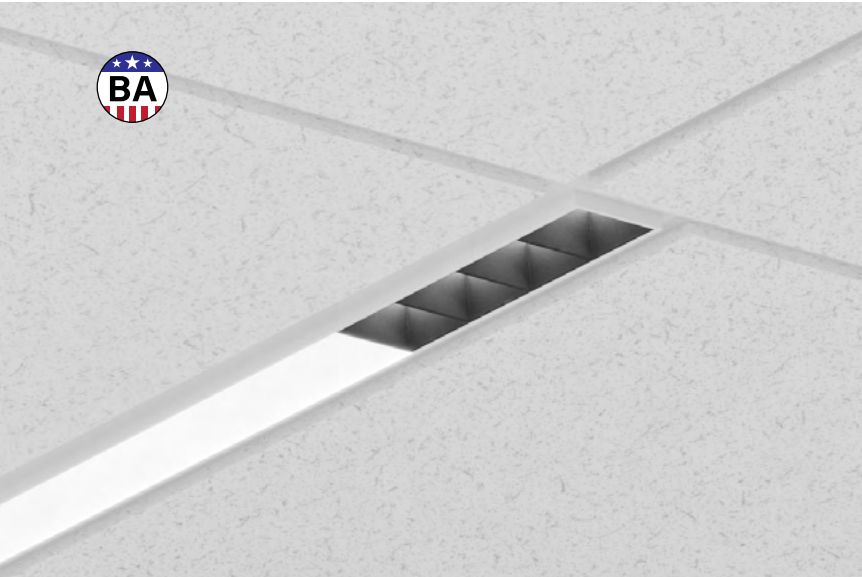
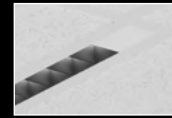


Seem® 1 Louver

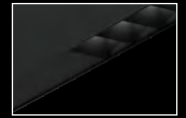
LED RECESSED WITH ID+ TECHNOLOGY



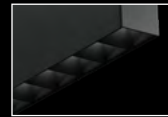
Tegular Tile



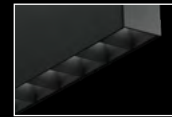
Lay-in Tile



Solid Faceplate + Louver



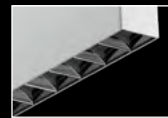
Black Specular Louver



Black Matte Louver



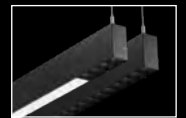
Clear Diffuse Louver



Clear Specular Louver

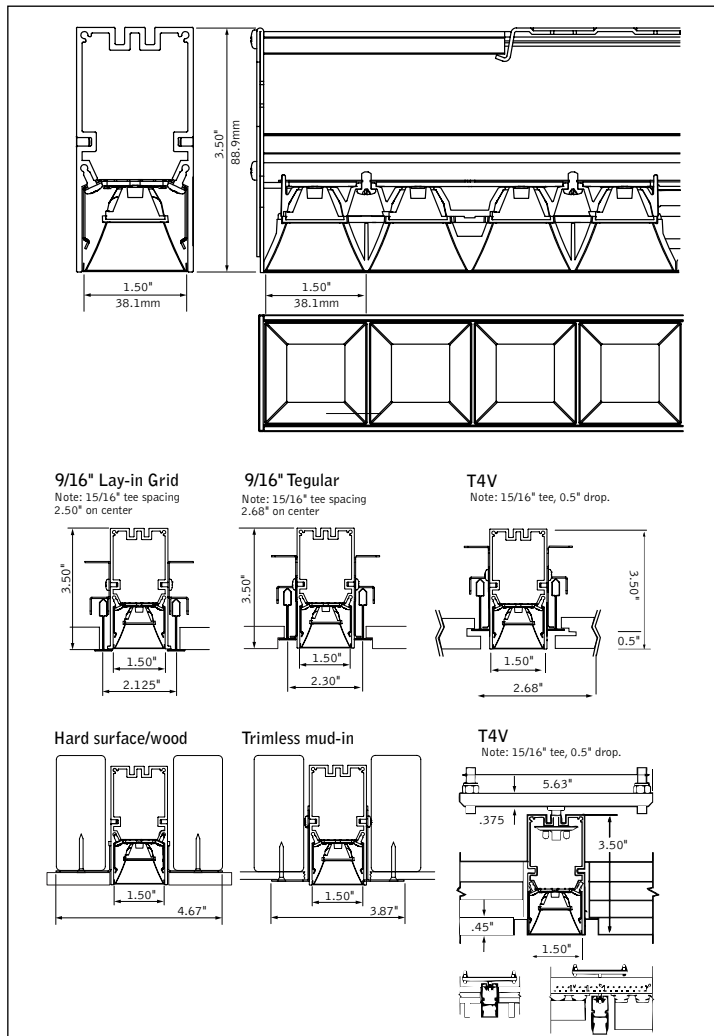


Matte White Louver



Suspended Companions

DIMENSIONAL DATA



FEATURES

Nominal 1.5" narrow extruded aluminum linear direct LED illumination with louver and high-performance optics.

Frosted acrylic lenses provide uninterrupted illumination, without pixels or shadows.

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.

Choice of output levels and light distributions support multiple applications, from highly focused task lighting to ambient lighting.

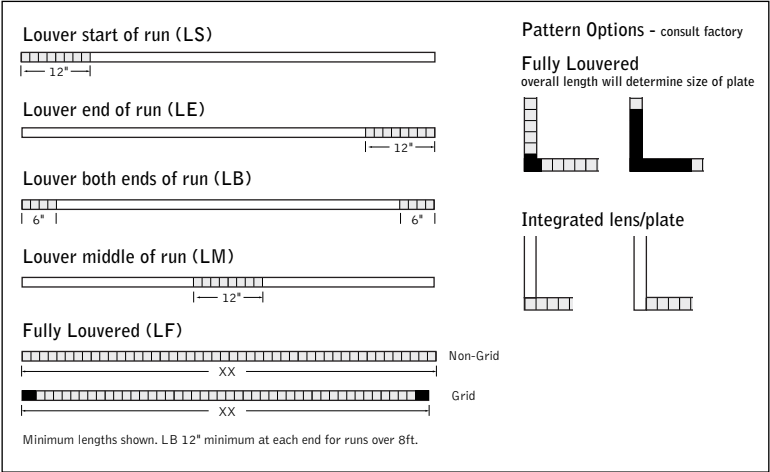
Individual units and continuous runs in 1" lensed or faceplate increments, and 6" louvered increments.

Highly configurable system enables self-service creation of customized products with standard lead times.

fixture:

project:

STANDARD LOUVER CONFIGURATION EXAMPLES



SPECIFICATIONS

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 modules and drivers are replaceable from below. Color accuracy <3 SDCM.

Construction

One piece extruded aluminum housing. 20 Ga. steel end caps. Housing for new construction applications. XFW acceptable for use with wood, consult factory for Type IC availability. 8' unit weight: 15lbs.

Optic

60-degree cut-off to louvered light source and its image. Lensed reflectors fabricated of 24 Ga. steel finished in High Reflectance White powder coat. Extruded acrylic lens .085" thick with frosted finish, up to 8' continuous.

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.

Emergency

Emergency output - 10 watts for 90 minutes. Louvered maximum mounting height (LC, SC) = 26.4ft, lensed maximum mounting height (BC, FC) = 18ft.

Labels

UL and cUL listed. Suitable for Dry or Damp Locations, indoor use only.

Finish

Polyester powder coat applied over a multi-stage pre-treatment.

Lumen Maintenance

Linear Source				
Reported:	L70 at >61,000 hours	Calculated:	L70 at 470,000 hours	
	L90 at >61,000 hours		L90 at 115,000 hours	
Louvered Sources				
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

PERFORMANCE CHARTS

See page 4

Focal Point LLC reserves the right to change specifications for product improvement without notification.

STANDARD CONFIGURATION ORDERING

Luminaire Series		FSM1C
Seem 1 with louver		FSM1C
Shielding		
Batwing lens + Louver		BC
Flush lens + Louver		FC
Solid faceplate + Louver		SC
Louver only		LC
Louver Configuration		
(Specify total length of louver in inches for run length. Example: 36" of Louver at start of run = LS36)		
Louver start or end of run (6" increments, 12" min.)		LS_ or LE_
Louver both ends of run (12" increments, split equally) (Runs over 8ft must contain min. 24" of louver)		LB_
Louver middle of run (12" increments) (12" Louver increments. Min 24" of lens or faceplate, split equally.)		LM_
Fully Louvered (LC shielding only, length matches run length) (2.5" plate required on each end for grid options)		LF
Lumen Output		
LUMEN OUTPUT OPTIONS (specify value for each distribution. Example: 625DN-1000DL)	250 Lumens per foot (Consult factory for available options)	250
	375 Lumens per foot	375
	500 Lumens per foot	500
	625 Lumens per foot	625
	750 Lumens per foot	750
	875 Lumens per foot	875
	1000 Lumens per foot	1000
Direct Lensed Distribution (625 lumens max. Use 1000L for SC & LC options.) (Consult Factory for LH1 & D11 with BC & FC for 375 & 500 lm/ft.)		___DN
Direct Louvered Distribution		___DL
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		
Single Circuit		1C
Dual Circuit (FC & BC shielding only)		2C
Voltage		
120/277 UNV Volt		UNV
347 Volt (LD1 driver only)		347
Control System & Dimming Level		
0-10V - 10% Dimming		LD1
0-10V - 1% Dimming		L11
Lutron Hi-Lume EcoSystem (LDEI) -		LH1
1% Dimming		
DALI 1% Dimming		D11
Ceiling Configuration		
Std. 15/16" Lay-in or Regular		G1 or T1
Std. 9/16" Lay-in or Regular		G2 or T2
9/16" Slot-tee Regular		G3
Tall 15/16" Lay-in or Regular		G4 or T4
Tall 9/16" Lay-in or Regular		G5 or T5
Node 9/16" Regular		T6
No Flange for specialty ceilings (Ex. slat, panel, cloud systems.)		NF
Mud-in Trimless		XFF
Non-Drywall Hard Surface		XFN
Hard Surface, Wood		XFW
Distribution		
Narrow Flood		NFL
Flood 1		FL1
Flood 2		FL2
Wide Flood		WFL
Louvered Mixing Chamber		LMC
Factory Options		
Chicago Plenum		CP
Emergency Circuit		_EC
Emergency Battery Pack (5' min. length with LC shielding. Consult factory for integrated options.)		_EM
6' Flex Whip		FW
Louver Finish		
Matte Black		BK
Black Specular		BS
Clear Diffuse		CD
Clear Specular		CS
Matte White		WH
Housing & Faceplate Finish		
Matte Black		BK
Titanium Silver		TS
Matte White		WH
Luminaire Length		
Total luminaire/row length (12" increments; 6" increments for LF. 4" minimum run length.)		__ft __in

TAILORED LOUVER CONFIGURATION EXAMPLES

Alternating louver & lens/faceplate starting with louver (ACS)

12"

12"

12"

examples:

24"

24"

24"

12ft run = 24" louver sections, 36" lens/faceplate sections (ACS24-3S, 12ft run)

24"

24"

24"

12ft run = 24" louver sections, 16" lens/faceplate sections (ACS24-4S, 12ft run)

24"

24"

24"

10ft run = 24" louver sections, 24" lens/faceplate sections (ACS24-3S, 10ft run)

30"

30"

30"

12ft run = 30" louver sections, 27" lens/faceplate sections (ACS30-3S, 12ft run)

18"

18"

18"

10ft run = 18" louver sections, 16" lens/faceplate sections (ACS18-4S,10ft run)

Alternating louver & lens/faceplate starting with lens/faceplate (AFS)

12"

12"

examples:

24"

24"

24"

12ft run = 24" louver sections, 32" lens/faceplate sections (AFS24-2S, 12ft run)

24"

24"

24"

12ft run = 24" louver sections, 18" lens/faceplate sections (AFS24-3S, 12ft run)

24"

24"

24"

10ft run = 24" louver sections, 24" lens/faceplate sections (AFS24-2S, 10ft run)

30"

30"

30"

12ft run = 30" louver sections, 28" lens/faceplate sections (AFS30-2S, 12ft run)

18"

18"

18"

10ft run = 18" louver sections, 16.5" lens/faceplate sections (AFS18-3S, 10ft run)

SPECIFICATIONS

See page 2

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

PERFORMANCE CHARTS

See page 4

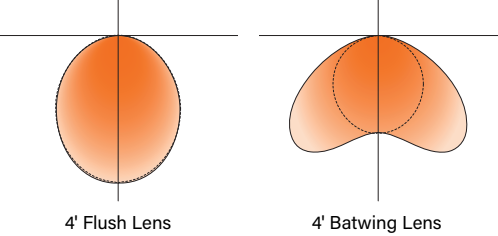
TAILORED CONFIGURATION ORDERING		
Luminaire Series		FSM1C
Seem 1 with louver		FSM1C
Shielding		
Batwing lens + Louver		BC
Flush lens + Louver		FC
Solid faceplate + Louver		SC
Louver Configuration		
(Specify length of each louver segment in 6" increments, 12" minimum*, and the total number of louver segments in the run. Example: 24" louver segments, 4 segments total = ACS24-4S *Consult factory for 6" segment availability.)		
Alternating louver & lens/faceplate starting with louver (Min. 3 segments per run.)		ACS_-_S
Alternating louver & lens/faceplate starting with lens/faceplate (Min. 2 segments per run.)		AFS_-_S
Lumen Output		
(Consult factory for available lumen outputs based on specified Louver Configuration)		
LUMEN OUTPUT OPTIONS (specify value for each distribution. Example: 625DN-1000DL)	250 Lumens per foot	250
	375 Lumens per foot	375
	500 Lumens per foot	500
	625 Lumens per foot	625
	750 Lumens per foot	750
	875 Lumens per foot	875
1000 Lumens per foot		1000
Direct Lensed Distribution		___DN
(625 lumens max. Use '0DN' for SC & LC options.) (Consult Factory for LH1 & D11 with BC & FC for 375 & 500 lm/ft.)		
Direct Louvered Distribution		___DL
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		
Single Circuit		1C
Dual Circuit (FC & BC shielding only)		2C
Voltage		
120/277 UNV Volt		UNV
347 Volt (LD1 driver only)		347
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
Ceiling Configuration		
Std. 15/16" Lay-in or Tegular		G1 or T1
Std. 9/16" Lay-in or Tegular		G2 or T2
9/16" Slot-tee Tegular		G3
Tall 15/16" Lay-in or Tegular		G4 or T4
Tall 9/16" Lay-in or Tegular		G5 or T5
Node 9/16" Tegular		T6
No Flange for specialty ceilings (Ex. slat, panel, cloud systems.)		NF
Mud-in Trimless		XFF
Non-Drywall Hard Surface		XFN
Hard Surface, Wood		XFW
Distribution		
Narrow Flood		NFL
Flood 1		FL1
Flood 2		FL2
Wide Flood		WFL
Louvered Mixing Chamber		LMC
Factory Options		
Chicago Plenum		CP
Emergency Circuit		_EC
Emergency Battery Pack (Consult facotry for available options.)		_EM
6' Flex Whip		FW
Louver Finish		
Matte Black		BK
Black Specular		BS
Clear Diffuse		CD
Clear Specular		CS
Matte White		WH
Housing & Faceplate Finish		
Matte Black		BK
Titanium Silver		TS
Matte White		WH
Luminaire Length		
Total luminaire/row length (12" increments; 6" increments for L.F. 4' minimum run length.)		_ft _in

4' PERFORMANCE CHART - LENSED DISTRIBUTIONS

Shielding	Lumens per Foot	Delivered Lumens	Tested System Watts	LPW
Batwing/ Flush Lens	250LF	1000	10	98
	375LF	1500	15	104
	500LF	2000	19	106
	625LF	2500	25	103

Based on 3500k, 4' length. Lumen output may vary +/- 5%. Actual wattage may vary +/- 5%.

PERFORMANCE CURVES

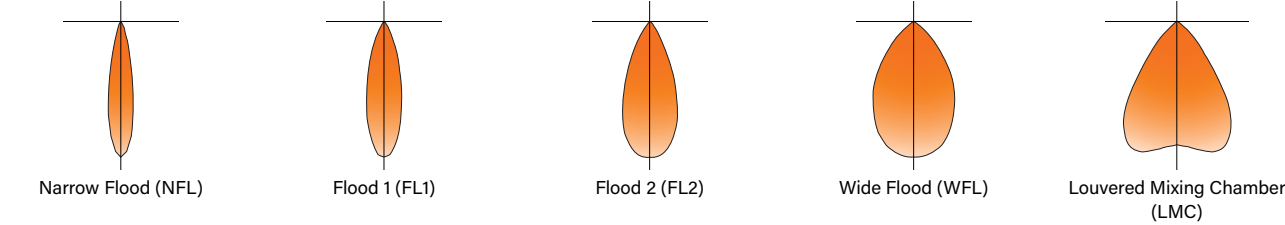


4' PERFORMANCE CHART - LOUVERED DISTRIBUTIONS

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

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

PERFORMANCE CURVES



SEEM 1 LOUVER LUMEN MULTIPLIER TABLE

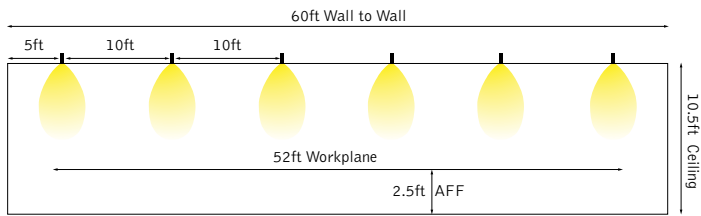
Lens Color Temperature & CRI		Louver Color Temperature & CRI		Louver Distribution	
Color Temperature	Multiplier	Color Temperature	Multiplier	Distribution	Multiplier
2700K, 80+ CRI [27K]	0.96	2700K, 80+ CRI [27K]	0.95	Narrow Flood [NFL]	1.34
2700K, 90+ CRI [927K]	0.79	2700K, 90+ CRI [927K]	0.80	Flood 1 [FL1]	1.14
3000K, 80+ CRI [30K]	1.00	3000K, 80+ CRI [30K]	0.97	Flood 2 [FL2]	1.21
3000K, 90+ CRI [930K]	0.82	3000K, 90+ CRI [930K]	0.83	Wide Flood [WFL]	1.00
3500K, 80+ CRI [35K]	1.00	3500K, 80+ CRI [35K]	1.00	Louvered Mixing Chamber [LMC]	0.97
3500K, 90+ CRI [935K]	0.84	3500K, 90+ CRI [935K]	0.85		
4000K, 80+ CRI [40K]	1.01	4000K, 80+ CRI [40K]	1.03	Louver Finish	
4000K, 90+ CRI [940K]	0.86	4000K, 90+ CRI [940K]	0.87	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

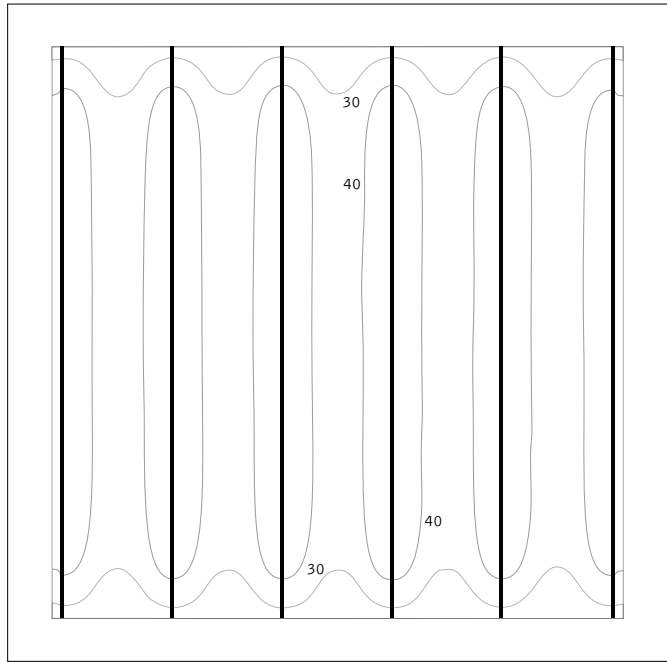
Formula: (Lumen Output Value) x (Color Temperature & CRI) x (Distribution) x (Finish)

Louwer Example: FSM1CBS-1000DL-930K-NFL-BS
(1000) x (0.83) x (1.34) x (1.00) ≈ 1112.2 lm (estimated delivered lumens)

SEEM 1 LOUVER APPLICATION EXAMPLE - FULLY LOUVERED



Workplane Illuminance



Average Illuminance = 38 fc

Lighting Power Density (LPD) = 0.38

Seem 1 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.

Calculation Details

Room Area:	60ft x 60ft
Calculation Area:	52ft x 52ft
Ceiling Height:	10.5ft
Luminaire 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 Distribution	LPD (Watts/ft²)	Workplane	
Ceiling Height	On-center Spacing	Lumens/ft			Average Footcandles	Uniformity (avg. to min.)
9FT	8FT	250LF	WFL	0.34	33.5	2.00
			LMC		32.4	1.94
10.5FT			WFL		32.7	1.94
			LMC		31.6	1.94
10.5FT	10FT	375LF	WFL	0.38	38.7	1.99
			LMC		37.2	1.96