

PRODUCT SPECIFICATIONS

LED Light Engine Consistent 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 50° cutoff to source and source image • Available with field interchangeable optics in 18° Spot, 24° Narrow Flood, 35° Flood, and 45° wide flood distributions • Additional distributions of 20°, 30°, 50° and 55° FWHM can be achieved with the use of the diffusing films and spot primary optic.

Reflector .040" aluminum hyperbolic reflector in clear specular, black specular, clear diffuse, white or wheat diffuse finish provides a quiet ceiling and broad distribution.

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 • Compatible with most incandescent and electronic low voltage dimmers or 0-10V dimmers • For a list of compatible dimmers, refer to [ACLXLED2-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 • ICAT rated new construction fixture meets energy code Air Leakage requirements per ASTM E283 • ENERGY STAR® Certified with select trims • ICAT rated luminaires with 3000K, 90 CRI light engine are certified to high efficacy requirements of California T24 with select trims • ICAT rated new construction luminaire is Chicago Plenum (CCEA) approved • 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-VIT™ bar hanger system, permitting quick placement of housing with 24" on-center joists or suspended ceilings • ICAT rated new construction luminaire also features vertically adjustable mounting brackets (butterfly brackets) • Centerline indicators on 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-IC 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.

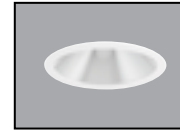


2" LED RECESSED DOWNLIGHT
800/1200 LUMEN

ROUND HYPERBOLIC DOWNLIGHT TRIM
 NEW CONSTRUCTION
AX2 with 2DH Trim



Self-Flanged



Flangeless



AX2 ICAT



AX2

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

Warranty 5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

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: AX2 D 08LM 30K 80CRI 24D FPC 120 2DH CS SF

HOUSING OPTIONS	Series / Housing Style		Lumens		CCT		CRI		Beam		Driver		Voltage ¹		Options	
	AX2 D	New Construction Downlight	08LM	800 Lumens	27K	2700K	80CRI	18D	18° beam	FPC	Phase cut dimming, 5% dim	120	CP	Chicago Plenum		
AX2 A	New Construction Universal ADJ/DL/WW	12LM	1200 Lumens	30K	3000K	90CRI	24D	24° beam	ZT	0-10V Dimming, 10% dim	MVOLT (120-277)	ICAT	IC, Air-Tight			
				35K	3500K		35D	35° beam				NLIGHT ²	nLight dimming pack controls			
				40K	4000K		45D	45° beam								

TRIM OPTIONS	Trim Style		Reflector Finish		Flange Style / Finish		Environment		Ceiling Installation		
	DOWNLIGHT	2DH	BS	Black Specular	SELF FLANGED	WET	Wet location	SELF-FLANGED / FLANGELESS WOOD/STONE/TILE			
	Hyperbolic Downlight	CD	Clear Diffuse	SF	Flange is same finish as reflector			Ceiling ≤ .75"			
		CS	Clear Specular	WHSF	White painted flange			CTA2/120 Ceiling 0.75" - 1.20"			
		W	White Paint		FLANGELESS ³			CTA2/150 Ceiling 1.20" - 1.5"			
		WTD	Wheat Diffuse	FM	Flangeless			FLANGELESS, GYPSUM			
								FMA2/075 Ceiling ≤ .75"			
								FMA2/120 Ceiling 0.75" - 1.20"			
								FMA2/150 Ceiling 1.20" - 1.50"			

Ordering Notes

¹ MVOLT standard on ZT. 120 standard on FPC
² NLIGHT compatible with ZT only
³ Flangeless trims in drywall ceilings must specify ceiling installation (FMA2)

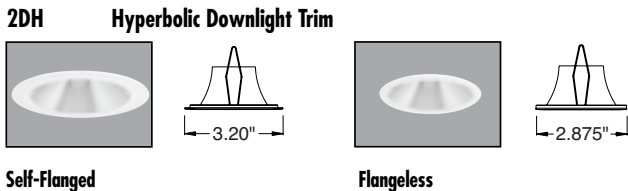
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ROUND HYPERBOLIC DOWNLIGHT TRIM NEW CONSTRUCTION

AX2 with 2DH Trim

TRIM SELECTION



	CCT/CRI:	80CRI 27K, 30K, 35K, 40K
	Optic:	18D, 24D, 35D, 45D
	Trim Finish:	CS, CD, WTD, W

	Construction:	ICAT
	CCT/CRI:	90CRI, 30K
	Optic:	18D, 24D, 35D, 45D
	Trim Finish:	CS, CD, WTD, W

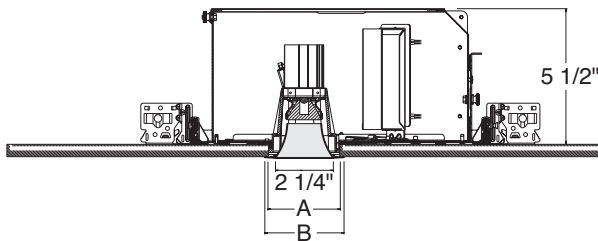
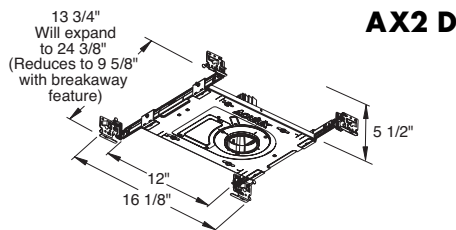
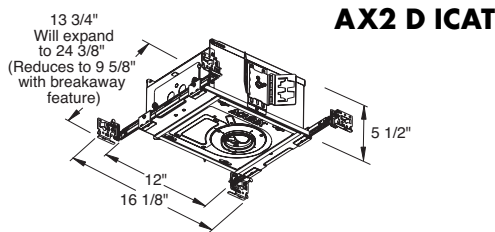
ACCESSORIES

Cat. #	Description
2AXOPT/18D	18° Spot Optic
2AXOPT/24D	24° Narrow Flood Optic
2AXOPT/35D	35° Flood Optic
2AXOPT/45D	45° Wide Flood Optic
AF2/10	10° Film (Use with Spot Optic)
AF2/20	20° Film (Use with Spot Optic)
AF2/40	40° Film (Use with Spot Optic)
AF2/50	50° Film (Use with Spot Optic)
AF2/90x1	90°x1° Film (Use with Spot 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
EMI20	20W Emergency Lighting Inverter

To order, specify catalog number.

DIMENSIONS

NEW CONSTRUCTION



Trim Style	Cutout Size (A)	Trim O.D. (B)
Self Flanged Trims	2-7/8"	3.20"
Flangeless Trims (Solid Ceiling)	2-7/8"	2.875"
Flangeless Trims (Drywall Ceiling)	3"	2.875"

Note: An accurate hole saw is recommended for best results

DIFFUSING FILMS

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

Desired FWHM	Primary Optic	Film
18°	18D	-
20°	18D	AF2/10
24°	24D	-
30°	18D	AF2/20
35°	35D	-
45°	45D	-
50°	18D	AF2/40
55°	18D	AF2/50
60°x20°	18D	AF2/90x1

LUMEN OUTPUT MULTIPLIERS

Color Temperature	CRI	Multiplier
2700K	80	0.93
3000K	80	1.00
3500K	80	1.02
4000K	80	1.06
2700K	90	0.71
3000K	90	0.77

ELECTRICAL DATA

Lumen Package	08LM			12LM		
	FPC	ZT		FPC	ZT	
Voltage	120	120	277	120	120	277
Input Power	10.1	9.6	9.6	14.8	14.8	14.6
Input Current	0.09	0.08	0.04	0.12	0.12	0.06
Frequency	50/60Hz		50/60Hz	50/60Hz		50/60Hz
Power Factor	0.99	0.99	0.93	0.99	0.99	0.95

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AX2 with 2DH Trim

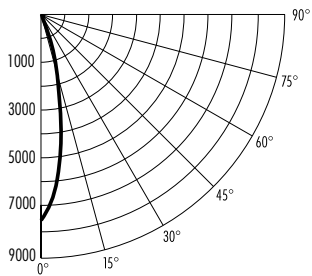
PHOTOMETRICS

SPOT

PHOTOMETRIC REPORT

Test Report #: PT02140706
 Catalog No: AX2 D 12LM 30K
 80CRI 18D FPC 120
 2DH CD

Luminaire Spacing Criterion: 0.36
 Luminaire LPW: 83



CANDLEPOWER DISTRIBUTION (Candelas)

Degrees	Candelas
Vertical	0°
0	7636
5	6522
15	1790
25	260
35	55
45	11
55	2
65	0
75	0
85	0
90	0

AVERAGE INITIAL FOOTCANDLES

Multiple Units (Square Array, 60'x60' room)
 Ceiling 80% Wall 50% Floor 20%

Spacing	RCR1	RCR3	RCR5
4.0'	86	80	74
5.0'	55	51	47
6.0'	38	35	33
7.0'	31	29	27
8.0'	25	23	21
9.0'	19	17	16
10.0'	14	13	12

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30°	1177	96.1
0-40°	1213	99.1
0-60°	1224	100.0
0-90°	1224	100.0

INITIAL FOOTCANDLES

(One Unit, 14.8W, 20.2° Beam)

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
6	212.1	2.1'
8	119.3	2.9'
10	76.4	3.6'
12	53.0	4.3'

LUMINANCE (Average cd/m²)

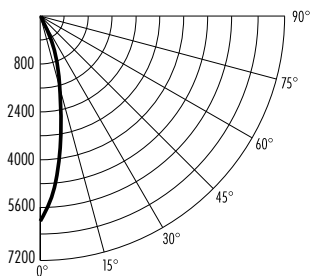
Degrees	Average Luminance
45	5853
55	1640
65	111
75	0
85	540

NARROW FLOOD

PHOTOMETRIC REPORT

Test Report #: PT02140707
 Catalog No: AX2 D 12LM 30K
 80CRI 24D FPC 120
 2DH CD

Luminaire Spacing Criterion: 0.40
 Luminaire LPW: 77



CANDLEPOWER DISTRIBUTION (Candelas)

Degrees	Candelas
Vertical	0°
0	5730
5	4949
15	1739
25	348
35	58
45	14
55	3
65	0
75	0
85	0
90	0

AVERAGE INITIAL FOOTCANDLES

Multiple Units (Square Array, 60'x60' room)
 Ceiling 80% Wall 50% Floor 20%

Spacing	RCR1	RCR3	RCR5
4.0'	81	73	68
5.0'	52	47	44
6.0'	36	33	30
7.0'	29	26	25
8.0'	23	21	19
9.0'	18	16	15
10.0'	13	12	11

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30°	1082	94.9
0-40°	1126	98.8
0-60°	1140	100.0
0-90°	1140	100.0

INITIAL FOOTCANDLES

(One Unit, 14.8W, 22.5° Beam)

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
6	159.1	2.4'
8	89.5	3.2'
10	57.3	4.0'
12	39.8	4.8'

LUMINANCE (Average cd/m²)

Degrees	Average Luminance
45	7383
55	1640
65	0
75	0
85	0

Fixtures tested to IES recommended standard for solid state lighting per LM-79-08. Photometric performance on a single unit represents a baseline of performance for the fixture. Results may vary in the field. Photometry is at 3000K CCT.

2" LED RECESSED DOWNLIGHT 800/1200 LUMEN

ROUND HYPERBOLIC DOWNLIGHT TRIM NEW CONSTRUCTION

AX2 with 2DH Trim (continued)

PHOTOMETRICS

FLOOD

PHOTOMETRIC REPORT

Test Report #: PT02140708

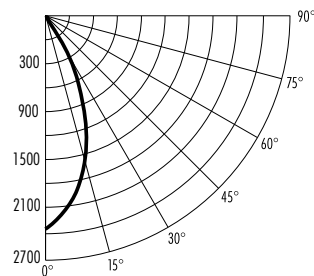
Catalog No: AX2 D 12LM 30K

80CRI 35D FPC 120

2DH CD

Luminaire Spacing Criterion: 0.66

Luminaire LPW: 73



CANDLEPOWER DISTRIBUTION (Candelas)

Degrees	Candelas
Vertical	0°
0	2368
5	2291
15	1670
25	678
35	98
45	18
55	4
65	0
75	0
85	0
90	0

AVERAGE INITIAL FOOTCANDLES

Multiple Units (Square Array, 60'x60' room)

Ceiling 80% Wall 50% Floor 20%

Spacing	RCR1	RCR3	RCR5
4.0'	75	67	61
5.0'	48	43	39
6.0'	34	30	27
7.0'	27	24	22
8.0'	21	19	17
9.0'	16	15	13
10.0'	12	11	10

INITIAL FOOTCANDLES

(One Unit, 14.8W, 39.5° Beam)

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
6	65.8	4.3'
8	37.0	5.7'
10	23.7	7.2'
12	16.4	8.6'

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30°	979	90.9
0-40°	1058	98.2
0-60°	1077	100.0
0-90°	1078	100.0

LUMINANCE (Average cd/m²)

Degrees	Average Luminance
45	9511
55	2378
65	0
75	0
85	0

WIDE FLOOD

PHOTOMETRIC REPORT

Test Report #: PT02140705

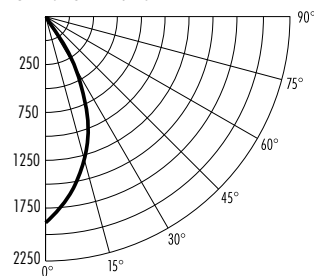
Catalog No: AX2 D 12LM 30K

80CRI 45D FPC 120

2DH CD

Luminaire Spacing Criterion: 0.70

Luminaire LPW: 70



CANDLEPOWER DISTRIBUTION (Candelas)

Degrees	Candelas
Vertical	0°
0	1877
5	1762
15	1332
25	782
35	163
45	31
55	6
65	0
75	0
85	0
90	0

AVERAGE INITIAL FOOTCANDLES

Multiple Units (Square Array, 60'x60' room)

Ceiling 80% Wall 50% Floor 20%

Spacing	RCR1	RCR3	RCR5
4.0'	72	64	57
5.0'	46	41	36
6.0'	32	28	25
7.0'	26	23	20
8.0'	21	18	16
9.0'	16	14	12
10.0'	12	10	9

INITIAL FOOTCANDLES

(One Unit, 14.8W, 44.7° Beam)

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
6	52.1	4.9'
8	29.3	6.6'
10	18.8	8.2'
12	13.0	9.9'

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30°	880	85.0
0-40°	997	96.4
0-60°	1034	100.0
0-90°	1035	100.0

LUMINANCE (Average cd/m²)

Degrees	Average Luminance
45	16695
55	3772
65	111
75	0
85	0

Fixtures tested to IES recommended standard for solid state lighting per LM-79-08. Photometric performance on a single unit represents a baseline of performance for the fixture. Results may vary in the field. Photometry is at 3000K CCT.