



UL Verification Services Inc.
7036 Snowdrift Road
Allentown, PA 18106
610-774-1300



Indoor Distribution Test Report

Relevant Standards
IES LM-79-2008, ANSI C82.77-2002

Prepared For
TechBrite LLC
1000 Kieley Pl
Cincinnati, OH 45217
United States

Catalog Number
LT224SS1B40DC000,RT224SS1B40DC000
Order Number
11748594
Test Number
11748594.15

Test Date

2017-05-08

Prepared By

Josh Mitchell, Technician

Approved By

Tiffany Hamm, Project Handler

The results contained in this report pertain only to the tested sample.
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Luminaire Description: White steel housing, prismatic lens enclosure. Tested in an A.L.P EL 2x2 housing.
Lamp: 112 white LEDs
Mounting: Surface – Ceiling
Ballast/Driver: Everline D700CC30UNVTZ-C

Luminaire



Luminaire Characteristics

Luminous Length: 21.00 in.
Luminous Width: 21.00 in.

Summary of Results

Total Luminaire Output:	3623 Lumens
Luminaire Efficacy:	109.4 lm/w
Maximum Candela:	1592 Candela

Test Conditions

Test Temperature:	25.1 °C
Voltage:	120.0 VAC
Current:	0.2768 A
Power:	33.11 W
Power Factor:	0.997
Frequency:	60 Hz
Current THD:	7.38 %

Laboratory results may not be representative of field performance
Ballast factors have not been applied



Distribution - Goniophotometer

Distribution Test Conditions

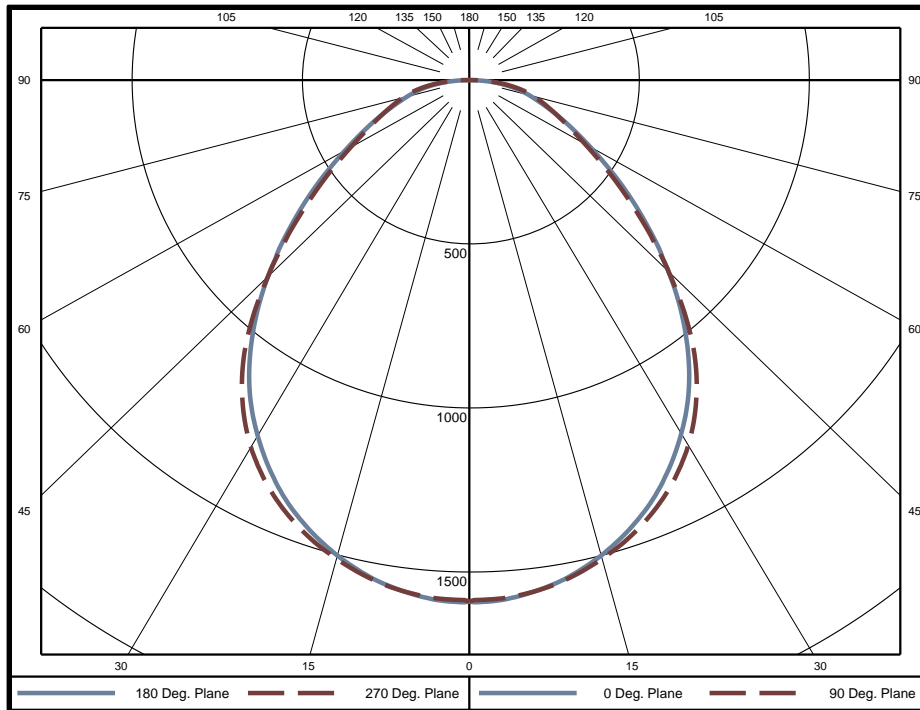
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
25.1 °C	120.0 VAC	0.2768 A	33.11 W	0.997	60 Hz	7.38 %

Summary of Results

Spacing Criteria
 0-180: 1.18
 90-270: 1.18

Total Lumen Output: 3623 Lumens
Luminaire Efficacy: 109.4 lm/w
Maximum Candela: 1592 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	37.9	1.0%	60-65	171.8	4.7%	120-125	0	0.0%
5-10	112.2	3.1%	65-70	138.0	3.8%	125-130	0	0.0%
10-15	181.6	5.0%	70-75	111.4	3.1%	130-135	0	0.0%
15-20	243.3	6.7%	75-80	86.3	2.4%	135-140	0	0.0%
20-25	294.8	8.1%	80-85	56.8	1.6%	140-145	0	0.0%
25-30	332.9	9.2%	85-90	21.8	0.6%	145-150	0	0.0%
30-35	354.8	9.8%	90-95	0	0.0%	150-155	0	0.0%
35-40	357.6	9.9%	95-100	0	0.0%	155-160	0	0.0%
40-45	339.8	9.4%	100-105	0	0.0%	160-165	0	0.0%
45-50	306.0	8.4%	105-110	0	0.0%	165-170	0	0.0%
50-55	261.5	7.2%	110-115	0	0.0%	170-175	0	0.0%
55-60	214.3	5.9%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1915	52.9%
0-60	3037	83.8%
0-90	3623	100.0%
90-180	0	0.0%



Candela Tabulation
Horizontal Angle (Degrees)

Vertical Angle (Degrees)	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	1590	1590	1590	1590	1590	1590	1590	1590	1590	1590	1590	1590	1590	1590	1590	1590
5	1582	1582	1583	1580	1579	1580	1583	1582	1582	1582	1583	1580	1579	1580	1583	1582
10	1552	1553	1556	1555	1554	1555	1556	1553	1552	1553	1556	1555	1554	1555	1556	1553
15	1502	1505	1509	1510	1511	1510	1509	1505	1502	1505	1509	1510	1511	1510	1509	1505
20	1436	1438	1443	1452	1456	1452	1443	1438	1436	1438	1443	1452	1456	1452	1443	1438
25	1353	1354	1362	1376	1384	1376	1362	1354	1353	1354	1362	1376	1384	1376	1362	1354
30	1251	1250	1261	1279	1290	1279	1261	1250	1251	1250	1261	1279	1290	1279	1261	1250
35	1133	1128	1139	1155	1169	1155	1139	1128	1133	1128	1139	1155	1169	1155	1139	1128
40	992	988	995	1007	1017	1007	995	988	992	988	995	1007	1017	1007	995	988
45	838	839	842	835	836	835	842	839	838	839	842	835	836	835	842	839
50	685	689	685	667	665	667	685	689	685	689	685	667	665	667	685	689
55	543	539	531	516	517	516	531	539	543	539	531	516	517	516	531	539
60	419	409	400	396	399	396	400	409	419	409	400	396	399	396	400	409
65	324	311	298	307	314	307	298	311	324	311	298	307	314	307	298	311
70	246	241	226	245	252	245	226	241	246	241	226	245	252	245	226	241
75	187	186	178	192	202	192	178	186	187	186	178	192	202	192	178	186
80	133	127	131	139	147	139	131	127	133	127	131	139	147	139	131	127
85	69	66	71	78	80	78	71	66	69	66	71	78	80	78	71	66
90	3	12	14	17	17	17	14	12	3	12	14	17	17	17	14	12
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)

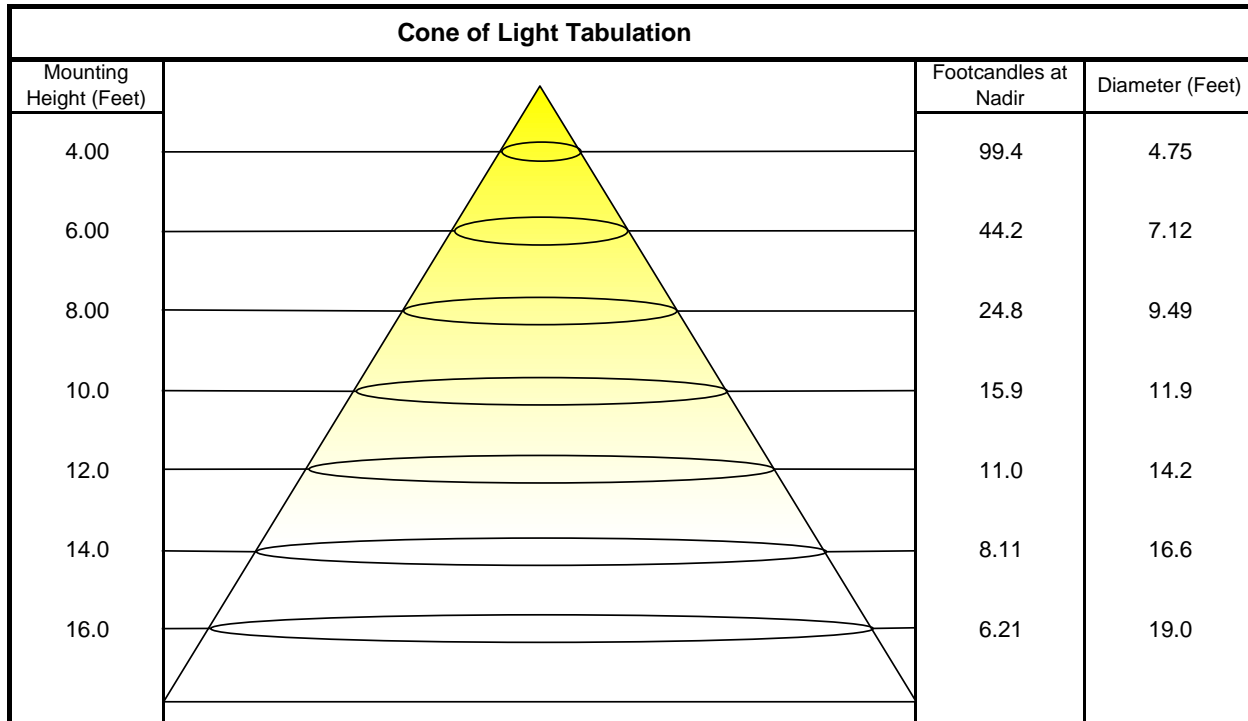
Vertical Angle (Degrees)	Horizontal Angle (Degrees)		
	0	45	90
0	5588	5588	5588
45	4164	4186	4154
55	3329	3256	3171
65	2691	2475	2610
75	2543	2420	2737
85	2776	2854	3216



Utilization of Lumens - 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 Lumens delivered to the task surface **																	
0	4313	4313	4313	4313	4213	4213	4213	4213	4025	4025	4025	3854	3854	3854	3697	3697	3697	3623
1	3965	3802	3656	3525	3867	3720	3588	3468	3567	3458	3358	3427	3338	3256	3297	3226	3159	3085
2	3636	3357	3126	2931	3543	3289	3077	2897	3162	2984	2830	3045	2897	2766	2937	2814	2705	2629
3	3341	2983	2706	2486	3253	2927	2670	2463	2821	2601	2420	2722	2536	2379	2631	2474	2339	2263
4	3079	2670	2371	2143	2998	2623	2344	2128	2534	2291	2099	2451	2241	2071	2374	2194	2044	1969
5	2847	2407	2099	1872	2773	2367	2078	1862	2292	2037	1842	2222	1998	1823	2157	1961	1804	1731
6	2641	2183	1875	1655	2574	2149	1859	1648	2086	1827	1633	2026	1796	1620	1970	1766	1606	1535
7	2458	1991	1689	1477	2397	1963	1675	1472	1908	1650	1461	1857	1624	1451	1809	1600	1441	1372
8	2295	1826	1532	1329	2240	1802	1521	1325	1755	1500	1317	1711	1479	1310	1669	1459	1302	1236
9	2150	1683	1398	1205	2100	1662	1389	1202	1622	1371	1196	1583	1354	1190	1547	1338	1184	1120
10	2020	1559	1283	1099	1975	1540	1275	1097	1505	1261	1092	1472	1247	1088	1440	1233	1083	1022

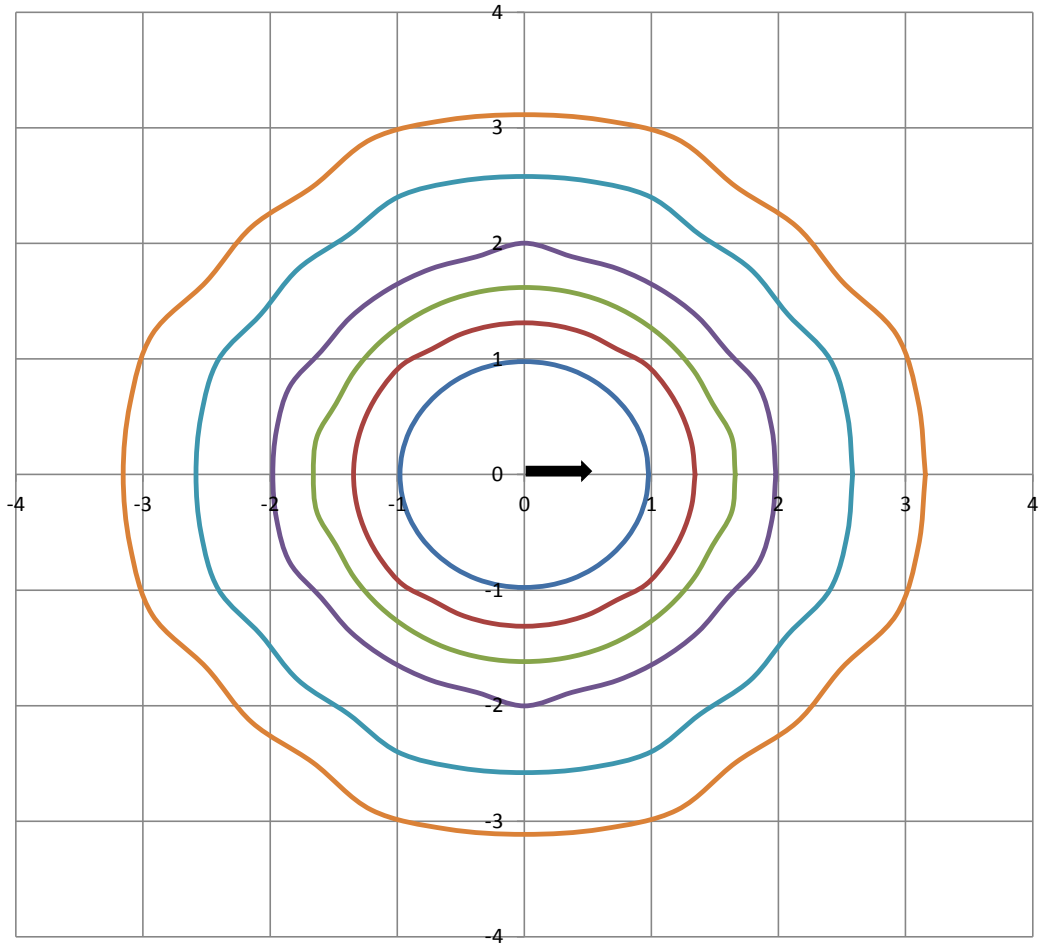
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1590 Candela
Central Cone Intensity:	1587 Candela
Beam Flux:	2341.4 Lumens
Beam Angle (0-180):	92.6 Degrees
Beam Angle (90-270):	92.3 Degrees
Field Angle (0-180):	155.4 Degrees
Field Angle (90-270):	158.0 Degrees





ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

