LightLab INTERNATIONAL ALLENTOWN, LLC

NVLAP LAB CODE 201079-0

Report of Test

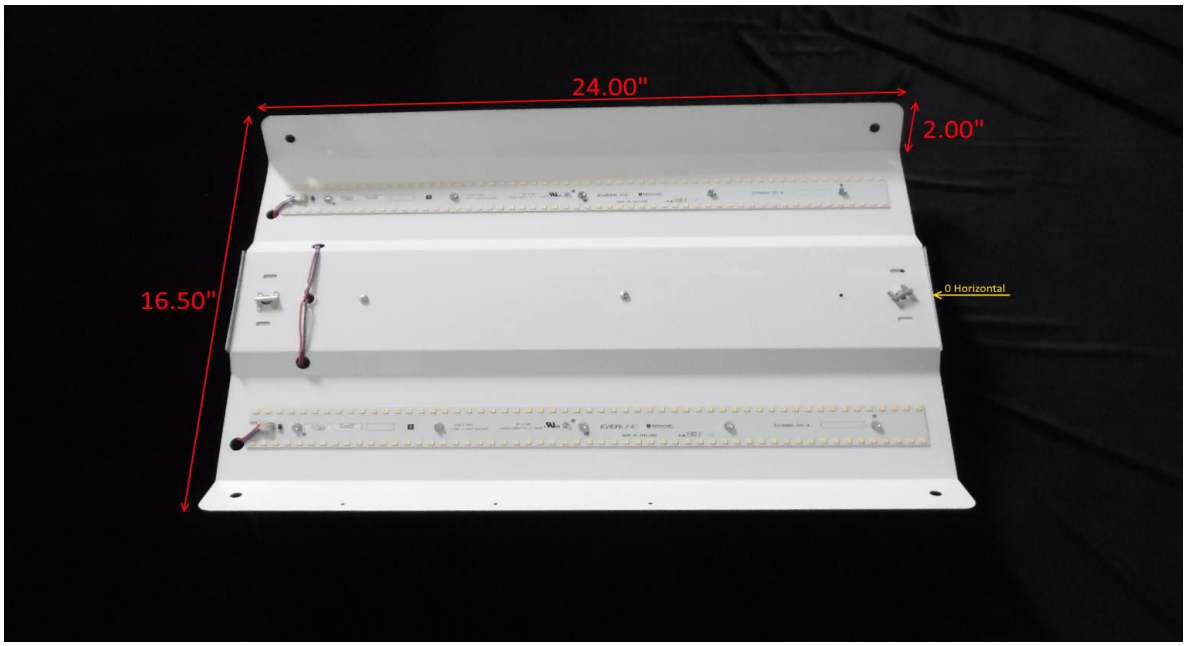
LLIA000559-007

Catalog Number: EBL2

Low bay surface/pendant mounted luminaire. White reflective powder-coated formed steel housing with formed aluminum LED tray.

224 white LEDs, two Universal Lighting Technologies Everline M14CC840D112NHDOC boards with 112 LEDs each. One Universal Lighting Technologies Everline D24VA100UNV-A driver set at 4.1A

120.0Vac, 60.0Hz, 0.8679A, 103.63W, 0.995PF, 4.90%THD(i)



Performance Summary

Total Light Output	13551	lm
Luminaire Power	103.6	W
Luminous Efficacy	130.8	lm/W

PREPARED FOR : Lumen Focus, LLC, 880 Facet Road, Henderson, NC 27537, USA

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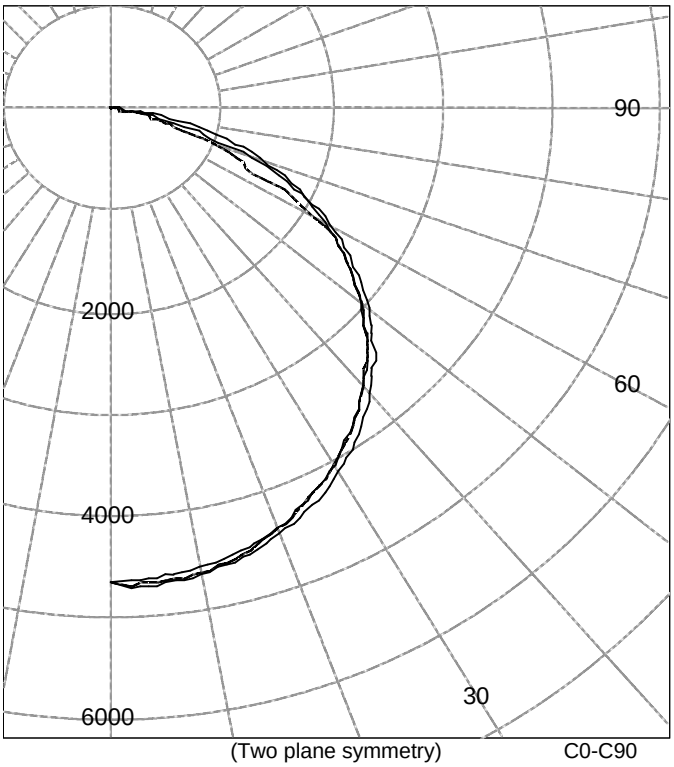
Legend: C0-Solid, C45-Dashed, C90-Grey (cd)



(Two plane symmetry) C0-C90

INTENSITY SUMMARY (cd)

Gamma	C-Plane C0	C22.5	C45	C67.5	C90	Flux (lm)
0.0	4669	4669	4669	4669	4669	
5.0	4696	4657	4631	4649	4673	443
10.0	4648	4610	4585	4602	4623	
15.0	4568	4528	4506	4534	4550	1279
20.0	4455	4411	4403	4397	4405	
25.0	4306	4263	4231	4239	4221	1960
30.0	4125	4087	4049	4033	4033	
35.0	3907	3876	3800	3813	3806	2400
40.0	3654	3605	3554	3557	3551	
45.0	3367	3320	3265	3275	3270	2540
50.0	3044	2979	2951	2961	2958	
55.0	2684	2627	2608	2616	2614	2343
60.0	2293	2242	2235	2241	2125	
65.0	1874	1833	1837	1594	1357	1697
70.0	1433	1405	1262	1015	903	
75.0	983	971	686	470	460	760
80.0	545	447	290	204	165	
85.0	184	123	65	51	51	126
90.0	0	16	20	9	0	

AVERAGE LUMINANCE (cd / m^2)

Gamma	C0	C45	C90
45.0	17202	17066	18099
55.0	16370	16414	17836
65.0	14726	15101	12566
75.0	11336	8499	6952
85.0	4234	1738	2287

ZONAL FLUX AND PERCENTAGES

Zone	Flux (lm)	% Lamp	% Luminaire
0-30	3682	N / A	27.2
0-40	6082	N / A	44.9
0-60	10965	N / A	80.9
0-90	13549	N / A	100.0
40-90	7467	N / A	55.1
60-90	2583	N / A	19.1
90-180	2	N / A	0.0
0-180	13551	N / A	100.0

Total Light Output = 13,551 lm

Signed: Michael Grather Digitally signed by Michael Grather Date: 2016.04.13 15:16:25 -04'00'

Michael L. Grather
Authorized Signatory

Date of test 12-Apr-2016
Date of report 13-Apr-2016

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120.0Vac, 60.0Hz, 0.8679A, 103.63W, 0.995PF, 4.90%THD(i)

Intensity data (cd)

	C-Plane				
Gamma	**C0**	**C22.5**	**C45**	**C67.5**	**C90**
0.0	4669	4669	4669	4669	4669
2.5	4707	4668	4641	4659	4684
5.0	4696	4657	4631	4649	4673
7.5	4676	4637	4612	4631	4652
10.0	4648	4610	4585	4602	4623
12.5	4613	4573	4547	4571	4591
15.0	4568	4528	4506	4534	4550
17.5	4516	4474	4459	4472	4471
20.0	4455	4411	4403	4397	4405
22.5	4385	4340	4323	4327	4333
25.0	4306	4263	4231	4239	4221
27.5	4220	4178	4144	4129	4131
30.0	4125	4087	4049	4033	4033
32.5	4019	3986	3915	3928	3926
35.0	3907	3876	3800	3813	3806
37.5	3784	3747	3682	3687	3683
40.0	3654	3605	3554	3557	3551
42.5	3515	3466	3414	3420	3415
45.0	3367	3320	3265	3275	3270
47.5	3210	3168	3112	3122	3117
50.0	3044	2979	2951	2961	2958
52.5	2868	2805	2783	2793	2789
55.0	2684	2627	2608	2616	2614
57.5	2493	2442	2425	2433	2431
60.0	2293	2242	2235	2241	2125
62.5	2086	2039	2038	1893	1816
65.0	1874	1833	1837	1594	1357
67.5	1656	1620	1591	1207	1205
70.0	1433	1405	1262	1015	903
72.5	1209	1188	911	590	567
75.0	983	971	686	470	460
77.5	760	745	404	356	355
80.0	545	447	290	204	165
82.5	349	264	147	101	92
85.0	184	123	65	51	51
87.5	61	33	38	33	28
90.0	0	16	20	9	0

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Intensity data (cd)

	C-Plane				
Gamma	**C0**	**C22.5**	**C45**	**C67.5**	**C90**
90.0	0	16	20	9	0
92.5	0	8	11	0	0
95.0	0	0	0	0	0
97.5	0	0	0	0	0
100.0	0	0	0	0	0
102.5	0	0	0	0	0
105.0	0	0	0	0	0
107.5	0	0	0	0	0
110.0	0	0	0	0	0
112.5	0	0	0	0	0
115.0	0	0	0	0	0
117.5	0	0	0	0	0
120.0	0	0	0	0	0
122.5	0	0	0	0	0
125.0	0	0	0	0	0
127.5	0	0	0	0	0
130.0	0	0	0	0	0
132.5	0	0	0	0	0
135.0	0	0	0	0	0
137.5	0	0	0	0	0
140.0	0	0	0	0	0
142.5	0	0	0	0	0
145.0	0	0	0	0	0
147.5	0	0	0	0	0
150.0	0	0	0	0	0
152.5	0	0	0	0	0
155.0	0	0	0	0	0
157.5	0	0	0	0	0
160.0	0	0	0	0	0
162.5	0	0	0	0	0
165.0	0	0	0	0	0
167.5	0	0	0	0	0
170.0	0	0	0	0	0
172.5	0	0	0	0	0
175.0	0	0	0	0	0
177.5	0	0	0	0	0
180.0	0	0	0	0	0

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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	111	111	111	106	106	106	102	102	102	100
1	109	105	101	97	107	102	99	95	98	95	92	94	92	89	91	89	87	85
2	99	91	85	79	97	89	83	78	86	81	76	83	78	75	80	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60
4	83	71	62	56	81	70	61	55	67	60	54	65	59	54	63	57	53	51
5	76	63	54	48	74	62	54	47	60	53	47	58	52	46	56	50	46	44
6	70	57	48	42	68	56	47	41	54	47	41	52	46	41	51	45	40	38
7	65	51	43	37	63	51	42	36	49	42	36	48	41	36	46	40	36	34
8	60	47	38	33	59	46	38	32	45	38	32	44	37	32	42	36	32	30
9	56	43	35	29	55	42	35	29	41	34	29	40	34	29	39	33	29	27
10	53	40	32	26	52	39	32	26	38	31	26	37	31	26	36	30	26	24

For absolute test reports, CUs are expressed as a percentage of total lumen 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.

Circle of Light Plot

Height(ft)	Illuminance at Nadir (fc)	Beam Width (across 50% Nadir Illum) 0-180	90-270
6.0	129.7	7.86	7.70
8.0	73.0	10.48	10.27
10.0	46.7	13.10	12.84
12.0	32.4	15.72	15.40
14.0	23.8	18.34	17.97
16.0	18.2	20.95	20.54

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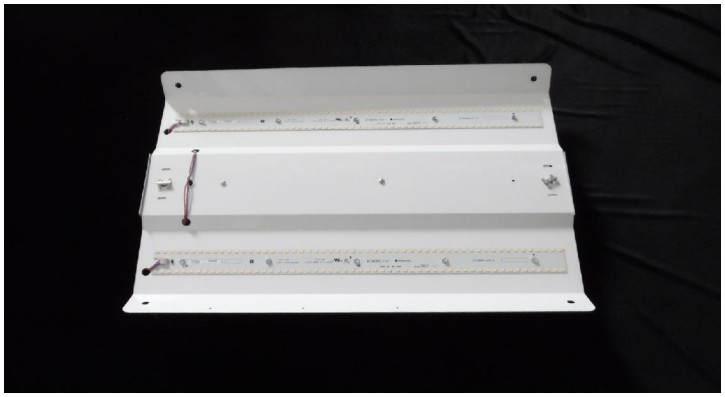

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Test Distance	9.5 m
Test Temperature	24.8 °C

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 publications: IES LM-79-08 (Sec. 12), IES LM-16-93, IES LM-58-13, CIE 13.3:1995, CIE 15:2004, ANSI C78.377:2011, ANSI C82.77:2002.

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 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.

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