

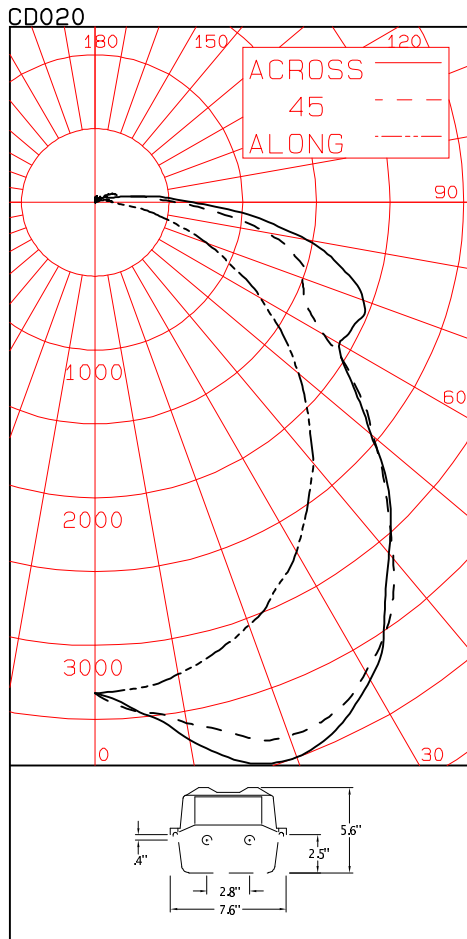


LIGHTING SCIENCES CANADA LTD.

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. LSCD020
 COMPUTED BY LSC PROGRAM **TEST-LITE**

PIONEER LIGHTING 8' VAPOURTITE LUMINAIRE CAT. NO. TO 296T-T5HO-EL
 WITH SPECULAR REFLECTOR AND PATTERNED ACRYLIC LENS
 FOUR 54W T5 HO FLUORESCENT LAMPS. LUMEN RATING = 4400 LMS.
 ONE ADVANCE 120-277V 1 TO 4-LAMP ELECTRONIC BALLAST NO. ICN-4S54-90C-2LS-G



CANDLEPOWER SUMMARY

OUTPUT LUMENS

ANGLE	ALONG	22.5	45	67.5	ACROSS	3325
0	3325	3325	3325	3325	3325	3325
5	3302	3323	3464	3431	3465	334
15	3155	3355	3731	3908	3928	1029
25	2892	3325	3819	3911	3917	1662
35	2510	3116	3473	3425	3421	2023
45	2046	2659	2787	2809	2824	2057
55	1554	2030	2153	2121	2123	1822
65	1026	1401	1571	1956	1945	1592
75	567	875	1403	1760	1737	1364
85	189	507	849	1081	1081	840
90	114	328	553	653	664	
95	110	229	375	399	441	356
105	75	133	182	133	121	147
115	19	62	136	94	89	81
125	0	8	70	46	56	36
135	0	0	61	6	37	17
145	0	0	16	0	17	7
155	0	0	0	0	0	1
165	0	0	0	0	0	0
175	0	0	0	0	0	0
180	0	0	0	0	0	0

ZONE	LUMENS	% LAMP	%LUMINAIRE
0-30	3023	17.18	22.62
0-40	5046	28.67	37.76
0-60	8925	50.71	66.78
0-90	12720	72.28	95.17
40-90	7673	43.60	57.41
60-90	3795	21.56	28.40
90-180	645	3.66	4.83
0-180	13365	75.94	100.00

** EFFICIENCY = 76.0% **

LUMINANCE SUMMARY-CD. / SQ. M.

S/MH = 1.5

SC(ALONG) = 1.2, SC(ACROSS) = 1.5

ANGLE	ALONG	45	ACROSS
45	6406	7071	6707
55	5933	6170	5588
65	5226	5361	5940
75	4539	6130	6559
85	3817	5418	5562

CERTIFIED BY:

Charles Sisson

DATE:
DEC 11, 2007

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. LSCD020
 COMPUTED BY LSC PROGRAM **TEST-LITE**

PIONEER LIGHTING 8' VAPOUR TITE LUMINAIRE CAT. NO. TO 296T-T5HO-EL
 WITH SPECULAR REFLECTOR AND PATTERNED ACRYLIC LENS
 FOUR 54W T5 HO FLUORESCENT LAMPS. LUMEN RATING = 4400 LMS.
 ONE ADVANCE 120-277V 1 TO 4-LAMP ELECTRONIC BALLAST NO. ICN-4S54-90C-2LS-G

CANDLEPOWER DATA

ANGLE	PLANE						OUTPUT LUMENS
	ALONG	22.5	45	67.5	ACROSS	AVERAGE	
0	3325	3325	3325	3325	3325	3325	
5	3302	3323	3464	3431	3465	3400	334
10	3244	3355	3579	3683	3698	3522	
15	3155	3355	3731	3908	3928	3634	1029
20	3048	3351	3843	4004	3999	3680	
25	2892	3325	3819	3911	3917	3615	1662
30	2733	3246	3673	3737	3733	3472	
35	2510	3116	3473	3425	3421	3245	2023
40	2303	2941	3146	3108	3102	2974	
45	2046	2659	2787	2809	2824	2673	2057
50	1800	2354	2463	2459	2442	2349	
55	1554	2030	2153	2121	2123	2036	1822
60	1298	1683	1792	1897	1913	1744	
65	1026	1401	1571	1956	1945	1604	1592
70	800	1116	1499	1950	1937	1483	
75	567	875	1403	1760	1737	1298	1364
80	392	723	1179	1433	1459	1065	
85	189	507	849	1081	1081	768	840
90	114	328	553	653	664	481	
95	110	229	375	399	441	319	356
100	96	157	227	210	231	190	
105	75	133	182	133	121	136	147
110	39	60	152	96	96	94	
115	19	62	136	94	89	86	81
120	8	27	105	63	68	58	
125	0	8	70	46	56	38	36
130	0	12	44	33	33	26	
135	0	0	61	6	37	21	17
140	0	0	52	0	24	15	
145	0	0	16	0	17	6	7
150	0	0	0	0	6	1	
155	0	0	0	0	0	0	1
160	0	0	0	0	0	0	
165	0	0	0	0	0	0	0
170	0	0	0	0	0	0	
175	0	0	0	0	0	0	0
180	0	0	0	0	0	0	

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

CERTIFIED TEST REPORT NO. LSCD020
 COMPUTED BY LSC PROGRAM **TEST-LITE**

PIONEER LIGHTING 8' VAPOURTITE LUMINAIRE CAT. NO. TO 296T-T5HO-EL
 WITH SPECULAR REFLECTOR AND PATTERNED ACRYLIC LENS
 FOUR 54W T5 HO FLUORESCENT LAMPS. LUMEN RATING = 4400 LMS.
 ONE ADVANCE 120-277V 1 TO 4-LAMP ELECTRONIC BALLAST NO. ICN-4S54-90C-2LS-G

AVERAGE LUMINANCE DATA

ANGLE	ALONG	CD. / SQ. M. (FOOTLAMBERTS)			
		22.5	45	67.5	ACROSS
0	7551(2203)	7551(2203)	7551(2203)	7551(2203)	7551(2203)
30	7061(2060)	7813(2280)	8352(2437)	8212(2396)	8115(2368)
40	6684(1951)	7705(2248)	7607(2220)	7188(2098)	7076(2065)
45	6406(1869)	7370(2151)	7071(2063)	6754(1971)	6707(1957)
50	6172(1801)	7007(2045)	6580(1920)	6200(1809)	6051(1766)
55	5933(1731)	6551(1912)	6170(1800)	5671(1655)	5588(1631)
60	5645(1647)	6001(1751)	5546(1618)	5438(1587)	5368(1566)
65	5226(1525)	5608(1636)	5361(1564)	6100(1780)	5940(1733)
70	4963(1448)	5160(1506)	5724(1670)	6708(1958)	6493(1895)
75	4539(1325)	4822(1407)	6130(1789)	6833(1994)	6559(1914)
80	4473(1305)	4971(1451)	6104(1781)	6410(1871)	6306(1840)
85	3817(1114)	4673(1364)	5418(1581)	5787(1689)	5562(1623)

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES

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

CERTIFIED TEST REPORT NO. LSCD020
 COMPUTED BY LSC PROGRAM **TEST-LITE**

PIONEER LIGHTING 8' VAPOURTITE LUMINAIRE CAT. NO. TO 296T-T5HO-EL
 WITH SPECULAR REFLECTOR AND PATTERNED ACRYLIC LENS
 FOUR 54W T5 HO FLUORESCENT LAMPS. LUMEN RATING = 4400 LMS.
 ONE ADVANCE 120-277V 1 TO 4-LAMP ELECTRONIC BALLAST NO. ICN-4S54-90C-2LS-G

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	.90	.90	.90	.90	.87	.87	.87	.87	.82	.82	.82	.78	.78	.78	.74	.74	.74	.74	.74	.74	.74	.72
1	.81	.77	.73	.70	.78	.75	.71	.68	.70	.68	.65	.67	.65	.63	.64	.62	.60	.60	.60	.60	.60	.58
2	.73	.66	.61	.56	.71	.64	.59	.55	.61	.57	.53	.58	.54	.51	.55	.52	.50	.50	.50	.50	.50	.48
3	.66	.58	.52	.46	.64	.57	.51	.46	.54	.49	.45	.51	.47	.43	.49	.45	.42	.42	.42	.42	.42	.40
4	.61	.51	.45	.39	.59	.50	.44	.39	.48	.42	.38	.46	.41	.37	.43	.39	.36	.36	.36	.36	.36	.34
5	.56	.45	.38	.33	.53	.44	.38	.33	.42	.36	.32	.40	.35	.31	.38	.34	.31	.31	.31	.31	.31	.29
6	.51	.41	.34	.29	.49	.40	.33	.28	.38	.32	.28	.36	.31	.27	.35	.30	.26	.26	.26	.26	.26	.25
7	.47	.36	.30	.25	.46	.36	.29	.24	.34	.28	.24	.33	.27	.24	.31	.27	.23	.23	.23	.23	.23	.22
8	.43	.33	.26	.21	.42	.32	.26	.21	.31	.25	.21	.29	.24	.20	.28	.24	.20	.20	.20	.20	.20	.19
9	.40	.29	.23	.18	.39	.29	.23	.18	.28	.22	.18	.26	.21	.18	.25	.21	.17	.17	.17	.17	.17	.16
10	.37	.27	.20	.16	.36	.26	.20	.16	.25	.20	.16	.24	.19	.15	.23	.19	.15	.15	.15	.15	.15	.14

DETERMINED IN ACCORDANCE WITH CURRENT IES PUBLISHED PROCEDURES
 LUMINAIRE INPUT WATTS = 210.0
 LABORATORY RESULT MAY NOT BE REPRESENTATIVE OF FIELD PERFORMANCE.
 BALLAST FACTORS HAVE NOT BEEN APPLIED.