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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

390460-LEDH5

Order Number

12520987

Test Number

12520987.05

Test Date

2018-10-19 - 2018-10-22

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 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: Six T8LDR4F15/850C Lamps
Mounting: Recessed
Ballast/Driver: One Universal B232IUNVHEH-A and B432IUNVHEH-E

Luminaire



Luminaire Characteristics

Luminous Length: 48.00 in.
Luminous Width: 17.25 in.

Summary of Results

Integrating Sphere

Luminous Flux: 13620 Lumens
Efficacy: 91.5 lm/w
CCT: 5212 K
CRI (Ra): 83.5

Distribution

Total Luminaire Output: 13310 Lumens
Luminaire Efficacy: 89.2 lm/w
Maximum Candela: 4576 Candela

Electrical Data at 120 VAC

Test Temperature: 25.5 °C
Voltage: 120.1 VAC
Current: 1.244 A
Power: 148.9 W
Power Factor: 0.997
Frequency: 60 Hz
Current THD: 6.63 %



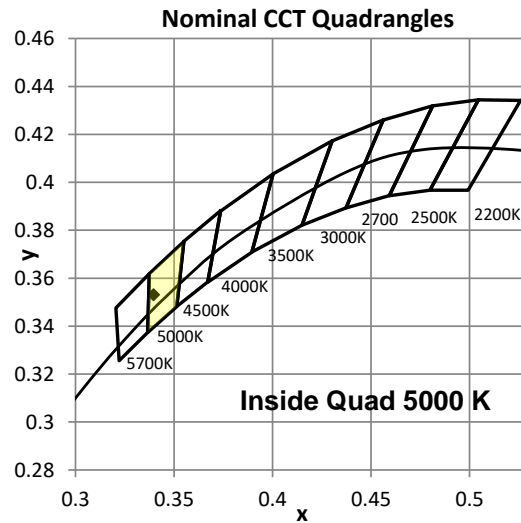
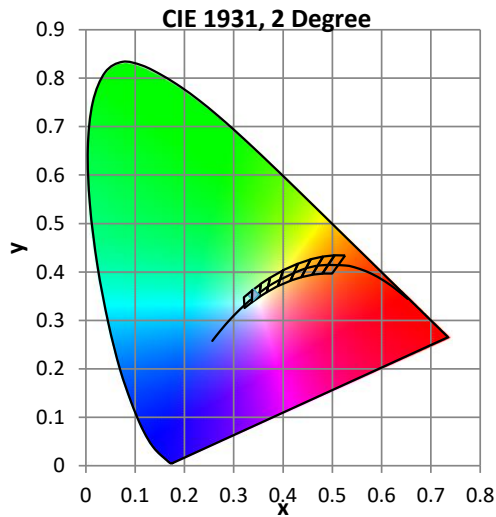
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.5 °C	120.1 VAC	1.244 A	148.9 W	0.997	60 Hz	6.63 %

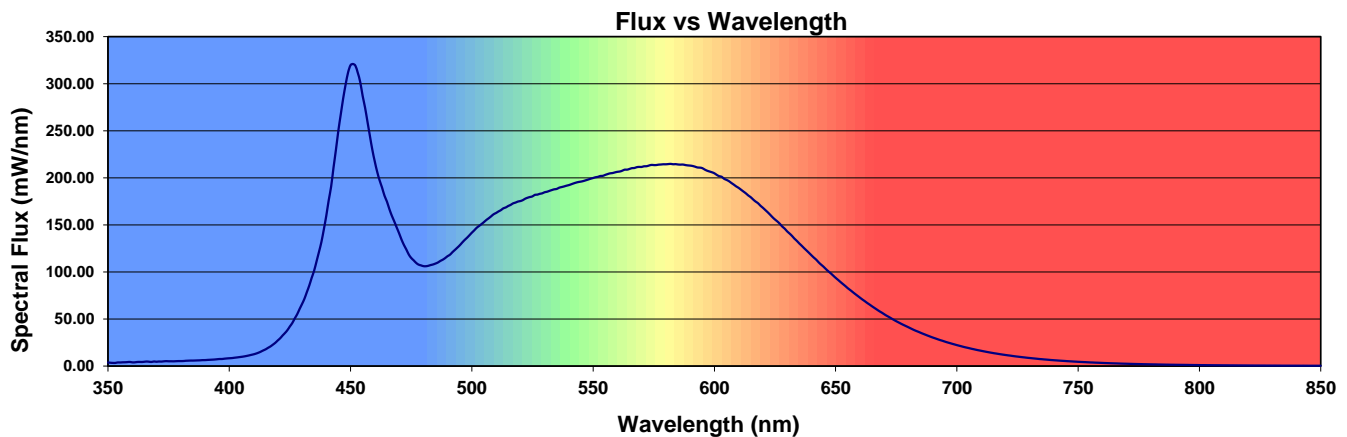
Summary of Results

Total Output:	13620 Lumens	Chromaticity (x):	0.3396
Efficacy:	91.5 lm/w	Chromaticity (y):	0.3531
CCT:	5212 K	Chromaticity (u'):	0.2072
CRI (Ra):	83.5	Chromaticity (v'):	0.4846
CRI (R9):	4.9	TM-30 Rf:	82.8
Peak Wavelength:	451 nm	TM-30 Rg:	94.6
Dominant Wavelength:	566 nm	Duv:	0.0025
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
83.5	81.4	89.2	94.1	82.7	82.5	85.0	86.7	66.4	4.9	74.3	82.0	66.3	83.5	97.0	75.0





Distribution - Goniophotometer

Distribution Test Conditions

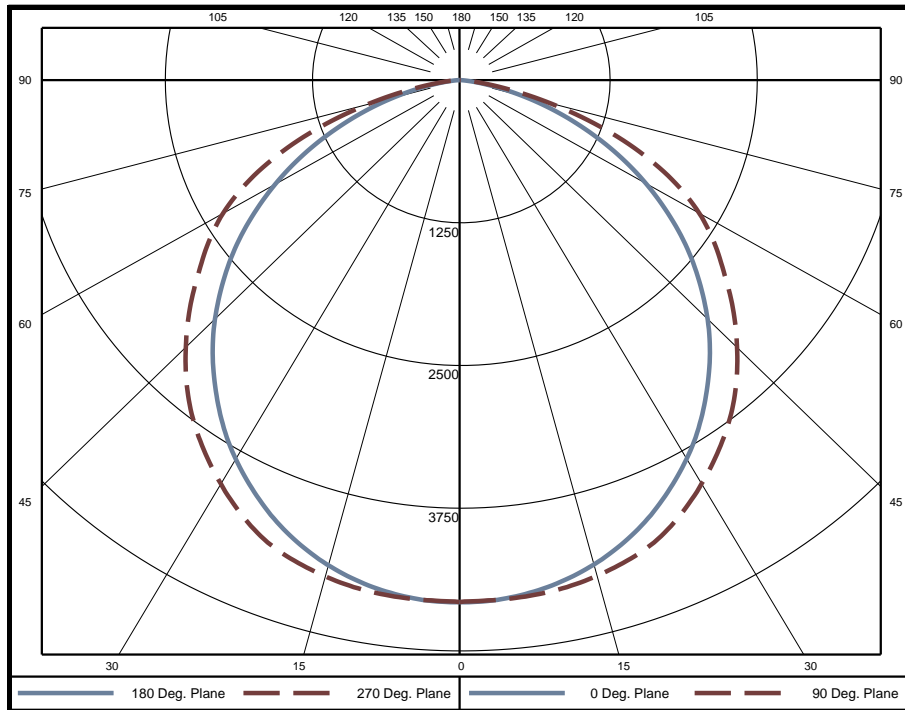
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.1 °C	120.0 VAC	1.247 A	149.2 W	0.997	60 Hz	6.58 %

Summary of Results

Spacing Criteria
 0-180: 1.25
 90-270: 1.32

Total Lumen Output: 13310 Lumens
Luminaire Efficacy: 89.2 lm/w
Maximum Candela: 4576 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	109	0.8%	60-65	935	7.0%	120-125	0	0.0%
5-10	325	2.4%	65-70	755	5.7%	125-130	0	0.0%
10-15	532	4.0%	70-75	532	4.0%	130-135	0	0.0%
15-20	725	5.4%	75-80	297	2.2%	135-140	0	0.0%
20-25	895	6.7%	80-85	110	0.8%	140-145	0	0.0%
25-30	1035	7.8%	85-90	20	0.2%	145-150	0	0.0%
30-35	1141	8.6%	90-95	0	0.0%	150-155	0	0.0%
35-40	1209	9.1%	95-100	0	0.0%	155-160	0	0.0%
40-45	1237	9.3%	100-105	0	0.0%	160-165	0	0.0%
45-50	1223	9.2%	105-110	0	0.0%	165-170	0	0.0%
50-55	1165	8.8%	110-115	0	0.0%	170-175	0	0.0%
55-60	1070	8.0%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	5971	44.9%
0-60	10666	80.1%
0-90	13315	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	4573	4573	4573	4573	4573	4573	4573	4573	4573	4573	4573	4573	4573	4573	4573	4573
5	4556	4557	4566	4565	4562	4565	4566	4557	4556	4557	4566	4565	4562	4565	4566	4557
10	4495	4503	4526	4541	4542	4541	4526	4503	4495	4503	4526	4541	4542	4541	4526	4503
15	4392	4413	4455	4485	4492	4485	4455	4413	4392	4413	4455	4485	4492	4485	4455	4413
20	4246	4282	4349	4402	4413	4402	4349	4282	4246	4282	4349	4402	4413	4402	4349	4282
25	4056	4110	4207	4271	4274	4271	4207	4110	4056	4110	4207	4271	4274	4271	4207	4110
30	3834	3905	4023	4074	4077	4074	4023	3905	3834	3905	4023	4074	4077	4074	4023	3905
35	3576	3666	3791	3846	3857	3846	3791	3666	3576	3666	3791	3846	3857	3846	3791	3666
40	3284	3401	3523	3593	3603	3593	3523	3401	3284	3401	3523	3593	3603	3593	3523	3401
45	2965	3107	3227	3295	3302	3295	3227	3107	2965	3107	3227	3295	3302	3295	3227	3107
50	2611	2773	2903	2967	2982	2967	2903	2773	2611	2773	2903	2967	2982	2967	2903	2773
55	2232	2405	2534	2616	2660	2616	2534	2405	2232	2405	2534	2616	2660	2616	2534	2405
60	1825	2008	2139	2281	2327	2281	2139	2008	1825	2008	2139	2281	2327	2281	2139	2008
65	1402	1591	1750	1881	1895	1881	1750	1591	1402	1591	1750	1881	1895	1881	1750	1591
70	977	1155	1338	1378	1364	1378	1338	1155	977	1155	1338	1378	1364	1378	1338	1155
75	578	739	856	829	802	829	856	739	578	739	856	829	802	829	856	739
80	250	377	383	352	337	352	383	377	250	377	383	352	337	352	383	377
85	57	98	91	91	89	91	91	98	57	98	91	91	89	91	91	98
90	5	7	9	10	10	10	9	7	5	7	9	10	10	10	9	7
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	8560	8560	8560
45	7851	8544	8741
55	7283	8270	8680
65	6212	7751	8393
75	4182	6188	5799
85	1227	1953	1921

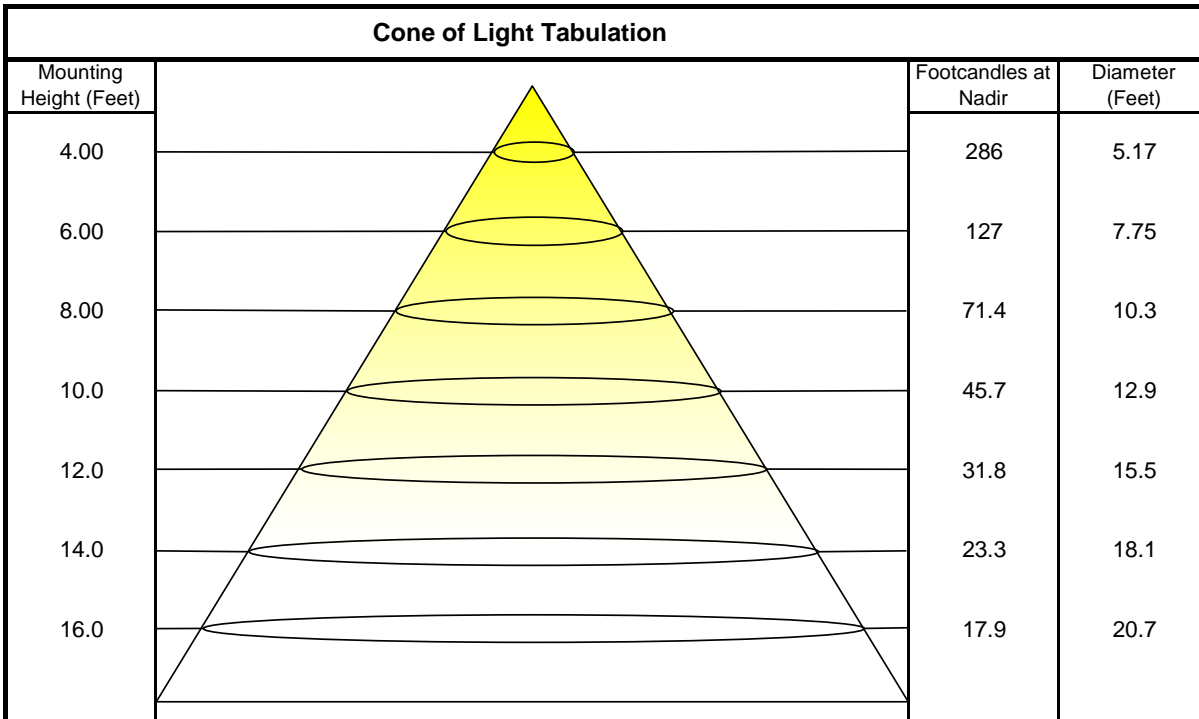


Coefficients of Utilization - Zonal Cavity Method

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	109	104	100	97	106	102	98	95	98	95	92	94	92	89	90	88	87	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70
3	90	80	72	65	88	78	71	65	75	69	64	73	67	62	70	65	61	59
4	83	71	62	55	80	69	61	55	67	60	54	65	58	53	62	57	53	50
5	76	63	54	47	74	62	54	47	60	52	47	58	51	46	56	50	46	44
6	70	57	48	41	68	56	47	41	54	46	41	52	46	40	51	45	40	38
7	65	51	43	36	63	51	42	36	49	41	36	48	41	36	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	44	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

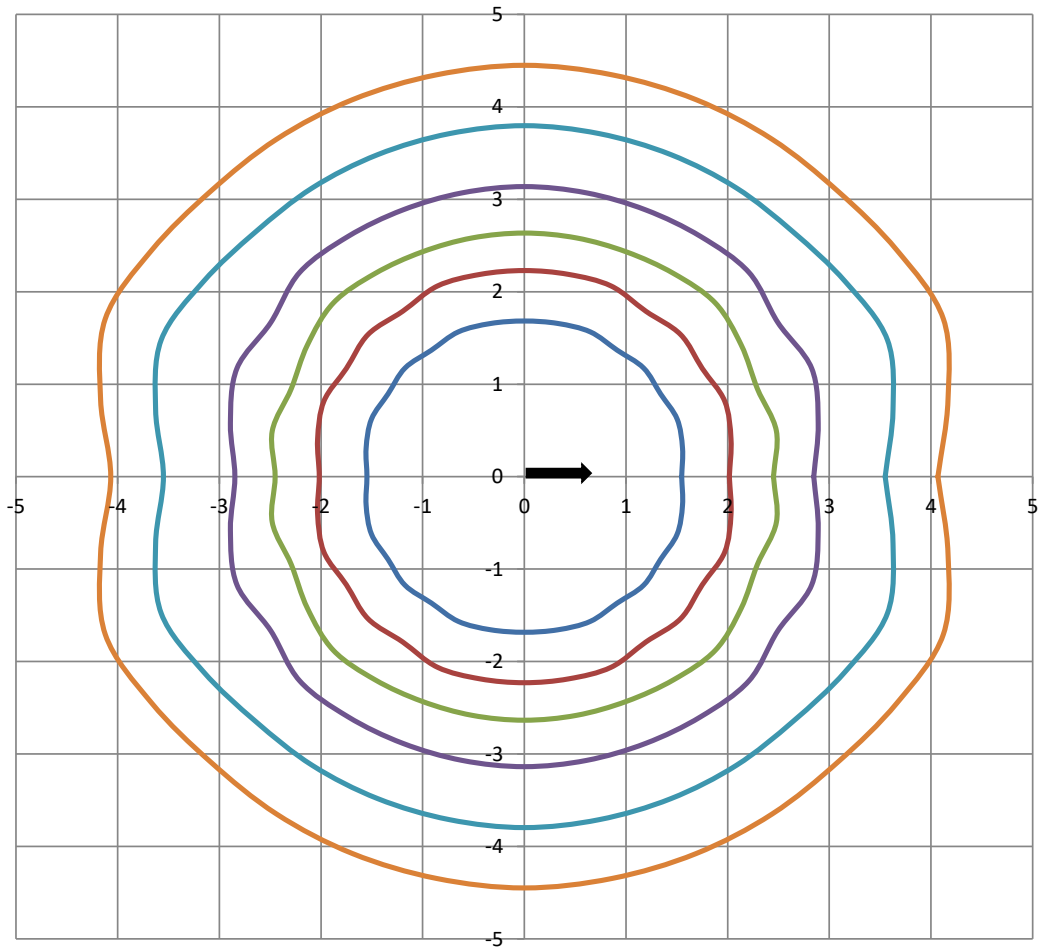
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	4573 Candela
Central Cone Intensity:	4569 Candela
Beam Flux:	10275.0 Lumens
Beam Angle (0-180):	108.6 Degrees
Beam Angle (90-270):	121.1 Degrees
Field Angle (0-180):	153.3 Degrees
Field Angle (90-270):	157.0 Degrees





ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

