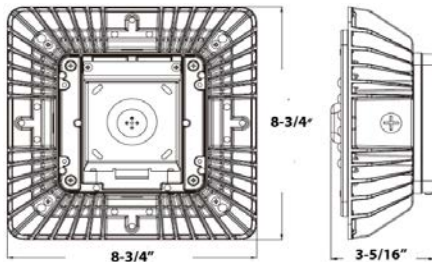




Catalog Number	71622
UPC Number	60198671622
Description	LED Ultra Thin Recessed Canopy Fixture 40W Voltage: 120/208/240/277



Shown with optional
recessed mounting Bezel/Trim
Cat# 71620



Features

- Integral Cooling Fin Releases the Heat Efficiently to Maintain the Life of LEDs and LED Driver
- Corrosion Die Cast Aluminum Housing
- Prismatic Polycarbonate Lens
- Superior Architectural White Powder Coat Finish
- LG LEDs
- Stainless Steel Hardware
- 5 Threaded Apertures - (1) Back, (4) Sides
- 50,000+ Hour Life Expectancy

General

Material:	Diecast Aluminum Housing
Lens:	Prismatic Polycarbonate Lens
Finish:	White Powdercoat
Lamp Type:	LED Array
Photocell:	Optional
Color Temperature:	5000K

Dimension Information

Length:	8-3/4"
Width:	8-3/4"
Height:	3-5/16"

Specifications

Color Temperature:	5000K
Lumens:	4302
Temperature Rating:	-40°F to 131°F
Voltage Rating:	120/208/240/277
Wattage Rating:	40W
Light Pattern:	148° Beam Angle
CRI:	≥73

Packaging

Box Qty	1
---------	---

Certifications

cULus	Yes
DLC	Yes
IP65(Nema 4X)	Yes
Warranty	5 Year



Report No.: STD160411NB-A

LM-79-08 Test Report

For

**Morris Products Inc.
53 Carey Rd.
Queensbury, NY 12804**

Model name(s): 71622

Representative (Tested) Model: 71622

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

Test & Report By:

Johnson Sun

Engineer: Johnson Sun

Date: May.13, 2016

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-S/2

Address: Standard-Tech Building, No.6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China

Tel: 8620-3229 0320

Fax: 8620-32290422

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Model name	CCT(K)	Total Luminous (lm)	Power (W)	Luminous Efficacy (lm/W)
71622	5000K	4302.6	40.07	107.38

*1: This value is calculated and the calculation formula is as below:

$$3989.5 = (4407 - 3885.1) / 5 + 3989.5$$

$$4093.9 = (4407 - 3885.1) / 5 + 4093.9$$

$$4198.2 = (4407 - 3885.1) / 5 + 4198.2$$

$$4302.6 = (4407 - 3885.1) / 5 + 4302.6$$

*2: This value is calculated and the calculation formula is as below:

$$40.07 = (39.37 + 40.77) / 2$$

*3: This value is calculated and the calculation formula is as below:

$$99.56 = 3989.5 / 40.07$$

$$102.17 = 4093.9 / 40.07$$

$$104.77 = 4198.2 / 40.07$$

$$107.38 = 4302.6 / 40.07$$

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	May.13, 2016
Test Report No.	STD160411NB-A
Laboratory Contact Name	Tommy Liang

Product Information:

Organization Name	Morris Products Inc.		
Brand Name	N/A		
Model Number	71622		
SKU (if available)	N/A		
Type of Luminaire (for integral lamps, list base type and lamp type)	Walkway & Garage Lighting		
Luminaire Aperture (for downlights)	--	in. mm mm	
Luminaire Length	--		
Luminaires Width	--		
Number of Units (modular products)	N/A		

	Integrating Sphere	Goniophotometer	
Electrical Measurements:	Output	Output	
Input Wattage	39.37	--	W
Input Current	0.3296	--	A
Input Voltage (ac)	120	--	V
Power Factor	0.9953	--	
Off-State Power	0	--	W
Photometric Characteristics			
Total Initial Lumen Output	4407	--	lm
Initial Lumen Efficacy	111.95	--	lm/w
Correlated color temperature / CCT	5406	--	K
Color rendering index / CRI	71.6	--	
R9 Value	0	--	
Duv	0.0009	--	
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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Date of Receipt	: Apr.10, 2016
Date of Test	: Apr.12, 2016
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 $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$, 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 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.

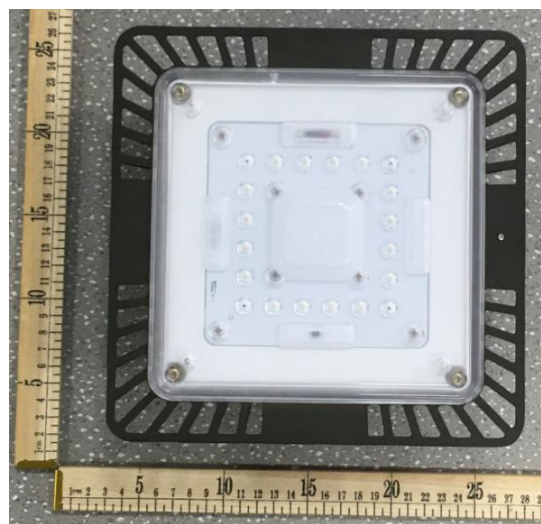
2. Photometric and Electrical Measurements – Integrating Sphere Method:

Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. 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 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.

1. Product Information:

Brand Name	N/A
Model Number	71622
Luminaire Type	Walkway & Garage Lighting
Rated Voltage / Frequency	100 ~ 277 Vac, 50/60Hz
Nominal Power	40W
Rated Initial Lamp Lumen	--
Declared CCT	5000K,
LED Manufacturer	LG INNOTEK Development
LED Model	LEMWA33X80LX3000
Sample Receipt Date	Apr.10, 2016
Sample Number	STD160411NB-A1(3000K),A2(5700K)

Photo



Laboratory: Standard-Tech Co. Ltd Testing Center

NVLAP CODE: 201011-0

Report Format Number STD/QR4909-S/2

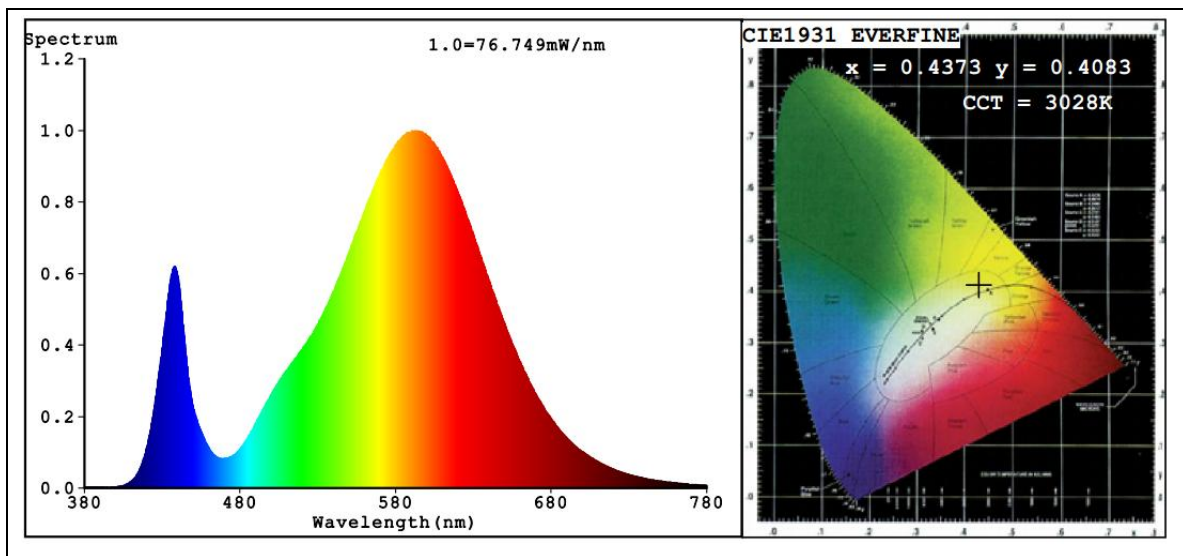
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Spectral Power Distribution & Chromaticity Diagram



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Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	427.2	11%
0-40	830.4	21.4%
0-60	2,578.4	66.4%
60-90	1,303.1	33.5%
70-100	341.1	8.8%
90-120	1.7	0%
0-90	3,881.5	99.9%
90-180	3.2	0.1%
0-180	3,884.7	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	43.3	1.1%	90-100	0.3	0%
10-20	135.8	3.5%	100-110	0.5	0%
20-30	248.1	6.4%	110-120	0.9	0%
30-40	403.2	10.4%	120-130	0.7	0%
40-50	669.7	17.2%	130-140	0.4	0%
50-60	1,078.3	27.8%	140-150	0.2	0%
60-70	962.3	24.8%	150-160	0.1	0%
70-80	299.5	7.7%	160-170	0.1	0%
80-90	41.3	1.1%	170-180	0.0	0%

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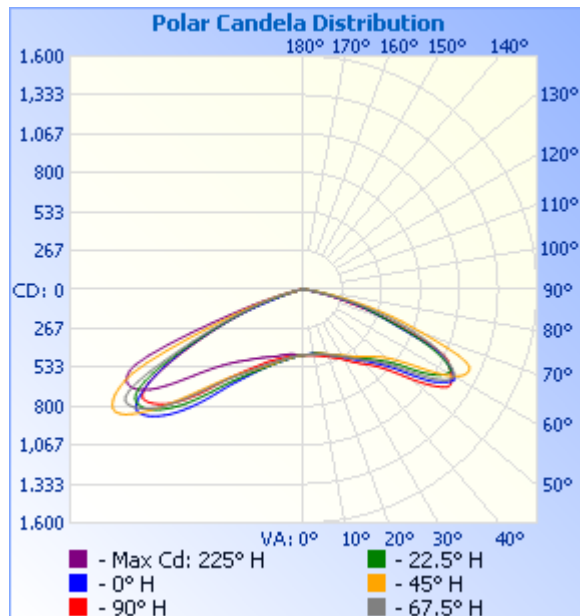
Address: Standard-Tech Building, No.6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China

Tel: 8620-3229 0320

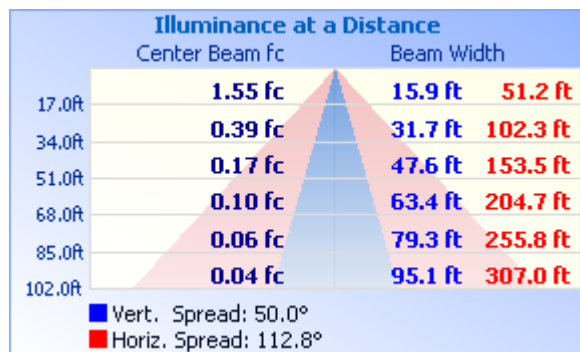
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Photometric Data



Illuminance Plots



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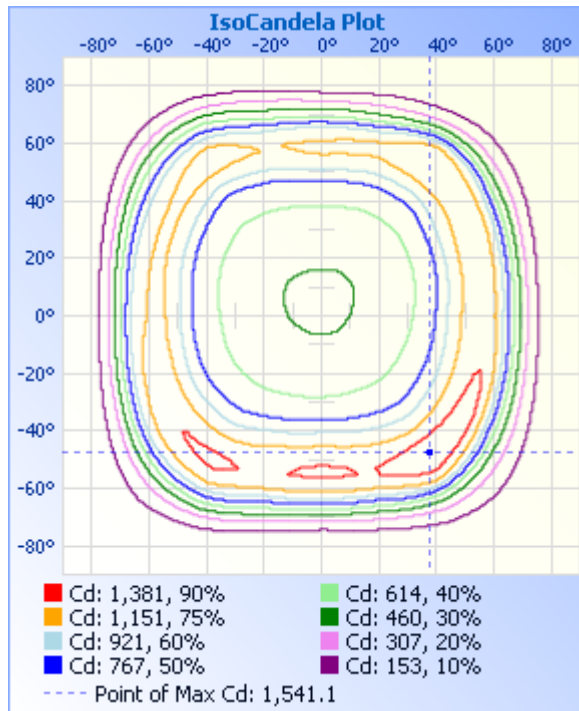
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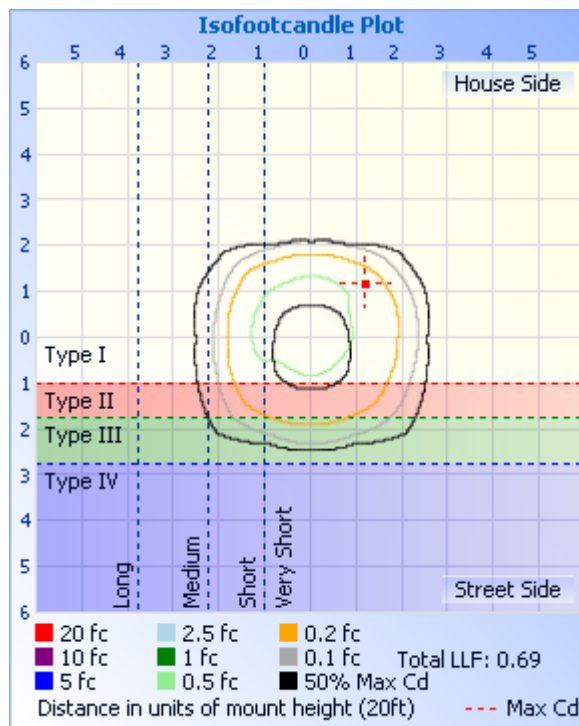
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ISOCANDELA DIAGRAM



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	448	448	448	448	448	448	448	448	448	448	448	448	448	448	448	448	448
1	447	447	447	447	448	448	448	449	449	449	448	448	448	447	447	447	447
2	446	446	447	447	448	449	449	450	450	450	449	449	448	447	446	446	446
3	445	446	447	448	449	450	451	452	452	452	451	450	449	447	446	445	445
4	444	445	447	448	449	451	452	454	454	454	453	451	450	448	446	445	444
5	443	445	447	449	450	452	454	457	457	457	455	453	451	449	446	444	443
6	443	444	447	449	451	454	457	459	460	460	458	456	453	450	446	444	443
7	442	444	447	450	452	456	459	462	463	463	461	458	455	451	446	443	442
8	442	444	447	451	454	458	462	465	466	466	464	461	457	453	447	443	442
9	443	444	448	452	455	460	465	469	470	470	467	465	460	455	448	444	443
10	443	445	448	453	457	463	468	472	475	474	471	468	463	457	449	444	443
11	445	446	449	454	458	466	472	477	479	479	475	472	466	459	450	446	445
12	447	448	450	456	461	469	475	481	484	483	479	477	469	462	452	447	447
13	449	450	451	457	463	472	479	486	490	488	484	481	472	464	454	449	449
14	452	452	452	459	466	475	483	491	495	493	489	486	476	468	457	451	452
15	455	455	454	461	469	479	488	496	501	499	494	491	480	471	460	454	455
16	458	457	457	463	473	483	492	502	506	504	500	497	485	475	464	458	458
17	462	461	460	466	477	487	497	508	512	511	506	502	490	479	468	462	462
18	465	464	463	469	480	491	503	514	518	518	512	508	495	482	472	466	465
19	469	468	466	472	485	496	508	521	525	525	520	515	501	487	477	471	469
20	473	471	470	476	489	501	515	528	532	533	527	521	506	491	482	476	473
21	477	475	474	480	494	507	522	535	540	542	535	528	513	497	488	481	477
22	481	479	478	485	499	513	529	543	549	550	544	536	519	502	492	487	481
23	486	484	482	489	504	520	536	551	559	559	553	544	526	509	497	492	486
24	491	489	486	493	509	527	543	559	569	569	561	553	533	515	502	496	491
25	496	494	491	498	515	533	551	569	580	580	571	562	540	521	507	501	496
26	502	500	496	502	521	540	559	579	592	591	581	572	549	528	512	506	502
27	508	506	501	508	527	547	567	590	604	603	591	582	558	536	518	512	508
28	515	512	506	514	534	555	575	602	617	615	601	593	570	543	523	518	515
29	523	519	513	520	543	563	583	614	632	628	612	605	582	551	529	525	523

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30	530	526	520	528	553	571	592	627	649	642	624	617	595	560	536	531	530
31	539	534	527	535	563	579	602	641	667	656	636	630	610	570	543	538	539
32	548	541	534	544	574	589	612	656	686	673	649	645	624	580	551	546	548
33	557	548	541	553	584	600	622	673	708	691	663	660	640	593	559	554	557
34	567	556	549	562	595	611	634	691	730	709	676	677	656	606	568	562	567
35	578	564	556	571	607	622	646	710	754	729	690	694	674	619	577	570	578
36	589	573	564	581	619	634	660	730	780	750	706	712	693	633	587	578	589
37	601	583	573	592	631	646	673	753	807	773	723	731	714	648	598	588	601
38	612	594	581	603	643	658	689	777	840	798	742	752	736	665	610	598	612
39	623	604	589	615	656	671	707	804	881	827	763	774	761	682	622	610	623
40	635	615	599	627	669	686	726	835	926	860	785	799	790	701	634	622	635
41	648	625	608	640	682	702	745	873	975	899	811	828	824	722	647	634	648
42	663	636	619	652	697	720	766	917	1023	942	841	861	864	746	662	648	663
43	679	648	629	664	714	738	790	965	1072	987	875	897	910	773	678	663	679
44	697	662	639	679	735	757	819	1015	1120	1033	913	938	959	807	695	680	697
45	717	677	650	695	758	779	850	1064	1167	1080	955	985	1007	849	714	698	717
46	739	694	661	714	785	804	885	1113	1210	1125	1001	1035	1055	896	736	717	739
47	763	711	674	734	816	834	924	1157	1251	1167	1053	1087	1101	946	760	737	763
48	790	730	689	757	853	869	967	1199	1288	1207	1109	1139	1143	998	789	760	790
49	821	752	704	785	895	908	1015	1237	1321	1244	1170	1190	1182	1048	822	785	821
50	860	777	723	818	943	955	1066	1272	1350	1277	1231	1239	1218	1096	861	817	860
51	906	805	746	856	994	1007	1121	1304	1374	1308	1291	1285	1247	1140	904	854	906
52	957	841	774	899	1041	1064	1175	1331	1394	1333	1348	1323	1272	1180	957	899	957
53	1010	887	809	950	1087	1121	1229	1353	1406	1355	1402	1355	1294	1215	1017	950	1010
54	1062	938	849	1002	1129	1177	1279	1369	1412	1370	1449	1384	1313	1244	1081	1004	1062
55	1102	988	896	1054	1163	1229	1322	1379	1407	1378	1491	1408	1325	1270	1146	1054	1102
56	1136	1034	952	1099	1191	1275	1357	1381	1380	1380	1520	1426	1330	1292	1206	1095	1136
57	1163	1071	1017	1135	1198	1314	1385	1374	1341	1377	1537	1439	1318	1308	1256	1129	1163
58	1188	1103	1082	1165	1194	1351	1406	1352	1293	1357	1541	1442	1286	1314	1295	1160	1188
59	1202	1127	1138	1184	1186	1376	1416	1317	1236	1320	1530	1424	1238	1311	1328	1183	1202
60	1192	1146	1187	1189	1173	1373	1416	1263	1171	1258	1508	1379	1169	1295	1349	1201	1192
61	1167	1150	1222	1176	1154	1351	1405	1195	1095	1179	1476	1300	1089	1262	1362	1208	1167

Laboratory: Standard-Tech Co. Ltd Testing Center

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62	1136	1134	1247	1155	1134	1319	1379	1116	1009	1085	1432	1196	1000	1201	1368	1194	1136
63	1103	1097	1258	1123	1117	1278	1341	1023	922	977	1376	1068	912	1119	1363	1154	1103
64	1073	1048	1262	1085	1097	1230	1291	923	836	870	1302	945	821	1020	1345	1085	1073
65	1025	992	1255	1044	1058	1176	1222	830	748	773	1189	838	739	918	1318	1007	1025
66	949	929	1219	998	992	1112	1131	749	668	688	1029	739	663	816	1261	920	949
67	849	856	1153	942	902	1028	1022	675	587	609	865	649	589	718	1151	826	849
68	744	776	1056	878	808	937	918	602	509	537	719	564	515	623	997	727	744
69	666	693	959	809	721	836	822	529	436	468	602	489	449	534	828	640	666
70	606	618	866	741	645	730	732	456	363	407	516	422	389	457	671	563	606
71	552	559	783	678	574	634	646	387	281	348	442	362	332	390	550	500	552
72	497	508	708	610	499	545	557	324	222	291	372	314	275	327	451	440	497
73	440	464	637	540	419	462	468	265	183	236	309	269	223	270	370	386	440
74	383	420	558	463	340	386	384	214	152	188	257	232	185	219	298	336	383
75	321	374	480	386	275	319	309	170	120	148	215	196	151	176	236	287	321
76	259	327	405	311	228	263	245	134	99	119	175	162	121	144	188	239	259
77	204	276	333	244	189	218	192	108	86	98	140	132	99	119	150	197	204
78	154	225	267	191	148	179	149	90	75	84	110	108	76	101	120	160	154
79	105	178	210	148	112	142	117	78	61	73	85	91	63	89	96	128	105
80	79	137	163	116	80	114	92	68	48	64	68	78	56	79	80	104	79
81	63	106	126	94	65	93	75	60	42	53	59	68	50	71	68	87	63
82	51	83	99	78	56	77	63	50	36	42	51	60	45	64	59	74	51
83	42	67	80	68	49	66	54	43	29	33	42	54	39	57	49	63	42
84	34	53	63	59	38	54	45	35	24	28	36	47	34	50	42	53	34
85	27	40	50	49	32	42	37	27	19	22	29	40	30	41	34	41	27
86	20	27	35	38	26	32	25	21	13	18	23	32	25	32	26	30	20
87	14	18	21	28	20	23	18	14	8	14	17	24	20	25	20	19	14
88	11	12	14	18	13	15	13	10	4	10	13	15	13	17	15	13	11
89	8	9	9	10	7	10	8	7	2	7	9	10	8	11	10	9	8
90	5	4	4	4	2	3	4	4	1	3	5	5	3	5	6	5	5
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	1	1	0	0	0	0	0	1	1	0	0	0	0
99	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0
100	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
101	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0
102	0	0	0	0	0	0	0	1	0	1	1	1	0	0	0	0	0
103	0	0	0	0	0	0	0	1	0	1	1	1	0	0	0	0	0
104	0	0	0	0	0	0	1	1	0	1	1	1	0	0	0	0	0
105	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0
106	0	0	0	0	0	1	1	1	1	1	1	1	0	1	0	0	0
107	0	0	0	1	1	1	1	1	1	1	1	2	0	1	0	0	0
108	0	0	0	1	1	2	1	1	1	1	1	2	0	2	0	0	0
109	0	0	0	1	1	2	1	1	1	1	1	2	1	2	0	0	0
110	0	0	0	1	1	2	1	1	1	1	1	2	1	2	0	0	0
111	0	0	0	1	1	2	1	1	1	1	1	2	1	2	0	0	0
112	0	0	0	1	1	2	1	1	1	1	1	2	1	2	0	0	0
113	0	0	0	1	1	2	1	1	1	1	1	2	1	2	0	0	0
114	0	0	0	1	1	2	1	1	1	1	1	2	1	2	0	0	0
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120	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0
121	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1
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124	1	0	0	1	1	1	1	0	1	1	0	1	1	1	1	1	1
125	1	0	0	1	1	1	0	0	1	1	1	1	1	1	1	1	1

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126	1	1	0	1	1	1	0	0	1	0	0	1	1	1	1	1	1
127	1	1	1	1	1	1	0	0	1	0	0	1	1	1	1	1	1
128	1	1	1	1	1	1	0	0	1	0	0	1	1	1	1	1	1
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140	1	1	0	1	0	0	0	0	0	0	0	0	1	1	0	1	1
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157	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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158	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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161	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
162	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
163	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
164	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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169	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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179	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

2.2 Electrical, Photometric and Chromaticity Measurements

(Refer to Work Instruction QD25)

IES LM-79 2008

Test date	2016-04-12	Test Ambient:	25.2 °C
Test Orientation	Horizontal	Stabilization Time (min)	90
Model Number	71622		

Electrical Measurement :

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
STD160411	120.0	60	0.3296	39.37	0.9953	9.99
NB-A2	277.0	60	0.1539	39.37	0.9235	15.08

Sphere-Spectroradiometer Method:

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
Color Rendering Index (CRI)	71.6
R9	0
CCT (K)	5406
Chromaticity (x, y)	x=0.3347 y=0.3447
Chromaticity (u', v')	u'=0.2070 v'=0.4797
Duv	0.0009
Total Initial Lumen Output(lm)	4407
Initial Lumen Efficacy(lm/w)	111.94

Special Color Rendering Indices			
R1	69	R9	0
R2	75	R10	44
R3	82	R11	74
R4	73	R12	57
R5	72	R13	69
R6	70	R14	90
R7	77	R15	61
R8	54	--	--

Sphere-Spectroradiometer Method:

Parameter	Result
Test Voltage (V)	277.0
Frequency (Hz)	60
Total Initial Lumen Output(lm)	4373
Initial Lumen Efficacy(lm/w)	111.07

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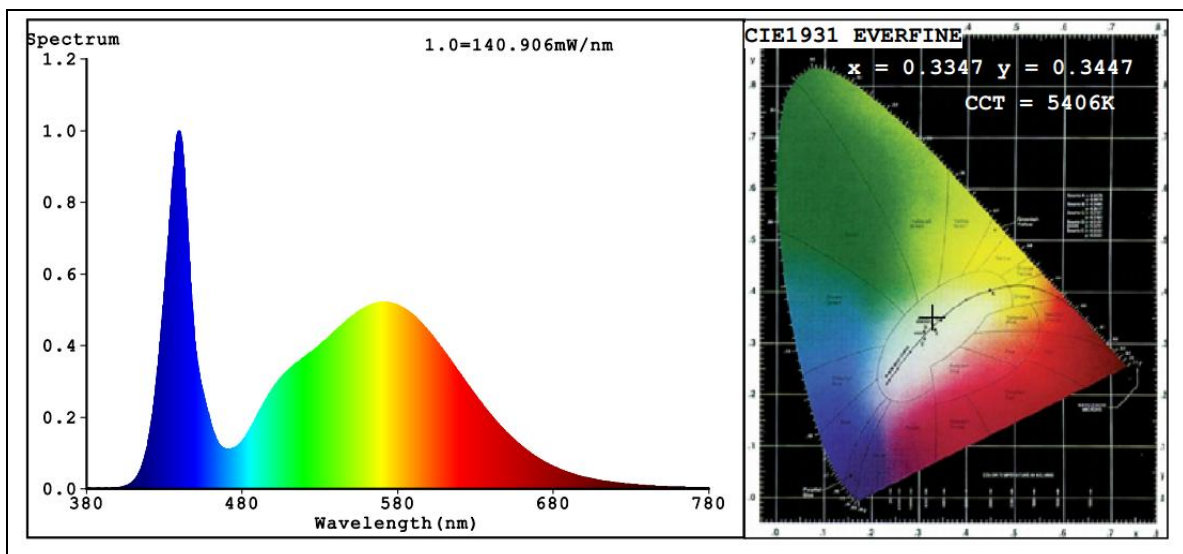
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Spectral Power Distribution & Chromaticity Diagram



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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 *******