

# Report of Test

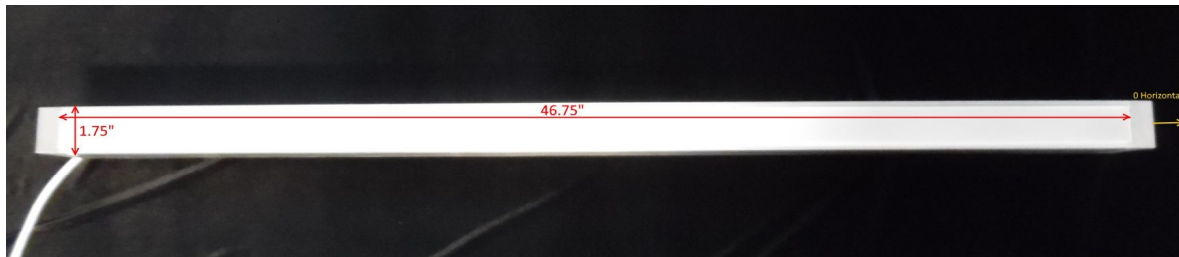
## LLIA000530-005

Catalog Number: MLS2FR-X-MO-K40-4-X-LOH-X-120 (480mA)

Pendant mounted, extruded aluminum housing, white inner reflector, white plastic lens enclosure

92 white LEDs

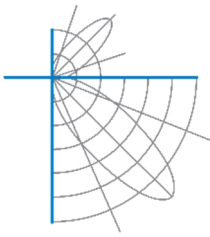
One Osram Optotronic OT30W/PROG1050C/UNV/DIM/L LED power supply, output set at 480mA  
120.0Vac, 60.0Hz, 0.1565A, 18.62W, 0.991PF, 5.01%THD(i)



### Performance Summary

Total Light Output	1851 lm
Luminaire Power	18.6 W
Luminous Efficacy	99.5 lm/W

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



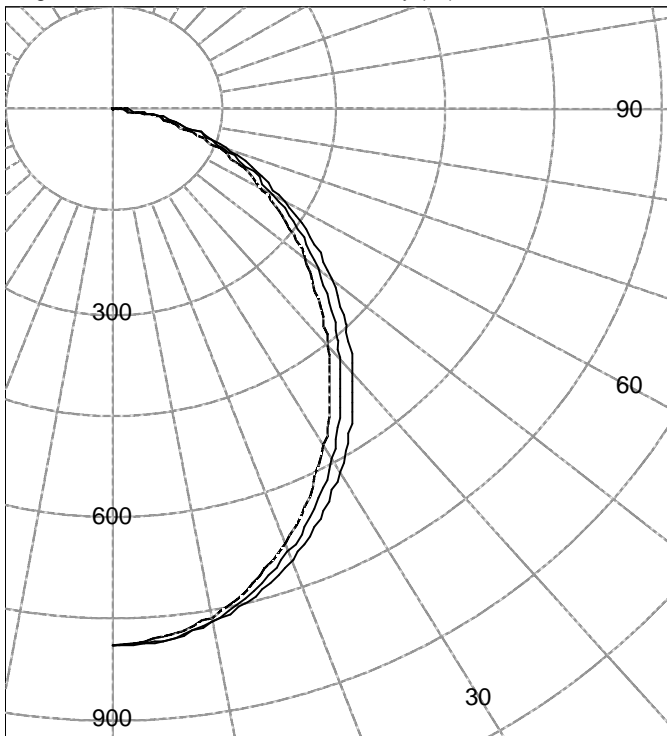
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Legend: C0-Solid, C45-Dashed, C90-Grey (cd)



(Two plane symmetry) C0-C90

**INTENSITY SUMMARY (cd)**

Gamma	C-Plane					Flux (lm)
	C0	C22.5	C45	C67.5	C90	
0.0	790	790	790	790	790	
5.0	785	780	786	785	781	74
10.0	769	764	767	764	759	
15.0	744	737	736	730	725	207
20.0	709	700	696	687	680	
25.0	666	656	648	636	628	298
30.0	618	606	595	579	571	
35.0	564	552	538	521	513	336
40.0	506	495	480	461	454	
45.0	446	437	422	403	395	324
50.0	387	379	364	345	339	
55.0	328	322	307	290	285	274
60.0	271	267	252	238	233	
65.0	215	212	200	188	184	198
70.0	162	160	150	141	138	
75.0	112	111	104	98	95	110
80.0	68	67	63	58	56	
85.0	31	30	26	23	21	30
90.0	0	0	0	0	0	

**AVERAGE LUMINANCE (cd / m<sup>2</sup>)**

Gamma	C0	C45	C90
45.0	11976	11308	10606
55.0	10842	10164	9420
65.0	9642	8957	8255
75.0	8203	7607	6988
85.0	6707	5620	4626

**ZONAL FLUX AND PERCENTAGES**

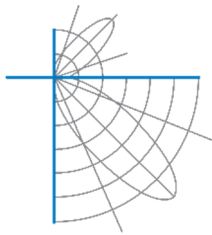
Zone	Flux (lm)	% Lamp	% Luminaire
0-30	578	N / A	31.2
0-40	914	N / A	49.4
0-60	1513	N / A	81.7
0-90	1851	N / A	100.0
40-90	937	N / A	50.6
60-90	338	N / A	18.3
90-180	0	N / A	0.0
0-180	1851	N / A	100.0

Total Light Output = 1,851 lm

Signed:

Michael L. Grather  
Authorized Signatory

Date of test 8-Jan-2016  
Date of report 12-Jan-2016



**Test Report No. LLIA000530-005**

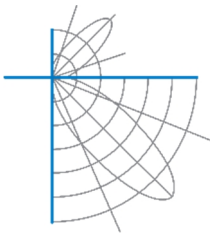
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**Intensity data (cd)**

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
0.0	790	790	790	790	790
2.5	789	785	791	790	786
5.0	785	780	786	785	781
7.5	779	773	778	776	771
10.0	769	764	767	764	759
12.5	758	751	753	748	743
15.0	744	737	736	730	725
17.5	727	720	717	710	704
20.0	709	700	696	687	680
22.5	689	679	673	662	655
25.0	666	656	648	636	628
27.5	643	632	622	608	600
30.0	618	606	595	579	571
32.5	591	580	567	550	542
35.0	564	552	538	521	513
37.5	535	524	509	491	483
40.0	506	495	480	461	454
42.5	477	466	451	432	424
45.0	446	437	422	403	395
47.5	417	407	393	374	367
50.0	387	379	364	345	339
52.5	357	350	336	318	312
55.0	328	322	307	290	285
57.5	299	294	280	264	259
60.0	271	267	252	238	233
62.5	242	239	226	213	208
65.0	215	212	200	188	184
67.5	188	186	174	164	161
70.0	162	160	150	141	138
72.5	136	135	126	119	116
75.0	112	111	104	98	95
77.5	89	88	83	77	75
80.0	68	67	63	58	56
82.5	49	48	44	40	38
85.0	31	30	26	23	21
87.5	14	13	9	7	7
90.0	0	0	0	0	0



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**Coefficients Of Utilization - Zonal Cavity Method**

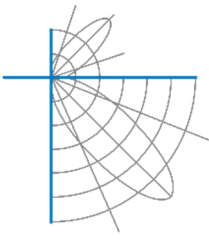
Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
	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	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	77	74	72
3	91	81	73	67	89	80	72	67	77	70	65	74	69	64	71	67	63	61
4	84	72	64	57	82	71	63	57	69	62	56	66	60	55	64	59	55	53
5	77	65	56	50	75	64	56	50	62	55	49	60	53	49	58	52	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	38	48	43	38	36
8	62	49	41	35	61	48	40	35	47	40	35	46	39	34	45	39	34	32
9	58	45	37	32	57	45	37	32	43	36	31	42	36	31	41	35	31	29
10	55	42	34	29	53	41	34	29	40	33	29	39	33	29	38	33	28	27

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	21.9	7.02	6.58
8.0	12.3	9.36	8.77
10.0	7.9	11.70	10.97
12.0	5.5	14.04	13.16
14.0	4.0	16.38	15.36
16.0	3.1	18.72	17.55

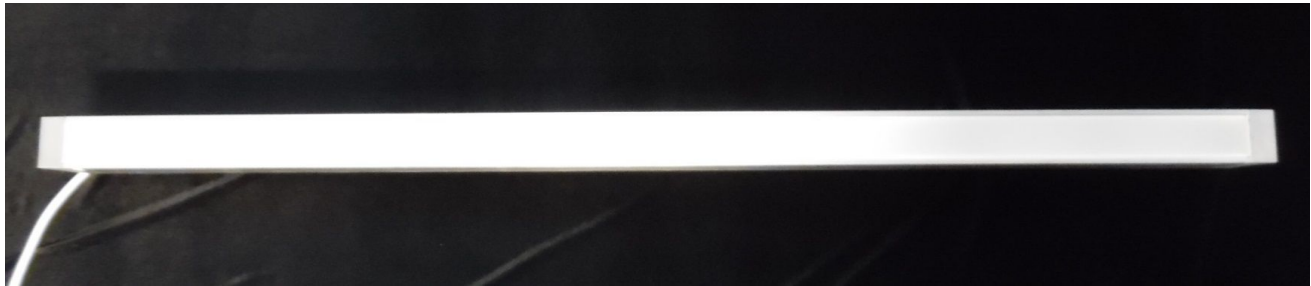


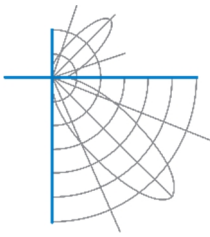
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**Test Distance** 9.5 m  
**Test Temperature** 24.5 °C

**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.