

## FEATURES

- Vi Technology for specifiable output/wattage
- Hinged center media tray allows specification of center diffusers
- Available in 2' x 2', 2' x 4' and 1' x 4' sizes
- SpectraSync™ Color Tuning Technology available
- NX Distributed Intelligence™ wired and wireless controls capability available
- PowerHUBB™ PoE Lighting and Control options available



## RELATED PRODUCTS

⌘ [VORA 50L](#)

⌘ [SAE301](#)

## CONTROL TECHNOLOGY



## SPECIFICATIONS

### CONSTRUCTION

- Housing: Die-formed steel
- Wiring access plate on top of housing for flexible conduit attachment
- Reflectors: High-reflectance prepaint matte white steel
- Media tray: Extruded aluminum
- Tri-lens aesthetic

### OPTICAL PERFORMANCE

- 3 SDCM color consistency, 80 CRI
- Chambered center channel for excellent source diffusion

### INSTALLATION

- Intended for installation in exposed, inverted T-bar grid ceiling (NEMA type G)
- Holes in housing provided for wire-on-chain mounting support to building structure

### ELECTRICAL

- Flex Whip: 3/8" flex conduit. 6' length. 90° connector on fixture end. 18 gauge wiring.
- LED boards and drivers can be accessed and removed from below fixture, while installed
- LED boards can be replaced either individually or as part of module

### CONTROLS

- Lutron Vive- 0-10V Wireless RF Fixture Module for 1A 0-10V
- NX Distributed Intelligence™ provides options for standalone and networked integrated sensor with wired or wireless connectivity for NX system deployments
- NX is available in U.S., Canada and Mexico. For other locations consult factory

### CERTIFICATIONS

- CSA listed for damp locations
- IBEW
- AF of L
- 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 Act 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](http://www.litecontrol.com) for details

KEY DATA	
Lumen Range	1,600 - 5,900
Wattage Range	13.0 - 45.0
Efficacy Range (LPW)	122 - 137
Rated Life (Hours)	L70: >60,000 L90: up to 91,000

## ORDERING GUIDE

Example: LFHL-G-D-14-SOF-C1-30K-D16-D01-UNV-EF-CCEA-FW

CATALOG #

Series	Ceiling Type <sup>7</sup>	Distribution	Size	Diffuser	Finish/Color <sup>6</sup>
LHFL LHF LED	<b>G</b> 15/16" Grid Ceiling <b>NG</b> 3/16" Narrow Face Grid Ceiling <b>SS</b> 3/16" Screw Slot Grid Ceiling <b>DW</b> Drywall Ceiling	<b>D</b> Direct	<b>14</b> 1' x 4' Fixture <b>22</b> 2' x 2' Fixture <b>24</b> 2' x 4' Fixture	<b>SOF</b> Soft Diffuse <b>BWO</b> Blade Baffle with Overlay <b>PRFO</b> Perforated Blade with Overlay	<b>C1</b> Matte White

Color Temperature	Output <sup>4</sup>	Driver	Voltage
<b>30K</b> 3000K	<b>D16 (min)</b> 1600	<b>D01</b> 1% Dimming, 0-10V	<b>UNV</b> Universal Voltage (120V through 277V)
<b>35K</b> 3500K	to	<b>D00</b> 1% Dim-to-Off, 0-10V	
<b>40K</b> 4000K	<b>D59 (max)</b> 5900	<b>D05</b> 5% Dimming, 0-10V <sup>3</sup>	<b>347</b> 347 Volt <sup>1,5</sup>
<b>2750T</b> 2700K - 5000K SpectraSync™ Tunable White <sup>2</sup>		<b>DS1</b> 1% Dimming w/ Soft Start, 0-10V	
<b>2765T</b> 2700K - 6500K SpectraSync™ Tunable White <sup>2</sup>		<b>DS0</b> 1% Dim-to-Off w/ Soft Start, 0-10V	
		<b>DALI</b> DALI <sup>1</sup>	
		<b>DALIP</b> Powered DALI (2.0) <sup>1</sup>	
		<b>NDM</b> Non-Dimming	

## OPTIONAL

Emergency	Chicago Environmental Air Modification	Flex Whip	Control Options
<b>EF</b> 10W Emergency Battery Pack <sup>8</sup>	<b>CCEA</b> Chicago Environmental Air Modification	<b>FW</b> Flex Whip <b>FWC</b> Flex Whip Field-installed <b>FWPR</b> Flex Whip, Plenum Rated (for CCEA only) <b>FWPRC</b> Flex Whip, Plenum Rated (for CCEA only) Field-installed	<b>NX Standalone</b> <b>NXS</b> NX, PIR BT Occupancy/Daylight Sensor, Slide Mount <sup>1,9,10</sup> <b>NX Networked – Wired</b> <b>NXE</b> NX, Dual SmartPorts <sup>1,9,10</sup> <b>NXES</b> NX, PIR BT Occupancy/Daylight Sensor, Slide Mount, Dual SmartPORTs <sup>1,9,10</sup> <b>NX Networked – Wireless</b> <b>NXSW</b> NX Wireless, PIR BT Occupancy/Daylight Sensor <sup>1,9,10</sup> <b>NXWE</b> NX Wireless Wireless Enabled <sup>1,9,10</sup> <b>NX Networked – Wired/Wireless</b> <b>NXSWD</b> NX Wireless, PIR BT Occupancy/Daylight Sensor, Dual SmartPORTs <sup>1,9,10</sup> <b>NXWD</b> NX Wireless, Dual Smart Ports <sup>1,9,10</sup> <b>Lutron Vive</b> <b>LV</b> 0-10V Wireless RF Fixture Module <sup>11,12</sup>

### Notes:

- Additional lead time may be applicable. Contact factory.
- Must be ordered with D05 Driver option; excludes 2' and 3' lengths
- Must be ordered with 2750T or 2765T option
- Specifiable in 100 lumen/ft increments. Reference the Performance Data Table for full performance offering and exceptions.
- Excludes Emergency Battery Pack 'EF' Option. Excludes DALI and DALIP Dimming Drivers.
- Visit [www.litecontrol.com/finishes](http://www.litecontrol.com/finishes) for details.
- Ceiling Type cannot be retrofitted in the field
- Enter quantity. Provides a minimum of 90 minutes of emergency lighting. Inverter-Compatible. Provided by others.

### NX In-Fixture Control Options:

- Not available for row mounting; Only available with 0-10V Driver options; Contact factory for length restrictions
- Refer to NX Integrated Controls Reference Table on page 3 for Functionality of Options.

### Third-Party Control Options:

- Excludes Ceiling type 'DW' option.
- Registered trademark of Daintree Networks, used by permission.

## CONTROLS

### 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
<b>NX Standalone</b>								
NXS	NXSMP-SMI	No	Yes	Yes	Yes	Yes	Yes	Yes
<b>NX Networked – Wired</b>								
NXE	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R <sup>1</sup>
NXES	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>NX Networked – Wireless</b>								
NXSW	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXWE <sup>2</sup>	N/A	Yes	Yes	No	No	Yes	Yes	No <sup>3</sup>
<b>NX Networked – Wired/Wireless</b>								
NXSWD	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXWD	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R <sup>1,3</sup>

<sup>1</sup> NXBTC/R needs to be plugged into an available NX SmartPort™ on the fixture network

<sup>2</sup> Programming via App requires factory assistance

<sup>3</sup> To program NXWE option, need to consult factory. If connected to an area controller, programming can be done from that

### SpectraSync™ Color Tuning Technology:

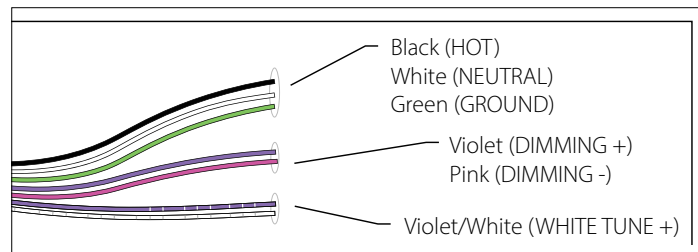
Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync™ Color Tuning Technologies.



SPECTRASYNCH COLOR TUNING TECHNOLOGY		
Mode	Kelvin Range	Description
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.

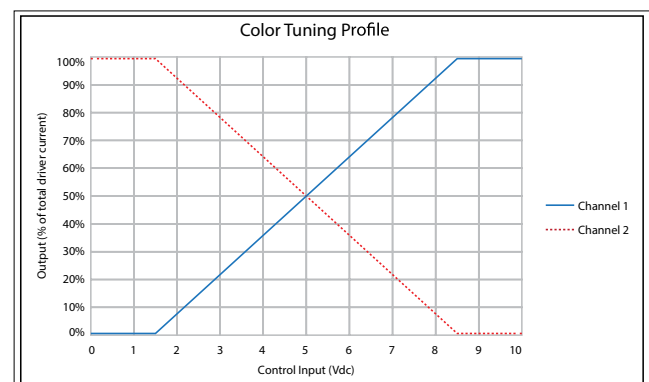


SpectraSync Tunable White luminaires are provided with two 0–10V circuits. The violet and pink circuit is for wiring to any qualified 0–10V controller for dimming. The violet/white and grey/white circuit is for wiring to any qualified 0–10V controller for Tunable White CCT control.

### 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: DDTV, DVSTV, and NDTV dimmers
- Wattstopper: ADF120277 and CD4BL (Titan) dimmers



DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

## 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/Fix	2x2		2x4		1x4	
		W/unit	Efficacy	W/unit	Efficacy	W/unit	Efficacy
D16 (min)	1600*	13.0	123	n/a	n/a	n/a	n/a
D17	1700*	13.6	125	n/a	n/a	n/a	n/a
D18	1800*	14.3	126	n/a	n/a	n/a	n/a
D19	1900*	15.0	127	n/a	n/a	n/a	n/a
D20	2000	15.7	127	14.9	134	15.8	127
D21	2100	16.4	128	15.6	135	16.5	127
D22	2200	17.1	129	16.2	135	17.2	128
D23	2300	17.8	129	16.9	136	18.0	128
D24	2400	18.6	129	17.6	136	18.7	128
D25	2500	19.3	129	18.3	137	19.4	129
D26	2600	20.1	130	19.0	137	20.2	129
D27	2700	20.8	130	19.7	137	20.9	129
D28	2800	21.6	130	20.4	137	21.7	129
D29	2900	22.4	130	21.1	137	22.4	129
D30	3000	23.2	129	21.8	137	23.2	129
D31	3100	24.0	129	22.6	137	24.0	129
D32	3200	24.8	129	23.3	137	24.8	129
D33	3300	25.6	129	24.0	137	25.6	129
D34	3400	26.5	128	24.8	137	26.4	129
D35	3500	27.3	128	25.5	137	27.2	129
D36	3600	28.2	128	26.2	137	28.0	129
D37	3700	29.1	127	27.0	137	28.8	128
D38	3800	29.9	127	27.8	137	29.7	128
D39	3900	30.8	126	28.5	137	30.5	128
D40	4000	31.7	126	29.3	137	31.4	128
D41	4100	32.7	126	30.1	136	32.2	127
D42	4200	33.6	125	30.9	136	33.1	127
D43	4300	34.5	124	31.6	136	33.9	127
D44	4400	35.5	124	32.4	136	34.8	126
D45	4500	36.5	123	33.2	135	35.7	126
D46	4600	37.4	123	34.0	135	36.6	126
D47	4700	38.4	122	34.8	135	37.5	125
D48	4800**	n/a	n/a	35.7	135	n/a	n/a
D49	4900**	n/a	n/a	36.5	134	n/a	n/a
D50	5000**	n/a	n/a	37.3	134	n/a	n/a
D51	5100**	n/a	n/a	38.1	134	n/a	n/a
D52	5200**	n/a	n/a	39.0	133	n/a	n/a
D53	5300**	n/a	n/a	39.8	133	n/a	n/a
D54	5400**	n/a	n/a	40.7	133	n/a	n/a
D55	5500**	n/a	n/a	41.5	132	n/a	n/a
D56	5600**	n/a	n/a	42.4	132	n/a	n/a
D57	5700**	n/a	n/a	43.3	132	n/a	n/a
D58	5800**	n/a	n/a	44.1	131	n/a	n/a
D59 (max)	5900**	n/a	n/a	45.0	131	n/a	n/a

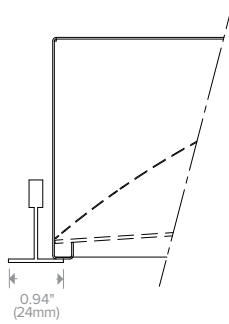
(wattage may vary up to 5% from published)

\*2x2 only

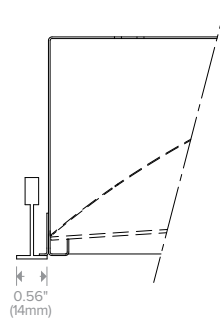
\*\*2x4 only

## DIMENSIONS

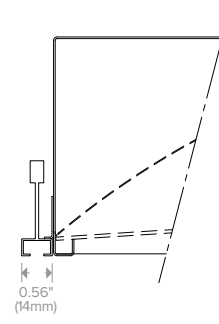
### Grid Mounting Options



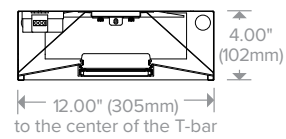
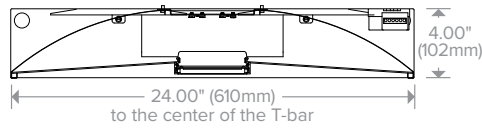
**G Grid**



**NG Narrow Face Grid**



**SS Screw Slot**



## PHOTOMETRY

### LHFL-G-D-22-SGL-C1-35K-D37-D01-UNV

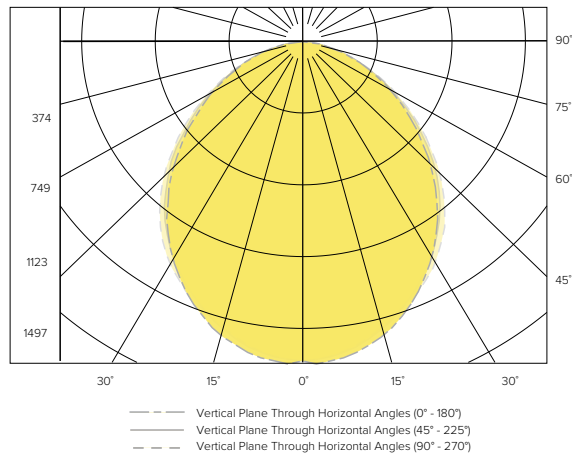
#### LUMINAIRE DATA

Test No.	20.00262
Description	2' x 2' Litewave LHF LED Recessed Troffer
Delivered Lumens	3706
Watts	29W
Efficacy	127.4
Mounting	Recessed

#### ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1805	48.7
0-60	3053	82.4
0-90	3706	100.0
0-180	3706	100.0

#### POLAR GRAPH



### LHFL-G-D-24-SGL-C1-35K-D42-D01-UNV

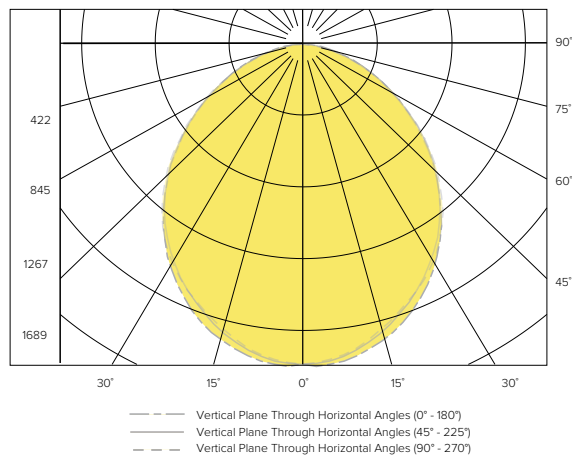
#### LUMINAIRE DATA

Test No.	20.00265
Description	2' x 4' Litewave LHF LED Recessed Troffer
Delivered Lumens	4214
Watts	31W
Efficacy	136.4
Mounting	Recessed

#### ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	2038	48.4
0-60	3461	82.1
0-90	4214	100.0
0-180	4214	100.0

#### POLAR GRAPH



### LHFL-G-D-14-SGL-C1-35K-D36-D01-UNV

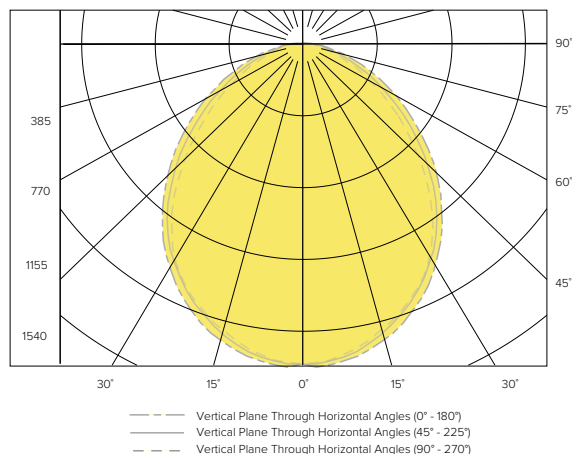
#### LUMINAIRE DATA

Test No.	20.00268
Description	1' x 4' Litewave LHF LED Recessed Troffer
Delivered Lumens	3581
Watts	28W
Efficacy	129.3
Mounting	Recessed

#### ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-40	1841	51.4
0-60	3018	84.3
0-90	3581	100.0
0-180	3581	100.0

#### POLAR GRAPH



## TM-30 DATA

	Ra	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
3000K	83	82	92	96	81	83	90	83	60	10	81	81	76	84	98
3500K	83	90	90	95	83	83	86	86	67	21	77	81	70	84	98
4000K	83	90	95	84	83	86	87	87	67	15	76	83	68	84	97

\*Graphics shown for 80 CRI

## ADDITIONAL INFORMATION

### Output (VI Technology):

Variable Intensity (VI) technology allows precise specification of fixture output/wattage. Fixture will be programmed and labeled to specification. See Performance Data Table section for available increments.

### Sensor

NX	NX sensors install in center diffuser
LV	Lutron Vive 0-10V Wireless RF Fixture Module for 1A 0-10V

See separate [LC-Controls](#) spec sheet for additional details.

### 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.
DALI	DALI compatible.
DALIP	Self-Powered DALI bus (e.g. SR, DEXAL).
NDM	Non-dimming. Fixture will be wired for fixed light output.

### Diffuser

SOF	High efficiency soft diffuse acrylic diffuser.
BWO	White baffle with SOF overlay (4% delivered lumen reduction).
PRFO	Perforated metal with SOF overlay (28% delivered lumen reduction).

### Fixture Weight:

13.5 lbs (2x2)

## LFHL

LFH LED RECESSED TROFFER

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

### ADDITIONAL INFORMATION CONTINUED

**Rated Life (LED Board):**

Tested in accordance to LM79-2008

L70 calculated (per TM-21 extrapolated curve):

≤ 4200 lm= 340,000 hours

> 4200 lm= 96,000 hours

L70 reported (per TM-21/LM80 6x's limitation):

> 60,000 hours

L90 calculated (per TM-21 extrapolated curve):

≤ 4200 lm=91,000 hours

>4200 lm= 27,000 hours

**Rated Life:**

Standard: 100,000 hours