

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 reflector in clear diffuse, black diffuse, wheat diffuse, or white finish provides 50° cut-off • Black shield prevents visibility into housing.

Trims Style Self Flanged and Flangeless styles are available • Flange is same finish as trim unless optional painted white flange is specified • 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 [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 • 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 and +/- 45° aperture rotation 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.

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



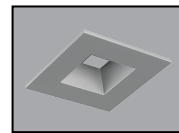
2" LED RECESSED DOWNLIGHT

800/1200/1500 LUMEN

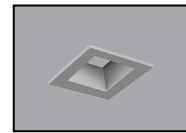
SQUARE DOWNLIGHT REFLECTOR

NEW CONSTRUCTION

AX2SQ D/AX2SQ A with 2SQD Trim



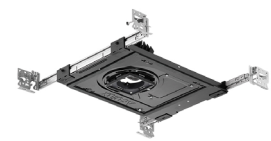
Self-Flanged



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 2SQD W SF

HOUSING OPTIONS

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 MVOLT (120-277)	CP ICAT IC, Air-Tight, Chicago Plenum
	12LM 1200 Lumens	30K 3000K	90CRI ¹	24D 24° beam	ZT 0-10V Dimming, 1% dim		
AX2SQ A G2 New Construction Universal ADJ/DL/WW	15LM 1500 Lumens	35K 3500K		35D 35° beam			NLIGHT ³ nLight dimming pack controls (Must mount remotely)
		40K 4000K		45D 45° beam			

TRIM OPTIONS

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
2SQD Downlight Reflector	CD Clear Diffuse	SF Flange is same finish as reflector		Ceiling ≤ .75"
	W White Paint	WHSF White painted flange		CTA2SQ/120 Ceiling 0.75" - 1.20"
	WTD Wheat Diffuse	FLANGELESS ⁴		CTA2SQ/150 Ceiling 1.20" - 1.5"
		FM Flangeless		FLANGELESS, GYPSUM
				FMA2SQ/075 Ceiling ≤ .75"
				FMA2SQ/120 Ceiling 0.75" - 1.20"
				FMA2SQ/150 Ceiling 1.20" - 1.50"

NOTES

Ordering Notes
¹ 90CRI available on 27K and 30K only.
² MVOLT standard on ZT. 120 standard on FPC.
³ NLIGHT compatible with ZT only.
⁴ Flangeless trims in drywall ceilings must specify ceiling installation (FMA2SQ).

2" LED RECESSED DOWNLIGHT

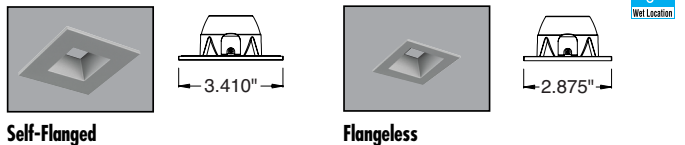
800/1200/1500 LUMEN

SQUARE DOWNLIGHT REFLECTOR NEW CONSTRUCTION

AX2SQ D/AX2SQ A with 2SQD Trim

TRIM SELECTION

2SQD Square Downlight Reflector

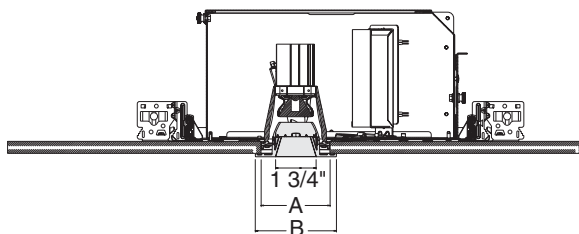
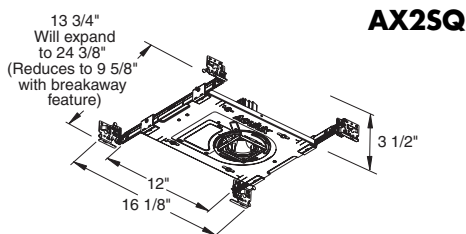
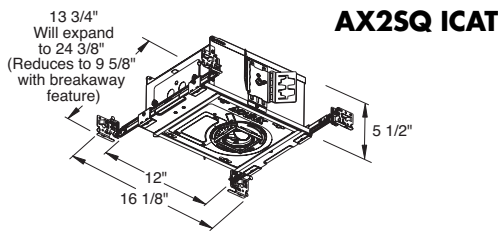


	CCT/CRI:	80CRI 27K, 30K, 35K, 40K
	Optic:	15D, 24D, 35D, 45D
	Trim Finish:	CD, WTD, BD, W

* With WET option

DIMENSIONS

NEW CONSTRUCTION



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	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

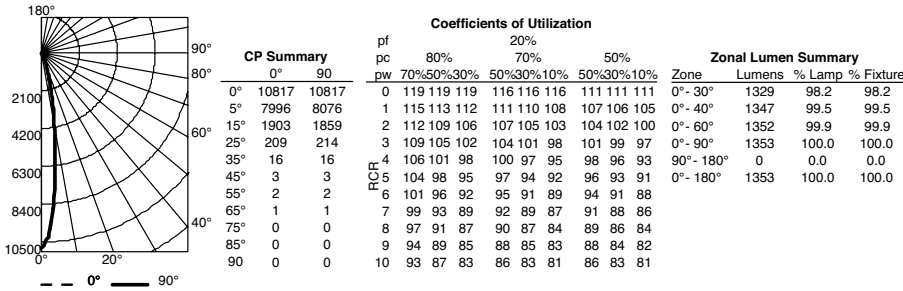
800/1200/1500 LUMEN

SQUARE DOWNLIGHT REFLECTOR NEW CONSTRUCTION

AX2SQ D/AX2SQ A with 2SQD Trim

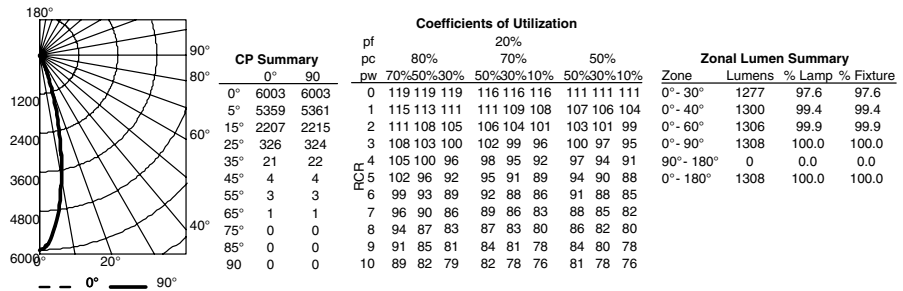
PHOTOMETRICS

AX2SQ D G2 15LM 30K 80CRI 15D FPC 120 2SQD CD, 3000K LEDs, input watts: 17.3, delivered lumens: 1369, LM/W = 79, test no. PT07172801R, tested in accordance to IESNA LM-79



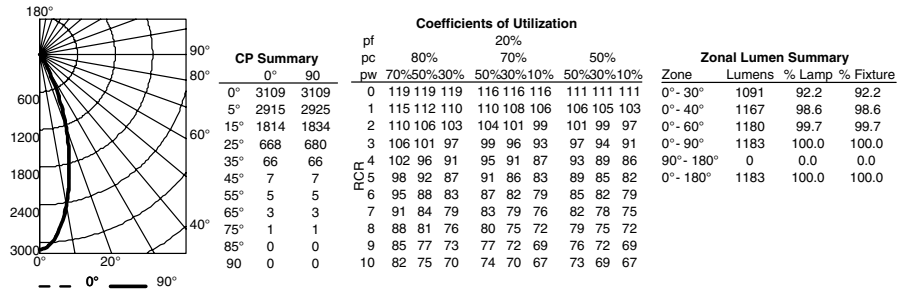
CONE OF LIGHT - Beam: 16.3°			LUMINANCE (cd/sq.m)	
Distance to Illuminated Plane (ft)	Footcandles Beam Center	Beam Diameter	Degrees	Average Luminance
4	676.0	1.1	45	4867
6	300.5	1.7	55	4125
8	169.0	2.3	65	2545
10	108.2	2.9	75	1246
12	75.1	3.4	85	1234

AX2SQ D G2 15LM 30K 80CRI 24D FPC 120 2SQD CD, 3000K LEDs, input watts: 17.3, delivered lumens: 1316, LM/W = 76, test no. PT07172808R, tested in accordance to IESNA LM-79



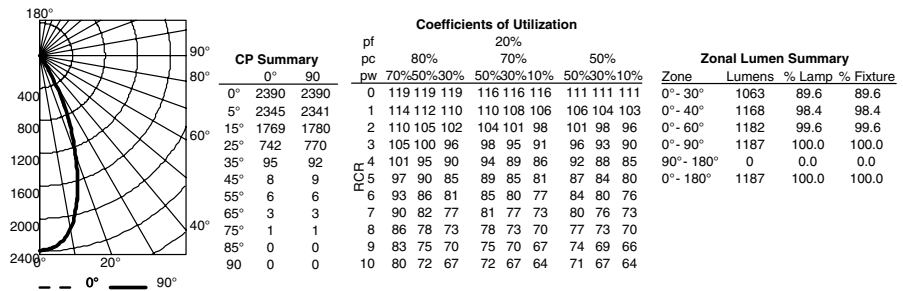
CONE OF LIGHT - Beam: 25.1°			LUMINANCE (cd/sq.m)	
Distance to Illuminated Plane (ft)	Footcandles Beam Center	Beam Diameter	Degrees	Average Luminance
4	375.2	1.8	45	5627
6	166.7	2.7	55	4687
8	93.8	3.6	65	3308
10	60.0	4.5	75	1662
12	41.7	5.3	85	2468

AX2SQ D G2 15LM 30K 80CRI 35D FPC 120 2SQD CD, 3000K LEDs, input watts: 17.3, delivered lumens: 1188, LM/W = 69, test no. PT07172815R, tested in accordance to IESNA LM-79



CONE OF LIGHT - Beam: 34.6°			LUMINANCE (cd/sq.m)	
Distance to Illuminated Plane (ft)	Footcandles Beam Center	Beam Diameter	Degrees	Average Luminance
4	194.3	2.5	45	10950
6	86.3	3.7	55	8999
8	48.6	5.0	65	6616
10	31.1	6.2	75	4155
12	21.6	7.5	85	2468

AX2SQ D G2 15LM 30K 80CRI 45D FPC 120 2SQD CD, 3000K LEDs, input watts: 17.3, delivered lumens: 1190, LM/W = 69, test no. PT07172822R, tested in accordance to IESNA LM-79



CONE OF LIGHT - Beam: 41.7°			LUMINANCE (cd/sq.m)	
Distance to Illuminated Plane (ft)	Footcandles Beam Center	Beam Diameter	Degrees	Average Luminance
4	149.4	3.0	45	12775
6	66.4	4.6	55	10687
8	37.3	6.1	65	8143
10	23.9	7.6	75	4986
12	16.6	9.1	85	2468

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

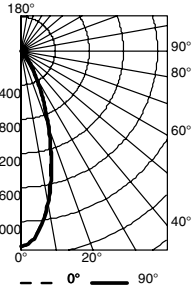
800/1200/1500 LUMEN

SQUARE DOWNLIGHT REFLECTOR NEW CONSTRUCTION

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

PHOTOMETRICS

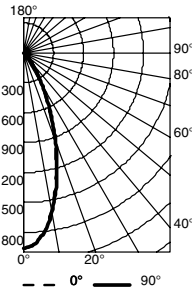
AX2SQ D G2 15LM 30K 80CRI 15D FPC 120 2SQD CD WET, 3000K LEDs, input watts: 17.3, delivered lumens: 1052, LM/W = 61, test no. PT07172806R, tested in accordance to IESNA LM-79



CP Summary		Coefficients of Utilization						Zonal Lumen Summary				
0°	90°	pf	80%		70%		50%		Zone	Lumens	% Lamp	% Fixture
0°	90°	pc	70%	50%	30%	50%	30%	10%	50%	30%	10%	
0°	2289	2289	0	119	119	119	116	116	116	111	111	111
5°	2150	2163	1	114	111	109	109	107	105	105	104	102
15°	1339	1379	2	109	105	101	103	99	97	100	97	95
25°	567	602	3	104	98	94	97	93	90	94	91	88
35°	181	197	4	100	93	88	92	87	84	90	86	83
45°	48	51	5	95	88	83	87	82	78	85	81	78
55°	13	13	6	91	83	78	83	78	74	81	77	73
65°	5	5	7	88	79	74	79	74	70	77	73	70
75°	2	2	8	84	76	70	75	70	66	74	69	66
85°	0	0	9	81	72	67	72	67	63	71	66	63
90°	0	0	10	78	69	64	69	64	60	68	63	60

CONE OF LIGHT - Beam: 35.3°			LUMINANCE (cd/sq.m)	
Distance to Illuminated Plane (ft)	Footcandles Beam Center	Beam Diameter	Degrees	Average Luminance
4	143.1	2.5	45	72999
6	63.6	3.8	55	24186
8	35.8	5.1	65	13232
10	22.9	6.4	75	7894
12	15.9	7.6	85	4935

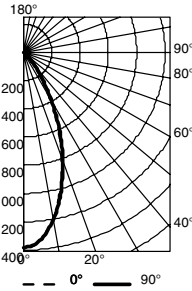
AX2SQ D G2 15LM 30K 80CRI 24D FPC 120 2SQD CD WET, 3000K LEDs, input watts: 17.3, delivered lumens: 1016, LM/W = 59, test no. PT07172813R, tested in accordance to IESNA LM-79



CP Summary		Coefficients of Utilization						Zonal Lumen Summary				
0°	90°	pf	80%		70%		50%		Zone	Lumens	% Lamp	% Fixture
0°	90°	pc	70%	50%	30%	50%	30%	10%	50%	30%	10%	
0°	1956	1956	0	119	119	119	116	116	116	111	111	111
5°	1861	1868	1	114	111	109	109	107	105	105	103	102
15°	1253	1281	2	109	104	100	102	99	96	99	96	94
25°	583	613	3	104	98	93	96	92	89	94	90	87
35°	191	205	4	99	92	87	91	86	83	89	85	82
45°	51	55	5	95	87	82	86	81	77	84	80	77
55°	13	14	6	91	82	77	82	76	73	80	76	72
65°	6	6	7	87	78	73	78	72	69	76	72	68
75°	2	2	8	83	74	69	74	69	65	73	68	65
85°	0	0	9	80	71	65	70	65	62	69	65	62
90°	0	0	10	77	68	62	67	62	59	66	62	59

CONE OF LIGHT - Beam: 38.5°			LUMINANCE (cd/sq.m)	
Distance to Illuminated Plane (ft)	Footcandles Beam Center	Beam Diameter	Degrees	Average Luminance
4	122.3	2.8	45	77258
6	54.3	4.2	55	24561
8	30.6	5.6	65	14250
10	19.6	7.0	75	8310
12	13.6	8.4	85	4935

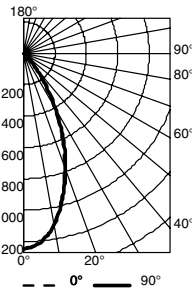
AX2SQ D G2 15LM 30K 80CRI 35D FPC 120 2SQD CD WET, 3000K LEDs, input watts: 17.3, delivered lumens: 911, LM/W = 53, test no. PT07172820R, tested in accordance to IESNA LM-79



CP Summary		Coefficients of Utilization						Zonal Lumen Summary				
0°	90°	pf	80%		70%		50%		Zone	Lumens	% Lamp	% Fixture
0°	90°	pc	70%	50%	30%	50%	30%	10%	50%	30%	10%	
0°	1382	1382	0	119	119	119	116	116	116	111	111	111
5°	1334	1337	1	114	111	108	109	107	105	105	103	101
15°	1003	1019	2	108	103	99	102	98	95	98	95	93
25°	572	594	3	103	97	92	95	91	87	93	89	86
35°	215	228	4	98	90	85	89	84	81	87	83	80
45°	52	55	5	93	85	79	84	79	75	82	78	74
55°	14	14	6	89	80	74	79	74	70	78	73	69
65°	7	7	7	85	76	70	75	69	66	74	69	65
75°	2	3	8	81	72	66	71	65	62	70	65	61
85°	1	1	9	77	68	62	67	62	58	66	61	58
90°	0	0	10	74	64	59	64	59	55	63	58	55

CONE OF LIGHT - Beam: 45.4°			LUMINANCE (cd/sq.m)	
Distance to Illuminated Plane (ft)	Footcandles Beam Center	Beam Diameter	Degrees	Average Luminance
4	86.3	3.3	45	78779
6	38.4	5.0	55	26061
8	21.6	6.7	65	16794
10	13.8	8.4	75	9556
12	9.6	10.0	85	6169

AX2SQ D G2 15LM 30K 80CRI 45D FPC 120 2SQD CD WET, 3000K LEDs, input watts: 17.3, delivered lumens: 894, LM/W = 52, test no. PT07172827R, tested in accordance to IESNA LM-79



CP Summary		Coefficients of Utilization						Zonal Lumen Summary				
0°	90°	pf	80%		70%		50%		Zone	Lumens	% Lamp	% Fixture
0°	90°	pc	70%	50%	30%	50%	30%	10%	50%	30%	10%	
0°	1245	1245	0	119	119	119	116	116	116	111	111	111
5°	1209	1210	1	114	111	108	109	106	104	105	103	101
15°	945	958	2	108	103	99	101	98	95	98	95	93
25°	572	591	3	103	96	91	95	90	87	92	88	85
35°	227	242	4	97	90	84	89	84	80	87	82	79
45°	49	51	5	93	84	79	83	78	74	82	77	73
55°	15	15	6	88	79	73	79	73	69	77	72	68
65°	7	7	7	84	75	69	74	69	65	73	68	64
75°	3	3	8	80	71	65	70	64	61	69	64	60
85°	1	1	9	76	67	61	66	61	57	65	60	57
90°	0	0	10	73	63	58	63	58	54	62	57	54

CONE OF LIGHT - Beam: 48.4°			LUMINANCE (cd/sq.m)	
Distance to Illuminated Plane (ft)	Footcandles Beam Center	Beam Diameter	Degrees	Average Luminance
4	77.8	3.6	45	74216
6	34.6	5.4	55	27186
8	19.4	7.2	65	18066
10	12.4	9.0	75	10803
12	8.6	10.8	85	6169

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