



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
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	G1504091-R1	Description	69W White SSL	Type Commercial
Test Date	9 April 2015	Serial Number	SRIS 1880	Description 69SSL-CY807
Report Date	15 April 2015	Photometric Method	Absolute	Manufacturer MEAN WELL USA inc.
Ambient	24.2 °C	Lamp Lumens	-1	Catalog No. LPF-60-15
Humidity	19.2 %	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-DWH 12XPE2-10x60-SI	Lens	Clear Flat Glass C/W Diffuse Film	Z 0.1667

SKT Position: None

Lamp Stabilization Time: 60 minutes, 43 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: G1504091-R1

Prepared for: Lumenpulse · Test Date: 09 April 2015

Floodlight: LUMENFACADE · Lumcat: LOG-120-48-DWH 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	2599	
Measured Input Power	52.54 W	
Floodlight Luminous Efficacy	49.5 lm/W	2) Field performance may differ from laboratory measurements.
Maximum Candela Value	11696	
Maximum Candela Location	0.0 H, -0.5 V	3) Results are valid for the tested material only.
Horizontal Beam Angle (50%)	66.0 °	
Vertical Beam Angle (50%)	9.0 °	4) All data published in this report are based on absolute photometry.
Horizontal Field Angle (10%)	96.0 °	
Vertical Field Angle (10%)	21.0 °	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%)	1270	
Beam Efficiency (50%)	N/A	
Field Lumens (10%)	2167	
Field Efficiency (10%)	N/A	
Spill Lumens	432	
Total Floodlight Lumens	2599	
Total Floodlight Efficiency	N/A	



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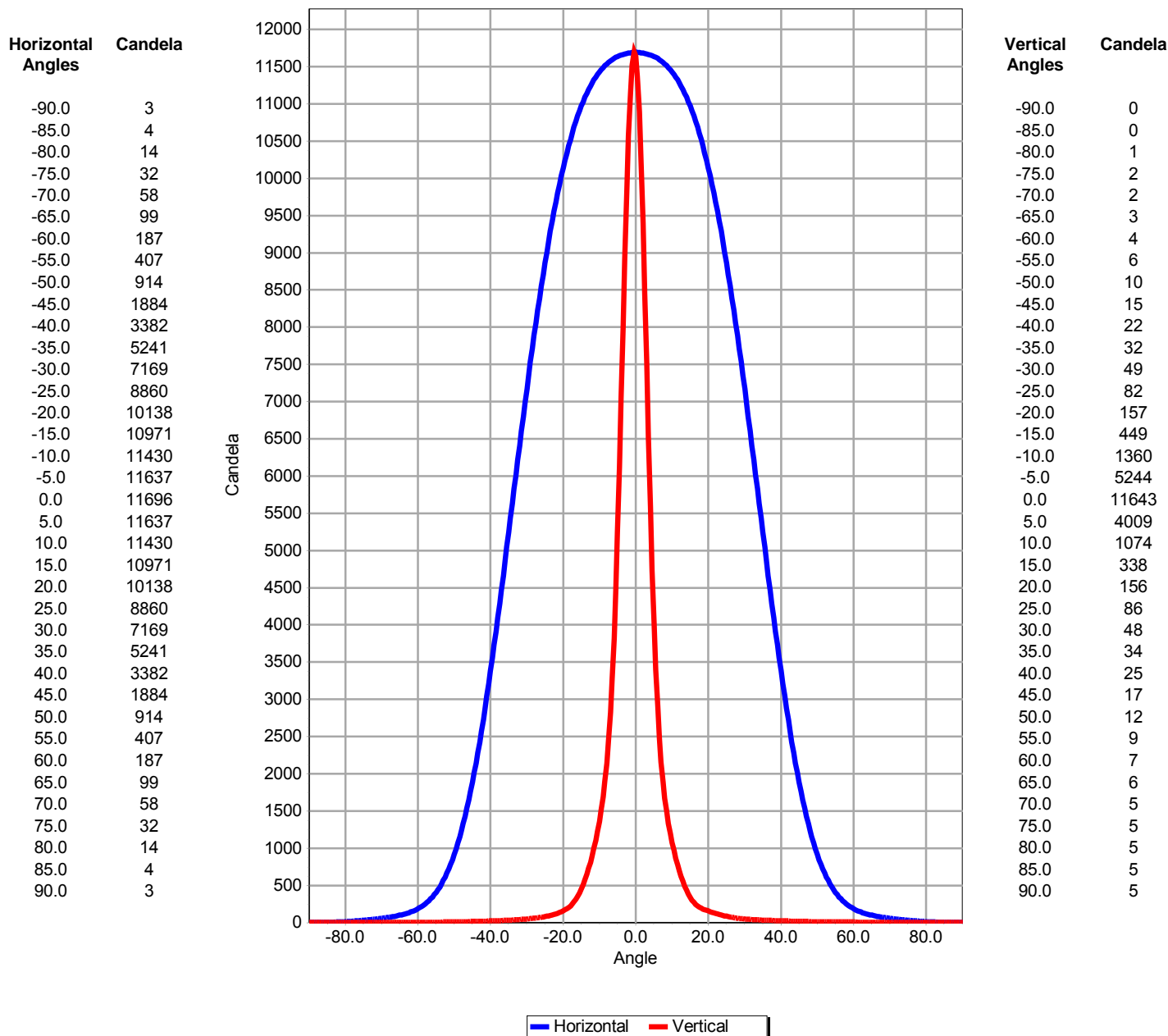
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Maximum Candela Trace (Max. Location: 0.0 H, -0.5 V)





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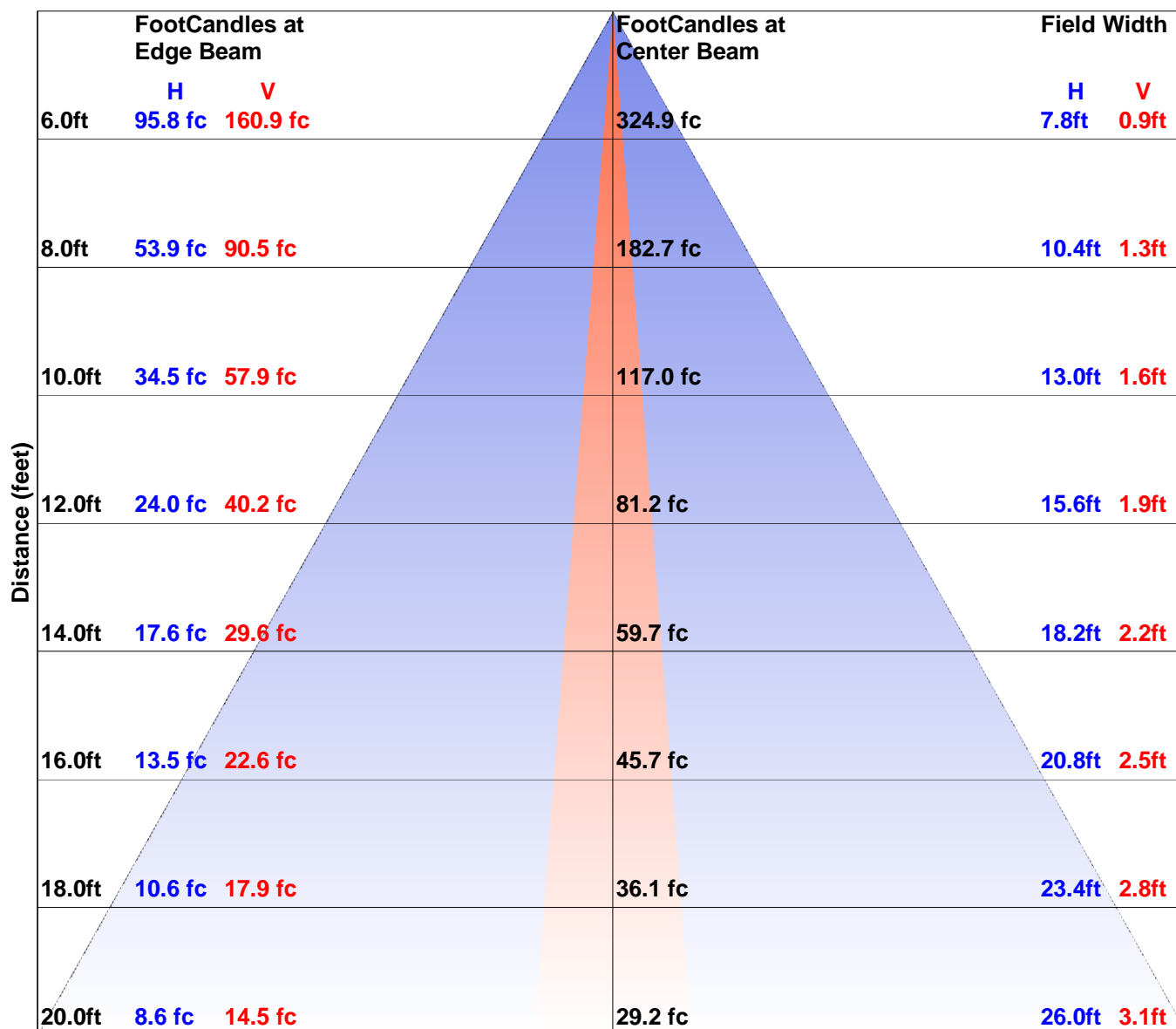
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Floodlight: LUMENFACADE · Lumcat: LOG-120-48-DWH 12XPE2-10x60-SI

Downlight Beam



— Horizontal (66.0 °) — Vertical (9.0 °)



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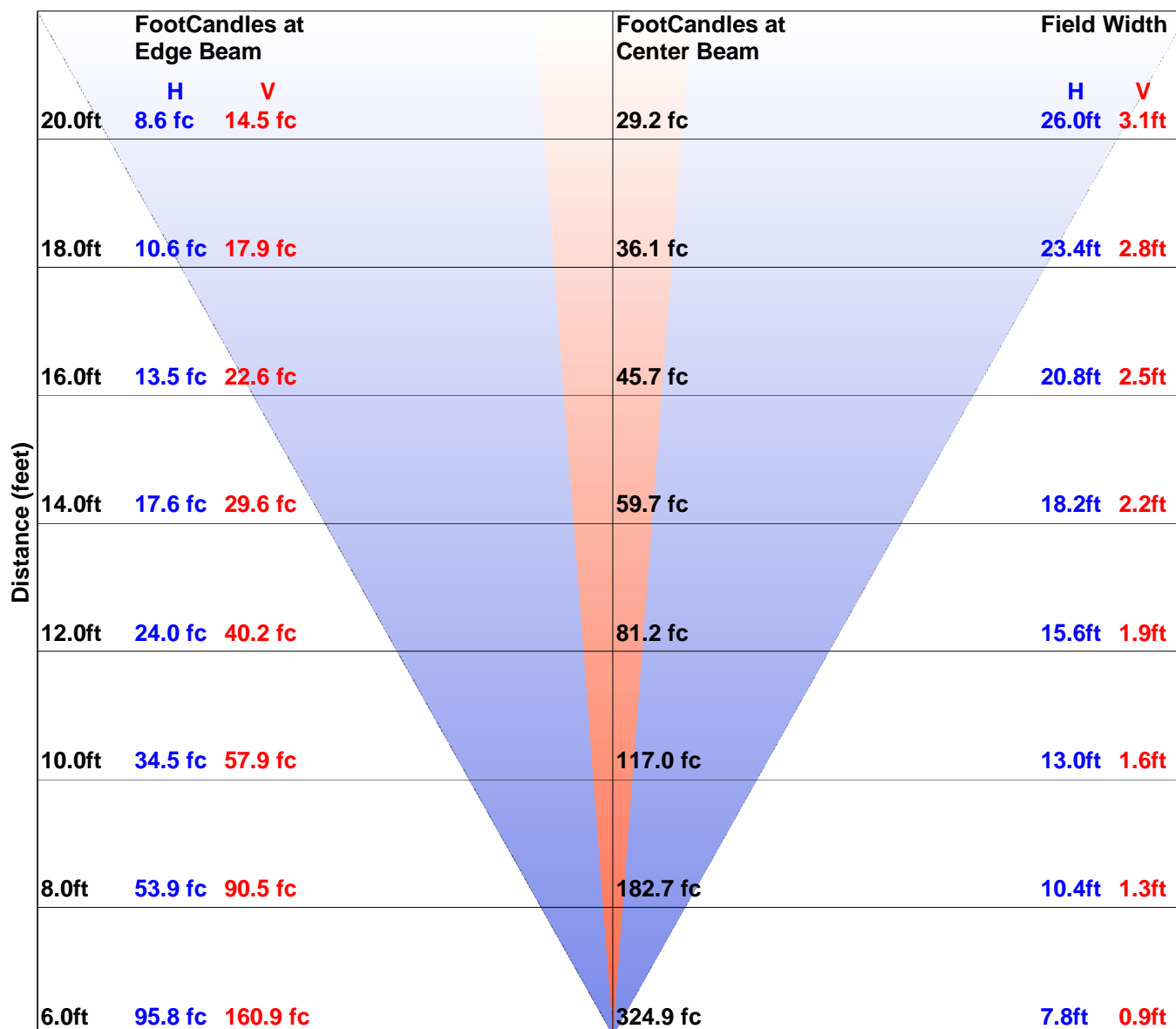
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Prepared for: Lumenpulse · Test Date: 09 April 2015

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

Uplight Beam



— Horizontal (66.0 °) — Vertical (9.0 °)



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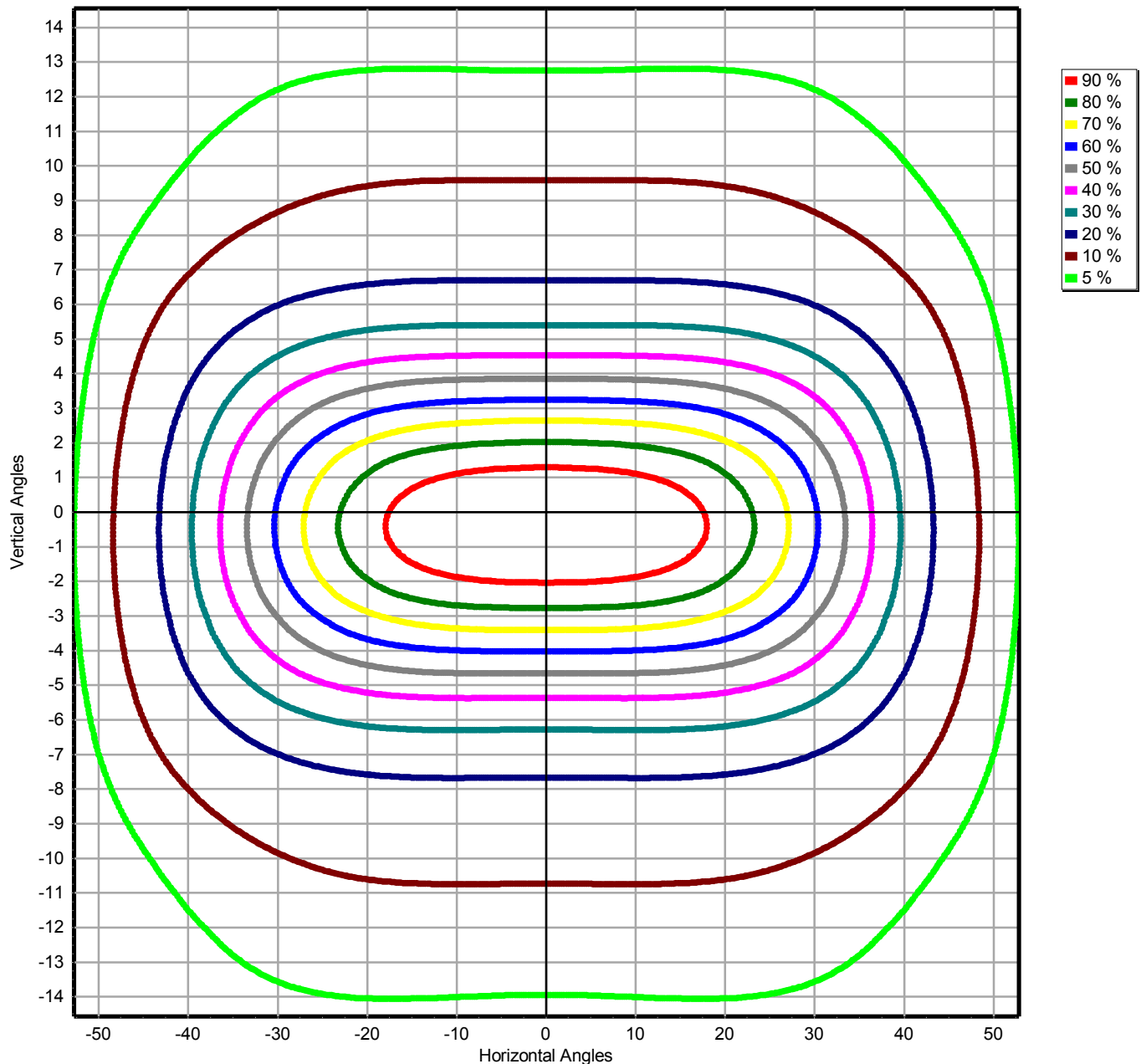
NVLAP LAB CODE: 200899-0

Photometric Report: G1504091-R1

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

ISO Candela Diagram





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IES File Headers

IESNA:LM-63-2002
[ISSUEDATE] 09 April 2015
[TESTLAB] Spectra Lux Industries Inc.
[TEST] G1504091-R1
[MANUFAC] Lumenpulse
[LUMCAT] LOG-120-48-DWH 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 (2,599 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)

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	2	2	2	2	1	1	1	1
	-65.0	3	3	3	3	3	3	3	3
	-55.0	6	6	6	7	7	7	8	9
	-45.0	15	15	15	16	17	18	18	19
	-35.0	32	32	33	34	35	36	37	37
	-25.0	82	82	83	85	88	90	91	85
	-20.0	157	158	159	160	161	160	155	146
	-15.0	449	452	459	467	471	465	441	335
	-12.5	809	811	816	816	805	771	708	497
	-12.0	897	899	902	901	886	845	773	536
	-11.5	999	1000	1004	1000	980	933	850	585
	-11.0	1106	1108	1110	1105	1081	1026	932	636
	-10.5	1226	1228	1231	1223	1195	1132	1027	697
	-10.0	1360	1362	1363	1354	1322	1251	1132	764
	-9.5	1515	1517	1519	1508	1472	1393	1260	847
	-9.0	1688	1692	1692	1682	1642	1556	1407	939
A n g l e s	-8.5	1899	1901	1905	1893	1849	1749	1584	1050
	-8.0	2142	2148	2152	2140	2092	1979	1785	1169
	-7.5	2444	2448	2458	2445	2390	2261	2035	1312
	-7.0	2823	2829	2837	2825	2760	2605	2331	1464
	-6.5	3275	3283	3296	3278	3197	3006	2672	1635
	-6.0	3823	3831	3839	3815	3706	3463	3051	1810
	-5.5	4476	4484	4493	4447	4302	3991	3481	2004
	-5.0	5244	5252	5245	5177	4975	4575	3941	2193
	-4.5	6126	6129	6112	6002	5730	5222	4449	2400
	-4.0	7052	7048	7002	6848	6495	5867	4940	2582
	-3.5	8012	8001	7936	7722	7281	6523	5441	2774
	-3.0	8928	8907	8806	8541	8006	7124	5887	2928
	-2.5	9833	9803	9677	9350	8725	7715	6331	3096
	-2.0	10574	10533	10372	10000	9291	8179	6669	3208
	-1.5	11139	11092	10914	10498	9731	8535	6938	3310
	-1.0	11523	11468	11268	10825	10011	8761	7096	3353
	-0.5	11696	11637	11430	10971	10138	8860	7169	3382



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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	11643	11584	11372	10914	10079	8806	7119	5206	3350
	0.5	11367	11308	11105	10662	9856	8616	6978	5107	3303
	1.0	10894	10840	10649	10234	9469	8294	6728	4942	3199
	1.5	10237	10188	10016	9645	8949	7861	6404	4722	3083
	2.0	9397	9355	9214	8892	8274	7302	5980	4444	2917
	2.5	8459	8425	8308	8048	7527	6680	5515	4132	2752
	3.0	7508	7483	7398	7187	6756	6038	5026	3810	2562
	3.5	6524	6506	6444	6295	5953	5366	4515	3464	2372
	4.0	5587	5577	5543	5433	5173	4704	4003	3120	2167
	4.5	4731	4727	4705	4636	4444	4079	3516	2778	1972
	5.0	4009	4008	4000	3952	3809	3526	3072	2466	1777
	5.5	3395	3395	3390	3360	3254	3033	2670	2170	1598
	6.0	2901	2902	2902	2879	2796	2619	2324	1913	1429
	6.5	2481	2481	2479	2461	2394	2251	2010	1670	1273
	7.0	2152	2153	2151	2135	2076	1954	1752	1469	1129
	7.5	1891	1891	1888	1873	1821	1716	1543	1300	1009
	8.0	1671	1672	1670	1654	1608	1517	1364	1154	900
	8.5	1489	1489	1486	1473	1431	1349	1214	1027	807
	9.0	1330	1331	1329	1317	1280	1207	1087	922	726
A n g l e s	9.5	1193	1193	1192	1182	1150	1085	980	832	659
	10.0	1074	1074	1074	1066	1038	982	888	757	600
	10.5	966	967	967	961	938	890	807	690	551
	11.0	866	867	869	864	846	804	733	629	504
	11.5	775	776	778	777	762	728	666	574	464
	12.0	697	698	701	701	690	661	608	528	428
	12.5	621	622	626	628	620	598	553	483	396
	15.0	338	340	344	349	352	349	335	307	264
	20.0	156	156	157	157	156	152	146	137	125
	25.0	86	86	87	89	90	92	93	90	84
	35.0	34	34	34	35	36	37	38	39	39
	45.0	17	17	18	18	18	19	19	20	20
	55.0	9	9	9	9	9	10	11	11	12
	65.0	6	6	6	6	6	6	6	6	6
	75.0	5	5	5	5	5	5	5	5	4
	85.0	5	6	6	6	6	6	6	6	5
	90.0	5	5	5	5	5	5	5	5	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	1
	-85.0	1	1	1	1	1	1	1	1
	-75.0	1	1	1	1	1	2	1	1
	-65.0	3	4	4	3	3	3	2	2
	-55.0	9	9	9	9	8	7	5	3
	-45.0	19	19	18	17	15	13	10	6
	-35.0	37	35	32	29	25	21	15	9
	-25.0	77	68	60	51	42	32	22	11
	-20.0	131	111	90	70	53	39	25	12
	-15.0	263	194	137	97	69	47	28	13
	-12.5	373	262	176	116	78	51	29	13
	-12.0	400	279	185	121	79	51	30	13
	-11.5	433	299	196	125	81	52	30	13
	-11.0	469	321	207	130	83	53	30	13
	-10.5	511	345	219	134	84	53	30	13
	-10.0	557	373	231	139	86	54	30	13
	-9.5	612	403	245	143	87	54	31	13
	-9.0	673	437	258	148	89	55	31	14
	-8.5	743	471	272	152	90	55	31	14
	-8.0	815	508	285	156	91	56	31	14
	-7.5	898	545	299	160	92	56	31	14
	-7.0	987	585	312	164	94	56	31	14
	-6.5	1079	623	325	167	95	57	32	14
	-6.0	1170	661	336	171	95	57	32	14
	-5.5	1265	696	348	173	96	57	32	14
	-5.0	1355	733	357	176	97	58	32	14
	-4.5	1454	767	368	179	98	58	32	14
	-4.0	1536	799	376	181	98	58	32	14
	-3.5	1621	827	385	182	99	58	32	14
	-3.0	1693	854	391	184	99	58	32	14
	-2.5	1762	876	398	185	99	58	32	14
	-2.0	1815	896	401	186	99	58	32	14
	-1.5	1855	906	406	187	100	58	32	14
	-1.0	1875	916	406	187	100	58	32	14
	-0.5	1884	914	407	187	99	58	32	14
	0.0	1869	910	404	186	99	58	32	14
	0.5	1844	898	401	185	99	58	32	14
	1.0	1799	884	395	184	99	58	32	14
	1.5	1743	861	390	182	98	58	32	14
	2.0	1670	835	382	180	98	58	32	14
	2.5	1591	806	374	178	97	57	32	14
	3.0	1507	776	364	176	96	57	31	14
	3.5	1421	742	355	173	95	57	31	14
	4.0	1322	707	344	170	94	56	31	14
	4.5	1231	670	333	167	94	56	31	13
	5.0	1134	634	321	164	93	56	31	13
	5.5	1042	595	309	160	91	55	31	13
	6.0	951	558	296	157	90	55	31	13
	6.5	863	518	284	153	89	54	30	13
	7.0	780	481	270	149	88	54	30	13
	7.5	708	446	257	145	86	53	30	13
	8.0	640	412	243	140	85	53	30	13
	8.5	580	379	230	136	83	52	30	13
	9.0	526	350	217	131	82	52	29	13



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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	481	324	205	127	80	51	29	13	4
	10.0	441	301	193	122	79	50	29	13	4
	10.5	407	280	183	118	77	50	29	13	4
	11.0	375	261	173	114	75	49	28	13	4
	11.5	348	244	164	109	74	48	28	13	4
	12.0	324	230	156	105	72	48	28	13	4
	12.5	302	216	149	102	70	47	28	12	4
	15.0	213	162	118	85	62	43	26	12	4
	20.0	111	95	78	62	48	35	23	11	4
	25.0	75	65	55	46	37	29	19	10	3
	35.0	38	36	32	28	23	18	13	7	3
	45.0	20	20	19	18	15	12	9	5	3
	55.0	12	12	12	12	11	10	8	6	5
	65.0	7	7	6	6	6	6	6	6	6
	75.0	4	4	4	4	4	4	4	4	4
85.0	5	5	5	5	5	5	5	5	6	
90.0	4	4	4	4	4	4	5	6	10	
A n g l e s										



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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 3
	-25.0 3
	-20.0 3
	-15.0 3
	-12.5 3
	-12.0 3
	-11.5 3
	-11.0 3
	-10.5 3
	-10.0 3
	-9.5 3
	-9.0 3
	-8.5 3
	-8.0 3
	-7.5 3
	-7.0 3
	-6.5 3
	-6.0 3
	-5.5 3
	-5.0 3
	-4.5 3
	-4.0 3
	-3.5 3
	-3.0 3
	-2.5 3
	-2.0 3
	-1.5 3
	-1.0 3
	-0.5 3
	0.0 3
	0.5 3
	1.0 3
	1.5 3
	2.0 3
	2.5 3
	3.0 3
	3.5 3
	4.0 3
	4.5 3
	5.0 3
	5.5 3
	6.0 3
	6.5 3
	7.0 3
	7.5 3
	8.0 3
	8.5 3
	9.0 3



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	90.0
	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
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