-type: none"> • Meetings • Teleconferences • Group work sessions • Presentations - Occasional AV 	Management conference room with permanent AV equipment
	Class B building (Intermediate finish level)	Class A building (High-end finish level)
	<p>4 dimmed lighting zones</p> <ul style="list-style-type: none"> • Recessed direct/indirect fluorescent fixture • Recessed linear fluorescent wall washers <p>1 shade zone</p> <ul style="list-style-type: none"> • Blackout shades 	<p>6 dimmed lighting zones</p> <ul style="list-style-type: none"> • Pendant linear fluorescent fixture • Recessed LED downlights <p>2 shade zones</p> <ul style="list-style-type: none"> • Sheer shades • Blackout shades
	Occupancy sensor	<ul style="list-style-type: none"> • Occupancy sensor • Daylight sensor
	<ul style="list-style-type: none"> • Preset scenes • 10% fluorescent dimming • Shades 	<ul style="list-style-type: none"> • Preset scenes • 1% fluorescent dimming • AV integration • Daylighting • Shades
		<ul style="list-style-type: none"> • Demand response (via Quantum®)

Basic conference room - switching

Interior space conference room for general shared use. Designed as an economical lighting system.

Control strategies:

- Occupancy/vacancy sensing
- Bi-level switching



Controls not to scale with reflected ceiling plan

Key

	2x2, 2-lamp 32W T8 U Lamp - with bi-level switching ballast
	Maestro Wireless® switches with 2-gang Claro® wallplate
	Radio Powr Savr™ wireless, ceiling-mount, occupancy/vacancy sensor

* Not shown in reflected ceiling plan

Maestro Wireless switch

- Easy to operate
- Installs in as little as 15 minutes
- Allows control of lighting levels with any combination of up to 10 switches, sensors and wireless controls

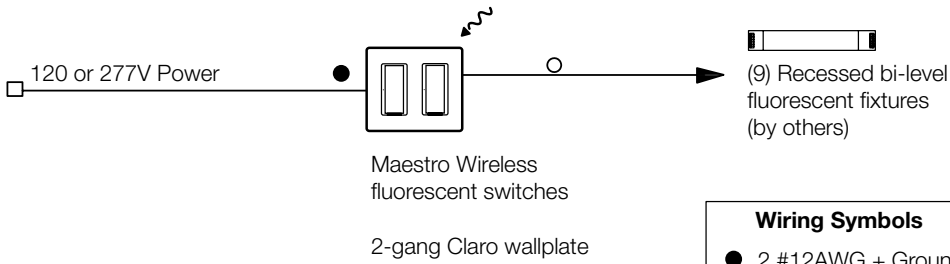
Radio Powr Savr wireless, ceiling-mount, occupancy/vacancy sensor

- Installs in as little as 15 minutes
- Communicates with compatible Lutron® dimmers, switches and light control systems
- Uses reliable Clear Connect™ Radio Frequency (RF) Technology, which ensures smooth, consistent performance

One-line diagram:



Radio Powr Savr wireless, ceiling-mount, occupancy/vacancy sensor



Wiring Symbols

- 2 #12AWG + Ground
- 3 #12AWG + Ground
- 120V or 277V Input Power
- ⤴ RF Communication

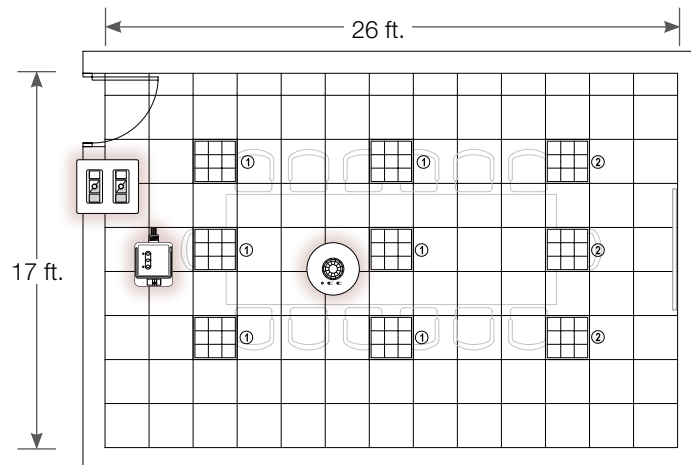
Bill of materials		
Control	Qty.	Description
MRF2-8S-DV-WH	2	Maestro Wireless switch
LRF2-OCR2B-P-WH	1	Radio Powr Savr wireless, ceiling-mount, occupancy/vacancy sensor
CW-2-WH	1	2-gang Claro wallplate
Materials cost (suggested list price, labor not included) = \$394.80		

Basic conference room - dimming

Interior space conference room for general shared use. Designed as an economical lighting system.






Control strategies:

- Occupancy/vacancy sensing
- Dimmed fluorescent lighting



Controls not to scale with reflected ceiling plan

Key

 (+ )*	2x2, 2-lamp 32W T8 U Lamp - with EcoSystem® H-Series ballast
 **	PowPak™ dimming module with EcoSystem
	Pico® wireless dimming control with 2-gang Claro® wallplates
	Radio Powr Savr™ wireless, ceiling-mount, occupancy/vacancy sensor

* Not shown in reflected ceiling plan

** Located above ceiling

Pico wireless control

- Provides wireless dimming control of lighting loads; communicates with PowPak dimming module with EcoSystem

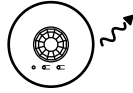
PowPak dimming module with EcoSystem

- Allows connected lighting loads to be dimmed in response to wireless occupancy/vacancy sensors, daylight sensors and Pico controls

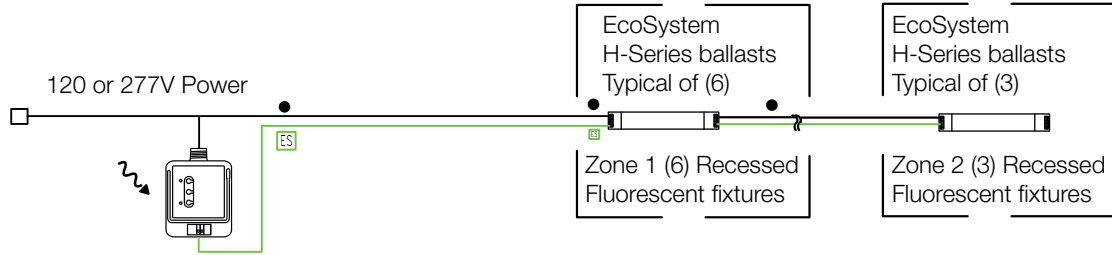
Radio Powr Savr wireless, ceiling-mount, occupancy/vacancy sensor

- Installs in as little as 15 minutes
- Communicates with compatible Lutron® dimmers, switches and light control systems
- Uses reliable Clear Connect™ Radio Frequency (RF) Technology, which ensures smooth, consistent performance

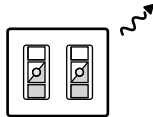
One-line diagram:



Radio Powr Savr wireless, ceiling-mount, occupancy/vacancy sensor



PowPak dimming module with EcoSystem



Pico wireless dimming controls Zone 1 and 2

2-gang Claro wallplate

Wiring Symbols

- 2 #12AWG + Ground
- ES EcoSystem link
2 #12AWG thru 2 #18AWG
- 120 or 277 VAC Input Power
- RF Communication

Bill of materials		
Control	Qty.	Description
RMJ-ECO32-DV-B	1	PowPak dimming module with EcoSystem
MRF2-3BRL-L-WH	2	Pico wireless dimming control
LRF2-OCR2B-P-WH	1	Radio Powr Savr wireless, ceiling-mount, occupancy/vacancy sensor
EHD T832 CU 210	9	EcoSystem H-Series dimming ballast - (2) T8 lamps ¹
CW-2-WH	1	2-gang Claro wallplate
Materials cost (suggested list price, labor not included) = \$1,087.80		

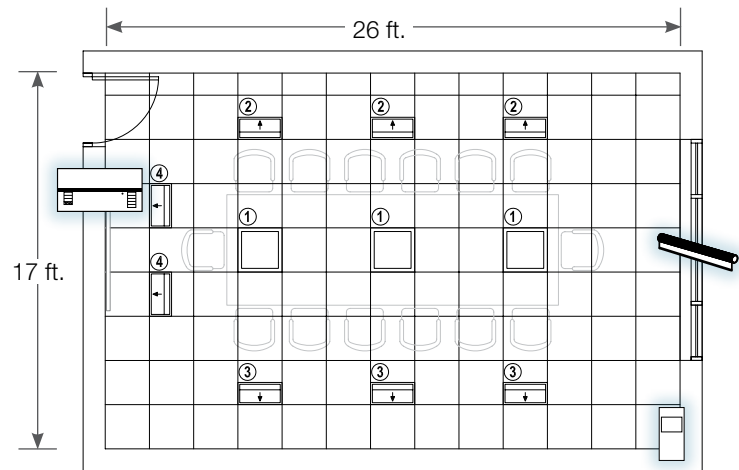
¹ Ballasts typically purchased with fixtures. Cost does not include price of fixtures.

Intermediate conference room

Conference room primarily used for presentations and working sessions with use of walls for display purposes. Designed as a functional lighting system.

Control strategies:


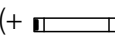

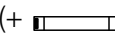



- Occupancy/vacancy sensing
- Preset dimmed fluorescent lighting



Controls not to scale with reflected ceiling plan

① Indicates control zone

Key

 (+ )*	2x2, 2-lamp recessed T5 twintube fixture - with EcoSystem® ballast
 (+ )*	1x2, 1-lamp recessed wallwash T5 twintube fixture - with EcoSystem ballast
	GRAFIK Eye® QS preset lighting control
	Sivoia® QS shades
	Radio Powr Savr™ wireless, corner-mount, occupancy/vacancy sensor

* Not shown in reflected ceiling plan

GRAFIK Eye QS

- Adjusts lights and shades for any task or activity at the touch of a button
- Provides easy access to programmed scenes

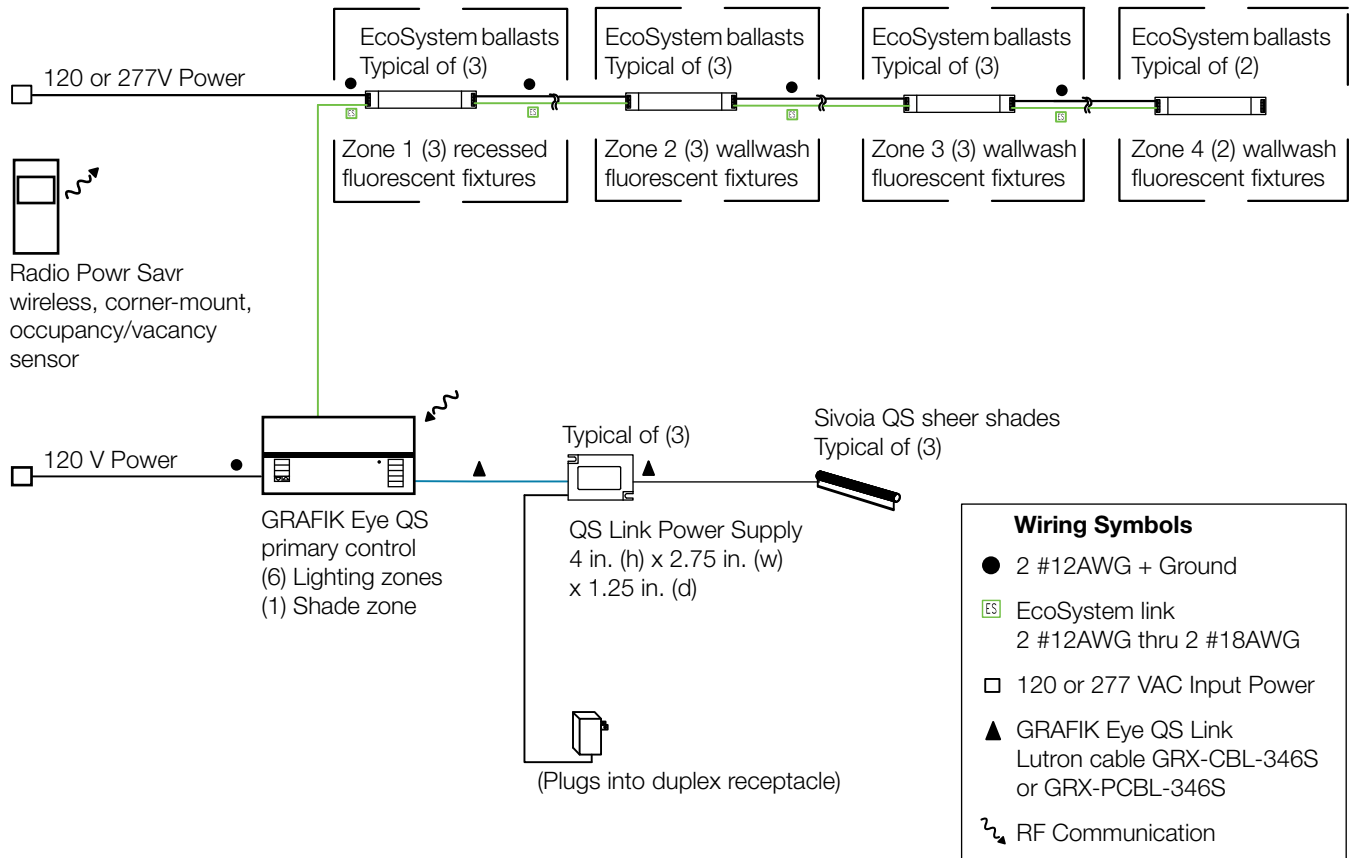
Sivoia QS shades

- Ultra-quiet control of daylight at the touch of a button

Radio Powr Savr wireless, corner-mount, occupancy/vacancy sensor

- Installs in as little as 15 minutes
- Communicates with compatible Lutron dimmers, switches and light control systems
- Uses reliable Clear Connect™ Radio Frequency (RF) Technology, which ensures smooth, consistent performance

One-line diagram:



Bill of materials

Control	Qty.	Description
QSGRJ-6E-1TWH	1	GRAFIK Eye QS preset lighting control - 6 zone with EcoSystem bus
LRF2-OWLB-P-WH	1	Radio Powr Savr wireless, corner-mount, occupancy/vacancy sensor
EC5 T550 J UNV 2	3	EcoSystem dimming ballast - (2) T5 twintube fluorescent lamps ¹
EC5 T550 J UNV 1	8	EcoSystem dimming ballast - (1) T5 twintube fluorescent lamps ¹
-	-	QS Link power supply ²
-	-	Sivoia QS sheer shades ²

Materials cost: Contact Lutron for pricing

1 Ballasts typically purchased with fixtures. Cost does not include price of fixtures.

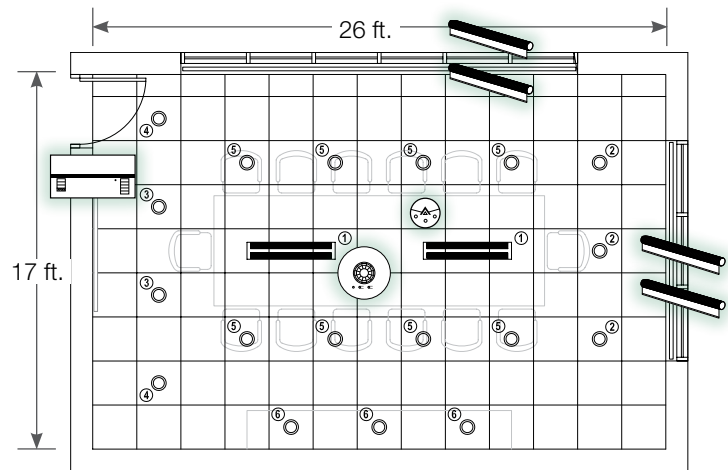
2 Contact Lutron representative for model numbers and pricing

Advanced conference room

Perimeter conference room for management-level meetings. Lighting system designed as high-end but cost-effective.

Control strategies:







- Occupancy/vacancy sensing
- Daylight sensing
- Preset dimmed fluorescent and LED lighting
- Blackout shades and sheer shades
- AV integration



Controls not to scale with reflected ceiling plan

① Indicates control zone

Key

	25W LED downlight - Hi-lume® LED driver
	4 ft. pendant 2-lamp T8 fixture - EcoSystem® H-Series ballast
	GRAFIK Eye® QS preset lighting control
	Radio Powr Savr™ wireless, ceiling-mount, occupancy/vacancy sensor
	Sivoia® QS shades
	Radio Powr Savr wireless daylight sensor

* Not shown in reflected ceiling plan

GRAFIK Eye QS

- Adjusts lights and shades for any task or activity at the touch of a button
- Provides easy access to programmed scenes

GRAFIK Eye QS network interface

- Provides communication with audiovisual system via ethernet or serial (RS232) protocol
- Allows control of lights and shades from a touch screen

Sivoia QS Wireless shades

- Ultra-quiet control of daylight at the touch of a button

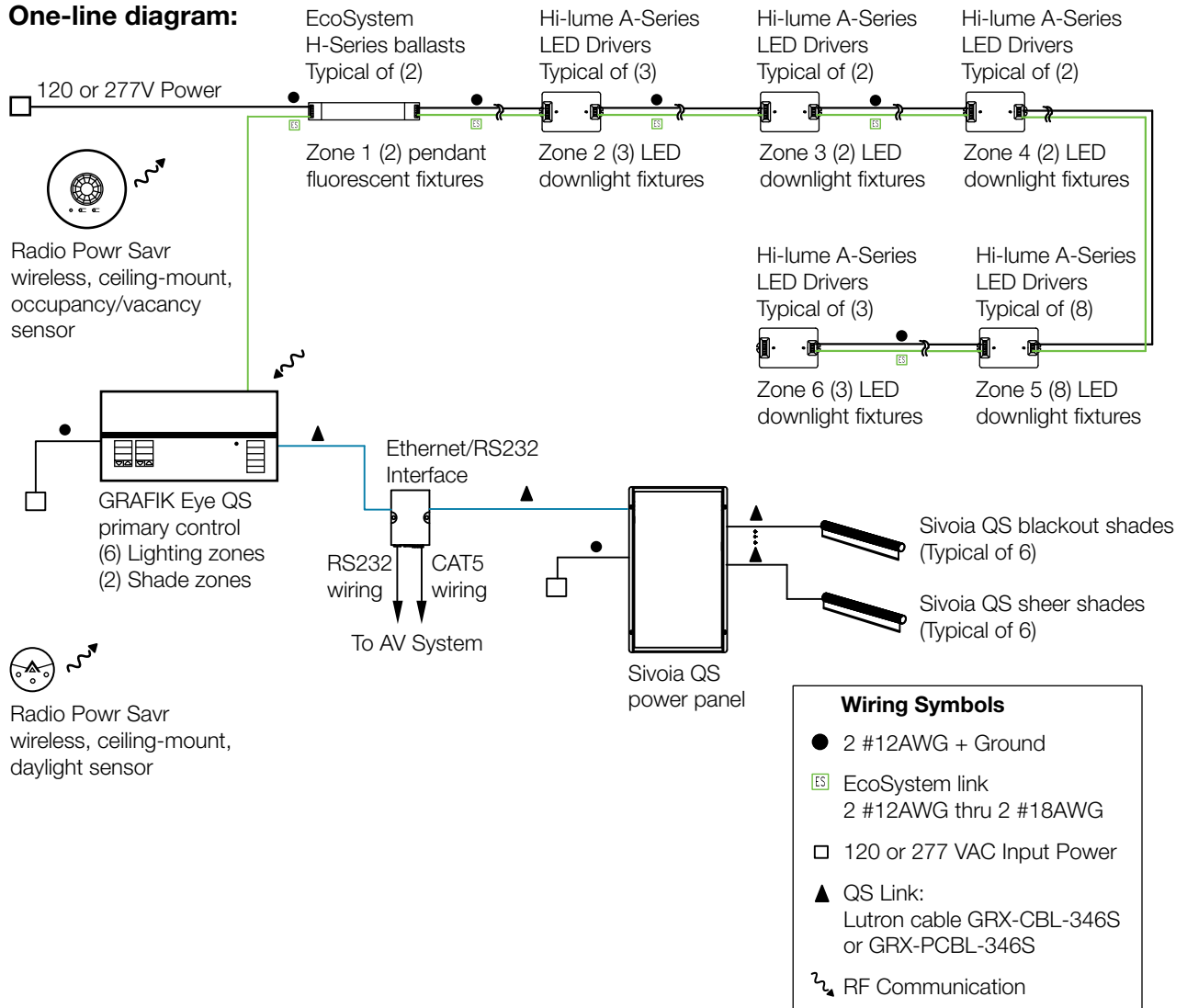
Radio Powr Savr wireless, ceiling-mount, occupancy/vacancy sensor

- Installs in as little as 15 minutes
- Communicates with compatible Lutron® dimmers, switches and light control systems
- Uses reliable Clear Connect™ Radio Frequency (RF) Technology, which ensures smooth, consistent performance

Radio Powr Savr wireless daylight sensor

- Allows connected dimmers, switches, and lighting control systems to automatically adjust light level based on available daylight

One-line diagram:



Bill of materials

Control	Qty.	Description
QSGRJ-6E	1	GRAFIK Eye QS with EcoSystem, preset lighting control
QSGFP-2TWH-EGN	1	GRAFIK Eye QS cover with engraving
LRF2-OCR2B-P-WH	1	Radio Powr Savr wireless, ceiling-mount, occupancy/vacancy sensor
LRF2-DCRB-WH	1	Radio Powr Savr wireless, ceiling-mount, daylight sensor
EHD T832 CU 210	2	EcoSystem H-Series dimming ballast - (2) T8 fluorescent lamps ¹
L3DA-4U1UKN	18	Hi-lume A-Series LED dimming driver - (1) 25W LED light engine ¹
QSE-CI-NWK-E	1	GRAFIK Eye QS digital interface - ethernet/RS232
-	-	Sivoia QS blackout shades and sheer shades ²

Materials cost: Contact Lutron for pricing

¹ Ballasts and drivers typically purchased with fixtures. Cost does not include price of fixtures.

² Contact Lutron representative for shades model numbers and pricing

www.lutron.com

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