

MEDICO

HEALTHWERX MEDICAL TROFFER
RECESSED
STATIC WHITE, BIOS ST/DY, FULL SPECTRUM

LUMENWERX



Project: _____

Type: _____

DESCRIPTION

Medico addresses both patient and staff needs in health facilities. Designed as a stand-alone luminaire or to complement Medico Plus fixtures for a consistent look throughout one entire healthcare space, Medico offers the same low-glare illumination as Medico Plus in Ambient mode. The central channel can be blank, or offered with parabolic louvers, a downlight, or mini spots. Medico is available in static white, BIOS, and Full Spectrum. Consult other spec sheets for Chromawerx SOLA and DUO options.

Up to 139 lm/W performance

UPTO
IP64

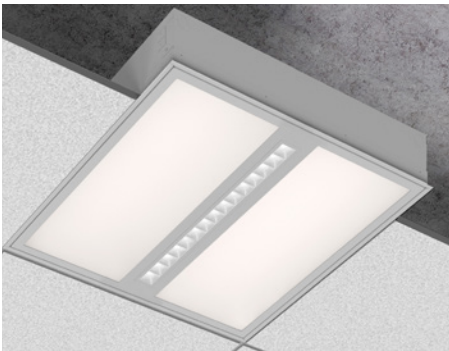


Medico 2'x2'

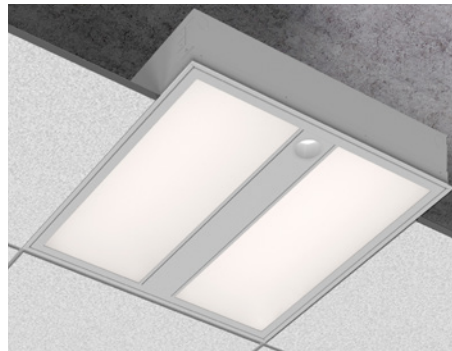


Medico 2'x4'

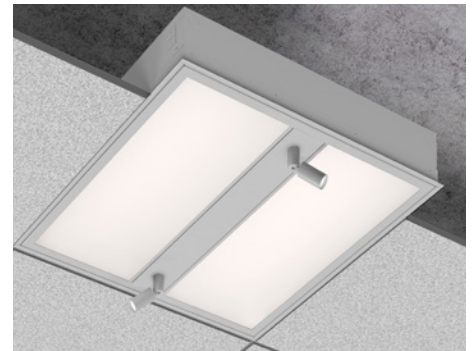
MODULES



Parabolic Louver



Downlight



Micro Spot

Project: _____
Type: _____

Order Guide (Example: MEDT-22-GFR-ULO-SW-90-1500-PAR(SW-711-SPL)-D1-35-120-GRD-W-NA)

NON-IC RATED

LUMIN. ID	SIZE	SEALING	SIDE OPTIC	LIGHT SOURCE ⁵	CRI	SIDE LUMEN PACKAGE ^{10, 11}	
MEDT							
MEDT - Medico Troffer	22 - 2'x2' 24 - 2'x4'	GFR ¹ - Gasketed frame, IP44 GSO ² - Gasketed side optic, IP54 PTR ^{3, 4} - Polycarbonate door with tamper-resistant screws, IP64 ¹ IP44 rated gasketed frame construction. ² IP54 rated gasketed frame construction with additional gaskets for the side optic. ³ IP64 and IK10 rated when specified with the polycarbonate door option. ⁴ Not available with Micro Spot module.	ULO - Uniform Lambertian Optic NPO - Nano-Prismatic Optic	SW - Static white BIOSST ⁶ - Static biologically-optimized lighting BIOSDY ⁶ - Dynamic biologically-optimized lighting FS ⁶ - Full Spectrum ⁵ Chromawerx SOLA and DUO also available. Consult other spec sheets. ⁶ Not available with modules.	80 ⁷ - 80 CRI 90 ^{7, 8} - 90 CRI (R9 - 50+) 95 ⁹ - 95 CRI ⁷ Not available with full spectrum. ⁸ Not available with BIOS. ⁹ Available with full spectrum only.	2'X2' 1500 lm 2500 lm 3500 lm 4500 lm ¹² 5500 lm ¹²	2'X4' 3000 lm 4000 lm 5000 lm 7500 lm 9000 lm ¹² 11 000 lm ¹²
MODULES		FUNCTION CONTROL ¹⁵	COLOR TEMP.	VOLTAGE	MOUNTING	FINISH	OPTIONS
BLA - Blank MODULES ¹³ PAR() ¹⁴ - Parabolic louver COB() - Downlight, 1x downlight MS() - Micro Spot, 2x Micro Spots ¹³ To specify, see code and examples below. ¹⁴ 1x 15-cell for 2'x2' and 2x 15-cell for 2'x4'.	INDEPENDENT CONTROL D1 ¹⁶ - 1% 0-10V DA ¹⁷ - DALI LDE1 ¹⁷ - Lutron Hi-lume 1% Eco STEP ¹⁸ - Step dimming LOW VOLTAGE CONTROL LVC2# ¹⁹ - Individual or sequential control for 2 functions ¹⁵ PoE (Power-over-Ethernet) compatible. Consult factory for details. ¹⁶ Side optics + modules dimmable. For multi-mode Ambient function, please select STEP. ¹⁷ On-site commissioning of functions is required. ¹⁸ Step dimming will be dimmed to 0%-30%-70%-100%. For other STEP dimming options, please contact factory. Modules, if selected, will be DI. ¹⁹ Not available with BIOSDY. The number of functions specified must coincide with the number of functions specified with the low-voltage control scheme. See page 7 for more details.	27 ²⁰ - 2700K 30 - 3000K 35 - 3500K 40 - 4000K ²⁰ Not available with BIOS.	120 - 120V 277 - 277V 347 ²¹ - 347V ²¹ Available with DI independent control only.	GRD - Grid ceiling DF - Drywall trim kit	W - Matte white AL - Aluminum WA - White antimicrobial Silverwerx CF# - Custom finish, specify RAL#	GKK - Grid gasket EMB ^{22, 23, 24} - Emergency battery NA - None ²² The battery is connected to the side optic. Overall height of fixture will increase for certain configurations. ²³ Available with independent function control options only. ²⁴ Not available with 347V.	

Parabolic Louver Module (Example: PAR(SW-711-SPL))

PARABOLIC LOUVER	PAR. LOUVER LIGHT SOURCE	PAR. LOUVER LUMEN PACK.	PAR. LOUVER FINISH
PAR()	SW		
PAR() ²⁵ - Parabolic louver ²⁵ 15-cell for 2'x2', 2x 15-cell for 2'x4'.	SW - Static white	2'X2' 711 - 711 lm 1778 - 1778 lm 2844 - 2844 lm	2'X4' 1422 - 1422 lm 3556 - 3556 lm 5688 - 5688 lm
			SPL - Specular aluminum louver MPL - Matte aluminum louver WPL - Matte white louver BPL - Matte black louver

Downlight Module (Example: COB(SW-7W-30-2-90-35-SDL))

DL.	DL. LIGHT	DOWNLIGHT WATTAGE	DOWNLIGHT BEAM	DL. COLOR QUALITY	DL. CRI	DL. COLOR TEMP.	DOWN. LENS
COB()	SW						
COB() - Downlight	SW - Static white	7W - Low output 537-896 lm 10W - Medium output 683-1103 lm 14W - High output 883-1338 lm	10 - 10° Narrow spot 20 - 20° Spot 30 - 30° Narrow Flood 40 - 40° Flood 50 - 50° Wide flood 60 - 60° Very wide flood 75 - 75° Very wide flood 90 - 90° Open flood	2 ²⁶ - 2-Step MacAdam Ellipse 3 ²⁷ - 3-Step MacAdam Ellipse ²⁶ For beams 30° to 90°. ²⁷ For beam 10° and 20°.	80 - 80 CRI 90 - 90 CRI 97 ²⁸ - 97 CRI ²⁸ Not available with 3500K, 10° and 20° beam angles.	27 - 2700K 30 - 3000K 35 - 3500K 40 - 4000K	SDL - Soft diffused lens FDL - Frosted diffused lens

Micro Spot Module (Example: MS25(80-400-35-W))

MICRO SPOT	MICRO SPOT CRI	MICRO SPOT LUMEN PACK.	MICRO SPOT COLOR TEMP.	MICRO SPOT FINISH
		400		
MS25() - Micro Spot 25° MS35() - Micro Spot 35° MS50() - Micro Spot 50°	80 - 80 CRI 90 - 90 CRI	400 ²⁹ - 400 lm ²⁹ For each Micro Spot.	27 - 2700K 30 - 3000K 35 - 3500K 40 - 4000K	W - Matte white B - Matte black

MEDICO

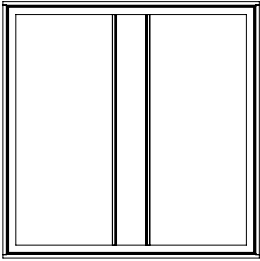
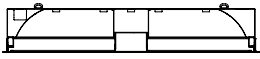
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LUMENWERX

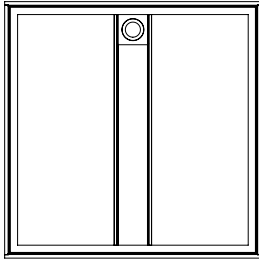
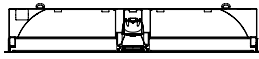
Section Views

MODULES

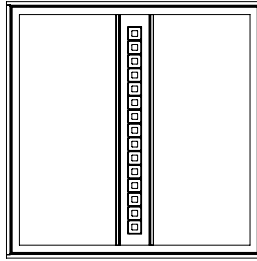
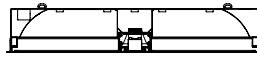
2'x2'



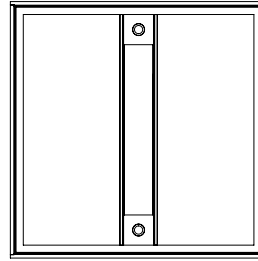
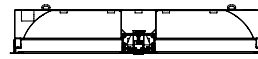
Blank



Downlight

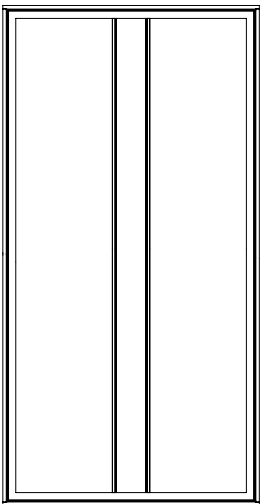


Parabolic Louver

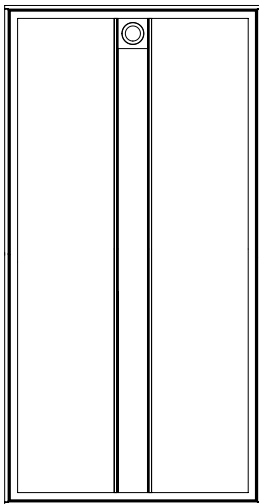


Micro Spot

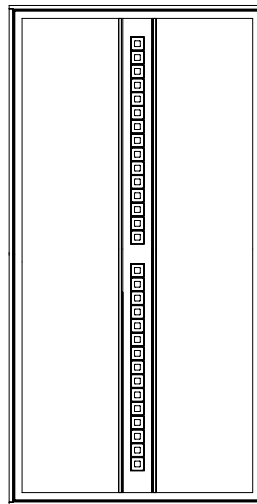
2'x4'



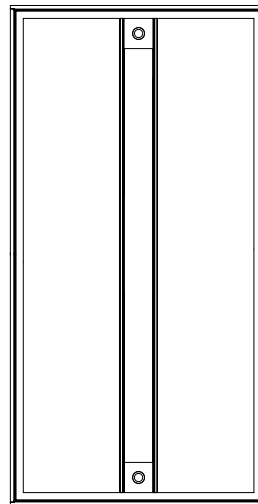
Blank



Downlight



Parabolic Louver



Micro Spot

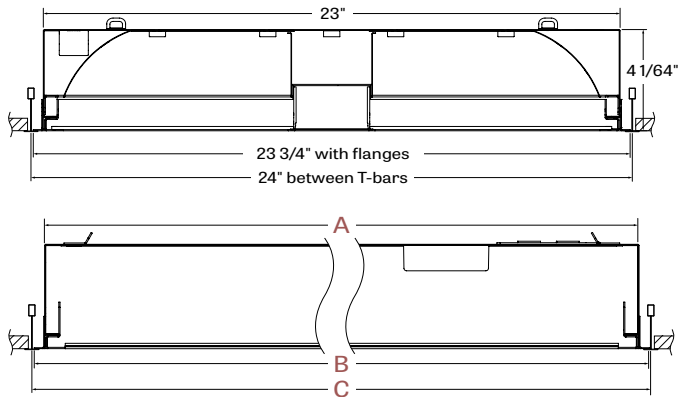
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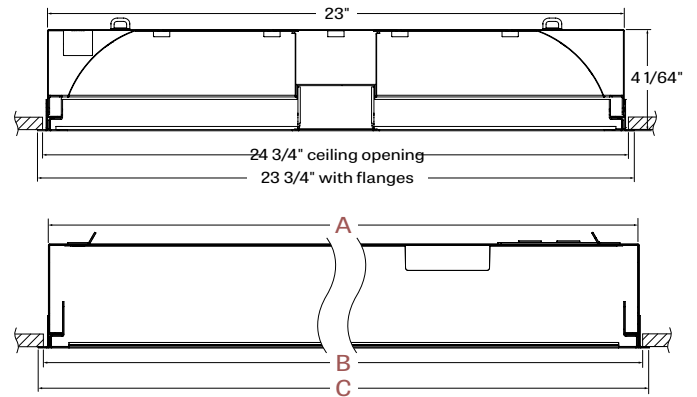
LUMENWERX

Dimensions

GRID CEILING



DRYWALL CEILING



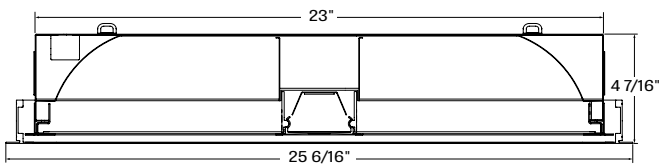
Grid - GRD

NOMINAL LENGTH	FIXTURE LENGTH	WITH FLANGES	BETWEEN T-BARS
	A	B	C
2' X 2'	23"	23 3/4"	24"
2' X 4'	47"	47 3/4"	48"

Drywall - DF

NOMINAL LENGTH	FIXTURE LENGTH	CEILING OPENING LENGTH	TRIM KIT LENGTH
	A	B	C
2' X 2'	23"	24 3/4"	25 3/8"
2' X 4'	47"	48 3/4"	49 3/8"

WITH POLYCARBONATE DOOR OPTION



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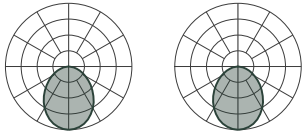
Photometrics

FIXTURE PERFORMANCE

Delivered lumens at 35K at 80 CRI

MULTIPLIER - SEALING

Polycarbonate door, IP64 | 0.85



ULO

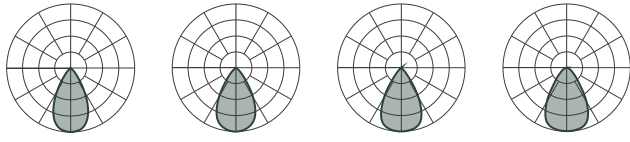
NPO

LUMEN OUTPUT			INPUT WATTS	LPW	LUMEN OUTPUT			INPUT WATTS	LPW
2'X2' - ULO									
1500	2500	3500	4500	5500	3000	4000	5000	7500	11000

MODULE PERFORMANCE

Delivered lumens at 35K at 80 CRI for all modules

PARABOLIC LOUVER



Specular Aluminum Louver

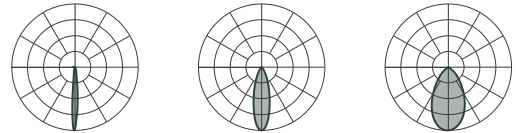
Matte Aluminum Louver

Matte Black Louver

Matte White Louver

LUMEN OUTPUT	INPUT WATTS	LPW	
2'X2' - 1x 15-CELL			
771	8.6	83	
1778	21.4	83	
2844	34.8	82	
2'X4' - 2x 15-CELL			
1442	17.2	83	
3556	42.8	83	
5688	69.6	82	
MULTIPLIER - OPTIC			
SPL	MPL	BPL	WPL
1	0.853	0.606	0.996

DOWNLIGHT



Narrow Spot 10°

Narrow Flood 30°

Very Wide Flood 60°

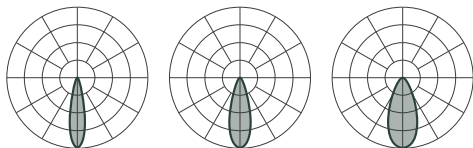
PERFORMANCE WITH SOFT DIFFUSED LENS

BEAM	LUMEN OUTPUT							
	10	20	30	40	50	60	75	90
Low - 7 W	484	478	808	784	776	717	675	642
Medium - 9.8 W	626	617	995	964	954	883	831	791
High - 13.8 W	809	797	1208	1170	1158	1072	1009	959
LPW (based on delivered lm high output of 13.8W)								
BEAM	10	20	30	40	50	60	75	90
80 CRI	58	57	87	85	90	78	73	70
90 CRI	55	54	80	78	77	71	67	64
97 CRI	NA	NA	70	67	66	61	57	55

PERFORMANCE WITH FROSTED DIFFUSED LENS

BEAM	LUMEN OUTPUT							
	10	20	30	40	50	60	75	90
Low - 7 W	402	396	671	651	644	595	560	533
Medium - 9.8 W	520	512	826	800	792	732	690	656
High - 13.8 W	672	661	1002	971	961	889	837	796
LPW (based on delivered lm high output of 13.8W)								
BEAM	10	20	30	40	50	60	75	90
80 CRI	48	48	73	70	75	65	61	58
90 CRI	45	45	66	65	64	59	55	53
97 CRI	NA	NA	58	55	55	51	48	46

MICRO SPOT



Micro Spot 25°

Micro Spot 35°

Micro Spot 50°

LM OUTPUT	TOTAL LM	INPUT WATTS	LPW
400	800	10.6	75.5

MULTIPLIER

CCT			
2700K	3000K	3500K	4000K
0.9	0.95	1	1.05

Technical Specifications

OPTICS

Uniform Efficiency Lambertian Optic (ULO)

Thermoformed from impact-modified white acrylic, the ULO provides an even light distribution with up to 88% transmission. Its unique enclosed design creates smooth illumination.

Nano-Prismatic Optic (NPO)

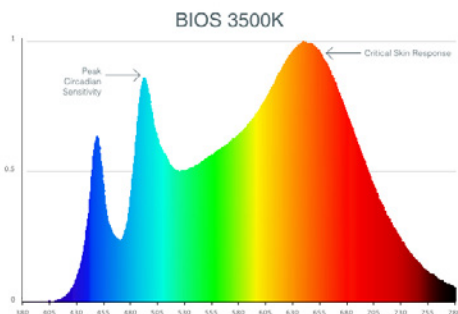
Nano-Prismatic Optic (NPO) is composed of multiple nanoprismatic refractors that bend light with great precision. The NPO's nanostructure eliminates pixelation from the LED diodes for a harmonious lens appearance. Light distribution is glare-free, concentrated, and 20% sharper than that diffused from a frosted acrylic lens.

LIGHT SOURCE

In static white, custom arrays of mid-flux LED are available in 2700K, 3000K, 3500K, and 4000K with a minimum 80 CRI and an option for 90 CRI with elevated R9 value. Color consistency maintained to within 3 SDCM. LEDs 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 L80 lumen maintenance greater than 60,000 hours. Absolute product photometry is measured and presented in accordance with IESNA LM-79, unless otherwise indicated. Optional BIOS or full spectrum LEDs can be incorporated in the fixture to increase Cyanosis Observation Index (COI) and assist in regulating circadian rhythms.



The non-visual light signals that stimulate our circadian system have peak intensity in the "sky blue" region. As the diagram below illustrates, BIOS SkyBlue technology shifts the peak LED spectral intensity (490 nm) to align better with the peak response of circadian stimulus. Also note the enhanced deep-red (near 660 nm) spectrum.



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 BIOS or full spectrum LED is selected
- Feature 55 or L04 meets WELL glare category (b-c-d)
- Feature 58 or L07 when 90CRI or above 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

ELECTRICAL

The side optics and modules are all powered by integral, high-efficiency, constant-current LED drivers that are dimmable through a number of different protocols (0-10V, DALI, Lutron Ecosystem). When individual control is selected, the LED drivers powering the side optics and modules must be combined for the Exam function. The Exam function is recommended for compliance with the ANSI RP-29-16 standard. For individual control applications where multiple output levels from the side optics are desired, an integral step-dimming (STEP) driver can be specified for the side optics with bi-level or tri-level step dimming ranging from 10% to 70%. Fixtures can also be specified with an integral LVC (low-voltage controller) that can be configured for multiple functions including Exam (side optics & modules) and Ambient (side optics only).

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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.

FUNCTION CONTROL

Independent Control

On/Off control of each load - Dimming available for dimmable loads.

Low Voltage Control

The Low Voltage Controller (LVC) option allows control of the luminaire functions from a patient pillow switch, bed side rail, or wall switch with normally open momentary dry contacts. Depending on the number of modes to be controlled, various control options are available.

		Low Voltage Control Selection	
		Exam (Side Optics & Module)	Ambient (Side Optics)
2-function LVC2	LVC21	I	SM
	LVC22	I	ST
	LVC23	I	I
	LVC24	SQ	SQ
SM: Smooth dimming I: On/off control SQ: Sequential ST: Step dimming			

EMERGENCY AND BATTERY OPTIONS

Battery

Factory installed long life, high temperature, maintenance-free Lithium-Ion battery pack with self-test functionality, test switch and charge indicator. Minimum of 90 minutes operation, up to 10W (25°C) emergency lighting output and recharge time of 24 hours.

MOUNTING

Recessed fixtures can be mounted into exposed or concealed T-bar or tegular ceiling, as well as in drywall ceilings with trim kit.

FINISH

Powder coated paint in matte white or aluminum. Optional antimicrobial finish, as well as custom finishes, also available.

CONSTRUCTION

Housing - Die formed cold rolled sheet steel 20 gauge thick
Reflectors - Cold rolled steel 0.030" thick precisely die formed, 95% reflective matte white painted

Interior brackets - Die formed cold rolled sheet steel 20 gauge thick

Side lens (ULO) - Frosted thermoformed impact-modified acrylic

Side lens (NPO) - Clear prismatic acrylic

Drywall kit - Extruded aluminum 0.07" nominal

Gasket - Closed-cell silicone foam gasket

WEIGHT

Medico 2'x2' - 28 lbs - 12.5 kg

Medico 2'x4' - 55 lbs - 25 kg

CERTIFICATION

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

NSF - NSF2 Listed for Non-Food Zones.

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.