LTL LUMINAIRE TESTING LABORATORY, INC.

IES SUSTAINING MEMBER

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

LTL NUMBER: 07242 DATE: 02-18-2003
PREPARED FOR: PRECISION ARCHITECTURAL LIGHTING
CATALOG NUMBER: TRPO1-SP-4-X-BW-X-120-T8
LUMINAIRE: EXTRUDED ALUMINUM HOUSING, FORMED SPECULAR ALUMINUM REFLECTORS, 12 CELL, 1 1/2" DEEP, FORMED WHITE ENAMEL ALUMINUM LOUVER BELOW LAMP.
LAMP: ONE 32 WATT LINEAR FLUORESCENT T8 LAMP RATED AT 2850 LUMENS.
LAMP CATALOG NUMBER: PHILIPS F32T8/TL841
BALLAST: ONE UNIVERSAL LIGHTING TECHNOLOGIES B132I120RH-A
MOUNTING: WALL
LUMEN TO CANDELA RATIO USED = 9.18
TOTAL INPUT WATTS = 29.6 AT 120.0 VOLTS
THE 0 DEGREE PLANE IS PERPENDICULAR TO THE LAMPS.

CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0	FLUX
0	500	500	500	500	500	500	500	500	500	
5	582	575	561	533	503	479	481	483	483	50
15	631	622	610	578	497	491	516	485	471	154
25	769	719	620	550	464	474	415	371	347	242
35	901	805	650	497	414	392	317	273	263	309
45	760	721	637	438	320	283	236	323	355	338
55	518	481	456	355	244	192	248	303	346	302
65	222	229	235	219	155	136	186	202	188	194
75	83	82	81	76	73	73	77	81	83	83
85	27	23	23	21	19	19	21	21	17	24
90	0	0	0	0	0	0	0	0	0	

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT
0- 30	445	15.6	26.3
0- 40	754	26.5	44.5
0- 60	1394	48.9	82.3
0- 90	1695	59.5	100.0
90-180	0	0.0	0.0
0-180	1695	59.5	100.0

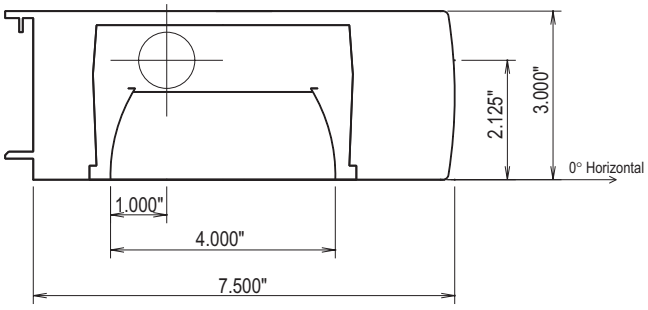
TOTAL LUMINAIRE EFFICIENCY: 59.5%

CIE TYPE:	DIRECT		
PLANE:	0-DEG	90-DEG	180-DEG
SPACING CRITERIA:	2.1	1.3	1.0
SHIELDING ANGLES:	27	21	53
LUMINOUS LENGTH:	4.000	48.000	

LUMINANCE IN CANDELA PER SQUARE METER

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
0	4036.	4036.	4036.
45	8676.	7272.	3653.
55	7290.	6418.	3434.
65	4240.	4489.	2961.
75	2589.	2526.	2277.
85	2501.	2130.	1760.

#07242



TESTED BY HERSCHEL SCHRECK
CHECKED BY MIKE GRATHER

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

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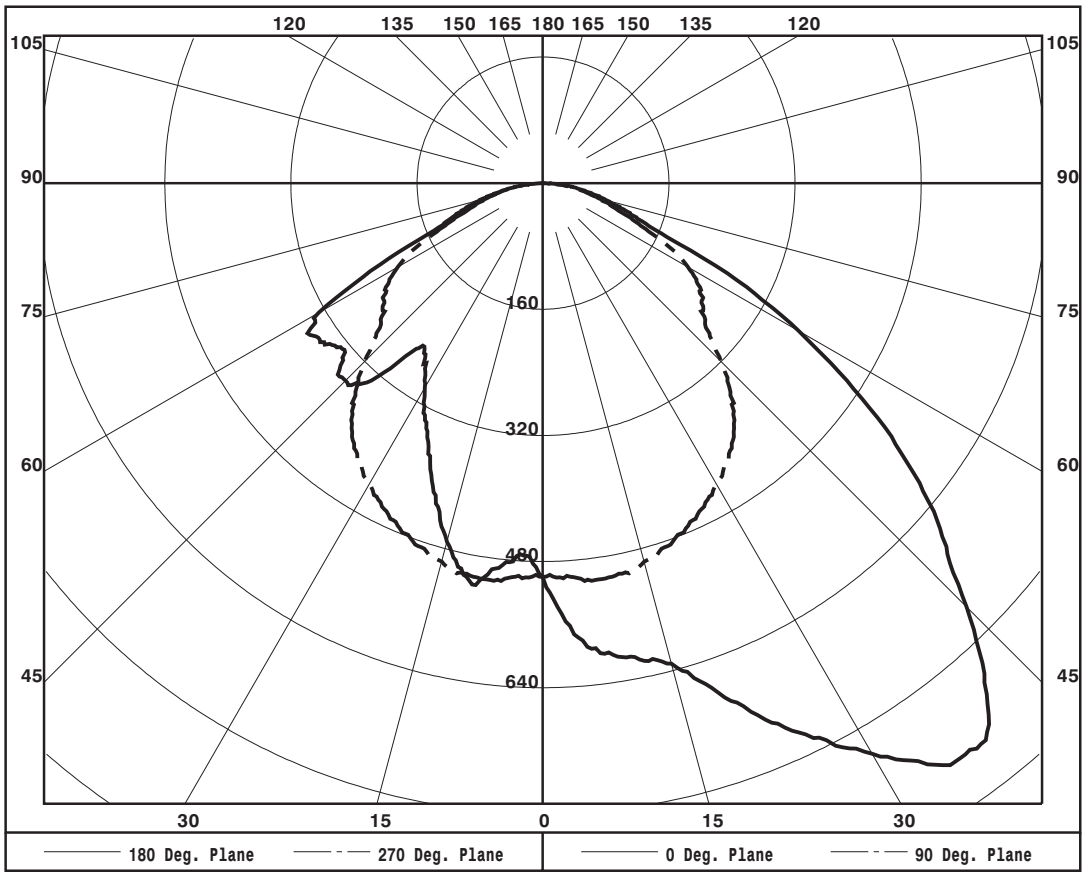
CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0
0	500	500	500	500	500	500	500	500	500
5	582	575	561	533	503	479	481	483	483
10	611	610	602	568	507	488	505	518	517
15	631	622	610	578	497	491	516	485	471
20	699	664	606	569	483	487	470	427	409
25	769	719	620	550	464	474	415	371	347
30	836	766	642	524	441	436	364	323	300
35	901	805	650	497	414	392	317	273	263
40	880	807	648	474	377	343	269	268	313
45	760	721	637	438	320	283	236	323	355
50	648	594	577	399	269	229	247	316	329
55	518	481	456	355	244	192	248	303	346
60	375	352	343	303	213	164	212	293	329
65	222	229	235	219	155	136	186	202	188
70	127	122	139	118	103	105	123	117	118
75	83	82	81	76	73	73	77	81	83
80	54	51	50	47	46	45	46	49	46
85	27	23	23	21	19	19	21	21	17
90	0	0	0	0	0	0	0	0	0

ZONAL LUMEN SUMMARY

0- 5	12.
5- 10	38.
10- 15	65.
15- 20	89.
20- 25	111.
25- 30	131.
30- 35	147.
35- 40	161.
40- 45	171.
45- 50	167.
50- 55	158.
55- 60	144.
60- 65	117.
65- 70	77.
70- 75	50.
75- 80	33.
80- 85	19.
85- 90	5.



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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	71	71	71	71	69	69	69	69	66	66	66	63	63	63	61	61	61	60
1	65	63	61	58	64	62	59	58	59	57	56	57	55	54	55	53	52	51
2	60	56	52	49	59	54	51	48	52	50	47	50	48	46	49	47	45	44
3	55	49	45	41	54	48	44	41	47	43	40	45	42	39	44	41	39	38
4	51	44	39	35	49	43	38	35	42	38	34	40	37	34	39	36	33	32
5	46	39	33	30	45	38	33	29	37	32	29	36	32	29	34	31	29	27
6	42	34	29	25	41	34	29	25	33	28	25	32	28	25	31	27	25	23
7	39	31	26	22	38	30	25	22	29	25	22	29	25	22	28	24	21	20
8	36	28	22	19	35	27	22	19	26	22	19	26	22	19	25	21	18	17
9	33	25	20	16	32	24	19	16	23	19	16	23	19	16	22	19	16	15
10	30	22	17	14	30	22	17	14	21	17	14	21	17	14	20	17	14	13

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 07242
LUMINAIRE SUSPENSION LENGTH = 1.5
WORKING PLANE HEIGHT = 2.50
FLOOR REFLECTANCE = 20

ROOM HT		8				9				10				12			
CEIL RF		80		70		80		70		80		70		80		70	
WALL RF		70	50	50	30	70	50	50	30	70	50	50	30	70	50	50	30
WIDTH	LENGTH																
10.	10.	4	5	5	5	4	5	5	6	5	6	6	7	5	7	7	8
10.	15.	5	6	6	7	6	7	7	8	6	7	7	8	7	9	9	10
15.	20.	10	10	11	11	10	11	11	12	10	12	12	13	12	14	14	16
15.	30.	14	15	15	16	14	16	16	17	15	17	17	18	16	19	19	21
20.	20.	12	13	13	14	13	14	14	15	13	15	15	16	14	17	17	19
20.	30.	18	19	19	20	18	20	20	21	19	21	21	23	20	23	23	25
20.	40.	23	24	25	26	24	25	26	27	24	26	27	29	26	29	30	32
20.	60.	34	35	36	38	35	37	38	40	36	38	39	42	38	41	42	46
30.	30.	25	27	27	28	26	28	28	30	27	29	29	31	28	31	32	34
30.	40.	33	35	35	37	34	36	37	38	35	37	38	40	37	40	41	44
30.	50.	41	43	44	45	42	44	45	47	43	46	46	49	45	49	50	53
30.	60.	49	51	52	54	50	52	53	56	51	54	55	58	53	57	58	62
60.	60.	94	97	99	101	96	99	101	104	97	101	103	107	100	105	107	112
60.	80.	125	128	131	133	126	130	133	136	128	132	135	139	131	137	140	146
60.	100.	155	159	162	165	157	161	165	168	159	164	167	172	162	169	173	179
100.	100.	256	260	266	269	258	263	269	273	260	266	272	278	264	273	279	286

QUANTITY OF LUMINAIRES