

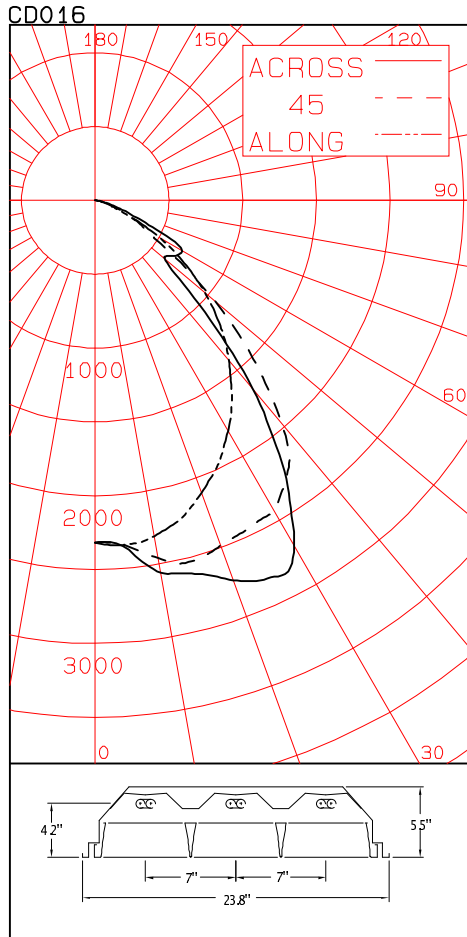


LIGHTING SCIENCES CANADA LTD.

440 Phillip St., Unit 19, Waterloo, Ontario, Canada N2L 5R9
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CERTIFIED TEST REPORT NO. LSC D016
 COMPUTED BY LSC PROGRAM **TEST-LITE**

PIONEER LIGHTING 2x2 RECESSED LUMINAIRE CAT. NO. TBDC 22-3CF-33-EL
 WITH SPECULAR REFLECTOR AND 9-CELL ALUMINUM LOUVER
 THREE 40W BIAXIAL COMPACT FLUORESCENT LAMPS. LUMEN RATING = 3150 LMS.
 ONE SYLVANIA QUICKTRONIC 120V 3-LAMP ELECTRONIC BALLAST NO. QT 3X40/120 DL



CANDLEPOWER SUMMARY

OUTPUT LUMENS

ANGLE	ALONG	22.5	45	67.5	ACROSS	
0	2318	2318	2318	2318	2318	
5	2340	2336	2343	2355	2360	231
10	2309	2332	2459	2533	2559	
15	2235	2333	2530	2603	2617	698
20	2109	2288	2488	2674	2737	
25	1974	2194	2454	2756	2818	1125
30	1804	2043	2424	2706	2703	
35	1616	1866	2272	2332	2238	1296
40	1409	1686	1967	1801	1661	
45	1200	1480	1516	1225	1000	1023
50	972	1204	1058	715	613	
55	736	909	640	585	654	637
60	504	577	389	548	679	
65	274	289	273	416	429	334
70	129	129	158	185	218	
75	73	67	64	85	108	88
80	37	29	21	34	44	
85	0	2	0	0	1	7
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LAMP	%LUMINAIRE
0-30	2053	21.73	37.77
0-40	3350	35.45	61.60
0-60	5010	53.02	92.13
0-90	5438	57.55	100.00
40-90	2088	22.10	38.40
60-90	428	4.53	7.87
90-180	0	.00	.00
0-180	5438	57.55	100.00

** EFFICIENCY = 57.5% **

LUMINANCE SUMMARY-CD. / SQ. M.

S/MH = 1.4

SC(ALONG) = 1.2, SC(ACROSS) = 1.4

ANGLE	ALONG	45	ACROSS
45	6230	7900	5210
55	4712	4110	4203
65	2377	2375	3742
75	1035	903	1544
85	0	0	36

CERTIFIED BY:

Charles Sisson

DATE:
DEC 7, 2007

PREPARED FOR:

PIONEER LIGHTING
 TORONTO, ONTARIO

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

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CANDLEPOWER DATA
 IN 2.5 DEGREE STEPS

ANGLE	PLANE						OUTPUT LUMENS
	ALONG	22.5	45	67.5	ACROSS	AVERAGE	
.0	2318	2318	2318	2318	2318	2318	
2.5	2336	2324	2319	2312	2318	2321	
5.0	2340	2336	2343	2355	2360	2346	231
7.5	2336	2336	2401	2453	2471	2398	
10.0	2309	2332	2459	2533	2559	2440	
12.5	2272	2326	2518	2587	2588	2465	
15.0	2235	2333	2530	2603	2617	2473	698
17.5	2172	2304	2516	2626	2667	2466	
20.0	2109	2288	2488	2674	2737	2468	
22.5	2039	2242	2467	2727	2791	2463	
25.0	1974	2194	2454	2756	2818	2450	1125
27.5	1887	2128	2435	2758	2834	2420	
30.0	1804	2043	2424	2706	2703	2357	
32.5	1717	1953	2350	2536	2470	2233	
35.0	1616	1866	2272	2332	2238	2099	1296
37.5	1509	1773	2161	2079	1948	1935	
40.0	1409	1686	1967	1801	1661	1747	
42.5	1314	1583	1740	1507	1326	1537	
45.0	1200	1480	1516	1225	1000	1330	1023
47.5	1085	1363	1287	954	737	1129	
50.0	972	1204	1058	715	613	942	
52.5	854	1071	835	609	618	813	
55.0	736	909	640	585	654	707	637
57.5	620	742	475	571	677	609	
60.0	504	577	389	548	679	526	
62.5	385	429	337	509	609	443	
65.0	274	289	273	416	429	332	334
67.5	181	205	218	289	302	238	
70.0	129	129	158	185	218	161	
72.5	90	88	105	125	154	110	
75.0	73	67	64	85	108	77	88
77.5	49	46	41	61	72	52	
80.0	37	29	21	34	44	31	
82.5	7	8	8	5	16	8	
85.0	0	2	0	0	1	1	7
87.5	0	0	0	0	0	0	
90.0	0	0	0	0	0	0	

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AVERAGE LUMINANCE DATA

ANGLE	ALONG	CD. / SQ. M. (FOOTLAMBERTS)			
		22.5	45	67.5	ACROSS
0	8507(2482)	8507(2482)	8507(2482)	8507(2482)	8507(2482)
30	7644(2231)	8682(2534)	10301(3006)	11495(3355)	11455(3343)
40	6751(1970)	8101(2364)	9433(2753)	8651(2525)	7959(2322)
45	6230(1818)	7692(2245)	7900(2305)	6377(1861)	5210(1520)
50	5548(1619)	6899(2013)	6039(1762)	4094(1194)	3499(1021)
55	4712(1375)	5826(1700)	4110(1199)	3755(1096)	4203(1226)
60	3699(1079)	4247(1239)	2859(834)	4033(1177)	4982(1454)
65	2377(694)	2510(732)	2375(693)	3624(1057)	3742(1092)
70	1388(405)	1389(405)	1696(495)	1984(579)	2337(682)
75	1035(302)	960(280)	903(263)	1209(353)	1544(450)
80	785(229)	625(182)	435(126)	714(208)	920(268)
85	0(0)	90(26)	0(0)	0(0)	36(10)

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES

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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	.69	.69	.69	.69	.67	.67	.67	.67	.64	.64	.64	.61	.61	.61	.59	.59	.59	.58			
1	.64	.62	.61	.59	.63	.61	.60	.58	.59	.57	.56	.57	.56	.55	.55	.54	.53	.52			
2	.60	.57	.54	.52	.59	.56	.53	.51	.54	.52	.50	.52	.50	.49	.51	.49	.48	.47			
3	.56	.52	.48	.45	.55	.51	.48	.45	.49	.46	.44	.48	.45	.43	.46	.45	.43	.42			
4	.53	.47	.43	.40	.51	.46	.43	.40	.45	.42	.40	.44	.41	.39	.43	.40	.39	.37			
5	.49	.43	.39	.36	.48	.42	.38	.35	.41	.38	.35	.40	.37	.35	.39	.37	.34	.33			
6	.46	.39	.35	.32	.44	.39	.35	.32	.38	.34	.31	.37	.34	.31	.36	.33	.31	.30			
7	.42	.35	.31	.28	.41	.35	.31	.28	.34	.30	.28	.33	.30	.28	.33	.30	.27	.26			
8	.39	.32	.28	.25	.38	.32	.28	.25	.31	.28	.25	.31	.27	.25	.30	.27	.25	.24			
9	.36	.30	.25	.22	.36	.29	.25	.22	.29	.25	.22	.28	.25	.22	.27	.24	.22	.21			
10	.34	.27	.23	.20	.33	.27	.23	.20	.26	.22	.20	.26	.22	.20	.25	.22	.20	.19			

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES
 LUMINAIRE INPUT WATTS = 104.0
 LABORATORY RESULT MAY NOT BE REPRESENTATIVE OF FIELD PERFORMANCE.
 BALLAST FACTORS HAVE NOT BEEN APPLIED.