



LUMINAIRE TESTING LABORATORY, INC.



905 Harrison Street · Allentown, PA 18103 · (610) 770-1044 · Fax (610) 770-8912 · www.LuminaireTesting.com

LTL NUMBER: 08367

DATE: 09-02-2004

PREPARED FOR: PRECISION ARCHITECTURAL LIGHTING

CATALOG NUMBER: LMPI/D03-PH-WR-4-LP-X-120-T8/T8

LUMINAIRE: EXTRUDED ALUMINUM HOUSING, FORMED WHITE ENAMEL ALUMINUM REFLECTOR, PERFORATED SECTION WITH TRANSLUCENT WHITE ACRYLIC INSERT, CLEAR LINEAR PRISMATIC POLYCARBONATE LENS.

LAMPS: THREE 32 WATT T8 LINEAR FLUORESCENT LAMPS RATED AT 2850 LUMENS EACH

LAMP CATALOG NUMBER: PHILIPS F32T8/TL841/ALTO

BALLAST: ONE ENERGY SAVINGS ES-2/1-T8-32/25/17/15-UNV-A-IS
ONE ADVANCE REL-1P32-SC

NOTE: THIS TEST REPORT WAS CALCULATED USING MEASURED DATA FROM LTL TEST REPORT NUMBERS 06294 AND 08341.

MOUNTING: WALL

TOTAL INPUT WATTS = 85.6 AT 120.0 VOLTS

THE 0 DEGREE PLANE IS PERPENDICULAR TO THE LAMPS.

CANDELA DISTRIBUTION

FLUX

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0	
0	726	726	726	726	726	726	726	726	726	
5	711	714	719	719	720	726	730	726	727	69
15	706	704	704	693	698	704	705	698	702	198
25	682	677	666	651	646	640	610	554	547	291
35	651	644	615	588	572	524	447	400	397	337
45	546	556	554	506	462	360	316	303	307	336
55	375	392	430	408	312	233	225	229	230	283
65	226	236	261	285	157	140	144	152	152	194
75	116	120	126	139	65	65	76	79	80	101
85	36	38	33	32	10	14	18	20	21	28
90	11	10	8	4	2	4	8	10	9	
95	100	119	133	130	56	37	55	55	62	95
105	529	550	551	478	264	163	135	136	143	346
115	967	977	901	711	501	384	316	283	285	580
125	1246	1196	1075	907	724	627	530	483	480	716
135	1352	1317	1223	1049	921	852	764	701	697	758
145	1431	1392	1306	1173	1086	1037	978	925	920	710
155	1431	1403	1345	1271	1217	1178	1153	1116	1118	575
165	1410	1394	1373	1337	1305	1286	1268	1255	1264	373
175	1380	1373	1375	1362	1353	1345	1337	1330	1334	129
180	1359	1359	1359	1359	1359	1359	1359	1359	1359	

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT
0- 30	558	6.5	9.1
0- 40	895	10.5	14.6
0- 60	1514	17.7	24.7
0- 90	1837	21.5	30.0
90-120	1020	11.9	16.7
90-130	1736	20.3	28.4
90-150	3204	37.5	52.4
90-180	4281	50.1	70.0
0-180	6118	71.6	100.0

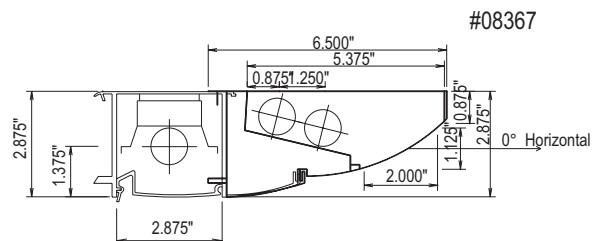
TOTAL LUMINAIRE EFFICIENCY: 71.6%

TOTAL REFLECTANCE OF PAINT: 90.4%

CIE TYPE: SEMI-INDIRECT

PLANE: 0-DEG 90-DEG 180-DEG

SPACING CRITERIA: 1.4 1.3 1.0



TESTED BY HERSCHEL SCHRECK
CHECKED BY MIKE GRATHER

THIS REPORT BASED ON LM-41 AND OTHER PERTINENT IESNA PROCEDURES.



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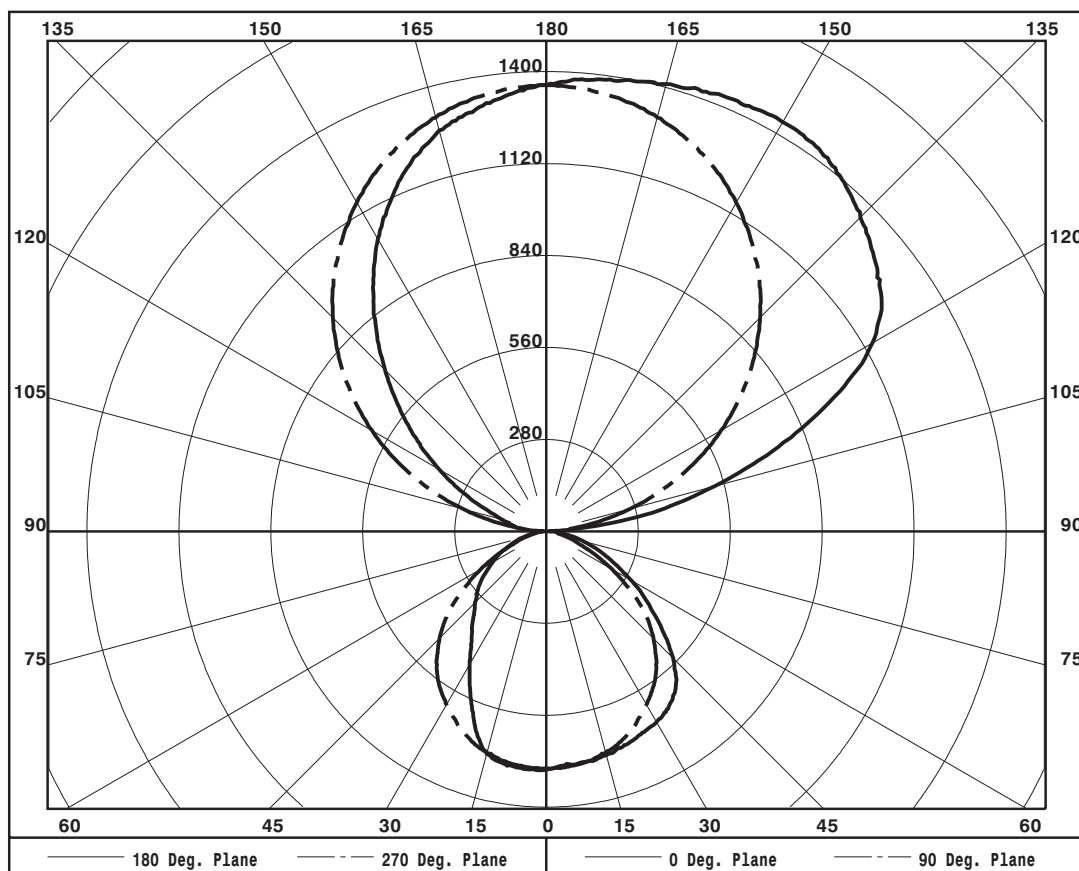
ZONAL LUMEN SUMMARY

0- 5	17.
5- 10	51.
10- 15	84.
15- 20	114.
20- 25	137.
25- 30	154.
30- 35	166.
35- 40	171.
40- 45	171.
45- 50	164.
50- 55	151.
55- 60	132.
60- 65	109.
65- 70	85.
70- 75	62.
75- 80	39.
80- 85	20.
85- 90	8.
90- 95	16.
95-100	78.
100-105	141.
105-110	204.
110-115	265.
115-120	315.
120-125	348.
125-130	369.
130-135	379.
135-140	379.
140-145	367.
145-150	343.
150-155	309.
155-160	266.
160-165	215.
165-170	158.
170-175	96.
175-180	32.

PLANE: 0-DEG 90-DEG
LUMINOUS LENGTH: 2.875 48.000
HEIGHT OF SIDE: 1.125 0.000

LUMINANCE IN CANDELA PER SQUARE METER

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
0	5774.	5774.	5774.
45	4133.	4638.	5196.
55	3070.	4000.	4326.
65	2083.	2828.	2955.
75	1267.	1697.	1997.
85	501.	611.	913.



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CANDELA DISTRIBUTION

[illegible]



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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	73	73	73	73	66	66	66	66	52	52	52	39	39	39	27	27	27	21
1	67	64	61	59	60	58	55	53	46	44	43	34	34	33	24	24	23	19
2	61	56	52	49	55	51	47	44	40	38	36	31	29	28	22	21	20	16
3	56	50	45	41	50	45	41	37	36	33	30	27	25	24	19	18	17	14
4	51	44	39	34	46	40	35	32	32	28	26	24	22	20	17	16	15	12
5	47	39	33	29	42	35	30	27	28	25	22	22	19	17	16	14	13	10
6	43	35	29	25	39	32	27	23	25	22	19	19	17	15	14	12	11	9
7	40	31	26	22	35	28	24	20	23	19	17	18	15	13	13	11	10	8
8	37	28	23	19	33	25	21	18	20	17	15	16	13	12	11	10	9	7
9	34	25	20	17	30	23	18	15	19	15	13	14	12	10	10	9	8	6
10	31	23	18	15	28	21	17	14	17	14	11	13	11	9	9	8	7	5

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 COEFFICIENTS SHOULD BE USED WITH CAUTION.

THIS TEST WAS CONDUCTED USING RELATIVE PHOTOMETRY TECHNIQUES ACCORDING TO STANDARD IESNA PROCEDURES. THE USER MUST THEREFORE USE CAUTION IN THE FOLLOWING SITUATIONS: 1) THIS TEST WAS PERFORMED USING A SPECIFIC BALLAST/LAMP COMBINATION. EXTRAPOLATION OF THESE 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. 3) 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.



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INITIAL ILLUMINATION OF 50 FOOTCANDLES USING LTL TEST NUMBER 08367

LUMINAIRE SUSPENSION LENGTH = 1.5

WORKING PLANE HEIGHT = 2.50

FLOOR REFLECTANCE = 20

ROOM HT CEIL RF WALL RF	HT RF RF	8				9				10				12			
		80		70		80		70		80		70		80		70	
		70	50	50	30	70	50	50	30	70	50	50	30	70	50	50	30
WIDTH LENGTH																	
10.	10.	2	2	2	2	2	2	2	2	2	2	2	3	2	3	3	3
10.	15.	2	2	3	3	2	3	3	3	2	3	3	3	3	3	3	4
15.	20.	3	4	4	4	4	4	4	5	4	4	5	5	4	5	5	6
15.	30.	5	5	6	6	5	5	6	6	5	6	6	7	6	6	7	8
20.	20.	4	5	5	5	4	5	5	6	5	5	6	6	5	6	6	7
20.	30.	6	6	7	8	6	7	7	8	6	7	8	8	7	8	9	10
20.	40.	8	8	9	10	8	9	10	10	8	9	10	11	9	10	11	12
20.	60.	11	12	13	14	12	12	14	15	12	13	14	15	13	14	16	17
30.	30.	9	9	10	10	9	9	10	11	9	10	11	12	10	11	12	13
30.	40.	11	12	13	13	11	12	13	14	12	13	14	15	12	13	15	16
30.	50.	14	14	16	16	14	15	16	17	14	15	17	18	15	16	18	19
30.	60.	16	17	19	19	17	17	19	20	17	18	20	21	18	19	21	23
60.	60.	31	32	35	36	31	33	36	37	32	33	37	38	33	35	39	40
60.	80.	41	42	47	47	41	43	47	49	42	44	48	50	43	45	50	52
60.	100.	51	52	58	59	51	53	59	60	52	54	60	62	53	56	62	64
100.	100.	83	85	94	95	84	86	95	97	85	87	97	99	86	89	99	102

QUANTITY OF LUMINAIRES