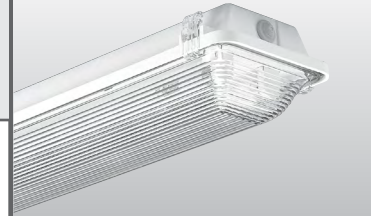


CATALOG #:	TYPE:
PROJECT:	NOTES:

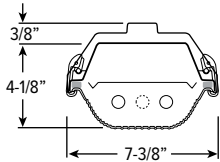
EXAMPLE

96 - 4 - 2 54T5H - PC - OPTIONS - EB2 - UNV

SERIES	NOMINAL LENGTH	TOTAL LAMPS	WATTAGE/TYPE	SHIELDING	OPTIONS/ACCESSORIES	BALLAST TYPE	VOLTAGE
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CROSS SECTION



Shown with PC diffuser

ORDERING INFORMATION

SERIES	96	Fully Enclosed Industrial
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NOMINAL LENGTH	4	4'
8	8'	

TOTAL LAMPS	1, 2, 3 ⁴ , 4, or 6 ⁴	(1-, 2-, or 3-lamp cross-section)
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LAMP WATTAGE/TYPE	28T5S	4', 28-watt T5
32	4', 32-watt T8	
54T5H ⁴	4', 54-watt T5H0 ⁴	
59	8', 59-watt T8	

SHIELDING	PC	Drop, clear, 100% polycarbonate diffuser (vacuum-formed) (standard in 4' units, not available in 8' units)
HIA	Drop, high-impact injection-molded acrylic (standard in 8' units)	
HIAFR	High-impact frosted acrylic	
DCL	Drop, clear, 100% acrylic, impact-resistant diffuser with frosted ends (see page 3 for details)	
DFR	Drop, frosted, 100% acrylic, impact-resistant diffuser (see page 3 for details)	

OPTIONS/ACCESSORIES

Stainless steel latches required for applications with harsh chemicals. Wet location cord sets are yellow.

For generic EM ballast options (must specify voltage), see [Technical Info.](#)^{2,4}

3WC6	3-wire, 6' STOW cord
3WC20	3-wire, 20' STOW cord
4WC6	4-wire, 6' STOW cord
4WC20	4-wire, 20' STOW cord
3WMR	3-wire mini-male receptacle only
3WMRC6	3-wire mini-male receptacle with 6' STOW cord
3WMRC20	3-wire mini-male receptacle with 20' STOW cord
4WMR	4-wire mini-male receptacle only
4WMRC6	4-wire mini-male receptacle with 6' STOW cord
4WMRC20	4-wire mini-male receptacle with 20' STOW cord

OPTIONS/ACCESSORIES (Continued)

WET/1	(1) 1/2" watertight hub (factory-installed in end of housing)
WET/2	(2) 1/2" watertight hubs (factory-installed in ends of housing; not available with occupancy sensor option)
SSCMB	Stainless steel chain mounting brackets (2 per fixture)
HA/40C ³	High-ambient, 40°C max. operating temp. ³
GMF ⁵	Fuse, slow blow (specify voltage) ⁵
GLR ⁵	Fuse, fast blow (specify voltage) ⁵
TP ⁶	Tamper-resistant polycarbonate latches ⁶
SS LATCH	Stainless steel latches
TP/SS LATCH ⁶	Tamper-resistant stainless steel latches ⁶
WMB	Stainless steel 45° wall mount bracket (2 per fixture). See page 3 for details.

OCCUPANCY SENSORS ¹

Specify from the following options (IP65 certified when specified with occupancy sensor):

OCCWS HB350W-L3W-_____	Must specify 120 or 277V.
OCCWS FSP-221B-L_-120-480	Factory-installed occupancy and daylight sensor, must specify lens, L2 or L3. See page 3 for details. Optional FSIR-100 remote controller available, ordered separately.
FSIR-100	Remote controller for occupancy sensor, please specify quantity required per project, ships separately, see page 3 for details

BALLAST TYPE	EB1	1-lamp electronic ballast
EB2	2-lamp electronic ballast	
EB3	3-lamp electronic ballast	
EB4	4-lamp electronic ballast	
EB4/2	(1) 4-lamp and (1) 2-lamp electronic ballast	

VOLTAGE	Must specify 120V or 277V when using occupancy sensor.	
120	120V	
277	277V	
347	347V	
480	480V (T5HO only)	
HRV	347-480V (T5HO only)	

FEATURES

- ▶ Fully gasketed fixture resists dust, bugs, and moisture.
- ▶ Polycarbonate toggle latches (standard) ensure a tight seal and provide easy access to electrical components.
- ▶ Optional stainless steel, tamper-resistant stainless steel, or tamper-resistant polycarbonate latches available.
- ▶ Stainless steel latches are available for harsh environments.
- ▶ Closed-cell polyurethane gasket poured and formed in place to ensure tight seal—does not absorb water or support fungal growth.
- ▶ NSF/ANSI Standard 2—Splash Zone certified.
- ▶ IP65, IP66, and IP67¹ certified.
- ▶ UL listed as fluorescent fixture suitable for wet locations when ordered with factory-installed watertight hubs, STOW cord, or mini-male receptacle option.²
- ▶ Can operate up to 40°C/104°F with high-ambient (HA/40C) option.³
- ▶ This fixture is proudly made in the USA.

¹ IP65 certified when specified with occupancy sensor.
² When specifying EM option for wet location fixture, EM ballast for enclosed and gasketed fixture is required. Wet location cord sets are yellow.
³ Amalgam lamps recommended. HA/40C option not available with EM ballast option or 354T5H cross-section.
⁴ EM ballast is not available with HA/40C or 354T5H cross-section.
⁵ Two (2) fuses required when specifying 208V or 240V.
⁶ This option requires a tamper-resistant tool (must be ordered separately). Please specify quantity required per project.



PHOTOMETRY

96-4-254T5H-PC-EB2 Report #: 13316.0; 11/01/06 | Lamp Type: FP54T5HO/835; Lamp Quantity: 2
 Total Luminaire Optical Efficiency: 66.5%; IES Spacing Criteria: End = 1.2, Diagonal = 1.5, Across = 1.7; Effective Floor Cavity Reflectance = .20

SPECIFICATIONS

Enclosure – Outer housing consists of 5VA (f1) fiberglass, rated for flame and weather resistance.

Internal Housing – 25-gauge die-formed C.R.S.

Latching – Injection-molded polycarbonate latches. Stainless steel latches are available for harsh environments.

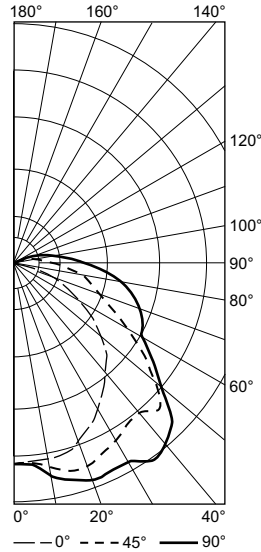
Reflective Surfaces – 92% minimum average reflective white polyester powder coat bonded to phosphate-free, multi-stage pretreated metal.

Shielding – Clear polycarbonate or acrylic UV stabilized diffuser.

Electrical – Electronic ballast standard, instant start T8, program start T5, rated Class P.

Mounting – Surface or suspended. Stainless steel ceiling mount bracket standard.

Labels & Certifications – UL/CUL listed as fluorescent luminaire suitable for dry or damp locations. UL/CUL listed as suitable for wet locations when specified with watertight hub, STOW cord, or mini-male receptacle option.² NSF/ANSI Standard 2–Splash Zone certified, IP65, IP66, and IP67¹ certified, and rated for NEMA 4X.

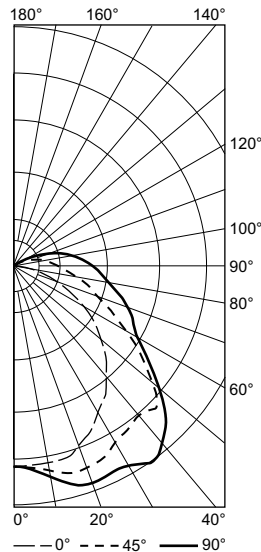


CANDLEPOWER DISTRIBUTION	Vertical Angle	Horizontal Angle			Zonal Lumens
		0°	45°	90°	
0		1539	1539	1539	
5		1525	1535	1558	146.8
15		1506	1653	1723	462.0
25		1367	1597	1748	733.9
35		1174	1501	1846	951.6
45		982	1568	1692	1109.8
55		698	1176	1276	974.3
65		421	802	1074	791.2
75		169	591	917	606.2
85		37	398	672	417.7
90		18	287	539	

LUMEN SUMMARY	Zone	Lumens	% Lamp	% Fixture
	0 - 30	1343	13.4	20.2
	0 - 40	2294	22.9	34.5
	0 - 60	4378	43.8	65.9
	0 - 90	6194	61.9	93.2
	90 - 120	426	4.3	6.4
	90 - 130	450	4.5	6.8
	90 - 150	455	4.6	6.8
	90 - 180	455	4.6	6.8
	0 - 180	6649	66.5	100.0

		ZONAL CAVITY COEFFICIENTS								
		Ceiling			.70			.50		
ROOM CAVITY RATIO	Wall	.70	.50	.30	.70	.50	.30	.50	.30	.10
	0	.78	.78	.78	.76	.76	.76	.71	.71	.71
	1	.70	.67	.63	.68	.65	.62	.61	.59	.56
	2	.64	.58	.53	.61	.56	.52	.53	.49	.46
	3	.58	.51	.45	.56	.49	.44	.47	.42	.38
	4	.53	.45	.39	.51	.43	.38	.41	.36	.32
	5	.48	.39	.33	.46	.38	.32	.36	.31	.27
	6	.44	.35	.29	.42	.34	.28	.32	.27	.23
	7	.41	.31	.25	.39	.30	.25	.29	.24	.20
	8	.37	.28	.22	.36	.27	.22	.26	.21	.17
	9	.34	.25	.19	.33	.24	.19	.23	.18	.15
10	.32	.23	.17	.31	.22	.17	.21	.16	.13	

96-4-232-PC-EB2 Report #: 13317.0; 11/01/06 | Lamp Type: F32T8/835; Lamp Quantity: 2
 Total Luminaire Optical Efficiency: 75.4%; IES Spacing Criteria: End = 1.2, Diagonal = 1.5, Across = 1.7; Effective Floor Cavity Reflectance = .20



CANDLEPOWER DISTRIBUTION	Vertical Angle	Horizontal Angle			Zonal Lumens
		0°	45°	90°	
0		1039	1039	1039	
5		1037	1051	1064	100.3
15		1029	1116	1179	314.6
25		933	1092	1181	496.8
35		813	1028	1242	647.9
45		661	1034	1099	729.7
55		470	774	830	643.3
65		285	523	666	508.3
75		119	376	541	376.4
85		23	251	437	265.1
90		11	211	389	

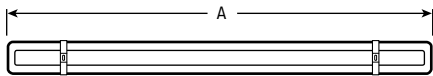
LUMEN SUMMARY	Zone	Lumens	% Lamp	% Fixture
	0 - 30	912	15.5	20.5
	0 - 40	1560	26.4	35.1
	0 - 60	2933	49.7	66.0
	0 - 90	4082	69.2	91.8
	90 - 120	347	5.9	7.8
	90 - 130	362	6.1	8.1
	90 - 150	364	6.2	8.2
	90 - 180	364	6.2	8.2
	0 - 180	4446	75.4	100.0

		ZONAL CAVITY COEFFICIENTS								
		Ceiling			.70			.50		
ROOM CAVITY RATIO	Wall	.70	.50	.30	.70	.50	.30	.50	.30	.10
	0	.88	.88	.88	.85	.85	.85	.80	.80	.80
	1	.80	.76	.72	.77	.73	.70	.69	.66	.64
	2	.72	.66	.60	.70	.64	.59	.60	.56	.52
	3	.66	.58	.51	.63	.56	.50	.53	.48	.44
	4	.60	.51	.44	.58	.49	.43	.47	.41	.37
	5	.55	.45	.38	.53	.44	.37	.41	.36	.31
	6	.50	.40	.33	.48	.39	.32	.37	.31	.27
	7	.46	.36	.29	.44	.35	.28	.33	.27	.23
	8	.42	.32	.25	.41	.31	.25	.29	.24	.20
	9	.39	.28	.22	.38	.28	.22	.26	.21	.17
10	.36	.26	.20	.35	.25	.19	.24	.19	.15	



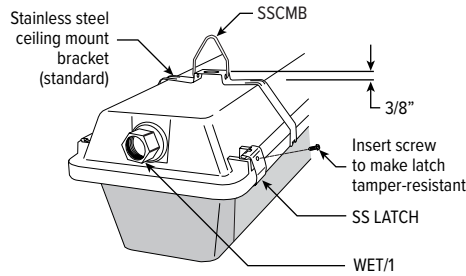
FIXTURE DETAILS

BACK VIEW



Nominal Length	Actual Length (A)
4'	51-3/4"
8'	100"

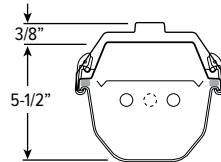
MOUNTING



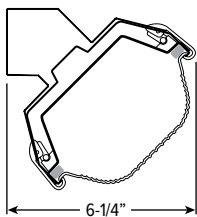
SHIELDING OPTIONS

Nominal Length	Catalog Numbers			
	PC	HIA	DCL	DFR
4'	Standard	Optional	Optional	Optional
8'	N/A	Standard	Optional	Optional

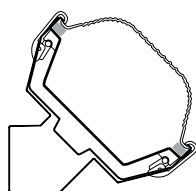
DCL | DFR



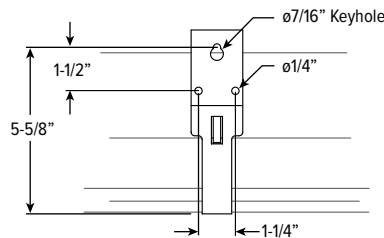
WMB



Wet location listed with fixture lens facing down



Dry or damp location only with fixture lens facing up



OCCUPANCY SENSOR

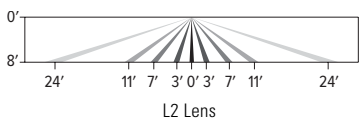
EXAMPLE

OCCWS FSP-221B - L2

OCCUPANCY SENSOR

LENS

- ▶ Fully adjustable high and low dimmed light levels.
- ▶ Designed for LED fixtures; rated for extreme temperatures and up to 200,000 on/off cycles.
- ▶ Hold-off setpoint with automatic calibration option for convenience and added energy savings.
- ▶ Adjustable via handheld wireless configuration tool (ordered separately, see Accessory Details).
- ▶ IP66 rated with choice of lenses for wet and outdoor locations, and mounting heights from 8' to 20'.
- ▶ Adjustable time delay and cutoff delay.
- ▶ Factory set to 10% dimming at 5 minutes, cutoff at 1 hour.
- ▶ Universal voltage for 120V – 480V.



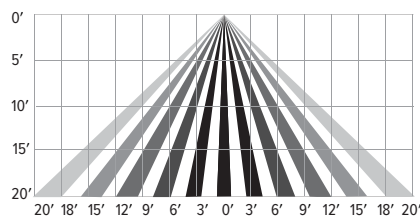
L2 Lens

ORDERING INFORMATION

OCCWS FSP-221B-L_-120-480 Factory-installed occupancy sensor, must specify lens.

LENS

- L2** Coverage at 8' mounting height: ø48'
- L3** Coverage at 20' mounting height: ø40'



L3 Lens

ACCESSORY DETAILS

FSIR-100 – Occupancy Sensor Remote



Initial setup and subsequent sensor adjustments are made using a handheld configuration tool (FSIR-100). The wireless tool stores up to five sensor parameter profiles to speed configuration of multiple sensors. Please specify quantity required per project.

Visit www.wattstopper.com for more information.

