



UL Verification Services Inc.  
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## Indoor Distribution Test Report

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

Prepared For  
**Picasso Lighting Industries**

46 Sellers St  
Kearny, NJ 07032-4216

Catalog Number  
**AMA-4'-LED-29W**

Order Number

11532175

Test Number

11532175.05

Test Date

2016-11-23

Prepared By

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Approved By

Timothy Wagner, Project Handler

The results contained in this report pertain only to the tested sample.  
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**Luminaire Description:** White enamel aluminum housing, frosted plastic lens enclosure  
**Lamp:** 96 white LEDs  
**Mounting:** Recessed  
**Ballast/Driver:** Philips XI054C150V054BST1

### Luminaire



### Luminaire Characteristics

Luminous Length: 46.25 in.  
Luminous Width: 3.125 in.

### Summary of Results

Total Luminaire Output:	2029 Lumens
Luminaire Efficacy:	78.6 lm/w
Maximum Candela:	749 Candela

### Test Conditions

Test Temperature:	25.1 °C
Voltage:	120.0 VAC
Current:	0.2172 A
Power:	25.80 W
Power Factor:	0.990
Frequency:	60 Hz
Current THD:	12.3 %

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	0.2172 A	25.80 W	0.990	60 Hz	12.3 %

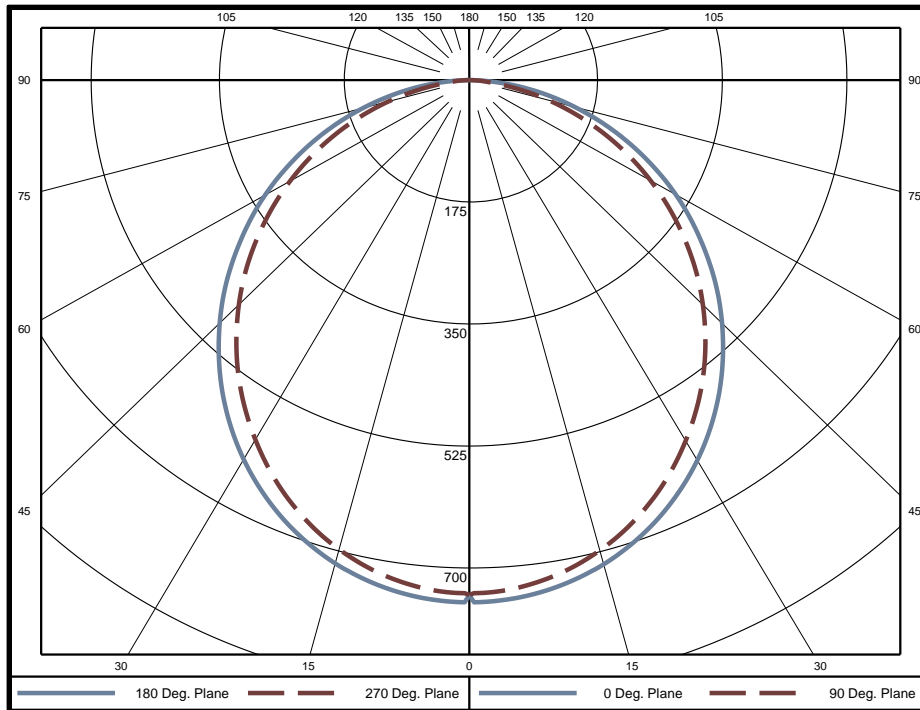
### Summary of Results

**Spacing Criteria**  
 0-180: 1.27  
 90-270: 1.27

**Total Lumen Output:**  
**Luminaire Efficacy:**  
**Maximum Candela:**

2029 Lumens  
 78.6 lm/w  
 749 Candela

### Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	17.6	0.9%	60-65	134.9	6.6%	120-125	0	0.0%
5-10	52.2	2.6%	65-70	110.8	5.5%	125-130	0	0.0%
10-15	84.7	4.2%	70-75	83.9	4.1%	130-135	0	0.0%
15-20	114.0	5.6%	75-80	55.3	2.7%	135-140	0	0.0%
20-25	139.0	6.9%	80-85	27.3	1.3%	140-145	0	0.0%
25-30	159.0	7.8%	85-90	6.9	0.3%	145-150	0	0.0%
30-35	173.3	8.5%	90-95	0	0.0%	150-155	0	0.0%
35-40	181.6	9.0%	95-100	0	0.0%	155-160	0	0.0%
40-45	183.7	9.1%	100-105	0	0.0%	160-165	0	0.0%
45-50	179.8	8.9%	105-110	0	0.0%	165-170	0	0.0%
50-55	170.0	8.4%	110-115	0	0.0%	170-175	0	0.0%
55-60	154.9	7.6%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	921	45.4%
0-60	1610	79.3%
0-90	2029	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	738.8	738.8	738.8	738.8	738.8	738.8	738.8	738.8	738.8	738.8	738.8	738.8	738.8	738.8	738.8	738.8
5	745.9	735.6	731.0	733.8	732.0	733.8	731.0	735.6	745.9	735.6	731.0	733.8	732.0	733.8	731.0	735.6
10	735.6	724.6	719.4	721.4	719.2	721.4	719.4	724.6	735.6	724.6	719.4	721.4	719.2	721.4	719.4	724.6
15	719.0	707.0	700.5	701.2	698.7	701.2	700.5	707.0	719.0	707.0	700.5	701.2	698.7	701.2	700.5	707.0
20	695.4	682.3	674.9	674.6	671.8	674.6	674.9	682.3	695.4	682.3	674.9	674.6	671.8	674.6	674.9	682.3
25	665.7	651.5	642.8	641.2	638.4	641.2	642.8	651.5	665.7	651.5	642.8	641.2	638.4	641.2	642.8	651.5
30	630.3	615.2	605.4	602.3	599.3	602.3	605.4	615.2	630.3	615.2	605.4	602.3	599.3	602.3	605.4	615.2
35	589.5	573.9	563.2	559.3	556.4	559.3	563.2	573.9	589.5	573.9	563.2	559.3	556.4	559.3	563.2	573.9
40	543.9	528.0	517.3	512.3	509.3	512.3	517.3	528.0	543.9	528.0	517.3	512.3	509.3	512.3	517.3	528.0
45	494.5	479.0	468.2	462.1	458.8	462.1	468.2	479.0	494.5	479.0	468.2	462.1	458.8	462.1	468.2	479.0
50	442.1	426.5	415.6	408.8	405.5	408.8	415.6	426.5	442.1	426.5	415.6	408.8	405.5	408.8	415.6	426.5
55	386.7	371.7	360.9	353.1	349.4	353.1	360.9	371.7	386.7	371.7	360.9	353.1	349.4	353.1	360.9	371.7
60	330.5	315.6	304.3	295.6	292.1	295.6	304.3	315.6	330.5	315.6	304.3	295.6	292.1	295.6	304.3	315.6
65	271.6	257.6	245.9	237.2	233.7	237.2	245.9	257.6	271.6	257.6	245.9	237.2	233.7	237.2	245.9	257.6
70	212.4	199.4	187.4	178.2	174.8	178.2	187.4	199.4	212.4	199.4	187.4	178.2	174.8	178.2	187.4	199.4
75	153.2	142.3	129.5	119.9	116.7	119.9	129.5	142.3	153.2	142.3	129.5	119.9	116.7	119.9	129.5	142.3
80	96.2	86.3	73.3	64.4	61.4	64.4	73.3	86.3	96.2	86.3	73.3	64.4	61.4	64.4	73.3	86.3
85	42.1	33.8	24.2	21.8	21.8	21.8	24.2	33.8	42.1	33.8	24.2	21.8	21.8	21.8	24.2	33.8
90	0.4	1.4	1.2	0.9	0.7	0.9	1.2	1.4	0.4	1.4	1.2	0.9	0.7	0.9	1.2	1.4
95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Average Luminance (cd/m<sup>2</sup>)**  
Horizontal Angle (Degrees)

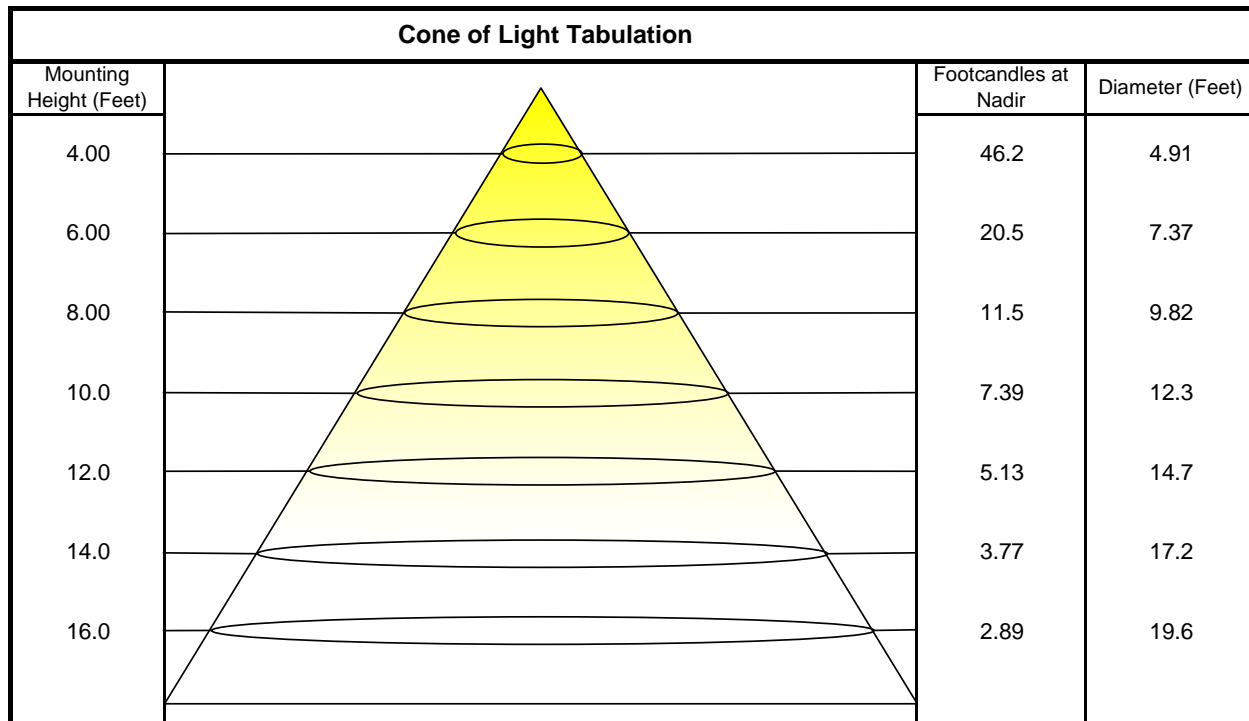
	0	45	90
0	7923	7923	7923
45	7500	7102	6958
55	7230	6747	6534
65	6892	6241	5931
75	6349	5365	4836
85	5177	2972	2682



### 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	2415	2415	2415	2415	2359	2359	2359	2359	2254	2254	2254	2158	2158	2158	2070	2070	2070	2029
1	2208	2112	2025	1947	2153	2066	1987	1916	1979	1914	1855	1900	1847	1798	1827	1784	1745	1702
2	2008	1841	1703	1587	1955	1803	1676	1568	1731	1624	1531	1664	1575	1496	1603	1529	1463	1419
3	1831	1617	1452	1320	1780	1585	1432	1308	1524	1393	1285	1468	1356	1262	1416	1321	1240	1196
4	1676	1433	1255	1119	1630	1406	1240	1111	1355	1210	1095	1308	1182	1080	1264	1155	1066	1022
5	1542	1281	1099	964	1499	1258	1087	958	1215	1064	948	1175	1042	937	1137	1021	927	884
6	1424	1154	972	842	1385	1134	963	838	1098	945	830	1063	927	823	1031	910	816	774
7	1321	1046	868	744	1285	1030	861	741	998	846	735	969	832	730	941	818	724	684
8	1230	955	782	664	1198	941	776	662	914	764	658	889	753	653	865	742	649	611
9	1149	877	710	598	1120	865	705	596	841	695	593	819	686	590	799	676	586	549
10	1078	809	649	542	1052	799	645	541	779	636	538	760	628	536	741	621	533	498

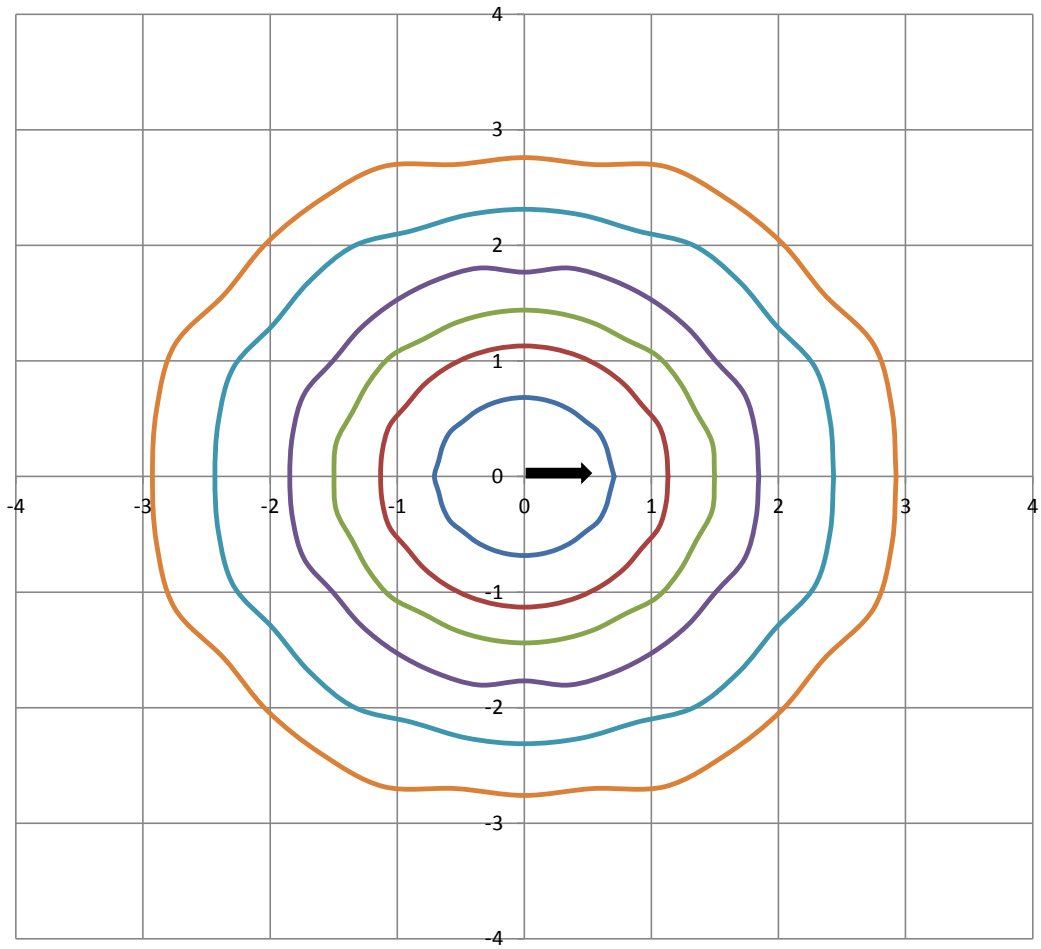
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	738.8 Candela
Central Cone Intensity:	737 Candela
Beam Flux:	1438.7 Lumens
Beam Angle (0-180):	113.1 Degrees
Beam Angle (90-270):	106.5 Degrees
Field Angle (0-180):	164.1 Degrees
Field Angle (90-270):	157.6 Degrees





### ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

