

IES INDOOR REPORT**PHOTOMETRIC FILENAME : ALX16LX-100L35KEX-AL16-FGR.IES****DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002

[TESTLAB] Photopia 2018.1.0 see: www.ltioptics.com/ies

[ISSUEDATE]

[TESTDATE] 7/27/2018

[UPDATE] 8/3/2018

[TEST] SP-00467_20_M-100L

[MANUFAC] Spectrum Lighting

[LUMCAT] ALX16LX-100L-35K-EX-AL16-FGR-xx

[LUMINAIRE] 16" Diam. Alum. Reflector LED Tech Pendant w/ Frosted Glass Ring

[OTHER] 22" outside diam. frosted, soda-lime glass ring, 16" diam. Open Center

[OTHER] Matte white, inside reflector finish

[OTHER] 73 Deg. Beam Angle

[OTHER] 98.5% Downlight, 1.5% Uplight

[LAMP] N/A

[LAMPCAT] N/A

[OTHER] Total Luminaire Watts is approximate

[OTHER] CCT Output Multipliers: 40K x 1.03, 30K x 0.979, 27K x 0.959

[OTHER] Adapted from Intertek LX-AL16 test luminaire ref. CRT1709151315-001-006

[OTHER] This report updated by Spectrum Lighting

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	8221
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	101
Total Luminaire Watts	81.06
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.12
Spacing Criterion (90-270)	1.12
Spacing Criterion (Diagonal)	1.08
Basic Luminous Shape	Circular w/ Sides
Luminous Length (0-180)	1.33 ft (Diameter)
Luminous Width (90-270)	1.33 ft (Diameter)
Luminous Height	0.92 ft

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LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5998	5911	5925
55	4371	4368	4418
65	3014	3029	2994
75	1604	1593	1589
85	393	403	406

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CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>	<u>202.5</u>
0.0	5391.678	5391.678	5391.678	5391.678	5391.678	5391.678	5391.678	5391.678	5391.678	5391.678
2.5	5402.994	5383.006	5391.456	5381.228	5378.969	5381.228	5391.456	5383.006	5402.994	5383.006
5.0	5414.310	5374.334	5391.234	5370.777	5366.259	5370.777	5391.234	5374.334	5414.310	5374.334
7.5	5345.421	5302.841	5328.398	5330.562	5325.861	5330.562	5328.398	5302.841	5345.421	5302.841
10.0	5276.532	5231.347	5265.562	5290.346	5285.462	5290.346	5265.562	5231.347	5276.532	5231.347
12.5	5138.430	5140.689	5133.492	5156.501	5145.256	5156.501	5133.492	5140.689	5138.430	5140.689
15.0	5000.327	5050.030	5001.422	5022.655	5005.050	5022.655	5001.422	5050.030	5000.327	5050.030
17.5	4806.011	4848.386	4824.792	4835.659	4813.956	4835.659	4824.792	4848.386	4806.011	4848.386
20.0	4611.694	4646.742	4648.161	4648.662	4622.862	4648.662	4648.161	4646.742	4611.694	4646.742
22.5	4443.951	4458.722	4457.141	4482.448	4450.859	4482.448	4457.141	4458.722	4443.951	4458.722
25.0	4276.208	4270.702	4266.121	4316.233	4278.855	4316.233	4266.121	4270.702	4276.208	4270.702
27.5	4123.166	4117.744	4126.388	4143.930	4128.802	4143.930	4126.388	4117.744	4123.166	4117.744
30.0	3970.123	3964.786	3986.655	3971.626	3978.749	3971.626	3986.655	3964.786	3970.123	3964.786
32.5	3547.624	3548.545	3562.134	3556.448	3559.572	3556.448	3562.134	3548.545	3547.624	3548.545
35.0	3125.125	3132.304	3137.613	3141.269	3140.394	3141.269	3137.613	3132.304	3125.125	3132.304
37.5	2467.237	2485.883	2490.515	2495.657	2502.642	2495.657	2490.515	2485.883	2467.237	2485.883
40.0	1809.349	1839.462	1843.416	1850.044	1864.889	1850.044	1843.416	1839.462	1809.349	1839.462
42.5	1419.929	1426.536	1429.490	1437.657	1441.413	1437.657	1429.490	1426.536	1419.929	1426.536
45.0	1030.508	1013.609	1015.564	1025.270	1017.936	1025.270	1015.564	1013.609	1030.508	1013.609
47.5	942.694	936.740	935.589	937.156	935.900	937.156	935.589	936.740	942.694	936.740
50.0	854.880	859.871	855.614	849.042	853.864	849.042	855.614	859.871	854.880	859.871
52.5	793.075	794.085	793.231	786.203	796.499	786.203	793.231	794.085	793.075	794.085
55.0	731.270	728.298	730.847	723.364	739.134	723.364	730.847	728.298	731.270	728.298
57.5	662.197	666.041	666.377	659.960	672.493	659.960	666.377	666.041	662.197	666.041
60.0	593.125	603.785	601.907	596.556	605.853	596.556	601.907	603.785	593.125	603.785
62.5	534.282	539.693	539.791	534.748	539.033	534.748	539.791	539.693	534.282	539.693
65.0	475.438	475.600	477.675	472.939	472.212	472.939	477.675	475.600	475.438	475.600
67.5	412.648	412.352	414.741	408.300	411.452	408.300	414.741	412.352	412.648	412.352
70.0	349.858	349.103	351.806	343.660	350.691	343.660	351.806	349.103	349.858	349.103
72.5	289.924	289.402	290.111	285.512	289.229	285.512	290.111	289.402	289.924	289.402
75.0	229.989	229.700	228.415	227.363	227.766	227.363	228.415	229.700	229.989	229.700
77.5	178.339	178.695	177.393	175.752	178.544	175.752	177.393	178.695	178.339	178.695
80.0	126.688	127.690	126.370	124.140	129.321	124.140	126.370	127.690	126.688	127.690
82.5	87.828	88.456	88.298	86.392	89.960	86.392	88.298	88.456	87.828	88.456
85.0	48.968	49.222	50.225	48.644	50.599	48.644	50.225	49.222	48.968	49.222
87.5	26.168	26.288	26.641	25.611	26.962	25.611	26.641	26.288	26.168	26.288
90.0	3.367	3.353	3.057	2.577	3.325	2.577	3.057	3.353	3.367	3.353
92.5	5.157	5.474	4.839	4.892	5.711	4.892	4.839	5.474	5.157	5.474
95.0	6.946	7.595	6.621	7.207	8.097	7.207	6.621	7.595	6.946	7.595
97.5	12.759	13.822	12.851	13.236	13.681	13.236	12.851	13.822	12.759	13.822
100.0	18.572	20.048	19.080	19.264	19.264	19.264	19.080	20.048	18.572	20.048
102.5	22.681	22.896	22.995	22.670	22.854	22.670	22.995	22.896	22.681	22.896
105.0	26.789	25.744	26.909	26.076	26.443	26.076	26.909	25.744	26.789	25.744
107.5	25.130	25.296	26.256	24.989	25.833	24.989	26.256	25.296	25.130	25.296
110.0	23.471	24.848	25.603	23.902	25.222	23.902	25.603	24.848	23.471	24.848
112.5	23.514	24.492	24.011	23.863	24.449	23.863	24.011	24.492	23.514	24.492
115.0	23.556	24.135	22.419	23.824	23.676	23.824	22.419	24.135	23.556	24.135
117.5	22.127	22.144	20.866	22.465	21.784	22.465	20.866	22.144	22.127	22.144
120.0	20.697	20.153	19.313	21.106	19.892	21.106	19.313	20.153	20.697	20.153
122.5	19.843	19.073	18.791	20.298	19.158	20.298	18.791	19.073	19.843	19.073
125.0	18.989	17.993	18.269	19.490	18.424	19.490	18.269	17.993	18.989	17.993
127.5	16.984	17.129	16.766	17.828	18.064	17.828	16.766	17.129	16.984	17.129
130.0	14.979	16.264	15.262	16.165	17.704	16.165	15.262	16.264	14.979	16.264
132.5	16.561	15.992	15.502	16.659	17.027	16.659	15.502	15.992	16.561	15.992

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135.0	18.142	15.720	15.742	17.153	16.349	17.153	15.742	15.720	18.142	15.720
137.5	20.122	18.043	18.636	17.997	18.379	17.997	18.636	18.043	20.122	18.043
140.0	22.102	20.365	21.530	18.840	20.408	18.840	21.530	20.365	22.102	20.365
142.5	21.714	22.377	21.573	21.597	22.490	21.597	21.573	22.377	21.714	22.377
145.0	21.325	24.389	21.615	24.354	24.572	24.354	21.615	24.389	21.325	24.389
147.5	21.512	23.782	21.319	23.179	22.705	23.179	21.319	23.782	21.512	23.782
150.0	21.699	23.175	21.022	22.003	20.838	22.003	21.022	23.175	21.699	23.175
152.5	22.218	23.712	21.216	21.558	20.927	21.558	21.216	23.712	22.218	23.712
155.0	22.737	24.248	21.410	21.113	21.015	21.113	21.410	24.248	22.737	24.248
157.5	21.534	22.494	22.208	20.729	22.332	20.729	22.208	22.494	21.534	22.494
160.0	20.330	20.739	23.005	20.344	23.648	20.344	23.005	20.739	20.330	20.739
162.5	21.837	20.390	22.423	20.584	22.049	20.584	22.423	20.390	21.837	20.390
165.0	23.344	20.041	21.841	20.824	20.450	20.824	21.841	20.041	23.344	20.041
167.5	22.547	17.556	20.256	19.374	19.765	19.374	20.256	17.556	22.547	17.556
170.0	21.749	15.071	18.671	17.923	19.080	17.923	18.671	15.071	21.749	15.071
172.5	17.048	15.001	16.825	16.434	19.190	16.434	16.825	15.001	17.048	15.001
175.0	12.346	14.930	14.979	14.944	19.299	14.944	14.979	14.930	12.346	14.930
177.5	14.701	15.993	16.017	16.000	18.177	16.000	16.017	15.993	14.701	15.993
180.0	17.000	17.000	17.000	17.000	17.000	17.000	17.000	17.000	17.000	17.000

Vert. Angles **Horizontal Angles**

	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0.0	5391.678	5391.678	5391.678	5391.678	5391.678	5391.678	5391.678
2.5	5391.456	5381.228	5378.969	5381.228	5391.456	5383.006	5402.994
5.0	5391.234	5370.777	5366.259	5370.777	5391.234	5374.334	5414.310
7.5	5328.398	5330.562	5325.861	5330.562	5328.398	5302.841	5345.421
10.0	5265.562	5290.346	5285.462	5290.346	5265.562	5231.347	5276.532
12.5	5133.492	5156.501	5145.256	5156.501	5133.492	5140.689	5138.430
15.0	5001.422	5022.655	5005.050	5022.655	5001.422	5050.030	5000.327
17.5	4824.792	4835.659	4813.956	4835.659	4824.792	4848.386	4806.011
20.0	4648.161	4648.662	4622.862	4648.662	4648.161	4646.742	4611.694
22.5	4457.141	4482.448	4450.859	4482.448	4457.141	4458.722	4443.951
25.0	4266.121	4316.233	4278.855	4316.233	4266.121	4270.702	4276.208
27.5	4126.388	4143.930	4128.802	4143.930	4126.388	4117.744	4123.166
30.0	3986.655	3971.626	3978.749	3971.626	3986.655	3964.786	3970.123
32.5	3562.134	3556.448	3559.572	3556.448	3562.134	3548.545	3547.624
35.0	3137.613	3141.269	3140.394	3141.269	3137.613	3132.304	3125.125
37.5	2490.515	2495.657	2502.642	2495.657	2490.515	2485.883	2467.237
40.0	1843.416	1850.044	1864.889	1850.044	1843.416	1839.462	1809.349
42.5	1429.490	1437.657	1441.413	1437.657	1429.490	1426.536	1419.929
45.0	1015.564	1025.270	1017.936	1025.270	1015.564	1013.609	1030.508
47.5	935.589	937.156	935.900	937.156	935.589	936.740	942.694
50.0	855.614	849.042	853.864	849.042	855.614	859.871	854.880
52.5	793.231	786.203	796.499	786.203	793.231	794.085	793.075
55.0	730.847	723.364	739.134	723.364	730.847	728.298	731.270
57.5	666.377	659.960	672.493	659.960	666.377	666.041	662.197
60.0	601.907	596.556	605.853	596.556	601.907	603.785	593.125
62.5	539.791	534.748	539.033	534.748	539.791	539.693	534.282
65.0	477.675	472.939	472.212	472.939	477.675	475.600	475.438
67.5	414.741	408.300	411.452	408.300	414.741	412.352	412.648
70.0	351.806	343.660	350.691	343.660	351.806	349.103	349.858
72.5	290.111	285.512	289.229	285.512	290.111	289.402	289.924
75.0	228.415	227.363	227.766	227.363	228.415	229.700	229.989
77.5	177.393	175.752	178.544	175.752	177.393	178.695	178.339
80.0	126.370	124.140	129.321	124.140	126.370	127.690	126.688

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CANDELA TABULATION - (Cont.)

82.5	88.298	86.392	89.960	86.392	88.298	88.456	87.828
85.0	50.225	48.644	50.599	48.644	50.225	49.222	48.968
87.5	26.641	25.611	26.962	25.611	26.641	26.288	26.168
90.0	3.057	2.577	3.325	2.577	3.057	3.353	3.367
92.5	4.839	4.892	5.711	4.892	4.839	5.474	5.157
95.0	6.621	7.207	8.097	7.207	6.621	7.595	6.946
97.5	12.851	13.236	13.681	13.236	12.851	13.822	12.759
100.0	19.080	19.264	19.264	19.264	19.080	20.048	18.572
102.5	22.995	22.670	22.854	22.670	22.995	22.896	22.681
105.0	26.909	26.076	26.443	26.076	26.909	25.744	26.789
107.5	26.256	24.989	25.833	24.989	26.256	25.296	25.130
110.0	25.603	23.902	25.222	23.902	25.603	24.848	23.471
112.5	24.011	23.863	24.449	23.863	24.011	24.492	23.514
115.0	22.419	23.824	23.676	23.824	22.419	24.135	23.556
117.5	20.866	22.465	21.784	22.465	20.866	22.144	22.127
120.0	19.313	21.106	19.892	21.106	19.313	20.153	20.697
122.5	18.791	20.298	19.158	20.298	18.791	19.073	19.843
125.0	18.269	19.490	18.424	19.490	18.269	17.993	18.989
127.5	16.766	17.828	18.064	17.828	16.766	17.129	16.984
130.0	15.262	16.165	17.704	16.165	15.262	16.264	14.979
132.5	15.502	16.659	17.027	16.659	15.502	15.992	16.561
135.0	15.742	17.153	16.349	17.153	15.742	15.720	18.142
137.5	18.636	17.997	18.379	17.997	18.636	18.043	20.122
140.0	21.530	18.840	20.408	18.840	21.530	20.365	22.102
142.5	21.573	21.597	22.490	21.597	21.573	22.377	21.714
145.0	21.615	24.354	24.572	24.354	21.615	24.389	21.325
147.5	21.319	23.179	22.705	23.179	21.319	23.782	21.512
150.0	21.022	22.003	20.838	22.003	21.022	23.175	21.699
152.5	21.216	21.558	20.927	21.558	21.216	23.712	22.218
155.0	21.410	21.113	21.015	21.113	21.410	24.248	22.737
157.5	22.208	20.729	22.332	20.729	22.208	22.494	21.534
160.0	23.005	20.344	23.648	20.344	23.005	20.739	20.330
162.5	22.423	20.584	22.049	20.584	22.423	20.390	21.837
165.0	21.841	20.824	20.450	20.824	21.841	20.041	23.344
167.5	20.256	19.374	19.765	19.374	20.256	17.556	22.547
170.0	18.671	17.923	19.080	17.923	18.671	15.071	21.749
172.5	16.825	16.434	19.190	16.434	16.825	15.001	17.048
175.0	14.979	14.944	19.299	14.944	14.979	14.930	12.346
177.5	16.017	16.000	18.177	16.000	16.017	15.993	14.701
180.0	17.000	17.000	17.000	17.000	17.000	17.000	17.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1913.8	N.A.	23.30
0-30	3892.77	N.A.	47.40
0-40	5765.27	N.A.	70.10
0-60	7323.23	N.A.	89.10
0-80	8038.67	N.A.	97.80
0-90	8100.86	N.A.	98.50
10-90	7591.49	N.A.	92.30
20-40	3851.46	N.A.	46.90
20-50	4758.02	N.A.	57.90
40-70	2027.66	N.A.	24.70
60-80	715.45	N.A.	8.70
70-80	245.75	N.A.	3.00
80-90	62.18	N.A.	0.80
90-110	35.59	N.A.	0.40
90-120	58.42	N.A.	0.70
90-130	74.93	N.A.	0.90
90-150	102.29	N.A.	1.20
90-180	119.87	N.A.	1.50
110-180	84.28	N.A.	1.00
0-180	8220.72	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	509.36
10-20	1404.44
20-30	1978.97
30-40	1872.49
40-50	906.56
50-60	651.41
60-70	469.70
70-80	245.75
80-90	62.18
90-100	10.04
100-110	25.55
110-120	22.83
120-130	16.51
130-140	13.40
140-150	13.96
150-160	10.15
160-170	5.85
170-180	1.58

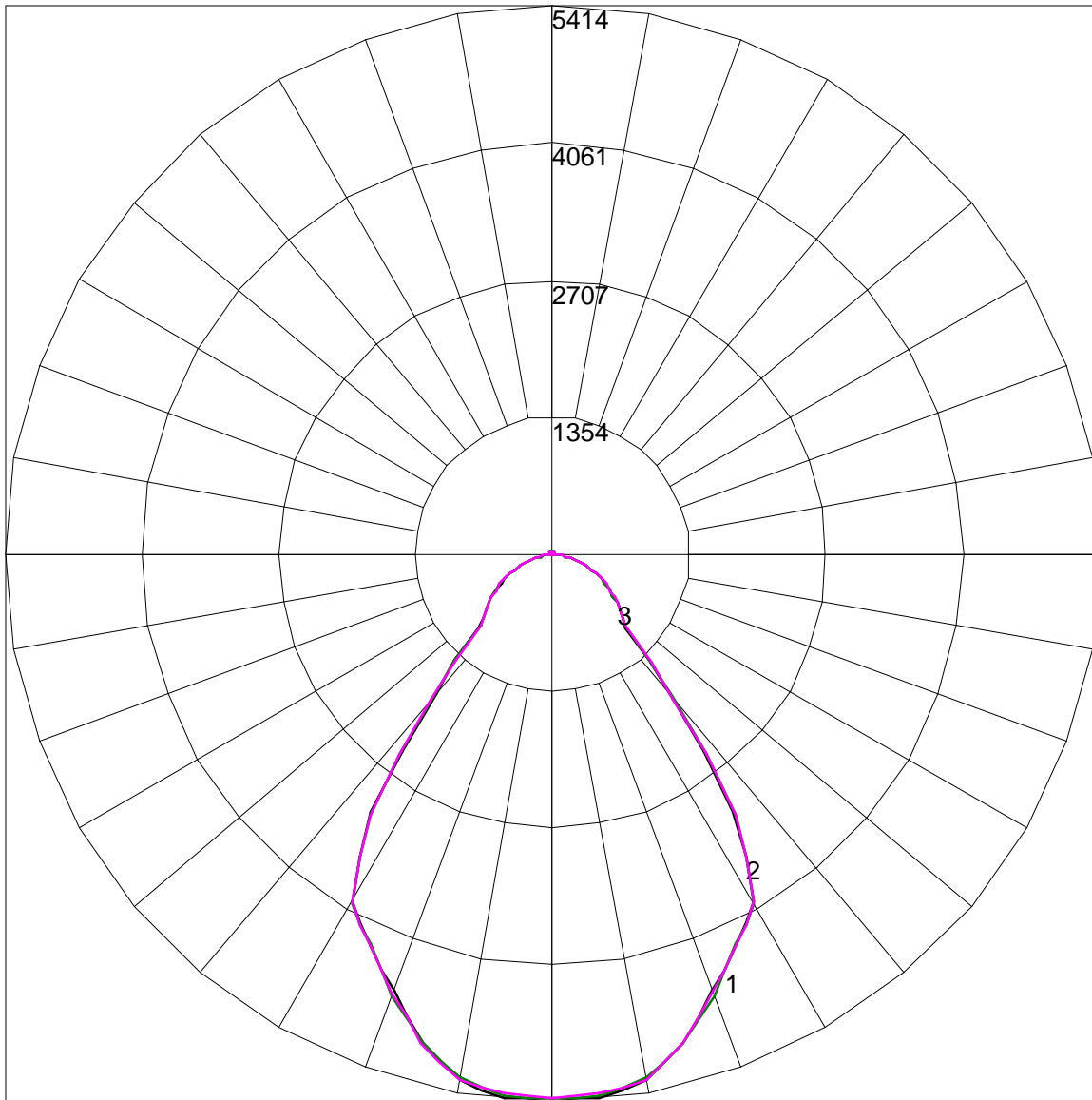
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	110	110	110	105	105	105	101	101	101	99
1	111	107	104	101	108	105	102	99	100	98	96	96	94	93	93	91	90	88
2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	82	80	78
3	96	88	81	76	94	86	80	75	83	78	74	80	76	72	78	74	71	69
4	90	80	73	67	88	79	72	67	76	70	66	74	69	65	72	67	64	62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	66	62	58	56
6	79	67	60	55	77	67	60	54	65	59	54	63	58	53	61	57	53	51
7	74	62	55	50	72	62	55	50	60	54	49	59	53	49	57	52	48	47
8	69	58	51	46	68	57	50	45	56	50	45	55	49	45	53	48	45	43
9	65	54	47	42	64	53	47	42	52	46	42	51	45	41	50	45	41	40
10	62	50	43	39	61	50	43	39	49	43	39	48	42	38	47	42	38	37

POLAR GRAPH



Maximum Candela = 5414.31 Located At Horizontal Angle = 0, Vertical Angle = 5

1 - Vertical Plane Through Horizontal Angles (0 - 180)

2 - Vertical Plane Through Horizontal Angles (45 - 225)

3 - Vertical Plane Through Horizontal Angles (90 - 270)