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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 C78.377-2015, IES TM-30-2015

Prepared For
Picasso Lighting Industries

46 Sellers St
Kearny, NJ 07032-4216
United States

Catalog Number
MED-R-168W-334K-R3A3E10-90-S-ZT-UE (Ambient Light Only)

Order Number
11944942
Test Number
11944942.02

Test Date

2017-09-22 - 2017-09-26

Prepared By

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Approved By

Alexa Lambert, Project Handler

The results contained in this report pertain only to the tested sample.
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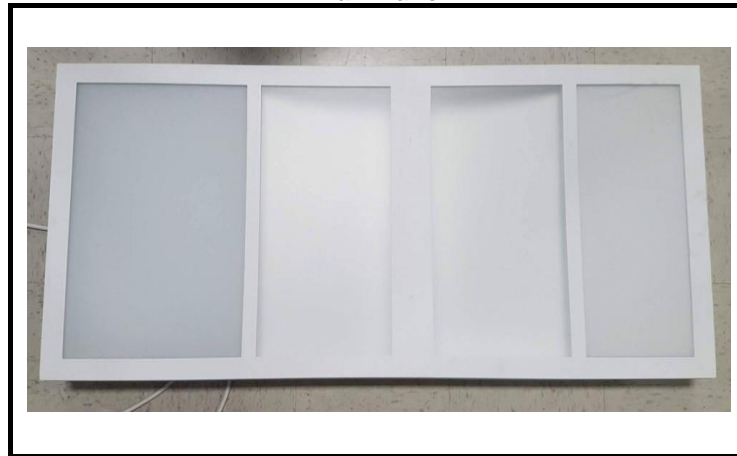
Laboratory results may not be representative of field performance
Ballast factors have not been applied

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 steel housing, frosted plastic lens enclosure
Lamp: 72 white LEDs
Mounting: Recessed
Ballast/Driver: One Philips XI054C150V054BST1 driver

Luminaire



Luminaire Characteristics

Luminous Length: 22.50 in.
Luminous Width: 44.50 in.

Summary of Results

Integrating Sphere

Luminous Flux: 3430 Lumens
Efficacy: 65.9 lm/w
CCT: 3143 K
CRI (Ra): 92.8

Distribution

Total Luminaire Output: 3308 Lumens
Luminaire Efficacy: 63.6 lm/w
Maximum Candela: 1134 Candela

Electrical Data at 120 VAC

Test Temperature: 24.6 °C
Voltage: 120.0 VAC
Current: 0.4346 A
Power: 52.02 W
Power Factor: 0.998
Frequency: 60 Hz
Current THD: 5.69 %



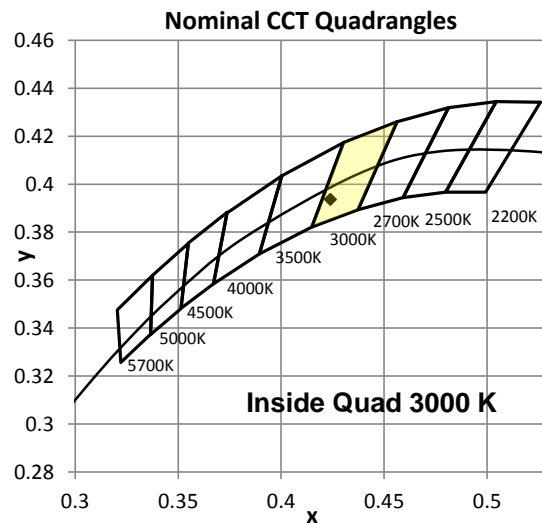
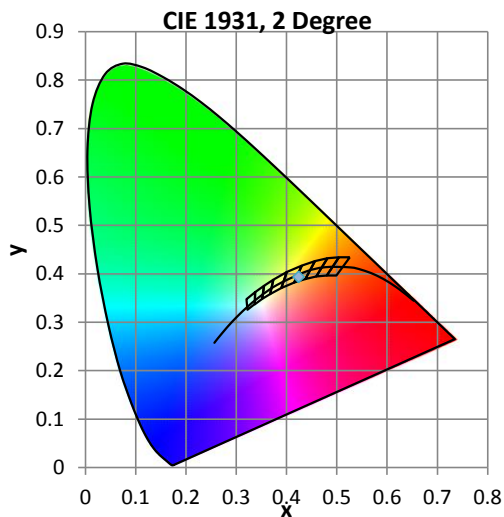
Color Quality - Integrating Sphere

Integrating Sphere Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.6 °C	120.0 VAC	0.4346 A	52.02 W	0.998	60 Hz	5.69 %

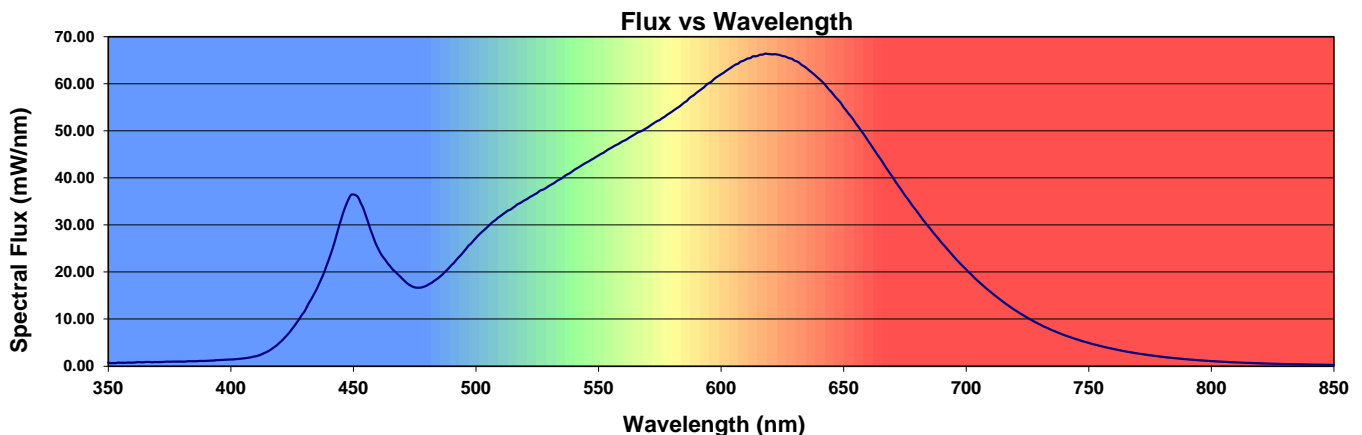
Summary of Results

Total Output:	3430 Lumens	Chromaticity (x):	0.4240
Efficacy:	65.9 lm/w	Chromaticity (y):	0.3937
CCT:	3143 K	Chromaticity (u'):	0.2466
CRI (Ra):	92.8	Chromaticity (v'):	0.5153
CRI (R9):	61.2	TM-30 Rf:	90.7
Peak Wavelength:	618.7 nm	TM-30 Rg:	101.1
Dominant Wavelength:	583.1 nm	Duv:	-0.0026
S/P Ratio:	1.478		



Color Rendering Index Detail

Ra (CRI)	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
92.8	93.2	96.1	97.1	92.9	93.1	94.9	92.1	82.9	61.2	89.9	93.4	86.1	94.0	97.9





Distribution - Goniophotometer

Distribution Test Conditions

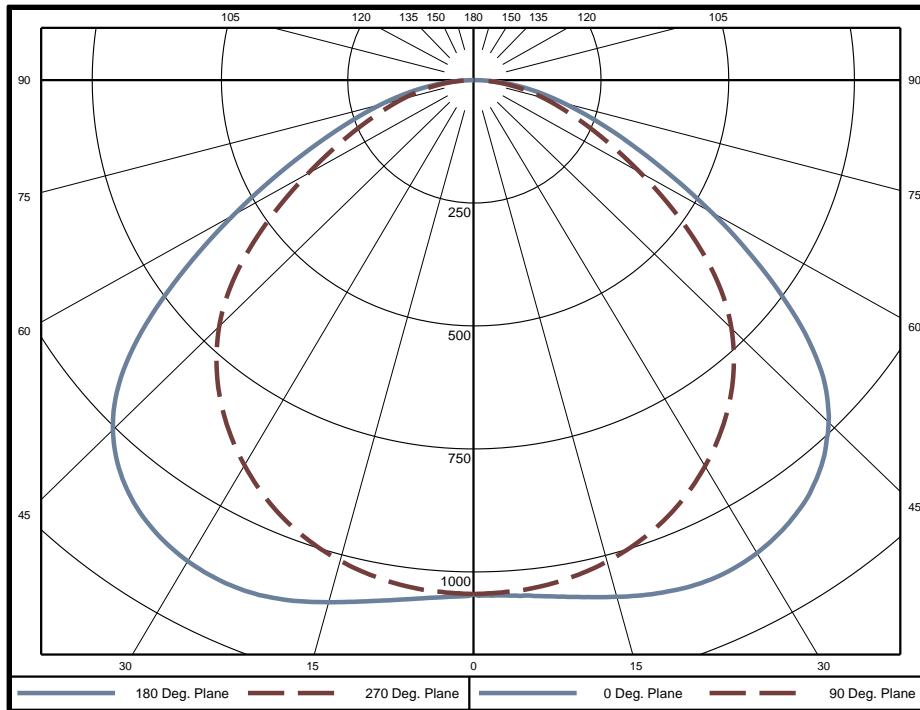
Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.5 °C	120.0 VAC	0.4347 A	52.05 W	0.998	60 Hz	5.70 %

Summary of Results

Spacing Criteria
 0-180: 1.56
 90-270: 1.29

Total Lumen Output: 3308 Lumens
Luminaire Efficacy: 63.6 lm/w
Maximum Candela: 1134 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	25.0	0.8%	60-65	196.4	5.9%	120-125	0	0.0%
5-10	75.0	2.3%	65-70	146.6	4.4%	125-130	0	0.0%
10-15	124.7	3.8%	70-75	106.1	3.2%	130-135	0	0.0%
15-20	173.5	5.2%	75-80	72.2	2.2%	135-140	0	0.0%
20-25	220.1	6.7%	80-85	41.1	1.2%	140-145	0	0.0%
25-30	262.0	7.9%	85-90	12.2	0.4%	145-150	0	0.0%
30-35	297.4	9.0%	90-95	0	0.0%	150-155	0	0.0%
35-40	324.3	9.8%	95-100	0	0.0%	155-160	0	0.0%
40-45	338.9	10.2%	100-105	0	0.0%	160-165	0	0.0%
45-50	335.2	10.1%	105-110	0	0.0%	165-170	0	0.0%
50-55	304.5	9.2%	110-115	0	0.0%	170-175	0	0.0%
55-60	252.7	7.6%	115-120	0	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	1502	45.4%
0-60	2733	82.6%
0-90	3308	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	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045
5	1053	1050	1045	1042	1042	1042	1046	1051	1057	1051	1046	1042	1042	1042	1045	1050
10	1067	1063	1048	1035	1031	1036	1050	1064	1075	1064	1050	1036	1031	1035	1048	1063
15	1087	1079	1051	1023	1013	1024	1054	1082	1099	1082	1054	1024	1013	1023	1051	1079
20	1107	1094	1053	1007	987	1007	1058	1100	1122	1100	1058	1007	987	1007	1053	1094
25	1117	1099	1048	983	951	983	1055	1110	1133	1110	1055	983	951	983	1048	1099
30	1110	1089	1032	951	906	952	1043	1105	1129	1105	1043	952	906	951	1032	1089
35	1088	1065	1004	912	853	913	1018	1086	1109	1086	1018	913	853	912	1004	1065
40	1048	1024	960	861	790	862	977	1048	1071	1048	977	862	790	861	960	1024
45	982	955	891	791	714	794	910	984	1006	984	910	794	714	791	891	955
50	874	842	781	688	615	693	804	877	894	877	804	693	615	688	781	842
55	712	679	629	552	495	558	651	716	723	716	651	558	495	552	629	679
60	538	511	473	417	378	423	493	541	544	541	493	423	378	417	473	511
65	386	368	342	303	280	308	356	390	391	390	356	308	280	303	342	368
70	272	259	241	217	203	221	252	275	274	275	252	221	203	217	241	259
75	185	177	166	151	143	153	173	188	186	188	173	153	143	151	166	177
80	116	109	103	95	91	97	108	117	114	117	108	97	91	95	103	109
85	55	49	47	43	41	44	50	54	50	54	50	44	41	43	47	49
90	2	2	3	4	4	4	3	3	1	3	3	4	4	4	3	2
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)

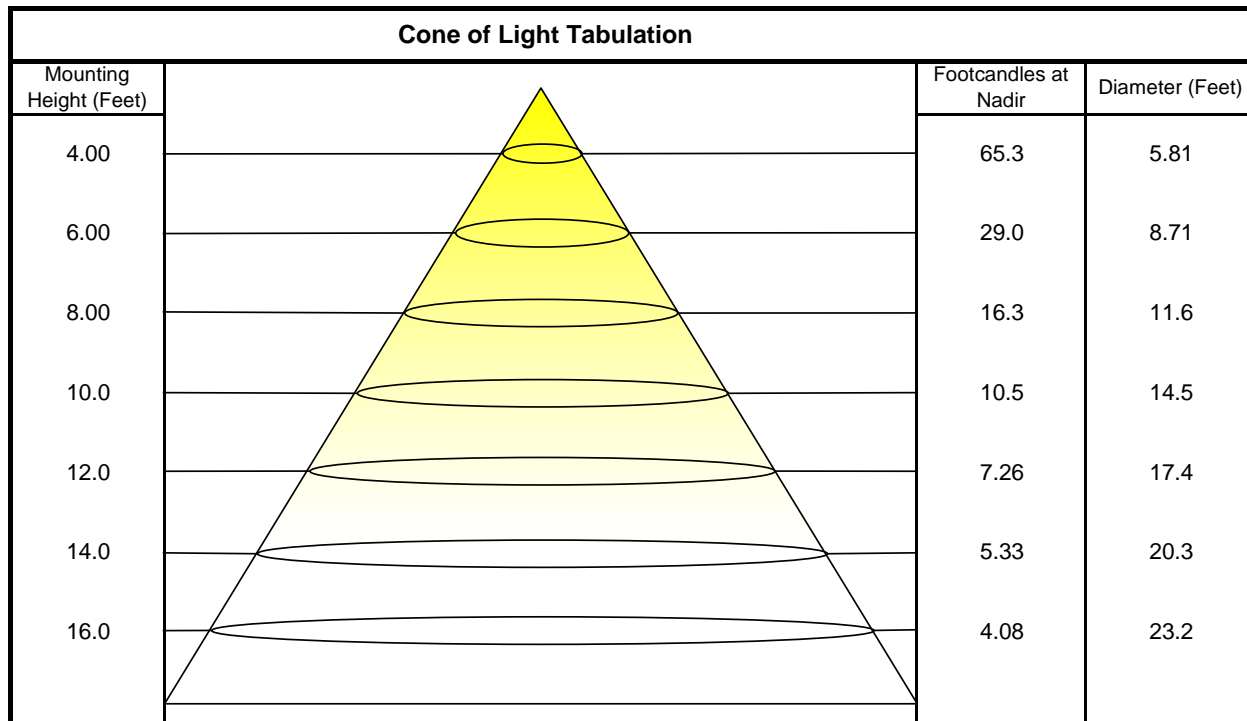
Vertical Angle (Degrees)	Horizontal Angle (Degrees)		
	0	45	90
0	1618	1618	1618
45	2151	1951	1563
55	1921	1698	1336
65	1415	1253	1024
75	1107	993	854
85	974	832	737



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	3938	3938	3938	3938	3846	3846	3846	3846	3675	3675	3675	3519	3519	3519	3375	3375	3375	3308
1	3611	3459	3322	3199	3522	3384	3260	3147	3244	3141	3048	3115	3032	2954	2996	2929	2867	2798
2	3292	3026	2806	2622	3206	2964	2762	2590	2847	2677	2530	2739	2597	2472	2639	2522	2417	2347
3	3004	2662	2397	2186	2922	2609	2364	2166	2511	2301	2128	2420	2241	2090	2336	2184	2055	1983
4	2750	2358	2071	1852	2674	2314	2046	1839	2231	1998	1814	2155	1953	1789	2083	1909	1765	1694
5	2527	2105	1810	1592	2457	2068	1790	1583	1997	1753	1566	1932	1717	1548	1871	1683	1532	1462
6	2330	1891	1597	1385	2267	1860	1582	1379	1800	1552	1367	1744	1523	1354	1692	1496	1342	1274
7	2157	1711	1422	1219	2100	1684	1409	1214	1633	1385	1205	1585	1362	1196	1540	1340	1187	1121
8	2005	1557	1276	1082	1953	1534	1266	1079	1490	1246	1072	1449	1227	1065	1410	1209	1059	995
9	1870	1426	1153	969	1823	1406	1145	967	1368	1129	962	1332	1113	956	1298	1098	951	891
10	1750	1312	1049	875	1708	1295	1043	873	1262	1029	869	1230	1016	865	1201	1003	861	802

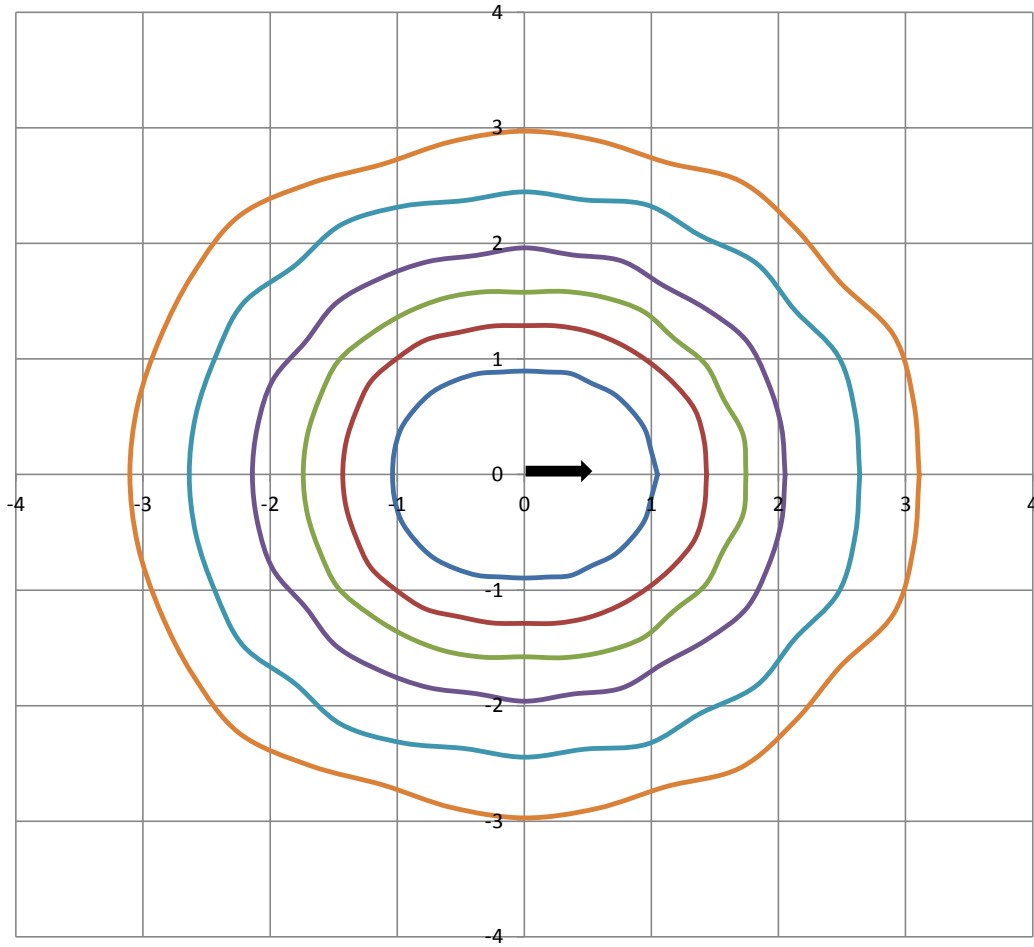
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1045 Candela
Central Cone Intensity:	1046 Candela
Beam Flux:	2648.8 Lumens
Beam Angle (0-180):	121.1 Degrees
Beam Angle (90-270):	107.8 Degrees
Field Angle (0-180):	161.6 Degrees
Field Angle (90-270):	157.3 Degrees





ISOFootcandle Plot

Mounting Height - 8 Feet



Grid Lines in Units of Mounting Height

