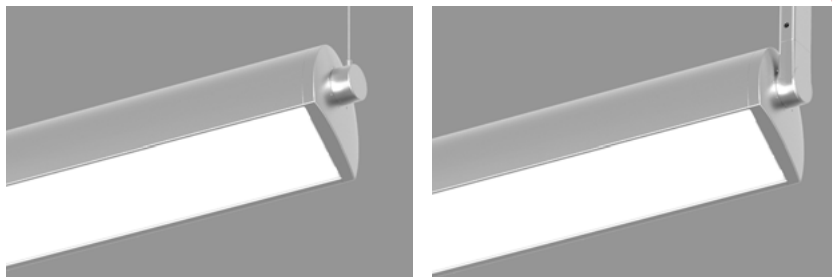


# AXLE LED

## PENDANT ASYMMETRIC



**LUMENWERX**  
WWW.LUMENWERX.COM



**PROJECT:** \_\_\_\_\_

**TYPE:** \_\_\_\_\_

**NOTES:** \_\_\_\_\_

### DESCRIPTION

**Axle** is an elegant and compact LED linear accent luminaire providing efficient asymmetric light distribution. Softly curved, Axle measures just 2 11/16" by 3 11/16". With adjustable optics, light output from 350 to 1200 lumens per foot (nominal), and efficacy up to 139 LPW, Axle delivers very effective illumination to graphics and artwork, as well as ceilings and walls. Highly flexible, Axle can be installed as individual luminaires (up to 8') or in continuous runs, with a choice of arm or cable suspension. LED boards and on-board driver are accessible without removing the luminaire.

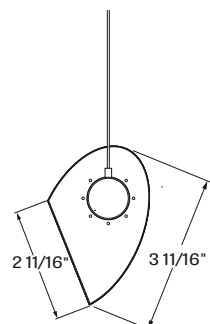
### ORDER GUIDE

**up to 139 lm/w performance**

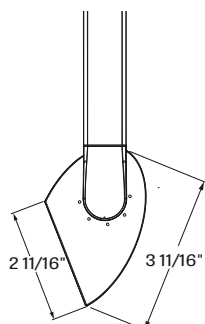
AXLPAD		LED			
LUMINAIRE ID	OPTICS	LIGHT SOURCE	CRI	LUMEN PACKAGES	COLOR TEMP.
<b>AXLPAD</b> - Axle pendant asymmetric direct	<b>APO</b> - Adjustable Asymmetric Projecting Optic <b>BAF</b> - white baffles overlay	<b>LED</b> - high performance LED	<b>80</b> - 80CRI <b>90</b> - 90CRI	<b>350</b> - min. eco low output 350lm/ft <b>550</b> - low output 550lm/ft <b>750</b> - medium output 750lm/ft <b>950</b> - high output 950lm/ft <b>1200</b> - max. ultra high output 1200lm/ft <b>####</b> - other required lm/ft	<b>27</b> - 2700k <b>30</b> - 3000k <b>35</b> - 3500k <b>40</b> - 4000k
LUMINAIRE LENGTH	VOLTAGE	DRIVER	ELECTRICAL		
Standard sections - 2', 3', 4', 5' & 8' For all other specify length <b>#FT</b> - nominal length in feet <b>#IN</b> - length in inches	<b>120</b> - 120V <b>277</b> - 277V <b>UNV</b> - 120V-277V <b>347</b> - 347V (not available with Lutron)	<b>D1</b> - 1% dimming 0-10V <b>DA</b> - Dali <b>LTEA2W</b> - Lutron 1% - 2 wire FF 120V <b>LDE1</b> - Lutron Hi-lume 1% Eco <b>LDE5</b> - Lutron 5% EcoSystem	<b>1</b> - 1 circuit <b>+ #EB</b> - emergency battery (min 4' fixture, except Lutron) <b>+ #EM</b> - emergency light circuit <b>+ #NL</b> - night light circuit		
MOUNTING	MOUNTING PLATE		FINISH	OPTIONS	
<b>AC36</b> - air craft cable 36" <b>AC##</b> - cable custom length (max 36") <b>ARM6</b> - cantilever arm 6" <b>ARM12</b> - cantilever arm 12" <b>ARM18</b> - cantilever arm 18" <b>ARM##</b> - cantilever arm custom length (max 24")	<b>55W</b> - 5" by 5" white plate (arm) <b>55AL</b> - 5" by 5" aluminum plate (arm) <b>53W</b> - power 5" + non power 3" white canopy (cable) <b>53A</b> - power 5" + non power 3" aluminum canopy (cable)		<b>W</b> - matte white <b>AL</b> - aluminum <b>CF#</b> - custom finish specify RAL#	<b>CU</b> - custom	

See page 2 for ordering code detailed information

### CROSS SECTION

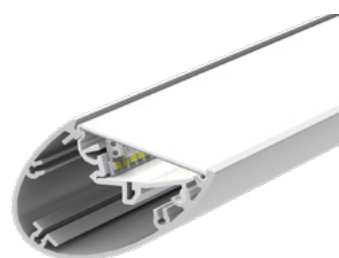


**AXL** - axle pendant air craft cable



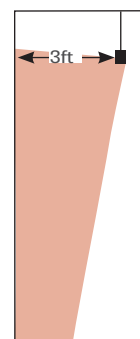
**AXL** - axle pendant cantilever

### OPTICS



**APO** - Asymmetric Projecting Optics

### LIGHT DISTRIBUTION



At 3ft from wall

File Name: AXLE-PENDANT-ASYM-SPEC

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November 5, 2019

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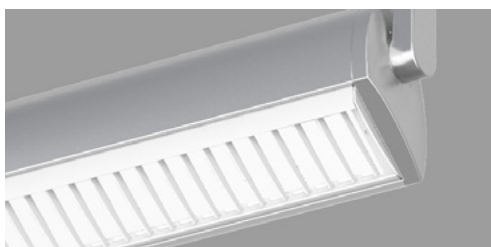


### OPTICS

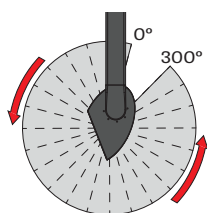
#### ASYMMETRIC PROJECTING OPTIC (APO) -

Cartridge-mounted, linear LED arrays are paired with precisely semi-specular reflector for smooth light distribution and a 95° beam spread. The LED array is protected by a clear acrylic cover. Peak intensity occurs at 30° below nadir with a peak-to-zenith intensity ratio of 5.2:1.

**OPTIONAL BAFFLES (BAF)** - Optional die-formed sheet metal white baffle with blades spaced 0.5" provides lateral shielding and can be field installed. The baffles are in sheet metal.



#### Field Adjustable Aiming (15 options)

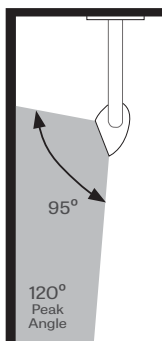


Stem mounting



Cable mounting

The Axle housing can be field rotated to provide either indirect (ceiling) or direct illumination. Detents in 15° increments permit precise aiming.



### LIGHT SOURCE - LED

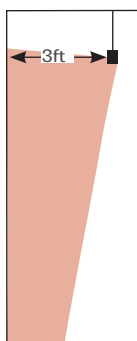
Custom linear array of mid-flux LED's are cartridge-mounted to facilitate service and thermal management. Available in 3000K, 3500K, and 4000K with a minimum 80 CRI and an option for 90 CRI with elevated R9 value. Color consistency are maintained to within 3 SDCM. LEDs operate at reduced drive current 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 - APO

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
eco low output	4000K	10	1400	139
low output	4000K	16.5	2200	135
medium output	4000K	22.5	3000	132
high output	4000K	29.5	3800	128
ultra high output	4000K	38.5	4800	124

### LIGHT DISTRIBUTION



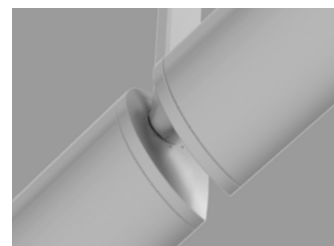
AXLPAD-APO-LED-80-350-40-20FT  
Luminaire Watts = 58W (for 20ft)  
Ceiling Height = 10ft  
Length of Wall = 20ft  
Suspension Drop = 2ft

#### Foot Candles on 20' length wall

11.5	13.2	13.7	14.0	14.2	14.2	14.0	13.8	13.4	11.7
33.0	39.4	41.7	42.2	42.4	42.4	42.3	41.8	39.6	33.0
32.7	39.6	42.6	43.7	44.0	44.0	43.7	42.7	39.7	32.2
21.9	26.0	28.3	29.5	30.0	30.0	29.5	28.4	26.1	22.0
12.3	13.9	15.1	16.0	16.5	16.5	16.0	15.1	13.9	12.2

### LUMINAIRE LENGTH

Axle is available in individual lengths up to 8'. The mounting hub provides connection for installation in continuous rows, allowing each luminaire to be aimed independently.

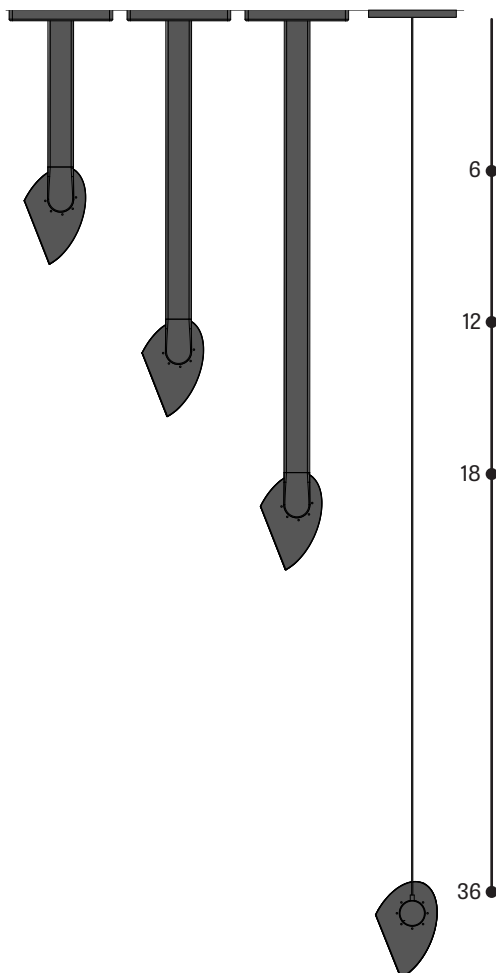


### ELECTRICAL

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 Dim-to-Off), Lutron 5-Series (5% Ecosystem), DMX (RDM compatible) and DALI protocol drivers. All of our standard 0-10V drivers are NEMA 410 compliant.

### MOUNTING

Axle is ceiling mounted using a choice of a fixed arm with concealed wiring, 6", 12" or 18" long with a 4"x4" plates. A standard 36" aircraft cable with a white power cord using 4" round canopies is also available.



### MOUNTING PLATES



5" x 5"



3" non power side  
(for cable only)

### FINISH

**Interior** - Natural aluminium Inner extrusion and 95%, reflective white brackets

**Exterior** - White or aluminum powder coating.

### 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.

### CONSTRUCTION

**Housing** - extruded aluminum 0.090" nominal thickness

**Reflector** - Reflector: semi-specular anodised aluminum sheet 0.020"

**Lens** - Extruded Clear Acrylic 0.050" nominal thickness

**Interior Brackets** - 22 GA CRS / Painted White

**Reflector bracket** - extruded aluminum 0.090" nominal thickness / Natural finish)

**End-caps** - die-cast aluminum

**Joiner** - die-cast aluminum

**Cantilever** - rectangular cold rolled steel tube with welded mounting plate

**Air craft cable suspension** - 7x7 braids Aluminum air craft cable 0.046" diam thick

**Baffles** - white sheet metal

### MAINTENANCE

LED boards are removable from the cartridge for easy replacement. Both cartridge and driver are accessible without removing the luminaire.

### WEIGHT

**AXLE 4ft** - 3.2Kg - 7lb

**AXLE 8ft** - 6.3Kg - 14lb

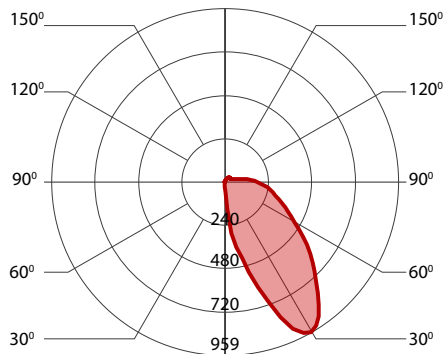
### CERTIFICATIONS

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

### WARRANTY

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.

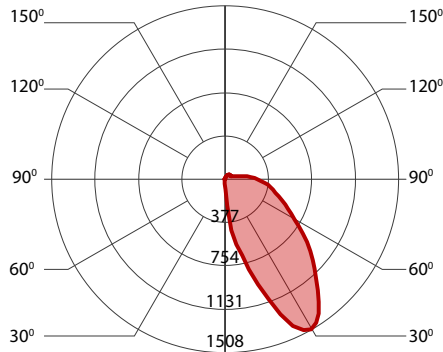
### 350 LUMEN AT 80CRI - ECO LOW OUTPUT



#### PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
eco low output	2700K	10.5	1400	131
eco low output	3000K	10.5	1400	132
eco low output	3500K	10.5	1400	134
eco low output	4000K	10	1400	139

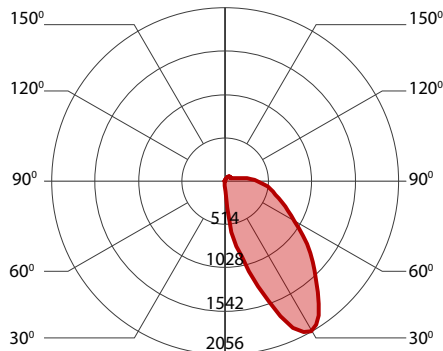
### 550 LUMEN AT 80CRI - LOW OUTPUT



#### PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
low output	2700K	17.5	2200	127
low output	3000K	17	2200	129
low output	3500K	17	2200	131
low output	4000K	16.5	2200	135

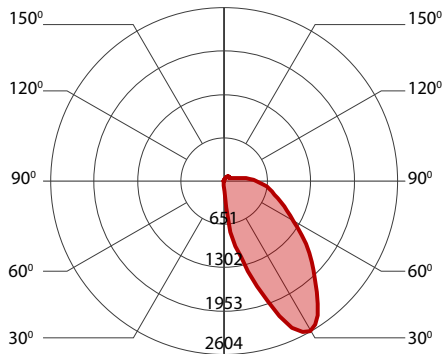
### 750 LUMEN AT 80CRI - MEDIUM OUTPUT



#### PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
medium output	2700K	23	3000	130
medium output	3000K	24	3000	125
medium output	3500K	23.5	3000	127
medium output	4000K	22.5	3000	132

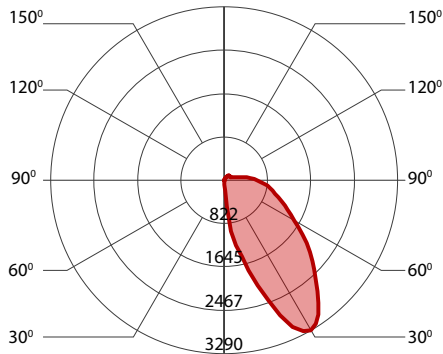
### 950 LUMEN AT 80CRI - HIGH OUTPUT



#### PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
high output	2700K	30	3800	127
high output	3000K	31	3800	122
high output	3500K	30.5	3800	124
high output	4000K	29.5	3800	128

### 1200 LUMEN AT 80CRI - ULTRA HIGH OUTPUT



#### PERFORMANCE PER 4'

LED output	Color Temp	Watts	Nominal Delivered Lumens	Efficacy LPW
ultra high output	2700K	38.5	4800	124
ultra high output	3000K	41	4800	117
ultra high output	3500K	40	4800	120
ultra high output	4000K	38.5	4800	124