

FRAXION® 4 LVS

FIXED

Versatile, high-performance, and retrofittable downlights, in a precise, 4-inch profile, the most diminutive in the industry.

PROJECT NAME:	TYPE:
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ORDERING INFORMATION - DOWNLIGHT / HOUSING

Quick Ship Product. All rough in components ship within 10 days up to quantities of 100.

SHAPE	TRIM	RATING	FLANGE FINISH	BAFFLE FINISH	CRI / WATTAGE PACKAGE	CCT	OPTIC (UGR)	INSTALL TYPE	CEILING THICKNESS	DRIVER	MEDIA
										LVS	
F4R Round	FFS Standard Flange	1 IP20 Dry/Damp 2 IP64 Wet* *Suction cup provided for Aim & Focus)	WH White	WH White	STATIC WHITE 80S11A 80+ CRI, 11W, Lumens Divd. - 1277 80S15A 80+ CRI, 15W, Lumens Divd. - 1710 80S21A 80+ CRI, 21W, Lumens Divd. - 2349 80S30B 80+ CRI, 30W, Lumens Divd. - 3156* *(Not available for IC housing applications) 90S11A 90+ CRI, 11W, Lumens Divd. - 1097 90S15A 90+ CRI, 15W, Lumens Divd. - 1469 90S21A 90+ CRI, 21W, Lumens Divd. - 2018 90S30B 90+ CRI, 30W, Lumens Divd. - 2711* *(Not available for IC housing applications) 97S11A 97+ CRI, 11W, Lumens Divd. - 963 97S15A 97+ CRI, 15W, Lumens Divd. - 1290 97S21A 97+ CRI, 21W, Lumens Divd. - 1772 97S30B 97+ CRI, 30W, Lumens Divd. - 2380* *(Not available for IC housing applications)	24 2400K* *190+ CRI only. Not available for 30W package)	10 10° (<13) * (15W package only)	REMOTE IR IC, Remote NR NIC, Remote AR IC, Airtight, Remote* *(ICCEA & Airtight compliant housing)	1 0.125" - 1.25"* * (Housing)	LVS Low Voltage System	STANDARD EFFECTS DEVICE 04 Soft Focus Lens NL No Lens* *(Standard with 10° optic. Not available for Wet Location, or Airtight Housings)
	F4S Square		MFS Microflange TFS Trimless FFT Standard Flange Transitional Baffle MFT Microflange Transitional Baffle TFT Transitional Baffle	AG Satin Silver AU Cashmere Gold BB Burnt Bronze BK Black PR Primer OO Trimless* * (Required for trimless) CF Custom Finish* * (Consult Factory)		AG Satin Silver AU Cashmere Gold BB Burnt Bronze BK Black PR Primer CF Custom Finish* * (Consult Factory)	WARM DIM 90W15A 90+ CRI, 15W Incandescent Profile: 2700K - 1800K Lumens Divd. - 1068 Halogen Profile: 3000K - 1800K Lumens Divd. - 1082 SEE PAGE 4 FOR DETAILED WARM DIM PROFILE COMPARISON. LUMENS DELIVERED REFLECT 3000K PAIRED WITH 20° OPTIC AND SOFT FOCUS LENS.	27 2700K 30 3000K 35 3500K 40 4000K	15 15° (<16) 20 20° (<13) 25 25° (<13) 40 40° (<16) 60 60° (<13)		



PART NUMBER NOTES




- Trim ships as e.g., F4RFFS1-WHWH-90C10A2-3S1-LVS
- Housing ships as e.g., ICT-F4R-01-LVS

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APPLICATION NOTES

- Lucifer Lighting will not supply a fixture with a POE node or power supply inside the fixture. This allows for easier site install with nodes of 2 or more outputs.
- Consult node manufacturer for maximum remote wiring distances.
- Housing and Fixture feature 18 Gauge wiring.
- Wiring connections are made in the splicing compartment or on the fixture using customer supplied connectors, ex. wire nuts, push-in connectors, or terminal blocks.
- Confirm node compatibility with factory if it is not listed.
- Customers are responsible for ensuring POE node drive current is set to correct values shown below.
- Customers must ensure voltage range of the proposed POE node encompasses the fixtures complete Vf range, both maximum and minimum. If assistance is required contact LLC rep or factory.

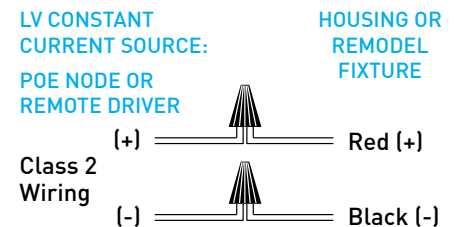
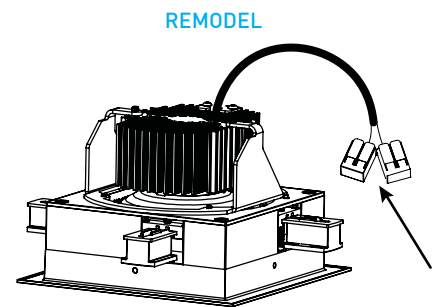
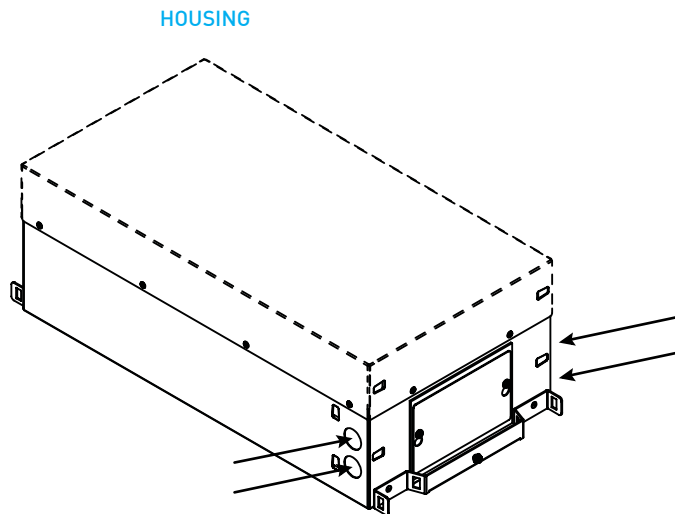
NODE COMPATIBILITY

Manufacturer	Model Number
 Igor® Enabling Smart Buildings™	NP50-60-C-F-5
 molex	180996-1001 180996-1002 180996-2001 180996-2002
 PLATFORMATICS	1 Channel Node, POE-LN2-1U-E 2 Channel Node, POE-LN2-2U-E 4 Channel Node, POE-LN2-4U-E

DRIVE CURRENT SPECIFICS

	80S				90S				97S				90W
	11A	15A	21A	30B	11A	15A	21A	30B	11A	15A	21A	30B	15A
Minimum Vf	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5	30.5
Maximum Vf	39	39	39	39	39	39	39	39	39	39	39	39	39
Current mA	250	350	500	700	250	350	500	700	250	350	500	700	350
Wattage W	8.2	11.8	17.4	25.4	8.2	11.8	17.4	25.4	8.2	11.8	17.4	25.4	11.8

WIRING DIAGRAM AND HOUSING/REMODEL ENTRY/ EXIT POINTS



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ACCESSORIES

ROUND ALTERNATE MEDIA

Dry/Damp location only.

Wet location requires alternate baffle.

- HCL-F4R** Honeycomb Louver w/ Diffusion Film*
*(Not available for Warm Dim, or Airtight housings)
- CGL-F4R** Clear Glass Lens*
*(Not available for Warm Dim)
- FGL-F4R** Frosted Glass Lens
- SFL-F4R** Soft Focus Lens
- FSFL-F4R** Frosted Soft Focus Lens
- WDL-F4R** Wide Distribution Lens*
*(Required and only available for 85° beam spread)
- FLSL-F4R** Frosted Linear Spread Lens

SQUARE ALTERNATE MEDIA

Dry/Damp location only.

Wet location requires alternate baffle.

- HCL-F4S** Honeycomb Louver w/ Diffusion Film*
*(Not available for Warm Dim, or Airtight housings)
- CGL-F4S** Clear Glass Lens*
*(Not available for Warm Dim)
- FGL-F4S** Frosted Glass Lens
- SFL-F4S** Soft Focus Lens
- FSFL-F4S** Frosted Soft Focus Lens
- WDL-F4S** Wide Distribution Lens*
*(Required and only available for 85° beam spread)
- FLSL-F4S** Frosted Linear Spread Lens

REPLACEMENT BAFFLE ASSEMBLY (INCLUDES MEDIA)

ASSEMBLY	SHAPE	TRIM	RATING	FLANGE FINISH	MEDIA
RBA				1	
REPLACEMENT BAFFLE ASSEMBLY	F4R Round F4S Square	FFS Standard Flange MFS Microflange TFS Trimless FFS Standard Flange MFS Microflange TFS Trimless FFT Standard Flange Transitional Baffle MFT Microflange Transitional Baffle TFT Trimless Transitional Baffle	1 Dry / Damp 2 Wet* *(Requires provided suction cup to service or aim & focus)	WH White BK Black PR Primer AU Cashmere Gold AG Satin Silver BB Burnt Bronze CF Custom Finish* *(Consult Factory)	Leave blank for standard Soft Focus Lens HCL Honeycomb Louver w/ Diffusion Film* *(Not available for Wet location, Warm Dim, or Airtight housings) CGL Clear Glass Lens* *(Not available for Warm Dim) FGL Frosted Glass Lens FSFL Frosted Soft Focus Lens WDL Wide Distribution Lens* *(Required and only available for 85° beam spread) FLSL Frosted Linear Spread Lens

REPLACEMENT OPTICS

Interchangeable optics accessible through fixture aperture.

STATIC WHITE

- RO-70-15-S** 15° optic
- RO-70-20-S** 20° optic
- RO-70-25-S** 25° optic
- RO-70-40-S** 40° optic
- RO-70-60-S** 60° optic

WARM DIM

- RO-70-20-W2** 20° optic
- RO-70-25-W2** 25° optic
- RO-70-40-W2** 40° optic
- RO-70-60-W2** 60° optic

REPLACEMENT SUCTION TOOL

One included with every six fixtures designated Wet location.

- F4-TOOL-SUCTION** Allows for removal of baffle with Wet location

T-GRID ACCESSORY KIT

Supplied with ceiling thickness "T" and recommended for installations in T-Grid up to 1.5" tall. Available for ceiling thicknesses from 0.125" - 1.25".

- DHA-TG-KIT**

FURRING CHANNEL ACCESSORY KIT

Recommended for installations in furring channel. Available for ceiling thicknesses from 0.125" - 1.25".

- DHA-FC-KIT**

HANGER BAR EXTENDER KIT

Extends hanger bars from 24.0" to 46.0" maximum.

- FRX-HBE-46** Extender, Hanger Bar

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PERFORMANCE - 3000K

LUMEN PACKAGE	WATTS	10° OPTIC NO LENS		15° OPTIC SOFT FOCUS LENS		20° OPTIC SOFT FOCUS LENS		25° OPTIC SOFT FOCUS LENS		40° OPTIC SOFT FOCUS LENS		60° OPTIC SOFT FOCUS LENS		85° OPTIC WIDE DISTRIBUTION	
		DLVD.	LPW	DLVD.	LPW	DLVD.	LPW	DLVD.	LPW	DLVD.	LPW	DLVD.	LPW	DLVD.	LPW
80S11A	11	-	-	1221	111	1277	116	1261	115	1199	109	1150	105	1053	93
80S15A	15	1436	131	1665	111	1710	114	1695	113	1620	108	1548	103	1399	93
80S21A	21	-	-	2259	108	2349	112	249	107	2202	105	2093	100	1909	91
80S30B	30	-	-	3015	100	3156	105	3093	103	2949	98	2803	93	2502	83
90S11A	11	-	-	1049	95	1097	100	1083	98	1030	94	988	90	905	82
90S15A	15	1238	113	1430	95	1469	98	1456	97	1392	93	1330	89	1202	80
90S21A	21	-	-	1941	92	2018	96	1932	92	1892	90	1798	86	1640	78
90S30B	30	-	-	2590	86	2711	90	2657	89	2533	84	2408	80	2149	72
97S11A	11	-	-	921	84	963	88	951	86	904	82	867	79	795	72
97S15A	15	1068	97	1256	84	1290	86	1278	85	1222	81	1168	78	1055	70
97S21A	21	-	-	1704	81	1772	84	1696	81	1661	79	1579	75	1440	69
97S30B	30	-	-	2274	76	2380	79	2333	78	2224	74	2114	70	1887	63
90W15A (27K-18K)	15	-	-	-	-	1068	71	1045	70	1011	67	968	65	861	57
90W15A (30K-18K)	15	-	-	-	-	1082	72	1064	71	1022	68	976	65	895	60

OUTPUT MULTIPLIER	
CCT	CCT SCALE
2400K	0.85
2700K	0.97
3000K	1.00
3500K	1.03
4000K	1.08

MEDIA LIGHT LOSS FACTOR	
MEDIA	LIGHT LOSS FACTOR
NO LENS	1.06
CGL	1.00
SFL	1.00
FGL	0.89
FSFL	0.81
FLSL	0.82
HCL	0.73

UNIFIED GLARE RATING

10° OPTIC NO LENS	15° OPTIC SOFT FOCUS LENS	20° OPTIC SOFT FOCUS LENS	25° OPTIC SOFT FOCUS LENS	40° OPTIC SOFT FOCUS LENS	60° OPTIC SOFT FOCUS LENS	85° OPTIC WIDE DISTRIBUTION
<13	<16	<13	<13	<16	<13	>19

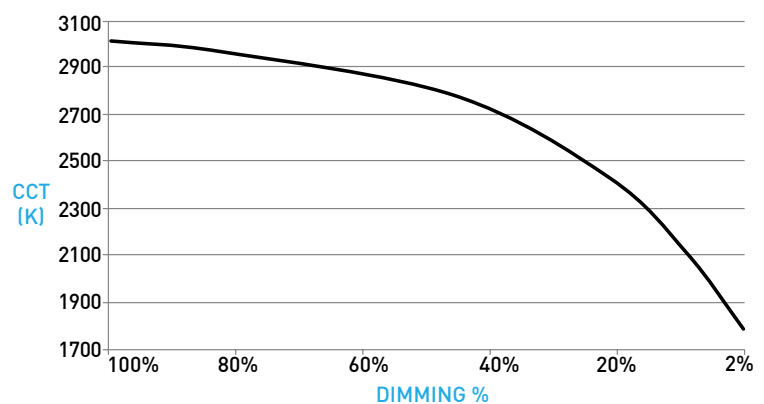
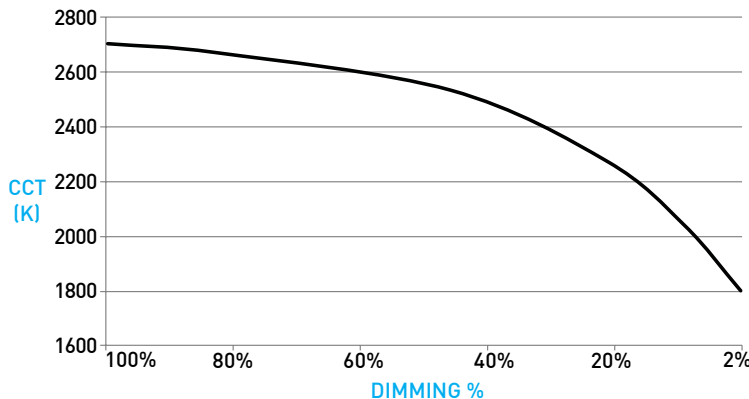
WARM DIM PERFORMANCE - 20° OPTIC - SOFT FOCUS LENS

WARM DIM TO MIRROR INCANDESCENT DIMMING PROFILE

WL 2700K - 1800K	Full on 100%	Dimmed to 80%	Dimmed to 70%	Dimmed to 50%	Dimmed to 20%	Dimmed to 10%	Dimmed to 2%
CCT (K)	2700	2650	2620	2520	2180	1950	1800
Light Output (Lm)	1068	854	747	534	213	106	21
Power (W)	15	12	10.5	7.5	3	1.5	.3
Efficacy (LPW)	71	71	71	71	71	71	71

HALOGEN WARM DIM PROFILE

WD 3000K - 1800K	Full on 100%	Dimmed to 80%	Dimmed to 70%	Dimmed to 50%	Dimmed to 20%	Dimmed to 10%	Dimmed to 2%
CCT (K)	3000	2950	2920	2775	2375	2000	1800
Light Output (Lm)	1082	865	757	541	216	108	22
Power (W)	15	12	10.5	7.5	3	1.5	.3
Efficacy (LPW)	72	72	72	72	72	72	72



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DOWNLIGHT

A BAFFLE

ROUND / SQUARE

Die-cast removable baffle minimizes aperture glare and conceals view into housing; includes silicone gasket.

TRANSITIONAL BAFFLE

Die-cast removable baffle transitions from square aperture to round aperture at light source. Minimizes aperture glare and conceals view into housing; includes silicone gasket.

B RETENTION

Integrated metal arm clamps located within fixture body allow discreet flange design, while accommodating varying ceiling thicknesses from 0.125" to 1.25". Snap-on spacer clips (3X) supplied for ceiling thickness below 0.50" only.

C1 STANDARD FLANGE PROFILE

Provides 0.86" total contractor (goof) allowance with 0.50" flange. Thickness measures 0.06". Wet location features integral silicone gasket.

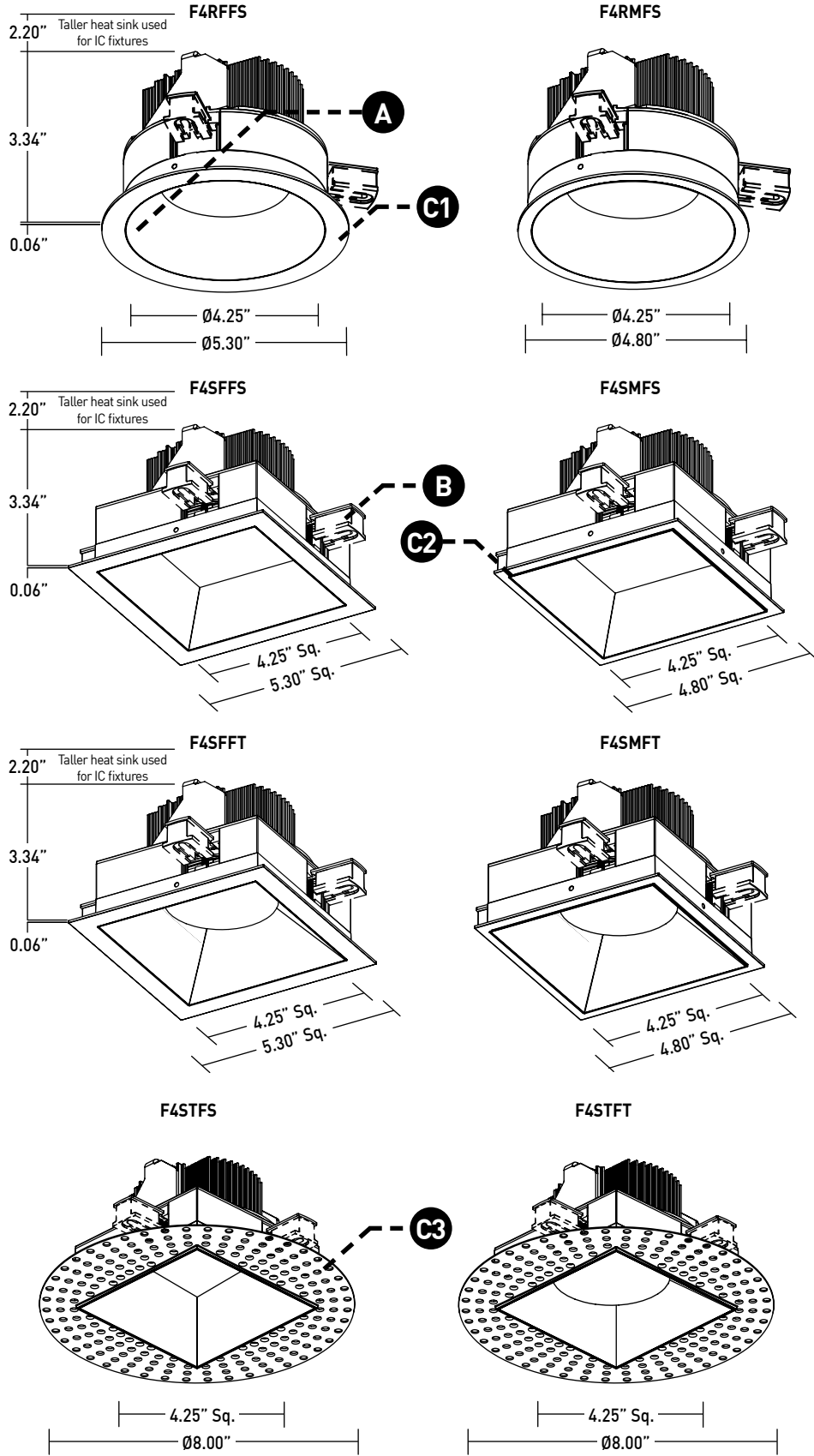
C2 MICROFLANGE PROFILE

Provides industry standard 0.42" total contractor (goof) allowance with 0.28" flange. Thickness measures 0.06". Wet location features integral silicone gasket.

C3 TRIMLESS PROFILE

Installs totally flush with the ceiling with no visible trim. Features integrated appliqué for plaster floating directly to the baffle, thickness measures 0.15" including 0.06" plaster stop. Not recommended for stucco applications.

DIMENSIONS / DRAWINGS



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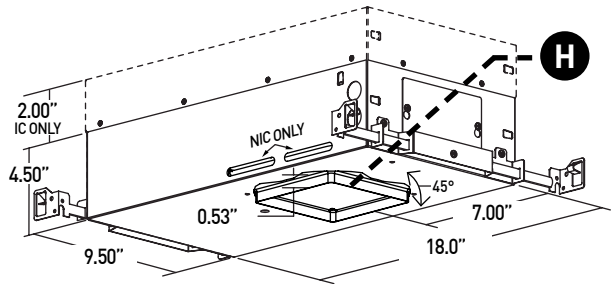
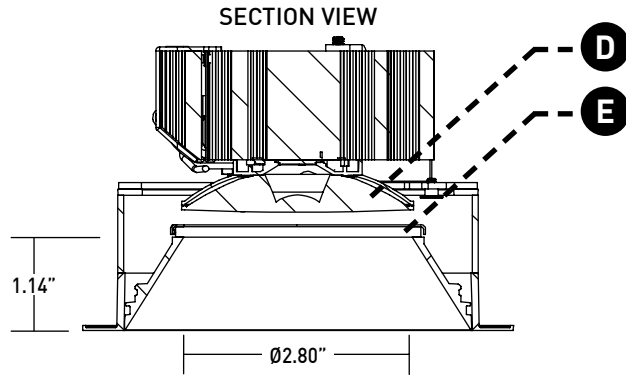
DOWNLIGHT

- D OPTIC**
Proprietary optic integrates Reflection, Refraction and TIR offering 10°, 15°, 25°, 40° & 60° beams.
- E EFFECTS DEVICES**
Soft focus lens included and sealed in Wet location option. Fixture is limited to 1 lens. Suction tool provided for removal of Wet location baffles.

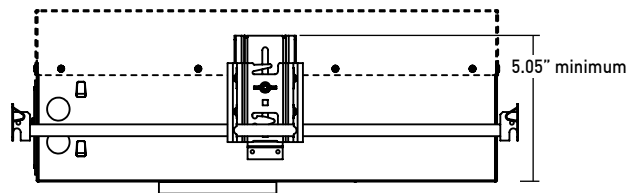
HOUSING / MOUNTING

- F ICT (IC) HOUSING - TALL**
 - For IC ceilings.
 - CCEA and Airtight listed.
 - Accommodates max 2259 delivered lumens.
 - No setback from polycell spray foam insulation having max R-Value of 60 on all sides and top of housing.
- G NCM (NIC) HOUSING - MEDIUM**
 - Minimum 0.50" setback from combustible and non-combustible materials on all sides and top of housing.
 - Minimum 3.00" setback from insulation material having max R-Value 30 on all sides and top of housing.
 - Minimum 6.00" setback from polycell spray foam insulation having max R-Value 60.
- H HOUSING COLLAR**
 - Requires 4.625" cutout.
 - Fixed round aperture or square aperture with 45 degree rotation that locks from below providing easy alignment of square aperture housings.
 - Accommodates varying ceiling thicknesses.
- I ADJUSTABLE HANGER BAR HEIGHT ACCESSORY**
Provided with ceiling thickness "T" and recommended for installations in T-Grid and with furring channel. Hanger bars are installed to adjustable bracket. Allows housing to be raised and lowered; ceiling thickness remains 0.5" to 1.0" max.

DIMENSIONS / DRAWINGS



NOTE: Square housing shown, housing will feature round aperture for round fixtures.



HOUSING / MOUNTING NOTES

- Do not install in environments where ambient temperatures exceed 40°C (104°F).
- Power supply compartment and all splice connections may be serviced from room side.
- Consult factory for spacing requirements for any installations exceeding R-Value 60.
- Hanger bars fitted to short side of housing, and long side of Low Flux housings; extend from 14.0" to 24.0", but may be field cut to accommodate narrow stud spacing. Can be extended up to 46" maximum with FRX-HBE-46 kit.
- Hanger bars and brackets add 4.00" to the overall dimension, but are exclusive of the setback requirements.
- Driver assembly ships with trim, not housing. Housing and trim feature mating quick-connect plugs for ease of installation.

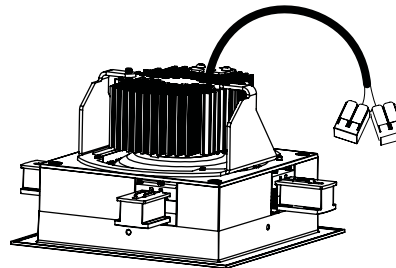
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REMODEL

J REMODEL

- Provided with RR install type.
- Requires 4.42" cutout.
- Installs without conventional housing using integral mounting clamps.
- Requires plenum rated Class 2 cable between fixture and remote driver. Cable supplied by others.
- Minimum 0.75" clearance from top of trim.
- Minimum setback from combustible and non-combustible materials of 6.63" radius from fixture centerline.
- Minimum additional 3.00" setback from insulation material with max R-Value 30 from any surface of downlight fixture assembly.
- Minimum additional 6.00" setback from polycell spray foam insulation with max R-Value 60 from any surface of downlight fixture assembly.
- Do not install in environments where ambient temperatures exceed 40°C (104°F).
- All splice connections serviceable from room side.
- Consult factory for spacing requirements for any installations exceeding R-Value 60.

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FRAXION4 LVS FIXED

TECHNICAL

CONSTRUCTION

Downlight: Aluminum and steel. Extruded aluminum heat-sink. Painted finishes are granulated powder coat.

Housing: 22 Gauge galvanized steel.

Appliqué: Zinc Alloy

STATIC WHITE LED

2-step MacAdam ellipse LED module available in 80+, 90+ and 97+ CRI configurations in color temperatures of 2700K, 3000K, 3500K and 4000K.

3-step MacAdam ellipse LED module available in 90+ CRI configuration in color temperature of 2400K. Average rated lamp life of 50,000 hours.

LED and driver assemblies are field-replaceable.

WARM DIM LED

3-step MacAdam ellipse warm dim LED module available in 90+ CRI configuration. 3000K or 2700K at full brightness, warming to 1800K at full dim. Average rated lamp life of 50,000 hours. LED and driver assemblies are field-replaceable.

LISTING

cTUVus listed to UL2108 standard for Dry / Damp and Wet locations.

CCEA and Airtight Listed.

U.S. Patent: 10,344,958

WEIGHT

Trim - 2.8 lbs max

IC Housing - 7 lbs

NIC Housing - 6 lbs

LIMITED WARRANTY

Manufacturer's 1-year warranty guarantees product(s) listed to be free from defects in material and workmanship under normal use and service. 5-year warranty on LED to operate with 70% of the original flux and remain within a range of 3 duv. Warranty period begins from the date of shipment by Seller. [Consult website for full warranty terms and conditions.](#)

CHANGE LOG

1. 04/07/2022: REMOVED REMOTE REMODEL ACCESSORY KIT PSF4-RMT-AK.

2. 10/17/2022: REMOVED 90W12A 3000K-1800K WARM DIM AND ADDED 90W12A 3000K-1800K WARM DIM.

3. 08/08/2023: ADDED NEW LED AND OPTIC SYSTEM.

4. 02/08/2024: ADDED 2400K.