LITECONTROL
making light work™

DATE: LOCATION:

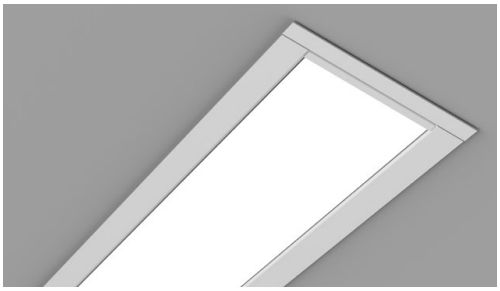
TYPE: PROJECT:

CATALOG #:

4L-R-D

MOD™ 4 LED RECESSED DIRECT

MOD X



FEATURES

- Variable Intensity technology provides a range of specifiable outputs and resulting fixture wattages
- 2 SDCM color consistency
- End cap design eliminates visible diffuser seams/gaps

DLC QPL LISTED

BUY AMERICAN SOLUTIONS
See Certification Specifications

CONTROLS

NX DISTRIBUTED INTELLIGENCE™ SpectraSync™ Color Tuning Technology

RELATED PRODUCTS

2L-R-D 3L-R-D 6L-R-D

SERVICE PROGRAMS

QS

SPECIFICATIONS

CONSTRUCTION

- Housing contructed from die-formed and welded steel with wiring knockouts in top
- End caps constructed from die-formed steel. Installs from below via magnetic interface
- End caps overlap diffuser at each fixture end to elimate gaps and LED visibility

OPTICAL PERFORMANCE

- 2 SDCM color consistency, 80 or 90 CRI
- SOF: Soft diffuse acrylic lens
- REG: ½" regressed softglo lens with painted steel inserts. Output multiplier (.77)
- BWO: White blade baffle with softglo lens overlay. Output multiplier (.70)
- ASYM: Asymmetric Highly transmissive diffuse acrylic lens with linear prisms
- BAT: "Batwing" distribution created created from highly transmissive diffuse acrylic lens with linear prisms
- DRP: 1/2" protruding soft diffuse "drop" lens

INSTALLATION

- PT Mounting: Continuous spackle trim with beaded edge welded to housing. Spackle trim allows plaster coat up to fixture edge for clean ceiling appearance
- LG/NG/SS Mounting: Side rails provide continuous mounting, lateral spacing between T-bars and allows clearance for T-bar supporting wire. For Tegular grid mount, fixture will sit level with the T-bar
- DW Mounting: Side rails allow installation into drywall slot. Visible flange is located on all 4 sides of fixture

INSTALLATION (CONTINUED)

- Illuminated corners available in 90°, 120°, 135°. One piece construction, ready to install, with diffusers that match adjoining fixtures. Corner system connectors must be used to form patterns. The length of each outside or inside illuminated corner is 12"
- Fixture weight: 3lbs/ft

ELECTRICAL

- Variable Intensity (VI) technology allows precise specification of fixture output/ wattage. Fixture will be programmed and labeled to specification. Indirect and direct hemispheres can be independently specified
- LED boards and drivers can be accessed and removed from fixture, while installed
- Entire LED module can be removed and replaced
- 1C (1 Circuit) Fixture wired for a single circuit
- Emergency Battery: 10W battery powered driver. Provides a minimum of 90 minutes of emergency lighting. Inverter-Compatible. Provided by others. Available in 4'+' fixtures

CONTROLS

- Sensors install between diffusers
- NX Distributed Intelligence™: Supports indoor and outdoor applications, wired, wireless and hybrid networked NX lighting control deployments and enabled emerging applications, such as Hubbell Lighting's SpectraSync™ Color Tuning Technology
- SpectraSync™ Color Tuning Technology: Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants

CERTIFICATIONS

- DLC® (DesignLights Consortium) Qualified - see www.designlights.org
- CSA listed for damp location
- IBEW
- AF of L
- UL924
- This product qualifies as a “designated country construction material” per FAR 52.225-11 Buy American-Construction. Materials under Trade Agreements effective 8/14/2020. See Buy American Solutions. Contact factory for configurations including SpectraSync, NX, or sensors.

WARRANTY

- LED boards - 5 years
- LED drivers (standard) - 5 years
- LED drivers (Lutron) - 3 years
- See www.litecontrol.com for details

KEY DATA	
Lumen Range Per Foot	D: 300–1100
Wattage Range Per Foot	2.6–10.0
Efficacy Range (LPW)	110–118
Rated Life (Hours)	L70: >61,000 L90: >61,000

HUBBELL Lighting

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= Service Program

Click icon for a list of Quick-Ship options

4L-R-D

MOD™ 4 LED RECESSED DIRECT

ORDERING GUIDE

Example: 4L-DW-D-8-.3-08-SOF-C1-27K-D030-D01-1C-UNV

CATALOG #

4L –

Series		Ceiling Type [1]		Fixture Distribution		Row Length (In Feet)		Row Length Adder [2]		Max Length in Row		Direct Optical Distribution	
4L	MOD	DW	Drywall	D	Direct	__'	Enter in foot increments	.3	Row length +3"	02	2', 609 mm	SOF	Soft Diffuse Lens, Lambertian
		PT	Drywall with plaster trim (trimless finish)	AD	Asymmetric Direct			.6	Row length +6"	03	3', 914 mm	REG	Regressed Diffuse Lens [3]
		LG	15/16 Grid					.9	Row length +9"	04	4', 1219 mm	BWO	Blade Baffle with Overlay [3]
		NG	9/16 Grid						Measured in inches	05	5', 1524 mm	ASYM	Asymmetric Diffuse Lens [3, 4]
		SS	9/16 Screw Slot							06	6', 1829 mm	BAT	Batwing Lens
										08	8', 2438 mm	DRP	Drop Lens [3, 5]

–

Finish/Color [6]		Color Temperature		Direct Output/ft [8]		Driver		Circuiting		Voltage	
C1	Matte White (Default)	27K	2700K [5]	D030	300 (min) [9]	D01	1% Dimming, 0-10V	1C	1 Circuit	UNV	Universal Voltage (120V through 277V)
C2	Textured Matte White	30K	3000K		*to*	D00	1% Dim-to-Off, 0-10V			347	347 Volt [5, 11]
C3	Light Silver	35K	3500K	D125	1250 (max)	D05	SpectraSync 5% Dimming, 0-10V [10]				
C4	Machined Aluminum	40K	4000K			DS1	1% Dimming w/ Soft Start, 0-10V				
C5	Carbon Black	50K	5000K [5]			DS0	1% Dim-to-Off w/ Soft Start, 0-10V				
C6	Textured Camera Black	27K9	2700K, 90 CRI [5]			LEC	Hi-lume 1% Ecosystem LED Driver				
CC	Custom Color	30K9	3000K, 90 CRI			DALI	DALI [5]				
		35K9	3500K, 90 CRI			DALIP	Powered by DALI (2.0) [5]				
		40K9	4000K, 90 CRI			NDM	Non-Dimming				
		50K9	5000K, 90 CRI [5]								
		2230TD	2200K-3000K SpectraSync™ Dim-to-Warm [7]								
		2750T	2700K-5000K SpectraSync™ Tunable White [7]								
		2765T	2700K-6500K SpectraSync™ Tunable White [7]								

OPTIONAL

Nightlight		Emergency		Thru-wiring		Patterns [5, 14]		Chicago Enviromental Air Modification	
NL	Nightlight Circuit Required. Enter quantity. 2NL = 2 nightlight circuits/row	EF	10W Emergency Battery Pack. Enter quantity. 2EF = 2 emergency batteries/row. [12]	W1	No Thru Wire	C90L	Illuminated 90° Corner	CCEA	Chicago Environmental Air Modification
				W2	Provide Normal and Emergency/ Nightlight Thru Wiring [13]	C120L	Illuminated 120° Corner		
				W3	Provide Normal Thru Wiring Only	C135L	Illuminated 135° Corner		

Control Options [5]

NX Standalone

NXS NX, PIR BT Occupancy/Daylight Sensor, Slide Mount [15, 16, 17]

NX Networked – Wired

NXE NX, Dual SmartPORTs [15, 16]

NXES NX, PIR BT Occupancy/Daylight Sensor, Slide Mount, Dual SmartPORTs [15, 16]

NX Networked – Wireless

NXSW NX Wireless, PIR BT Occupancy/Daylight Sensor [15, 16, 17]

NXWE NX Wireless Wireless Enabled [15, 16]

NX Networked – Wired/Wireless

NXSWD NX Wireless, PIR BT Occupancy/Daylight Sensor, Dual SmartPORTs [15, 16, 17]

NXWD NX Wireless, Dual SmartPORTs [15, 16]

Sensors

SD1 Daylight Sensor Required. Enter quantity. 2SD1 = 2 daylight sensors/row

SO1 Occupancy Sensor Required. Enter quantity. 2SO1 = 2 occupancy sensors/row

SZ1 Zigbee Radio Module Required. Enter quantity. 2SZ1=2 radio modules/row. Radio controls up to 10 drivers. Must be ordered with D00.

Notes:

1 Ceiling type can not be retrofitted in the field.
2 Excludes individual grid mounts
3 Not Available with Patterns.
4 Must be ordered with AD.
5 Additional lead time may be applicable. Contact factory.
6 Visit www.litecontrol.com/finishes for details.
7 Must be ordered with D05 Driver option; excludes 2' lengths and patterns.
8 Specifiable in 50 lumen increments. Reference the Performance Data Table for full performance offering and exceptions.
9 D030 not available in 2'
10 Must be ordered with 2230TD, 2750T or 2765T Option
11 Excludes Emergency Battery Pack 'EF' Option. Excludes DALI, DALIP and Lutron (LEC) Dimming Drivers
12 EF - 10W battery powered driver. Provides a minimum of 90 minutes of emergency lighting. Inverter-Compatible. Provided by others.
13 Only applicable when specified with Emergency/Nightlight.
14 Contact Factory for pattern configurations. Approval drawings required.

NX In-Fixture Control Options:

15 Not available for row mounting. Only available with 0-10V Driver options. Contact factory for Length restrictions.
16 Refer to NX Integrated Controls Reference Table for Functionality of Options.
17 NX Sensors with Bluetooth, BLE, provides remote commission only.

HUBBELL Lighting

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MOD™ 4 LED RECESSED DIRECT

CONTROLS

NX DISTRIBUTED™ INTELLIGENCE

NX Distributed Intelligence™ Lighting Controls:

Supports both indoor and outdoor applications in a variety of deployment options- wired, wireless, hybrid.
Integrates with and enables a wide array of luminaires including those with SpectraSync Color Tuning Technology.

NX INTEGRATED CONTROLS REFERENCE								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0–10V Dimming	On/off Control	Bluetooth® App Programming
NX Standalone								
NXS	NXSMP-SMI	No	Yes	Yes	Yes	Yes	Yes	Yes
NX Networked – Wired								
NXE	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R [1]
NXES	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NX Networked – Wireless								
NXSW	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXWE [2]	N/A	Yes	Yes	No	No	Yes	Yes	No [3]
NX Networked – Wired/Wireless								
NXSWD	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXWD	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R [1,3]

1 NXBTC/R needs to be plugged into an available NX SmartPort™ on the fixture network
2 Programming via App requires factory assistance
3 To program NXWE option, need to consult factory. If connected to an area controller, programming can be done from that

SpectraSync™ Color Tuning Technology:

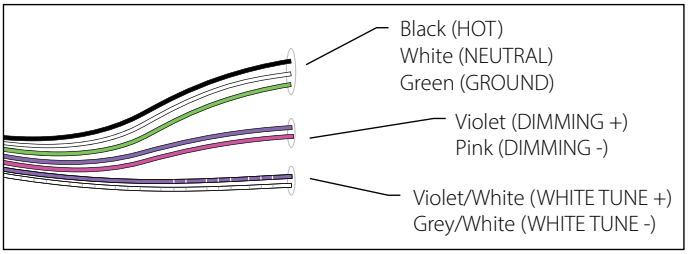
Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync™ Color Tuning Technologies.

SpectraSync™ Color Tuning Technology

SPECTRASYNC COLOR TUNING TECHNOLOGY		
Mode	Kelvin Range	Description
Dim to Warm	2200K-3000K	Mimics the familiar warming effect that occurs with traditional incandescent sources as they are dimmed
Tunable White	2700K-5000K 2700K-6500K	Offers users the ability to tailor CCT to their personal preference, enhancing task visibility, material and colors or the aesthetics of the space
Scheduled White	2700K-5000K 2700K-6500K	Mimics the rhythm of natural light or follows an alternative user-defined schedule throughout the day, enhancing an occupant's mood and well-being

SpectraSync Tunable White

Available in two options: 2750T (2700K–5000K) or 2765T (2700K–6500K).
Requires two 0–10V controllers, one for intensity and one for CCT.
Minimum 5% dimming.

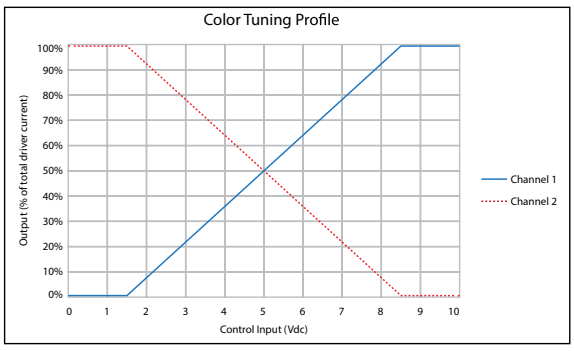


SpectraSync Tunable White luminaires are provided with two 0–10V circuits. The violet and pink circuit is for wiring to any qualified 0–10V controller for dimming. The violet/white and grey/white circuit is for wiring to any qualified 0–10V controller for Tunable White CCT control.

Controller Manufacturer Data

SpectraSync Tunable White was designed to be used with sinking style dimmers (provided by others) and is compatible with:

- Hubbell Control Solutions (HCS): NX Distributed Intelligence™ Room Controllers (NXRC) and In-fixture Controllers (NXFM)
- Lutron: DVTV, DVSTV, and NFTV dimmers
- Wattstopper: ADF120277 and CD4BL (Titan) dimmers



NX Design & Application Guide
NX Brochure
SpectraSync
NX Solutions Guide

HUBBELL Lighting

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4L-R-D

MOD™ 4 LED RECESSED DIRECT

PERFORMANCE DATA TABLE

The table below shows the delivered lumens for the various lumen outputs. Use this chart in connection with the output multiplier capability to deliver any output required.

Nomenclature	Lumens/Ft	W/Ft	Efficacy
Downlight			
D030 (min)	300	2.6	118
D035	350	3.0	118
D040	400	3.4	118
D045	450	3.8	118
D050	500	4.2	117
D055	550	4.7	117
D060	600	4.8	116
D065	650	5.6	116
D070	700	6.1	116
D075	750	6.5	115
D080	800	7.0	115
D085	850	7.5	113
D090	900	7.9	113
D095	950	8.5	112
D100	1000	9.0	112
D105	1050	9.4	111
D110	1100	10.0	110

(wattage may vary up to 5% from published)

Output Restrictions

Driver options listed below are not available for the output and length as shown.

Restrictions - Direct		Output LPA				
		300	350	400	450	500
Length (feet)	2	LEC, DALI, 347V	LEC, DALI, 347V	DALI, 347V	DALI, 347V	DALI, 347V
	3	DALI, 347V	DALI, 347V			

Output Multiplier Table

Photometrics for the 4L are published here at a nominal 3500K temperature. This table may be used to approximate the lumen values at different Kelvin temperatures. Power consumption would stay the same.

Option	2700K	3000K	3500K	4000K	5000K	2700K 90 CRI	3000K 90 CRI	3500K 90 CRI	4000K 90 CRI	5000K 90 CRI
SOF	0.95	0.98	1.00	1.03	1.05	0.83	0.85	0.88	0.90	0.93
REG	0.73	0.75	0.77	0.79	0.81	0.64	0.65	0.68	0.69	0.72
BWO	0.67	0.69	0.70	0.72	0.76	0.63	0.53	0.47	0.42	0.39
ASYM	0.95	0.98	1.00	1.03	1.05	0.83	0.85	0.88	0.90	0.93
BAT	0.95	0.98	1.00	1.03	1.05	0.83	0.85	0.88	0.90	0.93
DRP	0.95	0.98	1.00	1.03	1.05	0.83	0.85	0.88	0.90	0.93
LPAD	0.86	0.88	0.90	0.93	0.95	0.75	0.77	0.79	0.81	0.84

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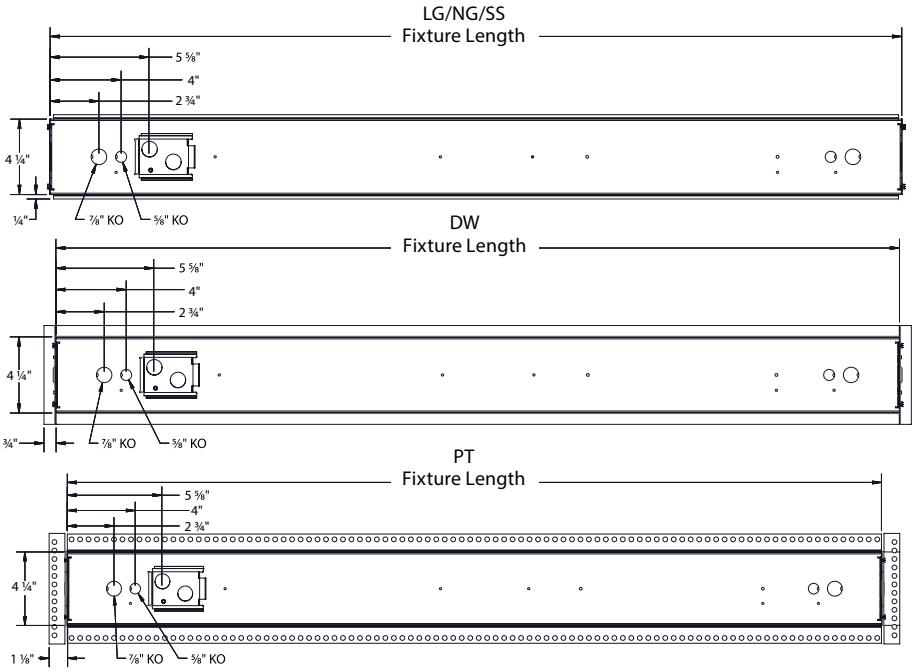
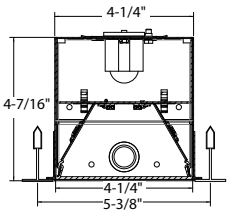
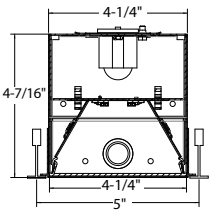
MOD™ 4 LED RECESSED DIRECT

DIMENSIONS

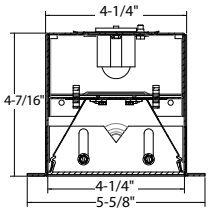




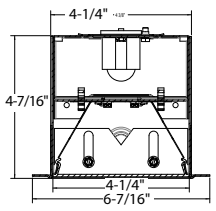
4L-LG



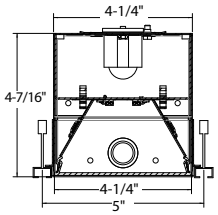
4L-NG



4L-DW



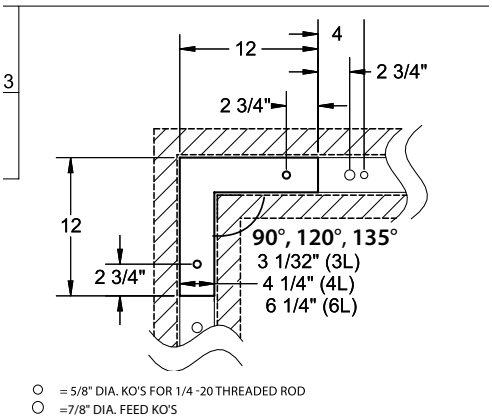
4L-PT



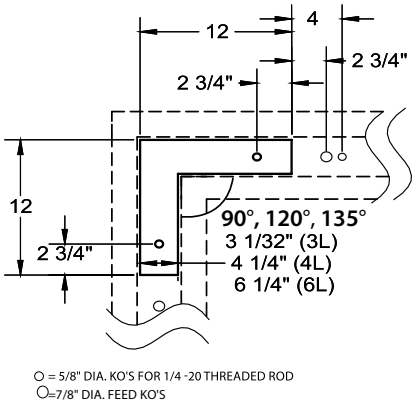
4L-SS

INDIVIDUAL MOUNTING

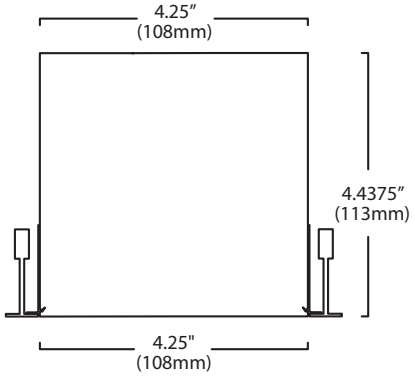
Drywall



Grid



PATTERNS



END CAP VIEW

HUBBELL Lighting

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4L-R-D

MOD™ 4 LED RECESSED DIRECT

PHOTOMETRY

4L-R-D-04-SOF-X-CX-35K-D100

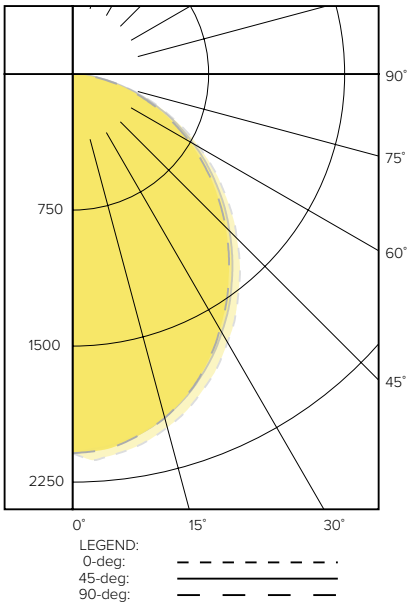
LUMINAIRE DATA

Description	**4L Recessed, Soft Diffuse Lens, 3500K**
Delivered Lumens	**4000**
Watts	
Efficacy	**112**
Mounting	**Recessed**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0–40	1885.80	47.1
0–60	3214.60	80.4
0–90	4000.10	100.0
0–180	4000.10	100.0

POLAR GRAPH



4L-R-AD-XX-XX-ASYM-CX-35K-D050

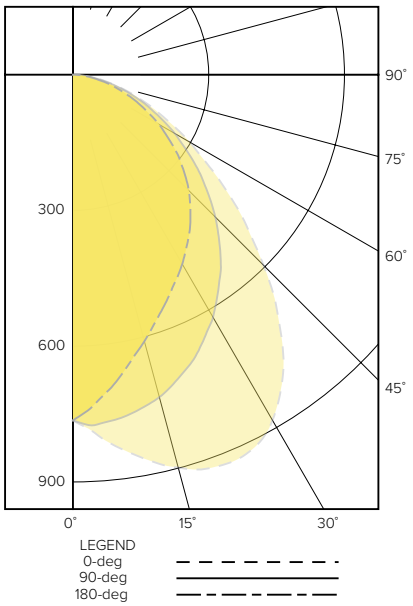
LUMINAIRE DATA

Description	**4L Recessed, Soft Diffuse Lens, 3500K**
Delivered Lumens	**2000**
Watts	
Efficacy	**124**
Mounting	**Recessed**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0–40	982.00	48.70
0–60	1658.00	82.30
0–90	2016.00	100.00
0–180	2016.00	100.00

POLAR GRAPH



HUBBELL Lighting

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4L-R-D

MOD™ 4 LED RECESSED DIRECT

PHOTOMETRY

4L-X-D-04-BAT-CX-35K-D100

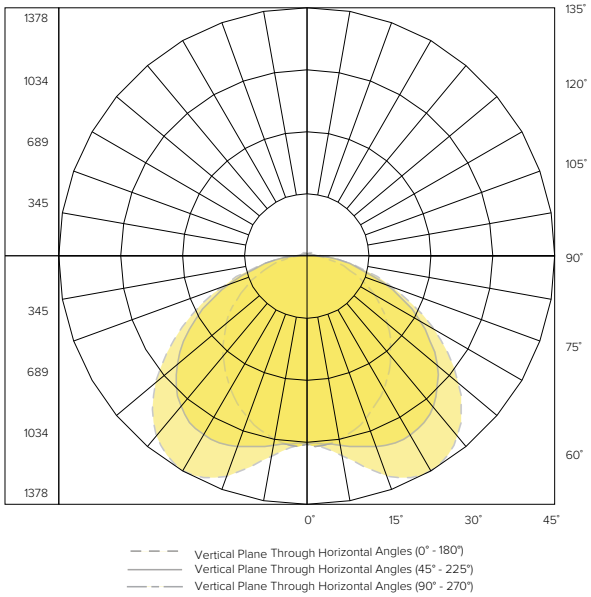
LUMINAIRE DATA

Description	**4L Recessed, Batwing Lens, 3500K**
Delivered Lumens	**4000**
Watts	
Efficacy	**111**
Mounting	**Recessed**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0–40	1625.84	40.64
0–60	3056.77	76.42
0–90	3948.20	98.7.0
0–180	4000.17	100.0

POLAR GRAPH



4L-X-D-04-DRP-CX-35K-D100

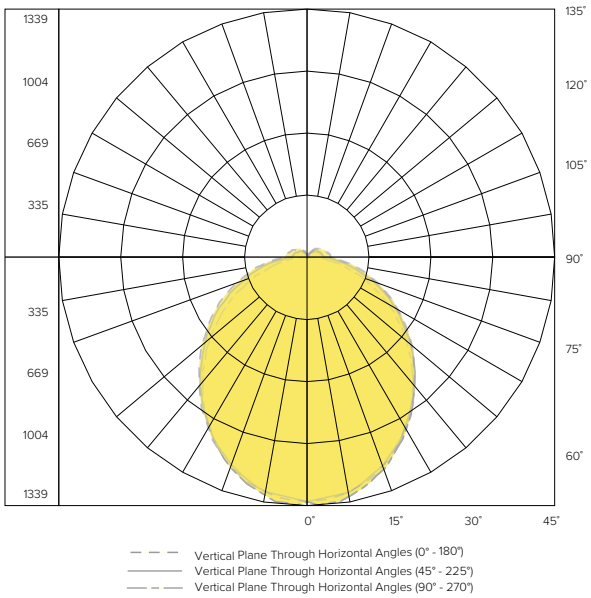
LUMINAIRE DATA

Description	**4L Recessed, Drop Lens, 3500K**
Delivered Lumens	**4000**
Watts	
Efficacy	**110**
Mounting	**Recessed**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0–40	1613.08	40.60
0–60	2797.69	70.50
0–90	3677.99	92.70
0–180	3969.32	100.0

POLAR GRAPH



HUBBELL Lighting

LITECONTROL
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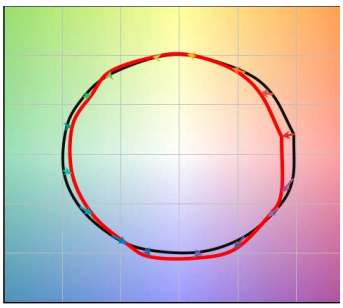
4L-R-D

MOD™ 4 LED RECESSED DIRECT

TM-30 DATA

COLOR VECTOR GRAPHIC



*Graphics shown are at 35K

Reference Illuminant — Test Source

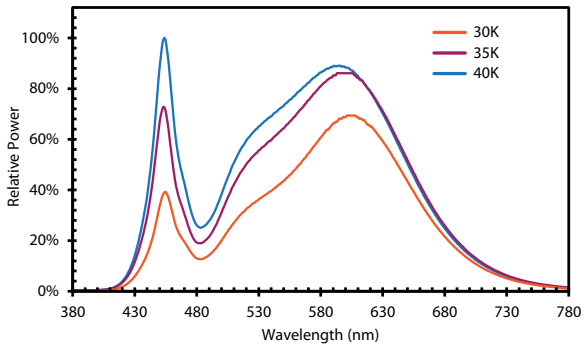
COLOR DISTORTION GRAPHIC

TEST RESULTS - 3500K	
Value	80+ CRI
CCT (K)	3494
CIE R_a	83
D_{UV}	-0.0004
R_f	82
R_g	96
x	0.4052
y	0.3898

COLOR CHARACTERISTICS:

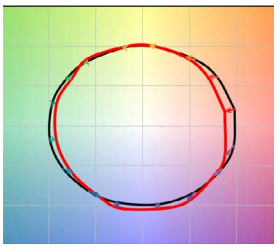
Value	Ordering Code		
	30K	35K	40K
Rf	83	82	82
Rg	96	96	96
CCT (K)	3009	3494	3975
Duv	-0.0009	-0.0004	-0.0003
x	0.435	0.4052	0.3814
y	0.4012	0.3898	0.3768
CIE Ra	83	83	84

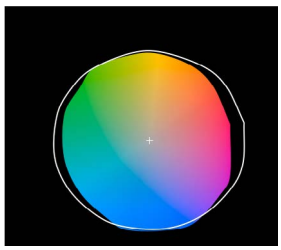
SPECTRAL DISTRIBUTION:



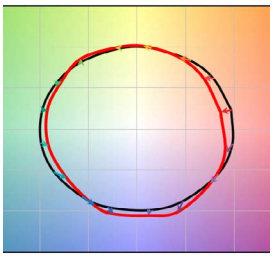
COLOR VECTOR GRAPHIC:

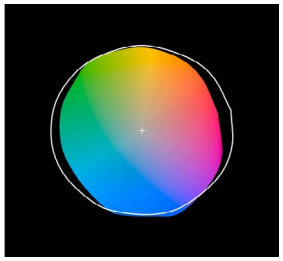
30K



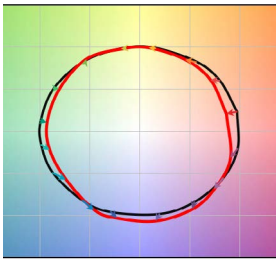


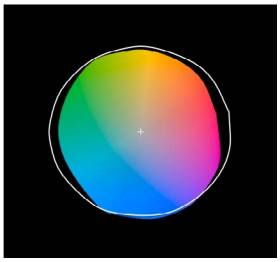
35K



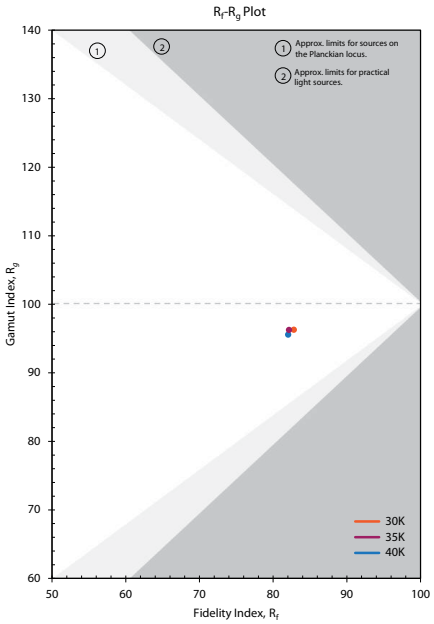


40K





COLOR GAMUT/FIDELITY PLOT:



CRI: 80 MINIMUM

CCT	CRI	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
30K	83	82	91	97	81	82	89	84	62	13	79	79	69	84	99
35K	83	81	89	95	81	81	85	86	65	13	73	79	62	83	97
40K	84	82	90	94	82	82	85	87	68	17	74	80	60	84	97

HUBBELL Lighting

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

4L-R-D

MOD™ 4 LED RECESSED DIRECT

ADDITIONAL INFORMATION

Driver

D01	100%- 1% dimming range. Fixture will be wired for low voltage 0-10V dimming control.
D00	Dim-to-Off 100%-1% dimming range. Fixture will be wired for low voltage 0-10V dimming control.
D05	100%-5% dimming range, Fixture will be wired for low voltage 0-10V dimming control. Only applicable if either 2230TD, 2750T or 2765T is selected.
DS1	Soft-Start 100%-1% dimming range. Fixture will be wired for low voltage 0-10V dimming control.
DS0	Soft-Start Dim-to-Off 100%-1% dimming range. Fixture will be wired for low voltage 0-10V dimming control.
LEC	Hi-Lume 1% EcoSystem LED Driver with Soft-On, Fade-to-Black dimming technology.
DALI	DALI compatible.
DALIP	Self-Powered DALI bus (e.g. DEXAL)
NDM	Non-dimming. Fixture will be wired for fixed light output.

Rated Life

Tested in accordance to LM79-2008 & derived from EPA TM-21 calculator
L70: 280,000 (calculated per TM-21 extrapolated curve)
L70: >61,000 (reported per TM-21/LM80 6x's limitation)
L90: 72,000 (calculated per TM-21 extrapolated curve)
L90: >61,000 (reported per TM-21/LM80 6x's limitation)

Rated Life (Driver)

Standard = 100,000 hours
Lutron = 50,000 hours