

Kekauluohi Archives Lighting Repairs

Background

A survey of the second floor lighting fixtures indicated that fixtures have exceeded their lifespan and require replacement. This is due to the fixtures failing as well as the stems that the fixtures are mounted from also failing and causing a possible hazard to staff in the area. This project will replace all fixtures with new LED type fixtures. There are also pull string switches in the area that are no longer necessary and will be removed. Occupancy sensors shall be provided for the new fixture groups (occupancy sensors for 2nd floor fixtures may be provided integral with new). Existing circuiting is to be reused to the best extent possible. New lighting fixtures are to be surface mounted to simplify installation.

There is also minor work in the Basement and First floors. The elevator lobby in the basement will have a single additional fixture added with power supplied by adjacent fixture. Occupancy sensors will be provided for the five (5) switched lighting groups in the storage area. A light switch and pilot light will be added to the first floor existing switch location as shown. This is to replace a failed switch that has been removed.

See Plan Sheets.

Scope of Work

Request a proposal for all work, complete and in-place, for the following:

- Removal and replacement of existing overhead lighting fixtures on Second Floor.
- The existing branch circuit conductors shall be reconnected to new fixtures. Re-use existing conduit and wiring to the best extent possible. Provide new wiring and light fixtures as necessary. The new fixtures shall be placed/located in the approximate location of the existing fixtures.
- Addition of occupancy sensors on the Second Floor and Basement.
- Addition of a light fixture in the Basement elevator lobby area.
- Addition of lighting switch on First Floor to control Second Floor lighting.
- Provide operational testing of all new electrical components provided.
- Properly dispose of all items removed by this contract.

Notes

- Contractor shall field verify existing conditions; to include electrical requirements and characteristics of existing fixtures and building power distribution prior to ordering any replacement electrical components.
- Lighting fixtures catalog cuts attached are for information only and are "OR EQUAL". Actual light fixtures provided shall have similar appearance and illumination performance as fixture catalog cuts provided.
- Contractor shall provide scaffolding when working at height. Scaffolding shall be erected and used in such a way as to prevent damage to shelving and records. All shelving and records shall not be moved or disturbed during contractor's work.

- New fixtures are indicated to be surface mounted; however, suspended struts may be used to mount light fixtures in areas where actual conditions make surface mounting more difficult. Suspended fixture installations shall be provided with seismic bracing per manufacturer's installation recommendations.

Time of Performance

- Provide schedule one week after notice to proceed.
- 4-month construction schedule.

End

LED



createchange



FEATURES

- Two attractive architectural center lens choices
- High efficiency acrylic center lens features linear prisms for high performance without pixelation
- Appropriate for offices, schools, medical, and public spaces
- High performance reflector with matte white paint standard
- 60,000 hour LEDs at L80 (up to 150,000 projected life) for reduced maintenance
- 83 CRI standard or optional 90 CRI for color sensitive applications
- Four LED color choices
- Ten lumen packages
- HE lumen packages available
- Multiple driver options to satisfy different applications
- LED modules and electrical accessible from below
- Optional architecturally styled integration of daylight and occupancy sensor(s)
- Wireless ZigBee® radio enabled option
- QR code traceability
- Integral battery pack optional on most models
- Compatible with Dual-Lite inverters
- Recessed, surface or cable mount
- Air return optional
- DesignLights Consortium® (DLC) qualified with many configurations qualifying for DLC Premium
- Five year warranty (Terms and Conditions apply)

PROJECT INFORMATION

Project Name _____

Type _____

Catalog No. _____

Date _____

CONSTRUCTION

Luminaire housing, reflectors and end caps are die formed code gauge cold rolled steel. High transmission extruded acrylic enclosed lens features linear prisms with custom frost for high efficacy without pixelation.

SHIELDING

Removable lens for easy access to LED module and electrical components.

FINISH

All reflective surfaces are finished after fabrication with unique formula high reflectivity matte white paint for soft, uniform indirect illumination.

INSTALLATION

An access plate is furnished with each luminaire for fast wiring access without the necessity to open the fixture or wireway.

CEILING COMPATIBILITY

Luminaire fits recessed exposed Grid ceilings (G); four integral NEC compliant T-bar clips are standard. Can be placed in Slot Grid (SG) style ceiling with regress 3/8" above ceiling plane. A Flange Kit (FK) accessory is available for recessed hard ceiling applications. Surface Mount (SM) option allows placement below ceiling plane. Cable Mount (CM) option allows suspension below ceiling plane.

CERTIFICATION

All luminaires are built to UL1598 and 2108 standards, and bear appropriate CSA labels. Damp location is standard. Emergency-equipped fixtures labeled UL 924 and Dry Location unless specified. Adheres to LM79, LM80, and TM21 industry standards. DesignLights Consortium® (DLC) and DLC Premium qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org.

IC RATING

IC label is standard for recessed products. Note that IC label is void if product is installed on site with air return fixtures.

WARRANTY

Five year warranty (Terms and Conditions apply).

ORDERING INFORMATION

EXAMPLE LCAT14-35MLG-ESDU

LCAT 14 -											
MODEL	CRI	COLOR TEMP	CEILING TYPE	AIR FUNCTION	VOLTAGE	OPTIONS	SIZE	LUMEN OUTPUT	SHIELDING	DRIVER	
LCAT LED Contemporary Architectural Troffer	Blank >80 9 >90 ¹	30 3000K 35 3500K 40 4000K 50 5000K	G Grid Lay-in ² SM Surface Mount ³ CM Cable Suspended Mount ^{3,4}	Blank Static A Air Return Side Slots	U 120V-277V 347 347V	ELL14 Emergency Battery Pack Installed, 1400 Lumens ^{5,7} C388 3-Wire Flex C488 4-Wire Flex C588 5-Wire Flex GLR Fast Blow Fuse NYC NYC Compliant EOR End of Row (SM and CM only. Provides end wiring access for continuous row mounting.) ³ INT Intermediate (SM and CM only. Provides ends with wiring access for continuous row mounting.) ³ CP Chicago Plenum ODP Occupancy and Daylight Sensors, Philips ⁸ ZRE Wireless ZigBee® radio enabled ⁹	14 1' x 4'	XW Extra Low Watt XWHE Extra Low Watt High Efficacy VW Very Low Watt VWHE Very Low Watt High Efficacy MW Medium Low Watt MWHE Medium Low Watt High Efficacy LW Low Watt ML Medium Lumen HL High Lumen VL Very High Lumen	Blank Curve R Rectangular	E Fixed Output ESD Step Dimming ^{5,7} ED 0-10V Dimming ED1 0-10V 1% Dimming LUTH Lutron H Series, 1% Dimming ^{5,7} LUTH5 Lutron 5 Series 5% Dimming ^{5,7}	

ACCESSORIES (ORDER SEPARATELY)

- FK14** 1' x 4' Single Flange Kit (Shipped separately)
- CM48Y1SC3F48** Cable Mount Kit for 1' wide Cable Mount fixtures, 3 Wire

See Product Availability Table on following pages.

DRIVER AVAILABILITY TABLE

	XW	XWHE	VW	VWHE	MW	MWHE	LW	ML	HL	VL
E	X	X	X	X	X	X	X	X	X	X
ED	X	X	X	X	X	X	X	X	X	X
ED1	X	X	X	X	X	X	X	X	X	X
ESD					X	X	X	X	X	X
LUT5	X		X		X		X	X	X	
LUTH	X		X		X		X	X	X	
347	X		X		X		X	X	X	

¹ Not available with HE lumen output.
² For drywall, order G with Flange Kit Accessory.
³ Not available with Air Return (A) air function.
⁴ Order hanger accessories separately.
⁵ Limitations apply based on lumen packages (See Driver Table).
⁶ For compatibility with Dual-Lite LiteGear® inverters, contact Hubbell Lighting Representative.
⁷ Not available in 347V.
⁸ Only available with 0-10V Dimming (ED) Driver Option.
⁹ Only available with 0-10V Dimming (ED, ED1) Driver Options.

For questions about configuration options, contact Hubbell Representative.

Product Availability 80 CRI					Product Availability 90 CRI				
Lumen Package	Shielding	Lumens	Input Watts	LPW	Lumen Package	Shielding	Lumens	Input Watts	LPW
LCAT14-30XW	Curve	2299	19.4	119	LCAT14-930XW	Curve	2105	20.6	102
LCAT14-30XWx-R	Rectangle	2398	20.6	116	LCAT14-930XWx-R	Rectangle	2039	20.6	99
LCAT14-30XWHE	Curve	2457	19.0	129					
LCAT14-30XWHEx-R	Rectangle	2486	20.0	124					
LCAT14-35XW	Curve	2377	19.4	123	LCAT14-935XW	Curve	2150	20.6	104
LCAT14-35XWx-R	Rectangle	2480	20.6	120	LCAT14-935XWx-R	Rectangle	2082	20.6	101
LCAT14-35XWHE	Curve	2540	19.0	134					
LCAT14-35XWHEx-R	Rectangle	2570	20.0	129					
LCAT14-40XW	Curve	2414	19.4	124	LCAT14-940XW	Curve	2197	20.6	107
LCAT14-40XWx-R	Rectangle	2519	20.6	122	LCAT14-940XWx-R	Rectangle	2127	20.6	103
LCAT14-40XWHE	Curve	2580	19.0	136					
LCAT14-40XWHEx-R	Rectangle	2610	20.0	131					
LCAT14-50XW	Curve	2478	19.4	128	LCAT14-950XW	Curve	2340	20.6	114
LCAT14-50XWx-R	Rectangle	2586	20.6	126	LCAT14-950XWx-R	Rectangle	2266	20.6	110
LCAT14-50XWHE	Curve	2648	19.0	139					
LCAT14-50XWHEx-R	Rectangle	2680	20.0	134					
LCAT14-30VW	Curve	3147	27.5	114	LCAT14-930VW	Curve	2674	27.5	97
LCAT14-30VWx-R	Rectangle	3047	27.5	111	LCAT14-930VWx-R	Rectangle	2591	27.5	94
LCAT14-30VWHE	Curve	3083	24.0	128					
LCAT14-30VWHEx-R	Rectangle	3161	26.0	122					
LCAT14-35VW	Curve	3241	27.5	118	LCAT14-935VW	Curve	2738	27.5	100
LCAT14-35VWx-R	Rectangle	3150	27.5	115	LCAT14-935VWx-R	Rectangle	2645	27.5	96
LCAT14-35VWHE	Curve	3175	24.0	132					
LCAT14-35VWHEx-R	Rectangle	3268	26.0	126					
LCAT14-40VW	Curve	3291	27.5	120	LCAT14-940VW	Curve	2801	27.5	102
LCAT14-40VWx-R	Rectangle	3200	27.5	116	LCAT14-940VWx-R	Rectangle	2702	27.5	98
LCAT14-40VWHE	Curve	3224	24.0	134					
LCAT14-40VWHEx-R	Rectangle	3319	26.0	128					
LCAT14-50VW	Curve	3584	27.5	130	LCAT14-950VW	Curve	2958	27.5	108
LCAT14-50VWx-R	Rectangle	3285	27.5	119	LCAT14-950VWx-R	Rectangle	2878	27.5	105
LCAT14-50VWHE	Curve	3511	24.0	146					
LCAT14-50VWHEx-R	Rectangle	3407	26.0	131					
LCAT14-30MW	Curve	3656	32.3	113	LCAT14-930MW	Curve	3107	32.3	96
LCAT14-30MWx-R	Rectangle	3666	32.3	113	LCAT14-930MWx-R	Rectangle	3118	32.3	97
LCAT14-30MWHE	Curve	3820	31.0	123					
LCAT14-30MWHEx-R	Rectangle	3540	29.0	122					
LCAT14-35MW	Curve	3766	32.3	117	LCAT14-935MW	Curve	3180	32.3	98
LCAT14-35MWx-R	Rectangle	3791	32.3	117	LCAT14-935MWx-R	Rectangle	3183	32.3	99
LCAT14-35MWHE	Curve	3935	31.0	127					
LCAT14-35MWHEx-R	Rectangle	3661	29.0	126					
LCAT14-40MW	Curve	3824	32.3	118	LCAT14-940MW	Curve	3254	32.3	101
LCAT14-40MWx-R	Rectangle	3850	32.3	119	LCAT14-940MWx-R	Rectangle	3252	32.3	101
LCAT14-40MWHE	Curve	3996	31.0	129					
LCAT14-40MWHEx-R	Rectangle	3717	29.0	128					
LCAT14-50MW	Curve	4164	32.3	129	LCAT14-950MW	Curve	3437	32.3	106
LCAT14-50MWx-R	Rectangle	3953	32.3	122	LCAT14-950MWx-R	Rectangle	3464	32.3	107
LCAT14-50MWHE	Curve	4351	31.0	140					
LCAT14-50MWHEx-R	Rectangle	3816	29.0	132					

Product Availability 80 CRI					Product Availability 90 CRI				
Lumen Package	Shielding	Lumens	Input Watts	LPW	Lumen Package	Shielding	Lumens	Input Watts	LPW
LCAT14-30LW	Curve	4376	36.0	122	LCAT14-930LW	Curve	3720	36.0	103
LCAT14-30LWx-R	Rectangle	4246	36.0	118	LCAT14-930LWx-R	Rectangle	3611	36.0	100
LCAT14-35LW	Curve	4508	36.0	125	LCAT14-935LW	Curve	3808	36.0	106
LCAT14-35LWx-R	Rectangle	4391	36.0	122	LCAT14-935LWx-R	Rectangle	3686	36.0	102
LCAT14-40LW	Curve	4578	36.0	127	LCAT14-940LW	Curve	3895	36.0	108
LCAT14-40LWx-R	Rectangle	4459	36.0	124	LCAT14-940LWx-R	Rectangle	3766	36.0	105
LCAT14-50LW	Curve	4985	36.0	138	LCAT14-950LW	Curve	4113	36.0	114
LCAT14-50LWx-R	Rectangle	4578	36.0	127	LCAT14-950LWx-R	Rectangle	4011	36.0	111
LCAT14-30ML	Curve	4689	38.3	122	LCAT14-930ML	Curve	4158	38.3	109
LCAT14-30MLx-R	Rectangle	4749	38.3	124	LCAT14-930MLx-R	Rectangle	4039	38.3	105
LCAT14-35ML	Curve	4830	38.3	126	LCAT14-935ML	Curve	4247	38.3	111
LCAT14-35MLx-R	Rectangle	4911	38.3	128	LCAT14-935MLx-R	Rectangle	4124	38.3	108
LCAT14-40ML	Curve	4905	38.3	128	LCAT14-940ML	Curve	4339	38.3	113
LCAT14-40MLx-R	Rectangle	4988	38.3	130	LCAT14-940MLx-R	Rectangle	4213	38.3	110
LCAT14-50ML	Curve	5341	38.3	139	LCAT14-950ML	Curve	4621	38.3	121
LCAT14-50MLx-R	Rectangle	5122	38.3	134	LCAT14-950MLx-R	Rectangle	4487	38.3	117
LCAT14-30HL	Curve	5405	43.9	123	LCAT14-930HL	Curve	4656	43.4	107
LCAT14-30HLx-R	Rectangle	5260	43.5	121	LCAT14-930HLx-R	Rectangle	4471	43.5	103
LCAT14-35HL	Curve	5567	43.9	127	LCAT14-935HL	Curve	4756	43.4	110
LCAT14-35HLx-R	Rectangle	5439	43.5	125	LCAT14-935HLx-R	Rectangle	4567	43.5	105
LCAT14-40HL	Curve	5653	43.9	129	LCAT14-940HL	Curve	4859	43.4	112
LCAT14-40HLx-R	Rectangle	5524	43.5	127	LCAT14-940HLx-R	Rectangle	4665	43.5	107
LCAT14-50HL	Curve	6156	43.9	140	LCAT14-950HL	Curve	5175	43.4	119
LCAT14-50HLx-R	Rectangle	5672	43.5	130	LCAT14-950HLx-R	Rectangle	4969	43.5	114
LCAT14-30VL	Curve	6793	57.5	118	LCAT14-930VL	Curve	5621	57.9	97
LCAT14-30VLx-R	Rectangle	6606	57.8	114	LCAT14-930VLx-R	Rectangle	5615	57.8	97
LCAT14-35VL	Curve	6997	57.5	122	LCAT14-935VL	Curve	6192	58.8	105
LCAT14-35VLx-R	Rectangle	6830	57.8	118	LCAT14-935VLx-R	Rectangle	5735	57.8	99
LCAT14-40VL	Curve	7106	57.5	124	LCAT14-940VL	Curve	6283	58.8	107
LCAT14-40VLx-R	Rectangle	6937	57.8	120	LCAT14-940VLx-R	Rectangle	5859	57.8	101
LCAT14-50VL	Curve	7738	57.5	135	LCAT14-950VL	Curve	6450	58.8	110
LCAT14-50VLx-R	Rectangle	7122	57.8	123	LCAT14-950VLx-R	Rectangle	6240	57.8	108

PHOTOMETRIC DATA

Test 16477 Test Date 6/14/2016

LUMINAIRE DATA

Luminaire	LCAT14-35LWG-EU LCAT Led Architectural Troffer, Recessed Architectural 1 x 4 led with frosted linear prismed lens
Ballast	XI040C110V054BST1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4508
Watts	36.00
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.25 90° = 1.33
Luminous Opening in Feet	Length: 3.92 Width: 0.92 Height: 0.00

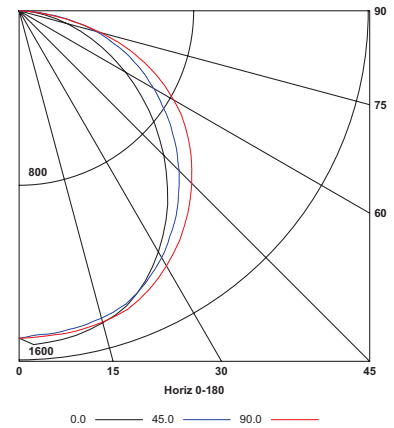
ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1193	26.5	26.5
0-40	1959	43.5	43.5
0-60	3482	77.3	77.3
0-90	4508	100.0	100.0
0-180	4508	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	125
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$1.92 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT



Test 16480 Test Date 8/1/2016

LUMINAIRE DATA

Luminaire	LCAT14-35MLG-EU LCAT Led Architectural Troffer, Recessed Architectural 1 x 4 led with frosted linear prismed lens
Ballast	XI054C150V054BST1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4830
Watts	38.30
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.23 90° = 1.30
Luminous Opening in Feet	Length: 3.92 Width: 0.92 Height: 0.00

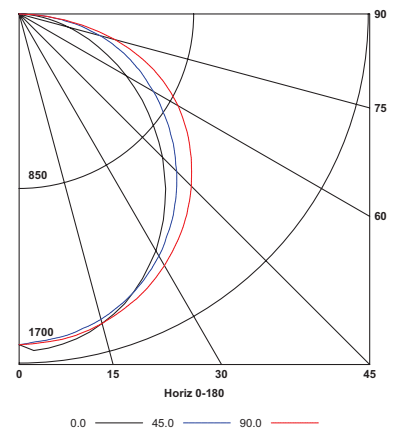
ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1253	25.9	25.9
0-40	2054	42.5	42.5
0-60	3663	75.8	75.8
0-90	4830	100.0	100.0
0-180	4830	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	126
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$1.89 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT



Test 16483 Test Date 8/3/2016

LUMINAIRE DATA

Luminaire	LCAT14-35HLG-EU LCAT Led Architectural Troffer, Recessed Architectural 1 x 4 led with frosted linear prismed lens
Ballast	XI054C150V054BST1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	5567
Watts	43.90
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.23 90° = 1.30
Luminous Opening in Feet	Length: 3.92 Width: 0.92 Height: 0.00

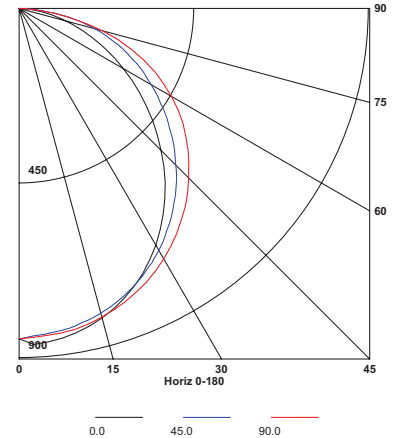
ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1472	26.4	26.4
0-40	2413	43.3	43.3
0-60	4287	77.0	77.0
0-90	5567	100.0	100.0
0-180	5567	100.0	100.0

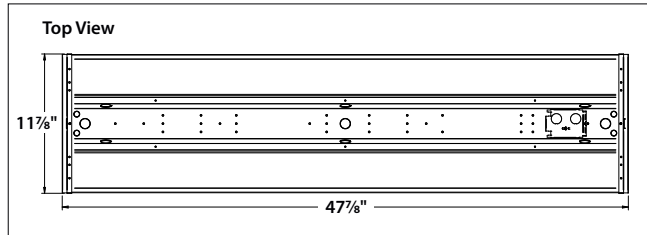
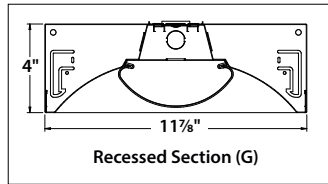
ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	127
ANSI/IESNA RP-1-2004 COMPLIANCE:	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$1.89 based on 3000 hrs. and \$0.08 per KWH

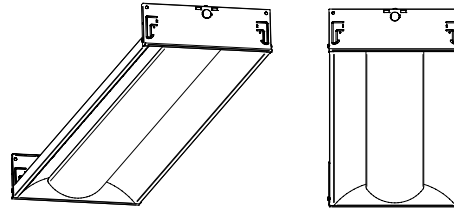
INDOOR CANDELA PLOT



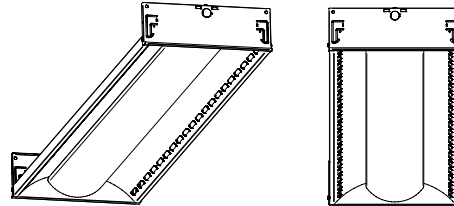
DIMENSIONAL DATA — GRID



GRID, STATIC

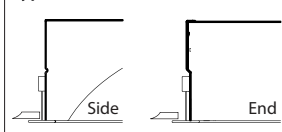


GRID, AIR RETURN



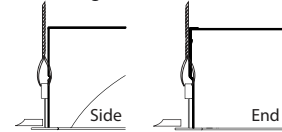
CEILING COMPATIBILITY

Type G



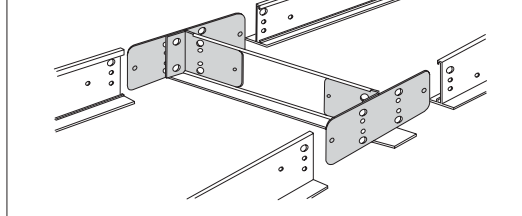
For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 2" allowed.

FK14 Flange Kit



For hard ceiling applications, order FK14 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance.

FKCR

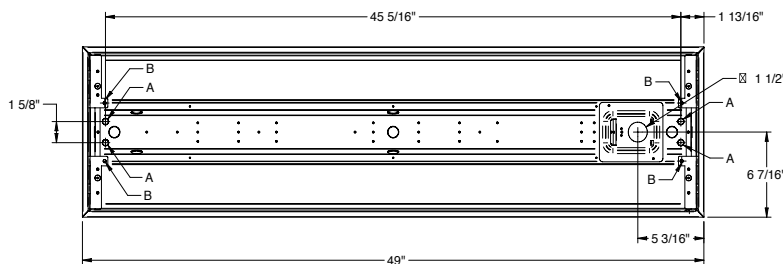
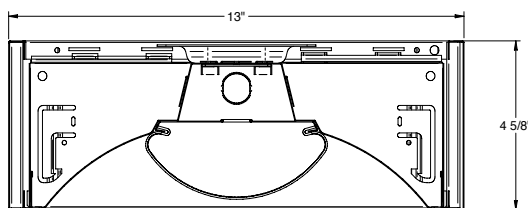


For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK14 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK14 & (1) FKCR)

Row cut out dimensions using FK14s & FKCR adapters:
Width 12 3/8", Length [48" x (# in row)] + 3/8".
Example: (48" x 2) + 3/8" = 96 3/8"

Flange kit cut out dimension for single unit only: 12 3/8" x 48 3/8"

DIMENSIONAL DATA — SURFACE MOUNT OR CABLE MOUNT, STATIC ONLY



Surface Mount:

Order SM ceiling type. Mounting collar required for surface mounting. (4) Mounting knock-outs, 3/8", provided in center channel as indicated at left, marked A.

Cable Mount:

Order CM ceiling type. Use CM48Y2SC3F-KIT 48" Cable Mount Kit for 2' wide SM trim fixtures. Mounting holes are provided in diagonal straps shown at left, marked B.

NOTE: All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.

LED



create**change**



FEATURES

- Two attractive architectural center lens choices
- High efficiency acrylic center lens features linear prisms for high performance without pixelation
- Appropriate for offices, schools, medical, and public spaces
- High performance reflector with matte white paint standard
- 60,000 hour LEDs at L80 (up to 150,000 projected life) for reduced maintenance
- 83 CRI standard or optional 90 CRI for color sensitive applications
- Four LED color choices
- Ten lumen packages
- HE lumen packages available
- Multiple driver options to satisfy different applications
- LED modules and electrical accessible from below
- Optional architecturally styled integration of daylight and occupancy sensor(s)
- Wireless ZigBee® radio enabled option
- QR code traceability
- Integral battery pack optional on most models
- Compatible with Dual-Lite inverters
- Recessed, surface or cable mount
- Air return optional
- DesignLights Consortium® (DLC) qualified with many configurations qualifying for DLC Premium
- Five year warranty (Terms and Conditions apply)

PROJECT INFORMATION

Project Name _____

Type _____

Catalog No. _____

Date _____

CONSTRUCTION

Luminaire housing, reflectors and end caps are die formed code gauge cold rolled steel. High transmission extruded acrylic enclosed lens features linear prisms with custom frost for high efficacy without pixelation.

SHIELDING

Removable lens for easy access to LED module and electrical components.

FINISH

All reflective surfaces are finished after fabrication with unique formula high reflectivity matte white paint for soft, uniform indirect illumination.

INSTALLATION

An access plate is furnished with each luminaire for fast wiring access without the necessity to open the fixture or wireway.

CEILING COMPATIBILITY

Luminaire fits recessed exposed Grid ceilings (G); four integral NEC compliant T-bar clips are standard. Can be placed in Slot Grid (SG) style ceiling with regress 3/8" above ceiling plane. A Flange Kit (FK) accessory is available for recessed hard ceiling applications. Surface Mount (SM) option allows placement below ceiling plane. Cable Mount (CM) option allows suspension below ceiling plane.

CERTIFICATION

All luminaires are built to UL1598 and 2108 standards, and bear appropriate CSA labels. Damp location is standard. Emergency-equipped fixtures labeled UL 924 and Dry Location unless specified. Adheres to LM79, LM80, and TM21 industry standards. DesignLights Consortium® (DLC) and DLC Premium qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org.

IC RATING

IC label is standard for recessed products. Note that IC label is void if product is installed on site with air return fixtures.

WARRANTY

Five year warranty (Terms and Conditions apply).

ORDERING INFORMATION

EXAMPLE LCAT14-35MLG-ESDU

LCAT 14 -											
MODEL	CRI	COLOR TEMP	CEILING TYPE	AIR FUNCTION	VOLTAGE	OPTIONS	SIZE	LUMEN OUTPUT	SHIELDING	DRIVER	
LCAT LED Contemporary Architectural Troffer	Blank >80 9 >90 ¹	30 3000K 35 3500K 40 4000K 50 5000K	G Grid Lay-in ² SM Surface Mount ³ CM Cable Suspended Mount ^{3,4}	Blank Static A Air Return Side Slots	U 120V-277V 347 347V	ELL14 Emergency Battery Pack Installed, 1400 Lumens ^{5,7} C388 3-Wire Flex C488 4-Wire Flex C588 5-Wire Flex GLR Fast Blow Fuse NYC NYC Compliant EOR End of Row (SM and CM only. Provides end wiring access for continuous row mounting.) ³ INT Intermediate (SM and CM only. Provides ends with wiring access for continuous row mounting.) ³ CP Chicago Plenum ODP Occupancy and Daylight Sensors, Philips ⁸ ZRE Wireless ZigBee® radio enabled ⁹	14 1' x 4'	XW Extra Low Watt XWHE Extra Low Watt High Efficacy VW Very Low Watt VWHE Very Low Watt High Efficacy MW Medium Low Watt MWHE Medium Low Watt High Efficacy LW Low Watt ML Medium Lumen HL High Lumen VL Very High Lumen	Blank Curve R Rectangular	E Fixed Output ESD Step Dimming ^{5,7} ED 0-10V Dimming ED1 0-10V 1% Dimming LUTH Lutron H Series, 1% Dimming ^{5,7} LUTH5 Lutron 5 Series 5% Dimming ^{5,7}	

ACCESSORIES (ORDER SEPARATELY)

- FK14** 1' x 4' Single Flange Kit (Shipped separately)
- CM48Y1SC3F48** Cable Mount Kit for 1' wide Cable Mount fixtures, 3 Wire

See Product Availability Table on following pages.

DRIVER AVAILABILITY TABLE

	XW	XWHE	VW	VWHE	MW	MWHE	LW	ML	HL	VL
E	X	X	X	X	X	X	X	X	X	X
ED	X	X	X	X	X	X	X	X	X	X
ED1	X	X	X	X	X	X	X	X	X	X
ESD					X	X	X	X	X	X
LUT5	X		X		X		X	X	X	
LUTH	X		X		X		X	X	X	
347	X		X		X		X	X	X	

¹ Not available with HE lumen output.
² For drywall, order G with Flange Kit Accessory.
³ Not available with Air Return (A) air function.
⁴ Order hanger accessories separately.
⁵ Limitations apply based on lumen packages (See Driver Table).
⁶ For compatibility with Dual-Lite LiteGear® inverters, contact Hubbell Lighting Representative.
⁷ Not available in 347V.
⁸ Only available with 0-10V Dimming (ED) Driver Option.
⁹ Only available with 0-10V Dimming (ED, ED1) Driver Options.

For questions about configuration options, contact Hubbell Representative.

Product Availability 80 CRI					Product Availability 90 CRI				
Lumen Package	Shielding	Lumens	Input Watts	LPW	Lumen Package	Shielding	Lumens	Input Watts	LPW
LCAT14-30XW	Curve	2299	19.4	119	LCAT14-930XW	Curve	2105	20.6	102
LCAT14-30XWx-R	Rectangle	2398	20.6	116	LCAT14-930XWx-R	Rectangle	2039	20.6	99
LCAT14-30XWHE	Curve	2457	19.0	129					
LCAT14-30XWHEx-R	Rectangle	2486	20.0	124					
LCAT14-35XW	Curve	2377	19.4	123	LCAT14-935XW	Curve	2150	20.6	104
LCAT14-35XWx-R	Rectangle	2480	20.6	120	LCAT14-935XWx-R	Rectangle	2082	20.6	101
LCAT14-35XWHE	Curve	2540	19.0	134					
LCAT14-35XWHEx-R	Rectangle	2570	20.0	129					
LCAT14-40XW	Curve	2414	19.4	124	LCAT14-940XW	Curve	2197	20.6	107
LCAT14-40XWx-R	Rectangle	2519	20.6	122	LCAT14-940XWx-R	Rectangle	2127	20.6	103
LCAT14-40XWHE	Curve	2580	19.0	136					
LCAT14-40XWHEx-R	Rectangle	2610	20.0	131					
LCAT14-50XW	Curve	2478	19.4	128	LCAT14-950XW	Curve	2340	20.6	114
LCAT14-50XWx-R	Rectangle	2586	20.6	126	LCAT14-950XWx-R	Rectangle	2266	20.6	110
LCAT14-50XWHE	Curve	2648	19.0	139					
LCAT14-50XWHEx-R	Rectangle	2680	20.0	134					
LCAT14-30VW	Curve	3147	27.5	114	LCAT14-930VW	Curve	2674	27.5	97
LCAT14-30VWx-R	Rectangle	3047	27.5	111	LCAT14-930VWx-R	Rectangle	2591	27.5	94
LCAT14-30VWHE	Curve	3083	24.0	128					
LCAT14-30VWHEx-R	Rectangle	3161	26.0	122					
LCAT14-35VW	Curve	3241	27.5	118	LCAT14-935VW	Curve	2738	27.5	100
LCAT14-35VWx-R	Rectangle	3150	27.5	115	LCAT14-935VWx-R	Rectangle	2645	27.5	96
LCAT14-35VWHE	Curve	3175	24.0	132					
LCAT14-35VWHEx-R	Rectangle	3268	26.0	126					
LCAT14-40VW	Curve	3291	27.5	120	LCAT14-940VW	Curve	2801	27.5	102
LCAT14-40VWx-R	Rectangle	3200	27.5	116	LCAT14-940VWx-R	Rectangle	2702	27.5	98
LCAT14-40VWHE	Curve	3224	24.0	134					
LCAT14-40VWHEx-R	Rectangle	3319	26.0	128					
LCAT14-50VW	Curve	3584	27.5	130	LCAT14-950VW	Curve	2958	27.5	108
LCAT14-50VWx-R	Rectangle	3285	27.5	119	LCAT14-950VWx-R	Rectangle	2878	27.5	105
LCAT14-50VWHE	Curve	3511	24.0	146					
LCAT14-50VWHEx-R	Rectangle	3407	26.0	131					
LCAT14-30MW	Curve	3656	32.3	113	LCAT14-930MW	Curve	3107	32.3	96
LCAT14-30MWx-R	Rectangle	3666	32.3	113	LCAT14-930MWx-R	Rectangle	3118	32.3	97
LCAT14-30MWHE	Curve	3820	31.0	123					
LCAT14-30MWHEx-R	Rectangle	3540	29.0	122					
LCAT14-35MW	Curve	3766	32.3	117	LCAT14-935MW	Curve	3180	32.3	98
LCAT14-35MWx-R	Rectangle	3791	32.3	117	LCAT14-935MWx-R	Rectangle	3183	32.3	99
LCAT14-35MWHE	Curve	3935	31.0	127					
LCAT14-35MWHEx-R	Rectangle	3661	29.0	126					
LCAT14-40MW	Curve	3824	32.3	118	LCAT14-940MW	Curve	3254	32.3	101
LCAT14-40MWx-R	Rectangle	3850	32.3	119	LCAT14-940MWx-R	Rectangle	3252	32.3	101
LCAT14-40MWHE	Curve	3996	31.0	129					
LCAT14-40MWHEx-R	Rectangle	3717	29.0	128					
LCAT14-50MW	Curve	4164	32.3	129	LCAT14-950MW	Curve	3437	32.3	106
LCAT14-50MWx-R	Rectangle	3953	32.3	122	LCAT14-950MWx-R	Rectangle	3464	32.3	107
LCAT14-50MWHE	Curve	4351	31.0	140					
LCAT14-50MWHEx-R	Rectangle	3816	29.0	132					

Product Availability 80 CRI					Product Availability 90 CRI				
Lumen Package	Shielding	Lumens	Input Watts	LPW	Lumen Package	Shielding	Lumens	Input Watts	LPW
LCAT14-30LW	Curve	4376	36.0	122	LCAT14-930LW	Curve	3720	36.0	103
LCAT14-30LWx-R	Rectangle	4246	36.0	118	LCAT14-930LWx-R	Rectangle	3611	36.0	100
LCAT14-35LW	Curve	4508	36.0	125	LCAT14-935LW	Curve	3808	36.0	106
LCAT14-35LWx-R	Rectangle	4391	36.0	122	LCAT14-935LWx-R	Rectangle	3686	36.0	102
LCAT14-40LW	Curve	4578	36.0	127	LCAT14-940LW	Curve	3895	36.0	108
LCAT14-40LWx-R	Rectangle	4459	36.0	124	LCAT14-940LWx-R	Rectangle	3766	36.0	105
LCAT14-50LW	Curve	4985	36.0	138	LCAT14-950LW	Curve	4113	36.0	114
LCAT14-50LWx-R	Rectangle	4578	36.0	127	LCAT14-950LWx-R	Rectangle	4011	36.0	111
LCAT14-30ML	Curve	4689	38.3	122	LCAT14-930ML	Curve	4158	38.3	109
LCAT14-30MLx-R	Rectangle	4749	38.3	124	LCAT14-930MLx-R	Rectangle	4039	38.3	105
LCAT14-35ML	Curve	4830	38.3	126	LCAT14-935ML	Curve	4247	38.3	111
LCAT14-35MLx-R	Rectangle	4911	38.3	128	LCAT14-935MLx-R	Rectangle	4124	38.3	108
LCAT14-40ML	Curve	4905	38.3	128	LCAT14-940ML	Curve	4339	38.3	113
LCAT14-40MLx-R	Rectangle	4988	38.3	130	LCAT14-940MLx-R	Rectangle	4213	38.3	110
LCAT14-50ML	Curve	5341	38.3	139	LCAT14-950ML	Curve	4621	38.3	121
LCAT14-50MLx-R	Rectangle	5122	38.3	134	LCAT14-950MLx-R	Rectangle	4487	38.3	117
LCAT14-30HL	Curve	5405	43.9	123	LCAT14-930HL	Curve	4656	43.4	107
LCAT14-30HLx-R	Rectangle	5260	43.5	121	LCAT14-930HLx-R	Rectangle	4471	43.5	103
LCAT14-35HL	Curve	5567	43.9	127	LCAT14-935HL	Curve	4756	43.4	110
LCAT14-35HLx-R	Rectangle	5439	43.5	125	LCAT14-935HLx-R	Rectangle	4567	43.5	105
LCAT14-40HL	Curve	5653	43.9	129	LCAT14-940HL	Curve	4859	43.4	112
LCAT14-40HLx-R	Rectangle	5524	43.5	127	LCAT14-940HLx-R	Rectangle	4665	43.5	107
LCAT14-50HL	Curve	6156	43.9	140	LCAT14-950HL	Curve	5175	43.4	119
LCAT14-50HLx-R	Rectangle	5672	43.5	130	LCAT14-950HLx-R	Rectangle	4969	43.5	114
LCAT14-30VL	Curve	6793	57.5	118	LCAT14-930VL	Curve	5621	57.9	97
LCAT14-30VLx-R	Rectangle	6606	57.8	114	LCAT14-930VLx-R	Rectangle	5615	57.8	97
LCAT14-35VL	Curve	6997	57.5	122	LCAT14-935VL	Curve	6192	58.8	105
LCAT14-35VLx-R	Rectangle	6830	57.8	118	LCAT14-935VLx-R	Rectangle	5735	57.8	99
LCAT14-40VL	Curve	7106	57.5	124	LCAT14-940VL	Curve	6283	58.8	107
LCAT14-40VLx-R	Rectangle	6937	57.8	120	LCAT14-940VLx-R	Rectangle	5859	57.8	101
LCAT14-50VL	Curve	7738	57.5	135	LCAT14-950VL	Curve	6450	58.8	110
LCAT14-50VLx-R	Rectangle	7122	57.8	123	LCAT14-950VLx-R	Rectangle	6240	57.8	108

PHOTOMETRIC DATA

Test 16477 Test Date 6/14/2016

LUMINAIRE DATA

Luminaire	LCAT14-35LWG-EU LCAT Led Architectural Troffer, Recessed Architectural 1 x 4 led with frosted linear prism lens
Ballast	XI040C110V054BST1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4508
Watts	36.00
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.25 90° = 1.33
Luminous Opening in Feet	Length: 3.92 Width: 0.92 Height: 0.00

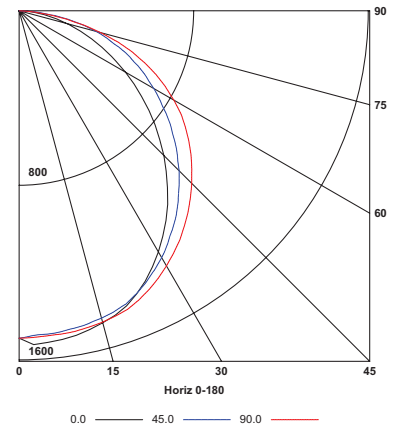
ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1193	26.5	26.5
0-40	1959	43.5	43.5
0-60	3482	77.3	77.3
0-90	4508	100.0	100.0
0-180	4508	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	125
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$1.92 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT



LUMINAIRE DATA

Luminaire	LCAT14-35MLG-EU LCAT Led Architectural Troffer, Recessed Architectural 1 x 4 led with frosted linear prism lens
Ballast	XI054C150V054BST1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	4830
Watts	38.30
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.23 90° = 1.30
Luminous Opening in Feet	Length: 3.92 Width: 0.92 Height: 0.00

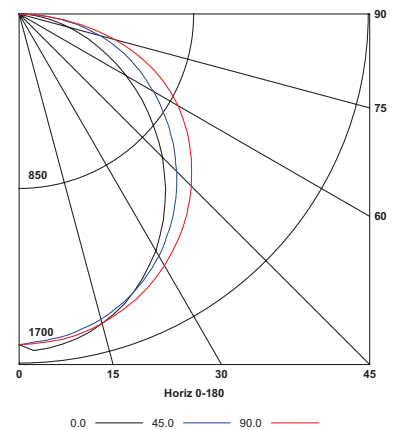
ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1253	25.9	25.9
0-40	2054	42.5	42.5
0-60	3663	75.8	75.8
0-90	4830	100.0	100.0
0-180	4830	100.0	100.0

ENERGY DATA

Total Luminaire Efficiency	100.0%
Total Lumens per Watt	126
IESNA RP-1-2004 Compliance	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$1.89 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT



Test 16480 Test Date 8/1/2016

LUMINAIRE DATA

Luminaire	LCAT14-35HLG-EU LCAT Led Architectural Troffer, Recessed Architectural 1 x 4 led with frosted linear prism lens
Ballast	XI054C150V054BST1
Ballast Factor	1.00
Lamp	LED
Fixture Lumens	5567
Watts	43.90
Mounting	Recessed
Shielding Angle	0° = 90 90° = 90
Spacing Criterion	0° = 1.23 90° = 1.30
Luminous Opening in Feet	Length: 3.92 Width: 0.92 Height: 0.00

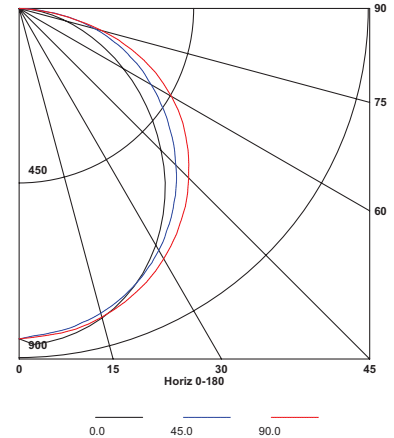
ZONAL LUMEN SUMMARY

Zone	Lumens	% Lamp	% Fixt.
0-30	1472	26.4	26.4
0-40	2413	43.3	43.3
0-60	4287	77.0	77.0
0-90	5567	100.0	100.0
0-180	5567	100.0	100.0

ENERGY DATA

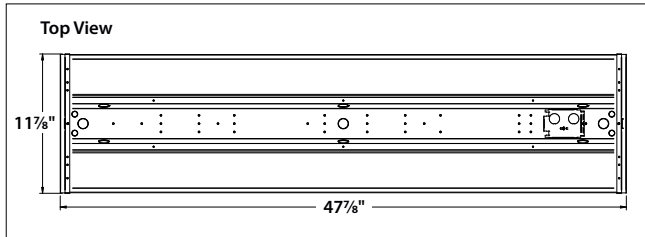
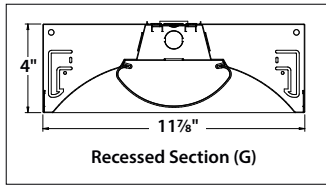
Total Luminaire Efficiency	100.0%
Total Lumens per Watt	127
ANSI/IESNA RP-1-2004 COMPLIANCE:	Non-Compliant
Comparative Yearly Lighting Energy Cost per 1000 Lumens	\$1.89 based on 3000 hrs. and \$0.08 per KWH

INDOOR CANDELA PLOT

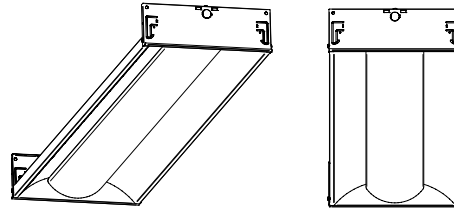


Test 16483 Test Date 8/3/2016

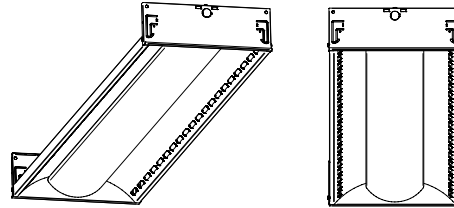
DIMENSIONAL DATA — GRID



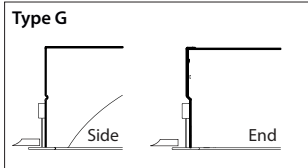
GRID, STATIC



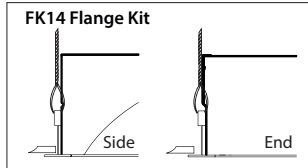
GRID, AIR RETURN



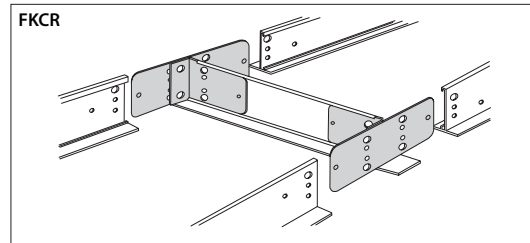
CEILING COMPATIBILITY



For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 2" allowed.



For hard ceiling applications, order FK14 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance.

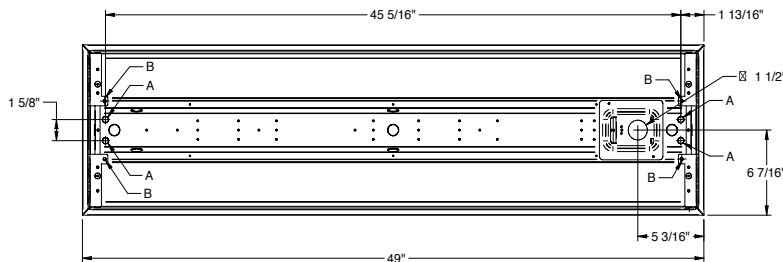
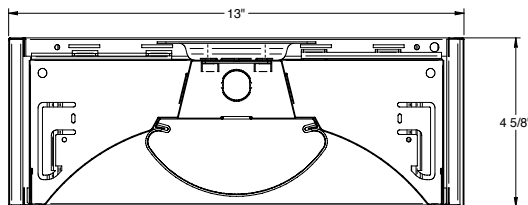


For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK14 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK14 & (1) FKCR)

Row cut out dimensions using FK14s & FKCR adapters:
Width 12 3/8", Length [48" x (# in row)] + 3/8".
Example: (48" x 2) + 3/8" = 96 3/8"

Flange kit cut out dimension for single unit only: 12 3/8" x 48 3/8"

DIMENSIONAL DATA — SURFACE MOUNT OR CABLE MOUNT, STATIC ONLY



Surface Mount:

Order SM ceiling type. Mounting collar required for surface mounting. (4) Mounting knock-outs, 3/8", provided in center channel as indicated at left, marked A.

Cable Mount:

Order CM ceiling type. Use CM48Y2SC3F-KIT 48" Cable Mount Kit for 2" wide SM trim fixtures. Mounting holes are provided in diagonal straps shown at left, marked B.

NOTE: All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.