

OBEX Cleanroom

RECESSED AND SURFACE CLEANROOM LUMINAIRE

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

FEATURES

- 2x2, 2x4, and 1x4 recessed fixture for cleanroom applications
- Shallow depth housing (less than 4"), lumen packages up to 25,000 lm+ (2x4)
- Inset and overlap door options, internal symmetric (Lambertian) and asymmetric optics
- Diffuse acrylic lens standard, polycarbonate and tempered glass as options
- Mounting options for grid, drywall (flange) and surface
- Formed steel housing and door with antimicrobial white painted finish, aluminum and stainless as options



SPECIFICATIONS

CONSTRUCTION

- Housing – 20 gauge die form and welded CRS steel, white antimicrobial paint finish. Formed aluminum and 304 stainless steel also available with painted finish.
- Inset and overlap door options are available, 18 gauge formed CRS steel, white antimicrobial paint finish standard. Formed aluminum and 304 stainless steel are also available with painted finish.

OPTICAL PERFORMANCE

- Diffuse lens of acrylic (.118), polycarbonate (.125, .220) or tempered glass (.125)
- Internal optics for even light distribution—symmetric (Lambertian) or asymmetric
- LED light source available in 3000K, 3500K, 4000K, 5000K CCT with 80 CRI and 90 CRI options. Green 530nm also available
- Optimal led life of L70 >72,000 hours, L90 > 45,000 hours

INSTALLATION

- OBEX in available for Grid (Nema G), Drywall (Flange), and Surface Mount
- Grid mount accommodates 1" and 1.5" grid. For 2" grid overlap door option must be used
- Swing gates are standard for drywall applications
- Frame kit available for drywall applications

ELECTRICAL

- Available in universal 120-277V 50/60 Hz and 347V. Not all options available in all voltages
- 1 and 2 circuit configurations are available. When green LED option is selected, 2 circuits are provided
- 0-10V dimming drivers are available for levels down to 1% and "dim to off." DALI and others available, consult factory for your application
- Integral emergency battery packs and generator compatible options are available as options
- Fusing and 10KVA surge suppression as options

CERTIFICATIONS

- UL 1598
- UL 924
- UL Ambient Temp Range: -20°C to 25°C
- CCEA approved (City of Chicago Environmental Air)

CERTIFICATIONS CONTINUED

- FCC Part 15b
- IC Rated
- IK10
- IP66
- ISO 3
- NSF2
- MIL 461G
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction. Materials under Trade Agreements effective 8/14/2020.

WARRANTY

- 5 Year Warranty

KEY DATA	
Lumen Range	6070 – 25,323
Wattage Range	43.8 – 172
Efficacy Range (LPW)	125 – 155
Rated Life (Hours)	L70: > 72,000 L90: > 45,000

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ORDERING GUIDE

Example: OBXS-14-DW-I-ASYM-_-_-DA-1C-835-L080-EDIU-DTS-TR

CATALOG # _____

OBX	C							
Model	Application	Size	Ceiling Type ¹	Doorframe	Distribution	Housing Material ^{2,3}	Doorframe Material ^{2,3}	Lens / Diffuser
OBX OBEX	C Cleanroom	14 1x4 22 2x2 24 2x4	G Grid DW Drywall Ceiling S Surface Mount	I Inset O Overlapping	Blank Standard Lambertian ASYM Asymmetric	Blank Painted Cold Rolled Steel, Anti-Microbial White PA Painted Formed Aluminum, Anti-Microbial White PSS Painted 304 Stainless Steel, Anti-Microbial White	Blank Painted Cold Rolled Steel, Anti-Microbial White PA Painted Formed Aluminum, Anti-Microbial White PSS Painted 304 Stainless Steel, Anti-Microbial White	DA Diffuse Acrylic (118) DP1 Diffuse Polycarbonate (125) DP2 Diffuse Polycarbonate (220) DP3 Diffuse Polycarbonate (356) TG Tempered Glass

Circuiting ^{6,7,8,11}	CRI ⁴	CCT	Optional Color/Circuit ¹¹	Primary White Output	Driver ⁹																				
1C 1 Circuit Only: White OR Color LED 2C 2 Circuit: 2 Circuits White OR 2 Circuits Color LED. 2 Circuit is Standard for White / Color LED	8 CRI >80 9 CRI >90 Blank No White Circuit(s)	30 3000K 35 3500K 40 4000K 50 5000K	Blank None, White Only	<table border="1"> <thead> <tr> <th>2x4</th> <th>2x2</th> </tr> </thead> <tbody> <tr> <td>L080 8,000 lm</td> <td>L060 6,000 lm</td> </tr> <tr> <td>L100 10,000 lm</td> <td>L080 8,000 lm</td> </tr> <tr> <td>L120 12,000 lm</td> <td>L100 10,000 lm</td> </tr> <tr> <td>L140 14,000 lm</td> <td>L120 12,000 lm</td> </tr> <tr> <td>L160 16,000 lm</td> <td>1x4</td> </tr> <tr> <td>L180 18,000 lm</td> <td>L060 6,000 lm</td> </tr> <tr> <td>L200 20,000 lm</td> <td>L080 8,000 lm</td> </tr> <tr> <td>L220 22,000 lm</td> <td>L100 10,000 lm</td> </tr> <tr> <td></td> <td>L120 12,000 lm</td> </tr> </tbody> </table>	2x4	2x2	L080 8,000 lm	L060 6,000 lm	L100 10,000 lm	L080 8,000 lm	L120 12,000 lm	L100 10,000 lm	L140 14,000 lm	L120 12,000 lm	L160 16,000 lm	1x4	L180 18,000 lm	L060 6,000 lm	L200 20,000 lm	L080 8,000 lm	L220 22,000 lm	L100 10,000 lm		L120 12,000 lm	EDD 0-10V Dim to Off ED1 0-10V 1% Dim DALIP DALI Power Bus LUTH Lutron Hi-Lume 1% ECOSystem Driver
2x4	2x2																								
L080 8,000 lm	L060 6,000 lm																								
L100 10,000 lm	L080 8,000 lm																								
L120 12,000 lm	L100 10,000 lm																								
L140 14,000 lm	L120 12,000 lm																								
L160 16,000 lm	1x4																								
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L200 20,000 lm	L080 8,000 lm																								
L220 22,000 lm	L100 10,000 lm																								
	L120 12,000 lm																								

Voltage	Options
U Universal Voltage (120-277V) 347 347V	GLR Fast Blow Fuse SSP10 Surge Suppression — 10kVA ELL14 Emergency Battery Pack Installed, 1400 Lumens ¹⁰ ELL14H2 Emergency Battery Pack Installed, 1400 Lumens, 2-Hour Run Time ¹⁰ ELL14ST Emergency Battery Pack Installed, 1400 Lumens, Self Test ¹⁰ ELL14CP 1400 Lumen Emer, Cold Pack ¹⁰ DTS Automatic Load Control Relay ¹⁰ CP Chicago Plenum C388 6 Ft. Flex Whip, 3 Wire C488 6 Ft. Flex Whip, 4 Wire C588 6 Ft. Flex Whip, 5 Wire TR Tamper Resistant Screws NAT Natatorium, Consult Factory MIL MIL 461G option

Accessories

OBX-FRAME Installation frame for drywall ceilings

Notes:

- Standard fixture not suitable for continuous row mount. For these applications, consult factory
- Internal components constructed of painted cold-rolled steel
- Cold-rolled steel door, housing is 20 gauge, overlap or inset door is 18 gauge.
- 90 CRI results in a reduced light output. Please consult lumen value chart, below, for white light output
- For color LED lumen output, please consult factory
- Two circuit white (only) is available for fixtures of 6000 lumens and above (all sizes, symmetric and asymmetric lens)
- For 2X2 and 2X4, two circuit fixtures are provided as inboard/outboard (color as inboard for white/color configurations). For other configurations, consult factory
- For 1 X 4, two circuit fixtures are provided as board 1 / board 2 configuration. Color LED as board 1 is standard for white/color LED configurations. For fixtures with asymmetric lens board 1 is defined as board closest to operating room table. For other configurations, consult factory
- All circuits within a fixture will be provided with the same driver, driver function. (Ex: if dimming is specified, all circuits will dim to the same level.) For other configurations, consult factory
- Not available for 347V
- Color LED options available Q1 2023, consult factory.

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PERFORMANCE DATA TABLE

The table below shows the delivered lumens for the various lumen outputs. Values shown are total for the pair.

White LED Fixtures 2 x 2		80 CRI			90 CRI		
Model	CCT	Lumens	Input Watts	LPW	Lumens	Input Watts	LPW
OBX22-L020	0.1575 in	2024	14	142	1755	14	123
	3500K	2052	14	143	1779	14	124
	4000K	2111	14	148	1830	14	128
	5000K	2130	14	149	1847	14	129
OBX22-L040	3000K	4048	29	139	3510	29	121
	3500K	4106	29	141	3560	29	122
	4000K	4225	29	145	3663	29	126
	5000K	4282	29	147	3712	29	128
OBX22-L060	3000K	5894	44	135	5110	44	117
	3500K	6070	44	139	5263	44	120
	4000K	6246	44	143	5415	44	124
	5000K	6331	44	145	5489	44	125
OBX22-L080	3000K	8218	56	147	7125	56	127
	3500K	8335	56	149	7226	56	129
	4000K	8577	56	153	7436	56	133
	5000K	8693	56	155	7537	56	135
OBX22-L100	3000K	10164	70	145	8812	70	126
	3500K	10308	70	147	8937	70	128
	4000K	10607	70	152	9196	70	131
	5000K	10751	70	154	9321	70	133
OBX22-L120	3000K	11426	86	133	9906	86	115
	3500K	11586	86	135	10045	86	117
	4000K	11917	86	139	10332	86	120
	5000K	12248	86	142	10619	86	123
OBX22-ASYM-L020	3000K	2089	17	142	1811	17	108
	3500K	2118	17	126	1837	17	109
	4000K	2179	17	130	1889	17	112
	5000K	2230	17	149	1933	17	115
OBX22-ASYM-L040	3000K	4160	32	130	3606	32	113
	3500K	4220	32	141	3659	32	114
	4000K	4342	32	136	3765	32	118
	5000K	4403	32	138	3817	32	119
OBX22-ASYM-L060	3000K	6024	47	128	5223	47	111
	3500K	6110	47	139	5297	47	113
	4000K	6287	47	134	5451	47	116
	5000K	6373	47	136	5525	47	118
OBX22-ASYM-L080	3000K	8405	61	138	7287	61	119
	3500K	8524	61	140	7390	61	121
	4000K	8771	61	144	7605	61	125
	5000K	8891	61	146	7708	61	126
OBX22-ASYM-L100	3000K	10151	79	128	8801	79	111
	3500K	10295	79	130	8926	79	113
	4000K	10594	79	134	9185	79	116
	5000K	10738	79	136	9310	79	118
OBX22-ASYM-L120	3000K	11853	95	125	10277	95	108
	3500K	12019	95	127	10420	95	110
	4000K	12298	95	129	10663	95	112
	5000K	12473	95	131	10814	95	114

White LED Fixtures 1 x 4		80 CRI			90 CRI		
Model	CCT	Lumens	Input Watts	LPW	Lumens	Input Watts	LPW
OBX14-L020	3000K	2031	17	142	1761	17	105
	3500K	2059	17	123	1786	17	106
	4000K	2149	17	128	1864	17	111
	5000K	2180	17	149	1890	17	113
OBX14-L040	3000K	4236	33	128	3672	33	111
	3500K	4296	33	141	3725	33	113
	4000K	4421	33	134	3833	33	116
	5000K	4481	33	136	3885	33	118
OBX14-L060	3000K	6261	47	133	5428	47	115
	3500K	6352	47	139	5507	47	117
	4000K	6535	47	139	5666	47	121
	5000K	6626	47	141	5745	47	122
OBX14-L080	3000K	7985	64	125	6923	64	108
	3500K	8102	64	127	7024	64	110
	4000K	8335	64	130	7226	64	113
	5000K	8452	64	132	7328	64	114
OBX14-L100	3000K	9988	76	131	8660	76	114
	3500K	10134	76	133	8786	76	116
	4000K	10426	76	137	9039	76	119
	5000K	10572	76	139	9166	76	121
OBX14-L120	3000K	11547	92	126	10011	92	109
	3500K	11709	92	127	10151	92	110
	4000K	12034	92	131	10434	92	113
	5000K	12205	92	133	10582	92	115
OBX14-ASYM-L020	3000K	1992	17	142	1727	17	103
	3500K	2020	17	120	1751	17	104
	4000K	2058	17	122	1784	17	106
	5000K	2087	17	149	1809	17	108
OBX14-ASYM-L040	3000K	3995	33	121	3464	33	105
	3500K	4052	33	141	3513	33	106
	4000K	4170	33	126	3615	33	110
	5000K	4226	33	128	3664	33	111
OBX14-ASYM-L060	3000K	6037	48	126	5234	48	109
	3500K	6126	48	139	5311	48	111
	4000K	6302	48	131	5464	48	114
	5000K	6390	48	133	5540	48	115
OBX14-ASYM-L080	3000K	7749	63	123	6719	63	107
	3500K	7863	63	125	6817	63	108
	4000K	8089	63	128	7013	63	111
	5000K	8202	63	130	7111	63	113
OBX14-ASYM-L100	3000K	9622	76	127	8342	76	110
	3500K	9763	76	128	8464	76	111
	4000K	10044	76	132	8708	76	115
	5000K	10185	76	134	8830	76	116
OBX14-ASYM-L120	3000K	12107	100	121	10497	100	105
	3500K	12276	100	123	10644	100	106
	4000K	12788	100	128	11088	100	111
	5000K	12970	100	130	11245	100	112

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PERFORMANCE DATA TABLE CONTINUED

White LED Fixtures 2 x 4		80 CRI			90 CRI		
Model	CCT	Lumens	Input Watts	LPW	Lumens	Input Watts	LPW
OBX24-L020	3000K	2110	16	142	1829	16	118
	3500K	2140	16	138	1855	16	120
	4000K	2203	16	142	1910	16	123
	5000K	2234	16	149	1937	16	124
OBX24-L040	3000K	4262	30	144	3696	30	124
	3500K	4323	30	141	3748	30	126
	4000K	4448	30	150	3857	30	130
	5000K	4509	30	152	3909	30	132
OBX24-L060	3000K	6175	44	140	5354	44	122
	3500K	6263	44	139	5430	44	123
	4000K	6445	44	146	5587	44	127
	5000K	6532	44	148	5664	44	129
OBX24-L080	3000K	8153	57	144	7069	57	125
	3500K	8269	57	146	7169	57	127
	4000K	8509	57	151	7377	57	131
	5000K	8625	57	153	7477	57	132
OBX24-L100	3000K	10091	71	142	8749	71	123
	3500K	10234	71	144	8873	71	125
	4000K	10531	71	148	9130	71	129
	5000K	10674	71	150	9254	71	130
OBX24-L120	3000K	12171	86	142	10552	86	123
	3500K	12344	86	144	10702	86	124
	4000K	12702	86	148	11013	86	128
	5000K	12875	86	150	11162	86	130
OBX24-L140	3000K	13863	97	142	12019	97	123
	3500K	14066	97	144	12195	97	125
	4000K	14471	97	148	12546	97	128
	5000K	14674	97	150	12722	97	130
OBX24-L160	3000K	16534	111.5	148	14335	112	129
	3500K	16776	111.5	150	14545	112	130
	4000K	17259	111.5	155	14964	112	134
	5000K	17501	111.5	157	15173	112	136
OBX24-L180	3000K	18091	126.6	143	15685	127	124
	3500K	18348	126.6	145	15908	127	126
	4000K	18880	126.6	149	16369	127	129
	5000K	19137	126.6	151	16592	127	131
OBX24-L200	3000K	19968	141.1	142	17313	141	123
	3500K	20252	141.1	144	17558	141	124
	4000K	20839	141.1	148	18068	141	128
	5000K	21123	141.1	150	18313	141	130
OBX24-L220	3000K	22272	154.6	144	19309	155	125
	3500K	22597	154.6	146	19592	155	127
	4000K	23248	154.6	150	20156	155	130
	5000K	23573	154.6	152	20438	155	132
OBX24-L240	3000K	24117	169	143	20909	169	124
	3500K	24455	169	145	21202	169	125
	4000K	24968	169	148	21648	169	128
	5000K	25323	169	150	21955	169	130

White LED Fixtures 2 x 4		80 CRI			90 CRI		
Model	CCT	Lumens	Input Watts	LPW	Lumens	Input Watts	LPW
OBX24-ASYM-L020	3000K	2055	16	130	1782	16	113
	3500K	2084	16	132	1807	16	114
	4000K	2128	16	135	1845	16	117
	5000K	2158	16	137	1871	16	118
OBX24-ASYM-L040	3000K	4072	29	140	3531	29	122
	3500K	4130	29	142	3581	29	123
	4000K	4250	29	147	3685	29	127
	5000K	4308	29	149	3735	29	129
OBX24-ASYM-L060	3000K	6201	45	137	5376	45	119
	3500K	6289	45	139	5453	45	121
	4000K	6471	45	143	5611	45	124
	5000K	6559	45	145	5687	45	126
OBX24-ASYM-L080	3000K	8279	57	146	7178	57	127
	3500K	8397	57	148	7280	57	129
	4000K	8641	57	153	7491	57	132
	5000K	8758	57	155	7593	57	134
OBX24-ASYM-L100	3000K	10408	72	145	9024	72	126
	3500K	10556	72	147	9152	72	128
	4000K	10862	72	151	9417	72	131
	5000K	11010	72	154	9546	72	133
OBX24-ASYM-L120	3000K	11932	87	137	10345	87	118
	3500K	12106	87	139	10496	87	120
	4000K	12455	87	143	10798	87	124
	5000K	12629	87	145	10950	87	125
OBX24-ASYM-L140	3000K	13528	97	139	11729	97	121
	3500K	13720	97	141	11895	97	122
	4000K	14118	97	145	12240	97	126
	5000K	14310	97	147	12407	97	128
OBX24-ASYM-L160	3000K	15500	111	139	13438	111	121
	3500K	15720	111	141	13629	111	122
	4000K	16176	111	145	14024	111	126
	5000K	16396	111	147	14215	111	128
OBX24-ASYM-L180	3000K	17160	125	137	14878	125	119
	3500K	17404	125	139	15089	125	121
	4000K	17909	125	143	15527	125	124
	5000K	18152	125	145	15738	125	126
OBX24-ASYM-L200	3000K	19050	140	136	16516	140	118
	3500K	19320	140	138	16750	140	120
	4000K	19880	140	142	17236	140	123
	5000K	20151	140	144	17471	140	125
OBX24-ASYM-L220	3000K	21067	154	137	18265	154	119
	3500K	21366	154	139	18524	154	120
	4000K	21986	154	143	19062	154	124
	5000K	22285	154	145	19321	154	126
OBX24-ASYM-L240	3000K	23073	172	135	20004	172	117
	3500K	23396	172	136	20284	172	118
	4000K	24033	172	140	20836	172	121
	5000K	24374	172	143	21132	172	123

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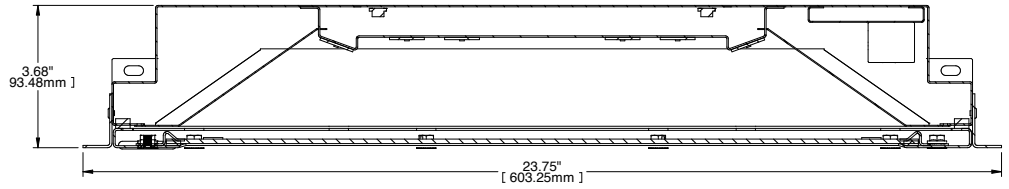
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TYPE: _____ PROJECT: _____

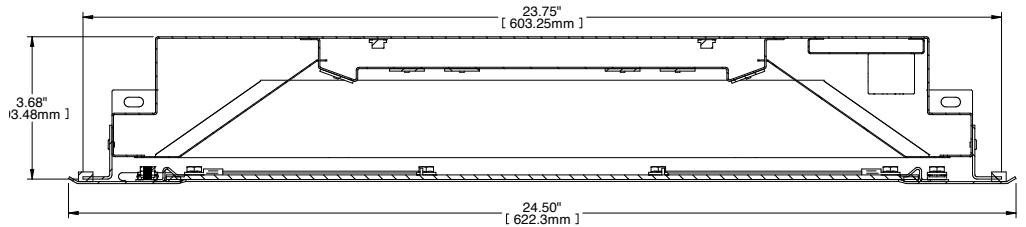
CATALOG #: _____

DIMENSIONS

**2X2/2X4
SYM INSET DOOR
(GRID OPTION SHOWN)**

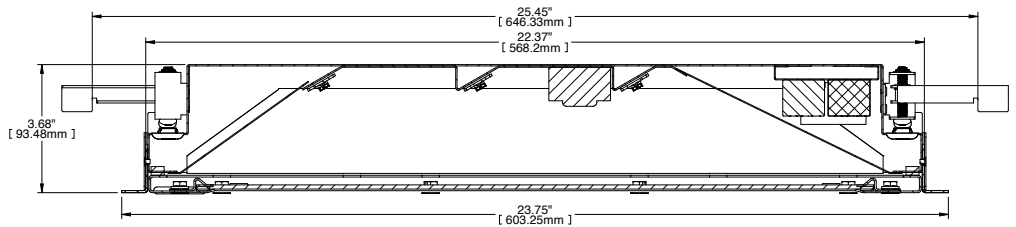


**2X2/2X4
SYM OVERLAP DOOR
(GRIDE OPTION SHOWN)**



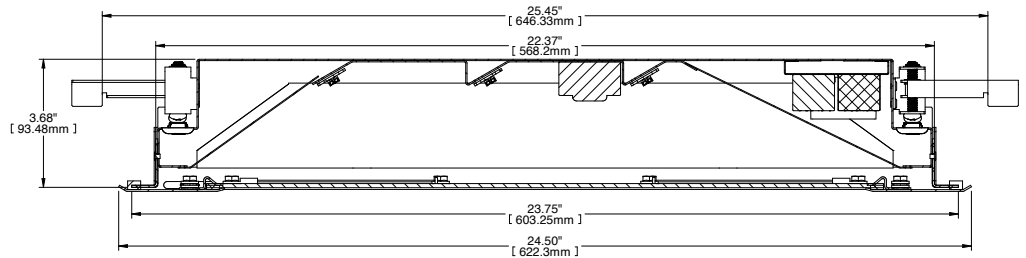
**2X2/2X4
ASYM INSET DOOR
(FLANGE OPTION SHOWN)**

Recommended ceiling cutout:
22.75" x 22.75" (2x2) / 22.75" x 46.75" (2x4)



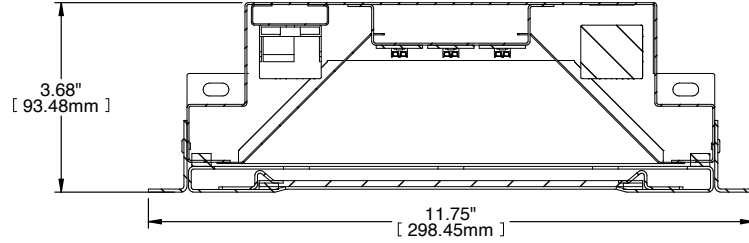
**2X2/2X4
ASYM OVERLAP DOOR
(FLANGE OPTION SHOWN)**

Recommended ceiling cutout:
22.75" x 22.75" (2x2) / 22.75" x 46.75" (2x4)

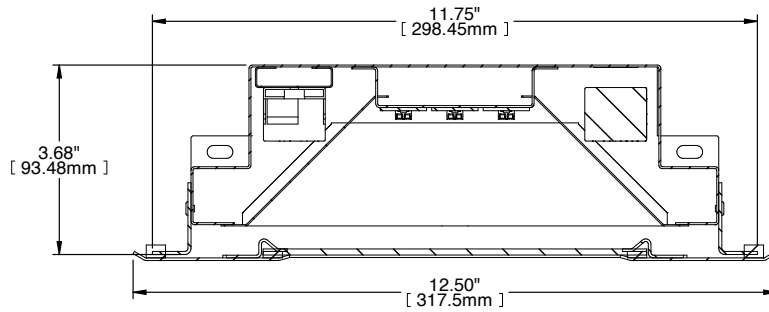


DIMENSIONS CONTINUED

**1X4
SYM INSET DOOR
(GRID OPTION SHOWN)**

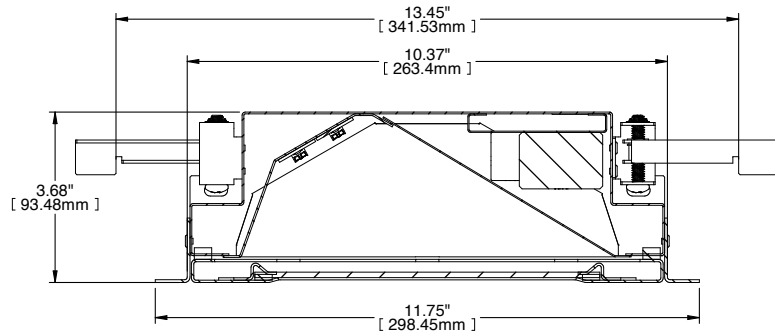


**1X4
SYM OVERLAP DOOR
(GRID OPTION SHOWN)**



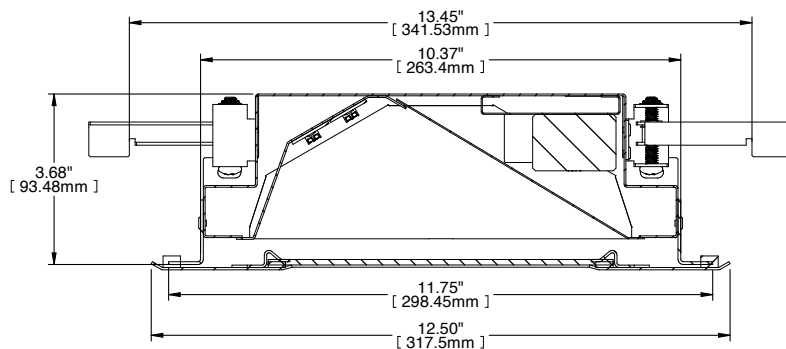
**1X4
ASYM INSET DOOR
(FLANGE OPTION SHOWN)**

Recommended ceiling cutout:
10.75" x 46.75"



**1X4
ASYM OVERLAP DOOR
(FLANGE OPTION SHOWN)**

Recommended ceiling cutout:
10.75" x 46.75"



OBEX Cleanroom

RECESSED AND SURFACE CLEANROOM LUMINAIRE

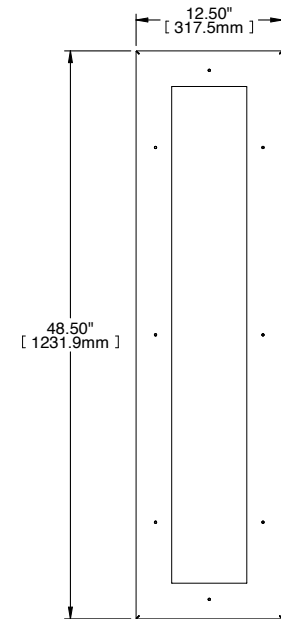
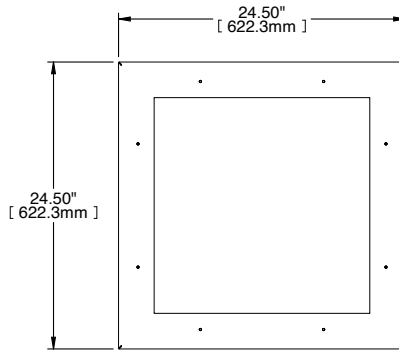
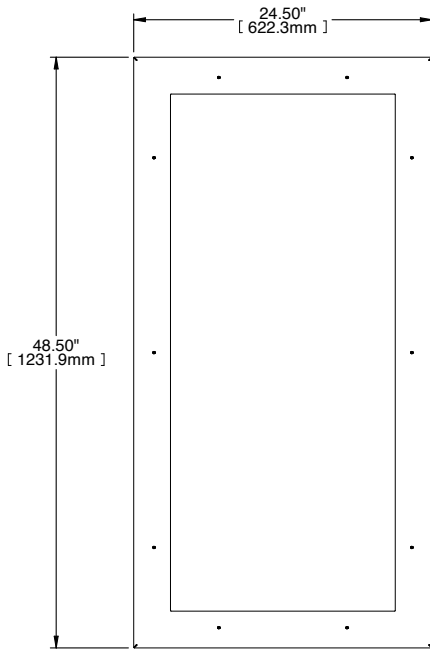
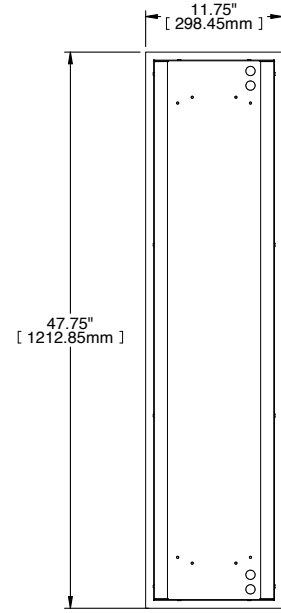
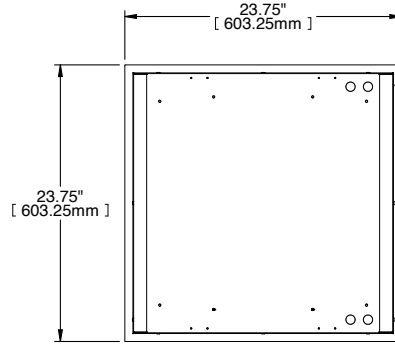
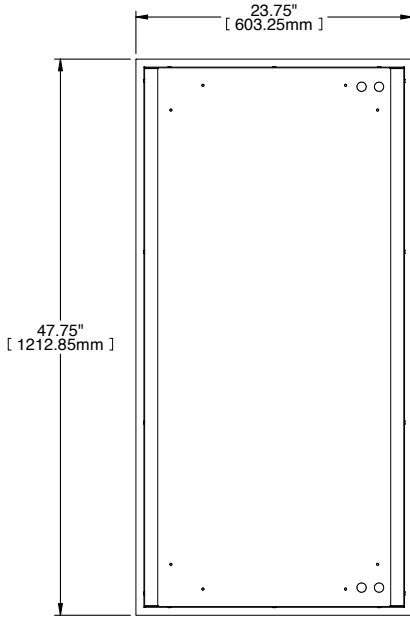
DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

DIMENSIONS CONTINUED

PLAN VIEW - HOUSINGS



OBEX Cleanroom

RECESSED AND SURFACE CLEANROOM LUMINAIRE

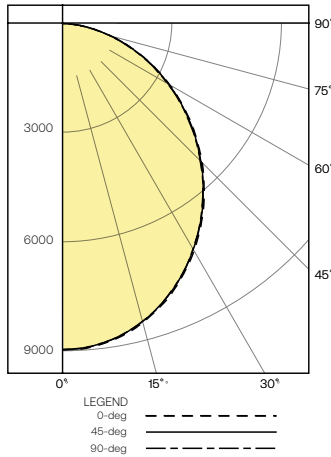
PHOTOMETRY

2 x 4, Symmetric / OBX24-40K8-SYM-L220

LUMINAIRE DATA

Test No.	21.00407
Description	4000K, 80 CRI
Lens	Diffuse Acrylic
Distribution	Lambertian
Delivered Lumens	23,248
Efficacy	150.3 LPW
Mounting	Recessed

POLAR GRAPH



ZONAL LUMEN SUMMARY

Zone	Lumens
0-5	213
5-10	629
10-15	1018
15-20	1363
20-25	1652
25-30	1875
30-35	2025
35-40	2101
40-45	2103
45-50	2035
50-55	1904
55-60	1716
60-65	1477
65-70	1204
70-75	906
75-80	604
80-85	326
85-90	95

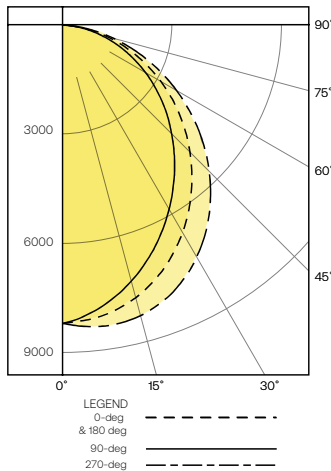
Zone	Lumens	% of Fixture
0-30	6750	29.0
0-40	10877	46.8
0-60	18636	80.2
0-90	23248	100.0
0-180	23248	100.0

2 x 4, Asymmetric / OBX24-35K8-ASYM-L220

LUMINAIRE DATA

Test No.	21.00393
Description	3500K, 80 CRI
Lens	Diffuse Acrylic
Distribution	Asymmetric
Delivered Lumens	21,366
Efficacy	138.9 LPW
Mounting	Recessed

POLAR GRAPH



ZONAL LUMEN SUMMARY

Zone	Lumens
0-5	195
5-10	575
10-15	932
15-20	1249
20-25	1515
25-30	1720
30-35	1859
35-40	1929
40-45	1933
45-50	1875
50-55	1755
55-60	1583
60-65	1363
65-70	1111
70-75	836
75-80	557
80-85	297
85-90	83

Zone	Lumens	% of Fixture
0-30	6185	28.9
0-40	9972	46.7
0-60	17117	80.1
0-90	21366	100.0
0-180	21366	100.0

CCT CONVERSION CHART

	3000K	3500K	4000K	5000K
3000K	1.00	1.014	1.043	1.058
3500K	0.986	1.00	1.029	1.043
4000K	0.958	0.972	1.00	1.014
5000K	0.945	0.959	0.986	1.00