

WAVE 2x2 LED | Recessed T-Bar & Drywall



Project _____

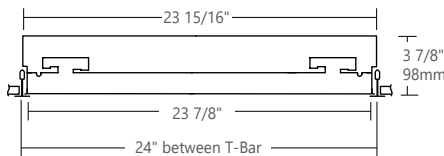
Type _____

Notes _____

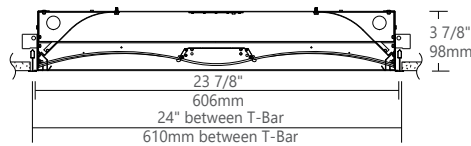
PERFORMANCE AT 4000K

NOMINAL LUMEN OUTPUT	INPUT WATTS*	EFFICACY
2500 lm	23.09W	109 lm/W
3000 lm	28.49W	105 lm/W
4000 lm	39.22W	102 lm/W
4400 lm	43.64W	101 lm/W

* Based on a 2'x2' luminaire using one driver
Please consult factory for customize lumen output and wattage.



SIDE VIEW



SECTION VIEW



* 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

WALED															
PRODUCT ID		SIZE		NOMINAL LUMENS		CRI		COLOR TEMP. (choose one)				SHIELDING		FINISH	
WALED	Wave LED	22	2'X2'	1300	1300 lm - Min	80	80 CRI	27	2700 K	TW2750 2700-5000 K - Tunable White		VL	VL optics	W	white
				4000	4000 lm - Max at 90 CRI	90	90 CRI*	30	3000 K	TW2765 2700-6500 K - Tunable White					
				4400	4400 lm - Max at 80 CRI			35	3500 K	BTW3527 3500-2700 K - Tunable BIOS					
								40	4000 K	BTW4027 4000-2700 K - Tunable BIOS					
								B30	3000 K - BIOS*						
								B35	3500 K - BIOS*						
								B40	4000 K - BIOS*						
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	DP	dimming (0-10V) 1%	1	1 circuit	TB9	t-bar 9/16"	B(#)	battery pack
277	277 V	LT(#)	Lutron*	+E(#)	emergency circuit*	TB15	t-bar 15/16"		
347	347 V	BI	bi-level dimming	+NL(#)	night light circuit*	ST	screw slot t-bar		
UNV	universal	O(#)	other**	+GTD(#)	generator transfer device*	TG9	regular 9/16"		
DC	low voltage*	DPB(STC)	dimming (0-10V) 1% with BIOS*			TG15	regular 15/16"		
		DPB(DYN)	Bio-dimming™ 100%-81% with BIOS*			DF	drywall flange		
		TW(#)	tunable white drivers*						
		POE(#)	POE drivers*						
* 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*	DS(#)	daylight sensor	C	custom
FW(#)	flex whip (6' std)	OS(#)	occupancy sensor		
AR	air return	DOS(#)	daylight & occupancy sensor		
CP	Chicago plenum	EN(#)	Enlighted integral *		
		ENR(#)	Enlighted remote *		
		WC(#)	wireless control dimming		
* 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 gauge)
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 gauge)
Interior Brackets	Die formed cold rolled sheet steel (20 gauge)
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.



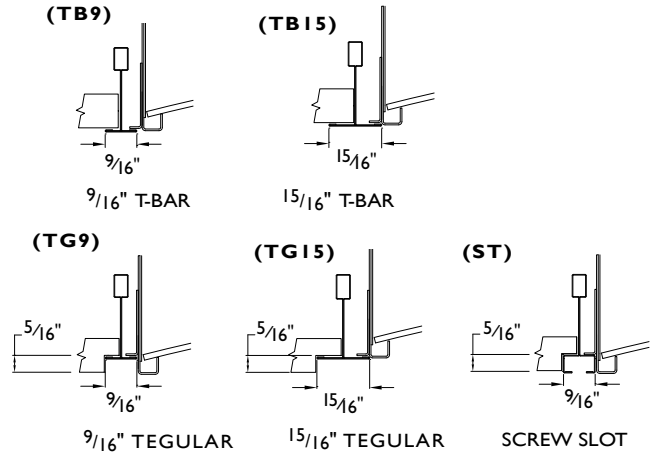
*Check the latest update on the DLC website for complete information. Not all versions may be DLC qualified.

● DLC Approved Options

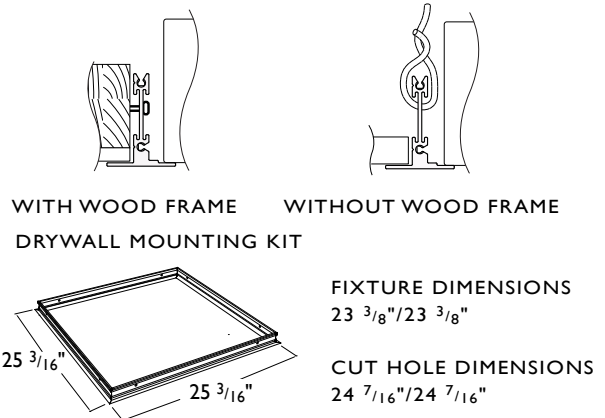
SIZE	OUTPUT	CRI	LUMENS	SHIELDING	FINISH	VOLTAGE	DRIVER	CIRCUITS
2'X2'	2500 lm	80	3000 K	VL	white	universal	DP	1
	3000 lm		3500 K					
	4000 lm		4000 K					
	4400 lm							

● CEILING SYSTEM

T-BAR STYLE MOUNTING



DRYWALL WITH FLANGE KIT (DF)

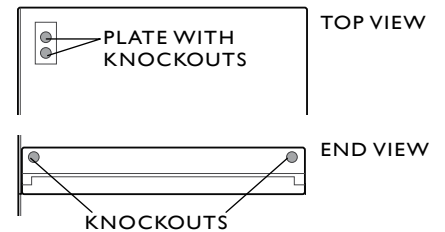


i Installation sheets for all mountings options are available at: www.axislighting.com

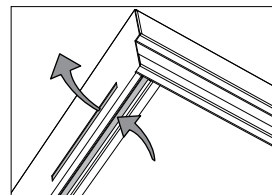
● STANDARD AND END MOUNT POWER FEED

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 OTHER)



● AIR RETURN



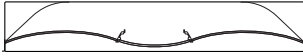
The air return (AR) option consists of discrete slots along the sides of the luminaire. These slots allow air to exhaust into the plenum and eliminate the need for unsightly air return grilles, and create a clean and well organized ceiling.

● WEIGHT

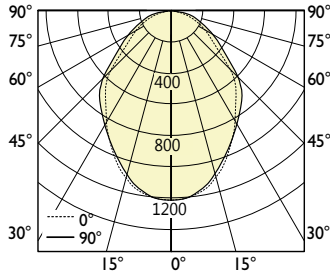
Standard	19 lbs / 8.6 kg
Drywall with Kit	21 lbs / 9.6 kg

● PHOTOMETRIC DATA

LED



PHOTOMETRIC CURVE



Luminaire Lumens: 2500 lm
Input Watts: 23.09 W
Efficacy: 109 lm/W
IES FILE: WALED-22-2500-80-40-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	1209	1209	1209	1209	1209	
10	1164	1163	1162	1161	1160	55.31
20	1015	1011	1014	1017	1016	95.11
30	820	832	853	869	875	116.56
40	650	671	708	727	733	123.24
50	400	425	445	470	487	93.63
60	249	273	293	313	323	69.14
70	152	167	182	197	212	46.88
80	69	76	86	87	86	22.04
90	0	0	0	0	0	

LUMINANCE DATA (CD/M²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	2250	2464	2570
55	1594	1885	2046
65	1410	1642	1875
75	1312	1554	1819
85	957	923	786

COEFFICIENTS OF UTILIZATION (%)

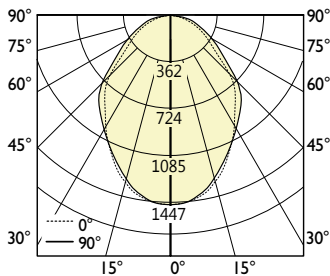
Ceiling	80				70				50			
	70	50	30	10	70	50	30	10	50	30	10	10
Wall	70	50	30	10	70	50	30	10	50	30	10	10
0	119	119	119	119	117	117	117	117	111	111	111	111
1	110	106	102	97	107	103	100	95	99	96	92	92
2	101	93	87	79	98	91	86	79	88	83	77	77
3	93	83	75	67	90	81	74	66	78	72	65	65
4	86	74	66	57	83	73	65	57	71	64	56	56
5	79	67	59	50	77	66	58	50	64	57	49	49
6	73	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: 3000 lm
Input Watts: 28.49 W
Efficacy: 105 lm/W
IES FILE: WALED-22-3000-80-40-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	1447	1447	1447	1447	1447	
10	1393	1392	1391	1390	1389	66
20	1215	1210	1214	1217	1216	114
30	982	996	1021	1040	1047	140
40	778	803	848	870	877	148
50	479	509	533	563	583	112
60	298	327	351	375	387	83
70	182	200	218	236	254	56
80	83	91	103	104	103	26
90	0	0	0	0	0	

LUMINANCE DATA (CD/M²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	2693	2950	3076
55	1909	2257	2450
65	1688	1966	2245
75	1571	1860	2177
85	1146	1105	941

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	111	111	111	
1	110	106	102	97	107	103	100	95	99	96	92	
2	101	93	87	79	98	91	86	79	88	83	77	
3	93	83	75	67	90	81	74	66	78	72	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	73	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

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

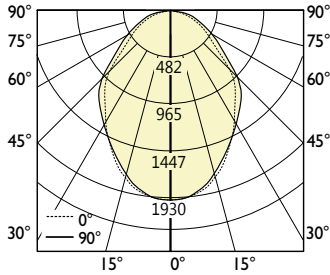
WAVE 2x2 LED | Recessed T-Bar & Drywall

● PHOTOMETRIC DATA

LED



PHOTOMETRIC CURVE



Luminaire Lumens: 4000 lm
Input Watts: 39.22 W
Efficacy: 102 lm/W
 IES FILE: WALED-22-4000-80-40-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	1930	1930	1930	1930	1930	
10	1858	1856	1855	1853	1852	88
20	1620	1614	1619	1623	1622	152
30	1309	1328	1362	1387	1397	186
40	1038	1071	1130	1160	1170	197
50	638	678	710	750	777	149
60	397	436	468	500	516	110
70	243	267	291	314	338	75
80	110	121	137	139	137	35
90	0	0	0	0	0	

LUMINANCE DATA (CD/M²)

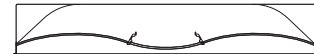
Vertical Angle	Horizontal Angles		
	0	45	90
45	3591	3934	4102
55	2545	3009	3266
65	2250	2621	2993
75	2094	2480	2903
85	1528	1473	1255

COEFFICIENTS OF UTILIZATION (%)

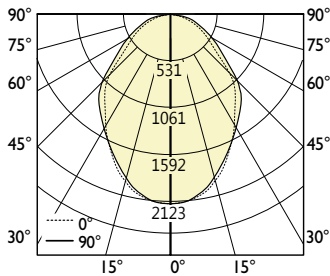
Ceiling	80				70				50			
	70	50	30	10	70	50	30	10	50	30	10	10
Wall	70	50	30	10	70	50	30	10	50	30	10	10
0	119	119	119	119	117	117	117	117	111	111	111	111
1	110	106	102	97	107	103	100	95	99	96	92	92
2	101	93	87	79	98	91	86	79	88	83	77	77
3	93	83	75	67	90	81	74	66	78	72	65	65
4	86	74	66	57	83	73	65	57	71	64	56	56
5	79	67	59	50	77	66	58	50	64	57	49	49
6	73	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: 4400 lm
Input Watts: 43.64 W
Efficacy: 101 lm/W
 IES FILE: WALED-22-4400-80-40-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	2123	2123	2123	2123	2123	
10	2044	2042	2040	2038	2037	97
20	1782	1775	1780	1786	1784	167
30	1440	1461	1498	1526	1536	205
40	1141	1178	1243	1276	1287	216
50	702	746	781	825	855	164
60	437	479	514	550	567	121
70	267	293	320	346	372	82
80	121	133	151	153	151	39
90	0	0	0	0	0	

LUMINANCE DATA (CD/M²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	3950	4357	4512
55	2799	3310	3593
65	2475	2884	3292
75	2304	2728	3193
85	1680	1620	1380

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	111	111	111	
1	110	106	102	97	107	103	100	95	99	96	92	
2	101	93	87	79	98	91	86	79	88	83	77	
3	93	83	75	67	90	81	74	66	78	72	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	73	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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