



LUMINAIRE TESTING LABORATORY, INC.

SUSTAINING
MEMBER
of the
IESNA

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

LTL NUMBER: 18360 DATE: 03-29-2010
 PREPARED FOR: LUMETTA, INC.
 CATALOG NUMBER: FW2092
 LUMINAIRE: FORMED WHITE ENAMEL STEEL HOUSING/REFLECTOR, TRANSLUCENT
 WHITE PLASTIC INNER DIFFUSER, FROSTED PLASTIC OUTER
 DIFFUSER WITH FORMED STEEL FRAME, OPEN TOP AND BOTTOM.
 LAMP: TWO VBD 26 WATT TRIPLE TUBE COMPACT FLUORESCENT LAMPS RATED AT
 1800 LUMENS EACH.
 LAMP CATALOG NUMBER: SYLVANIA CF26DT/E/IN/835
 BALLAST: ONE SAGE LIGHTING MODEL: NAU232
 MOUNTING: WALL
 ELECTRICAL VALUES: 120.0VAC, 0.4894A, 58.67W

Candela Distribution

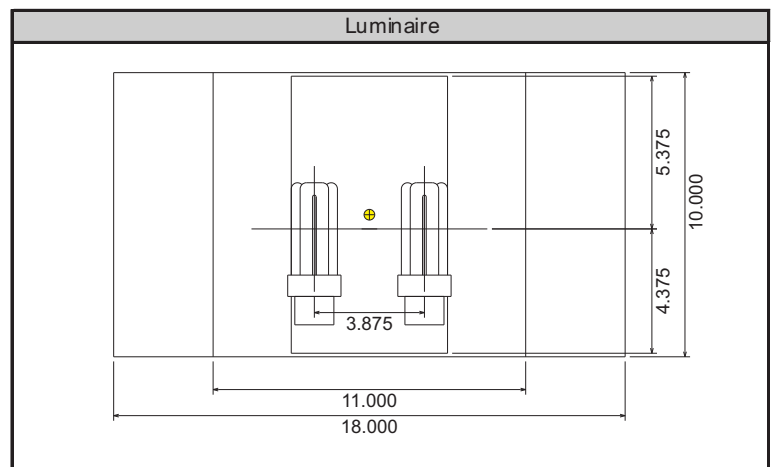
	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	Flux
0	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	
5	53	54	50	45	42	45	52	56	58	56	52	45	42	45	50	54	5.1
15	66	65	62	57	46	60	79	92	94	92	79	60	46	57	62	65	19.5
25	77	74	64	56	49	80	133	154	156	154	133	80	49	56	64	74	42.6
35	99	92	73	54	48	121	202	236	234	236	202	121	48	54	73	92	78.3
45	122	111	84	55	41	167	267	305	294	305	267	167	41	55	84	111	119.6
55	141	128	94	56	34	193	314	342	325	342	314	193	34	56	94	128	156.4
65	155	140	101	57	30	210	355	361	348	361	355	210	30	57	101	140	186.7
75	163	147	105	56	26	225	376	364	361	364	376	225	26	56	105	147	205.9
85	165	148	105	53	22	233	385	345	362	345	385	233	22	53	105	148	212.0
90	164	147	104	53	23	237	385	351	362	351	385	237	23	53	104	147	
95	163	147	104	54	28	246	388	377	364	377	388	246	28	54	104	147	219.2
105	161	146	106	59	34	264	398	389	357	389	398	264	34	59	106	146	218.5
115	156	141	104	62	40	271	396	384	341	384	396	271	40	62	104	141	203.5
125	145	130	99	63	47	245	361	351	313	351	361	245	47	63	99	130	171.0
135	127	116	91	65	54	197	305	303	268	303	305	197	54	65	91	116	128.6
145	108	99	83	66	61	135	218	233	209	233	218	135	61	66	83	99	83.0
155	90	85	77	70	64	84	132	142	132	142	132	84	64	70	77	85	45.0
165	80	78	76	72	63	70	82	89	87	89	82	70	63	72	76	78	22.0
175	71	69	66	62	60	63	67	69	68	69	67	63	60	62	66	69	6.5
180	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	

Zonal Lumen Summary

Zone	Lumens	% of Lamp	% of Luminaire
0-30	67.1	1.9%	3.2%
0-40	145.4	4.0%	6.8%
0-60	421.4	11.7%	19.8%
0-90	1026.0	28.5%	48.3%
90-180	1097.4	30.5%	51.7%
0-180	2123.4	59.0%	100.0%

Total luminaire efficiency: 59.0%

CIE Type: Direct/Indirect
 Spacing Criterion: 0 deg: 3.31 90 deg: 1.66
 180 deg: 4.77 270 deg: 1.66



Approved By: _____

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



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Candela Tabulation (5 degree Vertical Increments)

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5
0	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41
5	53	54	50	45	42	45	52	56	58	56	52	45	42	45	50	54
10	64	64	61	52	44	53	64	71	74	71	64	53	44	52	61	64
15	66	65	62	57	46	60	79	92	94	92	79	60	46	57	62	65
20	69	68	62	58	47	67	102	120	121	120	102	67	47	58	62	68
25	77	74	64	56	49	80	133	154	156	154	133	80	49	56	64	74
30	87	82	68	54	49	97	166	192	195	192	166	97	49	54	68	82
35	99	92	73	54	48	121	202	236	234	236	202	121	48	54	73	92
40	110	101	78	54	45	147	237	275	268	275	237	147	45	54	78	101
45	122	111	84	55	41	167	267	305	294	305	267	167	41	55	84	111
50	132	120	90	55	37	183	291	325	311	325	291	183	37	55	90	120
55	141	128	94	56	34	193	314	342	325	342	314	193	34	56	94	128
60	149	135	99	57	32	202	336	353	337	353	336	202	32	57	99	135
65	155	140	101	57	30	210	355	361	348	361	355	210	30	57	101	140
70	159	144	104	56	28	218	367	365	356	365	367	218	28	56	104	144
75	163	147	105	56	26	225	376	364	361	364	376	225	26	56	105	147
80	164	148	105	54	24	230	382	356	364	356	382	230	24	54	105	148
85	165	148	105	53	22	233	385	345	362	345	385	233	22	53	105	148
90	164	147	104	53	23	237	385	351	362	351	385	237	23	53	104	147
95	163	147	104	54	28	246	388	377	364	377	388	246	28	54	104	147
100	162	146	105	56	30	254	393	386	361	386	393	254	30	56	105	146
105	161	146	106	59	34	264	398	389	357	389	398	264	34	59	106	146
110	160	144	105	60	38	271	400	389	350	389	400	271	38	60	105	144
115	156	141	104	62	40	271	396	384	341	384	396	271	40	62	104	141
120	152	136	102	63	43	261	381	370	328	370	381	261	43	63	102	136
125	145	130	99	63	47	245	361	351	313	351	361	245	47	63	99	130
130	137	123	95	64	50	224	336	329	293	329	336	224	50	64	95	123
135	127	116	91	65	54	197	305	303	268	303	305	197	54	65	91	116
140	118	108	87	66	58	167	266	272	241	272	266	167	58	66	87	108
145	108	99	83	66	61	135	218	233	209	233	218	135	61	66	83	99
150	97	92	79	67	63	104	170	185	170	185	170	104	63	67	79	92
155	90	85	77	70	64	84	132	142	132	142	132	84	64	70	77	85
160	84	81	76	72	64	74	102	110	103	110	102	74	64	72	76	81
165	80	78	76	72	63	70	82	89	87	89	82	70	63	72	76	78
170	77	77	74	68	61	67	73	77	77	77	73	67	61	68	74	77
175	71	69	66	62	60	63	67	69	68	69	67	63	60	62	66	69
180	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59	59

Zonal Lumen Tabulation (5 degree zones)

Zone	Lumens	Zone	Lumens	Zone	Lumens	Zone	Lumens
0-5	1.1	45-50	64.8	90-95	109.1	135-140	58.6
5-10	4.0	50-55	74.0	95-100	110.1	140-145	47.1
10-15	7.5	55-60	82.4	100-105	110.1	145-150	35.9
15-20	12.0	60-65	90.1	105-110	108.4	150-155	26.2
20-25	17.6	65-70	96.6	110-115	104.9	155-160	18.8
25-30	24.9	70-75	101.4	115-120	98.6	160-165	13.2
30-35	34.0	75-80	104.5	120-125	90.3	165-170	8.8
35-40	44.3	80-85	106.1	125-130	80.7	170-175	5.0
40-45	54.9	85-90	105.9	130-135	70.0	175-180	1.5



Coefficients of Utilization - Zonal Cavity Method												
Effective Floor Cavity Reflectance 20%												
Ceiling Cavity Reflectance	90				80				70			
	70	50	30	10	70	50	30	10	70	50	30	10
Room Cavity Ratio (RCR)												
0	0.682	0.682	0.682	0.682	0.63	0.63	0.63	0.63	0.58	0.58	0.58	0.58
1	0.595	0.551	0.512	0.477	0.544	0.506	0.471	0.44	0.496	0.462	0.432	0.404
2	0.531	0.464	0.409	0.363	0.483	0.424	0.376	0.335	0.438	0.387	0.344	0.307
3	0.477	0.397	0.336	0.287	0.433	0.363	0.308	0.265	0.392	0.33	0.282	0.243
4	0.432	0.344	0.281	0.233	0.392	0.315	0.258	0.215	0.354	0.286	0.236	0.197
5	0.393	0.302	0.239	0.193	0.357	0.276	0.22	0.178	0.322	0.251	0.201	0.163
6	0.36	0.267	0.206	0.163	0.326	0.244	0.189	0.15	0.295	0.223	0.173	0.137
7	0.331	0.238	0.179	0.139	0.3	0.218	0.165	0.128	0.271	0.199	0.151	0.117
8	0.305	0.214	0.158	0.12	0.277	0.196	0.145	0.11	0.251	0.179	0.133	0.101
9	0.283	0.193	0.14	0.104	0.257	0.178	0.129	0.096	0.233	0.162	0.118	0.088
10	0.263	0.176	0.125	0.091	0.239	0.162	0.115	0.084	0.217	0.148	0.106	0.077

Ceiling Cavity Reflectance	50				30			10			0
	70	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)											
0	0.486	0.486	0.486	0.486	0.4	0.4	0.4	0.322	0.322	0.322	0.285
1	0.406	0.381	0.357	0.336	0.306	0.288	0.272	0.237	0.223	0.211	0.177
2	0.355	0.316	0.283	0.254	0.251	0.226	0.203	0.191	0.172	0.155	0.125
3	0.316	0.269	0.231	0.2	0.212	0.183	0.159	0.159	0.137	0.119	0.092
4	0.284	0.233	0.193	0.162	0.183	0.152	0.127	0.136	0.113	0.094	0.07
5	0.258	0.204	0.164	0.134	0.16	0.129	0.105	0.119	0.096	0.077	0.056
6	0.237	0.181	0.142	0.112	0.142	0.111	0.088	0.106	0.082	0.064	0.045
7	0.218	0.162	0.124	0.096	0.128	0.097	0.075	0.095	0.072	0.054	0.037
8	0.202	0.146	0.109	0.082	0.115	0.086	0.064	0.086	0.063	0.046	0.031
9	0.188	0.133	0.097	0.072	0.105	0.076	0.056	0.079	0.057	0.04	0.026
10	0.176	0.121	0.087	0.063	0.096	0.069	0.049	0.073	0.051	0.035	0.023

Average Luminance Table (cd/m²)

	0	45	90
0	875	875	875
45	1052	807	806
55	1154	865	718
65	1238	912	696
75	1309	958	710
85	1374	1004	724

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 values 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.

