

LUMINAIRE: HBL-48LU-5K-N-070-WH
 HBL Severe Location, Highbay
 18" diameter Led with custom engineered TIR optics
BALLAST: LXMG2203
BALLAST FACTOR: 1.00
LAMP: Led
FIXTURE LUMENS: 14063
WATTS: 108.00
MOUNTING: Specialty
SHIELDING ANGLE: 0° = 90 90° = 90
SPACING CRITERION: 0° = 0.96 90° = 0.96
LUMINOUS OPENING IN FEET
 LENGTH: 0.79
 WIDTH: 0.79
 HEIGHT: 0.00

TEST #5056
 DATE: 4/3/2012

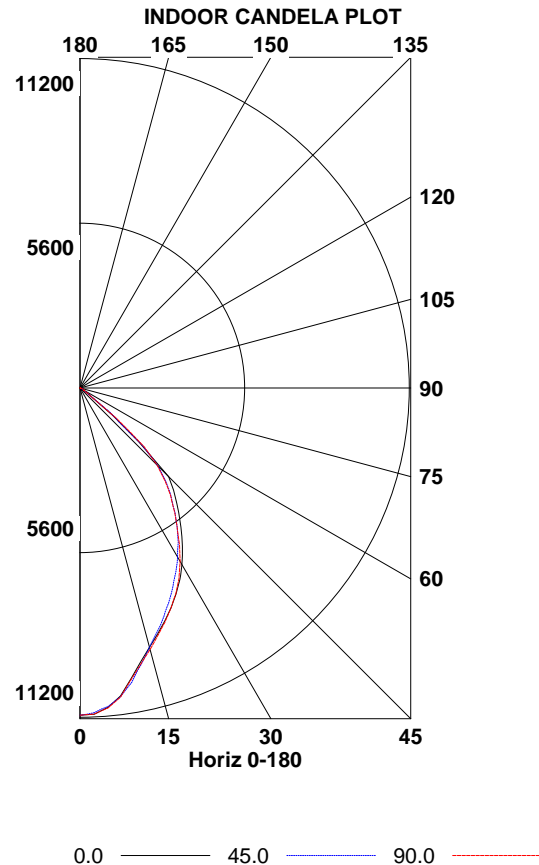
TOTAL LUMINAIRE EFFICIENCY = 100.0
TOTAL LUMENS PER WATT = 130
ANSI/IESNA RP-1-2004 COMPLIANCE: YES-VDT NORMAL USE
COMPARATIVE YEARLY LIGHTING ENERGY COST PER 1000 LUMENS = \$1.85
BASED ON 3000 HRS. AND \$.08 PER KWH

ZONAL LUMENS

ZONE	LUMENS	% LAMP	% FIXTURE
0-30	7098	50.5	50.5
0-40	10751	76.4	76.4
0-60	13876	98.7	98.7
0-90	14061	100.0	100.0
90-120	2	0.0	0.0
90-130	2	0.0	0.0
90-150	2	0.0	0.0
90-180	2	0.0	0.0
0-180	14063	100.0	100.0

AVERAGE LUMINANCE

ANGLE	CANDELA/SQ M					
	0.0	20.0	40.0	60.0	80.0	90.0
0	191839	191839	191839	191839	191839	191839
30	137953	136499	132217	133950	135882	135543
40	115342	112978	108925	107642	108430	107957
45	104004	98930	92467	89808	91174	90589
50	38450	39604	42099	43199	43816	43924
55	7337	7818	9051	8961	8540	8510
60	3449	3139	3242	3380	3863	6002
65	4040	3346	3510	3346	4408	5591
70	4236	3832	3530	3984	5396	4639
75	2932	4998	4198	4398	5198	3265
80	2682	4867	3874	4768	4072	3079
85	3562	6135	4354	5343	4750	4156



COEFFICIENTS OF UTILIZATION (%)

RC	EFFECTIVE FLOOR CAVITY REFLECTANCE = 20%																	
	80%				70%				50%				30%				10%	0%
	RW	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	113	109	107	104	110	107	105	102	103	101	99	99	98	96	96	95	93	92
2	106	100	96	92	104	99	94	91	95	92	89	92	89	87	89	87	85	83
3	99	92	86	82	97	91	85	81	88	83	80	85	82	78	83	80	77	75
4	93	85	78	73	91	83	77	73	81	76	72	79	75	71	77	73	70	68
5	88	78	71	66	86	77	71	66	75	69	65	73	68	65	72	67	64	62
6	82	72	65	60	81	71	65	60	69	64	59	68	63	59	67	62	58	57
7	77	67	60	55	76	66	59	55	64	59	54	63	58	54	62	57	54	52
8	73	62	55	50	71	61	55	50	60	54	50	59	54	50	58	53	49	48
9	69	58	51	46	67	57	51	46	56	50	46	55	50	46	54	49	46	44
10	65	54	47	43	64	53	47	43	52	47	43	52	46	42	51	46	42	41

RCR = ROOM CAVITY RATIO RC = EFFECTIVE CEILING CAVITY REFLECTANCE RW = WALL REFLECTANCE

THE DATA IN THIS REPORT ARE BASED ON ABSOLUTE MEASUREMENTS.
 ANSI/IESNA RP-1 COMPLIANCE IS BASED ON ABSOLUTE MEASUREMENTS.
 THIS TEST RUN IN ACCORDANCE WITH CURRENT I.E.S.N.A. PUBLISHED PROCEDURES.

APPROVED BY: _____

LUMINAIRE: HBL-48LU-5K-N-070-WH
HBL Severe Location, Highbay
18" diameter Led with custom engineered TIR optics

TEST #5056
DATE: 4/3/2012

CANDELA VALUES

ANGLE	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0
0.0	11123*	11123	11123	11123	11123	11123	11123	11123	11123	11123	11123	11123	11123	11123	11123	11123	11123
2.5	11103	11087	11075	11075	11070	11061	11058	11058	11043	11050	11047	11048	11062	11059	11064	11080	11074
5.0	10900	10887	10874	10877	10871	10865	10867	10869	10857	10869	10869	10868	10883	10880	10884	10899	10893
7.5	10564	10547	10544	10543	10543	10552	10563	10567	10562	10581	10571	10571	10592	10569	10566	10578	10572
10.0	10024	9974	10019	10021	10048	10070	10100	10119	10134	10160	10154	10145	10136	10100	10071	10062	10048
12.5	9537	9530	9532	9519	9535	9543	9561	9580	9598	9616	9605	9586	9578	9565	9561	9574	9581
15.0	9131	9131	9125	9110	9112	9102	9108	9099	9103	9117	9114	9127	9145	9147	9161	9171	9184
17.5	8771	8773	8763	8741	8736	8714	8706	8687	8692	8707	8702	8716	8740	8754	8768	8785	8806
20.0	8431	8436	8430	8400	8376	8340	8319	8289	8286	8299	8293	8308	8345	8375	8401	8424	8451
22.5	8090	8095	8090	8059	8020	7973	7934	7902	7881	7887	7891	7912	7967	8005	8040	8068	8092
25.0	7729	7741	7733	7702	7660	7604	7543	7500	7469	7466	7481	7518	7583	7625	7660	7689	7712
27.5	7348	7362	7362	7320	7276	7213	7147	7095	7057	7052	7068	7112	7174	7229	7255	7279	7302
30.0	6927	6938	6937	6897	6854	6784	6731	6671	6639	6636	6639	6670	6726	6784	6803	6820	6823
32.5	6484	6490	6502	6463	6420	6348	6295	6244	6215	6215	6208	6229	6266	6315	6324	6322	6317
35.0	6024	6029	6036	6000	5960	5895	5850	5802	5773	5757	5750	5765	5780	5802	5804	5804	5793
37.5	5555	5560	5567	5530	5490	5427	5392	5346	5313	5294	5274	5274	5276	5291	5302	5307	5293
40.0	5123	5132	5127	5080	5018	4963	4928	4878	4838	4811	4793	4785	4781	4795	4809	4822	4816
42.5	4712	4717	4714	4655	4582	4517	4462	4412	4365	4323	4299	4289	4285	4296	4305	4324	4321
45.0	4264	4268	4249	4173	4056	3973	3910	3845	3791	3736	3708	3694	3682	3691	3704	3737	3738
47.5	2707	2731	2767	2788	2806	2807	2823	2827	2829	2826	2818	2831	2856	2892	2926	2960	2973
50.0	1433	1441	1456	1464	1476	1490	1515	1542	1569	1588	1595	1612	1610	1610	1606	1615	1633
52.5	450	451	450	442	445	437	444	450	461	463	460	454	451	447	450	447	451
55.0	244	246	249	249	260	263	278	288	301	300	305	297	298	290	281	284	
57.5	123	121	125	121	123	121	128	128	137	135	137	131	133	128	132	129	140
60.0	100	94	93	89	91	86	92	89	94	92	96	93	98	99	102	102	112
62.5	110	95	91	87	86	84	84	84	88	92	89	85	91	93	93	97	101
65.0	99	93	89	79	82	81	81	75	86	87	87	76	82	85	88	88	108
67.5	98	95	91	80	81	75	77	78	82	78	83	79	78	79	85	88	113
70.0	84	88	89	84	76	72	76	74	70	67	71	75	79	74	79	95	107
72.5	67	76	84	80	77	72	73	68	68	65	67	67	74	72	82	88	92
75.0	44	51	74	72	75	65	66	63	63	59	62	64	66	68	78	77	78
77.5	33	37	56	60	66	60	59	58	53	51	56	56	61	63	68	62	61
80.0	27	32	37	47	49	46	47	44	39	28	39	42	48	46	49	50	41
82.5	26	23	31	36	39	36	38	34	29	23	30	32	40	36	39	37	31
85.0	18	19	26	28	31	24	28	25	22	19	22	23	27	24	31	26	24
87.5	10	14	22	19	24	18	21	16	16	11	16	13	19	16	18	16	17
90.0	2	7	7	6	9	5	8	3	5	2	7	4	7	2	6	2	5
92.5	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95.0	1	1	2	1	2	0	1	0	2	1	2	1	1	1	2	1	2
97.5	2	2	2	2	3	1	2	2	4	1	3	2	4	1	5	3	4
100.0	1	1	1	1	3	0	2	1	1	1	1	0	1	0	2	0	2
102.5	2	1	1	0	1	0	1	0	0	0	1	1	3	1	2	1	1
105.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
107.5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
110.0	1	0	1	0	1	0	1	0	1	0	2	0	1	1	2	1	3
112.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
117.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
122.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
125.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
127.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
132.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
137.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
142.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
147.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
152.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
155.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
157.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
162.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
165.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
167.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
172.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
177.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

*MAXIMUM CANDELA VALUE



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18" diameter Led with custom engineered TIR optics

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DATE: 4/3/2012

CANDELA VALUES

ANGLE	85.0	90.0
0.0	11123	11123
2.5	11079	11095
5.0	10894	10923
7.5	10571	10597
10.0	10038	10053
12.5	9579	9595
15.0	9182	9199
17.5	8803	8816
20.0	8449	8455
22.5	8090	8092
25.0	7716	7716
27.5	7293	7292
30.0	6810	6806
32.5	6292	6285
35.0	5758	5759
37.5	5276	5262
40.0	4803	4795
42.5	4298	4287
45.0	3717	3714
47.5	2957	2955
50.0	1633	1637
52.5	452	453
55.0	284	283
57.5	137	142
60.0	118	174
62.5	139	174
65.0	130	137
67.5	123	131
70.0	101	92
72.5	85	72
75.0	56	49
77.5	44	38
80.0	32	31
82.5	25	27
85.0	20	21
87.5	10	11
90.0	3	2
92.5	0	0
95.0	0	2
97.5	2	4
100.0	0	1
102.5	0	2
105.0	0	1
107.5	0	0
110.0	0	2
112.5	0	0
115.0	0	0
117.5	0	0
120.0	0	0
122.5	0	0
125.0	0	0
127.5	0	0
130.0	0	0
132.5	0	0
135.0	0	0
137.5	0	0
140.0	0	0
142.5	0	0
145.0	0	0
147.5	0	0
150.0	0	0
152.5	0	0
155.0	0	0
157.5	0	0
160.0	0	0
162.5	0	0
165.0	0	0
167.5	0	0
170.0	0	0
172.5	0	0
175.0	0	0
177.5	0	0
180.0	0	0