Project		Catalog #		Type	
Prepared by		Notes		Date	

HALO Commercial
HC56R | HM6R | 62R

6-inch LED retrofit regressed lens downlight

Typical Applications

Office · Healthcare · Hospitality · Institutional · Mixed-Use/Retail

High Lumen

Low Lumen

Interactive Menu

Product Certification

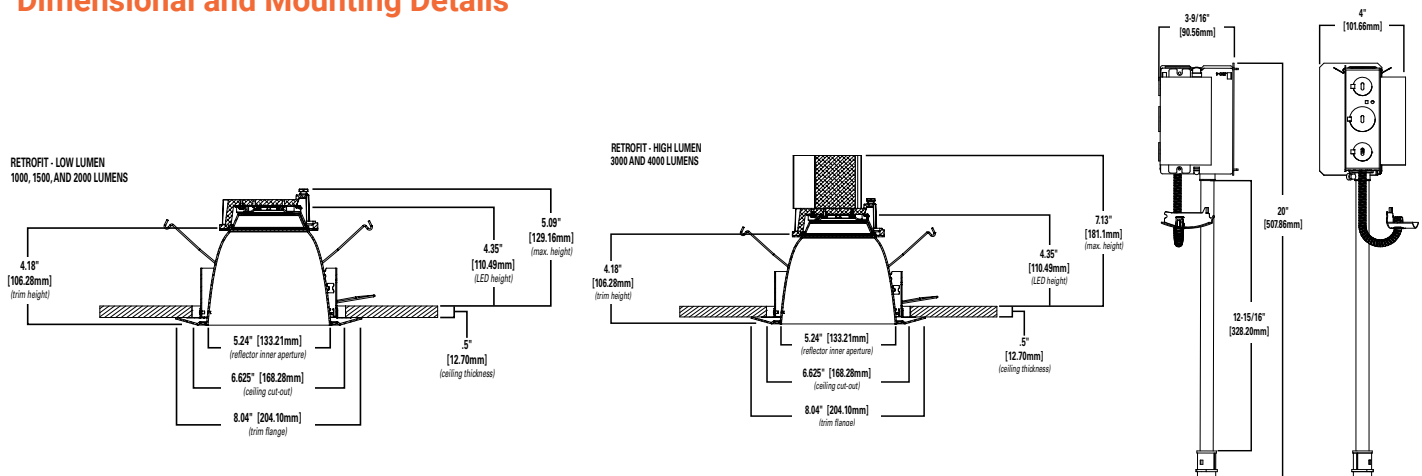ENERGY STAR · Efficiency Standards T24 Can be used to comply with California Title 24 Non-Residential · FCC · RoHS COMPLIANT · c(UL)us LISTED

Top Product Features

- Remodel/retrofit series; 1,000 to 4,000 lumens
- Medium beam distribution; Specular, Semi-Specular and White reflector finishes
- 2700K, 3000K, 3500K and 4000K CCT; 80 or 90 CRI
- Universal voltage 120V-277V; Standard 0-10V driver dims to 1%
- Factory installed connected lighting and emergency options

Dimensional and Mounting Details

RETROFIT - LOW LUMEN
1000, 1500, AND 2000 LUMENS

4.18" [106.28mm] (trim height)

5.09" [129.16mm] (max. height)

4.35" [110.49mm] (LED height)

5.24" [133.21mm] (reflector inner aperture)

6.625" [168.28mm] (ceiling cut-out)

8.04" [204.10mm] (trim flange)

.5" [12.70mm] (ceiling thickness)

RETROFIT - HIGH LUMEN
3000 AND 4000 LUMENS

4.18" [106.28mm] (trim height)

7.13" [181.1mm] (max. height)

4.35" [110.49mm] (LED height)

5.24" [133.21mm] (reflector inner aperture)

6.625" [168.28mm] (ceiling cut-out)

8.04" [204.10mm] (trim flange)

.5" [12.70mm] (ceiling thickness)

3-9/16" [90.56mm]

4" [101.66mm]

20" [507.86mm]

12-15/16" [328.20mm]

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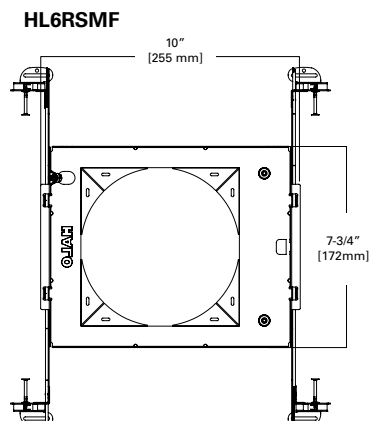
Order Information

Sample Number: HC56R20D010 – HM6R12835 – 62RMDC

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

Frame / Collar	Lumens	Input / Control	Factory Installed Options	Housing Accessories
HC56R = 6" retrofit kit for 5.875" (5-7/8") to 6.625" (6-5/8") 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)	**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] **HL6RSMF** = 6" aperture new construction mounting frame with integral wood & T-grid bar hangers, adjust for 8" to 24" wide
Notes	Notes	Notes	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)	Notes

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 HC56R10*, HC56R15*, HC56R20*, HC6R10*, HC6R15*, HC6R20* mounting frames, and 62R trims only **34**=3000, 4000 (nominal) For use with HC56R30*, HC56R40*, HC6R30*, HC6R40* 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
Notes	Notes	Notes

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	Notes	Notes	Notes

HL6RSMF

10" [255 mm]

7-3/4" [172mm]

Product Specifications

Housing Frame/Collar

- Galvanized steel collar; 2" thick
- Accommodates open frame housing openings 5.875" (5-7/8") to 6.625" (6-9/16") nominal ceiling cutout aperture
- Installs with two remodel spring clips from below the ceiling

Junction Box

- Galvanized steel junction box
- Provided with armored cables for flexible connections to the LED module and existing junction box for mains voltage connections
- 20 in³ internal volume excluding voltage barrier
- 25 in³ internal total volume
- Voltage barrier for 0-10V dimming wires (occupies one 1/2" pry-out space)
- Listed for eight #12 AWG (four in, four out) 90°C conductors and feed-thru branch wiring
- Three 1/2" and two 3/4" trade size pry-outs available
- Three 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 color rendering index (CRI)
- Color accuracy within 3 SDCM provides color consistency and uniformity
- 90 CRI option: R9>50 (refer to chromaticity information for details)
- Available in 2700K, 3000K, 3500K and 4000K correlated color temperature (CCT)
- Lumen options include 1,000, 1,500, 2,000, 3,000 and 4,000 lumens (nominal)
- Passive thermal management achieves 60,000 hours at 70% lumen maintenance (L70) in insulated ceilings (IC) and non-IC applications
- Integral diffuse lens provides visual shielding
- Integral connector allows quick connection to housing flex

Reflector

- Self-flanged aluminum reflectors available in medium distribution pattern
- Reflectors attach to LED module with three speed clamps
- Available in multiple painted or plated finishes

Reflector/Module Retention

- Reflector/module assembly is securely retained in the housing with two torsion springs

Driver

- Field-replaceable constant current driver provides low noise operation
- Universal 120-277VAC 50/60Hz input standard
- 347VAC 50/60Hz input option (Canada only)
- Continuous, 1% to 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 integral or remote charge indicator and test switch
- Available Self-Test (self-diagnostic) with remote charge indicator and test switch

Connected Lighting Systems Options

- WaveLinx (two options):
  o Factory installed WaveLinx tile-mount sensor kit includes control module, sensor and cable, allowing use with the comprehensive lighting system
  o Field installed WaveLinx accessory tile mount sensor kit includes the same components as the factory kit, but sold separately for field installation
  o WTA WaveLinx tile-mount sensor kit offers daylight dimming, PIR motion sensing control and optional Real Time Location Services (RLTS)
     (Refer to WaveLinx system specifications and application guides for details)
  o WTA WaveLinx kit includes a control module that mounts on the luminaire electrical junction box via a 1/2" knock-out
  o The WaveLinx tile-mount sensor features direct-mount spring clips to attach to a ceiling tile and the included mounting bracket allows for installation in an octagon ceiling box
- Enlighted wireless tile-mount sensor and control kit

New Construction Mounting Frame Accessory

- Install retrofit kit in new construction with accessory HL6RSMF mounting frame (ordered separately)
- HL6RSMF 6" aperture mounting frame is galvanized steel with GOT NAIL! Gen-3 bar hangers that adjust 8" to 24", and Pass Thru feature for shortening bars without removal. Integral nail and grid clip design for wood framing or T-grid ceilings.
- When used with HL6RSMF in new construction, the retrofit kit installs from below the finished ceiling; for ease of LED luminaire installation after rough-in of the ceiling.

Compliance

- cULus damp and wet location listed in protected ceilings
- IP20 - Above finished ceiling; IP65- Below finished ceiling
- Non-Insulated ceiling (Non-IC) rated for 2,000, 3,000 and 4,000 lumen models (insulation must be kept 3" from top and sides)
- Insulated ceiling (IC) rated for 1,000 and 1,500 lumen models and suitable for direct contact with air permeable insulation* (IC models are also suitable for Non-IC installations)
- 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 at 120/277V
- Contains no mercury or lead and RoHS compliant
- Photometric testing completed in accordance of IES LM-79-08
- Lumen maintenance projection in accordance of IES LM-80-08 and TM-21-11
- 1,000 and 1,500 lumen, 90 CRI, 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

  *Not for use in direct contact with spray foam insulation, consult NEMA LSD57-2013

Warranty

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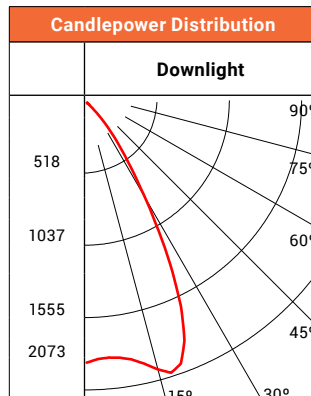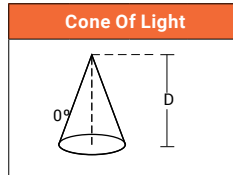
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Photometric Data

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

Medium (55° Beam*)

Test Number	P289609
Housing	HC620D010
Module	HM612835
Reflector	62RMDC
Lumens	1938 Lm
Efficacy	96.9 Lm/W
SC	1.04
UGR	11.6

*Values are nominal, for specular clear reflector, others may vary.
SC = Spacing Criteria
UGR = Unified Glare Rating

Candlepower Distribution

Downlight

518
1037
1555
2073

90°
75°
60°
45°
30°
15°
0°

Cone Of Light

MH	FC	L	W
5.5'	62.9	5.6	5.6
7'	38.8	7.2	7.2
8'	29.7	8.2	8.2
9'	23.5	9.2	9.2
10'	19	10.2	10.2
12'	13.2	12.4	12.4

Candela 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

Zonal Lumen Summary

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

Luminance

Average Candela Degrees	Avg. 0° Luminance
45	8295
55	1706
65	772
75	630
85	0

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.

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 nominal values with other series models

CCT Multipliers - 80CR

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

Multipliers for relative lumen values with other series color temperatures.
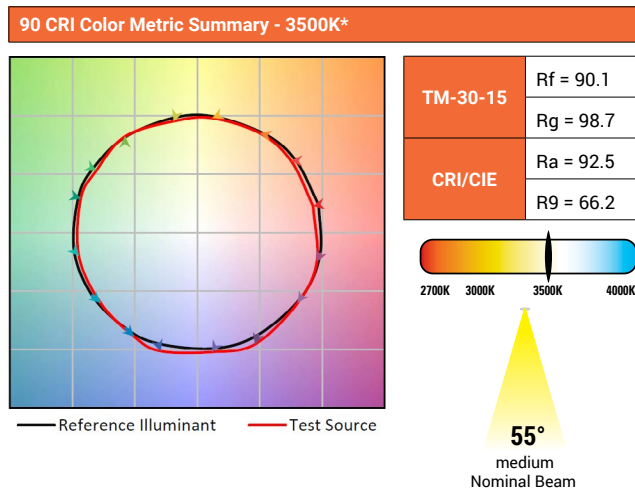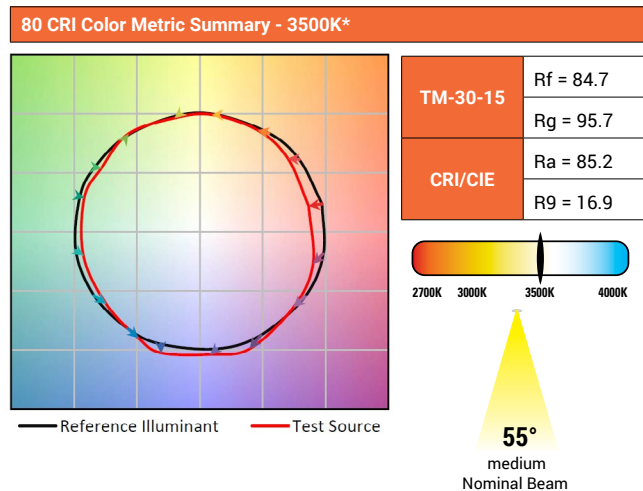
CCT Multipliers – 90CRI

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

Multipliers for relative lumen values with other series color temperatures.

Note: Refer to IES files for more product data.

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Energy & Performance Data

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

80 CRI Color Metric Summary - 3500K*

TM-30-15	Rf = 84.7
	Rg = 95.7
CRI/CIE	Ra = 85.2
	R9 = 16.9

2700K 3000K 3500K 4000K

— Reference Illuminant — Test Source

55°
medium
Nominal Beam

90 CRI Color Metric Summary - 3500K*

TM-30-15	Rf = 90.1
	Rg = 98.7
CRI/CIE	Ra = 92.5
	R9 = 66.2

2700K 3000K 3500K 4000K

— Reference Illuminant — Test Source

55°
medium
Nominal Beam

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

Series	1000 lumen	
Input Voltage 120-277VAC	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 120-277VAC	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 120-277VAC	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 120-277VAC	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 120-277VAC	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.

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Non - Halo Commercial Open Frame Housing*

Manufacturer	Brand	Series Open Frame Models Only	Housing Aperture
Cooper Lighting Solutions	PDS (Performance Downlighting System)	PD6 (Not Halo Commercial PD6)	6.25" (6-1/4")
Cooper Lighting Solutions	Portfolio	C6, MD6, H760, HD6, LD6	6.375" (6-3/8")
Signify N.V.	Lightolier® Calculite	B600, S6132B, C670MH, 6213H, 6218H, C639M, C670M, C610M, C639T, C670T, C615T	6.5625" (6-9/16")
Hubbell®	Prescolite® – Architecktur	CFT6, CFR6, CFCB6, CFQ6, INC600	6.25" (6-1/4")
Hubbell®	Prescolite® – Architecktur	RHD6	6.31" (6-5/16")
Hubbell®	Prescolite® – LiteFrame™	LF6	6.25" (6-1/4")

*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.

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