

# LCAT14

1' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

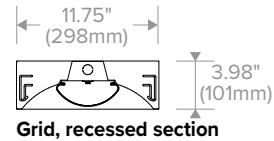
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TYPE:	PROJECT:
CATALOG #:	

## 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
- 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



## CONTROLS TECHNOLOGY



## 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 T-bar clips with holes for seismic wires 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

### 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 Lighting Controls 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)

- 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 8 for wiring diagram.
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 04/03/2020.
- DLC® (DesignLights Consortium) Qualified. Please refer to the DLC website for specific product qualifications at [www.designlights.org](http://www.designlights.org)

### WARRANTY

- 5 year warranty

KEY DATA	
Lumen Range	2314–8294
Wattage Range	18–63
Efficacy Range (LPW)	118–146
Reported Life (Hours)	L80/60,000

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1' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

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## ORDERING GUIDE

Example: LCAT14-35MLG-ESDU

CATALOG #

LCAT14								
Model	CRI	Color Temp	Delivered Lumens	Ceiling Type	Shielding	Air Function	Driver <sup>18</sup>	
LCAT14 1' x 4' LED Contemporary Architectural Troffer	Blank	>80	30 3000K	XW 2314-2651	G Grid Lay-in <sup>2</sup>	Blank	Static	E Fixed Output
	9	>90	35 3500K	VW 2984-3312	SM Surface Mount <sup>3,11</sup>	Curve	A Air Return Side Slots	ED 0-10V Dimming <sup>5</sup>
			40 4000K	MW 3297-3662	LW 4018-4500	R Rectangular		ED1 0-10V 1% Dimming
			50 5000K	LW 4018-4500	CM Cable Suspended Mount <sup>3,4</sup>			EDD 0-10V Dim-to-Off
			2750T 2700K-5000K SpectraSync™ Tunable White <sup>1</sup>	ML 4246-4748				ESD Step Dimming <sup>6,7,12</sup>
			2765T 2700K-6500K SpectraSync™ Tunable White <sup>1</sup>	HL 4063-5669				LUTH Hi-lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology <sup>6,7,12</sup>
			VL 6959-7749				DALIP Dali Power Bus <sup>7,12,15</sup>	
			XL 7424-8294					

Voltage	Options	Control Options <sup>19</sup>
U 120-277V 347 347V <sup>13</sup>	<p><b>ELL14</b> Emergency Battery Pack Installed, 1400 Lumens <sup>7,8</sup></p> <p><b>ELL14ST</b> Emergency Battery Pack, 1400 Lumens, Self Test <sup>7,8</sup></p> <p><b>ELL14H2</b> Emergency Battery Pack, 2-Hour Run Time <sup>7,8,9</sup></p> <p><b>DTS</b> Dimming Bypass Module <sup>7,10</sup></p> <p><b>C388</b> 3-wire Flex <sup>14</sup></p> <p><b>C488</b> 4-wire Flex <sup>14</sup></p> <p><b>C588</b> 5-wire Flex <sup>14</sup></p> <p><b>GLR</b> Fast Blow Fuse</p> <p><b>EOR</b> End of Row (SM and CM only. Provides end wiring access for continuous row mounting.) <sup>3</sup></p> <p><b>INT</b> Intermediate (SM and CM only. Provides ends with wiring access for continuous row mounting.) <sup>3</sup></p> <p><b>CP</b> Chicago Plenum</p>	<p><b>NX Networked – Wired</b></p> <p><b>NXE</b> NX Wired Dual RJ45 SmartPORTS, without Sensor <sup>11,12,13</sup></p> <p><b>NXESM</b> NX Wired Dual RJ45 SmartPORTS and Integral NXSMP2-SMI PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming <sup>11,12,13</sup></p> <p><b>NX Networked – Wireless</b></p> <p><b>NXW</b> NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor <sup>12,13</sup></p> <p><b>NXWSM</b> NX Networked Wireless Enabled Integral NXSMP2-SMI PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming <sup>12,13</sup></p> <p><b>NX Connect – Wireless</b></p> <p><b>NXCS</b> NX Connect NXC-WIZ20 Wireless Indoor Occupancy and Photocell Sensor <sup>7,12,17</sup></p> <p><b>Third-Party Control Options</b></p> <p><b>ODPG</b> Occupancy and Daylight Sensors w/ Grouping, Philips SNS200 <sup>7,15,17</sup></p> <p><b>LVR</b> Lutron Vive Integral Fixture Control DFCSJ-OEM-RF (RF only) <sup>7,15,16,17</sup></p> <p><b>LVS</b> Lutron Vive Integral Fixture Control DFCSJ-OEM-OCC (RF with daylight and occupancy sensing) <sup>7,15,16,17</sup></p>

Accessories	
<input type="checkbox"/> <b>FK14</b>	1' x 4' Single Flange Kit (Shipped separately)
<input type="checkbox"/> <b>CM48Y1SC3F48</b>	48" Cable Mount Kit for 1' wide Cable Mount fixtures, 3-wire
<input type="checkbox"/> <b>SMK-LCAT 1x4</b>	1x4 Surface Mount Kit, Field Install

- Notes:
- Available with ED driver and 80 CRI only. Not available with VL or XL lumen output
  - For drywall, order G with Flange Kit Accessory
  - Not available with Air Return (A) air function
  - Order hanger accessories separately
  - 1V minimum low-end trim recommended when paired with a 0-10V dimmer
  - Limitations apply based on lumen packages (see Product Exceptions & Details)
  - Not available in 347V
  - For compatibility with Dual-Lite LiteGear® inverters, contact Lighting Representative
  - Not available for use in Canada
  - 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 8 for wiring diagram

- NX In-Fixture Control Options:**
- NXE and NXESM cannot be used with surface mount versions
  - NX is not available with ESD, LUTH, or DALIP driver options
  - NX combined with Spectrasync is not available in 347V
  - For NX control and Flex Wire together, consult factory
- Third-Party Control Options:**
- LVS, LVR and ODPG only compatible with DALIP driver option
  - VIVE is a trademark of Lutron Electronics Co., Inc
  - Not available with SpectraSync (2750T or 2765T)
- Dimming Notes**
- Dimming curves may vary; dependent upon lumen output and driver option chosen. Separate dimming circuits are recommended if multiple driver options are chosen.
- All Controls**
- Minimum ambient temperature: 0°C (32°F)
- For questions about configuration options, contact Lighting Representative

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## PRODUCT EXCEPTIONS & DETAILS

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

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

## CONTROLS

### NX 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 INTEGRATED CONTROLS REFERENCE								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming
<b>NX Networked – Wired</b>								
NXE	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R <sup>1</sup>
NXESM	NXSMP2- SMI-XX	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>NX Networked – Wireless</b>								
NXWSM	NXSMP2- SMI-XX	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXW	N/A	Yes	Yes	No	No	Yes	Yes	Yes
<b>NX Connect – Wireless</b>								
NXCS <sup>2</sup>	WIZ20	Yes <sup>3</sup>	No	Yes	Yes	Yes	Yes	Yes

1 NXBTC/R needs to be plugged into an available NX SmartPORT™ on the fixture network  
 2 Not compatible with NX Networked Wired or NX Networked Wireless Options  
 3 Maximum network of 32 devices

### Philips EasySense Controls ODPG Sensor:



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

1 Wireless switches only compatible with ODPG Philips EasySense  
 2 Requires android device or IR dongle.

### Wireless Switch Accessories<sup>1</sup>

- PESR-WH EasySense compatible wireless single rocker switch, white
- PEDR-WH EasySense compatible wireless dual rocker switch, white

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**SpectraSync™ Color Tuning Technology:**

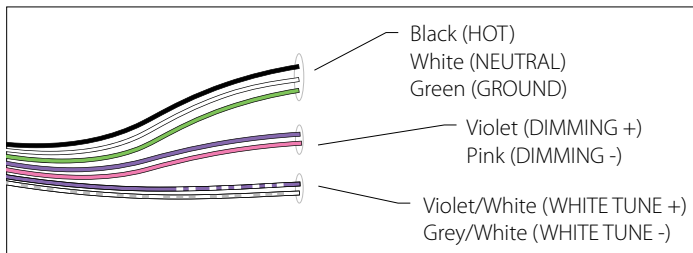
Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync™ Color Tuning Technologies.



SPECTRASYNC COLOR TUNING TECHNOLOGY		
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.

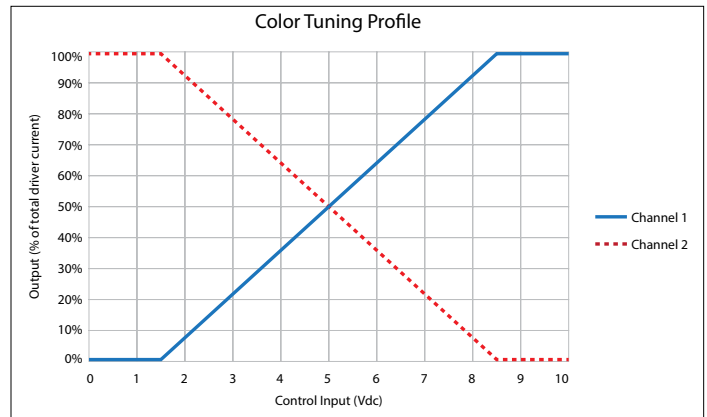


SpectraSync Tunable White luminaires are provided with two 0–10V circuits. The violet and pink circuit is for wiring to any qualified 0–10V controller for dimming. The violet/white and grey/white circuit is for wiring to any qualified 0–10V controller for Tunable White CCT control.

**Controller Manufacturer Data**

SpectraSync Tunable White was designed to be used with sinking style dimmers (provided by others) and is compatible with:

- NX Lighting Controls Room Controller (NXRC) and In-fixture Controllers (NXFM)
- Lutron: DDTV, DVSTV, and NDTV dimmers
- Wattstopper: ADF120277 and CD4BL (Titan) dimmers



To enable scheduling and for use with NX wall control preset stations please refer to NX SpectraSync technical sheet.

**DELIVERED LUMENS, SPECTRASYNC™**



Shielding	Lumen Output	Watts	2700		3000		3500		4000		5000		6500	
			Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
Curve	XW	19	2200	113	2299	119	2340	121	2370	122	2448	126	2412	124
	VW	28	3012	110	3147	114	3204	116	3245	118	3352	122	3301	120
	MW	32	3499	108	3656	113	3722	115	3769	117	3894	121	3835	119
	LW	36	4188	116	4376	122	4455	124	4512	125	4660	129	4590	128
	ML	38	4487	117	4689	122	4773	125	4834	126	4994	130	4919	128
	HL	44	5173	118	5405	123	5502	125	5573	127	5756	131	5670	129
	VL	58	6501	113	6793	118	6915	120	7004	122	7235	126	7126	124
Rectangle	XW	21	2295	111	2398	116	2441	119	2472	120	2554	124	2516	122
	VW	28	2916	106	3047	111	3102	113	3141	114	3245	118	3196	116
	MW	32	3508	109	3666	113	3732	116	3780	117	3904	121	3846	119
	LW	36	4063	113	4246	118	4322	120	4378	122	4522	126	4454	124
	ML	38	4545	119	4749	124	4834	126	4896	128	5058	132	4982	130
	HL	44	5034	116	5260	121	5355	123	5423	125	5602	129	5518	127
	VL	58	6322	109	6606	114	6725	116	6811	118	7035	122	6930	120

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## DELIVERED LUMENS (View 90 CRI data on supplemental document)

Product Availability 80 CRI					
Lumen Package	Shielding	Color	Lumens	Input Watts	LPW
<b>XW</b>		3000K	2403	18.8	128
		3500K	2622	18.6	141
		4000K	2651	18.6	143
		5000K	2651	18.6	143
	R	3000K	2314	18.8	123
		3500K	2491	18.6	134
		4000K	2519	18.6	136
		5000K	2519	18.6	136
<b>VW</b>		3000K	3086	24.5	126
		3500K	3276	24.5	134
		4000K	3312	24.5	135
		5000K	3312	24.5	135
	R	3000K	2984	24.4	122
		3500K	3168	24.4	130
		4000K	3203	24.4	131
		5000K	3203	24.4	131
<b>MW</b>		3000K	3412	27.3	125
		3500K	3622	27.3	133
		4000K	3662	27.3	134
		5000K	3662	27.3	134
	R	3000K	3297	27.3	121
		3500K	3500	27.3	128
		4000K	3538	27.3	130
		5000K	3538	27.3	130
<b>LW</b>		3000K	4193	32.4	129
		3500K	4451	32.4	137
		4000K	4500	32.4	139
		5000K	4500	32.4	139
	R	3000K	4018	32.4	124
		3500K	4266	32.4	132
		4000K	4313	32.4	133
		5000K	4313	32.4	133

Product Availability 80 CRI (continued)					
Lumen Package	Shielding	Color	Lumens	Input Watts	LPW
<b>ML</b>		3000K	4423	32.6	136
		3500K	4696	32.6	144
		4000K	4748	32.6	146
		5000K	4748	32.6	146
	R	3000K	4246	32.6	130
		3500K	4507	32.6	138
		4000K	4557	32.6	140
		5000K	4557	32.6	140
<b>HL</b>		3000K	5282	40.0	132
		3500K	5607	40.0	140
		4000K	5669	40.0	142
		5000K	5669	40.0	142
	R	3000K	5063	40.0	127
		3500K	5375	40.0	134
		4000K	5434	40.0	136
		5000K	5434	40.0	136
<b>VL</b>		3000K	7222	56.9	127
		3500K	7664	56.9	135
		4000K	7749	56.9	136
		5000K	7749	56.9	136
	R	3000K	6959	56.9	122
		3500K	7384	56.9	130
		4000K	7466	56.9	131
		5000K	7466	56.9	131
<b>XL</b>		3000K	7857	63.0	125
		3500K	8203	62.4	131
		4000K	8294	62.4	133
		5000K	8294	62.4	133
	R	3000K	7424	62.9	118
		3500K	7860	62.4	126
		4000K	7947	62.4	127
		5000K	7947	62.4	127

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1' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

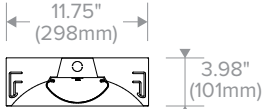
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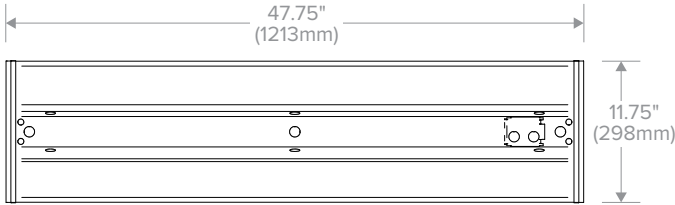
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## DIMENSIONS

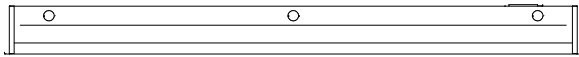
### GRID



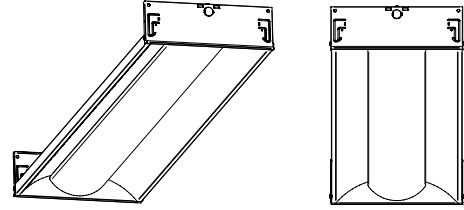
Grid, recessed section



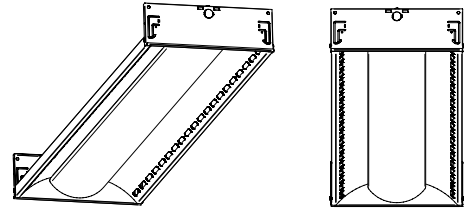
Grid, back of housing



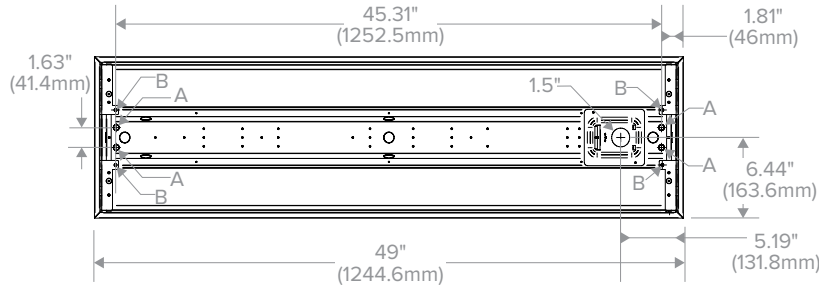
### GRID, STATIC



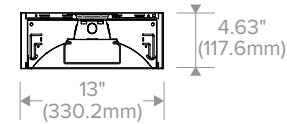
### GRID, AIR RETURN



## SURFACE MOUNT OR CABLE MOUNT, STATIC ONLY



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



Surface section (SM)

### 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.

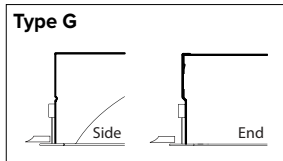
### Cable Mount:

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.

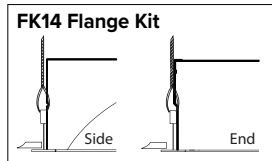
\* For Cable Mount a 2" x 3" access plate with (4) 3/8" KOs provided in place of Mounting Collar shown.

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

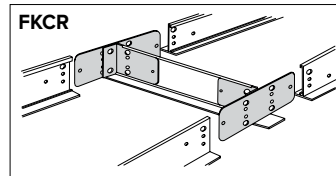
## CEILING COMPATIBILITY



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"**

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## PHOTOMETRY

### LCAT14-35LWG-EU

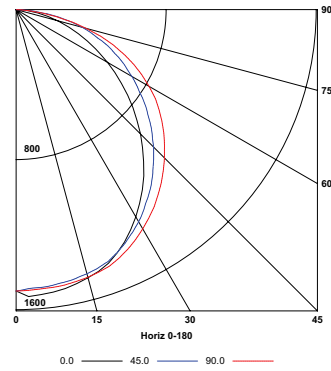
#### LUMINAIRE DATA

Test No.	16477
Description	1' x 4' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	4508
Watts	36.00
Efficacy	125
Mounting	Recessed
Spacing Criterion	0° = 1.25 90° = 1.33

#### ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	1193	26.5
0-40	1959	43.5
0-60	3482	77.3
0-90	4508	100
0-180	4508	100

#### POLAR GRAPH



### LCAT14-35MLG-EU

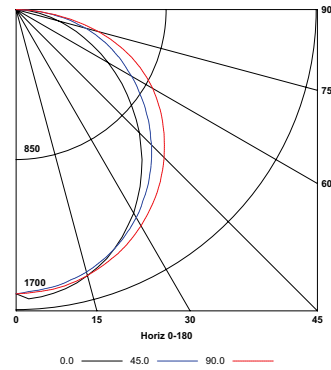
#### LUMINAIRE DATA

Test No.	16480
Description	1' x 4' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	4830
Watts	38.30
Efficacy	126
Mounting	Recessed
Spacing Criterion	0° = 1.23 90° = 1.30

#### ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	1253	25.9
0-40	2054	42.5
0-60	3663	75.8
0-90	4830	100
0-180	4830	100

#### POLAR GRAPH



### LCAT14-35HLG-EU

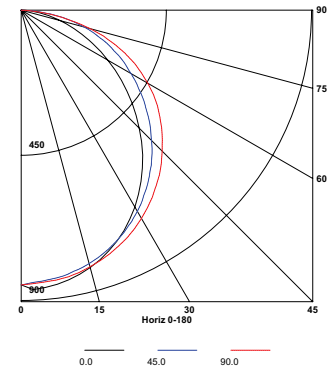
#### LUMINAIRE DATA

Test No.	16483
Description	1' x 4' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	5567
Watts	43090
Efficacy	127
Mounting	Recessed
Spacing Criterion	0° = 1.23 90° = 1.30

#### ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	1472	26.4
0-40	2413	43.3
0-60	4287	77
0-90	5567	100
0-180	5567	100

#### POLAR GRAPH



## ADDITIONAL INFORMATION

### DTS WIRING DIAGRAM (0-10V DIMMING DRIVER SHOWN)

