



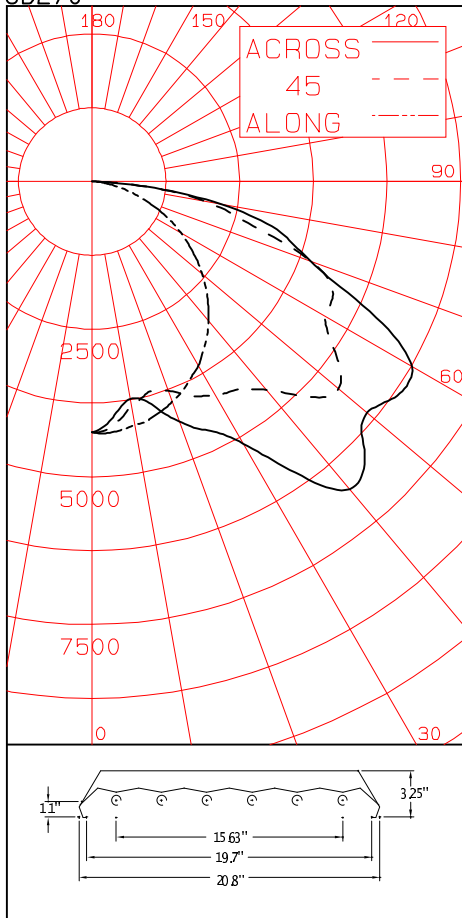
# LIGHTING SCIENCES CANADA LTD.

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 D270  
 COMPUTED BY LSC PROGRAM \*\*TEST-LITE\*\*

PIONEER LIGHTING 4' HIBAY FLUORESCENT LUMINAIRE CAT. NO. HB 648-T5HO  
 WITH SPECULAR REFLECTOR  
 SIX 54W T5 HO FLUORESCENT LAMPS. LUMEN RATING = 4450 LMS.  
 ONE ADVANCE 120-277V 1 TO 4-LAMP ELECTRONIC BALLAST NO. ICN-4S54-90C-2LS-G  
 ONE ADVANCE 120-277V 1 OR 2-LAMP ELECTRONIC BALLAST NO. ICN-2S54-90C

CD270



### CANDLEPOWER SUMMARY

### OUTPUT LUMENS

ANGLE	ALONG	22.5	45	67.5	ACROSS	
0	4248	4248	4248	4248	4248	
5	4252	4217	4141	4065	4005	393
10	4189	4100	3857	3767	3738	
15	4105	3866	3694	3824	3903	1099
20	3967	3647	3772	4180	4315	
25	3795	3449	4011	4482	4646	1872
30	3605	3326	4185	4780	5126	
35	3351	3257	4301	5519	6020	2806
40	3070	3255	4608	6323	6800	
45	2761	3178	5153	6456	6544	3718
50	2431	3052	5458	5879	6088	
55	2085	2935	5026	5835	6320	4036
60	1735	2992	4564	5922	6265	
65	1371	3012	4511	5267	5199	3888
70	1001	2520	3952	3919	3948	
75	664	2116	2735	3174	3313	2633
80	358	1516	1977	2243	2238	
85	124	646	810	829	798	816
90	0	0	0	0	0	

### ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LAMP	%LUMINAIRE
0-30	3363	12.60	15.82
0-40	6170	23.11	29.02
0-60	13923	52.15	65.49
0-90	21260	79.63	100.00
40-90	15090	56.52	70.98
60-90	7336	27.48	34.51
90-180	0	.00	.00
0-180	21260	79.63	100.00

\*\* EFFICIENCY = 79.6% \*\*

### LUMINANCE SUMMARY-CD. / SQ. M.

ANGLE	ALONG	45	ACROSS
45	6765	12676	16099
55	6298	15244	19169
65	5623	18565	21403
75	4446	18332	22271
85	2467	16154	15930

S/MH = 2.1

SC (ALONG) = 1.3, SC (ACROSS) = 2.1

CERTIFIED BY:

*Charles Sisson*

DATE:  
JUN 17, 2008

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	4248	4248	4248	4248	4248	4248	
2.5	4267	4253	4227	4183	4165	4220	
5.0	4252	4217	4141	4065	4005	4138	393
7.5	4222	4165	4008	3879	3830	4020	
10.0	4189	4100	3857	3767	3738	3922	
12.5	4164	3999	3772	3728	3768	3866	
15.0	4105	3866	3694	3824	3903	3847	1099
17.5	4042	3766	3708	3976	4132	3884	
20.0	3967	3647	3772	4180	4315	3935	
22.5	3896	3548	3882	4334	4510	3992	
25.0	3795	3449	4011	4482	4646	4040	1872
27.5	3693	3376	4096	4608	4826	4085	
30.0	3605	3326	4185	4780	5126	4164	
32.5	3473	3296	4244	5062	5540	4277	
35.0	3351	3257	4301	5519	6020	4441	2806
37.5	3218	3254	4433	5991	6531	4638	
40.0	3070	3255	4608	6323	6800	4780	
42.5	2919	3233	4856	6529	6769	4865	
45.0	2761	3178	5153	6456	6544	4860	3718
47.5	2609	3126	5396	6214	6198	4785	
50.0	2431	3052	5458	5879	6088	4662	
52.5	2271	2975	5321	5796	6186	4580	
55.0	2085	2935	5026	5835	6320	4500	4036
57.5	1915	2926	4731	5932	6358	4431	
60.0	1735	2992	4564	5922	6265	4369	
62.5	1553	3055	4547	5753	5853	4264	
65.0	1371	3012	4511	5267	5199	4019	3888
67.5	1181	2822	4343	4601	4441	3645	
70.0	1001	2520	3952	3919	3948	3216	
72.5	831	2258	3348	3454	3599	2819	
75.0	664	2116	2735	3174	3313	2503	2633
77.5	506	1907	2375	2768	2837	2180	
80.0	358	1516	1977	2243	2238	1759	
82.5	234	1047	1450	1550	1495	1228	
85.0	124	646	810	829	798	687	816
87.5	26	200	254	254	242	211	
90.0	0	0	0	0	0	0	

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AVERAGE LUMINANCE DATA

ANGLE	ALONG	CD. / SQ. M. (FOOTLAMBERTS)			ACROSS
		22.5	45	67.5	
0	7361( 2148)	7361( 2148)	7361( 2148)	7361( 2148)	7361( 2148)
30	7214( 2105)	6675( 1948)	8396( 2450)	9588( 2798)	10257( 2993)
40	6944( 2026)	7384( 2155)	10433( 3045)	14342( 4185)	15384( 4490)
45	6765( 1974)	7799( 2276)	12676( 3699)	15870( 4631)	16099( 4698)
50	6553( 1912)	8260( 2410)	14717( 4295)	15894( 4639)	16413( 4790)
55	6298( 1838)	8882( 2592)	15244( 4449)	17684( 5161)	19169( 5594)
60	6013( 1754)	10404( 3036)	15834( 4621)	20578( 6006)	21715( 6338)
65	5623( 1641)	12363( 3608)	18565( 5418)	21669( 6324)	21403( 6246)
70	5073( 1480)	12814( 3740)	20082( 5861)	19902( 5808)	20005( 5838)
75	4446( 1297)	14224( 4151)	18332( 5350)	21324( 6223)	22271( 6500)
80	3574( 1043)	15184( 4431)	19809( 5781)	22418( 6543)	22340( 6520)
85	2467( 720)	12892( 3762)	16154( 4714)	16544( 4828)	15930( 4649)

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	.95	.95	.95	.95	.93	.93	.93	.93	.88	.88	.88	.85	.85	.85	.81	.81	.81	.81	.81	.81	.81	.80
1	.85	.81	.77	.74	.83	.79	.76	.72	.76	.73	.70	.72	.70	.68	.70	.68	.66	.66	.66	.66	.66	.64
2	.76	.69	.63	.57	.74	.67	.62	.57	.64	.60	.55	.62	.58	.54	.59	.56	.53	.53	.53	.53	.53	.51
3	.69	.59	.52	.46	.67	.58	.51	.46	.56	.50	.45	.53	.48	.44	.51	.47	.43	.43	.43	.43	.43	.42
4	.62	.52	.44	.38	.60	.51	.43	.38	.48	.42	.37	.46	.41	.37	.45	.40	.36	.36	.36	.36	.36	.34
5	.56	.45	.36	.30	.54	.44	.36	.30	.42	.35	.30	.40	.34	.30	.38	.33	.29	.29	.29	.29	.29	.27
6	.51	.39	.31	.26	.49	.38	.31	.25	.37	.30	.25	.35	.29	.25	.34	.29	.24	.24	.24	.24	.24	.23
7	.46	.35	.27	.22	.45	.34	.27	.21	.33	.26	.21	.31	.25	.21	.30	.25	.21	.21	.21	.21	.21	.19
8	.43	.31	.23	.18	.41	.30	.23	.18	.29	.22	.18	.28	.22	.17	.27	.21	.17	.17	.17	.17	.17	.16
9	.39	.27	.20	.15	.38	.27	.20	.15	.26	.19	.15	.25	.19	.15	.24	.18	.14	.14	.14	.14	.14	.13
10	.36	.25	.17	.13	.35	.24	.17	.13	.23	.17	.13	.22	.17	.13	.22	.16	.12	.12	.12	.12	.12	.11

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES  
 LUMINAIRE INPUT WATTS = 328.0  
 LABORATORY RESULT MAY NOT BE REPRESENTATIVE OF FIELD PERFORMANCE.  
 BALLAST FACTORS HAVE NOT BEEN APPLIED.