



LUMINAIRE TESTING LABORATORY, INC.



SUSTAINING
MEMBER

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

LTL NUMBER: 05732

DATE: 04-03-2001

PREPARED FOR: ALM ARCHITECTURAL LIGHTING

CATALOG NUMBER: ZB-22G-314-T5-ELB-120V

LUMINAIRE: FORMED STEEL HOUSING, FORMED WHITE ENAMEL STEEL REFLECTORS,
FORMED WHITE ENAMEL PERFORATED STEEL SHIELD WITH TRANSLUCENT
WHITE ACRYLIC INSERT BELOW LAMPS.

LAMPS: THREE SYLVANIA FP14/835 RATED AT 1220 LUMENS EACH.

BALLASTS: ONE MAGNETEK BT5-128/120 AND ONE MAGNETEK B228PUNV-C

MOUNTING: RECESSED

LUMEN TO CANDELA RATIO USED = 9.17

TOTAL INPUT WATTS = 52.9 AT 120.0 VOLTS

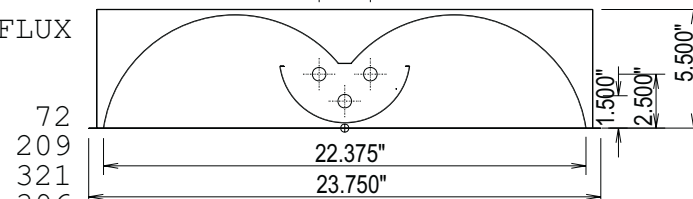
THE 0 DEGREE PLANE IS PARALLEL WITH THE LAMPS.

#05732

CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
0	763	763	763	763	763
5	759	761	762	762	761
15	727	731	739	746	747
25	666	676	694	714	722
35	581	598	635	665	676
45	474	502	553	594	609
55	351	389	453	504	524
65	227	267	337	384	396
75	116	141	172	183	190
85	28	31	36	39	38
90	0	0	0	0	0

FLUX



ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT
0- 30	602	16.4	25.6
0- 40	997	27.2	42.4
0- 60	1818	49.7	77.4
0- 90	2350	64.2	100.0
90-180	0	0.0	0.0
0-180	2350	64.2	100.0

TOTAL LUMINAIRE EFFICIENCY: 64.2%

TOTAL REFLECTANCE OF PAINT: 89.9%

CIE TYPE: DIRECT

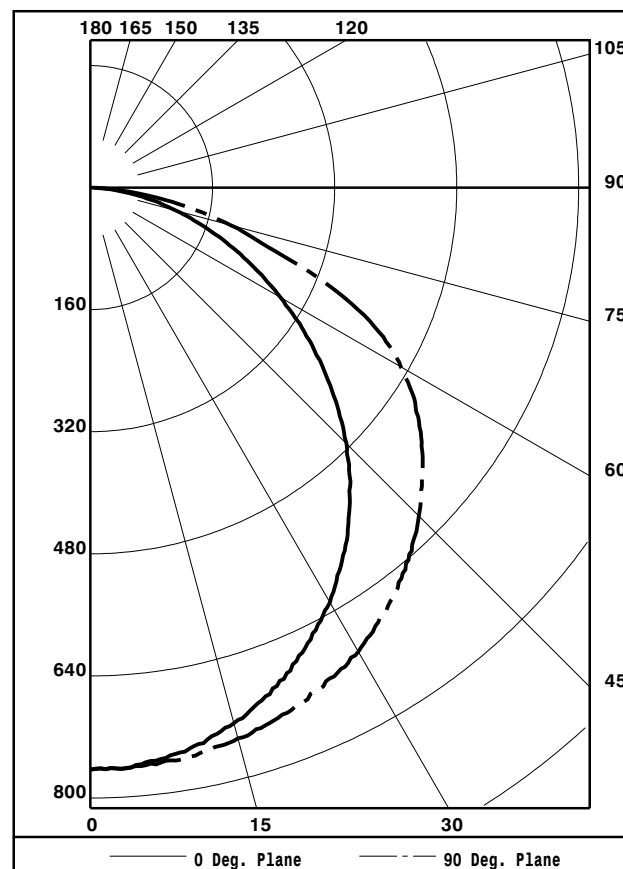
PLANE: 0-DEG 90-DEG

SPACING CRITERIA: 1.2 1.4

LUMINOUS LENGTH: 23.000 22.375

LUMINANCE IN CANDELA PER SQUARE METER

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
0	2298.	2298.	2298.
45	2019.	2355.	2594.
55	1843.	2379.	2751.
65	1618.	2402.	2822.
75	1350.	2001.	2211.
85	968.	1244.	1313.



TESTED BY HERSCHEL SCHRECK
CHECKED BY MIKE GRATHER

THIS REPORT BASED ON LM-41 AND OTHER PERTINENT IES 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	76	76	76	76	75	75	75	75	71	71	71	68	68	68	66	66	66	64
1	70	67	65	62	68	66	63	61	63	61	59	61	59	58	58	57	56	55
2	64	59	55	51	62	58	54	51	55	52	49	53	51	48	51	49	47	46
3	59	52	47	43	57	51	46	43	49	45	42	47	44	41	46	43	40	39
4	54	46	41	36	52	45	40	36	44	39	36	42	38	35	41	37	35	33
5	49	41	35	30	47	40	34	30	38	34	30	37	33	30	36	32	29	28
6	45	36	30	26	44	36	30	26	34	30	26	33	29	26	32	28	25	24
7	41	32	27	23	40	32	26	23	31	26	22	30	26	22	29	25	22	21
8	38	29	23	20	37	29	23	19	28	23	19	27	22	19	26	22	19	18
9	35	26	20	17	34	26	20	17	25	20	17	24	20	17	23	19	16	15
10	32	24	18	15	32	23	18	15	23	18	15	22	18	15	21	17	15	13

CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
0	763	763	763	763	763
5	759	761	762	762	761
10	747	749	752	757	757
15	727	731	739	746	747
20	698	706	719	732	735
25	666	676	694	714	722
30	628	642	668	692	702
35	581	598	635	665	676
40	528	552	594	631	643
45	474	502	553	594	609
50	413	448	505	552	569
55	351	389	453	504	524
60	287	329	395	452	470
65	227	267	337	384	396
70	168	203	264	283	280
75	116	141	172	183	190
80	69	77	95	107	110
85	28	31	36	39	38
90	0	0	0	0	0

ZONAL LUMEN SUMMARY

0- 5	18.
5- 10	54.
10- 15	88.
15- 20	120.
20- 25	149.
25- 30	172.
30- 35	191.
35- 40	205.
40- 45	211.
45- 50	211.
50- 55	206.
55- 60	193.
60- 65	174.
65- 70	145.
70- 75	104.
75- 80	67.
80- 85	33.
85- 90	8.

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 1220.

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	63	70	80	90	56	62	74	86
20	30	60	64	71	79	51	54	60	71
20	40	59	61	66	72	49	51	54	61
20	60	58	60	63	68	49	50	51	56
30	20	63	68	77	87	58	63	73	84
30	30	59	62	67	76	53	55	59	69
30	40	58	59	62	68	50	51	53	59
30	60	57	58	59	64	49	50	49	53
30	80	57	58	58	62	50	50	48	51
40	20	65	69	76	85	61	65	73	84
40	30	60	62	66	74	55	57	60	69
40	40	59	59	61	66	53	53	54	58
40	60	58	58	58	61	51	51	50	53
40	80	58	58	57	60	51	51	48	50
40	100	58	58	57	59	52	51	48	49
60	30	62	63	66	72	58	60	61	69
60	40	60	60	60	65	55	55	55	59
60	60	58	58	57	60	53	52	50	53
60	80	58	58	56	58	52	52	49	50
60	100	58	58	56	57	53	52	48	49
100	40	63	63	62	66	60	60	58	62
100	60	61	61	59	61	57	56	53	55
100	80	61	60	57	58	56	55	51	52
100	100	60	59	57	57	56	55	51	50