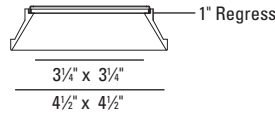


BeveLED® LED Trimless

Downlight



3310



LUMINAIRE INFORMATION

APPLICATION:

Accent luminaire for Residential, Commercial, Retail or Hospitality environments.

MATERIALS:

Trim: Die cast aluminum retained by two mounting clips.
Housing: All-Ways Square® housing allows alignment of square aperture (up to 20° rotation) after housing installation and prior to finish ceiling installation. All-Ways Square® covered by US Pat. No: US 7,832,889. Fabricated of 20 ga. galvanized steel with thru wire J-box, 4 in 4 out at min. 90°C, #12 AGW thru branch circuit wiring.
 Housing and trim supplied as one complete unit.
Trim Lens: Proprietary low glare blended optical lens system.
Reflector: Precision injection molded specular polycarbonate reflector for 30°, 50° or 80° beam distributions. 30° and 50° reflectors are field interchangeable.

LIGHT ENGINE: Field Replaceable

Available in 10W or 20W ±100K. High power white LED's tightly binned for fixture to fixture color consistency.

CRI OPTIONS: Standard: 80+ CRI. High: 90+ CRI.

RATED LIFE:

Based on IESNA LM80-2008
 50,000 hours at 70% lumen maintenance (L70).

HEATSINK:

Proprietary high performance aluminum die cast heatsink for maximum LED life.

DRIVER: Field Replaceable

Solid state electronic. Constant current.
 High power factor. Specify 120V or 277V.

DIMMING: (optional)

Multiple 3 wire dimming drivers available.
 See compatibility chart attached.

MOUNTING:

Butterfly brackets and adjustable nailer bars with integral nails provided. Nailer bars are extendible from 14" to 24" centers.

CEILING CUT OUT:

5 1/2" x 5 1/2"

LISTINGS:

Dry/Damp.
 IBEW union made.



NOTES:

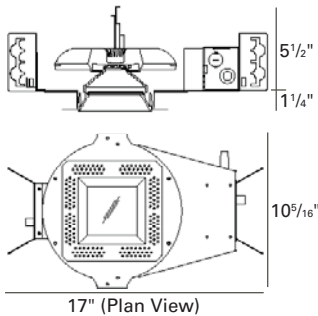
- Housing included with trim.
- Maximum ceiling thickness 1 inch. Consult factory for other ceiling conditions.
- Fixture should be installed in applications where ambient temperatures do not exceed 40°C during normal operation.
- For drywall installation only.
- Not for use with acoustical ceilings.
- **5 year warranty**

PHOTOMETRICS:

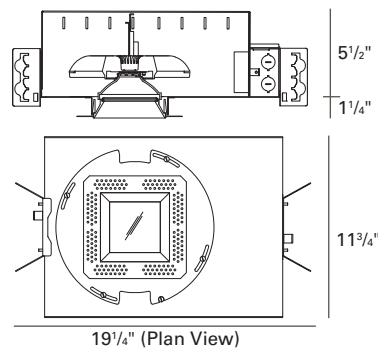
Consult factory or website for IES files.
 Tested in accordance with IESNA LM79-2008.

HOUSING INFORMATION

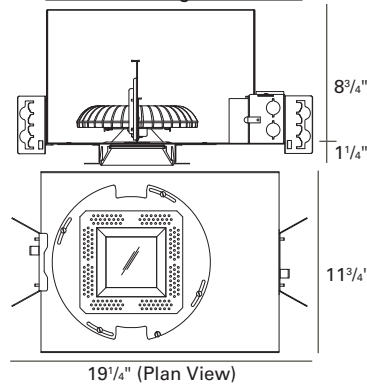
New Construction - NC Non-Air Handling Plenum



New Construction - NCAH Air Handling Plenum



Insulated / Airtight - IC



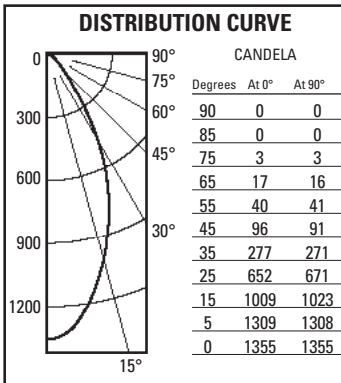
HOW TO SPECIFY

Trim	Trim Suffix for 80°	Finish	Housing	Color Temperature	Reflector	Housing Type	Voltage	Accessories
3310								
3310 BeveLED Trimless Downlight	8 Use 8 suffix to order trim that uses 80° reflector Do not include 8 when ordering 30° or 50° reflector	10 - White 21 - Black 28 - Metalized Grey RAL - Special Color	LSLD4-9010-C1 (10W LED) LSLD4-9020-C1 (20W LED)	Standard CRI 80+ 27 - 2700K 30 - 3000K 35 - 3500K 40 - 4000K High CRI 90+ 27H - 2700K 30H - 3000K	30 - 30° 50 - 50° 80 - 80°	NC - New Construction IC - Insulated / Airtight NCAH - New Construction Air Handling Plenum	120V 277V	CB27 - 27" C-Channel Bars CB52 - 52" C-Channel Bars DIML2 - 0-10V Low Voltage 15% Dimming Driver DIML4 - Lutron Hi-Lume LED / ECO System Series A 3 Wire Control 1% Dimming Driver EML - Emergency lighting battery pack w/ remote test switch. Note: Housing size may differ. Above ceiling access required for service Not for use with IC housing SLD30 - 30° Reflector SLD50 - 50° Reflector MLXX - Millwork Adapter XX=Specify Color (10, 21, 28, RAL)
	8							
					80			

Use 8 suffix to order trim that uses 80° reflector only
 Do not include 8 suffix when ordering 30° or 50° reflector

BeveLED Downlight, 50° Beam, 20W
3010-10-LSTD4-9020-C1-30-50-NC-120V
 LTL Report No. : 19747
 Spacing Criteria: .74 CBCP: 1355

LIGHTING PERFORMANCE DATA		
Ceiling Height (FT)	Initial Footcandles	Beam Diameter @ 50°
6.0	37.6	4.5
8.0	21.2	6.1
10.0	13.6	7.6
12.0	9.4	9.1
14.0	6.9	10.6

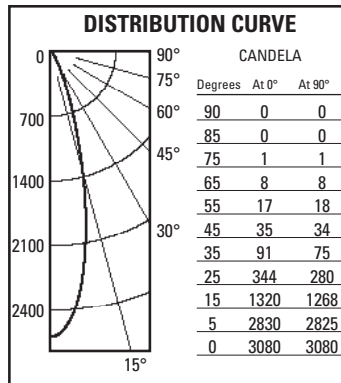


ZONAL LUMEN SUMMARY			
Zone	Lumens	% of Lamp	% of Luminaire
0-30	706.4	N/A	69.7%
0-40	886.6	N/A	87.5%
0-60	995.8	N/A	98.3%
0-90	1013.5	N/A	100.0%
90-180	0.0	N/A	0.0%
0-180	1013.5	N/A	100.0%

Total lumen Output: 1013.5 Lumens
Luminaire Efficacy: 51.7 Lumens per Watt
CIE Type: Direct
Spacing Criterion: 0°: 0.74 90°: 0.76
 180°: 0.74 270°: 0.76

BeveLED Downlight, 30° Beam, 20W
3010-10-LSTD4-9020-C1-30-30-NC-120V
 LTL Report No. : 19746
 Spacing Criteria: .46 CBCP: 3080

LIGHTING PERFORMANCE DATA		
Ceiling Height (FT)	Initial Footcandles	Beam Diameter @ 50°
6.0	85.6	2.7
8.0	48.1	3.7
10.0	30.8	4.6
12.0	21.4	5.5
14.0	15.7	6.4

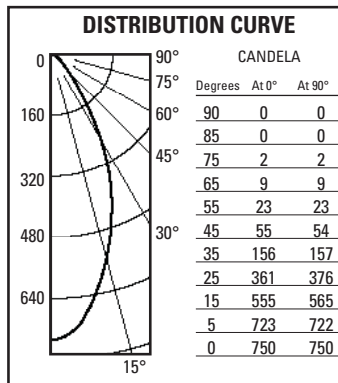


ZONAL LUMEN SUMMARY			
Zone	Lumens	% of Lamp	% of Luminaire
0-30	757.9	N/A	87.5%
0-40	813.9	N/A	93.9%
0-60	857.5	N/A	99.0%
0-90	866.4	N/A	100.0%
90-180	0.0	N/A	0.0%
0-180	866.4	N/A	100.0%

Total lumen Output: 866.4 Lumens
Luminaire Efficacy: 44.2 Lumens per Watt
CIE Type: Direct
Spacing Criterion: 0°: 0.46 90°: 0.45
 180°: 0.46 270°: 0.45

BeveLED Downlight, 50° Beam, 10W
3010-10-LSTD4-9010-C1-30-50-NC-120V
 LTL Report No. : 19901
 Spacing Criteria: .73 CBCP: 750

LIGHTING PERFORMANCE DATA		
Ceiling Height (FT)	Initial Footcandles	Beam Diameter @ 50°
6.0	20.8	4.5
8.0	11.7	6.0
10.0	7.5	7.6
12.0	5.2	9.1
14.0	3.8	10.6

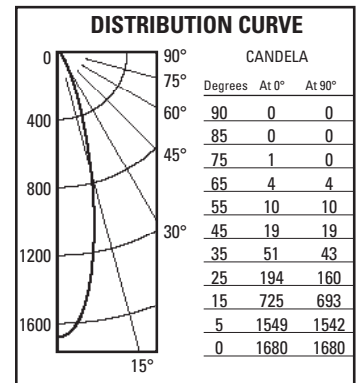


ZONAL LUMEN SUMMARY			
Zone	Lumens	% of Lamp	% of Luminaire
0-30	390.6	N/A	69.0%
0-40	493.2	N/A	87.1%
0-60	556.3	N/A	98.3%
0-90	566.2	N/A	100.0%
90-180	0.0	N/A	0.0%
0-180	566.2	N/A	100.0%

Total lumen Output: 566.2 Lumens
Luminaire Efficacy: 58.0 Lumens per Watt
CIE Type: Direct
Spacing Criterion: 0°: 0.73 90°: 0.77
 180°: 0.73 270°: 0.77

BeveLED Downlight, 30° Beam, 10W
3010-10-LSTD4-9010-C1-30-30-NC-120V
 LTL Report No. : 19900
 Spacing Criteria: .46 CBCP: 1680

LIGHTING PERFORMANCE DATA		
Ceiling Height (FT)	Initial Footcandles	Beam Diameter @ 50°
6.0	46.7	2.8
8.0	26.2	3.7
10.0	16.8	4.6
12.0	11.7	5.5
14.0	8.6	6.4



ZONAL LUMEN SUMMARY			
Zone	Lumens	% of Lamp	% of Luminaire
0-30	417.0	N/A	87.2%
0-40	448.7	N/A	93.9%
0-60	473.1	N/A	99.0%
0-90	478.0	N/A	100.0%
90-180	0.0	N/A	0.0%
0-180	478.0	N/A	100.0%

Total lumen Output: 478.0 Lumens
Luminaire Efficacy: 49.0 Lumens per Watt
CIE Type: Direct
Spacing Criterion: 0°: 0.46 90°: 0.45
 180°: 0.46 270°: 0.45

Note: Above data shown using 80+ CRI. 90+ CRI, de-rate data by approximately 20%.

BeveLED[®] LED Trimless Downlight

PERFORMANCE SUMMARY

Performance Summary (continued)

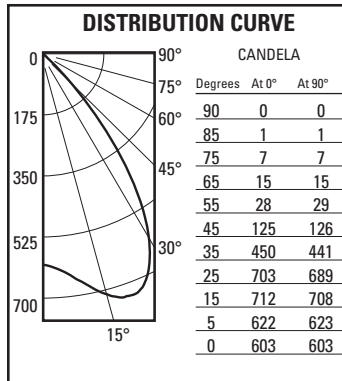
BeveLED Downlight, 80° Beam, 20W

3010-10-LSTD4-9020-C1-30-80-NC-120V

LTL Report No. : 23058

Spacing Criteria: 1.30 CBCP: 603.3

LIGHTING PERFORMANCE DATA		
Ceiling Height (FT)	Initial Footcandles	Beam Diameter @ 50°
6.0	16.8	7.92
8.0	9.43	10.6
10.0	6.03	13.2
12.0	4.19	15.8
14.0	3.08	18.5



ZONAL LUMEN SUMMARY

Zone	Lumens	% of Lamp	% of Luminaire
0-30	580	N/A	54.6%
0-40	869	N/A	81.8%
0-60	1038	N/A	97.7%
0-90	1062	N/A	100.0%
90-180	0.0	N/A	0.0%
0-180	1062	N/A	100.0%

Total lumen Output: 1062 Lumens

Luminaire Efficacy: 54.7 Lumens per Watt

CIE Type: Direct

Spacing Criterion: 0°: 1.30 90°: 1.29
180°: 1.30 270°: 1.29

Note: Above data shown using 80+ CRI. 90+ CRI, de-rate data by approximately 20%.

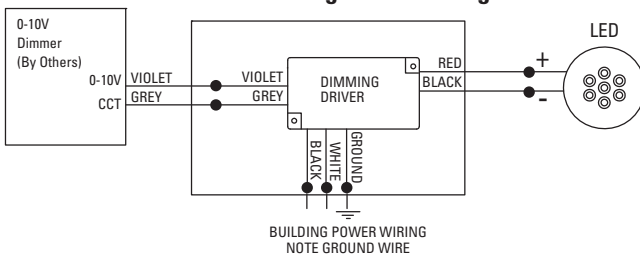
DIMMING DRIVER WIRING SCHEMES:

DIML2 LED: 0-10V Dimming Driver Wiring (Dims down to 15%)

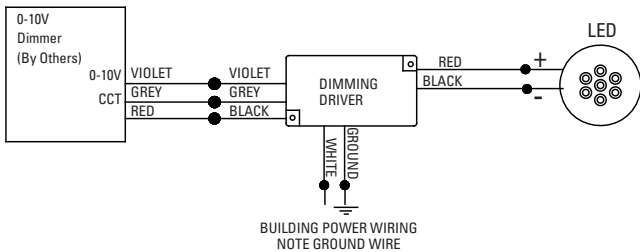
DIML2 Dimmer Compatibility Chart				
Manufacturer	Product	Part Number	Dimmed Light Output Range	Qty Fixtures Per Dimmer*
120V / 277V				
Crestron	iLux dimmer expansion module	CLS-EXP-DIMFLV	100% - 15%	Use source current per fixture specification sheet to determine number of fixtures per dimmer. Max number of fixtures is limited by dimmer load rating.
Crestron	DIN Rail dimmer	DIN-4DIMFLV4	100% - 15%	
Crestron	DIN Rail analog output module	DIN-A08	100% - 15%	
Crestron	8 Channel dimmer module	GLX-DIMFLV8	100% - 15%	
Crestron	8 Channel dimmer module	GLXP-DIMFLV8	100% - 15%	
Leviton	IllumaTech dimmer	IP710-DLX	100% - 15%	
Lightolier (Philips)	Vega	V2000FAMU	100% - 15%	
Lutron	Diva	DVTV-XX	100% - 15%	

* NOTE: Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

DIML2 Dimming Driver Wiring



**DIML2 Dimming Driver Wiring
(Lightolier and Leviton dimmers)**



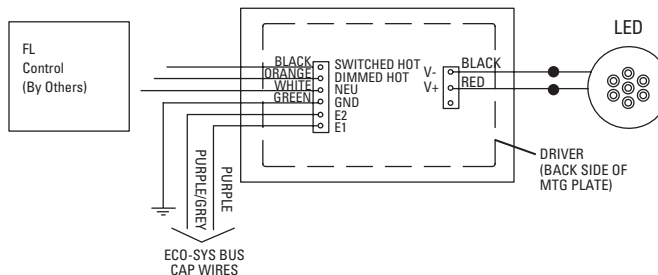
DIMMING DRIVER WIRING SCHEMES:

DIML4 LED: Lutron Hi-Lume A-Series LED Driver with 3-Wire FL Control / LED Dimming Driver Wiring (Dims down to 1%)

DIML4 3-Wire Dimmer Compatibility Chart					
Manufacturer	Product	Part Number	Dimmed Light Output Range	Qty Fixtures Per Control*	
				Typical 40W and Less	High Wattage 41W - 80W
120V Only					
ETC	Sensor+ Cabinet	D20 Dimming module	100% - 1%	*	*
ETC	Unison DRd Cabinet	D20F Dimming module	100% - 1%	*	*
Lutron	Nova T	NTF-10-	100%-1%	1-41	1-20
Lutron	Nova T	NTF-103P-	100%-1%	1-20	1-10
Lutron	Nova	NF-10-	100%-1%	1-41	1-20
Lutron	Nova	NF-103P-	100%-1%	1-20	1-10
Lutron	Vareo	VF-10-	100%-1%	1-20	1-10
Lutron	Skylark	SF-10P-, SF-103P-	100%-1%	1-20	1-10
Lutron	Diva	DVF-103P-, DVSCF-103P-	100%-1%	1-20	1-10
Lutron	Ariadni	AYF-103P-	100%-1%	1-20	1-10
Lutron	Vierti	VTF-6A-	100%-1%	1-15	1-7
Lutron	Maestro	MAF-6AM-, MSCF-6AM-	100%-1%	1-15	1-7
Lutron	Maestro Wireless	MRF2-F6AN-DV-	100%-1%	1-15	1-7
Lutron	RadioTouch	RTA-RX-F-	100%-1%	1-41	1-20
Lutron	Spacer System	SPSF-6A-, SPSF-6AM-	100%-1%	1-15	1-7
Lutron	Lyneo Lx	LXF-103PL-	100%-1%	1-20	1-10
Lutron	RadioRA 2	RRD-F6AN-DV-	100%-1%	1-15	1-7
Lutron	HomeWorks QS	HQRD-F6AN-DV	100%-1%	1-15	1-7
Lutron	Interfaces	PHPM-3F-120, PHPM-3F-DV, GRX-FDBI-16A	100%-1%	1-41	1-20
Lutron	GP Dimming Panels	Various	100%-1%	1-41	1-20
277V Only				40W and Less	41W - 80W
ETC	Sensor+ Cabinet	D20 Dimming module	100% - 1%	*	*
ETC	Unison DRd Cabinet	D20F Dimming module	100% - 1%	*	*
Lutron	Nova T	NTF-10-277-	100%-1%	1-44	1-22
Lutron	Nova T	NTF-103P-277-	100%-1%	1-33	1-16
Lutron	Nova	NF-10-277-	100%-1%	1-44	1-22
Lutron	Nova	NF-103P-277-	100%-1%	1-33	1-16
Lutron	Skylark	SF-12P-277-, SF-12P-277-3	100%-1%	1-33	1-16
Lutron	Diva	DVF-103P-277-, DVSCF-103P-277-	100%-1%	1-33	1-16
Lutron	Ariadni	AYF-103P-277-	100%-1%	1-44	1-22
Lutron	Vierti	VTF-6A-	100%-1%	1-33	1-16
Lutron	Maestro	MAF-6AM-277-, MSCF-6AM-277-	100%-1%	1-20	1-10
Lutron	Maestro Wireless	MRF2-F6AN-DV-	100%-1%	1-33	1-16
Lutron	RadioTouch	RTA-RX-F-	100%-1%	1-88	1-44
Lutron	Spacer System	SPSF-6A-277-, SPSF-6AM-277-	100%-1%	1-20	1-10
Lutron	Lyneo Lx	LXF-103PL-277-	100%-1%	1-33	1-16
Lutron	RadioRA 2	RRD-F6AN-DV-	100%-1%	1-33	1-16
Lutron	HomeWorks QS	HQRD-F6AN-DV	100%-1%	1-33	1-16
Lutron	Interfaces	PHPM-3F-DV, GRX-FDBI-16A	100%-1%	1-88	1-44
Lutron	GP Dimming Panels	Various	100%-1%	1-88	1-44

* NOTE: Number of fixtures may be higher if wattage is less than maximum values shown. Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

Wire Diagram for 3-Wire FL Control (no Eco System Control)



DIML4 wiring diagrams continued on next page

DIMMING DRIVER WIRING SCHEMES:

DIML4 LED: Lutron Hi-Lume A-Series LED Driver with Eco System Control / LED Dimming Driver Wiring (Dims down to 1%)

DIML4 3-Wire Dimmer Compatibility Chart					
Manufacturer	Product	Part Number	Dimmed Light Output Range	Qty Fixtures Per Control*	
				Typical	High Wattage
120V / 277V					
Lutron	PowPak dimming module	RMJ-ECO32-DV-B	100%–1%	1–32	1–16
Lutron	Energi Savr Node	QSN-1ECO-S, QSN-2ECO-S	100%–1%	1–64	1–32
Lutron	GRAFIK Eye QS (120V ONLY)	QSGRJ- E, QSGR- E	100%–1%	1–64	1–32
Lutron	Quantum	Various	100%–1%	1–64	1–32

* NOTE: Number of fixtures may be higher if wattage is less than maximum values shown. Refer to dimmer manufacturer's documentation for installation instructions and circuit details.

Wire Diagram for ECO System Digital Control

