

Report of Test

LLIA000537-001-R01

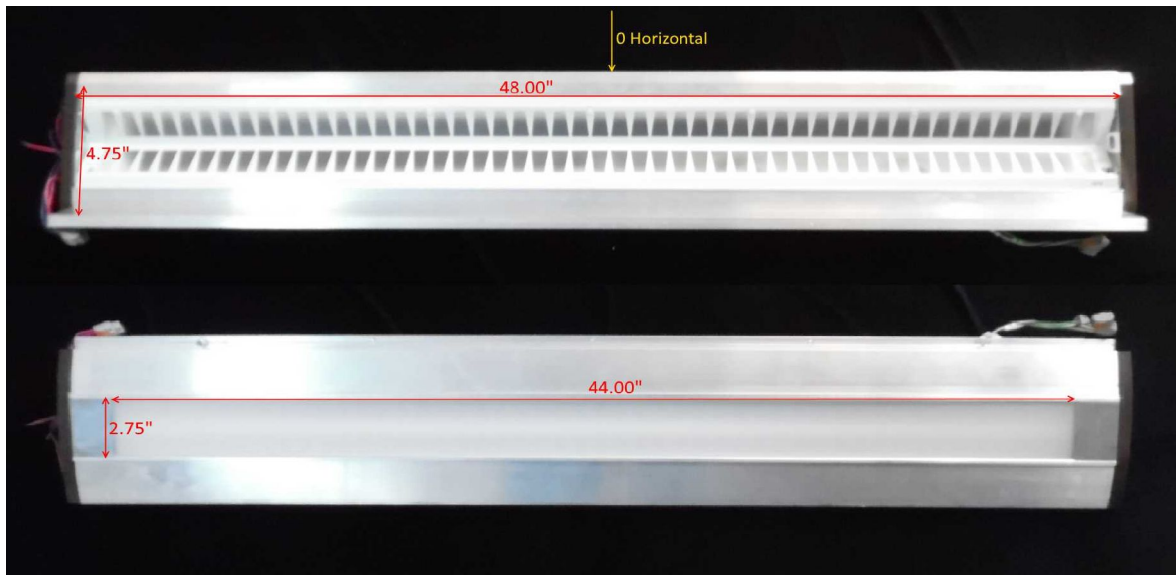
This test report supersedes test report number LLIA000537-001

Catalog Number: DXP-I/D-XMO-K40-4-X-OC6/LOH-X-120

Wall mounted, extruded aluminum housing, 60/40 distribution panel installed on top side of fixture, frosted acrylic lens on bottom side.

120 White LEDs

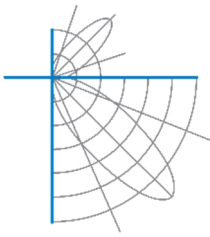
One Osram Optotronic OT50W/PRG1400C/UNV/DIM/L Driver: 2750 558-400 (MO)
120.0Vac, 60.0Hz, 0.1654A, 19.70W, 0.993PF, 5.15%THD(i)



Performance Summary

Total Light Output	2355 lm
Luminaire Power	19.7 W
Luminous Efficacy	119.5 lm/W

PREPARED FOR : Precision Architectural Lighting, 4830 Timber Creek Drive, Houston, TX



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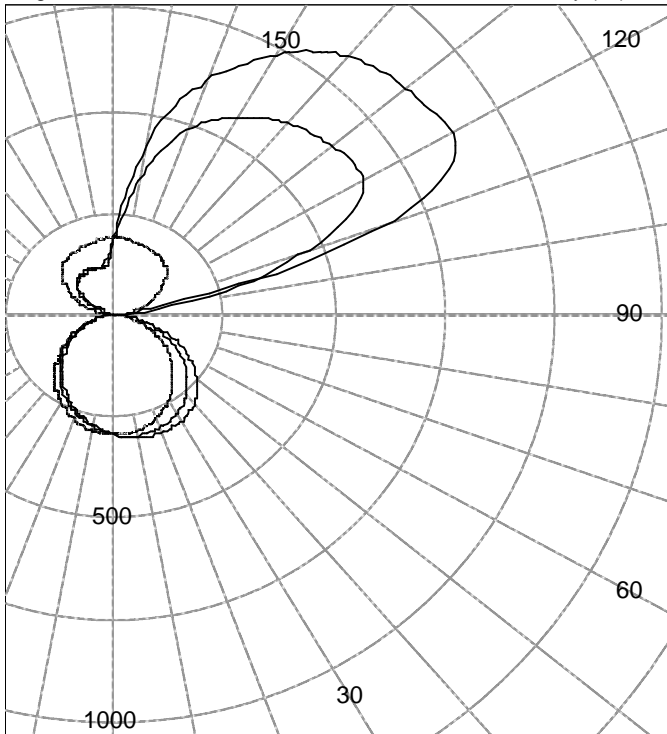
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120 White LEDs

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Legend: C0/C180-Solid, C45/C225-Dashed, C90/C270-Grey (cd)



INTENSITY SUMMARY (cd)

Gamma	C-Plane					Flux (lm)
	C0	C22.5	C45	C67.5	C90	
90.0	2	2	1	0	0	
95.0	15	16	19	48	15	18
100.0	64	74	138	107	38	
105.0	298	337	328	159	60	143
110.0	677	621	473	227	81	
115.0	841	760	598	297	101	288
120.0	890	803	655	353	120	
125.0	879	795	658	391	138	308
130.0	867	784	648	415	154	
135.0	852	773	634	425	167	273
140.0	829	753	615	422	174	
145.0	790	722	590	407	178	213
150.0	739	680	562	384	179	
155.0	679	631	527	358	180	143
160.0	611	573	480	327	182	
165.0	530	498	417	294	185	75
170.0	418	395	337	258	188	
175.0	289	278	254	222	190	20
180.0	189	189	189	189	189	

ZONAL FLUX AND PERCENTAGES

Zone	Flux (lm)	% Lamp	% Luminaire
180-150	238	N / A	10.1
180-140	451	N / A	19.2
180-120	1032	N / A	43.8
180-90	1481	N / A	62.9
140-90	1030	N / A	43.7
120-90	449	N / A	19.1
90-0	874	N / A	37.1
180-0	2355	N / A	100.0

Total Light Output = 2,355 lm

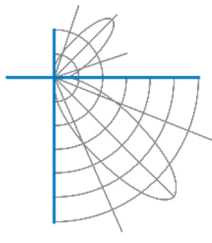
AVERAGE LUMINANCE (cd/m²)

Gamma	C0	C45	C90
45.0	2797	2478	1979
55.0	2845	2454	1881
65.0	2767	2334	1748
75.0	2503	2072	1530
85.0	1637	1522	1232

Signed:

Michael L. Grather
Authorized Signatory

Date of test 3-Feb-2016
Date of report 11-Feb-2016



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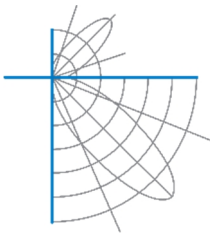
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120 White LEDs

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Intensity data (cd)

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
0.0	295	295	295	295	295
2.5	298	299	298	295	296
5.0	301	302	300	296	294
7.5	304	304	302	295	292
10.0	307	306	302	294	290
12.5	308	308	302	293	286
15.0	310	309	302	290	282
17.5	311	309	300	287	277
20.0	311	308	298	283	272
22.5	310	307	295	278	266
25.0	309	305	292	273	260
27.5	307	303	288	267	253
30.0	304	300	283	260	245
32.5	301	295	277	253	237
35.0	296	290	271	245	228
37.5	291	284	263	237	219
40.0	284	277	255	227	210
42.5	276	269	247	218	200
45.0	268	259	237	208	189
47.5	258	249	227	197	179
50.0	246	238	215	187	168
52.5	234	225	203	175	157
55.0	221	212	190	164	146
57.5	206	198	177	152	135
60.0	191	183	163	139	123
62.5	175	167	148	126	112
65.0	158	151	133	113	100
67.5	141	134	118	100	88
70.0	123	118	103	87	76
72.5	106	100	88	74	65
75.0	88	83	73	61	54
77.5	70	67	58	48	43
80.0	53	50	44	37	33
82.5	36	35	31	26	23
85.0	19	19	18	16	15
87.5	3	3	5	6	7
90.0	2	2	1	0	0



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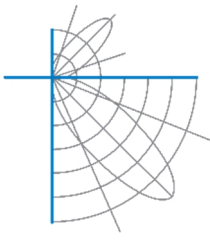
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Intensity data (cd)

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
90.0	2	2	1	0	0
92.5	3	3	3	10	5
95.0	15	16	19	48	15
97.5	36	37	56	85	26
100.0	64	74	138	107	38
102.5	135	172	239	131	49
105.0	298	337	328	159	60
107.5	508	506	400	191	71
110.0	677	621	473	227	81
112.5	775	701	542	263	91
115.0	841	760	598	297	101
117.5	878	792	635	328	111
120.0	890	803	655	353	120
122.5	887	801	660	374	129
125.0	879	795	658	391	138
127.5	873	789	654	405	147
130.0	867	784	648	415	154
132.5	860	779	642	422	161
135.0	852	773	634	425	167
137.5	842	764	625	425	171
140.0	829	753	615	422	174
142.5	811	739	603	415	176
145.0	790	722	590	407	178
147.5	766	703	577	396	179
150.0	739	680	562	384	179
152.5	710	656	545	371	180
155.0	679	631	527	358	180
157.5	646	603	505	343	181
160.0	611	573	480	327	182
162.5	573	538	451	311	183
165.0	530	498	417	294	185
167.5	478	450	379	276	186
170.0	418	395	337	258	188
172.5	353	336	295	240	189
175.0	289	278	254	222	190
177.5	233	228	219	205	191
180.0	189	189	189	189	189



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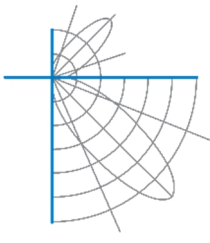
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Intensity data (cd)

Gamma	C-Plane				
	C90	C112.5	C135	C157.5	C180
0.0	295	295	295	295	295
2.5	296	292	293	292	290
5.0	294	290	289	288	286
7.5	292	287	285	283	281
10.0	290	283	280	278	275
12.5	286	278	275	272	270
15.0	282	273	270	266	263
17.5	277	268	264	260	257
20.0	272	262	257	253	250
22.5	266	255	250	246	243
25.0	260	248	243	239	236
27.5	253	240	235	231	228
30.0	245	233	228	223	220
32.5	237	224	219	215	212
35.0	228	216	211	206	203
37.5	219	207	202	198	195
40.0	210	198	193	188	185
42.5	200	188	184	179	176
45.0	189	179	175	169	167
47.5	179	169	165	159	157
50.0	168	159	155	149	147
52.5	157	149	145	139	137
55.0	146	138	134	129	127
57.5	135	128	123	118	116
60.0	123	117	113	108	106
62.5	112	106	102	97	96
65.0	100	95	91	87	86
67.5	88	84	80	77	75
70.0	76	73	69	66	65
72.5	65	62	59	56	56
75.0	54	51	48	47	46
77.5	43	40	39	37	37
80.0	33	31	29	28	28
82.5	23	22	21	20	19
85.0	15	13	12	12	11
87.5	7	6	5	5	5
90.0	0	0	0	0	0



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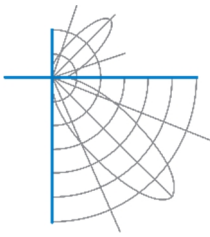
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Intensity data (cd)

Gamma	C-Plane				
	C90	C112.5	C135	C157.5	C180
90.0	0	0	0	0	0
92.5	5	1	0	0	0
95.0	15	1	1	0	0
97.5	26	3	1	0	0
100.0	38	10	1	0	0
102.5	49	19	3	0	0
105.0	60	25	8	2	2
107.5	71	37	18	4	2
110.0	81	46	33	13	8
112.5	91	56	51	24	18
115.0	101	65	60	41	31
117.5	111	74	71	65	51
120.0	120	83	83	78	77
122.5	129	90	91	85	86
125.0	138	97	97	96	93
127.5	147	102	103	104	104
130.0	154	106	107	109	110
132.5	161	110	111	113	114
135.0	167	113	114	116	118
137.5	171	115	117	119	121
140.0	174	117	119	121	123
142.5	176	119	120	123	125
145.0	178	120	121	124	126
147.5	179	121	121	125	127
150.0	179	121	121	125	127
152.5	180	122	121	124	126
155.0	180	123	120	123	125
157.5	181	125	119	121	123
160.0	182	127	119	120	121
162.5	183	130	119	118	119
165.0	185	134	120	117	117
167.5	186	139	123	118	117
170.0	188	146	128	121	119
172.5	189	154	136	128	125
175.0	190	165	149	140	137
177.5	191	176	166	160	157
180.0	189	189	189	189	189



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Coefficients Of Utilization - Zonal Cavity Method

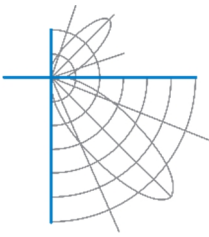
Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	104	104	104	104	94	94	94	94	76	76	76	60	60	60	44	44	44	37
1	95	90	87	83	86	82	79	76	66	64	62	52	51	49	39	38	37	31
2	86	79	73	68	78	72	66	62	58	54	51	46	43	41	34	32	31	26
3	78	69	62	56	71	63	56	51	51	46	43	40	37	34	30	28	26	21
4	72	61	53	47	65	55	49	43	45	40	36	36	32	29	27	24	22	18
5	66	54	46	40	59	49	42	37	40	35	31	32	28	25	24	21	19	16
6	60	48	40	35	54	44	37	32	36	31	27	29	25	22	22	19	17	14
7	56	43	36	30	50	40	33	28	33	27	23	26	22	19	20	17	15	12
8	51	39	32	26	47	36	29	25	30	24	21	24	20	17	18	15	13	11
9	48	36	28	23	43	33	26	22	27	22	18	22	18	15	17	14	12	10
10	45	33	26	21	40	30	24	19	25	20	16	20	16	14	15	13	11	9

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	8.2	7.91	7.41
8.0	4.6	10.55	9.88
10.0	3.0	13.19	12.35
12.0	2.0	15.82	14.82
14.0	1.5	18.46	17.29
16.0	1.2	21.10	19.76



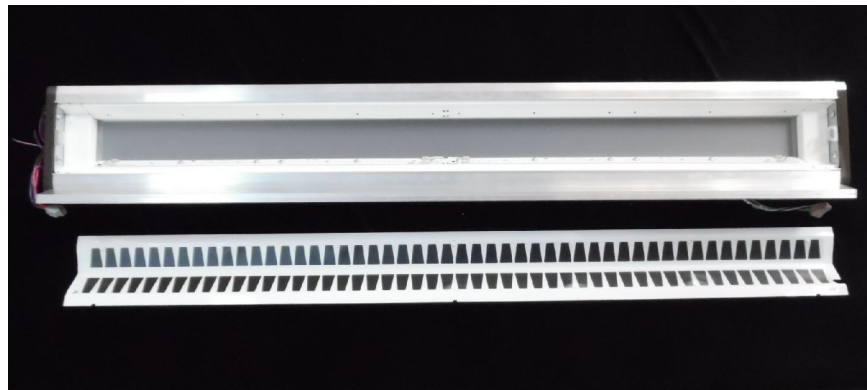
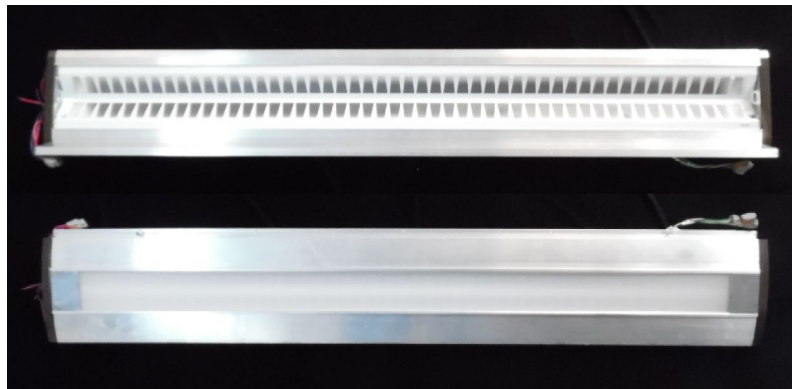
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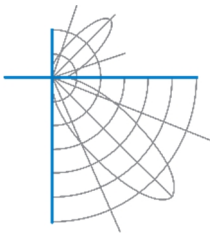
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Test Distance 9.5 m
Test Temperature 24.5 °C

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.