



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: 10598

DATE: 11-07-2006

PREPARED FOR: PRECISION ARCHITECTURAL LIGHTING

CATALOG NUMBER: 0505P-01-R-4-OP/PRFD-X-120T8

LUMINAIRE: EXTRUDED ALUMINUM HOUSING, FORMED SPECULAR ALUMINUM REFLECTOR, FROSTED PATTERNED ACRYLIC LOWER ENCLOSURE, OPEN TOP.

LAMP: ONE 32 WATT T8 LINEAR FLUORESCENT LAMP RATED AT 2850 LUMENS.

LAMP CATALOG NUMBER: PHILIPS F32T8/TL841/ALTO

BALLAST: ONE UNIVERSAL LIGHTING TECHNOLOGIES B232IUNV-C

MOUNTING: WALL

LUMEN TO CANDELA RATIO USED = 9.18

TOTAL INPUT WATTS = 35.5 AT 120.0 VOLTS

THE 0 DEGREE PLANE IS PERPENDICULAR TO THE LAMPS.

CANDELA DISTRIBUTION

FLUX

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0	
0	148	148	148	148	148	148	148	148	148	
5	160	158	156	152	148	143	139	137	137	14
15	176	172	165	154	142	129	119	113	110	40
25	174	171	162	145	127	110	97	89	86	59
35	159	154	145	128	108	89	76	70	68	69
45	129	126	119	104	86	69	59	55	53	68
55	93	91	86	76	63	49	43	40	39	58
65	58	57	55	49	41	32	29	27	26	41
75	27	26	26	24	20	16	14	13	13	21
85	12	11	7	6	5	4	3	2	3	7
90	17	16	11	4	0	0	0	0	0	
95	61	75	75	70	18	4	0	0	0	40
105	273	287	265	185	82	174	77	9	9	161
115	420	402	353	333	156	199	361	285	280	299
125	496	495	497	405	230	274	356	481	527	362
135	624	632	595	440	294	353	353	426	455	351
145	697	671	582	469	349	394	420	418	424	303
155	637	611	561	469	392	416	469	476	482	228
165	573	552	514	460	423	428	457	480	486	136
175	474	463	457	446	439	435	437	439	438	43
180	440	440	440	440	440	440	440	440	440	

ZONAL LUMEN SUMMARY

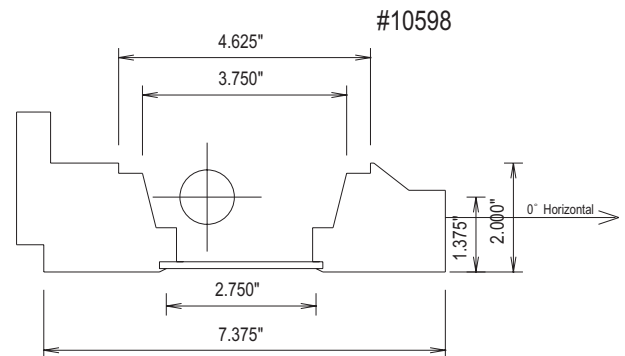
ZONE	LUMENS	%LAMP	%FIXT
0- 30	114	4.0	4.9
0- 40	183	6.4	7.9
0- 60	309	10.8	13.4
0- 90	378	13.3	16.4
90-120	501	17.6	21.7
90-130	863	30.3	37.5
90-150	1517	53.2	65.9
90-180	1924	67.5	83.6
0-180	2303	80.8	100.0

TOTAL LUMINAIRE EFFICIENCY: 80.8%

CIE TYPE: SEMI-INDIRECT

PLANE: 0-DEG 90-DEG 180-DEG

SPACING CRITERIA: 1.6 1.2 0.8



Approved By: MG

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



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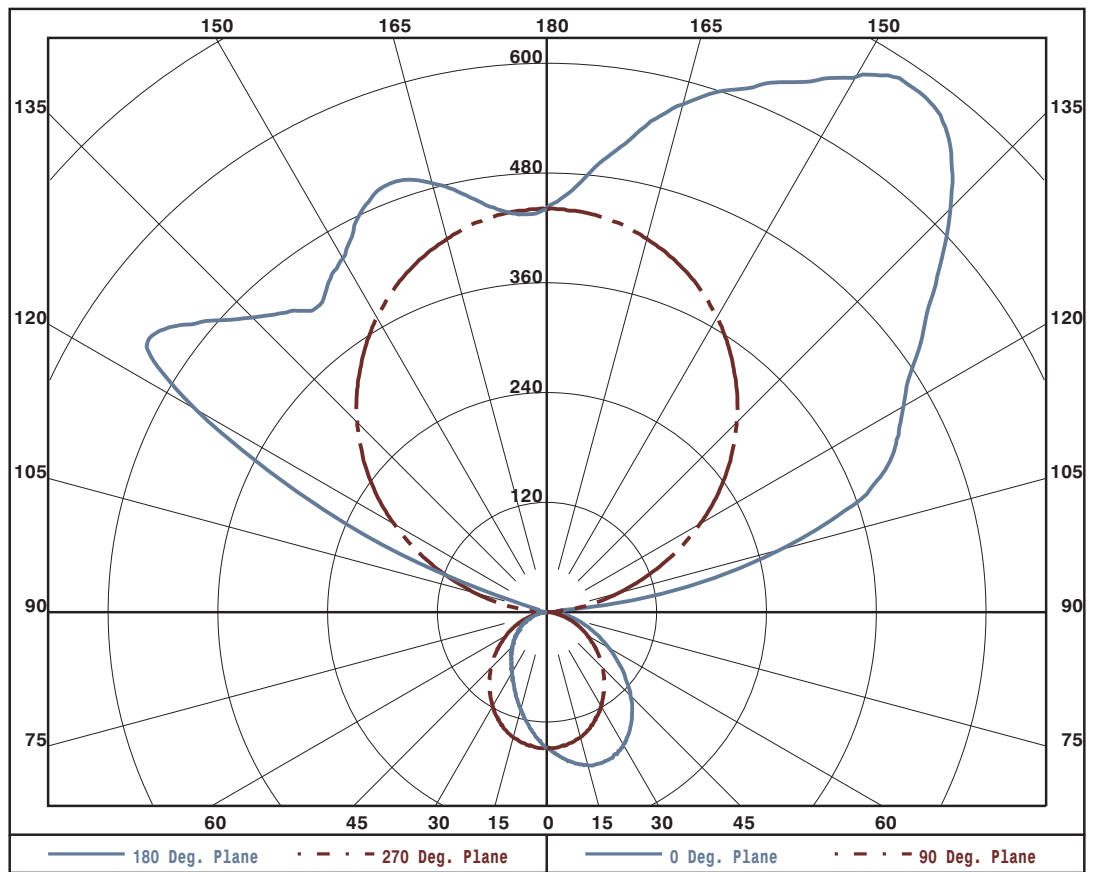
ZONAL LUMEN SUMMARY

0- 5	4.
5- 10	11.
10- 15	17.
15- 20	23.
20- 25	28.
25- 30	32.
30- 35	34.
35- 40	35.
40- 45	35.
45- 50	34.
50- 55	31.
55- 60	27.
60- 65	23.
65- 70	18.
70- 75	13.
75- 80	8.
80- 85	4.
85- 90	2.
90- 95	8.
95-100	33.
100-105	64.
105-110	97.
110-115	136.
115-120	163.
120-125	180.
125-130	182.
130-135	179.
135-140	172.
140-145	159.
145-150	144.
150-155	125.
155-160	104.
160-165	80.
165-170	56.
170-175	32.
175-180	11.

PLANE: 0-DEG 90-DEG
 LUMINOUS LENGTH: 2.750 43.875

LUMINANCE IN CANDELA PER SQUARE METER

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
0	1901.	1901.	1901.
45	2343.	2162.	1562.
55	2083.	1926.	1411.
65	1763.	1672.	1246.
75	1340.	1290.	993.
85	1769.	1032.	737.





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CANDELA DISTRIBUTION

Table with 10 columns representing candela values at various angles (0.0 to 180.0) and 20 rows representing different beam diameters (0 to 180).



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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

RC	80				70				50			30			10			0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	
0	80	80	80	80	70	70	70	70	52	52	52	36	36	36	20	20	20	13
1	73	70	67	64	64	61	59	57	46	44	43	31	31	30	18	18	17	11
2	66	61	56	53	58	54	50	47	40	38	36	28	26	25	16	15	15	10
3	61	54	48	44	53	47	43	39	35	32	30	25	23	21	14	14	13	8
4	55	47	41	37	49	42	37	33	31	28	25	22	20	18	13	12	11	7
5	51	42	36	31	44	37	32	28	28	24	22	19	17	16	11	10	9	6
6	47	37	31	27	41	33	28	24	25	21	19	17	15	13	10	9	8	5
7	43	34	28	23	38	30	25	21	23	19	16	16	13	12	9	8	7	5
8	40	30	24	20	35	27	22	18	20	17	14	14	12	10	8	7	6	4
9	37	27	22	18	32	24	19	16	18	15	12	13	11	9	8	6	6	4
10	34	25	19	16	30	22	17	14	17	13	11	12	9	8	7	6	5	3

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.