POP CORE ROUND 36 LED

LUMENWERX
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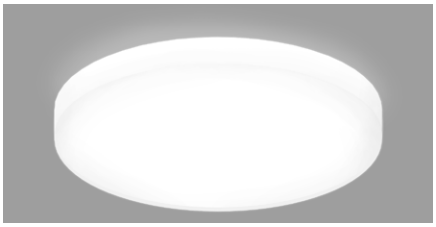
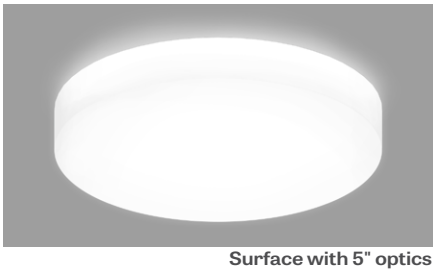
SURFACE-WALL - CHROMAWERX TUNABLE WHITE AND DIM TO WARM

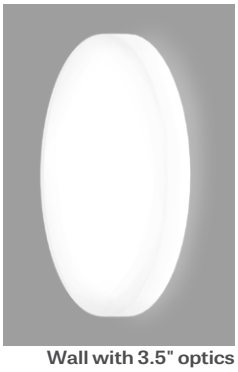
IMPORTANT: a qualified DMX integration consultant is required to ensure proper installation and function of any DMX network



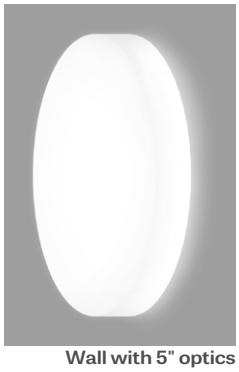
Surface with 3.5" optics



Surface with 5" optics



Wall with 3.5" optics



Wall with 5" optics

PROJECT: _____

TYPE: _____

NOTES: _____

DESCRIPTION

POP Core features a simple, uniformly luminous diffuser and delivers up to 114 LPW. The diffuser and light engine form a fully enclosed unit secured by a twist-and-lock mechanism for easy maintenance with no exposed hardware. POP Core is an ideal vehicle for ChromaWerx white tuning in education, office, and healthcare applications where modular luminaires are used.

CHROMAWERX

up to 114 lm/w performance

ORDER GUIDE

POROS	36IN	ULO		LED		
LUMINAIRE ID	**SIZE**	**OPTICS**	**HEIGHT**	**LIGHT SOURCE**	**CRI**	**LUMEN PACKAGES**
POROS - pop round surface-wall	**36IN** - ∅ 36"	**ULO** - Uniform Lambertian Optic	**3H** - 3.5" optic **5H** - 5" optic	**LED** - high performance LED	**80** - 80CRI **90** - 90CRI	**4000** - min. low output 4000lm **5500** - medium output 5500lm **8000** - max. high output 8000lm **####** - other required lm

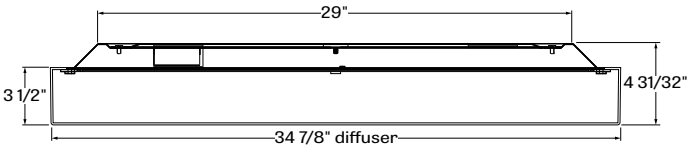
			1	SUR	
CHROMAWERX	**VOLTAGE**	**DRIVER**	**ELECTRICAL**	**MOUNTING**	**FINISH**
DUO - tunable white 2 channel control 27k to 65k **SOLA** - dim to warm single channel control 22k to 35k	**120** - 120V **277** - 277V	**DMX** - to specify see pages 4 to 9 **DA** - Dali (duo only) local on-site commissioning is required **0-10** - Single 0-10V input (Sola) or dual 0-10V input for CCT/Intensity (Duo) **PSQO** - Lutron T-Series 1% Tunable White (Duo only)	**1** - 1 circuit	**SUR** - surface mount	**W** - matte white **CF#** - custom finish specify RAL#

See page 2 for ordering code detailed information

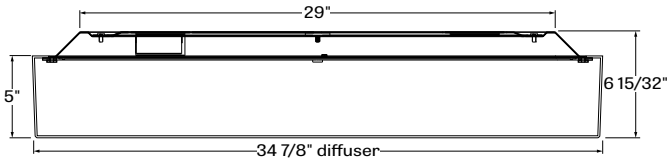
OPTIONS
FU - fuse **CU** - custom

DMX WALL CONTROLS
To specify see pages 4 to 9

CROSS SECTION



POROS + 3H - pop round surface-wall with 3.5" optics



POROS + 5H - pop round surface-wall with 5" optics

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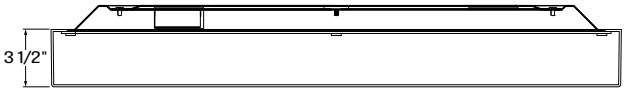
OPTICS

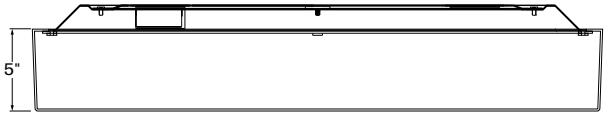
UNIFORM EFFICIENCY LAMBERTIAN OPTIC (ULO) - made of formed impact modified white PMMA, the optic provides an even light distribution with up to 88% transmission. Its unique enclosed shell design protects LEDs against Electrostatic Discharge and dust while its back surface project a soft glow on the mounting surface.

OPTICS HEIGHT

POP round surface-wall 36 is available with both 3.5" and 5" diffuser.



POROS + 3H - pop round surface-wall with 3.5" optics



POROS + 5H - pop round surface-wall with 5" optics

LIGHT SOURCE - LED

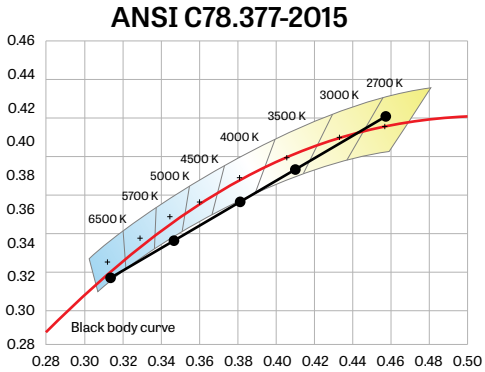
Custom array of alternating color temperature mid-flux LED's are mounted directly to the housing for optimal thermal performance. For the Duo products, a color temperature range from 2700K-6500K is achievable with color points on or below the black body curve. For the Sola products, a color temperature range from 2200K-3500K is controlled synchronously with intensity. Color consistency between fixtures is maintained to within 3SDCM. LEDs are operated at reduced drive current to optimize efficacy and lumen maintenance.
All LED's have been tested in accordance with IESNA LM-80-08 and the results have shown L80 lumen maintenance greater than 60,000 hours. Absolute product photometry is measured and presented in accordance with IESNA LM-79, unless otherwise indicated.

PERFORMANCE AT 4000K

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
Low output	4000K	35	4000	114
Medium output	4000K	49	5500	112
High output	4000K	75.5	8000	106

Lumen Adjustment Factors	
2700K	0.917
3000K	0.959
3500K	0.988
4000K	1.000
6500K	1.053

CHROMAWERX - TUNABLE WHITE



ChromaWerx Sola is single-channel control that dims output while warming the color temperature in a pre-determined relationship. A simple digital or 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 is two-channel control. It uses an analog (0-10V) protocol for separate control of luminaire CCT and intensity or a digital (DMX, DALI) 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 warm (2700K) to cool (6500K) 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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ELECTRICAL

DMX (Duo only)

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 (Duo Only)

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%.

0-10V (Sola)

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%.

0-10V (Duo)

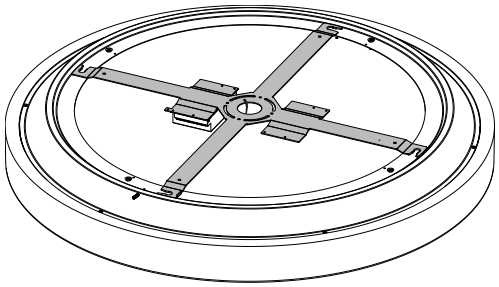
Factory-set adjustable output current LED driver with universal (120-277VAC) input. Controlled via two individual 0-10V signals, one for setting light output down to a minimum of 1% and the other for adjusting the CCT (default range of 2700K-6500K). Rated life of 50,000 hours at 70°C maximum driver case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

PSQ0 (Duo only)

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 Quatum System.

MOUNTING OPTIONS

A Twist and lock mounting system for clean look with no visible fastener and easy maintenance.



SUR - surface mount

FINISH

Interior - 95% reflective, matte white powder coating
Exterior - matte white powder coating.

CONSTRUCTION

Housing - 16 gauge spun aluminum, matte white powder coating
Diffuser - Uniform lambertian optic, thermoformed impact modified acrylic, completely enclosed

WEIGHT

RD 36 X 3.5 - 25.51lbs - 11.59kg
RD 36 X 5 - 26.91lbs - 12.22kg

CERTIFICATIONS

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

WARRANTY

For all ChromaWerx products, LumenWerx provides a three-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.

Do you require a wall controller provided by Lumenwerx?

YES → DMX controller supplied 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. ✓

How many zones do you have?
A zone consists of one or more luminaires behaving identically.

1 - 4 Zones

Do you have more than 32 drivers in total?

To Calculate # of drivers

How to calculate the required number of drivers:

per 4' fixture	per 4' fixture
Driver	Driver Driver
1x driver	2x driver
Direct only	Direct high output

NO → 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. ✓

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

5 or more Zones

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

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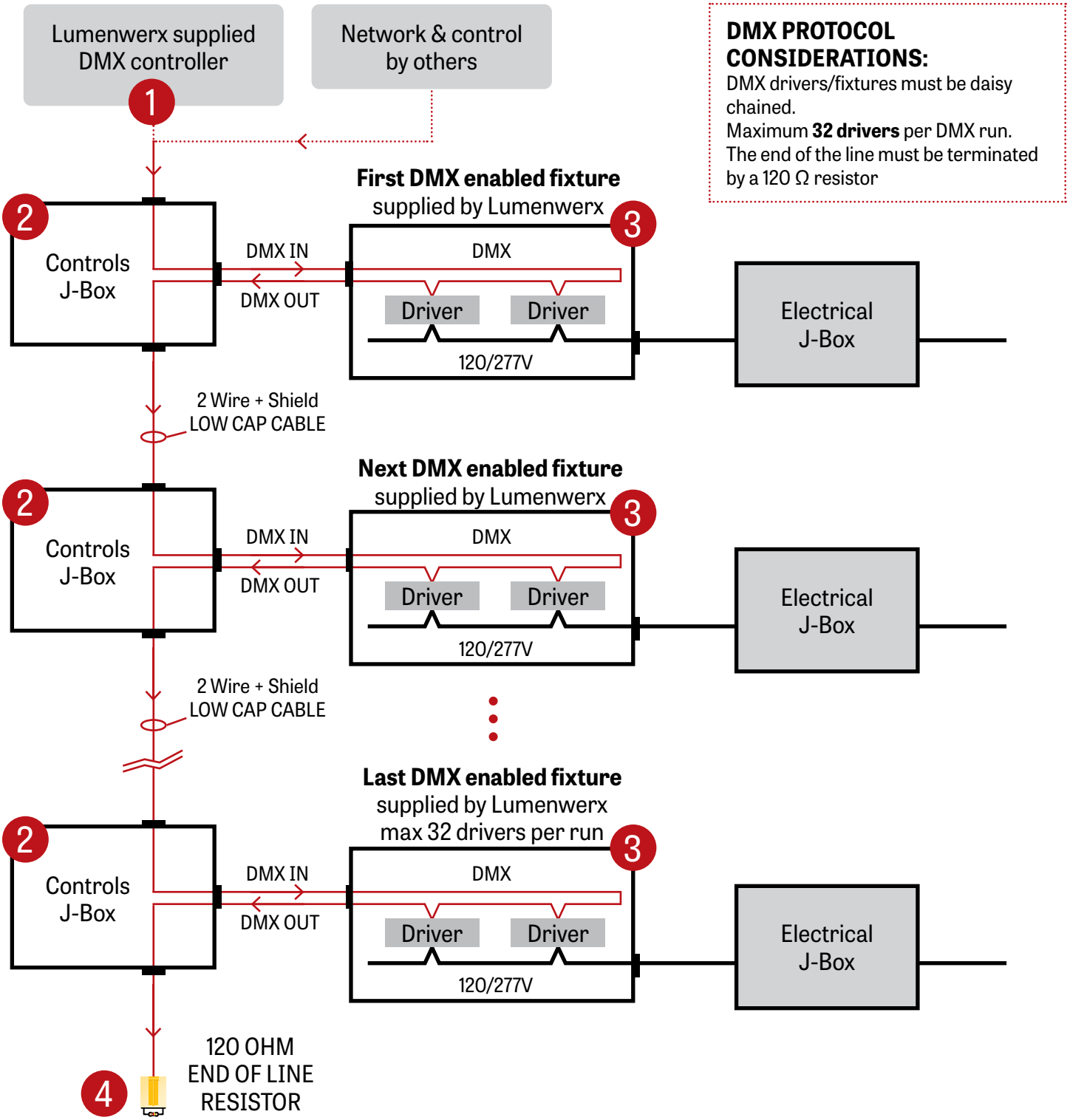
GENERIC DMX NETWORK ARCHITECTURE



DMX PROTOCOL CONSIDERATIONS:
DMX drivers/fixtures must be daisy chained.
Maximum **32 drivers** per DMX run.
The end of the line must be terminated by a 120 Ω resistor

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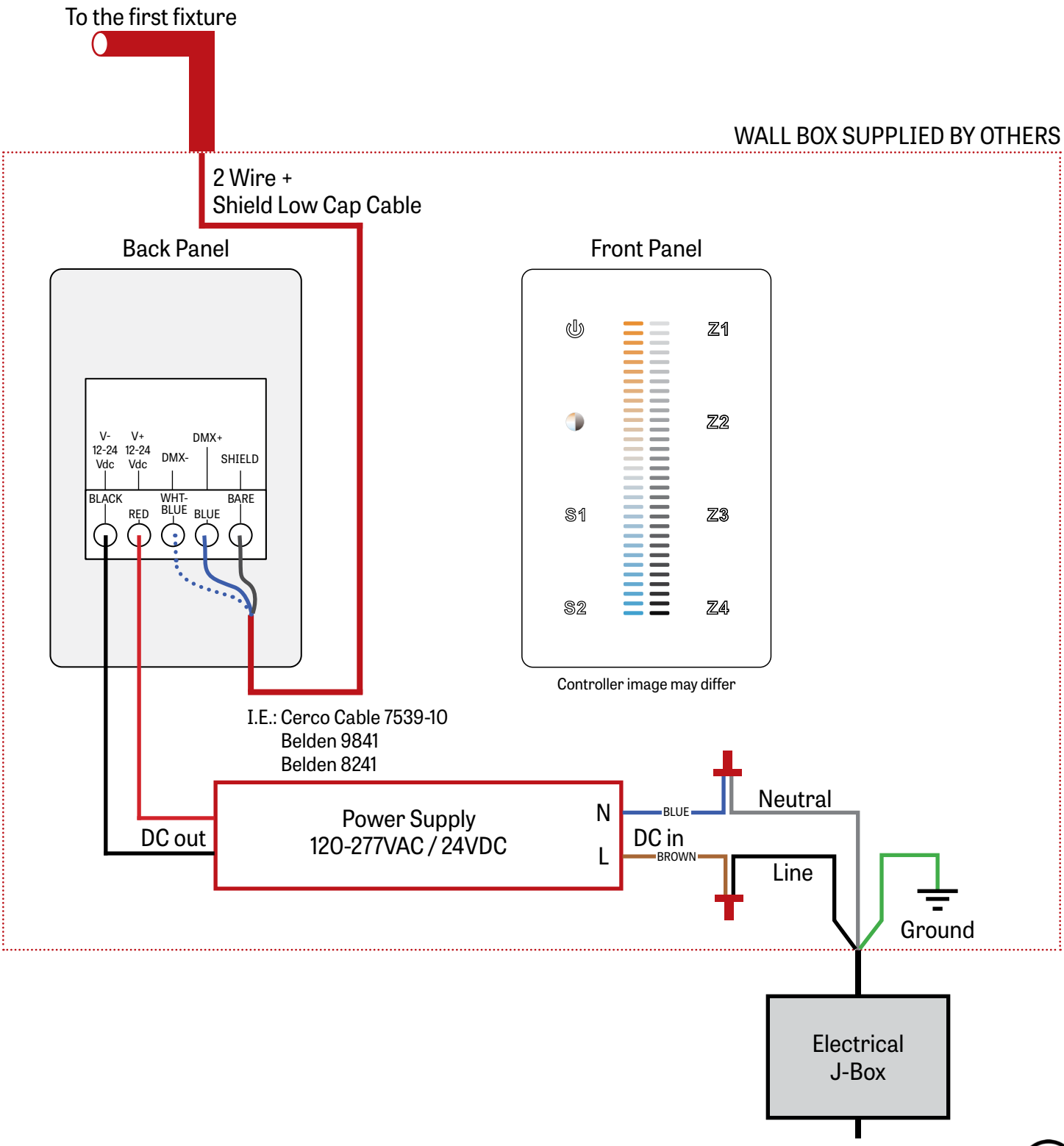
SURFACE-WALL - CHROMAWERX TUNABLE WHITE

1 LUMENWERX SUPPLIED DMX CONTROLLER



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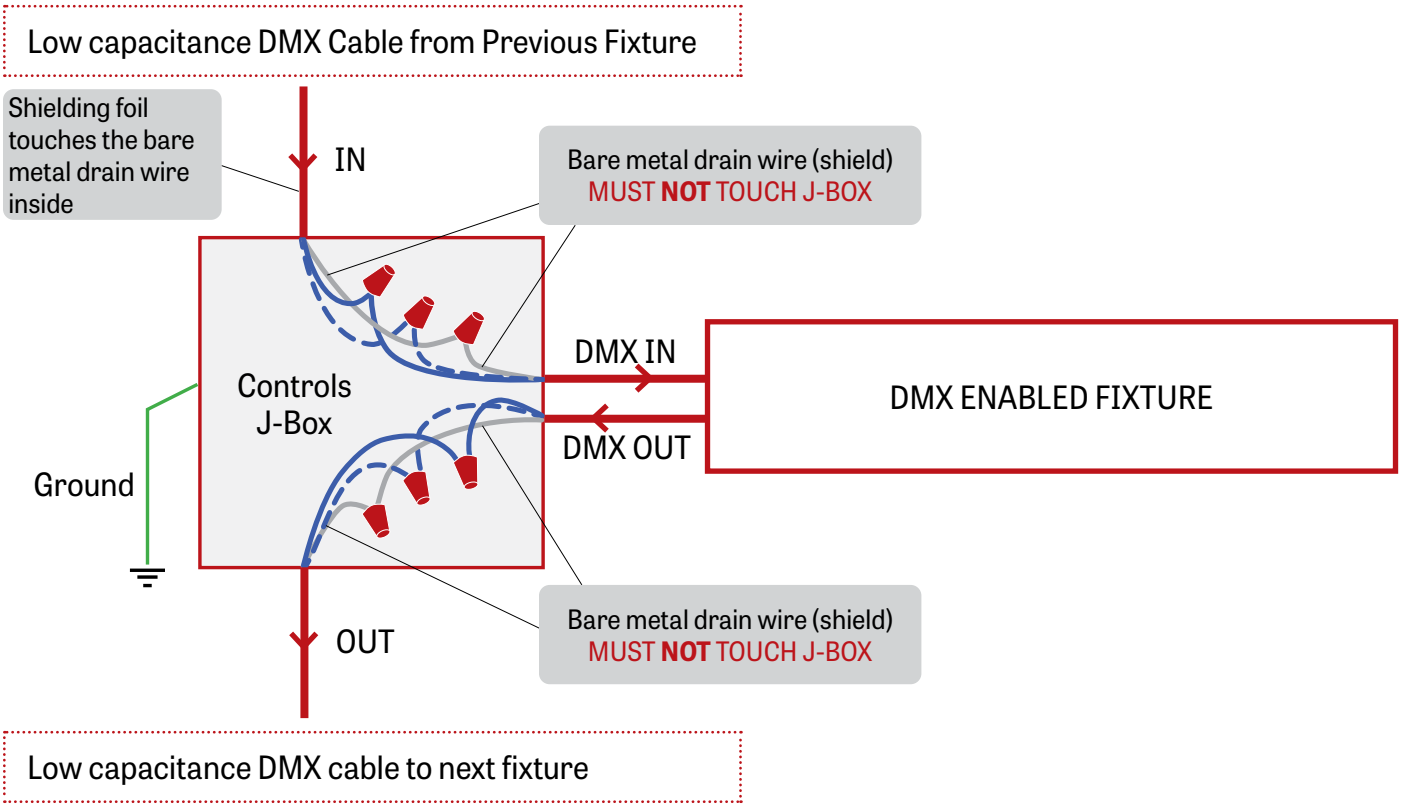
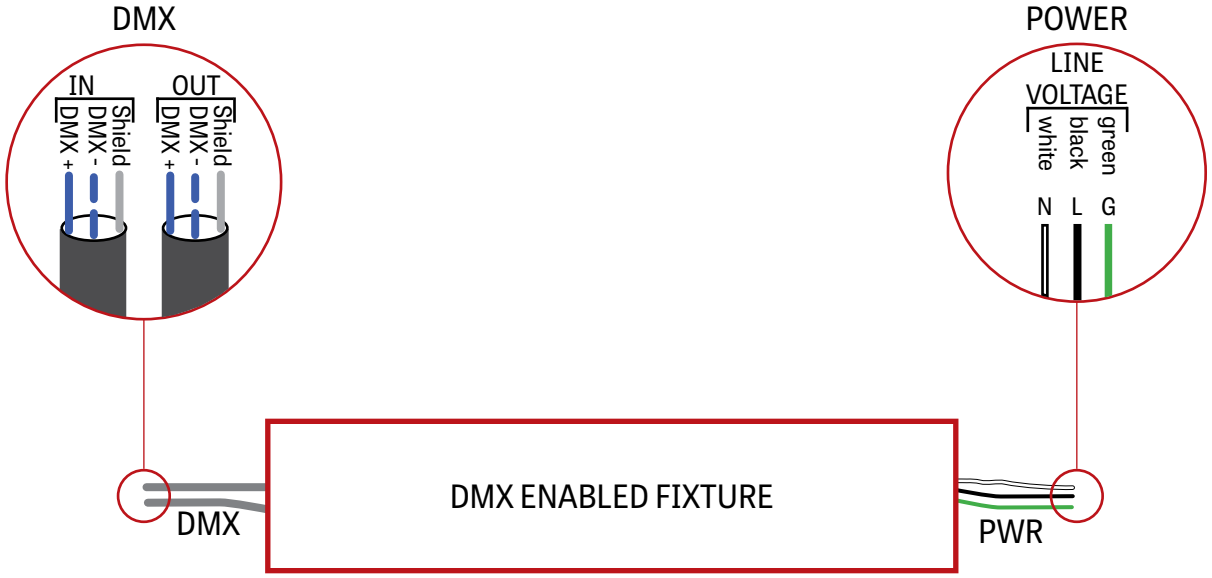
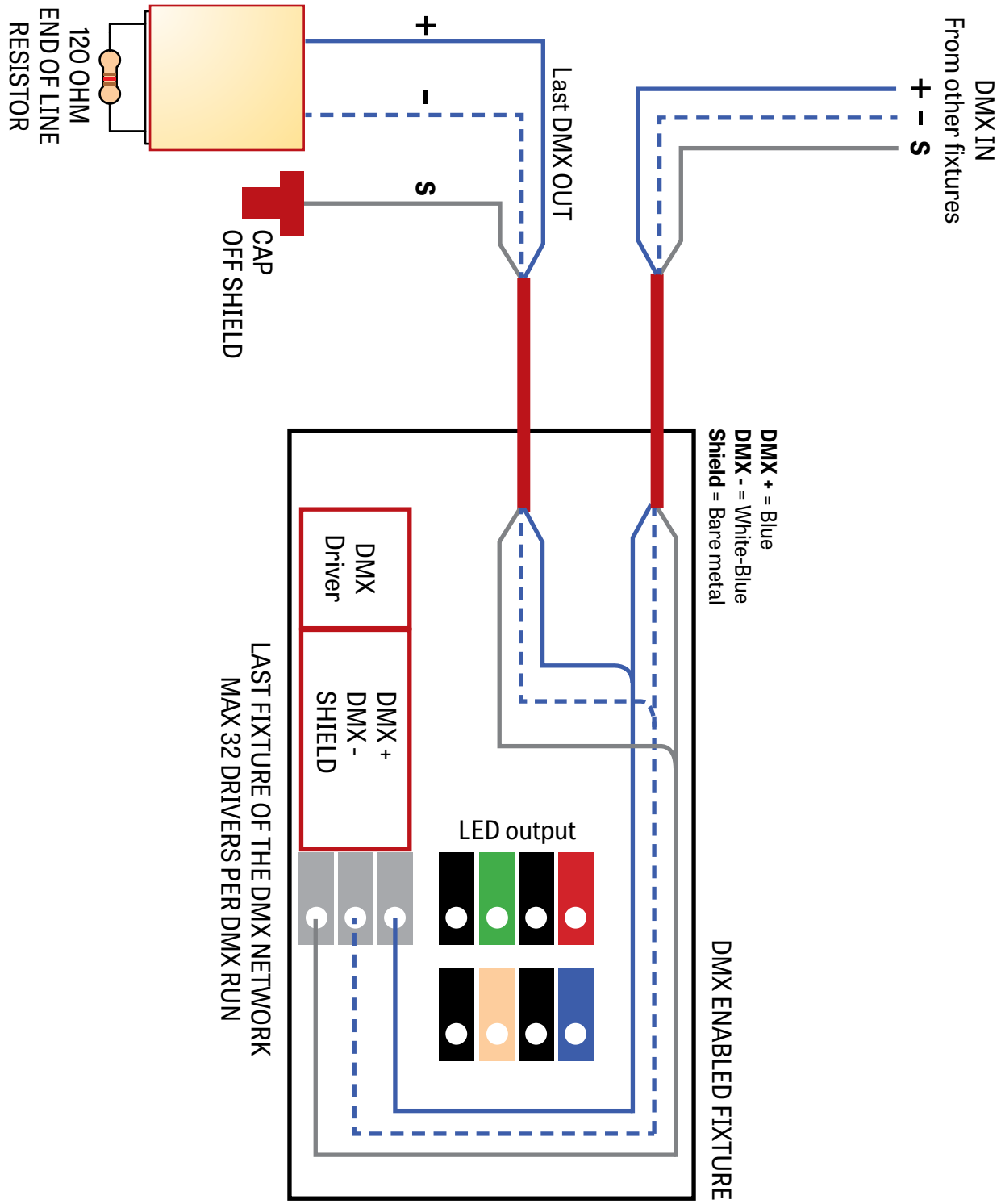
2 J-BOX DMX DAISY CHAIN DETAIL



3 DMX CONNECTION RECESSED & SURFACE

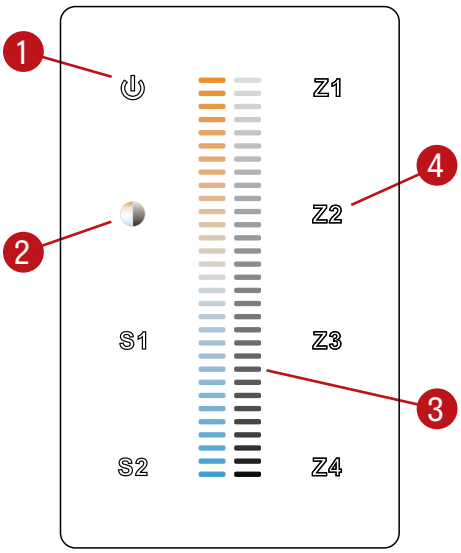


4 DMX LAST FIXTURE DETAIL



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

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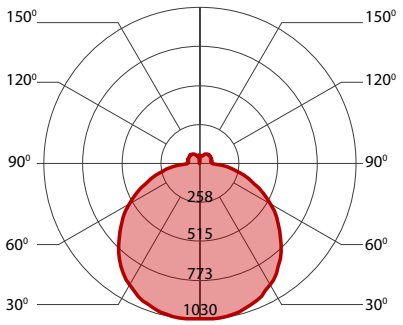
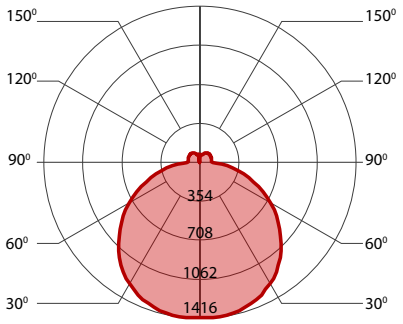
4000 LUMEN AT 80CRI - LOW OUTPUT



PERFORMANCE

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
low output	2700K	38	4000	105
low output	3000K	37.5	4000	107
low output	3500K	36.5	4000	110
low output	4000K	35	4000	114
low output	5000K	33.5	4000	119
low output	6500K	34	4000	118

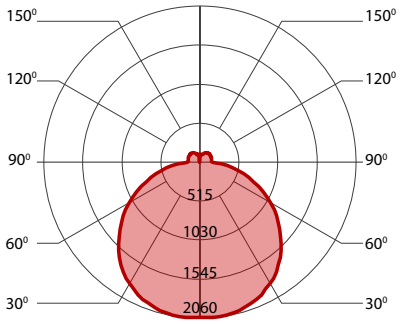
5500 LUMEN AT 80CRI - MEDIUM OUTPUT



PERFORMANCE

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
medium output	2700K	53.5	5500	103
medium output	3000K	52.5	5500	105
medium output	3500K	51	5500	108
medium output	4000K	49	5500	112
medium output	5000K	47	5500	117
medium output	6500K	47.5	5500	116

8000 LUMEN AT 80CRI - HIGH OUTPUT



PERFORMANCE

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
high output	2700K	82.5	8000	97
high output	3000K	81	8000	99
high output	3500K	77.5	8000	103
high output	4000K	75.5	8000	106
high output	5000K	72.5	8000	110
high output	6500K	72.5	8000	110