VIA 2 SEAL

PENDANT PATTERN DIRECT, DIRECT/INDIRECT

SEALWERX SERIES









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SEALWERX SERIES

Lumenwerx

Project:	
Type:	

Order Guide

LUMINAIRE ID	DISTRIBUTION	ENVIRONMENT 1		DIRECT OPTIC	INDIRECT OPTIC Specify NA for Direct fixture	LIGHT SOURCE 5	CRI
V2SEALPPAT							
V2SEALPPAT - Via 2" Seal	D - Direct DI - Direct/	<u>Direct:</u> IP66 - IP66-Rated	Direct/Indirect:	EPDO - Environmentally	EPIO - Environmentally Protected Indirect Optic	SW - Static white FS - Full spectrum static white	80CRI ⁷ - 80+ CRI 90CRI ^{7,8} - 90+ CRI
Pendant Pattern	Indirect	IP65EC - IP65- Rated Electrical Components IP44 ² - IP44-Rated		Protected Direct Optic ASDO - Asymmetric Soft Direct Optic	ASIO ³ - Asymmetric Soft Indirect Optic WIO2 ⁴ - Widespread Indirect Optic NA - Not applicable	BIOSST ⁶ - BIOS Biological Static BIOSDY ⁶ - BIOS Biological Dynamic BIOSTU ⁶ - BIOS Biological Tunable	PSCRI 9 - 95+ CRI Not available with full spectrum. Not available with BIOS. Only available with
		features and installation environment option. ² Fixture must be installe facing down.			³ Not available with BIOS. ⁴ Not available with BIOSTU.	⁵ Chromawerx SOLA and DUO also available. Consult factory for RGBW. ⁶ See page 8 for details.	full spectrum.

DIR. LUM. PACK.	INDIR. LUM. PACK. Specify NA for Direct fixture	COLOR TEMP.	PATTERN LENGTH	CORNER TYPE 14	VOLTAGE
350LMF - Low output 350 Im/ft 500LMF - Medium output 500 Im/ft 750LMF 10 - High output 750 Im/ft	350LMF - Low output 350 Im/ft 500LMF - Medium output 500 Im/ft 750LMF " - High output 750 Im/ft NA - Not applicable	27K ¹² - 2700K 30K - 3000K 35K - 3500K 40K - 4000K 50K ¹² - 5000K	##FT##IN(#X#FT#IN-#X#FT#IN) 13 - ##FT##IN: total nominal length of pattern in feet and/or inches #X: quantity of each section #FT#IN: nominal length of each section in feet and/or inches	#LEV2C(A##) - ANGLE (A##): 2-way leveled (A90) - 90° (A##) ¹⁵ - Custom *Specify quantity (#) and angle (A##) for each required corner type. If more than one option is specified,	120V - 120V 277V - 277V UNV - 120V-277V 347V 16 - 347V
The distribution of the control of t	¹¹ Not available with BIOS.		Continuous runs: lengths over 12' B. Minimum 2' for Direct. minimum 3' for Direct/Indirect.	separate codes with a "+", e.g. 1LEV2C(A90)+2LEV2C(A60). Minimum angle is 45°.	with D1 driver only.

DRIVER 17	ELECTRICAL	ELECTRICAL SECTIONS (optional) 25, 26
D1 - 1% 0-10V ELV ¹⁸ - ELV 120V TRI ¹⁸ - TRIAC 120V DA ¹⁹ - DALI LDE1 ¹⁹ - Lutron Hi-lume 1% Eco ELD1 - eldoLED 1% ECOdrive 0-10V ELD0 - eldoLED 0.1% SOLOdrive 0-10V RLTD10 - Low-temperature 10% 0-10V 7 See page 5 for driver temperature ranges. 18 Available with 120V only. 19 On-site commissioning is required.	IC - 1 circuit 2C ²⁰ - 2 circuits #MC ²¹ - Multi circuit EC - Emergency-powered fixture NL - Night light fixture DL - Daylight fixture GTD ^{22, 23, 24} - Generator transfer device fixture ²⁰ Available for Direct/Indirect only. Separate direct and indirect circuits. ²⁰ Specify total number of circuits (#), including any circuits required for electrical section options. Provide drawing or layout specifications. Minimum ⁴ section per circuit. ²² Minimum ⁴ fixture. ²³ Not available with 347V. ²⁴ Not available for environments where the ambient temperature falls below 0°C (32°F).	#EC## 27 - Emergency-powered section #NL## 27 - Night light section #DL## 27 - Daylight section #GTD## 27, 28, 29, 30 - Generator transfer device section #EMB 29, 30, 31, 32 - Emergency battery NA - None 25 Specify with multi circuit (#MC) electrical option only. 26 Provide drawing or layout specifications. Consult factory for other configurations. Default section length is 4'. 27 Specify quantity (#), and section length in inches (##). 28 Minimum 4' section. 29 Not available with 347V. 30 Not available for environments where the ambient temperature falls below 0°C (32°F). 37 Specify quantity (#). All batteries will be on the same circuit. Each battery powers a 4' section. For Direct/Indirect, minimum 8' fixture. 32 Only available with IP44.

POWER FEED	MOUNTING 33	FINISH	OPTION
TF			
TF - Top feed	STS - Stem, standard STC() - Stem, custom 3 Standard canopies are black for black fixtures, and white for all other finishes. See page 3 for full details on standard and custom options.	W - Matte white AL - Aluminum B - Matte black WA - White antimicrobial Silverwerx CF# - Custom finish, specify RAL#	CRF - Corrosion- resistant finish NA - None



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Standard

For a standard mounting, please refer to the information below.

MOUNTING

STS - Stem, standard

- ∙Ø 5" for power canopy
- •Ø 5" for non-power canopy
- Canopies are black for black fixtures, and white for all other fixture finishes
- · Stem finish is the same color as fixture
- \cdot Stem length is 18"
- · Stem is not field adjustable
- $\boldsymbol{\cdot}$ Power cord is black for black fixtures, and white for all other fixture finishes

Custom

Stem

For a custom mounting, specify the options in the parentheses.

Example: STC(5NPC-36IN-W-STW-SLS)

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MOUNTING	3				
STC()					
	NON-POWER CANOPY SIZE	STEM LENGTH	CANOPY FINISH	STEM COLOR	OPTION
STC	5NPC - Ø 5" non-power canopy	36IN - 18" 36IN - 36" #IN ¹ - Specify length in inches	W - Matte white AL - Aluminum B - Matte black CF# - Custom finish,	STW - Matte white STAL - Aluminum STB - Matte black STCF# - Custom finish,	SLS - Sloped ceiling for stem NA - None
		¹ Minimum length is 6". Maximum length is 72". Stem is not field adjustable.	specify RAL#	specify RAL#	







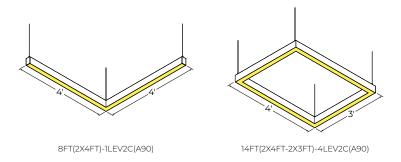
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Pattern Layout

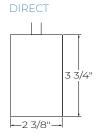
CORNER TYPES

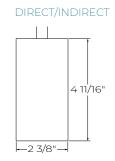


EXAMPLES



Dimensions







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		Dir	ect		
IP6	6		5 EC Components	IP4	4
Dust tight	High water resistance	Dust tight	Moderate water resistance	Particles larger than 1mm protected	splash
		OUTE	DOOR		
	oosed to the nents		exposure to ements		canopy, posed
		IND	OOR		
	application			application	
	application application		Healthcare	application	
lens gasket external end cap gasket internal end cap gasket					
External joiner gasket every 12' Continuous line of light over 12'					
Driver: in a sealed enclosure Electrical connections: water and dust proof					
LED boards protection	s: conformal c	oated for ma	aximum		

	Direct/I	ndirect	
IP6		IP4	
Dust tight	Moderate water resistance	Particles larger than 1mm protected	Water splash resistance
	OUTE	DOOR	
	exposure to ements	Under o	canopy, posed
	INDO	OOR	
Wipe down	application	Wipe down	application
	application	Healthcare	application
Cleanroom	application		
	-lens gasket d cap gasket	Linternal end	—weep hole -lens gasket d cap gasket
	iner gasket y 12'		us line of over 12'
Driver: in a senctosure Electrical co	onnections:		
LED boards coated for r protection	: conformal naximum		

Ambient Temperature Range based on driver selection						
	LDE1	ELV / TRI	DA / ELD1 / ELD0	DI	RLTD10	
Minimum temperature:	0 °C / 32 °F	-10 °C / 14 °F	-20 °C / -4 °F	-30 °C / -22 °F	-40 °C / -40 °F	
Maximum temperature:			40 °C / 104 °F			









Values calculated based on a 4' fixture at 3500K and 80+ CRI for all optics.

DIRECT





LM/FT	W/FT	LM/W
350	3.5	99
500	5.2	97
750	8.2	92





LM/FT	W/FT	LM/W
350	4.3	82
500	6.3	79
750	10.0	75

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MULTIPLIERS

Use this table to get results for different color temperatures and CRI for all photometric tables.

Multiplier - CCT/CRI

сст	WATTS		LP	w
	80+ CRI	90+ CRI	80+ CRI	90+ CRI
2700K	1.05	1.27	0.95	0.79
3000K	1.02	1.23	0.98	0.81
3500K	1.00	1.19	1.00	0.84
4000K	1.00	1.19	1.00	0.84
5000K	0.96	1.12	1.04	0.89



PENDANT PATTERN DIRECT, DIRECT/INDIRECT

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Photometrics

Values calculated based on a 4' fixture at 3500K and 80+ CRI for all optics.

DIRECT/INDIRECT



EPDO - EPIO



EPDO - ASIO



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EPDO - WIO2

LM/FT		TOTAL	W/FT	LM/W
D	- 1	LM/FT		
EPDO	EPIO			
	350	700	7.0	100
350	500	850	8.7	98
	750	1100	11.7	94
	350	850	8.7	98
500	500	1000	10.3	97
	750	1250	13.3	94
	350	1100	11.7	94
750	500	1250	13.3	94
	750	1500	16.3	92

LM/FT		TOTAL	W/FT	LM/W
D	1.0	LM/FT		
EPDO	ASIO			
	350	700	6.9	102
350	500	850	8.5	100
	750	1100	11.3	97
	350	850	8.5	100
500	500	1000	10.1	99
	750	1250	13.0	96
	350	1100	11.6	95
750	500	1250	13.2	95
	750	1500	16.0	94

LM/FT		TOTAL	W/FT	LM/W
D	- 1	LM/FT		
EPDO	WIO2			
	350	700	6.5	108
350	500	850	7.9	108
	750	1100	10.3	107
	350	850	8.1	105
500	500	1000	9.5	105
	750	1250	11.9	105
	350	1100	11.1	99
750	500	1250	12.5	100
	750	1500	15.0	100



ASDO - FPIO

6	
2	



LM/FT		TOTAL	W/FT	LM/W
D	1	LM/FT		
ASDO	EPIO			
	350	700	7.8	90
350	500	850	9.4	90
	750	1100	12.4	89
	350	850	9.8	87
500	500	1000	11.5	87
	750	1250	14.5	86
	350	1100	13.6	81
750	500	1250	15.2	82
	750	1500	18.1	83

ASDO - ASIO				
LM/FT		TOTAL	W/FT	LM/W
D	1.0	LM/FT		
ASDO	ASIO			
	350	700	7.6	92
350	500	850	9.2	92
	750	1100	12.1	91
	350	850	9.7	88
500	500	1000	11.2	89
	750	1250	14.2	88
	350	1100	13.4	82
750	500	1250	15.1	83
	750	1500	17.9	84

ASDO - WIO2 TOTAL LM/W LM/FT W/FT LM/FT D ASDO WIO2 350 700 7.2 350 500 850 8.6 99 750 1100 11.0 100 350 850 9.2 92 500 500 1000 10.6 94 750 1250 13.2 95 350 1100 12.9 85 750 500 1250 14.4 87 750 1500 16.9 89

MULTIPLIERS

Use this table to get results for different color temperatures and CRI for all photometric tables.

Multiplier - CCT/CRI

сст	WATTS		LPW	
	80+ CRI	90+ CRI	80+ CRI	90+ CRI
250011	3.05	100	0.05	0.50
2700K	1.05	1.27	0.95	0.79
3000K	1.02	1.23	0.98	0.81
3500K	1.00	1.19	1.00	0.84
4000K	1.00	1.19	1.00	0.84
5000K	0.96	1.12	1.04	0.89



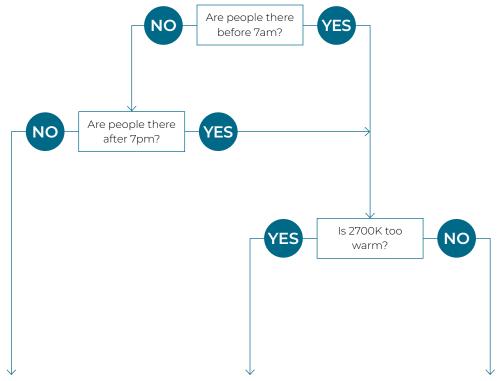


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BIOS

Three BIOS Circadian LED solutions are offered – Biological Static, Biological Dynamic, and Biological Tunable. Use the decision tree below to identify when and where to use BIOS Wellness LED Lighting Solutions.



Biological Static BIOSST	Biological Dynamic BIOSDY	Biological Tunable BIOSTU	
No CCT change when dimmed	500K shift when dimmed	Dims to 2700K	
Daytime solution	Daytime + evening solution	Daytime + evening solution	
Spaces in operation during daytime hours, between 7am and 7pm	Spaces in operation overnight, after 7pm and before 7am, and when CCT color shift in the evening is not preferred	Suitable for spaces in operation overnight, after 7pm and before 7am, and where people do not sleep (CCT color shift in the evening is preferred)	
E.g. offices, medical/dental offices	E.g. hospitals	E.g. offices, shiftwork	
360 400 500 140 500 100 100 100 100 100 100 100 100 10	Daytime	Daytime	



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Technical Specifications

DIRECT OPTICS

Environmentally Protected Direct Optic (EPDO)

The Environmentally Protected Direct Optic creates a seal that blocks debris and moisture, and withstands UV distortion and moderate impact. This extruded snap-in lens has a gasket to ensure proper sealing. The lens is 1/16" thick and made of frosted polycarbonate. Internally, white, side kicking reflectors guide the light through the lens. The EPDO suits moderate climate environments.

Asymmetric Soft Direct Optic (ASDO)

The Asymmetric Soft Direct Optic creates a seal that blocks debris and moisture, and withstands UV distortion and moderate impact. This extruded snap-in lens has a gasket to ensure proper sealing. The lens is 1/16" thick and made of frosted polycarbonate. Internally, white, side kicking reflectors specifically angled to guide the light through the lens to create a nice asymmetric distribution. The ASDO suits moderate climate environments.

INDIRECT OPTICS

Environmentally Protected Indirect Optic (EPIO)

The Environmentally Protected Indirect Optic creates a seal that blocks debris and moisture, and withstands UV distortion and moderate impact. The lens is 1/16" thick and made of frosted polycarbonate. This extruded snap-in lens has a gasket to ensure proper sealing. The EPIO suits moderate climate environments.

Asymmetric Soft Indirect Optic (ASIO)

The Asymmetric Soft Indirect Optic creates a seal that blocks debris and moisture, and withstands UV distortion and moderate impact. The lens is 1/16" thick and made of clear polycarbonate. This extruded snap-in lens has a gasket to ensure proper sealing. The total internal reflection and surface scattering optic is specifically angled to guide the light through the lens to create a nice asymmetric distribution. The ASIO suits moderate climate environments.

Widespread Indirect Optic (WIO2)

The Widespread Indirect Optic creates a seal that blocks debris and moisture, and withstands UV distortion and moderate impact. The lens is 1/16" thick and made of clear polycarbonate. This extruded snap-in lens has a gasket to ensure proper sealing. The total internal reflection and surface scattering optic offers an impressive 160° spread. WIO2 creates an even illumination for smooth brightness on the ceiling that can achieve uniformity ratios of up to 2:1. The WIO2 suits moderate climate environments.

Uniformity [max/min]

Based on 18' continuous runs, in a 20' x 40' room, 10' wall height

Mounting height from	Spacing (Center to center)		
ceiling	8'	10'	12'
24"	3.0	5.5	8.0
36"	2.0	3.0	4.5
48"	2.0	2.0	3.5

LIGHT SOURCE

Static white

Custom linear array of mid-flux LEDs are cartridge-mounted with quick-connect wiring to facilitate service and thermal management. Available in 2700K, 3000K, 3500K, 4000K, and 5000K with a minimum 80+ CRI and an option for 90+ CRI with elevated R9 value. Color consistency maintained to within 3 SDCM. 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.

Full spectrum static white

The full spectrum LED option offers improved color particularly in the cyan region which helps increase Cyanosis Observation Index (COI) and assist in regulating circadian rhythms. The cyan region in full spectrum LED is richer at the 480 nm range.



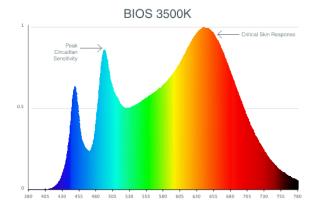
VIA 2 SEAL

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BIOS

BIOS SkyBlue™ Technology is designed to provide the specific circadian stimulus to improve overall sleep quality, recovery during the night, and overall feelings of well-being. 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 deepred (near 660 nm) spectrum.



Three BIOS solutions are offered: BIOS Biological Static (BIOSST), BIOS Biological Dynamic (BIOSDY), and BIOS Biological Tunable (BIOSTU). See page 8 for details.

WELL BUILDING STANDARD



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 LED is selected
- Feature 58 or L07 when 90+ CRI 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

PATTERN I ENGTH

Via 2 Seal can be ordered in 1' and/or 1" increments. Continuous runs are available for run lengths over 12'. The minimum length is 2' for Direct fixtures, and 3' for Direct/Indirect fixtures. All individual sections are joined together onsite using the joiner kits provided. Lumenwerx joiner kits are extremely simple to work with in the field and result in a fixture that appears virtually seamless with no light leak at any connection.

WEEP HOLES

The Direct/Indirect fixtures, with the IP44-Rated option, feature a weep hole situated in the end cap. Water and moisture that enters the fixture will be expelled through this hole.



TEMPERATURE VARIATION PROTECTION

The intergrated pressure equalization and moisture control GORE® protective vent allows air to flow while blocking water, dust, and contaminants. It reduces internal condensation, supports thermal stability, and preserves the fixture's sealed performance over time.



Location may vary.





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Factory-set, adjustable output current LED driver with universal (120-277 VAC) input. Dimmable from 100% to 1% with 0-10V dimming control. Rated life (90% survivorship) of 50,000 hours at 50°C max. ambient (and 70°C max. case) temperature. At maximum driver load: Efficiency>84%, PF>0.9, THD<20%. Other specifiable options include Lutron Hi-Lume 1% Ecosystem, eldoLED 1% ECOdrive 0-10V, eldoLED 0.1% SOLOdrive 0-10V, and DALI protocol drivers. All of our standard 0-10V drivers are NEMA 410 compliant. An optional low-temperature 10% 0-10V driver, suitable for temperatures down to -40°C/F is also available.

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), QUADRO (RGBW), emergency battery backup, and sensor integration. These must be addressed and evaluated on a case-by-case basis.

ELECTRICAL SECTION OPTIONS

Electrical section options are available for fixtures specified as multi circuit (#MC). With MC, specify the total number of circuits (#), including any circuits required for optional electrical sections. A drawing is required to specify the layout. Please consult factory for custom configurations.

Electrical sections

Options include emergency-powered light (#EC##), night light (#NL##), daylight (#DL##), and generator transfer device (#GTD##) sections. Specify the quantity (#), as well as the section length in inches (##).

Example 1: A 32' Direct fixture with two 8' emergency light sections on a second circuit.

Code: 2MC-2EC96

Example 2: A 16' Direct/Indirect fixture with separate circuits for direct and indirect, and with one 4' night light section on the direct side on a third circuit.

Code: 3MC-1NL48

Example 3: A 24' Direct fixture with one 4' generator transfer device section.

Code: 1MC-1GTD48



Battery

Each emergency battery (#EMB) powers a 4' section. All batteries will be on the same circuit. Specify the number of batteries (#) required.

Factory installed long life, high temperature, maintenance-free Lithium-lon battery pack with self-test functionality, test switch and charge indicator. Minimum of 90 minutes operation, up to 1000 lumens per 4' (25°C) emergency lighting output and recharge time of 24 hours. Suited for ambient temperatures of 0°C (32°F) to 55°C (131°F).

Generator Transfer Device (GTD)

A UL924 listed shunt relay that can bypass both line voltage (120-277V) and 0-10V dimming signal. Suited for ambient temperatures of 0° C (32°F) to 60° C (140°F).

MOUNTING

Pendant fixtures can be mounted with stem. See page 3 for details. Additional bracing by others required for wind and earthquake exposure.

FINISH

Interior: 95%, reflective matte powder coated white paint **Exterior**: Powder-coat paint in matte white, matte black, or aluminum. Custom finishes are also available. Optional antimicrobial finish.

CONSTRUCTION

Housing: Extruded aluminum, up to 90% recycled content **Interior brackets**: Die-formed cold rolled sheet steel

Gaskets: closed-cell silicone foam

Reflectors: Die-formed cold rolled sheet steel, 95% reflective

matte white painted **End cap**: Die-cast aluminum

CERTIFICATIONS

ETL: IP44-Rated environment option is rated for dry/damp locations. IP66-Rated, IP65-Rated, and IP65-Rated Electrical Components environment options are ETL Wet Listed. Conforms to UL Standard 1598 and certified to CAN/CSA Standard C22.2 No. 250.0. During the installation of Wet Listed fixtures, the contractor is responsible for properly sealing all mounting and electrical connection points.

IK08: Impact resistance rated to IK08

WARRANTY

Lumenwerx provides a five-year limited warranty on 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.

