**Lumenwerx** 

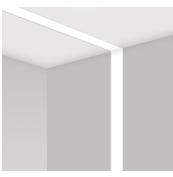












Inner corner



Outer corner

#### DESCRIPTION

Our elegant, flexible Via family is composed of linear, pendant, surface, recessed, and wall mounted luminaires. Each lighting fixture can be

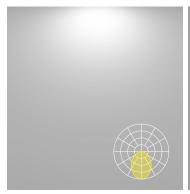
installed as a discrete luminaire or in continuous runs or patterns in which a combination of luminaires forms part of a custom design that can also incorporate less conventional acute and obtuse angles. Via 3 Recessed is offered with Lambertian, asymmetric, wall wash, or grazing reflector optics.

Up to 131 lm/W performance

**IC RATED** 



Aera Module Option



Leveled corner

HLO High-Efficiency Lambertian Optic



ARO2 Asymmetric Refractive Optic



WRO2 Wall Wash Refractive Optic



GRO Grazing Reflector Optic







DIRECT STATIC WHITE, BIOS

Project:	
Туре:	

LUMINAIRE II	D DISTRIBUTION	OPTIC		LENS POSITION	LIGHT SO	OURCE 2		CRI	
VIA3RPAT	D								
<b>/IA3RPAT</b> - Via	a 3" D - Direct	<b>HLO</b> - High-Efficiency	Lambertian Optic	n Optic <b>FH</b> 1 - Flush		c white		80CRI - 80+ CRI	
Recessed Patte	ern	ARO2 - Asymmetric Re WRO2 - Wall Wash Re GRO - Grazing Reflector	ractive Optic	<b>RG</b> <sup>1</sup> - Regressed <b>0.5D</b> <sup>1</sup> - 0.5" drop <b>1.0D</b> <sup>1</sup> - 1.0" drop	BIOSDY 3,	i - BIOS Biological Static 4 - BIOS Biological Dynam 4 - BIOS Biological Tunable		90CRI 5 - 90+ CR 5 Not available with BIOS.	
				Por HLO, specify FH, RG, 0.5D, or 1.0D.  For ARO2, WRO2, and GRO, specify FH.	*Chromawerx SOLA, DUO, and QUADRO also availab				
LUMEN PACK	(AGE	COLOR TEMP.	PATTERN LENG	PATTERN LENGTH CORNER					
350LMF <sup>6</sup> - Hypo output 350 lm/ft 500LMF - Low output 500 lm/ft 750LMF - Medium output 750 lm/ft 1000LMF - High output 1000 lm/ft 1200LMF <sup>7</sup> - Hyper output 1200 lm/ft <sup>6</sup> Minimum 3' fixture. <sup>7</sup> Fixture will be very bright. Use in suitable applications.		27K <sup>8</sup> - 2700K 30K - 3000K 35K - 3500K 40K - 4000K 50K <sup>8</sup> - 5000K <sup>8</sup> Not available with BIOS.	##FT##IN: total pattern in feet ar #X: quantity of e #FT#IN: nomina in feet and/or inc	T##IN(#X#FT#IN-#X#FT#IN) 9 - T##IN: total nominal length of tern in feet and/or inches quantity of each section #IN: nominal length of each section eet and/or inches itinuous runs: lengths over 12'		#LEV2C(A##) - 2-way leveled corner #LEV3C(A##) <sup>10,12</sup> - 3-way leveled corner #LEV4C(A##) <sup>10,12</sup> - 4-way leveled corner #INN2C(A90) <sup>12,13</sup> - 2-way inner corner #OUT2C(A90) <sup>12,13</sup> - 2-way outer corner  10 Specify quantity (#) and angle (A##) for each required consecutive in the context of		ired, e.g. 1LEV4C(A60+A120).	
VOLTAGE	DRIVER 16	ELECTRICAL	ELECTR	ICAL SECTIONS (optio	nal) <sup>22, 23</sup>	MOUNTING CEILING	MOUNTING WALL		
120V - 120V 277V - 277V UNV - 120V-277V 347V 15 - 347V  15 Available with D1 driver only.  D1 - 1% 0-10V DA 7' - DALI LDE1 7' - Lutron Hilume 1% Eco ELD1 - eldoLED 1% ECOdrive 0-10V ELD0 - eldoLED 0.1% SOLOdrive 0-10V ELV 16 - ELV 120V		IC - 1 circuit #MC <sup>19</sup> - Multi circuit EC - Emergency-pov fixture NL - Night light fixtur DL - Daylight fixture GTD <sup>20,21</sup> - Generator device fixture	#NL## <sup>24</sup> #DL## <sup>24</sup> #GTD## re section #EMB <sup>25</sup> NA - Non	- Emergency-powered section - Night light section - Daylight section - Daylight section - Section - Section - Section - Section - Section - Emergency battery - Emergency battery - With multi circuit (#MC) electrical option only - Section on Section on Section on Section Sectio		TG15 - Tegular 15/16" TB9 - T-bar 9/16" TB15 - T-bar 15/16" ST - Screw Slot T-bar DTR - Trim DTL - Trimless DMF - Drywall mud flange NA - Not applicable		DTR - Trim DTL - Trimless DMF - Drywall mud flange NA - Not applicable	
	TRI 18 - TRIAC 120V  16 PoE (Power-over-Ethernet	(#), including any requi	ed for factory fo dule length is	or other configurations. Defau 4'.	MFM <sup>29</sup> - Multiple flange mounting  28Transition mounting options also available (e.g. Recessed to				
	compatible. Consult factory for details.  7 On-site commissioning is required.  8 Available with 120V only.	compatible. Consult factory for details.  On-site commissioning is required.  Minimum 4 fixture.		uantity (#), and section lengt n 4' section. able with 347V. uantity (#). All batteries will b ach battery powers a 4' sectio					e on the same
FINISH	CONTROL 30, 31					OPTIONS 37	MODULE	(optional) 38,39	
W - Matte white B - Matte black CF# - Custom finish, specify RAL#  STANDALONE CC Specify the quan #OMS ** - Onboa #OMS ** ** ** Onboa #OMS *** ** ** ** Onboa #OMS *** ** ** ** ** Onboa #OMS *** ** ** ** ** ** ** ** ** ** ** ** *		ntity (#) of sensors per fi	xture. <b>LU</b> - Lutror	r <u>ED CONTROLS</u> <sup>36</sup> n <b>WL</b> - Co utron Athena Wavelir		<b>FU120</b> - Fuse 120V <b>FU277</b> - Fuse 277V <b>FWC</b> - Flexible whip	#AE2R() - downlight NA - None		

	Standaione and connected control options of
	31 Available with flush lens option only

**#ODS** - Onboard Daylight

**#OCS** - Onboard Occupancy & Daylight

 ${f LG}$  - Legrand

 $^{38}\mbox{See}$  page 3 for ordering details. 39 Not available with ELV/TRI driver options.





Wireless Node Sensor

ENC - Encelium

NA - None



NA - None

specified.

37 Separate codes with a "+" if more than one is



s cannot be combined.

<sup>32</sup> Available with D1 driver and 1 circuit options only. 33 Minimum 4' per zone. Provide control zone length.

 $<sup>^{\</sup>rm 34}\,\textsc{Fixture}$  turns off when no occupancy.  $^{35}$  Fixture dims to specified light level % (##).

 $<sup>^{\</sup>rm 36}$  Consult factory for connected controls.



DIRECT STATIC WHITE, BIOS

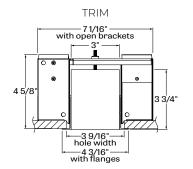
## Module Code

For a module, specify the options in the parentheses. The module is trimless and the light source is static white. CRI of module matches specification of main fixture.

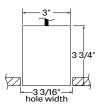
Example: 1AE2R(7W-10DEG-27K-SDL-FTMW)

MODULE (optional)										
MODULE 1, 2, 3	WATTAGE	BEAM ANGLE	COLOR TEMP.	LENS AT BAFFLE	BAFFLE FINISH					
#AE2R() - Aera 2" round downlight <sup>1</sup> Minimum 4' fixture and minimum 2' section per module. Consult factory for other configurations. <sup>2</sup> Specify quantity (#). <sup>3</sup> 6" blank per module. Blank finish will match fixture finish.	7W - 7 W output, up to 714 lm	10DEG - 10° very narrow spot 15DEG - 15° Narrow spot 25DEG - 25° Spot 35DEG - 35° Narrow flood 50DEG - 50° Wide flood	27K - 2700K 30K - 3000K 35K - 3500K 40K - 4000K 50K - 5000K	SDL - Soft diffused lens, solite FDL - Frosted diffused lens CL - Clear lens	FTMW - Matte white FTMB - Matte black FSPC - Satin silver FSSPC - Matte silver FCHP - Champagne FDBZ - Dark bronze CF# - Custom finish, specify RAL#					

## Dimensions

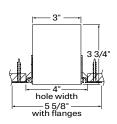


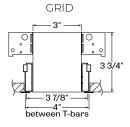
#### **TRIMLESS**



For regressed lens the hole width is 3 5/16".

#### DRYWALL MUD FLANGE





TG9 Tegular 9/16"

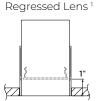


TB9 T-bar 9/16"

TB15 T-bar 15/16"



#### LENS POSITIONS



0.5" Drop Lens 1

1.0" Drop Lens 1



<sup>&</sup>lt;sup>1</sup>Regressed lens and drop lens positions available with HLO only.









DIRECT STATIC WHITE, BIOS

## Multiple Flange Mounting Details

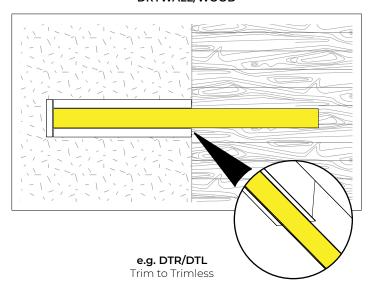
Multiple flange mounting can be specified when a fixture run needs to have a multiple flange recessed mounting detail. A drawing is required to clearly illustrate the application.

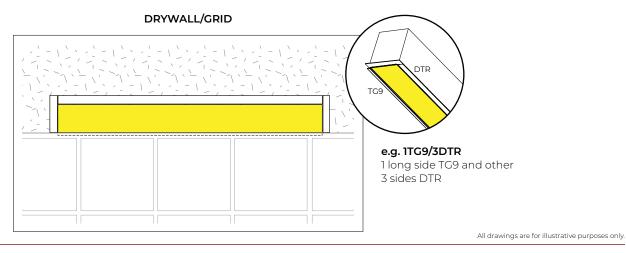
CEILING CONDITION EXAMPLES (consult factory for project specific ceiling conditions)

## DRYWALL/GRID

# e.g. DMF/TB15 Drywall Mud Flange to TB15

#### DRYWALL/WOOD

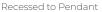




#### TRANSITION MOUNTING OPTIONS (consult factory for details)

Mounting condition alters along the run of the fixture.







Surface to Pendant



Surface to Recessed in corner



Surface to Pendant in corner





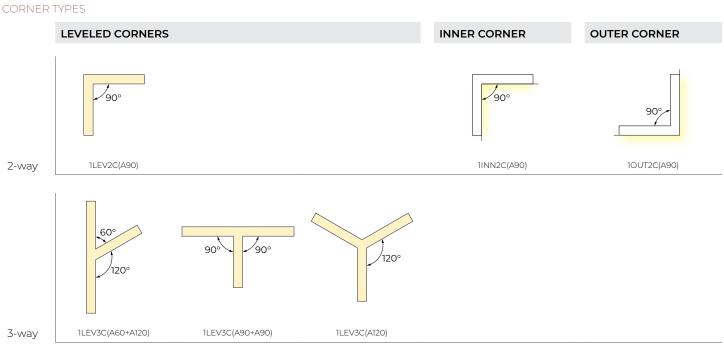






DIRECT STATIC WHITE, BIOS

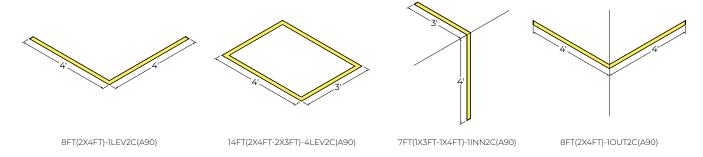
## Pattern Layout





## **EXAMPLES**

4-way









DIRECT STATIC WHITE, BIOS

## Photometrics

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

HLO (Flush lens)



LM/FT	W/FT	LM/W
350	2.8	125
500	4.1	123
750	6.3	119
1000	8.6	116
1200	10.6	113



LM/FT	W/FT	LM/W
350	3.0	116
500	4.4	113
750	7.0	107
1000	9.7	103
1200	12.1	99



LM/FT	W/FT	LM/W		
350	3.0	116		
500	4.4	112		
750	7.0	107		
1000	9.8	102		
1200	12.1	99		



ARO2

LM/FT	W/FT	LM/W		
350	3.3	108		
500	4.8	104		
750	7.6	99		
1000	10.6	94		
1200	13.2	91		

#### **MULTIPLIER TABLES**

Use these tables to get results for different color temperatures, CRI, and drop lenses, for all photometric tables.

Multiplier - CCT/CRI

сст	WA	TTS	LPW			
CCI	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		

Multiplier - Drop lens



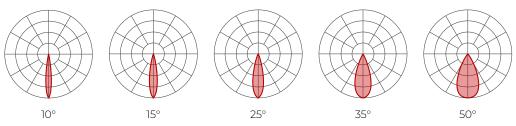




DIRECT STATIC WHITE, BIOS

#### AERA 2" MODULE

Values calculated based on 3500K and SDL lens option.



#### Delivered lumens

CRI 80+ CRI						90+ CRI				
BEAM	10°	15°	25°	35°	50°	10°	15°	25°	35°	50°
7 W	589	654	714	705	676	550	611	667	659	632

### Efficacy

CRI	CRI 80+ CRI						90+ CRI				
BEAM	10°	15°	25°	35°	50°		10°	15°	25°	35°	50°
7 W	84	93	102	101	97		79	87	95	94	90

Please follow the multiplier tables to ensure correct lumen value. CCT and lensing will change the lumen value.

сст		LENS AT BAFFLE	
2700K	0.94	SDL - Soft diffused lens, Solite	1
3000K	0.98	FDL - Frosted lens	0.8
3500K	1	CL - Clear lens	1.1
4000K	1.05		
5000K	1.05		



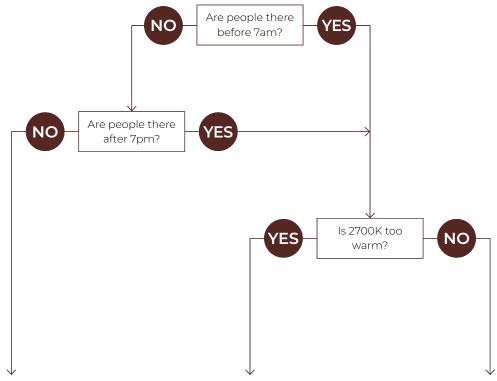




DIRECT STATIC WHITE, BIOS

## 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	
95 423 465 500 140 500 140 170 140 170 140 170	Daytime	Daytime	







DIRECT STATIC WHITE, BIOS

## Technical Specifications

#### **OPTICS**

#### **High-Efficiency Lambertian Optic (HLO)**

The High-Efficiency Lambertian Optic (HLO) uses matte white reflectors to distribute LED output across 0.075" acrylic shielding, providing up to 88% transmission and good obscuration. Available as a flush lens or as a drop lens, the HLO has a spacing criterion of 1.10.

#### Asymmetric Refractive Optic (ARO2)

The Asymmetric Refractive Optic (ARO2) uses a sophisticated reflector combined with a matte beam-shaping film to create a smooth, effective downward light component without shadows or hot spots. It provides directional Gaussian light distribution with peak intensity at 20° above nadir and a 55° Full Width at Half Maximum (FWHM) beam angle. Microstructure material applied to the snap-in lens provides the precise refractive power and visual comfort, while achieving a high luminous efficacy.

#### Wall Wash Refractive Optic (WRO2)

The Wall Wash Refractive Optic (WRO2) delivers smooth vertical illumination with a gentle gradient and soft visual cut-off. Its exacting configuration creates a strong downward light component without shadows or hot spots and provides light distribution with peak intensity at 21° above nadir. Microstructure material applied to the snap-in lens provides the precise refractive power and visual comfort, while achieving a high luminous efficacy.

#### **Grazing Reflector Optic (GRO)**

The Grazing Reflector Optic (GRO) is oriented to project light with maximum luminous intensity at 5° from nadir. This provides a tight beam to highlight and accentuate a wall with subtle vertical illumination.

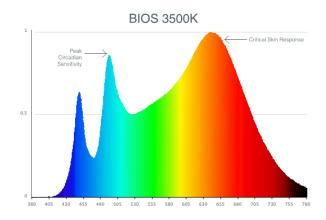
#### LIGHT SOURCE

#### 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.

#### BIOS

BIOS SkyBlue<sup>™</sup> 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 deep-red (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.

#### PATTERN LENGTH

All individual sections are joined together onsite using the joiner kits provided. Lumenwerx offers joiner kits that 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.

#### **ELECTRICAL**

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% Eco, eldoLED 1% ECOdrive 0-10V, eldoLED 0.1% SOLOdrive 0-10V, ELV, TRIAC, and DALI protocol drivers. All of our standard 0-10V drivers are NEMA 410 compliant.







DIRECT STATIC WHITE, BIOS

#### 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 (#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-powered sections on a second circuit.

Code: 2MC-2EC96

Example 2: 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.

#### MOUNTING

Recessed fixtures can be mounted into exposed or concealed T-bar or tegular ceiling, as well as in ceilings with trim, trimless, or mud flange options. Via 3 is compatible with 4" Armstrong Techzone $^{\text{TM}}$  & USG ceilings.

#### FINISH

**Interior**: 95%, reflective matte powder coated white paint **Exterior**: Matte white or matte black powder coating. Custom finishes are also available.

#### CONTROLS

Lumenwerx offers several options for integrating occupancy and daylight harvesting controls in our luminaires. For latest information on sensors, click here.



#### Standalone controls

An integrated standalone sensor controls the luminaire in which it is installed. Depending on the length, more than one sensor may be necessary and may control the entire luminaire, or just a section of it. These controls operate independently. Unless otherwise agreed, sensor location, blank size, and functionality of the sensor within the luminaire are selected by Lumenwerx. See client drawings for details.

Three types are available:

OMS: An integral Passive InfraRed (PIR) sensor turns luminaires on and off automatically with field-adjustable time out period. No wall control is used. Coverage pattern for large motion has a 12' diameter with the sensor mounted 8' above the floor; for small motion, the pattern has an 8' diameter. Typically, one sensor is required for every 10' of a continuous luminaire run.

<u>ODS</u>: An integral, daylight harvesting sensor with closed-loop operation dims the luminaire in which it is installed in order to compensate for available daylight. The sensor measures the combination of daylight and luminaire light reflected from horizontal surfaces below the luminaire. Initial onsite calibration is required via the use of provided remote control.

 $\underline{\text{OCS}}$ : Both an occupancy and a daylight sensor are installed in the luminaire.

#### Connected controls

With connected controls, sensors or nodes installed in the luminaire form part of a larger control system infrastructure from manufacturers such as: Lutron, Encelium, Cooper Wavelinx, Acuity nLight, Casambi, Legrand, and others. These connected controls allow for a scalable system providing features like occupancy and daylight control, manual control, scheduling and configuration of various zones and scenes. Energy reporting and system monitoring are also possible. Specific capabilities depend on the control system being used.

Lumenwerx installs the components (sensors, nodes, power packs, etc) which may be supplied to us by a third party, or procured directly by Lumenwerx, depending on the control system manufacturer.







DIRECT STATIC WHITE, BIOS

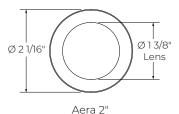
Lumenwerx is solely responsible for the installation of specified components; the controls manufacturer is responsible for performance of the control system.

To indicate a Lumenwerx luminaire with connected controls, identify the specific onsite control system to be integrated into the luminaires using the ordering code. Due to the diversity of components, you must contact factory to assure complete compatibility with intended control system and to fully specify the luminaire.

Complete control specifications, sensor/node/power pack layout, and narrative for the control system are required for Lumenwerx to create shop drawings and submittals.

#### AERA MODULE

Compact COB (Chip-On-Board) LED module, available in 2700K, 3000K, 3500K, 4000K, and 5000K with a choice of 80+ CRI or 90+ CRI, with elevated R9 value for 90+ CRI and above. Color consistency is maintained to within 2 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.



#### CONSTRUCTION

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

Joining system: Die-cast zinc

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

white painted **Lens**: Acrylic

**Drop lens**: Extruded with glued end caps

Recessed flanges: Extruded aluminum, up to 90% recycled

content

Mud flange: Extruded aluminum, up to 90% recycled content

**Slip-through bracket**: Die-formed galvanized sheet **End plate**: Die-formed cold rolled sheet steel

#### **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) when specified with CP option.

IC rated: Suitable for direct contact with insulation

Declare: LBC Red List Approved

#### 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.



