



# 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: 16458

DATE: 09-04-2009

PREPARED FOR: LEOTEK ELECTRONICS CORPORATION

CATALOG NUMBER: CL3-56W3 (5' COOLER LIGHT)

LUMINAIRE: EXTRUDED ALUMINUM HOUSING, CLEAR PLASTIC ENCLOSURE.

LAMP: (30) WHITE LEDS WITH CLEAR PLASTIC OPTICS BELOW EACH.

LED POWER SUPPLY: ONE LEOTEK ELECTRONICS CORP. LP1040-22-C1750

MOUNTING: SURFACE

ELECTRICAL VALUES: 120.0VAC, 0.3291A, 38.97W

NOTE: THIS TEST WAS PERFORMED USING THE CALIBRATED  
PHOTODETECTOR METHOD OF ABSOLUTE PHOTOMETRY. \*

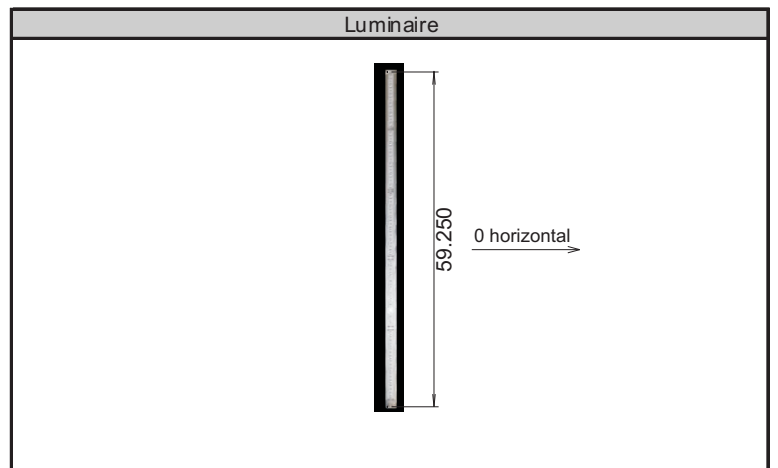
### Candela Distribution

	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	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	
5	219	220	220	220	221	220	220	220	219	220	220	220	221	220	220	220	20.1
15	149	153	159	161	160	161	159	153	149	153	159	161	160	161	159	153	44.1
25	119	118	120	121	122	121	120	118	119	118	120	121	122	121	120	118	55.7
35	105	106	112	116	111	116	112	106	105	106	112	116	111	116	112	106	70.3
45	122	127	150	160	157	160	150	127	122	127	150	160	157	160	150	127	116.6
55	220	244	310	321	307	321	310	244	220	244	310	321	307	321	310	244	259.8
65	413	458	590	566	500	566	590	458	413	458	590	566	500	566	590	458	520.1
75	775	807	672	231	160	231	672	807	775	807	672	231	160	231	672	807	566.1
85	169	119	126	89	35	89	126	119	169	119	126	89	35	89	126	119	141.7
90	113	64	60	37	0	37	60	64	113	64	60	37	0	37	60	64	
95	76	35	23	2	0	2	23	35	76	35	23	2	0	2	23	35	29.8
105	1	1	1	0	0	0	1	1	1	1	1	0	0	0	1	1	1.2
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1
125	0	0	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	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	119.8	N/A	6.6%
0-40	190.1	N/A	10.4%
0-60	566.5	N/A	31.0%
0-90	1794.3	N/A	98.3%
90-180	31.1	N/A	1.7%
0-180	1825.4	N/A	100.0%

Total lumen Output: 1825.4 Lumens  
 Luminaire efficacy: 46.8 Lumens per Watt  
 CIE Type: Direct  
 Spacing Criterion: 0 deg: 0.65 90 deg: 0.71  
 180 deg: 0.65 270 deg: 0.71



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.

**TESTING WAS PERFORMED IN ACCORDANCE WITH IES LM-79-08.**

TEST ANGULAR INCREMENTS AND REPORT FORMATTING WAS BASED ON IES LM-41-98 AND LM-46-04.



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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	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230	230
5	219	220	220	220	221	220	220	220	219	220	220	220	221	220	220	220
10	187	189	193	193	193	193	193	189	187	189	193	193	193	193	193	189
15	149	153	159	161	160	161	159	153	149	153	159	161	160	161	159	153
20	128	129	134	135	136	135	134	129	128	129	134	135	136	135	134	129
25	119	118	120	121	122	121	120	118	119	118	120	121	122	121	120	118
30	112	111	114	115	113	115	114	111	112	111	114	115	113	115	114	111
35	105	106	112	116	111	116	112	106	105	106	112	116	111	116	112	106
40	106	108	120	126	122	126	120	108	106	108	120	126	122	126	120	108
45	122	127	150	160	157	160	150	127	122	127	150	160	157	160	150	127
50	158	173	215	229	223	229	215	173	158	173	215	229	223	229	215	173
55	220	244	310	321	307	321	310	244	220	244	310	321	307	321	310	244
60	304	339	431	431	385	431	431	339	304	339	431	431	385	431	431	339
65	413	458	590	566	500	566	590	458	413	458	590	566	500	566	590	458
70	560	626	781	697	585	697	781	626	560	626	781	697	585	697	781	626
75	775	807	672	231	160	231	672	807	775	807	672	231	160	231	672	807
80	862	399	209	145	107	145	209	399	862	399	209	145	107	145	209	399
85	169	119	126	89	35	89	126	119	169	119	126	89	35	89	126	119
90	113	64	60	37	0	37	60	64	113	64	60	37	0	37	60	64
95	76	35	23	2	0	2	23	35	76	35	23	2	0	2	23	35
100	29	7	2	1	0	1	2	7	29	7	2	1	0	1	2	7
105	1	1	1	0	0	0	1	1	1	1	1	0	0	0	1	1
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	5.4	45-50	69.0	90-95	21.5	135-140	0.0
5-10	14.7	50-55	105.2	95-100	8.3	140-145	0.0
10-15	20.5	55-60	154.5	100-105	0.9	145-150	0.0
15-20	23.6	60-65	218.4	105-110	0.3	150-155	0.0
20-25	26.3	65-70	301.8	110-115	0.1	155-160	0.0
25-30	29.4	70-75	334.2	115-120	0.0	160-165	0.0
30-35	32.7	75-80	231.8	120-125	0.0	165-170	0.0
35-40	37.5	80-85	98.3	125-130	0.0	170-175	0.0
40-45	47.6	85-90	43.4	130-135	0.0	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	2222	2222	2222	2222	2166	2166	2166	2166	2112	2112	2112	2112
1	1891	1725	1577	1444	1826	1674	1538	1416	1764	1626	1501	1388
2	1623	1359	1144	963.8	1557	1316	1116	947.7	1495	1274	1089	932
3	1418	1104	865	676.4	1355	1067	844	666.2	1296	1031	823.6	656.2
4	1261	925.2	683.3	500.8	1203	893.7	667	493.9	1149	863.4	651.1	487
5	1137	794.7	559.8	388.7	1085	768.1	546.9	383.6	1035	742.5	534.3	378.5
6	1036	695.9	472	313.5	989	673.4	461.6	309.6	944.6	651.7	451.4	305.7
7	951.7	618.7	407.2	260.9	909.8	599.6	398.6	257.8	870.1	581.2	390.3	254.8
8	880.5	557.1	357.8	222.7	843.1	540.9	350.8	220.2	807.7	525.1	343.9	217.8
9	819.4	506.8	319.2	194.1	786	492.9	313.3	192.1	754.4	479.3	307.6	190.1
10	766.4	465.1	288.3	172.1	736.5	453	283.3	170.4	708.2	441.3	278.5	168.7

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	2011	2011	2011	2011	1919	1919	1919	1834	1834	1834	1794	
1	1650	1536	1432	1336	1453	1367	1287	1377	1306	1240	1190	
2	1379	1195	1038	901.7	1122	989.5	872.8	1055	944.2	845.2	789.9	
3	1186	963.8	784.4	636.8	901.4	747.4	618	843.5	712.3	600	544.1	
4	1048	806.1	620.5	473.5	753	591.3	460.4	703.5	563.5	447.6	393.5	
5	944.4	694	509.8	368.6	648.9	486.5	358.9	606.8	464.1	349.5	297.9	
6	863.2	610.6	431.6	298.1	572.2	412.6	290.7	536.2	394.3	283.4	234.8	
7	797.3	546.2	374.1	248.7	513.3	358.4	242.8	482.5	343.3	237	191.4	
8	742.6	495.1	330.4	212.9	466.9	317.4	208.1	440.4	304.8	203.4	160.7	
9	696	453.5	296.3	186.1	429.1	285.3	182.1	406.1	274.7	178.2	138.2	
10	655.8	418.9	268.9	165.4	397.7	259.6	162.1	377.8	250.6	158.8	121.2	

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

	0	45	90
0	3445	3445	3445
45	2006	2636	3327
55	4081	6268	8002
65	9049	14565	17676
75	21671	22134	9255
85	6778	6539	5938

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.

