



LUMINAIRE TESTING LABORATORY, INC.



SUSTAINING
MEMBER

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

LTL NUMBER: 07354

DATE: 04-14-2003

PREPARED FOR: PRECISION ARCHITECTURAL LIGHTING

CATALOG NUMBER: TRP02-X-4-X-OP/PB-X-120-T5HO

LUMINAIRE: EXTRUDED ALUMINUM HOUSING, FORMED SPECULAR ALUMINUM REFLECTORS
BESIDE LAMP, 12 CELL, 1 1/2" DEEP FORMED SEMI-SPECULAR ALUMINUM
LOUVER WITH TRANSLUCENT WHITE ACRYLIC OVERLAY, OPEN TOP.

LAMPS: TWO 54 WATT HIGH OUTPUT T5 LINEAR FLUORESCENT LAMP RATED AT 4400
LUMENS EACH.

LAMP CATALOG NUMBER: SYLVANIA FP54/841/HO

BALLAST: ONE UNIVERSAL LIGHTING TECHNOLOGIES B254PUNV-D

MOUNTING: WALL

LUMEN TO CANDELA RATIO USED = 9.18

TOTAL INPUT WATTS = 123.2 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	855	855	855	855	855	855	855	855	855	
5	860	855	857	855	850	849	848	845	844	81
15	831	828	825	814	805	799	796	789	790	228
25	767	761	749	741	729	716	705	707	712	337
35	661	650	648	637	632	608	599	594	604	391
45	525	512	514	517	513	485	468	464	478	382
55	366	349	352	369	377	341	324	331	351	311
65	111	119	141	150	146	139	141	144	142	137
75	9	9	9	10	8	8	12	13	13	13
85	0	1	2	1	0	2	2	1	1	1
90	0	0	0	0	0	0	0	0	0	
95	26	33	41	121	61	184	124	74	73	119
105	587	625	563	459	285	418	678	856	893	596
115	928	944	896	718	541	663	805	996	1061	811
125	1254	1218	1097	950	782	905	965	1039	1098	912
135	1397	1369	1271	1137	996	1078	1216	1217	1226	927
145	1502	1473	1407	1273	1177	1228	1339	1423	1438	845
155	1555	1530	1471	1375	1316	1346	1409	1456	1470	660
165	1535	1515	1486	1443	1411	1424	1454	1468	1473	415
175	1493	1489	1485	1467	1460	1460	1470	1467	1462	141
180	1467	1467	1467	1467	1467	1467	1467	1467	1467	

ZONAL LUMEN SUMMARY

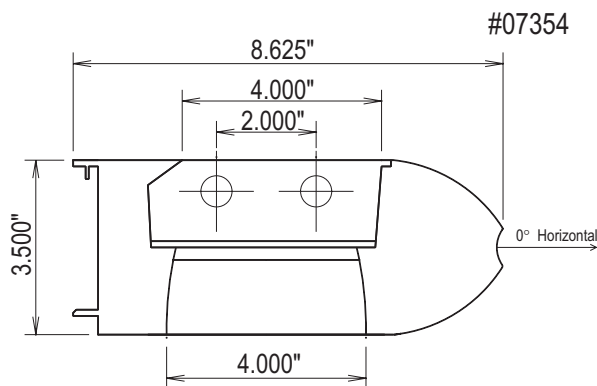
ZONE	LUMENS	%LAMP	%FIXT
0- 30	646	7.3	8.8
0- 40	1037	11.8	14.2
0- 60	1730	19.7	23.7
0- 90	1882	21.4	25.8
90-120	1526	17.3	20.9
90-130	2438	27.7	33.4
90-150	4209	47.8	57.6
90-180	5424	61.6	74.2
0-180	7306	83.0	100.0

TOTAL LUMINAIRE EFFICIENCY: 83.0%

CIE TYPE: SEMI-INDIRECT

PLANE: 0-DEG 90-DEG 180-DEG

SPACING CRITERIA: 1.2 1.2 1.2



#07354

TESTED BY HERSCHEL SCHRECK
CHECKED BY MIKE GRATHER

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



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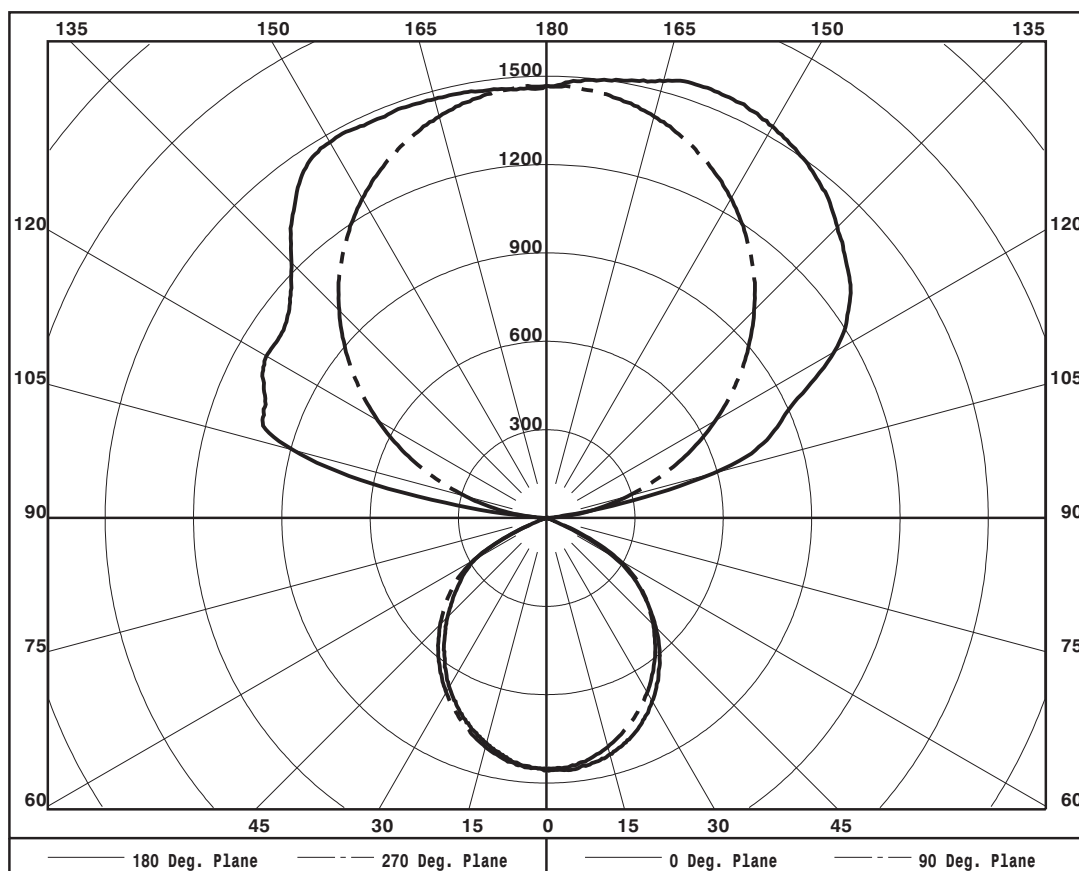
ZONAL LUMEN SUMMARY

0- 5	20.
5- 10	60.
10- 15	98.
15- 20	131.
20- 25	158.
25- 30	179.
30- 35	193.
35- 40	198.
40- 45	196.
45- 50	186.
50- 55	169.
55- 60	142.
60- 65	99.
65- 70	38.
70- 75	9.
75- 80	4.
80- 85	1.
85- 90	0.
90- 95	8.
95-100	112.
100-105	257.
105-110	338.
110-115	386.
115-120	426.
120-125	449.
125-130	462.
130-135	466.
135-140	461.
140-145	440.
145-150	405.
150-155	358.
155-160	302.
160-165	240.
165-170	174.
170-175	105.
175-180	35.

PLANE: 0-DEG 90-DEG
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	6902.	6902.	6902.
45	5993.	5868.	5856.
55	5151.	4954.	5306.
65	2120.	2693.	2789.
75	281.	281.	250.
85	0.	185.	0.



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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	84	84	84	84	75	75	75	75	58	58	58	42	42	42	28	28	28	21
1	77	74	71	68	69	66	64	62	52	50	49	38	37	36	26	25	25	19
2	71	65	61	57	63	58	55	51	46	43	41	34	33	31	23	22	22	17
3	65	58	52	48	58	52	47	43	41	38	35	31	29	27	21	20	19	15
4	59	51	45	41	53	46	41	37	36	33	30	27	25	23	19	18	17	13
5	54	45	39	35	48	41	36	32	32	29	26	24	22	20	17	16	15	11
6	50	41	34	30	45	37	31	27	29	25	22	22	19	18	15	14	13	10
7	46	37	30	26	41	33	28	24	26	22	20	20	17	15	14	12	11	9
8	42	33	27	23	38	30	24	21	24	20	17	18	15	13	13	11	10	8
9	39	30	24	20	35	27	22	18	21	18	15	16	14	12	11	10	9	7
10	36	27	21	17	33	24	19	16	19	16	13	15	12	10	10	9	8	6

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 07354

LUMINAIRE SUSPENSION LENGTH = 1.5

WORKING PLANE HEIGHT = 2.50

FLOOR REFLECTANCE = 20

ROOM HT CEIL RF WALL 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.	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3
10.	15.	2	2	2	2	2	2	2	3	2	2	3	3	2	3	3	3
15.	20.	3	3	4	4	3	3	4	4	3	4	4	4	4	4	4	5
15.	30.	4	4	5	5	4	5	5	6	4	5	5	6	5	5	6	7
20.	20.	4	4	4	5	4	4	5	5	4	4	5	5	4	5	5	6
20.	30.	5	6	6	6	5	6	6	7	6	6	7	7	6	7	7	8
20.	40.	7	7	8	8	7	7	8	9	7	8	8	9	8	8	9	10
20.	60.	10	10	11	12	10	11	12	12	10	11	12	13	11	12	13	14
30.	30.	7	8	9	9	8	8	9	9	8	8	9	10	8	9	10	11
30.	40.	9	10	11	11	10	10	11	12	10	11	12	12	10	11	13	14
30.	50.	12	12	13	14	12	12	14	15	12	13	14	15	13	14	15	16
30.	60.	14	14	16	17	14	15	16	17	14	15	17	18	15	16	18	19
60.	60.	26	27	30	31	27	28	31	32	27	28	31	33	28	29	33	34
60.	80.	35	35	40	40	35	36	40	41	35	37	41	42	36	38	43	44
60.	100.	43	44	49	50	43	45	50	51	44	45	51	52	45	47	52	54
100.	100.	70	71	80	81	71	72	81	82	72	73	82	84	73	75	84	87

QUANTITY OF LUMINAIRES