



LUMINAIRE TESTING LABORATORY, INC.



SUSTAINING
MEMBER

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

LTL NUMBER: 07474

DATE: 07-07-2003

PREPARED FOR: MERCURY LIGHTING PRODUCTS COMPANY INC.

CATALOG NUMBER: M501-254-HO-T5-ELB-120V

LUMINAIRE: MOLDED ACRYLIC HOUSING, FORMED WHITE ENAMEL STEEL REFLECTOR,
CLEAR POLYCARBONATE LINEAR PRISMATIC LENS.

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

LAMP CATALOG NUMBER: SYLVANIA FP54/830/HO

BALLAST: ONE ADVANCE ICN-2S54

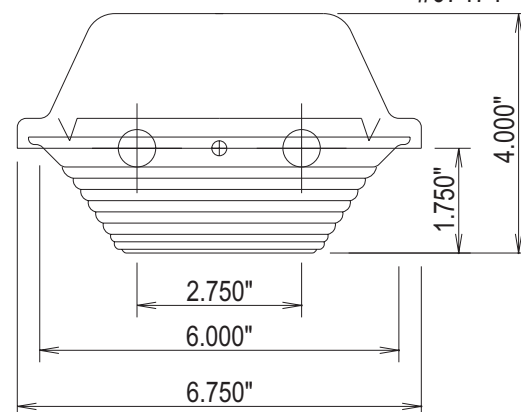
MOUNTING: SURFACE

LUMEN TO CANDELA RATIO USED = 9.18

TOTAL INPUT WATTS = 102.2 AT 120.0 VOLTS

THE 0 DEGREE PLANE IS PARALLEL WITH THE LAMPS.

#07474



CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
0	1416	1416	1416	1416	1416
5	1408	1411	1417	1414	1417
15	1354	1366	1408	1439	1456
25	1246	1290	1382	1447	1484
35	1090	1185	1347	1428	1464
45	886	1038	1226	1315	1349
55	654	866	1051	1202	1287
65	413	632	903	990	1020
75	176	397	628	822	895
85	27	206	348	438	471
90	12	98	211	295	325
95	13	48	125	190	213
105	6	11	48	74	79
115	2	2	13	32	38
125	0	1	2	11	15
135	0	0	0	0	0
145	0	0	0	0	0
155	0	0	0	0	0
165	0	0	0	0	0
175	0	0	0	0	0
180	0	0	0	0	0

FLUX

135
398
634
820
907
915
804
627
346
132
47
17
5
0
0
0
0
0
0
0

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT
0- 30	1166	13.3	20.2
0- 40	1987	22.6	34.3
0- 60	3808	43.3	65.8
0- 90	5585	63.5	96.5
90-120	197	2.2	3.4
90-130	201	2.3	3.5
90-150	202	2.3	3.5
90-180	202	2.3	3.5
0-180	5787	65.8	100.0

TOTAL LUMINAIRE EFFICIENCY:

65.8%

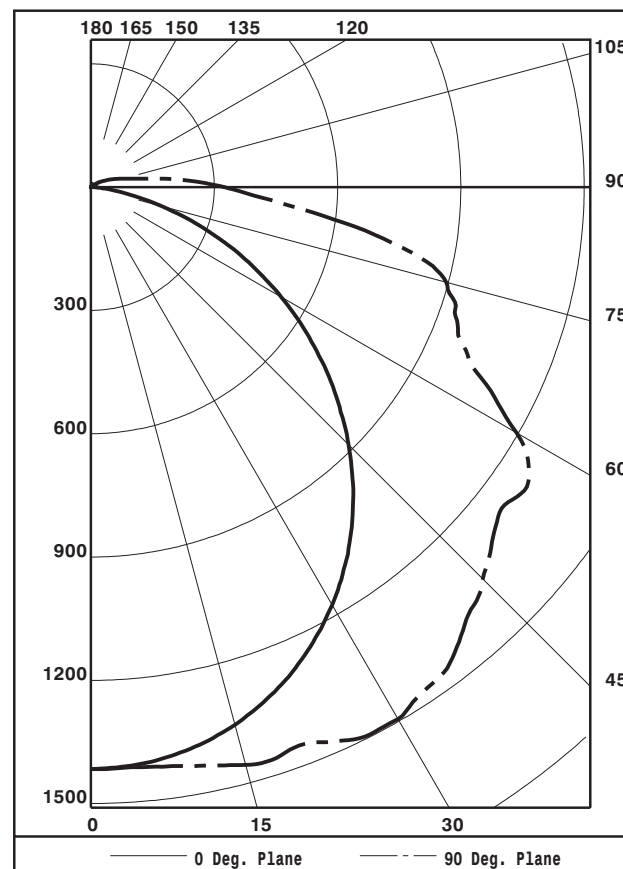
TOTAL REFLECTANCE OF PAINT:

87.7%

CIE TYPE: DIRECT

PLANE: 0-DEG 90-DEG

SPACING CRITERIA: 1.2 1.6



TESTED BY HERSCHEL SCHRECK

CHECKED BY MIKE GRATHER

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



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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	78	78	78	78	76	76	76	76	72	72	72	68	68	68	65	65	65	63
1	70	66	63	60	68	64	62	59	61	59	57	58	56	54	55	54	52	51
2	63	57	52	48	61	55	51	47	53	49	46	50	47	44	48	45	43	41
3	57	50	44	39	55	48	43	39	46	42	38	44	40	37	42	39	36	34
4	52	44	38	33	50	43	37	32	41	36	32	39	35	31	37	33	30	29
5	47	38	32	27	46	37	31	27	36	30	26	34	30	26	33	29	25	24
6	43	34	28	23	42	33	27	23	32	27	23	30	26	22	29	25	22	20
7	40	30	24	20	38	30	24	20	28	23	19	27	23	19	26	22	19	17
8	37	27	21	17	35	27	21	17	25	20	17	24	20	16	23	19	16	15
9	34	24	18	15	33	24	18	14	23	18	14	22	17	14	21	17	14	13
10	31	22	16	13	30	22	16	13	21	16	13	20	15	12	19	15	12	11

PLANE: 0-DEG 90-DEG
LUMINOUS LENGTH: 50.625 6.000
HEIGHT OF SIDE: 1.750 1.750

LUMINANCE IN CANDELA PER SQUARE METER

ANGLE	AVERAGE	AVERAGE	AVERAGE
IN DEG	0-DEG	45-DEG	90-DEG
0	7225.	7225.	7225.
45	6361.	9170.	9272.
55	5723.	8827.	9770.
65	4814.	8959.	8952.
75	3219.	7907.	9657.
85	1234.	6257.	6869.



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	0.0	22.5	45.0	67.5	90.0
0	1416	1416	1416	1416	1416
5	1408	1411	1417	1414	1417
10	1388	1392	1412	1423	1431
15	1354	1366	1408	1439	1456
20	1307	1332	1405	1441	1451
25	1246	1290	1382	1447	1484
30	1174	1242	1357	1461	1494
35	1090	1185	1347	1428	1464
40	993	1111	1296	1385	1408
45	886	1038	1226	1315	1349
50	774	964	1135	1244	1285
55	654	866	1051	1202	1287
60	534	754	977	1164	1195
65	413	632	903	990	1020
70	292	515	732	877	948
75	176	397	628	822	895
80	82	283	543	684	723
85	27	206	348	438	471
90	12	98	211	295	325
95	13	48	125	190	213
100	10	25	76	107	117
105	6	11	48	74	79
110	4	4	27	51	56
115	2	2	13	32	38
120	2	2	6	19	25
125	0	1	2	11	15
130	0	0	0	4	6
135	0	0	0	0	0
140	0	0	0	0	0
145	0	0	0	0	0
150	0	0	0	0	0
155	0	0	0	0	0
160	0	0	0	0	0
165	0	0	0	0	0
170	0	0	0	0	0
175	0	0	0	0	0
180	0	0	0	0	0

ZONAL LUMEN SUMMARY

0- 5	34.
5- 10	101.
10- 15	167.
15- 20	231.
20- 25	289.
25- 30	345.
30- 35	392.
35- 40	428.
40- 45	448.
45- 50	459.
50- 55	458.
55- 60	457.
60- 65	428.
65- 70	376.
70- 75	335.
75- 80	292.
80- 85	216.
85- 90	131.
90- 95	84.
95-100	48.
100-105	29.
105-110	18.
110-115	11.
115-120	6.
120-125	3.
125-130	1.
130-135	0.
135-140	0.
140-145	0.
145-150	0.
150-155	0.
155-160	0.
160-165	0.
165-170	0.
170-175	0.
175-180	0.

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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VISUAL COMFORT PROBABILITY TABLE

RATED LUMENS PER LAMP 4400.

100. FC. ROOM		REFLECTANCES 80/50/20 LUMINAIRES 0 DEG PLANE				LUMINAIRES 90 DEG PLANE			
W	L	8.5	10.0	13.0	16.0	8.5	10.0	13.0	16.0
20	20	32	39	53	68	24	32	43	62
20	30	28	32	40	52	17	22	29	41
20	40	27	30	35	42	15	17	22	29
20	60	27	29	33	38	13	16	17	22
30	20	31	37	47	62	26	33	41	58
30	30	26	30	35	46	18	22	28	38
30	40	25	27	30	37	16	18	21	28
30	60	24	26	28	32	14	16	17	21
30	80	24	26	28	32	13	15	15	18
40	20	31	37	46	59	28	35	42	56
40	30	26	29	34	43	20	24	29	38
40	40	24	27	29	34	17	19	22	27
40	60	23	25	27	30	15	17	17	20
40	80	24	25	26	29	14	16	15	18
40	100	24	25	26	29	14	15	14	16
60	30	27	30	33	41	22	26	30	38
60	40	25	26	28	33	19	20	22	28
60	60	23	24	25	29	16	18	17	21
60	80	23	24	24	27	15	16	15	18
60	100	24	24	24	27	15	16	15	16
100	40	27	28	29	34	23	24	25	31
100	60	25	26	26	29	20	21	20	23
100	80	25	25	24	27	18	19	18	19
100	100	25	24	24	26	17	18	16	18

THIS TABLE WAS CALCULATED ACCORDING TO IESNA LM-42-72. THE VCP CALCULATION PROCEDURE IS MOST ACCURATE FOR LUMINAIRES THAT EXHIBIT THE FOLLOWING CHARACTERISTICS. 1). LUMINAIRE IS RELATIVELY CONSISTANT IN LUMINANCE 2). LUMINAIRE HAS WELL-DEFINED LUMINOUS EDGES AND 3). LUMINAIRE UTILIZES FLUORESCENT LAMPS. CAUTION SHOULD BE USED WHEN APPLYING VCP VALUES BASED ON LUMINAIRES THAT DO NOT CONFORM TO THE ABOVE CONDITIONS.