

Photometric Test Report

Relevant Standards

- ☒ IES LM-79-2019
- ☒ ANSI C82.77-10:2014

Prepared For

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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 - Non-Cutoff and Semi-Cutoff Wall-Mounted Area Luminaires				
Requirement Category	Test Method	Requirements		Test value
Luminaire Output (lm) (Goniophotometer - Section 4.2 (0°-180° zones)	IES LM-79-2019	300		1791
Minimum Luminaire Efficacy (lm/W) (Goniophotometer - Section 4.2) (0°-180° zones)	IES LM-79-2019	Standard 105	Premium 120	133.7
Luminaire Output (lm) (Goniophotometer - Section 4.2) (0°-90° zones)	IES LM-79-2019	300		1113
Minimum Luminaire Efficacy (lm/W) (Goniophotometer - Section 4.2) (0°-90° zones)	IES LM-79-2019	Standard 105	Premium 120	83.1
Power (Input Wattage) (W) (Goniophotometer - Section 4.2)	IES LM-79-2019	Worst Case		13.4
Total Harmonic Distortion (A%) (THD & PF - section 4.3)	ANSI C82.77-10:2014	20.00%	120V	5.26%
		20.00%	277V	10.91%
Power Factor (THD & PF - section 4.3)	ANSI C82.77-10:2014	0.9	120V	0.996
		0.9	277V	0.947
Allowable CCTs* (K) (Integrating Sphere - Section 4.1)	IES LM-79-2019	7 step	5029±283	4935
		4 step	5029±220	
Minimum CRI (Integrating Sphere - Section 4.1)	IES LM-79-2019 CIE 13.3-1995	≥70		84
Minimum R9 (Integrating Sphere - Section 4.1)	IES LM-79-2019 CIE 13.3-1995	-		14
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		96
IES Rcs,h1 (Integrating Sphere - Section 4.1)	ANSI/IES TM-30-18	-18%≤IES Rcs,h1≤+23%		-11%
Zonal Lumen Requirement (80°-90°) (Goniophotometer - Section 4.2)	IES LM-79-2019	≤10%		18.49%
Input Voltage (V)				
(Goniophotometer - Section 4.2)	IES LM-79-2019	Worst Case		277
(Goniophotometer - Section 4.2)		Non-Worst Case		120
Input Current (A)				
(Goniophotometer - Section 4.2)	IES LM-79-2019	Worst Case		0.051
(Goniophotometer - Section 4.2)		Non-Worst Case		0.111
Power (Input Wattage - W)				
(Goniophotometer - Section 4.2)	IES LM-79-2019	Worst Case		13.4
(Goniophotometer - Section 4.2)		Non-Worst Case		13.3

2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025/3/5	ET @ 14W/5000K	N/A	DLF2503101-I1
2	Goniophotometer Test	2025/3/5	ET @ 14W/5000K	N/A	DLF2503101-I1
3	THD and PF Test	2025/3/5	ET @ 14W/5000K	N/A	DLF2503101-I1

Remark(If any)

1. This report shall not be used by the client to claim product endorsement by NVLAP, NIST or any agency of the US government.
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: ET @ 14W/5000K

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

Received Date: 2025/3/4

Photos of Luminaire Characteristics



4.0 LM-79 Measurement and Test Results

4.1 Integrating Sphere Test

Model No.	ET @ 14W/5000K	Sample ID.	DLF2503101-I1
Operate time (Min.)	90	Stabilization time (Min.)	45
Temperature (°C)	25.1	Humidity (%RH)	57.0

Test Method

The samples were tested according to the IES LM-79-2019.

Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature and relative humidity condition inside the sphere was maintained at $25^{\circ}\text{C} \pm 1.2^{\circ}\text{C}$ and 10% - 65% RH.

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
120.05	60	0.111	13.3	0.996
276.97	60	0.051	13.4	0.947

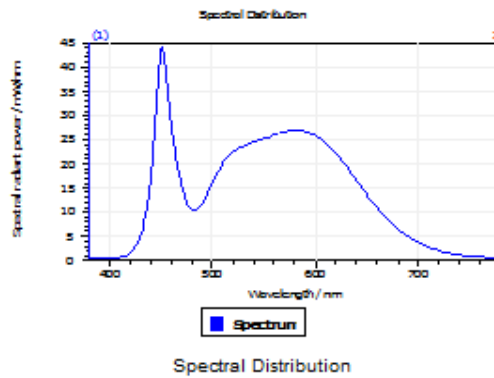
Test Result

CCT (K)	CRI	R9	Duv
4935	84	14	0.0025

Rf	Rg	IES Rcs,h1
84	96	-11%

4.1 Integrating Sphere Test

Results

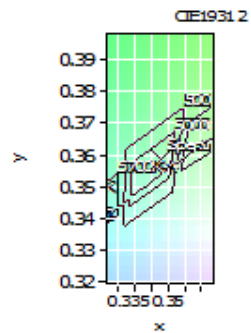


Spectral values

DominantWavelength 571.24 nm
Purity 0.119
PeakWavelength 451.13 nm
Radiant Power 5.381 W
Width50%:

Color Coordinates

Correlated Color Temperat 4935 K
x: 0.3475 u: 0.2103 u': 0.2103
y: 0.3587 v: 0.3256 v': 0.4884
CRI01 81.5 CRI09 14.2
CRI02 88.5 CRI10 72.2
CRI03 92.8 CRI11 80.8
CRI04 82.2 CRI12 55.9
CRI05 81.5 CRI13 83.4
CRI06 83.5 CRI14 96.2
CRI07 88.5 CRI15 76.1
CRI08 69.2 CRI16 73.4
ResultsCRI 83.5



PlanckDistance 2.5E-003

4.1 Integrating Sphere Test

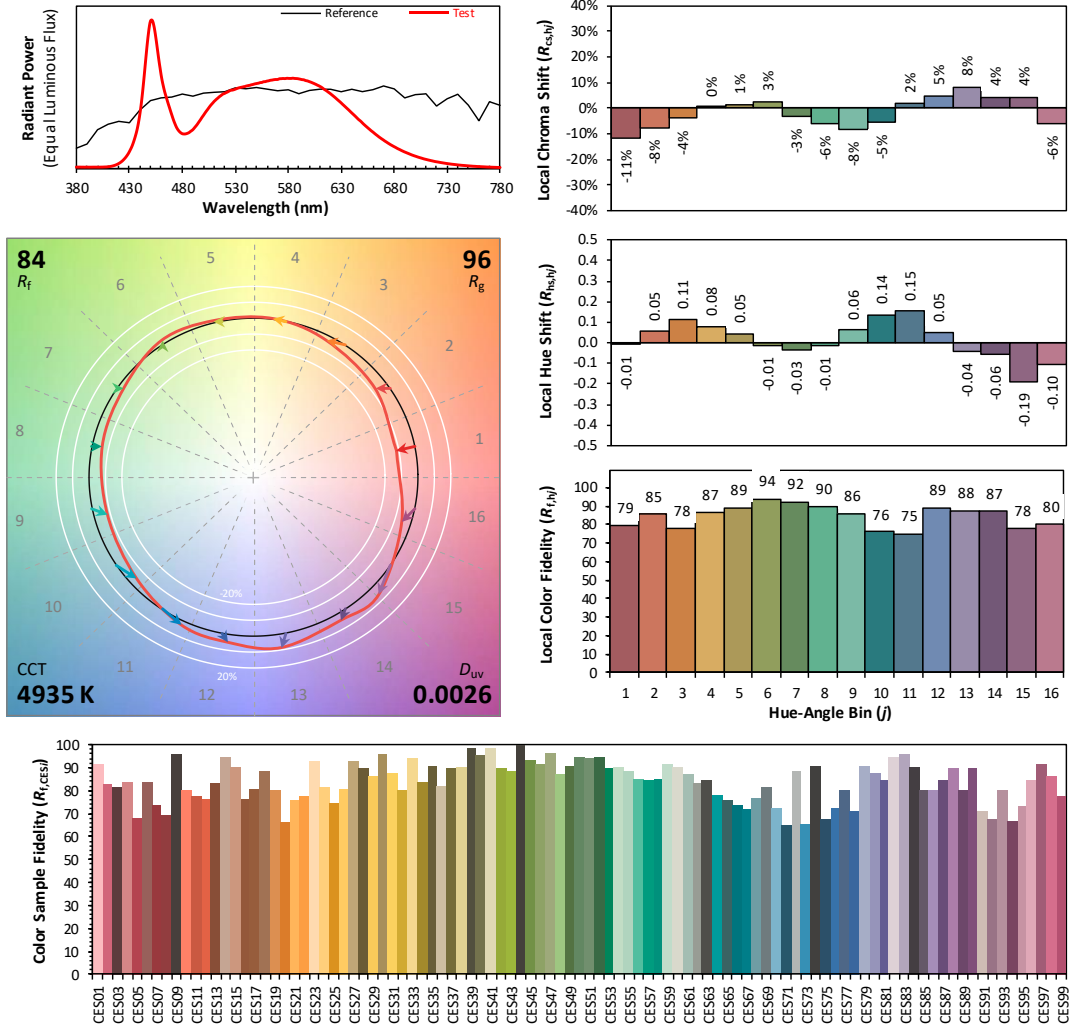
IES TM-30-18 Color Rendition Report

Source: DLF2503101-9a

Manufacturer: RAB Lighting Inc.

Date: 2025/3/5

Model: ET @ 14W/5000K



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

x 0.3475
 y 0.3587
 u' 0.2103
 v' 0.4884

CIE 13.3-1995
(CRI)

R_a 84
 R_g 21

4.1 Integrating Sphere Test

Spectral Distribution over Visible Wavelength							
WL (nm)	Radiant (Watts/nm)	WL (nm)	Radiant (Watts/nm)	WL (nm)	Radiant (Watts/nm)	WL (nm)	Radiant (Watts/nm)
380	4.71E-04	485	1.05E-02	590	2.67E-02	695	4.30E-03
385	4.57E-04	490	1.16E-02	595	2.64E-02	700	3.72E-03
390	4.58E-04	495	1.36E-02	600	2.59E-02	705	3.21E-03
395	4.59E-04	500	1.59E-02	605	2.52E-02	710	2.76E-03
400	4.58E-04	505	1.81E-02	610	2.44E-02	715	2.38E-03
405	4.83E-04	510	2.00E-02	615	2.34E-02	720	2.05E-03
410	5.80E-04	515	2.14E-02	620	2.22E-02	725	1.77E-03
415	8.78E-04	520	2.24E-02	625	2.09E-02	730	1.52E-03
420	1.54E-03	525	2.32E-02	630	1.95E-02	735	1.31E-03
425	2.82E-03	530	2.36E-02	635	1.81E-02	740	1.12E-03
430	5.04E-03	535	2.41E-02	640	1.66E-02	745	9.73E-04
435	8.94E-03	540	2.45E-02	645	1.50E-02	750	8.40E-04
440	1.64E-02	545	2.49E-02	650	1.36E-02	755	7.21E-04
445	3.09E-02	550	2.53E-02	655	1.22E-02	760	6.31E-04
450	4.39E-02	555	2.56E-02	660	1.09E-02	765	5.46E-04
455	3.89E-02	560	2.60E-02	665	9.60E-03	770	4.66E-04
460	2.78E-02	565	2.63E-02	670	8.49E-03	775	4.08E-04
465	2.11E-02	570	2.65E-02	675	7.44E-03	780	3.56E-04
470	1.60E-02	575	2.68E-02	680	6.53E-03		
475	1.20E-02	580	2.68E-02	685	5.71E-03		
480	1.04E-02	585	2.69E-02	690	4.95E-03		

4.0 LM-79 Measurement and Test Results

4.2 Goniophotometer Test

Model No.	ET @ 14W/5000K	Sample ID.	DLF2503101-I1
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-79-2019.

Photometric paramters were measured using a type C goniophotometer and software.

The ambient temperature shall be maintained at 25° C ± 1.2° C and 10% - 65% RH, 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.

Airflow for the instantaneous tangential velocity of any point on the DUT shall be less than an upper tolerance limit of 0.20 m/s.

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	277.01	60	0.051	13.4	0.947
NON-WORST CASE	120.00	60	0.111	13.3	0.996

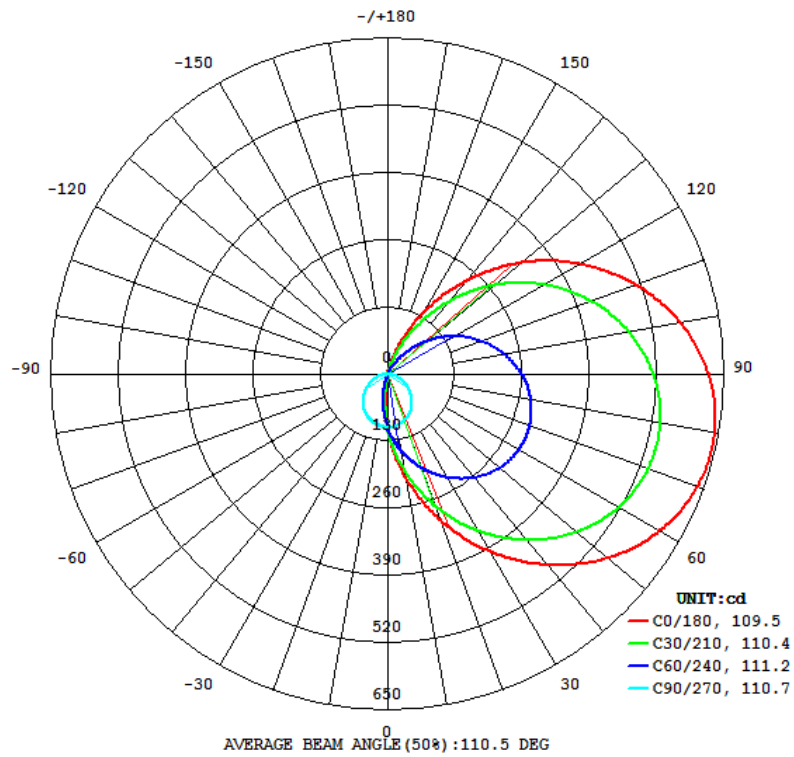
Test Result

Result type	Flux (lm)	Field Angle(10%)		Beam Angle(50%)		Luminous Efficacy (lm/W)
		C0-180	C90-270	C0-180	C90-270	
0°-180° zones	1791	162.4	161.8	109.5	110.7	133.7
0°-90° zones	1113	94.2	161.8	67.7	110.7	83.1

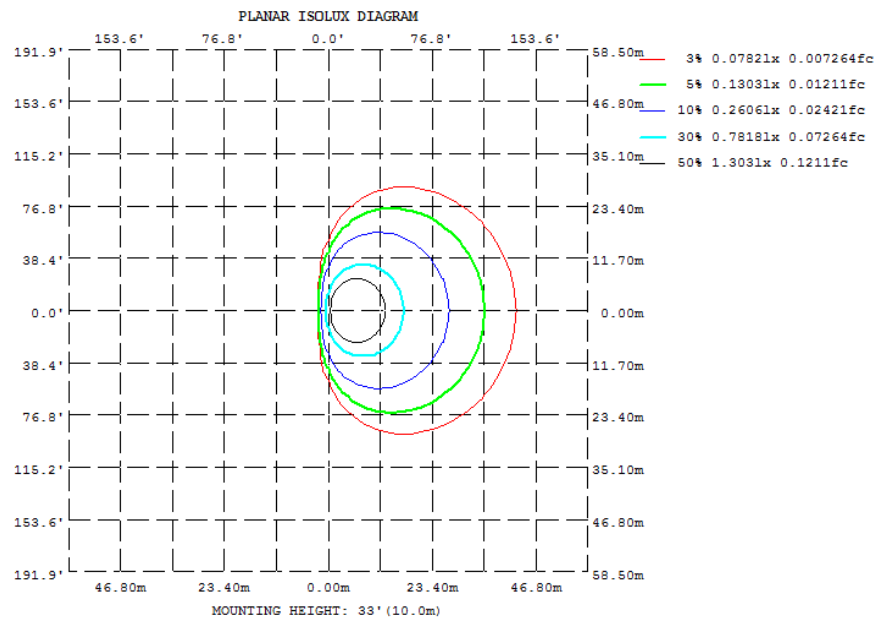
Zonal Lumen Requirement (80°-90°)	BUG rating
18.49%	B0-U3-G2

4.2 Goniophotometer Test

Light Distrubtion Curve



Isolux Plot



4.2 Goniophotometer Test

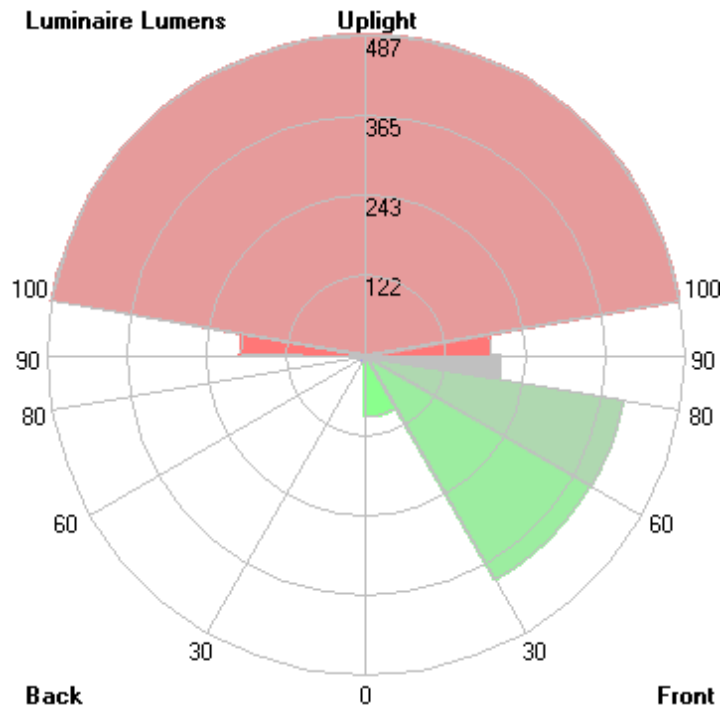
Zonal Lumen Summary

γ	C0	C45	C90	C135	C180	C225	C270	C315
10	201.3	171.0	102.0	40.51	18.43	40.51	102.0	171.0
20	301.5	237.3	96.49	0.3246	0.3802	0.3246	96.49	237.3
30	396.6	297.9	87.42	0.2781	0.3560	0.2781	87.42	297.9
40	482.2	349.2	75.13	0.2858	0.3478	0.2858	75.13	349.2
50	553.8	388.7	60.46	0.3658	0.4177	0.3658	60.46	388.7
60	606.5	414.5	44.27	0.3692	0.4803	0.3692	44.27	414.5
70	636.9	424.9	27.44	0.3605	0.4608	0.3605	27.44	424.9
80	642.0	419.7	11.59	0.3535	0.3783	0.3535	11.59	419.7
90	620.6	398.9	1.600	0.3685	0.3935	0.3685	1.600	398.9
100	575.2	363.7	0.1411	0.4081	0.4835	0.4081	0.1411	363.7
110	509.7	316.2	0.1509	0.4130	0.5494	0.4130	0.1509	316.2
120	428.9	258.8	0.1662	0.4042	0.5620	0.4042	0.1662	258.8
130	337.2	194.6	0.1967	0.3984	0.5382	0.3984	0.1967	194.6
140	238.6	127.2	0.2383	0.3913	0.5031	0.3913	0.2383	127.2
150	139.0	60.48	0.2557	0.3383	0.3988	0.3383	0.2557	60.48
160	48.09	3.963	0.2618	0.2643	0.2457	0.2643	0.2618	3.963
170	0.1013	0.2087	0.2295	0.1808	0.1203	0.1808	0.2295	0.2087
180	0.1278	0.1864	0.1989	0.1755	0.1275	0.1755	0.1989	0.1864
DEG	LUMINOUS INTENSITY:cd							

	Zonal (lm)		Total (lm)	Percent
0-10	9.99	0 - 10	9.99	0.56%
10-20	31.96	0 - 20	41.95	2.34%
20-30	61.90	0 - 30	103.85	5.80%
30-40	97.83	0 - 40	201.68	11.26%
40-50	135.12	0 - 50	336.80	18.80%
50-60	169.02	0 - 60	505.82	28.24%
60-70	194.27	0 - 70	700.09	39.08%
70-80	207.12	0 - 80	907.21	50.65%
80-90	205.86	0 - 90	1113.07	62.14%
90-100	191.20	0 - 100	1304.27	72.81%
100-110	165.16	0 - 110	1469.43	82.03%
110-120	131.14	0 - 120	1600.57	89.36%
120-130	93.75	0 - 130	1694.32	94.59%
130-140	58.14	0 - 140	1752.46	97.84%
140-150	28.96	0 - 150	1781.42	99.45%
150-160	9.06	0 - 160	1790.48	99.96%
160-170	0.74	0 - 170	1791.22	100.00%
170-180	0.02	0 - 180	1791.24	100.00%

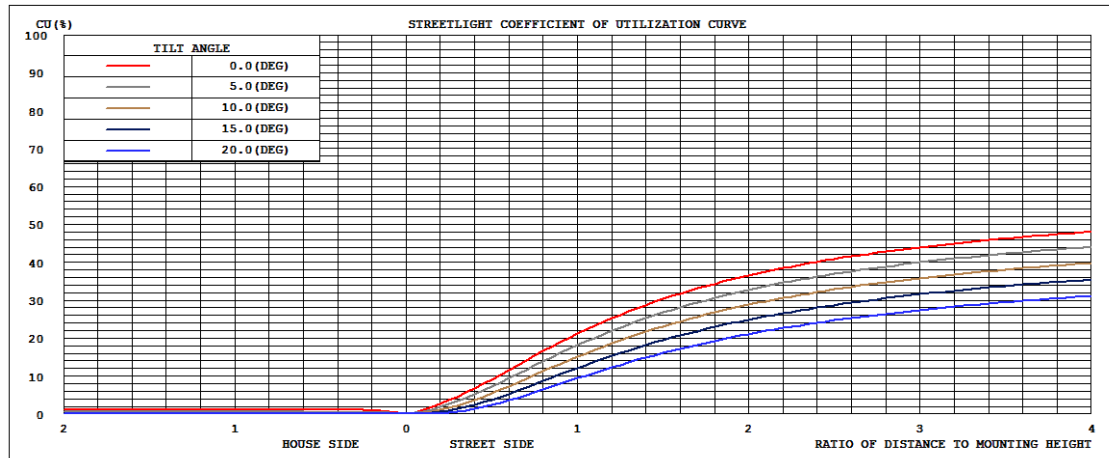
4.2 Goniophotometer Test

LCS/BUG

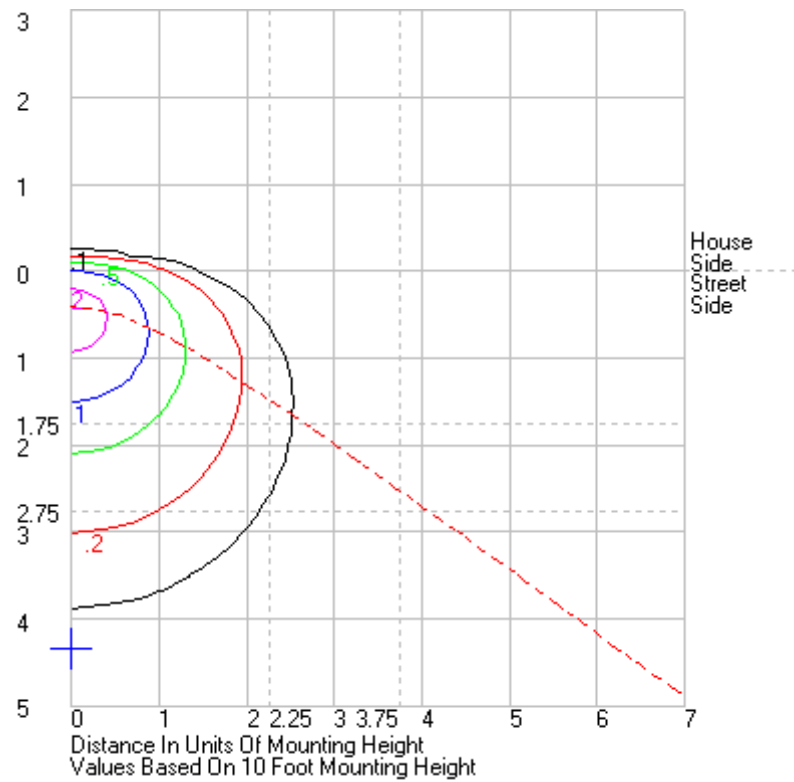


	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	93.3	N.A.	5.2
FM - Front-Medium (30-60)	394.6	N.A.	22.0
FH - Front-High (60-80)	398.7	N.A.	22.3
FVH - Front-Very High (80-90)	205.4	N.A.	11.5
BL - Back-Low (0-30)	10.5	N.A.	0.6
BM - Back-Medium (30-60)	7.3	N.A.	0.4
BH - Back-High (60-80)	2.7	N.A.	0.1
BVH - Back-Very High (80-90)	0.4	N.A.	0.0
UL - Uplight-Low (90-100)	191.2	N.A.	10.7
UH - Uplight-High (100-180)	487.0	N.A.	27.2
Total	1791.1	N.A.	100.0
BUG Rating	B0-U3-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	103.41	103.41	103.41	103.41	103.41	103.41	103.41	103.41	103.41	103.41	103.41	103.41	103.41	103.41	103.41	103.41	103.41	103.41	103.41	103.41	103.41	103.41	103.41	103.41	
1	112.53	111.95	111.25	109.98	108.4	106.23	103.78	101.4	99.029	96.887	95.169	94.026	93.895	94.026	95.169	96.887	99.029	101.4	103.78	106.23	108.4	109.98	111.25	111.95	112.53
2	122.02	121.24	119.63	116.78	113.07	108.62	103.74	98.89	94.325	90.239	87.183	85.036	84.606	85.036	87.183	90.239	94.325	98.89	103.74	108.62	113.07	116.78	119.63	121.24	122.02
3	131.61	130.45	127.82	123.39	117.67	110.96	103.66	96.465	89.674	83.845	79.354	76.492	75.662	76.492	79.354	83.845	89.674	96.465	103.66	110.96	117.67	123.39	127.82	130.45	131.61
4	141.62	139.95	136.11	130.18	122.38	113.3	103.54	93.964	85.003	77.372	71.54	67.848	66.892	67.848	71.54	77.372	85.003	93.964	103.54	113.3	122.38	130.18	136.11	139.95	141.62
5	151.62	149.45	144.6	136.87	127.02	115.59	103.34	91.418	80.435	71.077	64.004	59.564	58.316	59.564	64.004	71.077	80.435	91.418	103.34	115.59	127.02	136.87	144.6	149.45	151.62
6	161.37	159.04	153.17	143.73	131.7	117.87	103.18	88.875	75.788	64.757	56.44	51.374	49.641	51.374	56.44	64.757	75.788	88.875	103.18	117.87	131.7	143.73	153.17	159.04	161.37
7	171.33	168.52	161.71	150.69	136.36	120.04	102.9	86.268	71.216	58.602	49.132	43.222	41.353	43.222	49.132	58.602	71.216	86.268	102.9	120.04	136.36	150.69	161.71	168.52	171.33
8	181.45	178.12	170.14	157.5	140.96	122.24	102.66	83.707	66.619	52.538	41.964	35.368	33.397	35.368	41.964	52.538	66.619	83.707	102.66	122.24	140.96	157.5	170.14	178.12	181.45
9	191.34	187.84	178.64	164.25	145.61	124.42	102.36	81.101	62.412	46.497	34.838	27.636	25.528	27.636	34.838	46.497	62.412	81.101	102.36	124.42	145.61	164.25	178.64	187.84	191.34
10	201.26	197.44	187.26	171.04	150.23	126.51	101.97	78.505	57.81	40.51	27.884	20.393	18.429	20.393	27.884	40.51	57.81	78.505	101.97	126.51	150.23	171.04	187.26	197.44	201.26
11	211.55	207.11	195.82	177.79	154.82	128.61	101.6	75.918	53.236	34.666	21.117	13.459	11.329	13.459	21.117	34.666	53.236	75.918	101.6	128.61	154.82	177.79	195.82	207.11	211.55
12	221.27	216.75	204.26	184.6	159.2	130.66	101.17	73.252	48.802	28.948	14.981	7.17	5.317	7.17	14.981	28.948	48.802	73.252	101.17	130.66	159.2	184.6	204.26	216.75	221.27
13	231.48	226.38	212.78	191.3	163.63	132.59	100.73	70.634	44.399	23.326	9.198	3.473	1.785	3.473	9.198	23.326	44.399	70.634	100.73	132.59	163.63	191.3	212.78	226.38	231.48
14	241.69	236.19	221.26	197.97	168.12	134.52	100.2	67.967	40.033	17.895	4.887	0.652	0.35	0.652	4.887	17.895	40.033	67.967	100.2	134.52	168.12	197.97	221.26	236.19	241.69
15	251.73	245.82	229.87	204.59	172.46	136.44	99.67	65.351	35.757	12.867	1.995	0.244	0.343	0.244	1.995	12.867	35.757	65.351	99.67	136.44	172.46	204.59	229.87	245.82	251.73
16	261.81	255.34	238.18	211.27	176.88	138.3	99.121	62.673	31.501	8.213	0.349	0.247	0.351	0.247	0.349	8.213	31.501	62.673	99.121	138.3	176.88	211.27	238.18	255.34	261.81
17	271.77	264.97	246.68	217.86	181.14	140.1	98.502	60.008	27.275	4.961	0.278	0.252	0.359	0.252	0.278	4.961	27.275	60.008	98.502	140.1	181.14	217.86	246.68	264.97	271.77
18	281.72	274.6	255.08	224.43	185.43	141.87	97.901	57.372	23.122	2.215	0.282	0.256	0.367	0.256	0.282	2.215	23.122	57.372	97.901	141.87	185.43	224.43	255.08	274.6	281.72
19	291.42	284	263.32	230.95	189.62	143.6	97.255	54.708	19.055	0.687	0.286	0.261	0.373	0.261	0.286	0.687	19.055	54.708	97.255	143.6	189.62	230.95	263.32	284	291.42
20	301.46	293.49	271.5	237.34	193.74	145.3	96.492	51.99	15.188	0.325	0.29	0.265	0.38	0.265	0.29	0.325	15.188	51.99	96.492	145.3	193.74	237.34	271.5	293.49	301.46
21	311.3	302.93	279.84	243.73	197.8	147.03	95.745	49.331	11.625	0.323	0.291	0.268	0.385	0.268	0.291	0.323	11.625	49.331	95.745	147.03	197.8	243.73	279.84	302.93	311.3
22	321	312.08	287.99	250.01	201.83	148.52	94.97	46.625	8.335	0.32	0.291	0.269	0.387	0.269	0.291	0.32	8.335	46.625	94.97	148.52	201.83	250.01	287.99	312.08	321
23	330.71	321.5	296.01	256.22	205.82	150	94.138	43.91	5.844	0.315	0.289	0.269	0.386	0.269	0.289	0.315	5.844	43.91	94.138	150	205.82	256.22	296.01	321.5	330.71
24	340.42	330.68	304.12	262.39	209.75	151.41	93.283	41.225	3.593	0.31	0.286	0.268	0.384	0.268	0.286	0.31	3.593	41.225	93.283	151.41	209.75	262.39	304.12	330.68	340.42
25	350.01	339.93	312.05	268.58	213.62	152.86	92.355	38.551	1.951	0.304	0.282	0.267	0.381	0.267	0.282	0.304	1.951	38.551	92.355	152.86	213.62	268.58	312.05	339.93	350.01
26	359.59	348.97	319.95	274.55	217.34	154.19	91.444	35.83	0.85	0.298	0.278	0.266	0.378	0.266	0.278	0.298	0.85	35.83	91.444	154.19	217.34	274.55	319.95	348.97	359.59
27	368.74	357.93	327.71	280.51	221.06	155.48	90.49	33.169	0.393	0.292	0.274	0.264	0.373	0.264	0.274	0.292	0.393	33.169	90.49	155.48	221.06	280.51	327.71	357.93	368.74
28	378.07	366.99	335.44	286.4	224.72	156.74	89.527	30.51	0.306	0.287	0.269	0.262	0.366	0.262	0.269	0.287	0.306	30.51	89.527	156.74	224.72	286.4	335.44	366.99	378.07
29	387.5	375.41	342.88	292.04	228.25	157.89	88.504	27.865	0.3	0.282	0.266	0.26	0.36	0.26	0.266	0.282	0.3	27.865	88.504	157.89	228.25	292.04	342.88	375.41	387.5
30	396.62	384.45	350.48	297.88	231.82	159.05	87.416	25.239	0.296	0.278	0.264	0.26	0.356	0.26	0.264	0.278	0.296	25.239	87.416	159.05	231.82	297.88	350.48	384.45	396.62
31	405.45	392.94	357.78	303.43	235.17	160.05	86.308	22.656	0.293	0.277	0.265	0.262	0.354	0.262	0.265	0.277	0.293	22.656	86.308	160.05	235.17	303.43	357.78	392.94	405.45
32	414.48	401.47	365.07	308.94	238.49	161.01	85.185	20.066	0.292	0.276	0.266	0.265	0.352	0.265	0.266	0.276	0.292	20.066	85.185	161.01	238.49	308.94	365.07	401.47	414.48
33	423.69	409.92	372.4	314.41	241.69	162.04	84.028	17.541	0.29	0.276	0.267	0.268	0.35	0.268	0.267	0.276	0.29	17.541	84.028	162.04	241.69	314.41	372.4	409.92	423.69
34	432.22	418.15	379.43	319.64	244.87	162.85	82.849	15.138	0.289	0.276	0.269	0.271	0.348	0.271	0.269	0.276	0.289	15.138	82.849	162.85	244.87	319.64	379.43	418.15	432.22
35	440.75	426.51	386.29	324.91	248	163.71	81.63	12.898	0.287	0.276	0.271	0.274	0.345	0.274	0.271	0.276	0.287	12.898	81.63	163.71	248	324.91	386.29	426.51	440.75
36	449.35	434.72	393.27	329.97	250.95	164.38	80.365	10.82	0.286	0.277	0.274	0.279	0.345	0.279	0.274	0.277	0.286	10.82	80.365	164.38	250.95	329.97	393.27	434.72	449.35
37	457.86	442.52	399.97	334.86	253.83	165.12	79.105	8.825	0.285	0.277	0.278	0.285	0.344	0.285	0.278	0.277	0.285	8.825	79.105	165.12	253.83	334.86	399.97	442.52	457.86
38	466.16	450.44	406.6	339.74	256.49	165.72	77.816	7.175	0.285	0.28	0.282	0.29	0.345	0.29	0.282	0.28	0.285	7.175	77.816	165.72	256.49	339.74	406.6	450.44	466.16
39	474.26	458.08	413	344.46	259.26	166.3	76.418	5.61	0.286	0.282	0.288	0.298	0.346	0.298	0.288	0.282	0.286	5.61	76.418	166.3	259.26	344.46	413	458.08	474.26
40	482.19	465.8	419.38	349.17	261.92	166.8	75.126	4.257	0.286	0.286	0.294	0.306	0.348	0.306	0.294	0.286	0.286	4.257	75.126	166.8	261.92	349.17	419.38	465.8	482.19
41	490.08	473.17	425.65	353.68	264.37	167.29	73.728	3.096	0.288	0.29	0.301	0.315	0.351	0.315	0.301	0.29	0.288	3.096	73.728	167.29	264.37	353.68	425.65	473.17	490.08
42	497.95	480.6	431.74	358.09	266.95	167.6	72.349	2.139	0.29	0.295	0.309	0.325	0.356	0.325	0.309	0.295	0.29	2.139	72.349	167.6	266.95	358.09	431.74	480.6	497.95
43																									

50	553.83	533.03	475.29	388.65	282.64	168.3	60.462	0.293	0.332	0.366	0.404	0.433	0.418	0.433	0.404	0.366	0.332	0.293	60.462	168.3	282.64	388.65	475.29	533.03	553.83
51	559.88	538.76	480.13	391.81	284.15	168.11	58.88	0.294	0.336	0.372	0.413	0.442	0.426	0.442	0.413	0.372	0.336	0.294	58.88	168.11	284.15	391.81	480.13	538.76	559.88
52	565.94	544.31	484.72	395	285.62	167.8	57.341	0.294	0.338	0.377	0.419	0.45	0.434	0.45	0.419	0.377	0.338	0.294	57.341	167.8	285.62	395	484.72	544.31	565.94
53	571.84	549.82	489.1	397.93	286.98	167.45	55.715	0.293	0.339	0.38	0.424	0.457	0.441	0.457	0.424	0.38	0.339	0.293	55.715	167.45	286.98	397.93	489.1	549.82	571.84
54	577.65	555.19	493.23	400.83	288.16	167.05	54.107	0.292	0.339	0.382	0.428	0.461	0.448	0.461	0.428	0.382	0.339	0.292	54.107	167.05	288.16	400.83	493.23	555.19	577.65
55	582.84	560	497.4	403.34	289.22	166.63	52.516	0.289	0.338	0.382	0.43	0.464	0.453	0.464	0.43	0.382	0.338	0.289	52.516	166.63	289.22	403.34	497.4	560	582.84
56	588.25	564.99	501.21	405.92	290.23	166.04	50.864	0.286	0.335	0.381	0.429	0.464	0.459	0.464	0.429	0.381	0.335	0.286	50.864	166.04	290.23	405.92	501.21	564.99	588.25
57	593.19	569.65	505	408.19	291.11	165.54	49.235	0.282	0.332	0.378	0.428	0.465	0.465	0.465	0.428	0.378	0.332	0.282	49.235	165.54	291.11	408.19	505	569.65	593.19
58	597.71	574.1	508.66	410.52	291.85	164.91	47.595	0.279	0.328	0.375	0.427	0.465	0.469	0.465	0.427	0.375	0.328	0.279	47.595	164.91	291.85	410.52	508.66	574.1	597.71
59	602.36	578.2	511.93	412.49	292.57	164.16	45.939	0.275	0.324	0.372	0.425	0.465	0.475	0.465	0.425	0.372	0.324	0.275	45.939	164.16	292.57	412.49	511.93	578.2	602.36
60	606.55	582.31	515.1	414.49	293.13	163.31	44.272	0.271	0.321	0.369	0.423	0.465	0.48	0.465	0.423	0.369	0.321	0.271	44.272	163.31	293.13	414.49	515.1	582.31	606.55
61	610.81	586.01	518	416.22	293.6	162.54	42.593	0.267	0.318	0.367	0.421	0.465	0.486	0.465	0.421	0.367	0.318	0.267	42.593	162.54	293.6	416.22	518	586.01	610.81
62	614.84	589.72	520.69	417.88	293.93	161.68	40.936	0.264	0.315	0.364	0.419	0.465	0.489	0.465	0.419	0.364	0.315	0.264	40.936	161.68	293.93	417.88	520.69	589.72	614.84
63	618.13	592.93	523.26	419.27	294.15	160.71	39.229	0.261	0.312	0.362	0.417	0.464	0.491	0.464	0.417	0.362	0.312	0.261	39.229	160.71	294.15	419.27	523.26	592.93	618.13
64	621.73	596.39	525.65	420.63	294.31	159.7	37.57	0.257	0.31	0.361	0.414	0.461	0.494	0.461	0.414	0.361	0.31	0.257	37.57	159.7	294.31	420.63	525.65	596.39	621.73
65	624.89	599.1	527.9	421.53	294.31	158.65	35.861	0.255	0.308	0.36	0.412	0.46	0.495	0.46	0.412	0.36	0.308	0.255	35.861	158.65	294.31	421.53	527.9	599.1	624.89
66	628.16	602.01	529.86	422.68	294.2	157.51	34.184	0.252	0.306	0.36	0.409	0.456	0.493	0.456	0.409	0.36	0.306	0.252	34.184	157.51	294.2	422.68	529.86	602.01	628.16
67	630.56	604.42	531.51	423.56	294.02	156.36	32.517	0.249	0.305	0.36	0.407	0.451	0.489	0.451	0.407	0.36	0.305	0.249	32.517	156.36	294.02	423.56	531.51	604.42	630.56
68	632.91	606.54	533.06	424.1	293.75	155.11	30.779	0.247	0.303	0.36	0.404	0.444	0.481	0.444	0.404	0.36	0.303	0.247	30.779	155.11	293.75	424.1	533.06	606.54	632.91
69	635.09	608.54	534.45	424.58	293.22	153.77	29.115	0.244	0.302	0.36	0.401	0.438	0.471	0.438	0.401	0.36	0.302	0.244	29.115	153.77	293.22	424.58	534.45	608.54	635.09
70	636.85	610.18	535.51	424.93	292.65	152.44	27.438	0.242	0.301	0.361	0.4	0.431	0.461	0.431	0.4	0.361	0.301	0.242	27.438	152.44	292.65	424.93	535.51	610.18	636.85
71	638.66	611.66	536.55	425.34	292.15	151.1	25.74	0.239	0.3	0.36	0.398	0.425	0.449	0.425	0.398	0.36	0.3	0.239	25.74	151.1	292.15	425.34	536.55	611.66	638.66
72	640.19	612.97	537.18	425.22	291.47	149.6	24.08	0.237	0.298	0.359	0.398	0.421	0.437	0.421	0.398	0.359	0.298	0.237	24.08	149.6	291.47	425.22	537.18	612.97	640.19
73	641.2	613.83	537.54	424.99	290.49	148.15	22.409	0.234	0.297	0.359	0.398	0.418	0.426	0.418	0.398	0.359	0.297	0.234	22.409	148.15	290.49	424.99	537.54	613.83	641.2
74	642.03	614.59	537.98	424.76	289.63	146.59	20.786	0.232	0.297	0.358	0.398	0.416	0.414	0.416	0.398	0.358	0.297	0.232	20.786	146.59	289.63	424.76	537.98	614.59	642.03
75	642.62	615.02	537.99	424.27	288.46	145.04	19.162	0.229	0.295	0.358	0.398	0.415	0.404	0.415	0.398	0.358	0.295	0.229	19.162	145.04	288.46	424.27	537.99	615.02	642.62
76	643.09	615.36	537.9	423.66	287.39	143.34	17.604	0.227	0.294	0.357	0.398	0.416	0.397	0.416	0.398	0.357	0.294	0.227	17.604	143.34	287.39	423.66	537.9	615.36	643.09
77	643.24	615.21	537.4	422.9	286.02	141.67	16.035	0.224	0.293	0.357	0.398	0.417	0.392	0.417	0.398	0.357	0.293	0.224	16.035	141.67	286.02	422.9	537.4	615.21	643.24
78	642.76	614.95	536.72	422.03	284.61	139.92	14.497	0.22	0.29	0.355	0.398	0.416	0.386	0.416	0.398	0.355	0.29	0.22	14.497	139.92	284.61	422.03	536.72	614.95	642.76
79	642.72	614.64	536.02	420.89	283.26	138.08	13.05	0.217	0.288	0.354	0.398	0.417	0.381	0.417	0.398	0.354	0.288	0.217	13.05	138.08	283.26	420.89	536.02	614.64	642.72
80	641.98	613.72	535.14	419.73	281.6	136.19	11.59	0.213	0.286	0.353	0.398	0.417	0.378	0.417	0.398	0.353	0.286	0.213	11.59	136.19	281.6	419.73	535.14	613.72	641.98
81	641.03	612.8	534.02	418.25	279.89	134.25	10.251	0.21	0.284	0.353	0.399	0.419	0.375	0.419	0.399	0.353	0.284	0.21	10.251	134.25	279.89	418.25	534.02	612.8	641.03
82	639.79	611.55	532.73	416.71	278.17	132.33	8.913	0.207	0.283	0.353	0.4	0.42	0.374	0.42	0.4	0.353	0.283	0.207	8.913	132.33	278.17	416.71	532.73	611.55	639.79
83	638.26	610.05	530.99	415.02	276.23	130.39	7.619	0.205	0.282	0.354	0.402	0.423	0.374	0.423	0.402	0.354	0.282	0.205	7.619	130.39	276.23	415.02	530.99	610.05	638.26
84	636.33	608.24	529	413.18	274.18	128.35	6.458	0.203	0.281	0.355	0.404	0.426	0.375	0.426	0.404	0.355	0.281	0.203	6.458	128.35	274.18	413.18	529	608.24	636.33
85	634.43	606.27	527.12	411.08	272.25	126.36	5.376	0.202	0.282	0.356	0.407	0.429	0.378	0.429	0.407	0.356	0.282	0.202	5.376	126.36	272.25	411.08	527.12	606.27	634.43
86	632.05	603.87	524.99	408.96	269.98	124.29	4.402	0.202	0.283	0.358	0.409	0.432	0.379	0.432	0.409	0.358	0.283	0.202	4.402	124.29	269.98	408.96	524.99	603.87	632.05
87	629.57	601.44	522.52	406.54	267.66	122.16	3.541	0.202	0.284	0.36	0.412	0.435	0.381	0.435	0.412	0.36	0.284	0.202	3.541	122.16	267.66	406.54	522.52	601.44	629.57
88	626.87	598.66	520.07	404.16	265.42	120.01	2.768	0.202	0.285	0.363	0.415	0.438	0.385	0.438	0.415	0.363	0.285	0.202	2.768	120.01	265.42	404.16	520.07	598.66	626.87
89	623.93	595.71	517.08	401.53	262.93	117.81	2.111	0.203	0.287	0.366	0.419	0.443	0.389	0.443	0.419	0.366	0.287	0.203	2.111	117.81	262.93	401.53	517.08	595.71	623.93
90	620.56	592.39	514.16	398.88	260.4	115.62	1.6	0.205	0.289	0.368	0.422	0.446	0.393	0.446	0.422	0.368	0.289	0.205	1.6	115.62	260.4	398.88	514.16	592.39	620.56
91	616.91	589.1	511.12	395.82	257.71	113.36	1.178	0.206	0.292	0.371	0.425	0.449	0.396	0.449	0.425	0.371	0.292	0.206	1.178	113.36	257.71	395.82	511.12	589.1	616.91
92	613.3	585.37	507.58	392.78	254.96	111.15	0.84	0.208	0.294	0.374	0.428	0.452	0.399	0.452	0.428	0.374	0.294	0.208	0.84	111.15	254.96	392.78	507.58	585.37	613.3
93	609.08	581.79	504.06	389.62	252.19	108.82	0.573	0.209	0.296	0.377	0.431	0.456	0.402	0.456	0.431	0.377	0.296	0.209	0.573	108.82	252.19	389.62	504.06	581.79	609.08
94	604.91	577.76	500.28	386.45	249.28	106.47	0.362	0.211	0.299	0.38	0.435	0.461	0.41	0.461	0.435	0.38	0.299	0.211							

104	551.07	525.71	453.52	346.02	215.83	81.911	0.145	0.226	0.324	0.414	0.481	0.519	0.516	0.519	0.481	0.414	0.324	0.226	0.145	81.911	215.83	346.02	453.52	525.71	551.07
105	544.71	519.64	447.95	341.31	212.05	79.356	0.145	0.227	0.324	0.415	0.482	0.521	0.523	0.521	0.482	0.415	0.324	0.227	0.145	79.356	212.05	341.31	447.95	519.64	544.71
106	537.82	513.14	442.41	336.54	208.19	76.811	0.147	0.227	0.324	0.415	0.483	0.522	0.529	0.522	0.483	0.415	0.324	0.227	0.147	76.811	208.19	336.54	442.41	513.14	537.82
107	531.08	506.68	436.44	331.56	204.39	74.207	0.148	0.227	0.323	0.413	0.48	0.515	0.534	0.515	0.48	0.413	0.323	0.227	0.148	74.207	204.39	331.56	436.44	506.68	531.08
108	524.09	499.91	430.42	326.57	200.44	71.61	0.149	0.227	0.321	0.412	0.48	0.516	0.54	0.516	0.48	0.412	0.321	0.227	0.149	71.61	200.44	326.57	430.42	499.91	524.09
109	516.95	492.92	424.39	321.42	196.47	69.024	0.15	0.227	0.321	0.412	0.48	0.518	0.545	0.518	0.48	0.412	0.321	0.227	0.15	69.024	196.47	321.42	424.39	492.92	516.95
110	509.67	486.01	418.22	316.19	192.4	66.42	0.151	0.228	0.322	0.413	0.481	0.519	0.549	0.519	0.481	0.413	0.322	0.228	0.151	66.42	192.4	316.19	418.22	486.01	509.67
111	502.16	479.07	411.86	310.92	188.24	63.797	0.152	0.229	0.323	0.415	0.484	0.52	0.554	0.52	0.484	0.415	0.323	0.229	0.152	63.797	188.24	310.92	411.86	479.07	502.16
112	494.45	471.7	405.29	305.43	184.22	61.208	0.153	0.23	0.325	0.417	0.486	0.524	0.557	0.524	0.486	0.417	0.325	0.23	0.153	61.208	184.22	305.43	405.29	471.7	494.45
113	486.77	464.18	398.62	299.85	179.98	58.574	0.155	0.231	0.324	0.416	0.484	0.521	0.559	0.521	0.484	0.416	0.324	0.231	0.155	58.574	179.98	299.85	398.62	464.18	486.77
114	479.09	456.56	391.93	294.28	175.71	55.944	0.156	0.232	0.324	0.414	0.482	0.519	0.561	0.519	0.482	0.414	0.324	0.232	0.156	55.944	175.71	294.28	391.93	456.56	479.09
115	470.89	448.8	384.87	288.6	171.4	53.34	0.158	0.232	0.323	0.413	0.48	0.517	0.562	0.517	0.48	0.413	0.323	0.232	0.158	53.34	171.4	288.6	384.87	448.8	470.89
116	462.7	441.11	377.98	282.74	167.11	50.67	0.159	0.232	0.322	0.409	0.474	0.51	0.563	0.51	0.474	0.409	0.322	0.232	0.159	50.67	167.11	282.74	377.98	441.11	462.7
117	454.54	433.17	371.04	276.86	162.72	48.067	0.161	0.234	0.321	0.407	0.471	0.506	0.565	0.506	0.471	0.407	0.321	0.234	0.161	48.067	162.72	276.86	371.04	433.17	454.54
118	446.03	425.05	363.63	270.94	158.3	45.43	0.162	0.234	0.321	0.406	0.468	0.503	0.565	0.503	0.468	0.406	0.321	0.234	0.162	45.43	158.3	270.94	363.63	425.05	446.03
119	437.51	416.86	356.51	264.89	153.87	42.807	0.164	0.236	0.321	0.405	0.466	0.5	0.564	0.5	0.466	0.405	0.321	0.236	0.164	42.807	153.87	264.89	356.51	416.86	437.51
120	428.93	408.35	348.97	258.81	149.4	40.171	0.166	0.237	0.322	0.404	0.465	0.498	0.562	0.498	0.465	0.404	0.322	0.237	0.166	40.171	149.4	258.81	348.97	408.35	428.93
121	420.28	400.09	341.51	252.7	144.98	37.587	0.169	0.239	0.323	0.404	0.464	0.496	0.56	0.496	0.464	0.404	0.323	0.239	0.169	37.587	144.98	252.7	341.51	400.09	420.28
122	411.25	391.46	333.83	246.42	140.25	34.97	0.17	0.241	0.323	0.403	0.462	0.494	0.56	0.494	0.462	0.403	0.323	0.241	0.17	34.97	140.25	246.42	333.83	391.46	411.25
123	402.31	382.91	326.16	240.13	135.53	32.351	0.173	0.243	0.324	0.404	0.461	0.493	0.56	0.493	0.461	0.404	0.324	0.243	0.173	32.351	135.53	240.13	326.16	382.91	402.31
124	393.4	374.22	318.51	233.82	131.14	29.799	0.176	0.245	0.325	0.403	0.46	0.49	0.559	0.49	0.46	0.403	0.325	0.245	0.176	29.799	131.14	233.82	318.51	374.22	393.4
125	384.07	365.4	310.58	227.36	126.45	27.212	0.179	0.247	0.326	0.403	0.458	0.487	0.557	0.487	0.458	0.403	0.326	0.247	0.179	27.212	126.45	227.36	310.58	365.4	384.07
126	375.08	356.58	302.7	220.89	121.9	24.67	0.182	0.25	0.327	0.402	0.455	0.484	0.553	0.484	0.455	0.402	0.327	0.25	0.182	24.67	121.9	220.89	302.7	356.58	375.08
127	365.49	347.33	294.67	214.34	117.22	22.137	0.185	0.253	0.328	0.401	0.453	0.48	0.548	0.48	0.453	0.401	0.328	0.253	0.185	22.137	117.22	214.34	294.67	347.33	365.49
128	356.18	338.39	286.62	207.89	112.67	19.65	0.189	0.256	0.329	0.4	0.451	0.476	0.544	0.476	0.451	0.4	0.329	0.256	0.189	19.65	112.67	207.89	286.62	338.39	356.18
129	346.59	329.36	278.42	201.31	108.04	17.24	0.193	0.259	0.331	0.399	0.448	0.473	0.541	0.473	0.448	0.399	0.331	0.259	0.193	17.24	108.04	201.31	278.42	329.36	346.59
130	337.19	320.02	270.21	194.59	103.42	14.919	0.197	0.262	0.332	0.398	0.445	0.469	0.538	0.469	0.445	0.398	0.332	0.262	0.197	14.919	103.42	194.59	270.21	320.02	337.19
131	327.57	310.85	262.1	187.96	98.735	12.758	0.201	0.265	0.333	0.398	0.442	0.465	0.535	0.465	0.442	0.398	0.333	0.265	0.201	12.758	98.735	187.96	262.1	310.85	327.57
132	317.92	301.45	253.79	181.33	94.141	10.715	0.206	0.269	0.335	0.397	0.437	0.463	0.533	0.463	0.437	0.397	0.335	0.269	0.206	10.715	94.141	181.33	253.79	301.45	317.92
133	308.31	292.16	245.38	174.55	89.513	8.782	0.21	0.273	0.337	0.395	0.434	0.459	0.53	0.459	0.434	0.395	0.337	0.273	0.21	8.782	89.513	174.55	245.38	292.16	308.31
134	298.42	282.74	237.06	167.84	84.902	7.058	0.215	0.276	0.339	0.392	0.432	0.456	0.527	0.456	0.432	0.392	0.339	0.276	0.215	7.058	84.902	167.84	237.06	282.74	298.42
135	288.5	273.19	228.64	161.11	80.314	5.493	0.219	0.279	0.341	0.391	0.433	0.451	0.524	0.451	0.433	0.391	0.341	0.279	0.219	5.493	80.314	161.11	228.64	273.19	288.5
136	278.4	263.7	220.19	154.34	75.805	4.119	0.224	0.284	0.342	0.392	0.435	0.448	0.521	0.448	0.435	0.392	0.342	0.284	0.224	4.119	75.805	154.34	220.19	263.7	278.4
137	268.65	253.98	211.68	147.61	71.163	2.901	0.229	0.287	0.342	0.393	0.433	0.444	0.518	0.444	0.433	0.393	0.342	0.287	0.229	2.901	71.163	147.61	211.68	253.98	268.65
138	258.71	244.46	203.26	140.76	66.629	1.867	0.232	0.289	0.344	0.393	0.43	0.439	0.515	0.439	0.43	0.393	0.344	0.289	0.232	1.867	66.629	140.76	203.26	244.46	258.71
139	248.66	234.79	194.67	133.85	62.409	1.076	0.236	0.291	0.344	0.393	0.425	0.433	0.51	0.433	0.425	0.393	0.344	0.291	0.236	1.076	62.409	133.85	194.67	234.79	248.66
140	238.61	225.21	186.19	127.2	57.69	0.604	0.238	0.292	0.344	0.391	0.421	0.426	0.503	0.426	0.421	0.391	0.344	0.292	0.238	0.604	57.69	127.2	186.19	225.21	238.61
141	228.48	215.52	177.65	120.4	53.082	0.27	0.241	0.293	0.343	0.388	0.415	0.419	0.495	0.419	0.415	0.388	0.343	0.293	0.241	0.27	53.082	120.4	177.65	215.52	228.48
142	218.57	205.83	169.19	113.66	48.607	0.19	0.243	0.294	0.343	0.384	0.409	0.411	0.488	0.411	0.409	0.384	0.343	0.294	0.243	0.19	48.607	113.66	169.19	205.83	218.57
143	208.41	196.19	160.61	106.9	44.09	0.192	0.246	0.296	0.342	0.381	0.402	0.403	0.48	0.403	0.402	0.381	0.342	0.296	0.192	44.09	106.9	160.61	196.19	208.41	
144	198.58	186.45	152.1	100.16	39.535	0.195	0.248	0.296	0.341	0.376	0.395	0.395	0.47	0.395	0.395	0.376	0.341	0.296	0.195	39.535	100.16	152.1	186.45	198.58	
145	188.49	176.86	143.48	93.434	35.096	0.198	0.25	0.296	0.338	0.37	0.386	0.385	0.459	0.385	0.386	0.37	0.338	0.296	0.25	0.198	35.096	93.434	143.48	176.86	188.49
146	178.35	167.27	134.82	86.759	30.644	0.201	0.251	0.294	0.334	0.364	0.377	0.375	0.447	0.375	0.377	0.364	0.334	0.294	0.251	0.201	30.644	86.759	134.82	167.27	178.35
147	168.57	157.65	126.52	80.16	26.287	0.204	0.252	0.292	0.329	0.356	0.366	0.363	0.432	0.363	0.366	0.356	0.329	0.292	0.252	0.204	26.287	80.16	126.52	157.65	168.57
148	158.59	148.09	118.03	73.577	21.947	0.206	0.252	0.291	0.325	0.349	0.357	0.352	0.418	0.352	0.357	0.349	0.325	0.291	0.252	0.206	21.947	73.577			

158	64.991	56.957	37.736	11.8	0.205	0.241	0.267	0.284	0.291	0.287	0.275	0.255	0.284	0.255	0.275	0.287	0.291	0.284	0.267	0.241	0.205	11.8	37.736	56.957	64.991
159	56.452	48.561	30.382	7.44	0.208	0.241	0.265	0.279	0.283	0.276	0.263	0.242	0.266	0.242	0.263	0.276	0.283	0.279	0.265	0.241	0.208	7.44	30.382	48.561	56.452
160	48.091	40.324	23.469	3.963	0.211	0.241	0.262	0.272	0.273	0.264	0.249	0.228	0.246	0.228	0.249	0.264	0.273	0.272	0.262	0.241	0.211	3.963	23.469	40.324	48.091
161	39.795	32.255	17.02	2.002	0.213	0.24	0.258	0.264	0.262	0.252	0.235	0.214	0.225	0.214	0.235	0.252	0.262	0.264	0.258	0.24	0.213	2.002	17.02	32.255	39.795
162	31.645	24.571	10.9	0.609	0.216	0.241	0.255	0.26	0.254	0.242	0.224	0.203	0.211	0.203	0.224	0.242	0.254	0.26	0.255	0.241	0.216	0.609	10.9	24.571	31.645
163	23.887	17.528	6.083	0.199	0.218	0.24	0.252	0.254	0.246	0.232	0.212	0.192	0.196	0.192	0.212	0.232	0.246	0.254	0.252	0.24	0.218	0.199	6.083	17.528	23.887
164	16.654	10.95	2.849	0.192	0.22	0.24	0.249	0.248	0.239	0.223	0.203	0.182	0.184	0.182	0.203	0.223	0.239	0.248	0.249	0.24	0.22	0.192	2.849	10.95	16.654
165	10.305	5.677	1.111	0.196	0.222	0.239	0.246	0.242	0.231	0.214	0.193	0.173	0.17	0.173	0.193	0.214	0.231	0.242	0.246	0.239	0.222	0.196	1.111	5.677	10.305
166	5.698	2.617	0.185	0.2	0.223	0.239	0.243	0.237	0.224	0.206	0.184	0.165	0.158	0.165	0.184	0.206	0.224	0.237	0.243	0.239	0.223	0.2	0.185	2.617	5.698
167	2.099	0.92	0.176	0.203	0.225	0.238	0.24	0.233	0.219	0.199	0.177	0.158	0.147	0.158	0.177	0.199	0.219	0.233	0.24	0.238	0.225	0.203	0.176	0.92	2.099
168	0.103	0.153	0.18	0.205	0.225	0.237	0.237	0.228	0.212	0.192	0.17	0.151	0.138	0.151	0.17	0.192	0.212	0.228	0.237	0.237	0.225	0.205	0.18	0.153	0.103
169	0.097	0.157	0.184	0.207	0.225	0.234	0.233	0.223	0.206	0.186	0.163	0.145	0.128	0.145	0.163	0.186	0.206	0.223	0.233	0.234	0.225	0.207	0.184	0.157	0.097
170	0.101	0.161	0.187	0.209	0.224	0.232	0.23	0.218	0.202	0.181	0.158	0.14	0.12	0.14	0.158	0.181	0.202	0.218	0.23	0.232	0.224	0.209	0.187	0.161	0.101
171	0.105	0.166	0.191	0.212	0.227	0.235	0.231	0.22	0.203	0.182	0.159	0.14	0.121	0.14	0.159	0.182	0.203	0.22	0.231	0.235	0.227	0.212	0.191	0.166	0.105
172	0.11	0.17	0.195	0.216	0.233	0.24	0.238	0.227	0.21	0.188	0.164	0.145	0.125	0.145	0.164	0.188	0.21	0.227	0.238	0.24	0.233	0.216	0.195	0.17	0.11
173	0.114	0.173	0.197	0.219	0.234	0.242	0.24	0.229	0.212	0.19	0.167	0.147	0.126	0.147	0.167	0.19	0.212	0.229	0.24	0.242	0.234	0.219	0.197	0.173	0.114
174	0.118	0.176	0.199	0.219	0.235	0.243	0.242	0.233	0.216	0.195	0.172	0.153	0.127	0.153	0.172	0.195	0.216	0.233	0.242	0.243	0.235	0.219	0.199	0.176	0.118
175	0.122	0.177	0.198	0.218	0.232	0.24	0.24	0.231	0.217	0.197	0.175	0.157	0.127	0.157	0.175	0.197	0.217	0.231	0.24	0.24	0.232	0.218	0.198	0.177	0.122
176	0.126	0.176	0.195	0.213	0.225	0.232	0.232	0.224	0.211	0.193	0.174	0.158	0.127	0.158	0.174	0.193	0.211	0.224	0.232	0.232	0.225	0.213	0.195	0.176	0.126
177	0.126	0.174	0.19	0.205	0.217	0.223	0.222	0.215	0.203	0.187	0.17	0.157	0.128	0.157	0.17	0.187	0.203	0.215	0.222	0.223	0.217	0.205	0.19	0.174	0.126
178	0.128	0.171	0.185	0.198	0.208	0.212	0.212	0.206	0.195	0.182	0.167	0.157	0.128	0.157	0.167	0.182	0.195	0.206	0.212	0.212	0.208	0.198	0.185	0.171	0.128
179	0.128	0.166	0.178	0.189	0.197	0.202	0.201	0.196	0.188	0.176	0.164	0.156	0.126	0.156	0.164	0.176	0.188	0.196	0.201	0.202	0.197	0.189	0.178	0.166	0.128
180	0.128	0.128	0.128	0.128	0.128	0.128	0.128	0.128	0.128	0.128	0.128	0.128	0.128	0.128	0.128	0.128	0.128	0.128	0.128	0.128	0.128	0.128	0.128	0.128	0.128

4.0 LM-79 Measurement and Test Results

4.3 THD and PF Test

Model No.	ET @ 14W/5000K	Sample ID.	DLF2503101-I1
Temperature (°C)	25.1	Humidity (%RH)	57.0

Test Method

The samples were tested according to the ANSI C82.77-10:2014.

The ambient temperature shall be maintained at $25^{\circ}\text{C} \pm 1.0^{\circ}\text{C}$ and 10% - 65% RH. 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
120.05	60	0.111	13.3	0.996	5.26%
276.97	60	0.051	13.4	0.947	10.91%

5.0 Equipment Information

Test Equipment			
Equipment ID	Equipment Name	Last Calibration Date	Calibration Due Date
DLF107	Integrating Sphere System	2024/12/23	2025/12/22
DLF108	Auxiliary Lamp	2024/12/23	2025/12/22
DLF122	Measurement Standard Lamp Standard Lamp Type: 220 V, 0.473 A, Tungsten, Omni-derectional	2024/12/23	2025/12/22
DLF116	AC Power Source	2024/12/13	2025/12/12
DLF516	Power Meter	2024/12/13	2025/12/12
DLF114	Temperature & Humidity Datalogger	2024/12/19	2025/12/18
DLF101	Goniophotometer	2024/12/23	2025/12/22
DLF521	Measurement Standard Lamp Standard Lamp Type: Tungsten, Omni- derectional	2024/12/23	2025/12/22
DLF512	AC Power Source	2024/12/13	2025/12/12
DLF507	DC Power Source	2024/12/13	2025/12/12
DLF111	Temperature & Humidity Datalogger	2024/12/19	2025/12/18
DLF119	Power Meter	2024/12/13	2025/12/12
DLF530	Hot-wire anemometer	2025/1/23	2026/1/22
DLF129	Clock	2024/6/20	2025/6/19

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