

WAVE 2x4 LED | Recessed T-Bar & Drywall



Project _____

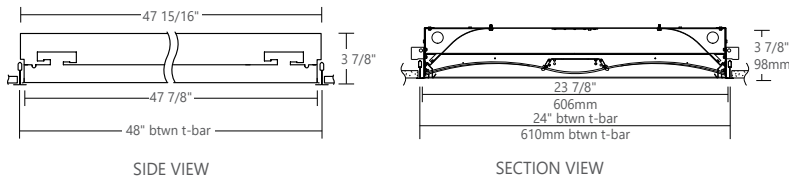
Type _____

Notes _____

PERFORMANCE AT 4000K

NOMINAL LUMEN OUTPUT	INPUT WATTS*	EFFICACY
4500 lm	38.37W	117 lm/W
5000 lm	44.0W	114 lm/W
7000 lm	62.76W	112 lm/W
9000 lm	81.36W	111 lm/W

Please consult factory for customize lumen output and wattage.



* Check the latest update on the DLC website for complete information. Not all versions may be DLC qualified.
See page 3 for DLC Approved options



Ordering Guide

PRODUCT ID	SIZE	NOMINAL LUMENS	CRI	COLOR TEMP. (choose one)	SHIELDING	FINISH
WALED Wave LED	24 2'X4'	1400 1400 lm - Min 6400 6400 lm - Max at 90 CRI 7200 7200 lm - Max at 80 CRI	80 80 CRI 90 90 CRI*	27 2700 K 30 3000 K 35 3500 K 40 4000 K B30 3000 K - BIOS* B35 3500 K - BIOS* B40 4000 K - BIOS*	VL VL optics	W white C custom
		Outputs between listed min and max are available. Consult factory for outputs outside of the listed range. Consult factory for max output with BIOS	*Not available with BIOS.	Consult Axitune technical sheet for more information of color technology. *Consult BIOS guide for more information on BIOS technology		

VOLTAGE	DRIVER	CIRCUITS	MOUNTING	BATTERY (OPTIONAL)
120 120 V 277 277 V 347 347 V UNV universal DC low voltage*	DP dimming (0-10V) 1% LT(#) Lutron* BI bi-level dimming O(#) other** DPB(STC) dimming (0-10V) 1% with BIOS* DPB(DYN) Bio-dimming™ 100%-81% with BIOS* TW(#) tunable white drivers* POE(#) POE drivers*	1 1 circuit +E(#) emergency circuit* +NL(#) night light circuit* +GTD(#) generator transfer device*	TB9 t-bar 9/16" TB15 t-bar 15/16" ST screw slot t-bar TG9 tegular 9/16" TG15 tegular 15/16" DF drywall flange	B(#) battery pack
* Only available with POE drivers.	* See page 2 to specify system ** Please consult factory; see page 2	*Specify quantity		Not available with 347V Please consult factory

OTHER (OPTIONAL)	IC CONTROLS (OPTIONAL)	CUSTOM (OPTIONAL)
F fuse* AR air return FW(#) flex whip (6' std) CP Chicago plenum	DS(#) daylight sensor OS(#) occupancy sensor DOS(#) daylight & occupancy sensor EN(#) Enlighted integral * ENR(#) Enlighted remote * WC(#) wireless control dimming	C custom
* Requires 120V or 277V	*Please consult factory Specify quantity. Requires 1.5" blank. See integrated controls guide for more details. Consult factory for Tunable White. Not available with DPB (DYN) driver for BIOS with Dynamic Spectrum.	Please specify

SPECIFY DRIVER NAME (if needed)

SPECIFY BATTERY NAME (if needed)

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ELECTRICAL

Lutron driver*	LDE1 - Hi-lume 1% EcoSystem with Soft-on, Fade-to-Black LTEA - Hi-lume 1% 2-wire (120V forward phase only) *Consult factory
Other drivers**	DALI - Digital Addressable Lighting Interface DMX - Digital Multiplex Xitanium SR - For wireless sensor
BIOS DPB drivers*	STC - BIOS control 0-10V with static spectrum and BIOS SkyBlue enabled from 100% to 1%. DYN - BIOS control 0-10V with dynamic spectrum and BIOS SkyBlue® with Bio-Dimming™, which changes spectral qualities by removing the SkyBlue component when dimming from 100% to 81%, while light output remains relatively constant; bio-dimming reduces CCT to 2700K. Dimming from 80% to 1% will then reduce light output.
Tunable White TW drivers*	DALIDT6 - DALI Type 6 (Two DALI Addresses) DALIDT8 - DALI Type 8 (One DALI Address) LTTW - Lutron T-Series Tunable White
Power over Ethernet POE drivers* UL2108 certified for integral or remote driver	MOLEX IGOR SMARTENGINE O - Other (Consult factory)
Emergency	Integral emergency battery pack or emergency circuit optional.
Input Voltage	120V, 277V, 347V, UNV, DC.
Flex Whip	Shipped in a separate box for contractors to install

*Choose driver from available options.

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

LED SYSTEM

CRI	Minimum 80 or 90 color rendering index.
CRI BIOS	Minimum 80 color rendering index with R9>75 for all CCTs.
CCT Single Color	Choice of 2700K, 3000K, 3500K and 4000K color temperature with a great color consistency (within 3-step MacAdam ellipse). Both within fixture and fixture to fixture.
CCT BIOS	BIOS Static (STC) Choice of 3000K, 3500K and 4000K. BIOS SkyBlue® Dynamic (DYN) Choice of 3000K, 3500K, and 4000K with Bio-Dimming™ BIOS Tunable White (BTW) Choice of 4000-2700K and 3500-2700K; does not use a bio-dimmer, it uses TW drivers, which allow independent control of CCT and intensity; e.g., BTW4027 provides combined SkyBlue + white light at 4000K, SkyBlue is removed at 2700K. Light output can be adjusted for each CCT. Consult BIOS guide for more information on BIOS technology.
CCT Axitune Systems	Consult Axitune technical sheet for more information on color technology.
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 in operating ambient temperatures of 0-40°C (32-104°F).

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● SPECIFICATIONS

CONSTRUCTION

Housing	Die formed cold rolled sheet steel (20 ga)
Central Lens Housing	Extruded aluminum (0.060" nominal)
Center Lens	PMMA Precision formed microconical structure 92 percent transmission, cuts off glare above 55°.
Side lens	0.08" PMMA satin blend
Reflectors	Die formed cold rolled sheet steel (22 ga)
Interior Brackets	Die formed cold rolled sheet steel (20 ga)
Drywall Flange Kit	Extruded aluminum (0.060" nominal)

● 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.

● WARRANTY

Axis Lighting will warrant defective LEDs, boards, and drivers for 5 years from date of purchase. Warranty is valid if luminaire is installed and used according to specifications.

If defective, Axis will send replacement boards or drivers at no cost along with detailed replacement instructions and instructions on how to return defective components to Axis.

● APPROVALS

Certified to UL and CSA standards
Chicago Plenum Certified (CCEA)
Meets NYC requirements
Suitable for damp locations.



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● DLC Approved Options

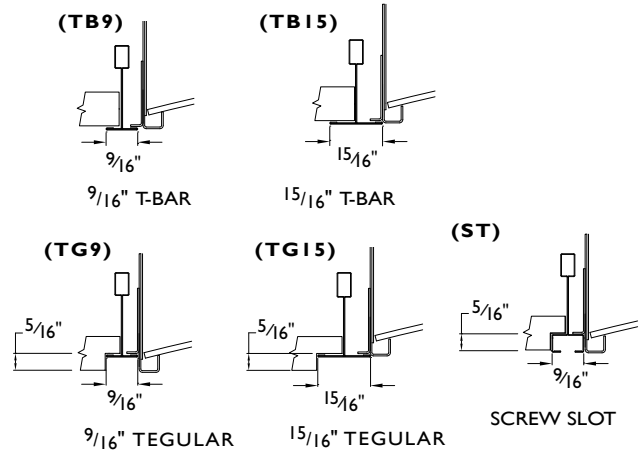
SIZE	OUTPUT	CRI	LUMENS	SHIELDING	FINISH	VOLTAGE	DRIVER	CIRCUITS
2'X4'	3100 lm	80	3000 K	VL	white	universal	DP	1
	4500 lm		3500 K					
	5000 lm		4000 K					
	7000 lm							
	9000 lm							

● WEIGHT

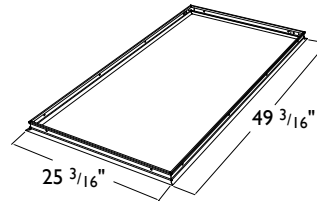
Standard	19 lbs / 8.6 kg
Drywall with Kit	21 lbs / 9.6 kg

● CEILING SYSTEM

T-BAR STYLE MOUNTING



DRYWALL WITH FLANGE KIT (DF)



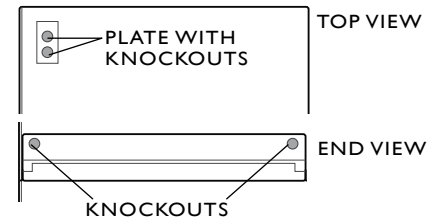
FIXTURE DIMENSIONS
47 3/8" / 23 3/8"

CUT HOLE DIMENSIONS
48 7/16" / 24 7/16"

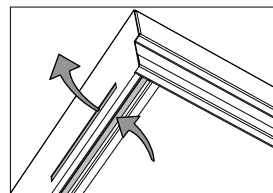
i Installation sheets for all mounting options are available at: www.axislighting.com

● STANDARD AND END MOUNT POWER FEED

Knockouts for BX cable connection are provided both on the top and on the ends of the luminaire. This allows for an end mount power feed solution if it is required. (BX CABLE BY OTHERS)



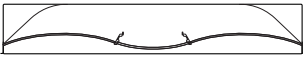
● AIR RETURN



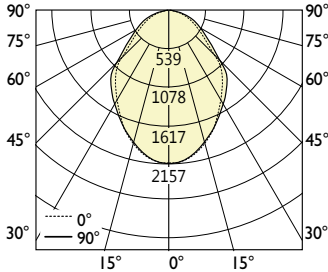
The air return (AR) option consists of discrete slots along the sides of the luminaire. These slots allow air to exhaust into the plenum and eliminate the need for unsightly air return grilles, and create a clean and well organized ceiling.

● PHOTOMETRIC DATA

LED



PHOTOMETRIC CURVE



Luminaire Lumens: 4500 lm
Input Watts: 38.37 W
Efficacy: 117 lm/W
 IES FILE: WALED-24-4500-40-VL.ies

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles					Zonal Lumens
	0	22.5	45	67.5	90	
0	2155	2155	2155	2155	2155	
10	2069	2068	2067	2072	2071	99
20	1814	1814	1817	1826	1830	171
30	1558	1547	1532	1511	1496	210
40	1304	1304	1280	1225	1199	223
50	850	824	804	776	729	168
60	561	540	518	495	457	122
70	361	342	324	305	277	83
80	159	163	162	142	134	41
90	0	0	0	0	0	

LUMINANCE DATA (CD/M²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	2255	2177	2038
55	1719	1647	1439
65	1566	1434	1243
75	1507	1356	1145
85	713	909	1007

COEFFICIENTS OF UTILIZATION (%)

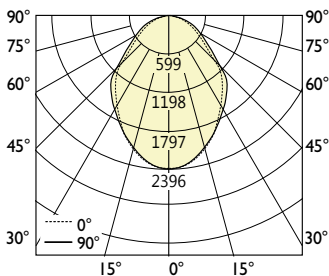
Ceiling	80				70				50			
	70	50	30	10	70	50	30	10	50	30	10	10
Wall												
0	119	119	119	119	117	117	117	117	112	112	112	112
1	110	106	102	97	107	103	100	95	99	96	92	92
2	101	93	87	79	98	92	86	79	88	83	77	77
3	93	83	75	67	90	81	74	66	79	73	65	65
4	86	74	66	57	83	73	65	57	71	64	56	56
5	79	67	59	50	77	66	58	50	64	57	49	49
6	74	61	52	44	72	60	52	44	58	51	44	44
7	68	56	47	39	67	55	47	39	53	46	39	39
8	64	51	43	35	62	50	43	35	49	42	35	35
9	60	47	39	32	59	47	39	32	45	39	32	32
10	56	44	36	29	55	43	36	29	42	35	29	29

Based on floor reflectance of 20

LED



PHOTOMETRIC CURVE



Luminaire Lumens: 5000 lm
Input Watts: 44.0 W
Efficacy: 114 lm/W
 IES FILE: WALED-24-5000-80-40-VL.ies

TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles					Zonal Lumens
	0	22.5	45	67.5	90	
0	2394	2394	2394	2394	2394	
10	2298	2298	2297	2302	2301	109
20	2015	2015	2019	2028	2033	190
30	1731	1718	1702	1679	1662	233
40	1449	1449	1422	1361	1332	248
50	944	916	894	862	810	186
60	623	600	575	550	508	136
70	401	380	360	339	308	92
80	177	182	180	158	149	46
90	0	0	0	0	0	

LUMINANCE DATA (CD/M²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	2506	2419	2264
55	1910	1830	1599
65	1740	1593	1381
75	1675	1507	1272
85	793	1010	1119

COEFFICIENTS OF UTILIZATION (%)

Ceiling	80				70				50			
	70	50	30	10	70	50	30	10	50	30	10	10
Wall												
0	119	119	119	119	117	117	117	117	112	112	112	112
1	110	106	102	97	107	103	100	95	99	96	92	92
2	101	93	87	79	98	92	86	79	88	83	77	77
3	93	83	75	67	90	81	74	66	79	73	65	65
4	86	74	66	57	83	73	65	57	71	64	56	56
5	79	67	59	50	77	66	58	50	64	57	49	49
6	74	61	52	44	72	60	52	44	58	51	44	44
7	68	56	47	39	67	55	47	39	53	46	39	39
8	64	51	43	35	62	50	43	35	49	42	35	35
9	60	47	39	32	59	47	39	32	45	39	32	32
10	56	44	36	29	55	43	36	29	42	35	29	29

Based on floor reflectance of 20

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

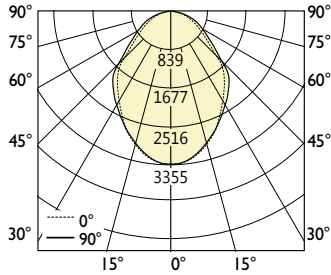
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● PHOTOMETRIC DATA

LED



PHOTOMETRIC CURVE



Luminaire Lumens: 7000 lm
Input Watts: 62.76 W
Efficacy: 112 lm/W
 IES FILE: WALED-24-7000-80-40-VLies

TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles					Zonal Lumens
	0	22.5	45	67.5	90	
0	3352	3352	3352	3352	3352	
10	3218	3217	3215	3223	3222	153
20	2822	2822	2827	2840	2846	265
30	2423	2406	2382	2351	2326	326
40	2028	2028	1991	1905	1865	347
50	1322	1282	1251	1207	1134	261
60	872	839	805	770	712	190
70	562	532	504	474	431	129
80	248	254	252	222	209	64
90	0	0	0	0	0	

LUMINANCE DATA (CD/M²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	3508	3387	3170
55	2675	2562	2238
65	2436	2230	1934
75	2345	2110	1780
85	1110	1414	1567

COEFFICIENTS OF UTILIZATION (%)

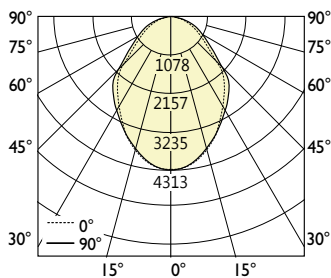
Ceiling	80				70				50			
	70	50	30	10	70	50	30	10	50	30	10	10
Wall	70	50	30	10	70	50	30	10	50	30	10	10
0	119	119	119	119	117	117	117	117	112	112	112	112
1	110	106	102	97	107	103	100	95	99	96	92	92
2	101	93	87	79	98	92	86	79	88	83	77	77
3	93	83	75	67	90	81	74	66	79	73	65	65
4	86	74	66	57	83	73	65	57	71	64	56	56
5	79	67	59	50	77	66	58	50	64	57	49	49
6	74	61	52	44	72	60	52	44	58	51	44	44
7	68	56	47	39	67	55	47	39	53	46	39	39
8	64	51	43	35	62	50	43	35	49	42	35	35
9	60	47	39	32	59	47	39	32	45	39	32	32
10	56	44	36	29	55	43	36	29	42	35	29	29

Based on floor reflectance of 20

LED



PHOTOMETRIC CURVE



Luminaire Lumens: 9000 lm
Input Watts: 81.36 W
Efficacy: 111 lm/W
 IES FILE: WALED-24-9000-80-40-VLies

TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles					Zonal Lumens
	0	22.5	45	67.5	90	
0	4310	4310	4310	4310	4310	
10	4137	4136	4134	4144	4142	197
20	3628	3628	3635	3651	3660	341
30	3115	3093	3063	3023	2991	419
40	2607	2607	2560	2450	2398	446
50	1699	1649	1609	1552	1458	335
60	1121	1079	1036	990	915	245
70	722	684	648	610	555	166
80	318	327	323	285	268	83
90	0	0	0	0	0	

LUMINANCE DATA (CD/M²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	4510	4355	4075
55	3439	3294	2878
65	3133	2867	2486
75	3014	2713	2289
85	1427	1818	2014

COEFFICIENTS OF UTILIZATION (%)

Ceiling	80				70				50			
Wall	70	50	30	10	70	50	30	10	50	30	10	
0	119	119	119	119	117	117	117	117	112	112	112	
1	110	106	102	97	107	103	100	95	99	96	92	
2	101	93	87	79	98	92	86	79	88	83	77	
3	93	83	75	67	90	81	74	66	79	73	65	
4	86	74	66	57	83	73	65	57	71	64	56	
5	79	67	59	50	77	66	58	50	64	57	49	
6	74	61	52	44	72	60	52	44	58	51	44	
7	68	56	47	39	67	55	47	39	53	46	39	
8	64	51	43	35	62	50	43	35	49	42	35	
9	60	47	39	32	59	47	39	32	45	39	32	
10	56	44	36	29	55	43	36	29	42	35	29	

Based on floor reflectance of 20

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