

R2ANC

2" LED Adjustable Recessed Downlight: New Construction IC and StopAire

Specifications/Features

Housing/Mounting

Specification grade 2" downlight delivering 1700 lumens. Housing is rated for insulated ceiling (IC) and StopAire applications. For use in direct contact with insulation materials.

16 gauge galvanized steel housing painted matte black inside and out. Dual nailer hanger bars are adjustable for 16" and 24" center joists (14-1/4" to 24-1/2"). Nailer bars enable easy installation and may be extended to rest on T-bar ceilings. Optional clip-on T-bar hangers also available.

Quick-connect design enables easy installation and removal of Universal LED Module. For MVD dimming option, drivers are fully accessible from above or below the ceiling. For 12D3, MVD4, MVD6, MVD7, MVD8, and MVD9 dimming options, drivers are **only** accessible from above the ceiling.

Housing features a removable cover for driver access and utilizes a spring latch tether to provide secondary support of the Universal LED Module

Electrical

Driver with Class 2 output. RoHS Compliant. Output over voltage, over-current and short circuit protection. Approved for through-circuit wiring. Max.: (8) 12 AWG (4in/4out). Pre-wired junction box with knockouts. (7) 1/2" concentric knockouts.

Universal LED Module

Consists of a high output multi-chip LED array arranged into a single LED package, enabling precise optical control. Available in four wattage/lumen packages: 8W/800Lm, 10W/1000Lm, 14W/1300Lm, and 21W/1700Lm.

Excellent fixture-to-fixture color consistency with a 2-step MacAdam Ellipse tolerance. System designed and rated for 50,000 hours at 70% lumen maintenance. The 3000K Crisp White LED option delivers 90+ color rendering with additional violet wavelengths that enhance white visibility.

Matte black painted mechanism is constructed of 16 gauge sheet metal, an aluminum die-cast heat-sink, an acrylic TIR optic, and a thermoplastic optic holder. Three spring steel supports secure module into housing/ceiling.

Precision TIR Optics produce 14°, 26°, and 33° beam distributions. Optics are interchangeable and can be field replaced.

Module features adjustability to 45° when installed in a 1/2" to 1" thick ceiling. 30° in 1-1/2" ceiling.

With optional FA-47 accessory holder clip: Two lens/louver, 45° at 3/4" thick ceiling. Snoot, 45° at 5/8" thick ceiling.

Mechanism adjustment features white graduation marks every 15° for consistent aiming, as well as a set screw to lock tilt adjustment in place.

Dimming

All R2A adjustable downlights are available for non-dimming and dimming applications. For a list of compatible dimmers, refer to the Dimming Specifications sheet.

Trims

Specification Grade trims are available in different styles and finishes. Featuring a high quality Alzak™ finish; optically designed for reduced glare while maintaining maximum lumen output. Angle Cut, Full Cone and Pinhole trims are available.

Note: R2A series and R2RM series trims are not compatible with each other.

Warranty

This complete fixture is covered by ConTech's full five (5) year replacement guarantee after date of purchase.

Labels/Usage

cCSAus Certified using U.S. (UL) and Canadian (CSA) Standards. Suitable for damp locations.

Energy Star certified: R2ANC1 and R2ANC2 Series', 26° (M) and 33° (F) beam distributions, when used with C2302, C2304, C2302SQ, and C2304SQ trims – all finishes.

Lutron 12D3 and MVD4 options are not Energy Star certified.

The Crisp White LED option is not Energy Star certified.

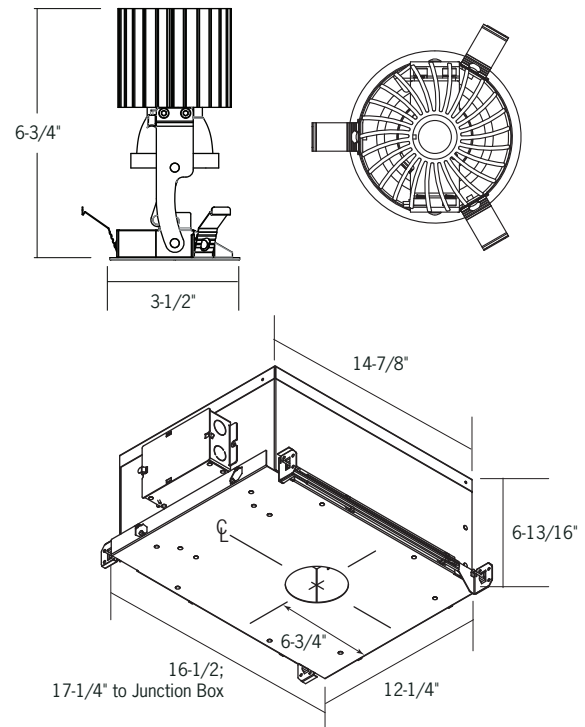
Conforms to Washington State Energy Code (WSEC) for low air infiltration.

Tested in accordance with ASTM E283 (2.0 CFM or less).

CP housings are Chicago Plenum CCEA listed.

10W Housing with MVD Driver combined with the Standard CRI (all color temperatures) or High CRI (3000K, 3500K, 4000K only) module using the C2304-CLR trim can be used to comply with 2016 Title 24 Part 6 JA8 high efficacy LED light source requirements when used with ConTech specified trims.

Assembled in the USA.



Ceiling Opening: 3-1/4"
Ceiling Thickness: 1/2" – 1-1/2"

	Series-05	Series-1	Series-2	Series-3
Input Wattage (W)	8	10	14	21
Input Current (A) 120/277	.07/.03	.08/.04	.12/.05	.18/.08
Input Voltage				
Standard Driver	90-305V AC, 50/60Hz			
Lutron HiLume®	120V AC, 50/60Hz			
Lutron Eco-System®	120-277V AC, 50/60Hz			
eldoLED ECOdrive/SOLOdrive	120-277V AC, 50/60Hz			
Color Temp	2700K/3000K/3500K/4000K			
CRI Standard/High	83 (80min) / 90+			
Driver				
Power Factor	> 0.90			
THD	< 20%			

R2ANC

2" LED Adjustable Recessed Downlight: New Construction IC and StopAire

Ordering Information

Housing/Driver Kit + Module + Trim = Complete System

Example Order: Housing:
 Module:
 Trim:

Housing

Housing	LED Series	Electrical/Dimming	Options
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
R2ANC - New Construction, IC, StopAire Housing	05 - 8W/800lm 1 - 10W/1000lm 2 - 14W/1300lm 3 - 21W/1700lm	MVD1 - 120-277V Triac, ELV and 0-10V Dimming 12D32 - Lutron Hi-Lume 1% 2-Wire LED Driver (120V Forward Phase Only) MVD42 - Lutron Hi-Lume 1% EcoSystem LED Driver with Soft-on, Fade-to-Black MVD6 ^{2,3} - 120-277V eldoLED ECOdrive 0-10V, Dim to 1% MVD7 ^{2,3} - 120-277V eldoLED ECOdrive DALI, Dim to 1% MVD8 ^{2,3} - 120-277V eldoLED SOLOdrive 0-10V, Dim to 0.1% MVD9 ^{2,3} - 120-277V eldoLED SOLOdrive DALI, Dim to 0.1%	CP4 - Chicago Plenum ER5 - Factory Installed 7W/200mA Emergency Battery Backup (Remote Test Switch)

Accessories (Standard Hanger Bars Supplied with Housing)

- RL-KIT** - Commercial Mounting Brackets
- HB-24** - 27" Flat Hanger Bars for RL-KIT
- HBC-24** - 25" C-Channel Hanger Bars for RL-KIT in Grid Ceiling Construction
- HB-30** - T-Bar Hanger Set

1. Triac and ELV Dimming for 120V only.
2. *Lutron and eldoLED Dimming Options:*
Requires above ceiling driver access
3. eldo LED Drivers are programmed for linear curve dimming as standard. For logarithmic curve dimming, please consult factory.
4. *Chicago Plenum Option:*
Cannot be used in an IC (Insulated Ceiling) application
Cannot be used with Emergency Battery Backup Option
5. *Emergency Backup Option:*
Cannot be used in an IC (Insulated Ceiling) application
Requires above ceiling battery access
550 Lumen nominal average for any Series 05, 1, 2, or 3

Module

Module	Color Temp	Beam Dist.	Accessories
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
UMOD - 2" Universal Module	27K - 2700K 30K - 3000K 35K - 3500K 40K - 4000K 27KC - 2700K, 93+ CRI 30KC - 3000K, 93+ CRI 35KC - 3500K, 93+ CRI 40KC - 4000K, 90+ CRI 30KW - 3000K, 90+ CRI Crisp White	S - 14° M - 26° F - 33°	2INOPTIC-S - 14° Beam Optic 2INOPTIC-M - 26° Beam Optic 2INOPTIC-F - 33° Beam Optic FA-47 - Black Accessory Holder Clip; Accepts Two (2) Media R2ASNR1-B - Dual Ring Snoot 60MM OD X 1" Long, Black, FA-47 required FA-16 60MM - Honeycomb Louver, FA-47 required LF16-** 60MM - 2-3/8" Diameter Lenses, FA-47 required

****Color/Pattern Legend**

- A (Amber), -B (Blue), -CL (Clear), -G (Green), -LB (Light Blue), -R (Red), -RO (Rose), -Y (Yellow), -73 (Spread Lens), -LS (Linear Spread Lens), -SL (Soft Light), -SOL (Solite), -UV (Optivex UV Filter)

Trim - See Page 3

R2ANC

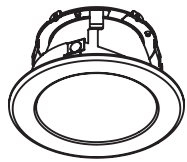
2" LED Adjustable Recessed Downlight: New Construction IC and StopAire

Ordering Information, Continued

Housing/Driver Kit + Module + Trim = Complete System Example Order: Housing:
Module:
Trim:

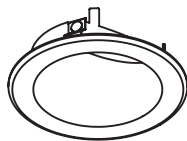
Trim

Note: R2A and R2RM Series trims are NOT compatible with each other.

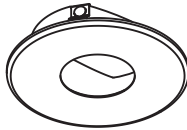


Specification Grade Trims

C2302-(CLR*, PL*, BLK, WHT)
2" Spec Grade Full Cone Reflector Trim
Wet location certified when used with an LF16 60MM lens.
Trim accepts one (1) FA-16 60MM 2-3/8" Dia. Black Honeycomb Louver or (1) LF16 60MM 2-3/8" Dia. Tempered Glass Lens. OD: 3-5/8"; ID: 2-5/8"



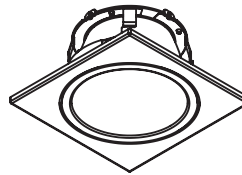
C2304-(CLR*, PL*, BLK, WHT)
2" Spec Grade Angle Cut Reflector Trim.
OD: 3-5/8"; ID: 2-5/8"



C2304WL-(CLR*, PL*, BLK, WHT)
2" Spec Grade Angle Cut Reflector Trim, Wet Location
Clear glass lens provides wet location certification
OD: 3-5/8"; ID: 2-5/8"

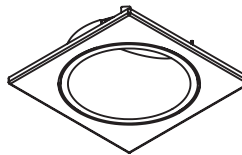
C2305-(BLK, WHT)
2" Pinhole Trim, OD: 3-5/8"; 1-1/2" Aperture.
*Available with White Painted Flange, add -WPF to part number

Finishes: -BLK (matte black), -CLR (clear), -PL (matte platinum), -WHT (matte white)

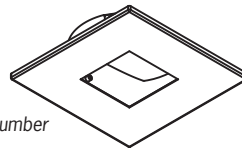


Specification Grade Trims with Square Trim Plate

C2302SQ-(CLR, PL, BLK, WHT)-(B, P)
2" Spec Grade Full Cone Reflector Trim, Black or White Trim Plate
Wet location certified when used with an LF16 60MM lens. Trim accepts one (1) FA-16 60MM 2-3/8" Dia. Black Honeycomb Louver or (1) LF16 60MM 2-3/8" Dia. Tempered Glass Lens. SQ: 3-5/8"; ID: 2-5/8"



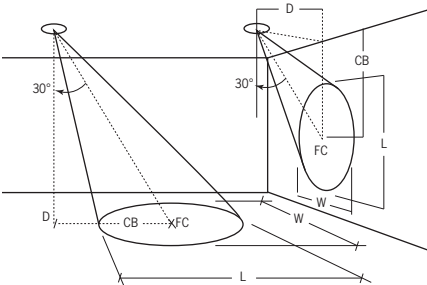
C2304SQ-(CLR, PL, BLK, WHT)-(B, P)
2" Spec Grade Angle Cut Reflector Trim, Black or White Trim Plate. SQ: 3-5/8"; ID: 2-5/8"



C2304SQWL-(CLR, PL, BLK, WHT)-(B, P)
2" Spec Grade Angle Cut Reflector Trim, Wet Location, Black or White Trim Plate. SQ: 3-5/8"; ID: 2-5/8"
Clear glass lens provides wet location certification

C2305SQ-(BLK, WHT)
2" Pinhole Trim, SQ: 3-5/8"; 1-1/2" Aperture

Photometrics



APPLICATION DATA NOTES BASED UPON R2ANC3MVD-UMOD30K(S,M,F)-C2304-CLR:

- D - Offset distance between the luminaire to the illuminated plane in feet
- CB - Projected distance between the luminaire and the center point where the beam is aimed in feet
- FC - Horizontal or vertical illuminance at the center point where the beam is aimed in footcandles
- L - Beam length corresponding to the perimeter where the luminous intensity is 50% of center beam candlepower (CBCP) in feet
- W - beam width corresponding to the perimeter where the luminous intensity is 50% of center beam candlepower (CBCP) in feet

Luminaires Aimed At 30° From Nadir

	ILLUMINANCE ON HORIZONTAL PLANE					ILLUMINANCE ON VERTICAL PLANE				
	D	CB	FC	L	W	D	CB	FC	L	W
SPOT	5	2.9	427	1.3	1.3	3	5.2	256	2	1.3
	7.5	4.3	190	2	2	4	6.9	144	2.6	1.8
	10	5.8	107	2.7	2.7	5	8.7	92	3.3	2.2
	12.5	7.2	68	3.4	3.4	6	10.4	64	3.9	2.7
MEDIUM	5	2.9	223	2.5	2.7	3	5.2	157	3.3	2.3
	7.5	4.3	99	3.8	4	4	6.9	89	4.4	3.1
	10	5.8	56	5	5.3	5	8.7	57	5.5	3.9
	12.5	7.2	36	6.3	6.6	6	10.4	39	6.6	4.7
FLOOD	5	2.9	139	3.2	3.3	3	5.2	97	3.8	2.8
	7.5	4.3	62	4.8	4.9	4	6.9	55	5.1	3.8
	10	5.8	35	6.4	6.5	5	8.7	35	6.4	4.7
	12.5	7.2	22	8.1	8.1	6	10.4	24	7.6	5.7

R2ANC

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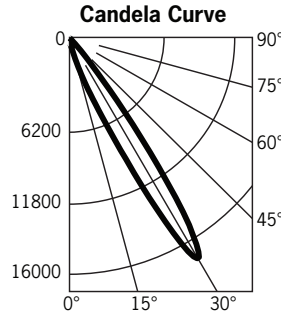
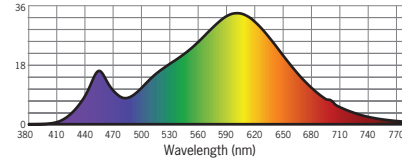
Photometrics

R2ANC3MVD-UMOD30KS-C2304-CLR

Designed for 50,000 Hour Lamp Life¹; LM-63 Test No. G17061305

Fixture Aimed at 30° from Nadir
Light Output (Fixture Delivered Lumens): 1198
Total Watts@120V: 20.6; **Lumens Per Watt:** 58.1
Center Beam Candle Power: 17,370
Color Rendering Index (CRI)²: 81
Color Temperature (CCT)³: 3061K Warm White
Spectral Power Distribution Chart⁴

LM-79 Test No. 84022



Candlepower Summary

FROM 0	CANDELA	LUMENS
0	448	
5	409	43
15	1393	163
25	9343	1373
35	9039	1784
45	262	67
55	13	6
65	0	1
75	0	0
85	0	0

Intensity Distribution

DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIAMETER (FT.)
4'	28.0	2.2
6'	12.4	3.3
8'	7.0	4.4
10'	4.5	5.5
12'	3.1	6.6
14'	2.3	7.7

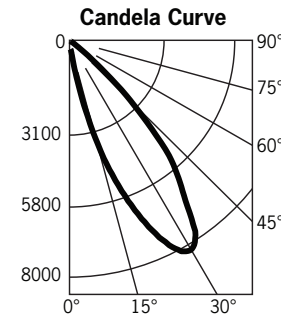
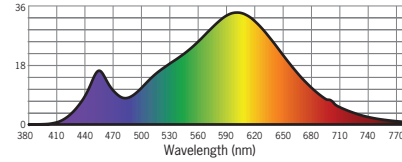
Beam Distribution: 14°

R2ANC3MVD-UMOD30KM-C2304-CLR

Designed for 50,000 Hour Lamp Life¹; LM-63 Test No. G17061406

Fixture Aimed at 30° from Nadir
Light Output (Fixture Delivered Lumens): 1740
Total Watts@120V: 20.6; **Lumens Per Watt:** 84.5
Center Beam Candle Power: 8316
Color Rendering Index (CRI)²: 81
Color Temperature (CCT)³: 3042K Warm White
Spectral Power Distribution Chart⁴

LM-79 Test No. 84023



Candlepower Summary

FROM 0	CANDELA	LUMENS
0	331	
5	479	39
15	3386	367
25	7338	1147
35	7097	1422
45	2700	661
55	103	30
65	2	2
75	0	1
85	0	0

Intensity Distribution

DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIAMETER (FT.)
4'	20.7	2.6
6'	9.2	3.9
8'	5.2	5.2
10'	3.3	6.5
12'	2.3	7.8
14'	1.7	9.1

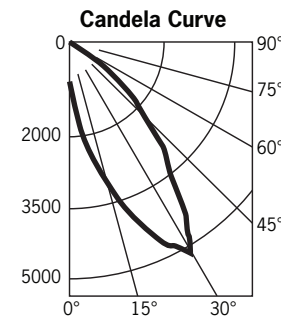
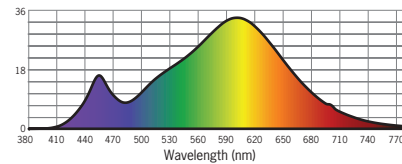
Beam Distribution: 26°

R2ANC3MVD-UMOD30KF-C2304-CLR

Designed for 50,000 Hour Lamp Life¹; LM-63 Test No. G17061312

Fixture Aimed at 30° from Nadir
Light Output (Fixture Delivered Lumens): 1760
Total Watts@120V: 20.6; **Lumens Per Watt:** 85.4
Center Beam Candle Power: 5161
Color Rendering Index (CRI)²: 81
Color Temperature (CCT)³: 3038K Warm White
Spectral Power Distribution Chart⁴

LM-79 Test No. 84024



Candlepower Summary

FROM 0	CANDELA	LUMENS
0	454	
5	1259	70
15	3022	369
25	4708	845
35	4104	910
45	2302	580
55	671	190
65	2	2
75	1	1
85	0	0

Intensity Distribution

DISTANCE (FT.)	FOOTCANDLES (FC)	BEAM DIAMETER (FT.)
4'	28.4	2.6
6'	12.6	4.0
8'	7.1	5.3
10'	4.5	6.6
12'	3.2	7.9
14'	2.3	9.2

Beam Distribution: 33°

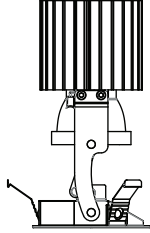
Multiplication Factors

CCT	STANDARD CRI	HIGH CRI	CRISP WHITE	SERIES 05, 8W	SERIES 1, 10W	SERIES 2, 14W	PL & WHT REFLECTORS	BLK REFLECTOR
2700K	0.94	0.70	0.79	0.45	0.58	0.76	1.0	0.94
3000K	N/A	0.75	0.79	0.45	0.58	0.76	1.0	0.94
3500K	1.0	0.81	0.79	0.45	0.58	0.76	1.0	0.94
4000K	1.0	0.87	0.79	0.45	0.58	0.76	1.0	0.94

1. Dependent on surrounding temperatures
 2. Accuracy of rendering colors
 3. Color appearance of light source
 4. Colors present within the light source

For ConTech Lighting 2" LED Round and Square Downlights: **R2A, RN2A, R2ASQ, and RN2ASQ Series**

- Incandescent 120VAC dimmers adjust the light with “forward phase control,” where the dimmer “chops” the forward part of the AC wave to deliver less or more power to the light source. No neutral wire connection required.
- Electronic low voltage 120VAC dimmers adjust the light with “reverse phase control,” where the dimmer “chops” the back part of the AC wave to deliver less or more power to the light source. Neutral wire connection required.
- 0-10V DC low voltage dimmers operate using two low voltage dimming wires that are separate from the 120V or 277V AC power. The dimmer sends a variable output voltage to the fixture based upon the dimming level. 10V corresponds to undimmed operation, 5V to 50% and so on. Switching on/off is controlled with the line voltage power (120V or 277V AC) input to the dimmer and then dimming operation is controlled with the 0-10V DC low voltage wiring connection between the dimmer and the LED driver. The control signal runs on two low voltage control wires (color coded violet and gray).
- Lutron HiLume and EcoSystem drivers provide continuous dimming from 1%-100%. For a complete list of compatible dimmers and controls, please visit www.lutron.com
- Use DALI approved controls for dimming eldoLED MVD7 (1%-100%) and MVD9 (0.1%-100%) options.



			R2ANC*, R2ARM* RN2ANC*, RN2ARM* R2ASQNC*, R2ASQRM* Dimming Options 12D, 27D, MVD Dimming Range	R2ANC, R2ANC, R2ASQNC eldoLED ECoDrive 0-10V Dimming Options MVD6 Dimming Range	R2ANC, R2ANC R2ASQNC eldoLED SOLOdrive 0-10V Dimming Options MVD8 Dimming Range
Manufacturer	Product	Model	Light Output	Light Output	Light Output
Leviton	IllumaTech	IPI06-1LZ	1%-100%	NA	NA
Leviton	SureSlide	6631-2	1%-100%	NA	NA
Leviton	Vizia	VPE06	9%-100%	NA	NA
Leviton	Trimatron	6683-JW	4%-100%	NA	NA
Leviton	Decora	6161	15%-100%	NA	NA
Leviton	SureSlide	6633-P	0%-100%	NA	NA
Leviton	IllumaTech	IPE04	6%-100%	NA	NA
Leviton	IllumaTech	IP710-DLX	NA	1%-100%	0.1%-100%
Cooper	Devine	DLC03P	1%-100%	NA	NA
Cooper	Skye	SLC03P	0%-100%	NA	NA
Cooper	Decorator	DAL06P	0%-100%	NA	NA
Pass & Seymour	Titan	CD4FB-W	NA	1%-100%	0.1%-100%
Synergy		ISD BC	NA	1%-100%	0.1%-100%
Watt Stopper	Miro Decorator	DCLV1	NA	1%-100%	0.1%-100%
Lutron	Ariadni	TGCL-153P	4%-100%	NA	NA
Lutron	Ariadni	TG-600P	11%-100%	NA	NA
Lutron	Diva	DVCL-153P	0%-100%	NA	NA
Lutron	Diva	DV600P	0%-100%	NA	NA
Lutron	Diva	DVELV303P	6%-100%	NA	NA
Lutron	Diva	DVTV	NA	1%-100%	0.1%-100%
Lutron	Faetra	FAELV500	12%-100%	NA	NA
Lutron	Lumea	LG600P	5%-100%	NA	NA
Lutron	Maestro	MAELV600	11%-100%	NA	NA
Lutron	Nova	NFTV	NA	1%-100%	0.1%-100%
Lutron	Nova T	NTFTV	NA	1%-100%	0.1%-100%
Lutron	Skylark	S-603PG	4%-96%	NA	NA
Lutron	Skylark	S600P	1%-100%	NA	NA
Lutron	Skylark	SELV300P	7%-100%	NA	NA
Lutron	Skylark	CT103P	9%-100%	NA	NA

*277V Triac dimming is not available

Notes

1. Testing was performed with a single fixture connected to dimmer.
2. Testing has been performed on these dimmers, but this does not imply any warranty of compatibility.
3. Dimming performance can be influenced by different loads, as well as variations in dimmer switches within the same model.
4. Dimmer maximum load rating with LED may differ from published traditional source dimmer ratings. Consult manufacturer for maximum dimmer information.
5. Consult factory for additional dimming information.