LTL 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: 14951 DATE: 03-06-2009
PREPARED FOR: SIGNTEX, INC.
CATALOG NUMBER: MOE-10L2
LUMINAIRE: FORMED ALUMINUM HOUSING, CLEAR LINEAR PRISMATIC PLASTIC LENS.
LAMP: 2 WHITE LEDS WITH CLEAR FRESNEL PLASTIC OPTICS BELOW EACH.
MOUNTING: RECESSED
ELECTRICAL VALUES: 7.66VDC, 1.200A, 9.16W
NOTE: UPON REQUEST, THIS DATA WAS PRORATED TO INTENSITY VALUES MEASURED IMMEDIATELY FOLLOWING SWITCH-ON. TEST WAS PERFORMED USING THE CALIBRATED PHOTODETECTOR METHOD OF ABSOLUTE PHOTOMETRY.* VERTICAL TEST DATA WAS ACQUIRED IN ½ DEGREE INCREMENTS.

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	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	
5	32	29	28	25	21	18	15	14	15	14	15	18	21	25	28	29	2.2
15	59	58	51	38	27	17	11	8	8	8	11	17	27	38	51	58	9.0
25	144	164	131	56	27	13	8	5	4	5	8	13	27	56	131	164	30.2
35	183	424	479	82	29	10	4	3	2	3	4	10	29	82	479	424	82.4
45	70	154	291	140	31	7	4	1	2	1	4	7	31	140	291	154	67.1
55	36	54	72	260	47	6	2	2	0	2	2	6	47	260	72	54	50.0
65	17	26	31	80	83	3	2	0	0	0	2	3	83	80	31	26	29.8
75	8	11	14	19	51	3	0	0	0	0	0	3	51	19	14	11	13.8
85	6	5	6	7	7	3	0	0	0	0	0	3	7	7	6	5	4.7
90	3	5	5	5	4	3	0	0	0	0	0	3	4	5	5	5	
95	4	4	4	4	3	4	0	0	0	0	0	4	3	4	4	4	2.6
105	2	2	4	2	2	4	0	0	0	0	0	4	2	2	4	2	1.7
115	2	2	1	1	1	2	0	0	0	0	0	2	1	1	1	2	1.0
125	0	0	1	0	0	1	0	0	0	0	0	1	0	0	1	0	0.2
135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Zonal Lumen Summary

Zone	Lumens	% of Lamp	% of Luminaire
0-30	41.4	N/A	14.0%
0-40	123.7	N/A	42.0%
0-60	240.9	N/A	81.7%
0-90	289.2	N/A	98.1%
90-180	5.6	N/A	1.9%
0-180	294.7	N/A	100.0%

Total lumen Output 294.7 Lumens
Luminaire efficacy: 32.2 Lumens per Watt
CIE Type: Direct
Spacing Criterion: 0 deg: 2.56 90 deg: 2.13
180 deg: 0.29 270 deg: 2.13

Luminaire

Approved By: MG

*DATA WAS ACQUIRED USING THE CALIBRATED PHOTODETECTOR METHOD OF ABSOLUTE PHOTOMETRY. A UDT MODEL #211 PHOTODETECTOR AND UDT MODEL #S370 OPTOMETER COMBINATION WERE USED AS A STANDARD. A SPECTRAL MISMATCH CORRECTION FACTOR WAS EMPLOYED BASED ON THE SPECTRAL RESPONSIVITY OF THE PHOTODETECTOR AND THE SPECTRAL POWER DISTRIBUTION OF THE TEST SUBJECT.

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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	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
5	32	29	28	25	21	18	15	14	15	14	15	18	21	25	28	29
10	44	41	37	31	24	17	12	10	10	10	12	17	24	31	37	41
15	59	58	51	38	27	17	11	8	8	8	11	17	27	38	51	58
20	88	89	76	45	27	14	9	6	5	6	9	14	27	45	76	89
25	144	164	131	56	27	13	8	5	4	5	8	13	27	56	131	164
30	209	311	274	70	28	12	6	4	4	4	6	12	28	70	274	311
35	183	424	479	82	29	10	4	3	2	3	4	10	29	82	479	424
40	110	312	489	98	29	8	3	3	1	3	3	8	29	98	489	312
45	70	154	291	140	31	7	4	1	2	1	4	7	31	140	291	154
50	51	85	139	224	37	6	3	2	1	2	3	6	37	224	139	85
55	36	54	72	260	47	6	2	2	0	2	2	6	47	260	72	54
60	25	37	46	174	65	5	1	0	0	0	1	5	65	174	46	37
65	17	26	31	80	83	3	2	0	0	0	2	3	83	80	31	26
70	12	16	21	36	82	4	1	0	0	0	1	4	82	36	21	16
75	8	11	14	19	51	3	0	0	0	0	0	3	51	19	14	11
80	7	8	9	11	20	3	0	0	0	0	0	3	20	11	9	8
85	6	5	6	7	7	3	0	0	0	0	0	3	7	7	6	5
90	3	5	5	5	4	3	0	0	0	0	0	3	4	5	5	5
95	4	4	4	4	3	4	0	0	0	0	0	4	3	4	4	4
100	3	4	4	2	2	4	0	0	0	0	0	4	2	2	4	4
105	2	2	4	2	2	4	0	0	0	0	0	4	2	2	4	2
110	2	2	2	2	2	4	0	0	0	0	0	4	2	2	2	2
115	2	2	1	1	1	2	0	0	0	0	0	2	1	1	1	2
120	1	1	2	1	1	2	0	0	0	0	0	2	1	1	2	1
125	0	0	1	0	0	1	0	0	0	0	0	1	0	0	1	0
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Zonal Lumen Tabulation (5 degree zones)

Zone	Lumens	Zone	Lumens	Zone	Lumens	Zone	Lumens
0-5	0.5	45-50	29.1	90-95	1.4	135-140	0.0
5-10	1.7	50-55	26.7	95-100	1.2	140-145	0.0
10-15	3.3	55-60	23.3	100-105	0.9	145-150	0.0
15-20	5.7	60-65	17.2	105-110	0.8	150-155	0.0
20-25	10.1	65-70	12.5	110-115	0.5	155-160	0.0
25-30	20.1	70-75	8.7	115-120	0.4	160-165	0.0
30-35	36.4	75-80	5.1	120-125	0.2	165-170	0.0
35-40	45.9	80-85	2.8	125-130	0.0	170-175	0.0
40-45	38.0	85-90	1.9	130-135	0.0	175-180	0.0

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Utilization of Lumens - 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)	** Values are expressed as Lumens delivered to the task surface **											
0	358.8	358.8	358.8	358.8	349.6	349.6	349.6	349.6	340.8	340.8	340.8	340.8
1	328.8	313.4	299.8	287.5	319.7	305.9	293.4	282.2	311.2	298.6	287.3	277.1
2	299	272.2	250.3	232.1	290.2	265.9	245.8	228.8	281.9	259.8	241.4	225.7
3	271.6	237.1	210.8	190.1	263.3	231.8	207.4	188	255.4	226.7	204.1	185.9
4	247.1	207.6	179.2	157.8	239.4	203.1	176.6	156.4	232	198.8	174.1	154.9
5	225.4	182.9	153.7	132.5	218.2	179.1	151.7	131.5	211.5	175.4	149.7	130.5
6	206.1	162	133	112.4	199.6	158.7	131.3	111.7	193.4	155.6	129.7	110.9
7	189.1	144.3	115.9	96.25	183.1	141.5	114.6	95.67	177.5	138.8	113.2	95.09
8	174.1	129.3	101.7	83.05	168.6	126.9	100.6	82.59	163.5	124.5	99.53	82.13
9	160.8	116.5	89.89	72.17	155.9	114.4	88.96	71.8	151.2	112.3	88.04	71.43
10	149	105.5	79.92	63.12	144.6	103.6	79.13	62.82	140.4	101.8	78.35	62.52

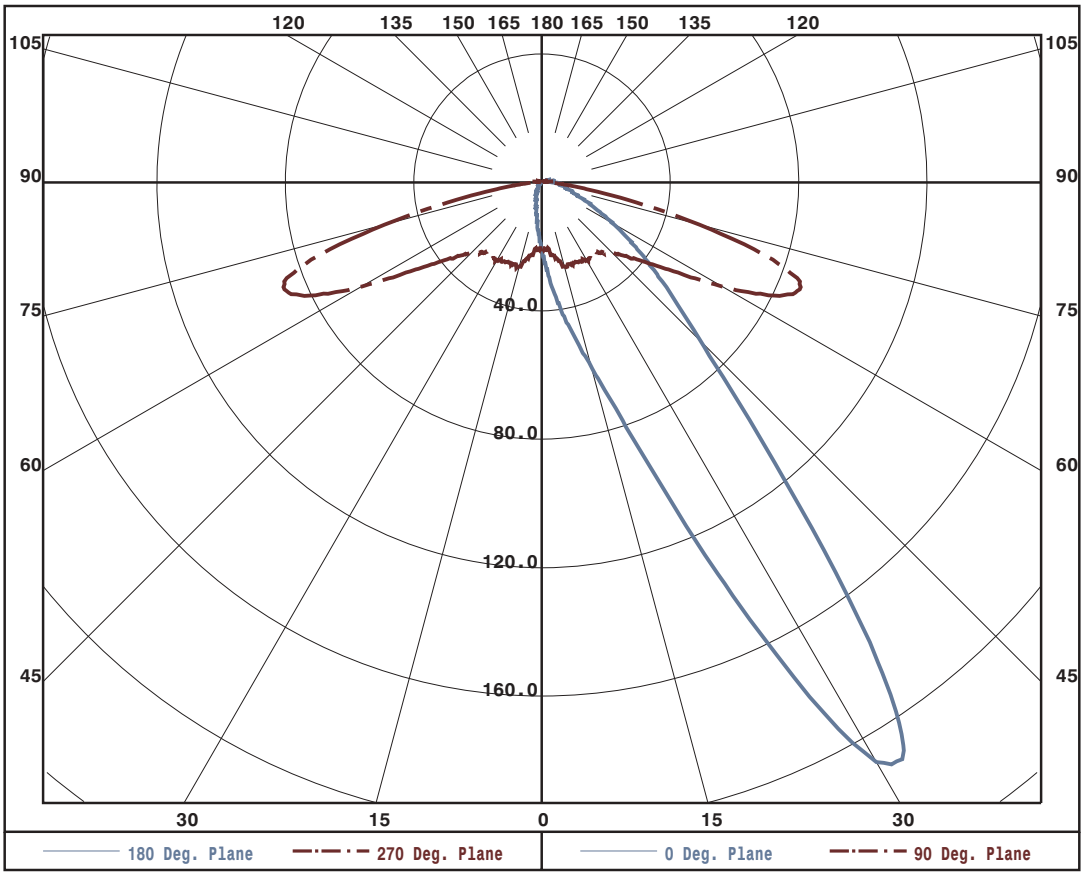
Ceiling Cavity Reflectance	50				30			10			0
Wall Reflectance	70	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)	** Values are expressed as Lumens delivered to the task surface **										
0	324.4	324.4	324.4	324.4	309.4	309.4	309.4	295.7	295.7	295.7	289.2
1	295.3	285.1	275.8	267.3	272.7	265.1	258.2	261.2	255.2	249.6	243.1
2	266.6	248.5	233	219.6	238	225.1	213.7	228.3	217.6	208.2	201.5
3	241	217	197.8	181.9	208.1	191.7	178	199.9	186.1	174.2	167.5
4	218.6	190.6	169.1	152.1	183	164.5	149.4	175.9	160	146.8	140.1
5	199.1	168.4	145.8	128.5	161.9	142.1	126.5	155.8	138.5	124.6	118
6	182	149.6	126.6	109.4	144	123.6	108	138.7	120.7	106.5	100.1
7	167.1	133.6	110.7	93.94	128.8	108.2	92.82	124.2	105.8	91.71	85.51
8	154.1	120.1	97.39	81.23	115.8	95.33	80.34	111.9	93.33	79.46	73.51
9	142.7	108.4	86.25	70.7	104.8	84.51	69.98	101.3	82.82	69.27	63.57
10	132.6	98.44	76.83	61.92	95.21	75.35	61.33	92.17	73.92	60.75	55.29

Average Luminance Table (cd/m²)

	0	45	90
0	3912	3912	3912
45	9324	40643	6455
55	4893	10282	11094
65	2468	4763	23342
75	1287	2265	18300
85	990	1186	3518

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 PHOTOMETRY TECHNIQUES ACCORDING TO STANDARD IES 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) 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.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