

Project:	Catalogue #:	Type:
Notes:		

## Product Description

The Visioneering LRTH-DFX Series provides the modern styling and high visual comfort of our standard LRTH. The LRTH-DFX combines a single shallow semiround lens and 365DisInFx™ UVA technology to help in the inactivation of surface bacteria where people are present and conventional lighting is needed. This IC-rated luminaire's low-profile makes it ideal for shallow or obstructed plenum applications.



## Technical Summary

**Test Results:** 365DisInFx™ UVA disinfection technology was tested using in-vitro methods (as described in Livingston, Kvam<sup>1,2</sup>) which resulted in 99.7% reduction in MRSA on surfaces exposed to 3W/m<sup>2</sup> of 365nm UVA over a single 8-hour period. Results of this testing also showed significant reduction over a similar exposure period of certain common pathogens including Staphylococcus aureus, Enterococcus faecalis, Escherichia coli, Acinetobacter baumannii, Pseudomonas aeruginosa, Candida albicans and auris, associated with Hospital Acquired Infections (HAIs). Photobiological science and mathematical modeling enables us to calculate expected inactivation rates for 24-hour continuous operation of the 365DisInFx™ UVA technology.

**Safety:** 24-hour dosage is designed to operate below human health exposure limits per IEC 62471 Photobiological Safety for Lamps and Lamp Systems standard and American Conference of Governmental Industrial Hygienists (ACGIH®) TLVs® guidelines.

**Disinfection Light Source:** 365nm UVA light emitted is invisible to the human eye and does not impact CCT or CRI.

**Light Control:** Fixture LED white light source may be controlled by wired or wireless controls and is dimmable to 1%. The UVA disinfection light source has a fixed output and operates continuously on a separate circuit.

## Optical System

Ribbed frosted acrylic diffuser, specially formulated for enhanced UV transmission and resistance. Captive diffuser is secured with tamper resistant brackets. Indirect reflectors are precision formed and contoured to provide soft, low-glare, indirect illumination, while maintaining high-efficiency and a wide, uniform light distribution.

## Mounting

This luminaire has been specifically designed for T-Bar applications. Holes provided for chain-mounting support to building structure with integral earthquake clips.

## Construction

Post-painted die-formed, code gauge steel housing. Precision-formed steel reflector.

## Finish

UV resistant white, polyester powder painted housing.

## Electrical

Long life white LEDs coupled with high efficiency drivers provide quality illumination. Rated to deliver L80 lumen performance >50,000 hrs.

## Warranty

5 year limited warranty on visible light portion of fixture.

## Caution

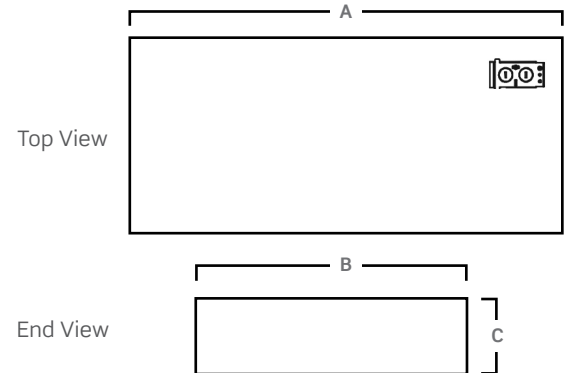
UVA emitted from this product. Install in compliance with manufacturer instructions to prevent risk of personal injury from UV radiation.

## Approvals

- Approved to CSA/UL standards. UL listed for insulated ceilings.
- Tested in accordance to IESNA LM-79.
- Suitable for damp locations.



## Dimensions



Size	A	B	C
1x4	47 3/4"	11 3/4"	2 1/2"
2x2	23 3/4"	23 3/4"	2 1/2"
2x4	47 3/4"	23 3/4"	2 1/2"

Consult installation guide for exact dimensions.

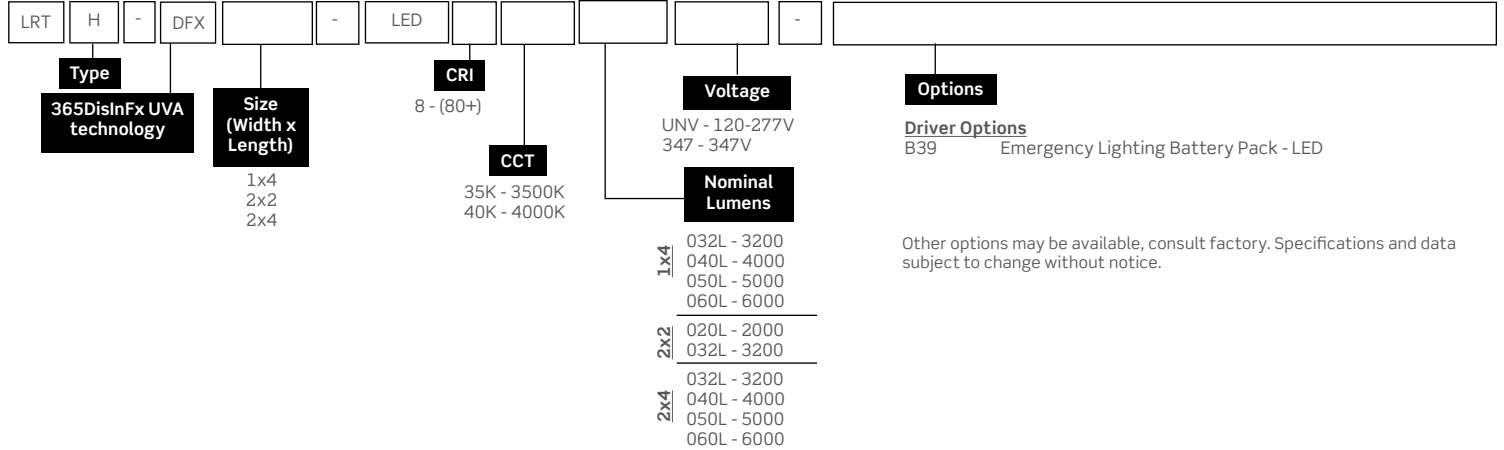
### Notes:

1. Livingston SH, Cadnum JL, Benner KJ, Donskey CJ (2020) Efficacy of an ultraviolet-A lighting system for continuous decontamination of health care-associated pathogens on surfaces. Am. J. Infect. Control 48: 337-339. <https://doi.org/10.1016/j.ajic.2019.08.003>
  2. Kvam E, Benner K (2017) Disinfection via LED Lighting: summary of mechanism and results for 365nm-mediated inactivation of microbes. GE Global Research Technical Information Series 2017GRC0545, GE Confidential
- Inoculated steel disk carriers, modification of ASTM E-2197-02
  - using a benchtop device that delivered the 3W/m<sup>2</sup> irradiance
  - Inoculated steel disk carriers, modification of ASTM E-2197-02
  - using a benchtop device that delivered the 3W/m<sup>2</sup> irradiance.

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### Order Key

#### EXAMPLE: LRTH-DFX2x4-LED840K050LUNV



### Performance Data

LED Performance Data					
White LED					
Size	Nominal Lumens	Delivered Lumens	Watts	Lumens Per Watt	UV Watts
1x4	3200	3201	26	122	30
	4000	4003	33	120	30
	5000	5042	44	116	30
	6000	6015	54	122	30
2x2	2000	2095	13.7	134	15
	3200	3214	26.7	120	15
2x4	3200	3201	26	126	30
	4000	4003	33	120	30
	5000	5042	44	116	30
	6000	6015	54	112	30

Values based on 840K with standard lens at 25C

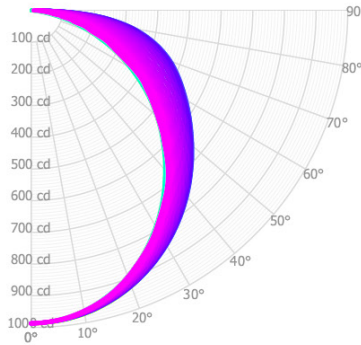
### Make an Informed Decision

- UV radiation can pose a risk of personal injury. Overexposure can result in damage to eyes, bare skin, and immune system. To reduce risk of overexposure, equipment must be installed in accordance with site planning and application recommendations.
- UV solutions are intended for common high traffic spaces and not recommended for dwellings or home use.
- Installation of the devices must be performed by qualified professionals as detailed in the device installation guide.
- To allow for occupancy, 365DisInFx™ UVA products comply with IEC 62471 Photobiological Safety for Lamps and Lamp Systems standard and American Conference of American Hygienists (ACGIH®) TLVs®.
- UV products are meant to be used in conjunction with other protective measures like manual cleaning and the use of proper PPE. They are not a substitute for other measures.
- 365DisInFx™ UVA products are not intended to be used as a medical device.
- When combining two or more UV solutions, regardless of the manufacturer, please consult a trained product application representative to ensure the total irradiance (UV dose) does not exceed recommended human exposure limits. To the extent UV solutions are combined, it may affect the deactivation and inactivation rates.
- ACGIH® and TLVs® are registered trademarks of American Conference of Governmental Industrial Hygienists, Inc.

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## Photometrics

IES File: **LRTH-DFX2X2-LED840K032LUNV (White Channel Only)**  
 Lumens: **3013**  
 Wattage: **24.56**  
 Efficacy: **123**



### Zonal Lumen Summary

Zone	Lumens	%Fixture
0.0° - 30.0°	761	25.2%
0.0° - 40.0°	1242	41.2%
0.0° - 60.0°	2214	73.5%
0.0° - 90.0°	3013	100.0%

### Average Luminance Table (cd/m<sup>2</sup>) CP Summary

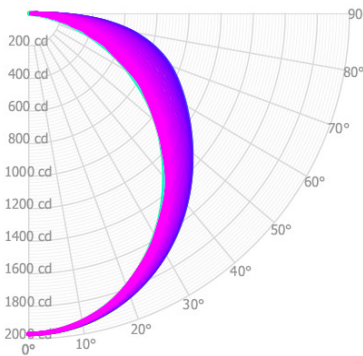
	0.00°	45.00°	90.00°
0.00°	2737	2737	2737
45.00°	2362	2539	2754
55.00°	2203	2489	2865
65.00°	1953	2573	3208
75.00°	1535	2856	3874
85.00°	374	3176	4131

### Coefficients of Utilization

pc	80%			70%			50%		
	pw	70%	50%	30%	70%	50%	30%	70%	50%
0	119	119	119	116	116	116	111	111	111
1	107	102	97	105	100	95	99	95	92
2	97	88	81	94	86	79	89	83	77
3	88	77	68	86	75	67	81	72	65
4	80	68	59	78	66	58	74	64	56
5	74	60	51	72	59	50	68	57	49
6	68	54	45	66	53	45	63	52	44
7	63	49	40	61	48	40	58	47	39
8	59	45	36	57	44	36	54	43	35
9	55	41	33	54	41	33	51	39	32
10	52	38	30	50	38	30	48	36	29

Effective Floor Cavity Reflectance: 20%

IES File: **LRTH-DFX2X4-LED840K060LUNV (White Channel Only)**  
 Lumens: **6016**  
 Wattage: **53.58**  
 Efficacy: **112**



### Zonal Lumen Summary

Zone	Lumens	%Fixture
0.0° - 30.0°	1519	25.2%
0.0° - 40.0°	2481	41.2%
0.0° - 60.0°	4421	73.5%
0.0° - 90.0°	6016	100.0%

### Average Luminance Table (cd/m<sup>2</sup>) CP Summary

	0.00°	45.00°	90.00°
0.00°	2712	2712	2712
45.00°	2340	2516	2729
55.00°	2183	2466	2839
65.00°	1936	2550	3179
75.00°	1521	2830	3839
85.00°	370	3147	4093

### Coefficients of Utilization

pc	80%			70%			50%		
	pw	70%	50%	30%	70%	50%	30%	70%	50%
0	119	119	119	116	116	116	111	111	111
1	107	102	97	105	100	95	99	95	92
2	97	88	81	94	86	79	89	83	77
3	88	77	68	86	75	67	81	72	65
4	80	68	59	78	66	58	74	64	56
5	74	60	51	72	59	50	68	57	49
6	68	54	45	66	53	45	63	52	44
7	63	49	40	61	48	40	58	47	39
8	59	45	36	57	44	36	54	43	35
9	55	41	33	54	41	33	51	39	32
10	52	38	30	50	38	30	48	36	29

Effective Floor Cavity Reflectance: 20%