



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

Mandy Peck
1000 Kieley Pl
Cincinnati, OH 45217
United States

Catalog Number
UB4208SS1B5A0000

Order Number
11186413
Test Number
1222352

Test Date

2016-03-14

Prepared By

Derek Smarr, Technician

Approved By

Carissa Samonte-cam, Project Handler

The results contained in this report pertain only to the tested sample.
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Luminaire Description: White steel housing / reflector, no enclosure
Lamp: 1248 white LEDs
Mounting: Surface
Ballast/Driver: Four Everline D23CC90UNVT-F (1015mA)

Luminaire



Luminaire Characteristics

Luminous Length: 46.00 in.
Luminous Width: 18.50 in.

Summary of Results

Total Luminaire Output: 25610 Lumens
Luminaire Efficacy: 157 lm/w
Maximum Candela: 8683 Candela

Test Conditions

Test Temperature: 24.8 °C
Voltage: 120.0 VAC
Current: 1.370 A
Power: 163.1 W
Power Factor: 0.992
Frequency: 60 Hz
Current THD: 8.45 %

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



Distribution - Goniophotometer

Distribution Test Conditions

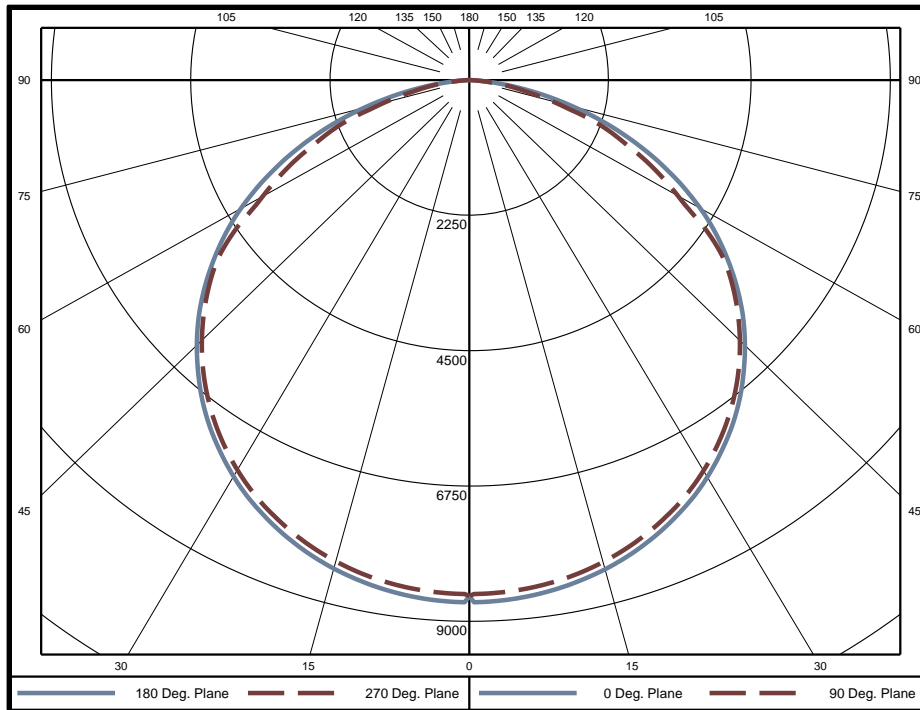
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.8 °C	120.0 VAC	1.370 A	163.1 W	0.992	60 Hz	8.45 %

Summary of Results

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

Total Lumen Output: 25610 Lumens
Luminaire Efficacy: 157.0 lm/w
Maximum Candela: 8683 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	205	0.8%	60-65	1802	7.0%	120-125	0	0.0%
5-10	609	2.4%	65-70	1445	5.6%	125-130	0	0.0%
10-15	996	3.9%	70-75	1050	4.1%	130-135	0	0.0%
15-20	1354	5.3%	75-80	626	2.4%	135-140	0	0.0%
20-25	1674	6.5%	80-85	276	1.1%	140-145	0	0.0%
25-30	1945	7.6%	85-90	51	0.2%	145-150	0	0.0%
30-35	2157	8.4%	90-95	0	0.0%	150-155	0	0.0%
35-40	2303	9.0%	95-100	0	0.0%	155-160	0	0.0%
40-45	2375	9.3%	100-105	0	0.0%	160-165	0	0.0%
45-50	2370	9.3%	105-110	0	0.0%	165-170	0	0.0%
50-55	2282	8.9%	110-115	0	0.0%	170-175	0	0.0%
55-60	2094	8.2%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	11243	43.9%
0-60	20364	79.5%
0-90	25614	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	8578	8578	8578	8578	8578	8578	8578	8578	8578	8578	8578	8578	8578	8578	8578	8578
5	8653	8570	8532	8515	8520	8515	8532	8570	8653	8570	8532	8515	8520	8515	8532	8570
10	8561	8484	8446	8432	8437	8432	8446	8484	8561	8484	8446	8432	8437	8432	8446	8484
15	8416	8337	8301	8286	8293	8286	8301	8337	8416	8337	8301	8286	8293	8286	8301	8337
20	8209	8130	8093	8079	8087	8079	8093	8130	8209	8130	8093	8079	8087	8079	8093	8130
25	7943	7865	7829	7817	7825	7817	7829	7865	7943	7865	7829	7817	7825	7817	7829	7865
30	7615	7540	7501	7486	7494	7486	7501	7540	7615	7540	7501	7486	7494	7486	7501	7540
35	7218	7149	7111	7094	7098	7094	7111	7149	7218	7149	7111	7094	7098	7094	7111	7149
40	6757	6696	6658	6637	6639	6637	6658	6696	6757	6696	6658	6637	6639	6637	6658	6696
45	6228	6178	6141	6118	6117	6118	6141	6178	6228	6178	6141	6118	6117	6118	6141	6178
50	5640	5596	5560	5541	5534	5541	5560	5596	5640	5596	5560	5541	5534	5541	5560	5596
55	4980	4952	4914	4894	4842	4894	4914	4952	4980	4952	4914	4894	4842	4894	4914	4952
60	4260	4238	4212	3970	3852	3970	4212	4238	4260	4238	4212	3970	3852	3970	4212	4238
65	3450	3452	3374	3099	3053	3099	3374	3452	3450	3452	3374	3099	3053	3099	3374	3452
70	2605	2617	2405	2296	2278	2296	2405	2617	2605	2617	2405	2296	2278	2296	2405	2617
75	1739	1763	1572	1416	1387	1416	1572	1763	1739	1763	1572	1416	1387	1416	1572	1763
80	928	881	756	729	733	729	756	881	928	881	756	729	733	729	756	881
85	276	240	249	242	236	242	249	240	276	240	249	242	236	242	249	240
90	4	6	9	12	14	12	9	6	4	6	9	12	14	12	9	6
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	15620	15620	15620
45	16040	15820	15760
55	15810	15600	15370
65	14870	14540	13160
75	12240	11060	9764
85	5763	5200	4924



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	30492	30492	30492	30492	29783	29783	29783	29783	28459	28459	28459	27248	27248	27248	26136	26136	26136	25613
1	27897	26689	25606	24631	27200	26107	25122	24229	25018	24206	23463	24018	23356	22744	23095	22564	22068	21533
2	25345	23234	21487	20018	24670	22749	21142	19778	21838	20484	19315	20998	19867	18874	20221	19286	18452	17896
3	23072	20359	18259	16586	22433	19952	18005	16435	19186	17516	16141	18477	17053	15857	17819	16615	15583	15020
4	21091	17996	15730	13999	20498	17654	15537	13900	17008	15164	13705	16407	14810	13516	15849	14471	13331	12771
5	19368	16044	13722	12008	18824	15755	13572	11940	15208	13282	11806	14698	13005	11675	14223	12739	11547	10997
6	17861	14416	12103	10444	17366	14170	11984	10395	13705	11754	10300	13270	11533	10206	12863	11320	10115	9581
7	16541	13046	10780	9192	16093	12836	10684	9157	12438	10499	9087	12065	10320	9018	11715	10147	8950	8436
8	15382	11885	9685	8174	14977	11705	9607	8148	11363	9456	8095	11041	9309	8043	10739	9167	7992	7498
9	14359	10892	8769	7335	13992	10737	8705	7315	10441	8579	7274	10163	8458	7234	9900	8340	7194	6722
10	13452	10037	7994	6634	13120	9903	7940	6618	9646	7836	6586	9404	7734	6555	9175	7635	6524	6072

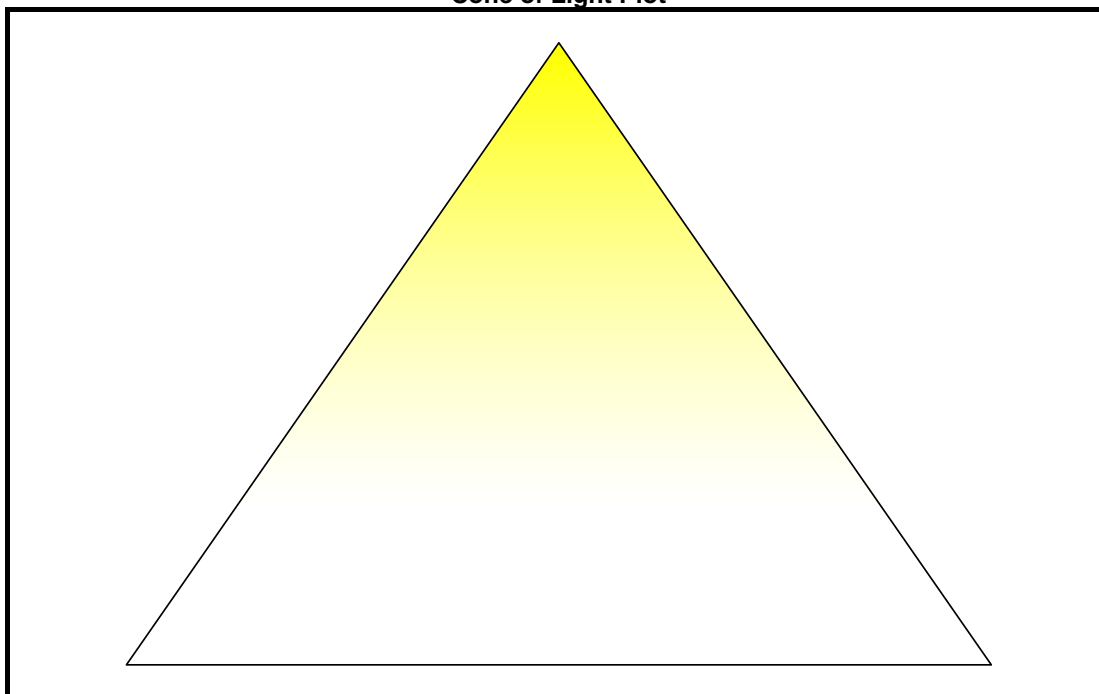
Cone of Light Tabulation

Mounting Height	Footcandles at Nadir	Diameter (Feet)
4.00	536	5.21
6.00	238	7.81
8.00	134	10.4
10.0	85.8	13.0
12.0	59.6	15.6
14.0	43.8	18.2
16.0	33.5	20.8

Beam and Field Information

CIE Type:	Direct
Center Beam Intensity:	8578 Candela
Central Cone Intensity:	8569 Candela
Beam Flux:	20016.1 Lumens
Beam Angle (0-180):	119.6 Degrees
Beam Angle (90-270):	115.5 Degrees
Field Angle (0-180):	160.9 Degrees
Field Angle (90-270):	157.6 Degrees

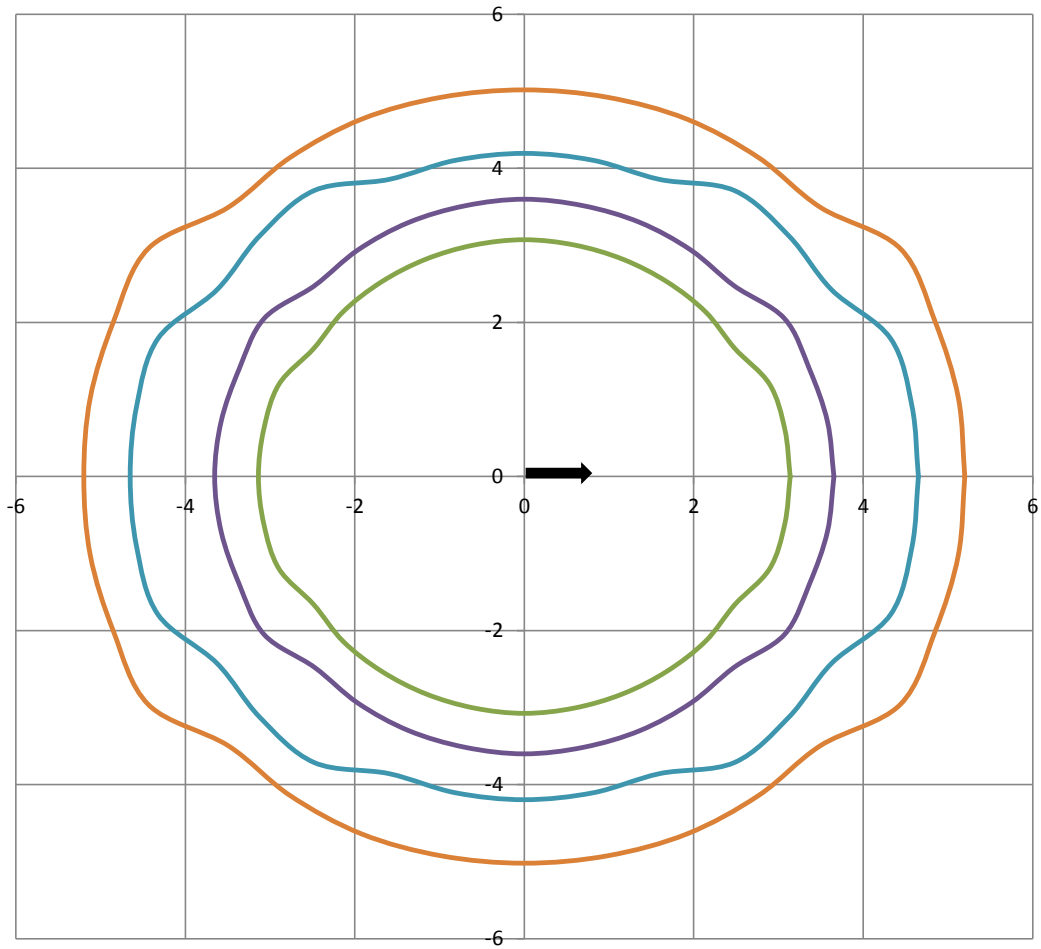
Cone of Light Plot





ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

