nLight®

IECC 2024

Applications Guide

www.nlightcontrols.com

/ nLight® Lighting Controls Platform

Your one networked lighting control system that scales and adapts to your needs from a single room to an entire campus, both wired and wireless, indoors and out. nLight®, a flexible and optimizable system, addresses code requirements and enhances your energy and operational efficiencies. Built into the fabric of your building, create a connected experience that promotes comfort, offers personalized control, and curates user-centered spaces that evoke the desired mood. An investment in nLight aids in compliance with IECC 2024 standards and transforms your space with a fully scalable, connected-building infrastructure that will serve the further needs of your business.

/ TABLE OF CONTENTS

/ ABOUT

About IECC 2024

The International Energy Conservation Code (IECC) 2024 is a residential and commercial building energy code. The IECC has been adopted by many states and municipalities. The intention of this code is to reduce energy consumption by outlining design and construction requirements which include specific constraints for lighting controls. The use of lighting controls to synchronize light levels with daylight, occupancy, and scheduled/manual inputs are required in order to be compliant.

About This Guide

Acuity Brands® offers the nLight® IECC Applications Guide as a reference of typical nLight layouts that help make code compliance quicker and easier. The Acuity Brands Design Services Team is also available to support engineers and contractors with detailed design, submittal, and installation. For additional information, please contact your Acuity Brands Sales Representative.

Code Requirements for Common Building Spaces

The chart below is an overview of the Code Requirements for Common Building Spaces. Please use this information as a guide. For specific code requirements please refer to the IECC code.*

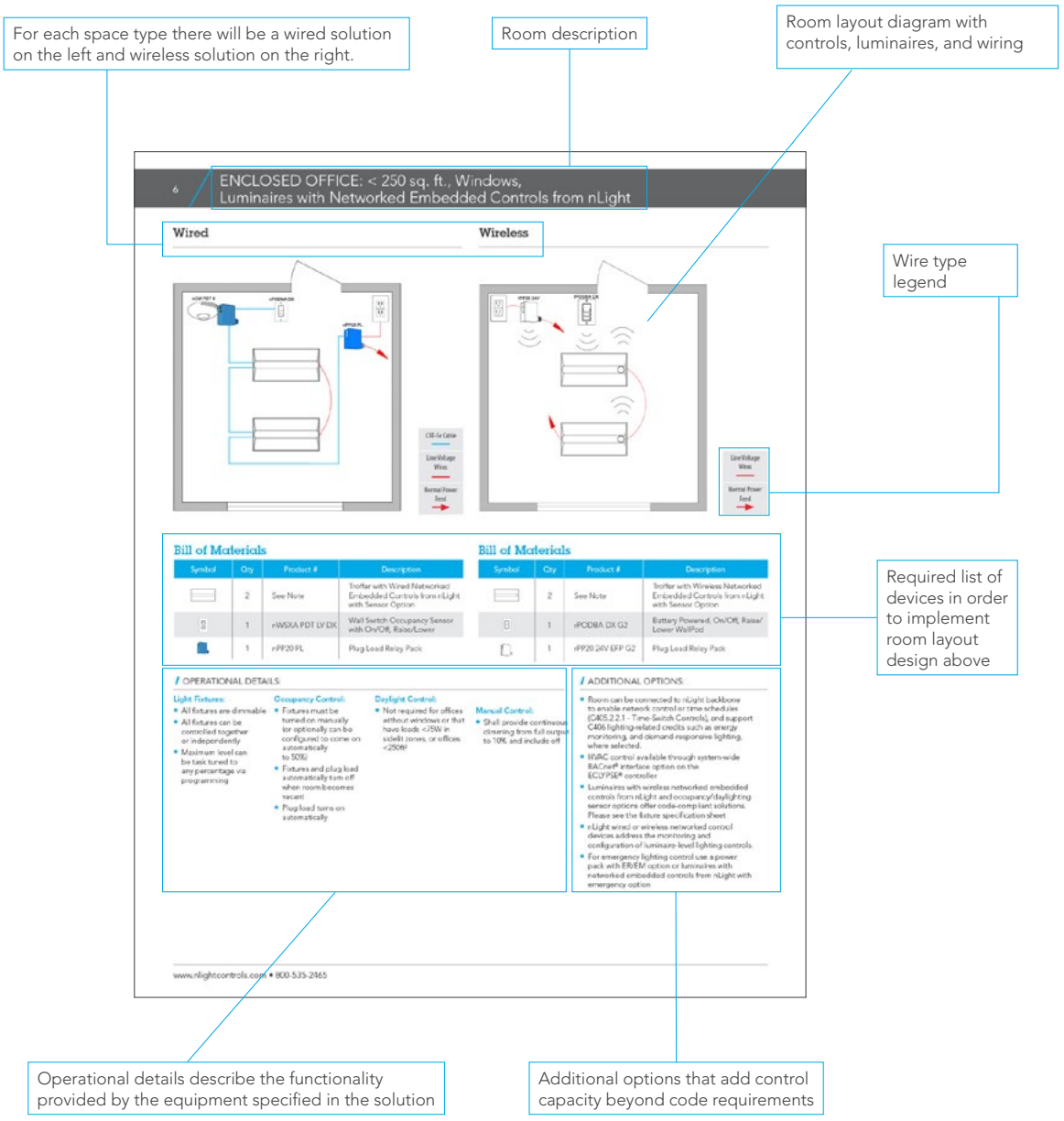
	Control Requirement*	Code Provision	Code Summary*	Indoor Space Type									
				Enclosed Office, Copy / Print, Open Office <300ft²	Conference, Meeting, Multipurpose Room	Classroom, Lecture Hall, Training Room	Gymnasium	Non-Exit Stairwell	Open Office >300ft²	Lobby	Corridor	Restroom	Warehouse
On-Off Control	Manual-On or AutoOn ≤ 50%	C405.2.1.1.2	Automatically controlled spaces must be controlled to automatically turn the lighting on to not more than 50% power.	✓	✓	✓	✓						
	Full Automatic-On	C405.2.1.1, exception	Automatically controlled spaces are allowed to turn on to full.					✓	✓	✓		✓	✓
	Manual Control (Local Switch)	C405.2.1.1.3	Areas with occupant sensors shall incorporate a manual control to allow occupants to turn luminaires off.	✓	✓	✓	✓						✓
	Auto Reduce Light Level via Occupancy	C405.2.1.2.2 C405.2.1.3.4 C405.2.1.4 C405.2.7.3.2 C405.2.8.1	Occupancy sensors shall automatically reduce lighting.						✓		✓ (and)		✓
	Time-Switch Controls (via System Controller)	C405.2.2.1 C405.2.7.2 C405.2.7.3.1.1 C405.2.7.3.1.2	Each area not provided with occupant sensor controls shall be provided with time switch controls and programmed such that the Lighting is OFF at least 12hrs in any 24hr period.					✓ (or)	✓ (or)	✓ (or)	✓ (or)		✓ (or)
	Full Auto-Off via Occupancy Sensor	C405.2.1.1.1 C405.2.7.3.1.3	Luminaires must automatically turn off within 20 minutes of all occupants leaving the space.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Daylight Control	Dimming Controls	C405.2.3	Continuous dimming from full output down to 10% or less, plus off, with a manual control in the space.	✓	✓	✓	✓	✓	✓	✓			
	Automatic Receptacle Control	C405.12	50% of all receptacles, and 25% of branch circuit feeders installed for modular furniture, shall be automatically turned off by occupancy sensor, time schedule, or signal from another automatic system capable of shutting off within 20 minutes.	✓	✓	✓			✓				
	Daylight-Responsive Controls	C405.2.4.1 C405.2.4.2 C405.2.7.1 C405.2.8.2 C405.2.8.3	Daylight-responsive controls shall be provided Spaces < 250 ft² do not require daylight-responsive controls.	✓	✓	✓	✓		✓	✓			✓

Notes:

**This summary is for general information purposes only and is provided without any warranty as to accuracy, completeness, or otherwise. The user should read the applicable code sections for more complete and detailed descriptions of code requirements and exceptions and should consult with a professional engineer or other competent advisor before making any decision or taking any action based on this summary.*

This IECC Applications Guide is designed to facilitate quicker and easier lighting controls solutions to help you address the requirements of the standards using nLight lighting controls. While there are many ways to design a space to support building energy codes, use this guide as a quick reference to get your project on the path toward compliance. Our Design Services Team is also available to support engineers and contractors with detailed design, submittal, and installation assistance. For additional information, please contact your Acuity Brands sales representative.

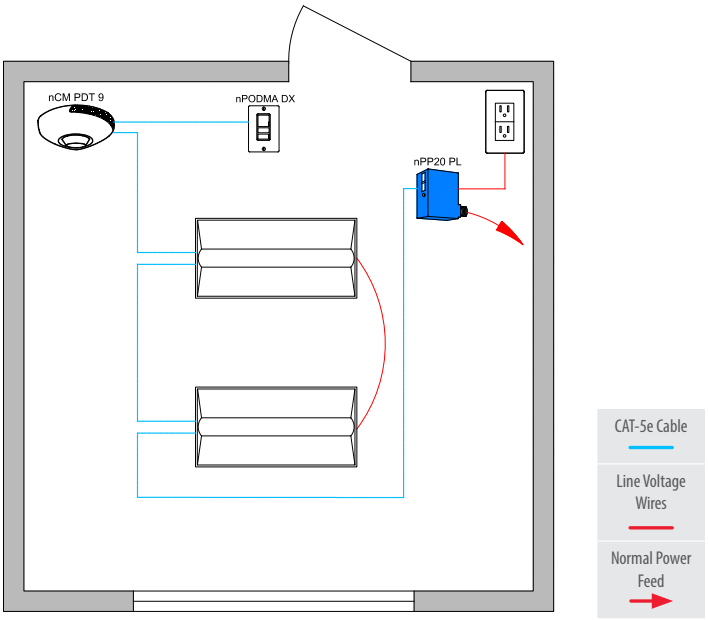
	Outdoor Space Type		
Data Centers	Parking Garage	Site, Parking Area	Facade and Landscape
✓			
✓			
	✓	✓	
		(or)	
	✓ (or)	✓	✓
	✓		✓
✓			
	✓	✓	✓



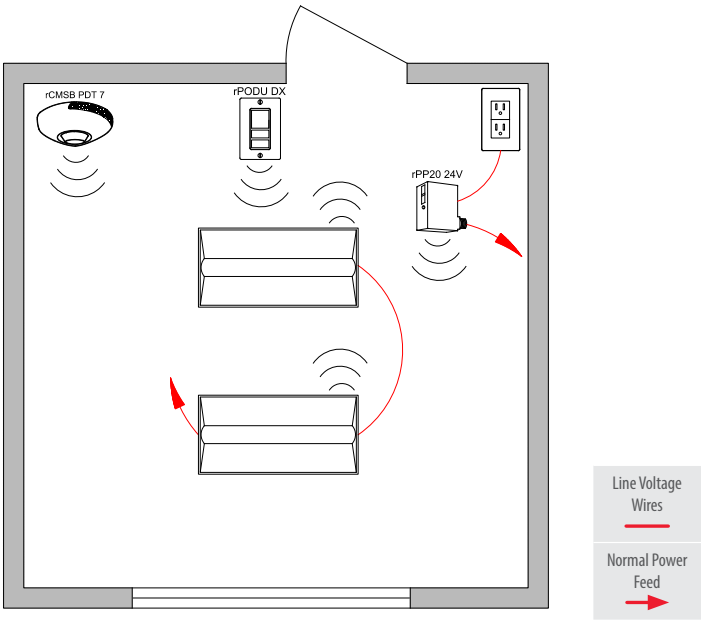
1. Note: This summary is for general information purposes only and is provided without any warranty as to accuracy, completeness, or otherwise. The user should read the applicable code sections for more complete and detailed descriptions of code requirements and exceptions and should consult with a professional engineer or other competent advisor before making any decision or taking any action based on this summary. 2. Can be inaccessible to unauthorized personnel. 3. Not required in residential areas such as hotels, condos or dormitories. 4. Does not apply to Classrooms and Lecture Halls. 5. In office spaces greater than 250 square feet, control zones shall not exceed 600 sq ft. Occupancy sensor controls shall be used to reduce light level of vacant zones by 80%, and lighting shall turn off after all control zones are vacant. 6. Restrooms with two or more stalls, parking areas, stairwells, corridors and areas of the building intended for access or use by the public may use a manual control not accessible to unauthorized personnel. 7. Stairwells require automatic full-ON and partial-OFF by at least 50% when the space is unoccupied. 8. The wattage requirement for daylight responsive controls in sidelit primary and secondary zones in parking garages is 60 watts or greater. 9. Where multi-level lighting controls are required, occupant sensors must operate as either partial-ON controls activating 50–70% of lighting power automatically or as vacancy sensors requiring manual ON activation.

OFFICE: < 250 sq. ft., Windows, Luminaires with Networked Embedded Controls by nLight®

Wired



Wireless



Bill of Materials

Symbol	Qty	Product #	Description
	2	See Note	Troffer with Wired Networked Embedded Controls by nLight with Sensor Option
	1	nPODMA DX	On/Off, Raise/Lower WallPod
	1	nPP20 PL	Plug Load Relay Pack
	1	nCM PDT 9 RJB	Occupancy Sensor

Bill of Materials

Symbol	Qty	Product #	Description
	2	See Note	Troffer with Wireless Networked Embedded Controls by nLight
	1	rPODU DX G2	Battery Powered, On/Off, Raise/Lower WallPod
	1	rPP20 24V EFP G2	Plug Load Relay Pack
	1	rCMSB PDT 7 G2	Battery Powered Occupancy and Daylight Sensor

/ OPERATIONAL DETAILS:

Light Luminaires:
- All luminaires are dimmable
- All luminaires can be controlled together or independently
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:
- Luminaires must be turned on manually (or optionally can be configured to come on automatically to 50%)
- Luminaires and plug load automatically turn off when room becomes vacant
- Plug load turns on automatically

Daylight Control:
- Not required for offices without windows or that have loads <75W in sidelit zones, or offices <250ft²

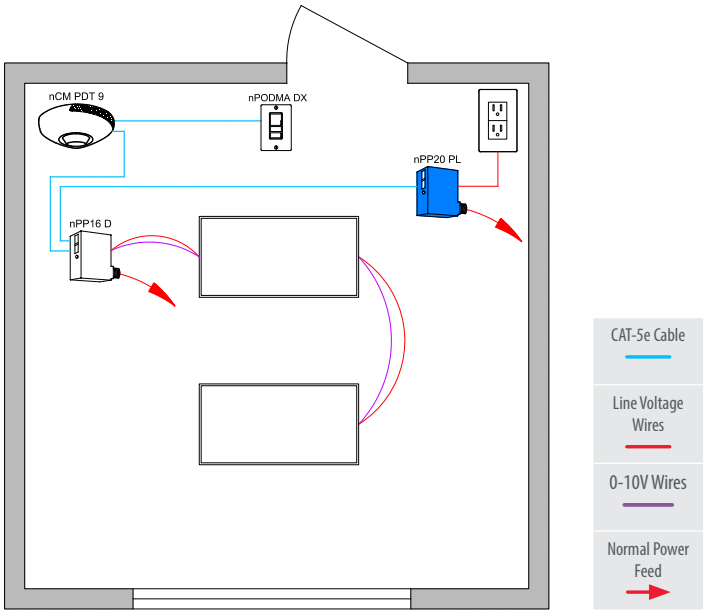
Manual Control:
- Shall provide continuous dimming from full output to 10% and include off
- < 250 ft² with windows are exempt from daylight-responsive control, even if the watts exceed these thresholds

Note: *Contact your local lighting agent for more information on luminaires with networked embedded controls by nLight.*

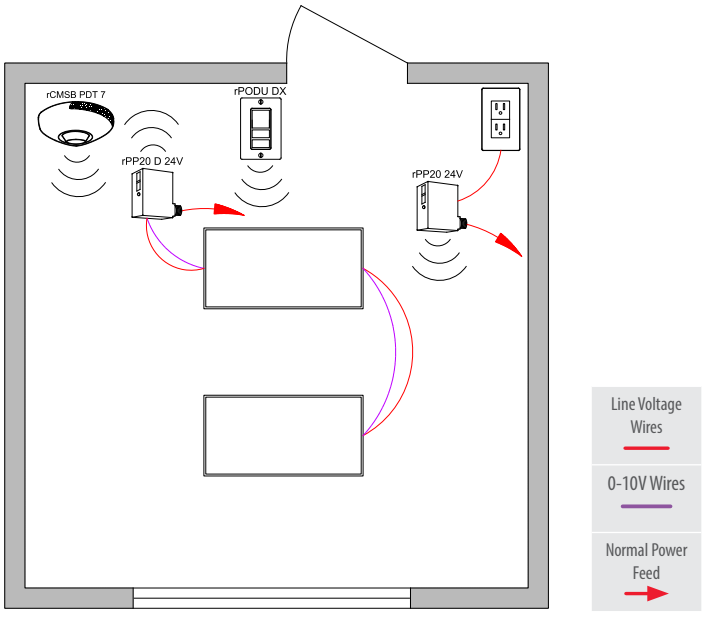
/ ADDITIONAL OPTIONS:

- Room can be connected to nLight backbone to enable network control or time schedules (C405.2.2.1 - Time-Switch Controls), and support C406 lighting-related credits such as energy monitoring, and demand-responsive lighting, where selected.
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE® controller
- Luminaires with wireless networked embedded controls by nLight and occupancy/daylighting sensor options offer code-compliant solutions. Please see the luminaire specification sheet
- nLight wired or wireless networked control devices address the monitoring and configuration of luminaire-level lighting controls.
- For emergency lighting control use a power pack with ER/EM option or luminaires with networked embedded controls by nLight with emergency option

Wired



Wireless



Bill of Materials

Symbol	Qty	Product #	Description
	1	nPP16 D EFP	Relay Pack with 0-10V Dimming Output
	1	nPODMA DX	On/Off, Raise/Lower WallPod
	1	nPP20 PL	Plug Load Relay Pack
	1	nCM PDT 9 RJB	Occupancy Sensor

Bill of Materials

Symbol	Qty	Product #	Description
	1	rPP20 D 24V EFP G2	Relay Pack with 0-10V Dimming Output
	1	rPP20 24V EFP G2	Plug Load Relay Pack
	1	rPODU DX G2	Battery Powered, On/Off, Raise/Lower WallPod
	1	rCMSB PDT 7 G2	Battery Powered Occupancy and Daylight Sensor

/ OPERATIONAL DETAILS:

Light Luminaires:

- All luminaires are dimmable
- All luminaires are controlled together
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:

- Luminaires must be turned on manually (or optionally can be configured to come on automatically to 50%)
- Luminaires and plug load automatically turn off when room becomes vacant
- Plug load turns on automatically

Daylight Control:

- Not required for offices without windows or that have loads <75W in sidelit zone

Manual Control:

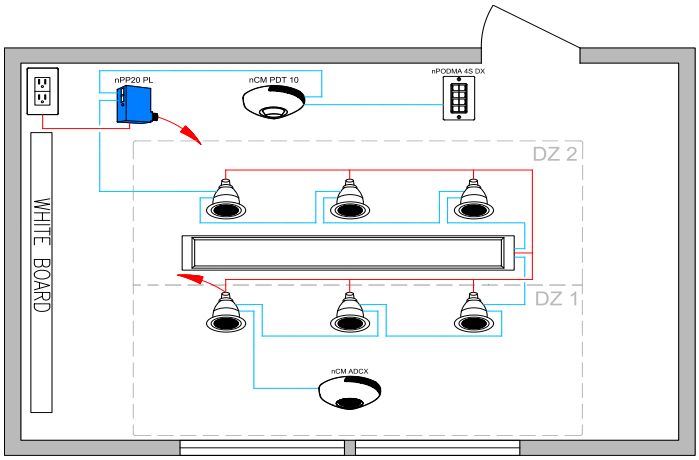
- Shall provide continuous dimming from full output to 10% and include off
- < 250 ft² with windows are exempt from daylight-responsive control, even if the watts exceed these thresholds

/ ADDITIONAL OPTIONS:

- Room can be connected to nLight backbone to enable network control or time schedules (C405.2.2.1 - Time-Switch Controls), and also qualify for Enhanced Digital Lighting Controls (C406.4)
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE® controller
- For emergency lighting control use a power pack with ER/EM option or luminaire with networked embedded controls with nLight emergency option

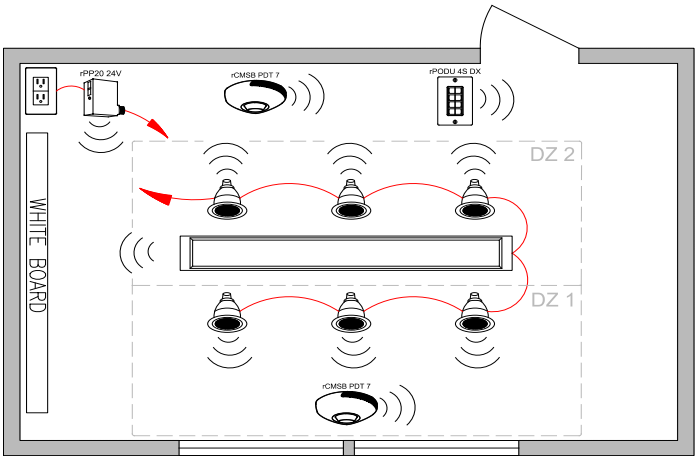
CONFERENCE ROOM with Luminaires with Networked Embedded Controls by nLight®

Wired



CAT-5e Cable | Line Voltage Wires | Normal Power Feed

Wireless



Line Voltage Wires | Normal Power Feed

Bill of Materials

Symbol	Qty	Product #	Description
	1	See Note	Luminaire with Wired Networked Embedded Controls by nLight
	6	See Note	Downlight with Wired Networked Embedded Controls by nLight
	1	nPODMA 4S DX	4 Scene Switch with Raise/ Lower
	1	nPP20 PL	Plug Load Relay Pack
	1	nCM ADCX RJB	Daylight Sensor
	1	nCM PDT 10 RJB	Dual-Tech Occupancy Sensor

Bill of Materials

Symbol	Qty	Product #	Description
	1	See Note	Luminaire with Wireless Networked Embedded Controls by nLight
	6	See Note	Downlight with Wireless Networked Embedded Controls by nLight
	1	rPODU 4S DX	4 Scene Switch with Raise/ Lower
	1	rPP20 24V EFP G2	Plug Load Relay Pack
	2	rCMSB PDT 7 G2	Battery Powered Occupancy and Daylight Sensor

/ OPERATIONAL DETAILS:

Luminaires
- All luminaires are dimmable
- Maximum level can be task tuned to any percentage via programming
- A/V zone can be programmed to control two luminaires in front of the whiteboard

Occupancy Control:
- Luminaires must be turned on manually (or optionally can be configured to come on automatically to 50%)
- Luminaires and plug load automatically turn off when room becomes vacant
- Plug load turns on automatically

Daylight Control:
- Smooth continuous dimming
- Daylight zones sizes defined by window size or skylight placement (not shown)
- Not required for areas without windows or that have loads <75w in sidelit zones

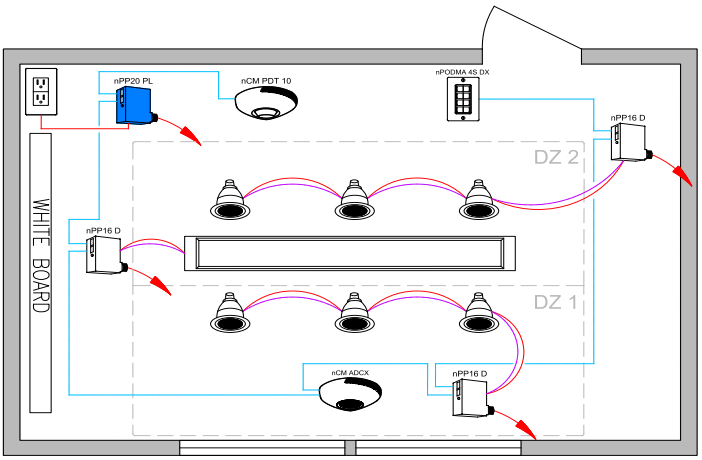
Manual Control:
- On/off & raise lower control of two zones of luminaires
- Raise/lower control is not required for spaces with occupancy sensors but is recommended

/ ADDITIONAL OPTIONS:

- Room can be connected to nLight backbone to enable network control or time schedules (C405.2.2.1 - Time-Switch Controls), and also qualify for Enhanced Digital Lighting Controls (C406.4)
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE™ controller
- Luminaires with wireless networked embedded controls by nLight and occupancy/daylighting sensor options available, please see the luminaire specification sheet
- nLight wired or wireless networked control devices address the monitoring and configuration of luminaire Level Lighting Controls
- For emergency lighting control use a power pack with ER/EM option or luminaires with networked embedded controls from nLight with emergency option

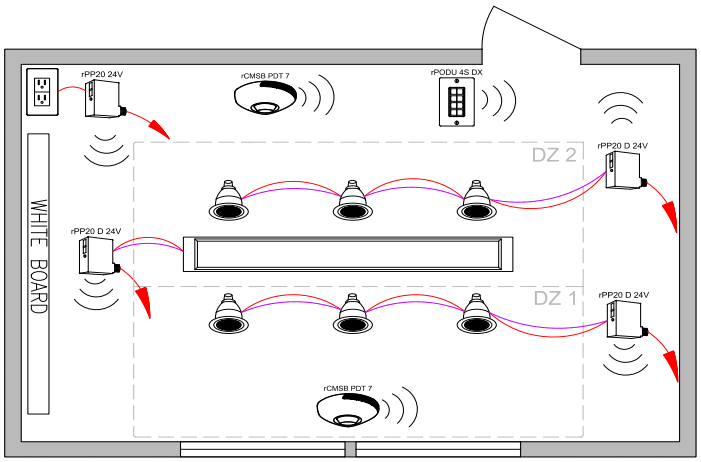
Note: *Contact your local lighting agent for more information on luminaires with networked embedded controls by nLight.*

Wired



CAT-5e Cable | Line Voltage Wires | Normal Power Feed | 0-10V Wires

Wireless



Line Voltage Wires | Normal Power Feed | 0-10V Wires

Bill of Materials

Symbol	Qty	Product #	Description
	3	nPP16 D EFP	Relay Pack with 0-10V Dimming Output
	1	nPODMA 4S DX	4 Scene switch with Raise/ Lower
	1	nCM PDT 10 RJB	Occupancy Sensor
	1	nCM ADCX RJB	Daylight Sensor
	1	nPP20 PL	Plug Load Relay Pack

Bill of Materials

Symbol	Qty	Product #	Description
	3	rPP20 D 24V EFP G2	Relay Pack with 0-10V Dimming Output
	1	rPODU 4S DX	4 Scene Switch with Raise/ Lower
	2	rCMSB PDT 7 G2	Battery Powered Occupancy and Daylight Sensor
	1	rPP20 24V EFP G2	Plug Load Relay Pack

/ OPERATIONAL DETAILS:

Luminaires:
- All luminaires are dimmable
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:
- Luminaires must be turned on manually (or optionally can be configured to come on automatically to 50%)
- Luminaires and plug load automatically turn off when room becomes vacant
- Plug load turns on automatically

Daylight Control:
- Smooth continuous dimming
- Daylight zones sizes defined by window size or skylight placement (not shown)
- Not required for areas without windows or that have loads <75W in sidelit zones

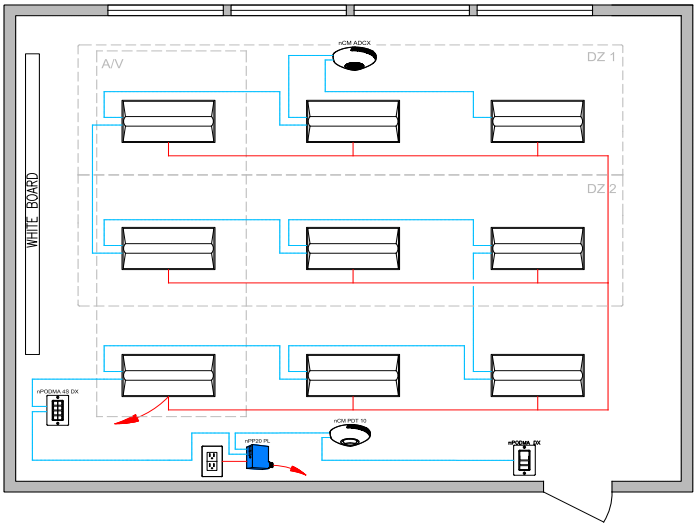
Manual Control:
- On/off & raise lower control of two zones of luminaires
- Raise/lower control is not required for spaces with occupancy sensors but is recommended

/ ADDITIONAL OPTIONS:

- Room can be connected to nLight backbone to enable network control or time schedules (C405.2.2.1 - Time-Switch Controls), and also qualify for Enhanced Digital Lighting Controls (C406.4)
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE™ controller
- For emergency lighting control use a power pack with ER/EM option or luminaires with networked embedded controls by nLight with emergency option

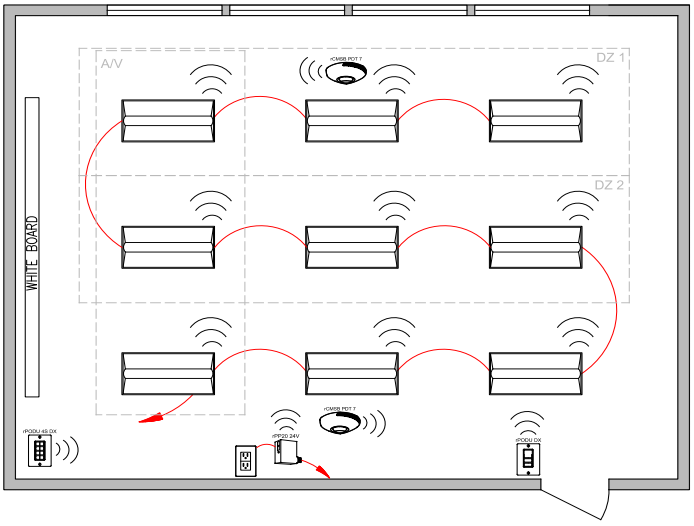
CLASSROOM with Luminaires with Networked Embedded Controls by nLight®

Wired



CAT-5e Cable | Line Voltage Wires | Normal Power Feed

Wireless



Line Voltage Wires | Normal Power Feed

Bill of Materials

Symbol	Qty	Product #	Description
	9	See Note	Troffer with Wired Networked Embedded Controls by nLight
	1	nPODMA DX	On/Off, Raise/Lower WallPod
	1	nPP20 PL	Plug Load Relay Pack
	1	nPODMA 4S DX	Teacher Station — 4 Scene Control with Master On/Off & Raise/Lower
	1	nCM PDT 10 RJB	Occupancy Sensor
	1	nCM ADCX RJB	Daylight Sensor

Bill of Materials

Symbol	Qty	Product #	Description
	9	See Note	Troffer with Wireless Networked Embedded Controls by nLight
	1	rPODU DX G2	Battery Powered, On/Off, Raise/Lower WallPod
	1	rPODU 4S DX G2	Teacher Station — Battery Powered 4 Scene Control with Master On/Off & Raise/Lower
	1	rPP20 24V EFP G2	Plug Load Relay Pack
	2	rCMSB PDT 7 G2	Battery Powered Occupancy and Daylight Sensor

OPERATIONAL DETAILS:

Luminaires:
- All luminaires are dimmable
- All luminaires are controlled together or independently
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:
- Luminaires must be turned on manually (or optionally can be configured to come on automatically to 50%)
- Luminaires and plug load automatically turn off when room becomes vacant
- Plug load turns on automatically

Daylight Control:
- Smooth continuous dimming
- Daylight zones sizes defined by window size or skylight placement (not shown)
- Not required for areas without windows or that have loads <75W in sidelit zones

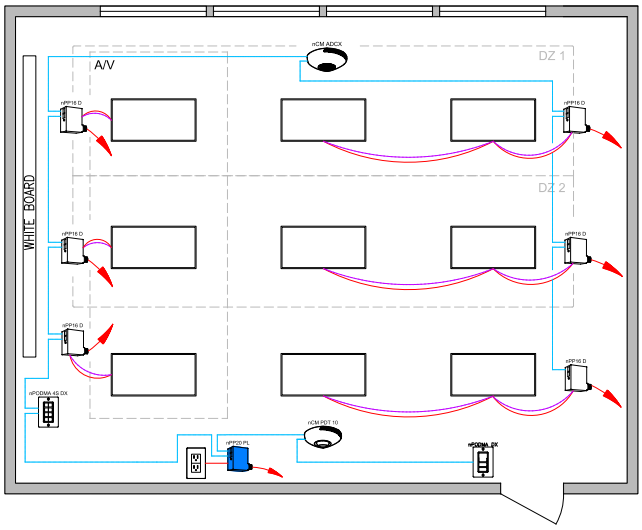
Manual Control:
- On/off & raise/lower control of entire room
- Teacher station with 4 preset scenes
- Raise/lower control is not required for spaces with occupancy sensors but is recommended

ADDITIONAL OPTIONS:

- Room can be connected to nLight backbone to enable network control or time schedules (C405.2.2.1 - Time-Switch Controls), and also qualify for Enhanced Digital Lighting Controls (C406.4)
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE™ controller
- Luminaires with wireless networked embedded controls by nLight and occupancy/daylighting sensor options available, please see the luminaire specification sheet
- nLight wired or wireless networked control devices address the monitoring and configuration of luminaire Level Lighting Controls
- For emergency lighting control use a power pack with ER/EM option or luminaire with networked embedded controls from nLight with emergency option

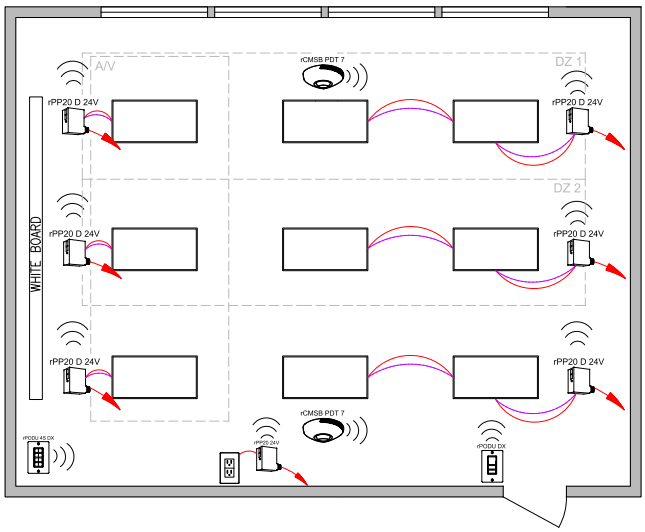
Note: *Contact your local lighting agent for more information on luminaires with networked embedded controls by nLight.*

Wired



CAT-5e Cable | Line Voltage Wires | Normal Power Feed | 0-10V Wires

Wireless



Line Voltage Wires | Normal Power Feed | 0-10V Wires

Bill of Materials

Symbol	Qty	Product #	Description
	6	nPP16 D EFP	Relay Module with 0-10V Dimming Output
	1	nPODMA DX	On/Off, Raise/Lower WallPod
	1	nPODMA 4S DX	Teacher Station — 4 Scene Control with Master On/Off & Raise/Lower
	1	nCM ADCX RJB	Daylight Sensor
	1	nPP20 PL	Plug Load Relay Pack
	1	nCM PDT 10 RJB	Occupancy Sensor

Bill of Materials

Symbol	Qty	Product #	Description
	6	rPP20 D 24V EFP G2	Relay Pack with 0-10V Dimming Output
	1	rPODU DX G2	Battery Powered, On/Off, Raise/Lower WallPod
	2	rCMSB PDT 7 G2	Battery Powered Occupancy and Daylight Sensor
	1	rPODU 4S DX	Teacher Station — Battery Powered 4 Scene Control with Master On/Off & Raise/Lower
	1	rPP20 24V EFP G2	Plug Load Relay Pack

/ OPERATIONAL DETAILS:

Luminaires:
- All luminaires are dimmable
- Each row can be controlled independently
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:
- Luminaires must be turned on manually (or optionally can be configured to come on automatically to 50%)
- Luminaires and plug load automatically turn off when room becomes vacant
- Plug load turns on automatically

Daylight Control:
- Smooth continuous dimming
- Daylight zones sizes defined by window size or skylight placement (not shown)
- Not required for areas without windows or that have loads <75W in sidelit zones

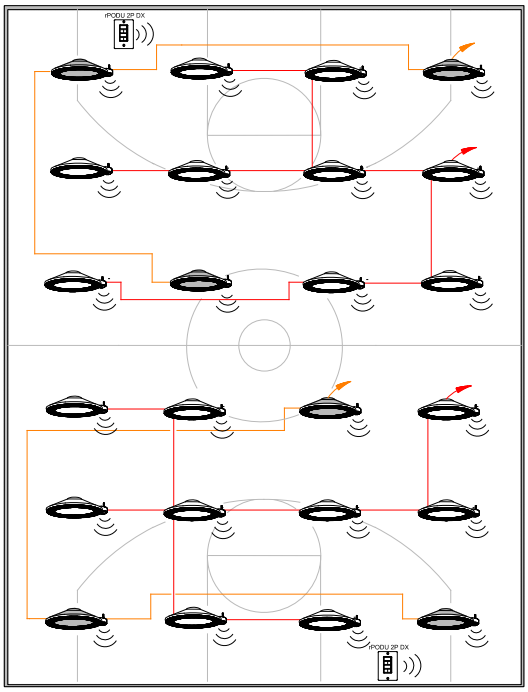
Manual Control:
- Master on/off & raise/lower control of entire room
- Teacher station with 4 preset scenes
- Raise/lower control is not required for spaces with occupancy sensors but is recommended

/ ADDITIONAL OPTIONS:

- Room can be connected to nLight backbone to enable network control or time schedules (C405.2.2.1 - Time-Switch Controls), and also qualify for Enhanced Digital Lighting Controls (C406.4)
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE™ controller
- For emergency lighting control use a power pack with ER/EM option or luminaires with networked embedded controls from nLight with emergency option

GYMNASIUM with Luminaires with Networked Embedded Controls by nLight®/0-10V Dimming Luminaires

Luminaire with Wireless Networked Embedded Controls by nLight

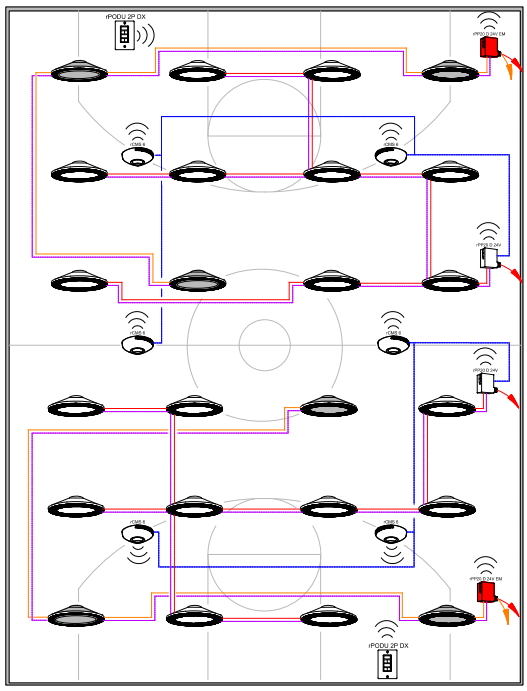


Line Voltage Wires	Normal Power Feed	Emergency Line Voltage Wires	EMG Power Feed

Bill of Materials

Symbol	Qty	Product #	Description
	18	See Notes	Luminaire with Wireless Networked Embedded Controls by nLight with Sensor Option
	6	See Notes	Luminaire with Wireless Networked Embedded Controls by nLight with Sensor and Emergency Option
	2	rPODU 2P DX G2	Battery Powered, 2-Pole, On/Off, Raise/Lower WallPod

Wireless with 0-10V Dimming Luminaires



Low Voltage Wires	0-10V Wires	Line Voltage Wires	Normal Power Feed	Emergency Line Voltage Wires	EMG Power Feed

Bill of Materials

Symbol	Qty	Product #	Description
	2	rPP20 D 24V EFP G2	Relay Pack with 0-10V Dimming Output
	2	rPP20 D 24V EM EFP G2	Emergency Relay Pack with 0-10V Dimming Output
	2	rPODU 2P DX G2	Battery Powered, 2-Pole, On/Off, Raise/Lower WallPod
	6	rCMS 6 G2	High Bay Occupancy Sensor

/ OPERATIONAL DETAILS:

Luminaires:
- All luminaires are dimmable
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:
- Luminaires automatically go to full bright when occupied
- Luminaires automatically turn off or optionally can be configured to drop to low dim setting when space becomes vacant

Daylight Control:
- Daylight responsive controls lights to full off when adequate daylight present
- Not required for spaces without skylights or that have loads <75W in toplit zones

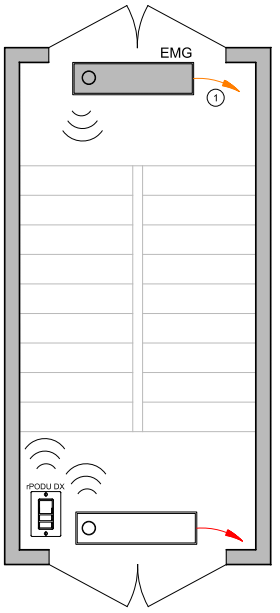
Manual Control:
- On/off & raise/lower control of luminaires
- Raise/lower control is not required for spaces with occupancy sensors but is recommended

/ ADDITIONAL OPTIONS:

- Room can be connected to nLight backbone to enable network control or time schedules (C405.2.2.1 - Time-Switch Controls), and also qualify for Enhanced Digital Lighting Controls (C406.4)
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE™ controller
- Luminaires with wireless networked embedded controls by nLight with occupancy/daylighting sensor options available, please see the luminaire specification sheet
- nLight wired or wireless networked control devices address the monitoring and configuration of luminaire Level Lighting Controls

Note: *Contact your local lighting agent for more information on luminaires with networked embedded controls by nLight.*

Luminaire with Wireless Networked Embedded Controls by nLight

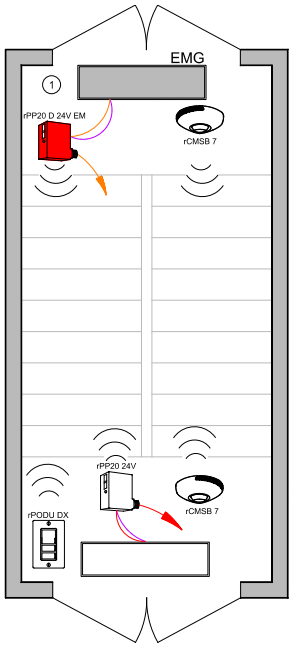


Normal Power Feed

EMG Power Feed

(1) Fixure(s) assumed to include nlight AIR EM emergency options. nlight AIR devices

Wireless with 0-10V Dimming Luminaires



Line Voltage Wires

Normal Power Feed

0-10V Wires

Emergency Line Voltage Wires

EMG Power Feed

Bill of Materials

Symbol	Qty	Product #	Description
	1	See Note	Luminaire with Wireless Networked Embedded Controls by nLight with Sensor Option
	1	See Note	Luminaire with Wireles Networked Embedded Controls by nLight with Sensor and Emergency Option
	1	rPODU DX G2	Battery Powered, On/Off, Raise/Lower WallPod

Bill of Materials

Symbol	Qty	Product #	Description
	1	rPP20 D 24V EFP G2	Relay Pack with 0-10V Dimming Output
	1	rPP20 D 24V EM EFP G2	Emergency Relay Pack with 0-10V Dimming Output
	2	rCMSB 7 G2	Battery Powered Occupancy Sensor
	1	rPODU DX G2	Battery Powered, On/Off, Raise/Lower WallPod

OPERATIONAL DETAILS:

Luminaires:

- All luminaires are dimmable
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:

- Luminaires automatically go to full bright when occupied
- Luminaires automatically turn off or optionally can be configured to drop to low dim setting when space becomes vacant

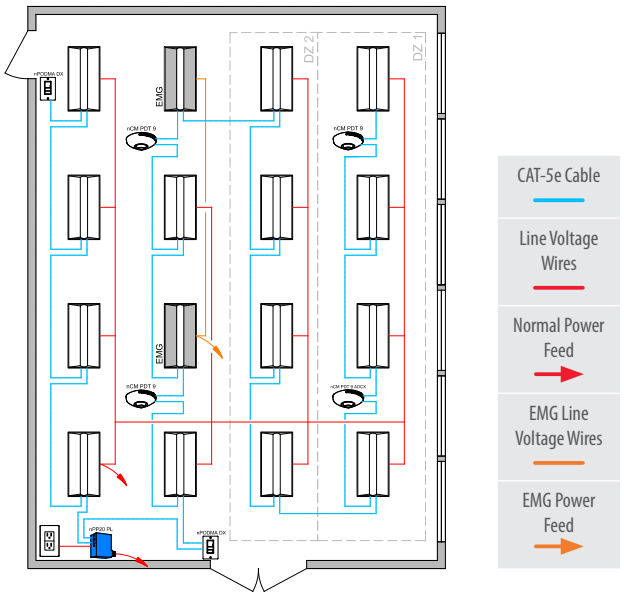
ADDITIONAL OPTIONS:

- Room can be connected to nLight backbone to enable network control or time schedules (C405.2.2.1 - Time-Switch Controls), and also qualify for Enhanced Digital Lighting Controls (C406.4)
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE™ controller
- Luminaires with wireless networked embedded control and occupancy/daylighting sensor options available, please see the luminaire specification sheet
- For emergency lighting control use a power pack with ER/EM option or luminaire with networked embedded controls by nLight with emergency option

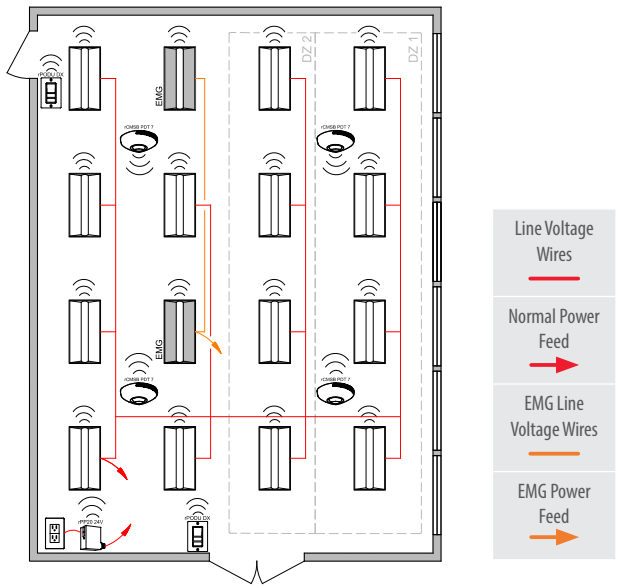
Note: *Contact your local lighting agent for more information on luminaires with networked embedded controls by nLight.*

OPEN PLAN OFFICE: > 300 sq. ft., Luminaires with Networked Embedded Controls by nLight®

Wired



Wireless



Bill of Materials

Symbol	Qty	Product #	Description
	14	See Note	Luminaire with Wired Networked Embedded Controls by nLight
	2	See Note	Luminaire with Wired Networked Embedded Controls by nLight with Emergency Option
	2	nPODMA DX	On/Off, Raise/Lower WallPod
	3	nCM PDT 9 RJB	Occupancy Sensor
	1	nCM PDT 9 ADCX RJB	Occupancy & Daylight Sensor
	1	nPP20 PL	Plug Load Relay Pack

Bill of Materials

Symbol	Qty	Product #	Description
	14	See Note	Troffer with Wireless Networked Embedded Controls by nLight
	2	See Note	Troffer with Wireless Networked Embedded Controls by nLight with EM Option
	2	rPODU DX G2	Battery Powered, On/Off, Raise/Lower WallPod
	1	rPP20 24V EFP G2	Plug Load Relay Pack
	4	rCMSB PDT 7 G2	Battery Powered Occupancy & Daylight Sensor

/ OPERATION DETAILS:

Luminaires:
- All luminaires are dimmable
- All luminaires can be controlled together or independently
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:
- Partial-on occupancy sensors automatically activate between 50-70% of controlled lighting power or luminaires must be turned on manually
- Plug load turns on automatically
- Luminaires and plug load automatically turn off when room becomes vacant

Daylight Control:
- Not required if room has < 24 ft² of glazing or lighting load < 75W in the skylit and the sidelit daylit zone
- Smooth continuous dimming
- Custom grouping of luminaires into separate daylight zones (max. number of zones = number of luminaires)

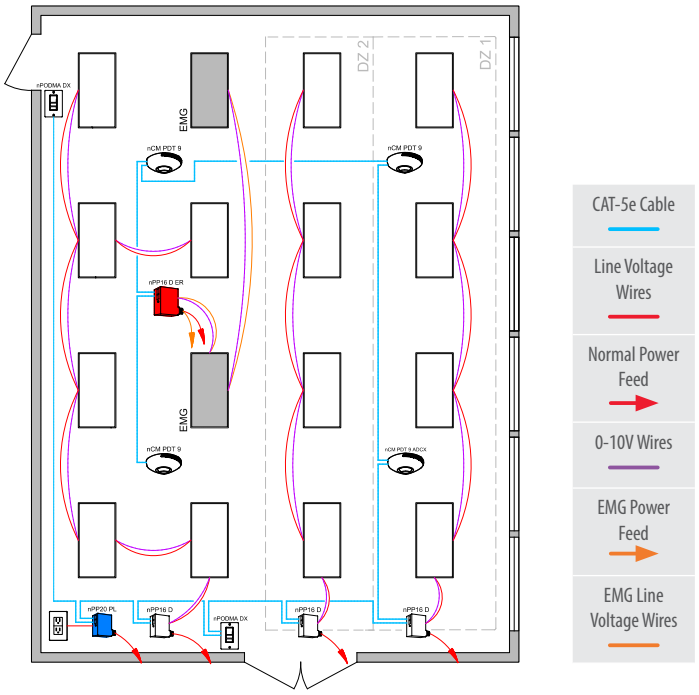
Manual Control:
- On/off & raise/lower control of luminaires

Note: *Contact your local lighting agent for more information on luminaires with networked embedded controls by nLight.*

/ ADDITIONAL OPTIONS:

- Room can be connected to nLight backbone to enable network control, time schedules and Automated Demand Response (OpenADR 2.0a)
- HVAC control available through system-wide BACnet® interface option on the Eclypse™ controller
- Networked embedded controls by nLight are available with an occupancy and photocell option
- Wireless sensor is available as a non-battery version that can be powered via a power-pack
- Wireless battery powered switches are available in line powered versions
- Wired sensor is available as a daylight sensor without occupancy sensing
- Multi-pole, scene, and touchscreen switch available in both wired and wireless versions

Wired



Wireless

Bill of Materials

Symbol	Qty	Product #	Description
	3	nPP16 D EFP	Relay Pack with 0-10V Dimming Output
	1	nPP16 D ER EFP	Emergency Relay Pack with 0-10V Dimming Output
	2	nPODMA DX	On/Off, Raise/Lower WallPod
	3	nCM PDT 9 RJB	Occupancy Sensor
	1	nCM PDT 9 ADCX RJB	Occupancy & Daylight Sensor
	1	nPP20 PL	Plug Load Relay Pack

Bill of Materials

Symbol	Qty	Product #	Description
	3	rPP20 D 24V EFP G2	Relay Pack with 0-10V Dimming Output
	1	rPP20 D 24V EM EFP G2	Emergency Relay Pack with 0-10V Dimming Output
	2	rPODU DX G2	Battery Powered, On/Off, Raise/Lower WallPod
	4	rCMSB PDT 7 G2	Battery Powered Occupancy and Daylight Sensor
	1	rPP20 24V EFP G2	Plug Load Relay Pack

/ OPERATION DETAILS:

Luminaires:
- All luminaires are dimmable
- Luminaires are controlled based on power pack line voltage and 0-10V wiring
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:
- Partial-on occupancy sensors automatically activate between 50-70% of controlled lighting power or luminaires must be turned on manually
- Plug load turns on automatically
- Luminaires and plug load automatically turn off when room becomes vacant
- Each occupancy control zone will not exceed 600 sq ft, will dim to 20% output or less when vacant, and will turn off when all zones are vacant

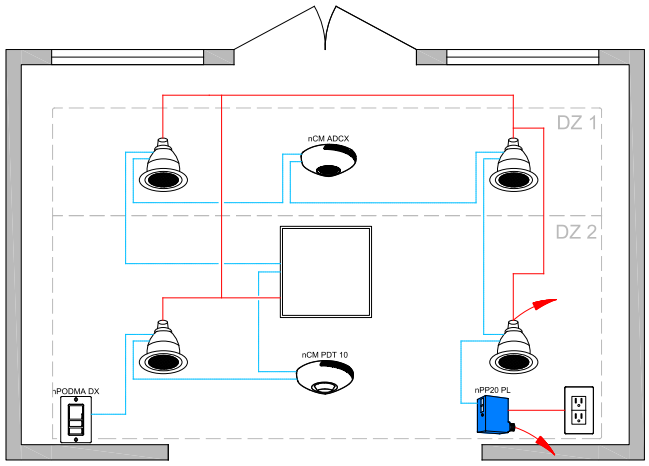
Daylight Control:
- Not required if room has < 24 ft^2 of glazing or lighting load < 75W in the skylit and the sidelit daylit zone
- Smooth continuous dimming
- Daylight zones defined by relay packs

Manual Control:
- On/off & raise/lower control of luminaires

/ ADDITIONAL OPTIONS:

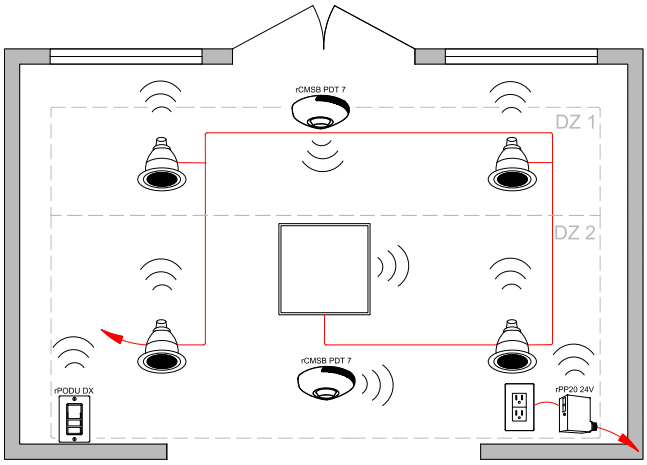
- Room can be connected to nLight backbone to enable network control, time schedules and Automated Demand Response (OpenADR 2.0a)
- HVAC control available through system-wide BACnet® interface option on the Eclypse™ controller or through occupancy sensor auxiliary relay (AR) contact option
- Networked embedded controls by nLight are available to minimize material and labor time and provide flexibility in rezoning luminaires in any configuration
- Wireless sensor is available as a non-battery version that can be powered via a power-pack
- Wireless battery powered switches are available in line powered versions
- Wired sensor is available as a daylight sensor without occupancy sensing
- Multi-pole, scene, and touchscreen switch available in both wired and wireless options

Wired



CAT-5e Cable | Line Voltage Wires | Normal Power Feed

Wireless



Line Voltage Wires | Normal Power Feed

Bill of Materials

Symbol	Qty	Product #	Description
	4	See Notes	Downlight with Wired Networked Embedded Controls by nLight
	1	See Notes	Troffer with Wired Networked Embedded Controls by nLight
	1	nPODMA DX	On/Off, Raise/Lower WallPod
	1	nPP20 PL	Plug Load Relay Pack
	1	nCM ADCX RJB	Daylight Sensor
	1	nCM PDT 10 RJB	Occupancy Sensor

Bill of Materials

Symbol	Qty	Product #	Description
	4	See Notes	Downlight with Wireless Networked Embedded Controls by nLight
	1	See Notes	Troffer with Wireless Networked Embedded Controls by nLight
	1	rPODU DX G2	Battery Powered, On/Off, Raise/Lower WallPod
	1	rPP20 24V G2	Plug Load Relay Pack
	2	rCMSB PDT 7 G2	Battery Powered Occupancy and Daylight Sensor

/ OPERATIONAL DETAILS:

Luminaires:
- All luminaires are dimmable
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:
- Luminaires automatically go to full bright when occupied
- Luminaires automatically turn off when room becomes vacant

Daylight Control:
- Smooth continuous dimming
- Daylight zones sizes defined by window size or skylight placement (not shown)
- Not required for areas without windows or that have loads <75W in sidelit zones

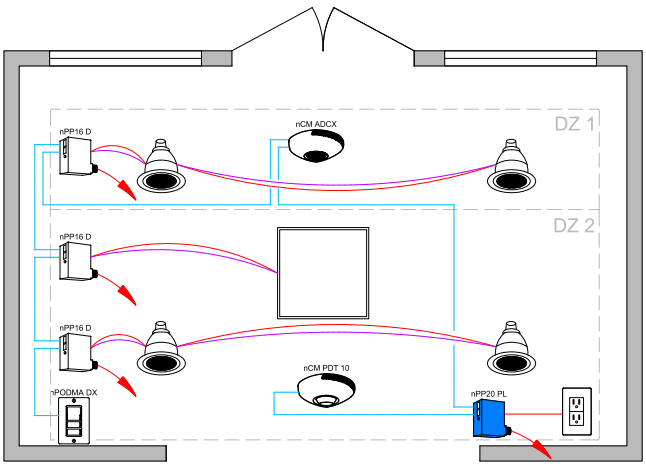
Manual Control:
- On/off & raise/lower control of luminaires
- Raise/lower control is not required for spaces with occupancy sensors but is recommended

/ ADDITIONAL OPTIONS:

- Room can be connected to nLight backbone to enable network control or time schedules (C405.2.2.1 - Time-Switch Controls), and also qualify for Enhanced Digital Lighting Controls (C406.4)
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE™ controller
- Wireless networked embedded control from nLight and occupancy/daylighting sensor options available, please see the luminaire specification sheet
- Luminaires with wireless networked embedded controls by nLight with occupancy/daylighting sensor options available, please see the luminaire specification sheet
- For emergency lighting control use a power pack with ER/EM option or luminaire with networked embedded controls by nLight with emergency option

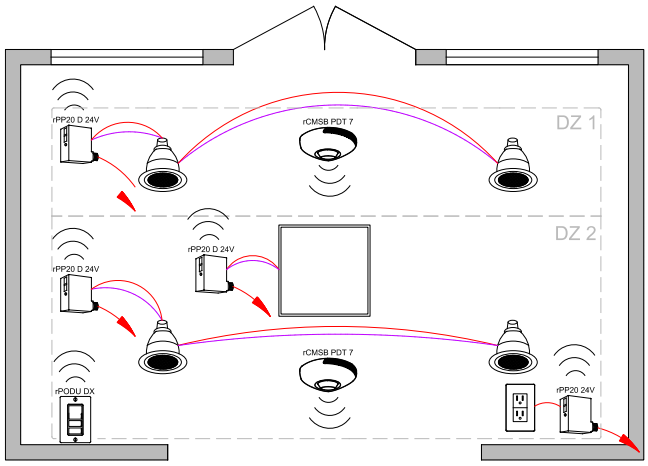
Note: *Contact your local lighting agent for more information on luminaires with networked embedded controls by nLight.*

Wired



CAT-5e Cable | Line Voltage Wires | Normal Power Feed | 0-10V Wires

Wireless



Line Voltage Wires | Normal Power Feed | 0-10V Wires

Bill of Materials

Symbol	Qty	Product #	Description
	3	nPP16 D EFP	Relay Pack with 0-10V Dimming Output
	1	nPODMA DX	On/Off, Raise/Lower WallPod
	1	nCM ADCX	Daylight Sensor
	1	nPP20 PL	Plug Load Relay Pack
	1	nCM PDT 10 RJB	Occupancy Sensor

Bill of Materials

Symbol	Qty	Product #	Description
	3	rPP20 D 24V EFP G2	Relay Pack with 0-10V Dimming Output
	1	rPODU DX G2	Battery Powered, On/Off, Raise/Lower WallPod
	2	rCMSB PDT 7 G2	Battery Powered Occupancy and Daylight Sensor
	1	rPP20 24V EFP G2	Plug Load Relay Pack

/ OPERATIONAL DETAILS:

Luminaires:
- All luminaires are dimmable
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:
- Luminaires automatically go to full bright when occupied
- Luminaires automatically turn off when room becomes vacant

Daylight Control:
- Smooth continuous dimming
- Daylight zones defined by relay module wiring
- Not required for areas without windows or that have loads <75W in sidelit zones

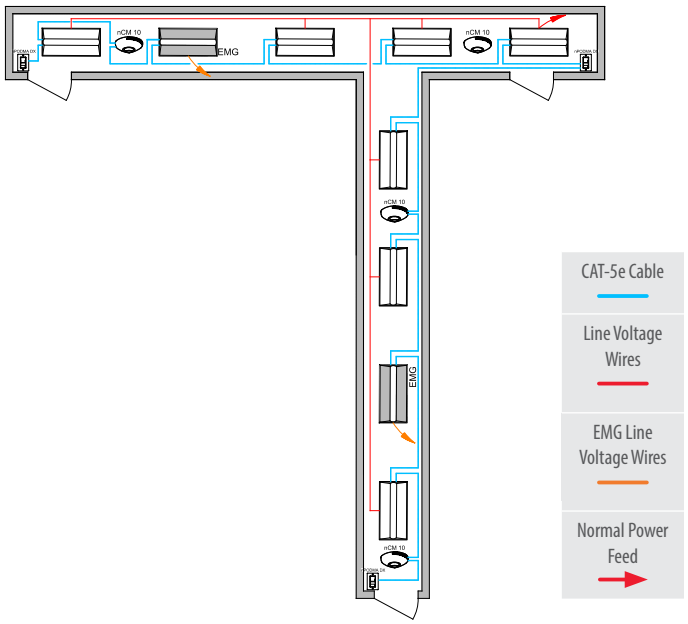
Manual Control:
- On/off & raise/lower control of luminaires
- Raise/lower control is not required for spaces with occupancy sensors but is recommended

/ ADDITIONAL OPTIONS:

- Room can be connected to nLight backbone to enable network control or time schedules (C405.2.2.1 - Time-Switch Controls), and also qualify for Enhanced Digital Lighting Controls (C406.4)
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE controller
- For emergency lighting control use a power pack with ER/EM option or luminaires with networked embedded controls from nLight and emergency option

Note: *Contact your local lighting agent for more information on luminaires with networked embedded controls by nLight.*

Wired

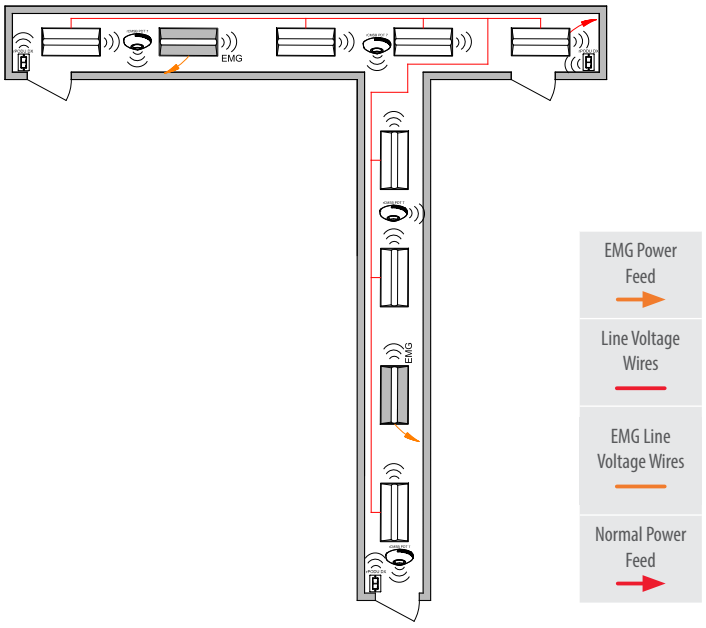


(1) Some emergency luminaires with networked embedded controls from nLight require separate normal and emergency connections. Wiring shown assumes battery backup emergency option. See luminaire spec sheets for options and details.

Bill of Materials

Symbol	Qty	Product #	Description
	7	See Note	Troffer with Wired Networked Embedded Controls by nLight
	2	See Note	Troffer with Wired Networked Embedded Controls by nLight with Emergency Option
	4	nCM 10 RJB	Occupancy Sensor
	3	nPODMA DX	On/Off, Raise/Lower WallPod

Wireless



(1) Some emergency luminaires with wireless networked embedded controls from nLight require separate normal and emergency connections. Wiring shown assumes battery backup emergency option. See luminaire spec sheets for options and details.

Bill of Materials

Symbol	Qty	Product #	Description
	7	See Note	Troffer with Wireless Networked Embedded Controls by nLight
	2	See Note	Troffer with Wireless Networked Embedded Controls by nLight with EMG Option
	3	rPODU DX WH G2	Battery Powered, On/Off, Raise/Lower WallPod
	4	rCMSB PDT 7 G2	Battery Powered Occupancy Sensor

/ OPERATIONAL DETAILS:

Luminaires:

- All luminaires are dimmable
- All luminaires are controlled together or independently
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:

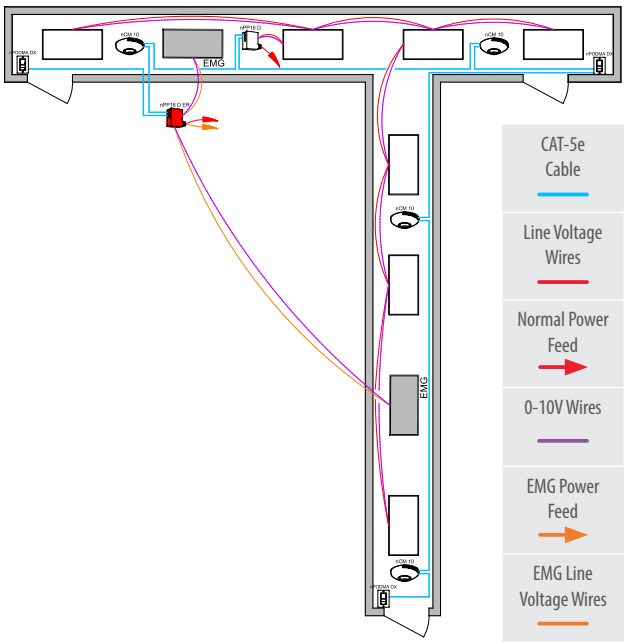
- Luminaires automatically go to full bright when occupied
- Luminaires automatically turn off or optionally can be configured to drop to low dim setting when space becomes vacant

/ ADDITIONAL OPTIONS:

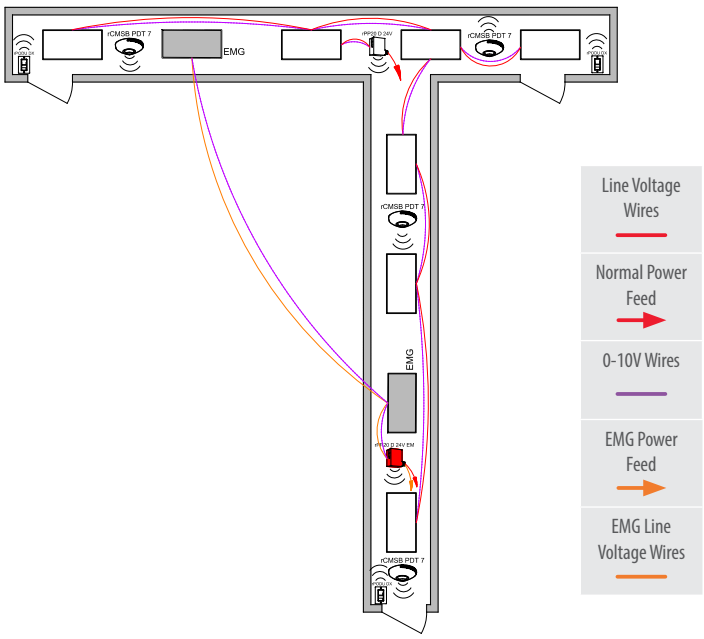
- Room can be connected to nLight backbone to enable network control or time schedules (C405.2.2.1 - Time-Switch Controls), and also qualify for Enhanced Digital Lighting Controls (C406.4)
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE™ controller
- Luminaire with networked wireless control and occupancy daylighting sensor options available, please see the luminaire specification sheet
- Wireless networked embedded control from nLight and occupancy/daylighting sensor options available, please see the luminaire specification sheet

Note: *Contact your local lighting agent for more information on luminaires with networked embedded controls by nLight.*

Wired



Wireless



(1) nLight AIR devices with an EM option must be grouped with a normal power sensing device to exit emergency operation. See control device spec sheet for details.

Bill of Materials

Symbol	Qty	Product #	Description
	1	nPP16 D EFP	Relay Pack with 0-10V Dimming Output
	1	nPP16 D ER EFP	Emergency Relay Pack with 0-10V Dimming Output
	4	nCM 10 RJB	Occupancy Sensor
	3	nPODMA DX	On/Off, Raise/Lower WallPod

Bill of Materials

Symbol	Qty	Product #	Description
	1	rPP20 D 24V EFP G2	Relay Pack with 0-10V Dimming Output
	1	rPP20 D 24V EM EFP G2	Emergency Relay Pack with 0-10V Dimming Output
	4	rCMSB PDT 7 G2	Battery Powered Occupancy Sensor
	3	rPODU DX WH G2	Battery Powered, On/Off, Raise/Lower WallPod

/ OPERATIONAL DETAILS:

Luminaires:

- All luminaires are dimmable
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:

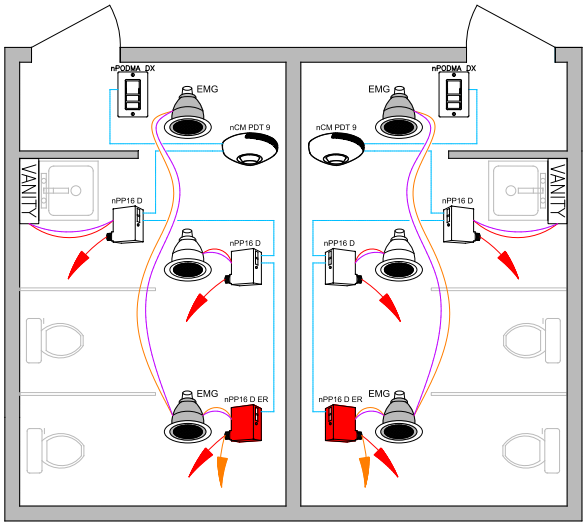
- Luminaires automatically go to full bright when occupied
- Luminaires automatically turn off or optionally can be configured to drop to low dim setting when space becomes vacant

/ ADDITIONAL OPTIONS:

- Room can be connected to nLight backbone to enable network control or time schedules (C405.2.2.1 - Time-Switch Controls), and also qualify for Enhanced Digital Lighting Controls (C406.4)
- VAC control available through system-wide BACnet® interface option on the ECLYPSE™ controller
- For emergency lighting control use a power pack with ER/EM option or luminaire with networked embedded controls from nLight and emergency option

Note: *Contact your local lighting agent for more information on luminaires with networked embedded controls by nLight.*

Wired

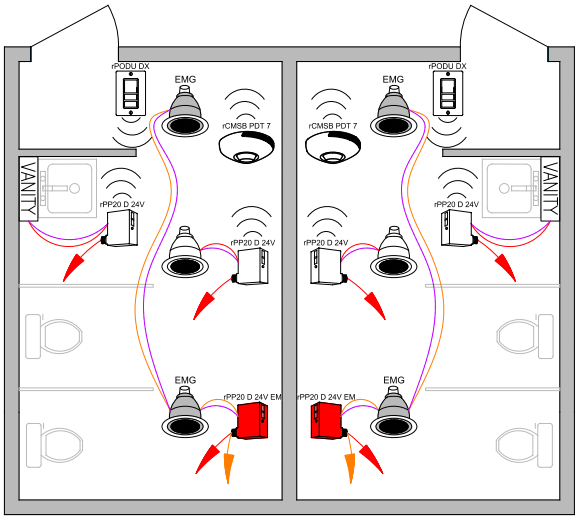


CAT-5e Cable	0-10V Wires	Line Voltage Wires	Normal Power Feed	EMG Power Feed	EMG Line Voltage Wires

Bill of Materials

Symbol	Qty	Product #	Description
	4	nPP16 D EFP	Relay Pack with 0-10V Dimming Output
	2	nPP16 D ER EFP	Emergency Module with 0-10V Dimming Output
	2	nCM PDT 9 RJB	Occupancy Sensor
	2	nPODMA DX	On/Off, Raise/Lower

Wireless



(1) nLight AIR devices with an EM option must be grouped with a normal power sensing device to exit emergency operation. See control device spec sheet for details.

0-10V Wires	Line Voltage Wires	Normal Power Feed	EMG Power Feed	EMG Line Voltage Wires

Bill of Materials

Symbol	Qty	Product #	Description
	4	rPP20 D 24V EFP G2	Relay Pack with 0-10V Dimming Output
	2	rPP20 D 24V EM EFP G2	Emergency Relay Pack with 0-10V Dimming Output
	2	rCMSB PDT 7 G2	Battery Powered Occupancy Sensor
	2	rPODU DX WH G2	Battery Powered, On/Off, Raise/Lower

OPERATIONAL DETAILS:

Luminaires:

- All luminaires are dimmable
- All luminaires are controlled together or independently (per room)
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:

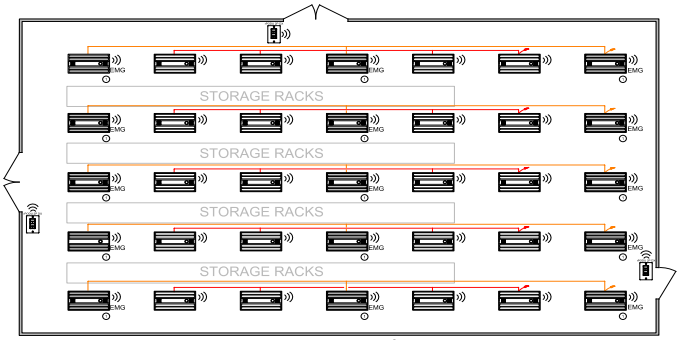
- Luminaires automatically go to full bright when occupied (or optionally can be configured to come on automatically to 50%)
- Luminaires automatically turn off when space becomes vacant

ADDITIONAL OPTIONS:

- Room can be connected to nLight backbone to enable network control or time schedules (C405.2.2.1 - Time-Switch Controls), and also qualify for Enhanced Digital Lighting Controls (C406.4)
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE™ controller
- Luminaires with wireless networked embedded controls by nLight and occupancy/daylighting sensor options available, please see the luminaire specification sheet
- nLight wired or wireless networked control devices address the monitoring and configuration of luminaire Level Lighting Controls

Note: *Contact your local lighting agent for more information on luminaires with networked embedded controls by nLight.*

Luminaires with Wireless Networked Embedded Controls from nLight



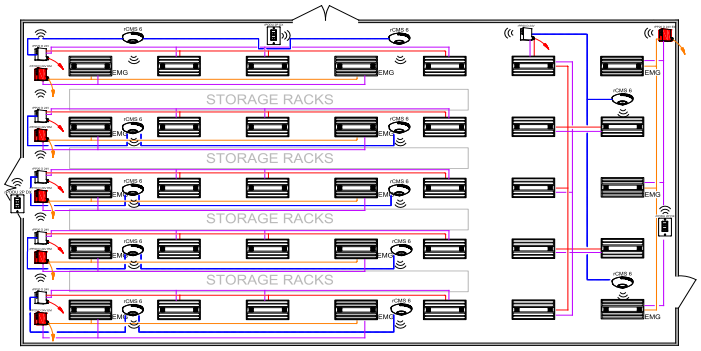
(1) Luminaire(s) assumed to include nLight AIR EM emergency options. For battery backup option, no dedicated emergency circuit necessary. nLight AIR devices with an EM option must be grouped with a normal power sensing device to exit emergency operation. See control device spec sheet for details.

Line Voltage Wires	Normal Power Feed	EMG Power Feed	EMG Line Voltage Wires

Bill of Materials

Symbol	Qty	Product #	Description
	20	See Note	High Bay Luminaire with Wireless Networked Embedded Controls by nLight with Sensor Option
EMG	15	See Note	High Bay Luminaire with Wireless Networked Embedded Controls by nLight with Sensor and Emergency Option
	3	rPODU 2P DX	Battery Powered, 2-Pole, On/Off WallPod

Wireless with 0-10V Dimming Luminaires



(1) nLight AIR devices with an EM option must be grouped with a normal power sensing device to exit emergency operation. See control device spec sheet for details.

CAT5-5e Cable	0-10V Wires	Line Voltage Wires	Normal Power Feed	EMG Power Feed	EMG Line Voltage Wires

Bill of Materials

Symbol	Qty	Product #	Description
	6	rPP20 D 24V EFP G2	Relay Pack with 0-10V Dimming Output
	6	rPP20 D 24V EM EFP G2	Emergency Relay Pack with 0-10V Dimming Output
	3	rPODU 2P DX	Battery Powered, 2-Pole, On/Off, Raise Lower WallPod
	12	rCMS 6 G2	Occupancy Sensor

/ OPERATIONAL DETAILS:

Luminaires:
- All luminaires are dimmable
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:
- Luminaires automatically go to full bright when occupied
- Luminaires automatically turn off or optionally can be configured to drop to low dim setting when space becomes vacant

Daylight Control:
- Daylight responsive controls lights to full off when adequate daylight present
- Not required for spaces without skylights or that have loads <75W in toplit zones

Manual Control:
- Safety may preclude the use of a manual control in these areas

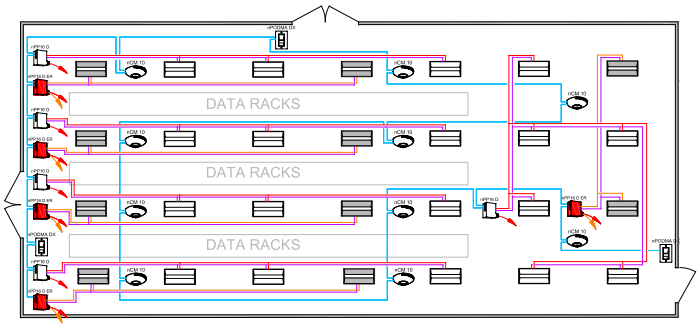
/ ADDITIONAL OPTIONS:

- Room can be connected to nLight backbone to enable network control or time schedules (C405.2.2.1 - Time-Switch Controls), and also qualify for Enhanced Digital Lighting Controls (C406.4)
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE™ controller
- Luminaires with wireless networked embedded controls by nLight with sensor options available, please see the luminaire specification sheet
- nLight wired or wireless networked control devices address the monitoring and configuration of luminaire Level Lighting Controls

Note: *Contact your local lighting agent for more information on luminaires with networked embedded controls by nLight.*

DATA CENTER with 0-10V Dimming Luminaires

Wired

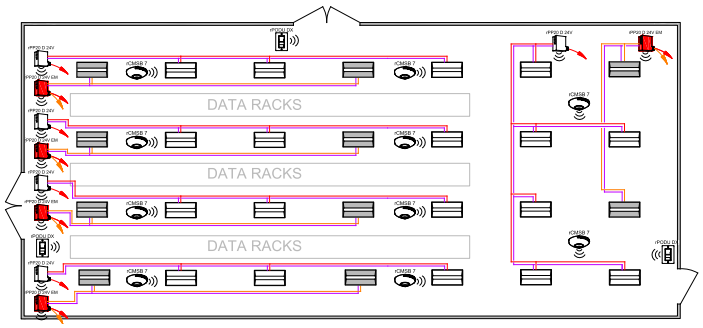


CAT-5e Cable | 0-10V Wires | Line Voltage Wires | Normal Power Feed | EMG Power Feed | EMG Line Voltage Wires

Bill of Materials

Symbol	Qty	Product #	Description
	3	nPODMA DX	On/Off, Raise/Lower WallPod
	10	NCM 10	Ceiling Mounted Sensor PIR
	5	nPP16 D ER EFP	Emergency Module with 0-10V Dimming Output
	5	nPP16 D EFP	Relay Pack with 0-10V Dimming Output

Wireless



Line Voltage Wires | Normal Power Feed | EMG Power Feed | EMG Line Voltage Wires

Bill of Materials

Symbol	Qty	Product #	Description
	3	rPODU DX	On/Off, Raise/Lower WallPod
	10	rCMSB 7	Battery Powered Occupancy and Daylight Sensor PIR
	5	rPP20 D ER EFP	Emergency Module with 0-10V Dimming Output
	5	rPP20 D 24V EFP G2	Relay Pack with 0-10V Dimming Output

/ OPERATIONAL DETAILS:

Luminaires:

- All luminaires are dimmable
- All luminaires are controlled together or independently (per room)
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:

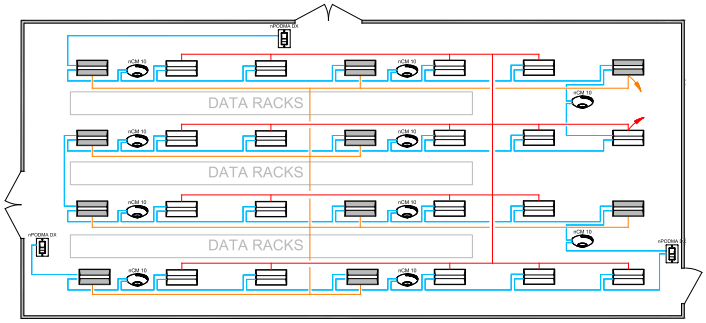
- Luminaires automatically go to full bright when occupied (or optionally can be configured to come on automatically to 50%)
- Luminaires automatically turn off when space becomes vacant

/ ADDITIONAL OPTIONS:

- Room can be connected to nLight backbone to enable network control or time schedules (C405.2.2.1 - Time-Switch Controls), and also qualify for Enhanced Digital Lighting Controls (C406.4)
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE controller
- Luminaires with wireless networked embedded controls by nLight and occupancy/daylighting sensor options available, please see the luminaire specification sheet
- nLight wired or wireless networked control devices address the monitoring and configuration of luminaire Level Lighting Controls

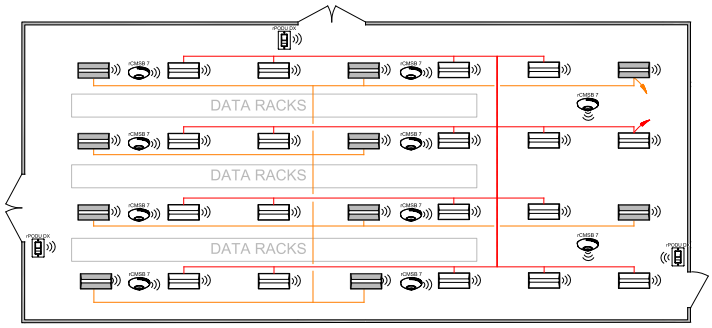
Note: *Contact your local lighting agent for more information on luminaires with networked embedded controls by nLight.*

Wired



CAT-5e Cable | Line Voltage Wires | Normal Power Feed | EMG Line Voltage Wires | EMG Power Feed

Wireless



Line Voltage Wires | Normal Power Feed | EMG Power Feed | EMG Line Voltage Wires

Bill of Materials

Symbol	Qty	Product #	Description
	18	See Note	Troffer with Wired Networked Embedded Controls from nLight
	3	nPODMA DX	On/Off, Raise/Lower
	10	nCM 10	Ceiling mounted Sensor
	10	See Note	Troffer with Wired Networked Embedded Controls by nLight with Emergency Power

Bill of Materials

Symbol	Qty	Product #	Description
	18	See Note	Troffer with Wired Networked Embedded Controls from nLight
	3	rPODU DX	On/Off, Raise/Lower WallPod
	10	rCMSB 7	Ceiling Mounted Sensor
	10	See Note	Troffer with Wired Networked Embedded Controls by nLight Emergency with Power

/ OPERATIONAL DETAILS:

Luminaires:
- All luminaires are dimmable
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:
- Luminaires automatically go to full bright when occupied
- Luminaires automatically turn off or optionally can be configured to drop to low dim setting when space becomes vacant

Daylight Control:
- Daylight responsive controls lights to full off when adequate daylight present
- Not required for spaces without skylights or that have loads <75W in toplit zones

Manual Control:
- Safety may preclude the use of a manual control in these areas

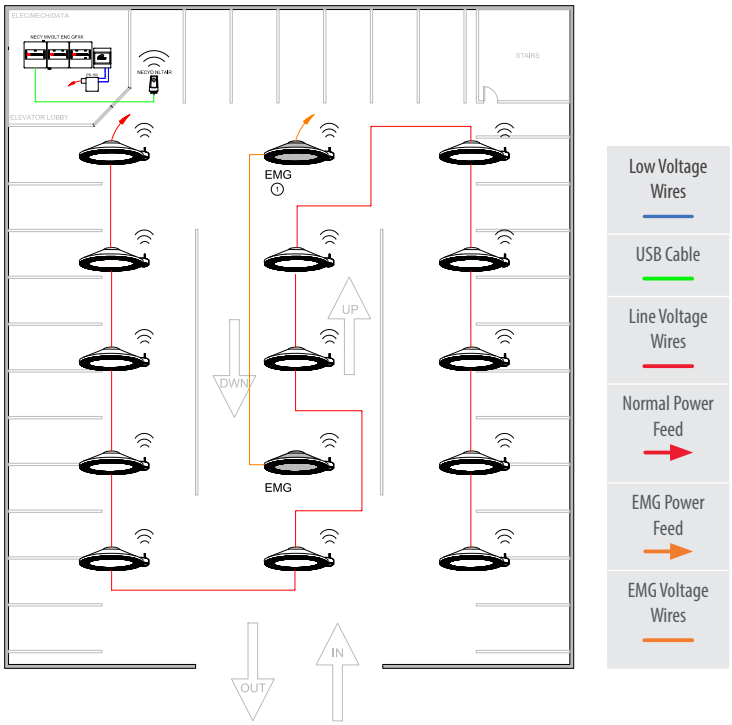
/ ADDITIONAL OPTIONS:

- Room can be connected to nLight backbone to enable network control or time schedules (C405.2.2.1 - Time-Switch Controls), and also qualify for Enhanced Digital Lighting Controls (C406.4)
- HVAC control available through system-wide BACnet® interface option on the ECLYPSE™ controller
- Luminaires with wireless networked embedded controls by nLight with sensor options available, please see the luminaire specification sheet
- nLight wired or wireless networked control devices address the monitoring and configuration of luminaire Level Lighting Controls

Note: *Contact your local lighting agent for more information on luminaires with networked embedded controls by nLight.*

PARKING GARAGE with Luminaire with Wireless Networked Embedded Controls by nLight®

Wireless Parking Garage



(1) Luminaire(s) assumed to include nLight AIR EM emergency options. For battery backup option, no dedicated emergency circuit necessary. nLight AIR devices with an EM option must be grouped with a normal power sensing device to exit emergency operation. See control device spec sheet for details.

Bill of Materials

Symbol	Qty	Product #	Description
	13	See Note	Canopy Luminaire with Wireless Networked Embedded Controls by nLight with Sensor Option
	2	See Note	Canopy Luminaire with Wireless Networked Embedded Controls by nLight with Sensor and Emergency Option
	1	nECY	nLight ECLYPSE™ Network System Controller
	1	nECYD NLTAIR G2	nLight AIR Adapter

/ OPERATIONAL DETAILS:

Luminaires:

- All luminaires are dimmable
- All luminaires can be controlled together or independently
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:

- Luminaires automatically go to full bright when occupied
- Luminaires automatically turn off or optionally can be configured to <greater than or equal to symbol>30% reduction when vacant, and that perimeter zones near large openings will provide <greater than or equal to symbol>50% reduction.

Daylight Control:

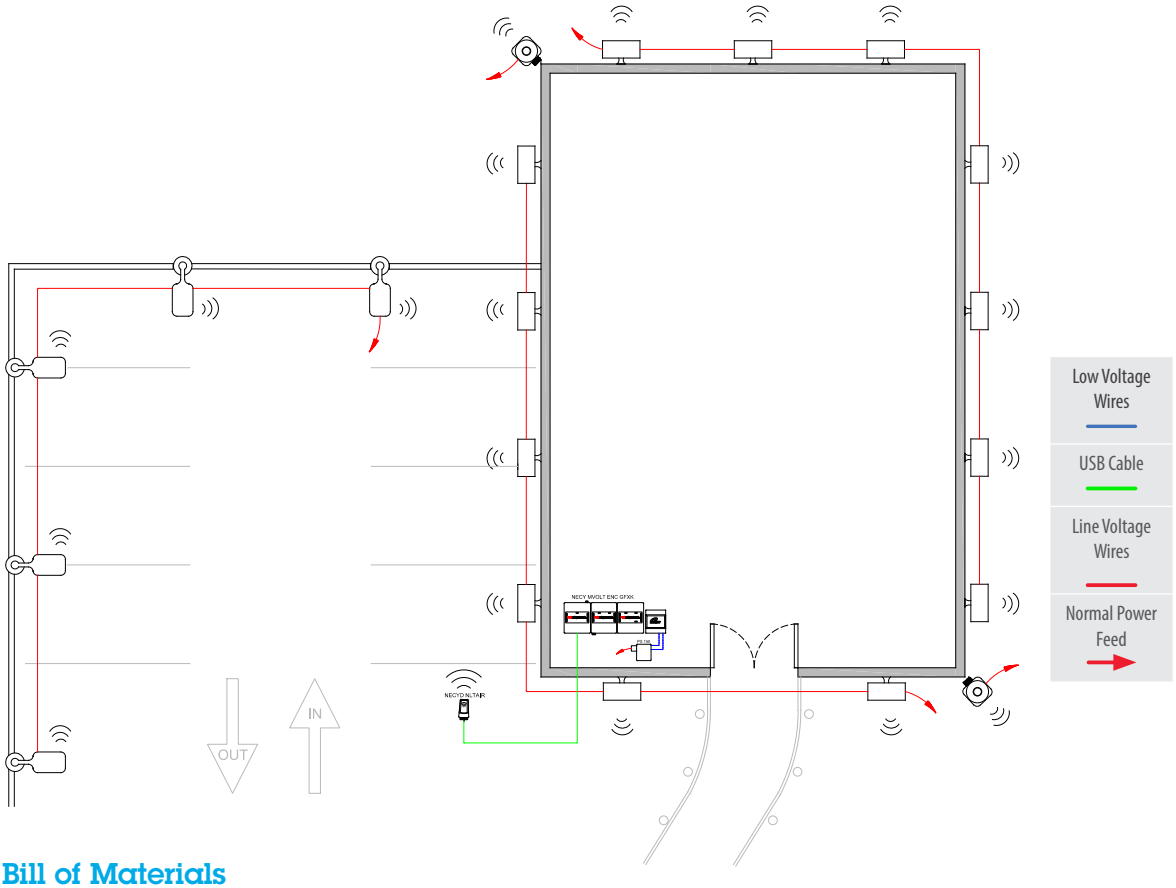
- Daylight responsive controls lights to full off when adequate daylight present -
- Where lighting for eye adaptation is provided at vehicle entrances to buildings, such lighting shall be separately controlled by a device that automatically reduces lighting power by at least 50 percent from sunset to sunrise.
- The power to luminaires within 20 feet (6096 mm) of perimeter wall openings shall automatically reduce in response to daylight by at least 50 percent.

/ ADDITIONAL OPTIONS:

- Devices can be connected to nLight backbone to luminaires with networked embedded control or time schedules, including time schedules (C405.2.2.1), lighting setback (C405.2.7.3), & exterior time-switch control (C405.2.6.4).
- Luminaires with wireless networked embedded control by nLight with occupancy/daylighting sensor options available, please see the luminaire specification sheet
- nLight wired or wireless networked control devices address the monitoring and configuration of luminaire Level Lighting Controls

Note: *Contact your local lighting agent for more information on luminaires with networked embedded controls by nLight.*

Wireless Site/Parking Area



Bill of Materials

Symbol	Qty	Product #	Description
	5	See Note	Area Fixture with Wireless Networked Embedded Controls by nLight
	13	See Note	Wall Mount with Wireless Networked Controls by nLight
	1	nECY	nLight ECLYPSE™ Network System Controller Graphic Touchscreen
	1	nECYD NLTAIR G2	nLight AIR Adapter
	2	rSBOR	nLight AIR Repeater

/ OPERATIONAL DETAILS:

Luminaires:

- All luminaires are dimmable
- All luminaires can be controlled together or independently
- Maximum level can be task tuned to any percentage via programming

Occupancy Control:

- Luminaires automatically go to full bright when occupied
- Luminaires automatically turn off or optionally can be configured to drop to low dim setting when space becomes vacant

Daylight Control:

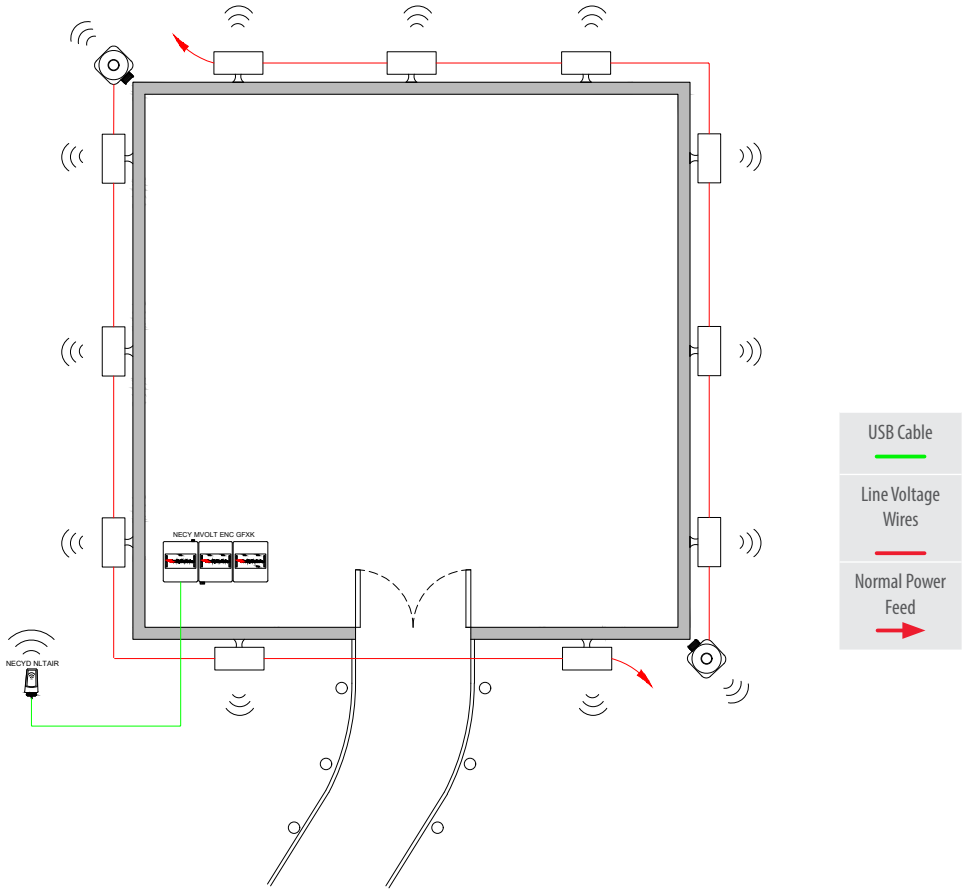
- Daylight responsive controls lights to full off when adequate daylight present

/ ADDITIONAL OPTIONS:

- Devices can be connected to nLight backbone to luminaires with networked embedded control or time schedules, including time schedules (C405.2.2.1), lighting setback (C405.2.7.3), & exterior time-switch control (C405.2.6.4).
- Luminaires with wireless networked embedded controls by nLight with occupancy/daylighting sensor options available, please see the luminaire specification sheet
- nLight wired or wireless networked control devices address the monitoring and configuration of luminaire Level Lighting Controls

Note: *Contact your local lighting agent for more information on luminaires with networked embedded controls by nLight.*

Wireless Facade and Landscaping



Bill of Materials

Symbol	Qty	Product #	Description
	11	See Note	Wall Mount with Wireless Networked Embedded Controls by nLight
	1	nECY	nLight ECLYPSE™ Network System Controller
	1	nECYD NLTAIR G2	nLight AIR Adapter
	2	rSBOR	nLight AIR Sensor and Wireless Repeater

/ OPERATIONAL DETAILS:

Luminaires:

- All luminaires are dimmable
- All luminaires can be controlled together or independently
- Maximum level can be task tuned to any percentage via programming

Daylight Control:

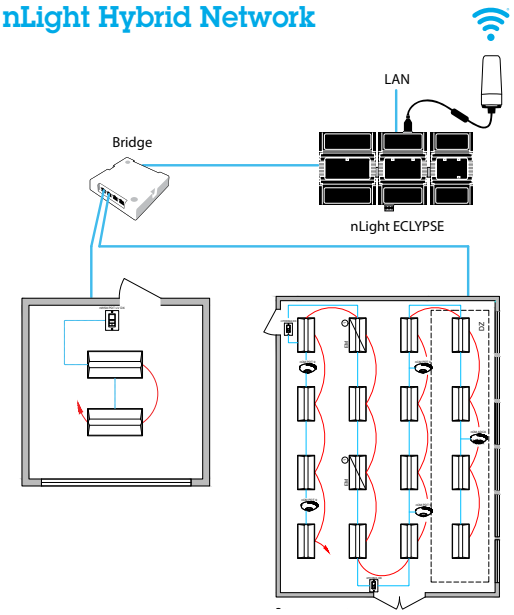
- Daylight responsive controls lights to full off when adequate daylight present

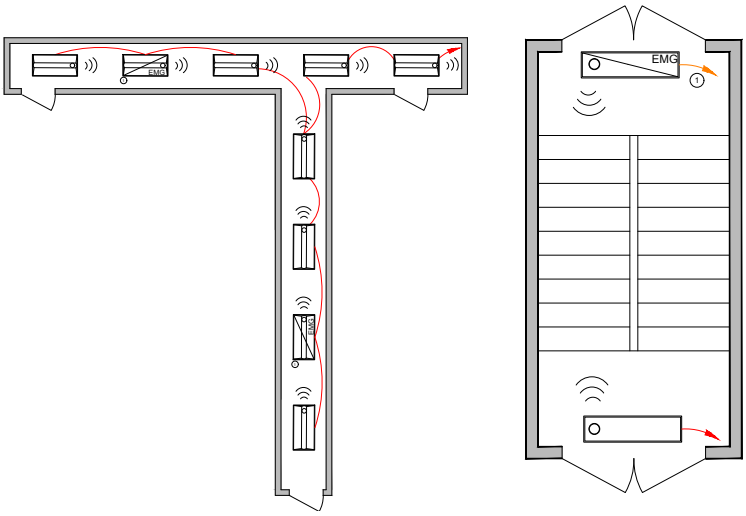
/ ADDITIONAL OPTIONS:

- Devices can be connected to nLight backbone to luminaires with networked embedded control or time schedules, including time schedules (C405.2.2.1), lighting setback (C405.2.7.3), & exterior time-switch control (C405.2.6.4).
- Luminaires with wireless networked embedded control by nLight and occupancy/daylighting sensor options available, please see the luminaire specification sheet
- nLight wired or wireless networked control devices address the monitoring and configuration of luminaire Level Lighting Controls

Note: *Contact your local lighting agent for more information on luminaires with networked embedded controls by nLight.*

nLight Hybrid Network





Bill of Materials

Symbol	Qty	Product #	Description
	1	nBRG 8 KIT	8-Port Backbone Bridge
	1	nECY MVOLT ENC	nLight ECLYPSE™ Network System Controller and Optional BMS Interface
	1	nECYD NLTAIR G2	nLight AIR Adapter

Programmable Time Clock Control:

Although not pictured within each of the individual room design guides, each nLight controlled space can be connected via an nLight backbone to create a networked nLight lighting control system capable of meeting the requirements of IECC 2024 Provision C405.2.2.1, Time-Switch Controls.

APPENDIX B: Requirements Overview

	Control Requirement	Code Provision	nLight Solution Details	
Shut-Off Control	Manual Control (Local Switch)	C405.2.1.1.3	nLight WallPod devices provide a user with local control of lighting within an nLight controlled space. WallPods are available in multiple styles – each with varying features and user experiences.	
			Push-Button WallPod	**7" Touchscreen Wall Switch**
			nPODMA Series rPODU Series rPODLA Series 	nTS Touchscreen 
			Traditional tactile buttons and LED user feedback.	Full-color touch screen provides a sophisticated look and feel.
	Time-Switch Controls and Exterior Lighting Control (via System Controller)	C405.2.2.1 C405.2.7.2 C405.2.7.3.1.1 C405.2.7.3.1.2 C405.2.7.4	Individual nLight control groups (i.e.: rooms) can be easily networked together across an entire building simply by connecting them into a "backbone" made up of one or more nLight bridge devices and/or nLight AIR adapters and an nLight ECLYPSE™ system controller. The system controller provides programmable time clock functionality for an nLight network as well as interfaces to the SensorView suite of web-based software applications (via an Ethernet LAN / WAN connection).	
			Network System Controller	
			Network System Controller 	
			Additional benefits of installing an nLight backbone include remote status monitoring, system-wide configuration changes, and BMS interface capability.	
	Full Auto-Off via Occupancy Sensor	C405.2.1.1	nLight occupancy sensors utilize 100% digital passive infrared (PIR) detection, come in several mounting styles, and offer multiple coverage pattern options. Additionally, nLight sensors are available with patented Microphonics™ dual technology detection for rooms with obstructions. Configuring for full off vs. partial off control is done with system programming.	
	Manual On, Auto-On <=50%, Full Automatic On	C405.2.1.1, Exception	**360° Occupancy Sensor**	**120° WideView Corner Sensor***
			nCM Series rCMS Series rCMSB Series 	nWV Series 
			Surface mounts to ceiling tiles or sheetrock/plaster.	Directly mounts in corner or to ceiling via repositionable ceiling bracket.
Light Level Control	Light-Reduction Controls	C405.2.3	nLight provides multiple options for controlling continuous dimming luminaires. This allows spaces with several lighting types and technologies to be controlled together and with a common user experience.	
			Acuity Brands Luminaires with Networked Embedded Controls from nLight	**Dimming Relay Packs**
				nPP16 Series rPP20 Series 
			Acuity Brands offers a wide variety of LED luminaires with factory installed embedded controls by nLight that provide smooth continuous dimming.	nLight dimming relay enable control of any 0-10VDC dimmable LED luminaire.
	Daylight-Responsive Controls	C405.2.4.1 C405.2.4.2 C405.2.7.1 C405.2.8.2 C405.2.8.3	nLight offers standalone daylight harvesting sensors as well as occupancy sensors with integrated daylight harvesting. Sensors are available in various housings and provide continuous dimming control of any/all luminaires with networked embedded controls by nLight or dimming relay packs, each capable of being its own daylight zone.	
			Ceiling Mount Dimming Photocell	**Recessed Mount Dimming Photocell***
			nCM Series rCMS Series rCMSB Series 	nRM Series 

**Available with nLight Wired products only.*

Note: This summary is for general information purposes only and is provided without any warranty as to accuracy, completeness, or otherwise. The user should read the applicable code sections for more complete and detailed descriptions of code requirements and exceptions and should consult with a professional engineering or other competent advisor before making any decision or taking any action based on this summary.

2024 IECC and Emergency Lighting

The nLight platform offers flexible, UL 924 compliant control of emergency lighting. It addresses the needs of conventional projects that use extra wiring to charge battery packs inside of luminaires or to tell control devices to enter an emergency state when normal power is lost. Traditional lighting controls would make use of a shunt device in addition to a lighting control device (Figure 1). nLight consolidates the shunt device and lighting control device into a single digital device, which reduces installation and maximizes control (Figure 2). Wireless products also offer power detection through devices connected to normal power to initiate emergency control when normal power is lost. This modern method removes the need for extra wiring, further reducing the cost of installing emergency controls without sacrificing the intelligence and configurability that is expected from nLight devices (Figure 3).

IECC lighting controls requirement C405.2 (and subsection 405.2.7 for exterior lighting controls) provides exceptions for emergency and egress lighting, indicating that lighting controls are not required for the following types of lighting:

- Areas designated as security or emergency areas that are required to be continuously lighted.
- Interior exit stairways, interior exit ramps and exit passageways.
- Emergency egress lighting that is normally off.
- Lighting for covered vehicle entrances or exits from buildings or parking structures where required for safety, security or eye adaptation.

Generally speaking, lighting that is normally on during occupied periods, normally dimmed or off during unoccupied periods, and also used to provide for egress during emergency power conditions should be controlled in compliance with C405.2. nLight features various UL 924 listed options that can be specified to provide both lighting control in compliance with IECC and emergency operation in compliance with locally enforced fire codes.

Traditional Shunt

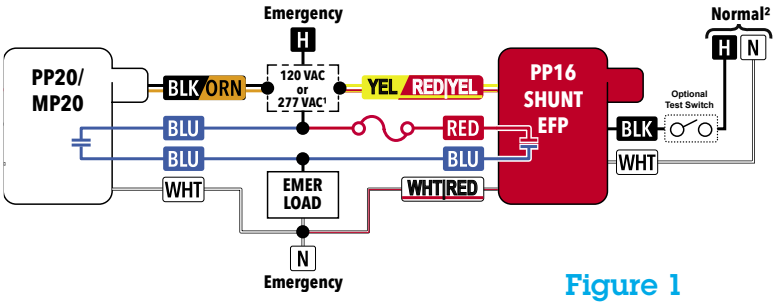


Figure 1

Control With Built-In Emergency Option via Normal Power Sense (Wired)

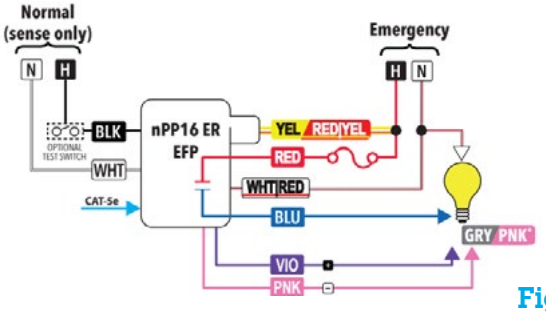


Figure 2

Control With Built-In Emergency Option Via Normal Power Sense (Wireless)

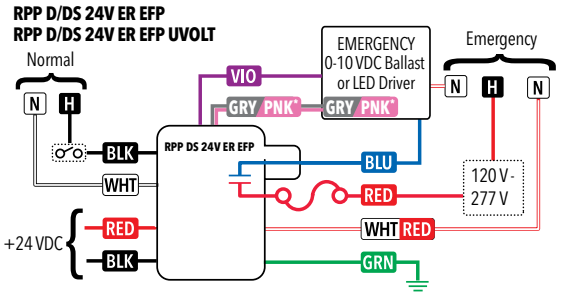


Figure 3

Control With Built-In Emergency Option Via nLight AIR EM

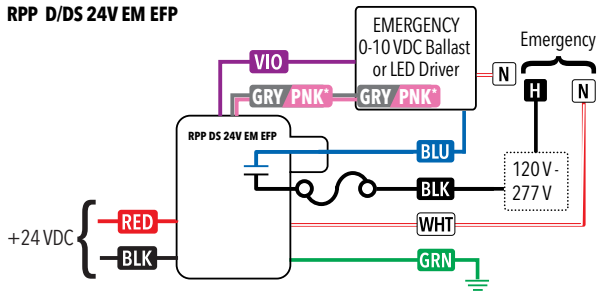


Figure 4

Luminaires with Networked Embedded Controls by nLight

Acuity Brands offers the industry's broadest portfolio of luminaires with networked embedded controls from nLight. Please scan the QR code to see the current luminaires with networked embedded controls from nLight.

Luminaires with Wireless Networked Embedded Controls by nLight

Luminaires with Wired Networked Embedded Controls by nLight

CLAIRITY™+ Mobile App

Quick and Easy Lighting Configuration and Control In the Palm of Your Hand

nLight Wired

The nLight Wired micro-application of CLAIRITY+ is a cost-effective method that simplifies programming and reduces start-up times for nLight devices in smaller projects.

nLight AIR

The nLight AIR application provides easy startup, configuration and modification of nLight® AIR wireless controls. This cloud connected app allows validated end users (electrical contractors, sales agents or facility maintenance professionals) to start up, configure and troubleshoot from a compatible smartphone or tablet.

Wall Switches - Contemporary Design for nLight Wall Switches

The nLight® platform portfolio of wall switches offer enhanced aesthetics for wired and wireless applications. The modern design makes them ideal solutions for commercial office, healthcare, and industrial options.

Features & Benefits

- **Contemporary Aesthetic –** A modern and sleek design featuring a matte finish, screwless wall plate, and thin profile with recessed buttons
- **Color Options/Custom Engraving –** A full range of color options provides a variety of choices for your building designs with the assurance that the color of the housing and the wall plate match
- **Easy-to-Install and Program –** The innovative screwless wall plate design and mobile apps make for easy installation and programming

Available Color Options

White

Lt Almond

Ivory

Gray

Black

Red

Additional Resources

Controls Typical Layout Drawings

https://www.acuitybrands.com/resources/tools-and-documents/typicals

IECC

http://www.iccsafe.org/

Use the Following Sections of the IECC 2024 Code as Reference:

Section C405.2.1.1.2	–	Manual-On or Partial-On
Section C405.2.1.1, Exception	–	Full Automatic On
Section C405.2.6.1	–	Local Switch
Section C405.2.2.1	–	Programmable Timeclock
Section C405.2.4	–	Daylight-Responsive Controls
Section C405.2.3.1	–	Manual Lighting Reduction
Section C405.2.7	–	Exterior Lighting Controls
Section C406.4	–	Enhanced Digital Lighting Controls

Explore Acuity Academy

Acuity Academy provides educational resources for individuals wanting to expand their lighting, controls and building management technical knowledge. On Acuity Academy, you can register for instructor-led classes, take e-learning courses or watch videos and recorded content. https://www.acuitybrands.com/resources/training-and-education

nLight Lighting Controls

www.nlightcontrols.com

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