

Ovation Series Retrofit Kit

Prefix: **KVN24**

The Ovation Series LED Retrofit system has been developed to dramatically improve existing recessed troffer performance using Solid State Lighting (SSL) technologies. The Ovation retrofit series provides an attractive, energy efficient architectural look which has been specifically designed to upgrade existing fluorescent recessed troffer style fixtures. Comfortable, low glare, uniform lighting is attributed to this style of retrofit. Typical applications for this type of product are interior spaces where finished ceilings and walls exist. Applications Include:

- Commercial/Corporate Office Spaces
- Retail Spaces, Public Spaces and Airports
- Schools, Colleges and Universities
- Hospitals, Government Facilities and Military Bases

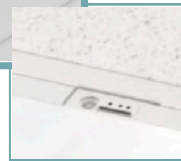


DLC Application Category #14
“Integrated Retrofit Kits for 2x4 Luminaires”

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org to confirm which versions are qualified.



Optional Wireless Sensor Shown Installed



project:

fixture type:

catalog #:

quantity:

ORDERING GUIDE

KVN	24	N							
PREFIX/SERIES	SIZE	OPTICS (DISTRIBUTION)	LUMEN OUTPUT*	DRIVER VOLTAGE	DRIVER TYPE	COLOR TEMP.	CRI	LENS (DIFFUSER)	RETROFIT OPTIONS
KVN - Ovation Series Retrofit Kit	24x2x4	N - Normal	L015 - 1500 (11.7W) L020 - 2000 (15.1W) L030 - 3000 (22.2W) L040 - 4000 (29.2W) L050 - 5000 (39.6W) L060 - 6000 (48.3W) Lxxx - Custom (Specify)	UNV - Universal Voltage (120v - 277v) (50/60 Hz)	DM - 0-10v Low Voltage Dimming (10% - 100%) (Standard) DM1 - 0-10v Low Voltage* Dimming (1% - 100%) LH1 - Lutron Hi-Lume* Dimming (1% - 100%) LV - Line Voltage* Dimming (120V only) DA1 - Dali-2 and D4i cert* Dimming (1% - 100%) *Special Order Only	C27 - 2700 K* C30 - 3000 K* C35 - 3500 K C40 - 4000 K C50 - 5000 K* *Special Order Only	Blank -80CRI 9-90 CRI* S -Sunlike 95CRI* *Special Order Only	AF - Frosted Linear Prism Acrylic Lens (Standard)	AR - Air Return Slots MPCxy - Metal Pan Ceiling†† HDCxyz - Hard Ceiling†† SNS21x - Philips Wireless Sensor (EasySense)††† SVP -Silvair PIR Wireless Sensor††† SVM -Silvair Microwave Sensor†††† LAR - Lutron Athena Wireless control RF Only††††† LAP -Lutron Athena Wireless PIR Sensor††† LVR - Lutron Vive Wireless control RF Only††††† LVP - Lutron Vive Wireless PIR Sensor††† WLI -Wave Linx Integral PIR Sensor††† Axx - Auxiliary output 12 or 24V EM - Emergency Battery Pack †

† Standard “EM” option to be NiCd Battery @ 5 Watts constant power @ 90 min. duration (standard). Consult factory for all available options.

†† See page 2/4 for more information on dimensional requirements.

††† PIR sensors provide: Occupancy/Vacancy, Daylight Harvesting, Task Tuning & Advanced Grouping control options. (max 12 ft mounting height, highbay options available upon request)

†††† Microwave sensor provides: Occupancy/Vacancy, Task Tuning, Energy Monitoring & Advanced Grouping control options. (Sensor not visible from exterior of fixture, max 12 ft mounting height)

††††† RF sensors provide: Wireless fixture control only. (Wireless controls must be located within 60 ft (18 m) from each other in the line of sight, or 30 ft (9 m) through walls)



PRIOR TO RETROFITTING THE EXISTING FLUORESCENT FIXTURE, PLEASE NOTE THE FOLLOWING: Fluorescent lamps contain small amounts of mercury. Such lamps are labeled “Contains Mercury” and / or with the symbol “Hg.” Lamps that contain mercury must be disposed of in accordance with local requirements. Information regarding lamp recycling and disposal can be found at www.lamprecycle.org.



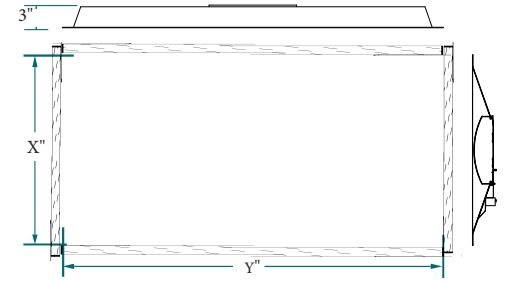
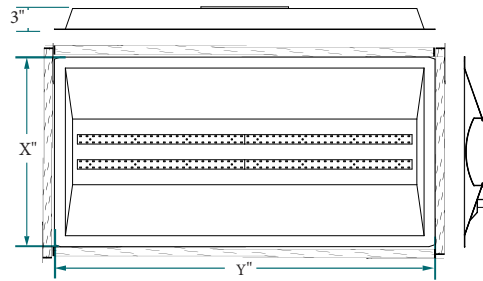
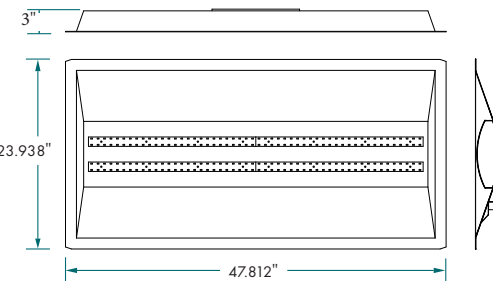
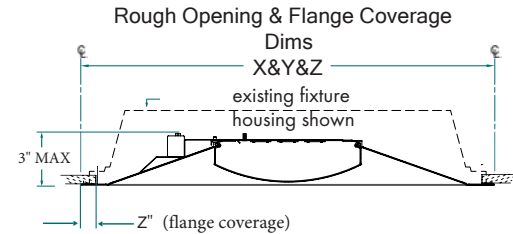
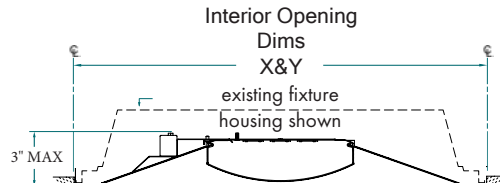
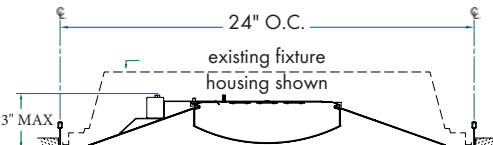
KVN 2x4 Cross Section

Prefix: KVN24

T-GRID Mount (Standard)

Metal Pan Mount (MPC)

Hard Ceiling Mount (HDC)



Ordering Code: MPC

Ordering Code: HDC

CONSTRUCTION

- Precision die formed from 22 gauge cold rolled steel.
- Mechanically fastened / resistance welded.
- Consult factory for all options or any modification needed.

FINISH

- High Reflectance Matte White polyester powder coat baked enamel for extreme durability and superior fixture efficiency. Total Reflectance = 97%.

LED's/OPTICS

- High performance LED boards manufactured specifically for interior lighting. LED boards feature the most current LEDs for maximum performance, efficiency and longevity.
- Standard color temperatures offered are 3500K and 4000K. Consult factory for all other color temperature options. 80 CRI (Minimum) standard, 90 CRI and Sunlike 95 CRI Options available.
- RoHS Compliant.
- Always consult factory for the latest developments and improvements concerning LEDs and Optics.

DRIVERS

- Electronic, constant current type. Universal voltage (120v-277v)
- 0-10v dimmable. 10-100% (Standard)
 - 100% (Optional).
- Line Voltage Dimming Drivers are optional.
- Auxiliary output (Optional) used to power various sensors / wireless modules. (12 or 24Vdc options specify when ordering)
- Suitable for dry and damp locations.
- UL Recognized Class P, RoHS Compliant.

LENS (DIFFUSER)

- Extruded from 100% clear, virgin acrylic.
- Extruded linear ribs provide clean, aesthetic architectural look.

MOUNTING

- Retrofit kit is designed to be mounted into an existing prismatic or parabolic troffer installed into a standard grid (NEMA "G") or non-grid (NEMA "NFG") ceiling T grids. Consult factory for all other special mounting conditions.

ELECTRICAL

- Retrofit kits are UL/Class III listed and labeled.
- LM80 performance for 50,000+ hours
- Driver disconnect provided where required to comply with US & Canadian codes.

QUALITY CONTROL

- All retrofit kits are designed, fabricated, painted, assembled, tested, packaged and shipped from RENOVA's manufacturing facility in Warwick, RI (USA).

WARRANTY

- 5-year limited warranty. Please refer to RENOVA's website at www.renova.com/sales/warranties for the latest warranty terms and conditions.

NOTES:

LED Drivers have adjustable output capability. A wide range of input watts/lumen output can be adjusted up or down on all models to suit a particular application. Always consult factory for the latest information.

Photometric data, IES files and all other information is available on request.

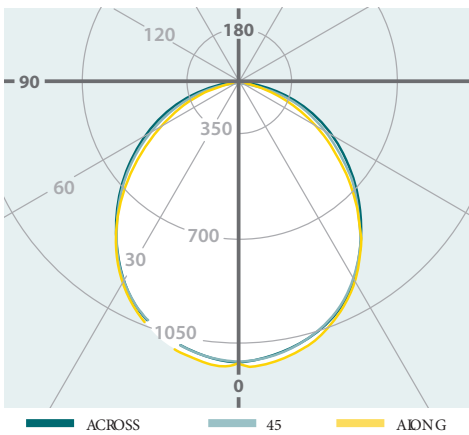
RENOVA products are constantly being improved; therefore the information shown is subject to change without notice. Always consult your lighting representative or RENOVA Lighting Systems, Inc. for the latest information.



Catalog #: L-KVN24-WN-L30-UNV-30DM-W23-208-C40-AF
 Photometric Test Report #: 10551935-803985
 Delivered Lumens: 3075
 Efficacy (Lumens/Watt): 129.7
 Power: 23.68w @ 120 VAC
 Power Factor: 0.996
 Current THD: 5.23%
 CRI: 82.6
 CCT: 3921 K
 LED Life: 50,000+ hrs

Coefficients of Utilizations (%)									
Effective Floor Cavity Reflectance 20 Per (pfc=0.20)									
pcc	80			70			50		
	70	50	30	70	50	30	50	30	
RCR	0	119	119	119	116	116	116	111	111
	1	110	105	101	107	103	100	99	96
	2	101	94	87	99	92	86	88	83
	3	93	83	75	90	81	75	79	73
	4	86	75	67	84	73	66	71	64
	5	79	67	59	77	66	58	64	57
	6	73	60	52	71	59	51	58	51
	7	67	54	46	66	53	45	52	45
	8	62	49	41	61	48	41	47	40
	9	58	45	37	57	44	37	43	36
	10	54	41	33	53	40	33	39	32

Candela Distribution Polar Plot



Spacing/Mounting Height: 1.2
 SC (Along): 1.2 SC (Across): 1.2

Cone of Light Tabulation

Ht.	Fc	Dia. (Ft.)
4'	73.7	4.88'
6'	32.8	7.32'
8'	18.4	9.75'
10'	11.8	12.2'
12'	8.19	14.6'
14'	6.02	17.1'
16'	4.61	19.5'

Luminaire Summary CD./SQ.M.

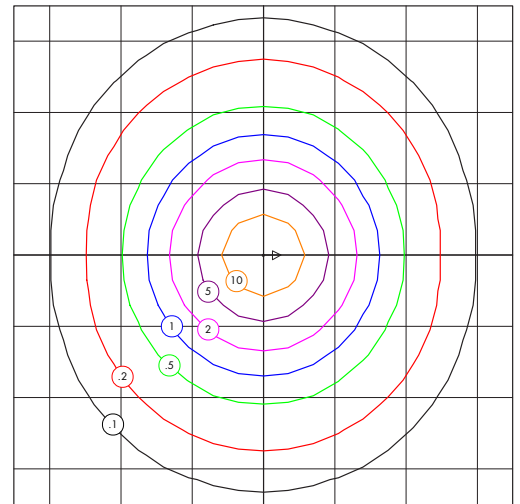
Angle	Along	45.0	Across
45	1645	1689	1705
55	1420	1526	1583
65	1167	1383	1524
75	910	1320	1495
85	644	1092	1057

Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	904	29.39
0-40	1459	47.45
0-60	2469	80.32
0-90	3075	100.00
40-90	1616	52.55
60-90	605	19.68
90-180	0	0
0-180	3075	100.00

Horizontal Footcandles

Mounting Height = 8'-0" A.F.F.
 Maximum Calculated Value = 18.43 Fc



Grid Lines in Units of Mounting Height

10 fc 5 fc 2 fc 1 fc 5 fc 2 fc 1 fc



KVN Series LED Luminaires Listed on the DLC Qualified Products List (QPL)

RENOVA Catalog Number	Delivered Lumens	Input Watts	Lumens per Watt	DLC - QPL Classification
KVN24-N-[L015 to L070]-UNV-DM-C35-AF-SNS[2,3]00-[BLANK, EM, AR]	1500-7004	Varies by Output	144.53	Standard
KVN24-N-[L015 to L070]-UNV-DM-C35-AF-SNS[2,3]00-[BLANK, EM, AR]	1500-7004	Varies by Output	142.59	Standard
KVN24-N-L030-UNV-DM-C35-AF-xx	2886	22.19	130.10	Standard
KVN24-N-L030-UNV-DM-C40-AF-xx	2966	22.19	133.67	Standard
KVN24-N-L040-UNV-DM-C35-AF-xx	3799	29.24	129.92	Standard
KVN24-N-L040-UNV-DM-C40-AF-xx	3771	29.20	129.14	Standard
KVN24-N-L050-UNV-DM-C35-AF-xx	5586	41.09	135.95	Standard
KVN24-N-L050-UNV-DM-C40-AF-xx	5741	41.09	139.72	Standard
KVN24-N-L060-UNV-DM-C35-AF-xx	5808	48.49	119.78	Standard
KVN24-N-L060-UNV-DM-C40-AF-xx	5969	48.49	123.10	Standard
KVN24-N-L070-UNV-DM-C35-AF-xx	6492	55.86	116.22	Standard
KVN24-N-L070-UNV-DM-C40-AF-xx	6672	55.86	119.45	Standard
KVN24-N-L080-UNV-DM-C35-AF-xx	7391	65.38	113.05	Standard
KVN24-N-L080-UNV-DM-C40-AF-xx	7596	65.38	116.19	Standard
KVN24-N-L090-UNV-DM-C35-AF-xx	8729	68.55	127.34	Standard
KVN24-N-L090-UNV-DM-C40-AF-xx	8971	68.55	130.87	Standard