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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
380-LEDS5-3L-4-UNV1
Order Number
12520987
Test Number
12520987.08

Test Date

2018-10-22 - 2018-10-23

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: Three T8LDR4F15/850C Lamps
Mounting: Pendant
Ballast/Driver: One Universal B332IUNVHP-A

Luminaire



Luminaire Characteristics

Luminous Length: 48.00 in.
Luminous Width: 12.50 in.
Luminous Height: 3.00 in.

Summary of Results

Integrating Sphere

Luminous Flux: 5853 Lumens
Efficacy: 112.8 lm/w
CCT: 5041 K
CRI (Ra): 83.5

Distribution

Total Luminaire Output: 5600 Lumens
Luminaire Efficacy: 107.7 lm/w
Maximum Candela: 1650 Candela

Electrical Data at 120 VAC

Test Temperature: 24.4 °C
Voltage: 120.0 VAC
Current: 0.4348 A
Power: 51.89 W
Power Factor: 0.994
Frequency: 60 Hz
Current THD: 6.68 %



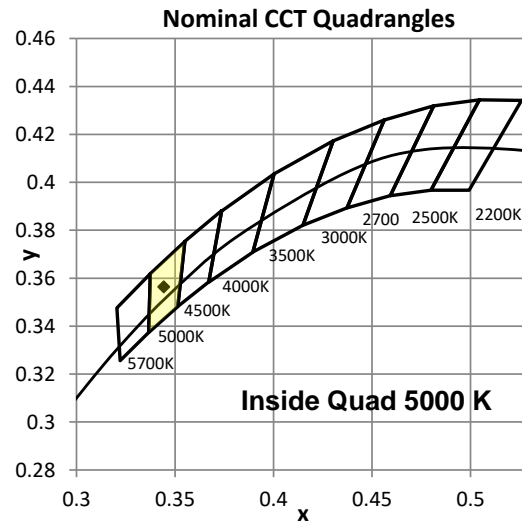
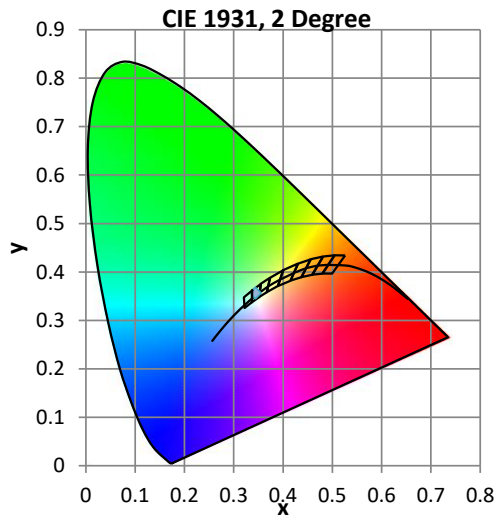
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.4 °C	120.0 VAC	0.4348 A	51.89 W	0.994	60 Hz	6.68 %

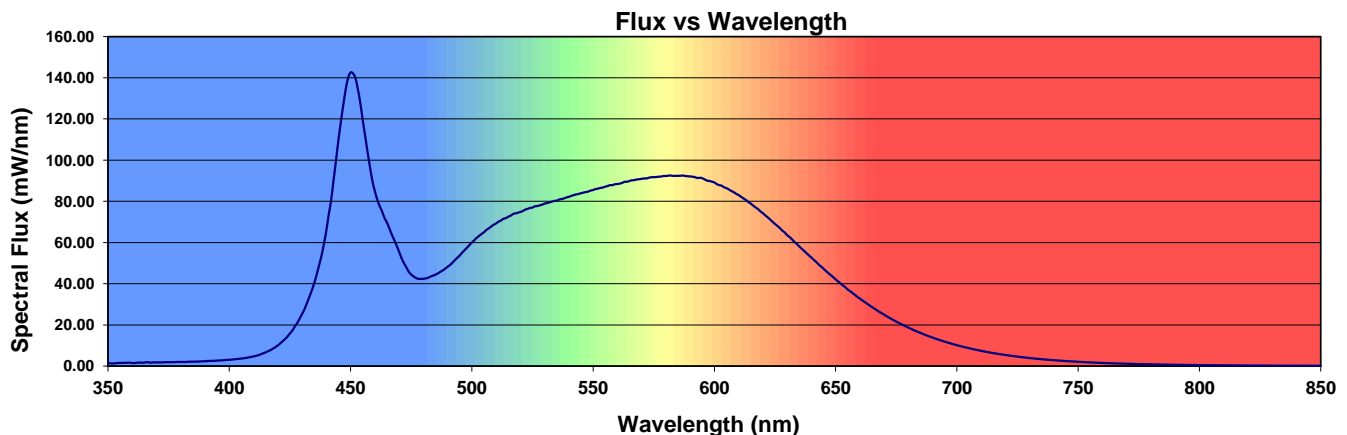
Summary of Results

Total Output:	5853 Lumens	Chromaticity (x):	0.3443
Efficacy:	112.8 lm/w	Chromaticity (y):	0.3564
CCT:	5041 K	Chromaticity (u'):	0.2090
CRI (Ra):	83.5	Chromaticity (v'):	0.4869
CRI (R9):	6.4	TM-30 Rf:	82.8
Peak Wavelength:	451 nm	TM-30 Rg:	95
Dominant Wavelength:	570 nm	Duv:	0.0020
S/P Ratio:	1.98		



Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
83.5	81.5	89.0	93.9	83.1	82.6	84.8	86.7	66.6	6.4	73.9	82.4	66.0	83.5	96.9	75.6





Distribution - Goniophotometer

Distribution Test Conditions

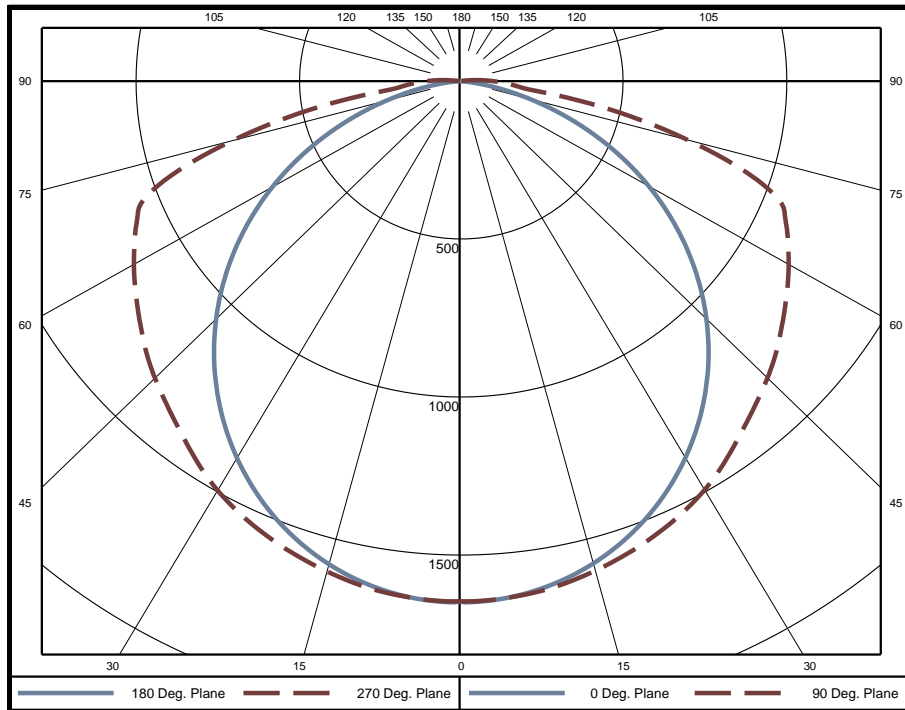
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.2 °C	120.0 VAC	0.4350 A	52.00 W	0.995	60 Hz	6.60 %

Summary of Results

Spacing Criteria
 0-180: 1.24
 90-270: 1.35

Total Lumen Output: 5600 Lumens
Luminaire Efficacy: 107.7 lm/w
Maximum Candela: 1650 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	39.3	0.7%	60-65	428.2	7.6%	120-125	0	0.0%
5-10	116.7	2.1%	65-70	398.8	7.1%	125-130	0	0.0%
10-15	190.6	3.4%	70-75	344.5	6.2%	130-135	0	0.0%
15-20	258.8	4.6%	75-80	245.5	4.4%	135-140	0	0.0%
20-25	319.5	5.7%	80-85	122.8	2.2%	140-145	0	0.0%
25-30	371.3	6.6%	85-90	48.8	0.9%	145-150	0	0.0%
30-35	412.5	7.4%	90-95	18.4	0.3%	150-155	0	0.0%
35-40	441.8	7.9%	95-100	1.7	0.0%	155-160	0	0.0%
40-45	459.8	8.2%	100-105	0	0.0%	160-165	0	0.0%
45-50	467.1	8.3%	105-110	0	0.0%	165-170	0	0.0%
50-55	463.9	8.3%	110-115	0	0.0%	170-175	0	0.0%
55-60	450.5	8.0%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	2151	38.4%
0-60	3992	71.3%
0-90	5580	99.7%
90-180	20	0.4%



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	1646	1646	1646	1646	1646	1646	1646	1646	1646	1646	1646	1646	1646	1646	1646	1646
5	1642	1639	1639	1642	1643	1642	1639	1639	1642	1639	1639	1642	1643	1642	1639	1639
10	1619	1617	1620	1627	1629	1627	1620	1617	1619	1617	1620	1627	1629	1627	1620	1617
15	1581	1581	1590	1600	1604	1600	1590	1581	1581	1581	1590	1600	1604	1600	1590	1581
20	1527	1531	1548	1567	1575	1567	1548	1531	1527	1531	1548	1567	1575	1567	1548	1531
25	1460	1469	1496	1527	1539	1527	1496	1469	1460	1469	1496	1527	1539	1527	1496	1469
30	1379	1393	1436	1480	1496	1480	1436	1393	1379	1393	1436	1480	1496	1480	1436	1393
35	1286	1307	1368	1421	1439	1421	1368	1307	1286	1307	1368	1421	1439	1421	1368	1307
40	1182	1212	1289	1353	1382	1353	1289	1212	1182	1212	1289	1353	1382	1353	1289	1212
45	1067	1109	1199	1292	1330	1292	1199	1109	1067	1109	1199	1292	1330	1292	1199	1109
50	944	997	1111	1231	1275	1231	1111	997	944	997	1111	1231	1275	1231	1111	997
55	811	878	1029	1165	1217	1165	1029	878	811	878	1029	1165	1217	1165	1029	878
60	670	753	941	1102	1162	1102	941	753	670	753	941	1102	1162	1102	941	753
65	524	629	857	1038	1104	1038	857	629	524	629	857	1038	1104	1038	857	629
70	374	515	775	967	1008	967	775	515	374	515	775	967	1008	967	775	515
75	230	403	674	725	726	725	674	403	230	403	674	725	726	725	674	403
80	106	301	410	407	402	407	410	301	106	301	410	407	402	407	410	301
85	18	128	136	164	174	164	136	128	18	128	136	164	174	164	136	128
90	0	21	65	93	104	93	65	21	0	21	65	93	104	93	65	21
95	0	0	5	27	36	27	5	0	0	0	5	27	36	27	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	4253	4253	4253
45	3670	3609	3919
55	3351	3550	4083
65	2822	3591	4456
75	1863	3740	3821
85	314	1167	1379

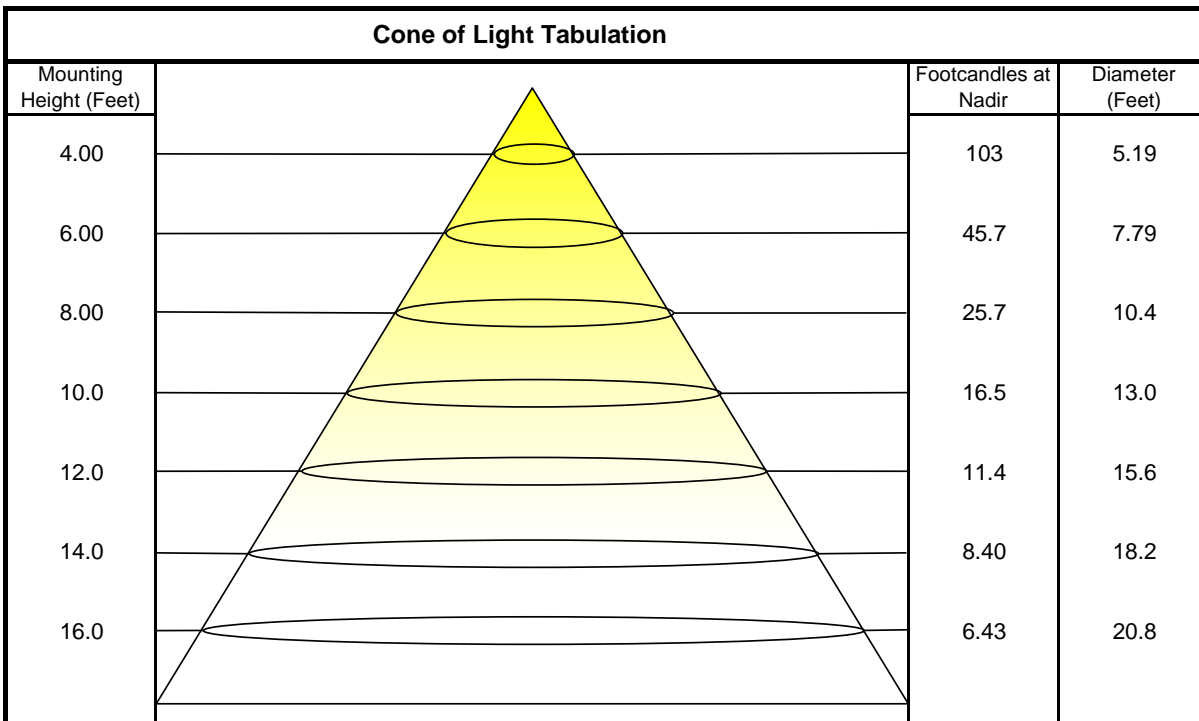


Coefficients of Utilization - Zonal Cavity Method

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	107	102	97	93	104	99	95	91	95	91	88	91	88	85	87	85	83	80
2	97	87	80	73	94	85	78	73	82	76	71	78	73	69	75	71	67	65
3	87	76	67	60	85	74	66	59	71	64	58	68	62	57	65	60	56	54
4	80	67	57	50	77	65	56	50	63	55	49	60	53	48	58	52	47	45
5	73	59	50	43	71	58	49	42	56	48	42	54	47	41	52	46	41	38
6	67	53	44	37	65	52	43	37	50	42	36	48	41	36	47	40	35	33
7	62	48	39	32	60	47	38	32	45	38	32	44	37	32	42	36	31	29
8	58	44	35	29	56	43	34	28	41	34	28	40	33	28	39	33	28	26
9	54	40	31	26	52	39	31	26	38	31	25	37	30	25	36	30	25	23
10	50	37	29	23	49	36	28	23	35	28	23	34	28	23	33	27	23	21

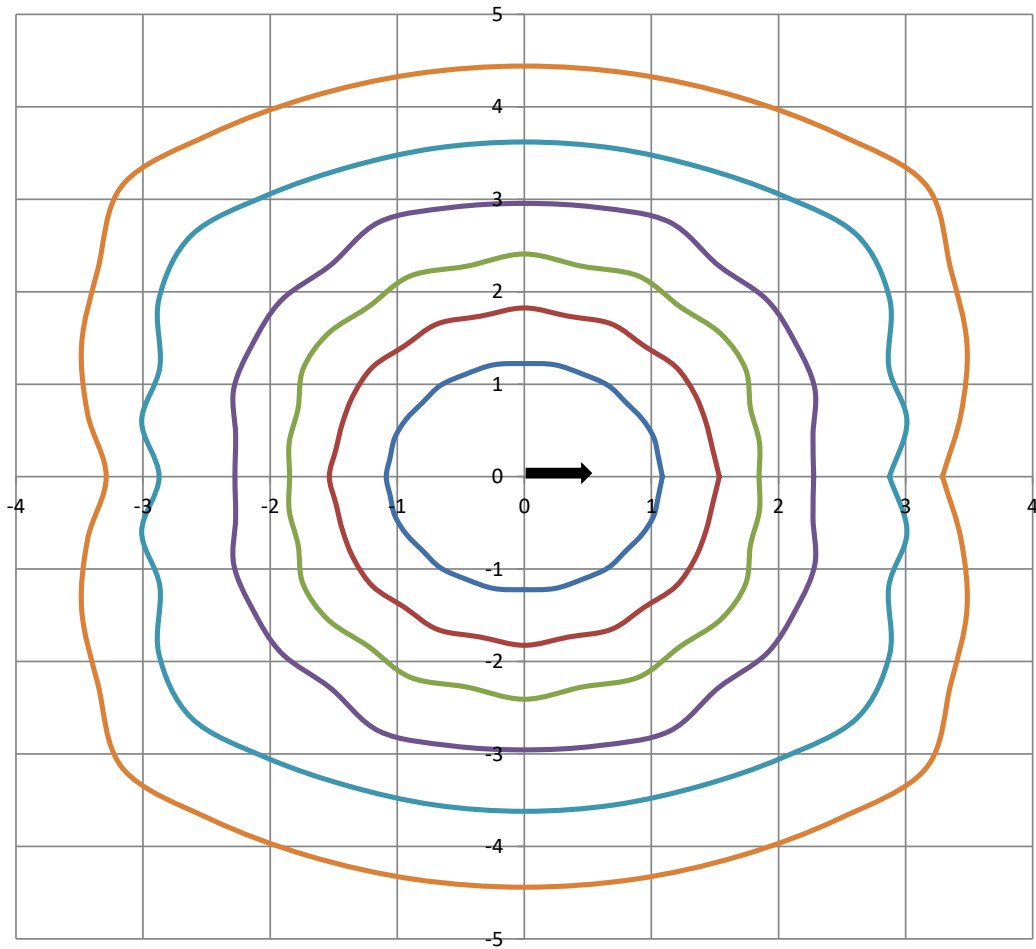
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1646 Candela
Central Cone Intensity:	1644 Candela
Beam Flux:	4562.3 Lumens
Beam Angle (0-180):	109.1 Degrees
Beam Angle (90-270):	147.0 Degrees
Field Angle (0-180):	155.0 Degrees
Field Angle (90-270):	171.4 Degrees





ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

