

POP RECESSED

REGRESSED ROUND
CHROMAWERX - SOLA AND DUO



LUMENWERX



Project: _____

Type: _____



DESCRIPTION

Pop Recessed Regressed Round is a flexible, elegant, low-glare luminaire available in four different sizes. Its innovative, precision-crafted Uniform Lambertian Optic (ULO) allows all models to have a Uniform Glare Rating (UGR) of <19, beneficial for creating well-balanced, low glare architectural spaces. The fixture can be integrated in various grid ceiling and gypsum board setups. Pop Regressed Round comes in Chromawerx Sola and Duo. Consult web pages for Static White, BIOS LED, and Chromawerx Quadro solutions for Pop Regressed Round.

Order Guide

LUMINAIRE ID	SIZE	OPTIC	LIGHT SOURCE ¹	CRI	LUMEN PACKAGE			
PORRGRO		ULO						
PORRGRO - Pop Recessed Regressed Round	12 - 12" diameter 24 - 24" diameter 36 - 36" diameter 48 - 48" diameter	ULO - Uniform Lambertian Optic	SOLA - Dim-to-warm single channel control 35K to 22K DUO - Tunable white 2-channel control 65K to 27K	80 - 80 CRI 90 - 90 CRI	Low L500 lm M2800 lm M6200 lm M11000 lm	Medium M690 lm M2800 lm M6200 lm M11000 lm	High H900 lm H3600 lm H8000 lm H14200 lm	
¹ Static white, BIOS, and Chromawerx Quadro also available. Consult other spec sheets.								

VOLTAGE	DRIVER ²	ELECTRICAL	MOUNTING	FINISH	OPTIONS
		1			
120 -120V 277 - 277V UNV - 120V-277V	SOLA SDI - Single 0-10V input DUO DMX ³ - DMX, to specify see pages 7 to 12 DA ³ - DALI DDI - Dual 0-10V input for CCT/intensity PSQO ³ - Lutron T-Series 1% Tunable White ² PoE (Power-over-Ethernet) compatible. Consult factory for details. ³ On-site commissioning is required.	1 - 1 circuit	GRD ⁴ - Grid ceiling DTR - Drywall trim DMF - Drywall mud flange ⁴ Not available with Ø 48".	W - Matte white CF# - Custom finish, specify RAL#	FU120 - Fuse 120V FU277 - Fuse 277V FWC - Flexible whip cable (6' std) CP - Chicago Plenum NA - None

Accessories

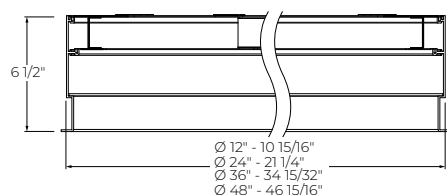
Optional, order separately

DMX WALL CONTROLLER ⁵

WCW - Wall controller white
WBW - Wall controller black

⁵Available with DMX only. For more information, see pages 7 to 12, or consult factory.

Section View



3D Cross section



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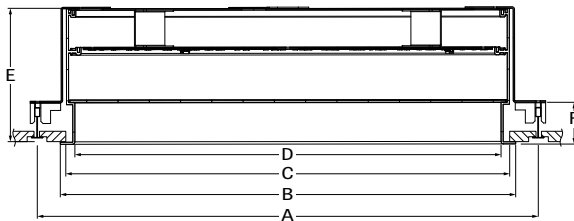


LUMENWERX

Dimensions

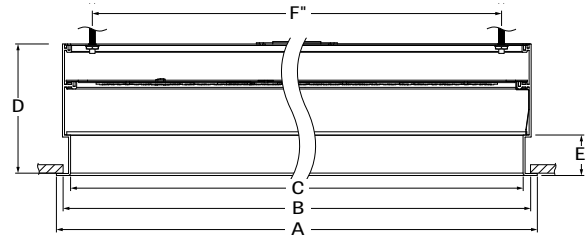
GRD - Grid ceiling

SIZE	A	B	C	D	E	F
12	24"	11 1/2"	11"	10 1/8"	6 13/32"	2"
24	24"	21 27/32"	21 1/4"	20 7/16"	6 13/32"	2"
36	48"	35 3/32"	34 1/2"	33 11/16"	6 13/32"	2"
48	N/A	N/A	N/A	N/A	N/A	N/A



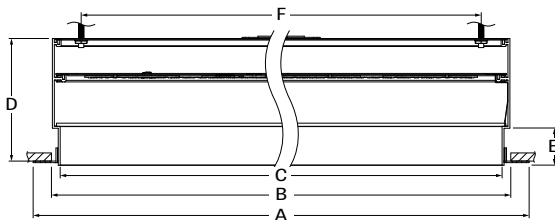
DTR - Drywall trim

SIZE	A	B	C	D	E	F
12	11 17/32"	11 5/32"	10 1/8"	6 13/32"	2"	8 1/2"
24	21 27/32"	21 1/2"	20 7/16"	6 13/32"	2"	14"
36	35 3/32"	34 25/32"	33 11/16"	6 13/32"	2"	32"
48	47 9/16"	47"	46 5/32"	6 13/32"	2"	44"



DMF - Drywall mud flange

SIZE	A	B	C	D	E	F
12	12 13/16"	11 5/32"	10 1/8"	6 9/32"	2"	8 1/2"
24	23 3/16"	21 1/2"	20 9/16"	20 7/16"	2"	14"
36	36 3/8"	34 25/32"	33 11/16"	6 9/32"	2"	32"
48	48 29/32"	47"	46 1/8"	6 9/32"	2"	44"



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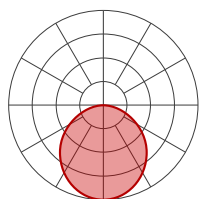
Technical Specifications

OPTIC

Uniform Lambertian Optic (ULO) - This optic provides a smooth homogenous glow with even illumination and consistent distribution. With Pop Regressed, ULO offers excellent visual comfort in all aperture sizes, from smallest to largest.

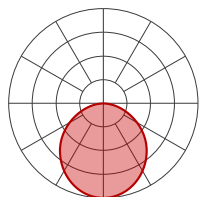
LIGHT SOURCE

Custom array of alternating color temperature mid-flux LEDs are mounted directly to the housing for optimal thermal performance. For the Duo products, a color temperature range from 6500K-2700K is achievable with color points on or below the black body curve. For the Sola products, a color temperature range from 3500K-2200K is controlled synchronously with intensity. Color consistency between fixtures is maintained to within 3 SDCM. LEDs are operated at reduced drive current to optimize efficacy and lumen maintenance. All LEDs have been tested in accordance with IESNA LM-80-08 and the results have shown L90 lumen maintenance greater than 60,000 hours reported, 150,000 hours projected. Absolute product photometry is measured and presented in accordance with IESNA LM-79, unless otherwise indicated.



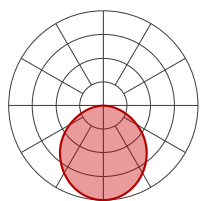
Performance for Ø 12", at 80 CRI

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
Low output	3500K	5.9	500	85
Medium output	3500K	8.5	690	81
High output	3500K	11.6	900	78



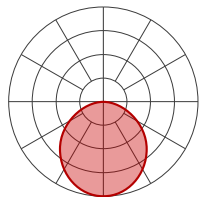
Performance for Ø 24", at 80 CRI

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
Low output	3500K	21.7	2000	92
Medium output	3500K	31.8	2800	88
High output	3500K	42.8	3600	84



Performance for Ø 36", at 80 CRI

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
Low output	3500K	47.3	4500	95
Medium output	3500K	68.1	6200	91
High output	3500K	92.0	8000	87



Performance for Ø 48", at 80 CRI

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
Low output	3500K	84.1	8000	95
Medium output	3500K	120.9	11000	91
High output	3500K	163.4	14200	87

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WELL for Light - The WELL building standard focuses on light quality in several features. There are three categories that are fully attributed to the construction and features of a luminaire. In WELL V1, it's Feature 54 Circadian Lighting, Feature 55 Glare Control, and Feature 58 Color Quality. In WELL V2, it's Feature L03 Circadian Lighting, Feature L04 Glare Control, and Feature L07 Electric Light Quality.

This fixture meets Features:

- Feature 54 or L03 when Duo is selected
- Feature 55 or L04 meets WELL glare category (b-c-d)
- Feature 58 or L07 when 90CRI is selected

All LED drivers used at Lumenwerx are deemed to have a low risk level of flicker, of 5 % or less below 90Hz operational as defined by IEEE standard 1789-2015 LED.



WELL for Mind - This luminaire meets WELL for mind as it is a human centric luminaire offering quality light, excellent color, and smooth optics. If any of these features are incorporated in a luminaire, it can improve the ability to focus, concentrate, and persist longer on a given task. This fixture harmoniously operates in a space to assist the mind.

For more information, please contact well@lumenwerx.com.

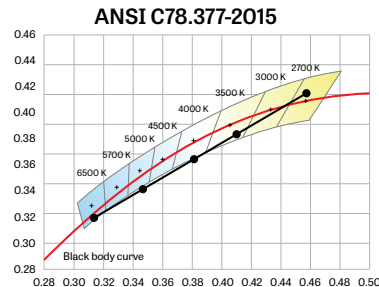
CHROMAWERX - TUNABLE WHITE

Chromawerx Sola

It is a single-channel control that dims output while warming the color temperature in a pre-determined relationship. A simple analog control sends a common signal to dual output digital drivers, which are programmed to adjust a specially populated LED array to emulate the effect of dimming a filament source. Dimming range is programmable but the default option runs from 3500K at 100% of full power to 2200K at 5% of full power. CRI is maintained above 80 throughout the dimming range.

Chromawerx Duo

It is a two-channel control. It uses an analog (0-10V) protocol for separate control of luminaire CCT and intensity or a digital (DMX, DALI and PSQ0) protocol for synchronous control of both warm and cool LED arrays to enable the user to set color temperature and light output. Commonly called "tunable white", Chromawerx two-channel control provides the range of cool (6500K) to warm (2700K) color that can be useful for helping to entrain circadian rhythms, stimulate alertness for improved educational and work productivity, and compensate for jet lag, among other applications. The Chromawerx drivers are programmed to limit maximum light output and power usage across all color temperatures. CRI is maintained above 80.



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LUMENWERX

ELECTRICAL

SOLA

SDI

Factory-set, adjustable output current LED driver with universal (120-277VAC) input. Using a single 0-10V control signal, the light output warms in color temperature as it dims down to 1% and 2200K. At maximum driver load, efficiency<86%, PF>0.9, THD<20%.

DUO

DMX

Factory-set adjustable output current electronic driver with 120-277V AC line input. Using DMX wall controls (optionally supplied by Lumenwerx) or an existing DMX control system, both channels of LEDs are independently adjustable. Each DMX driver can be independently addressed using the built-in RDM (Remote Device Management) in the field. Dimming down to 1% is attainable. Rated life (90% survivorship) of 50,000 hours at 50°C maximum ambient temperature. At maximum driver load, efficiency<84%, PF>0.9, THD<20%.

DALI

Factory-set adjustable output current electronic driver with 120-277V AC line input. Using an existing DALI control system (supplied by others), one control channel adjusts the fixture color temperature, and the other control channel adjusts fixture brightness. Dimming down to 1% is attainable. Rated life (90% survivorship) of 50,000 hours at 50°C maximum ambient temperature. At maximum driver load, efficiency<84%, PF>0.9, THD<20%.

DDI

Factory-set adjustable output current LED driver with universal (120-277VAC) input. Controlled via two individual 0-10V signals, one for setting light output down to a minimum of 1% and the other for adjusting the CCT (default range of 6500K-2700K). Rated life of 50,000 hours at 70°C maximum driver case temperature and 100% load conditions. Typical efficiency of 86%, PF>0.9, THD<20% at 100% load conditions.

PSQ0

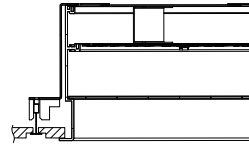
Lutron T-Series 2-Channel tunable white drivers enable high-performance human centric lighting (HCL) applications. Digital control of color temperature (CCT) and intensity are achieved when used with the ESN T-Series tunable white controller as a part of a Lutron Quantum System.

PoE

Depending on the PoE manufacturer selected, Lumenwerx will install the node in factory as either integral to the luminaire, or as a remote module. Factory programming of the PoE node may or may not enable the following functionalities: lumen package, Duo (tunable white), emergency battery backup, and sensor integration. These must be addressed and evaluated on a case-by-case basis.

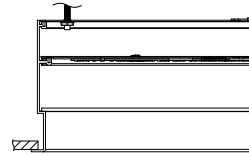
MOUNTING OPTIONS

Recessed mount into exposed or concealed T-Bar or Tegular grid ceiling.

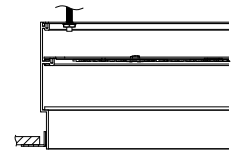


GRD - Grid ceiling

Recessed mount in drywall ceilings with trim or mud flange options.



DTR - Drywall trim



DMF - Drywall mud flange

FINISH

Interior - 95% reflective, matte white powder coating.

Exterior - Matte white powder coating. Custom finishes are also available.

CONSTRUCTION

Housing

Housing - Curved Aluminum extrusion.

Diffuser - 0.125" thick white acrylic.

WEIGHT

Ø 12" - 6.4 lbs - 2.9 kg

Ø 24" - 13.2 lbs - 6 kg

Ø 36" - 26.9 lbs - 12.2 kg

Ø 48" - 59.1 lbs - 26.8 kg

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CERTIFICATIONS

ETL - Rated for Indoor Dry/Damp locations. Conforms to UL Standard 1598 and certified to CAN/CSA Standard C22.2 No. 250.0.

Chicago Plenum - City of Chicago Approved (CCEA)

IC rated - Suitable for direct contact with insulation.

WARRANTY

Lumenwerx provides a five-year limited warranty of electrical and mechanical performance of the luminaires, including the LED boards, drivers, and auxiliary electronics. Lumenwerx will repair or replace defective luminaires or components at our discretion, provided they have been installed and operated in accordance with our specifications. Other limitations apply, please refer to the full warranty on our website.

Wall controllers are covered by the manufacturer warranty.

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DUO DMX SPECIFICATION

A qualified DMX integrator is required to assure proper installation and commissioning of the DMX network. **When placing the PO, please provide the contact information of your DMX integrator.**

Please answer the following questions to help us identify your DMX network requirements.

YES

Do you require a wall controller provided by Lumenwerx?

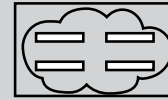
NO

DMX control system supplied by others. Lumenwerx will supply DMX-enabled fixtures with default DMX addressing. See following pages for technical DMX informations. ✓

DMX controller supplied by Lumenwerx

How many zones do you have?

A zone consists of one or more luminaires behaving identically.



1 Zone



2 Zones

How to calculate the required number of drivers:

per 4' fixture

Driver
1x driver

Direct only

per 4' fixture

Driver Driver
2x driver

Direct high output

To Calculate # of drivers

1 - 4 Zones

5 or more Zones

Do you have more than 32 drivers in total?

NO

YES

Order a standard Lumenwerx wall controller.

WALL CONTROLLER

WCW - wall controller white
WCB - wall controller black

Add the control code at the end of your order code.

Please provide a fixture layout or RCP (Reflected Ceiling Plan) showing the locations of the DMX fixtures, zones and the DMX wall controller.

Refer to your DMX integrator for the installation. ✓

Subject to factory evaluation. Please contact our controls specialist at controls@lumenwerx.com. Additional cost and equipment will be required. ✓

Subject to factory evaluation and approval. Please contact our controls specialist at controls@lumenwerx.com. Additional cost and equipment will be required. ✓

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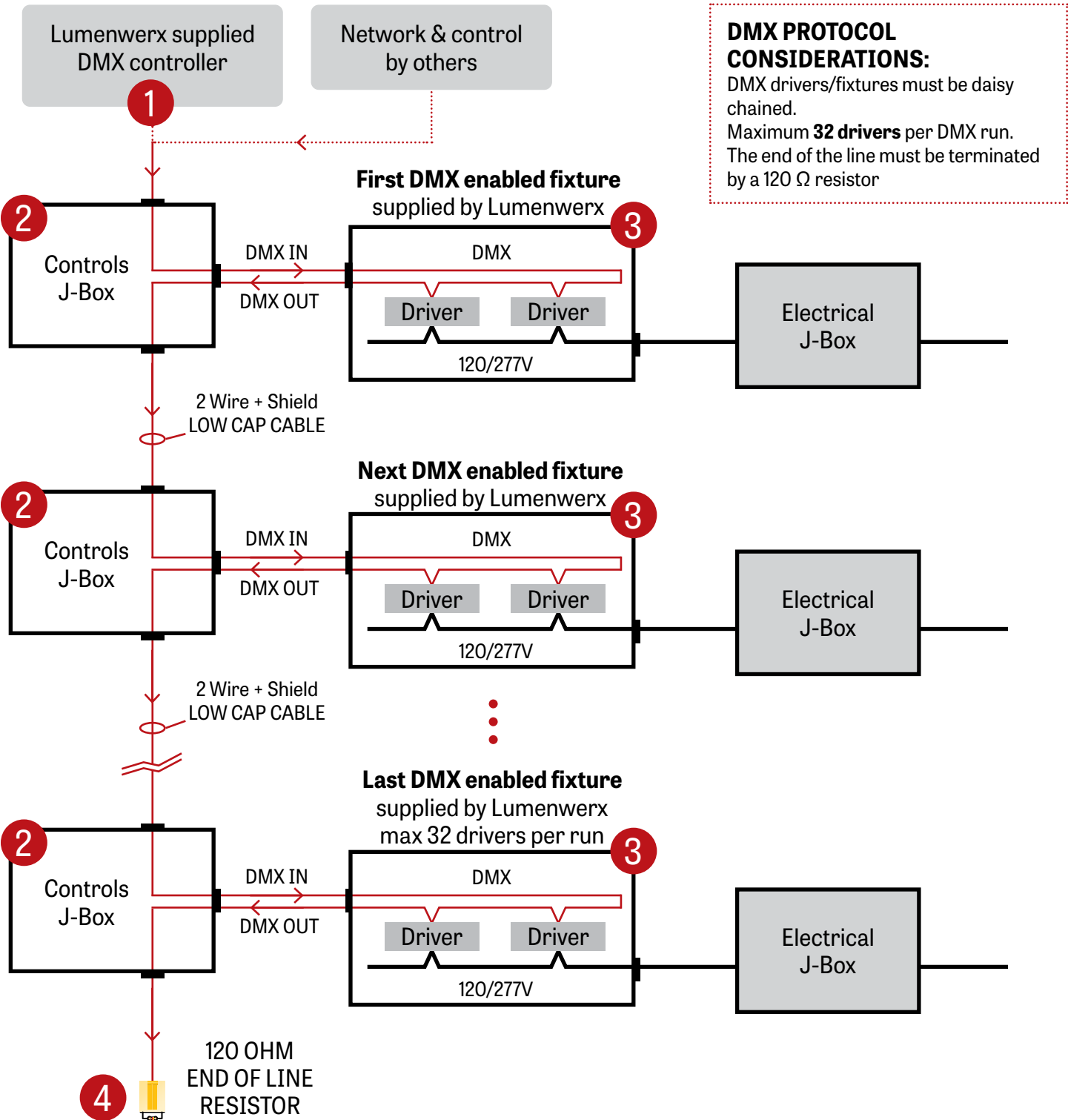
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GENERIC DMX NETWORK ARCHITECTURE



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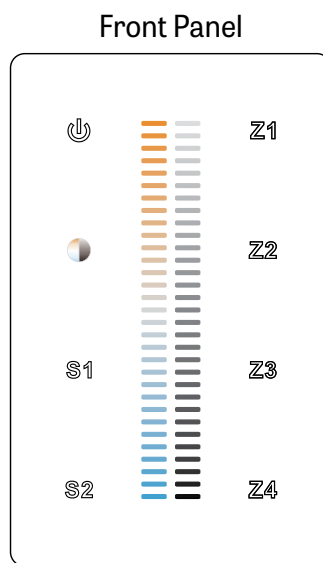
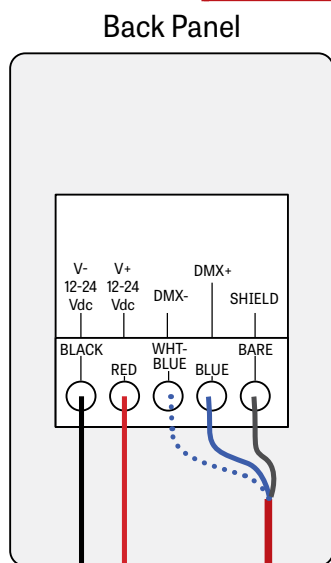
1 LUMENWERX SUPPLIED DMX CONTROLLER

To the first fixture



2 Wire +
Shield Low Cap Cable

WALL BOX SUPPLIED BY OTHERS

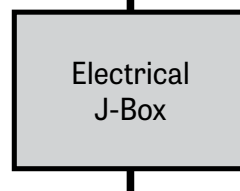
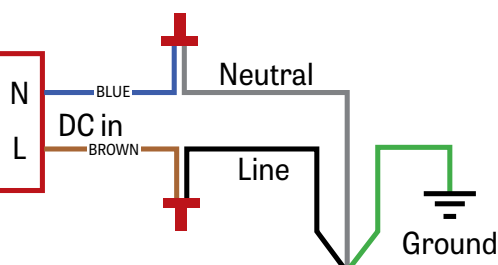


Controller image may differ

I.E.: Cerco Cable 7539-10
Belden 9841
Belden 8241



DC out



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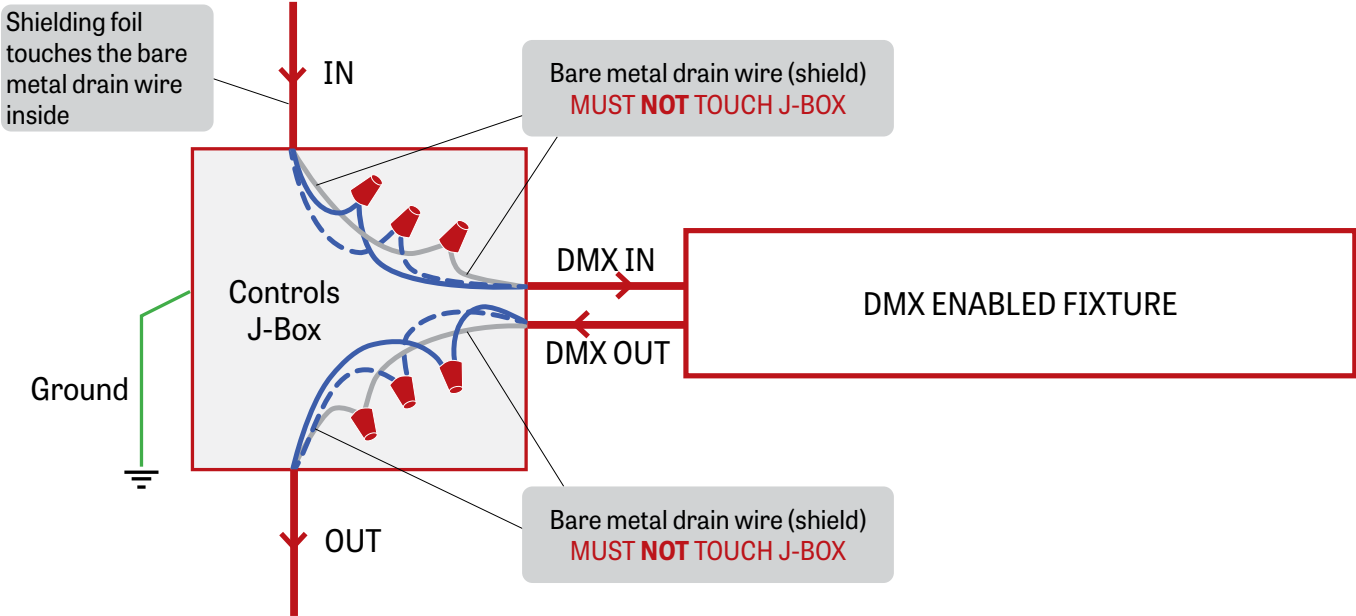
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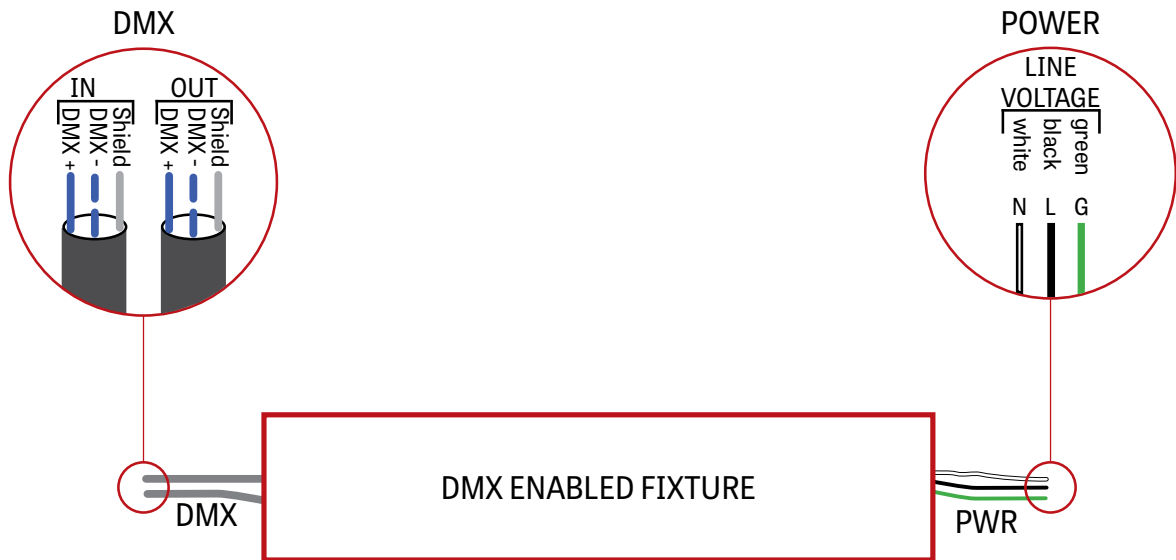
2 J-BOX DMX DAISY CHAIN DETAIL

Low capacitance DMX Cable from Previous Fixture



Low capacitance DMX cable to next fixture

3 DMX CONNECTION RECESSED & SURFACE



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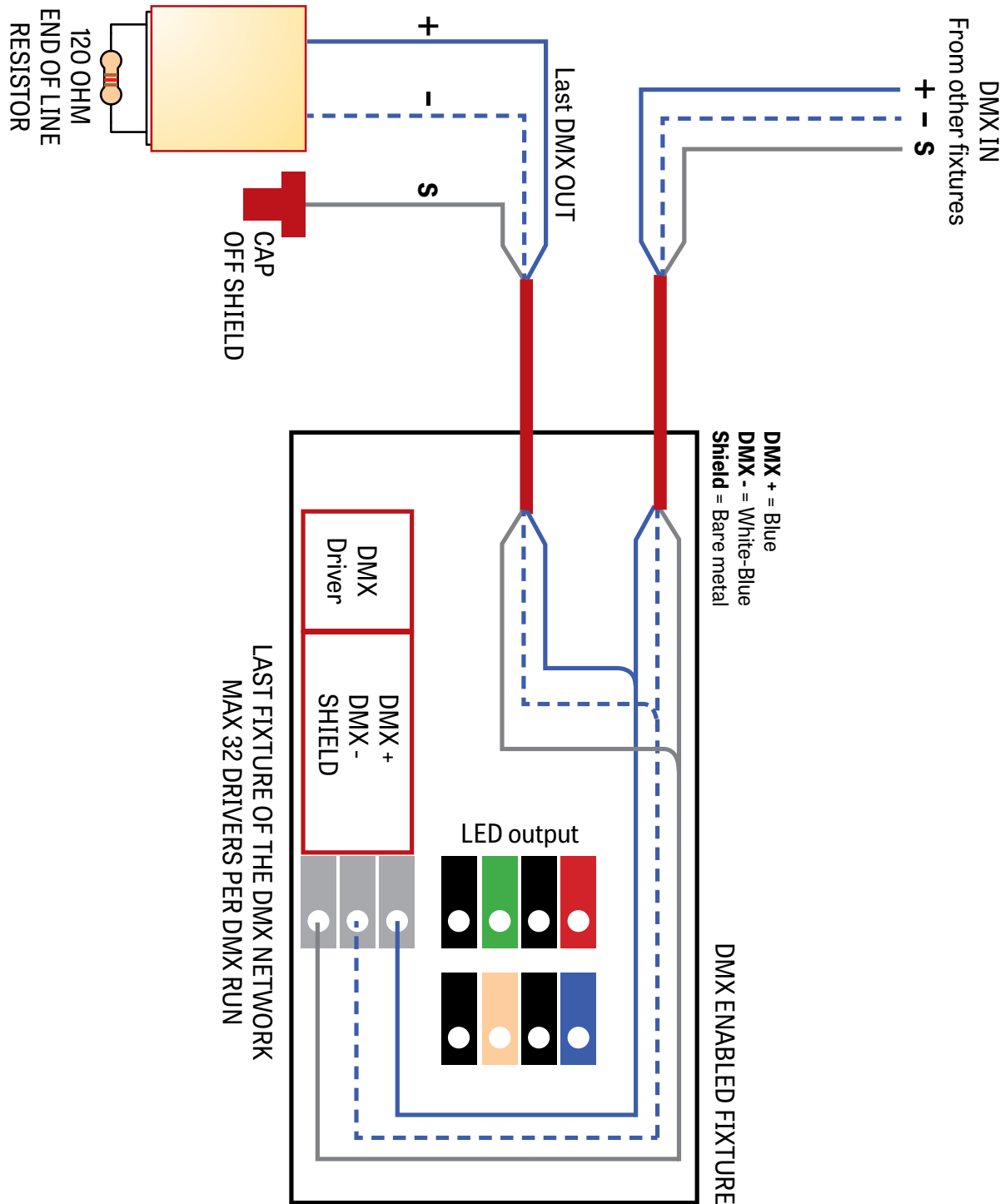
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4 DMX LAST FIXTURE DETAIL



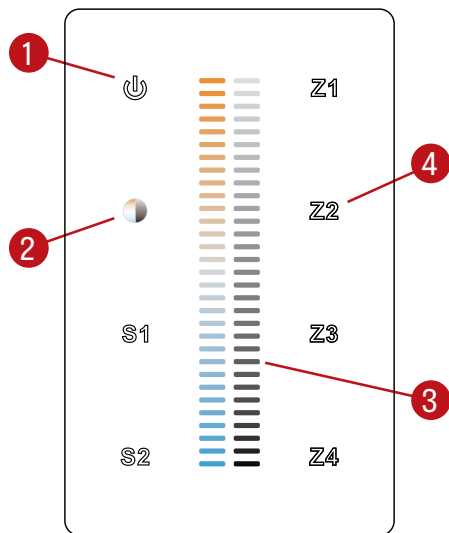
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DMX WALL CONTROLLER

DUO 1-4 ZONE



- (1) Power: Use this button to turn ON or OFF the fixture.
- (2) Brightness/CCT: Use the color/brightness toggle button to choose between color/brightness. When Blue: brightness is selected, when Yellow: color is selected.
- (3) Slider: Depending on the mode chosen in step 2, the slider will allow the user to set desired color or brightness.
- (4) Zone select: Up to 4 zones can be selected either independently or together. Once selected, the commands will be sent to the zone identified by a Blue LED.

Default DMX Addresses:

- 1 Warm
- 2 Cool