

Report of Test LLI-19091-1

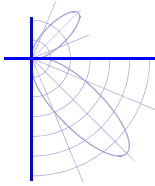
Optolum - Linear luminaire. Product ID: OLM-010VH-H-011235--014800
Extruded aluminum housing with clear plastic flat lens.
48 LEDs mounted in single row with individual clear plastic focusing lenses.
Two Harvard Technology LED drivers. Model: CLS50-1400A-UNI-B-I/F
Operating at 277v AC an 60 Hz,



Performance Summary

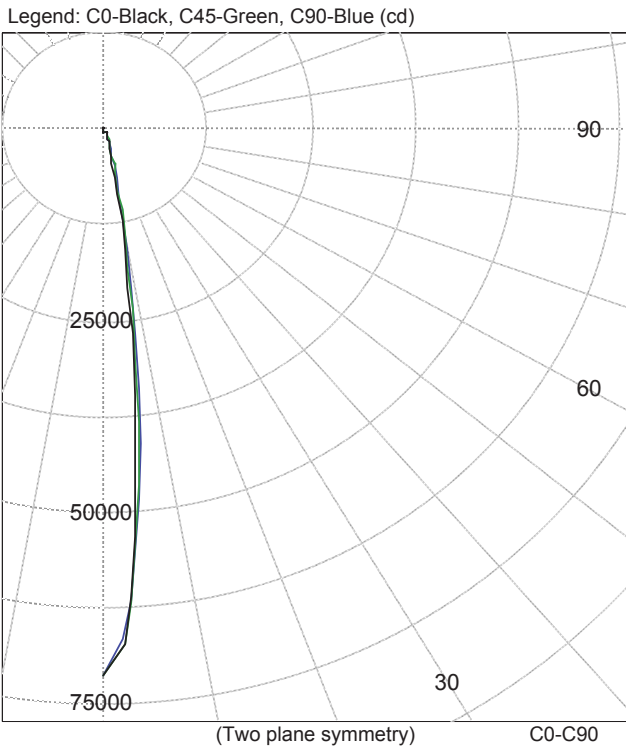
Total Light Output	4965 lm	Min Power Factor	0.86 @ 277 V
Luminaire Power	70.6 W	Max THD(i)*	13.0 % @ 277 V
Luminous Efficacy	70.3 lm/W		
CCT	3370 K		
CIE(x,y) 1931	(0.407, 0.381)		
CRI	95		

PREPARED FOR : Optolum, Tempe, AZ 85281



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INTENSITY SUMMARY (cd)

Gamma	C-Plane					Flux (lm)
	C0	C22.5	C45	C67.5	C90	
0.0	71405	71405	71405	71405	71405	
5.0	43941	44852	46708	48079	48573	3275
10.0	11857	12488	13931	15336	15914	
15.0	2558	2845	3412	3649	3594	1128
20.0	936	950	1050	1075	1022	
25.0	415	415	429	436	424	213
30.0	222	211	209	210	211	
35.0	168	158	156	154	152	101
40.0	142	134	135	131	127	
45.0	130	120	122	118	116	93
50.0	119	110	109	106	105	
55.0	97	91	91	89	88	80
60.0	73	68	70	68	65	
65.0	54	49	50	49	45	50
70.0	37	32	34	32	31	
75.0	20	19	20	19	19	21
80.0	9	7	8	8	9	
85.0	3	4	3	3	2	4
90.0	0	0	0	0	0	

ZONAL FLUX AND PERCENTAGES

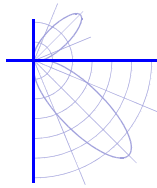
Zone	Flux (lm)	% Lamp	% Luminaire
0-30	4616	N/A	93.0
0-40	4717	N/A	95.0
0-60	4891	N/A	98.5
0-90	4965	N/A	100.0
40-90	248	N/A	5.0
60-90	74	N/A	1.5
90-180	0	N/A	0.0
0-180	4965	N/A	100.0

Total Light Output = 4,965 lm

Signed:

Ryder Tunney
Ryder Tunney
Authorized Signatory

Date of test 5-Apr-2019
Date of report 5-Apr-2019

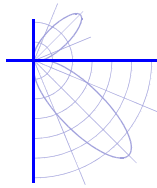


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Intensity data (cd)

Gamma	C-Plane				
	C0	C22.5	C45	C67.5	C90
0.0	71405	71405	71405	71405	71405
2.5	64598	64696	64670	64359	64302
5.0	43941	44852	46708	48079	48573
7.5	23740	24633	27007	29395	30365
10.0	11857	12488	13931	15336	15914
12.5	5451	5923	6866	7523	7703
15.0	2558	2845	3412	3649	3594
17.5	1411	1530	1807	1879	1790
20.0	936	950	1050	1075	1022
22.5	631	633	663	674	647
25.0	415	415	429	436	424
27.5	279	276	283	289	286
30.0	222	211	209	210	211
32.5	190	179	176	174	173
35.0	168	158	156	154	152
37.5	154	145	145	141	138
40.0	142	134	135	131	127
42.5	137	126	128	124	119
45.0	130	120	122	118	116
47.5	126	115	115	112	110
50.0	119	110	109	106	105
52.5	109	100	101	98	98
55.0	97	91	91	89	88
57.5	85	79	81	77	76
60.0	73	68	70	68	65
62.5	64	59	60	57	56
65.0	54	49	50	49	45
67.5	45	40	42	40	37
70.0	37	32	34	32	31
72.5	28	25	26	25	24
75.0	20	19	20	19	19
77.5	15	12	13	13	14
80.0	9	7	8	8	9
82.5	5	4	6	6	5
85.0	3	4	3	3	2
87.5	3	1	1	2	2
90.0	0	0	0	0	0



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LM-79 Performance Data

Spectral	CIE 1931 (x, y) ⁽¹⁾	(0.407, 0.381)
	CIE 1976 (u', v') ⁽¹⁾	(0.241, 0.507)
	Correlated Color Temperature (CCT) ⁽¹⁾	3370 K
	Spatial Δ (u', v') Uniformity ⁽²⁾	3.45E-03
	Color Rendering Index (Ra) ⁽¹⁾	95.0
	Special CRI 9 (R ₉) ^{(1),(3)}	76.8
	Distance from Planckian Locus (Duv) ^{(1),(3)}	-4.95E-03
	Scotopic/Photopic Ratio ^{(1),(3)}	1.61

Electrical	Voltage	277.0 V	(Setpoint 1)
	Frequency	60.0 Hz	
	Current	0.296 A	
	Power	70.6 W	
	Power Factor	0.86	
	Current THD	13 %	
	Voltage	120.0 V	(Setpoint 2)
	Frequency	60.0 Hz	
	Current	0.616 A	
	Power	72.0 W	
	Power Factor	0.97	
	Current THD	2.3 %	

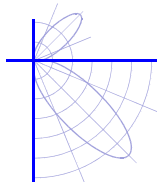
Performance data in accordance with IESNA LM-79-08. Spectral calculations are for a CIE 2° observer
Photometric and spectral values were measured at Setpoint 1

(1) Value is computed from the weighted average of the spatial measurements

(2) Value is the maximum deviation of the spatial u' and v' measurements from the weighted average

(3) Quantity is in addition to the scope of IESNA LM-79-08





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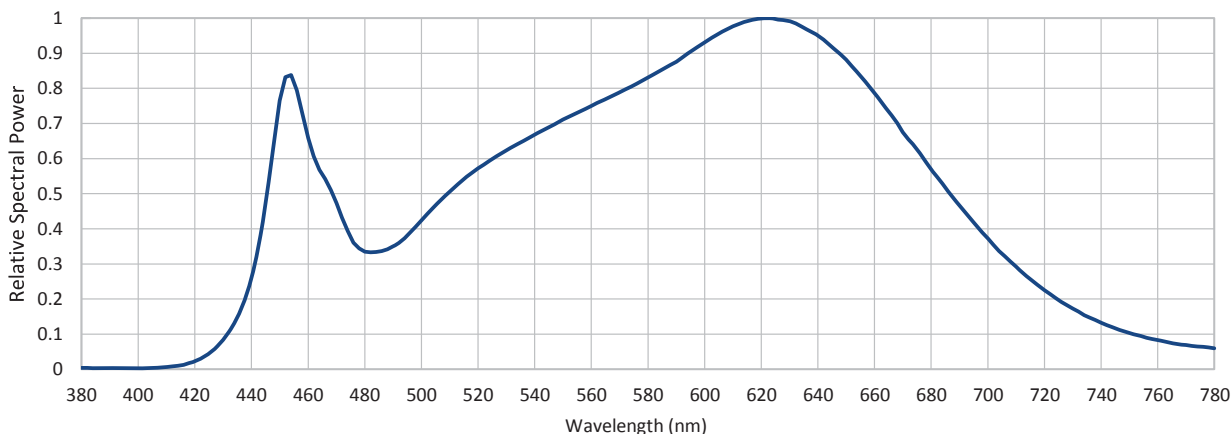
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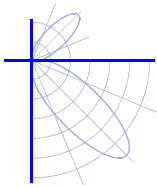
LM-79 Performance Data

Relative spectral power distribution

(Relative to peak = 1, weighted average of spatial measurements)

λ (nm)	Relative Power	λ (nm)	Relative Power	λ (nm)	Relative Power	λ (nm)	Relative Power	λ (nm)	Relative Power
380	0.004	460	0.658	540	0.668	620	0.999	700	0.373
385	0.003	465	0.555	545	0.689	625	0.998	705	0.330
390	0.003	470	0.473	550	0.711	630	0.991	710	0.292
395	0.003	475	0.378	555	0.730	635	0.972	715	0.257
400	0.003	480	0.335	560	0.750	640	0.950	720	0.225
405	0.004	485	0.336	565	0.769	645	0.918	725	0.197
410	0.006	490	0.350	570	0.789	650	0.882	730	0.173
415	0.012	495	0.381	575	0.809	655	0.835	735	0.151
420	0.023	500	0.424	580	0.831	660	0.787	740	0.133
425	0.046	505	0.467	585	0.854	665	0.733	745	0.117
430	0.084	510	0.506	590	0.876	670	0.675	750	0.103
435	0.149	515	0.541	595	0.905	675	0.626	755	0.092
440	0.260	520	0.572	600	0.931	680	0.570	760	0.083
445	0.476	525	0.599	605	0.956	685	0.518	765	0.075
450	0.765	530	0.623	610	0.977	690	0.466	770	0.069
455	0.816	535	0.646	615	0.991	695	0.418	775	0.064
								780	0.060

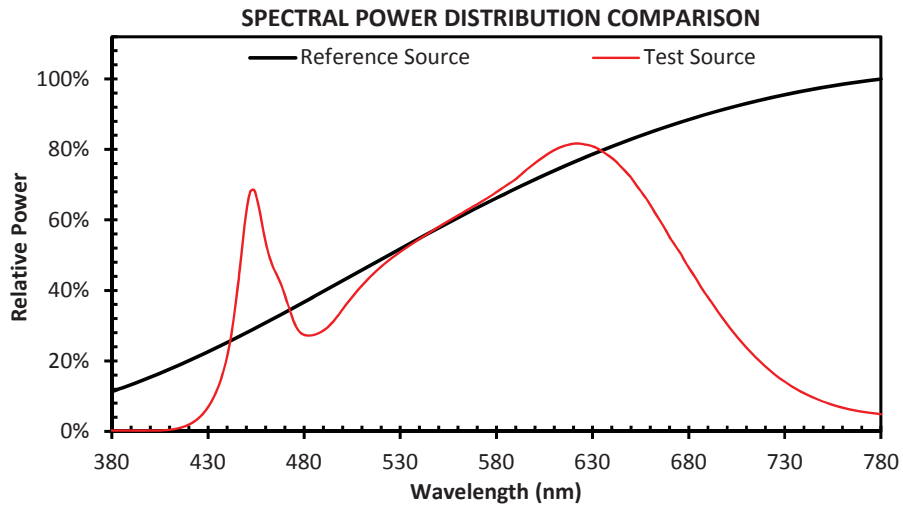




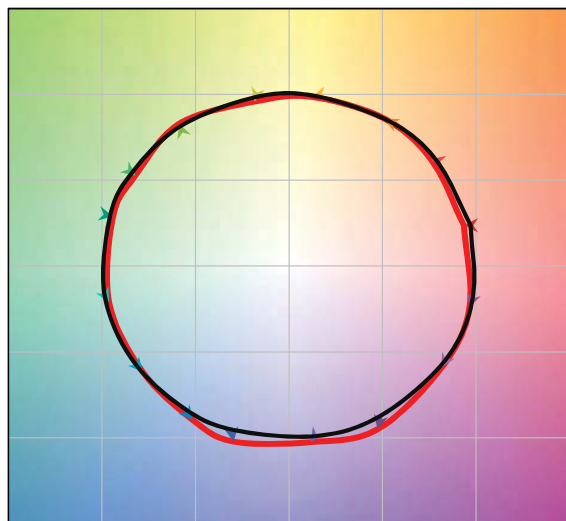
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R_f	90
R_g	100

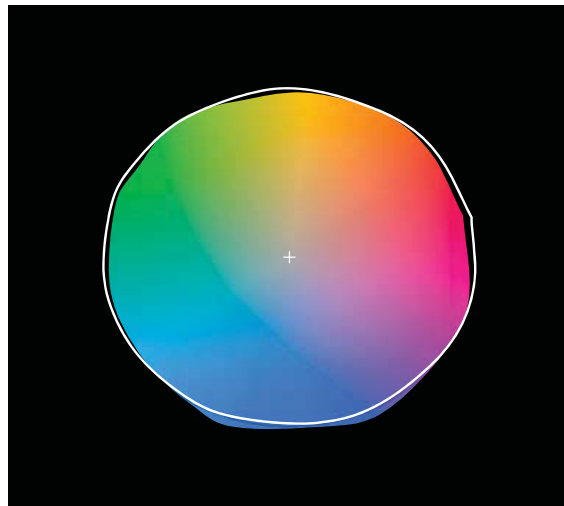


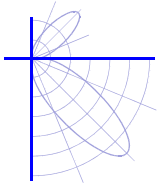
COLOR VECTOR GRAPHIC



— Test Source → Series1

COLOR DISTORTION GRAPHIC





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Test Distance 8.0 m
Test Temperature 25.2 °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 C78.377:2015, ANSI C82.77-10:2014.

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.

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