



LIGHTING SCIENCES CANADA LTD.

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CERTIFIED TEST REPORT NO. LSC D096

RELUME TECHNOLOGIES OUTDOOR LED LUMINAIRE CAT. NO. R-30
WITH BLACK/DIFFUSE REFLECTORS AND CLEAR LENS
36 WHITE LEDS. LUMEN OUTPUT = 4343 LMS.
(OPERATED FOR 1000 HOURS)

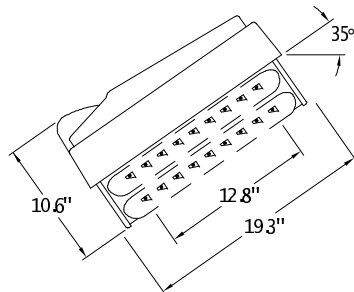
IESNA CUTOFF CLASSIFICATION: CUTOFF

REPORT PREPARED FOR:

THE CITY OF WELLAND
WELLAND, ONTARIO
UPON REQUEST FROM:
TABIA - GREEN TBIZ PROGRAM

CERTIFIED BY:

A handwritten signature in cursive script, reading "Charles Lison". The signature is written in black ink and is positioned to the right of the "CERTIFIED BY:" text.



DATE: JAN 24, 2008

LABORATORY RESULTS MAY NOT BE REPRESENTATIVE OF FIELD PERFORMANCE.
ABSOLUTE PHOTOMETRY TAKEN. BALLAST FACTORS HAVE BEEN APPLIED.

TESTED IN 30 PLANES LEFT SIDE, 30 PLANES RIGHT SIDE, LEFT AND RIGHT AVERAGED

VERTICAL TEST INCREMENTS ARE 2.5 DEGREES.

TEST DISTANCE EXCEEDS FIVE TIMES THE GREATEST
LUMINOUS OPENING OF LUMINAIRE.

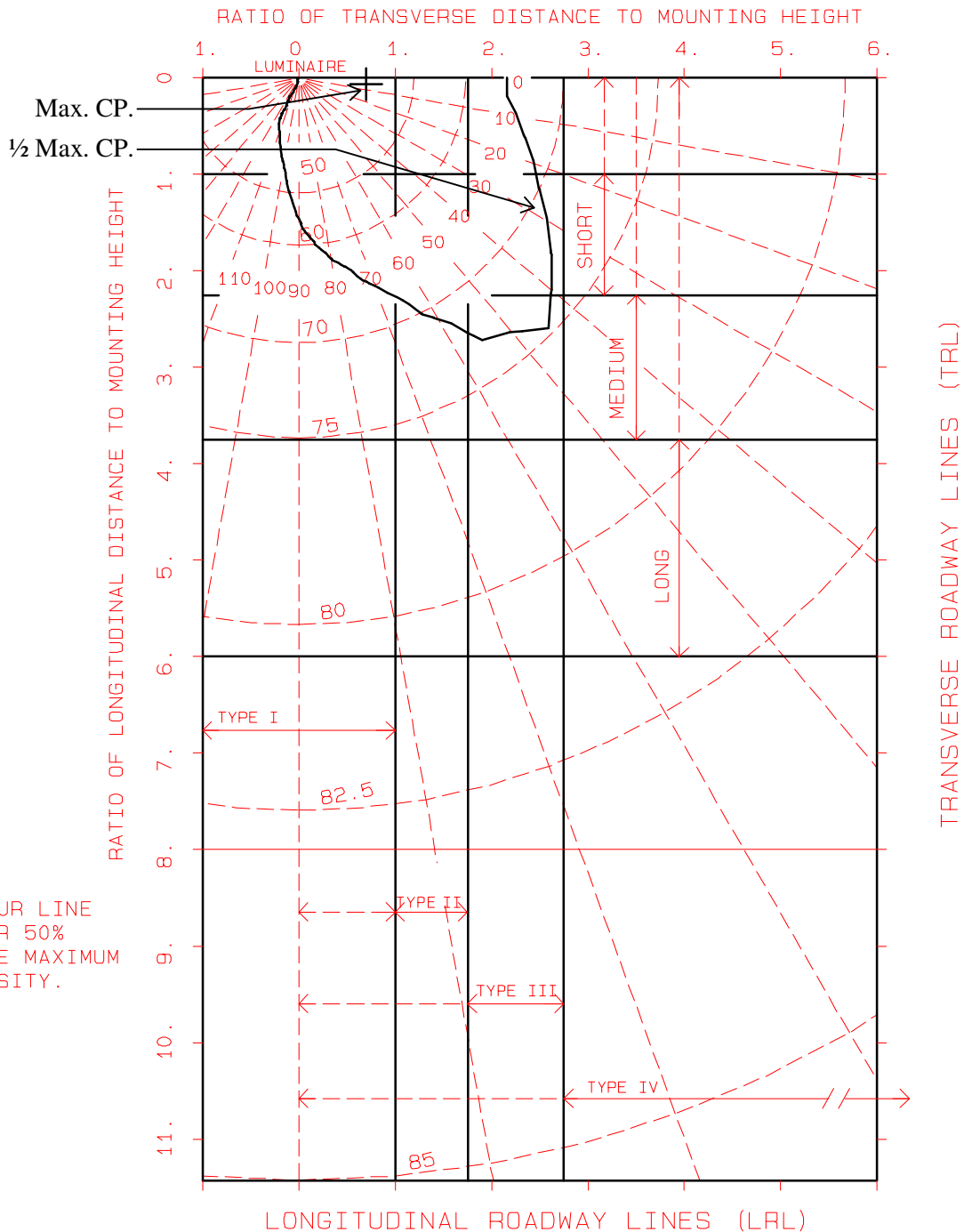
TESTED IN ACCORDANCE WITH IES RECOMMENDED PROCEDURES

LIGHTING SCIENCES CANADA LTD.

440 PHILLIP ST., UNIT 19
WATERLOO, ONTARIO

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IES CLASSIFICATION: TYPE III, VERY SHORT

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UTILIZATION TABLE

CO-EFFICIENT OF UTILIZATION

RATIO	HOUSE SIDE	STREET SIDE	TOTAL
.5	.161	.284	.445
1.0	.202	.509	.711
1.5	.209	.633	.843
2.0	.212	.699	.911
2.5	.212	.734	.947
3.0	.212	.753	.965
3.5	.213	.766	.978
4.0	.213	.772	.985
5.0	.213	.780	.993
TOTAL:	.213	.786	.999

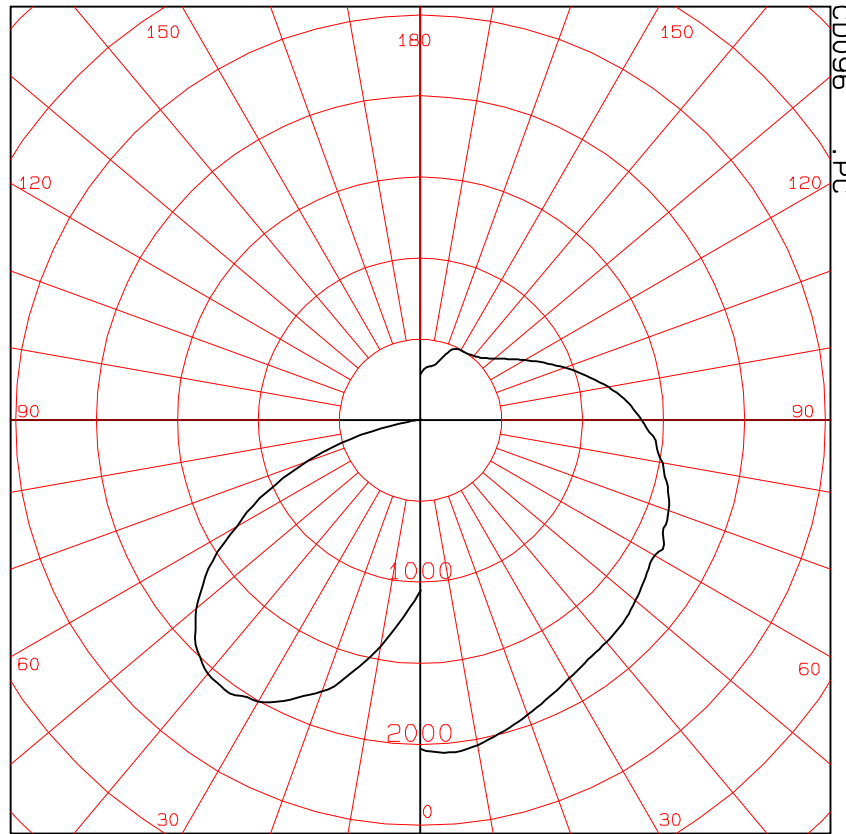
PERCENTAGE OUTPUTS

DOWNWARD:	STREET SIDE =	78.6%
	HOUSE SIDE =	21.3%
	TOTAL =	99.9%
UPWARD:	STREET SIDE =	.1%
	HOUSE SIDE =	.0%
	TOTAL =	.1%
TOTAL EFFICIENCY	=	100.0%

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CANDLEPOWER
IN MAX. PLANE

ANGLE	CANDLEPOWER
.0	1052
5.0	1225
10.0	1418
15.0	1601
20.0	1782
25.0	1905
30.0	2004
35.0	2058
40.0	2043
45.0	1962
50.0	1810
52.5	1701
55.0	1598
57.5	1465
60.0	1307
62.5	1187
65.0	1044
67.5	895
70.0	744
72.5	604
75.0	447
77.5	279
80.0	156
82.5	89
85.0	53
87.5	34
90.0	18
95.0	12
105.0	3
115.0	0
125.0	0
135.0	0
145.0	0
155.0	0
165.0	0
175.0	0
180.0	0



CANDLEPOWER
IN MAX. CONE

ANGLE	CANDLEPOWER
.0	2029
5.0	2058
15.0	1985
25.0	1883
35.0	1803
45.0	1768
55.0	1694
60.0	1668
62.5	1694
65.0	1647
67.5	1644
70.0	1630
72.5	1607
75.0	1579
77.5	1542
80.0	1517
82.5	1474
85.0	1456
87.5	1405
90.0	1364
95.0	1282
105.0	1060
115.0	839
125.0	657
135.0	543
145.0	502
155.0	483
165.0	357
175.0	322
180.0	284

MAXIMUM CANDLEPOWER: 2058
 PLANE OF MAXIMUM: 5.0
 VERTICAL ANGLE OF MAXIMUM: 35.0

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CANDLEPOWER SUMMARY

VERT. ANGLE	HORIZONTAL ANGLES - STREET SIDE									
	.0	5.0	15.0	25.0	35.0	45.0	55.0	65.0	75.0	85.0

.0	1052	1052	1052	1052	1052	1052	1052	1052	1052	1052
5.0	1231	1225	1233	1233	1220	1204	1172	1148	1116	1101
10.0	1403	1418	1418	1418	1382	1363	1320	1280	1227	1173
15.0	1596	1601	1596	1599	1531	1517	1467	1420	1364	1281
20.0	1740	1782	1771	1737	1650	1650	1576	1526	1474	1378
25.0	1866	1905	1887	1821	1781	1716	1644	1596	1534	1432
30.0	1948	2004	1982	1863	1799	1750	1694	1631	1579	1498
35.0**	2029	2058	1985	1883	1803	1768	1694	1647	1579	1456
40.0	2025	2043	1958	1853	1773	1741	1680	1624	1514	1395
45.0	1970	1962	1874	1810	1739	1703	1648	1538	1468	1340
50.0	1821	1810	1771	1727	1696	1649	1557	1490	1440	1262
55.0	1608	1598	1632	1614	1626	1616	1489	1442	1340	1179
60.0	1336	1307	1434	1475	1535	1516	1457	1349	1247	1006
65.0	1039	1044	1202	1321	1397	1411	1402	1258	953	565
70.0	741	744	883	1034	1232	1321	1276	870	371	168
75.0	452	447	548	653	846	1006	785	225	53	41
80.0	171	156	159	155	228	299	137	35	23	22
85.0	63	53	61	60	54	46	31	21	9	10
90.0	27	18	17	11	11	13	10	15	9	3

VERT. ANGLE	HORIZONTAL ANGLES - HOUSE SIDE										
	90.0	95.0	105.0	115.0	125.0	135.0	145.0	155.0	165.0	175.0	180.0
.0	1052	1052	1052	1052	1052	1052	1052	1052	1052	1052	1052
5.0	1087	1059	1033	998	988	962	961	953	927	944	928
10.0	1158	1136	1076	1013	968	917	877	870	845	820	828
15.0	1251	1200	1117	1028	951	878	817	792	764	740	730
20.0	1325	1267	1145	1023	902	798	740	707	671	675	662
25.0	1378	1319	1178	1024	864	753	671	613	583	580	564
30.0	1438	1349	1139	944	794	684	598	535	484	463	450
35.0**	1364	1282	1060	839	657	543	502	483	357	322	284
40.0	1316	1256	951	675	496	394	307	188	170	155	139
45.0	1233	1127	821	558	404	314	192	103	69	68	54
50.0	1136	1024	698	431	308	241	191	92	33	11	6
55.0	1053	903	542	355	264	198	155	97	28	0	1
60.0	806	648	387	241	180	131	100	99	21	0	0
65.0	401	312	174	115	92	79	68	70	0	0	0
70.0	107	91	75	42	37	34	46	12	0	0	0
75.0	40	48	26	14	14	8	16	5	0	0	0
80.0	21	21	9	0	5	0	2	0	0	0	0
85.0	8	1	5	3	0	0	0	0	0	0	0
90.0	2	2	5	0	0	0	0	0	0	0	0

** DENOTES VERTICAL ANGLE OF MAXIMUM CONE

**** DENOTES LATERAL ANGLE OF MAXIMUM PLANE

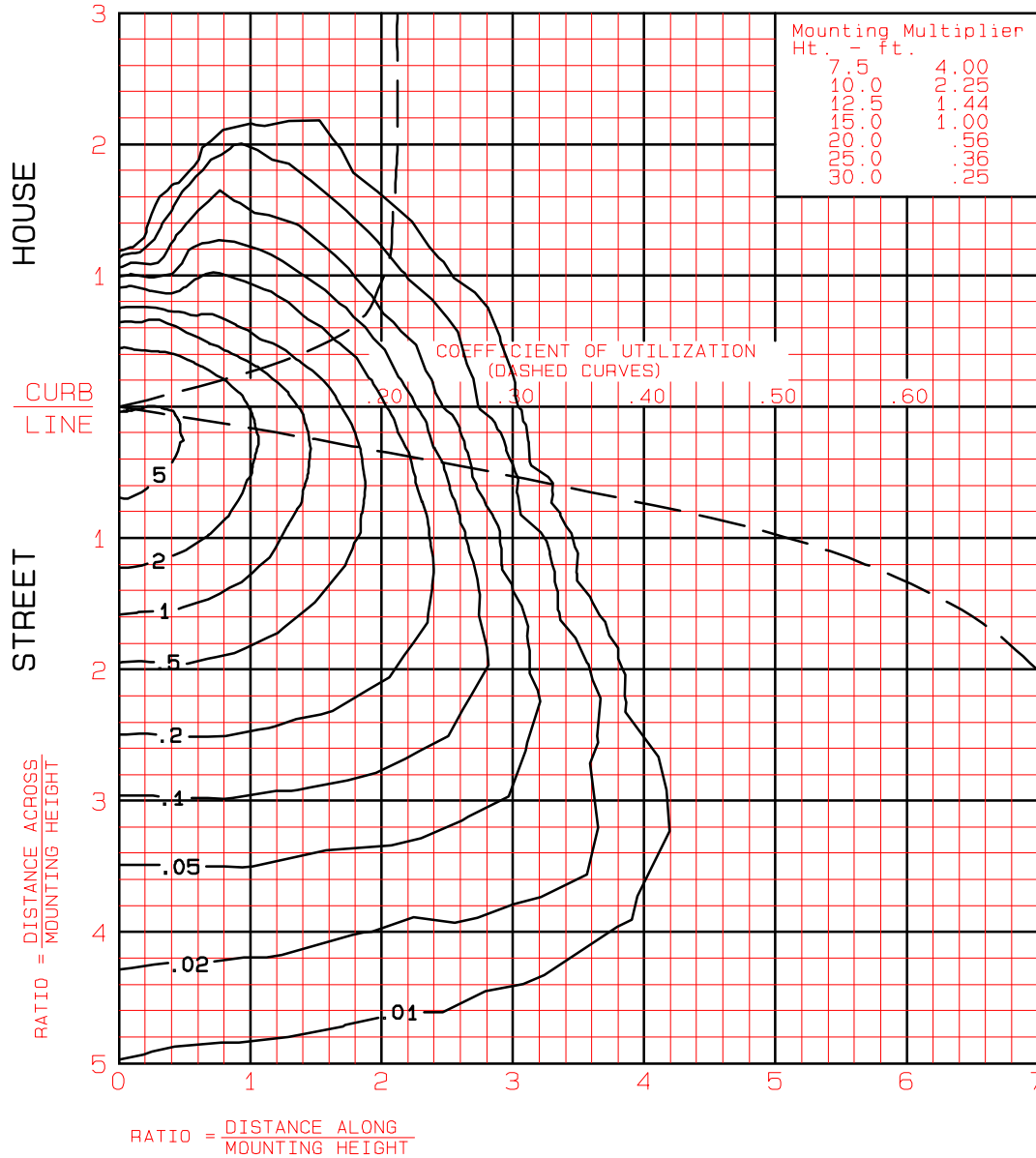
CANDLEPOWER WAS MEASURED IN 2.5 DEGREE STEPS - TABULATIONS ARE AVAILABLE

ISOFOOTCANDLE

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MOUNTING HEIGHT FOR ISOFC 15.0 FEET



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** FOOTCANDLE TABLE FOR SINGLE LUMINAIRE AT 15.0 FT. **

LATERAL RATIOS	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
-3.00	.000	.000	.000	.001	.001	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000
-2.50	.000	.000	.002	.004	.003	.001	.001	.000	.000	.000	.000	.000	.000	.000	.000
-2.00	.000	.000	.018	.013	.005	.003	.001	.001	.000	.000	.000	.000	.000	.000	.000
-1.50	.002	.035	.050	.029	.012	.005	.002	.001	.001	.001	.000	.000	.000	.000	.000
-1.00	.086	.13	.17	.088	.029	.011	.005	.002	.001	.001	.001	.000	.000	.000	.000
-.50	1.6	1.2	.61	.27	.085	.024	.008	.004	.002	.001	.001	.001	.000	.000	.000
HOUSE	CURB LINE														
-----	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
STREET	4.6	4.4	1.9	.76	.21	.043	.010	.004	.002	.001	.001	.001	.000	.000	.000
.50	6.0	4.2	2.0	.90	.36	.090	.019	.005	.002	.001	.001	.001	.000	.000	.000
1.00	3.0	2.3	1.3	.73	.38	.13	.033	.007	.002	.001	.001	.001	.000	.000	.000
1.50	1.1	1.0	.76	.48	.30	.15	.052	.012	.004	.002	.001	.001	.000	.000	.000
2.00	.45	.45	.39	.30	.21	.13	.065	.020	.005	.002	.001	.001	.000	.000	.000
2.50	.19	.19	.19	.16	.12	.096	.054	.025	.009	.003	.001	.001	.001	.000	.000
3.00	.090	.095	.095	.085	.073	.057	.042	.022	.010	.004	.001	.001	.001	.000	.000
3.50	.046	.048	.048	.044	.038	.031	.025	.018	.009	.004	.002	.001	.001	.000	.000
4.00	.025	.024	.024	.022	.019	.017	.014	.010	.007	.004	.002	.001	.001	.000	.000
4.50	.014	.013	.012	.011	.010	.009	.007	.006	.005	.004	.002	.001	.001	.000	.000
5.00	.008	.007	.007	.006	.005	.004	.004	.004	.003	.002	.002	.001	.001	.000	.000
	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0
	LONGITUDINAL MOUNTING HEIGHT RATIOS														

CORRECTION FACTORS FOR OTHER MOUNTING HEIGHTS: SEE ISOFOOTCANDLE PAGE

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CHROMATICITY MEASUREMENTS

CIE 1931-x:	0.317
CIE 1931-y:	0.341
CORRELATED COLOUR TEMPERATURE (°K):	6233
COLOUR RENDERING INDEX (%):	71.5