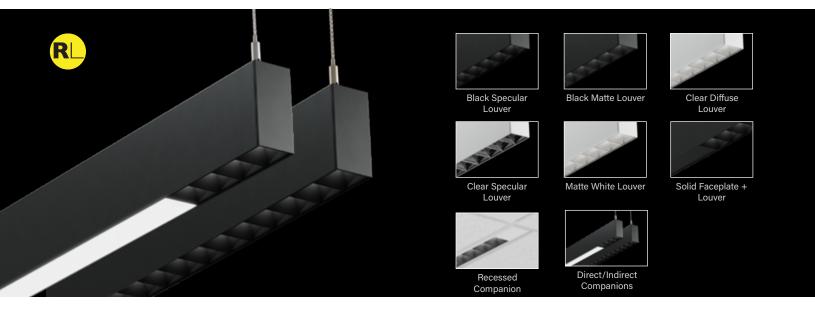
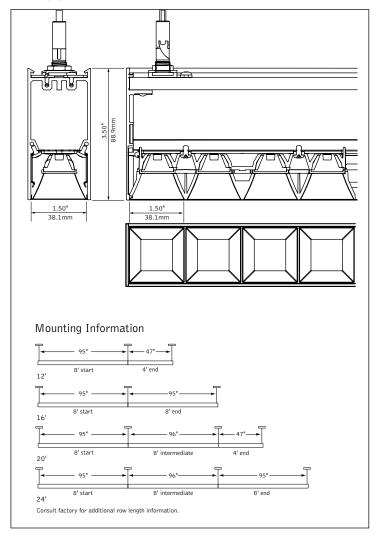
Seem® 1 Louver

LED DIRECT WITH ID+ TECHNOLOGY





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.

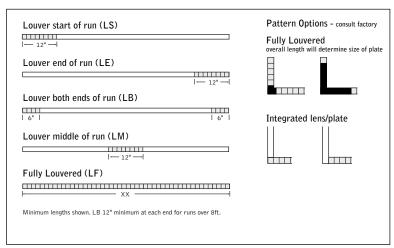
Diversity of louver finishes to tailor how the light is perceived and experienced, from nearly invisible light sources with a striking transition to warmly illuminated louver cells with a smooth transition.

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.

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. Cast aluminum end caps. 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.

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

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

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.

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.

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

STANDARD CONFIGURATION ORDERING FSM1CS **Luminaire Series** Seem 1 with louver FSM1CS 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 Louver middle of run (12" increments) (12" Louver increments, Min 24" of lens or faceplate, split equally, $\label{eq:fully Louvered} \textit{(LC shielding only, length matches run length)} \qquad LF$ **Lumen Output** 250 Lumens per foot 375 Lumens per foot 375 or each dis 625DN-1 500 Lumens per foot 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 lum (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** DI **Color Temperature** 27K or 927K 2700K, 80CRI or 90 CRI 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) 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 Mounting 24" Cable Suspension C24 48" Cable Suspension C48_ 96" Cable Suspension C96_ (Specify canopy color White (WH), Black (BK) or Titanium Silver (TS). Example: C24WH.)
(Specify one of the following in place of "c"

J - for 2" canopies at non-feed locations.
CS - for sloped ceiling applications.) Surface Mount SM Distribution Narrow Flood NFL Flood 1 FL1 Flood 2 FL2 Wide Flood WFL Louvered Mixing Chamber LMC **Factory Options** Black Cord BKCD **Emergency Circuit** _EC **Emergency Battery Pack** _EM (4' min. length with LC shielding. Consul **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

OPTIONS

LUMEN OUTPUT

fixture:	project:
II/LUI Ci	projecti

TAILORED LOUVER CONFIGURATION EXAMPLES

12" —	12"-		— 12" —			
12 -	1—12 —	1	- 12 -			
examples:						
				ш		
24" —			I 24"			24" —
12ft run = 24'	louver sections	s, 36" lens/fa	ceplate sections	(ACS24-3S, 12f	ft run)	
24" —		24" -		24"	4	24"
	louver sections	: 16" lens/fa	centate sections	(ACS24-4S, 12t	ft run)	
		,	,	,		
						п
24" —		1	- 24"I	1	24" —	=
10ft run = 24'	louver sections	s, 24" lens/fa	ceplate sections	(ACS24-3S, 10	ft run)	
30"	——		30" -		1	30"
12ft run = 30'	louver sections	s, 27" lens/fa	ceplate sections	(ACS30-3S, 12f	t run)	
I—18" ——	1-1	.8" ———	I 18"	-	18" —	⊣
10ft run = 18'	Innuar cartions					
	Touver sections	s, 16° iens/ta	ceplate sections	(ACS18-4S,10ft	run)	
ernating louve	er & lens/facepl	ate starting	with lens/facepla	·	run)	
	er & lens/facepl			·	: run)	
ternating louve	er & lens/facepl	ate starting		·	: run)	
ernating louve	er & lens/facepl ──	ate starting		ate (AFS)		
ternating louve	er & lens/facepl	ate starting		ate (AFS)	- 24"	
ernating louve	er & lens/facepl	ate starting	with lens/facepla	ate (AFS)	- 24°	
ernating louve	er & lens/facepl	ate starting	with lens/facepla	ate (AFS)	- 24°	
ernating louve	er & lens/facepl	ate starting	with lens/facepla	(AFS24-2S, 12)	- 24*	
examples:	er & lens/facepl	ate starting	with lens/facepla	(AFS24-2S, 12i	- 24* ———————————————————————————————————	
examples:	er & lens/facepl	ate starting	with lens/facepla	(AFS24-2S, 12)	- 24* ———————————————————————————————————	
examples:	er & lens/facepl	ate starting	with lens/facepla	(AFS24-2S, 12i	- 24* ———————————————————————————————————	
examples:	er & lens/facepl	ate starting	with lens/facepla	(AFS24-2S, 124 (AFS24-3S, 124	- 24* ———————————————————————————————————	
ernating louve	er & lens/facepl	ate starting	with lens/facepla	(AFS24-2S, 124 (AFS24-3S, 124	24* ————————————————————————————————————	
ernating louve	er & lens/facepl	ate starting	with lens/facepla	(AFS24-2S, 124 (AFS24-3S, 124	24* ————————————————————————————————————	
ernating louve	er & lens/facepl	ate starting	with lens/facepla	(AFS24-2S, 124 (AFS24-3S, 124	24* ————————————————————————————————————	
ernating louve	er & lens/facepl	ate starting	with lens/facepla	(AFS24-2S, 124 (AFS24-3S, 124 (AFS24-2S, 101	24' ————————————————————————————————————	24*
12ft run = 24ft 10ft run =	er & lens/facepl	ate starting	with lens/facepla	(AFS24-2S, 12) (AFS24-3S, 12) (AFS24-2S, 10)	24' ft run) 2 ft run)	24*
12ft run = 24ft 10ft run =	er & lens/facepl	ate starting	with lens/facepla	(AFS24-2S, 124 (AFS24-3S, 124 (AFS24-2S, 101	24' ft run) 2 ft run)	24*
examples: 12ft run = 24' 12ft run = 24' 10ft run = 24'	louver sections	ate starting	with lens/facepla	(AFS24-2S, 12f	- 24' ft run)	24*
ernating louve	er & lens/facepl	ate starting	with lens/facepla	(AFS24-2S, 12) (AFS24-3S, 12) (AFS24-2S, 10)	- 24' ft run)	24*

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

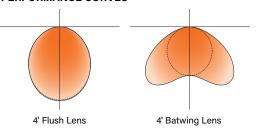
TAILORED CONFIGURATION	N ORDERING	
Luminaire Series		FSM1CS
Seem 1 with louver	FSM1CS	
Shielding		
Batwing lens + Louver	BC	
Flush lens + Louver	FC	
Solid faceplate + Louver	SC	
Louver Configuration (Specify length of each louver segment in 6" increments,		
12" minimum*, and the total number of louver segments in the run. Example: 24" louver segments, 4 segments total = ACS24-4S		
*Consult factory for 6" segment availability.)		
Alternating louver & lens/faceplate	ACC C	
starting with louver (Min. 3 segments per run.)	ACSS	
Alternating louver & lens/faceplate starting with lens/faceplate (Min. 2 segments per run.)	AFSS	
·	/ " OO	
Lumen Output o		
based on specified Louver Configuration)		
250 Lumens per foot	250 375	
375 Lumens per foot 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 option.) (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	
Mounting		
24" Cable Suspension	C24	
48" Cable Suspension	C48	
96" Cable Suspension	C96	
(Specify canopy color White (WH), Black (BK) or Titanium Silver (TS). Example: C24WH.)		
(Specify one of the following in place of "C" J - for 2" canopies at non-feed locations.)		
Surface Mount	SM	
Distribution		
Narrow Flood	NFL	
Flood 1	FL1	
Flood 2	FL2	
Wide Flood	WFL LMC	
Louvered Mixing Chamber Factory Options	LIVIC	
Black Cord	BKCD	
Emergency Circuit	_EC	
Emergency Battery Pack	_EM	
(Consult factory for available options.)		
Louver Finish Matte Black	BK	
Black Specular	BS	
Clear Diffuse	CD	
Clear Specular Matte White	CS WH	
	VVII	
Housing & Faceplate Finish Matte Black	ВК	
Titanium Silver	TS	
Matte White	WH	
Luminaire Length		
Total luminaire/row length (12" increments. 4' minimum run length.)	_ft _in	

4' PERFORMANCE CHART - LENSED DISTRIBUTIONS

Shielding	Lumens per Foot	Delivered Lumens	Tested System Watts	LPW
	250LF	1000	10	98
Batwing/	375LF	1500	15	104
Flush Lens	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

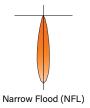


4' PERFORMANCE CHART - LOUVERED DISTRIBUTIONS

Distribution	Lumens per Foot	Tested System Watts	LPW
	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' 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

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) x (0.83) x (1.34) x (1.00) \approx 1112.2 lm (estimated delivered lumens)

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

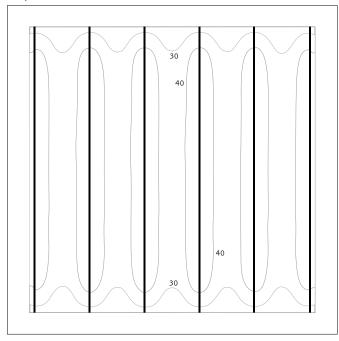
Louver Finish

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

SEEM 1 LOUVER APPLICATION EXAMPLE - FULLY LOUVERED

5ft 10ft 10ft 10ft 10.5ft AFF 10.5ft AFF 2.5ft Workplane 2.5ft AFF

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.

Calcluation Details

Room Area: 60ft x 60ft Calculation Area: 52ft x 52ft Ceiling Height: 12.5ft 10.5ft AFF Luminaire Height: 10ft OCS Luminiare Spacing: 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/ft²)	Average Footcandles	Uniformity (avg. to min.)								
1164	11ft 9ft		05015	WFL		33.1	2.00							
IIIL		8ft		LMC	0.04	32.0	1.95							
			811	811	811	8IL ZSULF	OIL	OIL	OIL	250LF	WFL	0.34	31.7	2.03
10 F f	10 F#						LMC		32.0	1.95				
12,511	12.5ft 10.5ft —		27ELE	WFL	0.20	38.1	1.98							
	10ft 375LF	LMC	0.38	36.8	1.96									