



LUMINAIRE TESTING LABORATORY, INC.



SUSTAINING
MEMBER

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

LTL NUMBER: 06076

DATE: 08-07-2001

PREPARED FOR: VANTAGE LUMINAIRES

CATALOG NUMBER: 8HF2X13E1-08616SCL/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 = 27.3 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	699	699	699	699	699	699	699	699	699	
5	695	720	764	794	799	777	731	689	673	72
15	612	716	749	722	703	690	657	574	540	188
25	407	504	550	549	523	483	404	306	271	206
35	196	259	270	242	231	220	176	103	82	136
45	82	109	192	212	213	198	157	102	83	122
55	67	73	98	106	108	101	86	81	72	81
65	28	28	35	38	38	34	33	29	22	33
75	7	6	7	7	7	7	5	5	0	5
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	466	25.9	55.3
0- 40	603	33.5	71.5
0- 60	806	44.8	95.5
0- 90	843	46.8	100.0
90-180	0	0.0	0.0
0-180	843	46.8	100.0

TOTAL LUMINAIRE EFFICIENCY: 46.8%

CIE TYPE: DIRECT

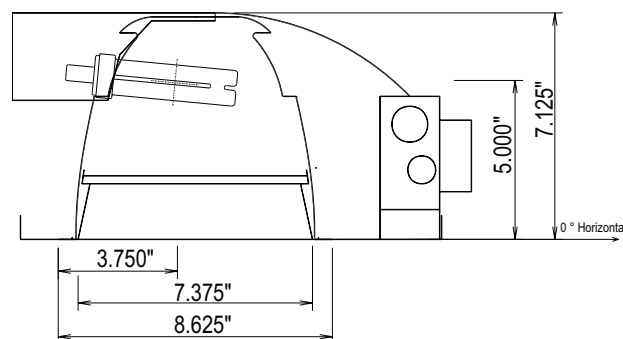
PLANE: 0-DEG 90-DEG 180-DEG

SPACING CRITERIA: 0.9 1.0 0.7

LUMINOUS DIAMETER: 7.375

LUMINANCE IN CANDELA PER SQUARE METER

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
0	25361.	25361.	25361.
45	4207.	9851.	10929.
55	4238.	6199.	6832.
65	2404.	3005.	3262.
75	981.	981.	981.
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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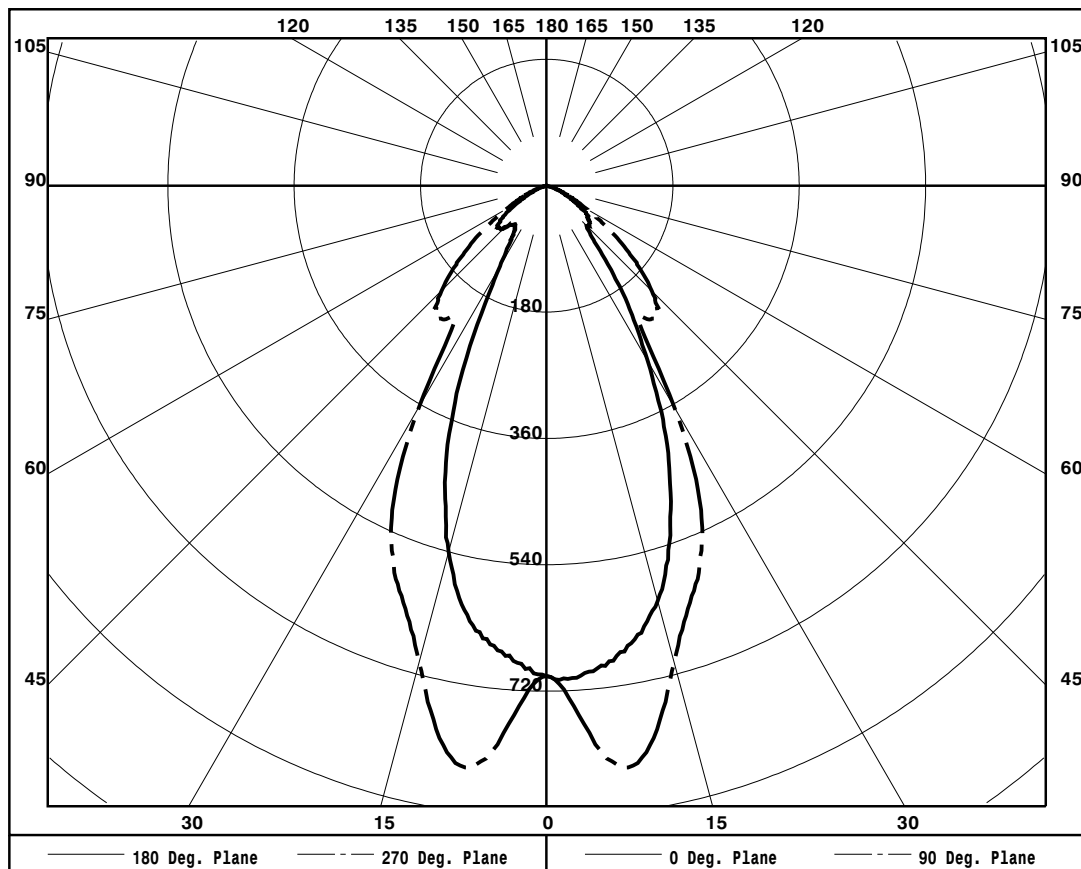
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CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0
0	699	699	699	699	699	699	699	699	699
5	695	720	764	794	799	777	731	689	673
10	666	752	817	830	820	803	754	671	630
15	612	716	749	722	703	690	657	574	540
20	515	616	651	633	614	585	544	456	420
25	407	504	550	549	523	483	404	306	271
30	288	362	420	399	364	339	264	169	132
35	196	259	270	242	231	220	176	103	82
40	113	163	226	245	245	230	178	92	72
45	82	109	192	212	213	198	157	102	83
50	79	87	144	159	162	150	125	105	91
55	67	73	98	106	108	101	86	81	72
60	45	50	59	66	68	61	56	52	45
65	28	28	35	38	38	34	33	29	22
70	15	15	17	19	18	18	15	14	13
75	7	6	7	7	7	7	5	5	0
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	17.
5- 10	55.
10- 15	86.
15- 20	102.
20- 25	108.
25- 30	98.
30- 35	72.
35- 40	64.
40- 45	64.
45- 50	58.
50- 55	48.
55- 60	33.
60- 65	21.
65- 70	12.
70- 75	5.
75- 80	0.
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	56	56	56	56	54	54	54	54	52	52	52	50	50	50	48	48	48	47
1	53	51	50	49	52	50	49	48	48	48	47	47	46	45	45	45	44	43
2	50	47	45	43	49	46	44	43	45	43	42	43	42	41	42	41	40	39
3	47	44	41	39	46	43	40	39	42	40	38	40	39	37	39	38	37	36
4	44	40	37	35	43	39	37	35	38	36	34	37	35	34	37	35	33	33
5	41	37	34	31	40	36	33	31	35	33	31	35	32	31	34	32	30	30
6	39	34	31	29	38	34	31	28	33	30	28	32	30	28	32	30	28	27
7	36	32	28	26	36	31	28	26	31	28	26	30	28	26	29	27	26	25
8	34	29	26	24	34	29	26	24	28	25	24	28	25	23	27	25	23	23
9	32	27	24	21	31	27	23	21	26	23	21	26	23	21	25	23	21	20
10	30	25	22	20	30	25	22	20	24	21	20	24	21	19	23	21	19	19

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. REFLECTANCES 80/50/20		ROOM 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	71	66	69	75	63	57	55	57
20	30	71	67	64	67	64	58	53	51
20	40	71	67	66	64	64	58	55	51
20	60	72	67	66	65	64	58	55	53
30	20	74	68	67	70	69	61	57	58
30	30	74	68	63	63	69	62	54	52
30	40	74	69	64	61	69	62	56	50
30	60	75	69	65	62	69	62	56	53
30	80	75	69	65	62	69	62	57	53
40	20	76	71	69	70	69	66	61	60
40	30	76	71	65	62	69	65	58	53
40	40	76	71	66	60	69	65	59	52
40	60	76	71	66	62	69	66	59	54
40	80	76	71	66	62	69	66	59	55
40	100	76	71	66	62	69	66	60	55
60	30	76	71	67	64	69	66	61	56
60	40	76	71	68	61	69	66	63	55
60	60	76	71	69	63	69	66	63	57
60	80	76	71	69	63	69	66	63	57
60	100	76	71	69	63	69	66	63	57
100	40	76	71	68	65	69	66	63	59
100	60	76	71	69	66	69	66	63	61
100	80	76	71	69	66	69	66	63	61
100	100	76	71	69	66	69	66	63	60



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LTL TEST #06076

CIRCLE-OF-LIGHT

Ft below	FC nadir	Dia @ 50%
6.0	19.4	5.4
8.0	10.9	7.2
10.0	7.0	9.0
12.0	4.9	10.8
14.0	3.6	12.6
16.0	2.7	14.4

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