



Report of Test

LLIA001721-003-R02*

Indoor Distribution Photometry Test Report

Catalog Number: Fusion Light Panel #FLP-24-SCW with Bendheim LED174401 glass
Wall mounted, edge-lit optical panel from top and bottom edges with "3/16" Low Iron Pattern Glass (Pattern # 1 surface) + Diffusing Interlayer + 1/4" Low Iron Clear Float Glass (1 side smooth -1 side textured)". Unknown quantity of white LEDs mounted along top and bottom edges of panel. One Magnitude Lighting CVN96L24DC LED driver.



Prepared For:
Evo-Lite, LLC
6240 W 54th Ave.
Arvada, CO 80002, USA

Performance Summary			
Input Voltage	120.0 Vac	Luminous Flux	1530.4 Lumens
Input Current	0.2520 A	Total Efficacy	51.4 Lm/W
Input Power	29.76 W	Downward Flux	762.9 Lumens
Frequency	60.00 Hz	Downward Flux	49.8 % of Total
Power Factor	0.984		
Current THD	5.3 %		

*This test report supersedes previous versions - see the end of this report for a list of revisions

This test report was issued by LightLab International Allentown, LLC without alterations or erasures.

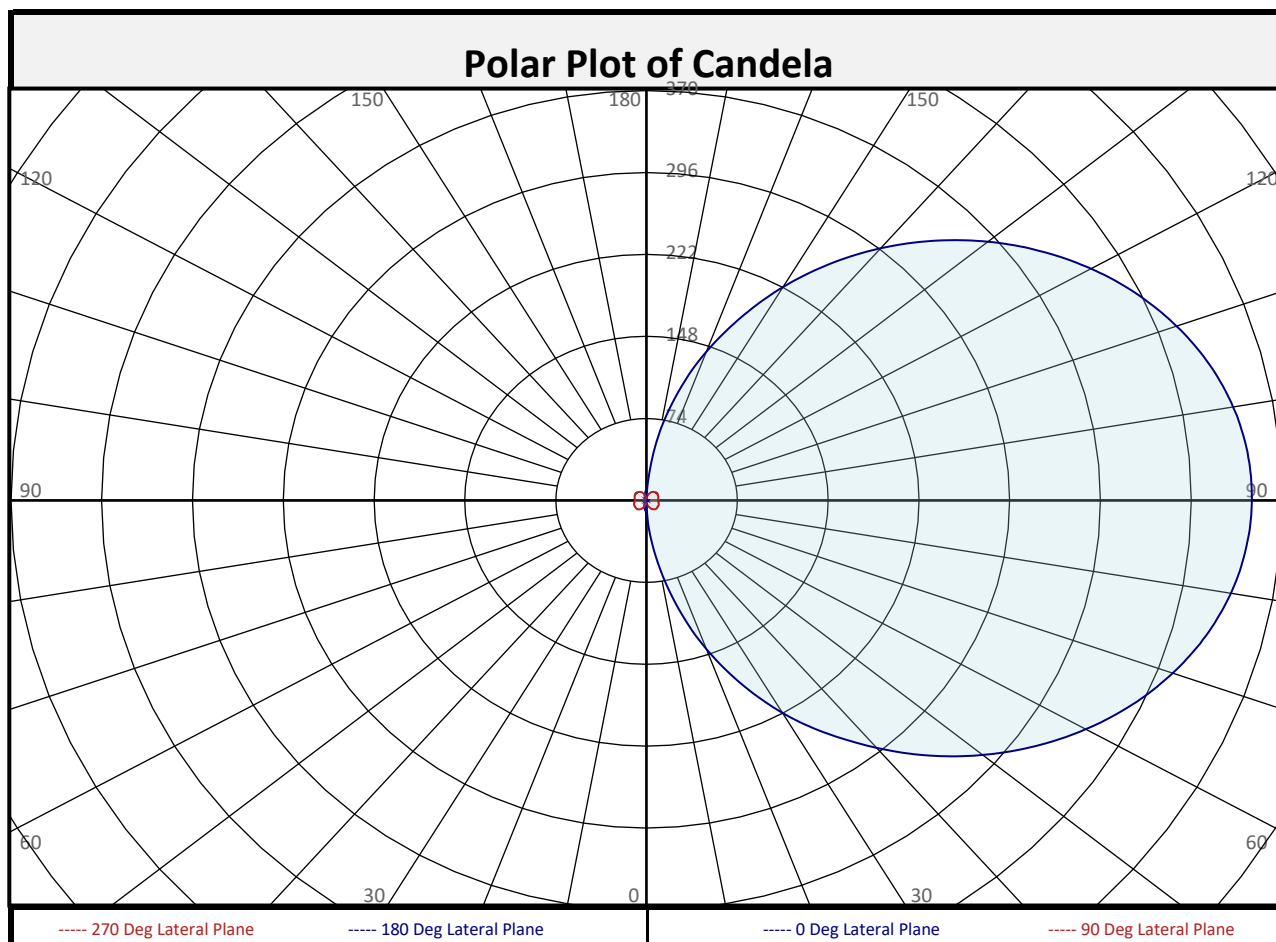
Test date: 05/09/2022
Report date: 05/16/2022

Signed: _____



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Zonal Flux Summary										
Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total		Zone (Deg Vert)	Flux (Lumens)	Percent of Total
0-10	1.6	0.1%		90-100	172.6	11.3%		0-20	12.0	0.8%
10-20	10.4	0.7%		100-110	161.7	10.6%		0-30	40.7	2.7%
20-30	28.6	1.9%		110-120	141.5	9.2%		0-40	94.4	6.2%
30-40	53.7	3.5%		120-130	114.4	7.5%		0-60	290.0	18.9%
40-50	82.7	5.4%		130-140	83.7	5.5%		0-80	590.7	38.6%
50-60	112.9	7.4%		140-150	53.9	3.5%		10-90	761.3	49.7%
60-70	140.0	9.1%		150-160	28.5	1.9%		20-50	165.1	10.8%
70-80	160.7	10.5%		160-170	10.1	0.7%		40-90	668.5	43.7%
80-90	172.2	11.3%		170-180	1.2	0.1%		60-90	472.9	30.9%
0-90	762.9	49.8%		90-180	767.5	50.2%		0-180	1530	100.0%



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Luminous Intensity (Candela) Table

	Lateral (C-Plane) Angles									
	0	22.5	45	67.5	90	112.5	135	157.5	180	
0	2	2	2	2	2	2	2	2	2	
2.5	11	11	12	9	3	8	10	10	10	
5	29	26	20	12	3	10	10	9	9	
7.5	44	40	31	15	3	10	9	9	8	
10	62	56	42	23	4	11	9	8	8	
12.5	81	74	55	30	5	11	8	7	7	
15	102	93	69	36	5	11	7	6	6	
17.5	123	112	83	43	6	11	7	6	7	
20	143	133	98	50	6	11	7	7	6	
22.5	163	151	113	57	7	11	7	6	6	
25	183	170	129	65	8	12	8	5	5	
27.5	202	188	143	72	8	12	8	5	4	
30	222	206	157	80	9	12	7	4	4	
32.5	240	224	171	87	9	12	7	4	3	
35	257	241	185	94	10	12	7	3	3	
37.5	274	257	198	101	10	13	6	3	2	
40	292	272	211	108	10	13	6	2	1	
42.5	309	288	222	115	11	13	6	1	1	
45	326	304	234	121	11	14	5	1	1	
47.5	342	319	244	128	11	14	5	1	1	
50	358	334	255	134	11	15	4	1	1	
52.5	373	348	266	140	11	15	4	0	1	
55	387	361	276	145	11	16	4	0	0	
57.5	401	373	286	150	11	16	4	0	0	
60	413	385	295	154	11	15	4	0	0	
62.5	426	396	303	158	11	15	4	0	0	
65	437	406	311	162	11	15	4	0	0	
67.5	447	416	318	166	11	15	5	0	0	
70	456	424	324	170	11	16	5	0	0	
72.5	465	432	330	173	11	16	5	0	0	
75	472	439	335	175	10	16	5	0	0	
77.5	478	444	339	178	10	16	5	0	0	
80	484	449	343	180	10	16	5	0	0	
82.5	488	453	346	181	10	16	5	0	0	
85	491	457	348	183	10	17	5	0	0	
87.5	493	460	349	183	9	17	5	0	0	
90	493	462	349	184	9	17	5	0	0	



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Luminous Intensity (Candela) Table

	Lateral (C-Plane) Angles									
		0	22.5	45	67.5	90	112.5	135	157.5	180
Vertical (Gamma) Angles - Data was acquired in 0.5° increments, 2.5° increments shown.	90	493	462	349	184	9	17	5	0	0
	92.5	493	461	349	184	9	17	5	0	0
	95	492	459	348	183	10	17	5	0	0
	97.5	489	455	347	182	10	16	5	0	0
	100	485	451	344	181	10	16	5	0	0
	102.5	481	447	341	179	10	16	5	0	0
	105	475	441	337	177	10	16	5	0	0
	107.5	468	435	332	175	10	16	5	0	0
	110	460	428	327	172	10	16	5	0	0
	112.5	451	419	321	169	10	15	5	0	0
	115	441	410	314	165	10	15	5	0	0
	117.5	430	400	307	161	11	15	5	0	0
	120	418	390	299	157	11	16	4	0	0
	122.5	406	378	290	152	11	16	4	0	0
	125	392	366	281	147	11	15	4	0	0
	127.5	378	352	270	141	10	15	4	1	1
	130	363	339	260	135	10	15	4	1	1
	132.5	348	324	248	129	10	14	4	1	1
	135	332	309	237	122	10	13	5	1	1
	137.5	315	293	224	116	10	13	5	1	1
	140	297	277	212	109	10	13	5	1	0
	142.5	279	260	198	102	9	12	5	2	1
	145	261	243	185	96	9	12	6	2	2
	147.5	242	225	171	89	9	12	6	3	2
	150	222	207	157	81	8	11	6	3	3
	152.5	203	188	143	74	8	11	7	4	3
	155	182	169	130	66	8	11	6	4	4
	157.5	162	151	114	58	7	10	6	5	4
	160	143	133	99	49	6	10	6	6	5
	162.5	123	113	84	40	6	9	6	5	5
	165	102	94	68	32	5	8	6	5	5
	167.5	83	76	52	24	4	7	6	6	5
	170	63	56	37	18	3	7	6	7	6
	172.5	42	35	23	11	3	6	6	6	7
	175	21	17	12	6	2	5	5	5	6
	177.5	6	6	5	7	2	2	4	5	6
	180	1	1	1	1	1	1	1	1	1



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Coefficients of Utilization/Room 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
RCR																						
0	107	107	107	107		99	99	99	99		83	83	83		69	69	69		56	56	56	50
1	92	85	79	74		84	78	73	68		64	60	56		52	49	46		40	38	36	30
2	81	71	63	56		74	65	57	51		53	47	42		42	38	34		32	29	26	21
3	73	61	51	44		66	55	47	40		45	38	33		36	30	26		27	23	20	15
4	66	53	43	35		60	48	39	32		39	32	27		31	25	21		23	19	15	11
5	60	46	36	29		54	42	33	27		34	27	22		27	21	17		20	16	12	9
6	55	41	31	24		50	37	29	22		30	23	18		24	18	14		18	14	10	7
7	50	36	27	21		46	33	25	19		27	20	16		21	16	12		16	12	9	6
8	47	33	24	18		42	30	22	16		24	18	13		19	14	10		14	10	7	5
9	43	30	21	16		39	27	19	14		22	16	12		18	13	9		13	9	6	4
10	40	27	19	14		36	25	17	12		20	14	10		16	11	8		12	8	6	3

For absolute test reports, RUs are expressed as a percentage of total lumen output. For relative test reports, CUs are expressed as a percentage of total lamp output. Calculations were based on published IES procedures, and are based on the zonal cavity method. Basic assumptions: 1) Room surfaces are lambertian reflectors. 2) Incident flux on each surface is uniformly distributed. 3) The room is spectrally neutral. When luminaires are not evenly distributed throughout the room, or do not exhibit lateral symmetry, CU values may differ from actual performance.

Average Luminance (cd/m ²)			
	0 deg Plane	45 deg Plane	90 deg Plane
0	281	281	281
45	1228	1209	1007
55	1266	1245	1023
65	1298	1274	1067
75	1322	1296	1106
85	1337	1311	1151



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UGR Table - Corrected

Reflectances

Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	16.4	17.4	17.3	18.4	19.7	2.8	3.8	3.7	4.8	6.1
	3H	20.5	21.5	21.4	22.4	23.7	4.2	5.2	5.2	6.2	7.5
	4H	22.6	23.5	23.6	24.5	25.8	4.8	5.7	5.7	6.7	7.9
	6H	24.9	25.7	25.8	26.7	28.0	5.1	6.0	6.1	7.0	8.3
	8H	26.0	26.9	27.0	27.9	29.2	5.2	6.1	6.2	7.1	8.4
	12H	27.3	28.1	28.2	29.1	30.4	5.3	6.1	6.3	7.1	8.4
4H	2H	16.5	17.4	17.4	18.4	19.7	7.2	8.1	8.1	9.1	10.3
	3H	20.7	21.5	21.7	22.5	23.8	9.0	9.8	9.9	10.8	12.1
	4H	23.0	23.7	23.9	24.7	26.0	9.7	10.4	10.6	11.4	12.8
	6H	25.3	26.0	26.3	27.0	28.3	10.2	10.9	11.2	11.9	13.2
	8H	26.6	27.2	27.6	28.2	29.6	10.4	11.0	11.3	12.0	13.4
	12H	27.9	28.5	28.9	29.5	30.9	10.5	11.1	11.5	12.1	13.4
8H	4H	23.0	23.6	24.0	24.7	26.0	12.4	13.1	13.4	14.1	15.4
	6H	25.5	26.0	26.5	27.1	28.4	13.3	13.9	14.3	14.9	16.2
	8H	26.8	27.3	27.8	28.4	29.7	13.6	14.1	14.6	15.2	16.5
	12H	28.3	28.8	29.3	29.8	31.2	13.9	14.3	14.9	15.4	16.7
12H	4H	23.0	23.6	24.0	24.6	25.9	13.2	13.8	14.2	14.8	16.2
	6H	25.5	26.0	26.5	27.0	28.4	14.4	14.9	15.4	15.9	17.3
	8H	26.9	27.3	27.9	28.4	29.7	14.9	15.3	15.9	16.3	17.7

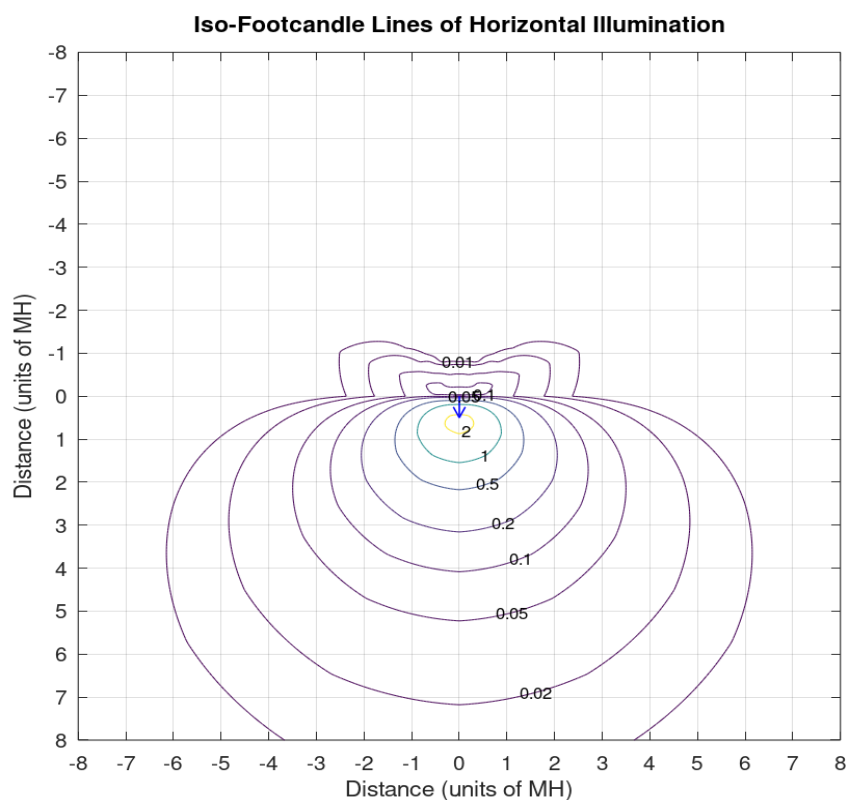
Maximum UGR = 31.2



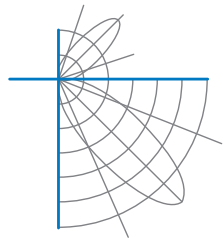
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Iso-Illuminance Plot



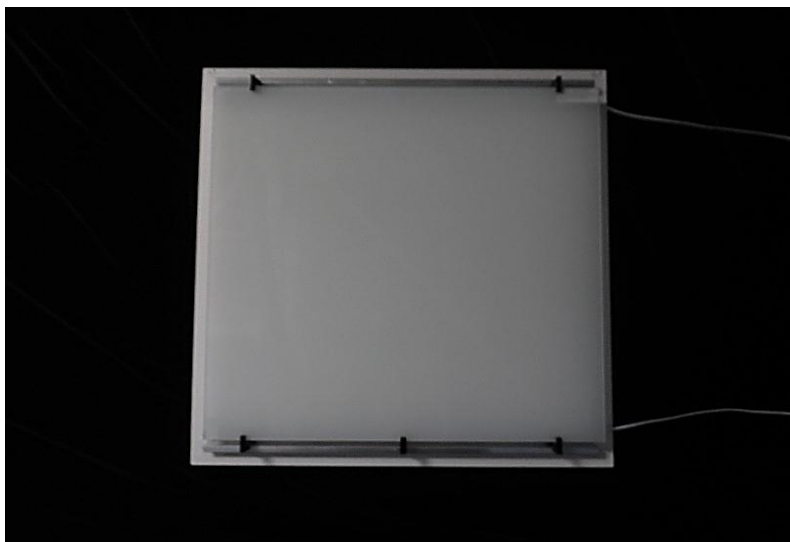
The isofootcandle values shown in the plot above are based on a mounting height of $h = 8.0$ feet. Grid values show multiples of mounting height. The isoilluminance contour lines are expressed in units of footcandles. The values expressed are based on the direct light from a single unit without the contribution of room reflections.



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Additional Pictures of Test Subject



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Test Distance 9.5 m
Ambient Temperature 24.8 °C

Notes

The laboratory has not participated in the selection of samples to be tested. All testing is performed on the understanding that the significance of the report is limited to the extent that the test sample is representative of production units.

Tested in accordance with the applicable sections of IES LM-79-19. Format of reports and angular increments based on IES LM-41-20 and LM-46-20.

The luminous intensity values, and other derived quantities, contained in this report are based on the absolute data, as measured.

Prorating the performance of the sample for the use of other component combinations (such as lamp / LED / Ballast / driver), or for use in different environmental conditions than that tested, may produce erroneous results.

This report is free of erasures and corrections.

Photometric intensity values are reported using the CIE C-Gamma coordinate system as defined in CIE publication number 121.

This report may contain data that are not covered by the NVLAP accreditation. Quantities marked with ‡ are not covered.

This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Revision History: R01 - 05/12/2022 - Revised catalog number
 R02 - 05/16/2022 - Revised description