



# 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: 18379

DATE: 05-18-2010

PREPARED FOR: LUMETTA, INC.

CATALOG NUMBER: FP600

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

LAMP: ONE VBU 26 WATT DOUBLE TUBE COMPACT FLUORESCENT LAMP RATED AT 1800 LUMENS.

LAMP CATALOG NUMBER: SYLVANIA CF26DD/E/IN/835

BALLAST: ONE B&L TECHNOLOGIES NV6-1128-PSX

MOUNTING: PENDANT

ELECTRICAL VALUES: 120.0VAC, 0.1731A, 18.75W

### 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	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	
5	135.0	143.5	148.0	149.5	143.5	136.5	131.0	131.5	134.9	131.5	131.0	136.5	143.5	149.5	148.0	143.5	13.8
15	137.9	152.7	178.8	159.9	162.1	164.5	170.1	176.5	176.0	176.5	170.1	164.5	162.1	159.9	178.8	152.7	44.5
25	95.9	101.3	101.5	102.1	105.3	110.4	117.3	121.8	119.6	121.8	117.3	110.4	105.3	102.1	101.5	101.3	50.3
35	71.3	74.2	73.9	75.3	78.0	81.6	87.3	91.2	90.1	91.2	87.3	81.6	78.0	75.3	73.9	74.2	50.8
45	64.7	66.5	66.6	68.7	72.0	74.3	78.8	82.2	81.8	82.2	78.8	74.3	72.0	68.7	66.6	66.5	56.5
55	62.7	64.3	64.5	66.8	70.8	72.2	75.9	78.7	78.1	78.7	75.9	72.2	70.8	66.8	64.5	64.3	63.2
65	61.9	63.2	63.4	65.9	70.3	71.1	73.8	76.2	75.7	76.2	73.8	71.1	70.3	65.9	63.4	63.2	68.5
75	61.5	62.8	62.4	64.4	68.9	69.1	71.0	73.0	72.5	73.0	71.0	69.1	68.9	64.4	62.4	62.8	71.2
85	60.1	61.3	60.8	62.5	66.6	66.2	67.3	69.0	68.5	69.0	67.3	66.2	66.6	62.5	60.8	61.3	70.7
90	59.4	60.6	60.1	61.6	65.5	64.8	65.6	67.0	66.6	67.0	65.6	64.8	65.5	61.6	60.1	60.6	
95	59.7	60.6	59.9	61.0	64.7	63.8	64.3	65.8	65.4	65.8	64.3	63.8	64.7	61.0	59.9	60.6	68.7
105	61.2	61.9	60.9	61.4	64.8	63.7	63.6	65.0	64.5	65.0	63.6	63.7	64.8	61.4	60.9	61.9	66.7
115	63.8	64.0	62.2	62.3	65.3	64.4	64.4	65.6	64.7	65.6	64.4	64.4	65.3	62.3	62.2	64.0	63.6
125	67.3	67.2	64.0	63.3	66.0	65.6	66.5	68.4	67.5	68.4	66.5	65.6	66.0	63.3	64.0	67.2	59.3
135	73.8	73.1	68.6	66.0	68.5	68.6	71.0	74.1	73.7	74.1	71.0	68.6	68.5	66.0	68.6	73.1	54.7
145	87.9	85.2	78.2	73.5	75.3	76.4	80.0	84.7	85.0	84.7	80.0	76.4	75.3	73.5	78.2	85.2	50.2
155	98.9	98.9	91.1	83.0	82.9	85.0	88.8	95.7	96.8	95.7	88.8	85.0	82.9	83.0	91.1	98.9	41.6
165	63.6	80.8	79.2	73.9	69.4	69.9	78.7	87.0	78.7	87.0	78.7	69.9	69.4	73.9	79.2	80.8	21.0
175	9.7	9.8	10.8	12.2	13.9	14.7	13.9	14.5	13.9	14.5	13.9	14.7	13.9	12.2	10.8	9.8	1.8
180	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	

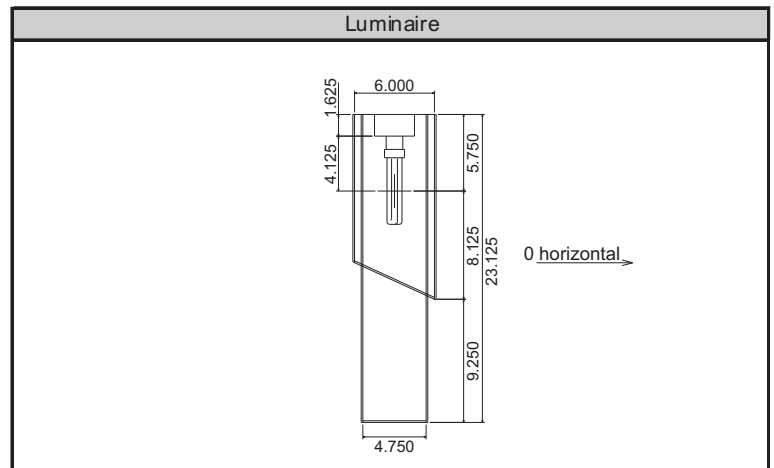
### Zonal Lumen Summary

Zone	Lumens	% of Lamp	% of Luminaire
0-30	108.6	6.0%	11.8%
0-40	159.3	8.9%	17.4%
0-60	279.1	15.5%	30.4%
0-90	489.5	27.2%	53.4%
90-180	427.6	23.8%	46.6%
0-180	917.0	50.9%	100.0%

Total luminaire efficiency: 50.9%

CIE Type: Direct/Indirect

Spacing Criterion: 0 deg: 1.21 90 deg: 1.28  
180 deg: 1.42 270 deg: 1.28



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	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0
5	135.0	143.5	148.0	149.5	143.5	136.5	131.0	131.5	134.9	131.5	131.0	136.5	143.5	149.5	148.0	143.5
10	125.0	151.7	173.3	158.2	154.2	153.9	155.7	161.4	168.1	161.4	155.7	153.9	154.2	158.2	173.3	151.7
15	137.9	152.7	178.8	159.9	162.1	164.5	170.1	176.5	176.0	176.5	170.1	164.5	162.1	159.9	178.8	152.7
20	116.2	124.6	140.1	130.0	132.4	136.0	143.1	150.4	148.6	150.4	143.1	136.0	132.4	130.0	140.1	124.6
25	95.9	101.3	101.5	102.1	105.3	110.4	117.3	121.8	119.6	121.8	117.3	110.4	105.3	102.1	101.5	101.3
30	79.4	84.5	84.0	84.3	87.1	91.8	98.3	102.2	100.1	102.2	98.3	91.8	87.1	84.3	84.0	84.5
35	71.3	74.2	73.9	75.3	78.0	81.6	87.3	91.2	90.1	91.2	87.3	81.6	78.0	75.3	73.9	74.2
40	67.0	69.0	68.9	70.8	73.8	76.5	81.7	85.5	84.8	85.5	81.7	76.5	73.8	70.8	68.9	69.0
45	64.7	66.5	66.6	68.7	72.0	74.3	78.8	82.2	81.8	82.2	78.8	74.3	72.0	68.7	66.6	66.5
50	63.5	65.1	65.4	67.6	71.3	73.1	77.2	80.2	79.8	80.2	77.2	73.1	71.3	67.6	65.4	65.1
55	62.7	64.3	64.5	66.8	70.8	72.2	75.9	78.7	78.1	78.7	75.9	72.2	70.8	66.8	64.5	64.3
60	62.2	63.7	64.0	66.4	70.6	71.7	74.8	77.4	76.9	77.4	74.8	71.7	70.6	66.4	64.0	63.7
65	61.9	63.2	63.4	65.9	70.3	71.1	73.8	76.2	75.7	76.2	73.8	71.1	70.3	65.9	63.4	63.2
70	61.8	63.1	62.8	65.2	69.7	70.2	72.5	74.7	74.3	74.7	72.5	70.2	69.7	65.2	62.8	63.1
75	61.5	62.8	62.4	64.4	68.9	69.1	71.0	73.0	72.5	73.0	71.0	69.1	68.9	64.4	62.4	62.8
80	61.0	62.2	61.8	63.6	68.0	67.9	69.3	71.2	70.7	71.2	69.3	67.9	68.0	63.6	61.8	62.2
85	60.1	61.3	60.8	62.5	66.6	66.2	67.3	69.0	68.5	69.0	67.3	66.2	66.6	62.5	60.8	61.3
90	59.4	60.6	60.1	61.6	65.5	64.8	65.6	67.0	66.6	67.0	65.6	64.8	65.5	61.6	60.1	60.6
95	59.7	60.6	59.9	61.0	64.7	63.8	64.3	65.8	65.4	65.8	64.3	63.8	64.7	61.0	59.9	60.6
100	60.2	61.1	60.2	61.0	64.5	63.5	63.8	65.4	64.8	65.4	63.8	63.5	64.5	61.0	60.2	61.1
105	61.2	61.9	60.9	61.4	64.8	63.7	63.6	65.0	64.5	65.0	63.6	63.7	64.8	61.4	60.9	61.9
110	62.5	62.8	61.5	61.9	65.0	64.0	63.9	64.9	64.4	64.9	63.9	64.0	65.0	61.9	61.5	62.8
115	63.8	64.0	62.2	62.3	65.3	64.4	64.4	65.6	64.7	65.6	64.4	64.4	65.3	62.3	62.2	64.0
120	65.4	65.4	62.9	62.7	65.6	64.9	65.3	66.7	65.8	66.7	65.3	64.9	65.6	62.7	62.9	65.4
125	67.3	67.2	64.0	63.3	66.0	65.6	66.5	68.4	67.5	68.4	66.5	65.6	66.0	63.3	64.0	67.2
130	70.0	69.7	65.8	64.3	66.9	66.7	68.3	70.8	70.0	70.8	68.3	66.7	66.9	64.3	65.8	69.7
135	73.8	73.1	68.6	66.0	68.5	68.6	71.0	74.1	73.7	74.1	71.0	68.6	68.5	66.0	68.6	73.1
140	79.8	78.2	72.5	69.0	71.4	71.9	74.9	78.8	78.7	78.8	74.9	71.9	71.4	69.0	72.5	78.2
145	87.9	85.2	78.2	73.5	75.3	76.4	80.0	84.7	85.0	84.7	80.0	76.4	75.3	73.5	78.2	85.2
150	97.4	93.1	85.4	79.4	80.4	81.8	85.2	90.8	91.6	90.8	85.2	81.8	80.4	79.4	85.4	93.1
155	98.9	98.9	91.1	83.0	82.9	85.0	88.8	95.7	96.8	95.7	88.8	85.0	82.9	83.0	91.1	98.9
160	87.1	100.4	94.8	85.0	83.3	83.1	89.1	97.3	93.7	97.3	89.1	83.1	83.3	85.0	94.8	100.4
165	63.6	80.8	79.2	73.9	69.4	69.9	78.7	87.0	78.7	87.0	78.7	69.9	69.4	73.9	79.2	80.8
170	29.7	35.9	32.5	33.5	29.5	34.6	40.3	44.5	42.5	44.5	40.3	34.6	29.5	33.5	32.5	35.9
175	9.7	9.8	10.8	12.2	13.9	14.7	13.9	14.5	13.9	14.5	13.9	14.7	13.9	12.2	10.8	9.8
180	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3

Zonal Lumen Tabulation (5 degree zones)

Zone	Lumens	Zone	Lumens	Zone	Lumens	Zone	Lumens
0-5	3.0	45-50	29.1	90-95	34.6	135-140	26.8
5-10	10.9	50-55	30.8	95-100	34.1	140-145	25.7
10-15	19.7	55-60	32.4	100-105	33.6	145-150	24.5
15-20	24.7	60-65	33.8	105-110	33.0	150-155	22.4
20-25	25.5	65-70	34.8	110-115	32.3	155-160	19.1
25-30	24.8	70-75	35.4	115-120	31.3	160-165	14.0
30-35	24.9	75-80	35.7	120-125	30.2	165-170	7.0
35-40	25.8	80-85	35.6	125-130	29.1	170-175	1.6
40-45	27.4	85-90	35.1	130-135	27.9	175-180	0.2



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	0.592	0.592	0.592	0.592	0.55	0.55	0.55	0.55	0.51	0.51	0.51	0.51
1	0.525	0.491	0.461	0.434	0.484	0.455	0.428	0.404	0.446	0.42	0.396	0.375
2	0.473	0.421	0.377	0.341	0.435	0.389	0.351	0.319	0.399	0.359	0.325	0.297
3	0.43	0.366	0.317	0.278	0.395	0.338	0.295	0.26	0.362	0.312	0.274	0.243
4	0.392	0.321	0.27	0.232	0.36	0.298	0.252	0.218	0.33	0.275	0.235	0.203
5	0.359	0.285	0.234	0.197	0.33	0.265	0.219	0.185	0.302	0.245	0.204	0.173
6	0.331	0.255	0.205	0.17	0.304	0.237	0.192	0.16	0.279	0.22	0.179	0.15
7	0.306	0.23	0.182	0.149	0.281	0.214	0.171	0.14	0.258	0.199	0.159	0.132
8	0.283	0.209	0.163	0.131	0.261	0.195	0.153	0.124	0.24	0.181	0.143	0.117
9	0.264	0.19	0.146	0.117	0.243	0.178	0.138	0.11	0.224	0.166	0.129	0.104
10	0.247	0.175	0.133	0.105	0.228	0.163	0.125	0.099	0.21	0.152	0.117	0.094

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	0.434	0.434	0.434	0.434	0.365	0.365	0.365	0.302	0.302	0.302	0.272
1	0.374	0.354	0.337	0.32	0.294	0.281	0.268	0.239	0.229	0.22	0.193
2	0.333	0.303	0.277	0.254	0.25	0.231	0.213	0.202	0.188	0.174	0.15
3	0.301	0.263	0.233	0.208	0.218	0.195	0.175	0.176	0.158	0.144	0.122
4	0.274	0.232	0.2	0.175	0.193	0.168	0.148	0.156	0.137	0.121	0.102
5	0.252	0.207	0.175	0.15	0.173	0.147	0.127	0.14	0.12	0.105	0.088
6	0.232	0.187	0.154	0.13	0.156	0.13	0.111	0.127	0.107	0.092	0.077
7	0.216	0.17	0.138	0.115	0.142	0.117	0.098	0.116	0.097	0.082	0.068
8	0.201	0.155	0.124	0.102	0.13	0.106	0.088	0.107	0.088	0.073	0.061
9	0.188	0.142	0.112	0.091	0.12	0.096	0.079	0.1	0.081	0.066	0.055
10	0.177	0.131	0.102	0.083	0.112	0.088	0.072	0.093	0.074	0.061	0.05

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

	0	45	90
0	5316	5316	5316
45	853	878	949
55	751	773	849
65	700	717	795
75	678	687	759
85	666	674	737

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.

