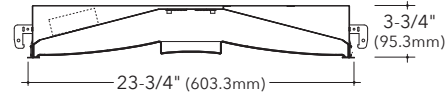


LUCEN LU24

2x4 Architectural Recessed



Key Features

- Pre-painted formed 22 gauge cold rolled steel housing
- Highly reflective die-formed white painted reflector
- Wiring access available on both ends and top of housing
- LED offered with a 5-year limited warranty. Covers LED, driver and fixture
- UL and cUL Listed, LO, MO, and HO lumen packages are IC Rated
- Pre-painted fixtures are to be used in dry locations only
- For damp location, must specify Paint After Fabrication (PAF) in the Options section of the luminaire specification
- Maximum fixture weight is 25 lbs - Surface Mount Box adds 10 lbs
- Room-Side Maintenance for LED system
- Buy American Act compliant



Example Part #: LU24-A-830HO-G1-U-OL1-1-0-W

LU24	SHIELDING	CRI, CCT & OUTPUT	MOUNTING	VOLTAGE	DRIVER	CIRCUITING	BATTERY & EMERGENCY	FINISH	FIXTURE OPTIONS	CONTROLS
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SHIELDING	CRI, CCT & OUTPUT ¹	MOUNTING	VOLTAGE
A - Satine Lens ^{QS} W - White Rails ^{QS} S - Silver Rails ^{QS} <i>Shielding pg. 2</i>	27 - 2700K 30 - 3000K 35 - 3500K 40 - 4000K CL - Custom Lumens CW - Custom Watts <i>Lumen Output pg. 2</i> <i>Example: 830HO is 8 = 80 CRI; 30 = 3000K;</i> HO = High Output	G1 - 15/16" Grid ^{QS} G9 - 9/16" Grid ^{QS} GS - Screw Slot Grid ^{QS} FL - Flanged S - Surface Mount <i>Mounting pg. 3</i>	U - Universal (120 thru 277V) ^{QS} 1 - 120V ^{QS} 2 - 277V ^{QS} 3 - 347V <i>Voltage pg. 3</i>

DRIVER	CIRCUITING	BATTERY & EMERGENCY	FINISH
OL1 - Osram (10%, 0-10v, standard) ^{10QS} OL2 - Osram (1%, 0-10v) OL3 - Osram 347v (10%, 0-10v) EE1 - eldoLED Ecodrive (1%, 0-10v) ES1 - eldoLED Ecodrive (1%, 0-10v) LH1 - Lutron Hi-lume (1%, EcoSystem) ^{10QS} L51 - Lutron 5-Series (5%, EcoSystem) PL2 - Philips Xitanium (1%, 0-10v) PS1 - Philips Xitanium (50%/100%) ND - Non-Dimming <i>Driver pg. 3</i>	1 - Single Circuit ^{10QS} E - Emergency (entire fixture) ^{10QS} N - Night Light (entire fixture) ^{10QS} <i>Circuiting pg. 4</i>	0 - None ^{10QS} 1P - Philips Bodine 10W ^{10QS} 1I - Iota 10W ^{10QS} 1IC - Iota 10W, CEC Listed 1A - Acuity Power Sentry 10W 1G - Philips Bodine GTD <i>Battery and Emergency pg. 4</i>	W - White ^{10QS} <i>Finish pg. 4</i>

FIXTURE OPTIONS ²	CONTROLS ³
QS - QuickShip ^{10QS} TW - Through-wiring CP - Chicago Plenum AM - Antimicrobial Paint FW6 - 6' Flex Whip ^{10QS} FW12 - 12' Flex Whip GLR - Fast Blow Fusing ^{10QS} GMF - Slow Blow Fusing PAF - Paint after fabrication <i>Fixture Options pg. 4</i>	NLIGHT - Acuity nLight (wired) DLMFC - Wattstopper DLM (wired) <i>Controls pg. 5</i>


¹Not all products qualify for DLC listing. For a complete listing of the EV3D products that qualify for DLC, please go to the DLC website. ²For Quickship CRI, CCT & Output see chart on page 4 ³QS must be used in fixture options section of part number to qualify. ⁴Controls can only be used with Single Circuit (1) or Emergency Circuit (E), cannot be used with any battery options. See Controls chart on page 5 for driver options and more information.



Shielding

- Single piece extruded diffuse lens with convex wings and articulated center spine
- Fully luminous housing with optimal glare control
- Highly reflective white reflectors maintain uniform lens brightness

Ordering Code

A	W	S
Satine Lens	Satine Lens with White Trim	Satine Lens with Silver Trim
		

Output

- Specify either 80 or 90 CRI
- Longer lead-time may apply for 90 CRI. Consult factory.
- 80 CRI = R9≥19 and 90 CRI = R9≥61
- Not all products qualify for DLC listing. For a complete listing of the EV3D products that qualify for DLC, please go to the DLC website.

Custom Output- Lumens OR Wattage

CL_____	Specify CRI, CCT and desired lumens (i.e. CL8351200)	Specify lumens between standard offering listed below. Lumens are specified per color temp
CW_____	Specify CRI, CCT and desired wattage (i.e. CW94015)	Specify watts between standard offering listed below

80 CRI

	Color	Output	Watts	Shielding					
				A Satine Lens		W White Trim		S Silver Trim	
				Lumens	LPW	Lumens	LPW	Lumens	LPW
830LO	3000K	Low	24.3	2937	120.9	2650	109.0	2500	102.9
830MO	3000K	Middle	32.2	3888	120.7	3507	108.9	3309	102.8
830HO	3000K	High	40.8	4788	117.4	4319	105.9	4075	99.9
830VHO	3000K	Very High	63.9	6958	108.9	6276	98.2	5921	92.7
835LO	3500K	Low	24.3	3019	124.2	2723	112.1	2569	105.7
835MO	3500K	Middle	32.2	3996	124.1	3604	111.9	3401	105.6
835HO	3500K	High	40.8	4921	120.6	4439	108.8	4188	102.6
835VHO	3500K	Very High	63.9	7151	111.9	6450	100.9	6086	95.2
840LO	4000K	Low	24.3	3155	129.8	2846	117.1	2685	110.5
840MO	4000K	Middle	32.2	4178	129.8	3769	117.0	3555	110.4
840HO	4000K	High	40.8	5169	126.7	4662	114.3	4399	107.8
840VHO	4000K	Very High	63.9	7482	117.1	6749	105.6	6367	99.6

90 CRI

927LO	2700K	Low	24.3	2448	100.8	2208	90.9	2084	85.7
927MO	2700K	Middle	32.2	3241	100.6	2923	90.8	2758	85.6
927HO	3500K	High	40.8	3991	97.8	3600	88.2	3396	83.2
927VHO	3500K	Very High	63.9	5799	90.8	5231	81.9	4935	77.2
930LO	3000K	Low	24.3	2706	111.4	2441	100.4	2303	94.8
930MO	3000K	Middle	32.2	3581	111.2	3230	100.3	3047	94.6
930HO	3000K	High	40.8	4410	108.1	3978	97.5	3753	92.0
930VHO	3000K	Very High	63.9	6409	100.3	5781	90.5	5454	85.4
935LO	3500K	Low	24.3	2715	111.7	2449	100.8	2310	95.1
935MO	3500K	Middle	32.2	3593	111.6	3241	100.6	3058	95.0
935HO	3500K	High	40.8	4424	108.4	3990	97.8	3765	92.3
935VHO	3500K	Very High	63.9	6429	100.6	5799	90.8	5471	85.6
940LO	4000K	Low	24.3	2815	115.8	2539	104.5	2396	98.6
940MO	4000K	Middle	32.2	3727	115.7	3362	104.4	3172	98.5
940HO	4000K	High	40.8	4611	113.0	4159	101.9	3924	96.2
940VHO	4000K	Very High	63.9	6674	104.4	6020	94.2	5680	88.9

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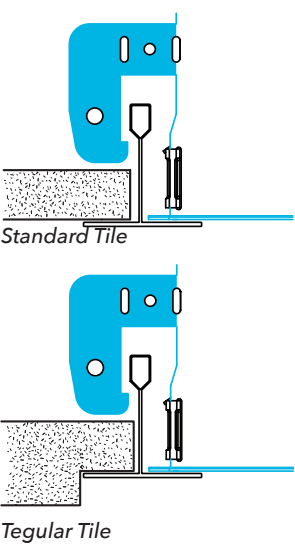
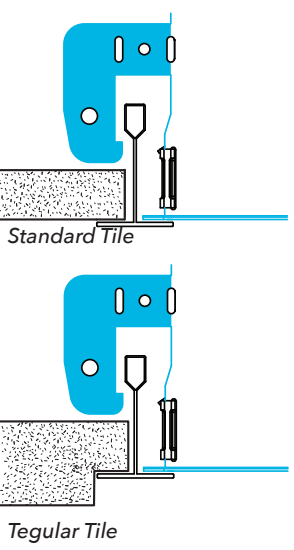
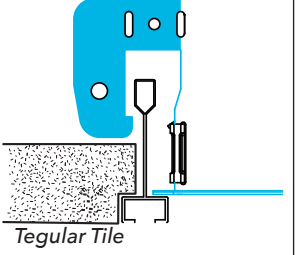
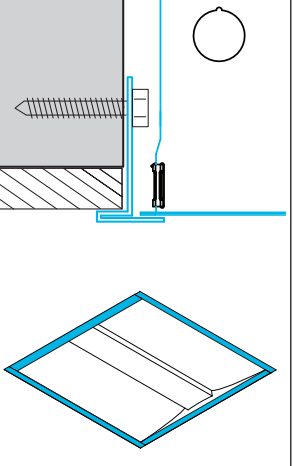
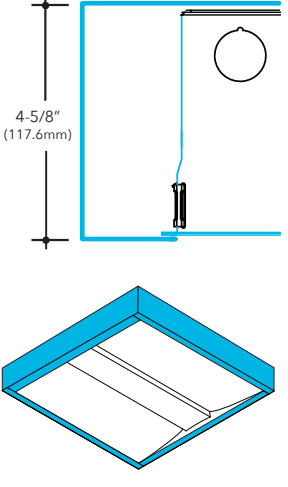
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LU24_LED_SPEC_JAN2019



Mounting

- LUCEN is offered with a universal flange for all grid types. See below for fixture placement in relation to the tile for each grid type
- Grid retention clips integral to housing and require mechanical attachment
- Tie off fixture to structure with retention wires
- Refer to installation instructions during installation at the jobsite
- Approved for dry/damp location when PAF is specified
- Maximum fixture weight is 25lbs - Surface Mount Box adds 10 lbs

G1	G9	GS	FL	S
<p>1" Grid Mount <i>Works with 15/16" grid ceiling types. See profile for fixture position in relation to ceiling grid and tile.</i></p>  <p><i>Standard Tile</i></p> <p><i>Tegular Tile</i></p>	<p>9/16" Grid Mount <i>Works with 9/16" grid ceiling type. For tegular tile installations, fixture position will not be flush to the bottom of the tile. See tegular tile profile image below.</i></p>  <p><i>Standard Tile</i></p> <p><i>Tegular Tile</i></p>	<p>Screw Slot Mounting <i>Works with screw slot and bolt slot grid ceiling types.</i></p>  <p><i>Tegular Tile</i></p>	<p>Flange Kit <i>A separate flange kit is supplied for installations into inaccessible or drywall applications. Flange kit ships from factory uninstalled separately from fixture.</i></p> 	<p>Surface Mount <i>Utilize for hard lid ceiling applications. The 20 gauge steel frame easily secures to ceiling. Surface Mount Box adds 10 lbs</i></p>  <p>4-5/8" (117.6mm)</p>

Voltage

- Some LUCEN configurations will not accommodate all voltage options; consult with factory

U	Universal
1	120 volt
2	277 volt
3	347 volt

Driver

- Standard Driver Option = OL1
- Driver Lifetime: 50,000 hours at 25°C ambient operating conditions
- For more Driver options, see Pinnacle Resource Guide
- Some LUCEN configurations will not accommodate all driver options; consult with factory

OL1	Osram Optotronic 10%, 0-10v
OL2	Osram Optotronic 1%, 0-10v, nominal 1% dimming range
OL3	Osram Optotronic 347v 10%, 0-10v, requires 347v option
EE1	eldoLED ECOdrive 1%, 0-10v Logarithmic
EE2	eldoLED ECOdrive 1%, 0-10v Linear
ES1	eldoLED SOLOdrive 0%, 0-10v Logarithmic
ES2	eldoLED SOLOdrive 0%, 0-10v Linear
LH1	Lutron Hi-lume Soft-on, Fade-to-black 1%, EcoSystem, LDE1
L51	Lutron 5-Series 5%, EcoSystem, LDE5
PL2	Philips Advance Xitanium 1%, 0-10v
PS1	Philips Advance Xitanium Step Dimming 50% / 100%
ND	Non-Dimming

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Circuiting

- Select fixture circuiting from options below
- Some LUCEN configurations will not accommodate all circuiting options; consult with factory

1	Single Circuit
E	Emergency Circuit only (uses nIO EZ PH ER with NLIGHT)
N	Night Light Circuit only

Battery & Emergency

- Select battery or emergency options if required
- Battery duration is 90 minutes

0	No Battery
1P	Philips Bodine 10w Integral, CEC Listed
1I	Iota 10w Integral
1IC	Iota 10w Integral, CEC Listed
1G	Philips Bodine GTD
1A	Acuity Power Sentry 10W Integral (NLIGHT ONLY)

- Test button is integral to fixture
- For more Battery options, see Pinnacle Resource Guide

For Approximate Battery Lumen Output

- Multiply battery wattage X fixture LPW shown on Lumen Table
- 10 (watts) x 92.3 (LPW) = 923 battery lumen output

Battery & Emergency Ordering Examples

- Single circuit, 10w integral battery Ordering Code: 1-1P
- Emergency circuit only, 10w integral battery Ordering Code: E-1P

Finish

- Powder-coat white painted finish on exposed trim

W	White
----------	-------

Fixture Options

- Additional options to enhance the fixture and finish of the product

QS	Quick Ship
TW	Through-Wiring
CP	Chicago Plenum
AM	Antimicrobial Paint
FW6	Flex Whip 6'
FW12	Flex Whip 12'
GLR	Internal Fast Blow Fuse
GMF	Internal Slow Blow Fuse
PAF	Paint After Fabrication

Quick Ship

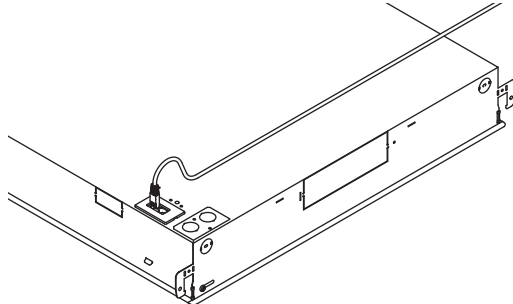
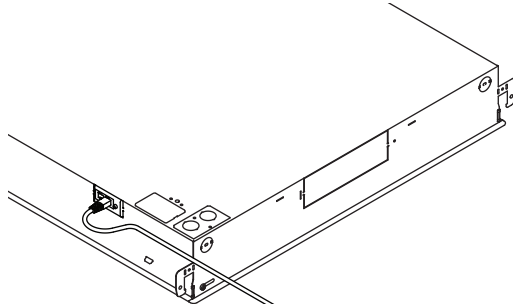
Shielding	CRI, CCT & Output	Mounting	Voltage	Driver	Circuiting	Battery	Finish	Options
10-Day								
A Satine Lens	80 CRI, All color temperatures, all lumen packages See pg 4	G1 1" Grid	U Universal 1 120v 2 277v	OL1 Osram 0-10v, 10% LH1 Lutron LDE1	1 Single E Emergency N Night Light	1P Philips Bodine 10w Integral 1I Iota 10w Integral	W White	CP Chicago Plenum FW6 Flex Whip 6' 18-gauge GLR Internal Fast- Blow Fuse
W White Rails		G9 9/16" Grid						
S Silver Rails		GS Grid Screw Slot						

Consult Factory for projects that are larger than 200 units.



Controls

- Pinnacle Lighting offers easy to specify network control solutions that connect to an intelligent centralized system to maximize lighting energy efficiencies or integral sensors for individual fixture control
- Pinnacle Lighting fixtures ship technology ready for quick onsite connections
- Controls can only be used with Single Circuit (1) or Emergency Circuit (E), only NLIGHT option available with a battery (1A)
- Contact factory for any non-standard configurations for layout or placement

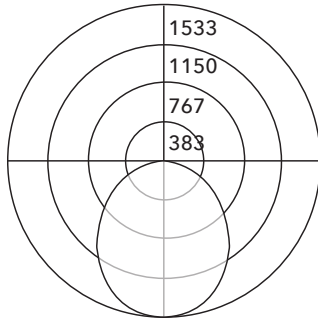
	DLMFC		NLIGHT	
Solution	Legrand Wattstopper DLM		Acuity nLight	
Description	Wattstopper Digital Lighting Management (DLM) utilizes wired network connections with Plug n’Go capability for digital control of individual lighting fixtures through switching, dimming or occupancy/daylighting harvesting feedback.		nLight utilizes wired network connections to create a system of distributed intelligence for digital control of individual lighting fixtures through time, daylight, sensor or manual control schemes.	
Components	LMFC-011		nIO EZ PH or nIO EZ PH ER	
Network Type	Digital Lighting Management (DLM)		nLight	
Connection	Wired, two RJ45 ports (Cat5 cable supplied by others)		Wired, two RJ45 ports (Cat5 cable supplied by others)	
Required Drivers	OL1	Osram Optotronic 10%, 0-10v	EE2	eldoLED ECOdrive, 1%, 0-10v
	OL2	Osram Optotronic 1%, 0-10v	ES2	eldoLED SOLOdrive, 0%, 0-10v
	OL3	Osram Optotronic 10%, 0-10v, 347v only		
Voltage Limitations	None		Not available with 347 volt	
Sample Part #	LU22-A-830-G1-U-OL1-1-0-W-DLMFC		LU22-A-830-G1-U-EE2-1-0-W-NLIGHT	
Access Location				



Photometrics

Satine Lens

Test #	ITL88934
Catalog #	LU24A-840MO
Lumens	4178 lm
Watts	32.2 W
Efficacy	130 LPW



Candela Distribution

Vert Angle	Horizontal Angle				
	0	22.5	45	67.5	90
0	1533	1533	1533	1533	1533
5	1525	1525	1525	1525	1524
10	1503	1501	1503	1502	1499
15	1464	1459	1464	1462	1458
20	1411	1402	1409	1404	1400
25	1341	1333	1338	1333	1329
30	1258	1250	1255	1251	1249
35	1163	1156	1161	1162	1162
40	1057	1053	1061	1069	1070
45	944	944	955	968	972
50	825	827	845	862	865
55	707	713	735	751	753
60	587	596	621	636	637
65	468	482	507	521	522
70	351	371	397	409	412
75	239	265	291	301	304
80	139	166	191	199	201
85	58	81	95	93	94
90	0	0	0	0	0

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2037	2061	2097
55	1881	1955	2003
65	1690	1831	1885
75	1409	1716	1792
85	1015	1663	1646

For all available IES files, please visit our website at pinnacle-ltg.com. Photometry testing in accordance to IESNA-LM-79-08 at an NVLAP accredited testing laboratory. Testing conducted at 25°C ambient conditions

Approvals & Certifications

Construction: Pre-painted formed 22 gauge cold rolled steel housing. Highly reflective die-formed reflectors maintain uniform lens brightness. Wiring access on both sides and top of housing. Housing designed to maintain optimal temperature of LED diodes and driver. Captive door frame swings open for room-side maintenance of lens, driver and LED boards.

Shielding: Single piece extruded diffuse lens with convex wings and articulated center spine creating a fully luminous housing with optimal glare control. Available with standard satine lens or optional white or silver lens side rails.

Mounting: Designed to install into acoustical grid and inaccessible ceilings. Specify G1, G9 or GS for acoustical grid ceiling. Specify FL for inaccessible ceilings. Grid retention clips integral to housing and require mechanical attachment. Tie off fixture to structure with retention wires. Maximum fixture weight is 25 lbs - Surface Mount Box adds 10 lbs.

LED: 25°C test environment. Lumen output/wattage has a margin of +/- 5%. All luminaire configurations tested in accordance with IES LM-79. Diodes tested in accordance with IES LM-80. Lifetime calculated using IES TM-21. Minimum lifetime greater than 60,000 hours. L70 = 134,700 hours and L90 = 40,100 hours. MacAdam 3-Step Ellipses. Not all products are lighting facts listed. For all available IES files, please visit our website at pinnacle-ltg.com.

Color & Lumen Output: Four lumen packages available. Low (LO), Medium (MO), High (HO) and Very High (VHO). Custom outputs are available. Specify custom lumens or watts between standard offering listed on CRI, CCT & Output page. 80 CRI is available for 3000K, 3500K, and 4000K. 90 CRI is available for 2700K, 3000K, 3500K, and 4000K. 80 CRI = R9≥19 and 90 CRI = R9≥61.

Voltage: Universal (U), 120 volt (1), 277 volt (2) and 347 volt (3) options available. Must specify OL3 in Driver section when 347 volt (3) is selected. Some LUCEN configurations will not accommodate all voltage options; consult with factory.

Driver: Standard Driver Option is Osram 0-10V, 10% = OL1. Electronic driver, Power factor is >0.9 with a THD <20%. Driver Lifetime: 50,000 hours at 25°C ambient operating conditions. Ambient operating range: -20°F/-30°C to 95°F/35°C. For more driver options, see Pinnacle Resource Guide. Some LUCEN configurations will not accommodate all driver options.

Circuiting: Select from single circuit (1), Emergency circuit (E) or Night Light circuit (N). Some LUCEN configurations will not accommodate all circuiting options, consult with factory.

Battery & Emergency: Select battery or emergency options if required. If battery or emergency option is not required, enter 0. Battery duration is 90 minutes as standard. Test button is integral to fixture. For more Battery options, see Pinnacle Resource Guide.

Finish: Pre-painted white polyester polymer finish on exposed trim. Optional Paint After Fabrication (PAF) available if specified in Options section of part number.

Controls: Pinnacle is able to accommodate different control solutions from different manufacturers. Consult Factory for more information.

Labels: UL and cUL Listed. LO, MO, and HO lumen packages are IC Rated. Pre-painted fixtures are to be used in dry locations only. For damp location, must specify Paint After Fabrication (PAF) in the Options section of the luminaire

Fixture Weight: 25 lbs maximum - Surface Mount Box 10 lbs.

Buy American Act Compliant

Warranty: LUCEN LED offered with a 5-year limited warranty. Covers LED, driver and fixture.