## PENDANT DIRECT/INDIRECT





Shown with PMO optics

## DESCRIPTION

## Camber ICL (Independently Controllable Light)

is a linear LED pendant luminaire with a thin, articulated profile and Independently Controllable Light output of its indirect and direct

components. Using advanced LED engines and optical
technique, Camber ICL provides wide spread uplight
and well shielded downlight. These components can
be controlled independently using a variety of dimming
protocols. Please see additional specification sheets for
Camber luminaires with uniform control over the light
distribution, as well as other mounting arrangements.

PROJECT:	
TYPE: NOTES:	

### **ORDER GUIDE**

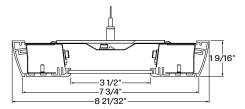
CAMPICL	РМО	LED				
LUMINAIRE ID	OPTICS	LIGHT SOURCE	CRI	DIRECT LUMEN PACKAGES	INDIRECT LUMEN PACKAGES	COLOR TEMP.
CAMPICL - Camber	PMO - Precision	<b>LED</b> - High	<b>80</b> - 80CRI	750 - Min. low output 750lm/ft	500 - Min. low output 500lm/ft	<b>27</b> - 2700K
pendant independently	micro-prism Optic	performance LED	<b>90</b> - 90CRI	875 - Medium output 875lm/ft	750 - Max. medium output 750lm/ft	<b>30</b> - 3000K
controllable light				1000 - Max. high output 1000lm/ft	#### - Other required Im/ft	<b>35</b> - 3500K
				#### - Other required Im/ft		<b>40</b> - 4000K

LUMINAIRE LENGTH	VOLTAGE	DRIVER	ELECTRICAL	MOUNTING
#FT - Nominal length in feet	<b>120</b> - 120V	<b>D1</b> - 1% 0-10V	1-1 circuit	53WAC36 - Power 5" + non power
Sections - 4', 8' and 12' only	<b>277</b> - 277V	DA - DALI	2 - 2 circuits	3" white canopy (36" aircraft
Continuous Run - for	<b>UNV</b> - 120V-277V	LTEA2W - Lutron 1% - 2 wire FP 120V	+#EB - Emergency battery	cable)
luminaires over 8' in	<b>347</b> - 347V (not	LDE1 - Lutron Hi-lume 1% Eco	(min 4' fixture, except Lutron)	55WSW18 - Power 5" + non power
multiples of 4'	available with	LDE5 - Lutron 5% EcoSystem	+#EM - Emergency light circuit	5" white canopy & stem (18" stem)
	Lutron)		+#NL - Night light circuit	For all other options refer to our
			+GTD - Generator transfer device	Pendant Mounting Guide

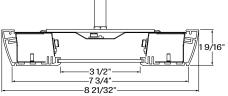
See page 2 for ordering code detailed information

FINISH	CONTROLS	OPTIONS
<b>W</b> - Matte white	STANDALONE CONTROLS	FU - Fuse
<b>AL</b> - Aluminum	OMS - Onboard Occupancy	TB# - T-bar caddy clip specify grid size
CF# - Custom finish specify RAL#	ODS - Onboard Daylight	TG# - Tegular caddy clip specify grid size
	OCS - Onboard Occupancy & Daylight	ST - Screw Slots caddy clip
	CONNECTED CONTROLS	CU - Custom
	CCS() - LU-Lutron, EN-Enlighted,	
	OS-Osram, CR-Crestron.	
	To specify see information on page 3	

CROSS SECTION OPTICS



CAMP - aircraft cable



PMO - Precision Micro-prism Optic

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March 28, 2020



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CAMP - stem

## PENDANT DIRECT/INDIRECT



#### **OPTICS**

**PRECISION MICRO-PRISM-OPTIC (PMO)** - Angled LED array with matte aluminum reflectors and precision Micro-Prism Optic (PMO) shielding of 0.1" thick acrylic. Precisely formed pyramidal prisms with a 0.06" square base provide outstanding control of high-angle brightness.

### **LIGHT SOURCE - LED**

Custom linear array of mid-flux LEDs are mounted directly to the housing for optimal thermal performance. 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.

### PERFORMANCE PER 4' AT 4000K Medium Output (3000 Lumens)

LED output	Color Temp	Watts	Direct Lumens	Indirect Lumens	Total Nominal Delivered Lumens	Efficacy LPW
low output	4000K	74	3000	3000	6000	81
medium output	4000K	81	3500	3000	6500	80
high output	4000K	90	4000	3000	7000	78

### Low Output (2000 Lumens)

LED output	Color Temp	Watts	Direct Lumens	Indirect Lumens	Total Nominal Delivered Lumens	Efficacy LPW
low output	4000K	64	3000	2000	5000	78
medium output	4000K	71	3500	2000	5500	77
high output	4000K	79	4000	2000	6000	76

### **LUMINAIRE LENGTH**

Camber is made up of standard 4, 8 and 12 foot sections only that may be joined together to create continuous run lengths. Nominal run length required must be noted in the product code. The minimum individual section available is 4 feet. 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.



Joining system for Camber

### **ELECTRICAL**

Factory-set, adjustable output current LED driver with universal (120-277VAC) 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% (specify 2-wire, or Ecosystem Dimto-Off), Lutron 5-Series (5% Ecosystem) and DALI protocol drivers. All of our standard 0-10V drivers are NEMA 410 compliant.

### **EMERGENCY**

Factory installed long life high temperature recyclable Ni-Cad battery pack with test switch and charge indicator, minimum of 90 minutes operation, up to 1000 lumens per 4ft (25°C) emergency lighting output. Recharge time of 24 hours.

### **MOUNTING OPTIONS**

Fixtures can be pendant-mounted, using aircraft cables, or stem-mounted.

Unless otherwise specified, Lumenwerx provides the following hardware:

**For cable-mounted fixtures** - 53WAC36 (5" white canopy for all power mounting point, 3" white canopy for non power mounting point, and a 36" cable)

For stem-mounted fixtures - 55WSW18 (5" white canopy for all power mounting point, and non power mounting point, and a 18" white stem)

Caddy clips, if required specify under OPTIONS

For all other options, see our website for a detailed

Pendant Mounting Guide

### **FINISH**

**Interior** - 95%, reflective matte powder coated white paint

**Exterior** - matte white or aluminum powder coating.
Custom finishes are also available.

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### **CONTROLS**

Lumenwerx offers several options for integrating occupancy and daylight harvesting controls in our luminaires.

### STANDALONE CONTROLS

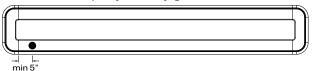
An integrated standalone sensor controls the luminaire in which it is installed. Depending on the length, more than one sensor may be necessary and may control the entire luminaire, or just a section of it. These controls operate independently. Unless otherwise agreed, location and functionality of the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

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.

**ODS**: 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.

**OCS**: Both an occupancy and a daylight sensor are installed in the luminaire.



Location of an Onboard control

### 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\*, Enlighted, Osram ENCELIUM, Acuity nLight, Crestron 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.

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 controls@lumenwerx.com 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.

\* Lumenwerx offers a Lutron Vive-Enabled fixture option using either the DFCSJ-OEM-OCC (OCS Option) or DFCSJ-OEM-RF (wireless only, no sensor) Integral Fixture Modules and a DALI or EcoSystem LED driver based on customer dimming requirements.

Please contact our controls department at controls@lumenwerx.com for further assistance.

### CONSTRUCTION

**Housing** - Extruded aluminum 0.075" nominal, matte white or aluminum powder coating. Custom finishes are also available.

End cap - Die cast aluminum (0.95" nominal)

**Joiners** - Male/female system made in die cast aluminum (0.95" nominal)

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

**Reflectors** - Flat rolled aluminum sheet 0.040" thick precisely die formed, 95% reflective matte white painted

**Hanger** - Chromed griplock securely attached with spring steel hardware in end caps and/or joiners

**Aircraft Cable Suspension** - 7x7 braids aluminum aircraft cable 0.06" thick

**Stem** - 0.5" diameter threaded steel tube matte white or aluminum powder coating. Custom finishes are also available.

### WEIGHT

**Camber 4ft** - 11.67lbs - 5.3kg **Camber 8ft** - 20.92lbs - 9.5kg **Camber 12ft** - 30.40lbs - 13.8kg

### **CERTIFICATIONS**

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



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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.	

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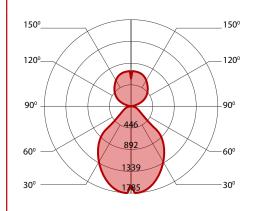


## PENDANT DIRECT/INDIRECT



## PERFORMANCE AT INDIRECT 500 LUMEN PER FOOT

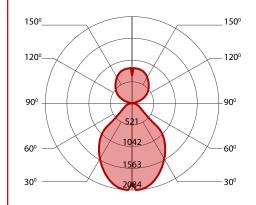
## **750 LUMEN AT 80CRI - LOW OUTPUT**



### **PERFORMANCE PER 4'**

LED output	Color Temp	Watts	Direct Lumens	Indirect Lumens	Total Nominal Delivered Lumens	Efficacy LPW
low output	2700K	66	3000	2000	5000	76
low output	3000K	67.5	3000	2000	5000	74
low output	3500K	66	3000	2000	5000	76
low output	4000K	64	3000	2000	5000	78

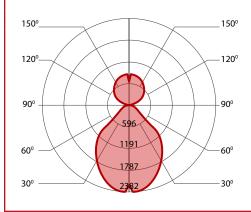
## 875 LUMEN AT 80CRI - MEDIUM OUTPUT



### **PERFORMANCE PER 4**

LED output	Color Temp	Watts	Direct Lumens	Indirect Lumens	Total Nominal Delivered Lumens	Efficacy LPW
medium output	2700K	72.5	3500	2000	5500	76
medium output	3000K	75	3500	2000	5500	73
medium output	3500K	73	3500	2000	5500	75
medium output	4000K	71	3500	2000	5500	77

### 1000 LUMEN AT 80CRI - HIGH OUTPUT



### PERFORMANCE PER 4'

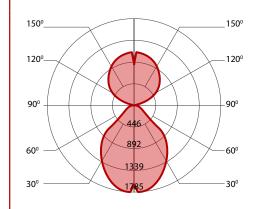
LED output	Color Temp	Watts	Direct Lumens	Indirect Lumens	Total Nominal Delivered Lumens	Efficacy LPW
high output	2700K	81	4000	2000	6000	74
high output	3000K	84.5	4000	2000	6000	71
high output	3500K	82	4000	2000	6000	73
high output	4000K	79	4000	2000	6000	76

## PENDANT DIRECT/INDIRECT



## PERFORMANCE AT INDIRECT 750 LUMEN PER FOOT

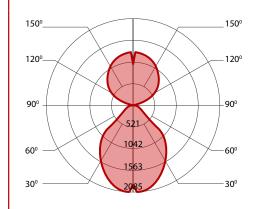
## **750 LUMEN AT 80CRI - LOW OUTPUT**



### **PERFORMANCE PER 4'**

LED output	Color Temp	Watts	Direct Lumens	Indirect Lumens	Total Nominal Delivered Lumens	Efficacy LPW
low output	2700K	77	3000	3000	6000	78
low output	3000K	79	3000	3000	6000	76
low output	3500K	77	3000	3000	6000	78
low output	4000K	74	3000	3000	6000	81

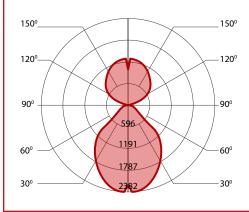
## 875 LUMEN AT 80CRI - MEDIUM OUTPUT



### **PERFORMANCE PER 4**

LED output	Color Temp	Watts	Direct Lumens	Indirect Lumens	Total Nominal Delivered Lumens	Efficacy LPW
medium output	2700K	83.5	3500	3000	6500	78
medium output	3000K	87	3500	3000	6500	75
medium output	3500K	84	3500	3000	6500	77
medium output	4000K	81	3500	3000	6500	80

### 1000 LUMEN AT 80CRI - HIGH OUTPUT



### **PERFORMANCE PER 4'**

LED output	Color Temp	Watts	Direct Lumens	Indirect Lumens	Total Nominal Delivered Lumens	Efficacy LPW
high output	2700K	92	4000	3000	7000	76
high output	3000K	96	4000	3000	7000	73
high output	3500K	92	4000	3000	7000	76
high output	4000K	90	4000	3000	7000	78

