

LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE:	LOCATION:
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 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

ELECTRICAL

- 60,000 hour LEDs at L80 for reduced maintenance

ELECTRICAL (CONTINUED)

- 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
- DLC® (DesignLights Consortium) Qualified, with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at www.designlights.org

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.

WARRANTY

- 5 year warranty

KEY DATA	
Lumen Range	2350–8367
Wattage Range	18–63
Efficacy Range (LPW)	119–146
Reported Life (Hours)	L80/60,000

LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE:	LOCATION:
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ORDERING GUIDE

Example: LCAT24-35MLG-ESDU

CATALOG #

LCAT24													
Model	CRI	Color Temp		Delivered Lumens		Ceiling Type		Shielding	Air Function	Driver ¹⁸			
LCAT24 2' x 4' LED Contemporary Architectural Troffer	Blank	>80	30	3000K	XW	2350-2560	G	Grid Lay-in ²	Blank	Static	E	Fixed Output	
	9	>90	35	3500K	VW	2953-3339	SM	Surface Mount ^{3,11}	Curve	A	Air Return Side Slots	ED	0-10V Dimming ⁵
			40	4000K	MW	3205-3626			R	Rectangular		ED1	0-10V 1% Dimming
			50	5000K	LW	4041-4617	CM	Cable Suspended Mount ^{3,4}				EDD	0-10V Dim-to-Dark
			2750T	2700K-5000K	ML	4448-5026						ESD	Step Dimming ^{6,7,12}
			2765T	2700K-6500K	HL	5065-5786						LUTH	Hi-lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology ^{6,7,12}
				VL	6542-7440						DALIP	DALI Power Bus ^{7,12,15}	
				XL	7517-8367								

Voltage	Options	Control Options
U 120-277V 347 347V ¹³	<p>ELL14 Emergency Battery Pack Installed, 1400 Lumens^{7,8}</p> <p>ELL14ST Emergency Battery Pack, 1400 Lumens, Self Test^{7,8}</p> <p>ELL14H2 Emergency Battery Pack, 2-Hour Run Time^{7,8,9}</p> <p>DTS Dimming Bypass Module^{7,10}</p> <p>C388 3-wire Flex¹⁴</p> <p>C488 4-wire Flex¹⁴</p> <p>C588 5-wire Flex¹⁴</p> <p>GLR Fast Blow Fuse</p> <p>EOR End of Row (SM and CM only. Provides end wiring access for continuous row mounting.)³</p> <p>INT Intermediate (SM and CM only. Provides ends with wiring access for continuous row mounting.)³</p> <p>CP Chicago Plenum</p>	<p><u>NX Networked – Wired</u></p> <p>NXE NX Wired Dual RJ45 SmartPORTS, without Sensor^{12,13}</p> <p>NXESM NX Wired Dual RJ45 SmartPORTS and Integral NXSMP2-SMI PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming^{12,13}</p> <p>NXERM NX Wired Dual RJ45 SmartPORTS and Integral NXSMP2-LMI PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming</p> <p><u>NX Networked – Wireless</u></p> <p>NXW NX Networked Wireless Radio Module NXRM2 and Bluetooth Programming, without Sensor^{11,12,13}</p> <p>NXWSM NX Networked Wireless Enabled Integral NXSMP2-SMI PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming^{11,12,13}</p> <p>NXWRM NX Networked Wireless Enabled Integral NXSMP2-LMI PIR Occupancy Sensor with Automatic Dimming Photocell and Bluetooth Programming</p> <p><u>Third-Party Control Options</u></p> <p>ODPG Occupancy and Daylight Sensors w/ Grouping, Philips SNS200^{7,15,17}</p> <p>LVR Lutron VIVE Integral Fixture Control DFCSJ-OEM-RF (RF only)^{7,15,16,17}</p> <p>LVS Lutron VIVE Integral Fixture Control DFCSJ-OEM-OCC (RF with daylight and occupancy sensing)^{7,15,16,17}</p>

Accessories

- FK24** 2' x 4' Single Flange Kit (Shipped separately)
- CM48Y2SC3F-KIT** 48" Cable Mount Kit for 2' wide Cable Mount fixtures, 3-wire

Notes:

- 1 Available with ED driver and 80 CRI only. Not available with VL or XL lumen outputs
- 2 For drywall, order G with Flange Kit Accessory
- 3 Not available with Air Return (A) air function
- 4 Order hanger accessories separately
- 5 1V minimum low-end trim recommended when paired with a 0-10V dimmer
- 6 Limitations apply based on lumen packages (see Product Exceptions & Details)
- 7 Not available in 347V
- 8 For compatibility with Dual-Lite LiteGear® inverters, contact Lighting Representative
- 9 Not available for use in Canada
- 10 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:

- 11 NXSW, NXWE, NXSWD and NXWD cannot be used with surface mount versions
- 12 NX is not available with ESD, LUTH, or DALIP driver options
- 13 NX combined with Spectrasync is not available in 347V
- 14 For NX control and Flex Wire together, consult factory

Third-Party Control Options:

- 15 LVS, LVR and ODPG only available with DALIP driver option
- 16 VIVE is a trademark of Lutron Electronics Co., Inc
- 17 Not available with SpectraSync (2750T or 2765T)

Dimming Notes

- 18 Dimming curves may vary; dependent upon lumen output and driver option chosen. Separate dimming circuits are recommended if multiple driver options are chosen.

For questions about configuration options, contact Lighting Representative

DATE: _____ LOCATION: _____
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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
LUTH	X	X	X	X	X	X		
DALIP		X	X	X	X	X	X	X
347	X	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
NX Networked – Wired								
NXE	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ¹
NXESM	NXSMP2- SMI-XX	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXERM	NXSMP2-LMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NX Networked – Wireless								
NXWSM	NXSMP2- SMI-XX	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXW	N/A	Yes	Yes	No	No	Yes	Yes	Yes

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 switches¹
- 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-compliance 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 Requires android device or IR dongle.

Wireless Switch Accessories¹

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

CONTROLS (CONTINUED)

SpectraSync™ Color Tuning Technology:

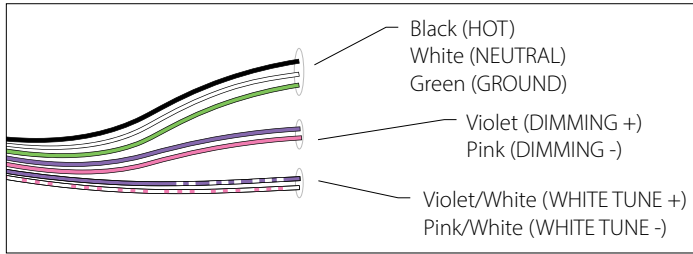
Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync™ Color Tuning Technologies.



SPECTRASYNC COLOR TUNING TECHNOLOGY		
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.

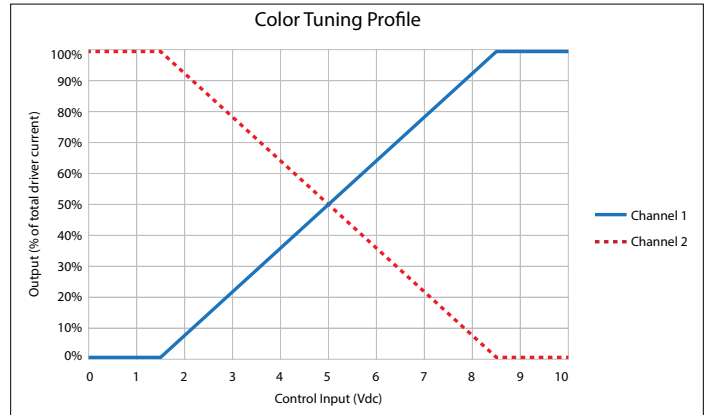


SpectraSync Tunable White luminaires are provided with two 0–10V circuits. The violet and pink circuit is for wiring to any qualified 0–10V controller for dimming. The violet/white and grey/white circuit is for wiring to any qualified 0–10V controller for Tunable White CCT control.

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 NFTV 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	2240	117	2341	123	2383	125	2414	126	2493	131	2456	129
	VW	28	2990	108	3124	113	3180	115	3221	117	3327	121	3277	119
	MW	30	3218	107	3363	111	3424	113	3467	115	3582	119	3528	117
	LW	36	4084	113	4268	118	4345	120	4400	122	4545	126	4477	124
	ML	39	4566	118	4771	123	4857	125	4919	127	5081	131	5005	129
	HL	44	5209	118	5443	124	5541	126	5612	128	5797	132	5710	130
Rectangle	XW	20	2489	123	2601	128	2648	130	2682	132	2770	136	2728	134
	VW	28	3085	109	3224	114	3282	116	3324	118	3434	122	3382	120
	MW	30	3323	110	3472	115	3534	117	3580	119	3698	122	3642	121
	LW	36	4230	117	4420	122	4500	125	4557	126	4707	130	4637	128
	ML	39	4711	121	4923	127	5012	129	5076	131	5243	135	5164	133
	HL	43	5295	123	5533	128	5633	131	5705	132	5893	137	5804	135

LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DELIVERED LUMENS (View 90 CRI data on supplemental document)

Product Availability 80 CRI					
Lumen Package	Shielding	Color	Lumens	Input Watts	LPW
XW		3000K	2448	18.7	131
		3500K	2532	18.7	135
		4000K	2560	18.7	137
		5000K	2560	18.7	137
	R	3000K	2350	18.6	126
		3500K	2532	18.7	135
		4000K	2560	18.7	137
		5000K	2560	18.7	137
VW		3000K	3112	24.3	128
		3500K	3303	24.3	136
		4000K	3339	24.3	138
		5000K	3339	24.3	138
	R	3000K	2953	24.3	122
		3500K	3135	24.3	129
		4000K	3169	24.3	130
		5000K	3169	24.3	130
MW		3000K	3379	26.4	128
		3500K	3587	26.4	136
		4000K	3626	26.4	137
		5000K	3626	26.4	137
	R	3000K	3205	26.5	121
		3500K	3402	26.5	128
		4000K	3439	26.5	130
		5000K	3439	26.5	130
LW		3000K	4302	32.1	134
		3500K	4567	32.1	142
		4000K	4617	32.1	144
		5000K	4617	32.1	144
	R	3000K	4041	32.2	125
		3500K	4290	32.2	133
		4000K	4337	32.2	135
		5000K	4337	32.2	135

Product Availability 80 CRI (continued)					
Lumen Package	Shielding	Color	Lumens	Input Watts	LPW
ML		3000K	4683	36.0	130
		3500K	4971	36.0	138
		4000K	5026	36.0	140
		5000K	5026	36.0	140
	R	3000K	4448	36.1	123
		3500K	4722	36.1	131
		4000K	4774	36.1	132
		5000K	4774	36.1	132
HL		3000K	5391	39.7	136
		3500K	5723	39.7	144
		4000K	5786	39.7	146
		5000K	5786	39.7	146
	R	3000K	5065	39.8	127
		3500K	5377	39.8	135
		4000K	5436	39.8	137
		5000K	5436	39.8	137
VL		3000K	6933	52.9	131
		3500K	7358	52.9	139
		4000K	7440	52.9	141
		5000K	7440	52.9	141
	R	3000K	6542	53.1	123
		3500K	6942	53.1	131
		4000K	7019	53.1	132
		5000K	7019	53.1	132
XL		3000K	7798	63.0	124
		3500K	8273	63.0	131
		4000K	8367	63.0	133
		5000K	8367	63.0	133
	R	3000K	7517	63.0	119
		3500K	7894	62.9	126
		4000K	7894	62.9	126
		5000K	7517	62.9	120

LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

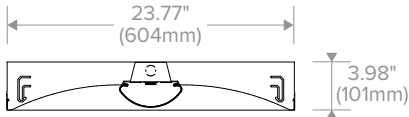
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TYPE: _____ PROJECT: _____

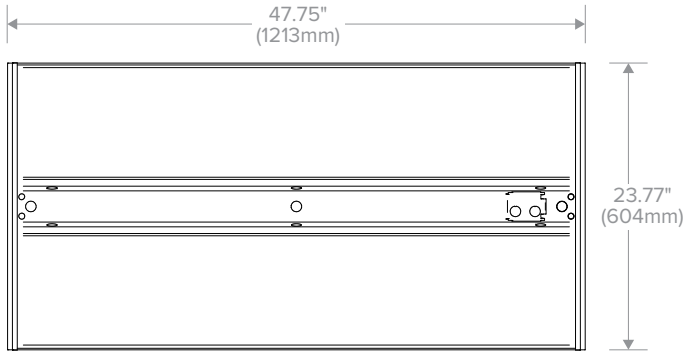
CATALOG #: _____

DIMENSIONS

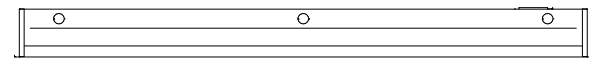
GRID



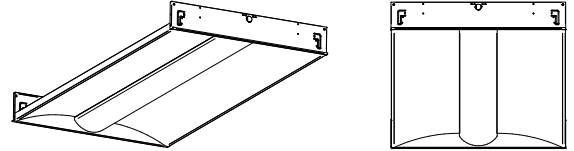
Grid, recessed section



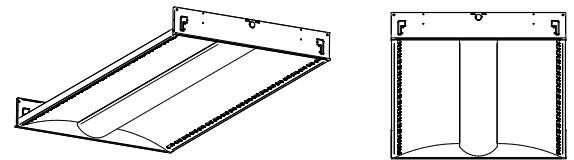
Grid, back of housing



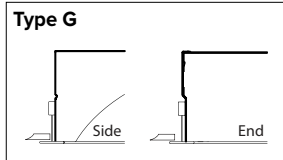
GRID, STATIC



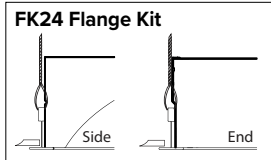
GRID, AIR RETURN



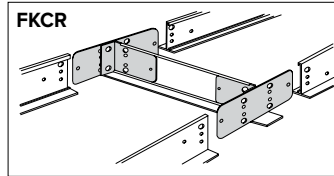
CEILING COMPATIBILITY



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 FK24 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance.

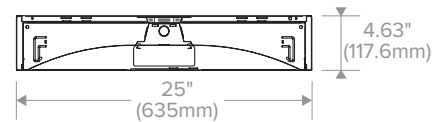
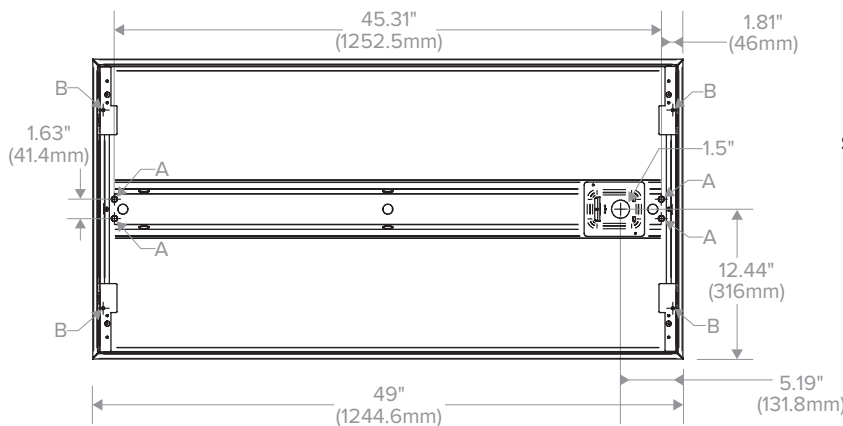


For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK24 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK24 & (1) FKCR)

Row cut out dimensions using FK24s & FKCR adapters:
Width 24³/₈", Length [48" x (# in row)] + ³/₈".
Example: (48" x 2) + ³/₈" = 96³/₈"

Flange kit cut out dimension for single unit only: 24³/₈" x 48³/₈"

SURFACE MOUNT OR CABLE MOUNT, STATIC ONLY



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

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

* 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.

LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

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PHOTOMETRY

LCAT24-35LWG-EU

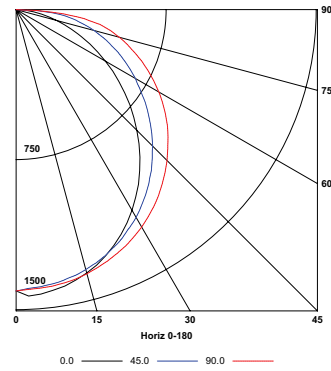
LUMINAIRE DATA

Test No.	16519
Description	2' x 4' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	4396
Watts	36.10
Efficacy	122
Mounting	Recessed
Spacing Criterion	0° = 1.22 90° = 1.32

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	1098	25
0-40	1804	41
0-60	3240	73.7
0-90	4396	100
0-180	4396	100

POLAR GRAPH



LCAT24-35MLG-EU

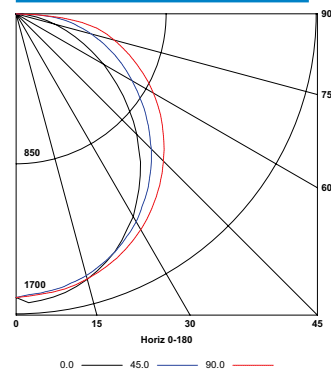
LUMINAIRE DATA

Test No.	16522
Description	2' x 4' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	4914
Watts	38.80
Efficacy	127
Mounting	Recessed
Spacing Criterion	0° = 1.22 90° = 1.30

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	1250	25.4
0-40	2049	41.7
0-60	3648	74.2
0-90	4914	100
0-180	4914	100

POLAR GRAPH



LCAT24-35HLG-EU

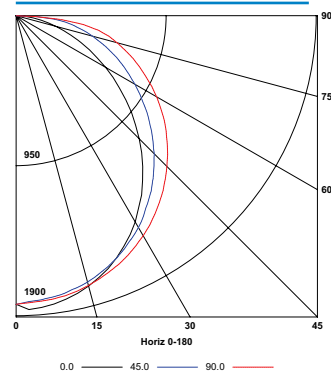
LUMINAIRE DATA

Test No.	16525
Description	2' x 4' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	5607
Watts	44.00
Efficacy	127
Mounting	Recessed
Spacing Criterion	0° = 1.22 90° = 1.31

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	1422	25.4
0-40	2333	41.6
0-60	4161	74.2
0-90	5607	100
0-180	5607	100

POLAR GRAPH



ADDITIONAL INFORMATION

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

