

Project		Catalog #		Type	
Prepared by		Notes		Date	



Shaper

Shaper Sense™ Box

Acoustic Lighting
Pendant Luminaire
Suspended Direct/Indirect

Typical Applications

• Office • Education • Healthcare • Hospitality • Retail • Co-working

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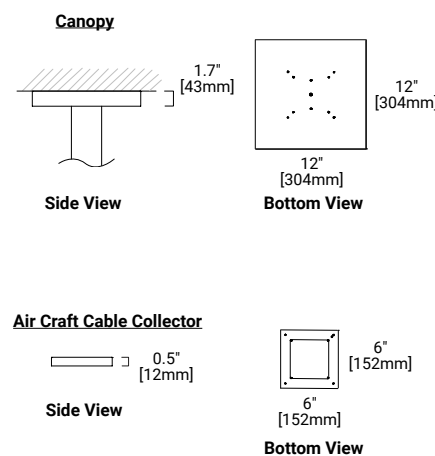
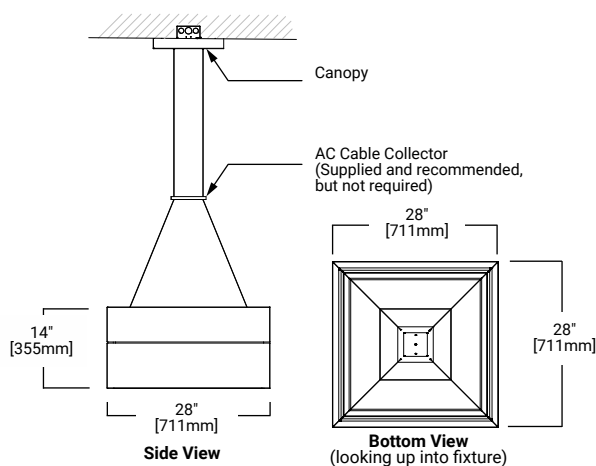
Systems | Certification | Features & Awards



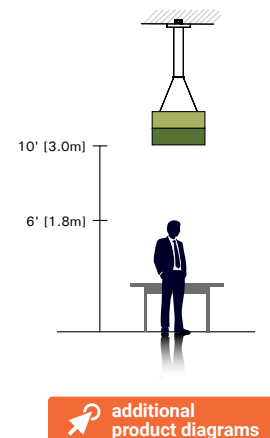
Top Product Features

- Shaper Sense is an award winning and patented acoustic lighting product series that merges the concepts of light and sound absorption.
- Lighting is created by an edge-lit square LED panel with an array of patterns that produce uniform visual distribution.
- Sound absorbing acoustic panels are designed with industry leading [FilzFelt™](#) acoustic materials.
- Available in over 60+ vibrant felt colors using 100% Wool Design Felt - 100% recyclable.
- Noise Reduction Coefficient (NRC) = 1.2, Sound Absorption Average (SAA) = 1.19. Learn more at [Noise at Work, Knoll - Workplace Research](#).
- Select top panel felt colors and bottom panel felt colors.

Dimensions



Scale



additional product diagrams

Order Information

FIXTURE NUMBER SAMPLE: ShSe-BOX-1-L40-80-UNV-CNPY-STD-TP300-BP170

Series	Shape / Family	Light Level (Lumens, Wattage, Color Temp, CRI)	Voltage	Mounting	Dimming	Finish	Controls (optional)
Series	Shape / Family	Light Level / CCT / CRI (Lumens Wattage, Color Temp, CRI)	Voltage	Mounting	Dimming	Finish	Controls
ShSe= Shaper Sense	BOX=Box shaped acoustic light fixture	1-L30-90=2480 lumens, 30W, 3000K, 90 CRI 1-L35-80=3084 lumens, 30W, 3500K, 80 CRI 1-L40-80=3028 lumens, 30W, 4000K, 80 CRI 2-L30-90=3172 lumens, 39W, 3000K, 90 CRI 2-L35-80=3944 lumens, 39W, 3500K, 80 CRI 2-L40-80=3873 lumens, 39W, 4000K, 80 CRI	UNV=Universal Voltage (120-277)	CNPY=Canopy mount (works for surface, open structure, and gypsum ceilings)	STD=0-10V	(See below and page 3 for panel and color selections)	SWTPD1=Wavelinx Wireless Tile Sensor LWTPD1=LumaWatt Pro Wireless Tile Sensor
Notes	Notes	Notes 3000K – only in 90 CRI, 3500K only available in 80 CRI, 4000K only available in 80 CRI.	Notes	Notes	Notes	Notes	Notes

Top Panel Selection (TP)

Bottom Panel Selection (BP)

Top Panel Selection (TP)		Bottom Panel Selection (BP)	
TP100= TP Wollweiss TP110= TP Rohweiss TP150= TP Weiss TP160= TP Beige TP170= TP Asche TP175= TP Graphit TP190= TP Natur-meliert TP200= TP Natur TP220= TP Rehbraun TP250= TP Truffelbraun TP300= TP Anthrazit TP102= TP Kirsche TP105= TP Rost TP116= TP Orange TP125= TP Tomate TP136= TP Weinrot TP156= TP Loden TP203= TP Vanille TP274= TP Senf TP312= TP Lagune TP331= TP Sahara TP385= TP Schlamm TP408= TP Taupe TP415= TP Schlif TP437= TP Aubergine TP448= TP Moos TP503= TP Magnolie TP534= TP Rose TP540= TP Ozean TP613= TP Gletscher TP626= TP Azur TP686= TP Enzian TP713= TP Kiwi		BP100= BP Wollweiss BP110= BP Rohweiss BP150= BP Weiss BP160= BP Beige BP170= BP Asche BP175= BP Graphit BP190= BP Natur-meliert BP200= BP Natur BP220= BP Rehbraun BP250= BP Truffelbraun BP300= BP Anthrazit BP102= BP Kirsche BP105= BP Rost BP116= BP Orange BP125= BP Tomate BP136= BP Weinrot BP156= BP Loden BP203= BP Vanille BP274= BP Senf BP312= BP Lagune BP331= BP Sahara BP385= BP Schlamm BP408= BP Taupe BP415= BP Schlif BP437= BP Aubergine BP448= BP Moos BP503= BP Magnolie BP534= BP Rose BP540= BP Ozean BP613= BP Gletscher BP626= BP Azur BP686= BP Enzian BP713= BP Kiwi	
TP732= TP Farn TP124= TP Gelb TP131= TP Honig TP151= TP Hellorange TP173= TP Mango TP179= TP Hellrot TP180= TP Terracotta TP201= TP Rot TP209= TP Bordeaux TP231= TP Rosa TP242= TP Pink TP255= TP Flieder TP265= TP Lavendel TP269= TP Violett TP272= TP Royal TP282= TP D'Blau TP284= TP Himmel TP286= TP H'Blau TP308= TP Petrol TP343= TP D'Grun TP345= TP Pazifik TP377= TP Maigrun TP378= TP Oliv TP384= TP Lind TP411= TP Alpaka TP423= TP Hellgrau TP425= TP Taubengrau TP426= TP Schwarz TP467= TP Sand TP476= TP Schoko TP497= TP D'Braun TP533= TP Indigo TP548= TP Turkis		BP732= BP Farn BP124= BP Gelb BP131= BP Honig BP151= BP Hellorange BP173= BP Mango BP179= BP Hellrot BP180= BP Terracotta BP201= BP Rot BP209= BP Bordeaux BP231= BP Rosa BP242= BP Pink BP255= BP Flieder BP265= BP Lavendel BP269= BP Violett BP272= BP Royal BP282= BP D'Blau BP284= BP Himmel BP286= BP H'Blau BP308= BP Petrol BP343= BP D'Grun BP345= BP Pazifik BP377= BP Maigrun BP378= BP Oliv BP384= BP Lind BP411= BP Alpaka BP423= BP Hellgrau BP425= BP Taubengrau BP426= BP Schwarz BP467= BP Sand BP476= BP Schoko BP497= BP D'Braun BP533= BP Indigo BP548= BP Turkis	
Notes Selection for BOX top panel color. See diagram on page 3 for clarification.		Notes Selection for BOX bottom panel color. See diagram on page 3 for clarification.	

Product Specifications

Construction

- Light Engine is 6063-T5 extruded aluminum and 20 gauge cold rolled steel frame
- Acoustic Light Fixture is supported with max load 132lb cable
- Weight: 25lbs fully assembled

Electrical

- Standard driver features electronic universal voltage (120-277V/ 50-60 Hz), greater than 0.9 power factor
- Less than 20% harmonic distortion, and ambient temperature of 25°C (77°F). 0-10V dimming standard

LED Optics

- Light Engine is 85% transparent
- LPW 100+ in some 3500K and 4000K configurations
- Light Engine offered in 80 CRI for 3500K and 4000K CCTs, and in 90 CRI for 3000K CCT

Mounting

- Acoustic Light Fixture supported by aircraft cable. 12ft adjustable AC cable supplied
- Recommended minimum height of 15" from AC cable collector to Light Engine
- Driver box assembly can mount to any ceiling type: open structure, gyp., or acoustic tile

- Acoustic Light fixture can be supported by junction box supporting 50lb load
- Low voltage cable connects to remote driver box assembly
- AC Cable Collector recommended but not required

Finish

- Light Engine - Housing is white powder coat paint for superior protection against fade and wear
- Acoustic Panels - Over 60+ felt color choices using 100% Wool Design Felt for both top and bottom panels
- Sound absorbing substrate is made of a minimum 60%+ recycled content and is 100% recyclable

Compliance

- Light Engine components are UL recognized and are cULus listed for 25°C ambient environments, dry listed
- Acoustic Light Fixture tested per IESNA LM-79
- LM-80 data supplied by LED manufacturer and utilized in TM-21 lumen maintenance projections
- Acoustic Light Fixture tested to ASTM 423C-17 standards and FCC compliant
 - Noise Reduction Coefficient - NRC = 1.2
 - Sound Absorption Average - SAA = 1.19
 - Apparent NRC and SAA values calculated from using total test area occupied by light fixtures

Environment

- Indoor only, dry listing
- 25°C ambient temperature

Control

- 0-10V dimming standard
- Optional - WaveLinx and Lumawatt Pro wireless control systems

Maintenance

- Cleaning of FilzFelt acoustic materials found [here](#)

Awards

- Best of NeoCon : Gold Lighting: Decorative and Hospitality
- 2019 IES Progress Report, selection
- Architect Magazine Spring 2019, selection
- Architectural SSL Magazine, Product Innovation Award (PIA) 2019
- Architectural Products Magazine, Product Innovation Award (PIA) 2019
- LED Magazine, Sapphire Award Finalist

Warranty

- Five year warranty standard

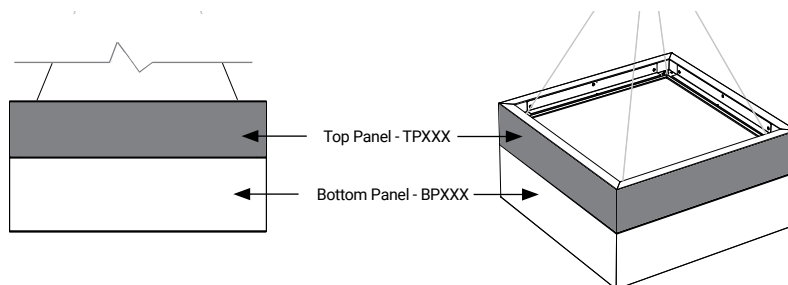
Ordering Information

- Select a color for the Top Panel and a color for the Bottom Panel
- For contrasting colors, choose different colors for the top panel and the bottom panel.
- For a monochromatic effect, select the same color for both top and bottom panels.
- For complete catalog number, select a Top Panel (TPXXX) and Bottom Panel (BPXXX) number.

Select TBXXX for Top Panel + Color Selection from chart.

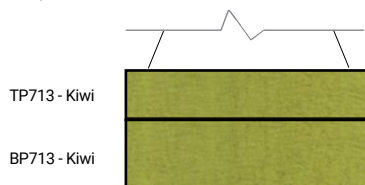
Select BPXXX for Bottom Panel + Color Selection from chart.

XXX = 3 digit code from FilzFelt color chart options (see below).



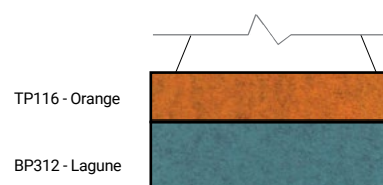
EXAMPLE OF MONO-TONE

Top Panel TP713 = 713 Kiwi and Bottom Panel BP713 = 713 Kiwi



EXAMPLE OF TWO-TONE

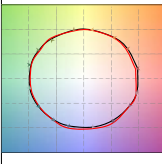
Top Panel TP116 = 116 Orange and Bottom Panel BP312 = 312 Lagune

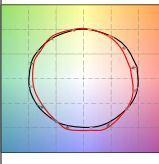


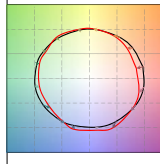
FILZFELT COLOR CHART OPTIONS

136 Weinrot	209 Bordeaux	102 Kirsche	201 Rot	125 Tomate	179 Hellrot	180 Terracotta	173 Mango	105 Rost	116 Orange	151 Hellorange	124 Gelb
131 Honig	274 Senf	203 Vanille	384 Lind	378 Oliv	732 Farn	377 Maigrün	713 Kiwi	343 D'Grün	156 Loden	448 Moos	548 Türkis
312 Lagune	345 Pazifik	308 Petrol	686 Enzian	282 D'Blau	533 Indigo	540 Ozean	626 Azur	272 Royal	286 H'Blau	284 Himmel	613 Gletscher
437 Aubergine	269 Violett	255 Flieder	265 Lavendel	242 Pink	503 Magnolie	231 Rosa	534 Rosè	250 Trüffelbraun	411 Alpaka	497 D'Braun	476 Schoko
220 Rehbraun	385 Schlamm	415 Schilf	331 Sahara	467 Sand	160 Beige	150 Weiss	110 Rohweiss	100 Wollweiss	200 Natur	408 Taupe	175 Graphit
190 Natur-meliert	425 Taubengrau	423 Hellgrau	170 Asche	426 Schwarz	300 Anthrazit						

Photometric Data

SHAPER SENSE - BOX @ 3000K / 90 CRI		
Filename	ShSe-BOX-2-L30-90-UNV-STD.ies	Color Vector Graphic 
Test No.	P316050	
Lumcat	ShSe-BOX-2-L30-90-UNV-STD	TM-30-15
Lumens	3172 Lm	
Watts	38.8 W	R _f 91.7
LPW	95.5 Lm/W	
CCT	3000K	R _g 99.7
SC (0/90/45)	3.21 / 2.21 / 2.38	
		64% up 36% down

SHAPER SENSE - BOX @ 3500K / 80 CRI		
Filename	ShSe-BOX-2-L35-80-UNV-STD.ies	Color Vector Graphic 
Test No.	P316051	
Lumcat	ShSe-BOX-2-L35-80-UNV-STD	TM-30-15
Lumens	3944 Lm	
Watts	38.8 W	R _f 81
LPW	118.8 Lm/W	
CCT	3500K	R _g 95.9
SC (0/90/45)	3.21 / 2.21 / 2.38	
		64% up 36% down

SHAPER SENSE - BOX @ 4000K / 80 CRI		
Filename	ShSe-BOX-2-L40-80-UNV-STD.ies	Color Vector Graphic 
Test No.	P316052	
Lumcat	ShSe-BOX-2-L40-80-UNV-STD	TM-30-15
Lumens	3873 Lm	
Watts	38.8 W	R _f 81
LPW	116.6 Lm/W	
CCT	4000K	R _g 95.9
SC (0/90/45)	3.21 / 2.21 / 2.38	
		64% up 36% down

Lumen Maintenance

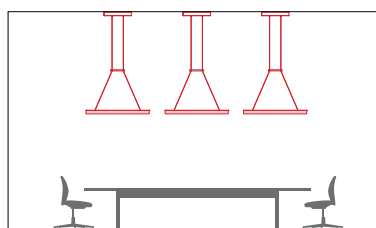
Ambient Temperature	Lumen Maintenance: TM-21 (60,000 Hours)	Theoretical L70 (H ₀)
25°C	> 89%	> 60,000

Acoustic Analysis - Reverberation Decrease

Reverberation Time example. Acoustic test reports available by request.

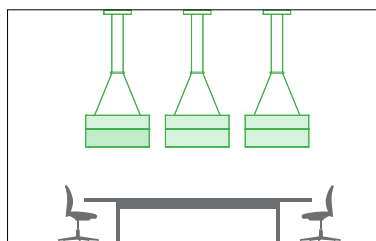
RT60 : Light Fixtures without sound absorption

Frequency (Hz)						Avg
125	250	500	1000	2000	4000	250-2k
0.76	0.97	1.15	1.11	0.91	0.85	1.04

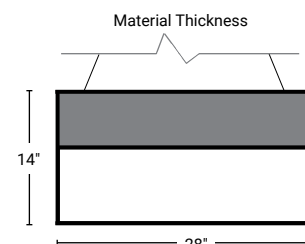


RT60 : Light Fixtures with sound absorption

Frequency (Hz)						Avg
125	250	500	1000	2000	4000	250-2k
0.67	0.82	0.84	0.74	0.64	0.62	0.76



Reverberation: prolongation of a sound; resonance.
Reverberation Time (RT60): Reverberation time is a measure of the time required for the sound to decay or sound pressure level to reduce by 60 dB.

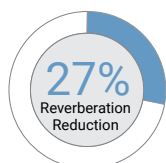


Acoustic panel thickness is 1.49" thick. Each of the 4 panel sizes are 28"L x 14"H x 1.49"D.

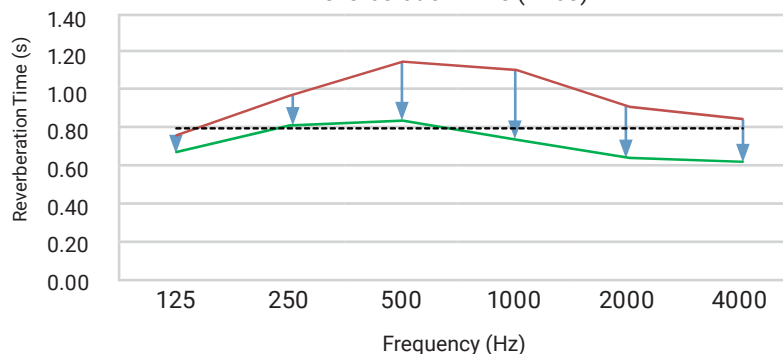
% Improvement in Reverberation (RT60)

Frequency (Hz)						Avg
125	250	500	1000	2000	4000	250-2k
12%	16%	27%	33%	30%	27%	27%

Ex. 27% Reverberation decrease (RT60) using 6 Shaper Sense Box fixtures.



Reverberation Time (RT60)



— RT60 (without acoustic treatment)
— RT60 (with acoustic treatment)
--- GOAL

RT60 GOAL (typical. office) **0.8**

Connected Control (Optional)

WaveLinX (SWPD1) Wireless Sensor and LumaWatt Pro (LWIPD1) Ordering Information.

Product Family	Occupancy Technology	Sensing Technology	Coverage Pattern
SWT = WaveLinX Wireless Sensor LWT = LumaWatt Pro Wireless Sensor	P = Passive Infrared	D = Dimming Daylight Harvesting (Closed Loop)	1 = ~ 144 Square Feet

WaveLinX

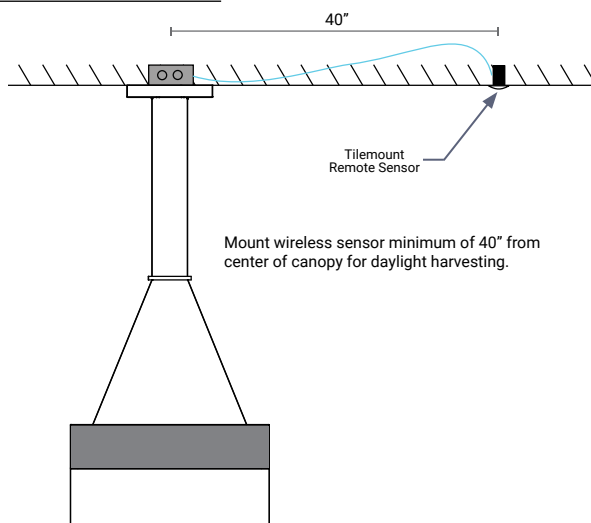
The WaveLinX Tilemount sensor option is an integral part of the WaveLinX Wireless Connected Lighting System. It offers 3 amp relay control and continuous 0-10V dimming of Shaper Sense luminaires. The tilemount sensor provides daylight dimming and control for a single luminaire or can be daisy chained for group luminaire control. The sensor's control module allows simple electrical junction box mounting via a 1/2" knockout or direct connection to the junction box attached to the Shaper luminaire. The WaveLinX Tilemount sensor operates on a wireless mesh network based on IEEE 802.15.4 standards and is controlled by a WaveLinX Wireless Area Controller.

LumaWatt Pro

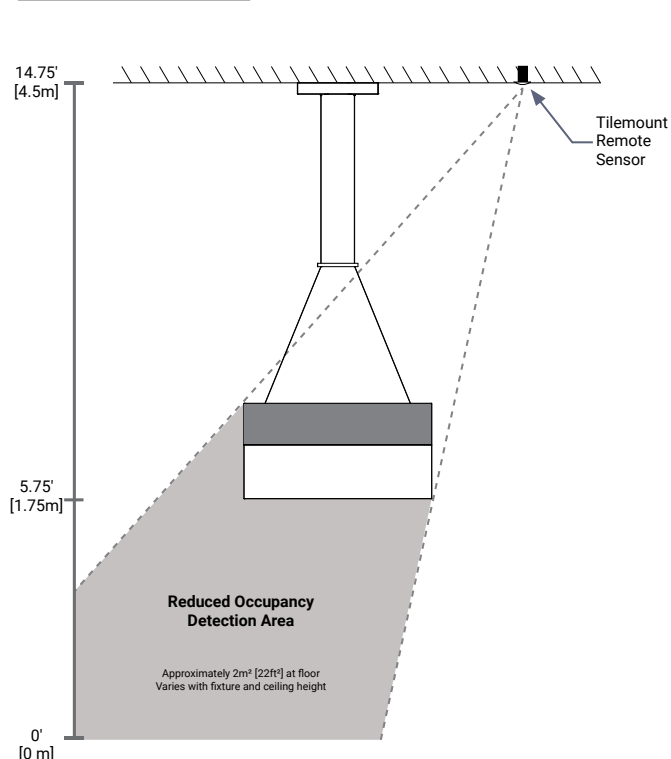
The LumaWatt Pro Tilemount sensor option is field installed to a single luminaire's junction box or daisy chained to a group of luminaires, providing lighting control and sensing in an independent, fault-proof, resilient network of powerful end-points. Sensors have profiles stored internally containing all of the variables for the application once a configuration is set and is able to manage the fixture without connectivity to the system. The sensors gather data from four on-board inputs: Passive infrared occupancy detection, daylight, temperature, and electrical current use. Wireless gateways communicate with the sensors and transmit the data using industry-standard wired technology to the Energy Manager, for powerful, familiar dashboards of information tailored for access on a connected computer. Energy Managers connect to optional cloud-based applications, maximizing the dense, data-rich sensing within the footprint of the luminaire for management of the building environment, and much more.

Sensor Mounting and Coverage

Daylight Harvesting - Recommended mounting

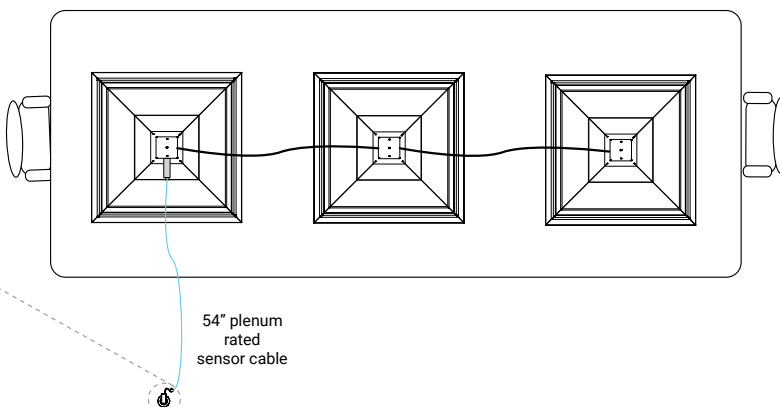
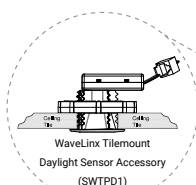


Occupancy Detection - Coverage



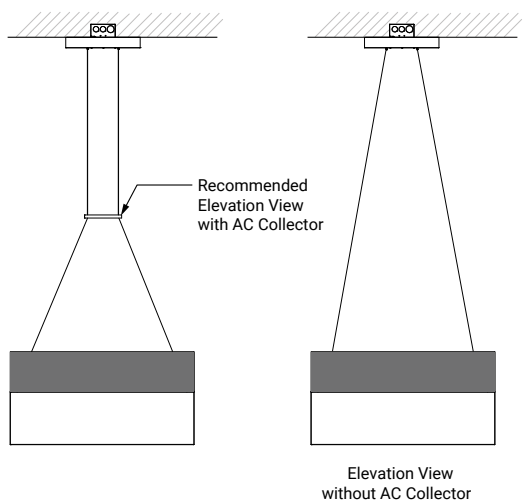
Wireless Sensor Example Layout

Daisy-chain switching control and 0-10V dimming up to 360W of luminaires per sensor



Mounting Information and Recommendations

Collector is recommended but not required



Maximum and Minimum Hanging Heights

