PINNACLE
ARCHITECTURAL LIGHTING®

Project Name _____

Date _____ Type _____

LUCEN LU22
2x2 Architectural Recessed

3-3/4" (95.3mm)

23-3/4" (603.3mm)

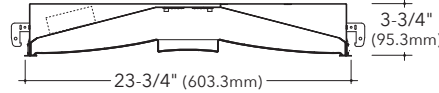## Key Features

- 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 15 lbs - Surface Mount Box adds 10 lbs
- Room-Side Maintenance for LED system
- Buy American Act compliant

Example Part #: LU22-A-830HO-G1-U-OL1-1-0-W

LU22 - ___ - ___ - ___ - ___ - ___ - ___ - ___ - ___ - ___

SHIELDING | CRI, CCT & OUTPUT | MOUNTING | VOLTAGE | DRIVER | CIRCUITING | BATTERY & EMERGENCY | FINISH | FIXTURE OPTIONS | CONTROLS

SHIELDING	CRI, CCT & OUTPUT QS¹	MOUNTING	VOLTAGE
A - Satine Lens QS	**_27_ _** - 2700K	**G1** - 15/16" Grid QS	**U** - Universal *(120 thru 277V)* QS
W - White Rails QS	**_30_ _** - 3000K	**G9** - 9/16" Grid QS	**1** - 120V QS
S - Silver Rails QS	**_35_ _** - 3500K	**GS** - Screw Slot Grid QS	**2** - 277V QS
Shielding pg. 2	**_40_ _** - 4000K	**FL** - Flanged	**3** - 347V
	CL_ _ _ _ _ _ - Custom Lumens	**S** - Surface Mount	*Voltage pg. 3*
	CW_ _ _ _ _ _ - Custom Watts	*Mounting pg. 3*	
	Lumen Output pg. 2		
	Example: 830HO is 8 = 80 CRI; 30 = 3000K;		
	HO = High Output		

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

FIXTURE OPTIONS²	CONTROLS³
QS - QuickShip QS	**NLIGHT** - Acuity nLight *(wired)*
TW - Through-wiring	**DLMFC** - Wattstopper DLM *(wired)*
CP - Chicago Plenum QS	*Controls pg. 5*
AM - Antimicrobial Paint	
FW6 - 6' Flex Whip QS	
FW12 - 12' Flex Whip	
GLR - Fast Blow Fusing QS	
GMF - Slow Blow Fusing	
PAF - Paint after fabrication	
Fixture Options pg. 4	

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. ¹For Quickship CRI, CCT & Output see chart on page 4 ²QS must be used in fixture options section of part number to qulify. ³Controls can only be used with Single Circuit (1) or Emergency Circtuit (E), cannot be used with any battery options. See Controls chart on page 5 for driver options and more information.

Specifications and dimensions subject to change without notice. Specification sheets that appear on pinnacle-ltg.com are the most recent version and supersede all other previously printed or electronic versions.

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	19.6	2132	108.8	1923	98.1	1814	92.6
830MO	3000K	Middle	30.8	3322	107.9	2996	97.3	2827	91.8
830HO	3000K	High	42.1	4287	101.8	3867	91.9	3648	86.7
835LO	3500K	Low	19.6	2191	111.8	1976	100.8	1865	95.1
835MO	3500K	Middle	30.8	3414	110.8	3079	100.0	2905	94.3
835HO	3500K	High	42.1	4406	104.7	3974	94.4	3750	89.1
840LO	4000K	Low	19.6	2286	116.6	2062	105.2	1945	99.3
840MO	4000K	Middle	30.8	3566	115.8	3217	104.4	3035	98.5
840HO	4000K	High	42.1	4627	109.9	4174	99.1	3938	93.5

90 CRI
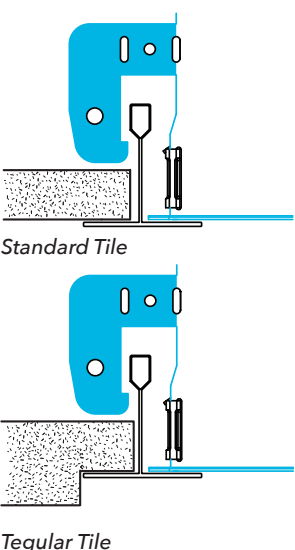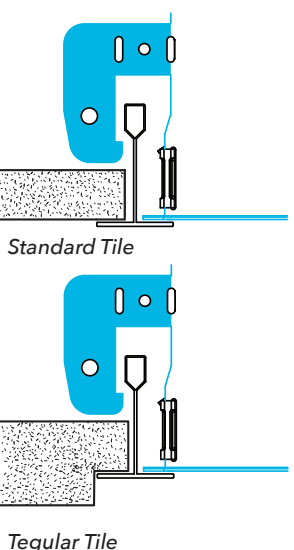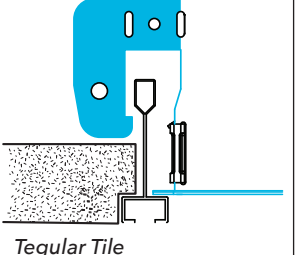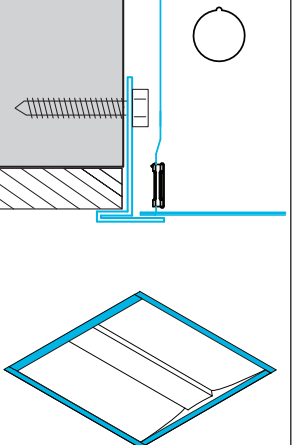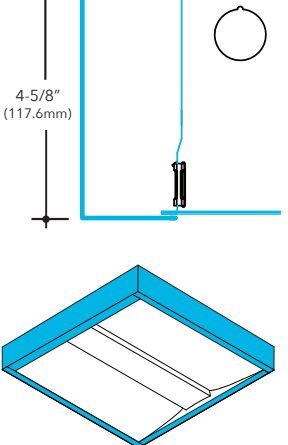
	Color	Output	Watts	Lumens	LPW	Lumens	LPW	Lumens	LPW
927LO	2700K	Low	19.6	1777	90.7	1603	81.8	1512	77.2
927MO	2700K	Middle	30.8	2769	89.9	2497	81.1	2356	76.5
927HO	2700K	High	42.1	3573	84.9	3223	76.6	3041	72.2
930LO	3000K	Low	19.6	1964	100.2	1772	90.4	1671	85.3
930MO	3000K	Middle	30.8	3060	99.4	2760	89.6	2604	84.5
930HO	3000K	High	42.1	3949	93.8	3562	84.6	3361	79.8
935LO	3500K	Low	19.6	1970	100.5	1777	90.7	1676	85.5
935MO	3500K	Middle	30.8	3070	99.7	2769	89.9	2613	84.8
935HO	3500K	High	42.1	3961	94.1	3573	84.9	3371	80.1
940LO	4000K	Low	19.6	2040	104.1	1840	93.9	1736	88.6
940MO	4000K	Middle	30.8	3181	103.3	2869	93.2	2707	87.9
940HO	4000K	High	42.1	4128	98.1	3723	88.4	3513	83.4

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 15lbs - Surface Mount Box adds 10 lbs

G1
1" Grid Mount
Works with 15/16" grid ceiling types. See profile for fixture position in relation to ceiling grid and tile.

Standard Tile

Tegular Tile

G9
9/16" Grid Mount
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.

Standard Tile

Tegular Tile

GS
Screw Slot Mounting
Works with screw slot and bolt slot grid ceiling types.

Tegular Tile

FL
Flange Kit
A separate flange kit is supplied for installations into inaccessible or drywall applications. Flange kit ships from factory uninstalled separately from fixture.

S
Surface Mount
Utilize for hard lid ceiling applications. The 20 gauge steel frame easily secures to ceiling. Surface Mount Box adds 10 lbs

4-5/8"
(117.6mm)

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

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

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

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)*

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	10 Day 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
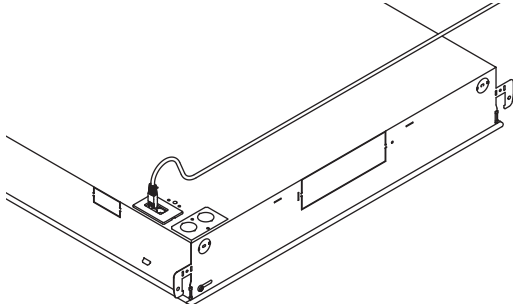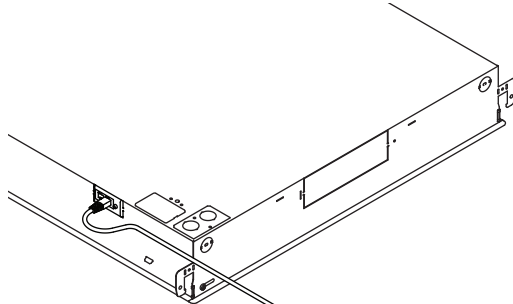
Shielding	CRI, CCT & Output	Mounting	Voltage	Driver	Circuiting	Battery	Finish	Options
10-Day								
A Satine Lens **W** White Rails **S** Silver Rails	80 CRI, All color temperatures, all lumen packages *See pg 4*	**G1** 1" Grid **G9** 9/16" Grid **GS** Grid Screw Slot	**U** Universal **1** 120v **2** 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' **GLR** 18-gauge Internal Fast-Blow Fuse

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		
	OL3	Osram Optotronic 10%, 0-10v, 347v only	**ES2**	eldoLED SOLOdrive, 0%, 0-10v
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				

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pg. 5

Photometrics

Satine Lens

Test #	ITL88919
Catalog #	LU22A-840MO
Lumens	3566 lm
Watts	30.8 W
Efficacy	116 LPW
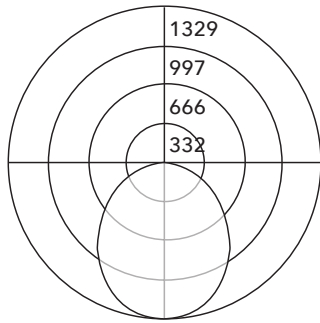
1329
997
666
332

Candela Distribution

Vert Angle	Horizontal Angle				
	0	22.5	45	67.5	90
0	1329	1329	1329	1329	1329
5	1324	1324	1324	1324	1323
10	1304	1303	1302	1302	1303
15	1271	1269	1266	1263	1264
20	1221	1219	1214	1210	1210
25	1158	1156	1149	1145	1145
30	1084	1080	1074	1072	1073
35	999	994	990	992	996
40	905	902	901	909	916
45	803	803	809	823	832
50	700	702	713	732	743
55	596	600	617	637	648
60	493	500	522	540	550
65	392	403	426	443	453
70	294	309	334	348	357
75	201	219	244	256	266
80	118	136	159	170	178
85	48	63	78	80	84
90	0	0	0	0	0

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3633	3661	3765
55	3325	3442	3615
65	2968	3225	3429
75	2485	3016	3288
85	1762	2863	3084

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: Formed 20 gauge cold rolled steel housing. Highly reflective die-formed white painted reflector. Wiring access available on top of housing. Captive and hinged center lens swings open for room-side maintenance of lens, driver and LED boards.

Shielding: Co-extruded acrylic lens with ribbed side channels evenly illuminates the side reflector giving the appearance of a fully luminous aperture. Available with standard satine lens or optional clear lens with linear slot or round perf insert.

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 28 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 = 107,300 hours and L90 = 32,000 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.

CRI, CCT & 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 Color Temperature & 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) and 277 volt (2). Some ADEO 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 25C ambient operating conditions. Ambient operating range: -20°F/-30°C to 91°F/33°C.

Circuiting: Select from single circuit (1), Emergency circuit (E) or Night Light circuit (N). Some ADEO 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.

Finish: Powder-coat white painted finish on exposed trim.

Controls: Legrand Wattstopper Digital Lighting Management (DLM) integrated fixtures include the LMFC-011 fixture controller and dual-port RJ45 access for ethernet cable connectivity (provided by others). Acuity nLight integrated fixtures include the nIO EZ PH control device utilizing eldoLED 0-10v LED drivers and provide dual-port RJ45 access for ethernet cable connectivity (provided by others).

Labels: UL and cUL Listed. LO, MO, HO and VHO lumen packages are IC Rated, approved for dry/damp location unless otherwise noted.

Fixture Weight: 15 lbs maximum - Surface Mount Box adds 10 lbs.

Buy American Act Compliant

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

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