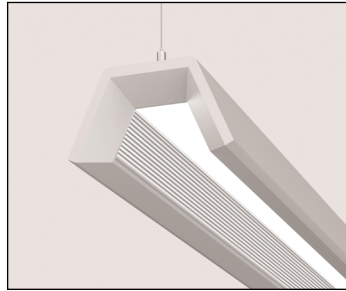


MSO - microgroove spotless lens



MAL - microgroove aluminum

Project _____

Type _____

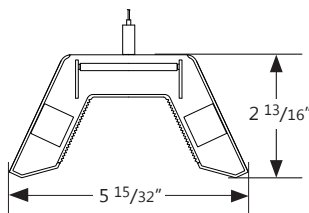
Notes _____

PERFORMANCE PER LINEAR FOOT AT 3500K

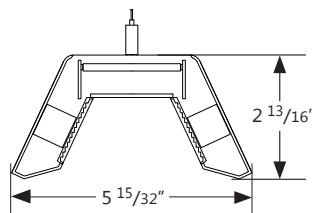
DISTRIBUTION	NOMINAL LUMEN OUTPUT		INPUT WATTS	EFFICACY	SHIELDING
	UP	DOWN			
50up/50down at 1400 lm/ft	757 lm/ft	639 lm/ft	11.7 w/ft	120 lm/w	MSO
65up/35down at 1400 lm/ft	998 lm/ft	400 lm/ft	10.5 w/ft	135 lm/w	MSO
50up/50down at 1400 lm/ft	674 lm/ft	722 lm/ft	12.5 w/ft	111 lm/w	MAL
65up/35down at 1400 lm/ft	1004 lm/ft	395 lm/ft	11.1 w/ft	127 lm/w	MAL

* Based on a 4 foot luminaire using one driver
Please consult factory for custom lumen output and wattage

MSO - microgroove spotless lens



MAL - microgroove aluminum



Ordering Guide

ZELED											
PRODUCT ID		LIGHT ENGINE		NOM. LUMENS/FT		CRI	COLOR TEMP.	SHIELDING			
ZELED	Pendant LED	SL 50/50	surroundlite 50%up/50%down-direct indirect	500	500 lm/ft - Minimum	80	80 CRI	27	2700 K	MSO	microgroove spotless lens
		SL 65/35	surroundlite 65%up/35%down-semi indirect	1200	1200 lm/ft - Maximum for 90 CRI	90	90 CRI	30	3000 K	MAL	microgroove aluminum *
				1400	1400 lm/ft - Maximum for 80 CRI			35	3500 K		
								40	4000 K		
				Applies to both UP&DOWN. Consult factory for other lumen packages.		Applies to both UP & DOWN.		Applies to both UP & DOWN.		*Standard white	



SHIELDING FINISH (OPT.)	FIXTURE LENGTH	FINISH	VOLTAGE	DRIVER	CIRCUITS
W white - standard C custom	2 2' 3 3' 4 4' 5 5' 6 6' 7 7' 8 8' 12 12' S(L) system run	AP aluminum paint W white BLK black C custom	UNV universal DC low voltage*	DP integral 0-10V driver dimming 1% POE(#) POE drivers*	1 1 circuit * +E(#) emergency section
Shielding finish option is for MAL option only.	Come in 1' increments		Consult factory for 347 V * Only available with POE drivers.	Only integral 0-10V mini driver available * Specify system, see page 4	* Control UP & DOWN lights together

MOUNTING/SUSPENSION	BATTERY (OPTIONAL)	REMOTE CONTROLS (OPTIONAL)	CUSTOM
CA(#) drywall+cable length (36" std.) CT9(#) TB/TG 9/16+cable length (36" std.) CT15(#) TB/TG 15/16+cable length (36" std.) CTS(#) screw slot+cable length (36" std.) SA(#) drywall+stem length >48" (18" std.) CASL(#) drywall cable sloped ceiling SASL(#) drywall stem sloped ceiling +SM seismic kit	BR(#) remote battery pack	DS(#) daylight sensor DOS(#) daylight & occupancy sensor WC(#) wireless control dimming	C custom
See Mounting kit guide for full specification code.	Not available with 347V Please consult factory	Applies to both UP & DOWN. Remote only. See integrated controls guide for more details.	Please specify



● SURROUNDLITE TECHNOLOGY

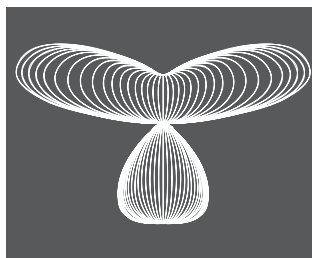
ZEN with SurroundLite provides the flexibility of high efficacy spherical three dimensional wide batwing distributions and shielding options that all result in true lighting effectiveness. ZEN with integral mini driver and a light guide with proper cutoff and no view of bugs or dust particles.

An innovative technology to get much more out of LEDs: Axis SurroundLite is based on the fundamental physics of how light interacts with matter. The specially engineered lightguide is made of precisely coded and aligned molecules that shape LED output in all three dimensions.

With SurroundLite extra-wide, multidimensional light distribution, light is directed in all three planes and sent in every corner of the room. SurroundLite brings the promise of balanced brightness, facilitating lighting design.

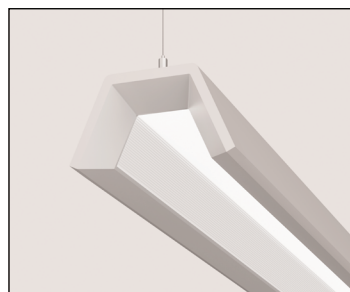


3D Polar Curve (SL 25/75)



● UNIQUE ZEN SHIELDING OPTIONS

A new linear downlight optical concept. A central Surroundlite lightguide optic with highly efficient and comfortable micro groove side wall shielding for excellent shielding along and across.



MSO - microgroove spotless lens



MAL - microgroove aluminum



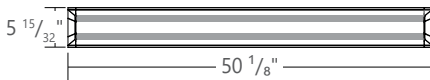
● LIGHT GUIDE

High precision light guide made of PMMA material, allows distribution of controlled light in all 3-dimensions to put light on both vertical and horizontal planes within the space. Patented lightguide design featuring molecular optics and precision-coupled optic components yield a high efficiency luminaire. In-plane mixing maximizes color uniformity while light emitting area is uniform and diffuse without 'head lighting' from the LED's.

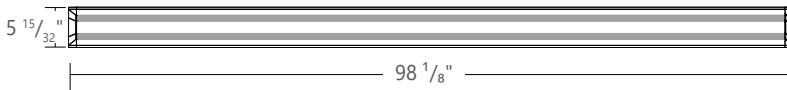
● LENGTHS

ZEN 4ft (4)

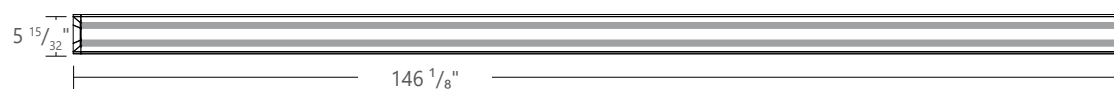
ZEN 4ft



ZEN 8ft



ZEN 12ft



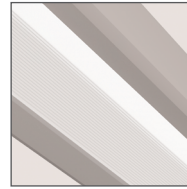
● SYSTEMS (S#)

Runs of ZEN that are greater than 12ft in length are designated as systems (S#). This means that the run is comprised of a combination 4ft and/or 8ft sections to be assembled on site using our joining system.

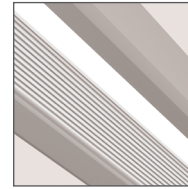
● WEIGHT

ZEN 4 ft 9 lbs / 4.1 kg
ZEN 8 ft 18 lbs / 8.2 kg
ZEN 12 ft 27 lbs / 12.3 kg

● OPTICS



MSO microgroove
spotless lens

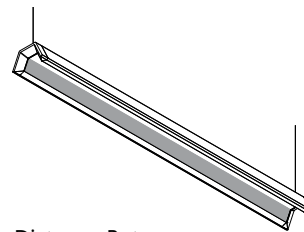


MAL microgroove
aluminum

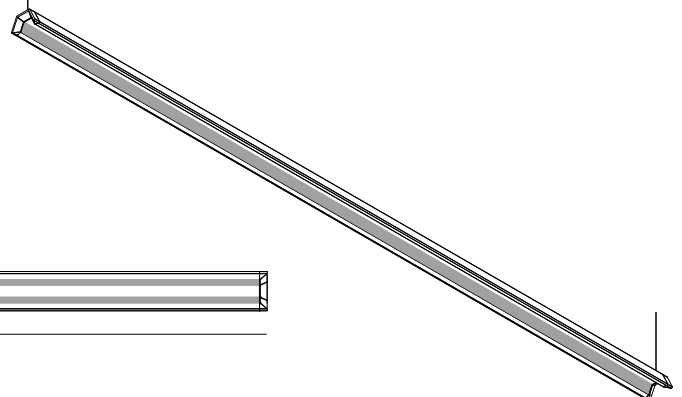
● SUSPENSION / MOUNTING SPACING

Distance Between
Mounting Points:
ZEN 4ft 48"
ZEN 8ft 96"

Standard Suspension
Length:
CABLE: 36"
STEM: 18"



Distance Between
Mounting Points:
ZEN 12ft 144"



● FINISH

White, black, aluminum paint, powder coated and custom finishes are also available.

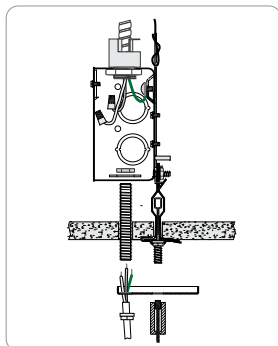
● APPROVALS

Certified to UL and CSA standards
Suitable for damp locations.





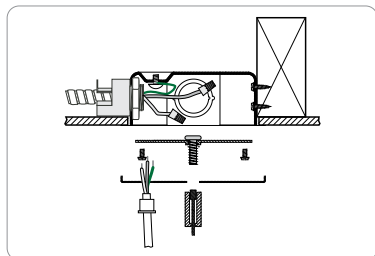
● MOUNTING OPTIONS



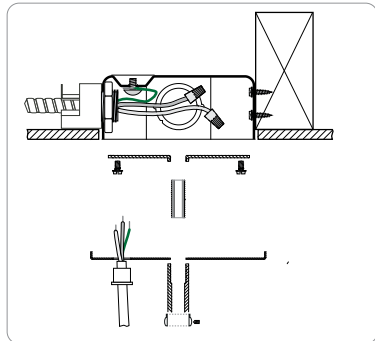
CT TILE CEILING - ON GRID

Mounting options are also available for slope ceiling and seismic bracing.

i Installation sheets for all mounting options are available at: www.axislighting.com under 'Downloads' tab.



CA DRYWALL CEILING



SA STEM MOUNT IN DRYWALL CEILING

● LED SYSTEM

CRI	Minimum 80 or 90 color rendering index
CCT	Choice of 3000K, 3500K and 4000K color temperature with a great color consistency (within 3-step MacAdam ellipse). Both within fixture and fixture to fixture.
LED life	Minimum 50,000h with 85% of lumen maintenance in 25°C ambient temperature, in compliance with IES LM-80 testing measurements.
Thermal Management	Aluminum housing acting as the heat sink to maximize life.
Environment	Dry and damp rated for indoor use only in operating ambient temperatures of 0-40°C (32-104°F)

● CONSTRUCTION

Housing	Extruded aluminum (0.075" nominal)
End Cap	Die cast aluminum (0.10" nominal)
Joiners	Die cast aluminum (0.10" nominal)
Interior Bracket	Die cast aluminum
Microgroove Lens	Uniform frosted acrylic lens
Microgroove Aluminum	White painted aluminum material

● ELECTRICAL

Power over Ethernet MOLEX
POE drivers* IGOR
 UL2108 certified for integral or remote driver SMARTENGINE
 O - Other (Consult factory)

Emergency Remote emergency battery pack or emergency circuit optional.

Input Voltage UNV (120-277 V)

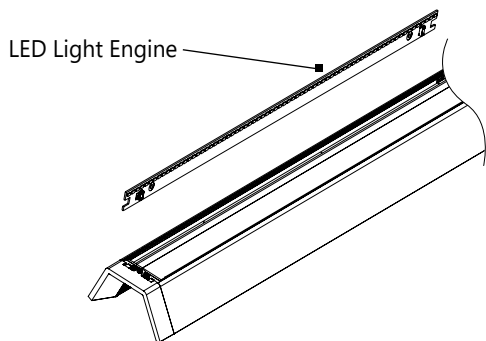
i Incorporating these components may have limitations or affect the length of the luminaire. Please contact factory for more details.

● WARRANTY

Limited 5-year warranty is available. Warranty is valid provided luminaires are installed and used according to specifications. For full terms and conditions, please consult warranty section at axislighting.com.

● LED UPGRADE / REPLACEMENT

All LED light engines used are field replaceable and upgradable to ensure the lighting system will last for years. Future-proof design comes with easy access to LED light engines from above using quick connectors (included in luminaire) and a screwdriver.



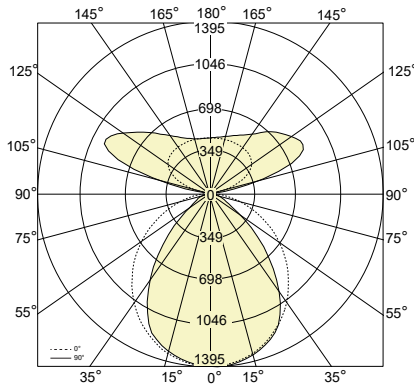


● PHOTOMETRIC DATA

Microgroove Spotless Lens (MSO)

ZELED-SL 50-50-1400-80-35-MSO-4'-W-UNV-DP-1.ies
50% up / 50% down at 1400 lm/ft

PHOTOMETRIC CURVE



Lumen/ft up: 757 lm/ft
Lumen/ft down: 639 lm/ft
Total Lumens: 5584 lm (for 4ft)
Input Watts: 46.7 W
Efficacy: 120 lm/W

CRI: 80 shown

IES FILE: ZELED-SL 50-50-1400-80-35-MSO-4'-W-UNV-DP-1.ies
TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1392	1392	1392	1392	1392
5	1385	1386	1388	1391	1392
15	1333	1334	1338	1341	1345
25	1223	1228	1233	1232	1237
35	1074	1078	1078	998	971
45	886	887	793	651	610
55	677	664	465	317	281
65	454	380	189	132	128
75	240	129	83	67	66
85	53	34	23	14	14
90	2	7	4	2	2
95	22	47	69	66	69
105	160	198	280	398	446
115	318	349	459	678	830
125	409	435	551	696	796
135	442	468	535	648	700
145	450	468	510	555	576
155	450	461	483	505	512
165	447	452	461	469	472
175	444	446	447	449	449
180	444	444	444	444	444

ZONAL LUMENS

Zone	Lumens
0	
0-10	132
10-20	375
20-30	558
30-40	628
40-50	564
50-60	403
60-70	235
70-80	108
80-90	26
90	
90-100	64
100-110	323
110-120	520
120-130	514
130-140	426
140-150	318
150-160	220
160-170	129
170-180	43
180	

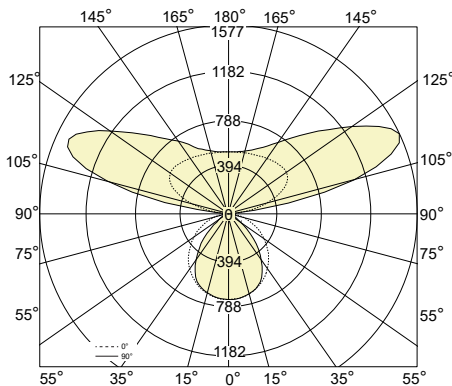
LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	15339	13718	10565
55	14443	9915	5986
65	13144	5478	3702
75	11368	3938	3129
85	7505	3177	2002

Microgroove Spotless Lens (MSO)

ZELED-SL 65-35-1400-80-35-MSO-4'-W-UNV-DP-1-xx.ies
65% up / 35% down at 1400 lm/ft

PHOTOMETRIC CURVE



Lumen/ft up: 998 lm/ft
Lumen/ft down: 400 lm/ft
Total Lumens: 5592 lm (for 4ft)
Input Watts: 41.4 W
Efficacy: 135 lm/W

CRI: 80 shown

IES FILE: ZELED-SL 65-35-1400-80-35-MSO-4'-W-UNV-DP-1-xx.ies
TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	717	717	717	717	717
5	714	714	714	714	715
15	690	689	689	688	689
25	640	637	636	633	631
35	566	561	549	497	479
45	471	464	396	320	297
55	363	343	231	140	122
65	249	196	85	63	60
75	133	62	40	31	30
85	30	16	9	4	3
90	3	5	4	3	3
95	74	156	143	78	60
105	318	413	708	1002	1087
115	516	569	828	1306	1577
125	593	631	799	1090	1268
135	588	615	717	868	947
145	562	574	625	696	727
155	540	544	562	590	602
165	524	527	529	537	541
175	516	517	517	518	518
180	516	516	516	516	516

ZONAL LUMENS

Zone	Lumens
0	
0-10	68
10-20	194
20-30	291
30-40	331
40-50	301
50-60	216
60-70	126
70-80	59
80-90	14
90	
90-100	171
100-110	716
110-120	898
120-130	765
130-140	574
140-150	403
150-160	264
160-170	151
170-180	50
180	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	3728	3135	2348
55	3548	2257	1188
65	3300	1125	802
75	2873	868	642
85	1923	592	220

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

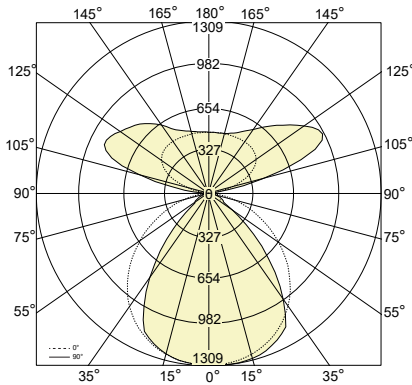


● PHOTOMETRIC DATA

Microgroove Aluminium (MAL)

ZELED-SL 50-50-1400-80-35-MAL-4'-W-UNV-DP-1.ies
50% up / 50% down at 1400 lm/ft

PHOTOMETRIC CURVE



Lumen/ft up: 674 lm/ft
Lumen/ft down: 722 lm/ft
Total lumens: 5585 lm (for 4ft)
Input Watts: 50.1 W
Efficacy: 111 lm/W

CRI: 80 shown
IES FILE: ZELED-SL 50-50-1400-80-35-MAL-4'-W-UNV-DP-1.ies
TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1304	1304	1304	1304	1304
5	1301	1301	1304	1304	1309
15	1263	1269	1279	1286	1295
25	1182	1193	1211	1218	1229
35	1049	1065	1080	1020	988
45	864	882	802	619	568
55	648	671	431	253	215
65	422	367	140	115	116
75	215	108	77	64	64
85	43	29	21	15	16
90	2	6	4	2	2
95	27	35	38	21	19
105	177	197	295	408	418
115	343	354	476	772	951
125	438	451	549	753	891
135	471	484	548	663	729
145	476	480	514	566	593
155	472	472	481	500	509
165	467	466	466	470	471
175	464	464	464	464	464
180	464	464	464	464	464

ZONAL LUMENS

Zone	Lumens
0	
0-10	124
10-20	358
20-30	546
30-40	622
40-50	539
50-60	367
60-70	210
70-80	97
80-90	23
90	
90-100	72
100-110	340
110-120	545
120-130	542
130-140	454
140-150	337
150-160	229
160-170	134
170-180	44
180	

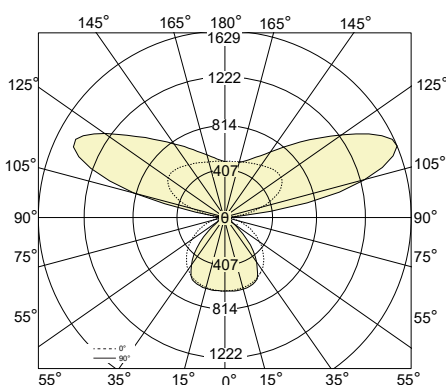
LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	14957	13888	9830
55	13818	9196	4584
65	12220	4063	3356
75	10189	3624	3034
85	6073	3006	2241

Microgroove Aluminium (MAL)

ZELED-SL 65-35-1400-80-35-MAL-4'-W-UNV-DP-1.ies
65% up / 35% down at 1400 lm/ft

PHOTOMETRIC CURVE



Lumen/ft up: 1004 lm/ft
Lumen/ft down: 395 lm/ft
Total lumens: 5595 lm (for 4ft)
Input Watts: 44.2 W
Efficacy: 127 lm/W

CRI: 80 shown
IES FILE: ZELED-SL 65-35-1400-80-35-MAL-4'-W-UNV-DP-1.ies
TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	643	643	643	643	643
5	642	643	644	647	647
15	634	637	642	646	648
25	612	615	620	622	624
35	563	564	563	505	486
45	480	478	402	305	273
55	370	356	214	102	81
65	251	193	65	60	58
75	131	51	37	29	28
85	28	14	6	1	1
90	3	5	5	4	4
95	76	199	271	186	147
105	323	442	781	1159	1260
115	521	586	848	1335	1617
125	601	634	799	1083	1259
135	592	604	698	848	929
145	554	552	598	666	700
155	523	513	526	554	565
165	502	491	489	495	498
175	490	486	483	480	480
180	487	487	487	487	487

ZONAL LUMENS

Zone	Lumens
0	
0-10	61
10-20	181
20-30	285
30-40	339
40-50	308
50-60	213
60-70	123
70-80	57
80-90	13
90	
90-100	170
100-110	716
110-120	909
120-130	776
130-140	582
140-150	405
150-160	262
160-170	146
170-180	47
180	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	8307	6961	4719
55	7905	4567	1732
65	7275	1868	1690
75	6196	1738	1306
85	3913	889	149

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