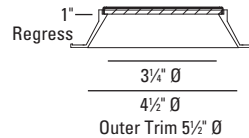


BeveLED® LED

Downlight



3020



LUMINAIRE INFORMATION

APPLICATION:

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

MATERIALS:

Trim: Die cast aluminum retained by two mounting clips.

Housing: Fabricated of 20 ga. galvanized steel with thru wire J-box, 4 in 4 out (for NC, NCAH and IC) 2 in 2 out (for NCSL and RT) 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 maximized for 30°, 50° or 80° beam distribution. 30° and 50° reflectors are field interchangeable in NC, IC, CP and NCAH.

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

20W - 50,000 hours at 70% lumen maintenance (L70).

10W - 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:

NC / NCAH / IC / NCSL : Butterfly brackets and adjustable nailer bars with integral nails provided. Nailer bars are extendible from 14" to 24" centers.

RT: Screw driver activated swing and compress mounting system.

CEILING CUT OUT: 5 1/16" Ø

LISTINGS:

Dry/Damp.

*Wet under covered ceiling is optionally available (not standard). IBEW union made. Chicago Plenum housing is CCEA Approved.



NOTES:

- Housing included with trim.
- Maximum ceiling thickness **NC / NCAH / IC / CP:** 1 inch. **NCSL / RT:** 1-1/4" Consult factory for other ceiling conditions.
- Fixture should be installed in applications where ambient temperatures do not exceed 40°C during normal operation.
- 5 year warranty**
- IC not currently Energy Star rated.
- NCSL / RT: Min. 1/2" clearance above fixture for servicing.

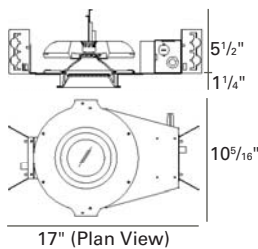
PHOTOMETRICS:

Consult factory.

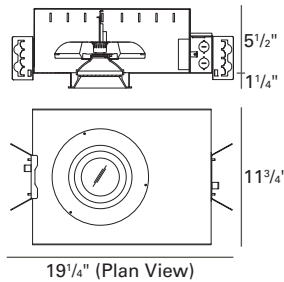
Tested in accordance with IESNA LM79-2008.

HOUSING INFORMATION

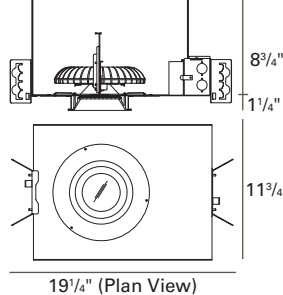
New Construction - NC
Non-Air Handling Plenum
50° Beam Shown



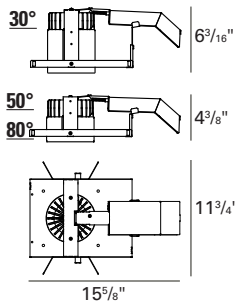
New Construction - NCAH
Air Handling Plenum
50° Beam Shown



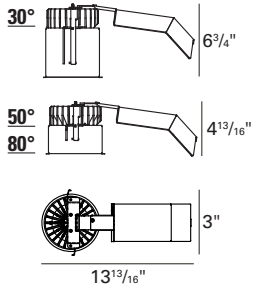
Insulated / Airtight - IC
Chicago Plenum - CP
50° Beam Shown



New Construction - NCSL
Air Handling Plenum



Retrofit - RT
Air Handling Plenum



HOW TO SPECIFY

Trim	Trim Suffix for 80°	Finish	Housing	Color Temperature	Reflector	Housing Type	Voltage	Accessories
3020 BeveLED Trim 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	LRTD4-9010-C1 (10W LED) LRTD4-9020-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 CP - Chicago Plenum IC - Insulated / Airtight NCAH - New Construction Air Handling NCSL - New Construction Air Handling RT - Retrofit Air Handling	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 Below Options ONLY available for NC / NCAH / IC* W - Wet Listed (under covered ceiling) EML - Emergency lighting battery pack w/ remote test switch. Not available in IC* Note: Housing size may differ. Above ceiling access required for service Not for use with WET LISTED (W) option SLD30 - 30° Reflector SLD50 - 50° Reflector
	8				80			

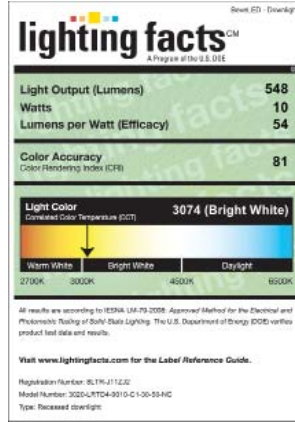
Use 8 suffix to order trim that uses 80° reflector only
Do not include 8 suffix when ordering 30° or 50° reflector

BeveLED Downlight, 50° Beam, 20W
3020-10-LRTD4-9020-C1-30-50-NC-120V
 LTL Report No. : 20486
 Spacing Criteria: .75 CBCP: 1259

BeveLED Downlight, 30° Beam, 20W
3020-10-LRTD4-9020-C1-30-30-NC-120V
 LTL Report No. : 20484
 Spacing Criteria: .47 CBCP: 2777

BeveLED Downlight, 50° Beam, 10W
3020-10-LRTD4-9010-C1-30-50-NC-120V
 LTL Report No. : 20710
 Spacing Criteria: .71 CBCP: 766

BeveLED Downlight, 30° Beam, 10W
3020-10-LRTD4-9010-C1-30-30-NC-120V
 LTL Report No. : 20708
 Spacing Criteria: .47 CBCP: 1639

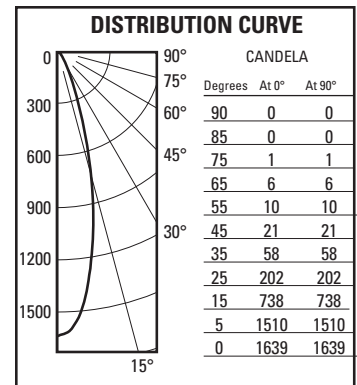
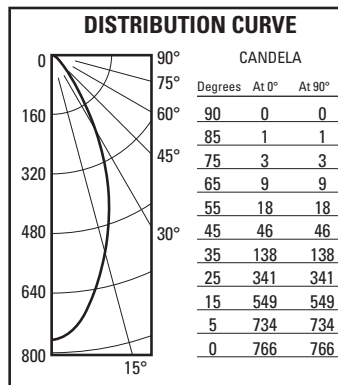
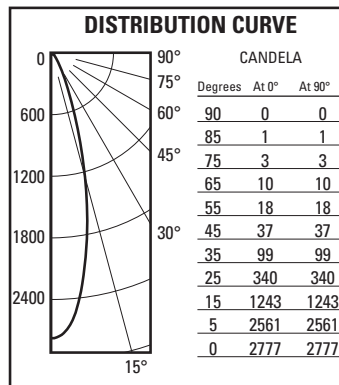
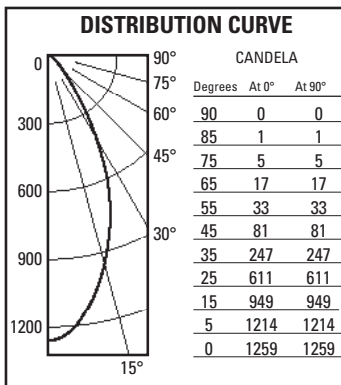


LIGHTING PERFORMANCE DATA		
Ceiling Height (FT)	Initial Footcandles	Beam Diameter @ 50°
6.0	35.0	4.5
8.0	19.7	6.1
10.0	12.6	7.5
12.0	8.7	9.0
14.0	6.9	10.5

LIGHTING PERFORMANCE DATA		
Ceiling Height (FT)	Initial Footcandles	Beam Diameter @ 50°
6.0	77.1	2.8
8.0	43.4	3.7
10.0	27.8	4.7
12.0	19.3	5.6
14.0	14.2	6.5

LIGHTING PERFORMANCE DATA		
Ceiling Height (FT)	Initial Footcandles	Beam Diameter @ 50°
6.0	21.3	4.3
8.0	12.0	5.7
10.0	7.7	7.1
12.0	5.3	8.5
14.0	3.9	9.9

LIGHTING PERFORMANCE DATA		
Ceiling Height (FT)	Initial Footcandles	Beam Diameter @ 50°
6.0	45.5	2.8
8.0	25.6	3.7
10.0	16.4	4.7
12.0	11.4	5.6
14.0	8.4	6.5



ZONAL LUMEN SUMMARY			
Zone	Lumens	% of Lamp	% of Luminaire
0-30	651.1	N/A	70.0%
0-40	809.5	N/A	87.0%
0-60	905.7	N/A	97.4%
0-90	930.1	N/A	100.0%
90-180	0.0	N/A	0.0%
0-180	930.1	N/A	100.0%

ZONAL LUMEN SUMMARY			
Zone	Lumens	% of Lamp	% of Luminaire
0-30	723.2	N/A	85.4%
0-40	787.7	N/A	93.0%
0-60	833.2	N/A	98.4%
0-90	846.7	N/A	100.0%
90-180	0.0	N/A	0.0%
0-180	846.7	N/A	100.0%

ZONAL LUMEN SUMMARY			
Zone	Lumens	% of Lamp	% of Luminaire
0-30	374.2	N/A	70.6%
0-40	463.0	N/A	87.5%
0-60	517.3	N/A	97.5%
0-90	530.4	N/A	100.0%
90-180	0.0	N/A	0.0%
0-180	530.4	N/A	100.0%

ZONAL LUMEN SUMMARY			
Zone	Lumens	% of Lamp	% of Luminaire
0-30	428.5	N/A	85.5%
0-40	466.6	N/A	93.2%
0-60	493.3	N/A	98.5%
0-90	500.9	N/A	100.0%
90-180	0.0	N/A	0.0%
0-180	500.9	N/A	100.0%

Total lumen Output: 930.1 Lumens
Luminaire Efficacy: 46.8 Lumens per Watt
CIE Type: Direct
Spacing Criterion: 0.75

Total lumen Output: 846.7 Lumens
Luminaire Efficacy: 42.6 Lumens per Watt
CIE Type: Direct
Spacing Criterion: 0.47

Total lumen Output: 530.4 Lumens
Luminaire Efficacy: 52.9 Lumens per Watt
CIE Type: Direct
Spacing Criterion: 0.71

Total lumen Output: 500.9 Lumens
Luminaire Efficacy: 50.0 Lumens per Watt
CIE Type: Direct
Spacing Criterion: 0.47

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

BeveLED® LED Downlight

Performance Summary (continued)

BeveLED Downlight, 80° Beam, 20W

3020-10-LRTD4-9020-C1-30-80-NC-120V

LTL Report No. : 23160

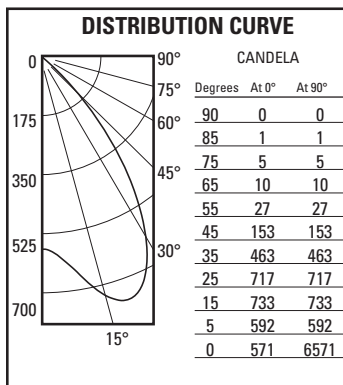
Spacing Criteria: 1.34 CBCP: 571



NOTE

lighting facts label coming soon

LIGHTING PERFORMANCE DATA		
Ceiling Height (FT)	Initial Footcandles	Beam Diameter @ 50°
6.0	15.9	8.05
8.0	8.92	10.7
10.0	5.71	13.4
12.0	3.97	16.1
14.0	2.91	18.8



ZONAL LUMEN SUMMARY

Zone	Lumens	% of Lamp	% of Luminaire
0-30	591	N/A	56.5%
0-40	877	N/A	83.9%
0-60	1028	N/A	98.4%
0-90	1045	N/A	100.0%
90-180	0.0	N/A	0.0%
0-180	1045	N/A	100.0%

Total lumen Output: 1045 Lumens
 Luminaire Efficacy: 53.6 Lumens per Watt
 CIE Type: Direct
 Spacing Criterion: 1.34

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

DIMMING DRIVER COMPATIBILITY SELECTION GUIDE

DIML2

DIMMING DRIVER WIRING SCHEMES:

DIML2 LED: 0-10V 3-Wire FL Dimming Driver Wiring (Dims down to 15%)

NOTE: Consult dimmer manufacturer for detailed installation information.

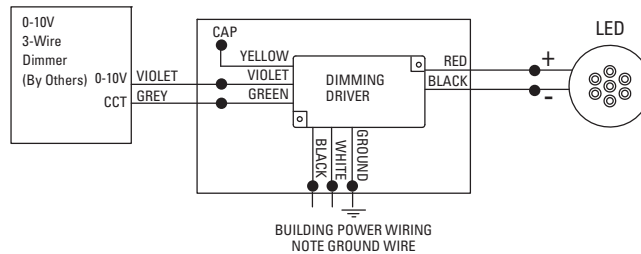
For use with 0-10V fluorescent type controls.

Use only with approved vendor models:

Lutron: DIVA DDTV-XX XX=Color

Leviton: IP710-DLX

Lightolier: V2000FAMU



Compatible Crestron Dimming System

NOTE: Consult dimmer manufacturer for detailed installation information.

Crestron Model	Compatible	Min # of Fixtures Required (1)	Crestron Min-Max % Limits (2)	Measured Light Output (3)
CLS-EXP-DIMFLV	Y	1	0-100%	15-100%
DIN-4DIMFLV4	Y	1	0-100%	15-100%
DIN-A08	Y	1	0-100%	15-100%
GLX-DIMFLV8	Y	1	0-100%	15-100%
GLXP-DIMFLV8	Y	1	0-100%	15-100%

(1) Operating dimmers with less than the minimum required fixtures may cause flicker.

The Max number of fixtures is limited by dimmer rating unless otherwise noted.

(2) % Level refers to the Crestron Control System Intensity.

Operating the dimmer below the Min % level may cause flicker.

Operating the dimmer above the Max % may show no additional brightness.

(3) % Level of light output from fixture when connected directly to power source

(4) Dimmer requires a direct connection to neutral unless otherwise noted.

NOTE: See next page for DIML4 LED Dimming Part Numbers

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

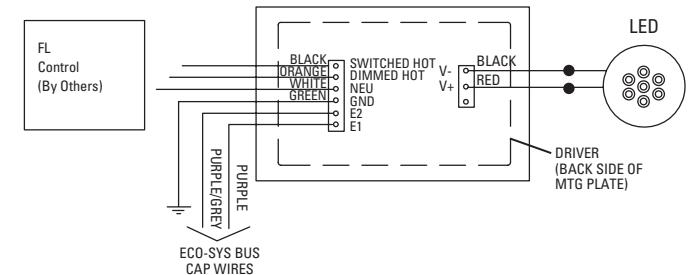
Compatible Lutron Dimmers / Test Results

NOTE: Consult dimmer manufacturer for detailed installation information.

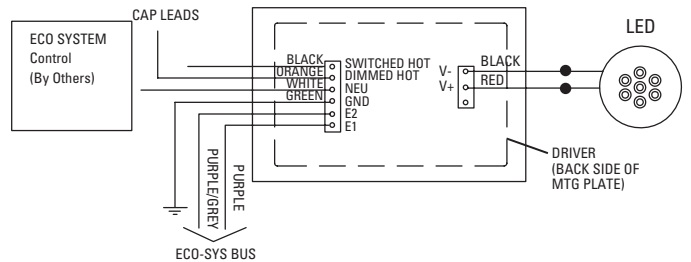
Product	Part Number	Fixtures Per Dimmer		Measured Light Output Range
		120V	277V	
NovaT	NTF-10,	1-59	-	100% - 1%
NovaT	NTF-103P, NTF-10-277	1-29	1-61	100% - 1%
NovaT	NTF-103P-277	-	1-46	100% - 1%
Nova	NF-10	1-59	-	100% - 1%
Nova	NF-103P, NF-10-277	1-29	1-61	100% - 1%
Nova	NF-103P-277	-	1-46	100% - 1%
Vareo	VF-10	1-29	-	100% - 1%
Skylark	SF-10P, SF-103P	1-29	-	100% - 1%
Skylark	SF-12P-277, SF-12P-277-3	-	1-46	100% - 1%
Diva	DVF-103, DVSCF-103P	1-29	-	100% - 1%
Diva	DVF-103P-277, DVSCF-103P-277	-	1-46	100% - 1%
Ariadni	AYF-103P	1-29	-	100% - 1%
Ariadni	AYF-103P-277	-	1-46	100% - 1%
Vierti	VTF-6AM	1-22	-	100% - 1%
Maestro	MAF-6AM, MAF-6AM-277, MSCF-6AM, MCSF-6AM-277	1-22	1-46	100% - 1%
Maestro Wireless	MRF2-F6AN-DV	1-22	1-46	100% - 1%
Spacer System	SPSF-6A, SPSF-6A-277, SPSF-6AM, SPSF-6AM-277	1-22	1-46	100% - 1%
Lyneo	LXF-103PL	1-29	-	100% - 1%
Lyneo	LXF-103PL-277	-	1-46	100% - 1%
Radio RA 2	RRD-F6AN-DV	1-22	1-46	100% - 1%
HomeWorks QS	HQRD-F6AN-DV	1-22	1-46	100% - 1%
Interfaces (1)	PHPM-3F	1-59	1-123	100% - 1%
	GRX-FDBI-16A	1-59	-	100% - 1%
EcoSystem	CS-1L-WM, CS-2L-WM, CS-1L CM, CS-2L-CM, EcoSystem ESN	64 per		100% - 1%
	Grafik Eye QS with EcoSystem	EcoSystem link		100% - 1%
	Quantum			100% - 1%

(1) For use with 3 Wire controls or Commercial Systems, RA Systems or Home Systems applications.
*Contact Lutron tech support for deganging rules when using wallbox controls on the Hi-lume A-Series LED Driver.

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



Wire Diagram for ECO System Digital Control



Compatible Crestron Dimmers / Test Results

NOTE: Consult dimmer manufacturer for detailed installation information.

20W

Date Tested: 06/02/2011. [Report Revised 6/28/2011]
Dimming Performance: Smooth and Continuous.
Operating Voltage / Power Rating: 120V / 277V, 20W
Control Type: 3 Wire Control (HOT, Dimmed HOT, Neutral)
Notes: Recommend setting MIN Level to 25% to avoid dead travel at low dimming levels. Recommend setting MAX Level to level indicated below to avoid dead travel at high end.

Crestron Model	Compatible	Min # of Fixtures Required (1)	Crestron Min-Max % Limits (2)	Measured Light Output % (3)	Notes
CLS-EXP-DIMFDB	Y	1	25-87%	<1-100%	MIN Level must be set to 25%
GLX-DIM6	Y	1	25-77%	<1-100%	
GLXX-2DIM8	Y	1	25-70%	<1-100%	

(1) Operating dimmers with less than the minimum required fixtures may cause flicker. The Max number of fixtures is limited by dimmer rating unless otherwise noted.
(2) % Level refers to the Crestron Control System Intensity. 0 power source
(4) Dimmer requires a direct connection to neutral unless otherwise noted.

10W

Date Tested: 06/02/2011.
Dimming Performance: Smooth and Continuous at 120V only.
Operating Voltage / Power Rating: 120V / 277V, 10W
Control Type: 3 Wire Control (HOT, Dimmed HOT, Neutral)
Notes: Recommend setting MIN Level to 25% to avoid dead travel at low dimming levels. Recommend setting MAX Level to level indicated below to avoid dead travel at high end. Power supply tested is NOT suitable for use at 277V. Supply cuts out regardless of LED Load or Dimmer connected.

Crestron Model	Compatible	Min # of Fixtures Required (1)	Crestron Min-Max % Limits (2)	Measured Light Output % (3)	Notes
CLS-EXP-DIMFDB	Y	1	25-87%	<1-100%	MIN Level must be set to 25% 120V operation only
GLX-DIM6	Y	1	25-77%	<1-100%	
GLXX-2DIM8	Y	1	25-70%	<1-100%	