

miniFlex™



ARCHITECTURAL AREA LIGHTING

*"to create, inspire and nurture
EXCELLENCE in each other"*



ENERGY EFFICIENCY

The light sources employed in the miniFlex family of fixtures are the most efficient sources commercially available today. The reflectors are designed to direct the illumination on the ground with no stray light which translates into wasted energy. The result is more light with less energy consumption.

LIGHT POLLUTION

The miniFlex family of fixtures is designated as a full cutoff fixture with zero light emitted above 90 degrees horizontal.

LONGEVITY

AAL manufactures all its products to have a life span as long as the building or space they illuminate. The primary material used for all our products is aluminum to resist corrosion and the need for maintenance. Aluminum will not need the periodic refinishing required of steel products that will eventually rust and corrode. All our internal parts and fasteners are made of aluminum or stainless steel. The lamp enclosures are kept dust free and dry to prevent light degradation and maintain a high level of energy efficiency.

SUSTAINABILITY

AAL develops our products with recycling and resource management in mind. We recycle all incoming packaging materials. Our products are shipped in easy to recycle packaging materials. Our state of the art finishing system uses eco friendly cleansing and preparation chemicals that are harmless enough to send to the drain without further processing. Our powder coating process eliminates the release of volatile chemicals into the atmosphere. AAL makes the minFlex, like all AAL products, with renewable materials such as aluminum and stainless steel.

Index

Universal Configuration	5
Arm Options	6
Glass & Hood Options	10
Lamp Information	12
Construction	14
Order Information	
Wall Mounted	16
Post Mounted	17
Options	19
Dimensions	20
Specifications	22
Photometry	23



AAL is a registered continuing education provider.

miniFlex™

An energy efficient luminaire designed to change in appearance and application, when aesthetics is as important as illumination quality.



Designed for outdoor environments,
detailed to complement interior architecture.



Universal Configuration

Every miniFlex is an...

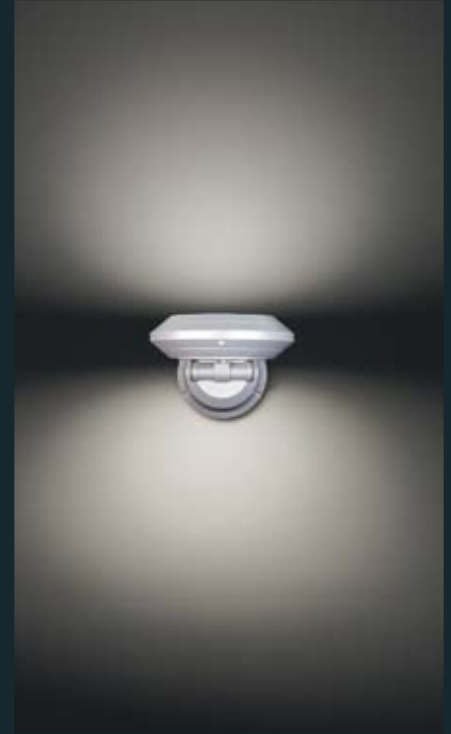
uplight



downlight



uplight +
downlight



The miniFlex makes it easy to change the direction of the light without ordering another fixture, even after installation!

The internal lens cover blocks the uplight or downlight component of light. The lens cover can also be easily removed to create a 50% uplight - 50% downlight luminaire.



Wall Mount

Stainless steel yoke for mounting close to wall.



FMR short yoke arm mounts to wall with a remote ballast. Not available with LED

Stainless steel arms for pole or wall mounting. Wall mount models have an integral ballast housing.



FMSS short straight arm



FMSC short curved arm



FMLS long straight arm



FMLC long curved arm



FMLSX long straight arm with extension



FMLCX long curved arm with extension

FMSC CGL-U



FMSC CGL-U CGL-L



FMLSX SR-U CGL-L



FMSC CON-U FLR-L



7

Pole mount

The pole mounted miniFlex, in single or twin models, is perfect for illuminating pedestrian areas. Both models can be configured with short or long arms, and extension rods to match the Flex.



FMTLC4XP CGL-U



FMLC4 DMC-U

Optional accessories

The miniFlex can be specified to encompass a wide range of visual designs. Its small scale and soft illumination suit both interior and exterior applications.



conical glass

The molded glass lens is frosted and tempered. These lenses are factory installed in place of the flat glass lenses.



concentric rings

The rings can be used with the standard flat glass lens or the optional conical glass lens. The rings are field installed.

Hood elements can be added to the top and/or bottom of the lens frame



angled shade



flared shade



flared cone

aluminum painted
to match the fixture

stainless
steel

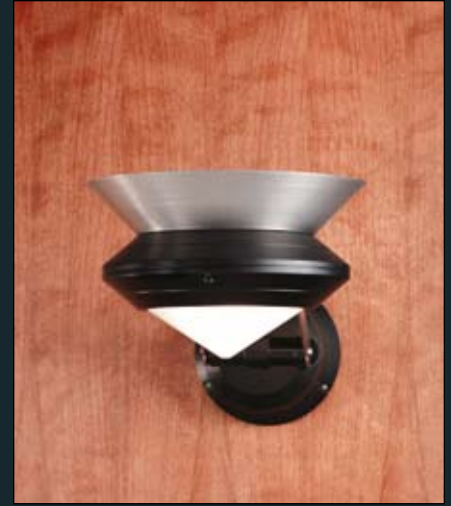
natural
copper



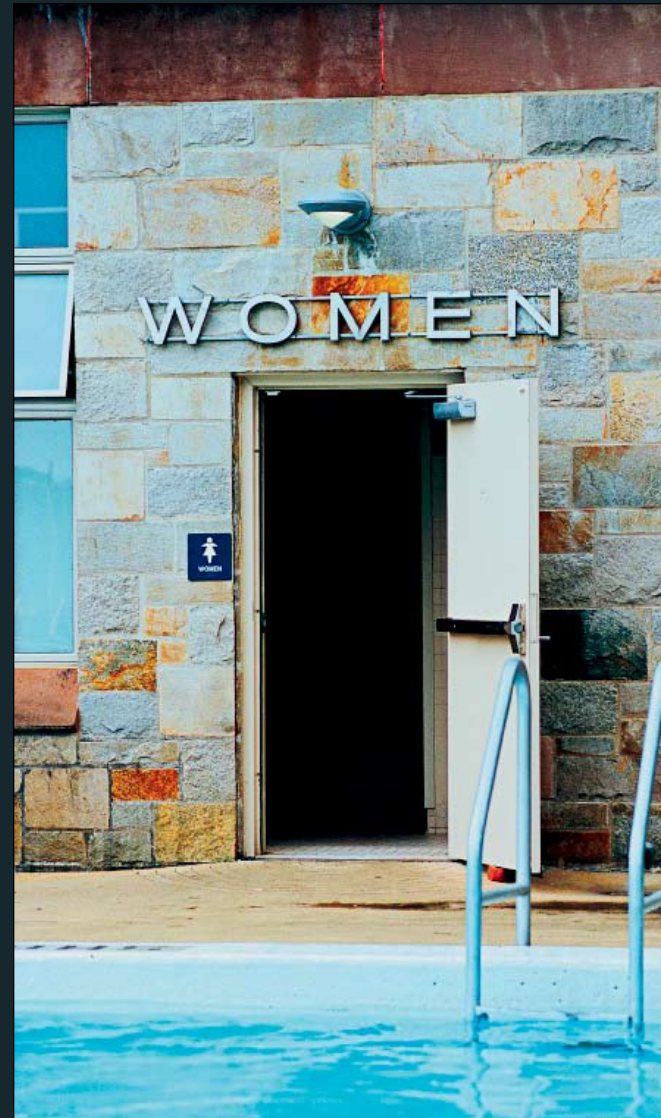
FMLSX CGL-U SR-U CGL-L



FMSC CGL-U CGL-L FLRCOP-L



FMSC ANGSTS-U CGL-L



Multiple lamp sources

Light Emitting Diodes

30 LED (32 watt)

- Energy efficient
- Long life
- Instant restrike

Electronic ballast option

The miniFlex segregates the lamp into a separate compartment allowing the use of electronic metal halide ballast controls. Faster start up, longer lamp life and better color rendition are achieved when used with ceramic metal halide ED-17 or T-6 lamps. The A sound rating provides quiet operation for interior applications.

Metal Halide

ED-17 medium base

- 50, 70, 100 watts
- Energy efficient
- High lumen output
- Long lamp life
- High color rendering

G12 bi-pin base

- Excellent color rendering
- The T-6 lamp is available only in a color corrected version-poor quality lamps cannot be used for future relamping
- Long lamp life

Compact Fluorescent

PL-T 4-pin base and ballast

- Accepts 26, 32, or 42 watt lamps
- Instant restart
- Energy efficient
- High color rendering
- Long lamp life

Add color



Internal color filter

Create drama, highlight a facade, or compliment the color scheme of your next project. Adding a color filter to one lens of the fixture does not affect the color of the light emitted through the other lens (LED available as uplight or downlight only). The miniFlex accepts internal dichroic filters in the uplight and/or downlight position. The filter is located inside the lamp compartment to ensure it remains clean and out of sight.





FMLSX CGL-U CGL-L

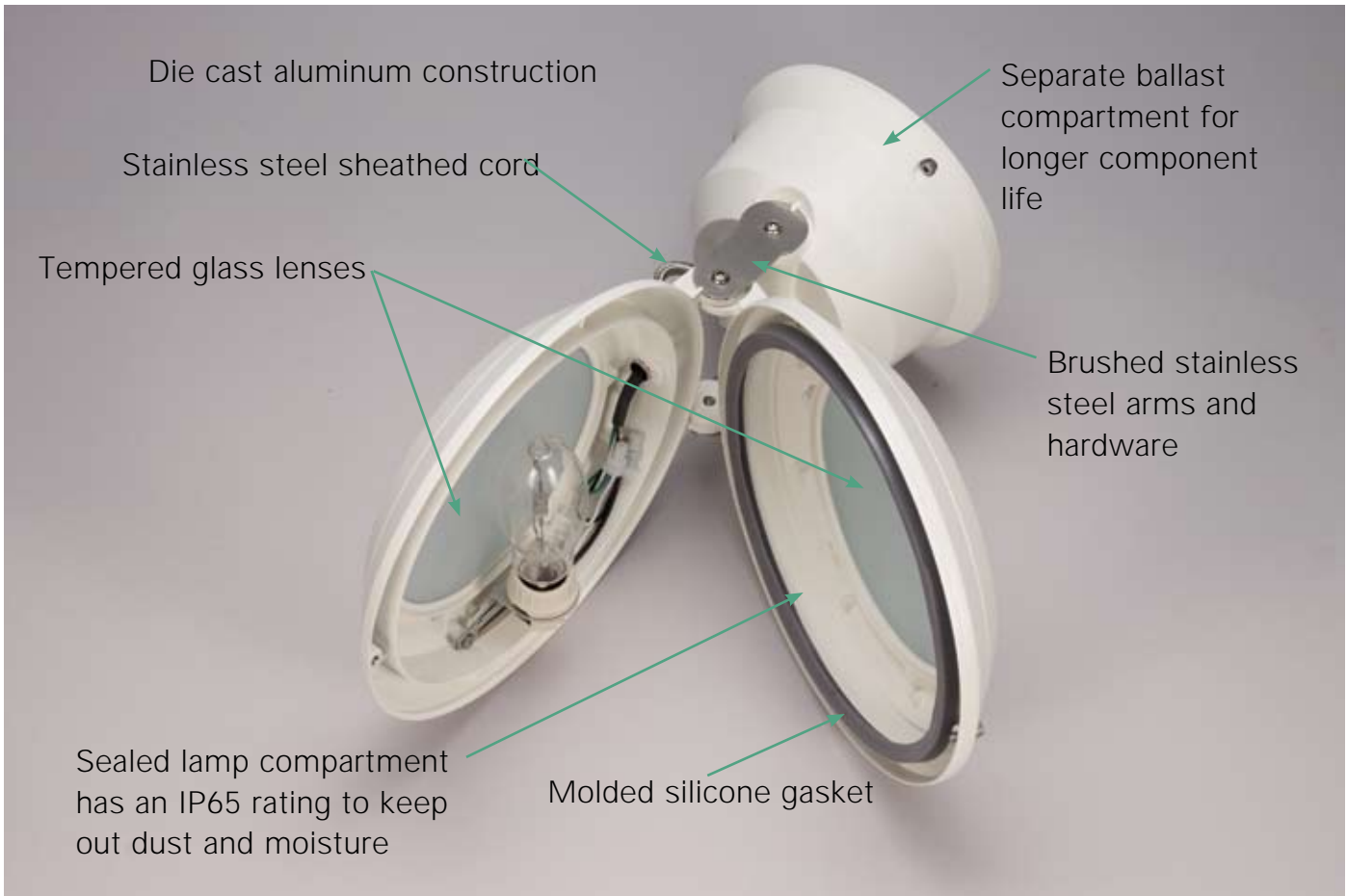


FMLSX

ARCHITECTURAL AREA LIGHTING

miniFlex™

Design Quality



Installation

Installation is easy. Just secure the backplate to a j-box or building surface. Connect the load wires and attach the miniFlex to the backplate with three captive stainless steel cap screws.



Design continuity



The miniFlex is a perfect complement to the Flex, a high performance site lighting fixture. Both fixtures use modular design elements such as circular housings, stainless steel arms, braided stainless steel wiring and separate ballast modules.

Ordering information - Wall Mounted

1	2	3	4	5	6					
FIXTURE	LAMP/BALLAST	LED OUTPUT (IF APPLICABLE)	COLOR	EXTERNAL OPTIONS	INTERNAL OPTIONS					
EXAMPLES										
FMLSX	/	CF	/	WHT	/	CGL-U	/	CGL-L	/	.

All miniFlex fixtures are standard with flat, lightly diffused tempered glass lenses on the upper and lower lens frame. An internal lens cover is factory installed on the upper lens frame. The lens cover may be removed for an upright-downlight configuration or installed on the lower lens frame for upright only.

1 FIXTURE WALL MOUNT

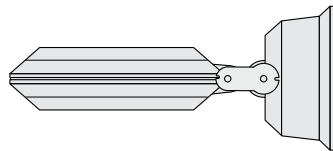
Remote Ballast

Short stainless steel yoke arm with a 25 ft/8 m waterproof black cable for connection to a remote ballast. Ballast enclosure by others. Includes a 5 in/125 mm round cover plate for the wall if required. Not available with LED.

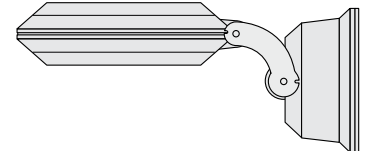


FMR Short arm
Projection: 13.25 in/340 mm
Height: 3.50 in/90 mm

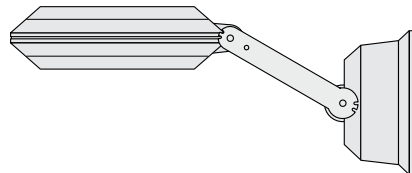
Integral Ballast



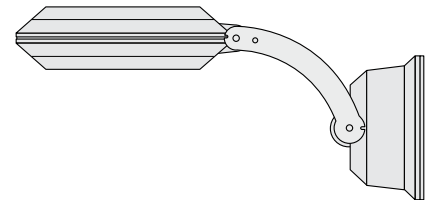
FMSS Short straight arm
Projection: 17.2 in/440 mm
Height: 7.8 in/200 mm



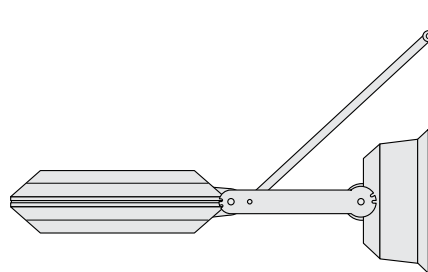
FMSC Short curved arm
Projection: 17.9 in/445 mm
Height: 7.8 in/200 mm



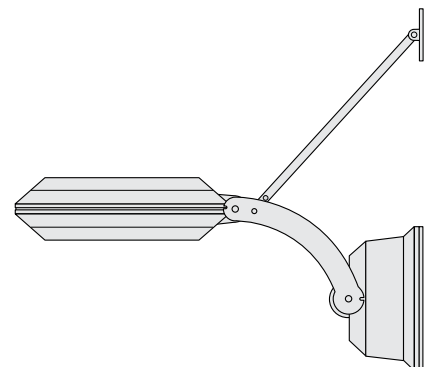
FMLS Long straight arm
Projection: 22.5 in/570 mm
Height: 7.8 in/200 mm
Arm can be tilted up 30 degrees



FMLC Long curved arm
Projection: 21.3 in/540 mm
Height: 10.1 in/260 mm



FMLSX Long straight arm & extension
Projection: 22.5 in/570 mm
Height: 14.2 in/360 mm
Arm can be tilted up 30 degrees



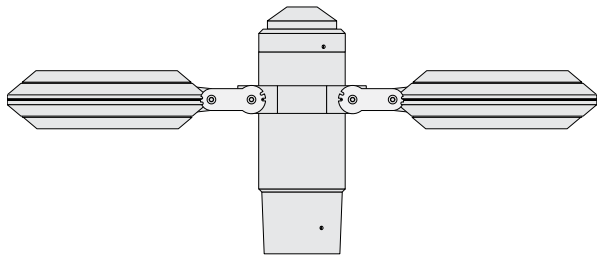
FMLCX Long curved arm & extension
Projection: 21.3 in/540 mm
Height: 18.9 in/480 mm

Ordering information - Pole Mounted

1	2	3	4	5	6					
FIXTURE	LAMP/BALLAST	LED OUTPUT (IF APPLICABLE)	COLOR	EXTERNAL OPTIONS	INTERNAL OPTIONS					
EXAMPLES										
FMLSX	/	CF	/	WHT	/	CGL-U	/	CGL-L	/	.

POLE MOUNT

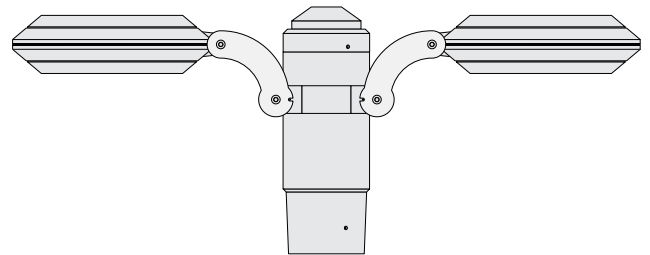
Ballast is located in the post top fitter. Slips over a 4 in/100 mm O.D. pole.



SHORT STRAIGHT ARM

FMSS4 Single short straight arm

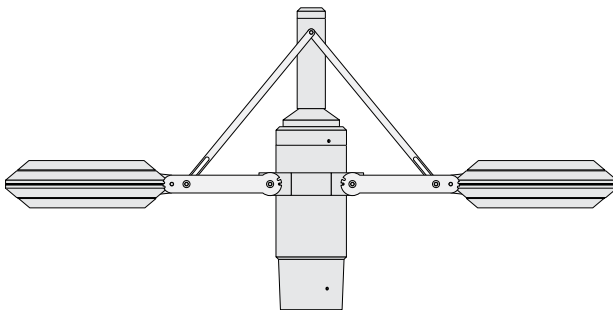
FMTSS4 Twin short straight arm



SHORT CURVED ARM

FMSC4 Single short curved arm

FMTCS4 Twin short curved arm



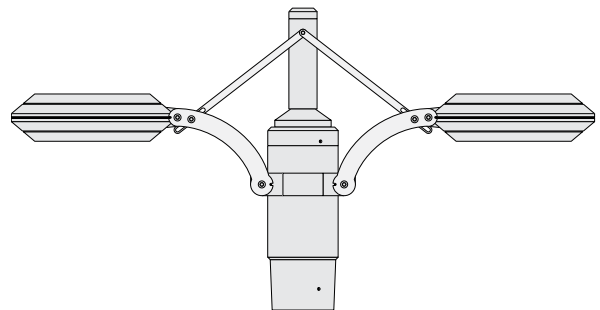
LONG STRAIGHT ARM

FMLS4 Single long straight arm

FMLS4XP Single long straight arm with extension

FMTLS4 Twin long straight arm

FMTLS4XP Twin long straight arm with extension



LONG CURVED ARM

FMLC4 Single long curved arm

FMLC4XP Single long curved arm with extension

FMTLC4 Twin long curved arm

FMTLC4XP Twin long curved arm with extension

Ordering Information

2 LAMP/BALLAST

CF	Compact fluorescent, electronic 120 thru 277 volt ballast. Use 4 pin lamp, 26, 32 or 42 watt.
39MHT6EB	39 watt electronic metal halide 120 thru 277 volt ballast. Use G12 base, T-6 ceramic lamp.
50MH	50 watt metal halide 120/277 volt ballast. Use medium base, ED-17 lamp.
50MHEB	50 watt electronic metal halide 120 thru 277 volt ballast. Use medium base, ED-17 lamp.
70MH	70 watt metal halide 120/208/240/277 volt ballast. Use medium base, ED-17 lamp.
70MHEB	70 watt electronic metal halide 120 thru 277 volt ballast. Use medium base, ED-17 lamp.
70MHT6	70 watt metal halide 120/277 volt ballast. Use G12 base, T-6 ceramic lamp.
70MHT6EB	70 watt electronic metal halide 120 thru 277 volt ballast. Use G12 base, T-6 ceramic lamp.
100MH	100 watt metal halide 120/208/240/277 volt ballast. Use medium base, ED-17 lamp.
100MHEB	100 watt electronic metal halide 120 thru 277 volt ballast. Use medium base, ED-17 lamp.
50HPS	50 watt high pressure sodium 120/277 volt ballast. Use medium base, ED-17 lamp.
70HPS	70 watt high pressure sodium 120/208/240/277 volt ballast. Use medium base, ED-17 lamp.
100HPS	100 watt high pressure sodium 120/208/240/277 volt ballast. Use medium base, ED-17 lamp.
30LED-WW	30 light emitting diode array (32 watt). Warm white (3500K). 120 thru 277 volt. Uplight or downlight only. Specify desired output option.
30LED-BW	30 light emitting diode array (32 watt). Bright white (5100K). 120 thru 277 volt. Uplight or downlight only. Specify desired output option.

*All ballasts are factory wired for 277 volts, unless specified. Lamps not included (except LED options).
All applicable ballast are EISA compliant.*

3 LED OUTPUT OPTION – Must select one when LED option is chosen

LO-U	LED light output upper (uplight)
LO-L	LED light output lower (downlight)

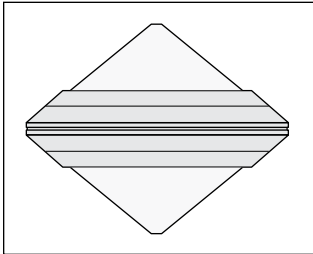
4 COLORS

All standard and premium AAL colors available. For RAL and custom colors, please submit a 4-digit RAL number or color chip for custom colors.

Ordering Information

5 EXTERNAL OPTIONS

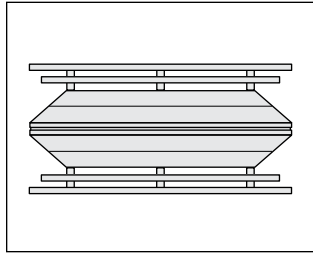
The conical glass lens, angled shade, flared shade, flared cone, and solid ring options can be ordered to attach to the upper and/or lower lens frame. These options can be used separately or in combination with the other (except LED which is uplight or downlight only). All of the options, except for the conical glass, are field installed to the lens frame with three stainless steel screws.



CGL-U upper
CGL-L lower

CONICAL GLASS

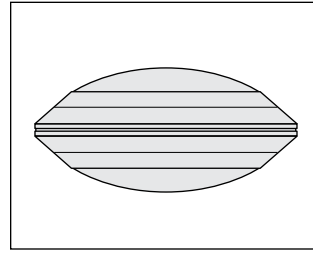
Molded, tempered, frosted glass lens.



SR-U upper
SR-L lower

SOLID RINGS

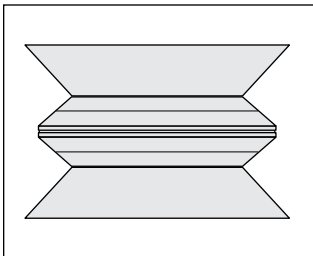
Two cast aluminum rings.



DMC-U upper
DMC-L lower

DOMED COVER

Spun aluminum dome mimics the design of the Flex.



ANG-U upper
ANG-L lower

ANGLED SHADE

Spun aluminum shade with hemmed edge. Painted the same color as the fixture.

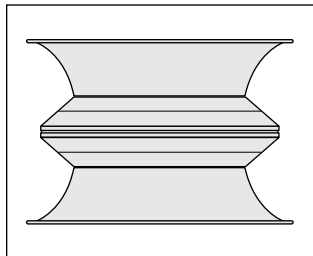
12.75 in/325 mm dia
2.50 in/64 mm Ht

ANGCOP-U upper
ANGCOP-L lower

Unfinished copper will patina over time.

ANGSTS-U upper
ANGSTS-L lower

Brushed stainless steel.



FLR-U upper
FLR-L lower

FLARED SHADE

Spun aluminum shade with rolled edge. Painted the same color as the fixture.

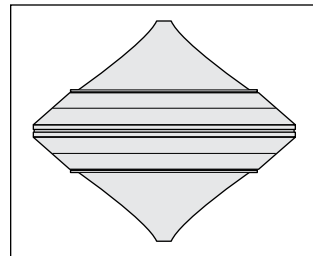
12.87 in/330 mm dia
2.75 in/70 mm Ht

FLRCOP-U upper
FLRCOP-L lower

Spun copper shade with rolled edge. Unfinished, will patina over time.

FLRSTS-U upper
FLRSTS-L lower

Brushed stainless steel.



CON-U upper
CON-L lower

FLARED CONE

Spun aluminum cone. Painted the same color as the fixture.

3.4 in/86 mm Ht

CONCOP-U upper
CONCOP-L lower

Unfinished copper will patina over time.

CONSTS-U upper
CONSTS-L lower

Brushed stainless steel.

6 INTERNAL OPTIONS

QL

Socket for T-4 mini-can lamp, field wired to a separate circuit. (Lamp wattage not to exceed ballast Wattage). Must be wired to a separate 120 volt circuit. Not available with LED.

CFH

Aluminum ring with three key hole slots to hold one color filter (by others). The holder accepts a filter that is 8" /200mm in diameter.

CFH-2

Two color filter holders. Not available with LED.

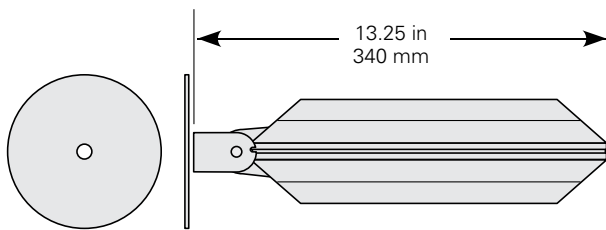
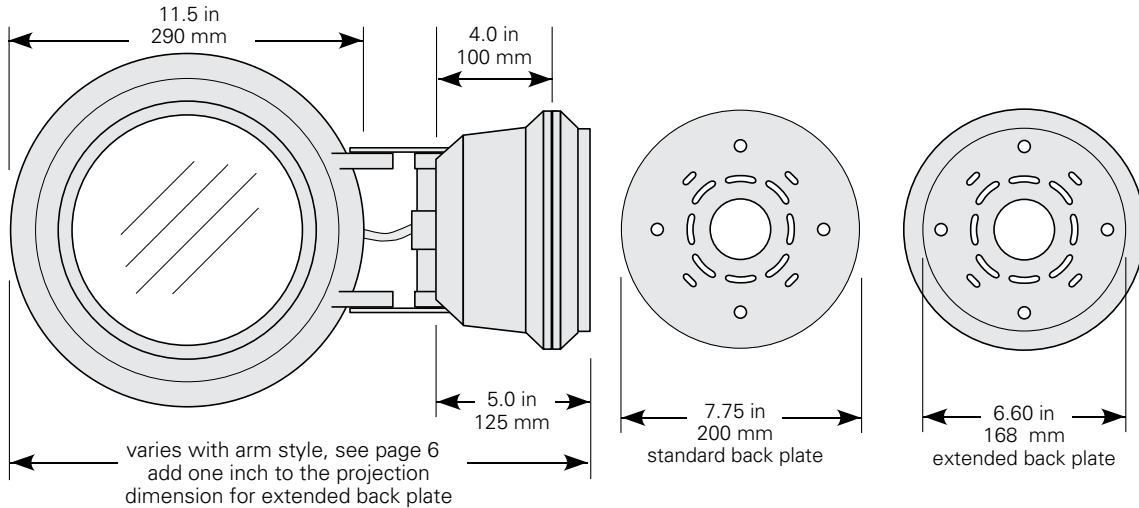
Filters are available from Special FX, or other filter providers.

347

120/277/347 volt magnetic ballast for all HID lamps, except the 50HPS and 50MH which are 347 volts only. Not available with LED.

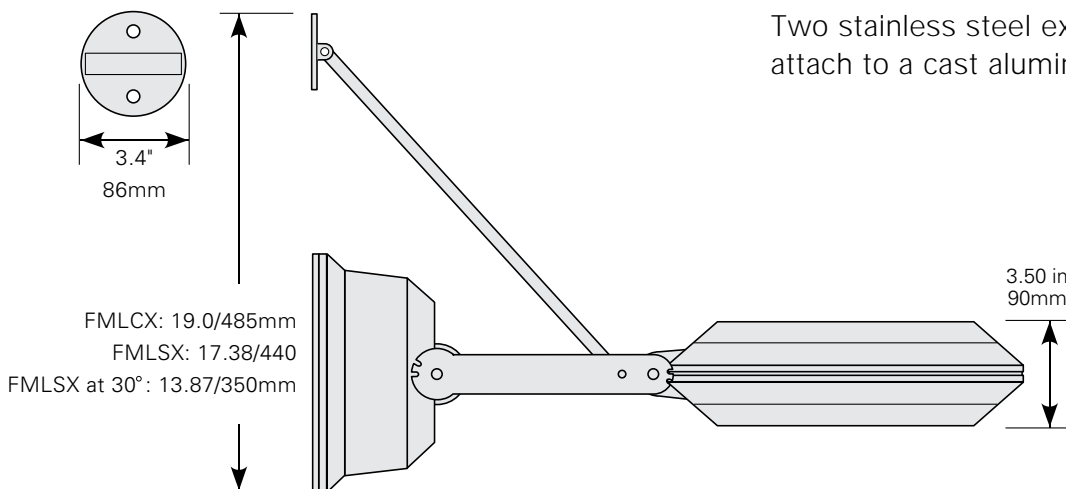
Dimensional information - Wall mounted

The standard backplate is for compact fluorescent and electronic metal halide ballasts. The extended backplate is required for metal halide and high pressure sodium magnetic ballasts.



Remote Ballast

Short stainless steel yoke arm with a 25 ft/8 m waterproof cable for connection to a remote ballast. Ballast enclosure by others. Includes a 5 in/125 mm round cover plate for the wall if required. Not available with LED.

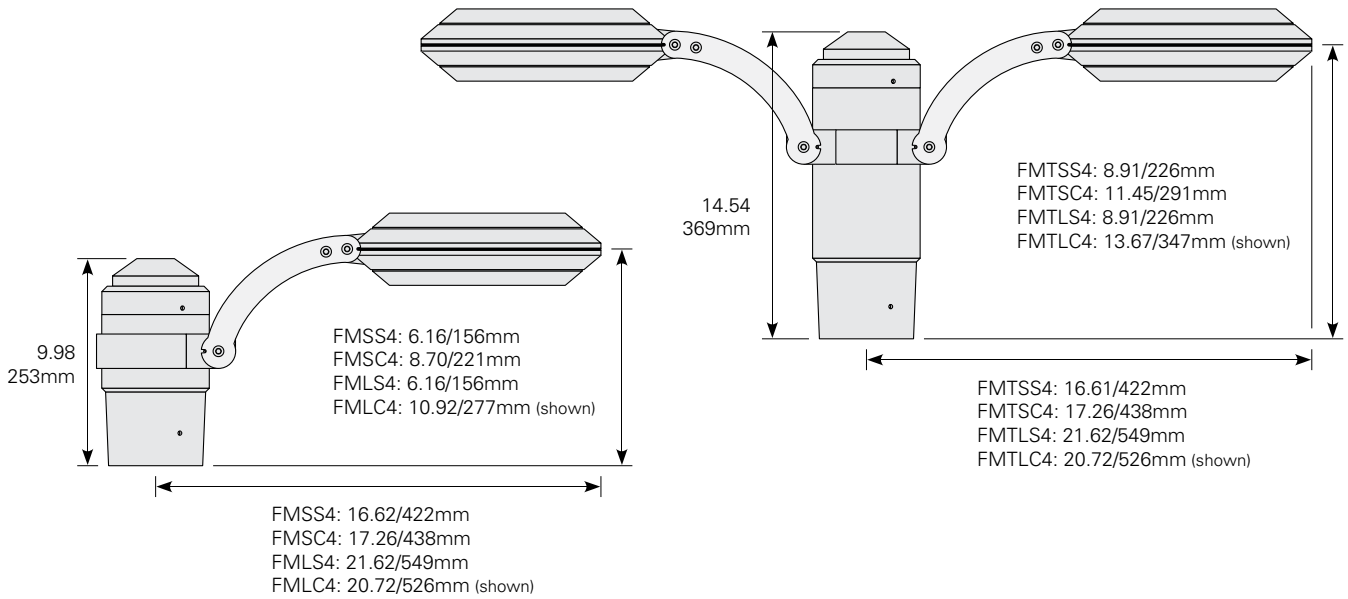


Arm Extension

Two stainless steel extension arms attach to a cast aluminum wall plate.

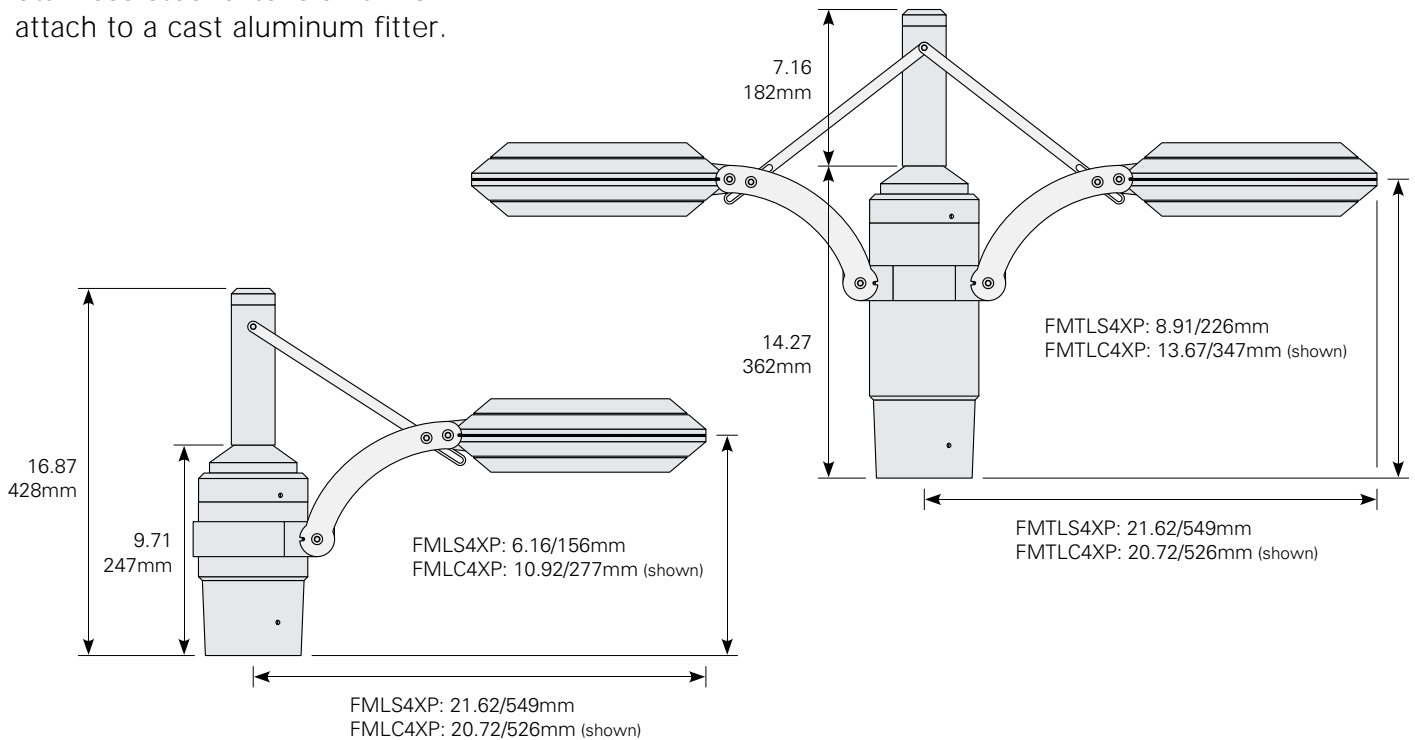
Dimensional information - Pole mounted

Ballast is located in the post top fitter.
Slips over a 4 in/100 mm O.D. pole.

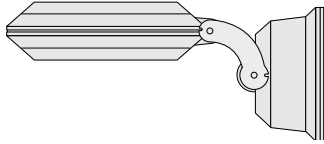


Arm Extensions

Stainless steel extension arms attach to a cast aluminum fitter.



Specifications



LAMP MODULE

The lamp housing is two-piece die cast aluminum. Two stainless steel arms join the lamp module and ballast module with four stainless steel bolts. The cable between the lamp and ballast modules is sheathed in a flexible stainless steel hose with watertight stainless steel fittings.

An internal lens cover is pre-installed on the upper lamp housing. The cover is movable to the lower housing to change the fixture to an uplight luminaire, or removed for a 50/50 uplight/downlight configuration. The LED option is only available as an uplight or downlight.

The lens, flat or conical, is tempered glass with a lightly diffused finish to obscure the lamp image and eliminate striations on the wall surface.

The housing is sealed with a molded silicone gasket. One captive stainless steel screw is loosened to swing the door open allowing access to the lamp.

WALL MOUNT

The ballast housing is two-piece die cast aluminum. The back plate is mounted to an electrical box or fastened directly to the wall surface. The ballast housing holds the ballast components and attaches to the back plate with three captive stainless steel cap screws. LED not available with remote ballast.

POST TOP MOUNT

The ballast is mounted to a strap within the post top fitter. The fitter has a removable top cap for access and removal of the ballast assembly.

ELECTRICAL

Magnetic HID ballasts are high power factor, rated for -30°C starting. Electronic ballasts for metal halide lamps are sound rated A, 120 thru 277 volt. Compact fluorescent transformers are electronic, 120 thru 277 volt for 26, 32 or 42 watt 4 pin lamps. Sockets are pulse rated, medium base for ED-17 lamps, G12 for use with T6 lamps. LED components are 120 thru 277 volt with 30 light emitting diodes. Maximum system wattage is 32 watts. The miniFlex is factory supplied as a complete, prewired assembly including the lamp and ballast module. Ballasts are prewired to 277 volts, unless specified.

FINISH

Fixture finish consists of a five stage pretreatment regimen with a polymer primer sealer, oven dry off and top coated with a thermoset TGIC polyester powder coat finish. The finish meets the AAMA 605.2 performance specification which includes -passing a 3000 hour salt spray test for corrosion resistance.

EISA COMPLIANCE

AAL is committed to complying with U.S. EISA requirements. All applicable products manufactured for sale in the United States after January 1, 2009, meet EISA requirements.

CERTIFICATION

The fixture is listed with ETL for outdoor, wet location use, in accordance to the UL1598 and Canadian CSA Std. C22.2 no.250

WARRANTY

Fixture is warranted for three years. Ballast components carry the ballast manufacturer's limited warranty. Any unauthorized return, repair, replacement or modification of the Product(s) shall void this warranty. This warranty applies only to the use of the Product(s) as intended by AAL and does not cover any misapplication or misuse of said Product(s), or installation in hazardous or corrosive environments. Contact AAL for complete warranty language, exceptions, and limitations.

Photometry

The values shown are in initial footcandles. Discount values for light loss due to voltage, temperature and atmospheric variations which affect light output. To substitute another lamp in the charts, multiply the chart values by the lamp conversion factor. Mounting height is to the lamp center. Testing is performed by a certified independent laboratory. Photometry is available in IES formatted files at www.aal.net.

LAMP TYPE	CONVERSION FACTOR
39 Metal Halide	3400 lumens .57
50 Metal Halide	3750 lumens .63
70 Metal Halide	6000 lumens 1.00
100 Metal Halide	9000 lumens 1.50

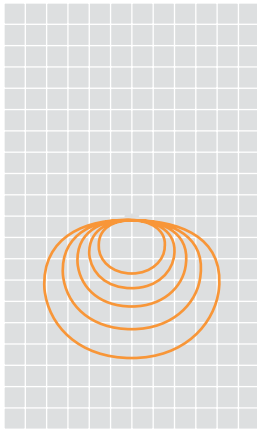
LAMP TYPE	CONVERSION FACTOR
32 Compact Fluorescent	2040 lumens .34
42 Compact Fluorescent	2720 lumens .45

LAMP TYPE	CONVERSION FACTOR
50 High Pressure Sodium	4000 lumens .67
70 High Pressure Sodium	6300 lumens 1.05
100 High Pressure Sodium	9500 lumens 1.58

Downlight or Uplight only

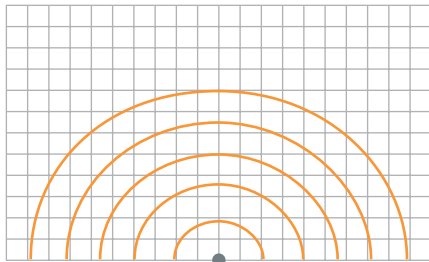
Flat glass lens, block-off plate
70 watt Metal Halide
10 ft/3.1 m mounting height

VERTICAL FOOTCANDLES ON THE WALL
ONE GRID SQUARE EQUALS TWO FEET



HORIZONTAL FOOTCANDLES ON THE GROUND

ONE GRID SQUARE EQUALS TWO FEET

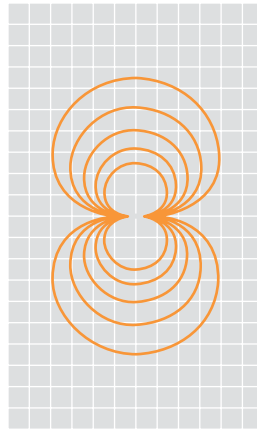


MOUNTING HEIGHT	8'	5.8	2.9	1.4	.72	.36
10'	4.0	2.0	1.0	.50	.25	
12'	2.8	1.4	.7	.35	.17	
14'	2.0	1.0	.51	.26	.09	

Uplight and Downlight

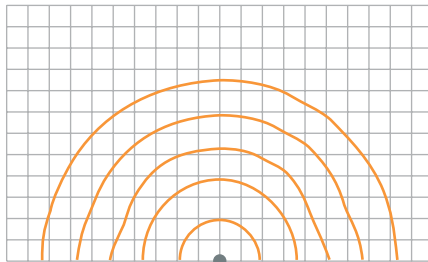
Flat glass lens
70 watt Metal Halide
10 ft/3.1 m mounting height

VERTICAL FOOTCANDLES ON THE WALL
ONE GRID SQUARE EQUALS TWO FEET



HORIZONTAL FOOTCANDLES ON THE GROUND

ONE GRID SQUARE EQUALS TWO FEET

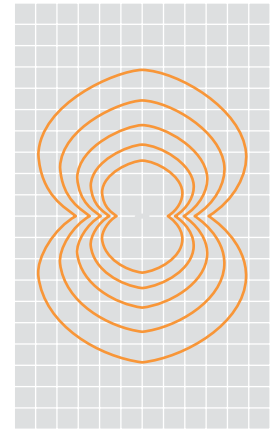


MOUNTING HEIGHT	8'	5.8	2.9	1.4	.72	.36
10'	4.0	2.0	1.0	.50	.25	
12'	2.8	1.4	.7	.35	.17	
14'	2.0	1.0	.51	.26	.09	

Uplight and Downlight

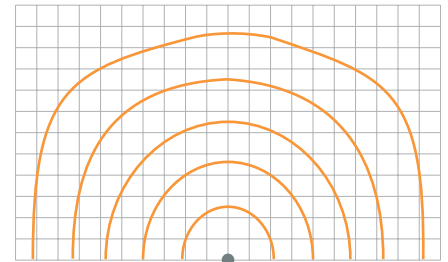
Conical glass lenses
70 watt Metal Halide
10 ft/3.1 m mounting height

VERTICAL FOOTCANDLES ON THE WALL
ONE GRID SQUARE EQUALS TWO FEET



HORIZONTAL FOOTCANDLES ON THE GROUND

ONE GRID SQUARE EQUALS TWO FEET



MOUNTING HEIGHT	8'	5.8	2.9	1.4	.72	.36
10'	4.0	2.0	1.0	.50	.25	
12'	2.8	1.4	.7	.35	.17	
14'	2.0	1.0	.51	.26	.09	

miniFlex™



Architectural Area Lighting
116555 East Gale Ave. | City of Industry | CA 91745
T 626.968.5666 | F 626.369.2695 | www.aal.net/aal/fm110.html

© 2010 Architectural Area Lighting | Design Patents | Made in the USA | miniFLEX 110