



Report No.: RHL21082506-9

LM-79-08 Test Report

For

XIAMEN LUMINNAT LIGHTING CO.,LTD

(Brand Name: N/A)

NO.608 LINGDOU WEST ROAD, SIMING DISTRICT,XIAMEN,CHINA

2x4 Luminaires for Ambient Lighting of Interior Commercial Spaces

Model name(s): GPBP-D1-A24-40-8XX-L21-B10D

Remark: The "XX" in the model name represents CCT, can be 35=3500K; 40=4000K;
50=5000K.

Representative (Tested) Model:
GPBP-D1-A24-40-835-L21-B10D
GPBP-D1-A24-40-850-L21-B10D

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

Test & Report By:

Peter Zhou

Engineer: Peter Zhou

Date: Aug. 31, 2021

Review By:

Ryan Liang

Manager: Ryan Liang

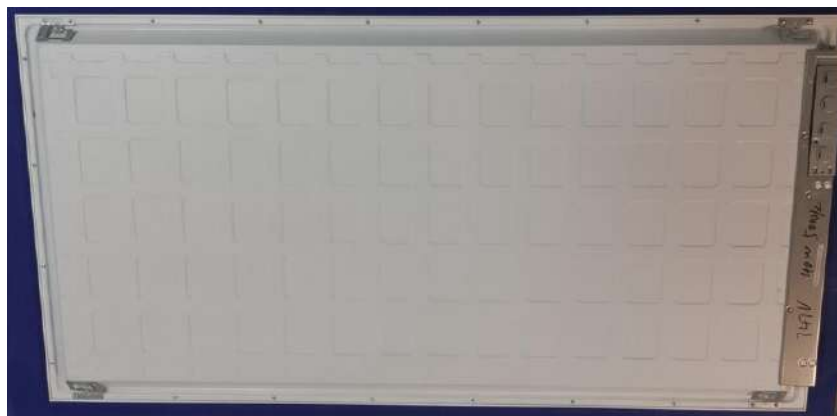
Laboratory: Hopestar Test Lab Limited, NVLAP Code: 600245-0
Add: Room 212, 24 Building, 7 Qingyi Road, Hi-Tech Zone, Ningbo, China
www.hopestartest.com

Report Format Number HL-Report-EEL-001

1.1 Product Information:

Organization Name	XIAMEN LUMINNAT LIGHTING CO.,LTD	
Brand Name	N/A	
Model Number	GPBP-D1-A24-40-8XX-L21-B10D	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	2x4 Luminaires for Ambient Lighting of Interior Commercial Spaces	
Rated Voltage / Frequency	120-347Vac, 50/60 Hz	
Nominal Power	40W	
Rated Initial Lamp Lumen	--	
Declared CCT	3500K,4000K, 5000K	
LED Manufacturer	Samsung Electronics Co., LTD.	
LED Model	SPMWHR229AD5SGRURB	
Sample Number	RHL21082506-901(3500K) RHL21082506-902(5000K)	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s

Photo





1.2 Test Specifications:

Date of Receipt	Aug. 25, 2021
Date of Test	Aug. 28, 2021
Test item	<ol style="list-style-type: none">1. Total Luminous Flux2. Luminous Distribution Intensity3. Luminous Efficacy4. Correlated Color Temperature5. Color Rendering Index6. Chromaticity Coordinate7. Electrical Parameters
Reference Standard	<ol style="list-style-type: none">1. IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products and IES-LM-79-2019 OPTICAL AND ELECTRICAL MEASUREMENTS OF SOLID-STATE LIGHTING PRODUCTS2. ANSI C78.377-2008 Specifications for the Chromaticity of Solid State Lighting Products3. CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources4. CIE 15-2004 Technical Report Colorimetry5. IESNA LM-16-93 Practical Guide to Colorimetry of Light Source6. IESNA TM-16-05 Technical Memorandum on Light Emitting Diode (LED) Sources and Systems
Reference Work Instruction	HL-WI-EE-001, HL-WI-EE-002

1.3 Test Methods

1) Photometric and Light Distribution Measurement – Goniophotometer Method:

Photometric parameters were measured using the goniophotometer and software. The ambient temperature shall be maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$, 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 or rated 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) Chromaticity Measurement – Sphere-Spectroradiometer Method:

Chromaticity parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. 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 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral power distribution taken at 5 nm intervals over the range of 380 to 780 nm.

3) Electrical Measurements:

Electrical parameters were measured using power meters incorporated in goniophotometer or sphere-spectroradiometer system. The ambient temperature surrounding the sample was maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Voltage, frequency, current, power, power factor and total harmonic distortion were measured by and read from the power meter.

**2.1 Electrical, Photometric and Chromaticity Measurements***(Refer to Work Instruction HL-WI-EE-001, HL-WI-EE-002)*

Test date	2021-08-28	Test Ambient:	25.1 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	GPBP-D1-A24-40-835-L21-B10D		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
RHL2108	120.0	60	0.318	38.07	0.995	7.06
2506-901	347.0	60	0.117	37.69	0.927	12.49
DLC Pass Criteria					$\geq 0.9(-3\%)$	$\leq 20(+5)$

Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	83	R9	11
Frequency (Hz)	60	R2	91	R10	80
CCT (K)	3506	R3	96	R11	81
Duv	-0.0010	R4	82	R12	70
Chromaticity (x, y)	x = 0.4039 y = 0.3877	R5	83	R13	85
Chromaticity (u', v')	u' = 0.2360 v' = 0.5098	R6	89	R14	99
Color Rendering Index (CRI)	84.0	R7	85	R15	76
R9	11	R8	63	--	--
Rf	85	--	--	--	--
Rg	96	--	--	--	--
Rcs,h1(%)	-12	--	--	--	--

Photometric Measurement – Goniophotometer Method:

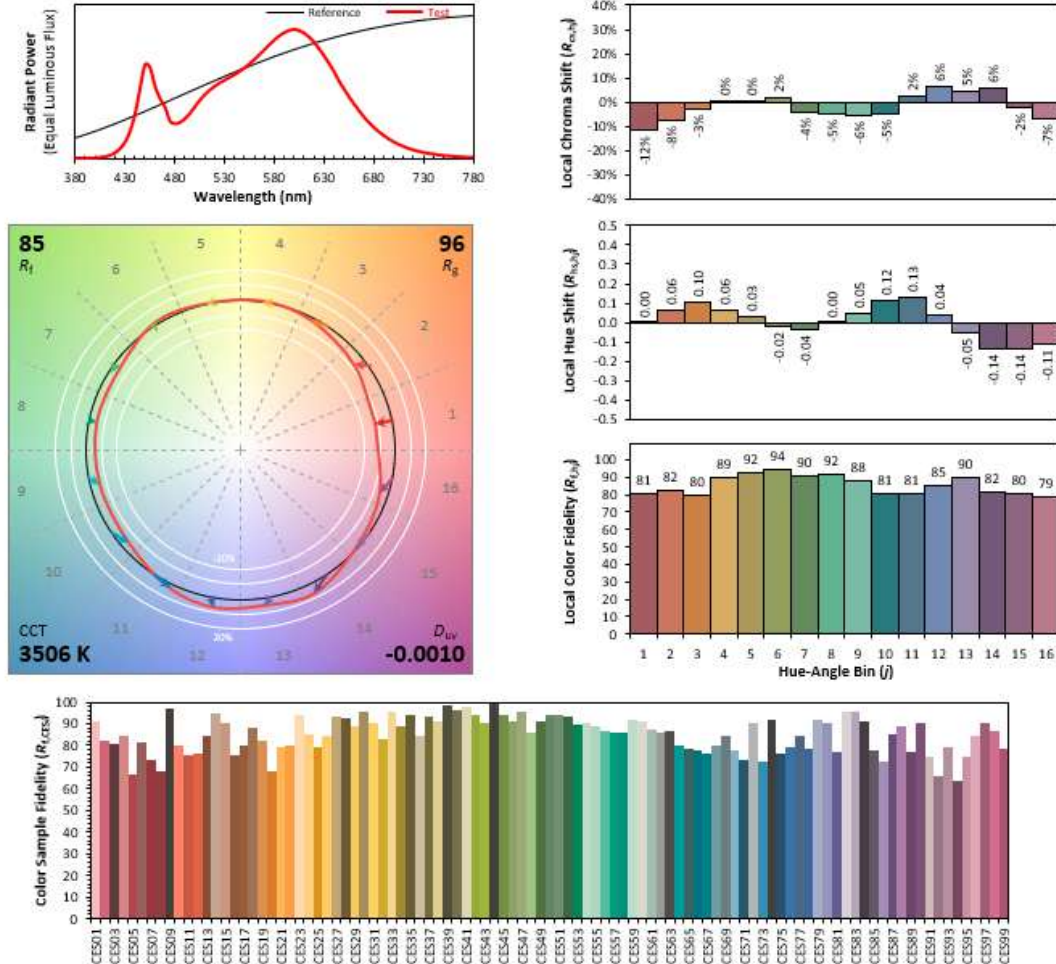
Parameter	Result		DLC V5.1 Pass Criteria
Test Voltage (V)	120.0	277.0	--
Frequency (Hz)	60	60	
Total Luminous (lm)	4320.5	4345.8	>=3000 lm (-10%)
Luminous Efficacy (lm/W)	113.49	115.30	Standard: >= 110(-3%)
Most worst Luminous/Highest Watts	113.49		
SC:0-180°	1.27	--	1.0-2.0(±0.1)
SC:90-270°	1.27	--	1.0-2.0(±0.1)
Zonal lumens in the 0-60° zone (%)	77.6	--	>=75(-3)
Beam Angle (°)	114.2	--	--
Center Beam Candle Power (cd)	1466	--	--



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Spectral Distribution over Visible Wavelength							
WL(nm)	Radiant(Watts)	WL(nm)	Radiant(Watts)	WL(nm)	Radiant(Watts)	WL(nm)	Radiant(Watts)
380	0.0054	485	0.2814	590	0.9752	695	0.1541
385	0.0057	490	0.3093	595	0.9918	700	0.1317
390	0.0057	495	0.3511	600	0.9994	705	0.1118
395	0.0054	500	0.4024	605	0.9913	710	0.0952
400	0.0067	505	0.4528	610	0.9713	715	0.0804
405	0.0108	510	0.4953	615	0.9403	720	0.0683
410	0.0166	515	0.5313	620	0.9012	725	0.0583
415	0.0281	520	0.5610	625	0.8514	730	0.0494
420	0.0477	525	0.5859	630	0.7965	735	0.0422
425	0.0798	530	0.6079	635	0.7374	740	0.0360
430	0.1324	535	0.6292	640	0.6751	745	0.0305
435	0.2167	540	0.6504	645	0.6013	750	0.0258
440	0.3512	545	0.6755	650	0.5408	755	0.0222
445	0.5479	550	0.7026	655	0.4811	760	0.0189
450	0.7281	555	0.7334	660	0.4255	765	0.0161
455	0.7039	560	0.7673	665	0.3725	770	0.0138
460	0.5599	565	0.8039	670	0.3253	775	0.0119
465	0.4661	570	0.8431	675	0.2819	780	0.0111
470	0.3993	575	0.8814	680	0.2437		
475	0.2922	580	0.9178	685	0.2101		
480	0.2711	585	0.9505	690	0.1805		

TM-30



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.4039
 y 0.3877
 u' 0.2360
 v' 0.5098

CIE 13.3-1995 (CRI)

R_a 84
 R_g 11



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Zonal Lumen Tabulation

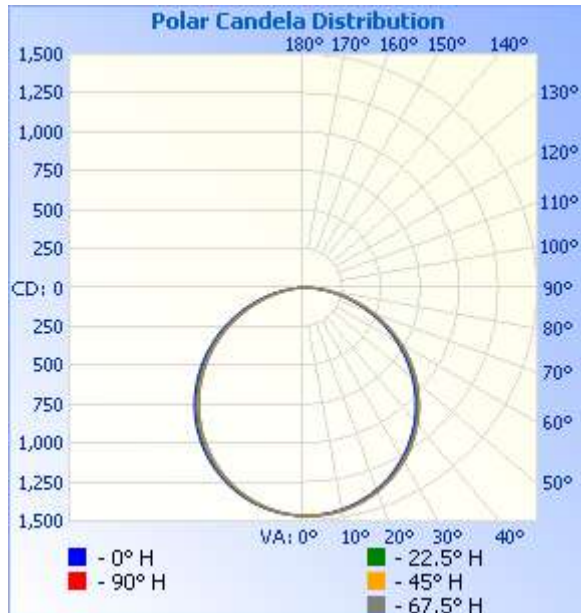
Zonal Lumen Summary

Zone	Lumens	% Lamp	% Luminaire
0-30	1,144.0	26.5%	26.5%
0-40	1,880.7	43.5%	43.5%
0-60	3,351.3	77.6%	77.6%
60-90	949.9	22%	22%
70-100	415.5	9.6%	9.6%
90-120	8.6	0.2%	0.2%
0-90	4,301.2	99.6%	99.6%
90-180	18.9	0.4%	0.4%
0-180	4,320.1	100%	100%

Lumens Per Zone

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	138.8	3.2%	90-100	4.1	0.1%
10-20	398.5	9.2%	100-110	2.3	0.1%
20-30	606.8	14.0%	110-120	2.2	0.1%
30-40	736.6	17.1%	120-130	2.3	0.1%
40-50	769.9	17.8%	130-140	2.3	0.1%
50-60	700.7	16.2%	140-150	2.2	0.1%
60-70	538.6	12.5%	150-160	1.8	0%
70-80	315.5	7.3%	160-170	1.2	0%
80-90	95.9	2.2%	170-180	0.4	0%

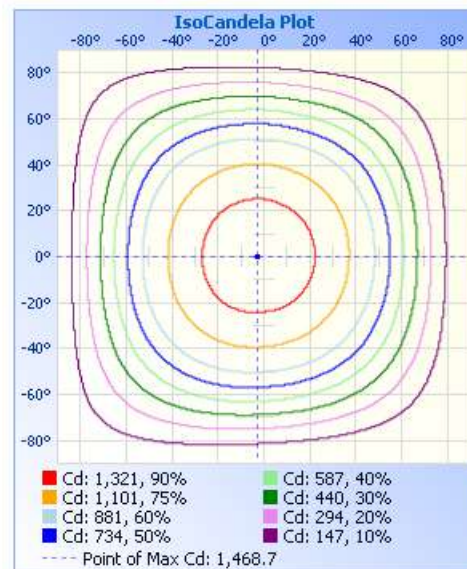
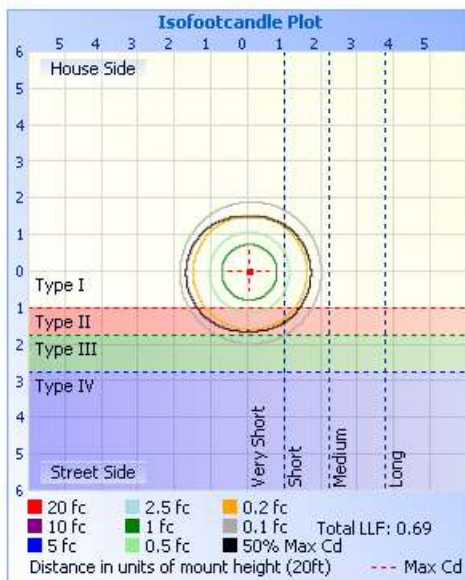
Photometric Data



Illuminance at a Distance

	Center Beam fc	Beam Width
17.0ft	5.07 fc	53.1 ft 52.6 ft
34.0ft	1.27 fc	106.2 ft 105.1 ft
51.0ft	0.56 fc	159.4 ft 157.7 ft
68.0ft	0.32 fc	212.5 ft 210.3 ft
85.0ft	0.20 fc	265.6 ft 262.8 ft
102.0ft	0.14 fc	318.7 ft 315.4 ft

■ Vert. Spread: 114.8°
■ Horiz. Spread: 114.2°





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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	1466	1466	1466	1466	1466	1466	1466	1466	1466	1466	1466	1466	1466	1466	1466	1466	1466
1	1466	1466	1467	1467	1467	1467	1466	1465	1466	1465	1464	1464	1465	1466	1465	1465	1466
2	1465	1467	1468	1469	1468	1467	1466	1464	1464	1463	1463	1462	1462	1464	1463	1463	1465
3	1464	1466	1468	1468	1468	1468	1465	1463	1463	1461	1461	1459	1460	1460	1461	1463	1464
4	1463	1466	1468	1468	1468	1467	1465	1462	1460	1459	1458	1456	1457	1459	1459	1459	1463
5	1461	1464	1467	1468	1466	1467	1463	1459	1458	1456	1453	1453	1453	1456	1456	1457	1461
6	1459	1463	1466	1466	1465	1465	1461	1457	1455	1452	1450	1448	1449	1452	1453	1455	1459
7	1457	1460	1464	1465	1464	1463	1459	1454	1451	1447	1445	1444	1445	1447	1449	1452	1457
8	1453	1457	1461	1461	1462	1460	1456	1451	1447	1443	1440	1438	1439	1442	1444	1448	1453
9	1450	1454	1458	1459	1459	1457	1453	1448	1442	1437	1435	1433	1434	1436	1440	1444	1450
10	1446	1451	1455	1455	1455	1454	1449	1443	1436	1433	1429	1427	1428	1431	1435	1440	1446
11	1441	1448	1451	1452	1451	1450	1446	1437	1431	1428	1423	1421	1421	1425	1429	1433	1441
12	1436	1442	1447	1447	1446	1447	1441	1433	1426	1421	1416	1414	1415	1419	1423	1428	1436
13	1430	1436	1442	1443	1442	1442	1435	1426	1420	1414	1410	1407	1408	1411	1416	1422	1430
14	1424	1431	1437	1438	1437	1435	1429	1421	1413	1407	1402	1399	1399	1404	1408	1415	1424
15	1418	1425	1431	1433	1431	1430	1423	1414	1405	1399	1393	1390	1391	1394	1401	1408	1418
16	1411	1418	1424	1426	1426	1424	1416	1407	1397	1390	1384	1381	1382	1386	1392	1400	1411
17	1404	1411	1417	1419	1418	1418	1409	1398	1389	1381	1375	1372	1373	1378	1384	1392	1404
18	1397	1404	1410	1412	1411	1410	1403	1391	1379	1372	1366	1362	1363	1368	1376	1383	1397
19	1388	1396	1402	1404	1403	1403	1395	1383	1370	1362	1356	1353	1353	1358	1366	1373	1388
20	1380	1387	1393	1396	1395	1394	1386	1375	1361	1353	1345	1341	1343	1348	1355	1365	1380
21	1370	1379	1387	1388	1387	1385	1377	1366	1351	1342	1334	1330	1331	1337	1345	1355	1370
22	1360	1370	1376	1378	1378	1376	1368	1355	1339	1330	1322	1318	1320	1325	1334	1344	1360
23	1351	1360	1366	1369	1369	1366	1357	1345	1329	1319	1311	1306	1308	1313	1324	1333	1351
24	1340	1350	1357	1359	1359	1357	1347	1334	1317	1307	1299	1293	1296	1302	1312	1322	1340
25	1329	1339	1347	1349	1349	1346	1336	1322	1305	1294	1285	1281	1283	1289	1300	1310	1329
26	1317	1327	1335	1337	1337	1335	1325	1310	1293	1282	1272	1268	1269	1276	1287	1299	1317
27	1304	1317	1324	1326	1326	1323	1313	1299	1280	1268	1258	1253	1256	1263	1274	1286	1304
28	1292	1304	1311	1315	1314	1311	1301	1286	1268	1254	1245	1240	1242	1251	1261	1274	1292
29	1280	1292	1300	1303	1302	1299	1288	1274	1254	1240	1231	1226	1227	1234	1247	1259	1280
30	1267	1278	1287	1291	1290	1287	1275	1260	1240	1226	1216	1210	1212	1220	1233	1246	1267

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31	1253	1266	1273	1277	1277	1273	1262	1247	1225	1211	1201	1195	1196	1205	1219	1232	1253
32	1240	1252	1260	1264	1263	1259	1249	1232	1210	1197	1184	1179	1181	1190	1204	1218	1240
33	1226	1238	1246	1250	1250	1245	1234	1216	1196	1181	1168	1163	1165	1174	1188	1203	1226
34	1211	1223	1232	1236	1234	1232	1220	1202	1180	1165	1152	1147	1149	1158	1172	1187	1211
35	1195	1207	1218	1221	1220	1217	1204	1187	1163	1146	1136	1130	1131	1141	1156	1171	1195
36	1179	1192	1203	1206	1205	1199	1189	1171	1146	1130	1119	1112	1116	1125	1140	1154	1179
37	1163	1176	1185	1189	1189	1184	1173	1155	1130	1113	1102	1093	1097	1107	1124	1138	1163
38	1147	1161	1170	1173	1174	1168	1157	1139	1113	1096	1082	1076	1078	1090	1106	1121	1147
39	1131	1145	1154	1157	1156	1152	1140	1120	1095	1078	1064	1058	1061	1072	1088	1105	1131
40	1114	1127	1137	1140	1139	1135	1123	1103	1078	1058	1046	1038	1043	1052	1070	1087	1114
41	1094	1108	1120	1123	1123	1118	1104	1085	1058	1039	1027	1020	1024	1034	1051	1068	1094
42	1077	1091	1103	1107	1105	1100	1086	1067	1039	1021	1008	999	1002	1014	1033	1050	1077
43	1059	1073	1083	1088	1088	1080	1068	1049	1020	1001	988	979	983	995	1014	1031	1059
44	1040	1055	1066	1069	1069	1062	1050	1029	1001	982	967	959	963	975	995	1012	1040
45	1021	1037	1047	1051	1051	1044	1031	1010	981	961	946	938	944	955	973	992	1021
46	1001	1018	1028	1032	1030	1025	1012	989	961	940	926	919	923	936	953	973	1001
47	980	996	1009	1012	1011	1006	990	969	940	919	905	896	902	913	933	951	980
48	960	977	987	992	991	984	970	949	919	899	882	875	879	892	912	932	960
49	940	957	968	971	971	964	950	928	898	878	861	853	858	871	892	911	940
50	919	936	948	951	952	945	929	907	876	856	839	831	836	849	868	889	919
51	898	915	927	930	929	922	909	884	853	832	817	809	814	825	847	866	898
52	877	895	906	910	908	902	887	863	833	810	795	787	792	803	824	844	877
53	854	871	883	888	887	880	864	841	808	788	773	765	769	781	803	823	854
54	832	849	862	867	865	857	842	819	786	765	749	739	744	759	780	800	832
55	810	827	840	843	844	834	819	797	764	742	725	717	721	735	757	778	810
56	788	805	818	821	822	812	797	774	741	719	701	694	698	713	732	755	788
57	765	783	796	799	797	790	775	749	716	693	678	670	675	687	710	730	765
58	740	758	773	777	775	767	750	726	692	670	654	647	649	663	686	706	740
59	717	735	748	754	752	742	726	703	669	646	630	620	625	640	663	684	717
60	694	712	725	728	728	719	703	679	646	622	604	596	601	616	639	660	694
61	670	688	701	705	705	695	678	656	622	598	579	571	577	592	615	637	670
62	647	665	678	682	679	672	655	629	597	572	555	547	552	568	589	613	647
63	620	641	655	658	655	647	631	605	573	547	530	523	528	541	564	589	620

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64	596	614	628	634	631	621	605	581	547	523	506	498	501	517	540	563	596
65	572	590	604	608	607	597	580	557	523	499	481	471	477	493	517	539	572
66	548	566	579	583	581	573	556	530	499	475	455	447	453	468	492	515	548
67	523	542	555	559	557	548	531	505	474	448	430	422	428	444	465	490	523
68	496	517	530	534	532	524	506	480	447	423	405	398	401	417	441	463	496
69	471	490	503	507	507	497	479	456	423	399	381	371	377	393	417	439	471
70	447	466	478	482	482	472	455	432	398	374	356	347	352	368	392	415	447
71	423	441	454	458	456	448	431	405	374	350	330	322	328	345	368	391	423
72	399	417	429	433	431	423	406	381	350	324	306	299	304	321	342	367	399
73	372	390	402	409	407	396	379	357	324	300	283	275	281	295	318	341	372
74	348	366	378	382	382	372	355	333	300	277	259	250	256	272	295	317	348
75	324	342	354	358	358	348	332	309	277	255	234	227	233	249	272	294	324
76	301	318	330	333	332	324	308	284	254	229	212	205	211	227	247	271	301
77	277	295	306	309	308	301	284	261	232	207	190	183	189	203	225	249	277
78	252	269	280	285	284	275	259	238	207	186	169	162	166	181	203	224	252
79	229	246	257	260	261	252	236	216	185	164	148	139	145	160	181	202	229
80	208	224	234	237	238	230	214	194	164	143	128	120	125	139	160	181	208
81	186	202	212	214	214	207	192	170	143	124	107	101	106	120	138	160	186
82	163	181	188	193	192	184	171	150	123	102	88	83	87	101	118	139	163
83	143	158	167	170	171	162	148	130	102	84	70	64	68	80	99	118	143
84	123	138	147	150	151	142	128	110	83	66	52	48	51	63	80	99	123
85	103	118	127	130	129	122	108	89	65	49	37	33	36	46	61	80	103
86	82	99	108	111	109	103	89	70	48	32	22	19	22	30	44	63	82
87	64	78	87	92	90	82	70	53	30	18	10	7	8	16	28	44	64
88	46	61	69	73	72	65	51	36	15	6	3	3	3	5	14	27	46
89	30	44	53	56	56	48	35	19	4	2	3	3	3	3	4	13	30
90	15	28	37	40	38	32	20	6	2	2	3	3	3	3	3	4	15
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**2.3 Electrical, Photometric and Chromaticity Measurements***(Refer to Work Instruction HL-WI-EE-001, HL-WI-EE-002)*

Test date	2021-08-28	Test Ambient:	25.1° C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	GPBP-D1-A24-40-850-L21-B10D		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
RHL2108	120.0	60	0.318	38.08	0.996	7.95
2506-902	347.0	60	0.116	37.73	0.934	13.47
DLC Pass Criteria					$\geq 0.9(-3\%)$	$\leq 20(+5)$

Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	84	R9	18
Frequency (Hz)	60	R2	91	R10	78
CCT (K)	5244	R3	94	R11	83
Duv	-0.0002	R4	84	R12	65
Chromaticity (x, y)	x = 0.3386 y = 0.3459	R5	85	R13	86
Chromaticity (u', v')	u' = 0.2092 v' = 0.4809	R6	86	R14	97
Color Rendering Index (CRI)	85.0	R7	87	R15	80
R9	18	R8	70	--	--
Rf	84	--	--	--	--
Rg	95	--	--	--	--
Rcs,h1(%)	-12	--	--	--	--

Photometric Measurement – Sphere-Spectroradiometer Method:

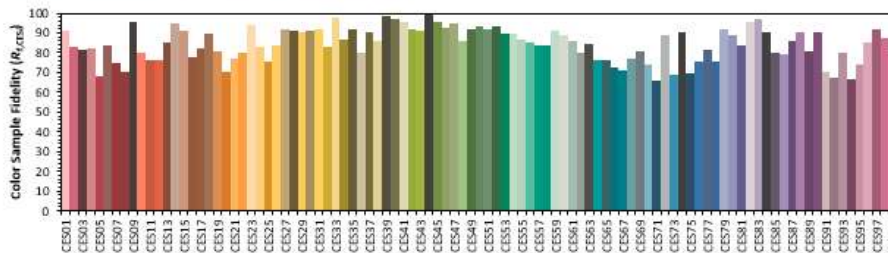
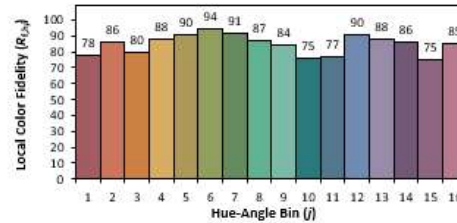
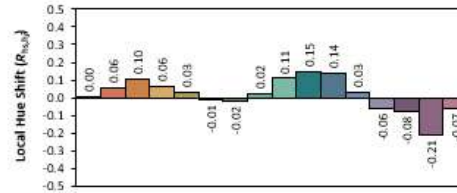
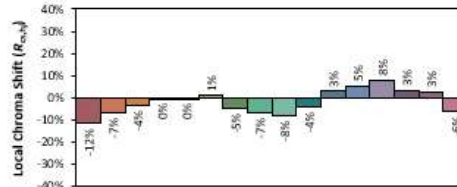
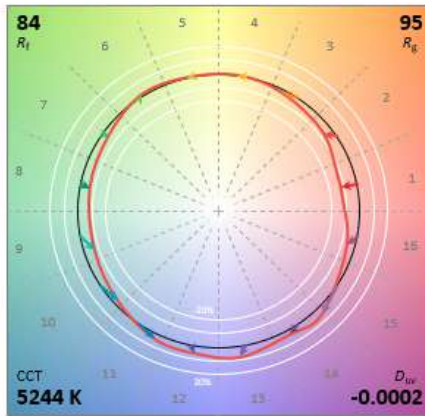
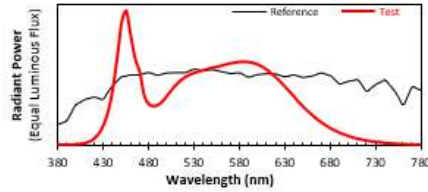
Parameter	Result		DLC V5.1 Pass Criteria
Test Voltage (V)	120.0	277.0	--
Frequency (Hz)	60	60	
Total Luminous (lm)	4204.3	4213.6	>=3000 lm (-10%)
Luminous Efficacy (lm/W)	110.41	111.68	Standard: >= 110(-3%)
Most worst Luminous/Highest Watts	110.41		



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Spectral Distribution over Visible Wavelength							
WL(nm)	Radiant(Watts)	WL(nm)	Radiant(Watts)	WL(nm)	Radiant(Watts)	WL(nm)	Radiant(Watts)
380	0.0073	485	0.2899	590	0.6147	695	0.0826
385	0.0063	490	0.2991	595	0.6092	700	0.0705
390	0.0064	495	0.3258	600	0.5976	705	0.0600
395	0.0072	500	0.3653	605	0.5808	710	0.0509
400	0.0086	505	0.4083	610	0.5591	715	0.0436
405	0.0121	510	0.4471	615	0.5325	720	0.0370
410	0.0187	515	0.4788	620	0.5033	725	0.0316
415	0.0310	520	0.5030	625	0.4701	730	0.0272
420	0.0534	525	0.5216	630	0.4353	735	0.0232
425	0.0897	530	0.5355	635	0.3994	740	0.0198
430	0.1517	535	0.5448	640	0.3636	745	0.0168
435	0.2499	540	0.5549	645	0.3220	750	0.0144
440	0.4066	545	0.5640	650	0.2880	755	0.0124
445	0.6420	550	0.5735	655	0.2559	760	0.0106
450	0.9078	555	0.5792	660	0.2258	765	0.0091
455	0.9890	560	0.5882	665	0.1974	770	0.0079
460	0.8100	565	0.5972	670	0.1722	775	0.0067
465	0.6380	570	0.6054	675	0.1494	780	0.0063
470	0.5396	575	0.6115	680	0.1290		
475	0.3668	580	0.6158	685	0.1116		
480	0.3051	585	0.6177	690	0.0959		

TM-30



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.3386
 y 0.3459
 u' 0.2092
 v' 0.4809

CIE 13.3-1995
(CRI)

R_a 85
 R_g 18



2.4 Performance Assessment:

Model Number	Luminous Flux (lm)	Power (W)	Efficacy (lm/W)
GPBP-D1-A24-40-835-L21-B10D	4320.5	38.07	113.49
GPBP-D1-A24-40-840-L21-B10D	4281.8	38.08	112.44
GPBP-D1-A24-40-850-L21-B10D	4204.3	38.08	110.41



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3. Test Equipment

Equipment Name	Model No.	Serial No.	Next Calibration Date
Goniophotometric System	GPM-3000	91N827816	2021-09-26
AC Power Source	CHP-1000	213630	2021-09-19
Total Luminous Flux Standard Lamp	24V150W	24V150W	2021-08-10
Digital Power Meter	WT500	TBS1012 C020506	2021-09-19
Integral Sphere (2M)	2m sphere	N.A	N/A
Digital Power Meter	PF310A	P609877CD1391157	2021-04-02
Optical Color and Electrical Measurement System	HAAS-2000	M108544CM5351115	2021-09-26
Expand Uncertainty: Photometric Measurement (Sphere): 2.08%, k=2 Chromaticity Measurement(Sphere):25.6K, k=2 Photometric Measurement(Goniophotometer):2.645%, k=2			

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