



NVLAP LAB CODE 201011-0

Report No.: STD150803NB-S-R

LM-79-08 Test Report

For

CEA GROUP INTERNATIONAL CO.,LTD

(Brand Name: CEA/EAEC)

Sanjiali Industrial Zone Zhucheng Road Panshi North baixiang Yueqing Zhejiang China

Architectural Flood and Spot Luminaires and Industrial buildings

Model name(s): SFL1S-50

Representative (Tested) Model: SFL1S-50(2700K)
SFL1S-50(5700K)

Model Different: All construction and rating are the same, except CCT

Test & Report By:

Peeta Cao

Engineer: Peeta Cao

Date: Dec.24,2015

Review By:

Tommy Liang

Manager: Tommy Liang

Note: This report does not imply product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Laboratory: Standard-Tech Co. Ltd Testing Center

NVLAP CODE: 201011-0

Report Format Number STD/QR4909-C/2

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Tel: 8620-3229 0320

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<http://www.standard-tech.com>



U.S. Department of Energy

Lighting Facts™ Uniform LM-79 Reporting Template

Laboratory Information:

Name of Test Laboratory	Standard-Tech Co., Ltd.
Date of Test Report	Dec.24,2015
Test Report No.	STD150803NB-S
Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	CEA GROUP INTERNATIONAL CO.,LTD	
Brand Name	CEA/EAEC	
Model Number	SFL1S-50(2700K)	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	Architectural Flood and Spot Luminaires and Industrial buildings	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s

Integrating Sphere

Goniophotometer

Electrical Measurements:

Output

Output

Input Wattage	--	46.04	W
Input Current	--	0.3903	A
Input Voltage (ac)	--	120.0	V
Power Factor	--	0.9830	
Off-State Power	--	0	W

Photometric Characteristics

Total Initial Lumen Output	--	3936.6	lm
Initial Lumen Efficacy	--	85.51	lm/w
Correlated color temperature / CCT	2805		K
Color rendering index / CRI	70.2		
R9 Value	0		
Duv	0.0027		

Luminous Intensity Distribution

Center beam candlepower (if applicable)	-----	1790	cd
Beam angle (if applicable)		99.2	°
Zonal lumens in the 0 °-60 ° zone		91.3	%
Zonal lumens in the 60 °-90 ° zone		8.6	%
Zonal lumens in the 90 °-120 ° zone		0	%
Zonal lumens in the 120 °-180 ° zone		0.1	%

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Date of Test Report	Dec.24,2015
Test Report No.	STD150803NB-S
Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	CEA GROUP INTERNATIONAL CO.,LTD	
Brand Name	CEA/EAEC	
Model Number	SFL1S-50(5700K)	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	Architectural Flood and Spot Luminaires and Industrial buildings	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s

Integrating Sphere

Goniophotometer

Electrical Measurements:

Output

Output

Input Wattage	47.10	--	W
Input Current	0.3982	--	A
Input Voltage (ac)	120.0	--	V
Power Factor	0.9856	--	
Off-State Power	0	--	W

Photometric Characteristics

Total Initial Lumen Output	4246	--	lm
Initial Lumen Efficacy	90.14	--	lm/w
Correlated color temperature / CCT	5363	--	K
Color rendering index / CRI	70.4	--	
R9 Value	0	--	
Duv	0.0004	--	

Luminous Intensity Distribution

Center beam candlepower (if applicable)	-----	cd
Beam angle (if applicable)		°
Zonal lumens in the 0 °-60 ° zone		%
Zonal lumens in the 60 °-90 ° zone		%
Zonal lumens in the 90 °-120 ° zone		%
Zonal lumens in the 120 °-180 ° zone		%

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Test Specifications:	
Date of Receipt	: Oct.18,2015
Date of Test	: Oct.25,2015
Test item	: Total Luminous Flux, Luminous Distribution Intensity, Luminous Efficacy, Correlated Color Temperature, Color Rendering Index, Chromaticity Coordinate, Electrical parameters
Reference Standard	IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products ANSI C78.377-2008 Specifications for the Chromaticity of Solid State Lighting Products CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources CIE 15-2004 Technical Report Colorimetry IESNA LM-16-93 Practical Guide to Colorimetry of Light Source IESNA TM-16-05 Technical Memorandum on Light Emitting Diode (LED) Sources and Systems
Reference Work Instruction	QD25

Test Methods

1. Photometric and Electrical measurements – Light Distribution Method:

Photometric parameters were measured using the goniophotometer and software. The ambient temperature shall be maintained at $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$, measured at a point not more than 1 m from the sample and at the same height as the sample. The sample was operated at 120 Volts AC, 60Hz. It was stabilized before measurement was made. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at 1 ° vertical intervals and 22.5 ° horizontal intervals.

2. Photometric and Electrical Measurements – Integrating Sphere Method:

Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$. The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. The sample was operated at 120 Volts AC, 60Hz. It was stabilized before measurement was made. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at least 5 nm intervals over the range of 380 to 780 nm.

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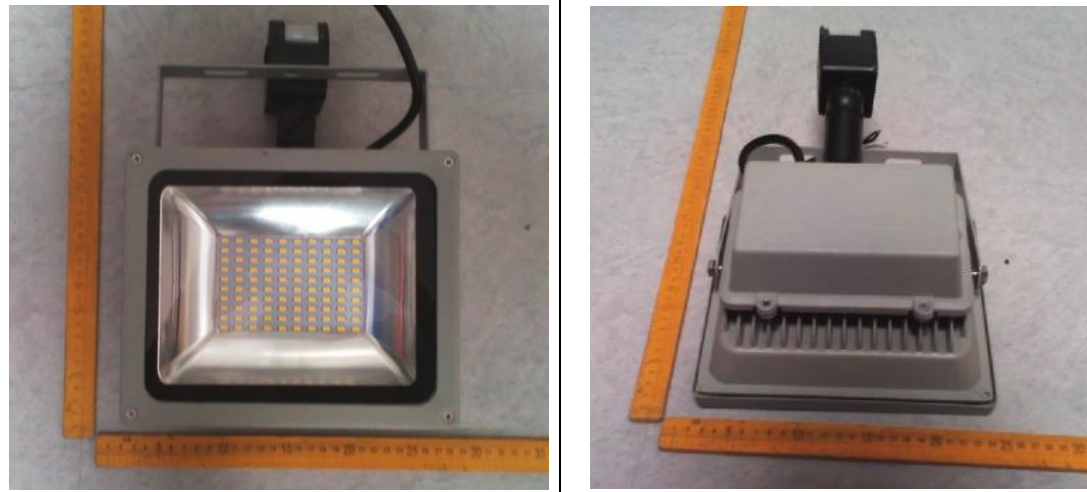
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1. Product Information:

Brand Name	CEA/EAEC
Model Number	SFL1S-50
Luminaire Type	Architectural Flood and Spot Luminaires and Industrial buildings
Rated Voltage / Frequency	100~ 277Vac, 50/60Hz
Nominal Power	50W
Rated Initial Lamp Lumen	--
Declared CCT	2700K,3000K,3500K,4000K,4500K,5000K,5700K
LED Manufacturer	Chuang Te LED
LED Model	CT-5730
Sample Receipt Date	Oct.18,2015
Sample Number	STD150803NB-S1(2700K),S2(5700K)

Photo



2.1 Electrical, Photometric and Chromaticity Measurements (Refer to Work Instruction QD25)	IES LM-79 2008
--	-----------------------

Test date	2015-10-25	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	SFL1S-50(2700K)		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
STD150803	120.0	60	0.3903	46.04	0.9830	10.81
NB-S1	277.0	60	0.1815	45.68	0.9085	14.22

Sphere-Spectroradiometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	70.2
R9	0
CCT (K)	2805
Chromaticity (x, y)	x=0.4560 y=0.4170
Chromaticity (u', v')	u'=0.2572 v'=0.5292
Duv	0.0027

Special Color Rendering Indices			
R1	67	R9	0
R2	78	R10	48
R3	96	R11	56
R4	67	R12	39
R5	68	R13	64
R6	69	R14	95
R7	79	R15	54
R8	38	--	--

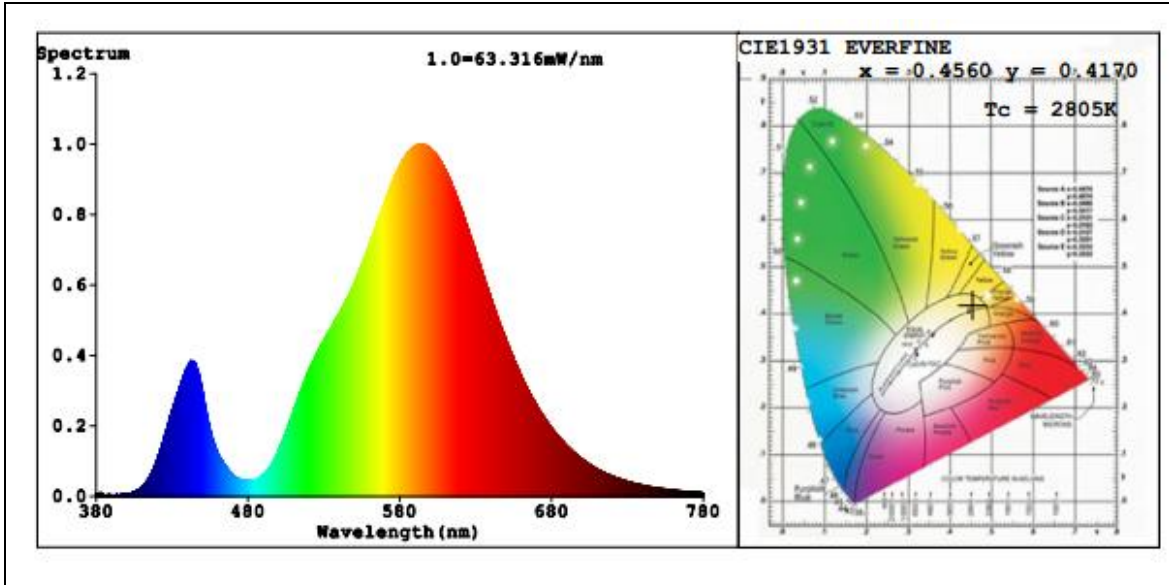
Goniophotometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Total Luminous (lm)	3936.6
Luminous Efficacy (lm/W)	85.51
Beam Angle °	99.2
Center Beam Candle Power (cd)	1790

Goniophotometer Method:

Parameter	Result
Test Voltage (V)	277.0
Frequency (Hz)	60
Total Luminous (lm)	3798.0
Luminous Efficacy (lm/W)	83.14

Spectral Power Distribution & Chromaticity Diagram



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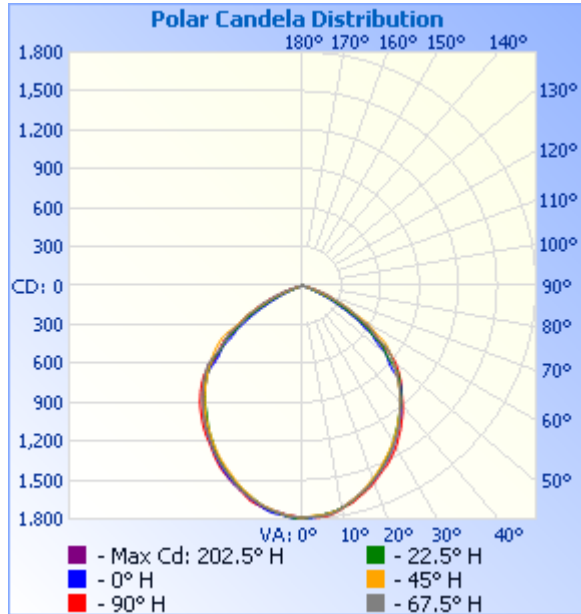
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Zonal Lumen Tabulation

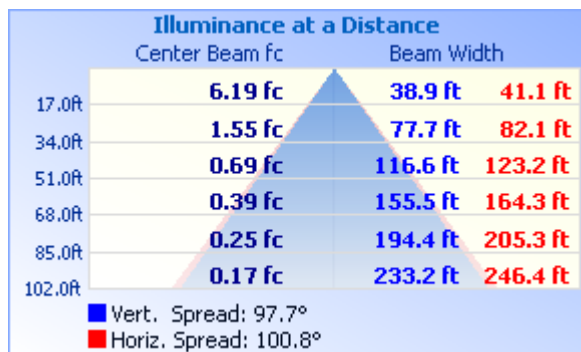
Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	1,330.5	33.8%
0-40	2,141.3	54.4%
0-60	3,592.0	91.3%
60-90	340.0	8.6%
70-100	46.1	1.2%
90-120	0.1	0%
0-90	3,932.0	99.9%
90-180	3.9	0.1%
0-180	3,935.9	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	168.1	4.3%	90-100	0	0%
10-20	470.5	12.0%	100-110	0	0%
20-30	692.0	17.6%	110-120	0.1	0%
30-40	810.7	20.6%	120-130	0.6	0%
40-50	814.4	20.7%	130-140	0.9	0%
50-60	636.4	16.2%	140-150	0.9	0%
60-70	293.9	7.5%	150-160	0.8	0%
70-80	43.5	1.1%	160-170	0.5	0%
80-90	2.6	0.1%	170-180	0.2	0%

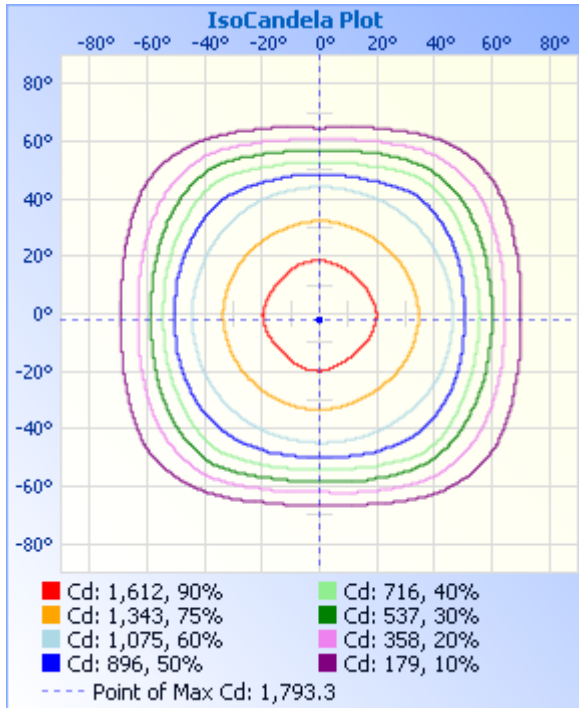
Photometric Data



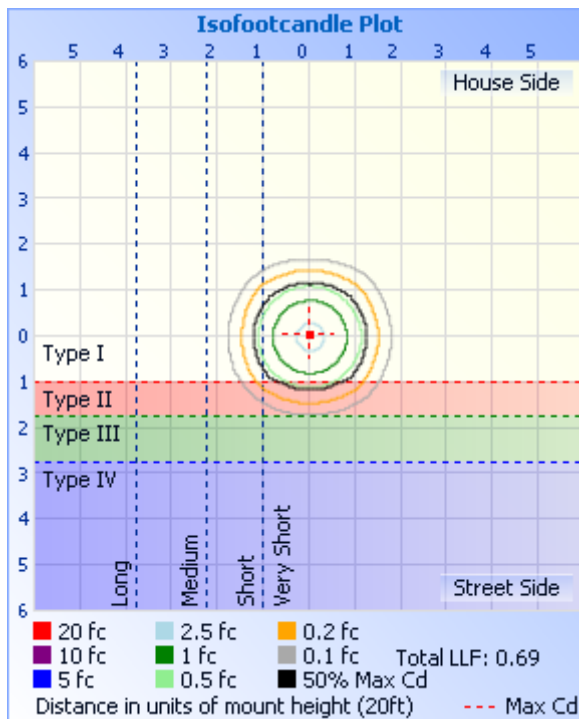
Illuminance Plots



ISOCANDELA DIAGRAM



ISOLUX DIAGRAM



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Candela Table - Type C

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	360
0	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790	1790
1	1791	1789	1786	1786	1786	1785	1787	1790	1792	1793	1789	1788	1786	1787	1787	1790	1791
2	1792	1787	1780	1782	1783	1780	1781	1789	1793	1793	1783	1784	1780	1780	1781	1790	1792
3	1789	1781	1776	1783	1787	1780	1778	1785	1789	1788	1777	1781	1778	1776	1775	1785	1789
4	1781	1777	1776	1784	1790	1781	1774	1779	1783	1780	1773	1778	1774	1771	1769	1776	1781
5	1775	1774	1776	1782	1787	1775	1772	1772	1776	1771	1768	1770	1768	1763	1763	1768	1775
6	1769	1768	1771	1780	1786	1773	1768	1767	1772	1763	1760	1761	1762	1756	1758	1761	1769
7	1764	1763	1766	1776	1782	1768	1765	1761	1769	1755	1750	1755	1757	1751	1751	1753	1764
8	1760	1757	1761	1767	1771	1757	1762	1753	1763	1748	1739	1746	1751	1744	1742	1746	1760
9	1751	1750	1753	1755	1761	1745	1757	1746	1754	1739	1731	1736	1745	1736	1731	1737	1751
10	1739	1740	1742	1745	1748	1737	1743	1735	1741	1728	1725	1728	1738	1728	1719	1727	1739
11	1725	1730	1725	1729	1733	1723	1728	1723	1727	1714	1715	1717	1729	1717	1708	1717	1725
12	1711	1718	1709	1715	1726	1713	1713	1711	1714	1699	1701	1705	1721	1705	1696	1704	1711
13	1698	1705	1697	1705	1717	1703	1698	1699	1701	1686	1684	1694	1714	1694	1686	1690	1698
14	1685	1690	1683	1690	1701	1688	1680	1687	1688	1673	1668	1683	1702	1684	1672	1675	1685
15	1671	1675	1669	1672	1686	1670	1665	1675	1673	1658	1653	1672	1683	1670	1657	1661	1671
16	1656	1660	1655	1658	1674	1656	1652	1662	1658	1644	1641	1656	1666	1654	1640	1646	1656
17	1642	1645	1637	1643	1659	1645	1637	1649	1644	1630	1625	1641	1650	1638	1624	1629	1642
18	1628	1630	1617	1628	1644	1633	1618	1633	1632	1614	1607	1627	1633	1622	1609	1612	1628
19	1613	1612	1600	1611	1633	1617	1600	1617	1619	1600	1589	1609	1619	1605	1592	1595	1613
20	1597	1591	1583	1596	1614	1600	1582	1600	1604	1583	1570	1590	1607	1588	1574	1579	1597
21	1580	1570	1565	1581	1595	1582	1565	1583	1587	1565	1552	1571	1592	1572	1554	1562	1580
22	1561	1553	1548	1563	1577	1565	1548	1567	1569	1547	1535	1555	1576	1554	1534	1543	1561
23	1543	1537	1528	1547	1561	1548	1533	1550	1551	1531	1518	1538	1562	1535	1513	1526	1543
24	1526	1519	1509	1528	1546	1528	1518	1530	1533	1513	1500	1522	1547	1518	1495	1508	1526
25	1509	1499	1489	1509	1532	1509	1500	1508	1514	1494	1484	1505	1529	1503	1475	1488	1509
26	1491	1478	1472	1492	1514	1491	1482	1487	1493	1476	1466	1488	1508	1484	1457	1468	1491
27	1469	1459	1454	1474	1495	1472	1461	1468	1473	1457	1446	1469	1487	1464	1439	1450	1469
28	1449	1438	1433	1451	1477	1452	1441	1449	1452	1435	1427	1451	1466	1445	1421	1430	1449
29	1431	1417	1414	1431	1459	1433	1421	1427	1432	1412	1408	1432	1443	1423	1404	1409	1431

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30	1410	1396	1394	1411	1438	1413	1398	1405	1410	1388	1390	1411	1422	1402	1387	1387	1410
31	1386	1372	1372	1389	1417	1393	1376	1381	1389	1369	1370	1389	1404	1382	1367	1367	1386
32	1362	1349	1351	1368	1391	1371	1356	1359	1368	1349	1348	1367	1387	1363	1346	1346	1362
33	1339	1327	1332	1347	1367	1348	1338	1337	1345	1326	1328	1348	1369	1344	1323	1323	1339
34	1319	1306	1309	1324	1347	1325	1318	1314	1322	1302	1308	1330	1351	1324	1304	1302	1319
35	1297	1284	1285	1299	1322	1303	1295	1290	1300	1278	1289	1310	1333	1302	1283	1279	1297
36	1275	1261	1263	1276	1297	1282	1272	1267	1277	1254	1267	1290	1312	1280	1262	1255	1275
37	1252	1240	1242	1248	1275	1257	1249	1244	1253	1232	1245	1268	1289	1260	1239	1234	1252
38	1228	1219	1217	1221	1251	1232	1228	1221	1229	1212	1223	1244	1269	1238	1214	1214	1228
39	1204	1198	1192	1195	1226	1207	1206	1198	1206	1191	1201	1221	1248	1214	1189	1192	1204
40	1180	1176	1170	1172	1199	1183	1181	1174	1181	1170	1176	1200	1227	1191	1167	1170	1180
41	1158	1152	1145	1149	1170	1158	1151	1149	1157	1146	1153	1179	1205	1170	1147	1146	1158
42	1138	1129	1120	1124	1143	1133	1121	1122	1133	1122	1129	1156	1181	1149	1125	1124	1138
43	1115	1106	1095	1099	1117	1109	1097	1099	1110	1101	1103	1133	1156	1122	1101	1100	1115
44	1090	1083	1068	1070	1094	1083	1074	1078	1085	1081	1080	1109	1132	1096	1078	1077	1090
45	1063	1060	1041	1043	1072	1058	1048	1054	1059	1059	1055	1085	1106	1073	1054	1055	1063
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47	944	1009	990	995	1022	1003	993	1001	1005	1007	1006	1035	1051	1026	1005	1007	944
48	901	981	965	968	996	975	967	971	972	980	983	1010	1020	1001	983	974	901
49	878	912	939	942	968	946	943	943	900	951	958	980	965	976	960	901	878
50	852	854	914	914	938	922	917	917	851	926	929	950	887	948	934	853	852
51	824	825	888	887	906	896	890	852	822	867	900	902	845	906	907	829	824
52	749	799	861	858	859	866	862	797	794	805	879	824	816	829	880	806	749
53	705	773	834	830	776	836	834	770	759	774	854	785	792	779	855	777	705
54	679	711	808	785	736	799	805	744	687	746	828	756	767	750	829	707	679
55	653	654	782	708	707	721	774	710	647	717	800	728	739	724	799	660	653
56	576	628	739	668	679	670	742	638	620	652	772	702	676	697	734	638	576
57	540	603	672	642	646	643	711	598	573	603	741	671	614	671	684	613	540
58	509	536	636	615	568	616	657	568	512	576	683	610	585	621	648	545	509
59	434	492	608	580	527	585	605	515	484	544	584	548	563	554	592	503	434
60	411	464	573	505	503	528	574	465	418	478	539	522	538	528	542	474	411
61	345	393	504	473	476	473	536	432	386	445	511	497	474	506	476	403	345

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62	317	368	432	448	410	447	471	366	332	395	487	469	422	481	443	379	317
63	259	308	407	417	374	422	404	339	294	351	430	406	401	423	421	313	259
64	233	281	377	353	352	371	378	282	245	310	388	370	380	377	382	288	233
65	177	225	320	329	304	327	340	256	214	267	332	350	316	356	309	231	177
66	148	198	273	304	263	304	293	204	163	221	293	325	287	334	280	206	148
67	113	153	225	248	247	262	241	167	129	190	261	265	271	271	235	158	113
68	71	112	201	228	228	224	199	133	98	144	228	245	213	250	215	116	71
69	37	85	151	211	210	206	171	93	63	107	173	217	193	226	158	88	37
70	29	56	125	191	165	188	132	60	33	81	144	173	176	169	132	59	29
71	26	29	100	142	143	163	99	33	29	51	122	158	161	150	108	28	26
72	24	25	68	120	105	119	76	26	26	28	86	138	116	134	73	25	24
73	21	23	50	87	82	98	53	23	23	25	65	100	90	103	52	22	21
74	18	20	34	60	58	71	37	20	20	22	42	81	65	79	33	20	18
75	16	17	20	42	32	46	22	17	18	19	28	51	38	51	19	17	16
76	14	15	16	24	13	26	16	15	16	17	18	30	15	30	16	15	14
77	12	13	14	14	11	14	14	13	13	14	15	17	13	15	14	13	12
78	10	11	12	11	10	12	11	11	11	12	13	12	11	12	12	11	10
79	9	9	10	10	8	10	9	9	9	10	11	10	9	10	10	9	9
80	7	7	8	8	7	8	7	7	7	8	9	9	8	9	8	7	7
81	6	6	6	7	6	6	6	6	6	6	7	7	7	7	7	6	6
82	4	4	4	5	5	5	4	4	4	5	5	6	6	6	5	5	4
83	3	3	3	4	3	4	3	3	3	4	4	5	5	5	4	3	3
84	2	2	2	3	2	3	2	2	2	2	3	3	4	4	2	2	2
85	1	1	1	2	1	1	1	1	1	1	1	2	3	2	1	1	1
86	1	1	0	1	1	1	0	0	1	1	1	1	2	1	1	1	1
87	1	1	0	0	0	0	0	0	0	1	0	0	1	1	0	1	1
88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
93	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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94	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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113	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
114	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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119	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
121	0	0	0	1	1	1	1	0	0	0	0	0	0	1	0	0	0
122	0	0	0	1	1	1	0	0	0	0	0	1	0	1	0	0	0
123	1	0	1	1	1	1	1	1	1	1	1	0	1	1	0	0	1
124	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	0	1
125	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0	1	1

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126	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1
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130	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
131	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1
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145	1	2	1	1	1	1	1	2	2	2	1	1	1	1	1	2	1
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147	2	2	1	1	1	2	1	2	2	2	1	2	1	1	1	2	2
148	2	2	1	1	1	2	1	2	2	2	2	2	2	1	1	2	2
149	2	2	1	1	1	2	1	2	2	2	2	2	2	1	1	2	2
150	2	2	1	1	1	2	2	2	2	2	2	2	2	1	1	2	2
151	2	2	1	1	1	2	2	2	2	2	2	2	2	1	2	2	2
152	2	2	1	1	1	2	2	2	2	2	2	2	2	1	2	2	2
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155	2	2	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2
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157	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2

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158	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2
159	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2
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172	3	2	2	2	2	2	2	2	2	3	2	2	2	2	2	2	3
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177	3	2	2	2	2	2	2	2	2	3	2	2	2	2	2	2	3
178	3	2	2	2	2	2	2	2	2	3	2	2	2	2	2	2	3
179	3	2	2	2	2	2	2	2	2	3	2	2	2	2	3	2	3
180	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

2.3 Electrical, Photometric and Chromaticity Measurements (Refer to Work Instruction QD25)	IES LM-79 2008
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Test date	2015-10-25	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	SFL1S-50(5700K)		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
STD150803	120.0	60	0.3982	47.10	0.9856	10.93
NB-S2	277.0	60	0.1852	46.65	0.9094	14.79

Sphere-Spectroradiometer Method:

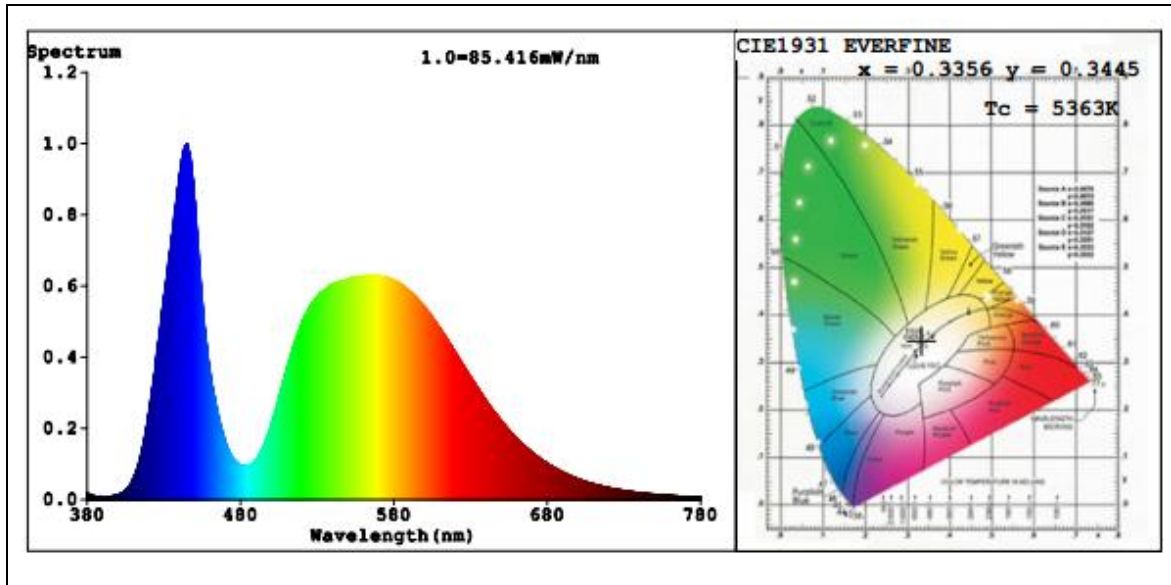
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	70.4
R9	0
CCT (K)	5363
Chromaticity (x, y)	x=0.3356 y=0.3445
Chromaticity (u', v')	u'=0.2077 v'=0.4798
Duv	0.0004
Total Initial Lumen Output(lm)	4246
Initial Lumen Efficacy(lm/w)	90.14

Special Color Rendering Indices			
R1	70	R9	0
R2	73	R10	36
R3	75	R11	72
R4	73	R12	45
R5	71	R13	69
R6	65	R14	86
R7	77	R15	64
R8	59	--	--

Sphere-Spectroradiometer Method for 277V:

Parameter	Result
Test Voltage (V)	277.0
Frequency (Hz)	60
Total Initial Lumen Output(lm)	4112
Initial Lumen Efficacy(lm/w)	88.15

Spectral Power Distribution & Chromaticity Diagram



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3. Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Next Calibration Date
ST-R-336	2 meter Integrating Sphere	2015-07-01	2016-06-30
ST-R-331	Spectral analysis system HAAS-2000	2015-07-01	2016-06-30
D204	Standard Lamp	2015-07-01	2016-06-30
PF2010	Power Meter for Integrating Sphere	2015-07-01	2016-06-30
EE-09	Goniophotometer system	2015-07-01	2016-06-30
D908S	Standard Lamp	2015-07-01	2016-06-30
PF210	Power Meter for Goniophotometer	2015-07-01	2016-06-30
ST-R-181A	Temperature Tester	2015-07-01	2016-06-30
Uncertainty: Photometric Measurement (Sphere):1.74% Chromaticity Measurement(Sphere):14.3K Photometric Measurement(Goniophotometer):1.62%			

******* END OF DATASHEET PACKAGE *******