ELCO Lighting

Project name:

Fixture type:

Date:

1" Square Recessed Oak™ Pull Down

Small aperture 12V AC Downlight delivers over 600 lumens. More than a traditional 50W MR16 Halogen Lamp. Requires 12V AC Transformer (daisy chain up to 6). Dimmable ELV, MLV or 0-10V depending on transformer used.



Features

- Requires 12V AC transformer. Dimmable ELV, MLV or 0-10V depending on transformer used.
- IC for use with direct contact to insulation
- Height allows for use in ceilings with under 4" depth. Ceiling thickness can be reduced from fixture depth.
- Daisy chain up to 6 fixtures with E1LDRV60
- 28°, 38° and 50° beam options, not reccomended for in field changes.
- Remodel requires no frame. New construction E1LF2 frame available.
- UL Damp Location Rated
- UL Listed, Meets California Title 24 JA8-2016-E and Energy Star standards.
- Life Span 50,000 Hours L70

Specifications

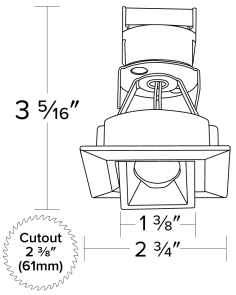
Wattage	6.1W
Lumens	625 lm - 700 lm
Voltage	12V AC
Color Temp.	2700K - 4000K
Dimmable	Yes
Lamp Type	LED
Beam Angle	28° - 50°

Options



White **Black** **Bronze**

Dimensions



Technical Details

Optics: PC Lens for even lumen distribution. 28°, 38° and 50° beam options, not reccomended for in field changes.

Adjustability: 360° rotation with 30° gimbal adjustability. Gimbal can be locked into place by tightening locking screw.

Construction: Diecast construction for lasting quality and greater heat dissipation. High quality powder coat finish prevents rust and paint cracking.

Installation: Requires 12V AC transformer. Can be installed on E1LF2 new construction frame. Remodel requires no frame. Hole cutout size: 2 3/8" (61 mm). Height allows for use in ceilings with under 4" depth. Ceiling thickness can be reduced from fixture depth.

LED Technology: Extremely accurate color rendering with 93+ CRI. Efficacy of up to 110 lumens per watt. Lumen Maintenance of 50,000 hours L70 based on LM80. Superior Thermal Management by utilizing diecast aluminum body as heat sink.

Electrical: Requires 12V AC transformer. Can be daisy chained up to 6 fixtures with E1LDRV60 or can be wired 1 fixture per transformer.

Delivered Lumens: **E1L22F27** 625 lm/2700K **E1L22F30** 650 lm/3000K **E1L22F35** 675 lm/3500K **E1L22F40** 700 lm/4000K

Dimming: Dims with MLV dimmers when powered by dimmable magnetic 12V AC transformer. Works with ELV dimmers when powered by dimmable electronic 12V AC transformer. Dims with 0-10V systems with 0-10V dimmable 12V AC transformer. Check transformer and dimmer compatibility before installation .

Listings: cUL Listed. UL Listed for DAMP Location. UL Listed for direct contact with inuslation. Meets California

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Title 24 JA8-2016-E and Energy Star standards.

Warranty: ELCO Products are built to last with a 5-year Limited warranty.

Product Number Builder Example: **E1L22F27W**

Trim	Style	Beam Angle	Color Temperature	Finish
E1L				
	22 Square	**F** 38°	**27** 2700K	**W** All White
		NF 28°	**30** 3000K	**BZ** All Bronze
		WF 50°	**40** 4000K	**B** All Black

Distance from Transformer to 1st Fixture	#12 Gauge						#14 Gauge						#18 Gauge					
	Number of Fixtures						Number of Fixtures						Number of Fixtures					
	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
1'	12.0	11.9	11.6	11.5	11.1	10.8	12.0	11.9	11.6	11.5	10.9	10.7	11.9	11.8	11.3	11.1	9.9	9.6
2'	11.9	11.9	11.6	11.4	10.8	10.7	11.9	11.8	11.5	11.3	10.7	10.5	11.9	11.6	11.1	10.9	9.7	9.1
4'	11.9	11.8	11.5	11.3	10.6	10.4	11.9	11.8	11.4	11.2	10.2	10.2	11.8	11.5	11.0	10.8	9.5	8.7
6'	11.9	11.8	11.4	11.3	10.5	10.3	11.9	11.7	11.3	11.2	10.3	10.0	11.7	11.3	10.8	10.5	9.3	8.2
8'	11.8	11.7	11.3	11.1	10.3	9.9	11.7	11.6	11.5	10.9	9.8	9.5	11.5	11.2	10.4	9.8	8.6	7.4
10'	11.7	11.6	11.2	10.9	10.1	9.4	11.7	11.6	11.1	10.9	9.7	9.2	11.4	11.0	10.4	9.3	8.1	6.9
16'	11.7	11.7	11.3	10.7	9.9	8.9	11.5	11.4	10.9	10.2	9.0	8.2	11.3	10.9	10.1	8.8	7.6	6.6
20'	11.4	11.3	10.9	10.1	9.2	8.2	11.5	11.3	10.8	9.9	8.6	7.6	10.8	10.0	8.5	7.1	5.9	4.4

Notes:

1. Max 6 fixtures.
2. For this analysis, 3' of wire was used between fixtures.
3. There will be an additional drop of ~1V if a dimmer is used.
4. Recommended maximum voltage drop is to 10.5V.

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Compatible Products

For use with **1″ Oak™ Adjustable Light Engines**

1″ Oak™ New Construction IC Frames



IC Rated Frame*
New Construction

CAT NO.	SPECIFICATIONS
E1LF2	2 ⅜″ Cutout for E1L32 and E1I22

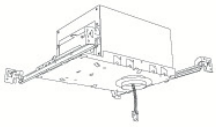


IC Rated Multiple Frame*
New Construction

CAT NO.	SPECIFICATIONS
E1LF2-M2	2 Set for E1L32 and E1I22
E1LF2-M3	3 Set for E1L32 and E1I22
E1LF2-M4	4 Set for E1L32 and E1I22
E1LF2-M5	5 Set for E1L32 and E1I22

*Requires 12V AC transformer (not included)

1″ Oak™ New Construction IC Rated



Specialty R-60
1″ IC Housing - Includes transformer
New Construction

CAT NO.	SPECIFICATIONS
E1LF2ICAJ	2 ⅜″ Cutout for E1L32 and E1I22

PRODUCT NUMBER BUILDER

1″ Oak™ IC Rated Housing		Dimming	
E1LF2ICAJ	R60 IC New Construction Housing	**(blank)**	120V Input, ELV Dimmable
		-7	277V Input, Non-Dimmable
		DX	120V Input, 0-10V Dimmable
		DX-7	277V Input, 0-10V Dimmable

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Compatible Products

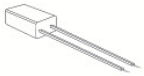
For use with **1" Oak™ Light Engines**

1" Oak™ 12V AC Transformers



Enclosed Electronic Transformer

CAT NO.	SPECIFICATIONS
E1LDRV60	ELV Dimmable



Electronic Transformer

CAT NO.	SPECIFICATIONS
LET-60	120V Input
LET-60H	120V Input, Hatch
LET-60-277	277 Input



0-10V Dimmable Electronic Transformer

CAT NO.	SPECIFICATIONS
LET-60DX	120V Input
LET-60DX-277	277V Input



Magnetic Transformer

CAT NO.	SPECIFICATIONS
ETR12	50W, Daisy Chain 2-6
ETR12-20	20W, Daisy Chain 1-3

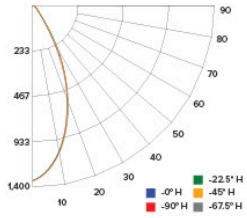
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Photometric Report

Oak™ LED Light Engine

PHOTOMETRIC REPORT

Product #: E1L22F30
Wattage / Lumens: 6.4W / 600 lm
Luminaire LPW: 93.7 lm/W



CANDLE POWER SUMMARY

Degress Vertical	0°
0	1302
5	1259
15	869
25	368
35	108
45	39
55	13
65	6
75	3
85	0
90	0

ILLUMINANCE AT A DISTANCE

Distance to Target Plane	Center Beam Footcandles	Beam Diameter
4′	81.4	2.8′
6′	36.2	4.2′
8′	20.3	5.6′
10′	13.0	7.0′

ZONAL LUMEN SUMMARY

Zone	Lumens	%Luminaire
0-30°	529.5	88.3
0-40°	608.0	91.7
0-60°	653.2	98.5
0-90°	663.2	100

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Dimmer Compatibility Chart
The Oak™ System
With Electronic Low Voltage Transformers

For Reference Only

Testing conducted by ELCO Lighting is not a substitute for and does not imply certification by an independent laboratory or any other standards certification. Refer to manufacturer specifications for more detailed information on product certifications and standards. Consult the dimmer manufacturer prior to installation to ensure compatibility.

Manufacturer	Product	Part Number	Dimmed Light Output Range
ELV Dimming			
Lutron	Diva® 300W Single-Pole Electronic Low Voltage Dimmer	DVELV-300P	10% - 100%
	Diva® 300W 3-Way Electronic Low Voltage Dimmer	DVELV-303P	10% - 100%
	Skylark® 300W Single-Pole Electronic Low Voltage Dimmer	SELV-300P	10% - 100%
	Skylark® 300W 3-Way Electronic Low Voltage Dimmer	SELV-303P	10% - 100%
	Maestro® 600W Single-Pole/Multi-Location Electronic Low Voltage Dimmer	MAELV-600	10% - 100%
Leviton	SureSlide® 300W 3-Way Electronic Low Voltage Dimmer	6615-P0	10% - 100%
	Decora® 450W Single-Pole/3-Way Electronic Low Voltage Dimmer	DSE06-10Z	10% - 100%
	IllumaTech® 300W Single-Pole/3-Way Electronic Low Voltage Dimmer	IPE04-1LZ	10% - 100%
	Vizia® RF + 600W Single-Pole/3-Way/Multi-Location Electronic Low Voltage Dimmer	VRE06-1LZ	10% - 100%
	Vizia® 600W Single-Pole/3-Way/Multi-Location Electronic Low Voltage Dimmer	VZE06-1LX	10% - 100%
	Decora® Digital Bluetooth 600W Single-Pole/3-Way/Multi-Location Electronic Low Voltage Dimmer	DDE06-BLZ	10% - 100%

*NOTE: Refer to dimmer manufacturer's documentation for installation instructions and circuit details

Disclaimer: Minimum and maximum loads for LEDs and CFLs are given in number of lamps and may vary depending on the lamp being used. Testing conducted by ELCO Lighting is not a substitute for and does not imply certification by an independent laboratory or any other standards certification. Refer to manufacturer specifications for more detailed information on product certifications and standards.

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