

EK-1972X-86

Subj Copy

DDA REGISTRY

FILE: 45-1

ROUTING AND TRANSMITTAL SLIP

Date

12 MAY 1986

TO: (Name, office symbol, room number,
building, Agency/Post)

Initials

Date

1. C/PMS/OL

2.

3.

4.

5.

Action	File	Note and Return
Approval	For Clearance	Per Conversation
As Requested	For Correction	Prepare Reply
Circulate	For Your Information	See Me
Comment	Investigate	Signature
Coordination	Justify	

REMARKS

FOR YOUR HANDLING AS APPROPRIATE.

DO NOT use this form as a RECORD of approvals, concurrences, disposals,
clearances, and similar actions

FROM: (Name)

ncy/Post)

EXO/DDA

Room No.—Bldg.

7D24 HCS

5041-102

☆ GPO : 1991 O - 361-529 (143)

OPTIONAL FORM 104 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206

STAT

STAT

EXECUTIVE SECRETARIAT ROUTING SLIP

TO:		ACTION	INFO	DATE	INITIAL
1	DCI				
2	DDCI				
3	EXDIR				
4	D/ICS				
5	DDI				
6	DDA	X			
7	DDO				
8	DDS&T				
9	Chm/NIC				
10	GC				
11	IG				
12	Compt				
13	D/OLL				
14	D/PAO				
15	D/PERS				
16	VC/NIC				
17					
18					
19					
20					
21					
22					
SUSPENSE		Date _____			

Remarks

TO #6: For your handling as appropriate.

STAT

Executive Secretary

9 May 86

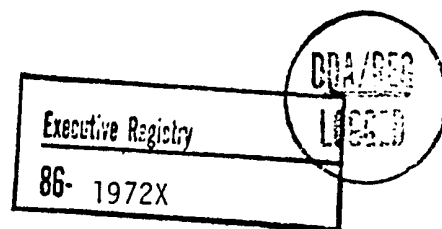
Date

3637 (10-81)



MAXIMUM TECHNOLOGY

The Quality Reflector Company



29 April 1986

Director
Central Intelligence Agency
Washington, DC 20505

Dear Sir:

Maurice Keville, our representative in your area, has asked that I forward the enclosed information to you.

Should you require follow-up or additional information, please do not hesitate to contact Maurice directly at 703/780-5860.

Sincerely,

MAXIMUM TECHNOLOGY

Frederic M. Smith

Frederic M. Smith
Director of Marketing/Sales

FMS:dr
enclosures

cc: Maurice Keville

60 Industrial Way Brisbane, CA 94005 (415) 468-2560

PHOTOMETRIC

LIGHTING SCIENCES INC. is continuously testing various fixtures and retrofit reflector configurations. The enclosed test numbers are a representative sampling.

Test No. 3787 and 3788 are concerned with 2 x 4 recessed fixtures. A new Keene Lighting Products fixture in a four lamp configuration was tested as the control unit. An exact fixture was tested in a two lamp configuration utilizing SSOR.

Test No. 3021 is a commercially available 2 x 4 fixture in a two lamp configuration.

All fixtures used F40 (40 watt) lamps.

Fixture efficiencies

3788 - SSOR/2 lamp - 81.0%.

3787 - white/4 lamp - 58.5%.

3021 - white/2 lamp - 61.16%.

Test No. 3835 is representative of a single lamp strip or industrial fixture using an F96T12CW/HO lamp.

Test No. 3792 is similar to the above using an F96T12CW lamp.

With the strip and industrial fixtures it is possible to vary distribution patterns with a variety of design concepts. The "four bender" is one possibility.

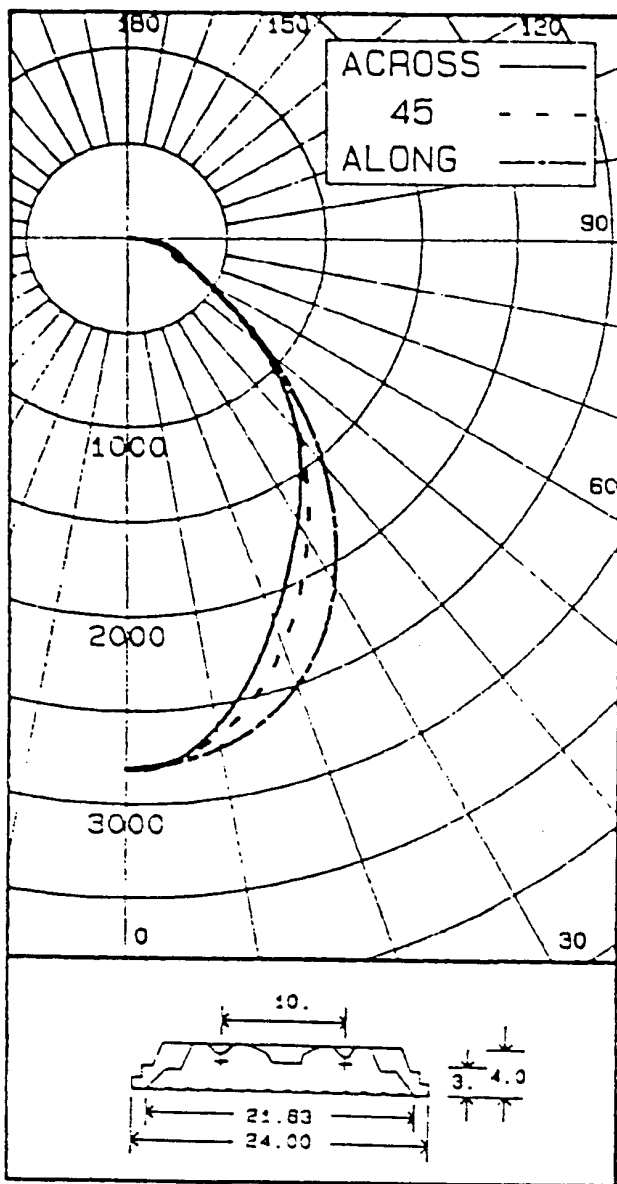


LIGHTING SCIENCES INC.

7830 E. Evans Rd. Scottsdale, Arizona 85260 602-991-9260

CERTIFIED TEST REPORT NO. LSI 3788
COMPUTED BY LSI PROGRAM **TEST-LITE**

COMMERCIALY AVAILABLE 2 X 4 FLUORESCENT TROFFER
SPECULAR REFLECTOR WITH PRISMATIC LENS AND ADVANCE RQM-2S40 BALLAST
TWO F40T12CW FLUORESCENT LAMPS. LUMEN RATING = 3150 LMS.



CANDLEPOWER SUMMARY

ANGLE	ACROSS	67.5	45	22.5	ALONG	OUTPUT LUMENS
0	2810	2810	2810	2810	2810	
5	2773	2765	2772	2778	2785	263
10	2615	2624	2664	2710	2728	
15	2394	2420	2497	2592	2638	708
20	2152	2181	2286	2430	2505	
25	1923	1948	2058	2218	2328	965
30	1718	1733	1819	1972	2101	
35	1522	1530	1583	1710	1834	1020
40	1330	1324	1351	1440	1537	
45	1115	1103	1104	1160	1227	879
50	877	879	870	890	930	
55	649	663	657	666	668	602
60	475	479	469	488	475	
65	358	348	320	362	357	355
70	279	254	217	273	292	
75	225	193	169	209	250	215
80	167	143	133	150	190	
85	95	84	79	90	105	95
90	25	24	20	20	20	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LAMP	% FIXTURE
0-30	1935	30.73	37.94
0-40	2955	46.92	57.93
0-60	4437	70.44	86.97
0-90	5102	80.99	100.00
40-90	2146	34.07	42.07
60-90	664	10.55	13.03
90-180	0	0.00	0.00
0-180	5102	80.99	100.00

** EFFICIENCY = 81.0% **

LUMINANCE SUMMARY - FOOTLAMBERTS

ANGLE	ACROSS	45	ALONG
45	727	720	797
55	522	528	535
65	391	348	388
75	400	299	414
85	500	417	551

S/MH = 1.0
SC(ALONG) = 1.1, SC(ACROSS) = 1.0
CERTIFIED BY:

Jan Levin

DATE:
APR 25, 1984

PREPARED FOR:

MAXIMUM TECHNOLOGY
BRISBANE, CA

TESTED IN ACCORDANCE WITH IES PROCEDURES. TEST DISTANCE = 8 METERS (26 FT.)

LIGHTING SCIENCES INC.
7830 E. EVANS ROAD, SCOTTSDALE INDUSTRIAL AIRPARK
SCOTTSDALE, ARIZONA 85260.

CERTIFIED TEST REPORT NO. LSI 3788
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COMMERCIALY AVAILABLE 2 X 4 FLUORESCENT TROFFER
SPECULAR REFLECTOR WITH PRISMATIC LENS AND ADVANCE RQM-2S40 BALLAST
TWO F40T12CW FLUORESCENT LAMPS. LUMEN RATING = 3150 LMS.

CANDLEPOWER DATA
IN 2.5 DEGREE STEPS

ANGLE	PLANE						OUTPUT LUMENS
	ACROSS	67.5	45	22.5	ALONG	AVERAGE	
0.0	2810	2810	2810	2810	2810	2810	
2.5	2811	2802	2797	2793	2795	2799	
5.0	2773	2765	2772	2778	2785	2774	263
7.5	2705	2706	2723	2748	2760	2728	
10.0	2615	2624	2664	2710	2728	2667	
12.5	2511	2523	2590	2657	2691	2593	
15.0	2394	2420	2497	2592	2638	2507	708
17.5	2273	2302	2398	2516	2578	2410	
20.0	2152	2181	2286	2430	2505	2307	
22.5	2035	2064	2173	2325	2423	2198	
25.0	1923	1948	2058	2218	2328	2087	965
27.5	1818	1837	1936	2097	2220	1972	
30.0	1718	1733	1819	1972	2101	1859	
32.5	1621	1632	1702	1839	1970	1742	
35.0	1522	1530	1583	1710	1834	1625	1020
37.5	1427	1428	1469	1578	1687	1508	
40.0	1330	1324	1351	1440	1537	1387	
42.5	1223	1211	1228	1298	1385	1260	
45.0	1115	1103	1104	1160	1227	1134	879
47.5	1000	990	987	1022	1075	1009	
50.0	877	879	870	890	930	886	
52.5	759	770	760	773	792	770	
55.0	649	663	657	666	668	661	602
57.5	554	562	559	572	563	563	
60.0	475	479	469	488	475	478	
62.5	412	409	389	423	411	408	
65.0	358	348	320	362	357	347	355
67.5	315	294	260	314	321	296	
70.0	279	254	217	273	292	257	
72.5	249	222	189	241	271	228	
75.0	225	193	169	209	250	202	215
77.5	197	169	156	180	224	179	
80.0	167	143	133	150	190	151	
82.5	132	114	109	121	149	121	
85.0	95	84	79	90	105	88	95
87.5	57	53	45	53	61	53	
90.0	26	24	20	20	20	22	

LIGHTING SCIENCES INC.
 7830 E. EVANS ROAD, SCOTTSDALE INDUSTRIAL AIRPARK
 SCOTTSDALE, ARIZONA 85260.

CERTIFIED TEST REPORT NO. LSI 3788
 COMPUTED BY LSI PROGRAM **TEST-LITE**

COMMERCIALY AVAILABLE 2 X 4 FLUORESCENT TROFFER
 SPECULAR REFLECTOR WITH PRISMATIC LENS AND ADVANCE RQM-2S40 BALLAST
 TWO F40T12CW FLUORESCENT LAMPS. LUMEN RATING = 3150 LMS.

AVERAGE LUMINANCE DATA

FOOTLAMBERTS

ANGLE	ACROSS	67.5	45	22.5	ALONG
0	1290	1290	1290	1290	1290
30	911	921	967	1049	1114
40	797	796	811	865	921
45	727	718	720	754	797
50	626	630	622	638	664
55	522	532	528	534	535
60	436	441	431	450	436
65	391	379	348	394	388
70	374	341	292	368	392
75	400	343	299	373	444
80	442	378	354	398	503
85	500	444	417	474	551

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES

LIGHTING SCIENCES INC.
7830 E. EVANS ROAD, SCOTTSDALE INDUSTRIAL AIRPARK
SCOTTSDALE, ARIZONA 85260.

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SPECULAR REFLECTOR WITH PRISMATIC LENS AND ADVANCE RQM-2S40 BALLAST
TWO F40T12CW FLUORESCENT LAMPS. LUMEN RATING = 3150 LMS.

COEFFICIENTS OF UTILIZATION

EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

CC	80				70				50				30				10				C
WALL	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	C
RCR																					C
1	.90	.87	.84	.81	.88	.85	.82	.80	.81	.79	.77	.78	.77	.75	.75	.74	.73	.75	.74	.73	.7
2	.83	.78	.73	.69	.81	.76	.72	.69	.73	.70	.67	.71	.68	.65	.69	.66	.64	.69	.66	.64	.6
3	.77	.70	.65	.60	.75	.69	.64	.60	.67	.62	.59	.65	.61	.58	.63	.60	.57	.63	.60	.57	.5
4	.72	.63	.57	.53	.70	.62	.57	.52	.61	.56	.52	.59	.55	.51	.57	.53	.50	.57	.53	.50	.4
5	.66	.57	.51	.46	.65	.56	.50	.46	.55	.49	.46	.53	.49	.45	.52	.48	.45	.52	.48	.45	.4
6	.62	.52	.46	.41	.60	.51	.45	.41	.50	.45	.41	.49	.44	.40	.48	.43	.40	.48	.43	.40	.3
7	.57	.47	.41	.37	.56	.47	.41	.36	.46	.40	.36	.44	.40	.36	.44	.39	.36	.44	.39	.36	.3
8	.53	.43	.37	.32	.52	.42	.37	.32	.41	.36	.32	.41	.36	.32	.40	.35	.32	.40	.35	.32	.3
9	.49	.39	.33	.29	.48	.39	.33	.29	.38	.32	.28	.37	.32	.28	.36	.31	.28	.36	.31	.28	.2
10	.46	.36	.30	.26	.45	.35	.30	.26	.35	.29	.25	.34	.29	.25	.33	.29	.25	.33	.29	.25	.2

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES

LUMINAIRE INPUT WATTS = 90.3

LIGHTING SCIENCES INC.
7830 EAST EVANS ROAD, SCOTTSDALE INDUSTRIAL AIRPARK
SCOTTSDALE, ARIZONA 85260.

CERTIFIED TEST REPORT NO. LSI 3788

LSI PROGRAM ** TEST-LITE **

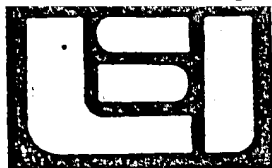
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SPECULAR REFLECTOR WITH PRISMATIC LENS AND ADVANCE RQM-2S40 BALLAST
TWO F40T12CW FLUORESCENT LAMPS. LUMEN RATING = 3150 LMS.

IES VISUAL COMFORT PROBABILITY

CC, WALL + FC REFLECTANCES = 80, 50, 20
WORK PLANE ILLUMINATION = 100.0 FOOTCANDLES
WORK PLANE HEIGHT = 2.5 FEET

ROOM DIMENSIONS HEIGHT W L		LUMINAIRES LENGTHWISE				LUMINAIRES CROSSWISE			
		8.5	10.0	13.0	16.0	8.5	10.0	13.0	16.0
20	20	74	78	84	88	75	79	85	89
20	30	67	71	77	81	68	72	77	82
20	40	62	66	71	76	63	67	72	77
20	60	57	61	65	70	59	63	67	72
30	20	75	79	84	88	76	80	84	88
30	30	67	72	76	80	68	72	77	81
30	40	62	66	70	74	63	67	71	75
30	60	57	61	64	68	58	62	65	69
30	80	54	57	60	64	56	59	61	65
40	20	77	80	85	88	77	81	85	88
40	30	69	73	77	80	69	73	77	81
40	40	63	66	70	74	64	67	71	74
40	60	57	61	64	67	59	62	65	69
40	80	54	57	59	63	56	59	61	65
40	100	52	55	56	60	53	56	58	62
60	30	69	73	77	80	70	74	77	81
60	40	64	67	71	74	64	68	71	75
60	60	58	61	64	67	59	62	65	68
60	80	54	57	59	63	55	59	60	64
60	100	52	55	56	59	53	56	57	61
100	40	66	69	72	76	67	70	73	76
100	60	60	63	65	69	61	64	66	70
100	80	56	59	60	64	57	60	61	65
100	100	54	56	57	60	54	57	58	61

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES

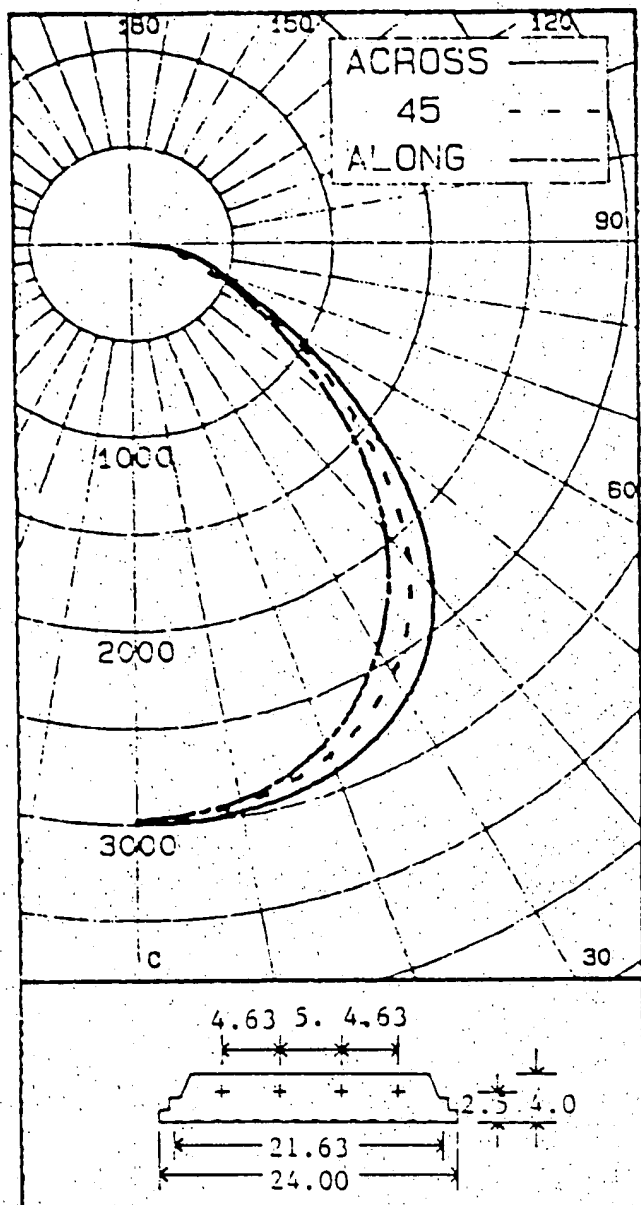


LIGHTING SCIENCES INC.

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CERTIFIED TEST REPORT NO. LSI 3787
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COMMERCIALY AVAILABLE 2 X 4 FLUORESCENT TROFFER
WHITE PAINTED INTERIOR WITH PRISMATIC LENS AND ADVANE RQM-2S40 BALLASTS
FOUR F40T12CW FLUORESCENT LAMPS. LUMEN RATING = 3150 LMS.



CANDLEPOWER SUMMARY

ANGLE	ACROSS	67.5	45	22.5	ALONG	OUTPUT LUMENS
0	2977	2977	2977	2977	2977	
5	2992	2979	2961	2950	2954	283
10	2971	2955	2936	2914	2913	
15	2942	2919	2881	2850	2845	816
20	2896	2865	2806	2756	2743	
25	2820	2787	2708	2635	2604	1250
30	2710	2673	2572	2469	2422	
35	2552	2504	2385	2263	2211	1488
40	2323	2264	2138	2008	1955	
45	2025	1951	1827	1705	1657	1410
50	1651	1597	1485	1368	1322	
55	1272	1232	1150	1052	1005	1033
60	923	895	836	784	750	
65	655	614	563	572	568	606
70	485	428	371	424	454	
75	376	315	270	317	376	342
80	272	226	203	224	274	
85	146	127	113	128	143	140
90	32	32	22	22	25	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LAMP	% FIXTURE
0-30	2349	18.64	31.88
0-40	3836	30.45	52.07
0-60	6280	49.84	85.24
0-90	7367	58.48	100.00
40-90	3531	28.02	47.93
60-90	1087	8.63	14.76
90-180	0	0.00	0.00
0-180	7367	58.48	100.00

** EFFICIENCY = 58.5% **

LUMINANCE SUMMARY - FOOTLAMBERTS

ANGLE	ACROSS	45	ALONG
45	1320	1191	1076
55	1022	924	804
65	715	614	618
75	669	480	666
85	770	594	753

PAINT REFLECTANCE = .75 S/MH = 1.3
SC(ALONG) = 1.2, SC(ACROSS) = 1.3
CERTIFIED BY:

Jan Levin

DATE:
APR 25, 1984

PREPARED FOR:

MAXIMUM TECHNOLOGY
BRISBANE, CA

TESTED IN ACCORDANCE WITH IES PROCEDURES. TEST DISTANCE = 8 METERS (26 FT.)

LIGHTING SCIENCES INC.
7830 E. EVANS ROAD, SCOTTSDALE INDUSTRIAL AIRPARK
SCOTTSDALE, ARIZONA 85260.

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WHITE PAINTED INTERIOR WITH PRISMATIC LENS AND ADVANE RQM-2S40 BALLASTS
FOUR F40T12CW FLUORESCENT LAMPS. LUMEN RATING = 3150 LMS.

CANDLEPOWER DATA
IN 2.5 DEGREE STEPS

ANGLE	PLANE						OUTPUT LUMENS
	ACROSS	67.5	45	22.5	ALONG	AVERAGE	
0.0	2977	2977	2977	2977	2977	2977	
2.5	2993	2985	2968	2959	2963	2972	
5.0	2992	2979	2961	2950	2954	2966	283
7.5	2985	2969	2950	2933	2937	2953	
10.0	2971	2955	2936	2914	2913	2937	
12.5	2959	2939	2913	2888	2883	2915	
15.0	2942	2919	2881	2850	2845	2886	816
17.5	2920	2899	2848	2808	2795	2853	
20.0	2896	2865	2806	2756	2743	2812	
22.5	2862	2829	2764	2699	2681	2766	
25.0	2820	2787	2708	2635	2604	2710	1250
27.5	2771	2733	2644	2558	2519	2645	
30.0	2710	2673	2572	2469	2422	2570	
32.5	2641	2595	2485	2371	2322	2483	
35.0	2552	2504	2385	2263	2211	2383	1488
37.5	2448	2396	2267	2141	2085	2268	
40.0	2323	2264	2138	2008	1955	2137	
42.5	2181	2115	1988	1861	1811	1990	
45.0	2025	1951	1827	1705	1657	1831	1410
47.5	1842	1774	1660	1538	1492	1659	
50.0	1651	1597	1485	1368	1322	1484	
52.5	1458	1412	1318	1207	1159	1311	
55.0	1272	1232	1150	1052	1005	1143	1033
57.5	1089	1058	990	910	869	984	
60.0	923	895	836	784	750	838	
62.5	775	747	694	671	649	706	
65.0	655	614	563	572	568	590	606
67.5	555	509	458	439	505	497	
70.0	485	428	371	424	454	423	
72.5	428	363	308	369	415	365	
75.0	376	315	270	317	376	319	342
77.5	328	269	237	268	332	276	
80.0	272	226	203	224	274	231	
82.5	211	177	161	178	211	182	
85.0	146	127	113	128	143	128	140
87.5	80	75	64	71	73	72	
90.0	32	32	22	22	25	26	

LIGHTING SCIENCES INC.
 7830 E. EVANS ROAD, SCOTTSDALE INDUSTRIAL AIRPARK
 SCOTTSDALE, ARIZONA 85260.

CERTIFIED TEST REPORT NO. LSI 3787
 COMPUTED BY LSI PROGRAM **TEST-LITE**

COMMERCIALY AVAILABLE 2 X 4 FLUORESCENT TROFFER
 WHITE PAINTED INTERIOR WITH PRISMATIC LENS AND ADVANE RQM-2S40 BALLASTS
 FOUR F40T12CW FLUORESCENT LAMPS. LUMEN RATING = 3150 LMS.

AVERAGE LUMINANCE DATA

FOOTLAMBERTS

ANGLE	ACROSS	67.5	45	22.5	ALONG
0	1368	1368	1368	1368	1368
30	1438	1421	1368	1313	1284
40	1393	1361	1283	1207	1172
45	1320	1271	1191	1109	1076
50	1180	1144	1061	981	944
55	1022	989	924	844	804
60	847	824	768	722	689
65	715	669	614	622	618
70	651	575	499	571	610
75	669	560	480	564	666
80	719	598	538	594	725
85	770	670	594	675	753

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES

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FOUR F40T12CW FLUORESCENT LAMPS. LUMEN RATING = 3150 LMS.

COEFFICIENTS OF UTILIZATION

EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

CC	80				70				50				30				10			
WALL	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
1	.65	.62	.60	.58	.63	.61	.59	.57	.58	.57	.55	.56	.55	.54	.54	.53	.52	.5		
2	.59	.55	.52	.49	.58	.54	.51	.48	.52	.50	.47	.50	.48	.46	.49	.47	.45	.4		
3	.55	.50	.45	.42	.54	.49	.45	.42	.47	.44	.41	.45	.43	.40	.44	.42	.40	.3		
4	.51	.45	.40	.36	.50	.44	.40	.36	.42	.39	.36	.41	.38	.35	.40	.37	.35	.3		
5	.47	.40	.35	.31	.45	.39	.35	.31	.38	.34	.31	.37	.33	.31	.36	.33	.30	.2		
6	.43	.36	.31	.28	.42	.35	.31	.27	.34	.30	.27	.33	.30	.27	.33	.29	.27	.2		
7	.40	.32	.28	.24	.39	.32	.27	.24	.31	.27	.24	.30	.26	.24	.30	.26	.24	.2		
8	.37	.29	.24	.21	.36	.29	.24	.21	.28	.24	.21	.27	.23	.21	.27	.23	.21	.2		
9	.34	.26	.22	.18	.33	.26	.21	.18	.25	.21	.18	.25	.21	.18	.24	.21	.18	.1		
10	.31	.24	.19	.16	.31	.24	.19	.16	.23	.19	.16	.22	.19	.16	.22	.18	.16	.1		

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES

LUMINAIRE INPUT WATTS = 169.6

LIGHTING SCIENCES INC.
7830 EAST EVANS ROAD, SCOTTSDALE INDUSTRIAL AIRPARK
SCOTTSDALE, ARIZONA 85260.

CERTIFIED TEST REPORT NO. LSI 3787

LSI PROGRAM ** TEST-LITE **

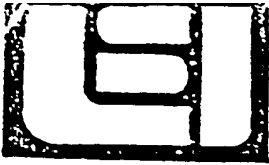
COMMERCIALY AVAILABLE 2 X 4 FLUORESCENT TROFFER
WHITE PAINTED INTERIOR WITH PRISMATIC LENS AND ADVANE RQM-2S40 BALLASTS
FOUR F40T12CW FLUORESCENT LAMPS. LUMEN RATING = 3150 LMS.

IES VISUAL COMFORT PROBABILITY

CC, WALL + FC REFLECTANCES = 80, 50, 20
WORK PLANE ILLUMINATION = 100.0 FOOTCANDLES
WORK PLANE HEIGHT = 2.5 FEET

ROOM DIMENSIONS		LUMINAIRES LENGTHWISE				LUMINAIRES CROSSWISE			
HEIGHT W L		8.5	10.0	13.0	16.0	8.5	10.0	13.0	16.0
20	20	63	68	75	82	61	65	71	78
20	30	55	60	66	73	54	58	62	68
20	40	51	54	60	66	50	53	57	62
20	60	47	50	54	59	46	49	52	56
30	20	65	69	74	80	53	67	71	77
30	30	56	60	65	70	55	59	62	67
30	40	51	54	59	63	50	53	57	60
30	60	47	50	52	57	46	49	51	55
30	80	44	47	49	53	44	46	47	51
40	20	66	70	75	79	65	69	73	77
40	30	58	62	66	70	57	61	64	67
40	40	52	56	59	63	52	55	57	60
40	60	48	50	53	56	47	50	51	54
40	80	45	48	49	52	44	47	48	51
40	100	43	46	46	49	43	45	45	48
60	30	59	63	66	70	58	62	65	68
60	40	53	56	59	63	53	56	58	61
60	60	48	51	53	56	48	50	51	55
60	80	45	48	48	52	45	47	47	51
60	100	43	45	46	49	43	45	45	48
100	40	56	59	61	65	56	59	61	64
100	60	51	53	54	58	51	53	54	57
100	80	48	49	50	53	47	49	49	52
100	100	45	47	47	50	45	46	46	49

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES

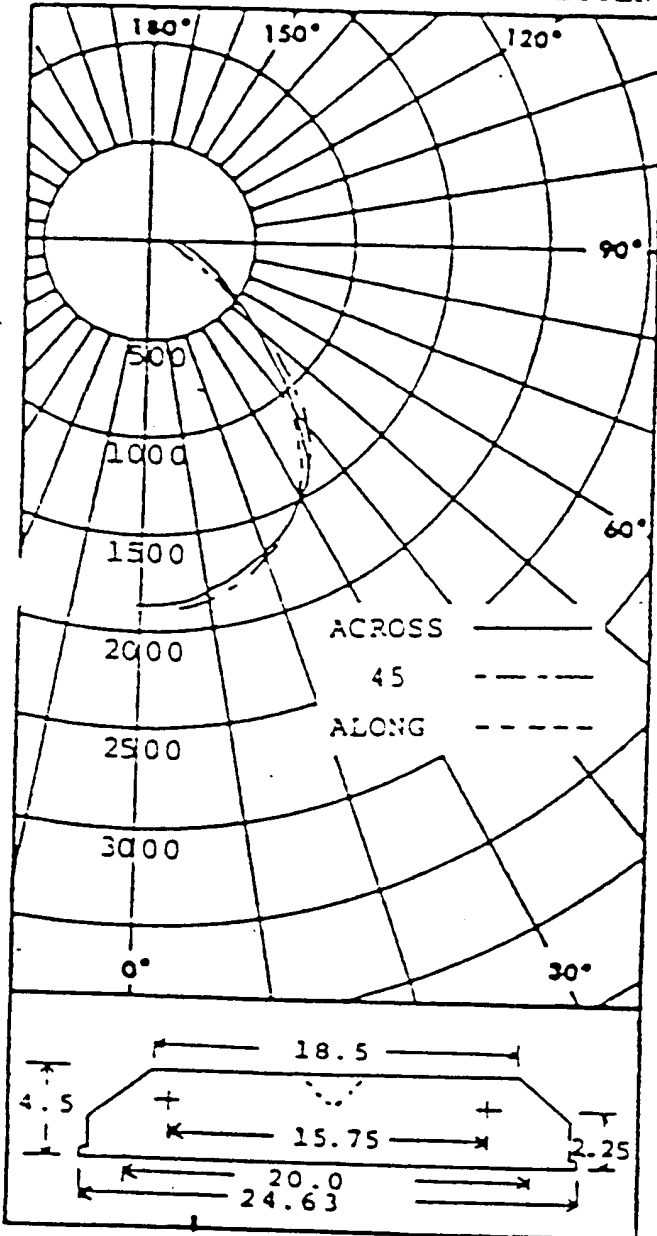


LIGHTING SCIENCES INC.

7830 E. Evans Rd. Scottsdale, Arizona 85260 602-991-9260

CERTIFIED TEST REPORT NO. LSI 3021
COMPUTED BY LSI PROGRAM **TEST-LITE**

COMMERCIALY AVAILABLE 2 X 4 FT. FLUORESCENT TROFFER
WHITE PAINTED HOUSING, PATTERN 12 LENS IN AIR HANDLING DOOR FRAME, W/ REFLECT
TWO P40W FLUORESCENT LAMPS. LUMEN RATING = 3200 LMS.



LUMINANCE SUMMARY - FOOTLAMBERTS

ANGLE	ACROSS	ALONG
45	651	665
55	453	471
65	375	256
75	291	303
85	292	295

CANDLEPOWER SUMMARY

ANGLE	ACROSS	67.5	45	22.5	ALONG	OUTER LUMEN
0	1884	1884	1884	1884	1884	
5	1867	1873	1871	1875	1870	17
10	1827	1836	1836	1844	1842	
15	1758	1773	1778	1791	1791	50
20	1677	1689	1692	1711	1718	
25	1595	1602	1590	1607	1621	74
30	1509	1508	1479	1478	1493	
35	1385	1394	1358	1327	1327	84
40	1177	1205	1193	1139	1111	
45	908	951	926	915	884	71
50	680	695	669	692	688	
55	512	495	465	512	535	45
60	411	341	311	363	424	
65	312	237	214	251	318	26
70	224	173	163	189	234	
75	149	138	128	154	155	15
80	102	104	108	111	104	
85	50	56	60	57	51	6
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LAMP	% FIXTURE
0-30	1420	22.19	36.29
0-40	2265	35.39	57.87
0-60	3439	53.74	87.87
0-90	3914	61.16	100.00
40-90	1648	25.76	42.13
60-90	474	7.42	12.13
90-180	0	0.00	0.00
0-180	3914	61.16	100.00

** EFFICIENCY = 61.16% **

CERTIFIED BY:

Tom Levin

PREPARED FOR:

BENTLEY ENGINEERING CO.
SAN FRANCISCO

S/MH = 1.2
SC = 1.2

DATE:
MAR 25, 1963

TESTED IN ACCORDANCE WITH IES PROCEDURES. TEST DISTANCE

LIGHTING SCIENCES INC.
7830 E. EVANS ROAD, SCOTTSDALE INDUSTRIAL AIRPARK
SCOTTSDALE, ARIZONA 85260.

CERTIFIED TEST REPORT NO. LSI 3021
COMPUTED BY LSI PROGRAM **TEST-LITE**

COMMERCIALY AVAILABLE 2 X 4 FT. FLUORESCENT TROFFER
WHITE PAINTED HOUSING, PATTERN 12 LENS IN AIR HANDLING DOOR FRAME, W/ REFLEC
TWO F40WW FLUORESCENT LAMPS. LUMEN RATING = 3200 LMS.

CANDLEPOWER DATA
IN 2.5 DEGREE STEPS

ANGLE	ACROSS	67.5	45	PLANE 22.5	ALONG	AVERAGE	OUTPUT LUMENS
0.0	1884	1884	1884	1884	1884	1884	
2.5	1878	1881	1879	1882	1878	1880	
5.0	1867	1873	1871	1875	1870	1872	
7.5	1853	1858	1858	1861	1859	1858	178
10.0	1827	1836	1836	1844	1842	1837	
12.5	1795	1808	1809	1820	1820	1811	
15.0	1758	1773	1778	1791	1791	1779	
17.5	1716	1731	1737	1753	1758	1739	503
20.0	1677	1689	1692	1711	1718	1697	
22.5	1636	1647	1640	1662	1673	1651	
25.0	1595	1602	1590	1607	1621	1602	740
27.5	1554	1558	1534	1548	1561	1549	
30.0	1509	1508	1479	1478	1493	1491	
32.5	1455	1457	1421	1406	1415	1430	
35.0	1385	1394	1358	1327	1327	1359	845
37.5	1293	1314	1287	1237	1225	1274	
40.0	1177	1205	1193	1139	1111	1170	
42.5	1047	1084	1066	1030	996	1050	
45.0	908	951	926	915	884	922	716
47.5	787	819	795	798	782	799	
50.0	680	695	669	692	688	685	
52.5	587	589	558	596	603	585	
55.0	512	495	465	512	535	499	458
57.5	456	412	381	434	477	423	
60.0	411	341	311	363	424	358	
62.5	364	283	257	301	370	302	
65.0	312	237	214	251	318	254	262
67.5	266	201	184	215	273	217	
70.0	224	173	163	189	234	188	
72.5	185	152	145	169	194	164	
75.0	149	138	128	154	155	143	154
77.5	123	122	116	135	127	125	
80.0	102	104	108	111	104	106	
82.5	76	82	89	83	76	83	
85.0	56	56	60	57	51	56	60
87.5	24	27	29	26	26	27	
90.0	0	0	0	0	0	0	

RENTLY ENGINEERING CO.

LIGHTING SCIENCES INC.
7830 E. EVANS ROAD, SCOTTSDALE INDUSTRIAL AIRPARK
SCOTTSDALE, ARIZONA 85260.

CERTIFIED TEST REPORT NO. LSI 3021
COMPUTED BY LSI PROGRAM **TEST-LITE**

COMMERCIALY AVAILABLE 2 X 4 FT. FLUORESCENT TROFFER
WHITE PAINTED HOUSING, PATTERN 12 LENS IN AIR HANDLING DOOR FRAME, W/ REFLEC
TWO P40WW FLUORESCENT LAMPS. LUMEN RATING = 3200 LMS.

AVERAGE LUMINANCE DATA

FOOTLAMBERTS

ANGLE	ACROSS	67.5	45	22.5	ALONG	
0	952	952	952	952	952	.60
30	881	882	865	865	871	.53
40	777	798	788	754	733	.55
45	651	682	665	655	632	.54
50	535	548	526	546	541	.57
55	453	437	411	452	471	.52
60	415	345	314	368	429	.55
65	375	284	256	301	380	.53
70	330	255	241	280	346	.53
75	291	270	249	302	303	.54
80	296	303	314	323	302	.54
85	292	324	351	332	295	.55

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES

RECEIVED

APR 11 1968

RECEIVED ENGINEERING CO

LIGHTING SCIENCES INC.
7830 E. EVANS ROAD, SCOTTSDALE INDUSTRIAL AIRPARK
SCOTTSDALE, ARIZONA 85260.

CERTIFIED TEST REPORT NO. LSI 3021
COMPUTED BY LSI PROGRAM **TEST-LITE**

COMMERCIALY AVAILABLE 2 X 4 FT. FLUORESCENT TROFFER
WHITE PAINTED HOUSING, PATTERN 12 LENS IN AIR HANDLING DOOR FRAME, W/ REFLECTOR
TWO P40WW FLUORESCENT LAMPS. LUMEN RATING = 3200 LMS.

COEFFICIENTS OF UTILIZATION

EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

CC	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
WALL	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
1	.65	.63	.61	.66	.64	.62	.60	.62	.60	.59	.59	.58	.57	.57	.56	.55	.55
2	.63	.59	.56	.53	.62	.58	.55	.52	.56	.53	.51	.54	.52	.50	.52	.50	.48
3	.58	.53	.49	.46	.57	.52	.48	.45	.50	.47	.44	.49	.46	.44	.47	.45	.43
4	.54	.48	.43	.40	.53	.47	.43	.40	.46	.42	.39	.44	.41	.39	.43	.40	.38
5	.50	.43	.38	.35	.49	.43	.38	.35	.41	.37	.34	.40	.37	.34	.39	.36	.34
6	.47	.39	.34	.31	.45	.39	.34	.31	.38	.34	.31	.37	.33	.30	.36	.33	.30
7	.43	.36	.31	.28	.42	.35	.31	.27	.34	.30	.27	.33	.30	.27	.33	.29	.27
8	.40	.32	.27	.24	.39	.32	.27	.24	.31	.27	.24	.30	.27	.24	.30	.26	.24
9	.37	.29	.24	.21	.36	.29	.24	.21	.28	.24	.21	.27	.24	.21	.27	.23	.21
10	.34	.27	.22	.19	.34	.26	.22	.19	.26	.22	.19	.25	.21	.19	.25	.21	.18

DESIGNED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES

80.0 WATTS

LUMINAIRE INPUT WATTS = 80.0

DESIGNED BY LSI

LIGHTING SCIENCES INC.
7830 EAST EVANS ROAD, SCOTTSDALE INDUSTRIAL AIRPARK
SCOTTSDALE, ARIZONA 85260.

CERTIFIED TEST REPORT NO. LSI 3021

LSI PROGRAM ** TEST-LITE **

COMMERCIALY AVAILABLE 2 X 4 FT. FLUORESCENT TROFFER
WHITE PAINTED HOUSING, PATTERN 12 LENS IN AIR HANDLING DOOR FRAME, W/ REFLECT
TWO F40WW FLUORESCENT LAMPS. LUMEN RATING = 3200 LMS.

IES VISUAL COMFORT PROBABILITY

CC, WALL + FC REFLECTANCES = 80, 50, 20
WORK PLANE ILLUMINATION = 100.0 FOOTCANDLES
WORK PLANE HEIGHT = 2.5 FEET

ROOM DIMENSIONS		LUMINAIRES LENGTHWISE				LUMINAIRES CROSSWISE			
HEIGHT		8.5	10.0	13.0	16.0	8.5	10.0	13.0	16.0
W	L								
20	20	78	82	87	90	79	82	87	90
20	30	72	76	80	84	73	77	81	84
20	40	69	72	76	79	70	73	77	79
20	60	66	69	72	75	68	70	73	76
30	20	79	83	87	90	80	83	87	90
30	30	73	76	80	83	74	77	80	83
30	40	69	72	75	78	70	73	76	78
30	60	66	68	70	73	67	69	72	74
30	80	64	66	68	71	65	68	69	71
40	20	80	84	88	90	81	84	88	90
40	30	74	77	81	83	74	78	81	84
40	40	69	72	75	78	70	73	76	78
40	60	66	68	70	73	66	69	71	74
40	80	64	66	67	70	65	67	68	71
40	100	63	65	65	68	64	66	66	69
60	30	74	78	81	84	75	78	81	84
60	40	70	72	75	78	70	73	76	78
60	60	66	68	70	73	66	69	71	73
60	80	63	65	66	69	64	66	67	70
60	100	62	64	64	66	63	65	65	68
100	40	72	74	77	80	73	75	77	80
100	80	68	69	71	74	68	70	71	74
100	100	65	66	67	69	66	67	68	70
100	100	64	64	64	67	64	65	65	68

03 DIMENSION DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES

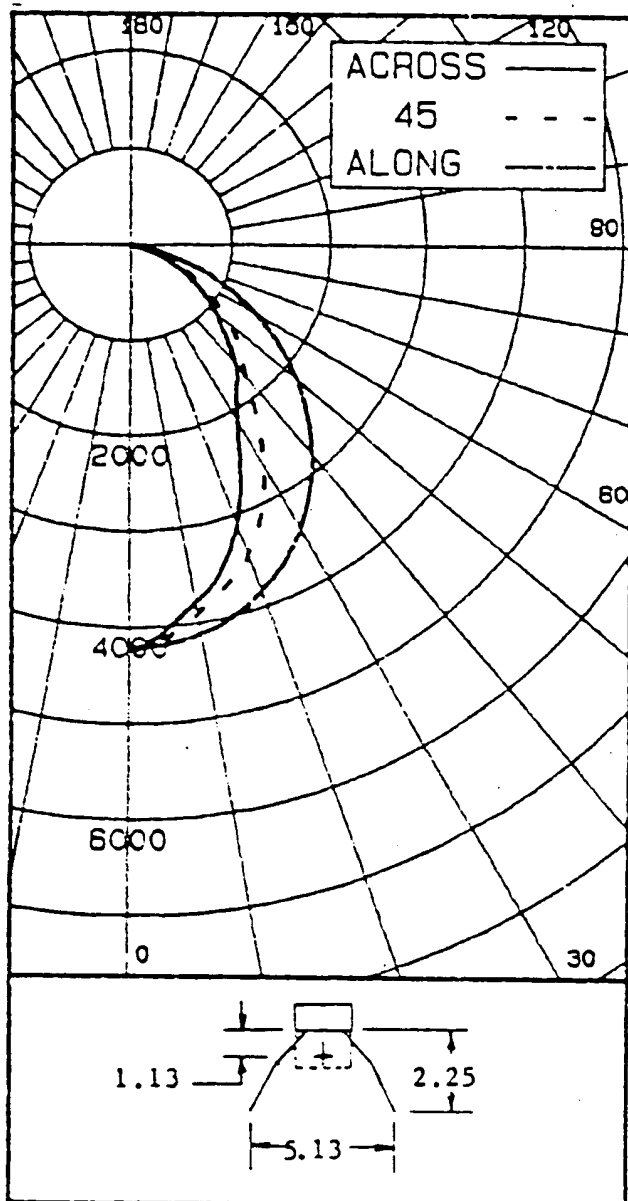


LIGHTING SCIENCES INC.

7830 E. Evans Rd. Scottsdale, Arizona 85260 602-991-9260

CERTIFIED TEST REPORT NO. LSI 3835
COMPUTED BY LSI PROGRAM **TEST-LITE**

COMMERCIALY AVAILABLE 8' FLUORESCENT STRIP LAMP
FOUR BEND SPECULAR REFLECTOR WITH STANDARD UNIVERSAL 481-LH BALLAST
ONE F96T12/CW/HO FLUORESCENT LAMP. LUMEN RATING = 9200 LMS.



CANDLEPOWER SUMMARY

ANGLE	ACROSS 67.5	45	22.5	ALONG	OUTPUT LUMENS
0	4227	4227	4227	4227	
5	4047	4082	4130	4170	391
10	3788	3811	3901	4033	4114
15	3520	3576	3688	3845	4001
20	3113	3207	3440	3616	3843
25	2598	2733	3095	3391	3653
30	2133	2224	2673	3138	3414
35	1831	1877	2210	2828	3141
40	1627	1670	1799	2467	2842
45	1334	1394	1518	2069	2509
50	1104	1127	1293	1635	2176
55	891	936	1018	1239	1817
60	682	711	788	954	1455
65	470	505	577	731	1088
70	260	297	371	483	721
75	74	101	178	289	377
80	0	0	19	128	173
85	0	0	1	8	40
90	0	0	0	0	20

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LAMP	% FIXTURE
0-30	2864	31.13	37.67
0-40	4347	47.25	57.17
0-60	6713	72.97	88.29
0-90	7603	82.65	100.00
40-90	3256	35.40	42.83
60-90	890	9.68	11.71
90-180	0	0.00	0.00
0-180	7603	82.65	100.00

** EFFICIENCY = 82.6% **

LUMINANCE SUMMARY - FOOTLAMBERTS

ANGLE	ACROSS	45	ALONG
45	1717	1893	3078
55	1415	1545	2697
65	1012	1162	2127
75	261	556	1128
85	0	9	273

SC(ALONG) = 1.2, SC(ACROSS) = 0.9
CERTIFIED BY:

Tan Levin

DATE:
MAY 08, 1984

PREPARED FOR:

MAXIMUM TECHNOLOGY
BRISBANE, CA

TESTED IN ACCORDANCE WITH IES PROCEDURES

LIGHTING SCIENCES INC.
7830 E. EVANS ROAD, SCOTTSDALE INDUSTRIAL AIRPARK
SCOTTSDALE, ARIZONA 85260.

CERTIFIED TEST REPORT NO. LSI 3835
COMPUTED BY LSI PROGRAM **TEST-LITE**

COMMERCIALY AVAILABLE 8' FLUORESCENT STRIP LAMP
FOUR BEND SPECULAR REFLECTOR WITH STANDARD UNIVERSAL 481-LH BALLAST
ONE F96T12/CW/HO FLUORESCENT LAMP. LUMEN RATING = 9200 LMS.

CANDLEPOWER DATA
IN 2.5 DEGREE STEPS

ANGLE	ACROSS	67.5	45	PLANE 22.5	ALONG	AVERAGE	OUTPUT LUMENS
0.0	4227	4227	4227	4227	4227	4227	
2.5	4168	4196	4208	4214	4200	4200	
5.0	4047	4082	4130	4170	4188	4125	391
7.5	3912	3944	4030	4108	4154	4029	
10.0	3788	3811	3901	4033	4114	3924	
12.5	3676	3705	3799	3949	4068	3831	
15.0	3520	3576	3638	3845	4001	3717	1048
17.5	3328	3406	3576	3731	3935	3586	
20.0	3113	3207	3440	3616	3843	3435	
22.5	2866	2983	3279	3506	3749	3269	
25.0	2598	2733	3095	3391	3653	3086	1424
27.5	2343	2477	2889	3271	3540	2895	
30.0	2133	2224	2673	3138	3414	2702	
32.5	1974	2032	2437	2988	3285	2522	
35.0	1831	1877	2210	2828	3141	2350	1483
37.5	1747	1765	1983	2650	2998	2193	
40.0	1627	1670	1799	2467	2842	2042	
42.5	1484	1538	1644	2274	2682	1884	
45.0	1334	1394	1518	2069	2509	1725	1339
47.5	1207	1245	1428	1854	2345	1576	
50.0	1104	1127	1293	1635	2176	1424	
52.5	998	1026	1149	1426	1996	1274	
55.0	891	936	1018	1239	1817	1137	1027
57.5	791	814	898	1088	1633	1003	
60.0	682	711	788	954	1455	880	
62.5	578	606	681	849	1265	764	
65.0	470	505	577	731	1088	648	642
67.5	361	396	475	599	909	526	
70.0	260	297	371	483	721	410	
72.5	163	199	274	383	537	301	
75.0	74	101	178	289	377	198	229
77.5	8	31	91	207	258	115	
80.0	0	0	19	128	173	58	
82.5	0	1	7	55	98	28	
85.0	0	0	1	8	40	7	20
87.5	0	0	2	2	14	3	
90.0	0	0	0	0	0	0	

LIGHTING SCIENCES INC.
 7830 E. EVANS ROAD, SCOTTSDALE INDUSTRIAL AIRPARK
 SCOTTSDALE, ARIZONA 85260.

CERTIFIED TEST REPORT NO. LSI 3835
 COMPUTED BY LSI PROGRAM **TEST-LITE**

COMMERCIALY AVAILABLE 8' FLUORESCENT STRIP LAMP
 FOUR BEND SPECULAR REFLECTOR WITH STANDARD UNIVERSAL 481-LH BALLAST
 ONE F96T12/CW/HO FLUORESCENT LAMP. LUMEN RATING = 9200 LMS.

AVERAGE LUMINANCE DATA

FOOTLAMBERTS

ANGLE	ACROSS	67.5	45	22.5	ALONG
0	3834	3834	3834	3834	3834
30	2234	2312	2755	3217	3484
40	1926	1953	2076	2828	3241
45	1717	1762	1893	2549	3078
50	1558	1562	1757	2205	2912
55	1415	1448	1545	1850	2697
60	1236	1255	1354	1617	2447
65	1012	1048	1162	1440	2127
70	690	752	906	1151	1698
75	261	334	556	876	1128
80	0	0	83	542	718
85	0	0	9	58	273

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES

LIGHTING SCIENCES INC.
7830 E. EVANS ROAD, SCOTTSDALE INDUSTRIAL AIRPARK
SCOTTSDALE, ARIZONA 85260.

CERTIFIED TEST REPORT NO. LSI 3835
COMPUTED BY LSI PROGRAM **TEST-LITE**

COMMERCIALY AVAILABLE 8' FLUORESCENT STRIP LAMP
FOUR BEND SPECULAR REFLECTOR WITH STANDARD UNIVERSAL 481-LH BALLAST
ONE F96T12/CW/HO FLUORESCENT LAMP. LUMEN RATING = 9200 LMS.

COEFFICIENTS OF UTILIZATION

EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

CC WALL	80				70				50				30				10			
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
1	.92	.89	.86	.84	.90	.87	.85	.82	.84	.82	.80	.81	.79	.77	.78	.76	.75	.74	.73	.71
	.85	.80	.76	.72	.84	.79	.74	.71	.76	.72	.69	.73	.70	.68	.71	.69	.66	.65	.64	.62
3	.79	.72	.67	.62	.77	.71	.66	.62	.69	.64	.61	.67	.63	.60	.65	.62	.59	.57	.56	.54
4	.73	.65	.59	.54	.72	.64	.59	.54	.62	.57	.53	.60	.56	.53	.59	.55	.52	.50	.49	.47
5	.68	.59	.52	.47	.66	.58	.52	.47	.56	.51	.47	.54	.50	.46	.53	.49	.46	.44	.43	.41
6	.63	.53	.47	.42	.61	.52	.46	.42	.51	.46	.41	.50	.45	.41	.49	.44	.41	.39	.38	.36
7	.58	.48	.42	.37	.57	.48	.42	.37	.46	.41	.37	.45	.40	.37	.44	.40	.36	.35	.34	.32
8	.54	.44	.37	.33	.53	.43	.37	.33	.42	.37	.33	.41	.36	.32	.40	.36	.32	.31	.30	.28
9	.50	.40	.33	.29	.49	.39	.33	.29	.38	.33	.29	.37	.32	.29	.37	.32	.29	.28	.27	.25
10	.47	.36	.30	.26	.46	.36	.30	.26	.35	.30	.26	.34	.29	.26	.34	.29	.25	.24	.23	.21

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES

LUMINAIRE INPUT WATTS = 112.4

LIGHTING SCIENCES INC.
7830 EAST EVANS ROAD, SCOTTSDALE INDUSTRIAL AIRPARK
SCOTTSDALE, ARIZONA 85260.

CERTIFIED TEST REPORT NO. LSI 3835

LSI PROGRAM ** TEST-LITE **

COMMERCIALY AVAILABLE 8' FLUORESCENT STRIP LAMP
FOUR BEND SPECULAR REFLECTOR WITH STANDARD UNIVERSAL 481-LH BALLAST
ONE F96T12/CW/HO FLUORESCENT LAMP. LUMEN RATING = 9200 LMS.

IES VISUAL COMFORT PROBABILITY

CC, WALL + FC REFLECTANCES = 80, 50, 20
WORK PLANE ILLUMINATION = 100.0 FOOTCANDLES
WORK PLANE HEIGHT = 2.5 FEET

ROOM DIMENSIONS		LUMINAIRES LENGTHWISE				LUMINAIRES CROSSWISE			
HEIGHT		8.5	10.0	13.0	16.0	8.5	10.0	13.0	16.0
W	L								
20	20	42	43	50	60	56	56	63	73
20	30	38	37	38	45	60	56	55	61
20	40	38	36	34	36	61	60	56	55
20	60	39	37	33	34	61	60	60	57
30	20	47	47	52	60	57	56	61	70
30	30	43	41	40	46	62	56	53	57
30	40	43	39	36	37	60	58	54	52
30	60	44	39	34	34	60	59	58	54
30	80	45	41	34	34	60	59	58	54
40	20	52	52	54	61	60	58	61	68
40	30	49	45	43	47	63	57	53	56
40	40	48	43	38	38	63	59	54	51
40	60	49	43	36	35	63	59	57	53
40	80	50	45	36	35	63	60	57	53
40	100	52	46	38	35	63	60	57	53
60	30	50	49	46	49	65	59	54	56
60	40	50	47	41	40	65	62	54	51
60	60	51	46	39	37	65	62	57	52
60	80	53	48	38	36	65	62	57	52
60	100	54	50	40	36	65	62	57	52
100	40	50	46	44	47	69	66	58	54
100	60	51	46	43	42	69	66	60	55
100	80	53	49	43	41	69	66	60	55
100	100	56	51	44	41	69	66	60	55

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES

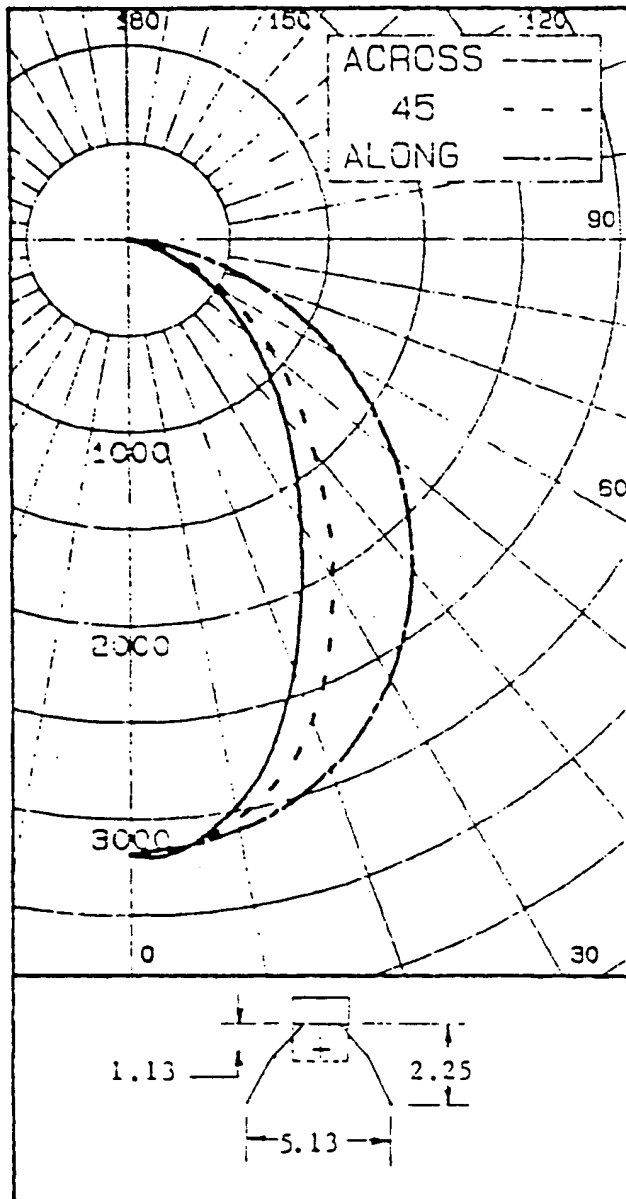


LIGHTING SCIENCES INC.

7830 E. Evans Rd. Scottsdale, Arizona 85260 602-991-9260

CERTIFIED TEST REPORT NO. LSI 3792
COMPUTED BY LSI PROGRAM **TEST-LITE**

COMMERCIALY AVAILABLE 8 FOOT FLUORESCENT STRIP LAMP
4 BEND SPECULAR REFLECTOR AND ADVANCE RSM-175 BALLAST
ONE F96T12CW FLUORESCENT LAMP. LUMEN RATING = 6300 LMS.



CANDLEPOWER SUMMARY

ANGLE	ACROSS	67.5	45	22.5	ALONG	OUTPUT LUMENS
0	3184	3184	3184	3184	3184	
5	3154	3149	3155	3143	3149	299
10	2984	3002	3041	3078	3098	
15	2725	2766	2876	2974	3025	310
20	2382	2438	2649	2834	2917	
25	2020	2087	2350	2661	2787	1098
30	1700	1761	2028	2438	2629	
35	1435	1489	1718	2188	2433	1151
40	1195	1245	1430	1893	2226	
45	979	1027	1186	1600	1993	1023
50	788	817	963	1306	1747	
55	619	669	745	1033	1483	785
60	456	489	555	780	1211	
65	300	332	398	568	935	478
70	151	184	249	373	671	
75	29	52	118	214	413	174
80	0	1	19	92	196	
85	1	1	6	16	65	22
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LAMP	% FIXTURE
0-30	2206	35.03	37.75
0-40	3358	53.31	57.45
0-60	5171	82.08	88.45
0-90	5845	92.79	100.00
40-90	2487	39.48	42.55
60-90	674	10.70	11.54
90-180	0	0.00	0.00
0-180	5845	92.79	100.00

** EFFICIENCY = 92.8% **

LUMINANCE SUMMARY - FOOTLAMBERTS

ANGLE	ACROSS	45	ALONG
45	1245	1509	2528
55	971	1169	2318
65	638	843	1984
75	100	409	1430
85	12	62	668

PAINT REFLECTANCE = .85 S/MH = 0.9
SC(ALONG) = 1.2, SC(ACROSS) = 0.9
CERTIFIED BY:

Tan Lewis

DATE:
APR 25, 1984

PREPARED FOR:

MAXIMUM TECHNOLOGY
BRISBANE, CA

TESTED IN ACCORDANCE WITH IES PROCEDURES. TEST DISTANCE = 8 METERS (26 FT.)

LIGHTING SCIENCES INC.

7830 E. EVANS ROAD, SCOTTSDALE INDUSTRIAL AIRPARK
SCOTTSDALE, ARIZONA 85260.CERTIFIED TEST REPORT NO. LSI 3792
COMPUTED BY LSI PROGRAM **TEST-LITE**COMMERCIALY AVAILABLE 8 FOOT FLUORESCENT STRIP LAMP
4 BEND SPECULAR REFLECTOR AND ADVANCE RSM-175 BALLAST
ONE F96T12CW FLUORESCENT LAMP. LUMEN RATING = 6300 LMS.CANDLEPOWER DATA
IN 2.5 DEGREE STEPS

ANGLE	PLANE						OUTPUT LUMENS
	ACROSS	67.5	45	22.5	ALONG	AVERAGE	
0.0	3184	3184	3184	3184	3184	3184	
2.5	3196	3194	3178	3161	3161	3178	
5.0	3154	3149	3155	3143	3149	3150	299
7.5	3074	3078	3104	3116	3127	3100	
10.0	2984	3002	3041	3078	3098	3040	
12.5	2872	2896	2966	3035	3067	2967	
15.0	2725	2766	2876	2974	3025	2873	810
17.5	2552	2607	2779	2914	2973	2766	
20.0	2382	2438	2649	2834	2917	2643	
22.5	2193	2264	2505	2758	2861	2514	
25.0	2020	2087	2350	2661	2787	2375	1098
27.5	1854	1926	2187	2556	2708	2237	
30.0	1700	1761	2028	2438	2629	2098	
32.5	1565	1618	1873	2314	2531	1963	
35.0	1435	1489	1713	2188	2433	1832	1151
37.5	1312	1377	1568	2048	2332	1704	
40.0	1195	1245	1430	1893	2226	1570	
42.5	1092	1127	1306	1743	2108	1444	
45.0	979	1027	1136	1600	1993	1325	1028
47.5	879	920	1070	1453	1873	1205	
50.0	788	817	963	1306	1747	1089	
52.5	701	727	851	1164	1612	975	
55.0	619	659	745	1033	1483	875	785
57.5	544	566	649	899	1343	764	
60.0	456	489	555	780	1211	664	
62.5	383	409	479	669	1076	572	
65.0	300	332	398	568	935	479	478
67.5	225	256	325	463	803	390	
70.0	151	184	249	373	671	304	
72.5	83	113	182	284	539	223	
75.0	29	52	118	214	413	151	174
77.5	2	10	55	149	301	92	
80.0	0	1	19	92	196	53	
82.5	4	2	5	46	120	29	
85.0	1	1	6	16	65	14	22
87.5	1	1	4	6	35	7	
90.0	0	0	0	0	0	0	

LIGHTING SCIENCES INC.
 7830 E. EVANS ROAD, SCOTTSDALE INDUSTRIAL AIRPARK
 SCOTTSDALE, ARIZONA 85260.

CERTIFIED TEST REPORT NO. LSI 3792
 COMPUTED BY LSI PROGRAM **TEST-LITE**

COMMERCIALY AVAILABLE 8 FOOT FLUORESCENT STRIP LAMP
 4 BEND SPECULAR REFLECTOR AND ADVANCE RSM-175 BALLAST
 ONE F96T12CW FLUORESCENT LAMP. LUMEN RATING = 6300 LMS.

AVERAGE LUMINANCE DATA

FOOTLAMBERTS

ANGLE	ACROSS	67.5	45	22.5	ALONG
0	2855	2855	2855	2855	2855
30	1760	1828	2105	2531	2722
40	1399	1461	1675	2222	2605
45	1245	1306	1509	2031	2528
50	1100	1143	1343	1829	2436
55	971	1049	1169	1617	2318
60	813	878	996	1403	2172
65	638	707	848	1206	1984
70	394	484	655	981	1758
75	100	180	409	745	1430
80	0	6	99	474	1013
85	12	12	62	161	668

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES

LIGHTING SCIENCES INC.
7830 E. EVANS ROAD, SCOTTSDALE INDUSTRIAL AIRPARK
SCOTTSDALE, ARIZONA 85260.

CERTIFIED TEST REPORT NO. LSI 3792
COMPUTED BY LSI PROGRAM **TEST-LITE**

COMMERCIALY AVAILABLE 8 FOOT FLUORESCENT STRIP LAMP
4 BEND SPECULAR REFLECTOR AND ADVANCE RSM-175 BALLAST
ONE F96T12CW FLUORESCENT LAMP. LUMEN RATING = 6300 LMS.

COEFFICIENTS OF UTILIZATION

EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

CC	80				70				50				30				10			
WALL	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
1	1.03	1.00	.97	.94	1.01	.98	.95	.93	.94	.92	.90	.90	.89	.87	.87	.86	.84	.87	.86	.84
2	.96	.90	.85	.81	.94	.88	.84	.80	.85	.81	.78	.82	.79	.76	.80	.77	.75	.79	.77	.75
3	.89	.81	.75	.70	.87	.80	.74	.69	.77	.72	.68	.75	.71	.67	.73	.69	.66	.73	.69	.66
4	.83	.73	.66	.61	.81	.72	.66	.61	.70	.64	.60	.68	.63	.59	.66	.62	.59	.66	.62	.59
5	.76	.66	.59	.53	.74	.65	.58	.53	.63	.57	.53	.61	.56	.52	.60	.55	.51	.60	.55	.51
6	.71	.60	.53	.47	.69	.59	.52	.47	.57	.51	.47	.56	.50	.46	.55	.50	.46	.55	.50	.46
7	.66	.54	.47	.42	.64	.54	.47	.42	.52	.46	.42	.51	.45	.41	.50	.45	.41	.50	.45	.41
8	.61	.49	.42	.37	.60	.48	.42	.37	.47	.41	.37	.46	.41	.36	.45	.40	.36	.45	.40	.36
9	.56	.45	.38	.33	.55	.44	.37	.33	.43	.37	.32	.42	.36	.32	.41	.36	.32	.41	.36	.32
10	.52	.41	.34	.29	.51	.40	.34	.29	.39	.33	.29	.39	.33	.29	.38	.33	.29	.38	.33	.29

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES

LUMINAIRE INPUT WATTS = 90.7

LIGHTING SCIENCES INC.
7830 EAST EVANS ROAD, SCOTTSDALE INDUSTRIAL AIRPARK
SCOTTSDALE, ARIZONA 85260.

CERTIFIED TEST REPORT NO. LSI 3792

LSI PROGRAM ** TEST-LITE **

COMMERCIALLY AVAILABLE 8 FOOT FLUORESCENT STRIP LAMP
4 BEND SPECULAR REFLECTOR AND ADVANCE RSM-175 BALLAST
ONE F96T12CW FLUORESCENT LAMP. LUMEN RATING = 6300 LMS.

IES VISUAL COMFORT PROBABILITY

CC, WALL + FC REFLECTANCES = 80, 50, 20
WORK PLANE ILLUMINATION = 100.0 FOOTCANDLES
WORK PLANE HEIGHT = 2.5 FEET

ROOM DIMENSIONS		LUMINAIRES LENGTHWISE				LUMINAIRES CROSSWISE			
HEIGHT		8.5	10.0	13.0	16.0	8.5	10.0	13.0	16.0
W	L								
20	20	48	50	57	66	68	67	73	81
20	30	43	43	44	51	72	69	67	71
20	40	42	40	39	41	72	72	68	67
20	60	41	39	36	37	72	72	72	70
30	20	54	54	59	67	68	66	71	77
30	30	49	47	46	52	73	68	64	67
30	40	47	44	41	43	73	70	66	64
30	60	46	43	38	38	73	70	70	66
30	80	46	43	37	37	73	70	70	66
40	20	57	59	62	69	70	68	71	76
40	30	53	52	50	54	74	68	64	66
40	40	51	48	44	45	74	70	66	62
40	60	50	47	41	40	74	70	69	65
40	80	50	47	40	39	74	71	69	65
40	100	50	47	40	38	74	71	69	65
60	30	54	55	53	56	75	70	64	65
60	40	53	52	47	47	75	72	66	62
60	60	52	50	44	42	75	72	68	64
60	80	52	50	42	41	76	72	67	64
60	100	52	50	43	40	76	72	68	64
100	40	54	53	50	52	79	75	68	64
100	60	54	52	46	47	79	75	70	66
100	80	55	53	46	45	79	75	70	66
100	100	55	53	46	45	79	75	70	66

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES