

DESCRIPTION

The Encounter™ 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 savings.

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 step-dimming 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.

Catalog #		Type	
Project		Date	
Comments			
Prepared by			

Finish

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

Optics

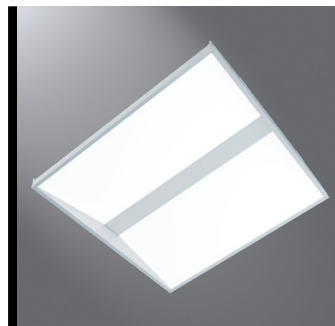
Precision formed optical assembly with positively retained high optical grade acrylic lenses provide a directed optical distribution using WaveStream technology.

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.



22EN LED

2' X 2' TROFFER LED MODULE

Specification Grade Troffer



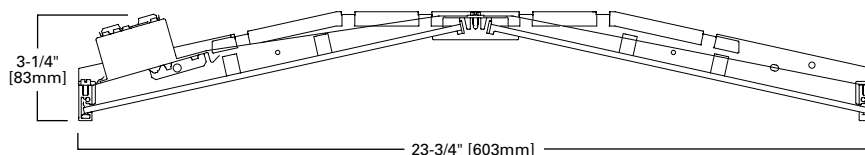
Connected Systems
[CLICK HERE](#)



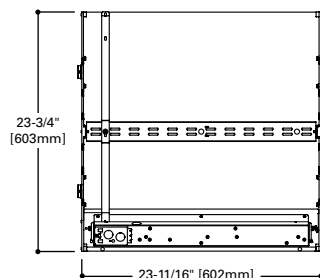
CERTIFICATION DATA

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

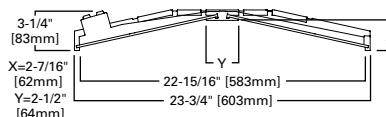
*See Drywall Frame Kit Accessory in Ordering Information section.
 **Fixture construction is suitable for use in Air-handling and plenum rated spaces in accordance with Section 300.22 (C) of the National Electrical Code, Section 4.3.11.2.6.5 of NFPA 90A and Section 602.2.1.4 of ICC.



MOUNTING DATA



LAMP CONFIGURATIONS



CEILING COMPATIBILITY

G	F	Ceiling Type	Trim Type
Grid/Lay-in Standard	Drywall Frame Kit	Exposed Grid	G
		Concealed T	G or T
		Slot Grid	G or T
		Flange	*

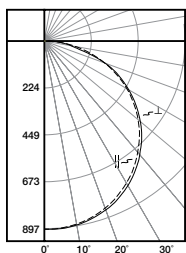
LINEAR DISCONNECT

Safe and convenient means of disconnecting power



PS519064EN
3-19-2018-PRELIM

PHOTOMETRICS



22EN-LD2-25-UNV-L835-CD1-U

Electronic Driver
 Linear LED 3500K
 Spacing criterion:
 (H) 1.27 x mounting
 height, (L) 1.29 x
 mounting height
 Lumens: 2648
 Input Watts: 20W
 Efficacy: 132.4 lm/W
 Test Report: 22EN-
 LD2-25-UNV-L835-
 CD1-U.IES

Candlepower

Angle	Along H	45°	Across L
0	897	897	897
5	892	892	896
10	880	880	885
15	861	861	868
20	835	835	846
25	802	803	815
30	764	766	779
35	720	720	735
40	669	668	684
45	617	613	632
50	557	551	570
55	491	485	504
60	422	413	433
65	347	338	361
70	271	263	267
75	193	181	154
80	114	95	99
85	42	40	39
90	0	0	0

Coefficients of Utilization

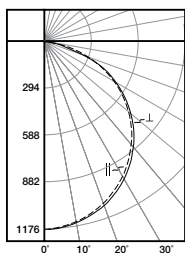
rc rw RCR	Effective floor cavity reflectance																							
	80%				70%				50%				30%				10%				0%			
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	0
1	109	104	99	95	106	101	98	94	97	94	91	93	91	88	90	88	86	83	83	83	83	83	83	0
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69	69	69	69	69	69	0
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58	58	58	58	58	58	0
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49	49	49	49	49	49	0
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42	42	42	42	42	42	0
6	69	56	47	40	68	55	46	40	53	46	40	51	45	39	50	44	39	37	37	37	37	37	37	0
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33	33	33	33	33	33	0
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29	29	29	29	29	29	0
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26	26	26	26	26	26	0
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24	24	24	24	24	24	0

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	700	26.4
0-40	1153	43.5
0-60	2068	78.1
0-90	2648	96.3
0-180	2648	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2793	2775	2861
55	2740	2710	2815
65	2632	2561	2733
75	2389	2240	1908
85	1529	1477	1429



22EN-LD2-34-UNV-L835-CD1-U

Electronic Driver
 Linear LED 3500K
 Spacing criterion:
 (H) 1.27 x mounting
 height, (L) 1.29 x
 mounting height
 Lumens: 3471
 Input Watts: 28.5W
 Efficacy: 121.8 lm/W
 Test Report: 22EN-
 LD2-34-UNV-L835-
 CD1-U.IES

Candlepower

Angle	Along H	45°	Across L
0	1176	1176	1176
5	1169	1169	1174
10	1153	1153	1160
15	1128	1128	1137
20	1095	1095	1109
25	1051	1053	1069
30	1002	1004	1021
35	944	944	963
40	877	875	896
45	809	803	828
50	729	722	747
55	643	636	661
60	554	541	568
65	455	443	473
70	355	345	350
75	253	237	202
80	149	125	130
85	55	53	51
90	0	0	0

Coefficients of Utilization

rc rw RCR	Effective floor cavity reflectance																							
	80%				70%				50%				30%				10%				0%			
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	0
1	109	104	99	95	106	101	98	94	97	94	91	93	91	88	90	88	86	83	83	83	83	83	83	0
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69	69	69	69	69	69	0
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58	58	58	58	58	58	0
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49	49	49	49	49	49	0
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42	42	42	42	42	42	0
6	69	56	47	40	68	55	46	40	53	46	40	51	45	39	50	44	39	37	37	37	37	37	37	0
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33	33	33	33	33	33	0
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29	29	29	29	29	29	0
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26	26	26	26	26	26	0
10	52	39	31	26	51	39	31	26	38	30	26	38	30	26	37	30	25	24	24	24	24	24	24	0

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	918	26.4
0-40	1511	43.5
0-60	2711	78.1
0-90	3471	100.0
0-180	3471	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	3662	3638	3750
55	3592	3553	3690
65	3449	3356	3583
75	3132	2936	2501
85	2003	1936	1874

LUMEN MAINTENANCE

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

Non-IC data

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

22EN-LD2-25-UNV-L835-CD1-U
at 90CRI at 3500K

Lumen Adjustment Factor = 0.864

*Total Light Output =
2,648 lm x 0.864 = 2,287 lm*

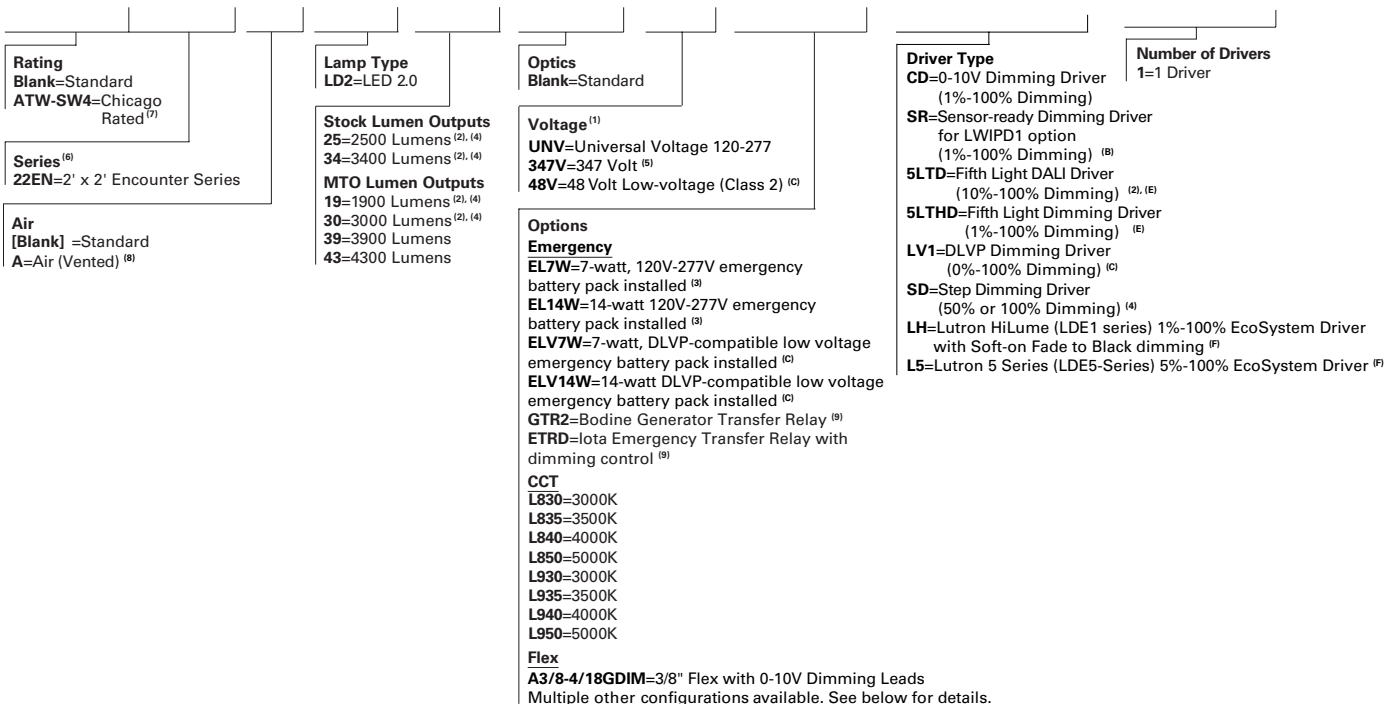
Efficacy = $\frac{2,287 \text{ lm}}{20 \text{ W}} = 114.3 \text{ lm/W}$

ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO	Catalog Logic (Curved)	Delivered Lumens	Watts	Efficacy (LPW)
MTO	22EN-LD2-19-UNV-L830-CD1-U	2028	16.5	123
MTO	22EN-LD2-19-UNV-L835-CD1-U	2091	16.5	127
MTO	22EN-LD2-19-UNV-L840-CD1-U	2133	16.5	129
MTO	22EN-LD2-19-UNV-L850-CD1-U	2321	16.5	141
MTO	22EN-LD2-25-UNV-L830-CD1-U	2569	20	128
STOCK	22EN-LD2-25-UNV-L835-CD1-U	2648	20	132
STOCK	22EN-LD2-25-UNV-L840-CD1-U	2701	20	135
MTO	22EN-LD2-25-UNV-L850-CD1-U	2940	20	147
MTO	22EN-LD2-30-UNV-L830-CD1-U	2985	24.9	120
MTO	22EN-LD2-30-UNV-L835-CD1-U	3078	24.9	124
MTO	22EN-LD2-30-UNV-L840-CD1-U	3139	24.9	126
MTO	22EN-LD2-30-UNV-L850-CD1-U	3417	24.9	137
MTO	22EN-LD2-34-UNV-L830-CD1-U	3367	28.5	118
STOCK	22EN-LD2-34-UNV-L835-CD1-U	3471	28.5	122
STOCK	22EN-LD2-34-UNV-L840-CD1-U	3540	28.5	124
MTO	22EN-LD2-34-UNV-L850-CD1-U	3853	28.5	135
MTO	22EN-LD2-39-UNV-L830-CD1-U	3859	33.3	116
MTO	22EN-LD2-39-UNV-L835-CD1-U	3979	33.3	119
MTO	22EN-LD2-39-UNV-L840-CD1-U	4058	33.3	122
MTO	22EN-LD2-39-UNV-L850-CD1-U	4417	33.3	133
MTO	22EN-LD2-43-UNV-L830-CD1-U	4345	38.3	113
MTO	22EN-LD2-43-UNV-L835-CD1-U	4478	38.3	117
MTO	22EN-LD2-43-UNV-L840-CD1-U	4568	38.3	119
MTO	22EN-LD2-43-UNV-L850-CD1-U	4971	38.3	130

ORDERING INFORMATION

SAMPLE NUMBER: 22EN-LD2-34-UNV-L835-CD1-SVPD1-U



Integrated Sensing Systems
SWPD1=WaveLinX Wireless Integrated Sensor^(A)
LWIPD1=LumaWatt Pro Wireless Integrated Sensor^(B)
LWTPD1=LumaWatt Pro Wireless Tile-mount Sensor^(B)
SLVPD1=DLVP Low-voltage Integrated Sensor^(C)
SVPD1=0-10V Stand-alone Integrated Sensor^(D)



Packaging
U=Unit Pack
PALC=Job Pack, in carton

ACCESSORIES
T3A END E.O. BRACKET PARTS BAG (Standard with fixture)
DF-22-W=2' x 2' Drywall Frame Kit
SK-22-WS=2' x 2' Shallow Surface Mount Kit
SK-22-WT=2' x 2' Tall Surface Mount Kit
DF10P-C=Decorator Dimmer, 0-10V
SF10P-=Decorator Slide Dimmer, 0-10V
ISHH-01=Programming Remote for Integrated Sensor^(D)
ISHH-02=Personal Control Remote for Integrated Sensor^(D)

NOTES: ⁽¹⁾Products also available in non-US voltages and frequencies for international markets. ⁽²⁾1900, 2500, 3000 and 3400 lumen option are not available with a Fifth Light DALI (5LTD) driver. ⁽³⁾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. ⁽⁴⁾Step-dim driver not available with 1900, 2500, 3000 and 3400 lumen option. ⁽⁵⁾347V emergency option not available. ⁽⁶⁾DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details. ⁽⁷⁾Chicago rated version does not allow for row mounting. ⁽⁸⁾Air version is vented but does not meet air handling requirements. ⁽⁹⁾Used to bypass local control during outage. Must be used in conjunction with UL 1008 device (provided by others). GTR2 option includes 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.

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: ^(A)Consult WaveLinX system pages for additional details and compatibility. ^(B)Consult LumaWatt Pro system pages for additional details and compatibility. ^(C)Consult DLVP system pages for additional details and compatibility. ^(D)Consult SVPD series system pages for additional details and compatibility. ^(E)Consult Fifth Light system pages for additional details and compatibility. ^(F)Consult Marketplace Options - 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 connector. Not all options may be combined and installation ratings vary by type.
A3/8-4/18GDIM series notes: Factory installed dimming option 3/8" flexible metal conduit with 2-#18 power and ground wires and 2-#18 UL-listed jacketed 0-10V +/- control wires. Meets UL 66, 83, 1479, 1569, 1581, 2556. NEC® 250.118, 300.22(C), 392, 396, 330, 501, 502, 503, 530, 504, 505, 518, 520, 530, 645, 72; Federal Specification A-A-59544 (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.
22EN-LD2-25	14 lbs.
22EN-LD2-34	14 lbs.



Eaton
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

PS519064EN
3-19-2018-PRELIM

INTEGRATED SENSOR

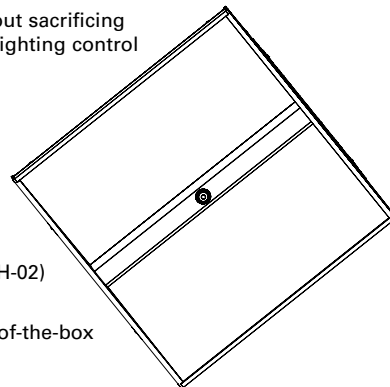
The Encounter and Encounter HP with Integrated Sensor technology provides automatic energy savings without sacrificing performance. Traditionally, these types of energy savings required coordination between the luminaire and a lighting control system. The Encounter delivers superior lighting with integrated occupancy and daylighting controls.

Capture the benefits of traditional lighting controls, without complicated coverage planning or special wiring. Ideal for new construction or retrofit, the Encounter delivers automatic ON to an energy saving light level, while ensuring lighting is turned OFF when the space is unoccupied.

The integral daylight sensor reduces the need for special daylight zone planning. Each luminaire will automatically adjust the light level based on reflected light beneath the sensor in a closed loop method.

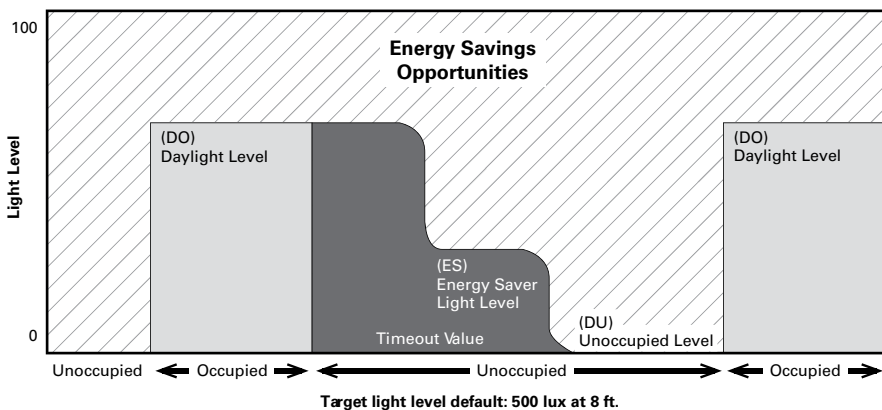
Occupied daylight light levels and unoccupied light levels can be adjusted using the integrated sensor programming remote (Catalog Number: ISHH-01). The integrated sensor personal remote (Catalog Number: ISHH-02) provides code compliant manual raise, lower, ON, OFF control.

The Encounter with Integrated Sensor is easy to install with no special wiring and ensures energy savings out-of-the-box with default control settings.

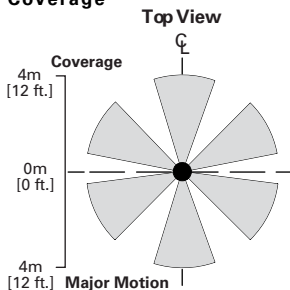


How it works:

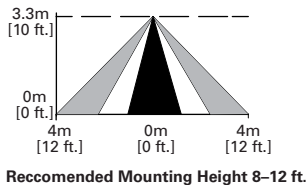
- As the user enters the space controlled by the integral sensor, the lighting turns ON to the default daylight level.
- Lighting will remain at that the daylight level until the space is unoccupied. This will start the occupancy timeout period (default 20 minutes).
- If the space remains unoccupied 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.



Coverage



Side View



Optional Remote Controls



ISHH-01 Programming Remote



ISHH-02 Personal Control Remote