



MINI LED DOWNLIGHT

MD1L RECESSED HOUSING AND TRIM LOW VOLTAGE

Project: _____

Fixture Type: _____

Location: _____

Contact/Phone: _____

PRODUCT DESCRIPTION

The Mini LED recessed downlight is IC rated for insulated or non-insulated applications • Sleek, compact form factor provides direct accent lighting with low glare optic system that approximates the light output and distribution of 20W halogen lamps • Ideal for both residential and commercial limited space applications including niches, bookshelves, displays and cabinets • Remote mount Class 2 120V to 12V AC electronic or magnetic driver/transformer required • Designed to provide 50,000 hours of life • 5 year limited warranty on LED components.

ENVIRONMENTALLY FRIENDLY, ENERGY EFFICIENT

- No harmful ultraviolet or infrared wavelengths
- No lead or mercury
- Comparable light output to 20W MR11 halogen lamps while consuming 5W



PRODUCT SPECIFICATIONS

LED Light Engine Lumileds LUXEON® Rebel LEDs provide outstanding reliability, performance and color quality/consistency • 2700K, 3000K, 3500K or 4100K color temperatures available • 85 CRI typical.

Optical System Fixtures are offered with a choice of spot (16°), narrow flood (24°) or flood (35°) beam patterns • LED source concealed with lensed optic is deeply recessed into an internal reflector to produce a low glare system • Reflectors finished to match trim ring color for uniform appearance • Field replacement of optical lenses is NOT recommended.

LED Driver/Transformer Onboard fixture LED driver operates at less than 5 watts input at 12-volts AC • Requires remote mount Class 2, 120V to 12V AC electronic or magnetic driver/transformer for operation • Juno's TL602E electronic driver/transformer is designed specifically for use with these fixtures • Consult factory for Class 2 magnetic transformer options.

Dimming May be dimmed with dimmers tested and qualified by Juno for use with TL602E – see driver/transformer specifications for compatible dimmers • Color temperature remains constant over dimming range • Consult factory for additional information.

Life Rated for 50,000 hours at 70% lumen maintenance.

Labels UL Listed for indoor damp locations and daisy chaining • Union made • UL and cUL listed • RoHS compliant.

Testing All reports are based on published industry procedures; field performance may differ from laboratory performance.

Product specifications subject to change without notice.

HOUSING FEATURES

Housing Designed for use in IC (insulated ceiling) or non-IC construction • Die cast aluminum housing.

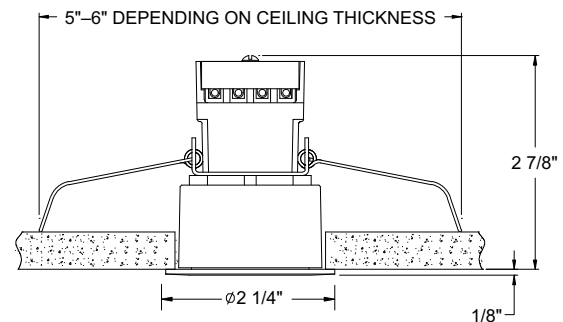
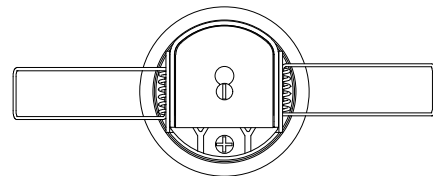
Wiring Compartment Provided with removable access plate • Four pole terminal block allows for quick, secure connection • UL / cUL listed for daisy chaining • Easy to wire with commonly available low voltage cable (Type CL2 or NEC equivalent, 18-12 AWG). Consult local codes for compliant wiring methods.

Mounting Tempered spring steel torsion clips are provided fully assembled to housing • Springs allow for fast, secure installation or removal in mounting surfaces from 1/8" to 1" thick material • 2" Cutout dimension corresponds to common hole saw size.

LUXEON is a registered trademark of the Philips Lumileds Lighting Company



DIMENSIONS



2" CUTOUT

ELECTRICAL DATA

Input Voltage	12VAC
Input Power	4.8W
Input Current - Max	0.42A
Frequency	Varies with Transformer

ORDERING INFORMATION:

Example: MD1L41K-NFL-SN

Fixture

Catalog No.	Color Temp.	Optic	Finish
MD1L	27K 2700K 3K 3000K 35K 3500K 41K 4100K	SP Spot NFL Narrow Flood FL Flood	WH White BL Black SN Satin Nickel BZ Bronze

Electronic Transformer

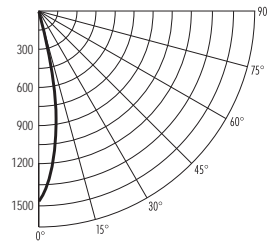
Catalog Number	Finish	Description
TL602E-60-WH	White	60W 12V AC Electronic Driver/Transformer

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PHOTOMETRIC REPORT

Test Report #: PT10102802
 Catalog No: MD1L35K-SP-WH
 Luminaire Spacing Criterion: 0.28
 Luminaire LPW: 38.6



CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	1453
5	1086
15	211
25	52
35	11
45	4
55	0
65	0
75	0
85	0
90	0

Multiplier: 27K - 0.92
 3K - 0.96
 41K - 1.06

AVERAGE INITIAL FOOTCANDLES

Multiple Units (Square Array, 60'x60' room)
 Ceiling 80% Wall 50% Floor 20%

Spacing	RCR1	RCR3	RCR5
4.0'	14	13	12
5.0'	9	8	7
6.0'	6	6	5
7.0'	5	5	4
8.0'	4	4	3
9.0'	3	3	3
10.0'	2	2	2

INITIAL FOOTCANDLES (One Unit, 5W, 15.7° Beam)

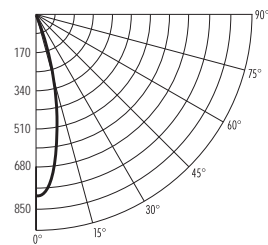
Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
4	90.8	1.1'
6	40.4	1.7'
8	22.7	2.2'
10	14.5	2.8'

LUMINANCE (Average cd/m²)

Degrees	Average 0° Luminance
45	6377
55	0
65	0
75	0
85	0

PHOTOMETRIC REPORT

Test Report #: LTL21544
 Catalog No: MD1L35K-NFL-WH
 Luminaire Spacing Criterion: 0.40
 Luminaire LPW: 38.2



CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	803
5	701
15	277
25	74
35	19
45	5
55	2
65	0
75	0
85	0
90	0

Multiplier: 27K - 0.92
 3K - 0.96
 41K - 1.06

AVERAGE INITIAL FOOTCANDLES

Multiple Units (Square Array, 60'x60' room)
 Ceiling 80% Wall 50% Floor 20%

Spacing	RCR1	RCR3	RCR5
4.0'	13	12	11
5.0'	9	8	7
6.0'	6	5	5
7.0'	5	4	4
8.0'	4	4	3
9.0'	3	3	2
10.0'	2	2	2

INITIAL FOOTCANDLES (One Unit, 5W, 23.6° Beam)

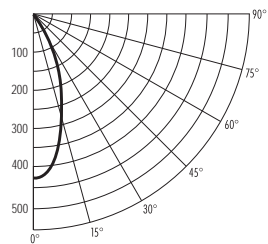
Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
4	50.2	1.7'
6	22.3	2.5'
8	12.5	3.3'
10	8.0	4.2'

LUMINANCE (Average cd/m²)

Degrees	Average 0° Luminance
45	6171
55	3215
65	0
75	0
85	0

PHOTOMETRIC REPORT

Test Report #: PT10102803
 Catalog No: MD1L35K-FL-WH
 Luminaire Spacing Criterion: 0.56
 Luminaire LPW: 37.2



CANDLEPOWER DISTRIBUTION (Candelas)

Degrees Vertical	0°
0	424
5	403
15	240
25	104
35	28
45	9
55	4
65	2
75	0
85	0
90	0

Multiplier: 27K - 0.92
 3K - 0.96
 41K - 1.06

AVERAGE INITIAL FOOTCANDLES

Multiple Units (Square Array, 60'x60' room)
 Ceiling 80% Wall 50% Floor 20%

Spacing	RCR1	RCR3	RCR5
4.0'	13	12	11
5.0'	8	8	7
6.0'	6	5	5
7.0'	5	4	4
8.0'	4	3	3
9.0'	3	3	2
10.0'	2	2	2

INITIAL FOOTCANDLES (One Unit, 5W, 34.9° Beam)

Distance to Illuminated Plane (Feet)	Footcandles Beam Center	Beam Diameter
4	26.5	2.5'
6	11.8	3.8'
8	6.6	5.0'
10	4.2	6.3'

LUMINANCE (Average cd/m²)

Degrees	Average 0° Luminance
45	16739
55	7738
65	7000
75	0
85	0

Fixtures tested to IES recommended standard for solid state lighting per LM-79-08. Photometric performance on a single unit at 12VAC in a 25° C ambient represents a baseline of performance for the fixture. Results may vary in the field and when multiple fixtures are used in a system.

