

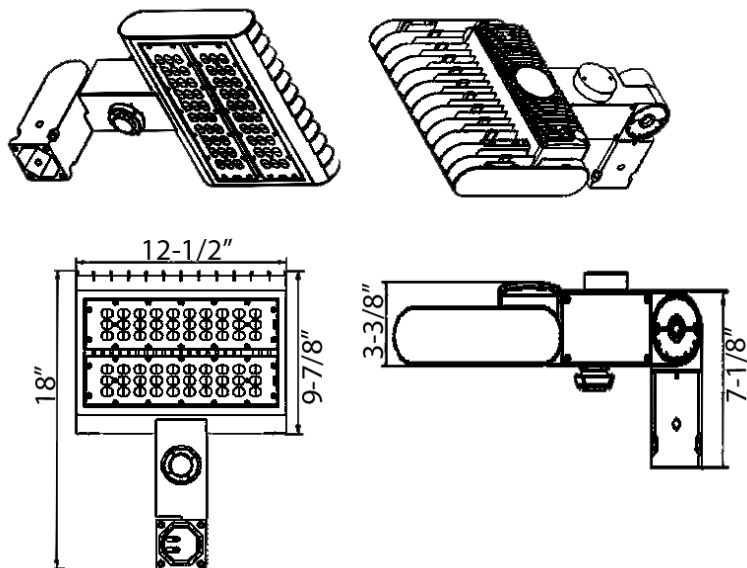


Cat# 71562
100 Watts
Slipfitter Mount



Model: 71562		
OVERALL LAMP PARAMETERS	Input Voltage	100-277VAC 50/60HZ
	Input Current	.83A Max
	Input Power	100W
	Power Factor	PF≥ 0.90
	Luminance	12,105 LM
	Luminous Efficiency	121 LM/W
	CRI	>83
	Beam Angle	Type III 120x90°
	Main Structure	Aluminium + PC Lens
LED DRIVER	Output Voltage	36-60VDC
	Output Current	2.5A
	Driver Efficiency	88%
LED	LED Manufacturer	Philips
	LED Type	3030 LED
	LED Quantity	120 PCS
	LED Efficacy	120LM/W
	Color Temperature	5000K
Photocell	-	Not Included
LIFE SPAN & ENVIRONMENT	Lifespan	50,000+ Hrs.
	Warranty	5 Years
	IP Rating	IP65 Wet Locations
	Operating Temperature	-40 —+55
	Storage Temperature.Humidity	-40℃—+80℃ , 10—90% RH
SAFETY & EMC	Safety Norms	UL1598, UL8750, EN60598, EN61347-2-13, EN62031, EN62471
	Withstand Voltage	I/P-FG: 2121VDC
	Grounding Resistance	≤0.5Ω, OK
	Electromagnetic Compatibility	EN55015, EN61000-2-3, EN61000-3-3, EN61547
OTHERS	Dimension	Pls refer to attached dimension drawing
	Q'ty / Carton	1PCS
	Volume	
	EPA Rating	1.16ft ²

Dimension:



LM-79-08 Test Report

For

Morris Products Inc.

53 Carey Rd. Queensbury, NY 12804

Architectural Flood and Spot Luminaires

Model name(s): 71542, 71832, 71562,
71841, 71574A, 71852,
71584, 71865, 71866,
71867

Representative (Tested) Model: 71542

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

Test & Report By:

Johnson Sun

Engineer: Johnson Sun

Update: Nov.16, 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-A/2

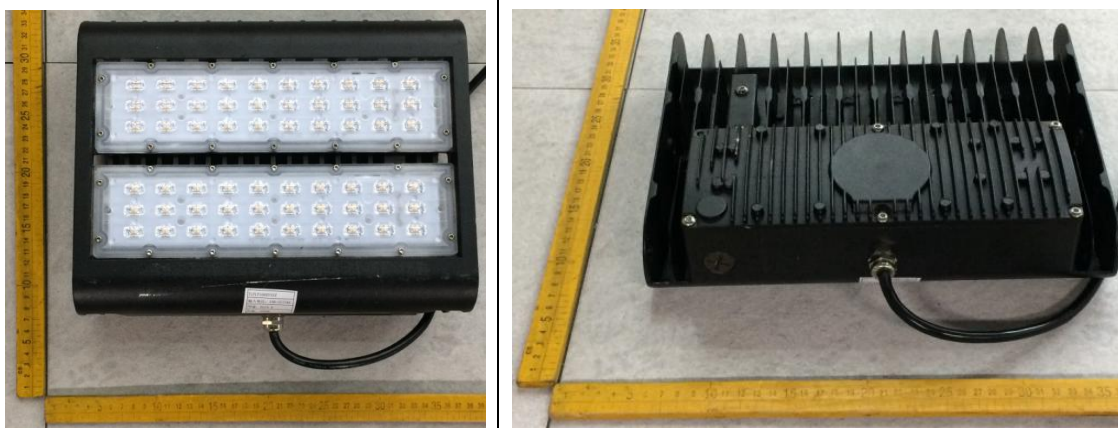
Address: Standard-Tech Building, No.6 Guanhong Road, Guangzhou Science City, Guangzhou 510663, China

Tel: 8620-3229 0320

Fax: 8620-32290422

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

1.1 Product Information:

Organization Name	Morris Products Inc.	
Brand Name	MORRIS	
Model Number	71542	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	Architectural Flood and Spot Luminaires	
Rated Voltage / Frequency	100 -277Vac, 50/60 Hz	
Nominal Power	100W	
Rated Initial Lamp Lumen	--	
Declared CCT	4000K,5000K,5700K	
LED Manufacturer	Philips Lumileds	
LED Model	L130-2780003000W21	
Sample Number	GZE161105-AI1(4000K),AI2(5700K)	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s
Photo		
		

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1.2 Test Specifications:

Date of Receipt	: Oct.31,2016
Date of Test	: Nov.03,2016
Test item	1. Total Luminous Flux 2. Luminous Distribution Intensity 3. Luminous Efficacy 4. Correlated Color Temperature 5. Color Rendering Index 6. Chromaticity Coordinate 7. Electrical Parameters
Reference Standard	1. IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products 2. ANSI C78.377-2008 Specifications for the Chromaticity of Solid State Lighting Products 3. CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources 4. CIE 15-2004 Technical Report Colorimetry 5. IESNA LM-16-93 Practical Guide to Colorimetry of Light Source 6. IESNA TM-16-05 Technical Memorandum on Light Emitting Diode (LED) Sources and Systems
Reference Work Instruction	QD25

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 QD25)*

Test date	2016-11-03	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	71542		

Electrical Measurement :

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE161105-	120.0	60	0.8373	99.99	0.9952	14.82
AI1	277.0	60	0.3901	100.2	0.9274	18.53
DLC Pass Criteria					$\geq 0.9(-3\%)$	$\leq 20(+5)$

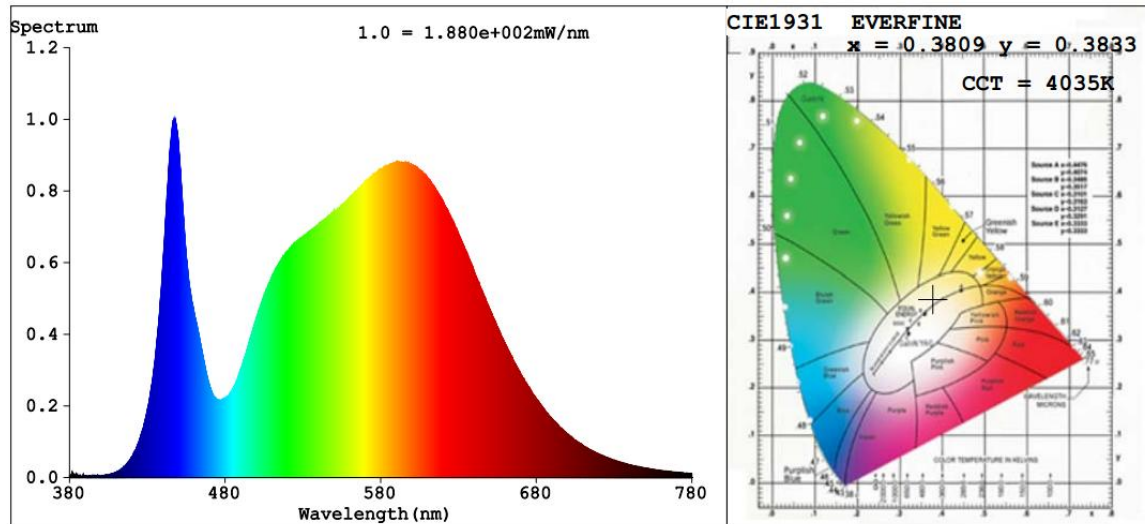
Chromaticity Measurement - Sphere-Spectroradiometer Method :

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	80	R9	9
Frequency (Hz)	60	R2	87	R10	69
CCT (K)	4035	R3	92	R11	82
Duv	0.0029	R4	83	R12	61
Chromaticity (x, y)	x=0.3809 y=0.3833	R5	80	R13	81
Chromaticity (u', v')	u'=0.2228 v'=0.5045	R6	82	R14	96
Color Rendering Index (CRI)	82.2	R7	87	R15	74
R9	9	R8	66	--	--

Photometric Measurement – Goniophotometer Method :

Parameter	Result		DLC V4.0 Pass Criteria	
Test Voltage (V)	120.0	277.0	--	
Frequency (Hz)	60	60		
Total Luminous (lm)	12105	12225	$\geq 1000 (-10\%)$	
Luminous Efficacy (lm/W)	121.06	122.01	Standard: $\geq 100(-3\%)$	Premium: $\geq 120(-3\%)$
Zonal lumens in the 0-90 °zone (%)	99.8	--	$\geq 85(-3)$	
Beam Angle (°)	104.6	--	--	
Center Beam Candle Power (cd)	4124	--	--	

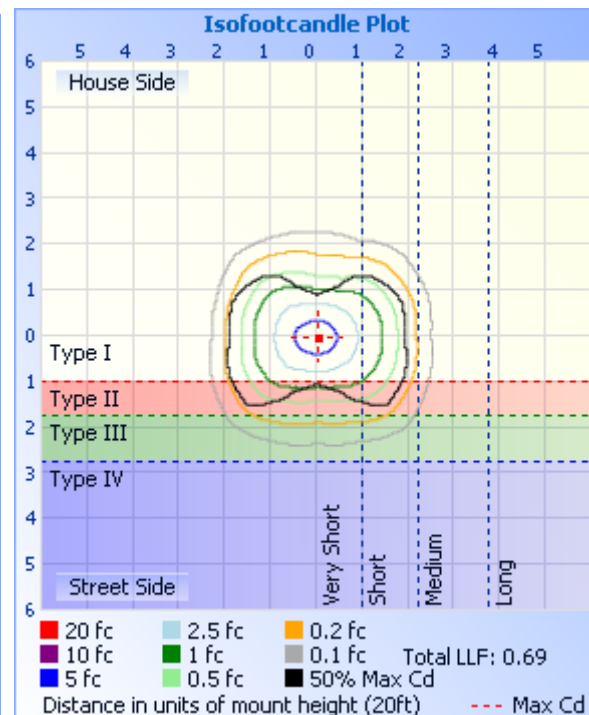
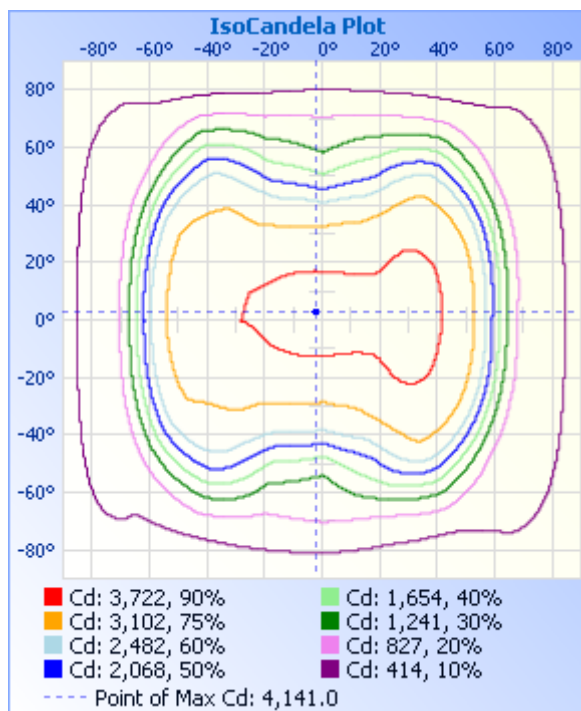
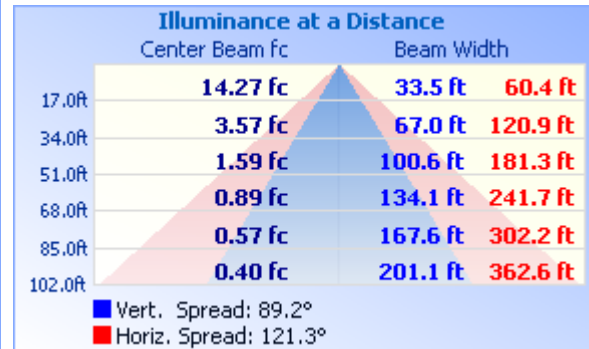
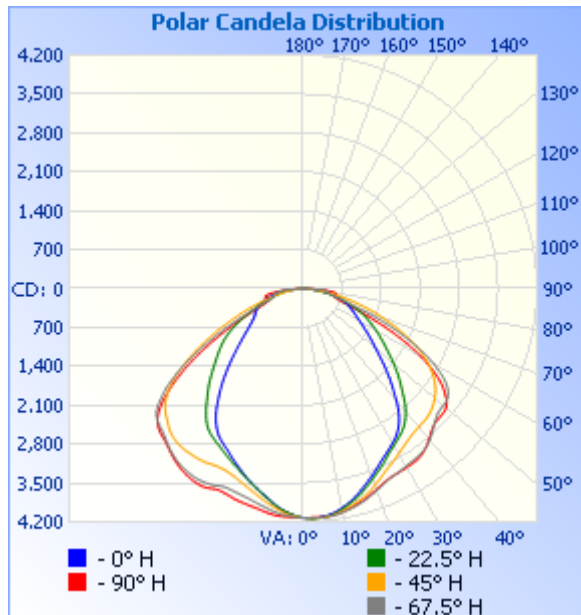
Spectral Power Distribution & Chromaticity Diagram



Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	3,125.1	25.8%
0-40	5,237.6	43.3%
0-60	9,671.3	79.9%
60-90	2,403.4	19.9%
70-100	976.2	8.1%
90-120	7.3	0.1%
0-90	12,074.8	99.8%
90-180	28.8	0.2%
0-180	12,103.6	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	386.8	3.2%	90-100	1.6	0%
10-20	1,083.7	9.0%	100-110	2.2	0%
20-30	1,654.6	13.7%	110-120	3.5	0%
30-40	2,112.5	17.5%	120-130	5.1	0%
40-50	2,295.0	19.0%	130-140	5.5	0%
50-60	2,138.8	17.7%	140-150	4.6	0%
60-70	1,428.8	11.8%	150-160	3.5	0%
70-80	717.7	5.9%	160-170	2.1	0%
80-90	256.9	2.1%	170-180	0.8	0%



C (DEG) γ (DEG)	0	23	45	68	90	113	135	158	180	203	225	248	270	293	315	338
0	4125	4125	4125	4125	4125	4125	4125	4125	4125	4125	4125	4125	4125	4125	4125	4125
5	4115	4119	4130	4135	4118	4132	4136	4126	4118	4079	4041	4017	4011	4010	4043	4085
10	4067	4075	4033	4019	4007	4031	4062	4090	4073	3985	3898	3828	3804	3813	3892	3990
15	4008	3996	3893	3843	3818	3861	3935	3994	3976	3872	3742	3656	3613	3620	3730	3898
20	3951	3920	3772	3635	3593	3647	3767	3865	3846	3726	3577	3474	3407	3441	3601	3843
25	3963	3920	3671	3448	3379	3443	3576	3745	3741	3628	3431	3286	3210	3291	3550	3894
30	3979	3957	3640	3307	3210	3259	3432	3693	3715	3577	3292	3122	3039	3159	3587	3915
35	3895	3900	3653	3161	2995	3110	3304	3648	3678	3509	3187	2890	2728	3003	3598	3859
40	3754	3790	3641	2899	2593	2864	3240	3541	3521	3428	3101	2501	2281	2696	3567	3739
45	3638	3639	3554	2544	2139	2491	3199	3356	3378	3275	2971	2100	1831	2381	3434	3590
50	3366	3470	3336	2208	1729	2138	3082	3280	3347	3174	2773	1727	1448	2061	3241	3439
55	2703	3067	2987	1902	1420	1801	2878	3173	3059	3027	2520	1409	1176	1798	2832	2900
60	1844	2361	2493	1609	1178	1522	2550	2714	2443	2559	2153	1163	1013	1498	2216	2069
65	1057	1548	1876	1310	1002	1258	2070	1969	1600	1824	1649	959	929	1131	1561	1241
70	682	892	1290	988	856	974	1512	1155	876	1071	1124	768	829	785	1007	717
75	661	583	807	701	691	690	979	642	595	603	690	585	665	544	601	541
80	657	484	455	424	442	413	544	467	609	426	381	419	447	377	328	521
85	348	353	158	195	182	176	203	409	457	341	173	190	135	162	148	357
90	3.03	2.85	2.15	1.93	1.88	1.84	2.64	4.14	2.95	2.42	1.27	1.40	1.47	1.49	1.91	2.12
95	1.53	1.59	1.45	1.06	1.01	0.85	1.34	1.60	1.32	1.22	1.12	0.96	1.15	1.00	1.38	1.43
100	1.64	1.85	1.49	0.94	0.95	0.86	1.40	1.43	1.06	1.64	1.97	1.38	1.01	1.22	1.91	1.91
105	3.01	3.17	2.28	1.18	1.04	1.22	2.01	2.07	1.80	2.54	2.71	1.81	1.23	1.54	2.77	3.04
110	4.59	4.39	3.02	1.44	1.48	1.91	2.92	3.55	2.75	3.34	3.24	2.08	1.91	1.97	3.29	3.99
115	5.54	5.29	3.88	1.70	1.96	2.21	3.93	4.94	3.59	4.29	3.93	2.38	2.07	2.30	3.77	4.62
120	6.34	5.92	4.83	2.81	2.40	2.76	5.04	5.79	4.44	5.03	4.78	3.10	2.66	2.93	3.99	4.89
125	7.39	7.08	5.27	6.59	14.7	4.46	5.63	6.90	5.39	5.72	4.99	4.10	3.92	3.72	4.21	5.32
130	7.96	7.30	5.35	7.98	21.8	5.74	5.95	7.49	6.44	5.96	5.07	4.69	4.56	4.57	4.25	5.62
135	7.86	7.12	5.39	8.88	14.2	7.17	5.94	7.45	6.58	6.09	5.04	5.48	5.14	5.26	4.09	5.78
140	7.66	7.15	5.57	7.67	18.8	7.28	5.86	7.49	6.92	6.63	4.83	6.12	5.68	5.53	4.13	6.06
145	7.41	6.03	6.15	9.58	18.9	8.24	5.20	6.91	7.13	6.71	5.20	6.49	5.94	5.95	4.89	6.16
150	7.32	5.95	7.16	9.74	16.0	8.64	6.20	7.01	6.81	6.79	6.48	6.81	6.90	6.91	6.43	6.18
155	6.45	6.46	8.12	10.1	13.3	8.82	7.11	7.12	6.22	6.81	6.53	7.17	6.95	6.86	6.58	6.20
160	6.26	6.51	7.75	9.06	10.5	7.96	7.30	7.03	5.91	6.40	6.58	7.26	7.95	7.50	6.74	6.38
165	6.43	6.61	7.59	7.56	7.27	7.23	7.37	6.64	6.60	6.24	6.85	7.38	7.16	7.34	6.83	6.91
170	6.98	7.36	8.92	8.51	8.26	8.34	8.76	6.85	7.61	7.62	8.03	9.16	9.28	8.83	8.08	8.88
175	7.34	8.20	9.34	8.77	9.28	8.45	9.08	7.23	7.81	7.89	8.65	9.37	9.32	9.57	8.38	8.96
180	6.86	7.77	8.70	8.58	9.23	8.24	8.82	7.17	7.02	7.14	7.91	8.68	8.54	8.98	8.28	8.77

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BUG Rating: B3-U2-G2**IESNA Luminaire Flux Distribution Table:**

Zone	Lumens	Luminaire %
FL - Front-Low(0-30)	1592.1	13.2
FM - Front-Medium(30-60)	3370.3	27.8
FH - Front-High(60-80)	1138.7	9.4
FVH - Front-Very High(80-90)	132.76	1.1
Total Forward Light	6250.1	51.6

BL - Back-Low(0-30)	1533	12.7
BM - Back-Medium(30-60)	3177.1	26.2
BH - Back-High(60-80)	1007.6	8.3
BVH - Back-Very High(80-90)	124.14	1.0
Total Back Light	5854.5	48.4

UL - Uplight-Low(90-100)	1.5547	0.0
UH - Uplight-High(100-180)	27.269	0.2
Total Up Light	28.823	0.2

BUG(Back,Up,Glare) Rating	B3-U2-G2
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Zone	Downward Lumens	Upward Lumens	Total Lumens
House Side	5841.9	12.659	5854.5
Street Side	6233.9	16.164	6250.1

2.2 Electrical, Photometric and Chromaticity Measurements*(Refer to Work Instruction QD25)*

Test date	2016-11-03	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	71542		

Electrical Measurement :

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE161105-	120.0	60	0.8267	98.72	0.9951	14.86
AI2	277.0	60	0.3850	98.87	0.9272	18.57
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

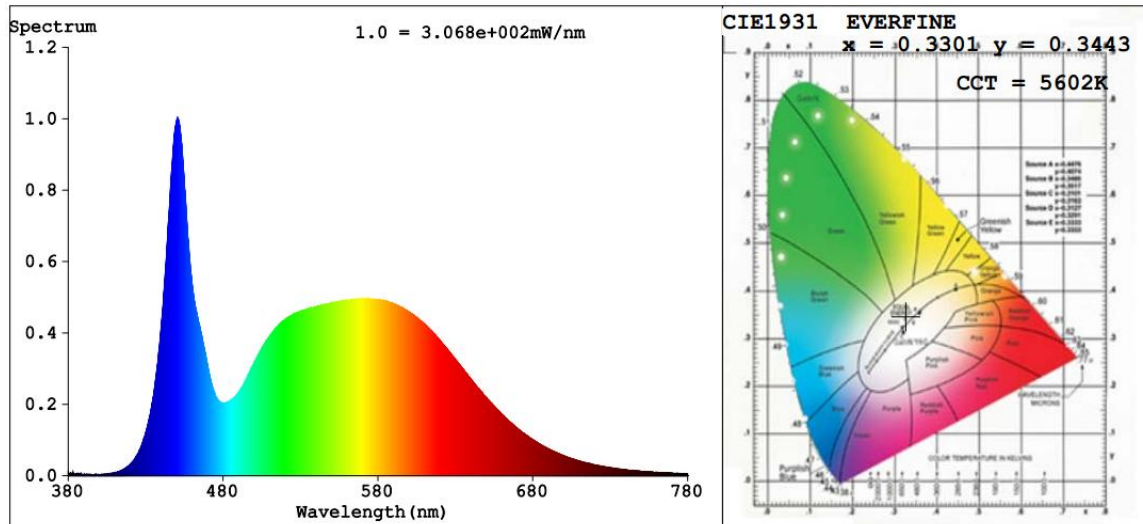
Chromaticity Measurement - Sphere-Spectroradiometer Method :

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	81	R9	9
Frequency (Hz)	60	R2	87	R10	68
CCT (K)	5602	R3	90	R11	82
Duv	0.0027	R4	83	R12	58
Chromaticity (x, y)	x=0.3301 y=0.3443	R5	82	R13	83
Chromaticity (u', v')	u'=0.2041 v'=0.4788	R6	82	R14	95
Color Rendering Index (CRI)	82.8	R7	88	R15	77
R9	9	R8	69	--	--

Photometric Measurement – Sphere-Spectroradiometer Method :

Parameter	Result		DLC V4.0 Pass Criteria	
Test Voltage (V)	120.0	277.0	--	
Frequency (Hz)	60	60		
Total Luminous (lm)	12353	12255	>=1000 (-10%)	
Luminous Efficacy (lm/W)	125.13	123.95	Standard: >= 100(-3%)	Premium: >= 120(-3%)

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	2016-07-01	2017-06-30
ST-R-331	Spectral analysis system HAAS-2000	2016-07-01	2017-06-30
D204	Standard Lamp	2016-07-01	2017-06-30
PF2010	Power Meter for Integrating Sphere	2016-07-01	2017-06-30
EE-09	Goniophotometer system	2016-07-01	2017-06-30
D908S	Standard Lamp	2016-07-01	2017-06-30
PF210	Power Meter for Goniophotometer	2016-07-01	2017-06-30
ST-R-181A	Temperature Tester	2016-07-01	2017-06-30
Uncertainty: Photometric Measurement (Sphere):1.74% Chromaticity Measurement(Sphere):14.3K Photometric Measurement(Goniophotometer):1.62%			

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

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