



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

390440-LEDS5

Order Number

12520987

Test Number

12520987.02

Test Date

2018-10-22

Prepared By

Cordaryl Cousar, Technician

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: Two T8LDR4F15/850C Lamps
Mounting: Recessed
Ballast/Driver: One Universal B432IUNVHP-A

Luminaire



Luminaire Characteristics

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

Summary of Results

Integrating Sphere

Luminous Flux: 6359 Lumens
Efficacy: 92.3 lm/w
CCT: 5126 K
CRI (Ra): 83.3

Distribution

Total Luminaire Output: 6145 Lumens
Luminaire Efficacy: 89.6 lm/w
Maximum Candela: 2156 Candela

Electrical Data at 120 VAC

Test Temperature: 25.1 °C
Voltage: 120.0 VAC
Current: 0.5771 A
Power: 68.93 W
Power Factor: 0.995
Frequency: 60 Hz
Current THD: 7.12 %



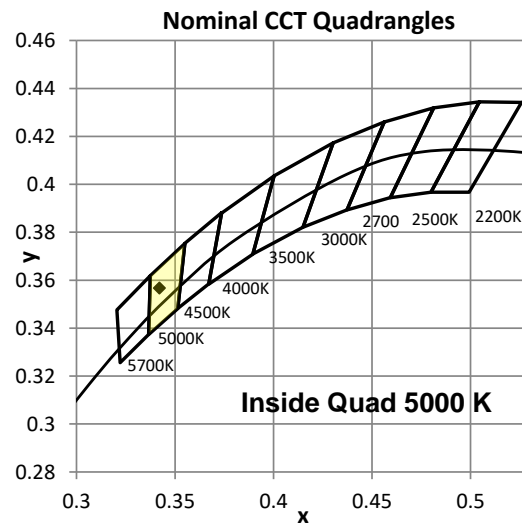
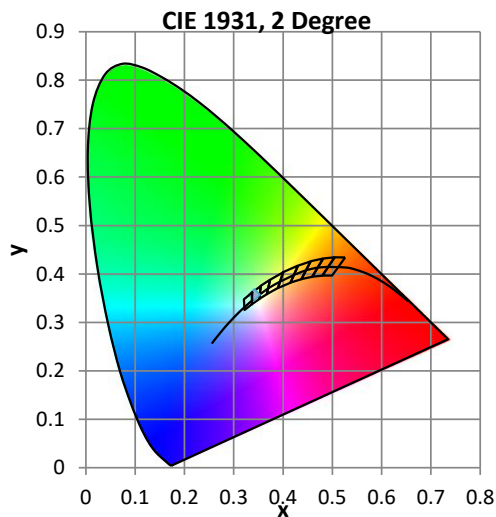
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.1 °C	120.0 VAC	0.5771 A	68.93 W	0.995	60 Hz	7.12 %

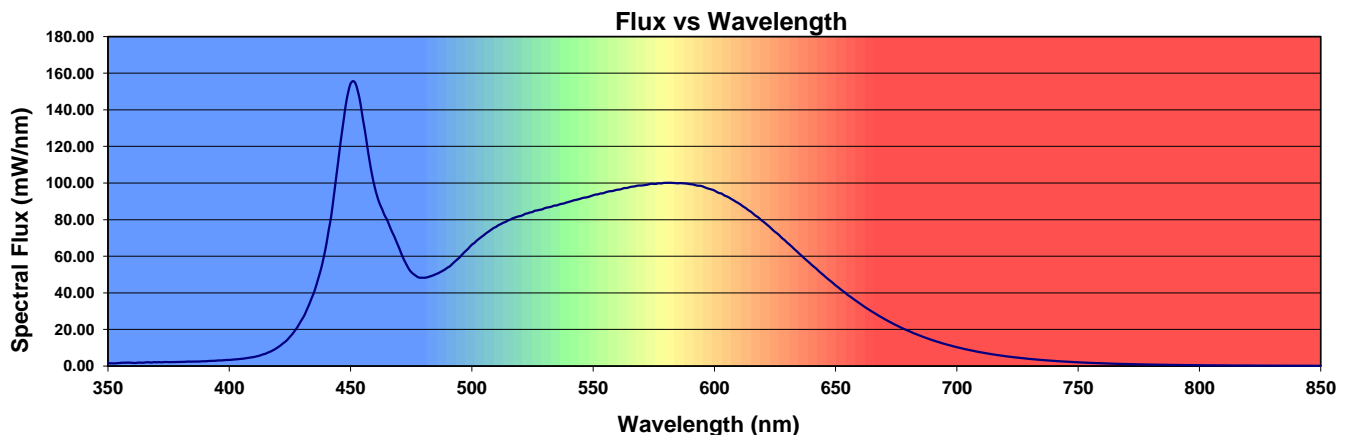
Summary of Results

Total Output:	6359 Lumens	Chromaticity (x):	0.3421
Efficacy:	92.3 lm/w	Chromaticity (y):	0.3568
CCT:	5126 K	Chromaticity (u'):	0.2074
CRI (Ra):	83.3	Chromaticity (v'):	0.4867
CRI (R9):	3.9	TM-30 Rf:	82.6
Peak Wavelength:	451 nm	TM-30 Rg:	94.2
Dominant Wavelength:	567 nm	Duv:	0.0032
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
83.3	81.0	89.2	94.4	82.3	82.1	84.9	86.6	65.8	3.9	74.3	81.6	65.0	83.3	97.2	74.7





Distribution - Goniophotometer

Distribution Test Conditions

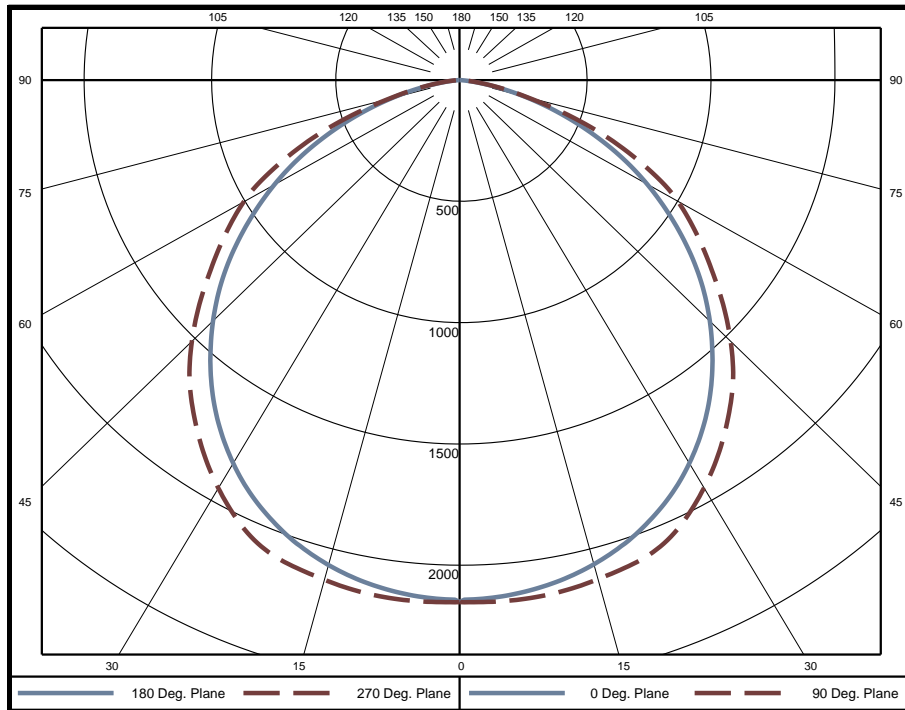
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.2 °C	120.0 VAC	0.5738 A	68.58 W	0.996	60 Hz	6.98 %

Summary of Results

Spacing Criteria
 0-180: 1.26
 90-270: 1.32

Total Lumen Output: 6145 Lumens
Luminaire Efficacy: 89.6 lm/w
Maximum Candela: 2156 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	51.4	0.8%	60-65	417.2	6.8%	120-125	0	0.0%
5-10	153.2	2.5%	65-70	328.8	5.4%	125-130	0	0.0%
10-15	251.4	4.1%	70-75	222.0	3.6%	130-135	0	0.0%
15-20	343.4	5.6%	75-80	118.7	1.9%	135-140	0	0.0%
20-25	426.1	6.9%	80-85	43.4	0.7%	140-145	0	0.0%
25-30	494.0	8.0%	85-90	6.9	0.1%	145-150	0	0.0%
30-35	543.1	8.8%	90-95	0	0.0%	150-155	0	0.0%
35-40	572.6	9.3%	95-100	0	0.0%	155-160	0	0.0%
40-45	582.2	9.5%	100-105	0	0.0%	160-165	0	0.0%
45-50	570.1	9.3%	105-110	0	0.0%	165-170	0	0.0%
50-55	536.3	8.7%	110-115	0	0.0%	170-175	0	0.0%
55-60	484.6	7.9%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	2835	46.1%
0-60	5008	81.5%
0-90	6145	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	2152	2152	2152	2152	2152	2152	2152	2152	2152	2152	2152	2152	2152	2152	2152	2152
5	2133	2145	2151	2155	2155	2155	2151	2145	2133	2145	2151	2155	2155	2155	2151	2145
10	2108	2123	2136	2147	2149	2147	2136	2123	2108	2123	2136	2147	2149	2147	2136	2123
15	2066	2087	2108	2125	2129	2125	2108	2087	2066	2087	2108	2125	2129	2125	2108	2087
20	2006	2034	2065	2095	2104	2095	2065	2034	2006	2034	2065	2095	2104	2095	2065	2034
25	1926	1961	2006	2039	2044	2039	2006	1961	1926	1961	2006	2039	2044	2039	2006	1961
30	1825	1868	1923	1939	1940	1939	1923	1868	1825	1868	1923	1939	1940	1939	1923	1868
35	1704	1756	1806	1815	1817	1815	1806	1756	1704	1756	1806	1815	1817	1815	1806	1756
40	1563	1627	1665	1677	1681	1677	1665	1627	1563	1627	1665	1677	1681	1677	1665	1627
45	1407	1486	1511	1522	1520	1522	1511	1486	1407	1486	1511	1522	1520	1522	1511	1486
50	1238	1322	1346	1344	1340	1344	1346	1322	1238	1322	1346	1344	1340	1344	1346	1322
55	1053	1141	1158	1158	1167	1158	1158	1141	1053	1141	1158	1158	1167	1158	1158	1141
60	863	947	959	986	999	986	959	947	863	947	959	986	999	986	959	947
65	665	748	767	792	781	792	767	748	665	748	767	792	781	792	767	748
70	463	537	573	549	532	549	573	537	463	537	573	549	532	549	573	537
75	276	333	342	302	287	302	342	333	276	333	342	302	287	302	342	333
80	120	164	139	132	129	132	139	164	120	164	139	132	129	132	139	164
85	25	36	34	34	33	34	34	36	25	36	34	34	33	34	34	36
90	1	1	1	1	1	1	1	1	1	1	1	1	1	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	5559	5559	5559
45	5140	5522	5553
55	4743	5216	5256
65	4067	4690	4771
75	2759	3414	2867
85	753	1016	973

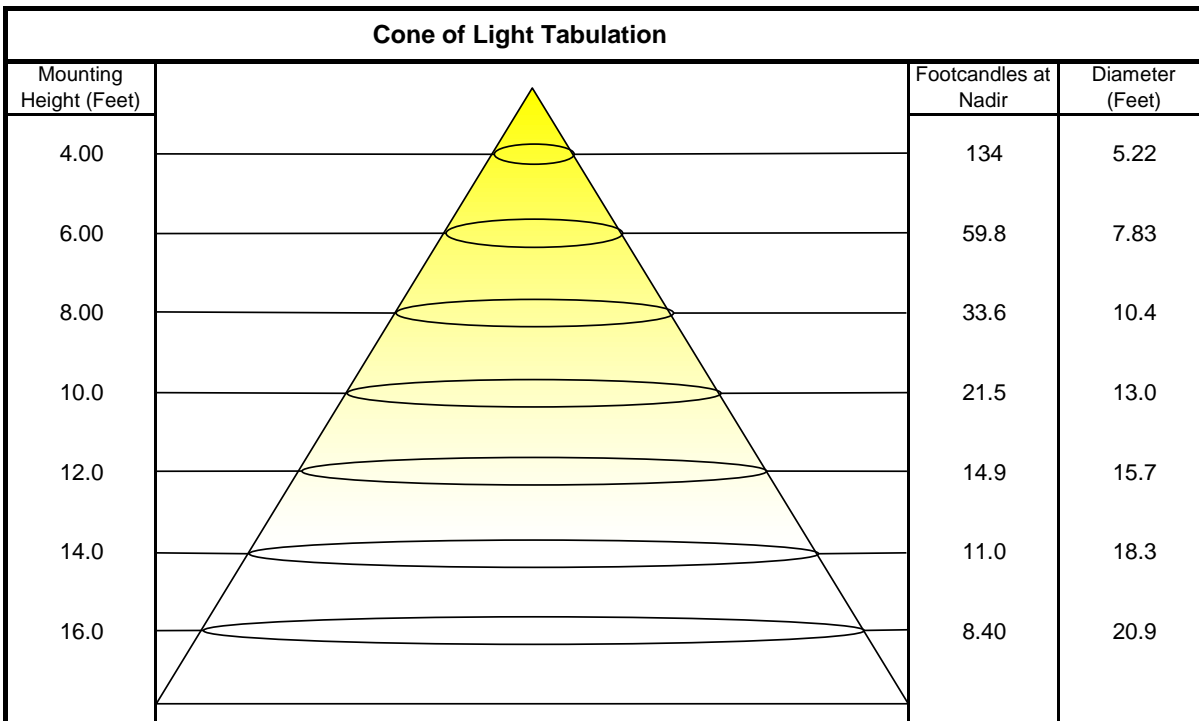


Coefficients of Utilization - Zonal Cavity Method

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	101	97	107	103	99	96	98	95	93	94	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	76	73	71
3	91	81	73	66	88	79	72	66	76	70	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44
6	71	57	49	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	31
9	57	44	35	30	55	43	35	30	42	35	30	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

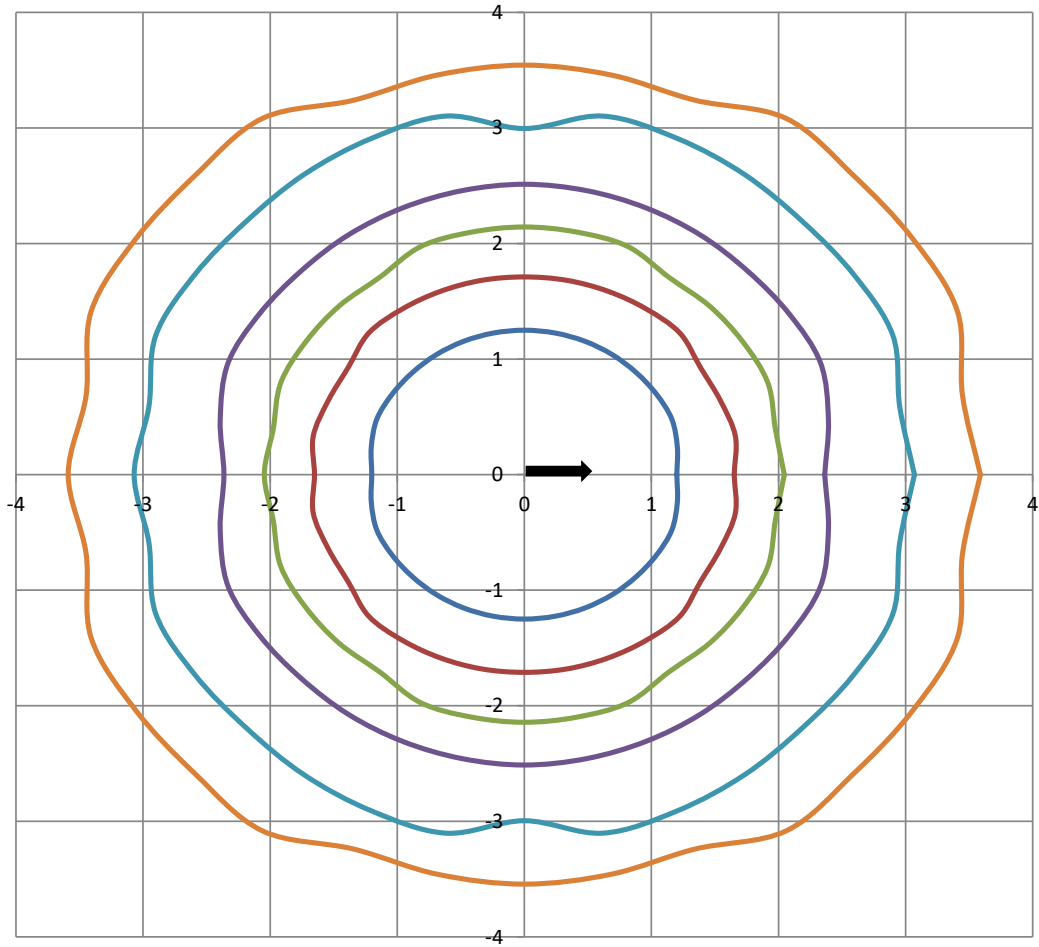
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	2152 Candela
Central Cone Intensity:	2151 Candela
Beam Flux:	4704.4 Lumens
Beam Angle (0-180):	108.8 Degrees
Beam Angle (90-270):	115.5 Degrees
Field Angle (0-180):	153.6 Degrees
Field Angle (90-270):	154.1 Degrees





ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

