2DS LED
2″ Downlight – Square

Williams

5″

2-11/16″   1/2″ min
2-3/8″ max

12-1/2″

CATALOG #: _____

TYPE: _____

PROJECT: _____

NEW CONSTRUCTION AND REMODEL

BUY AMERICAN ACT COMPLIANT · CCEA Approved · Low UGR · JA8 Compliant · TITLE 24 · WET/CC
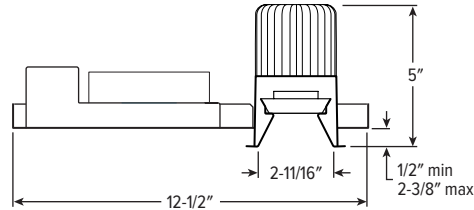
ORDERING EXAMPLE: 2DS - L20/835 - OPTIONS - CONTROL/DIM - UNV - LW - OF - WH - TRIM OPTIONS - N - F1

— HOUSING — | — TRIM — | MOUNT.

HOUSING

SERIES	LUMENS[1]	CRI	CCT	OPTIONS	CONTROL	DRIVER	VOLTAGE
2DS	L5 500lm L7 700lm L9 900lm L12 1,200lm L15 1,500lm L20 2,000lm L25 2,500lm	8 80 9 90	27 2700K 30 3000K 35 3500K 40 4000K 50 5000K	*See page 4 for EMERGENCY BATTERY OPTIONS.* **ATH** Airtight construction **F** Fuse kit **SDT** Stepdown transformer [2] **CP** Chicago plenum (CCEA)[3]	*See page 6 for ADDITIONAL CONTROL/DRIVER OPTIONS.* **–** None **AVI-LVFA** Avi-on wireless fixture control [4] **AWNR** Lutron Athena wireless node integral fixture control, RF only [5]	*See page 6 for ADDITIONAL CONTROL/DRIVER OPTIONS.* **DIM** Dimming driver, 0-10V **DIM1** 1% Dimming driver, 0-10V **DA** Driver with 12V auxiliary power, without external dimming wires [6]	**UNV** 120-277V **347** 347V [7]

TRIM [8]

TRIM TYPE	DISTRIBUTION	FLANGE TYPE	REFLECTOR FINISH	TRIM OPTIONS
L Flush lens **O** Open reflector **R** Regressed lens **A** Angled lens [9]	*See page 3 for BEAM ANGLE.* **W** Wide **M** Medium **N** Narrow [10] **S** Narrow spot [11] **WW** Wall wash [12]	**OF** 1/2″ standard flange **ZF** Zero-flange mud-in [13]	**Open trim types** **CS** Clear semi-specular anodize **SG** Satin glow anodize **GD** Gold anodize **CG** Champagne gold anodize **PW** Pewter anodize **SPC** Clear specular anodize **RG** Rose gold anodize **Lens trim types** **CS** Clear semi-specular powder coat **WH** White texture powder coat **BL** Black texture powder coat **MB** Black texture splay with white flange [14]	**MWT** Smooth matte white trim flange [15] **AD** Diffuse acrylic lens [16] **PD** Diffuse 1/8″ polycarbonate lens [17] **WET/CC** Wet location, covered ceiling listed [18] **AM** Anti-microbial [19]

MOUNTING

MOUNTING TYPE [20]

N Open pan for new construction [22]
I IC-rated enclosure for new construction [23]
R Remodel kit [24]

MOUNTING HARDWARE [21]

F1 Integral 2-position fixed pan bracket, universal bar hanger included [25]
BA1 Adjustable butterfly pan bracket, bar hanger not included [26]
CA1 Adjustable caterpillar pan bracket, universal bar hanger included [27]

NOTES

1. Lumen output based on O Trim Type, W Distribution, and WH Reflector Finish, 80 CRI/3500K CCT. Actual performance may vary +/-5%, see page 2 for FIXTURE PERFORMANCE DATA.
2. Not available with R Mounting. May be required for 347V, see product builder at hew.com/product-builder
3. I Mounting Type required.
4. DA Driver only. See page 6 for AVI-ON BLUETOOTH WIRELESS CONTROL DETAILS.
5. DA Driver only.
6. Avi-on and Lutron Athena Controls only. Not available with R Mounting Type.
7. Not available with EM batteries, DA, or DMX drivers.
8. Trim ships separately.
9. Available with WW Distribution only.
10. L20 lumen package max for N and R Mounting. L12 lumen package max for I Mounting.
11. L15 lumen package max for N and R Mounting. L12 lumen package max for I Mounting. Not available with 950 CRI/CCT.
12. A Trim Type only.
13. For use with mud-in plaster construction only, supplied with mud flange installation kit. See page 4 for TRIM TYPE DETAILS. Not available with O Trim Type or ATH Option.
14. R Trim Type only. Not available with ZF Flange Type or MWT.
15. Not available with L Trim Type, ZF Flange Type or WH Reflector Finish.
16. W Distribution only. Not available with O Trim Type.
17. W and WW Distributions only. Not available with O Trim Type.
18. Not available with O Trim Type.
19. WH and BL Reflector Finishes only.
20. Mounting hardware required (N and I only), ordered separately, see MOUNTING HARDWARE ordering info. See page 5 for MOUNTING TYPE DETAILS.
21. Additional mounting hardware options available. See page 5 for MOUNTING HARDWARE DETAILS.
22. Top access required when specified with EM battery or controls other than DIM, DIM1, DIM LINE.
23. L15 lumen package max. Not available with EM batteries.
24. Also used in new construction sheetrock ceilings. Pan-less installation. Additional plenum space required for R mounting when specified with EM battery. See page 4 for REMODEL MOUNTING PLENUM RESTRICTIONS.
25. N and I Mounting Types only. I Mounting requires external brackets.
26. N Mounting Type only.
27. N Mounting Type only.

H.E. Williams, Inc. ▪ Carthage, Missouri ▪ www.hew.com ▪ 417-358-4065 ▪ Designed and Manufactured in the USA

Information contained herein is subject to change without notice. REV.01/29/25.MH

Downlights
Page 1 of 6

2DS LED
2″ Downlight – Square

FEATURES

- 2″ aperture is unobtrusive in small scale spaces
- Beam angles ranging from 14º spot to 50º wide for tailored performance
- Square shape accentuates architectural styles
- Zero-flange trim options for modern ceiling
- New construction mounting pan, IC-rated, or pan-less remodel kit available
- Contemporary design provides glare-free illumination for a soft ceiling appearance
- Die-cast trim includes flush, regressed or angled lens
- Spring clip retention system eliminates trim sag
- Easily adjust mounting arms below ceiling to adapt to a range of ceiling thicknesses
- Open reflector with seven finishes complements any interior style
- Low UGR meets LEED and WELL requirements
- Wireless in-fixture control solutions available
- Made Right Here® in the USA

SPECIFICATIONS

- HOUSING – Die-cast aluminum trim housing with forged aluminum heat sink. Galvanized steel splice compartment with driver mounting plate/enclosure. Swing-out mounting arms field adjust for ceiling thickness from 1/2″ – 2-3/8″.
- OPEN REFLECTOR – Low-iridescent anodized aluminum with top diffuser.
- LENSED TRIM – Die-cast aluminum frame with micro-prismatic, acrylic lens. Diffuse acrylic lens standard with A Trim Type.
- ELECTRICAL – High-performance Class 2 C.O.B. LED array. Modular quick-connect plug for easy field-connection of LED light assembly to driver. Reported L70 > 55,000 hours. Reported L90 = 49,000 hours. Estimated L70 = 179,000 hours.
- MOUNTING – Recessed. 20 ga. galvanized steel mounting pan for new construction or IC-rated enclosure. Minimum 12-1/2″ O.C. marked spacing required for L20 and L25 lumen packages when specified with R Mounting Type and L15 lumen package when specified with S Distribution.

- LISTINGS –
  - cCSAus conforms to UL STD 1598; Certified to CAN/CSA STD C22.2 No. 250.0 for dry and damp locations. LED light assembly conforms to UL 2108 for remote installation.
  - Suitable for wet location under covered ceiling when specified with WET/CC option.
  - IC-rated for direct contact with insulation when specified with I Mounting Type.
  - City of Chicago Environmental Air approved when specified with CP option.
  - Complies with ASTM-E283 when specified with ATH option.
  - RoHS compliant.
  - Title 24 (JA8) compliant in select configurations, see energy.ca.gov
  - Complies with the Buy American Act and other federal regulations. Request certification at hew.com/buy-american
- WARRANTY – 5-year limited warranty, see hew.com/warranty

FIXTURE PERFORMANCE DATA

	DISTRIBUTION	FLUSH LENS TRIM TYPE			OPEN REFLECTOR TRIM TYPE			REGRESSED LENS TRIM TYPE			ANGLED LENS TRIM TYPE		
		DELIVERED LUMENS	WATTAGE	EFFICACY (lm/W)	DELIVERED LUMENS	WATTAGE	EFFICACY (lm/W)	DELIVERED LUMENS	WATTAGE	EFFICACY (lm/W)	DELIVERED LUMENS	WATTAGE	EFFICACY (lm/W)
L5	W	526	6.6	80	381	7.2	53	530	6.5	82	–	–	–
	M	528	6.6	80	361	7.2	50	520	6.6	79	–	–	–
	N	511	6.5	79	372	7.2	52	511	6.5	79	–	–	–
	S	607	7.8	78	435	7.8	56	609	7.8	78	–	–	–
	WW	–	–	–	–	–	–	–	–	–	407	6.7	61
L7	W	739	8.5	87	535	9.3	58	745	8.5	88	–	–	–
	M	742	8.5	87	507	9.3	55	731	8.5	86	–	–	–
	N	718	8.5	85	523	9.3	56	718	8.5	85	–	–	–
	S	848	11.2	76	607	11.2	54	850	11.2	76	–	–	–
	WW	–	–	–	–	–	–	–	–	–	572	8.7	66
L9	W	947	10.5	90	686	11.4	60	954	10.5	91	–	–	–
	M	950	10.5	91	650	11.4	57	936	10.5	89	–	–	–
	N	920	10.5	88	670	11.4	59	920	10.5	88	–	–	–
	S	1085	14.1	77	777	14.1	55	1089	14.1	77	–	–	–
	WW	–	–	–	–	–	–	–	–	–	733	10.8	68
L12	W	1292	14.0	92	936	15.3	61	1302	14.0	93	–	–	–
	M	1296	14.0	93	886	15.3	58	1277	14.0	91	–	–	–
	N	1254	14.0	90	914	15.3	60	1255	14.0	90	–	–	–
	S	1440	20.4	71	1031	20.4	51	1445	20.4	71	–	–	–
	WW	–	–	–	–	–	–	–	–	–	1000	14.4	69
L15	W	1602	17.3	93	1160	17.3	67	1614	17.3	93	–	–	–
	M	1607	17.3	93	1099	17.3	64	1583	17.3	92	–	–	–
	N	1555	17.3	90	1133	17.3	66	1556	17.3	90	–	–	–
	S	1783	26.7	67	1276	26.7	48	1789	26.6	67	–	–	–
	WW	–	–	–	–	–	–	–	–	–	1240	17.8	70
L20	W	2104	23.4	90	1523	25.6	60	2119	23.4	91	–	–	–
	M	2110	23.4	90	1443	25.6	56	2079	23.4	89	–	–	–
	N	2042	23.4	87	1488	25.6	58	2043	23.4	87	–	–	–
	S	–	–	–	–	–	–	–	–	–	–	–	–
	WW	–	–	–	–	–	–	–	–	–	1628	24.0	68
L25	W	2528	29.5	86	2155	32.2	67	2547	29.4	87	–	–	–
	M	2536	29.5	86	1734	32.2	54	2498	29.5	85	–	–	–
	N	–	–	–	–	–	–	–	–	–	–	–	–
	S	–	–	–	–	–	–	–	–	–	–	–	–
	WW	–	–	–	–	–	–	–	–	–	1957	30.3	65

FIXTURE PERFORMANCE DATA CONTINUED ON NEXT PAGE.

H.E. Williams, Inc. ▪ Carthage, Missouri ▪ www.hew.com ▪ 417-358-4065 ▪ Designed and Manufactured in the USA
Information contained herein is subject to change without notice.
REV.01/29/25.MH

Downlights
Page 2 of 6

2DS LED
2″ Downlight – Square

MULTIPLIER TABLES

COLOR TEMPERATURE

	CCT	CONVERSION FACTOR
80 CRI	2700K	0.92
	3000K	0.98
	3500K	1.00
	4000K	1.01
	5000K	1.02
90 CRI	2700K	0.76
	3000K	0.79
	3500K	0.82
	4000K	0.84
	5000K	0.88

REFLECTOR FINISH

	CATALOG NUMBER	CONVERSION FACTOR
O TRIM	CS	1.00
	SG [1]	0.92
	GD	0.93
	CG	0.96
	PW	0.86
	SPC	1.02
	RG	0.88
R TRIM	WH	1.00
	CS	0.98
	BL	0.79

TRIM OPTIONS

CATALOG NUMBER	CONVERSION FACTOR
AD	0.85
PD	0.85

BEAM ANGLE

TRIM TYPE			
	FLUSH	OPEN	REGRESSED
W	50°	50°	55°
M	30°	47°	30°
N	20°	47°	20°
S	14°	43°	14°

[1] Distribution will also be affected, consult factory.
- Photometrics tested in accordance with IESNA LM-79. Results based on CS (O trim type), or WH (L, R and A Trim Types) reflector finish, W distribution, 80 CRI/3500K CCT, wattage for 120V input, and 25ºC ambient temperature. Actual performance may vary +/-5%.
- Beam angle based on L Trim Type and WH Reflector Finish.
- To calculate lumen output in emergency mode, multiply the battery wattage by the efficacy.
- Use multiplier tables to calculate additional options.

PHOTOMETRY

2DS-L15/835-DIM-UNV-LW-OF-WH Report #: 13257153; 03/11/20 | Total Luminaire Output: 1602 lumens; 17.3 Watts | Efficacy: 92.5 lm/W | 80 CRI; 3500K CCT
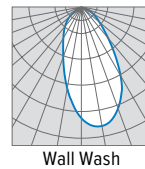

CANDLEPOWER DISTRIBUTION
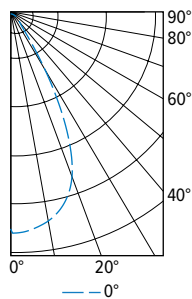
VERTICAL ANGLE	HORIZONTAL ANGLE 0°	ZONAL LUMENS
0	1852	
5	1869	129
15	1690	259
25	1065	225
35	269	83
45	109	43
55	72	32
65	46	21
75	22	9
85	5	1
90	0	

LUMEN SUMMARY

ZONE	LUMENS	% FIXTURE
0 - 40	1361	85
0 - 60	1526	95
0 - 90	1601	100
0-180	1602	100

FLUSH (L)

| 50° Wide | 30° Medium | 20° Narrow | 14° Spot |

ANGLED (A)

| Wall Wash |

OPEN (O)

| 50° Wide | 47° Medium | 47° Narrow | 43° Spot |

REGRESSED (R)

| 55° Wide | 30° Medium | 20° Narrow | 14° Spot |

H.E. Williams, Inc. ▪ Carthage, Missouri ▪ www.hew.com ▪ 417-358-4065 ▪ Designed and Manufactured in the USA
REV.01/29/25.MH
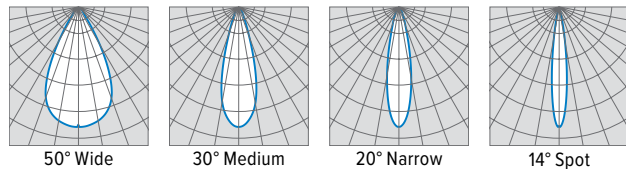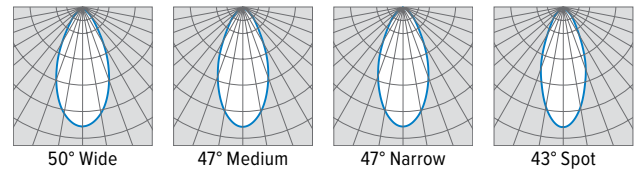
Downlights
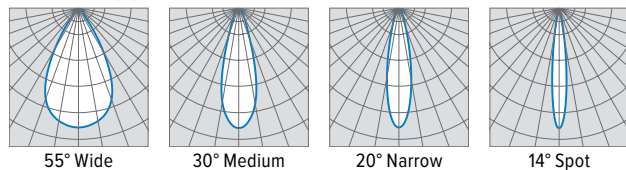Page 3 of 6

2DS LED
2″ Downlight – Square

EMERGENCY BATTERY OPTIONS

Additional limitations apply, see page 1. Specify CEC in the option code when California Energy Commission regulations are required.

CATALOG NUMBER	DESCRIPTION
EM/5W	5-watt emergency battery
EM/7W	7-watt emergency battery [1]
EM/7W/RTS	7-watt emergency battery with regressed test switch [2]
EM/7W/IPRTS	7-watt emergency battery with IP65 rated regressed test switch [3]
EM/10W	10-watt emergency battery [4]
EM/10W/RTS	10-watt emergency battery with regressed test switch [5]
EM/10W/IPRTS	10-watt emergency battery with IP65 rated regressed test switch [6]

1. L9 minimum lumen package required.
2. L9 minimum lumen package required. Not available with WET/CC Trim Option. N Mounting Type only. Top access required.
3. Must specify IP Trim Option. L9 minimum lumen package required. N Mounting Type only. Top access required.
4. L12 minimum lumen package required.
5. L12 minimum lumen package required. Not available with WET/CC Trim Option. N Mounting Type only. Top access required.
6. Must specify IP Trim Option. L12 minimum lumen package required. N Mounting Type only. Top access required.
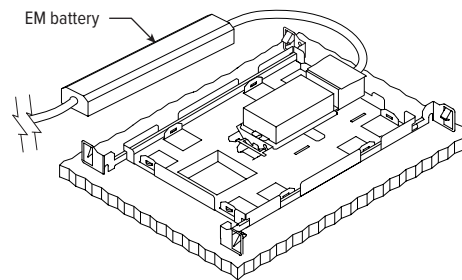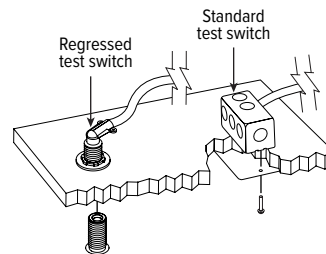
MOUNTING DETAILS
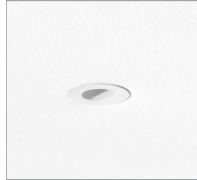
Regressed test switch
ø1-3/4″

Standard test switch
2-3/4″ x 4-1/2″

Max remote distance is 50′, connection by others.

Regressed test switch

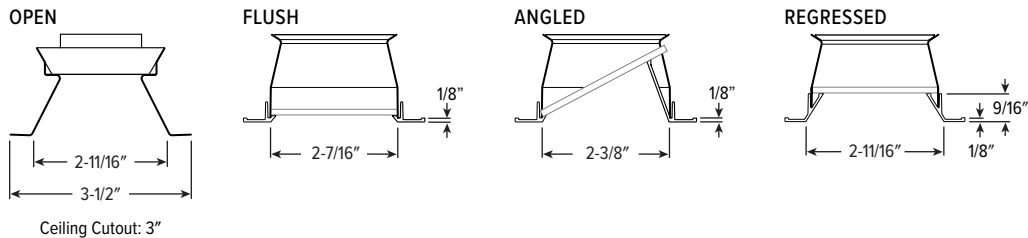Standard test switch

EM battery

REMODEL MOUNTING PLENUM RESTRICTIONS

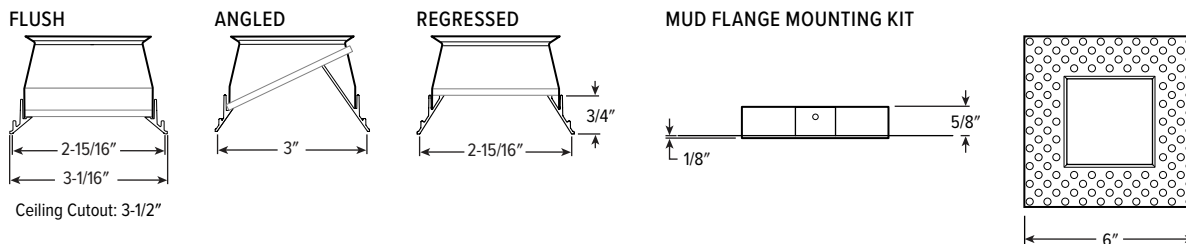Additional plenum space required for R mounting when specified with EM battery.

CATALOG NUMBER	MINIMUM HEIGHT
EM/5W	9″
EM/7W	11″
EM/10W	12″

TRIM TYPE DETAILS

1/2″ STANDARD FLANGE TYPE

OPEN
2-11/16″
3-1/2″
Ceiling Cutout: 3″

FLUSH
1/8″
2-7/16″

ANGLED
1/8″
2-3/8″

REGRESSED
9/16″
1/8″
2-11/16″

ZERO-FLANGE MUD-IN

FLUSH
2-15/16″
3-1/16″
Ceiling Cutout: 3-1/2″

ANGLED
3″

REGRESSED
3/4″
2-15/16″

MUD FLANGE MOUNTING KIT
5/8″
1/8″
6″

REFLECTOR FINISH DETAILS

SPC	SG	PW	GD	CG	RG	CS	WH	BL
Clear specular	Satin glow	Pewter	Gold	Champagne gold	Rose gold	Clear semi-specular	White	Black

H.E. Williams, Inc. ▪ Carthage, Missouri ▪ www.hew.com ▪ 417-358-4065 ▪ Designed and Manufactured in the USA
Information contained herein is subject to change without notice.
REV.01/29/25.MH

Downlights
Page 4 of 6

2DS LED
2″ Downlight – Square

MOUNTING TYPE DETAILS

NEW CONSTRUCTION

1-1/16″

3″

3″

9″

12-1/2″

IC-RATED

11-13/16″

A

12-3/4″

B

C

D

3″
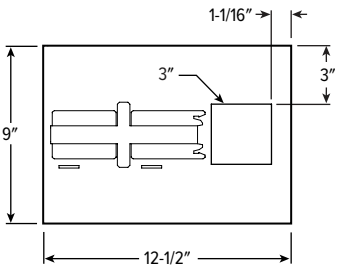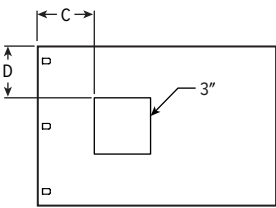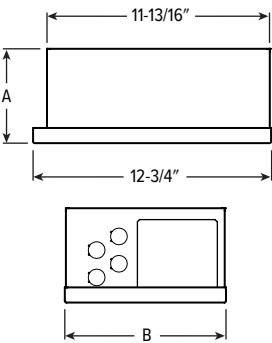
	DIM, DIM1, DIM LINE	ALL OTHER CONTROLS
A	5″	6-1/16″
B	8-9/16″	9-1/4″
C	3-1/16″	6-11/16″
D	2-3/4″	3-1/8″

REMODEL
CROSS SECTION

5″

2-11/16″
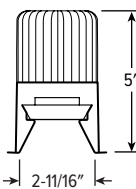
DRIVER & JUNCTION BOX

2-1/16″

7-1/4″
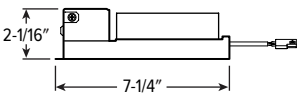
MOUNTING HARDWARE DETAILS

F1   Integral 2-position fixed pan bracket, universal bar hanger included

14″ minimum
24″ maximum

Mounts to t-bar or nailer bar

14″ minimum
24″ maximum
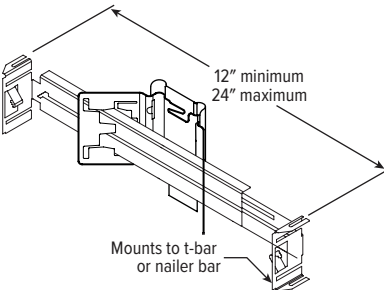
Mounts to t-bar or nailer bar
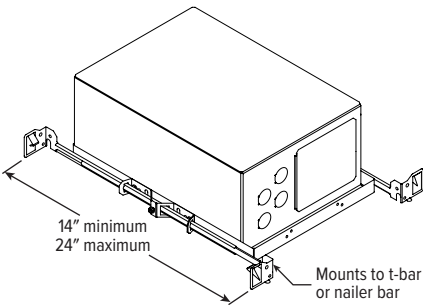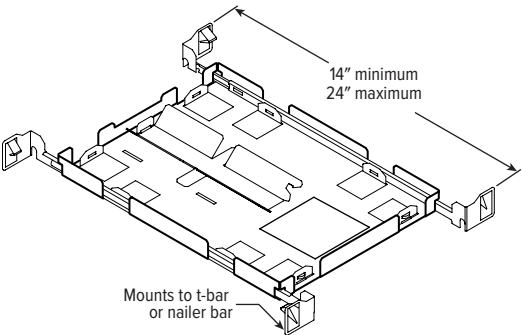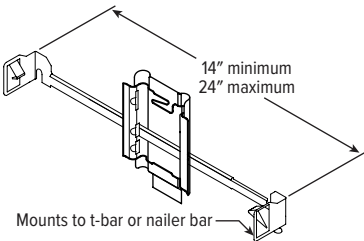
F1 with I Mounting Type

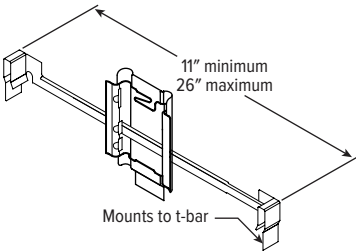**BA1**   Adjustable butterfly pan bracket, bar hanger not included (N Mounting Type only)
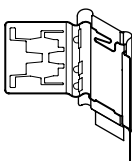
BA2   Adjustable butterfly pan bracket, heavy-duty universal bar hanger included (N Mounting Type only)

12″ minimum
24″ maximum

Mounts to t-bar or nailer bar

CA1   Adjustable caterpillar pan bracket, universal bar hanger included (N Mounting Type only)

14″ minimum
24″ maximum

Mounts to t-bar or nailer bar

CA2   Adjustable caterpillar pan bracket, t-bar hanger included (N Mounting Type only)

11″ minimum
26″ maximum

Mounts to t-bar

SEE NEXT PAGE FOR CONTROL DETAILS.

H.E. Williams, Inc. ▪ Carthage, Missouri ▪ www.hew.com ▪ 417-358-4065 ▪ Designed and Manufactured in the USA
Information contained herein is subject to change without notice.   REV.01/29/25.MH

Downlights
Page 5 of 6

2DS LED
2″ Downlight – Square

AVI-ON BLUETOOTH WIRELESS CONTROL DETAILS

FEATURES

Simple

- Gateway-free distributed control
- 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.
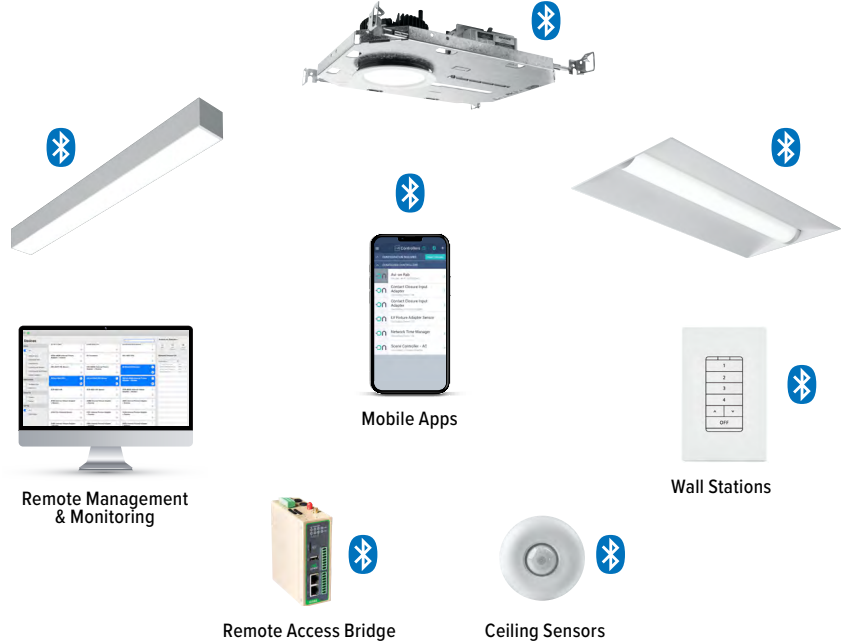
Commissioning Mobile App

Zone Scanner Web App

Commissioning Pro App

SYSTEM COMPONENTS

Mobile Apps

Remote Management & Monitoring

Wall Stations

Remote Access Bridge

Ceiling Sensors

The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Avi-on is under license. Other trademarks and trade names are those of their respective owners.

ACCESSORIES

WALL STATIONS	
AVI-B-2401AC-1	Scene controller - buttons numbered 1-4 and up/down/off, 120-277VAC
AVI-B-2402BAT-1	Scene controller - buttons numbered 1-4 and up/down/off, battery powered
AVI-B-2401AC-2	Dimmer with presets - buttons with percentages and up/down/off, 120-277VAC
AVI-B-2402BAT-2	Dimmer with presets - buttons with percentages and up/down/off, battery powered
AVI-B-2401AC-3	Two button control on/off or hold to dim up/down, 120-277VAC
AVI-B-2402BAT-3	Two button control on/off or hold to dim up/down, battery powered

NETWORK	
AVI-RAB-LTE	Remote access bridge
AVI-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

Lumen restrictions apply: L9 minimum for DIM LINE driver when specified with W, M, or N distributions; L7 minimum when specified with S distribution.
R Mounting Type only available with DIM, DIM1, and DIM LINE controls. Top access required with N mounting except using DIM, DIM1, DIM LINE controls. Lutron controls available with N Mounting Type only. 347V may require stepdown transformer, see 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
VRF/DBI/LDE1	Lutron Vive integral fixture control, RF only (DFCSJ-OEM-RF) and digital link interface, with Lutron Hi-lume 1% EcoSystem dimming LED driver
FCJS/DIM	Lutron Vive PowPak wireless fixture control with dimming driver
FCJS/DIM1	Lutron Vive PowPak wireless fixture control with 1% dimming driver
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 at 120V only)
DALI	DALI dimming driver
DMX	0.1% dimming driver for DMX controls
LDE1	Lutron Hi-lume 1% EcoSystem dimming LED driver

H.E. Williams, Inc. ▪ Carthage, Missouri ▪ www.hew.com ▪ 417-358-4065 ▪ Designed and Manufactured in the USA
Information contained herein is subject to change without notice. REV.01/29/25.MH

Downlights
Page 6 of 6