

University of South Carolina Aiken

## H&SS Restroom Renovation

471 University Pkwy, Aiken, South Carolina

State Project Number: H29-I364 50003418

February 11, 2021

### ADDENDUM NO. 1

This addendum forms a part of the Contract documents and modifies the original Bidding Documents and any previous Addenda as noted below. Acknowledge receipt of this Addendum in the space provided in the Bid Form. Failure to do so may subject Bidder to disqualification.

#### MODIFICATIONS TO PREVIOUS ADDENDA:

N/A

#### PRE-BID CONFERENCE – Feb 10, 2021 at 10:00 AM via Conference Call:

See attached Pre-Bid Conference Attendee List.

#### MODIFICATIONS TO PROJECT MANUAL:

None

#### MODIFICATIONS TO DRAWINGS:

##### ARCHITECTURAL DRAWINGS:

None

##### ELECTRICAL DRAWINGS:

None

##### MECHANICAL DRAWINGS:

None

##### PLUMBING DRAWINGS:

None

#### REQUESTED PRODUCT APPROVALS:

1. Approved Manufacturer Addition: The lighting manufacturer Columbia Lighting has been added as an approved equal to the Light Fixture schedule on Sheet E002. See attached lighting schedule from CAL+D dated 02/08/2021.

#### QUESTIONS FROM CONTRACTORS:

1. Question: What is the final date for questions?
  - a. **Answer: Final questions are due to the architect in writing via email Tuesday, 02/16/2021 at 12:00 PM EST. The final addendum will be posted on UofSC's procurement site Thursday, 02/18/2021.**
2. Question: I would like to get a copy of the asbestos report on this facility?
  - a. **Answer: Please find the asbestos report for this building attached.**
3. Question: Is there any hazmat abatement needed?
  - a. **Answer: No, see the attached asbestos report.**
4. Question: Can all 4 restrooms be worked on at once or will one need to be left operational until the other 3 are completed?
  - a. **Answer: Yes, both restrooms can be under construction concurrently.**

END OF ADDENDUM NO. 1



USC AIKEN H&SS BUILDING RESTROOM RENOVATION

H29-I364 50003418

February 10, 2021 at 10:00am

SWMBE Contractor?	Name	Company Name	Phone #	Email
S W M B E	AIMEE	SOLID STRUCTURES	(803) 926-0298	<a href="mailto:estimating@solidstructures.info">estimating@solidstructures.info</a>
S W M B E	CATHRYN POPLIN	MASHBURN CONSTRUCTION	(843) 371-0009	<a href="mailto:cpoplin@mashburnconstruction.com">cpoplin@mashburnconstruction.com</a>
S W M B E	MIKE AMMONS	PREMIER CONSTRUCTORS	(803) 960-9478	<a href="mailto:mammons@premierconstructors.net">mammons@premierconstructors.net</a>
S W M B E	TIM TROUTMAN	RD BROWN	(803) 278-3176	<a href="mailto:troutman@browntrusted.com">troutman@browntrusted.com</a>
S W M B E	JULIA GIBBS	FIRST CLASS CONSTRUCTION	(803) 926-1922	<a href="mailto:jgibbs@fccon.com">jgibbs@fccon.com</a>
S W M B E	PATRICK SOMMERS	SOMMERS CONSTRUCTIONS	(706) 955-8244	<a href="mailto:psommers@sommerscc.com">psommers@sommerscc.com</a>
S W M B E	ROBERT CLARK	COMPLETE SOLUTIONS CONTRACTING	(803) 760-6653	<a href="mailto:rclark@cscmidlands.com">rclark@cscmidlands.com</a>
S W M B E	JEAN-PAUL	JD GASKINS CONSTRUCTION	(803) 641-4068	<a href="mailto:jpaul@idgaskins.com">jpaul@idgaskins.com</a>
S W M B E	JASON WALKER	MSI CONSTRUCTION	(803) 683-6897	<a href="mailto:jasonwalker@msiconst.com">jasonwalker@msiconst.com</a>
S W M B E	KAYLA ARAVE	CAROLINA GOLD CONSTRUCTION	(803) 951-0803	<a href="mailto:kayla@gocarolinagold.com">kayla@gocarolinagold.com</a>
S W M B E	TAYLOR BEAUDROT	STUDIO 2LR	(803) 233-6602	<a href="mailto:tbeaudrot@studio2lr.com">tbeaudrot@studio2lr.com</a>
S W M B E	JERRY KNOX	USC	(803) 260-2361	<a href="mailto:knoxj3@mailbox.sc.edu">knoxj3@mailbox.sc.edu</a>
S W M B E	HATICE HIKMET	USC	(803) 777-9994	<a href="mailto:hikmeth@mailbox.sc.edu">hikmeth@mailbox.sc.edu</a>
S W M B E				
S W M B E				

\*\*\*\*By signing this sheet you agree to receive information electronically.



Date: Feb 8, 2021

CAL+D  
1237 Gadsden Street  
Columbia SC 29201  
Phone: (803) 271-2818  
Fax:

Job Name  
**USC Aiken Arts, Humanities, and Social Sciences Building Interior Renovations - 2021 Upfit**  
COL21-55495  
Aiken SC

Bid Date  
~~Feb 22, 2021~~

NOTE:  
CORRECT BID DATE IS  
FEBRUARY 25, 2021

Submittal Date  
Feb 8, 2021

*Architect:*  
Studio 2LR  
2428 Main Street  
Columbia SC 29201

*Engineer:*  
GWA, Inc.  
168 Laurelhurst Avenue  
Columbia SC 29210

Date: Feb 8, 2021



Carolina  
Architectural  
Lighting and  
Design

Page 1/1

# Transmittal

CAL+D  
1237 Gadsden Street  
Columbia SC 29201  
Phone: (803) 271-2818  
From: Jamie Hubbard

**Project** USC Aiken Arts, Humanities, and Social  
Sciences Building Interior Renovations -  
2021 Upfit

**Quote#** COL21-55495

**Location** Aiken SC  
Contact:

ATTACHED WE ARE SENDING YOU 1 COPY OF THE FOLLOWING ITEM:

- |                                   |   |        |
|-----------------------------------|---|--------|
| <input type="checkbox"/> Drawings | <input type="checkbox"/> Specifications | Other: |
| <input type="checkbox"/> Prints   | <input type="checkbox"/> Information    |        |
| <input type="checkbox"/> Plans    | <input type="checkbox"/> Submittals     |        |

THESE ARE TRANSMITTED FOR:

- |  |   |                                 |
|--|---|---------------------------------|
| <input type="checkbox"/> Prior Approval        | <input type="checkbox"/> Resubmittal for Approval | <input type="checkbox"/> Record |
| <input type="checkbox"/> Approval              | <input type="checkbox"/> Corrections              | Bids due on:                    |
| <input type="checkbox"/> Approval as Submitted | <input type="checkbox"/> Your Use                 | Other:                          |
| <input type="checkbox"/> Approval as Noted     | <input type="checkbox"/> Review and Comment       |                                 |

## Type

A  
C

## MFG

Columbia  
Columbia

## Part

[LCAT22-35MLG-EDU](#)  
[MPS4-35ML-CW-EDU CSHC](#)

**Columbia**  
LIGHTING

## LCAT22

2' x 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



### CONTROL 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 Distributed Intelligence™ provides options for standalone and networked integrated sensor with wired or wireless connectivity for NX system deployments

#### TECHNOLOGY

- SpectraSAFE™ is a scalable, cloud-enabled and lighting-based wireless video security solution for interior commercial and industrial applications

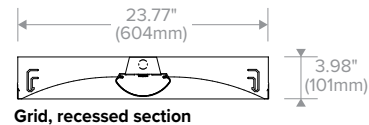
#### CERTIFICATIONS

- 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



#### RELATED PRODUCTS

θ [LCAT12](#)   θ [LCAT14](#)   θ [LCAT24](#)



#### CERTIFICATIONS (CONTINUED)

- DLC® (DesignLights Consortium) Qualified, with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at [www.designlights.org](http://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 8 for wiring diagram. [Link to Dimming Bypass Module Specification sheet](#)
- 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. [See Buy American Solutions](#)

#### WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

KEY DATA	
Lumen Range	1313–4863
Wattage Range	13–40
Efficacy Range (LPW)	93–139
Reported Life (Hours)	L80/60,000



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

For questions about configuration options, contact Hubbell Representative

**Columbia**  
LIGHTING

**LCAT22**

2' x 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: \_\_\_\_\_ LOCATION: \_\_\_\_\_  
TYPE: \_\_\_\_\_ PROJECT: \_\_\_\_\_  
CATALOG #: \_\_\_\_\_

## PRODUCT EXCEPTIONS & DETAILS

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

DRIVER AVAILABILITY TABLE											
	VW	VWHE	MW	MWHE	LW	ML	MLHE	HL	HLHE	VL	VLHE
E	X	X	X	X	X	X	X	X	X	X	X
ED	X	X	X	X	X	X	X	X	X	X	X
ED1	X	X	X	X	X	X	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	X	X	X	X
347	X		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
<b>NX Standalone</b>								
<a href="#">NXS</a>	<a href="#">NXSMP-SMI</a>	No	Yes	Yes	Yes	Yes	Yes	Yes
<b>NX Networked – Wired</b>								
<a href="#">NXE</a>	N/A	Yes	Yes	No	No	Yes	Yes	Requires <a href="#">NXBTC/R</a> <sup>1</sup>
<a href="#">NXES</a>	<a href="#">NXSMP-SMI</a>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>NX Networked – Wireless</b>								
<a href="#">NXSW</a>	<a href="#">NXSMP-SMI</a>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<a href="#">NXWE</a>	N/A	Yes	Yes	No	No	Yes	Yes	No <sup>2</sup>
<b>NX Networked – Wired/Wireless</b>								
<a href="#">NXSWD</a>	<a href="#">NXSMP-SMI</a>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<a href="#">NXWD</a>	N/A	Yes	Yes	No	No	Yes	Yes	Requires <a href="#">NXBTC/R</a> <sup>1,2</sup>

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<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 QPL 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 [See link to Philips commissioning](#)

3 Requires android device or IR dongle. See links for [phone compatibility](#) and [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



**Job Name:**

USC Aiken Arts, Humanities, and Social Sciences  
Building Interior Renovations - 2021 Upfit  
Architect: Studio 2LR (Columbia)  
Engineer: GWA, Inc. (Columbia)

**Columbia**  
LIGHTING
**LCAT22**

2' x 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: \_\_\_\_\_ LOCATION: \_\_\_\_\_  
TYPE: \_\_\_\_\_ PROJECT: \_\_\_\_\_  
CATALOG #: \_\_\_\_\_

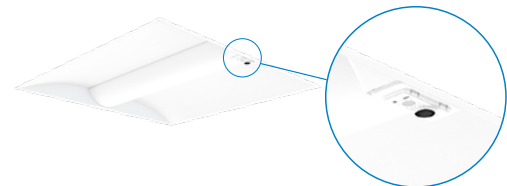
**CONTROLS (CONTINUED)****SpectraSAFE™ Integrated Surveillance Lighting System****Technical Features**

- High resolution 1080p full HD camera
- 2.8mm lens / 140° field of view
- IR emitter for low / no-light conditions
- [Multiple wiring configurations available](#)
- Supports 2-way audio communication
- Supports 2.4GHz WPA-PSK/WPA2-PSK Wi-Fi
- Data encrypted using AES 256 standard
- Low power consumption (2-5W)
- Transmissions secured using Open TLS / SSL

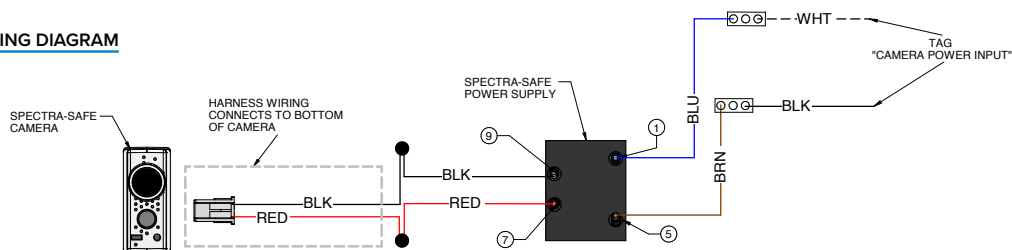
**Software & Support**

- Free Android, iOS and web-based app
- Versatile and supports multiple applications
- Multi-tenant web-based camera application
- Phone and in-app chat technical support
- Scalable cloud services and video storage
- Supported by a 5-year warranty

SPECTRASAFE

**SPECTRASAFE WIRING DIAGRAM**

Power Supply	
Pin Connections	
Pin#	Single
1	VAC in (NI)
5	VAC in (LI)
7	+Vout
9	-Vout

**SpectraSync™ Color Tuning Technology:**

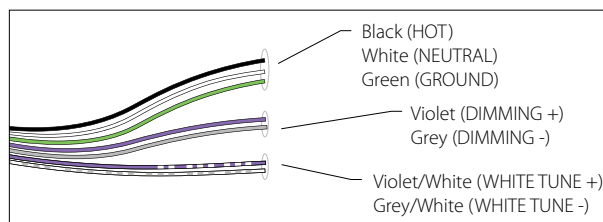
Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync™ Color Tuning Technologies.

**SpectraSync™**  
Color Tuning Technology

SPECTRASYNCH 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.

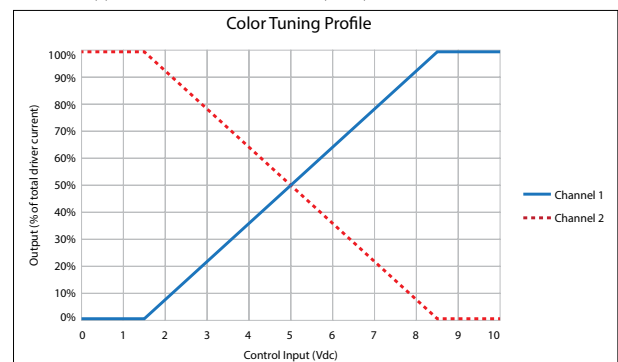


SpectraSync Tunable White luminaires are provided with two 0–10V circuits. The violet and grey circuit is for wiring to any qualified 0–10V controller for dimming. The violet/white and grey/white circuit is for wiring to any qualified 0–10V controller for Tunable White CCT control.

**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: 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 Hubbell Control Solutions NX SpectraSync technical sheet.



**Columbia**  
LIGHTING

## LCAT22

2' x 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

### DELIVERED LUMENS, SPECTRASYN<sup>™</sup>



Shielding	Lumen Output	Watts	2700		3000		3500		4000		5000		6500	
			Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
Curve	VW	14	1500	110	1567	115	1595	117	1616	119	1669	123	1644	121
	MW	18	1961	109	2049	114	2086	116	2113	117	2182	121	2149	119
	LW	23	2582	114	2698	119	2747	122	2782	123	2873	127	2830	125
	ML	29	3177	111	3320	116	3380	118	3423	119	3536	123	3483	121
	HL	32	3444	108	3599	113	3664	115	3711	117	3833	121	3775	119
Rectangle	VW	13	1479	110	1545	115	1573	117	1593	119	1645	123	1621	121
	MW	18	1930	109	2017	114	2053	116	2080	117	2148	121	2116	120
	LW	23	2547	113	2661	118	2709	120	2743	121	2834	125	2791	124
	ML	29	3127	109	3267	114	3326	116	3368	117	3479	121	3427	119
	HL	32	3391	107	3543	112	3607	114	3653	116	3773	119	3717	118

### DELIVERED LUMENS

Product Availability 80 CRI				
Lumen Package	Shielding	Lumens	Input Watts	LPW
LCAT22-30VW	Curve	1567	14	115
LCAT22-30VWx-R	Rectangle	1545	13	115
LCAT22-30VWHE	Curve	1530	13	121
LCAT22-35VW	Curve	1614	14	119
LCAT22-35VWx-R	Rectangle	1597	13	119
LCAT22-35VWHE	Curve	1576	13	125
LCAT22-40VW	Curve	1639	14	121
LCAT22-40VWx-R	Rectangle	1623	13	121
LCAT22-40VWHE	Curve	1600	13	127
LCAT22-50VW	Curve	1785	14	131
LCAT22-50VWx-R	Rectangle	1666	13	124
LCAT22-50VWHE	Curve	1743	13	138
LCAT22-30MW	Curve	2049	18	114
LCAT22-30MWx-R	Rectangle	2017	18	114
LCAT22-30MWHE	Curve	2010	17	122
LCAT22-35MW	Curve	2110	18	117
LCAT22-35MWx-R	Rectangle	2085	18	118
LCAT22-35MWHE	Curve	2070	17	125
LCAT22-40MW	Curve	2143	18	119
LCAT22-40MWx-R	Rectangle	2118	18	120
LCAT22-40MWHE	Curve	2102	17	127
LCAT22-50MW	Curve	2334	18	130
LCAT22-50MWx-R	Rectangle	2174	18	123
LCAT22-50MWHE	Curve	2289	17	139
LCAT22-30LW	Curve	2689	23	119
LCAT22-30LWx-R	Rectangle	2661	23	118
LCAT22-35LW	Curve	2770	23	123
LCAT22-35LWx-R	Rectangle	2752	23	122
LCAT22-40LW	Curve	2813	23	124
LCAT22-40LWx-R	Rectangle	2795	23	124
LCAT22-50LW	Curve	3063	23	136
LCAT22-50LWx-R	Rectangle	2870	23	127

Product Availability 90 CRI				
Lumen Package	Shielding	Lumens	Input Watts	LPW
LCAT22-930VW	Curve	1342	13	100
LCAT22-930VWx-R	Rectangle	1313	13	98
—	—	—	—	—
LCAT22-935VW	Curve	1371	13	102
LCAT22-935VWx-R	Rectangle	1341	13	100
—	—	—	—	—
LCAT22-940VW	Curve	1400	13	104
LCAT22-940VWx-R	Rectangle	1370	13	102
—	—	—	—	—
LCAT22-950VW	Curve	1492	13	111
LCAT22-950VWx-R	Rectangle	1459	13	109
—	—	—	—	—
LCAT22-930MW	Curve	1744	17.7	99
LCAT22-930MWx-R	Rectangle	1714	17.7	97
—	—	—	—	—
LCAT22-935MW	Curve	1781	18	101
LCAT22-935MWx-R	Rectangle	1750	18	99
—	—	—	—	—
LCAT22-940MW	Curve	1819	18	103
LCAT22-940MWx-R	Rectangle	1788	18	101
—	—	—	—	—
LCAT22-950MW	Curve	1938	18	109
LCAT22-950MWx-R	Rectangle	1905	18	108
—	—	—	—	—
LCAT22-930LW	Curve	2286	23	101
LCAT22-930LWx-R	Rectangle	2263	23	100
LCAT22-935LW	Curve	2339	23	103
LCAT22-935LWx-R	Rectangle	2311	23	102
LCAT22-940LW	Curve	2393	23	106
LCAT22-940LWx-R	Rectangle	2361	23	104
LCAT22-950LW	Curve	2527	23	112
LCAT22-950LWx-R	Rectangle	2515	23	111

(Tables continue on next page.)



## LCAT22

2' x 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: \_\_\_\_\_ LOCATION: \_\_\_\_\_  
 TYPE: \_\_\_\_\_ PROJECT: \_\_\_\_\_  
 CATALOG #: \_\_\_\_\_

### DELIVERED LUMENS, CONT'D

Product Availability 80 CRI				
Lumen Package	Shielding	Lumens	Input Watts	LPW
LCAT22-30ML	Curve	3320	29	116
LCAT22-30MLx-R	Rectangle	3267	29	114
LCAT22-30MLHE	Curve	3293	28	119
LCAT22-35ML	Curve	3420	29	119
LCAT22-35MLx-R	Rectangle	3378	29	118
LCAT22-35MLHE	Curve	3392	28	123
LCAT22-40ML	Curve	3473	29	121
LCAT22-40MLx-R	Rectangle	3431	29	120
LCAT22-40MLHE	Curve	3442	28	125
LCAT22-50ML	Curve	3781	29	132
LCAT22-50MLx-R	Rectangle	3522	29	123
LCAT22-50MLHE	Curve	3751	28	136
LCAT22-30HL	Curve	3599	32	113
LCAT22-30HLx-R	Rectangle	3543	32	112
LCAT22-30HLHE	Curve	3497	28	126
LCAT22-35HL	Curve	3707	32	117
LCAT22-35HLx-R	Rectangle	3664	32	116
LCAT22-35HLHE	Curve	3616	28	130
LCAT22-40HL	Curve	3764	32	118
LCAT22-40HLx-R	Rectangle	3721	32	118
LCAT22-40HLHE	Curve	3671	28	132
LCAT22-50HL	Curve	4099	32	129
LCAT22-50HLx-R	Rectangle	3820	32	121
LCAT22-50HLHE	Curve	3769	28	136
LCAT22-30VL	Curve	4270	39	111
LCAT22-30VLx-R	Rectangle	4432	40	110
LCAT22-30VLHE	Curve	4257	35	123
LCAT22-35VL	Curve	4398	39	114
LCAT22-35VLx-R	Rectangle	4583	40	113
LCAT22-35VLHE	Curve	4401	35	127
LCAT22-40VL	Curve	4466	39	116
LCAT22-40VLx-R	Rectangle	4655	40	115
LCAT22-40VLHE	Curve	4470	35	129
LCAT22-50VL	Curve	4863	39	126
LCAT22-50VLx-R	Rectangle	4779	40	118
LCAT22-50VLHE	Curve	4649	35	134

Product Availability 90 CRI				
Lumen Package	Shielding	Lumens	Input Watts	LPW
LCAT22-930ML	Curve	2821	29	98
LCAT22-930MLx-R	Rectangle	2778	29	97
—	—	—	—	—
LCAT22-935ML	Curve	2888	29	101
LCAT22-935MLx-R	Rectangle	2836	29	99
—	—	—	—	—
LCAT22-940ML	Curve	2954	29	103
LCAT22-940MLx-R	Rectangle	2897	29	101
—	—	—	—	—
LCAT22-950ML	Curve	3121	29	109
LCAT22-950MLx-R	Rectangle	3086	29	108
—	—	—	—	—
LCAT22-930HL	Curve	3123	32	98
LCAT22-930HLx-R	Rectangle	3012	32	95
—	—	—	—	—
LCAT22-935HL	Curve	3190	32	100
LCAT22-935HLx-R	Rectangle	3076	32	97
—	—	—	—	—
LCAT22-940HL	Curve	3259	32	102
LCAT22-940HLx-R	Rectangle	3142	32	99
—	—	—	—	—
LCAT22-950HL	Curve	3471	32	109
LCAT22-950HLx-R	Rectangle	3347	32	106
—	—	—	—	—
LCAT22-930VL	Curve	4289	39	110
LCAT22-930VLx-R	Rectangle	3767	40	93
—	—	—	—	—
LCAT22-935VL	Curve	4381	39	113
LCAT22-935VLx-R	Rectangle	3848	40	95
—	—	—	—	—
LCAT22-940VL	Curve	4476	39	115
LCAT22-940VLx-R	Rectangle	3930	40	97
—	—	—	—	—
LCAT22-950VL	Curve	4767	39	123
LCAT22-950VLx-R	Rectangle	4187	40	104
—	—	—	—	—

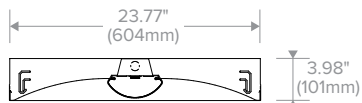
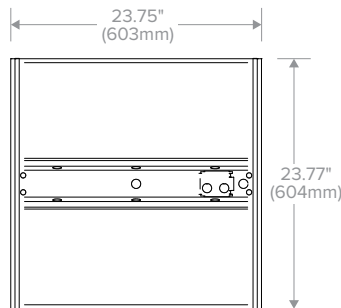
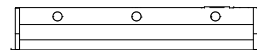
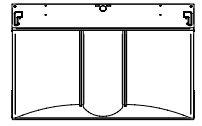
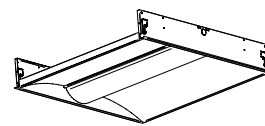
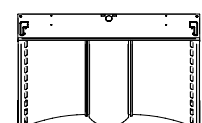
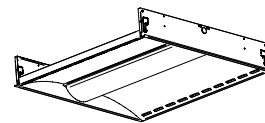
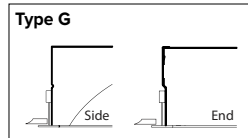
**Job Name:**
 USC Aiken Arts, Humanities, and Social Sciences  
 Building Interior Renovations - 2021 Upfit  
 Architect: Studio 2LR (Columbia)  
 Engineer: GWA, Inc. (Columbia)

**Catalog Number:**  
 LCAT22-35MLG-EDU
**Notes:****Type:****A**

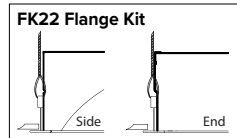
COL21-55495

**Columbia**  
 LIGHTING
**LCAT22**

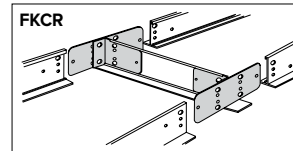
2' x 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

 DATE: \_\_\_\_\_ LOCATION: \_\_\_\_\_  
 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.

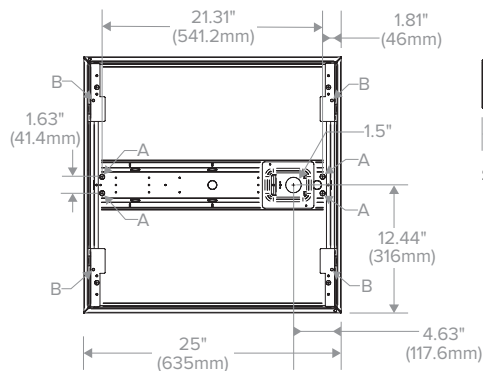
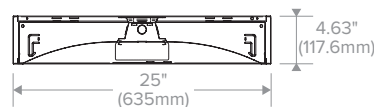


For hard ceiling applications, order FK22 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance.



For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK22 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK22 &amp; (1) FKCR)

 Row cut out dimensions using FK22s & FKCR adapters:  
 Width 24 3/4", Length [24" x (# in row)] + 3/8".  
 Example: (24" x 2) + 3/8" = 48 3/8"

**Flange kit cut out dimension for single unit only: 24 3/8" x 24 3/8"**
**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 CM48Y2SC3F-KIT 48" Cable Mount Kit for 2' 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.

**Job Name:**
 USC Aiken Arts, Humanities, and Social Sciences  
 Building Interior Renovations - 2021 Upfit  
 Architect: Studio 2LR (Columbia)  
 Engineer: GWA, Inc. (Columbia)

**Catalog Number:**  
 LCAT22-35MLG-EDU

Notes:

**Type:****A**

COL21-55495

**Columbia**  
 LIGHTING
**LCAT22**

2' x 2' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: LOCATION:

TYPE: PROJECT:

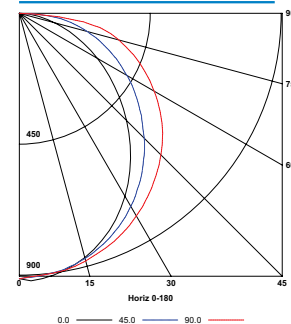
CATALOG #:

**PHOTOMETRY****LCAT22-35LWG-EU****LUMINAIRE DATA**

Test No.	16540
Description	2' x 2' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	2769
Watts	22.60
Efficacy	123
Mounting	Recessed
Spacing Criterion	0° = 1.19 90° = 1.31

**ZONAL LUMEN SUMMARY**

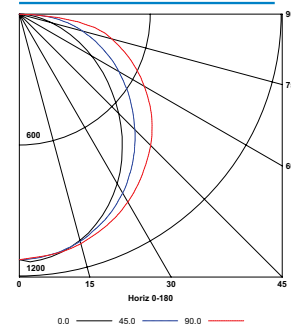
Zone	Lumens	% Luminaire
0-30	705	25.5
0-40	1154	41.7
0-60	2056	74.3
0-90	2769	100
0-180	2769	100

**POLAR GRAPH****LCAT22-35MLG-EU****LUMINAIRE DATA**

Test No.	16543
Description	2' x 2' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	3420
Watts	28.70
Efficacy	119
Mounting	Recessed
Spacing Criterion	0° = 1.19 90° = 1.31

**ZONAL LUMEN SUMMARY**

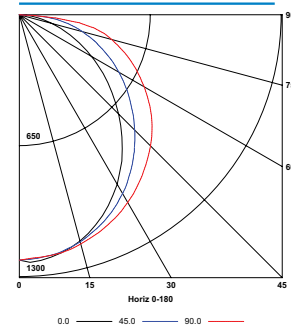
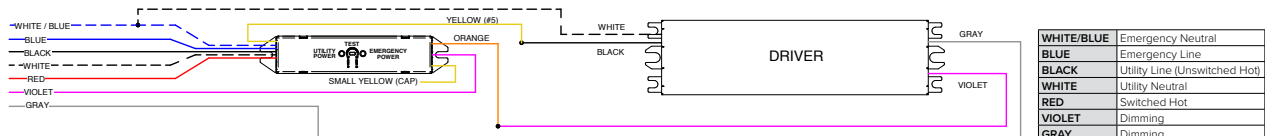
Zone	Lumens	% Luminaire
0-30	871	25.5
0-40	1424	41.7
0-60	2539	74.2
0-90	3420	100
0-180	3420	100

**POLAR GRAPH****LCAT22-35HLG-EU****LUMINAIRE DATA**

Test No.	16546
Description	2' x 2' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	3707
Watts	31.80
Efficacy	117
Mounting	Recessed
Spacing Criterion	0° = 1.19 90° = 1.31

**ZONAL LUMEN SUMMARY**

Zone	Lumens	% Luminaire
0-30	943	25.4
0-40	1543	41.6
0-60	2751	74.2
0-90	3707	100
0-180	3707	100

**POLAR GRAPH****ADDITIONAL INFORMATION****DTS WIRING DIAGRAM (0-10V DIMMING DRIVER SHOWN)**

All product and company names, logos and product identifiers are trademarks ® or registered trademarks ® of Hubbell Lighting, Inc. or their respective owners. Use of them does not necessarily imply any affiliation with or endorsement by such respective owners.

**Columbia**  
LIGHTING

**MPS**  
MULTIPURPOSE LINEAR

### FEATURES

- Uninterrupted ribbon of light; row mounting optional
- Long life 60,000 hour LEDs at L80 for reduced maintenance
- Superior color consistency within a 3-step MacAdam ellipse and greater than 80 CRI
- Available in 2', 4' or 8' lengths
- Optional integral emergency battery pack
- Three lens options as well as less lens (NL)
- Modular replaceable LED boards and driver accessible for future maintenance or upgrades
- Surface mount, wall mount or suspended



### CONTROL TECHNOLOGY



### SPECIFICATIONS

#### CONSTRUCTION

- Housing, wireway, and ends are formed from code-gauge steel
- Housing components act as heat sink for LED heat dissipation
- White painted parts are treated with a five stage phosphate bonding process and finished with high reflectance baked enamel

#### OPTICS

- Available with or without frosted acrylic lens

#### INSTALLATION

- Knockouts are provided for electrical access and mounting

#### ELECTRICAL

- Long-life LEDs are rated for 60,000 hours at L80 lumen maintenance
- Driver options include fixed output for on/off function, step dimming (high/low/ off), or continuous 0–10V dimming
- Superior drivers and long-life LEDs provide quality illumination for prolonged service life
- Drivers < 10% THD at 120V, power factor > 0.95

#### 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

#### TECHNOLOGY

- SpectraSAFE™ is a scalable, cloud-enabled and lighting-based wireless video security solution for interior commercial and industrial applications

#### CERTIFICATIONS

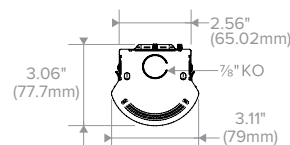
- IC label is standard for recessed products
- All luminaires are built to UL 1598 and 2108 standards, and bear appropriate cCSAus labels
- Damp Location label standard
- CSA certified to UL 924 standards with battery pack or DTS (Dimming Bypass Module) options

### RELATED PRODUCTS

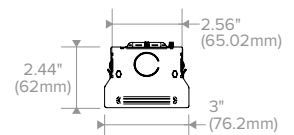
- [Revalume™ Linear Wrap](#)
- [Reverie™ Decorative Low Bay](#)



#### End View—Curve Lens



#### End View—Flat Lens



#### CERTIFICATIONS (CONTINUED)

- Adheres to LM79, LM80, and TM21 industry standards
- The DTS, Dimming Bypass Module, is for emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. See page 10 for wiring diagram. [Link to Dimming Bypass Module Specification sheet](#)
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 06/01/2020. [See Buy American Solutions](#)

#### WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

KEY DATA	
Lumen Range	1377–16,833
Wattage Range	13.5–133.8
Efficacy Range (LPW)	111–142
Reported Life (Hours)	L80–60,000

**Columbia**  
LIGHTING

**MPS**  
MULTIPURPOSE LINEAR

DATE: \_\_\_\_\_ LOCATION: \_\_\_\_\_  
TYPE: \_\_\_\_\_ PROJECT: \_\_\_\_\_  
CATALOG #: \_\_\_\_\_

## ORDERING GUIDE

Example: MPS4-40ML-CW-EDU

CATALOG # \_\_\_\_\_

MPS								
Model	Size <sup>1</sup>	CRI	Color Temp	Nominal Lumens <sup>4</sup>		Lens	Distribution <sup>5</sup>	
MPS	2' 2'	Blank >80	30 3000K	XW 4' (2700), 8' (5400)	LWHE 2' (2600), 4' (4100), 8' (8200)	C Curve, Frosted Acrylic	N Narrow Distribution <sup>6</sup>	
MultiPurpose Linear	4' 4'	9 90 <sup>2</sup>	35 3500K	XWHE 4' (2500), 8' (5000)	ML 2' (3600), 4' (4800), 8' (9500)	F Flat, Frosted Acrylic	W Wide Distribution	
	8' 8'		40 4000K	VW 2' (1700), 4' (3400), 8' (6900)	MLHE 4' (4700), 8' (9400)	NL Less Lens		
			50 5000K	VWHE 4' (3300), 8' (6600)	HL 2' (3800), 4' (6000), 8' (12,000)	CP Curve, Frosted Polycarbonate		
			2750T 2700K-5000K SpectraSync™ Tunable White <sup>3</sup>	MW 2' (2300), 4' (3800), 8' (7700)	HLHE 4' (5700), 8' (11,500)			
			2765T 2700K-6500K SpectraSync™ Tunable White <sup>3</sup>	MWHE 2' (2100), 4' (3700), 8' (7400)	VL 4' (7100), 8' (14,200)			
				LW 2' (2500), 4' (4200), 8' (8400)	XL 4' (8400), 8' (17,000)			

Driver	Voltage	Options	Control Options <sup>15,16</sup>
E Fixed Output	U 120V-277V	ELL14 Emergency Battery Pack, 10W <sup>9,10,11</sup>	<b>NX Standalone</b>
ED 0-10V Dimming	347 347V (E, ED, ED1 only)	ELL14H2 Emergency Battery Pack, 2-Hour Run Time <sup>9,10,11</sup>	NXS NX, PIR BT Occupancy/Daylight Sensor, Slide Mount <sup>17,19</sup>
ED1 0-10V 1% Dimming		GLR Fast Blow Fuse	<b>NX Networked - Wired</b>
EDD 0-10V Dim-to-Dark		GTD Generator Transfer Device <sup>12</sup>	NXE NX, Dual SmartPORTs <sup>17,18,19</sup>
ESD Step Dimming		DTS Dimming Bypass Module <sup>13</sup>	NXES NX, PIR BT Occupancy/Daylight Sensor, Slide Mount, Dual SmartPORTs <sup>17,18,19</sup>
LUTH Hi-lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology <sup>7</sup>		MPSCE Injection Molded ABS Material Curve Endcap <sup>15</sup>	<b>NX Networked - Wireless</b>
LUT5 5-Series EcoSystem LED driver <sup>7</sup>		MPSCE-MB Injection Molded ABS Material Curve Endcap, Matte Black	NXSW NX Wireless, PIR BT Occupancy/Daylight Sensor <sup>17,19</sup>
DALIP DALI Power Bus <sup>8</sup>		MPSFE Injection Molded ABS Material Flat Endcap <sup>15</sup>	NXWE NX Wireless Enabled <sup>17,19</sup>
		MPSFE-MB Injection Molded ABS Material Flat Endcap, Matte Black	<b>Third-Party Control Options</b>
		MB Matte Black	ODPG Occupancy and Daylight Sensors w/ Grouping, Philips SNS200 <sup>20,22</sup>
		ZT ZET Metallic Silver	LVR Lutron Vive Integral Fixture Control DFCSJ-OEM-RF (RF only) <sup>20,21,22</sup>
		PAF Painted After Fabrication	LVS Lutron Vive Integral Fixture Control DFCSJ-OEM-OCC (RF with daylight and occupancy sensing) <sup>20,21,22</sup>
		SAF SpectraSAFE™ Integrated Surveillance Lighting System <sup>14</sup>	

Accessories	
<input type="checkbox"/> S18 18" Stem, Canopy	<input type="checkbox"/> MPSCRK-C Continuous Row Kit, Curve
<input type="checkbox"/> SS18 18" Swivel Stem—45° Swivel	<input type="checkbox"/> MPSCRK-F Continuous Row Kit, Flat
<input type="checkbox"/> CM24SCF3-KIT 24" Adjustable Cable Mounting Kit, 3-wire feed <sup>23</sup>	<input type="checkbox"/> MPSWG2 2' Wire Guard
<input type="checkbox"/> CM48SCF3-KIT 48" Adjustable Cable Mounting Kit, 3-wire feed <sup>23</sup>	<input type="checkbox"/> MPSWG4 4' Wire Guard, two Required for 8' Fixture
<input type="checkbox"/> CM24NF-KIT Single Point Non-Feed Cable Mount with Canopy, Single - 24" <sup>23</sup>	<input type="checkbox"/> MPSCE Injection Molded ABS Material Curve Endcap
<input type="checkbox"/> CM48NF-KIT Single Point Non-Feed Cable Mount with Canopy, Single - 48" <sup>23</sup>	<input type="checkbox"/> MPSCE-MB Injection Molded ABS Material Curve Endcap, Matte Black
<input type="checkbox"/> CSHC Chain Hanger Assembly	<input type="checkbox"/> MPSFE Injection Molded ABS Material Flat Endcap
<input type="checkbox"/> MPSZT Zip Tee Hanger - 1½" Spacer on T-Bar Ceiling	<input type="checkbox"/> MPSFE-MB Injection Molded ABS Material Flat Endcap, Matte Black
<input type="checkbox"/> MPSTH Slide Tong Hanger	

Notes:

- For continuous row mounting, see [Continuous Row Mount Example Guide](#) on page 3
- Not available with HE lumen packages
- See [SpectraSync and NX Availability Table](#) on page 6
- High efficacy versions designated with "HE"
- Applicable to lens only
- Only available with Curve, Frosted Acrylic lens
- Not available in VL, XL, HE packages
- DALIP only available when LVS, LVR or ODPG control options are selected
- Delivered Emergency Lumens = ELL14 = 1210 lms
- Not available in 2ft size or with thru wire on XL 4ft and 8ft
- Emergency battery pack max ambient temperature: 25°C
- Only available with fixed output driver
- For emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. Not available with ESD driver option. Universal voltage only. DTS with 2" cannot be combined with Controls or SpectraSync options. See page 10 for wiring diagram
- SpectraSync+NX+SAF can not be configured. Only available with NXE or NXWE. Not available in 347V
- Standard PAF when this option is chosen
- Control Options include Injection Molded ABS End Cap
- Only available with 0-10V dimming drivers (ED, ED1 & EDD)
- Not available with surface mounting
- Not available in 2ft when SpectraSync and SpectraSAFE are chosen
- Third-Party Control Options:**
  - LVS, LVR and ODPG only available with DALIP driver option
  - VIVE is a trademark of Lutron Electronics Co., Inc
  - Not available with SpectraSync (2750T or 2765T)

**Accessory Notes:**  
23 See [Columbia Mounting Accessories page](#) for additional options



**MPS**  
MULTIPURPOSE LINEAR

DATE: \_\_\_\_\_ LOCATION: \_\_\_\_\_  
 TYPE: \_\_\_\_\_ PROJECT: \_\_\_\_\_  
 CATALOG #: \_\_\_\_\_

### ORDERING GUIDE (CONTINUED)

CONTINUOUS ROW MOUNT EXAMPLE GUIDE					
Continuous Row Length	MPS4	MPS8	MPSCRK*	CM**SCF*-KIT	CM**NF-KIT
12' — Option 1	1	1	1	1	1
12' — Option 2	3	0	2	1	1
16' — Option 1	0	2	1	1	1
16' — Option 2	2	1	2	1	2
32' — Option 1	0	4	3	2	1
32' — Option 2	2	3	4	2	1

[Link to Columbia Mounting Accessories page](#)

### PRODUCT EXCEPTIONS & DETAILS

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

DRIVER AVAILABILITY TABLE — 2'							
	VW	MW	MWHE	LW	LWHE	ML	HL
E	x	x	x	x	x	x	x
ED	x	x	x	x	x	x	x
ED1	x	x	x	x	x	x	x
EDD	x	x		x		x	x
ESD	x	x		x		x	x
LUT5	x	x		x		x	x
LUTH	x	x		x		x	x
347	x	x		x		x	x
DALIP	x	x	x	x	x	x	x

DRIVER AVAILABILITY TABLE — 4' & 8'														
	XW	XWHE	VW	VWHE	MW	MWHE	LW	LWHE	ML	MLHE	HL	HLHE	VL	XL
E	x	x	x	x	x	x	x	x	x	x	x	x	x	x
ED	x	x	x	x	x	x	x	x	x	x	x	x	x	x
ED1	x	x	x	x	x	x	x	x	x	x	x	x	x	x
EDD	x		x		x		x		x		x		x	x
ESD	x		x		x		x		x		x		x	x
347	x		x		x		x		x		x		x	x
LUT5	x		x		x		x		x		x			
LUTH	x		x		x		x		x		x			
DALIP	x	x	x	x	x	x	x	x	x	x	x	x	x	x

TEMPERATURE TABLE (C°) — 4' & 8'											
		80 CRI									
		E/ED/ED1		ESDU		ED347		EDD		LUT	
Size	Lumen Package	Ceiling/ Surface Mount	Pendant/ TH Mount	Ceiling/ Surface Mount	Pendant/ TH Mount	Ceiling/ Surface Mount	Pendant/ TH Mount	Ceiling/ Surface Mount	Pendant/ TH Mount	Ceiling/ Surface Mount	Pendant/ TH Mount
2'	VW	35	40	35	40	35	40	35	40	35	40
	MW	35	40	35	40	35	40	35	40	35	40
	LW	35	40	35	40	35	40	35	40	35	40
	ML	35	40	35	40	35	40	35	40	35	40
	HL	30	35	30	35	30	35	30	35	30	35
4'	XW	35	45	35	45	35	45	30	35	30	35
	VW	35	45	35	45	35	45	30	35	30	35
	MW	35	45	35	45	35	45	30	35	30	35
	LW	35	45	35	45	35	45	30	35	30	35
	ML	35	45	35	45	35	45	30	35	30	35
	HL	35	40	35	40	35	40	25	30	30	35
8'	VL	30	30	30	30	30	30	30	30	—	—
	XL*	25	25	25	25	25	25	25	25	—	—
	XW	35	45	35	45	35	45	30	35	30	35
	VW	35	45	35	45	35	45	30	35	30	35
	MW	35	45	35	45	35	45	30	35	30	35
	LW	35	45	35	45	35	45	30	35	30	35
8'	ML	35	45	35	45	35	45	30	35	30	35
	VL	30	30	30	30	30	30	30	30	—	—
	XL*	25	25	25	25	25	25	25	25	—	—

\*XL not available with thru wire



## Columbia LIGHTING

### MPS

MULTIPURPOSE LINEAR

#### 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
<b>NX Standalone</b>								
<a href="#">NXS</a>	<a href="#">NXSMP-SMI</a>	No	Yes	Yes	Yes	Yes	Yes	Yes
<b>NX Networked – Wired</b>								
<a href="#">NXE</a>	N/A	Yes	Yes	No	No	Yes	Yes	Requires <a href="#">NXBTC/R</a> <sup>1</sup>
<a href="#">NXES</a>	<a href="#">NXSMP-SMI</a>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>NX Networked – Wireless</b>								
<a href="#">NXSW</a>	<a href="#">NXSMP-SMI</a>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<a href="#">NXWE</a>	N/A	Yes	Yes	No	No	Yes	Yes	No <sup>2</sup>

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

<sup>2</sup> 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<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 QPL for Networked Lighting Controls. Please refer to the DLC website for specific product qualifications at [www.designlights.org](http://www.designlights.org)

<sup>1</sup> Wireless switches only compatible with ODPG Philips EasySense

<sup>2</sup> See [link to Philips commissioning](#)

<sup>3</sup> Requires android device or IR dongle. See links for [phone compatibility](#) and [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



## SPECTRASAFE

### SpectraSAFE™ Integrated Surveillance Lighting System

#### Technical Features

- High resolution 1080p full HD camera
- 2.8mm lens / 140° field of view
- IR emitter for low / no-light conditions
- [Multiple wiring configurations available](#)
- Supports 2-way audio communication
- Supports 2.4GHz WPA-PSK/WPA2-PSK Wi-Fi
- Data encrypted using AES 256 standard
- Low power consumption (2-5W)
- Transmissions secured using Open TLS / SSL

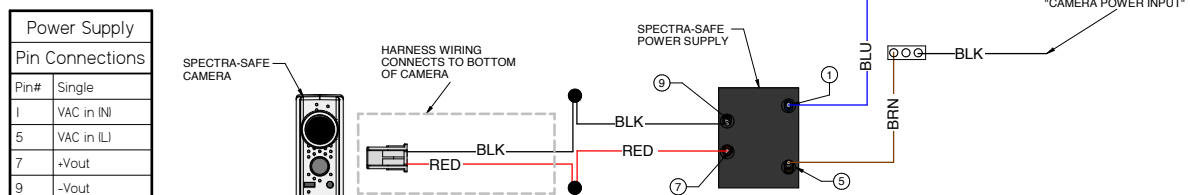


Note: Camera and end cap add 2.2" to the overall length.

#### Software & Support

- Free Android, iOS and web-based app
- Versatile and supports multiple applications
- Multi-tenant web-based camera application
- Phone and in-app chat technical support
- Scalable cloud services and video storage
- Supported by a 5-year warranty

#### SPECTRASAFE WIRING DIAGRAM





**Columbia**  
LIGHTING

**MPS**

MULTIPURPOSE LINEAR

DATE: \_\_\_\_\_ LOCATION: \_\_\_\_\_  
 TYPE: \_\_\_\_\_ PROJECT: \_\_\_\_\_  
 CATALOG #: \_\_\_\_\_

### CONTROLS (CONTINUED)

#### SpectraSync™ Color Tuning Technology:

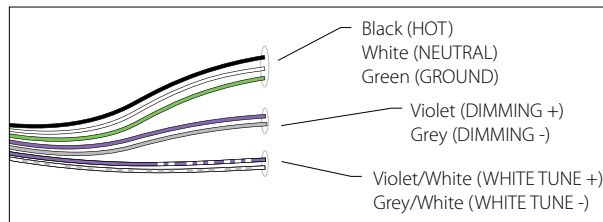
Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync™ Color Tuning Technologies.



SPECTRASYNCH 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.

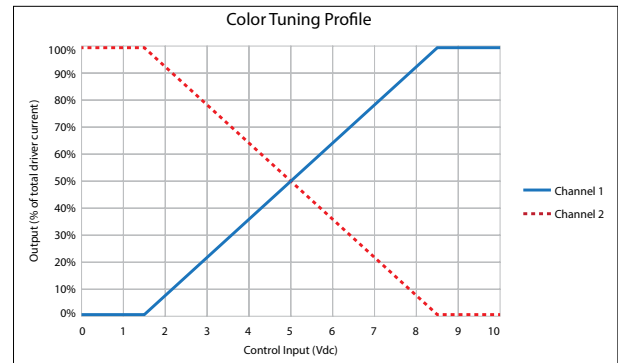


SpectraSync Tunable White luminaires are provided with two 0–10V circuits. The violet and grey circuit is for wiring to any qualified 0–10V controller for dimming. The violet/white and grey/white circuit is for wiring to any qualified 0–10V controller for Tunable White CCT control.

#### 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: 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 Hubbell Control Solutions NX SpectraSync technical sheet.

### SPECTRASYNCH™ AND NX AVAILABILITY TABLE



		Only With 80 CRI			Only With 80 CRI		
		No Battery Pack			With Battery Pack		
Size	Lumen package	CTC	NX	CTC+NX	CTC	NX	CTC+NX
2ft	VW	Y	Y	N	—	—	—
	MW	Y	Y	N	—	—	—
	LW	Y	Y	N	—	—	—
	ML	N	Y	N	—	—	—
	HL	N	Y	N	—	—	—
4ft	XW	Y	Y	Y	Y	Y	Y
	VW	Y	Y	Y	Y	Y	Y
	MW	Y	Y	Y	Y	Y	Y
	LW	Y	Y	Y	Y	Y	Y
	ML	Y	Y	Y	Y	Y	Y
	HL	Y	Y	Y	Y	Y	Y
	VL	N	Y	N	N	Y	N
8ft	XL	N	Y	N	N	Y	N
	XW	Y	Y	Y	Y	Y	Y
	VW	Y	Y	Y	Y	Y	Y
	MW	N	Y	N	N	Y	N
	LW	N	Y	N	N	Y	N
	ML	N	Y	N	N	Y	N
	HL	N	Y	N	N	Y	N
	VL	N	Y	N	N	Y	N
	XL	N	Y	N	N	Y	N



**MPS**  
MULTIPURPOSE LINEAR

DATE: \_\_\_\_\_ LOCATION: \_\_\_\_\_  
 TYPE: \_\_\_\_\_ PROJECT: \_\_\_\_\_  
 CATALOG #: \_\_\_\_\_

**DELIVERED LUMENS**

STANDARD EFFICACY PERFORMANCE TABLE						
FIXTURE	COLOR	LENS	DISTRIBUTION	LUMENS	INPUT WATTS	LPW
MPS2-VW	3500K	Curve	Wide	1659	13.8	120
			Narrow	1597	13.5	118
		Flat	Wide	1584	13.5	117
	4000K	No Lens		1724	13.8	125
		Curve	Wide	1681	13.8	122
			Narrow	1618	13.5	120
MPS2-MW	3500K	Flat	Wide	1604	13.5	119
		No Lens		1746	13.8	127
		Curve	Wide	2201	18.2	121
	4000K		Narrow	2092	17.8	118
		Flat	Wide	2076	17.8	117
		No Lens		2287	18.2	126
MPS2-LW	3500K	Curve	Wide	2229	18.2	122
			Narrow	2119	17.8	119
		Flat	Wide	2102	17.8	118
	4000K	No Lens		2316	18.2	127
		Curve	Wide	2444	20.4	120
			Narrow	2328	19.9	117
MPS2-ML	3500K	Flat	Wide	2309	19.9	116
		No Lens		2540	20.4	124
	4000K	Curve	Wide	2475	20.4	121
			Narrow	2358	19.9	118
		Flat	Wide	2338	19.9	118
		No Lens		2572	20.4	126
MPS2-HL	3500K	Curve	Wide	3452	29	119
			Narrow	3447	28.8	120
		Flat	Wide	3414	28.8	119
	4000K	No Lens		3587	29	124
		Curve	Wide	3496	29	121
			Narrow	3491	28.8	121
MPS2-XW	3500K	Flat	Wide	3458	28.8	120
		No Lens		3632	29	125
	4000K	Curve	Wide	3655	31.7	115
			Narrow	3707	31.5	118
		Flat	Wide	3678	31.5	117
		No Lens		3797	31.7	120
MPS4-VW	3500K	Curve	Wide	3701	31.7	117
			Narrow	3754	31.5	119
		Flat	Wide	3725	31.5	118
	4000K	No Lens		3846	31.7	121
		Curve	Wide	2574	20	129
			Narrow	2574	20	129
MPS4-MW	3500K	Flat	Wide	2463	20	123
		No Lens		2674	20	134
	4000K	Curve	Wide	2606	20	130
			Narrow	2574	20	129
		Flat	Wide	2494	20	125
		No Lens		2708	20	135
MPS4-LW	3500K	Curve	Wide	3279	26.7	123
			Narrow	3152	26.5	119
		Flat	Wide	3134	26.5	118
	4000K	No Lens		3450	26.7	129
		Curve	Wide	3321	26.7	124
			Narrow	3192	26.5	120
MPS4-XW	3500K	Flat	Wide	3174	26.5	120
		No Lens		3564	26.7	133
	4000K	Curve	Wide	3656	30.4	120
			Narrow	3511	30.1	117
		Flat	Wide	3491	30.1	116
		No Lens		3847	30.4	127
MPS4-ML	3500K	Curve	Wide	3702	30.4	122
			Narrow	3556	30.1	118
		Flat	Wide	3535	30.1	117
	4000K	No Lens		3974	30.4	131
		Curve	Wide	4043	34.4	118
			Narrow	4094	32.5	126
MPS4-HL	3500K	Flat	Wide	4072	32.5	125
		No Lens		4255	34.4	124
	4000K	Curve	Wide	4095	34.4	119
			Narrow	4147	32.5	128
		Flat	Wide	4124	32.5	127
		No Lens		4395	34.4	128



**MPS**  
MULTIPURPOSE LINEAR

DATE: \_\_\_\_\_ LOCATION: \_\_\_\_\_  
 TYPE: \_\_\_\_\_ PROJECT: \_\_\_\_\_  
 CATALOG #: \_\_\_\_\_

**DELIVERED LUMENS (CONTINUED)**

STANDARD EFFICACY PERFORMANCE TABLE						
FIXTURE	COLOR	LENS	DISTRIBUTION	LUMENS	INPUT WATTS	LPW
MPS4-ML	3500K	Curve	Wide	4556	40.1	114
			Narrow	4649	37.7	123
		Flat	Wide	4625	37.8	122
	4000K	No Lens		4794	40.1	120
		Curve	Wide	4614	40.1	115
			Narrow	4709	37.7	125
MPS4-HL	3500K	Flat	Wide	4684	37.8	124
		No Lens		4952	40.1	123
		Curve	Wide	5760	49.5	116
	4000K		Narrow	5781	49.4	117
		Flat	Wide	5741	49.4	116
		No Lens		6061	49.5	122
MPS4-VL	3500K	Curve	Wide	5833	49.5	118
			Narrow	5855	49.4	119
		Flat	Wide	5814	49.4	118
	4000K	No Lens		6261	49.5	126
		Curve	Wide	6769	54.1	125
			Narrow	6675	54.1	123
MPS4-XL	3500K	Flat	Wide	6637	54.1	123
		No Lens		7122	54.1	132
	4000K	Curve	Wide	6855	54.1	127
			Narrow	6760	54.1	125
		Flat	Wide	6722	54.1	124
		No Lens		7357	54.1	136
MPS8-XW	3500K	Curve	Wide	8045	66.5	121
			Narrow	7878	66.8	118
		Flat	Wide	7813	66.9	117
	4000K	No Lens		8466	66.5	127
		Curve	Wide	8148	66.5	123
			Narrow	7979	66.8	119
MPS8-VW	3500K	Flat	Wide	7913	66.9	118
		No Lens		8745	66.5	132
	4000K	Curve	Wide	5147	40	129
			Narrow	4939	39.8	124
		Flat	Wide	4925	40	123
		No Lens		5348	40	134
MPS8-MW	3500K	Curve	Wide	5213	40	130
			Narrow	5002	39.8	126
		Flat	Wide	4988	40	125
	4000K	No Lens		5416	40	135
		Curve	Wide	6558	53.4	123
			Narrow	6303	53	119
MPS8-LW	3500K	Flat	Wide	6269	53	118
		No Lens		6814	53.4	128
	4000K	Curve	Wide	6642	53.4	124
			Narrow	6384	53	120
		Flat	Wide	6349	53	120
		No Lens		6901	53.4	129
MPS8-ML	3500K	Curve	Wide	7311	60.8	120
			Narrow	7022	60.2	117
		Flat	Wide	6981	60.2	116
	4000K	No Lens		7596	60.8	125
		Curve	Wide	7405	60.8	122
			Narrow	7112	60.2	118
MPS8-SL	3500K	Flat	Wide	7071	60.2	117
		No Lens		7693	60.8	127
	4000K	Curve	Wide	8087	68.8	118
			Narrow	8189	65	126
		Flat	Wide	8144	65	125
		No Lens		8402	68.8	122
MPS8-LL	3500K	Curve	Wide	8190	68.8	119
			Narrow	8293	65	128
		Flat	Wide	8248	65	127
	4000K	No Lens		8510	68.8	124
		Curve	Wide	9111	80.2	114
			Narrow	9298	75.4	123
MPS8-LL	3500K	Flat	Wide	9250	75.6	122
		No Lens		9466	80.2	118
	4000K	Curve	Wide	9227	80.2	115
			Narrow	9417	75.4	125
		Flat	Wide	9368	75.6	124
		No Lens		9587	80.2	120

**Job Name:**
 USC Aiken Arts, Humanities, and Social Sciences  
 Building Interior Renovations - 2021 Upfit  
 Architect: Studio 2LR (Columbia)  
 Engineer: GWA, Inc. (Columbia)
**Catalog Number:**

MPS4-35ML-CW-EDU CSHC

**Notes:****Type:****C**

COL21-55495

**Columbia**  
 LIGHTING
**MPS**

MULTIPURPOSE LINEAR

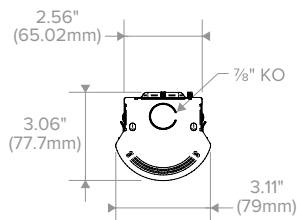
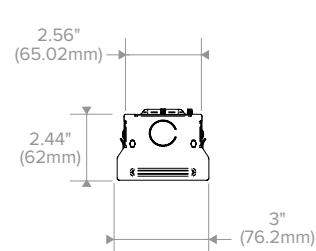
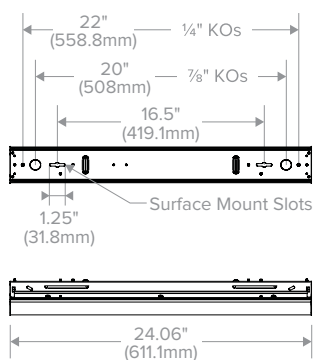
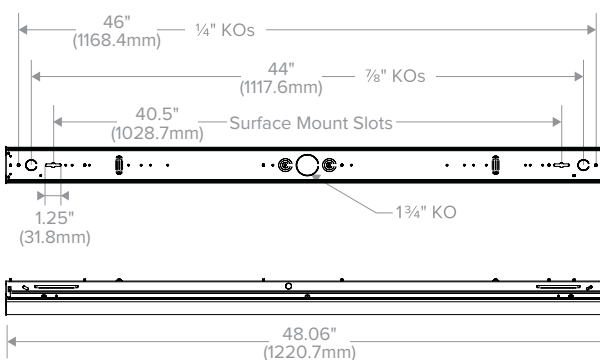
DATE: \_\_\_\_\_ LOCATION: \_\_\_\_\_

TYPE: \_\_\_\_\_ PROJECT: \_\_\_\_\_

CATALOG #: \_\_\_\_\_

**DELIVERED LUMENS (CONTINUED)**

STANDARD EFFICACY PERFORMANCE TABLE						
FIXTURE	COLOR	LENS	DISTRIBUTION	LUMENS	INPUT WATTS	LPW
MPS8-HL	3500K	Curve	Wide	11520	99	116
		Flat	Narrow	11562	98.8	117
		No Lens	Wide	11481	98.8	116
	4000K	Curve	Wide	11969	99	121
		Flat	Narrow	11667	99	118
		No Lens	Wide	11710	98.8	119
MPS8-VL	3500K	Curve	Wide	11628	98.8	118
		Flat	Narrow	12122	99	122
		No Lens	Wide	13537	108.2	125
	4000K	Curve	Narrow	13350	108.2	123
		Flat	Wide	13275	108.2	123
		No Lens	Wide	14065	108.2	130
MPS8-XL	3500K	Curve	Wide	13710	108.2	127
		Flat	Narrow	13521	108.2	125
		No Lens	Wide	13444	108.2	124
	4000K	Curve	Narrow	14245	108.2	132
		Flat	Wide	16091	133	121
		No Lens	Wide	15757	133.6	118
MPS8-XL	3500K	Curve	Narrow	15626	133.8	117
		Flat	Wide	16718	133	126
		No Lens	Wide	16296	133	123
	4000K	Curve	Narrow	15958	133.6	119
		Flat	Wide	15826	133.8	118
		No Lens	Wide	16932	133	127

**DIMENSIONS****MPS END View - Curve Lens****MPS END View - FLAT Lens****MPS 2' Dimensions****MPS 4' Dimensions**

**Job Name:**
 USC Aiken Arts, Humanities, and Social Sciences  
 Building Interior Renovations - 2021 Upfit  
 Architect: Studio 2LR (Columbia)  
 Engineer: GWA, Inc. (Columbia)
**Catalog Number:**

MPS4-35ML-CW-EDU CSHC

**Notes:****Type:****C**

COL21-55495

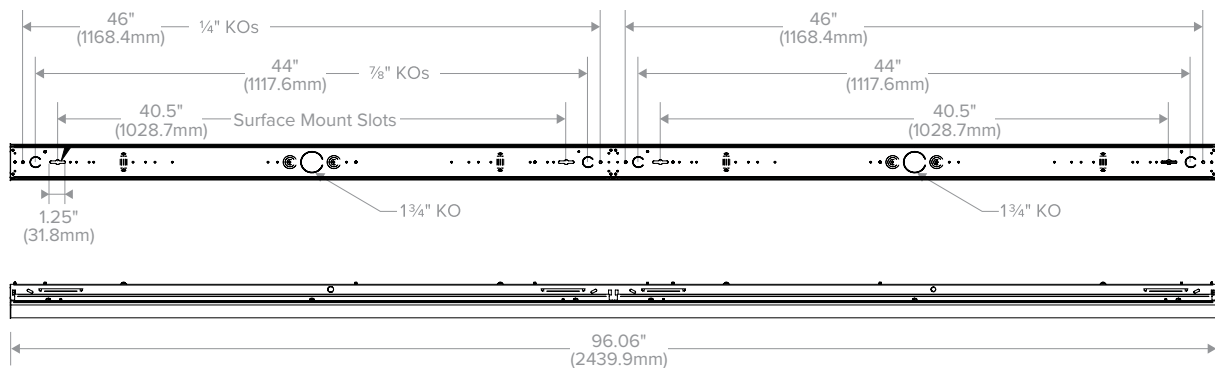
**Columbia**  
 LIGHTING
**MPS**

MULTIPURPOSE LINEAR

DATE: \_\_\_\_\_ LOCATION: \_\_\_\_\_

TYPE: \_\_\_\_\_ PROJECT: \_\_\_\_\_

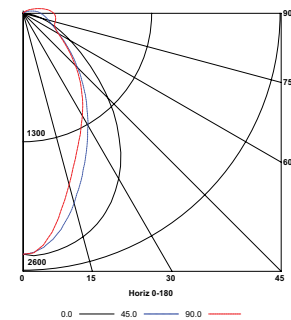
CATALOG #:

**DIMENSIONS (CONTINUED)****MPS 8' Dimensions****PHOTOMETRY****MPS4-40ML-CN-EDU****LUMINAIRE DATA**

Test No.	19735
Description	MultiPurpose Linear, Narrow, LED 4ft, Frosted Linear Prismed Lens
Delivered Lumens	4742
Watts	37.70
Efficacy	126
Mounting	Surface
Spacing Criterion	0° = 1.18 90° = 1.77

**ZONAL LUMEN SUMMARY**

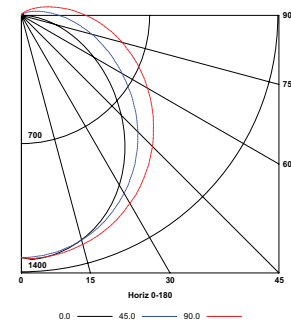
Zone	Lumens	% Luminaire
0-30	1542	32.5
0-40	2326	49.1
0-60	3518	74.2
0-90	4385	92.5
0-180	4742	100

**POLAR GRAPH****MPS4-40ML-CW-EDU****LUMINAIRE DATA**

Test No.	19600
Description	MultiPurpose Linear, Wide, LED 4ft, Frosted Linear Prismed Lens
Delivered Lumens	4615
Watts	40.10
Efficacy	115
Mounting	Surface
Spacing Criterion	0° = 1.20 90° = 1.33

**ZONAL LUMEN SUMMARY**

Zone	Lumens	% Luminaire
0-30	1029	22.3
0-40	1688	36.6
0-60	3019	65.4
0-90	4248	92
0-180	4615	100

**POLAR GRAPH**

**Columbia**  
LIGHTING

**MPS**  
MULTIPURPOSE LINEAR

DATE: \_\_\_\_\_ LOCATION: \_\_\_\_\_  
 TYPE: \_\_\_\_\_ PROJECT: \_\_\_\_\_  
 CATALOG #: \_\_\_\_\_

### PHOTOMETRY (CONTINUED)

#### MPS4-40ML-FW-EDU

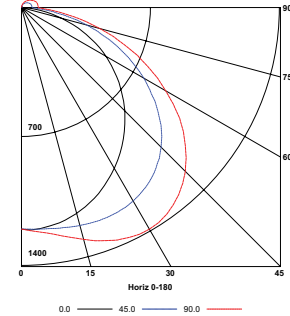
##### LUMINAIRE DATA

Test No.	19652
Description	MultiPurpose Linear, Wide, LED 4ft, Frosted Linear Prismatic Lens
Delivered Lumens	4685
Watts	37.80
Efficacy	124
Mounting	Surface
Spacing Criterion	0° = 1.24 90° = 1.67

##### ZONAL LUMEN SUMMARY

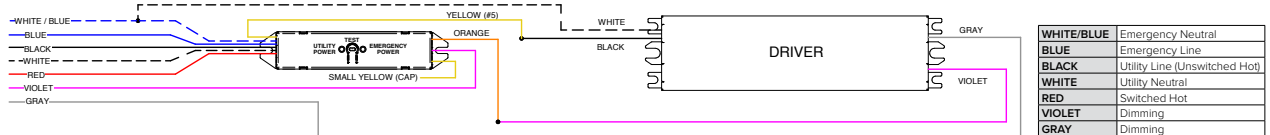
Zone	Lumens	% Luminaire
0-30	1026	21.9
0-40	1756	37.5
0-60	3324	70.9
0-90	4435	94.7
0-180	4685	100

##### POLAR GRAPH



### ADDITIONAL INFORMATION

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



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# ALTERNATIVE CONSTRUCTION & ENVIRONMENTAL SOLUTIONS, INC.

2247 Wrightsboro Road  
Augusta, GA 30904

Mailing Address: PO Box 3229, Augusta, GA 30914-3229  
Telephone: 706-262-2000 • Facsimile: 706-262-3299 • [www.aces-usa.com](http://www.aces-usa.com)

February 18, 2020

Client: University of South Carolina Aiken  
471 University Parkway  
Aiken, SC 29801  
ATTN: Mr. Brian Enter

Project: Limited, Pre-Renovation Asbestos Inspection  
Common Area Finishes Project  
Humanities and Social Sciences Building  
Campus of University of South Carolina Aiken  
471 University Parkway  
Aiken, SC  
Report Number: 1136-108-006

On February 3, 2020, a representative of Alternative Construction & Environmental Solutions, Inc., performed a limited, pre-renovation asbestos inspection of the above referenced structure for the presence of asbestos-containing materials (ACM). An individual who holds accreditation as an AHERA Inspector and who holds a South Carolina DHEC Building Inspector Certificate conducted this inspection.

Attached is a report of findings from the inspection. If you have any questions or need additional information, please feel free to give us a call.

**ALTERNATIVE CONSTRUCTION & ENVIRONMENTAL SOLUTIONS, INC.**

Cliff Hampton  
Manager  
Industrial Hygiene, Safety & Health Dept.

 COPY

Steve Connor  
Project Manager

## **TABLE OF CONTENTS**

- 1. Executive Summary**
- 2. Objective**
- 3. Site Description**
- 4. Inspection Protocol**
- 5. Results**
- 6. Conclusion and Recommendations**
- 7. Laboratory Analysis Sheets and Chains of Custody**
- 8. Photographs**



## **1.0 EXECUTIVE SUMMARY**

A representative of Alternative Construction & Environmental Solutions, Inc., performed a limited, pre-renovation asbestos inspection on a property located on the campus of the University of South Carolina Aiken on February 3, 2020. The purpose of the inspection was to determine if asbestos-containing materials would be encountered during renovation of the structure. Random samples of the suspect materials were collected and analyzed for asbestos content.

It is ACES' understanding that the property is scheduled for renovation. The asbestos inspection, therefore, was performed to comply with 29 CFR 1926.1101. During demolition, the identified friable ACM or non-friable ACM that might become friable during demolition must be abated prior to disturbance. A State of South Carolina licensed asbestos contractor using a licensed supervisor/foreman and properly trained workers in accordance with a project design prepared by an accredited project designer must perform asbestos abatement. In addition, an air monitoring professional should perform third-party air monitoring during abatement. It is important to note that Federal and State regulations require a 10-day notification prior to any renovation/demolition activities that may impact the condition of ACM in a building that affords public access or occupancy. SC DHEC also allows for Small Removals (>25SF but < 160SF, 260 LF, or 35 CF) a 4 working day notification prior to any renovation activity that would impact the condition of the ACM. For Minor Removals (> or = 25 SF) a 2 working day notification is required prior to any renovation activity that would impact the condition of the ACM. These activities must be performed in accordance with current Federal and State of South Carolina guidelines.

## **2.0 OBJECTIVE**

The objective of ACES' inspection was to quantify and sample suspect, asbestos-containing materials in the structure prior to renovation. This report was prepared for the exclusive use of the client for specific application to the subject project. No warranties, either expressed or implied, are made or intended. The material contained herein shall not, in whole or part, be disseminated or conveyed to any other party or be used or relied upon by any other party, in whole or part, without ACES' written consent.

## **3.0 SITE DESCRIPTION**

This inspection was performed on an occupied, multi-story educational building on the campus of the University of South Carolina Aiken. At the client's request, this inspection was limited to the scope of work in an upgrade project involving the interior common area finishes. Samples collected in this inspection supplement data obtained in previous inspections of the building. Additional sampling data can be reviewed in ACES' inspection reports listed below.

- ACES' Report 1136-108-001
- ACES' Report 1136-108-002
- ACES' Report 1136-108-003
- ACES' Report 1136-103-004
- ACES' Report 1136-108-005

#### 4.0 INSPECTION PROTOCOL

Random samples of the suspect asbestos material were collected by a U.S. Environmental Protection Agency (USEPA) accredited asbestos inspector. The material was grouped into a specific homogeneous area using one of the following classifications: surfacing material, thermal system insulation, or miscellaneous materials. A surfacing material is sprayed, troweled-on, or otherwise applied to surfaces (i.e., fireproofing, ceiling texture). Thermal system insulation consists of material applied to pipes, fittings, boilers, breaching, tanks, ducts, or other structural components to prevent heat loss or gain. Miscellaneous materials consist of items such as flooring, ceiling tiles, roofing materials, and cement board. In the course of an inspection the inspector randomly collects samples that are assessed for friability, accessibility, condition, damage potential, and relation to the ventilation system.

The inspector, using a knife, chisel, or coring tool, collected bulk samples of the suspect material. Prior to sampling, when required, the suspect material was sprayed with a surfactant to reduce fiber release. Samples collected were assigned a unique sample ID number and placed in a sealed container. Samples were sent to McCall & Spero Environmental, Inc., a NVLAP accredited laboratory (101895-0) and analyzed for asbestos content by Polarized Light Microscopy (PLM) coupled with dispersion staining techniques, in accordance with USEPA Method 40 CFR, Chapter 1, Part 763, Subpart F, Appendix A. The percentage of asbestos, where applicable, was determined by microscopic visual estimation.

Regulatory agencies (USEPA and OSHA) have defined ACM as a material containing greater than one percent asbestos. In order to define a material as non-ACM, a minimum number of samples must be collected and analyzed dependent upon the type and quantity of the homogeneous material. Additionally, samples determined to have an asbestos content of less than 10 per cent through PLM visual estimation (including those materials with an asbestos content of less than one percent) may either be assumed ACM or verified for asbestos content by point count analysis. A point count analysis is a statistical method for quantifying the percentage of asbestos in a material by PLM. Point counting was not within the scope of work for this project.

Asbestos materials are assessed as friable or non-friable. Friable materials, when dry, can be crumbled, pulverized or reduced to powder by hand pressure and have a higher potential for a fiber release than non-friable materials. Non-friable materials are materials that are firmly bound by plastic, cement, etc., and cannot be reduced to powder by hand pressure. The USEPA recommends that floor tile materials with no detectable asbestos through PLM analysis be verified through Transmission Electron Microscopy (TEM) analysis. Analysis utilizing TEM techniques was not performed at this time.

SC DHEC Regulation Section V, D (2) In accordance with ASTM E2356, and any subsequent amendments and editions, negative results for non-friable, organically bound materials such as flooring and roofing shall be verified with at least one TEM analysis.

## 5.0 RESULTS

Nineteen bulk samples were collected from the structure; however, due to multiple layers within some of those samples, a total of twenty-eight were analyzed by the laboratory. Table 1A is a listing of homogeneous materials for the project and Table 1B is a listing of the analytical results for asbestos.

**TABLE 1A**  
**Interior Common Area Finishes Upgrade Project**  
**H&SS Building, USCAiken**  
**Aiken, SC**  
**Homogeneous Areas**

HA	Sample Location	Sample Description	Condition	Category
HA-1	1 <sup>st</sup> , North Corridor at #101 1 <sup>st</sup> , South Corridor at 108 2 <sup>nd</sup> , Mid Corridor Seating Area	12"x12" Floor Tile – white/gray w/Yellow Mastic	Good	Misc.
HA-2	2 <sup>nd</sup> , Room #204 Break Room 2 <sup>nd</sup> , Office at Room #204	12"x12" Floor Tile – beige w/Yellow Mastic	Good	Misc.
HA-3	1 <sup>st</sup> , Corridor Wall at #116A 1 <sup>st</sup> , North Lobby, Ceiling 2 <sup>nd</sup> , Men's Bath, Wall 2 <sup>nd</sup> , Corridor Wall at #204 2 <sup>nd</sup> , Women's Bath, Wall 2 <sup>nd</sup> , Corridor at #201	Joint Compound	Good	Surf.
HA-4	1 <sup>st</sup> , Corridor at The Station 2 <sup>nd</sup> , Corridor at #201 2 <sup>nd</sup> , Corridor at Office C12	Gray Cove Base w/Tan Mastic	Good	Misc.
HA-5	1 <sup>st</sup> , North Entrance 1 <sup>st</sup> , South Entrance	12"x12" Ceiling (in track)	Good	Misc.

**TABLE 1B**  
**Interior Common Area Finishes Upgrade Project**  
**H&SS Building, USCAiken**  
**Aiken, SC**  
**Asbestos Analysis Results**

Sample ID	# of Samples	HA	Sample Description	ACM Present	Type of ACM	Quantity	F/NF
LS 1A-C	3	1	12"x12" Floor Tile – white/gray w/Yellow Mastic	No		8,500 ft <sup>2</sup>	NF
LS 2A-C	3	2	12"x12" Floor Tile – beige w/Yellow Mastic	No		300 ft <sup>2</sup>	NF
LS 3A-G	6	3	Joint Compound	No		<5,000 ft <sup>2</sup>	F
LS 4A-C	3	4	Gray Cove Base w/Tan Mastic	No		100 lf	NF
LS 5A-C	3	5	12"x12" Ceiling Tile	No		400 ft <sup>2</sup>	F

## 6.0 CONCLUSIONS AND RECOMMENDATIONS

Inconclusive results would be results where the Polarized Light Microscopy analysis yielded a result of less than 1% asbestos. These materials would have to be treated as asbestos-containing material or analyzed by TEM to determine their final status. No samples from this inspection returned inconclusive results.

SC DHEC Regulations require that a single sample of organic material which returns negative results by PLM analysis be analyzed by TEM analysis as well. TEM analysis of samples LS-1-A (tile and mastic), LS-2-A (tile and mastic) and LS-4-A (cove base and mastic) confirmed the negative PLM results.

During this inspection, materials suspect to contain asbestos may have been identified, but due to their location or current use, were not sampled. These non-sampled suspect materials include, but are not limited to, physically inaccessible materials, and materials that when sampled would degrade the operation of their parent system or contribute to asbestos contamination of a building system. Examples of the last category include gaskets and dampers in ventilation systems, and boiler seals. As requested by the client, this was

a limited inspection and, as such, every material suspected to contain asbestos was not sampled. Asbestos-containing materials not identified in this survey may be present.

Additionally, should the renovation activity involve the disturbance of painted coatings in Target Housing or a Child-Occupied Facility, the work is required to be performed by an RRP Certified Firm using a Certified Renovator with properly trained workers. The person contracting for the work is also required to receive a copy of the "Renovate Right" booklet and the contractor follow EPA 40 CFR 745.

In summary, the asbestos survey did not identify any of the materials sampled to contain greater than 1% asbestos. It is ACES' understanding the project is scheduled for renovation. Although no asbestos was identified in the inspection, the renovation contractor is required to notify the state of these results and also file proper demolition notification to the State of South Carolina if a structural-supporting wall is to be removed.

This inspection was performed by Steve Connor, AHERA Inspector Certificate Number 17750 which is valid until December 11, 2020 and SC DHEC Building Inspector Certificate Number BI-00707, which is valid until December 11, 2020.