



## 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  
DRS02-X-4-X-MPL-X-120-T8

LTL Test Number  
22465

Test Date

2011-02-28

Prepared By

Zachary Mooney, Technician III

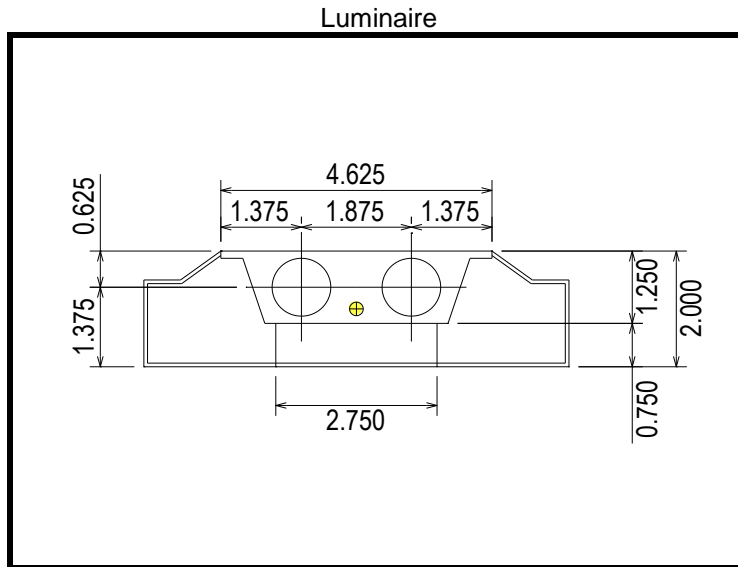
Approved By

Michael Grather, PDE

The results contained in this report pertain only to the tested sample.  
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Luminaire Description: Extruded aluminum housing, formed specular aluminum side reflectors, clear prismatic plastic lower lens, open top
Catalog Number: DRS02-X-4-X-MPL-X-120-T8
Lamp: Two horizontal 32 watt T8 linear fluorescent lamps rated at 2850 lumens each
Lamp Catalog Number: Philips F32T8/841/ALTO
Mounting: Pendant
Ballast/Driver: One Universal Lighting Technologies B232IUNV-C



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: 24.2 °C
Voltage: 120.0 VAC
Current: 0.4941 A
Power: 59.26 W
Power Factor: 0.999
Frequency: 60 Hz

Summary of Results

Luminaire Efficiency: 87.9 %

Spacing Criterion: 0 Degree: 1.21 90 Degree: 1.35
180 Degree: 1.21 270 Degree: 1.35

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	694	694	694	694	694	694	694	694	694	694	694	694	694	694	694	694
5	688	692	694	690	692	690	694	692	688	692	694	690	692	690	694	692
10	680	683	685	682	684	682	685	683	680	683	685	682	684	682	685	683
15	665	668	672	670	672	670	672	668	665	668	672	670	672	670	672	668
20	640	643	648	650	654	650	648	643	640	643	648	650	654	650	648	643
25	605	609	620	628	633	628	620	609	605	609	620	628	633	628	620	609
30	564	571	590	612	622	612	590	571	564	571	590	612	622	612	590	571
35	511	526	565	590	600	590	565	526	511	526	565	590	600	590	565	526
40	439	476	518	539	551	539	518	476	439	476	518	539	551	539	518	476
45	330	362	379	382	384	382	379	362	330	362	379	382	384	382	379	362
50	222	221	231	232	231	232	231	221	222	221	231	232	231	232	231	221
55	151	151	146	146	154	146	146	151	151	151	146	146	154	146	146	151
60	103	105	104	101	107	101	104	105	103	105	104	101	107	101	104	105
65	74	79	78	73	74	73	78	79	74	79	78	73	74	73	78	79
70	58	62	57	54	57	54	57	62	58	62	57	54	57	54	57	62
75	45	48	44	40	42	40	44	48	45	48	44	40	42	40	44	48
80	39	34	33	30	28	30	33	34	39	34	33	30	28	30	33	34
85	22	20	18	16	14	16	18	20	22	20	18	16	14	16	18	20
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	36	64	59	54	50	54	59	64	36	64	59	54	50	54	59	64
100	100	188	163	154	151	154	163	188	100	188	163	154	151	154	163	188
105	176	304	307	280	271	280	307	304	176	304	307	280	271	280	307	304
110	260	396	450	438	427	438	450	396	260	396	450	438	427	438	450	396
115	348	486	570	587	584	587	570	486	348	486	570	587	584	587	570	486
120	432	554	656	713	721	713	656	554	432	554	656	713	721	713	656	554
125	515	621	733	795	815	795	733	621	515	621	733	795	815	795	733	621
130	598	697	804	860	883	860	804	697	598	697	804	860	883	860	804	697
135	671	770	845	924	943	924	845	770	671	770	845	924	943	924	845	770
140	735	828	880	968	996	968	880	828	735	828	880	968	996	968	880	828
145	789	871	933	976	1008	976	933	871	789	871	933	976	1008	976	933	871
150	837	902	984	1003	1015	1003	984	902	837	902	984	1003	1015	1003	984	902
155	879	923	1014	1041	1053	1041	1014	923	879	923	1014	1041	1053	1041	1014	923
160	915	941	1014	1057	1071	1057	1014	941	915	941	1014	1057	1071	1057	1014	941
165	941	955	998	1034	1052	1034	998	955	941	955	998	1034	1052	1034	998	955
170	949	956	980	995	1004	995	980	956	949	956	980	995	1004	995	980	956
175	943	942	950	950	953	950	950	942	943	942	950	950	953	950	950	942
180	940	940	940	940	940	940	940	940	940	940	940	940	940	940	940	940

Zonal Lumen Tabulation (5 degree zones)

Zone (Degrees)	Lumens	Zone (Degrees)	Lumens	Zone (Degrees)	Lumens	Zone (Degrees)	Lumens
0-5	16.6	45-50	116.0	90-95	10.8	135-140	319.0
5-10	49.2	50-55	80.6	95-100	56.5	140-145	301.3
10-15	80.3	55-60	57.3	100-105	115.8	145-150	275.7
15-20	108.6	60-65	43.3	105-110	178.9	150-155	245.5
20-25	132.7	65-70	33.4	110-115	237.0	155-160	208.7
25-30	153.0	70-75	26.4	115-120	280.9	160-165	164.9
30-35	169.6	75-80	20.4	120-125	307.3	165-170	117.2
35-40	178.5	80-85	13.9	125-130	321.7	170-175	68.9
40-45	167.1	85-90	4.7	130-135	325.9	175-180	22.6



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	0.9958	0.9958	0.9958	0.9958	0.8977	0.8977	0.8977	0.8977	0.8043	0.8043	0.8043	0.8043
1	0.9134	0.8712	0.8337	0.8000	0.8225	0.7874	0.7559	0.7276	0.7361	0.7072	0.6812	0.6576
2	0.8365	0.7650	0.7065	0.6578	0.7526	0.6928	0.6433	0.6017	0.6732	0.6236	0.5822	0.5470
3	0.7664	0.6754	0.6060	0.5514	0.6893	0.6128	0.5536	0.5064	0.6165	0.5527	0.5026	0.4622
4	0.7029	0.5992	0.5245	0.4681	0.6322	0.5445	0.4803	0.4313	0.5656	0.4920	0.4373	0.3950
5	0.6458	0.5341	0.4574	0.4016	0.5811	0.4862	0.4199	0.3710	0.5200	0.4401	0.3833	0.3407
6	0.5948	0.4788	0.4024	0.3483	0.5355	0.4365	0.3701	0.3224	0.4797	0.3958	0.3385	0.2968
7	0.5495	0.4316	0.3567	0.3049	0.4951	0.3941	0.3286	0.2828	0.4439	0.3579	0.3011	0.2608
8	0.5090	0.3909	0.3181	0.2687	0.4591	0.3574	0.2935	0.2496	0.4120	0.3251	0.2694	0.2307
9	0.4730	0.3558	0.2855	0.2386	0.4270	0.3258	0.2638	0.2220	0.3836	0.2968	0.2425	0.2055
10	0.4407	0.3252	0.2574	0.2129	0.3983	0.2982	0.2382	0.1984	0.3581	0.2719	0.2193	0.1839

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	0.6298	0.6298	0.6298	0.6298	0.4701	0.4701	0.4701	0.3235	0.3235	0.3235	0.2546
1	0.5761	0.5572	0.5399	0.5241	0.4193	0.4087	0.3989	0.2922	0.2865	0.2812	0.2232
2	0.5266	0.4937	0.4656	0.4413	0.3739	0.3561	0.3405	0.2631	0.2532	0.2443	0.1949
3	0.4824	0.4395	0.4048	0.3763	0.3347	0.3123	0.2935	0.2375	0.2246	0.2135	0.1709
4	0.4430	0.3929	0.3544	0.3240	0.3009	0.2755	0.2549	0.2152	0.2002	0.1878	0.1509
5	0.4080	0.3529	0.3123	0.2812	0.2716	0.2444	0.2231	0.1958	0.1794	0.1662	0.1341
6	0.3770	0.3186	0.2772	0.2463	0.2464	0.2183	0.1967	0.1789	0.1616	0.1481	0.1199
7	0.3496	0.2891	0.2476	0.2175	0.2246	0.1961	0.1748	0.1641	0.1464	0.1328	0.1078
8	0.3252	0.2635	0.2225	0.1932	0.2056	0.1771	0.1562	0.1512	0.1332	0.1197	0.0975
9	0.3034	0.2413	0.2010	0.1728	0.1890	0.1607	0.1404	0.1397	0.1217	0.1085	0.0886
10	0.2840	0.2218	0.1824	0.1553	0.1744	0.1466	0.1269	0.1297	0.1118	0.0988	0.0810

Average Luminance Table (cd/m<sup>2</sup>)

		Horizontal Angle (Degrees)		
		0	45	90
Vertical Angle (Degree)	0	5284	5284	5284
	45	3549	4085	4134
	55	2007	1944	2044
	65	1332	1405	1339
	75	1316	1300	1224
	85	1922	1211	1211

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)

