



ModuLyte LED 4", 6" & 8" downlights provide the optimal balance of field flexibility, performance, and commercial appeal. Light engines are designed to be installed without need of frames making ModuLyte flexible to accommodate new construction, remodel, and retrofit applications. Field selectable correlated color temperature and lumens in addition to field installable optics including wall wash allow ModuLyte to adapt to a variety of applications such as office, institution, healthcare, retail, and public.

Complete luminaire = Frame (optional) + Engine/Trim + Accessories (optional)

Project: _____

Location: _____

Cat.No: _____

Type: _____

Qty: _____

Notes: _____

Engine

switchable example: M6RDL259CSWCDZ10U
fixed example: M6RDL25F935WCDZ10U

Series	Styles	Lumens ⁴		CRI/CCT ⁴		Beam	Reflector	Flange	Dimming	Voltage	Options
									Z10		
M4R 4" Round ¹ M6R 6" Round ² M8R 8" Round ²	DL Downlight LW Lensed Wall Wash ³	Selectable 10 500lm, 750lm, 1000lm 25 1500lm, 2000lm, 2500lm 40 3000lm, 3500lm, 4000lm ⁵ 50 4500lm, 5000lm ^{5,6}	Static 05F 500lm 07F 750lm 10F 1000lm 15F 1500lm 20F 2000lm 25F 2500lm 30F 3000lm 35F 3500lm 40F 4000lm 45F 4500lm 50F 5000lm	Selectable 9CS 2700K 3000K 935 3500K 4000K 950 5000K	Static 927 2700K 930 3000K 935 3500K 940 4000K 950 5000K	M Medium ⁷ W Wide	CL Specular clear CD Comfort clear diffuse	— White (matte) B Black (matte) P Polished (matches aperture)	Z10 0-10V 1%	U Universal 120/277V 3 347V ⁷	— None LC Chicago plenum ⁷ AT Air-tite (factory-installed trim flange gasket) ⁸ EM6R Emergency battery pack w/ remote test switch ⁹ EM6I Emergency battery pack w/ integral test switch to trim ¹⁰
				All options are 90CRI with Accurender		M Medium ⁷ W Wide	WH White BK Black (matte)	— White (matte) B Black (matte)			

Accessories

Lensed wall wash optic	New construction frame with 24" telescoping bar hangers	Medium beam diffuser lens	Goof ring White (matte)	Field-installed emergency Accessory	Round Cylinders field-installable accessories for use with Stock Ready light engines¹¹	Interact Ready System Bridge accessory
M4RLW 4" round M6RLW 6" round M8RLW 8" round	4RNSR 4" round 6RNSR 6" round 8RNR 8" round	M4MED 4" round M6MED 6" round M8MED 8" round	M4GRW 4" round M6GRW 6" round M8GRW 8" round	MLEM6 Bodine 6" BSL06 battery pack kit for field-installation with ModuLyte engines. Includes mounting plate for remote switch.	M4CRW 4" cylinder, white M4CRB 4" cylinder, black M6CRW 6" cylinder, white M6CRB 6" cylinder, black	SBA System Bridge (refer to Philips System Bridge Accessory specification sheet for options and details)

- IC rated up to 1500lm.
- IC rated up to 2000lm.
- Integral lensed wall wash optic factory installed. Order with wide (W) beam only. May also be field installed with M_RLW accessory with DL style light engine/trim.
- Select either selectable or fixed options for both lumens and CRI/CCT. Must be consistent with selectable or fixed for both lumens and CRI/CCT.
- The 4000, 4500, and 5000lm flux are marked spacings. Refer to page 7 for details.
- Available only with M6 and M8.
- The 347V (3) and LC (Chicago plenum) options not available with EM6R and EM6I emergency options.
- Stock Ready light engines include factory-installed gasket and are AirSeal in compliance with ASTM E283. All other configurations require air-tite (AT) option to be selected for factory-installed gasket.
- Factory installed Bodine BSL06 6W battery pack for remote mount test switch. Ceiling mounting plate included. May also be field installed with MLEM6 accessory.
- Factory installed Bodine BSL06 6W battery pack for mounting test switch integrally to trim.
- 3000lm maximum flux for both sizes. Must order CACK or CASK accessory when cylinders are pendant mounted. Cylinders not available for use with EM options or accessories.

Pendant accessories (field adjustable) ex: CASK36BK

Series	Mounts	Length	Finish
CA			
CA Calculte Accessory	SK Stem Kit	36 36 in. 48 48 in. 60 60 in. 72 72 in.	WH White (matte) BK Black (matte)
	CK Cable Kit	10 120 in.	WH White (matte) BK Black (matte)

M4R/M6R/M8R ModuLyte LED

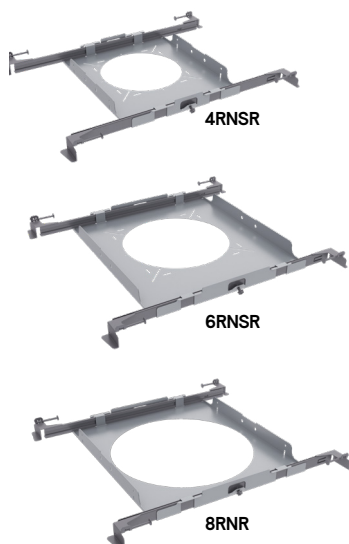
4", 6", & 8" Round Downlight

Frame (optional)

New Construction Frames (optional):

4RNSR, 6RNSR, 8RNR frames may be used to suit new construction installation as required to best accommodate placement of ceiling holes. All wiring is done on the integral junction box to the light engine.

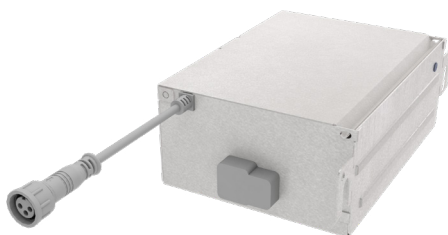
- All metal construction with galvanized finish for corrosion protection.
- Integrated 24"- 7¼" telescoping bar hangers.
 - Integral nail and joist alignment tab for wood construction. Holes oriented for using screws (by others).
 - Notch for t-bar attachment with integral locking mechanism.



Construction

- Trim includes integral self-flange with tapered profile for leveling to ceiling plane.
- Die cast aluminum heat sink manages thermal load over spectrum for product longevity.
- Stamped and heat treated leaf springs designed for easy installation and maximized retention to the ceiling.
- Air-tite compliant to ASTM E283. Stock Ready configurations are supplied with factory-installed closed cell gaskets on the trim flange. All other configurations require air-tite (AT) option to be selected for factory-installed gasket.

Static lumen/CCT option



Optics

- Provides a physical 59° cutoff.
- Available in wide (4"/6"-80°, 8"-72°) beam for optimal spacing. Medium (4"/6"-68°, 8"-60°) field installable diffuser lens available.
- Precision spun all high grade aluminum reflectors available in anodized and painted finishes.
- Lens media may be removed in the field tool-free for easy installation of accessory diffusion media.
- Injection molded lensed wall wash optics. Replaces existing lens media holder with the standard product. Factory installed option or field installed accessory.

Quality of light

- Beam shaping diffuser lens to mitigate pixilation, enhance beam quality, and minimize color over angle.
- Color consistency: 3 SDCM typ. @ 2700K & 5000K CCT
- Accurender 90 CRI minimum.

Light Engine

Quick disconnect between the driver and light engine provides the following advantages:

- Junction box may be field wired in advance to better accommodate construction schedules.
- Light engine/trim may be installed at a later stage to protect the trim.
- Rated for direct contact with insulation (IC) - M4RDL to 1500lm, M6RDL & M8RDL to 2000lm
- Easy replacement of electronics at end of life with minimal wasted material and labor required.
- Lumen Maintenance: L80 at 72,000 hours.

Junction box

- Galvanized metal with captured cover that can be opened tool-free
- Three (3) 3/4" knock outs on the end for mains/dimming connections
- Two (2) 3/4" knock outs on the for connection of battery pack to primary and secondary side of driver. (field accessory or factory option)
- Mounting clips allow for direct mount to joist, or can be field modified to suspended t-bar (fasteners by others)
- Plenum rated CMP cable for secondary low voltage wiring between driver and engine. Integral quick disconnect allows for the engine and driver to be separated in the field for ease of installation and maintenance.
- Easy access switches allow for field selection of CCT (2700K-3000K-3500K-4000K-5000K) and lumens (refer to product selection matrix).
- Options for static lumens and correlated color temperature provided with factory-installed non-metallic cover over the driver switches. Engine will be labeled with corresponding static catalog code, and will include input wattage specific to static lumens selected.
- Chicago plenum (LC) variant includes plenum rated enclosed flexible conduit gasketed to the engine and driver box. Driver box assembly is sealed and gasketed for compliance.

Max ceiling thickness is 1.25" (31 mm).
Ceiling cutout - see page 7

Driver

0-10v 1% (Z10) dimming:

- 120-277V, 50/60Hz 0-10v dimming to 1%
- 347V option, 60Hz 0-10v dimming to 1%
- Tested in compliance with NEMA77-2017 for temporal lighting artifacts (flicker)
- FCC CFR Title47 Part 15 Class A

Recommended 0-10v dimmers:

- Eaton slide SF10
- Eaton Decorator DF10
- Lutron® Diva DDTV
- Lutron® Nova T NTFTV
- Leviton® IllumaTech IP710

Emergency

- Bodine BSL06 6W battery pack w/ self-test/selfdiagnostic mounted on a separate junction box for mains/secondary wire splicing. Conduit connectors provided for attachment to mains and secondary side of AC driver box for splicing to cool LED circuit.
- EM6R - factory-installed option for remote mount test switch, provided with 4-3/8"x2-3/4" (109x69mm) white ceiling cover plate.
- EM6I - factory-installed option for test switch to be mounted direct to the reflector
- MLEM6 - field-installed accessory, includes white ceiling cover plate

Cylinder Accessories

- Designed for use with standard ModuLyte recessed light engines. Engine flange fits flush with the bottom rim of the cylinder for a clean appearance. See the ModuLyte cylinders specification sheet for factory-assembled cylinders with Stock Ready light engines.
- Robust extruded aluminum
- Painted finishes in matte white or black
- Includes mounting plates for surface or suspended mounting
- For suspension mounting, must be ordered with matching CASK pendant stem or CACK cable canopy kits (see page 1).
- Up to 3000lm maximum flux.
- Not available with EM options. May be used with LCELIS10 10W field-installed inverter.

Labels and Listings

- cULus listed for wet locations with covered ceilings
- Air-tight compliant to ASTM E-283
- CCEA (frames with *LC suffix)
- RoHS certified
- Engines are Energy star certified, visit energystar.gov to find a full list of configurations on the qualified product list

Warranty

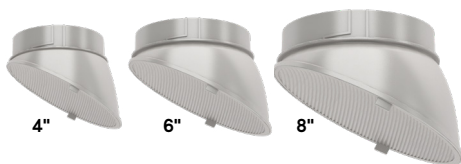


5 year limited warranty
Visit [Signify.com/warranties](https://www.signify.com/warranties) for more information on Signify's standard 5-year limited warranty on complete luminaire systems.

M4R/M6R/M8R ModuLyte LED

4", 6", & 8" Round Downlight

Accessories



Lensed wall wash optics:
M4RLW, M6RLW, M8RLW may be field installed to standard product quickly converting to asymmetric distribution.



Medium beam diffuser media:
M4MED, M6MED, and M8MED may be field installed to the media holder supplied with the standard engine.



Oversized goof rings:
M4GRW, M6GRW, M8GRW may be field installed over the integral trim flange to support ceiling coverage for new or retrofit construction. See ceiling cutout chart for retrofitting guidance.



Factory- or field-installed battery pack:
Bodine BSL6 6W battery pack with self-test/self-diagnostic. Includes remote ceiling plate for test switch. Includes flexible conduit and connector to wire into secondary compartment of the light engine's junction box. To estimate lumen output in emergency mode, multiply emergency pack wattage by luminaire configuration efficacy, then by 1.1.



AccuRender Technology (CRI 90+)

The right light brings colors to life. Our new AccuRender technology helps ensure colors are rendered more accurately and consistently, while doing so as efficiently as CRI 80 products.



Standard CRI 80
Good color rendering and high efficacy



Standard CRI 90
Better color rendering and low efficacy



AccuRender
Best color rendering, color preference and high efficacy

Enjoy design flexibility

Full range of products and options:

- Available soon in across Lightolier portfolio for application flexibility
- Multiple color temperatures (CCTs) and lumen packages offered

Promote savings

High efficacy, with no penalty:

- Energy efficacy compares well to conventional 80 CRI
- Up to 25% more energy savings vs competitor 90 CRI¹
- Helps meet Title 24 requirements

Show your true colors

High color rendering:

- True to life colors that help energize your environment and render better flesh tones critical for healthcare hospitality and retail applications.
- R_a up to 94 CRI
 R_9 up to 67 CRI
 G_9 up to 99 CRI
 C_9 up to 94 CRI
- R_f up to 92 TM-30
 $R_{f,h1}$ up to 91 TM-30
 R_9 up to 100 TM-30
 $R_{ca,h1}$ up to -5% TM-30

Achieve color balance

Best in class color consistency:

- Promote aesthetic harmony in your space with ≤ 3 SDCM @ 2700K & 5000K

M4R/M6R/M8R ModuLyte LED

4", 6", & 8" Round Downlight

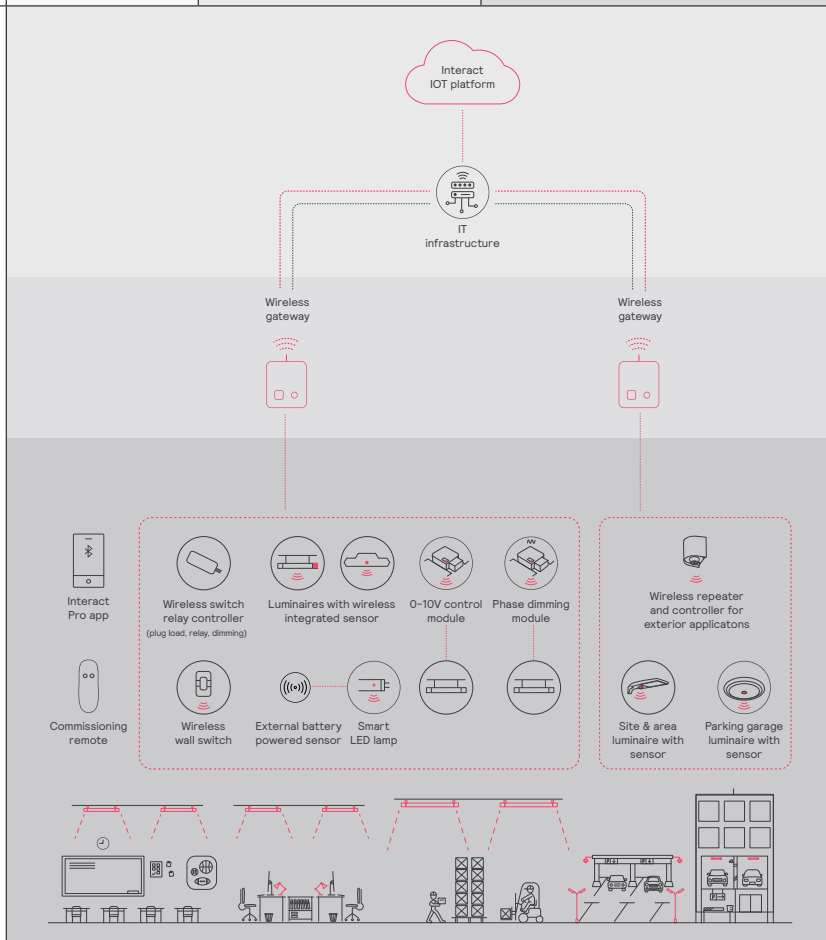
interact

	Gateway Connected		
	Standalone	Option 1	Option 2
Dimming, grouping, and zoning	✓	✓	✓
Bluetooth and ZigBee enabled	✓	✓	✓
Motion sensing and daylight harvesting	✓	✓	✓
Integration with 0-10V and phase dimming fixtures	✓	✓	✓
Code compliance	✓	✓	✓
Granular dimming and dwell time	✓	✓	✓
Correlated color temperature (CCT) tuning by switch	New	✓	✓
Support for sensor-based Tunable White luminaires	New	✓	✓
Energy reporting and monitoring		✓	✓
Scheduling		✓	✓
Demand response		✓	✓
BMS integration (BACnet)			✓
Floor plan visualization			✓
IoT sensors for wellness			✓
IoT Apps for productivity			✓

Currently supported maximum system size

To be able to design the lighting system correctly for the customer, it is important to know the prime characteristics of the system, its possibilities and limitations.

System level	
Total number of gateways	Unlimited
Total number of devices	200 per network
• Luminaires with integrated sensors	150
• Smart TLEDs	150
• Zones + groups	64
Total number of ZGP devices (sensors and switches)	50
• Sensors	30
• Switches	50
Group level	
Recommended number of lights	40 (maximum 150)
Number of ZGP devices	5
Number of scenes	16



M4R/M6R/M8R ModuLyte LED

4", 6", & 8" Round Downlight

Wireless controls options

Interact

- SWZCS is a connected sensor with integral occupancy and daylight sensing and supports wireless mesh connectivity.
- The sensor works in the standalone mode (similar to SpaceWise) when configured without a gateway or in a cloud connected mode if a compatible gateway is used.
- Interact includes an App, a portal and a broad portfolio of wireless luminaires, lamps and retrofit kits all working on the same system.
- Startup is implemented via Interact Pro App (Android or iPhone) & Bluetooth connectivity. The App provides flexibility to choose between a gateway or non gateway mode for setup.
- Setup with the gateway requires wired internet access to the gateway. It is possible to add a gateway at a later point.
- Prepare project configuration steps remotely and use IRT9015 remote on-site to identify and group devices together.

Compatible with:

- SWS200 & UID8465 wireless scene switch
- Battery powered IP42 presence sensor OCC sensor IA CM WH 10/1
- Battery powered IP42 presence & daylight sensor OCC-DL sensor IA CM IP42 WH
- LCN3110: battery powered IP65 presence sensor, OCC sensor IA CM IP65W
- LCN3120: battery powered IP65 presence & daylight sensor, OCC-DL sensor IA CM IP65 WH
- For more information on Interact visit:
interact-lighting.com/interactproscalablesystem

Radio only sensor (RA or RADIO)

- Integral RA or RADIO only sensor simply enables wireless mesh connectivity to the luminaire without any occupancy or daylight sensing.
- Ideal for applications where sensing functionality is managed by other Interact devices and the luminaire only needs to have wireless connectivity.
- Interact includes an App, a portal and a broad portfolio of wireless luminaires, lamps and retrofit kits all working on the same system.
- Startup is implemented via Interact Pro App (Android or iPhone) & Bluetooth connectivity. The App provides flexibility to choose between a gateway or non-gateway mode for setup.
- Setup with the gateway requires wired internet access to the gateway. It is possible to add a gateway at a later point.
- Prepare project configuration steps remotely, identify and group devices together onsite.
- Compatible with SWS200 and UID8465 wireless scene switch, wireless Occ sensor (OCC SENSOR IA CM IP42 WH 10/1) and wireless Day/Occ sensor (OCC MULTI SENSOR IA CM WH 10/1).
- For more information on Interact visit:
interact-lighting.com/interactproscalablesystem

Sensor bundle (IAOSB or SB)

- A wireless IoT connected lighting solution for large enterprises that span across multiple floors, buildings and require multiple gateways.
- View all your projects under one dashboard and easily compare insights from multiple projects in one view.
- Compatible with SWS200 wireless scene switch, wireless Occ sensor (OCC SENSOR IA CM IP42 WH 10/1) and wireless Day/Occ sensor (OCC MULTI SENSOR IA CM WH 10/1) and wireless Occupancy or Daylight & Occupancy sensors available. Use Interact software and insights to increase building efficiency, achieve building wide integration and optimize space through occupancy analytics.
- IAOSB or SB option in addition to occupancy and daylights sensing supports advanced IoT capabilities, such as people estimation analysis, desk level temperature & humidity sensing, noise classification, and BLE beacon.
- Requires compatible Gateway and internet connectivity for commissioning.
- For more information, visit:
interact-lighting.com/interactproscalablesystem

Emergency Options (ER100)

- **Power Sensing** (factory default) – Recommended UL924 option requires unswitched power sense line, absence of voltage on the normal circuit triggers luminaire to 100% output.
- **Power Interruption Detection** (field option) – Detects AC power interruption >30ms triggers 90 minute emergency mode with luminaire at 100% output.

Interact supported sensor option codes across Genlyte product lines

	Evokit	Day-Brite	Ledalite	Lightolier
ZigBee + Bluetooth + Sensing	SWZCS	SWZCS	CS	SBA accessory (external)
ZigBee + Bluetooth	RADIO	RADIO	RA	RA
ZigBee + Bluetooth + Sensing + Environmental data	IAOSB	IAOSB	SB	SB
ZigBee + Highbay + Sensing	-	SWZCSH	-	-

M4R/M6R/M8R ModuLyte LED

4", 6", & 8" Round Downlight

Reflectors



Specular clear (CL): Most specular and most efficient finish, delivers maximum photometric performance but can produce a mirror image effect of the interior space.



Comfort clear diffuse (CD): Slightly diffuse clear finish, that eliminates iridescence and reduces the mirror image effect inherent with specular finishes.



White (WH): (matte) Brightest illuminated aperture and provides the smoothest transition to most ceilings when off (white is only available with a white flange).



Black (BK): (matte) Provides the lowest aperture brightness possible and significantly reduces source identification in a ceiling.

Flanges



White (-): (matte) Provides the smoothest transition to ceilings when off.



Polished (P): (matches aperture) Produces a continuous look throughout the reflector (aperture matching).

Stock Ready configurations

Catalog Number	UPC Code	Model Number	Description
ModuLyte LED 4" Round Downlight			
Wide beam • 1500/2000/2500lm			
90CRI with 2700/3000/3500/4000/5000K CCTs			
M4RDL259CSWCLZ10U	190096192793	912401592618	CL/WH Z10 UNV
M4RDL259CSWCDZ10U	190096192809	912401592619	CD/WH Z10 UNV
M4RDL259CSWWHZ10U	190096192816	912401592620	WH/WH Z10 UNV
ModuLyte LED 6" Round Downlight			
Wide beam • 1500/2000/2500lm			
90CRI with 2700/3000/3500/4000/5000K CCTs			
M6RDL259CSWCLZ10U	190096192823	912401592621	CL/WH Z10 UNV
M6RDL259CSWCDZ10U	190096192830	912401592622	CD/WH Z10 UNV
M6RDL259CSWWHZ10U	190096192847	912401592623	WH/WH Z10 UNV
Medium beam • 3000/3500/4000lm			
90CRI with 2700/3000/3500/4000/5000K CCTs			
M6RDL409CSMCLZ10U	190096192854	912401592624	CL/WH Z10 UNV
M6RDL409CSMCDZ10U	190096192861	912401592625	CD/WH Z10 UNV
M6RDL409CSMWHZ10U	190096192878	912401592626	WH/WH Z10 UNV
ModuLyte LED 8" Round Downlight			
Wide beam • 1500/2000/2500lm			
90CRI with 2700/3000/3500/4000/5000K CCTs			
M8RDL259CSWCLZ10U	190096192885	912401592627	CL/WH Z10 UNV
M8RDL259CSWCDZ10U	190096192892	912401592628	CD/WH Z10 UNV
M8RDL259CSWWHZ10U	190096192908	912401592629	WH/WH Z10 UNV
Medium beam • 3000/3500/4000lm			
90CRI with 2700/3000/3500/4000/5000K CCTs			
M8RDL409CSMCLZ10U	190096192915	912401592630	CL/WH Z10 UNV
M8RDL409CSMCDZ10U	190096192922	912401592631	CD/WH Z10 UNV
M8RDL409CSMWHZ10U	190096192939	912401592632	WH/WH Z10 UNV

Cat. No.	UPC Code	Model Number	Description
ModuLyte LED 4" Accessories			
M4RLW	190096193134	912401592651	Lens Wall Wash Optics
M4MED	190096193165	912401592654	Medium Beam Optics
M4GRW	190096193189	912401592656	Goof Ring White
4RNSR	190096192526	912401592564	Frame SQ BH NJB
ModuLyte LED 6" Accessories			
M6RLW	190096193141	912401592652	Lens Wall Wash Optics
M6MED	190096193172	912401592655	Medium Beam Optics
M6GRW	190096193196	912401592657	Goof Ring White
6RNSR	190096192533	912401592565	Frame SQ BH NJB
ModuLyte LED 8" Accessories			
M8RLW	190096193158	912401592653	Lens Wall Wash Optics
M8MED	190096193226	912401592672	Medium Beam Optics
M8GRW	190096193202	912401592658	Goof Ring White
8RNR	190096192946	912401592635	Frame SQ BH NJB

Note: For the Canadian market, ModuLyte accessories (except frames) are quick ship make-to-order.

M4R/M6R/M8R ModuLyte LED

4", 6", & 8" Round Downlight

Electrical - 4 inch

Light engine	Input Volts	Input Current	Drive Current	Input Power	LED Power	THD Factor	Power Factor
500lm	120V	0.05	0.1	5.8	4.1	<20	>0.9
	277V	0.02	0.1	5.9	4.1	<20	>0.9
	347V	0.02	0.1	6.2	4.1	<20	>0.9
750lm	120V	0.07	0.2	8.2	6.2	<20	>0.9
	277V	0.03	0.2	8.4	6.2	<20	>0.9
	347V	0.03	0.2	8.7	6.2	<20	>0.9
1000lm	120V	0.09	0.2	10.6	8.3	<20	>0.9
	277V	0.04	0.2	10.7	8.3	<20	>0.9
	347V	0.03	0.2	11.6	8.3	<20	>0.9
1500lm	120V	0.13	0.3	15.3	12.5	<20	>0.9
	277V	0.06	0.3	15.4	12.5	<20	>0.9
	347V	0.04	0.3	15.3	12.5	<20	>0.9
2000lm	120V	0.17	0.4	20.3	17.0	<20	>0.9
	277V	0.07	0.4	20.4	17.0	<20	>0.9
	347V	0.06	0.4	20.3	17.0	<20	>0.9
2500lm	120V	0.21	0.5	25.4	21.5	<20	>0.9
	277V	0.09	0.5	25.5	21.5	<20	>0.9
	347V	0.07	0.5	25.2	21.5	<20	>0.9
3000lm	120V	0.24	0.6	28.6	24.2	<20	>0.9
	277V	0.10	0.6	28.7	24.2	<20	>0.9
	347V	0.08	0.6	28.5	24.2	<20	>0.9
3500lm	120V	0.28	0.7	33.6	28.6	<20	>0.9
	277V	0.12	0.7	33.6	28.6	<20	>0.9
	347V	0.10	0.7	33.3	28.6	<20	>0.9
4000lm	120V	0.32	0.8	38.5	32.9	<20	>0.9
	277V	0.14	0.8	38.6	32.9	<20	>0.9
	347V	0.11	0.8	38.1	32.9	<20	>0.9

Electrical - 6 & 8 inch

Light engine	Input Volts	Input Current	Drive Current	Input Power	LED Power	THD Factor	Power Factor
500lm	120V	0.05	0.1	5.9	4.2	<20	>0.9
	277V	0.02	0.1	6.1	4.2	<20	>0.9
	347V	0.02	0.1	6.4	4.2	<20	>0.9
750lm	120V	0.07	0.2	8.3	6.3	<20	>0.9
	277V	0.03	0.2	8.4	6.3	<20	>0.9
	347V	0.03	0.2	8.8	6.3	<20	>0.9
1000lm	120V	0.09	0.2	10.8	8.4	<20	>0.9
	277V	0.04	0.2	10.9	8.4	<20	>0.9
	347V	0.03	0.2	11.8	8.4	<20	>0.9
1500lm	120V	0.13	0.3	15.4	12.6	<20	>0.9
	277V	0.06	0.3	15.5	12.6	<20	>0.9
	347V	0.04	0.3	15.5	12.6	<20	>0.9
2000lm	120V	0.17	0.4	20.4	17.1	<20	>0.9
	277V	0.07	0.4	20.5	17.1	<20	>0.9
	347V	0.06	0.4	20.4	17.1	<20	>0.9
2500lm	120V	0.21	0.5	25.5	21.6	<20	>0.9
	277V	0.09	0.5	25.6	21.6	<20	>0.9
	347V	0.07	0.5	25.3	21.6	<20	>0.9
3000lm	120V	0.24	0.6	29.3	24.8	<20	>0.9
	277V	0.11	0.6	29.4	24.8	<20	>0.9
	347V	0.08	0.6	29.2	24.8	<20	>0.9
3500lm	120V	0.28	0.7	34.1	29.1	<20	>0.9
	277V	0.12	0.7	34.1	29.1	<20	>0.9
	347V	0.10	0.7	33.8	29.1	<20	>0.9
4000lm	120V	0.33	0.8	39.0	33.4	<20	>0.9
	277V	0.14	0.8	39.1	33.4	<20	>0.9
	347V	0.11	0.8	38.6	33.4	<20	>0.9
4500lm	120V	0.37	0.9	44.8	38.7	<20	>0.9
	277V	0.16	0.9	44.8	38.7	<20	>0.9
	347V	0.13	0.9	44.5	38.7	<20	>0.9
5000lm	120V	0.42	1.0	49.8	43.0	<20	>0.9
	277V	0.18	1.0	49.7	43.0	<20	>0.9
	347V	0.14	1.0	49.0	43.0	<20	>0.9

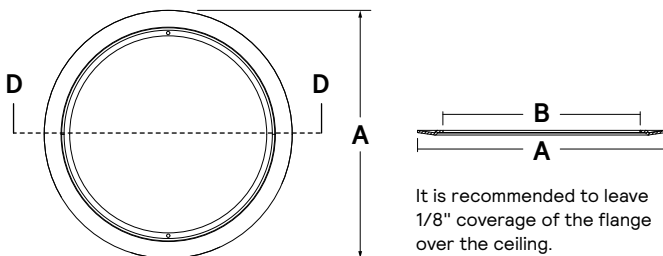
Marked spacing applications

Light engine	4000lm	4500lm	5000lm
M4R	X		
M6R	X	X	X
M8R	X	X	X

Light engines marked with an X require marked spacing:

- Center-to-center of adjacent luminaires: 24" (610mm)
- Top of luminaire to overhead building member: 3" (75mm)
- Luminaire center to side building member: 12" (305mm)

Goof ring

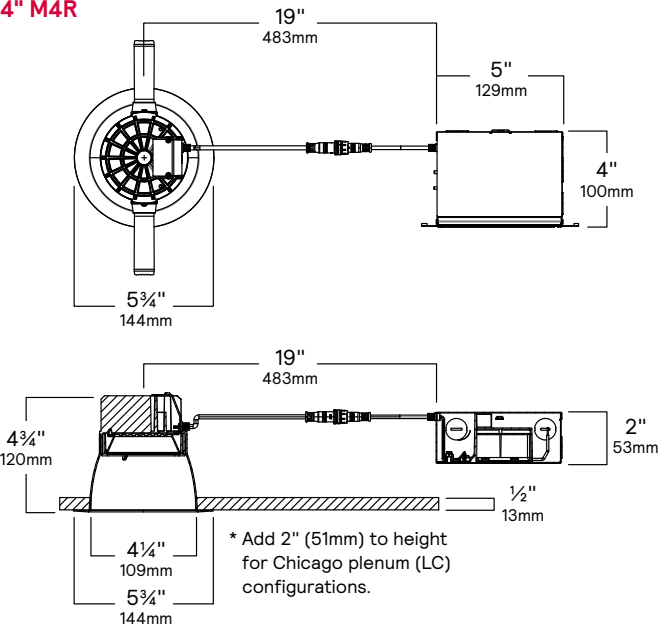


Size	A	B	Ceiling Cutout	
			Min (without goof ring)	Max (with goof ring)
M4GRW	7" (178mm)	5 3/8" (136mm)	4 1/8" (124mm)	5 3/4" (146mm)
M6GRW	8 3/4" (221mm)	6 7/8" (176mm)	6 3/8" (162mm)	7 1/2" (184mm)
M8GRW	10 3/4" (274mm)	9 1/8" (230mm)	8 3/8" (213mm)	9 1/4" (235mm)

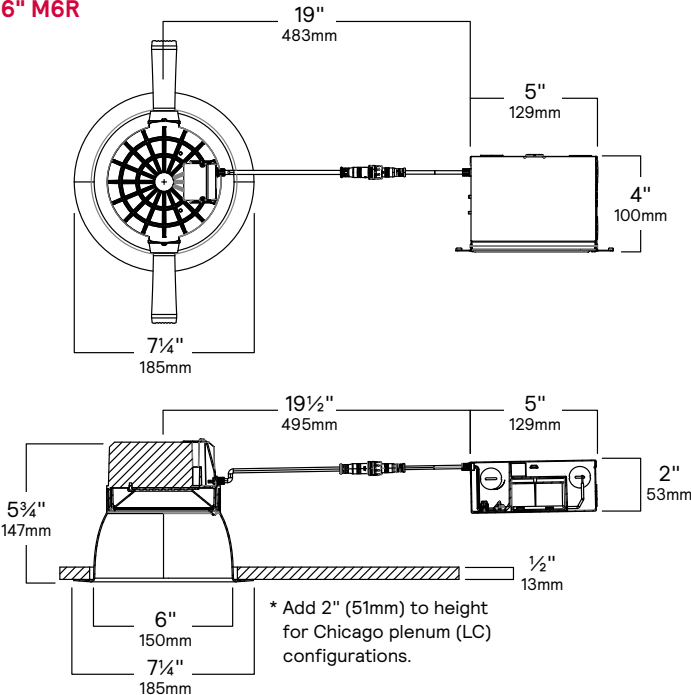
M4R/M6R/M8R ModuLyte LED

4", 6", & 8" Round Downlight

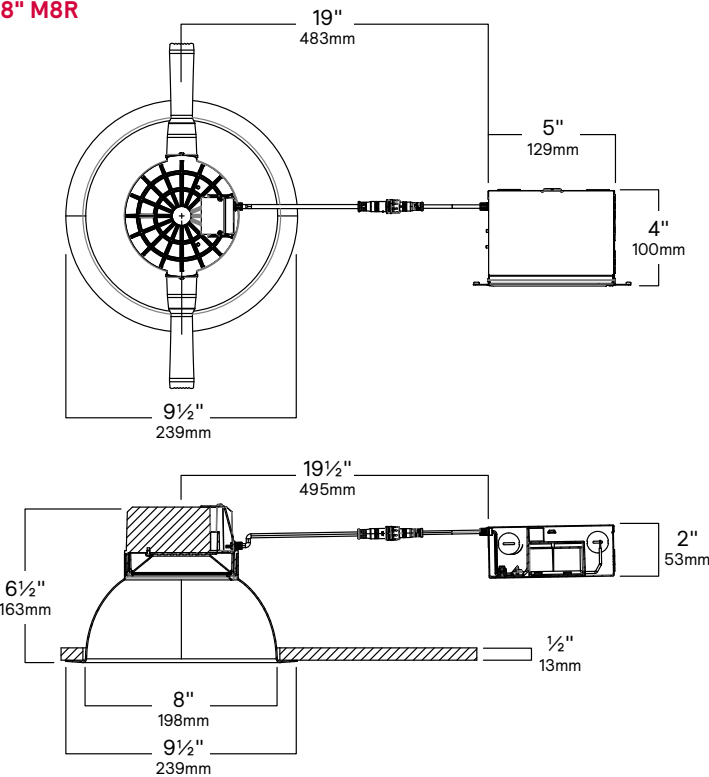
4" M4R



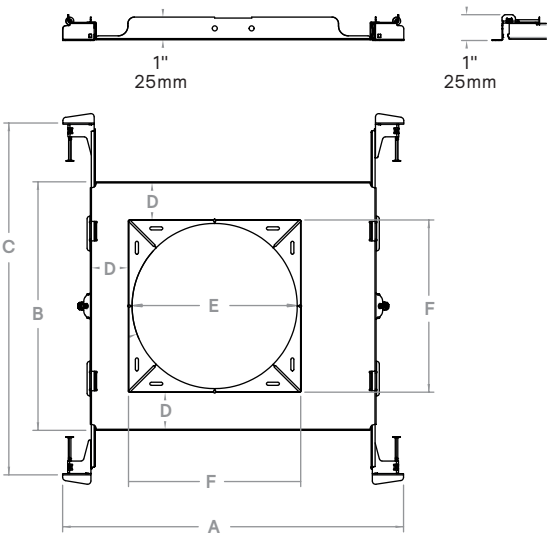
6" M6R



8" M8R



Frame (optional)



Size	A	B	C*	D	E	F
4RNSR	10 7/8" 276mm	7 1/4" 184mm	13 3/8" 345mm	1" 25mm	4 7/8" 124mm	5 1/4" 132mm
6RNSR	13 1/4" 334mm	9 5/8" 244mm	13 3/8" 345mm	1 1/2" 37mm	6 3/8" 162mm	5 5/8" 169mm
8RNR	13 1/4" 334mm	9 5/8" 244mm	13 3/8" 345mm	8" round apertured centered on frame		

* Maximum span is 24"

M4R/M6R/M8R ModuLyte LED

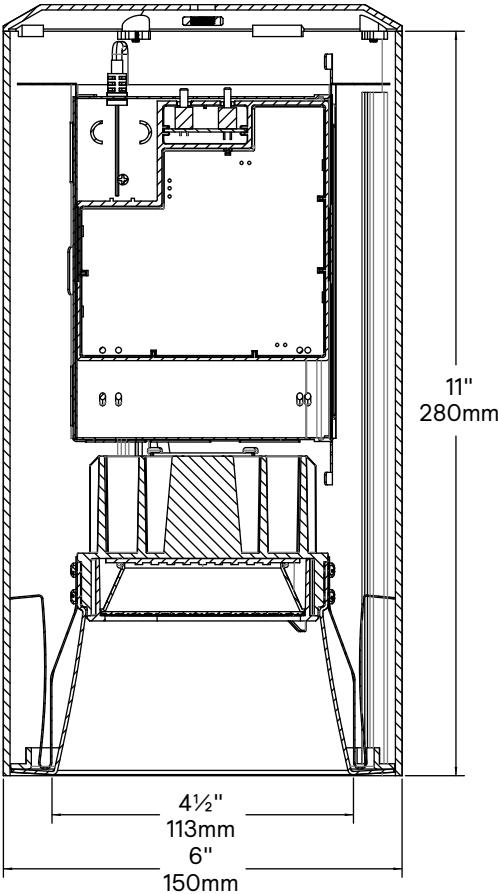
4", 6", & 8" Round Downlight

Cylinder Accessory Dimensions

Shown with recessed light engines installed.
Engines are ordered & installed separately.
Refer to ModuLyte cylinder specification sheet
for details on ordering factory-installed engines.

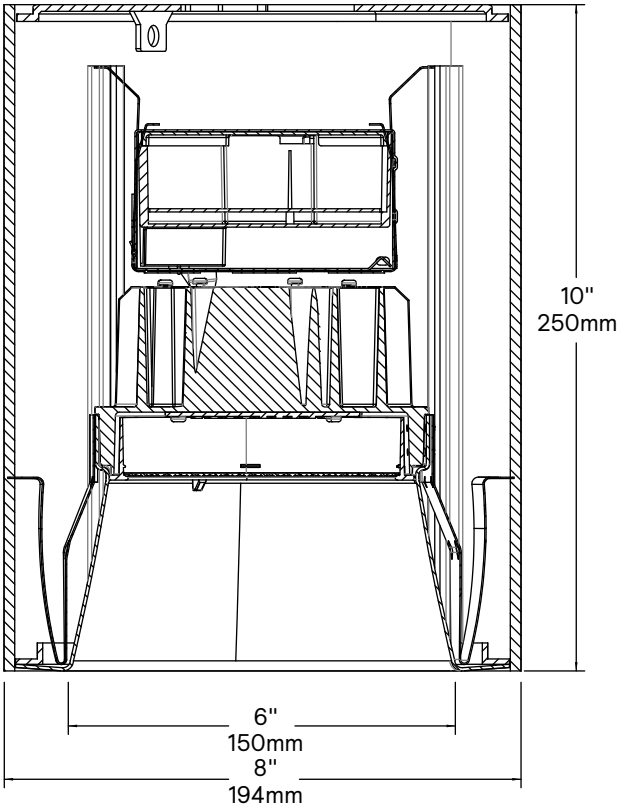
M4CR 4"

- Shown with pendant mount plate

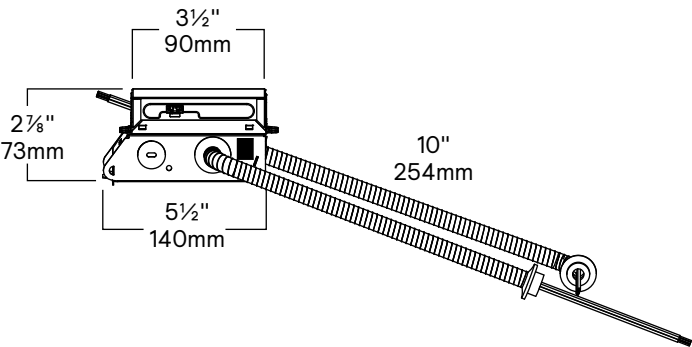


M6CR 6"

- Shown with surface mount plate



MLEM6

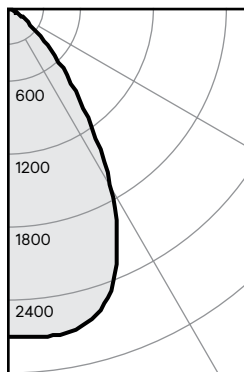


M4R/M6R/M8R ModuLyte LED

4", 6", & 8" Round Downlight

4-inch, Medium beam, 2500lm Engine, 103lm/W at 25W

Candela Curve



M4RDL259CSMCLZ10U

Output lumens: 2625 lms
Input watts: 25.4 W
CRI: 90 min
CCT¹: 5000K
Spacing Crit.: 1.04
Beam Angle: 65°

Zonal summary

Zone	Lumens	%Luminaire
0-30	1562	59.5%
0-40	2162	82.4%
0-60	2601	99.1%
0-90	2625	100.0%

Angle	Mean CP	Lumens
0	2147	
5	2156	
10	2156	206
15	2104	
20	1961	589
25	1693	
30	1336	767
35	958	
40	645	600
45	399	
50	232	315
55	133	
60	69	124
65	18	
70	2	23
75	1	
80	0	1
85	0	
90	0	0

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
8'	86	5.2'
9'	60	6.2'
10'	44	7.3'
12'	34	8.3'
14'	27	9.4'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq. ft.
5'	118.0	1.13
6'	77.0	0.74
7'	55.0	0.53
8'	46.0	0.44
9'	37.0	0.35

38' x 38' x 10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Efficacy: 103.3lm/W
Report²: M4RDL259CSMCL-5000K.ies*

Adjustment factors

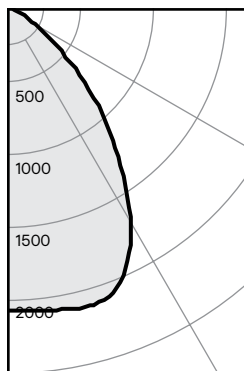
Finish	CCT (90CRI) *	Lumens
CL = 100%	5000K = 100%	4000lm = 160% 2000lm = 80%
CD = 97%	4000K = 99%	3500lm = 142% 1500lm = 60%
WH = 88%	3500K = 98%	3000lm = 120% 1000lm = 40%
BK = 57%	3000K = 97%	2500lm = 100% 750lm = 30%
	2700K = 93%	500lm = 20%

Coefficients of utilization

Ceiling	80%					70%		50%		30%		0%
Wall	70	50	30	10	50	10	50	10	50	10	0	
RCR	Zonal cavity method - Effective floor reflectance = 20%											
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100
	1	113	110	107	105	108	103	104	100	100	97	92
	2	107	101	97	93	100	92	96	90	93	88	84
	3	100	93	88	83	92	83	89	81	87	80	77
	4	95	86	80	75	85	75	83	74	81	73	71
	5	89	80	73	69	79	68	77	68	75	67	65
	6	84	74	68	63	73	63	72	62	70	62	60
	7	79	69	62	58	68	58	67	57	66	57	55
	8	75	65	58	53	64	53	63	53	62	53	51
	9	71	60	54	50	60	50	59	49	58	49	48
10	67	57	50	46	56	46	55	46	55	46	44	

4-inch, Wide beam, 2500lm Engine, 105lm/W at 25W

Candela Curve



M4RDL259CSWCLZ10U

Output lumens: 2665 lms
Input watts: 25.4 W
CRI: 90 min
CCT¹: 5000K
Spacing Crit.: 1.18
Beam Angle: 74°

Zonal summary

Zone	Lumens	%Luminaire
0-30	1323	49.6%
0-40	1984	74.4%
0-60	2631	98.7%
0-90	2665	100.0%

Angle	Mean CP	Lumens
0	1649	
5	1652	
10	1663	158
15	1650	
20	1677	473
25	1649	
30	1519	692
35	1313	
40	1052	661
45	823	
50	577	447
55	371	
60	218	200
65	111	
70	15	32
75	3	
80	1	1
85	0	
90	0	0

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
8'	66	5.9'
9'	46	7.1'
10'	34	8.3'
12'	26	9.4'
14'	20	10.6'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq. ft.
5'	118.0	1.13
6'	77.0	0.74
7'	55.0	0.53
8'	46.0	0.44
9'	37.0	0.35

38' x 38' x 10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Efficacy: 104.9lm/W
Report²: M4RDL259CSWCL-5000K.ies*

Adjustment factors

Finish	CCT (90CRI) *	Lumens
CL = 100%	5000K = 100%	4000lm = 160% 2000lm = 80%
CD = 97%	4000K = 99%	3500lm = 142% 1500lm = 60%
WH = 88%	3500K = 98%	3000lm = 120% 1000lm = 40%
BK = 57%	3000K = 97%	2500lm = 100% 750lm = 30%
	2700K = 93%	500lm = 20%

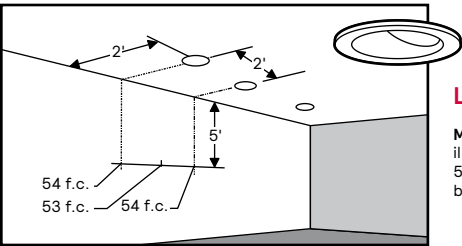
Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%	
Wall	70	50	30	10	50	10	50	10	50	10	0	
RCR	Zonal cavity method - Effective floor reflectance = 20%											
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100
	1	112	109	106	104	107	102	103	99	99	96	91
	2	106	100	95	91	98	90	95	88	92	86	82
	3	99	91	85	81	90	80	87	79	84	77	74
	4	92	83	77	72	82	71	80	70	78	70	67
	5	87	77	70	64	76	64	74	64	72	63	61
	6	81	70	63	58	70	58	68	58	66	57	55
	7	76	65	58	53	64	53	63	53	62	52	50
	8	71	60	53	48	60	48	58	48	57	48	46
	9	67	56	49	44	55	44	54	44	53	44	42
10	64	52	45	41	52	41	51	41	50	41	39	

1. Correlated Color Temperature within specs as defined in ANSI_NEMA_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.
2. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.

M4R/M6R/M8R ModuLyte LED

4", 6", & 8" Round Downlight



Lighting Data - Example

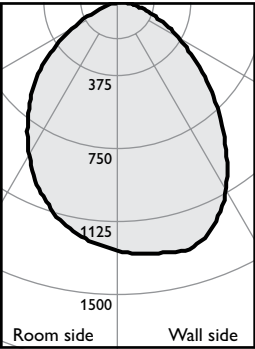
M4RDL259CSWCLZ10U-M4RLW
illumination on the wall
5' down from the ceiling is 54 f.c.
beneath and 53 f.c. between fixtures.

Adjustment factors

Finish	CCT (90CRI) *	Lumens	
CL = 100%	5000K = 100%	4000lm = 160%	2000lm = 80%
CD = 97%	4000K = 99%	3500lm = 142%	1500lm = 60%
WH = 88%	3500K = 98%	3000lm = 120%	1000lm = 40%
BK = 57%	3000K = 97%	2500lm = 100%	750lm = 30%
	2700K = 93%		500lm = 20%

4-inch, Lensed Wall Wash, 2500lm Engine, 102lm/W at 27W

Candela Curve



M4RDL259CSWCLZ10U-M4RLW

Output lumens: 2700 lms
Input watts: 26.5 W
CRI: 90 min
CCT¹: 5000K

Efficacy: 101.9 lm/w
Report²: M4RDL259CSWCL-
M4RLW-5000K.ies

Multiple unit data

Footcandles on wall

	2' from wall		
	2' on ctr.		
1	65	64	65
2	105	104	105
3	96	95	96
4	74	73	74
5	54	53	54
6	39	38	39
7	29	29	29
8	22	22	22
9	17	17	17
10	14	14	14
12	12	12	12
14	10	10	10

Multiple unit data

Footcandles on wall

	3' from wall		
	3' on ctr.		
1	21	20	21
2	41	40	41
3	48	47	48
4	45	46	45
5	38	39	38
6	31	32	31
7	25	26	25
8	20	21	20
9	16	17	16
10	13	14	13
12	11	12	11
14	10	10	10

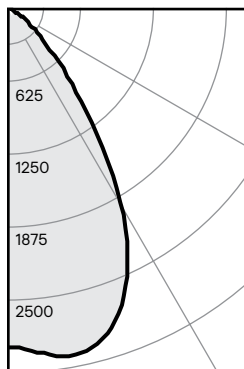
1. Correlated Color Temperature within specs as defined in ANSI_NEMA_ANSI C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.
2. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.

M4R/M6R/M8R ModuLyte LED

4", 6", & 8" Round Downlight

6-inch, Medium beam, 2500lm Engine, 114lm/W at 26W

Candela Curve



M6RDL259CSMCLZ10U

Output lumens: 2902 lms
Input watts: 25.5 W
CRI: 90 min
CCT: 5000K
Spacing Crit.: 1.08
Beam Angle: 65°

Zonal summary

Zone	Lumens	%Luminaire
0-30	1761	60.7%
0-40	2427	83.6%
0-60	2880	99.2%
0-90	2902	100.0%

Angle	Mean CP	Lumens
0	2307	
5	2348	
10	2405	226
15	2365	
20	2211	662
25	1929	
30	1528	873
35	1063	
40	681	666
45	409	
50	239	325
55	140	
60	68	128
65	12	
70	2	20
75	1	
80	0	1
85	0	
90	0	0

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
8'	92	5.4'
9'	64	6.5'
10'	47	7.6'
12'	36	8.6'
14'	28	9.7'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq. ft.
5'	128.0	1.13
6'	84.0	0.74
7'	60.0	0.53
8'	51.0	0.44
9'	40.0	0.35

38' x 38' x 10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Efficacy: 113.8lm/W
Report: M6RDL259CSMCL-5000K.ies*

Adjustment factors

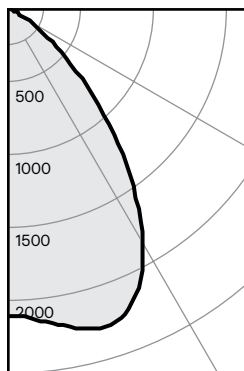
Finish	CCT (90CRI) *	Lumens
CL = 100%	5000K = 100%	5000lm = 200% 2000lm = 80%
CD = 99%	4000K = 99%	4000lm = 180% 1500lm = 60%
WH = 90%	3500K = 98%	3500lm = 160% 1000lm = 40%
BK = 58%	3000K = 97%	3000lm = 120% 750lm = 30%
	2700K = 93%	2500lm = 100% 500lm = 20%

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%										
Room Cavity Ratio	0	119	119	119	119	116	111	111	106	106	100
1	113	110	107	105	108	103	104	100	100	97	92
2	107	101	97	93	100	92	96	90	93	88	85
3	101	94	88	84	92	83	90	82	87	81	78
4	95	87	81	76	85	75	83	75	81	74	71
5	89	80	74	69	79	69	77	68	76	68	65
6	84	75	68	63	74	63	72	63	71	62	60
7	80	70	63	58	69	58	67	58	66	58	56
8	75	65	58	54	64	54	63	54	62	53	52
9	71	61	54	50	60	50	59	50	58	50	48
10	68	57	51	47	57	47	56	46	55	46	45

6-inch, Wide beam, 2500lm Engine, 113lm/W at 26W

Candela Curve



M6RDL259CSWCLZ10U

Output lumens: 2892 lms
Input watts: 25.6 W
CRI: 90 min
CCT: 5000K
Spacing Crit.: 1.28
Beam Angle: 73°

Zonal summary

Zone	Lumens	%Luminaire
0-30	1446	50.0%
0-40	2188	75.7%
0-60	2864	99.0%
0-90	2892	100.0%

Angle	Mean CP	Lumens
0	1679	
5	1707	
10	1763	165
15	1690	
20	1813	512
25	1804	
30	1687	769
35	1476	
40	1192	742
45	903	
50	616	478
55	382	
60	217	198
65	96	
70	12	27
75	2	
80	1	1
85	0	
90	0	0

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
8'	67	6.3'
9'	47	7.6'
10'	34	8.8'
12'	26	10.1'
14'	21	11.3'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq. ft.
5'	128.0	1.13
6'	84.0	0.74
7'	60.0	0.53
8'	51.0	0.44
9'	40.0	0.35

38' x 38' x 10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Efficacy: 113.0lm/W
Report: M6RDL259CSWCL-5000K.ies*

Adjustment factors

Finish	CCT (90CRI) *	Lumens
CL = 100%	5000K = 100%	5000lm = 200% 2000lm = 80%
CD = 99%	4000K = 99%	4000lm = 180% 1500lm = 60%
WH = 90%	3500K = 98%	3500lm = 160% 1000lm = 40%
BK = 58%	3000K = 97%	3000lm = 120% 750lm = 30%
	2700K = 93%	2500lm = 100% 500lm = 20%

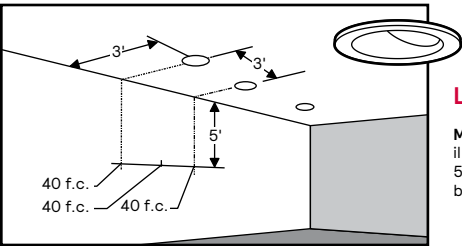
Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%										
Room Cavity Ratio	0	119	119	119	116	116	111	111	106	106	100
1	112	109	106	104	107	102	103	99	99	96	91
2	106	100	95	91	98	90	95	88	92	86	82
3	99	91	85	81	90	80	87	79	84	77	74
4	92	83	77	72	82	71	80	70	78	70	67
5	87	77	70	64	76	64	74	64	72	63	61
6	81	70	63	58	70	58	68	58	66	57	55
7	76	65	58	53	64	53	63	53	62	52	50
8	71	60	53	48	60	48	58	48	57	48	46
9	67	56	49	44	55	44	54	44	53	44	42
10	64	52	45	41	52	41	51	41	50	41	39

1. Correlated Color Temperature within specs as defined in ANSI_NEMA_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.
2. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.

M4R/M6R/M8R ModuLyte LED

4", 6", & 8" Round Downlight



Lighting Data - Example

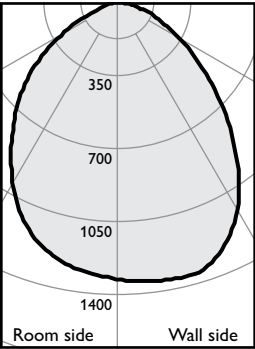
M6RDL259CSWCLZ10U-M6RLW
illumination on the wall
5' down from the ceiling is 40 f.c.
beneath and 40 f.c. between fixtures.

Adjustment factors

Finish	CCT (90CRI) *	Lumens	
CL = 100%	5000K = 100%	5000lm = 200%	2000lm = 80%
CD = 99%	4000K = 99%	4000lm = 180%	1500lm = 60%
WH = 90%	3500K = 98%	3500lm = 160%	1000lm = 40%
BK = 58%	3000K = 97%	3000lm = 120%	750lm = 30%
	2700K = 93%	2500lm = 100%	500lm = 20%

6-inch, Lensed Wall Wash, 2500lm Engine, 102lm/W at 27W

Candela Curve



M6RDL259CSWCLZ10U-M6RLW

Output lumens: 2700 lms
Input watts: 26.5 W
CRI: 90 min
CCT¹: 5000K

Efficacy: 101.9 lm/w
Report²: M6RDL259CSWCL-
M6RLW-5000K.ies

Multiple unit data

Footcandles on wall

	3' from wall		
	3' on ctr.	3' on ctr.	3' on ctr.
Distance from ceiling in feet			
1	20	19	20
2	40	39	40
3	48	48	48
4	47	47	47
5	40	40	40
6	32	33	32
7	26	27	26
8	21	21	21
9	17	17	17
10	14	14	14
12	12	12	12
14	10	10	10

Multiple unit data

Footcandles on wall

	3' from wall		
	3' on ctr.	4' on ctr.	3' on ctr.
Distance from ceiling in feet			
1	17	14	17
2	33	29	33
3	39	37	39
4	38	37	38
5	32	32	32
6	27	27	27
7	22	22	22
8	18	18	18
9	15	15	15
10	12	13	12
12	11	11	11
14	9	9	9

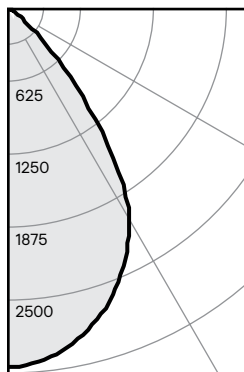
1. Correlated Color Temperature within specs as defined in ANSI_NEMA_ANSI C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.
2. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.

M4R/M6R/M8R ModuLyte LED

4", 6", & 8" Round Downlight

8-inch, Medium beam, 2500lm Engine, 114lm/W at 26W

Candela Curve



M8RDL259CSMCDZ10U

Output lumens: 2916 lms
Input watts: 25.7 W
CRI: 90 min
CCT¹: 5000K
Spacing Crit.: 1.06
Beam Angle: 71°

Zonal summary

Zone	Lumens	%Luminaire
0-30	1718	58.9%
0-40	2488	85.3%
0-60	2899	99.4%
0-90	2916	100.0%

Angle	Mean CP	Lumens
0	2444	
5	2414	
10	2341	228
15	2231	
20	2077	626
25	1886	
30	1651	864
35	1256	
40	791	770
45	423	
50	186	338
55	74	
60	22	73
65	11	
70	6	12
75	4	
80	2	4
85	1	
90	0	1

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
8'	98	5.3'
9'	68	6.4'
10'	50	7.4'
12'	38	8.5'
14'	30	9.5'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq. ft.
5'	131.0	1.14
6'	86.0	0.75
7'	61.0	0.53
8'	51.0	0.44
9'	41.0	0.36

38' x 38' x 10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

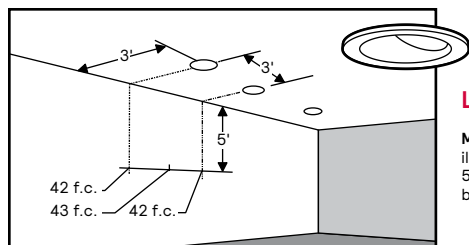
Efficacy: 113.8 lm/W
Report: M8RDL259CSWCD-5000K.ies*

Adjustment factors

Finish	CCT (90CRI)	Lumens
CL = 100%	5000K = 100%	5000lm = 200% 2000lm = 80%
CD = 98%	4000K = 99%	4000lm = 180% 1500lm = 60%
WH = 95%	3500K = 98%	3500lm = 160% 1000lm = 40%
BK = 74%	3000K = 97%	3000lm = 120% 750lm = 30%
	2700K = 93%	2500lm = 100% 500lm = 20%

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%	
Wall	70	50	30	10	50	10	50	10	50	10	0	
RCR	Zonal cavity method - Effective floor reflectance = 20%											
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100
	1	113	110	107	105	108	103	104	100	100	97	93
	2	107	102	97	94	100	92	97	90	94	88	85
	3	101	94	88	84	92	83	90	82	87	81	78
	4	95	87	81	76	86	76	83	75	81	74	71
	5	90	80	74	69	79	69	78	68	76	68	66
	6	84	75	68	64	74	63	72	63	71	62	60
	7	80	70	63	58	69	58	68	58	66	58	56
	8	75	65	58	54	64	54	63	54	62	53	52
	9	71	61	54	50	60	50	59	50	58	50	48
10	68	57	51	47	57	46	56	46	55	46	45	



Lighting Data - Example

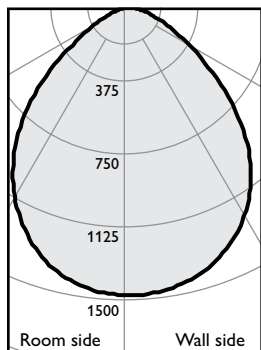
M8RDL259CSWCDZ10U-M4RLW
illumination on the wall
5' down from the ceiling is 40 f.c.
beneath and 40 f.c. between fixtures.

Adjustment factors

Finish	CCT (90CRI)	Lumens
CL = 100%	5000K = 100%	4000lm = 160% 2000lm = 80%
CD = 98%	4000K = 99%	3500lm = 142% 1500lm = 60%
WH = 95%	3500K = 98%	3000lm = 120% 1000lm = 40%
BK = 74%	3000K = 97%	2500lm = 100% 750lm = 30%
	2700K = 93%	2500lm = 100% 500lm = 20%

8-inch, Lensed Wall Wash, 2500lm Engine, 102lm/W at 27W

Candela Curve



M8RDL259CSWCDZ10U-M4RLW

Output lumens: 2700 lms
Input watts: 26.5 W
CRI: 90 min
CCT¹: 5000K

Efficacy: 101.9 lm/w
Report: M8RDL259CSWCL-M4RLW-5000K.ies

Multiple unit data

Footcandles on wall

	3' from wall	3' on ctr.	3' from wall
Distance from ceiling in feet			
1	23	22	23
2	42	41	42
3	51	50	51
4	50	50	50
5	42	43	42
6	35	35	35
7	27	28	27
8	22	23	22
9	18	18	18
10	15	15	15
12	12	12	12
14	10	11	10

Multiple unit data

Footcandles on wall

	3' from wall	4' on ctr.	3' from wall
Distance from ceiling in feet			
1	19	17	19
2	35	31	35
3	41	39	41
4	40	39	40
5	35	35	35
6	29	29	29
7	23	24	23
8	19	19	19
9	15	16	15
10	13	13	13
12	11	11	11
14	10	10	10

1. Correlated Color Temperature within specs as defined in ANSI/NEMA/ANSI C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.
2. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.