

MOFFAT M

Indoor Linear Luminaire

Key Features

- 6063-T6 Extruded aluminum housing
- Highly reflective die-formed white painted steel reflector
- Die-cast aluminum end caps
- MOFFAT offered with a 5-year limited warranty that covers LED, driver and fixture
- ETL listed conforming to UL 1598 in US and CSA 250 in Canada
- Approved for dry/damp location
- Maximum fixture weight is 20 lbs per standard 4' fixture
- Rotatable fixture head for asymmetric or general illumination
- Buy American Act compliant



Example Part #: M-A-835HO-26'-AC48G1-U-FSD-1-0-W



SHIELDING	SOURCE ¹	LENGTH ²	MOUNTING ³
A - Satine Lens HE - High Efficiency Lens WHE - Asymmetric Lens P - Parabolic Louver <i>Shielding pg. 2</i>	_27_ - 2700K _30_ - 3000K _35_ - 3500K _40_ - 4000K CL - Custom Lumens CW - Custom Watts <i>Output pg. 2-3</i>	_ - Individual Fixture _ - Continuous Row <i>Length pg. 3</i>	AC_G - AC to Grid AC_JB - AC to J Box AC_ST - AC to Structure FL - Flush Mount PH - Pendant Hub (<i>specify 12", 18", 24"</i>) PHS - Pendant Swivel (<i>specify 12", 18", 24"</i>) WH - Wall Hub (<i>specify 6", 12", 18", 24"</i>) <i>Mounting pg. 3</i>
VOLTAGE	DRIVER	CIRCUITING	BATTERY & EMERGENCY ⁴
U - Universal <i>(120 thru 277V)</i> 1 - 120V 2 - 277V 3 - 347V <i>Voltage pg. 4</i>	FSD - Factory Select Driver (<i>1%, 0-10v</i>) PL2 - Advance Xitanium (<i>1%, 0-10v</i>) OL2 - eldoLED Optotronic (<i>1%, 0-10v</i>) OL4 - eldoLED Optotronic 347v (<i>1%, 0-10v</i>) EE1 - eldoLED ECOdrive (<i>1%, 0-10v</i>) ES1 - eldoLED SOLOdrive (<i>0.1%, 0-10v</i>) LH1 - Lutron Hi-lume (<i>1%, EcoSystem</i>) <i>Driver pg. 4</i>	1 - Single Circuit M - Multi Circuit E - Emergency <i>(entire fixture)</i> N - Night Light <i>(entire fixture)</i> <i>Circuiting pg. 4</i>	0 - None _FSB - Factory Select Battery _FSG - Factory Select ALCR _GI - Iota ETS DR _GB - Bodine GTD _ILL - Iota 10W integral _PLL - Bodine 10W (<i>low profile</i>) _E - Emergency circuit section _N - Night Light circuit section _L - Life Safety circuit section <i>Battery and Emergency pg. 4-5</i>
FINISH	FIXTURE OPTIONS ⁵	CONTROLS ⁶	
W - White S - Metallic Silver BL - Textured Black BR - Bronze GR - Graphite CC - Custom Color <i>Finish pg. 5</i>	CE - Chrome Endcaps CM - Chrome Mounting (<i>includes hub</i>) GMF - Slow Blow Fusing DSP - Customer Supplied Battery/Driver/Sensor V - Visor <i>Fixture Options pg. 5</i>	DLMFC - Wattstopper DLM (<i>wired</i>) CLME - Encelium CLM (<i>wireless</i>) VRF - Lutron Vive Connected (<i>wireless</i>) <i>Controls pg. 6</i>	

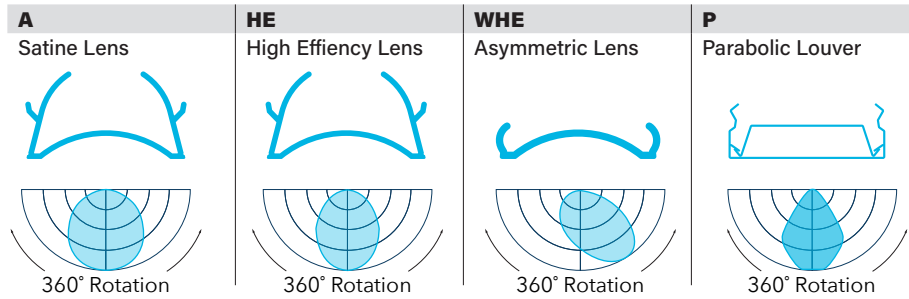
¹When specifying SOURCE the first _ is for specifying either 8 - 80CRI, 9 - 90CRI. The ending __ are for specifying output, example HO - High Output. See output charts for more information. BIOS dynamic available, please contact factory for more information. ²Individual fixtures come in 2', 3', 4', 6' & 8' lengths. Continuous rows available in 1' increments, starting at 2'. ³Specify AC Cable length, standard AC are 48" & 120"; Specify grid: G1=15/16", G9=9/16", GS=Screw Slot. ⁴Enter quantity for Battery and Emergency, Example 2PL. ⁵Both CE and CM options may require longer lead times. ⁶Controls can only be used with Single Circuit (1) or Emergency Circuit (E). See Controls chart on page 5 for driver options and more information.

Specifications and dimensions subject to change without notice. Specification sheets that appear on pinnacle-ltg.com are the most recent version and supersede all other previously printed or electronic versions.



Shielding

- The distributions for each shielding option below are shown in a direct orientation. See Mounting for all rotating head options.



CRI, CCT & Output

- Specify either 80 or 90 CRI
- Longer lead-time may apply for 90 CRI. Consult factory
- 90 CRI = R9≥50

Custom Output- Lumens OR Wattage

CL _____	Specify CRI, CCT and desired lumens (i.e. CL835950)	Specify lumens between standard offering listed below. Lumens are specified per color temp
CW _____	Specify CRI, CCT and desired wattage (i.e. CW9409.5)	Specify watts between standard offering listed below

80 CRI

	Color	Output	Lumens per foot	Shielding A Satine		HE High Efficiency		WHE Asymmetric Lens		P Parabolic Louver	
				LPW	Watts/ft	LPW	Watts/ft	LPW	Watts/ft	LPW	Watts/ft
830LO	3000K	Low	350	100.0	3.5	110.9	3.2	104.6	3.3	84.6	4.1
830	3000K	Standard	750	105.1	7.1	116.0	6.5	110.1	6.8	85.5	8.8
830HO	3000K	High	1000	107.3	9.3	115.3	8.7	108.9	9.2	86.4	11.6
830VHO	3000K	Very High	1250	105.5	11.9	118.0	10.6	110.7	11.3	N/A	N/A
835LO	3500K	Low	350	102.8	3.4	114.0	3.1	107.5	3.3	87.0	4.0
835	3500K	Standard	750	108.1	6.9	118.2	6.3	112.3	6.7	87.6	8.6
835HO	3500K	High	1000	110.4	9.1	118.6	8.4	112.0	8.9	88.9	11.2
835VHO	3500K	Very High	1250	108.6	11.5	121.4	10.3	113.9	11.0	N/A	N/A
840LO	4000K	Low	350	104.0	3.4	115.4	3.0	108.8	3.2	86.0	4.1
840	4000K	Standard	750	109.4	6.9	119.6	6.3	113.7	6.6	88.7	8.5
840HO	4000K	High	1000	111.8	8.9	120.1	8.3	113.4	8.8	90.0	11.1
840VHO	4000K	Very High	1250	109.9	11.4	122.9	10.2	115.4	10.8	N/A	N/A

90 CRI

927LO	2700K	Low	350	86.7	4.0	94.1	3.7	88.7	3.9	71.5	4.9
927	2700K	Standard	750	87.6	8.6	97.4	7.7	91.5	8.2	73.5	10.2
927HO	2700K	High	1000	89.1	11.2	99.5	10.0	93.5	10.7	N/A	N/A
930LO	3000K	Low	350	87.7	4.0	97.3	3.6	91.7	3.8	73.4	4.8
930	3000K	Standard	750	90.7	8.3	100.9	7.4	94.7	7.9	75.4	9.9
930HO	3000K	High	1000	92.4	10.8	102.2	9.8	96.9	10.3	73.9	13.5
935LO	3500K	Low	350	89.6	3.9	97.5	3.6	93.7	3.7	75.4	4.6
935	3500K	Standard	750	92.4	8.1	103.1	7.3	97.0	7.7	77.1	9.7
935HO	3500K	High	1000	94.5	10.6	104.5	9.6	99.1	10.1	76.5	13.1
940LO	4000K	Low	350	89.0	3.9	96.8	3.6	93.0	3.8	74.5	4.7
940	4000K	Standard	750	91.7	8.2	102.3	7.3	96.1	7.8	76.5	9.8
940HO	4000K	High	1000	93.7	10.7	103.7	9.6	98.3	10.2	75.9	13.2

¹LPW and watts/ft based off 48" fixture size.

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Length

- All individual units cannot be joined
- The AC, PH and WH mounting options have a 1-3/8" hub on each side of the fixture, the FL mounting option had 1/2" hub at each end of the fixture, see installation instructions for more details and chart.

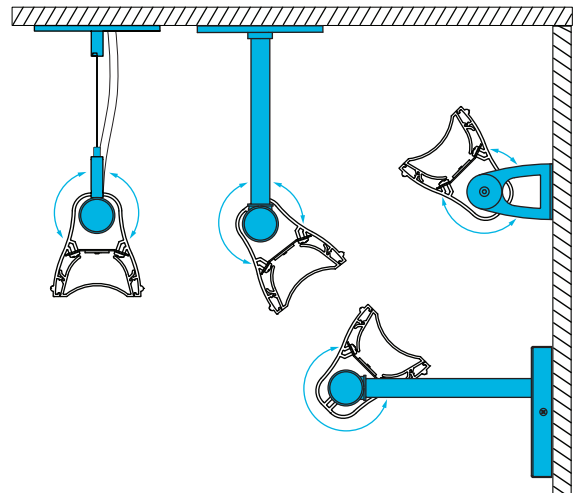
2	3	4	6	8	—
Indiv. Fixture	Indiv. Fixture	Indiv. Fixture	Indiv. Fixture	Indiv. Fixture	Cont. Run Specify nominal overall row length to the 1'
24-5/8" (610.2mm)					
	36-5/8" (930.3mm)				
		48-5/8" (1235.1mm)			
			72-5/8" (1844.7mm)		
				96-5/8" (2454.3mm)	
Specify to the 1' >>>					

Mounting

- Specify cable length in ordering code (AC48G1)
- Standard 48" adjustable cable. Specify up to 350"
- Pendant lengths are 12", 18", and 24"
- Wall Hub lengths are 6", 12", 18", and 24"
- End caps and standard white power cord attached at factory
- Aircraft Cable supplied with 5" (127mm) power and 2" (51mm) non-power canopies
- Canopies, hubs, and pendants match fixture finish, power cords are white or black depending on fixture finish. See Finish section for additional details
- Approved for dry/damp location unless otherwise noted

- Refer to installation instructions during installation at the job site
- Maximum fixture weight is 20 lbs. per 4' fixture
- Fixture head rotation provides asymmetric output,
- The AC, PH and WH mounting options have a 1-3/8" hub on each side of the fixture, the FL mounting option has 1/2" hub at each end of the fixture, see installation instructions for more details and chart.
- When using AC mount fixture head shouldn't be rotated more than 15°, anything past that will cause fixture to not hang straight

AC_G1	Adjustable AC to 1" (15/16") T-Bar (15° rotating head)
AC_G9	Adjustable AC to 9/16" T-Bar (15° rotating head)
AC_GS	Adjustable AC to Screw Slot T-Bar (15° rotating head)
AC_JB	Adjustable AC to Junction Box (15° rotating head)
AC_ST	Adjustable AC to Structure (15° rotating head)
FL	Flush Mount (360° rotating head)
PH	Pendant Hub (360° rotating head)
PHS	Pendant Hub Swivel (Hub swivels 23°, 360° rotating head)
WH	Wall Hub (360° rotating head)
AC5_G	5" (127mm) Non-Power Canopy
AC5_JB	5" (127mm) Non-Power Canopy
SQ_G	5" (127mm) Square Canopy
SQ_JB	5" (127mm) Square Canopy



Voltage

- Some MOFFAT configurations will not accommodate all voltage options; consult with factory

U	Universal
1	120 volt
2	277 volt
3	347 volt



Driver

- Standard Driver Option = FSD
- Driver Lifetime: 50,000 hours at 25°C ambient operating conditions
- Some MOFFAT configurations will not accommodate all driver options; consult with factory For more driver options see Pinnacle Resource Guide

0-10V Drivers

FSD	Factory Select Driver 1%, 0-10v
PL2	Signify Advance Xitanium 1%, 0-10v
PL4	Advance Xitanium 347v 1%, 0-10v, requires 347v
OL2	eldoLED Optotronic, 1%, 0-10v
OL4	eldoLED Optotronic 347v, 1% 0-10v, requires 347v option
EE1	eldoLED ECOdrive 1%, 0-10v Logarithmic
EE2	eldoLED ECOdrive 1%, 0-10v Linear
ES1	eldoLED SOLOdrive 0-10v, 0.1% Logarithmic
ES2	eldoLED SOLOdrive 0-10v, 0% Linear
OL5	eldoLED Optotronic 1%, 0-10v, AUX

DALI Drivers

EE3	eldoLED ECOdrive .1%, DALI (logarithmic)
ES3	eldoLED SOLOdrive .1%, DALI (logarithmic)
OD1	eldoLED Optotronic 1%, DEXAL
OD2	eldoLED Optotronic 1%, DALI 2 Channel

Lutron Drivers

LH1	Lutron Hi-lume Soft-on, Fade-to-black 1%, EcoSystem, LDE1
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Alternate Drivers

PS1	Signify Advance Xitanium Step Dimming 50%/100%
PR1	Philips Advance Xitanium SR, requires EASYS, VDO or VRF
EH1	ELV 120v only, 0-10v universal

How to specify Circuiting, Battery and Emergency

- 1**
- Select fixture circuiting from options below
 - Some MOFFAT configurations will not accommodate all circuiting options, consult with factory

Circuiting

1	Single Circuit
M	Multi Circuit
E	Emergency Circuit only
N	Night Light Circuit only

- 2** + **3**
- Battery and emergency section options are available in addition to fixture circuit
 - Select battery and emergency section options below; factory shop drawing required
 - Some MOFFAT configurations will not accommodate all circuiting options, consult with factory

Battery and/or Emergency If Required

0	No battery or specific emergency section required
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Battery

- Select battery section type if required, indicate total QTY. *Example 2PL*
- 90 minute battery runtime; test button can be integral or remote to fixture
- For more battery options available, see Pinnacle Resource Guide

0	No Battery
_FSB	Factory Select Battery (10w option)
_FSBST	Factory Select Battery (10w, Self Testing)
_ILL	Iota 10w Integral Lithium, Self Testing
_IRH	Iota 20w Remote
_PRH	Bodine 20w Remote
_PLL	Bodine 10w Integral Lithium, Self Testing

For Approximate Battery Lumen Output

- Multiply battery wattage X fixture LPW shown on Lumen Table
- 92.3 (LPW) x 10 (watts) = 923 battery lumen output

Emergency

- Select emergency section type if required, indicate total QTY. *Example 1E*
- Combine battery and emergency section ordering codes if both options are selected

_FSG	Factory Select Automatic Load Control Relay (ALCR), UNV
_GI	Emergency Transfer Switch (ETS) DR Emergency Control Device, UNV
_GB	Bodine GTD, Generator Transfer Device, 120v or 277v
_E	Emergency circuit section
_N	Night Light circuit section
_L	Life Safety circuit section NO THROUGH WIRE

Combination Section Ordering Examples

- Single circuit, (1) 10w battery, (1) emergency section Ordering Code: 1-1PL1E
- Multi circuit, (2) 10w battery, (2) emergency sections Ordering Code: M-2PL2E
- Single circuit, (1) night light section Ordering Code: 1-1N

Battery OR Emergency Ordering Examples

- Single circuit, 10w Integral Battery Ordering Code: 1-1PL
- Emergency only, 10w Integral Battery Ordering Code: E-1PL
- Single circuit, GTD required Ordering Code: 1-1GB

Finish

- Standard powder-coat textured white, metallic silver, textured black, graphite or bronze painted finish; consult factory for chip of standard paint finishes
- Selecting a fixture finish other than white may impact lumen output; consult factory for more information

- Specify finish options for mounting hardware (endcaps, hubs, and pendants) in fixture options section

W	White (<i>white cord/white canopy</i>)
S	Metallic Silver (<i>white cord/silver canopy</i>)
BL	Textured Black (<i>black cord/black canopy</i>)
BR	Bronze (<i>white cord/bronze canopy</i>)
GR	Graphite (<i>white cord/graphite canopy</i>)
CC	Custom Color (<i>white cord/color match canopy</i>)

Fixture Options

- Additional options to enhance the fixture and finish of the product
- CM option includes both Hub and Pendant (*NOT ENDCAP*). May require longer lead time.

- Cannot combine Visor with DLMFC or CLME control options

CE	Chrome Endcaps
CM	Chrome Mounting (<i>includes hub</i>)
GMF	Slow Blow Fusing
DSP	Customer Supplied Battery/Driver/Sensor
V	Visor





Controls

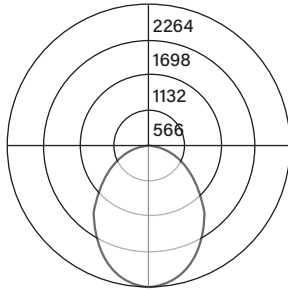
- Pinnacle Lighting offers easy to specify network control solutions that connect to an intelligent centralized system to maximize lighting energy efficiencies or integral sensors for individual fixture control
- Pinnacle Lighting fixtures ship technology ready; commissioning by others
- Controls can only be used with Single Circuit (1) or Emergency Circuit (E)
- Contact factory for any non-standard configurations for layout, placement, or EM options
- One drop per sensor typical, consult factory for more information

	Solution	Components	Network/Sensor	Connection	Required Drivers	Limitations
DLMFC	Legrand Wattstopper DLM	LMFC-011	Digital Light Management (DLM)	Wired, one RJ45 port	OL2, OL4	None
CLME	Encelium CLM	ZBHA-CLM-DIM	Encelium	Wireless	OL5	None
VRF	Lutron Vive Connected	DFCSJ-OEM-RF	Vive	Wireless	OD1, PR1	Not available with 347 volt

Photometrics

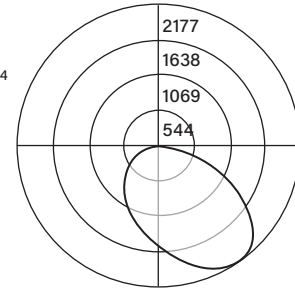
Satine Lens

Test # ITL91825
 Catalog # M-HE-840VHO-4
 Lumens 5312 lm
 Watts 43.1 W
 Efficacy 123 LPW



Asymmetric Lens

Test # ITL93165
 Catalog # MF-WHE-840VHO-4
 Lumens 4808 lm
 Watts 41.2 W
 Efficacy 117 LPW



Candela Distribution

Vert Angle	Horizontal Angle				
	0	22.5	45	67.5	90
0	2264	2264	2264	2264	2264
5	2249	2248	2244	2241	2239
10	2209	2198	2191	2183	2179
15	2138	2117	2106	2088	2075
20	2044	2010	1993	1965	1948
25	1922	1884	1856	1818	1796
30	1786	1742	1710	1659	1638
35	1636	1593	1548	1494	1465
40	1475	1434	1384	1323	1298
45	1306	1270	1218	1158	1130
50	1137	1105	1052	991	967
55	968	942	886	828	804
60	801	778	725	668	645
65	638	622	571	515	494
70	480	469	419	373	363
75	331	327	278	257	251
80	198	189	165	154	151
85	89	77	70	65	64
90	1	3	4	4	5

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	25653	22492	20410
55	23396	19631	17277
65	20862	16437	13612
75	17550	11936	10062
85	13557	6287	4984

Candela Distribution

Vert Angle	Horizontal Angle				
	0	22.5	45	67.5	90
0	1622	1622	1622	1622	1622
5	1755	1756	1750	1742	1727
10	1885	1881	1872	1856	1827
15	2005	2000	1988	1960	1916
20	2103	2093	2083	2044	1987
25	2161	2153	2138	2094	2029
30	2176	2165	2148	2102	2032
35	2128	2118	2103	2055	1985
40	2017	2009	1994	1951	1886
45	1842	1837	1825	1793	1739
50	1629	1620	1616	1590	1548
55	1378	1375	1369	1361	1328
60	1113	1116	1111	1115	1091
65	850	850	849	862	851
70	558	563	573	594	617
75	256	263	278	319	363
80	88	89	93	102	131
85	30	31	31	32	35
90	0	1	1	2	2

Luminance Data (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	35248	34922	20226
55	32508	32295	18778
65	27214	27182	16841
75	13384	14534	13697
85	4657	4813	7762

Fixture tested in direct orientation. Fixture head is rotatable for asymmetric aiming as needed. For all available IES files, please visit our website at pinnacle-ltg.com. Photometry testing in accordance to IESNA-LM-79-08 at an NVLAP accredited testing laboratory. Testing conducted at 25°C ambient conditions

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Approvals & Certifications

Construction: 6063-T6 Extruded aluminum housing. Fixtures can be joined to create continuous runs. Standard high reflectance die-formed reflector.

Shielding: Coextruded snap-in acrylic lens with diffuse face and highly reflective sides.

Mounting: Adjustable aircraft cable, pendant mount, wall mount, and flush mounts available. Fixture head rotation provides asymmetric output. When using AC mount fixture head should not be rotated more than 15°, anything past that will cause fixture to not hang straight. Refer to installation instructions for appropriate ceiling detail. Maximum fixture weight is 20 lbs. per 4' fixture.

White LED: 25°C test environment. Lumen output/wattage has a margin of +/- 5%. Luminaire configurations tested in accordance with IES LM-79. Diodes tested in accordance with IES LM-80. Lifetime calculated using IES TM-21. Minimum lifetime greater than 60,000 hours. Lifetime Projection: L70 lifetime - 146,500 hours and L90 lifetime - 45,000 hours. MacAdam 3-Step Ellipses. For all available IES files, please visit our website at pinnacle-ltg.com. Four lumen packages available. Low (LO), Standard, High (HO), and Very High (VHO). Custom outputs are available. Specify custom lumens or watts between standard offering listed on CRI, CCT & Output page. 80 CRI is available for 3000K, 3500K, and 4000K. 90 CRI is available for 2700K, 3000K, 3500K, and 4000K. 90 CRI = R9≥50. Fixture performance and photometric data based on 4' configuration. Published lumen or wattage data based on OL1 configuration.

Voltage: Universal (U), 120 volt (1), 277 volt (2) and 347 volt (3) options available. Must specify OL4 in Driver section when 347 volt (3) is selected. Some MOFFAT configurations will not accommodate all voltage options; consult with factory.

Driver: Standard Driver Option is Advance Xitanium 0-10V, 1% = PL2. Electronic driver, Power factor is >0.9 with a THD <20%. Driver Lifetime: 50,000 hours at 25°C ambient operating conditions. Ambient operating range: -4F/-20C to 122F/50C For more driver options, see Pinnacle Resource Guide. Some MOFFAT configurations will not accommodate all driver options.

Circuiting: Select from single circuit (1), Multi circuit (M), Emergency circuit (E), Night Light circuit (N) or Life Safety (L). For emergency circuiting situations that require no through wire or circuit separation, Life Safety Circuit should be selected. This will provide a separate power feed and only the Life Safety Circuit in that section. Some MOFFAT configurations will not accommodate all circuiting options; consult with factory.

Battery & Emergency: Select battery or emergency options if required. If battery or emergency option is not required, enter 0. Battery duration is 90 minutes as standard. Test button can be integral or remote to fixture. For more Battery options, see Pinnacle Resource Guide.

Finish: Standard powder-coat textured white, metallic silver, textured black, graphite or bronze painted finish, consult factory for chip of standard paint finishes. Canopies, hubs, and pendants painted white unless specified differently in the options section of the part number. Contact factory for additional custom color and finish options.

Controls: DLMFC: DLM utilizes wired network connections for digital control through switching and dimming with 0-10v LED drivers. NLTAIR: nLight Air rIO module provides wireless control using eldoLED LED drivers. CLME: ENCELIUM CLM provides wireless control using the Osram LED driver. VRF: Lutron Vive module provides wireless control using DEXAL or SR LED drivers. B3LM: DLM digital control of Intensity and CCT for tunable white.

Labels: UL and cUL 1598 listed. Approved for dry/damp location unless otherwise noted. Approved for dry/damp location unless otherwise noted.

Fixture Weight: Maximum fixture weight is 20 lbs (per 4' fixture).

Buy American Act Compliant

Warranty: MOFFAT LED offered with a 5-year limited warranty. Covers LED, driver and fixture.