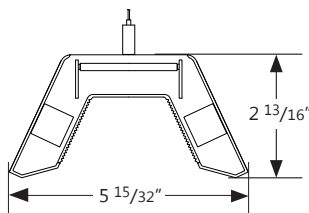


MSO - microgroove spotless lens

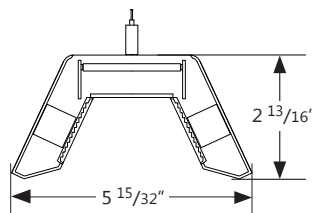


MAL - microgroove aluminum

MSO - microgroove spotless lens



MAL - microgroove aluminum



Project \_\_\_\_\_

Type \_\_\_\_\_

Notes \_\_\_\_\_

NOMINAL LUMENS/FT			
	SL 65/35	SL 50/50	INPUT WATTS
	Lumens/ft	Lumens/ft	W/ft
MSO	1450	1400	11.8
	1000	950	7.9
	700	700	5.9
	1550	1500	15.7
	1150	1100	11.8
MAL	800	750	7.9
	1450	1300	11.8
	1000	850	7.9
	700	650	5.9
	1550	1400	15.7
	1150	1050	11.8
	800	700	7.9

90 CRI only  
80 CRI only

For MAL, lumen values are based upon a white finish, lumen values may vary for custom MAL finishes



CONTROL SENSORS



SurroundLite™



### Ordering Guide

ZELED							
PRODUCT ID	LIGHT ENGINE		NOMINAL LUMENS/FT	CRI	COLOR TEMP.	SHIELDING	SHIELDING FINISH (OPTIONAL)
ZELED Pendant LED	SL 50/50	surroundlite 50%up/50%down-direct indirect	# #	80 80 CRI	27 2700 K	MSO microgroove spotless lens	W white - standard
	SL 65/35	surroundlite 65%up/35%down-semi indirect		90 90 CRI	30 3000 K	MAL microgroove aluminum <sup>(1)</sup>	C custom
					35 3500 K		
					40 4000 K		
			See table above for lumen selection. Applies to both UP&DOWN. Consult factory for other lumen packages.	Applies to both UP & DOWN.	Applies to both UP & DOWN.	(1) Standard white	Shielding finish option is for MAL option only.

FIXTURE LENGTH	FINISH	VOLTAGE	DRIVER	CIRCUITS
2 2'	AP aluminum paint	UNV universal	MD integral mini driver 0-10V dimming 2%	1 1 circuit <sup>(2)</sup>
3 3'	W white			2 2 circuits
4 4'	BLK black			2A/B 2 circuit alternating/4ft
5 5'	C custom			+E(#) emergency section
6 6'				
7 7'				
8 8'				
12 12'				
Come in 1" increments		Consult factory for 347 V	Only integral 0-10V mini driver available	(2) Control UP & DOWN lights together

MOUNTING/SUSPENSION	BATTERY (OPTIONAL)	REMOTE CONTROLS (OPTIONAL)	CUSTOM
CA(#) drywall+cable length (36" std.)	B# remote battery pack	DS# daylight sensor	C custom
CT9(#) TB/TG 9/16+cable length (36" std.)		DOS# daylight & occupancy sensor	
CT15(#) TB/TG 15/16+cable length (36" std.)		WC# wireless control dimming	
CTS(#) ST+cable length (36" std.)			
SA(#) drywall+stem length >48" (18" std.)			
+SM seismic option			
See Ceiling Mount Guide for further details	Not available with 347V Please consult factory	Applies to both UP & DOWN. Remote only. See integrated controls guide for more details.	Please specify



### ● SURROUND LITE TECHNOLOGY

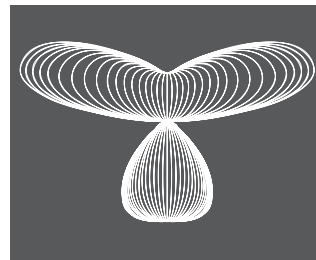
ZEN with SurroundLite provides the flexibility of high efficacy spherical three dimensional wide batwing distributions and shielding options that all result in true lighting effectiveness. ZEN with integral mini driver and a light guide with proper cutoff and no view of bugs or dust particles.

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



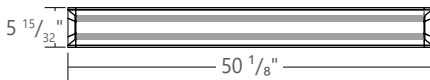
### ● LIGHT GUIDE

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.

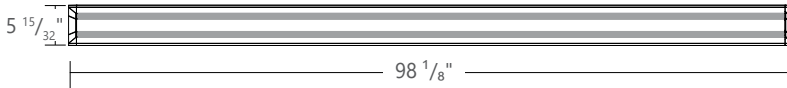
### ● LENGTHS

#### ZEN 4ft (4)

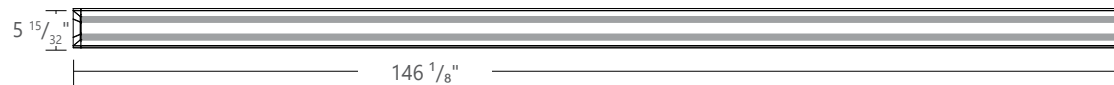
##### ZEN 4ft



##### ZEN 8ft



##### ZEN 12ft



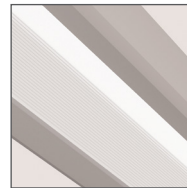
### ● SYSTEMS (S#)

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.

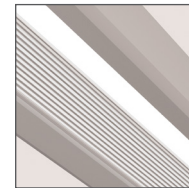
### ● WEIGHT

- 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

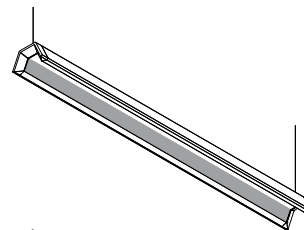


**MAL** microgroove  
aluminum

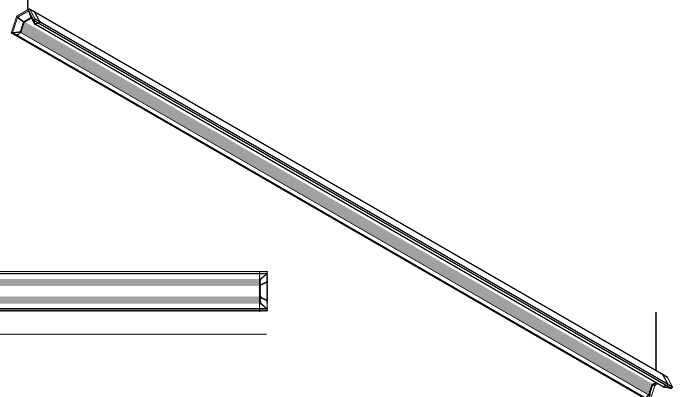
### ● SUSPENSION / MOUNTING SPACING

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.

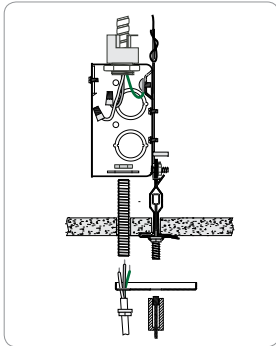
### ● APPROVALS

Certified to UL and CSA standards  
Suitable for damp locations.





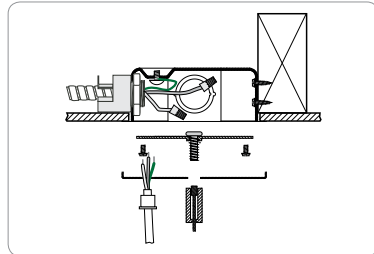
### ● MOUNTING OPTIONS



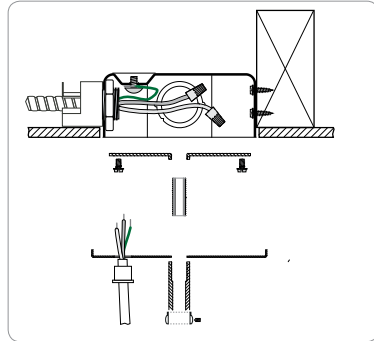
#### **GT** TILE CEILING - ON GRID

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

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



#### **CA** DRYWALL CEILING



#### **SA** STEM MOUNT IN DRYWALL CEILING

### ● LED SYSTEM

<b>CRI</b>	Minimum 80 or 90 color rendering index
<b>CCT</b>	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.
<b>LED life</b>	Minimum 50,000h with 85% of lumen maintenance in 25°C ambient temperature, in compliance with IES LM-80 testing measurements.
<b>Thermal Management</b>	Aluminum housing acting as the heat sink to maximize life.
<b>Environment</b>	Dry and damp rated in operating ambient temperatures of 0-40°C (32-104F)

### ● CONSTRUCTION

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

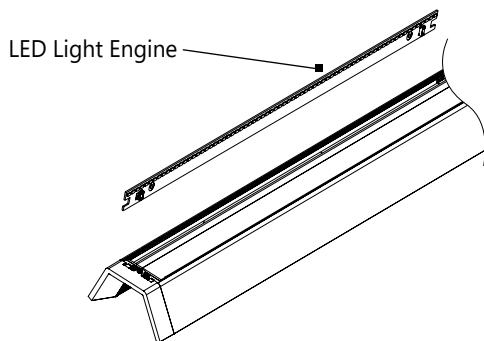
### ● ELECTRICAL

<b>Emergency</b>	Remote emergency battery pack or emergency circuit optional.
<b>Input Voltage</b>	UNV

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

### ● 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.

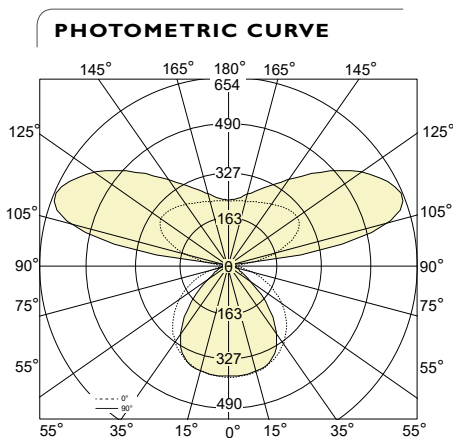




### ● PHOTOMETRIC DATA

#### Microgroove Spotless Lens (MSO)

ZELED-SL65-35-700-80-35-MSO-4-W-UNV-MD-1.ies  
65% up / 35% down at 700 lm/ft



**Lumen/ft up: 490 lm/ft**  
**Lumen/ft down: 238 lm/ft**  
**Total Lumens: 2915 lm (for 4ft)**  
**Input Watts: 23.6 W**  
**Efficacy: 124 lm/W**

CRI: 80 shown

IES FILE: ZELED-SL65-35-700-80-35-MSO-4-W-UNV-MD-1.ies  
TESTED ACCORDING TO IES LM-79-2008

#### CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	391	391	391	391	391
5	390	390	390	391	391
15	382	382	383	384	386
25	363	364	365	365	362
35	330	330	324	302	292
45	281	281	244	200	183
55	219	210	143	93	82
65	150	122	57	42	40
75	79	41	26	20	19
85	17	10	5	3	3
90	1	2	2	1	1
95	32	76	94	82	61
105	157	212	328	498	586
115	256	299	402	555	644
125	291	325	406	511	565
135	283	308	364	428	458
145	263	279	313	346	361
155	246	254	273	290	297
165	234	237	244	251	254
175	228	228	229	230	230
180	226	226	226	226	226

#### ZONAL LUMENS

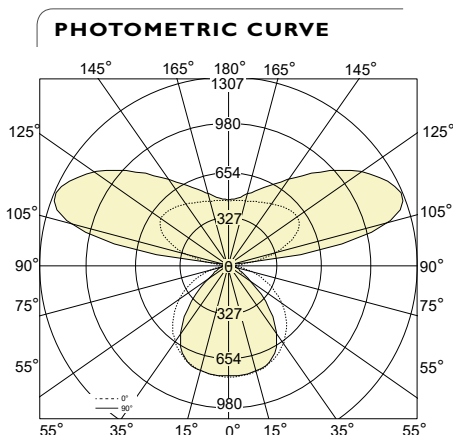
Zone	Lumens
0	
0-10	37
10-20	108
20-30	168
30-40	197
40-50	184
50-60	134
60-70	79
70-80	37
80-90	9
90	
90-100	105
100-110	363
110-120	420
120-130	373
130-140	285
140-150	197
150-160	127
160-170	70
170-180	22
180	

#### LUMINANCE DATA (cd/m<sup>2</sup>)

Vertical Angle	Horizontal Angles		
	0	45	90
45	3918	2465	1682
55	3710	1582	801
65	3363	720	435
75	2731	390	234
85	1394	102	44

#### Microgroove Spotless Lens (MSO)

ZELED-SL65-35-1450-80-35-MSO-4-W-UNV-MD-1.ies  
65% up / 35% down at 700 lm/ft



**Lumen/ft up: 980 lm/ft**  
**Lumen/ft down: 477 lm/ft**  
**Total Lumens: 5829 lm (for 4ft)**  
**Input Watts: 47.2 W**  
**Efficacy: 123 lm/W**

CRI: 80 shown

IES FILE: ZELED-SL65-35-1450-80-35-MSO-4-W-UNV-MD-1.ies  
TESTED ACCORDING TO IES LM-79-2008

#### CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	782	782	782	782	782
5	779	780	780	781	783
15	763	764	766	769	771
25	726	727	731	730	724
35	659	660	648	603	583
45	561	561	488	401	366
55	438	420	287	186	163
65	300	245	115	84	80
75	157	82	52	40	37
85	34	21	10	5	6
90	2	5	3	2	2
95	64	153	188	164	122
105	314	425	657	996	1172
115	512	598	805	1110	1288
125	582	651	811	1022	1130
135	565	616	728	856	915
145	526	558	626	693	722
155	492	508	545	579	593
165	468	474	488	502	508
175	456	456	458	459	461
180	453	453	453	453	453

#### ZONAL LUMENS

Zone	Lumens
0	
0-10	74
10-20	217
20-30	335
30-40	394
40-50	367
50-60	268
60-70	159
70-80	74
80-90	18
90	
90-100	211
100-110	725
110-120	839
120-130	746
130-140	570
140-150	395
150-160	253
160-170	139
170-180	44
180	

#### LUMINANCE DATA (cd/m<sup>2</sup>)

Vertical Angle	Horizontal Angles		
	0	45	90
45	7836	4930	3364
55	7420	3163	1602
65	6726	1440	870
75	5463	779	468
85	2788	204	88

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

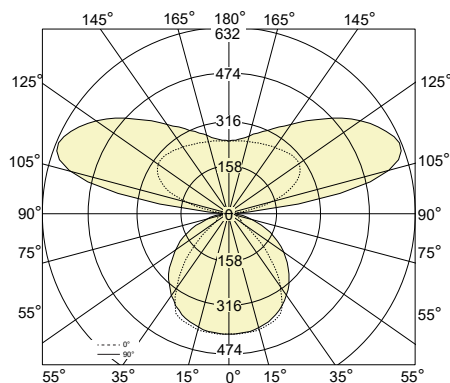


### PHOTOMETRIC DATA

#### Microgroove Aluminium (MAL)

ZELED-SL65-35-700-80-35-MAL-4-W-UNV-MD-1.ies  
65% up / 35% down at 700 lm/ft

#### PHOTOMETRIC CURVE



**Lumen/ft up: 491 lm/ft**  
**Lumen/ft down: 249 lm/ft**  
**Total lumens: 2961 lm (for 4ft)**  
**Input Watts: 23.5 W**  
**Efficacy: 126 lm/W**

CRI: 80 shown

IES FILE: ZELED-SL65-35-700-80-35-MAL-4-W-UNV-MD-1.ies  
TESTED ACCORDING TO IES LM-79-2008

#### CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	414	414	414	414	414
5	414	414	413	413	413
15	411	410	407	405	403
25	395	394	390	384	381
35	311	326	355	349	343
45	181	203	261	298	291
55	59	79	143	232	227
65	41	42	43	129	156
75	21	22	26	36	83
85	2	2	5	10	20
90	1	1	2	3	2
95	31	75	92	92	70
105	155	209	316	479	568
115	255	297	393	536	623
125	293	328	404	500	552
135	290	315	370	430	459
145	276	291	327	358	373
155	263	271	291	307	315
165	254	257	265	271	275
175	250	250	251	251	252
180	248	248	248	248	248

#### ZONAL LUMENS

Zone	Lumens
0	
0-10	39
10-20	115
20-30	179
30-40	211
40-50	192
50-60	134
60-70	79
70-80	38
80-90	9
90	
90-100	105
100-110	351
110-120	410
120-130	370
130-140	289
140-150	205
150-160	135
160-170	75
170-180	24
180	

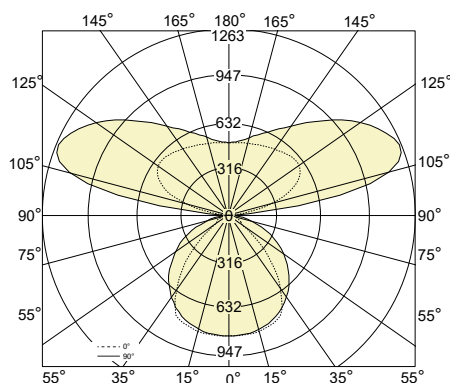
#### LUMINANCE DATA (cd/m<sup>2</sup>)

Vertical Angle	Horizontal Angles		
	0	45	90
45	2526	2651	2697
55	995	1592	2246
65	910	546	1712
75	715	398	1057
85	156	107	309

#### Microgroove Aluminium (MAL)

ZELED-SL65-35-1450-80-35-MAL-4-W-UNV-MD-1.ies  
65% up / 35% down at 700 lm/ft

#### PHOTOMETRIC CURVE



**Lumen/ft up: 982 lm/ft**  
**Lumen/ft down: 498 lm/ft**  
**Total lumens: 5922 lm (for 4ft)**  
**Input Watts: 47 W**  
**Efficacy: 126 lm/W**

CRI: 80 shown

IES FILE: ZELED-SL65-35-1450-80-35-MAL-4-W-UNV-MD-1.ies  
TESTED ACCORDING TO IES LM-79-2008

#### CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	828	828	828	828	828
5	829	828	827	826	826
15	823	820	815	809	806
25	791	787	780	768	762
35	622	652	710	697	686
45	362	406	521	595	582
55	117	157	286	465	454
65	81	84	86	259	312
75	41	43	52	72	166
85	4	5	11	20	39
90	63	150	183	184	140
95	311	418	632	959	1135
105	511	594	786	1071	1246
115	587	655	808	1000	1104
125	580	631	741	860	919
135	551	583	654	716	746
145	526	542	582	615	629
155	508	514	530	542	550
165	499	499	502	503	505
175	497	497	497	497	497
180	248	248	248	248	248

#### ZONAL LUMENS

Zone	Lumens
0	
0-10	79
10-20	230
20-30	358
30-40	422
40-50	383
50-60	269
60-70	158
70-80	75
80-90	19
90	
90-100	210
100-110	703
110-120	819
120-130	739
130-140	578
140-150	410
150-160	269
160-170	151
170-180	48
180	

#### LUMINANCE DATA (cd/m<sup>2</sup>)

Vertical Angle	Horizontal Angles		
	0	45	90
45	5052	5301	5394
55	1989	3184	4492
65	1820	1093	3424
75	1429	797	2114
85	312	215	618

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

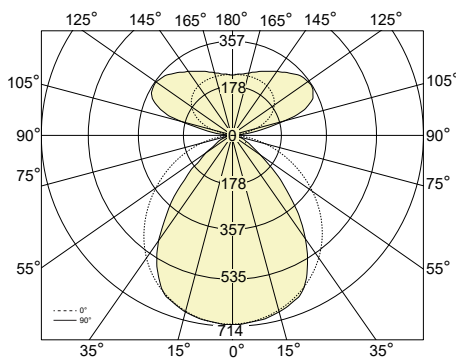


### ● PHOTOMETRIC DATA

#### Microgroove Spotless Lens (MSO)

ZELED-SL50-50-700-80-35-MSO-4-W-UNV-MD-1.ies  
50% up / 50% down at 700 lm/ft

##### PHOTOMETRIC CURVE



**Lumen/ft up: 307 lm/ft**  
**Lumen/ft down: 404 lm/ft**  
**Total Lumens: 2844 lm (for 4ft)**  
**Input Watts: 23.5 W**  
**Efficacy: 121 lm/W**

CRI: 80 shown

IES FILE: ZELED-SL50-50-700-80-35-MSO-4-W-UNV-MD-1.ies  
TESTED ACCORDING TO IES LM-79-2008

#### CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	714	714	714	714	714
5	711	711	710	711	711
15	689	688	688	689	689
25	641	641	641	640	635
35	569	568	555	507	484
45	474	472	401	321	291
55	363	347	228	151	130
65	245	197	94	69	65
75	127	67	41	32	29
85	28	16	8	4	4
90	3	4	2	1	1
95	14	18	17	21	22
105	84	98	128	176	202
115	163	179	223	291	333
125	210	226	267	322	351
135	227	241	274	310	328
145	231	242	264	285	294
155	231	238	251	262	267
165	230	233	238	243	245
175	229	229	230	230	231
180	229	229	229	229	229

#### ZONAL LUMENS

Zone	Lumens
0	
0-10	68
10-20	194
20-30	294
30-40	336
40-50	304
50-60	219
60-70	129
70-80	59
80-90	14
90	
90-100	28
100-110	142
110-120	230
120-130	244
130-140	213
140-150	166
150-160	116
160-170	68
170-180	22
180	

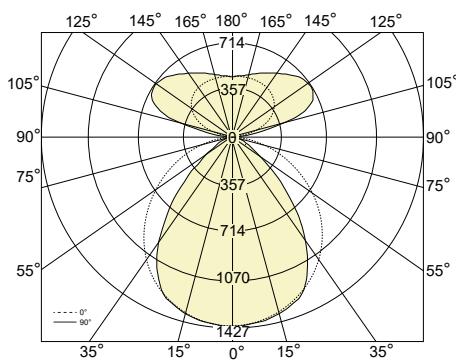
#### LUMINANCE DATA (cd/m<sup>2</sup>)

Vertical Angle	Horizontal Angles		
	0	45	90
45	6591	3950	2591
55	6127	2429	1226
65	5468	1133	673
75	4358	588	348
85	2203	149	52

#### Microgroove Spotless Lens (MSO)

ZELED-SL50-50-1400-80-35-MSO-4-W-UNV-MD-1.ies  
50% up / 50% down at 1400 lm/ft

##### PHOTOMETRIC CURVE



**Lumen/ft up: 614 lm/ft**  
**Lumen/ft down: 808 lm/ft**  
**Total Lumens: 5687 lm (for 4ft)**  
**Input Watts: 47.1 W**  
**Efficacy: 121 lm/W**

CRI: 80 shown

IES FILE: ZELED-SL50-50-1400-80-35-MSO-4-W-UNV-MD-1.ies  
TESTED ACCORDING TO IES LM-79-2008

#### CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1427	1427	1427	1427	1427
5	1422	1422	1421	1422	1422
15	1377	1376	1376	1378	1378
25	1283	1282	1281	1281	1271
35	1137	1136	1110	1014	968
45	947	945	802	642	581
55	726	695	455	301	260
65	491	394	188	138	130
75	254	135	82	63	59
85	55	32	16	8	7
90	6	9	4	2	2
95	27	36	34	42	45
105	169	196	256	352	404
115	327	357	446	582	667
125	419	451	535	644	703
135	454	483	548	621	655
145	463	484	528	570	589
155	463	475	501	524	534
165	460	465	476	485	490
175	458	459	460	461	462
180	458	458	458	458	458

#### ZONAL LUMENS

Zone	Lumens
0	
0-10	135
10-20	389
20-30	588
30-40	671
40-50	607
50-60	437
60-70	258
70-80	118
80-90	28
90	
90-100	55
100-110	283
110-120	461
120-130	488
130-140	426
140-150	331
150-160	232
160-170	135
170-180	44
180	

#### LUMINANCE DATA (cd/m<sup>2</sup>)

Vertical Angle	Horizontal Angles		
	0	45	90
45	13181	7899	5182
55	12254	4858	2452
65	10936	2266	1347
75	8716	1176	696
85	4406	299	104

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

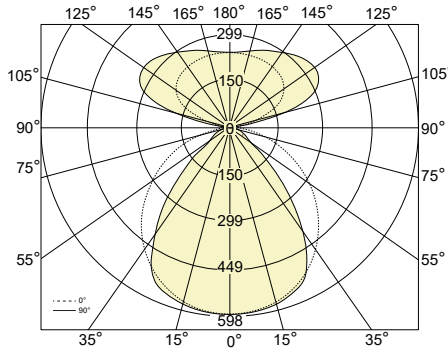


### PHOTOMETRIC DATA

#### Microgroove Aluminium (MAL)

ZELED-SL50-50-650-80-35-MAL-4-W-UNV-MD-1.ies  
50% up / 50% down at 650 lm/ft

#### PHOTOMETRIC CURVE



**Lumen/ft up: 304 lm/ft**  
**Lumen/ft down: 340 lm/ft**  
**Total lumens: 2576 lm (for 4ft)**  
**Input Watts: 23.5 W**  
**Efficacy: 110 lm/W**

CRI: 80 shown  
IES FILE: ZELED-SL50-50-650-80-35-MAL-4-W-UNV-MD-1.ies  
TESTED ACCORDING TO IES LM-79-2008

#### CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	598	598	598	598	598
5	596	596	596	597	597
15	577	579	581	584	585
25	538	542	547	551	552
35	478	484	487	438	414
45	399	406	344	260	230
55	308	309	182	101	80
65	210	169	59	56	54
75	111	47	34	28	28
85	25	13	7	3	2
90	1	2	1	1	1
95	12	17	18	18	19
105	85	98	126	167	191
115	165	179	218	277	313
125	211	226	264	310	335
135	230	244	273	305	319
145	237	247	267	285	293
155	239	245	258	268	272
165	239	241	247	252	254
175	239	239	240	240	241
180	239	239	239	239	239

#### ZONAL LUMENS

Zone	Lumens
0	
0-10	57
10-20	164
20-30	251
30-40	288
40-50	255
50-60	178
60-70	105
70-80	50
80-90	12
90	
90-100	26
100-110	137
110-120	224
120-130	239
130-140	212
140-150	167
150-160	119
160-170	70
170-180	23
180	

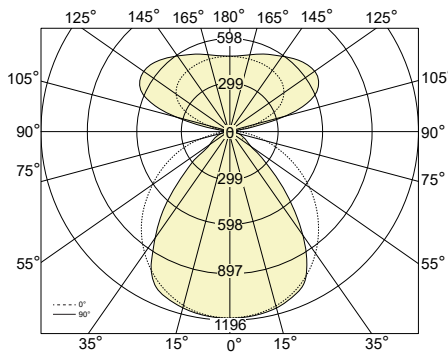
#### LUMINANCE DATA (cd/m<sup>2</sup>)

Vertical Angle	Horizontal Angles		
	0	45	90
45	5556	3390	2047
55	5195	1946	754
65	4680	708	561
75	3805	494	329
85	2032	123	33

#### Microgroove Aluminium (MAL)

ZELED-SL50-50-1300-80-35-MAL-4-W-UNV-MD-1.ies  
50% up / 50% down at 1300 lm/ft

#### PHOTOMETRIC CURVE



**Lumen/ft up: 608 lm/ft**  
**Lumen/ft down: 680 lm/ft**  
**Total lumens: 5153 lm (for 4ft)**  
**Input Watts: 47 W**  
**Efficacy: 110 lm/W**

CRI: 80 shown  
IES FILE: ZELED-SL50-50-1300-80-35-MAL-4-W-UNV-MD-1.ies  
TESTED ACCORDING TO IES LM-79-2008

#### CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1196	1196	1196	1196	1196
5	1192	1192	1193	1194	1195
15	1155	1157	1163	1169	1171
25	1077	1083	1094	1101	1104
35	956	967	974	876	827
45	799	813	689	520	459
55	616	617	365	201	160
65	420	338	117	113	108
75	222	94	69	57	55
85	51	26	13	7	5
90	2	5	3	2	1
95	24	33	37	36	37
105	170	196	252	334	382
115	329	359	436	554	627
125	422	453	528	621	669
135	459	488	547	610	638
145	473	494	535	571	586
155	478	490	516	536	544
165	479	483	494	503	508
175	479	478	479	480	481
180	478	478	478	478	478

#### ZONAL LUMENS

Zone	Lumens
0	
0-10	114
10-20	328
20-30	502
30-40	577
40-50	510
50-60	355
60-70	210
70-80	100
80-90	24
90	
90-100	51
100-110	274
110-120	447
120-130	478
130-140	424
140-150	335
150-160	238
160-170	140
170-180	46
180	

#### LUMINANCE DATA (cd/m<sup>2</sup>)

Vertical Angle	Horizontal Angles		
	0	45	90
45	11112	6780	4094
55	10390	3892	1508
65	9359	1415	1121
75	7610	989	658
85	4064	245	65

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