



**LUMINAIRE TESTING LABORATORY, INC.**

SUSTAINING  
MEMBER  
of the  
IESNA

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LTL NUMBER: 14952  
PREPARED FOR: SIGNTEX, INC.  
CATALOG NUMBER: MOE-15L3

DATE: 03-06-2009

LUMINAIRE: FORMED ALUMINUM HOUSING, CLEAR LINEAR PRISMATIC PLASTIC LENS.

LAMP: 3 WHITE LEDS WITH CLEAR FRESNEL PLASTIC OPTICS BELOW EACH.

MOUNTING: RECESSED

ELECTRICAL VALUES: 11.14VDC, 1.200A, 13.37W

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 1/2 DEGREE INCREMENTS.

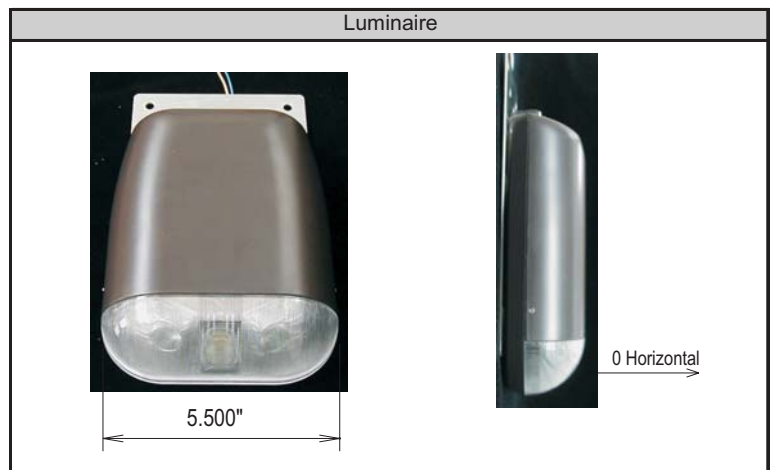
Candela Distribution

	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	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	
5	59	55	49	42	35	29	26	24	24	24	26	29	35	42	49	55	3.8
15	161	121	87	58	35	22	15	13	11	13	15	22	35	58	87	121	16.8
25	605	315	184	79	36	17	10	9	8	9	10	17	36	79	184	315	55.9
35	434	478	565	103	33	13	7	7	6	7	7	13	33	103	565	478	107.0
45	342	171	333	199	36	10	5	4	3	4	5	10	36	199	333	171	93.3
55	417	78	85	250	54	8	5	3	2	3	5	8	54	250	85	78	75.6
65	251	52	40	70	73	8	3	1	0	1	3	8	73	70	40	52	47.0
75	318	35	19	24	32	5	2	0	0	0	2	5	32	24	19	35	37.0
85	239	24	10	12	10	4	2	0	0	0	2	4	10	12	10	24	25.1
90	123	20	9	8	6	4	2	0	0	0	2	4	6	8	9	20	
95	66	16	7	6	4	4	2	0	0	0	2	4	4	6	7	16	10.1
105	21	9	5	3	3	3	2	0	0	0	2	3	3	3	5	9	4.6
115	8	5	3	2	2	2	2	0	0	0	2	2	2	2	3	5	2.7
125	4	3	2	2	1	2	2	0	0	0	2	2	1	2	2	3	1.6
135	2	2	1	0	0	0	2	0	0	0	2	0	0	0	1	2	0.7
145	2	2	1	0	0	0	0	0	0	0	0	0	0	0	1	2	0.3
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	0.0

Zonal Lumen Summary

Zone	Lumens	% of Lamp	% of Luminaire
0-30	76.5	N/A	15.9%
0-40	183.4	N/A	38.1%
0-60	352.3	N/A	73.2%
0-90	461.5	N/A	95.9%
90-180	19.9	N/A	4.1%
0-180	481.5	N/A	100.0%

Total lumen Output            481.5 Lumens  
Luminaire efficacy:            36.0 Lumens per Watt  
CIE Type:                         Direct  
Spacing Criterion:            0 deg: 4.36     90 deg: 1.40  
   180 deg: 0.29   270 deg: 1.40



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.



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	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37
5	59	55	49	42	35	29	26	24	24	24	26	29	35	42	49	55
10	93	83	66	48	35	26	20	17	16	17	20	26	35	48	66	83
15	161	121	87	58	35	22	15	13	11	13	15	22	35	58	87	121
20	356	202	123	66	36	19	12	10	9	10	12	19	36	66	123	202
25	605	315	184	79	36	17	10	9	8	9	10	17	36	79	184	315
30	588	433	343	91	36	15	9	7	8	7	9	15	36	91	343	433
35	434	478	565	103	33	13	7	7	6	7	7	13	33	103	565	478
40	321	325	574	133	34	11	7	5	5	5	7	11	34	133	574	325
45	342	171	333	199	36	10	5	4	3	4	5	10	36	199	333	171
50	429	112	156	275	43	10	5	3	3	3	5	10	43	275	156	112
55	417	78	85	250	54	8	5	3	2	3	5	8	54	250	85	78
60	309	62	55	141	65	8	3	2	1	2	3	8	65	141	55	62
65	251	52	40	70	73	8	3	1	0	1	3	8	73	70	40	52
70	269	42	28	38	56	6	2	0	0	0	2	6	56	38	28	42
75	318	35	19	24	32	5	2	0	0	0	2	5	32	24	19	35
80	351	30	14	16	18	4	2	0	0	0	2	4	18	16	14	30
85	239	24	10	12	10	4	2	0	0	0	2	4	10	12	10	24
90	123	20	9	8	6	4	2	0	0	0	2	4	6	8	9	20
95	66	16	7	6	4	4	2	0	0	0	2	4	4	6	7	16
100	33	12	6	4	4	3	2	0	0	0	2	3	4	4	6	12
105	21	9	5	3	3	3	2	0	0	0	2	3	3	3	5	9
110	13	7	4	2	2	2	2	0	0	0	2	2	2	2	4	7
115	8	5	3	2	2	2	2	0	0	0	2	2	2	2	3	5
120	5	5	3	2	2	2	3	0	0	0	3	2	2	2	3	5
125	4	3	2	2	1	2	2	0	0	0	2	2	1	2	2	3
130	2	2	2	1	1	1	2	0	0	0	2	1	1	1	2	2
135	2	2	1	0	0	0	2	0	0	0	2	0	0	0	1	2
140	2	2	1	0	0	0	0	0	0	0	0	0	0	0	1	2
145	2	2	1	0	0	0	0	0	0	0	0	0	0	0	1	2
150	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
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	0.9	45-50	43.5	90-95	6.1	135-140	0.2
5-10	2.9	50-55	41.6	95-100	4.0	140-145	0.2
10-15	5.8	55-60	33.9	100-105	2.7	145-150	0.1
15-20	11.0	60-65	25.7	105-110	1.9	150-155	0.0
20-25	21.2	65-70	21.3	110-115	1.5	155-160	0.0
25-30	34.7	70-75	19.0	115-120	1.2	160-165	0.0
30-35	49.8	75-80	18.1	120-125	0.9	165-170	0.0
35-40	57.2	80-85	15.3	125-130	0.7	170-175	0.0
40-45	49.9	85-90	9.8	130-135	0.4	175-180	0.0



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	584.7	584.7	584.7	584.7	568.4	568.4	568.4	568.4	552.9	552.9	552.9	552.9
1	527.5	498.3	472.4	449.2	511	484.7	461.1	439.8	495.4	471.6	450.1	430.7
2	477.4	429.5	390.3	357.7	461.5	418	382	351.7	446.5	407	373.9	345.9
3	433	373.1	327.5	291.5	418.1	363.4	321.1	287.4	403.9	354.1	315	283.5
4	394.1	326.9	278.4	241.9	380.3	318.6	273.5	239	367.2	310.7	268.7	236.2
5	359.9	288.4	239.4	203.7	347.2	281.4	235.5	201.5	335.2	274.7	231.6	199.4
6	329.8	256.2	207.8	173.5	318.2	250.2	204.6	171.9	307.3	244.4	201.5	170.2
7	303.2	229	181.9	149.3	292.7	223.9	179.3	148	282.8	218.9	176.7	146.7
8	279.8	206	160.5	129.6	270.3	201.5	158.3	128.6	261.3	197.2	156.1	127.5
9	259.1	186.2	142.5	113.4	250.4	182.4	140.7	112.5	242.3	178.6	138.8	111.6
10	240.7	169.3	127.4	99.86	232.9	165.9	125.8	99.12	225.5	162.6	124.2	98.39

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	523.9	523.9	523.9	523.9	497.3	497.3	497.3	473	473	473	461.5
1	466.5	447.1	429.5	413.3	424.6	410.3	397	403.9	392.4	381.6	369.7
2	418.7	386.3	358.6	334.7	367.2	344.2	323.9	349.6	330.6	313.7	301.6
3	377.9	336.6	303.2	275.8	320.3	292.1	268.3	305.3	281.5	261.1	249.2
4	343.1	295.8	259.4	230.6	281.9	250.6	225.2	269	242.2	220	208.3
5	313.2	261.9	224.2	195.3	250	217.1	191.2	238.9	210.2	187.2	175.9
6	287.2	233.5	195.4	167	223.2	189.6	163.9	213.6	184	160.8	149.9
7	264.5	209.4	171.7	144.2	200.5	166.8	141.6	192.2	162.1	139.2	128.7
8	244.7	188.9	151.9	125.4	181.2	147.8	123.4	173.9	143.8	121.3	111.4
9	227.2	171.4	135.2	109.9	164.6	131.8	108.2	158.2	128.4	106.5	97.04
10	211.8	156.3	121.2	96.94	150.3	118.2	95.5	144.7	115.3	94.08	85.07

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

	0	45	90
0	6904	6904	6904
45	45383	46527	7496
55	56286	12236	12639
65	35518	6042	20443
75	48753	3087	11486
85	41499	1967	5305

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.

