

FEATURES & SPECIFICATIONS

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

CONSTRUCTION — Retrofit and remodel installation. See table for compatible ceiling openings and thickness range.

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

25° ambient temperature

IC rated up to 1000lm

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

1.0 S/MH and 1.1S/MH options available.

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)

100LPW typical

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. Title 24 compliant (90CRI, up to 1000lm) Damp location standard (Wet location, covered ceiling optional). Some configurations are ENERGY STAR® certified, please visit www.energystar.gov for specific products. TAA compliant. UFC (3-530-01) specification compliant for power factor and THD. GSA P100 6.2.4 compliant for power quality at full output; compliant up to 2000lm at fully dimmed output. 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.

Performance Data

LUMEN OUTPUT	WATTAGE	DELIVERED LUMENS	LPW
LBR12 MWD			
AL01 (500LM)	6.1	629	103
AL01 (750LM)	9.0	946	105
AL01 (1000LM)	13.0	1320	101
AL02 (1000LM)	12.3	1399	114
AL02 (1500LM)	18.7	2085	112
AL02 (2000LM)	25.0	2650	106
AL03 (2000LM)	25.3	2726	108
AL03 (2500LM)	32.1	3345	104
AL03 (3000LM)	38.5	3818	99
AL04 (4000LM)	36.7	4304	117
AL04 (4500LM)	41.5	4720	114
AL04 (5000LM)	45.5	5136	113
LBR12 WD			
AL01 (500LM)	6.1	567	93
AL01 (750LM)	9.0	853	94
AL01 (1000LM)	13.0	1190	91
AL02 (1000LM)	12.3	1261	103
AL02 (1500LM)	18.7	1880	101
AL02 (2000LM)	25.0	2389	96
AL03 (2000LM)	25.3	2458	97
AL03 (2500LM)	32.1	3016	94
AL03 (3000LM)	38.5	3442	89
AL04 (4000LM)	36.7	3879	106
AL04 (4500LM)	41.5	4225	102
AL04 (5000LM)	45.5	4630	102

*Based on 3500K AR LSS 80CRI

Catalog Number
Notes
Type

LBR12SQ

12" Open LED Retrofit/
Remodel Downlight



Retrofit | Remodel

LBR12SQ

Module ordering

ORDERING INFORMATION

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

Example: LBR12SQ ALO2 SWW1 AR LSS MWD MVOLT UGZ 90CRI

Series	Lumens ‡				Color temperature ‡		Reflector Color		Reflector Flange ‡		Reflector Finish		
LBR12SQ 12" Square Retrofit	Adjustable Lumen Output				Fixed Lumen Output		Switchable CCT		AR	Clear	(blank)	Self-flanged	LSS Semi-specular
	AL01 500/750/1000lm				05LM 500lm		SWW1 3000K-3500K-4000K-5000K		BR ‡	Black painted	TRW	White painted flange	
	AL02 1000/1500/2000lm				07LM 750lm				WR ‡	White painted	TRBL	Black painted flange	
	AL03 2000/2500/3000lm				10LM 1000lm		Fixed CCT		TCPC ‡	Custom painted trim	FCPC	Custom painted flange only	
	AL04 4000/4500/5000lm				15LM 1500lm		27K 2700K						
					20LM 2000lm		30K 3000K		TRALTB ‡	RAL painted trim	FRALTB	RAL painted flange only	
					25LM 2500lm		35K 3500K		MS	Metallic Silver			
					30LM 3000lm		40K 4000K						
					40LM 4000lm		50K 5000K						
					45LM 4500lm								
					50LM 5000lm								

Distribution	Voltage	Driver	Emergency ‡	Control Input ‡	Options
MWD Medium wide (1.0 s/mh) WD Wide (1.2s/mh)	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% D1 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 Embedded wireless controls from nLight NLTAIREM2 Embedded wireless controls from nLight with UL924 listed emergency operation	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: ALO1 SWW1).
Fixed Lumens/CCT	Fixed Lumen Output and Fixed CCT must be specified together (for example: 10LM 30K)
LSS	Not available with BR, WR, MS
DALI	Not available with fixed lumens or CCT. Max 4500 lumens.
EC1, EC6	Not available with QDS, E10WCP, E10WCPR, ELR
QDS	Not available with emergency options, 347
WR	Not available with TRW
BR	Not available with TRBL
347	Not available with QDS, E10WCP, E10WCPR, ELR, NLIGHT, NLIGHTER, NLTAIR2, or NLTAIREM2
D1	Only available with SSAIR
SSAIR	Not available with NLTAIR2, NLTAIREM2, UGZ, or DALI drivers. Not available with emergency options. Max 4500 lumens. Fixed lumens and CCT only.
ETS	Not available with QDS, SSAIR, NLIGHT, NLIGHTER, NLTAIR2, NLTAIREM2, DALI, D1, 347
AT	Not available with E10WCP
WL	Not available with E10WCP
E10WCP	Not available with EC1, EC6, AT, QDS, 347, NLTAIREM2, ALO3 (2000-3000L) DALI, SSAIR, or WL, or NLIGHTER
E10WRSTAR	Not available with wet location, EC1, EC6, QDS, 347, NLIGHTER, NLTAIREM2, ALO3 & ALO4 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
NLIGHT, NLIGHTER	Not available QDS, DALI, D1, UGZ, 347, SSAIR, ETS
NLIGHTER	Not available with other emergency options.
NLTAIR2	Not available ETS
NLTAIR2, NLTAIREM2	Not available QDS, DALI, D1, UGZ, 347, SSAIR, ETS
NLTAIREM2	Not available with other emergency options.
NLTAIR2, NLTAIREM2, NLIGHT, NLIGHTER	Available with UGZ1 only.
TRALTB, FRALTB	RALTB for pricing only. Replace with applicable RAL number and finish when ready to order. See the RAL BROCHURE for available color options.
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

LBR12SQ

Accessories: Order as separate catalog number. Shipped separately.	
LBR SDT 347V 75W ASM	Field installed 347V Step-down transformer
LBR012SQ AR LSS TRIM	12" clear, semi-specular reflector
LBR012SQ ** TRIM	12" reflector (** specify WR, BR)

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 SD S	20W	90	2400	Title 20, Self Diagnostic
ILB CP20 HE SD R	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.

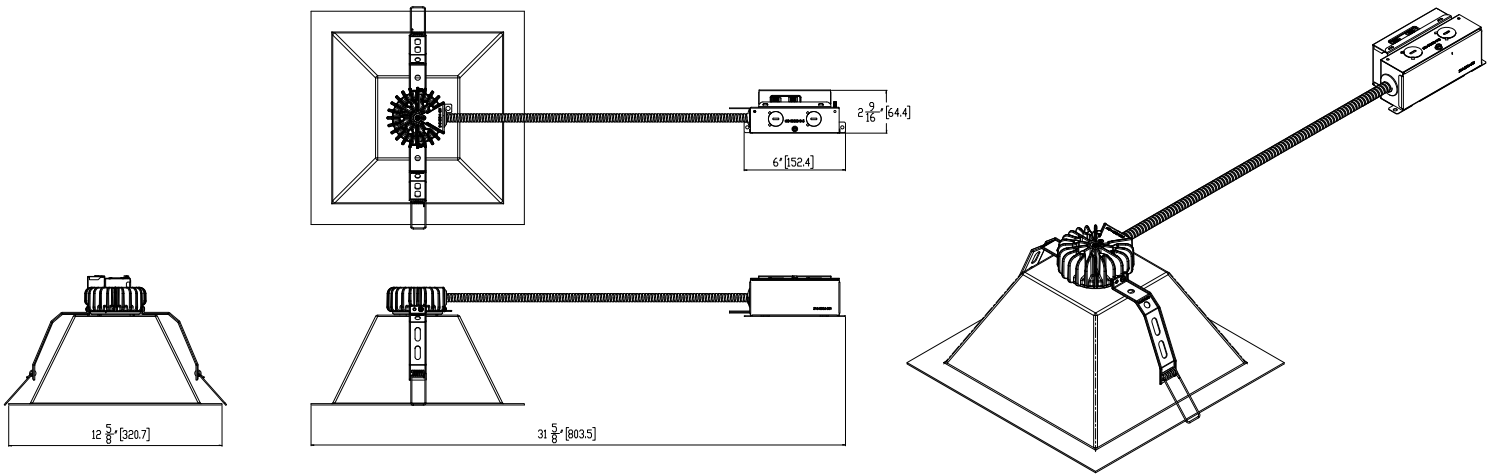
PLENUM DEPTH TABLE				
Aperture Size/Output	Fixture Height	IC	NON-IC	NON-IC MARKED SPACINGS
LBR12SQ 500-1000 LM	6.96	X		
LBR12SQ 1000-2000 LM	6.96		X	18 x 18 x 6
LBR12SQ 2000-3000 LM	6.96		X	24 x 24 x 9
LBR12SQ 4000-5000 LM	6.96		X	24 x 24 x 9

*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
LBR12SQ	Square	9.90"	12.625"	10.25"	1" - 1.25"	12"

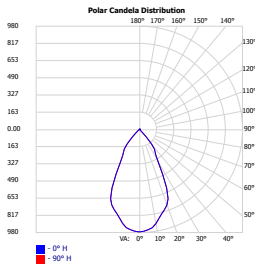
LBR12SQ ALOx SWW1 xx xxx MVOLT UGZ



PHOTOMETRY

MWD Medium Wide

LBR12 ALO1 @500LM SWW1 @35K AR LSS MWD Wattage: 6.1, Lumens: 629, LPW:103, S/MH: 0.9, Test No: 24-461-3P3



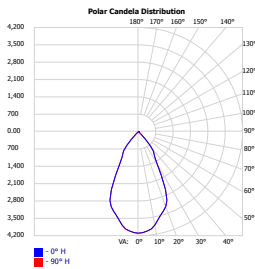
CANDELA SUMMARY	
0°	766
10°	715
20°	602
30°	282
40°	139
50°	2
60°	1
70°	1
80°	0
90°	0

ZONAL LUMEN SUMMARY		
Zone	Lumens	%
0-30	464.8	73.9%
0-40	593.7	94.4%
0-60	627.9	99.8%
0-90	629.2	100.0%

CONE OF LIGHT			
Mounting Height	Initial FC Center Beam	Beam Diameter (ft)	
		Horizontal	Vertical
8'	11.97	8.3	8.3
10'	7.66	10.3	10.3
12'	5.32	12.4	12.4
14'	3.91	14.5	14.5
16'	2.99	16.5	16.5

MWD Medium Wide

LBR12 ALO2 @2000LM SWW1 @35K AR LSS MWD Wattage: 25.0, Lumens: 2650, LPW: 106, S/MH: 0.9, Test No: 24-461-3P43



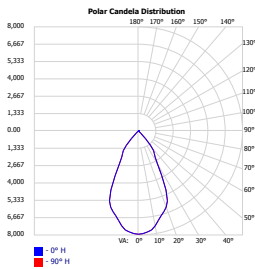
CANDELA SUMMARY	
0°	3226
10°	3011
20°	2534
30°	1190
40°	587
50°	10
60°	5
70°	2
80°	1
90°	0

ZONAL LUMEN SUMMARY		
Zone	Lumens	%
0-30	1,957.5	73.9%
0-40	2,500.3	94.4%
0-60	2,644.3	99.8%
0-90	2,649.8	100%

CONE OF LIGHT			
Mounting Height	Initial FC Center Beam	Beam Diameter (ft)	
		Horizontal	Vertical
8'	50.41	8.3	8.3
10'	32.26	10.3	10.3
12'	22.41	12.4	12.4
14'	16.46	14.5	14.5
16'	12.6	16.5	16.5

MWD Medium Wide

LBR12 ALO4 @5000LM SWW1 @35K AR LSS MWD Wattage: 45.5, Lumens: 5136, LPW: 113, S/MH: .9, Test No: 23-561-7P351



CANDELA SUMMARY	
0°	6253
10°	5835
20°	4911
30°	2306
40°	1137
50°	20
60°	10
70°	5
80°	1
90°	0

ZONAL LUMEN SUMMARY		
Zone	Lumens	%
0-30	3,793.7	73.9%
0-40	4,845.8	94.4%
0-60	5,124.8	99.8%
0-90	5,135.5	100%

CONE OF LIGHT			
Mounting Height	Initial FC Center Beam	Beam Diameter (ft)	
		Horizontal	Vertical
8'	97.7	8.3	8.3
10'	62.53	10.3	10.3
12'	43.42	12.4	12.4
14'	31.9	14.5	14.5
16'	24.43	16.5	16.5

CRI/CCT MULTIPLIER TABLE		
CRI	CCT	Multiplier
80	2700K	0.94
	3000K	0.98
	3500K	1.00
	4000K	1.01
	5000K	1.02
90	2700K	0.79
	3000K	0.85
	3500K	0.88
	4000K	0.90
	5000K	0.92

REFLECTOR FINISH MULTIPLIER	
Trim Color	Multiplier
AR	1.00
BR	0.60
WR	1.03

HOW TO ESTIMATE DELIVERED LUMENS IN EMERGENCY MODE

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

Delivered Lumens = 1.25 x P x 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	S (500-1000lm)	M (1000-2000lm)	L (2000-3000lm)	Comment
MLV	Lutron Glyder GLV-600	YES	YES	YES	
INC	Leviton SureSlide 6633	YES	YES	YES	
MLV	Lutron Diva DVLV-600P	YES	YES	YES	
MLV	Lutron Skylark SLV-600P	YES	YES	YES	
INC	Lutron RadioRA 2 10ND	YES	YES	YES	
MLV	Leviton SureSlide 6613-PLW	YES	YES	YES	
INC	Lutron Diva DVCL-153P	YES	YES	YES	
MLV	Leviton IPM06	YES, 2x *	YES	YES	* min 2 fixtures
INC	Leviton IPI06	YES, 2x *	YES	YES	* min 2 fixtures
MLV	Synergy ISD 600LV	YES, 2x *	YES	YES	* min 2 fixtures
INC	Synergy ISD 600 I	YES, 2x *	YES	YES	* min 2 fixtures
INC	Control4 C4-FPD 120	YES	YES	YES	
Type	Reverse Phase Dimmer Bank	S (500-1000lm)	M (1000-2000lm)	L (2000-3000lm)	
ELV	Lutron Nova T NTELV-600	YES	YES	YES	
ELV	Lutron Diva DVELV 600P	YES	YES	YES	
ELV	Lutron Maestro MAELV 600	YES	YES	YES	
ELV	Leviton Vizia VPE06-1LX	YES	YES	YES	
ELV	Leviton Illumatech IPE04	YES	YES	YES	
ELV	Control4 C4-APD 120 REVERSE PHASE	YES	YES	YES	
Type	Miscellaneous Dimmers	S (500-1000lm)	M (1000-2000lm)	L (2000-3000lm)	
PHA	Lutron RadioRA2 RRD-6NA	YES	YES	YES	
PHA	Lutron Maestro PRO LED+ RRD-PRO	YES	YES	YES	
Type	Control Systems	S (500-1000lm)	M (1000-2000lm)	L (2000-3000lm)	
MLV	Lutron LP-RPM-4U	YES	YES	YES	
PHA	Lutron LP-RPM-4A	YES	YES	YES	
MLV	Lutron GRAPHIC EYE QSGRJ-3P	YES	YES	YES	
PHA	Lutron PA Power Module PHPM-PA-120	YES	YES	YES	
ELV	Lutron nLight nSP5PCD ELV	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	S (500-1000lm)	M (1000-2000lm)	L (2000-3000lm)
Lutron	Other	0-10V (sink or source) PowPak wireless dimming module	RMJ-5T-DV-B	YES	YES	YES
Wattstopper	Control System	Digital single relay room controller (0-10V)	LMRC-211	YES	YES	YES
Crestron	Control System	DIN Rail 0-10V fluorescent dimmer, 4 feeds, 4 channels (Green Light System)	DIN-4DIMFLV4	YES	YES	YES
Lutron	Other	Grafik Eye 0-10V adapter	GRX-TVI	YES	YES	YES
Leviton	Wall Box	Illumatech 0-10V	IP710-DLX	YES	YES	YES
Lutron	Control System	Mounted in the Homeworks QS panel - 0-10V dimmer (sink or source)	GRX-TVM2	YES	YES	YES
Lutron	Wall Box	Nova 0-10V wallbox dimmer (use with PP-120-H line voltage relay)	NTFTV	YES	YES	YES
Lutron	Wall Box	Nova 0-10V wallbox dimmer (use with PP-120-H line voltage relay)	NTSTV-DV	YES	YES	YES
Lutron	Wall Box	Nova T	NFTV	YES	YES	YES
Leviton	Wall Box	Renior II 0-10V	AWSMG-7DW	YES	YES	YES
ACUITY	Wall Box	sensorswitch, wall switch sensor, occupancy controlled dimming	WSX D WH	YES	YES	YES
ACUITY	Control System	nLight	nPP16D	YES	YES	YES
ACUITY	Control System	nLight	nPS 80 EZ	YES	YES	YES
ACUITY	Control System	nLight Air	rPP20 D	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

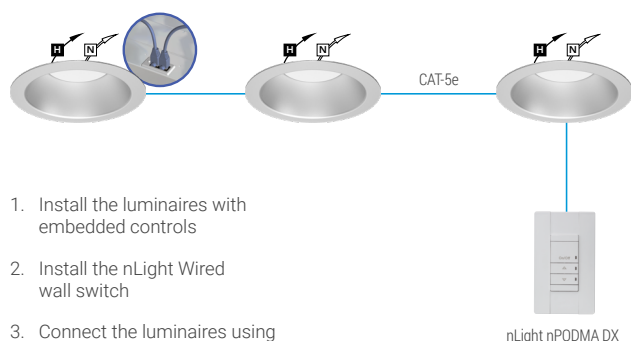


Single Lighting Controls Platform for Indoor & Outdoor Spaces

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)

nLight nPODMA DX

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

nLight rPODBA 2P DX

Mobile Device

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.