SPECTRACLEAN™

ANTIMICROBIAL LIGHTING FOR
FOOD SAFETY

HUBBELL®
Lighting

HUBBELL®

It's estimated that there's an annual economic loss of $77 billion to the food industry from recalls stemming from foodborne illnesses. Rigorous food safety practices reduce risk but they are not foolproof and the potential consequences of an outbreak are enormous.

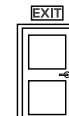**Listeria**

6.4% market share to **0%** $ total costs exceeded **$200M**   Production was halted for **5 months**   **70%** of workforce laid off and furloughed

E. Coli

$160M both in court costs and lost sales in **18 months** after outbreak   **30%** drop in parent company's share price
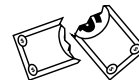
Salmonella

Over **$1B** loss to the U.S. peanut industry   **Federal felony conviction** of corporate executive
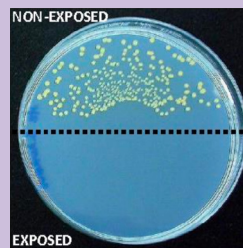
360 companies recalled **3900** products across **46** states   **Chapter 7 bankruptcy**

A small investment in SpectraClean™ antimicrobial lighting can help overcome the magnitude of food safety and public health risks.

NON-EXPOSED

EXPOSED

In a laboratory setting, photosensitive microorganisms populated a complete agar surface. Exposure to SpectraClean narrow band visible light demonstrated a significant reduction in microorganism population compared to the non-exposed area.

The Magnitude of an Outbreak

Even with the best practices, there are foodborne illness outbreaks. Think of the many opportunities pathogens are still introduced to human and animal food supplies:

- Employee error
- Supply chain partner oversight
- Ineffective cleaning
- Unacceptable hygiene
- Inadequate pest control

Studies show that outbreak recall costs can exceed $100M to a multi-national business. This includes the direct costs of the recall and the indirect costs of litigation, penalties, and damaged company reputation.

In a perfect world, robust sanitation processes would eliminate outbreaks. Unfortunately, there are so many variables in the food and beverage industry that can lead to contamination.
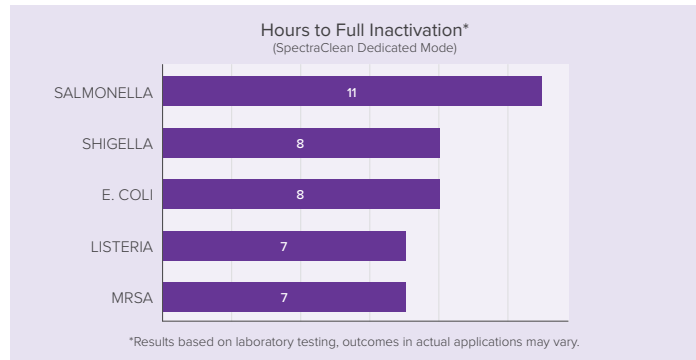
Considering the magnitude of preserving public heath through food safety, an investment in SpectraClean™ lighting from Hubbell Lighting is easily rationalized.

Imagine if lighting fixtures could contribute more than general illumination.
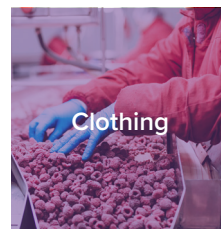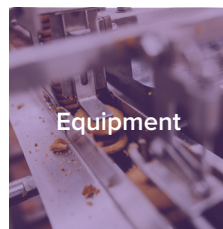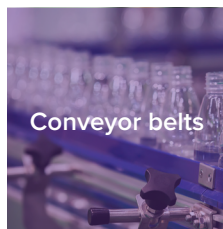
Hubbell Lighting's SpectraClean™ antimicrobial lighting leverages advances in lighting science and microbiology to combine white and 405 narrowband nanometer visible light. The germicidal effects of narrowband visible light suppress common pathogens responsible for foodborne illnesses:

- Food Poisoning - Campylobacter jejuni
- C. Perfingens
- Salmonella
- Staphylococcus aureus
- E Coli
- Listeria
- Clostridium Difficile
- Shigella
- Bacillus cereus

Hours to Full Inactivation*
(SpectraClean Dedicated Mode)

SALMONELLA	11
SHIGELLA	8
E. COLI	8
LISTERIA	7
MRSA	7

*Results based on laboratory testing, outcomes in actual applications may vary.

SpectraClean luminaires not only illuminate but, continuously and automatically disinfect. Its effective on pathogens in air or attached to surfaces. This helps prevent transfer and cross-contamination. With the proper dosage, this safe, continuous and effective breakthrough in lighting technology can help protect employees and the public against foodborne illnesses.

Conveyor belts

Equipment

Clothing

Hard surfaces

Disinfecting Luminaires

Hubbell Lighting's SpectraClean lighting fixture replaces existing lighting systems in food processing, preparation and manufacturing areas with the added benefit of disinfection. These luminaires are equipped with LED technology for energy efficient operation and low maintenance.

Storage | Utility | Food Manufacturing | Food Processing | Food Preparation | Packaging | Retail

SCCT
SpectraClean Contemporary Architectural Troffer

SCLT
SpectraClean Lensed Troffer

SCST
SpectraClean Striplight

SCVM | SCVW
SpectraClean Linear Vaportite

Modes

SpectraClean™ luminaires are available in four modes, allowing customization for the needs of the specific application. When coupled with occupancy sensors and room controllers, SpectraClean luminaires can be controlled based on usage or with pre-programmed schedules.
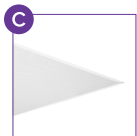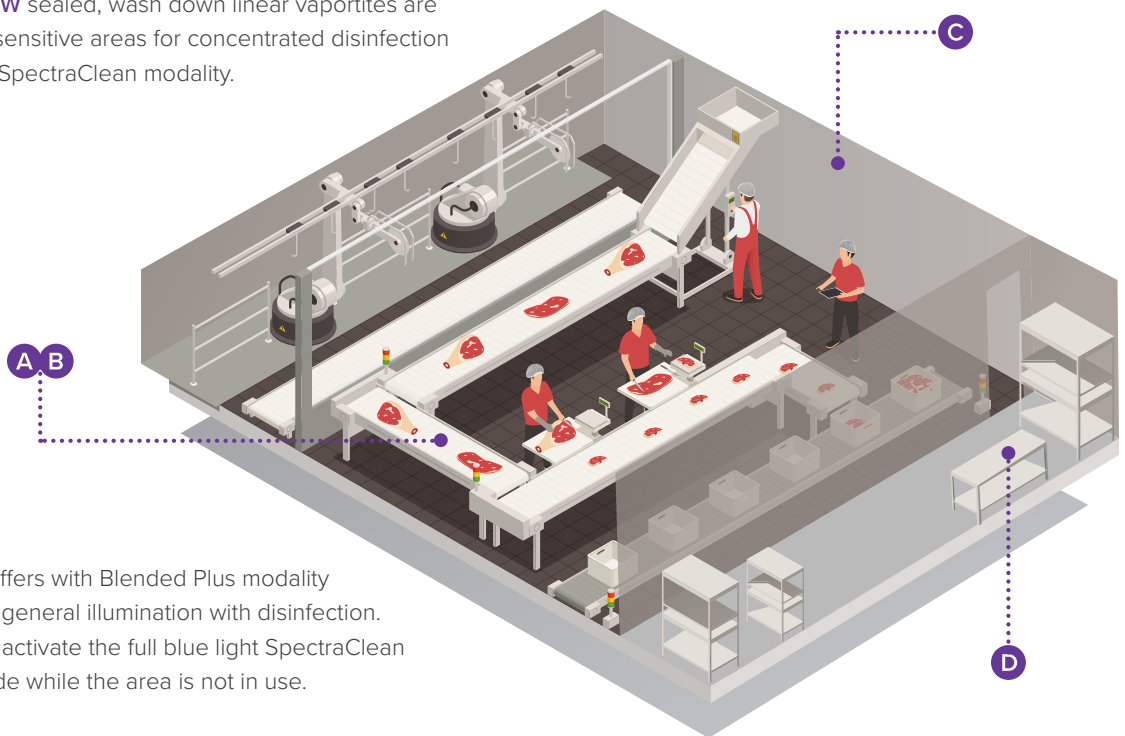
B Blended

One luminaire. One mode of operation. This option combines SpectraClean Antimicrobial Lighting with white light to provide class leading illumination while maintaining the appearance of a traditional white LED source. This allows for in-use disinfection.

Food Manufacturing

SpectraClean allows lighting designs that provide excellent illumination and effective disinfection. In this representative food manufacturing location, SpectraClean luminaires are effectively deployed throughout the entire space.

A B SCVM and SCVW sealed, wash down linear vaportites are deployed over sensitive areas for concentrated disinfection with Dedicated SpectraClean modality.

C SCLT lensed troffers with Blended Plus modality are installed for general illumination with disinfection. NX controls will activate the full blue light SpectraClean disinfection mode while the area is not in use.

D SCST linear strip lights with Independent modality can be deployed in rack and storage areas, toggling between white light during times of occupation and full SpectraClean while illumination is not needed.

> " What if you could use lighting to effectively and continuously disinfect? "

B+ Blended Plus

One luminaire. Two modes of operation. This combines SpectraClean enhanced white light with a high dosage SpectraClean mode for periods of accelerated disinfection.

N Independent

One luminaire. Two modes of operation. This configuration operates either as high dosage SpectraClean Antimicrobial Lighting or white ambient lighting. This SpectraClean mode is intended for periods of accelerated disinfection while the space is not being used.

D Dedicated

One luminaire. One mode of operation. This configuration is a high dosage SpectraClean Antimicrobial Lighting solution for concentrated disinfection, independent of white ambient lighting.

Restaurants

In a restaurant setting, SpectraClean anitmicrobial lighting is used to complement existing cleaning practices.

A

SCVM with Independent modality is applied in the sanitation closet and cold storage areas. The need for illumination in these areas is frequently brief, standard white light illuminates while the rooms are occupied and revert to the blue light SpectraClean mode while these sensitive areas are not occupied.

B

SCST with Dedicated SpectraClean blue light are installed over the employee hand wash station. This specific area will benefit from the germicidal effects of this high concentration, task specific solution while general illumination is provided by other luminaire providing ambient light.

C
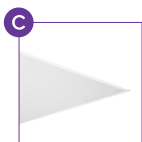
SCLT lensed troffers with Blended Plus modality are installed in the food prep areas, dish cleaning areas, and restrooms for general illumination with disinfection. NX controls will activate the full blue light SpectraClean disinfection mode while the area is not in use.

D
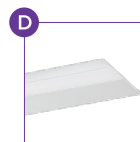
SCCT troffers with Blended modality provides disinfecting illumination in dining areas.

SCCT | SpectraClean™ Contemporary Architectural Troffer

- LED troffer with high efficiency acrylic center lens features linear prisms for performance without pixilation
- High performance reflector with matte white paint
- Available in 2'x4', 2'x2' and 1'x4'

Example: SCCT24–B–35MLG–EDU

CATALOG #

SCCT								
Model	**Size**	**Version**	**CRI**	**Color Temp**	**Nominal Lumens**	**SpectraClean Output [2]**	**Ceiling Type**	
SCCT Commercial Troffer with SpectraClean	**14** 1x4 **22** 2x2 **24** 2x4	**B** Blended **BP** Blended Plus **N** Independent	**Blank** >80	**30** 3000K **35** 3500K **40** 4000K **50** 5000K	**XW** 1x4, 2x4 (2500) **VW** 2x2 (1500); 1x4, 2x4 (3200) **MW** 2x2 (2000); 1x4, 2x4 (3600) **LW** 2x2 (2600); 1x4, 2x4 (4200) **ML** 2x2 (3300); 1x4, 2x4 (4800) **HL** 2x2 (3600); 1x4, 2x4 (5600)[1]	**L1** Level 1	**G** Grid Lay-in[3] **SM** Surface Mount **CM** Cable Suspended Mount[4]	

		U	
Shielding	**Driver**	**Voltage**	**Options**
Blank Curve	**E** Fixed output **ED** 0–10V Dimming **ED1** 0–10V 1% Dimming	**U** 120–277V	**C388** 3-Wire Flex **C488** 4-Wire Flex **C588** 5-Wire Flex **GLR** Fast Blow Fuse **EOR** End of Row (SM and CM only) **INT** Intermediate (SM and CM only) **CP** Chicago Plenum

Accessories	
☐ **FK14**	1x4 Single Flange Kit
☐ **FK22**	2x2 Single Flange Kit
☐ **FK24**	2x4 Single Flange Kit
☐ **CM48Y1SC3F48**	Cable Mount Kit for 1x4, 3-wire cord
☐ **CM48Y2SC3F-KIT**	Cable Mount Kit for 2x2 and 2x4, 3-wire cord

Notes:
1. HL not available with Blended Plus (BP) mode
2. Applies to Independent (N) and Blended Plus (BP) modes only. For Blended mode, leave blank.
3. For drywall, order G with Flange Kit Accessory
4. Order with cable mount kit accessory

SCLT | SpectraClean™ Lensed Troffer

- Full Distribution LED troffer with acrylic lens for light diffusion without compromise to light output
- Luminaire housing, end caps and reflectors are die formed code gauge cold rolled steel
- Available in 2'x4', 2'x2' and 1'x4'

Example: SCLT24–B–35MLG–FS–SFA–EDU

CATALOG #

SCLT								
Model	**Size**	**Version**	**CRI**	**Color Temp**	**Nominal Lumens**		**SpectraClean Output[1]**	**Ceiling Type**
SCLT Lensed Troffer with SpectraClean	**14** 1x4 **22** 2x2 **24** 2x4	**B** Blended **BP** Blended Plus **N** Independent	**Blank** >80	**30** 3000K **35** 3500K **40** 4000K **50** 5000K	**XW** 1x4, 2x4 (2800) **VW** 2x2 (1800); 1x4, 2x4 (3600) **MW** 2x2 (2000); 1x4, 2x4 (4000) **LW** 2x2 (2600); 1x4, 2x4 (4800) **ML** 2x2 (3200); 1x4, 2x4 (5200)		**L1** Level 1	**G** Grid Lay-in[2] **SM** Surface Mount **CM** Cable Suspended Mount[3]

	FA		U	
Door	**Shielding**	**Driver**	**Voltage**	**Options**
SD White Flush Steel **AD** White Flush Aluminum	**FA** Frosted Acrylic	**E** Fixed Output Driver **ED** 0–10V Dimming **ED1** 0–10V 1% Dimming	**U** 120–277V	**C388** 3-Wire Flex **C488** 4-Wire Flex **C588** 5-Wire Flex **GLR** Fast Blow Fuse **G1** Single Gasketing (Door to Housing) **G2** Double Gasketing (G1 and Lens to Door) **G3** Triple Gasketing (G2 and Housing to Ceiling) **EOR** End of Row (SM and CM only) **INT** Intermediate (SM and CM only) **CP** Chicago Plenum **WL** Wet Location[4]

Accessories	
☐ **FK14**	1x4 Single Flange Kit
☐ **FK22**	2x2 Single Flange Kit
☐ **FK24**	2x4 Single Flange Kit
☐ **CM48Y1SC3F48**	Cable Mount Kit for 1x4, 3-wire cord
☐ **CM48Y2SC3F-KIT**	Cable Mount Kit for 2x2 and 2x4, 3-wire cord

Notes:
1 Applies to Independent (N) and Blended Plus (BP) modes only. For Blended mode, leave blank
2 Order with flange kit accessory
3 Order hanger accessories separately
4 AD door required and select G2 or G3 gasketing

SpectraClean™ Linear Vaportites

- Enclosed and gasketed linear and wide body linear (SCVW) varportite with impact resistant lens options
- Smooth fiberglass housing with F1 weatherability rating
- IP67 rated
- -40°C (-104°F) minimum operating temperature
- UL Sanitation Certified per NSF Standards

SCVM

SCVW

Example: SCVM4–B–35LW–L1–SFA–EDU

CATALOG #

SCVM								
Model		**Size**	**Version**		**Color Temp[1]**		**Nominal Lumens[1]**	
SCVM	Vaportite with SpectraClean	**4** 4' **8** 8'	**B** Blended **BP** Blended Plus **N** Independent **D** Dedicated		**30** 3000K **35** 3500K **40** 4000K **50** 5000K		**VW** 4' (3200); 8' (6400) **LW** 4' (4200); 8' (8400) **ML** 4' (4800); 8' (9600) **HL** 4' (5600); 8' (11,200)	

			SpectraClean Output[2]		**Lens**	
			L1 Level 1		**SFA** Smooth Frosted Acrylic **SFP** Ribbed Frosted Polycarbonate	

		U	
Driver[3]		**Voltage**	**Options**
E Fixed Output **ED** 0–10V Dimming		**U** 120–277V	**GLR** Fast Blow Fuse **SSL** Stainless Steel Tamper Resistant Ready Latches **TP** Tamper Proof Latches **SWH** Single Wet Hub 1/2" NPT Hub **DWH** Dual Wet Hub 1/2" NPT Hub **F3C8W** 3 Wire 8' Wet Cord **F3C15W** 3 Wire 15' Wet Cord **F5C8W** 5 Wire 8' Wet Cord **F5C15W** 5 Wire 15' Wet Cord

Accessories	
☐ **XEDPM**	Dual Pendant Mount
☐ **XEHC**	Chain Hanger Kit
☐ **XE45MB**	45° Mounting Bracket Galvanized
☐ **XE45MBSS**	45° Mounting Bracket Stainless

Notes:
1. For Dedicated (D) mode, leave blank
2. For Blended (B) mode, leave blank
3. E for Dedicated (D) only; ED for Blended (B), Blended Plus (BP) and Independent (N) modes only

Example: SCVW4–D–L2–FAW–EU

CATALOG #

SCVW	4								W	
Model		**Size**	**Version**		**Color Temp[1]**		**Nominal Lumens[1]**	**SpectraClean Output**	**Lens**	**Distribution**
SCVW	Vaportite with SpectraClean	**4** 4'	**D** Dedicated **N** Independent		**30** 3000K **35** 3500K **40** 4000K **50** 5000K		**L** 12,000 **M** 16,000 **MH** 18,000	**L1** Level 1	**FA** Frosted Impact Resistant Acrylic **FP** Frosted Polycarbonate	**W** Wide

E	U	
Driver	**Voltage**	**Options**
E Fixed Output **ED** 0–10V Dimming	**U** 120–277V	**GLR** Fast Blow Fuse **SSL** Stainless Steel Tamper Resistant Ready Latches **TP** Tamper Proof Latches **F3C8W** 3-wire 8' Wet Cord **F3C15W** 3-wire 15' Wet Cord **F5C8W** 5 Wire 8' Wet Cord **F5C15W** 5 Wire 15' Wet Cord **SWH** Single Wet Hub 1/2" NPT Hub **DWH** Dual Wet Hub 1/2" NPT Hub

Accessories	
☐ **LHVQM5**	5' Aircraft Cable (Pair)
☐ **LHVQM10**	10' Aircraft Cable (Pair)
☐ **XEWVHK**	V-Hook (includes 2)
☐ **XEWRSBZN**	Zinc Plated Rigid Surface Mount Bracket Kit (includes 2)
☐ **XEWRSBSS**	Stainless Steel Rigid Surface Mount Bracket Kit (includes 2)
☐ **XEWFSBSS**	Stainless Steel Surface Mounting Bracket Kit (includes 2)

Notes:
1. For Dedicated (D) mode, leave blank

SCST I SpectraClean™ Striplight

- LED lensed striplight with heavy die-formed steel channel, 100% acrylic formed lens to eliminate pixilation and reduce glare
- Available in 4' and 8' lengths

Example: SCST4–B–35ML–EDU

CATALOG #

SCST									U
Model		**Size**	**Version**	**Color Temp**[1]	**Nominal Lumens**[1]		**SpectraClean Output**[2]	**Driver**[3]	**Voltage**
SCST	Lensed Striplight with SpectraClean	**4** 4' **8** 8'	**B** Blended **BP** Blended Plus **N** Independent **D** Dedicated	**30** 3000K **35** 3500K **40** 4000K **50** 5000K	**LW** 4' (4200); 8' (8400) **ML** 4' (4800); 8' (9600) **HL** 4' (5600); 8' (11,200)		**L1** Level 1	**E** Fixed output **ED** 0–10V Dimming	**U** 120–277V

Options			Accessories	
GLR	Fast Blow Fuse		☐ **S18**	18" Stem
PAF	Paint After Fabrication		☐ **SS18**	18" Swivel Stem - 45° Swivel
			☐ **CSHC**	Chain Hanger Assembly
			☐ **LCLWG4**	4' Wire guard, 2 Required for 8' fixture

Notes:
1. For Dedicated (D) mode, leave blank
2. For Blended (B) mode, leave blank
3. E for Dedicated (D) only; ED for Blended (B), Blended Plus (BP) and Independent (N) modes only

SpectraClean™ Trial Installation

Hubbell Lighting's Compare in the Air program offers risk free trial installation of four SpectraClean luminaires for 120 days.
This program allows you to see the effect of SpectraClean technology before purchase.

STEP 1 – Select 4 qualifying SpectraClean lighting fixtures for trial

STEP 2 – Order up to four fixtures and mark order with "COMPARE IN THE AIR"

STEP 3 – Receive 120 day dating terms on the order

STEP 4 – Install the products and measure the effectiveness

120 DAY
Compare
IN THE AIR

*Freight and installation charges are the responsibility of the customer
**If you decide to keep the products, simply pay the invoice when it is due. If you elect to return the products, you need only to request an RGA within the 90-day period and return the products to us in the original cartons at your expense.
*** Once we receive the return and confirm it is in good condition, we will immediately issue a credit memo to 100% offset the cost of the original invoice.

Coordinated Lighting Fixture and Control Solutions

Recessed Mounting Architectural Edge-Lit LED Exit Signs

Ration Floodlight Series

Ratio Area/Site Family

NX Distributed Intelligence™

Peloton High Performance High Bay

DUAL-LITE®   HUBBELL® Outdoor Lighting   HUBBELL® Control Solutions   Columbia LIGHTING

To learn about other lighting and control solutions form Hubbell Lighting, please visit www.hubbelllighting.com

HUBBELL Lighting

ALERA LIGHTING

ARCHITECTURAL AREA LIGHTING

BEACON PRODUCTS

COLUMBIA LIGHTING

COMPASS

DUAL-LITE

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HUBBELL CONTROL SOLUTIONS

HUBBELL INDUSTRIAL LIGHTING

HUBBELL OUTDOOR LIGHTING

KIM LIGHTING

KURT VERSEN

LITECONTROL

PRESCOLITE