



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: 18358

DATE: 04-16-2010

PREPARED FOR: LUMETTA, INC.

CATALOG NUMBER: FWB600

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

LAMP: ONE VBD 18 WATT TWIN TUBE T5 FLUORESCENT LAMP RATED AT 1250 LUMENS.

LAMP CATALOG NUMBER: GE F18BX/SPX30

BALLAST: ONE B+L TECHNOLOGIES NU6-1128-PSX

MOUNTING: WALL

ELECTRICAL VALUES: 120.0VAC, 0.1098A, 11.73W

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	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
5	19.6	20.9	18.1	14.2	11.7	13.4	16.2	17.4	19.3	17.4	16.2	13.4	11.7	14.2	18.1	20.9	2.3
15	34.8	35.7	36.0	39.2	41.1	53.0	51.7	65.2	79.7	65.2	51.7	53.0	41.1	39.2	36.0	35.7	13.1
25	29.3	29.0	27.9	31.0	35.1	46.5	60.1	72.5	93.2	72.5	60.1	46.5	35.1	31.0	27.9	29.0	20.9
35	34.9	34.0	31.2	29.3	28.3	31.8	43.4	67.9	93.9	67.9	43.4	31.8	28.3	29.3	31.2	34.0	26.0
45	42.3	41.0	37.0	31.6	26.5	24.6	31.7	64.0	95.9	64.0	31.7	24.6	26.5	31.6	37.0	41.0	31.6
55	50.2	48.2	41.9	33.7	25.9	21.1	26.4	61.0	98.7	61.0	26.4	21.1	25.9	33.7	41.9	48.2	37.3
65	56.9	54.4	46.9	36.2	25.2	18.3	23.6	58.1	101.5	58.1	23.6	18.3	25.2	36.2	46.9	54.4	42.4
75	61.2	58.4	50.1	37.9	25.1	17.4	22.0	55.7	104.6	55.7	22.0	17.4	25.1	37.9	50.1	58.4	46.3
85	63.4	60.5	51.8	38.9	25.1	17.5	23.3	56.1	107.4	56.1	23.3	17.5	25.1	38.9	51.8	60.5	48.9
90	64.0	61.0	52.0	38.9	25.1	18.0	24.7	58.9	108.6	58.9	24.7	18.0	25.1	38.9	52.0	61.0	
95	63.6	60.7	51.5	38.6	24.8	18.3	25.9	64.8	110.1	64.8	25.9	18.3	24.8	38.6	51.5	60.7	50.7
105	61.1	58.1	49.7	38.0	26.1	20.9	30.8	71.8	112.5	71.8	30.8	20.9	26.1	38.0	49.7	58.1	50.5
115	56.8	53.8	46.5	37.0	28.4	25.2	38.8	80.6	116.6	80.6	38.8	25.2	28.4	37.0	46.5	53.8	49.2
125	50.0	47.4	41.9	36.1	31.9	33.0	49.9	89.5	120.9	89.5	49.9	33.0	31.9	36.1	41.9	47.4	46.6
135	43.3	42.2	39.6	37.7	38.8	46.6	65.3	99.3	124.8	99.3	65.3	46.6	38.8	37.7	39.6	42.2	44.0
145	43.6	43.0	42.3	44.7	52.9	69.4	86.0	109.7	129.2	109.7	86.0	69.4	52.9	44.7	42.3	43.0	41.9
155	56.7	56.9	57.8	60.8	66.1	87.9	99.7	114.9	126.4	114.9	99.7	87.9	66.1	60.8	57.8	56.9	36.3
165	74.7	73.6	69.8	64.7	62.7	77.3	81.4	94.6	97.8	94.6	81.4	77.3	62.7	64.7	69.8	73.6	21.5
175	47.2	44.2	39.6	33.8	31.1	33.0	35.6	36.9	36.4	36.9	35.6	33.0	31.1	33.8	39.6	44.2	4.3
180	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	

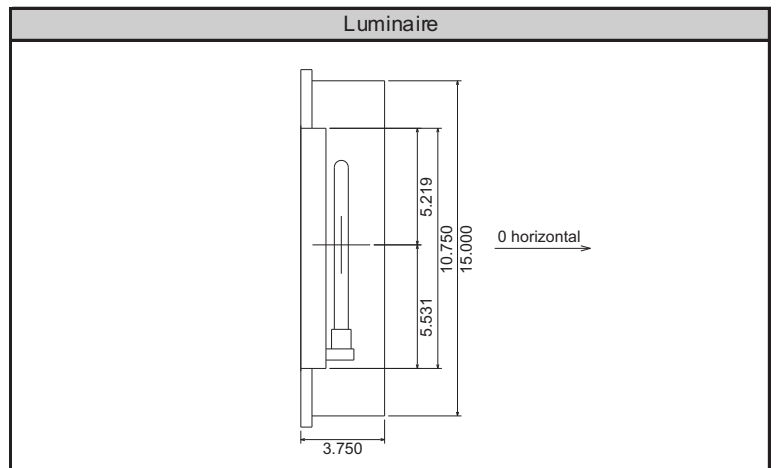
Zonal Lumen Summary

Zone	Lumens	% of Lamp	% of Luminaire
0-30	36.4	2.9%	5.9%
0-40	62.4	5.0%	10.2%
0-60	131.3	10.5%	21.4%
0-90	268.9	21.5%	43.8%
90-180	345.1	27.6%	56.2%
0-180	614.0	49.1%	100.0%

Total luminaire efficiency: 49.1%

CIE Type: Direct/Indirect
 Spacing Criterion: 0 deg: 8.44 90 deg: 6.10
 180 deg: 10.18 270 deg: 6.10

Total reflectance of paint: 71.0



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	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
5	19.6	20.9	18.1	14.2	11.7	13.4	16.2	17.4	19.3	17.4	16.2	13.4	11.7	14.2	18.1	20.9
10	38.9	38.5	37.0	33.7	32.0	37.6	35.6	43.4	53.7	43.4	35.6	37.6	32.0	33.7	37.0	38.5
15	34.8	35.7	36.0	39.2	41.1	53.0	51.7	65.2	79.7	65.2	51.7	53.0	41.1	39.2	36.0	35.7
20	29.7	29.9	30.0	34.3	38.6	54.4	62.8	73.1	89.8	73.1	62.8	54.4	38.6	34.3	30.0	29.9
25	29.3	29.0	27.9	31.0	35.1	46.5	60.1	72.5	93.2	72.5	60.1	46.5	35.1	31.0	27.9	29.0
30	31.8	30.9	28.8	29.2	31.3	38.0	52.1	70.4	93.1	70.4	52.1	38.0	31.3	29.2	28.8	30.9
35	34.9	34.0	31.2	29.3	28.3	31.8	43.4	67.9	93.9	67.9	43.4	31.8	28.3	29.3	31.2	34.0
40	38.5	37.6	34.2	30.3	27.0	27.4	36.4	66.0	94.8	66.0	36.4	27.4	27.0	30.3	34.2	37.6
45	42.3	41.0	37.0	31.6	26.5	24.6	31.7	64.0	95.9	64.0	31.7	24.6	26.5	31.6	37.0	41.0
50	46.5	44.6	39.5	32.8	26.3	22.7	28.7	62.3	97.2	62.3	28.7	22.7	26.3	32.8	39.5	44.6
55	50.2	48.2	41.9	33.7	25.9	21.1	26.4	61.0	98.7	61.0	26.4	21.1	25.9	33.7	41.9	48.2
60	53.7	51.4	44.5	34.8	25.4	19.4	24.7	59.4	100.0	59.4	24.7	19.4	25.4	34.8	44.5	51.4
65	56.9	54.4	46.9	36.2	25.2	18.3	23.6	58.1	101.5	58.1	23.6	18.3	25.2	36.2	46.9	54.4
70	59.3	56.8	48.8	37.2	25.2	17.8	22.7	56.9	103.2	56.9	22.7	17.8	25.2	37.2	48.8	56.8
75	61.2	58.4	50.1	37.9	25.1	17.4	22.0	55.7	104.6	55.7	22.0	17.4	25.1	37.9	50.1	58.4
80	62.8	59.8	51.3	38.6	25.2	17.3	22.4	55.9	106.3	55.9	22.4	17.3	25.2	38.6	51.3	59.8
85	63.4	60.5	51.8	38.9	25.1	17.5	23.3	56.1	107.4	56.1	23.3	17.5	25.1	38.9	51.8	60.5
90	64.0	61.0	52.0	38.9	25.1	18.0	24.7	58.9	108.6	58.9	24.7	18.0	25.1	38.9	52.0	61.0
95	63.6	60.7	51.5	38.6	24.8	18.3	25.9	64.8	110.1	64.8	25.9	18.3	24.8	38.6	51.5	60.7
100	62.5	59.6	50.7	38.2	25.2	19.4	27.7	67.9	111.0	67.9	27.7	19.4	25.2	38.2	50.7	59.6
105	61.1	58.1	49.7	38.0	26.1	20.9	30.8	71.8	112.5	71.8	30.8	20.9	26.1	38.0	49.7	58.1
110	59.2	56.2	48.3	37.6	27.0	22.7	34.5	76.1	114.2	76.1	34.5	22.7	27.0	37.6	48.3	56.2
115	56.8	53.8	46.5	37.0	28.4	25.2	38.8	80.6	116.6	80.6	38.8	25.2	28.4	37.0	46.5	53.8
120	53.7	50.7	44.2	36.3	29.8	28.4	43.8	84.8	118.5	84.8	43.8	28.4	29.8	36.3	44.2	50.7
125	50.0	47.4	41.9	36.1	31.9	33.0	49.9	89.5	120.9	89.5	49.9	33.0	31.9	36.1	41.9	47.4
130	46.1	43.9	40.4	36.5	35.0	39.0	56.9	94.4	123.1	94.4	56.9	39.0	35.0	36.5	40.4	43.9
135	43.3	42.2	39.6	37.7	38.8	46.6	65.3	99.3	124.8	99.3	65.3	46.6	38.8	37.7	39.6	42.2
140	42.6	41.7	40.2	39.8	44.8	57.8	75.5	104.6	126.4	104.6	75.5	57.8	44.8	39.8	40.2	41.7
145	43.6	43.0	42.3	44.7	52.9	69.4	86.0	109.7	129.2	109.7	86.0	69.4	52.9	44.7	42.3	43.0
150	47.9	47.7	48.5	52.8	60.2	79.7	94.6	113.7	130.0	113.7	94.6	79.7	60.2	52.8	48.5	47.7
155	56.7	56.9	57.8	60.8	66.1	87.9	99.7	114.9	126.4	114.9	99.7	87.9	66.1	60.8	57.8	56.9
160	67.0	66.6	66.2	66.4	68.2	87.8	95.7	110.1	117.0	110.1	95.7	87.8	68.2	66.4	66.2	66.6
165	74.7	73.6	69.8	64.7	62.7	77.3	81.4	94.6	97.8	94.6	81.4	77.3	62.7	64.7	69.8	73.6
170	71.6	68.9	62.9	53.7	49.8	55.8	59.7	66.4	65.6	66.4	59.7	55.8	49.8	53.7	62.9	68.9
175	47.2	44.2	39.6	33.8	31.1	33.0	35.6	36.9	36.4	36.9	35.6	33.0	31.1	33.8	39.6	44.2
180	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1

Zonal Lumen Tabulation (5 degree zones)

Zone	Lumens	Zone	Lumens	Zone	Lumens	Zone	Lumens
0-5	0.2	45-50	16.5	90-95	25.3	135-140	21.8
5-10	2.1	50-55	18.0	95-100	25.3	140-145	21.3
10-15	5.2	55-60	19.3	100-105	25.3	145-150	20.6
15-20	7.9	60-65	20.6	105-110	25.2	150-155	19.3
20-25	9.8	65-70	21.8	110-115	24.9	155-160	17.0
25-30	11.2	70-75	22.7	115-120	24.3	160-165	13.2
30-35	12.4	75-80	23.6	120-125	23.7	165-170	8.3
35-40	13.6	80-85	24.2	125-130	23.0	170-175	3.6
40-45	15.1	85-90	24.6	130-135	22.3	175-180	0.7



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	0.565	0.565	0.565	0.565	0.519	0.519	0.519	0.519	0.475	0.475	0.475	0.475
1	0.499	0.465	0.436	0.409	0.455	0.425	0.399	0.376	0.412	0.387	0.364	0.344
2	0.448	0.396	0.354	0.318	0.407	0.362	0.324	0.293	0.368	0.329	0.296	0.268
3	0.405	0.342	0.294	0.256	0.367	0.312	0.27	0.236	0.331	0.284	0.246	0.216
4	0.368	0.299	0.249	0.211	0.333	0.273	0.229	0.195	0.301	0.248	0.209	0.179
5	0.336	0.264	0.214	0.177	0.304	0.241	0.196	0.164	0.274	0.219	0.18	0.15
6	0.308	0.234	0.186	0.151	0.279	0.214	0.171	0.14	0.252	0.195	0.156	0.128
7	0.284	0.21	0.163	0.13	0.257	0.192	0.15	0.12	0.232	0.175	0.137	0.111
8	0.262	0.189	0.144	0.113	0.238	0.173	0.133	0.105	0.215	0.158	0.122	0.096
9	0.243	0.172	0.128	0.1	0.221	0.157	0.118	0.092	0.2	0.144	0.109	0.085
10	0.227	0.156	0.115	0.088	0.206	0.144	0.106	0.081	0.187	0.131	0.098	0.075

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	0.392	0.392	0.392	0.392	0.317	0.317	0.317	0.248	0.248	0.248	0.215
1	0.334	0.315	0.298	0.283	0.25	0.237	0.225	0.189	0.18	0.171	0.142
2	0.296	0.267	0.242	0.22	0.209	0.191	0.175	0.156	0.143	0.131	0.106
3	0.265	0.23	0.201	0.178	0.18	0.158	0.141	0.133	0.118	0.105	0.082
4	0.24	0.201	0.171	0.147	0.157	0.134	0.116	0.116	0.1	0.086	0.066
5	0.219	0.178	0.147	0.124	0.139	0.116	0.098	0.103	0.086	0.072	0.055
6	0.201	0.159	0.128	0.106	0.124	0.101	0.083	0.093	0.075	0.062	0.046
7	0.186	0.143	0.113	0.091	0.112	0.089	0.072	0.084	0.067	0.053	0.039
8	0.173	0.129	0.1	0.08	0.102	0.08	0.063	0.077	0.06	0.047	0.034
9	0.161	0.118	0.09	0.07	0.093	0.072	0.056	0.07	0.054	0.042	0.03
10	0.151	0.108	0.081	0.062	0.086	0.065	0.05	0.065	0.049	0.037	0.027

Average Luminance Table (cd/m²)

	0	45	90
0	106	106	106
45	804	640	753
55	877	661	697
65	944	700	663
75	999	731	665
85	1050	763	692

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.

