



Les Industries Spectralux Inc. Spectralux Industries Inc.

2750 Sabourin, Saint-Laurent (Quebec) H4S 1M2 Canada
Tel.: (514) 332-0082 Fax: (514) 332-3590 www.spectralux.ca

ISO/IEC 17025



NVLAP LAB CODE: 200899-0

Moving Mirror Goniophotometer Test Report

Standard(s): IESNA LM-35-02, IES LM-79-08, ANSI C82.77-2002

Customer Lumenpulse, 1751 Richardson, suite 1505, Montréal, Québec, Canada, H3K 1G6

General Information		SSL Details	Driver Details	
Test Report	G1504072-R1	Description	69W White SSL	Type Commercial
Test Date	7 April 2015	Serial Number	SRIS 1877	Description 69SSL-CY807
Report Date	15 April 2015	Photometric Method	Absolute	Manufacturer MEAN WELL USA inc.
Ambient	24.5 °C	Lamp Lumens	-1	Catalog No. LPF-60-15
Humidity	17.6 %	Test Position	Axial	Voltage Tap 120.00 V
Lamp Type	SSL	Comments	CREE XPE2 LED's	Power Factor 0.9900

Floodlight Data

General Information		Optics	Aperture (feet)	
Manufacturer	Lumenpulse	Reflector	48 Collimators	X 0.0000
Name	LUMENFACADE	Housing	Extruded Aluminum	Y 4.0000
Catalog No.	LOG-120-48-DWW 12XPE2-10x60-SI	Lens	Clear Flat Glass C/W Diffuse Film	Z 0.1667

SKT Position: None

Lamp Stabilization Time: 60 minutes, 51 seconds

Tested By: Jean-Paul Ojeil

Approved Signatory: Chrisnel Blot

Signature:



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Luminaire Test Method

Precise installation and alignment of the luminaire to the rotation axis of the photometer is governed by a servomotor controlled via a microcontroller. A laser is used to validate the luminaire positioning. Before photometric measurements are taken, luminaire is operated long enough to reach stabilization and temperature equilibrium.

All movement commands issued to the photometer axes are mediated by the software to ensure the motion is within the limits of operation. The photometric detector used is a silicon detector corrected to closely match the spectral luminous efficiency photopic curve with a quality index less than 1.5%. Proper shielding is incorporated to the photometric test bench such that only the light from the unit under test is measured.

Luminous intensity measurements are performed at a distance great enough so that the inverse-square law applies. During each measurement the computer records the luminous intensity associated to the corresponding angles of radiation, as well as input electrical operational parameters and temperature measurements. Candela values are reported in IES format as per LM-63.

Equipment, reference standards are traceable to National Institute of Standards and Technology (NIST) and National Research Council of Canada (NRC).





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Electrical Equipment

Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due Date
Power Supply	iRDC	CIF-3000A	974997	N.P.C.R.	N.P.C.R.
Input Power Meter	Yokogawa	WT210	91L239798	2014/03/25	2015/04/15
Output Power Meter	N/A	N/A	N/A	N.P.C.R.	N.P.C.R.

Photometric Equipment

Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due Date
Photometer	Gigahertz-Optik	X11	4500	2014/12/12	2015/12/12
Photodetector	INPHORA	IPR-PDET 19	110803	2014/05/16	2015/05/16

Environment Equipment

Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due Date
Temperature Humidity Sensor	Omega	HH311	051202970	2014/10/24	2016/10/24



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Photometric Report: G1504072-R1

Prepared for: Lumenpulse · Test Date: 07 April 2015

Floodlight: LUMENFACADE · Lumcat: LOG-120-48-DWW 12XPE2-10x60-SI

Photometric Floodlight Characteristics

Nominal SSL Power	69.00 W	
Measured Input Voltage	121.48 V	Notes
Test SSL Current	0.0000 A	1) Floodlight tested in accordance to IES LM-35-1989 at a distance great enough so that the inverse-square law applies.
Floodlight Luminous Flux	2144	
Measured Input Power	53.06 W	
Floodlight Luminous Efficacy	40.4 lm/W	2) Field performance may differ from laboratory measurements.
Maximum Candela Value	9260	
Maximum Candela Location	0.0 H, -0.5 V	3) Results are valid for the tested material only.
Horizontal Beam Angle (50%)	67.0 °	
Vertical Beam Angle (50%)	9.5 °	4) All data published in this report are based on absolute photometry.
Horizontal Field Angle (10%)	97.0 °	
Vertical Field Angle (10%)	22.0 °	5) The original electronic file or paper report cannot be edited in whole or in part without written consent of Spectralux Industries Inc.
IES/NEMA Type Classification	5Hx2V	
Beam Lumens (50%)	1028	
Beam Efficiency (50%)	N/A	
Field Lumens (10%)	1789	
Field Efficiency (10%)	N/A	
Spill Lumens	354	
Total Floodlight Lumens	2144	
Total Floodlight Efficiency	N/A	



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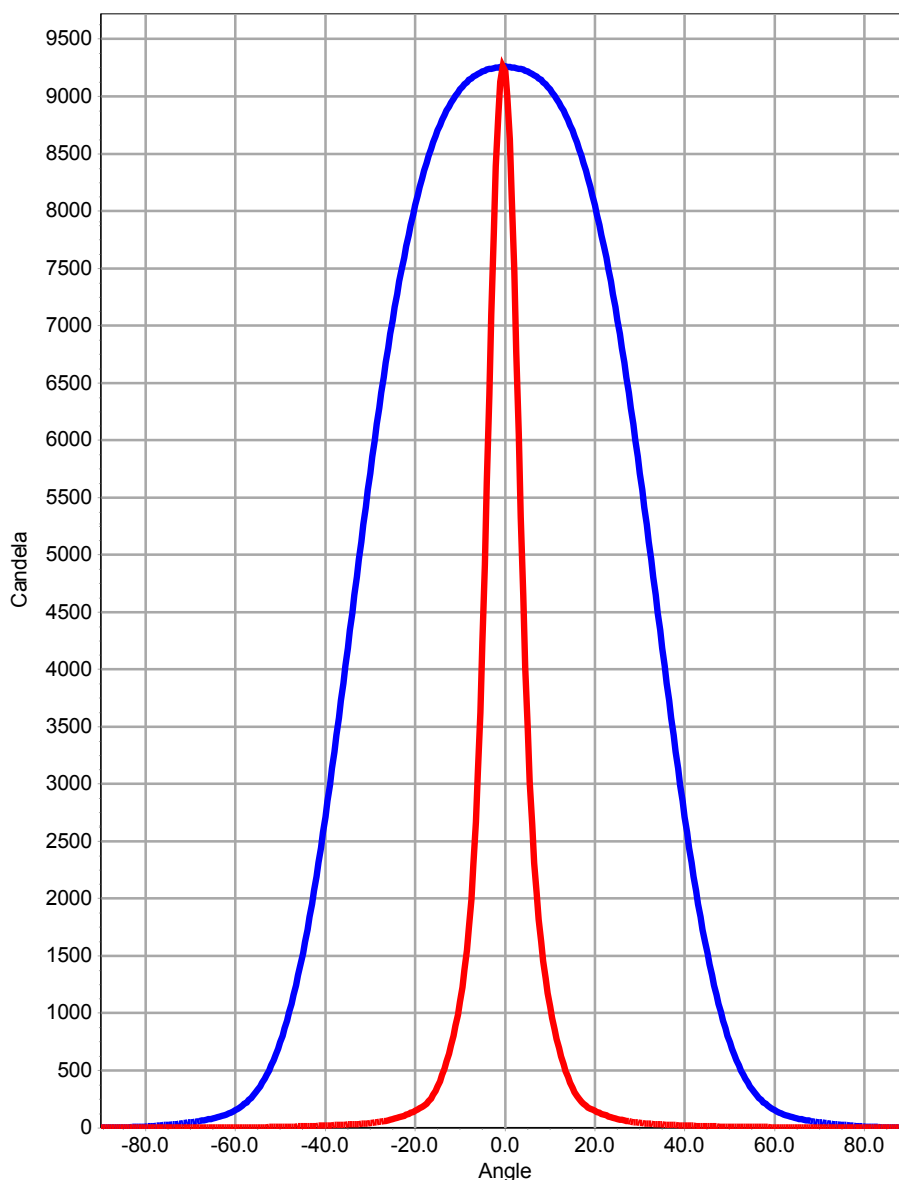
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Floodlight: LUMENFACADE · Lumcat: LOG-120-48-DWW 12XPE2-10x60-SI

Maximum Candela Trace (Max. Location: 0.0 H, -0.5 V)

Horizontal Angles	Candela
-90.0	2
-85.0	4
-80.0	11
-75.0	26
-70.0	47
-65.0	81
-60.0	154
-55.0	334
-50.0	744
-45.0	1522
-40.0	2712
-35.0	4185
-30.0	5711
-25.0	7046
-20.0	8052
-15.0	8703
-10.0	9060
-5.0	9218
0.0	9260
5.0	9218
10.0	9060
15.0	8703
20.0	8052
25.0	7046
30.0	5711
35.0	4185
40.0	2712
45.0	1522
50.0	744
55.0	334
60.0	154
65.0	81
70.0	47
75.0	26
80.0	11
85.0	4
90.0	2



Vertical Angles	Candela
-90.0	0
-85.0	0
-80.0	1
-75.0	1
-70.0	2
-65.0	2
-60.0	3
-55.0	4
-50.0	8
-45.0	13
-40.0	20
-35.0	28
-30.0	41
-25.0	75
-20.0	147
-15.0	360
-10.0	1099
-5.0	4223
0.0	9217
5.0	3483
10.0	1060
15.0	349
20.0	147
25.0	77
30.0	42
35.0	29
40.0	20
45.0	13
50.0	9
55.0	7
60.0	5
65.0	5
70.0	4
75.0	4
80.0	4
85.0	4
90.0	4

— Horizontal — Vertical



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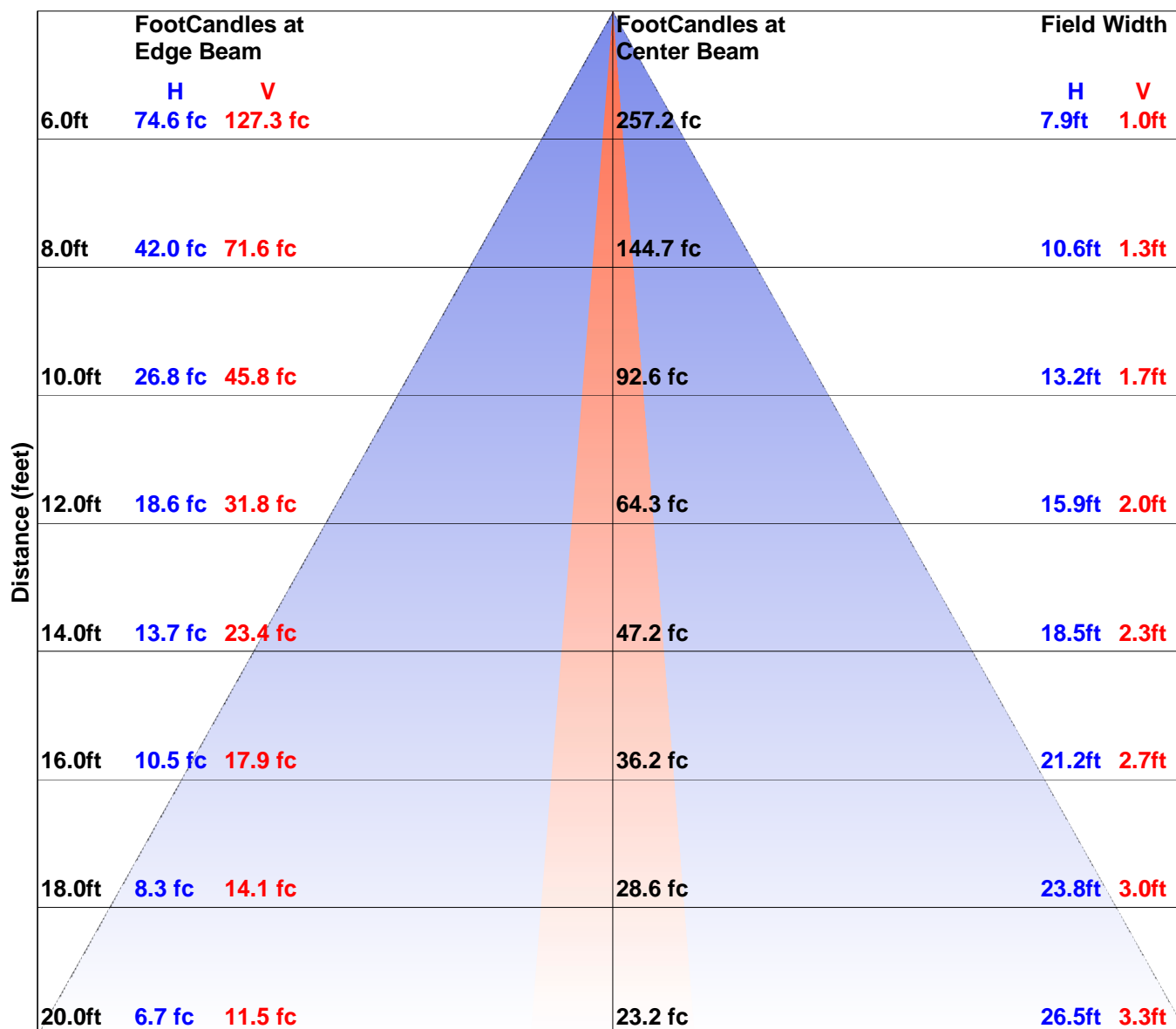
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Downlight Beam



— Horizontal (67.0 °) — Vertical (9.5 °)



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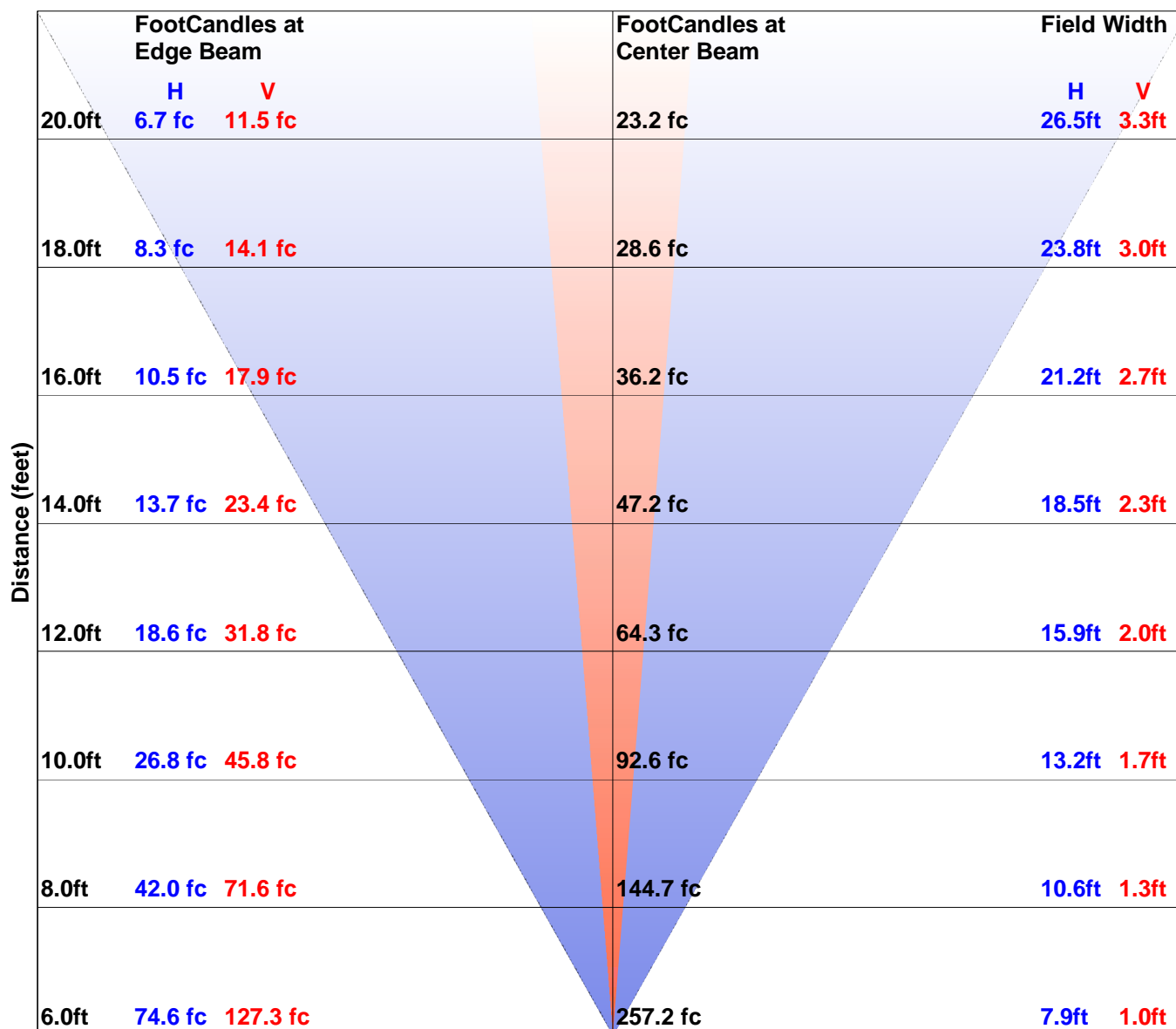
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Uplight Beam



— Horizontal (67.0 °) — Vertical (9.5 °)



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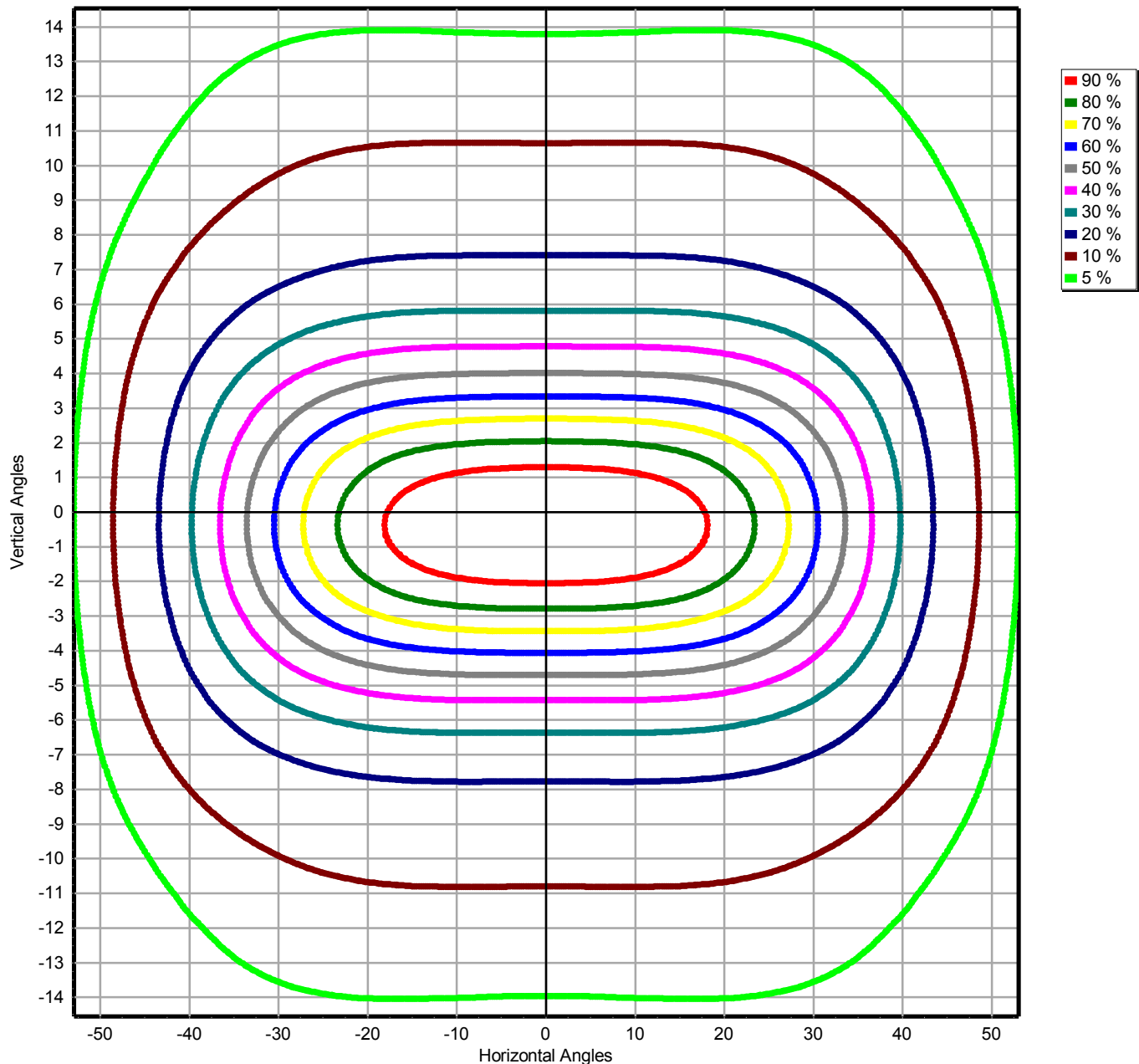
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ISO Candela Diagram





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IES File Headers

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IESNA:LM-63-2002
[ISSUEDATE] 07 April 2015
[TESTLAB] Spectra Lux Industries Inc.
[TEST] G1504072-R1
[MANUFAC] Lumenpulse
[LUMCAT] LOG-120-48-DWW 12XPE2-10x60-SI
[LUMINAIRE] LUMENFACADE
[LAMP] (CREE XPE2 LED's) White 69W SSL c/w MEAN WELL USA inc. Driver LPF-60-15 @ 120.00V
[_LAMPDETAILS] DC Voltage=15V, Current=4.6A, CCT=N/K, CRI=N/K, x=N/K, y=N/K
[_BURNING] Axial (2,144 Luminaire Lumens)
[_REFLECTOR] 48 Collimators
[_LENS] Clear Flat Glass C/W Diffuse Film
[_HOUSING] Extruded Aluminum
[_SKTPOSITION] None
[DISTRIBUTION] NEMA 5Hx2V (Max. CP at 0.0H,-0.5V)
[MORE] (Based on IES LM-35-1989)
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Candela Table

Horizontal Angles

	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
V e r t i c a l	-90.0	0	0	0	0	0	0	0	1
	-85.0	0	0	0	0	1	1	1	1
	-75.0	1	1	1	1	1	1	1	1
	-65.0	2	2	2	2	2	2	2	2
	-55.0	4	4	5	5	5	6	6	7
	-45.0	13	13	13	14	14	15	16	16
	-35.0	28	28	29	29	30	31	32	32
	-25.0	75	75	76	78	80	82	83	76
	-20.0	147	148	149	149	146	142	134	123
	-15.0	360	362	366	370	366	347	314	267
A n g l e s	-12.5	644	646	649	648	639	612	564	491
	-12.0	716	718	720	718	705	674	617	534
	-11.5	800	801	803	800	783	746	680	586
	-11.0	888	890	890	886	865	821	747	641
	-10.5	988	989	990	983	960	909	824	705
	-10.0	1099	1100	1100	1092	1064	1006	910	776
	-9.5	1226	1228	1228	1218	1187	1121	1013	861
	-9.0	1376	1378	1377	1366	1330	1255	1132	959
	-8.5	1548	1550	1551	1538	1497	1412	1271	1073
	-8.0	1745	1749	1749	1735	1687	1590	1432	1202
	-7.5	1991	1993	1996	1978	1924	1809	1619	1352
	-7.0	2297	2300	2300	2280	2214	2076	1844	1527
	-6.5	2665	2668	2671	2642	2559	2387	2107	1723
	-6.0	3096	3100	3096	3058	2950	2736	2392	1933
	-5.5	3619	3621	3615	3558	3417	3146	2726	2173
	-5.0	4223	4222	4203	4125	3937	3597	3083	2422
	-4.5	4914	4910	4879	4768	4526	4099	3475	2694
	-4.0	5640	5631	5579	5433	5127	4607	3863	2956
	-3.5	6391	6378	6311	6121	5748	5128	4263	3226
	-3.0	7104	7084	6991	6765	6321	5609	4623	3465
	-2.5	7812	7785	7676	7405	6895	6084	4986	3705
	-2.0	8389	8357	8227	7922	7355	6466	5271	3892
	-1.5	8834	8797	8656	8322	7713	6764	5499	4043
	-1.0	9130	9091	8934	8585	7944	6956	5639	4138
	-0.5	9260	9218	9060	8703	8052	7046	5711	4185



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Horizontal Angles

	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	
V e r t i c a l	0.0	9217	9173	9015	8662	8015	7018	5688	4172	2698
	0.5	8997	8956	8806	8469	7848	6883	5593	4110	2675
	1.0	8627	8588	8452	8139	7554	6642	5411	3995	2603
	1.5	8115	8083	7962	7685	7155	6316	5171	3837	2525
	2.0	7477	7449	7352	7113	6646	5895	4857	3635	2407
	2.5	6768	6746	6666	6474	6081	5428	4509	3406	2289
	3.0	6054	6040	5982	5828	5500	4943	4142	3164	2147
	3.5	5331	5321	5280	5166	4905	4442	3760	2906	2007
	4.0	4641	4636	4612	4527	4321	3947	3375	2644	1849
	4.5	4017	4013	3997	3940	3782	3482	3009	2388	1703
	5.0	3483	3483	3475	3432	3308	3065	2673	2149	1554
	5.5	3021	3021	3016	2987	2888	2691	2367	1922	1416
	6.0	2644	2645	2643	2618	2538	2373	2100	1724	1286
	6.5	2311	2312	2308	2290	2223	2085	1856	1537	1163
	7.0	2039	2041	2038	2020	1962	1845	1646	1376	1048
	7.5	1816	1816	1814	1799	1751	1648	1475	1237	952
	8.0	1621	1621	1620	1606	1562	1475	1325	1114	862
	8.5	1453	1454	1452	1441	1402	1323	1190	1003	783
	9.0	1306	1307	1306	1296	1263	1193	1075	910	712
A n g l e s	9.5	1174	1175	1175	1167	1138	1077	974	826	651
	10.0	1060	1061	1062	1055	1031	977	886	755	597
	10.5	956	957	958	954	933	888	807	691	550
	11.0	860	861	863	860	844	805	734	632	505
	11.5	772	773	776	775	762	729	668	578	466
	12.0	696	698	701	701	692	664	611	532	431
	12.5	624	626	629	632	625	603	558	488	399
	15.0	349	350	355	361	364	360	344	314	269
	20.0	147	148	149	150	151	149	144	135	124
	25.0	77	77	78	80	82	84	85	83	77
	35.0	29	29	29	30	31	32	33	34	34
45.0	13	14	14	14	15	15	16	16	17	
55.0	7	7	7	7	7	8	8	9	9	
65.0	5	5	5	5	5	5	5	5	5	
75.0	4	4	4	4	4	4	4	4	3	
85.0	4	5	5	5	5	5	5	5	4	
90.0	4	4	4	4	4	4	4	4	4	



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Horizontal Angles

	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
V e r t i c a l A n g l e s	-90.0	1	1	1	1	1	1	1	2
	-85.0	1	1	1	1	1	1	1	1
	-75.0	1	1	1	1	1	2	2	2
	-65.0	3	3	3	3	2	2	2	2
	-55.0	7	8	8	7	6	4	3	2
	-45.0	16	16	15	14	12	8	5	2
	-35.0	31	29	27	24	21	12	7	3
	-25.0	68	59	50	42	34	26	9	3
	-20.0	108	91	73	57	43	20	10	3
	-15.0	212	157	112	78	55	38	10	3
	-12.5	301	211	142	94	62	41	24	3
	-12.0	323	225	149	97	64	41	24	3
	-11.5	350	241	157	100	65	42	24	3
	-11.0	377	258	165	104	66	42	24	3
	-10.5	411	277	175	107	67	42	24	3
	-10.0	446	297	184	111	69	43	24	3
	-9.5	489	320	194	114	70	43	25	3
	-9.0	535	345	204	118	71	44	25	3
	-8.5	587	371	215	121	72	44	25	3
	-8.0	643	399	225	125	73	44	25	3
	-7.5	704	427	236	128	74	45	25	3
	-7.0	770	457	246	131	75	45	25	3
	-6.5	841	487	257	134	76	45	25	3
	-6.0	910	516	265	136	77	46	25	3
	-5.5	986	546	276	139	77	46	25	4
	-5.0	1058	575	284	141	78	46	25	3
	-4.5	1135	603	293	144	79	46	26	4
	-4.0	1205	631	300	146	79	47	26	3
	-3.5	1277	655	308	147	80	47	26	4
	-3.0	1335	678	314	149	80	47	26	4
	-2.5	1400	699	320	150	81	47	26	4
	-2.0	1443	718	325	152	81	47	26	4
	-1.5	1484	730	329	153	81	47	26	4
	-1.0	1506	740	331	153	81	47	26	3
	-0.5	1522	744	334	154	81	47	26	4
	0.0	1518	744	333	154	81	47	26	3
	0.5	1507	740	333	154	82	47	26	4
	1.0	1477	732	330	153	81	47	26	3
	1.5	1443	719	328	153	81	47	26	3
	2.0	1391	703	322	152	81	47	26	3
	2.5	1341	683	318	150	81	47	26	3
	3.0	1275	662	311	149	80	47	26	3
	3.5	1213	637	305	147	80	47	26	3
	4.0	1139	611	297	145	79	47	25	3
	4.5	1068	583	289	143	79	46	25	3
	5.0	993	555	280	141	78	46	25	3
	5.5	922	525	271	138	77	46	25	3
	6.0	851	496	260	135	76	46	25	3
	6.5	783	465	251	132	75	45	25	3
	7.0	717	436	239	129	74	45	25	3
	7.5	660	408	230	126	73	44	25	3
	8.0	604	380	219	122	72	44	25	3
	8.5	555	354	209	119	71	44	24	3
	9.0	509	331	198	115	70	43	24	3



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Horizontal Angles

	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	
V e r t i c a l	9.5	469	308	188	112	69	43	24	11	3
	10.0	433	288	179	108	67	42	24	11	3
	10.5	402	270	170	105	66	42	24	10	3
	11.0	372	253	161	101	65	41	24	10	3
	11.5	346	237	154	98	63	41	23	10	3
	12.0	322	223	146	94	62	40	23	10	3
	12.5	301	211	140	91	61	40	23	10	3
	15.0	214	158	111	77	54	37	22	10	3
	20.0	109	91	72	55	42	30	19	9	3
	25.0	69	59	49	41	32	24	16	8	3
	35.0	33	31	28	24	20	16	11	6	2
	45.0	17	17	16	15	13	10	7	4	2
	55.0	10	10	10	10	9	8	6	5	4
	65.0	5	5	5	5	5	5	5	5	5
	75.0	3	3	3	3	3	3	3	3	3
	85.0	4	4	4	4	4	4	4	4	5
	90.0	4	3	3	3	3	4	4	5	8

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Horizontal Angles

	90.0
V e r t i c a l A n g l e s	-90.0 1
	-85.0 1
	-75.0 1
	-65.0 2
	-55.0 1
	-45.0 2
	-35.0 2
	-25.0 2
	-20.0 2
	-15.0 2
	-12.5 2
	-12.0 2
	-11.5 2
	-11.0 2
	-10.5 2
	-10.0 2
	-9.5 2
	-9.0 2
	-8.5 2
	-8.0 2
	-7.5 2
	-7.0 2
	-6.5 2
	-6.0 2
	-5.5 2
	-5.0 2
	-4.5 2
	-4.0 2
	-3.5 2
	-3.0 2
	-2.5 2
	-2.0 2
	-1.5 2
	-1.0 2
	-0.5 2
	0.0 2
	0.5 2
	1.0 2
	1.5 2
	2.0 2
	2.5 2
	3.0 2
	3.5 2
	4.0 2
	4.5 2
	5.0 2
	5.5 2
	6.0 2
	6.5 2
	7.0 2
	7.5 2
	8.0 2
	8.5 2
	9.0 2



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ISO/IEC 17025



NVLAP LAB CODE: 200899-0

Horizontal Angles

90.0	
V e r t i c a l A n g l e s	9.5
	10.0
	10.5
	11.0
	11.5
	12.0
	12.5
	15.0
	20.0
	25.0
	35.0
	45.0
	55.0
	65.0
	75.0
	85.0
	90.0
	2
	2
	2
	2
	2
	2
	2
	2
	2
	2
	2
	2
	2
	4
	5
	3
	2
	1