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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-LEDS5
Order Number
12520987
Test Number
12520987.04

Test Date

2018-10-18 - 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 3-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: Six T8 Lamps
Mounting: Recessed
Ballast/Driver: Two Universal B332IUNVHP-A Drivers

Luminaire



Luminaire Characteristics

Luminous Length: 48.00 in.
Luminous Width: 17.50 in.

Summary of Results

Integrating Sphere

Luminous Flux: 10410 Lumens
Efficacy: 98.1 lm/w
CCT: 5129 K
CRI (Ra): 83.5

Distribution

Total Luminaire Output: 10070 Lumens
Luminaire Efficacy: 94.6 lm/w
Maximum Candela: 3455 Candela

Electrical Data at 120 VAC

Test Temperature: 24.7 °C
Voltage: 120.0 VAC
Current: 0.8872 A
Power: 106.1 W
Power Factor: 0.996
Frequency: 60 Hz
Current THD: 6.71 %



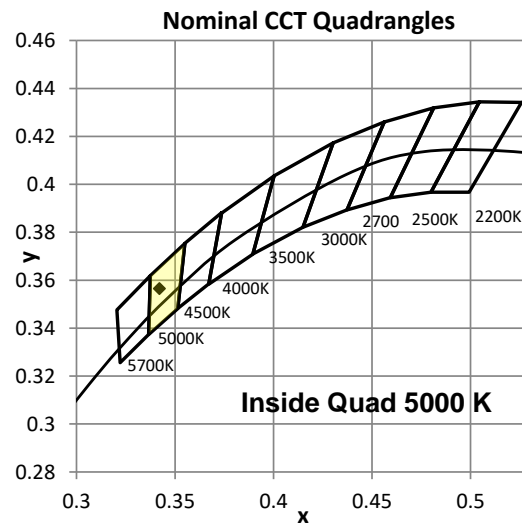
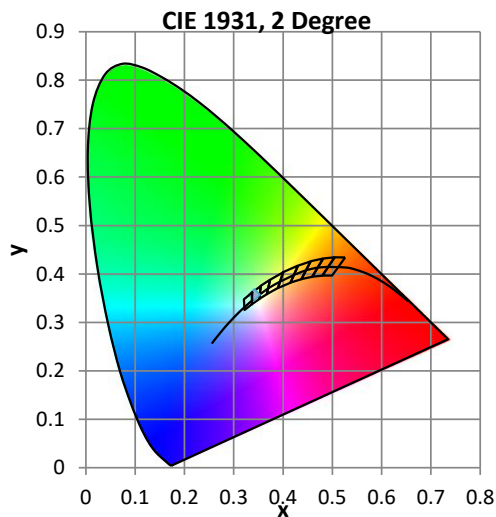
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.7 °C	120.0 VAC	0.8872 A	106.1 W	0.996	60 Hz	6.71 %

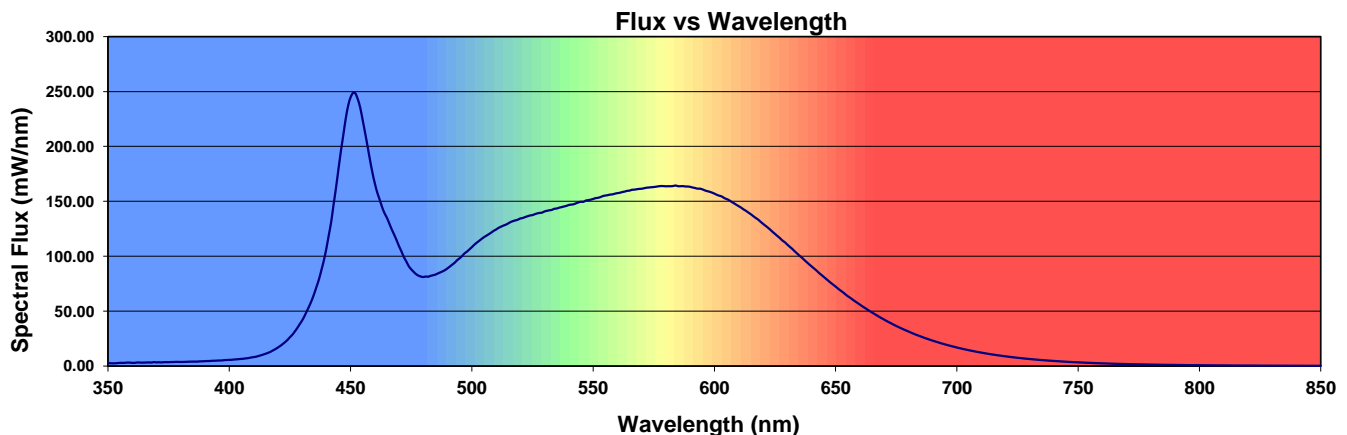
Summary of Results

Total Output:	10410 Lumens	Chromaticity (x):	0.3420
Efficacy:	98.1 lm/w	Chromaticity (y):	0.3566
CCT:	5129 K	Chromaticity (u'):	0.2074
CRI (Ra):	83.5	Chromaticity (v'):	0.4866
CRI (R9):	4.4	TM-30 Rf:	82.7
Peak Wavelength:	451 nm	TM-30 Rg:	94
Dominant Wavelength:	567 nm	Duv:	0.0031
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
83.5	81.3	89.6	94.7	82.3	82.2	85.4	86.6	65.8	4.4	75.1	81.6	65.4	83.6	97.4	75.0





Distribution - Goniophotometer

Distribution Test Conditions

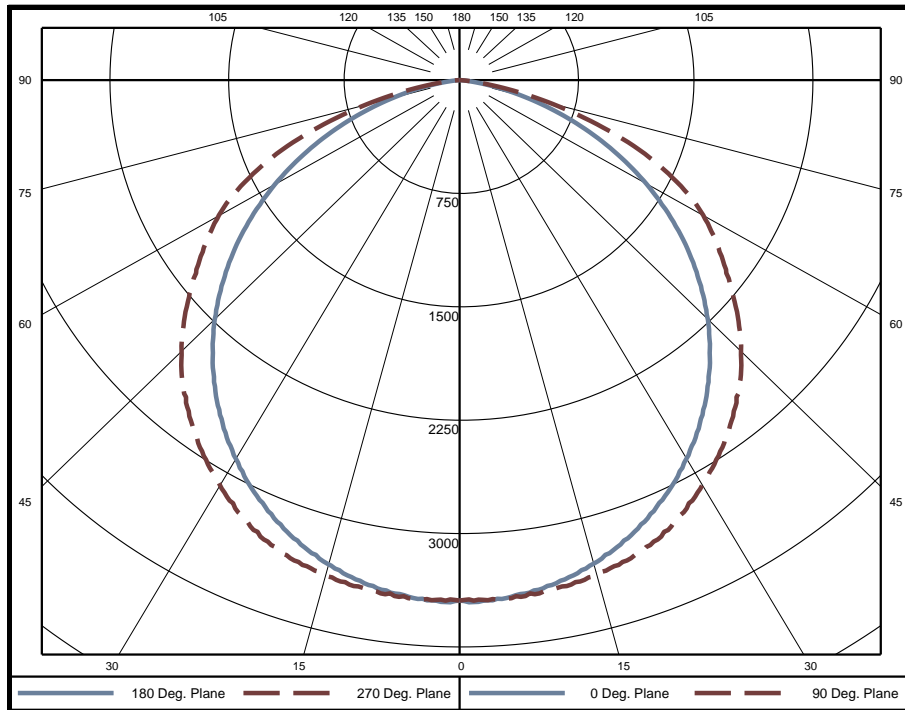
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.9 °C	120.0 VAC	0.8910 A	106.5 W	0.997	60 Hz	6.71 %

Summary of Results

Spacing Criteria
 0-180: 1.25
 90-270: 1.33

Total Lumen Output: 10070 Lumens
Luminaire Efficacy: 94.6 lm/w
Maximum Candela: 3455 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	82.2	0.8%	60-65	713.6	7.1%	120-125	0	0.0%
5-10	244.7	2.4%	65-70	579.5	5.8%	125-130	0	0.0%
10-15	400.6	4.0%	70-75	408.2	4.1%	130-135	0	0.0%
15-20	545.3	5.4%	75-80	225.4	2.2%	135-140	0	0.0%
20-25	674.1	6.7%	80-85	75.3	0.7%	140-145	0	0.0%
25-30	781.0	7.8%	85-90	5.1	0.1%	145-150	0	0.0%
30-35	861.5	8.6%	90-95	0	0.0%	150-155	0	0.0%
35-40	914.3	9.1%	95-100	0	0.0%	155-160	0	0.0%
40-45	937.3	9.3%	100-105	0	0.0%	160-165	0	0.0%
45-50	927.9	9.2%	105-110	0	0.0%	165-170	0	0.0%
50-55	885.0	8.8%	110-115	0	0.0%	170-175	0	0.0%
55-60	812.6	8.1%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	4504	44.7%
0-60	8067	80.1%
0-90	10074	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	3443	3443	3443	3443	3443	3443	3443	3443	3443	3443	3443	3443	3443	3443	3443	3443
5	3439	3432	3437	3439	3444	3439	3437	3432	3439	3432	3437	3439	3444	3439	3437	3432
10	3392	3392	3402	3418	3420	3418	3402	3392	3392	3392	3402	3418	3420	3418	3402	3392
15	3311	3322	3346	3377	3387	3377	3346	3322	3311	3322	3346	3377	3387	3377	3346	3322
20	3204	3224	3269	3311	3333	3311	3269	3224	3204	3224	3269	3311	3333	3311	3269	3224
25	3064	3097	3168	3217	3226	3217	3168	3097	3064	3097	3168	3217	3226	3217	3168	3097
30	2894	2944	3035	3078	3088	3078	3035	2944	2894	2944	3035	3078	3088	3078	3035	2944
35	2704	2762	2863	2908	2931	2908	2863	2762	2704	2762	2863	2908	2931	2908	2863	2762
40	2484	2569	2659	2723	2737	2723	2659	2569	2484	2569	2659	2723	2737	2723	2659	2569
45	2242	2346	2440	2513	2529	2513	2440	2346	2242	2346	2440	2513	2529	2513	2440	2346
50	1975	2095	2198	2263	2281	2263	2198	2095	1975	2095	2198	2263	2281	2263	2198	2095
55	1684	1811	1927	1996	2033	1996	1927	1811	1684	1811	1927	1996	2033	1996	1927	1811
60	1381	1519	1632	1741	1788	1741	1632	1519	1381	1519	1632	1741	1788	1741	1632	1519
65	1060	1207	1334	1450	1465	1450	1334	1207	1060	1207	1334	1450	1465	1450	1334	1207
70	735	879	1033	1069	1058	1069	1033	879	735	879	1033	1069	1058	1069	1033	879
75	432	560	659	632	617	632	659	560	432	560	659	632	617	632	659	560
80	179	285	287	261	248	261	287	285	179	285	287	261	248	261	287	285
85	24	53	46	46	47	46	46	53	24	53	46	46	47	46	46	53
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	6353	6353	6353
45	5850	6367	6600
55	5417	6201	6540
65	4630	5824	6398
75	3081	4697	4401
85	503	980	989

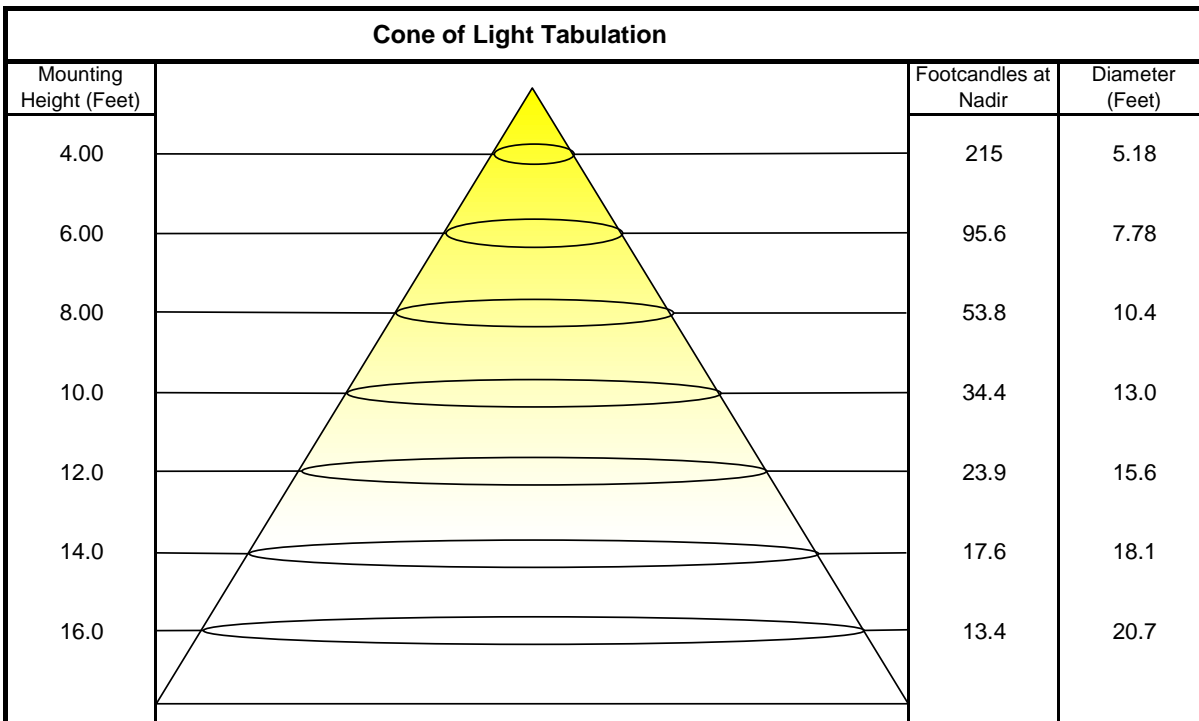


Coefficients of Utilization - Zonal Cavity Method

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	105	100	97	106	102	99	95	98	95	92	94	92	89	91	89	87	85
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	53	47	60	52	47	58	51	46	56	50	46	43
6	70	57	48	41	68	56	47	41	54	46	41	52	45	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	43	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

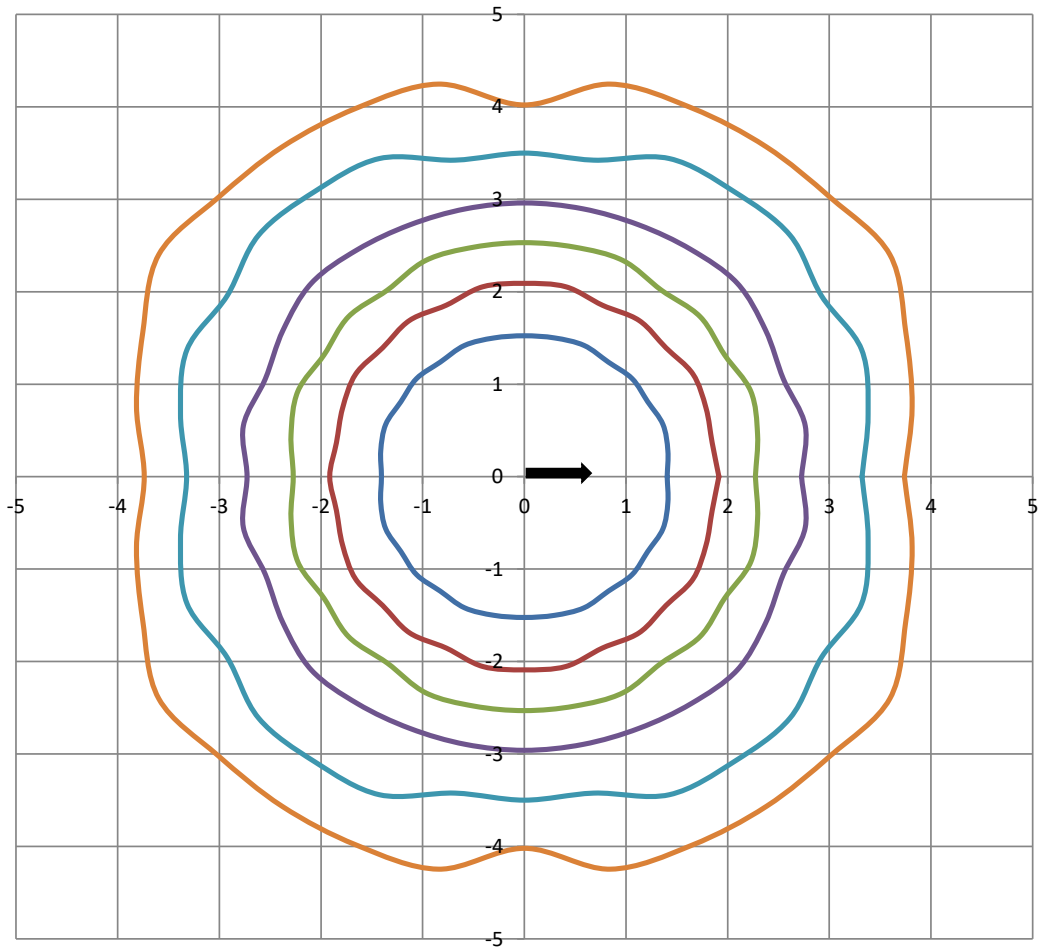
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	3443 Candela
Central Cone Intensity:	3441 Candela
Beam Flux:	7822.3 Lumens
Beam Angle (0-180):	108.8 Degrees
Beam Angle (90-270):	122.4 Degrees
Field Angle (0-180):	153.2 Degrees
Field Angle (90-270):	157.1 Degrees





ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

