



# 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: 18365  
 PREPARED FOR: LUMETTA, INC.  
 CATALOG NUMBER: FW3000  
 LUMINAIRE: FORMED SEMI-SPECULAR STEEL HOUSING/REFLECTOR, TRANSLUCENT WHITE PLASTIC DIFFUSER WITH FORMED STEEL FRAME, OPEN TOP AND BOTTOM.  
 LAMP: TWO VBD 26 WATT DOUBE TUBE COMPACT FLUORESCENT LAMPS RATED AT 1800 LUMENS EACH.  
 LAMP CATALOG NUMBER: SYLVANIA CF26DT/E/IN/835  
 BALLAST: ONE SAGE LIGHTING NUA142  
 MOUNTING: WALL  
 ELECTRICAL VALUES: 120.0VAC, 0.0483A, 51.13W, PF=0.999

DATE: 03-18-2010

### Candela Distribution

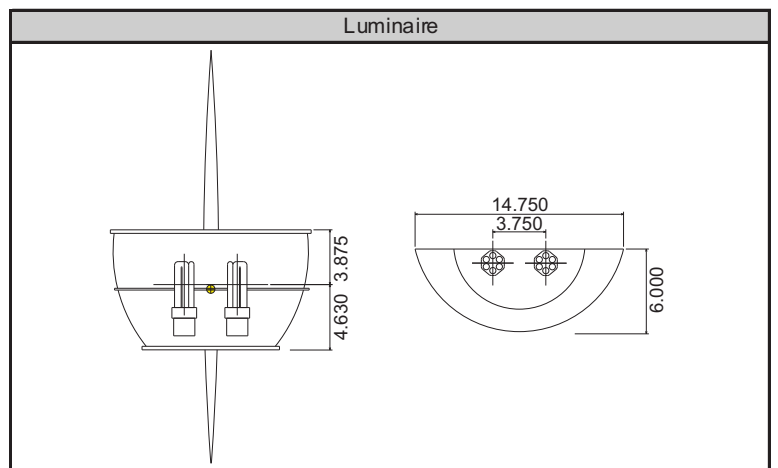
	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	Flux
0	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	
5	49	50	46	41	35	29	25	22	20	22	25	29	35	41	46	50	3.9
15	133	124	96	87	69	50	32	26	27	26	32	50	69	87	96	124	20.2
25	142	142	146	124	82	55	49	52	56	52	49	55	82	124	146	142	43.4
35	163	151	150	154	97	66	60	58	57	58	60	66	97	154	150	151	66.0
45	186	172	142	130	96	68	54	45	41	45	54	68	96	130	142	172	79.6
55	206	190	155	118	90	61	42	34	27	34	42	61	90	118	155	190	90.6
65	222	205	165	124	87	51	32	25	19	25	32	51	87	124	165	205	99.9
75	229	211	170	125	82	42	19	11	11	11	19	42	82	125	170	211	103.1
85	229	211	169	123	77	35	12	4	3	4	12	35	77	123	169	211	101.6
90	226	208	166	121	73	32	9	2	2	2	9	32	73	121	166	208	
95	223	205	164	120	75	36	14	8	9	8	14	36	75	120	164	205	100.5
105	217	199	160	119	83	51	32	33	31	33	32	51	83	119	160	199	106.6
115	220	198	174	161	145	74	60	70	55	70	60	74	145	161	174	198	127.5
125	274	238	257	261	233	117	88	102	76	102	88	117	233	261	257	238	164.2
135	353	302	353	342	305	176	109	116	97	116	109	176	305	342	353	302	185.1
145	401	334	382	350	321	223	156	131	121	131	156	223	321	350	382	334	168.3
155	370	306	328	305	271	238	199	181	173	181	199	238	271	305	328	306	121.1
165	265	239	208	232	221	217	209	204	200	204	209	217	221	232	208	239	62.7
175	174	173	166	158	157	163	175	184	183	184	175	163	157	158	166	173	16.5
180	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	

### Zonal Lumen Summary

Zone	Lumens	% of Lamp	% of Luminaire
0-30	67.5	1.9%	4.1%
0-40	133.4	3.7%	8.0%
0-60	303.6	8.4%	18.3%
0-90	608.2	16.9%	36.6%
90-180	1052.5	29.2%	63.4%
0-180	1660.6	46.1%	100.0%

Total luminaire efficiency: 46.1%

CIE Type: Semi-Indirect  
 Spacing Criterion: 0 deg: 4.48 90 deg: 3.02  
 180 deg: 1.98 270 deg: 3.02



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	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
5	49	50	46	41	35	29	25	22	20	22	25	29	35	41	46	50
10	92	91	73	63	52	37	25	20	18	20	25	37	52	63	73	91
15	133	124	96	87	69	50	32	26	27	26	32	50	69	87	96	124
20	142	138	120	104	76	55	39	39	43	39	39	55	76	104	120	138
25	142	142	146	124	82	55	49	52	56	52	49	55	82	124	146	142
30	151	143	154	144	91	60	57	59	61	59	57	60	91	144	154	143
35	163	151	150	154	97	66	60	58	57	58	60	66	97	154	150	151
40	175	161	143	144	99	68	59	53	51	53	59	68	99	144	143	161
45	186	172	142	130	96	68	54	45	41	45	54	68	96	130	142	172
50	196	182	148	119	92	65	48	38	34	38	48	65	92	119	148	182
55	206	190	155	118	90	61	42	34	27	34	42	61	90	118	155	190
60	214	198	160	121	88	56	36	31	22	31	36	56	88	121	160	198
65	222	205	165	124	87	51	32	25	19	25	32	51	87	124	165	205
70	226	209	168	124	84	46	26	17	15	17	26	46	84	124	168	209
75	229	211	170	125	82	42	19	11	11	11	19	42	82	125	170	211
80	230	212	170	124	79	38	14	7	7	7	14	38	79	124	170	212
85	229	211	169	123	77	35	12	4	3	4	12	35	77	123	169	211
90	226	208	166	121	73	32	9	2	2	2	9	32	73	121	166	208
95	223	205	164	120	75	36	14	8	9	8	14	36	75	120	164	205
100	219	201	161	119	78	42	22	18	19	18	22	42	78	119	161	201
105	217	199	160	119	83	51	32	33	31	33	32	51	83	119	160	199
110	215	196	158	128	108	62	45	51	43	51	45	62	108	128	158	196
115	220	198	174	161	145	74	60	70	55	70	60	74	145	161	174	198
120	233	210	209	206	191	92	75	88	66	88	75	92	191	206	209	210
125	274	238	257	261	233	117	88	102	76	102	88	117	233	261	257	238
130	316	273	311	311	272	146	98	111	86	111	98	146	272	311	311	273
135	353	302	353	342	305	176	109	116	97	116	109	176	305	342	353	302
140	384	323	380	352	321	202	130	117	106	117	130	202	321	352	380	323
145	401	334	382	350	321	223	156	131	121	131	156	223	321	350	382	334
150	396	326	364	334	300	235	180	155	146	155	180	235	300	334	364	326
155	370	306	328	305	271	238	199	181	173	181	199	238	271	305	328	306
160	317	273	270	271	245	230	208	198	194	198	208	230	245	271	270	273
165	265	239	208	232	221	217	209	204	200	204	209	217	221	232	208	239
170	215	206	170	163	171	177	186	200	199	200	186	177	171	163	170	206
175	174	173	166	158	157	163	175	184	183	184	175	163	157	158	166	173
180	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165

Zonal Lumen Tabulation (5 degree zones)

Zone	Lumens	Zone	Lumens	Zone	Lumens	Zone	Lumens
0-5	0.8	45-50	41.1	90-95	49.7	135-140	92.7
5-10	3.1	50-55	43.8	95-100	50.8	140-145	88.4
10-15	7.4	55-60	46.7	100-105	52.1	145-150	79.9
15-20	12.7	60-65	49.1	105-110	54.5	150-155	67.8
20-25	18.6	65-70	50.8	110-115	59.7	155-160	53.3
25-30	24.8	70-75	51.4	115-120	67.8	160-165	38.3
30-35	30.8	75-80	51.7	120-125	77.3	165-170	24.4
35-40	35.2	80-85	51.3	125-130	86.9	170-175	12.5
40-45	38.5	85-90	50.3	130-135	92.4	175-180	4.0



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	0.527	0.527	0.527	0.527	0.48	0.48	0.48	0.48	0.434	0.434	0.434	0.434
1	0.468	0.438	0.412	0.388	0.423	0.398	0.375	0.354	0.38	0.358	0.339	0.321
2	0.421	0.374	0.336	0.304	0.38	0.339	0.306	0.278	0.34	0.305	0.276	0.252
3	0.381	0.324	0.28	0.246	0.343	0.293	0.255	0.224	0.306	0.264	0.231	0.204
4	0.346	0.283	0.237	0.203	0.311	0.256	0.216	0.185	0.278	0.231	0.195	0.168
5	0.316	0.249	0.203	0.17	0.284	0.226	0.185	0.155	0.253	0.203	0.168	0.141
6	0.289	0.221	0.176	0.144	0.26	0.201	0.161	0.132	0.232	0.181	0.146	0.12
7	0.266	0.198	0.154	0.124	0.239	0.179	0.141	0.113	0.214	0.162	0.128	0.103
8	0.246	0.178	0.136	0.107	0.221	0.162	0.124	0.098	0.198	0.146	0.113	0.09
9	0.228	0.161	0.121	0.094	0.205	0.146	0.11	0.086	0.184	0.132	0.1	0.078
10	0.212	0.146	0.108	0.083	0.191	0.133	0.099	0.076	0.171	0.121	0.09	0.069

Ceiling Cavity Reflectance	50				30			10			0
	70	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)											
0	0.35	0.35	0.35	0.35	0.273	0.273	0.273	0.202	0.202	0.202	0.169
1	0.301	0.285	0.271	0.258	0.218	0.208	0.198	0.156	0.149	0.142	0.113
2	0.267	0.242	0.221	0.202	0.183	0.168	0.155	0.129	0.119	0.109	0.084
3	0.239	0.209	0.184	0.163	0.158	0.14	0.124	0.11	0.098	0.087	0.065
4	0.217	0.182	0.156	0.135	0.137	0.118	0.103	0.096	0.082	0.071	0.051
5	0.198	0.161	0.134	0.113	0.121	0.101	0.086	0.084	0.07	0.059	0.042
6	0.181	0.143	0.116	0.096	0.108	0.088	0.073	0.075	0.061	0.05	0.035
7	0.167	0.129	0.102	0.083	0.097	0.078	0.063	0.068	0.054	0.043	0.03
8	0.155	0.116	0.09	0.072	0.088	0.069	0.055	0.062	0.048	0.037	0.025
9	0.144	0.106	0.081	0.063	0.08	0.061	0.048	0.056	0.043	0.033	0.022
10	0.135	0.096	0.072	0.056	0.074	0.055	0.042	0.052	0.039	0.029	0.019

Average Luminance Table (cd/m<sup>2</sup>)

	0	45	90
0	638	638	638
45	2095	1634	1783
55	2256	1728	1770
65	2440	1857	1861
75	2611	1982	2014
85	2800	2123	2305

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.

