

DESCRIPTION

Cruze LED is a premium grade specification lensed troffer series. This innovative, high quality luminaire is dedicated to the latest solid state lighting and driver technology for optimal performance and energy efficiency. The Cruze is compatible with all of today's popular ceiling systems and is available with a number of options and accessories for application versatility.

The Cruze series features efficiency, quality and performance. The series is an excellent choice for commercial office spaces, schools, hospitals or retail merchandising areas.

SPECIFICATION FEATURES

Construction

Rigid housing is die formed of code gauge prime cold rolled steel and features full length die-formed stiffeners and unibody endplate for added strength. Side flanges are hemmed. Innovative design provides superior lens brightness uniformity and visual comfort. Unibody endplates are securely attached with interlocking tabs and screws. Four auxiliary fixture end suspension points provided.

Controls

The Cruze LED is Powered by Fifth Light, with a standard 0-10V continuous dimming driver that works with any 0-10V control/dimmer. Combine with energy saving products like occupancy sensors, daylighting controls and lighting relay panels to maximize energy savings. In addition, the Cruze can include a factory-installed integrated sensor system for occupancy and daylight dimming control and manual control from an optional handheld remote. Or, specify the Digital Addressable Lighting Interface (DALI) drivers, dimmable down to 10%, for use with Fifth Light controls. See ordering information for details on all three options.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3000K, 3500K, 4000K or 5000K with a CRI \geq 85. Projected life is 60,000 hours at 83% lumen output. cULus listed. 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. See ordering information for details.

Finish

Multistage, iron phosphate pretreatment ensures maximum bonding and rust inhibition. Housing finished with 90% reflective white enamel for superior performance.

Catalog #		Type	
Project		Date	
Comments			
Prepared by			

Hinging/Latching

Positive cam action steel latches with baked white enamel finish. Safety-lock T-hinges allow hinging and latching either side. Door assembly hinges down for easy access from below.

Frame/Shielding

Die formed, heavy gauge, flat steel door with reinforced mitered corners and painted after fabrication, baked matte white enamel finish. Positive light seals. Acrylic frosted lens.

Compliance

Modules are UL recognized components and indoor luminaires are cULus listed for 25°C ambient environments, RoHS compliant, and LED modules comply with IESNA LM-79 and LM-80 standards. DesignLights Consortium™ Qualified and classified for DLC Standard, refer to www.designlights.org for details.

Warranty

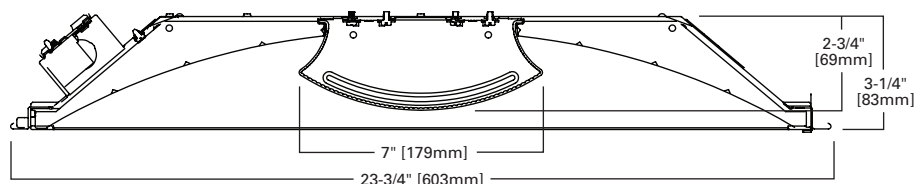
Five year warranty.



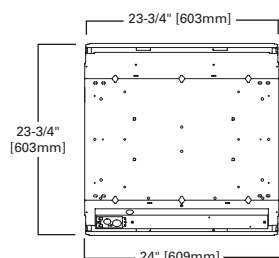
**22CZ
LED**

**2' X 2' TROFFER LED
MODULE**

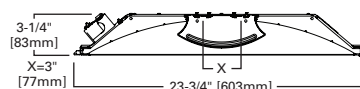
Specification Grade Troffer



MOUNTING DATA



LAMP CONFIGURATIONS



CEILING COMPATIBILITY

G	G	G	Ceiling Type	Trim Type
Grid/Lay-in Standard	Concealed T	Slot Grid	Exposed Grid	Standard
			Concealed T	Standard
			Slot Grid	Standard
			Flange	*

CERTIFICATION DATA

cULus - 1598
 Damp Location Listed
 IC Rated
 LM79/LM80 Compliant
 ROHS Compliant
 DesignLights Consortium™ Qualified
 NOM Compliant

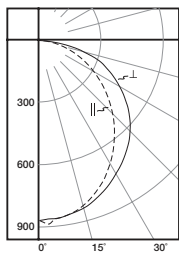
*See Drywall Frame Kit Accessory in Ordering Information Section

LINEAR DISCONNECT

Safe and convenient means of disconnecting power



PHOTOMETRICS

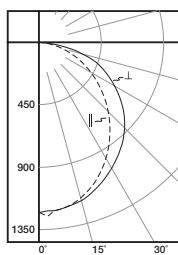


22CZ-LD4-24-UNV-L835-CD1-U

Electronic Driver
 Linear LED 3500K
 Spacing criterion:
 (II) 1.2 x mounting
 height, (⊥) 1.3 x
 mounting height
 Lumens: 2417
 Input Watts: 22.6W
 Efficacy: 106.9 lm/W
 Test Report:
 22CZ-LD4-24-UNV-
 L835-CD1-U.IES

Candlepower

Angle	Along II	45°	Across ⊥
0	861	861	861
5	857	868	855
10	842	844	843
15	815	821	828
20	776	788	801
25	731	747	770
30	676	700	733
35	618	648	697
40	557	595	657
45	494	539	612
50	429	482	561
55	365	426	503
60	301	369	443
65	240	310	381
70	181	251	319
75	124	190	228
80	73	118	137
85	31	45	43
90	0	0	0



22CZ-LD4-34-UNV-L835-CD1-U

Electronic Driver
 Linear LED 3500K
 Spacing criterion:
 (II) 1.2 x mounting
 height, (⊥) 1.3 x
 mounting height
 Lumens: 3420
 Input Watts: 34.5W
 Efficacy: 99.1 lm/W
 Test Report:
 22CZ-LD4-34-UNV-
 L835-CD1-U.IES

Candlepower

Angle	Along II	45°	Across ⊥
0	1219	1219	1219
5	1214	1229	1211
10	1192	1194	1194
15	1153	1162	1173
20	1100	1116	1135
25	1032	1057	1090
30	957	990	1040
35	875	918	987
40	788	842	931
45	699	763	866
50	608	684	793
55	516	604	710
60	427	522	624
65	339	439	536
70	255	355	448
75	175	269	321
80	102	166	190
85	43	63	58
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						
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	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	68	62	71	66	61	69	64	60	58						
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49						
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42						
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37						
7	65	51	42	36	63	50	42	36	48	41	35	47	40	35	46	40	35	33						
8	60	46	38	32	58	46	38	32	44	37	32	43	36	31	42	36	31	29						
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26						
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24						

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	658	27.2
0-40	1065	44.1
0-60	1869	77.3
0-90	2417	100.0
0-180	2417	100.0

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						
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	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	68	62	71	66	61	69	64	60	58						
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49						
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43						
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37						
7	65	51	42	36	63	50	42	36	48	41	35	47	40	35	46	40	35	33						
8	60	46	38	32	58	46	38	32	44	37	32	43	36	31	42	36	31	29						
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26						
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24						

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	931	27.2
0-40	1508	44.1
0-60	2645	77.3
0-90	3420	100.0
0-180	3420	100.0

ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO*	Catalog Logic (Ribbed Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	22CZ-LD4-20-UNV-L830-CD1-U	1888	18.9	100
MTO	22CZ-LD4-20-UNV-L835-CD1-U	2056	18.9	108
MTO	22CZ-LD4-20-UNV-L840-CD1-U	2166	18.9	114
MTO	22CZ-LD4-20-UNV-L850-CD1-U	2261	18.9	119
MTO	22CZ-LD4-24-UNV-L830-CD1-U	2220	22.6	98
Stock	22CZ-LD4-24-UNV-L835-CD1-U	2417	22.6	107
Stock	22CZ-LD4-24-UNV-L840-CD1-U	2547	22.6	113
MTO	22CZ-LD4-24-UNV-L850-CD1-U	2658	22.6	118
MTO	22CZ-LD4-29-UNV-L830-CD1-U	2682	28.2	95
MTO	22CZ-LD4-29-UNV-L835-CD1-U	2920	28.2	103
MTO	22CZ-LD4-29-UNV-L840-CD1-U	3077	28.2	109
MTO	22CZ-LD4-29-UNV-L850-CD1-U	3211	28.2	114
MTO	22CZ-LD4-34-UNV-L830-CD1-U	3141	34.4	91
Stock	22CZ-LD4-34-UNV-L835-CD1-U	3420	34.4	99
Stock	22CZ-LD4-34-UNV-L840-CD1-U	3603	34.4	105
MTO	22CZ-LD4-34-UNV-L850-CD1-U	3761	34.4	109
MTO	22CZ-LD4-39-UNV-L830-CD1-U	3589	41.3	87
MTO	22CZ-LD4-39-UNV-L835-CD1-U	3908	41.3	95
MTO	22CZ-LD4-39-UNV-L840-CD1-U	4118	41.3	100
MTO	22CZ-LD4-39-UNV-L850-CD1-U	4298	41.3	104
MTO	22CZ-LD4-44-UNV-L830-CD1-U	4035	49.2	82
MTO	22CZ-LD4-44-UNV-L835-CD1-U	4394	49.2	89
MTO	22CZ-LD4-44-UNV-L840-CD1-U	4630	49.2	94
MTO	22CZ-LD4-44-UNV-L850-CD1-U	4832	49.2	98

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

ENERGY AND PERFORMANCE DATA BY CATALOG NUMBER

Stock or MTO*	Catalog Logic (Smooth Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	22CZ-LD4-20-S-UNV-L830-CD1-U	1912	18.9	101
MTO	22CZ-LD4-20-S-UNV-L835-CD1-U	2082	18.9	110
MTO	22CZ-LD4-20-S-UNV-L840-CD1-U	2194	18.9	116
MTO	22CZ-LD4-20-S-UNV-L850-CD1-U	2290	18.9	121
MTO	22CZ-LD4-24-S-UNV-L830-CD1-U	2248	22.6	99
MTO	22CZ-LD4-24-S-UNV-L835-CD1-U	2448	22.6	108
MTO	22CZ-LD4-24-S-UNV-L840-CD1-U	2579	22.6	114
MTO	22CZ-LD4-24-S-UNV-L850-CD1-U	2692	22.6	119
MTO	22CZ-LD4-29-S-UNV-L830-CD1-U	2715	28.2	96
MTO	22CZ-LD4-29-S-UNV-L835-CD1-U	2957	28.2	105
MTO	22CZ-LD4-29-S-UNV-L840-CD1-U	3116	28.2	110
MTO	22CZ-LD4-29-S-UNV-L850-CD1-U	3252	28.2	115
MTO	22CZ-LD4-34-S-UNV-L830-CD1-U	3180	34.4	92
MTO	22CZ-LD4-34-S-UNV-L835-CD1-U	3463	34.4	100
MTO	22CZ-LD4-34-S-UNV-L840-CD1-U	3649	34.4	106
MTO	22CZ-LD4-34-S-UNV-L850-CD1-U	3808	34.4	110
MTO	22CZ-LD4-39-S-UNV-L830-CD1-U	3634	41.3	88
MTO	22CZ-LD4-39-S-UNV-L835-CD1-U	3957	41.3	96
MTO	22CZ-LD4-39-S-UNV-L840-CD1-U	4170	41.3	101
MTO	22CZ-LD4-39-S-UNV-L850-CD1-U	4352	41.3	105
MTO	22CZ-LD4-44-S-UNV-L830-CD1-U	4086	49.2	83
MTO	22CZ-LD4-44-S-UNV-L835-CD1-U	4450	49.2	90
MTO	22CZ-LD4-44-S-UNV-L840-CD1-U	4688	49.2	95
MTO	22CZ-LD4-44-S-UNV-L850-CD1-U	4893	49.2	99

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

Standard Efficacy Versions

Stock or MTO*	Catalog Logic (Ribbed Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
STOCK	22CZ-LD4-24SE-UNV-L835-CD1-U	2456	24.5	100
STOCK	22CZ-LD4-24SE-UNV-L840-CD1-U	2588	24.5	106
STOCK	22CZ-LD4-32SE-UNV-L835-CD1-U	3161	35.1	90
STOCK	22CZ-LD4-32SE-UNV-L840-CD1-U	3331	35.1	95

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

Standard Efficacy Versions

Stock or MTO*	Catalog Logic (Smooth Lens)	Delivered Lumens	Watts	Efficacy (lm/W)
MTO	22CZ-LD4-24SE-S-UNV-L835-CD1-U	2467	24.5	101
MTO	22CZ-LD4-24SE-S-UNV-L840-CD1-U	2634	24.5	108
MTO	22CZ-LD4-32SE-S-UNV-L835-CD1-U	3218	35.1	92
MTO	22CZ-LD4-32SE-S-UNV-L840-CD1-U	3390	35.1	97

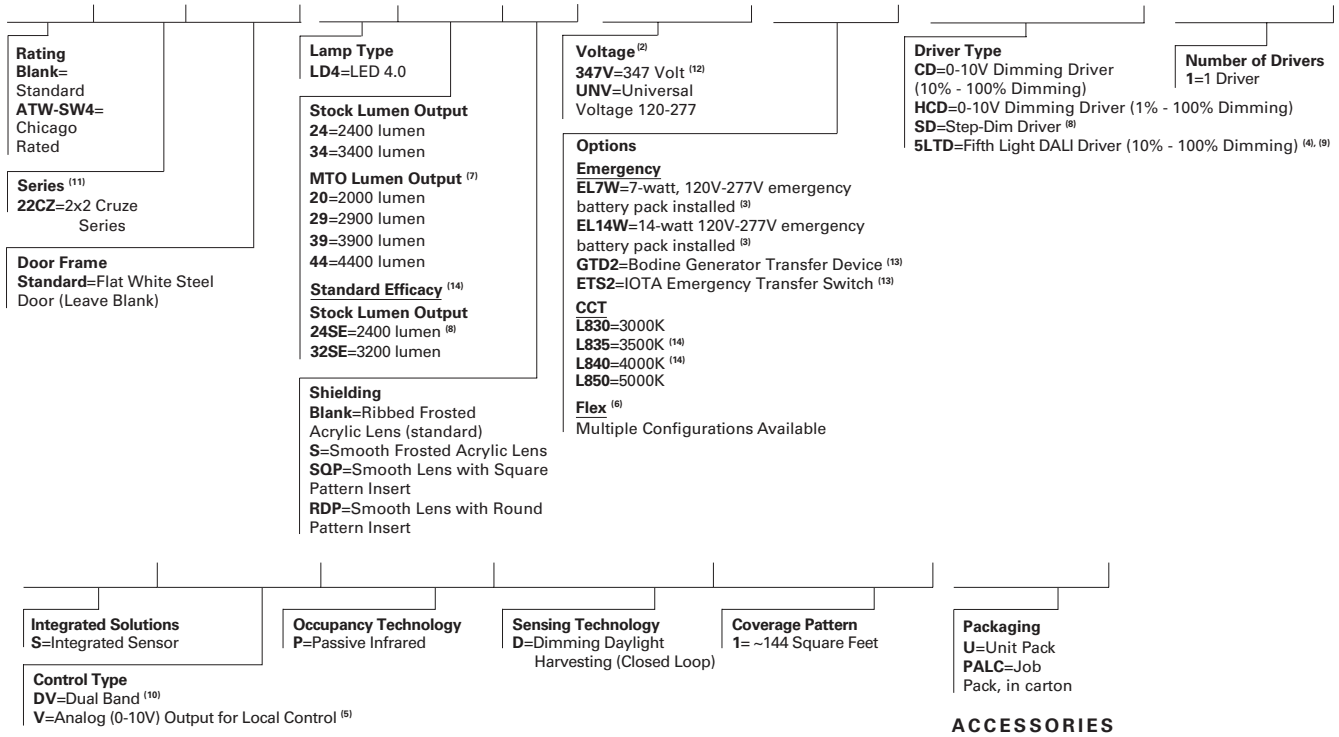
*Made to order (MTO) requires a typical four week lead time.

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 hours)	Theoretical L70 (Hours)
25°C	> 83%	> 117,000

ORDERING INFORMATION

SAMPLE NUMBER: 22CZ-LD4-34-UNV-L835-CD1-U



ACCESSORIES

- EQ-CLIP-U=T-BAR Safety Earthquake Clips ⁽¹⁾
- 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
- ISHH-02=Personal Control Remote for Integrated Sensor

NOTES: ⁽¹⁾An EQ Grid Clip is recommended for all 9/16" ceiling systems. Four required per fixture. ⁽²⁾Products also available in non-US voltages and frequencies for international markets. ⁽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⁾Must be used in conjunction with a DALI control system. For a complete listing of Fifth Light Technology products and other solutions from Cooper Controls, visit www.eaton.com/lightingsystems ⁽⁵⁾Integral sensor works only with "CD" driver and is factory prewired to the driver for stand-alone control. ⁽⁶⁾Flex does not include dimming leads. Control leads provided by others. ⁽⁷⁾Made-to-order (MTO) requires a typical four week leadtime. ⁽⁸⁾Step dim driver option is not available with 2000, 2400 and 2900 lumen packages and 2400 SE version. ⁽⁹⁾Provides blank band on opposite side from sensor band to provide symmetric appearance. ⁽¹⁰⁾DesignLights Consortium™ Qualified and classified for DLC Standard (all lumen packages), refer to www.designlights.org for details. ⁽¹¹⁾347V versions are not available with emergency options. ⁽¹²⁾Used to transfer fixture to secondary power source for life-safety operation. When used with a dimming fixture, two devices are required to ensure control is disabled while operating under emergency power. ⁽¹³⁾Standard efficacy version is only available in 3500K and 4000K CCT.

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

SHIPPING DATA

Catalog No.	Wt.
22CZ-LD4-27	12.5 lbs.
22CZ-LD4-36	12.5 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.

INTEGRATED SENSOR

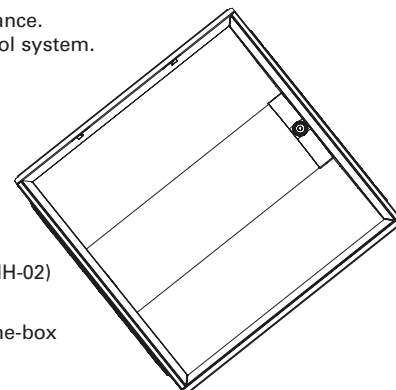
The Cruze with Integrated Sensor technology provides automatic energy savings without sacrificing performance. Traditionally, these types of energy savings required coordination between the luminaire and a lighting control system. The Cruze delivers superior lighting with integrated occupancy and daylighting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

Capture the benefits of traditional lighting controls, without complicated coverage planning or special wiring. Ideal for new construction or retrofit, the Cruze 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.

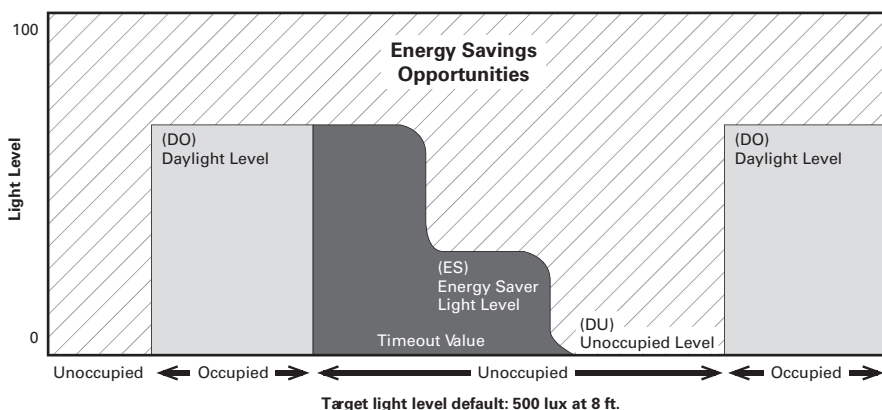
Occupied daylight light levels and unoccupied light levels can be adjusted using the integrated sensor programming remote (Catalog Number: ISHH-01). The integrated sensor personal remote (Catalog Number: ISHH-02) provides code compliant manual raise, lower, ON, OFF control.

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

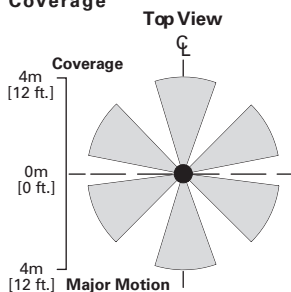


How it works:

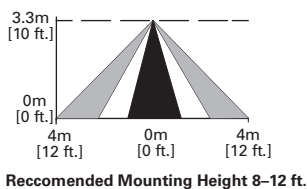
- As the user enters the space controlled by the integral sensor, the lighting turns ON to the default daylight level.
- Lighting will remain at that the daylight level until the space is unoccupied. This will start the occupancy timeout period (default 20 minutes).
- If the space remains unoccupied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