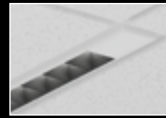
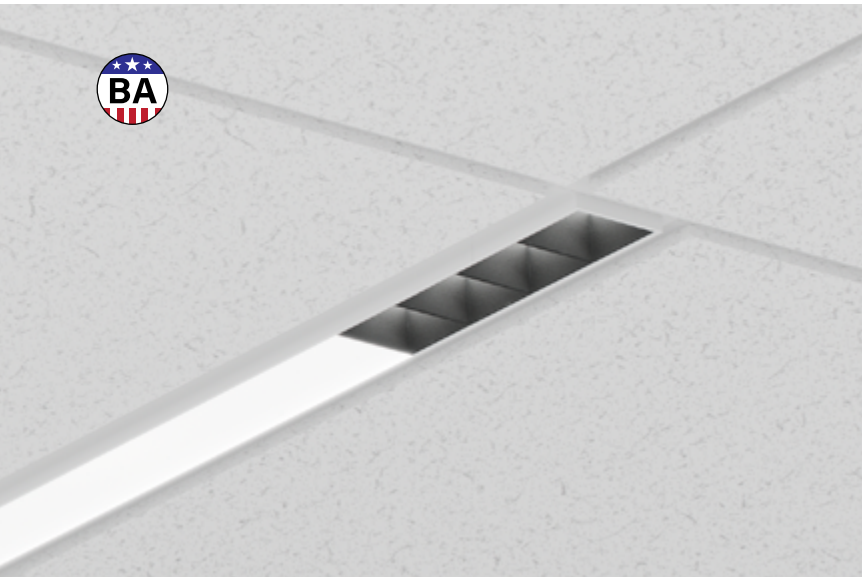


Seem® 1 Louver

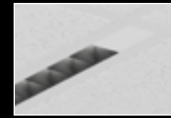
LED RECESSED WITH ID+ TECHNOLOGY



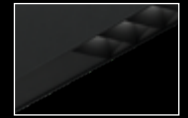
FOCAL POINT®



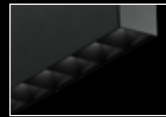
Regular Tile



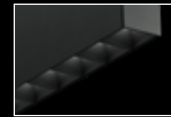
Lay-in Tile



Solid Faceplate + Louver



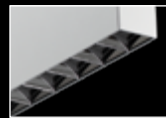
Black Specular Louver



Black Matte Louver



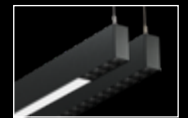
Clear Diffuse Louver



Clear Specular Louver

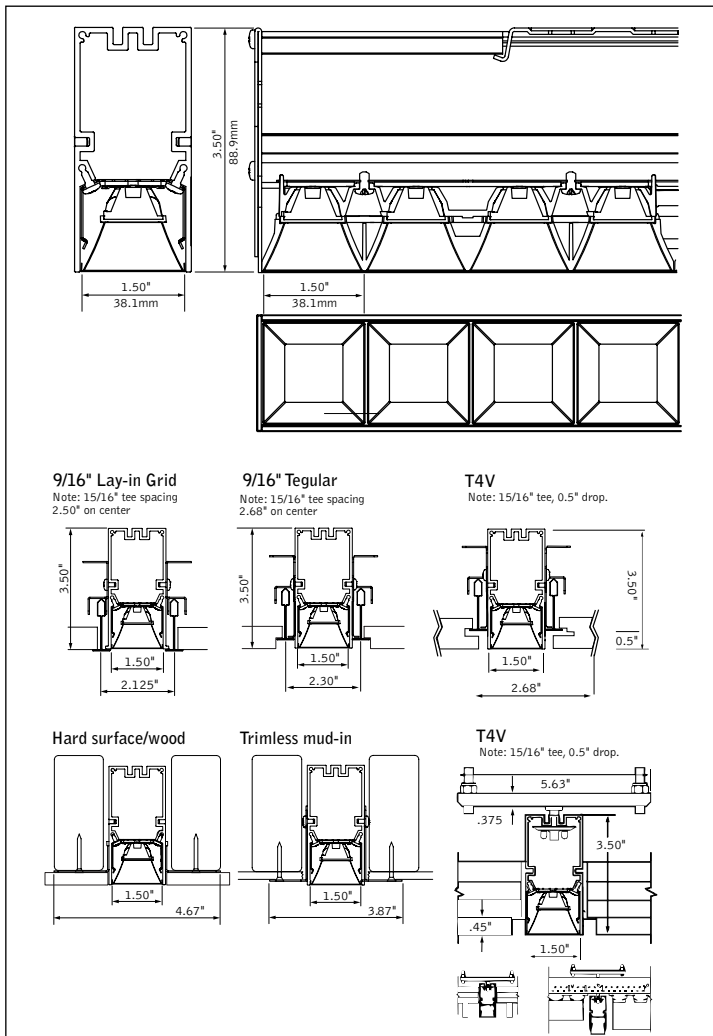


Matte White Louver



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.

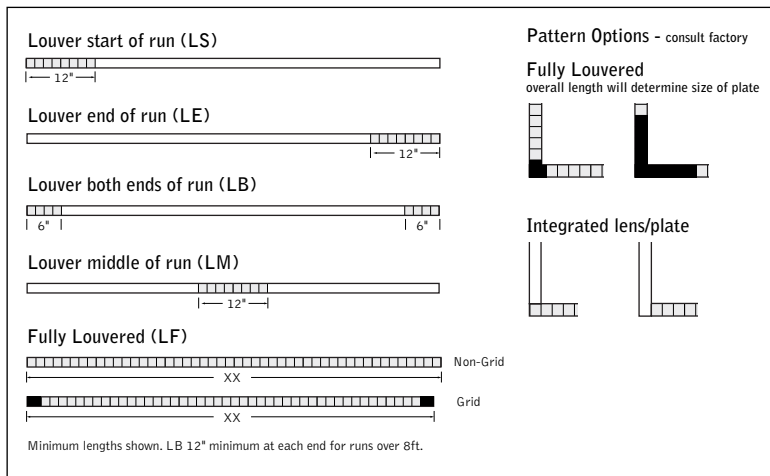
Individual units and continuous runs in 1" lensed or faceplate increments, and 6" louvered increments.

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

Seem 1 with louver FSM1C

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) LB_
 Louver middle of run (12" increments) LM_
 Fully Louvered (12" Louver increments. Min 24" of lens or faceplate, split equally.) LF
 Fully Louvered (LC shielding only, length matches run length) LF
 (2.5" plate required on each end for grid options)

Lumen Output

LUMEN OUTPUT OPTIONS (specify value for each distribution. Example: 625DN-1000DL)		
250 Lumens per foot	250	
(Consult factory for available options)		
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 "0DN" 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 (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 NF
 (Ex. slat, panel, cloud systems.)
 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 (Not available with FW) CP
 Emergency Circuit _EC
 Emergency Battery Pack _EM
 (Consult factory for integrated options.)
 6' Flex Whip (Not available with CP) 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 ___ft_in
 (12" increments; 6" increments for LF. 4" minimum run length.)

TAILORED LOUVER CONFIGURATION EXAMPLES

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

examples:

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

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

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

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

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

examples:

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

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

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

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

Luminaire Series

Seem 1 with louver FSM1C

Shielding

Batwing lens + Louver BC
 Flush lens + Louver FC
 Solid faceplate + Louver SC

Louwer 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)

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

LUMEN OUTPUT OPTIONS
 (Specify value for each distribution. Example: 625DN-1000DL)

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) - 1% Dimming LH1
 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 NF
 (Ex. slat, panel, cloud systems.)

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 (Not available with FW) CP
 Emergency Circuit _EC
 Emergency Battery Pack _EM
 (Consult factory for available options.)
 6' Flex Whip (Not available with CP) FW

Louwer Finish

Matte Black BK
 Black Specular BS
 Clear Diffuse CD
 Clear Specular CS
 Matte White WH

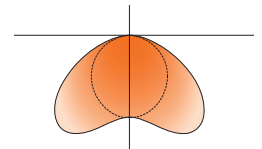
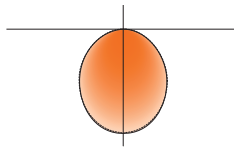
Housing & Faceplate Finish

Matte Black BK
 Titanium Silver TS
 Matte White WH

Luminaire Length

Total luminaire/row length _____ ft_in
 (12" increments; 6" increments for LF. 4" minimum run length.)

4' PERFORMANCE CHART - LENSED DISTRIBUTIONS



Lumens per Foot	Delivered Lumens	Tested System Watts	4' Flush Lens LPW	Tested System Watts	4' Batwing Lens LPW
250LF	1000	9	110	9	115
375LF	1500	13	119	12	125
500LF	2000	16	121	16	128
625LF	2500	20	122	19	129

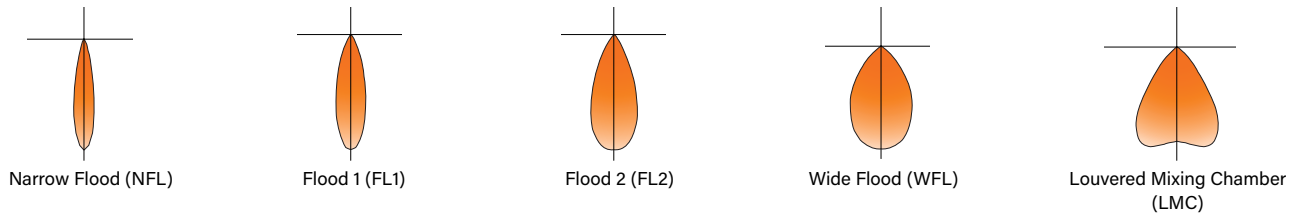
Based on 3500K, 4' length. Lumen output may vary +/- 5%. Actual wattage may vary +/- 5%.

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

Color Temperature	Multiplier
2700K, 80+ CRI [27K]	0.96
2700K, 90+ CRI [927K]	0.79
3000K, 80+ CRI [30K]	1.00
3000K, 90+ CRI [930K]	0.82
3500K, 80+ CRI [35K]	1.00
3500K, 90+ CRI [935K]	0.84
4000K, 80+ CRI [40K]	1.01
4000K, 90+ CRI [940K]	0.86

Louver Color Temperature & CRI

Color Temperature	Multiplier
2700K, 80+ CRI [27K]	0.95
2700K, 90+ CRI [927K]	0.80
3000K, 80+ CRI [30K]	0.97
3000K, 90+ CRI [930K]	0.83
3500K, 80+ CRI [35K]	1.00
3500K, 90+ CRI [935K]	0.85
4000K, 80+ CRI [40K]	1.03
4000K, 90+ CRI [940K]	0.87

Louver 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

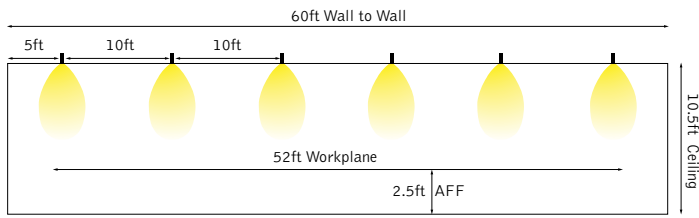
Color	Multiplier
Matte Black [BK]	1.00
Black Specular [BS]	1.00
Clear Diffuse [CD]	1.07
Clear Specular [CS]	1.10
Matte White [WH]	1.11

How To Use Lumen Multipliers

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

Louver Example: FSM1CBS-1000DL-930K-NFL-BS
 $(1000) \times (0.83) \times (1.34) \times (1.00) \approx 1112.2$ lm (estimated delivered lumens)

SEEM 1 LOUVER APPLICATION EXAMPLE - FULLY LOUVERED

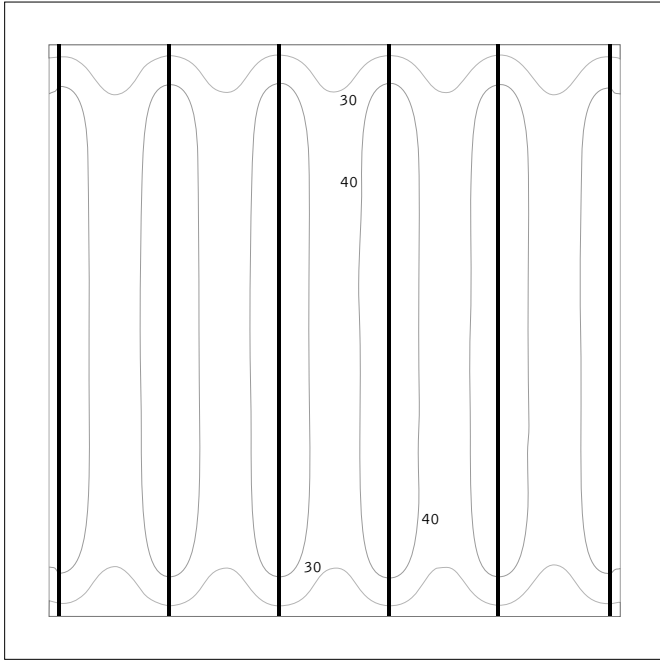


Average Illuminance = 38 fc

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.

Workplane Illuminance



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/ft ²)	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