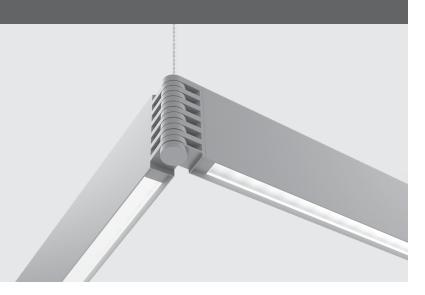
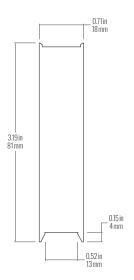
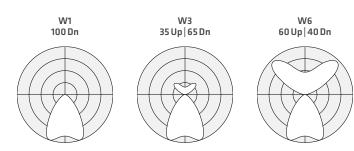
# FLUXWERX。



# **CROSS SECTION**



# **DISTRIBUTIONS**



# SPECIFICATION DATA

# LINES SUSPENDED (LN1A) PATTERNS

CATALOG #
PROJECT
PROJECT
NOTES

# **PERFORMANCE FOCUS**

35 Up | 65 Dn, 80 CRI 4000 K (LN1-W3840)

	Energy (W/4ft)	Light (Im/4ft)	Efficacy (Im/W)
A (100 Dn)	9.5 W	1100	119
В	12 W	1500	126
С	15 W	1900	130
D	18 W	2400	133
E	22 W	2950	134
F	27 W	3600	135

Color Matching	Lumen Main	tenance (hr)		
(SDCM)	L90 per TM21	L80 per TM21		
< 2	> 60,000	> 102,000		

Nominal values, refer to back pages for full performance data.

# **FEATURES**

- Ultra slim (0.7") linear suspended luminaire with a form factor matching Portal, Hyphen and Profile families.
- 2, 3 and 4-way articulating pivots and wall mounts permit an endless variety of suspended patterns.
- Continuous rows can be built from 5 linear modules and 3 endcap styles in black, silver or white powdercoat finish.
- Narrow gauge 1/8" integrated power and suspension cord.
- Positioned to facilitate intricate shapes and tighter spacing within budget.
- Advanced optics deliver comfortable direct illumination from a narrow 0.5" aperture and an indirect batwing light distribution, for an exceptional lit environment.
- Row spacing up to 10' o.c., delivering 40 fc at less than 0.35 W/ft<sup>2</sup>.







SPECIFICATION DATA

# LINES SUSPENDED (LN1A) PATTERNS

# **ORDER GUIDE (1 OF 2)**

1	2	3	4	5	6	7	8	9	10	11	12	OPTIONS	CONTROLS
LN1	Α												

See following pages for geometry details.

1 FAMILY	2 CONFIGURATION	3 LAYOUT	4 CEILING	5 SUSPENSION
<b>LN1</b> Lines Suspended	P Predefined Shape e.g. Straight, Open n-side, Closed polygon, Spoke	<ul><li># Number of Sides (1-9, e.g. 3 = 3 Sides)</li><li>Y 3-Spoke</li><li>X 4-Spoke</li></ul>	<ul><li>D Drywall</li><li>G Grid</li><li>S Structure</li><li>R Remote</li></ul>	03 ≤ 3 ft 06 ≤ 6 ft 12 ≤ 12 ft 25 ≤ 25 ft <sup>2</sup>
	► A Pattern ¹ ¹ Please provide a drawing.	<b>0</b> Any Number of Sides		<sup>2</sup> Add 2W /4 ft for cable loss.

6 FINISH		7	DISTRIBUTION	8	CRI	9	CCT	10	ENERGY 5
FIXTURE FINISH <sup>3</sup> B Black Powdercoat  K Black Powdercoat, Black Cord  S Metallic Silver Powdercoat	<b>B</b> Black Powdercoat	W1 W3 W6	100 Dn 35 Up   65 Dn 60 Up   40 Dn	8	80 CRI 90 CRI	30 35 40	3000 K 3500 K 4000 K	B C D	9.5 W <sup>6</sup> 12 W 15 W 18 W 22 W 27 W <sup>7</sup>
W White Powdercoat C Custom Color (RAL)  3 Default silver power cord.	<sup>4</sup> Only white or black canopy in Grid (G) ceiling. Cord coupler: default silver finish; black with black cord or canopy.							<sup>5</sup> Non Add <sup>6</sup> A: O F1/F	ninal input power /4 ft. 4 W for BP or 347 V. nly 100 Dn (W1). Only '22 Driver with 2 ft module. ot 100 Dn (W1).

11	DRIVER	12 VOLTAGE	OPTIONS	CONTROLS	
F1	Non-Dim	<b>M</b> 120-277 V	<b>B#</b> Battery Pack Qty <sup>11</sup>	TYPE & LOCATION 14	BRAND & PROTOCOL 14
F2 F4 E1	O-10 V Dim 3% Line Voltage Dim (Fwd/Rev) 3% 120 V eldoLED ECO O-10 V Dim 1%	1 120 V <sup>9</sup> 2 277 V <sup>9</sup> 3 347 V <sup>10</sup>	H# Emergency Switch Qty 11.12 (GTD or Controller)  C Chicago CCEA	R Remote Sensor / Controller on Ceiling S Sensor / Controller on Canopy	N1 Acuity nLight Wired 15 N2 Acuity nLight Air rIO 15 N3 Acuity nLight Air RPP20 15
E2 E3 E4	eldoLED SOLO 0-10 V Dim 0.1% eldoLED ECO DALI-2 DT6 Dim 1% eldoLED SOLO DALI-2 DT6 Dim 0.1%		P Oversize J-Box Canopies 13	<ul> <li>V Controller on Driver / Plenum Side</li> <li>Y Controller on Canopy / Room side</li> </ul>	L1 Lutron Athena Wireless M1 Legrand Wattstopper PLUS V1 Leviton Intellect Wireless
	Lutron Hi-Lume 1% EcoSystem (LDE1) <sup>8</sup> n: Not available with lowest or st Energy (A.F).	<ol> <li>Fixed voltage only for (F4) Line Dim Driver or nLight controls.</li> <li>347V transformer, not available in Drywall ceiling.</li> </ol>	<ul> <li>BP &amp; GTD: 120-277V only. Remote mounted in Structure ceiling.</li> <li>For Drywall ceiling, use Remote (R) or Structure (S) option.</li> <li>GTD not compatible with (F4) Line Dim driver.</li> <li>For 120-277V in Structure (S) ceilings.</li> </ul>	Controls selection may be limited by version, protocol or other features – see Controls page.	<sup>15</sup> nLight: Controller (V,Y) only.



# LINES SUSPENDED (LN1A) PATTERNS

ΡΔΤΤΕΡΝ ΓΔΤΔΙ ΝΓ.	+

# ORDER GUIDE (2 OF 2) - PATTERN ELEMENTS

Ó.	TY*	LINE	LENGTH	QTY*	CONNECTOR	POWER	QTY*	POWER SOURCE	LENGTH	OPTIONS
/		L		/		/	,	D		

	LINE	LENGTH	CC	DNNECTOR	POWER	POWER SOURCE	LENGTH	OPTIONS
/	<b>L</b> Line	2 2ft / 3 3ft 4 4ft	P Capsule Endcap (P) Power A Sail Endcap (Option			<b>/ D</b> Power Source	# Powered Length in Ft (2-8 ft)	B Battery Pack 11  H Emergency Switch 11,12
		6 6ft 8 8ft J Joiner 2 Straight				(GTD or Controller)		
			<b>V</b> Pivot	<ul> <li>2 2-Way Pivot</li> <li>Y 3-Way Pivot</li> <li>X 4-Way Pivot</li> <li>W Wall Pivot</li> <li>K Wall 2-Way Pivot</li> <li>M Wall 3-Way Pivot</li> </ul>	<sup>77</sup> Wall Pivots always non-power.			

<sup>\*</sup> Qty not required for one element.

# **LIST OF PATTERN ELEMENTS**

Refer to pattern drawing for layout of elements.

LINES	CONNECTORS (ENDS, PIVOTS, JOINS)	SOURCES

# FLUXWE<u>R</u>X。

SPECIFICATION DATA

# LINES SUSPENDED (LN1A) PATTERNS

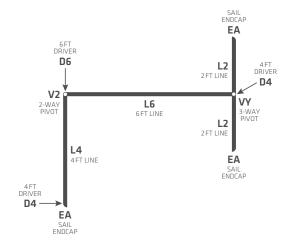
# **PATTERN EXAMPLES**

Lines Patterns (LN1A) are for specifying unique layouts with many lines, multiple branches or mixed lighting options. The overall pattern is built up from individual elements – lines, pivots, ends and (optional) power source locations. Examples below.

Simpler geometry can be specified using Lines Predefined Shapes (LN1P) spec sheet.



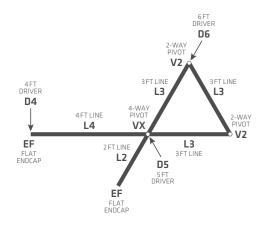
### **OPEN ASYMMETRIC**



# LN1A0.../L4/3EA/L6/V2/VY/2L2

4 ft Line, 3 Sail Endcaps, 6 ft Line, 2-Way Pivot, 3-Way Pivot, 2 x 2 ft Lines

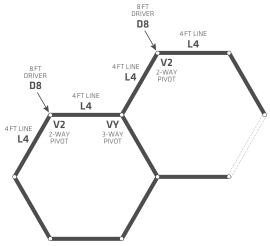
### **OPEN & CLOSED**



# LN1A0.../L4/2EF/L2/VX/3L3/2V2

4 ft Line, 2 Flat Endcaps, 2 ft Line, 4-Way Pivot, 3 x 3 ft Lines, 2 x 2-Way Pivots

# **HEXAGONAL GRID**



# LN1A0.../10L4/8V2/2VY/5D8...

10 x 4 ft Lines, 8 x 2-Way Pivots, 2 x 3-Way Pivots...

### **DESIGN TIPS**

- A Power Source (D) can power 1 or more Lines up to 8 ft.
- $-\,$  A suspended straight Join (J2) or Pivot (V2, VY, VX) can connect up to 16 ft of Lines.

# LINES SUSPENDED (LN1A) PATTERNS

# PARTS EXAMPLE - OPEN SHAPE

# DRIVER/ CANDPY MOUNT Open 'U' or 'Z' shape with Capsule Ends. 2ft, 2ft & 5ft sides. STRUCTURE CEILING PARTS CANDPY MOUNT STRAIGHT JOIN STRAIGHT JOIN

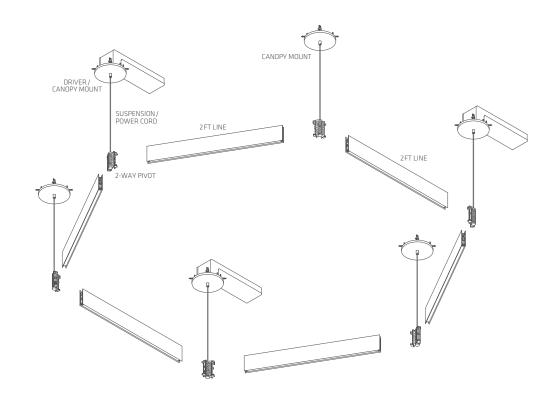
2-WAY PIVOT

# **PARTS EXAMPLE - CLOSED SHAPE**

# LN1A0.../6L2/6V2

Hexagon with 2 ft sides.

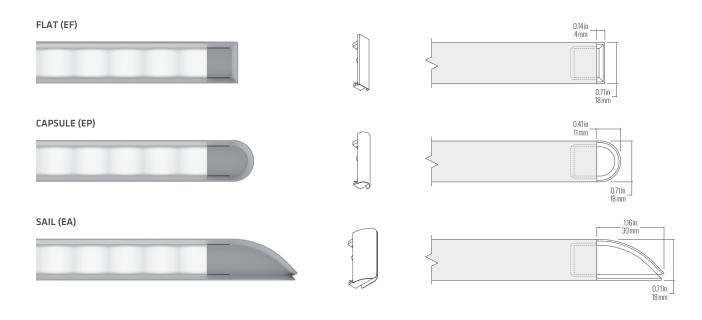
DRYWALL CEILING PARTS



SPECIFICATION DATA

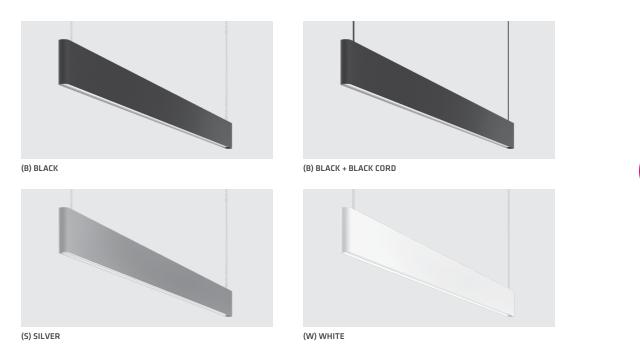
# LINES SUSPENDED (LN1A) PATTERNS

# **ENDCAP OPTIONS**



# **FINISHES**

All finishes high temperature powder coated. Silver power cord by default.

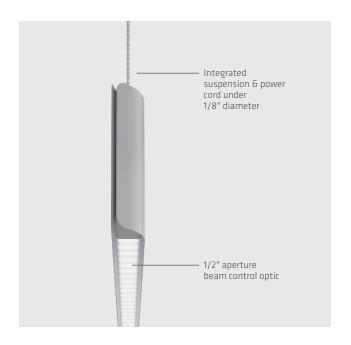




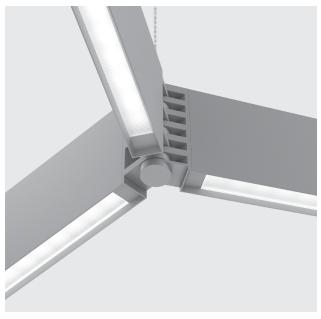
SPECIFICATION DATA

# LINES SUSPENDED (LN1A) PATTERNS

# **PRODUCT DETAILS**











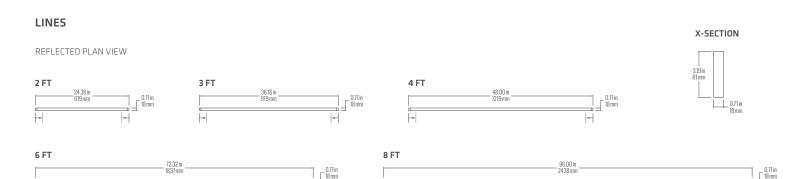
WALL 2-WAY PIVOT



# **LINES SUSPENDED (LN1A) PATTERNS**

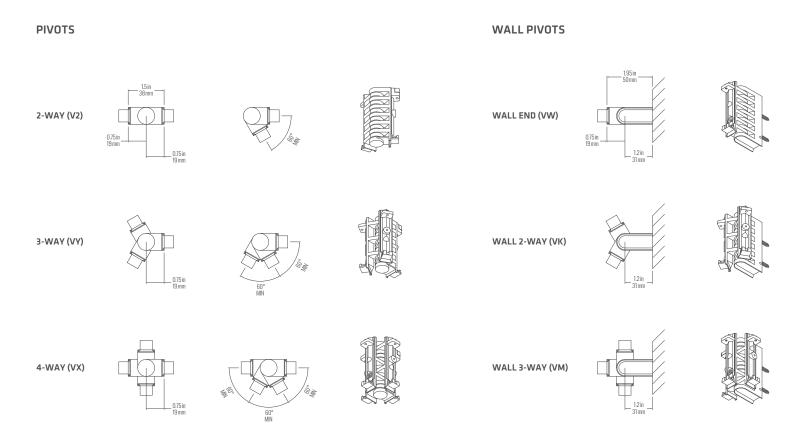
# **FIXTURE PARTS**

All fixtures are factory prewired. Joints, endcaps and pivots may be factory preinstalled to a maximum length of 8ft.



Mount adjustment (not pivots):

- 1" (24 mm) from ends 3" (80 mm) across joins



SPECIFICATION DATA

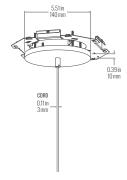
# LINES SUSPENDED (LN1A) PATTERNS

# **CEILING INTEGRATION**

INTEGRATED DRIVER, MOUNTING, POWER FEED & CANOPY/BASE

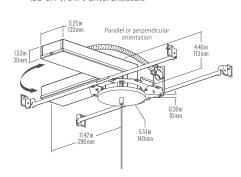
# (D) DRYWALL

For GWB or panel ceiling < 0.875" (22 mm) thick. Level fixture and horizontal ceiling only.

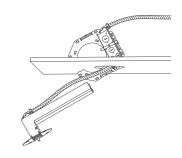


Ceiling Canopy & Non-Power Mount

# 120-277 V, 347 V Driver Enclosure



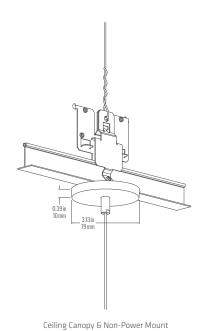
New Construction



Retrofit Installation

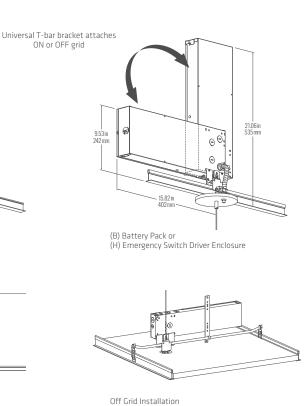
# (G) GRID

For accessible ceiling grid < 1.75" (44 mm) tall. Level fixture and horizontal ceiling only.



13.5 in 459 mm 19.0 mm

Detached Method





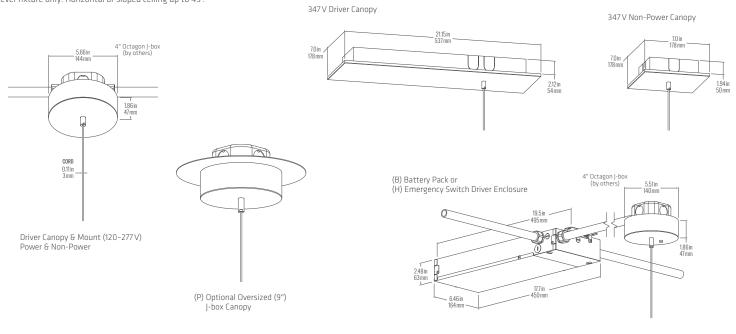
# LINES SUSPENDED (LN1A) PATTERNS

# **CEILING INTEGRATION**

INTEGRATED DRIVER, MOUNTING, POWER FEED & CANOPY/BASE

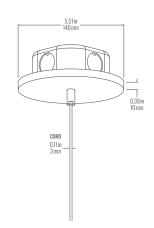
# (S) STRUCTURE

For exposed ceiling with conduit or recessed junction box. Level fixture only. Horizontal or sloped ceiling up to 45°.

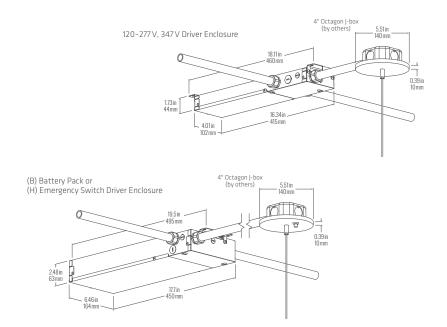


# (R) REMOTE

External remote mounted driver for exposed ceiling with conduit or recessed junction box. See Notes for recommended wire gauge. Level fixture only. Horizontal or sloped ceiling up to 45°.



Ceiling Canopy & Mount (Power & Non-Power)



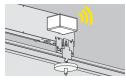
# FLUXWE<u>R</u>X.

# SPECIFICATION DATA

# **LINES SUSPENDED (LN1A) PATTERNS**

# **CONTROLS & SENSORS**

# **LUMINAIRE INTEGRATION**



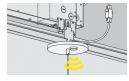
Controller Enclosure/Plenum Side



Controller Canopy/Room Side



R Sensor. Remote/on Ceiling



S Sensor on Canopy

Sensor/Controller preinstalled into suspension canopy or ceiling collar (for remote tile or J-box lid installation). Plenum rated cable whips and connectors for fast field activation.

Acuity nLight Wired



nLight wired, digital network. Model: nPS-80-EZ or nPS-80-EZ-ER (with H - Emergency Switching)



nLight Wired Controller, Enclosure/Plenum Side

(N2, N3)

Acuity nLight Air



Acuity nLight wireless network interfaces.

Models: rIO, rPP20



nLight rIO Controller, Enclosure/Plenum Side VN2 nLight rIO Controller, Canopy/Room Side

nLight rPP20 Controller, Enclosure/Plenum Side

Lutron (L1)

Athena

**\$LUTRON Athena** 

Lutron Athena wireless smart controllers & sensors.

Models: A-WN-D01-RF, A-WN-D01-OCC

For YL1 and SL1: Default Athena color to match fixture/canopy color

Canopy WH SV BK Athena WH BK BK

For VL1 and RL1: default WH



Athena Controller, Enclosure/Plenum Side VL1 YL1 Athena Controller, Canopy/Room Side

RI1 Athena Sensor, Remote/on Ceiling

SL1 Athena Sensor, on Canopy

Legrand Wattstopper PILIS

**L**legrand

WATTSTOPPER® PLUS

Wattstopper PLUS wireless smart controllers & sensors.

Models: ZBHA-CLM, EN-CLM-PIR



Wattstopper PLUS Control Module, VM1 Enclosure/Plenum Side

YM1 Wattstopper PLUS Control Module, Canopy/Room Side

RM1 SensiLUM Sensor, Remote/on Ceiling SM<sub>1</sub> SensiLUM Sensor, on Canopy

Leviton Intellect



Leviton Intellect wireless smart controllers & sensors.

Models: ZL0x0, ZL0xS



VV1

RV1

Intellect Controller, Enclosure/Plenum Side Intellect Controller, Canopy/Room Side Intellect Sensor, Remote/on Ceiling

SV1 Intellect Sensor, on Canopy

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Pass & Seymour®







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# LINES SUSPENDED (LN1A) PATTERNS

## **NOTES**

# CONSTRUCTION

- Architectural grade aluminum and 22 ga. steel housings
- Canopies and driver enclosures suitable for new build or retrofit in grid, GWB, structure or hard lid ceilings
- White, metallic silver or black textured powdercoat standard finishes

### OPTICAL

- Precision molded high transmittance clear acrylic lenses
- Long life LED system designed for typical TM21 lumen maintenance ≥ L80 @ 102.000 h
- Available in 3000 K, 3500 K, 4000 K with CRI≥80 and R9≥0, or CRI≥90 and R9≥50, all with color accurate binning ≤2 SDCM

### **ELECTRICAL**

- Low voltage power cord, factory pre-installed
- Integral high efficiency drivers for 50-60 Hz, 120-277 V or 347 V
- Power Factor:

   0.90 (Drivers F1, F2, E1-4, L2) except
   0.80 (Energy A, B in 2 ft, 3 ft source)
   0.75 (Driver L1)
- Total Harmonic Distortion:
   < 20 % (Drivers F1, F2, E1-E4)</li>
- Dim level: Standard 3%, optional 1% or 0.1%
- Surge Protection: Meets ANSI C82.11 spec and ANSI/IEEE C62.41
- Inrush Current: Meets NEMA 410

### **EMERGENCY**

- Optional Battery Pack delivers 10 W Class 2 rated output for 90 min. See Family Performance for estimated emergency output
- Optional GTD (Generator Transfer Switch), 120–277V, disables 0–10V or DALI control during emergency for full light output

## **WIRE GAUGE**

 Recommended low voltage wire gauge (AWG) for minimal losses over distance when REMOTE mounting:

30 ft | 18 ga

50 ft | 14 ga

80 ft | 12 ga

### **ENVIRONMENTAL & CARE**

- Designed for use in dry or damp indoor locations with ambient temperatures of 0-30° C (32-86° F)
- The luminaire may be damaged by chemicals such as chlorine, solvents, ammonia, alcohol or sulfur in the area of operation or in cleaning products. Damage from contaminants is not covered under warranty.
- Not suitable for natatorium environments, e.g. swimming pools, hot tubs and saunas.
- Clean only by wiping with a slightly water-damp, soft, clean cloth.

### WEIGHT

- Fixture: 1lb (0.45 kg) per ft
- Pivot: 0.4 lbs (0.18 kg)

### WARRANTY

• 5 year limited warranty on all components and workmanship

### INDEPENDENT TESTING

- IFSNA I M79
- IESNA LM80 (LED @ 17,000 hr)

### **APPROVALS**

- UL Listed (USA + Canada)
- · CCEA Chicago Plenum
- Living Building Challenge (LBC)
   Declared

# **DRIVERS + EMERGENCY**

# PIONE ADVANCE F1 Non-Dim F2 0-10 V Dim 3% F4 Line Voltage Dim 3% (Forward/Reverse) 120 V E1 eldoLED ECO 0-10 V Dim 1% E2 eldoLED SOLO 0-10 V Dim 0.1% E3 eldoLED ECO DALI-2 DT6 Dim 1% E4 eldoLED SOLO DALI-2 DT6 Dim 0.1% E4 eldoLED SOLO DALI-2 DT6 Dim 0.1% E4 Lutron Hi-Lume 1% EcoSystem (LDE1)

# EMERGENCY OPTIONS





- Battery Pack Bodine BSL310 (10 W)
- H Emergency Switching Functional Devices ESRB Emergency Lighting Relay

Driver and emergency selection may be limited by product or version. For further options, contact Fluxwerx.



# LINES SUSPENDED (LN1A) PATTERNS

# **FAMILY PERFORMANCE**

# COLOR

80 CRI	4000 K	3500 K	3000 K
Color Rendering (CRI)	83	82	81
Red Index (R9)	4	1	1
Fidelity (TM-30 R <sub>f</sub> )	84	83	84
Gamut (TM-30 R <sub>g</sub> )	95	95	94
Color Matching (SDCM)		< 2	

90 CRI	4000 K	3500 K	3000 K	
Color Rendering (CRI)	93	92	91	
Red Index (R9)	55	53	53	
Fidelity (TM-30 R <sub>f</sub> )	90	89	90	
Gamut (TM-30 R <sub>g</sub> )	97	97	96	
Color Matching (SDCM)		< 2		

Typical colorimetry values.

# LUMEN MAINTENANCE

	9.5 W (A) – 27 W (F)		
L90 per TM-21 (hr)	> 60,000		
L80 per TM-21 (hr)	>102,000		

### **OUTPUT MULTIPLIERS**

MULTIPLIER	Applies To			
90 CRI	0.84	All 80 CRI		
Battery Pack	1.00	Energy B (12 W)		

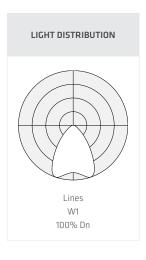
FINISH	100 Dn (W1)	35   65 (W3)	60   40 (W6)
Black	0.89	0.91	0.91
Metallic Silver	0.93	0.94	0.95

For 90 CRI, emergency BP or non-white fixtures, use multipliers to scale published Light (lm), Efficacy (lm/W), Intensity (Cd), Luminance (Cd/m²) and IES files.

# **VERSION PERFORMANCE**

# W1 - 100 Dn, 80 CRI

CONFIGURATION		LIGHT & POWER				VISUAL COMFORT		
ССТ	ENERGY (NOM.)		LIGHT (lm/4ft)	POWER (W/4ft)	EFFICACY (Im/W)	MAX BEAM INTENSITY (Cd)	MAX INTENSITY 45-90° (Cd)	UGR (4H x 8H)
	Α	9.5 W	1114	9.38	118.8	797	220	18.9
	В	12 W	1459	11.92	122.4	1,044	290	19.8
LN1-W1840 4000 K	С	15 W	1877	14.85	126.4	1,343	370	20.7
4000 K	D	18 W	2357	18.16	129.8	1,686	465	21.5
	E	22 W	2881	22.06	130.6	2,061	570	22.2
	Α	9.5 W	1104	9.38	117.7	790	220	18.9
	В	12 W	1446	11.92	121.3	1,035	285	19.8
LN1-W1835 3500 K	С	15 W	1859	14.85	125.2	1,330	370	20.7
3300 K	D	18 W	2335	18.16	128.6	1,671	465	21.5
	E	22 W	2854	22.06	129.4	2,042	565	22.2
	Α	9.5 W	1078	9.38	114.9	771	215	18.8
	В	12 W	1412	11.92	118.5	1,010	280	19.7
LN1-W1830 3000 K	С	15 W	1816	14.85	122.3	1,299	360	20.6
2230 K	D	18 W	2281	18.16	125.6	1,632	450	21.4
	E	22 W	2788	22.06	126.4	1,995	555	22.1



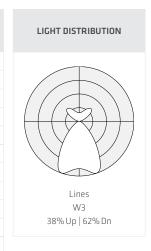


# LINES SUSPENDED (LN1A) PATTERNS

# **VERSION PERFORMANCE**

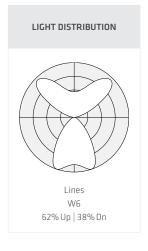
# W3 - 35 Up | 65 Dn, 80 CRI

CONF	IGURATIO	N		LIGHT 8	POWER		VISUAL COMFORT	
CCT ENERGY (NOM.)		LIGHT (Im/4ft)	POWER (W/4ft)	EFFICACY (Im/W)	MAX BEAM INTENSITY (Cd)	MAX INTENSITY 45-90° (Cd)	UGR (4H x 8H)	
	В	12 W	1501	11.92	125.9	661	190	15.3
1 114 14/20 40	С	15 W	1930	14.85	130.0	850	245	16.1
LN1-W3840 4000 K	D	18 W	2423	18.16	133.4	1,067	310	16.9
4000 K	E	22 W	2962	22.06	134.3	1,304	380	17.6
	F	27 W	3643	27.02	134.8	1,604	465	18.3
	В	12 W	1486	11.92	124.7	654	190	15.2
	С	15 W	1912	14.85	128.8	842	245	16.1
LN1-W3835 3500 K	D	18 W	2401	18.16	132.2	1,057	305	16.9
3300 K	E	22 W	2935	22.06	133.0	1,292	375	17.6
	F	27 W	3608	27.02	133.5	1,588	460	18.3
	В	12 W	1452	11.92	121.8	639	185	15.2
	С	15 W	1867	14.85	125.7	822	240	16.0
LN1-W3830 3000 K	D	18 W	2345	18.16	129.1	1,032	300	16.8
3000 K	E	22 W	2867	22.06	130.0	1,262	365	17.5
	F	27 W	3525	27.02	130.5	1,552	450	18.2



# W6 - 60 Up | 40 Dn, 80 CRI

CONFIGURATION			LIGHT & POWER				VISUAL COMFORT	
ССТ	CCT ENERGY (NOM.)		LIGHT (lm/4ft)	POWER (W/4ft)	EFFICACY (Im/W)	MAX BEAM INTENSITY (Cd)	MAX INTENSITY 45-90° (Cd)	UGR (4H x 8H)
LN1-W6840 4000 K	В	12 W	1554	11.68	133.0	406	125	11.7
	С	15 W	1998	14.51	137.7	522	160	12.5
	D	18 W	2510	17.67	142.0	656	200	13.3
	E	22 W	3068	21.30	144.0	802	245	14.0
	F	27 W	3772	26.18	144.1	986	300	14.8
	В	12 W	1539	11.68	131.8	402	120	11.6
	С	15 W	1980	14.51	136.5	518	155	12.5
LN1-W6835 3500 K	D	18 W	2486	17.67	140.7	650	195	13.3
3300 K	E	22 W	3039	21.30	142.7	795	240	14.0
	F	27 W	3737	26.18	142.7	977	295	14.7
	В	12 W	1504	11.68	128.8	393	120	11.6
	С	15 W	1934	14.51	133.3	506	155	12.4
LN1-W6830 3000 K	D	18 W	2429	17.67	137.5	635	190	13.2
	E	22 W	2969	21.30	139.4	776	235	13.9
	F	27 W	3651	26.18	139.5	955	290	14.6



Photometry Reports: 14235146.01 to 14235146.03

Photometry baseline established with integrating sphere and goniophotometer results from an independent accredited testing laboratory per IES LM-79, ANSI 78.377. Remaining values scaled from baseline data. Output and power may vary by up to 5%.