



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	G1504203-R1	Description	69W White SSL	Type Commercial
Test Date	20 April 2015	Serial Number	SRIS 1902	Description 69SSL-CY807
Report Date	24 April 2015	Photometric Method	Absolute	Manufacturer MEAN WELL USA inc.
Ambient	24.4 °C	Lamp Lumens	-1	Catalog No. LPF-60-15
Humidity	24.6 %	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-DWH-1FT-WWLF-SI	Lens	Clear Flat Glass C/W Diffuse Film	Z 0.1667

SKT Position: None

Lamp Stabilization Time: 59 minutes, 42 seconds

Tested By: Jean-Paul Ojeil

Approved Signatory: Chrisnel Blot

Signature:



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

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).





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

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	2015/04/15	2016/04/16
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



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

Photometric Report: G1504203-R1

Prepared for: Lumenpulse · Test Date: 20 April 2015

Floodlight: LUMENFACADE · Lumcat: LOG-120-48-DWH-1FT-WWLF-SI

Photometric Floodlight Characteristics

Nominal SSL Power	69.00 W	
Measured Input Voltage	121.40 V	Notes
Test SSL Current	0.0000 A	
Floodlight Luminous Flux	2333	1) Floodlight tested in accordance to IES LM-35-1989 at a distance great enough so that the inverse-square law applies.
Measured Input Power	57.30 W	
Floodlight Luminous Efficacy	40.7 lm/W	2) Field performance may differ from laboratory measurements.
Maximum Candela Value	3501	
Maximum Candela Location	0.0 H, 3.0 V	3) Results are valid for the tested material only.
Horizontal Beam Angle (50%)	81.0 °	
Vertical Beam Angle (50%)	19.0 °	4) All data published in this report are based on absolute photometry.
Horizontal Field Angle (10%)	127.0 °	
Vertical Field Angle (10%)	56.0 °	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	6Hx4V	
Beam Lumens (50%)	913	
Beam Efficiency (50%)	N/A	
Field Lumens (10%)	1916	
Field Efficiency (10%)	N/A	
Spill Lumens	417	
Total Floodlight Lumens	2333	
Total Floodlight Efficiency	N/A	



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

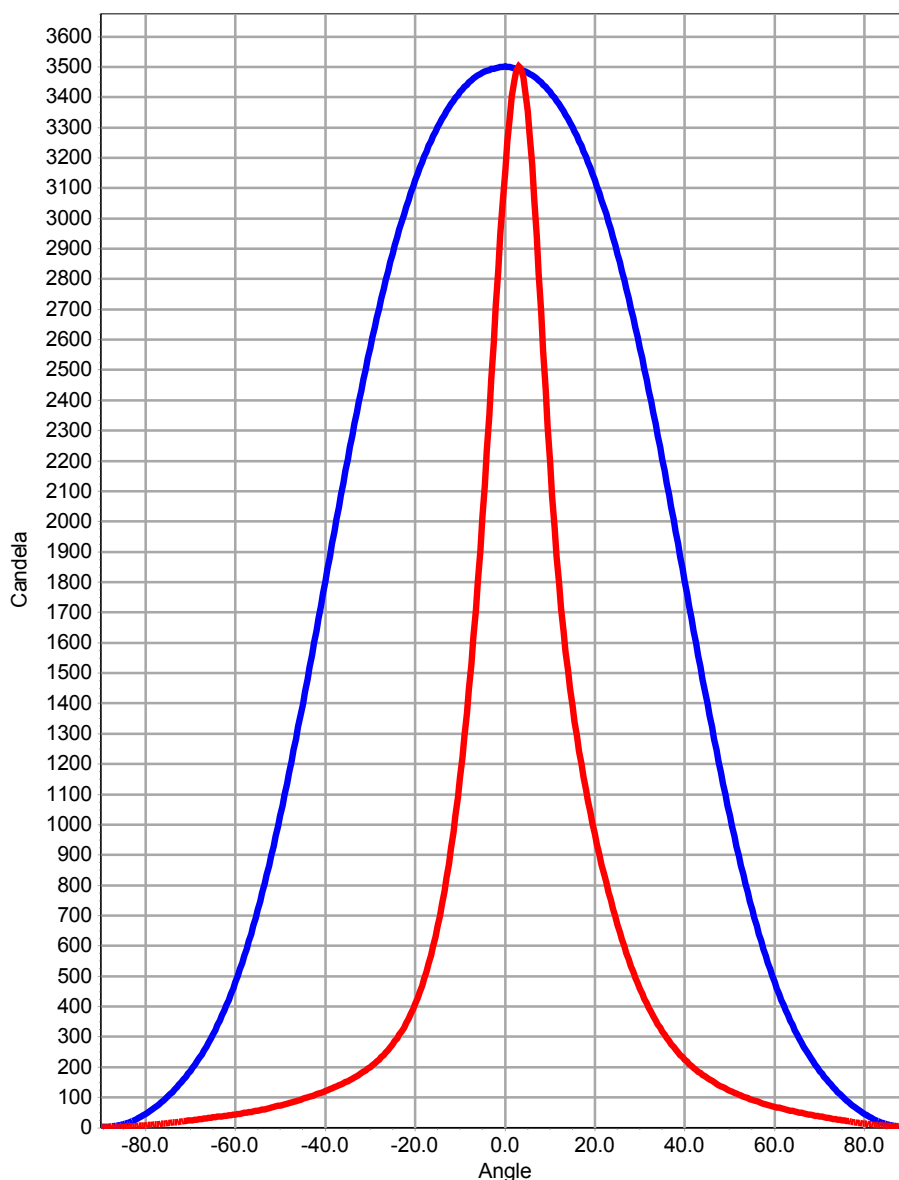
Photometric Report: G1504203-R1

Prepared for: Lumenpulse · Test Date: 20 April 2015

Floodlight: LUMENFACADE · Lumcat: LOG-120-48-DWH-1FT-WWLF-SI

Maximum Candela Trace (Max. Location: 0.0 H, 3.0 V)

Horizontal Angles	Candela
-90.0	3
-85.0	11
-80.0	46
-75.0	103
-70.0	187
-65.0	308
-60.0	480
-55.0	719
-50.0	1029
-45.0	1400
-40.0	1803
-35.0	2206
-30.0	2573
-25.0	2883
-20.0	3126
-15.0	3301
-10.0	3417
-5.0	3481
0.0	3501
5.0	3481
10.0	3417
15.0	3301
20.0	3126
25.0	2883
30.0	2573
35.0	2206
40.0	1803
45.0	1400
50.0	1029
55.0	719
60.0	480
65.0	308
70.0	187
75.0	103
80.0	46
85.0	11
90.0	3



Vertical Angles	Candela
-90.0	1
-85.0	4
-80.0	8
-75.0	15
-70.0	24
-65.0	34
-60.0	44
-55.0	57
-50.0	74
-45.0	95
-40.0	121
-35.0	154
-30.0	201
-25.0	275
-20.0	409
-15.0	664
-10.0	1153
-5.0	2011
0.0	3159
5.0	3355
10.0	2195
15.0	1393
20.0	968
25.0	670
30.0	459
35.0	318
40.0	225
45.0	164
50.0	122
55.0	92
60.0	69
65.0	52
70.0	37
75.0	25
80.0	14
85.0	7
90.0	4

— Horizontal — Vertical



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



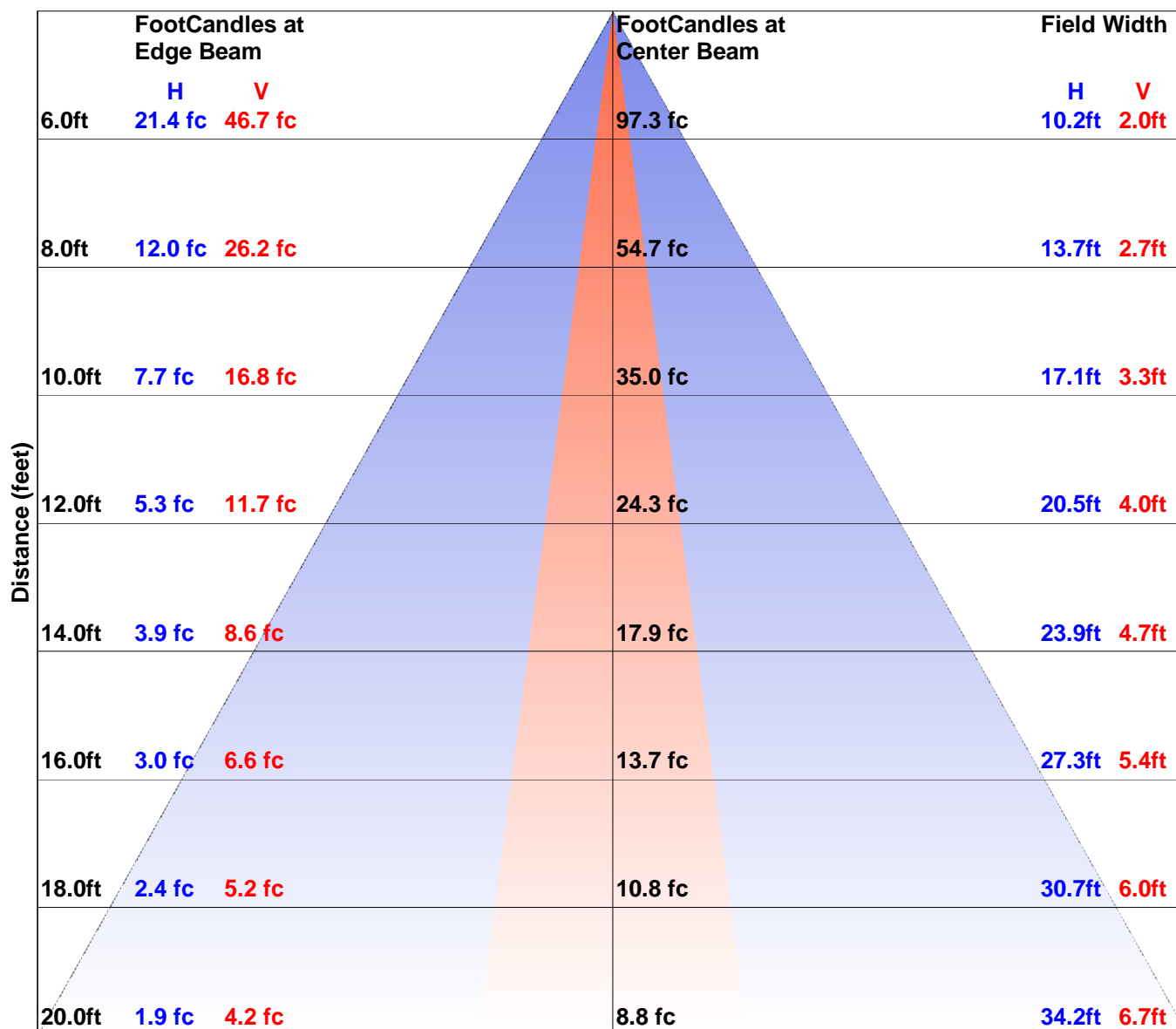
NVLAP LAB CODE: 200899-0

Photometric Report: G1504203-R1

Prepared for: Lumenpulse · Test Date: 20 April 2015

Floodlight: LUMENFACADE · Lumcat: LOG-120-48-DWH-1FT-WWLF-SI

Downlight Beam



— Horizontal (81.0 °) — Vertical (19.0 °)



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



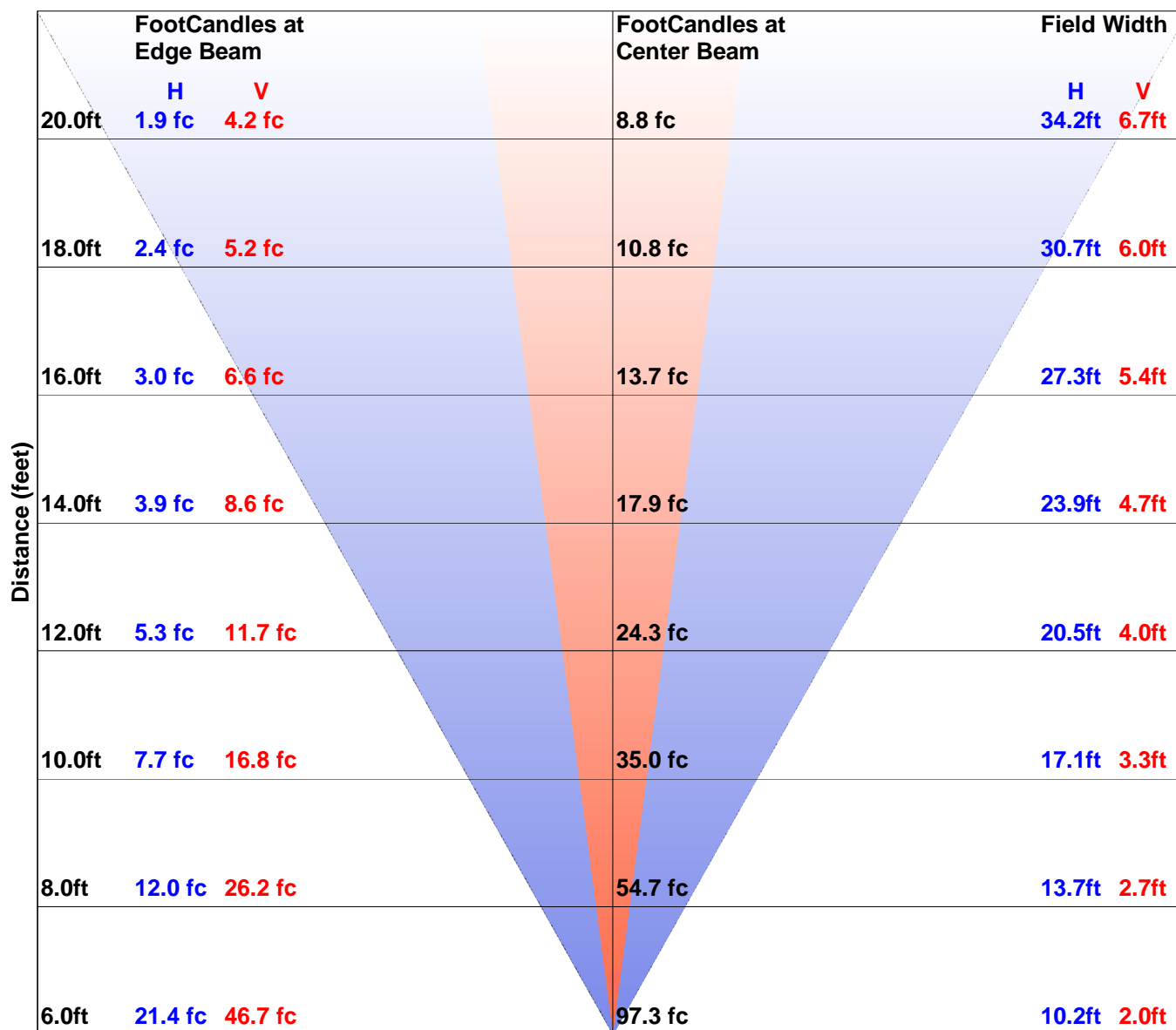
NVLAP LAB CODE: 200899-0

Photometric Report: G1504203-R1

Prepared for: Lumenpulse · Test Date: 20 April 2015

Floodlight: LUMENFACADE · Lumcat: LOG-120-48-DWH-1FT-WWLF-SI

Uplight Beam



— Horizontal (81.0 °) — Vertical (19.0 °)



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



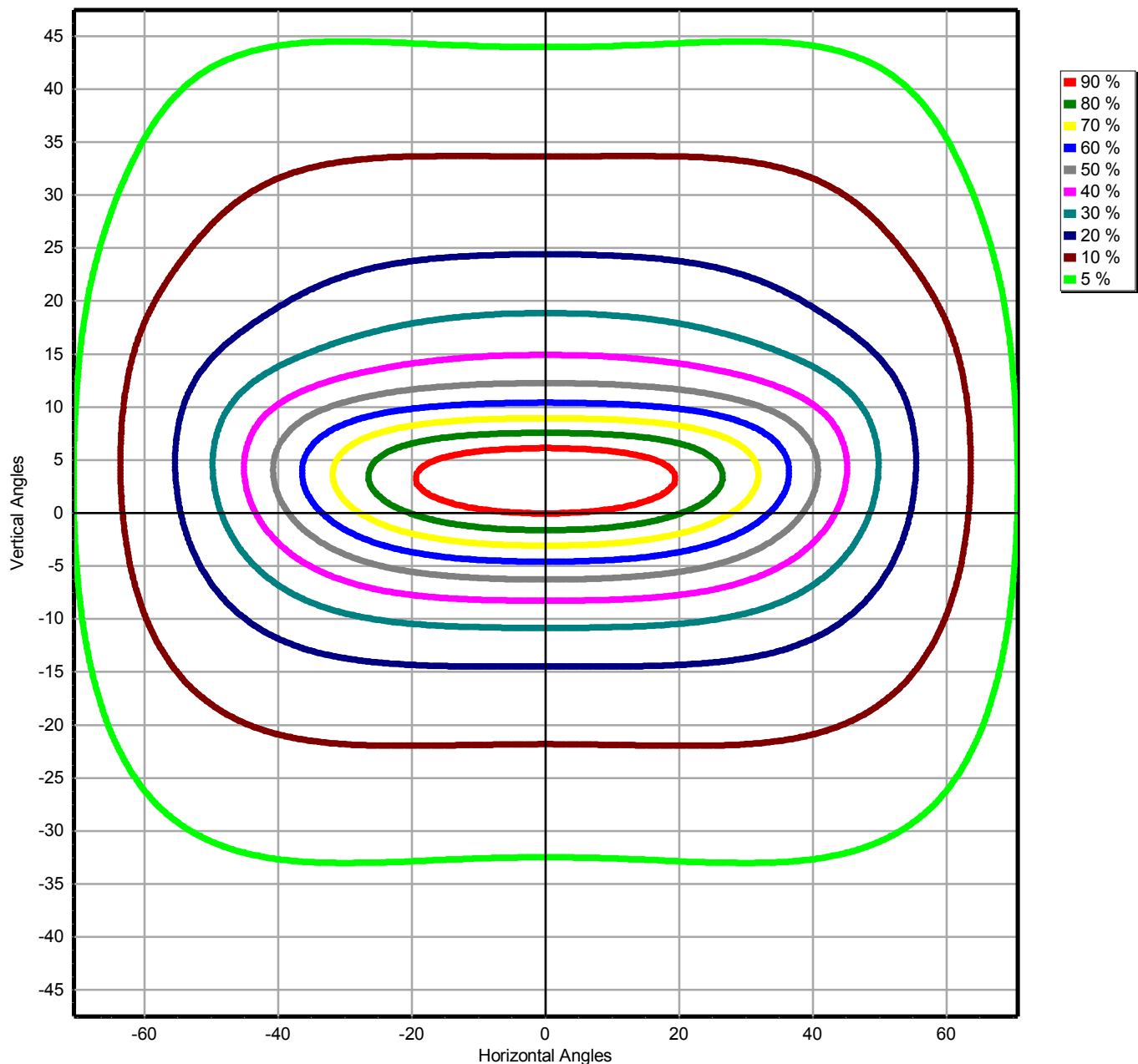
NVLAP LAB CODE: 200899-0

Photometric Report: G1504203-R1

Prepared for: Lumenpulse · Test Date: 20 April 2015

Floodlight: LUMENFACADE · Lumcat: LOG-120-48-DWH-1FT-WWLF-SI

ISO Candela Diagram





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

IES File Headers

```
IESNA:LM-63-2002
[ISSUEDATE]      20 April 2015
[TESTLAB]        Spectra Lux Industries Inc.
[TEST]           G1504203-R1
[MANUFAC]        Lumenpulse
[LUMCAT]          LOG-120-48-DWH-1FT-WWLF-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 (2,333 Luminaire Lumens)
[_REFLECTOR]      48 Collimators
[_LENS]           Clear Flat Glass C/W Diffuse Film
[_HOUSING]        Extruded Aluminum
[_SKTPOSITION]    None
[DISTRIBUTION]    NEMA 6Hx4V (Max. CP at 0.0H,3.0V)
[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	1	1	1	1	1	1	1	2
	-85.0	4	4	4	4	4	3	3	3
	-75.0	15	15	15	15	15	14	14	13
	-65.0	34	34	34	34	33	33	33	32
	-55.0	57	57	57	57	58	59	60	60
	-45.0	95	95	96	97	98	99	100	99
	-35.0	154	154	155	156	157	158	158	156
	-32.5	175	175	176	177	178	179	179	177
	-30.0	201	201	202	203	205	206	204	201
	-27.5	233	233	234	236	237	238	236	230
	-25.0	275	275	277	278	280	279	275	267
	-22.5	331	332	333	335	336	333	326	314
	-20.0	409	409	410	412	410	403	392	373
	-17.5	516	516	516	517	515	509	497	448
	-15.0	664	664	664	661	655	643	621	544
A n g l e s	-14.0	739	738	737	733	724	708	681	588
	-13.0	825	824	822	816	804	783	749	639
	-12.0	921	920	916	908	892	865	823	692
	-11.0	1031	1030	1024	1013	992	958	908	752
	-10.0	1153	1151	1143	1128	1102	1059	998	814
	-9.0	1292	1289	1279	1259	1225	1173	1099	883
	-8.0	1447	1442	1429	1404	1362	1298	1209	957
	-7.0	1618	1612	1595	1563	1512	1434	1328	1035
	-6.0	1802	1796	1774	1734	1672	1580	1454	1118
	-5.0	2011	2002	1976	1927	1849	1739	1594	1206
	-4.0	2235	2225	2192	2134	2039	1909	1737	1296
	-3.0	2471	2458	2419	2347	2239	2085	1888	1385
	-2.0	2713	2698	2650	2567	2440	2265	2039	1476
	-1.0	2946	2929	2875	2780	2636	2437	2187	1565
	0.0	3159	3139	3079	2974	2815	2598	2321	1642
	1.0	3335	3315	3251	3137	2968	2735	2439	1713
	2.0	3453	3431	3366	3250	3073	2831	2523	1767
	3.0	3501	3481	3417	3301	3126	2883	2573	1803
	4.0	3467	3448	3388	3281	3114	2880	2577	1814
	5.0	3355	3338	3285	3189	3037	2818	2534	1803



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

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	6.0	3177	3162	3117	3033	2900	2706	2447	2127	1764
	7.0	2945	2934	2896	2828	2715	2548	2321	2036	1702
	8.0	2690	2682	2652	2596	2503	2365	2168	1918	1624
	9.0	2437	2431	2407	2361	2284	2168	2003	1788	1531
	10.0	2195	2187	2168	2129	2066	1969	1829	1650	1425
	11.0	1979	1974	1956	1922	1866	1782	1665	1512	1323
	12.0	1796	1790	1773	1741	1694	1620	1517	1384	1220
	13.0	1638	1631	1615	1588	1541	1473	1385	1267	1123
	14.0	1508	1503	1487	1457	1413	1350	1267	1162	1035
	15.0	1393	1388	1372	1344	1301	1242	1166	1070	955
	17.5	1157	1153	1139	1115	1079	1029	964	886	794
	20.0	968	965	955	936	908	868	815	751	676
	22.5	808	806	799	786	765	736	695	644	583
	25.0	670	668	664	656	642	621	592	553	506
	27.5	555	554	552	547	539	525	505	476	440
A n g l e s	30.0	459	459	458	456	451	443	429	410	382
	32.5	381	381	381	381	379	374	366	352	333
	35.0	318	318	319	319	319	317	312	303	289
	45.0	164	164	165	167	168	170	170	169	167
	55.0	92	92	93	94	95	96	97	98	97
	65.0	52	52	52	52	53	53	54	54	54
	75.0	25	25	25	25	25	25	25	24	24
85.0	7	7	7	7	6	6	6	6	6	
90.0	4	4	4	4	4	4	4	4	4	



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

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	-90.0	2	2	2	2	2	2	2	2
	-85.0	3	3	3	3	2	2	2	2
	-75.0	13	12	11	10	9	6	4	2
	-65.0	31	30	28	26	23	19	8	3
	-55.0	59	58	55	51	45	37	27	15
	-45.0	98	94	89	82	72	59	42	23
	-35.0	152	146	136	123	105	83	58	31
	-32.5	172	163	151	136	115	91	62	33
	-30.0	194	184	169	150	126	98	67	35
	-27.5	221	208	189	166	138	106	71	37
	-25.0	254	236	213	184	151	114	75	39
	-22.5	295	271	240	205	164	122	79	40
	-20.0	347	313	272	227	180	131	84	42
	-17.5	409	362	309	253	196	140	87	43
	-15.0	488	422	353	281	213	148	91	44
	-14.0	523	449	371	293	219	152	93	44
	-13.0	563	479	391	306	227	155	94	45
	-12.0	605	509	412	319	233	159	95	45
	-11.0	651	542	433	332	241	162	97	45
	-10.0	698	576	455	345	247	165	97	45
A n g l e s	-9.0	750	612	479	358	254	168	99	46
	-8.0	805	649	502	371	260	171	99	46
	-7.0	862	688	526	384	267	173	101	46
	-6.0	922	727	550	397	273	176	101	46
	-5.0	985	769	574	410	279	178	102	46
	-4.0	1048	809	597	422	284	180	102	46
	-3.0	1112	850	620	433	290	182	103	46
	-2.0	1174	888	642	444	294	184	103	46
	-1.0	1234	925	662	454	298	185	104	46
	0.0	1288	958	680	463	301	186	103	46
	1.0	1335	988	696	470	304	187	104	46
	2.0	1374	1010	708	476	306	187	103	46
	3.0	1400	1029	719	480	308	187	103	46
	4.0	1410	1037	723	483	308	187	103	45
	5.0	1407	1038	725	483	309	187	103	45
	6.0	1386	1028	721	482	307	186	102	45
	7.0	1351	1011	714	479	307	185	102	44
	8.0	1302	983	701	473	304	184	101	44
	9.0	1243	951	685	466	302	183	100	44
	10.0	1173	910	664	458	297	181	99	43
	11.0	1101	867	642	447	293	179	99	43
	12.0	1027	820	616	435	288	177	97	42
	13.0	955	773	591	422	283	175	97	42
	14.0	887	726	563	409	276	172	95	41
	15.0	825	682	536	394	270	170	94	41
	17.5	692	583	469	357	252	162	90	39
	20.0	592	504	413	322	234	153	87	38
	22.5	514	440	365	290	215	144	83	36
	25.0	450	389	325	261	197	135	79	34
	27.5	396	345	292	236	181	125	74	33
	30.0	348	308	263	215	166	116	69	31
	32.5	306	274	236	195	152	107	65	29
	35.0	270	244	213	178	139	99	60	27
	45.0	161	152	138	119	96	69	42	18



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

Horizontal Angles

	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
55.0	96	92	86	76	62	45	27	12	4
65.0	53	51	48	43	35	26	16	8	5
75.0	23	22	20	18	14	11	7	5	4
85.0	6	5	5	5	4	4	4	4	5
90.0	4	4	4	4	4	4	4	4	5

V
e
r
t
i
c
a
l

A
n
g
l
e
s



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

Horizontal Angles

	90.0
V e r t i c a l	-90.0 2
	-85.0 2
	-75.0 2
	-65.0 2
	-55.0 2
	-45.0 2
	-35.0 2
	-32.5 2
	-30.0 3
	-27.5 3
	-25.0 3
	-22.5 3
	-20.0 3
	-17.5 3
	-15.0 3
	-14.0 3
	-13.0 3
	-12.0 3
	-11.0 3
	-10.0 3
A n g l e s	-9.0 3
	-8.0 3
	-7.0 3
	-6.0 3
	-5.0 3
	-4.0 3
	-3.0 3
	-2.0 3
	-1.0 3
	0.0 3
	1.0 3
	2.0 3
	3.0 3
	4.0 3
	5.0 3
	6.0 3
	7.0 3
	8.0 3
	9.0 3
	10.0 3
	11.0 3
	12.0 3
	13.0 3
	14.0 3
	15.0 3
	17.5 3
	20.0 3
	22.5 3
	25.0 3
	27.5 3
	30.0 3
	32.5 3
	35.0 3
	45.0 3



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

Horizontal Angles

90.0

55.0	3
65.0	4
75.0	4
85.0	3
90.0	3

**V
e
r
t
i
c
a
l**

**A
n
g
l
e
s**