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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

390420-LEDS5

Order Number

12520987

Test Number

12520987.01

Test Date

2018-10-19

Prepared By

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Approved By

Kevin Rodriguez, Project Handler

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 2-meter integrating sphere using the 4π geometry method.
Absorption correction was employed for Sphere measurement



Luminaire Description: White formed steel housing, clear glass lens enclosure
Lamp: Two T8LDR4F15/850C Lamps
Mounting: Recessed
Ballast/Driver: One Universal B232IUNVHP-N

Luminaire



Luminaire Characteristics

Luminous Length: 48.00 in.
Luminous Width: 7.250 in.

Summary of Results

Integrating Sphere

Luminous Flux: 2977 Lumens
Efficacy: 83.5 lm/w
CCT: 5130 K
CRI (Ra): 83.9

Distribution

Total Luminaire Output: 2883 Lumens
Luminaire Efficacy: 80.8 lm/w
Maximum Candela: 1125 Candela

Electrical Data at 120 VAC

Test Temperature: 25.5 °C
Voltage: 120.0 VAC
Current: 0.2976 A
Power: 35.67 W
Power Factor: 0.999
Frequency: 60 Hz
Current THD: 4.64 %



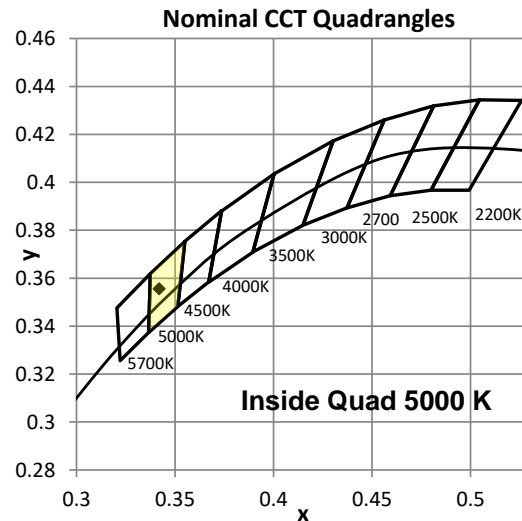
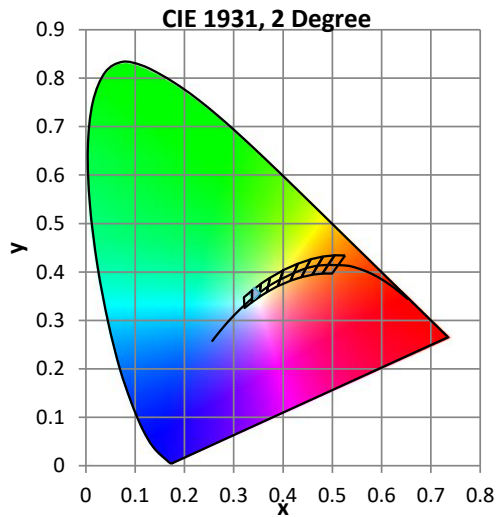
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.5 °C	120.0 VAC	0.2976 A	35.67 W	0.999	60 Hz	4.64 %

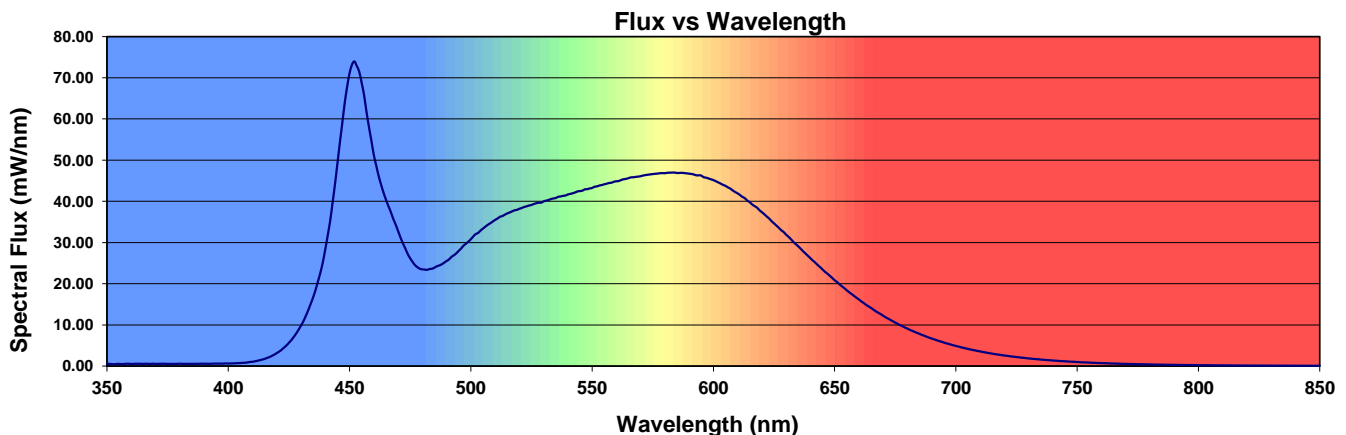
Summary of Results

Total Output:	2977 Lumens	Chromaticity (x):	0.3419
Efficacy:	83.5 lm/w	Chromaticity (y):	0.3556
CCT:	5130 K	Chromaticity (u'):	0.2078
CRI (Ra):	83.9	Chromaticity (v'):	0.4861
CRI (R9):	6.5	TM-30 Rf:	82.5
Peak Wavelength:	452 nm	TM-30 Rg:	93.8
Dominant Wavelength:	567 nm	Duv:	0.0027
S/P Ratio:	2.02		



Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
83.9	81.9	90.4	94.9	82.3	82.7	86.1	86.5	66.2	6.5	76.9	81.7	64.5	84.4	97.6	75.6





Distribution - Goniophotometer

Distribution Test Conditions

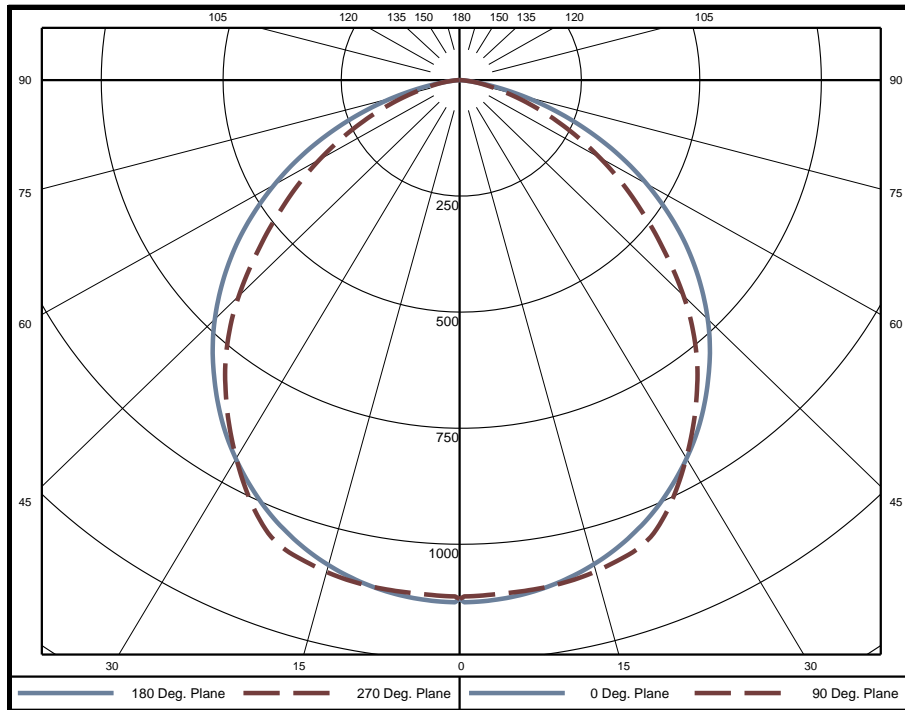
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.8 °C	120.0 VAC	0.2976 A	35.66 W	0.999	60 Hz	4.66 %

Summary of Results

Spacing Criteria
 0-180: 1.25
 90-270: 1.24

Total Lumen Output: 2883 Lumens
Luminaire Efficacy: 80.8 lm/w
Maximum Candela: 1125 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	26.7	0.9%	60-65	170.1	5.9%	120-125	0	0.0%
5-10	79.4	2.8%	65-70	126.7	4.4%	125-130	0	0.0%
10-15	130.1	4.5%	70-75	82.3	2.9%	130-135	0	0.0%
15-20	177.2	6.1%	75-80	43.7	1.5%	135-140	0	0.0%
20-25	218.6	7.6%	80-85	17.0	0.6%	140-145	0	0.0%
25-30	250.5	8.7%	85-90	3.3	0.1%	145-150	0	0.0%
30-35	271.3	9.4%	90-95	0	0.0%	150-155	0	0.0%
35-40	281.6	9.8%	95-100	0	0.0%	155-160	0	0.0%
40-45	281.3	9.8%	100-105	0	0.0%	160-165	0	0.0%
45-50	268.7	9.3%	105-110	0	0.0%	165-170	0	0.0%
50-55	244.1	8.5%	110-115	0	0.0%	170-175	0	0.0%
55-60	210.2	7.3%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1435	49.8%
0-60	2440	84.6%
0-90	2883	100.0%
90-180	0	0.0%



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	1118	1118	1118	1118	1118	1118	1118	1118	1118	1118	1118	1118	1118	1118	1118	1118
5	1120	1115	1115	1114	1110	1114	1115	1115	1120	1115	1115	1114	1110	1114	1115	1115
10	1105	1101	1105	1109	1106	1109	1105	1101	1105	1101	1105	1109	1106	1109	1105	1101
15	1080	1079	1088	1096	1096	1096	1088	1079	1080	1079	1088	1096	1096	1096	1088	1079
20	1044	1048	1063	1076	1077	1076	1063	1048	1044	1048	1063	1076	1077	1076	1063	1048
25	998	1006	1030	1032	1024	1032	1030	1006	998	1006	1030	1032	1024	1032	1030	1006
30	943	956	980	954	943	954	980	956	943	956	980	954	943	954	980	956
35	879	898	903	868	858	868	903	898	879	898	903	868	858	868	903	898
40	807	836	815	778	767	778	815	836	807	836	815	778	767	778	815	836
45	730	764	721	679	661	679	721	764	730	764	721	679	661	679	721	764
50	644	674	624	566	546	566	624	674	644	674	624	566	546	566	624	674
55	551	573	513	453	440	453	513	573	551	573	513	453	440	453	513	573
60	451	466	395	352	341	352	395	466	451	466	395	352	341	352	395	466
65	348	357	288	256	247	256	288	357	348	357	288	256	247	256	288	357
70	242	244	192	170	163	170	192	244	242	244	192	170	163	170	192	244
75	143	139	110	96	93	96	110	139	143	139	110	96	93	96	110	139
80	60	59	48	47	47	47	48	59	60	59	48	47	47	47	48	59
85	12	15	16	15	14	15	16	15	12	15	16	15	14	15	16	15
90	1	1	1	1	0	1	1	1	1	1	1	1	0	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/m²)

Horizontal Angle (Degrees)

	0	45	90
0	4978	4978	4978
45	4596	4542	4163
55	4275	3985	3415
65	3668	3033	2604
75	2468	1890	1606
85	601	796	720

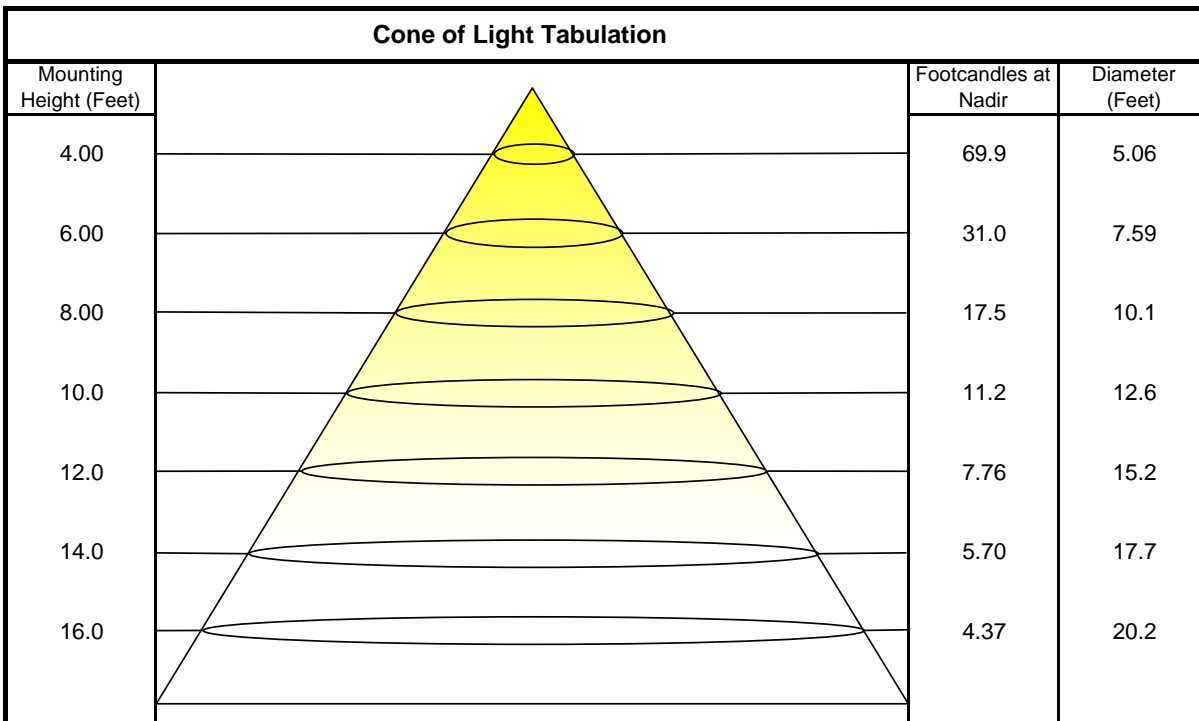


Coefficients of Utilization - Zonal Cavity Method

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	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	93	87	81	98	91	85	80	88	83	79	84	80	77	81	78	75	73
3	92	82	75	68	90	81	74	68	78	72	67	75	70	65	72	68	64	62
4	85	73	65	58	82	72	64	58	69	63	57	67	61	57	65	60	56	54
5	78	66	57	51	76	65	56	50	62	55	50	61	54	49	59	53	49	47
6	72	59	51	44	70	58	50	44	57	49	44	55	48	43	53	48	43	41
7	67	54	45	39	65	53	45	39	52	44	39	50	44	39	49	43	38	36
8	62	49	41	35	61	48	41	35	47	40	35	46	39	35	45	39	34	33
9	58	45	37	32	57	45	37	32	43	36	32	42	36	31	41	36	31	29
10	55	42	34	29	53	41	34	29	40	33	29	39	33	29	38	33	28	27

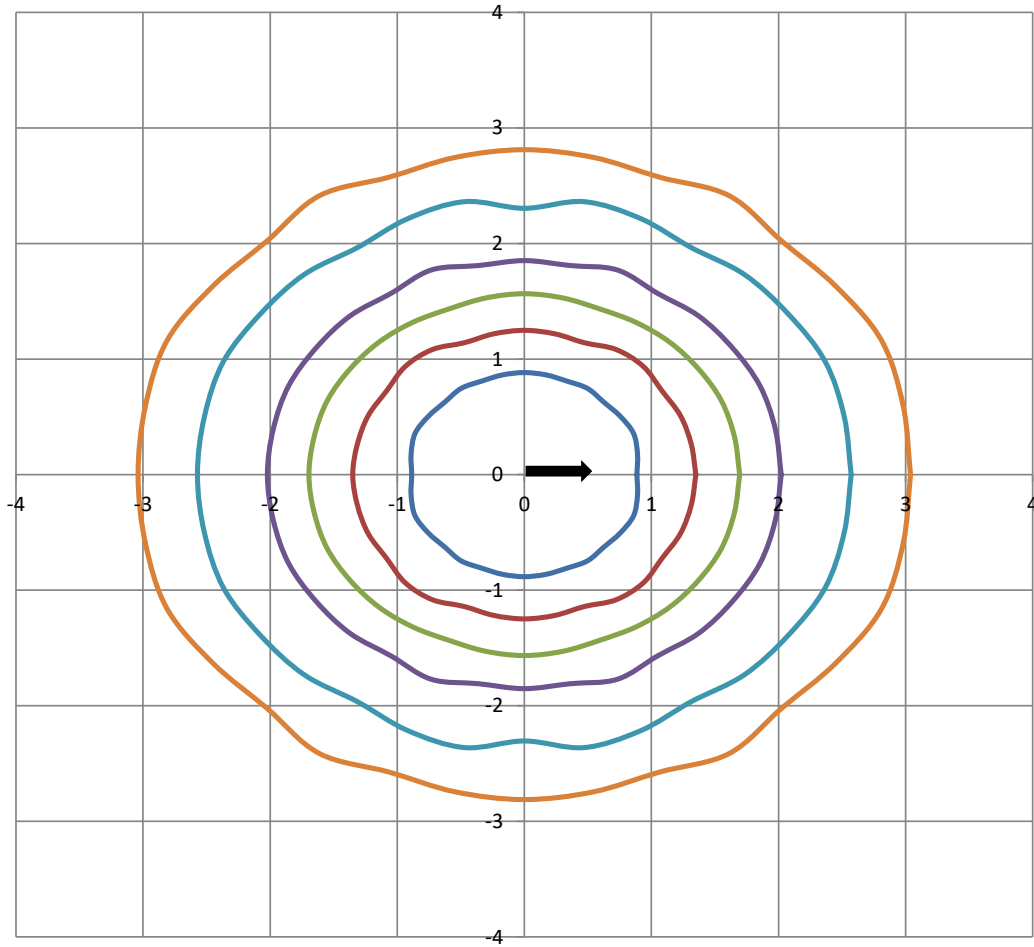
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1118 Candela
Central Cone Intensity:	1117 Candela
Beam Flux:	2128.9 Lumens
Beam Angle (0-180):	109.2 Degrees
Beam Angle (90-270):	98.8 Degrees
Field Angle (0-180):	153.4 Degrees
Field Angle (90-270):	147.1 Degrees





ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

