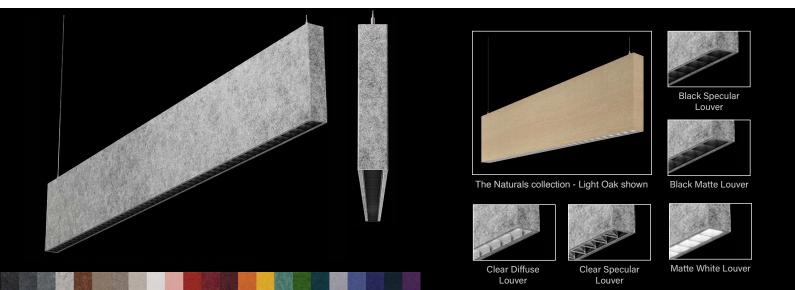
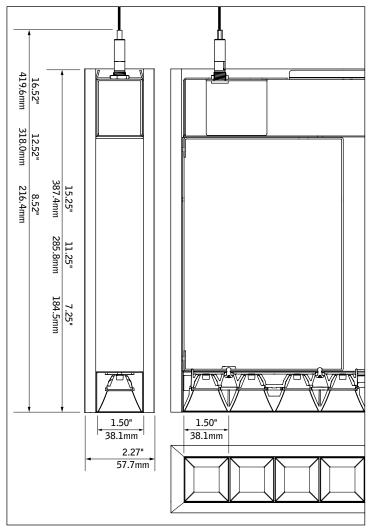
## Seem<sup>®</sup> 1 Acoustic Louver LED DIRECT





#### **DIMENSIONAL DATA**



#### FEATURES

Narrow, sound absorbing 1.5" aperture linear direct acoustic luminaire with louver and high-performance optics.

Available in 4' to 208' lengths in 6" increments with 8", 12" or 16" nominal housing heights in straight lengths.

Deeply regressed louver cells provide 60° cut-off from light source to promote visual comfort.

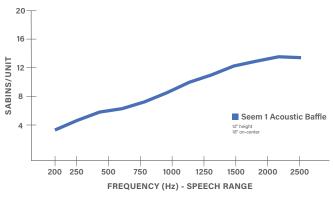
Diversity of louver finishes to tailor how the light is perceived and experienced, from nearly invisible light sources with a striking transition to warmly illuminated louver cells with a smooth transition.

AirCore® Technology: patented, eco-friendly technology that maximizes sound absorption and reduces ecological impact.

Pair with Seem 1 Acoustic unlit baffle, Seem 1 Acoustic Trio, AirCore Blade®, or TruBlade® to create a coordinated look in interior spaces.

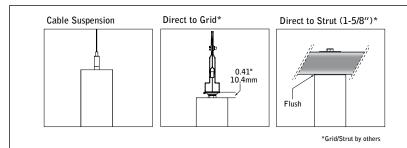
Available with The Naturals, a series of finishes that exude biophilic beauty

#### ACOUSTIC PERFORMANCE



refer to ASTM C423 reports for more inform

#### **MOUNTING DETAILS**



### SPECIFICATIONS

#### Acoustic Material

Content	Housing material is 100% polyester containing up to 50% of recycled plastic bottles (PET felt) and is moisture resistant. See page 3 for color offering. Acoustic material colors are subject to change without notice. For the most current color options, please visit focalpointlights.com/acousticsolutions. Lead times may vary depending on color.
Cleaning and Care	Remove dust and debris with a clean, soft, lint-free cloth or vacuum
PET Thickness	9mm
Surface Burning Characteristcs	ASTM E84 Class A / CAN ULC S102 Flame Spread: 0, Smoke Development Index: 300

#### Acoustic Performance

Acoustic testing is performed on all Focal Point acoustic products and varies based on installation and configuration. ASTM C423 test reports can be downloaded from focalpointlights.com. Contact acoustic.solutions@focalpointlights.com for technical questions.

Sabins	Sabins is a unit of sound absorption. It measures how well one square foot of material absorbs sound. Focal Point has averaged the Sabins per unit at four specific frequency bands representing the human speech range (250, 500, 1000, 2000 Hz) to determine the Sabins per product.
	8' length, 12" height: 12" OC = 5.08 Sabins, 18" OC = 9.05 Sabins, 24" OC = 9.46 Sabins

#### LED System

Proprietary linear LED module incorporates premium LEDs on a robust platform to achieve excellent thermal management. LEDs are placed to promote a uniform appearance. Available in 2700K, 3000K, 3500K or 4000K with both 80 and 90 CRI options. LED drivers are replaceable from above. Color accuracy <3 SDCM.

#### Weight

12" height, 4' length = 10.75lbs. 12" height, 6' length = 16.13lbs. 12" height, 8' length = 21.5lbs.

#### Optic

60-degree cut-off to louvered light source and its image.

#### Electrical

Luminaires are pre-wired with factory installed branch circuit wiring and over-molded quick connects. Standard 120-277V constant current driver includes 0-10V analog dimming. Power factor > .9. Power cord white as standard.

#### Canopy (suspended mounting only)

Polyester powder coat applied over a multi-stage pre-treatment. Canopy white as standard.

#### **Emergency Battery**

Emergency output - 10 watts for 90 minutes. Maximum mounting height: 16.83ft.

#### Labels

ETL listed in accordance with UL standards. Suitable for Dry Locations, indoor use only.

#### Lumen Maintenance

Reported:	L70 at >54,000 hours	Calculated:	L70 at 138,000 hours
	L90 at 43,000 hours		L90 at 43,000 hours
Derived from EPA TM-21 calculator. Based on typical conditions, consult factory for additional data.			

#### Reliability

At Focal Point, our products are designed to stand the test of time. Each luminaire is engineered using superior components, manufactured with the utmost care and rigorously tested. Contact us for reliability data.

#### Warranty

LED system rated for operation in ambient environments up to 25°C. 5-year limited warranty.

#### DISTRIBUTIONS

	NFL	FL1	FL2	WFL	LMC
Beam Spread	20°	29°	43°	67°	68°
Spacing Criteria	0.36	0.50	0.70	0.98	1.18

#### **4' PERFORMANCE CHART**

See page 4

ORDERING Luminaire Series ASM1CS ASM1CS Seem 1 Acoustic Louver Shielding LC I C Louver **Louver Configuration** LF Fully Louvered LF Luminaire Height (heights are nominal) 8" 8 12" 12 16" 16 Lumen Output 250 Lumens per foot 250DL 375 Lumens per foot 375DL 500 Lumens per foot 500DL 625 Lumens per foot 625DL 750 Lumens per foot 750DL 875 Lumens per foot 875DL 1000 Lumens per foot 1000DL **Color Temperature** 2700K, 80CRI or 90 CRI 27K or 927K 3000K, 80CRI or 90 CRI 30K or 930K 3500K, 80CRI or 90 CRI 35K or 935K 4000K, 80CRI or 90 CRI 40K or 940K Circuit 1C Single Circuit 1C UNV Voltage 120/277 UNV Volt UNV **Control System & Dimming Level** 0-10V - 10% Dimming LD1 0-10V - 1% Dimming L11 Lutron Hi-Lume EcoSystem (LDE1) -LH1 1% Dimming DALI 1% Dimming D11 Mounting **Suspended** (Mounting hang kits ship with order. Power cable is 18 Inting hang kits ship with order. Power cable is to long-than suspension length. Consult factory for longer powe cable lengths 24" Cable Suspension J24 48" Cable Suspension J48 96" Cable Suspension J96 120" Cable Suspension J120\_ (Specify canopy color White (WH), Black (BK) or Titanium Silver (TS). Example: J24WH.) (Consult factory for sloped ceiling applications)

(30" power cable standard. Consult factory for logger -Direct/Flush to Grid DTG

Louver

Direct/Flush to Strut DTS

#### Distribution

Narrow Flood	NFL
Flood 1	FL1
Flood 2	FL2
Wide Flood	WFL
red Mixing Chamber	LMC

#### **Factory Options**

Black Cord Emergency Circuit Emergency Battery Pack (5' min. length)	BKCD _EC _EM	-
Louver Finish Matte Black Black Specular Clear Diffuse Clear Specular Matte White	BK BS CD CS WH	_
Acoustic Panel Color See page 3 for color offering		-

ft in

Luminaire Length

\_ft \_in

(Luminaires are 3/4" longer that an specified and cannot be cut to length or joined in the field.) Specify length in 6" increments from 4' to 208' (16' maximum for DTG, consult factory for alternate lengths.)

# Acoustic Materials



FOCAL POINT®

#### THE NATURALS (25% SCALE) LIGHT OAK GRE CHESTNUT CHT WALNUT WLT NATURAL LINEN NTL LOK GRAY ELM STANDARD PET PREMIUM PET PURE BLACK PBK CHARCOAL GRAY CHG DNB MIDNIGHT BLUE MNB DEEP PURPLE CORNFLOWER BLUE CFB DENIM BLUE DPP SLATE SLT SHADOW GRAY SDG BRD CHERRY RED CHR BERRY BRY BLUSH BRICK RED BLS SILVER GRAY SLG PEARLICE PIC DEEP WATER DWT SEAFOAM SFM EMERALD GREEN EMG CLASSIC WHITE CWH NATURAL LINEN NTL CARROT CRT PINEAPPLE PNA **Declare**. 9mm PET Felt Focal Point, LLC Final Assembly: Chicago, Illinois, USA Life Expectancy: 30 Year(s) End of Life Options: Salvageable/Reusable in its Entirety, Recyclable (100%) HAZELWOOD HZW CINNAMON **CNM** LIMESTONE LMS Ingredients: Polyethylene terephthalate: PET; N, N'-Ethylene bistearamide: Octadecanamide, N.N'-12-ethanediylbis-; Stearic Acid: Stearic Acid; Antioxidant 1076: Benzenepropanoic acid; 3,5-bis(1)-dimethylethyl)-4-hydroxy-, octadecyl ester; Antioxidant KY-405: Benzenamine, 4-(1-methyl-1-phenylethyl)-1/-4(1-methyl-1-phenylethyl)phenyl]-; Titanium Dioxide: Titanium dioxide LIGHT REFLECTIVITY 90 75 % LIGHT REFLECTANCE Living Building Challenge Criteria: Compliant 60 I-13 Red List: LBC Red List Free % Disclosed: 100% at 100ppm LBC Red List Approved VOC Content: Not Applicable 45 Declared I-10 Interior Performance: CDPH Standard Method v1.1-2010 I-14 Responsible Sourcing: Not Applicable 30 FPL-0001 15 EXP. 01 MAR 2024 Original Issue Date: 2020 NTL PIC CRT CRT CRT CRT CRT CRT CNM CCHG CCHG CCHG NNB PNA CWH PBK MANUFACTURER RESPONSIBLE FOR LABEL ACCURACY INTERNATIONAL LIVING FUTURE INSTITUTE™ living-future.org/declare

#### **4' PERFORMANCE CHART**

Distribution	Lumens per Foot	Tested System Watts	LPW
	250	11.0	92
	375	14.7	101
	500	19.3	106
WFL	625	24.3	105
	750	28.3	107
	875	32.6	107
	1000	37.0	108

Based on 4' Iuminaire, 3500K, 80 CRI, Matte Black baffle. Lumen output may vary +/- 5%. Actual wattage may vary +/- 5%

#### PERFORMANCE CURVES











Louvered Mixing Chamber (LMC)

#### MULTIPLIER TABLE

**Color Temperature & CRI** 

Multiplier
0.95
0.80
0.97
0.83
1.00
0.85
1.03
0.87

## Louver Distribution Distribution

Distribution	Multiplier
Narrow Flood [NFL]	1.34
Flood 1 [FL1]	1.14
Flood 2 [FL2]	1.21
Wide Flood [WFL]	1.00
Louvered Mixing Chamber [LMC]	0.97

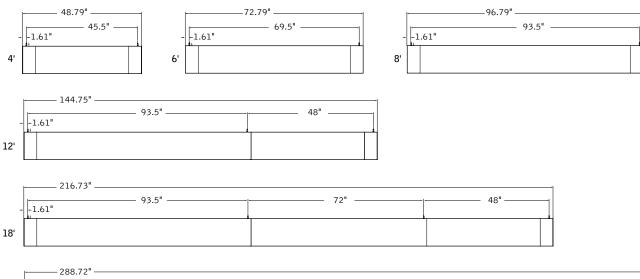
#### Louver Finish Color Multiplier Matte Black [BK] 1.00 Black Specular [BS] 1.00 Clear Diffuse [CD] 1.07 Clear Specular [CS] 1.10 Matte White [WH] 1.11

#### How To Use Lumen Multipliers

Formula: (Lumen Output Value) x (Color Temperature & CRI) x (Distribution) x (Finish)

Louver Example: ASM1CS-1000DL-930K-NFL-BS (1000) x (0.83) x (1.34) x (1.00)  $\approx$  1112.2 lm (estimated delivered lumens)

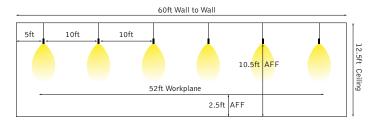
#### MOUNTING DETAILS (see Run Chart on following page for number of hang points per run)



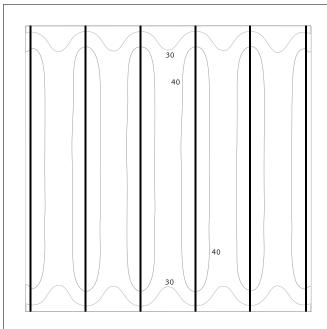
	93.5"	84"	60"	48"
-	-1.61"			
24'				
24				

↓ FEED LOCATION

#### SEEM 1 ACOUSTIC LOUVER APPLICATION EXAMPLE



#### Workplane Illuminance



#### Average Illuminance = 38 fc

#### Lighting Power Density (LPD) = 0.38

Seem 1 Acoustic Louver with fully louvered direct illumination is a powerful and efficacious solution for open working environments. Workplanes benefit from 32 footcandles or more and superior uniformity with a lighting power density of less than 0.38 while maintaining luminaire on-center spacing of 8 feet or greater.

#### **Calcluation Details**

Room Area:	60ft x 60ft
Calculation Area:	52ft x 52ft
Ceiling Height:	12.5ft
Luminaire Height:	10.5ft AFF
Luminiare Spacing:	10ft OCS
Workplane Height:	2.5ft AFF
Reflectances:	80/50/20
Light Loss Factor:	0.9

#### Luminaire Details

Shielding:	Fully Louvered, Wide Flood
Lumens per foot:	375 Direct
Louver finish:	Matte Black

		Installation			Louver	LPD	Workplane	
	Ceiling Height	AFF	On-center Spacing	Lumens/ft	Distribution	(Watts/ft <sup>2</sup> )	Average Footcandles	Uniformity (avg. to min.)
	11ft	9ft	- 8ft	250LF	WFL	0.34	33.1	2.00
	IIIL				LMC		32.0	1.95
_		10.5ft			WFL		31.7	2.03
	10 54				LMC		32.0	1.95
	12.5ft		10ft	375LF	WFL	0.38	38.1	1.98
					LMC		36.8	1.96

#### **RUN CHART**

Run length (ft)	Housing Configuration Section Lengths	# of hang points per run	
9	5 + 4	3	
10	6 + 4	3	
11	7 + 4	3	
12	8 + 4	3	
13	8 + 5	3	
14	8 + 6	3	
15	8 + 7	3	
16	8 + 8	3	
17	8 + 5 + 4	4	
18	8 + 6 + 4	4	
19	8 + 7 + 4	4	
20	8 + 7 + 5	4	
21	8 + 7 + 6	4	
22	8 + 7 + 7	4	
23	8 + 7 + 8	4	
24	8 + 7 + 5 + 4	5	
25	8 + 7 + 6 + 4	5	
26	8 + 7 + 7 + 4	5	
27	8 + 7 + 7 + 5	5	
28	8 + 7 + 7 + 6	5	

29 $8+7+7+7$ $5$ $30$ $8+7+7+8$ $5$ $31$ $8+7+7+8$ $6$ $32$ $8+7+7+5+4$ $6$ $33$ $8+7+7+7+6+4$ $6$ $34$ $8+7+7+7+7+6$ $6$ $35$ $8+7+7+7+7+6$ $6$ $36$ $8+7+7+7+7+6$ $6$ $37$ $8+7+7+7+7+6$ $6$ $38$ $8+7+7+7+7+8$ $6$ $39$ $8+7+7+7+7+6+4$ $7$ $40$ $8+7+7+7+7+6+4$ $7$ $41$ $8+7+7+7+7+6+7$ $7$ $42$ $8+7+7+7+7+8$ $7$ $43$ $8+7+7+7+7+6+4$ $8$ $46$ $8+7+7+7+7+6+4$ $8$ $46$ $8+7+7+7+7+6+4$ $8$ $47$ $8+7+7+7+7+7+6+4$ $8$ $48$ $8+7+7+7+7+7+8$ $8$	Run length (ft)	Housing Configuration Section Lengths	# of hang points per run
31 $8+7+7+5+4$ 632 $8+7+7+6+4$ 633 $8+7+7+7+6+4$ 634 $8+7+7+7+5$ 635 $8+7+7+7+6$ 636 $8+7+7+7+7$ 637 $8+7+7+7+8$ 638 $8+7+7+7+8$ 639 $8+7+7+7+6+4$ 740 $8+7+7+7+7+6+4$ 741 $8+7+7+7+7+6+4$ 742 $8+7+7+7+7+6$ 743 $8+7+7+7+7+7$ 744 $8+7+7+7+7+8$ 745 $8+7+7+7+7+5+4$ 846 $8+7+7+7+7+6+4$ 847 $8+7+7+7+7+7+4$ 8	29	8 + 7 + 7 + 7	5
32 $8+7+7+6+4$ 633 $8+7+7+7+4$ 634 $8+7+7+7+5$ 635 $8+7+7+7+6$ 636 $8+7+7+7+7$ 637 $8+7+7+7+8$ 638 $8+7+7+7+6+4$ 739 $8+7+7+7+6+4$ 740 $8+7+7+7+7+6$ 741 $8+7+7+7+7+6$ 742 $8+7+7+7+7+6$ 743 $8+7+7+7+7+7$ 744 $8+7+7+7+7+8$ 745 $8+7+7+7+7+6+4$ 846 $8+7+7+7+7+6+4$ 847 $8+7+7+7+7+7+7+8$ 8	30	8 + 7 + 7 + 8	5
33 $8+7+7+7+4$ 634 $8+7+7+7+5$ 635 $8+7+7+7+5$ 636 $8+7+7+7+7$ 637 $8+7+7+7+7$ 638 $8+7+7+7+5+4$ 739 $8+7+7+7+6+4$ 740 $8+7+7+7+7+6+4$ 741 $8+7+7+7+7+6$ 742 $8+7+7+7+7+6$ 743 $8+7+7+7+7+7$ 744 $8+7+7+7+7+8$ 745 $8+7+7+7+7+5+4$ 846 $8+7+7+7+7+6+4$ 847 $8+7+7+7+7+7+4$ 8	31	8 + 7 + 7 + 5 + 4	6
	32	8 + 7 + 7 + 6 + 4	6
35 $8+7+7+7+6$ 636 $8+7+7+7+7$ 637 $8+7+7+7+8$ 638 $8+7+7+7+5+4$ 739 $8+7+7+7+6+4$ 740 $8+7+7+7+7+6$ 741 $8+7+7+7+7+6$ 742 $8+7+7+7+7+6$ 743 $8+7+7+7+7+8$ 744 $8+7+7+7+7+8$ 745 $8+7+7+7+7+6+4$ 846 $8+7+7+7+7+6+4$ 847 $8+7+7+7+7+4$ 8	33	8 + 7 + 7 + 7 + 4	6
36 $8+7+7+7+7$ $6$ $37$ $8+7+7+7+8$ $6$ $38$ $8+7+7+7+8$ $6$ $39$ $8+7+7+7+6+4$ $7$ $40$ $8+7+7+7+7+6+4$ $7$ $41$ $8+7+7+7+7+5$ $7$ $42$ $8+7+7+7+7+6$ $7$ $43$ $8+7+7+7+7+7$ $7$ $44$ $8+7+7+7+7+8$ $7$ $45$ $8+7+7+7+7+5+4$ $8$ $46$ $8+7+7+7+7+6+4$ $8$ $47$ $8+7+7+7+7+7+8$ $8$	34	8 + 7 + 7 + 7 + 5	6
37 $8+7+7+7+8$ 638 $8+7+7+7+5+4$ 739 $8+7+7+7+6+4$ 740 $8+7+7+7+7+6$ 741 $8+7+7+7+7+6$ 742 $8+7+7+7+7+6$ 743 $8+7+7+7+7+7$ 744 $8+7+7+7+7+8$ 745 $8+7+7+7+7+5+4$ 846 $8+7+7+7+7+6+4$ 847 $8+7+7+7+7+7+8$ 8	35	8 + 7 + 7 + 7 + 6	6
38 $8+7+7+7+5+4$ 739 $8+7+7+7+6+4$ 740 $8+7+7+7+7+4$ 741 $8+7+7+7+7+5$ 742 $8+7+7+7+7+6$ 743 $8+7+7+7+7+7$ 744 $8+7+7+7+7+8$ 745 $8+7+7+7+7+5+4$ 846 $8+7+7+7+7+6+4$ 847 $8+7+7+7+7+7+8$ 8	36	8 + 7 + 7 + 7 + 7	6
39 $8+7+7+7+6+4$ $7$ $40$ $8+7+7+7+7+4$ $7$ $41$ $8+7+7+7+7+5$ $7$ $42$ $8+7+7+7+7+6$ $7$ $43$ $8+7+7+7+7+7$ $7$ $44$ $8+7+7+7+7+8$ $7$ $45$ $8+7+7+7+7+5+4$ $8$ $46$ $8+7+7+7+7+6+4$ $8$ $47$ $8+7+7+7+7+7+4$ $8$	37	8 + 7 + 7 + 7 + 8	6
40     8+7+7+7+7+4     7       41     8+7+7+7+7+5     7       42     8+7+7+7+7+6     7       43     8+7+7+7+7+7     7       44     8+7+7+7+7+8     7       45     8+7+7+7+7+5+4     8       46     8+7+7+7+7+6+4     8       47     8+7+7+7+7+7     8	38	8 + 7 + 7 + 7 + 5 + 4	7
41 8+7+7+7+7+5 7   42 8+7+7+7+7+6 7   43 8+7+7+7+7+7 7   44 8+7+7+7+7+8 7   45 8+7+7+7+7+5+4 8   46 8+7+7+7+7+6+4 8   47 8+7+7+7+7+7+4 8	39	8 + 7 + 7 + 7 + 6 + 4	7
$\begin{array}{ccccccc} 42 & 8+7+7+7+7+6 & 7\\ 43 & 8+7+7+7+7+7 & 7\\ 44 & 8+7+7+7+7+8 & 7\\ 45 & 8+7+7+7+7+5+4 & 8\\ 46 & 8+7+7+7+7+6+4 & 8\\ 47 & 8+7+7+7+7+7+8 & 8\\ \end{array}$	40	8 + 7 + 7 + 7 + 7 + 4	7
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44     8+7+7+7+78     7       45     8+7+7+7+75+4     8       46     8+7+7+7+76+4     8       47     8+7+7+7+7+74     8	42	8 + 7 + 7 + 7 + 7 + 6	7
45     8 + 7 + 7 + 7 + 5 + 4     8       46     8 + 7 + 7 + 7 + 6 + 4     8       47     8 + 7 + 7 + 7 + 7 + 7 + 7 + 4     8	43	8 + 7 + 7 + 7 + 7 + 7	7
46     8+7+7+7+7+6+4     8       47     8+7+7+7+7+7+4     8	44	8 + 7 + 7 + 7 + 7 + 8	7
47 8+7+7+7+7+4 8	45	8 + 7 + 7 + 7 + 7 + 5 + 4	8
	46	8 + 7 + 7 + 7 + 7 + 6 + 4	8
48 8+7+7+7+7+5 8	47	8 + 7 + 7 + 7 + 7 + 7 + 4	8
	48	8 + 7 + 7 + 7 + 7 + 7 + 5	8

Standard run configurations, consult factory for custom configurations and longer run lengths.