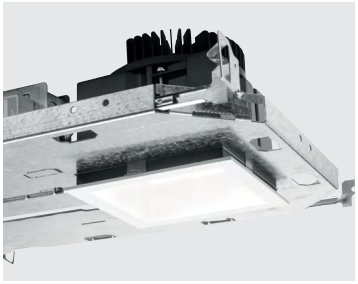
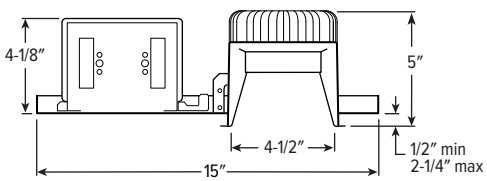
4DS LED 4.5″ Downlight – Square



NEW CONSTRUCTION AND REMODEL



L10 – L20 Lumens shown

CATALOG #:

TYPE:

PROJECT:

BAA & BABA COMPLIANT · CCEA Approved · Low UGR · IP65 Rated · JA8 Compliant · TITLE 24 · WET/CC · ASTM-E283 · TW

ORDERING EXAMPLE: 4DS - L20/835 - OPTIONS - CONTROL/DIM - UNV - LW - OF - WH - TRIM OPTIONS - N - F1
(HOUSING: 4DS - L20/835 - OPTIONS - CONTROL/DIM - UNV; TRIM: LW - OF - WH - TRIM OPTIONS; MOUNT.: N - F1)

HOUSING

SERIES
4DS

LUMENS[1]
Single CCT or TW
L10 1,000lm
L15 1,500lm
L20 2,000lm
Single CCT only
L30 3,000lm
L40 4,000lm
L50 5,000lm

CRI
8 80
9 90 [2]

CCT
27 2700K
30 3000K
35 3500K
40 4000K
50 5000K
TW Tunable white (80 CRI, 2700K-5000K)

OPTIONS
See page 3 for EMERGENCY BATTERY OPTIONS.
See page 3 for APERTURE ADAPTOR ORDERING INFO.
ATH Airtight construction
F Fuse kit
SDT Stepdown transformer [3]
CP Chicago plenum (CCEA)[4]
(L__) Additional lower lumen packages available [5] Example: 4,500 lumens = 4DS-L50/835-**(L45)**

CONTROL
Click HERE for control options.
– None

DRIVER
See page 5 for ADDITIONAL DRIVER OPTIONS.
DIM Dimming driver, 0-10V [6]
DIM1 1% Dimming driver, 0-10V [7]
DIM LINE Driver with line voltage dimming wires [8]

VOLTAGE
UNV 120-277V
347 347V [9]

TRIM [10]

TRIM TYPE
L Flush lens
O Open reflector
R Regressed lens
A Angled lens [11]

DISTRIBUTION
See page 2 for BEAM ANGLE.
W Wide
M Medium [12]
N Narrow [13]
WW Wall wash [14]

FLANGE TYPE
OF 1/2″ standard flange
SF 1/4″ mud-in flange [15]

REFLECTOR FINISH
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
WH White texture powder coat

Lens trim types
CS Clear semi-specular powder coat
WH White texture powder coat
BL Black texture powder coat

TRIM OPTIONS
MWT Smooth matte white trim flange [16]
IP IP65 rated trim [17]
AD Diffuse acrylic lens [18]
PD Diffuse 1/8″ polycarbonate lens [19]
WET/CC Wet location, covered ceiling listed [20]
AM Anti-microbial [21]

MOUNTING

MOUNTING TYPE [22]
N Open pan for new construction
I IC-rated enclosure for new construction [24]
R Remodel kit [25]

MOUNTING HARDWARE [23]
F1 Integral 2-position fixed pan bracket, universal bar hanger included [26]
F1S New construction mounting pan shipped ahead, integral 2-position fixed bracket, universal bar hangers included [27]
BA1 Adjustable butterfly pan bracket, bar hanger not included [28]
CA1 Adjustable caterpillar pan bracket, universal bar hanger included [29]

NOTES

1 Lumen output based on L Trim Type, W Distribution and WH Reflector Finish, 80 CRI, 3500K for static white and 4000K for tunable white. Actual performance may vary +/-5%, see page 2 for FIXTURE PERFORMANCE DATA. Additional lumen packages available, see Options.
2 Not available with tunable white.
3 May be required for 347V, see product builder at hew.com/product-builder
4 I Mounting Type required.
5 Specify in increments of 100 nominal lumens. Option must be specified with next higher lumen package.
6 0.1% Driver with tunable white.
7 Not available with tunable white.
8 L40 lumen package max. Not available with tunable white.
9 Not available with Tunable White, EM batteries, or DMX Driver.
10 Trim ships separately.
11 Available with WW Distribution only.
12 L30 lumen package max.
13 L30 lumen package max.
14 A Trim Type only.
15 For use with mud-in plaster construction only, supplied with mud flange installation kit. See page 4 for FLANGE TYPE DETAILS. Not available with O Trim Type, ATH, IP, or MWT Options.
16 Not available with WH Reflector Finish or L Trim Type.
17 L and R Trim Types only.
18 Not available with O Trim Type. W and WW Distributions only.
19 Not available with O Trim Type. W and WW Distributions only.
20 Not available with O Trim Type.
21 WH and BL Reflector Finishes only.
22 Mounting hardware required (N and I only), ordered separately, see MOUNTING HARDWARE ordering info. See page 4 for MOUNTING TYPE DETAILS.
23 Additional mounting hardware options available. See page 5 for MOUNTING HARDWARE DETAILS.
24 L20 lumen package max. Not available with EM batteries.
25 Also used in new construction sheetrock ceilings. Pan-less installation.
26 N and I Mounting Types only. I Mounting requires external brackets.
27 N Mounting Type only.
28 N Mounting Type only.
29 N Mounting Type only.

4DS LED
4.5" Downlight – Square

FEATURES

- Beam angles ranging from 25° narrow to 60° wide for tailored performance
- Die-cast trim choices include flush, regressed or angled lens
- Spring clip retention system eliminates trim sag
- Industry leading efficacies as high as 125 lm/W
- IP65-rated die-cast trim includes easy-to-clean flush lens
- Fully room-side accessible
- Low UGR meets LEED and WELL requirements
- Support human-centric design with adaptive, individualized lighting using tunable white light
- Wireless in-fixture control solutions available
- 4 inch aperture is unobtrusive in small scale spaces
- Square shape accentuates architectural styles
- New construction mounting pan, IC-rated, or pan-less remodel kit available
- Title 24 | JA8 compliant
- 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" – 2-1/4".
- OPEN REFLECTOR – Low-iridescent anodized aluminum with top diffuser.
- LENSED TRIM – Die-cast aluminum frame with micro-prismatic, acrylic lens.
- 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>55,000 hours. Estimated L70 = 200,000 hours. Tunable White products use LEDs of multiple CCTs and may produce a perceptibly different shade of white from single-CCT products at the same CCT. All CCTs are within 3 MacAdam ellipses.
- MOUNTING – Recessed 20 ga. galvanized steel mounting pan for new construction or IC-rated enclosure. Remodel kit option includes receiver bracket hardware. Minimum 24" O.C. marked spacing required for L40 and L50 lumen package.
- 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.
  - IP65 rated trim when specified with IP option.
  - Complies with ASTM-E283 when specified with ATH option.
  - RoHS compliant.
  - Title 24 (JA8) compliant in select configurations, see cacertappliances.energy.ca.gov
  - Build America, Buy America (BABA) and Buy American Act (BAA) compliant. Request certification at hew.com/buy-american
- WARRANTY – 5-year limited warranty, see hew.com/warranty

FIXTURE PERFORMANCE DATA

			FLUSH (L)		OPEN (O)		REGRESSED (R)	
	DISTRIBUTION	WATTAGE	DELIVERED LUMENS	EFFICACY (lm/W)	DELIVERED LUMENS	EFFICACY (lm/W)	DELIVERED LUMENS	EFFICACY (lm/W)
L10	W	11.1	1034	93	851	77	979	88
	M	11.1	1356	122	1020	92	1305	118
	N	11.1	1373	124	1055	95	1361	123
L15	W	16.4	1543	94	1270	77	1461	89
	M	16.4	1978	121	1521	93	1947	119
	N	16.4	2049	125	1574	96	2031	124
L20	W	22.2	2043	92	1681	76	1935	87
	M	22.2	2619	118	2014	91	2578	116
	N	22.2	2713	122	2084	94	2689	121
L30	W	31.8	3030	95	2454	77	2854	90
	M	31.8	3830	120	2936	92	3748	118
	N	31.8	3812	120	2905	91	3745	118
L40	W	41.2	4012	97	3282	80	3831	93
	M	–	–	–	–	–	–	–
	N	–	–	–	–	–	–	–
L50	W	52.5	5054	96	4134	79	4827	92
	M	–	–	–	–	–	–	–
	N	–	–	–	–	–	–	–

- Photometrics tested in accordance with IESNA LM-79. Results based on L Trim Type, W Distribution and WH Reflector Finish, 80 CRI, 3500K for single CCT and 4000K for tunable white, wattage for 120V 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.

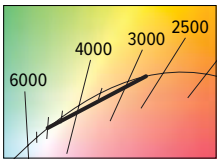
MULTIPLIER TABLES

	COLOR TEMPERATURE		
	CCT	SINGLE CCT	TW
80 CRI	2700K	0.98	0.83
	3000K	1.00	1.00
	3500K	1.00	0.99
	4000K	1.01	1.00
	5000K	0.99	0.98
90 CRI	2700K	0.94	–
	3000K	0.96	–
	3500K	0.97	–
	4000K	0.97	–
	5000K	0.95	–

TRIM OPTIONS	
CATALOG NUMBER	CONVERSION FACTOR
AD	0.85
PD	0.85

OPEN REFLECTOR FINISH	
CATALOG NUMBER	CONVERSION FACTOR
CS	1.00
SG	0.83
GD	0.93
CG	0.96
PW	0.86
SPC	1.02
RG	0.88
WH	0.99

TUNABLE WHITE



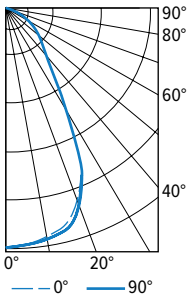
BEAM ANGLE

	TRIM TYPE [1]		
	O	L	R
W	55°	60°	60°
M	45°	35°	35°
N	40°	25°	25°

[1] Beam angle based on CS or WH Reflector Finish.

PHOTOMETRY

4DS-L10/835-DIM-UNV-LW-OF-WH Total Luminaire Output: 1034 lumens; 11.1 Watts | Efficacy: 93 lm/W | 80 CRI; 3500K CCT

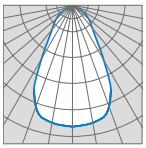


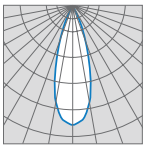
CANDLEPOWER DISTRIBUTION					
	VERTICAL ANGLE	HORIZONTAL ANGLE 0°	45°	90°	ZONAL LUMENS
	0	769	769	769	
	5	762	762	763	72
	15	719	729	734	204
	25	558	632	559	265
	35	253	384	247	194
	45	160	173	158	130
	55	97	99	96	89
	65	51	49	50	51
	75	21	21	21	23
	85	3	2	3	4
	90	0	0	0	

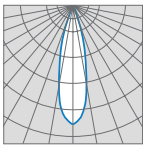
LUMEN SUMMARY			
	ZONE	LUMENS	% FIXTURE
	0 - 30	542	52
	0 - 40	736	71
	0 - 60	956	92
	0 - 90	1034	100
	0 - 180	1034	100

4DS LED
4.5″ Downlight – Square

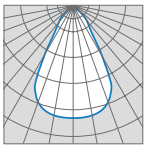
FLUSH (L)


60° Wide


35° Medium


25° Narrow

REGRESSED (R)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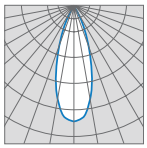
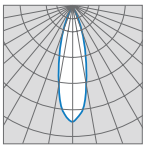
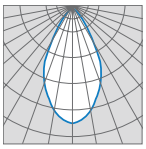
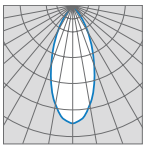
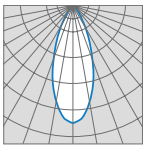

35° Medium


25° Narrow

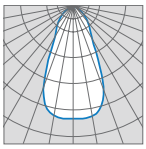
OPEN (O)


55° Wide


45° Medium


40° Narrow

ANGLED (A)


Wall Wash

EMERGENCY BATTERY OPTIONS

ORDERING EXAMPLE: EM/7W/RTS	
EMERGENCY BATTERY	TEST SWITCH
EM/7W 7-watt emergency battery **EM/10W** 10-watt emergency battery [1]	**–** Standard [2] **/RTS** Regressed test switch [3] **/IPRTS** IP65 rated regressed test switch [4]

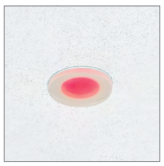
Additional limitations apply, see page 1. Specify CEC in the option code when California Energy Commission regulations are required. Max remote distance is 50′, connection by others.

1 Not available with L10 lumen package.
2 Not available with IP Trim Option.
3 Not available with IP or WET/CC Trim Options.
4 Must specify IP or WET/CC Trim Option.

TEST SWITCH DETAILS

Standard
2-3/4″ x 4-1/2″

Regressed
ø1-3/4″


IP-Rated
ø1-3/4″

APERTURE ADAPTOR ORDERING INFO

ORDERING EXAMPLE: 4DR - GR - 0575 - WHT			
SERIES	CATALOG #	CEILING CUTOUT	FINISH
4AR **6AR** **8DR** **4DR** **6DR** **4DS** **6DS** **4PR** **6PR** **4PS** **6PS**	**GR**	Specify ceiling cutout in 1/8″ increments. Example: 5.75″ = **0575** See Kit Components for application limits.	**CS** Clear semi-specular powder coat **WH** White texture powder coat **BL** Black texture powder coat

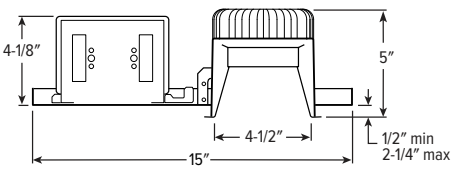
Adaptor (goof ring) corrects ceiling cutout errors during remodel downlight installation.

Additional finishes available, consult factory.

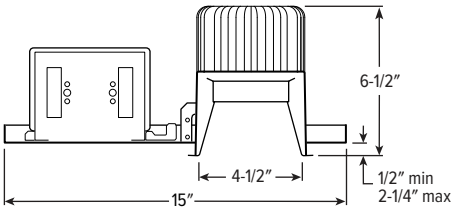
For limitations and instructions, see hew.com/aperture-adaptor.pdf

CROSS SECTIONS

L10 – L20 LUMENS



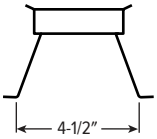
L30 – L50 LUMENS



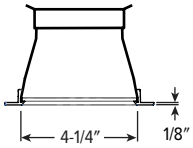
4DS LED
4.5″ Downlight – Square

TRIM TYPE DETAILS

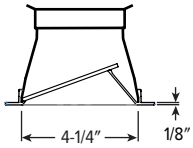
OPEN



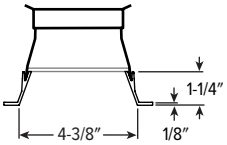
FLUSH



ANGLED

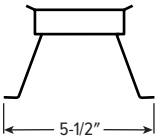


REGRESSED



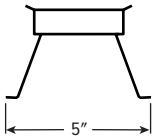
FLANGE TYPE DETAILS

1/2″ STANDARD



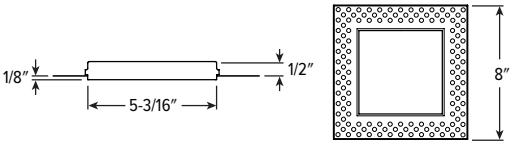
Ceiling Cutout: 5″

1/4″ MUD-IN



Ceiling cutout: 5-1/2″

MUD FLANGE MOUNTING KIT (SLIM FLANGE TYPE)



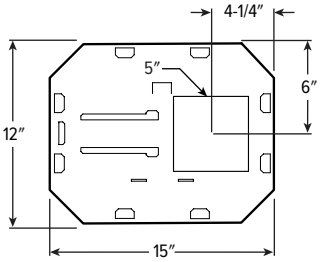
REFLECTOR FINISH DETAILS

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

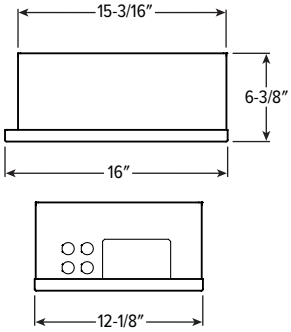
MOUNTING TYPE DETAILS

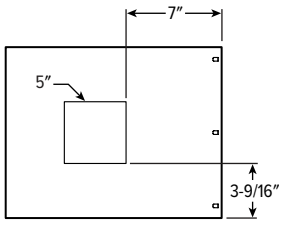
Flex conduit is recommended for installation.

NEW CONSTRUCTION



IC-RATED



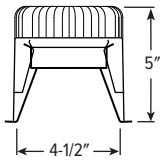


REMODEL

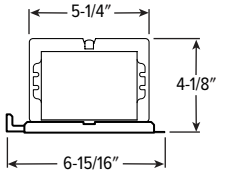
H.E. Williams Inc. strongly recommends installing a trial fixture to confirm fitment on-site prior to ordering full project quantities.

CROSS SECTION

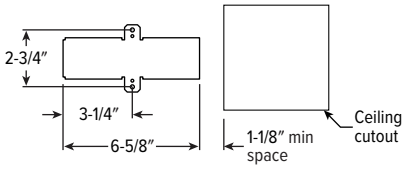
L10 – L20 lumens shown



DRIVER & JUNCTION BOX



RECEIVER BRACKET

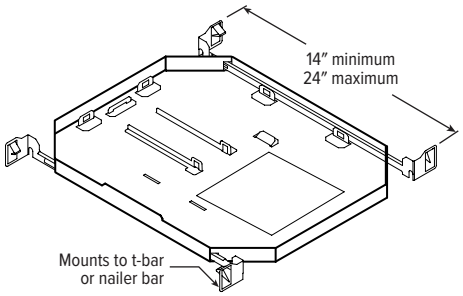


MOUNTING DETAILS CONTINUED ON NEXT PAGE.

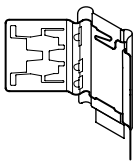
4DS LED
4.5″ Downlight – Square

MOUNTING HARDWARE DETAILS

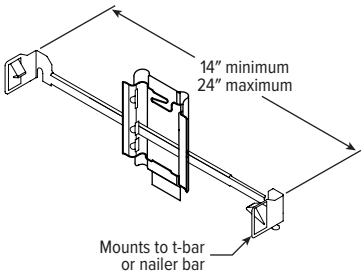
F1 Integral 2-position fixed pan bracket, universal bar hanger included



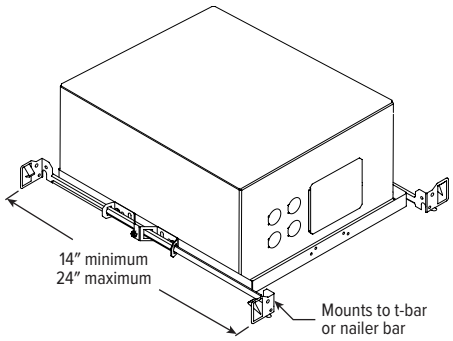
BA1 Adjustable butterfly pan bracket, bar hanger not included (N Mounting Type only)



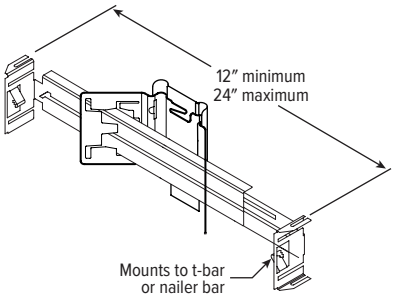
CA1 Adjustable caterpillar pan bracket, universal bar hanger included (N Mounting Type only)



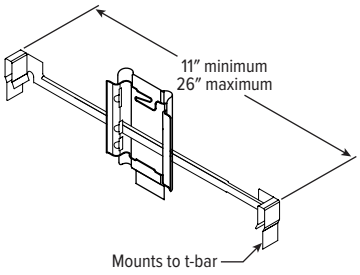
F1 with I Mounting Type



BA2 Adjustable butterfly pan bracket, heavy-duty universal bar hanger included. (N Mounting Type only)



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



ADDITIONAL DRIVER OPTIONS

Lumen restrictions apply: L30 max for DMX driver, L30 max for Lutron drivers, L40 max for DIM LINE driver. R mounting type requires top access with DMX driver. 347V may require stepdown transformer, see product builder at hew.com/product-builder. I Mounting Type not available with Lutron driver.

CATALOG NUMBER	DESCRIPTION
DIM	Driver with external dimming wires prewired for 0-10V low voltage applications (tunable white: (1) 0-10V signal controls 0.1% dimming and (1) 0-10V signal controls CCT)
DIM1 [1]	1% driver with external dimming wires prewired for 0-10V low voltage applications
DIM LINE [1]	Line voltage dimming driver (TRIAC and ELV compatible, 120V only)
DA	Driver with 12V auxiliary power, without external dimming wires (not available with 347V)
DALI	DALI dimming driver
DMX	Driver prewired for DMX applications
LDE1 [1]	Lutron Hi-lume 1% EcoSystem dimming driver
LD2	Lutron DALI-2 digital driver, 1%
DCC	Remote UL Class 2 DC constant current supply, UL- or CSA-listed, by others

1 Single CCT only.

TUNABLE WHITE DRIVER DETAILS

DIM

DALI

DMX

LD2