

Project:	Catalog #:	Type:
Prepared by:	Notes:	Date:

E3DL (4")

w/ ezCCT Field Selectable CCT

LED RETROFIT DOWNLIGHTING
4" Round
5-yr Warranty



OVERVIEW

Energetic Lighting's E3DL (4") retrofit downlights are designed to easily upgrade your existing 4-inch recessed fixture affordably and can be as simple as replacing an incandescent lamp. ENERGY STAR® certified and can be used to comply with Title-24 and JA8 high efficacy light source requirements. The E3DL series provides the perfect blend of performance and reliability at an affordable value to the customer.

The E3DL (4") delivers a minimum of 900 lumens of quality illumination while providing as much as 85% savings in energy consumption. Fixtures feature a white aluminum baffle with a recessed diffusing lens to conceal the LED array that provides a pixel free visual appearance.

The integrated ezCCT field selectable CCTs (2700K, 3000K, 4000K, 5000K, 6500K) is standard in the E3DL series. This greatly helps to reduce SKU complexity while providing design flexibility for applications that may require multiple color temperatures on the same project.

KEY FEATURES

- ezCCT field selectable CCT (2700K, 3000K (std), 4000K, 5000K & 6500K)
- 92+ CRI with a R9 greater than 60
- 4" round, 900 lumens minimum, 12W, 120V, 50/60Hz
- Spring loaded friction clip mount to existing 4" housing
- E26 screw base adapter included (incandescent retrofit)
- Applicable for residential and commercial installations
- Suitable for use in IC & Non-IC applications
- Wet location listed (showers, protected ceilings, etc.)
- Dimmable to 10% with many 120V TRIAC & ELV dimmers
- ENERGY STAR® rated
- Certified to California JA8 database per JA8-2016-E
- Can be used to comply with Title 24 Part 6 requirements
- 78% lumen maintenance @ 60,000 hours - L78/60,000 (per IES TM21)

SPECIFICATIONS & FEATURES

Construction

Die-cast aluminum trim frame design. High impact diffuse polymer lens provides direct view shielding of LED array. Aluminum housing and heat sink provides thermal management and cooling for use in both IC and non-IC applications.

LED Array

Utilizes a high efficiency LED array when coupled with the diffusing lens to provide an extremely uniform source of pixel free illumination. 90 CRI minimum with an R9 greater than 60.

Optics

Uniform illumination is achieved by the coupling of the LED array with a high impact polymer diffusing lens. The optical system creates a wide distribution for optimized fixture spacing. Provides a soft and uniform visual appearance with no LED pixelation for superior visual comfort.

Electrical

Integral 120V 50/60HZ constant current driver provides noise free operation. Continuous flicker-free dimming from 100% to 10% with select TRIAC dimmers. Dimming to as low as 10% is recommended by using dimmers with low end trim adjustment. Always consult dimmer manufacturer for compatibility and proper conditions of use. Some dimmers may require a neutral in the wall box conditions of use. 78% LED lumen maintenance at 60,000 hours (L78/60,000) per IES TM21. Projected L70 @ 88,000 hours. Drivers are rated for FCC part 15 Class B use in residential and commercial applications.

Mounting & Installation

Requires no housing or secondary junction box for install. Can be easily installed into existing 4" recessed housing using spring loaded friction clips. Product includes E26 screw base adapter for installation into incandescent housings. Installer must ensure fitment compatibility in any application. This includes compliance to all applicable national and local building and electrical codes.

Compliance & Certification

All luminaires are built to UL1598 standards with appropriate ETL/cETL labels. Suitable for wet location use. Adheres to LM79, LM80 and TM21 industry standards for performance and lifetime calculations. ENERGY STAR® listed product. Refer to ENERGY STAR® database for current listings. Product can be used to comply with California Title 24 Part 6 High Efficacy requirements. Product certified to California Appliance Efficiency Database under JA8-2016-E. Airtight certified per ASTM-E283. Suitable for use in clothes closets when installed in accordance with the NEC 410.16 spacing requirements.

Warranty

The E3DL series of luminaires ships with Energetic's 5-year standard warranty. (Terms & Conditions apply).

Load Information

Power Factor	0.97%
THD	18.8%
Frequency	50/60 Hz
Sound Rating	Class A, < 16.2 DbA
Low Temp Start	-25° C
Max Temp	40° C
Unit Weight	0.3 lbs

Shipping Information

Size	Weight ¹	Pallet ² (40" x 48" w x 80" h)
4"	0.5 lbs	756 units per

1. Case pack weighs 4.0 lbs (6 units/case pack).
2. There are 126 case packs per pallet.

Lumen Maintenance

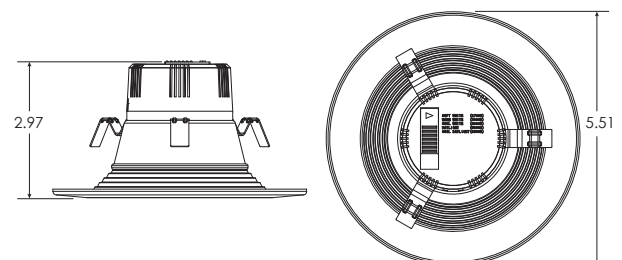
Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
25° C	> 78%	88,000

ezCCT Field Selectable CCT

The ezCCT field selectable color temperature driver helps to provide added design flexibility and simplified SKU reduction and complexity. Access to the ezCCT integrated toggle switch is on the back of the driver housing. Easily switch CCTs between 2700K, 3000K, 4000K, 5000K and 6500K. (set to 3000K standard from the factory)



Dimensions



STOCK ORDERING INFORMATION (EZCCT field selectable 2700K|3000K|4000K|5000K|6500K CCT)

Catalog Logic	Order #	Size	Lumens	Wattage	LPW	EZCCT	CRI	Voltage	Dimming	Energy Star	Pallet Qty
E3DL12P4-92765 ¹	50050	4"	900	12.0	75	2700K	92.4	120	TRIAC	Yes	TBD
			921			3000K <small>[standard]</small>					
			960			4000K					
			962			5000K					
			936			6500K					

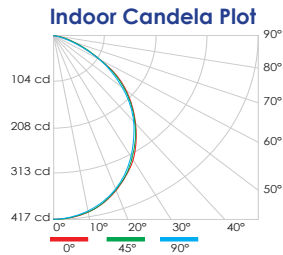
Notes:
1. Installing contractor responsible for ensuring desired CCT is selected during installation.

2700K, 12.0W PHOTOMETRIC DATA

Luminaire Data

Cat Logic: E3DL12P4-92765
 Test Report: E3DL12P4-92765-27K.IES
 CCT: 2700K (field selectable EZCCT)
 Lamp Type: LED
 Lumens: 900
 Input Watts: 12.0
 Efficacy: 75
 Spacing: 0° = 1.18 90° = 1.16
 Beam Angle: 94.5°
 Field Angle: 142.3°
 Max Candela: 416.8

Photometric values based on tests performed in compliance with LM-79.



Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	309	34.4
0-40	490	54.5
0-60	797	88.6
0-90	900	100.0

Candlepower

Angle	0°	90°
0	417	417
5	415	413
10	407	404
15	394	390
20	375	370
25	352	346
30	324	319
35	294	288
40	262	256
45	228	222
50	192	186
55	154	147
60	114	108
65	76	68
70	43	41
75	21	21
80	7	7
85	3	3
90	0	0

Coefficients of Utilization

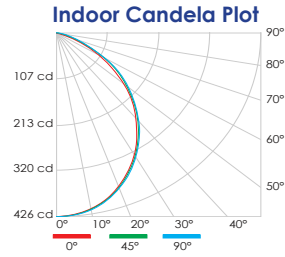
Effective Floor Cavity Reflectance 20%

rc	80%				70%				50%				30%				10%				0%					
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100								
1	111	107	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87								
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75								
3	94	84	77	71	91	83	76	71	80	74	70	77	72	68	75	71	67	65								
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5	80	68	60	54	78	67	59	54	65	58	53	63	57	52	61	56	52	50								
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8	64	52	44	38	63	51	43	38	50	43	38	48	42	38	47	42	37	36								
9	60	48	40	35	59	47	40	34	46	39	34	45	39	34	44	38	34	32								
10	57	44	36	31	55	43	36	31	43	36	31	42	35	31	41	35	31	29								

3000K (standard), 12.0W PHOTOMETRIC DATA

Luminaire Data

Cat Logic: E3DL12P4-92765
 Test Report: E3DL12P4-92765-3K.IES
 CCT: 3000K (ezCCT field selectable)
 Lamp Type: LED
 Lumens: 921
 Input Watts: 12.0
 Efficacy: 77
 Spacing: 0° = 1.18 90° = 1.16
 Beam Angle: 94.5°
 Field Angle: 142.3°
 Max Candela: 426.3



Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	316	34.4
0-40	501	54.5
0-60	816	88.6
0-90	921	100.0

Candlepower

Angle	0°	90°
0	426	426
5	424	423
10	416	413
15	403	399
20	384	379
25	360	354
30	332	326
35	301	295
40	267	261
45	234	228
50	197	191
55	157	151
60	117	111
65	78	73
70	44	42
75	22	20
80	7	8
85	3	3
90	0	0

Coefficients of Utilization

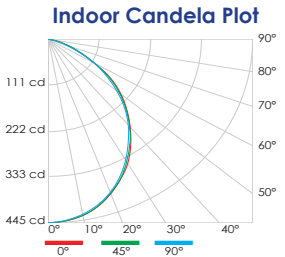
Effective Floor Cavity Reflectance 20%

rc	80%				70%				50%				30%				10%				0%							
	rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	
RCR																												
0	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	100	100	100	100
1	111	107	103	100	108	104	101	98	100	97	95	95	96	94	92	93	91	89	87	87	87	87	87	87	87	87	87	87
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10	57	44	36	31	55	43	36	31	43	36	31	31	42	35	31	41	35	31	29	29	29	29	29	29	29	29	29	29

4000K, 12.0W PHOTOMETRIC DATA

Luminaire Data

Cat Logic: E3DL12P4-92765
 Test Report: E3DL12P4-92765-4K.IES
 CCT: 4000K (field selectable)
 Lamp Type: LED
 Lumens: 960
 Input Watts: 12.0
 Efficacy: 80
 Spacing: 0° = 1.18 90° = 1.16
 Beam Angle: 94.5°
 Field Angle: 142.3°
 Max Candela: 444.5



Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	330	34.4
0-40	523	54.5
0-60	850	88.6
0-90	960	100.0

Candlepower

Angle	0°	90°
0	444	444
5	442	441
10	434	431
15	420	416
20	400	395
25	375	369
30	346	340
35	314	307
40	279	273
45	244	237
50	205	199
55	164	157
60	122	116
65	81	76
70	46	44
75	23	22
80	8	8
85	3	3
90	0	0

Coefficients of Utilization

Effective Floor Cavity Reflectance 20%

rc	80%				70%				50%				30%				10%				0%							
	rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	
RCR																												
0	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	100	100	100	100
1	111	107	103	100	108	104	101	98	100	97	95	95	96	94	92	93	91	89	87	87	87	87	87	87	87	87	87	87
2	102	95	89	84	99	93	87	83	89	85	81	81	86	82	79	83	80	77	75	75	75	75	75	75	75	75	75	75
3	94	84	77	71	91	83	76	71	80	74	70	70	77	72	68	75	71	67	65	65	65	65	65	65	65	65	65	65
4	86	76	68	62	84	74	67	61	72	65	60	60	70	64	60	68	63	59	57	57	57	57	57	57	57	57	57	57
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6	74	62	53	48	72	61	53	47	59	52	47	47	57	51	47	56	50	46	44	44	44	44	44	44	44	44	44	44
7	69	56	48	42	67	56	48	42	54	47	42	42	53	46	42	51	46	41	39	39	39	39	39	39	39	39	39	39
8	64	52	44	38	63	51	43	38	50	43	38	38	48	42	38	47	42	37	36	36	36	36	36	36	36	36	36	36
9	60	48	40	35	59	47	40	34	46	39	34	34	45	39	34	44	38	34	32	32	32	32	32	32	32	32	32	32
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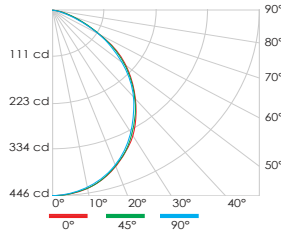
5000K, 12.0W PHOTOMETRIC DATA

Luminaire Data

Cat Logic: E3DL12P4-92765
Test Report: E3DL12P4-92765-5K.IES
CCT: 5000K (field selectable)
Lamp Type: LED
Lumens: 962
Input Watts: 12.0
Efficacy: 80
Spacing: 0° = 1.18 90° = 1.16
Beam Angle: 94.5°
Field Angle: 142.3°
Max Candela: 445

Photometric values based on tests performed in compliance with LM-79.

Indoor Candela Plot



Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	330	34.4
0-40	524	54.5
0-60	852	88.6
0-90	962	100.0

Candlepower

Angle	0°	90°
0	445	445
5	443	442
10	435	432
15	421	417
20	401	396
25	376	370
30	347	341
35	314	308
40	280	273
45	244	238
50	206	199
55	164	158
60	122	116
65	81	76
70	46	44
75	23	22
80	8	8
85	3	3
90	0	9

Coefficients of Utilization

Effective Floor Cavity Reflectance 20%

rc	80%				70%				50%				30%				10%				0%			
	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10
0	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100
1	111	107	103	100	108	104	101	98	100	97	95	93	96	94	92	93	91	89	87	87	87	87	87	87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75	75	75	75	75	75	75
3	94	84	77	71	91	83	76	71	80	74	70	77	72	68	75	71	67	65	65	65	65	65	65	65
4	86	76	68	62	84	74	67	61	72	65	60	70	64	60	68	63	59	57	57	57	57	57	57	57
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7	69	56	48	42	67	56	48	42	54	47	42	53	46	42	51	46	41	39	39	39	39	39	39	39
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9	60	48	40	35	59	47	40	34	46	39	34	45	39	34	44	38	34	32	32	32	32	32	32	32
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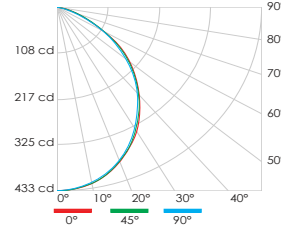
6500K, 12.0W PHOTOMETRIC DATA

Luminaire Data

Cat Logic: E3DL12P4-92765
Test Report: E3DL12P4-92765-65K.IES
CCT: 6500K (field selectable)
Lamp Type: LED
Lumens: 936
Input Watts: 12.0
Efficacy: 78
Spacing: 0° = 1.18 90° = 1.16
Beam Angle: 94.5°
Field Angle: 142.3°
Max Candela: 433

Photometric values based on tests performed in compliance with LM-79.

Indoor Candela Plot



Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	321	34.4
0-40	510	54.5
0-60	829	88.6
0-90	936	100.0

Candlepower

Angle	0°	90°
0	433	433
5	431	429
10	423	420
15	409	405
20	290	385
25	365	360
30	337	331
35	305	299
40	272	266
45	238	231
50	200	194
55	160	153
60	119	113
65	79	74
70	45	42
75	22	22
80	7	8
85	3	3
90	0	0

Coefficients of Utilization

Effective Floor Cavity Reflectance 20%

rc	80%				70%				50%				30%				10%				0%			
	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10	70	50	30	10
0	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100
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2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75	75	75	75	75	75	75
3	94	84	77	71	91	83	76	71	80	74	70	77	72	68	75	71	67	65	65	65	65	65	65	65
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7	69	56	48	42	67	56	48	42	54	47	42	53	46	42	51	46	41	39	39	39	39	39	39	39
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9	60	48	40	35	59	47	40	34	46	39	34	45	39	34	44	38	34	32	32	32	32	32	32	32
10	57	44	36	31	55	43	36	31	43	36	31	42	35	31	41	35	31	29	29	29	29	29	29	29

NOTES: