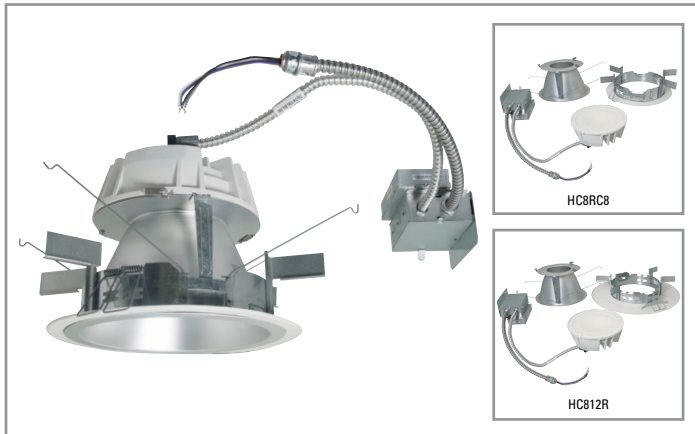


Project		Catalog #		Type	
Prepared by		Notes		Date	



HALO Commercial

HC8R | HM8 | 81

8-inch downlight retrofit kits

Typical Applications

Office • Education • Healthcare • Hospitality

Interactive Menu

- Order Information page 2
- Product Specifications page 3
- Photometric Data page 4
- Energy & Performance Data page 6
- Product Warranty

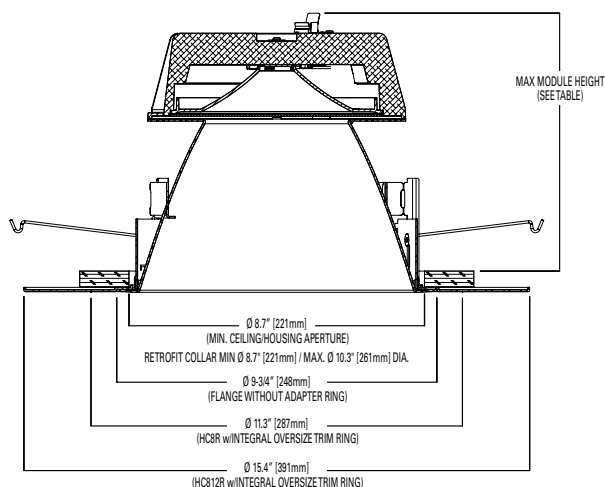
Product Certification



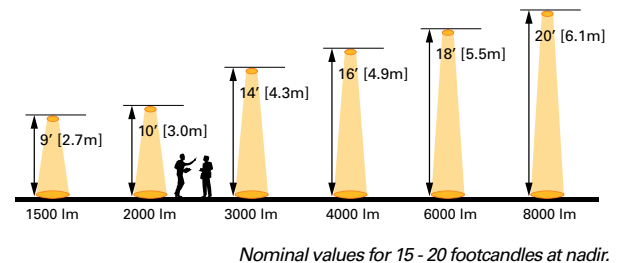
Top Product Features

- Two retrofit kits available for 8.7" to 10" and 12" nominal aperture open frame housing retrofits
- Lumen output in 1500, 2000, 3000, 4000, 6000, 8000 lm
- Color temperature in 2700K, 3000K, 3500K, 4000K CCT
- CRI in 80 CRI or 90 CRI
- Reflector distribution in Narrow, Medium, Wide, and Wall Wash with rotatable linear spread lens
- Reflector finish in Specular clear, semi-specular (haze), matte white, black baffle, and white baffle finishes

Dimensional and Mounting Details



Scale



additional product diagrams

Order Information

Icon Key: ▲ Configurable Product

SAMPLE ORDER NUMBER: **HC8R20D010 – HM81520835 - 81MDC**

A complete luminaire consists of a retrofit kit, LED module, and reflector; ordered separately

Retrofit Kit	Lumens (nominal)	Input / Control	Factory Installed Options	Accessories
<p>HC8R = 8.7" retrofit kit collar ring and junction box/driver pack fit 8.73" to 10.3" nominal ceiling cutout apertures with preinstalled 11.3" O.D. oversized matte white trim ring</p> <p>HC812R = 12" retrofit kit collar ring and junction box/driver pack fit 12" nominal ceiling cutout apertures with preinstalled 15.375" O.D. oversized matte white trim ring</p>	<p>15 = 1500 lumens</p> <p>20 = 2000 lumens</p> <p>30 = 3000 lumens</p> <p>40 = 4000 lumens</p> <p>60 = 6000 lumens ⁽¹⁾</p> <p>80 = 8000 lumens ⁽¹⁾</p>	<p>D010 = 120-277VAC 50/60Hz, 0-10V analog, 1%-100% dimming</p> <p>Canada option</p> <p>D010347 = 347VAC 50/60Hz 0-10V analog 1%-100% dimming LED driver; for 1500, 2000, 3000, 4000 lumen models only (Canada only)</p> <p>D010X347 = step down transformer factory installed with the standard "D010" 120V-277V LED driver, for 6000 and 8000 lumen models only (Canada only)</p>	<p>REM7 = 7 watt emergency battery backup with remote test / indicator light, use with D010 only ⁽³⁾</p> <p>REM14 = 14 watt emergency battery backup with remote test / indicator light, use with D010 only ⁽³⁾</p> <p>BOD7ST = 7.5 watt Bodine self-test diagnostic emergency module with remote test / indicator light, use with D010 only</p> <p>LWTPD1 = factory installed Enlighted wireless tile sensor kit, use with D010 only</p> <p>WTA = Field installed WaveLinX wireless sensor kit ⁽⁷⁾</p>	<p>PORLWTPD1 = Enlighted wireless sensor kit, field installed, use with D010 driver only</p> <p>TMSWPD1 = Field installed WaveLinX tilemount daylight sensor kit, field installed, use with D010 driver only</p> <p>WTA = Field installed WaveLinX wireless sensor kit ⁽⁷⁾</p>
Notes	Notes	Notes	Notes	Notes
	(1) Marked Spacing: Center to Center of Adjacent Luminaires = 36" Center of Luminaire to Building Member = 18" Minimum overhead = 0.5"		(3) Emergency battery backup options are Non-IC only. (7) WTA = WaveLinX tile mount sensor kit for daylight dimming, PIR motion sensing, and optional RLTS - Real Time Location Services, use with D010 only (Refer to WaveLinX system specifications)	(7) WTA = WaveLinX tile mount sensor kit for daylight dimming, PIR motion sensing, and optional RLTS - Real Time Location Services, use with D010 only (Refer to WaveLinX system specifications)

Module	Lumens (nominal)	CRI / CCT (minimum)
<p>HM8 = 8" module</p>	<p>1520 = 1500, 2000 lumens</p> <p>3040 = 3000, 4000 lumens</p> <p>6080 = 6000, 8000 lumens</p>	<p>827 = 80 CRI, 2700K CCT</p> <p>830 = 80 CRI, 3000K CCT</p> <p>835 = 80 CRI, 3500K CCT</p> <p>840 = 80 CRI, 4000K CCT</p> <p>927 = 90 CRI, 2700K CCT</p> <p>930 = 90 CRI, 3000K CCT</p> <p>935 = 90 CRI, 3500K CCT</p> <p>940 = 90 CRI, 4000K CCT</p>
Notes	Notes	Notes

Reflector	Distribution	Finish	Flange	Accessories
<p>81 = 8" conical reflector</p>	<p>ND = narrow reflector 13° beam angle, 0.24 SC</p> <p>MD = medium reflector 37° beam angle, 0.60 SC</p> <p>WD = wide reflector 71° beam angle, 1.08 SC</p> <p>RWW = rotatable wall wash with linear spread lens</p>	<p>C = Specular clear</p> <p>H = Semi-specular clear</p> <p>W = White</p>	<p>Blank = Polished flange standard with C & H reflectors</p> <p>Blank = White flange standard with W reflector</p> <p>WF = White flange option available with C & H reflectors</p>	<p>81RWWPK = Rotatable wall wash insert –replacement part kit ⁽⁶⁾</p>
<p>81 = 8" baffle reflector</p>	<p>WD = wide baffle 71° beam angle, 1.08 SC</p> <p>RWW = rotatable wall wash with linear spread lens (wide beam baffle with lens wall wash)</p>	<p>BB = Black baffle</p> <p>WB = White baffle</p>	<p>Blank = White flange standard with BB & WB</p> <p>BF = Black flange option available with BB</p>	
<p>81PS = 8" non-conductive polymer conical reflector ⁽⁴⁾</p>	<p>MD = medium reflector 37° beam angle, 0.60 SC</p>	<p>W = White</p>	<p>Blank = White flange standard with W reflector</p>	
Notes	Notes	Notes	Notes	Notes
(4) 81PS reflector is for Non-IC environment only, and up to 4000 lumens only	(5) Values are nominal, based on specular clear reflector, other may vary.			(6) For use with 81RWW only.

Product Specifications

Retrofit Kit

- Designed for installation from below the finished ceiling into existing open frame commercial housings
- HC8R kit that fits 8.73" to 10.3" nominal ceiling cutout apertures includes a retrofit galvanized steel collar preinstalled with an integral 11.3" oversized matte white trim ring. Kit also includes junction box / driver pack with metallic cable for retrofit wiring.
- HC812R kit that fits 12.0" nominal ceiling cutout apertures includes a retrofit galvanized steel collar preinstalled in an integral 15.37" oversized matte white trim ring. Kit also includes junction box / driver with metallic cable for retrofit wiring.
- Retrofit collars are 2" thick with sturdy remodel spring clips – to be installed from below the ceiling

LED Module

- Proximity phosphors over chip on board LEDs provide a uniform source with high efficiency and no pixillation
- Available in 80 or 90 CRI minimum, provides accuracy within 3 SDCM color uniformity
- 90 CRI, R9>50 (refer to photometry section for colorimetric data)
- Correlated Color Temperature options
 - 2700K
 - 3000K
 - 3500K
 - 4000K
- Passive thermal management achieves L70 at 60,000 hours in IC and non IC applications (refer to compliance listings)
- Integral diffuse lens provides visual shielding
- Integral connector allows quick connection to housing flex

Lumen Options

- Lumen values (nominal)
 - 1500 lm
 - 2000 lm
 - 3000 lm
 - 4000 lm
 - 6000 lm
 - 8000 lm

Reflector

- Self-flanged aluminum reflectors are available in narrow, medium or wide distribution patterns
- Medium distribution non-conductive polymer matte white reflector for use in meeting 'dead front' applications
- Wall wash reflector features a rotatable linear spread lens for precise alignment of vertical illumination.
- Reflectors attach to LED module with (3) speed clamps
- Multiple painted or plated finishes are available

Reflector / Module Retention

- Reflector / module assembly is securely retained in the housing with (2) torsion springs

Driver

- Field replaceable constant current driver
- UNV 120-277VAC 50/60Hz input standard
- Continuous 1% - 10% dimming with 0-10V analog controls

Canada Options

- 347VAC 50/60Hz; 1% dimming on 0-10V analog control, for 1500, 2000, 3000, 4000 lumen models only
- 347V step down transformer factory installed with the standard "D010" 120V-277V, LED driver on 6000 and 8000 lumen models only

Emergency Options

- Provides 90 minutes of standby lighting meeting most life safety codes for egress
- Available with remote charge indicator and test switch
- Available Self-Test (self-diagnostic), with remote charge indicator and test switch

Connected Lighting System Options

- WaveLinX - Two WaveLinX options:
 - Factory installed WaveLinX tile mount sensor kit
 - Field installed WaveLinX accessory tile mount sensor kit.
- The WTA WaveLinX tile mount sensor kit offers daylight dimming, PIR motion sensing control, and optional RLTS - Real Time Location Services available. (Refer to WaveLinX system specifications and application guides for details) The WTA WaveLinX kit includes control module that mounts on the luminaire electrical junction box via 1/2" knock-out, and tilemount sensor with direct-mount spring clips or for octagon ceiling box with included mounting bracket. (Field mount kit ordered and installed separately).
- Enlighted wireless tile mount sensor and control kit mount sensor and control kit

Junction Box

- Galvanized steel junction box
- 20 in³ internal volume excluding voltage barrier
- 25 in³ internal total volume
- Voltage divider for 0-10V dimming wires [occupies (1) 1/2" pry-out space]
- Listed for (8) #12 AWG (four in, four out) 90° C conductors and feed-thru branch wiring
- (3) 1/2" and (2) 3/4" trade size pry-outs available
- (3) 4-port push wire nuts for mains voltage, with 1-port for fixture connection

Compliance

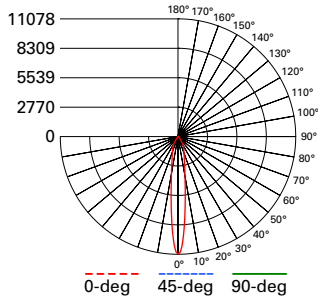
- cULus damp and wet location listed in protected ceilings; and IP20 - Above finished ceiling; IP65 - Below finished ceiling
- Non-IC rated 4000, 6000, 8000 lumen models. Insulation must be kept 3" from top and sides.
- IC rated 1500, 2000, 3000 lumen models are suitable for direct contact with air permeable insulation (also suitable for Non-IC)
- Non-IC marked spacing required for 6000 and 8000 lumen models
 - Marked Spacing Center to Center of Adjacent Luminaires = 36"
 - Center of Luminaire to Building Member = 18"
 - Minimum overhead = 0.5"
- Emergency battery backup options are Non-IC only.
- Not for use in direct contact with spray foam insulation, consult NEMA LSD57-2013
- Airtight per ASTM-E283-04
- Suitable for use in clothes closets when installed in accordance with the NEC 410.16 spacing requirements
- EMI/RFI emissions FCC CFR Title 47 Part 15 Class A 120/277V
- Contains no mercury or lead and RoHS compliant
- Photometric testing in accordance with IES LM-79-08
- Lumen maintenance projections in accordance with IES LM-80-08 and TM-21-11
- 1500, 2000, 3000 lumen 90 CRI IC rated models may be used to comply with State of California Title 24 residential code, per JA8 certification standards
- May be used to comply with State of California Title 24 non-residential code, in Non-IC, as a dimmable LED luminaire
- ENERGY STAR® certified, refer to certified light fixtures database

Warranty

- Five year limited warranty, consult website for details. www.cooperlighting.com/legal

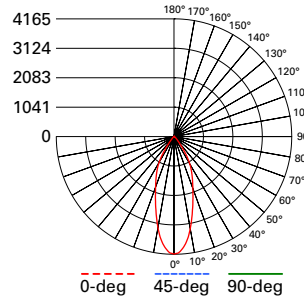
Photometric Data

[View IES files](#)



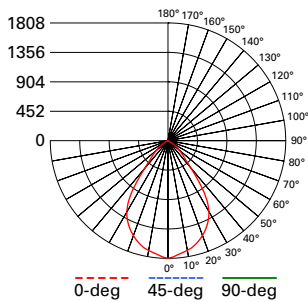
HC820D010-HM81520835-81NDC

Narrow Distribution
13° beam angle
Specular Clear Finish, 2000 Lumen Model, 80 CRI, 3500K
Spacing criterion: 0.24
Lumens: 2050
Input Watts: 20.5 W
Efficacy: 100 LPW
UGR: 10.0
Test Report:
HC820D010-HM81520835-81NDC.ies



HC820D010-HM81520835-81MDC

Medium Distribution
37° beam angle
Specular Clear Finish, 2000 Lumen Model, 80 CRI, 3500K
Spacing criterion: 0.59
Lumens: 2185
Input Watts: 20.5 W
Efficacy: 106.6 LPW
UGR: 10.2
Test Report:
HC820D010-HM81520835-81MDC.ies



HC820D010-HM81520835-81WDC

Wide Distribution
71° beam angle
Specular Clear Finish, 2000 Lumen Model, 80 CRI, 3500K
Spacing criterion: 1.08
Lumens: 2286
Input Watts: 20.5 W
Efficacy: 111.5 LPW
UGR: 14.7
Test Report:
HC820D010-HM81520835-81WDC.ies

Photometric Multipliers (nominal lumen values)

1500 Lumen	2000 Lumen	3000 Lumen	4000 Lumen	6000 Lumen	8000 Lumen
0.72	1.00	1.47	2.06	2.80	3.32

Multipliers for relative lumen values with other series models.

CCT Multipliers – 80CRI

2700K	3000K	3500K	4000K
0.93	0.94	1.00	1.02

Multipliers for relative lumen values with other series color temperatures.

CCT Multipliers – 90CRI

2700K	3000K	3500K	4000K
0.77	0.83	0.87	0.90

Multipliers for relative lumen values with other series color temperatures.

Color Finish Multipliers

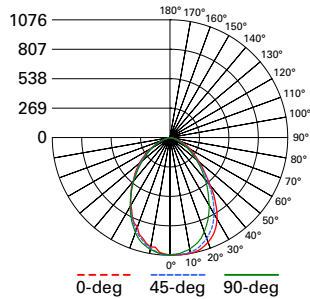
Finish code	C	H	W	BB
Finish	Specular Clear	Semi-Specular	Matte White	Black Baffle (lower cone)
Multiplier	1.00	0.95	0.98	0.89

Multipliers for relative lumen values with other color finishes.

Note: Refer to IES files for more product data.

Photometric Data

[View IES files](#)



HC820D010-HM81520835-81RWWC
 Wall Wash - Specular Clear Finish, 2000 Lumen Model, 80 CRI, 3500K
 Spacing criterion: 1.05
 Lumens: 1927
 Input Watts: 20.5 W
 Efficacy: 94 LPW
 Test Report: HC820D010-HM81520835-81RWWC.ies

SINGLE UNIT FOOTCANDLES							
2.5' from wall (distance from fixture along wall)							
1	17.5	12.3	5.2	1.8	0.6	0.2	0.1
2	25.6	19.9	10.4	4.8	2.2	1	0.5
3	24.6	20.3	11.9	6.1	3.1	1.6	0.9
4	19.4	16.9	11.1	6.4	3.5	2	1.1
5	13.4	12.2	9.1	5.9	3.6	2.1	1.3
6	9	8.5	6.9	5	3.3	2.1	1.3
7	6.2	6	5.1	4	2.9	2	1.3
8	4.4	4.3	3.8	3.1	2.4	1.8	1.3
9	3.2	3.2	2.9	2.4	2	1.5	1.1
10	2.4	2.4	2.2	1.9	1.6	1.3	1

MULTIPLE UNIT FOOTCANDLES						
	2.5' from wall (distance from fixture along wall)			2.5' from wall (distance from fixture along wall)		
	3			4		
1	19.4	16.7	19.4	18.2	10.5	18.2
2	30.4	29.8	30.4	27.7	20.8	27.7
3	30.7	31.9	30.7	27.7	23.8	27.7
4	25.9	28.1	25.9	23	22.3	23
5	19.3	21.5	19.3	16.9	18.2	16.9
6	14	15.5	14	12.3	13.8	12.3
7	10.2	11.1	10.2	9.1	10.2	9.1
8	7.6	8.1	7.6	6.8	7.6	6.8
9	5.7	6.1	5.7	5.2	5.7	5.2
10	4.4	4.6	4.4	4.1	4.4	4.1

Photometric Multipliers (nominal lumen values)

1500 Lumen	2000 Lumen	3000 Lumen	4000 Lumen	6000 Lumen	8000 Lumen
0.72	1.00	1.47	2.06	2.80	3.32

Multipliers for relative lumen values with other series models.

CCT Multipliers – 80CRI

2700K	3000K	3500K	4000K
0.93	0.94	1.00	1.02

Multipliers for relative lumen values with other series color temperatures.

CCT Multipliers – 90CRI

2700K	3000K	3500K	4000K
0.77	0.83	0.87	0.90

Multipliers for relative lumen values with other series color temperatures.

Color Finish Multipliers

Finish code	C	H	W	BB
Finish	Specular Clear	Semi-Specular	Matte White	Black Baffle (lower cone)
Multiplier	1.00	0.95	0.98	0.89

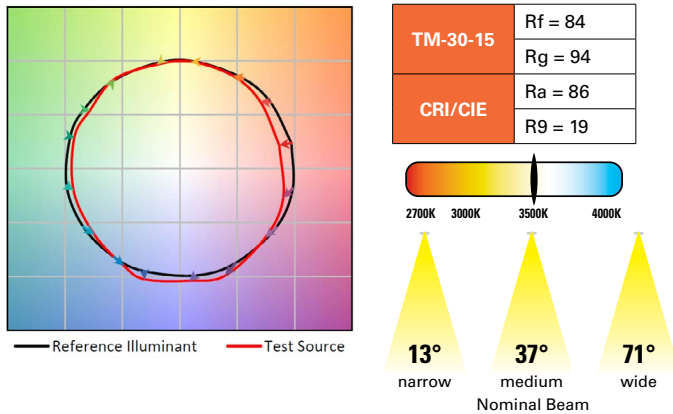
Multipliers for relative lumen values with other color finishes.

Note: Refer to IES files for more product data.

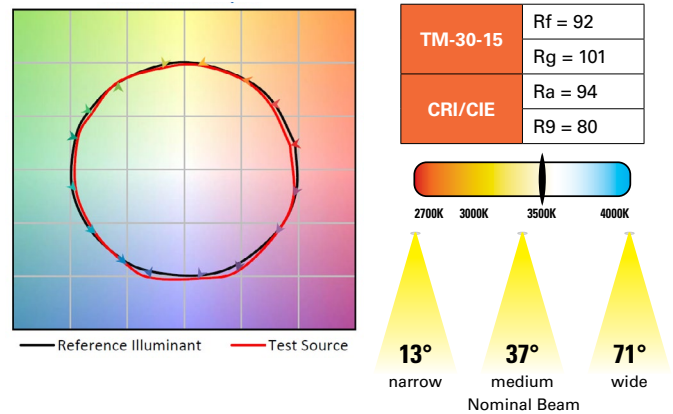
Energy and Performance Data

COLOR METRICS - TM-30-15 & CRI/CIE (3500K)

80 CRI Color Metric Summary - 3500K*



90 CRI Color Metric Summary - 3500K*



ENERGY DATA

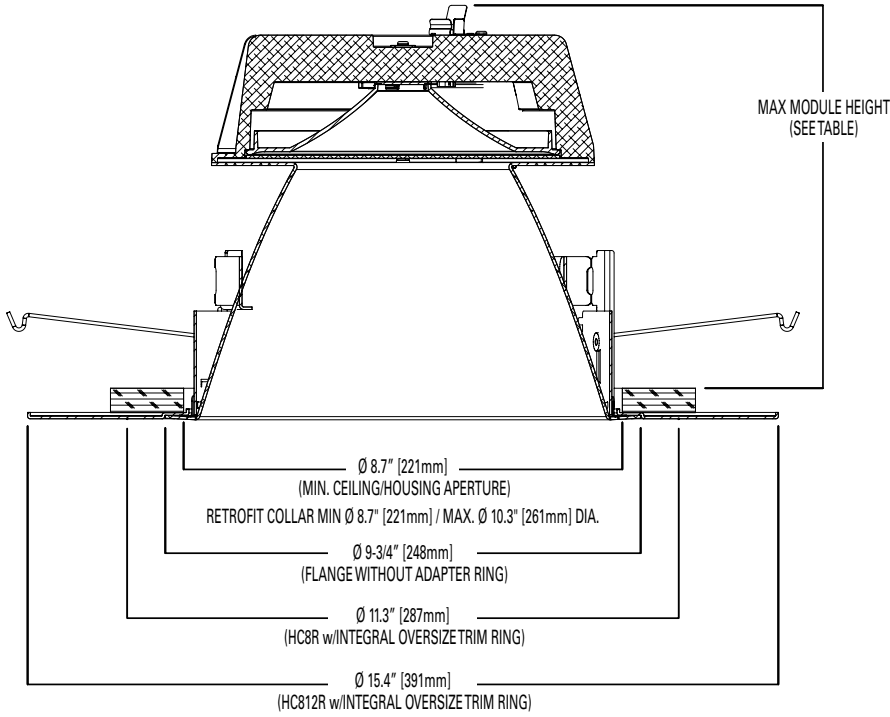
Series	1500 lumen		Series	2000 lumen		Series	3000 lumen	
Input Voltage 120-277VAC	120V	277V	Input Voltage 120-277VAC	120V	277V	Input Voltage 120-277VAC	120V	277V
Input Current (A)	0.119	0.055	Input Current (A)	0.176	0.082	Input Current (A)	0.228	0.102
Input Power (W)	14.2	14.9	Input Power (W)	21.1	21.4	Input Power (W)	27.2	27
In-rush (A)	0.212	0.85	In-rush (A)	0.588	0.624	In-rush (A)	0.898	1.7
In-rush Duration (ms)	0.28	0.32	In-rush Duration (ms)	0.3	0.38	In-rush Duration (ms)	0.36	0.38
THD (%)	7.8	16.3	THD (%)	8.8	11.2	THD (%)	9.7	9.3
PF	≥ 0.99	≥ 0.95	PF	≥ 0.99	≥ 0.94	PF	≥ 0.99	≥ 0.96
Minimum starting temperature -30°C (-22°F)* (Nominal input 120-277VAC & 100% of rated output power)			Minimum starting temperature -30°C (-22°F)* (Nominal input 120-277VAC & 100% of rated output power)			Minimum starting temperature -30°C (-22°F)* (Nominal input 120-277VAC & 100% of rated output power)		
Sound Rating: Class A standards			Sound Rating: Class A standards			Sound Rating: Class A standards		

Series	4000 lumen		Series	6000 lumen		Series	8000 lumen	
Input Voltage 120-277VAC	120V	277V	Input Voltage 120-277VAC	120V	277V	Input Voltage 120-277VAC	120V	277V
Input Current (A)	0.345	0.15	Input Current (A)	0.5	0.22	Input Current (A)	0.636	0.29
Input Power (W)	41.3	40.7	Input Power (W)	59.7	59	Input Power (W)	75.8	75
In-rush (A)	1.05	2.23	In-rush (A)	5.4	10.8	In-rush (A)	4.9	9.8
In-rush Duration (ms)	0.32	0.34	In-rush Duration (ms)	0.12	0.154	In-rush Duration (ms)	0.13	0.156
THD (%)	10.06	14.01	THD (%)	12.4	10.8	THD (%)	7.2	12.8
PF	≥ 0.99	≥ 0.97	PF	≥ 0.99	≥ 0.95	PF	≥ 0.99	≥ 0.93
Minimum starting temperature -30°C (-22°F)* (Nominal input 120-277VAC & 100% of rated output power)			Minimum starting temperature -30°C (-22°F)* (Nominal input 120-277VAC & 100% of rated output power)			Minimum starting temperature -30°C (-22°F)* (Nominal input 120-277VAC & 100% of rated output power)		
Sound Rating: Class A standards			Sound Rating: Class A standards			Sound Rating: Class A standards		

Notes:

* Emergency Battery packs are rated for a minimum starting temperature of 0°C.

Dimensional Details



Reflector	Max. Module Height
Narrow	7.9"
Medium	7.5"
Wide	6.8"
Baffle	6.8"

