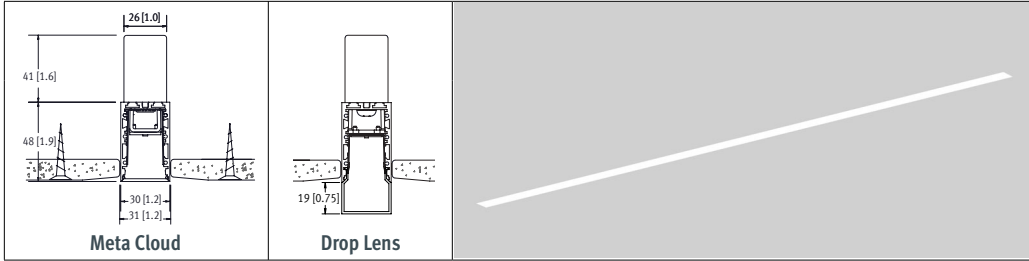


Rail 1 RML (Formerly Caledonia)

LED . Recessed



CAT #:
PREP BY:
DATE:
PROJECT:
TYPE:
NOTES:



ORDERING LOGIC

Example Part Number: RML-1L35K-12-MC-W-L31-DF-1-90

RML			Optics					DF																										
Series	Color Temp	Length / Pattern	Up	Down	Finish	LL/Driver	Circuitry	Mounting	Voltage	Controls	Options																							
Color Temp	Length / Pattern	Optics Up		Light Level (LL) / Driver			Circuitry		Controls																									
1L30K = 3000K	4 = 4 ft	= None (leave space empty)		Performance at 3500K 0-10V Dimming (Standard) All drivers remote mounted			1 = 1 Circuit		= None (leave space empty)																									
1L35K = 3500K	8 = 8 ft	Optics Down		<table border="1"> <thead> <tr> <th>Optics</th> <th>Light Level</th> <th>Lumens Delivered</th> <th>Wattage</th> <th>Efficacy (LPW)</th> </tr> </thead> <tbody> <tr> <td>L1</td> <td>1280</td> <td>13.8</td> <td>92</td> <td></td> </tr> <tr> <td>L2</td> <td>1578</td> <td>17.6</td> <td>89</td> <td></td> </tr> <tr> <td>L3</td> <td>2108</td> <td>24.2</td> <td>87</td> <td></td> </tr> <tr> <td>L4</td> <td>3882</td> <td>48.3</td> <td>80</td> <td></td> </tr> </tbody> </table>	Optics	Light Level	Lumens Delivered	Wattage	Efficacy (LPW)	L1	1280	13.8	92		L2	1578	17.6	89		L3	2108	24.2	87		L4	3882	48.3	80		B = Battery Pack (remote mounted)		Options		
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1L40K = 4000K	12 = 12 ft	MC = Meta Cloud		<table border="1"> <thead> <tr> <th colspan="3">Lumen Adjustment Factor</th> </tr> <tr> <th>Color Temp</th> <th>80 CRI</th> <th>90 CRI</th> </tr> </thead> <tbody> <tr> <td>3000K</td> <td>0.984</td> <td>0.873</td> </tr> <tr> <td>3500K</td> <td>1.000</td> <td>0.875</td> </tr> <tr> <td>4000K</td> <td>1.032</td> <td>0.879</td> </tr> </tbody> </table>	Lumen Adjustment Factor			Color Temp	80 CRI	90 CRI	3000K	0.984	0.873	3500K	1.000	0.875	4000K	1.032	0.879	DF = Recessed Drywall Flangeless		90 = 90 CRI												
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	R = Continuous Rows Consult factory	MD = Drop Lens **		Based on 4ft sections.		Mounting		= None (leave space empty)																										
	G = Square / Rectangle	Finish				Voltage																												
	U = U-Shape	SA = Satin Aluminum				1 = 120 V																												
	L = L-Shape	W = White				2 = 277 V																												
	C = Custom Pattern*	C = Custom Finish Specify RAL#:				3 = 347 V																												
	Enter pattern dimensions on page 2					4 = UNV (120 - 277 V)																												
						For other voltage, consult factory																												

* Consult factory for custom patterns, including X and T patterns. | ** Drop lens is not available with patterns.

SPECIFICATIONS

Due to the Continuous Improvement Policy at Metalumen, we reserve the right to change our specifications without notice.

Housing: Anodized Extruded Aluminum 65% post-industrial recycled content with a 20 Gauge steel die cast onboard hangers, complete with die cast zinc alloy powder coated end caps.

Optical System: Computer modeled, formed painted steel materials are utilized to provide wide, horizontal direct distribution.

CRI: 83 (3500K) (80 minimum)

Lumen Maintenance: At an ambient operating temperature of 35°C the LED lifetime expectancy =< 60 000hrs at L70.

Finish: Satin Aluminum and white are standard options. For custom finish, contact factory.

Weight: 1.0lb/ft or 0.5kg/300mm.

Mounting: Mounting brackets/clips provided.

Drivers: Metalumen offers dimming drivers

as a standard on our entire LED product offering at 0-10V. Dimming is 10%-100% range Power factor is <90% with a Class 2 rating. All drivers remote mounted.

Lutron Driver Options: Consult factory for Lutron driver options:

- L3DAE Hi-lume 1% EcoSystem LED Driver
- L3DA3W Hi-lume 1% 3-wire LED Driver
- L7EA2W Hi-lume 1% 2-wire LED Driver
- LDE1 Hi-lume 1% -H EcoSystem LED Driver

- **LDE5** 5-Series EcoSystem LED Driver
- Approvals:** Certified to NRTL and IES testing standards. All components are UL Recognized or Listed. RoHS compliant.
- Environment:** Suitable for dry or damp indoor locations.

WARRANTY

Metalumen will warrant defective luminaires for 5 years from date of purchase. Warranty is valid if luminaire is installed and used according to specification. If defective, Metalumen will send replacement boards or drivers at no cost along with detailed replacement instructions and instructions on how to return defective components to Metalumen.

APPROVALS

Signature _____

Date _____

FILE NAME: RML_DF_SPEC_SHEET_20180503

570 Southgate Drive, Guelph, Ontario N1G 4P6
Mailing Address: P.O. Box 1779 Guelph, Ontario, N1H 6Z9

1.800.621.6785 | T 519.822.4381 | F 519.822.4589
www.metalumen.com

Metalumen

FEATURES

COMMERCIAL // Commercial Lighting - With over 30 years of successful architectural lighting, providing unique concept and installation solutions has become second nature. Metalumen's Start to End Development Process results in unique performance, design and architectural requirements from concept through implementation. Metalumen's Lighting Solutions have been applied to customer projects requiring: high profile architectural installations; improved energy efficiency; retrofit installations; unique installations. Metalumen can provide top-quality innovative fixtures when and where they are needed and, at the same time, allow the customer to determine their level of involvement in Metalumen's Start to End Development Process.

EDULUMEN // Educational Lighting
 Edulumen is a collection of premium luminaires that maximize both the functionality and performance of any educational facility. Based on maximum efficiency, integration of controls and exceptional design, Edulumen will earn high marks for meeting your requirements. Students challenge themselves throughout the day to achieve, and Metalumen is dedicated to this by creating sustainable environments that foster enhanced educational experiences.

MEDILUMEN // Healthcare Lighting
 Every product in our broad line of healthcare luminaires has been strategically engineered to meet modern

healthcare demands while addressing patient needs and aesthetic requirements.

meta ICE META ICE is a smooth Continuum Optical System with a 91% transmission rate that creates smooth subdued lighting with no source imagery. Meta Ice is a premium lensing optic unique to Metalumen but coupled with a high performance side kicking specular reflector to maximize the lumens from the source creating an unparalleled lumen delivery.


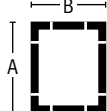
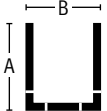

Meta ICE META ICE is a smooth Continuum Optical System with a 91% transmission rate that creates smooth subdued lighting with no source imagery. Meta Ice is a premium lensing optic unique to Metalumen but coupled with a

high performance side kicking specular reflector to maximize the lumens from the source creating an unparalleled lumen delivery.

META LED boards with a raw efficacy of over 120lm/W, proprietary to Metalumen. A slim LED platform for any of your LED linear application.

DAMP Suitable for dry or damp locations.

PATTERNS

Select Pattern	Square (G)	Rectangle (G)	U-Shape (U)	L-Shape (L)
Pattern Configuration				
Indicate Desired Lengths (ft)	A =	A = B =	A = B = C =	A = B =
Minimum Lengths	4' for all sides		A = 3', B = 4', C = 3'	A = 3', B = 3'

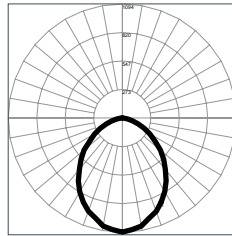
Record drawings will be sent out upon order showing mounting locations.

PHOTOMETRIC DATA - 3500K

Meta Cloud

File Name: RML-1L35K-4-MC-L3
 Luminaire Lumens: 2108
 Total Watts: 24.2
 Efficacy: 87 lms/W

PHOTOMETRIC CURVE



CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angle				
	0	22.5	45	67.5	90
0	1093.56	1093.56	1093.56	1093.56	1093.56
5	1073.75	1072.5	1053.04	1048.58	1073.76
10	1052.87	1051.05	1030.63	1016.15	1012
15	992.33	991.9	985.01	955.83	937.07
20	950.71	929.92	893.99	868.22	870.58
25	886.96	859.88	822.78	782.09	764.22
30	814.97	784.78	740.08	692.76	673.11
35	735.91	700.05	645.9	594.7	583.57
40	640.54	619.64	553.2	506.18	496.77
45	560.26	530.37	469.9	430.17	415.27
50	476.81	444.78	389.8	353.3	335.93
55	381.23	362.17	318.26	283.23	272.11
60	306.71	282.55	247.82	219.4	209.51
65	232.4	214.21	183.6	158.25	148.41
70	163.26	151.24	128.01	108.46	104.24
75	105.13	95.36	77.79	64.86	61.6
80	54.75	49.36	37.19	32.11	29.44
85	20.4	17.14	11.47	8.87	8.77
90	4.44	2.24	1.03	.88	.85

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-20	374.28	17.70
0-30	752.82	35.60
0-40	1159.79	54.90
0-60	1819.67	86.10
0-80	2093.88	99.10
0-90	2112.37	100.00
10-90	2011.67	95.20
20-40	785.52	37.20
20-50	1155.79	54.70
40-70	846.76	40.10
60-80	274.21	13.00
70-80	87.33	4.10
80-90	18.49	0.90
90-110	0.00	0.00
90-120	0.00	0.00
90-130	0.00	0.00
90-150	0.00	0.00
90-180	0.00	0.00
110-180	0.00	0.00
0-180	2112.37	100.00

COEFFICIENTS OF UTILIZATION

Zonal Cavity Method | Effective Floor Cavity Reflectance = .20

RC RW	80			70			50				
	70	50	30	10	70	50	30	10	50	30	10
RCR											
0	119	119	119	119	116	116	116	116	111	111	111
1	110	106	102	99	108	104	100	97	100	97	94
2	101	94	88	83	99	92	87	82	89	84	80
3	93	84	76	71	91	82	75	70	79	74	69
4	86	75	67	61	84	74	66	61	71	65	60
5	80	68	60	54	78	67	59	53	65	58	53
6	74	62	53	47	72	61	53	47	59	52	47
7	69	56	48	42	67	56	48	42	54	47	42
8	65	52	44	38	63	51	44	38	50	43	38
9	60	48	40	35	59	47	40	35	46	39	35
10	57	44	37	32	56	44	37	32	43	36	32

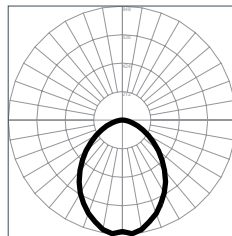
LUMINANCE DATA (CD/M²)

Vertical Angle	Horizontal Angle		
	0	45	90
45	20944	8413	6170
55	17284	5707	3942
65	13923	3400	2161
75	9716	1538	930
85	4415	251	142

Drop Lens

File Name: RML-1L35K-4-MD-L3
 Luminaire Lumens: 2235
 Total Watts: 24.2
 Efficacy: 93 lms/W

PHOTOMETRIC CURVE



CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angle				
	0	22.5	45	67.5	90
0	827.1	827.1	827.1	827.1	827.1
5	848.29	844.47	838.02	837.63	817.63
10	825.7	811.29	810.61	800.87	786.88
15	782.12	776.86	757.59	743.58	729.38
20	738.66	729.83	707.99	692.13	683.53
25	682.12	672.5	647.44	634.04	622.89
30	624.2	616.07	593.83	574.77	564.57
35	560.56	548.21	528.7	523.74	522.08
40	488.87	481.83	473.17	475.33	480.6
45	418.47	418.41	419.74	436.16	436.57
50	352.75	360.14	372.83	386.38	392.56
55	281.42	298.89	328.42	343.55	346.1
60	225.15	246.8	276.47	296.07	304.21
65	169.58	198.36	228.71	249.97	257.48
70	123.09	151.81	189.32	210.77	217.96
75	76.32	111.38	149.04	172.12	174.22
80	45.49	76.52	120.14	137.96	144.32
85	20.28	52.13	93.88	110.61	115.02
90	7.58	39.02	76.89	92.84	100.16

ZONAL LUMEN SUMMARY

Zone	Lumens	%Fixt
0-20	292.69	13.10
0-30	593.26	26.50
0-40	928.92	41.50
0-60	1545.49	69.00
0-80	1917.31	85.60
0-90	2008.69	89.70
10-90	1929.92	86.20
20-40	636.23	28.40
20-50	964.99	43.10
40-70	838.69	37.50
60-80	371.82	16.60
70-80	149.70	6.70
80-90	91.38	4.10
90-110	115.58	5.20
90-120	157.49	7.00
90-130	189.12	8.40
90-150	222.82	10.00
90-180	230.09	10.30
110-180	114.51	5.10
0-180	2238.78	100.00

COEFFICIENTS OF UTILIZATION

Zonal Cavity Method | Effective Floor Cavity Reflectance = .20

RC RW	80			70			50				
	70	50	30	10	70	50	30	10	50	30	10
RCR											
0	117	117	117	117	113	113	113	113	105	105	105
1	106	101	96	92	102	97	93	90	91	88	85
2	96	88	81	75	93	85	79	73	80	75	70
3	88	77	69	63	84	75	67	61	70	64	59
4	81	69	60	53	77	67	59	52	63	56	51
5	74	62	53	46	71	60	52	45	57	49	44
6	69	56	47	41	66	54	46	40	51	44	39
7	64	51	42	36	61	49	41	35	47	40	35
8	59	46	38	32	57	45	37	32	43	36	31
9	56	43	34	29	54	42	34	29	40	33	28
10	52	39	32	26	50	38	31	26	37	30	26

LUMINANCE DATA (CD/M²)

Vertical Angle	Horizontal Angle		
	0	45	90
45	15096	6174	5141
55	12506	4546	3847
65	9742	3220	2819
75	6845	2134	1936
85	4256	1383	1350