



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
DRP01-X-4-X-MPL-X-120-T8

LTL Test Number
22467

Test Date
2011-03-02

Prepared By

Zachary Mooney, Technician III

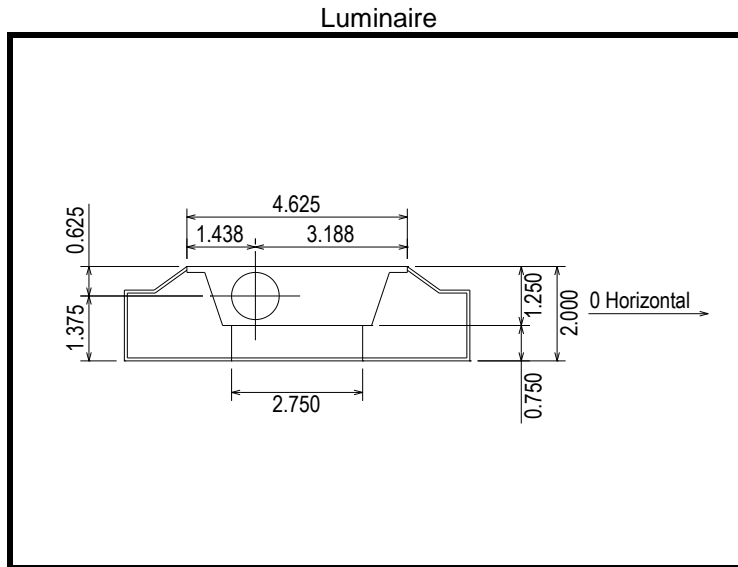
Approved By

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: DRP01-X-4-X-MPL-X-120-T8
 Lamp: One horizontal 32 watt T8 linear fluorescent lamp rated at 2850 lumens
 Lamp Catalog Number: Philips F32T8/841/ALTO
 Mounting: Pendant
 Ballast/Driver: One Universal Lighting Technologies B232IUNV-C



Zonal Lumen Summary

Zone (Degrees)	Lumens	% of Lamp	% of Luminaire
0-30	223	7.8%	9.1%
0-40	366	12.8%	14.9%
0-60	539	18.9%	22.0%
0-90	597	21.0%	24.4%
90-180	1855	65.1%	75.6%
0-180	2452	86.0%	100.0%

Test Conditions

Test Temperature: 25.5 °C
 Voltage: 120.0 VAC
 Current: 0.2960 A
 Power: 35.50 W
 Power Factor: 0.999
 Frequency: 60 Hz

Summary of Results

Luminaire Efficiency: 86.0 %

Spacing Criterion: 0 Degree: 1.69 90 Degree: 1.20
 180 Degree: 0.58 270 Degree: 1.20

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	291.0	291.0	291.0	291.0	291.0	291.0	291.0	291.0	291.0	291.0	291.0	291.0	291.0	291.0	291.0	291.0
5	322.3	321.0	315.4	303.1	289.7	276.6	266.4	255.9	252.1	255.9	266.4	276.6	289.7	303.1	315.4	321.0
10	352.9	348.1	335.7	312.4	285.7	259.4	237.5	220.0	213.1	220.0	237.5	259.4	285.7	312.4	335.7	348.1
15	379.4	372.8	353.1	318.8	278.9	239.0	206.8	182.2	172.6	182.2	206.8	239.0	278.9	318.8	353.1	372.8
20	402.0	392.9	365.0	320.2	268.0	215.1	172.3	142.9	131.5	142.9	172.3	215.1	268.0	320.2	365.0	392.9
25	416.1	405.9	373.2	316.7	252.4	187.1	135.9	105.9	96.0	105.9	135.9	187.1	252.4	316.7	373.2	405.9
30	424.7	412.1	375.1	310.0	233.2	156.7	102.9	81.0	77.2	81.0	102.9	156.7	233.2	310.0	375.1	412.1
35	397.2	390.9	369.3	299.4	209.6	124.3	83.9	90.5	102.1	90.5	83.9	124.3	209.6	299.4	369.3	390.9
40	330.6	325.1	321.9	278.2	177.2	98.9	107.8	137.2	154.1	137.2	107.8	98.9	177.2	278.2	321.9	325.1
45	213.5	208.0	206.8	190.8	129.1	102.4	108.8	109.3	103.1	109.3	108.8	102.4	129.1	190.8	206.8	208.0
50	130.2	128.6	122.7	105.6	88.1	74.2	67.5	64.9	63.2	64.9	67.5	74.2	88.1	105.6	122.7	128.6
55	83.9	78.5	76.1	68.6	60.5	54.6	45.0	42.1	45.3	42.1	45.0	54.6	60.5	68.6	76.1	78.5
60	55.8	51.4	51.4	46.3	41.3	38.8	34.0	31.8	32.2	31.8	34.0	38.8	41.3	46.3	51.4	51.4
65	37.3	35.4	37.3	35.3	29.7	28.9	25.7	23.0	23.0	23.0	25.7	28.9	29.7	35.3	37.3	35.4
70	30.0	26.8	27.3	28.2	24.1	22.7	18.8	16.9	16.9	16.9	18.8	22.7	24.1	28.2	27.3	26.8
75	22.0	20.3	21.9	21.7	18.5	17.2	14.7	12.9	12.4	12.9	14.7	17.2	18.5	21.7	21.9	20.3
80	14.7	15.5	15.5	15.3	15.8	12.3	10.9	9.3	8.6	9.3	10.9	12.3	15.8	15.3	15.5	15.5
85	6.7	7.7	9.1	10.2	8.9	6.5	5.9	5.4	5.1	5.4	5.9	6.5	8.9	10.2	9.1	7.7
90	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
95	41.2	48.7	55.4	60.2	15.6	17.2	7.7	5.3	6.4	5.3	7.7	17.2	15.6	60.2	55.4	48.7
100	142.6	149.6	156.2	128.9	45.0	108.5	46.6	36.4	34.8	36.4	46.6	108.5	45.0	128.9	156.2	149.6
105	256.2	269.5	257.2	174.9	82.3	159.2	178.7	106.9	88.1	106.9	178.7	159.2	82.3	174.9	257.2	269.5
110	375.9	361.0	298.3	231.5	124.6	174.5	284.0	277.6	259.4	277.6	284.0	174.5	124.6	231.5	298.3	361.0
115	417.3	404.1	340.9	278.6	169.9	194.3	319.7	385.3	388.6	385.3	319.7	194.3	169.9	278.6	340.9	404.1
120	459.1	446.4	387.7	300.9	216.0	237.1	322.6	431.5	466.5	431.5	322.6	237.1	216.0	300.9	387.7	446.4
125	511.2	491.5	436.3	330.6	254.3	261.3	310.9	409.2	448.0	409.2	310.9	261.3	254.3	330.6	436.3	491.5
130	560.0	533.2	478.0	363.4	289.1	298.5	312.1	389.6	426.9	389.6	312.1	298.5	289.1	363.4	478.0	533.2
135	590.6	565.4	489.0	389.7	320.7	337.1	343.2	358.6	389.6	358.6	343.2	337.1	320.7	389.7	489.0	565.4
140	612.3	583.4	493.6	410.3	347.8	369.3	350.3	378.4	381.3	378.4	350.3	369.3	347.8	410.3	493.6	583.4
145	602.1	565.6	504.8	424.7	372.4	395.5	378.3	400.0	412.9	400.0	378.3	395.5	372.4	424.7	504.8	565.6
150	567.3	556.8	512.1	435.9	394.9	415.3	413.0	403.3	411.3	403.3	413.0	415.3	394.9	435.9	512.1	556.8
155	571.8	553.0	512.7	444.9	415.4	429.8	441.9	431.4	436.2	431.4	441.9	429.8	415.4	444.9	512.7	553.0
160	559.3	543.9	504.5	455.3	432.8	439.7	457.9	457.1	459.8	457.1	457.9	439.7	432.8	455.3	504.5	543.9
165	539.6	523.8	495.5	463.8	443.8	446.1	459.8	467.3	471.9	467.3	459.8	446.1	443.8	463.8	495.5	523.8
170	508.0	497.0	480.0	459.0	446.7	447.8	454.4	459.0	463.6	459.0	454.4	447.8	446.7	459.0	480.0	497.0
175	455.0	452.1	450.4	444.6	443.0	444.0	446.5	445.4	448.3	445.4	446.5	444.0	443.0	444.6	450.4	452.1
180	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2

Zonal Lumen Tabulation (5 degree zones)

Zone (Degrees)	Lumens	Zone (Degrees)	Lumens	Zone (Degrees)	Lumens	Zone (Degrees)	Lumens
0-5	6.9	45-50	47.5	90-95	5.6	135-140	155.6
5-10	20.6	50-55	33.2	95-100	33.2	140-145	145.7
10-15	33.5	55-60	23.5	100-105	71.5	145-150	131.9
15-20	45.1	60-65	17.6	105-110	114.4	150-155	116.3
20-25	54.7	65-70	13.6	110-115	145.1	155-160	98.8
25-30	62.5	70-75	10.9	115-120	161.8	160-165	78.5
30-35	68.9	75-80	8.3	120-125	167.0	165-170	56.0
35-40	73.4	80-85	5.7	125-130	166.6	170-175	32.7
40-45	69.6	85-90	1.8	130-135	163.2	175-180	10.6



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	0.9698	0.9698	0.9698	0.9698	0.8692	0.8692	0.8692	0.8692	0.7733	0.7733	0.7733	0.7733
1	0.8887	0.8472	0.8103	0.7772	0.7955	0.7611	0.7304	0.7026	0.7070	0.6789	0.6535	0.6305
2	0.8132	0.7430	0.6856	0.6378	0.7272	0.6688	0.6205	0.5798	0.6459	0.5977	0.5575	0.5233
3	0.7446	0.6553	0.5872	0.5335	0.6656	0.5909	0.5331	0.4870	0.5910	0.5291	0.4805	0.4414
4	0.6824	0.5806	0.5073	0.4521	0.6100	0.5244	0.4618	0.4139	0.5417	0.4704	0.4174	0.3764
5	0.6265	0.5169	0.4418	0.3871	0.5602	0.4677	0.4030	0.3553	0.4977	0.4202	0.3651	0.3239
6	0.5766	0.4629	0.3880	0.3350	0.5159	0.4194	0.3546	0.3081	0.4587	0.3775	0.3219	0.2816
7	0.5324	0.4168	0.3434	0.2927	0.4767	0.3782	0.3144	0.2697	0.4241	0.3409	0.2859	0.2469
8	0.4928	0.3771	0.3058	0.2574	0.4417	0.3427	0.2804	0.2376	0.3934	0.3093	0.2554	0.2179
9	0.4577	0.3429	0.2740	0.2281	0.4106	0.3120	0.2516	0.2109	0.3660	0.2820	0.2296	0.1937
10	0.4262	0.3131	0.2468	0.2032	0.3827	0.2852	0.2269	0.1881	0.3416	0.2582	0.2073	0.1730

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	0.5944	0.5944	0.5944	0.5944	0.4306	0.4306	0.4306	0.2802	0.2802	0.2802	0.2096
1	0.5428	0.5248	0.5083	0.4932	0.3832	0.3734	0.3643	0.2528	0.2478	0.2431	0.1838
2	0.4957	0.4643	0.4374	0.4143	0.3412	0.3247	0.3102	0.2274	0.2186	0.2109	0.1605
3	0.4536	0.4127	0.3797	0.3525	0.3050	0.2842	0.2668	0.2050	0.1937	0.1841	0.1408
4	0.4162	0.3684	0.3318	0.3028	0.2738	0.2503	0.2313	0.1856	0.1725	0.1617	0.1244
5	0.3829	0.3304	0.2918	0.2622	0.2468	0.2217	0.2019	0.1688	0.1545	0.1430	0.1105
6	0.3535	0.2979	0.2585	0.2292	0.2236	0.1976	0.1777	0.1541	0.1390	0.1272	0.0989
7	0.3275	0.2700	0.2306	0.2019	0.2036	0.1772	0.1576	0.1412	0.1258	0.1140	0.0889
8	0.3044	0.2458	0.2068	0.1790	0.1861	0.1598	0.1405	0.1300	0.1143	0.1026	0.0804
9	0.2839	0.2248	0.1865	0.1597	0.1709	0.1449	0.1261	0.1201	0.1045	0.0930	0.0732
10	0.2655	0.2064	0.1690	0.1432	0.1576	0.1319	0.1138	0.1114	0.0958	0.0846	0.0669

Average Luminance Table (cd/m²)

		Horizontal Angle (Degrees)		
		0	45	90
Vertical Angle (Degree)	0	3728	3728	3728
	45	3867	3746	2338
	55	1874	1700	1350
	65	1132	1132	899
	75	1090	1082	916
	85	985	1313	1313

Note: The zonal cavity calculation technique is accurate when luminaires with symmetric candela distributions are employed and when the luminaires are located symmetrically throughout the room. This unit has special characteristics and therefore these values should be used with caution.

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)

