

# EVOLVE

## EFMH/EFHH Series

### LED Hazardous Location Flood Lights



Project Name \_\_\_\_\_

Date \_\_\_\_\_ Type \_\_\_\_\_

Notes \_\_\_\_\_

The **Evolve**® EFMH and EFHH are a line of Hazardous Location Rated flood lights offering world class performance and durability for industrial, indoor or outdoor applications. Offering both medium output and high output, the EFMH and EFHH series respectively are ideal for severe duty applications including hazardous location ratings listed.

### CONSTRUCTION

<b>Housing:</b>	Die cast aluminum housing with slim design
<b>Lens:</b>	Impact resistant tempered glass
<b>Paint:</b>	Corrosion resistant polyester powder paint, minimum 2.0 mil thickness Standard = Black, Dark Bronze, Gray, White (RAL & custom colors available)
<b>Weight:</b>	25-35 lbs (11.3-15.9 kgs)
<b>Optical Assembly:</b>	Reflective optic with flat glass lens

### OPTICAL SYSTEM

<b>Lumens:</b>	6,400 to 39,000
<b>Wattage:</b>	50 - 196 W (EFMH) & 150 - 297 W (EFHH)
<b>Efficacy:</b>	104 - 156 LPW (EFMH) & 115 - 140 LPW (EFHH)
<b>CCT:</b>	3000K, 4000K, 5000K options
<b>CRI:</b>	70

### ELECTRICAL

<b>Input Voltage:</b>	120-277 V & 347-480
<b>Input Frequency:</b>	50/60Hz
<b>Power Factor*:</b>	>90%*
<b>Total Harmonic Distortion*:</b>	<20%.*
<b>Surge Protection:</b>	ANSI 136.2-2015 6kV/3kA "Basic"
<b>EMI:</b>	Title 47 CFR15 Class A

\*PF and THD may vary with options

### CONTROLS

<b>Dimming:</b>	Not Available
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### LUMEN MAINTENANCE

Projected Lxx per IES TM-21 at 25°C

EMFH01 Optical	Distribution	LXX(10K) @ Hours		
		25,000 HR	50,000 HR	60,000 HR
BB, CC	T3 & S2	L89	L80	L76
BB, CC, DD	65, 66, 76, & 77	L95	L92	L91
EE, FF	65, 66, 76, & 77	L93	L88	L86

EMHH01 Optical	Distribution	LXX(10K) @ Hours		
		25,000 HR	50,000 HR	60,000 HR
BB, CC, DD, EE	65, 66, 76, & 77	L95	L91	L90

**Note:** Projected Lxx based on LM80 (10,000 hour testing). Accepted industry tolerances apply to initial luminous flux and lumen maintenance measurements.

### LUMINAIRE AMBIENT TEMPERATURE FACTOR

Type	Temperature Rate
Operating Temperature	-40°C to +50°C

### RATINGS

<b>LM-79:</b>	Tests and reports in accordance with IESNA standards
<b>Safety:</b>	UL/cUL Listed, suitable for wet locations
<b>UL 1598:</b>	Suitable for wet locations
<b>UL 1598A:</b>	Outside Type (Saltwater)
<b>UL844:</b>	Listed — Class I Div 2, Group A, B, C, and D (Zone 2) — Class II Div 2, Group F & G (Zone 22) — Class III Div 1 & 2 — For Indoor and Outdoor Applications
<b>IP66:</b>	Optical enclosure per ANSI C136.25-2009
<b>Vibration:</b>	3G vibration level per ANSI C136.31-2010

### WARRANTY

5 Year (Standard)  
Please refer to document IND599 for more information.



Project Name \_\_\_\_\_

Date \_\_\_\_\_ Type \_\_\_\_\_

Notes \_\_\_\_\_

### E F M H 01

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PROD. ID	GEN	VOLTAGE	OPTIC CODE	DISTRIBUTION	CRI	CCT	DIMMING	CONTROLS	MOUNTING ARM	COLOR	OPTIONS
E = Evolve	01	0 = 120-277			7 = 70	30 = 3000K	N = No PE Receptacle & Non Dimmable	A = No Control	T2 = Trunnion with conduit entry	BLCK = Black	L = Tool-Less Entry
FM = Flood Medium		H = 347-480				40 = 4000K				DKBZ = Dark Bronze	XXX = Special Options
H = Hazardous						50 = 5000K				GRAY = Gray	
										WHITE = White	

OPTICAL CODE	DIST. CODE	OPTICAL DIST./NEMA CLASS	TYPICAL INITIAL LUMENS		TYPICAL SYSTEM WATTAGE	IES FILE NUMBER						
			3000K	4000K/5000K	120-277V 347-480V	3000K		4000K		5000K		
						120-277V	347-480V	120-277V	347-480V	120-277V	347-480V	
BB	77	7 x 7	9800	10000	64	EFMH01_BB77730_IES	EFMH01_BB77740_IES	EFMH01_BB77750_IES				
CC	77	7 x 7	14700	15000	96	EFMH01_CC77730_IES	EFMH01_CC77740_IES	EFMH01_CC77750_IES				
DD	77	7 x 7	20400	20900	146	EFMH01_DD77730_IES	EFMH01_DD77740_IES	EFMH01_DD77750_IES				
EE	77	7 x 7	23400	24000	175	EFMH01_EE77730_IES	EFMH01_EE77740_IES	EFMH01_EE77750_IES				
FF	77	7 x 7	26200	27000	196	EFMH01_FF77730_IES	EFMH01_FF77740_IES	EFMH01_FF77750_IES				
BB	76	7 x 6	9500	9700	64	EFMH01_BB76730_IES	EFMH01_BB76740_IES	EFMH01_BB76750_IES				
CC	76	7 x 6	14300	14600	96	EFMH01_CC76730_IES	EFMH01_CC76740_IES	EFMH01_CC76750_IES				
DD	76	7 x 6	19900	20400	146	EFMH01_DD76730_IES	EFMH01_DD76740_IES	EFMH01_DD76750_IES				
EE	76	7 x 6	23300	23900	175	EFMH01_EE76730_IES	EFMH01_EE76740_IES	EFMH01_EE76750_IES				
FF	76	7 x 6	25600	26300	196	EFMH01_FF76730_IES	EFMH01_FF76740_IES	EFMH01_FF76750_IES				
BB	66	6 x 6	9400	9600	64	EFMH01_BB66730_IES	EFMH01_BB66740_IES	EFMH01_BB66750_IES				
CC	66	6 x 6	14200	14500	96	EFMH01_CC66730_IES	EFMH01_CC66740_IES	EFMH01_CC66750_IES				
DD	66	6 x 6	19700	20200	146	EFMH01_DD66730_IES	EFMH01_DD66740_IES	EFMH01_DD66750_IES				
EE	66	6 x 6	22900	23500	175	EFMH01_EE66730_IES	EFMH01_EE66740_IES	EFMH01_EE66750_IES				
FF	66	6 x 6	25200	23900	196	EFMH01_FF66730_IES	EFMH01_FF66740_IES	EFMH01_FF66750_IES				
BB	65	6 x 5	8900	9100	64	EFMH01_BB65730_IES	EFMH01_BB65740_IES	EFMH01_BB65750_IES				
CC	65	6 x 5	13400	13700	96	EFMH01_CC65730_IES	EFMH01_CC65740_IES	EFMH01_CC65750_IES				
DD	65	6 x 5	18700	19100	146	EFMH01_DD65730_IES	EFMH01_DD65740_IES	EFMH01_DD65750_IES				
EE	65	6 x 5	21600	22200	175	EFMH01_EE65730_IES	EFMH01_EE65740_IES	EFMH01_EE65750_IES				
FF	65	6 x 5	23800	24400	196	EFMH01_FF65730_IES	EFMH01_FF65740_IES	EFMH01_FF65750_IES				
AA*	T3	Type 3	6400	6600	50	EFMH01_AAT3730_IES	EFMH01_AAT3740_IES	EFMH01_AAT3750_IES				
BB	T3	Type 3	10200	10500	88	EFMH01_BBT3730_IES	EFMH01_BBT3740_IES	EFMH01_BBT3750_IES				
CC	T3	Type 3	14700	15000	141	EFMH01_CCT3730_IES	EFMH01_CCT3740_IES	EFMH01_CCT3750_IES				
AA*	52	20° Spot	7100	7300	50	EFMH01_AAS2730_IES	EFMH01_AAS2740_IES	EFMH01_AAS2750_IES				
BB	52	20° Spot	11300	11600	88	EFMH01_BBS2730_IES	EFMH01_BBS2740_IES	EFMH01_BBS2750_IES				
CC	52	20° Spot	16300	16700	141	EFMH01_CCS2730_IES	EFMH01_CCS2740_IES	EFMH01_CCS2750_IES				

Luminaire	OPERATING TEMPERATURE CODE		
	CLASS 1, DIV. 2 GROUP A, B, C, & D ZONE 2 GROUP IIA, IIB, IIC, & IIB PLUS HYDROGEN	CLASS II, DIV. 2 GROUP F & G ZONE 22	CLASS 1, DIV. 2 & CLASS II, DIV. 2 SIMULTANEOUS
EFMH	T3A	T3A	T3A
EFHH	T3A	T3A	T3A

Project Name \_\_\_\_\_

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Notes \_\_\_\_\_

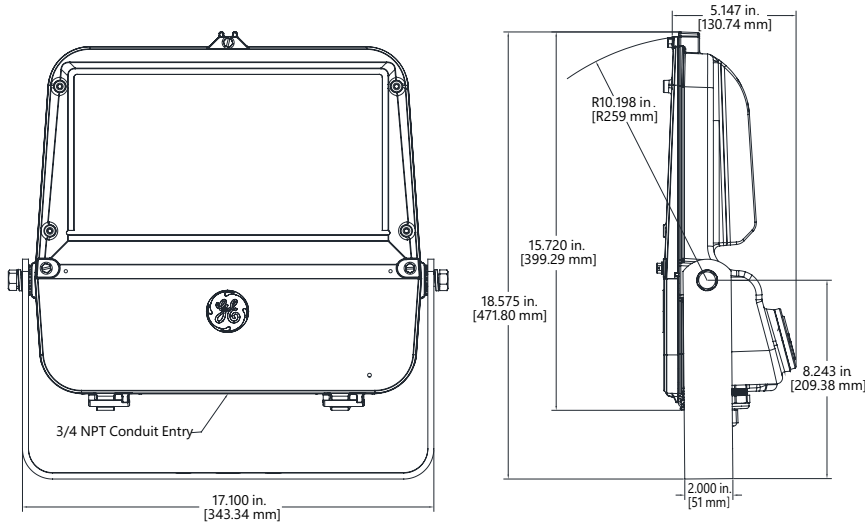
### EFHH 01

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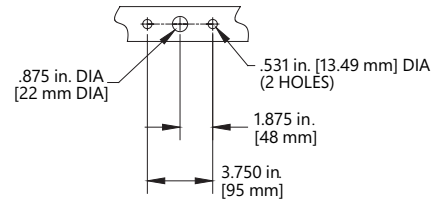
PROD. ID	GEN	VOLTAGE	OPTIC CODE	DISTRIBUTION	CRI	CCT	DIMMING	CONTROLS	MOUNTING ARM	COLOR	OPTIONS
E = Evolve	01	0 = 120-277			7 = 70	30 = 3000K	N = No PE Receptacle & Non Dimmable	A = No Control	T2 = Trunnion with conduit entry	BLCK = Black	L = Tool-Less Entry
FH = Flood High Output		H = 347-480				40 = 4000K				DKBZ = Dark Bronze	XXX = Special Options
H = Hazardous						50 = 5000K				GRAY = Gray	
										WHITE = White	

OPTICAL CODE	DIST. CODE	OPTICAL DIST./ NEMA CLASS	TYPICAL INITIAL LUMENS			TYPICAL SYSTEM WATTAGE	IES FILE NUMBER					
							3000K		4000K		5000K	
			3000K	4000K	5000K		120-277V	347-480V	120-277V	347-480V	120-277V	347-480V
AA	77	7 x 7	18900	19300	19500	150	EFHH01_AA77730_IES	EFHH01_AA77740_IES	EFHH01_AA77750_IES			
BB	77	7 x 7	26300	26800	27100	194	EFHH01_BB77730_IES	EFHH01_BB77740_IES	EFHH01_BB77750_IES			
CC	77	7 x 7	29100	29700	30000	218	EFHH01_CC77730_IES	EFHH01_CC77740_IES	EFHH01_CC77750_IES			
DD	77	7 x 7	34000	34700	35000	266	EFHH01_DD77730_IES	EFHH01_DD77740_IES	EFHH01_DD77750_IES			
EE	77	7 x 7	37900	38700	39000	297	EFHH01_EE77730_IES	EFHH01_EE77740_IES	EFHH01_EE77750_IES			
AA	76	7 x 6	18500	18800	19000	150	EFHH01_AA76730_IES	EFHH01_AA76740_IES	EFHH01_AA76750_IES			
BB	76	7 x 6	25700	26200	26500	194	EFHH01_BB76730_IES	EFHH01_BB76740_IES	EFHH01_BB76750_IES			
CC	76	7 x 6	28400	29000	29300	218	EFHH01_CC76730_IES	EFHH01_CC76740_IES	EFHH01_CC76750_IES			
DD	76	7 x 6	33200	33900	34200	266	EFHH01_DD76730_IES	EFHH01_DD76740_IES	EFHH01_DD76750_IES			
EE	76	7 x 6	37100	37800	38100	297	EFHH01_EE76730_IES	EFHH01_EE76740_IES	EFHH01_EE76750_IES			
AA	66	6 x 6	18200	18600	18800	150	EFHH01_AA66730_IES	EFHH01_AA66740_IES	EFHH01_AA66750_IES			
BB	66	6 x 6	25400	25900	26200	194	EFHH01_BB66730_IES	EFHH01_BB66740_IES	EFHH01_BB66750_IES			
CC	66	6 x 6	28100	28700	29000	218	EFHH01_CC66730_IES	EFHH01_CC66740_IES	EFHH01_CC66750_IES			
DD	66	6 x 6	32800	33500	33800	266	EFHH01_DD66730_IES	EFHH01_DD66740_IES	EFHH01_DD66750_IES			
EE	66	6 x 6	36600	37400	37700	297	EFHH01_EE66730_IES	EFHH01_EE66740_IES	EFHH01_EE66750_IES			
AA	65	6 x 5	17300	17700	17900	150	EFHH01_AA65730_IES	EFHH01_AA65740_IES	EFHH01_AA65750_IES			
BB	65	6 x 5	24100	24600	24800	194	EFHH01_BB65730_IES	EFHH01_BB65740_IES	EFHH01_BB65750_IES			
CC	65	6 x 5	26700	27200	27500	218	EFHH01_CC65730_IES	EFHH01_CC65740_IES	EFHH01_CC65750_IES			
DD	65	6 x 5	31200	31800	32100	266	EFHH01_DD65730_IES	EFHH01_DD65740_IES	EFHH01_DD65750_IES			
EE	65	6 x 5	34800	35500	35800	297	EFHH01_EE65730_IES	EFHH01_EE65740_IES	EFHH01_EE65750_IES			

#### TRUNNION MOUNT EFMH PRODUCT DIMENSIONS



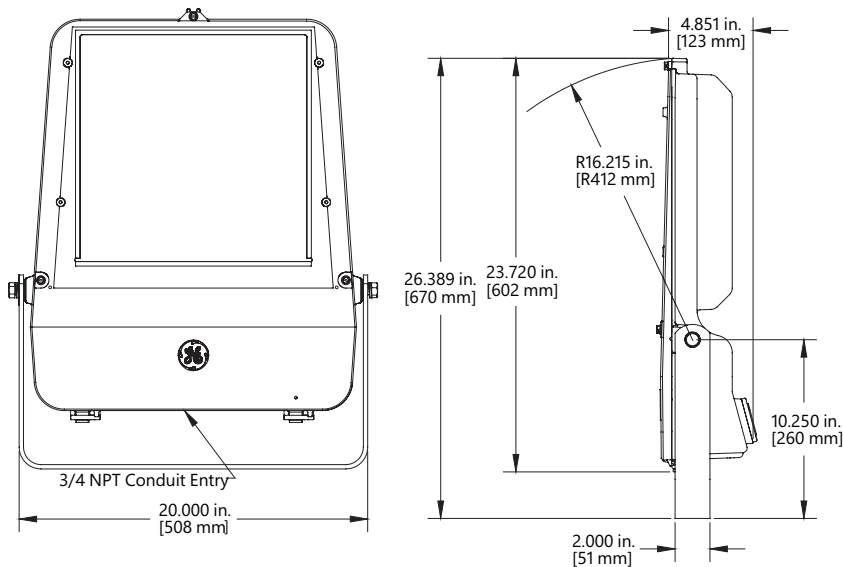
#### Mounting Drill Template



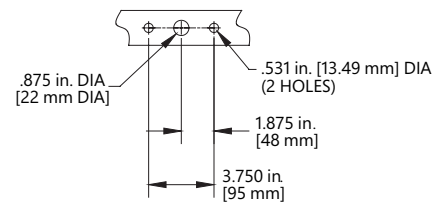
#### DATA

- **Approximate net weight:** 25 lbs (11.34 kgs)
- **Effective Projected Area:**
  - 0° aim (vertical glass) 1.96 sq. ft.
  - 45° aim 1.22 sq. ft.
  - Side profile (all aims) 0.73 sq. ft.
  - 90° (downward) aim 0.79 sq. f

#### TRUNNION MOUNT EFHH PRODUCT DIMENSIONS



#### Mounting Drill Template



#### DATA

- **Approximate net weight:** 35 lbs (15.9 kgs)
- **Effective Projected Area:**
  - Vertical 3.51 sq. ft. (0.33 sq. M) (aimed at horizon)
  - Tilted 1.79 sq. ft. (0.17 sq. M) (aimed down 45° degrees).