



# 365DisInFx™

UVA technology

## 365DisInFx™ LED Luminaires

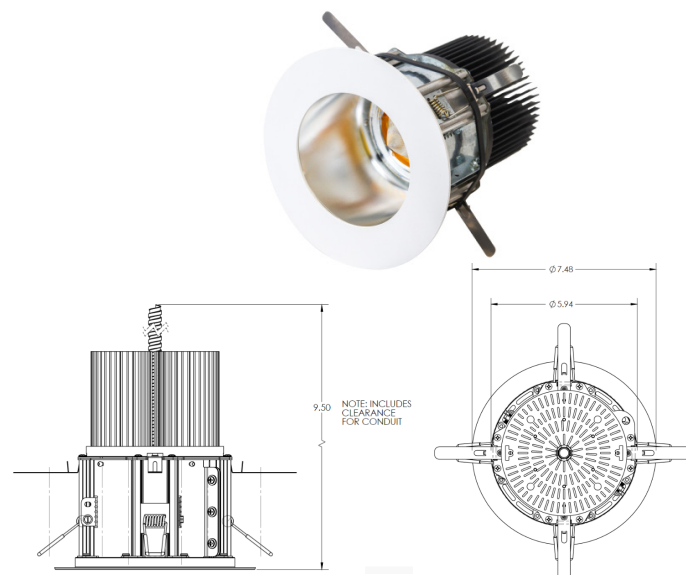
### LDU Downlight with 365DisInFx™ UVA Technology

LDU Series

#### Product Description:

Current's LDU Series Downlight LED Luminaires offer a clean sleek finish for recessed downlighting applications. In addition to delivering a smooth, uniform pattern, the LDU also provides UVA disinfection lighting in areas where conventional light is needed and people are present.

#### Product Dimensions:



**Note:** - Minimum mounting height of 8.5 ft.

#### 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 American 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 5%. The UVA disinfection lightsource has a fixed output and operates continuously.

#### Product Availability:

**Product Ordering:** Product is commercially available and can be ordered for general use.

#### Notes:

- 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>
  - Inoculated steel disk carriers, modification of ASTM E-2197-02
  - using a benchtop device that delivered the 3W/m<sup>2</sup> irradiance
- 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 (Class 3)
 

Kvam E, Benner K. Mechanistic insights into UV-A mediated bacterial disinfection via endogenous photosensitizers. *Journal of Photochemistry and Photobiology B: Biology*. 2020;209:111899. doi:10.1016/j.jphotobiol.2020.111899.

  - Inoculated steel disk carriers, modification of ASTM E-2197-02
  - using a benchtop device that delivered the 3W/m<sup>2</sup> irradiance.

## Ordering Number Logic

LDU	6R	-	--	WD	8	Q
FAMILY	FIXTURE TYPE	VOLTAGE	NOMINAL LUMENS	BEAM SPREAD	CRI/CCT	CONTROLS
LDU1 = Lumination Downlight UV Generation 1	6R = 6" ROUND	0 = 120-277 VAC D = 347* VAC	10 = 1000 lumens 20 = 2000 lumens 30 = 3000 lumens 40 = 4000 lumens	WD = Wide	835 = 80CRI, 3500K 840 = 80CRI, 4000K	VQ = 0 - 10V Dimming TQ* = Wireless Enabled, Daintree Compatible

\* Option requires longer lead-time. Contact your Current sales representative.

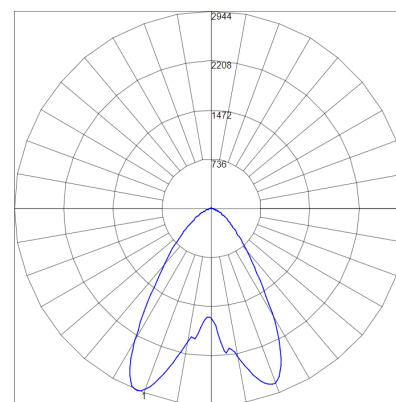
SKU #	DESCRIPTION	WATTAGE
93141768	LDU16R010WD835VQ	48
93141769	LDU16R020WD835VQ	57
93141770	LDU16R030WD835VQ	66
93141771	LDU16R040WD835VQ	77
93141772	LDU16R010WD840VQ	48
93141773	LDU16R020WD840VQ	57
93141774	LDU16R030WD840VQ	66
93141775	LDU16R040WD840VQ	77

## Photometric Data: 365DisInFx™ LDU Series

ZONAL LUMEN SUMMARY	
Zone	Lumens
0-10°	191.23
10-20°	732.46
20-30°	1189.42
30-40°	876.65
40-50°	527.98
50-60°	288.08
60-70°	137.91
70-80°	42.93
80-90°	7.55
90-100°	0.15
100-110°	0.15
110-120°	0.23
120-130°	0.35
130-140°	0.75
140-150°	1.33
150-160°	1.47
160-170°	1.09
170-180°	0.42

ZONAL LUMEN SUMMARY			
Zone	Lumens	% of Lamp	% of Fixture
0-20°	923.69	N.A.	23.10
0-30°	2113.1	N.A.	52.80
0-40°	2989.75	N.A.	74.70
0-60°	3805.81	N.A.	95.10
0-80°	3986.65	N.A.	99.70
0-90°	3994.21	N.A.	99.90
10-90°	3802.97	N.A.	95.10
20-40°	2066.06	N.A.	51.60
20-50°	2594.04	N.A.	64.80
40-70°	953.97	N.A.	23.80
60-80°	180.85	N.A.	4.50
70-80°	42.93	N.A.	1.10
80-90°	7.55	N.A.	0.20
90-110°	0.30	N.A.	0.00
90-120°	0.53	N.A.	0.00
90-130°	0.88	N.A.	0.00
90-150°	2.95	N.A.	0.10
90-180°	5.94	N.A.	0.10
110-180°	5.64	N.A.	0.10
0-180°	4000.14	N.A.	100.00

### POLAR GRAPH



Maximum Candela= 2944 Located At Horizontal Angle= 220, Verticle Angle= 22  
#1 - Vertical Plane Through Horizontal Angles (220 - 40) (Through Max. Cd.)

White light + UVA light output

## Product Specifications:

### LED & Optical Assembly

**CRIa:** >80+

**R9:** >0

**Color Consistency:** Central limit 4-Step MacAdam Ellipse with LED recipe approach for tight unit to unit color control

**Rated Luminaire Lumen Depreciation:** L85@50,000 Hours

**UV Output:** 365nm +- 5nm

### Electrical

**Input Voltage:** 120-277 VAC

**Input Frequency:** 50/60 Hz

**System Power Factor (PF):** >0.9\*

**Total Harmonic Distortion (THD):** <20%\*

**LED Driver Type:** Class 2

*\*PF and THD may vary with options*

### Ratings & Evaluations

**Operating Temperature:** -20°C to +25°C

**Storage Temperature:** -40°C to +70°C

**Surge Protection:** ANSI C82.77 Compliant

**Location:** Damp

**Safety:** UL Classified

**Environmental:** Compliant with material restrictions of RoHS

### Construction & Finish

**Housing:** Long lasting construction. Galvanized steel and aluminum.

**Lensing:** UV LED: Silicon DOW MS 1002. White LED: Plexiglass V825.

**Paint:** Antimicrobial matte white

**Weight:** 8 pounds

### Design Life & Warranty:

**Warranty:** 5 year on visible light portion of spectrum

**Driver Design Lifetime:** >10 year life of continuous operation, >100,000 hour design parameters

**Reliability Testing:** Components and systems evaluation

### Controls

**Standard Dimming:** 0-10VDC ANSI C137.x compliant

**Minimum Dimming:** 5% of rated lumen LED drive current

**Optional Dimming:** Contact Manufacturer

**Wireless Networking and Sensing Device Options\***

Daintree Enterprise Wireless enabled **Power Addition for Controls:** <2 watts

*\*Contact Factory for specific option availability*

### Mounting

**Typical Mounting:** Retrofit ceiling. Consult installation guide for hole diameter requirements.

**Wiring Access:** 1/2" trade-size KOs on power supply box with minimum 6" aluminum conduit.

### Accessories & Options:

Contact your GE Current, a Daintree company sales representative for available options. For more information and access to all of our resources, including our design tools, visit: [www.gecurrent.com](http://www.gecurrent.com)

## CAUTION

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

### Make An Informed Decision

- UV radiation can pose a risk of personal injury. Overexposure can result in damage to eyes and bare skin. To reduce risk of overexposure, equipment must be installed in accordance with manufacturer's site planning and application recommendations, including minimum ceiling height restrictions.
- UV solutions are intended for common high traffic spaces and not recommended for dwellings or home use.
- Installation of the devices should be performed by qualified professionals as detailed in Current's installation guide.
- To allow for occupancy during use, Current products comply with IEC 62471 – Photobiological Safety of Lamps and Lamp Systems standards and American Conference of Governmental Industrial Hygienists (ACGIH®) TLVs® guidelines when installed as directed.
- Current's 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.
- Current products are not intended to be used as a medical device.
- If combining two or more UV solutions, whether from GE Current, a Daintree company and/or other manufacturers, 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 impact inactivation rates.