

Product Description

The FOS 4" Retrofit LED Downlight Kit is designed and engineered for residential applications, retrofitting existing recessed 4" can light housings as well as new construction applications, replacing incandescent lamps or compact fluorescent luminaires. The LED package delivers high lumen output with up to 90+ CRI while achieving over 75 lumen per watt. Included is an optional E26 Edison screw base adapter, GU24 or AB male/female connector. Suitable for 120V AC or 100-277V AC input voltage.

Product Specifications

LED Chip

The product light source is a high efficiency LM80 chip with low thermal resistance. This product enables color management to preserve high color consistency over the life of the product, with a CRI of at least 90 while maintaining high luminous efficacy—a no compromise solution.

Construction & Materials

Thermal management system uses durable upper housing and driver to conduct heat away from LEDs and transfer it to the plenum space for optimal performance. LED junction temperatures stay below specified maximum even when installed in attic insulation with ambient temperatures exceeding 40 °C. Suitable for insulated and non-insulated ceilings.

Optical System

- A unique combination of reflective and refractive optical components achieve a uniform, comfortable appearance while eliminating pixel and color fringing. This ensures smooth light patterns are projected with no hot spots and striations.
- Components work together to optimize distribution, balancing the delivery of high illuminance levels on horizontal surfaces with an ideal amount of light on walls and vertical surfaces. This increases the perception of spaciousness.

Electrical System

Integral, high-efficiency driver and power supply.

Power Factor > 0.9 nominal

Input Voltage: 120V, 60Hz or 100-277VAC

Dimming: Dimmable to 1%-100% with most incandescent dimmers. (FOS-CR4-9W-XXE/FOS-CR4-11W-XXE)

(Suggested dimmer manufacturers: Lutron & Leviton)

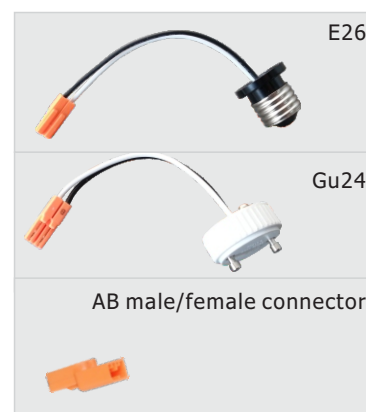
Order Information

Example: FOS-CR4-11W-XXE-277

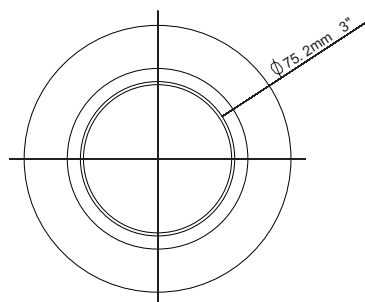
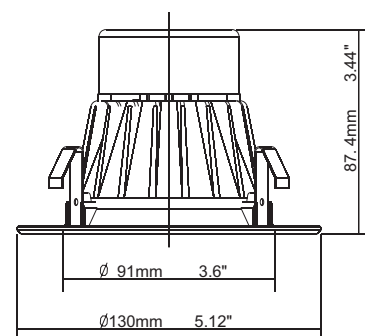
Catagory	Size	Wattage	CCT(XX)	Version	Input Voltage
CR=Retrofit	4=4inch	9W=9W 11W=11W	27=2700K 30=3000K 40=4000K 50=5000K	E=CRI 80 H=CRI90	Blank for 120VAC 277=100-277VAC



Accessories



Dimension



PERFORMANCE SUMMARY

Efficacy: 77LPW

Delivered Light Output: 685Lumens

Rated Power: 9Watts

CRI: Ra>80 (Ra>90 Optional)

ES CCT Options: 2700K 3000K 4000K 5000K

Input Voltage: 120VAC

Input current: 0.08A

THD: <20%

PF: >0.9

Standard Warranty: 5 Years

Standard Lifetime: Designed minimum 35,000 hours

Mounting: Recessed

CERTIFICATE

UL and cUL listed

Energy Star Listed

FCC 47Part 15

LM79 Report

Suitable for damp locations.

ZONAL LUMEN DENSITY MEASUREMENT

T	φ zone	φ total	lum, lamp
0-10	35.84	35.84	5.31,5.31
10-20	95.58	131.4	19.5,19.5
20-30	127.5	259.0	38.4,38.4
30-40	132.3	391.2	58.58
40-50	116.0	507.3	75.2,75.2
50-60	87.70	595.0	88.2,88.2
60-70	54.47	649.5	96.3,96.3
70-80	21.63	671.1	99.5,99.5
80-90	3.511	674.6	100,100

LUMINOUS INTENSITY(CD) DISTRIBUTION DATA

Y	C0	C45	C90
10	359.1	364.3	369.5
20	299.4	311.2	320.8
30	229.4	244.7	257.5
40	165.4	182.0	195.2
50	110.4	123.9	135.7
60	67.07	76.02	84.59
70	31.15	36.00	41.46
80	6.466	7.317	9.350
90	0.0001	0.0123	0.3204

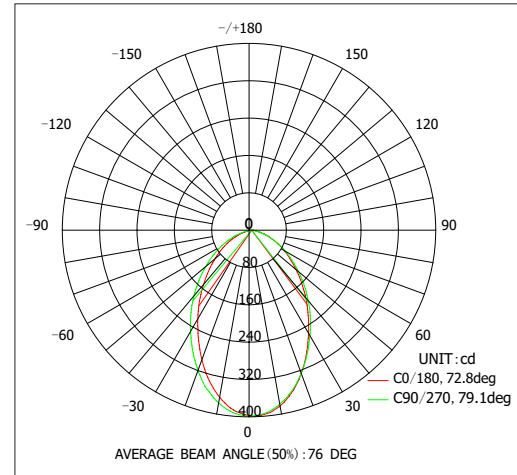
COEFFICIENTS OF UTILIZATION

ppc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR: Room Cavity Ratio			CU												
0	119	119	119	116	116	116	111	111	111	106	106	106	102	102	102	0
1	107	103	100	104	101	98	100	98	95	96	94	92	93	91	90	88
2	95	89	84	93	88	83	90	85	82	87	83	80	84	81	78	76
3	85	78	72	84	77	72	81	75	71	78	73	69	76	72	68	66
4	77	69	63	75	68	63	73	67	62	71	65	61	69	64	60	58
5	69	61	56	68	61	55	66	60	55	64	59	54	63	58	54	52
6	63	55	49	62	55	49	61	54	49	59	53	48	58	52	48	46
7	58	50	44	57	50	44	56	49	44	54	48	44	53	48	43	42
8	53	46	40	53	45	40	51	45	40	50	44	40	49	44	39	38
9	49	42	37	49	42	37	48	41	36	47	41	36	46	40	36	34
10	46	39	34	45	38	34	44	38	34	44	38	33	43	37	33	32

Photometric:

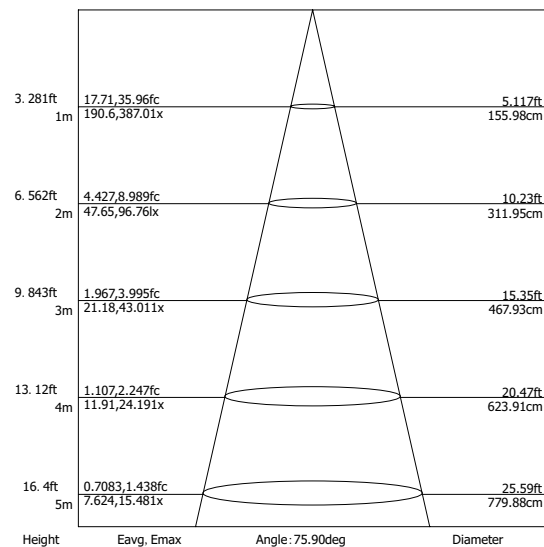
Fixture photometry has been conducted in an accredited testing laboratory in accordance with IESNA LM-79-08.

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



AVERAGE ILLUMINANCE CURVE

Flux out: 365.5lm



Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

PERFORMANCE SUMMARY

Efficacy: 80LPW

Delivered Light Output: 885Lumens

Rated Power: 11Watts

CRI: Ra>80 (Ra>90 Optional)

ES CCT Options: 2700K 3000K 4000K 5000K

Input Voltage: 120VAC (100-277 VAC Optional)

Input current: 0.0926A

THD: <20%

PF: >0.9

Standard Warranty: 5 Years

Standard Lifetime: Designed minimum 35,000 hours

Mounting: Recessed

CERTIFICATE

UL and cUL listed

Energy Star Listed (120VAC Model Only)

FCC 47Part 15

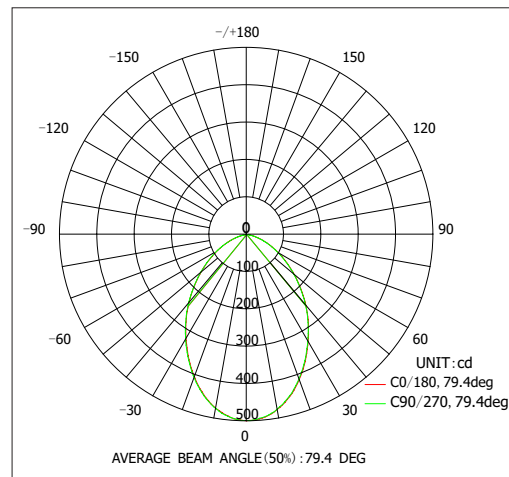
LM79 Report

Suitable for damp locations.

Photometric:

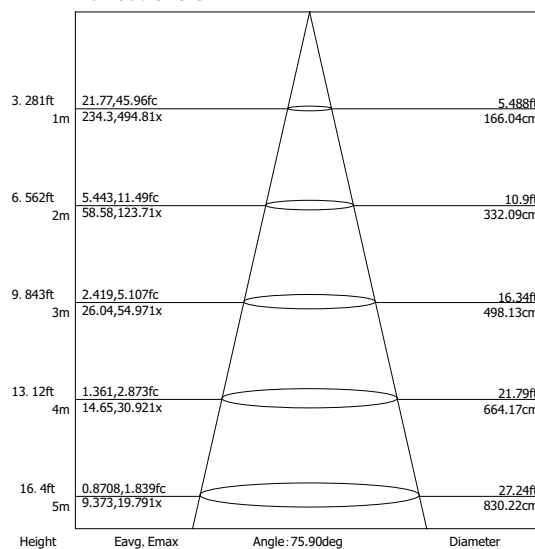
Fixture photometry has been conducted in an accredited testing laboratory in accordance with IESNA LM-79-08.

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



AVERAGE ILLUMINANCE CURVE

Flux out: 518.3lm



Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

ZONAL LUMEN DENSITY MEASUREMENT

T	φ zone	φ total	%lum, lamp
0-10	46.06	46.06	5.15, 5.15
10-20	124.4	170.4	19.1, 19.1
20-30	169.3	339.8	38, 38
30-40	178.6	518.3	58, 58
40-50	157.3	675.7	75.6, 75.6
50-60	116.8	792.5	88.7, 88.7
60-70	69.87	862.4	96.5, 96.5
70-80	26.93	889.3	99.5, 99.5
80-90	4.542	893.8	100, 100

LUMINOUS INTENSITY (CD) DISTRIBUTION DATA

Y	C0	C45	C90
10	469.8	469.4	470.0
20	406.1	407.0	407.5
30	324.5	325.0	326.6
40	242.9	242.8	244.3
50	164.0	164.2	165.1
60	97.72	98.06	99.33
70	44.58	45.02	45.63
80	9.449	9.753	9.919
90	0.0092	0.0117	0.0138

COEFFICIENTS OF UTILIZATION

ppc	50%	80%	10%	50%	70%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw	50%	80%	10%	50%	70%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0
RCR	RCR: Room Cavity Ratio			CU												
0	119	119	119	116	116	116	111	111	111	106	106	105	102	102	102	0
1	107	103	100	105	101	98	100	98	95	97	94	92	93	91	90	88
2	95	89	85	93	88	84	90	85	82	87	83	80	84	81	78	76
3	85	78	73	84	77	72	81	75	71	78	73	69	76	72	68	66
4	77	69	63	75	68	63	73	67	62	71	65	61	69	64	60	58
5	69	61	56	68	61	55	66	60	55	64	59	54	63	58	54	52
6	63	55	49	62	55	49	61	54	49	59	53	48	58	52	48	46
7	58	50	44	57	50	44	56	49	44	54	48	44	53	48	43	42
8	53	46	40	53	45	40	51	45	40	50	44	40	49	44	39	38
9	49	42	37	49	41	37	48	41	36	47	41	36	46	40	36	34
10	46	38	34	45	38	34	44	38	33	43	37	33	43	37	33	31