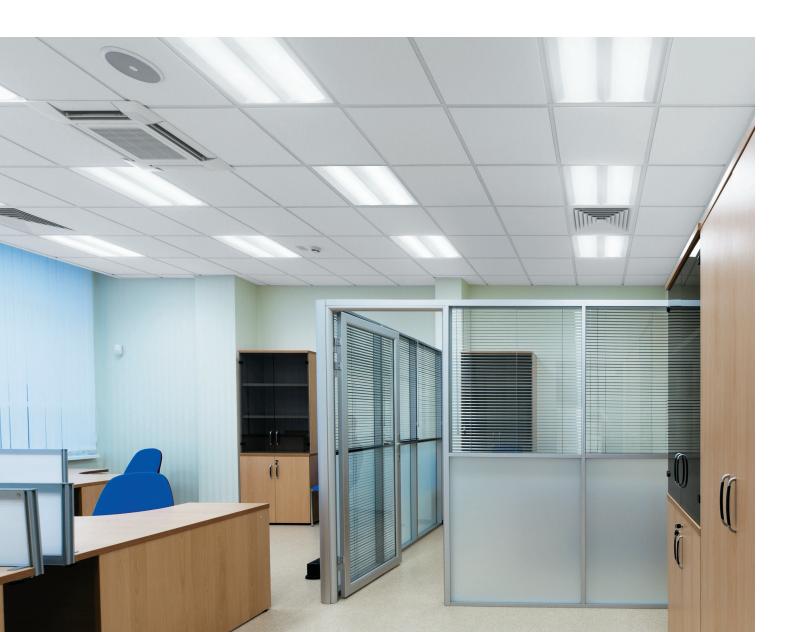


# A new approach

Dualed is a highly efficient, architecturally styled recessed LED luminaire designed with a minimalistic strategy to achieve sustainable objectives. It combines an extremely low profile with clean aesthetics and is powered by highly efficient advanced LED sources, providing the utmost in comfortable efficient lighting. Driver and integral control options ensure optimization for every application. The concept is so efficient that the advantages reach beyond simply light levels and input power. Designed for excellent visual comfort, Dualed is perfect for a wide variety of general applications like offices, schools, retail, or healthcare.



# A minimalistic strategy maintaining maximum performance, creating unparalleled value.



#### It satisfies your needs

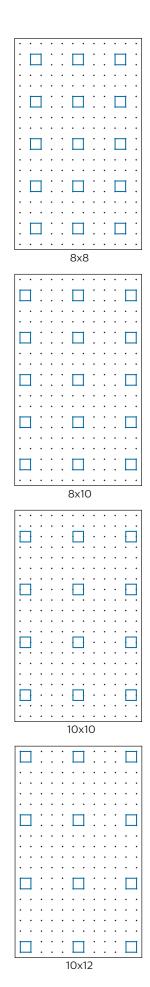
- Four 1x4 lumen packages from 2,700 to 4,100 delivered lumens, four 2x2 lumen packages from 2,700 to 4,400 delivered lumens, and four 2x4 lumen packages from 4,300 to 7,300 delivered lumens optimize performance for any application.
- High lumen options and diffuse photometric distribution allow wide luminaire spacing to reduce luminaire count and installation labor for lower overall costs.
- Luminaire efficacy as high as 105 LPW significantly reduces energy usage compared to conventional sources.
- · High CRI sources provide excellent color rendering.
- Controlled lighting in the upper room spaces balances brightness and creates the impression of a larger, brighter environment without glare.
- High efficiency, long life electrical system has a minimum life rating of 50,000 hours (L70).
- 5 year luminaire warranty covers luminaire as well as board and driver (emergency driver carries a 3 year warranty).
- Standard 0-10V dimming, step dimming and integral emergency options are available to add even more application flexibility.

### And solves your problems

- Uncomplicated design requires few parts outside of the electrical system and associated hardware, and combines with the slender housing to create a number of benefits:
  - Less material required to manufacture the luminaire
  - Less packaging required
  - Luminaire weight is reduced
  - Less energy is required for construction and assembly
- More luminaires can be shipped on a truck to reduce fuel use and emissions
- Clean simple aesthetics create a fresh variation of the popular dual chamber configuration.
- Soft opal diffusers with large luminous area minimize apparent brightness and provide high visual comfort.
- · Slender 2-11/16" housing requires little plenum space.
- LED boards and driver are easily accessible from below without tools. Multiple LED boards are individually replaceable via plug in connectors to ensure a long service life.
- Integral sensor options are available for occupancy and/or daylight harvesting for additional energy savings with easy installation and no reduction of LED performance or life (SpaceWise technology).
- · Listed for use in insulated ceilings (Type IC.)
- Painted after fabrication matte white powder coating creates a durable high quality finish with no unfinished edges to create an installation hazard or potential for corrosion.



Integral sensor options available



# Sample applications

#### Open Area:

The controlled high angle lighting distribution of DuaLED provides diffuse uniform lighting in large spaces and creates significant vertical illumination. Wide luminaire spacing is possible.

#### 2x2 sample area:

40' long x 24' wide x 9' ceiling 80/50/20 reflectances

Calculation grid at 2.5' Maintenance factors 0.85 LLD, 0.94 LDD, 0.799 LLF

Uniformity is excellent at 2.2 or less, even when moving to extended 10'x12' luminaire spacing. High delivered lumen options allow the extended spacing to provide IES recommended illumination levels for many tasks. Smooth, uniform lighting at recommended light levels with good vertical illumination is available with power density between 0.5 and 0.85 Watts per square foot, satisfying all known energy code.

Spacing	Number of Luminaires	Model	Maintained Average Illumination	Max./Min.	Input Power per lum.	Watts/ Sq. foot				
	Open Area									
8'x8'	15	2DLG27L840-2-D-UNV-DIM	35.4 fc	2.7	26.4 W	0.39				
		2DLG34L840-2-D-UNV-DIM	37.7 fc	37.7 fc 2.7 35.4W		0.53				
		2DLG38L840-2-D-UNV-DIM	41.1 fc	2.7	38.6 W	0.57				
		2DLG44L840-2-D-UNV-DIM	46.6 fc	2.7	45.2W	0.67				
8'x10'	15	2DLG27L840-2-D-UNV-DIM	28.8 fc	3.0	26.4 W	0.31				
		2DLG34L840-2-D-UNV-DIM	30.7 fc	3.0	35.4W	0.42				
		2DLG38L840-2-D-UNV-DIM	33.5 fc	3.0	38.6 W	0.46				
		2DLG44L840-2-D-UNV-DIM	37.9 fc	3.0	45.2W	0.54				
10'x10'	12	2DLG27L840-2-D-UNV-DIM	27.1 fc	2.4	26.4 W	0.31				
		2DLG34L840-2-D-UNV-DIM	28.9 fc	2.4	35.4W	0.42				
		2DLG38L840-2-D-UNV-DIM	31.5 fc	2.4	38.6 W	0.46				
		2DLG44L840-2-D-UNV-DIM	35.8 fc	2.4	45.2W	0.54				
10'x12'	12	2DLG27L840-2-D-UNV-DIM	25.7 fc	1.8	26.4 W	0.31				
		2DLG34L840-2-D-UNV-DIM	27.4 fc	1.8	35.4W	0.42				
		2DLG38L840-2-D-UNV-DIM	29.9 fc	1.8	38.6 W	0.46				
		2DLG44L840-2-D-UNV-DIM	33.9 fc	1.8	45.2W	0.54				

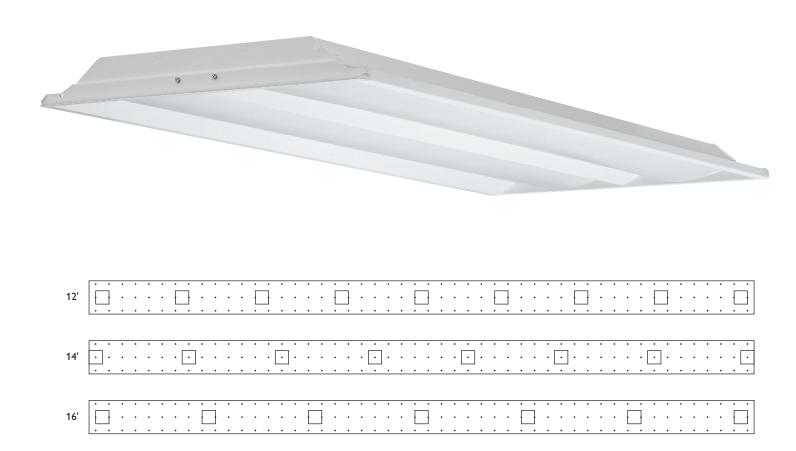
#### 2x4 sample area:

42' long x 24' wide x 9' ceiling 80/50/20 reflectances

Calculation grid at 2.5' Maintenance factors 0.85 LLD, 0.94 LDD, 0.799 LLF

Uniformity is excellent at 3.0 or less, even when moving to extended 10'x12' luminaire spacing. High delivered lumen options allow the extended spacing to provide IES recommended illumination levels for many tasks. Smooth, uniform lighting at recommended light levels with good vertical illumination is available with power density between 0.5 and 0.75 Watts per square foot, satisfying any known energy code.

Spacing	Number of Luminaires	Model	Maintained Average Illumination	Max./Min.	Input Power per lum.	Watts/ Sq. foot
8'x8'	15	2DLG43L840-4-D-UNV-DIM	47.2 fc	2.7	40.9 W	0.61
		2DLG49L840-4-D-UNV-DIM	54.2 fc	2.7	48.1 W	0.72
		2DLG58L840-4-D-UNV-DIM	61.1 fc	2.7	57.4 W	0.85
		2DLG73L840-4-D-UNV-DIM	78.6 fc	2.7	73.4 W	1.10
8'x10'	15	2DLG43L840-4-D-UNV-DIM	38.3 fc	3.0	40.9 W	0.49
		2DLG49L840-4-D-UNV-DIM	44.0 fc	3.0	48.1 W	0.57
		2DLG58L840-4-D-UNV-DIM	49.6 fc	3.0	57.4 W	0.68
		2DLG73L840-4-D-UNV-DIM	63.8 fc	3.0	73.4 W	0.87
10'x10'	12	2DLG43L840-4-D-UNV-DIM	36.2 fc	2.4	40.9 W	0.49
		2DLG49L840-4-D-UNV-DIM	41.6 fc	2.4	48.1 W	0.57
		2DLG58L840-4-D-UNV-DIM	46.7 fc	2.4	57.4 W	0.68
		2DLG73L840-4-D-UNV-DIM	60.3 fc	2.4	73.4 W	0.87
10'x12'	12	2DLG43L840-4-D-UNV-DIM	34.3 fc	1.8	40.9 W	0.49
		2DLG49L840-4-D-UNV-DIM	39.4 fc	1.8	48.1 W	0.57
		2DLG58L840-4-D-UNV-DIM	44.5 fc	1.8	57.4 W	0.68
		2DLG73L840-4-D-UNV-DIM	57.2 fc	1.8	73.4 W	0.87



#### Corridor:

DuaLED allows uniform corridor lighting with wide luminaire spacing and good vertical illumination with reduced scalloping.

#### A sample corridor:

 $100' \log x 5'$  wide x 9' ceiling 80/50/20 reflectances

Calculation grid at 2.5' Maintenance factors 0.85 LLD, 0.94 LDD. 0.799 LLF

Uniformity is excellent at less than 3 to 1 with 12' or 14' spacing and only 3.3 to 1 at extended 16' spacing. Smooth, uniform lighting at recommended light levels with good vertical illumination is available with power density less than 0.5 Watts per square foot.

Spacing	Number of Luminaires	Model	Maintained Average Illumination	Max./Min.	Input Power per lum.	Watts/ Sq. foot
			Corridor			
12'	9	2DLG27L840-2-D-UNV-DIM	23.8 fc	2.0	26.4W	0.47
		2DLG34L840-2-D-UNV-DIM	25.4 fc	2.0	35.4W	0.63
		2DLG38L840-2-D-UNV-DIM	27.7 fc 2.0		38.6 W	0.68
		2DLG44L840-2-D-UNV-DIM	31.3 fc 2.0		45.2W	0.80
14'	8	2DLG27L840-2-D-UNV-DIM	20.8 fc	2.7	26.4W	0.41
		2DLG34L840-2-D-UNV-DIM	22.2 fc	2.7	35.4W	0.56
		2DLG38L840-2-D-UNV-DIM	24.1 fc 2.7		38.6 W	0.61
		2DLG44L840-2-D-UNV-DIM	27.4 fc	2.6	45.2W	0.71
16'	7	2DLG27L840-2-D-UNV-DIM	18.3 fc	3.5	26.4W	0.36
		2DLG34L840-2-D-UNV-DIM	19.5 fc	3.5	35.4W	0.49
		2DLG38L840-2-D-UNV-DIM	21.3 fc	3.5	38.6 W	0.53
		2DLG44L840-2-D-UNV-DIM	24.1 fc	3.5	45.2W	0.62



DuaLED was thoughtfully developed as a sustainable luminaire with a modern appearance and uncomplicated design, also offering exceptional quality and performance, for an outstanding benefit to the customer.

## **DuaLED Specifications**

- Simple, sustainable design requires few parts outside of the electrical system and associated hardware.
- Soft opal diffusers provide high visual comfort perfect for a wide variety of general lighting applications.
- Directs a controlled amount of light to higher angles to balance the brightness of the surfaces in the room.
- Multiple lumen packages available to provide flexibility
  of light levels and/or luminaire spacing. Each model is
  available in four lumen packages where 1x4 models range
  from 2,700 to 4,100 delivered lumens, 2x2 models range
  from 2,700 to 4,400 initial delivered lumens, and 2x4
  models from 4,300 to 7,300 initial delivered lumens.
- Total luminaire efficacy as high as 94 LPW (lumens per Watt) to minimize energy use.
- Recommended light levels are possible with as little as 0.5 to 0.85 Watts per square foot, complying with all known energy codes.
- Integral occupancy and/or daylighting sensor options are available for additional energy savings with no reduction of life or performance.
- Low profile configuration protrudes only 2-11/16" into the plenum.

- · High CRI source provides excellent 80 CRI color rendering.
- Driver and LED boards are easily accessible from below without tools if necessary. LED boards are individually replaceable if needed via plug-in connectors.
- Five-year luminaire warranty covers the entire luminaire including driver and LED boards (emergency driver carries a three year warranty, if so equipped).
- High efficiency LEDs have minimum 50,000 hour rated life ( $L_{70}$ ).
- 0-10V dimming and integral emergency options available. Emergency models require a top mounted battery enclosure that increases luminaire depth.
- · Painted after fabrication matte white powder coating.
- Designed for use with standard Grid (NEMA "G") or Narrow Grid (NEMA "NFG") ceiling T-bars. Drywall or plaster requirements can be accommodated by using an FMA "F" mounting frame. (sold separately)
- · Listed for use in insulated ceilings (Type IC.)
- ETL listed to UL and CSA standards, suitable for damp locations.



# Ordering Guide

Example: 000000000

		T	_				T	T			
Width	Family	Ceiling type	Source	Color		Length	Diffusers	Voltag	e	Options	
	DL	G					D				
1 1' 2 2'	DL DuaLED	<b>G</b> Grids	1' X 4': 27L 2700 delivered lumens 28L 2800 delivered lumens 36L 3600 delivered lumens 41L 4100 delivered lumens 2' X 2': 27L 2700 delivered lumens 34L 3400 delivered lumens 34L 3400 delivered lumens 44L 4400 delivered lumens 2' X 4': 43L 4300 delivered lumens 58L 5800 delivered lumens 49L 4900 delivered lumens 73L 7300 delivered lumens	840	80 CRI, 4000K 80 CRI, 3500K	<b>2</b> 2' <b>4</b> 4'	D Diffuse (Opal)	UNV 347	Universal voltage 120-277 volts 347 volts	CC F1 F2 GLR1 DIM EMLED16	Custom Color 3/8" Flex, 3 Wire 18 gauge 3/8" Flex, 4 Wire 18 gauge Fusing, Fast Blow 0-10V dimming driver (some models, consult spec. sheet for availability) integral emergency battery pack (1600 delivered lumens, requires ballast enclosure on top of luminaire) Integral sensor, occupancy (some models, consult spec. sheet for availability) Integral sensor, daylighting (some models, consult spec. sheet for availability) Integral sensor, daylighting and occupancy (some models, consult spec. sheet for availability) Integral sensor, daylighting and occupancy (some models, consult spec. sheet for availability)

