



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



Moving Mirror Goniophotometer Test Report

Standard(s): IESNA LM-31-95, IES LM-79-08, IESNA TM-15-07

Customer: ABC Technologies, 1st Avenue, City, Province, Country, 1A1-1A1

General Information		SSL Details		Rated DC Values	
Test Report	S1001262-R1	Description	90W White 4000°K SSL	Type	Direct DC
Test Date	26 January 2010	Serial Number	0000000001	Voltage	24.00 V
Report Date	5 February 2010	Photometric Method	Absolute	Current	4.000 Amps
Ambient	24.5 °C	Lamp Lumens	-1	Active Power	96.00 Watts
Humidity	21.2 %	Test Position	Horizontal		
Lamp Type	SSL	Comments	50 LED		

Luminaire Data

General Information		Optics		Aperture (feet)	
Manufacturer	AAAAA	Reflector	50 Clear LED Collimators	X	1.1667
Name	AAAA AAAA	Housing	Die Cast Aluminum	Y	0.6667
Catalog No.	AAAA-90W50LED4K-AAA	Lens	None	Z	0.0000

SKT Position:
Lamp Stabilization Time: 60 Minutes

Tested By:

Approved Signatory:

Signature:



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Photometric Report: S1001262-R1

Prepared for: AAAAA · Test Date: 26 January 2010

Luminaire: AAAA AAAA · Lumcat: AAAA-90W50LED4K-AAA

Photometric Luminaire Characteristics as per IESNA RP-8-00

		Notes
Nominal SSL Power	90.00 W	
Luminaire Luminous Flux	5736	
Measured Input Wattage	90.00 W	1) Luminaire tested in accordance to IES LM-31-95 and IES LM-79-08 at a distance great enough so that the inverse-square law applies.
Luminaire Luminous Efficacy	63.7 lm/W	
Maximum Candela Value	4346	2) Field performance may differ from laboratory measurements.
Maximum Candela Location	77.5 °H, 62.5 °V	3) Results are valid for the tested material only.
Maximum Candela at 90° Vertical	0	
Maximum Candela at 80° Vertical	336	4) All data published in this report are based on absolute photometry.
IES Classification	Type II, Short, Full Cutoff	5) The luminaire classification is based on IESNA RP-8-00.
Downward Street Side Lumens	4149	
Downward Street Side Efficiency	N/A	6) The original electronic file or paper report cannot be edited in whole or in part without written consent of Spectralux Industries Inc.
Downward House Side Lumens	1587	
Downward House Side Efficiency	N/A	
Downward Total Efficiency	N/A	7) This photometric file describes the performance of a single luminaire and does not necessarily represent the average performance of a group of the same SSL luminaires.
Upward Street Side Lumens	0	
Upward Street Side Efficiency	N/A	
Upward House Side Lumens	0	
Upward House Side Efficiency	N/A	8) The previous IESNA cutoff classifications (Full Cutoff, Cutoff, Semi-Cutoff and Non-Cutoff) are superseded by the Luminaire Classification System (LCS) which defines the standard solid angles for evaluation and comparison of outdoor luminaires.
Upward Total Efficiency	N/A	
Total Luminaire Lumens	5736	
Total Luminaire Efficiency	N/A	



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Luminaire: AAAA AAAA · Lumcat: AAAAS-90W50LED4K-AAA

Luminaire Classification System as per IESNA TM-15-07

		Notes
Nominal SSL Power	90.00 W	
Luminaire Luminous Flux	5736	
Measured Input Wattage	90.00 W	1) Luminaire tested in accordance to IES LM-31-95 and IES LM-79-08 at a distance great enough so that the inverse-square law applies.
Luminaire Luminous Efficacy	63.7 lm/W	
Maximum Candela Value	4346	
Maximum Candela Location	77.5 °H, 62.5 °V	2) Field performance may differ from laboratory measurements.
IES Classification	Type II, Short	
Downward Street Side Lumens	4149	3) Results are valid for the tested material only.
Downward Street Side Efficiency	N/A	
Downward House Side Lumens	1587	4) All data published in this report are based on absolute photometry.
Downward House Side Efficiency	N/A	
Downward Total Lumens	5736	5) The luminaire classification is based on IESNA TM-15-07.
Downward Total Efficiency	N/A	
Upward Street Side Lumens	0	6) The original electronic file or paper report cannot be edited in whole or in part without written consent of Spectralux Industries Inc.
Upward Street Side Efficiency	N/A	
Upward House Side Lumens	0	
Upward House Side Efficiency	N/A	
Upward Total Lumens	0	7) This photometric file describes the performance of a single luminaire and does not necessarily represent the average performance of a group of the same SSL luminaires.
Upward Total Efficiency	N/A	
Trapped Light Lumens	0	
Total Luminaire Lumens	5736	
Total Luminaire Efficiency	N/A	



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Photometric Report: S1001262-R1

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Luminaire: AAAA AAAA · Lumcat: AAAA-90W50LED4K-AAA

**Luminaire Lumens Distribution based on 5736 total luminaire lumens
 as per IESNA TM-15-07**

Downward Forward Light	Lumens	Notes
Total	4149	
Lumens Distribution		
Forward Light Low (0° - 30°)	568	1) Luminaire tested in accordance to IES LM-31-95 and IES LM-79-08 at a distance great enough so that the inverse-square law applies.
Forward Light Mid (30° - 60°)	2561	
Forward Light High (60° - 80°)	998	
Forward Light Very High (80° - 90°)	22	2) Field performance may differ from laboratory measurements.
Downward Back Light	Lumens	
Total	1587	3) Results are valid for the tested material only.
Lumens Distribution		
Back Light Low (0° - 30°)	242	
Back Light Mid (30° - 60°)	821	4) All data published in this report are based on absolute photometry.
Back Light High (60° - 80°)	503	
Back Light Very High (80° - 90°)	21	5) The luminaire classification is based on IESNA TM-15-07.
Uplight	Lumens	
Total	0	6) The original electronic file or paper report cannot be edited in whole or in part without written consent of Spectralux Industries Inc.
Lumens Distribution		
Uplight Low (90° - 100°)	0	
Uplight High (100° - 180°)	0	7) This photometric file describes the performance of a single luminaire and does not necessarily represent the average performance of a group of the same SSL luminaires.
Trapped Light	Lumens	
Total	0	



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Luminaire: AAAA AAAA · Lumcat: AAAA-90W50LED4K-AAA

Addendum A for IESNA TM-15-07 : Backlight, Uplight and Glare (BUG) Ratings

Table A-1 : Backlight Ratings (maximal zonal lumens)

Control of Backlight / Trespass

Backlight Rating

Zone	B0	B1	B2	B3	B4	B5
BH	110	500	1000	2500	5000	>5000
BM	220	1000	2500	5000	8500	>8500
BL	110	500	1000	2500	5000	>5000

Backlight Ratings

Zone	Lumens	Rating
BH	503	B2
BM	821	B1
BL	242	B1

The Backlight Rating is B2.

Table A-2 : Uplight Ratings (maximal zonal lumens)

Control of Uplight / Skyglow

Uplight Rating

Zone	U0	U1	U2	U3	U4	U5
UH	0	10	100	500	1000	>1000
UL	0	10	100	500	1000	>1000
FVH	10	75	150	>150	N/A	N/A
BVH	10	75	150	>150	N/A	N/A

Uplight Ratings

Zone	Lumens	Rating
UH	0	U0
UL	0	U0
FVH	22	U1
BVH	21	U1

The Uplight Rating is U1.

Table A-3 : Glare Ratings (maximum zonal lumens)

Control of Glare / Offensive Light

Glare Rating for Asymmetrical Luminaire Types (Type I, Type II, Type III, Type IV)

Zone	G0	G1	G2	G3	G4	G5
FVH	10	250	375	500	750	>750
BVH	10	250	375	500	750	>750
FH	660	1800	5000	7500	12000	>12000
BH	110	500	1000	2500	5000	>5000

Glare Ratings for Typell

Zone	Lumens	Rating
FVH	22	G1
BVH	21	G1
FH	998	G1
BH	503	G2

The Glare Rating is G2.

The BUG Rating is B2 U1 G2



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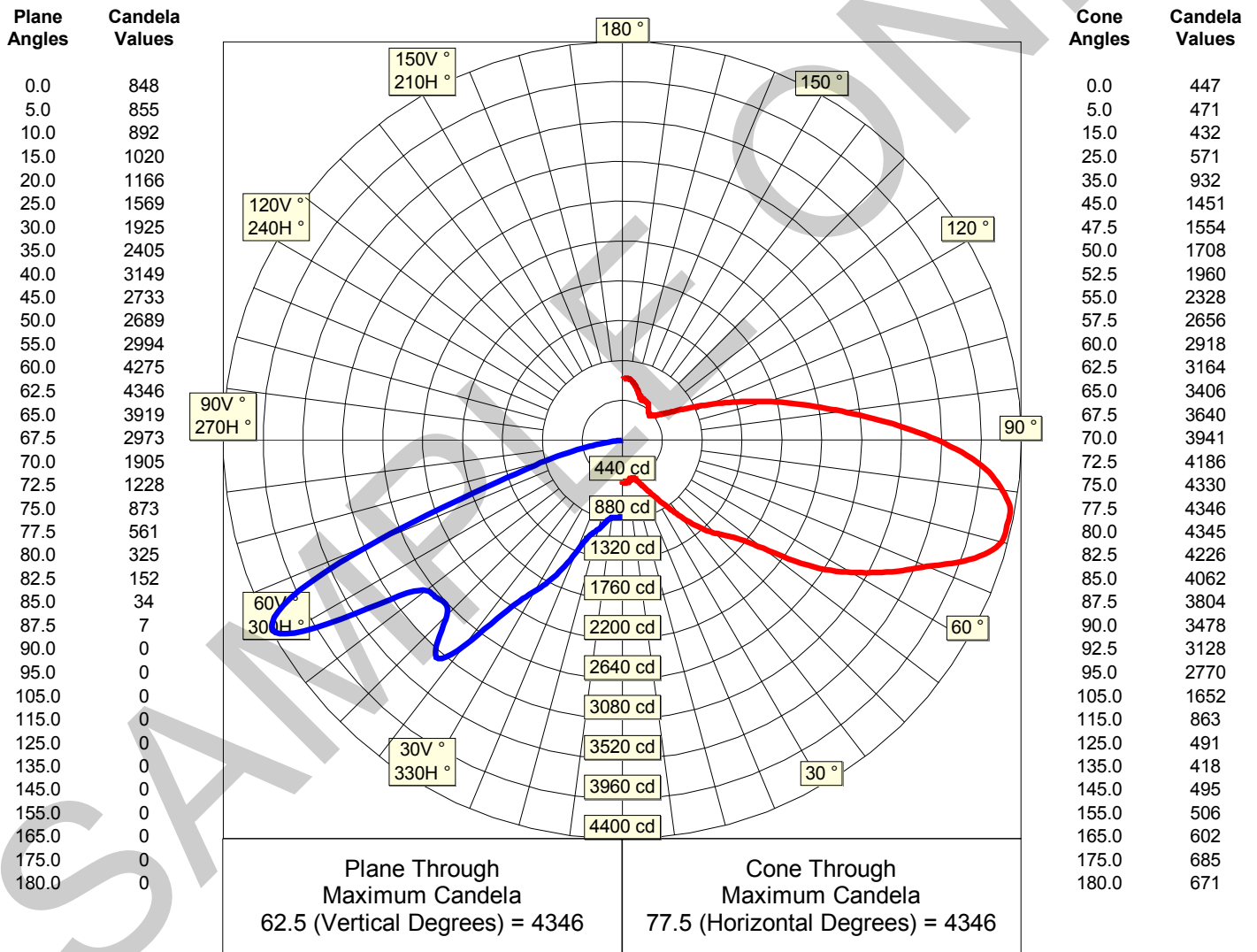


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Luminaire: AAAA AAAA · Lumcat: AAAA-90W50LED4K-AAA

Maximum Plane and Maximum Cone Plots of Candela (1)





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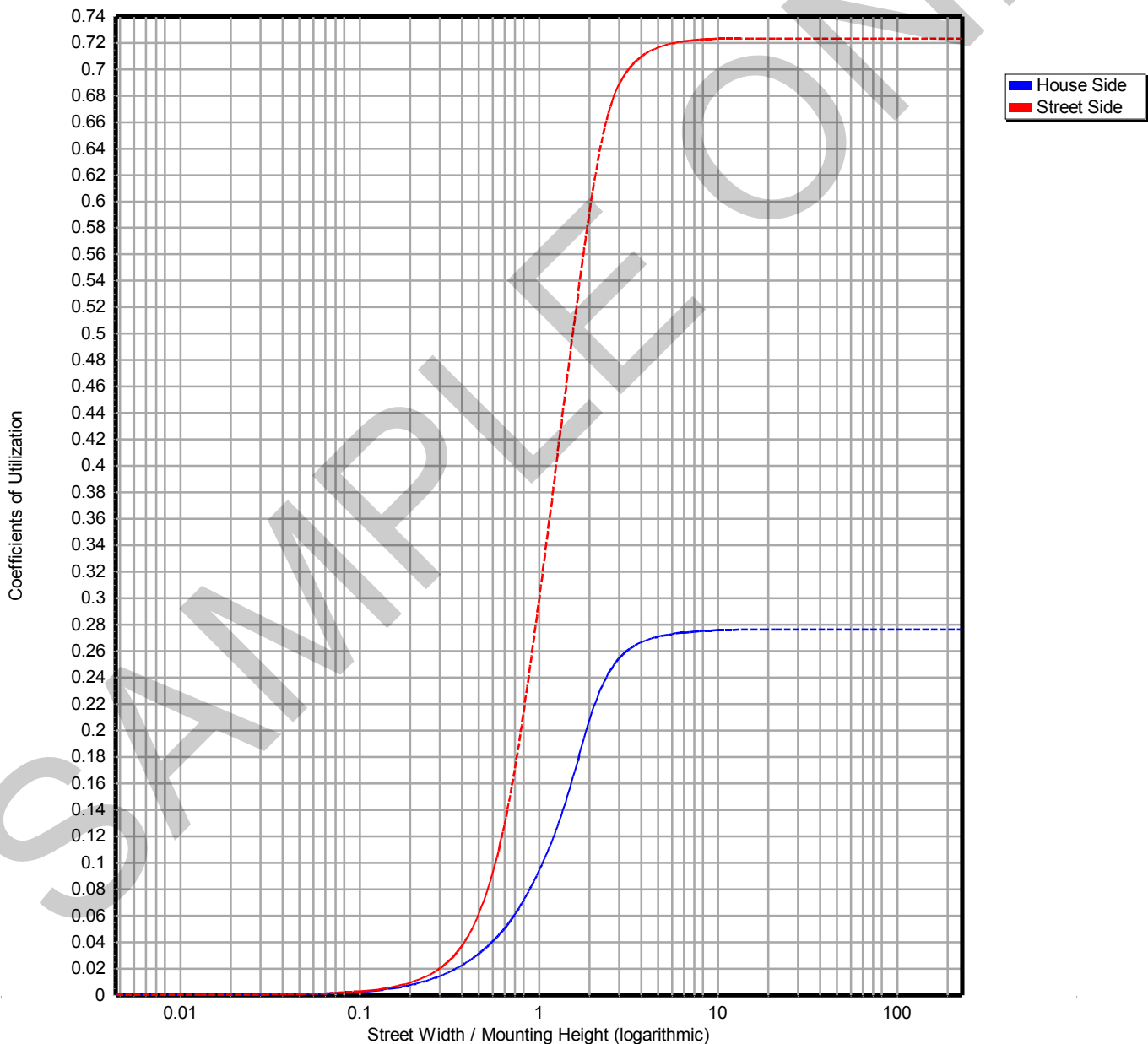


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Luminaire: AAAA AAAA · Lumcat: AAAA-90W50LED4K-AAA

Coefficients of Utilization



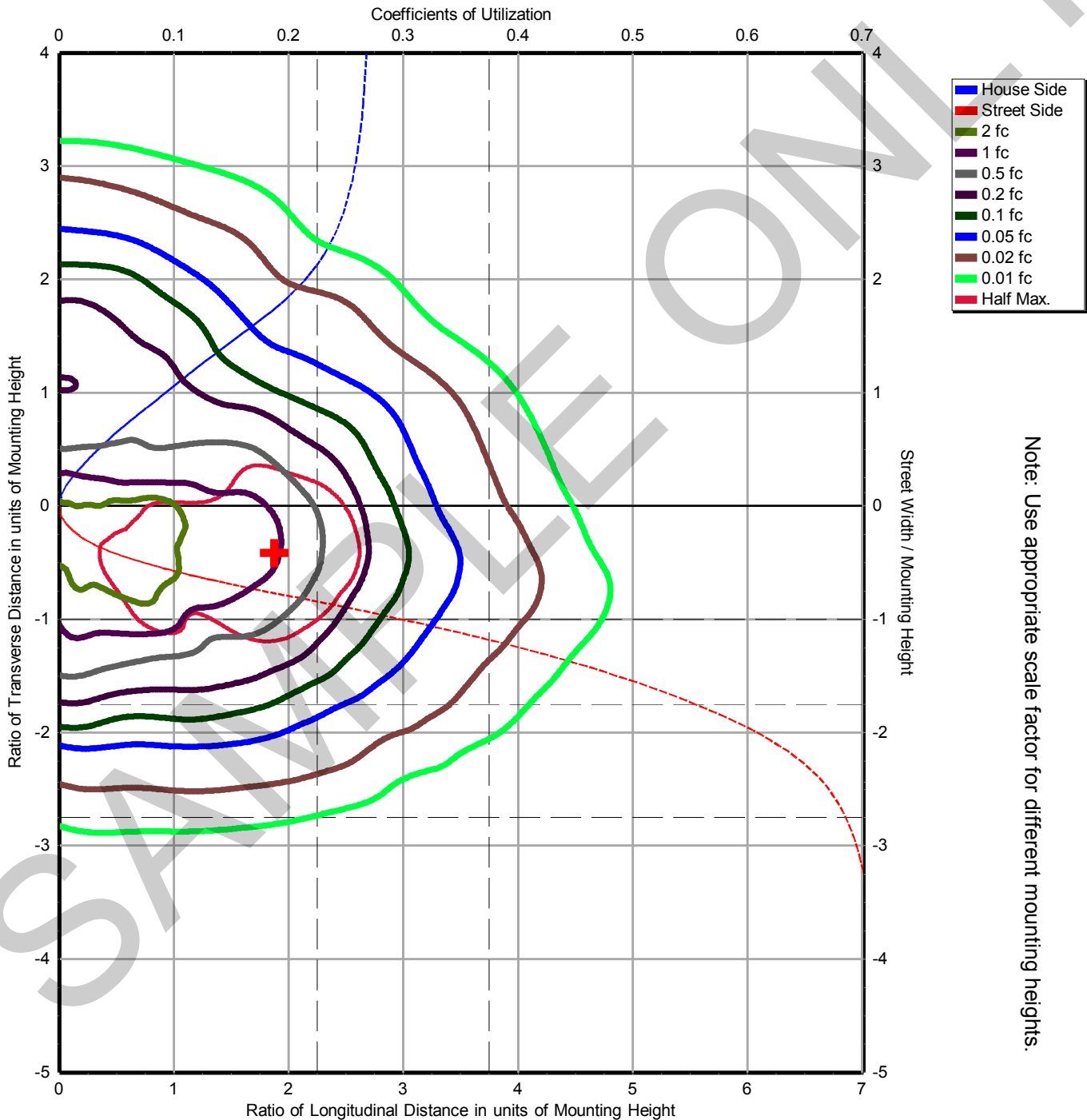


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Isoilluminance based on 20 feet of Mounting Height and Coefficients of Utilization Diagram (Right Side)



Note: Use appropriate scale factor for different mounting heights.



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IES File Headers

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IESNA:LM-63-2002
[ISSUEDATE] 26 January 2010
[TESTLAB] Spectra Lux Industries Inc.
[TEST] S1001262-R1
[MANUFAC] AAAAA
[LUMCAT] AAAA-90W50LED4K-AAA
[LUMINAIRE] AAAA AAAA
[LAMP] (50 LED)White 90W SSL
[_LAMPDETAILS] DC Voltage=24V, Current=4A, CCT=4055K, CRI=65, x=0.382, y=0.3904
[_BURNING] Horizontal (5,736 Luminaire Lumens)
[_REFLECTOR] 50 Clear LED Collimators
[_LENS] None
[_HOUSING] Die Cast Aluminum
[_SKTPOSITION] Fixed
[DISTRIBUTION] Type II, Short
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Candela Table

Lateral Angles

	0.0	5.0	15.0	25.0	35.0	45.0	47.5	50.0	52.5
0.0	848	848	848	848	848	848	848	848	848
5.0	878	883	881	883	879	877	879	878	876
10.0	893	901	911	918	941	954	958	957	954
15.0	983	1002	1018	1027	1070	1092	1098	1099	1097
20.0	1117	1150	1204	1293	1381	1465	1482	1479	1466
25.0	1161	1189	1273	1542	1795	2010	2027	2002	1967
30.0	1165	1205	1412	1616	2042	2396	2448	2483	2487
35.0	1295	1354	1554	1630	2230	2762	2821	2833	2852
40.0	1311	1439	1580	1596	2246	2765	2899	2941	2921
45.0	1219	1401	1421	1575	2238	2816	2843	2912	2924
50.0	1300	1451	1464	1630	2238	2928	2845	2786	2797
55.0	1302	1376	1293	1424	1871	2428	2345	2317	2405
60.0	640	680	628	775	1183	1714	1697	1804	2043
62.5	447	471	432	571	932	1451	1554	1708	1960
65.0	234	270	296	430	750	1207	1364	1532	1726
67.5	154	174	201	300	514	894	1025	1142	1295
70.0	115	127	145	212	344	570	635	715	811
72.5	85	96	110	145	220	374	417	460	501
75.0	67	72	86	114	148	228	256	272	298
77.5	53	55	70	93	111	140	151	165	179
80.0	40	43	62	84	87	104	294	316	124
82.5	41	29	51	46	62	60	103	121	64
85.0	9	8	7	8	9	9	9	10	10
87.5	5	5	5	6	6	7	7	7	7
90.0	0	0	0	0	0	0	0	0	0
95.0	0	0	0	0	0	0	0	0	0
105.0	0	0	0	0	0	0	0	0	0
115.0	0	0	0	0	0	0	0	0	0
125.0	0	0	0	0	0	0	0	0	0
135.0	0	0	0	0	0	0	0	0	0
145.0	0	0	0	0	0	0	0	0	0
155.0	0	0	0	0	0	0	0	0	0
165.0	0	0	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0	0	0



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NVLAP LAB CODE: 200899-0

Lateral Angles

	55.0	57.5	60.0	62.5	65.0	67.5	70.0	72.5	75.0
0.0	848	848	848	848	848	848	848	848	848
5.0	874	873	872	872	873	872	869	864	859
10.0	948	945	943	940	930	921	914	908	900
15.0	1090	1083	1079	1078	1078	1075	1069	1053	1036
20.0	1456	1443	1422	1397	1363	1332	1292	1249	1206
25.0	1927	1897	1860	1828	1793	1734	1696	1672	1622
30.0	2453	2419	2385	2330	2249	2167	2063	2014	1993
35.0	2860	2804	2772	2731	2748	2707	2570	2514	2464
40.0	2937	3049	3118	3092	3057	3054	3091	3159	3199
45.0	2885	2869	2887	2877	2812	2720	2662	2701	2728
50.0	2910	3007	3030	2954	2844	2748	2638	2629	2649
55.0	2651	2840	2940	2989	2953	2909	2913	2930	2974
60.0	2451	2793	3036	3245	3443	3649	3898	4147	4280
62.5	2328	2656	2918	3164	3406	3640	3941	4186	4330
65.0	2030	2320	2570	2787	3011	3247	3495	3700	3857
67.5	1507	1737	1924	2075	2258	2446	2629	2731	2893
70.0	931	1091	1189	1281	1396	1480	1571	1686	1827
72.5	575	671	745	828	911	978	1037	1102	1186
75.0	337	407	462	527	569	608	657	731	792
77.5	244	242	268	314	350	378	417	456	504
80.0	142	184	149	166	191	205	230	243	283
82.5	55	64	69	87	88	98	111	121	136
85.0	11	12	12	15	16	18	21	25	28
87.5	7	7	7	7	7	7	7	8	8
90.0	0	0	0	0	0	0	0	0	0
95.0	0	0	0	0	0	0	0	0	0
105.0	0	0	0	0	0	0	0	0	0
115.0	0	0	0	0	0	0	0	0	0
125.0	0	0	0	0	0	0	0	0	0
135.0	0	0	0	0	0	0	0	0	0
145.0	0	0	0	0	0	0	0	0	0
155.0	0	0	0	0	0	0	0	0	0
165.0	0	0	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0	0	0

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Lateral Angles

	77.5	80.0	82.5	85.0	87.5	90.0	92.5	95.0	105.0
0.0	848	848	848	848	848	848	848	848	848
5.0	855	850	847	842	838	835	830	825	811
10.0	892	880	868	856	846	836	826	817	778
15.0	1020	1001	977	952	932	911	888	864	765
20.0	1166	1123	1081	1045	1005	970	935	900	763
25.0	1569	1520	1429	1336	1281	1202	1140	1095	812
30.0	1925	1853	1749	1601	1529	1420	1305	1216	786
35.0	2405	2300	2172	2043	1946	1818	1634	1441	815
40.0	3149	3040	2969	2863	2628	2369	2073	1786	860
45.0	2733	2742	2707	2638	2500	2346	2104	1788	938
50.0	2689	2735	2677	2575	2474	2285	2081	1811	1259
55.0	2994	3039	2980	2909	2809	2554	2323	2070	1598
60.0	4275	4194	4088	3951	3776	3470	3164	2868	1869
62.5	4346	4345	4226	4062	3804	3478	3128	2770	1652
65.0	3919	3890	3794	3612	3363	3083	2721	2383	1283
67.5	2973	2939	2894	2768	2602	2387	2136	1905	1043
70.0	1905	1940	1888	1777	1648	1490	1345	1185	832
72.5	1228	1266	1252	1154	1015	905	828	752	583
75.0	873	892	874	784	679	582	531	493	381
77.5	561	589	564	482	425	380	339	314	227
80.0	325	336	331	284	244	216	204	194	145
82.5	152	166	164	145	129	115	114	114	101
85.0	34	36	35	29	29	28	29	29	28
87.5	7	7	8	8	8	8	8	8	8
90.0	0	0	0	0	0	0	0	0	0
95.0	0	0	0	0	0	0	0	0	0
105.0	0	0	0	0	0	0	0	0	0
115.0	0	0	0	0	0	0	0	0	0
125.0	0	0	0	0	0	0	0	0	0
135.0	0	0	0	0	0	0	0	0	0
145.0	0	0	0	0	0	0	0	0	0
155.0	0	0	0	0	0	0	0	0	0
165.0	0	0	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0	0	0



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NVLAP LAB CODE: 200899-0

Lateral Angles

	115.0	125.0	135.0	145.0	155.0	165.0	175.0	180.0
0.0	848	848	848	848	848	848	848	848
5.0	792	771	756	742	731	744	750	745
10.0	742	698	664	624	595	576	570	571
15.0	696	631	567	522	493	485	473	468
20.0	641	543	475	434	408	396	381	380
25.0	601	495	424	373	335	313	298	301
30.0	546	442	380	336	308	285	273	273
35.0	557	454	390	350	316	296	292	291
40.0	567	490	439	381	321	288	283	282
45.0	639	532	485	395	320	268	236	233
50.0	805	609	461	419	400	364	331	330
55.0	942	615	494	510	530	590	620	620
60.0	934	533	471	538	537	644	720	714
62.5	863	491	418	495	506	602	685	671
65.0	658	388	385	431	472	539	521	515
67.5	555	349	273	308	331	376	375	379
70.0	471	320	216	238	228	243	264	278
72.5	338	262	169	177	167	158	162	161
75.0	217	165	123	131	129	126	116	120
77.5	132	107	90	95	99	94	97	97
80.0	94	72	71	64	72	75	79	83
82.5	71	46	44	46	50	60	75	64
85.0	28	25	26	27	27	46	61	58
87.5	8	9	10	11	12	23	23	38
90.0	0	0	0	0	0	0	0	0
95.0	0	0	0	0	0	0	0	0
105.0	0	0	0	0	0	0	0	0
115.0	0	0	0	0	0	0	0	0
125.0	0	0	0	0	0	0	0	0
135.0	0	0	0	0	0	0	0	0
145.0	0	0	0	0	0	0	0	0
155.0	0	0	0	0	0	0	0	0
165.0	0	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0	0

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