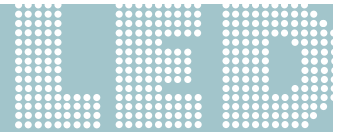




category: **LED** Prefix: **KCN22**
Cynergy Series Retrofit Kit



project:

fixture type:

catalog #:

quantity:

Innovative Lighting Ideas
Energy Efficient Solutions



The Cynergy Series LED Retrofit system has been developed to dramatically improve existing recessed troffer performance using Solid State Lighting (SSL) technologies. This 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



Cynergy Retrofit 2x2

RoHS
Compliant

LED lighting facts®
A Program of the U.S. DOE



Philips Fortimo LEDs Provide High Quality White Light with a High CRI Index.



Philips Xitanium High Efficiency Drivers Offer Many Degrees of Control Over Lumen Output and Input Watts



High Light Transmission Frosted Lens (Standard)



Precision Fabricated Frame Assembly (Air Return Slots are Optional) Custom Colors are Optional

FEATURES

CONSTRUCTION

- Precision die-formed from 22 ga. cold rolled steel.
- Mechanically fastened/resistance welded for superior construction.
- Finish on all internal bracketry to be prepainted. high reflectance gloss white polyester powder coat enamel.
- Finish on all external cosmetic trim to be postpainted "textured" high reflectance white polyester powder coat enamel. Custom colors are available.
- Heavy gauge steel (NYC) is optional.

LEDs/OPTICS—Philips Fortimo LEDline provides high quality white light in terms of color rendition and color consistency and are part of the Fortimo future proof promise. The color consistency is comparable with conventional fluorescent lighting. LEDline boards provide:

- Increased energy efficiency
- Improved temperature management
- System compatible with all Xitanium drivers
- Module efficiency up to 140 lm/w
- Minimum color rendering index (CRI) of 80
- Available in 3000k, 3500k, 4000k, and 5000k color temperatures
- Lambertian beam shape (Optics) emitted from LEDs helps provide even illumination
- RoHS Compliant
- Conflict-free electronic components
- UL Class 2 Recognized for dry & damp location

Always consult factory for the latest developments & improvements concerning LEDs and optics.

DRIVERS—Philips Xitanium LED Electronic Drivers are system matched to the Fortimo LED boards to provide high-efficiency and reliability. Some of the attributes include:

- 54 watt voltage output (max.)
- Robust construction provides protection against dust, moisture, and destructive vibrations.
- Adjustable output (factory set) to "dial in" lumen output and input watts
- Three available options for dimming include:
 - Low voltage 0-10v Dimming (120v-277v)
 - Line Voltage Dimming (120v or 277v)
 - Step Dimming (120v-277v)
- RoHS Compliant
- Conflict-free electronic components
- UL Class 2 Recognized for dry & damp locations

LENS (Diffuser)

- Custom extruded profile for precision fit.
- Linear prisms designed for both visual appeal & control of lighting distribution.
- Extruded from 100% clear, virgin acrylic.
- Special formula high light transmission frosted acrylic polymer used for glare free shielding and high overall fixture efficiency.
- Consult factory for all available lens/diffuser options.

MOUNTING—Retrofit System is designed to be mounted in an existing recessed troffer. Please refer to installation instructions for proper fit and sizing.

ELECTRICAL

- Long-life LEDs and high-efficiency drivers provide superior quantity and quality of illumination for extended service life. Cynergy series is rated to deliver LM80 performance for 50,000+ hrs.
- Bi-level dimming option allows system to be switched to 50% power for compliance with common energy codes while maintaining fixture appearance.
- Ballast disconnect provided where required to comply with US & Canadian codes

CONTROLS

- Compatible with industry standard 0-10v Dimming, Step Dim, and Line Voltage Dimming controls. (Per driver type selection.)

LISTINGS & CERTIFICATIONS

- UL/CUL listed for safety (1598)
- UL/CUL listed for Dry/Damp Locations
- RoHS Compliant
- Lighting Facts (U.S. Department of Energy) Certified

QUALITY CONTROL—All retrofit components are designed, fabricated, assembled, tested, packaged and shipped from RENOVA's manufacturing facility. All retrofit components and kits are inspected and labeled prior to shipment.

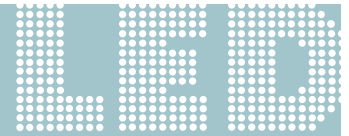
WARRANTY—5-year limited warranty. Please refer to RENOVA's website at www.renova.com/sales/warranties for the latest warranty terms and conditions.

*Note: Specifications subject to change without notice.



Innovative Lighting Ideas
Energy Efficient Solutions

category: **LED** Prefix: **KCN22**
Cynergy Series Retrofit Kit

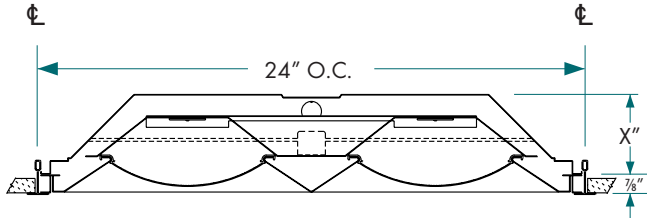


2' x 2'

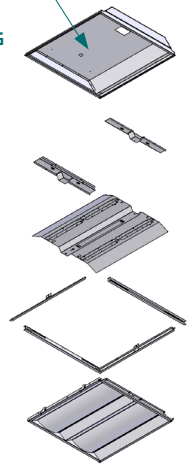


**KCN22 Retrofit Kit
(Shown Installed)**

KCN 2x2 Cross Section



EXISTING
FIXTURE
HOUSING
SHOWN



ORDERING GUIDE

L	- KCN	22	-	-	-	-	-	-	-	-
LIGHT SOURCE	PREFIX/SERIES	SIZE	REFLECTOR MATERIAL	OPTICS (DISTRIBUTION)	LUMEN OUTPUT	DRIVER VOLTAGE	DRIVER TYPE	INPUT WATTS	COLOR TEMP.	OPTIONS
LED	Recessed Cynergy Series Retrofit Kit	2x2	M Miro4 (95% TR) W White Paint (91% TR) X White Optics (96% TR)	F - Focused N - Normal S - Spread *Normal is Standard	L23 - (2300)* L27 - (2700) L34 - (3400) L38 - (3800) L43 - (4300) L45 - (4500)	120 - 120v, 60 Hz 277 - 277v, 60 Hz UNV - 120v-277v, 60 Hz (Multi-Tap)	54 DN - 0-10v Dimming (Standard) 54 XR - Line Voltage Dimming (120v) 54 XV - Line Voltage Dimming (277v) 54 SN - Step Dimming	W23 - (23)* W30 - (30) W39 - (39) W45 - (45) W54 - (54) W57 - (57)	C30 - (3000K) C35 - (3500K) C40 - (4000K) C50 - (5000K)	AF - Frosted Linear Prism Acrylic Lens (Standard) AR - Air Return Slots

SAMPLE ORDERING NUMBER

L-KCN22-WN-L27-UNV-54DN-W30-C30-AF



DLC Application Category #31
"Retrofit Kits for 2x2 luminaires for Ambient Lighting of Interior Commercial Spaces"

NOTES:

Philips Xitanium 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.



MERCURY-FREE



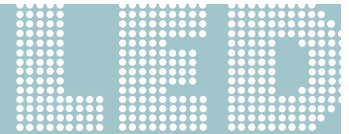
PRIOR TO RETROFITTING THE EXISTING FLUORESCENT FIXTURE, PLEASE NOTE THE FOLLOWING:

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.

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.



category: LED Prefix: KCN22
Cynergy Series Retrofit Kit



Innovative Lighting Ideas
Energy Efficient Solutions

2' x 2' Photometric Data for Catalog #:
L-KCN22-WN-L34-UNV-54DN-W39-C30-AF



The following reports were used to
compile the data listed below:

- Integrating Sphere Test Report #99300
- Photometric Indoor Test Report #99292

Delivered Lumens	3,434
Efficacy (Lumens/Watt)	86.5
Power	39.69w
Voltage	120v
Power Factor	.991
THD	14.4%
CRI	80.9
CCT	3098K
LED Life	50,000+ hrs

See TM-21
Data Sheet

Zonal Lumen Summary

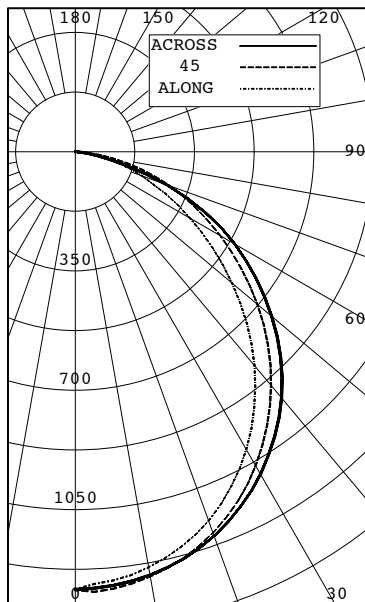
Zone	Lumens	%Luminaire
0-30	984	29.73
0-40	1592	48.09
0-60	2718	82.07
0-90	3311	100.00
40-90	1719	51.91
60-90	594	17.93
90-180	0	0.00
0-180	3311	100.00

Intensity (Candlepower) Summary

Angle	Along	22.5	45.0	67.5	Across	Output Lumens
0	1285	1285	1285	1285	1285	
5	1263	1275	1287	1286	1278	123
10	1239	1251	1266	1268	1261	
15	1200	1215	1234	1239	1235	345
20	1149	1165	1188	1197	1197	
25	1083	1102	1130	1145	1148	516
30	1006	1026	1060	1081	1089	
35	915	941	981	1008	1020	608
40	817	846	894	926	941	
45	711	745	798	833	852	607
50	601	638	697	734	753	
55	491	531	593	629	647	518
60	388	425	490	524	539	
65	293	331	391	418	421	369
70	209	243	299	301	288	
75	136	166	204	179	155	186
80	75	98	113	80	65	
85	29	38	35	23	20	39
90	0	0	0	0	0	

Coefficients of Utilizations (%)

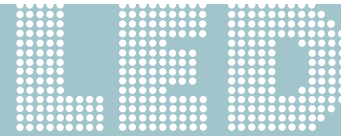
Sq. Ft. Room	90				80				70				50				30				10				0
	70	50	30	10	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0			
0	122	122	122	122	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100			
1	113	108	104	100	110	106	102	99	108	104	100	97	99	97	94	96	93	91	92	90	89	87			
2	104	96	90	84	101	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77	75			
3	95	85	77	71	93	84	76	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65			
4	88	77	68	62	86	75	67	61	84	74	67	61	72	65	60	69	64	59	67	63	59	57			
5	82	69	60	53	80	68	59	53	77	67	59	53	64	58	52	63	56	52	61	56	51	49			
6	75	62	53	47	73	61	52	47	71	60	52	45	58	51	46	56	50	45	55	49	45	43			
7	69	55	47	41	67	55	46	41	66	54	46	40	52	45	40	51	44	40	50	44	39	37			
8	64	50	42	36	63	50	42	36	61	49	41	36	48	41	36	46	40	35	45	39	35	33			
9	60	46	37	32	58	45	37	32	57	45	37	32	43	36	31	42	36	31	41	35	31	29			
10	55	42	33	28	54	41	33	28	53	41	33	28	40	33	28	39	32	28	38	32	28	26			



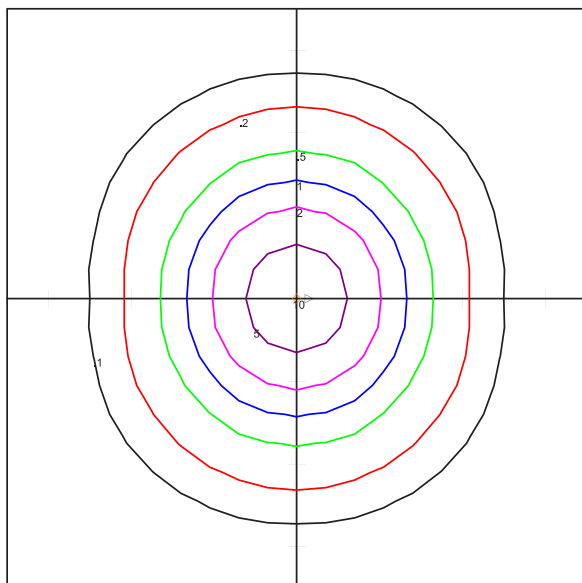
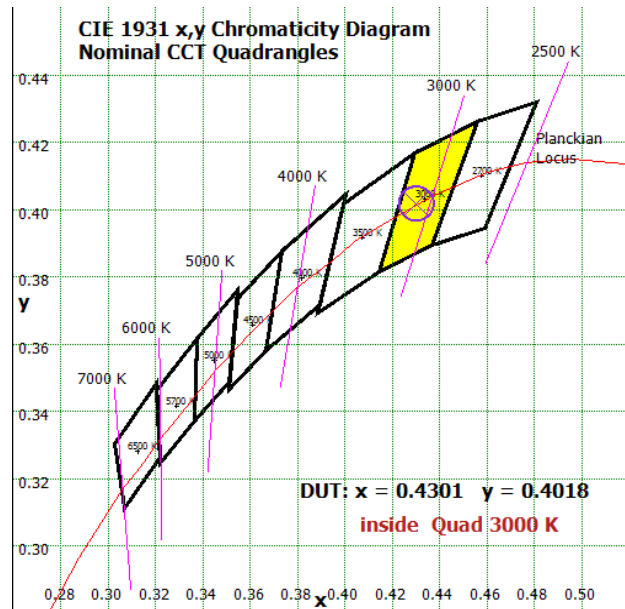
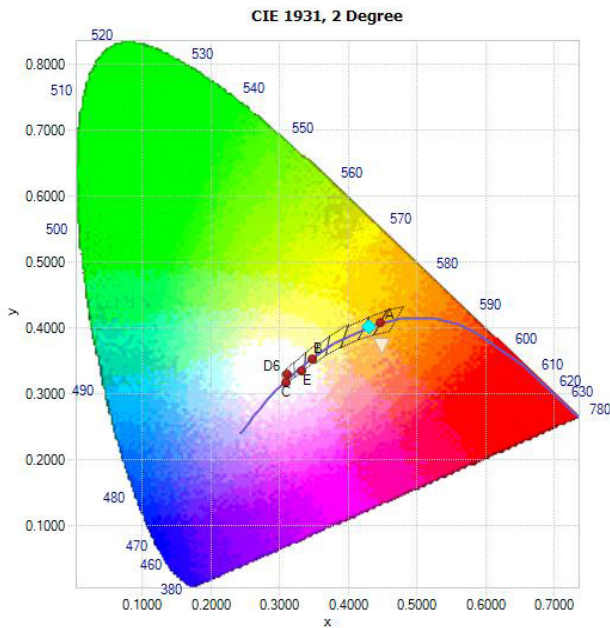
L-KCN22-WN-L34-UNV-54DN-W39-C30-AF
Independent Test Report #99292
Efficacy (Lumens/Watt): 86.5
Spacing/Mounting Height: 1.3
SC (Along): 1.2 SC (Across): 1.3



category: **LED** Prefix: **KCN22**
Cynergy Series Retrofit Kit



Diagrams for Catalog #: L-KCN22-WN-L34-UNV-54DN-W39-C30-AF



Renova Lighting Systems Inc
 L-KCN22-WN-L27-UNV-W30-C31-AF (Red Rset)

Horizontal Footcandles
 Scale: 1 Inch = 10 Ft
 Mounting Height = 10.00 Ft
 Maximum Calculated Value = 10.37 Fc

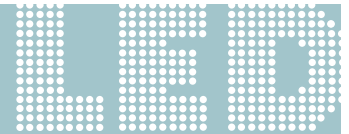
MOUNTING HEIGHT ABOVE WORK PLANE (FT)	CONE OF LIGHT				
	INITIAL FC AT NADIR -FCN (FC)	.1*FCN (FC)	10% LIGHTED DIAMETER (FT)	.5*FCN (FC)	50% LIGHTED DIAMETER (FT)
1	1037.0	103.7	2.7	518.5	1.2
2	259.2	25.9	5.4	129.6	2.4
3	115.2	11.5	8.1	57.6	3.7
4	64.8	6.5	10.8	32.4	4.9
5	41.5	4.1	13.5	20.7	6.1
6	28.8	2.9	16.3	14.4	7.3
7	21.2	2.1	19.0	10.6	8.5
8	16.2	1.6	21.7	8.1	9.8

10% CONE ANGLE: 107.1 DEGREES
 50% CONE ANGLE: 62.8 DEGREES



category: LED Prefix: KCN22

Cynergy Series Retrofit Kit



Innovative Lighting Ideas
Energy Efficient Solutions



L-KCN22-WN-L27-UNV-54DN-W30-C30-AF

LED lighting facts
A Program of the U.S. DOE

The U.S. Department of Energy's LED Lighting Facts® Program has verified product performance based on industry-standardized testing.

For details, see: www.lightingfacts.com/products

Model # L-KCN22-WN-L27-UNV-54DN-W30-C30-AF

L-KCN22-WN-L34-UNV-54DN-W39-C30-AF

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Model # L-KCN22-WN-L34-UNV-54DN-W39-C30-AF

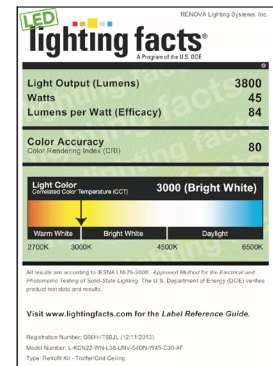
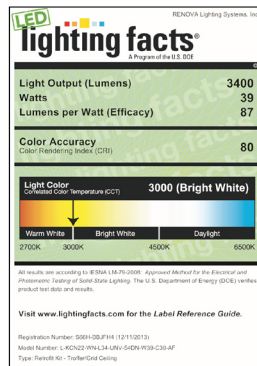
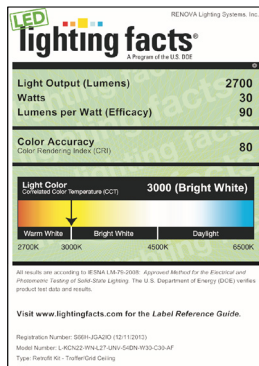
L-KCN22-WN-L38-UNV-54DN-W45-C30-AF

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Model # L-KCN22-WN-L38-UNV-54DN-W45-C30-AF



L-KCN22-WN-L43-UNV-54DN-W54-C30-AF

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For details, see: www.lightingfacts.com/products

Model # L-KCN22-WN-L43-UNV-54DN-W54-C30-AF

L-KCN22-WN-L45-UNV-54DN-W57-C30-AF

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For details, see: www.lightingfacts.com/products

Model # L-KCN22-WN-L45-UNV-54DN-W57-C30-AF

