

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 Die cast trim in white or black with black oculus • Black shield 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 • 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 or wet locations • ICAT rated new construction fixture meets energy code Air Leakage requirements per ASTM E283 • 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-VI™ 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.

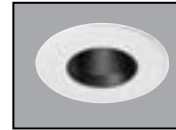
Wiring ICAT housing includes (2) 1/2" knockouts in access plate, and is compatible with rigid conduit and flexible supply • Non-IC housings include (2) 1/2" knockouts with pryout slots in junction box and are compatible with flexible electrical supply only • All housings supplied with quick connect electrical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

2" LED RECESSED DOWNLIGHT

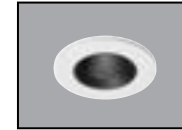
800/1200 LUMEN

ROUND DOWNLIGHT 1 1/4" PINHOLE TRIM
 NEW CONSTRUCTION

AX2 with 2DPIN 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/CustomResources/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 2DPIN BD WHSF

HOUSING OPTIONS

Series / Housing Style	Lumens	CCT	CRI	Beam	Driver	Voltage ¹	Options
AX2 D New Construction Downlight	08LM 800 Lumens 12LM 1200 Lumens	27K 2700K 30K 3000K 35K 3500K 40K 4000K	80CRI 90CRI	18D 18° beam 24D 24° beam 35D 35° beam 45D 45° beam	FPC Phase cut dimming, 5% dim ZT 0-10V Dimming, 10% dim	120 MVOLT (120-277)	CP Chicago Plenum ICAT IC, Air-Tight NLIGHT² nLight dimming pack controls

TRIM OPTIONS

Trim Style	Reflector Finish	Flange Style / Finish	Environment	Ceiling Installation
DOWNLIGHT 2DPIN Downlight Pinhole, 1 1/4"	BD Black Diffuse	SELF FLANGED WHSF White painted flange BLSF Black painted flange FLANGELESS³ WHFM Flangeless, White trim BLFM Flangeless, Black trim	WET Wet location	SELF-FLANGED / FLANGELESS WOOD/STONE/TILE Ceiling ≤ .75" CTA2/120 Ceiling 0.75" - 1.20" CTA2/150 Ceiling 1.20" - 1.5" FLANGELESS, GYPSUM FMA2/075 Ceiling ≤ .75" FMA2/120 Ceiling 0.75" - 1.20" FMA2/150 Ceiling 1.20" - 1.50"

NOTES

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)

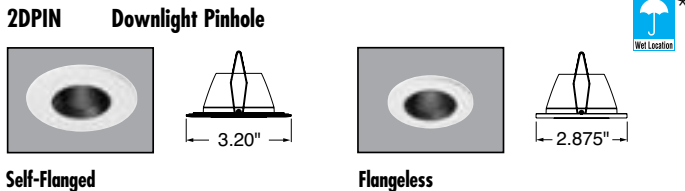
2" LED RECESSED DOWNLIGHT

800/1200 LUMEN

ROUND DOWNLIGHT 1 1/4" PINHOLE TRIM NEW CONSTRUCTION

AX2 with 2DPIN Trim

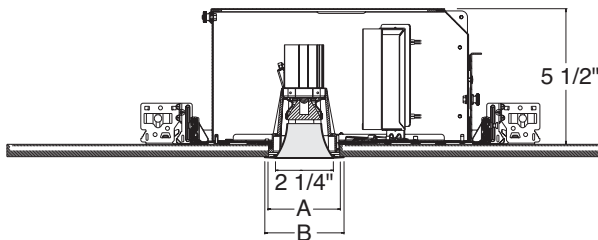
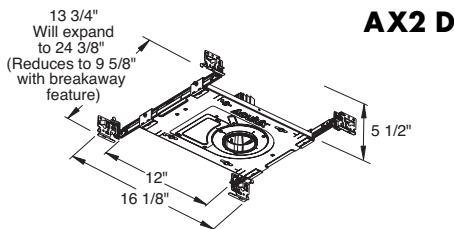
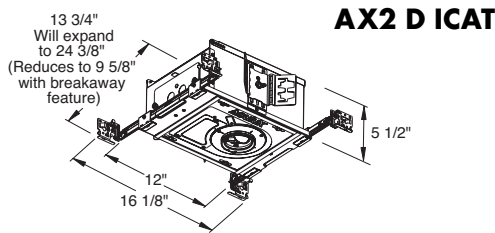
TRIM SELECTION



* With WET option

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

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.

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

2" LED RECESSED DOWNLIGHT 800/1200 LUMEN

ROUND DOWNLIGHT 1 1/4" PINHOLE TRIM NEW CONSTRUCTION

AX2 with 2DPIN Trim

PHOTOMETRICS

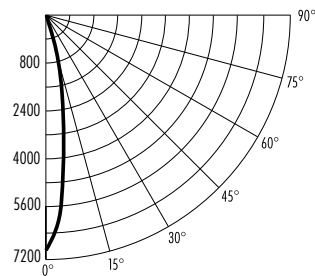
SPOT

PHOTOMETRIC REPORT

Test Report #: PT10142003R
Catalog No: AX2 D 12LM 30K
80CRI 18D FPC 120
2DPIN BD

Luminaire Spacing Criterion: 0.28

Luminaire LPW: 48



CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	7031
5	5469
15	823
25	62
35	7
45	0
55	0
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'	51	47	45
5.0'	33	30	29
6.0'	23	21	20
7.0'	18	17	16
8.0'	15	13	13
9.0'	11	10	10
10.0'	8	8	7

INITIAL FOOTCANDLES

(One Unit, 14.8W, 16.3° Beam)

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
6	195.3	1.7'
8	109.9	2.3'
10	70.3	2.9'
12	48.8	3.4'

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30°	710	99.2
0-40°	715	99.8
0-60°	715	100.0
0-90°	716	100.0

LUMINANCE (Average cd/m²)

Degrees	Average Luminance
45	960
55	592
65	402
75	656
85	0

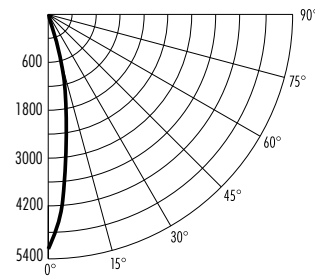
NARROW FLOOD

PHOTOMETRIC REPORT

Test Report #: PT10142005R
Catalog No: AX2 D 12LM 30K
80CRI 24D FPC 120
2DPIN BD

Luminaire Spacing Criterion: 0.32

Luminaire LPW: 45



CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	5147
5	4064
15	915
25	83
35	12
45	0
55	0
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'	47	44	41
5.0'	30	28	26
6.0'	21	19	18
7.0'	17	16	15
8.0'	13	12	12
9.0'	10	10	9
10.0'	8	7	7

INITIAL FOOTCANDLES

(One Unit, 14.8W, 18.3° Beam)

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
6	143.0	1.9'
8	80.4	2.6'
10	51.5	3.2'
12	35.7	3.9'

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30°	655	98.5
0-40°	663	99.8
0-60°	665	100.0
0-90°	665	100.0

LUMINANCE (Average cd/m²)

Degrees	Average Luminance
45	960
55	592
65	402
75	656
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 DOWNLIGHT 1 1/4" PINHOLE TRIM NEW CONSTRUCTION

AX2 with 2DPIN Trim (continued)

PHOTOMETRICS

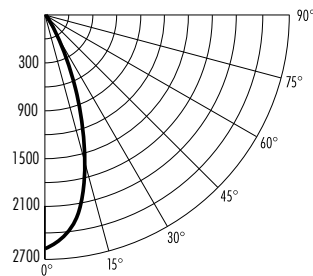
FLOOD

PHOTOMETRIC REPORT

Test Report #: PT10142007R
Catalog No: AX2 D 12LM 30K
80CRI 35D FPC 120
2DPIN BD

Luminaire Spacing Criterion: 0.58

Luminaire LPW: 58



CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	2603
5	2518
15	1629
25	328
35	25
45	1
55	0
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'	60	55	50
5.0'	39	35	32
6.0'	27	24	22
7.0'	22	20	18
8.0'	17	16	14
9.0'	13	12	11
10.0'	10	9	8

INITIAL FOOTCANDLES (One Unit, 14.8W, 34.6° Beam)

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
6	72.3	3.7'
8	70.7	5.0'
10	26.0	6.2'
12	18.1	7.5'

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30°	832	97.2
0-40°	855	99.8
0-60°	856	100.0
0-90°	856	100.0

LUMINANCE (Average cd/m²)

Degrees	Average Luminance
45	1201
55	888
65	803
75	656
85	0

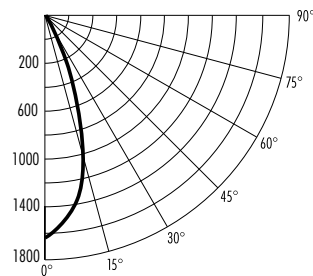
WIDE FLOOD

PHOTOMETRIC REPORT

Test Report #: PT10142009R
Catalog No: AX2 D 12LM 30K
80CRI 45D FPC 120
2DPIN BD

Luminaire Spacing Criterion: 0.60

Luminaire LPW: 40



CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	1634
5	1556
15	1070
25	254
35	50
45	1
55	0
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'	41	37	34
5.0'	26	24	22
6.0'	18	17	15
7.0'	15	13	12
8.0'	12	11	10
9.0'	9	8	7
10.0'	7	6	5

INITIAL FOOTCANDLES (One Unit, 14.8W, 34.9° Beam)

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
6	45.4	3.8'
8	25.5	5.0'
10	16.3	6.3'
12	11.3	7.5'

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30°	550	93.9
0-40°	584	99.7
0-60°	585	99.9
0-90°	586	100.0

LUMINANCE (Average cd/m²)

Degrees	Average Luminance
45	1681
55	1184
65	803
75	656
85	0

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2" LED RECESSED DOWNLIGHT 800/1200 LUMEN

ROUND DOWNLIGHT 1 1/4" PINHOLE TRIM NEW CONSTRUCTION

AX2 with 2DPIN Trim with WET option

PHOTOMETRICS

SPOT

PHOTOMETRIC REPORT

Test Report #: PT02140111

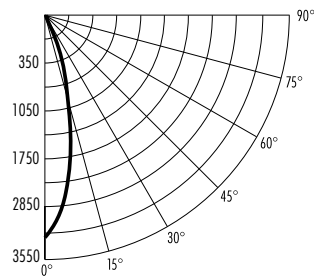
Catalog No: AX2 D 12LM 30K

80CRI 18D FPC 120

2DPIN BD WET

Luminaire Spacing Criterion: 0.38

Luminaire LPW: 44



CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	3246
5	2803
15	974
25	195
35	39
45	10
55	3
65	1
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'	46	42	38
5.0'	29	27	25
6.0'	20	19	17
7.0'	16	15	14
8.0'	13	12	11
9.0'	10	9	8
10.0'	7	7	6

INITIAL FOOTCANDLES

(One Unit, 14.8W, 22.3° Beam)

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
6	90.2	2.4'
8	50.7	3.2'
10	32.5	3.9'
12	22.5	4.7'

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30°	609	94.0
0-40°	635	98.0
0-60°	646	99.7
0-90°	649	100.0

LUMINANCE (Average cd/m²)

Degrees	Average Luminance
45	18729
55	7400
65	4017
75	1968
85	0

NARROW FLOOD

PHOTOMETRIC REPORT

Test Report #: PT10142004R

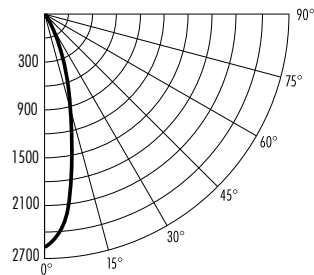
Catalog No: AX2 D 12LM 30K

80CRI 24D FPC 120

2DPIN BD WET

Luminaire Spacing Criterion: 0.42

Luminaire LPW: 41



CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	2549
5	2261
15	929
25	216
35	45
45	11
55	3
65	1
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'	43	39	35
5.0'	27	25	23
6.0'	19	17	16
7.0'	15	14	13
8.0'	12	11	10
9.0'	9	8	8
10.0'	7	6	6

INITIAL FOOTCANDLES

(One Unit, 14.8W, 24.7° Beam)

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
6	70.8	2.6'
8	39.8	3.5'
10	25.5	4.4'
12	17.7	5.3'

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30°	559	92.6
0-40°	590	97.7
0-60°	602	99.7
0-90°	604	100.0

LUMINANCE (Average cd/m²)

Degrees	Average Luminance
45	21387
55	7999
65	4021
75	1968
85	0

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2" LED RECESSED DOWNLIGHT 800/1200 LUMEN

ROUND DOWNLIGHT 1 1/4" PINHOLE TRIM NEW CONSTRUCTION

AX2 with 2DPIN Trim with WET option (continued)

PHOTOMETRICS

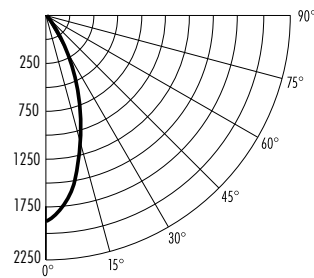
FLOOD

PHOTOMETRIC REPORT

Test Report #: PT10142006R
Catalog No: AX2 D 12LM 30K
80CRI 35D FPC 120
2DPIN BD WET

Luminaire Spacing Criterion: 0.60

Luminaire LPW: 52



CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	1863
5	1778
15	1160
25	422
35	102
45	22
55	5
65	2
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'	54	48	43
5.0'	35	31	28
6.0'	24	21	19
7.0'	19	17	16
8.0'	15	14	12
9.0'	12	10	9
10.0'	9	8	7

INITIAL FOOTCANDLES

(One Unit, 14.8W, 35.6° Beam)

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
6	51.8	3.9'
8	29.1	5.1'
10	18.6	6.4'
12	12.9	7.7'

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30°	676	87.7
0-40°	745	96.6
0-60°	769	99.7
0-90°	771	100.0

LUMINANCE (Average cd/m²)

Degrees	Average Luminance
45	42054
55	13034
65	5628
75	1312
85	0

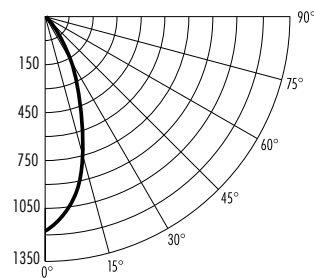
WIDE FLOOD

PHOTOMETRIC REPORT

Test Report #: PT10142008R
Catalog No: AX2 D 12LM 30K
80CRI 45D FPC 120
2DPIN BD WET

Luminaire Spacing Criterion: 0.62

Luminaire LPW: 36



CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	1175
5	1162
15	758
25	300
35	88
45	19
55	4
65	1
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'	37	33	29
5.0'	24	21	19
6.0'	16	15	13
7.0'	13	12	11
8.0'	11	9	8
9.0'	8	7	6
10.0'	6	5	5

INITIAL FOOTCANDLES

(One Unit, 14.8W, 36.7° Beam)

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
6	32.6	4.0'
8	18.4	5.3'
10	11.8	6.6'
12	8.2	8.0'

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixture
0-30°	450	84.9
0-40°	508	95.8
0-60°	529	99.7
0-90°	530	100.0

LUMINANCE (Average cd/m²)

Degrees	Average Luminance
45	37248
55	9775
65	2619
75	1312
85	0

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