



DATE

PROJECT

COMMENTS

### PRODUCT FEATURES

#### FIXTURE HOUSING

Width: 3.0" Height: 4.0"

#### INDIRECT ILLUMINATION

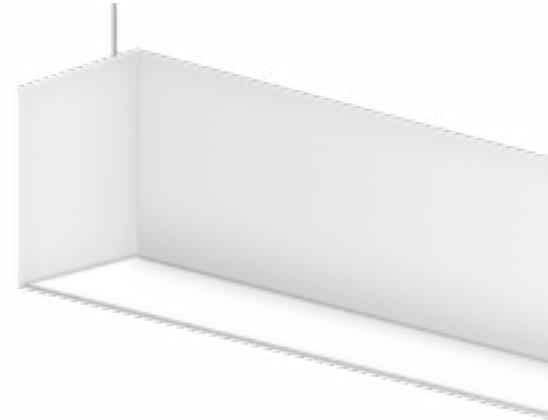
We offer three indirect illumination options. Standard Lambertian can be upgraded to Batwing Up (BW) or Asymmetric Up (AU)

#### ONE-PIECE EXTRUDED ALUMINUM HOUSING

Housing ensures straighter rows and consistent lens retention

#### 120/277VAC 0-10 VOLT DIMMING TO 1% STANDARD

#### UP TO 159.7 LUMENS PER WATT AT 90 CRI



### ORDERING GUIDE EX: 3SID - 20 - VHU - MD - 35 - UNV - T1 - WH - C90

SERIES	LENGTH	UPPER OUTPUT	DIRECT OUTPUT	CCT	VOLTAGE	MOUNTING	COLOR
<b>3SID</b>	<b>XX FT</b>	<b>VHU</b> 1250 LM/FT	<b>VHD</b> 1250 LM/FT	<b>30</b> 3000K	<b>UNV</b> 120-277V	<b>T1</b> 1" Grid	<b>WH</b> White
	1' Increments EX: 20' = 20	<b>HU</b> 1000 LM/FT	<b>HD</b> 1000 LM/FT	<b>35</b> 3500K	<b>347'</b> 347V	<b>T9</b> 9/16" Grid	<b>BLK</b> Black
		<b>MU</b> 750 LM/FT	<b>MD</b> 750 LM/FT	<b>40</b> 4000K		<b>SC</b> Screw Slot	
		<b>LU</b> 500 LM/FT	<b>LD</b> 500 LM/FT			<b>HC</b> Hard Ceiling	
		<b>VLU</b> 250 LM/FT	<b>VLD</b> 250 LM/FT			<b>JB</b> Junction Box	
		<b>CU</b> Custom	<b>CD</b> Custom				

**ORDERING NOTES**

- EM NOT AVAILABLE WITH 347V.
- EM AND SENSORS ARE NOT AVAILABLE WITH 2' AND 3' FIXTURES.
- FOR INDIVIDUAL FIXTURES, SENSOR LOCATED AT POWER FEED END. FOR RUNS, A SENSOR IS INSTALLED INTO EACH FIXTURE IN RUN, EX. 2 SENSORS ARE INSTALLED IN A 16 FT RUN (1 SENSOR IN EACH 8 FT FIXTURE).

### OPTIONS

CRI	SUSPENSION	INTEGRATED CONTROLS <sup>2,3,4</sup>	OPTICAL	CIRCUITING
<b>C90</b>	<b>BLANK = 48" CABLE</b>	<b>DOS</b> Daylight Occupancy Sensor DALI DRIVER STANDARD	<b>BLANK = LAMBERTIAN</b>	<b>SS-U/D</b> Separate Switching UPWARDS/DOWNWARDS
<b>C90</b> 90 CRI	<b>CB96</b> 96" Cables		<b>WW<sup>5</sup></b> Wall Wash, Direct	
	<b>CB144</b> 144" Cables		<b>BW</b> Batwing Up	
	<b>BC</b> Black Canopy & Cord		<b>AU</b> Asymmetric Up	

FOR INDIVIDUALS	FOR LINEAR RUNS <sup>6,7</sup>
<b>EM<sup>2</sup></b> Emergency Battery CEC LISTED	<b>EM</b>
<b>EC</b> Emergency Circuit	<b>EC</b>

#### EMERGENCY OPTION NOTES

- CONSULT FACTORY FOR COMPONENT OR SYSTEM NOT LISTED.
- INTEGRATED CONTROLS NOT AVAILABLE WITH WALL WASH.
- EM AND EC QUANTITY IS NOT TO EXCEED NUMBER OF DISCRETE FIXTURE SECTIONS IN A ROW.
- EM AND EC POSITION REFERS TO WHICH FIXTURE IN THE RUN THAT WILL BE POWERED BY THE EM/EC CIRCUIT. POSITION OPTIONS: **S**=STARTER, **J**=JOINER, **E**=ENDER  
EX: 3SID-20-HU-HD-35-UNV-T1-WH-EM2SJ



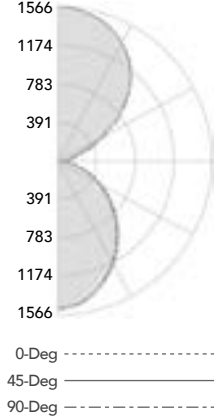
PHOTOMETRICS

3SID-04-HU-HD-35-UNV-XX-C90

Total Lumens: 8,032  
Ratio: 50% Up & 50% Down  
Wattage: 56.1  
Efficacy: 143.1 LM/W  
Fixture Length: Four Feet

Zonal Lumen Summary

Zone	Lumens	% Fixt
0 - 30	1136.0	14.1
0 - 40	1828.8	22.8
0 - 60	3145.9	39.2
0 - 90	3997.3	49.8
90 - 180	4034.9	50.2
0 - 180	8032.1	100.0



ENERGY CONSUMPTION WATTS PER LINEAR FOOT

INDIRECT (LAMBERTIAN) / DIRECT (LAMBERTIAN) LIGHT AT 90 CRI

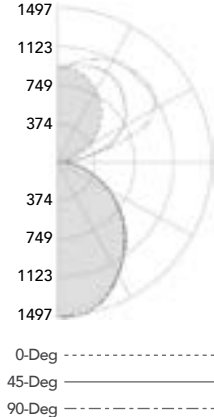
	VHU-VHD	VHU-HD	VHU-MD	VHU-LD	VHU-VLD		LU-VHD	LU-HD	LU-MD	LU-LD	LU-VLD
<b>Watts/ft</b>	18.2	15.8	13.7	11.7	9.8	<b>Watts/ft</b>	13.5	11.1	9.0	7.0	5.1
<b>Lumens/ft</b>	2543	2287	2043	1787	1556	<b>Lumens/ft</b>	1766	1510	1266	1010	779
<b>LPW</b>	139.7	144.7	149.1	152.7	159.4	<b>LPW</b>	130.8	136.0	140.6	144.2	153.9
	HU-VHD	HU-HD	HU-MD	HU-LD	HU-VLD		VLU-VHD	VLU-HD	VLU-MD	VLU-LD	VLU-VLD
<b>Watts/ft</b>	16.4	14.0	11.9	9.9	8.0	<b>Watts/ft</b>	12.1	9.7	7.6	5.6	3.6
<b>Lumens/ft</b>	2264	2007	1763	1507	1276	<b>Lumens/ft</b>	1517	1261	1017	761	530
<b>LPW</b>	137.8	143.1	147.8	151.8	159.7	<b>LPW</b>	125.9	130.6	134.7	137.1	146.7
	MU-VHD	MU-HD	MU-MD	MU-LD	MU-VLD						
<b>Watts/ft</b>	14.9	12.5	10.4	8.4	6.4						
<b>Lumens/ft</b>	1997	1741	1497	1241	1010						
<b>LPW</b>	134.2	139.5	144.2	148.0	156.8						

3SID-04-HU-HD-35-UNV-XX-C90-BW

Total Lumens: 7,873  
Ratio: 50% Up & 50% Down  
Wattage: 56.1  
Efficacy: 140.2 LM/W  
Fixture Length: Four Feet

Zonal Lumen Summary

Zone	Lumens	% Fixt
0 - 30	1136.0	14.4
0 - 40	1828.8	23.2
0 - 60	3145.9	40.0
0 - 90	3997.4	50.8
90 - 180	3875.4	49.2
0 - 180	7872.7	100.0



INDIRECT (BATWING) / DIRECT (LAMBERTIAN) LIGHT AT 90 CRI

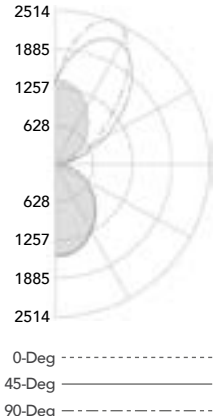
	VHU-VHD	VHU-HD	VHU-MD	VHU-LD	VHU-VLD		LU-VHD	LU-HD	LU-MD	LU-LD	LU-VLD
<b>Watts/ft</b>	18.2	15.8	13.7	11.7	9.7	<b>Watts/ft</b>	13.5	11.1	9.0	7.0	5.0
<b>Lumens/ft</b>	2492	2236	1992	1736	1505	<b>Lumens/ft</b>	1746	1489	1245	989	758
<b>LPW</b>	136.9	141.5	145.4	148.4	155.2	<b>LPW</b>	129.3	134.2	138.4	141.3	151.7
	HU-VHD	HU-HD	HU-MD	HU-LD	HU-VLD		VLU-VHD	VLU-HD	VLU-MD	VLU-LD	VLU-VLD
<b>Watts/ft</b>	16.4	14.0	11.9	9.9	7.9	<b>Watts/ft</b>	12.1	9.7	7.6	5.6	3.6
<b>Lumens/ft</b>	2224	1967	1723	1467	1236	<b>Lumens/ft</b>	1507	1250	1006	750	519
<b>LPW</b>	135.3	140.2	144.4	147.8	155.9	<b>LPW</b>	125.0	129.6	133.3	135.2	146.3
	MU-VHD	MU-HD	MU-MD	MU-LD	MU-VLD						
<b>Watts/ft</b>	14.9	12.5	10.4	8.4	6.4						
<b>Lumens/ft</b>	1968	1711	1467	1211	980						
<b>LPW</b>	132.2	137.1	141.3	144.5	153.6						

3SID-04-HU-HD-35-UNV-XX-C90-AU

Total Lumens: 7,883  
Ratio: 50% Up & 50% Down  
Wattage: 56.1  
Efficacy: 140.4 LM/W  
Fixture Length: Four Feet

Zonal Lumen Summary

Zone	Lumens	% Fixt
0 - 30	1140.0	14.4
0 - 40	1828.8	23.2
0 - 60	3145.9	39.9
0 - 90	3997.3	50.7
90 - 180	3885.9	49.3
0 - 180	7883.1	100.0



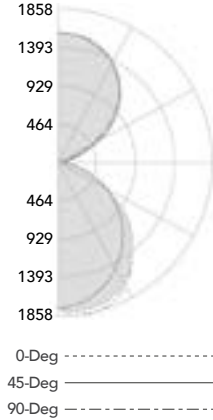
INDIRECT (ASYMMETRIC) / DIRECT (LAMBERTIAN) LIGHT AT 90 CRI

	VHU-VHD	VHU-HD	VHU-MD	VHU-LD	VHU-VLD		LU-VHD	LU-HD	LU-MD	LU-LD	LU-VLD
<b>Watts/ft</b>	18.2	15.8	13.7	11.7	9.7	<b>Watts/ft</b>	13.5	11.1	9.0	7.0	5.0
<b>Lumens/ft</b>	2496	2239	1995	1739	1508	<b>Lumens/ft</b>	1747	1491	1247	991	760
<b>LPW</b>	137.1	141.7	145.6	148.7	155.5	<b>LPW</b>	129.4	134.3	138.5	141.5	151.9
	HU-VHD	HU-HD	HU-MD	HU-LD	HU-VLD		VLU-VHD	VLU-HD	VLU-MD	VLU-LD	VLU-VLD
<b>Watts/ft</b>	16.4	14.0	11.9	9.9	7.9	<b>Watts/ft</b>	12.1	9.7	7.6	5.6	3.6
<b>Lumens/ft</b>	2226	1970	1726	1470	1239	<b>Lumens/ft</b>	1507	1251	1007	751	520
<b>LPW</b>	135.5	140.4	144.7	148.0	156.2	<b>LPW</b>	125.1	129.6	133.4	135.3	146.5
	MU-VHD	MU-HD	MU-MD	MU-LD	MU-VLD						
<b>Watts/ft</b>	14.9	12.5	10.4	8.4	6.4						
<b>Lumens/ft</b>	1969	1713	1469	1213	982						
<b>LPW</b>	132.4	137.3	141.5	144.8	153.9						

PHOTOMETRICS

3SID-04-HU-HD-35-UNV-XX-C90-WW

Total Lumens: 8,089  
Ratio: 50% Up & 50% Down  
Wattage: 56.1  
Efficacy: 144.1 LM/W  
Fixture Length: Four Feet

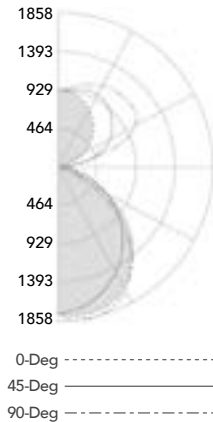


Zonal Lumen Summary

Zone	Lumens	% Fixt
0 - 30	1302.7	16.1
0 - 40	2069.4	25.6
0 - 60	3396.3	42.0
0 - 90	4056.4	50.1
90 - 180	4033.0	49.9
0 - 180	8089.4	100.0

3SID-04-HU-HD-35-UNV-XX-C90-WW-BW

Total Lumens: 7,930  
Ratio: 50% Up & 50% Down  
Wattage: 56.1  
Efficacy: 141.3 LM/W  
Fixture Length: Four Feet

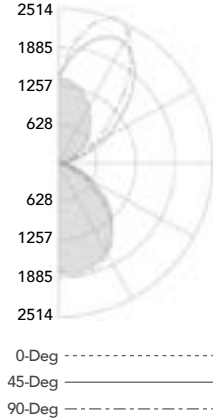


Zonal Lumen Summary

Zone	Lumens	% Fixt
0 - 30	1302.7	16.4
0 - 40	2069.4	26.1
0 - 60	3396.3	42.8
0 - 90	4056.4	51.2
90 - 180	3873.4	48.8
0 - 180	7929.8	100.0

3SID-04-HU-HD-35-UNV-XX-C90-WW-AU

Total Lumens: 7,940  
Ratio: 50% Up & 50% Down  
Wattage: 56.1  
Efficacy: 141.5 LM/W  
Fixture Length: Four Feet



Zonal Lumen Summary

Zone	Lumens	% Fixt
0 - 30	1302.7	16.4
0 - 40	2069.4	26.1
0 - 60	3396.3	42.8
0 - 90	4056.4	51.1
90 - 180	3884.0	48.9
0 - 180	7940.4	100.0

ENERGY CONSUMPTION WATTS PER LINEAR FOOT

INDIRECT (LAMBERTIAN) / DIRECT (WALL WASH) LIGHT AT 90 CRI

	VHU-VHD	VHU-HD	VHU-MD	VHU-LD	VHU-VLD	LU-VHD	LU-HD	LU-MD	LU-LD	LU-VLD
<b>Watts/ft</b>	18.2	15.8	13.7	11.7	9.7	13.5	11.1	9.0	7.0	5.0
<b>Lumens/ft</b>	2562	2302	2054	1794	1560	1785	1524	1277	1017	783
<b>LPW</b>	140.8	145.7	149.9	153.4	160.8	132.2	137.3	141.9	145.3	156.5
	HU-VHD	HU-HD	HU-MD	HU-LD	HU-VLD	VLU-VHD	VLU-HD	VLU-MD	VLU-LD	VLU-VLD
<b>Watts/ft</b>	16.4	14.0	11.9	9.9	7.9	12.1	9.7	7.6	5.6	3.6
<b>Lumens/ft</b>	2282	2022	1774	1515	1280	1536	1276	1028	768	534
<b>LPW</b>	138.9	144.1	148.7	152.5	161.4	127.5	132.2	136.2	138.4	150.4
	MU-VHD	MU-HD	MU-MD	MU-LD	MU-VLD					
<b>Watts/ft</b>	14.9	12.5	10.4	8.4	6.4					
<b>Lumens/ft</b>	2016	1755	1508	1248	1014					
<b>LPW</b>	135.5	140.7	145.3	148.9	158.9					

INDIRECT (BATWING) / DIRECT (WALL WASH) LIGHT AT 90 CRI

	VHU-VHD	VHU-HD	VHU-MD	VHU-LD	VHU-VLD	LU-VHD	LU-HD	LU-MD	LU-LD	LU-VLD
<b>Watts/ft</b>	18.2	15.8	13.7	11.7	9.7	13.5	11.1	9.0	7.0	5.0
<b>Lumens/ft</b>	2511	2251	2003	1743	1509	1764	1504	1257	997	762
<b>LPW</b>	138.0	142.5	146.2	149.0	155.6	130.7	135.5	139.6	142.4	152.5
	HU-VHD	HU-HD	HU-MD	HU-LD	HU-VLD	VLU-VHD	VLU-HD	VLU-MD	VLU-LD	VLU-VLD
<b>Watts/ft</b>	16.4	14.0	11.9	9.9	7.9	12.1	9.7	7.6	5.6	3.6
<b>Lumens/ft</b>	2242	1982	1735	1475	1240	1526	1265	1018	758	523
<b>LPW</b>	136.5	141.3	145.4	148.5	156.4	126.6	131.1	134.8	136.5	147.4
	MU-VHD	MU-HD	MU-MD	MU-LD	MU-VLD					
<b>Watts/ft</b>	14.9	12.5	10.4	8.4	6.4					
<b>Lumens/ft</b>	1986	1726	1478	1219	984					
<b>LPW</b>	133.5	138.3	142.4	145.4	154.3					

INDIRECT (ASYMMETRIC) / DIRECT (WALL WASH) LIGHT AT 90 CRI

	VHU-VHD	VHU-HD	VHU-MD	VHU-LD	VHU-VLD	VHU-VHD	VHU-HD	VHU-MD	VHU-LD	VHU-VLD
<b>Watts/ft</b>	18.2	15.8	13.7	11.7	9.7	13.5	11.1	9.0	7.0	5.0
<b>Lumens/ft</b>	2515	2254	2007	1747	1512	1766	1506	1258	998	764
<b>LPW</b>	138.2	142.7	146.5	149.3	155.9	130.8	135.6	139.8	142.6	152.7
	HU-VHD	HU-HD	HU-MD	HU-LD	HU-VLD	VLU-VHD	VLU-HD	VLU-MD	VLU-LD	VLU-VLD
<b>Watts/ft</b>	16.4	14.0	11.9	9.9	7.9	12.1	9.7	7.6	5.6	3.6
<b>Lumens/ft</b>	2245	1985	1737	1477	1243	1526	1266	1018	759	524
<b>LPW</b>	136.6	141.5	145.6	148.8	156.7	126.7	131.2	134.9	136.7	147.6
	MU-VHD	MU-HD	MU-MD	MU-LD	MU-VLD					
<b>Watts/ft</b>	14.9	12.5	10.4	8.4	6.4					
<b>Lumens/ft</b>	1988	1728	1480	1221	986					
<b>LPW</b>	133.6	138.5	142.6	145.7	154.6					

## OPERATION

### Light Engine:

The 3SID is available in 3000K, 3500K and 4000K CCT all within a 3-Step MacAdam Ellipse and has a standard CRI of 90+.

### Optics:

The back-lit extruded acrylic lens ensures high efficiency light output, in a minimal form factor for a clean, evenly illuminated surface with minimal glare.

### Indirect Optics:

Standard Lambertian can be upgraded to indirect batwing (BW) or Asymmetric (AU). The extruded acrylic batwing lens (BW) provides an ultra-wide distribution with even illumination across the ceiling while allowing for maximum spacing between fixtures. The Asymmetric (AU) diffused forward-throw optics properly illuminates the wall and protects LED's from dust and debris.

### Electrical:

Class 2 programmable (factory pre-set) premium power supply, 120-277VAC input. Power factor >0.9. THD <15%. Integral Surge Protection to 2KV.

### Dimming:

The 3SID comes standard with 0-10V dimming to 1%. For DOS (Daylight/Occupancy Sensor) ordering code, DALI driver required. Advance Xitanium SR, 1% dimming to be utilized.

### Emergency Battery Pack:

Emergency Battery Pack has been engineered to exceed UL minimum safety standards. Standard battery is CEC Listed. For most fixtures, the entire direct portion of the fixture will be illuminated by the EM Battery Pack. For 8' VHD, 10' HD and VHD, and 12' MD, HD, and VHD, only the first portion of the fixture will be illuminated by the EM battery pack. "Quantity per Run" refers to the number of fixtures in the run that will be supplied with an emergency battery pack. "Position in Run" refers to which fixture in the run that will contain the battery. Position options are Starter (S), Joiner (J), or Ender (E). For example, a 24' run needing two emergency battery packs, one in the starter and one in the joiner, would be ordered as EM3SIDJ. When a joiner is selected, battery packs are always supplied in 8' fixtures before 6' fixtures in that run.

### Emergency Circuit:

Emergency Circuit fixtures are engineered so that the entire fixture is wired to the emergency circuit. "Quantity per Run" refers to the number of fixtures in the run that are wired to the emergency circuit. "Position in Run" refers to which fixture in the run that will be powered by the Emergency Circuit. Position options are Starter (S), Joiner (J), or Ender (E). For example, a 24' run with needing two emergency sections, one in the starter and one in the joiner, would be ordered as EC3SIDJ. When a joiner is selected, Emergency Circuits are always supplied in 8' fixtures before 6' fixtures in that run.

## GENERAL

### Warranty:

Ten (10) Year limited warranty from date of shipment.

### Lumen Maintenance:

Rated for 85% initial lumen output at 90,000 Hours of operation, operated at 25°C ambient temperature; per TM-21 Guidelines published by the Illuminating Engineering Society (IES).

### Certifications:

All Luminaires are UL/cUL Listed to UL 1598 Standards and approved for Indoor use in Dry/Damp Locations.

### Shipping:

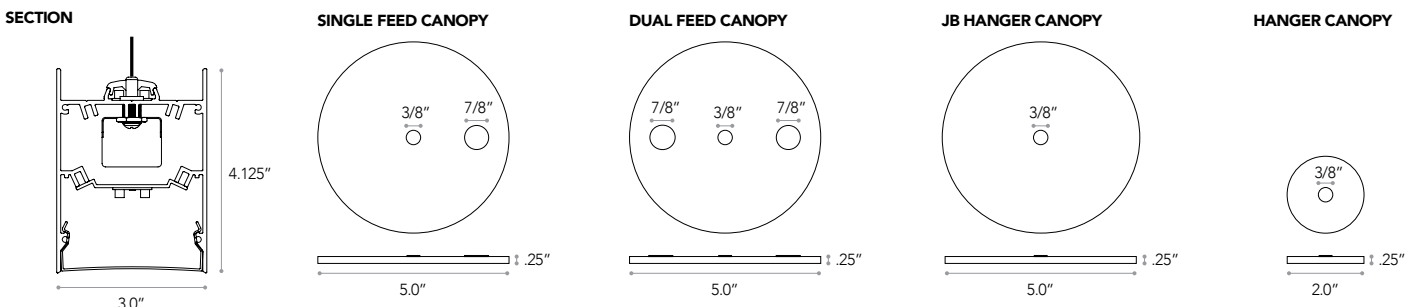
2-Week lead time for orders up to 1000 Linear Feet.

Lead time for orders greater than 1,000' will be determined at time of order.

### Manufactured in the USA:

All ALL Luminaires and Components (with the exception of our LED boards and drivers) are proudly manufactured and assembled in the USA.

## MOUNTING DETAILS



## MECHANICAL

### Housing Construction:

Extruded Aluminum 6063-T5 alloy outer housing with die-formed steel internal components for strength, alignment, and mounting attachment. Our high-quality die-cast end caps are engineered to conceal all fasteners and to retain the sealing gaskets on the inside of the fixture while completing the clean and minimalistic look of this luminaire.

### Alignment/Assembly:

The alignment system employs a four-point alignment and attachment method, designed to create straighter rows and minimize seams between sections (field assembled). Four alignment pins ensure the outer extruded aluminum rails are aligned, while a draw-screw secures housing-to-housing attachment. Additional alignment biscuits double as the light shields.

### Lengths:

The 3SID is available in a minimum 2-foot (nominal) length with additional 1-foot increments available ( $\pm 0.030"$ ,  $\pm 0.50"$ ). Longer fixture rows are available and will be configured with 4-foot, 5-foot, 6-foot, 7-foot, and 8-foot fixtures. Maximum run length on one power feed is 72'. Continuous runs over 72' will require a second feed.

### Mounting Method/Hardware:

The 3SID is available for mounting upon any ceiling type, additional mounting hardware available by others.

### Exterior Finish:

The 3SID is available in White and Black polyester powder coat finish to ensure durability.

### Suspension Components:

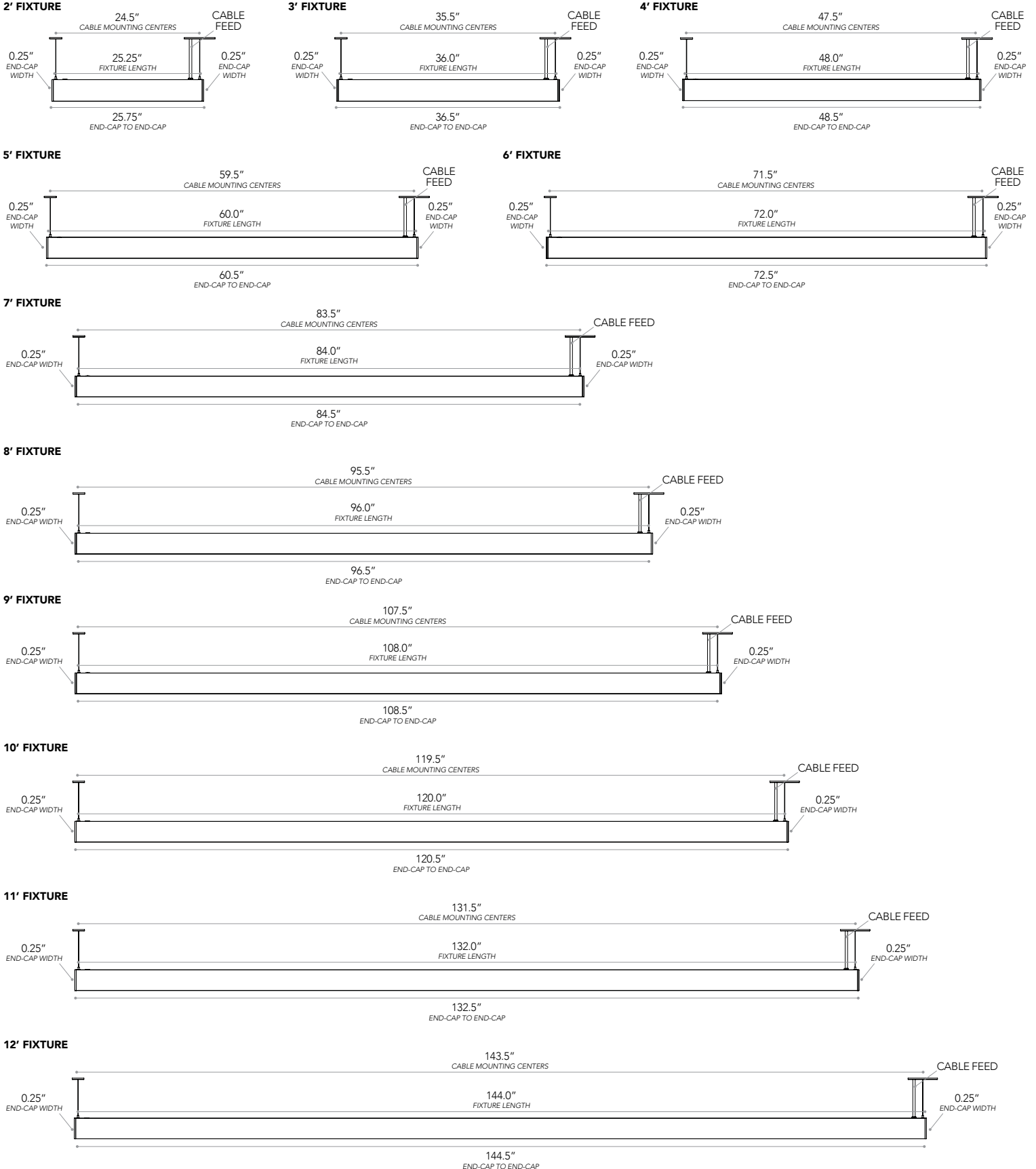
Fixtures are suspended by 1/16" galvanized aircraft cable. Cables are attached to the ceiling suspension point with a 1/4-20 threaded ceiling cable barrel that incorporates a threaded ring to support the feed/hanger canopy allowing access to the J-box/hanger without removal of the suspension cable allowing conductor inspection/service without having to support the fixture(s). Feed canopies are 5" O.D. And hanger canopies are 2" O.D. Cable lengths can be specified for 48", 96" and 144" suspension lengths. Ceiling type options are "T1" T-grid, "T9" T-grid, "SC" screw slot grid, "HC" hard ceiling or "JB" hard ceiling J-box mount.

### Integrated Controls:

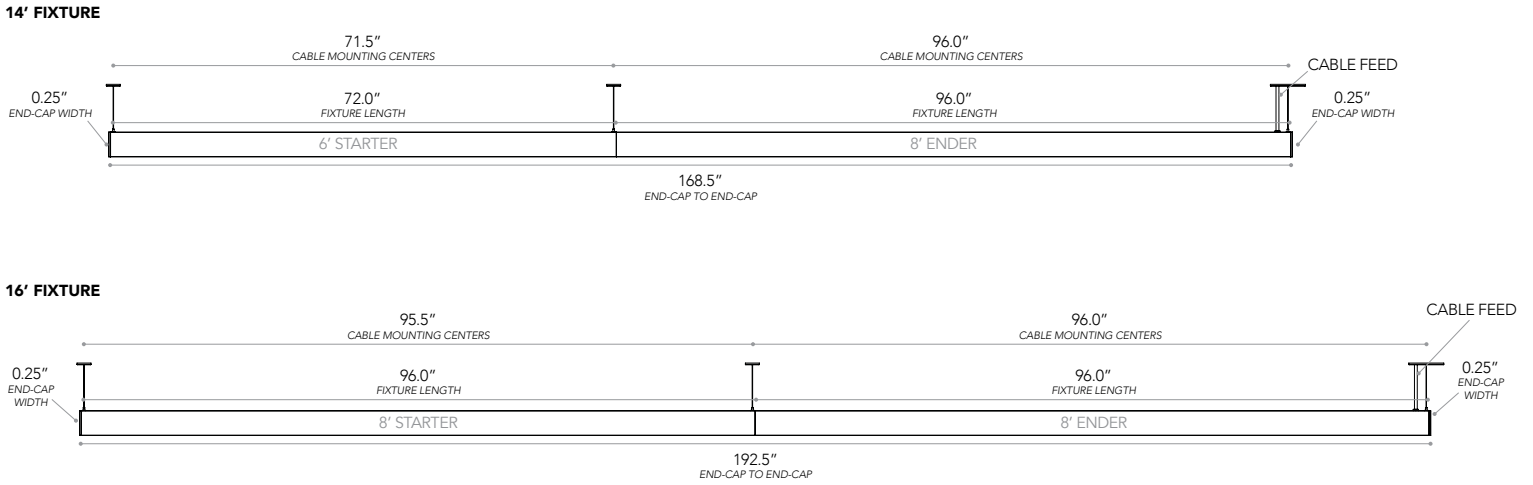
The 3SID is available with optional integrated controls. Sensors are conveniently designed to mount in aperture and are located at the power feed end of each fixture. For runs, each fixture section will be supplied with a discrete sensor that will control that specific section. Philips EasySense is standard daylight/occupancy sensor. DALI driver required. If your project requires a component or system not listed, please contact American Linear Lighting to review requirements.

MANUFACTURER	ORDERING CODE	SENSOR	CONNECTION	DRIVER
Philips EasySense	DOS	Daylight/PIR Occupancy	Wireless	DALI (Advanced Xitanium SR, 1% Dimming)

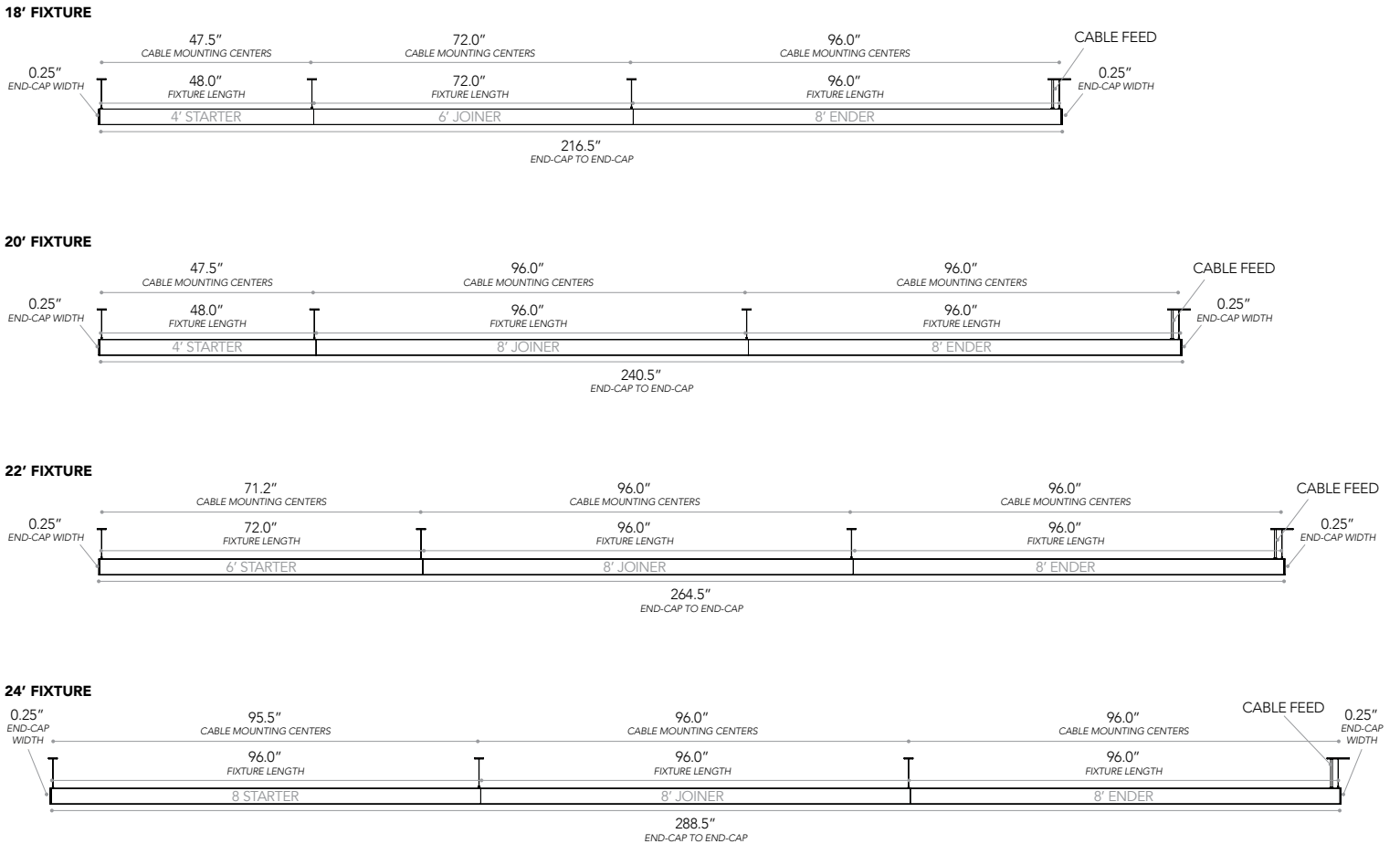
**FIXTURE ROW LAYOUT: SINGLE UNIT** 2' - 3' - 4' - 5' - 6' - 7' - 8' - 9' - 10' - 11' - 12'



**FIXTURE ROW LAYOUT: TWO UNITS 14' - 16'**



**FIXTURE ROW LAYOUT: THREE UNITS 18' - 20' - 22' - 24'**



FIXTURE ROW COMPONENTS

RUN LENGTH	FIXTURE LENGTHS									JOINER	FEED KITS	HANGER KITS	END-CAP TO END-CAP
	STARTER	JOINER											
	1	2	3	4	5	6	7	8	9				
14'	6'	-	-	-	-	-	-	-	8'	1	1	2	168.5"
15'	7'	-	-	-	-	-	-	-	8'	1	1	2	180.5"
16'	8'	-	-	-	-	-	-	-	8'	1	1	2	192.5"
17'	3'	6'	-	-	-	-	-	-	8'	2	1	3	204.5"
18'	4'	6'	-	-	-	-	-	-	8'	2	1	3	216.5"
19'	5'	6'	-	-	-	-	-	-	8'	2	1	3	228.5"
20'	4'	8'	-	-	-	-	-	-	8'	2	1	3	240.5"
21'	5'	8'	-	-	-	-	-	-	8'	2	1	3	252.5"
22'	6'	8'	-	-	-	-	-	-	8'	2	1	3	264.5"
23'	7'	8'	-	-	-	-	-	-	8'	2	1	3	276.5"
24'	8'	8'	-	-	-	-	-	-	8'	2	1	3	288.5"
25'	5'	6'	6'	-	-	-	-	-	8'	3	1	4	300.5"
26'	4'	6'	8'	-	-	-	-	-	8'	3	1	4	312.5"
27'	5'	6'	8'	-	-	-	-	-	8'	3	1	4	324.5"
28'	4'	8'	8'	-	-	-	-	-	8'	3	1	4	336.5"
29'	5'	8'	8'	-	-	-	-	-	8'	3	1	4	348.5"
30'	6'	8'	8'	-	-	-	-	-	8'	3	1	4	360.5"
31'	7'	8'	8'	-	-	-	-	-	8'	3	1	4	372.5"
32'	8'	8'	8'	-	-	-	-	-	8'	3	1	4	384.5"
33'	5'	6'	6'	8'	-	-	-	-	8'	4	1	5	396.5"
34'	4'	6'	8'	8'	-	-	-	-	8'	4	1	5	408.5"
35'	5'	6'	8'	8'	-	-	-	-	8'	4	1	5	420.5"
36'	4'	8'	8'	8'	-	-	-	-	8'	4	1	5	432.5"
37'	5'	8'	8'	8'	-	-	-	-	8'	4	1	5	444.5"
38'	6'	8'	8'	8'	-	-	-	-	8'	4	1	5	456.5"
39'	7'	8'	8'	8'	-	-	-	-	8'	4	1	5	468.5"
40'	8'	8'	8'	8'	-	-	-	-	8'	4	1	5	480.5"
41'	5'	6'	6'	8'	8'	-	-	-	8'	5	1	6	492.5"
42'	4'	6'	8'	8'	8'	-	-	-	8'	5	1	6	504.5"
43'	5'	6'	8'	8'	8'	-	-	-	8'	5	1	6	516.5"
44'	4'	8'	8'	8'	8'	-	-	-	8'	5	1	6	528.5"
45'	5'	8'	8'	8'	8'	-	-	-	8'	5	1	6	540.5"
46'	6'	8'	8'	8'	8'	-	-	-	8'	5	1	6	552.5"
47'	7'	8'	8'	8'	8'	-	-	-	8'	5	1	6	564.5"
48'	8'	8'	8'	8'	8'	-	-	-	8'	5	1	6	576.5"
49'	5'	6'	6'	8'	8'	8'	-	-	8'	6	1	7	588.5"
50'	4'	6'	8'	8'	8'	8'	-	-	8'	6	1	7	600.5"
51'	5'	6'	8'	8'	8'	8'	-	-	8'	6	1	7	612.5"
52'	4'	8'	8'	8'	8'	8'	-	-	8'	6	1	7	624.5"
53'	5'	8'	8'	8'	8'	8'	-	-	8'	6	1	7	636.5"
54'	6'	8'	8'	8'	8'	8'	-	-	8'	6	1	7	648.5"
55'	7'	8'	8'	8'	8'	8'	-	-	8'	6	1	7	660.5"
56'	8'	8'	8'	8'	8'	8'	-	-	8'	6	1	7	672.5"
57'	5'	6'	6'	8'	8'	8'	8'	-	8'	7	1	8	684.5"
58'	4'	6'	8'	8'	8'	8'	8'	-	8'	7	1	8	696.5"
59'	5'	6'	8'	8'	8'	8'	8'	-	8'	7	1	8	708.5"
60'	4'	8'	8'	8'	8'	8'	8'	-	8'	7	1	8	720.5"
61'	5'	8'	8'	8'	8'	8'	8'	-	8'	7	1	8	732.5"
62'	6'	8'	8'	8'	8'	8'	8'	-	8'	7	1	8	744.5"
63'	7'	8'	8'	8'	8'	8'	8'	-	8'	7	1	8	756.5"
64'	8'	8'	8'	8'	8'	8'	8'	-	8'	7	1	8	768.5"
65'	5'	6'	6'	8'	8'	8'	8'	8'	8'	8	1	9	780.5"
66'	4'	6'	8'	8'	8'	8'	8'	8'	8'	8	1	9	792.5"
67'	5'	6'	8'	8'	8'	8'	8'	8'	8'	8	1	9	804.5"
68'	4'	8'	8'	8'	8'	8'	8'	8'	8'	8	1	9	816.5"
69'	5'	8'	8'	8'	8'	8'	8'	8'	8'	8	1	9	828.5"
70'	6'	8'	8'	8'	8'	8'	8'	8'	8'	8	1	9	840.5"
71'	7'	8'	8'	8'	8'	8'	8'	8'	8'	8	1	9	852.5"
72'	8'	8'	8'	8'	8'	8'	8'	8'	8'	8	1	9	864.5"

	MOUNTING CENTERS		
	STARTER	STARTER	JOINER/ENDER
3'	36.0"	35.25"	-
4'	48.0"	47.25"	-
5'	60.0"	59.25"	-
6'	72.0"	71.25"	72.0"
7'	84.0"	83.25"	-
8'	96.0"	95.25"	96.0"

