

PRODUCT SPECIFICATIONS

LED Light Engine Fixture to fixture color consistency within a 2-step MacAdam ellipse • 2700K, 3000K, 3500K, or 4000K color temperatures are available with 80 CRI minimum • 2700K and 3000K also available with 90 CRI minimum.

Modular Optics 45° cutoff to source and source image • Available with field interchangeable optics in 15°, 24°, 35° and 45° distributions • Additional distributions of 20°, 30°, 40°, 50°, 55°, 60°, 60° x 20° FWHM can be achieved with the use of the diffusing films and spot primary optic.

Reflector Die cast trim in white or black with black reflector that eliminates visibility into housing.

Trims Style Self Flanged and Flangeless styles are available • Flangeless is compatible with gypsum or solid ceiling materials such as wood, stone, or tile.

LED Driver Choice of two drivers to accommodate voltages from 120-277 volts AC at 50/60Hz • Dims as low as 1% with most incandescent and electronic low voltage dimmers or 0-10V dimmers • For a list of compatible dimmers, refer to [ACULUX LED DIM](#) • Power Factor > 0.9 • Field replaceable from above or below ceiling.

Life Rated for 50,000 hrs at 70% lumen maintenance.

Codes/Labels UL and cUL listed for damp locations • Wet location listed with WET option • ICAT rated new construction fixture meets energy code Air Leakage requirements per ASTM E283 • ENERGY STAR® certified with select trims and housings • ICAT new construction luminaire is Chicago Plenum (CCEA) approved standard • ICAT housings are rated for direct contact with insulation, including spray foam insulation with R-Value of 3.7 per inch or less • Union made.

New Construction Mounting Features patented (US Patent 8,038,113) Pro-VI™ bar hanger system, permitting quick placement of housing with 24" on-center joists or suspended ceilings • ICAT new construction luminaire also features vertically adjustable mounting brackets (butterfly brackets) • V-Notch in plaster frame and patented (US Patent 8,277,090) Tru-Line™ Platform featuring +/- 1/2" translation aids fixture alignment after installation, prior to drywall.

Wiring ICAT housing includes (2) 1/2" knockouts in access plate, and is compatible with rigid conduit and flexible supply • Non-ICAT housings include (2) 1/2" knockouts with pryout slots in junction box and are compatible with flexible electrical supply only • All housings supplied with quick connect electrical connectors.

Ceiling Thickness 1/2" – 1 1/2" ceiling standard.



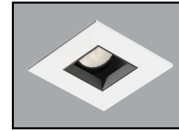
2" LED RECESSED DOWNLIGHT

800/1200/1500 LUMEN

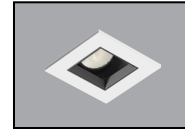
SQUARE DOWNLIGHT 1 1/4" PINHOLE

NEW CONSTRUCTION

AX2SQ D/AX2SQ A with 2SQDPIN Trim



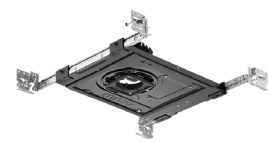
Self-Flanged



Flangeless



AX2SQ ICAT



AX2SQ

Buy American Act This product is assembled in the USA and meets the Buy America(n) government procurement requirements under FAR, DFARS and DOT regulations. Please refer to www.acuitybrands.com/buy-american for additional information.

Warranty - 5YR 5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

NOTE: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25°C. Specifications subject to change without notice.

ORDERING INFORMATION

Example: AX2SQ D G2 08LM 30K 80CRI 24D FPC 120 2SQDPIN BD WHSF

Series / Housing Style	Lumens	CCT	CRI	Beam	Driver	Voltage ²	Options
AX2SQ D G2 New Construction Downlight	08LM 800 Lumens	27K 2700K	80CRI	15D 15° beam	FPC Phase cut dimming, 1% dim	120	CP ICAT IC, Air-Tight, Chicago Plenum
AX2SQ A G2 New Construction Universal ADJ/DL/WW	12LM 1200 Lumens	30K 3000K	90CRI ¹	24D 24° beam	ZT 0-10V Dimming, 1% dim	MVOLT (120-277)	NLIGHT ³ nLight dimming pack controls (Must mount remotely)
	15LM 1500 Lumens	35K 3500K		35D 35° beam			
		40K 4000K		45D 45° beam			

Square Trim Style	Reflector Finish	Flange Style / Finish	Environment	Ceiling Installation
DOWNLIGHT	BD Black Diffuse	SELF FLANGED	WET Wet location	SELF FLANGED & FLANGELESS, WOOD/STONE/TILE
2SQDPIN Downlight Pinhole, 1 1/4"		WHSF White, flanged		Ceiling ≤ .75"
		BLSF Black, flanged		CTA2SQ/120 Ceiling 0.75" - 1.20"
		FLANGELESS ⁴		CTA2SQ/150 Ceiling 1.20" - 1.5"
		WHFM Flangeless, White trim		FLANGELESS, GYPSUM
		BLFM Flangeless, Black trim		FMA2SQ/075 Ceiling ≤ .75"
				FMA2SQ/120 Ceiling 0.75" - 1.20"
				FMA2SQ/150 Ceiling 1.20" - 1.50"

Ordering Notes

¹ 90CRI available on 27K and 30K only.

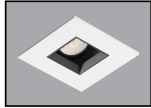
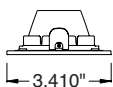
⁴ Flangeless trims in drywall ceilings must specify ceiling installation (FMA2SQ).

² MVOLT standard on ZT. 120 standard on FPC.

³ NLIGHT compatible with ZT only.

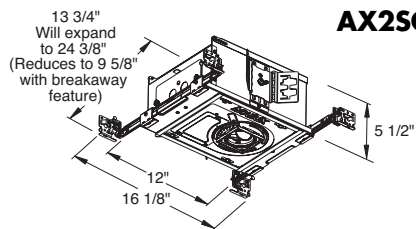
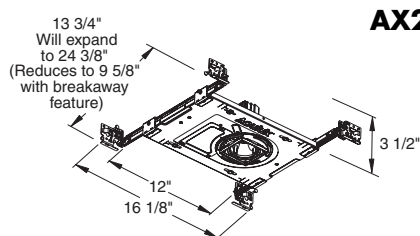
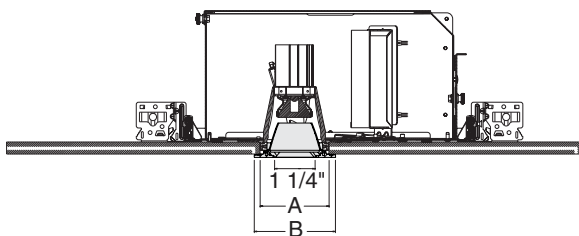
**2" LED RECESSED
DOWNLIGHT****800/1200/1500 LUMEN**

SQUARE DOWNLIGHT 1 1/4" PINHOLE NEW CONSTRUCTION

AX2SQ D/AX2SQ A with 2SQDPIN Trim**TRIM SELECTION****2SQDPIN****Square Downlight Pinhole, 1 1/4"****Self-Flanged****Flangeless**

CCT/CRI:	80CRI 27K, 30K, 35K, 40K
Optic:	15D, 24D, 35D, 45D
Finish:	BD

* With WET option

DIMENSIONS**NEW CONSTRUCTION****AX2SQ ICAT****AX2SQ**

Trim Style	Cutout Size (A)	Flange Dimension (B)
Self Flanged Trims	2-7/8" x 2-7/8"	3.410"
Flangeless Trims (Solid Ceiling)	2-7/8" x 2-7/8"	2.875"
Flangeless Trims (Drywall Ceiling)	3" x 3"	2.875"

ACCESSORIES

Cat. #	Description
2AXG2OPT/15D	15° Spot Optic
2AXG2OPT/24D	24° Narrow Flood Optic
2AXG2OPT/35D	35° Flood Optic
2AXG2OPT/45D	45° Wide Flood Optic
AF2/10	10° Film (Use with 15D Optic)
AF2/20	20° Film (Use with 15D Optic)
AF2/30	30° Film (Use with 15D Optic)
AF2/40	40° Film (Use with 15D Optic)
AF2/50	50° Film (Use with 15D Optic)
AF2/60	60° Film (Use with 15D Optic)
AF2/90x1	90°x1° Film (Use with 15D Optic)
HB1	(2) Real Nail 3 Bar Hangers
HB26	(2) 26" C-Channel Bar Hangers
HB50	(2) 50" C-Channel Bar Hangers
LB27	(2) 27" Linear Bar Hangers
IIS 35 HE	Up to 35W Remote Mount Micro Inverter (AX2SQ 2A G2 15LM and AX2SQ 3A G2 12LM Excluded)

To order, specify catalog number.

DIFFUSING FILMS

To achieve the desired beam angle (FWHM), specify the following primary LED optic on the luminaire and order the diffusing film accessory from the table below

Desired FWHM	Primary Optic	Film
15°	15D	-
20°	15D	AF2/10
24°	24D	-
30°	15D	AF2/20
35°	35D	-
40°	15D	AF2/30
45°	45D	-
50°	15D	AF2/40
55°	15D	AF2/50
60°	15D	AF2/60
60°x20°	15D	AF2/90x1

ELECTRICAL DATA

Lumen Package	08LM			12LM			15LM		
Driver Option	FPC	ZT		FPC	ZT		FPC	ZT	
Voltage	120	120	277	120	120	277	120	120	277
Input Power	10.0	9.9	10.1	14.7	14.3	14.3	17.3	16.5	16.4
Input Current	0.08	0.08	0.04	0.12	0.12	0.06	0.14	0.14	0.06
Frequency	50/60Hz			50/60Hz			50/60Hz		
Power Factor	0.99	0.99	0.9	0.99	0.99	0.92	0.99	0.99	0.92

2" LED RECESSED DOWNLIGHT

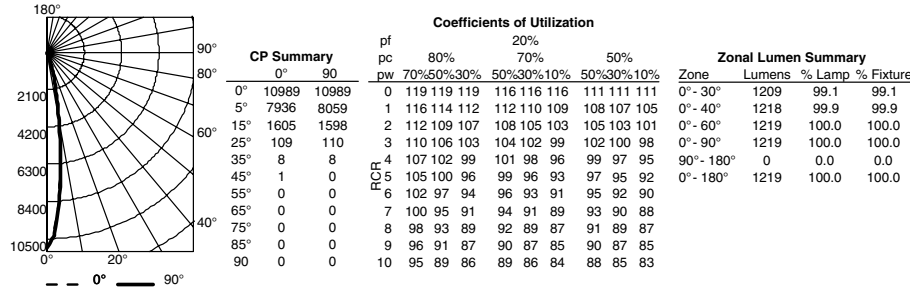
800/1200/1500 LUMEN

SQUARE DOWNLIGHT 1 1/4" PINHOLE NEW CONSTRUCTION

AX2SQ D/AX2SQ A with 2SQDPIN Trim

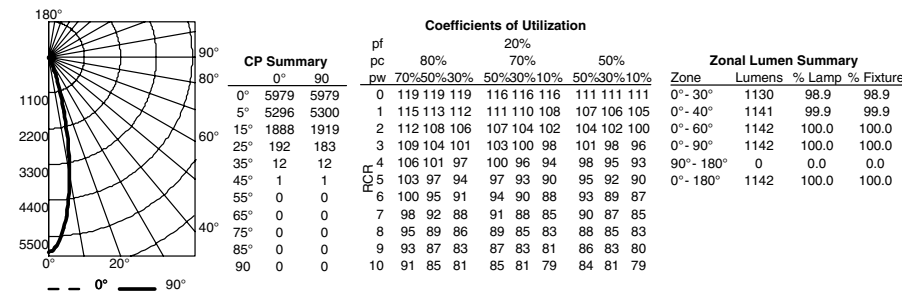
PHOTOMETRICS

AX2SQ D G2 15LM 30K 80CRI 15D FPC 120 2SQDPIN BD, 3000K LEDs, input watts: 17.3, delivered lumens: 1236, LM/W = 71, test no. PT07172802R, tested in accordance to IESNA LM-79



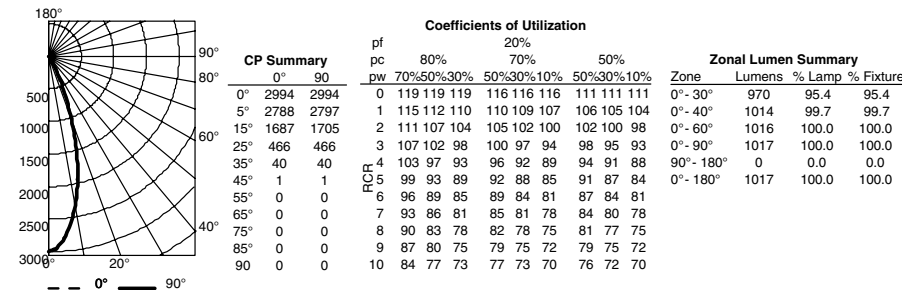
CONE OF LIGHT - Beam: 15.8°			LUMINANCE (cd/sq.m)	
Distance to Illuminated Plane (ft)	Footcandles Beam Center	Beam Diameter	Degrees	Average Luminance
4	686.8	1.1	45	760
6	305.3	1.7	55	375
8	171.7	2.2	65	254
10	109.9	2.8	75	415
12	76.3	3.3	85	0

AX2SQ D G2 15LM 30K 80CRI 24D FPC 120 2SQDPIN BD, 3000K LEDs, input watts: 17.3, delivered lumens: 1151, LM/W = 67, test no. PT07172809R, tested in accordance to IESNA LM-79



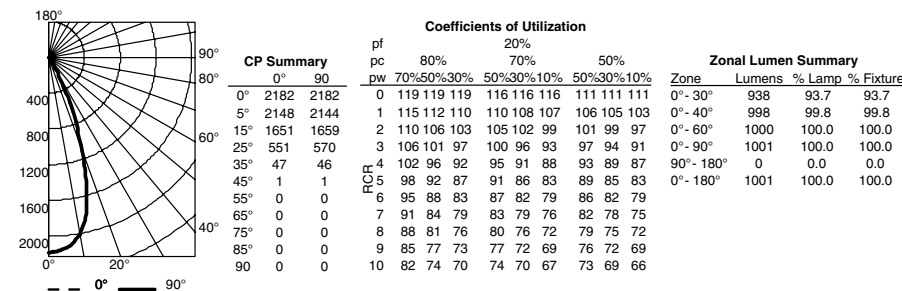
CONE OF LIGHT - Beam: 23.8°			LUMINANCE (cd/sq.m)	
Distance to Illuminated Plane (ft)	Footcandles Beam Center	Beam Diameter	Degrees	Average Luminance
4	373.7	1.7	45	760
6	166.1	2.5	55	375
8	93.4	3.4	65	254
10	59.8	4.2	75	0
12	41.5	5.1	85	0

AX2SQ D G2 15LM 30K 80CRI 35D FPC 120 2SQDPIN BD, 3000K LEDs, input watts: 17.3, delivered lumens: 1021, LM/W = 59, test no. PT07172816R, tested in accordance to IESNA LM-79



CONE OF LIGHT - Beam: 33°			LUMINANCE (cd/sq.m)	
Distance to Illuminated Plane (ft)	Footcandles Beam Center	Beam Diameter	Degrees	Average Luminance
4	187.1	2.4	45	1369
6	83.2	3.6	55	375
8	46.8	4.7	65	254
10	29.9	5.9	75	415
12	20.8	7.1	85	0

AX2SQ D G2 15LM 30K 80CRI 45D FPC 120 2SQDPIN BD, 3000K LEDs, input watts: 17.3, delivered lumens: 1004, LM/W = 58, test no. PT07172823R, tested in accordance to IESNA LM-79



CONE OF LIGHT - Beam: 39.9°			LUMINANCE (cd/sq.m)	
Distance to Illuminated Plane (ft)	Footcandles Beam Center	Beam Diameter	Degrees	Average Luminance
4	136.4	2.9	45	1369
6	60.6	4.4	55	375
8	34.1	5.8	65	254
10	21.8	7.3	75	415
12	15.2	8.7	85	0

LUMEN OUTPUT MULTIPLIERS

Color Temperature	CRI	Multiplier
2700K	80	0.95
3000K	80	1.00
3500K	80	1.05
4000K	80	1.10

Color Temperature	CRI	Multiplier
2700K	90	0.83
3000K	90	0.87

Lumen Package	Multiplier
800	0.58
1200	0.86
1500	1.00

2" LED RECESSED
DOWNLIGHT

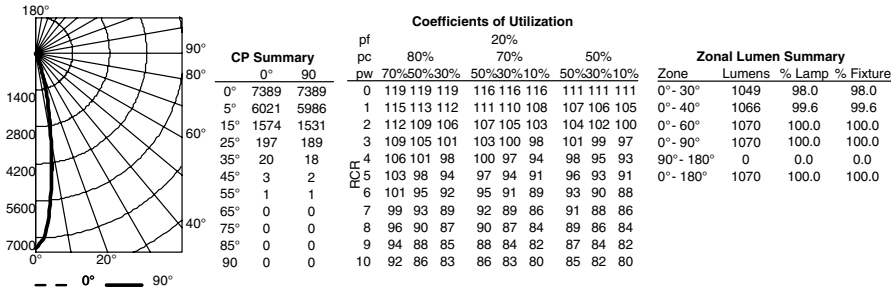
800/1200/1500 LUMEN

SQUARE DOWNLIGHT 1 1/4" PINHOLE NEW CONSTRUCTION

PHOTOMETRICS

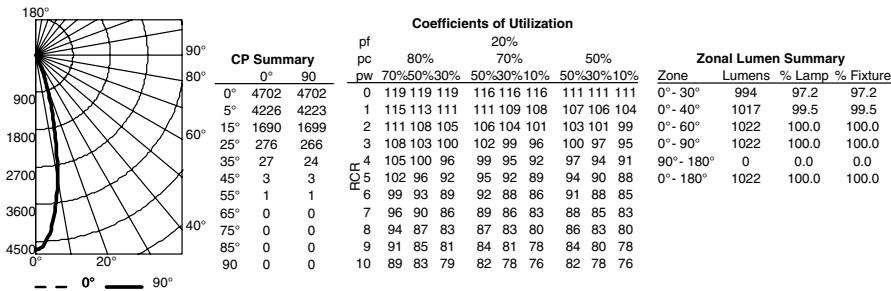
AX2SQ D/AX2SQ A with 2SQDPIN Trim with WET option

AX2SQ D G2 15LM 30K 80CRI 15D FPC 120 2SQDPIN BD WET, 3000K LEDs, input watts: 17.3, delivered lumens: 1081, LM/W = 63, test no. PT07172805R, tested in accordance to IESNA LM-79



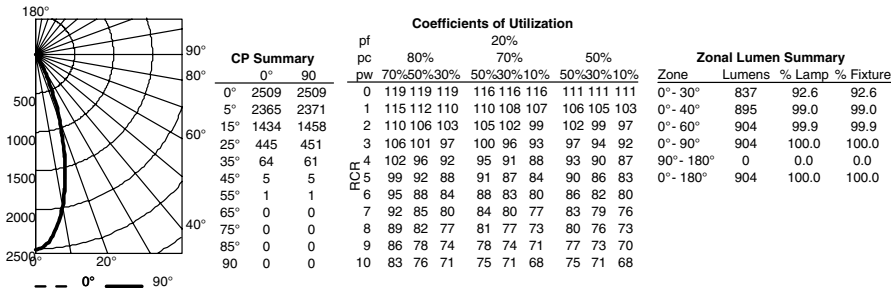
CONE OF LIGHT - Beam: 18.9°			LUMINANCE (cd/sq.m)	
Distance to Illuminated Plane (ft)	Footcandles Beam Center	Beam Diameter	Degrees	Average Luminance
4	461.8	1.3	45	3954
6	205.2	2.0	55	1312
8	115.4	2.7	65	1018
10	73.9	3.3	75	415
12	51.3	4.0	85	0

AX2SQ D G2 15LM 30K 80CRI 24D FPC 120 2SQDPIN BD WET, 3000K LEDs, input watts: 17.3, delivered lumens: 1029, LM/W = 60, test no. PT07172812R, tested in accordance to IESNA LM-79



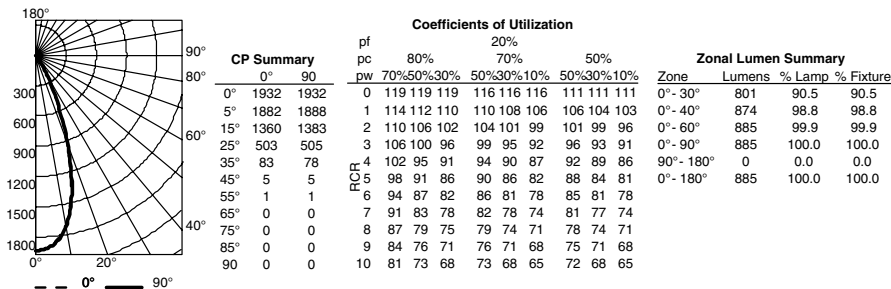
CONE OF LIGHT - Beam: 25°			LUMINANCE (cd/sq.m)	
Distance to Illuminated Plane (ft)	Footcandles Beam Center	Beam Diameter	Degrees	Average Luminance
4	293.9	1.8	45	4562
6	130.6	2.7	55	1312
8	73.5	3.5	65	1018
10	47.0	4.4	75	415
12	32.7	5.3	85	0

AX2SQ D G2 15LM 30K 80CRI 35D FPC 120 2SQDPIN BD WET, 3000K LEDs, input watts: 17.3, delivered lumens: 908, LM/W = 52, test no. PT07172819R, tested in accordance to IESNA LM-79



CONE OF LIGHT - Beam: 33.6°			LUMINANCE (cd/sq.m)	
Distance to Illuminated Plane (ft)	Footcandles Beam Center	Beam Diameter	Degrees	Average Luminance
4	156.8	2.4	45	7756
6	69.7	3.6	55	1500
8	39.2	4.8	65	763
10	25.1	6.0	75	831
12	17.4	7.2	85	0

AX2SQ D G2 15LM 30K 80CRI 45D FPC 120 2SQDPIN BD WET, 3000K LEDs, input watts: 17.3, delivered lumens: 888, LM/W = 51, test no. PT07172826R, tested in accordance to IESNA LM-79



CONE OF LIGHT - Beam: 38.9°			LUMINANCE (cd/sq.m)	
Distance to Illuminated Plane (ft)	Footcandles Beam Center	Beam Diameter	Degrees	Average Luminance
4	120.7	2.8	45	7300
6	53.7	4.2	55	1125
8	30.2	5.7	65	763
10	19.3	7.1	75	831
12	13.4	8.5	85	0

LUMEN OUTPUT MULTIPLIERS

Color Temperature	CRI	Multiplier
2700K	80	0.95
3000K	80	1.00
3500K	80	1.05
4000K	80	1.10

Color Temperature	CRI	Multiplier
2700K	90	0.83
3000K	90	0.87

Lumen Package	Multiplier
800	0.58
1200	0.86
1500	1.00