BeveLED®2.1 Trimless

DOWNLIGHT 3321

1" Regress

PROJECT INFORMATION

PROJECT _____

_____

DATE _____

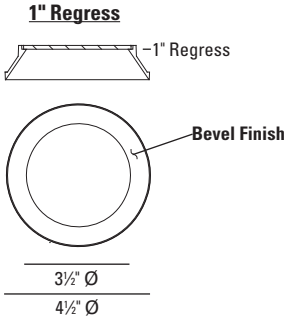
TYPE _____

BeveLED 2.1 Recessed Downlight - BeveLED 2.1 is the most complete recessed LED downlight product family available from USAI Lighting, now with more BeveLED trim finishes, LED classic white color temperatures, innovative housing styles, and dimming driver options than before. With industry-leading performance, BeveLED 2.1 can provide a solution for any project - commercial, corporate and residential installations.

DELIVERED PERFORMANCE

BeveLED 2.1 1" REGRESS DOWNLIGHT	9 Watts		12 Watts		16 Watts		24 Watts		33 Watts		36 Watts	
Color Rendering Index	80+ CRI	90+ HIGH CRI	80+ CRI	90+ HIGH CRI	80+ CRI	90+ HIGH CRI	80+ CRI	90+ HIGH CRI	80+ CRI	90+ HIGH CRI	80+ CRI	90+ HIGH CRI
Lumens per Watt	93	68	86	67	86	67	80	63	71	57	100	78
Source Lumens	1150	900	1300	1025	1725	1350	2400	1875	3025	2350	4150	3250
Delivered Lumens	**775**	**600**	**1025**	**800**	**1375**	**1075**	**1925**	**1500**	**2400**	**1875**	**3450**	**2700**
Color Consistency	2-Step MacAdam Ellipse											

Performance based on 3000K



CCT MULTIPLIER	2200K	2700K		3000K		3500K	4000K
Color Rendering Index	80+ CRI	80+ CRI	90+ HIGH CRI	80+ CRI	90+ HIGH CRI	80+ CRI	80+ CRI
Multiplier for Lumen Output	0.72	0.94	0.78	1.00	.78	1.00	1.06

90+ CRI is not available for 2200K, 3500K, or 4000K

HOW TO SPECIFY

Ordering Example: Specify trim code and housing code to order: Example : **3321W - B1- S - 10 - LRLD4 - 9012 - C3 - 27KS - 50 - NC - 277V - DIML2 - CB27**

TRIM ORDERING INFORMATION

TRIM: 3321 | OPTION: _____ – BEVEL STYLE: _____ – LENS: _____ – B1 BEVEL FINISH: _____

3321 Round Trimless Downlight 1" Regress	OPTION	BEVEL STYLE	LENS	B1 BEVEL FINISH
	W Wet location [1] **EML** Integral Emergency Test Switch [2]	**B1** 1" Regress Bevel, Painted Die Cast	**S** Solite (provided standard) **F** Frosted	**10** White **13** Statuary Bronze **21** Black **28** Metalized Grey **RAL** Custom Color (specify RAL #)
		AB1 1" Regress Bevel, Black Anodized Finish **AC1** 1" Regress Bevel, Clear Matte Anodized Finish	**S** Solite (provided standard) **F** Frosted	(Leave blank for AB1 and AC1 Bevel Styles)

[1] Wet location, use with B1 trims only.

[2] See table on page 2

HOUSING ORDERING INFORMATION

HOUSING CODE: LRLD4 – WATTAGE: _____ – ENGINE CODE: _____ – COLOR: _____ – REFLECTOR: _____ – HOUSING TYPE: _____ – SELECT ONE VOLTAGE: _____ – DIMMING DRIVER OPTIONS: _____ – ACCESSORIES: _____

HOUSING CODE	WATTAGE	ENGINE CODE	COLOR	REFLECTOR
LRLD4	**9009** 9W LED **9012** 12W LED **9016** 16W LED **9024** 24W LED **9033** 33W LED	**C3**	**22KS** 2200K, 80+ CRI [3] **27KS** 2700K, 80+ CRI **30KS** 3000K, 80+ CRI **35KS** 3500K, 80+ CRI **40KS** 4000K, 80+ CRI **27KH** 2700K, 90+ CRI **30KH** 3000K, 90+ CRI	**25** 25° beam **50** 50° beam **90** 90° beam
	9036 36W LED	**E1**		
	See performance chart for precise lumen information.		2 Step MacAdam ellipse is standard for all [3] Not available with E1 light engine	

HOUSING TYPE	SELECT ONE VOLTAGE	DIMMING DRIVER OPTIONS	ACCESSORIES
FT Flat Housing New Construction	**120V** **277V**	**For use with 120V or 277V** **DIML2** 0-10V dim, 10% (provided standard) **DIML4** Lutron A 3-wire/ECO, 1% **DIML4E** Lutron 5 ECO, 5% [5] **DIML4H** Lutron H ECO, 1% Fade [5] **DIML6A** EldoLED 0-10V, 0.1%, logarithmic / Lutron controls **DIML6B** EldoLED 0-10V Linear, 0.1%, linear controls **DIML6E** EldoLED 0-10V, 1%, logarithmic/Lutron controls **DIML6F** EldoLED 0-10V, 1%, linear controls **DIML7** EldoLED DALI, 0.1% **DIML8** EldoLED DMX, 0.1% [6, 7]	**CB27** 27" C-Channel Bars **CB52** 52" C-Channel Bars **EML** Emergency battery [9] **EMLW** Emergency battery, wet location [9] **MLXX** Millwork housing [10] XX=Specify Color (10, 13, 21, 28, RAL) Millwork not wet listed
FTIC Flat Housing IC-Rated/Airtight (up to 16W maximum)			
NCSM1 New Construction Narrow Width 5/8" to 1-1/4" ceiling max			
NCSM2 New Construction Narrow Width 1-1/4" to 2-1/4" ceiling max			
NC New Construction all in one			
CP Chicago Plenum			
IC Insulation-Contact Rated / Airtight [4]			
See emergency solutions chart for EM options with these housings	**120V** **277V**	**For use with 120V only** **DIML3** Lutron A 2-wire, 1% 120V only **DIML19** Phase 2-wire dimming, 1% 120V only [5, 6, 8]	
[4] Not available with E1 light engine	**347V**	**For use with 347V only** **DIML15** 0-10V dim, 1%, 347 only	[9] See emergency solutions chart for more details on EM options. Not available with 347V.
	[5] N/A with 9W [6] N/A with 33W [7] N/A with FT or FTIC housing [8] N/A with E1 light engine		[10] ML not for use with NCSM1 housing

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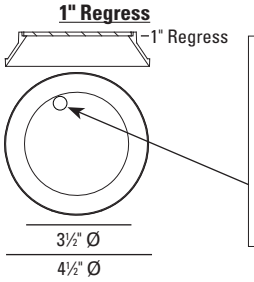
Revised 12/19/2017

BeveLED®2.1 Trimless

DOWNLIGHT 3321

TRIM INFORMATION

1" Regress



EM fixtures that are provided with an integral test switch are shipped with a hole in the glass lens for access. Refer to "EMERGENCY SOLUTIONS" chart to find out which fixtures have an integral test switch.

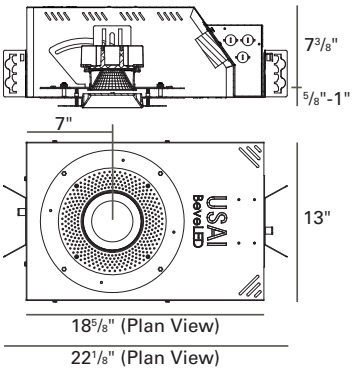
3321 Emergency Solutions

Housing	EM SERVICE	Integral Test Switch	Remote Test Switch	Inverter By Others
FT, FTIC	N/A			X
NCSM*	Above ceiling access required		X	X
NC, 25° or 50° optic	Through aperture	X		X
NC, 90° optic	Through aperture		X	X
NC Wet Location	Through aperture		X	X
CP	N/A			X
IC	N/A			X

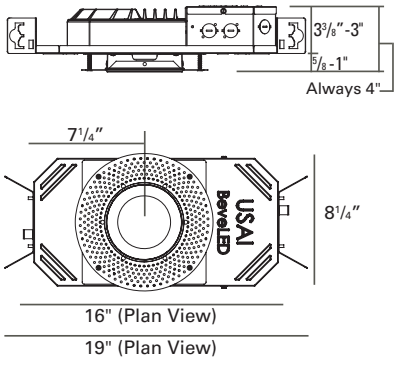
* NCSM + DIML8 cannot be offered with EM. 347V cannot be offered with EM.

HOUSING INFORMATION

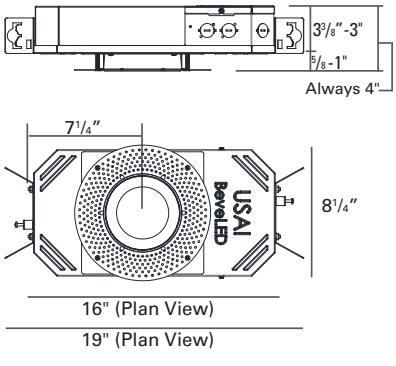
New Construction
Universal Style Housing - NC



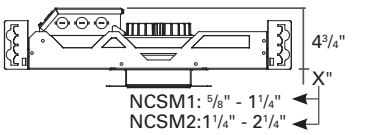
New Construction Flat Housing - FT

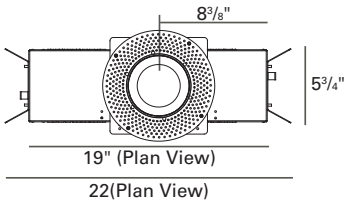


New Construction
Flat Housing IC-Rated /Airtight- FTIC
(up to 16W maximum)

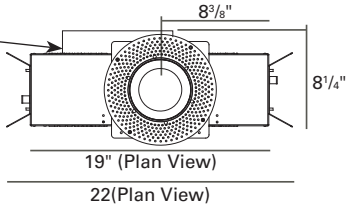


New Construction - Narrow Width - NCSM

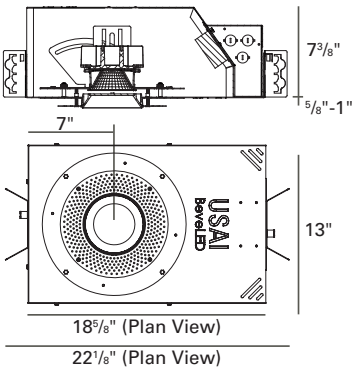




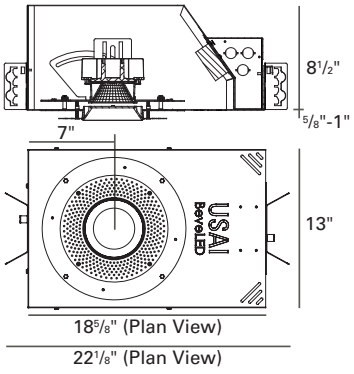
Shown with EM option



Chicago Plenum (24W and less) - CP
IC / Airtight (24W and less) - IC



Chicago Plenum (33W and 36W) - CP
IC / Airtight (33W) - IC
(Not available with E1 light engine)



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SPECIFICATIONS

TRIM: 4-1/2" round aperture with a 1" regressed bevel, retained by three ball plungers. Die cast aluminum bevel is available in white, statuary bronze, black, and metalized grey finishes. Also available in black anodized or clear matte anodized bevel. Custom colors available (provide RAL#).

TRIM LENS: Trim is shipped with integral solite lens standard; frosted lens available as an option.

REFLECTOR: Interchangeable precision injection molded specular polycarbonate reflector optimized for 25°, 50° or 90° beam distribution.

FIELD REPLACEABLE LIGHT ENGINE: Available in 6 lumen packages. Engine is field replaceable through the aperture without tools. See performance chart for precise lumen output information.

COLOR: BeveLED 2.1 is available in 5 color temperatures (2200K, 2700K, 3000K, 3500K, 4000K). All color options are tightly binned for fixture-to-fixture color consistency within a 2-Step MacAdam Ellipse. 80+ color rendering index provided standard. 90+ CRI available for 2700K and 3000K CCTs. 2200K is not available with E1 light engine.

RATED LIFE: Based on IESNA LM80-2008 50,000 hours at 70% lumen maintenance (L70).

THERMAL MANAGEMENT: Proprietary high performance aluminum die cast heatsink for maximum LED life. Ambient temperatures at fixture location should not exceed 40°C during normal operation.

FIELD REPLACEABLE DRIVER: 0-10V, 100%-10% solid state electronic constant current driver with a high power factor provided standard and sources 2mA. Specify 120V or 277V. Driver complies with IEEE C62.41 surge protection.

DIMMING OPTIONS: Multiple dimming drivers available. See compatibility chart attached. Some on-time delay may be experienced depending on control system used. Note: DIML6A and DIML6E logarithmic control are intended for use with Lutron control systems; DIML6B and DIML6F linear control are intended for use with non-Lutron controls. DIML15 and DIML6 dimming drivers source 2mA.

EMERGENCY: Fixtures provided with an integral test switch are provided with a hole in the glass lens as per the drawing above. Fixtures provided with a remote test switch are provided with a 24" lead length for location of the test switch. Fixtures that have no USAI EM option may be connected to an inverter (by others) for emergency lighting. SPECIAL NOTE FOR NCSM HOUSING: DIML8 cannot be combined with EM options in NCSM housing. See emergency solutions chart for more information on EM test switches and servicing.

MOUNTING: Butterfly brackets and adjustable nailer bars with integral nails provided. Nailer bars are extendible from 14" to 24" centers. C-channel bars are optionally available.

MAXIMUM CEILING THICKNESS: As per drawings above. Millwork option is for 2-1/4" max. thickness wood with NCSM2 housing and for 1" max thickness wood with all other housings. Millwork option is not available with NCSM1 housing.

CEILING CUT OUT: Millwork: 4-13/16" Ø
All others: 5-1/2" Ø

HOUSING: Fabricated of 20 ga. galvanized steel with thru wire J-box, 4 in 4 out at min. 90°C, #12 AWG thru branch circuit wiring. FTIC housing is IC-rated up to 16W maximum. IC-rated housings for use with 9W, 12W, and 16W light engines only are rated for direct contact with spray foam insulation of R-42 or less. IC rated housing is not available with E1 light engine. When using DIML8, NCSM housing can NOT be used with thru-branch circuit wiring.

LISTINGS: Dry/Damp. Wet location option available with B1 trim only. Millwork dry/damp only. NRTL/CSA-US tested to UL standards. IBEW union made. Energy Star Qualified under Luminaires Specification V2.0. Please see Energy Star website for exact model #s included in the listing. Please note that the following options are not Energy Star qualified: 22KS, 27KH, and 30KH light engines; E1 light enginge; B-13, B-21, and AB trim styles; Frosted lens and EM options. CEC/Title 24 Compliant up to 16W maximum. See CEC website for exact models included.

WARRANTY: 5 years

NOTES:

- Not for use in corrosive environment.
- Use of pressure washer voids warranty.
- For interior use only.
- Not for use with acoustical ceilings.
- Trimless for drywall installation only.
- Millwork option for non-spackle installations.

PHOTOMETRICS: Consult factory or website for IES files. Tested in accordance with IESNA LM79-2008.

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DELIVERED PERFORMANCE

3021 / 3321 16W 30KS 25°

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

RCC %:	80				70				50			30			10			0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0
RCR: 0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.14	1.11	1.09	1.07	1.11	1.09	1.07	.94	1.05	1.03	1.02	1.01	1.00	.99	.98	.97	.96	.94
2	1.09	1.04	1.00	.97	1.06	1.02	.99	.89	.99	.96	.94	.96	.94	.92	.93	.92	.90	.88
3	1.04	.98	.93	.89	1.02	.96	.92	.84	.94	.90	.87	.91	.88	.86	.89	.87	.85	.83
4	.99	.92	.87	.83	.97	.91	.86	.79	.89	.85	.82	.87	.83	.81	.85	.82	.80	.78
5	.95	.87	.82	.78	.93	.86	.81	.75	.84	.80	.77	.83	.79	.76	.81	.78	.75	.74
6	.91	.83	.77	.73	.89	.82	.77	.71	.80	.76	.72	.79	.75	.72	.78	.74	.71	.70
7	.87	.79	.73	.69	.86	.78	.73	.68	.77	.72	.69	.76	.71	.68	.74	.71	.68	.67
8	.83	.75	.69	.66	.82	.74	.69	.65	.73	.69	.65	.72	.68	.65	.71	.68	.65	.64
9	.80	.72	.66	.63	.79	.71	.66	.62	.70	.66	.62	.69	.65	.62	.69	.65	.62	.61
10	.77	.69	.63	.60	.76	.68	.63	.59	.67	.63	.60	.67	.62	.59	.66	.62	.59	.58

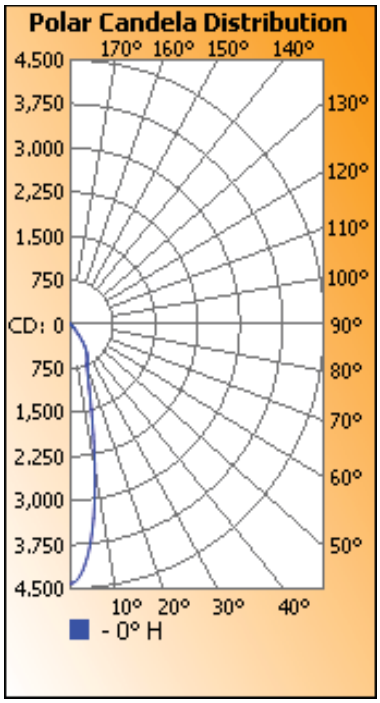
Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	1,033.0	74.8%
0-40	1,268.7	91.9%
0-60	1,353.3	98%
60-90	28.0	2%
70-100	9.3	0.7%
90-120	0	0%

Illuminance at a Distance

	Center Beam fc	Beam Width
2.0ft	1,106.1 fc	0.8 ft
4.0ft	276.5 fc	1.5 ft
6.0ft	122.9 fc	2.3 ft
8.0ft	69.1 fc	3.1 ft
10.0ft	44.2 fc	3.9 ft
12.0ft	30.7 fc	4.6 ft
14.0ft	22.6 fc	5.4 ft
16.0ft	17.3 fc	6.2 ft

Beam Spread: 21.9°



3021 / 3321 33W 30KS 25°

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

RCC %:	80				70				50			30			10			0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0
RCR: 0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.14	1.11	1.09	1.07	1.11	1.09	1.07	.94	1.05	1.03	1.02	1.01	1.00	.99	.98	.97	.96	.94
2	1.09	1.04	1.00	.97	1.06	1.02	.99	.89	.99	.96	.94	.96	.94	.92	.93	.92	.90	.88
3	1.04	.98	.93	.89	1.02	.96	.92	.84	.94	.90	.87	.91	.88	.86	.89	.87	.85	.83
4	.99	.92	.87	.83	.97	.91	.86	.79	.89	.85	.82	.87	.83	.81	.85	.82	.80	.78
5	.95	.87	.82	.78	.93	.86	.81	.75	.84	.80	.77	.83	.79	.76	.81	.78	.75	.74
6	.91	.83	.77	.73	.89	.82	.77	.71	.80	.76	.72	.79	.75	.72	.78	.74	.71	.70
7	.87	.79	.73	.69	.86	.78	.73	.68	.77	.72	.69	.76	.71	.68	.74	.71	.68	.67
8	.83	.75	.69	.66	.82	.74	.69	.65	.73	.69	.65	.72	.68	.65	.71	.68	.65	.64
9	.80	.72	.66	.63	.79	.71	.66	.62	.70	.66	.62	.69	.65	.62	.69	.65	.62	.61
10	.77	.69	.63	.60	.76	.68	.63	.59	.67	.63	.60	.67	.62	.59	.66	.62	.59	.58

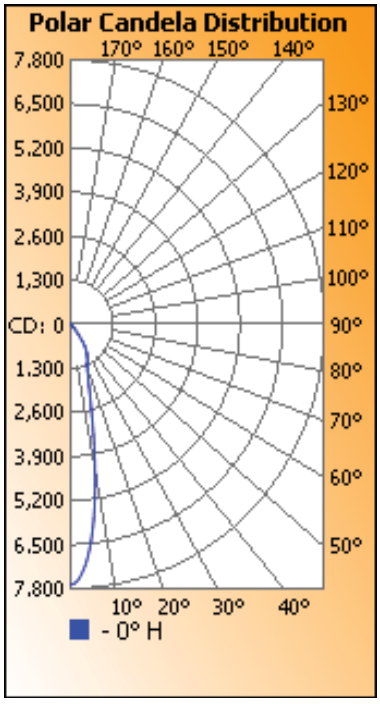
Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	1,799.7	74.8%
0-40	2,210.3	91.9%
0-60	2,357.6	98%
60-90	48.7	2%
70-100	16.1	0.7%
90-120	0	0%

Illuminance at a Distance

	Center Beam fc	Beam Width
2.0ft	1,927.0 fc	0.8 ft
4.0ft	481.8 fc	1.5 ft
6.0ft	214.1 fc	2.3 ft
8.0ft	120.4 fc	3.1 ft
10.0ft	77.1 fc	3.9 ft
12.0ft	53.5 fc	4.6 ft
14.0ft	39.3 fc	5.4 ft
16.0ft	30.1 fc	6.2 ft

Beam Spread: 21.9°



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DELIVERED PERFORMANCE

3021 / 3321 16W 30KS 50°

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

RCC %:	80				70				50			30			10			0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0
RCR: 0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.14	1.11	1.08	1.06	1.11	1.09	1.06	.94	1.05	1.03	1.01	1.01	.99	.98	.97	.96	.95	.94
2	1.08	1.03	.99	.96	1.06	1.01	.98	.88	.98	.95	.93	.95	.93	.91	.93	.91	.89	.87
3	1.03	.96	.92	.88	1.01	.95	.91	.82	.92	.89	.86	.90	.87	.84	.88	.85	.83	.81
4	.98	.91	.85	.81	.96	.89	.84	.77	.87	.83	.80	.85	.82	.79	.83	.80	.78	.76
5	.93	.85	.79	.75	.92	.84	.79	.73	.82	.78	.74	.81	.77	.74	.79	.76	.73	.72
6	.89	.80	.75	.70	.87	.80	.74	.69	.78	.73	.70	.77	.72	.69	.75	.72	.69	.67
7	.85	.76	.70	.66	.84	.75	.70	.65	.74	.69	.66	.73	.69	.65	.72	.68	.65	.64
8	.81	.72	.66	.62	.80	.71	.66	.61	.70	.65	.62	.69	.65	.62	.68	.64	.61	.60
9	.78	.68	.63	.59	.77	.68	.63	.58	.67	.62	.59	.66	.62	.58	.65	.61	.58	.57
10	.74	.65	.60	.56	.73	.65	.59	.55	.64	.59	.56	.63	.59	.55	.62	.58	.55	.54

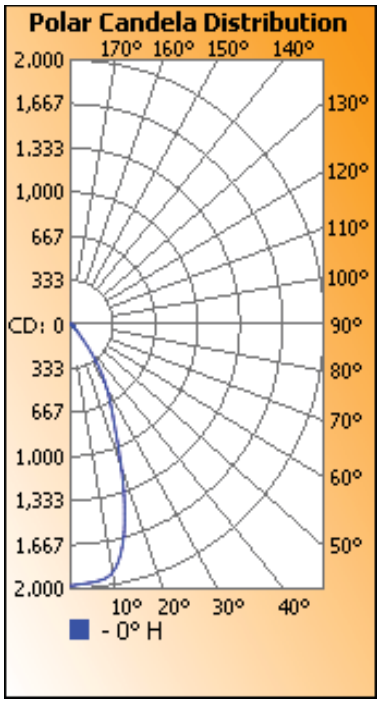
Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	1,003.8	74.9%
0-40	1,227.7	91.6%
0-60	1,309.5	97.7%
60-90	30.3	2.3%
70-100	9.8	0.7%
90-120	0	0%

Illuminance at a Distance

	Center Beam fc	Beam Width
2.0ft	495.9 fc	1.6 ft
4.0ft	124.0 fc	3.3 ft
6.0ft	55.1 fc	4.9 ft
8.0ft	31.0 fc	6.5 ft
10.0ft	19.8 fc	8.2 ft
12.0ft	13.8 fc	9.8 ft
14.0ft	10.1 fc	11.4 ft
16.0ft	7.7 fc	13.1 ft

Beam Spread: 44.4°



3021 / 3321 33W 30KS 50°

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

RCC %:	80				70				50			30			10			0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0
RCR: 0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.14	1.11	1.08	1.06	1.11	1.09	1.06	.94	1.05	1.03	1.01	1.01	.99	.98	.97	.96	.95	.94
2	1.08	1.03	.99	.96	1.06	1.01	.98	.88	.98	.95	.93	.95	.93	.91	.93	.91	.89	.87
3	1.03	.96	.92	.88	1.01	.95	.91	.82	.92	.89	.86	.90	.87	.84	.88	.85	.83	.81
4	.98	.91	.85	.81	.96	.89	.84	.77	.87	.83	.80	.85	.82	.79	.83	.80	.78	.76
5	.93	.85	.79	.75	.92	.84	.79	.73	.82	.78	.74	.81	.77	.74	.79	.76	.73	.72
6	.89	.80	.75	.70	.87	.80	.74	.69	.78	.73	.70	.77	.72	.69	.75	.72	.69	.67
7	.85	.76	.70	.66	.84	.75	.70	.65	.74	.69	.66	.73	.69	.65	.72	.68	.65	.64
8	.81	.72	.66	.62	.80	.71	.66	.61	.70	.65	.62	.69	.65	.62	.68	.64	.61	.60
9	.78	.68	.63	.59	.77	.68	.63	.58	.67	.62	.59	.66	.62	.58	.65	.61	.58	.57
10	.74	.65	.60	.56	.73	.65	.59	.55	.64	.59	.56	.63	.59	.55	.62	.58	.55	.54

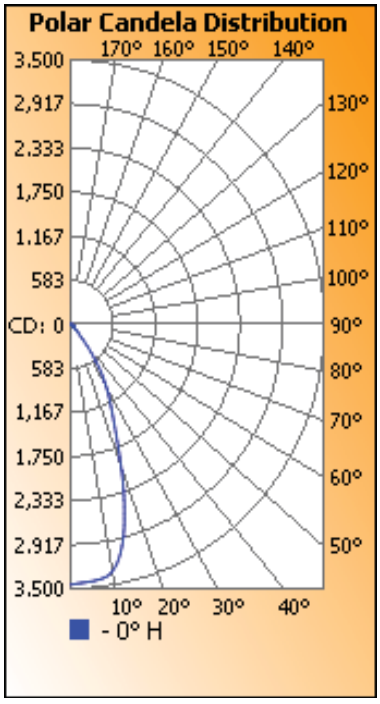
Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	1,748.8	74.9%
0-40	2,138.9	91.6%
0-60	2,281.3	97.7%
60-90	52.9	2.3%
70-100	17.1	0.7%
90-120	0	0%

Illuminance at a Distance

	Center Beam fc	Beam Width
2.0ft	863.9 fc	1.6 ft
4.0ft	216.0 fc	3.3 ft
6.0ft	96.0 fc	4.9 ft
8.0ft	54.0 fc	6.5 ft
10.0ft	34.6 fc	8.2 ft
12.0ft	24.0 fc	9.8 ft
14.0ft	17.6 fc	11.4 ft
16.0ft	13.5 fc	13.1 ft

Beam Spread: 44.4°



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DELIVERED PERFORMANCE

3021 / 3321 16W 30KS 90°

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

RCC %:	80				70				50			30			10			0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0
RCR: 0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.11	1.08	1.04	1.01	1.09	1.05	1.02	.90	1.01	.99	.97	.97	.96	.94	.94	.92	.91	.89
2	1.03	.97	.91	.87	1.01	.95	.90	.79	.92	.87	.84	.88	.85	.82	.86	.83	.80	.78
3	.96	.87	.80	.75	.94	.86	.79	.70	.83	.78	.73	.80	.76	.72	.78	.74	.71	.69
4	.89	.79	.71	.66	.87	.78	.71	.63	.75	.69	.65	.73	.68	.64	.71	.67	.63	.61
5	.83	.72	.64	.58	.81	.71	.63	.56	.69	.62	.57	.67	.61	.57	.65	.60	.56	.54
6	.77	.65	.57	.52	.75	.64	.57	.50	.63	.56	.51	.61	.55	.51	.60	.54	.50	.49
7	.72	.60	.52	.47	.70	.59	.52	.45	.58	.51	.46	.56	.50	.46	.55	.50	.46	.44
8	.67	.55	.47	.42	.66	.54	.47	.41	.53	.46	.42	.52	.46	.42	.51	.45	.41	.40
9	.63	.51	.43	.38	.62	.50	.43	.38	.49	.43	.38	.48	.42	.38	.47	.42	.38	.36
10	.59	.47	.40	.35	.58	.47	.40	.34	.46	.39	.35	.45	.39	.35	.44	.38	.35	.33

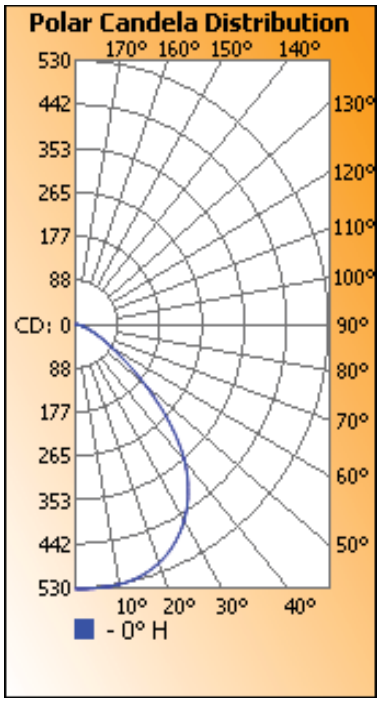
Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	420.6	39.2%
0-40	675.0	62.9%
0-60	998.8	93.1%
60-90	73.5	6.9%
70-100	23.0	2.1%
90-120	0	0%

Illuminance at a Distance

	Center Beam fc	Beam Width
2.0ft	132.5 fc	4.1 ft
4.0ft	33.1 fc	8.2 ft
6.0ft	14.7 fc	12.3 ft
8.0ft	8.3 fc	16.3 ft
10.0ft	5.3 fc	20.4 ft
12.0ft	3.7 fc	24.5 ft
14.0ft	2.7 fc	28.6 ft
16.0ft	2.1 fc	32.7 ft

Beam Spread: 91.2°



3021 / 3321 33W 30KS 90°

Coefficients Of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance: 20%

RCC %:	80				70				50			30			10			0
RW %:	70	50	30	0	70	50	30	0	50	30	20	50	30	20	50	30	20	0
RCR: 0	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.00	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.11	1.08	1.04	1.01	1.09	1.05	1.02	.90	1.01	.99	.97	.97	.96	.94	.94	.92	.91	.89
2	1.03	.97	.91	.87	1.01	.95	.90	.79	.92	.87	.84	.88	.85	.82	.86	.83	.80	.78
3	.96	.87	.80	.75	.94	.86	.79	.70	.83	.78	.73	.80	.76	.72	.78	.74	.71	.69
4	.89	.79	.71	.66	.87	.78	.71	.63	.75	.69	.65	.73	.68	.64	.71	.67	.63	.61
5	.83	.72	.64	.58	.81	.71	.63	.56	.69	.62	.57	.67	.61	.57	.65	.60	.56	.54
6	.77	.65	.57	.52	.75	.64	.57	.50	.63	.56	.51	.61	.55	.51	.60	.54	.50	.49
7	.72	.60	.52	.47	.70	.59	.52	.45	.58	.51	.46	.56	.50	.46	.55	.50	.46	.44
8	.67	.55	.47	.42	.66	.54	.47	.41	.53	.46	.42	.52	.46	.42	.51	.45	.41	.40
9	.63	.51	.43	.38	.62	.50	.43	.38	.49	.43	.38	.48	.42	.38	.47	.42	.38	.36
10	.59	.47	.40	.35	.58	.47	.40	.34	.46	.39	.35	.45	.39	.35	.44	.38	.35	.33

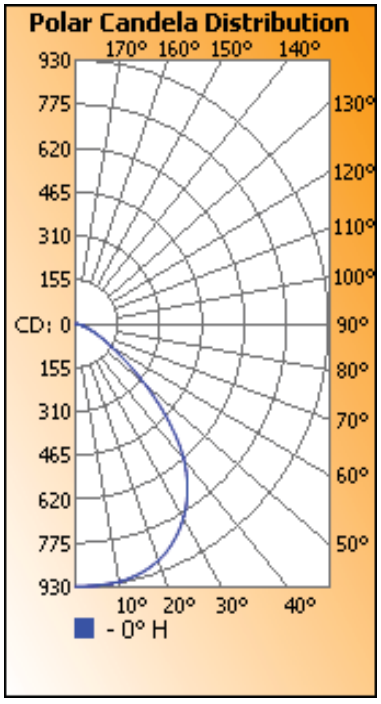
Zonal Lumen Summary

Zone	Lumens	% Luminaire
0-30	732.8	39.2%
0-40	1,175.9	62.9%
0-60	1,740.1	93.1%
60-90	128.0	6.9%
70-100	40.1	2.1%
90-120	0	0%

Illuminance at a Distance

	Center Beam fc	Beam Width
2.0ft	230.8 fc	4.1 ft
4.0ft	57.7 fc	8.2 ft
6.0ft	25.6 fc	12.3 ft
8.0ft	14.4 fc	16.3 ft
10.0ft	9.2 fc	20.4 ft
12.0ft	6.4 fc	24.5 ft
14.0ft	4.7 fc	28.6 ft
16.0ft	3.6 fc	32.7 ft

Beam Spread: 91.2°



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DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
D2 / DIML2

DIMMING DRIVER WIRING SCHEMES:

NOTES:
Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

IMPORTANT SAFETY INSTRUCTIONS - SAVE THESE INSTRUCTIONS

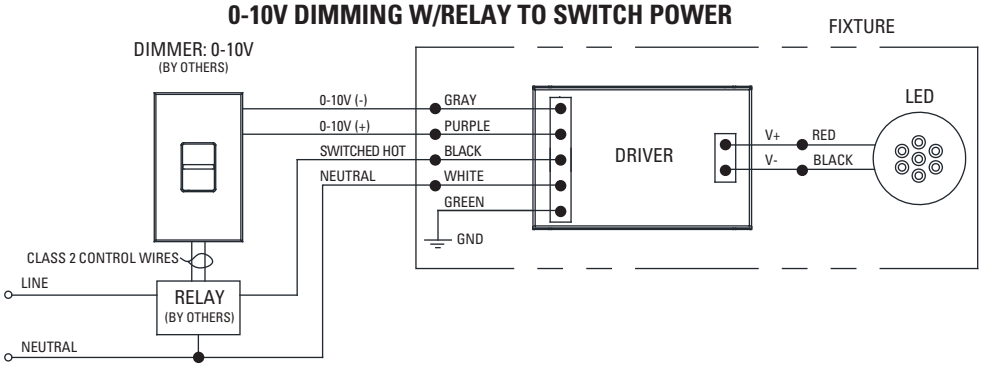
1. Keep these instructions in a safe place for future reference.
2. Only qualified electricians in accordance to local codes should install these fixtures.
3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.
4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
5. Cap any wires not used separately (not together).

D2 / DIML2 LED: 0-10V Dimming Driver Wiring (Dims down to 10%)

D2 / DIML2 Dimmer Compatibility Chart				
Manufacturer	Product	Part Number	Dimmed Light Output Range	Qty Fixtures Per Dimmer*
120V / 277V				Use source current per fixture specification sheet to determine number of fixtures per dimmer. Max number of fixtures is limited by dimmer load rating.
Crestron	iLux dimmer expansion module	CLS-EXP-DIMFLV	100% - 10%	
Crestron	DIN Rail dimmer	DIN-4DIMFLV4	100% - 10%	
Crestron	DIN Rail analog output module	DIN-A08	100% - 10%	
Crestron	8 Channel dimmer module	GLX-DIMFLV8	100% - 10%	
Crestron	8 Channel dimmer module	GLXP-DIMFLV8	100% - 10%	
Leviton	IllumaTech dimmer	IP710-DLX	100% - 10%	
Lightolier (Philips)	Vega	V2000FAMU	100% - 10%	
Lutron	Diva	DVTV-XX	100% - 10%	

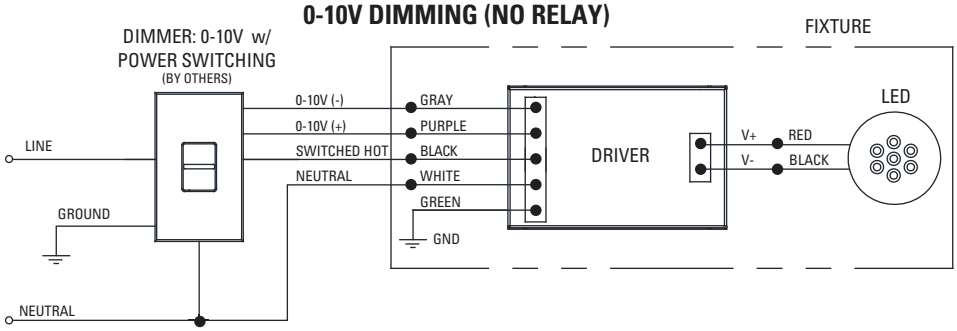
* NOTE: Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

D2 / DIML2
0-10V DIMMING W/RELAY TO SWITCH POWER



NOTE:
If switched, non-dimming operation is desired, cap off purple and gray wires individually at installation. Do NOT cap purple and gray wires together.

D2 / DIML2
0-10V DIMMING (NO RELAY)



NOTE:
If switched, non-dimming operation is desired, cap off purple and gray wires individually at installation. Do NOT cap purple and gray wires together.

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DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
D3 / DIML3

DIMMING DRIVER WIRING SCHEMES:

NOTES:
Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

IMPORTANT SAFETY INSTRUCTIONS - SAVE THESE INSTRUCTIONS

1. Keep these instructions in a safe place for future reference.
2. Only qualified electricians in accordance to local codes should install these fixtures.
3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.
4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
5. Cap any wires not used separately (not together).

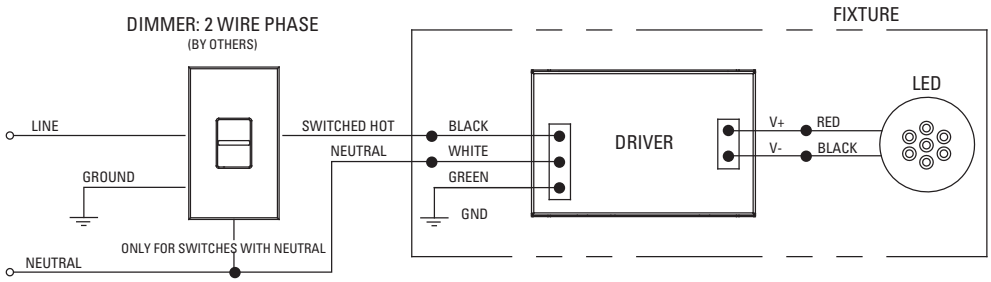
D3 / DIML3 LED: Lutron Hi-Lume A-Series 2 Wire Fwd Phase (with neutral) / LED Dimming Driver Wiring (Dims down to 1%) 120V

D3 / DIML3 Dimmer Compatibility Chart

Manufacturer	Product	Part Number	Dimmed Light Output Range	Qty Fixtures Per Dimmer* Fixture Wattage	
120V Only				39W and Less	40W - 80W
ETC	Sensor+ Cabinet	ELV10	100% - 1%	1 – 26	1 – 13
ETC	Unison DRd Cabinet	ELV10	100% - 1%	1 – 26	1 – 13
Lutron	Maestro Wireless® 600W dimmer	MRF2-6ND-120-	100% - 1%	1 – 8	1 – 4
Lutron	Maestro Wireless® 1000W dimmer	MRF2-10ND-120-	100% - 1%	1 – 13	1 – 6
Lutron	HomeWorks® QS adaptive dimmer	HQRD-6NA-	100% - 1%	1 – 8	1 – 4
Lutron	HomeWorks® QS 600W dimmer	HQRD-6ND-	100% - 1%	1 – 8	1 – 4
Lutron	HomeWorks® QS 1000 W dimmer	HQRD-10ND-	100% - 1%	1 – 13	1 – 6
Lutron	Caseta Wireless® Pro 1000W dimmer	PD-10NXD-	100% - 1%	1 – 13	1 – 6
Lutron	Stanza® dimmer	SZ-6ND-	100% - 1%	1 – 8	1 – 4
Lutron	RadioRA® 2 adaptive dimmer	RRD-6NA-	100% - 1%	1 – 8	1 – 4
Lutron	RadioRA® 2 1000 W dimmer	RRD-10ND-	100% - 1%	1 – 6	1 – 3
Lutron	myRoom DIN power module	MQSE-4A1-D	100% - 1%	1 – 6	1 – 3
Lutron	HomeWorks® QS wallbox power module	HQRJ-WPM-6D-120-	100% - 1%	1 – 26	1 – 13
Lutron	Homeworks® DIN power module	LQSE-4A1-D	100% - 1%	1 – 6	1 – 3
Lutron	HomeWorks® wallbox power module	HWI-WPM-6D-120	100% - 1%	1 – 26	1 – 13
Lutron	GRAFIK Eye® QS control unit	QSGR-, QSGRJ-	100% - 1%	1 – 26	1 – 13
Lutron	GRAFIK Eye® 3000 control unit	GRX-3100-, GRX-3500-	100% - 1%	1 – 26	1 – 13
Lutron	RPM-4U module	HW-RPM-4U-120, LP-RPM-4U-120	100% - 1%	1 – 26	1 – 13
Lutron	RPM-4A module	HW-RPM-4A-120, LP-RPM-4A-120	100% - 1%	1 – 26	1 – 13
Lutron	GP dimming panels	Various	100% - 1%	1 – 26	1 – 13
Lutron	Ariadni CL 250W dimmer	AYCL-253P-	100%-1%	1 – 8	1 – 4
Lutron	Diva CL 250W dimmer	DVCL-253P-, DVSCCL-253P-	100%-1%	1 – 8	1 – 4
Lutron	Grafik T CL or RF CL dimmer	GT-250M-, GTJ-250M-	100%-1%	1 – 8	1 – 4
Lutron	Nova T CL 250W dimmer	NTCL-250-	100%-1%	1 – 10	1 – 5

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

D3 / DIML3
2 WIRE PHASE DIMMING



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DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
D4 / DIML4

DIMMING DRIVER WIRING SCHEMES:

NOTES:
Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

IMPORTANT SAFETY INSTRUCTIONS - SAVE THESE INSTRUCTIONS

1. Keep these instructions in a safe place for future reference.
2. Only qualified electricians in accordance to local codes should install these fixtures.
3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.
4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
5. Cap any wires not used separately (not together).

D4 / DIML4 LED: Lutron Hi-Lume A-Series LED Driver with 3-Wire FL Control / LED Dimming Driver Wiring (Dims down to 1%)

D4 / DIML4 3-Wire Dimmer Compatibility Chart

Manufacturer	Product	Part Number	Dimmed Light Output Range	Qty Fixtures Per Control* Fixture Wattage	
120V Only				39W and Less	40W - 80W
ETC	Sensor+ Cabinet	D20 Dimming module	100% - 1%	1–53	1–26
ETC	Unison DRd Cabinet	D20F Dimming module	100% - 1%	1–53	1–26
Lutron	Nova T	NTF-10-	100%–1%	1–41	1 – 20
Lutron	Nova T	NTF-103P-	100%–1%	1–20	1 – 10
Lutron	Nova	NF-10-	100%–1%	1–41	1 – 20
Lutron	Nova	NF-103P-	100%–1%	1–20	1 – 10
Lutron	Vareo	VF-10-	100%–1%	1–20	1 – 10
Lutron	Skylark	SF-10P-, SF-103P-	100%–1%	1–20	1 – 10
Lutron	Diva	DVF-103P-, DVSCF-103P-	100%–1%	1–20	1 – 10
Lutron	Ariadni	AYF-103P-	100%–1%	1–20	1 – 10
Lutron	Vierti	VTF-6A-	100%–1%	1–15	1 – 7
Lutron	Maestro	MAF-6AM-, MSCF-6AM-	100%–1%	1–15	1 – 7
Lutron	Maestro Wireless	MRF2-F6AN-DV-	100%–1%	1–15	1 – 7
Lutron	RadioRA 2	RRD-F6AN-DV-	100%–1%	1–15	1 – 7
Lutron	HomeWorks QS	HQRD-F6AN-DV	100%–1%	1–15	1 – 7
Lutron	Interfaces	PHPM-3F-120, PHPM-3F-DV	100%–1%	1–41	1 – 20
Lutron	GP Dimming Panels	Various	100%–1%	1–41	1 – 20
277V Only				40W and Less	41W - 80W
ETC	Sensor+ Cabinet	D20 Dimming module	100% - 1%	1–53	1–26
ETC	Unison DRd Cabinet	D20F Dimming module	100% - 1%	1–53	1–26
Lutron	Nova T	NTF-10-277-	100%–1%	1–44	1 – 22
Lutron	Nova T	NTF-103P-277-	100%–1%	1–33	1 – 16
Lutron	Nova	NF-10-277-	100%–1%	1–44	1 – 22
Lutron	Nova	NF-103P-277-	100%–1%	1–33	1 – 16
Lutron	Skylark	SF-12P-277-, SF-12P-277-3	100%–1%	1–33	1 – 16
Lutron	Diva	DVF-103P-277-, DVSCF-103P-277-	100%–1%	1–33	1 – 16
Lutron	Ariadni	AYF-103P-277-	100%–1%	1–44	1 – 22
Lutron	Vierti	VTF-6A-	100%–1%	1–33	1 – 16
Lutron	Maestro	MAF-6AM-277-, MSCF-6AM-277-	100%–1%	1–20	1 – 10
Lutron	Maestro Wireless	MRF2-F6AN-DV-	100%–1%	1–33	1 – 16
Lutron	RadioRA 2	RRD-F6AN-DV-	100%–1%	1–33	1 – 16
Lutron	HomeWorks QS	HQRD-F6AN-DV	100%–1%	1–33	1 – 16
Lutron	Interfaces	PHPM-3F-DV	100%–1%	1–88	1 – 44
Lutron	GP Dimming Panels	Various	100%–1%	1–88	1 – 44

* NOTE: Number of fixtures may be higher if wattage is less than maximum values shown. Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

DIML4 wiring diagrams continued on next page

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DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
D4 / DIML4 Continued

DIMMING DRIVER WIRING SCHEMES:

NOTES:
Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

IMPORTANT SAFETY INSTRUCTIONS - SAVE THESE INSTRUCTIONS

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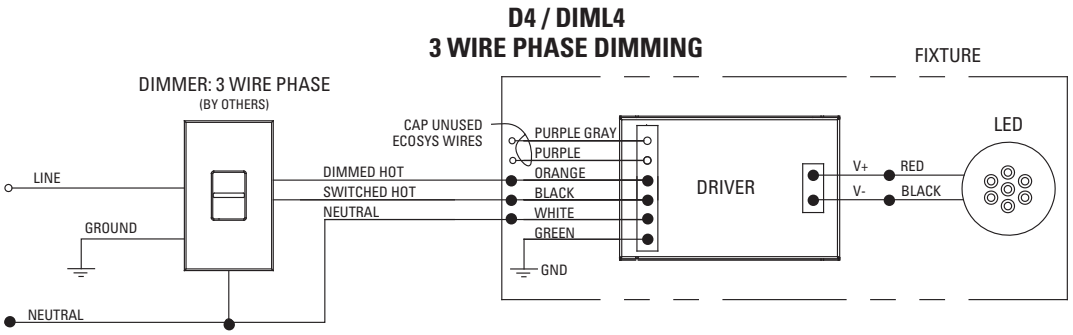
2. Only qualified electricians in accordance to local codes should install these fixtures.
3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.
4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
5. Cap any wires not used separately (not together).

D4 / DIML4 LED: Lutron Hi-Lume A-Series LED Driver with 3-Wire FL Control / LED Dimming Driver Wiring (Dims down to 1%)

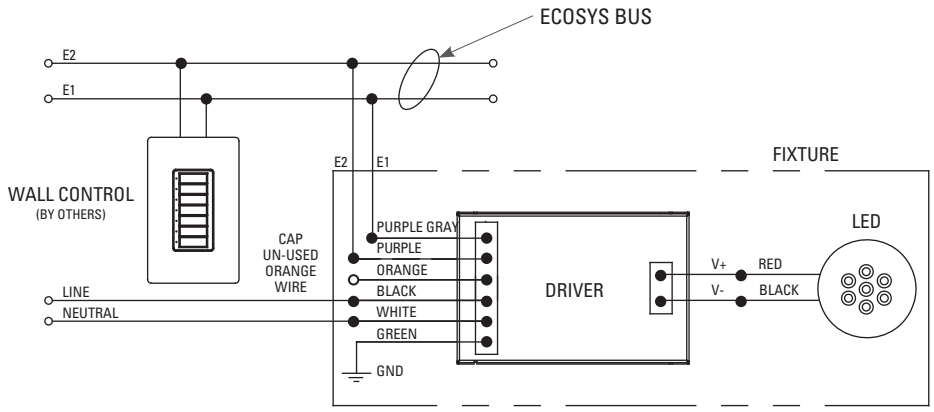


D4 / DIML4 LED: Lutron Hi-Lume A-Series LED Driver with EcoSystem Control / LED Dimming Driver Wiring (Dims down to

D4 / DIML4 EcoSystem Dimmer Compatibility Chart

Manufacturer	Product	Part Number	Dimmed Light Output Range	Qty Fixtures Per Control* Fixture Wattage	
120V / 277V				39W and Less	40W - 80W
Lutron	PowPak dimming module	RMJ-ECO32-DV-B	100%–1%	1–32	1 – 16
Lutron	Energi Savr Node	QSN-1ECO-S, QSN-2ECO-S	100%–1%	1–64	1 – 32
Lutron	GRAFIK Eye QS (120V ONLY)	QSGRJ- E, QSGR- E	100%–1%	1–64	1 – 32
Lutron	Quantum	Various	100%–1%	1–64	1 – 32

* NOTE: Number of fixtures may be higher if wattage is less than maximum values shown. Refer to dimmer manufacturer's documentation for installation instructions and circuit details.



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DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
D4E / DIML4E and D4H /DIML4H

DIMMING DRIVER WIRING SCHEMES:

NOTES:
Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

IMPORTANT SAFETY INSTRUCTIONS - SAVE THESE INSTRUCTIONS

1. Keep these instructions in a safe place for future reference.
2. Only qualified electricians in accordance to local codes should install these fixtures.
3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.
4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
5. Cap any wires not used separately (not together).

D4E / DIML4E LED: Lutron 5 Series EcoSystem LED Driver / LED Dimming Driver Wiring (Dims down to 5%)

D4E / DIML4E EcoSystem Dimmer Compatibility Chart

Manufacturer	Product	Part Number	Dimmed Light Output Range	Qty Fixtures Per Control* Fixture Wattage	
120V / 277V				39W and Less	40W - 80W
Lutron	PowPak dimming module	RMJ-ECO32-DV-B	100%–5%	1–32	1 – 16
Lutron	Energi Savr Node	QSN-1ECO-S, QSN-2ECO-S	100%–5%	1–64	1 – 32
Lutron	GRAFIK Eye QS (120V ONLY)	QSGRJ- E, QSGR- E	100%–5%	1–64	1 – 32
Lutron	Quantum	Various	100%–5%	1–64	1 – 32

* NOTE: Number of fixtures may be higher if wattage is less than maximum values shown. Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

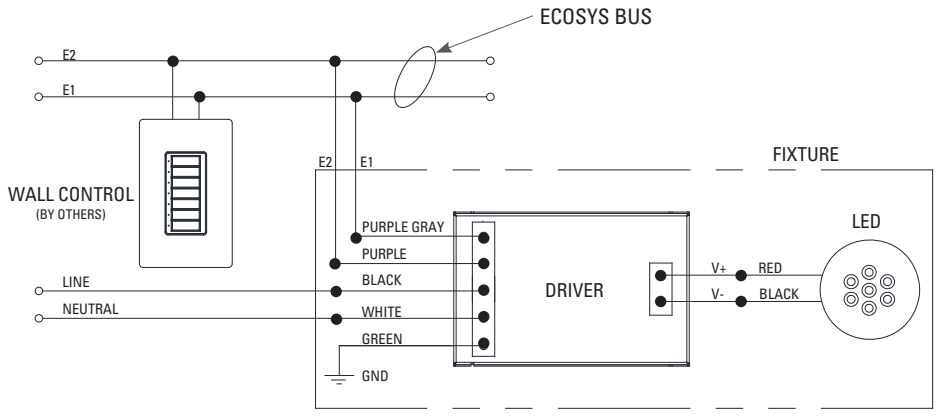
D4H / DIML4H LED: Lutron H Series EcoSystem LED Driver with Fade to Black (dims down to 1%)

D4H / DIML4H EcoSystem Dimmer Compatibility Chart

Manufacturer	Product	Part Number	Dimmed Light Output Range	Qty Fixtures Per Control* Fixture Wattage	
120V / 277V				39W and Less	40W - 80W
Lutron	PowPak dimming module	RMJ-ECO32-DV-B	100%–1%	1–32	1 – 16
Lutron	Energi Savr Node	QSN-1ECO-S, QSN-2ECO-S	100%–1%	1–64	1 – 32
Lutron	GRAFIK Eye QS (120V ONLY)	QSGRJ- E, QSGR- E	100%–1%	1–64	1 – 32
Lutron	Quantum	Various	100%–1%	1–64	1 – 32

* NOTE: Number of fixtures may be higher if wattage is less than maximum values shown. Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

D4E / DIML4E and D4H / DIML 4H EcoSystem CONTROLS



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DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
D6A / DIML6A and D6E / DIML6E
D6B / DIML6B and D6F / DIML6F

IMPORTANT SAFETY INSTRUCTIONS - SAVE THESE INSTRUCTIONS

1. Keep these instructions in a safe place for future reference.
2. Only qualified electricians in accordance to local codes should install these fixtures.
3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.
4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
5. Cap any wires not used separately (not together).

D6A / DIML6A and D6E / DIML6E LED Dimming Compatibility Table

D6A / DIML6A and D6E / DIML6E are linearly programmed dimming drivers for use with logarithmic-style dimming controls (e.g., Lutron and others listed in the table below)
D6A / DIML6A = EldoLED SOLOdrive 0-10V control dims from 100% to 0.1%
D6E / DIML6E = EldoLED ECOdrive 0-10V control dims from 100% to 1%

D6A / DIML6A and D6E / DIML6E Dimmer Compatibility Chart

Manufacturer	Product	Part Number	Dimmed Light Output Range			Qty Fixtures Per Dimmer*
120V & 277V			DIML6A		6E	Refer to manufacturer's dimmer load rating for maximum and minimum fixture quantities per dimmer. Enlighted compatible.
Lutron	Diva	DVTV/NFTV with PP-20	99% -	0.1%	1%	
Lutron	Nova T	NTFTV with PP-20	99% -	0.1%	1%	
Lutron	Energi Savr Node	QSN-4T16-S	100% -	0.1%	1%	
Lutron	GP Dimming Panels	TVM2 Module	99% -	0.1%	1%	
Lutron	Interfaces	GRX-TVI w/ GRX3503	100% -	0.1%	1%	
Sensor Switch	nIO	nIO EZ	100% -	0.1%	1%	
enlighted	Control Unit	CU-3E-1R	100% -	0.1%	1%	

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

D6B / DIML6B and D6F / DIML6F LED Dimming Compatibility Table

D6B / DIML6B and D6F / DIML6F are logarithmic-programmed dimming drivers for use with linear-style dimming controls (e.g., Crestron, non-Lutron and others listed below)
D6B / DIML6B = EldoLED SOLOdrive 0-10V control dims from 100% to 0.1% D6F / DIML6F = EldoLED ECOdrive 0-10V control dims from 100% to 1%

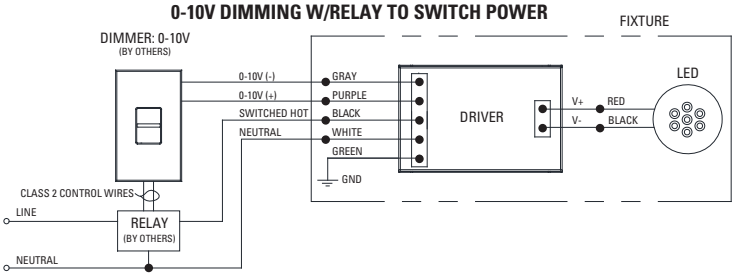
D6B / DIML6B and D6F / DIML6F Dimmer Compatibility Chart

Manufacturer	Product	Part Number	Dimmed Light Output Range			Qty Fixtures Per Dimmer*
120V & 277V			DIML6B		6F	Refer to manufacturer's dimmer load rating for maximum and minimum fixture quantities per dimmer. Enlighted compatible.
Bush-Jaeger	Electronic potentiometer	2112U-101	100% -	0.1%	1%	
Jung	Electronic potentiometer	240-10	100% -	0.1%	1%	
Leviton	Iluma Tech dimmer	IP710-DLX	100% -	0.1%	1%	
Lightolier (Philips)	Momentum (120V ONLY)	ZP600FAM120	100% -	0.1%	1%	
Merten	Electronic potentiometer	5729	100% -	0.1%	1%	
Pass & Seymour	Titan	CD4FB-W	100% -	0.1%	1%	
Watt Stopper	Miro	DCLV1	100% -	0.1%	1%	
Synergy	Wallbox Dimmers	ISD BC	100% -	0.1%	1%	
ABB	i-bus	SD/S 2.16.1	100% -	0.1%	1%	
Crestron	Modules	GLX-DIMFLV8, GLXP-DIMFLV8	100% -	0.1%	1%	
Crestron	Green Light	GLPAC-DIMFLV4-, GLPAC-DIMFLV8-	100% -	0.1%	1%	
Crestron	Green Light Power Pack	GLPP-DIMFLVEX-PM, GLPP-1DIMFLV2EX-PM, GLPP-1DIMFLV3EX-PM	100% -	0.1%	1%	
Crestron	DIN Rail Analog Output Module	DIN-A08	100% -	0.1%	1%	
Crestron	DIN Rail 0-10V Fluorescent Dimmer	DIN-4DIMFLV4	100% -	0.1%	1%	
Crestron	iLux 0-10V Dimmer Expansion Module	CLS-EXP-DIMFLV	100% -	0.1%	1%	
enlighted	Control Unit	CU-3E-1R	100% -	0.1%	1%	

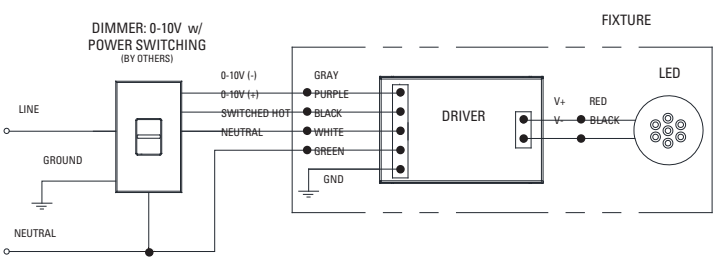
DIMMING DRIVER WIRING SCHEMES:

NOTES: Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

D6 / DIML6
0-10V DIMMING W/RELAY TO SWITCH POWER



0-10V DIMMING (NO RELAY)



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DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
D7 / DIML7 and D7E

DIMMING DRIVER WIRING SCHEMES:

NOTES:
Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

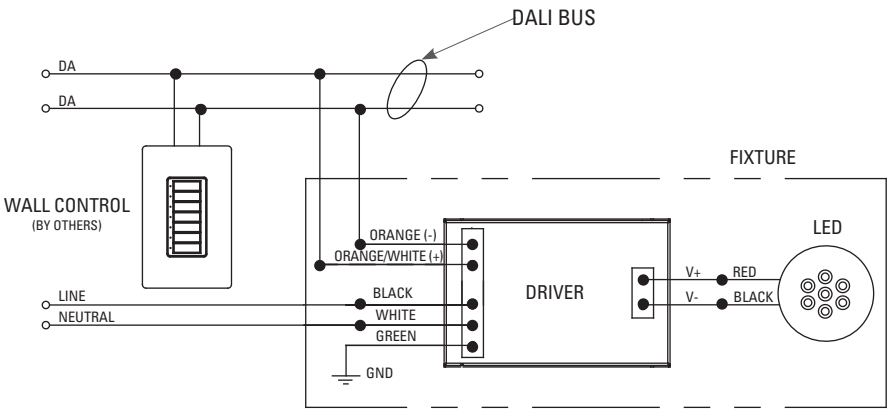
IMPORTANT SAFETY INSTRUCTIONS - SAVE THESE INSTRUCTIONS

1. Keep these instructions in a safe place for future reference.
2. Only qualified electricians in accordance to local codes should install these fixtures.
3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.
4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
5. Cap any wires not used separately (not together).

D7 / DIML7 and D7E Dimming Driver Wiring

D7 / DIML7 and D7E are linearly programmed dimming drivers.
D7 / DIML7 = EldoLED SOLOdrive DALI control dims from 100% to 0.1%
D7E = EldoLED ECOdrive DALI control dims from 100% to 1%

D7 / DIML7 / D7E
DALI CONTROLS



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DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
D8 / DIML8 and D8E

DIMMING DRIVER WIRING SCHEMES:

NOTES:
Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

IMPORTANT SAFETY INSTRUCTIONS - SAVE THESE INSTRUCTIONS

1. Keep these instructions in a safe place for future reference.
2. Only qualified electricians in accordance to local codes should install these fixtures.
3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.
4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
5. Cap any wires not used separately (not together).

D8 / DIML8 and D8E Dimming Driver Wiring

D8 / DIML8 and D8E are linearly programmed dimming drivers.
D8 / DIML8 = EldoLED POWERdrive DMX control dims from 100% to 0.1%
D8E = EldoLED POWERdrive DMX control dims from 100% to 1%

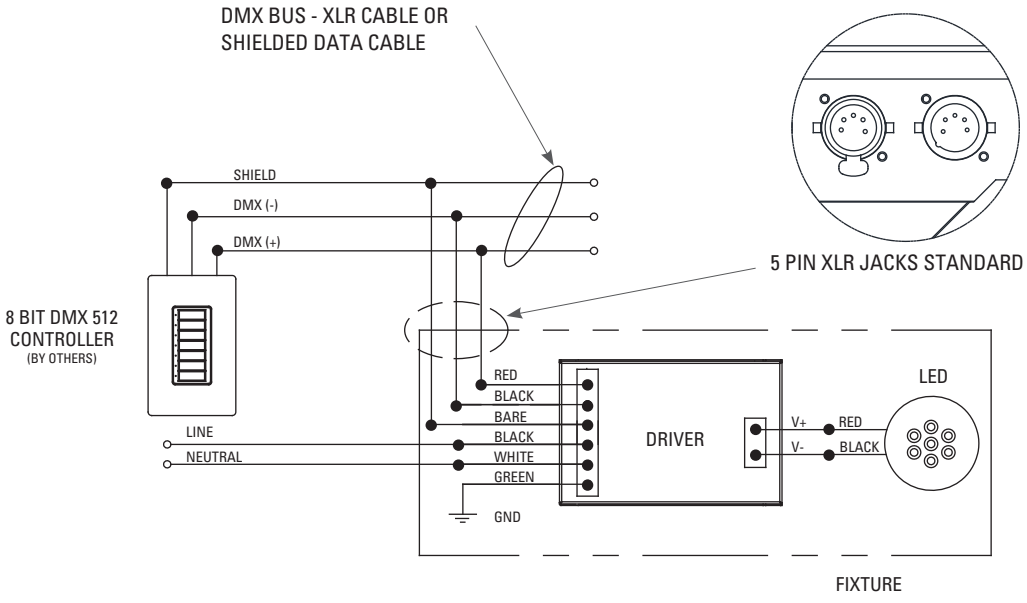
DMX BUS - XLR CABLE OR
SHIELDED DATA CABLE

The data cable used must meet the following requirements:

- type: shielded, 2-conductor twisted pair
- maximum capacitance between conductors: 30 pF/ft
- maximum capacitance between conductor and shield: 55 pF/ft
- maximum resistance: 0.02 ohms/ft
- normal impedance: 100-140 ohms
- conductive core: 24 AWG is recommended

If 3-wire data cables are preferred, we suggest a Belden 9841 or equivalent cable which meets the specifications for EIA RS-485 applications. Do not use standard microphone cables: they cannot transmit DMX512 data reliably over long distances. NOTE: DMX link termination device (by others) should be used on last fixture in line on a circuit to avoid signal loss.

D8 / DIML8 / D8E
DMX CONTROLS



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DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
D15 / DIML15

DIMMING DRIVER WIRING SCHEMES:

NOTES:
Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

IMPORTANT SAFETY INSTRUCTIONS - SAVE THESE INSTRUCTIONS

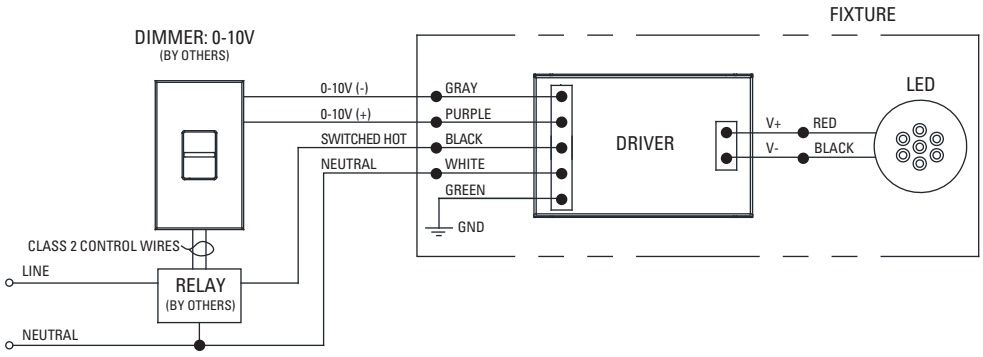
1. Keep these instructions in a safe place for future reference.
2. Only qualified electricians in accordance to local codes should install these fixtures.
3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.
4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
5. Cap any wires not used separately (not together).

D15 / DIML15 LED: 0-10V, 347V Dimming Driver Wiring (Dims down to 1%) 347V Only

D15 / DIML15 Dimmer Compatibility Chart			
Manufacturer	Product	Dimmed Light Output Range	Qty Fixtures Per Dimmer*
347			Use source current per fixture specification sheet to determine number of fixtures per dimmer. Max number of fixtures is limited by dimmer load rating.
Acuity	Synergy ISD-BC	100% - 1%	
Douglas Lighting	WPN-5721, WPN-5822	100% - 1%	
Hubbell	Light Hawk2 LHD-IRS3-N347-xx	100% - 1%	
Leviton	Illumatech IP710-DLZ with 347V relay	100% - 1%	
Leviton	Centura Fluorescent Control System	100% - 1%	
Lutron	Nova NFTV-* dimmer plus 347V relay	100% - 1%	
Lutron	Diva DVTV-* dimmer plus 347V relay	100% - 1%	

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

D15 / DIML15
0-10V DIMMING W/RELAY TO SWITCH POWER



NOTE:
If switched, non-dimming operation is desired, cap off purple and gray wires individually at installation. Do NOT cap purple and gray wires together.

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DIMMING DRIVER COMPATIBILITY SELECTION GUIDE
D19 / DIML19

DIMMING DRIVER WIRING SCHEMES:

NOTES:
Wiring diagrams are examples of typical installations intended to illustrate the number of wires that must be run to fixture. These diagrams are not intended to specify all equipment necessary for a given dimming circuit. Refer to specific dimmer manufacturer's documentation for details.

IMPORTANT SAFETY INSTRUCTIONS - SAVE THESE INSTRUCTIONS

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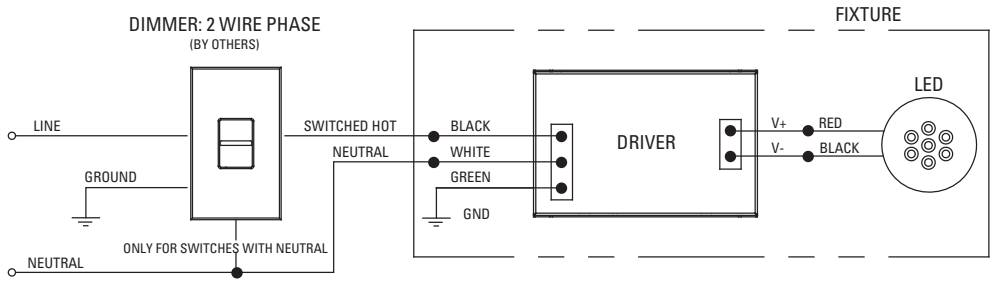
2. Only qualified electricians in accordance to local codes should install these fixtures.
3. De-energize the electrical circuit at the circuit breaker prior to installation process or servicing.
4. Make sure all connections are in accordance with the National Electrical Code and any local regulations.
5. Cap any wires not used separately (not together).

D19 / DIML19 LED: Hatch XTC series or equivalent - Forward and Reverse Phase Dimming Driver. Dims down to 1% contingent upon dimmer specification and load. 120V only.

D19 / DIML19
2 WIRE PHASE DIMMING



D19 / DIML19 Dimmer Compatibility Chart

120V ONLY		
Forward Phase / TRIAC Dimming		
Manufacturer	Product	Qty Fixtures Per Dimmer
Leviton	IPL06-10Z	Use fixture wattage per fixture specification sheet to determine number of fixtures per dimmer. Max number of fixtures is limited by dimmer load rating.
	6613-xxx	
Lutron	S-600P	
	S-603P	
	DV-600P	
	DV-603P	
	DVSC-603P	
	CT-600P	
	CT-603P	

120V ONLY		
Reverse Phase / ELV Dimming		
Manufacturer	Product	Qty Fixtures Per Dimmer
Leviton	6615	Use fixture wattage per fixture specification sheet to determine number of fixtures per dimmer. Max number of fixtures is limited by dimmer load rating.
	IPE04-xxx	
Lutron	NTELV-300	
	NTELV-600	
	SELV-300P	
	SELV-303P	
	DVELV-300P	
	DVELV-303P	

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