Project	Catalog #	Туре	
Prepared by	Notes	Date	



# **Portfolio**

# LSRS2B/LSSQS2B Cylinders

LSRS2B/LSSQS2B/LSRSYM2B/LSSQSYM2B LED 2" Shallow Round and Square Cylinder

### **Typical Applications**

Office • Education • Healthcare • Hospitality • Retail • Residential

# Interactive Menu

- Order Information page 2 page 3
- Product Specifications page 4
- Energy Data page 4
- Photometric Data page 5
- Connected Systems page 7
- · Product Warranty

# **Product Certification**











**Product Features** 



damp location



# **Control Compatibility**



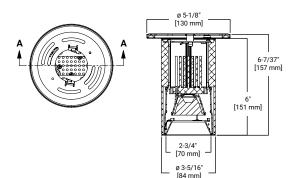


## **Top Product Features**

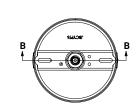
- 500 to 2000 lumens; Offered in 80, 90 and 97 CRI; Downlight or wall wash
- Shallow round or square surface-mount cylinders; Ceiling, wall, stem, up/down, yoke mount adjustable, LuxWire power over cable
- Extruded aluminum housing; Matte Black, White, Bronze and Silver paint finishes
- 6 color temperatures: 2400K, 2700K, 3000K, 3500K, 4000K and 5000K CCT; D2W™ option from 3000K to 1850K
- W2N Tunable White 2700K-6500K or 2000K-5000K (remote only)
- · Options to meet Trade Agreements Act requirements

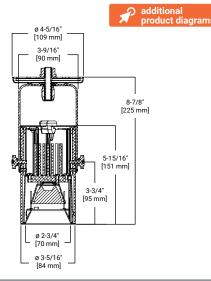
# **Dimensional and Mounting Details**

# 2IN ROUND SHALLOW CYLINDER CEILING MOUNT



# 2IN ROUND SHALLOW CYLINDER YOKE MOUNT







## **Order Information**

SAMPLE ORDER NUMBER: LSR2B10D010P

Domestic Preferences  Domestic Preferences(22)	<b>Cylinder</b> Cylinder	Lumens Lumens	<b>Distribution</b> Distribution	CRI CRI		Color Color	
[Blank]=Standard TAA=Trade Agreements Act	LSRS2B=2-inch round shallow surface ceiling mount <sup>(17)</sup> LSRSWM2B= 2-inch round shallow wall mount LSRSUD2B= 2-inch round shallow wall mount up/down <sup>(1)</sup> LSSQS2B= 2-inch square shallow surface ceiling mount <sup>(17)</sup> LSSQSWM2B= 2-inch square shallow wall mount up/down <sup>(1)</sup> LSSQSUD2B= 2-inch square shallow wall mount up/down <sup>(1)</sup> LSSQSPC2B = 2-inch square surface ceiling mount LuxWire aircraft cable with power 120° <sup>(15)</sup> <sup>(17)</sup> LSRSPC2B = 2-inch round surface ceiling mount LuxWire aircraft cable with power 120° <sup>(15)</sup> <sup>(17)</sup> LSRSYM2B = 2-inch round shallow yoke mount <sup>(18)</sup> LSSQSYM2B = 2-inch square shallow yoke mount <sup>(18)</sup>	05=500 lumens <sup>(21)</sup> 10=1000 lumens 15=1500 lumens 20=2000 lumens	SP15=15° NFL25=25° FL40=40° WFL55=55°	80=80 CRI minimum 90=90 CRI minimum 97=97 CRI minimum 97=97 CRI minimum Dim to Warm (1000 & 9030D2W=1800-3000k Tunable White (1000 li W2N902765 = 0% to 10 W2N902050 = 0% to 10	( Dim to Warm, <b>umens only)</b> 00%, 120-277V,	, 90 CRI , 2700K-6500K	

Driver	Finish
Driver	Finish <sup>(4)</sup>
D010R= Remote 120-277V 0-10V 1% dimming 3D010R= Remote 347V 0-10V 1% dimming D010TRR= Remote 0-10V (120-277V) or line voltage (120V) dimming, 5-100% DE010R=Remote 120-277V 0-10V 0% linear dimming D5LTR=Remote Fifth Light DALI DT6 Logarithmic Dimming, 0% to 100%, 120V-27 DMXR=Remote DMX/RDM logarithmic dimming <sup>69</sup> DMXCSR=Remote DMX/RDM logarithmic dimming with RJ45 connection DL2R=Remote 1 to 100% dimming, 120V Lutron Hi-Lume forward phase dimming DLER=Remote Lutron Ecosystem dimming 1% to 100%, 120-277V	
Tunable White 1000-2000 lumens <sup>(1-6)</sup> DE010W2N2765=0-10V dimming, 0% to 100%, 120-277V, 2700K-6500K DE010W2N22050=0-10V dimming, 0% to 100%, 120-277V, 2000K-5000K DSLTW2N276=Fifth Light DALI DT6 Logarithmic Dimming, 0% to 100%, 120V-27; DSLTW2N2050=Fifth Light DALI DT6 Logarithmic Dimming, 0% to 100%, 120V-27;	

### SAMPLE ORDER NUMBER: 2LBSW3LI

Trim	Reflector	Flange	Finish
Trim	Reflector	Flange	Finish
2LB=2* trim	D=Spun aluminum DL=Lensed spun aluminum DC=Die cast aluminum <sup>(9)</sup> DLC=Lensed die cast aluminum <sup>(9)</sup>	3=Rimless <sup>(10)</sup>	LI=Specular Clear(11) H=Semi-Specular Clear(11) WMH=Warm Haze(11) WHH-Wheat(11) WHH=Wheat Haze(11) GPH=Graphite Haze(11) B=Specular Black(11) MW=Matte White MB=Matte Black(12) MMS=Matte Metallic Silver(12)

- Notes
  (1) Requires 2 reflectors and light engines.
- (3) DMX fixtures default to full on upon loss of DMX signal
- (4) Consult factory for custom finishes.
- (9) Available with Matte White, Matte metallic silver and Matte Black Finishes. (10) Available on D, DL, DLC and DC.
- (11) Not available on Pinhole or DC distributions.
- (12) Available only on DC.
- (15) Canopy mount driver available omit R in driver ordering information, not offered with DMX (16) W2N not compatible with LuxWire.
- (17) Requires canopy kit, see below for ordering information
- (18) Ceiling mount only
- (21) Limited to D010 drivers
- (22) Only product configurations with this designated prefix are built to be compliant with the Trade Agreements Act of 1979 (TAA). Please refer to <u>DOMESTIC PREFERENCES</u> website for more information. Components shipped separately may be separately analyzed under domestic preference requirements. Consult factory for further information.

Trim must be ordered with cylinder for TAA compliance. Example: TAALSR2B10D010P-2LB



### **Order Information**

### **REQUIRED** if Remote Driver (R) is specified on Cylinder

Domestic Preferences  Domestic Preferences(22)	Remote Drivers  Remote Drivers <sup>(5)</sup>	Lumens Lumens	Voltage Voltage	<mark>Driver</mark> Driver	Options Options	Controls Controls
[Blank]=Standard TAA=Trade Agreements Act	R100=Remote 100 ft R75= Remote 75ft R50= Remote 50 ft R25= Remote 25ft R15= Remote 15ft R5= Remote 15ft R5= Remote 2 ft	05=500 lumens <sup>(21)</sup> 10=1000 lumens 15=1500 lumens 20=2000 lumens	blank=120-277V 3=347V	D010=120-277V 0-10V 1% dimming D010TR=0-10V (120-277V) or line voltage (120V) dimming, 5-100% DE010=0-10V Linear Dimming, 0% to 100%, 120V-277V DSLT=Firth Light® DALI DT6 Logarithmic Dimming, 0% to 100%, 120V-277V DMX-DMX/RDM Logarithmic Dimming, 0% to 100%, 120V-277V (%) DMXCS=DMX/RDM Logarithmic Dimming, 0% to 100%, 120V-277V, with RJ45 connection DL2=1 to 100% dimming, 120V Lutron Hi-Lume forward phase dimming (7) DLE=Lutron Ecosystem dimming 1% to 100%, 120-277V (7) DLV=Low Voltage System  Tunable White 1000-2000 lumens DE010W2N2765=0-10V dimming, 0% to 100%, 120-277V, 2700K-6500K DE010W2N2765=0-10V dimming, 0% to 100%, 120-277V, 2000K-5000K DSLTW2N276=Fifth Light DALI DT6 Logarithmic Dimming, 0% to 100%, 120V-277V, 2700K-6500K	EM7=7W Emergency Module with Remote Test Switch EM14=14W Emergency Module with Remote Test Switch EM80D=Bodine® Emergency Module with Remote Test Switch EM72=7W Emergency Module for use with DLV driver with Remote Test Switch EM14=14W Emergency Module for use with DLV driver with Remote Test Switch EM14=14W Emergency Module for use with DLV driver with Remote Test Switch	WPST = Factory installed Wavelinx (includes control module, sensor, cable, tilemount and ceiling mount sensor) (8) (19) WLST = Factory installed WaveLinx LITE Sensor Kit (8) (28) WPN = WaveLinx PRO Wireless Node without sensor (23)

Pendant or Canopy Kit REQUIRED for Surface Ceiling Mount Pendant Kit for round cylinder <sup>(13)</sup> P236B2—Bronze pendant stem kit for round suspended mount cylinder P236B3—Silver pendant stem kit for round suspended mount cylinder P236B3—Silver pendant stem kit for square suspended mount cylinder PSQ236B2—Bronze pendant stem kit for square suspended mount cylinder PSQ236B3—Silver pendant stem kit for square suspended mount cylinder PSQ236B3—Silver pendant stem kit for square suspended mount cylinder PSQ236B3—Silver pendant stem kit for square suspended mount cylinder PSQ236B3—Silver pendant stem kit for square suspended mount cylinder PSQ236B3—Silver pendant stem kit for square suspended mount cylinder PSQ236B3—Silver pendant stem kit for square suspended mount cylinder	Accessories	туре	Lengths
Pendant Kit for round cylinder (13) P236BZ=Bronze pendant stem kit for round suspended mount cylinder P236BBABT Ebronze pendant stem kit for round suspended mount cylinder P236SL=Silver pendant stem kit for round suspended mount cylinder PENDANT FOR SQUART STEMP S	Accessories <sup>(22)</sup>	Туре	Lengths
	Pendant Kit for round cylinder <sup>(13)</sup> P236P=White pendant stem kit for round suspended mount cylinder P236BZ=Bronze pendant stem kit for round suspended mount cylinder P236MB-Matte black pendant stem kit for round suspended mount cylinder P236LS=Silver pendant stem kit for round suspended mount cylinder Pendant Kit for square cylinder <sup>(13)</sup> PSQ236P=White pendant stem kit for square suspended mount cylinder PSQ236BZ=Bronze pendant stem kit for square suspended mount cylinder PSQ236MB-Matte black pendant stem kit for square suspended mount cylinder	RM=For remote drivers	

#### Surface Ceiling Mount Canopy

2SQPSMLP= White low profile canopy for square surface mount 2-inch junction box 2SQPSMLBZ= Bronze low profile canopy for square surface mount 2-inch junction box 2SQPSMLMB= Matte Black low profile canopy for square surface mount 2-inch junction box 2SQPSMLSL= Silver low profile canopy for square surface mount 2-inch junction box 2RCPSMLP= White low profile canopy for round surface mount 2-inch junction box 2RCPSMLBZ= Bronze low profile canopy for round surface mount 2-inch junction box 2RCPSMLMB= Matte Black low profile canopy for round surface mount 2-inch junction box 2RCPSMLSL= Silver low profile canopy for round surface mount 2-inch junction box 2SQPSTANP= White low profile canopy for square surface mount standard junction box 2SQPSTANBZ= Bronze low profile canopy for square surface mount standard junction box 2SQPSTANMB= Matte black low profile canopy for square surface mount standard junction box 2SQPSTANSL= Silver low profile canopy for square surface mount standard junction box 2RCPSTANP= White low profile canopy for round surface mount standard junction box 2RCPSTANBZ= Bronze low profile canopy for round surface mount standard junction box 2RCPSTANMB= Matte black low profile canopy for round surface mount standard junction box 2RCPSTANSL= Silver low profile canopy for round surface mount standard junction box

#### Connected Lighting Systems(8

WPST = Field installed WaveLinx sensor Kit (19)
WLST = Field installed WaveLinx Lite Sensor Kit (20)

- **Notes** (5) Up down surface mount require 2 driver assemblies.
- (6) DMX fixtures default to full on upon loss of DMX signal
- (7) Only available up to 25'
- (8) Refer to system specifications for additional information, features, and benefits. Order either factory installed option or accessory
- (13) 0-45° slope.
- (19) WPST = WaveLinx wireless sensor kit for daylight dimming, PIR motion sensing, and optional RLTS Real Time Location Services, use with 0-10V only.
- (20) WLST = WaveLinx Lite tile mount sensor kit for daylight dimming, PIR motion sensing, use with D010 only (Refer to WaveLinx Lite system specifications)
- (22) Only product configurations with this designated prefix are built to be compliant with the Trade Agreements Act of 1979 (TAA). Please refer to <u>DOMESTIC PREFERENCES</u> website for more information. Components shipped separately may be separately analyzed under domestic preference requirements. Consult factory for further information.
- (23) WPN = WaveLinx PRO wireless node provides luminaire-level control with scene and zone configuration without an integrated sensor; Connects wirelessly with daylight dimming sensor and PIR motion sensor if desired. Use with 0-10V driver only



## **Product Specifications**

#### **Lower Reflector**

- Round or square 2-3/4" aperture
- · Painted die-cast aluminum or spun aluminum with a lensed upper optical chamber provides superior lumen output with minimal source brightness
- · Square surface mount available with round reflectors
- · Available in all Portfolio finishes

#### Trim retention

Three pressure springs hold flange tightly to the cylinder lip

#### Cylinder

- · Round and soft square extruded aluminum
- · Matte white, bronze, silver or matte black. Consult factory for custom finishes.
- · Available in standard and shallow heights
- · Yoke mount provides +/-45° lockable tilt

- · Mounting plate installs to mounted junction box
- Cylinder mounts to plate with easy twist and lock hooks for ceiling mount
- For wall mount, mounting arm attaches directly to junction box via a robust mounting plate
- Offered with optional stem and aircraft cable
- LuxWire™ provides low voltage power to the cylinder via aircraft cable

· Aluminum heat sink conducts heat away from the LED module for optical performance and longer life

#### **LED System**

- Contains a plurality of high brightness white LED's combined with high reflectance upper reflector and convex transitional lens producing even distribution with no pixilation
- · Lumen output shall not decrease by more than 10% over the minimum life of 55,000 hours (L90 > 55,000 hours)
- Color variation within 2-step MacAdam ellipses
- Available in 2400K, 2700K, 3000K, 3500K, 4000K and 5000K correlated color temperature (CCT)
- · Available in 80, 90 or 97 color rendering index (CRI)

### VividTune™ Color Tuning Solutions

- D2W™ Dim-to-Warm shifts CCT from 3000K to 1850K as fixture dims, mimicking halogen sources
- W2N Tunable white CCT range from 2700K to 6500K or 2000K to 5000K; 90 CRI (remote only)

#### **Remote Driver**

- Standard 120-277V 0-10V dimming driver provides
- flicker free dimming from 100% to 1%
- Optional 120V leading edge, <1% 0-10V, Fifth Light,
- · DMX or Lutron® Ecosystem
- · Distributed low voltage power system combines power, lighting, and controls with ease of installation. (remote only)

#### **Connected Lighting System Options**

Two WaveLinx connected solutions to choose from. Refer to WaveLinx system specifications and application guides for details.

### WaveLinx PRO Tilemount Sensor Kit

· WaveLinx WPST tilemount sensor kit offers daylight dimming, PIR motion sensing, scene and zone configuration, automatic commissioning; and optional RLTS - Real Time Location Services available.

#### **WaveLinx PRO Wireless Node**

WaveLinx PRO wireless node provides luminairelevel control with scene and zone configuration without an integrated sensor; Connects wirelessly with daylight dimming sensor and PIR motion sensor if desired. Use with 0-10V driver only.

#### WaveLinx LITE Tilemount Sensor Kit

WaveLinx LITE WLST tilemount sensor kit offers daylight dimming and PIR motion sensing, scene and grouping configuration.

### **WaveLinx Tilemount Kits Application**

- The WPST and WLST tilemount kits include a control module mounted on the luminaire junction box via 1/2" knock-out, and a tilemount sensor on 54-inch whip; for ceiling installation by direct-mount spring clips or via mounting bracket in octagon ceiling boxes.
- The WPST and WLST tilemount kits may be ordered as factory installed on the luminaire, or ordered separately as a field installed accessory kit.

#### Compliance

- Pendant mount cULus Listed for damp locations
- Ceiling mount cULus Listed for protected wet locations with lensed trims with covered ceiling
- Wall mount downlight cULus Listed for wet locations
- EMI/RFI emissions per FCC 47CFR Part 18 Class B consumer limits
- RoHS compliant
- Photometric testing completed in accordance with IES LM-79
- LED life testing completed in accordance with IES LM-80 standards

#### Warranty

Five year warranty www.cooperlighting.com/legal

# **Energy Data**

ENERGY DATA
Sound Rating: Class A standards
(Values at non-dimming line voltage)
Minimum Starting Temperature: -30°C (-22°F)
EMI/RFI: FCC Title 47 CFR, Part 15, Class B (Consumer)
Input Voltage: UNV (120V - 277V)
Power Factor: >0.90 (at nominal input 120-277 VAC & 100% of Rated Output Power)
Input Frequency: 50/60Hz

	12	10V	277V		
Lumens	Inrush (A)	Duration (ms)	Inrush (A)	Duration (ms)	
500 Lumen D010	0.64	0.05	1.4	0.04	
1000 Lumen D010	1.02	0.041	2.18	0.021	
1500 Lumen D010	1.02	1.02	2.24	0.064	
2000 Lumen D010	1.02	0.077	2.43	0.027	

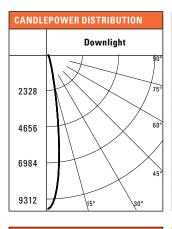
500 Lum	en D010	1000 Lur	nen D010
Input Power: 7.38W	THD <14.4%	Input Power: 11W	THD <13.8%
Input Current: 0.06A	277V Input Current: 0.03A	Input Current: 0.086A	277V Input Current: 0.042A

1500 Lur	nen D010	2000 Lur	nen D010
Input Power: 15.05 W	THD <13.0%	Input Power: 21.2 W	THD <8.6%
Input Current:0.13A	277V Input Current:0.06A	Input Current:0.18A	277V Input Current:0.081A



# **Photometric Data**

SPOT (15°	SPOT (15° BEAM)					
Test Number	P264029					
Housing	LSR2B10SP158035					
Trim	2LBD*LI					
Lumens	974					
Efficacy	94.6 Lm/W					
sc	0.28					



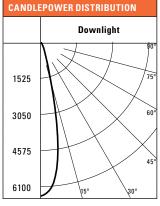
CONE	CONE OF LIGHT						
0°							
D	FC	L	W				
4'	582.2	1	1				
7'	190.1	1.8	1.8				
9'	9' 115 2.4 2.4						
13'	55.1	3.6	3.6				
16'	36.4	4.4	4.4				

CANDELA TABLE		
Degrees Vertical	Candela	
0	9316	
5	7438	
15	976	
25	141	
35	30	
45	7	
55	2	
65	1	
75	0	
85	0	
90	0	

ZONAL	LUMEN SI	JMMARY	LUMIN
Zone	Lumens	%	Averaç Cande
		Fixture	Degree
0-30	945	97	45
0-40	965	99.1	55
0-60	973	99.9	
			65
0-90	974	100	
			75
90-180	0	0	
0-180	974	100	85
			L

Υ	LUMINANO	CE
	Average Candela Degrees	Average 0° Luminance
	45	4884
	55	1720
	65	1167
	75	0
	85	0

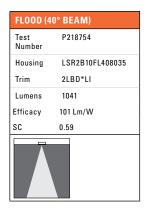
FLOOD (25	° BEAM)
Test Number	P218711
Housing	LSR2B10NFL258035
Trim	2LBD*LI
Lumens	1026
Efficacy	99.6 Lm/W
SC	0.39

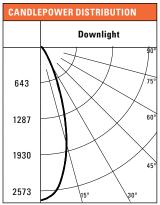


CONE	CONE OF LIGHT				
000					
D	FC	L	W		
4'	382	1.4	1.4		
7'	125	2.6	2.6		
9'	75	3.4	3.4		
13'	36	5	5		
16'	24	6	6		

	CANDELA TABLE		
	Degrees Vertical	Candela	
	0	6104	
	5	5611	
	15	1236	
	25	229	
ı	35	51	
ò	45	7	
	55	1	
ŀ	65	0	
	75	0	
	85	0	
	90	0	

ZONAL	LUMEN SI	JMMARY	LUMINANO	CE
Zone	Lumens	% Fixture	Average Candela Degrees	Average 0° Luminance
0-30	987	96.2	45	3836
0-40	1019	99.3	55	676
0-60	1026	100	65	0
0-90	1026	100	75	0
90-180	0	0	/5	U
0-180	1026	100	85	0



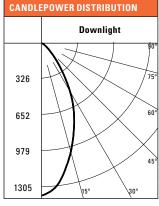


CONE OF LIGHT				
000				
D	FC	L	W	
4'	161	2.2	2.2	
7'	53	4	4	
9'	32	5.2	5.2	
13'	15	7.6	7.6	
16'	10	9.4	9.4	

Degrees Vertical	Candela	
0	2577	
5	2467	
15	1626	
25	581	
35	120	
45	19	
55	4	
65	0	
75	0	
85	0	
90	0	

ZONAL	LUMEN SU	JMMARY		LUMINANO	E
Zone	Lumens	% Fixture		Average Candela Degrees	Average 0° Luminance
0-30	938	90.2		45	10412
0-40	1020	98.0		55	2702
0-60	1040	99.9			
0-90	1041	100		65	0
90-180	0	0		75	0
0-180	1041	100		85	0
			l '		

WIDE FLO	DOD (55° BEAM)			
Test Number	P218801			
Housing	LSR2B10WFL558035			
Trim	2LBD*LI			
Lumens	985			
Efficacy	95.6 Lm/W			
SC	0.73			



000				
D	FC	L	W	
4'	82	2.8	2.8	
7'	27	5	5	
9'	16	6.6	6.6	
13'	8	9.4	9.4	
16'	5	11.6	11.6	

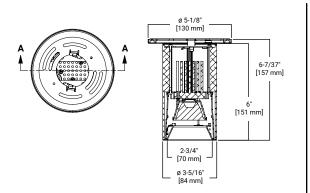
CANDELA TABLE	
Degrees Vertical	Candela
0	1309
5	1250
15	959
25	644
35	313
45	105
55	28
65	0
75	0
85	0
90	0

ZONAL LUMEN SUMMARY		
Zone	Lumens	%
		Fixture
0-30	674	68.5
0-40	873	88.7
0-60	984	99.9
0-90	985	100
90-180	0	0
0-180	985	100

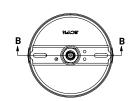
LUMINANCE	
Average Candela Degrees	Average 0° Luminance
45	57541
55	18916
65	0
75	0
85	0

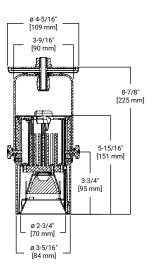
# **Dimensional and Mounting Details**

# 2IN ROUND SHALLOW CYLINDER CEILING MOUNT

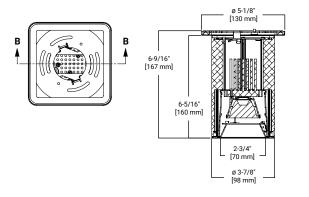


# 2IN ROUND SHALLOW CYLINDER YOKE MOUNT

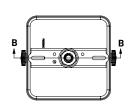


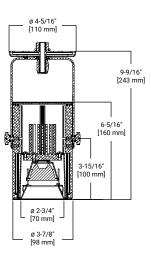


# 2IN SQUARE SHALLOW CYLINDER CEILING MOUNT



# 2IN SQUARE SHALLOW CYLINDER YOKE MOUNT





### **Connected Solutions**



## WaveLinx LITE - WLST Tilemount Sensor

- Intuitive Android™ or Apple® iOS® app for basic system code compliant set up and configuration via Bluetooth
- Up to 28 unique areas per project site (WaveLinx LITE Bluetooth network)
- Up to 50 devices for an area, any one of 16 control zones, up to 6 occupancy sets, and custom lighting scenes
- Automatic occupancy or vacancy, sensor sensitivity, daylight dimming, etc. configurable through the app
- Refer to the WaveLinx system specifications for details







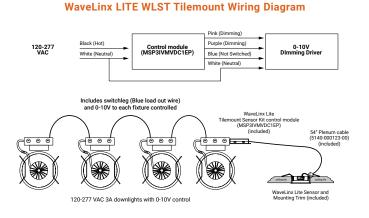


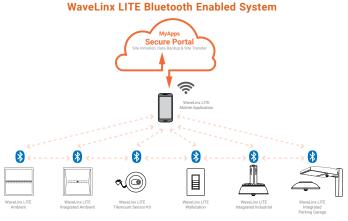












# WaveLinx PRO Wireless - WPST Tilemount Sensor

- WaveLinx PRO Wireless functionality configures zones and customizes settings from one secure mobile app
- Automatic code commissioning that meets the strictest codes
- Fixtures and sensors integrate with Wireless Area Controller, Wall Stations, and Control Devices
- Stand-Alone Offices or Entire Building Network Installations



### WaveLinx mobile app settings









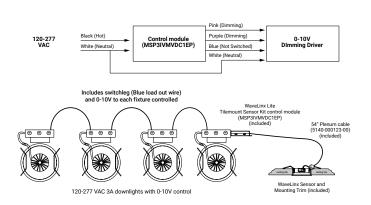




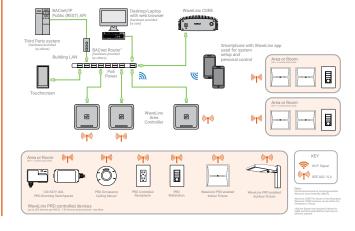




#### **WaveLinx PRO WPST Tilemount Wiring Diagram**



#### **WaveLinx CORE Building Management Integration**



## **Connected Solutions**

## WaveLinx PRO Wireless Node - WPN

- · WaveLinx Wireless functionality configures zones and customizes settings from one secure mobile app
- · Automatic code commissioning that meets the strictest codes
- · Fixtures and sensors integrate with WaveLinx Area Controller, Wall Stations, and Control Devices
- · Stand-Alone Offices or Entire Building Network Installations



#### WaveLinx mobile app settings











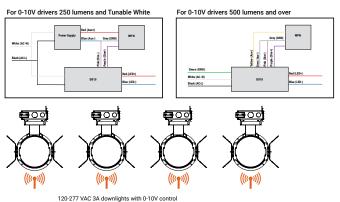








### WaveLinx PRO Wireless Node (WPN) Wiring Diagram



# **WaveLinx CORE Building Management Integration**

