



LUMINAIRE TESTING LABORATORY, INC.



SUSTAINING
MEMBER

905 Harrison Street · Allentown, PA 18103 · (610) 770-1044 · Fax (610) 770-8912 · www.LuminaireTesting.com

LTL NUMBER: 07243

DATE: 02-18-2003

PREPARED FOR: PRECISION ARCHITECTURAL LIGHTING

CATALOG NUMBER: TRPO2-SP-4-X-PB-X-120-T8

LUMINAIRE: EXTRUDED ALUMINUM HOUSING, FORMED SPECULAR ALUMINUM REFLECTORS,
12 CELL, 1 1/2" DEEP, FORMED SEMI-SPECULAR ALUMINUM LOUVER
BELOW LAMPS.

LAMPS: TWO 32 WATT LINEAR FLUORESCENT T8 LAMPS RATED AT 2850 LUMENS EACH.

LAMP CATALOG NUMBER: PHILIPS F32T8/TL841

BALLAST: ONE UNIVERSAL LIGHTING TECHNOLOGIES B232I120RH-A

MOUNTING: WALL

LUMEN TO CANDELA RATIO USED = 9.18

TOTAL INPUT WATTS = 57.1 AT 120.0 VOLTS

THE 0 DEGREE PLANE IS PERPENDICULAR TO THE LAMPS.

CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0	FLUX
0	982	982	982	982	982	982	982	982	982	
5	1076	1059	1038	1002	975	990	1019	1031	1033	99
15	1182	1175	1152	1046	938	1018	1135	1174	1175	311
25	1240	1195	1105	1034	863	1021	1105	1192	1222	506
35	1288	1213	1083	936	760	939	1088	1220	1278	668
45	1158	1108	1013	807	619	809	1019	1121	1156	738
55	831	794	773	639	450	647	776	790	814	632
65	270	294	328	316	206	318	321	283	231	283
75	30	32	33	29	26	31	32	31	27	36
85	10	9	11	9	8	9	9	9	9	6
90	0	0	0	0	0	0	0	0	0	

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT
0- 30	916	16.1	27.9
0- 40	1584	27.8	48.3
0- 60	2954	51.8	90.1
0- 90	3280	57.5	100.0
90-180	0	0.0	0.0
0-180	3280	57.5	100.0

TOTAL LUMINAIRE EFFICIENCY: 57.5%

CIE TYPE: DIRECT

PLANE: 0-DEG 90-DEG 180-DEG

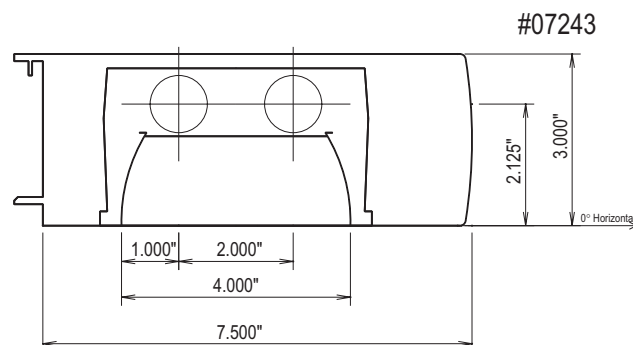
SPACING CRITERIA: 1.8 1.2 1.8

SHIELDING ANGLES: 27 21 27

LUMINOUS LENGTH: 4.000 48.000

LUMINANCE IN CANDELA PER SQUARE METER

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
0	7927.	7927.	7927.
45	13220.	11564.	7066.
55	11695.	10879.	6333.
65	5157.	6265.	3935.
75	936.	1029.	811.
85	926.	1019.	741.



TESTED BY HERSCHEL SCHRECK
CHECKED BY MIKE GRATHER

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



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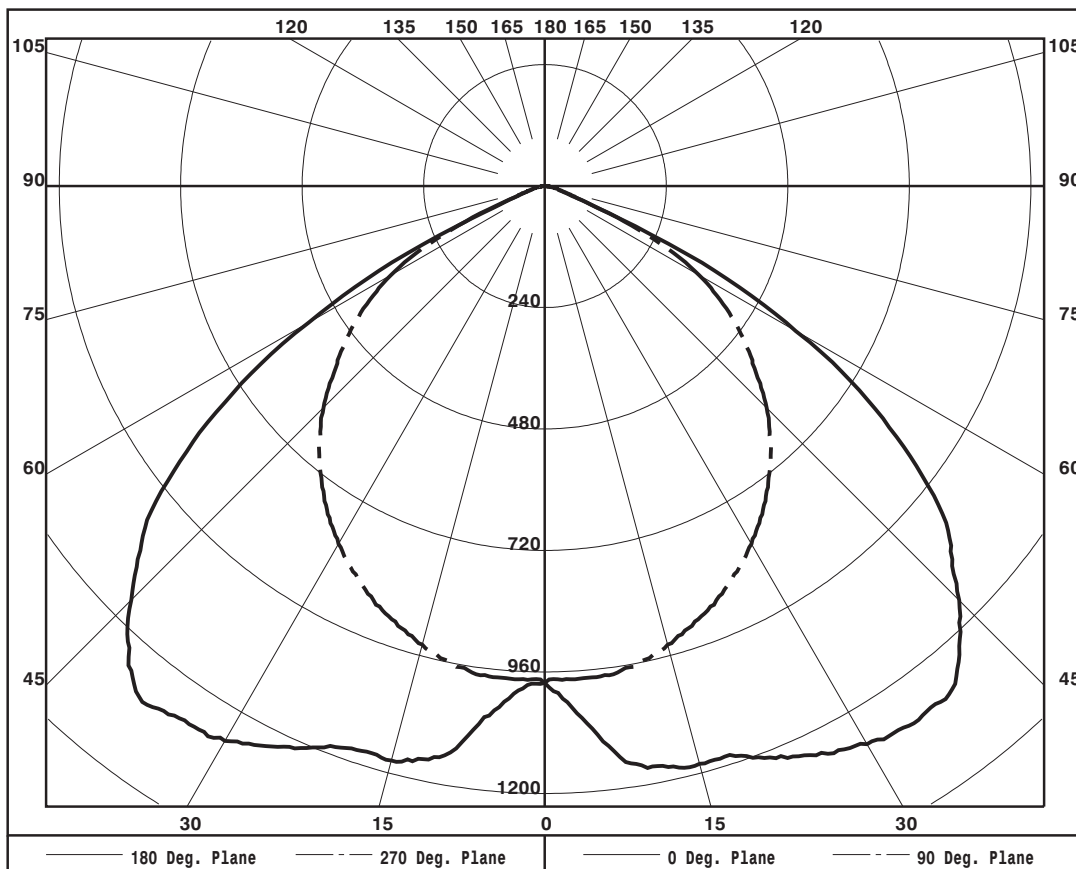
PREPARED FOR: PRECISION ARCHITECTURAL LIGHTING

CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0
0	982	982	982	982	982	982	982	982	982
5	1076	1059	1038	1002	975	990	1019	1031	1033
10	1168	1156	1117	1031	965	1011	1079	1135	1142
15	1182	1175	1152	1046	938	1018	1135	1174	1175
20	1202	1172	1137	1056	904	1027	1135	1167	1180
25	1240	1195	1105	1034	863	1021	1105	1192	1222
30	1273	1214	1099	991	816	987	1096	1215	1266
35	1288	1213	1083	936	760	939	1088	1220	1278
40	1265	1195	1056	872	694	875	1063	1213	1268
45	1158	1108	1013	807	619	809	1019	1121	1156
50	1035	969	934	731	535	735	942	976	1026
55	831	794	773	639	450	647	776	790	814
60	572	553	573	509	352	515	572	546	540
65	270	294	328	316	206	318	321	283	231
70	64	72	118	89	57	91	113	69	61
75	30	32	33	29	26	31	32	31	27
80	16	16	17	16	11	14	16	16	14
85	10	9	11	9	8	9	9	9	9
90	0	0	0	0	0	0	0	0	0

ZONAL LUMEN SUMMARY

0- 5	24.
5- 10	75.
10- 15	130.
15- 20	181.
20- 25	230.
25- 30	276.
30- 35	317.
35- 40	351.
40- 45	370.
45- 50	368.
50- 55	345.
55- 60	287.
60- 65	200.
65- 70	84.
70- 75	25.
75- 80	11.
80- 85	5.
85- 90	1.





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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	68	68	68	68	67	67	67	67	64	64	64	61	61	61	59	59	59	58
1	64	62	60	58	62	60	59	57	58	57	55	56	55	54	54	53	52	51
2	59	55	52	49	58	54	51	49	52	50	48	51	48	47	49	47	46	45
3	55	50	46	42	53	49	45	42	47	44	41	45	43	41	44	42	40	39
4	50	44	40	36	49	43	39	36	42	38	36	41	38	35	40	37	35	34
5	46	39	34	31	45	39	34	31	37	33	30	36	33	30	35	32	30	29
6	42	35	30	27	41	34	30	26	33	29	26	32	29	26	32	28	26	25
7	39	31	26	23	38	31	26	23	30	26	23	29	25	22	28	25	22	21
8	35	28	23	20	34	27	23	20	27	22	19	26	22	19	25	22	19	18
9	32	25	20	17	32	24	20	17	24	19	17	23	19	16	22	19	16	15
10	30	22	18	15	29	22	18	15	21	17	14	21	17	14	20	17	14	13

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 COEFFICIENTS 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.



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INITIAL ILLUMINATION OF 50 FOOTCANDLES USING LTL TEST NUMBER 07243
LUMINAIRE SUSPENSION LENGTH = 1.5
WORKING PLANE HEIGHT = 2.50
FLOOR REFLECTANCE = 20

ROOM HT CEIL RF WALL RF		8				9				10				12				
		80		70		80		70		80		70		80		70		
		70	50	50	30	70	50	50	30	70	50	50	30	70	50	50	30	
WIDTH	LENGTH																	
10.	10.		2	2	3	3	2	3	3	3	3	3	3	3	3	4	4	4
10.	15.		3	3	3	4	3	4	4	4	3	4	4	4	4	5	5	5
15.	20.		5	5	6	6	5	6	6	6	6	6	6	7	6	7	7	8
15.	30.		7	8	8	8	7	8	8	9	8	8	9	9	8	9	10	11
20.	20.		6	7	7	7	7	7	7	8	7	8	8	8	7	8	9	9
20.	30.		9	10	10	10	9	10	10	11	10	11	11	11	10	12	12	13
20.	40.		12	12	13	13	12	13	13	14	13	14	14	15	13	15	15	16
20.	60.		17	18	19	19	18	19	19	20	18	20	20	21	19	21	21	23
30.	30.		13	14	14	15	13	14	15	15	14	15	15	16	15	16	16	17
30.	40.		17	18	18	19	18	18	19	20	18	19	19	20	19	20	21	22
30.	50.		21	22	22	23	22	23	23	24	22	23	24	25	23	25	25	27
30.	60.		25	26	27	27	26	27	27	28	26	27	28	29	27	29	30	31
60.	60.		49	50	51	52	49	51	52	53	50	52	53	54	51	53	55	57
60.	80.		64	66	67	68	65	67	68	70	66	68	69	71	67	70	71	74
60.	100.		80	82	83	85	81	83	85	86	82	84	86	88	83	86	88	91
100.	100.		132	134	137	138	133	135	138	140	134	137	140	142	136	140	143	146

QUANTITY OF LUMINAIRES