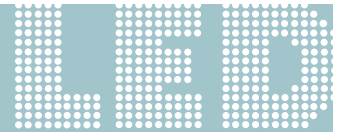




category: **LED** Prefix: **RCN24**

Cynergy Series

High Efficiency LED Luminaire



project:

fixture type:

catalog #:

quantity:

Innovative Lighting Ideas
Energy Efficient Solutions



The Cynergy (CYN) Series has been developed for illumination of interior spaces where superior advanced LED lighting is required together with high fixture efficiency. This series provides an attractive, energy efficient architectural look which has been specifically designed to replace existing parabolic troffer style fixtures.

Comfortable, low glare, uniform lighting is attributed to this style of fixture.

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 Recessed 2x4

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 with 30% "DR" additive (used to resist breakage).
- 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—Luminaire is designed to be mounted in a standard NEMA Type "G" T-Bar ceiling grid.

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

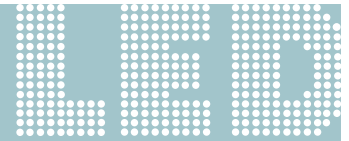
QUALITY CONTROL—All fixtures are designed, fabricated, assembled, tested, packaged and shipped from RENOVA's manufacturing facility. All fixtures and kits are inspected and labeled prior to shipment.

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.



category: **LED** Prefix: **RCN24**
Cynergy Series High Efficiency LED Luminaire

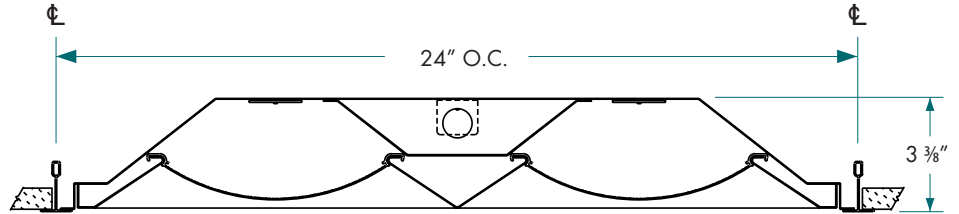


**Innovative Lighting Ideas
 Energy Efficient Solutions**

2' x 4'



RCN 2x4 Cross Section



ORDERING GUIDE



LIGHT SOURCE	PREFIX/SERIES	SIZE	REFLECTOR MATERIAL	OPTICS (DISTRIBUTION)	LUMEN OUTPUT	DRIVER VOLTAGE	DRIVER TYPE	INPUT WATTS	COLOR TEMP.	OPTIONS
LED	Recessed Cynergy Series	2x4	M Miro4 (95% TR) W White Paint (91% TR) X White Optics (96% TR)	F - Focused N - Normal S - Spread *Normal is Standard	L31 - (3100)* L44 - (4400)	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	W28 - (28)* W44 - (44)	C30 - (3000K) C35 - (3500K) C40 - (4000K) C50 - (5000K)	AF - Frosted Linear Prism Acrylic Lens (Standard) AR - Air Return Slots

SAMPLE ORDERING NUMBER

L-RCN24-WN-L44-UNV-54DN-W44-C30-AF



DLC Application Category #17
 "2x4 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.

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: **RCN24**
Cynergy Series High Efficiency LED Luminaire



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**2' x 4' Photometric Data for Catalog #:
 L-RCN24-WN-L44-UNV-54DN-W44-C30-AF**



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

- Integrating Sphere Test Report #37103
- Photometric Indoor Test Report #37102

Delivered Lumens	4,437
Efficacy (Lumens/Watt)	100
Power	44.32w
Voltage	120v
Power Factor	.992
THD	9.81%
CRI	81.5
CCT	3071K
LED Life	50,000+ hrs

See TM-21 Data Sheet

Zonal Lumen Summary

Zone	Lumens	%Luminaire
0-30	1295	30.69
0-40	2095	49.67
0-60	3537	83.85
0-90	4218	100.00
40-90	2123	50.33
60-90	681	16.15
90-180	0	0.00
0-180	4218	100.00

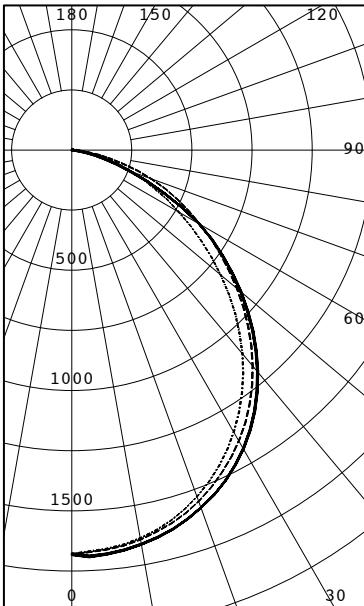
Intensity (Candlepower) Summary

Output Lumens

Angle	Along	22.5	45.0	67.5	Across	
0	1681	1681	1681	1681	1681	
5	1665	1669	1668	1675	1686	161
10	1639	1643	1645	1653	1665	
15	1595	1600	1606	1618	1630	453
20	1531	1538	1551	1568	1580	
25	1449	1459	1479	1502	1515	680
30	1350	1364	1392	1419	1431	
35	1234	1253	1289	1317	1326	801
40	1104	1128	1169	1194	1202	
45	961	991	1037	1058	1064	788
50	810	844	896	914	917	
55	657	696	754	767	767	654
60	514	556	616	622	609	
65	385	426	485	461	427	440
70	268	308	355	298	262	
75	168	204	224	167	142	203
80	88	113	112	78	67	
85	30	38	32	23	20	39
90	0	0	0	0	0	

Coefficients of Utilizations (%)

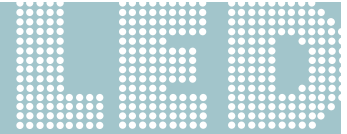
Sq. Ft. Room	90		80		70		50		30		10		0									
	70	50	30	10	70	50	30	10	70	50	30	10	0									
0	122	122	122	122	119	119	119	119	116	116	116	111	111	111	106	106	106	102	102	102	100	
1	113	108	105	101	110	106	103	99	108	104	101	98	100	97	95	96	94	92	93	91	89	87
2	104	97	91	85	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76
3	96	86	79	72	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66
4	89	78	69	63	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58
5	83	70	61	55	80	69	60	54	78	68	60	54	65	59	54	64	58	53	62	57	52	51
6	76	63	54	48	74	62	54	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	70	56	48	42	68	56	47	42	67	55	47	41	53	46	41	52	45	41	51	45	40	39
8	65	51	43	37	63	50	43	37	62	50	42	37	48	41	37	47	41	36	46	40	36	34
9	60	47	38	33	59	46	38	33	57	45	38	33	44	37	32	43	37	32	42	36	32	30
10	56	43	34	29	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	28	27



L-RCN24-WN-L44-UNV-54DN-W44-C30-AF
 Independent Test Report #37102
 Efficacy (Lumens/Watt): 100.0
 Spacing/Mounting Height: 1.3
 SC (Along): 1.2 SC (Across): 1.3



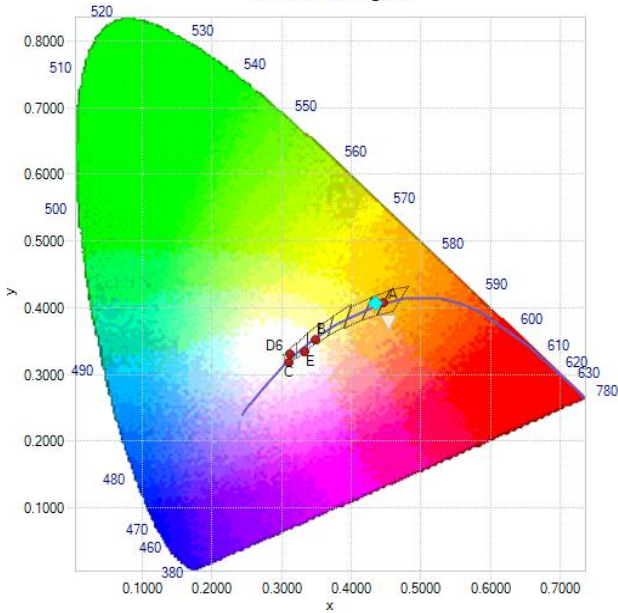
category: **LED** Prefix: **RCN24**
Cynergy Series High Efficiency LED Luminaire



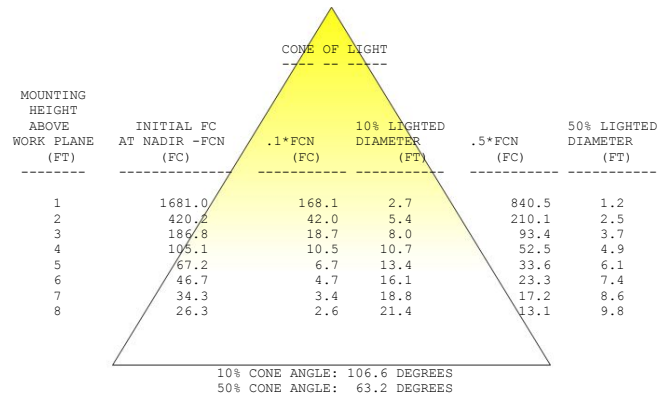
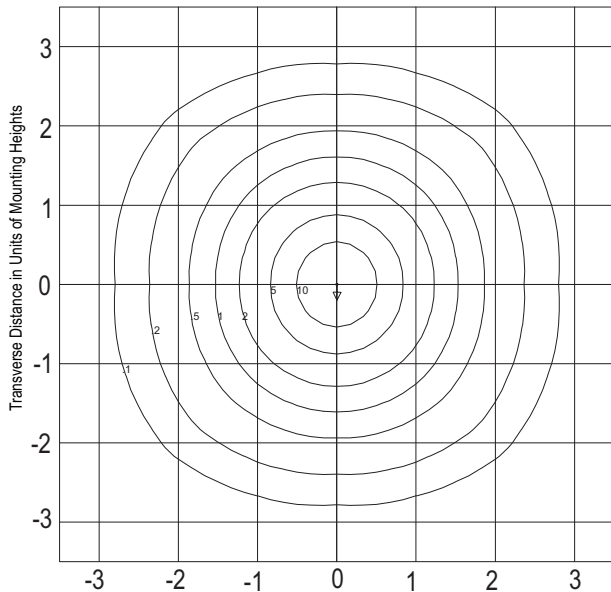
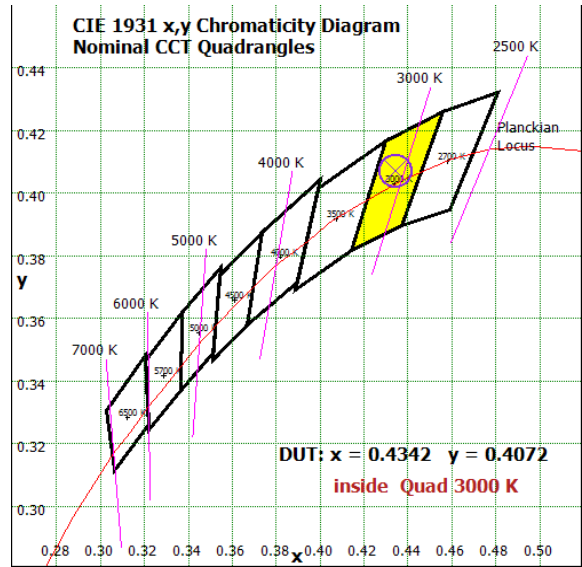
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Diagrams for Catalog #: L-RCN24-WN-L44-UNV-54DN-W44-C30-AF

CIE 1931, 2 Degree



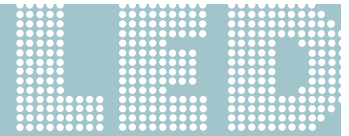
CIE 1931 x,y Chromaticity Diagram
 Nominal CCT Quadrangles



Isofootcandle values are based on a mounting height of 10', with the luminaire located at 0.0. Isofootcandle values are calculated from the direct contribution of the luminaire only. Wall, ceiling, and floor contributions are not included. Grid lines are in increments of mounting height.



category: LED Prefix: RCN24
Cynergy Series High Efficiency LED Luminaire



Innovative Lighting Ideas
Energy Efficient Solutions

L-RCN24-WN-L44-UNV-54DN-W44-C30-AF



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




For details, see: RENOVA Lighting Systems, Inc.

Model # L-RCN24-WN-L44-UNV-54DN-W44-C30-AF

www.lightingfacts.com/products

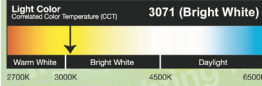
RENOVA Lighting Systems, Inc.



Light Output (Lumens)	4437
Watts	44.32
Lumens per Watt (Efficacy)	100

Color Accuracy Color Rendering Index (CRI)	82
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Light Color Correlated Color Temperature (CCT)	3071 (Bright White)
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All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting. The U.S. Department of Energy (DOE) verifies product test data and results.

Visit www.lightingfacts.com for the Label Reference Guide.

Registration Number: 599H-KY7WYD (1/24/2014)
 Model Number: L-RCN24-WN-L44-UNV-54DN-W44-C30-AF
 Type: Luminaire - Troffer/Grid Ceiling