SQR LED Square Troffer

Williams

CATALOG #: _____

TYPE: _____

PROJECT: _____

6-13/16″
47-13/16″

BUY AMERICAN ACT COMPLIANT

CCEA Approved

FEATURES

- Provides soft, smooth illumination in three perfectly square sizes
- Combine 2′, 3′ and 4′ fixtures in your space to create a unique, modern ceiling
- Large-format design complements the RND family
- Fully-enclosed spring-loaded cam latches allow years of hassle-free maintenance
- T-slot steel hinge ensures positive retention when door is opened
- Deep reinforcement ribs provide added strength
- Rolled-edge channel adds superior strength
- Integral T-bar clips quickly secure fixture to structure
- Fully gasketed door minimizes contaminants
- Wireless in-fixture control solutions available
- Made Right Here® in the USA

SPECIFICATIONS

- HOUSING – .040″ thick die-formed aluminum with 22-gauge steel end plates.
- DOOR FRAME – .050″ extruded aluminum, flat or regress, with mitered corners. T-slot steel hinge allows reversible hinging and latching. Fully enclosed spring-loaded cam latches.
- SHIELDING – KSH frostglaze, .125″ thick.
- FINISH – 92% minimum average reflective white polyester powder coat bonded to phosphate-free, multi-stage pretreated metal. All parts painted after fabrication to facilitate installation, increase efficiency, and inhibit corrosion.
- ELECTRICAL – High-quality mid-power LED boards. L85 at 50,000 hours.
- MOUNTING – NEMA Type "G" 15/16″ or 1″ grid standard. Drywall flange kits available, shipped separately, see options. (4) T-bar EQ clips standard.
- LISTINGS –
  - cCSAus certified as luminaire suitable for dry or damp locations.
  - City of Chicago Environmental Air approved when specified with CP option.
  - IC-rated for direct contact with insulation when specified with L113 lumen package or lower.
  - Complies with the Buy American Act and other federal regulations. Request certification at hew.com/baa.
- WARRANTY – 5-year limited warranty, see hew.com/warranty.

ORDERING EXAMPLE: SQR G - 44 - L200/835 - F FG125 - OPTIONS - CONTROL/DIM - UNV

ORDERING INFO

SERIES	CEILING TYPE	SIZE	LUMENS [1]		CRI	CCT	DOOR FRAME
SQR	G 15/16″ or 1″ grid	22 2′ x 2′	**2x2**		8 80	27 2700K	F White flat aluminum
	F Flange [2]	33 3′ x 3′	L42	4,200lm	9 90 [3]	30 3000K	R White regress aluminum
		44 4′ x 4′	L65	6,500lm		35 3500K	FB Black flat aluminum
			3x3			40 4000K	RB Black regress aluminum
			L67	6,700lm		50 5000K	
			L150	15,000lm			
			4x4				
			L113	11,300lm			
			L200	20,000lm			

SHIELDING	OPTIONS [4]		CONTROL [5]
FG125 KSH frostglaze, .125″ thick			*See page 4 for ADDITIONAL CONTROL/ DRIVER OPTIONS.*
	EM/10W	10-watt emergency battery	– None
	DG	Double gasket [6]	AVI-LVFA Avi-on wireless fixture control [8]
	TG	Triple gasket [7]	AWNR Lutron Athena wireless node integral fixture control, RF only [9]
	(L_ _)	Additional lower lumen packages available. Specify in increments of 100 nominal lumens. Option must be specified with next higher lumen package. Example: 17,000 nominal lumens = SQRG-44-L200/835-(**L170**)	
	CP	Chicago plenum (CCEA)	
	DFK-2424W	Drywall kit, 24″ x 24″, white	
	DFK-3636W	Drywall kit, 36″ x 36″, white	
	DFK-4848W	Drywall kit, 48″ x 48″, white	

DRIVER	VOLTAGE
See page 4 for ADDITIONAL CONTROL/ DRIVER OPTIONS.	120 120V
DIM Driver with external dimming wires	277 277V
DRV Driver without external dimming wires	UNV 120-277V
DA Driver with 12V auxiliary power, without external dimming wires [10]	347 347V [12]
DSR Sensor-ready driver without external dimming wires (D4i DALI-2) [11]	

NOTES

1. Lumen output based on 80 CRI/3500K CCT. Actual performance may vary +/-5%. See page 2 for FIXTURE PERFORMANCE DATA. Additional lumen packages available, see Options.
2. See page 3 for F CEILING TYPE INSTALLATION.
3. Extended lead times may apply. Consult factory for availability.
4. See page 3 for DRYWALL KIT (DFK) OPTIONS. See Technical Info for POWER ENTRY details.
5. See page 4 for AVI-ON BLUETOOTH WIRELESS CONTROL DETAILS.
6. Flat aluminum door only. See page 3 for GASKETING DETAILS.
7. Flat aluminum door only. Field-installed. See page 3 for GASKETING DETAILS.
8. DA Driver only.
9. DA and DSR Drivers only.
10. Avi-on and Lutron Athena Controls only.
11. Lutron Athena Controls only.
12. Not available with EM batteries, DA, or DSR drivers.

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FIXTURE PERFORMANCE DATA

|	LUMEN PACKAGE	DELIVERED LUMENS	WATTAGE	EFFICACY (lm/W)
2x2	L42	4153	46.3	90
2x2	L65	6538	68.8	95
3x3	L67	6743	74.7	90
3x3	L150	15158	172.1	88
4x4	L113	11312	127.5	89
4x4	L200	20158	226.9	89

- Photometrics tested in accordance with IESNA LM-79. Results based on 80 CRI/3500K CCT, average wattage for 120V through 277V input, and 25°C ambient temperature. Actual performance may vary +/-5%
- To calculate lumen output in emergency mode, multiply the battery wattage by the efficacy.
- Use multiplier table to calculate additional options.

MULTIPLIER TABLE

|	COLOR TEMPERATURE	
	CCT	CONVERSION FACTOR
80 CRI	2700K	0.97
80 CRI	3000K	0.99
80 CRI	3500K	1.00
80 CRI	4000K	1.03
80 CRI	5000K	1.06
90 CRI	2700K	0.80
90 CRI	3000K	0.82
90 CRI	3500K	0.83
90 CRI	4000K	0.86
90 CRI	5000K	0.89

PHOTOMETRY

SQR-S22-L42/835-FFG125 Total Luminaire Output: 4153 lumens; 46.3 Watts | Efficacy: 89.8 lm/W | 80 CRI; 3500K CCT
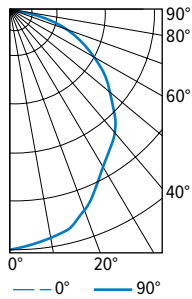
VERTICAL ANGLE	HORIZONTAL ANGLE			ZONAL LUMENS
	0º	45º	90º	
0	1556	1556	1556	
5	1523	1521	1522	145
15	1468	1469	1469	412
25	1294	1296	1298	596
35	1117	1119	1123	703
45	961	967	970	743
55	751	753	758	669
65	516	515	523	507
75	269	264	273	289
85	76	73	78	89
90	8	10	10	

| ZONE	LUMENS	% FIXTURE
0 - 30	1153	28
0 - 40	1857	45
0 - 60	3268	79
0 - 90	4153	100
0 - 180	4153	100

SQR-S33-L67/835-FFG125 Total Luminaire Output: 6743 lumens; 74.7 Watts | Efficacy: 90.3 lm/W | 80 CRI; 3500K CCT
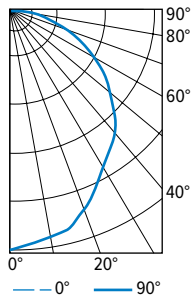
VERTICAL ANGLE	HORIZONTAL ANGLE			ZONAL LUMENS
	0º	45º	90º	
0	2526	2526	2526	
5	2473	2470	2471	236
15	2384	2385	2385	668
25	2101	2104	2107	968
35	1813	1818	1823	1142
45	1561	1569	1575	1207
55	1219	1223	1231	1086
65	837	836	850	822
75	437	429	443	469
85	123	118	127	145
90	14	17	17	

ZONE	LUMENS	% FIXTURE
0 - 30	1872	28
0 - 40	3014	45
0 - 60	5307	79
0 - 90	6743	100
0 - 180	6743	100

SQR-S44-L113/835-FFG125 Total Luminaire Output: 11312 lumens; 127.5 Watts | Efficacy: 88.7 lm/W | 80 CRI; 3500K CCT
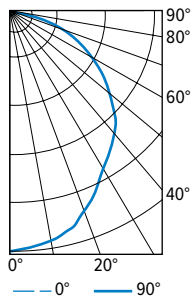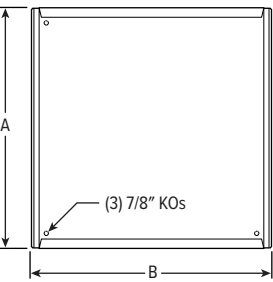

VERTICAL ANGLE	HORIZONTAL ANGLE			ZONAL LUMENS
	0º	45º	90º	
0	4224	4224	4224	
5	4135	4130	4132	394
15	3986	3988	3988	1130
25	3513	3518	3523	1628
35	3032	3039	3048	1910
45	2610	2624	2633	2033
55	2038	2044	2058	1836
65	1400	1398	1421	1393
75	731	717	740	767
85	206	197	213	221
90	23	28	28	

ZONE	LUMENS	% FIXTURE
0 - 30	3153	28
0 - 40	5062	45
0 - 60	8931	79
0 - 90	11312	100
0 - 180	11312	100

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FIXTURE DETAILS

BACK VIEW

(3) 7/8" KOs

SIZE	A	B
2' x 2'	23-13/16"	23-13/16"
3' x 3'	35-13/16"	35-13/16"
4' x 4'	47-13/16"	47-13/16"

CROSS SECTION
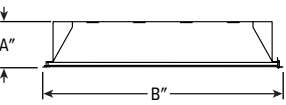
SIZE	A	B
2' x 2'	6-13/16"	23-13/16"
3' x 3'	6-13/16"	35-13/16"
4' x 4'	6-13/16"	47-13/16"

F CEILING TYPE INSTALLATION

1-1/2" min.
2-3/4" max.
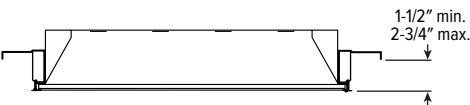
Note: Maximum recommended ceiling opening is 24-3/8" x 24-3/8", 36-3/8" x 36-3/8", or 48-3/8" x 48-3/8".

For continuous row mounting, add 49-5/16" for each additional fixture to obtain ceiling opening. 1-5/16" between end plates.

GASKETING DETAILS

DOUBLE GASKETING (DG OPTION)

First gasketing factory-installed between door frame and luminaire housing prevents light leak and reduces dust ingress.
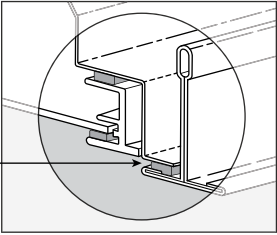
Second gasketing factory-installed between door frame and lens reduces dust and bug contaminants.
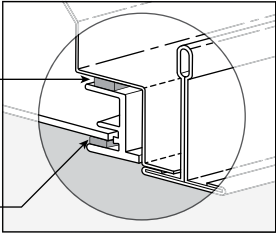
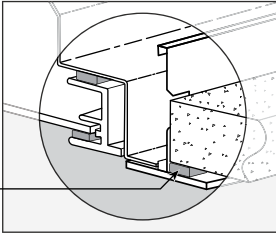
TRIPLE GASKETING (TG OPTION)

T-bar

Third gasketing field installed between bottom perimeter of fixture and T-bar ceiling seals plenum dust from the room.

Drywall

Between bottom perimeter of fixture and hardpan ceiling.

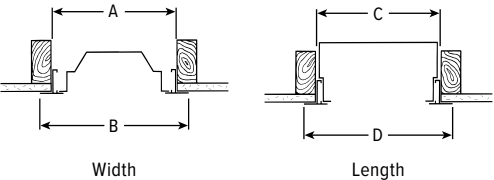## DRYWALL KIT (DFK) OPTIONS

ORDERING INFO

EXAMPLE: DFK - 24 24 W			
SERIES	**WIDTH**	**LENGTH**	**FINISH**
DFK Drywall kit	**24** 2' **36** 3' **48** 4'	**24** 2' **36** 3' **48** 4'	**W** White **AMW** Anti-microbial white

INSTALLATION DIMENSIONS

NOMINAL SIZE	ROUGH-IN		FINISH TRIM SIZE	
	WIDTH (A)	LENGTH (C)	WIDTH (B)	LENGTH (D)
2' x 2'	24-3/8"	24-3/8"	25-5/16"	25-5/16"
3' x 3'	36-3/8"	36-3/8"	37-5/16"	37-5/16"
4' x 4'	48-3/8"	48-3/8"	49-5/16"	49-5/16"

TYPICAL INSTALLATION

Refer to table for dimensions.

Width

Length

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AVI-ON BLUETOOTH WIRELESS CONTROL DETAILS

FEATURES

Simple

- Gateway-free distributed control
- Factory pre-commissioning
- Contractor friendly installation
- Occupancy/vacancy/daylight sensing

Scalable

- Virtually unlimited network size
- Spans small offices to large warehouses
- Flexible control strategies

Secure

- Optional cloud connectivity
- UL IoT platinum security rating
- DLC 5.0 compliant

COMMISSIONING & INSTALLATION TOOLS

Avi-on mobile apps provide intuitive, quick installation and commissioning. Pro tools are available to qualified installers. Live commissioning training and on-site or remote support by Avi-on must be ordered separately through Avi-on.
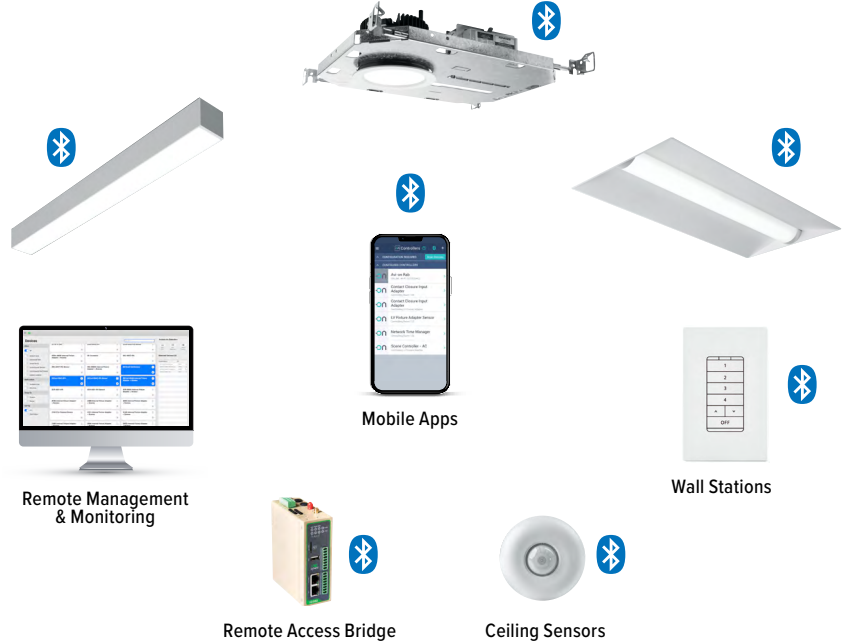
Commissioning Mobile App

Zone Scanner Web App

Commissioning Pro App

SYSTEM COMPONENTS

Mobile Apps

Wall Stations

Remote Management & Monitoring

Remote Access Bridge

Ceiling Sensors

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ACCESSORIES

WALL STATIONS	
AVI-2401AC	Scene controller - numbered 1-4, 120-277VAC
AVI-2402BAT	Scene controller - numbered 1-4, battery powered
AVI-2401AC-2	Dimmer with presets - percentages, 120-277VAC
AVI-2402BAT-2	Dimmer with presets - percentages, battery powered
AVI-2401AC-3	On/off/dimming, 120-277VAC
AVI-2402BAT-3	On/off/dimming, battery powered

NETWORK	
AVI-RAB-LTE	Remote access bridge
AVI-KIT-NTM	Network time manager with battery backup

CEILING MOUNT SENSORS	
AVI-KIT-SEN-DUCM	PIR motion and ultrasonic sensor kit
AVI-KIT-SEN-ICM	PIR motion and photocell sensor kit

For load controllers and additional accessory info, see hew.com/avi-on

ADDITIONAL CONTROL/DRIVER OPTIONS

Note: Lumen restrictions apply, consult product builder at hew.com/product-builder.

CATALOG NUMBER	DESCRIPTION
AVI-LVFA/DA	Avi-on wireless fixture control for use with driver with 12V auxiliary power
AWNR/DA	Lutron Athena wireless node integral fixture control, RF only, for use with driver with 12V auxiliary power
AWNR/DSR	Lutron Athena wireless node integral fixture control, RF only, for use with sensor-ready driver (D4i DALI-2)
DRV	Driver prewired for non-dimming applications
DIM	Dimming driver prewired for 0-10V low voltage applications
DIM1	1% dimming driver prewired for 0-10V low voltage applications
DIM LINE	Line voltage dimming driver (TRIAC and ELV compatible, 120V only)
DIM TRC	Line voltage dimming driver (TRIAC compatible, 120V only)
SD40	40% step-dimming driver
SD50	50% step-dimming driver
DALI	DALI dimming driver
LDE1	Lutron Hi-lume 1% EcoSystem dimming LED driver

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