#### Ρ L NNA С Ε ARCHITECTURAL LIGHTING

Project Name

Date \_

5-1/4" (133.4mm)



#### **Key Features**

- Extruded aluminum trim with formed cold rolled 20 gauge steel back box housing
- EXECUTED and the second second
- .
- .
- .
- Buy American Act compliant



Example Part #: EVL-830HO-26'-G1-U-OL1-1-0-W

EVL HOUSING CRI, CCT & LENGTH OR MOUNTING VOLTAGE DRIVER CIRCUITING BATTERY & FINISH FIXTURE OUTPUT PATTERN EMERGENCY OPTIONS

HOUSING	CRI, CCT & OUTPUT $Q_{\sum}^1$	LENGTH OR PATTERN <sup>2</sup>	MOUNTING <sup>3</sup>
<b>EVL</b> - Outline (5-1/4" tall) $Q$ <b>EVLS</b> - Outline Shallow (4-1/4" tall) $Q$ Housing pg. 2	_27 2700K _30 3000K _35 3500K _40 4000K CL Custom Lumens CW Custom Watts Lumen Output pg. 2 Example: 830HO is 8 = 80 CRI; 30 = 3000K; HO = High Output; Blank = Standard Output	$ \begin{array}{c} \ \mbox{ Individual Fixture } Q \\ \ \mbox{ Continuous Row } Q \\ L \\ \ \mbox{ Continuous Row } Q \\ L \\ \_ \ x \\ \ \mbox{ Indiv L Shape } \\ L \\ \_ \ x \\ \ \mbox{ Outside L Shape } \\ R \\ I \\ \_ \ x \\ \ \mbox{ Outside Rectangle } \\ R \\ C \\ \_ \ x \\ \ \mbox{ Outside Rectangle } \\ S \\ \ \mbox{ Outside Square } \\ S \\ \ \mbox{ Outside Square } \\ M \\ \_ \ M \mbox{ Mod Layout } \\ L \\ l$	<b>G1</b> - 1" (15/16") T Bar $Q_{S_{+}}$ <b>G9</b> - 9/16" T Bar $Q_{S_{+}}$ <b>GB</b> - 9/16" Bevel T Bar <b>GS</b> - Screw Slot T Bar <b>FL</b> - 1/2" Flange $Q_{S_{+}}$ <b>NF</b> - Non Flange $Q_{S_{+}}$ <b>SF</b> - Spackle Flange $Q_{S_{+}}$ <i>Mounting pg.</i> 3
		_	
VOLTAGE	DRIVER	CIRCUITING	BATTERY & EMERGENCY⁴
U - Universal QS, (120 thru 277V) 1 - 120V QS, 2 - 277V QS, 3 - 347V Voltage pg. 4	<b>FSD</b> - Factory Select Driver (1%, 0-10v) $Q$ <b>PL2</b> - Advance Xitanium (1%, 0-10v) $Q$ <b>OL2</b> - eldoLED Optotronic (1%, 0-10v) $Q$ <b>OL4</b> - eldoLED Optotronic 347v (1%, 0-10v) <b>EE1</b> - eldoLED EOCdrive (1%, 0-10v) <b>ES1</b> - eldoLED SOLOdrive (1%, 0-10v) <b>LH1</b> - Lutron Hi-lume (1%, <i>EcoSystem</i> ) <b>PS1</b> - Advance Xitanium (50%/100%) Driver pg. 4	<ul> <li>1 - Single Circuit QS,</li> <li>M - Multi Circuit</li> <li>E - Emergency QS, (entire fixture)</li> <li>N - Night Light QS, (entire fixture)</li> <li>Circuiting pg. 5</li> </ul>	<ul> <li>O - None QS<sub>+</sub></li> <li>_FSB - Factory Select Battery</li> <li>_FSG - Factory Select ALCR</li> <li>_GI - lota ETS DR</li> <li>_GB - Bodine GTD</li> <li>_IC - lota 10w Integral (CEC listed) QS<sub>+</sub></li> <li>_P - Bodine 10w Integral</li> <li>_E - Emergency Circuit Section</li> <li>_N - Night Light Circuit Section</li> <li>_L - Life Safety Circuit Section</li> <li>Battery and Emergency pg. 5</li> </ul>
FINISH	FIXTURE OPTIONS	CONTROLS	
W - White QS S - Metallic Silver BL - Textured Black BR - Bronze GR - Graphite CC - Custom Color Finish pg. 5	QS - QuickShip $Q_{S_*}$ CP - Chicago Plenum $Q_{S_*}$ GLR - Internal Fast Blow Fuse $Q_{S_*}$ LGR - Low Glare Reflector DSP - Customer Supplied Battery/Driver/ Sensor EF - End Fillers $Q_{S_*}$ Fixture Options pg. 5	Pinnacle is able to accommodate different control solutions from different manufacturers. Consult Factory for more information.	

When specifying SOURCE the first \_ is for specifying either 8 - 80CRI, 9 - 90CRI or B - BIOS. The ending \_ are for specifying output, example HO - High Output. When specifying BIOS use B and then specify color temperature, either 3500K or 4000K, and output, example B35HO - BIOS 3500K High Output. If specifying QS output is 80 CRI, all color temperatures, all lumen packages. Does not include BIOS or Tunable White. See output charts for more information. BIOS dynamic available, please contact factory for more information

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# CRI, CCT & Output

Specify either 80 or 90 CRI

- Longer lead-time may apply for 90 CRI. Consult factory
- . 90 CRI = R9≥50

## **Custom Output- Lumens OR Wattage**

CL	Specify CRI, CCT and desired lumens (i.e. CL835400)	Specify lumens between standard offering listed below. Lumens are specified per color temp
CW	Specify CRI, CCT and desired wattage (i.e. CW9405)	Specify watts between standard offering listed below

80 CRI

	Color	Output	Watts per foot		
				Lumens/ft	LPW
830	3000K	Standard	3.1	200	64.0
830HO	3000K	High	6.0	381	63.5
830VHO	3000K	Very High	8.1	492	60.9
835	3500K	Standard	3.1	209	66.9
835HO	3500K	High	6.0	398	66.3
835VHO	3500K	Very High	8.1	514	63.7
840	4000K	Standard	3.1	214	68.5
840HO	4000K	High	6.0	409	68.2
840VHO	4000K	Very High	8.1	527	65.3

## 90 CRI

927	2700K	Standard	3.1	164	52.5
927HO	2700K	High	6.0	313	52.2
927VHO	2700K	Very High	8.1	404	50.0
930	3000K	Standard	3.1	185	59.2
930HO	3000K	High	6.0	351	58.5
930VHO	3000K	Very High	8.1	454	56.2
935	3500K	Standard	3.1	188	60.2
935HO	3500K	High	6.0	358	59.7
935VHO	3500K	Very High	8.1	463	57.3
940	4000K	Standard	3.1	191	61.1
940HO	4000K	High	6.0	365	60.8
940VHO	4000K	Very High	8.1	471	58.3

#### Length

Individual units cannot be joined, end trims are factory installed and cannot be removed
Refer to Pattern section for specification and ordering options
Continuous Rows are made up of even and odd length fixtures; designed to fall on-grid

2	3	4	5	6	8	-
Indiv. Fixture 23" (584.2mm)	Indiv. Fixture	Cont. Run Customizable length using feild				
	35" (889mm)					cutable non-illu- minated end fillers
	47	7" (1193.8mm)				- max. length of 12" per side.
		59	" (1498.6mm)			per side.
			71	" (1803.4mm)		
					95" (2413mm)	Í
						Specify length

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# Pattern

- Outline is a complete perimeter lighting solution that includes inside corners, outside corners, and end fillers
- Corners are 90 degree and allow for +/- 5 degrees of adjustability to accommodate wall imperfections
- Specify runs to the nearest foot. Corners are slid into place to finish the perimeter lighting
- Field cut End Fillers have a maximum length of 12" & recomended length of 6" Inside and Outside corners are field cut. Detailed length information will
- be on Factory Drawings Inside Corners are Illuminated while Outside Corners are unilluminated
- See installation instructions for detailed information

SI_	SO_	RI_x_	RO_x_	UI_x_x_	UO_x_x_	LI_x_	LO_x_	M
Square, Inside ( <b>SI</b> ) or C Provide overall dimension for e	length	Rectangle, Inside ( <b>RI</b> ) or C Provide overall dimension for ea	length	U-Shape, Inside ( <b>UI</b> ) or C Provide overall dimension for e	length	L-Shape, Inside ( <b>LI</b> ) or C Provide overall dimension for e	length	Mod Layout For 45 degrees, patterns or lengths not shown or standard
End Fille	r	90° Inside			Inside Co Min. Leng Max. Leng Length is med	th - 7"	d to wall.	
	90°	Outside						

All fixture lengths within a pattern will be rounded to the nearest foot. End fillers and Corners (both field cut) will be used to complete the pattern. Factory Drawings will reflect all fixture, corner, and end filler locations and will need to be approved before an order is entered.

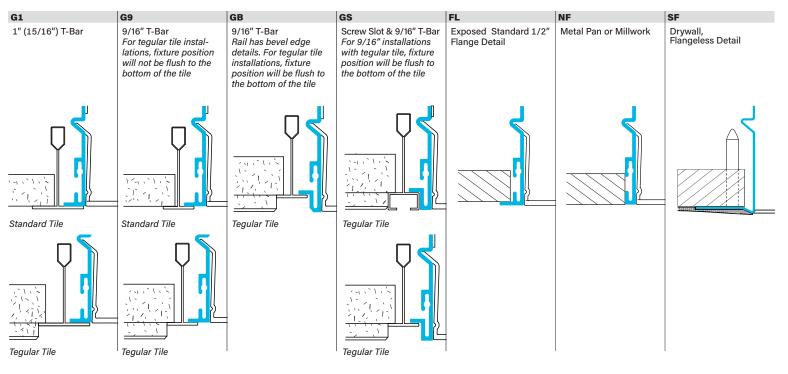
# Mounting

- All individual units cannot be joined, end trims are factory installed and cannot be • removed
- Designed to install into acoustical grid and inaccessible ceilings
- Grid retention brackets integral to housing and require mechanical attachment
- Each housing contains 4 grid retention brackets
- Tie off fixture to structure with retention wires

**Outside Corners:** Min. Length - 0"

. Approved for dry/damp location unless otherwise noted

Max. Length - 9-1/2" Length is measured from fixture end to wall.



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Some EVL configurations will not accommodate all driver options;

consult with factory

# ine

# Voltage

 Some EVL 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 = FSD
- Driver Lifetime: 50,000 hours at 25°C ambient operating conditions
- For more driver options see Pinnacle Resource Guide

0-10V Drivers	
FSD	Factory Select Driver 1%, 0-10v
PL2	Signify Advance Xitanium 1%, 0-10v
PL4	Advance Xitanium 347v 1%, 0-10v, requires 347v
OL2	eldoLED Optotronic, 1%, 0-10v
OL4	eldoLED Optotronic 347v, 1% 0-10v, requires 347v option
EE1	eldoLED ECOdrive 1%, 0-10v Logarithmic
EE2	eldoLED ECOdrive 1%, 0-10v Linear
ES1	eldoLED SOLOdrive 0-10v, 0.1% Logarithmic
ES2	eldoLED SOLOdrive 0-10v, 0% Linear
<b>DALI Drivers</b>	
EE3	eldoLED ECOdrive .1%, DALI (logarithmic)
ES3	eldoLED SOLOdrive .1%, DALI (logarithmic)
OD1	eldoLED Optotronic 1%, DEXAL
OD2	eldoLED Optotronic 1%, DALI 2 Channel
<b>Lutron Driver</b>	S
LH1	Lutron Hi-lume Soft-on, Fade-to-black 1%, EcoSystem, LDE1
LH4	Lutron Hi-Lume 1%, 2-wire, Lutron-LTEA2W, 120v only
<b>Alternate Driv</b>	/ers
PS1	Signify Advance Xitanium Step Dimming 50%/100%
EH1	ELV 120v only, 0-10v universal

# How to specify Circuiting, Battery and Emergency

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

# Circuiting

1	Single Circuit
М	Multi Circuit
E	Emergency Circuit only
Ν	Night Light Circuit only



Battery and emergency section options are available in addition to fixture circuit
 Select battery and emergency section options below; factory shop drawing required
 Some EVL configurations will not accommodate all circuiting options, consult with factory

#### Battery and/or Emergency If Required



No battery or specific emergency section required

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## Battery

- Select battery section type if required, indicate total QTY. *Example 2P* 90 minute battery runtime; test button is remote
- No battery option available for 2' lengths

0	No Battery
_FSB	Factory Select Battery (10w option)
_FSBST	Factory Select Battery (10w, Self Testing)
_ILL	lota 10w Integral Lithium, Self Testing
_IRH	lota 20w Remote
_PRH	Bodine 20w Remote
_PLL	Bodine 10w Integral Lithium, Self Testing

### Emergency

Select emergency section type if required, indicate total QTY. Example 1E

2	Combine battery and	emergency section	ordering codes if b	ooth options are selected

_FSG	Factory Select Automatic Load Control Relay (ALCR), UNV			
_GI	Emergency Transfer Switch (ETS) DR Emergency Control Device, UNV			
_GB	Bodine GTD, Generator Transfer Device, 120v or 277v			
_E	Emergency circuit section			
_N	Night Light circuit section			
_L	Life Safety circuit section NO THROUGH WIRE			

#### **Battery OR Emergency Ordering Examples**

 Single circuit, 10w Integral Battery Ordering Code: 1-1P • Emergency only, 10w Integral Battery Ordering Code: E-1P - Single circuit, GTD required Ordering Code: 1-1G

- Entire fixture is on battery for lengths up to 5' •
- Half of fixture is on battery for 6' or 8' housing lengths
- For more battery options available, see Pinnacle Resource Guide

For Approximate Battery Lumen Output

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

ombination	Section	Ordering	Examples	

- Single circuit, (1) 10w battery, (1) emergency section • Multi circuit, (2) 10w battery, (2) emergency sections Single circuit, (1) night light section
- Ordering Code: 1-1P1E Ordering Code: M-2P2E Ordering Code: 1-1N

### Finish

- Standard powder-coat textured white, metallic silver, textured black, graphite or bronze painted finish; consult factory for chip of standard paint finishes
- Selecting a fixture finish other than white may impact lumen output; consult factory for more information

W	White
S	Metallic Silver
BL	Textured Black
GR	Graphite
BR	Bronze
CC	Custom Color

#### **Fixture Options**

Additional options to enhance the fixture and finish of the product

QS	QuickShip
СР	Chicago Plenum
GLR	Internal Fast Blow Fuse
LGR	Low Glare Reflector (for patterns utilizing inside corners only) not recomended for straight runs, cannot be added in the feild)
DSP	Customer Supplied Battery/Driver/Sensor
EF	End Fillers, comes as pair adds upto 12" per end (6" recomended)

#### **Quick Ship**

	CRI, CCT & Output	Mounti	ng	Volt	age	Drive	er	Cire	cuiting	Bat	tery	Fin	ish	Optio	ons
10-Da	у														
EVL EVLS	80 CRI, all color temperatures, all lumen packages <i>See pg 5</i> &6	G1(G) G9(G) FL(F) NF(N)	1" Grid 9/16" Grid Flanged Non- Flanged	U 1 2	Universal (120-277) 120V 277V	PL2	Factory Select Driver (1%, 0-10v) Advance Xitanium 0-10v, 1% Osram 0-10v, 1%	1 E N	Single Circuit Emergency Night Light	0 1IC	None lota 10w Integral	w	White		Chicago Plenum Internal Fast- Blow Fuse End Fillers

All lengths and continuous rows up to 1,000 ft OR 150 individual fixtures. Consult factory for larger projects.

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**EDGE**  $E \lor L$  Recessed Linear Outline



# Controls

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

# **Photometrics**

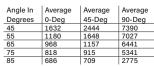
#### Outline

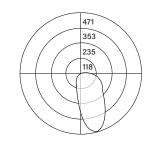
Test #	ITL84678
Catalog #	EVL-840-4
Lumens	856 lm
Watts	12.5 W
Efficacy	68 LPW

#### **Candela Distribution**

Vert	Horizontal Angle						
Angle							
	0	22.5	45	67.5	90		
0	442	442	442	442	442		
5	463	458	439	425	416		
10	465	466	435	393	342		
15	446	458	428	318	210		
20	416	438	416	219	88		
25	377	411	401	120	44		
30	329	377	383	62	10		
35	283	337	360	35	3		
40	242	293	336	8	2		
45	206	251	308	5	1		
50	179	210	278	4	0		
55	157	174	245	3	0		
60	144	145	210	2	0		
65	131	122	174	2	0		
70	120	108	136	1	0		
75	110	93	98	1	0		
80	98	80	61	1	0		
85	88	68	26	1	0		
90	77	55	3	1	0		
95	65	43	0	1	0		
100	47	26	0	1	0		
105	30	16	0	0	0		
110	21	9	0	0	0		
115	13	3	0	0	0		
120	7	1	0	0	0		
125	1	1	0	0	0		







#### Outline - LRG

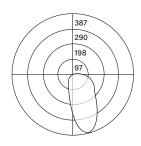
Test #	ITL84678
Catalog #	EVL-840-4-LGR
Lumens	746 lm
Watts	12.6 W
Efficacy	59 LPW
Lincacy	55 LI W

#### **Candela Distribution**

Vert	Horizontal Angle				
Angle					
	0	22.5	45	67.5	90
0	171	171	171	171	171
5	263	238	171	115	94
10	337	300	170	72	56
15	376	341	168	55	34
20	384	364	165	37	21
25	368	370	161	24	16
30	341	356	156	19	13
35	307	333	150	16	10
40	273	304	143	13	7
45	241	269	133	11	5
50	216	235	124	8	2
55	197	203	113	6	0
60	185	176	101	3	0
65	175	155	88	2	0
70	165	142	74	2	0
75	153	128	58	2	0
80	141	113	41	2	0
85	127	97	25	2	0
90	114	82	3	1	0
95	103	69	8	1	0
100	82	52	8	1	0
105	67	40	7	1	0
110	53	19	6	1	0
115	37	3	5	1	0
120	1	2	5	1	0
125	0	2	4	1	0

#### Luminance Data (cd/sq.m)

Angle In	Average	Average	Average
Degrees	0-Deg	45-Deg	90-Deg
45	4745	6053	4751
55	3993	4848	4910
65	3786	4063	5132
75	3644	3864	5374
85	3507	3577	5807



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

# **Applications & Certificates**

**Construction:** Extruded aluminum trim with formed cold rolled 20 gauge steel back box housing.

Shielding: Extruded aluminum module with for perfect perimeter illumination.

**Mounting:** Outline is designed to install into acoustical grid and inaccessible ceilings. Specify GXG, FLF, SFS, NFN for individual, unjoinable units (individual units will fall ongrid). Specify GX, FL, SF, NF for continuous runs (runs designed to fall on-grid). Grid retention brackets are integral to housing. Consult factory for detailed installation instructions.

**LED:** 25°C test environment. Lumen output/wattage has a margin of +/- 5%; 2' or 3' lengths may have a greater wattage deviation. 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. Lifetime Projection L70 = 136,200 hours and L90 = 41,100 hours. MacAdam 3-Step Ellipses. For all available IES files, please visit our website at pinnacle-ltg.com.

**CRI, CCT & Lumen Output:** Three lumen packages available. Standard, 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. 90 CRI = R9 $\geq$ 50.

**Voltage:** Universal (U), 120 volt (1), 277 volt (2) and 347 volt (3) options available. Must specify OL4 in Driver section when 347 volt (3) is selected. Some Outline configurations will not accommodate all voltage options; consult with factory.

**Driver:** Standard Driver Option is Advance Xitanium 0-10V, 1% = PL2. 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 96°F/35°C. For more driver options, see Pinnacle Resource Guide. Some Outline configurations will not accommodate all driver options.

Circuiting: Select from single circuit (1), Multi circuit - For multiple circuiting and zone

control, requires factory shop drawing (M), Emergency circuit (E), Life Safety (L) or Night Light circuit (N). For emergency circuiting situations that require no through wire or circuit separation, Life Safety Circuit should be selected. This will provide a separate power feed and only the Life Safety Circuit in that section. Some EDGE 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 remote. For more Battery options, see Pinnacle Resource Guide.

**Finish:** Standard powder-coat textured white, metallic silver, textured black, graphite or bronze painted finish; consult factory for chip of standard paint finishes or for additional custom color and finish options.

Controls: Consult Factory.

Labels: UL and cUL 1598 listed. Standard, HOand VHO lumen packages are IC Rated, approved for dry/damp location unless otherwise noted.

#### **Buy American Act Compliant**

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

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