



LIGHTING SCIENCES CANADA LTD.

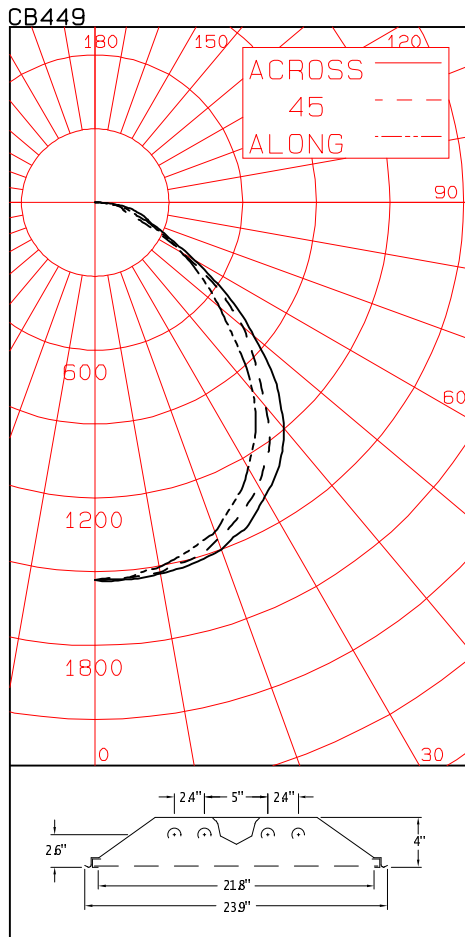
440 Phillip St., Unit 19, Waterloo, Ontario, Canada N2L 5R9
 Tel: (519) 746-3140 Fax: (519) 746-3156 lsc@lightingsciences.ca

CERTIFIED TEST REPORT NO. LSC B449
 COMPUTED BY LSC PROGRAM **TEST-LITE**

PIONEER FLUORESCENT 2'x2' TROFFER LUMINAIRE CAT. NO. TB 22-424-EL
 WITH WHITE PAINTED INTERIOR AND ACRYLIC K12 LENS
 FOUR 17W T8 FLUORESCENT LAMPS. LUMEN RATING = 1400 LMS.
 ONE ADVANCE 120V 3 OR 4-LAMP ELECTRONIC BALLAST NO. REL-4P32-SC

CANDLEPOWER SUMMARY

OUTPUT
LUMENS



ANGLE	ALONG	22.5	45	67.5	ACROSS	
0	1534	1534	1534	1534	1534	
5	1532	1523	1530	1533	1538	148
10	1505	1507	1525	1530	1531	
15	1466	1485	1503	1519	1522	422
20	1425	1430	1456	1490	1501	
25	1341	1370	1398	1432	1457	643
30	1245	1278	1329	1364	1381	
35	1138	1163	1233	1282	1306	760
40	995	1027	1080	1151	1195	
45	815	863	923	992	1044	712
50	659	703	785	815	844	
55	525	539	613	628	657	529
60	405	386	414	448	469	
65	304	281	265	311	325	297
70	227	201	163	239	240	
75	158	146	120	182	200	167
80	112	104	105	133	149	
85	53	45	57	77	80	63
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LAMP	%LUMINAIRE
0-30	1213	21.66	32.42
0-40	1972	35.23	52.73
0-60	3214	57.39	85.90
0-90	3741	66.81	100.00
40-90	1768	31.59	47.27
60-90	527	9.42	14.10
90-180	0	.00	.00
0-180	3741	66.81	100.00

** EFFICIENCY = 66.8% **

LUMINANCE SUMMARY-CD. / SQ. M.

PAINT REFLECTANCE = .82 S/MH = 1.3
 SC (ALONG) = 1.2, SC (ACROSS) = 1.3

ANGLE	ALONG	45	ACROSS
45	3757	4274	4831
55	2985	3498	3752
65	2345	2052	2515
75	1992	1512	2528
85	1966	2125	2999

CERTIFIED BY:

Charles Sisson

DATE:
NOV 24, 2006

PREPARED FOR:

PIONEER LIGHTING
 TORONTO, ONTARIO

TESTED ACCORDING TO IES PROCEDURES. TEST DISTANCE EXCEEDS FIVE TIMES THE GREATEST LUMINOUS OPENING OF LUMINAIRE.

LIGHTING SCIENCES CANADA LTD.
 440 PHILLIP ST., UNIT 19
 WATERLOO, ONTARIO

CERTIFIED TEST REPORT NO. LSC B449
 COMPUTED BY LSC PROGRAM **TEST-LITE**

PIONEER FLUORESCENT 2'x2' TROFFER LUMINAIRE CAT. NO. TB 22-424-EL
 WITH WHITE PAINTED INTERIOR AND ACRYLIC K12 LENS
 FOUR 17W T8 FLUORESCENT LAMPS. LUMEN RATING = 1400 LMS.
 ONE ADVANCE 120V 3 OR 4-LAMP ELECTRONIC BALLAST NO. REL-4P32-SC

CANDLEPOWER DATA
 IN 2.5 DEGREE STEPS

ANGLE	PLANE						OUTPUT LUMENS
	ALONG	22.5	45	67.5	ACROSS	AVERAGE	
.0	1534	1534	1534	1534	1534	1534	
2.5	1540	1529	1528	1531	1534	1531	
5.0	1532	1523	1530	1533	1538	1530	148
7.5	1512	1516	1528	1539	1537	1527	
10.0	1505	1507	1525	1530	1531	1520	
12.5	1485	1495	1506	1518	1527	1506	
15.0	1466	1485	1503	1519	1522	1500	422
17.5	1443	1455	1487	1514	1511	1483	
20.0	1425	1430	1456	1490	1501	1460	
22.5	1379	1403	1430	1459	1471	1429	
25.0	1341	1370	1398	1432	1457	1400	643
27.5	1301	1326	1366	1400	1419	1363	
30.0	1245	1278	1329	1364	1381	1321	
32.5	1192	1220	1276	1323	1347	1272	
35.0	1138	1163	1233	1282	1306	1225	760
37.5	1073	1100	1166	1222	1254	1163	
40.0	995	1027	1080	1151	1195	1088	
42.5	911	945	997	1071	1118	1007	
45.0	815	863	923	992	1044	927	712
47.5	732	777	849	907	945	843	
50.0	659	703	785	815	844	764	
52.5	596	626	694	739	757	684	
55.0	525	539	613	628	657	593	529
57.5	468	472	510	540	560	509	
60.0	405	386	414	448	469	421	
62.5	355	327	335	382	384	354	
65.0	304	281	265	311	325	293	297
67.5	259	230	208	270	279	244	
70.0	227	201	163	239	240	209	
72.5	184	179	134	203	222	180	
75.0	158	146	120	182	200	157	167
77.5	139	127	113	146	174	136	
80.0	112	104	105	133	149	118	
82.5	85	74	88	93	116	89	
85.0	53	45	57	77	80	61	63
87.5	19	15	24	24	31	22	
90.0	0	0	0	0	0	0	

LIGHTING SCIENCES CANADA LTD.
 440 PHILLIP ST., UNIT 19
 WATERLOO, ONTARIO

CERTIFIED TEST REPORT NO. LSC B449
 COMPUTED BY LSC PROGRAM **TEST-LITE**

PIONEER FLUORESCENT 2'x2' TROFFER LUMINAIRE CAT. NO. TB 22-424-EL
 WITH WHITE PAINTED INTERIOR AND ACRYLIC K12 LENS
 FOUR 17W T8 FLUORESCENT LAMPS. LUMEN RATING = 1400 LMS.
 ONE ADVANCE 120V 3 OR 4-LAMP ELECTRONIC BALLAST NO. REL-4P32-SC

AVERAGE LUMINANCE DATA

ANGLE	ALONG	CD. / SQ. M. (FOOTLAMBERTS)			ACROSS
		22.5	45	67.5	
0	5002 (1460)	5002 (1460)	5002 (1460)	5002 (1460)	5002 (1460)
30	4688 (1368)	4827 (1408)	5019 (1465)	5147 (1502)	5199 (1517)
40	4238 (1236)	4382 (1279)	4601 (1343)	4914 (1434)	5087 (1484)
45	3757 (1096)	3985 (1163)	4274 (1247)	4588 (1339)	4831 (1410)
50	3344 (976)	3579 (1044)	3985 (1163)	4148 (1210)	4280 (1249)
55	2985 (871)	3072 (896)	3498 (1021)	3580 (1045)	3752 (1095)
60	2640 (770)	2527 (737)	2701 (788)	2930 (855)	3059 (893)
65	2345 (684)	2169 (633)	2052 (599)	2407 (702)	2515 (734)
70	2166 (632)	1920 (560)	1555 (454)	2282 (666)	2292 (669)
75	1992 (581)	1848 (539)	1512 (441)	2298 (670)	2528 (738)
80	2106 (614)	1966 (573)	1975 (576)	2492 (727)	2800 (817)
85	1966 (573)	1682 (491)	2125 (620)	2891 (843)	2999 (875)

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES

LIGHTING SCIENCES CANADA LTD.
 440 PHILLIP ST., UNIT 19
 WATERLOO, ONTARIO

CERTIFIED TEST REPORT NO. LSC B449
 COMPUTED BY LSC PROGRAM **TEST-LITE**

PIONEER FLUORESCENT 2'x2' TROFFER LUMINAIRE CAT. NO. TB 22-424-EL
 WITH WHITE PAINTED INTERIOR AND ACRYLIC K12 LENS
 FOUR 17W T8 FLUORESCENT LAMPS. LUMEN RATING = 1400 LMS.
 ONE ADVANCE 120V 3 OR 4-LAMP ELECTRONIC BALLAST NO. REL-4P32-SC

COEFFICIENTS OF UTILIZATION

ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

CC WALL	80				70				50				30				10				0
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	.80	.80	.80	.80	.78	.78	.78	.78	.74	.74	.74	.71	.71	.71	.68	.68	.68	.67			
1	.74	.71	.69	.66	.72	.70	.67	.65	.67	.65	.63	.64	.63	.61	.62	.61	.60	.58			
2	.68	.63	.60	.56	.67	.62	.59	.56	.60	.57	.54	.58	.55	.53	.56	.54	.52	.51			
3	.63	.57	.52	.48	.61	.56	.51	.48	.54	.50	.47	.52	.49	.46	.51	.48	.46	.44			
4	.58	.51	.46	.42	.57	.50	.46	.42	.49	.44	.41	.47	.44	.41	.46	.43	.40	.39			
5	.54	.46	.40	.36	.52	.45	.40	.36	.44	.39	.36	.42	.38	.35	.41	.38	.35	.34			
6	.50	.41	.36	.32	.48	.41	.35	.32	.39	.35	.31	.38	.34	.31	.37	.34	.31	.30			
7	.46	.37	.32	.28	.45	.37	.32	.28	.36	.31	.28	.35	.31	.27	.34	.30	.27	.26			
8	.42	.34	.28	.24	.41	.33	.28	.24	.32	.27	.24	.31	.27	.24	.31	.27	.24	.23			
9	.39	.30	.25	.21	.38	.30	.25	.21	.29	.24	.21	.28	.24	.21	.28	.24	.21	.20			
10	.36	.28	.22	.19	.35	.27	.22	.19	.26	.22	.19	.26	.21	.18	.25	.21	.18	.17			

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES
 LUMINAIRE INPUT WATTS = 57.7
 LABORATORY RESULT MAY NOT BE REPRESENTATIVE OF FIELD PERFORMANCE.
 BALLAST FACTORS HAVE NOT BEEN APPLIED.