



# 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: 18366

DATE: 06-10-2010

PREPARED FOR: LUMETTA, INC.

CATALOG NUMBER: FW6602

LUMINAIRE: FORMED WHITE ENAMEL STEEL HOUSING/REFLECTOR, TRANSLUCENT WHITE PLASTIC DIFFUSER WITH FORMED STEEL FRAME, OPEN TOP AND BOTTOM.

LAMP: TWO VBD 26 WATT DOUBLE TUBE COMPACT FLUORESCENT LAMPS RATED AT 1800 LUMENS EACH.

LAMP CATALOG NUMBER: SYLVANIA CF26DD/E/835

BALLAST: ONE SAGE LIGHTING MODEL: NUA232

MOUNTING: WALL

ELECTRICAL VALUES: 120.0VAC, 0.4360A, 52.21W

### 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	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	
5	38	39	34	28	24	28	37	44	51	44	37	28	24	28	34	39	5.0
15	98	107	119	113	91	124	133	139	164	139	133	124	91	113	119	107	33.6
25	110	113	123	149	137	157	149	126	120	126	149	157	137	149	123	113	61.4
35	119	116	117	116	162	150	120	83	77	83	120	150	162	116	117	116	75.3
45	130	124	108	100	131	111	83	68	75	68	83	111	131	100	108	124	80.0
55	145	134	109	82	74	67	58	65	75	65	58	67	74	82	109	134	78.8
65	155	143	113	77	57	48	51	58	73	58	51	48	57	77	113	143	81.9
75	162	148	114	73	47	40	47	55	74	55	47	40	47	73	114	148	85.3
85	168	153	116	71	42	38	50	57	76	57	50	38	42	71	116	153	88.2
90	169	153	116	70	40	39	53	58	78	58	53	39	40	70	116	153	
95	168	152	114	70	43	44	58	65	88	65	58	44	43	70	114	152	92.1
105	162	146	111	72	59	59	70	78	99	78	70	59	59	72	111	146	96.3
115	152	136	107	85	92	87	89	94	111	94	89	87	92	85	107	136	102.8
125	141	132	117	118	175	142	126	115	129	115	126	142	175	118	117	132	118.6
135	143	137	136	157	236	221	178	147	156	147	178	221	236	157	136	137	131.8
145	157	156	168	214	274	279	238	207	211	207	238	279	274	214	168	156	134.3
155	189	198	217	270	266	301	288	289	285	289	288	301	266	270	217	198	118.2
165	227	237	247	239	217	244	268	286	284	286	268	244	217	239	247	237	70.1
175	151	148	140	128	118	119	128	136	134	136	128	119	118	128	140	148	14.8
180	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	

### Zonal Lumen Summary

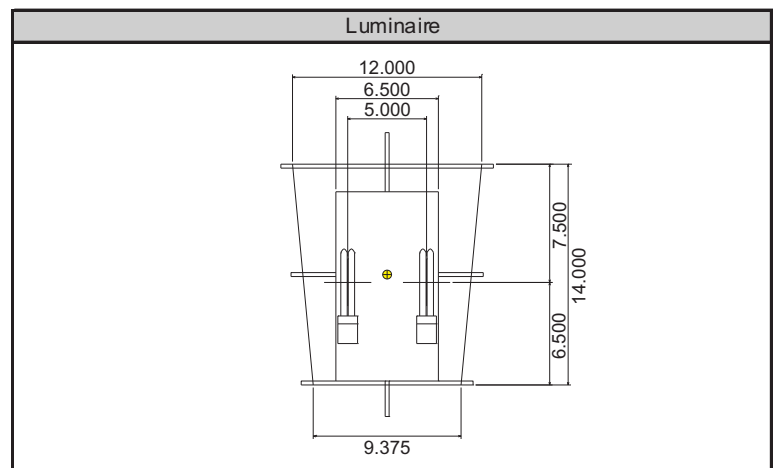
Zone	Lumens	% of Lamp	% of Luminaire
0-30	99.9	2.8%	6.8%
0-40	175.2	4.9%	11.9%
0-60	333.9	9.3%	22.7%
0-90	589.4	16.4%	40.1%
90-180	879.0	24.4%	59.9%
0-180	1468.4	40.8%	100.0%

Total luminaire efficiency: 40.8%

CIE Type: Direct/Indirect

Spacing Criterion: 0 deg: 5.91 90 deg: 3.99  
180 deg: 4.36 270 deg: 3.99

Total reflectance of paint: 91.0



Approved By: MG

**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	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
5	38	39	34	28	24	28	37	44	51	44	37	28	24	28	34	39
10	78	83	85	69	63	81	96	100	113	100	96	81	63	69	85	83
15	98	107	119	113	91	124	133	139	164	139	133	124	91	113	119	107
20	107	115	123	146	113	143	151	145	152	145	151	143	113	146	123	115
25	110	113	123	149	137	157	149	126	120	126	149	157	137	149	123	113
30	115	114	121	132	157	158	137	102	91	102	137	158	157	132	121	114
35	119	116	117	116	162	150	120	83	77	83	120	150	162	116	117	116
40	124	120	113	108	152	134	102	73	75	73	102	134	152	108	113	120
45	130	124	108	100	131	111	83	68	75	68	83	111	131	100	108	124
50	138	129	108	91	101	87	69	66	75	66	69	87	101	91	108	129
55	145	134	109	82	74	67	58	65	75	65	58	67	74	82	109	134
60	150	139	111	79	63	55	54	60	74	60	54	55	63	79	111	139
65	155	143	113	77	57	48	51	58	73	58	51	48	57	77	113	143
70	159	146	114	75	52	44	49	56	73	56	49	44	52	75	114	146
75	162	148	114	73	47	40	47	55	74	55	47	40	47	73	114	148
80	165	150	115	72	44	38	48	56	76	56	48	38	44	72	115	150
85	168	153	116	71	42	38	50	57	76	57	50	38	42	71	116	153
90	169	153	116	70	40	39	53	58	78	58	53	39	40	70	116	153
95	168	152	114	70	43	44	58	65	88	65	58	44	43	70	114	152
100	165	150	113	71	50	51	63	71	94	71	63	51	50	71	113	150
105	162	146	111	72	59	59	70	78	99	78	70	59	59	72	111	146
110	157	142	108	76	72	71	77	85	105	85	77	71	72	76	108	142
115	152	136	107	85	92	87	89	94	111	94	89	87	92	85	107	136
120	145	132	111	99	129	110	106	105	120	105	106	110	129	99	111	132
125	141	132	117	118	175	142	126	115	129	115	126	142	175	118	117	132
130	142	133	125	137	209	181	150	128	140	128	150	181	209	137	125	133
135	143	137	136	157	236	221	178	147	156	147	178	221	236	157	136	137
140	149	145	150	183	261	254	207	173	178	173	207	254	261	183	150	145
145	157	156	168	214	274	279	238	207	211	207	238	279	274	214	168	156
150	170	173	190	246	274	294	267	245	248	245	267	294	274	246	190	173
155	189	198	217	270	266	301	288	289	285	289	288	301	266	270	217	198
160	214	226	244	268	250	289	292	312	308	312	292	289	250	268	244	226
165	227	237	247	239	217	244	268	286	284	286	268	244	217	239	247	237
170	205	210	205	185	165	177	204	220	219	220	204	177	165	185	205	210
175	151	148	140	128	118	119	128	136	134	136	128	119	118	128	140	148
180	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97	97

Zonal Lumen Tabulation (5 degree zones)

Zone	Lumens	Zone	Lumens	Zone	Lumens	Zone	Lumens
0-5	0.5	45-50	40.0	90-95	45.5	135-140	67.0
5-10	4.4	50-55	39.4	95-100	46.6	140-145	67.8
10-15	12.5	55-60	39.4	100-105	47.6	145-150	66.5
15-20	21.1	60-65	40.4	105-110	48.7	150-155	62.7
20-25	28.2	65-70	41.4	110-115	50.1	155-160	55.5
25-30	33.2	70-75	42.2	115-120	52.7	160-165	43.1
30-35	36.5	75-80	43.1	120-125	57.2	165-170	26.9
35-40	38.8	80-85	43.9	125-130	61.4	170-175	12.1
40-45	40.0	85-90	44.3	130-135	64.7	175-180	2.8



Coefficients of Utilization - Zonal Cavity Method												
Effective Floor Cavity Reflectance 20%												
Ceiling Cavity Reflectance	90				80				70			
Wall Reflectance	70	50	30	10	70	50	30	10	70	50	30	10
Room Cavity Ratio (RCR)												
0	0.468	0.468	0.468	0.468	0.427	0.427	0.427	0.427	0.389	0.389	0.389	0.389
1	0.417	0.391	0.368	0.348	0.379	0.356	0.336	0.319	0.342	0.323	0.306	0.29
2	0.376	0.335	0.302	0.274	0.341	0.306	0.277	0.252	0.307	0.277	0.252	0.23
3	0.341	0.291	0.253	0.223	0.309	0.265	0.232	0.206	0.278	0.241	0.212	0.188
4	0.311	0.255	0.216	0.186	0.281	0.233	0.198	0.171	0.253	0.211	0.18	0.157
5	0.284	0.226	0.186	0.156	0.257	0.206	0.171	0.144	0.231	0.187	0.156	0.132
6	0.261	0.201	0.162	0.134	0.236	0.184	0.149	0.124	0.212	0.167	0.136	0.113
7	0.24	0.18	0.142	0.116	0.217	0.165	0.131	0.107	0.196	0.15	0.12	0.098
8	0.222	0.162	0.126	0.101	0.201	0.149	0.116	0.093	0.181	0.135	0.106	0.086
9	0.206	0.147	0.112	0.089	0.187	0.135	0.103	0.082	0.168	0.123	0.095	0.076
10	0.191	0.134	0.1	0.078	0.174	0.123	0.093	0.073	0.157	0.112	0.085	0.067

Ceiling Cavity Reflectance	50				30			10			0
Wall Reflectance	70	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)											
0	0.318	0.318	0.318	0.318	0.252	0.252	0.252	0.192	0.192	0.192	0.164
1	0.275	0.261	0.249	0.237	0.204	0.195	0.187	0.152	0.146	0.14	0.115
2	0.245	0.223	0.205	0.188	0.174	0.16	0.148	0.128	0.119	0.11	0.088
3	0.221	0.194	0.172	0.154	0.151	0.135	0.121	0.111	0.099	0.09	0.071
4	0.201	0.17	0.147	0.129	0.132	0.115	0.101	0.097	0.085	0.075	0.058
5	0.184	0.151	0.127	0.109	0.118	0.1	0.086	0.087	0.074	0.064	0.049
6	0.169	0.135	0.111	0.094	0.106	0.088	0.074	0.078	0.065	0.055	0.042
7	0.156	0.122	0.098	0.081	0.095	0.078	0.064	0.071	0.058	0.048	0.036
8	0.145	0.11	0.087	0.071	0.087	0.069	0.057	0.064	0.052	0.042	0.032
9	0.135	0.101	0.078	0.063	0.079	0.062	0.05	0.059	0.047	0.037	0.028
10	0.126	0.092	0.071	0.056	0.073	0.056	0.045	0.055	0.042	0.034	0.025

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

	0	45	90
0	390	390	390
45	1349	1205	3150
55	1375	1121	1777
65	1406	1107	1421
75	1447	1106	1256
85	1516	1146	1240

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.

