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ACCREDITED
Testing Laboratory

NVLAP LAB CODE 201042-0

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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United States

Catalog Number

6PR-L40/835-DIM-UNV-L-M-OF-WH

Order Number
12326812
Test Number
12326812.35

Test Date

2018-06-07 - 2018-06-20

Prepared By

Jesse Litchfield, Technician

Approved By

Alexa Lambert, Project Handler

Table of Contents

Laboratory results may not be representative of field performance
Ballast factors have not been applied

Testing was performed in a 2-meter integrating sphere using the 4π geometry method.

Absorption correction was employed for Sphere measurement

Luminaire Description: Black formed aluminum housing, white reflector, frosted plastic optic, clear glass patterned lens enclosure
Lamp: One white LED
Mounting: Recessed
Ballast/Driver: Philips XI050C140V054DSM5

Luminaire

Luminaire Characteristics
Luminous Diameter: 5.50 in.

Summary of Results

Integrating Sphere

Luminous Flux:	4415	Lumens
Efficacy:	100.4	lm/w
CCT:	3438	K
CRI (Ra):	83.1	

Distribution

Total Luminaire Output:	4454	Lumens
Luminaire Efficacy:	101.1	lm/w
Maximum Candela:	8645	Candela

Electrical Data at 120 VAC

Test Temperature:	25.1	°C
Voltage:	120.0	VAC
Current:	0.3672	A
Power:	43.96	W
Power Factor:	0.998	
Frequency:	60	Hz
Current THD:	5.64	%

In-Situ

LED Temperature:	71.1	°C
Driver Temperature:	54.3	°C
Measured LED Current:	1.127	A

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

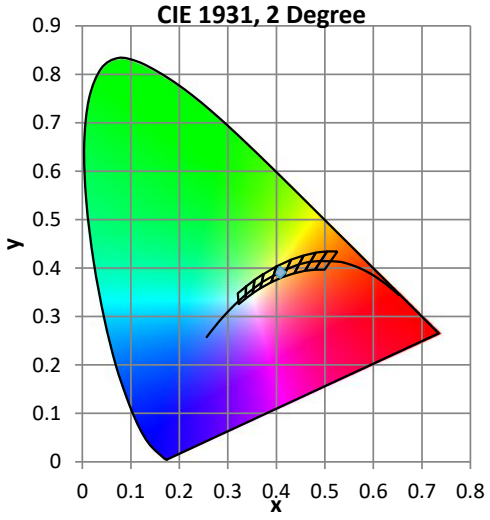
Color Quality - Integrating Sphere

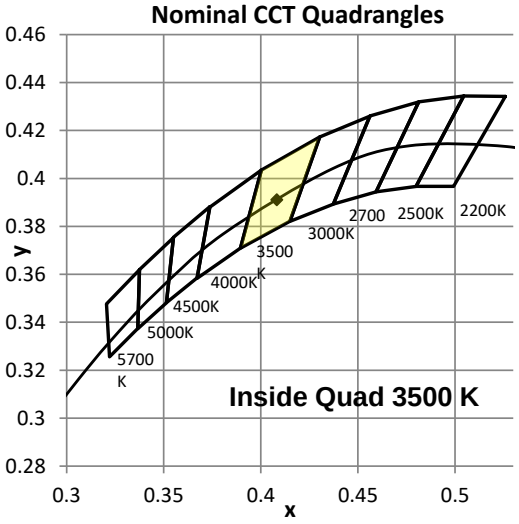
Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.1 °C	120.0 VAC	0.3672 A	43.96 W	0.998	60 Hz	5.64 %

Summary of Results

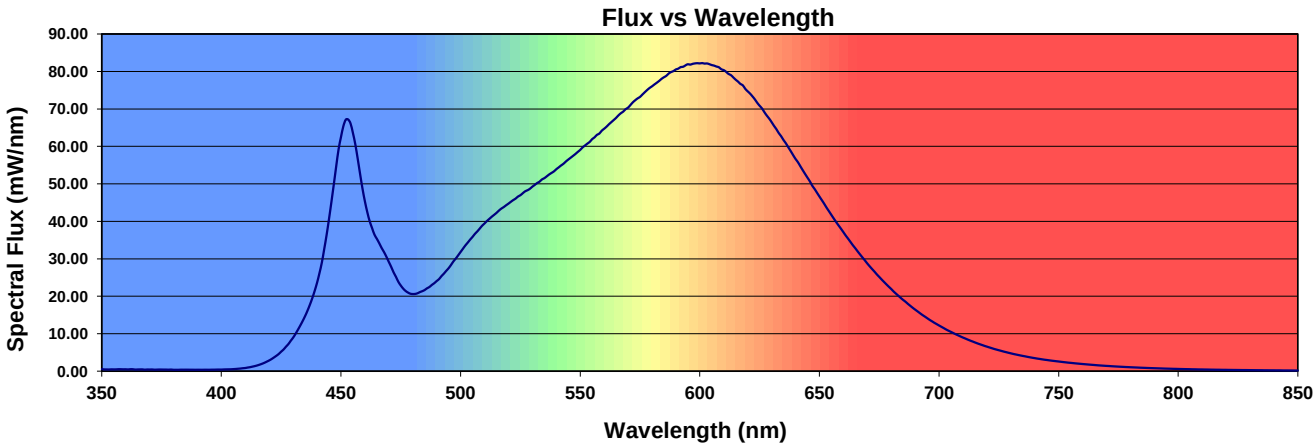
Total Output:	4415	Lumens	**Chromaticity (x):**	0.4082
Efficacy:	100.4	lm/w	**Chromaticity (y):**	0.3911
CCT:	3438	K	**Chromaticity (u'):**	0.2374
CRI (Ra):	83.1		**Chromaticity (v'):**	0.5119
CRI (R9):	10.8		**TM-30 Rf:**	82.5
Peak Wavelength:	595	nm	**TM-30 Rg:**	95.2
Dominant Wavelength:	581	nm	**Duv:**	0.0008
S/P Ratio:	1.51			





Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
83.1	81.5	90.6	96.2	80.7	81.4	87.1	84.6	62.6	10.8	77.6	79.1	66.0	83.7	98.3	75.4



Distribution - Goniophotometer

Distribution Test Conditions

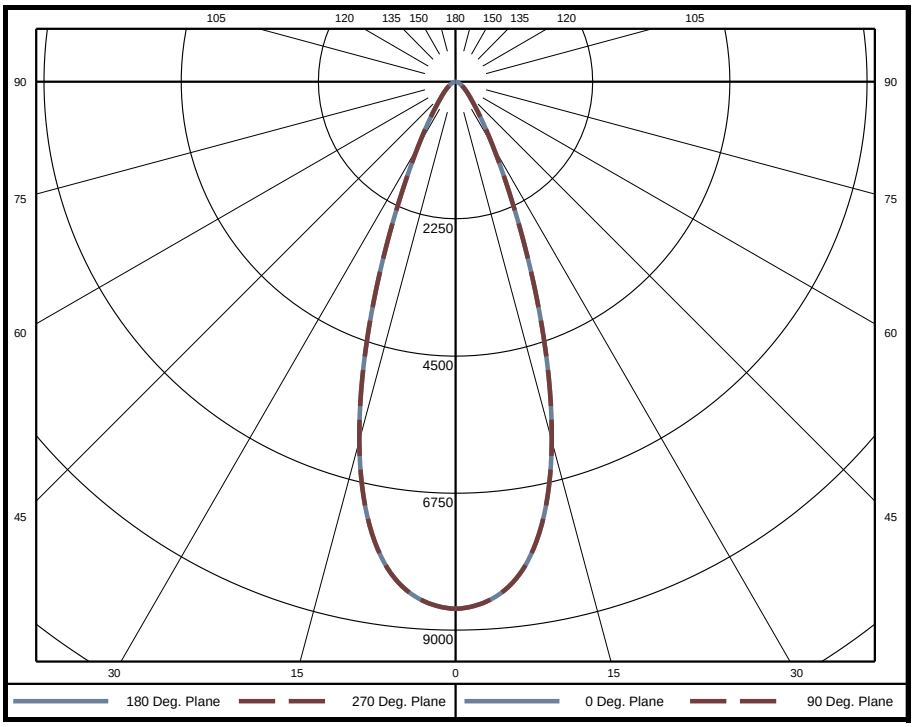
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.0 °C	119.9 VAC	0.3683 A	44.07 W	0.998	60 Hz	5.57 %

Summary of Results

Spacing Criteria
0-180: 0.64
90-270: 0.64

Total Lumen Output: 4454 Lumens
Luminaire Efficacy: 101.1 lm/w
Maximum Candela: 8645 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	204.1	4.6%	60-65	43.7	1.0%	120-125	0	0.0%
5-10	576.9	13.0%	65-70	32.0	0.7%	125-130	0	0.0%
10-15	818.0	18.4%	70-75	22.7	0.5%	130-135	0	0.0%
15-20	829.7	18.6%	75-80	14.9	0.3%	135-140	0	0.0%
20-25	639.7	14.4%	80-85	7.7	0.2%	140-145	0	0.0%
25-30	423.3	9.5%	85-90	1.8	0.0%	145-150	0	0.0%
30-35	277.0	6.2%	90-95	0	0.0%	150-155	0	0.0%
35-40	187.1	4.2%	95-100	0	0.0%	155-160	0	0.0%
40-45	134.6	3.0%	100-105	0	0.0%	160-165	0	0.0%
45-50	102.8	2.3%	105-110	0	0.0%	165-170	0	0.0%
50-55	78.8	1.8%	110-115	0	0.0%	170-175	0	0.0%
55-60	59.2	1.3%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	3956	88.8%
0-60	4331	97.2%
0-90	4454	100.0%
90-180	0	0.0%

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	8645	8645	8645	8645	8645	8645	8645	8645	8645	8645	8645	8645	8645	8645	8645	8645
5	8430	8430	8430	8430	8430	8430	8430	8430	8430	8430	8430	8430	8430	8430	8430	8430
10	7654	7654	7654	7654	7654	7654	7654	7654	7654	7654	7654	7654	7654	7654	7654	7654
15	6102	6102	6102	6102	6102	6102	6102	6102	6102	6102	6102	6102	6102	6102	6102	6102
20	4028	4028	4028	4028	4028	4028	4028	4028	4028	4028	4028	4028	4028	4028	4028	4028
25	2252	2252	2252	2252	2252	2252	2252	2252	2252	2252	2252	2252	2252	2252	2252	2252
30	1235	1235	1235	1235	1235	1235	1235	1235	1235	1235	1235	1235	1235	1235	1235	1235
35	715	715	715	715	715	715	715	715	715	715	715	715	715	715	715	715
40	442	442	442	442	442	442	442	442	442	442	442	442	442	442	442	442
45	301	301	301	301	301	301	301	301	301	301	301	301	301	301	301	301
50	214	214	214	214	214	214	214	214	214	214	214	214	214	214	214	214
55	152	152	152	152	152	152	152	152	152	152	152	152	152	152	152	152
60	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107
65	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
70	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
75	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
80	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
85	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
90	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	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
170	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
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	564000	564000	564000
45	27780	27780	27780
55	17300	17300	17300
65	11590	11590	11590
75	8826	8826	8826
85	5955	5955	5955

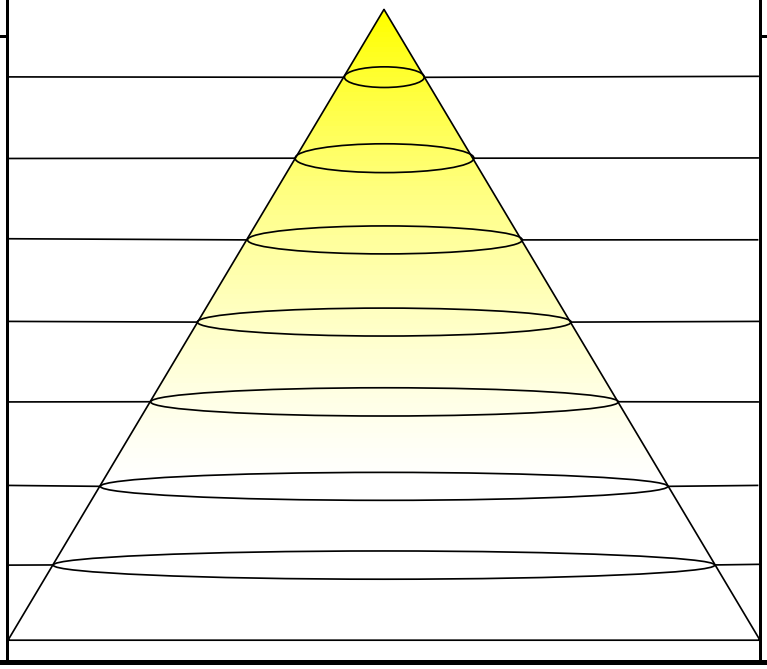
Coefficients of Utilization - Zonal Cavity Method

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 percent of total lumen output delivered to the task surface **																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	114	111	108	106	111	109	106	104	105	103	101	101	100	98	98	96	95	94
2	108	103	100	96	106	102	98	95	99	96	93	96	93	91	93	91	89	88
3	103	97	92	88	101	96	91	88	93	89	86	91	88	85	88	86	84	82
4	98	91	86	82	97	90	85	82	88	84	81	86	83	80	84	81	79	77
5	94	86	81	77	93	85	80	76	84	79	76	82	78	75	80	77	74	73
6	90	82	76	72	89	81	76	72	80	75	71	78	74	71	77	73	71	69
7	86	78	72	68	85	77	72	68	76	71	68	75	70	67	74	70	67	66
8	83	74	69	65	82	73	68	65	72	68	64	71	67	64	70	67	64	63
9	80	71	65	62	78	70	65	62	69	65	61	68	64	61	68	64	61	60
10	76	68	62	59	76	67	62	59	66	62	59	66	61	58	65	61	58	57

Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	8645 Candela
Central Cone Intensity:	8569 Candela
Beam Flux:	2312.0 Lumens
Beam Angle (0-180):	38.6 Degrees
Beam Angle (90-270):	38.6 Degrees
Field Angle (0-180):	66.4 Degrees
Field Angle (90-270):	66.4 Degrees

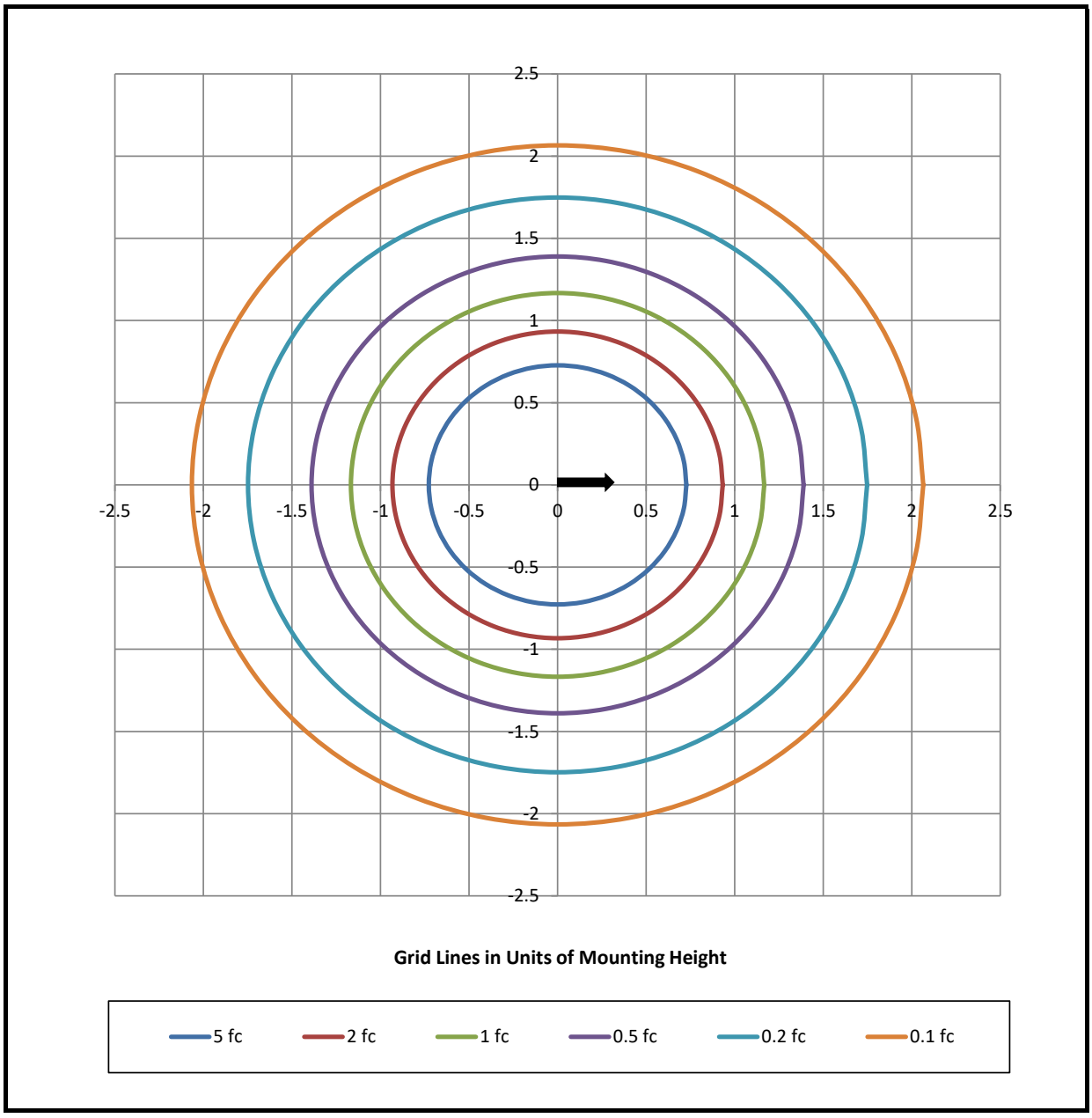
Cone of Light Tabulation

Mounting Height (Feet)	Footcandles at Nadir	Diameter (Feet)
4.00	540	2.55
6.00	240	3.83
8.00	135	5.11
10.0	86.5	6.38
12.0	60.0	7.66
14.0	44.1	8.94
16.0	33.8	10.2



ISOFootcandle Plot

Mounting Height - 8 Feet



In-Situ Test

In-Situ Test Conditions

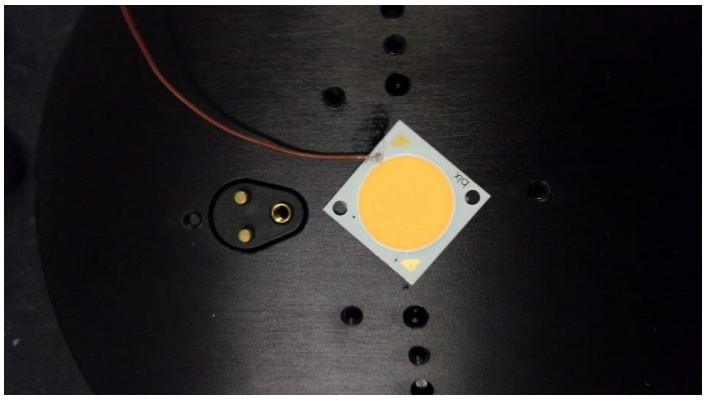
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
23.5 °C	119.9 VAC	N/A	N/A	N/A	60 Hz	N/A

Summary of Results

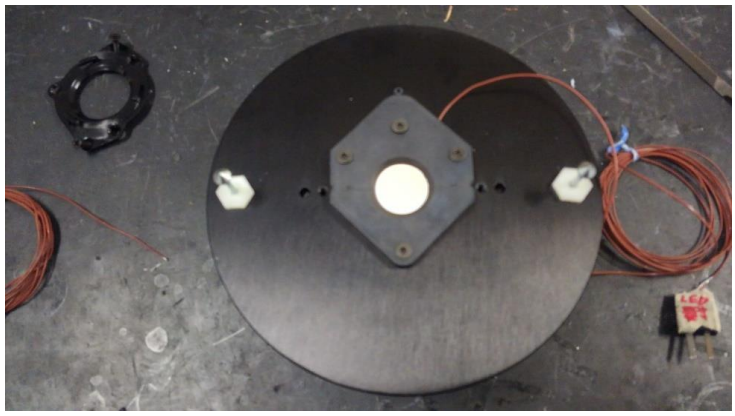
LED Temperature:	71.1	°C
Driver Temperature:	54.3	°C
Measured LED Current:	1.127	A

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

LED Temperature Location



Thermocouple Reference



Driver Temperature Location