



Photometric Indoor Test Report

Relevant Standards

IES LM-9-2009, IES LM-41-1998
ANSI C78.81-2010, ANSI C82.1-2004, ANSI C82.11, ANSI C82.2, ANSI C82.77
IEC 60081, IEC 60901, IEC 61347-2-3

Prepared For
Precision Architectural Lighting, Inc.
Fred Compton
4830 Timber Creek Drive
Houston, TX 77017

Catalog Number
DRS03-X-4-X-MPL-X-120-T5

LTL Test Number
22463

Test Date
2011-03-03

Prepared By

Zachary Mooney, Technician III

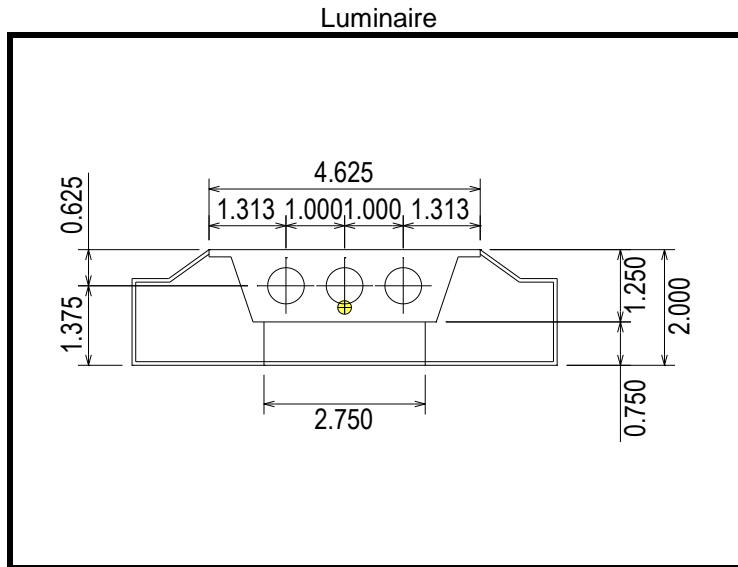
Approved By

Michael Grather, PDE

The results contained in this report pertain only to the tested sample.
This report shall not be reproduced, except in full, without written approval of Underwriters Laboratories.



Luminaire Description: Extruded aluminum housing, formed specular aluminum side reflectors, clear prismatic plastic lower lens, open top
Catalog Number: DRS03-X-4-X-MPL-X-120-T5
Lamp: Three 28 watt T5 linear fluorescent lamps rated at 2610 lumens each
Lamp Catalog Number: Philips F28T5/841/ALTO
Mounting: Pendant
Ballast/Driver: Two Universal Lighting Technologies B228PUNV-CUS



Zonal Lumen Summary

Table with 4 columns: Zone (Degrees), Lumens, % of Lamp, % of Luminaire. Rows include zones from 0-30 to 0-180.

Test Conditions

Test Temperature: 24.3 °C
Voltage: 120.0 VAC
Current: 0.8406 A
Power: 100.7 W
Power Factor: 0.999
Frequency: 60 Hz

Summary of Results

Luminaire Efficiency: 88.6 %

Spacing Criterion: 0 Degree: 1.19 90 Degree: 1.31
180 Degree: 1.19 270 Degree: 1.31

CIE Type: Semi-Indirect



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	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001	1001
5	988	998	1000	996	1000	996	1000	998	988	998	1000	996	1000	996	1000	998
10	975	985	990	989	995	989	990	985	975	985	990	989	995	989	990	985
15	952	964	977	984	994	984	977	964	952	964	977	984	994	984	977	964
20	915	930	958	977	986	977	958	930	915	930	958	977	986	977	958	930
25	865	887	931	939	941	939	931	887	865	887	931	939	941	939	931	887
30	801	841	874	884	892	884	874	841	801	841	874	884	892	884	874	841
35	723	775	805	825	835	825	805	775	723	775	805	825	835	825	805	775
40	617	669	704	699	707	699	704	669	617	669	704	699	707	699	704	669
45	465	483	498	492	489	492	498	483	465	483	498	492	489	492	498	483
50	305	295	304	304	301	304	304	295	305	295	304	304	301	304	304	295
55	204	201	194	191	200	191	194	201	204	201	194	191	200	191	194	201
60	137	139	138	132	138	132	138	139	137	139	138	132	138	132	138	139
65	98	105	103	95	95	95	103	105	98	105	103	95	95	95	103	105
70	78	84	75	70	73	70	75	84	78	84	75	70	73	70	75	84
75	60	64	58	52	53	52	58	64	60	64	58	52	53	52	58	64
80	51	45	42	38	35	38	42	45	51	45	42	38	35	38	42	45
85	29	26	22	19	17	19	22	26	29	26	22	19	17	19	22	26
90	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1
95	37	57	22	8	7	8	22	57	37	57	22	8	7	8	22	57
100	108	216	168	131	118	131	168	216	108	216	168	131	118	131	168	216
105	206	419	353	302	291	302	353	419	206	419	353	302	291	302	353	419
110	323	575	596	524	497	524	596	575	323	575	596	524	497	524	596	575
115	451	661	832	784	762	784	832	661	451	661	832	784	762	784	832	661
120	577	766	1024	1033	1016	1033	1024	766	577	766	1024	1033	1016	1033	1024	766
125	699	889	1117	1246	1251	1246	1117	889	699	889	1117	1246	1251	1246	1117	889
130	814	971	1159	1360	1413	1360	1159	971	814	971	1159	1360	1413	1360	1159	971
135	921	1023	1210	1377	1460	1377	1210	1023	921	1023	1210	1377	1460	1377	1210	1023
140	1020	1085	1292	1371	1444	1371	1292	1085	1020	1085	1292	1371	1444	1371	1292	1085
145	1109	1139	1350	1399	1436	1399	1350	1139	1109	1139	1350	1399	1436	1399	1350	1139
150	1186	1189	1339	1449	1466	1449	1339	1189	1186	1189	1339	1449	1466	1449	1339	1189
155	1249	1235	1334	1421	1470	1421	1334	1235	1249	1235	1334	1421	1470	1421	1334	1235
160	1299	1278	1329	1378	1399	1378	1329	1278	1299	1278	1329	1378	1399	1378	1329	1278
165	1338	1315	1328	1345	1356	1345	1328	1315	1338	1315	1328	1345	1356	1345	1328	1315
170	1355	1338	1337	1333	1339	1333	1337	1338	1355	1338	1337	1333	1339	1333	1337	1338
175	1347	1339	1338	1325	1326	1325	1338	1339	1347	1339	1338	1325	1326	1325	1338	1339
180	1342	1342	1342	1342	1342	1342	1342	1342	1342	1342	1342	1342	1342	1342	1342	1342

Zonal Lumen Tabulation (5 degree zones)

Zone (Degrees)	Lumens	Zone (Degrees)	Lumens	Zone (Degrees)	Lumens	Zone (Degrees)	Lumens
0-5	23.9	45-50	153.6	90-95	4.7	135-140	452.2
5-10	71.0	50-55	106.4	95-100	46.2	140-145	423.0
10-15	116.4	55-60	75.6	100-105	129.3	145-150	385.5
15-20	159.0	60-65	57.0	105-110	223.3	150-155	337.6
20-25	196.3	65-70	44.1	110-115	315.7	155-160	280.0
25-30	224.8	70-75	34.9	115-120	395.7	160-165	219.8
30-35	244.3	75-80	26.6	120-125	454.9	165-170	158.5
35-40	248.4	80-85	17.7	125-130	482.6	170-175	95.6
40-45	222.3	85-90	5.4	130-135	475.6	175-180	32.0



Coefficients of Utilization - Zonal Cavity Method

Effective Floor Cavity Reflectance 20%												
Ceiling Cavity Reflectance	90				80				70			
Wall Reflectance	70	50	30	10	70	50	30	10	70	50	30	10
Room Cavity Ratio (RCR)												
0	1.004	1.004	1.004	1.004	0.906	0.906	0.906	0.906	0.812	0.812	0.812	0.812
1	0.922	0.880	0.842	0.808	0.830	0.795	0.764	0.735	0.744	0.715	0.689	0.665
2	0.845	0.773	0.714	0.665	0.760	0.700	0.651	0.609	0.680	0.631	0.589	0.554
3	0.774	0.683	0.613	0.558	0.697	0.620	0.561	0.513	0.624	0.560	0.509	0.469
4	0.711	0.606	0.531	0.475	0.639	0.551	0.487	0.438	0.572	0.499	0.444	0.401
5	0.653	0.541	0.464	0.408	0.588	0.493	0.426	0.377	0.527	0.446	0.389	0.347
6	0.602	0.485	0.408	0.354	0.542	0.443	0.376	0.328	0.486	0.402	0.344	0.302
7	0.556	0.438	0.362	0.310	0.502	0.400	0.334	0.288	0.450	0.364	0.307	0.266
8	0.515	0.397	0.323	0.274	0.465	0.363	0.299	0.255	0.418	0.331	0.275	0.236
9	0.479	0.361	0.291	0.243	0.433	0.331	0.269	0.227	0.389	0.302	0.247	0.210
10	0.446	0.330	0.262	0.217	0.404	0.303	0.243	0.203	0.364	0.277	0.224	0.188

Ceiling Cavity Reflectance	50				30			10			0
Wall Reflectance	70	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)											
0	0.636	0.636	0.636	0.636	0.476	0.476	0.476	0.328	0.328	0.328	0.259
1	0.583	0.564	0.547	0.531	0.425	0.415	0.405	0.297	0.292	0.286	0.228
2	0.533	0.500	0.472	0.448	0.380	0.362	0.346	0.268	0.258	0.250	0.200
3	0.489	0.446	0.411	0.382	0.340	0.318	0.299	0.243	0.230	0.219	0.176
4	0.449	0.399	0.360	0.330	0.307	0.281	0.260	0.220	0.205	0.193	0.156
5	0.414	0.359	0.318	0.287	0.277	0.250	0.228	0.201	0.184	0.171	0.139
6	0.383	0.324	0.283	0.252	0.252	0.223	0.202	0.184	0.166	0.153	0.125
7	0.355	0.294	0.253	0.223	0.230	0.201	0.180	0.169	0.151	0.137	0.112
8	0.331	0.269	0.227	0.198	0.210	0.182	0.161	0.156	0.138	0.124	0.102
9	0.309	0.246	0.206	0.177	0.194	0.165	0.145	0.144	0.126	0.113	0.093
10	0.289	0.226	0.187	0.160	0.179	0.151	0.131	0.134	0.116	0.103	0.085

Average Luminance Table (cd/m²)

		Horizontal Angle (Degrees)		
		0	45	90
Vertical Angle (Degree)	0	12820	12820	12820
	45	8418	9018	8853
	55	4556	4329	4475
	65	2975	3121	2891
	75	2969	2887	2623
	85	4238	2440	2440

This test was conducted using photometry techniques according to standard IES procedures. The user must therefore use caution in the following situations: 1) This test was performed using a specific ballast/lamp combination. Extrapolation of this data for other ballast/lamp combinations may produce erroneous results. 2) According to IESNA procedures, the ballast(s) and lamp(s) are presumed to produce 100% of rated output. An appropriate ballast factor must be applied to the lumen output ratings and luminous intensity values given. This test was conducted in a controlled laboratory environment where the ambient temperature was held at 25°C ±1°C. Field performance may differ particularly in regards to change in luminous output as a result of difference in ambient temperature and method of mounting the luminaire.



Polar Plot (Candela)

