



UL Verification Services Inc.
7036 Snowdrift Road
Allentown, PA 18106
610-774-1300



Photometric Test Report

Relevant Standards

IES LM-79-2008, ANSI C82.77-2002, CIE 13.3-1995
CIE 15-2004, ANSI C78.377-2017, IES TM-30-2015

Prepared For

LDPI Inc

4404 Anderson Dr
Eau Claire, WI 54703
United State

Catalog Number

380-LEDS5-2L-4-UNV1

Order Number

12520987

Test Number

12520987.06

Test Date

2018-10-19 - 2018-10-23

Prepared By

Cordaryl Cousar, Technician

Approved By

Kevin Rodriguez, Project Handler

The results contained in this report pertain only to the tested sample.
This report shall not be reproduced, except in full, without written approval of Underwriters Laboratories.
This report must not be used by the client to claim product certification, approval, or endorsement by
NVLAP, NIST, or any agency of the Federal Government.



Table of Contents

Summary of Results	Page 3
Integrating Sphere Results	Page 4
Distribution Results	
Conditions / Summary of Results / Polar Plot / Zonal Lumens	Page 5
Candela Tabulation / Average Luminance	Page 6
Coefficients of Utilization / Cone of Light	Page 7
ISOFootcandle Plot	Page 8

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 aluminum housing, clear glass lens enclosure
Lamp: Two T8LDR4F15/850C Lamps
Mounting: Pendant
Ballast/Driver: One Universal B232IUNVHP-N

Luminaire



Luminaire Characteristics

Luminous Length: 48.00 in.
Luminous Width: 8.500 in.
Luminous Height: 3.00 in.

Summary of Results

Integrating Sphere

Luminous Flux: 3974 Lumens
Efficacy: 111.0 lm/w
CCT: 5086 K
CRI (Ra): 84.1

Distribution

Total Luminaire Output: 3819 Lumens
Luminaire Efficacy: 106.6 lm/w
Maximum Candela: 1121 Candela

Electrical Data at 120 VAC

Test Temperature: 24.5 °C
Voltage: 120.0 VAC
Current: 0.2995 A
Power: 35.81 W
Power Factor: 0.997
Frequency: 60 Hz
Current THD: 3.98 %



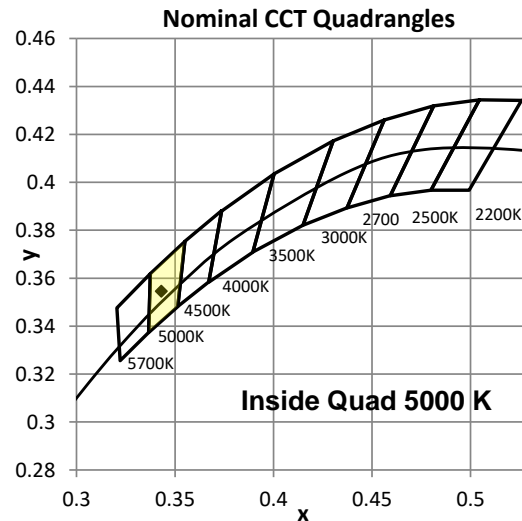
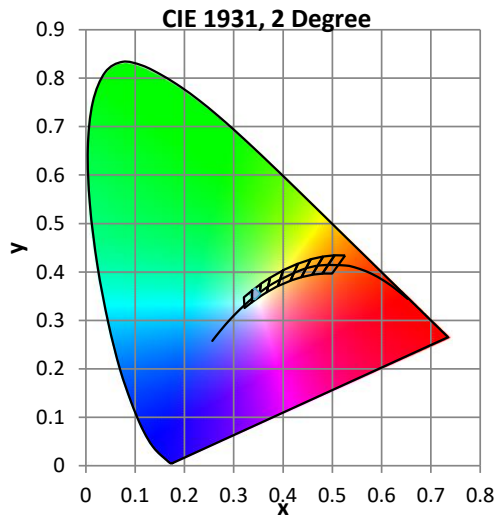
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.5 °C	120.0 VAC	0.2995 A	35.81 W	0.997	60 Hz	3.98 %

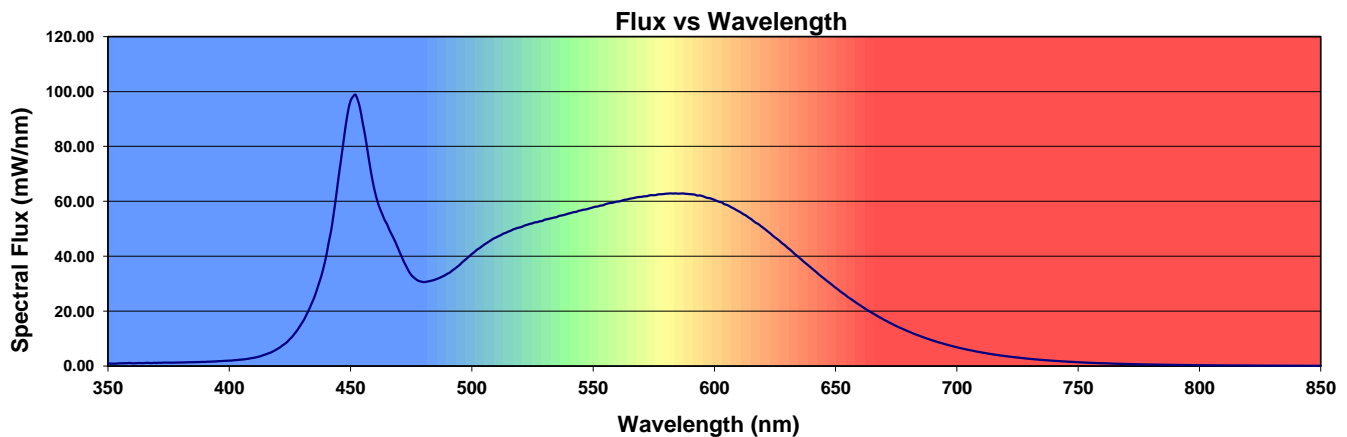
Summary of Results

Total Output:	3974 Lumens	Chromaticity (x):	0.3430
Efficacy:	111.0 lm/w	Chromaticity (y):	0.3546
CCT:	5086 K	Chromaticity (u'):	0.2089
CRI (Ra):	84.1	Chromaticity (v'):	0.4858
CRI (R9):	8.4	TM-30 Rf:	82.8
Peak Wavelength:	452 nm	TM-30 Rg:	94.5
Dominant Wavelength:	569 nm	Duv:	0.0017
S/P Ratio:	2.01		



Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
84.1	82.3	90.1	94.6	83.0	83.1	85.8	86.7	67.0	8.4	76.2	82.3	66.0	84.5	97.4	76.2





Distribution - Goniophotometer

Distribution Test Conditions

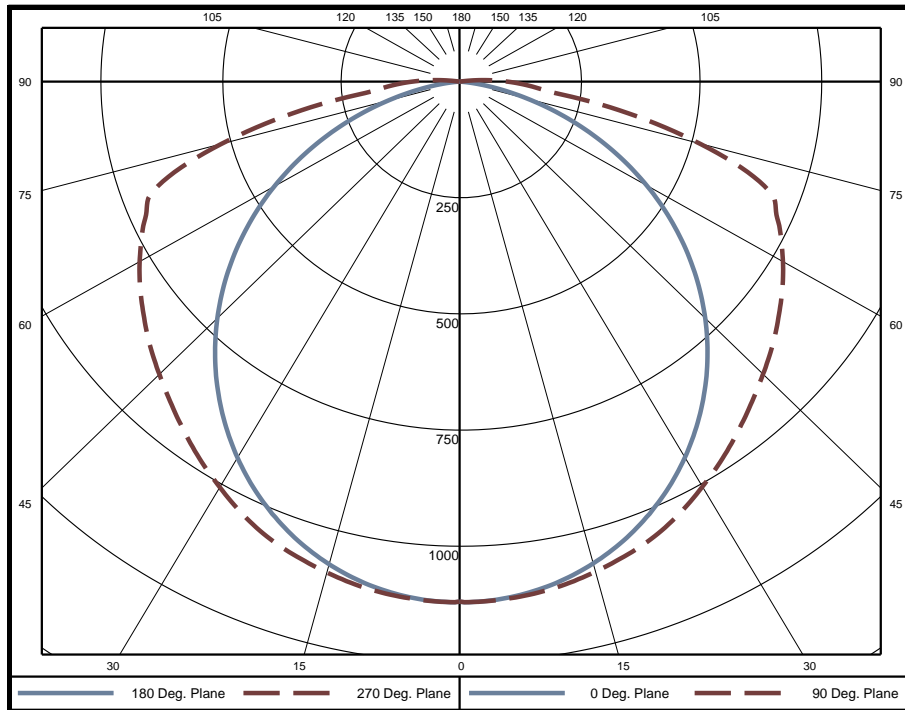
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.6 °C	120.0 VAC	0.2991 A	35.84 W	0.999	60 Hz	3.97 %

Summary of Results

Spacing Criteria
 0-180: 1.24
 90-270: 1.34

Total Lumen Output: 3819 Lumens
Luminaire Efficacy: 106.6 lm/w
Maximum Candela: 1121 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	26.7	0.7%	60-65	286.1	7.5%	120-125	0	0.0%
5-10	79.4	2.1%	65-70	265.8	7.0%	125-130	0	0.0%
10-15	129.6	3.4%	70-75	233.7	6.1%	130-135	0	0.0%
15-20	175.9	4.6%	75-80	174.3	4.6%	135-140	0	0.0%
20-25	217.2	5.7%	80-85	98.7	2.6%	140-145	0	0.0%
25-30	251.9	6.6%	85-90	46.4	1.2%	145-150	0	0.0%
30-35	279.0	7.3%	90-95	18.0	0.5%	150-155	0	0.0%
35-40	298.2	7.8%	95-100	1.5	0.0%	155-160	0	0.0%
40-45	309.8	8.1%	100-105	0	0.0%	160-165	0	0.0%
45-50	314.2	8.2%	105-110	0	0.0%	165-170	0	0.0%
50-55	311.2	8.1%	110-115	0	0.0%	170-175	0	0.0%
55-60	301.6	7.9%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1458	38.2%
0-60	2695	70.6%
0-90	3800	99.5%
90-180	20	0.5%



Candela Tabulation

Horizontal 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	1119	1119	1119	1119	1119	1119	1119	1119	1119	1119	1119	1119	1119	1119	1119	1119
5	1116	1114	1114	1117	1118	1117	1114	1114	1116	1114	1114	1117	1118	1117	1114	1114
10	1100	1099	1102	1107	1108	1107	1102	1099	1100	1099	1102	1107	1108	1107	1102	1099
15	1073	1075	1081	1089	1092	1089	1081	1075	1073	1075	1081	1089	1092	1089	1081	1075
20	1037	1041	1052	1065	1072	1065	1052	1041	1037	1041	1052	1065	1072	1065	1052	1041
25	991	998	1017	1037	1044	1037	1017	998	991	998	1017	1037	1044	1037	1017	998
30	935	946	975	998	1008	998	975	946	935	946	975	998	1008	998	975	946
35	872	887	924	956	970	956	924	887	872	887	924	956	970	956	924	887
40	800	822	866	911	930	911	866	822	800	822	866	911	930	911	866	822
45	722	751	806	867	892	867	806	751	722	751	806	867	892	867	806	751
50	637	673	746	825	856	825	746	673	637	673	746	825	856	825	746	673
55	546	587	687	782	817	782	687	587	546	587	687	782	817	782	687	587
60	451	501	630	738	777	738	630	501	451	501	630	738	777	738	630	501
65	351	418	575	692	734	692	575	418	351	418	575	692	734	692	575	418
70	250	341	518	646	684	646	518	341	250	341	518	646	684	646	518	341
75	153	270	457	513	519	513	457	270	153	270	457	513	519	513	457	270
80	70	203	303	316	318	316	303	203	70	203	303	316	318	316	303	203
85	11	101	130	155	164	155	130	101	11	101	130	155	164	155	130	101
90	0	23	65	91	100	91	65	23	0	23	65	91	100	91	65	23
95	0	0	5	26	34	26	5	0	0	0	5	26	34	26	5	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/m²)

Horizontal Angle (Degrees)

	0	45	90
0	4252	4252	4252
45	3652	3347	3542
55	3321	3206	3597
65	2783	3170	3754
75	1822	3201	3288
85	281	1298	1422

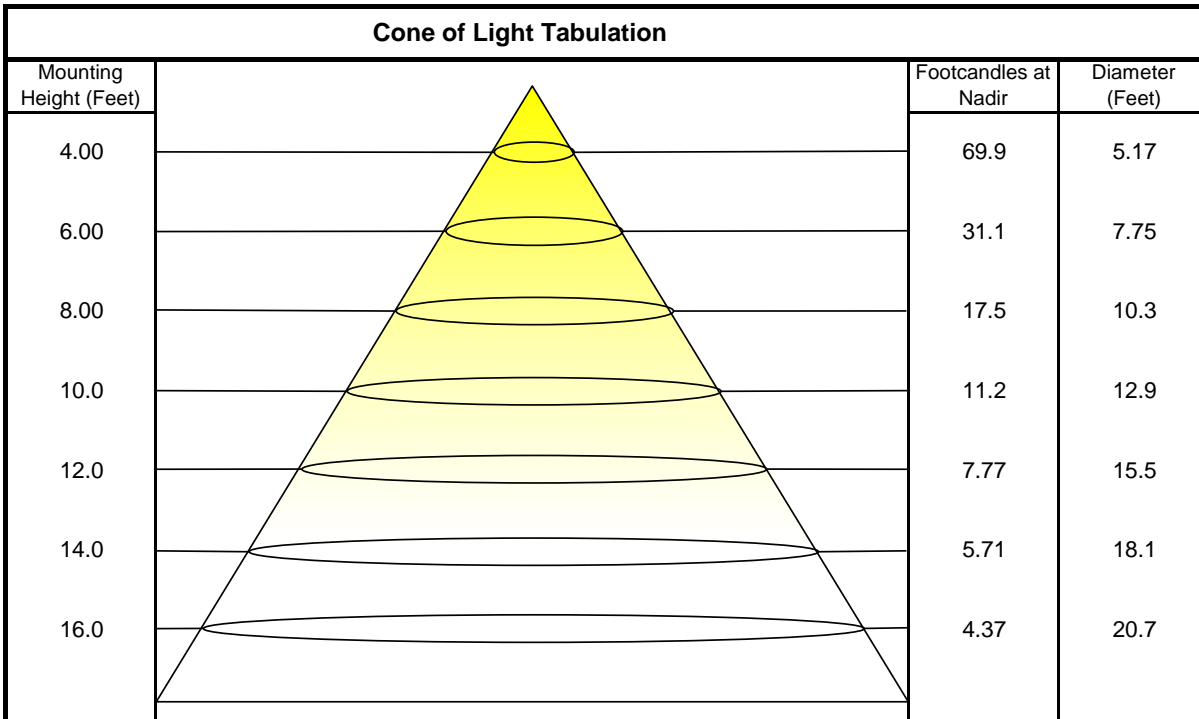


Coefficients of Utilization - Zonal Cavity Method

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	99
1	107	101	96	92	104	99	95	90	95	91	87	91	87	85	87	84	82	80
2	96	87	79	73	93	85	78	72	81	75	70	78	73	68	75	71	67	64
3	87	76	67	59	84	74	66	59	71	64	58	68	62	57	65	60	55	53
4	79	66	57	50	77	65	56	49	62	55	48	60	53	48	58	52	47	45
5	73	59	49	42	70	58	49	42	56	48	41	53	46	41	51	45	40	38
6	67	53	43	37	65	52	43	36	50	42	36	48	41	36	46	40	35	33
7	62	48	39	32	60	47	38	32	45	37	32	44	37	31	42	36	31	29
8	58	43	35	28	56	43	34	28	41	34	28	40	33	28	39	32	28	26
9	54	40	31	25	52	39	31	25	38	30	25	37	30	25	36	29	25	23
10	50	37	28	23	49	36	28	23	35	28	23	34	27	23	33	27	23	21

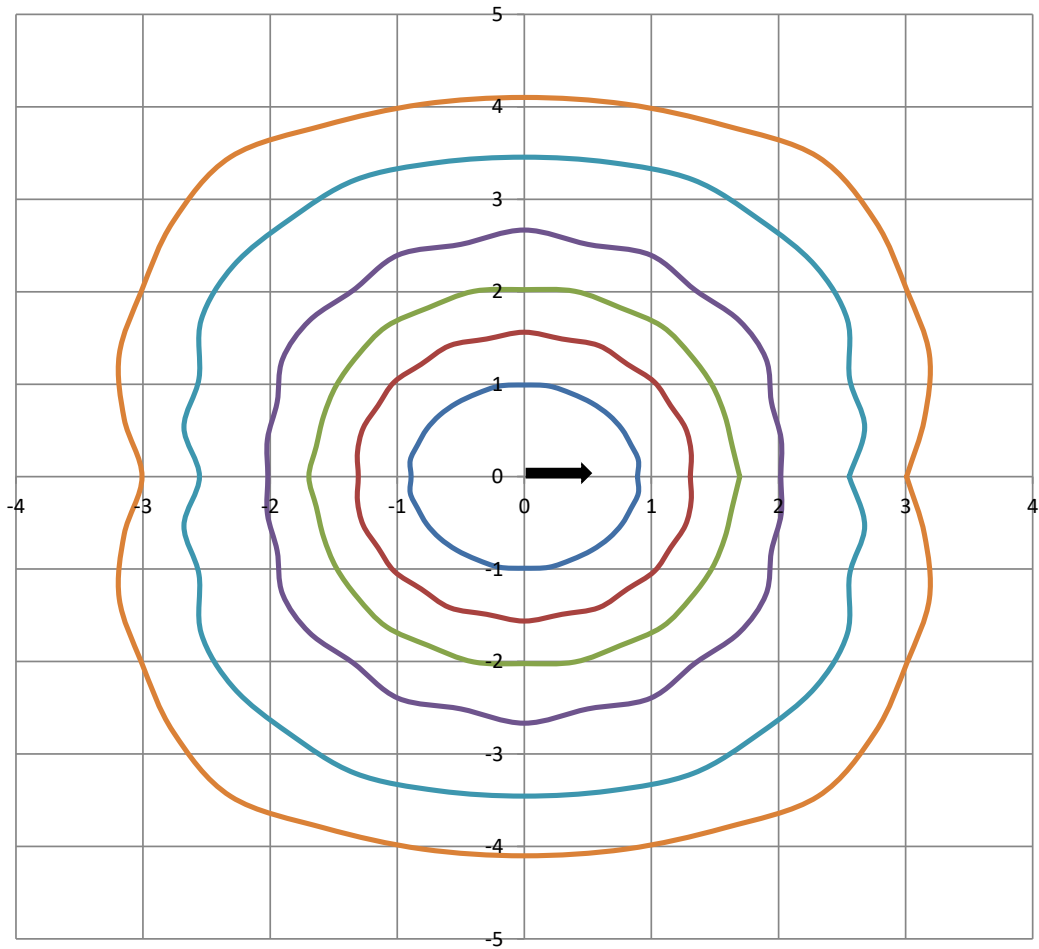
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1119 Candela
Central Cone Intensity:	1118 Candela
Beam Flux:	3063.5 Lumens
Beam Angle (0-180):	108.6 Degrees
Beam Angle (90-270):	147.9 Degrees
Field Angle (0-180):	154.7 Degrees
Field Angle (90-270):	178.1 Degrees





ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

