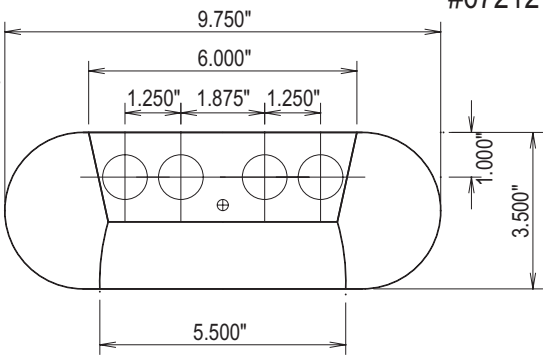
LTL LUMINAIRE TESTING LABORATORY, INC.

IES SUSTAINING MEMBER

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

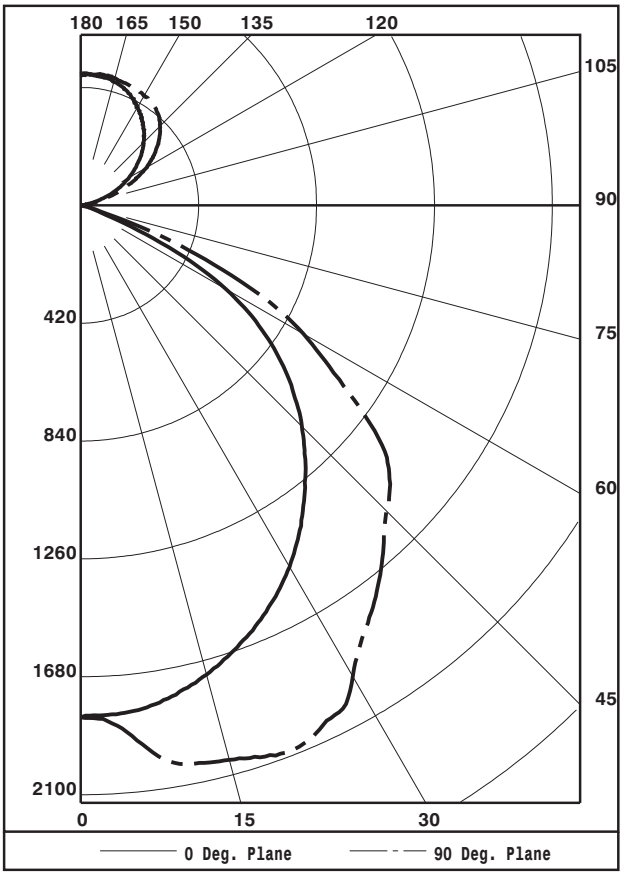
LTL NUMBER: 07212 DATE: 01-30-2003
PREPARED FOR: PRECISION ARCHITECTURAL LIGHTING
CATALOG NUMBER: TRSO4-PP2-4-PB-120-T8
LUMINAIRE: EXTRUDED ALUMINUM HOUSING, FORMED SPECULAR ALUMINUM REFLECTORS BESIDE LAMPS, 12 CELL, 1 1/2" DEEP, FORMED SEMI-SPECULAR ALUMINUM LOUVER BELOW LAMPS, CLEAR POLYCARBONATE ENCLOSURE WITH LAMINATED PERFORATED SPECULAR LAYER ABOVE LAMPS.
LAMPS: FOUR PHILIPS F32T8/TL841 RATED AT 2850 LUMENS EACH.
BALLAST: ONE ADVANCE RCN-4P32-SC
MOUNTING: PENDENT

#07212



LUMEN TO CANDELA RATIO USED = 9.18
TOTAL INPUT WATTS =101.2 AT 120.0 VOLTS
THE 0 DEGREE PLANE IS PARALLEL WITH THE LAMPS.

CANDELA DISTRIBUTION					FLUX
	0.0	22.5	45.0	67.5	90.0	
0	1824	1824	1824	1824	1824	
5	1815	1827	1856	1870	1884	179
15	1731	1839	1987	2026	2046	548
25	1582	1792	1919	2019	2043	870
35	1370	1608	1753	1753	1792	1050
45	1114	1365	1407	1467	1539	1076
55	800	988	1045	1123	1167	922
65	315	422	503	563	593	476
75	32	37	46	48	45	58
85	5	7	7	7	7	5
90	0	0	0	0	0	
95	7	11	10	9	8	15
105	63	85	88	86	86	89
115	155	188	208	210	208	195
125	242	270	305	318	320	262
135	314	335	372	391	399	282
145	380	393	414	435	443	258
155	425	435	444	453	459	205
165	456	461	468	470	470	131
175	467	467	469	468	468	45
180	467	467	467	467	467	



ZONAL LUMEN SUMMARY			
ZONE	LUMENS	%LAMP	%FIXT
0- 30	1596	14.0	24.0
0- 40	2646	23.2	39.7
0- 60	4644	40.7	69.7
0- 90	5182	45.5	77.8
90-120	299	2.6	4.5
90-130	561	4.9	8.4
90-150	1101	9.7	16.5
90-180	1483	13.0	22.2
0-180	6665	58.5	100.0

TOTAL LUMINAIRE EFFICIENCY: 58.5%

CIE TYPE:	SEMI-DIRECT	
PLANE:	0-DEG	90-DEG
SPACING CRITERIA:	1.2	1.5
SHIELDING ANGLES:	21	21

TESTED BY HERSCHEL SCHRECK
CHECKED BY MIKE GRATHER

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

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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	67	67	67	67	63	63	63	63	58	58	58	53	53	53	48	48	48	45
1	62	60	58	56	59	57	55	54	52	51	50	48	47	46	44	43	42	40
2	57	53	50	47	55	51	48	46	47	45	43	43	42	40	40	38	37	35
3	53	48	44	40	50	46	42	39	42	39	37	39	37	35	36	34	33	31
4	48	42	38	35	46	41	37	34	38	35	32	35	32	30	32	30	28	27
5	44	38	33	30	42	36	32	29	34	30	27	31	28	26	29	27	25	23
6	41	34	29	26	39	33	28	25	30	27	24	28	25	23	26	23	21	20
7	38	30	26	22	36	29	25	22	27	23	21	25	22	20	23	21	19	17
8	35	27	22	19	33	26	22	19	24	21	18	23	19	17	21	18	16	15
9	32	24	20	17	30	23	19	16	22	18	15	20	17	15	19	16	14	13
10	29	22	18	15	28	21	17	14	20	16	14	18	15	13	17	14	12	11

PLANE:	0-DEG	90-DEG
LUMINOUS LENGTH:	48.000	5.500

LUMINANCE IN CANDELA PER SQUARE METER

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
0	10708.	10708.	10708.
45	9249.	11682.	12778.
55	8188.	10696.	11945.
65	4376.	6987.	8238.
75	726.	1043.	1021.
85	337.	472.	472.

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CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0
0	1824	1824	1824	1824	1824
5	1815	1827	1856	1870	1884
10	1785	1831	1946	2005	2021
15	1731	1839	1987	2026	2046
20	1661	1838	1952	2038	2079
25	1582	1792	1919	2019	2043
30	1487	1710	1866	1937	1939
35	1370	1608	1753	1753	1792
40	1246	1496	1582	1617	1668
45	1114	1365	1407	1467	1539
50	970	1190	1237	1336	1427
55	800	988	1045	1123	1167
60	597	733	822	843	916
65	315	422	503	563	593
70	72	111	209	235	236
75	32	37	46	48	45
80	16	18	17	19	18
85	5	7	7	7	7
90	0	0	0	0	0
95	7	11	10	9	8
100	29	38	40	40	40
105	63	85	88	86	86
110	108	139	148	147	145
115	155	188	208	210	208
120	199	231	259	271	272
125	242	270	305	318	320
130	282	303	345	359	363
135	314	335	372	391	399
140	351	366	395	418	426
145	380	393	414	435	443
150	406	418	429	446	452
155	425	435	444	453	459
160	445	452	459	463	464
165	456	461	468	470	470
170	463	467	472	473	472
175	467	467	469	468	468
180	467	467	467	467	467

ZONAL LUMEN SUMMARY

0- 5	44.
5- 10	135.
10- 15	230.
15- 20	318.
20- 25	401.
25- 30	469.
30- 35	512.
35- 40	538.
40- 45	543.
45- 50	533.
50- 55	500.
55- 60	422.
60- 65	314.
65- 70	161.
70- 75	43.
75- 80	15.
80- 85	5.
85- 90	0.
90- 95	4.
95-100	12.
100-105	31.
105-110	58.
110-115	86.
115-120	109.
120-125	126.
125-130	136.
130-135	141.
135-140	140.
140-145	134.
145-150	124.
150-155	110.
155-160	95.
160-165	76.
165-170	55.
170-175	34.
175-180	11.

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 07212
LUMINAIRE SUSPENSION LENGTH = 1.5
WORKING PLANE HEIGHT = 2.50
FLOOR REFLECTANCE = 20

ROOM HT		8				9				10				12			
CEIL RF		80		70		80		70		80		70		80		70	
WALL RF		70	50	50	30	70	50	50	30	70	50	50	30	70	50	50	30
WIDTH	LENGTH																
10.	10.	1	2	2	2	1	2	2	2	2	2	2	2	2	2	2	3
10.	15.	2	2	2	2	2	2	2	2	2	2	2	3	2	3	3	3
15.	20.	3	3	3	3	3	3	3	4	3	3	4	4	3	4	4	4
15.	30.	4	4	4	5	4	4	5	5	4	5	5	5	5	5	5	6
20.	20.	4	4	4	4	4	4	4	4	4	4	4	5	4	5	5	5
20.	30.	5	5	5	6	5	5	6	6	5	6	6	6	6	6	6	7
20.	40.	6	7	7	7	7	7	7	8	7	7	8	8	7	8	8	9
20.	60.	9	10	10	10	9	10	10	11	10	10	11	11	10	11	12	12
30.	30.	7	7	8	8	7	8	8	8	7	8	8	9	8	8	9	9
30.	40.	9	9	10	10	9	10	10	11	10	10	11	11	10	11	11	12
30.	50.	11	12	12	12	11	12	12	13	12	12	13	13	12	13	14	14
30.	60.	13	14	14	15	14	14	15	15	14	14	15	16	14	15	16	17
60.	60.	25	26	27	28	26	26	28	28	26	27	28	29	27	28	29	30
60.	80.	34	34	36	36	34	35	36	37	34	35	37	38	35	36	38	39
60.	100.	42	42	44	45	42	43	45	46	42	44	46	47	43	45	47	48
100.	100.	68	69	73	73	69	70	73	74	69	71	74	75	70	72	76	78

QUANTITY OF LUMINAIRES