



# / nLight Lighting Controls Platform

# It's not just smarter. It's easier.

nLight is a sensor-based digital lighting controls solution that offers wired and wireless lighting controls that easily connect luminaires, sensors, and other control devices to create a digital network. The nLight platform of products enables ease in specification, installation, and ownership, making it the go-to digital lighting controls platform for specifiers, contractors, and building owners.



# / TABLE OF CONTENTS

04	Code	Requireme	nts for Commo	n Building	Snaces
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- 05 How to Use This Guide
- 06 Enclosed Office Solutions
- 08 Open Plan Office Solutions
- 10 Conference Room Solutions
- 12 Classroom Solutions
- 14 Lobby Solutions
- 16 Corridor Solutions
- 18 Restroom Solutions
- 21 Stairwell Solutions
- 22 Warehouse Storage Solutions
- 23 Gymnasium Solutions
- 24 Parking Garage
- 25 Site Lighting
- 26 nLight Hybrid Networked Lighting Control
- 27 Requirements Overview
- 28 Emergency Lighting
- 29 nLight Enabled Luminaires





#### / ABOUT

#### **About IECC 2018**

The International Energy Conservation Code (IECC) 2018 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.

#### About nLight

nLight® is a sensor-based digital lighting controls solution that offers wired and wireless lighting controls that easily connect luminaires, sensors, and other control devices to create one digital lighting controls platform to aid in code compliance, reduce energy, and enable advanced networked capabilities. Ideal for practically any application, small to large, indoor to outdoor, nLight offers lighting controls that scale from one room to an entire floor, from one floor to an entire building, from one building to an entire campus.

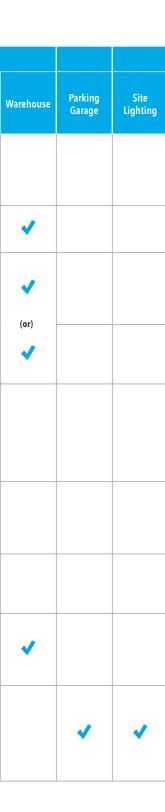
The chart below is an overview of the Code Requirements for Common Building Spaces. Please use this information as a guide. For specific code requirements please refer to the IECC code.

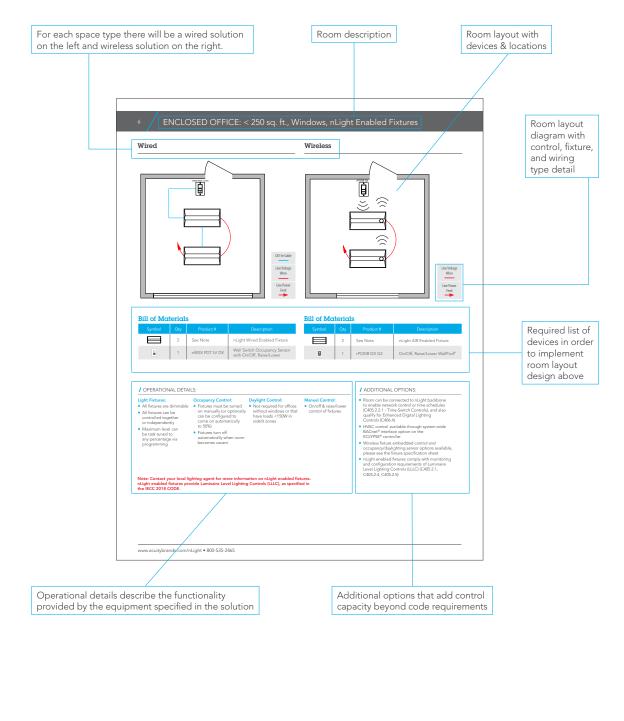
									Space Typ	oe e			
	Control Requirement*	Code Provision	Code Summary*	Enclosed Office	Open Plan Office	Conference, Meeting, Multipurpose Room	Classroom, Lecture Hall, Training Room	Lobby	Corridor	Public Restroom	Private Restroom	Non-Exit Stairwell	Gymasium
	Manual-On or AutoOn ≤ 50%	C405.2.1.1.1	Automatically controlled spaces must be controlled to automatically turn the lighting on to not more than 50% power.	<b>*</b>		<b>*</b>	<b>✓</b>						
	Full Automatic-On	C405.2.1.1.2	Automatically controlled spaces are allowed to turn on to full.					<b>~</b>	<b>*</b>	<b>*</b>	<b>✓</b>	<b>✓</b>	
	Auto-Off ≤ 50%	C405.2.1.2	Occupancy sensors shall automatically reduce lighting in warehouse storage aisle-ways and open areas by ≤ 50%										
On-Off Control	Full Auto-Off via Occupancy Sensor	C405.2.1.1.1 & C405.2.1.3	Fixtures must automatically turn off within 20 minutes of all occupants leaving the space.	<b>✓</b>	<b>✓</b>	<b>*</b>	<b>✓</b>	<b>*</b>	<b>4</b>	<b>*</b>	<b>*</b>	<b>4</b>	<b>*</b>
)-u0	Time-Switch Controls (via System Controller)	C405.2.2.1	Each area of the building not provided with occupant sensor controls shall be provided with time switch controls. These areas must also be provided with a manual override switch.					(or)	(or)			(or)	(or)
	Light Reduction Controls	C405.2.2.2	Spaces shall have a manual control that allows the occupant to reduce the connected lighting load uniformly by not less than 50%.		<b>4</b>							<b>(ar)</b>	<b>*</b>
	Manual Control (Local Switch)	C405.2.5	Areas shall incorporate a manual control to allow occupants to turn fixtures off.	<b>4</b>	(or)	<b>~</b>	<b>~</b>	<b>~</b>	<b>*</b>	**	**	(or)	(or)
Daylight Control	Daylight- Responsive Controls	C405.2.3.1 & C405.2.3.2	Daylight-responsive controls shall be provided within each space with sidelight and toplight daylight zones totaling > 150W.	<b>~</b>	<b>~</b>	•	<b>~</b>	<b>~</b>	<b>~</b>	<b>*</b>	<b>~</b>	<b>✓</b>	<b>~</b>
Exterior Control	Exterior Lighting Controls	C405.2.6	C405.2.6.1 Daylight shutoff C405.2.6.2 Decorative lighting shutoff C405.2.6.3 Lighting setback C405.2.6.4 Exterior time- switch control function										

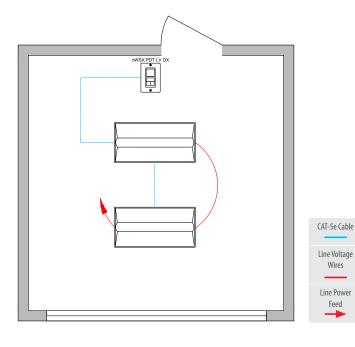
#### Notes

<sup>\*</sup>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.

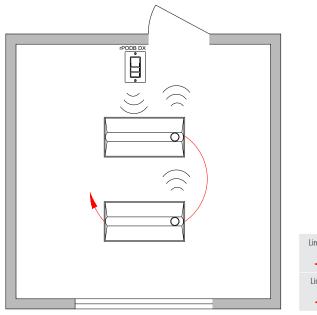
<sup>\*\*</sup> While energy code is required, safety may preclude the use of a manual controls in these spaces.







#### Wireless





#### **Bill of Materials**

Symbol	Qty	Product #	Description
	2	See Note	nLight Wired Enabled Fixture
	1	nWSX PDT LV DX	Wall Switch Occupancy Sensor with On/Off, Raise/Lower

#### **Bill of Materials**

Symbol	Qty	Product #	Description
	2	See Note	nLight AIR Enabled Fixture
Ē	1	rPODB DX G2	On/Off, Raise/Lower WallPod®

#### / OPERATIONAL DETAILS:

#### **Light Fixtures:**

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

#### **Occupancy Control:**

- Fixtures must be turned on manually (or optionally can be configured to come on automatically to 50%)
- Fixtures turn off automatically when room becomes vacant

#### **Daylight Control:**

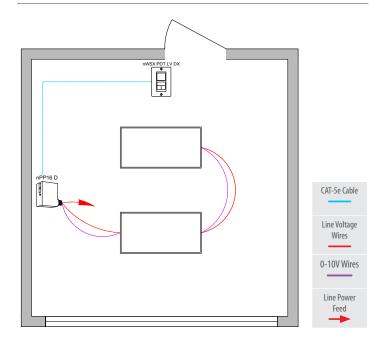
 Not required for offices without windows or that have loads <150W in sidelit zones

#### **Manual Control:**

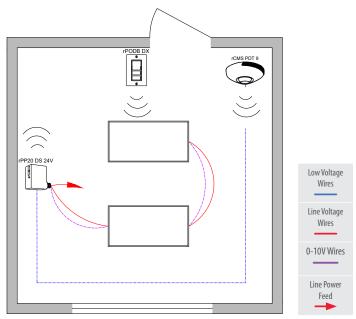
On/off & raise/lower control of fixtures

#### / 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 fixture embedded control and occupancy/daylighting sensor options available, please see the fixture specification sheet
- nLight enabled fixtures comply with monitoring and configuration requirements of Luminaire Level Lighting Controls (LLLC) (C405.2.1, C405.2.4, C405.2.5)



#### Wireless



#### **Bill of Materials**

	Qty	Product #	Description
	1	nPP16 D EFP	Relay Pack with 0-10V Dimming Output
	1	nWSX PDT LV DX	Wall Switch Occupancy Sensor with On/Off, Raise/Lower

#### **Bill of Materials**

Symbol	Qty	Product #	Description
	1	rPP20 DS 24V G2	Relay Pack with 0-10V Dimming Output
Ė	1	rPODB DX G2	On/Off, Raise/Lower WallPod
	1	rCMS PDT 9 G2	Occupancy and Daylight Sensor

#### / OPERATIONAL DETAILS:

#### **Light Fixtures:**

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

#### Occupancy Control:

- Fixtures must be turned on manually (or optionally can be configured to come on automatically to 50%)
- Fixtures turn off automatically when room becomes vacant

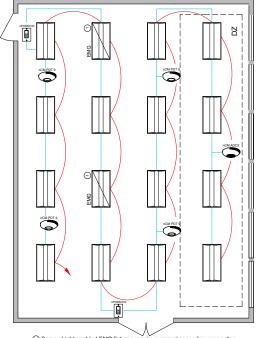
#### Daylight Control:

 Not required for offices without windows or that have loads <150W in sidelit zone

#### Manual Control:

On/off & raise/lower control of fixtures

- 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 or through occupancy sensor auxiliary relay (AR) contact option
- For emergency lighting control use a power pack with ER option

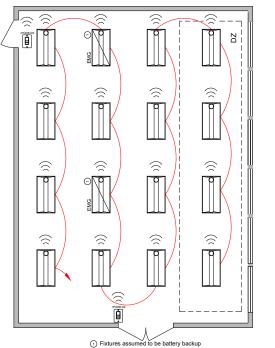




Some nLight enabled EMG fixtures require a normal sense line connection.

See fixture spec sheets for details.

#### Wireless





#### **Bill of Materials**

Symbol	Qty	Product #	Description
	14	See Note	nLight Wired Enabled Fixture
	2	See Note	nLight Wired Enabled Fixture with EMG option
	2	nPODM DX	On/Off, Raise/Lower WallPod
	4	nCM PDT 9 RJB	Occupancy Sensor
	1	nCM ADCX RJB	Daylight Sensor

#### **Bill of Materials**

Symbol	Qty	Product #	Description
	14	See Note	nLight AIR Enabled Fixture
	2	See Note	nLight AIR Enabled Fixture with Battery Option
	2	rPODB DX G2	On/Off, Raise/Lower WallPod

#### / OPERATIONAL DETAILS:

#### **Light Fixtures:**

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

#### **Occupancy Control:**

- Fixtures must be turned on manually (or optionally can be configured to come on automatically to 50%)
- Fixtures turn off automatically when room becomes vacant
- General lighting must be controlled in zones not greater than 600 sq. ft.

#### **Daylight Control:**

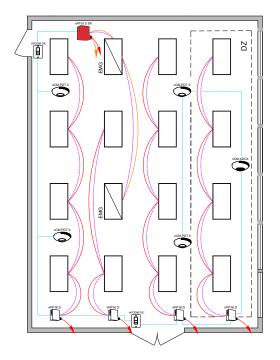
- Smooth continuous dimming
- Custom grouping of fixtures into separate daylight zones (max. number zones = number of fixtures)
- Not required for offices without windows or that have loads <150W in sidelit zones

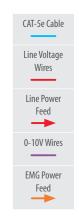
#### **Manual Control:**

 On/off & raise/lower control of fixtures

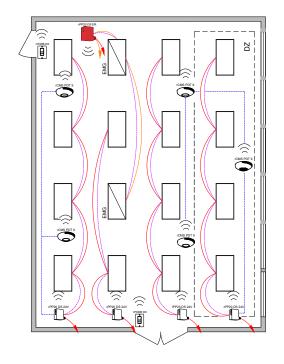
#### / ADDITIONAL OPTIONS:

- 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 or through occupancy sensor auxiliary relay (AR) contact option
- Wireless fixture embedded control and occupancy/ daylighting sensor options available, please see the fixture specification sheet
- nLight enabled fixtures comply with monitoring and configuration requirements of Luminaire Level Lighting Controls (LLLC) (C405.2.1, C405.2.4, C405.2.5)
- Occupant sensor controls in open plan office spaces less than 300 sq. ft. in area shall comply with Section C405.2.1.1





#### Wireless





#### **Bill of Materials**

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

#### **Bill of Materials**

Symbol	Qty	Product #	Description
	4	rPP20 DS 24V G2	Relay Pack with 0-10V Dimming Output
	1	rPP20 DS ER G2	Emergency Relay Pack with 0-10V Dimming Output
Ů,	2	rPODB DX G2	On/Off, Raise/Lower WallPod
	5	rCMS PDT 9 G2	Occupancy and Daylight Sensor

#### / OPERATIONAL DETAILS:

#### **Light Fixtures:**

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

#### **Occupancy Control:**

- Fixtures must be turned on manually (or optionally can be configured to come on automatically to 50%)
- Fixtures turn off automatically when room becomes vacant
- General lighting must be controlled in zones not greater than 600 sq. ft.

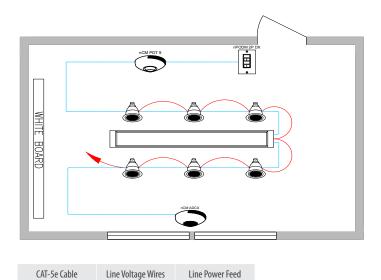
#### Daylight Control:

- Smooth continuous dimming
- Daylight zones defined by rows
- Not required for offices without windows or that have loads <150W in sidelit zones

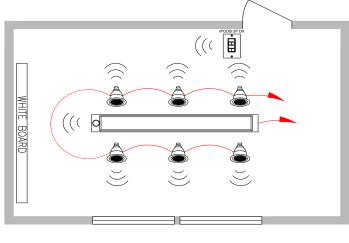
#### Manual Control:

On/off & raise/lower control of fixtures

- 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<sup>®</sup> interface option on the ECLYPSE controller or through occupancy sensor auxiliary relay (AR) contact option
- Occupant sensor controls in open plan office spaces less than 300 sq. ft. in area shall comply with Section C405.2.1.1



#### Wireless





#### **Bill of Materials**

Symbol	Qty	Product #	Description
	1	See Note	nLight Wired Enabled Linear Fixture
	6	See Note	nLight Wired Enabled Downlight Fixture
٥	1	nPODM 2P DX	2-Pole On/Off, Raise/ Lower WallPod
	1	nCM PDT 9 RJB	Occupancy Sensor
	1	nCM ADCX RJB	Daylight Sensor

#### **Bill of Materials**

Symbol	Qty	Product #	Description
	1	See Note	nLight AIR Enabled Linear Fixture
	6	See Note	nLight AIR Enabled Downlight Fixture
Ė	1	rPODB 2P DX G2	2-Pole On/Off, Raise/ Lower WallPod

#### / OPERATIONAL DETAILS:

#### **Light Fixtures:**

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

#### **Occupancy Control:**

- Fixtures must be turned on manually (or optionally can be configured to come on automatically to 50%)
- Fixtures turn off automatically when room becomes vacant

#### **Daylight Control:**

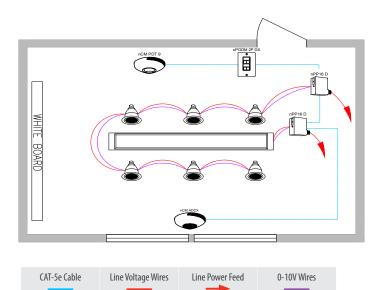
- Smooth continuous dimming
- Custom grouping of fixtures into separate daylight zones (max number zones = number of fixtures)
- Not required for areas without windows or that have loads <150w in sidelit zones

#### **Manual Control:**

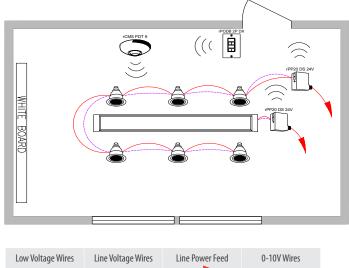
 On/off & raise lower control of two zones of fixtures

#### / 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<sup>®</sup> interface option on the ECLYPSE controller or through occupancy sensor auxiliary relay (AR) contact option
- Wireless fixture embedded control and occupancy/ daylighting sensor options available, please see the fixture specification sheet
- nLight enabled fixtures comply with monitoring and configuration requirements of Luminaire Level Lighting Controls (LLLC) (C405.2.1, C405.2.4, C405.2.5)



#### Wireless



#### **Bill of Materials**

Symbol	Qty	Product #	Description
	2	nPP16 D EFP	Relay Pack with 0-10V Dimming Output
È	1	nPODM 2P DX	2-Pole On/Off, Raise/ Lower WallPod
	1	nCM PDT 9 RJB	Occupancy Sensor
	1	nCM ADCX RJB	Daylight Sensor

#### **Bill of Materials**

Symbol	Qty	Product #	Description
	2	rPP20 DS 24V G2	Relay Pack with 0-10V Dimming Output
Ė	1	rPODB 2P DX G2	2-Pole On/Off, Raise/ Lower WallPod
	1	rCMS PDT 9 G2	Occupancy and Daylight Sensor

#### / OPERATIONAL DETAILS:

#### **Light Fixtures:**

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

#### **Occupancy Control:**

- Fixtures must be turned on manually (or optionally can be configured to come on automatically to 50%)
- Fixtures turn off automatically when room becomes vacant

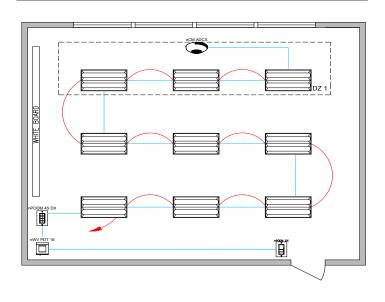
#### **Daylight Control:**

- Smooth continuous dimming
- Daylight zones defined by rows
- Not required for areas without windows or that have loads <150W in sidelit zones

#### **Manual Control:**

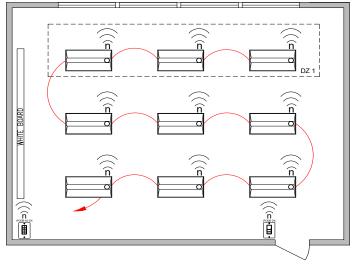
 On/off & raise lower control of two zones of fixtures

- 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<sup>®</sup> interface option on the ECLYPSE controller or through occupancy sensor auxiliary relay (AR) contact option





#### Wireless



#### **Bill of Materials**

Symbol	Qty	Product #	Description
	9	See Note	nLight Wired Enabled Fixture
0	1	nPODM DX	On/Off, Raise/Lower WallPod
	1	nWV PDT 16	Dual Technology Wide View Occupancy Sensor
<b>I</b>	1	nPODM 4S DX	Teacher Station — 4 Scene Control with Master On/Off & Raise/Lower
	1	nCM ADCX RJB	Daylight Sensor

#### **Bill of Materials**

Line Power Feed

Line Voltage Wires

Symbol	Qty	Product #	Description
	9	See Note	nLight AIR Enabled Fixture
Ė	1	rPODB DX G2	On/Off, Raise/Lower WallPod
Ē	1	rPODB 4S DX G2	Teacher Station — 4 Scene Control with Master On/Off & Raise/Lower

#### / OPERATIONAL DETAILS:

#### **Light Fixtures:**

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

#### **Occupancy Control:**

- Fixtures must be turned on manually (or optionally can be configured to some on automatically to 50%)
- Fixtures automatically turn off when room becomes vacant

#### Daylight Control:

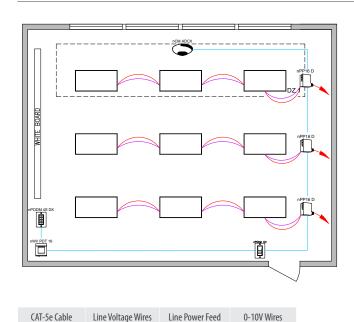
- Smooth continuous dimming
- Custom grouping of fixtures into separate daylight zones (max number zones = number of fixtures)
- Not required for areas without windows or that have loads <150W in sidelit zones

#### **Manual Control:**

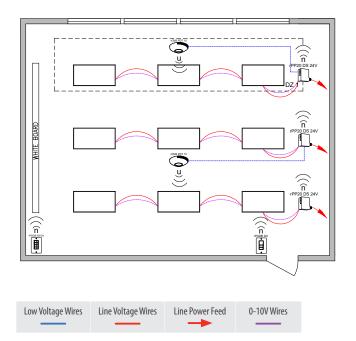
- On/off & raise/lower control of entire room
- Teacher station with 4 preset scenes

#### / 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<sup>®</sup> interface option on the ECLYPSE controller
- Wireless fixture embedded control and occupancy/ daylighting sensor options available, please see the fixture specification sheet
- nLight enabled fixtures comply with monitoring and configuration requirements of Luminaire Level Lighting Controls (LLLC) (C405.2.1, C405.2.4, C405.2.5)



#### **Wireless**



#### **Bill of Materials**

Symbol	Qty	Product #	Description
	3	nPP16 D EFP	Relay Module with 0-10V Dimming Output
•	1	nPODM DX	On/Off, Raise/Lower WallPod
	1	nWV PDT 16	Dual Technology Wide View Occupancy Sensor
I	1	nPODM 4S DX	Teacher Station — 4 Scene Control with Master On/Off & Raise/Lower
	1	nCM ADCX RJB	Daylight Sensor

#### **Bill of Materials**

Symbol	Qty	Product #	Description
	3	rPP20 DS 24V G2	Relay Pack with 0-10V Dimming Output
o o	1	rPODB DX G2	On/Off, Raise/Lower WallPod
	2	rCMS PDT 10 G2	Occupancy and Daylight Sensor
<b>±</b>	1	rPODB 4S DX G2	Teacher Station — 4 Scene Control with Master On/Off & Raise/Lower

#### / OPERATIONAL DETAILS:

#### **Light Fixtures:**

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

#### **Occupancy Control:**

- Fixtures must be turned on manually (or optionally can be configured to come on automatically to 50%)
- Fixtures automatically turn off when room becomes vacant

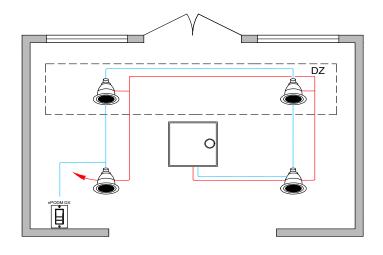
#### **Daylight Control:**

- Smooth continuous dimming
- Daylight zones defined by rows
- Not required for areas without windows or that have loads <150W in sidelit zones

#### **Manual Control:**

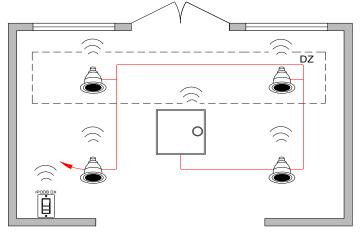
- Master on/off & raise/ lower control of entire room
- Teacher station with 4 preset scenes

- 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<sup>®</sup> interface option on the ECLYPSE controller or through occupancy sensor auxiliary relay (AR) contact option





#### Wireless





#### **Bill of Materials**

Symbol	Qty	Product #	Description
	4	See Notes	nLight Wired Enabled Downlight
0	1	See Notes	nLight Wired Enabled troffer (recessed)
Ė	1	nPODM DX	On/Off, Raise/Lower WallPod

#### **Bill of Materials**

Symbol	Qty	Product #	Description
	4	See Notes	nLight AIR Enabled Downlight
0	1	See Notes	nLight AIR Enabled troffer (recessed)
È	1	rPODB DX G2	On/Off, Raise/Lower WallPod

#### / OPERATIONAL DETAILS:

#### **Light Fixtures:**

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

#### **Occupancy Control:**

- Fixtures automatically go to full bright when occupied
- Fixtures automatically turn off when room becomes vacant

#### **Daylight Control:**

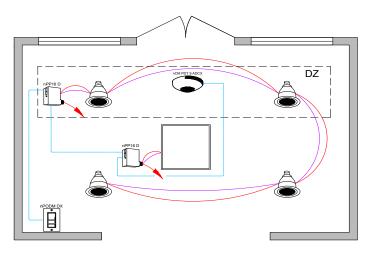
- Smooth continuous dimming
- Custom grouping of fixtures into separate daylight zones (max number zones = number of fixtures)
- Not required for areas without windows or that have loads <150W in sidelit zones

#### **Manual Control:**

On/off & raise/lower control of fixtures

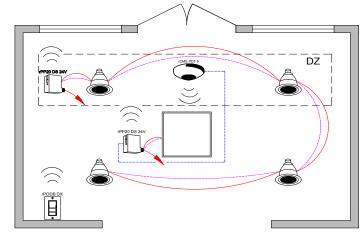
#### / ADDITIONAL OPTIONS:

- 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<sup>®</sup> interface option on the ECLYPSE controller
- Wireless fixture embedded control and occupancy/ daylighting sensor options available, please see the fixture specification sheet
- nLight enabled fixtures comply with monitoring and configuration requirements of Luminaire Level Lighting Controls (LLLC) (C405.2.1, C405.2.4, C405.2.5)



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

#### Wireless



Low Voltage Wires	Line Voltage Wires	Line Power Feed	0-10V Wires
		<b>→</b>	

#### **Bill of Materials**

Symbol	Qty	Product #	Description
	2	nPP16 D EFP	Relay Pack with 0-10V Dimming Output
Ė	1	nPODM DX	On/Off, Raise/Lower WallPod
	1	nCM PDT 9 ADCX	Occupancy and Daylight Sensor

#### **Bill of Materials**

Symbol	Qty	Product #	Description
	2	rPP20 DS 24V G2	Relay Pack with 0-10V Dimming Output
Ė	1	rPODB DX G2	On/Off, Raise/Lower WallPod
	1	rCMS PDT 9 G2	Occupancy and Daylight Sensor

#### / OPERATIONAL DETAILS:

#### **Light Fixtures:**

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

#### **Occupancy Control:**

- Fixtures automatically go to full bright when occupied
- Fixtures automatically turn off when room becomes vacant

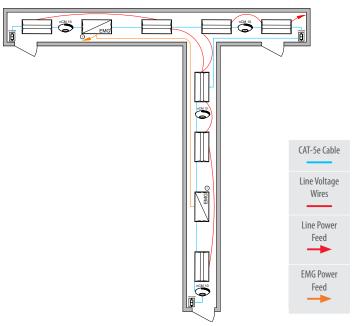
#### **Daylight Control:**

- Smooth continuous dimming
- Daylight zones defined by relay module wiring
- Not required for areas without windows or that have loads <150W in sidelit zones

#### **Manual Control:**

On/off & raise/lower control of fixtures

- 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<sup>®</sup> interface option on the ECLYPSE controller or through occupancy sensor auxiliary relay (AR) contact option

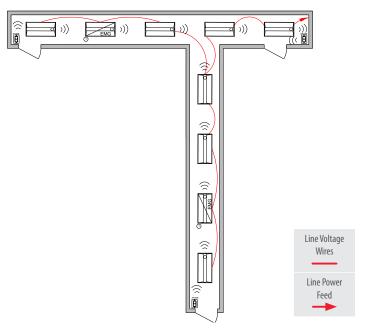


① Some nLight enabled EMG fixtures require a normal sense line connection. See fixture spec sheet for details.

#### **Bill of Materials**

Symbol	Qty	Product #	Description
	7	See Note	nLight Wired Enabled Fixture
	2	See Note	nLight Wired Enabled Fixture with EMG Option
	3	nPODM	On/Off WallPod
	4	nCM 10 RJB	Occupancy Sensor

#### Wireless



1) Fixtures assumed to be battery backup

#### **Bill of Materials**

Symbol	Qty	Product #	Description
	7	See Note	nLight AIR Enabled Fixture
	2	See Note	nLight AIR Enabled Fixture with Battery Option
Ė	3	rPODB G2	On/Off WallPod

#### / OPERATIONAL DETAILS:

#### Light Fixtures:

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

#### Occupancy Control:

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

#### Manual Control:

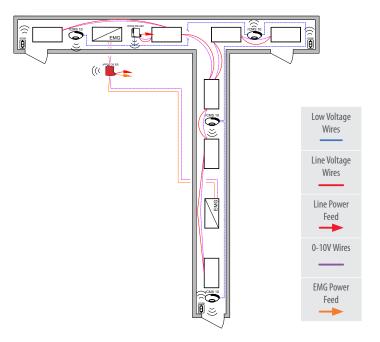
On/off control of fixtures

#### / 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 fixture embedded control and occupancy/ daylighting sensor options available, please see the fixture specification sheet
- nLight enabled fixtures comply with monitoring and configuration requirements of Luminaire Level Lighting Controls (LLLC) (C405.2.1, C405.2.4, C405.2.5)

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

#### Wireless



#### **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
Ė	3	nPODM	On/Off WallPod

#### Bill of Materials

Symbol	Qty	Product #	Description
	1	rPP20 DS 24V G2	Relay Pack with 0-10V Dimming Output
	1	rPP20 DS ER G2	Emergency Relay Pack with 0-10V Dimming Output
	4	rCMS 10 G2	Occupancy Sensor
į	3	rPODB G2	On/Off WallPod

#### / OPERATIONAL DETAILS:

#### **Light Fixtures:**

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

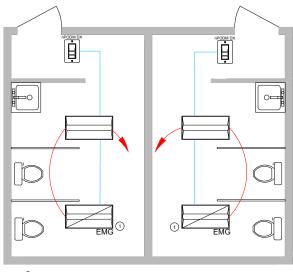
#### **Occupancy Control:**

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

#### Manual Control:

On/off control of fixtures

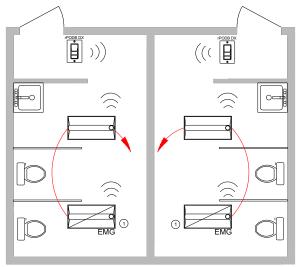
- Room can be connected to nLight backbone to enable network control or time schedules (C405.2.2.1 - Time-Switch Controls), and also qualify for Enhanced Digital Lighting Controls (C406.4)
- HVAC control available through system-wide BACnet<sup>®</sup> interface option on the ECLYPSE controller



 Some nLight enabled EMG fixtures require a normal sense line connection. See fixture spec sheets for details.



#### Wireless



1) Fixtures assumed to be battery backup



#### **Bill of Materials**

Symbol	Qty	Product #	Description
	2	See Note	nLight Wired Enabled Fixture
	2	See Note	nLight Wired Enabled Fixture with the EMG Option
•	2	nPODM DX	On/Off, Raise/Lower WallPod

#### **Bill of Materials**

Symbol	Qty	Product #	Description
	2	See Note	nLight AIR Enabled Fixture
	2	See Note	nLight AIR Enabled Fixture with the Battery Option
Ė	2	rPODB DX G2	On/Off, Raise/Lower WallPod

#### / OPERATIONAL DETAILS:

#### **Light Fixtures:**

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

#### **Occupancy Control:**

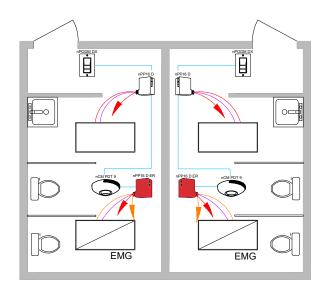
- Fixtures automatically go to full bright when occupied (or optionally can be configured to come on automatically to 50%)
- Fixtures automatically turn off or optionally can be configured to drop to low dim setting when space becomes vacant

#### **Manual Control:**

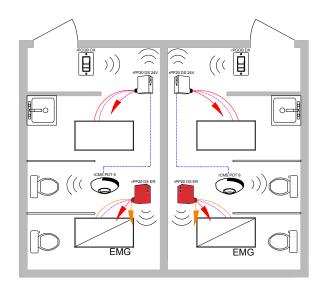
- On/off & raise/lower control of fixtures
- If switch poses safety concerns, optionally can be programmed for "on only"

Note: Contact your local lighting agent for more information on nLight enabled fixtures. nLight enabled fixtures provide Luminaire Level Lighting Controls (LLLC), as specified in the IECC 2018 CODE.

- 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<sup>®</sup> interface option on the ECLYPSE controller or through occupancy sensor auxiliary relay (AR) contact option
- Fixture embedded control and occupancy/ daylighting sensor options available, please see the fixture specification sheet
- nLight enabled fixtures comply with monitoring and configuration requirements of Luminaire Level Lighting Controls (LLLC) (C405.2.1, C405.2.4, C405.2.5)



#### Wireless



CAT-5e Cable	0-10V Wires	Line Voltage Wires	Line Power Feed	EM Power Feed
			<b>→</b>	<b>→</b>

Low Voltage Wires	0-10V Wires	Line Voltage Wires	Line Power Feed	EM Power Feed
			<b>→</b>	-

#### **Bill of Materials**

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

#### **Bill of Materials**

Symbol	Qty	Product #	Description
	2	rPP20 DS 24V G2	Relay Pack with 0-10V Dimming Output
	2	rPP20 DS ER G2	Emergency Relay Pack with 0-10V Dimming Output
	2	rPODB DX G2	On/Off & Raise/ Lower WallPod
	2	rCMS PDT 9 G2	Occupancy Sensor

#### / OPERATIONAL DETAILS:

#### **Light Fixtures:**

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

#### **Occupancy Control:**

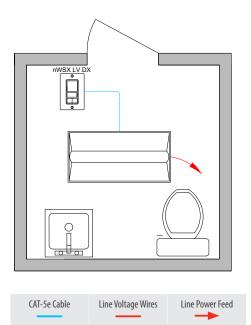
- Fixtures automatically go to full bright when occupied (or optionally can be configured to come on automatically to 50%)
- Fixtures automatically turn off or optionally can be configured to drop to low dim setting when space becomes vacant

#### Manual Control:

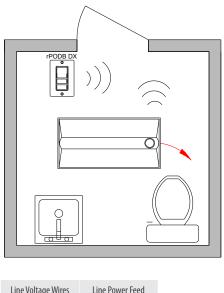
- On/off & raise/lower control of fixtures
- If switch poses safety concerns, optionally can be programmed for "on only"

Note: Contact your local lighting agent for more information on nLight enabled fixtures. nLight enabled fixtures provide Luminaire Level Lighting Controls (LLLC), as specified in the IECC 2018 CODE.

- 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<sup>®</sup> interface option on the ECLYPSE controller or through occupancy sensor auxiliary relay (AR) contact option
- Wireless fixture embedded control and occupancy/ daylighting sensor options available, please see the fixture specification sheet
- nLight enabled fixtures comply with monitoring and configuration requirements of Luminaire Level Lighting Controls (LLLC) (C405.2.1, C405.2.4, C405.2.5)



#### Wireless





#### **Bill of Materials**

Symbol	Qty	Product #	Description
	1	See Notes	nLight Wired Enabled Fixture
Ė	1	nWSX LV DX	Occupancy Wall Switch, On/Off, Raise/Lower

#### **Bill of Materials**

Symbol	Qty	Product #	Description
	1	See Notes	nLight AIR Enabled Fixture
Ė	1	rPODB DX G2	On/Off, Raise/ Lower WallPod

#### / OPERATIONAL DETAILS:

#### **Light Fixtures:**

- All fixtures are dimmable
- Maximum level can be task tuned to any percentage via progrmamming

#### **Occupancy Control:**

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

#### Manual Control:

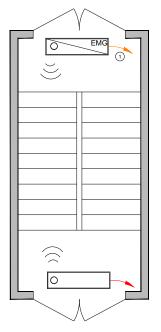
- On/off & raise/lower control of fixtures
- If switch poses safety concerns, optionally can be programmed for "on only"

Note: Contact your local lighting agent for more information on nLight enabled fixtures. nLight enabled fixtures provide Luminaire Level Lighting Controls (LLLC), as specified in the IECC 2018 CODE.

- 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 fixture embedded control and occupancy/ daylighting sensor options available, please see the fixture specification sheet
- nLight enabled fixtures comply with monitoring and configuration requirements of Luminaire Level Lighting Controls (LLLC) (C405.2.1, C405.2.4, C405.2.5)

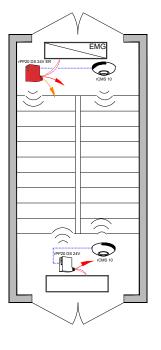
#### Wireless with nLight Enabled Fixtures

#### Wireless with 0-10V Dimming Fixtures





1 Fixtures assumed to be battery backup





#### **Bill of Materials**

Symbol	Qty	Product #	Description
0	1	See Note	nLight AIR Enabled Fixture
	1	See Note	nLight AIR Enabled Fixture with Battery Option

#### **Bill of Materials**

Symbol	Qty	Product #	Description
	1	rPP20 DS 24V G2	Relay Pack with 0-10V Dimming Output
	1 rPP20 E ER G2		Emergency Relay Pack with 0-10V Dimming Output
	2	rCMS 10 G2	Occupancy and Daylight Sensor

#### / OPERATIONAL DETAILS:

#### **Light Fixtures:**

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

#### Occupancy Control:

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

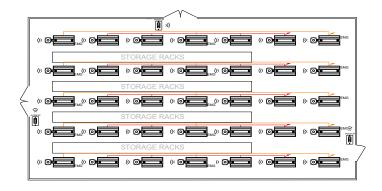
#### Manual Control:

 Safety may preclude the use of a manual control in these areas

Note: Contact your local lighting agent for more information on nLight enabled fixtures. nLight enabled fixtures provide Luminaire Level Lighting Controls (LLLC), as specified in the IECC 2018 CODE.

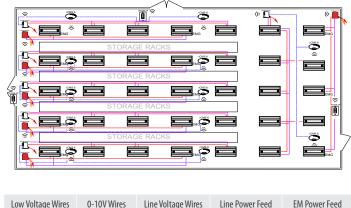
- Room can be connected to nLight backbone to enable network control or time schedules (C405.2.2.1 - Time-Switch Controls), and also qualify for Enhanced Digital Lighting Controls (C406.4)
- HVAC control available through system-wide BACnet<sup>®</sup> interface option on the ECLYPSE controller or through occupancy sensor auxiliary relay (AR) contact option
- Wireless fixture embedded control and occupancy/ daylighting sensor options available, please see the fixture specification sheet
- nLight enabled fixtures comply with monitoring and configuration requirements of Luminaire Level Lighting Controls (LLLC) (C405.2.1, C405.2.4, C405.2.5)

#### Wireless with nLight Enabled Fixtures



# Line Voltage Wires Line Power Feed EM Power Feed

#### Wireless with 0-10V Dimming Fixtures



#### **Bill of Materials**

Symbol	Qty	Product #	Description
	20	IBG Series	nLight AIR Enabled Fixture
	15	IBG Series	nLight AIR Enabled Fixture with EM Option
0	3	rPODB 2P G2	2-Pole On/Off WallPod

#### **Bill of Materials**

Symbol	Qty	Product #	Description
	6	rPP20 DS 24V G2	Relay Pack with 0-10V Dimming Output
	6	rPP20 DS ER G2	Emergency Relay Pack with 0-10V Dimming Output
	3	rPODB 2P G2	2-Pole On/Off WallPod
	12	rCMS 6 G2	Occupancy Sensor

#### / OPERATIONAL DETAILS:

#### **Light Fixtures:**

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

#### **Occupancy Control:**

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

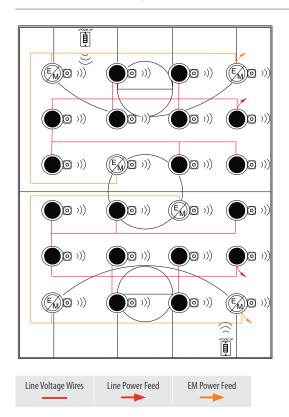
#### **Daylight Control:**

- Daylight responsive controls lights to full off when adequate daylight present
- Not required for spaces without skylights or that have loads
   <150W in toplit zones</li>

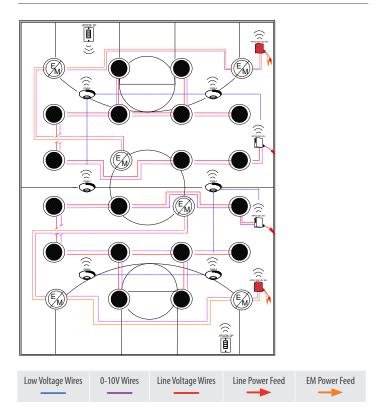
#### / ADDITIONAL OPTIONS:

- 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<sup>®</sup> interface option on the ECLYPSE controller or through occupancy sensor auxiliary relay (AR) contact option
- Wireless fixture embedded control and occupancy/ daylighting sensor options available, please see the fixture specification sheet
- nLight enabled fixtures comply with monitoring and configuration requirements of Luminaire Level Lighting Controls (LLLC) (C405.2.1, C405.2.4, C405.2.5)

## Wireless with nLight Enabled Fixtures



#### Wireless with 0-10V Dimming Fixtures



#### **Bill of Materials**

Symbol	Qty	Product #	Description
	18	See Notes	nLight AIR Enabled Fixture
	6	See Notes	nLight AIR Enabled Fixture with EM Option
	2	rPODB 2P G2	2-Pole On/Off WallPod

#### **Bill of Materials**

Symbol	Qty	Product #	Description
	2	rPP20 DS 24V G2	Relay Pack with 0-10V Dimming Output
	2	rPP20 DS 24V ER G2	Emergency Relay Pack with 0-10V Dimming Output
	2	rPODB 2P G2	2-Pole On/Off WallPod
	6	rCMS 6 G2	High Bay Occupancy Sensor

#### / OPERATIONAL DETAILS:

#### **Light Fixtures:**

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

#### **Occupancy Control:**

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

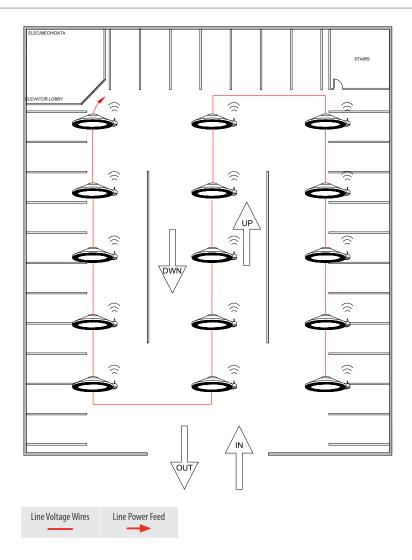
#### **Daylight Control:**

- Daylight responsive controls lights to full off when adequate daylight present
- Not required for spaces without skylights or that have loads
   150W in toplit zones

#### / 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 or through occupancy sensor auxiliary relay (AR) contact option
- Wireless fixture embedded control and occupancy/daylighting sensor options available, please see the fixture specification sheet
- nLight enabled fixtures comply with monitoring and configuration requirements of Luminaire Level Lighting Controls (LLLC) (C405.2.1, C405.2.4, C405.2.5)

### Wireless Parking Garage



#### **Bill of Materials**

Symbol	Qty	Product #	Description	
	15	See Notes	nLight AIR Enabled Fixture	

#### / OPERATIONAL DETAILS:

#### **Light Fixtures:**

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

#### **Occupancy Control:**

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

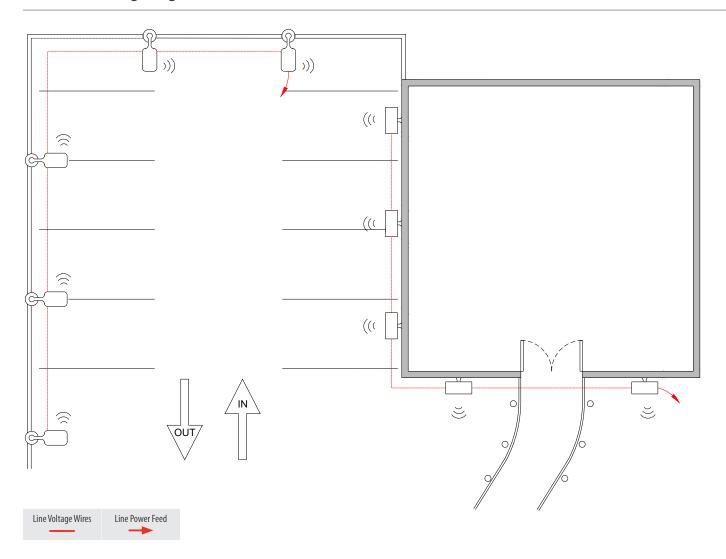
#### **Daylight Control:**

 Daylight responsive controls lights to full off when adequate daylight present

# Note: Contact your local lighting agent for more information on nLight enabled fixtures. nLight enabled fixtures provide Luminaire Level Lighting Controls (LLLC), as specified in the IECC 2018 CODE.

- Devices can be connected to nLight backbone to enabled network control or time schedules, including astronomical time schedules for shutoff (C405.2.6.2), lighting setback (C405.2.6.3), & exterior time-switch control (C405.2.6.4)
- Wireless fixture embedded control and occupancy/daylighting sensor options available, please see the fixture specification sheet
- nLight enabled fixtures comply with monitoring and configuration requirements of Luminaire Level Lighting Controls (LLLC) (C405.2.1, C405.2.4, C405.2.5)

#### **Wireless Site Lighting**



#### **Bill of Materials**

Symbol	Qty	Product #	Description	
	5	See Notes	nLight AIR Enabled Area Fixture	
	5	See Notes	nLight AIR Enabled Wall Mount	

#### / OPERATIONAL DETAILS:

#### **Light Fixtures:**

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

#### **Occupancy Control:**

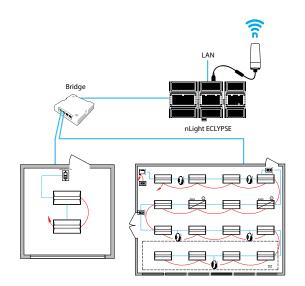
- Fixtures automatically go to full bright when occupied
- Fixtures automatically turn off or optionally can be configured to drop to low dim setting when space becomes vacant

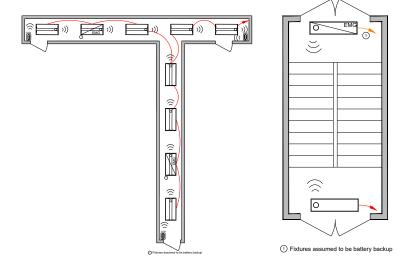
#### **Daylight Control:**

 Daylight responsive controls lights to full off when adequate daylight present

/ ADDITIONAL OPTIONS:

- Devices can be connected to nLight backbone to enabled network control or time schedules, including astronomical time schedules for shutoff (C405.2.6.2), lighting setback (C405.2.6.3), & exterior time-switch control (C405,2,6,4)
- Wireless fixture embedded control and occupancy/daylighting sensor options available, please see the fixture specification sheet
- nLight enabled fixtures comply with monitoring and configuration requirements of Luminaire Level Lighting Controls (LLLC) (C405.2.1, C405.2.4, C405.2.5)





Some nLight enabled EMG fixtures require a normal sense line connection. See fixture spec sheet for details.

#### **Bill of Materials**

Symbol	Qty	Product #	Description
	1	nBRG 8 KIT	8-Port Backbone Bridge
		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 2018 Provision C405.2.2.1, Time-Switch Controls. A networked system also enables astronomical time clock control.

	Control Requirement	Code Provision	nLight Solu	ıtion Details		
			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	Graphic WallPod*		
	Manual Control (Local Switch)	C405.2.5	nPODM Series rPODB Series	Graphic WallPod®		
			Traditional tactile buttons and LED user feedback.	Full-color touch screen provides a sophisticated look and feel.		
	Time Switch		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).			
ontrol	Time-Switch Controls	C405.2.2.1	Network System Controller			
Shut-Off Control	and Exterior Lighting Control (via System Controller)	C405.2.6.2 C405.2.6.3 C405.2.6.4	Network System Controller			
			Additional benefits of installing an nLight backbone include remote status interface capability.	monitoring, system-wide configuration changes, and BMS		
	Full Auto-Off via Occupancy Sensor	C405.2.1.1.1	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.			
			360° Occupancy Sensor	120° WideView Corner Sensor*		
	Manual On, Auto-On <=50%, Full Automatic On	C405.2.1.1.2	nCM Series rCMS Series	nWV Series		
			Surface mounts to ceiling tiles or sheetrock/plaster.	Directly mounts in corner or to ceiling via repositionable ceiling bracket.		
		C405.2.2.2	nLight provides multiple options for controlling continuous dimming lumi be controlled together and with a common user experience.	inaires. This allows spaces with several lighting types and technologies to		
			nLight Enabled Acuity Brands Fixtures	Dimming Relay Packs		
_	Light- Reduction Controls			nPP16 Series rPP20 Series		
Light Level Control			Acuity Brands offers a wide variety of LED fixtures with factory installed integrated nLight controls that provide smooth continuous dimming.	nLight dimming relay enable control of any 0-10VDC dimmable LED luminaire.		
Light		C405.2.3.1	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 networked nLight enabled fixtures or dimming relay packs, each capable of being its own daylight zone.			
	Daylight- Responsive		Ceiling Mount Dimming Photocell	Recessed Mount Dimming Photocell*		
	Controls C405.2.3.2	nCM Series rCMS Series	nRM Series			

 $<sup>{\</sup>rm *Available\ with\ nLight\ Wired\ products\ only.}$ 

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.

# 2018 IECC and Emergency Lighting

IECC lighting controls requirement C405.2 (and subsection 405.2.5 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 UL924 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.

Additional specification details and information can be found on the nLight platform webpage at <a href="https://www.acuitybrands.com/nLight">www.acuitybrands.com/nLight</a>.

# nLight Enabled Fixtures

Acuity Brands offers the industry's broadest portfolio of controls enabled fixtures. Please scan the QR code to see the current nLight enabled fixtures.



# **Mobile Apps**

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

#### nLight Wired







#### nLight BLE Radio Module

nLight wired uses the nIO BT (Bluetooth® Low Energy radio module) to communicate with the nConfig app to modify the settings and operation of the devices in an nLight zone.

The Bluetooth® word mark and logos are registered trademarks owned by Bluettoth SIG, Inc. and any use of such marks by Acuity Brands Lighting is under license.

#### nConfig™

The nConfig mobile app is for nLight wired controls startups. It's a quick and easy alternative to SensorView software for smaller projects and simple programming.

# nLight AIR



#### **CLAIRITY™** Pro

The CLAIRITY Pro mobile app allows you to start up, configure and troubleshoot nLight AIR wireless controls from a compatible smartphone or tablet.



# Additional Resources

#### **Acuity 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 2018 Code as Reference:

Section C405.2.1.1.1 – Full Auto-Off via Occupancy Sensor Section C405.2.1.1.2 – Manual-On or Partial-On

Section C405.2.1.1.2 – Manual-On or Partial-O Section C405.2.1.1.2 – Full Automatic On

Section C405.2.1.3 – Local Switch

Section C405.2.2.1 – Programmable Timeclock
Section C405.2.3 – Daylight-Responsive Controls

Section C405.2.5 – Manual Lighting Reduction
Section C405.2.6 – 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. <a href="https://www.acuitybrands.com/resources/training-and-education">https://www.acuitybrands.com/resources/training-and-education</a>

#### nLight Lighting Controls Platform Page

www.acuitybrands.com/nlight



For lighting applications, A+ means verified consistent performance, visual appearance and system interoperability of all luminaires and controls within the certified solutions. For lighting professionals it means confidence that all parts of the lighting system will work together and meet common Acuity Brands specifications.

Go to www.acuitybrands.com/solutions/a-certified or contact your local Acuity Brands representative for more information.

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