Cat# 71867
100 Watts
Wall Mount

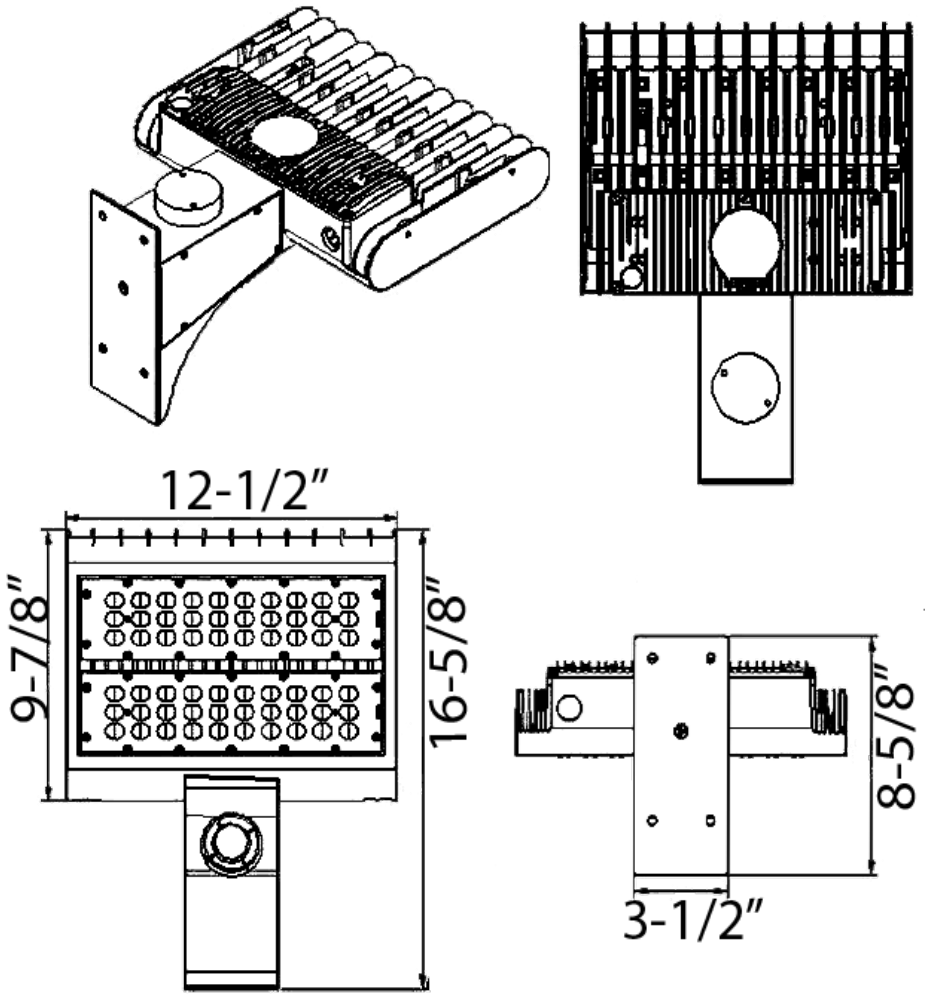
RoHS

UL/CUL
TUV-CE

QPL ID #
PLYMQ5L6Y6MQ

Model :		71867
OVERALL LAMP PARAMETERS	Input Voltage	347-480 VAC 50/60HZ
	Input Current	.47A Max
	Input Power	100W
	Power Factor	PF≥ 0.95
	Luminance	12,350 LM
	Luminous Efficiency	124 LM/W
	CRI	>83
	R9	9
	Beam Angle	Type II 120 x 90°
	Main Structure	Aluminium + PC Lens
LED DRIVER	Output Voltage	36-60VDC
	Output Current	4.4A
	THD	7%
	Driver Efficiency	88%
LED	LED Manufacturer	Philips
	LED Type	3030 LED
	LED Quantity	120 PCS
	LED Efficacy	130 LM/W
	Color Temperature	5000K
Photocell	-	Not Included
LIFESPAN & 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 diamension drawing
	Q'ty / Carton	1 PC
	Volume	
	EPA Rating	1.16ft^2

Dimensions:



LM-79-08 Test Report

For

Morris Products Inc.

53 Carey Rd. Queensbury, NY 12804

Architectural Flood and Spot Luminaires

Model name(s): 71867

Representative (Tested) Model: 71867

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

Test & Report By:

Johnson Sun

Engineer: Johnson Sun

Update: Nov.03, 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.

1.1 Product Information:

Organization Name	Morris Products Inc.	
Brand Name	MORRIS	
Model Number	71867	
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	277 -480Vac, 50/60 Hz	
Nominal Power	100W	
Rated Initial Lamp Lumen	--	
Declared CCT	5000K	
LED Manufacturer	Philips Lumileds	
LED Model	L130-2780003000W21	
Sample Number	GZE161105-AE1(4000K),AE2(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	: Oct.31,2016
Date of Test	: Nov.01,2016
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 °C ±1 °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 ºC ±1 ºC. 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 ºC ±1 ºC. 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	2016-11-01	Test Ambient:	25.2 ℃
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	71867		

Electrical Measurement :

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE161105-AE1	277.0	60	0.3655	100.1	0.9888	4.97
	480.0	60	0.2136	98.81	0.9638	13.49
				DLC Pass Criteria	>= 0.9(-3%)	<= 20(+5)

Chromaticity Measurement - Sphere-Spectroradiometer Method :

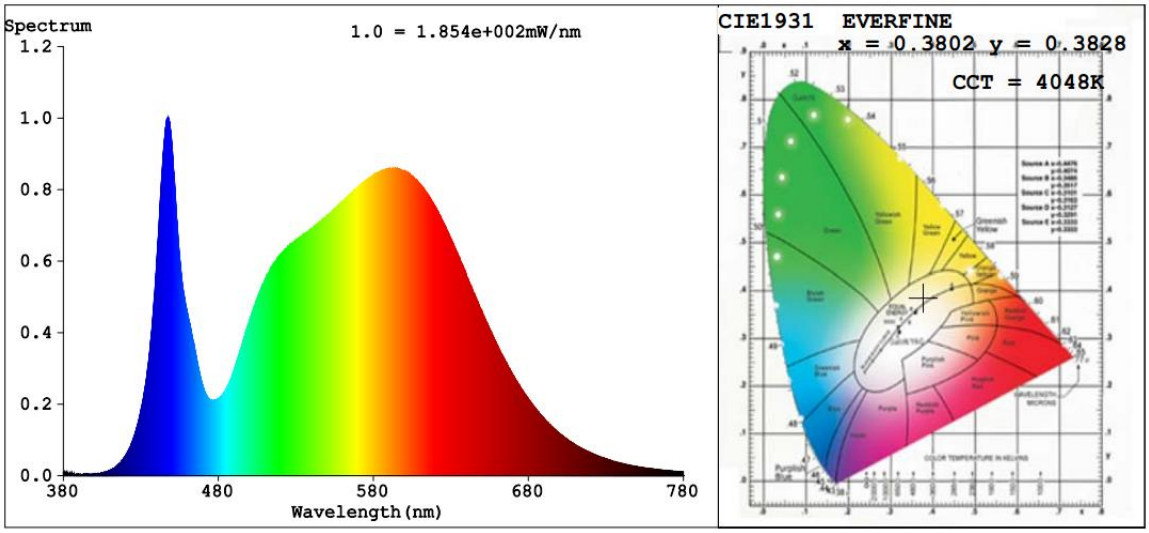
Parameter	Result
Test Voltage (V)	277.0
Frequency (Hz)	60
CCT (K)	4048
Duv	0.0029
Chromaticity (x, y)	x=0.3802 y=0.3828
Chromaticity (u', v')	u'=0.2226 v'=0.5042
Color Rendering Index (CRI)	82.1
R9	8

Special Color Rendering Indices			
R1	80	R9	8
R2	86	R10	69
R3	92	R11	82
R4	83	R12	61
R5	80	R13	81
R6	82	R14	96
R7	87	R15	74
R8	66	--	--

Photometric Measurement – Goniophotometer Method :

Parameter	Result		DLC V4.0 Pass Criteria	
Test Voltage (V)	277.0	480.0	--	
Frequency (Hz)	60	60		
Total Luminous (lm)	12354	12242	>=1000 (-10%)	
Luminous Efficacy (lm/W)	123.42	123.89	Standard: >= 100(-3%)	Premium: >= 120(-3%)
Zonal lumens in the 0-90 °zone (%)	99.8	--	>=85(-3)	
Beam Angle ( )	106.8	--	--	
Center Beam Candle Power (cd)	4091	--	--	

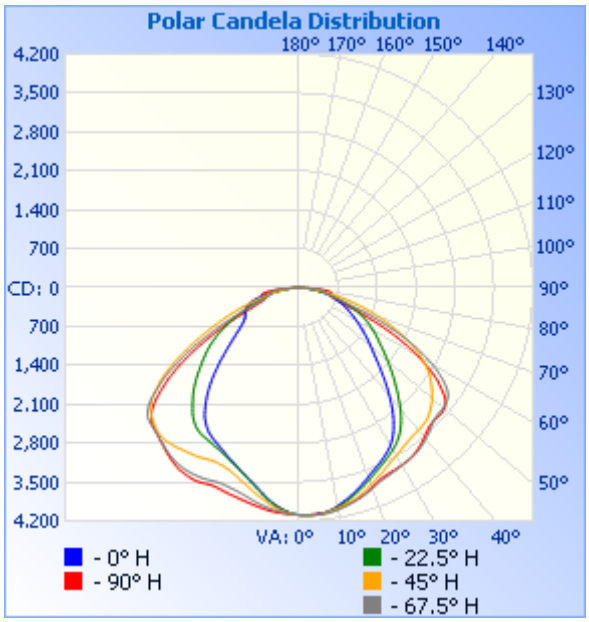
Spectral Power Distribution & Chromaticity Diagram

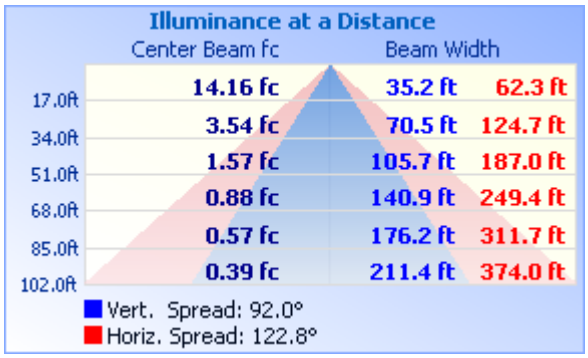


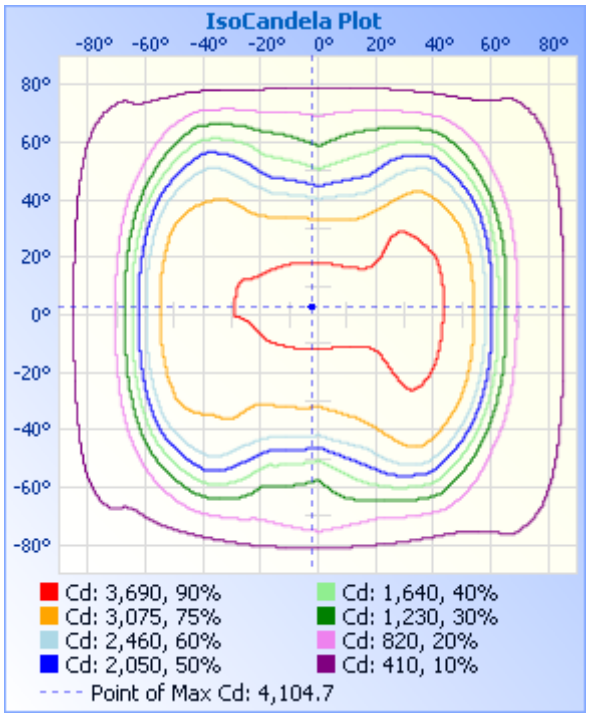
Zonal Lumen Tabulation

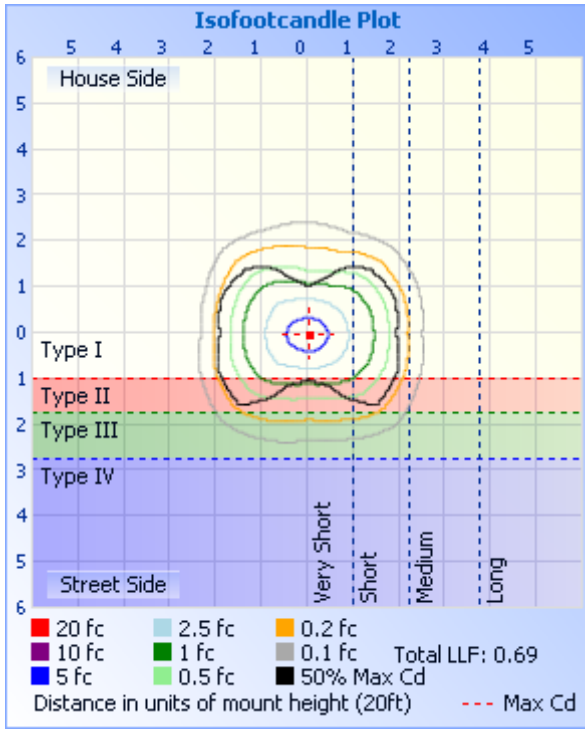
Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	3,107.6	25.2%
0-40	5,238.3	42.4%
0-60	9,820.8	79.5%
60-90	2,502.8	20.3%
70-100	991.8	8%
90-120	7.7	0.1%
0-90	12,323.6	99.8%
90-180	29.8	0.2%
0-180	12,353.4	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	383.5	3.1%	90-100	1.7	0%
10-20	1,073.9	8.7%	100-110	2.3	0%
20-30	1,650.2	13.4%	110-120	3.7	0%
30-40	2,130.7	17.2%	120-130	5.3	0%
40-50	2,352.0	19.0%	130-140	5.6	0%
50-60	2,230.5	18.1%	140-150	4.6	0%
60-70	1,512.7	12.2%	150-160	3.5	0%
70-80	745.0	6.0%	160-170	2.2	0%
80-90	245.1	2.0%	170-180	0.8	0%


Polar Candela Distribution
180° 170° 160° 150° 140°
4,200
3,500
2,800
2,100
1,400
700
CD: 0
700
1,400
2,100
2,800
3,500
4,200
130°
120°
110°
100°
90°
80°
70°
60°
50°
VA: 0° 10° 20° 30° 40°
- 0° H
- 90° H
- 22.5° H
- 45° H
- 67.5° H


Illuminance at a Distance
Center Beam fc
Beam Width
17.0ft 14.16 fc 35.2 ft 62.3 ft
34.0ft 3.54 fc 70.5 ft 124.7 ft
51.0ft 1.57 fc 105.7 ft 187.0 ft
68.0ft 0.88 fc 140.9 ft 249.4 ft
85.0ft 0.57 fc 176.2 ft 311.7 ft
102.0ft 0.39 fc 211.4 ft 374.0 ft
Vert. Spread: 92.0°
Horiz. Spread: 122.8°


IsoCandela Plot
-80° -60° -40° -20° 0° 20° 40° 60° 80°
80°
60°
40°
20°
0°
-20°
-40°
-60°
-80°
Cd: 3,690, 90%
Cd: 3,075, 75%
Cd: 2,460, 60%
Cd: 2,050, 50%
Cd: 1,640, 40%
Cd: 1,230, 30%
Cd: 820, 20%
Cd: 410, 10%
Point of Max Cd: 4,104.7


Isofootcandle Plot
5 4 3 2 1 0 1 2 3 4 5
House Side
Type I
Type II
Type III
Type IV
Very Short
Short
Medium
Long
Street Side
20 fc
10 fc
5 fc
2.5 fc
1 fc
0.5 fc
0.2 fc
0.1 fc
50% Max Cd
Total LLF: 0.69
Distance in units of mount height (20ft)
Max Cd

γ (DEG) \ C (DEG)	0	23	45	68	90	113	135	158	180	203	225	248	270	293	315	338
0	4091	4091	4091	4091	4091	4091	4091	4091	4091	4091	4091	4091	4091	4091	4091	4091
5	4066	4078	4082	4084	4087	4100	4099	4099	4084	4062	4022	3994	3977	3985	4016	4044
10	4019	4013	3983	3992	3986	4009	4026	4055	4036	3974	3866	3791	3760	3779	3852	3964
15	3953	3934	3859	3826	3820	3855	3930	3964	3951	3846	3686	3582	3549	3559	3677	3856
20	3908	3868	3741	3645	3625	3679	3769	3848	3826	3699	3511	3424	3378	3392	3534	3798
25	3899	3876	3662	3491	3458	3514	3616	3747	3715	3575	3370	3280	3236	3272	3476	3821
30	3939	3925	3653	3337	3277	3366	3488	3689	3687	3512	3259	3164	3117	3200	3530	3859
35	3888	3909	3687	3117	2959	3160	3389	3642	3634	3459	3172	3023	2936	3149	3584	3842
40	3764	3834	3670	2788	2516	2828	3339	3544	3503	3363	3149	2746	2585	2976	3641	3755
45	3649	3677	3545	2434	2060	2444	3278	3409	3405	3247	3102	2375	2127	2691	3619	3653
50	3455	3514	3305	2110	1701	2090	3116	3376	3397	3215	2959	1957	1665	2360	3479	3554
55	2867	3184	2979	1845	1430	1785	2879	3255	3094	3119	2735	1570	1322	2037	3111	3070
60	2039	2533	2515	1613	1189	1537	2549	2766	2471	2634	2343	1277	1133	1688	2488	2293
65	1178	1682	1913	1341	984	1284	2067	2009	1629	1888	1779	1066	1073	1282	1781	1430
70	719	959	1311	1007	797	979	1510	1154	873	1116	1203	883	1000	911	1183	804
75	625	608	804	688	615	668	956	630	582	618	744	697	817	653	723	563
80	677	487	447	386	374	372	507	461	582	418	410	430	472	406	405	523
85	423	391	153	145	140	130	176	396	441	306	131	166	167	155	137	393
90	2.96	2.72	1.84	1.55	1.52	1.47	2.07	3.30	2.62	1.95	1.22	0.85	0.90	1.00	1.22	1.80
95	1.53	1.59	1.32	1.06	1.06	0.75	1.27	1.39	1.16	1.16	1.11	0.85	0.79	0.80	1.22	1.38
100	1.63	2.00	1.59	1.01	1.06	0.85	1.54	1.33	1.27	1.43	1.75	1.17	0.95	1.17	1.96	1.86
105	3.00	3.22	2.44	1.17	1.22	1.43	2.43	2.70	2.17	2.49	2.60	1.65	1.12	1.54	2.86	3.04
110	4.53	4.55	3.44	1.70	2.01	2.12	3.60	3.82	3.06	3.60	3.18	2.12	1.85	1.92	3.28	4.09
115	5.52	5.45	4.18	2.12	2.54	2.71	4.66	5.36	4.06	4.60	4.03	2.12	2.02	2.23	3.71	4.73
120	6.42	6.03	5.30	2.96	3.07	3.39	5.67	6.31	4.91	5.30	4.98	3.09	2.61	3.03	4.24	5.05
125	7.32	6.98	5.46	6.25	13.8	4.67	6.25	7.22	5.80	5.98	4.98	3.93	3.76	3.72	4.34	5.47
130	8.01	7.35	5.46	7.59	23.5	5.84	6.30	8.07	6.90	6.24	5.41	4.57	4.55	4.46	4.61	5.79
135	7.85	6.83	5.46	8.23	14.3	7.12	6.30	7.65	6.90	6.40	5.14	5.47	5.40	5.26	4.50	5.84
140	7.53	6.88	5.56	7.44	21.8	7.17	6.15	7.65	7.01	6.72	5.09	6.11	5.62	5.42	4.34	6.21
145	7.38	5.88	5.78	8.92	18.7	7.91	5.51	7.22	7.17	6.82	5.62	6.69	6.04	5.96	5.25	6.37
150	7.43	5.77	6.94	9.28	15.8	8.18	6.25	7.22	7.11	7.04	6.62	7.12	7.10	6.70	6.84	6.58
155	6.43	6.03	7.79	9.56	13.5	8.50	7.10	7.27	6.48	7.20	6.78	7.75	7.31	7.13	6.94	6.58
160	6.11	6.30	7.79	9.40	11.0	8.50	7.15	7.27	6.11	6.67	6.94	7.75	8.26	8.24	7.26	6.80
165	6.32	6.35	7.68	7.75	7.36	7.39	7.26	6.96	6.85	6.61	7.21	7.86	7.94	8.02	7.52	7.12
170	7.11	7.41	8.90	8.38	8.20	8.24	8.85	7.22	7.85	7.88	8.48	9.50	9.85	9.62	8.95	9.19
175	7.43	8.35	9.32	8.92	9.58	8.87	9.43	7.43	7.90	7.99	8.58	9.39	9.58	9.94	8.90	9.29
180	7.06	8.57	8.96	9.18	9.80	8.98	9.16	7.49	7.11	7.19	8.21	9.03	8.95	9.46	8.85	9.24

BUG Rating: B3-U2-G2

IESNA Luminaire Flux Distribution Table:

Zone	Lumens	Luminaire %
FL - Front-Low(0-30)	1589.8	12.9
FM - Front-Medium(30-60)	3387.6	27.4
FH - Front-High(60-80)	1152.2	9.3
FVH - Front-Very High(80-90)	125.11	1.0
Total Forward Light	6271.4	50.8
BL - Back-Low(0-30)	1517.8	12.3
BM - Back-Medium(30-60)	3326.8	26.9
BH - Back-High(60-80)	1105.4	8.9
BVH - Back-Very High(80-90)	120	1.0
Total Back Light	6083.1	49.2
UL - Uplight-Low(90-100)	1.6704	0.0
UH - Uplight-High(100-180)	28.1	0.2
Total Up Light	29.77	0.2

BUG(Back,Up,Glare) Rating	B3-U2-G2

Zone	Downward Lumens	Upward Lumens	Total Lumens
House Side	6070	13.135	6083.1
Street Side	6254.8	16.635	6271.4

2.2 Electrical, Photometric and Chromaticity Measurements

(Refer to Work Instruction QD25)

Test date	2016-11-01	**Test Ambient:**	25.2 ºC
Test Orientation	As intended	**Stabilization Time (min)**	90
Model Number	71867		

Electrical Measurement :

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE161105-AE2	277.0	60	0.3649	99.87	0.9881	5.03
	480.0	60	0.2132	98.58	0.9632	13.55
				DLC Pass Criteria	>= 0.9(-3%)	<= 20(+5)

Chromaticity Measurement - Sphere-Spectroradiometer Method :

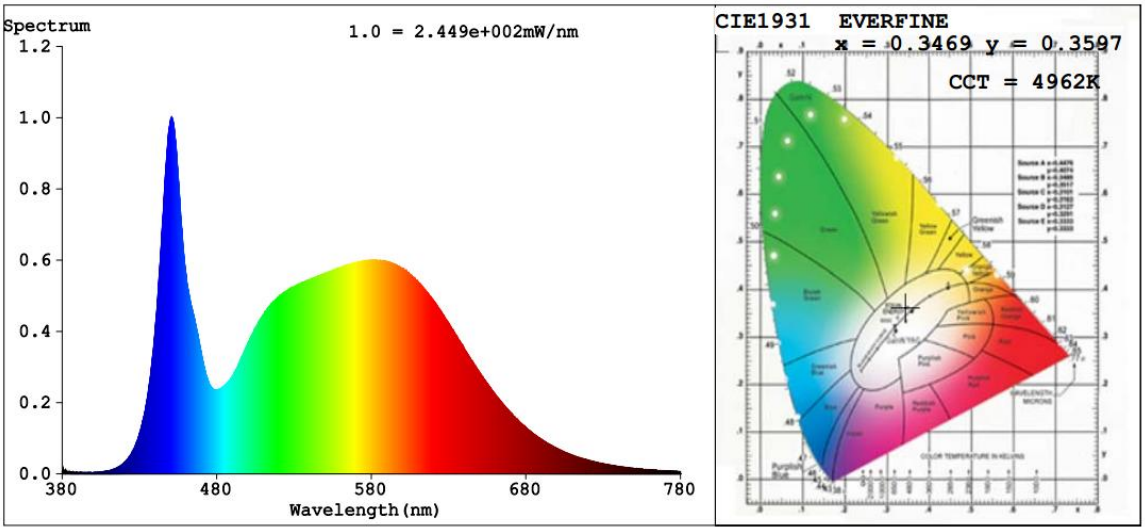
Parameter	Result
Test Voltage (V)	277.0
Frequency (Hz)	60
CCT (K)	4962
Duv	0.0033
Chromaticity (x, y)	x=0.3469 y=0.3597
Chromaticity (u', v')	u'=0.2095 v'=0.4888
Color Rendering Index (CRI)	82.9
R9	9

Special Color Rendering Indices			
R1	81	R9	9
R2	88	R10	71
R3	93	R11	80
R4	82	R12	56
R5	81	R13	83
R6	83	R14	96
R7	88	R15	75
R8	68	--	--

Photometric Measurement – Sphere-Spectroradiometer Method :

Parameter	Result		DLC V4.0 Pass Criteria	
Test Voltage (V)	277.0	480.0	--	
Frequency (Hz)	60	60		
Total Luminous (lm)	12507	12394	>=2000 (-10%)	
Luminous Efficacy (lm/W)	125.23	125.73	Standard: >= 100(-3%)	Premium: >= 120(-3%)

Spectral Power Distribution & Chromaticity Diagram



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 ********