

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 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° and 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 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 • 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 [ACULUX2-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 new construction fixture meets energy code Air Leakage requirements per ASTM E283 • 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) • 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 pry-out 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

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.



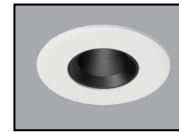
2" LED RECESSED DOWNLIGHT

800/1200/1500 LUMEN

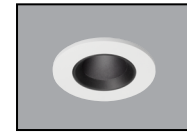
ROUND DOWNLIGHT 1 1/4" PINHOLE TRIM

NEW CONSTRUCTION

AX2 D/AX2 A with 2DPIN Trim



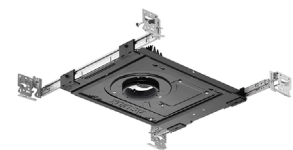
Self-Flanged



Flangeless



AX2 ICAT



AX2

Warranty 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: AX2 D G2 08LM 30K 80CRI 24D FPC 120 2DPIN BD WHSF

HOUSING OPTIONS	Series / Housing Style	Lumens	CCT	CRI	Beam	Driver	Voltage ²	Options
	AX2 D G2 New Construction Downlight	08LM 800 Lumens 12LM 1200 Lumens	27K 2700K 30K 3000K	80CRI 90CRI ¹	15D 15° beam 24D 24° beam 35D 35° beam 45D 45° beam	FPC Phase cut dimming, 1% dim ZT 0-10V Dimming, 1% dim	120 MVOLT (120-277)	CP ICAT IC, Air-Tight, Chicago Plenum NLIGHT ³ nLight dimming pack controls (Must mount remotely)
TRIM OPTIONS	AX2 A G2 New Construction Universal ADJ/DL/WW	15LM 1500 Lumens	35K 3500K 40K 4000K					

Trim Style	Reflector Finish	Flange Style/Finish	Environment	Ceiling Installation
2DPIN Downlight Pinhole, 1 1/4"	BD Black Diffuse	Self-Flanged WHSF White painted flange BLSF Black painted flange Flangeless⁴ 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"

Ordering Notes

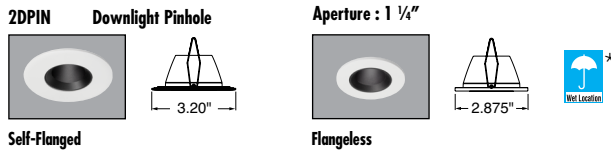
- 90CRI available on 27K and 30K only
1. nLight compatible with ZT only
- MVOLT standard on ZT. 120 standard on FPC
- Flangeless trims in drywall ceilings must specify ceiling installation (FMA2)

2" LED RECESSED DOWNLIGHT

800/1200/1500 LUMEN

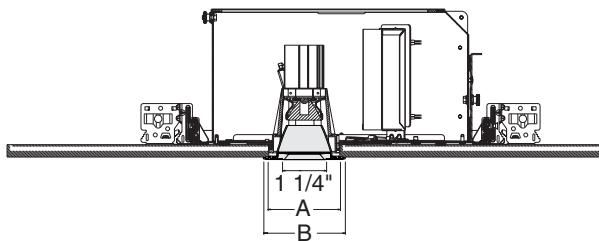
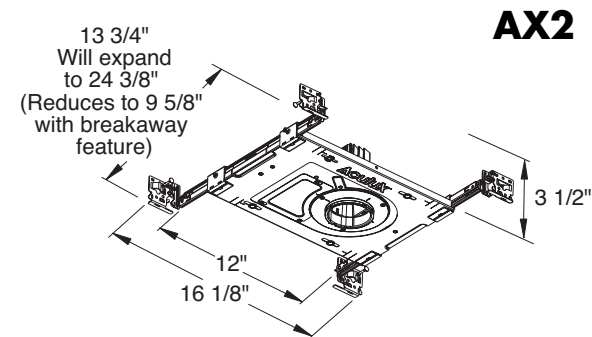
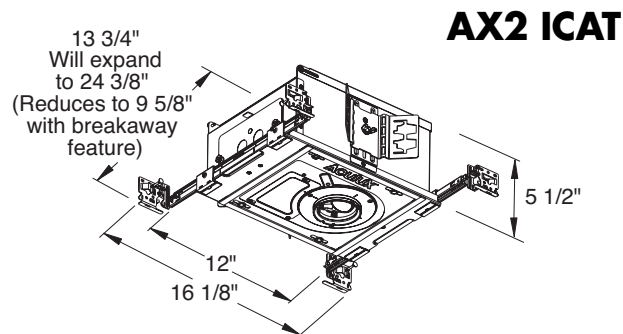
ROUND DOWNLIGHT 1 1/4" PINHOLE TRIM NEW CONSTRUCTION AX2 D/AX2 A with 2DPIN Trim

TRIM SELECTION



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
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

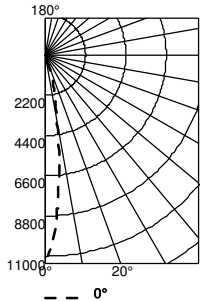
Desired FWHM	Primary Optic	Film	Desired FWHM	Primary Optic	Film
15°	15D	-	45°	45D	-
20°	15D	AF2/10	50°	15D	AF2/40
24°	24D	-	55°	15D	AF2/50
30°	15D	AF2/20	60°	15D	AF2/60
35°	35D	-	60°x20°	15D	AF2/90x1
40°	15D	AF2/30			

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**

ROUND DOWNLIGHT 1 1/4" PINHOLE TRIM NEW CONSTRUCTION

AX2 D/AX2 A with 2DPIN Trim**PHOTOMETRICS****AX2 D G2 15LM 30K 80CRI 15D FPC 120 2DPIN BD, 3000K LEDs, input watts: 17.3, delivered lumens: 1167, LM/W = 67, test no. PT07172504, tested in accordance to IESNA LM-79**

CP Summary

0°	0°
0°	11156
5°	7975
15°	1553
25°	109
35°	7
45°	1
55°	0
65°	0
75°	0
85°	0
90°	0

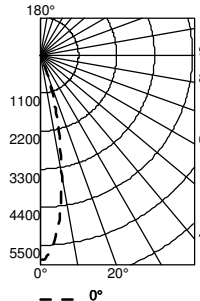
Coefficients of Utilization

pf	80%	70%	50%
pc	70%50%30%	50%30%10%	50%30%10%
0	119 119 119	116 116 116	111 111 111
1	116 114 112	112 110 109	108 107 106
2	113 110 107	108 106 104	105 103 101
3	110 106 103	105 102 100	102 100 98
4	107 103 100	102 99 96	100 97 95
5	105 100 97	99 96 94	98 95 93
6	103 98 94	97 94 92	96 93 91
7	101 95 92	95 92 90	94 91 89
8	99 94 90	93 90 88	92 89 87
9	97 92 88	91 88 86	91 88 86
10	95 90 87	90 87 85	89 86 84

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	1142	99.3	99.3
0° - 40°	1149	99.9	99.9
0° - 60°	1150	100.0	100.0
0° - 90°	1150	100.0	100.0
90° - 180°	0	0.0	0.0
0° - 180°	1150	100.0	100.0

CONE OF LIGHT - Beam : 15.4°			LUMINANCE (cd/sq.m)	
Distance to Illuminated Plane (ft)	Footcandles Beam Center	Beam Diameter	Degrees	Average Luminance
4	697.2	1.1	45	1162
6	309.9	1.6	55	477
8	174.3	2.2	65	324
10	111.6	2.7	75	529
12	77.5	3.2	85	0

AX2 D G2 15LM 30K 80CRI 24D FPC 120 2DPIN BD, 3000K LEDs, input watts: 17.3, delivered lumens: 1044, LM/W = 60, test no. PT07172512, tested in accordance to IESNA LM-79

CP Summary

0°	0°
0°	5946
5°	5236
15°	1743
25°	159
35°	12
45°	1
55°	0
65°	0
75°	0
85°	0
90°	0

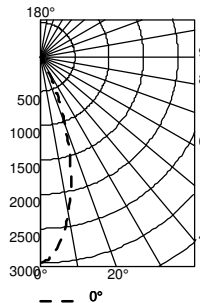
Coefficients of Utilization

pf	80%	70%	50%
pc	70%50%30%	50%30%10%	50%30%10%
0	119 119 119	116 116 116	111 111 111
1	115 113 112	111 110 108	107 106 105
2	112 109 106	107 105 103	104 102 100
3	109 105 101	103 100 98	101 99 97
4	106 101 98	100 97 94	98 96 93
5	103 98 94	97 94 91	96 93 91
6	101 95 92	95 91 89	93 90 88
7	99 93 89	92 89 86	91 88 86
8	96 90 87	90 87 84	89 86 84
9	94 88 85	88 84 82	87 84 82
10	92 86 83	86 83 80	85 82 80

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	1025	99.1	99.1
0° - 40°	1034	99.9	99.9
0° - 60°	1035	100.0	100.0
0° - 90°	1035	100.0	100.0
90° - 180°	0	0.0	0.0
0° - 180°	1035	100.0	100.0

CONE OF LIGHT - Beam : 23°			LUMINANCE (cd/sq.m)	
Distance to Illuminated Plane (ft)	Footcandles Beam Center	Beam Diameter	Degrees	Average Luminance
4	371.6	1.6	45	1162
6	165.2	2.4	55	477
8	92.9	3.3	65	324
10	59.5	4.1	75	529
12	41.3	4.9	85	0

AX2 D G2 15LM 30K 80CRI 35D FPC 120 2DPIN BD, 3000K LEDs, input watts: 17.3, delivered lumens: 980, LM/W = 57, test no. PT07172620, tested in accordance to IESNA LM-79

CP Summary

0°	0°
0°	2990
5°	2791
15°	1686
25°	483
35°	44
45°	1
55°	0
65°	0
75°	0
85°	0
90°	0

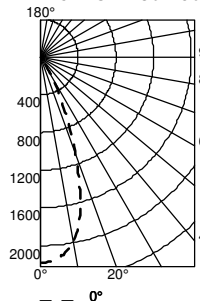
Coefficients of Utilization

pf	80%	70%	50%
pc	70%50%30%	50%30%10%	50%30%10%
0	119 119 119	116 116 116	111 111 111
1	115 113 111	110 109 107	106 105 104
2	111 107 104	105 102 100	102 100 98
3	107 102 98	101 97 94	98 95 93
4	103 98 93	97 93 90	95 91 89
5	100 94 89	93 89 86	91 88 85
6	97 90 85	89 85 82	88 84 81
7	93 87 82	86 82 79	85 81 78
8	91 83 79	83 79 76	82 78 76
9	88 81 76	80 76 73	79 76 73
10	85 78 74	78 73 71	77 73 70

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	939	96.2	96.2
0° - 40°	974	99.8	99.8
0° - 60°	975	100.0	100.0
0° - 90°	976	100.0	100.0
90° - 180°	0	0.0	0.0
0° - 180°	976	100.0	100.0

CONE OF LIGHT - Beam : 32.9°			LUMINANCE (cd/sq.m)	
Distance to Illuminated Plane (ft)	Footcandles Beam Center	Beam Diameter	Degrees	Average Luminance
4	186.9	2.4	45	1549
6	83.1	3.5	55	716
8	46.7	4.7	65	324
10	29.9	5.9	75	529
12	20.8	7.1	85	0

AX2 D G2 15LM 30K 80CRI 45D FPC 120 2DPIN BD, 3000K LEDs, input watts: 17.3, delivered lumens: 948, LM/W = 55, test no. PT07172628, tested in accordance to IESNA LM-79

CP Summary

0°	0°
0°	2179
5°	2138
15°	1629
25°	563
35°	57
45°	1
55°	0
65°	0
75°	0
85°	0
90°	0

Coefficients of Utilization

pf	80%	70%	50%
pc	70%50%30%	50%30%10%	50%30%10%
0	119 119 119	116 116 116	111 111 111
1	115 112 110	110 108 107	106 105 103
2	110 106 103	105 102 99	102 99 97
3	106 101 97	100 96 93	97 94 92
4	102 96 92	95 91 88	93 90 87
5	99 92 88	91 87 84	90 86 83
6	95 88 84	88 83 80	86 82 80
7	92 85 80	84 80 77	83 79 76
8	89 81 77	81 76 73	80 76 73
9	86 78 74	78 73 70	77 73 70
10	83 75 71	75 71 68	74 70 68

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	896	94.9	94.9
0° - 40°	943	99.8	99.8
0° - 60°	944	100.0	100.0
0° - 90°	945	100.0	100.0
90° - 180°	0	0.0	0.0
0° - 180°	945	100.0	100.0

CONE OF LIGHT - Beam : 39.5°			LUMINANCE (cd/sq.m)	
Distance to Illuminated Plane (ft)	Footcandles Beam Center	Beam Diameter	Degrees	Average Luminance
4	136.2	2.9	45	1549
6	60.5	4.3	55	716
8	34.1	5.7	65	324
10	21.8	7.2	75	529
12	15.1	8.6	85	0

LUMEN OUTPUT MULTIPLIERS

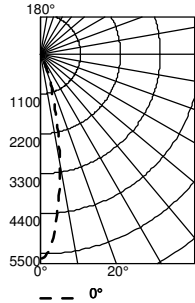
Color Temperature	CRI	Multiplier
2700K	80	0.95
3000K	80	1.00
3500K	80	1.05
4000K	80	1.10

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**

ROUND DOWNLIGHT 1 1/4" PINHOLE TRIM NEW CONSTRUCTION

AX2 D/AX2 A with 2DPIN Trim and WET Option**PHOTOMETRICS****AX2 D G2 15LM 30K 80CRI 15D FPC 120 2DPIN BD WET, 3000K LEDs, input watts: 17.3, delivered lumens: 1040, LM/W = 60, test no. PT07172506, tested in accordance to IESNA LM-79**

CP Summary

0°	0°
0°	5652
5°	4769
15°	1569
25°	288
35°	50
45°	11
55°	4
65°	2
75°	1
85°	0
90°	0

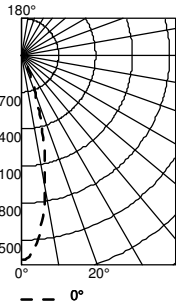
Coefficients of Utilization

pf	pc	80%			70%			50%		
		70%	50%	30%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111	111
1	115	113	111	111	109	108	107	106	104	
2	111	108	105	106	103	101	103	101	99	
3	108	103	100	102	99	96	100	97	95	
4	105	99	95	98	95	92	96	93	91	
5	102	96	92	95	91	88	93	90	88	
6	99	93	89	92	88	85	91	87	85	
7	96	90	86	89	85	83	88	85	82	
8	94	87	83	87	83	80	86	82	80	
9	91	85	81	84	81	78	84	80	78	
10	89	83	79	82	78	76	81	78	76	

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	981	95.0	95.0
0° - 40°	1016	98.4	98.4
0° - 60°	1029	99.7	99.7
0° - 90°	1032	100.0	100.0
90° - 180°	0	0.0	0.0
0° - 180°	1032	100.0	100.0

CONE OF LIGHT - Beam : 21.3°			LUMINANCE (cd/sq.m)	
Distance to Illuminated Plane (ft)	Footcandles Beam Center	Beam Diameter	Degrees	Average Luminance
4	353.2	1.5	45	22075
6	157.0	2.3	55	10026
8	88.3	3.0	65	7452
10	56.5	3.8	75	2645
12	39.2	4.5	85	0

AX2 D G2 15LM 30K 80CRI 24D FPC 120 2DPIN BD WET, 3000K LEDs, input watts: 17.3, delivered lumens: 944, LM/W = 55, test no. PT07172514, tested in accordance to IESNA LM-79

CP Summary

0°	0°
0°	3889
5°	3506
15°	1521
25°	326
35°	57
45°	13
55°	4
65°	2
75°	1
85°	0
90°	0

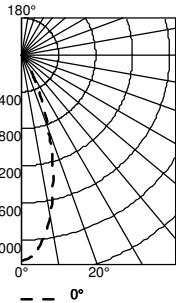
Coefficients of Utilization

pf	pc	80%			70%			50%		
		70%	50%	30%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111	111
1	115	113	111	111	109	107	107	105	104	
2	111	107	104	106	103	100	102	100	98	
3	107	102	99	101	98	95	99	96	93	
4	104	98	94	97	93	90	95	92	89	
5	100	94	90	94	90	87	92	88	86	
6	97	91	87	90	86	83	89	85	83	
7	94	88	83	87	83	80	86	82	80	
8	92	85	81	84	80	78	84	80	77	
9	89	82	78	82	78	75	81	77	75	
10	87	80	76	79	76	73	79	75	73	

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	881	93.9	93.9
0° - 40°	921	98.1	98.1
0° - 60°	936	99.7	99.7
0° - 90°	939	100.0	100.0
90° - 180°	0	0.0	0.0
0° - 180°	939	100.0	100.0

CONE OF LIGHT - Beam : 25.8°			LUMINANCE (cd/sq.m)	
Distance to Illuminated Plane (ft)	Footcandles Beam Center	Beam Diameter	Degrees	Average Luminance
4	243.0	1.8	45	24398
6	108.0	2.7	55	10504
8	60.8	3.7	65	7452
10	38.9	4.6	75	2645
12	27.0	5.5	85	0

AX2 D G2 15LM 30K 80CRI 35D FPC 120 2DPIN BD WET, 3000K LEDs, input watts: 17.3, delivered lumens: 864, LM/W = 50, test no. PT07172622, tested in accordance to IESNA LM-79

CP Summary

0°	0°
0°	2220
5°	2098
15°	1312
25°	468
35°	103
45°	21
55°	6
65°	2
75°	1
85°	0
90°	0

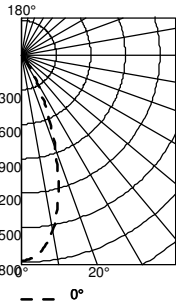
Coefficients of Utilization

pf	pc	80%			70%			50%		
		70%	50%	30%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111	111
1	114	112	110	110	108	106	106	104	103	
2	110	106	102	104	101	98	101	98	96	
3	106	100	96	99	95	92	96	93	91	
4	102	95	91	94	90	87	92	89	86	
5	98	91	86	90	85	82	88	84	81	
6	94	87	82	86	81	78	85	81	78	
7	91	83	78	82	78	74	81	77	74	
8	87	80	75	79	74	71	78	74	71	
9	84	76	72	76	71	68	75	71	68	
10	81	74	69	73	69	66	72	68	65	

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	765	88.8	88.8
0° - 40°	835	97.0	97.0
0° - 60°	858	99.7	99.7
0° - 90°	861	100.0	100.0
90° - 180°	0	0.0	0.0
0° - 180°	861	100.0	100.0

CONE OF LIGHT - Beam : 34.2°			LUMINANCE (cd/sq.m)	
Distance to Illuminated Plane (ft)	Footcandles Beam Center	Beam Diameter	Degrees	Average Luminance
4	138.7	2.5	45	39889
6	61.7	3.7	55	13368
8	34.7	4.9	65	7776
10	22.2	6.2	75	2645
12	15.4	7.4	85	0

AX2 D G2 15LM 30K 80CRI 45D FPC 120 2DPIN BD WET, 3000K LEDs, input watts: 17.3, delivered lumens: 838, LM/W = 48, test no. PT07172630, tested in accordance to IESNA LM-79

CP Summary

0°	0°
0°	1782
5°	1728
15°	1235
25°	505
35°	118
45°	22
55°	6
65°	2
75°	1
85°	0
90°	0

Coefficients of Utilization

pf	pc	80%			70%			50%		
		70%	50%	30%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111	111
1	114	112	110	110	108	106	106	104	103	
2	110	105	102	104	101	98	101	98	96	
3	105	100	95	98	94	91	96	92	90	
4	101	94	90	93	89	86	91	88	85	
5	97	90	85	89	84	81	87	83	80	
6	93	85	80	85	80	77	83	79	76	
7	89	82	76	81	76	73	80	75	72	
8	86	78	73	77	73	69	76	72	69	
9	83	75	70	74	69	66	73	69	66	
10	80	72	67	71	67	63	70	66	63	

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Fixture
0° - 30°	728	87.1	87.1
0° - 40°	808	96.7	96.7
0° - 60°	833	99.7	99.7
0° - 90°	836	100.0	100.0
90° - 180°	0	0.0	0.0
0° - 180°	836	100.0	100.0

CONE OF LIGHT - Beam : 38.9°			LUMINANCE (cd/sq.m)	
Distance to Illuminated Plane (ft)	Footcandles Beam Center	Beam Diameter	Degrees	Average Luminance
4	111.4	2.8	45	43181
6	49.5	4.2	55	13368
8	27.9	5.7	65	7452
10	17.8	7.1	75	2645
12	12.4	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