



LUMINAIRE TESTING LABORATORY, INC.



SUSTAINING
MEMBER

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

LTL NUMBER: 06073

DATE: 08-17-2001

PREPARED FOR: VANTAGE LUMINAIRES

CATALOG NUMBER: 7HF2X13E1-07616SCL/SCL

LUMINAIRE: FORMED STEEL HOUSING, SPUN SPECULAR ALUMINUM REFLECTOR,
CLEAR FRESNEL GLASS LENS ABOVE SPUN SEMI-SPECULAR ALUMINUM
LOWER REFLECTOR.

LAMPS: TWO PHILIPS PL-C 13W/27/4P RATED AT 900 LUMENS EACH.

BALLAST: ONE ADVANCE ICF-2S13-H1-LD

MOUNTING: RECESSED

TOTAL INPUT WATTS = 27.7 AT 120.0 VOLTS

THE 0 DEGREE PLANE IS PARALLEL WITH THE LAMPS.

CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0	FLUX
0	439	439	439	439	439	439	439	439	439	
5	424	459	488	501	504	496	478	444	421	45
15	370	439	477	486	481	481	459	421	356	126
25	240	313	370	437	451	426	346	277	216	162
35	96	119	201	262	275	278	235	126	97	126
45	87	96	111	126	133	130	110	95	96	86
55	51	56	63	66	67	64	57	52	47	54
65	25	28	30	32	32	33	29	25	22	28
75	7	7	9	9	10	10	11	5	6	10
85	0	0	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0	0	0

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT
0- 30	333	18.5	52.3
0- 40	458	25.5	72.0
0- 60	599	33.3	94.0
0- 90	637	35.4	100.0
90-180	0	0.0	0.0
0-180	637	35.4	100.0

TOTAL LUMINAIRE EFFICIENCY: 35.4%

CIE TYPE: DIRECT

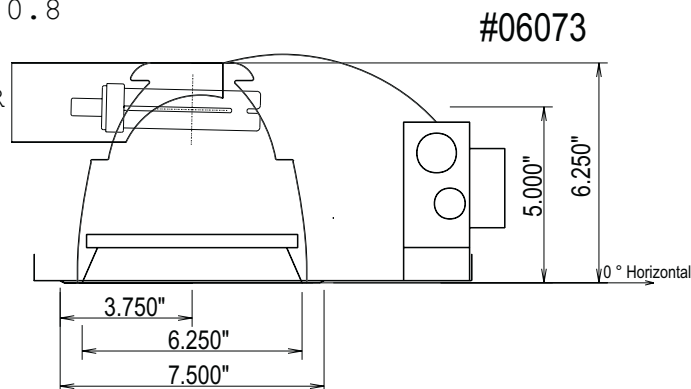
PLANE: 0-DEG 90-DEG 180-DEG

SPACING CRITERIA: 0.8 1.3 0.8

LUMINOUS DIAMETER: 6.250

LUMINANCE IN CANDELA PER SQUARE METER

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
0	22178.	22178.	22178.
45	6216.	7930.	9502.
55	4492.	5549.	5901.
65	2988.	3586.	3825.
75	1366.	1757.	1952.
85	0.	0.	0.



TESTED BY HERSCHEL SCHRECK
CHECKED BY MIKE GRATHER

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



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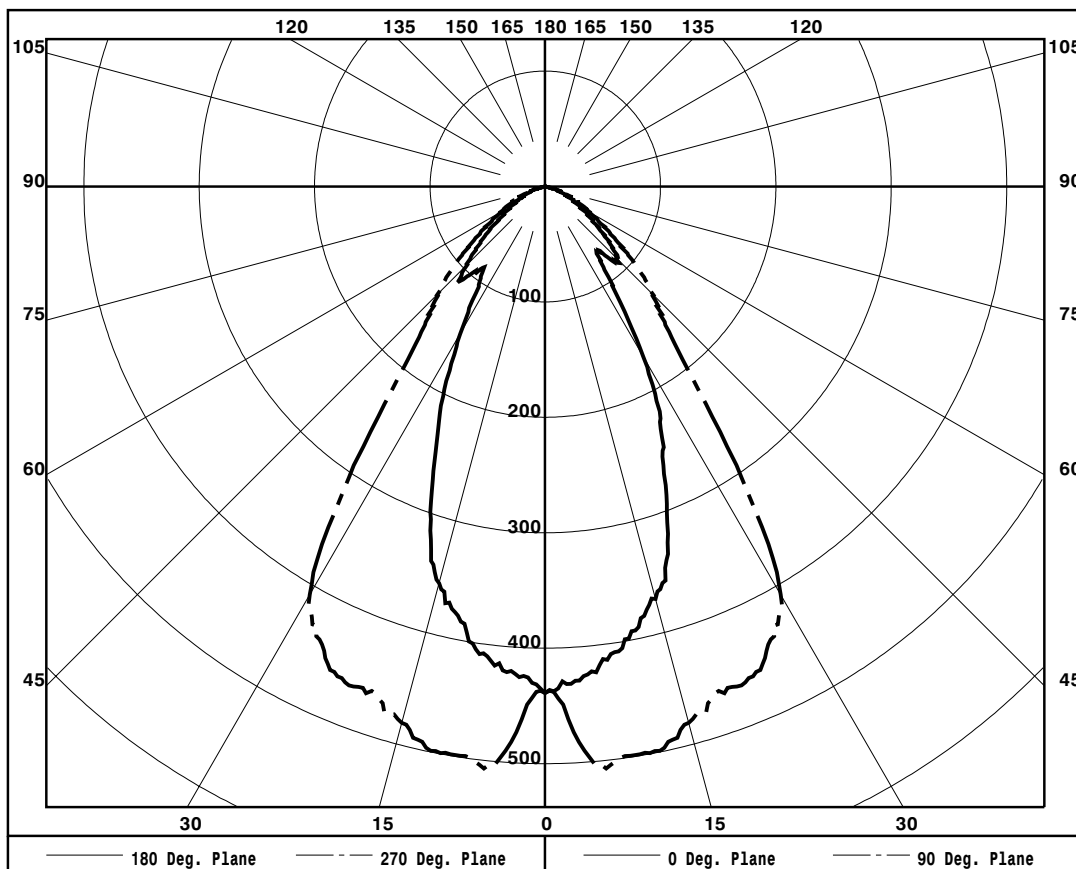
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CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0
0	439	439	439	439	439	439	439	439	439
5	424	459	488	501	504	496	478	444	421
10	398	456	482	495	498	491	478	444	392
15	370	439	477	486	481	481	459	421	356
20	310	385	440	460	462	449	413	356	290
25	240	313	370	437	451	426	346	277	216
30	170	216	317	394	408	388	290	186	148
35	96	119	201	262	275	278	235	126	97
40	72	88	126	162	170	170	148	104	98
45	87	96	111	126	133	130	110	95	96
50	67	78	87	96	98	96	83	74	70
55	51	56	63	66	67	64	57	52	47
60	34	38	44	45	46	47	39	36	33
65	25	28	30	32	32	33	29	25	22
70	13	16	20	20	20	20	17	15	13
75	7	7	9	9	10	10	11	5	6
80	0	0	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0	0

ZONAL LUMEN SUMMARY

0- 5	11.
5- 10	34.
10- 15	54.
15- 20	71.
20- 25	80.
25- 30	82.
30- 35	74.
35- 40	51.
40- 45	46.
45- 50	40.
50- 55	31.
55- 60	23.
60- 65	17.
65- 70	12.
70- 75	7.
75- 80	2.
80- 85	0.
85- 90	0.





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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	42	42	42	42	41	41	41	41	39	39	39	38	38	38	36	36	36	35
1	40	39	38	37	39	38	37	36	37	36	35	35	35	34	34	33	33	32
2	37	35	34	32	37	35	33	32	34	32	31	33	32	31	32	31	30	29
3	35	33	31	29	34	32	30	29	31	30	28	30	29	28	29	28	27	27
4	33	30	28	26	32	29	27	26	29	27	25	28	26	25	27	26	25	24
5	31	27	25	23	30	27	25	23	26	24	23	26	24	23	25	24	22	22
6	29	25	23	21	28	25	23	21	24	22	21	24	22	21	23	22	21	20
7	27	23	21	19	27	23	21	19	23	21	19	22	20	19	22	20	19	18
8	25	21	19	17	25	21	19	17	21	19	17	20	19	17	20	18	17	16
9	24	20	17	16	23	20	17	16	19	17	16	19	17	15	18	17	15	15
10	22	18	16	14	22	18	16	14	18	16	14	17	15	14	17	15	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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VISUAL COMFORT PROBABILITY TABLE

RATED LUMENS PER LAMP 900.

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	62	61	67	73	56	56	60	63
20	30	63	60	59	64	59	53	53	55
20	40	63	62	58	60	59	57	52	51
20	60	64	62	61	59	59	57	55	50
30	20	63	62	65	70	60	58	61	63
30	30	64	60	58	61	61	55	53	54
30	40	64	62	57	56	61	57	51	49
30	60	64	62	59	56	61	58	54	49
30	80	64	62	60	56	61	58	55	49
40	20	67	65	66	70	64	62	63	64
40	30	67	62	58	60	65	59	55	55
40	40	67	64	57	56	65	60	53	50
40	60	67	64	59	55	65	60	55	49
40	80	67	64	59	56	65	60	55	50
40	100	67	64	59	56	65	60	55	50
60	30	67	65	60	61	65	62	57	57
60	40	67	66	59	56	65	63	55	51
60	60	67	66	60	56	65	63	57	51
60	80	67	66	60	56	65	63	57	51
60	100	67	66	60	56	65	63	57	51
100	40	67	66	62	60	65	63	59	56
100	60	67	66	63	60	65	63	60	55
100	80	67	66	63	60	65	63	60	56
100	100	67	66	63	60	65	63	60	56



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LTL TEST #06073

CIRCLE-OF-LIGHT

Ft below	FC nadir	Dia @ 50%
6.0	12.2	6.2
8.0	6.9	8.3
10.0	4.4	10.3
12.0	3.0	12.4
14.0	2.2	14.5
16.0	1.7	16.5

NOTE: 'Dia' spans the edge-points that are half of nadir FC