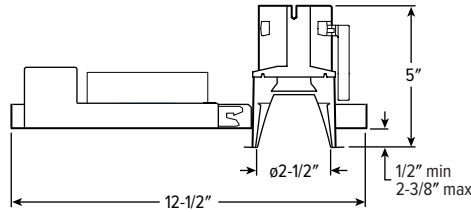


## NEW CONSTRUCTION AND REMODEL



CATALOG #: \_\_\_\_\_

TYPE: \_\_\_\_\_

PROJECT: \_\_\_\_\_



## FEATURES

- Deliver scalable, data-driven smart buildings with PoE-enabled fixtures and controls

## SPECIFICATIONS

- HOUSING** – Die-cast aluminum trim housing with forged aluminum heat sink. Swing-out mounting arms field adjust for ceiling thickness from 1/2" – 2-3/8".
- OPEN REFLECTOR** – Low-iridescent anodized aluminum. Clear semi-specular finish standard.
- 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 node. Reported L70>55,000 hours. Reported L90>55,000 hours. Estimated L70 = 200,000 hours. Low-voltage DC fixture, to be fed by Class 2 power supply. 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. Minimum 12-1/2" O.C. marked spacing required for P15 static white (S Distribution only), P20 and P23 static white, P12 and P15 tunable white lumen packages when specified with R Mounting Type. Nodes cannot be mounted above hard ceilings
- 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 or TD options.
  - 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.
  - Complies with the Buy American Act and other federal regulations. Request certification at [hew.com/baa](http://hew.com/baa).
- WARRANTY** – 5-year limited warranty, see [hew.com/warranty](http://hew.com/warranty).

## SYSTEM REQUIREMENTS

- PoE-ready luminaires are connected to building power systems through network integration and require other components for complete PoE lighting system.
- For additional PoE info, see [hew.com/poe](http://hew.com/poe).

ORDERING EXAMPLE: 2DR - P20/835 - OPTIONS - POE PR - OW - OF - CS - TRIM OPTIONS - N - F1

## HOUSING

SERIES	LUMENS <sup>[1]</sup>	CRI	CCT	OPTIONS	CONTROL <sup>[2]</sup>
2DR	P5 500lm	80 <sup>[3]</sup>	27 2700K	ATH Airtight construction	POE PR Power over Ethernet-ready
	P7 700lm	90	30 3000K	CP Chicago plenum (CCEA) <sup>[5]</sup>	
	P9 900lm		35 3500K		
	P12 1,200lm		40 4000K		
	P15 1,500lm		50 5000K		
	P20 2,000lm		TW Tunable white (90 CRI, 2700K-5000K) <sup>[4]</sup>		
	P23 2,300lm				

## TRIM <sup>[6]</sup>

TRIM TYPE	DISTRIBUTION <sup>[7]</sup>	FLANGE TYPE	REFLECTOR FINISH	TRIM OPTIONS
O Open reflector	W 70° Wide	OF 1/2" standard flange	Open trim types	MWT Textured white trim flange <sup>[14]</sup>
L Flush lens	M 40° Medium		CS Clear semi-specular anodize	AD Diffuse acrylic lens <sup>[15]</sup>
R Regressed lens	N 15° Narrow <sup>[9]</sup>	ZF Zero-flange mud-in <sup>[12]</sup>	SG Satin glow anodize	PD Diffuse 1/8" polycarbonate lens <sup>[16]</sup>
A Angled lens <sup>[8]</sup>	S 8° Narrow spot <sup>[10]</sup>		GD Gold anodize	TD Diffuse polycarbonate lens media at top of open reflector <sup>[17]</sup>
	WW Wall wash <sup>[11]</sup>		CG Champagne gold anodize	
			PW Pewter anodize	
			SPC Clear specular anodize	
			RG Rose gold anodize	
			WH White texture powder coat	
			BL Black texture powder coat	
			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 <sup>[13]</sup>	
				WET/CC Wet location, covered ceiling listed <sup>[18]</sup>
				AM Anti-microbial <sup>[19]</sup>

## MOUNTING

### MOUNTING TYPE <sup>[20]</sup>

- N Open pan for new construction
- I IC-rated enclosure for new construction <sup>[22]</sup>
- R Remodel kit <sup>[23]</sup>

### MOUNTING HARDWARE <sup>[21]</sup>

- F1 Integral 2-position fixed pan bracket, universal bar hanger included <sup>[24]</sup>
- BA1 Adjustable butterfly pan bracket, bar hanger not included <sup>[25]</sup>
- CA1 Adjustable caterpillar pan bracket, universal bar hanger included <sup>[26]</sup>

## NOTES

- Lumen output based on O Trim Type, W Distribution, and CS Reflector Finish, 80 CRI/3500K for single CCT and 90 CRI/4000K CCT for TW. Actual performance may vary +/-5%, see page 2 for FIXTURE PERFORMANCE DATA.
- For additional PoE connection details, consult factory.
- Not available with tunable white.
- P15 lumen package max with W, M, and WW Distributions. P12 lumen package max with N Distribution. Not available with S Distribution.
- I Mounting Type required.
- Trim ships separately.
- Beam angle based on static white, O Trim Type and CS Reflector Finish. Trim Type affects beam angle. See page 2 for FIXTURE PERFORMANCE DATA.
- Available with WW Distribution only.
- When specified with L or R Trim Type: P20 static white and P12 tunable white lumen packages max for N and R Mounting, P12 static white and P7 tunable white lumen packages max for I Mounting.
- Static white only. P15 lumen package max for N and R Mounting. P12 lumen package max for I Mounting. Not available with 950 CRI/CCT.
- A Trim Type only.
- 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.
- R Trim Type only. Not available with ZF Flange Type or MWT.
- Not available with L Trim Type, ZF Flange Type or WH Reflector Finish.
- W distribution only. Not available with O Trim Type.
- W and WW distributions only. Not available with O Trim Type.
- O Trim Type only. WET/CC standard.
- Not available with PD trim option.
- WH and BL Reflector Finishes only.
- Mounting hardware required (N and I only), ordered separately, see MOUNTING HARDWARE ordering info. See page 5 for MOUNTING TYPE DETAILS.
- Additional mounting hardware options available. See page 5 for MOUNTING HARDWARE DETAILS.
- P15 static white and P9 tunable white lumen packages max.
- Also used in new construction sheetrock ceilings. Pan-less installation.
- N and I Mounting Types only. I Mounting requires external brackets.
- N Mounting Type only.
- N Mounting Type only.

# 2DR PoE | tunable WHITE

## 2" Downlight – Round

### FIXTURE PERFORMANCE DATA

STATIC WHITE (See page 3 for tunable white data)

	DISTRIBUTION	WATTAGE	OPEN REFLECTOR TRIM TYPE		FLUSH LENS TRIM TYPE		REGRESSED LENS TRIM TYPE		ANGLED LENS TRIM TYPE	
			DELIVERED LUMENS	EFFICACY (lm/W)	DELIVERED LUMENS	EFFICACY (lm/W)	DELIVERED LUMENS	EFFICACY (lm/W)	DELIVERED LUMENS	EFFICACY (lm/W)
P5	W	4.2	516	123	540	129	535	127	–	–
	M	4.2	499	119	532	127	509	121	–	–
	N	4.2	407	97	528	126	515	123	–	–
	S	5.4	452	84	583	108	562	104	–	–
	WW	4.2	–	–	–	–	–	–	366	87
P7	W	5.9	706	120	739	125	732	124	–	–
	M	5.9	682	116	728	123	697	118	–	–
	N	5.9	557	94	722	122	704	119	–	–
	S	7.6	587	77	813	107	784	103	–	–
	WW	5.9	–	–	–	–	–	–	501	85
P9	W	7.9	910	115	953	121	943	119	–	–
	M	7.9	879	111	938	119	898	114	–	–
	N	7.9	718	91	931	118	908	115	–	–
	S	11.1	807	73	1041	94	1004	90	–	–
	WW	7.9	–	–	–	–	–	–	645	63
P12	W	11.5	1267	110	1327	115	1313	114	–	–
	M	11.5	1224	106	1307	114	1250	109	–	–
	N	11.5	1000	87	1296	113	1264	110	–	–
	S	15.3	1000	65	1382	90	1332	87	–	–
	WW	11.5	–	–	–	–	–	–	898	78
P15	W	14.7	1571	107	1645	112	1628	111	–	–
	M	14.7	1518	103	1620	110	1550	105	–	–
	N	14.7	1240	84	1607	109	1567	107	–	–
	S	22.7	1325	58	1711	75	1650	73	–	–
	WW	14.7	–	–	–	–	–	–	1114	76
P20	W	20.6	2063	100	2160	105	2138	104	–	–
	M	20.6	1993	97	2127	103	2035	99	–	–
	N	20.6	1629	79	2110	102	2058	100	–	–
	S	–	–	–	–	–	–	–	–	–
	WW	20.6	–	–	–	–	–	–	1463	71
P23	W	23.7	2281	96	2388	101	2364	100	–	–
	M	23.7	2204	93	2352	99	2251	95	–	–
	N	23.7	1801	76	–	–	–	–	–	–
	S	–	–	–	–	–	–	–	–	–
	WW	23.7	–	–	–	–	–	–	1617	68

### MULTIPLIER TABLES

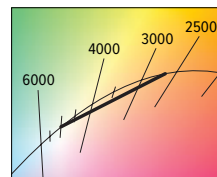
	CCT	COLOR TEMPERATURE	
		LUMENS	
		STANDARD	TUNABLE WHITE
80 CRI	2700K	0.92	–
	3000K	0.98	–
	3500K	1.00	–
	4000K	1.01	–
	5000K	1.02	–
90 CRI	2700K	0.76	0.87
	3000K	0.79	0.96
	3500K	0.82	1.02
	4000K	0.84	1.00
	5000K	0.88	1.02

	REFLECTOR FINISH	
	CATALOG NUMBER	CONVERSION FACTOR
O TRIM	CS	1.00
	SG <sup>1</sup>	0.92
	GD	0.93
	CG	0.96
	PW	0.86
	SPC	1.02
	RG	0.88
	WH <sup>1</sup>	0.89
R TRIM	BL <sup>1</sup>	0.47
	WH	1.00
	CS	0.98
	BL	0.79

TRIM OPTIONS	
CATALOG NUMBER	CONVERSION FACTOR
AD	0.85
PD	0.85
TD	0.67
WET/CC <sup>2</sup>	0.85

### BEAM ANGLE

	TRIM TYPE		
	OPEN	FLUSH	REGRESSED
W	70°	50°	55°
M	40°	30°	30°
N	15°	20°	20°
S	8°	14°	14°



- Distribution will also be affected, consult factory.
  - Use multiplier only when specified with O Trim Type.
- 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 and 25°C ambient temperature. Static white results based on 80 CRI/3500K CCT. Tunable white results based on 90 CRI/4000K CCT. Actual performance may vary +/-5%.
  - Wattage and efficacy data shown do not account for node losses.
  - Beam angle based on static white, O Trim Type and CS Reflector Finish.
  - Use multiplier tables to calculate additional options.



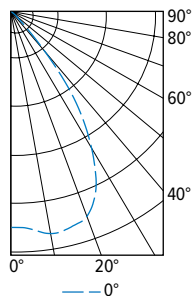
# 2DR PoE | tunable **WHITE** 2" Downlight – Round

TUNABLE WHITE (See page 2 for static white data)

	DISTRIBUTION	WATTAGE	OPEN REFLECTOR TRIM TYPE		FLUSH LENS TRIM TYPE		REGRESSED LENS TRIM TYPE		ANGLED LENS TRIM TYPE	
			DELIVERED LUMENS	EFFICACY (lm/W)	DELIVERED LUMENS	EFFICACY (lm/W)	DELIVERED LUMENS	EFFICACY (lm/W)	DELIVERED LUMENS	EFFICACY (lm/W)
P5	W	7.3	570	78	597	82	591	81	–	–
	M	7.3	575	79	614	84	587	80	–	–
	N	7.3	440	60	571	78	557	76	–	–
	S	–	–	–	–	–	–	–	–	–
	WW	7.3	–	–	–	–	–	–	404	55
P7	W	10.1	761	75	797	79	789	78	–	–
	M	10.1	768	76	819	81	784	78	–	–
	N	10.1	588	58	762	75	743	74	–	–
	S	–	–	–	–	–	–	–	–	–
	WW	10.1	–	–	–	–	–	–	540	53
P9	W	14.6	1062	73	1112	76	1101	75	–	–
	M	14.6	1071	73	1144	78	1094	75	–	–
	N	14.6	821	56	1063	73	1037	71	–	–
	S	–	–	–	–	–	–	–	–	–
	WW	14.6	–	–	–	–	–	–	753	52
P12	W	19.3	1306	68	1368	71	1353	70	–	–
	M	19.3	1318	68	1406	73	1346	70	–	–
	N	19.3	1009	52	1308	68	1275	66	–	–
	S	–	–	–	–	–	–	–	–	–
	WW	19.3	–	–	–	–	–	–	926	48
P15	W	23.7	1462	62	1531	65	1515	64	–	–
	M	23.7	1475	62	1574	66	1506	64	–	–
	N	23.7	1130	48	–	–	–	–	–	–
	S	–	–	–	–	–	–	–	–	–
	WW	23.7	–	–	–	–	–	–	1037	44
P20	W	–	–	–	–	–	–	–	–	–
	M	–	–	–	–	–	–	–	–	–
	N	–	–	–	–	–	–	–	–	–
	S	–	–	–	–	–	–	–	–	–
	WW	–	–	–	–	–	–	–	–	–
P23	W	–	–	–	–	–	–	–	–	–
	M	–	–	–	–	–	–	–	–	–
	N	–	–	–	–	–	–	–	–	–
	S	–	–	–	–	–	–	–	–	–
	WW	–	–	–	–	–	–	–	–	–

## PHOTOMETRY

2DR-P15/835-POE PR-OW-OF-CS Total Luminaire Output: 1571 lumens; 14.7 Watts | Efficacy: 107 lm/W | 80 CRI; 3500K CCT

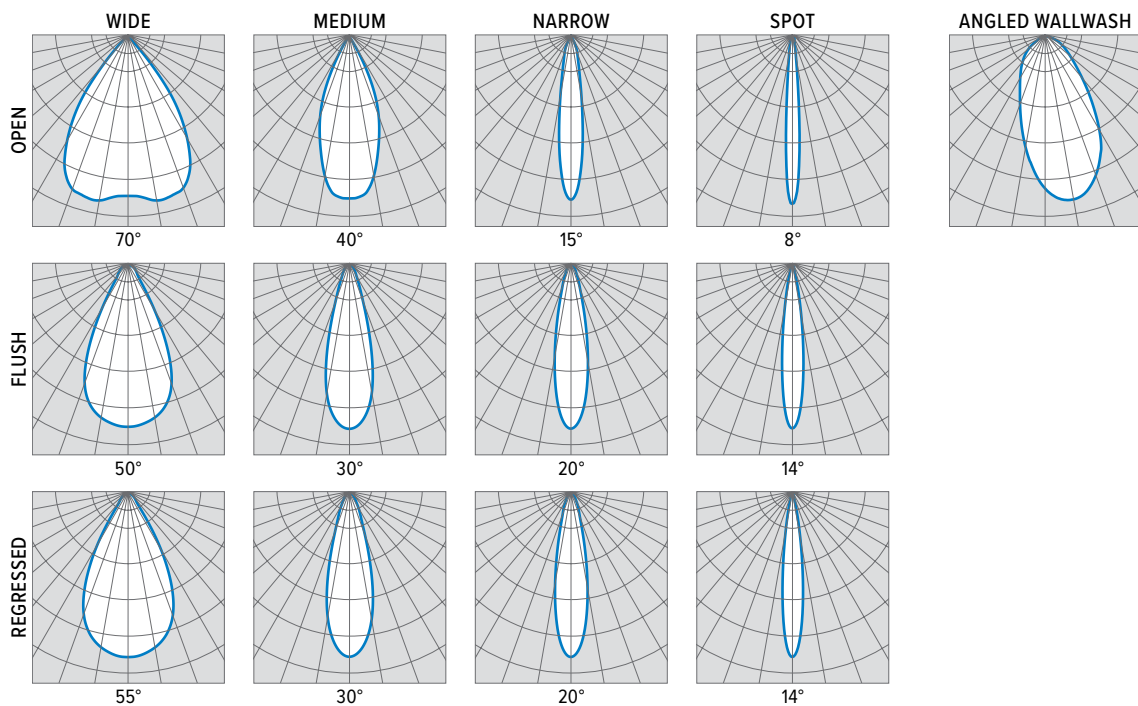


CANDLEPOWER DISTRIBUTION	VERTICAL ANGLE	HORIZONTAL ANGLE	ZONAL LUMENS
		0°	
	0	1274	
	5	1288	125
	15	1323	374
	25	1178	532
	35	690	415
	45	95	96
	55	22	21
	65	7	8
	75	1	2
	85	0	0
	90	0	

LUMEN SUMMARY	ZONE	LUMENS	% FIXTURE
	0 - 40	1445	92
	0 - 60	1562	99
	0 - 90	1571	100
	0-180	1571	100

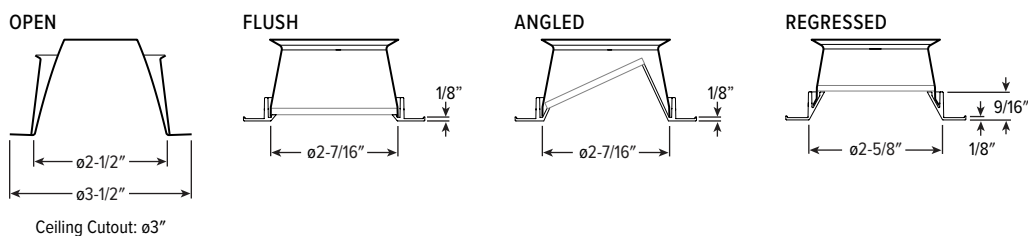


# 2DR PoE | tunable **WHITE** 2" Downlight – Round

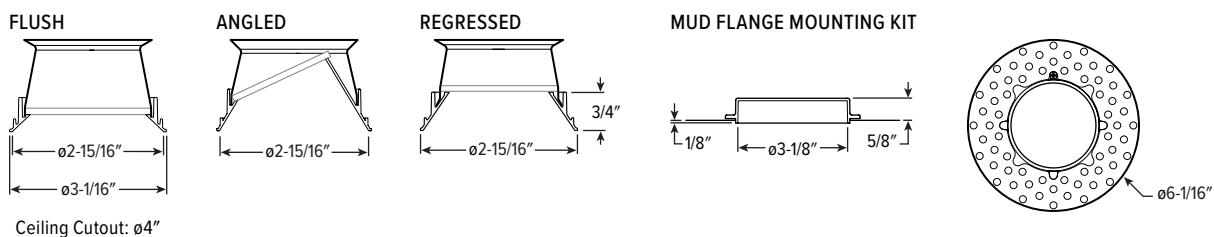


## TRIM TYPE DETAILS

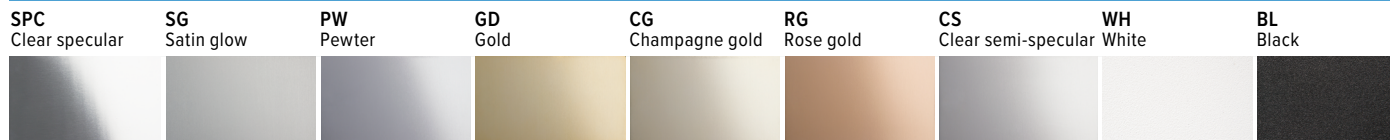
### 1/2" STANDARD FLANGE TYPE



### ZERO-FLANGE MUD-IN

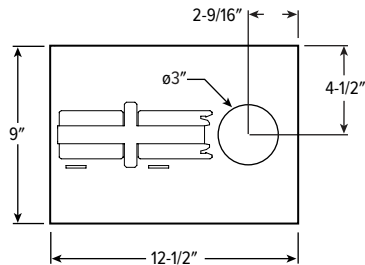


## REFLECTOR FINISH DETAILS

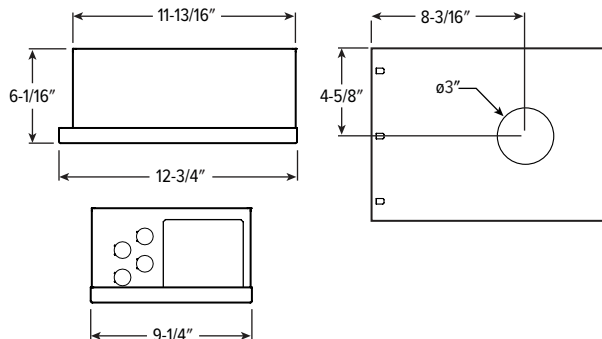


## MOUNTING TYPE DETAILS

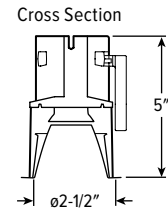
### NEW CONSTRUCTION



### IC-RATED

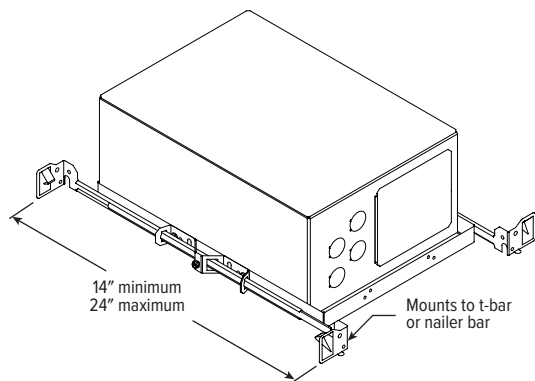
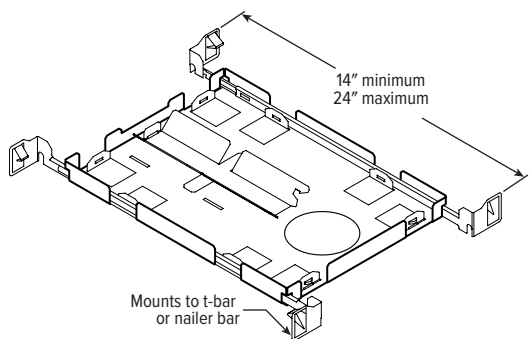


### REMODEL



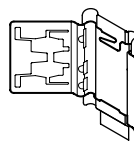
## MOUNTING HARDWARE DETAILS

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

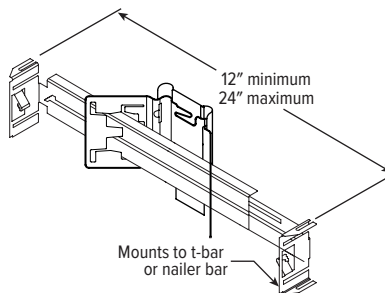


F1 with I Mounting Type

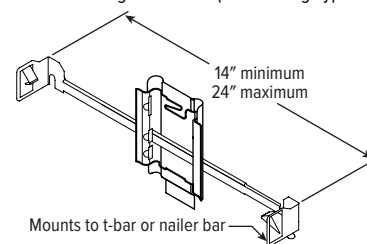
### BA1 Adjustable butterfly pan bracket, bar hanger not included (N Mounting Type only)



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



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



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

