



Dimming:
PWM/TIME/0-5V/0-10V

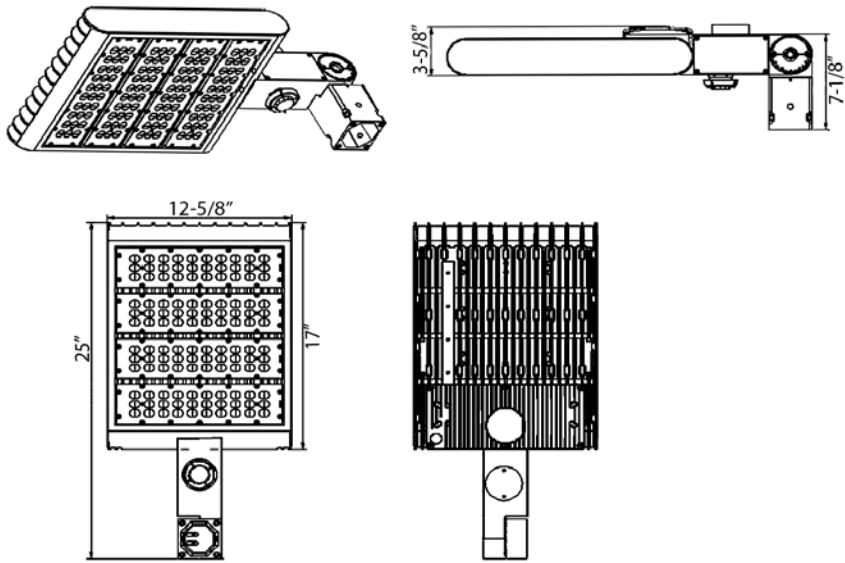
Cat# 71844
220 Watts
Slipfitter Mount



UL US LISTED
DLC
QPL ID #
PLGLI8X8MFJR

Model: 71844		
OVERALL LAMP PARAMETERS	Input Voltage	100-277VAC 50/60HZ
	Input Current	1.82A Max
	Input Power	220W
	Power Factor	PF≥ 0.9
	Luminance	27600 LM
	Luminous Efficiency	125 LM/W
	CRI	>80
	Beam Angle	Type III 150 x 105°
	Main Structure	Aluminium + PC Lens
LED DRIVER	Output Voltage	36-60VDC
	Output Current	5.3A
	Driver Efficiency	88%
LED	LED Manufacturer	Philips
	LED Type	3030 LED
	LED Quantity	120 PCS
	LED Efficacy	150 LM/W
	Color Temperature	4000K
Photocell	-	Not Included
LIFESPAN & ENVIRONMENT	Lifespan	50,000+ Hrs.
	Warranty	5 Years
	IP Rating	IP65 Wet Locations
	Operating Temperature	-40F - +131F
	Storage Temperature, Humidity	-40°C—+80°C , 10—90% RH
SAFETY&EMC	Safety Norms	UL1598, UL8750, EN60598, EN61347-2-13, EN62031, EN62471
	Withstand Voltage	I/P-PG: 2121VDC
	Grounding Resistance	≤0.5 Ω, 0K
	Electromagnetic Compatibility	EN55015, EN61000-2-3, EN61000-3-3, EN61547
OTHERS	Dimension	Pls refer to attached dimension drawing
	Net Weight	KG
	Gross Weight	KG
	Packing Size	master carton: L*W*Hmm
	Q'ty / Carton	1PCS
	Volume	
	EPA Rating	1.68ft ²

Dimension:





Report No.: GZE160938-E-R

NVLAP LAB CODE 201011-0

LM-79-08 Test Report

For

Morris Products Inc.

53 Carey Rd. Queensbury, NY 12804

Outdoor Pole/Arm-mounted Area and Roadway

Luminaires

Model name(s): 71564A, 71844, 71576A, 71855
The only difference of these models is the mounting option

Representative (Tested) Model: 71844, 71564A

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

Test & Report By:

Garman Mo

Engineer: Garman Mo

Date: Sept.23,2016

Update: Oct.14,2016 Update model number.

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

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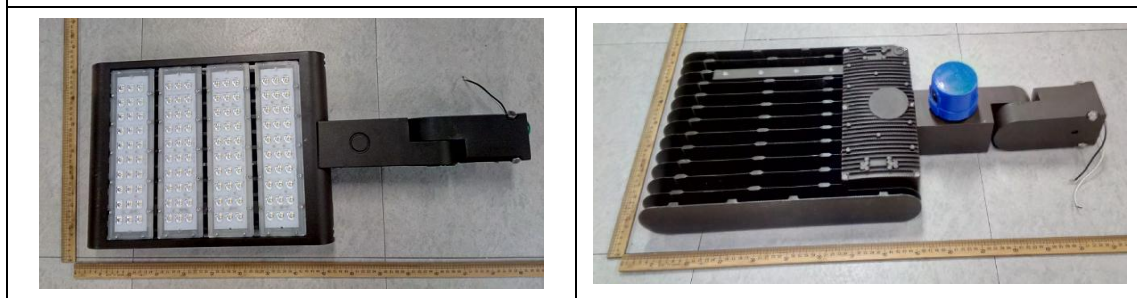
Fax: 8620-32290422

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

1.1 Product Information:

Organization Name	Morris Products Inc.	
Brand Name	MORRIS FlatPanel	
Model Number	71564A	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	Outdoor Pole/Arm-mounted Area and Roadway Luminaires	
Rated Voltage / Frequency	120 -277Vac, 50/60 Hz	
Nominal Power	220W	
Rated Initial Lamp Lumen	--	
Declared CCT	4000K,5000K,5700K	
LED Manufacturer	Philips Lumileds	
LED Model	LUXEON 3030 2D	
Sample Number	GZE160938-E1 (4000K);A2(5700K)	
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	Sept 10,2016
Date of Test	Sept 11,2016
Test item	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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 $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$, 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 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 $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$. 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 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 $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$. 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	2016-09-11	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	71844 (TYPE3)		

Electrical Measurement :

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE160938-	120.0	60	1.839	219.3	0.9939	5.78
E1	277.0	60	0.8144	212.4	0.9415	8.19
DLC Pass Criteria					$\geq 0.9(-3\%)$	$\leq 20(+5)$

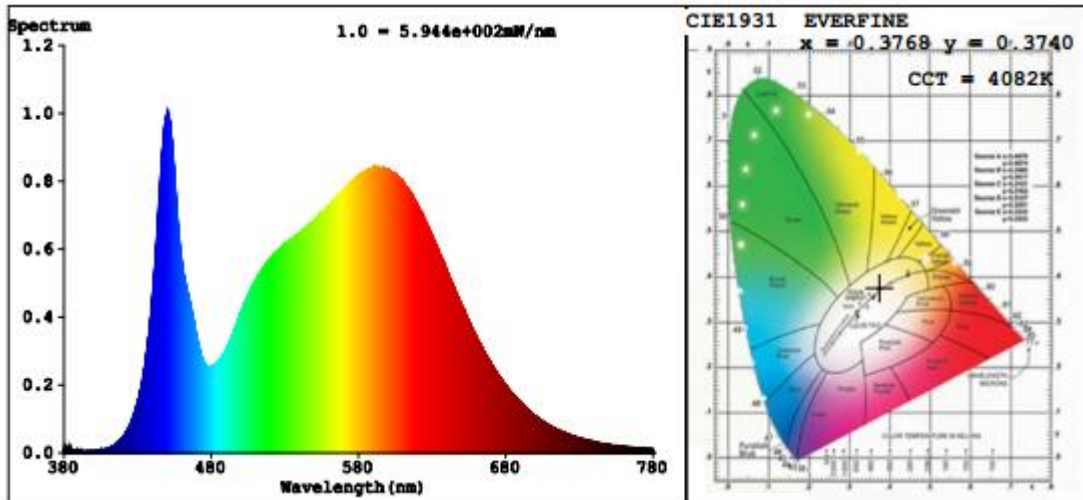
Chromaticity Measurement - Sphere-Spectroradiometer Method :

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	82	R9	11
Frequency (Hz)	60	R2	89	R10	74
CCT (K)	4082	R3	94	R11	81
Duv	-0.0002	R4	83	R12	63
Chromaticity (x, y)	x=0.3768 y=0.3740	R5	82	R13	84
Chromaticity (u', v')	u'=0.2238 v'=0.4998	R6	85	R14	97
Color Rendering Index (CRI)	83.4	R7	87	R15	76
R9	11	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)	27536	27221	$\geq 10000 (-10\%)$	
Luminous Efficacy (lm/W)	125.56	128.16	Standard: $\geq 100(-3\%)$	Premium: $\geq 120(-3\%)$
Zonal lumens in the 0-90 °zone (%)	99.8	--	$\geq 100(-1)$	
Zonal lumens in the 80-90 °zone (%)	1.0	--	$\leq 10(+3)$	
Beam Angle (°)	124.6	--	--	
Center Beam Candle Power (cd)	8041	--	--	

Spectral Power Distribution & Chromaticity Diagram

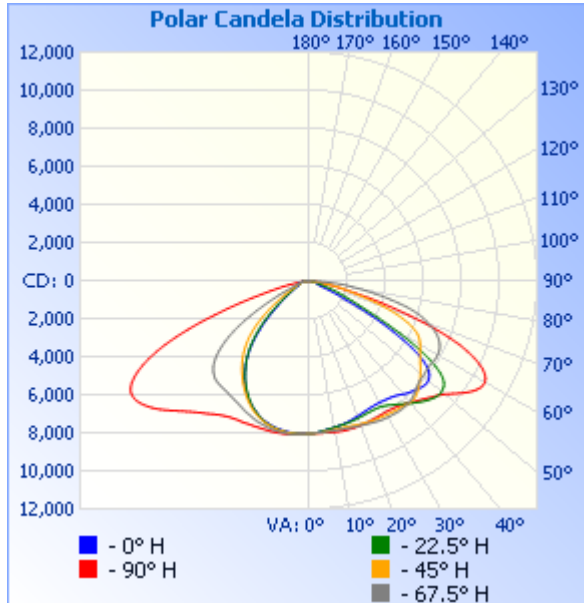


Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	6,570.0	23.9%
0-40	11,196.7	40.7%
0-60	21,820.1	79.3%
60-90	5,641.9	20.5%
70-100	1,938.9	7%
90-120	20.0	0.1%
0-90	27,461.9	99.8%
90-180	67.5	0.2%
0-180	27,529.4	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	765.7	2.8%	90-100	3.8	0%
10-20	2,247.5	8.2%	100-110	6.5	0%
20-30	3,556.8	12.9%	110-120	9.7	0%
30-40	4,626.7	16.8%	120-130	11.9	0%
40-50	5,359.4	19.5%	130-140	11.9	0%
50-60	5,264.0	19.1%	140-150	9.9	0%
60-70	3,706.7	13.5%	150-160	7.5	0%
70-80	1,648.3	6.0%	160-170	4.5	0%
80-90	286.8	1.0%	170-180	1.8	0%

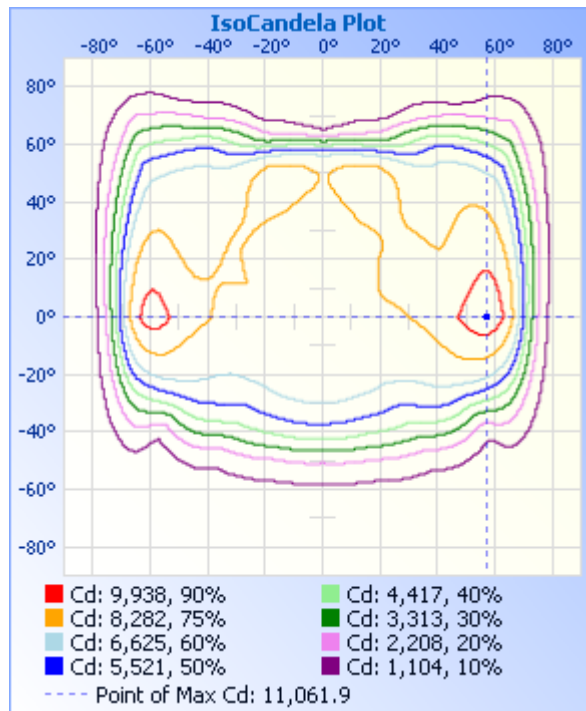
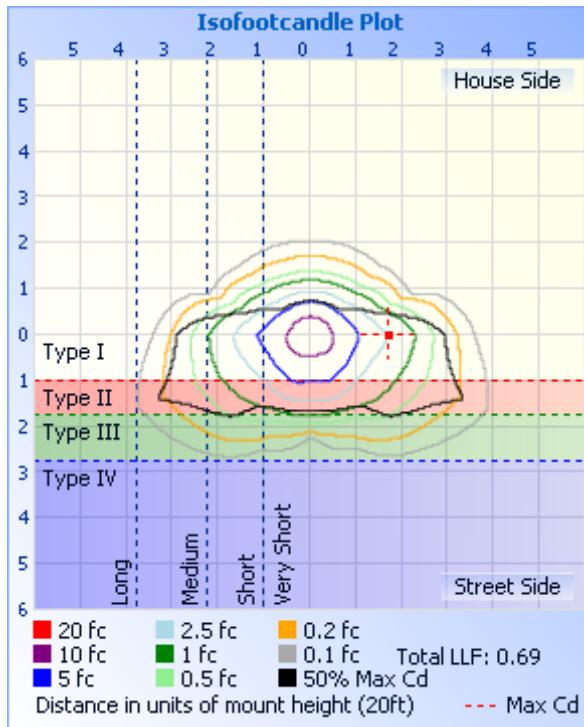
Photometric Data



Illuminance at a Distance

	Center Beam fc	Beam Width	
17.0ft	27.8 fc	28.6 ft	95.5 ft
34.0ft	6.96 fc	57.2 ft	191.0 ft
51.0ft	3.09 fc	85.9 ft	286.5 ft
68.0ft	1.74 fc	114.5 ft	382.0 ft
85.0ft	1.11 fc	143.1 ft	477.5 ft
102.0ft	0.77 fc	171.7 ft	573.0 ft

■ Vert. Spread: 80.2°
■ Horiz. Spread: 140.8°



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Tel: 8620-3229 0320 Fax: 8620-32290422 <http://www.standard-tech.com>

Table--1 UNIT: *10cd

C (DEG) Y (DEG)	0	23	45	68	90	113	135	158	180	203	225	248	270	293	315	338
0	804	804	804	804	804	804	804	804	804	804	804	804	804	804	804	804
5	811	808	803	797	794	795	800	800	803	805	804	803	806	807	808	811
10	815	813	801	791	782	782	794	800	808	805	800	797	798	803	803	809
15	816	817	805	788	772	775	794	802	809	800	790	783	783	787	789	801
20	816	826	815	784	757	767	801	809	808	784	764	758	757	758	763	787
25	820	838	825	780	744	760	808	820	804	755	727	720	715	714	723	766
30	828	850	831	791	741	764	815	830	800	725	676	665	658	655	670	744
35	857	857	835	826	750	794	822	834	808	695	615	593	583	581	608	728
40	904	855	836	878	777	841	833	829	835	677	546	505	489	493	541	721
45	968	834	800	918	807	887	813	800	875	664	461	387	364	380	459	703
50	1046	848	746	927	820	910	766	782	929	623	350	253	231	255	353	641
55	1102	869	717	835	738	843	715	776	1021	517	222	150	140	154	230	510
60	1074	870	688	553	446	554	676	782	1069	333	123	98.2	91.9	98.1	132	317
65	883	807	629	267	124	253	617	757	960	147	77.6	73.4	62.7	72.5	80.2	146
70	527	691	479	128	55.0	117	461	677	645	67.4	56.5	55.0	51.3	54.2	55.9	70.7
75	205	488	258	44.5	36.4	46.6	237	533	256	46.1	38.8	40.2	48.2	40.6	37.9	45.4
80	44.1	263	71.2	26.4	29.6	27.5	89.4	310	63.6	31.2	23.1	27.0	31.2	26.6	21.9	28.8
85	14.3	84.3	9.26	14.7	16.6	16.1	10.3	113	17.1	11.3	8.23	12.6	13.7	11.9	7.31	9.88
90	0.61	0.76	0.37	0.16	0.13	0.18	0.33	0.89	0.61	0.46	0.20	0.06	0.05	0.06	0.25	0.62
95	0.69	0.30	0.17	0.07	0.07	0.07	0.12	0.36	0.63	0.72	0.40	0.10	0.04	0.11	0.44	0.85
100	1.11	0.21	0.11	0.07	0.06	0.06	0.10	0.24	0.92	1.02	0.64	0.23	0.10	0.23	0.66	1.09
105	1.57	0.34	0.12	0.07	0.13	0.08	0.13	0.38	1.32	1.35	0.82	0.44	0.31	0.49	0.93	1.40
110	1.86	0.62	0.24	0.16	0.25	0.17	0.28	0.66	1.66	1.55	0.96	0.67	0.59	0.77	1.10	1.62
115	1.91	0.91	0.41	0.25	0.56	0.30	0.46	0.99	1.73	1.65	1.14	0.83	0.85	1.00	1.25	1.66
120	1.91	1.10	0.58	0.43	0.75	0.39	0.64	1.20	1.74	1.65	1.33	1.16	1.06	1.21	1.48	1.61
125	1.93	1.29	0.68	0.74	1.99	0.78	0.80	1.39	1.71	1.65	1.34	1.29	1.56	1.34	1.47	1.63
130	1.90	1.35	0.82	0.93	1.87	1.01	0.94	1.47	1.74	1.50	1.36	1.61	1.74	1.71	1.63	1.56
135	1.67	1.28	0.89	1.27	2.07	1.38	1.06	1.37	1.64	1.43	1.30	1.87	1.97	1.99	1.58	1.62
140	1.64	1.32	0.99	1.49	2.34	1.61	1.10	1.45	1.58	1.48	1.19	1.86	2.22	1.89	1.33	1.66
145	1.55	1.19	1.15	1.71	2.37	1.79	1.02	1.36	1.58	1.44	1.24	1.78	1.86	1.69	1.46	1.66
150	1.49	1.17	1.44	1.85	2.46	1.99	1.29	1.36	1.54	1.45	1.46	1.78	2.15	1.76	1.85	1.60
155	1.29	1.22	1.59	1.87	2.25	1.92	1.52	1.41	1.44	1.49	1.40	1.74	1.60	1.59	1.91	1.55
160	1.34	1.23	1.59	1.84	2.12	1.84	1.53	1.46	1.35	1.45	1.33	1.64	1.64	1.67	1.77	1.64
165	1.37	1.25	1.61	1.66	1.75	1.67	1.55	1.41	1.49	1.37	1.33	1.57	1.58	1.60	1.66	1.75
170	1.52	1.49	1.83	1.94	1.83	1.96	1.86	1.48	1.69	1.66	1.55	1.91	2.06	2.12	2.02	2.10
175	1.65	1.65	1.91	1.96	2.05	1.94	1.96	1.59	1.82	1.81	1.71	1.90	2.07	2.14	1.99	2.10
180	1.63	1.65	1.76	1.84	2.01	1.83	1.95	1.60	1.67	1.64	1.64	1.78	1.87	2.00	1.84	1.97

2.2 Electrical, Photometric and Chromaticity Measurements

(Refer to Work Instruction QD25)

Test date	2016-09-11	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	71564A (TYPE3)		

Electrical Measurement :

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE160938-	120.0	60	1.804	215.2	0.9941	6.82
E2	277.0	60	0.7988	208.1	0.9405	7.17
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

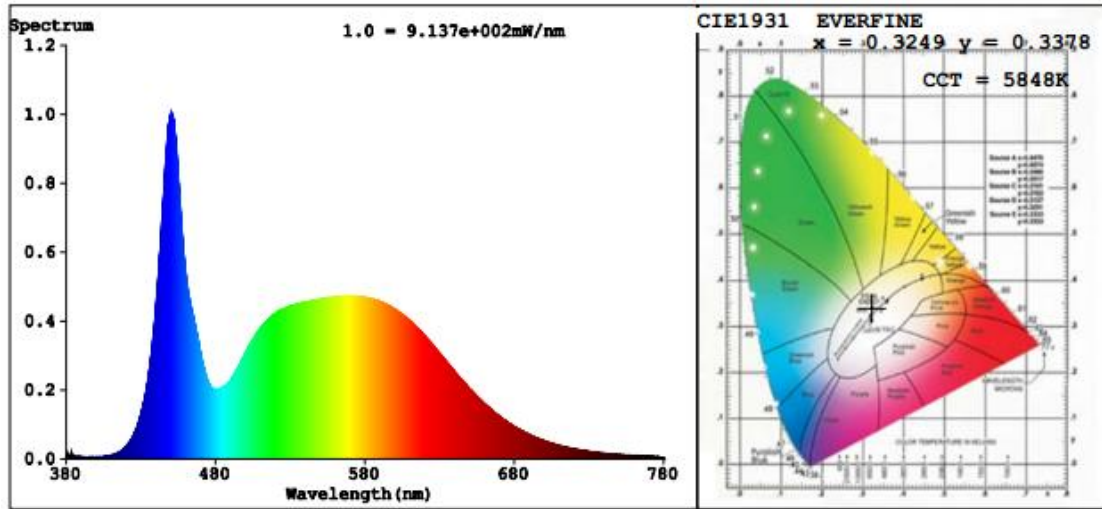
Chromaticity Measurement - Sphere-Spectroradiometer Method :

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	82	R9	12
Frequency (Hz)	60	R2	87	R10	69
CCT (K)	5048	R3	90	R11	83
Duv	0.0018	R4	84	R12	59
Chromaticity (x, y)	x=0.3249 y=0.3378	R5	83	R13	83
Chromaticity (u', v')	u'=0.2029 v'=0.4747	R6	82	R14	94
Color Rendering Index (CRI)	83.2	R7	88	R15	78
R9	12	R8	71	--	--

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)	27754	27384	>=10000 (-10%)	
Luminous Efficacy (lm/W)	128.97	131.59	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 *******