

Lumination® LED Luminaires



LVR 22 Series - Refit™ Kit 2' x 2' LED Recessed Luminaire

New Generation!
Enhanced Performance,
Upgraded Specifications!

Product Description:

Current's Lumination® LVR Series Recessed LED Refit kits bring a three-dimensional volumetric designer's touch to any drop ceiling landscape. By providing high uniformity, excellent efficiency and reduced glare the LVR is ideal for commercial office, education or healthcare applications. The newly rated lumen maintenance of greater than L85 at 50,000 hours operation offers even lower maintenance costs and now optional "High Performance" products offer DLC premium. LVR is suitable for indoor general lighting for retrofit where the previous fixture "box" remains in place and there is no need to go above the ceiling. With a beautiful three-dimensional look, LVR offers an easy-to-install LED solution. A matte finish, curved or Rectangular diffused lens with no unsightly ribs, smooth uniform light (no pixels or stripes), no dark end caps and delineated details create visual interest in any ceiling. All fixtures available with Daintree's complete portfolio of wireless control options for all use cases. Daintree One and Daintree EZ Connect, offer the ability to upgrade disconnected fixtures into an enterprise grade energy management solution. This allows end users to Build a digital ceiling with already installed infrastructure today, tomorrow, or when they are ready for the productivity benefits of IoT.



Performance Highlights:

Light Output Range: 2000-5000 lumens

CRI: 80+, R9>0, Trigain® >90, R9 > 90

CCT: 3000K/3500K/4000K/5000K

Efficacy: Standard: 108-122 LPW

High Performance: 129 LPW

Input Voltage: 120-277V, 347V

Wattage Range: Standard: 16.5-41.0 watts

High Performance 15.5-31.0 watts

Luminaire Lumen Depreciation: L85@50,000 hours

(see next pages for TM-21 calcs)

Limited Warranty: 5 Years

Certifications:



TriGain®
Technology

Daintree
WIRELESS CONTROLS

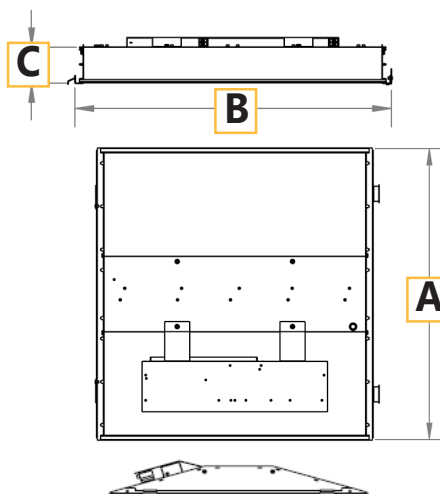
LUTRON



Please refer to the DLC QPL website for the latest and most complete information.
www.designlights.org/QPL

Product Dimensions:

A = 23.0 in
B = 21.7 in
C = 2.5 in



Ordering Number Logic

LVR	22	B		XX				RM		
FAMILY	FAMILY TYPE	GEN.	VOLTAGE	NOMINAL LUMENS	DISTRIBUTION	CRI/CCT	CONTROLS	MOUNTING	FINISH	OPTIONS
LVR = Lumination® Volumetric Refit™	22 = 2' x 2'	B = 2 nd Gen	0 = 120-277 D = 347	XX = Nominal Lumen Level	MM = Med. Curved SS = Med. Rectangular	830 = 80CRI, 3000K ¹ 835 = 80CRI, 3500K 840 = 80CRI, 4000K 850 = 80CRI, 5000K ¹ T35 = TriGain, 90CRI ⁸ , 3500k T40 = TriGain, 90CRI ⁸ , 4000k	SEE CHART BELOW	RM = Refit Mount	WHITE = White WHAM = White Antimicrobial Paint	(blank) = None CP = ChicagoPlenum EL = Emergency Light ³ BZ = Emergency Bypass ⁴ -Dual Shunt Relay to be used with building generator back up systems to override dimming DF = Dim-to-off ⁹ (must be ordered with V1 Controls code) HP = High Performance ⁵

Standard Performance⁵:

EXAMPLE CONFIGURATIONS	LUMINAIRE LUMENS	LUMINAIRE TOTAL SYSTEM WATTS	LUMINAIRE LPW
LVR22B020MM8_VQRMWHITE	2000	16.5	121
LVR22B033MM8_VQRMWHITE	3300	29.0	114
LVR22B040MM8_VQRMWHITE	4000	37.0	108
LVR22B050MM8_VQRMWHITE	5000	41.0	122

High Performance⁵:

EXAMPLE CONFIGURATIONS	LUMINAIRE LUMENS ⁶	LUMINAIRE TOTAL SYSTEM WATTS	LUMINAIRE LPW
LVR22B020MMT_VQRMWHITEHP	2400	19.0	126
LVR22B033MMT_VQRMWHITEHP	3300	25.5	129
LVR22B040MMT_VQRMWHITEHP	4000	31.0	129

Ordering Notes:

- Contact manufacturer for lead times
- Most commonly ordered for Daintree Enterprise Wireless Enabled
- Test switch is remote mounted in the ceiling, EL option not available in 347V
- Contact manufacturer prior to ordering to confirm application
- Most Standard and HP (High Performance) base SKU's are DLC, there are exceptions for 347V and EL for meeting PF and/or THD results. Please check the DLC QPL
- 5000 lumens not available in High Performance
- See product specifications section: Controls on page 4 for additional Daintree system details
- 90 CRI Trigain⁸ is only available on HP (high performance) SKU's
- Must be ordered with V1 (1% Diming) controls code

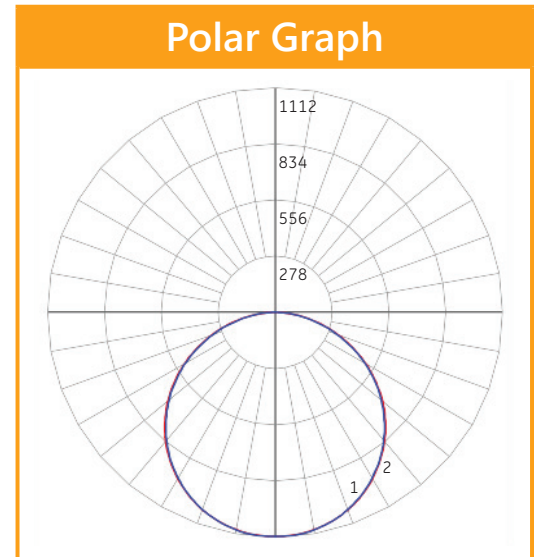
CONTROLS CODE	DESCRIPTION
V1	0-10v Dimming (1%)
VQ	0-10v Dimming
TQ	Daintree Enterprise Wireless Enabled ²
TS	Daintree Enterprise Wireless Enabled with Daintree WFA100
TZ	Daintree Enterprise Wireless with fixture integrated sensor
TT	Daintree EZ Connect Wireless with fixture integrated sensor
T1	Daintree One with fixture integrated sensor with factory programmed preset ⁴
SQ	Digital Input Driver (does not have 0-10v input) that uses a field installed accessory (in the ceiling -not the fixture) that is Daintree compatible such as Daintree One, EZ Connect or Enterprise sensors
LB	Lutron Vive - VDO or DFCSJ OEM OCC Integral Fixture Control with Sensor Daylight and Occupancy
LU	Lutron Vive - VRF or DFCSJ OEM RF Integral Fixture Control (RF only) No sensor

SENSOR KIT (FOR SQ CONTROL OPTION ONLY)	PRODUCT CODE
Daintree One/EZ Connect: LSAATT/T1FM6 (WIT100 Sensor Kit)	93098472
Daintree Enterprise: LSAATZFM6(WIZ100 Sensor Kit)	93098473
Daintree Ent. Multi Sensor: LSAATMFM6 (WMZ10 Sensor Kit)	93119594

Photometric Data

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



LED & Optical Assembly

CRIa: >80+ (835/840/850), >90 (T35,T40)

R9: >0 (835/840/850), >90 (T35,T40)

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

TM-21 LED Data:

Standard Performance:

Estimated Lumen Maintenance: L81 > 100,000 hrs

Reported: L88 > 60,000 hrs

Premium Performance:

Estimated Lumen Maintenance: L75 > 100,000 hrs

Reported: L90 > 36,000 hrs

Reported: L77 > 90,000 hrs

Electrical

Input Voltage: 120-277, 347 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 +35°C

Storage Temperature: -40°C to +70°C

Surge Protection: ANSI C82.77 Compliant

Location: Damp

Insulation Contact: Type IC Rated

Safety: UL/cUL Listed

Environmental: RoHS compliant

Utility: DLC™ Qualified Product Listed, check www.designlights.org/QPL for specific products

Construction & Finish

Housing: Durable, long lasting construction. Steel, electrogalvanized, cold-rolled, commercial quality.

Lensing: Precision formed optical lens/diffuser curved and technically balanced for efficacy, and transmissivity. This offers smooth uniform light (no pixels or stripes) and no dark end caps. There are no unsightly ribs which are typically used to distract from pixels, stripes and poor uniformity.

Paint: Highly reflective matte finish

Weight: <11 pounds

Controls

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

Minimum Dimming: 10% of rated lumen LED drive current. Contact manufacturer for other available options.

Optional Dimming: Contact Manufacturer

Wireless Networking and Sensing Device Options*

Daintree One: Wireless fixture integrated sensor that is perfect for single fixtures or small area applications. Standalone wireless lighting controls that work independently. Comes preset from the factory, yet can be upgraded to Daintree EZ Connect and/or Daintree Enterprise in the future. Factory preset to shut off 20 minutes after the space is vacated of occupants. Daylight harvesting preset enabled on.

Daintree EZ Connect: Wireless fixture integrated sensor that is designed for room based controls where a group of fixtures communicate to each other and communicate wirelessly in chorus as a system. The advantage is simple, minimal field based commissioning. Factory preset to shut off 20 minutes after the space is vacated of occupants. No daylight harvesting set in initial preset. EZ Connect wireless lighting controls are set up and/or can be changed by the Daintree EZ Connect application that can be downloaded via a smart device.

Daintree Enterprise: Wireless fixture integrated sensor technology that is ideal for multisite lighting system management. System requires software and commissioning. Monitor multiple controls, lighting, energy, HVAC with unlimited potential for other (3rd party) sensor integration. "Open on the bottom" means that ZigBee communication protocol is an industry standard with countless wireless hardware sensing options. "Open on the top" means that the data from the sensors can be used by any 3rd party software supplier/developer, be it part of a complete BMS system or simple API (Application Programming Interface or "App"). Daintree Enterprise offers a complete future proof solution from any Daintree enabled installed base of fixtures.

Lutron Vive: Vive by Lutron is a simple, scalable, wireless control that can be installed in a single space or throughout an entire campus. It's designed to meet today's energy codes, be used in new construction or retrofit situations, and meet your budgetary needs. And with a wide family of products – including sensors, remotes, load controls, and an available software management suite -- Vive provides the flexibility to select the products you want and handle any on-site challenges with ease.

Power Addition for Controls: <2 watts

**Contact Factory for specific option availability*

Mounting

Typical Mounting: Fits standard T-Bar grid luminaires (drop ceilings)

Accessories & Options:

Optional Emergency Battery: Provides 90-minutes of Emergency lighting.

Notes: EL option is not available with 347V option, test button is remote mounted in the field.

Design Life & Warranty

System Warranty: 5 Year

Minimum Luminaire Design Lifetime: > 10 Years

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

Reliability Testing: Components and systems evaluation