

● **PROJECT INFORMATION**

Project:

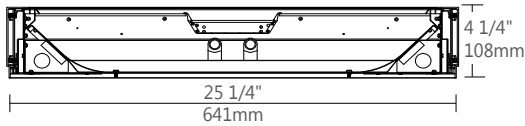
Notes:

Type:

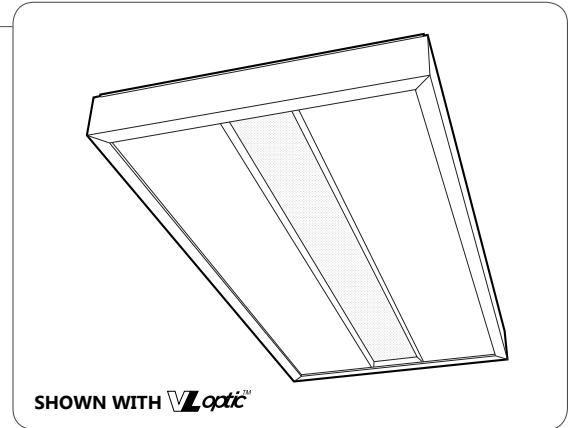
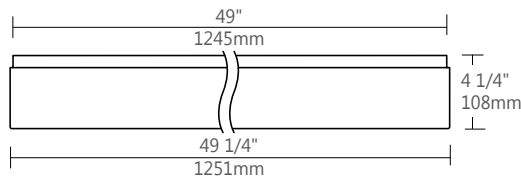
Approved by:  Date:

● **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	24 2'X4'	VL vl optic S satin lens	T5 T5 T5HO T5HO T8 T8	1 1 lamp 2 2 lamps 3 3 lamps	W white BLK black C custom

7 VOLTAGE	8 BALLAST	9 CIRCUITS	10 MOUNTING/SUSPENSION	11 BATTERY (OPTIONAL)
120 120V 277 277V 347 347V <sup>(1)</sup> UNV universal	D dimming E instant start <sup>(2)</sup> 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# battery pack

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

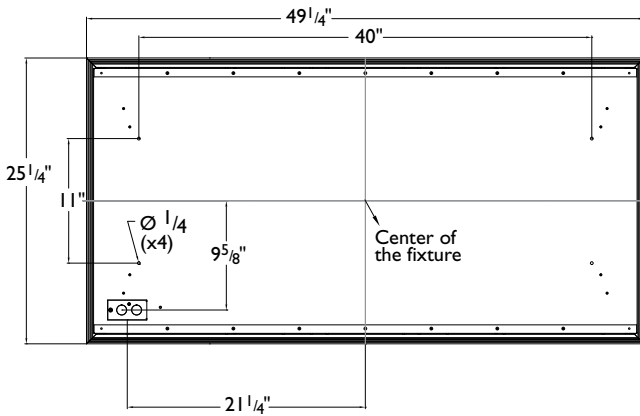
12 OTHER (OPTIONAL)	13 IC CONTROLS (OPTIONAL)	14 CUSTOM (OPTIONAL)
F fuse FW(#) flex whip (6' std)	DS# daylight sensor OS# occupancy sensor DS+OS# daylight+occupancy sensor DOS# daylight&occupancy sensor See integrated controls guide for further details	C custom Please specify

**SPECIFY BALLAST NAME (if needed)**

**SPECIFY BATTERY NAME (if needed)**

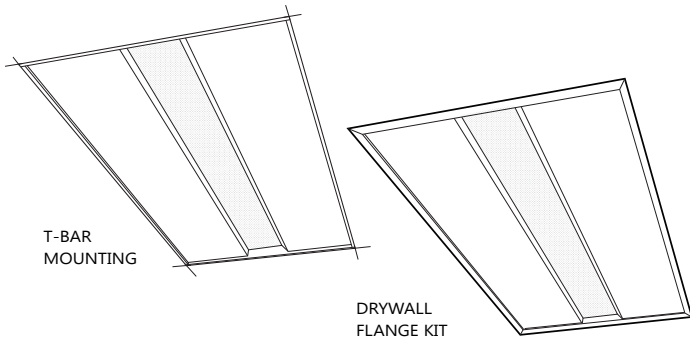
● **CEILING SYSTEM**

**MOUNTING HOLES POSITION**



**RECESSED OPTION**

For more details see recessed specification sheets available at: [www.axislighting.com](http://www.axislighting.com)



**i** Installation sheets for all mounting options are available at: [www.axislighting.com](http://www.axislighting.com)

● **CONSTRUCTION**

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

● **WEIGHT**

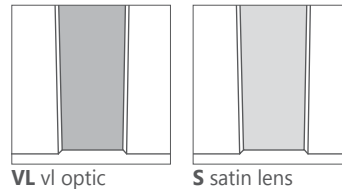
<b>Surface Mount</b>	42 lbs / 18.9 kg
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● **OPTICAL SYSTEM**

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<sup>opti</sup>**: 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 yet has a matte texture to diffuse glare and lamp image on the surfaces within the optical chamber. Custom finishes are also available (exterior only).

● **ELECTRICAL**

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

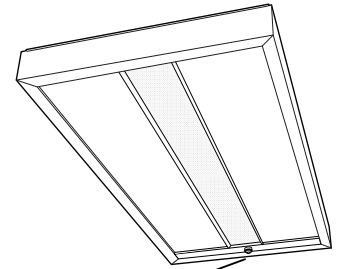
● **APPROVALS**

Certified to UL and CUL standards  Suitable for damp locations.

**INTEGRATED CONTROL OPTIONS**

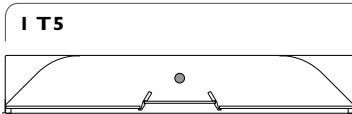
PLANO luminaires allow the use of integrated controls such as daylight sensors (DS), occupancy sensors (OS), individual daylight sensors and occupancy sensors (DS+OS), and combination daylight/occupancy sensors (DOS). These options can be seamlessly integrated into our luminaires. The control system 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.



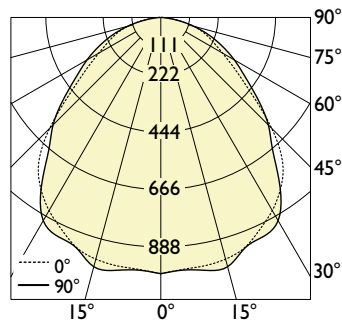
SENSORS	BRAND	Model	TYPE	CODE	COMPATIBLE DIMMING BALLAST
Daylight Sensor (DS)	Lutron	EC-DIR-WH	Daylight	LD	EcoSystem
	Wattstopper	FD-301	Daylight	WD	0-10V
	Philips	Luxsense	Daylight	PL	0-10V
Occupancy Sensor (OS)	Wattstopper	FS-205	PIR Occupancy	WP1	Programmed Rapid Start
		FS-355	PIR Occupancy	WP2	Programmed 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 or 0-10V

**PHOTOMETRIC DATA**



with **VL optic**

**PHOTOMETRIC CURVE**



**Test Lamp: 1xF28T5**  
 IES FILE: PO24-VL-T5-1.ies

**Efficiency: 86.7%**

**i** All IES files are available for download at: [www.axislighting.com](http://www.axislighting.com)

**CANDELA DISTRIBUTION**

Vertical Angle	Horizontal Angles					Zonal Lumens
	0	22.5	45	67.5	90	
0	991	991	991	991	991	
5	976	965	993	981	993	53
15	948	946	949	953	950	232
25	863	872	893	908	908	392
35	734	742	715	689	674	501
45	458	458	470	478	489	482
55	276	287	306	321	329	366
65	180	183	194	201	198	267
75	74	68	71	73	69	169
85	27	23	24	23	21	51
90	2	2	2	2	2	

**COEFFICIENTS OF UTILIZATION (%)**

Ceiling	80			70			50				
	70	50	30	10	70	50	30	10	50	30	10
Wall	70	50	30	10	70	50	30	10	50	30	10
0	104	104	104	104	101	101	101	101	97	97	97
1	95	92	88	85	93	90	87	84	86	83	81
2	87	81	75	71	85	79	74	70	76	72	68
3	80	72	65	60	78	70	64	59	68	62	58
4	74	64	57	51	72	63	56	51	61	55	50
5	68	57	50	44	66	56	49	44	55	49	44
6	63	52	45	39	61	51	44	39	50	43	39
7	59	47	40	35	57	47	40	35	45	39	34
8	55	43	36	31	53	43	36	31	42	35	31
9	51	40	33	28	50	39	33	28	38	32	28
10	48	37	30	26	47	36	30	26	36	30	26

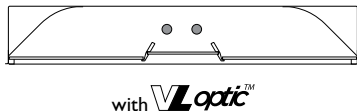
Based on floor reflectance of 20

**LUMINANCE DATA (CD/M<sup>2</sup>)**

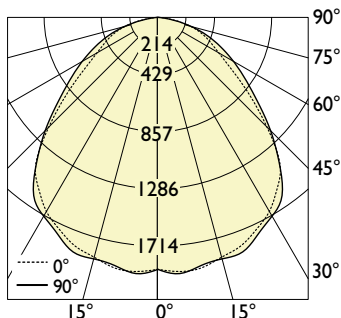
Vertical Angle	Horizontal Angles		
	0	45	90
45	1088	972	977
55	752	727	764
65	615	586	624
75	533	430	428
85	218	125	112

**PHOTOMETRIC DATA**

**2 T5**



**PHOTOMETRIC CURVE**



**Test Lamp: 2xF28T5**  
 IES FILE: PO24-VL-T5-2.ies

**Efficiency: 85.3%**

**CANDELA DISTRIBUTION**

Vertical Angle	Horizontal Angles					Zonal Lumens
	0	22.5	45	67.5	90	
0	1888	1888	1888	1888	1888	
5	1913	1886	1922	1913	1929	103
15	1862	1871	1872	1894	1875	446
25	1756	1777	1785	1794	1792	760
35	1567	1572	1589	1616	1631	966
45	1163	1182	1200	1195	1202	965
55	679	728	757	796	805	738
65	438	473	503	525	525	535
75	257	245	265	270	264	334
85	54	44	47	45	42	101
90	5	4	3	4	4	

**COEFFICIENTS OF UTILIZATION (%)**

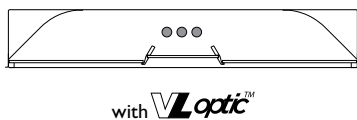
Ceiling	80				70				50			
	70	50	30	10	70	50	30	10	50	30	10	
Wall												
0	102	102	102	102	99	99	99	99	95	95	95	
1	94	90	87	84	91	88	85	82	84	82	80	
2	86	79	71	69	84	78	73	68	75	70	67	
3	79	70	64	58	77	69	63	58	66	61	57	
4	72	63	55	50	70	61	55	40	59	54	49	
5	67	56	49	43	65	55	48	43	53	47	43	
6	62	51	43	38	60	50	43	38	48	42	38	
7	57	46	39	34	56	46	39	34	44	38	34	
8	53	42	35	30	52	42	35	30	41	34	30	
9	50	39	32	27	49	38	32	27	37	31	27	
10	47	36	29	25	46	35	29	25	35	29	25	

Based on floor reflectance of 20

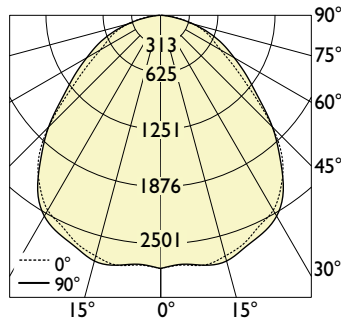
**LUMINANCE DATA (CD/M<sup>2</sup>)**

Vertical Angle	Horizontal Angles		
	0	45	90
45	2083	1976	1994
55	1453	1443	1551
65	1208	1181	1252
75	1042	843	858
85	432	244	223

**3 T5**



**PHOTOMETRIC CURVE**



**Test Lamp: 3xF28T5**  
 IES FILE: PO24-VL-T5-3.ies

**Efficiency: 82.4%**

**CANDELA DISTRIBUTION**

Vertical Angle	Horizontal Angles					Zonal Lumens
	0	22.5	45	67.5	90	
0	2771	2771	2771	2771	2771	
5	2744	2764	2814	2759	2735	149
15	2727	2737	2719	2766	2784	652
25	2547	2584	2609	2639	2634	1107
35	2294	2322	2354	2378	2339	1424
45	1730	1730	1721	1722	1729	1401
55	986	1039	1082	1128	1145	1055
65	626	668	712	737	753	759
75	366	360	379	383	371	477
85	75	65	64	64	58	143
90	6	5	5	5	4	

**COEFFICIENTS OF UTILIZATION (%)**

Ceiling	80				70				50			
	70	50	30	10	70	50	30	10	50	30	10	
Wall												
0	98	98	98	98	96	96	96	96	92	92	92	
1	91	87	84	81	88	85	82	80	82	79	77	
2	83	77	71	67	81	75	70	66	72	68	65	
3	76	68	62	57	74	67	61	56	64	59	55	
4	70	61	54	48	68	60	53	48	57	52	48	
5	65	54	47	42	63	54	47	42	52	46	41	
6	60	49	42	37	58	48	42	37	47	41	37	
7	56	45	38	33	54	44	38	33	43	37	33	
8	52	41	34	30	51	40	34	29	39	33	29	
9	48	38	31	27	47	37	31	27	36	31	26	
10	45	35	28	24	44	34	28	24	34	28	24	

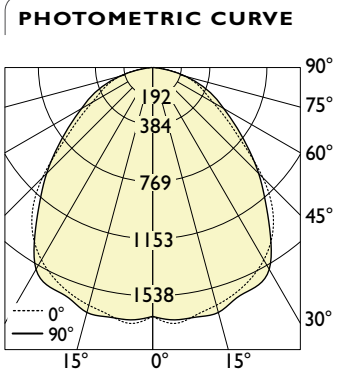
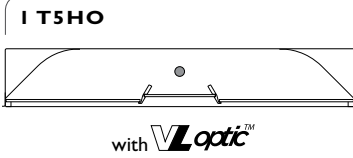
Based on floor reflectance of 20

**LUMINANCE DATA (CD/M<sup>2</sup>)**

Vertical Angle	Horizontal Angles		
	0	45	90
45	3099	2833	2870
55	2108	2062	2207
65	1724	1673	1793
75	1480	1208	1206
85	604	331	309

**i** All IES files are available for download at: [www.axislighting.com](http://www.axislighting.com)

● **PHOTOMETRIC DATA**



**Test Lamp: 1xF54T5HO**  
 IES FILE: PO24-VL-T5HO-1.ies

**Efficiency: 86.7%**

**CANDELA DISTRIBUTION**

Vertical Angle	Horizontal Angles					Zonal Lumens
	0	22.5	45	67.5	90	
0	1676	1676	1676	1676	1676	
5	1730	1729	1679	1711	1706	92
15	1657	1675	1658	1687	1708	398
25	1567	1585	1603	1619	1632	679
35	1399	1415	1427	1409	1382	864
45	1050	1044	1018	1022	1009	831
55	610	621	658	664	681	632
65	383	404	429	449	453	459
75	228	218	230	239	229	292
85	45	38	41	39	36	88
90	5	4	3	3	3	

**COEFFICIENTS OF UTILIZATION (%)**

Ceiling	80			70			50				
	70	50	30	10	70	50	30	10	50	30	10
Wall	70	50	30	10	70	50	30	10	50	30	10
0	104	104	104	104	101	101	101	101	97	97	97
1	95	92	88	85	93	90	87	84	86	83	81
2	87	81	75	71	85	79	74	70	76	72	68
3	80	72	65	60	78	70	64	59	68	62	58
4	74	64	57	51	72	63	56	51	61	55	50
5	68	57	50	44	66	56	49	44	55	49	44
6	63	52	45	39	61	51	44	39	50	43	39
7	59	47	40	35	57	47	40	35	45	39	34
8	55	43	36	31	53	43	36	31	42	35	31
9	51	40	33	28	50	39	33	28	38	32	28
10	48	37	30	26	47	36	30	26	36	30	26

Based on floor reflectance of 20

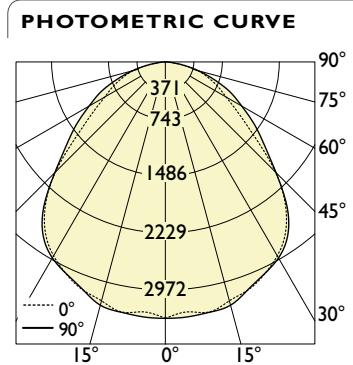
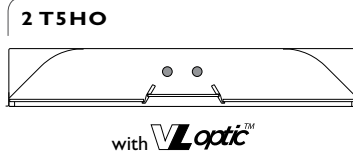
**LUMINANCE DATA (CD/M<sup>2</sup>)**

Vertical Angle	Horizontal Angles		
	0	45	90
45	1880	1677	1675
55	1304	1255	1312
65	1056	1007	1080
75	921	732	745
85	361	211	196

**COEFFICIENTS OF UTILIZATION (%)**

Ceiling	80			70			50				
	70	50	30	10	70	50	30	10	50	30	10
Wall	70	50	30	10	70	50	30	10	50	30	10
0	102	102	102	102	99	99	99	99	95	95	95
1	94	90	87	84	91	88	85	82	84	82	80
2	86	79	74	69	84	78	73	68	75	70	67
3	79	70	63	58	76	69	63	58	66	61	57
4	72	62	55	50	70	61	55	50	59	53	49
5	67	56	49	43	65	55	48	43	53	47	43
6	62	51	43	38	60	50	43	38	48	42	38
7	57	46	39	34	56	46	39	34	44	38	34
8	53	42	35	30	52	42	35	30	41	34	30
9	50	39	32	27	49	38	32	27	37	31	27
10	47	36	29	25	46	35	29	25	35	29	25

Based on floor reflectance of 20



**Test Lamp: 2xF54T5HO**  
 IES FILE: PO24-VL-T5HO-2.ies

**Efficiency: 85.3%**

**CANDELA DISTRIBUTION**

Vertical Angle	Horizontal Angles					Zonal Lumens
	0	22.5	45	67.5	90	
0	3343	3343	3343	3343	3343	
5	3271	3298	3217	3257	3337	176
15	3224	3251	3236	3231	3284	771
25	3056	3066	3087	3081	3052	1309
35	2729	2696	2737	2771	2779	1666
45	2033	2031	2073	2051	2042	1664
55	1165	1241	1310	1378	1416	1270
65	754	808	861	905	936	923
75	443	426	461	470	448	577
85	88	80	79	76	69	172
90	9	7	6	6	6	

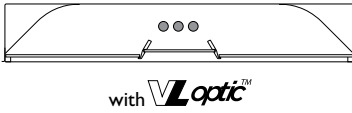
**LUMINANCE DATA (CD/M<sup>2</sup>)**

Vertical Angle	Horizontal Angles		
	0	45	90
45	3642	3413	3388
55	2492	2497	2728
65	2077	2023	2230
75	1794	1468	1456
85	713	408	372

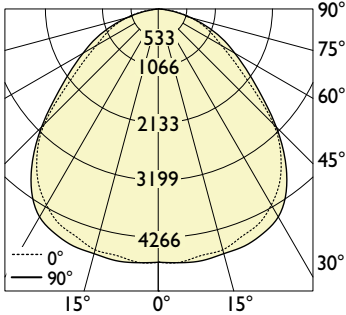
**i** All IES files are available for download at: [www.axislighting.com](http://www.axislighting.com)

● **PHOTOMETRIC DATA**

**3 T5HO**



**PHOTOMETRIC CURVE**



Test Lamp: 3x F54T5HO  
 IES FILE: PO24-VL-T5HO-3.ies

**Efficiency: 82.4%**

**CANDELA DISTRIBUTION**

Vertical Angle	Horizontal Angles					Zonal Lumens
	0	22.5	45	67.5	90	
0	4723	4723	4723	4723	4723	
5	4789	4775	4788	4787	4755	257
15	4786	4713	4799	4786	4756	1125
25	4609	4598	4626	4658	4597	1911
35	4254	4290	4320	4385	4445	2461
45	3606	3636	3618	3506	3475	2418
55	2248	2279	2337	2391	2405	1812
65	1325	1414	1520	1545	1624	1305
75	876	892	947	977	963	819
85	358	331	345	356	328	247
90	11	10	7	9	5	

**COEFFICIENTS OF UTILIZATION (%)**

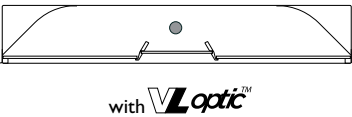
Ceiling	80			70			50					
	70	50	30	10	70	50	30	10	50	30	10	
Wall												
0	98	98	98	98	96	96	96	96	92	92	92	
1	91	87	84	81	88	85	82	80	82	79	77	
2	83	77	71	67	81	75	70	66	72	68	65	
3	76	68	62	57	74	67	61	56	64	59	55	
4	70	61	54	49	68	60	53	48	58	52	48	
5	65	55	47	42	63	54	47	42	52	46	42	
6	60	49	42	37	58	49	42	37	47	41	37	
7	56	45	38	33	54	44	38	33	43	37	33	
8	52	41	34	30	51	41	34	30	39	34	29	
9	49	38	31	27	47	37	31	27	36	31	27	
10	46	35	29	24	44	34	28	24	34	28	24	

Based on floor reflectance of 20

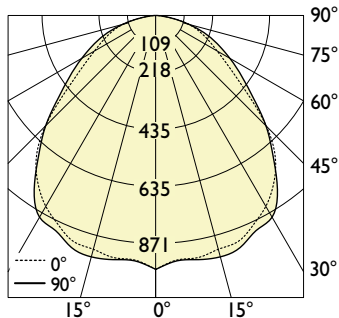
**LUMINANCE DATA (CD/M<sup>2</sup>)**

Vertical Angle	Horizontal Angles		
	0	45	90
45	5339	4913	4926
55	3622	3544	3811
65	2951	2847	3107
75	2581	2063	2016
85	1000	593	555

**1 T8**



**PHOTOMETRIC CURVE**



Test Lamp: 1x F32T8  
 IES FILE: PO24-VL-T8-1.ies

**Efficiency: 85.7%**

**CANDELA DISTRIBUTION**

Vertical Angle	Horizontal Angles					Zonal Lumens
	0	22.5	45	67.5	90	
0	971	971	971	971	971	
5	938	955	980	960	941	52
15	925	945	954	947	955	225
25	883	898	906	924	908	384
35	786	797	811	812	812	491
45	599	591	583	592	597	479
55	342	362	381	391	400	366
65	222	236	249	261	263	267
75	132	126	132	137	132	169
85	26	23	24	22	20	51
90	2	2	2	2	2	

**COEFFICIENTS OF UTILIZATION (%)**

Ceiling	80			70			50					
	70	50	30	10	70	50	30	10	50	30	10	
Wall												
0	102	102	102	102	100	100	100	100	95	95	95	
1	94	90	87	84	92	88	85	83	85	82	80	
2	86	80	74	70	84	78	73	69	75	71	67	
3	79	70	64	59	77	69	63	58	67	61	57	
4	73	63	56	50	71	62	55	50	60	54	49	
5	67	57	49	44	65	56	49	43	54	48	43	
6	62	51	44	38	60	50	43	38	49	43	38	
7	58	47	39	34	56	46	39	34	45	38	34	
8	54	43	35	31	52	42	35	31	41	35	30	
9	50	39	32	28	49	39	32	28	38	32	27	
10	47	36	30	25	46	36	29	25	35	29	25	

Based on floor reflectance of 20

**LUMINANCE DATA (CD/M<sup>2</sup>)**

Vertical Angle	Horizontal Angles		
	0	45	90
45	1073	960	990
55	732	727	771
65	611	585	627
75	535	420	430
85	208	122	109

**i** All IES files are available for download at: [www.axislighting.com](http://www.axislighting.com)

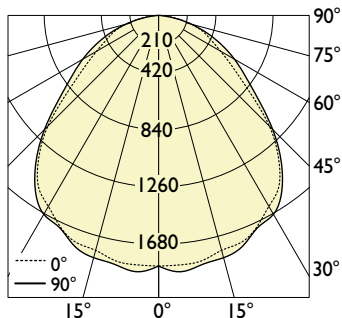
**PHOTOMETRIC DATA**

**2 T8**



with **VL<sub>optic</sub>**

**PHOTOMETRIC CURVE**



**Test Lamp: 2xF32T8**  
 IES FILE: PO24-VL-T8-2.ies

**Efficiency: 82.9%**

**CANDELA DISTRIBUTION**

Vertical Angle	Horizontal Angles					Zonal Lumens
	0	22.5	45	67.5	90	
0	1841	1841	1841	1841	1841	
5	1839	1857	1828	1834	1890	99
15	1786	1800	1806	1826	1842	432
25	1711	1721	1747	1745	1720	737
35	1538	1528	1557	1576	1577	943
45	1151	1151	1164	1172	1185	943
55	667	694	734	768	778	715
65	422	454	487	498	510	517
75	250	241	254	260	250	323
85	50	43	44	43	39	97
90	4	4	3	4	3	

**COEFFICIENTS OF UTILIZATION (%)**

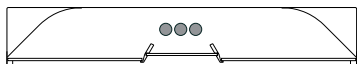
Ceiling	80				70				50			
	70	50	30	10	70	50	30	10	50	30	10	
Wall	70	50	30	10	70	50	30	10	50	30	10	
0	99	99	99	99	96	96	96	96	92	92	92	
1	91	87	84	81	89	85	82	80	82	80	77	
2	83	77	72	67	81	75	70	66	72	68	65	
3	76	68	62	57	74	67	61	56	64	59	55	
4	70	61	54	49	68	60	53	48	58	52	48	
5	65	55	47	42	63	54	47	42	52	46	41	
6	60	49	42	37	58	49	42	37	47	41	37	
7	56	45	38	33	54	44	38	33	43	37	33	
8	52	41	34	30	51	40	34	29	39	33	29	
9	49	38	31	27	47	37	31	27	36	31	26	
10	46	35	28	24	45	34	28	24	34	28	24	

Based on floor reflectance of 20

**LUMINANCE DATA (CD/M<sup>2</sup>)**

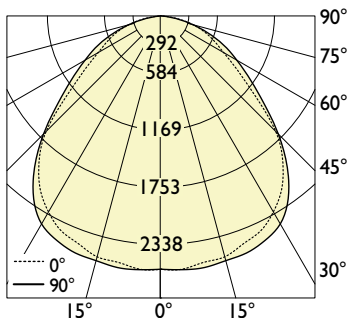
Vertical Angle	Horizontal Angles		
	0	45	90
45	2062	1917	1966
55	1426	1400	1499
65	1164	1144	1214
75	1011	810	813
85	407	230	209

**3 T8**



with **VL<sub>optic</sub>**

**PHOTOMETRIC CURVE**



**Test Lamp: 3xF32T8**  
 IES FILE: PO24-VL-T8-3.ies

**Efficiency: 79.3%**

**CANDELA DISTRIBUTION**

Vertical Angle	Horizontal Angles					Zonal Lumens
	0	22.5	45	67.5	90	
0	2591	2591	2591	2591	2591	
5	2601	2630	2630	2613	2606	141
15	2552	2543	2613	2596	2592	613
25	2429	2454	2514	2524	2536	1053
35	2166	2215	2268	2287	2283	1364
45	1673	1661	1700	1704	1709	1365
55	963	1009	1059	1096	1118	1032
65	612	655	699	710	728	740
75	353	343	362	359	349	456
85	71	62	63	59	56	138
90	5	5	5	5	4	

**COEFFICIENTS OF UTILIZATION (%)**

Ceiling	80				70				50			
	70	50	30	10	70	50	30	10	50	30	10	
Wall	70	50	30	10	70	50	30	10	50	30	10	
0	95	95	95	95	92	92	92	92	88	88	88	
1	87	84	81	78	85	82	79	77	79	76	74	
2	80	74	69	64	78	72	68	64	69	66	62	
3	73	65	59	54	71	64	58	54	62	57	53	
4	67	58	52	47	66	57	51	46	55	50	46	
5	62	52	45	40	60	51	45	40	50	44	40	
6	57	47	40	36	56	47	40	35	45	39	35	
7	53	43	36	32	52	42	36	31	41	35	31	
8	50	39	33	28	49	39	33	28	38	32	28	
9	47	36	30	26	45	36	30	25	35	29	25	
10	44	33	27	23	43	33	27	23	32	27	23	

Based on floor reflectance of 20

**LUMINANCE DATA (CD/M<sup>2</sup>)**

Vertical Angle	Horizontal Angles		
	0	45	90
45	2996	2799	2837
55	2059	2019	2154
65	1686	1641	1734
75	1428	1153	1133
85	571	326	300

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