



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: 16913 DATE: 10-15-2009
 PREPARED FOR: MERCURY LIGHTING PRODUCTS
 CATALOG NUMBER: M401-GL-332-OCT-MRT-ELB-UNI
 LUMINAIRE: MOLDED PLASTIC HOUSING, FORMED SPECULAR ALUMINUM REFLECTOR,
 CLEAR PATTERNED PLASTIC ENCLOSURE.
 LAMP: THREE 32 WATT T8 LINEAR FLUORESCENT LAMPS RATED AT 2850 LUMENS
 EACH.
 LAMP CATALOG NUMBER: PHILIPS F32T8/TL841/ALTO
 BALLAST: ONE UNIVERSAL LIGHTING TECHNOLOGIES TRIAD B332IUNVHP-A
 MOUNTING: SURFACE
 ELECTRICAL VALUES: 120.0VAC, 0.6407A, 76.69W

Candela Distribution

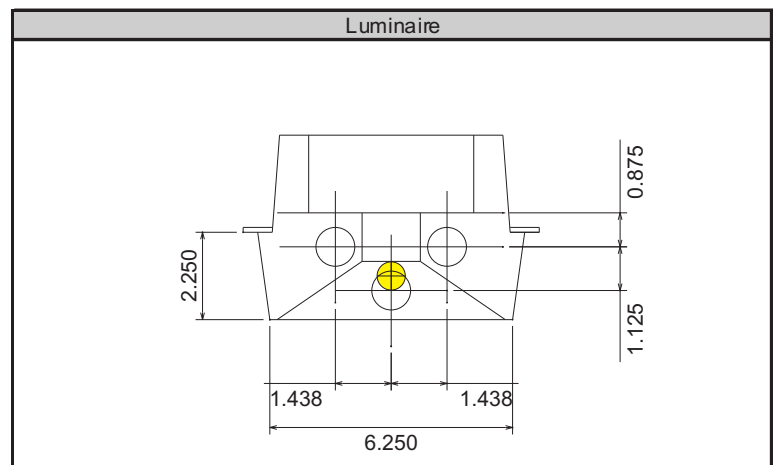
	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	Flux
0	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	
5	1036	1034	1037	1029	1030	1029	1037	1034	1036	1034	1037	1029	1030	1029	1037	1034	97.5
15	1005	983	947	918	915	918	947	983	1005	983	947	918	915	918	947	983	269.4
25	943	883	879	959	999	959	879	883	943	883	879	959	999	959	879	883	428.1
35	845	768	928	1084	1145	1084	928	768	845	768	928	1084	1145	1084	928	768	592.7
45	708	699	956	1163	1233	1163	956	699	708	699	956	1163	1233	1163	956	699	731.2
55	529	623	925	1132	1187	1132	925	623	529	623	925	1132	1187	1132	925	623	787.2
65	331	491	788	935	990	935	788	491	331	491	788	935	990	935	788	491	712.3
75	163	341	607	771	825	771	607	341	163	341	607	771	825	771	607	341	586.7
85	47	211	483	665	725	665	483	211	47	211	483	665	725	665	483	211	476.8
90	20	171	432	609	671	609	432	171	20	171	432	609	671	609	432	171	
95	23	136	379	556	617	556	379	136	23	136	379	556	617	556	379	136	377.9
105	15	51	208	399	467	399	208	51	15	51	208	399	467	399	208	51	236.2
115	7	17	50	135	183	135	50	17	7	17	50	135	183	135	50	17	79.0
125	2	7	25	32	36	32	25	7	2	7	25	32	36	32	25	7	20.7
135	1	2	15	29	33	29	15	2	1	2	15	29	33	29	15	2	12.0
145	1	1	4	12	16	12	4	1	1	1	4	12	16	12	4	1	4.4
155	1	1	1	3	4	3	1	1	1	1	1	3	4	3	1	1	1.1
165	1	1	1	2	2	2	1	1	1	1	1	2	2	2	1	1	0.4
175	1	1	1	2	2	2	1	1	1	1	1	2	2	2	1	1	0.1
180	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	

Zonal Lumen Summary

Zone	Lumens	% of Lamp	% of Luminaire
0-30	795.0	9.3%	14.7%
0-40	1387.7	16.2%	25.6%
0-60	2906.1	34.0%	53.7%
0-90	4681.9	54.8%	86.5%
90-180	731.7	8.6%	13.5%
0-180	5413.6	63.3%	100.0%

Total luminaire efficiency: 63.3%

CIE Type: Semi-Direct
 Spacing Criterion: 0 deg: 1.28 90 deg: 1.73
 180 deg: 1.28 270 deg: 1.73



Approved By: MG

THIS REPORT BASED ON LM-41 AND OTHER PERTINENT IESNA PROCEDURES.



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

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	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045	1045
5	1036	1034	1037	1029	1030	1029	1037	1034	1036	1034	1037	1029	1030	1029	1037	1034
10	1025	1015	1000	978	973	978	1000	1015	1025	1015	1000	978	973	978	1000	1015
15	1005	983	947	918	915	918	947	983	1005	983	947	918	915	918	947	983
20	979	938	895	904	925	904	895	938	979	938	895	904	925	904	895	938
25	943	883	879	959	999	959	879	883	943	883	879	959	999	959	879	883
30	898	824	896	1028	1076	1028	896	824	898	824	896	1028	1076	1028	896	824
35	845	768	928	1084	1145	1084	928	768	845	768	928	1084	1145	1084	928	768
40	781	727	949	1133	1204	1133	949	727	781	727	949	1133	1204	1133	949	727
45	708	699	956	1163	1233	1163	956	699	708	699	956	1163	1233	1163	956	699
50	624	669	951	1165	1237	1165	951	669	624	669	951	1165	1237	1165	951	669
55	529	623	925	1132	1187	1132	925	623	529	623	925	1132	1187	1132	925	623
60	430	561	876	1037	1077	1037	876	561	430	561	876	1037	1077	1037	876	561
65	331	491	788	935	990	935	788	491	331	491	788	935	990	935	788	491
70	240	418	685	850	902	850	685	418	240	418	685	850	902	850	685	418
75	163	341	607	771	825	771	607	341	163	341	607	771	825	771	607	341
80	100	266	537	714	775	714	537	266	100	266	537	714	775	714	537	266
85	47	211	483	665	725	665	483	211	47	211	483	665	725	665	483	211
90	20	171	432	609	671	609	432	171	20	171	432	609	671	609	432	171
95	23	136	379	556	617	556	379	136	23	136	379	556	617	556	379	136
100	20	92	311	495	557	495	311	92	20	92	311	495	557	495	311	92
105	15	51	208	399	467	399	208	51	15	51	208	399	467	399	208	51
110	10	27	110	259	326	259	110	27	10	27	110	259	326	259	110	27
115	7	17	50	135	183	135	50	17	7	17	50	135	183	135	50	17
120	4	11	30	56	81	56	30	11	4	11	30	56	81	56	30	11
125	2	7	25	32	36	32	25	7	2	7	25	32	36	32	25	7
130	2	4	21	31	31	31	21	4	2	4	21	31	31	31	21	4
135	1	2	15	29	33	29	15	2	1	2	15	29	33	29	15	2
140	1	1	9	21	26	21	9	1	1	1	9	21	26	21	9	1
145	1	1	4	12	16	12	4	1	1	1	4	12	16	12	4	1
150	1	1	2	6	8	6	2	1	1	1	2	6	8	6	2	1
155	1	1	1	3	4	3	1	1	1	1	1	3	4	3	1	1
160	1	1	1	2	2	2	1	1	1	1	1	2	2	2	1	1
165	1	1	1	2	2	2	1	1	1	1	1	2	2	2	1	1
170	1	1	1	2	2	2	1	1	1	1	1	2	2	2	1	1
175	1	1	1	2	2	2	1	1	1	1	1	2	2	2	1	1
180	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Zonal Lumen Tabulation (5 degree zones)

Zone	Lumens	Zone	Lumens	Zone	Lumens	Zone	Lumens
0-5	24.8	45-50	379.5	90-95	202.3	135-140	5.0
5-10	72.7	50-55	395.5	95-100	175.6	140-145	2.9
10-15	115.5	55-60	391.6	100-105	140.8	145-150	1.4
15-20	153.9	60-65	370.8	105-110	95.4	150-155	0.7
20-25	193.1	65-70	341.5	110-115	53.5	155-160	0.4
25-30	234.9	70-75	309.0	115-120	25.5	160-165	0.2
30-35	276.5	75-80	277.7	120-125	12.2	165-170	0.2
35-40	316.2	80-85	251.4	125-130	8.4	170-175	0.1
40-45	351.7	85-90	225.4	130-135	7.0	175-180	0.0



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

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	0.762	0.762	0.762	0.762	0.733	0.733	0.733	0.733	0.706	0.706	0.706	0.706
1	0.673	0.628	0.588	0.552	0.644	0.603	0.567	0.534	0.617	0.58	0.547	0.517
2	0.603	0.532	0.474	0.426	0.575	0.511	0.458	0.414	0.549	0.491	0.443	0.402
3	0.543	0.457	0.392	0.34	0.518	0.44	0.379	0.331	0.493	0.423	0.367	0.323
4	0.493	0.399	0.331	0.279	0.469	0.384	0.321	0.272	0.447	0.369	0.311	0.266
5	0.45	0.351	0.284	0.234	0.429	0.338	0.275	0.229	0.408	0.326	0.267	0.223
6	0.413	0.313	0.247	0.2	0.393	0.301	0.24	0.195	0.375	0.291	0.233	0.191
7	0.381	0.281	0.217	0.173	0.363	0.271	0.211	0.169	0.346	0.261	0.205	0.166
8	0.353	0.254	0.193	0.151	0.337	0.245	0.188	0.148	0.321	0.237	0.183	0.145
9	0.328	0.231	0.173	0.134	0.313	0.224	0.169	0.131	0.299	0.216	0.164	0.129
10	0.306	0.212	0.156	0.12	0.293	0.205	0.152	0.117	0.28	0.199	0.149	0.115

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	0.656	0.656	0.656	0.656	0.61	0.61	0.61	0.567	0.567	0.567	0.548
1	0.566	0.536	0.51	0.485	0.496	0.475	0.455	0.46	0.442	0.426	0.406
2	0.501	0.454	0.414	0.379	0.419	0.387	0.358	0.388	0.361	0.337	0.317
3	0.448	0.391	0.344	0.306	0.361	0.322	0.289	0.334	0.301	0.274	0.255
4	0.406	0.341	0.292	0.253	0.316	0.274	0.24	0.292	0.257	0.227	0.209
5	0.371	0.302	0.252	0.213	0.28	0.237	0.203	0.259	0.222	0.192	0.176
6	0.341	0.27	0.22	0.182	0.251	0.207	0.174	0.233	0.195	0.166	0.15
7	0.315	0.243	0.194	0.158	0.227	0.183	0.151	0.211	0.173	0.144	0.129
8	0.293	0.221	0.173	0.139	0.206	0.164	0.133	0.193	0.155	0.127	0.113
9	0.274	0.202	0.156	0.124	0.189	0.148	0.118	0.177	0.14	0.113	0.1
10	0.257	0.186	0.142	0.111	0.175	0.135	0.106	0.164	0.128	0.102	0.09

Average Luminance Table (cd/m²)

	0	45	90
0	4759	4759	4759
45	4420	5222	6389
55	4009	5743	6894
65	3311	5873	6776
75	2522	5881	7137
85	1727	7002	8891

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.

