Columbia LIGHTING

LCAT12

1' × 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

FEATURES

• 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

• HE lumen packages available

• LED modules and electrical accessible from below

• Optional architecturally styled integration of daylight and occupancy sensor(s)

• QR code traceability

• Compatible with Dual-Lite inverters

RELATED PRODUCTS

∂ LCAT14   ∂ LCAT22   ∂ LCAT24

CONTROL TECHNOLOGY

SpectraSync Color Tuning Technology   NX DISTRIBUTED INTELLIGENCE

11.75" (298mm)

3.98" (101mm)

Grid, recessed section

SPECIFICATIONS

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

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

OPTICS
• Removable lens for easy access to LED module and electrical components

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

• 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 ⅜" 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

ELECTRICAL
• 60,000 hour LEDs at L80 for reduced maintenance

• 83 CRI standard or optional 90 CRI for color sensitive applications

CONTROLS
• Optional SpectraSync™ offers two modes of Tunable White solutions and integrates seamlessly into a variety of control systems

• NX Distributed Intelligence™ provides options for standalone and networked integrated sensor with wired or wireless connectivity for NX system deployments
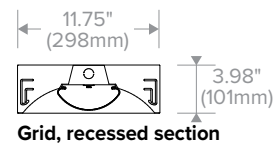
CERTIFICATIONS
• IC label is standard for recessed products. Note that IC label is void if product is installed on site with a combination of both battery pack plus through wiring or for air return fixtures

• All luminaires are built to UL1598 and 2108 standards, and bear appropriate cCSAus labels

• CSA certified to UL 924 standards with battery pack or DTS (Dimming Bypass Module) options

• Damp Location label standard

• Adheres to LM79, LM80, and TM21 industry standards

CERTIFICATIONS (CONTINUED)
• DLC® (DesignLights Consortium) Qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org.

• NX is available in U.S., Canada and Mexico. For other locations consult factory

• The DTS, Dimming Bypass Module, is for emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. See page 7 for wiring diagram. Link to Dimming Bypass Module Specification sheet

WARRANTY
• 5 year warranty

• See HLI Standard Warranty for additional information

KEY DATA	
Lumen Range	1322–4083
Wattage Range	13–32
Efficacy Range (LPW)	90–135
Reported Life (Hours)	L80/60,000
Input Current Range (mA)	46–266

HUBBELL Lighting

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LCAT12
1' × 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

ORDERING GUIDE

Example: LCAT12–35MLG–ESDU

CATALOG #

LCAT12	–				–			–	

Model	CRI	Color Temp		Delivered Lumens		Ceiling Type	
LCAT12 1' x 2' LED Contemporary Architectural Troffer	**Blank** >80 **9** >90	**30** **35** **40** **50** **2750T** **2765T**	3000K 3500K 4000K 5000K 2700K–5000K SpectraSync™ Tunable White[1] 2700K–6500K SpectraSync™ Tunable White[1]	**VW** **MW** **LW** **ML** **HL**	1322–1730 1720–2181 2253–3047 2808–3794 2858–4083	**G** **SM** **CM**	Grid Lay-in[2] Surface Mount[3,9] Cable Suspended Mount[3,4]

Shielding		Air Function		Driver	
Blank Curve **R** Rectangular		**Blank** Static **A** Air Return Side Slots		**E** **ED** **ED1** **EDD** **ESD** **LUTH** **LUT5** **DALIP**	Fixed Output 0–10V Dimming 0–10V 1% Dimming 0–10V Dim-to-Dark Step Dimming[5,7,10] Hi-lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology[5,7,10] 5-Series EcoSystem LED driver[5,7,10] Dali Power Bus[13]

Voltage		Options		Control Options
U 120–277V **347** 347V[11]		**ELL14** **ELL14ST** **ELL14H2** **DTS** **C388** **C488** **C588** **GLR** **EOR** **INT** **CP**	Emergency Battery Pack Installed, 1400 Lumens[6,7] Emergency Battery Pack, 1400 Lumens, Self Test[6,7] Emergency Battery Pack, 2-Hour Run Time[6,7] Dimming Bypass Module[8] 3-wire Flex[12] 4-wire Flex[12] 5-wire Flex[12] Fast Blow Fuse End of Row (SM and CM only. Provides end wiring access for continuous row mounting.)[3] Intermediate (SM and CM only. Provides ends with wiring access for continuous row mounting.)[3] Chicago Plenum	**NX Standalone** **NXS** NX, PIR BT Occupancy/Daylight Sensor, Slide Mount[10,11] **NX Networked – Wired** **NXE** NX, Dual SmartPORTs[10,11] **NXES** NX, PIR BT Occupancy/Daylight Sensor, Slide Mount, Dual SmartPORTs[10,11] **NX Networked – Wireless** **NXSW** NX Wireless, PIR BT Occupancy/Daylight Sensor[9,10,11] **NXWE** NX Wireless Enabled[9,10,11] **NX Networked – Wired/Wireless Hybrid** **NXSWD** NX Wireless, PIR BT Occupancy/Daylight Sensor, Dual SmartPORTs **NXWD** NX Wireless, Dual SmartPORTs **Third-Party Control Options** **ODPG** Occupancy and Daylight Sensors w/ Grouping, Philips SNS200[7,13,17] **LV** Lutron Vive Attached FCJS POWPAK Fixture Control (RF only for 0–10V drivers)[7,14,15,16,17] **LVR** Lutron Vive Integral Fixture Control DFCSJ-OEM-RF (RF only)[7,13,15,17] **LVS** Lutron Vive Integral Fixture Control DFCSJ-OEM-OCC (RF with daylight and occupancy sensing)[7,13,15,17] **ZRE** ControlScope® compatible[7,17,18]

Accessories		
☐ **FK12**	1' × 2' Single Flange Kit (Shipped separately)
☐ **CM48Y1SC3F48**	48" Cable Mount Kit for 1' wide Cable Mount fixtures, 3-wire

Notes:

1. Available with ED driver and 80 CRI only
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 Product Exceptions & Details)
6. For compatibility with Dual-Lite LiteGear® inverters, contact Hubbell Lighting Representative
7. Not available in 347V
8. For emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. Only available with 0–10V drivers. Universal voltage only. See page 7 for wiring diagram

NX In-Fixture Control Options:

9. NXSW, NXWE, NXSWD and NXWD cannot be used with surface mount versions
10. NX is not available with ESD, LUTH, LUT5 or DALIP driver options

11. NX combined with Spectrasync is not available in 347V
12. For NX control and Flex Wire together, consult factory

Third-Party Control Options:

13. LVS, LVR and ODPG only available with DALIP driver option
14. Only available with ED driver option
15. VIVE is a trademark of Lutron Electronics Co., Inc
16. Installations controlled solely by the Lutron Pico controller require accessing the LV (Lutron FCJS) module for commissioning after the circuit has been energized
17. Not available with SpectraSync (2750T or 2765T)
18. Registered trademark of Daintree Networks, used by permission

For questions about configuration options, contact Hubbell Representative

HUBBELL Lighting

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

LCAT12
1' × 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

PRODUCT EXCEPTIONS & DETAILS

Driver options listed below are available for the outputs as shown.

DRIVER AVAILABILITY TABLE					
	VW	MW	LW	ML	HL
E	X	X	X	X	X
ED	X	X	X	X	X
ED1	X	X	X	X	X
EDD		X	X	X	X
ESD		X	X	X	X
LUT5		X	X	X	
LUTH		X	X	X	
DALIP			X	X	X
347	X	X	X	X	X

CONTROLS

NX Distributed Intelligence™ Lighting Controls:
Supports both indoor and outdoor applications in a variety of deployment options- wired, wireless, hybrid.
Integrates with and enables a wide array of luminaires including those with SpectraSync™ Color Tuning Technology.

NX DISTRIBUTED™ INTELLIGENCE

NX INTEGRATED CONTROLS REFERENCE								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0–10V Dimming	On/off Control	Bluetooth® App Programming
NX Standalone								
NXS	NXSMP-SMI	No	Yes	Yes	Yes	Yes	Yes	Yes
NX Networked – Wired								
NXE	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R[1]
NXES	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NX Networked – Wireless								
NXSW	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXWE	N/A	Yes	Yes	No	No	Yes	Yes	No[2]
NX Networked – Wired/Wireless								
NXSWD	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXWD	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R[1,2]

1   NXBTC/R needs to be plugged into an available NX SmartPORT™ on the fixture network

2   To program NXWE option, need to consult factory. If connected to an area controller, programming can be done from that

Philips EasySense Controls ODPG Sensor:

- Occupancy sensing, daylight harvesting, task tuning and grouping in one device
- Standalone control or grouping to wireless switches[1]
- Uses Philips field apps for on site commissioning[2,3]
- Ability to create scenes for various room configurations
- Cost-effective solution for energy-savings and code-compliancy strategies
- DLC® Qualified: Listed on the QPL for Networked Lighting Controls. Please refer to the DLC website for specific product qualifications at www.designlights.org

1   Wireless switches only compatible with ODPG Philips EasySense

2   See link to Philips commssioning

3   Requires android device or IR dongle. See links for phone compatiblity and IR dongle

Wireless Switch Accessories[1]

☐ **PESR-WH**   EasySense compatible wireless single rocker switch, white

☐ **PEDR-WH**   EasySense compatible wireless dual rocker switch, white

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LCAT12
1' × 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

CONTROLS (CONTINUED)

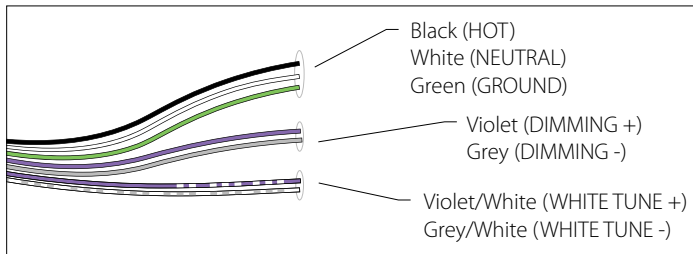### SpectraSync™ Color Tuning Technology:
Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync™ Color Tuning Technologies.

SpectraSync Color Tuning Technology

SPECTRASYNC COLOR TUNING TECHNOLOGY		
Mode	Kelvin Range	Description
Tunable White	2700K–5000K 2700K–6500K	Offers users the ability to tailor CCT to their personal preference, enhancing task visibility, material and colors or the aesthetics of the space

SpectraSync Tunable White
Available in two options: 2750T (2700K–5000K) or 2765T (2700K–6500K). Requires two 0–10V controllers, one for intensity and one for CCT. Minimum 5% dimming.

Black (HOT)
White (NEUTRAL)
Green (GROUND)

Violet (DIMMING +)
Grey (DIMMING -)

Violet/White (WHITE TUNE +)
Grey/White (WHITE TUNE -)

SpectraSync Tunable White luminaires are provided with two 0–10V circuits. The violet and grey circuit is for wiring to any qualified 0–10V controller for dimming. The violet/white and grey/white circuit is for wiring to any qualified 0–10V controller for Tunable White CCT control.

Controller Manufacturer Data
SpectraSync Tunable White was designed to be used with sinking style dimmers (provided by others) and is compatible with:
- Hubbell Control Solutions (HCS): NX Distributed Intelligence™ Room Controllers (NXRC) and In-fixture Controllers (NXFM)
- Lutron: DVTV, DVSTV, and NFTV dimmers
- Wattstopper: ADF120277 and CD4BL (Titan) dimmers

Color Tuning Profile
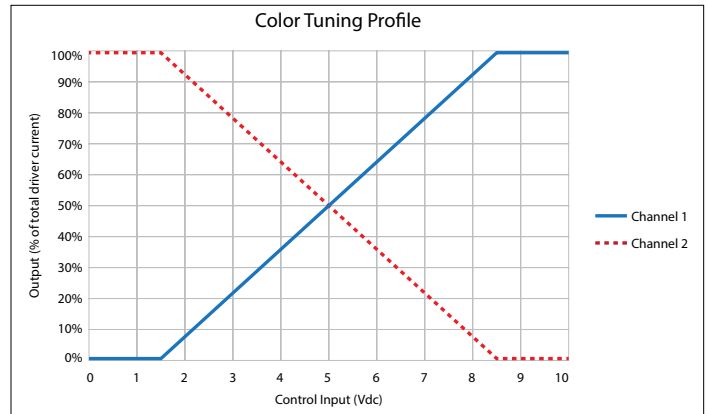
To enable scheduling and for use with NX wall control preset stations please refer to Hubbell Control Solutions NX SpectraSync technical sheet.

DELIVERED LUMENS, SPECTRASYNC™

SpectraSync Color Tuning Technology

Shielding	Lumen Output	Watts	2700		3000		3500		4000		5000		6500	
			Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
Curve	VW	13	1454	109	1519	114	1546	116	1566	118	1618	122	1593	120
	MW	18	1669	95	1744	99	1775	101	1798	102	1857	106	1829	104
	LW	23	2561	113	2676	118	2724	121	2759	122	2850	126	2807	124
	ML	29	3188	111	3331	116	3391	118	3434	119	3548	123	3494	121
	HL	32	3430	109	3584	113	3649	115	3695	117	3817	121	3760	119
Rectangle	VW	13	1488	111	1555	116	1583	118	1603	120	1656	124	1631	122
	MW	18	1936	109	2023	114	2059	116	2086	117	2154	121	2122	119
	LW	23	2537	112	2651	117	2699	119	2733	121	2823	125	2781	123
	ML	29	3160	110	3302	115	3361	117	3404	118	3517	122	3464	120
	HL	32	3216	102	3361	106	3421	108	3465	110	3579	113	3526	112

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LCAT12
1' × 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

DELIVERED LUMENS

Product Availability 80 CRI				
Lumen Package	Shielding	Lumens	Input Watts	LPW
LCAT12-30VW	Curve	1519	13	114
LCAT12-30VWx-R	Rectangle	1555	13	116
LCAT12-35VW	Curve	1564	13	118
LCAT12-35VWx-R	Rectangle	1608	13	120
LCAT12-40VW	Curve	1589	13	119
LCAT12-40VWx-R	Rectangle	1633	13	122
LCAT12-50VW	Curve	1730	13	130
LCAT12-50VWx-R	Rectangle	1676	13	125
LCAT12-30MW	Curve	1744	18	99
LCAT12-30MWx-R	Rectangle	2023	18	114
LCAT12-35MW	Curve	1796	18	102
LCAT12-35MWx-R	Rectangle	2092	18	118
LCAT12-40MW	Curve	1824	18	104
LCAT12-40MWx-R	Rectangle	2125	18	119
LCAT12-50MW	Curve	1986	18	113
LCAT12-50MWx-R	Rectangle	2181	18	123
LCAT12-30LW	Curve	2676	23	118
LCAT12-30LWx-R	Rectangle	2651	23	117
LCAT12-35LW	Curve	2756	23	122
LCAT12-35LWx-R	Rectangle	2741	23	121
LCAT12-40LW	Curve	2799	23	124
LCAT12-40LWx-R	Rectangle	2784	23	123
LCAT12-50LW	Curve	3047	23	135
LCAT12-50LWx-R	Rectangle	2858	23	126
LCAT12-30ML	Curve	3331	29	116
LCAT12-30MLx-R	Rectangle	3302	29	115
LCAT12-35ML	Curve	3431	29	119
LCAT12-35MLx-R	Rectangle	3414	29	119
LCAT12-40ML	Curve	3484	29	121
LCAT12-40MLx-R	Rectangle	3468	29	120
LCAT12-50ML	Curve	3794	29	132
LCAT12-50MLx-R	Rectangle	3560	29	124
LCAT12-30HL	Curve	3584	32	113
LCAT12-30HLx-R	Rectangle	3361	32	106
LCAT12-35HL	Curve	3692	32	117
LCAT12-35HLx-R	Rectangle	3475	32	110
LCAT12-40HL	Curve	3749	32	119
LCAT12-40HLx-R	Rectangle	3529	32	112
LCAT12-50HL	Curve	4083	32	129
LCAT12-50HLx-R	Rectangle	3624	32	115

Product Availability 90 CRI				
Lumen Package	Shielding	Lumens	Input Watts	LPW
LCAT12-930VW	Curve	1328	14	98
LCAT12-930VWx-R	Rectangle	1322	13	99
LCAT12-935VW	Curve	1356	14	100
LCAT12-935VWx-R	Rectangle	1350	13	101
LCAT12-940VW	Curve	1385	14	103
LCAT12-940VWx-R	Rectangle	1379	13	103
LCAT12-950VW	Curve	1476	14	109
LCAT12-950VWx-R	Rectangle	1469	13	110
LCAT12-930MW	Curve	1735	18	97
LCAT12-930MWx-R	Rectangle	1720	18	97
LCAT12-935MW	Curve	1773	18	100
LCAT12-935MWx-R	Rectangle	1756	18	99
LCAT12-940MW	Curve	1810	18	102
LCAT12-940MWx-R	Rectangle	1794	18	101
LCAT12-950MW	Curve	1928	18	108
LCAT12-950MWx-R	Rectangle	1911	18	107
LCAT12-930LW	Curve	2274	23	101
LCAT12-930LWx-R	Rectangle	2253	23	100
LCAT12-935LW	Curve	2328	23	103
LCAT12-935LWx-R	Rectangle	2301	23	102
LCAT12-940LW	Curve	2381	23	105
LCAT12-940LWx-R	Rectangle	2351	23	104
LCAT12-950LW	Curve	2515	23	111
LCAT12-950LWx-R	Rectangle	2504	23	111
LCAT12-930ML	Curve	2831	29	98
LCAT12-930MLx-R	Rectangle	2808	29	98
LCAT12-935ML	Curve	2898	29	101
LCAT12-935MLx-R	Rectangle	2867	29	100
LCAT12-940ML	Curve	2964	29	103
LCAT12-940MLx-R	Rectangle	2929	29	102
LCAT12-950ML	Curve	3131	29	109
LCAT12-950MLx-R	Rectangle	3120	29	108
LCAT12-930HL	Curve	3047	32	96
LCAT12-930HLx-R	Rectangle	2858	32	90
LCAT12-935HL	Curve	3118	32	99
LCAT12-935HLx-R	Rectangle	2918	32	92
LCAT12-940HL	Curve	3190	32	101
LCAT12-940HLx-R	Rectangle	2981	32	94
LCAT12-950HL	Curve	3369	32	107
LCAT12-950HLx-R	Rectangle	3175	32	100

HUBBELL Lighting

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

LCAT12

1' × 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

DIMENSIONS

GRID

11.75"
(298mm)

3.98"
(101mm)

Grid, recessed section

23.75"
(603mm)

11.75"
(298mm)
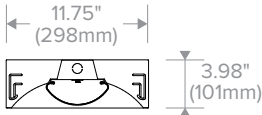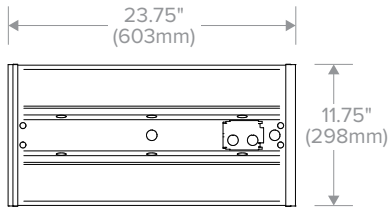
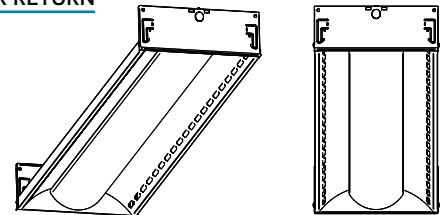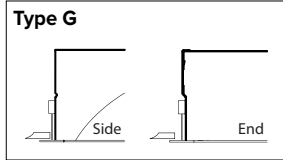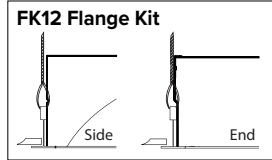**Grid, back of housing**
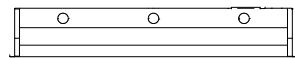
GRID, STATIC
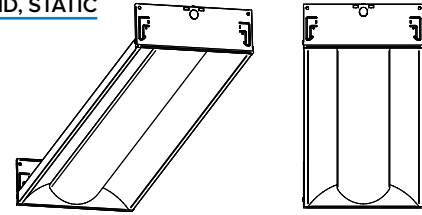
GRID, AIR RETURN

CEILING COMPATIBILITY

Type G

Side   End

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

FK12 Flange Kit

Side   End

For hard ceiling applications, order FK12 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance.
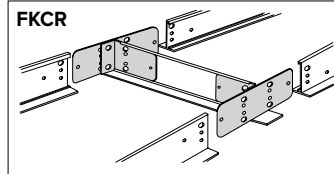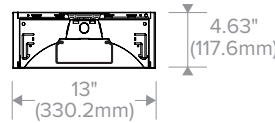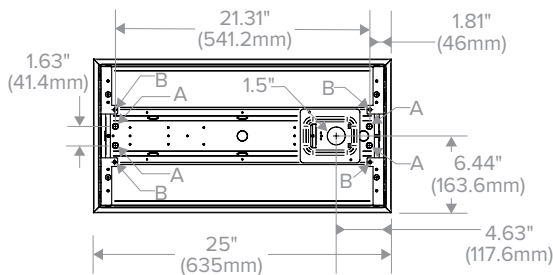
FKCR

For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK12 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK12 & (1) FKCR)

Row cut out dimensions using FK12s & FKCR adapters:
Width 12⅜", Length [24" × (# in row)] + ⅜".
Example: (24" × 2) + 3/8" = 48⅜"

Flange kit cut out dimension for single unit only: 12⅜" × 24⅜"

SURFACE MOUNT OR CABLE MOUNT, STATIC ONLY

21.31"
(541.2mm)

1.81"
(46mm)

1.63"
(41.4mm)

B
A   1.5"   B

A
A
A   6.44"
B   (163.6mm)

25"
(635mm)

4.63"
(117.6mm)

4.63"
(117.6mm)

13"
(330.2mm)

Surface section (SM)

Surface Mount (SM) and Cable Mount (CM), back of housing

˙ For Cable Mount a 2" x 3" access plate with (4) ⅞" KOs provided in place of Mounting Collar shown.

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 CM48Y1SC3F48 48" Cable Mount Kit for 1' wide CM 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.

HUBBELL Lighting

Columbia LIGHTING

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

LCAT12

1' × 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

PHOTOMETRY

LCAT12-35LWG-EU

LUMINAIRE DATA

Test No.	16456
Description	1' x 2' LED architectural troffer with frosted linear prismed lens
Delivered Lumens	2756
Watts	22.60
Efficacy	122
Mounting	Recessed
Spacing Criterion	0° = 1.19 90° = 1.30

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0–30	733	26.6
0–40	1199	43.5
0–60	2128	77.2
0–90	2756	100
0–180	2756	100

POLAR GRAPH
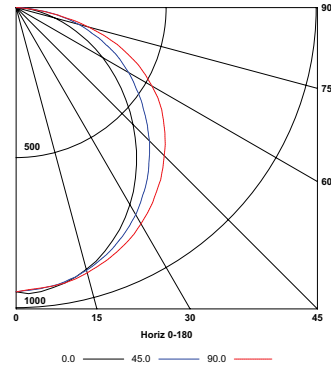
LCAT12-35MLG-EU

LUMINAIRE DATA

Test No.	16459
Description	1' x 2' LED architectural troffer with frosted linear prismed lens
Delivered Lumens	3431
Watts	28.80
Efficacy	117
Mounting	Recessed
Spacing Criterion	0° = 1.19 90° = 1.29

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0–30	918	26.8
0–40	1497	43.6
0–60	2643	77
0–90	3431	100
0–180	3431	100

POLAR GRAPH
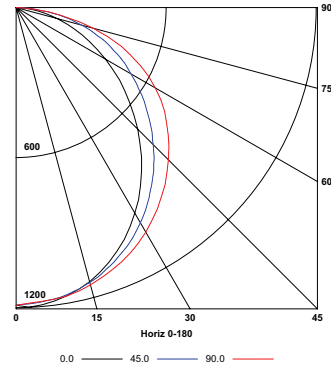
LCAT12-35HLG-EU

LUMINAIRE DATA

Test No.	16462
Description	1' x 2' LED architectural troffer with frosted linear prismed lens
Delivered Lumens	3692
Watts	31.60
Efficacy	117
Mounting	Recessed
Spacing Criterion	0° = 1.19 90° = 1.31

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0–30	980	26.6
0–40	1603	43.4
0–60	2846	77.1
0–90	3692	100
0–180	3692	100

POLAR GRAPH
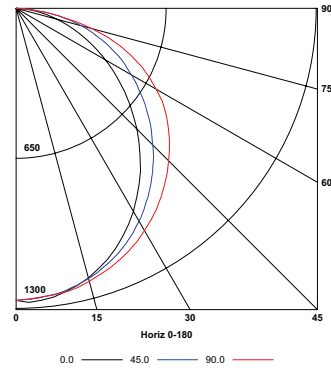
ADDITIONAL INFORMATION

DTS WIRING DIAGRAM (0–10V DIMMING DRIVER SHOWN)

WHITE/BLUE	Emergency Neutral
BLUE	Emergency Line
BLACK	Utility Line (Unswitched Hot)
WHITE	Utility Neutral
RED	Switched Hot
VIOLET	Dimming
GRAY	Dimming

HUBBELL Lighting
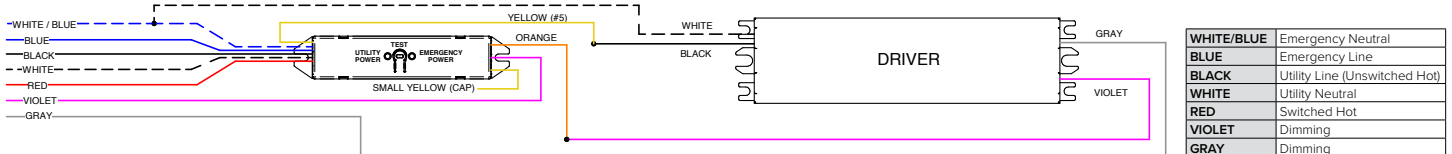
Sidebar: PHOTOMETRY · IES · PDF · IES · PDF · IES · PDF · DTS Integration Guide