



IES LM-79-08

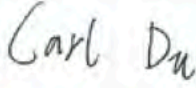
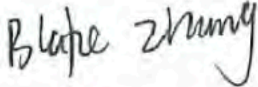
MEASUREMENT AND TEST REPORT

For

P.Q.L., Inc.

2285 Ward Avenue Simi Valley, CA 93065

Test Model: 55271, 55272

Report Type:	Electrical and Photometric tests including: Luminous Flux, Chromaticity, Luminous Intensity Distribution, THD
Test Engineer:	Carl Du 
Report Number:	RKS161114003-10
Test Date:	2016-11-16 to 2016-11-17
Report Date:	2016-11-18
Reviewed By:	Blake Zhang 
Prepared By:	Bay Area Compliance Laboratories Corp. (Dongguan). Pu Long Cun 69, Puxinghu Industrial Area, Tangxia Town, Dongguan, Guangdong, P.R.China. Tel: +86-0769-86858888 Fax: +86-0769-86858588
Test Facility:	Test facility was located at Pu Long Cun 69, Puxinghu Industrial Area, Tangxia Town, Dongguan, Guangdong, P.R.China.
Accreditation:	The IAS Accreditation Number TL-460.



Note: The test data was only valid for the test sample(s). This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (Dongguan). This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

1. Product Description

General Information:

One sample was received on 2016-11-14 and used for testing.

Model Tested: 55271, 55272
 Manufacturer: P.Q.L., Inc.
 Brand Name: Superior Life®
 Product Designation: 2x4 Luminaires for Ambient Lighting of Interior Commercial Spaces
 Dimmable: Continuous Dimming
 Dimming Range: 10% to 100%
 Burning Time Before Test: 0hour(For New Products)

Rated Values:

Rated Voltage/Frequency: 120-277VAC, 60Hz
 Rated Power: 42W
 Nominal CCT: 3500K
 Nominal Lumen Output: 4368lm
 Nominal CRI: 80

2. Standards Used

- IES LM-79-08: Approved Method: Electrical & Photometric Measurement of Solid-state Lighting Products
- ANSI C82.77-2002: Harmonic Emission Limits – Related Power Quality Requirements for Lighting
- IES TM-30-15: IES Method for Evaluating Light Source Color Rendition (This method is not in IAS accreditation scope)

3. Description of Test Equipment

Device	Manufacture	Model No	Serial No	Test Range	Calibration date	Calibration due date
2.0m integrating sphere	EVERFINE	R98	11010018	R98	2016-11-08	2017-11-07
spectroradiometer	EVERFINE	HAAS-2000	20140912	380-780nm	2016-11-08	2017-11-07
Digital Power Meter	EVERFINE	PF2010A	1011004	600V/20A	2016-07-11	2017-07-10
Digital CC&CV DC Power Supply	EVERFINE	WY305-V1	1101047	30V/5A	2016-07-07	2017-07-06
Temperature/humidity/clock	Victor	VC230	EE023	0~40°C0~90%	2016-03-21	2017-03-20
Standard Light Source	SENSING	N/A	LSD090808	N/A	2016-09-24	2017-09-23
Special zero-voltage synchronous switching AC	EVERFINE	DPS1010-YF	1011001T	0-150V, 0-300V	2016-03-04	2017-03-03
AC Power Supply	EVERFINE	VPS1030 PWM	1012017	0-150V, 0-300V	2016-03-04	2017-03-03
DC Power Supply	EVERFINE	WY12010	1009009	30V/5A	2016-03-04	2017-03-03
Power Meter	YOKOGAWA	WT-210	91KB35700	15/30/60/150/300/600 V	2016-03-04	2017-03-03
Goniophotometer	EVERFINE	GO-R5000	YG108492N10120001	1600mm,3000W/10A	2016-03-10	2017-03-09

Device	Manufacture	Model No	Serial No	Test Range	Calibration date	Calibration due date
Wireless Remote Sensor	N/A	433MHz	N/A	0°C~50°C;-20°C~60°C	2016-03-21	2017-03-20
Standard Light Source	EVERFINE	D908	1012003	N/A	2016-09-07	2017-09-06

Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attested that all calibration has been performed using suitable standards traceable to National Primary Standards and International System of Units (SI).

4. Test Method

Product was tested with no seasoning. All stabilization and measurements were made in compliance with IES LM-79-08. The product was operated at rated voltage or at voltage required by manufacturer. The ambient temperature of the sample was maintained at 25°C±1°C during measurement. And relative humidity is less than 65%.

Integrating Sphere System

The system includes AC power source, digital power meter, DC power supply, Spectroradiometer, and integrating sphere. The integrating sphere system is calibrated by standard spectrum light source before measurement.

4π geometry was used during measurement. The product was operated in its intended orientation in application and was recorded in this report.

The uncertainty of the light output (luminous flux) measurements is U=1.8% (K=2), at the 95% confidence level. The uncertainty of the correlated color temperature measurements is U=20K (K=2), at the 95% confidence level. The uncertainty of the CRI is U=1.8(K=2), at the 95% confidence level.

The uncertainty of power meter AC current U=0.19 % of rdg, AC Voltage U=0.15% of rdg, Power U=0.20%) (K=2), at the 95% confidence level.

Goniophotometer System

The goniophotometer system is calibrated by standard light source before measurement.

Type C goniophotometer was used for measuring total luminous flux, luminous intensity distribution, and color spatial uniformity. The product was operated in its intended orientation in application and was recorded in this report. The vertical angle (γ) test intervals were set no more than 1 degree while data for 5 degree intervals is reported. The horizontal angle (C plane) test intervals were set no more than 22.5 degree.

The uncertainty of the luminous intensity is U=1.6% (K=2) , at the 95% confidence level.

Additional Test

The Additional Test item may not be covered by IESNA LM-79-2008. Additional test including power factor, off-state power and THD, was measured by Digital Power Meter after stabilized at 25°C±1°C. Test voltage for THD and power factor test would be equal to rated voltage or, in case of a voltage range, maximum value of that range.

The uncertainty of power meter AC current U=0.19 % of rdg, AC Voltage U=0.15% of rdg, Power U=0.20%) (K=2), at the 95% confidence level.

Fidelity Index and Gamut Index Calculation

The R_f , R_g was calculated according to IES TM-30-15 by using calculation tools. The calculation was based on the measured SPD from 380nm to 780nm with 1nm intervals. All the colors in this report is for reference only.

5. Test Result

[Integrating Sphere System]

Total operating time for integrating sphere test: **0.5 hour**

Test orientation: **Downward**

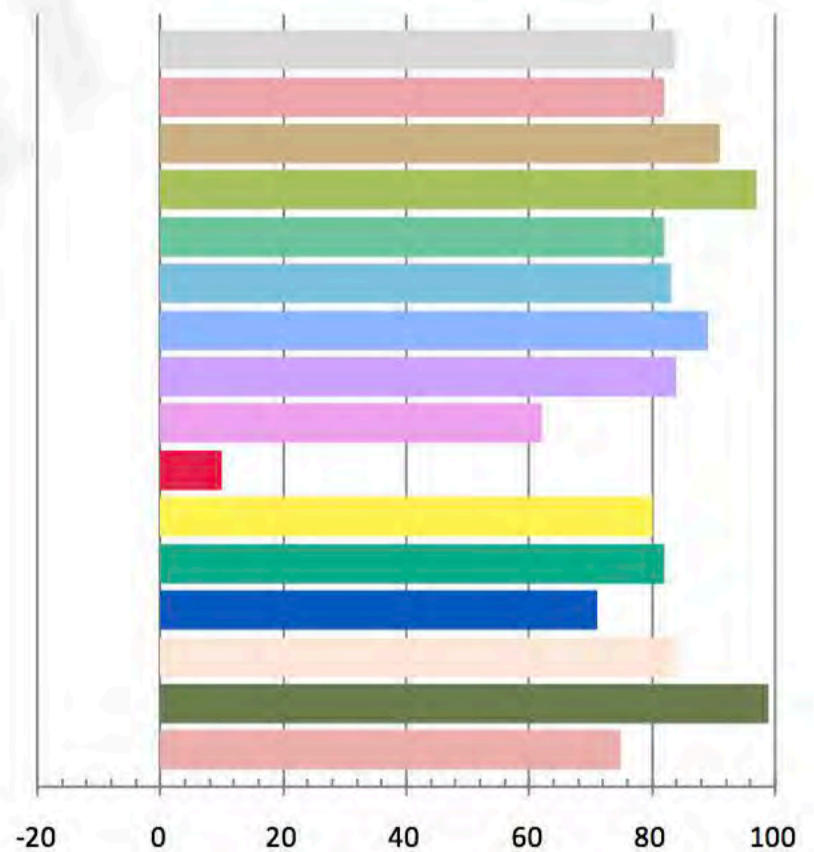
Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.0	60	0.3571	42.55	0.9927	4386.2	103.09

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
13.197	3431	0.00049	0.4098	0.3941	0.2373	0.5133

Color Rendering Index

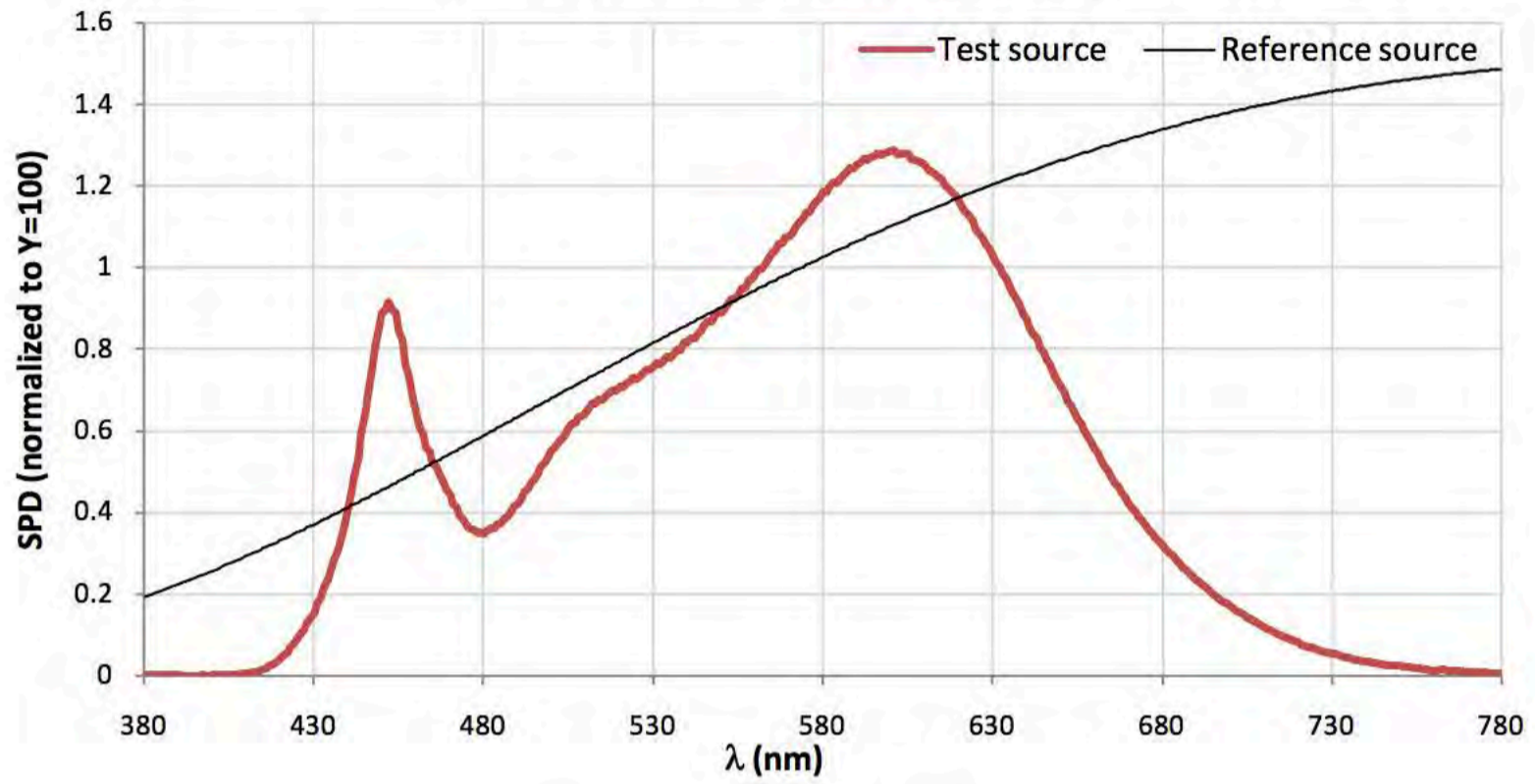
Ra			
83.8			
R1	R2	R3	R4
82	91	97	82
R5	R6	R7	R8
83	89	84	62
R9	R10	R11	R12
10	80	82	71
R13	R14	R15	
84	99	75	



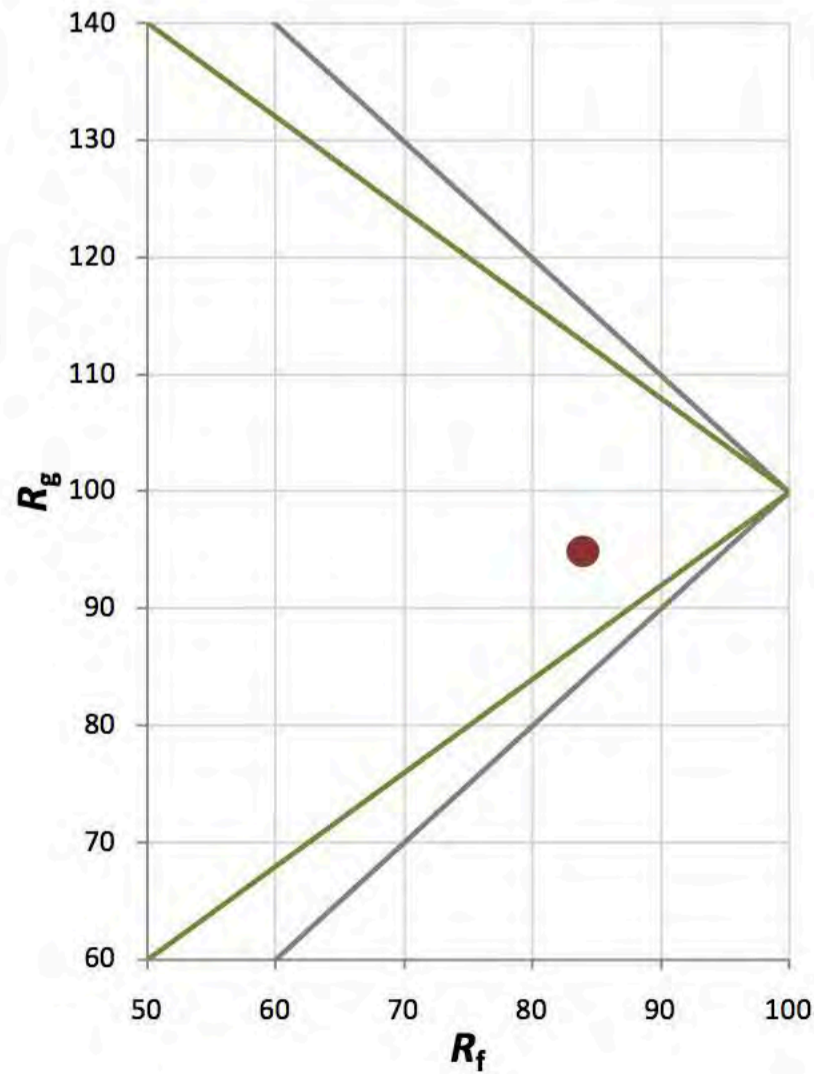
Fidelity Index and Gamut Index

Fidelity Index R_f	84
Gamut Index R_g	95

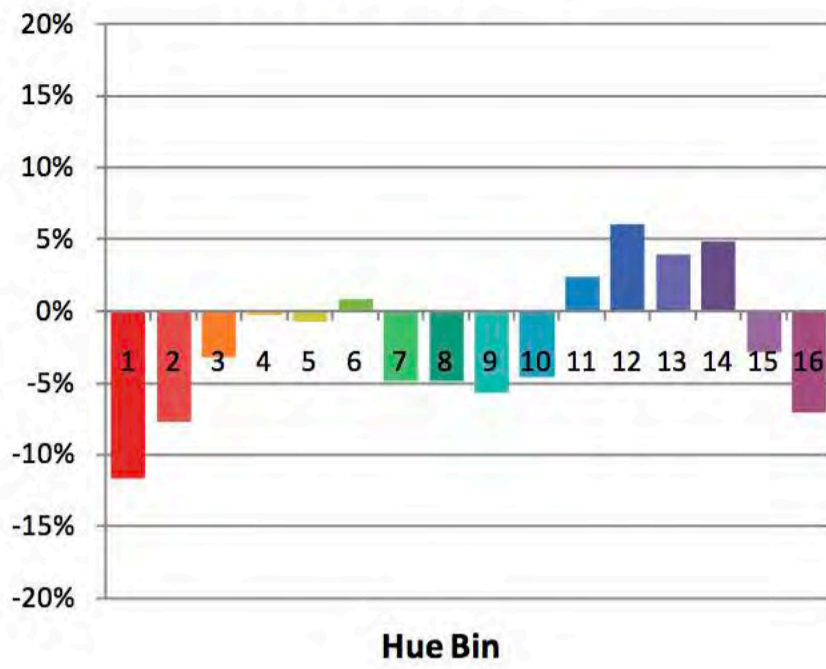
Spectral Power Distribution Comparison



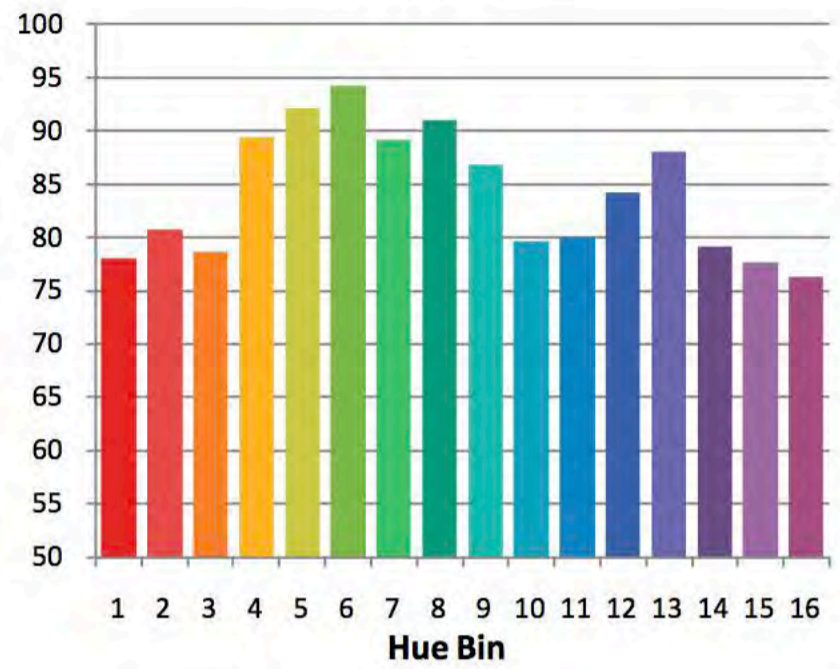
Plot of R_g versus R_f



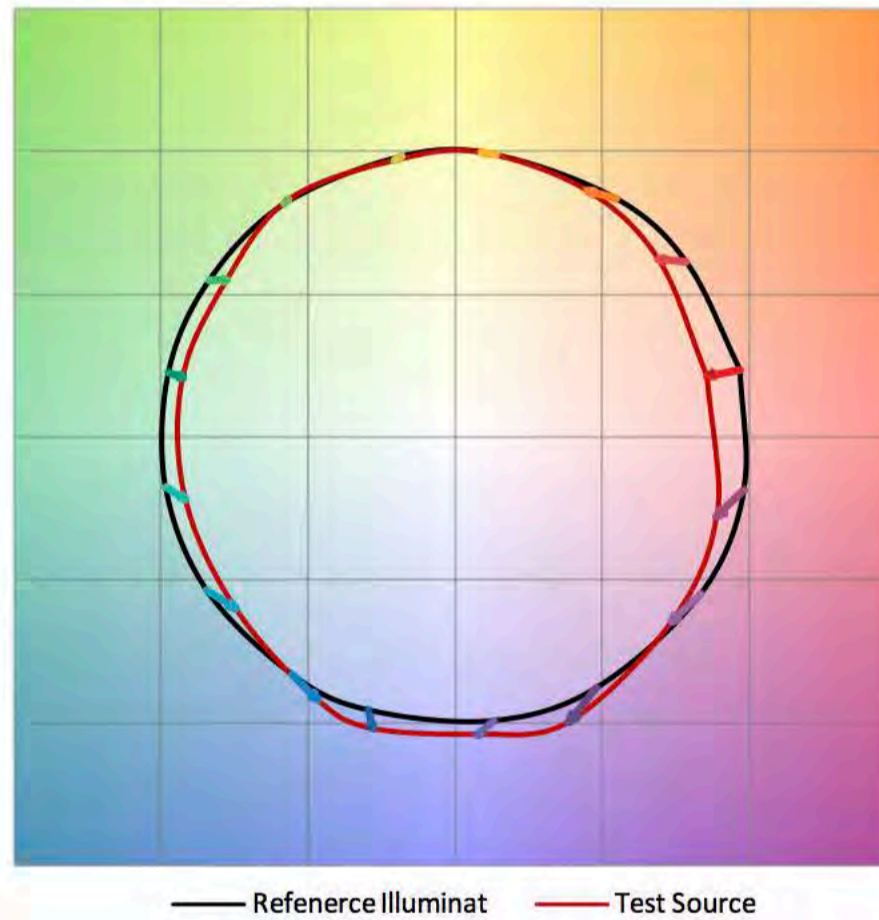
Chroma Shift by Hue



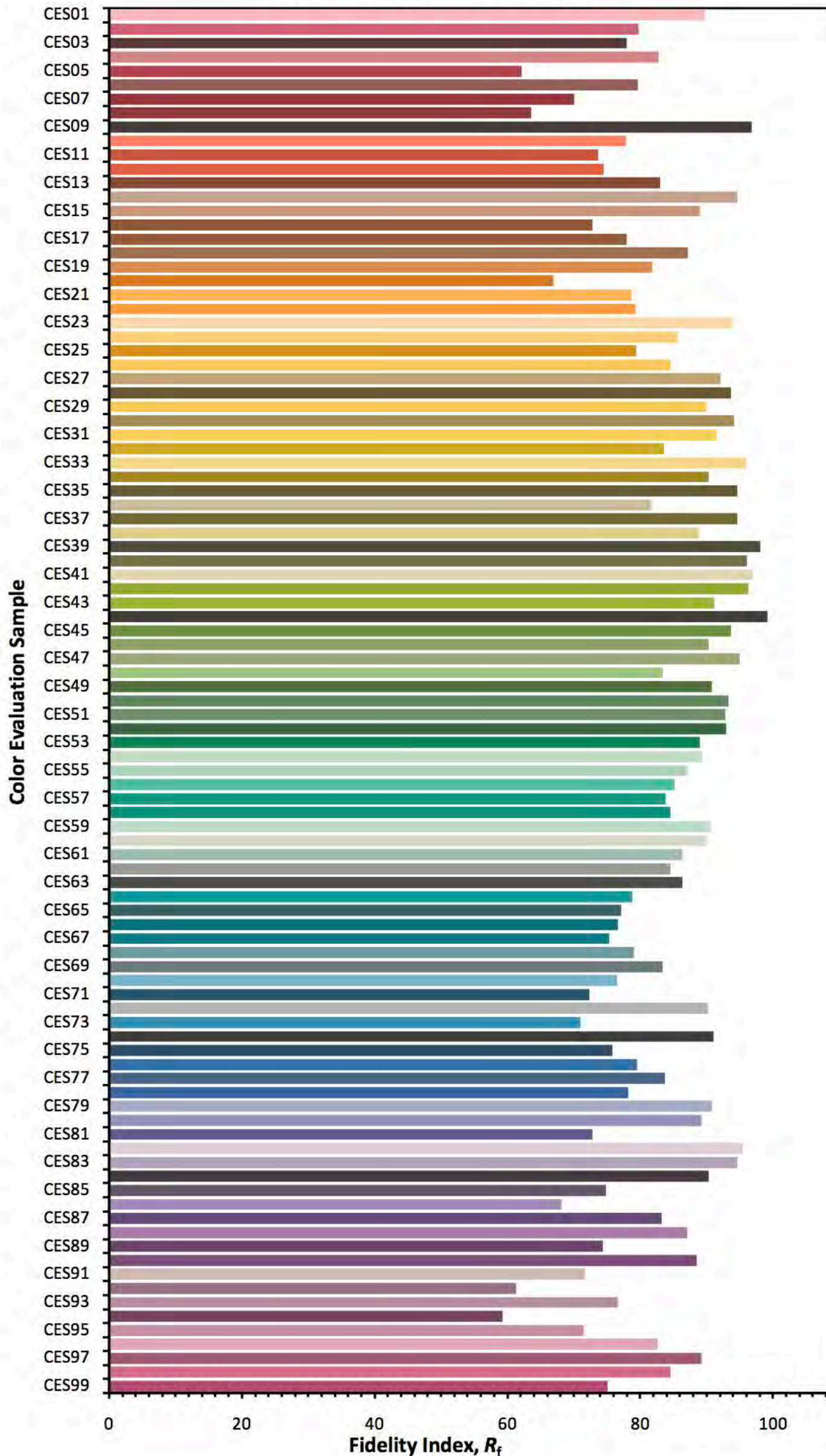
R_f by Hue



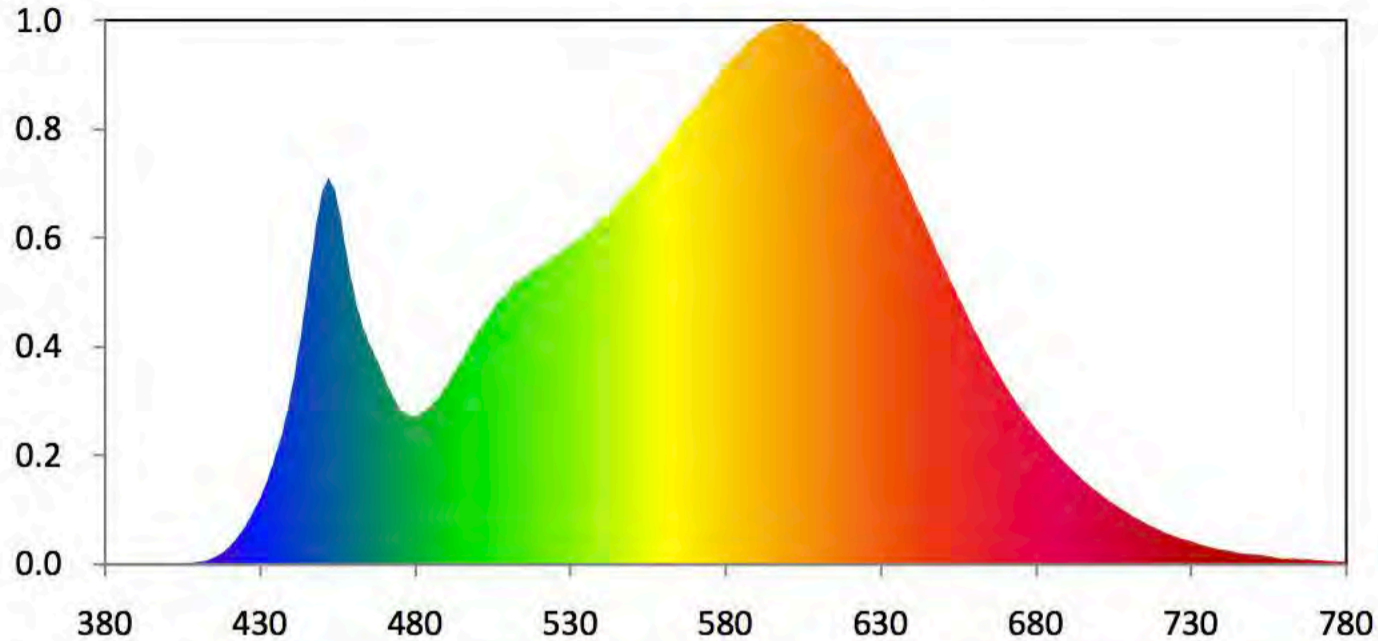
Color Vector Graphic



Color Fidelity by CES Sample



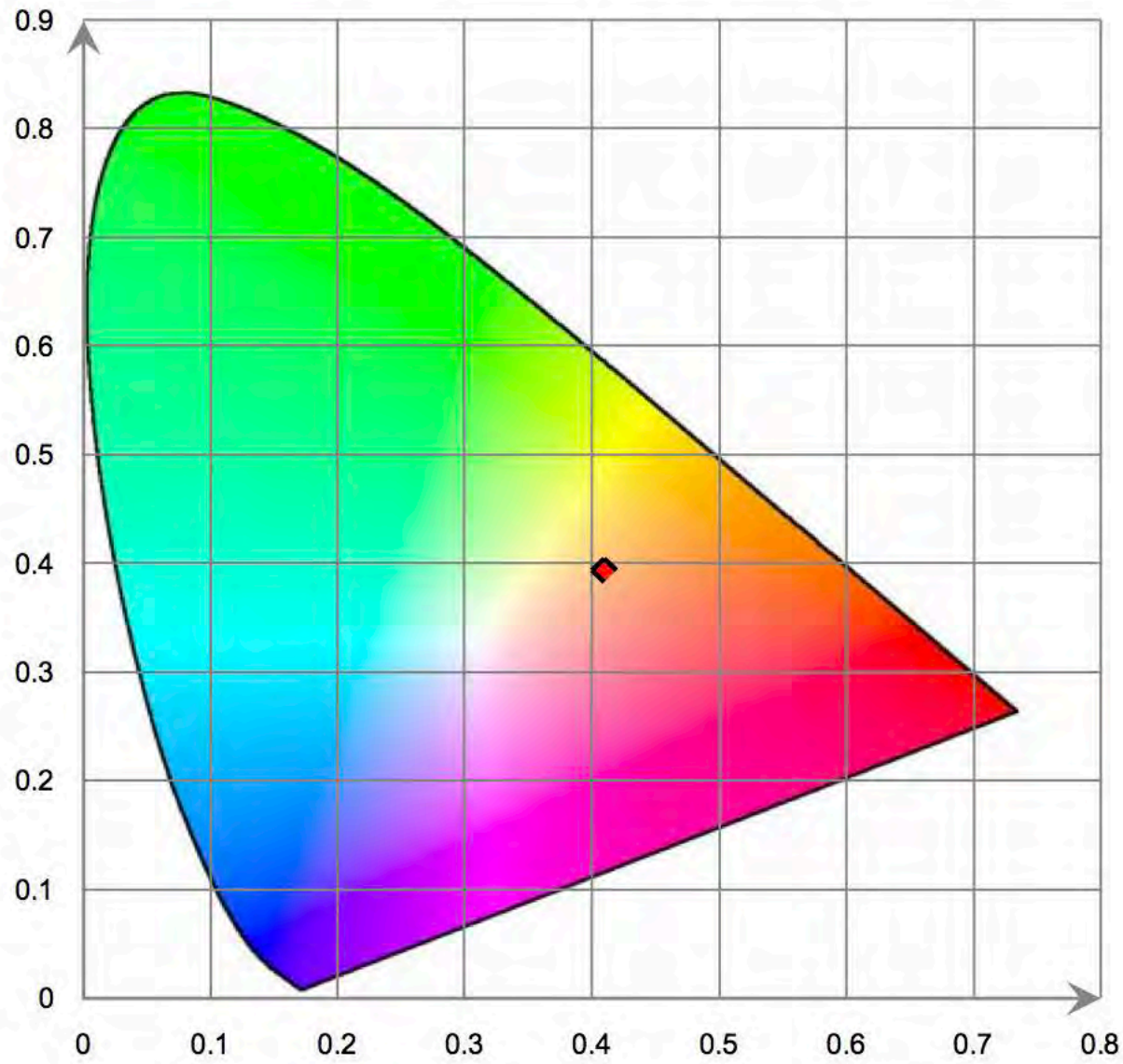
Relative Spectral Power Distribution



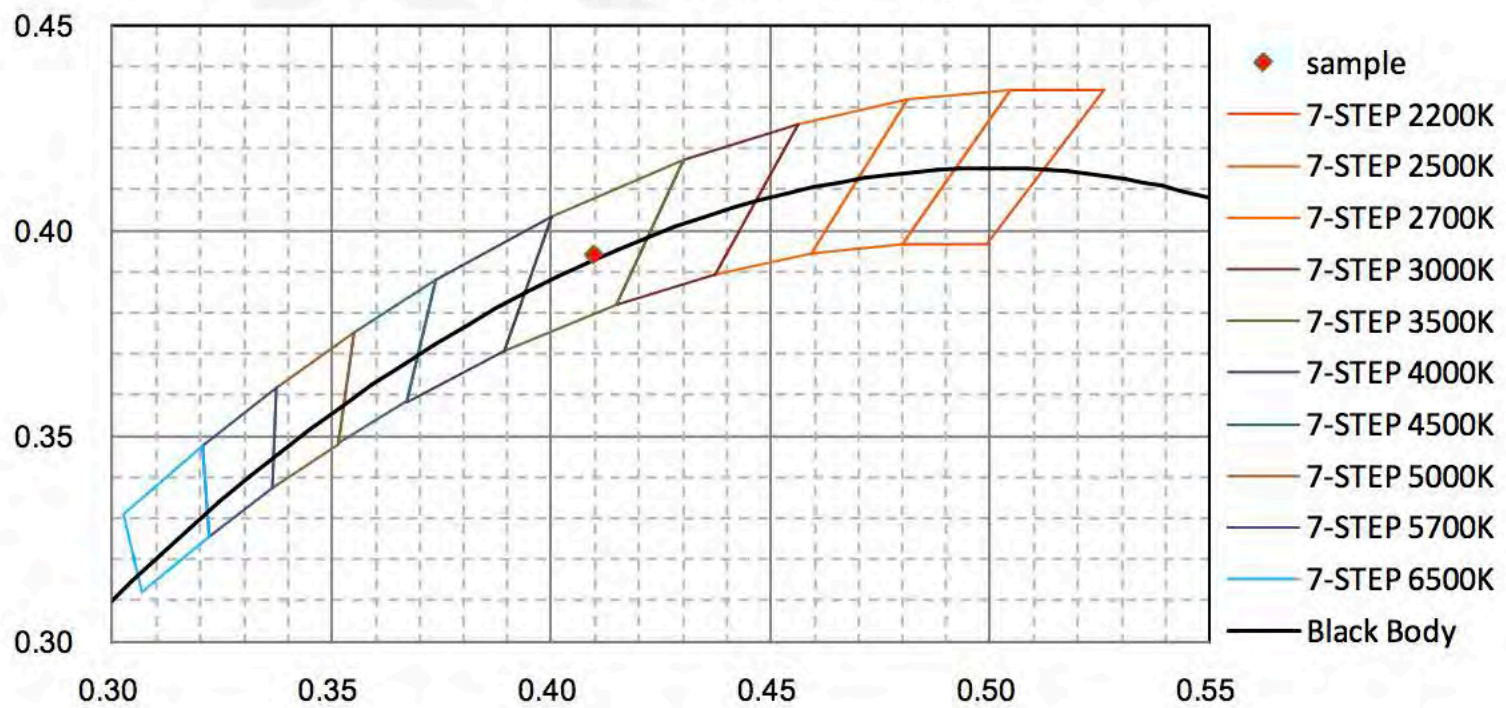
nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	5.350E-02	421	3.166E+00	462	3.792E+01	503	3.711E+01	544	5.436E+01
381	4.370E-02	422	3.648E+00	463	3.596E+01	504	3.797E+01	545	5.501E+01
382	4.320E-02	423	4.353E+00	464	3.504E+01	505	3.882E+01	546	5.567E+01
383	4.390E-02	424	4.953E+00	465	3.350E+01	506	3.968E+01	547	5.574E+01
384	4.020E-02	425	5.578E+00	466	3.283E+01	507	3.987E+01	548	5.645E+01
385	3.380E-02	426	6.516E+00	467	3.142E+01	508	4.061E+01	549	5.711E+01
386	3.910E-02	427	7.224E+00	468	3.073E+01	509	4.078E+01	550	5.712E+01
387	4.360E-02	428	8.284E+00	469	2.929E+01	510	4.147E+01	551	5.774E+01
388	4.250E-02	429	9.119E+00	470	2.849E+01	511	4.212E+01	552	5.849E+01
389	6.240E-02	430	9.995E+00	471	2.708E+01	512	4.278E+01	553	5.923E+01
390	5.530E-02	431	1.132E+01	472	2.631E+01	513	4.278E+01	554	5.934E+01
391	2.700E-02	432	1.229E+01	473	2.508E+01	514	4.338E+01	555	6.005E+01
392	1.680E-02	433	1.386E+01	474	2.447E+01	515	4.341E+01	556	6.078E+01
393	1.500E-02	434	1.503E+01	475	2.347E+01	516	4.397E+01	557	6.092E+01
394	2.100E-02	435	1.681E+01	476	2.310E+01	517	4.442E+01	558	6.227E+01
395	2.310E-02	436	1.816E+01	477	2.291E+01	518	4.490E+01	559	6.243E+01
396	2.570E-02	437	1.963E+01	478	2.243E+01	519	4.483E+01	560	6.318E+01
397	3.010E-02	438	2.189E+01	479	2.255E+01	520	4.535E+01	561	6.392E+01
398	2.290E-02	439	2.360E+01	480	2.234E+01	521	4.533E+01	562	6.410E+01
399	1.890E-02	440	2.635E+01	481	2.266E+01	522	4.583E+01	563	6.486E+01
400	2.990E-02	441	2.845E+01	482	2.311E+01	523	4.629E+01	564	6.566E+01
401	4.850E-02	442	3.175E+01	483	2.319E+01	524	4.678E+01	565	6.638E+01
402	5.060E-02	443	3.426E+01	484	2.377E+01	525	4.664E+01	566	6.709E+01
403	4.290E-02	444	3.810E+01	485	2.396E+01	526	4.710E+01	567	6.792E+01
404	6.020E-02	445	4.094E+01	486	2.466E+01	527	4.757E+01	568	6.812E+01
405	9.750E-02	446	4.504E+01	487	2.494E+01	528	4.807E+01	569	6.891E+01
406	1.319E-01	447	4.779E+01	488	2.572E+01	529	4.806E+01	570	6.903E+01
407	1.577E-01	448	5.177E+01	489	2.658E+01	530	4.859E+01	571	6.975E+01
408	1.824E-01	449	5.386E+01	490	2.697E+01	531	4.908E+01	572	7.058E+01
409	2.622E-01	450	5.684E+01	491	2.790E+01	532	4.903E+01	573	7.133E+01
410	3.331E-01	451	5.749E+01	492	2.890E+01	533	4.958E+01	574	7.200E+01
411	3.996E-01	452	5.872E+01	493	2.939E+01	534	5.013E+01	575	7.279E+01
412	4.728E-01	453	5.752E+01	494	3.042E+01	535	5.007E+01	576	7.294E+01
413	5.990E-01	454	5.699E+01	495	3.095E+01	536	5.063E+01	577	7.372E+01
414	7.894E-01	455	5.436E+01	496	3.196E+01	537	5.123E+01	578	7.452E+01
415	9.701E-01	456	5.260E+01	497	3.297E+01	538	5.125E+01	579	7.526E+01
416	1.229E+00	457	4.914E+01	498	3.347E+01	539	5.242E+01	580	7.602E+01
417	1.487E+00	458	4.688E+01	499	3.448E+01	540	5.241E+01	581	7.608E+01
418	1.779E+00	459	4.367E+01	500	3.544E+01	541	5.303E+01	582	7.677E+01
419	2.203E+00	460	4.188E+01	501	3.585E+01	542	5.310E+01	583	7.752E+01
420	2.596E+00	461	3.925E+01	502	3.679E+01	543	5.374E+01	584	7.752E+01

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
585	7.813E+01	626	6.957E+01	667	2.959E+01	708	8.232E+00	749	1.479E+00
586	7.875E+01	627	6.880E+01	668	2.880E+01	709	7.890E+00	750	1.485E+00
587	7.936E+01	628	6.797E+01	669	2.804E+01	710	7.594E+00	751	1.444E+00
588	7.993E+01	629	6.717E+01	670	2.717E+01	711	7.266E+00	752	1.382E+00
589	7.984E+01	630	6.634E+01	671	2.644E+01	712	7.022E+00	753	1.308E+00
590	8.032E+01	631	6.510E+01	672	2.571E+01	713	6.780E+00	754	1.223E+00
591	8.081E+01	632	6.418E+01	673	2.501E+01	714	6.527E+00	755	1.166E+00
592	8.130E+01	633	6.323E+01	674	2.426E+01	715	6.255E+00	756	1.141E+00
593	8.107E+01	634	6.236E+01	675	2.361E+01	716	6.007E+00	757	9.636E-01
594	8.144E+01	635	6.104E+01	676	2.300E+01	717	5.800E+00	758	8.610E-01
595	8.180E+01	636	6.008E+01	677	2.227E+01	718	5.564E+00	759	8.415E-01
596	8.216E+01	637	5.920E+01	678	2.169E+01	719	5.336E+00	760	7.673E-01
597	8.188E+01	638	5.828E+01	679	2.112E+01	720	5.132E+00	761	8.151E-01
598	8.215E+01	639	5.696E+01	680	2.043E+01	721	4.882E+00	762	8.943E-01
599	8.233E+01	640	5.595E+01	681	1.996E+01	722	4.691E+00	763	8.632E-01
600	8.249E+01	641	5.467E+01	682	1.932E+01	723	4.496E+00	764	7.458E-01
601	8.258E+01	642	5.368E+01	683	1.877E+01	724	4.333E+00	765	7.017E-01
602	8.202E+01	643	5.297E+01	684	1.819E+01	725	4.135E+00	766	6.747E-01
603	8.209E+01	644	5.170E+01	685	1.757E+01	726	3.944E+00	767	7.201E-01
604	8.211E+01	645	5.073E+01	686	1.704E+01	727	3.813E+00	768	7.007E-01
605	8.205E+01	646	4.972E+01	687	1.656E+01	728	3.688E+00	769	6.362E-01
606	8.139E+01	647	4.868E+01	688	1.602E+01	729	3.595E+00	770	5.801E-01
607	8.121E+01	648	4.740E+01	689	1.553E+01	730	3.439E+00	771	5.544E-01
608	8.098E+01	649	4.646E+01	690	1.508E+01	731	3.290E+00	772	5.496E-01
609	8.068E+01	650	4.552E+01	691	1.460E+01	732	3.085E+00	773	4.696E-01
610	8.036E+01	651	4.456E+01	692	1.419E+01	733	2.932E+00	774	4.298E-01
611	7.955E+01	652	4.336E+01	693	1.370E+01	734	2.844E+00	775	4.608E-01
612	7.929E+01	653	4.244E+01	694	1.329E+01	735	2.691E+00	776	4.198E-01
613	7.890E+01	654	4.155E+01	695	1.279E+01	736	2.570E+00	777	4.044E-01
614	7.844E+01	655	4.038E+01	696	1.238E+01	737	2.442E+00	778	3.750E-01
615	7.801E+01	656	3.967E+01	697	1.199E+01	738	2.294E+00	779	3.461E-01
616	7.708E+01	657	3.855E+01	698	1.158E+01	739	2.217E+00	780	3.165E-01
617	7.661E+01	658	3.761E+01	699	1.122E+01	740	2.174E+00		
618	7.603E+01	659	3.652E+01	700	1.086E+01	741	2.102E+00		
619	7.547E+01	660	3.568E+01	701	1.054E+01	742	2.039E+00		
620	7.482E+01	661	3.485E+01	702	1.013E+01	743	1.914E+00		
621	7.368E+01	662	3.398E+01	703	9.804E+00	744	1.792E+00		
622	7.303E+01	663	3.296E+01	704	9.450E+00	745	1.688E+00		
623	7.232E+01	664	3.216E+01	705	9.142E+00	746	1.611E+00		
624	7.160E+01	665	3.132E+01	706	8.854E+00	747	1.551E+00		
625	7.037E+01	666	3.034E+01	707	8.541E+00	748	1.510E+00		

CIE 1931 x y Chromaticity Diagram



7-Step Chromaticity Quadrangles



[Goniophotometer System]

Total operating time for luminous intensity distribution: **1.0 hours**

Test orientation: **Downward**

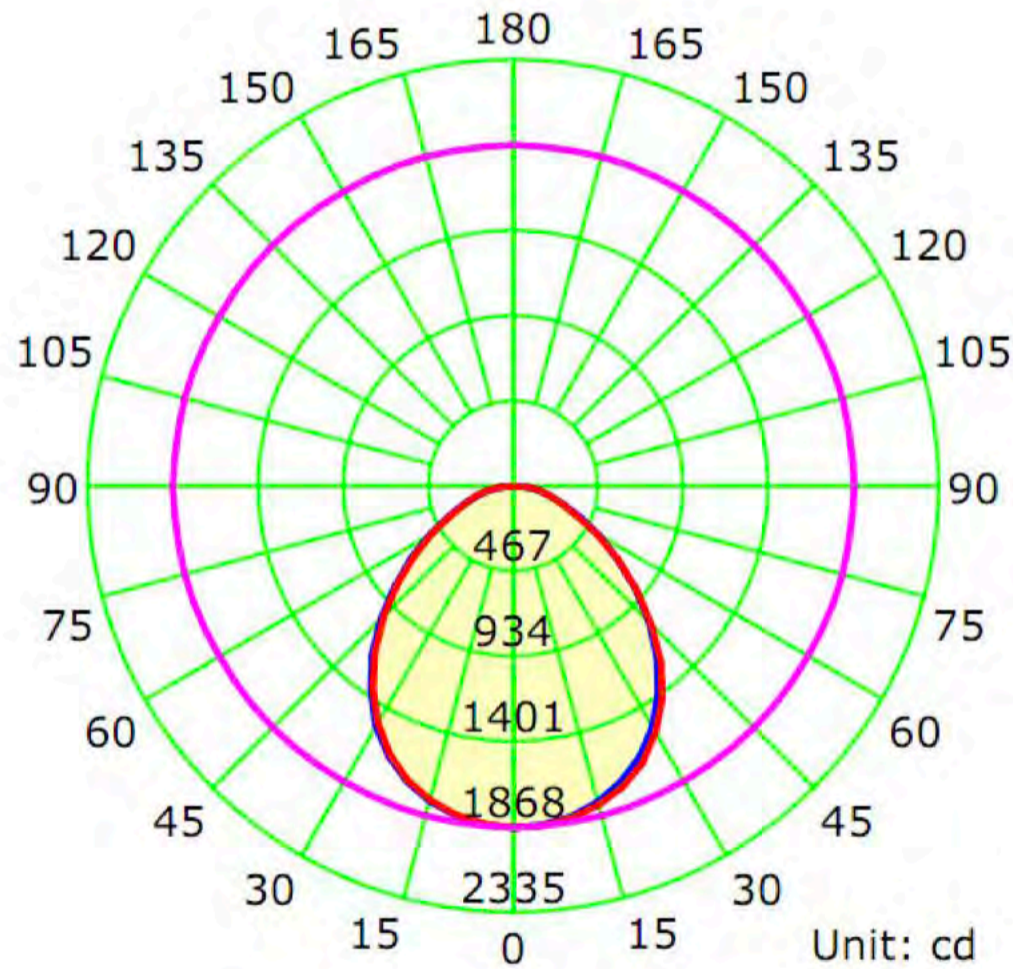
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.0	60	0.3530	42.23	0.9950

Photometric Measurement

Luminous Flux (lm)	Efficacy (lm/W)	I_{max} (cd)	S/MH (C0/180)	S/MH (C90/270)
4395.7	104.09	1868.2	1.21	1.21

Luminous Intensity Distribution



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle (50% I_{max}):	96.2	95.8	95.8	95.6	95.9
Field Angle (10% I_{max}):	153.3	147.7	153.2	148.0	150.6

Luminous Intensity (cd) Distribution Data

γ \ C	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0.0°	1868	1868	1868	1868	1868	1868	1868	1868
5.0°	1861	1860	1862	1865	1865	1865	1864	1862
10.0°	1837	1837	1840	1843	1846	1846	1843	1838
15.0°	1793	1796	1799	1805	1809	1808	1803	1798
20.0°	1727	1733	1739	1747	1754	1752	1745	1735
25.0°	1638	1644	1654	1663	1672	1669	1659	1647
30.0°	1525	1532	1541	1554	1563	1561	1548	1534
35.0°	1388	1393	1402	1417	1426	1422	1408	1393
40.0°	1229	1233	1241	1252	1264	1259	1241	1230
45.0°	1056	1058	1059	1070	1074	1073	1062	1055
50.0°	875	875	875	881	881	883	876	872
55.0°	702	693	693	692	698	698	696	699
60.0°	543	526	518	518	528	524	524	535
65.0°	403	383	363	372	387	377	372	393
70.0°	292	273	243	263	278	265	250	279
75.0°	212	194	167	187	204	190	171	197
80.0°	147	132	116	127	147	129	116	132
85.0°	79	71	60	73	83	74	61	71
90.0°	5	8	8	14	15	16	9	11
95.0°	1	1	2	1	1	1	1	1
100.0°	1	1	2	2	1	1	2	1
105.0°	1	1	1	1	1	1	2	1
110.0°	1	1	2	1	1	1	2	1
115.0°	1	1	2	2	1	1	2	1
120.0°	2	2	2	2	2	2	2	2
125.0°	2	2	2	2	2	2	2	2
130.0°	2	2	3	3	2	2	3	2
135.0°	2	2	3	3	3	3	3	3
140.0°	3	3	3	3	3	3	3	3
145.0°	3	3	4	3	4	3	4	4
150.0°	4	4	4	4	4	4	4	4
155.0°	4	4	4	4	4	4	4	4
160.0°	4	4	4	4	4	4	5	4
165.0°	4	4	4	4	4	4	5	4
170.0°	4	4	5	4	4	4	5	5
175.0°	4	4	5	5	4	5	5	5
180.0°	0	0	0	0	0	0	0	0

Luminous Intensity (cd) Distribution Data (cont.)

$\gamma \backslash C$	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
0.0°	1868	1868	1868	1868	1868	1868	1868	1868
5.0°	1859	1858	1858	1857	1855	1856	1857	1857
10.0°	1832	1831	1830	1829	1827	1827	1828	1831
15.0°	1787	1785	1784	1781	1781	1779	1779	1783
20.0°	1720	1717	1716	1714	1711	1711	1711	1715
25.0°	1630	1626	1623	1619	1618	1615	1617	1620
30.0°	1514	1506	1502	1499	1498	1493	1494	1500
35.0°	1370	1364	1357	1355	1354	1349	1349	1357
40.0°	1209	1202	1190	1190	1189	1183	1185	1196
45.0°	1034	1027	1017	1011	1009	1009	1009	1021
50.0°	857	853	843	837	834	834	838	849
55.0°	687	684	672	668	669	668	669	680
60.0°	529	527	513	513	518	514	510	523
65.0°	394	390	370	378	388	379	368	386
70.0°	284	279	252	270	281	273	250	275
75.0°	205	195	172	192	208	192	171	192
80.0°	139	127	116	129	146	129	113	124
85.0°	73	66	57	71	79	71	56	65
90.0°	4	5	5	12	13	13	6	5
95.0°	2	1	2	2	2	2	2	1
100.0°	1	1	2	1	1	2	2	2
105.0°	1	1	2	2	1	2	2	2
110.0°	1	2	2	2	1	2	2	2
115.0°	1	2	2	2	1	2	2	2
120.0°	2	2	2	2	1	2	2	2
125.0°	2	2	2	2	2	2	2	2
130.0°	2	2	2	2	2	2	3	2
135.0°	3	3	3	2	2	3	3	3
140.0°	3	3	3	3	3	3	3	3
145.0°	3	3	3	3	3	3	3	3
150.0°	3	3	3	3	3	4	4	4
155.0°	3	4	4	4	4	4	4	4
160.0°	4	4	4	4	4	4	4	4
165.0°	4	4	4	4	4	4	4	4
170.0°	4	4	4	4	5	5	5	5
175.0°	4	4	4	5	5	5	5	4
180.0°	0	0	0	0	0	0	0	0

Zonal Lumen Density Measurement

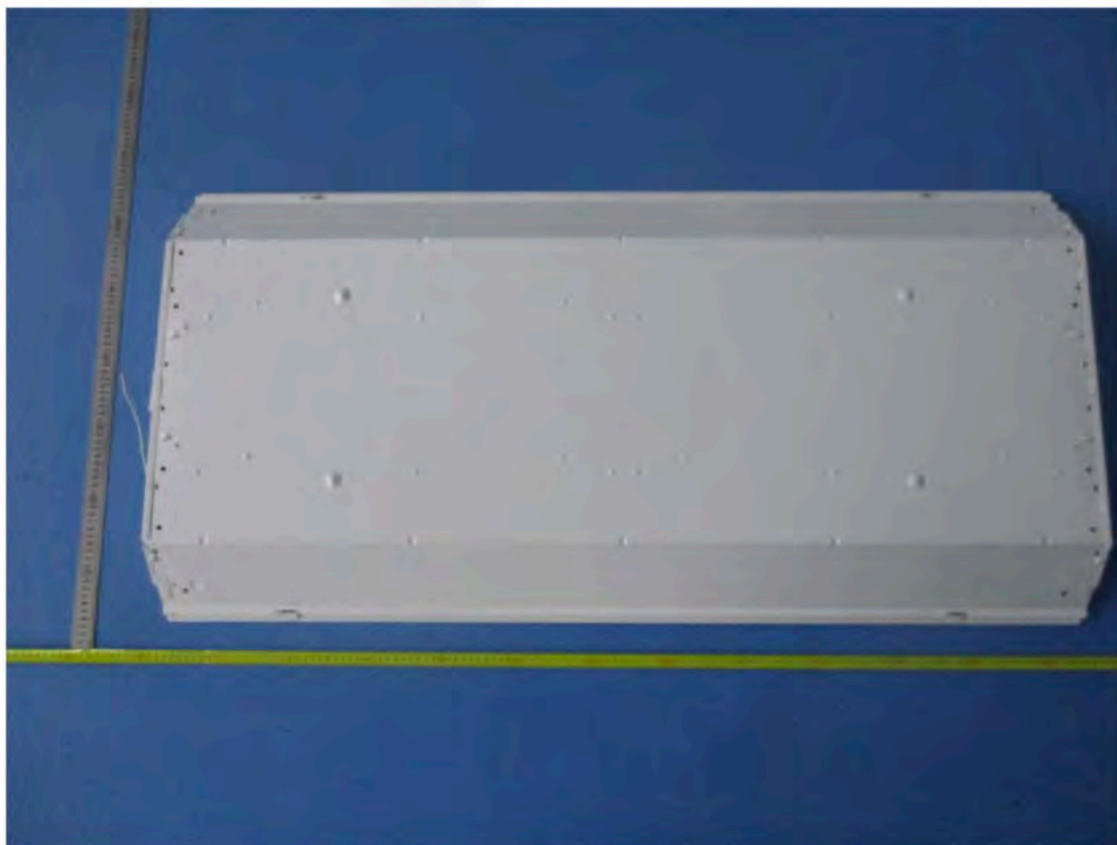
Deg	Flux (lm)	%
0-5	44.6	1.01
5-10	132.2	3.01
10-15	215.2	4.89
15-20	290.1	6.60
20-25	353.1	8.03
25-30	400.0	9.10
30-35	427.7	9.73
35-40	433.7	9.87
40-45	418.2	9.51
45-50	384.0	8.74
50-55	336.0	7.64
55-60	279.2	6.35
60-65	219.8	5.00
65-70	164.7	3.75
70-75	120.2	2.73
75-80	85.6	1.95
80-85	54.0	1.23
85-90	21.5	0.49
90-95	2.9	0.07
95-100	0.8	0.02
100-105	0.7	0.02
105-110	0.7	0.02
110-115	0.7	0.02
115-120	0.8	0.02
120-125	0.9	0.02
125-130	0.9	0.02
130-135	1.0	0.02
135-140	1.0	0.02
140-145	1.1	0.02
145-150	1.0	0.02
150-155	0.9	0.02
155-160	0.8	0.02
160-165	0.7	0.02
165-170	0.5	0.01
170-175	0.3	0.01
175-180	0.1	0.00

Deg	Flux (lm)	%
0-5	44.6	1.01
0-10	176.8	4.02
0-15	391.9	8.92
0-20	682.0	15.52
0-25	1035.1	23.55
0-30	1435.1	32.65
0-35	1862.8	42.38
0-40	2296.5	52.24
0-45	2714.7	61.76
0-50	3098.6	70.49
0-55	3434.7	78.14
0-60	3713.9	84.49
0-65	3933.7	89.49
0-70	4098.4	93.24
0-75	4218.6	95.97
0-80	4304.1	97.92
0-85	4358.2	99.15
0-90	4379.7	99.64
0-95	4382.6	99.70
0-100	4383.4	99.72
0-105	4384.1	99.74
0-110	4384.9	99.75
0-115	4385.6	99.77
0-120	4386.4	99.79
0-125	4387.3	99.81
0-130	4388.2	99.83
0-135	4389.2	99.85
0-140	4390.3	99.88
0-145	4391.3	99.90
0-150	4392.3	99.92
0-155	4393.3	99.95
0-160	4394.1	99.96
0-165	4394.8	99.98
0-170	4395.3	99.99
0-175	4395.6	100.00
0-180	4395.6	100.00

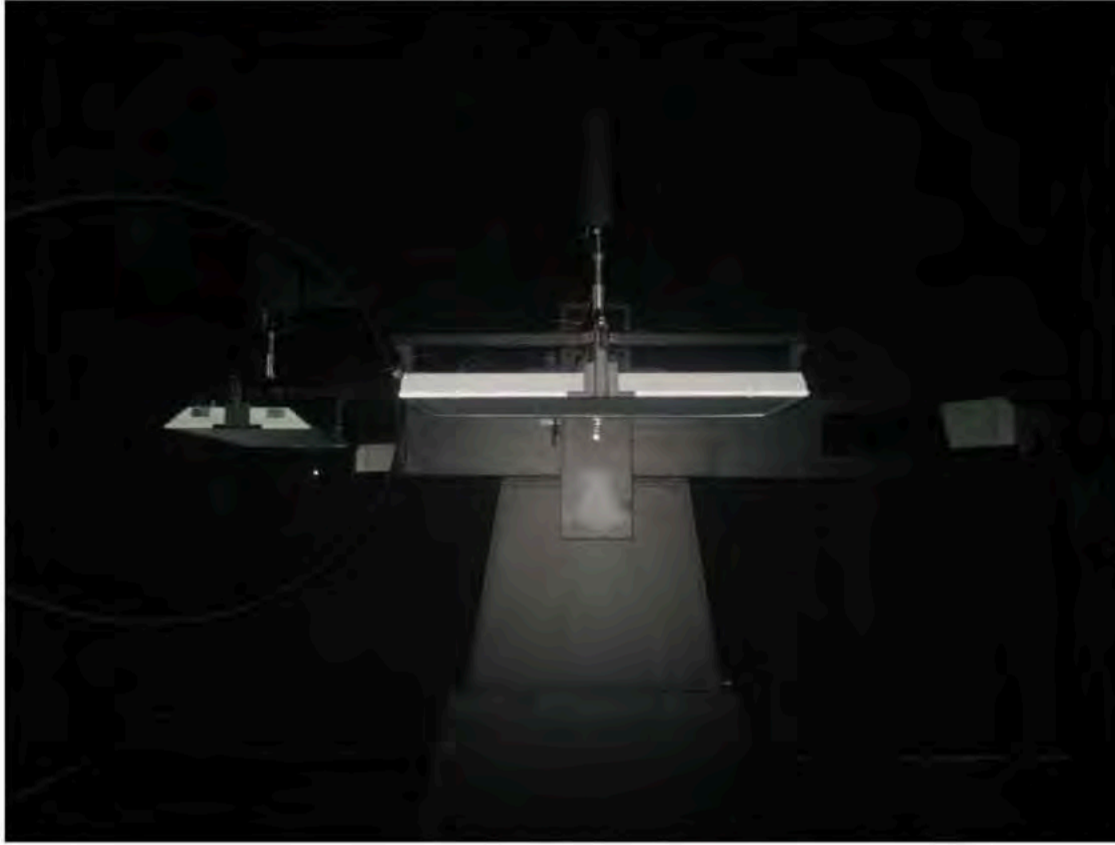
[Additional Test]

Test Item	Test Voltage (V)	Frequency (Hz)	Test Result
Power Factor:	240.0	60	0.9712
Total Harmonic Distortion:	240.0	60	9.04%
Total Harmonic Distortion:	120.0	60	9.02%
Total Harmonic Distortion:	277.0	60	9.37%
Power Factor:	277.0	60	0.9551

6. Product Photo



7. Product Test orientation in the Goniophotometer



*****END OF REPORT*****