

● **PROJECT INFORMATION**

Project:

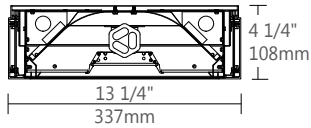
Type:

Notes:

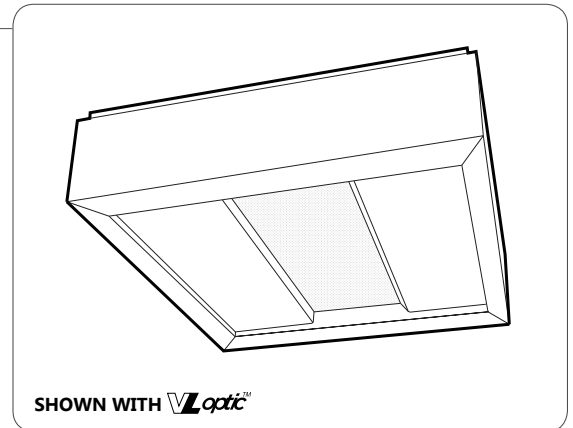
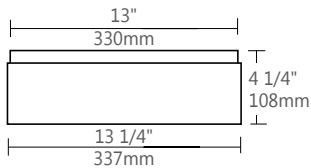
Approved by: Date:

● **DIMENSIONS**

SECTION VIEW



SIDE VIEW



● **ORDERING CODE**

1	2	3	4	5	6	7	8	9	10	11	12	13	14
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● **PRODUCT SPECIFICATIONS**

1 PRODUCT ID	2 SIZE	3 CENTER OPTIC	4 LAMP	5 LAMP CONFIGURATION	6 FINISH
PO plano	11 1'X1'	VL vl optic S satin lens	F18TT TT18W (2G11) CFTR18 CFTR18 CFTR26 CFTR26	1 1 lamp ⁽¹⁾ 2 2 lamps	W white BLK black C custom

(1) Not available for CFTR18 & 26

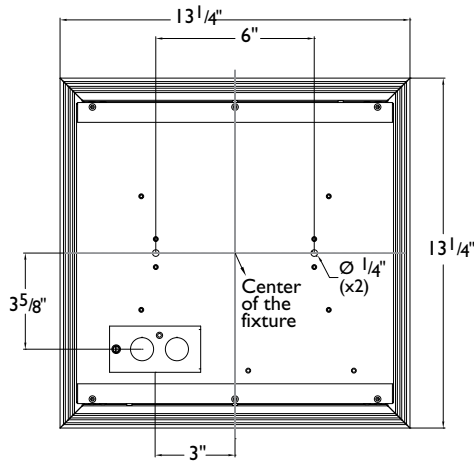
7 VOLTAGE	8 BALLAST	9 CIRCUITS	10 MOUNTING/SUSPENSION	11 BATTERY (OPTIONAL)
120 120V 277 277V 347 347V ⁽²⁾ UNV universal	D dimming E instant start ⁽³⁾ ERS program start +M master +S satellite BI bi-level dimming	1 1 regular 2 2 regular 2A/B 2 alternating +E(#) emergency section +NL(#) night light section +GTD(#) generator transfer device	SM surface mount	B# remote battery pack only

(2) Please consult factory (3) Available with T8 lamp only

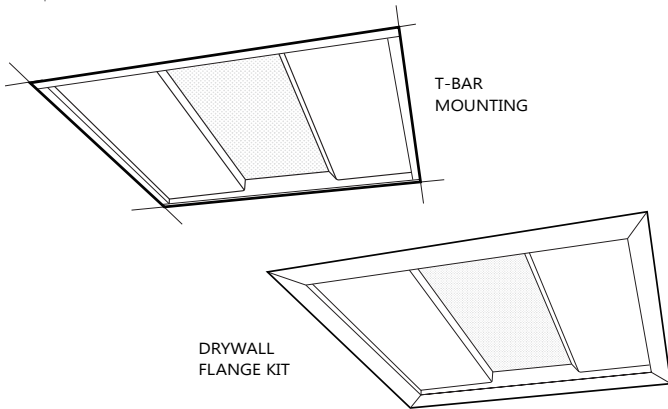
12 OTHER (OPTIONAL)	13 IC CONTROLS (OPTIONAL)	14 CUSTOM (OPTIONAL)	SPECIFY BALLAST NAME (if needed)
F fuse FW(#) flex whip (6' std)	DS# daylight sensor OS# occupancy sensor DS+OS# daylight+occupancy sensor DOS# daylight&occupancy sensor <small>See integrated controls guide for further details</small>	C custom <small>Please specify</small>	SPECIFY BATTERY NAME (if needed)

● **CEILING SYSTEM**

SURFACE HOLES POSITION



RECESSED OPTION



i Installation sheets for all mounting options are available at: www.axislighting.com

● **CONSTRUCTION**

Housing	Die formed cold rolled sheet steel (20 gauge)
Central Lens Housing Reflectors	Extruded aluminum (0.060" nominal) Die formed cold rolled sheet steel (22 gauge)
Interior Brackets	Die formed cold rolled sheet steel (20 gauge)
Surface Mount Kit	Extruded aluminum (0.070" nominal)

● **WEIGHT**

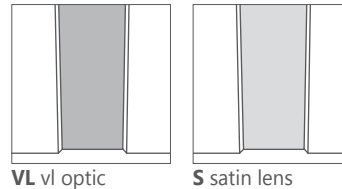
Surface mount	11 lbs / 5.0 kg
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● **OPTICAL SYSTEM**

PLANO optical system includes two side lenses and one center lens. Center lens has an extruded aluminum frame and can be opened to replace the lamps. Side lenses are 0.08" PMMA satin blend.

There are two available options for center lens:

- VL^{opti}™**: PMMA Precision formed microconical structure (VL Optic) 92 percent transmissive that cuts off glare above 55 degrees.
- Satin**: PMMA blend satin lens (0.12" nominal) 68% transmissive.




● **FINISH**

Highly reflective, matte powder coat white paint for high efficiency. Matte texture to diffuse glare and lamp image on the surface within the optical chamber exterior. Custom finishes are also available.

● **ELECTRICAL**

Ballast	Electronic IS, Electronic Rapid Start, Dimming (0-10V, Line, EcoSystem, DALI), BI-level dimming With preinstalled ballast disconnect as per NEC & CEC
Emergency	Emergency battery pack or emergency circuit
Voltage	120V, 277V, 347V, UNV

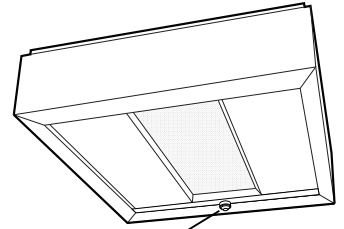
● **APPROVALS**

Certified to UL and CUL standards 
 Suitable for damp locations.

● **INTEGRATED CONTROL OPTIONS**

PLANO luminaires allow the use of integrated controls such as daylight sensors (DS), occupancy sensors (OS), individual daylight sensors and occupancy sensors (DS+OS), and combination daylight/occupancy sensors (DOS). These options can be seamlessly integrated into our luminaires. The control system could be used to optimize the lighting of the space by reducing energy consumption through daylight harvesting and occupancy, thereby improving the overall interior environment and allowing for LEED credits.

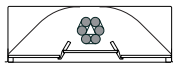
- Consult factory for other options.
- Refer to IC brochure for more information.



SENSORS	BRAND	Model	TYPE	CODE	COMPATIBLE DIMMING BALLAST
Daylight Sensor (DS)	Wattstopper	FD-301	Daylight	WD	0-10V
Occupancy Sensor (OS)	Wattstopper	FS-205	PIR Occupancy	WP1	Programmed Rapid Start
		FS-355	PIR Occupancy	WP2	Programmed Rapid Start
		FS-155	PIR Occupancy	WP3	Programmed Rapid Start
		FS-505	Ultrasonic Occupancy	WU1	Programmed Rapid Start
		FS-505C	Ultrasonic Occupancy	WU2	Programmed Rapid Start
		FM-105	High Frequency Occupancy	WH	Programmed Rapid Start
Daylight & Occupancy Sensors (DOS)	Philips	Actilume	Daylight & PIR Occupancy	PA	DALI

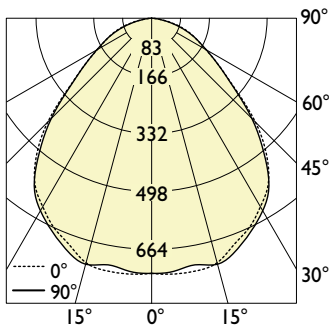
● **PHOTOMETRIC DATA**

2 CTFR 18W



with **Optic™**

PHOTOMETRIC CURVE



Test Lamp: 2xCTFR 18W
 IES FILE: PO11-VL-CTFR18W-2.ies

Efficiency: 71.8%

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles					Zonal Lumens
	0	22.5	45	67.5	90	
0	734	734	734	734	734	
5	739	748	744	747	731	40
15	728	721	722	720	733	172
25	665	669	675	684	677	289
35	585	590	594	582	589	361
45	422	425	420	412	408	344
55	236	241	240	237	235	238
65	142	143	143	143	142	158
75	75	71	71	72	68	93
85	13	14	14	13	12	28
90	1	1	2	2	1	

LUMINANCE DATA (CD/M²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	4977	4447	4761
55	3088	2746	3041
65	2168	1837	2136
75	1428	1082	1261
85	349	261	313

COEFFICIENTS OF UTILIZATION (%)

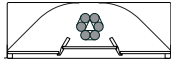
Ceiling	80			70			50				
	70	50	30	10	70	50	30	10	50	30	10
0	86	86	86	86	84	84	84	84	80	80	80
1	79	76	74	71	77	75	72	70	72	70	68
2	73	68	63	60	71	66	62	59	64	60	58
3	67	60	55	51	65	59	54	50	57	53	49
4	62	54	48	44	60	53	48	44	51	47	43
5	57	49	43	38	56	48	42	38	47	42	38
6	53	44	38	34	52	44	38	34	42	37	34
7	49	40	34	30	48	40	34	30	39	34	30
8	46	37	31	27	45	37	31	27	36	31	27
9	43	34	28	25	42	34	28	25	33	28	25
10	41	32	26	23	40	31	26	22	31	26	22

Based on floor reflectance of 20

i All IES files are available for download at www.axislighting.com

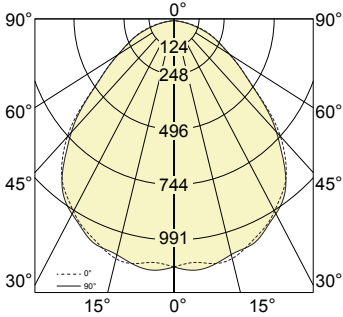
PHOTOMETRIC DATA

2 CFTR 26W



with **VL_{opti}**

PHOTOMETRIC CURVE



Test Lamp: 2xCTFR 26W
 IES FILE: PO11-VL-CFTR26W-2

Efficiency: 77.1%

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles					Zonal Lumens
	0	22.5	45	67.5	90	
0	1097	1097	1097	1097	1097	
5	1081	1077	1089	1061	1115	58
15	1083	1092	1058	1075	1067	257
25	994	999	1015	1022	1000	431
35	868	870	883	870	870	536
45	632	638	639	620	613	514
55	358	358	360	354	357	357
65	212	216	215	213	214	237
75	112	107	107	109	102	140
85	21	21	21	20	19	43
90	2	3	2	2	2	

COEFFICIENTS OF UTILIZATION (%)

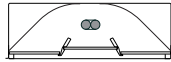
Ceiling	80				70				50			
	70	50	30	10	70	50	30	10	50	30	10	
Wall												
0	85	85	85	85	83	83	83	83	80	80	80	
1	79	76	73	70	77	74	72	69	71	69	67	
2	73	67	63	58	71	66	62	57	64	60	56	
3	67	60	55	49	65	59	54	48	57	53	48	
4	62	54	48	42	60	53	47	42	51	46	41	
5	57	48	43	36	56	48	42	36	46	41	36	
6	53	44	38	32	52	43	38	32	42	37	32	
7	49	40	34	28	48	40	34	28	38	33	28	
8	46	37	31	25	45	36	31	25	35	30	25	
9	43	34	28	23	42	33	28	23	33	28	23	
10	40	31	26	21	40	31	26	21	30	25	21	

Based on floor reflectance of 20

LUMINANCE DATA (CD/M²)

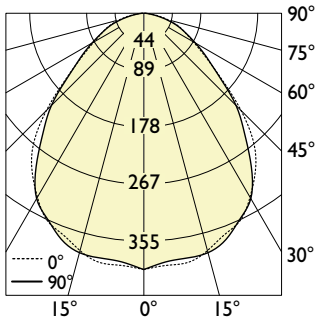
Vertical Angle	Horizontal Angles		
	0	45	90
45	7445	6764	7153
55	4686	4110	4612
65	3230	2763	3213
75	2120	1621	1883
85	547	411	476

1 F18TT



with **VL_{opti}**

PHOTOMETRIC CURVE



Test Lamp: 1xF18TT
 IES FILE: PO11-VL-F18TT-1.ies

Efficiency: 73.8%

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles					Zonal Lumens
	0	22.5	45	67.5	90	
0	400	400	400	400	400	
5	395	397	399	393	390	21
15	383	386	384	389	387	92
25	357	354	356	359	355	153
35	303	303	301	296	293	186
45	215	212	209	202	203	171
55	117	120	121	120	120	120
65	71	72	73	73	71	80
75	39	37	37	37	34	48
85	8	8	7	7	7	15
90	1	1	1	1	1	

COEFFICIENTS OF UTILIZATION (%)

Ceiling	80				70				50			
	70	50	30	10	70	50	30	10	50	30	10	
Wall												
0	88	88	88	88	86	86	86	86	82	82	82	
1	82	78	76	73	80	77	74	72	74	72	70	
2	75	70	65	61	73	68	64	61	66	62	59	
3	69	62	57	52	67	61	56	52	59	55	51	
4	64	56	50	45	62	55	49	45	53	48	44	
5	59	50	44	40	58	50	44	40	48	43	39	
6	55	46	40	35	54	45	39	35	44	39	35	
7	51	42	36	32	50	41	35	31	40	35	31	
8	48	38	32	28	47	38	32	28	37	32	28	
9	45	35	30	26	44	35	29	26	34	29	26	
10	42	33	27	27	41	32	27	23	32	27	23	

Based on floor reflectance of 20

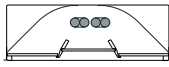
LUMINANCE DATA (CD/M²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	2529	2211	2373
55	1528	1387	1548
65	1083	937	1071
75	733	566	633
85	201	138	165

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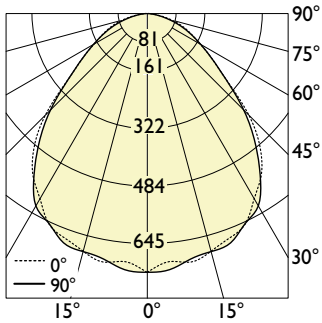
● **PHOTOMETRIC DATA**

2 F18TT



with **V-Optic™**

PHOTOMETRIC CURVE



Test Lamp: 2x F18TT
 IES FILE: PO11-VL-F18TT-2.ies

Efficiency: 68.3%

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles					Zonal Lumens
	0	22.5	45	67.5	90	
0	725	725	725	725	725	
5	698	719	703	709	721	38
15	690	684	699	698	691	165
25	651	646	654	663	650	278
35	557	558	560	555	552	343
45	403	397	393	384	382	322
55	222	229	230	226	222	226
65	136	137	136	134	133	150
75	72	69	68	67	61	89
85	14	14	13	13	12	27
90	1	1	1	2	2	

LUMINANCE DATA (CD/M²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	4749	4163	4460
55	2910	2633	2874
65	2073	1752	1994
75	1373	1037	1133
85	368	259	296

COEFFICIENTS OF UTILIZATION (%)

Ceiling	80				70				50			
	70	50	30	10	70	50	30	10	50	30	10	
Wall												
0	82	82	82	82	80	80	80	80	76	76	76	
1	75	73	70	68	74	71	69	67	68	66	65	
2	69	64	60	57	68	63	59	56	61	58	55	
3	64	57	52	48	62	56	52	48	54	50	47	
4	59	52	46	42	58	51	46	42	49	45	41	
5	55	46	41	37	53	46	40	36	44	40	36	
6	51	42	36	32	49	42	36	32	40	36	32	
7	47	39	33	29	46	38	33	29	37	32	29	
8	44	35	30	26	43	35	30	26	34	29	26	
9	41	33	27	24	40	32	27	24	31	27	23	
10	39	30	25	22	38	30	25	21	29	25	21	

Based on floor reflectance of 20

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