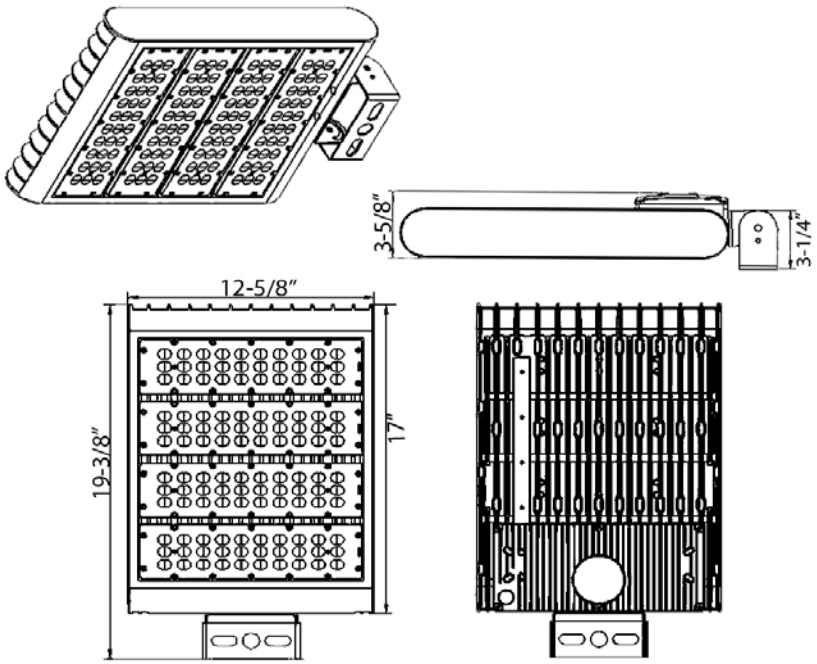
Cat# 71835
220 Watts
Trunion Mount

RoHS

QPL ID #
PLV6JFYMIZ5R

Model :		71835
OVERALL LAMP PARAMETERS	Input Voltage	100-277VAC 50/60HZ
	Input Current	.80A Max
	Input Power	220W
	Power Factor	PF≥ 0.95
	Luminance	27,600 LM
	Luminous Efficiency	125 LM/W
	CRI	>82
	R9	8
	Beam Angle	Type II 120x90°
	Main Structure	Aluminium + PC Lens
LED DRIVER	Output Voltage	36-60VDC
	Output Current	5.3A
	THD	4%
	Driver Efficiency	88%
LED	LED Manufacturer	Philips
	LED Type	3030 LED
	LED Quantity	120 PCS
	LED Efficacy	130LM/W
	Color Temperature	4000K
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 dimension drawing
	Net Weight	KG
	Gross Weight	KG
	Packing Size	master carton: L*W*Hmm
	Q'ty / Carton	1PCS
	Volume	
	EPA Rating	1.68 ft^2

Dimension:



NVLAP LAB CODE 201011-0

LM-79-08 Test Report

For

Morris Products Inc.

53 Carey Rd Queensbury, NY 12804

Architectural Flood and Spot Luminaires

Model name(s): 71544, 71835, 71836, 71564A
71844, 71845, 71576A, 71855
71856

Representative (Tested) Model: 71544

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

Test & Report By:

Garman Mo

Engineer: Garman Mo
Date: Aug 11,2016
Update: Nov 30,2016

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	71544	
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	220W	
Rated Initial Lamp Lumen	--	
Declared CCT	4000K,5000K,5700K	
LED Manufacturer	Philips Lumileds	
LED Model	LUXEON 3030 2D	
Sample Number	GZE160825-C3(4000K),C1(5000K);C2(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	Aug 09,2016
Date of Test	Aug 10,2016
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	2016-08-10	Test Ambient:	25.2 ℃
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	71544		

Electrical Measurement :

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE160825-C1	100.0	60	2.291	228.5	0.9976	5.32
	120.0	60	1.843	219.7	0.9936	6.85
	277.0	60	0.8188	212.9	0.9387	7.95
				DLC Pass Criteria	>= 0.9(-3%)	<= 20(+5)

Chromaticity Measurement - Sphere-Spectroradiometer Method :

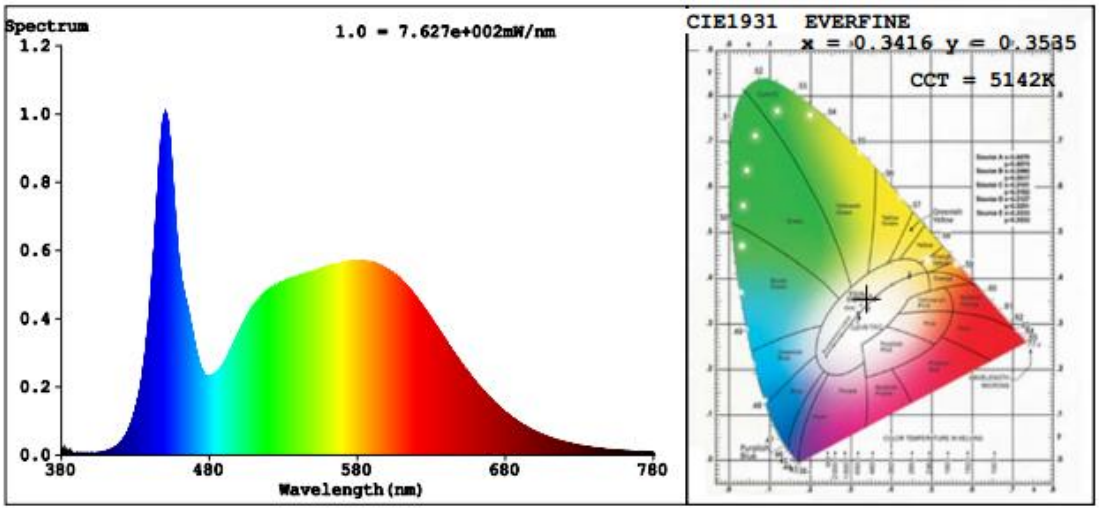
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
CCT (K)	5142
Duv	0.0024
Chromaticity (x, y)	x=0.3416 y=0.3535
Chromaticity (u', v')	u'=0.2083 v'=0.4851
Color Rendering Index (CRI)	83.5
R9	11

Special Color Rendering Indices			
R1	82	R9	11
R2	88	R10	71
R3	92	R11	83
R4	84	R12	62
R5	83	R13	83
R6	84	R14	96
R7	87	R15	77
R8	69	--	--

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)	26731	26433	>=1000 (-10%)	
Luminous Efficacy (lm/W)	121.67	124.16	Standard: >= 100(-3%)	Premium: >= 120(-3%)
Zonal lumens in the 0-90 °zone (%)	99.7	--	>=85(-3)	
Beam Angle (°)	106.7	--	--	
Center Beam Candle Power (cd)	9062	--	--	

Spectral Power Distribution & Chromaticity Diagram



Zonal Lumen Tabulation

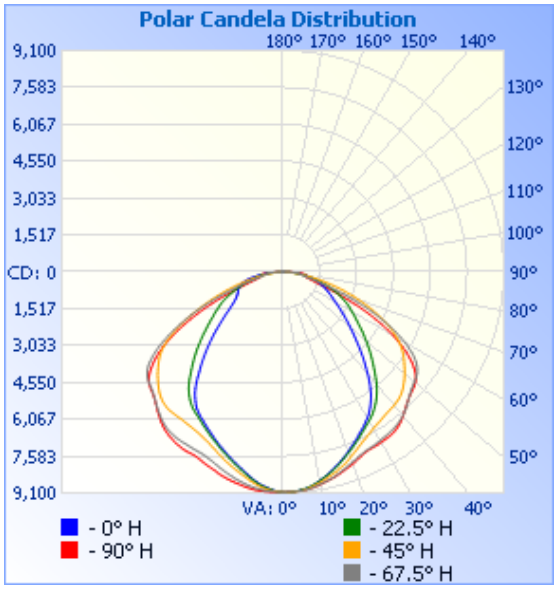
Zonal Lumen Summary

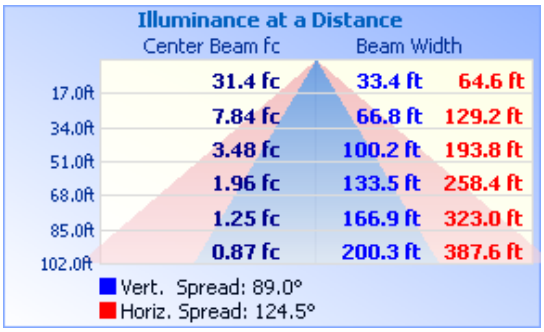
Zone	Lumens	% Luminaire
0-30	6,802.5	25.5%
0-40	11,337.2	42.4%
0-60	20,947.2	78.4%
60-90	5,706.4	21.4%
70-100	2,261.3	8.5%
90-120	20.8	0.1%
0-90	26,653.6	99.7%
90-180	73.4	0.3%
0-180	26,727.0	100%

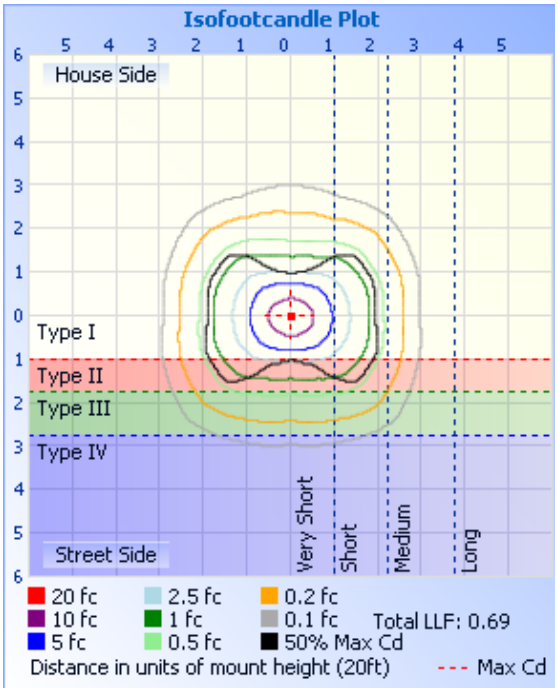
Lumens Per Zone

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	849.1	3.2%	90-100	4.6	0%
10-20	2,371.7	8.9%	100-110	6.8	0%
20-30	3,581.6	13.4%	110-120	9.5	0%
30-40	4,534.7	17.0%	120-130	12.3	0%
40-50	4,909.3	18.4%	130-140	13.7	0.1%
50-60	4,700.8	17.6%	140-150	11.5	0%
60-70	3,449.6	12.9%	150-160	8.4	0%
70-80	1,701.3	6.4%	160-170	4.8	0%
80-90	555.4	2.1%	170-180	1.9	0%

Photometric Data







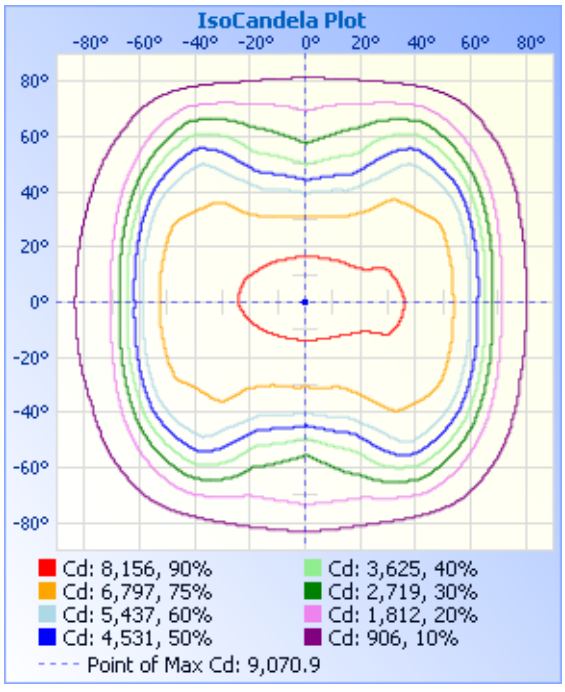


Table--1 UNIT:

γ (DEG) \ C (DEG)	0	23	45	68	90	113	135	158	180	203	225	248	270	293	315	338
0	9062	9062	9062	9062	9062	9062	9062	9062	9062	9062	9062	9062	9062	9062	9062	9062
5	9054	9055	9024	9005	8996	8997	9026	9033	9020	8981	8919	8876	8855	8879	8932	9016
10	8969	8928	8799	8754	8724	8729	8797	8871	8880	8769	8586	8474	8442	8493	8610	8860
15	8814	8720	8504	8370	8310	8352	8498	8635	8660	8481	8225	8046	8005	8063	8258	8622
20	8594	8451	8163	7934	7865	7909	8121	8338	8409	8162	7823	7652	7596	7664	7899	8342
25	8402	8258	7814	7497	7394	7478	7732	8107	8147	7951	7493	7280	7196	7287	7593	8174
30	8355	8183	7564	7075	6950	7081	7445	8010	8095	7878	7246	6899	6830	6931	7426	8133
35	8199	8038	7437	6606	6317	6643	7250	7900	8010	7734	7115	6524	6306	6600	7360	8065
40	7877	7842	7287	5928	5413	6003	7144	7695	7708	7521	7058	5850	5361	6030	7356	7817
45	7457	7464	7028	5134	4478	5225	6944	7336	7338	7187	6848	5015	4382	5226	7157	7442
50	7191	7098	6576	4410	3677	4509	6543	7061	7112	6938	6408	4205	3451	4447	6731	7166
55	6513	6787	6065	3775	3035	3847	6064	6736	6486	6625	5883	3448	2716	3726	6220	6778
60	5254	5880	5440	3246	2519	3295	5423	5796	5256	5631	5116	2848	2255	3152	5393	5676
65	3572	4452	4444	2784	2126	2803	4459	4338	3596	4153	3978	2389	2055	2626	4133	4151
70	1953	2798	3257	2247	1794	2244	3303	2660	1964	2545	2774	1914	1937	2014	2864	2493
75	1126	1478	2110	1659	1499	1642	2138	1418	1164	1353	1742	1460	1710	1458	1769	1298
80	906	832	1156	1053	1084	1029	1144	858	951	820	946	1060	1268	1010	935	807
85	795	536	437	527	601	497	436	623	845	568	369	514	623	478	357	573
90	5.36	5.04	5.59	5.52	5.93	6.00	5.89	6.12	5.75	5.01	4.49	4.23	4.55	4.45	4.72	4.62
95	3.45	3.76	4.34	3.92	4.19	3.67	4.30	3.89	3.24	3.76	4.29	3.87	3.55	3.93	4.31	3.73
100	4.66	5.23	5.24	3.82	4.13	4.08	5.52	5.11	4.15	4.72	5.40	4.30	3.66	4.46	5.79	5.12
105	7.20	7.88	7.40	4.66	4.87	5.30	7.96	7.92	6.43	6.94	6.94	4.94	4.30	5.20	7.55	7.62
110	9.91	10.4	9.10	6.04	6.51	6.74	10.0	10.5	8.81	8.58	7.83	5.89	5.36	6.05	8.82	9.92
115	11.7	12.2	10.6	7.00	8.95	7.95	11.8	13.0	10.5	10.4	9.16	6.20	6.73	6.78	9.83	11.8
120	13.4	13.3	12.2	9.00	13.7	8.96	13.6	14.6	12.1	11.5	10.1	7.85	7.97	7.82	10.8	12.7
125	15.4	15.1	12.5	12.7	31.4	13.6	14.0	16.2	13.3	12.4	10.1	10.2	13.6	10.7	11.0	13.7
130	16.5	15.7	12.9	15.7	35.6	16.0	14.4	16.8	15.0	12.2	11.1	12.3	24.8	13.0	12.6	14.1
135	16.1	14.9	12.6	21.5	42.0	20.2	14.4	15.6	15.3	12.4	11.0	15.7	23.8	16.2	12.8	14.7
140	16.2	14.8	12.3	22.9	39.7	22.3	13.6	15.7	15.7	13.3	10.7	17.5	31.4	17.5	11.9	15.6
145	16.0	13.1	13.3	25.4	41.4	24.1	12.0	14.3	15.9	13.6	11.0	17.3	20.9	18.0	13.7	15.8
150	15.8	12.8	15.9	25.5	37.7	26.3	14.3	14.4	15.9	14.2	13.6	18.3	26.5	20.7	17.5	15.5
155	14.4	13.0	17.9	22.4	28.8	23.0	16.4	15.1	15.5	15.7	13.8	17.9	18.2	17.6	19.5	15.1
160	14.3	13.1	17.6	21.8	26.7	21.6	16.2	15.2	14.6	15.5	13.0	16.6	18.5	19.0	18.3	16.3
165	14.8	13.2	17.5	18.2	19.4	18.7	16.2	14.7	16.1	14.9	12.7	15.5	16.4	17.5	17.4	16.4
170	16.5	14.9	19.0	20.9	20.8	21.4	18.3	15.5	18.0	17.8	15.1	18.9	21.1	21.5	21.2	20.8
175	17.8	16.5	19.4	20.8	22.8	20.9	19.8	16.8	19.1	19.1	16.6	19.1	21.5	23.3	21.1	20.8
180	16.9	16.0	17.9	19.5	22.6	19.8	19.9	16.9	17.4	17.2	15.9	18.1	19.6	21.9	19.3	19.6

2.2 Electrical, Photometric and Chromaticity Measurements

(Refer to Work Instruction QD25)

Test date	2016-08-10	Test Ambient:	25.2 ºC
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	71544		

Electrical Measurement :

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE160825-C2	100.0	60	2.225	222.1	0.9982	6.18
	120.0	60	1.790	213.5	0.9939	7.29
	277.0	60	0.7953	206.9	0.9392	8.04
				DLC Pass Criteria	>= 0.9(-3%)	<= 20(+5)

Chromaticity Measurement - Sphere-Spectroradiometer Method :

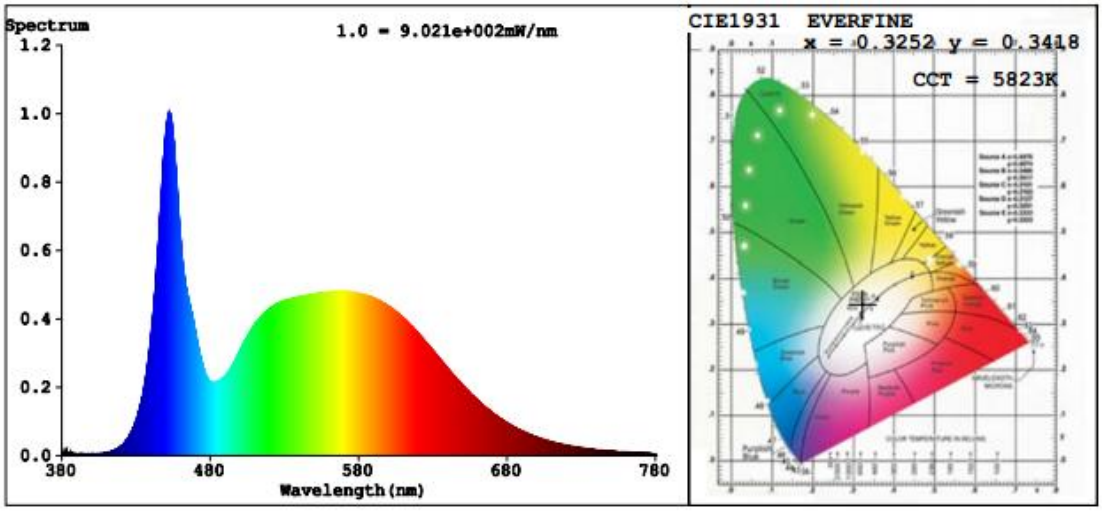
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
CCT (K)	5823
Duv	0.0037
Chromaticity (x, y)	x=0.3252 y=0.3418
Chromaticity (u', v')	u'=0.2017 v'=0.4769
Color Rendering Index (CRI)	83.0
R9	9

Special Color Rendering Indices			
R1	81	R9	9
R2	88	R10	70
R3	91	R11	81
R4	82	R12	56
R5	82	R13	83
R6	82	R14	95
R7	88	R15	77
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)	27489	27183	>=1000 (-10%)	
Luminous Efficacy (lm/W)	128.75	131.38	Standard: >= 100(-3%)	Premium: >= 120(-3%)

Spectral Power Distribution & Chromaticity Diagram



BUG Rating: B4-U3-G3

IESNA Luminaire Flux Distribution Table:

Zone	Lumens	Luminaire %
FL - Front-Low(0-30)	3442.6	12.9
FM - Front-Medium(30-60)	7129.1	26.7
FH - Front-High(60-80)	2666.8	10.0
FVH - Front-Very High(80-90)	284.48	1.1
Total Forward Light	13563	50.7

BL - Back-Low(0-30)	3360.2	12.6
BM - Back-Medium(30-60)	7019.3	26.3
BH - Back-High(60-80)	2484.1	9.3
BVH - Back-Very High(80-90)	270.87	1.0
Total Back Light	13168	49.3

UL - Uplight-Low(90-100)	4.5814	0.0
UH - Uplight-High(100-180)	68.875	0.3
Total Up Light	73.456	0.3

BUG(Back,Up,Glare) Rating	B4-U3-G3

Zone	Downward Lumens	Upward Lumens	Total Lumens
House Side	13134	33.661	13168
Street Side	13523	39.795	13563

2.3 Electrical, Photometric and Chromaticity Measurements

(Refer to Work Instruction QD25)

Test date	2016-08-10	Test Ambient:	25.2 ℃
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	TLFLF2204YKZZ		

Electrical Measurement :

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
GZE160825-C3	100.0	60	2.318	231.4	0.9981	5.18
	120.0	60	1.875	223.7	0.9942	6.71
	277.0	60	0.8385	219.6	0.9455	7.82
				DLC Pass Criteria	>= 0.9(-3%)	<= 20(+5)

Chromaticity Measurement - Sphere-Spectroradiometer Method :

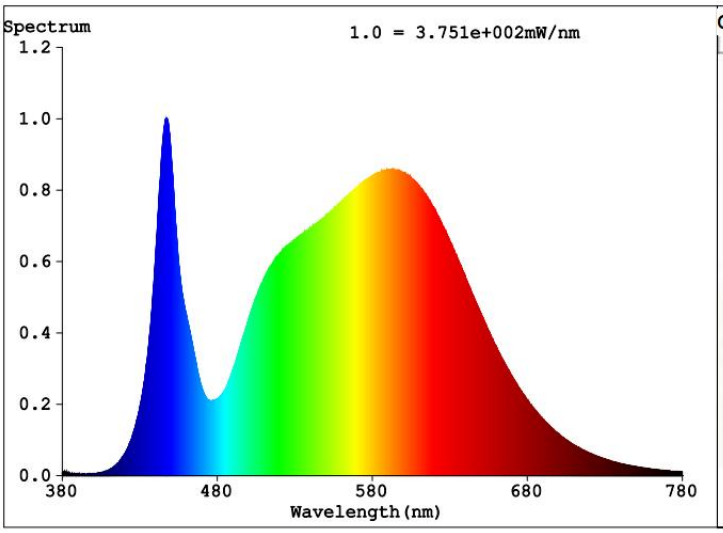
Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
CCT (K)	4073
Duv	0.0030
Chromaticity (x, y)	x=0.3792 y=0.3825
Chromaticity (u', v')	u'=0.2220 v'=0.5039
Color Rendering Index (CRI)	82.0
R9	8

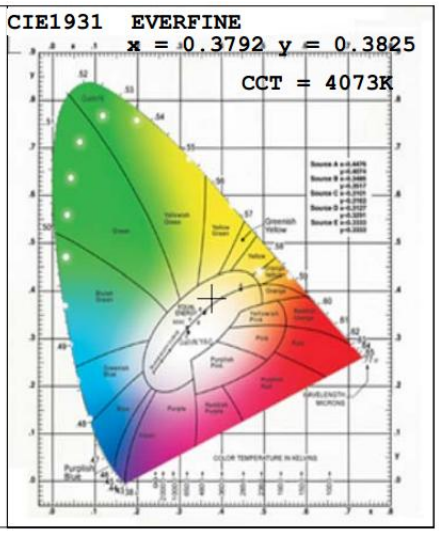
Special Color Rendering Indices			
R1	80	R9	8
R2	86	R10	68
R3	92	R11	82
R4	83	R12	61
R5	80	R13	81
R6	82	R14	96
R7	87	R15	74
R8	66	--	--

Photometric Measurement – Goniophotometer Method :

Parameter	Result		DLC V4.0 Pass Criteria	
Test Voltage (V)	120.0	277.0	--	
Frequency (Hz)	60	60		
Total Luminous (lm)	26219	25878	>=1000 (-10%)	
Luminous Efficacy (lm/W)	117.21	117.84	Standard: >= 100(-3%)	Premium: >= 120(-3%)
Zonal lumens in the 0-90 °zone (%)	99.7	--	>=85(-3)	
Beam Angle (°)	106.4	--	--	
Center Beam Candle Power (cd)	9191	--	--	

Spectral Power Distribution & Chromaticity Diagram

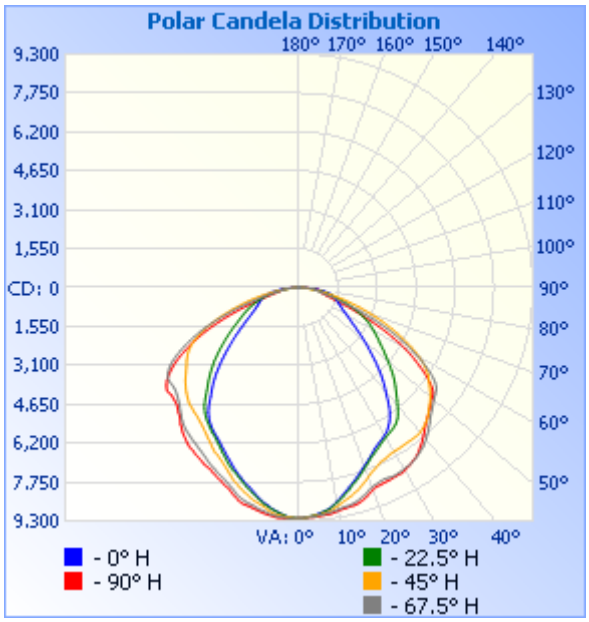


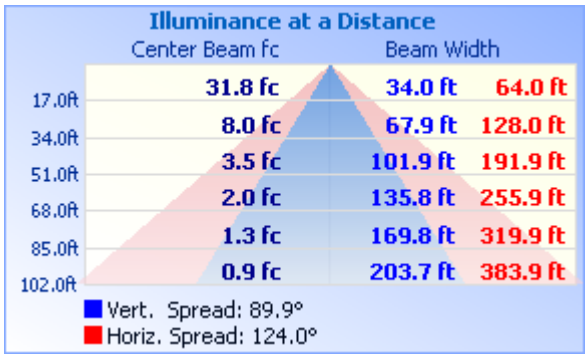


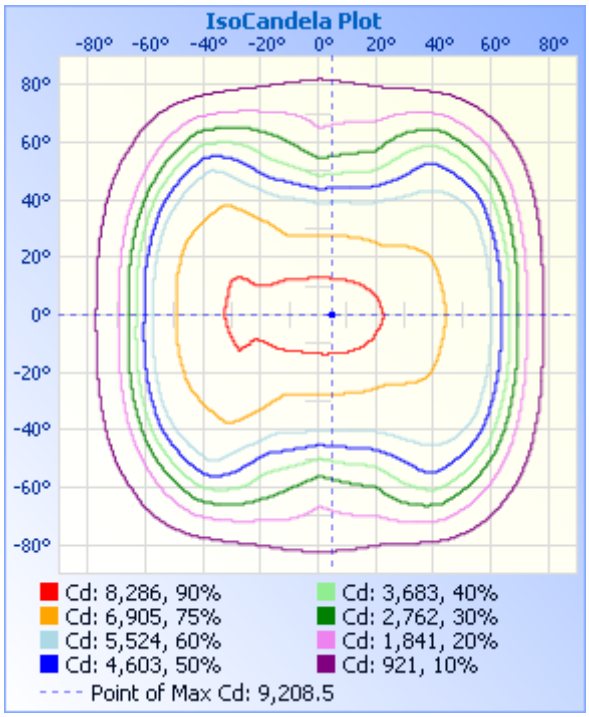
Zonal Lumen Tabulation

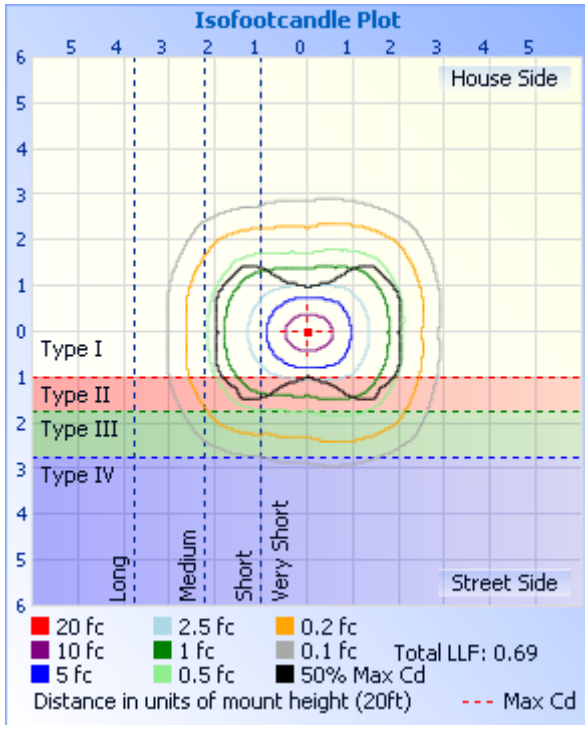
Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	6,786.6	25.9%
0-40	11,240.0	42.9%
0-60	20,557.6	78.4%
60-90	5,588.5	21.3%
70-100	2,181.1	8.3%
90-120	20.4	0.1%
0-90	26,146.1	99.7%
90-180	70.7	0.3%
0-180	26,216.9	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	859.0	3.3%	90-100	4.7	0%
10-20	2,381.6	9.1%	100-110	6.6	0%
20-30	3,546.0	13.5%	110-120	9.1	0%
30-40	4,453.4	17.0%	120-130	12.0	0%
40-50	4,763.3	18.2%	130-140	13.0	0%
50-60	4,554.3	17.4%	140-150	10.7	0%
60-70	3,412.1	13.0%	150-160	8.0	0%
70-80	1,672.8	6.4%	160-170	4.8	0%
80-90	503.6	1.9%	170-180	1.9	0%


Polar Candela Distribution
180° 170° 160° 150° 140°
9,300
7,750
6,200
4,650
3,100
1,550
CD: 0
1,550
3,100
4,650
6,200
7,750
9,300
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
34.0ft
51.0ft
68.0ft
85.0ft
102.0ft
31.8 fc 34.0 ft 64.0 ft
8.0 fc 67.9 ft 128.0 ft
3.5 fc 101.9 ft 191.9 ft
2.0 fc 135.8 ft 255.9 ft
1.3 fc 169.8 ft 319.9 ft
0.9 fc 203.7 ft 383.9 ft
Vert. Spread: 89.9°
Horiz. Spread: 124.0°


IsoCandela Plot
-80° -60° -40° -20° 0° 20° 40° 60° 80°
80°
60°
40°
20°
0°
-20°
-40°
-60°
-80°
Cd: 8,286, 90%
Cd: 6,905, 75%
Cd: 5,524, 60%
Cd: 4,603, 50%
Cd: 3,683, 40%
Cd: 2,762, 30%
Cd: 1,841, 20%
Cd: 921, 10%
Point of Max Cd: 9,208.5


Isofootcandle Plot
5 4 3 2 1 0 1 2 3 4 5
House Side
Type I
Type II
Type III
Type IV
Long
Medium
Short
Very Short
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	9191	9191	9191	9191	9191	9191	9191	9191	9191	9191	9191	9191	9191	9191	9191	9191
5	9206	9171	9098	9059	9042	9068	9105	9099	9142	9114	9059	9014	9002	9024	9109	9161
10	9053	8958	8825	8688	8653	8679	8826	8976	9030	8943	8751	8624	8604	8651	8788	8978
15	8882	8718	8459	8176	8089	8150	8473	8823	8921	8753	8398	8142	8110	8186	8426	8730
20	8443	8315	7953	7675	7559	7636	8030	8457	8576	8366	8013	7684	7622	7727	7964	8294
25	8123	8010	7489	7232	7092	7198	7668	8361	8468	8246	7689	7204	7109	7229	7488	7964
30	7891	7735	7103	6874	6788	6886	7538	8338	8409	8290	7545	6815	6714	6779	7089	7652
35	7674	7439	6764	6505	6289	6671	7517	8193	8163	8137	7503	6498	6267	6412	6716	7396
40	7278	7161	6538	5739	5348	6084	7502	7867	7696	7827	7411	5942	5427	5814	6481	7145
45	6836	6744	6266	4919	4396	5387	7240	7372	7238	7355	7109	5283	4545	5057	6265	6715
50	6640	6367	5801	4054	3468	4647	6807	6989	6880	6901	6641	4573	3626	4318	5905	6411
55	6421	6340	5356	3278	2721	3969	6284	6612	6219	6623	6156	3889	2842	3564	5475	6354
60	5467	5785	4913	2649	2190	3429	5511	5426	4871	5558	5503	3322	2260	2900	5087	5791
65	4086	4578	4141	2196	1851	2888	4311	3872	3179	4051	4351	2805	1890	2389	4342	4586
70	2447	3085	3075	1785	1627	2206	3015	2224	1708	2408	3043	2175	1676	1944	3257	3079
75	1247	1635	1978	1375	1436	1528	1810	1177	1056	1252	1851	1533	1511	1456	2115	1633
80	779	802	1065	950	1145	964	906	767	859	754	947	935	1160	934	1138	805
85	589	436	383	479	661	442	342	569	715	509	340	472	687	467	412	452
90	5.01	4.85	5.43	5.53	5.99	5.53	5.62	5.79	5.40	5.30	4.89	4.73	5.39	5.08	5.36	4.95
95	3.03	3.39	4.67	4.19	3.85	3.88	4.95	4.59	3.78	3.97	4.33	3.71	3.54	4.11	3.89	3.67
100	3.91	4.85	5.68	4.58	3.85	4.03	5.95	5.84	4.75	4.86	5.11	3.69	3.59	4.53	5.38	4.50
105	6.30	7.34	7.87	5.36	4.46	4.94	7.93	8.35	6.79	6.95	6.37	4.28	4.06	5.15	7.16	6.65
110	9.23	10.1	9.74	6.71	6.07	6.40	9.65	10.8	9.34	8.41	7.05	5.21	5.10	6.14	8.41	9.11
115	11.2	11.9	11.5	7.60	8.14	7.18	11.1	12.5	10.5	9.96	8.19	5.36	5.95	6.45	9.97	11.0
120	13.2	13.3	12.9	10.5	11.9	9.28	12.2	13.7	11.6	10.9	9.01	7.68	7.20	8.07	11.1	12.3
125	15.2	15.4	13.4	13.8	29.1	13.0	12.5	15.4	12.4	11.3	8.97	10.1	12.7	11.5	11.5	13.7
130	16.3	16.0	13.3	16.4	32.0	15.1	13.0	15.5	13.6	11.4	9.91	12.5	22.8	13.6	13.6	14.4
135	16.4	15.3	12.9	21.1	36.2	18.7	12.9	14.4	14.1	11.4	10.4	16.2	26.2	16.3	13.6	15.0
140	16.4	14.9	12.6	20.6	36.1	19.2	11.6	14.4	14.4	12.3	9.99	16.7	27.1	17.2	12.6	16.2
145	16.4	13.7	13.0	22.4	33.8	20.8	10.7	13.9	15.1	12.7	10.4	16.6	18.6	17.6	14.8	16.3
150	16.2	13.2	16.0	22.1	28.0	22.3	13.8	14.2	15.4	13.6	12.5	16.8	22.3	19.5	19.3	15.9
155	15.1	13.1	17.3	21.1	26.0	21.2	15.3	15.3	15.2	15.1	13.1	16.6	16.3	17.8	19.5	15.1
160	14.5	13.1	16.9	20.0	23.3	19.8	15.6	15.5	15.4	15.4	13.1	16.0	17.2	17.5	18.0	16.6
165	15.6	13.2	17.3	16.8	18.4	17.7	15.6	15.3	16.3	15.5	13.0	15.8	15.5	16.6	17.8	18.6
170	17.1	15.3	19.5	20.6	19.5	20.6	18.5	16.4	18.4	17.9	15.0	19.4	22.1	21.7	22.2	21.3
175	18.3	16.3	20.2	21.2	22.6	21.0	20.0	17.5	18.8	18.8	16.2	19.8	22.1	23.9	21.7	21.2
180	17.6	16.0	18.8	20.2	22.5	19.2	19.8	17.4	18.0	17.8	15.9	19.0	20.1	22.3	19.6	19.8

BUG Rating: B4-U3-G3

IESNA Luminaire Flux Distribution Table:

Zone	Lumens	Luminaire %
FL - Front-Low(0-30)	3392.2	12.9
FM - Front-Medium(30-60)	6870.8	26.2
FH - Front-High(60-80)	2546	9.7
FVH - Front-Very High(80-90)	247.71	0.9
Total Forward Light	13095	49.9
BL - Back-Low(0-30)	3394.7	12.9
BM - Back-Medium(30-60)	6902.4	26.3
BH - Back-High(60-80)	2538.1	9.7
BVH - Back-Very High(80-90)	255.84	1.0
Total Back Light	13124	50.1
UL - Uplight-Low(90-100)	4.6537	0.0
UH - Uplight-High(100-180)	66.102	0.3
Total Up Light	70.755	0.3

BUG(Back,Up,Glare) Rating	B4-U3-G3

Zone	Downward Lumens	Upward Lumens	Total Lumens
House Side	13091	32.581	13124
Street Side	13057	38.174	13095

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 ********