#### DESCRIPTION

The Encounter<sup>™</sup> redefines ambient lighting by being the first fixture to blend modern contemporary styling with the innovative WaveStream™ technology to deliver exceptional performance and superior energy savings. Encounter's highly efficient LED system with advance optical design delivers an unparalleled combination of optimal light uniformity for enhanced visual comfort and superior efficiency for greater energy savinas.

Encounter is compatible with all of today's popular ceiling systems and available in a variety of configurations for application versatility. Its perfect balance of form and function make it an ideal choice for commercial office spaces, schools, hospitals, retail and other indoor ambient applications.

#### SPECIFICATION FEATURES

#### Construction

Shallow 3-1/4" deep housing is extruded aluminum frame and injected molded composite end plates. End plates are securely attached with screws for strength and rigidity and the elimination of gaps. End plates have accessory grid-lock feature for safety and convenience. Four auxiliary fixture end suspension points are provided. Large access plate for supply connection.

#### Controls

Metalux LED luminaires come standard with 0-10V dimming drivers (1% standard).

Options compatible with Eaton's **Connected Lighting Systems:** 

- WaveLinx sensor
- LumaWatt Pro sensor
- SVPD sensor
- DLVP sensor and driver
- Fifth Light DALI driver

Other options include stepdimming and 3rd party drivers. Refer to the Connected Lighting options page and ordering information for more details.

# Electrical

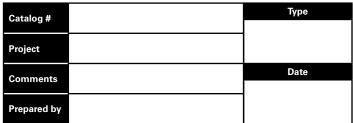
Long-life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3000K, 3500K, 4000K or 5000K with a minimum CRI of 80. Projected life is 100,000 hours at 92% lumen output. Electronic drivers are available for 120-277V applications.

#### **Emergency Battery Pack Option**

Optional 120V-277V integral emergency battery pack is available in 7-watts or 14-watts to meet critical life-safety lighting requirements. The 90-minute batteries provide constant power to the LED system, ensuring code-compliance. A test switch/ indicator button can be tested safely from the ground using a laser pointer, while the patented EZ Key prevents accidental discharge of the battery during construction. Emergency/generator transfer options available - see ordering information for details.

#### **Driver Access**

Drivers can be accessed via plenum.



# Finish

Durable frame has high reflectance baked matte white enamel finish for luminous uniformity.

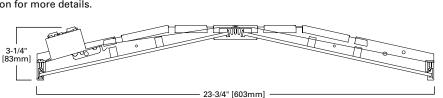
#### Optics

Precision formed optical assembly with positively retained high optical grade acrylic lenses provide a directed optical distribution using WaveStream technology.

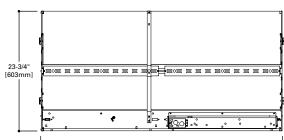
#### Compliance

Components are UL recognized. Indoor luminaires are cULus and CSA listed for 25° C ambient environments, RoHS compliant, and comply with IESNA LM-79. LEDs comply with LM-80 standards. DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www. designlights.org for details.

#### Warranty Five-year warranty.



#### MOUNTING DATA

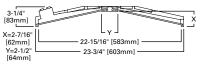


– 47-11/16" [1212mm]

# LAMP CONFIGURATIONS

Drywall Frame

Kit



#### CEILING COMPATIBILITY



G Grid/Lay-in Standard

Ceiling Type	Tri Tyj
Exposed Grid	G
Concealed T	Go
Slot Grid	Go
Flange	*

# 24EN LED

### 2' X 4' TROFFER LED MODULE

Specification Grade Troffer





#### CERTIFICATION DATA

cULus - 1598 and 2043\*\* Damp Location Listed CSA IC Rated LM79/LM80 Compliant **ROHS** Compliant DesignLights Consortium® Qualified NOM Compliant

\*See Drywall Frame Kit Accessory in Ordering Information section. \*\*Fixture construction is suitable for use in Air-handling and plenum rated spaces in accordance with Section 300.22 (C) of the National Electrical Code, Section 4.3.11.2.6.5 of NFPA 90A and Section 602.2.1.4 of ICC.

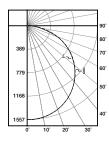


Safe and convenient means of disconnecting power



Metalux

#### PHOTOMETRICS



24EN-LD2-45-UNV-	Candlepower						
L835-CD1-U	Angle	Along II	45°				
Electronic Driver	0	1552	1552				
Linear LED 3500K	5	1552	1544				
Elliear EED 5500K	10	1533	1525				
Spacing criterion:	15	1502	1495				
(II) 1.29 x mounting	20	1461	1454				
height, (⊥) 1.29 x	25	1408	1401				
	30	1343	1336				
mounting height	35	1269	1261				
Lumens: 4656	40	1188	1175				
Input Matter 29M/	45	1093	1078				
Input Watts: 38W	50	991	974				
Efficacy: 122.5 lm/W	55	881	860				
To at Damante 24EN	60	759	735				
Test Report: 24EN-	65	628	602				
LD2-45-UNV-L835-	70	490	470				
CD1-U.IES	75	349	334				
	80	206	175				
	85	82	77				

90

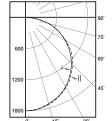
#### **Coefficients of Utilization**

	Effe	ectiv	e flo	or cav	ity ref	ecta	nce	20	%									
rc		8	80%			7	0%			50	6		30%	6		10%	6	0%
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	99	95	106	101	97	94	97	94	91	93	90	88	90	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	79	68	60	53	66	58	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	50	42	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	25	37	30	25	36	30	25	35	29	25	23

#### Zonal Lumen Summary

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2368	2335	2351
55	2353	2296	2320
65	2200	2182	2263
75	2066	1974	1669
85	1436	1350	1248
	85	85 1436	85 1436 1350

Luminance Data



Across  $\perp$ 

1552

1548

1499

1459

1408

1343

1268

1182

1086

869

751

625

469

983

1529

#### 24EN-LD2-54-UNV L835-CD1-U

#### **Electronic Driver** Linear LED 3500K Spacing criterion: (II) 1.3 x mounting height, ( $\perp$ ) 1.3 x mounting height Lumens: 5410 Input Watts: 43.0W Efficacy: 125.8 lm/ Test Report: 24EN-LD2-54-UNV-L835-CD1-U.IES

Angle	Along II	45°	Across $\perp$
0	1791	1791	1791
5	1792	1782	1784
10	1770	1759	1761
15	1734	1721	1723
20	1684	1670	1673
25	1621	1609	1610
30	1550	1533	1531
35	1465	1444	1439
40	1372	1348	1344
45	1270	1241	1238
50	1153	1124	1125
55	1029	997	998
60	893	860	867
65	743	706	721
70	588	558	550
75	423	401	345
80	258	223	226
85	110	106	101
90	0	0	0

### **Coefficients of Utilization**

	Effe	ectiv	e floo	or cav	ity ref	ecta	nce	20	%									-
rc		8	0%			7	'0%			50%	6		30%	ő		10%	ó	0%
rw	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	60	68	64	59	57
4	82	69	60	53	79	68	59	53	65	58	52	63	57	51	61	55	51	49
5	75	62	52	46	73	61	52	45	58	51	45	56	50	44	55	49	44	42
6	69	55	46	40	67	54	46	40	53	45	39	51	44	39	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	35	46	39	34	45	39	34	32
8	59	46	37	31	58	45	37	31	44	36	31	42	36	31	41	35	30	28
9	56	42	34	28	54	41	33	28	40	33	28	39	32	28	38	32	27	26
10	52	39	31	25	51	38	30	25	37	30	25	36	30	25	35	29	25	23

#### Zonal Lumen Summary

Lumens	% Fixture	
1398	25.8	
2305	42.6	
4164	77.0	
5410	100.0	
5410	100.0	
	1398 2305 4164 5410	1398 25.8   2305 42.6   4164 77.0   5410 100.0



### LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (100,0000 hours)	Theoretical L70 (Hours)
25°C	> 92%	> 448,000
Non-IC data	•	

#### Non io u

## 90 CRI

Lumen Adjustment Factors 80->90 CRI								
3000K	0.861							
3500K	0.864							
4000K	0.883							
5000K	0.86							

### Example of Lumen Adjustment Calculation

24EN-LD2-45-UNV-L835-CD1-U at 90CRI at 3500K

Lumen Adjustment Factor = 0.864

Total Light Output = 4,651 lm x 0.864 = 4,022 lm

Efficacy =  $\frac{4,022 \text{ Im}}{38 \text{ W}}$  = 105.8 lm/W

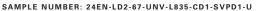
#### ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

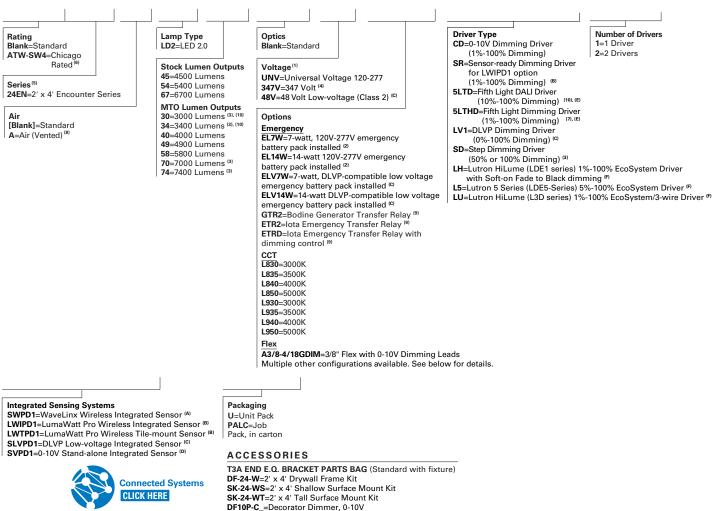
_				
Stock or MTO*	Catalog Logic (Curved)	Delivered Lumens	Watts	Efficacy (LPW)
MTO	24EN-LD2-30-UNV-L830-CD1-U	3023	24.6	123
MTO	24EN-LD2-30-UNV-L835-CD1-U	3117	24.6	127
MTO	24EN-LD2-30-UNV-L840-CD1-U	3180	24.6	129
MTO	24EN-LD2-30-UNV-L850-CD1-U	3460	24.6	141
MTO	24EN-LD2-34-UNV-L830-CD1-U	3502	28.7	122
MTO	24EN-LD2-34-UNV-L835-CD1-U	3610	28.7	126
MTO	24EN-LD2-34-UNV-L840-CD1-U	3682	28.7	128
MTO	24EN-LD2-34-UNV-L850-CD1-U	4008	28.7	140
MTO	24EN-LD2-40-UNV-L830-CD1-U	4079	33.9	120
MTO	24EN-LD2-40-UNV-L835-CD1-U	4204	33.9	124
MTO	24EN-LD2-40-UNV-L840-CD1-U	4289	33.9	127
MTO	24EN-LD2-40-UNV-L850-CD1-U	4667	33.9	138
MTO	24EN-LD2-45-UNV-L830-CD1-U	4516	38.0	119
STOCK	24EN-LD2-45-UNV-L835-CD1-U	4656	38.0	123
STOCK	24EN-LD2-45-UNV-L840-CD1-U	4748	38.0	125
MTO	24EN-LD2-45-UNV-L850-CD1-U	5168	38.0	136
MTO	24EN-LD2-49-UNV-L830-CD1-U	4946	42.2	117
МТО	24EN-LD2-49-UNV-L835-CD1-U	5099	42.2	121
МТО	24EN-LD2-49-UNV-L840-CD1-U	5200	42.2	123
МТО	24EN-LD2-49-UNV-L850-CD1-U	5659	42.2	134
МТО	24EN-LD2-54-UNV-L830-CD1-U	5248	43.0	122
STOCK	24EN-LD2-54-UNV-L835-CD1-U	5410	43.0	126
STOCK	24EN-LD2-54-UNV-L840-CD1-U	5518	43.0	128
MTO	24EN-LD2-54-UNV-L850-CD1-U	6005	43.0	140
MTO	24EN-LD2-58-UNV-L830-CD1-U	5663	47.0	120
MTO	24EN-LD2-58-UNV-L835-CD1-U	5838	47.0	124
МТО	24EN-LD2-58-UNV-L840-CD1-U	5955	47.0	127
MTO	24EN-LD2-58-UNV-L850-CD1-U	6480	47.0	138
MTO	24EN-LD2-67-UNV-L830-CD1-U	6529	56.1	116
STOCK	24EN-LD2-67-UNV-L835-CD1-U	6731	56.1	120
STOCK	24EN-LD2-67-UNV-L840-CD1-U	6866	56.1	122
MTO	24EN-LD2-67-UNV-L850-CD1-U	7471	56.1	133
МТО	24EN-LD2-70-UNV-L830-CD1-U	6812	60.2	113
МТО	24EN-LD2-70-UNV-L835-CD1-U	7023	60.2	117
МТО	24EN-LD2-70-UNV-L840-CD1-U	7163	60.2	119
МТО	24EN-LD2-70-UNV-L850-CD1-U	7796	60.2	130
МТО	24EN-LD2-74-UNV-L830-CD1-U	7259	63.6	114
МТО	24EN-LD2-74-UNV-L835-CD1-U	7484	63.6	118
МТО	24EN-LD2-74-UNV-L840-CD1-U	7634	63.6	120
МТО	24EN-LD2-74-UNV-L850-CD1-U	8307	63.6	131

\*Made to order (MTO) requires a typical two week lead time.



#### ORDERING INFORMATION





NOTES: <sup>(1)</sup>Products also available in non-US voltages and frequencies for international markets. <sup>(2)</sup>With integral test switch/indicator/laser test. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens). IES-format photometry for luminaire under emergency operation available. <sup>(3)</sup>Step-dim driver not available with 3000, 3400, 7000 and 7400 lumen options. <sup>(4)</sup>347V emergency option not available. <sup>(5)</sup>DesignLights Consortium<sup>®</sup> Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details. <sup>(6)</sup>Chicago rated version does not allow for row mounting. <sup>(7)</sup>Two drivers required for 5LTHD option for 6700 lumens and up. <sup>(6)</sup> Airversion is vented but does not meet air handling requirements. <sup>(6)</sup> Used to bypass local control during outage. Must be used in conjunction with UL 1008 device (provided by others). GTR2 and ETR2 options include 2 relays on fixtures with dimming drivers. ETRD option only requires one relay when used on a dimming fixture. Must specify voltage as 120V or 277V when ordering these devices. <sup>(10)</sup> 6LTD DALI option not available with 3000 and 3400 lumen packages.

ISHH-01=Programming Remote for Integrated Sensor (D) ISHH-02=Personal Control Remote for Integrated Sensor (D)

SF10P-\_=Decorator Slide Dimmer, 0-10V

#### Integrated Sensing and Control System Options

NOTES: Integrated options must be used in conjunction with the associated system and may not be compatible with other options or accessories. Please refer to the following <sup>(A)</sup>Consult WaveLinx system pages for additional details and compatibility. <sup>(B)</sup>Consult LVP system pages for additional details and compatibility. <sup>(B)</sup>Consult LVP system pages for additional details and compatibility. <sup>(B)</sup>Consult LVP system pages for additional details and compatibility. <sup>(B)</sup>Consult LVP system pages for additional details and compatibility. <sup>(B)</sup>Consult LVP system pages for additional details and compatibility. <sup>(B)</sup>Consult LVP system pages for additional details and compatibility. <sup>(B)</sup>Consult Marketplace ptions - Lutron system pages for additional details and compatibility. Compatible only with driver series shown, and may require two or more drivers. Requires field commissioning to operate or dim. Contact Lutron at www.lutron.com.

Flexible Metal Conduit Options Flex options available for 0-10V dimming control, DALI dimming control, emergency and night light functions. 72-inch factory-installed and pre-wired to driver, fitted to luminaire housing access plate with 90° enclosed FMC

A378-4/18GDIM series notes: Factory installed dimming only 518, 150, 518, 520, 530, 645, 72; Federal Specification A-A-559544 (formerly J-C-30B); all applicable OSHA and HUD Requirements. UL classified 1, 2-, and 3-hour through penetration with applicable fire stop product (not included). May be surface mounted, fished and/or embedded in plaster. Cable tray and approved raceway rated, install per NEC®; Environmental Air-Handling Space Installation per NEC® 300.22(C).

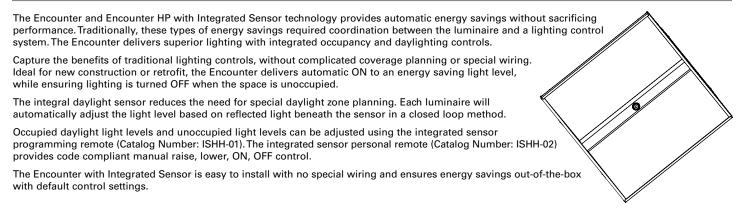
Specifications & dimensions subject to change without notice. Consult your Eaton Representative for availability and ordering information.

#### SHIPPING DATA

Catalog No.	Wt.
24EN-LD2-45	28 lbs.
24EN-LD2-54	28 lbs.
24EN-LD2-67	28 lbs.

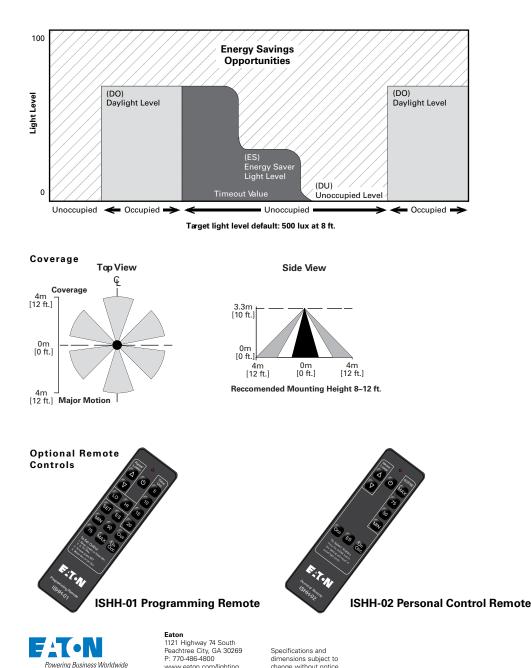


#### INTEGRATED SENSOR



#### How it works:

- As the user enters the space controlled by the integral sensor, the lighting turns ON to the default daylight level.
- Lighting will remain at that the daylight level until the space is unoccupied. This will start the occupancy timeout period (default 20 minutes).
- If the space remains unoccupied for half of the timeout period, the lighting will automatically reduce to the Energy Saver light level. This adjustable light level is typically half of the occupied daylight level.
- At the end of the timeout period the lighting will go to the unoccupied light level. This adjustable light level uses the OFF default setting.



www.eaton.com/lighting

change without notice

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