

Photometric Test Report

Relevant Standards

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

Prepared For

RAB Lighting Inc.

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Project Number

DLF2207109

Report Number

DLF2207109-3a

Test Date

2022/7/29

Issue Date

2022/7/30

Prepared By



Wangzun Zhu

Approved By



Kevin Jia

The results contained in this report pertain only to the tested sample.

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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		10458
Minimum Luminaire Efficacy (lm/W) (Goniophotometer - Section 4.2)	IES LM-79-2008	Standard 105	Premium 120	128.8
Power (Input Wattage) (W) (Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		81.2
Total Harmonic Distortion (A%) (THD & PF - section 4.3)	ANSI C82.77:2014	20.00%	120V	2.02%
		20.00%	277V	8.16%
Power Factor (THD & PF - section 4.3)	ANSI C82.77:2014	0.9	120V	0.999
		0.9	277V	0.965
Allowable CCTs* (K) (Integrating Sphere - Section 4.1)	IES LM-79-2008	7 step	3985±275	3896
		4 step	3985±154	
Minimum CRI (Integrating Sphere - Section 4.1)	IES LM-79-2008 CIE 13.3-1995	≥70		82
Minimum R9 (Integrating Sphere - Section 4.1)	IES LM-79-2008 CIE 13.3-1995	≥-40		4
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		94
Minimum IES Rcs,h1 (Integrating Sphere - Section 4.1)	ANSI/IES TM-30-18	-18%≤IES Rcs,h1≤+23%		-13%
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%		0.83%
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		0.678
(Goniophotometer - Section 4.2)		Non-Worst Case		0.297
Power (Input Wattage - W)				
(Goniophotometer - Section 4.2)	IES LM-79-2008	Worst Case		81.2
(Goniophotometer - Section 4.2)		Non-Worst Case		79.5

2.0 Test List

Test Item	Test	Test Date	Model Number	Sample No.
1	Integrating Sphere Test	2022/7/29	ALEDS3TN	C1
2	Goniophotometer Test	2022/7/29	ALEDS3TN	C1
3	THD and PF Test	2022/7/29	ALEDS3TN	C1

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.

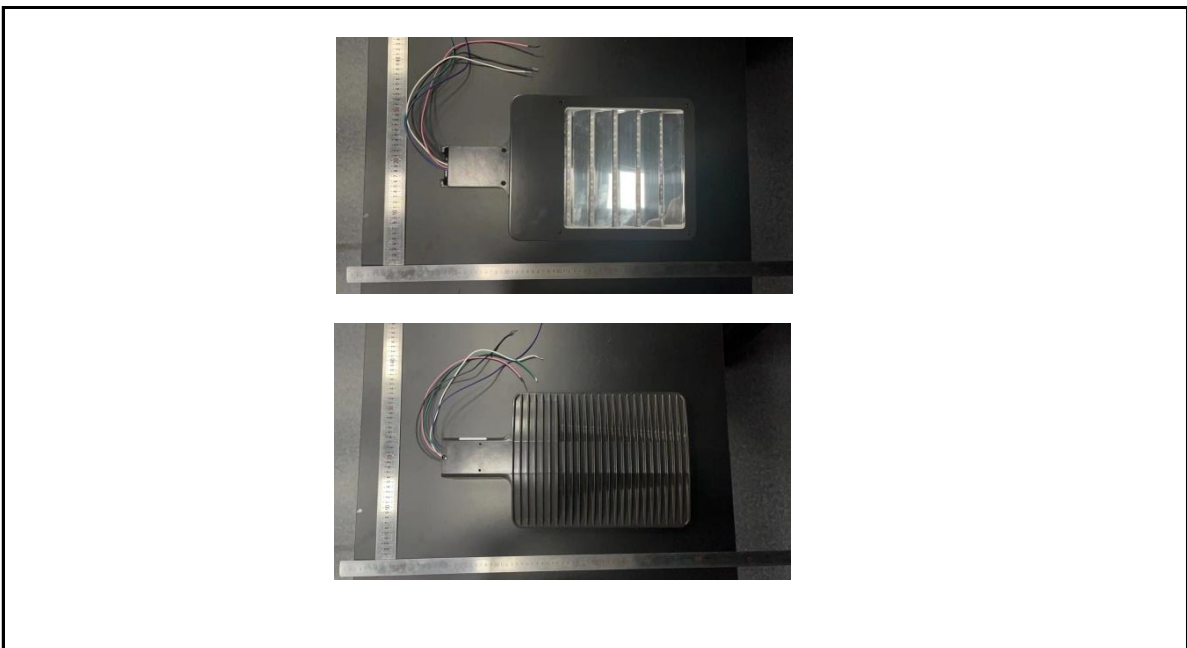
3.0 Production Description

Luminaire Description: ALEDS3TN

Description: 80W @ 4000K

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.	ALEDS3TN	Sample ID.	C1
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 ± 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
119.98	60	0.676	81.1	0.999
277.01	60	0.295	78.9	0.965

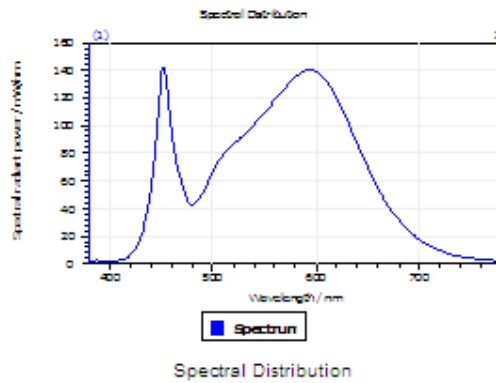
Test Result

CCT (K)	CRI	R9	Duv
3896	82	4	0.00099

Rf	Rg	IES Rcs,h1
84	94	-13%

4.1 Integrating Sphere Test

Results



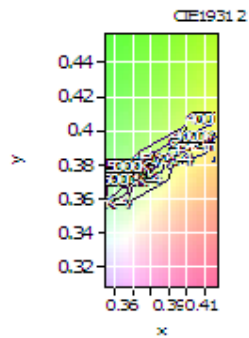
Spectral values

DominantWavelength 578.96 nm
Purity 0.305
PeakWavelength 452.28 nm
Radiant Power 23.94 W
Width50%:

Color Coordinates

Correlated Color Temperat 3896 K
x: 0.3859 u: 0.2265 u': 0.2265
y: 0.3822 v: 0.3365 v': 0.5048

CRI01	80.0	CRI09	3.7
CRI02	89.5	CRI10	75.4
CRI03	95.7	CRI11	78.8
CRI04	80.2	CRI12	62.8
CRI05	80.6	CRI13	82.3
CRI06	85.8	CRI14	98.0
CRI07	84.8	CRI15	73.3
CRI08	61.9	CRI16	70.8
ResultsCRI	82.3		



PlanckDistance 9.9E-004

4.1 Integrating Sphere Test

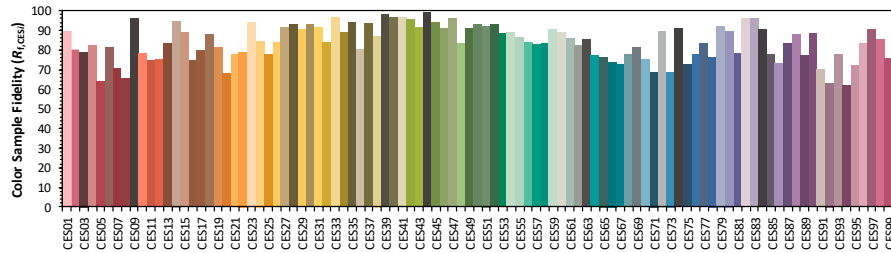
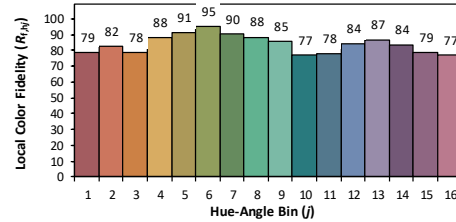
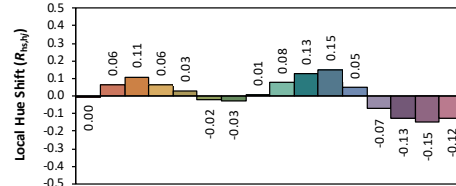
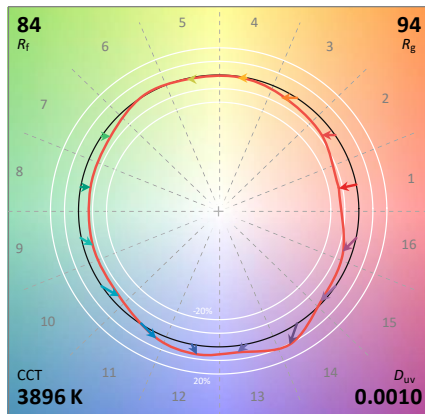
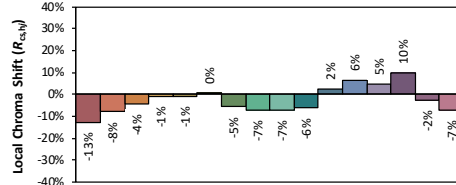
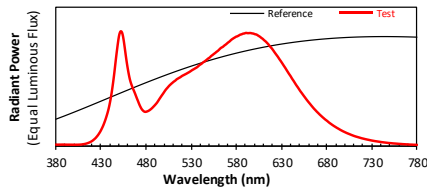
IES TM-30-18 Color Rendition Report

Source: DLF2207109-3a

Manufacturer: RAB Lighting Inc.

Date: 2022/7/29

Model: ALEDS3TN



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

x 0.3859
 y 0.3822
 u' 0.2265
 v' 0.5048

CIE 13.3-1995
(CRI)
 R_a 82
 R_g 3

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.	ALEDS3TN	Sample ID.	C1
Operate 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 parameters 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	120.02	60	0.678	81.2	0.998
NON-WORST CASE	277.07	60	0.297	79.5	0.965

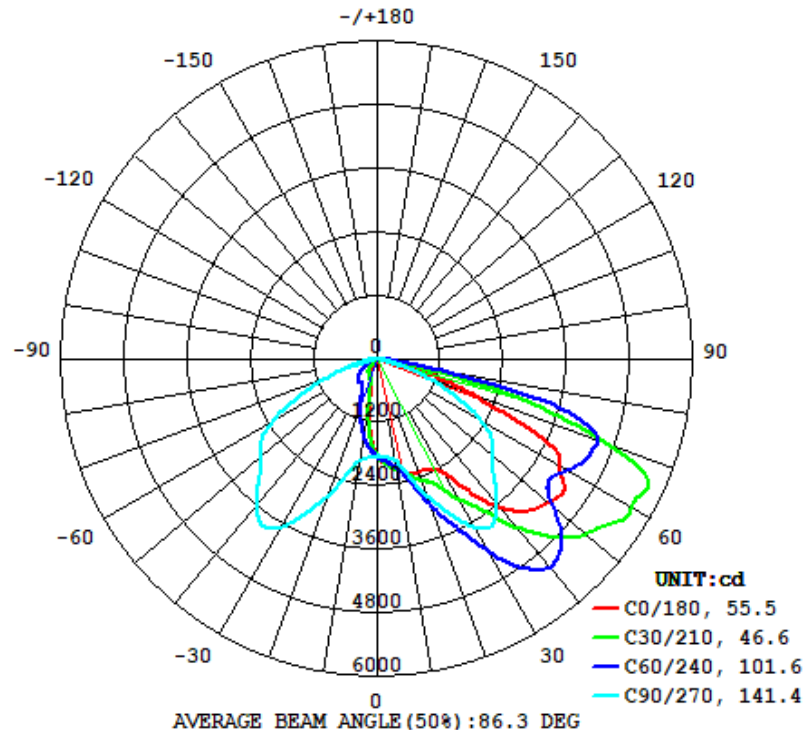
Test Result

Flux (lm)	Field Angle(10%)		Beam Angle(50%)		Luminous Efficacy (lm/W)
	C0-180	C90-270	C0-180	C90-270	
10458	91.3	159.7	55.5	141.4	128.8

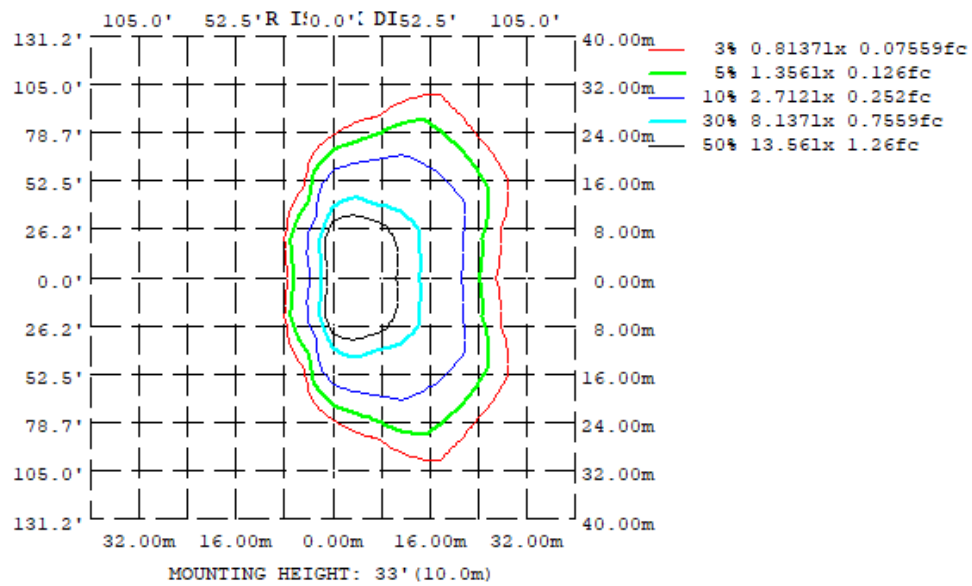
Zonal Lumen Requirement (0° - 90°)	Zonal Lumen Requirement (80° - 90°)	BUG rating
100.00%	0.83%	B1-U0-G2

4.2 Goniophotometer Test

Light Distrubtion Curve



Isolux Plot



4.2 Goniophotometer Test

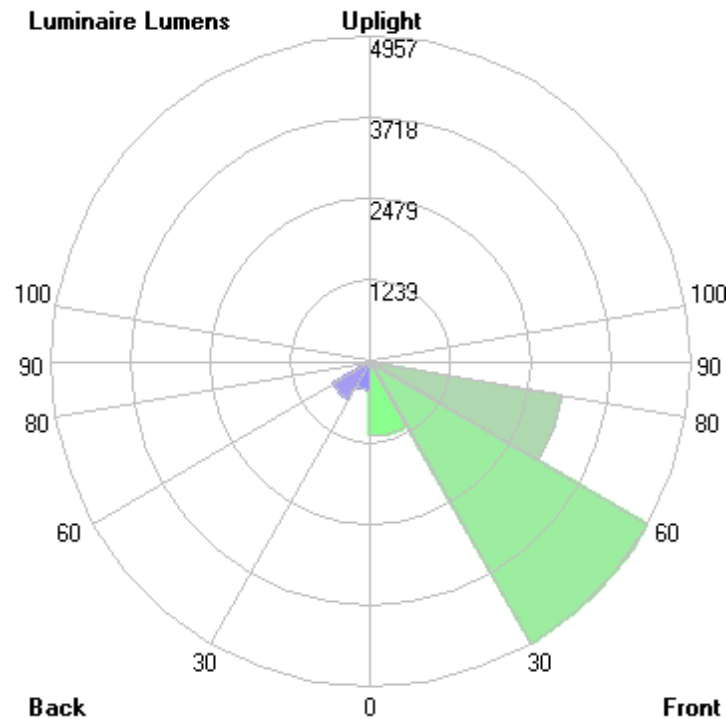
Zonal Lumen Summary

γ	C0	C45	C90	C135	C180	C225	C270	C315
10	2114	2117	1946	1223	832.2	1223	1946	2117
20	2287	2680	2748	522.4	346.2	522.4	2748	2680
30	2473	3710	3679	445.1	236.6	445.1	3679	3710
40	3674	4667	3558	394.3	107.5	394.3	3558	4667
50	4217	5240	2898	183.3	66.72	183.3	2898	5240
60	4016	5018	2232	107.9	32.39	107.9	2232	5018
70	1845	4714	1020	40.59	14.62	40.59	1020	4714
80	91.92	777.7	176.7	14.73	5.463	14.73	176.7	777.7
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	167.85	0 - 10	167.85	1.60%
10-20	482.71	0 - 20	650.56	6.22%
20-30	915.20	0 - 30	1565.76	14.97%
30-40	1489.73	0 - 40	3055.49	29.22%
40-50	1949.43	0 - 50	5004.92	47.86%
50-60	2188.96	0 - 60	7193.88	68.79%
60-70	2089.17	0 - 70	9283.05	88.76%
70-80	1088.72	0 - 80	10371.77	99.17%
80-90	86.62	0 - 90	10458.39	100.00%
90-100	0.00	0 - 100	10458.39	100.00%
100-110	0.00	0 - 110	10458.39	100.00%
110-120	0.00	0 - 120	10458.39	100.00%
120-130	0.00	0 - 130	10458.39	100.00%
130-140	0.00	0 - 140	10458.39	100.00%
140-150	0.00	0 - 150	10458.39	100.00%
150-160	0.00	0 - 160	10458.39	100.00%
160-170	0.00	0 - 170	10458.39	100.00%
170-180	0.00	0 - 180	10458.39	100.00%

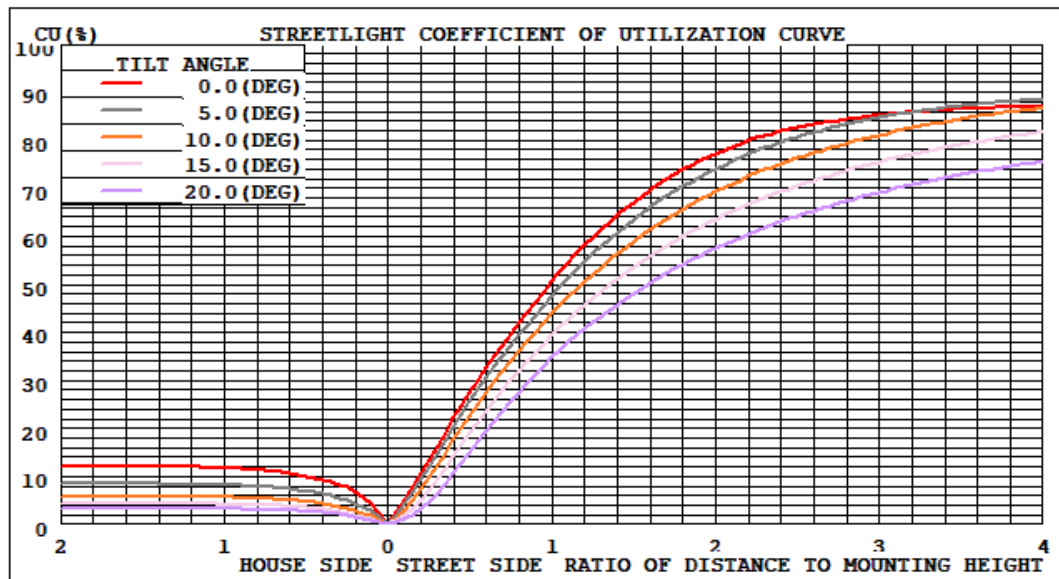
4.2 Goniophotometer Test

LCS/BUG

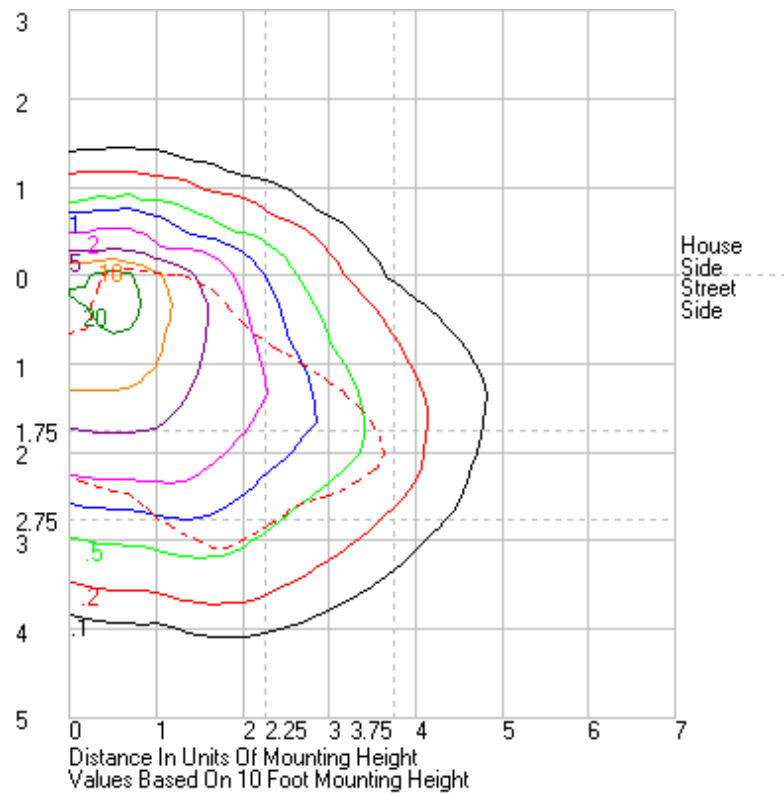


	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	1130.9	N.A.	10.8
FM - Front-Medium (30-60)	4957.2	N.A.	47.4
FH - Front-High (60-80)	2999.4	N.A.	28.7
FVH - Front-Very High (80-90)	81.0	N.A.	0.8
BL - Back-Low (0-30)	434.8	N.A.	4.2
BM - Back-Medium (30-60)	670.9	N.A.	6.4
BH - Back-High (60-80)	178.5	N.A.	1.7
BVH - Back-Very High (80-90)	5.6	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	10458.3	N.A.	100.0
BUG Rating	B1-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	1843.54	1843.54	1843.54	1843.54	1843.54	1843.54	1843.54	1843.54	1843.54	1843.54	1843.54	1843.54	1843.54	1843.54	1843.54	1843.54	1843.54	1843.54	1843.54	1843.54	1843.54	1843.54	1843.54	1843.54	1843.54
1	1881.77	1879.64	1877.49	1872.09	1865.76	1857.62	1848.07	1836.62	1826.35	1814.47	1805.24	1798.09	1796.12	1798.09	1805.24	1814.47	1826.35	1836.62	1848.07	1857.62	1865.76	1872.09	1877.49	1879.64	1881.77
2	1911.41	1908.06	1905.01	1898.35	1888.04	1872.35	1853.69	1829.78	1803.41	1777.34	1752.65	1735.03	1729.31	1735.03	1752.65	1777.34	1803.41	1829.78	1853.69	1872.35	1888.04	1898.35	1905.01	1908.06	1911.41
3	1935.66	1934.39	1930.32	1921.72	1907.75	1889.74	1860.66	1823.3	1778.85	1732.16	1692.77	1663.54	1650.11	1663.54	1692.77	1732.16	1778.85	1823.3	1860.66	1889.74	1907.75	1921.72	1930.32	1934.39	1935.66
4	1964.25	1961.2	1956.5	1945.28	1929.85	1905.65	1867.97	1816.17	1750.12	1680.83	1616.17	1570.38	1552.16	1570.38	1616.17	1680.83	1750.12	1816.17	1867.97	1905.65	1929.85	1945.28	1956.5	1961.2	1964.25
5	1994.05	1989.98	1984.9	1971.76	1949.41	1921.58	1874.79	1808.33	1716.89	1620.06	1529.92	1467.99	1440.51	1467.99	1529.92	1620.06	1716.89	1808.33	1874.79	1921.58	1949.41	1971.76	1984.9	1989.98	1994.05
6	2019.93	2018.73	2013.64	1998.19	1971.15	1937.97	1884.27	1798.82	1681.32	1550.06	1434.59	1355.62	1324.44	1355.62	1434.59	1550.06	1681.32	1798.82	1884.27	1937.97	1971.15	1998.19	2013.64	2018.73	2019.93
7	2047.02	2046.71	2043.89	2026.89	1995.38	1957.11	1896.83	1790.17	1638.82	1472.56	1331.43	1238.77	1208.15	1238.77	1331.43	1472.56	1638.82	1790.17	1896.83	1957.11	1995.38	2026.89	2043.89	2046.71	2047.02
8	2067.57	2070.5	2071.35	2057.17	2023.58	1978.79	1909.59	1780.78	1593.63	1390.68	1229.19	1119.13	1083.33	1119.13	1229.19	1390.68	1593.63	1780.78	1909.59	1978.79	2023.58	2057.17	2071.35	2070.5	2067.57
9	2091.85	2096.14	2098.26	2085.11	2053.18	2000.94	1925.38	1771.65	1544.25	1307.98	1121.09	995.76	955.17	995.76	1121.09	1307.98	1544.25	1771.65	1925.38	2000.94	2053.18	2085.11	2098.26	2096.14	2091.85
10	2113.62	2121.33	2125.08	2116.84	2084.21	2028.67	1945.65	1763.54	1488.58	1223.13	1010.09	875.73	832.18	875.73	1010.09	1223.13	1488.58	1763.54	1945.65	2028.67	2084.21	2116.84	2125.08	2121.33	2113.62
11	2136.6	2145.04	2150.9	2146.36	2117.03	2063.97	1974.26	1757.66	1432.03	1133.25	902.9	763.76	719.71	763.76	902.9	1133.25	1432.03	1757.66	1974.26	2063.97	2117.03	2146.36	2150.9	2145.04	2136.6
12	2157.2	2167.59	2178.51	2177.2	2156.51	2110.83	2019.51	1759.05	1376.86	1041.93	798.4	660.15	618.52	660.15	798.4	1041.93	1376.86	1759.05	2019.51	2110.83	2156.51	2177.2	2178.51	2167.59	2157.2
13	2181.96	2194.63	2204.66	2210.54	2204.46	2177.35	2077.43	1770.25	1323.29	951.19	704.83	582.66	541.52	582.66	704.83	951.19	1323.29	1770.25	2077.43	2177.35	2204.46	2210.54	2204.66	2194.63	2181.96
14	2207.58	2221.44	2235.83	2248.56	2267.11	2261.65	2158.97	1794.39	1271.73	863.7	626.81	513.93	479.31	513.93	626.81	863.7	1271.73	1794.39	2158.97	2261.65	2267.11	2248.56	2235.83	2221.44	2207.58
15	2241.25	2251.79	2269.81	2291.06	2342.93	2369.68	2259.88	1829.92	1223.44	783.1	562.84	458.66	433.75	458.66	562.84	783.1	1223.44	1829.92	2259.88	2369.68	2342.93	2291.06	2269.81	2251.79	2241.25
16	2269.4	2285.35	2304.47	2343.64	2438.57	2489.75	2367.29	1874.22	1178.06	709.26	504.39	421.05	402.87	421.05	504.39	709.26	1178.06	1874.22	2367.29	2489.75	2438.57	2343.64	2304.47	2285.35	2269.4
17	2289.28	2306.74	2345.13	2407.56	2550.85	2613.3	2472.84	1915.03	1134.36	647.28	462.52	398.61	384.53	398.61	462.52	647.28	1134.36	1915.03	2472.84	2613.3	2550.85	2407.56	2345.13	2306.74	2289.28
18	2298.26	2327.27	2382.67	2482.53	2672.96	2732.04	2571.58	1945.99	1088.89	599.05	434.37	383.3	370.07	383.3	434.37	599.05	1088.89	1945.99	2571.58	2732.04	2672.96	2482.53	2382.67	2327.27	2298.26
19	2292.31	2333.36	2416.69	2572.28	2797.82	2846.25	2665.05	1967	1038.93	555.53	417.17	370.64	357.87	370.64	417.17	555.53	1038.93	1967	2665.05	2846.25	2797.82	2572.28	2416.69	2333.36	2292.31
20	2287.32	2328.6	2454.64	2679.73	2916.84	2949.06	2747.94	1977.01	984.95	522.41	404.3	359.23	346.21	359.23	404.3	522.41	984.95	1977.01	2747.94	2949.06	2916.84	2679.73	2454.64	2328.6	2287.32
21	2283.74	2328.15	2478.74	2799.37	3034.6	3044.94	2823.99	1978.08	928.99	496.93	394.66	348.59	334.62	348.59	394.66	496.93	928.99	1978.08	2823.99	3044.94	3034.6	2799.37	2478.74	2328.15	2283.74
22	2280.12	2330.74	2502.13	2919.71	3145.17	3134.63	2901.56	1970.18	873.05	482.15	385.94	337.18	321.23	337.18	385.94	482.15	873.05	1970.18	2901.56	3134.63	3145.17	2919.71	2502.13	2330.74	2280.12
23	2292.2	2339.14	2534.77	3044.99	3254.38	3231.73	2989.46	1962.51	819.32	474.03	378.09	324.27	306.93	324.27	378.09	474.03	819.32	1962.51	2989.46	3231.73	3254.38	3044.99	2534.77	2339.14	2292.2
24	2312.58	2359.5	2572.36	3167.4	3361.18	3337.35	3084.56	1954.5	768.86	468.58	370.1	311.36	292.89	311.36	370.1	468.58	768.86	1954.5	3084.56	3337.35	3361.18	3167.4	2572.36	2359.5	2312.58
25	2331.33	2385.42	2620.82	3271.26	3470.31	3447.54	3182.6	1945.73	720.35	465.15	360.99	298.2	278.97	298.2	360.99	465.15	720.35	1945.73	3182.6	3447.54	3470.31	3271.26	2620.82	2385.42	2331.33
26	2349.94	2412.88	2682.92	3361.28	3588.38	3571.14	3294.51	1933.61	676.47	462.33	350.84	285.63	266.16	285.63	350.84	462.33	676.47	1933.61	3294.51	3571.14	3588.38	3361.28	2682.92	2412.88	2349.94
27	2364.41	2441.52	2763.66	3446.37	3713.96	3704.8	3401.03	1915.1	641.83	460.12	340.35	274	256.27	274	340.35	460.12	641.83	1915.1	3401.03	3704.8	3713.96	3446.37	2763.66	2441.52	2364.41
28	2383.69	2464.51	2859.62	3531.95	3850.36	3840.89	3501.8	1888.75	610.06	456.61	330.97	265.22	247.93	265.22	330.97	456.61	610.06	1888.75	3501.8	3840.89	3850.36	3531.95	2859.62	2464.51	2383.69
29	2417.57	2496.8	2956.21	3617.42	3999.53	3968.4	3592.95	1854.61	582.38	451.67	321.41	258.02	241.56	258.02	321.41	451.67	582.38	1854.61	3592.95	3968.4	3999.53	3617.42	2956.21	2496.8	2417.57
30	2472.9	2545.79	3049.09	3709.75	4155.47	4093.93	3678.82	1804.96	567.19	445.13	314.3	252.99	236.57	252.99	314.3	445.13	567.19	1804.96	3678.82	4093.93	4155.47	3709.75	3049.09	2545.79	2472.9
31	2557.24	2614.51	3128.59	3809.12	4312.12	4211.1	3746.01	1746.34	559.12	436.74	309.64	249.35	232.91	249.35	309.64	436.74	559.12	1746.34	3746.01	4211.1	4312.12	3809.12	3128.59	2614.51	2557.24
32	2658.87	2708.75	3211.72	3918.53	4467.31	4314.2	3794.74	1675.25	557.42	428.3	305.95	245.93	228.5	245.93	305.95	428.3	557.42	1675.25	3794.74	4314.2	4467.31	3918.53	3211.72	2708.75	2658.87
33	2789.34	2826.03	3291.56	4050.69	4600.51	4398.62	3825.17	1592.2	558.37	418.51	305.06	241.39	222.4	241.39	305.06	418.51	558.37	1592.2	3825.17	4398.62	4600.51	4050.69	3291.56	2826.03	2789.34
34	2919.58	2964.51	3380.05	4179.03	4715.26	4462.55	3831.9	1504.13	561.42	409.17	304.67	234.52	210.1	234.52	304.67	409.17	561.42	1504.13	3831.9	4462.55	4715.26	4179.03	3380.05	2964.51	2919.58
35	3053.88	3109.4	3485.34	4298.55	4817.26	4517.45	3826.2	1415.93	564.89	400.9	304.99	221.87	193.2	221.87	304.99	400.9	564.89	1415.93	3826.2	4517.45	4817.26	4298.55	3485.34	3109.4	3053.88
36	3197.67	3255.14	3598.81	4409.11	4906.34	4548.24	3797.33	1325.5	566.98	394.97	304.04	205.96	175.16	205.96	304.04	394.97	566.98	1325.5	3797.33	4548.24	4906.34	4409.11	3598.81	3255.14	3197.67
37	3323.16	3401.7	3734.38	4499.93	4986.81	4560.12	3748.2	1234.47	567.98	390.6	298.16	186.65	156.13	186.65	298.16	390.6	567.98	1234.47	3748.2	4560.12	4986.81	4499.93	3734.38	3401.7	3323.16
38	3451.8	3526.47	3875.04	4573.55	5048.72	4552.22	3693.86	1148.84	566.59	389.66	284.97	167.3	137.11	167.3	284.97	389.66	566.59	1148.84	3693.86	4552.22	5048.72	4573.55	3875.04	3526.47	3451.8
39	3570.53	3652.26	4019.07	4625.71	5094.6	4539.06	3627.28	1069.15																	

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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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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

4.0 LM-79 Measurement and Test Results

4.3 THD and PF Test

Model No.	ALEDS3TN	Sample ID.	C1
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
119.98	60	0.676	81.1	0.999	2.02%
277.01	60	0.295	78.9	0.965	8.16%

5.0 Equipment Information

Test Equipment			
Equipment ID	Equipment Name	Last Calibration Date	Calibration Due Date
DLF107	Integrating Sphere System	2021/12/26	2022/12/25
DLF108	Auxiliary Lamp	2021/12/26	2022/12/25
DLF122	Measurement Standard Lamp Standard Lamp Type: 220 V, 0.4720 A, Tungsten, Omni-derectional	2021/12/26	2022/12/25
DLF116	AC Power Source	2021/12/26	2022/12/25
DLF113	Power Meter	2021/12/26	2022/12/25
DLF112	Temperature Recorder	2021/12/26	2022/12/25
DLF114	Temperature & Humidity Datalogger	2021/12/26	2022/12/25
DLF101	Goniophotometer	2021/12/26	2022/12/25
DLF125	Standard Lamp Standard Lamp Type: 76.58 V, 6.7875 A, Tungsten, Omni-derectional	2021/12/26	2022/12/25
DLF104	AC Power Source	2021/12/26	2022/12/25
DLF507	DC Power Source	2021/12/26	2022/12/25
DLF102	Power Meter	2021/12/26	2022/12/25
DLF111	Temperature & Humidity Datalogger	2021/12/26	2022/12/25
DLF119	Power Meter	2021/12/26	2022/12/25
DLF031	Temperature data logger	2021/12/26	2022/12/25
DLF022	Digital power meter	2021/12/26	2022/12/25
DLF003	Temperature & Humidity Datalogger	2021/12/26	2022/12/25

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