

# Photometric Test Report

## Relevant Standards

- ☒ IES LM-79-2008
- ☒ ANSI C82.77:2017

## Prepared For

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## Project Number

**DLF2301106**

## Report Number

**DLF2301106-12a**

## Test Date

**2023/1/11**

## Issue Date

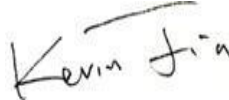
**2023/1/16**

## Prepared By



Wangzun Zhu

## Approved By



Kevin Jia

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## 1.0 Test Summary

DLC Technical Requirements v5.1

Outdoor - Pole/Arm-Mounted Area and Roadway Luminaires				
Requirement Category	Test Method	Requirements		Test value
Luminaire Output (lm) (Goniophotometer - Section 4.2)	IES LM-79-2008	1000		20604
Minimum Luminaire Efficacy (lm/W) (Goniophotometer - Section 4.2)	IES LM-79-2008	Standard 105	Premium 120	137.3
Power (Input Wattage) (W) (Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		150.1
Total Harmonic Distortion (A%) (THD & PF - section 4.3)	ANSI C82.77:2014	20.00%	120V	3.32%
		20.00%	277V	8.00%
Power Factor (THD & PF - section 4.3)	ANSI C82.77:2014	0.9	120V	0.999
		0.9	277V	0.960
Allowable CCTs* (K) (Integrating Sphere - Section 4.1)	IES LM-79-2008	7 step	3045±175	2922
		4 step	3045±100	
Minimum CRI (Integrating Sphere - Section 4.1)	IES LM-79-2008 CIE 13.3-1995	≥70		81
Minimum R9 (Integrating Sphere - Section 4.1)	IES LM-79-2008 CIE 13.3-1995	≥-40		0
Minimum Rf (Integrating Sphere - Section 4.1)	ANSI/IES TM-30-18	≥70		83
Minimum Rg (Integrating Sphere - Section 4.1)	ANSI/IES TM-30-18	≥89		98
Minimum IES Rcs,h1 (Integrating Sphere - Section 4.1)	ANSI/IES TM-30-18	-18%≤IES Rcs,h1≤+23%		-12%
Zonal Lumen Requirement (0°-90°) (Goniophotometer - Section 4.2)	IES LM-79-2008	100%		100.00%
Zonal Lumen Requirement (80°-90°) (Goniophotometer - Section 4.2)	IES LM-79-2008	≤10%		0.30%
Input Voltage (V)				
(Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		120
(Goniophotometer - Section 4.2)		Non-Worst Case		277
Input Current (A)				
(Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		1.253
(Goniophotometer - Section 4.2)		Non-Worst Case		0.553
Power (Input Wattage - W)				
(Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		150.1
(Goniophotometer - Section 4.2)		Non-Worst Case		147.1

## 2.0 Test List

Test Item	Test	Test Date	Model Number	Sample No.
1	Integrating Sphere Test	2023/1/11	ALEDM5TY	L1
2	Goniophotometer Test	2023/1/11	ALEDM5TY	L1
3	THD and PF Test	2023/1/11	ALEDM5TY	L1

### Remark(If any)

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- 2、 The results reported herein have been performed in accordance with the laboratory's terms of accreditation. This report shall not be reproduced except in full without the written approval of the Laboratory. The results in this report apply to the test sample(s) mentioned above at the time of the testing period only and are not to be used to indicate applicability to other similar products. This report does not imply that the product(s) has met the criteria for certification.

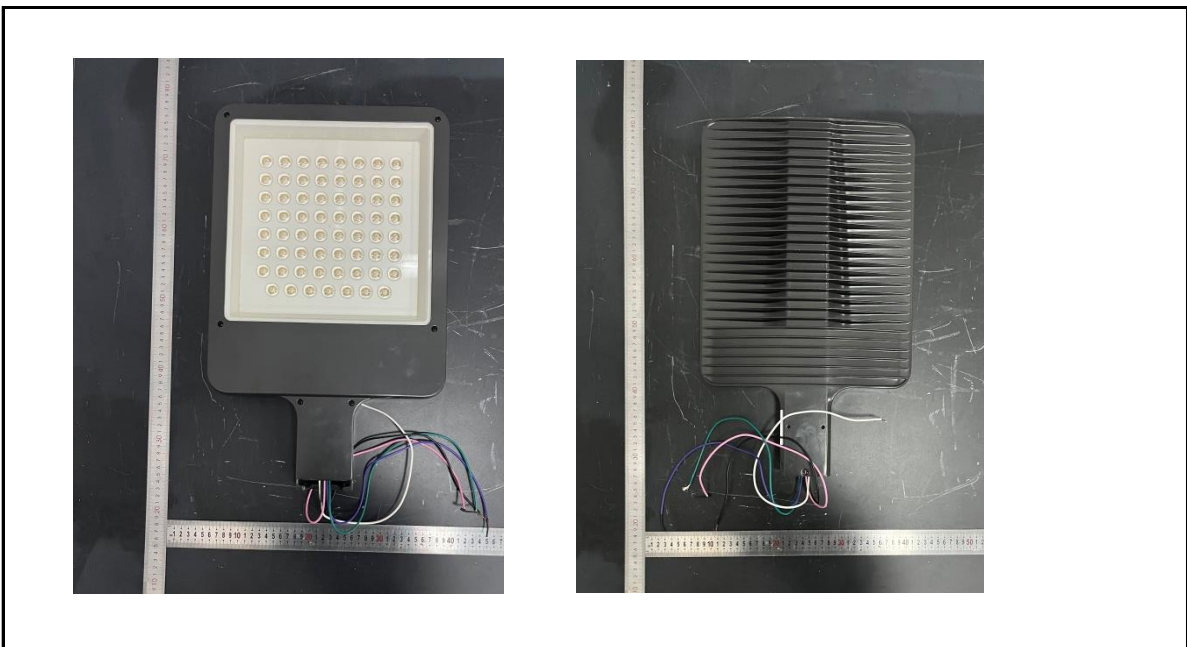
## 3.0 Production Description

**Luminaire Description:** ALEDM5TY

**Description:** 150W @ 3000K

**Electrical Specification:** 120V-277V,50/60HZ

### Photos of Luminaire Characteristics



## 4.0 LM-79 Measurement and Test Results

### 4.1 Integrating Sphere Test

Model No.	ALEDM5TY	Sample ID.	L1
Operate time (Min.)	90	Stabilization time (Min.)	45
Temperature (°C)	25.3	Humidity (%RH)	56.0

#### Test Method

The samples were tested according to the IES LM-79-2008.

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 voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within  $\pm 0.2$  percent under load.

The sample was measured using  $4\pi$  geometry and operated at rated voltage and was stabilized before measurement. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at 1 nm intervals over the range of 380 to 780 nm.

#### Test Result

Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
120.00	60	1.252	150.1	0.999
277.06	60	0.552	146.7	0.960

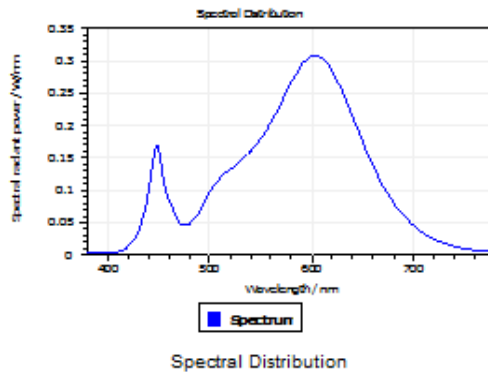
#### Test Result

CCT (K)	CRI	R9	Duv
2922	81	0	0.0021

Rf	Rg	IES Rcs,h1
83	98	-12%

## 4.1 Integrating Sphere Test

### Results



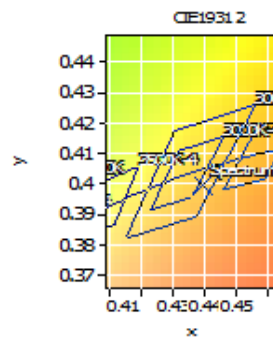
#### Spectral values

DominantWavelength 583.92 nm  
Purity 0.519  
PeakWavelength 603.28 nm  
Radiant Power 44.82 W  
Width50%:

#### Color Coordinates

Correlated Color Temperat 2922 K  
x: 0.4394 u: 0.2541 u': 0.2541  
y: 0.3997 v: 0.3467 v': 0.5200

CRI01	79.4	CRI09	0.4
CRI02	90.4	CRI10	78.8
CRI03	95.0	CRI11	78.1
CRI04	78.4	CRI12	74.9
CRI05	79.6	CRI13	82.0
CRI06	88.5	CRI14	97.8
CRI07	80.6	CRI15	71.5
CRI08	55.2	CRI16	69.3
ResultsCRI	80.9		



PlankDistance 2.1E-003

## 4.1 Integrating Sphere Test

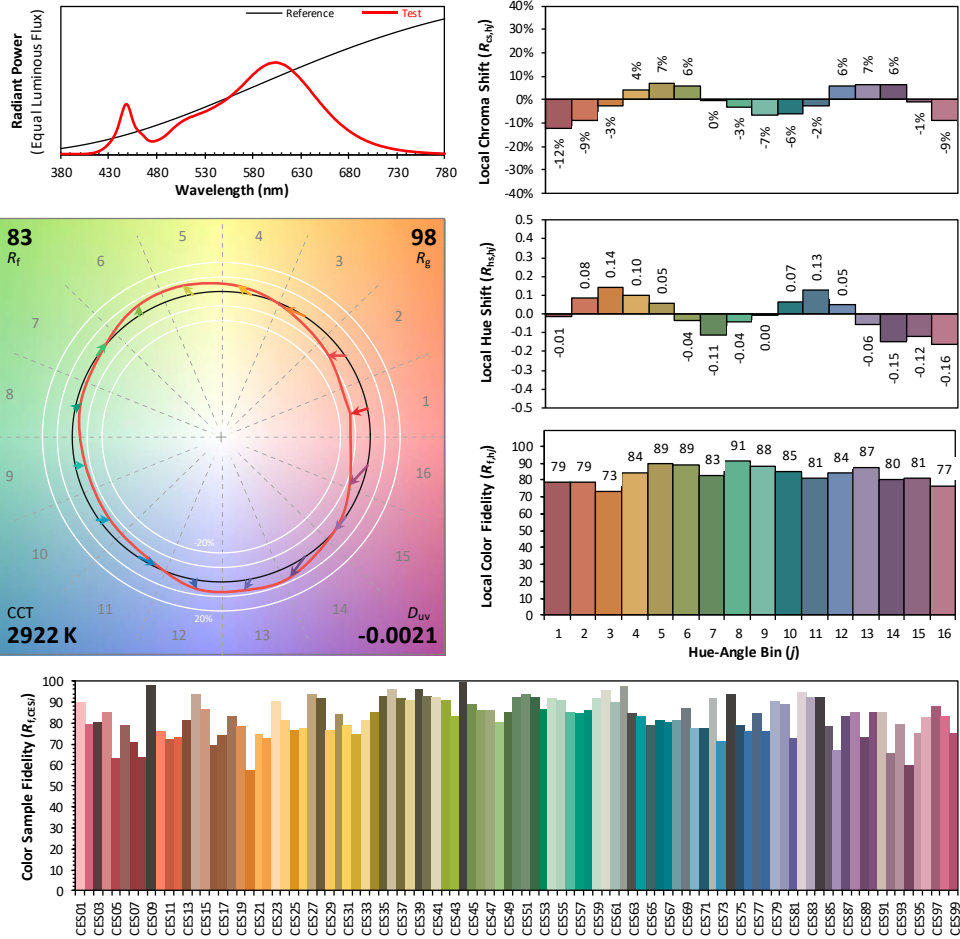
### IES TM-30-18 Color Rendition Report

Source: DLF2301106-12a

Manufacturer: RAB Lighting Inc.

Date: 2023/1/11

Model: ALEDM5TY



**Notes:** This is a recommended method for displaying ANSI/IES TM-30-18 information.

$x$  0.4394

$y$  0.3997

$u'$  0.2541

$v'$  0.5200

CIE 13.3-1995  
(CRI)

$R_a$  81

$R_9$  2

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.0

## 4.0 LM-79 Measurement and Test Results

### 4.2 Goniophotometer Test

Model No.	ALEDM5TY	Sample ID.	L1
Opreate time (Min.)	90	Stabilization time (Min.)	45
Temperature (°C)	25.3	Humidity (%RH)	54.0

#### Test Method

The samples were tested according to the IES LM-79-2008.

Photometric paramters were measured using a type C 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 voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within  $\pm 0.2$  percent under load.

The samples were operated at rated voltage and was stabilized before measurement. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at  $0.5^{\circ}$  vertical intervals and  $10^{\circ}$  horizontal intervals.

#### Test Conditions

Condition	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
WORST CASE	119.94	60	1.253	150.1	0.999
NON-WROST CASE	277.01	60	0.553	147.1	0.961

#### Test Result

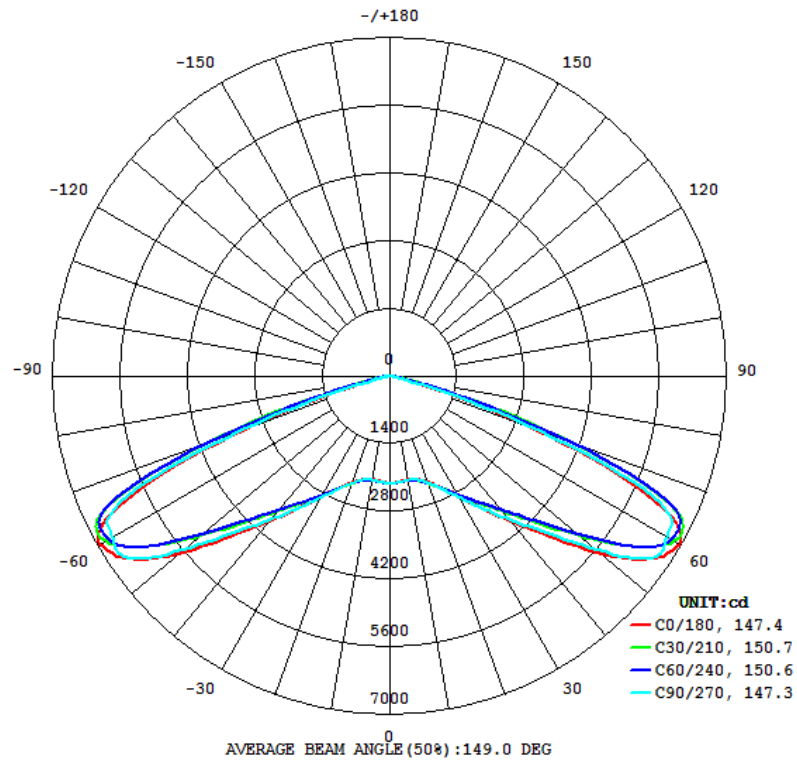
Flux (lm)	Field Angle(10%)		Beam Angle(50%)		Luminous Efficacy (lm/W)
	C0-180	C90-270	C0-180	C90-270	
20604	155.9	154.9	147.4	147.3	137.3

Zonal Lumen Requirement ( $0^{\circ}$ - $90^{\circ}$ )	Zonal Lumen Requirement ( $80^{\circ}$ - $90^{\circ}$ )	BUG rating
100.00%	0.30%	B4-U0-G2

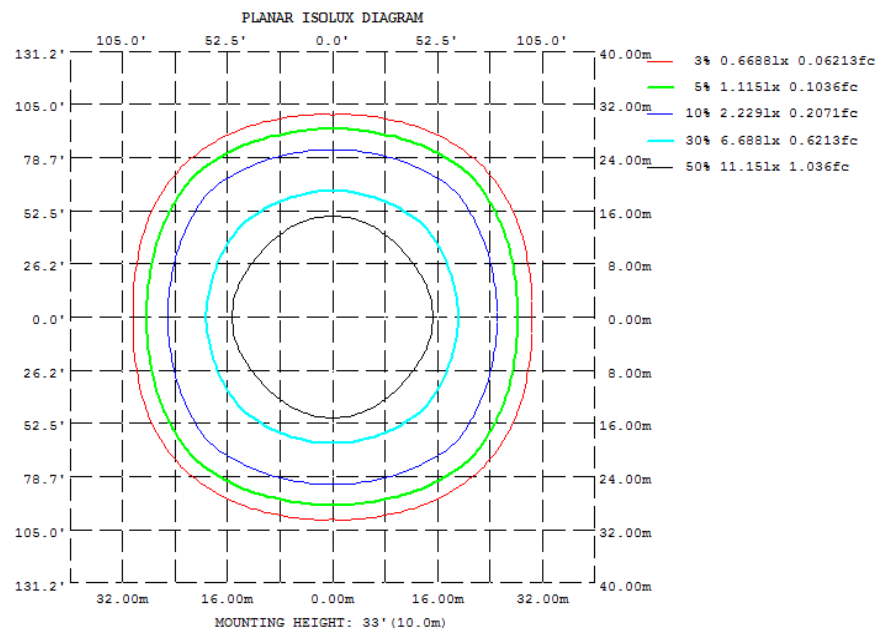


## 4.2 Goniophotometer Test

### Light Distrubtion Curve



### Isolux Plot





## 4.2 Goniophotometer Test

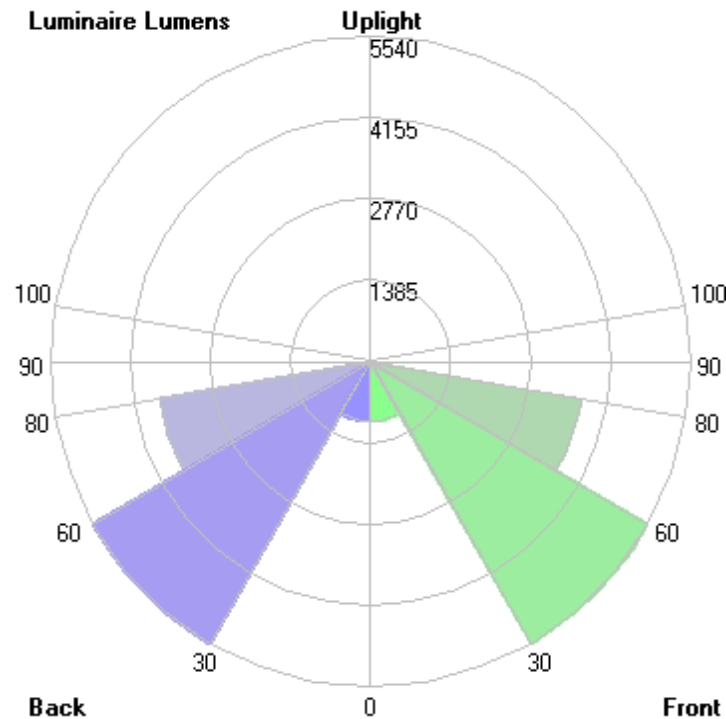
### Zonal Lumen Summary

γ	C0	C45	C90	C135	C180	C225	C270	C315
10	2181	2215	2191	2215	2181	2215	2191	2215
20	2342	2380	2366	2380	2342	2380	2366	2380
30	2869	2796	2906	2796	2869	2796	2906	2796
40	3901	3533	3878	3533	3901	3533	3878	3533
50	5700	4917	5558	4917	5700	4917	5558	4917
60	6945	6990	6652	6990	6945	6990	6652	6990
70	3244	4757	3312	4757	3244	4757	3312	4757
80	124.8	226.3	112.8	226.3	124.8	226.3	112.8	226.3
90	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0
DEG	LUMINOUS INTENSITY:cd							

	Zonal (lm)		Total (lm)	Percent
0-10	210.70	0 - 10	210.70	1.02%
10-20	641.64	0 - 20	852.34	4.14%
20-30	1200.81	0 - 30	2053.15	9.96%
30-40	2055.77	0 - 40	4108.92	19.94%
40-50	3439.63	0 - 50	7548.55	36.64%
50-60	5585.01	0 - 60	13133.56	63.74%
60-70	5941.46	0 - 70	19075.02	92.58%
70-80	1467.85	0 - 80	20542.87	99.70%
80-90	61.04	0 - 90	20603.91	100.00%
90-100	0.00	0 - 100	20603.91	100.00%
100-110	0.00	0 - 110	20603.91	100.00%
110-120	0.00	0 - 120	20603.91	100.00%
120-130	0.00	0 - 130	20603.91	100.00%
130-140	0.00	0 - 140	20603.91	100.00%
140-150	0.00	0 - 150	20603.91	100.00%
150-160	0.00	0 - 160	20603.91	100.00%
160-170	0.00	0 - 170	20603.91	100.00%
170-180	0.00	0 - 180	20603.91	100.00%

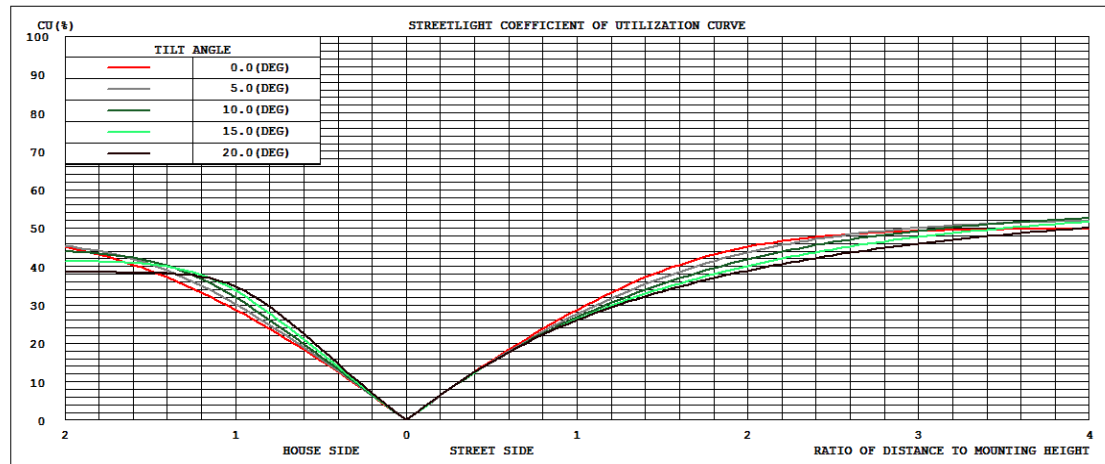
## 4.2 Goniophotometer Test

LCS/BUG

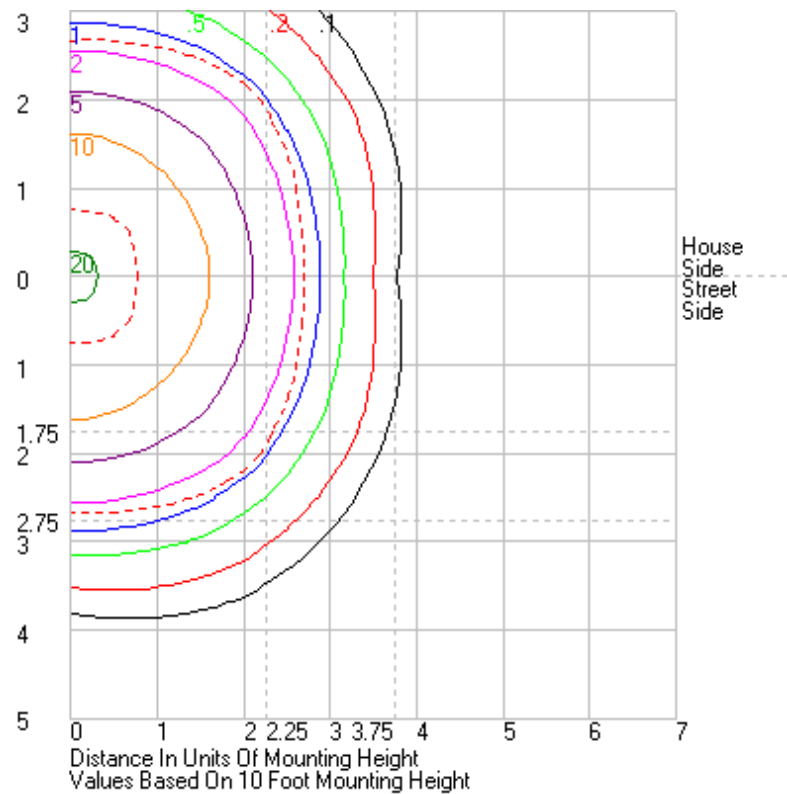


	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	1026.6	N.A.	5.0
FM - Front-Medium (30-60)	5540.2	N.A.	26.9
FH - Front-High (60-80)	3704.7	N.A.	18.0
FVH - Front-Very High (80-90)	30.5	N.A.	0.1
BL - Back-Low (0-30)	1026.6	N.A.	5.0
BM - Back-Medium (30-60)	5540.2	N.A.	26.9
BH - Back-High (60-80)	3704.7	N.A.	18.0
BVH - Back-Very High (80-90)	30.5	N.A.	0.1
UL - Uplight-Low (90-100)	0.0	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	20604.0	N.A.	100.0
BUG Rating	B4-U0-G2		

## Coefficients of Utilization



## Isolines



## 4.2 Goniophotometer Test

	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300	315	330	345	360
0	2229.22	2229.22	2229.22	2229.22	2229.22	2229.22	2229.22	2229.22	2229.22	2229.22	2229.22	2229.22	2229.22	2229.22	2229.22	2229.22	2229.22	2229.22	2229.22	2229.22	2229.22	2229.22	2229.22	2229.22	2229.22
1	2225.39	2223.93	2223.94	2223.78	2223.17	2222.6	2222.54	2222.6	2223.17	2223.78	2223.94	2223.93	2225.39	2223.93	2223.94	2223.78	2223.17	2222.6	2222.54	2222.6	2223.17	2223.78	2223.94	2223.93	2225.39
2	2223.52	2222.24	2223.18	2223.47	2223.52	2221.91	2220.73	2221.91	2223.52	2223.47	2223.18	2222.24	2223.52	2223.47	2223.18	2223.52	2221.91	2220.73	2221.91	2223.52	2223.47	2223.18	2222.24	2223.52	2223.52
3	2219.43	2218.58	2219.71	2220.78	2222.53	2221.36	2219.76	2221.36	2222.53	2220.78	2219.71	2218.58	2219.43	2218.58	2219.71	2220.78	2222.53	2221.36	2219.76	2221.36	2222.53	2220.78	2219.71	2218.58	2219.43
4	2210.37	2210.14	2215.52	2218.84	2220.57	2220.76	2219.82	2220.76	2220.57	2218.84	2215.52	2210.14	2210.37	2210.14	2215.52	2218.84	2220.57	2220.76	2219.82	2220.76	2220.57	2218.84	2215.52	2210.14	2210.37
5	2202.58	2203.45	2208.9	2215.98	2218.46	2218.46	2216.38	2218.25	2218.46	2215.98	2208.9	2203.45	2202.58	2203.45	2208.9	2215.98	2218.46	2218.25	2216.38	2218.25	2216.38	2215.98	2208.9	2203.45	2202.58
6	2199.15	2201.48	2206.39	2212.74	2214.97	2213.83	2210.01	2213.83	2214.97	2212.74	2206.39	2201.48	2199.15	2201.48	2206.39	2212.74	2214.97	2213.83	2210.01	2213.83	2214.97	2212.74	2206.39	2201.48	2199.15
7	2191.32	2195.55	2207.07	2211.11	2211.39	2209.2	2203.05	2209.2	2211.39	2211.11	2207.07	2195.55	2191.32	2195.55	2207.07	2211.11	2211.39	2209.2	2203.05	2209.2	2211.39	2211.11	2207.07	2195.55	2191.32
8	2184.21	2190.38	2205.04	2212.84	2208.79	2203.59	2196.63	2203.59	2208.79	2212.84	2205.04	2190.38	2184.21	2190.38	2205.04	2212.84	2208.79	2203.59	2196.63	2203.59	2208.79	2212.84	2205.04	2190.38	2184.21
9	2181.67	2187.21	2203.27	2214.55	2206.21	2199.22	2191.47	2199.22	2206.21	2214.55	2203.27	2187.21	2181.67	2187.21	2203.27	2214.55	2206.21	2199.22	2191.47	2199.22	2206.21	2214.55	2203.27	2187.21	2181.67
10	2180.93	2187.77	2203.26	2214.93	2205.49	2198.24	2191	2198.24	2205.49	2214.93	2203.26	2187.77	2180.93	2187.77	2203.26	2214.93	2205.49	2198.24	2191	2198.24	2205.49	2214.93	2203.26	2187.77	2180.93
11	2181.19	2190.07	2207.08	2216.58	2208.61	2198.87	2190.63	2198.87	2208.61	2216.58	2207.08	2190.07	2181.19	2190.07	2207.08	2216.58	2208.61	2198.87	2190.63	2198.87	2208.61	2216.58	2207.08	2190.07	2181.19
12	2183.26	2194.24	2214.67	2221.42	2213.9	2201.34	2193.52	2201.34	2213.9	2221.42	2214.67	2194.24	2183.26	2194.24	2214.67	2221.42	2213.9	2201.34	2193.52	2201.34	2213.9	2221.42	2214.67	2194.24	2183.26
13	2189.05	2201.77	2223.92	2229.78	2221.41	2208.71	2201.24	2208.71	2221.41	2229.78	2223.92	2201.77	2189.05	2201.77	2223.92	2229.78	2221.41	2208.71	2201.24	2208.71	2221.41	2229.78	2223.92	2201.77	2189.05
14	2201.01	2213.3	2235.16	2241.23	2232.7	2219.83	2211.94	2219.83	2232.7	2241.23	2235.16	2213.3	2201.01	2213.3	2235.16	2241.23	2232.7	2219.83	2211.94	2219.83	2232.7	2241.23	2235.16	2213.3	2201.01
15	2216.97	2229.05	2250.58	2255.6	2246.07	2233.25	2226.75	2233.25	2246.07	2255.6	2250.58	2229.05	2216.97	2229.05	2250.58	2255.6	2246.07	2233.25	2226.75	2233.25	2246.07	2255.6	2250.58	2229.05	2216.97
16	2236.53	2247.81	2270.12	2273.6	2262.84	2251.3	2246.79	2251.3	2262.84	2273.6	2270.12	2247.81	2236.53	2247.81	2270.12	2273.6	2262.84	2251.3	2246.79	2251.3	2262.84	2273.6	2270.12	2247.81	2236.53
17	2261.02	2269.71	2292.93	2296.13	2283.41	2273.46	2271.09	2273.46	2283.41	2296.13	2292.93	2269.71	2261.02	2269.71	2292.93	2296.13	2283.41	2273.46	2271.09	2273.46	2283.41	2296.13	2292.93	2269.71	2261.02
18	2285.49	2294.98	2319.43	2322.22	2308.49	2299.28	2299.12	2299.28	2308.49	2322.22	2319.43	2294.98	2285.49	2294.98	2319.43	2322.22	2308.49	2299.28	2299.12	2299.28	2308.49	2322.22	2319.43	2294.98	2285.49
19	2312.86	2321.93	2348.75	2349.89	2336.36	2328.03	2330.92	2328.03	2336.36	2349.89	2348.75	2321.93	2312.86	2321.93	2348.75	2349.89	2336.36	2328.03	2330.92	2328.03	2336.36	2349.89	2348.75	2321.93	2312.86
20	2342.12	2351.49	2380.04	2380.05	2367.51	2361.34	2366.23	2361.34	2367.51	2380.05	2380.04	2351.49	2342.12	2351.49	2380.04	2380.05	2367.51	2361.34	2366.23	2361.34	2367.51	2380.05	2380.04	2351.49	2342.12
21	2375.74	2383.11	2412.45	2412.67	2401.87	2397.26	2401.75	2397.26	2401.87	2412.67	2412.45	2383.11	2375.74	2383.11	2412.45	2412.67	2401.87	2397.26	2401.75	2397.26	2401.87	2412.67	2412.45	2383.11	2375.74
22	2414.92	2417.78	2448.1	2447.18	2440.39	2433.67	2439.7	2433.67	2440.39	2447.18	2448.1	2417.78	2414.92	2417.78	2448.1	2447.18	2440.39	2433.67	2439.7	2433.67	2440.39	2447.18	2448.1	2417.78	2414.92
23	2458.14	2458.41	2485.02	2483.03	2480.86	2474.7	2482.53	2474.7	2480.86	2483.03	2485.02	2458.41	2458.14	2458.41	2485.02	2483.03	2480.86	2474.7	2482.53	2474.7	2480.86	2483.03	2485.02	2458.41	2458.14
24	2503.84	2503.15	2523.65	2521.32	2523.37	2520.65	2530.76	2520.65	2523.37	2521.32	2523.65	2503.84	2503.15	2503.84	2523.65	2521.32	2523.37	2520.65	2530.76	2520.65	2523.37	2521.32	2523.65	2503.84	2503.15
25	2548.81	2553.4	2567.62	2561.61	2568.44	2571.79	2582.05	2571.79	2568.44	2561.61	2567.62	2553.4	2548.81	2553.4	2567.62	2561.61	2568.44	2571.79	2582.05	2571.79	2568.44	2561.61	2567.62	2553.4	2548.81
26	2599.82	2604.62	2613.57	2604.04	2615.39	2625.4	2638.1	2625.4	2615.39	2604.04	2613.57	2604.62	2599.82	2604.62	2613.57	2604.04	2615.39	2625.4	2638.1	2625.4	2615.39	2604.04	2613.57	2604.62	2599.82
27	2656.43	2660.44	2665.37	2648.68	2667.01	2684.3	2697.95	2684.3	2667.01	2648.68	2665.37	2660.44	2656.43	2665.37	2660.44	2648.68	2667.01	2684.3	2697.95	2684.3	2667.01	2648.68	2665.37	2660.44	2656.43
28	2719.32	2723.09	2721.39	2695.56	2722.11	2746.29	2763.49	2746.29	2722.11	2695.56	2721.39	2723.09	2719.32	2723.09	2721.39	2695.56	2722.11	2746.29	2763.49	2746.29	2722.11	2695.56	2721.39	2723.09	2719.32
29	2790.55	2789.82	2778.16	2744.44	2779.08	2813.69	2832.14	2813.69	2779.08	2744.44	2778.16	2789.82	2790.55	2789.82	2778.16	2744.44	2779.08	2813.69	2832.14	2813.69	2779.08	2744.44	2778.16	2789.82	2790.55
30	2869.14	2863.9	2838.75	2796.1	2838.66	2883.65	2906.07	2883.65	2838.66	2796.1	2838.75	2863.9	2869.14	2863.9	2838.75	2796.1	2838.66	2883.65	2906.07	2883.65	2838.66	2796.1	2838.75	2863.9	2869.14
31	2953.08	2941.1	2901.74	2850.89	2900.16	2957.98	2981.77	2957.98	2900.16	2850.89	2901.74	2941.1	2953.08	2941.1	2901.74	2850.89	2900.16	2957.98	2981.77	2957.98	2900.16	2850.89	2901.74	2941.1	2953.08
32	3041.5	3024.26	2968.53	2910.92	2964.19	3034.79	3062.36	3034.79	2964.19	2910.92	2968.53	3024.26	3041.5	3024.26	2968.53	2910.92	2964.19	3034.79	3062.36	3034.79	2964.19	2910.92	2968.53	3024.26	3041.5
33	3133.25	3114.74	3039.89	2975.08	3031.66	3115.15	3146.22	3115.15	3031.66	2975.08	3039.89	3114.74	3133.25	3114.74	3039.89	2975.08	3031.66	3115.15	3146.22	3115.15	3031.66	2975.08	3039.89	3114.74	3133.25
34	3232.96	3208.15	3112.92	3043.46	3102.08	3199.96	3237.7	3199.96	3102.08	3043.46	3112.92	3208.15	3232.96	3208.15	3112.92	3043.46	3102.08	3199.96	3237.7	3199.96	3102.08	3043.46	3112.92	3208.15	3232.96
35	3337.89	3309.26	3192.07	3115.2	3175.88	3292.07	3332.33	3292.07	3175.88	3115.2	3192.07	3309.26	3337.89	3309.26	3192.07	3115.2	3175.88	3292.07	3332.33	3292.07	3175.88	3115.2	3192.07	3309.26	3337.89
36	3450.8	3412.93	3273.9	3189.33	3253.01	3388.01	3431.49	3388.01	3253.01	3189.33	3273.9	3412.93	3450.8	3412.93	3273.9	3189.33	3253.01	3388.01	3431.49	3388.01	3253.01	3189.33	3273.9	3412.93	3450.8
37	3566.71	3521.44	3360.25	3268.6	3333.79	3488.84	3535.32	3488.84	3333.79	3268.6	3360.25	3521.44	3566.71	3521.44	3360.25	3268.6	3333.79	3488.84	3535.32	3488.84	3333.79	3268.6	3360.25	3521.44	3566.71
38	3679.17	3635.82	3452.5	3351.76	3418.81	3593.29	3642.49	3593.29	3418.81	3351.76	3452.5	3635.82	3679.17												

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161	0	0	0	0	0	0	0	0	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	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	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	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
166	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
167	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
168	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
169	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
171	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
173	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
177	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
178	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
179	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0



## 4.0 LM-79 Measurement and Test Results

### 4.3 THD and PF Test

Model No.	ALEDM5TY	Sample ID.	L1
Temperature (°C)	25.3	Humidity (%RH)	56.0

#### Test Method

The samples were tested according to the ANSI C82.77:2002.

The total harmonic distortion shall be measured to the 40th order.

The ambient temperature condition was maintained at  $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$ . The sample measurements were made using a digital power meter and power supply. The sample was operated at rated voltage and was stabilized before measurement. The total harmonic distortion were calculated.

#### Test Results

Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD
120.00	60	1.252	150.1	0.999	3.32%
277.06	60	0.552	146.7	0.960	8.00%

## 5.0 Equipment Information

Test Equipment			
Equipment ID	Equipment Name	Last Calibration Date	Calibration Due Date
DLF107	Integrating Sphere System	2022/12/26	2023/12/25
DLF108	Auxiliary Lamp	2022/12/26	2023/12/25
DLF122	Measurement Standard Lamp Standard Lamp Type: 220 V, 0.4720 A, Tungsten, Omni-derectional	2022/12/26	2023/12/25
DLF116	AC Power Source	2022/12/26	2023/12/25
DLF113	Power Meter	2022/12/26	2023/12/25
DLF112	Temperature Recorder	2022/12/26	2023/12/25
DLF114	Temperature & Humidity Datalogger	2022/12/26	2023/12/25
DLF101	Goniophotometer	2022/12/26	2023/12/25
DLF125	Standard Lamp Standard Lamp Type: 76.58 V, 6.7875 A, Tungsten, Omni-derectional	2022/12/26	2023/12/25
DLF104	AC Power Source	2022/12/26	2023/12/25
DLF507	DC Power Source	2022/12/26	2023/12/25
DLF102	Power Meter	2022/12/26	2023/12/25
DLF111	Temperature & Humidity Datalogger	2022/12/26	2023/12/25
DLF119	Power Meter	2022/12/26	2023/12/25
DLF031	Temperature data logger	2022/12/26	2023/12/25
DLF022	Digital power meter	2022/12/26	2023/12/25
DLF003	Temperature & Humidity Datalogger	2022/12/26	2023/12/25

\*\*\*\*\* End of Test Report\*\*\*\*\*