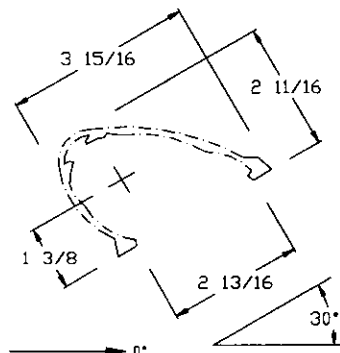


REPORT NUMBER: ITL45225
 PREPARED FOR: ELLIPTIPAR
 CATALOG NUMBER: F102-M128-S-02-A-000
 LUMINAIRE: EXTRUDED SEMI-SPECULAR METAL HOUSING/REFLECTOR, BLACK PAINTED METAL END PLATES, OPEN FACE.
 LAMP: ONE 28-WATT PHILIPS TL5 28W/840 FLUORESCENT, HORIZONTAL POSITION.
 BALLAST: ENERGY SAVINGS ES-1-T5-28-120-F
 THE 0 DEGREE PLANE IS PERPENDICULAR TO THE LAMP.
 TOTAL INPUT WATTS= 34.1 AT 120.0 VOLTS
 REPORT IS BASED ON 2900 LUMENS PER LAMP.

DATE: 07/17/96

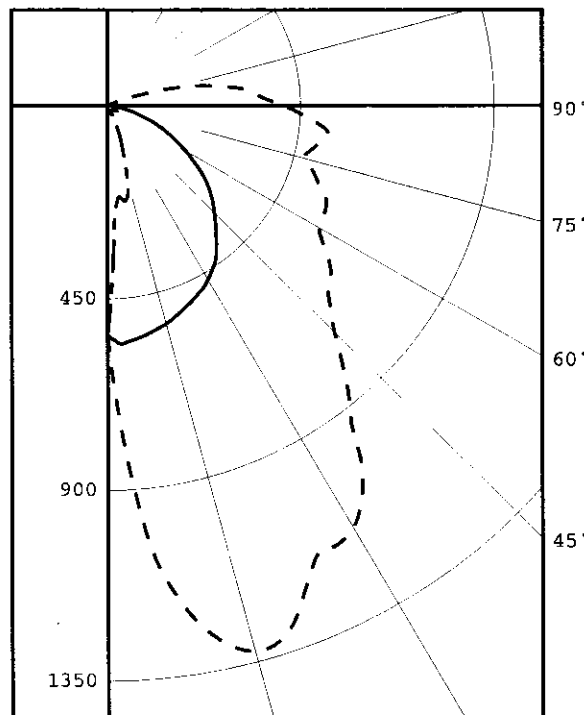
CANDELA DISTRIBUTION FLUX

	0.0	45.0	90.0	135.0	180.0	
0	537	537	537	537	537	
5	997	880	553	287	233	57
15	1325	1233	527	220	181	193
25	1158	1237	489	110	31	289
35	1031	1033	439	20	16	335
45	747	846	352	13	16	319
55	630	570	263	13	21	275
65	561	431	159	10	0	223
75	475	356	70	0	0	178
85	494	334	11	0	0	157
90	407	262	0	0	0	
95	343	205	0	0	0	98
105	157	40	0	0	0	34
115	16	0	0	0	0	3
125	0	0	0	0	0	0
135	0	0	0	0	0	0
145	0	0	0	0	0	0
155	0	0	0	0	0	0
165	0	0	0	0	0	0
175	0	0	0	0	0	0
180	0	0	0	0	0	0



ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LAMP	%FIXT
0- 30	540	18.6	25.0
0- 40	874	30.1	40.5
0- 60	1468	50.6	67.9
0- 90	2026	69.9	93.7
90-120	135	4.7	6.3
90-130	135	4.7	6.3
90-150	135	4.7	6.3
90-180	135	4.7	6.3
0-180	2161	74.5	100.0



TOTAL LUMINAIRE EFFICIENCY = 74.5 %

CIE TYPE - DIRECT

PLANE : 0-DEG 90-DEG 180-DEG
 SPACING CRITERIA : 2.0 1.3 0.1

LEGEND:
 0-deg: - - - - -
 90-deg: _____
 180-deg: - - - - -

Checked _____
 Approved *[Signature]*



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LUMINANCE DATA IN CANDELA/SQ M

ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 90-DEG	AVERAGE 180-DEG
45	8717.	6479.	697.
55	7835.	5968.	2716.
65	7720.	4897.	0.
75	7572.	3520.	0.
85	9709.	1642.	0.



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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	537	537	537	537	537	537	537	537	537
5.0	997	969	880	736	553	388	287	245	233
10.0	1236	1200	1121	913	541	266	212	219	225
15.0	1325	1306	1233	1034	527	216	220	198	181
20.0	1279	1288	1279	1104	508	204	186	108	96
25.0	1158	1172	1237	1128	489	201	110	52	31
30.0	1142	1129	1116	1116	468	183	69	18	17
35.0	1031	1057	1033	1068	439	144	20	15	16
40.0	870	885	972	984	394	96	15	14	14
45.0	747	766	846	866	352	64	13	14	16
50.0	670	665	691	734	312	26	13	16	17
55.0	630	616	570	654	263	14	13	18	21
60.0	571	549	493	530	209	11	15	3	0
65.0	561	523	431	387	159	10	10	0	0
70.0	522	497	391	279	114	9	0	0	0
75.0	475	432	356	212	70	7	0	0	0
80.0	501	447	315	166	34	0	0	0	0
85.0	494	455	334	137	11	0	0	0	0
90.0	407	373	262	103	0	0	0	0	0
95.0	343	308	205	53	0	0	0	0	0
100.0	259	227	122	9	0	0	0	0	0
105.0	157	129	40	0	0	0	0	0	0
110.0	61	45	2	0	0	0	0	0	0
115.0	16	1	0	0	0	0	0	0	0
120.0	0	0	0	0	0	0	0	0	0
125.0	0	0	0	0	0	0	0	0	0
130.0	0	0	0	0	0	0	0	0	0
135.0	0	0	0	0	0	0	0	0	0
140.0	0	0	0	0	0	0	0	0	0
145.0	0	0	0	0	0	0	0	0	0
150.0	0	0	0	0	0	0	0	0	0
155.0	0	0	0	0	0	0	0	0	0
160.0	0	0	0	0	0	0	0	0	0
165.0	0	0	0	0	0	0	0	0	0
170.0	0	0	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0	0	0



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ZONAL LUMEN SUMMARY

0- 5	13.
5- 10	44.
10- 15	80.
15- 20	113.
20- 25	137.
25- 30	152.
30- 35	165.
35- 40	170.
40- 45	165.
45- 50	153.
50- 55	143.
55- 60	132.
60- 65	118.
65- 70	105.
70- 75	94.
75- 80	83.
80- 85	83.
85- 90	74.
90- 95	56.
95-100	42.
100-105	24.
105-110	10.
110-115	3.
115-120	0.
120-125	0.
125-130	0.
130-135	0.
135-140	0.
140-145	0.
145-150	0.
150-155	0.
155-160	0.
160-165	0.
165-170	0.
170-175	0.
175-180	0.



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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	85	85	85	85	80	80	80	76	76	76	72	72	72	70
1	78	74	70	67	76	72	68	65	68	65	62	64	62	60	61	59	57	55
2	71	64	59	54	68	62	57	53	59	55	51	56	52	49	53	50	47	45
3	65	56	50	45	62	55	49	44	52	47	43	49	45	41	47	43	40	38
4	59	50	43	38	57	49	42	37	47	41	36	44	39	35	42	38	34	33
5	54	45	38	33	53	44	37	32	41	36	31	39	35	31	38	33	30	28
6	50	40	33	29	49	39	33	28	37	32	28	36	31	27	34	30	26	25
7	47	37	30	25	45	36	29	25	34	29	24	33	28	24	31	27	23	22
8	44	33	27	23	42	33	27	22	31	26	22	30	25	21	29	24	21	20
9	41	31	24	20	39	30	24	20	29	23	20	28	23	19	27	22	19	18
10	38	28	22	18	37	28	22	18	27	21	18	26	21	18	25	20	17	16

SEE NOTE

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.