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THE LIGHT CENTER OF THE INDUSTRY SINCE 1955

INDEPENDENT TESTING LABORATORIES, INC.
3386 LONGHORN ROAD, BOULDER, CO 80302 USA

PHONE: (303)442-1255 • FAX: (303)449-5274 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

REPORT NUMBER: ITL70215

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ISSUE DATE: 10/10/11

PREPARED FOR: PRECISION ARCHITECTURAL LIGHTING

CATALOG NUMBER: LTP-02-X-4-X-OP/PB-X-120-T8

LUMINAIRE: EXTRUDED SEMI-DIFFUSE METAL HOUSING WITH FABRICATED SEMI-DIFFUSE METAL END CAPS, ONE FORMED METAL FRONT AND REAR REFLECTOR WITH PREMIUM SPECULAR FINISH, ONE SEMI-SPECULAR REAR METAL REFLECTOR INSERT BEHIND EACH LAMP WITH PREMIUM SPECULAR FINISHED TOP AND FORWARD SIDE, FABRICATED SEMI-SPECULAR METAL PARABOLIC 29-CELL LOUVER. OPEN TOP.

LAMPS: TWO 32-WATT T-8 FO32/835 LINEAR FLUORESCENTS.

BALLASTS: TWO UNIVERSAL B132IUNVHP-B

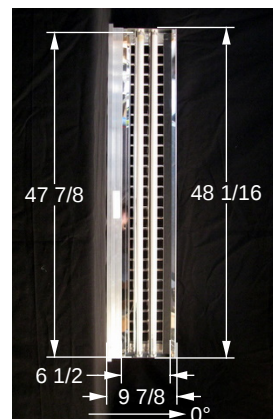
MOUNTING: WALL

THE 0 DEGREE PLANE IS PERPENDICULAR TO THE LAMPS.

TOTAL INPUT WATTS = 59.9 AT 120.0 VOLTS

LUMEN TO CANDELA RATIO USED = 9.17

REPORT IS BASED ON 2950 LUMENS PER LAMP.



CANDELA DISTRIBUTION

FLUX

	0.0	45.0	90.0	135.0	180.0	
0	875	875	875	875	875	
5	896	890	880	870	860	84
15	906	881	829	840	814	241
25	936	834	744	747	762	369
35	960	807	626	654	694	456
45	1006	759	493	536	578	496
55	828	653	295	378	432	431
65	526	259	42	160	358	225
75	140	23	10	19	114	56
85	6	2	0	2	4	4
90	2	1	0	0	0	
95	104	118	30	0	0	66
105	464	448	131	50	16	234
115	766	637	241	182	122	373
125	894	699	355	319	276	438
135	898	721	457	418	414	435
145	856	754	546	500	500	387
155	824	744	615	563	564	302
165	760	734	662	608	600	190
175	706	702	685	664	654	65
180	683	683	683	683	683	

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT
0- 30	693	11.7	14.3
0- 40	1149	19.5	23.7
0- 60	2076	35.2	42.8
0- 90	2361	40.0	48.7
90-120	672	11.4	13.9
90-130	1110	18.8	22.9
90-150	1932	32.7	39.8
90-180	2489	42.2	51.3
0-180	4851	82.2	100.0

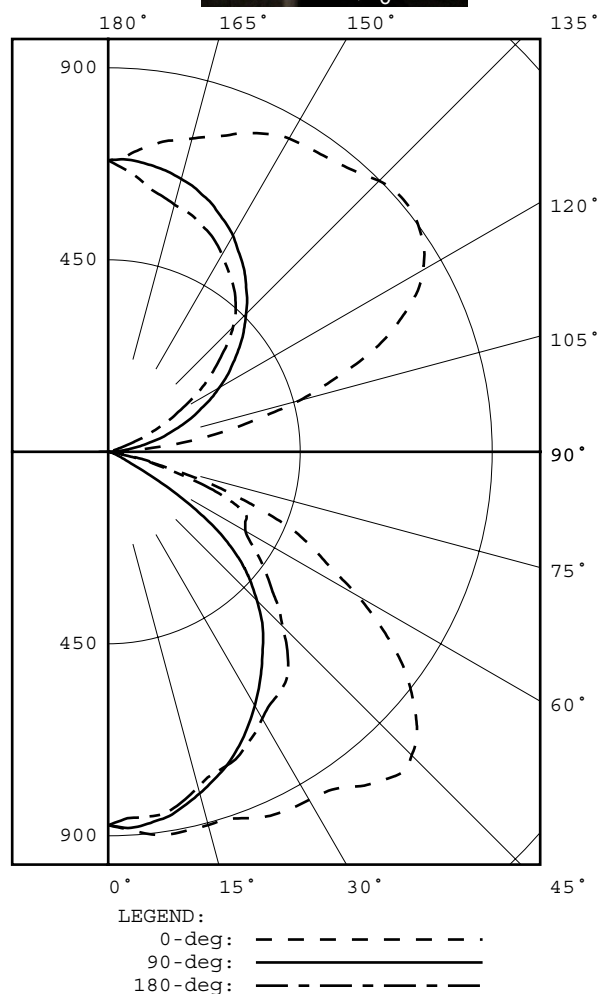
TOTAL LUMINAIRE EFFICIENCY = 82.2 %

CIE TYPE - DIRECT-INDIRECT

PLANE : 0-DEG 90-DEG 180-DEG

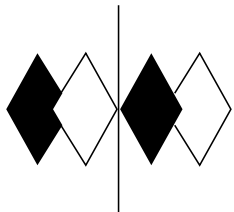
SPACING CRITERIA : 1.73 1.17 1.23

SHIELDING ANGLES : 12 27



Checked B. HYRE

Approved R. BEATTIE
Lighting Engineer



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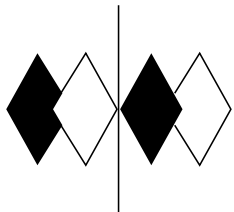
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PLANE : 0-DEG 90-DEG
LUMINOUS LENGTH : 5.563 44.375

LUMINANCE DATA IN CANDELA/SQ M

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 90-DEG	AVERAGE 180-DEG
45	8934.	4378.	5133.
55	9065.	3230.	4730.
65	7816.	624.	5319.
75	3397.	243.	2766.
85	432.	0.	288.



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CANDELA DISTRIBUTION

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0
0.0	875	875	875	875	875	875	875	875	875
5.0	896	891	890	885	880	874	870	865	860
10.0	908	905	897	876	863	862	867	862	852
15.0	906	899	881	853	829	834	840	828	814
20.0	914	893	860	827	792	801	795	792	788
25.0	936	908	834	791	744	756	747	767	762
30.0	942	906	824	746	687	700	707	724	722
35.0	960	901	807	696	626	630	654	676	694
40.0	1004	920	779	642	565	561	593	638	656
45.0	1006	930	759	592	493	495	536	563	578
50.0	938	869	732	540	411	429	460	484	500
55.0	828	758	653	462	295	343	378	407	432
60.0	676	609	497	279	137	200	287	340	372
65.0	526	430	259	88	42	62	160	290	358
70.0	354	259	64	33	20	26	49	197	262
75.0	140	83	23	16	10	13	19	74	114
80.0	26	13	9	7	4	5	7	12	34
85.0	6	4	2	1	0	2	2	4	4
90.0	2	2	1	0	0	0	0	0	0
95.0	104	118	118	128	30	3	0	2	0
100.0	278	287	278	256	76	39	9	2	2
105.0	464	467	448	332	131	104	50	22	16
110.0	634	627	567	374	185	165	110	74	48
115.0	766	750	637	409	241	224	182	141	122
120.0	852	816	681	456	300	276	251	215	196
125.0	894	849	699	501	355	323	319	289	276
130.0	910	859	705	543	409	374	374	359	344
135.0	898	843	721	575	457	419	418	418	414
140.0	870	830	741	605	503	461	460	465	464
145.0	856	828	754	635	546	500	500	497	500
150.0	848	825	751	663	585	537	534	533	534
155.0	824	803	744	684	615	572	563	562	564
160.0	788	774	739	699	642	604	585	585	586
165.0	760	752	734	702	662	631	608	600	600
170.0	738	734	721	702	676	655	636	624	620
175.0	706	704	702	697	685	676	664	654	654
180.0	683	683	683	683	683	683	683	683	683



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5-DEGREE

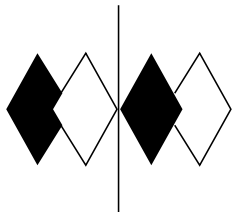
ZONAL LUMEN SUMMARY

0- 5	21.
5- 10	63.
10- 15	103.
15- 20	138.
20- 25	171.
25- 30	198.
30- 35	220.
35- 40	237.
40- 45	248.
45- 50	248.
50- 55	234.
55- 60	197.
60- 65	140.
65- 70	86.
70- 75	42.
75- 80	14.
80- 85	3.
85- 90	1.
90- 95	14.
95-100	52.
100-105	96.
105-110	138.
110-115	173.
115-120	199.
120-125	215.
125-130	222.
130-135	221.
135-140	214.
140-145	202.
145-150	185.
150-155	164.
155-160	138.
160-165	110.
165-170	80.
170-175	49.
175-180	16.

10-DEGREE

ZONAL LUMEN SUMMARY

0- 10	84.
0- 20	325.
0- 30	693.
0- 40	1149.
0- 50	1645.
0- 60	2076.
0- 70	2301.
0- 80	2357.
0- 90	2361.
0-100	2427.
0-110	2661.
0-120	3034.
0-130	3471.
0-140	3906.
0-150	4293.
0-160	4595.
0-170	4786.
0-180	4851.



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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	88	88	88	88	81	81	81	81	68	68	68	56	56	56	45	45	45	40
1	81	77	74	72	74	71	69	67	60	59	57	50	49	48	41	40	39	35
2	74	68	63	59	68	63	59	55	53	50	48	44	42	40	36	35	33	30
3	67	60	54	49	62	55	50	46	47	43	40	39	37	34	32	30	29	25
4	62	53	47	42	57	49	44	39	42	38	34	35	32	29	29	27	25	22
5	57	47	41	36	52	44	38	34	37	33	30	31	28	25	26	23	22	19
6	52	42	36	31	48	39	33	29	34	29	26	28	25	22	23	21	19	17
7	48	38	32	27	44	35	30	26	30	26	23	26	22	20	21	19	17	15
8	45	35	28	24	41	32	27	23	28	23	20	23	20	17	20	17	15	13
9	41	31	25	21	38	29	24	20	25	21	18	22	18	16	18	15	13	12
10	39	29	23	19	36	27	22	18	23	19	16	20	16	14	17	14	12	11

ALL CANDELA, LUMENS, LUMINANCE, COEFFICIENT OF UTILIZATION AND VCP VALUES IN THIS REPORT ARE BASED ON RELATIVE PHOTOMETRY WHICH ASSUMES A BALLAST FACTOR OF 1.000. ANY CALCULATIONS PREPARED FROM THESE DATA SHOULD INCLUDE AN APPROPRIATE BALLAST FACTOR.

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.