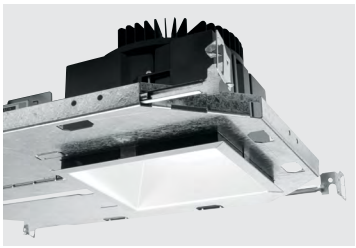
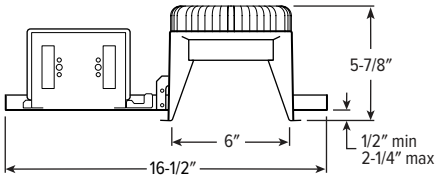
6DS LED 6″ Downlight – Square



NEW CONSTRUCTION AND REMODEL



L10 – L30 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: 6DS - L20/835 - OPTIONS - CONTROL/DIM - UNV - LW - OF - WH - TRIM OPTIONS - N - F1

HOUSING | TRIM | MOUNT.

HOUSING

SERIES
6DS

LUMENS [1]
Single CCT or TW
L10 1,000lm
L15 1,500lm
L20 2,000lm
L30 3,000lm
Single CCT only
L40 4,000lm
L50 5,000lm
L60 6,000lm
L70 7,000lm
L80 8,000lm
L90 9,000lm
L100 10,000lm

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 4 for APERTURE ADAPTOR ORDERING INFO.
ATH Airtight construction
CP Chicago plenum (CCEA) [3]
F Fuse kit
SDT Stepdown transformer [4]
(L__) Additional lower lumen packages available [5] Example: 4,500 lumens = 6DS-L50/835-**(L45)**

CONTROL
Click HERE for control options.
– None

DRIVER
See page 6 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
O Open reflector
L Flush lens
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 I Mounting Type required.
4 May be required for 347V, see product builder at hew.com/product-builder
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 L50 lumen package max. Not available with tunable white.
9 Not available with Tunable White, EM batteries, or DMX Drivers.
10 Trim ships separately.
11 Available with WW Distribution only.
12 Not available with L50 lumen package or higher.
13 Not available with L50 lumen package or higher.
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 5 for MOUNTING TYPE DETAILS.
23 Additional mounting hardware options available. See page 5 for MOUNTING HARDWARE DETAILS.
24 L20 lumen package max. L30 available, W Distribution only. 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.

6DS LED
6″ Downlight – Square

FEATURES

- Beam angles ranging from 25° narrow to 65° wide for tailored performance
- Square shape accentuates architectural styles
- Open reflector with seven finishes complements any interior style
- New construction mounting pan, IC-rated, or pan-less remodel kit available
- Die-cast trim choices include flush, regressed or angled lens
- Spring clip retention system eliminates trim sag
- Industry-leading efficacies as high as 127 lm/W
- Fully room-side accessible
- Support human-centric design with adaptive, individualized lighting using tunable white light
- IP65-rated die-cast trim includes easy-to-clean flush lens
- 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″ – 2-1/4″.
- 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 L50 - L100 lumen packages.
- 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.
  - IP65 rated trim when specified with IP 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 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

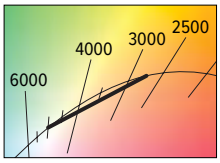
			FLUSH (L)		OPEN (O)		REGRESSED (R)	
	DISTRIBUTION	WATTAGE	DELIVERED LUMENS	EFFICACY (lm/W)	DELIVERED LUMENS	EFFICACY (lm/W)	DELIVERED LUMENS	EFFICACY (lm/W)
L10	W	10.5	1040	99	847	81	1007	96
	M	10.5	1272	121	928	88	1255	120
	N	10.5	1310	125	961	92	1304	124
L15	W	15.5	1544	100	1257	81	1495	96
	M	15.5	1888	122	1377	89	1864	120
	N	15.5	1945	125	1427	92	1936	125
L20	W	20.5	2073	101	1687	82	2007	98
	M	20.5	2535	124	1849	90	2502	122
	N	20.5	2612	127	1915	93	2600	127
L30	W	28.9	3063	106	2484	86	2958	102
	M	28.9	3660	127	2738	95	3648	126
	N	28.9	3681	127	2729	94	3651	126
L40	W	40.0	4042	101	3278	82	3901	98
	M	40.0	4830	121	3614	90	4814	120
	N	40.0	4858	121	3601	90	4818	120
L50	W	47.3	5044	107	4181	88	4878	103
	M	–	–	–	–	–	–	–
	N	–	–	–	–	–	–	–
L60	W	59.4	6078	102	5039	85	5877	99
	M	–	–	–	–	–	–	–
	N	–	–	–	–	–	–	–
L70	W	70.0	7028	100	5826	83	6796	97
	M	–	–	–	–	–	–	–
	N	–	–	–	–	–	–	–
L80	W	75.6	8038	106	6647	88	7733	102
	M	–	–	–	–	–	–	–
	N	–	–	–	–	–	–	–
L90	W	87.8	9055	103	7488	85	8711	99
	M	–	–	–	–	–	–	–
	N	–	–	–	–	–	–	–
L100	W	99.7	10007	100	8276	83	9627	97
	M	–	–	–	–	–	–	–
	N	–	–	–	–	–	–	–

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	0.93	–
	3000K	0.95	–
	3500K	0.96	–
	4000K	0.97	–
	5000K	0.94	–

TRIM OPTIONS	
CATALOG NUMBER	CONVERSION FACTOR
AD	0.85
PD	0.85

TUNABLE WHITE



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

BEAM ANGLE

	TRIM TYPE [1]		
	O	L	R
W	55°	65°	65°
M	50°	35°	35°
N	45°	25°	25°

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

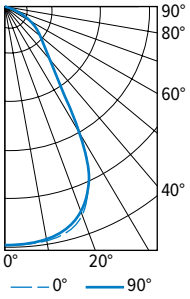
- Photometrics tested in accordance with IESNA LM-79. Results based on L Trim Type, W Distribution and WH Reflector Finish, 80 CRI, 3500K for single CCT and 4000K for tunable white, wattage for 120V input,
  and 25°C ambient temperature. Actual performance may vary +/-5%.
- To calculate lumen output in emergency mode, multiply the battery wattage by the efficacy.
- Use multiplier table to calculate additional options.

SEE NEXT PAGE FOR PHOTOMETRY DETAILS.

6DS LED
6″ Downlight – Square

PHOTOMETRY

6DS-L10/835-DIM-UNV-LW-OF-WH Total Luminaire Output: 1040 lumens; 10.5 Watts | Efficacy: 99 lm/W | 80 CRI; 3500K CCT



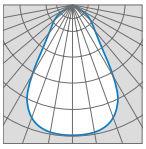
CANDLEPOWER DISTRIBUTION

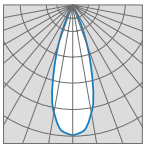
VERTICAL ANGLE	HORIZONTAL ANGLE 0°	45°	90°	ZONAL LUMENS
0	702	702	702	
5	704	701	701	67
15	688	679	679	192
25	573	632	576	268
35	262	423	263	211
45	159	184	156	134
55	101	103	100	91
65	52	52	50	52
75	20	20	19	22
85	2	1	2	4
90	0	0	0	

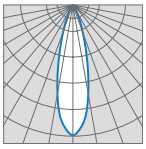
LUMEN SUMMARY

ZONE	LUMENS	% FIXTURE
0 - 30	527	51
0 - 40	738	71
0 - 60	963	93
0 - 90	1040	100
0 - 180	1040	100

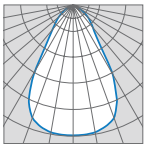
FLUSH (L)

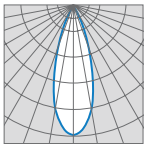

65° Wide

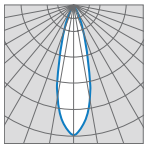

35° Medium


25° Narrow

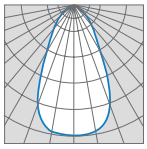
REGRESSED (R)


65° Wide

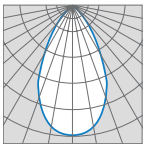

35° Medium

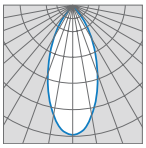

25° Narrow

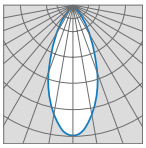
ANGLED (A)


Wall Wash

OPEN (O)


55° Wide


50° Medium


45° Narrow

EMERGENCY BATTERY OPTIONS

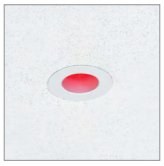
ORDERING EXAMPLE: EM/7W/RTS	
EMERGENCY BATTERY	**TEST SWITCH**
EM/7W 7-watt emergency battery	**–** Standard [2]
EM/10W 10-watt emergency battery [1]	**/RTS** Regressed test switch [3]
	/IPRTS IP65 rated regressed test switch [4]

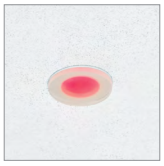
Additional limitations apply, see page 1. Specify CEC in the option code when California Energy Commission regulations are required. Max remote distance is 50′, connection by others.

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″

6DS LED 6″ Downlight – Square

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

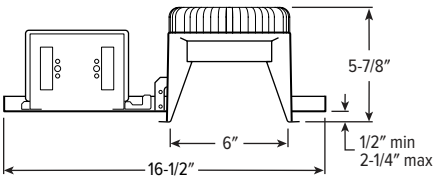
Adaptor (goof ring) corrects ceiling cutout errors during remodel downlight installation.

Additional finishes available, consult factory.

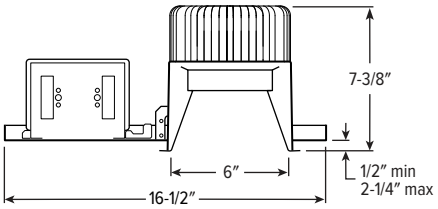
For limitations and instructions, see hew.com/aperture-adaptor.pdf

CROSS SECTIONS

L10 – L30 LUMENS

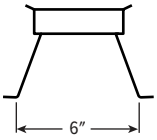


L40 – L100 LUMENS

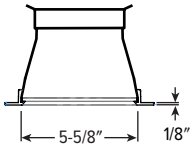


TRIM TYPE DETAILS

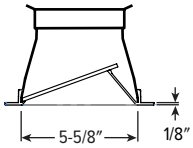
OPEN



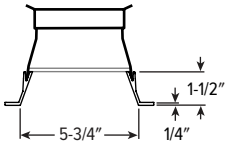
FLUSH



ANGLED

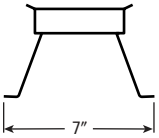


REGRESSED



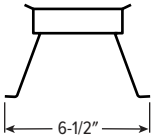
FLANGE TYPE DETAILS

1/2″ STANDARD



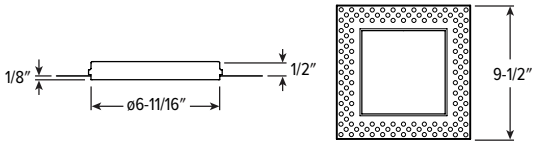
Ceiling Cutout: 6-1/2″

1/4″ MUD-IN



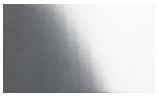
Ceiling cutout: 7″

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

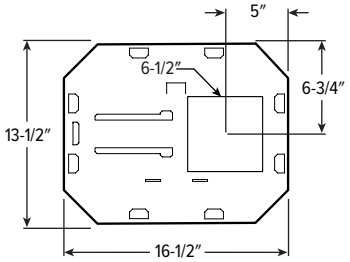
SEE NEXT PAGE FOR MOUNTING DETAILS

6DS LED
6″ Downlight – Square

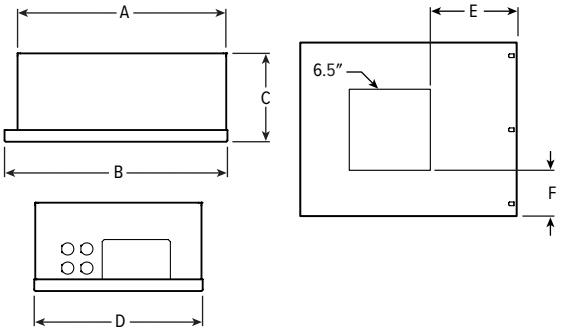
MOUNTING TYPE DETAILS

Flex conduit is recommended for installation.

NEW CONSTRUCTION



IC-RATED



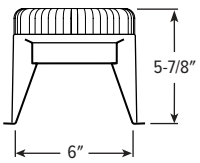
	LENGTH					
LUMENS	A	B	C	D	E	F
L10 - L20	15-3/16″	16″	6-3/8″	12-1/8″	6-1/4″	2-7/8″
L30	16-5/8″	17-1/2″	7-7/8″	14″	7″	3-3/4″

REMODEL

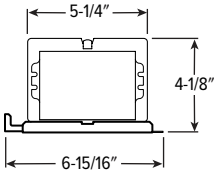
H.E. Williams Inc. strongly recommends installing a trial fixture to confirm fitment on-site prior to ordering full project quantities.

CROSS SECTION

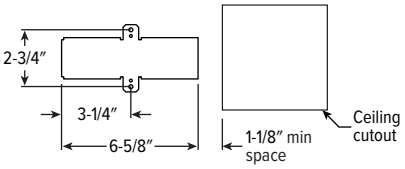
L10 – L30 lumens shown



DRIVER & JUNCTION BOX

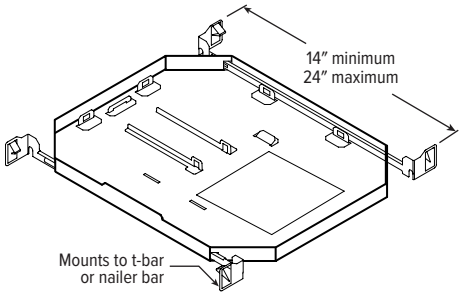


RECEIVER BRACKET

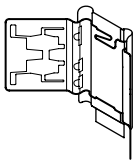


MOUNTING HARDWARE DETAILS

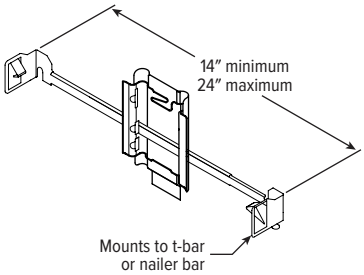
F1 Integral 2-position fixed pan bracket, universal bar hanger included



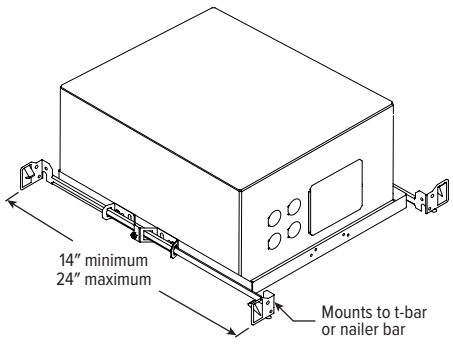
BA1 Adjustable butterfly pan bracket, bar hanger not included (N Mounting Type only)



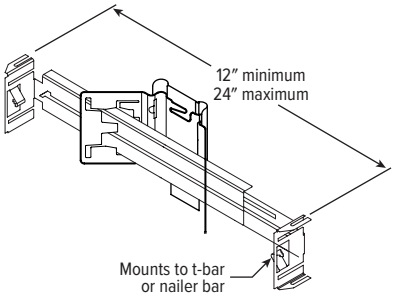
CA1 Adjustable caterpillar pan bracket, universal bar hanger included (N Mounting Type only)



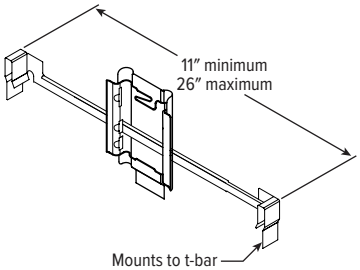
F1 with I Mounting Type



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)



SEE NEXT PAGE FOR DRIVER DETAILS.

ADDITIONAL DRIVER OPTIONS

Lumen restrictions apply: L40 max for DMX, Lutron, and DALI driver, L50 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