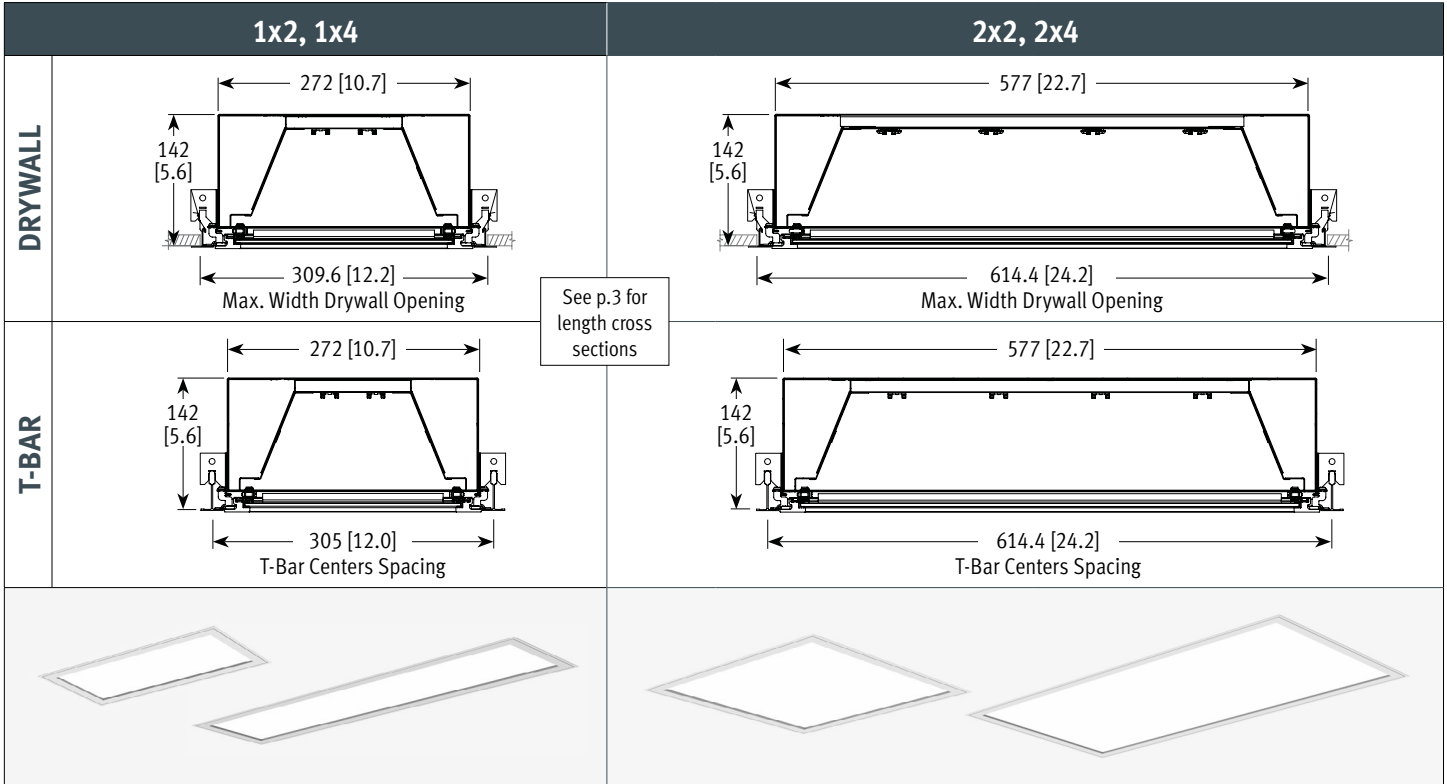


# Secureseal HC04

LED . Recessed



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



## ORDERING LOGIC

HC04			<del>Optics</del>			1					
Series	Color Temp	Size	Up	Down	Finish	LL/Driver	Circuitry	Mounting	Voltage	Controls	Options
<b>Color Temp</b>	<b>Size</b>	<b>Optics Up</b>	<b>Light Level (LL) / Driver</b>			<b>Circuitry</b>	<b>Controls</b>				
<i>1x2 &amp; 1x4 only</i>	<b>12 = 1 x 2'</b>	<b>Optics Down</b>	<b>Fixture Lumens</b> Light level measured at 3500K. Add 3% lumen output for 4000K or subtract 2% lumen output for 3000K.			<b>1 = 1 Circuit</b>	<b>D2 = DALI</b>				
<b>2L30K = 3000K</b>	<b>14 = 1 x 4'</b>	<b>M = Meta Ice</b>	<b>0-10V Dimming (Standard)</b>			<b>D = Recessed Drywall</b>	<b>Options</b>				
<b>2L35K = 3500K</b>	<b>22 = 2 x 2'</b>	<b>Finish</b>	<b>L1</b>	<b>L2</b>	<b>L3</b>	<b>T = Recessed T-Bar</b>	<b>RF = RFI (Radio Frequency Interference) / EMI (Electromagnetic Interference) Filter</b>				
<b>2L40K = 4000K</b>	<b>24 = 2 x 4'</b>	<b>WM = White matte 15% low gloss</b>	<b>L4</b>	<b>3500k</b>		<b>Voltage</b>	<b>AL = Aluminum Body</b>				
<i>2x2 &amp; 2x4 only</i>		<b>AM = Antimicrobial White Finish</b>	<b>=</b>	<b>1X2</b>	<b>1X4</b>	<b>1 = 120V</b>	<b>AR = Aluminum Body with RFI/EMI Filter</b>				
<b>4L30K = 3000K</b>			<b>=</b>	<b>2X2</b>	<b>2X4</b>	<b>2 = 277V</b>	<b>90 = 90 CRI</b>				
<b>4L35K = 3500K</b>			<b>=</b>	<b>Based on 4ft sections</b>		<b>3 = 347V</b>					
<b>4L40K = 4000K</b>			<b>=</b>			<b>4 = UNV (120 - 277V)</b>					

APPROVALS Signature \_\_\_\_\_ Date \_\_\_\_\_

FILE NAME: HC04\_LED\_SPEC\_SHEET

20180316

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



## SPECIFICATIONS

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

**Housing:** The nominal 5" deep recessed housing consists of a welded and sealed, code gauge, prime cold rolled steel body and end plates. The end plates are securely welded and completely sealed and gasketed for air-tight and water-tight construction. Extruded aluminum door frame and flange.

**Optical System:** Optical System MetaLED mid flux LED technology transmits to an

internal high performance-side kicking reflector that then passes through our Meta Ice acrylic diffuser for smooth distribution; this creates a continuum of smooth consistent light.

**CRI:** 84 (4000K) (80 minimum)

**Lumen Maintenance:** At an ambient operating temperature of 35°C the LED lifetime expectancy => 60 000hrs at L86.

**Finish:** White matte 15% low gloss high

reflectance white or antimicrobial white paint are available finishes.

**Mounting:** Fits 9/16" & 15/16" T-Bars, maximum height 1.5". Mounting brackets provided.

**Electrical:** Factory prewired with easy wire quick connect sections.

**Driver:** 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.

**Approvals:** Certified to NRTL and IES testing standards. All components are UL Recognized or tested. IP65 rating applicable to 2x4 size only.


**Environment:**


1x2, 1x4, 2x2 - Suitable for dry locations.  
2x4 - Suitable for dry and wet 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.

## FEATURES

 **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** 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.

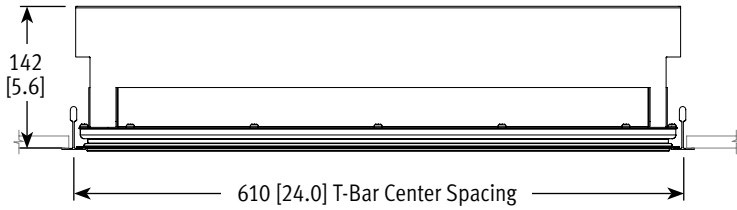
 **M E T A LED** boards with a raw efficacy of over 120lm/W, proprietary to Metalumen. A slim LED platform for any of your LED linear application.

## LUMINAIRE WATTAGE AND OUTPUT SPECIFICATION

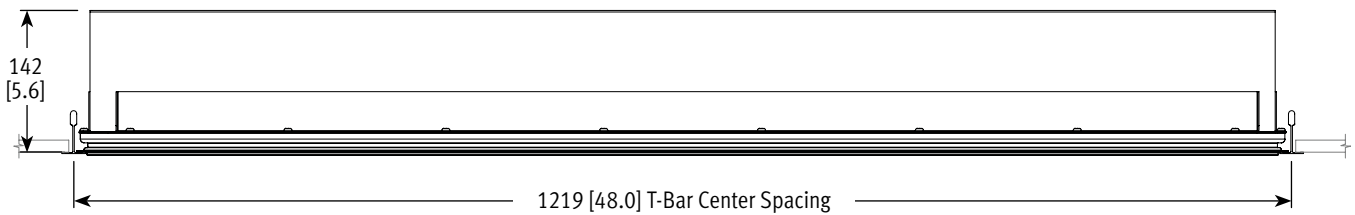
Light Level	1x2			1x4			2x2			2x4		
	Wattage	Lumens Delivered	Efficacy (LPW)	Wattage	Lumens Delivered	Efficacy (LPW)	Wattage	Lumens Delivered	Efficacy (LPW)	Wattage	Lumens Delivered	Efficacy (LPW)
L1 =	14	1429	103	28	3041	110	28	2956	107	55	6223	112
L2 =	18	1823	103	35	3882	110	35	3679	104	71	7746	109
L3 =	24	2394	99	48	5094	105	48	4934	102	97	10386	107
L4 =	48	4560	94	97	9711	101	97	9112	94	195	19184	99

CROSS SECTIONS

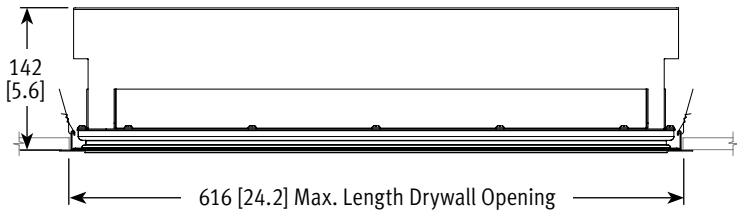
1x2 & 2x2 Recessed T-Bar



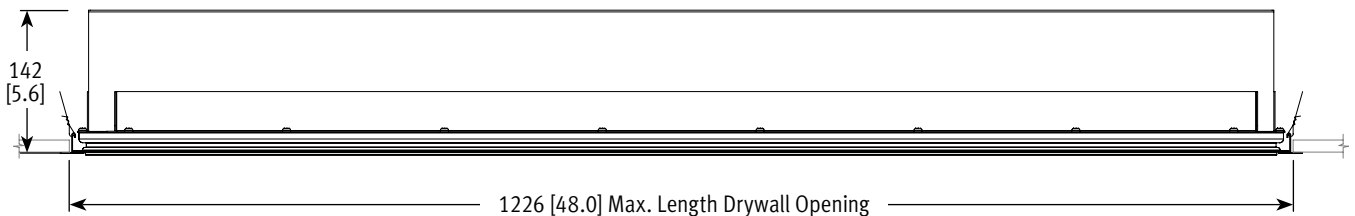
1x4 & 2x4 Recessed T-Bar



1x2 & 2x2 Recessed Drywall



1x4 & 2x4 Recessed Drywall



PHOTOMETRIC DATA - 3500K

L3  
1x2

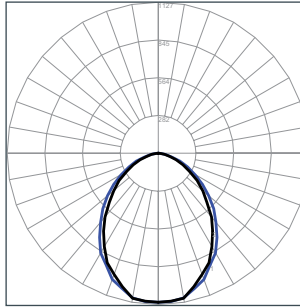
File Name: HC04-2L35K-12-M-L3  
 Luminaire Lumens: 2394  
 Total Watts: 24  
 Efficacy: 99 lms/W  
 Optics Down: Metalce

COEFFICIENTS OF UTILIZATION

Zonal Cavity Method  
 Effective Floor Cavity Reflectance = .20

RC	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	98	107	103	100	97	99	96	94	
2	101	93	87	82	98	91	86	81	88	83	79	
3	93	83	75	69	90	81	74	69	78	73	68	
4	85	74	66	60	83	73	65	59	70	64	59	
5	79	67	58	52	77	66	58	52	64	57	51	
6	73	61	52	46	71	60	52	46	58	51	46	
7	68	55	47	41	66	54	47	41	53	46	41	
8	64	51	43	37	62	50	42	37	49	42	37	
9	60	47	39	34	58	46	39	34	45	38	33	
10	56	43	36	31	55	43	36	31	42	35	30	

PHOTOMETRIC CURVE



CANDLE DISTRIBUTION

Vertical Angle	Horizontal Angle			
	0	30	60	90
0	1110.45	1110.45	1110.45	1110.45
5	1109.7	1109.25	1127.09	1107.45
10	1094.77	1083.41	1078.71	1098.38
15	1044.19	1044.37	1030.29	1028.36
20	1001.62	979.07	979.89	959.06
25	916.92	912.09	902	898.98
30	858.14	834.69	822.81	802.64
35	764.15	751.59	728.07	710.08
40	669.21	661.52	633.17	618.96
45	585.22	570.41	536.21	514.07
50	492.53	480.4	446.26	434.67
55	405.54	391.17	363.13	353.9
60	321.05	306.39	284.01	270.67
65	241.61	232.96	214.4	203.87
70	174.05	163.1	147.37	141.94
75	108.68	102.94	92.62	89.38
80	58.16	55.39	48.88	47.27
85	22.86	20.75	18.89	18.78
90	2.43	2.2	2.5	2.84

LUMINANCE DATA (CD/M<sup>2</sup>)

Vertical Angle	Horizontal Angle		
	0	45	90
45	3696	2873	2715
55	2923	2114	2026
65	2102	1408	1318
75	1239	727	687
85	396	187	185

L3  
1x4

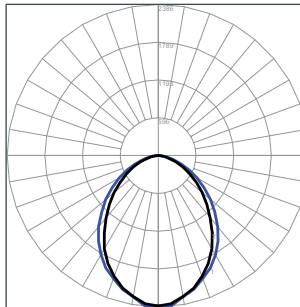
File Name: HC04-2L35K-14-M-L3  
 Luminaire Lumens: 5094  
 Total Watts: 48  
 Efficacy: 105 lms/W  
 Optics Down: Metalce

COEFFICIENTS OF UTILIZATION

Zonal Cavity Method  
 Effective Floor Cavity Reflectance = .20

RC	80				70				50			
	70	50	30	10	70	50	30	10	50	30	10	
RCR												
0	103	103	103	103	93	93	93	93	75	75	75	
1	94	90	86	82	85	81	78	75	65	63	60	
2	85	78	71	66	77	70	65	60	56	52	49	
3	77	68	60	54	69	61	55	50	49	45	41	
4	70	59	52	45	63	54	47	42	43	38	34	
5	64	53	44	38	58	48	41	35	38	33	29	
6	59	47	39	33	53	42	35	30	34	29	25	
7	54	42	34	28	49	38	31	26	31	25	22	
8	50	38	30	25	45	34	28	23	28	23	19	
9	47	34	27	22	42	31	25	20	25	20	17	
10	43	31	24	19	39	28	22	18	23	18	15	

PHOTOMETRIC CURVE



CANDLE DISTRIBUTION

Vertical Angle	Horizontal Angle			
	0	30	60	90
0	2372.69	2372.69	2372.69	2372.69
5	2385.94	2372.31	2362.3	2346.88
10	2266.08	2296.3	2279.94	2258.08
15	2183.3	2184.23	2165.86	2166.11
20	2066.34	2079.88	2055.57	2029.68
25	1954.13	1926.46	1898.38	1878.39
30	1809.8	1790.37	1731.28	1698.4
35	1648.56	1609.43	1533.92	1487.42
40	1467.58	1417.32	1332.22	1281.12
45	1264.33	1220.79	1129.47	1090.05
50	1078.35	1036.43	949.6	910.09
55	891.29	844.71	761.67	733.64
60	709.55	667.65	604.02	572.13
65	540.97	505.28	450.95	430.99
70	381.58	353.58	317.61	299.84
75	243.99	226.52	199.18	187.13
80	132.31	121.07	104.84	101.26
85	50.53	45.96	41.61	40.56
90	5.83	5.35	5.42	5.79

LUMINANCE DATA (CD/M<sup>2</sup>)

Vertical Angle	Horizontal Angle		
	0	45	90
45	4406	3227	2878
55	3666	2415	2100
65	2820	1644	1393
75	1810	886	719
85	687	240	200

PHOTOMETRIC DATA - 3500K

L3  
2x2

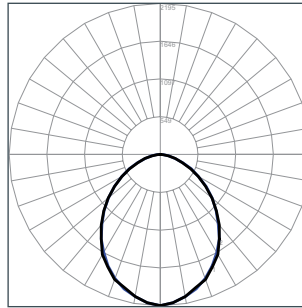
File Name: HC04-2L35K-22-M-L3  
 Luminaire Lumens: 4934  
 Total Watts: 48  
 Efficacy: 102 lms/W  
 Optics Down: Metalce

COEFFICIENTS OF UTILIZATION

Zonal Cavity Method  
 Effective Floor Cavity Reflectance = .20

RC	80				70				50			
	70	50	30	10	70	50	30	10	50	30	10	
RW	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	105	101	98	107	103	100	96	99	96	93
	2	100	93	87	81	98	91	85	80	87	83	78
	3	92	82	75	69	90	81	74	68	78	72	67
	4	85	73	65	59	83	72	64	58	70	63	58
	5	78	66	58	51	76	65	57	51	63	56	50
	6	73	60	51	45	71	59	51	45	57	50	45
	7	67	54	46	40	66	54	46	40	52	45	40
	8	63	50	42	36	61	49	41	36	48	41	36
	9	59	46	38	33	58	45	38	33	44	37	32
	10	55	43	35	30	54	42	35	30	41	34	30

PHOTOMETRIC CURVE CANDLE DISTRIBUTION



Vertical Angle	Horizontal Angle			
	0	30	60	90
0	2194.9	2194.9	2194.9	2194.9
5	2159.26	2171.52	2157.26	2159.8
10	2094.84	2093.08	2111	2096.93
15	2020.17	2010.64	2004.71	2000.07
20	1913.4	1888.75	1907.82	1930.32
25	1789.26	1779.17	1794.57	1802.03
30	1642.84	1651.43	1654.35	1678
35	1497.59	1501.42	1509.44	1495.69
40	1316.07	1324.63	1328.06	1336.52
45	1150.18	1153.83	1150.93	1160.55
50	983.18	975.98	983.59	986.98
55	817.7	814.23	811.49	805.13
60	648.48	647.73	646.45	640.69
65	499.34	488.94	487.46	489.76
70	350.71	352.33	347.03	343.4
75	231.47	226.43	222.79	226.22
80	124.61	120.38	118.73	118.31
85	49.45	48.49	46.37	45.32
90	6.27	5.83	5.14	5.07

LUMINANCE DATA (CD/M<sup>2</sup>)

Vertical Angle	Horizontal Angle		
	0	45	90
45	3593	3336	3618
55	2915	2623	2863
65	2148	1843	2100
75	1306	1060	1270
85	424	311	385

L3  
2x4

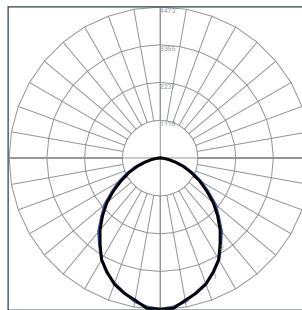
File Name: HC04-2L35K-24-M-L3  
 Luminaire Lumens: 10386  
 Total Watts: 97  
 Efficacy: 107 lms/W  
 Optics Down: Metalce

COEFFICIENTS OF UTILIZATION

Zonal Cavity Method  
 Effective Floor Cavity Reflectance = .20

RC	80				70				50			
	70	50	30	10	70	50	30	10	50	30	10	
RW	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	105	101	98	107	103	99	96	99	96	93
	2	100	93	86	81	98	91	85	80	87	82	78
	3	92	82	74	68	90	81	73	68	78	72	66
	4	85	73	65	59	82	72	64	58	69	63	57
	5	78	66	57	51	76	65	57	51	63	56	50
	6	72	60	51	45	70	59	51	45	57	50	44
	7	67	54	46	40	66	53	45	40	52	45	39
	8	63	50	41	36	61	49	41	36	48	41	35
	9	59	46	38	32	57	45	37	32	44	37	32
	10	55	42	35	29	54	42	34	29	41	34	29

PHOTOMETRIC CURVE



CANDLE DISTRIBUTION

Vertical Angle	Horizontal Angle			
	0	30	60	90
0	4473.17	4473.17	4473.17	4473.17
5	4422.26	4398.05	4457.84	4471.6
10	4310.84	4284.32	4344.24	4265.6
15	4115.91	4204.19	4178.51	4136.85
20	3949.78	3982.8	3970.29	3972.16
25	3741.01	3761.18	3730.37	3713.49
30	3477.48	3481.23	3434.07	3462.01
35	3139.86	3147.27	3117.43	3096.93
40	2826.96	2840.25	2797.76	2764.71
45	2453.08	2478.47	2430.85	2404.49
50	2138.04	2090.04	2070.21	2053.4
55	1740.65	1738.44	1701.29	1687.89
60	1421.79	1399.4	1350.53	1339.17
65	1097.13	1067.67	1029.48	1012.94
70	781.97	763.81	737.61	718.89
75	497.2	490.38	471.31	466.17
80	273.59	261.84	251.59	248.26
85	104.24	100.84	100.35	98.56
90	12.11	12.09	11.13	10.93

LUMINANCE DATA (CD/M<sup>2</sup>)

Vertical Angle	Horizontal Angle		
	0	45	90
45	4228	3785	3748
55	3542	3014	3000
65	2829	2206	2171
75	1825	1315	1308
85	701	411	419