

Project		Catalog #		Type	
Prepared by		Notes		Date	



iO LED

CoviO™

LED
Interior / Exterior
Architectural Cove Integral Driver

Typical Applications

- Hotels • Restaurants • Commercial Office Spaces • Schools • Hospitals
- Retail • Residential

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- Installation Instructions
- Product Warranty

Product Certification



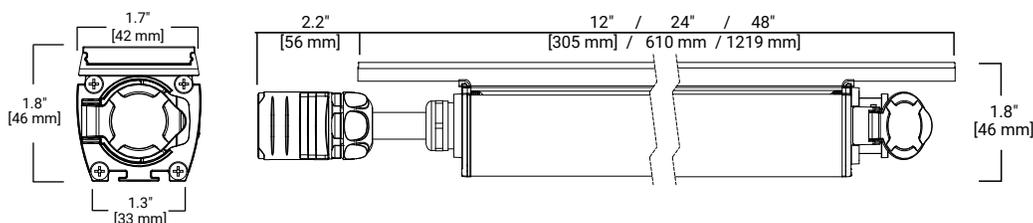
Product Features



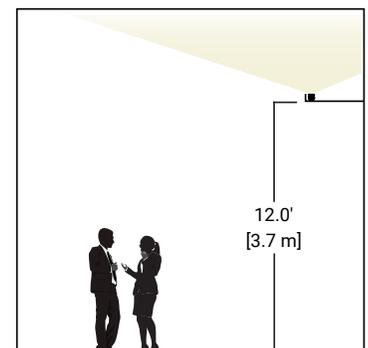
Top Product Features

- Cove lighting fixture with integral driver
- IP66 rated for exterior wet locations or interior installations
- Up to 1500 lm/ft (3 light level options at 500, 1000 and 1500 lm/ft)
- Up to 300 ft run from a single power drop
- Up to 130 lm/W
- Dimming to 1% (0-10V, 100% - 1%)
- 90+ CRI
- Wavelinx wireless control option

Dimensions



Scale



[additional product diagrams](#)

Order Information

SAMPLE ORDER NUMBER: **LM-10L-935-120-OD-277-S-SM-STD-50F**

Series	Lumen Package	LED CRI & CCT Standard CRI	Optical Distribution	Environment	Voltage
Series	Lumen Package (Power)	LED CRI & CCT	Optical Distribution	Environment	Voltage
LM=CoviO Linear LED	05L=500 lumens/ft (5 W/ft) 10L=1000 lumens/ft (10 W/ft) 15L=1500 lumens/ft (15 W/ft)	927=90 CRI, 2700K CCT 930=90 CRI, 3000K CCT 935=90 CRI, 3500K CCT 940=90 CRI, 4000K CCT	120=Standard lambertian	ID=Indoor OD=Outdoor	UNV=120-277V 277=277V
Notes Architectural LED cove luminaire from iO LED.	Notes Nominal for 12" section.	Notes 90 CRI standard.	Notes	Notes	Notes For UNV run specifications, 120V will be the default. For 277 V systems, specifying 277 will allow for longer run specifications. See pg 4 for run length limits details by output and voltage.

Housing Color	Mounting	Control Options	Length	Accessories
Housing Color	Mounting	Control Options	Length	Accessories
S=Standard Silver	SM=Surface Mount	STD=0-10V (1%-100%) ELV=ELV TR=Triac 5LT=DALI WL=WaveLinX wireless	___F=specify nominal run length in feet ___F/1=specify nominal run of 1ft fixtures ___F/2=specify nominal run of 2ft fixtures ___F/4=specify nominal run of 4ft fixtures 1F=12" Individual fixture 2F=24" Individual fixture 4F=48" Individual fixture	JHARN01-012=1ft jumper JHARN01-036=3 ft jumper JHARN01-144=12ft jumper LM-IC-STD=Std Power Harness
Notes Contact Cooper Lighting for custom color availability. Minimum order qty will apply.	Notes One mounting bracket/fixture is required. A 15 deg and 30 deg mounting angle plate is included with each bracket.	Notes "STD" control specifications include beginning of run power feed and junction box for line voltage connection. One is included for each individual fixture or run specification. All other control specifications include beginning of run control module. See page 6 for details and dimensions.	Notes Run specifications will include 1 power feed/run. Individual fixtures will include 1 power feed/fixture. Contact customer service for custom run configurations. See page 4 for run lengths limits by output and voltage.	Notes Accessories not included in run specifications. Must be ordered separately. Jumper accessory is required for any bend radius > 20". See page 7 for bend radius limits.

Product Specifications

Construction

- Housing is powder coated, extruded aluminum.
- All housing hardware is stainless steel.
- Clear, UV stabilized polycarbonate injection molded lens with integral silicone gasket.
- Proprietary IP66 exterior-rated, quick connect plugs.
- Self-closing IP66 end cap to simplify installation and eliminate end of run shorting risks.
- Available in 1F (12"), 2F (24") or 4F (48") lengths.

Electrical

- Integral high performance constant current driver.
- Standard 0-10V dimming (1% - 100%).
- Each cove module is configured for a line voltage feed while providing through wiring and quick connects for continuous mounting applications.
- See pg 4 for Run Length Limits.
- See pg 4 for Dimmer compatibility chart.

LED Optics

- Fixture equipped with proprietary 90+ CRI LED module available in 2700, 3000, 3500 or 4000K within 3-step MacAdam ellipse.
- Discrete low-powered LED array with clear, injection molded lens delivers light free from striations.
- Luminaires tested per IESNA LM-79.
- LM-80 data utilized in TM-21 lumen maintenance projections:
L70 > 72,000 hrs
L90 > 28,000 hrs

Mounting

- Each individual fixture comes with stainless steel mounting brackets designed to align long runs by spanning two fixtures.
- Optional angled mounting base plates to adjust output angle to 15° and 30° included with each bracket.
- 10% extra mountings are included in every order.
- Power harness is required for connection to line voltage.
- STD option includes beginning of run power harness + junction box for line voltage connection.
- Control options include beginning of run power harness + dimming converter + junction box for line voltage connection.
- Run specifications will calculate the minimum power feeds/run based on output and supply V. Individual fixtures will include 1 power feed/fixture. Contact customer service for custom run configurations. See page 4 for run lengths limits by output and voltage.

Finish

- Fixture housing is powder coated aluminum.
- Standard color is silver with black end caps and wiring harness.
- Contact Cooper Lighting for custom color availability (minimum order quantity will apply).

Compliance

- Luminaires are cULus listed for 50° C ambient environments.
- Wet Location Listed.
- IP66 rated.
- 2000 hour salt spray tested.
- RoHS compliant.
- Tested according to IESNA LM-79 (See pg 3).

Environment

- Suited for indoor or outdoor installations.
- Operating temperature range: -40° to 50° C

Control

- 0-10V dimming to 1% is standard.
- Additional dimming protocols including ELV, TRIAC and DALI supported through an added control module at the beginning of the run.
- Wireless control is supported through the Cooper Lighting WaveLinX system.
- See pg 4 for run length limits.

Weight

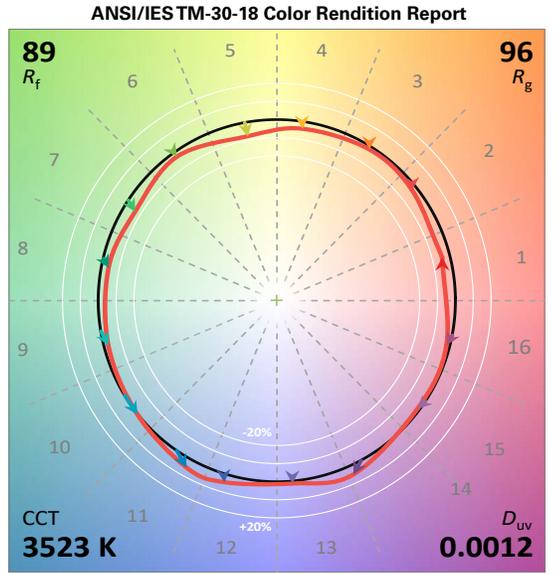
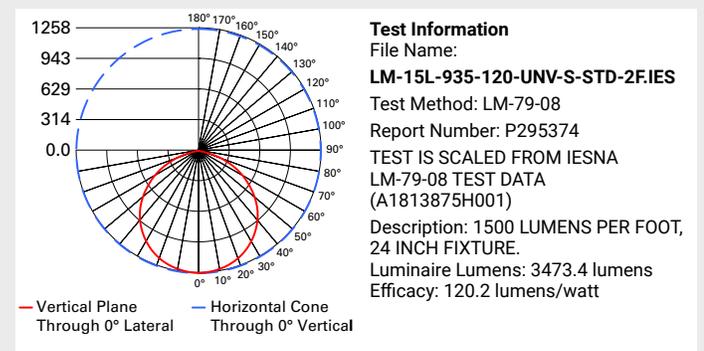
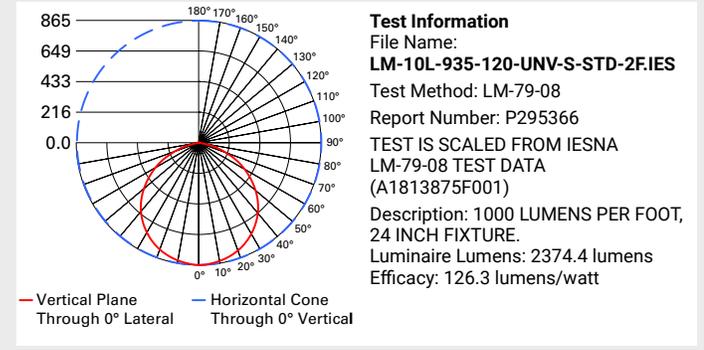
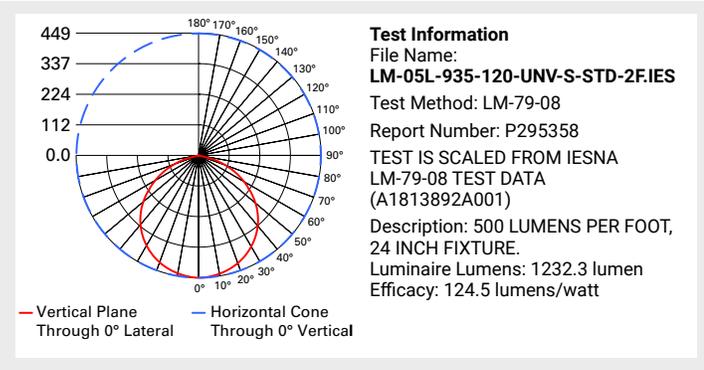
- 1F = 1 lb.
- 2F = 1.8 lbs.
- 4F = 3.5 lbs.

Warranty

- Five year warranty standard.

Photometric Data

[View IES files](#)



Reference Illuminant (black line), Test Source (red line)

Light Tm-30 and Photometric Sphere test results are summarized in the table below. Contact Cooper Lighting for specific TM-30 reports.

CCT	CRI	R _f	R _g	R ₉
2700K	93.3	92	99	65.6
3000K	94.1	92	99	72.4
3500K	93.5	89	96	71.7
4000K	93.2	86	93	81.4

Light Output Conversion Table

CCT	05L	10L	15L
2700K	0.324	0.626	0.915
3000K	0.337	0.649	0.949
3500K	0.349	0.672	0.983
4000K	0.354	0.683	1.00

Energy Data

120V - 277V 50/60 Hz
>0.9 Power Factor
<20% Total Harmonic Distortion
Efficacy > 110 lm / W
-30°C Min Temperature
50°C Max Temperature

Note: Refer to IES files for more product data.

Energy and Performance Data

Delivered Lumen Output Table										
Lumen Package, L	CCT	1F = 12" fixture			2F = 24" fixture			4F = 48" fixture		
		Delivered Lumens	Watts	Efficacy (lm/W)	Delivered Lumens	Watts	Efficacy (lm/W)	Delivered Lumens	Watts	Efficacy (lm/W)
05L	927	562	5.1	110.2	1147	9.9	115.9	2362	19	124.3
	930	583	5.1	114.3	1190	9.9	120.2	2450	19	128.9
	935	604	5.1	118.4	1232	9.9	124.5	2537	19	133.5
	940	614	5.1	120.4	1254	9.9	126.6	2581	19	135.8
10L	927	1080	9.9	109.1	2211	18.8	117.6	4538	37.5	121
	930	1120	9.9	113.1	2293	18.8	121.9	4706	37.5	125.5
	935	1160	9.9	117.2	2374	18.8	126.3	4874	37.5	130
	940	1180	9.9	119.2	2415	18.8	128.5	4958	37.5	132.2
15L	927	1581	14.6	108.3	3234	28.9	111.9	6576	56.5	116.4
	930	1640	14.6	112.3	3354	28.9	116.0	6820	56.5	120.7
	935	1698	14.6	116.3	3473	28.9	120.2	7064	56.5	125
	940	1727	14.6	118.3	3533	28.9	122.3	7185	56.5	127.2

Linear Module Run Length Limits

		Run Length Limits (ft)			
		Lumen Package	05L (500lm)	10L (1000lm)	15L (1500lm)
		Fixture Input Wattage	5.1W	9.9W	14.6W
Dimming Protocol	0-10V (STD) ELV (ELV) Triac (TR) WaveLinx (WL)	Maximum Run Length (ft) @ 120V	140	70	50
		Maximum Run Length (ft) @ 277V	300*	170	120
	DALI (5LT)	Maximum Run Length (ft) @ 120V	92	47	32
		Maximum Run Length (ft) @ 277V	216	110	76

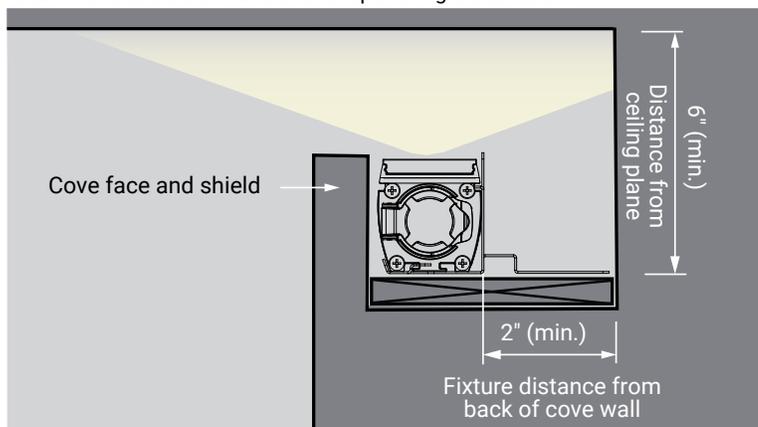
*NOTE: Run length can be extended to 340 ft. for 05L fixtures @ 277V when using 2F and 4F fixtures as long as runs are limited to 300 fixtures or less.

Dimmer Compatibility

List of Tested Dimmers				Notes
Manufacturer	Technology	Series	Part Number	
EWD (Eaton)	Triac	Devine	DAL06P	
EWD (Eaton)	Triac	Skye	SUT7-W	
EWD (Eaton)	Triac	Skye	SAL06P	
EWD (Eaton)	Triac	Toggle	TAL06P	
EWD (Eaton)	Triac	Smart	AAL06	
EWD (Eaton)	0-10Vdc		SF10P-W	Consult factory for runs < 5 ft
EWD (Eaton)	ELV		SUF7-W	
Lutron	Triac	Maestro C.L.	MACL-153-M	
Lutron	Triac	Skylark	SCL-153P-WH	
Leviton	Triac	SureSlide	6674	
Leviton	Triac	Illumatech	IPL06	
Lutron	ELV	Skylark	SELV-300P	
EWD (Eaton)	0-10Vdc		SF10P-W	
Lutron	0-10Vdc		DVSTV-WH	
Lutron	0-10Vdc		IP710-LFZ	
EWD (Eaton)	0-10Vdc		WBSD-010M-C1	

Cove Design Guidelines

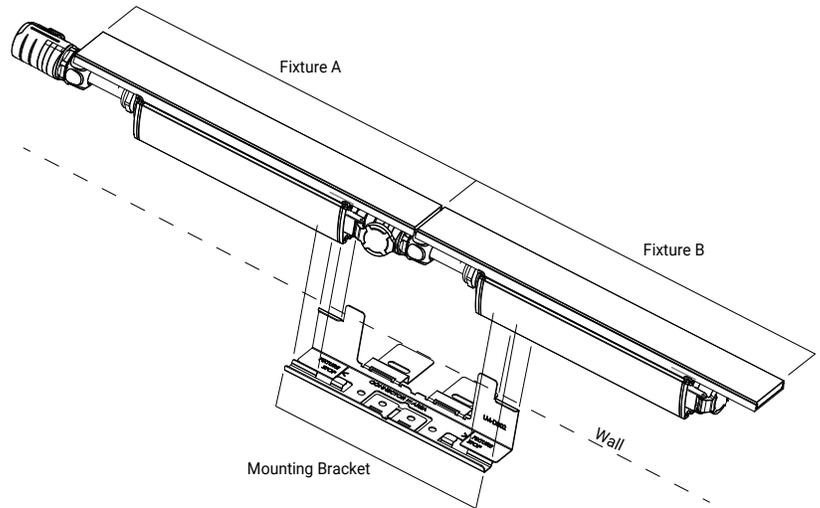
Recommended cove dimensions for optimal light distribution.



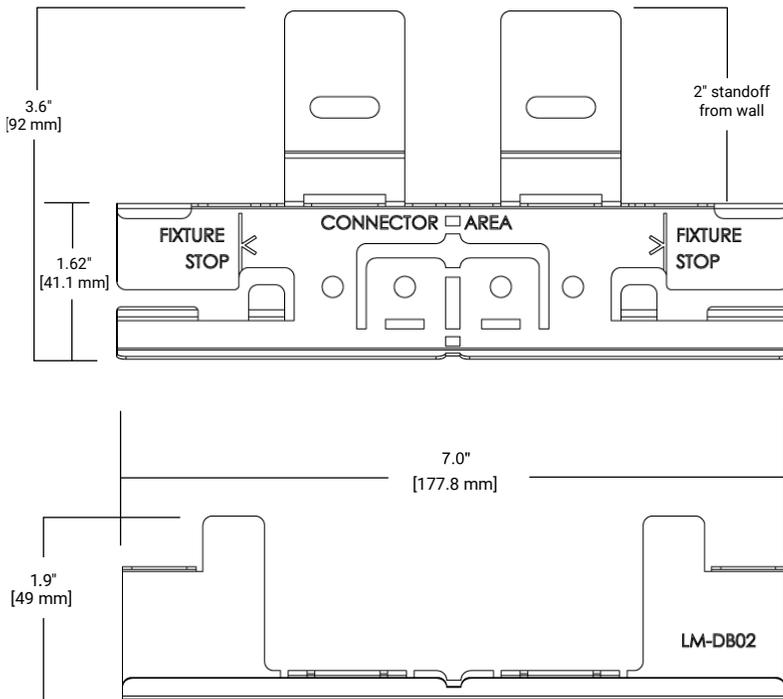
Mounting and Installation

Custom brackets are designed to self-align CoviO fixtures in a linear run. Diagrams at right shows how each bracket spans between two fixture to align the linear run. Bracket can be placed on mounting plate for 15° or 30° aiming. Brackets have incorporated 2" stand-off for optimal cove light distribution. Other mounting considerations:

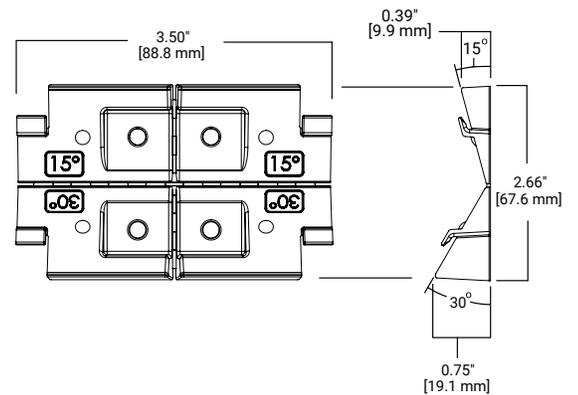
- Mounting location must have solid floor for mounting bracket attachment
- Matte surface finishes in, above and adjacent to cove will deliver optimal cove light distribution
- Do not pre-install more than 12 brackets before installing fixtures
- Fixtures should be mounted at least 2" from wall for optimal cove light distribution.
- Mounting bracket stand-off can be cut off when using angled mounting plate.
- Bracket can be cut in half for runs, end of run, or curved runs.
- Jumper accessory is required for any bend radius > 20°



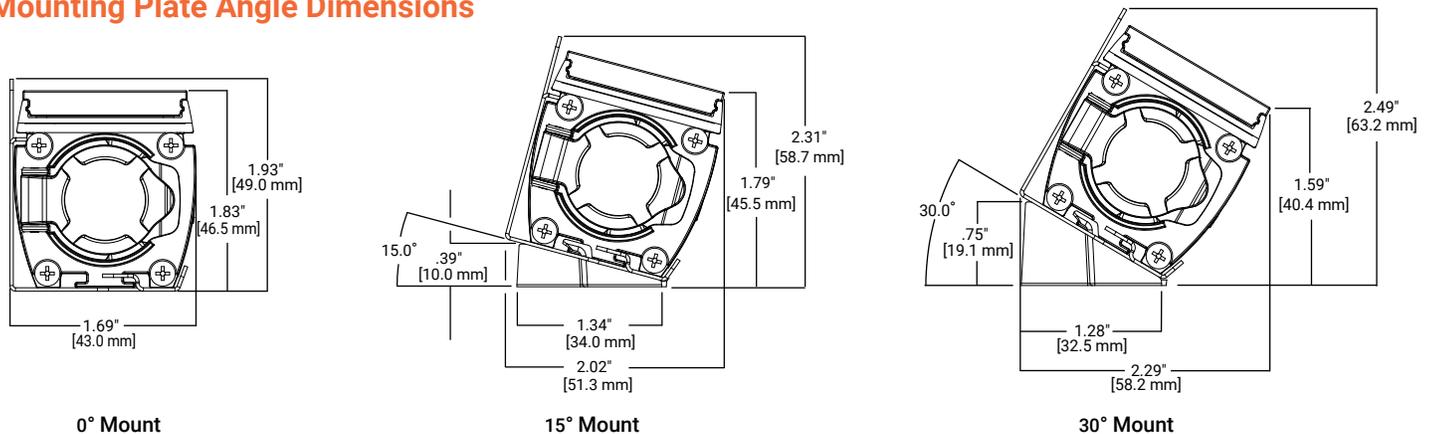
Mounting Bracket Dimensions



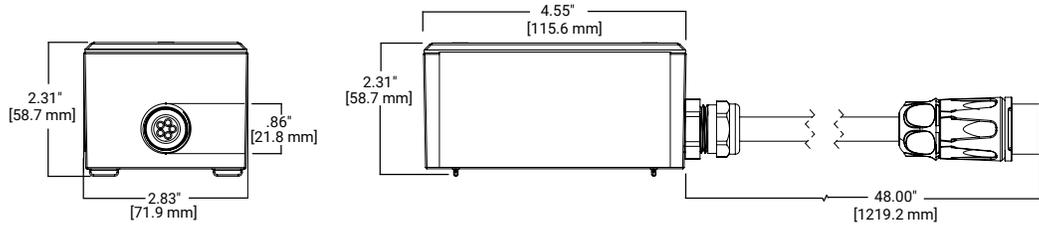
Mounting Plate Dimensions



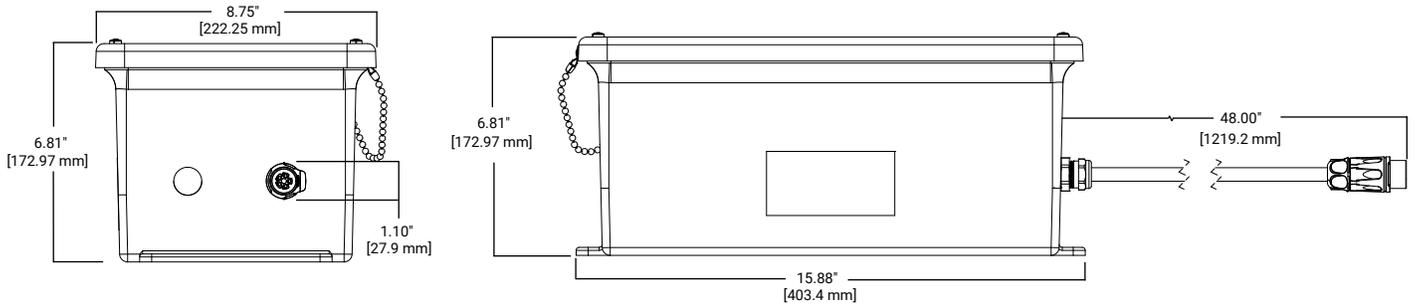
Mounting Plate Angle Dimensions



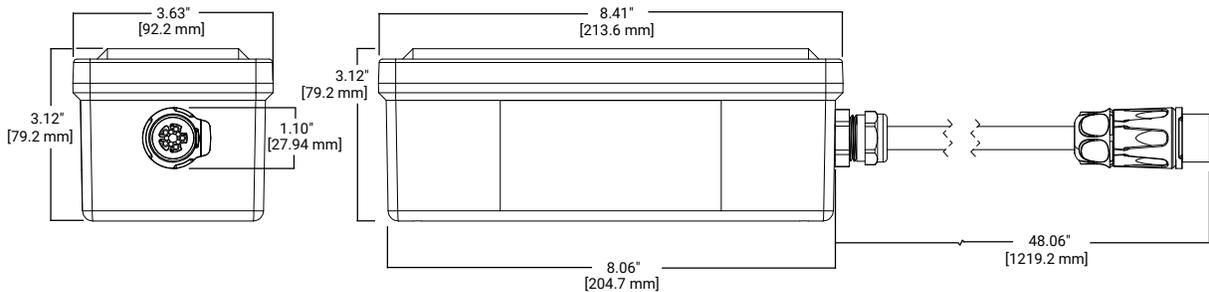
STD - Beginning of Run Power Harness



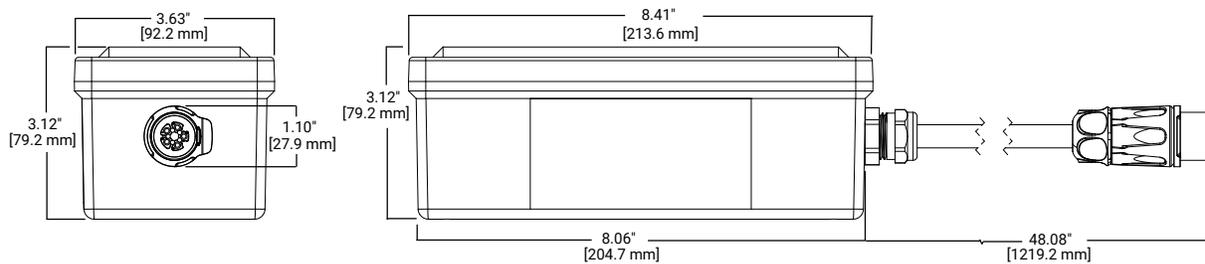
ELV / TR Control Module



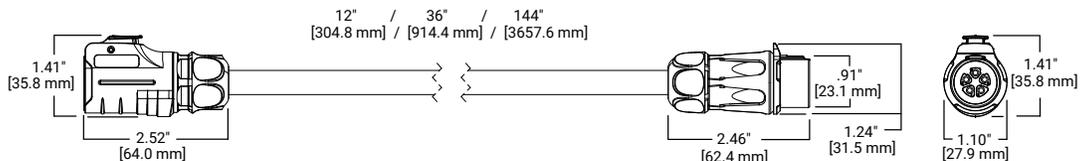
5LT - DALI Control Module



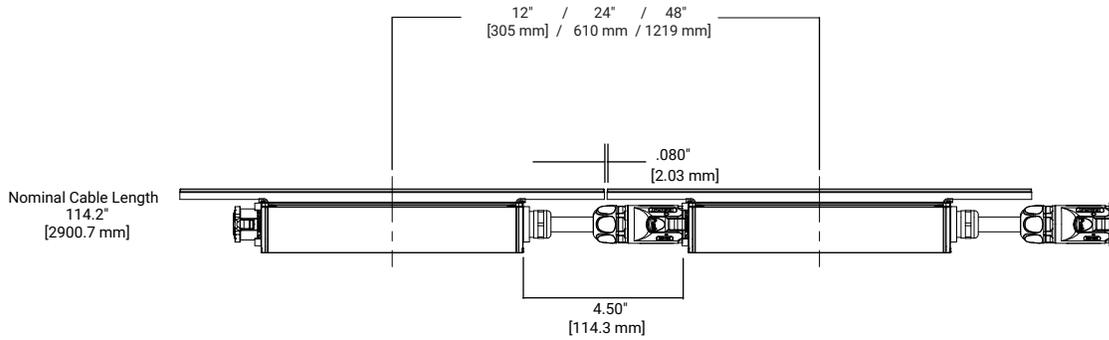
WL - Wavelinx Wireless Control Module



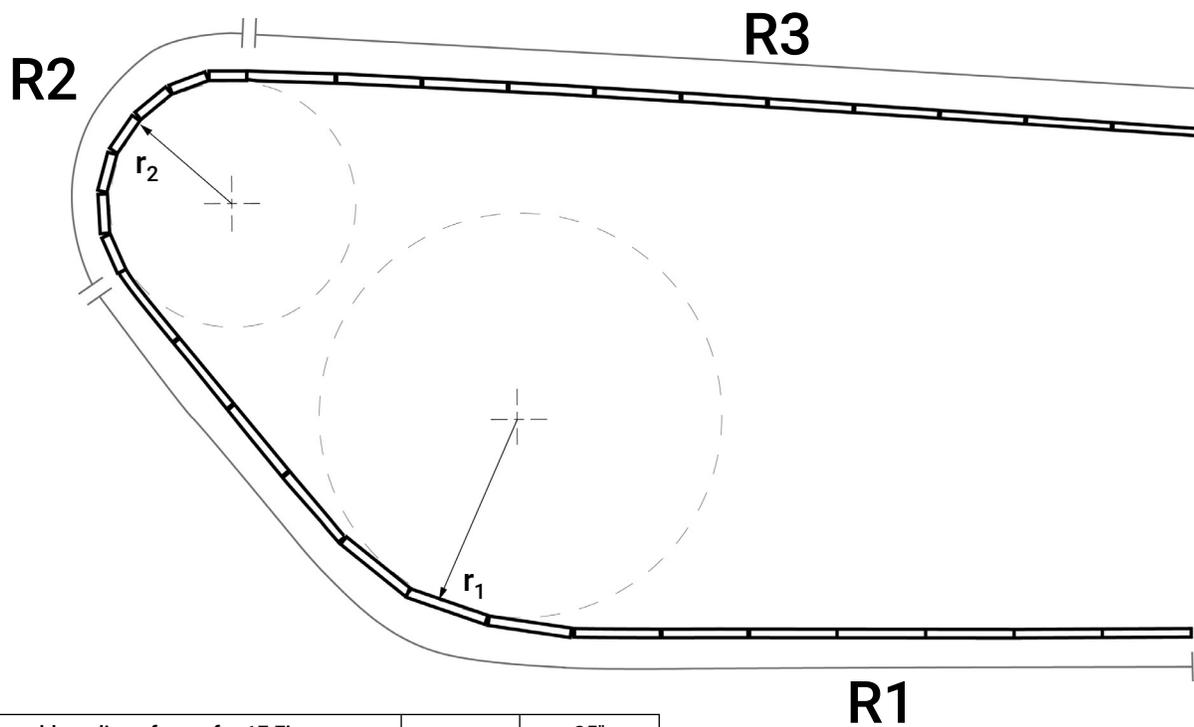
Jumper Harness Accessory



Typical Dimensions for Connected Fixtures



Run Specification Guidelines



Min allowable radius of cove for 1F Fixtures	r =	35"
Min allowable radius of cove for 2F Fixtures	r =	70"
Min allowable radius of cove for 4F Fixtures	r =	70"

Linear Run Specifications

Linear runs can be broken down into segments for easier specifications. Mounting brackets and power feeds are included in any run specifications. Jumper accessory is required of bend radius > 20°.

- R1 would be specified with Length = 45F = 45 ft linear run (22x 2 ft fixtures + 1x 1 ft fixture + power feed)
- R2 would be specified with Length = 7F/1 = 7 ft linear run of 1 ft fixtures (7 x 1 ft fixture + power feed)
- R3 would be specified with Length = 33F = 33 ft linear run (16x 2 ft fixtures + 1x 1 ft fixture + power feed)

Contact customer service for custom run configurations.

