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Photometric Test Report

Relevant Standards
IES LM-79-2008, ANSI C82.77-2002, UL 1598-2008
CIE 13.3-1995, CIE 15-2004, ANSI C78.377-2015
IES TM-30-2015

Prepared For

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1000 Kieley Pl
Cincinnati, OH 45217
United States

Catalog Number

S49SS1BC30A0000

Order Number

11642556

Test Number

11642556.07

Test Date

2017-04-17 - 2017-04-19

Prepared By

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Approved By

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The results contained in this report pertain only to the tested sample.
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Laboratory results may not be representative of field performance
Ballast factors have not been applied

Testing was performed in a 3-meter integrating sphere using the 4π geometry method.

Absorption correction was employed for Sphere measurement

Luminaire Description:	White formed steel housing, clear patterned plastic lens enclosure. Tested in A.L.P. SEP240 DLC reference housing.
Lamp:	224 white LEDs
Mounting:	Surface – Ceiling
Ballast/Driver:	One Universal Lighting Technologies Everline D10CC55UNVTZ-C driver (640 mA)

Luminaire

Luminaire Characteristics

Luminous Length:	48.00	in.
Luminous Width:	9.250	in.
Luminous Height:	2.00	in.

Summary of Results

Integrating Sphere

Luminous Flux:	3728	Lumens
Efficacy:	124.3	lm/w
CCT:	3081	K
CRI (Ra):	83.1	

Distribution

Total Luminaire Output:	3569	Lumens
Luminaire Efficacy:	118.8	lm/w
Maximum Candela:	1759	Candela

Electrical Data at 277 VAC

Test Temperature:	24.9	°C
Voltage:	277.0	VAC
Current:	0.1207	A
Power:	30.48	W
Power Factor:	0.912	
Frequency:	60	Hz
Current THD:	8.26	%

In-Situ

LED Temperature:	40.0	°C
Driver Temperature:	46.9	°C
Measured LED Current:	0.04050	A

Temperature is offset to an ambient temperature of 25°C as described in UL1598-2008.

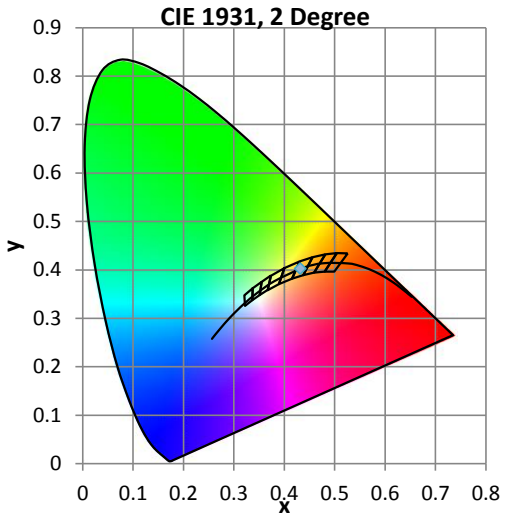
Color Quality - Integrating Sphere

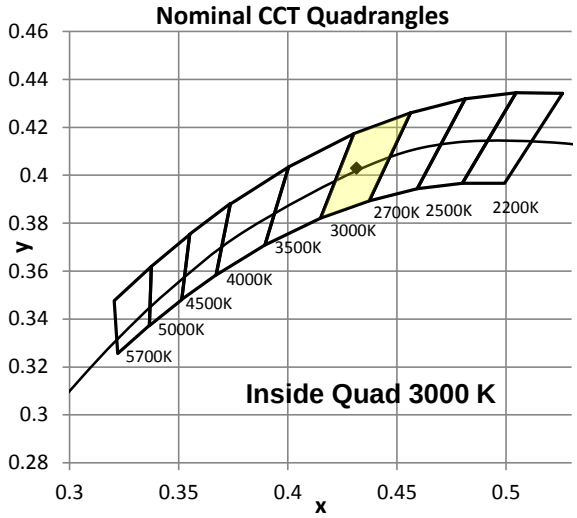
Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.9 °C	120.0 VAC	0.2535 A	30.00 W	0.986	60 Hz	6.88 %

Summary of Results

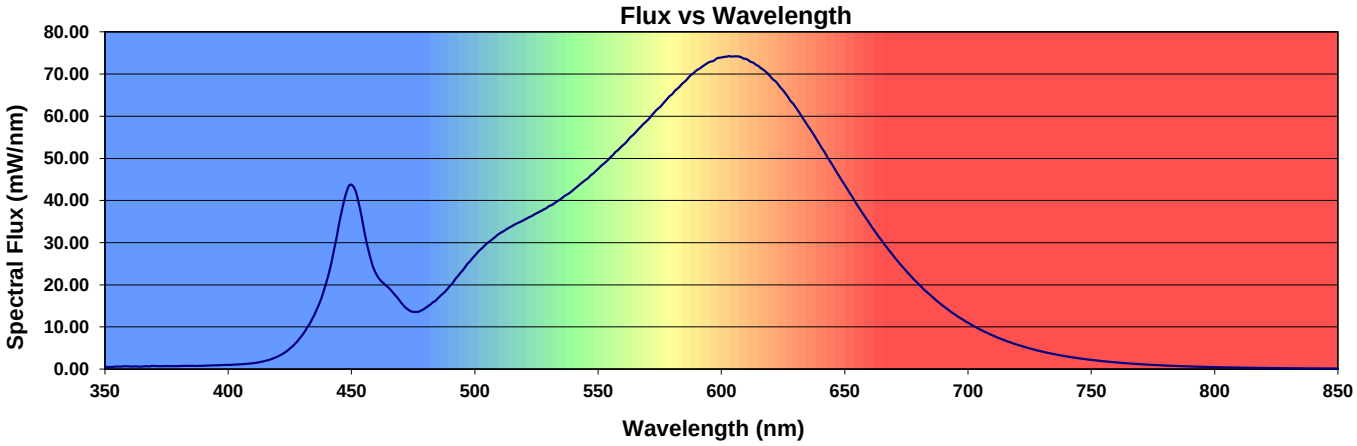
Total Output:	3728 Lumens	**Chromaticity (x):**	0.4315
Efficacy:	124.3 lm/w	**Chromaticity (y):**	0.4028
CCT:	3081 K	**Chromaticity (u'):**	0.2476
CRI (Ra):	83.1	**Chromaticity (v'):**	0.5201
CRI (R9):	9.1	**TM-30 R_f:**	83.7
Peak Wavelength:	603.8 nm	**TM-30 R_g:**	96.7
Dominant Wavelength:	582.4 nm	**Duv:**	0.0003
S/P Ratio:	1.375		





Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
83.1	81.2	90.6	96.8	81.5	81.6	88.6	83.7	60.5	9.1	78.8	80.9	72.8	83.3	98.7



Distribution - Goniophotometer

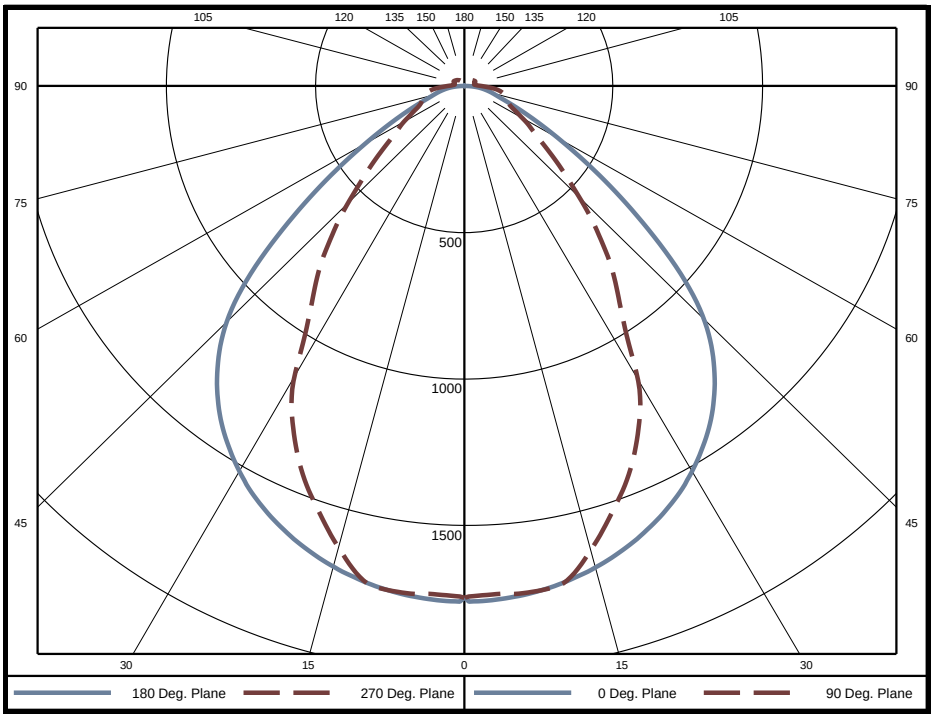
Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.4 °C	120.0 VAC	0.2513 A	30.04 W	0.996	60 Hz	6.84 %

Summary of Results

Spacing Criteria			
0-180:	1.29	**Total Lumen Output:**	3569 Lumens
90-270:	1.29	**Luminaire Efficacy:**	118.8 lm/w
		Maximum Candela:	1759 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	41.6	1.2%	60-65	121.2	3.4%	120-125	10.6	0.3%
5-10	124.1	3.5%	65-70	95.1	2.7%	125-130	9.2	0.3%
10-15	202.7	5.7%	70-75	78.6	2.2%	130-135	7.7	0.2%
15-20	269.3	7.5%	75-80	66.7	1.9%	135-140	6.2	0.2%
20-25	321.8	9.0%	80-85	51.5	1.4%	140-145	4.8	0.1%
25-30	357.0	10.0%	85-90	30.7	0.9%	145-150	3.5	0.1%
30-35	366.1	10.3%	90-95	17.6	0.5%	150-155	2.3	0.1%
35-40	353.6	9.9%	95-100	14.7	0.4%	155-160	1.4	0.0%
40-45	320.7	9.0%	100-105	13.0	0.4%	160-165	0.7	0.0%
45-50	270.3	7.6%	105-110	12.4	0.3%	165-170	0.3	0.0%
50-55	210.9	5.9%	110-115	12.6	0.4%	170-175	0.1	0.0%
55-60	158.9	4.5%	115-120	11.9	0.3%	175-180	0.0	0.0%

Zone	Lumens	% of Luminaire
0-40	2036	57.1%
0-60	2997	84.0%
0-90	3441	96.4%
90-180	129	3.6%

Candela Tabulation

Horizontal Angle (Degrees)

Vertical Angle (Degrees)

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5
0	1746	1746	1746	1746	1746	1746	1746	1746	1746	1746	1746	1746	1746	1746	1746	1746
5	1752	1743	1734	1735	1739	1735	1734	1743	1752	1743	1734	1735	1739	1735	1734	1743
10	1733	1725	1726	1731	1736	1731	1726	1725	1733	1725	1726	1731	1736	1731	1726	1725
15	1700	1700	1697	1655	1637	1655	1697	1700	1700	1700	1697	1655	1637	1655	1697	1700
20	1655	1658	1593	1523	1503	1523	1593	1658	1655	1658	1593	1523	1503	1523	1593	1658
25	1597	1590	1465	1383	1355	1383	1465	1590	1597	1590	1465	1383	1355	1383	1465	1590
30	1521	1475	1324	1215	1162	1215	1324	1475	1521	1475	1324	1215	1162	1215	1324	1475
35	1426	1335	1146	952	904	952	1146	1335	1426	1335	1146	952	904	952	1146	1335
40	1303	1166	913	770	734	770	913	1166	1303	1166	913	770	734	770	913	1166
45	1138	943	695	593	552	593	695	943	1138	943	695	593	552	593	695	943
50	877	694	523	435	402	435	523	694	877	694	523	435	402	435	523	694
55	595	477	382	322	294	322	382	477	595	477	382	322	294	322	382	477
60	375	328	284	248	230	248	284	328	375	328	284	248	230	248	284	328
65	231	230	222	200	177	200	222	230	231	230	222	200	177	200	222	230
70	143	165	181	168	155	168	181	165	143	165	181	168	155	168	181	165
75	100	123	154	151	144	151	154	123	100	123	154	151	144	151	154	123
80	68	92	121	132	129	132	121	92	68	92	121	132	129	132	121	92
85	37	55	84	101	99	101	84	55	37	55	84	101	99	101	84	55
90	0	17	49	60	58	60	49	17	0	17	49	60	58	60	49	17
95	0	15	41	42	39	42	41	15	0	15	41	42	39	42	41	15
100	0	16	34	34	33	34	34	16	0	16	34	34	33	34	34	16
105	0	15	28	34	35	34	28	15	0	15	28	34	35	34	28	15
110	0	14	28	36	38	36	28	14	0	14	28	36	38	36	28	14
115	0	15	29	37	39	37	29	15	0	15	29	37	39	37	29	15
120	0	14	28	35	37	35	28	14	0	14	28	35	37	35	28	14
125	0	13	26	32	34	32	26	13	0	13	26	32	34	32	26	13
130	0	11	24	30	32	30	24	11	0	11	24	30	32	30	24	11
135	0	9	22	27	28	27	22	9	0	9	22	27	28	27	22	9
140	0	7	18	24	26	24	18	7	0	7	18	24	26	24	18	7
145	0	6	15	21	22	21	15	6	0	6	15	21	22	21	15	6
150	0	4	11	17	18	17	11	4	0	4	11	17	18	17	11	4
155	0	3	8	13	14	13	8	3	0	3	8	13	14	13	8	3
160	0	2	5	8	10	8	5	2	0	2	5	8	10	8	5	2
165	0	1	3	5	6	5	3	1	0	1	3	5	6	5	3	1
170	0	1	1	2	3	2	1	1	0	1	1	2	3	2	1	1
175	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

Average Luminance (cd/m^2)

Horizontal Angle (Degrees)

Vertical Angle (Degrees)

	0	45	90
0	6094	6094	6094
45	5395	2902	2242
55	3417	1844	1367
65	1753	1320	999
75	1162	1233	1073
85	995	1092	1147

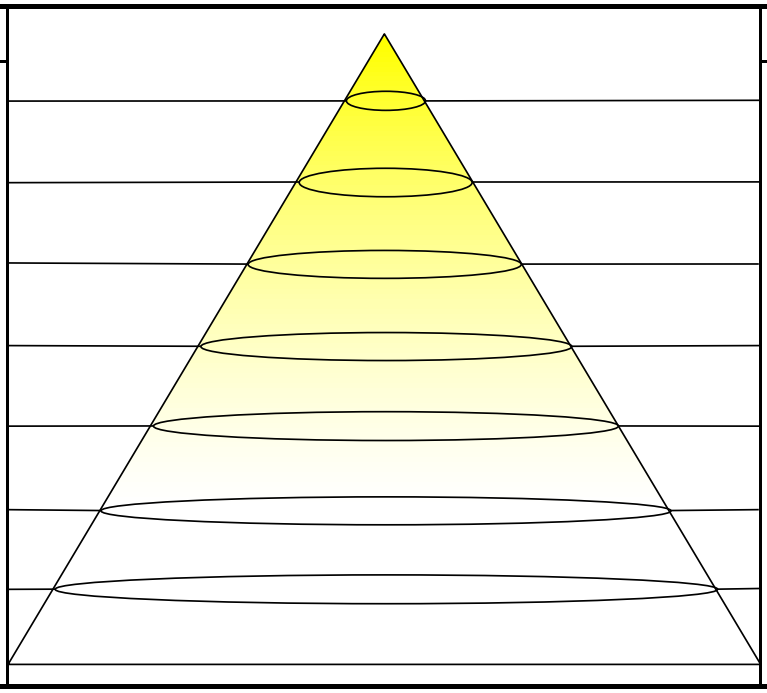
Utilization of Lumens - Zonal Cavity Method

Effective Floor Cavity Reflectance 20%																		
Ceiling Cavity Reflectance	80				70				50			30			10			0
Wall Reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)	** Values are expressed as Lumens delivered to the task surface **																	
0	4219	4219	4219	4219	4106	4106	4106	4106	3895	3895	3895	3701	3701	3701	3524	3524	3524	3441
1	3896	3745	3609	3486	3788	3652	3529	3418	3479	3379	3287	3319	3239	3165	3172	3109	3049	2969
2	3596	3337	3123	2943	3494	3260	3065	2899	3116	2954	2813	2983	2849	2731	2860	2751	2653	2575
3	3322	2991	2734	2530	3228	2926	2690	2499	2806	2605	2440	2694	2525	2383	2590	2449	2328	2251
4	3077	2697	2418	2206	2990	2643	2384	2184	2540	2318	2142	2446	2255	2101	2357	2195	2061	1986
5	2856	2445	2158	1946	2777	2400	2131	1930	2313	2079	1899	2232	2028	1868	2157	1980	1838	1766
6	2659	2229	1941	1735	2586	2190	1919	1722	2116	1877	1698	2047	1836	1675	1982	1796	1652	1582
7	2481	2043	1758	1559	2416	2009	1740	1549	1945	1705	1530	1885	1671	1512	1828	1638	1493	1426
8	2322	1880	1602	1411	2263	1851	1587	1403	1795	1558	1388	1743	1529	1373	1694	1502	1358	1294
9	2179	1738	1468	1286	2125	1713	1455	1279	1664	1431	1267	1619	1407	1255	1575	1383	1242	1181
10	2051	1614	1352	1178	2001	1591	1341	1173	1549	1320	1162	1509	1300	1152	1471	1280	1142	1083

Beam and Field Information

CIE Type:	Direct
Center Beam Intenisty:	1746 Candela
Central Cone Intensity:	1742 Candela
Beam Flux:	2209.8 Lumens
Beam Angle (0-180):	100.2 Degrees
Beam Angle (90-270):	71.9 Degrees
Field Angle (0-180):	135.8 Degrees
Field Angle (90-270):	130.6 Degrees

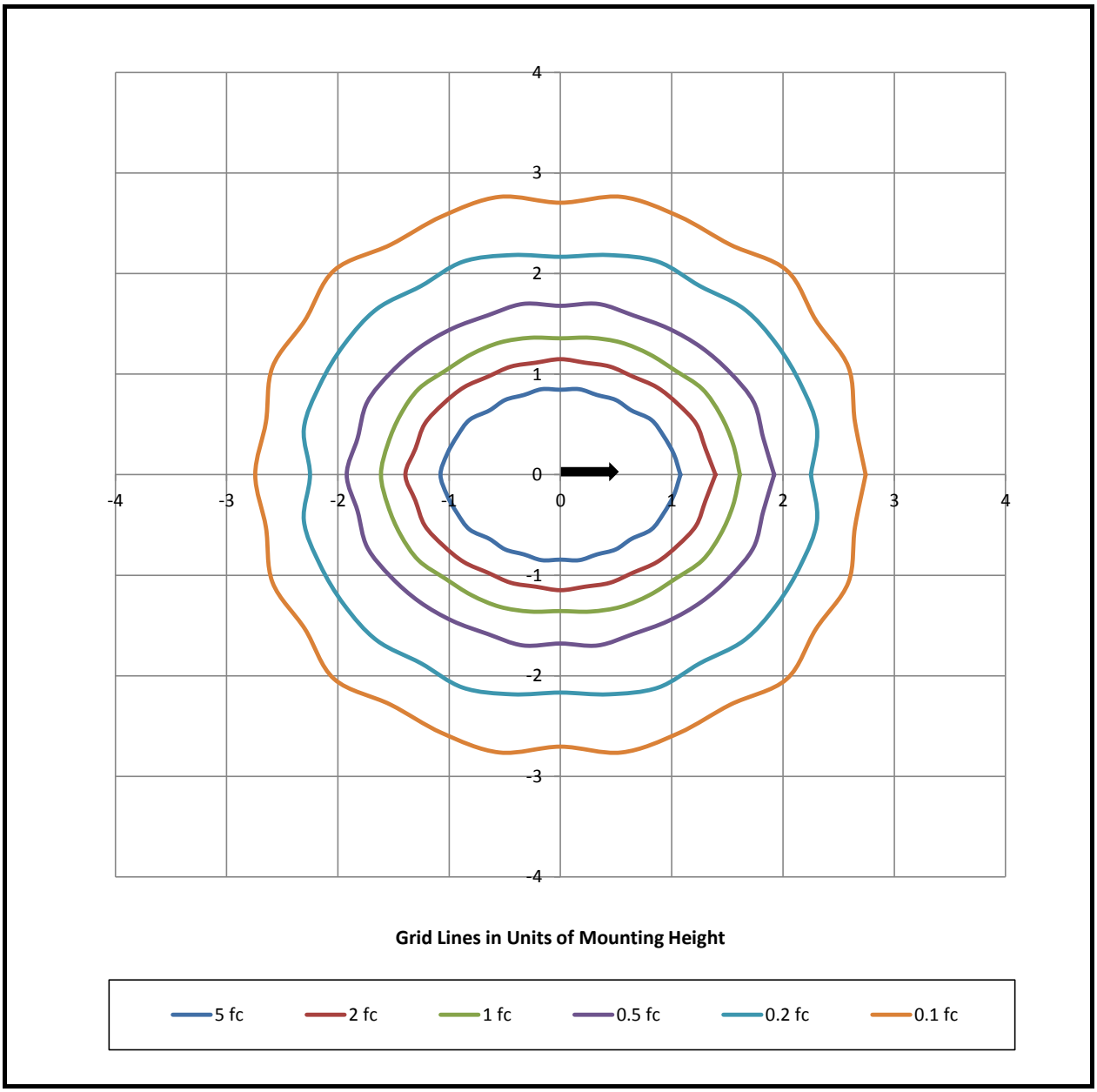
Cone of Light Tabulation



Mounting Height (Feet)	Footcandles at Nadir	Diameter (Feet)
4.00	109	4.61
6.00	48.5	6.91
8.00	27.3	9.21
10.0	17.5	11.5
12.0	12.1	13.8
14.0	8.91	16.1
16.0	6.82	18.4

ISOFootcandle Plot

Mounting Height - 8 Feet



In-Situ Test

In-Situ Test Conditions

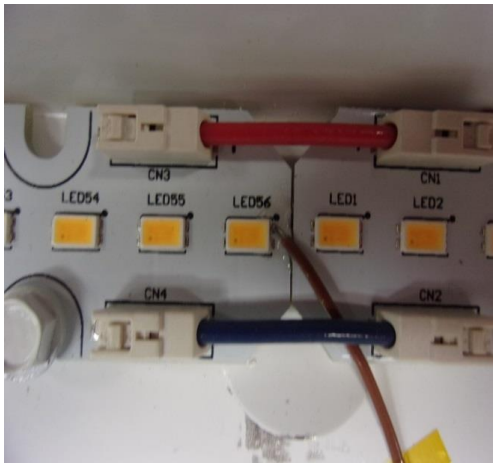
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.9 °C	120.4 VAC	N/A	N/A	N/A	60 Hz	N/A

Summary of Results

LED Temperature:	40.0	°C
Driver Temperature:	46.9	°C
Measured LED Current:	0.04050	A

Temperatures are offset to an ambient temperature of 25°C as described in UL1598-2008

LED Temperature Location



Driver Temperature Location