



365DisInFx™

UVA technology

365DisInFx™ LED Luminaires

RVU Recessed Luminaire with 365DisInFx™ UVA technology

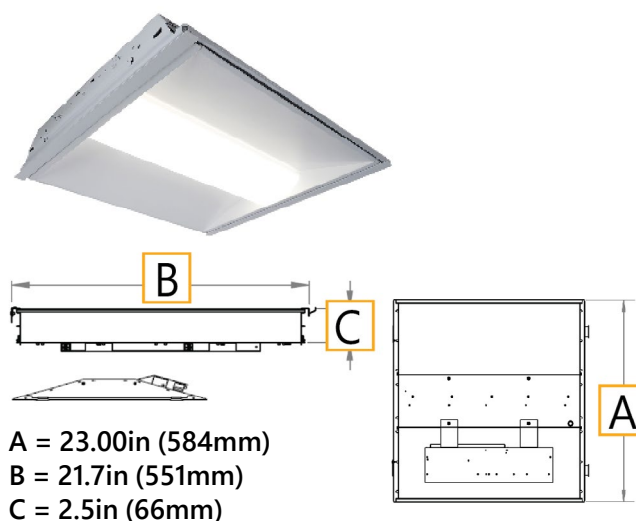
RVU22 Series - Refit™ Kit

Product Description:

Current's 365DisInFx™ RVU Series Recessed LED Refit kits bring a three-dimensional volumetric designer's touch to any drop ceiling landscape. In addition to delivering a smooth uniform lit appearance with LED technology, the RVU series also provides Current's 365DisInFx™ UVA technology to help in the inactivation of surface bacteria where people are present and conventional lighting is needed.



Product Dimensions:



Technical Summary:

Testing Results: 365DisInFx™ UVA disinfection technology was tested using in-vitro methods (as described in Livingston, Kvam^{1,2}) which resulted in 99.7% reduction in MRSA on surfaces exposed to 3W/m² 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 UL 8802 Outline of Investigation for UV Germicidal Equipment and Systems, 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 hydrophobic glass slides, modification of ASTM E-2197-02
 - using a benchtop device that delivered the 3W/m² 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.jphoto.2020.111899.
 - Inoculated steel disk carriers, modification of ASTM E-2197-02
 - using a benchtop device that delivered the 3W/m² irradiance.

Ordering Number Logic

RVU	22	0	XX	MM	AD		VQ	RM	WHAM
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FAMILY	FIXTURE TYPE	VOLTAGE	NOMINAL LUMENS	DISTRIBUTION	UV	CRI/CCT	CONTROLS	MOUNTING	FINISH
RVU = 365DisInFx™ Refit™ Kit UVA	22 = 2' x 2'	0 = 120-277VAC	20 = 2000 Lumen Level 30 = 3300 Lumen Level 40 = 4000 Lumen Level	MM = Medium	AD = All Day Continuous	835 = 80CRI, 3500K 840 = 80CRI, 4000K	VQ = 0-10V Dimming	RM = Refit Mount	WHAM = White Antimicrobial Paint

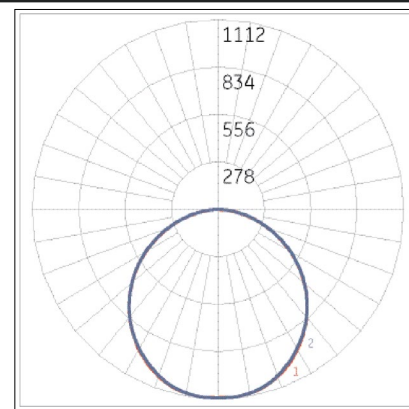
PRODUCT OFFERING				
CATALOGIC	CRI/CCT	LUMENS CODE	WHITE LED WATTS	UV LED WATTS
RVU22020MMAD835VQRMWHAM	835	2000	13	12
RVU22030MMAD835VQRMWHAM	835	3300	28	12
RVU22040MMAD835VQRMWHAM	835	4000	35	12
RVU22020MMAD840VQRMWHAM	840	2000	13	12
RVU22030MMAD840VQRMWHAM	840	3300	28	12
RVU22040MMAD840VQRMWHAM	840	4000	35	12

Photometric Data: 365DisInFx™ 2' x 2' RVU22 Series

ZONAL LUMEN SUMMARY	
Zone	Lumens
0-10°	105.23
10-20°	302.53
20-30°	460.02
30-40°	557.81
40-50°	583.15
50-60°	532.83
60-70°	414.99
70-80°	251.86
80-90°	79.83
90-100°	1.97
100-110°	1.63
110-120°	1.59
120-130°	1.54
130-140°	1.52
140-150°	1.37
150-160°	1.04
160-170°	0.78
170-180°	0.29

ZONAL LUMEN SUMMARY			
Zone	Lumens	% of Lamp	% of Fixture
0-20°	407.76	N.A.	12.40
0-30°	867.78	N.A.	26.30
0-40°	1425.59	N.A.	43.20
0-60°	2541.57	N.A.	77.00
0-80°	3208.42	N.A.	97.20
0-90°	3288.25	N.A.	99.60
10-90°	3183.02	N.A.	96.50
20-40°	1017.82	N.A.	30.80
20-50°	1600.97	N.A.	48.50
40-70°	1530.98	N.A.	46.40
60-80°	666.85	N.A.	20.20
70-80°	251.86	N.A.	7.60
80-90°	79.83	N.A.	2.40
90-110°	3.60	N.A.	0.10
90-120°	5.19	N.A.	0.20
90-130°	6.73	N.A.	0.20
90-150°	9.62	N.A.	0.30
90-180°	11.73	N.A.	0.40
110-180°	8.13	N.A.	0.20
0-180°	3299.98	N.A.	100.00

POLAR GRAPH



Maximum Candela = 1.963 Located At Horizontal Angle = 260, Verticle Angle = 3 #1 - Vertical Plane Through Horizontal Angles (260 - 80) (Through Max. Cd.)

White light

Contact your Sales representative for UVA photometric data

Product Specifications:

LED & Optical Assembly

CRI: >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/cUL Certified

Environmental: Compliant with material restrictions of RoHS
EPA Est. 90375-MEX-1

Construction & Finish

Housing: Durable, long lasting construction. Steel, electrogalvanized, powder-coated

Lensing: UV transmissive, Acrylic Base

Paint: White, Antimicrobial matte finish

Weight: <16 pounds

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.

Design Life & Warranty:

Warranty: 5 Year on visible light portion of fixture

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 lumens

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: Fits standard T-Bar grid (drop ceilings)

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

CAUTION

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