

Photometric Test Report

Relevant Standards

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

Prepared For

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2021/12/1

Issue Date

2021/12/3

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		21343
Minimum Luminaire Efficacy (lm/W) (Goniophotometer - Section 4.2)	IES LM-79-2008	Standard 105	Premium 120	146.9
Power (Input Wattage) (W) (Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		145.3
Total Harmonic Distortion (A%) (THD & PF - section 4.3)	ANSI C82.77:2014	20.00%		6.28%
Power Factor (THD & PF - section 4.3)	ANSI C82.77:2014	0.9		0.959
Allowable CCTs* (K) (Integrating Sphere - Section 4.1)	IES LM-79-2008	7 step	3985±275	3943
		4 step	3985±154	
Minimum CRI (Integrating Sphere - Section 4.1)	IES LM-79-2008 CIE 13.3-1995	≥70		83
Minimum R9 (Integrating Sphere - Section 4.1)	IES LM-79-2008 CIE 13.3-1995	≥-40		7
Minimum Rf (Integrating Sphere - Section 4.1)	ANSI/IES TM-30-18	≥70		84
Minimum Rg (Integrating Sphere - Section 4.1)	ANSI/IES TM-30-18	≥89		95
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%		0.54%
Input Voltage (V) (Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		480
Input Current (A) (Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		0.317

2.0 Test List

Test Item	Test	Test Date	Model Number	Sample No.
1	Integrating Sphere Test	2021/12/1	ALEDM5TN/480	T1
2	Goniophotometer Test	2021/12/1	ALEDM5TN/480	T1
3	THD and PF Test	2021/12/1	ALEDM5TN/480	T1

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.

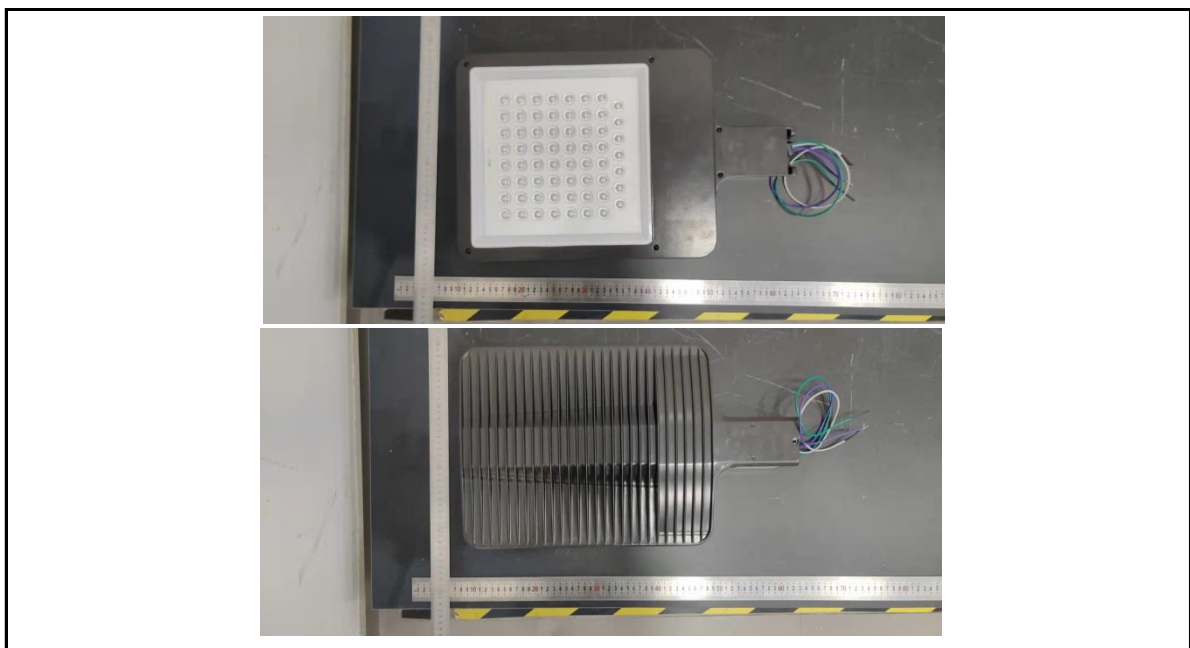
3.0 Production Description

Luminaire Description: ALEDM5TN/480

Description: 150W/18,000 lm @ 4000K

Electrical Specification: 480V,50/60HZ

Photos of Luminaire Characteristics



4.0 LM-79 Measurement and Test Results

4.1 Integrating Sphere Test

Model No.	ALEDM5TN/480	Sample ID.	T1
Opreate 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 paramters 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 ± 0.2 percent under load.

The sample was measured using 4π 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
479.90	60	0.316	145.2	0.959

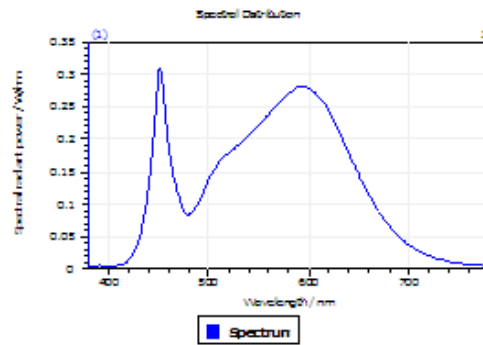
Test Result

CCT (K)	CRI	R9	Duv
3943	83	7	0.00017

Rf	Rg	IES Rcs,h1
84	95	-12%

4.1 Integrating Sphere Test

Results



Spectral values

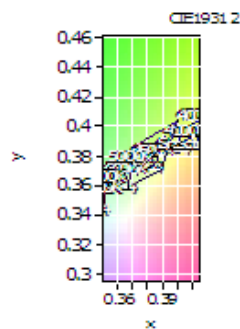
DominantWavelength	579.38 nm
Purity	0.283
PeakWavelength	451.53 nm
Radiant Power	48.94 W
Width50%:	21.34 nm

Color Coordinates

Correlated Color Temperat 3943 K

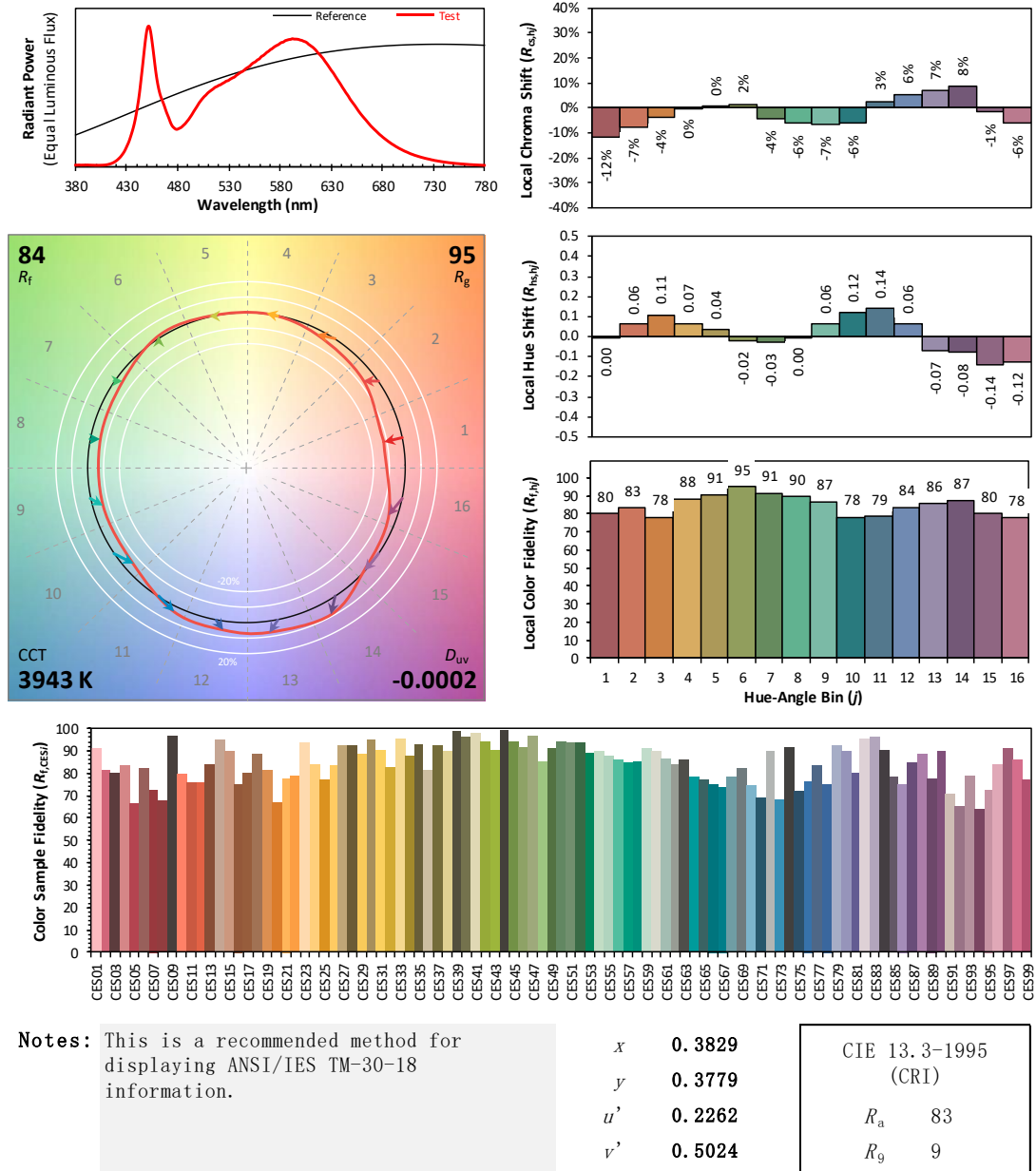
x: 0.3829 u: 0.2262 u': 0.2262
y: 0.3779 v: 0.3350 v': 0.5024

ResultsCRICRI01	80.8	ResultsCRICRI09	6.9
ResultsCRICRI02	90.0	ResultsCRICRI10	76.6
ResultsCRICRI03	95.4	ResultsCRICRI11	79.8
ResultsCRICRI04	80.8	ResultsCRICRI12	64.8
ResultsCRICRI05	81.5	ResultsCRICRI13	83.2
ResultsCRICRI06	86.5	ResultsCRICRI14	97.9
ResultsCRICRI07	84.7	ResultsCRICRI15	74.3
ResultsCRICRI08	62.7	ResultsCRICRI16	71.9
ResultsCRI	82.8		



PlanckDistance 1.7E-004

4.1 Integrating Sphere Test



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.	ALEDM5TN/480	Sample ID.	T1
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 ± 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° vertical intervals and 10° horizontal intervals.

Test Conditions

Condition	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
WORST CASE	480.03	60	0.317	145.3	0.956

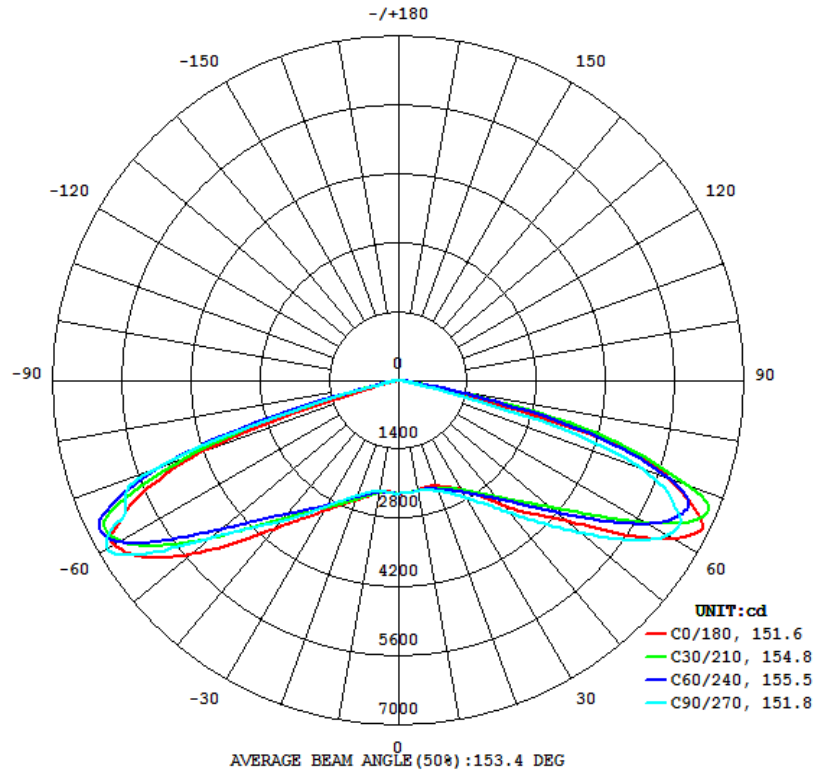
Test Result

Flux (lm)	Field Angle(10%)		Beam Angle(50%)		Luminous Efficacy (lm/W)
	C0-180	C90-270	C0-180	C90-270	
21343	158.4	158.6	151.6	151.8	146.9

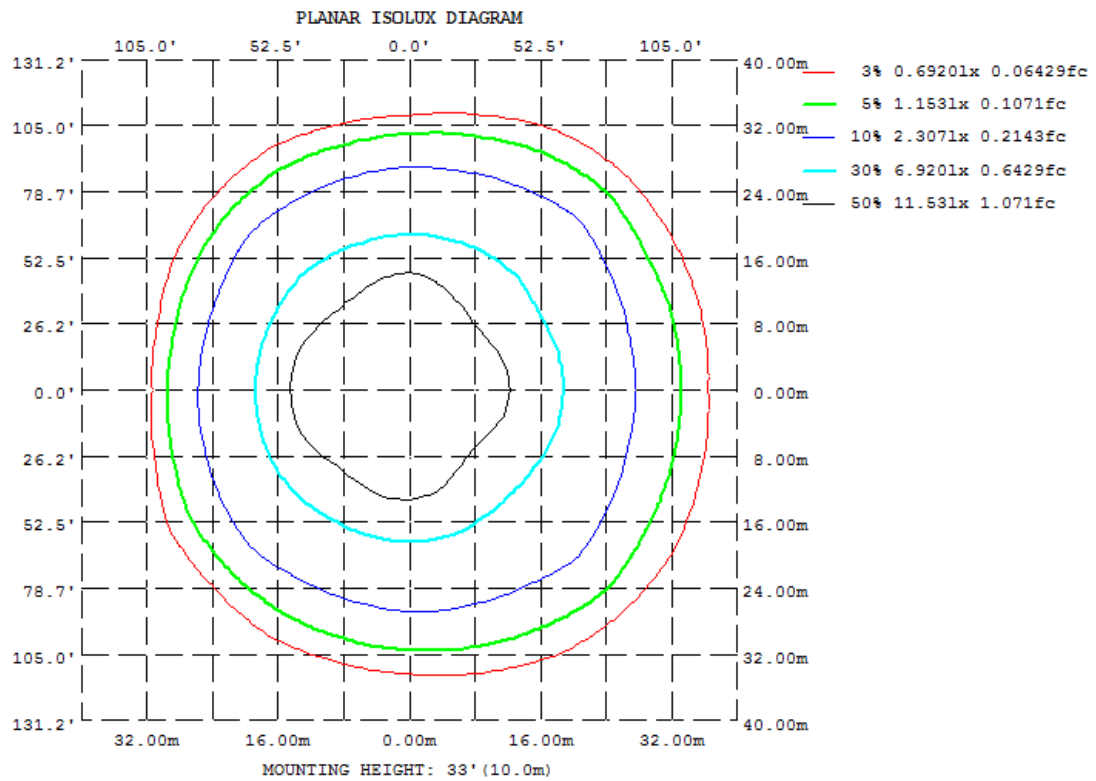
Zonal Lumen Requirement (0° - 90°)	Zonal Lumen Requirement (80° - 90°)	BUG rating
100.00%	0.54%	B4-U0-G2

4.2 Goniophotometer Test

Light Distrubtion Curve



Isolux Plot



4.2 Goniophotometer Test

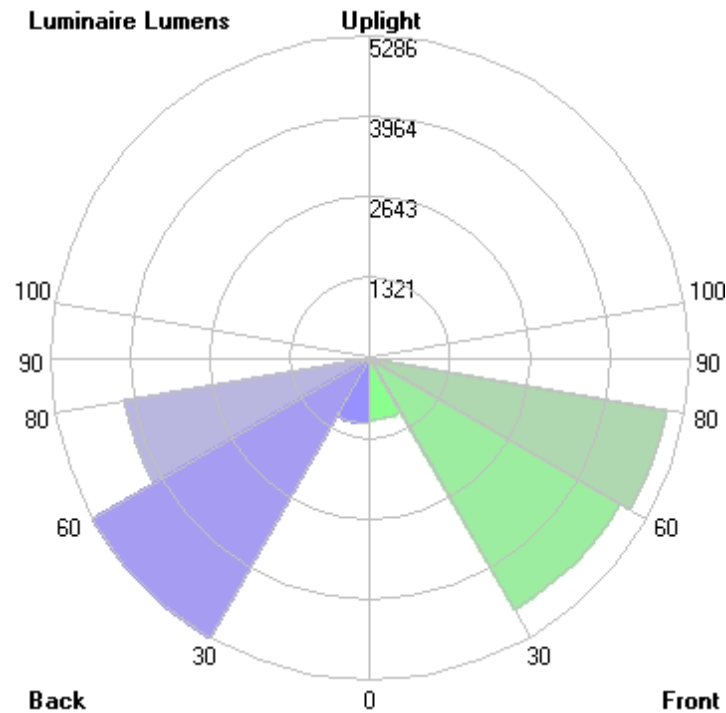
Zonal Lumen Summary

γ	C0	C45	C90	C135	C180	C225	C270	C315
10	2264	2277	2285	2310	2308	2312	2290	2280
20	2293	2355	2406	2533	2603	2552	2492	2424
30	2575	2567	2764	2916	3064	2929	2957	2746
40	3316	3022	3516	3501	3932	3518	3738	3243
50	4445	3912	4813	4609	5483	4688	4973	4094
60	6426	5650	6282	6330	6658	6598	6813	6180
70	5820	6721	5268	5447	4261	5435	5300	7272
80	350.0	920.8	186.0	292.2	143.1	223.4	188.7	588.8
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	218.78	0 - 10	218.78	1.03%
10-20	670.28	0 - 20	889.06	4.17%
20-30	1216.65	0 - 30	2105.71	9.87%
30-40	1969.03	0 - 40	4074.74	19.09%
40-50	3123.55	0 - 50	7198.29	33.73%
50-60	4957.05	0 - 60	12155.34	56.95%
60-70	6260.54	0 - 70	18415.88	86.29%
70-80	2812.13	0 - 80	21228.01	99.46%
80-90	114.75	0 - 90	21342.76	100.00%
90-100	0.00	0 - 100	21342.76	100.00%
100-110	0.00	0 - 110	21342.76	100.00%
110-120	0.00	0 - 120	21342.76	100.00%
120-130	0.00	0 - 130	21342.76	100.00%
130-140	0.00	0 - 140	21342.76	100.00%
140-150	0.00	0 - 150	21342.76	100.00%
150-160	0.00	0 - 160	21342.76	100.00%
160-170	0.00	0 - 170	21342.76	100.00%
170-180	0.00	0 - 180	21342.76	100.00%

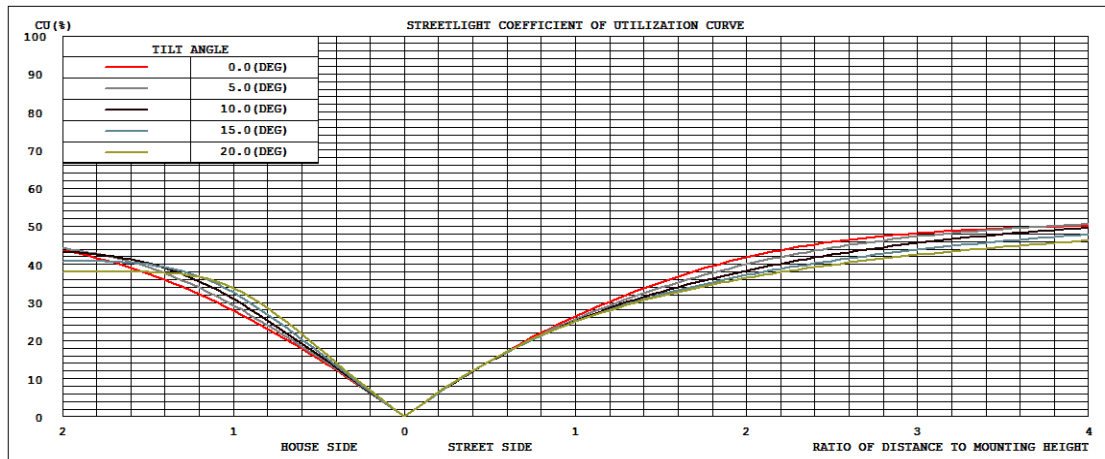
4.2 Goniophotometer Test

LCS/BUG

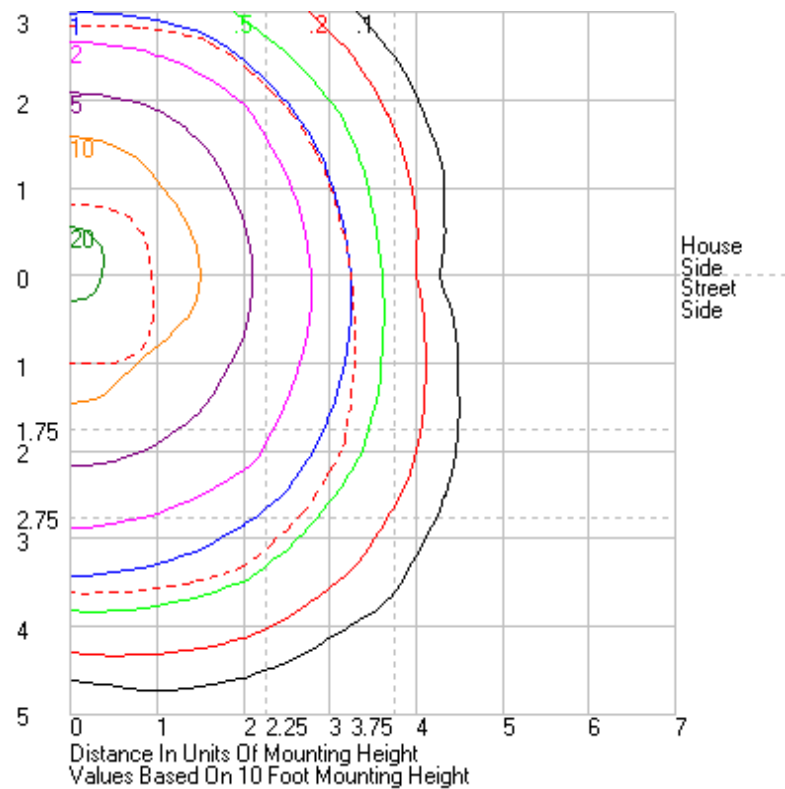


	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	1020.2	N.A.	4.8
FM - Front-Medium (30-60)	4763.8	N.A.	22.3
FH - Front-High (60-80)	4963.5	N.A.	23.3
FVH - Front-Very High (80-90)	75.9	N.A.	0.4
BL - Back-Low (0-30)	1085.5	N.A.	5.1
BM - Back-Medium (30-60)	5285.9	N.A.	24.8
BH - Back-High (60-80)	4109.2	N.A.	19.3
BVH - Back-Very High (80-90)	38.8	N.A.	0.2
UL - Uplight-Low (90-100)	0.0	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	21342.8	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	2304.86	2304.86	2304.86	2304.86	2304.86	2304.86	2304.86	2304.86	2304.86	2304.86	2304.86	2304.86	2304.86	2304.86	2304.86	2304.86	2304.86	2304.86	2304.86	2304.86	2304.86	2304.86	2304.86	2304.86	2304.86
1	2305.5	2304.15	2303.92	2303.91	2303.46	2303.26	2303.03	2302.61	2301.5	2301.42	2301.24	2301.41	2304.77	2304.78	2304.79	2305.02	2305.03	2305.46	2305.48	2305.71	2305.26	2305.21	2304.24	2303.13	2305.5
2	2300.85	2299.72	2299.83	2300.05	2300.8	2302.08	2301.18	2300.5	2298.71	2299.15	2299.15	2298.33	2302.42	2303.39	2304.78	2305.25	2305.69	2305.68	2306.81	2307.26	2305.45	2302.75	2300.42	2299.11	2300.85
3	2297.15	2295.58	2294.12	2295.77	2298.51	2301.43	2300.72	2299.37	2299.06	2296.02	2293.11	2291.08	2294.83	2296.47	2299.81	2304.48	2305.46	2304.8	2306.37	2306.57	2303.84	2300.49	2297.95	2295.75	2297.15
4	2297.54	2295.95	2293.5	2293.35	2296.67	2300.73	2301.62	2301.37	2299.41	2293.09	2287.26	2284.07	2287.73	2290.33	2295.01	2300.27	2306.1	2304.3	2305.42	2304.69	2302.41	2299.59	2297.14	2295.96	2297.54
5	2292.69	2291.8	2293.32	2294.56	2294.2	2297.14	2299.42	2300.95	2299.16	2291.02	2282.67	2278.18	2281.98	2286.03	2290.75	2298.46	2304.06	2302.03	2301.25	2299.79	2298.66	2298.46	2298.01	2292.32	2292.69
6	2286.36	2285.69	2288.85	2293.99	2291.47	2292.93	2296.68	2299.41	2297.8	2290.12	2280.88	2275.68	2278.81	2284.48	2290.13	2297.11	2301.3	2298.88	2295.67	2292.18	2293.28	2297.73	2294.17	2287.4	2286.36
7	2282.34	2281.16	2283.81	2290.02	2287.97	2286.99	2292.23	2296.96	2297.11	2291.42	2282.87	2277.24	2279.29	2286.19	2292.25	2296.9	2298.42	2296.88	2291.39	2285.16	2286.48	2292.31	2290.77	2284.19	2282.34
8	2275.96	2274.77	2281.14	2284.53	2284.26	2281.12	2289.22	2295.98	2297.78	2294.57	2288.96	2282.53	2284.44	2291.6	2297.31	2298.48	2298.3	2297.62	2288.26	2279.36	2281.47	2286.94	2287.8	2280.39	2275.96
9	2270.08	2268.99	2277.09	2278.9	2280.87	2277.25	2286.82	2297.32	2300.65	2300.57	2299.27	2293.17	2294.23	2301.84	2306.75	2303.46	2301.52	2300.66	2287.19	2275.66	2278.1	2282.36	2285.78	2276.76	2270.08
10	2263.78	2263.84	2272.81	2276.6	2278.21	2273.04	2284.98	2298.87	2306.83	2309.88	2312.82	2307.47	2308.14	2316.45	2319.66	2311.72	2308.4	2307.26	2289.83	2276.18	2276.35	2279.73	2284.23	2272.88	2263.78
11	2257.71	2260.36	2270.51	2275.24	2275.22	2270.74	2284.47	2303.3	2313.27	2323.79	2329.7	2326.79	2327.18	2335.12	2335.89	2325.41	2319.35	2317.56	2296.83	2282.32	2278.41	2280.9	2283.33	2270	2257.71
12	2250.89	2256.27	2270.24	2276.78	2274.1	2269.6	2286.68	2310.31	2322.77	2340.39	2349.48	2348.69	2349.24	2357.22	2356.17	2342.71	2335.26	2330.29	2307.33	2292.46	2285.73	2285.6	2284.03	2268.64	2250.89
13	2244.63	2252.53	2272.27	2280.54	2274.96	2272.95	2292.68	2319.64	2336.74	2359.93	2371.54	2373.94	2375.67	2381.68	2378.8	2363.86	2355	2344.74	2319.94	2304.47	2298.15	2294.21	2287.47	2266.86	2244.63
14	2240.26	2249.75	2274.9	2286.28	2279.03	2280.37	2300.93	2331.48	2353.04	2382.39	2395.66	2400.74	2405.55	2407.96	2402.72	2387.71	2374.48	2362.24	2337.59	2320.49	2311.87	2306.23	2290.88	2266.42	2240.26
15	2240	2249.25	2279.48	2287.08	2287.08	2290.02	2311.51	2344	2370.92	2405.25	2420.72	2428.13	2436.07	2435.54	2427.27	2414.19	2395.08	2383.27	2358.62	2341.54	2328.1	2321.89	2294.65	2267.62	2240
16	2243.12	2252.58	2286.23	2303.87	2297.96	2302.06	2325.08	2358.66	2390.75	2430.27	2449.18	2459.33	2469.23	2464.63	2454.08	2441.57	2418.73	2405.23	2382.35	2364.74	2349.19	2339.29	2301.3	2271.29	2243.12
17	2250.01	2258.01	2295.46	2314.77	2310.24	2316.86	2341.68	2374.87	2411.23	2454.4	2478.75	2489.47	2500.6	2494.23	2481.83	2467.67	2443.82	2426.69	2405.53	2388.51	2374.41	2356.95	2311.19	2277.96	2250.01
18	2261.01	2267.42	2306.35	2328.13	2325.04	2334.23	2361.48	2394.38	2433.52	2479.46	2509.22	2522.15	2532.96	2524.87	2511.09	2493.53	2468.5	2449.8	2430.88	2412.09	2400.68	2377.06	2325.71	2287.38	2261.01
19	2276.15	2280.2	2317.89	2341.71	2342.08	2354.17	2384.05	2416.4	2457.57	2506.4	2542.74	2555.23	2567.6	2558.21	2542.85	2522.35	2493.82	2475.48	2460.31	2439.55	2426.67	2399.48	2343.12	2300.38	2276.15
20	2292.97	2296.24	2330.88	2355.26	2361.82	2375.44	2406.23	2440.16	2483.37	2532.97	2577.01	2588.96	2602.81	2592.97	2578.19	2552.4	2521.12	2504.57	2492.07	2470.8	2455.5	2424.28	2363.71	2317.11	2292.97
21	2311.87	2313.29	2346.49	2369.85	2382.14	2396.19	2427.18	2463.68	2514.91	2564.26	2613.91	2625.16	2637.55	2628.63	2614.49	2583.88	2552.44	2536.25	2526.32	2505.28	2487.24	2449.9	2386.98	2334.86	2311.87
22	2328.84	2329.89	2365.13	2385.36	2404.74	2415.89	2449.79	2489.05	2546.39	2597.14	2651.73	2659.94	2672.41	2664.04	2652.57	2615.88	2585.75	2571.14	2561.04	2540.86	2522.46	2476	2412.49	2352.69	2328.84
23	2349.22	2346.29	2386.48	2401.8	2424.59	2437.35	2477.08	2517.83	2578.94	2633.43	2689.47	2696.96	2708.5	2702.23	2690.93	2650.34	2622.75	2605.15	2596.02	2577.51	2559.6	2501.78	2438.49	2370.89	2349.22
24	2373.44	2367.39	2408.04	2419.58	2446.42	2463.03	2506.95	2550.17	2612.68	2672.28	2730.13	2736.48	2746.94	2739.52	2729.6	2685.32	2660.57	2641	2635.7	2614.93	2600.14	2530.49	2466.7	2394.02	2373.44
25	2399.34	2392.03	2428.21	2440.05	2470.57	2492.13	2540.81	2585.21	2647.3	2711.16	2769.36	2776.03	2788.91	2780.11	2769.4	2723.92	2698.51	2682.59	2679.34	2657.5	2638.54	2562.21	2495.97	2420.23	2399.34
26	2429.09	2423.32	2453.78	2465.05	2498	2525.95	2579.15	2624.68	2686.91	2753.95	2809.75	2823.12	2836.92	2824.14	2810.18	2764.39	2738.09	2726.59	2727.29	2703.05	2676.35	2597.09	2528.09	2450.15	2429.09
27	2461.34	2457.03	2481.16	2490.53	2528.06	2560.84	2619.81	2665.52	2727.6	2795.32	2851.39	2873.33	2888.39	2872.56	2851	2805.59	2781.82	2774.97	2778.78	2752.91	2717	2633.08	2563.01	2482.2	2461.34
28	2495.47	2494.5	2509.9	2515.18	2559.48	2604.19	2664.12	2710.97	2771.73	2834.87	2894.13	2927.6	2943.15	2924.62	2894.64	2847.36	2827.88	2826.32	2834.87	2807.02	2759.82	2672.06	2598.02	2517.25	2495.47
29	2532.49	2534.31	2541.92	2540.06	2594.6	2647.3	2713.1	2759.54	2816.75	2876.35	2940.27	2987.23	3002.07	2980.44	2940.29	2888.65	2874.28	2882.03	2894.21	2864.14	2803.97	2710.55	2635.82	2553.81	2532.49
30	2575.19	2577.06	2576.51	2566.96	2632.16	2696.63	2764.25	2810	2863.04	2916.11	2988.96	3049.14	3064.47	3039.61	2989.15	2929.41	2923.54	2941.41	2956.85	2925.51	2849.86	2746.04	2674.01	2594.04	2575.19
31	2621.27	2624.46	2614.23	2598.28	2672.26	2748.85	2820.57	2864.59	2912.46	2958.7	3041.18	3112.89	3129.01	3103.23	3039.75	2970.62	2975.35	3001.21	3022.28	2988.62	2896.62	2782.02	2714.33	2638.21	2621.27
32	2674	2678.05	2655.43	2632.68	2712.88	2803.43	2878.14	2920.06	2964.42	3004.71	3096.94	3182	3200.14	3170.53	3094.28	3016.13	3030.04	3066.24	3091.34	3054.55	2947.07	2822.02	2757.25	2687.9	2674
33	2731.42	2734.95	2699.71	2668.59	2758.18	2864.37	2940.53	2982.54	3017.98	3052.66	3155.3	3252.92	3275.04	3243.94	3151.92	3064.67	3085.94	3133.34	3163.87	3123.56	3001.03	2865.93	2802.62	2742.01	2731.42
34	2794.75	2797	2747.15	2708.57	2804.69	2925.99	3007.72	3048.8	3075.04	3105.04	3216.63	3329.6	3351	3320.9	3211.03	3115.23	3144.39	3203.36	3237.63	3195.47	3056.09	2909.68	2852.29	2803	2794.75
35	2865.39	2864.26	2797.09	2751.53	2855.43	2994.65	3077.46	3119.57	3132.29	3159.78	3280.85	3409.24	3433.41	3402.07	3275.79	3170.61	3204.17	3276.5	3315.46	3270.82	3114.62	2958.04	2905.21	2870.38	2865.39
36	2941.59	2936.28	2848.5	2799.27	2909.17	3066.44	3154.02	3195.24	3195.01	3217.77	3349.72	3491.17	3520.02	3487.71	3344.02	3230.24	3266.45	3353.03	3395.07	3349.41	3174.65	3008.18	2962.75	2942.33	2941.59
37	3027.09	3015.92	2904.34	2848.61	2963.31	3140.98	3233.89	3273.65	3259.73	3281.11	3421.54	3581.03	3611.26	3578.5	3414.9	3295.32	3331.55	3432.5	3477.46	3430.94	3238.02	3062.37	3023.58	3021.26	3027.09
38	3117.94	3096.66	2961.07	2901.94	3022.36	3222.19	3323.02	3358.67	3328.74	3349.32	3497.72	3673.55	3709.34	3674.81	3489.87										

Page 13 of 17

Page 14 of 17



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.	ALEDM5TN/480	Sample ID.	T1
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
479.90	60	0.316	145.2	0.959	6.28%

5.0 Equipment Information

Test Equipment			
Equipment ID	Equipment Name	Last Calibration Date	Calibration Due Date
DLF107	Integrating Sphere System	2020/12/26	2021/12/25
DLF108	Auxiliary Lamp	2020/12/26	2021/12/25
DLF122	Measurement Standard Lamp Standard Lamp Type: 220 V, 0.4720 A, Tungsten, Omni-derectional	2020/12/26	2021/12/25
DLF116	AC Power Source	2020/12/26	2021/12/25
DLF113	Power Meter	2020/12/26	2021/12/25
DLF112	Temperature Recorder	2020/12/26	2021/12/25
DLF114	Temperature & Humidity Datalogger	2020/12/26	2021/12/25
DLF101	Goniophotometer	2020/12/26	2021/12/25
DLF125	Standard Lamp Standard Lamp Type: 76.58 V, 6.7875 A, Tungsten, Omni-derectional	2020/12/26	2021/12/25
DLF104	AC Power Source	2020/12/26	2021/12/25
DLF507	DC Power Source	2020/12/26	2021/12/25
DLF102	Power Meter	2020/12/26	2021/12/25
DLF111	Temperature & Humidity Datalogger	2020/12/26	2021/12/25
DLF119	Power Meter	2020/12/26	2021/12/25
DLF031	Temperature data logger	2020/12/26	2021/12/25
DLF022	Digital power meter	2020/12/26	2021/12/25
DLF003	Temperature & Humidity Datalogger	2020/12/26	2021/12/25

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