

DESCRIPTION

The HC6R LED retrofit downlight kit is designed to be installed into 6.625" (6-5/8") to 7.0" (7-0") nominal ceiling cutout aperture commercial housings (Non - Halo Commercial). The HC6R reflector offers a medium distribution ideal for general area lighting. Lumen options range from 1000 to 4000 lumens in color temperatures of 2700K, 3000K, 3500K, and 4000K; in 80 or 90CRI. Installs from below the ceiling into existing open frame recessed commercial housings. Intended for office spaces, healthcare, hospitality, and institutional applications.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Retrofit Frame / Collar

- Galvanized steel collar accommodates open frame housing openings from 6.625" (6-5/8") to 7.0" (7-0") nominal ceiling cutout aperture, 2" thick and installs with (2) remodel spring clips installed from below the ceiling.

Junction Box

- Provided with armored cables providing flexible connections to the LED module and existing junction box for mains voltage connections.
- Galvanized steel junction box
- 20in³ 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

LED Module

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

Lumen Options

- Nominal lumen values
 - 1000 lm
 - 1500 lm
 - 2000 lm
 - 3000 lm
 - 4000 lm

Reflector

- Self-flanged aluminum reflector is available in medium distribution
- Reflector attaches 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 provides low noise operation
- UNV 120-277VAC 50/60Hz input standard
- 347VAC 50/60Hz input option (Canada only)
- Continuous, 1%-100% dimming with 0-10V analog control

Emergency Option

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

Connected Lighting Options

- WaveLinX - two 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. (Refer to WaveLinX system specifications.) 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

Compliance

- cULus Listed/Classified, wet location labeled for covered ceilings
- IP20 - Above finished ceiling; IP65 - Below finished ceiling
- Non-IC rated 2000, 3000, 4000 lumen models. Insulation must be kept 3" from top and sides.
- IC rated 1000, 1500, lumen models are suitable for direct contact with air permeable insulation (also suitable for Non-IC)
- 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 NEC 410.16 spacing requirements
- EMI/RFI emissions FCC CFR Title 47 Part 15 Class A at 120/277V
- Contains no mercury or lead and RoHS compliant
- Photometric testing in accordance to IES LM-79-08
- Lumen maintenance projections in accordance to IES LM-80-08 and TM-21-11
- 1000 and 1500 lumen 90CRI ICAT 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, as a dimmable LED luminaire
- ENERGY STAR certified, reference certified light fixtures database

Warranty

- Limited 5-year warranty, see website for details. www.cooperlighting.com/legal



HC6R
Retrofit Frame/Collar

HM6R
Retrofit LED Module

62R
Series Reflectors

6-inch Lens Downlight Retrofit Kit

**1000/1500/2000/
3000/4000 Lumen**



ENERGY DATA

Series	1000 lumen	
Input Voltage (VAC)	120V	277V
Input Current (A)	0.085	0.042
Input Power (W)	10.1	10.9
In-rush Current (A)	0.644	1.95
In-rush Duration (ms)	0.125	0.24
THDi (%)	8.6	15.6
PF:	≥ 0.90	
(Nominal input 120-277VAC & 100% of rated output power)		
Minimum starting temperature -30°C (-22°F)*		
Sound Rating: Class A standards		

Series	1500 lumen	
Input Voltage (VAC)	120V	277V
Input Current (A)	0.119	0.055
Input Power (W)	14.2	14.9
In-rush Current (A)	0.212	0.85
In-rush Duration (ms)	0.28	0.32
THDi (%)	7.8	16.3
PF:	≥ 0.90	
(Nominal input 120-277VAC & 100% of rated output power)		
Minimum starting temperature -30°C (-22°F)*		
Sound Rating: Class A standards		

Series	2000 lumen	
Input Voltage (VAC)	120V	277V
Input Current (A)	0.176	0.082
Input Power (W)	21.1	21.4
In-rush Current (A)	0.588	0.624
In-rush Duration (ms)	0.3	0.38
THDi (%)	8.8	11.2
PF:	≥ 0.90	
(Nominal input 120-277VAC & 100% of rated output power)		
Minimum starting temperature -30°C (-22°F)*		
Sound Rating: Class A standards		

Series	3000 lumen	
Input Voltage (VAC)	120V	277V
Input Current (A)	0.228	0.102
Input Power (W)	27.2	27
In-rush Current (A)	0.898	1.7
In-rush Duration (ms)	0.36	0.38
THDi (%)	9.7	9.3
PF:	≥ 0.90	
(Nominal input 120-277VAC & 100% of rated output power)		
Minimum starting temperature -30°C (-22°F)*		
Sound Rating: Class A standards		

Series	4000 lumen	
Input Voltage (VAC)	120V	277V
Input Current (A)	0.345	0.15
Input Power (W)	41.3	40.7
In-rush Current (A)	1.05	2.23
In-rush Duration (ms)	0.32	0.34
THDi (%)	10.06	14.01
PF:	≥ 0.90	
(Nominal input 120-277VAC & 100% of rated output power)		
Minimum starting temperature -30°C (-22°F)*		
Sound Rating: Class A standards		

Notes:

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

ORDERING INFORMATION

Sample Number: HC6R20D010 – HM6R12835 – 62RMDC

A complete luminaire consists of a frame/collar, LED module, and reflector (ordered separately)

Frame / Collar	Lumens	Input / Control
HC6R = 6" retrofit kit for 6.625" (6-5/8") to 7.0" (7-0") nominal ceiling cutout aperture existing open frame commercial housings	10 = 1000 lumens (nominal) 15 = 1500 lumens (nominal) 20 = 2000 lumens (nominal) 30 = 3000 lumens (nominal) 40 = 4000 lumens (nominal)	D010 =120-277VAC 50/60Hz 0-10V analog 1% - 100% dimming D010347 = 347VAC 50/60Hz 0-10V analog 1%-100% dimming (Canada only)

Factory Installed Options	Accessories
REM7 = integral 7 watt emergency module with remote test / indicator light, for use with D010 only REM14 = integral 14 watt emergency module with remote test / indicator light, for use with D010 only BOD7ST = 7.5 watt Bodine self-test diagnostic emergency module with remote test / indicator light, use with D010 only LWTPD1 = factory installed Enlighted wireless tile mount sensor kit, for use with D010 only WTA =Factory installed WaveLinX sensor Kit ¹	H347 = 347 to 120V step down transformer, 75VA H347200 = 347 to 120V step down transformer, 200VA PORLWTPD1 = Field installed Enlighted wireless sensor kit, for use with D010 driver only WTA =Factory installed WaveLinX sensor Kit ¹

LED Module	Lumens	CRI/CCT
HM6R = 6" retrofit module for use for use HC6R and HC56R series retrofit kits and 62R trims only	12 =1000, 1500, 2000 lumens (nominal) Use with HC6R10*, HC6R15*, HC6R20*, HC56R10*, HC56R15*, HC56R20* mounting frames, and 62R trims only 34 =3000, 4000 (nominal) For use with HC6R30*, HC6R40*, HC56R30*, HC56R40* mounting frames, and 62R trims only	827 = 80 CRI (minimum), 2700K CCT 830 = 80 CRI (minimum), 3000K CCT 835 = 80 CRI (minimum), 3500K CCT 840 = 80 CRI (minimum), 4000K CCT 927 = 90 CRI (minimum), 2700K CCT 930 = 90 CRI (minimum), 3000K CCT 935 = 90 CRI (minimum), 3500K CCT 940 = 90 CRI (minimum), 4000K CCT

Reflector	Distribution	Finish	Flange
62R = 6" retrofit conical reflector for use HC6R and HC56R series retrofit kits only	MD = medium distribution 55° beam angle, 1.04 SC	C = Specular clear H = Semi-specular clear W = White (white flange)	Blank = Polished flange standard with C & H reflectors Blank = White flange standard with W reflector WF = White flange option available with C & H reflectors

Notes:

¹. 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)

NON - HALO COMMERCIAL OPEN FRAME HOUSINGS*

Manufacturer	Brand	Series Open Frame Models Only	Housing Aperture
Cooper Lighting Solutions	Halo	M700T	7.0" (7-0")
Cooper Lighting Solutions	Halo	H600T	7.0" (7-0")
Acuity Brands®	Lithonia Lighting®	LF6N, LP6N, 6HF, 6VF, 6VI	7.0" (7-0")
Acuity Brands®	Juno® Elate™	A6, P6, C6, M6	6.875" (6-7/8")
Acuity Brands®	Juno®	CV6, CH6, M6, MX6, TC906	6.875" (6-7/8")
Signify N.V.	Omega Lighting	OM6	6.625" (6-5/8")
Signify N.V.	Capri Lighting	CM6	6.75" (6-3/4")
Signify N.V.	Lightolier® Lytecaster	1102P1, 1102F1, 1102FH*, 1100FT, 1102D1, 1102DH*, 1102T*, 1102HF	6.8125" (6-13/16")

*This is a representative list of non - Halo Commercial housings deemed capable of retrofit. Models must be open frame versions of the respective series. Information noted about these other manufacturers products are obtained from published information made available by the manufacturer and is deemed to be reliable, but has not been verified. The specifications of these products and their conditions of use may change without notice to Cooper Lighting Solutions or any other user. Cooper Lighting Solutions makes no specific recommendation on product selection and there are no warranties of performance or compatibility implied.

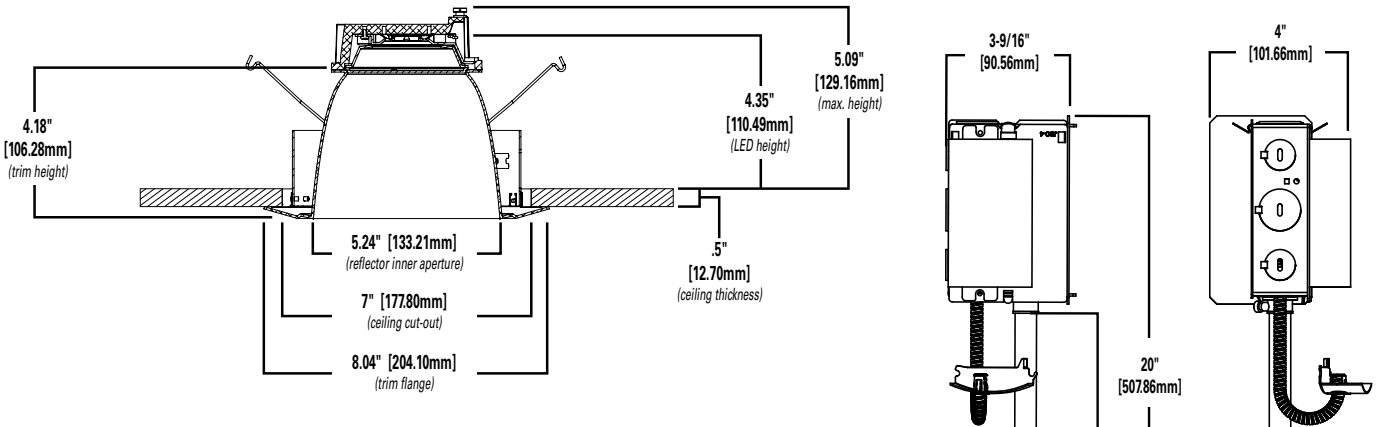
*Installer should ensure proper local and national electrical codes are followed; and that the application and conditions of use are per these and manufacturer guidelines.

*Installer is responsible to verify mechanical, dimensional, and site conditions are suitable for proper installation of the retrofit assembly.

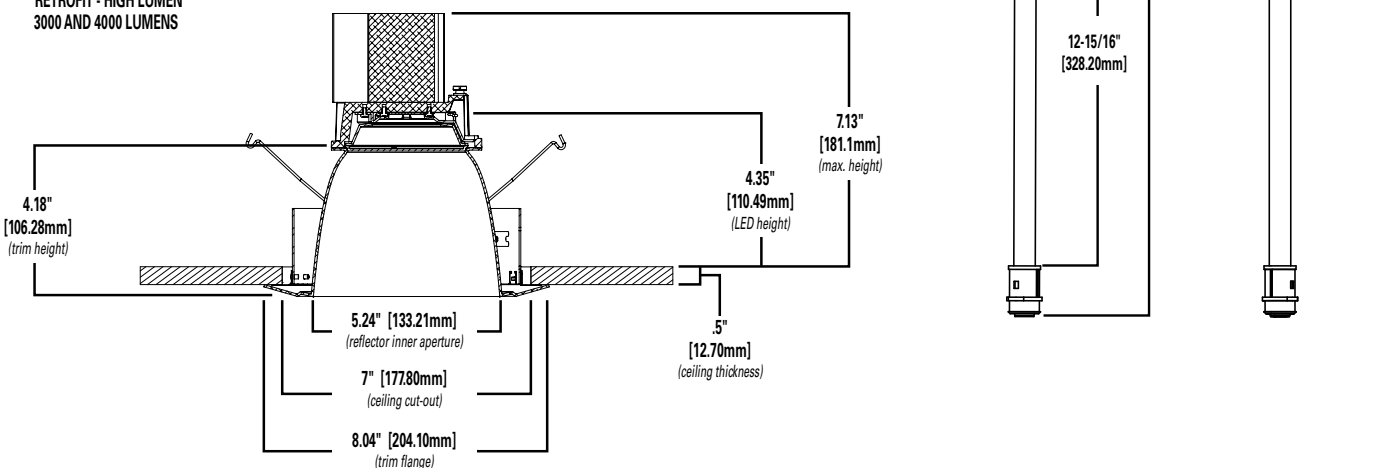
Acuity Brands®, Juno®, Elate™, Lithonia Lighting®, Signify N.V. (formerly Philips Lighting N.V.), Lightolier®, Calulite, Lytecaster, Omega Lighting, Capri Lighting, and their product brand names, where identified above, are tradenames or trademarks of each respective company and Cooper Lighting Solutions makes no representations on these trademarks.

DIMENSIONS

RETROFIT - LOW LUMEN 1000, 1500, AND 2000 LUMENS



RETROFIT - HIGH LUMEN 3000 AND 4000 LUMENS



PHOTOMETRY

MEDIUM DISTRIBUTION - SPECULAR CLEAR FINISH, 2000 LUMEN MODEL, 80 CRI, 3500K

MEDIUM (55° BEAM*)	CANDLEPOWER DISTRIBUTION	CONE OF LIGHT	CANDELA TABLE	ZONAL LUMEN SUMMARY	LUMINANCE																																																									
Test Number: P289609 Housing: HC620D010 Module: HM612835 Reflector: 62RMDC Lumens: 1938 Lm Efficacy: 96.9 Lm/W SC: 1.04 UGR: 11.6			<table border="1"> <thead> <tr> <th>Degrees Vertical</th> <th>Candela</th> </tr> </thead> <tbody> <tr><td>0</td><td>1903</td></tr> <tr><td>5</td><td>1873</td></tr> <tr><td>15</td><td>2021</td></tr> <tr><td>25</td><td>1646</td></tr> <tr><td>35</td><td>537</td></tr> <tr><td>45</td><td>90</td></tr> <tr><td>55</td><td>15</td></tr> <tr><td>65</td><td>5</td></tr> <tr><td>75</td><td>2</td></tr> <tr><td>85</td><td>0</td></tr> <tr><td>90</td><td>0</td></tr> </tbody> </table>	Degrees Vertical	Candela	0	1903	5	1873	15	2021	25	1646	35	537	45	90	55	15	65	5	75	2	85	0	90	0	<table border="1"> <thead> <tr> <th>Zone</th> <th>Lumens</th> <th>% Fixture</th> </tr> </thead> <tbody> <tr><td>0-30</td><td>1476</td><td>76.2</td></tr> <tr><td>0-40</td><td>1830</td><td>94.4</td></tr> <tr><td>0-60</td><td>1930</td><td>99.6</td></tr> <tr><td>0-90</td><td>1938</td><td>100</td></tr> <tr><td>90-180</td><td>0</td><td>0</td></tr> <tr><td>0-180</td><td>1938</td><td>100</td></tr> </tbody> </table>	Zone	Lumens	% Fixture	0-30	1476	76.2	0-40	1830	94.4	0-60	1930	99.6	0-90	1938	100	90-180	0	0	0-180	1938	100	<table border="1"> <thead> <tr> <th>Average Candela Degrees</th> <th>Average 0° Luminance</th> </tr> </thead> <tbody> <tr><td>45</td><td>8295</td></tr> <tr><td>55</td><td>1706</td></tr> <tr><td>65</td><td>772</td></tr> <tr><td>75</td><td>630</td></tr> <tr><td>85</td><td>0</td></tr> </tbody> </table>	Average Candela Degrees	Average 0° Luminance	45	8295	55	1706	65	772	75	630	85	0
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*Values are nominal, for specular clear reflector, others may vary.
SC = Spacing Criteria
UGR = Unified Glare Rating

Photometric Multipliers (nominal lumen values)

1000 Lumen	1500 Lumen	2000 Lumen	3000 Lumen	4000 Lumen
0.52	0.72	1.00	1.44	2.02

Multipliers for relative lumen values with other series models.

CCT Multipliers – 80CRI

2700K	3000K	3500K	4000K
0.93	0.95	1.00	1.05

Multipliers for relative lumen values with other series color temperatures.

Color Finish Multipliers

Finish code	C	H	W/WB	BB
Finish	Specular Clear	Semi-Specular	Matte White	Black Baffle
Multiplier	1.00	0.91	0.92	0.84

Multipliers for relative lumen values with other color finishes.

CCT Multipliers – 90CRI

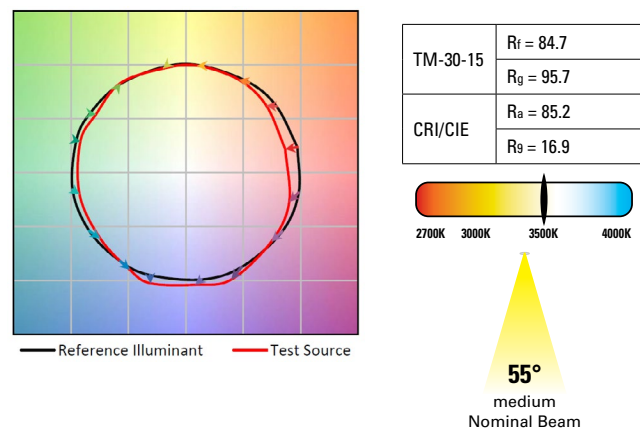
2700K	3000K	3500K	4000K
0.75	0.82	0.90	0.89

Multipliers for relative lumen values with other series color temperatures.

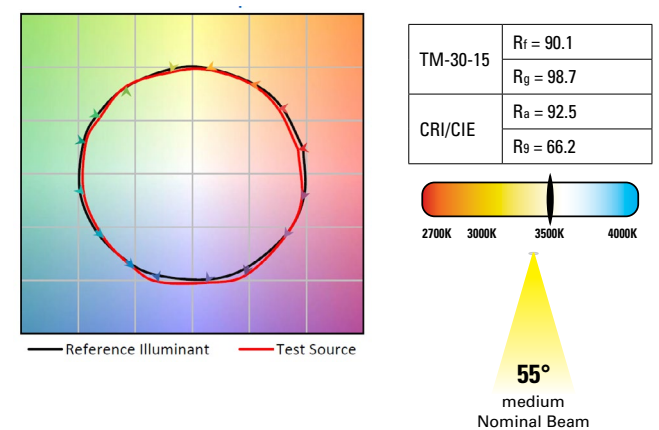
COLOR METRICS

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

80 CRI Color Metric Summary - 3500K*



90 CRI Color Metric Summary - 3500K*



* Color values are based on 61WDWB reflector, other finishes and field results may vary.