

FEATURES & SPECIFICATIONS

INTENDED USE — Typical applications include corridors, lobbies, conference rooms and private offices.

CONSTRUCTION — Retrofit, remodel, and new construction mounting types. See table for compatible ceiling openings and thickness range.

1/2"-1-1/2" ceiling thickness

25° ambient temperature

New construction frame accessories approved for 8 (4 in/4 out) No. 12 AWG conductors rated for 90°C through wiring.

OPTICS — LEDs are binned to a 3-step Mac Adam Ellipse. 55° cutoff

80CRI standard (90CRI optional)

UGR — UGR is zero for fixtures aimed at nadir with a cut-off equal to or less than 60deg, per CIE 117-1996 Discomfort Glare in Interior Lighting. [UGR FAQ](#)

ELECTRICAL — Adjustable lumen output with four module options. Fixed lumen options also available. MVOLT 120/277V 50/60Hz driver (0-10V & 120V Phase Dimming to 10% or 1% min dimming level) FCC CFR Title 47 Part 15 Class A for 277V. FCC CFR Title 47 Part 15 Class B for 120V.

LUMEN MAINTENANCE — L80 at 60,000 hours

LISTINGS — Certified to US and Canadian safety standards. Damp location standard (Wet Location (WL) optional, requires covered ceiling). Some configurations are ENERGY STAR® certified, please visit www.energystar.gov for specific products. TAA compliant. IP55 rated (WL and AT options only). Drivers are ROHS compliant

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.

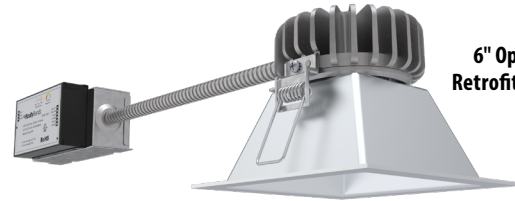
Specifications subject to change without notice.

Catalog
Number

Notes

Type

LBR6 Square



6" Open and Wallwash LED
Retrofit/Remodel Downlight

Retrofit | Remodel



Open Trim



Wallwash Trim

Performance Data

LBR6SQ AR LSS MWD		80CRI							
Lumen Output	Wattage	30K/80CRI		35K/80CRI		40K/80CRI		50K/80CRI	
		Delivered Lumens	LPW	Delivered Lumens	LPW	Delivered Lumens	LPW	Delivered Lumens	LPW
AL01 (500LM)	6	502	87	513	88	525	90	542	92
AL01 (750LM)	9	794	89	812	91	832	92	857	95
AL01 (1000LM)	13	1115	86	1141	88	1168	89	1204	92
AL02 (1000LM)	13	1182	95	1209	97	1238	99	1276	101
AL02 (1500LM)	19	1725	92	1765	94	1807	95	1863	97
AL02 (2000LM)	25	2173	87	2223	89	2276	90	2347	93
AL03 (2000LM)	25	2235	90	2287	92	2342	94	2414	96
AL03 (2500LM)	32	2699	86	2761	87	2827	89	2915	91
AL03 (3000LM)	38	3065	82	3136	83	3210	85	3310	87
AL04 (4000LM)	39	3530	91	3602	93	3674	95	3710	96
AL04 (4500LM)	44	3896	89	3976	91	4055	92	4095	93
AL04 (5000LM)	49	4237	86	4323	88	4410	89	4453	90

LBR6SQ AR LSS WD		80CRI							
Lumen Output	Wattage	30K/80CRI		35K/80CRI		40K/80CRI		50K/80CRI	
		Delivered Lumens	LPW	Delivered Lumens	LPW	Delivered Lumens	LPW	Delivered Lumens	LPW
AL01 (500LM)	6	458	79	467	81	476	82	481	83
AL01 (750LM)	9	688	77	702	78	716	80	723	81
AL01 (1000LM)	13	960	74	979	75	999	77	1009	78
AL02 (1000LM)	13	1029	82	1050	84	1071	86	1082	87
AL02 (1500LM)	19	1516	80	1547	82	1578	84	1594	84
AL02 (2000LM)	25	1927	77	1966	79	2006	80	2025	81
AL03 (2000LM)	25	2009	81	2050	82	2091	84	2111	85
AL03 (2500LM)	32	2432	77	2482	78	2532	80	2556	81
AL03 (3000LM)	38	2777	74	2834	75	2890	77	2919	77
AL04 (4000LM)	39	3219	83	3285	85	3351	87	3384	87
AL04 (4500LM)	44	3553	81	3626	83	3698	84	3734	85
AL04 (5000LM)	49	3864	78	3943	80	4022	82	4061	82

- Tested in accordance with IESNA LM-79-08. u8226
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- CRI: 80 typical



LBR6SQ

Module ordering

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: LBR6SQ AL02 SWW1 AR LSS MWD MVOLT UGZ 90CRI

Series	Lumens ‡	Color temperature ‡	Reflector Color	Reflector Flange ‡	Reflector Finish
LBR6SQ 6" Square Retrofit LBR6SQWW ‡ 6" Square Retrofit Wallwash	Adjustable Lumen Output AL01 500/750/1000lm AL02 1000/1500/2000lm AL03 2000/2500/3000lm AL04 4000/4500/5000lm Fixed Lumen Output 05LM 500lm 07LM 750lm 10LM 1000lm 15LM 1500lm 20LM 2000lm 25LM 2500lm 30LM 3000lm 40LM 4000lm 45LM 4500lm 50LM 5000lm	Switchable CCT SWW1 3000K-3500K-4000K-5000K Fixed CCT 27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K	AR Clear BR ‡ Black painted WR ‡ White painted TCPC ‡ Custom painted trim TRALTBD ‡ RAL painted trim	(blank) Self-flanged TRW White painted flange TRBL Black painted flange FCPC Custom painted flange only FRALTBD RAL painted flange only	LSS Semi-specular

Distribution	Voltage	Driver	Emergency ‡	Control Input ‡	Options
MWD Medium wide (1.0 s/mh) WD Wide (1.2s/mh) WW ‡ Wallwash	MVOLT 120 277 347	UGZ Universal dimming to 10% 0-10V; line voltage dimming (120V) UGZ1 Universal dimming to 1% 0-10V; line voltage dimming (120V) DALI ‡ DALI dimming to 1% Minimum dimming 1% driver for use with SSAIR	(blank) No Emergency Needed ELR Battery pack (10W constant power) Non-T20 Compliant remote test switch ETS Iota Emergency Transfer System E10WCP Battery pack (10W constant power) T20 Compliant integral test switch E10WCPR Battery pack (10W constant power) T20 Compliant remote test switch E10WRSTAR Emergency battery pack, 10W with remote test switch and Iota STAR technology	(blank) No Control Input Needed SSAIR Wireless standalone embedded control by SensorSwitch NLIGHT Embedded wired controls from nLight NLIGHTER Embedded wired controls from nLight with UL924 listed emergency operation NLTAIR2 nLight® Air enabled NLTAIREM2 nLight® AIR Dimming Pack Wireless Controls. UL924 Emergency Operation, via power interrupt detection.	90CRI High CRI (90+) AT ‡ Airtight EC1 ‡ Extended Conduit (18") EC6 ‡ Extended Conduit (6ft) WL ‡ Wet Location (IP55) QDS ‡ Quick disconnect plugs

NOTE: ‡ indicates option value has ordering restrictions. Please reference the Option Value Ordering Restrictions chart on the next page.

‡ Option Value Ordering Restrictions

Options	Restriction
Adjustable Lumens/CCT	Adjustable Lumen Output and Switchable CCT must be specified together (for example: AL01 SWW1)
Fixed Lumens/CCT	Fixed Lumen Output and Fixed CCT must be specified together (for example: 10LM 30K)
WW	Not available with WL, EL, E10WCP.
MS, WR, BR	Not available with LSS reflector finish
WR	Not available with TRW
BR	Not available with TRBL
TRALTBD, FRALTBD	RALTBD for pricing only. Replace with applicable RAL number and finish when ready to order. See the RAL BROCHURE for available color options. Not available with TCPC or FCPC.
TCPC, FCPC	CPC options for pricing only. Custom color chip needs to be sent in to your Customer Resolution specialist before order can be processed. Click HERE for more details. Not available with TRAL or FRAL.
TRW, TRBL	Available with MS and AR reflectors only.
LSS	Not available with BR or WR or MS
347V	Not available with CP, QDS, ELR, E10WCP, E10WCPR, NLIGHT, NLIGHTER, NLTAIR2, or NLTAIREM2
DALI	Not available with fixed lumens or CCT. Max 4500 lumens.
E10WCPR	Not available EC1, EC6, QDS, CP, 347V, NPS80EZ ER, NLTAIRER2, NLTAIREM2, AL03 & AL04 w/DALI, OR 2000-4500 lumens w/SSAIR.
E10WCP	Not available with WW, EC1, EC6, AT, QDS, CP, 347V, NLIGHTER, NLTAIREM2, WL, AL03 & AL04 w/DALI, OR 2000-4500 lumens w/SSAIR.
E10WSTAR	Not available with wet location, EC1, EC6, QDS, CP, 347V, NLIGHTER, NLTAIREM2, AL03 & AL04 w/DALI, OR 2000-4500 lumens w/SSAIR. Top access installation or 17.5" plenum clearance required for roomside installation. Not available with integral test switch
ELR	Not available EC1, EC6, QDS, CP, 347V, NLIGHTER, NLTAIREM2, AL03 & AL04 w/DALI, OR 2000-4500 lumens w/SSAIR.
ETS	Not available with, QDS, ELR, E10WCP, E10WCPR, 347V, SSAIR, NLIGHT, NLIGHTER, NLTAIR2, NLTAIREM2, DALI, or D1 driver
SSAIR	Only available with D1 driver. Not available with CP, NLIGHT, NLIGHTER, NLTAIR2, NLTAIREM2, UGZ, or DALI drivers. Max 4500 lumens. Fixed lumens and CCT only. Not available with 2000-4500lm in conjunction with emergency batterypacks.
NLIGHT	Must specify UGZ1. Not available with CP, QDS, SSAIR, ETS, UGZ, DALI, or D1 drivers. Not available with 347V.
NLIGHTER	Must specify UGZ1. Not available with CP, QDS, ELR, E10WCP, E10WCPR, DALI, or D1 drivers. Not available with 347V.
NLTAIR2	Must specify UGZ1. Not available with CP, QDS, SSAIR, ETS, UGZ, DALI, or D1 drivers. See UL 924 Sequence of Operation table. Non-emergency luminaires with this option can be used as a normal power sensing device for nLight AIR devices and luminaires with EM emergency options.
NLTAIREM2	Must specify UGZ1. Not available with CP, QDS, SSAIR, ETS, ELR, E10WCP, E10WCPR, DALI, D1 drivers. See UL 924 Sequence of Operation table.
WL	Not available with WW, All CP is wet location, except WW (Damp). IP55 rated. Not available with E10WCP
QDS	Must be specified for use with LBR_PFWQDS. Not Available with CP, emergency options, or 347V.
EC1, EC6	Not Available with CP,QDS, ELR, E10WCP, or E10WCPR.
AT	Standard for CP and IP55, not available with WW. Not available with E10WCP

Accessories: Order as separate catalog number. Shipped separately.	
LBR5QGR68 WR U	6" to 8" Square white goof ring unit pack
LBR06SQ AR LSS TRIM	6" square clear, semi-specular reflector
LBR06SQ ** TRIM	6" square reflector (** specify BR, WR)
LBRW6SQ AR LSS TRIM	6" square wall wash clear, semi-specular reflector
LBRW6SQ ** TRIM	6" square wall wash reflector (** specify BR, WR)
LBR46 SQFPAN U	Mounting plate 4"-8" unit pack
LBR46 SQFPAN J10	Mounting plate 4"-8" 10-pack
LBR SDT 347V 75W ASM	Field installed 347V Step-down transformer

Fixture	Plaster Frame Accessory	Compatible Mounting Option
LBR6SQ, LBR6SQWW	LBR6SQPF	QDS, EC1, ELR, E10WCPR
	LBR6SQPFW	Base fixture only
	LBR6SQPFWQDS	QDS fixture only

Emergency Battery Pack Options - Field Installable

Battery Model Number	Wattage	Runtime (Minutes)	Lumen Output* @ 120 Lumens/Watt	Other
ILB CP07 2H A	7W	120	840	Storm Shelter / 2 Hour Runtime
ILB CP10 A	10W	90	1200	
ILBLP CP10 HE SD A+	10W	90	1200	Title 20, Self Diagnostic
ILBLP CP15 HE SD A+	15W	90	1800	Title 20, Self Diagnostic
ILB CP20 HE A	20W	90	2400	Title 20
ILB CP20 HE SD A	20W	90	2400	Title 20, Self Diagnostic
ILBHI CP10 HE SD A+	10W	90	1200	347-480V AC Input, Title 20, Self Diagnostic
ILBHI CP15 HE SD A+	15W	90	1800	347-480V AC Input, Title 20, Self Diagnostic

All the above are UL Listed products that are certified for field install external/remote to the fixture.
*Minimum delivered lumen output to assist in product selection for increased fixture mounting height.
The CP10 delivered emergency illumination outperforms legacy 1400 lumen fluorescent emergency ballast.
Please contact us at techsupport@iotaengineering.com for any Emergency Battery related questions.

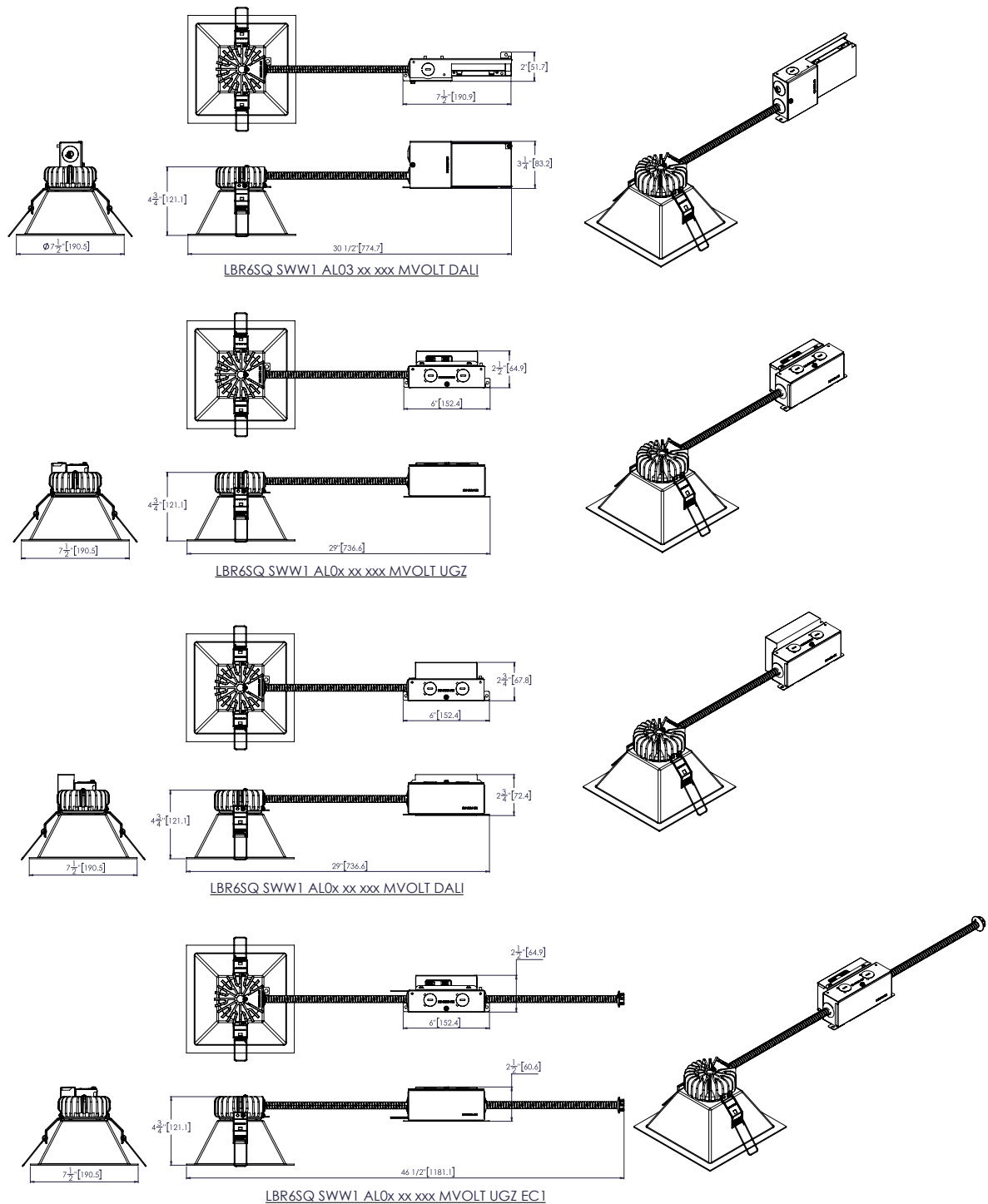
LBR6SQ

PLENUM DEPTH TABLE				
Aperture Size/Output	Plenum Depth*	IC	Non-IC	Non-IC Marked Spacing
LBR6SQ 500-1000 Lumen	3.69	X		
LBR6SQ 1000-2000 Lumen	3.69		X	18x18x6
LBR6SQ 2000-3000 Lumen	-			24x24x9
LBR6SQ 4000-5000 Lumen	-			24x24x9

*Above unfinished 1/2" ceiling plane

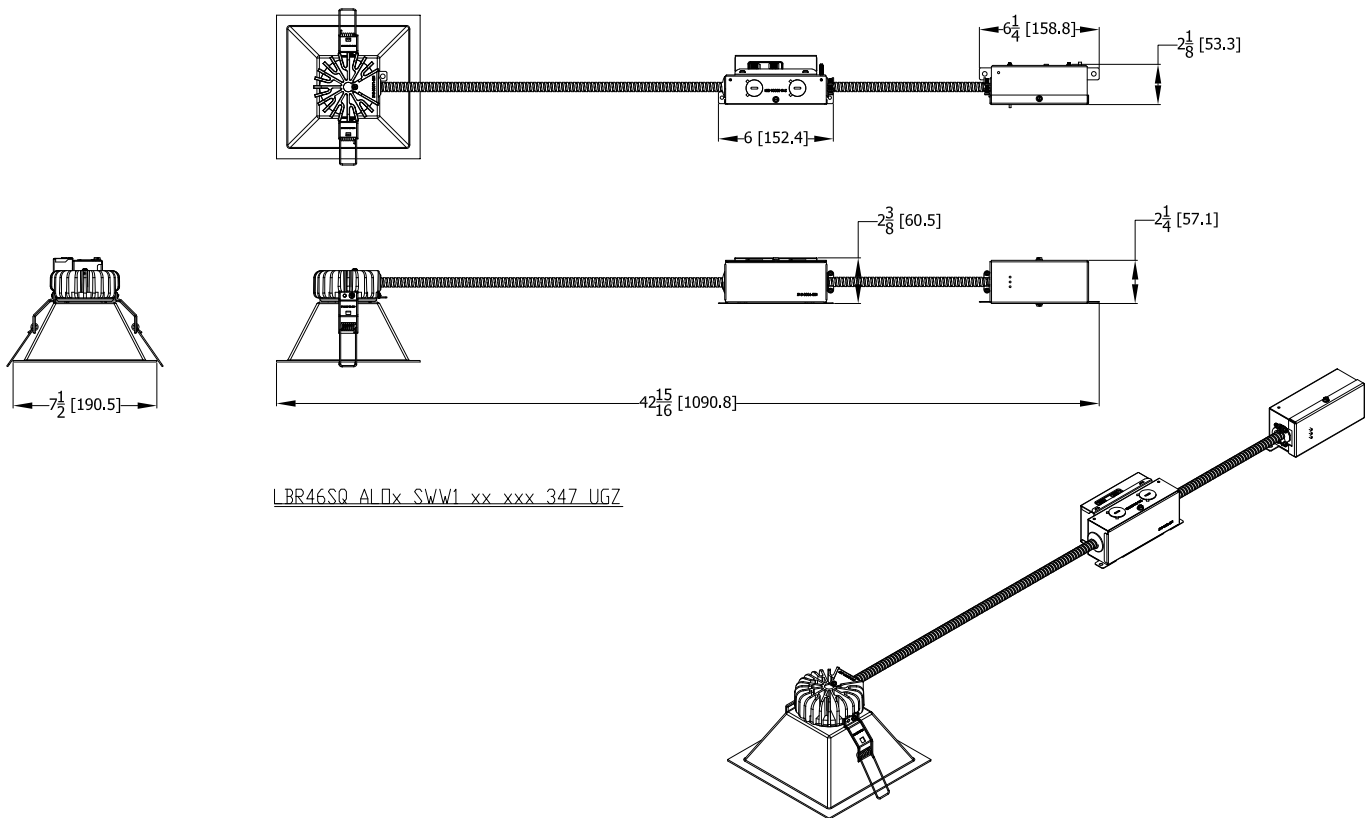
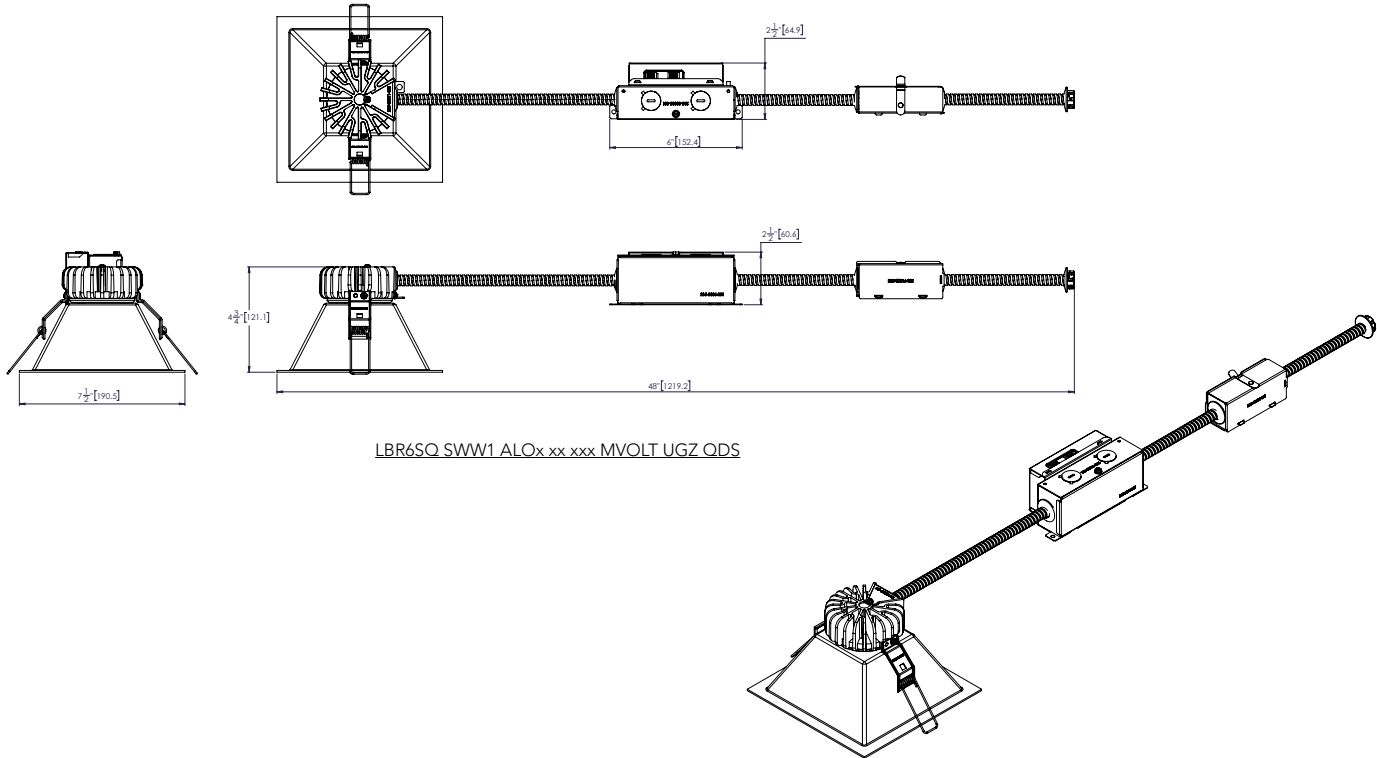
* All dimensions are inches (millimeters) unless otherwise noted.

CEILING COVERAGE TABLE						
Series		Aperture	Trim Flange OD	Min ceiling opening	Ceiling Thickness	Max ceiling opening
LBR6	SQUARE	6-1/4"	7-1/2"	6-1/2"	1/2"-1-1/2"	7-1/4"



LBR6SQ

* All dimensions are inches (millimeters) unless otherwise noted.



PHOTOMETRY

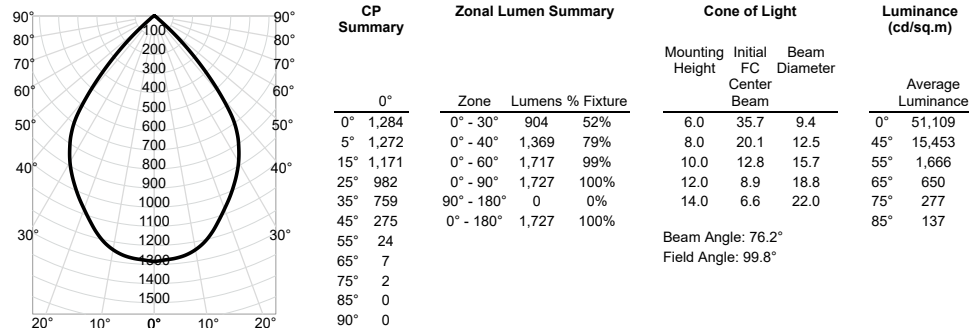
Distribution Curve

Distribution Data

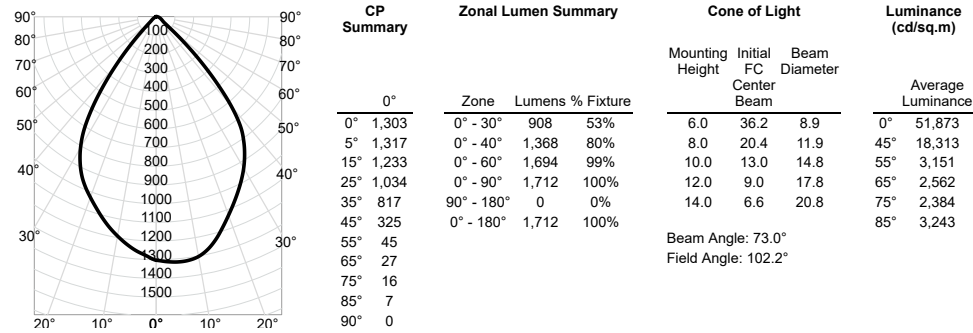
Output Data

Illuminance Data at 30" Above Floor for
a Single Luminaire

LBR6SQ SWW1 AL02 AR LSS MWD 1500L 35K, Input Watts: 18.6, Delivered Lumens: 1727, LPW: 92.8, S/MH: 1.05, Test No: 20-667-2



LBR6SQ SWW1 AL02 AR LSS WW 1500L 35K, Input Watts: 18.6, Delivered Lumens: 1712, LPW: 92.0, S/MH: 1.09, Test No: 20-667-3



LUMEN OUTPUT MULTIPLIERS - CCT

3000K	3500K	4000K	5000K
0.98	1.0	1.01	1.03

LUMEN OUTPUT MULTIPLIERS - FINISH

Clear Semi-spec (AR LSS)	1.0
Metallic Silver (MS)	0.84
White Painted (WR)	1.03
Black Painted (BR)	0.60

LUMEN OUTPUT MULTIPLIERS - CRI

80	1.0
90	0.874

HOW TO ESTIMATE DELIVERED LUMENS IN EMERGENCY MODE

Use the formula below to estimate the delivered lumens in emergency mode

$$\text{Delivered Lumens} = 1.25 \times P \times \text{LPW}$$

P = Output power of emergency driver. P = 10W

LPW = Lumen per watt rating of the luminaire. This information is available on the ABL luminaire spec sheet.

The LPW rating is also available at [Designlight Consortium](https://www.designlightconsortium.com/).

DIMMER COMPATIBILITY

Not compatible with DALI or DMX dimmers. For specific compatible dimmers see below.

LINE VOLTAGE DIMMING:						
Type	Forward Phase	ALO1 (500-1000lm)	ALO2 (1000-2000lm)	ALO3 (2000-3000lm)	ALO4 (3000-5000lm)	Comment
MLV	Sensorswitch WPD	YES	YES	YES	YES	
MLV	Sensorswitch CMR PDT10 ADC VLP	YES	YES	YES	YES	
MLV	Synergy ISD 600LV	YES, 2x *	YES	YES	YES	* min 2 fixtures
INC	Synergy ISD 600 I	YES, 2x *	YES	YES	YES	* min 2 fixtures
MLV	Lutron Glyder GLV-600	YES	YES	YES	YES	
INC	Leviton SureSlide 6633	YES	YES	YES	YES	
MLV	Lutron Diva DVLV-600P	YES	YES	YES	YES	
MLV	Lutron Skylark SLV-600P	YES	YES	YES	YES	
INC	Lutron RadioRA 2 10ND	YES	YES	YES	YES	
MLV	Leviton SureSlide 6613-PLW	YES	YES	YES	YES	
INC	Lutron Diva DVCL-153P	YES	YES	YES	YES	
MLV	Leviton IPM06	YES, 2x *	YES	YES	YES	* min 2 fixtures
INC	Leviton IPI06	YES, 2x *	YES	YES	YES	* min 2 fixtures
INC	Control4 C4-FPD 120	YES	YES	YES	YES	
Type	Reverse Phase Dimmer Bank	ALO1 (500-1000lm)	ALO2 (1000-2000lm)	ALO3 (2000-3000lm)	ALO4 (3000-5000lm)	
ELV	Lutron Nova T NTELV-600	YES	YES	YES	YES	
ELV	Lutron Diva DVELV 600P	YES	YES	YES	YES	
ELV	Lutron Maestro MAELV 600	YES	YES	YES	YES	
ELV	Leviton Vizia VPE06-1LX	YES	YES	YES	YES	
ELV	Leviton Illumatech IPE04	YES	YES	YES	YES	
ELV	Control4 C4-APD 120 REVERSE PHASE	YES	YES	YES	YES	
Type	Miscellaneous Dimmers	ALO1 (500-1000lm)	ALO2 (1000-2000lm)	ALO3 (2000-3000lm)	ALO4 (3000-5000lm)	
PHA	Lutron RadioRA2 RRD-6NA	YES	YES	YES	YES	
PHA	Lutron Maestro PRO LED+ RRD-PRO	YES	YES	YES	YES	
Type	Control Systems	ALO1 (500-1000lm)	ALO2 (1000-2000lm)	ALO3 (2000-3000lm)	ALO4 (3000-5000lm)	
MLV	Lutron LP-RPM-4U	YES	YES	YES	YES	
PHA	Lutron LP-RPM-4A	YES	YES	YES	YES	
MLV	Lutron GRAPHIC EYE QSGRJ-3P	YES	YES	YES	YES	
PHA	Lutron PA Power Module PHPM-PA-120	YES	YES	YES	YES	
ELV	Lutron nLight nSP5PCD ELV	YES	YES	YES	YES	

DIMMER COMPATIBILITY

Not compatible with DALI or DMX dimmers. For specific compatible dimmers see below.

0-10V DIMMING:							
Manufacturer	System Type	Description	P/N	ALO1 (500-1000lm)	ALO2 (1000-2000lm)	ALO3 (2000-3000lm)	ALO4 (3000-5000lm)
ACUITY	Wall Box	sensorswitch, dimming switch with multi-way option	SPODMRA	YES	YES	YES	YES
ACUITY	Wall Box	sensorswitch, wall switch sensor, occupancy controlled dimming	WSX D WH	YES	YES	YES	YES
ACUITY	Control System	nLight	nPP16D	YES	YES	YES	YES
ACUITY	Control System	nLight	nPS 80 EZ	YES	YES	YES	YES
ACUITY	Control System	nLight Air	rPP20 D	YES	YES	YES	YES
Lutron	Other	0-10V (sink or source) PowPak wireless dimming module	RMJ-5T-DV-B	YES	YES	YES	YES
Wattstopper	Control System	Digital single relay room controller (0-10V)	LMRC-211	YES	YES	YES	YES
Crestron	Control System	DIN Rail 0-10V fluorescent dimmer, 4 feeds, 4 channels (Green Light System)	DIN-4DIMFLV4	YES	YES	YES	YES
Lutron	Other	Grafik Eye 0-10V adapter	GRX-TVI	YES	YES	YES	YES
Leviton	Wall Box	Illumatech 0-10V	IP710-DLX	YES	YES	YES	YES
Lutron	Control System	Mounted in the Homeworks QS panel - 0-10V dimmer (sink or source)	GRX-TVM2	YES	YES	YES	YES
Lutron	Wall Box	Nova 0-10V wallbox dimmer (use with PP-120-H line voltage relay)	NTFTV	YES	YES	YES	YES
Lutron	Wall Box	Nova 0-10V wallbox dimmer (use with PP-120-H line voltage relay)	NTSTV-DV	YES	YES	YES	YES
Lutron	Wall Box	Nova T	NFTV	YES	YES	YES	YES
Leviton	Wall Box	Renior II 0-10V	AWSMG-7DW	YES	YES	YES	YES



Performance You Can Count On

SensorSwitch™ offers standalone wired and wireless lighting controls solutions designed for room-based applications. Our products offer reliable performance and ease of installation.

Sensorswitch.com

Wireless Embedded Controls



1. Install the luminaires with embedded controls
2. Insert the pairing tool into the pinhole on the wall switch; press and hold any button for 6 seconds.
3. Once paired, each fixture will individually dim down to 10% brightness. All products will be fully functional.



SensorSwitch
WSXA SSA

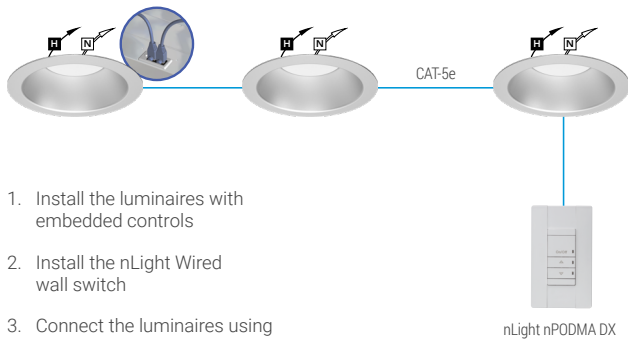


Single Lighting Controls Platform for Indoor & Outdoor Spaces

nLight® is your networked lighting controls platform, for indoor and outdoor applications, providing wired or wireless options. Scaling from room to campus-wide applications, it is the one platform that grows with your business today and tomorrow; to seamlessly address energy cost optimization, building code compliance, improved occupant comfort, and much more. nLight also interfaces with DALI®, BACnet®, DMX and additional third-party devices.

nLightcontrols.com

Wired Embedded Controls



1. Install the luminaires with embedded controls
2. Install the nLight Wired wall switch
3. Connect the luminaires using standard CAT-5e cables and the controls devices will automatically discover each other and work (plug and play)

Wireless Embedded Controls



1. Install the luminaires with embedded controls
2. Install the nLight AIR battery-powered wall switch
3. Use CLAIRITY+ mobile app to pair the fixtures with the wall switch and if desired, customize the sensor settings

UL924 Sequence of Operation

The below information applies to all nLight AIR devices with an EM option.

- EM devices will remain at their high-end trim and ignore wireless lighting control commands, unless a normal-power-sensed (NPS) broadcast is received at least every 8 seconds.
- Using the CLAIRITY+ mobile app, EM devices must be associated with a group that includes a normal power sensing device to receive NPS broadcasts.
- Only non-emergency rPP20, rLSXR, rSBOR, rSDGR, and nLight AIR luminaires with version 3.4 or later firmware can provide normal power sensing for EM devices. See specification sheets for control devices and luminaires for more information on options that support normal power sensing.