

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

Interactive Menu

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- Energy and Performance Data page 4
- Mounting and Installation page 5
- Installation Instructions
- Product Warranty

Product Certification



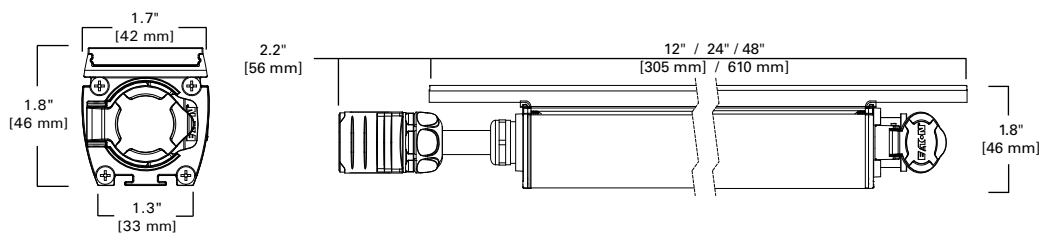
Product Features



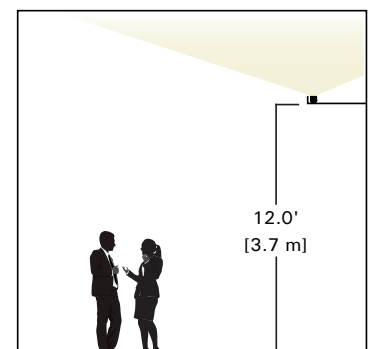
Top Product Features

- 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

No QS prefix needed for Stock or Quick Spec orders.

SAMPLE ORDER NUMBER: **LM-10L-935-120-OD-277-S-SM-STD-50F/4**

Color Key: Grey bar denotes Stock and Quick Spec items. Check for availability.
Lead times may be longer for non-stocked items.

Series	Lumen Package	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. Grey bar denotes stocked items.	Notes Nominal for 12" section. See page 4 for detailed energy and performance data by output and CCT.	Notes 90 CRI standard. 2700K orders will be subject to minimum order quantity of 20 pcs. per unit size and a longer lead time	Notes	Notes	Notes For run specifications, 120V will be the default. For 277 V systems, specifying 277 will allow for longer run specifications. See pg 4 for details.

Housing Color	Mounting	Control Options	Length	Accessories
S=Standard Silver	SM=Surface Mount ADJ=Adjustable Mount	STD=0-10V (1%-100%) 5LT=DALI WL=WaveLinX wireless	F=specify nominal run length in feet 1F=12" Individual fixture 2F=24" Individual fixture 4F=48" Individual fixture F/1=specify nominal run of 1ft fixtures	JHARN01-012=1ft jumper JHARN01-060=5 ft jumper JHARN01-144=12ft jumper LM-IC-STD=Std Power Harness
Notes Contact Cooper Lighting Solutions 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. ADJ bracket has +/- 90 deg adjustability. For "ADJ" two (2) mounting brackets/fixture are required are 4F fixtures; one (1) mounting bracket/fixture required for 1F fixtures.	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 minimum power feeds/run based on output and supply V. Individual fixtures will include 1 power feed/fixture. Run specifications will maximize 4F fixtures unless /1 is specified. Contact customer service for custom run configurations. See page 5 for run lengths limits by output and voltage. 2F option available on request and will be subject to longer lead times.	Notes Jumper accessory is required for any bend radius > 20". See page 7 for bend radius limits. Accessories are not included in run specifications and must be ordered separately.

Stock Products

Stock Orders must include:

① Fixture(s) + ② Power Harness (1 per run) and Mounts (1 per fixture) + ③ Optional Accessories as needed

See page 5 for run length limits by W and supply V to determine # of power harnesses required.

	Catalog Number	Description	Delivered Lumens	Power, (W)	Efficacy (lm/W)
FIXTURES	LM-05L-930-120-OD-STD-UNV-S-12	cove fixture, 5 W/ft, 3000K, 1 ft	583	5.1	114.3
	LM-05L-930-120-OD-STD-UNV-S-48	cove fixture, 5 W/ft, 3000K, 4 ft	2450	19	128.9
	LM-05L-935-120-OD-STD-UNV-S-12	cove fixture, 5 W/ft, 3500K, 1 ft	604	5.1	118.4
	LM-05L-935-120-OD-STD-UNV-S-48	cove fixture, 5 W/ft, 3500K, 4 ft	2537	19	133.5
	LM-10L-930-120-OD-STD-UNV-S-12	cove fixture, 10 W/ft, 3000K, 1 ft	1120	9.9	113.1
	LM-10L-930-120-OD-STD-UNV-S-48	cove fixture, 10 W/ft, 3000K, 4 ft	4706	37.5	125.5
	LM-10L-935-120-OD-STD-UNV-S-12	cove fixture, 10 W/ft, 3500K, 1 ft	1160	9.9	117.2
	LM-10L-935-120-OD-STD-UNV-S-48	cove fixture, 10 W/ft, 3500K, 4 ft	4874	37.5	130
	LM-15L-930-120-OD-STD-UNV-S-12	cove fixture, 15 W/ft, 3000K, 1 ft	1640	14.6	112.3
	LM-15L-930-120-OD-STD-UNV-S-48	cove fixture, 15 W/ft, 3000K, 4 ft	6820	56.5	120.7
	LM-15L-935-120-OD-STD-UNV-S-12	cove fixture, 15 W/ft, 3500K, 1 ft	1698	14.6	116.3
	LM-15L-935-120-OD-STD-UNV-S-48	cove fixture, 15 W/ft, 3500K, 4 ft	7064	56.5	125
REQUIRED ACCESSORIES	LM-IC-STD	beginning of run power harness (1 required per run)	N/A	N/A	N/A
	LM-KIT-ANG-MNT01	surface mount kit (includes mounting angle plate) (1 required per fixture)	N/A	N/A	N/A
OPTIONAL ACCESSORIES (AS NEEDED)	LM-JHARN01-012	jumper harness, 1 ft	N/A	N/A	N/A
	LM-JHARN01-060	jumper harness, 5 ft	N/A	N/A	N/A
	LM-JHARN01-144	jumper harness, 12 ft	N/A	N/A	N/A

Note: All stock products are supplied as OD fixtures

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. 2F fixtures subject to minimum order quantity.

Electrical

- Integral high performance constant current driver.
- Standard 0-10V dimming (1% - 100%)
- Power harness required for connection to line voltage
- Each cove module is configured for a line voltage feed while providing through wiring and quick connects for continuous mounting applications.
- See pg 5 for Run Length Limits.
- See pg 5 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

- The surface mount bracket is stainless steel and designed to align long runs by spanning two fixtures while maintaining optimal cove spacing from the wall.
- Optional angled mounting base plates to adjust output angle to 15° and 30° included with each surface mount bracket.
- Adjustable mount is also available.
- All mounts are designed to mount in any orientation (facing up, facing down or mounted vertically).
- 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 include minimum power feeds/run based on output and supply V. Individual fixtures will include 1 power feed/fixture. Run specifications will maximize 4F fixtures unless /1 is specified. Contact customer service for custom run configurations.
- See page 5 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.
- UL Wet Location Listed.
- IP66 rated.
- 3000 hour salt spray tested.
- RoHS compliant.
- Tested according to IESNA LM-79 (See pg 5).

Environment

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

Control

- 0-10V dimming to 1% is standard.
- DALI dimming supported through an added control module at the beginning of the run.
- Wireless control is supported through the Cooper Lighting WaveLinx system.
- See pg 5 for run length limits.

Weight

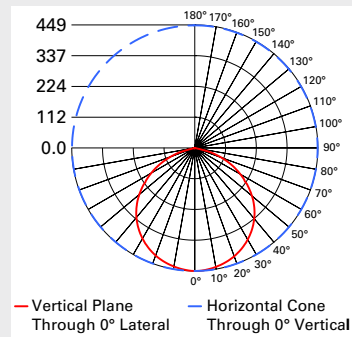
- 1F = 1 lb.
- 2F* = 1.8 lbs.
- 4F = 3.5 lbs.

Warranty

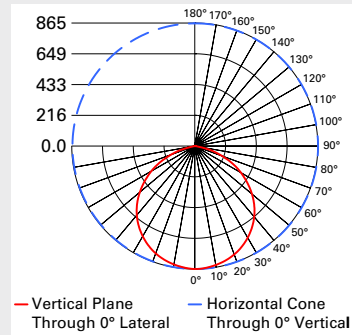
- Five year warranty standard.

***NOTE:** Non-stocked options are subject to longer lead times.

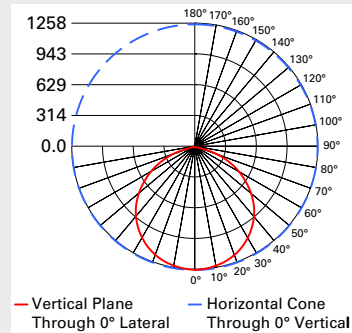
Photometric Data

[View IES files](#)


Test Information
 File Name: **LM-05L-935-120-UNV-S-STD-2FIES**
 Test Method: LM-79-08
 Report Number: P295358
 TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A1813892A001)
 Description: 500 LUMENS PER FOOT, 24 INCH FIXTURE.
 Luminaire Lumens: 1232.3 lumen
 Efficacy: 124.5 lumens/watt



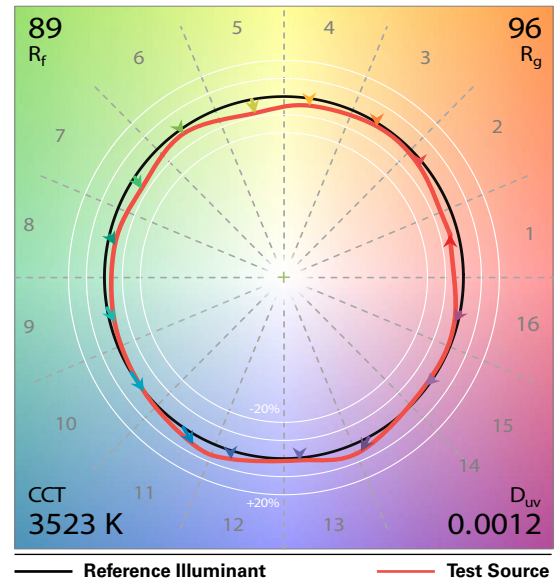
Test Information
 File Name: **LM-10L-935-120-UNV-S-STD-2FIES**
 Test Method: LM-79-08
 Report Number: P295366
 TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A1813875F001)
 Description: 1000 LUMENS PER FOOT, 24 INCH FIXTURE.
 Luminaire Lumens: 2374.4 lumens
 Efficacy: 126.3 lumens/watt



Test Information
 File Name: **LM-15L-935-120-UNV-S-STD-2FIES**
 Test Method: LM-79-08
 Report Number: P295374
 TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (A1813875H001)
 Description: 1500 LUMENS PER FOOT, 24 INCH FIXTURE.
 Luminaire Lumens: 3473.4 lumens
 Efficacy: 120.2 lumens/watt

Note: Refer to IES files for more product data.

ANSI/IES TM-30-18 Color Rendition Report



TM-30 and Photometric Sphere test results are summarized in the table below. Contact Cooper Lighting Solutions 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

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. Includes all jumpers and fixtures in run length calculations.

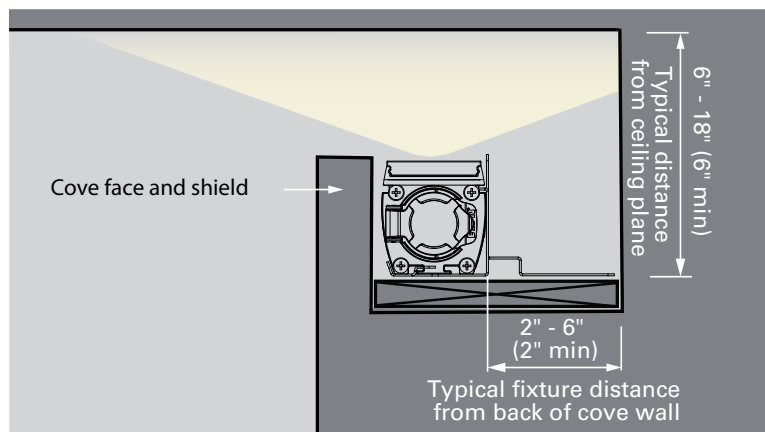
Dimmer Compatibility

List of Tested Dimmers		
Manufacturer	Technology	Part Number
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

Optimize cove design details utilizing the diagram below.

Note: Design the cove big enough so the light will wash the intended surface effectively. More space typically results in a more pleasing cove effect. A smaller cove does not produce better illumination and may limit light output distribution. The cove face height should be optimized to hide visibility of the cove fixture while not interfering with the light distribution. See diagram below for reference.

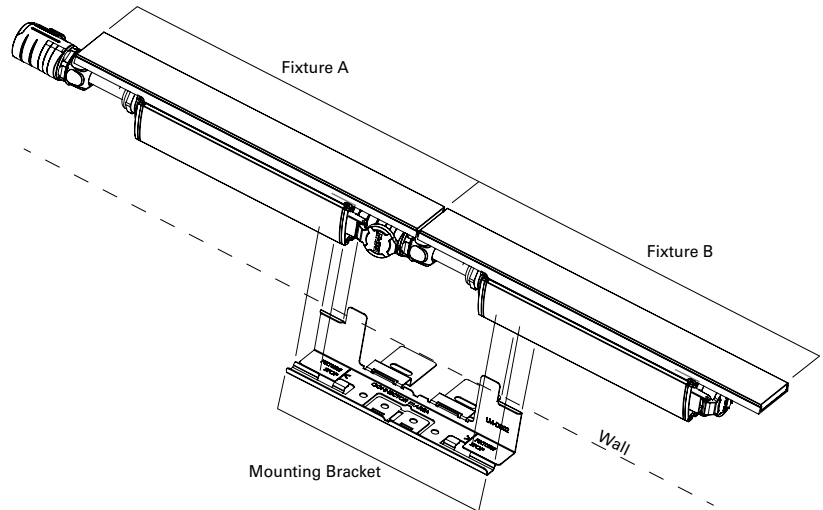


Mounting and Installation

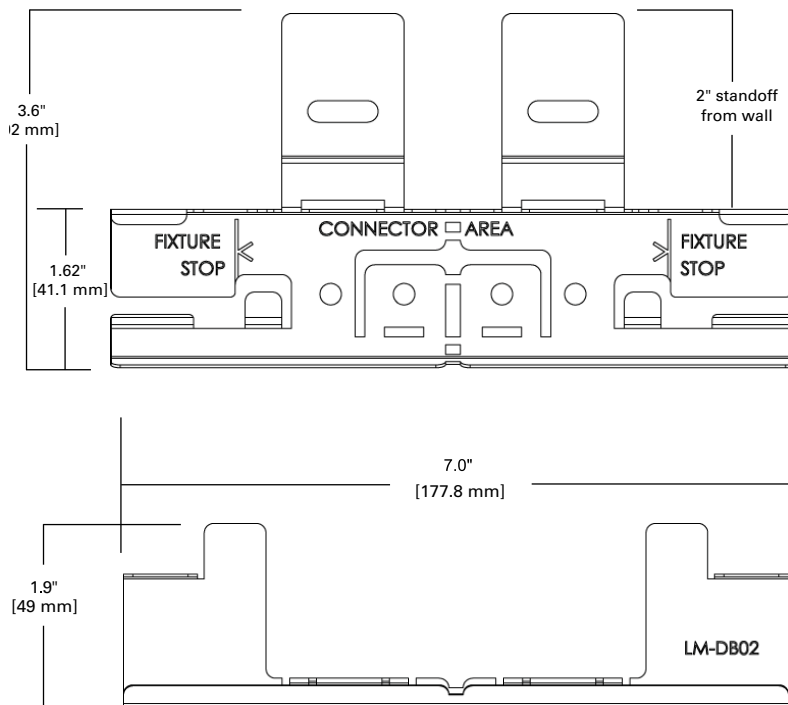
Custom surface mount (SM) brackets are designed to self-align CoviO fixtures in a linear run. Diagrams at right shows how each bracket spans between two fixture to align the linear run. Bracket can be placed on mounting plate for 15° or 30° aiming. Brackets have incorporated 2" stand-off (included) for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

Other mounting considerations:

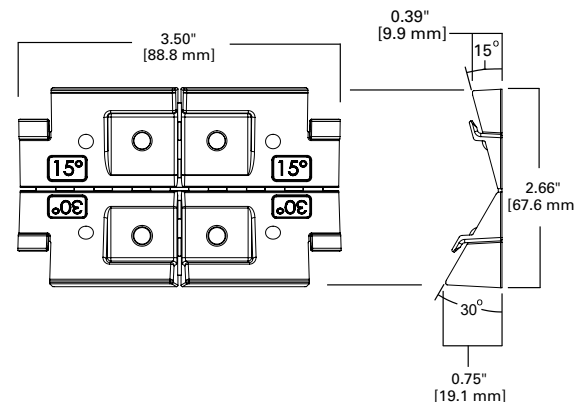
- Mounting location must have solid floor for mounting bracket attachment.
- Matte surface finishes in, above and adjacent to cove will deliver optimal cove light distribution
- Do not pre-install more than 12 brackets before installing fixtures.
- Fixtures should be mounted at least 2" from wall for 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°
- Fully adjustable bracket (ADJ) is also available.
- ADJ bracket 3G vibration rated
- All mounts are designed to mount in any orientation (facing up, facing down or mounted vertically).



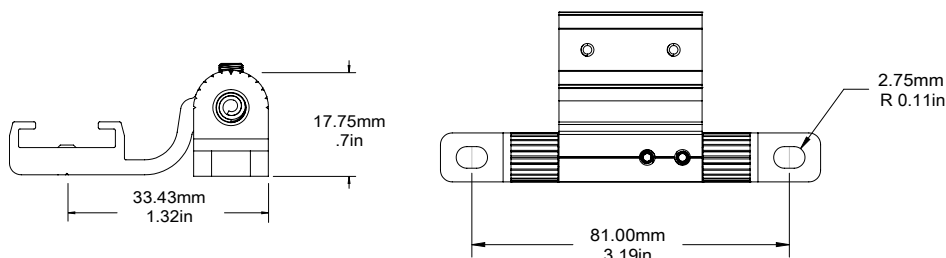
SM Mounting Bracket Dimensions



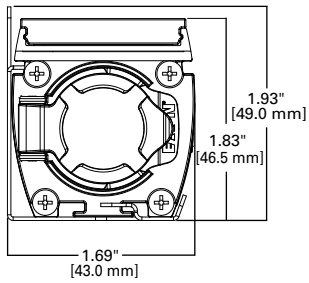
SM Mounting Plate Dimensions



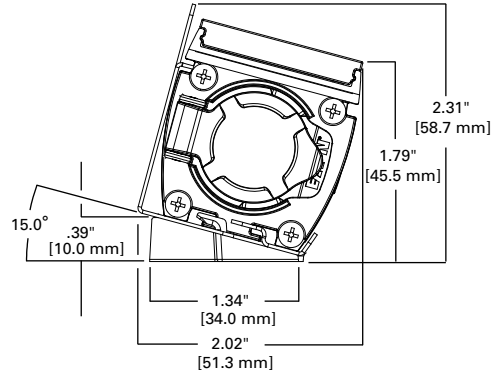
ADJ Mounting Bracket Dimensions



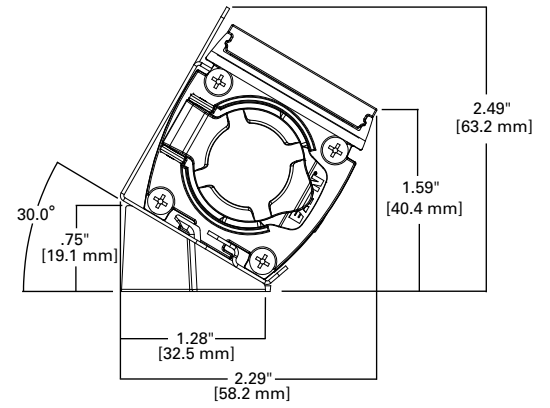
Mounting Plate Angle Dimensions



0° Mount

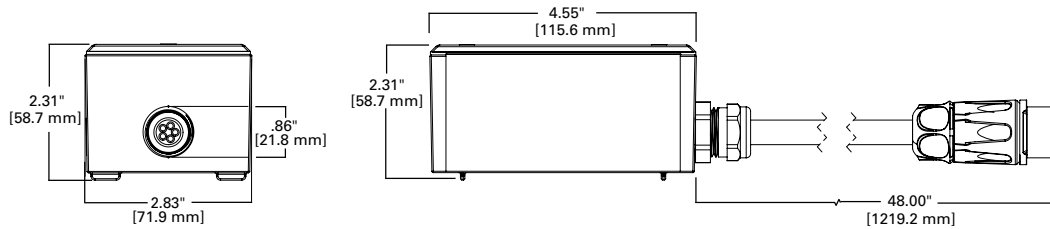


15° Mount

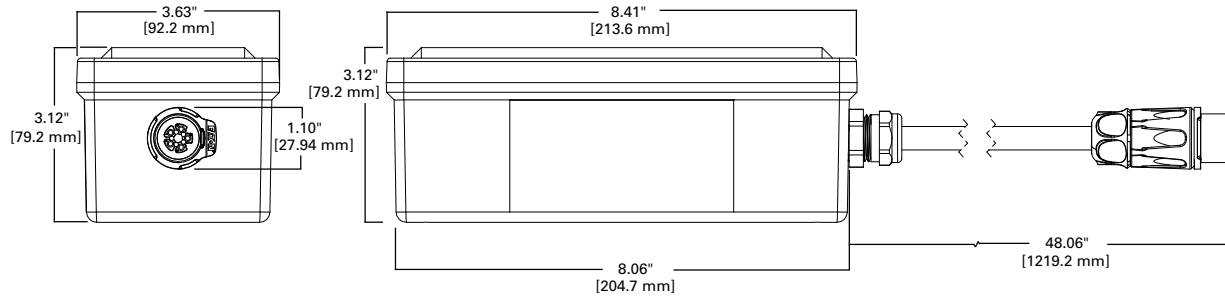


30° Mount

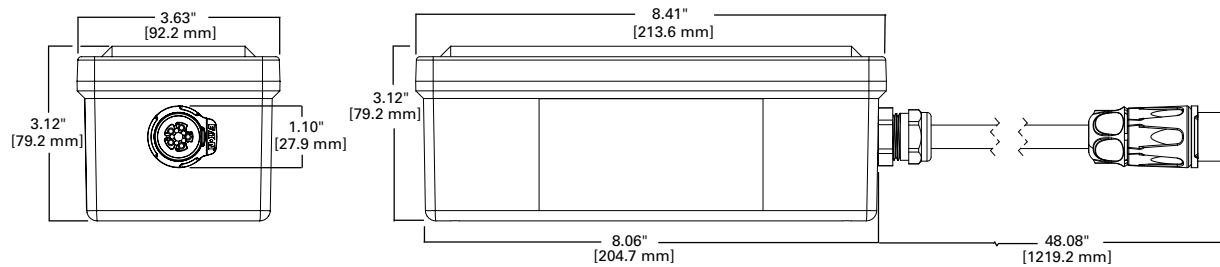
STD - Beginning of Run Power Harness



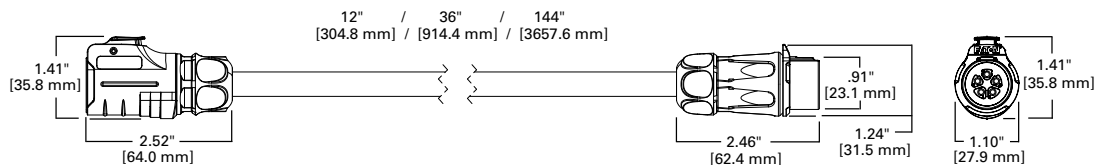
5LT - DALI Control Module



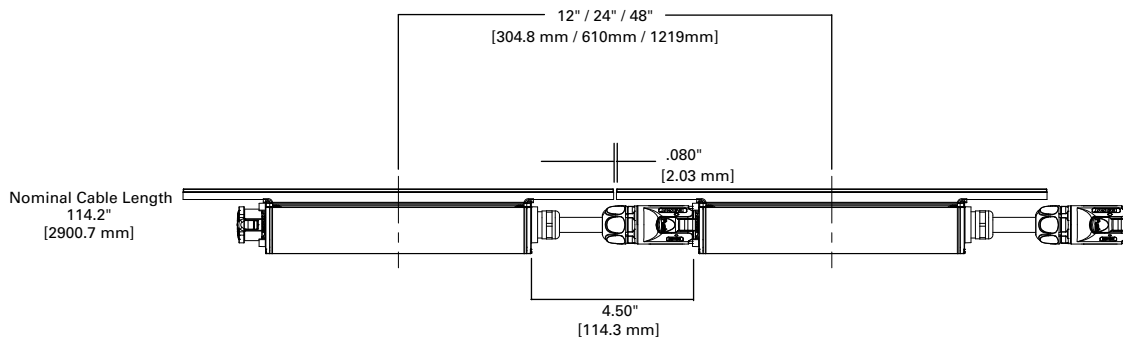
WL - Wavelinx Wireless Control Module



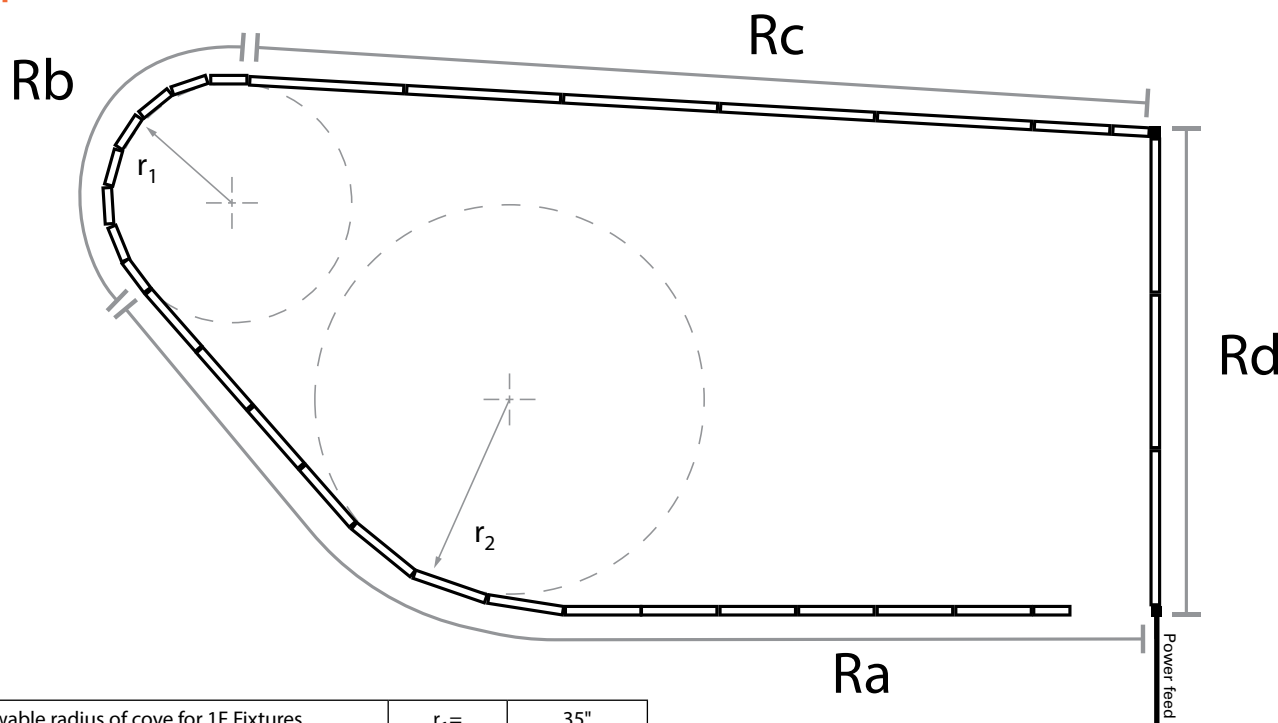
Jumper Harness Accessory



Typical Dimensions for Connected Fixtures



Run Specification Guidelines



Min allowable radius of cove for 1F Fixtures	r ₁ =	35"
Min allowable radius of cove for 2F Fixtures	r ₂ =	70"
Min allowable radius of cove for 4F Fixtures	r ₄ =	140"

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 for bend radius > 20 deg. For example, the architectural drawing above would be specified as 3 separate runs that could be combined together into a 70 ft run using 1x power feed for either 05L or 10L output fixtures.

If this was a 70 ft run of 15L fixtures, it would require 2x power feeds at 120V but still only 1x power feed at 277V:

- Ra would be specified with Length = $27F/2 = 27$ ft linear run (13x 2 ft fixtures + 1x 1 ft fixture + power feed) Note: Bend radius > 70°.
- Rb would be specified with Length = $8F/1 = 8$ ft linear run of 1 ft fixtures (8x 1 ft fixture) Note: Bend radius > 35°.
- Rc + Rd would be specified with Length = $35F = 35$ ft linear run (8x 4 ft fixtures + 1x 2 ft fixture + 1x 2 ft fixture)
- Note: Square corner between Rc and Rd uses a 1 ft jumper. Jumpers are required for angles > 20 deg.

This run could be specified as multiple runs or as a bulk order by fixture quantity. Contact customer service for custom run configurations.

Please Scan for iO CoviO installation instructions:

