



UL LLC
1075 W Lambert Rd Suite B
Brea, CA 92821

Photometric Test Report

Relevant Standards
IES LM-79-2008
ANSI C82.77-2002

Prepared For
Auroralight Inc
2742 Loker Ave. West
Carlsbad, CA 92010

Catalog Number
LBD350-C6-12-30-32 (3000K)
Order Number
11263738
Test Number
1254202

Test Date

2016-05-29

Prepared By

Tony Rubio, Technician

Approved By

Eric Gaudreau, Senior Engineering Associate

The results contained in this report pertain only to the tested sample.
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Luminaire Description: Conical 6" copper shade with stacked louvers and cylindrical 32" copper stem with brass base
Lamp: Eight (8) Cree XP-L 3000K LEDs
Mounting: Path/Area
Ballast/Driver: L.T.F. DL112W480C24LP65-0000

Luminaire



Luminaire Characteristics

Luminous Diameter: 5.50 in.
Luminous Height: 3.000 in.

Summary of Results

Roadway Classification:	Type II, Short
Cutoff Classification:	Noncutoff
BUG Rating:	B0 U1 G1

Test Conditions

Test Temperature:	24.3 °C
Voltage:	12.10 VAC
Current:	1.908 A
Power:	12.48 W
Power Factor:	0.540
Frequency:	60 Hz
Current THD:	84.6 %

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

Laboratory results may not be representative of field performance
Ballast factors have not been applied



Distribution - Goniophotometer

Distribution Test Conditions

Temperature	Voltage	Current	Power	Power Factor	Frequency	Current THD
24.3 °C	12.10 VAC	1.908 A	12.48 W	0.540	60 Hz	84.6 %

Summary of Results

Spacing Criteria

0-180: 8.17
90-270: 8.22

Total Lumen Output:

222.3 Lumens

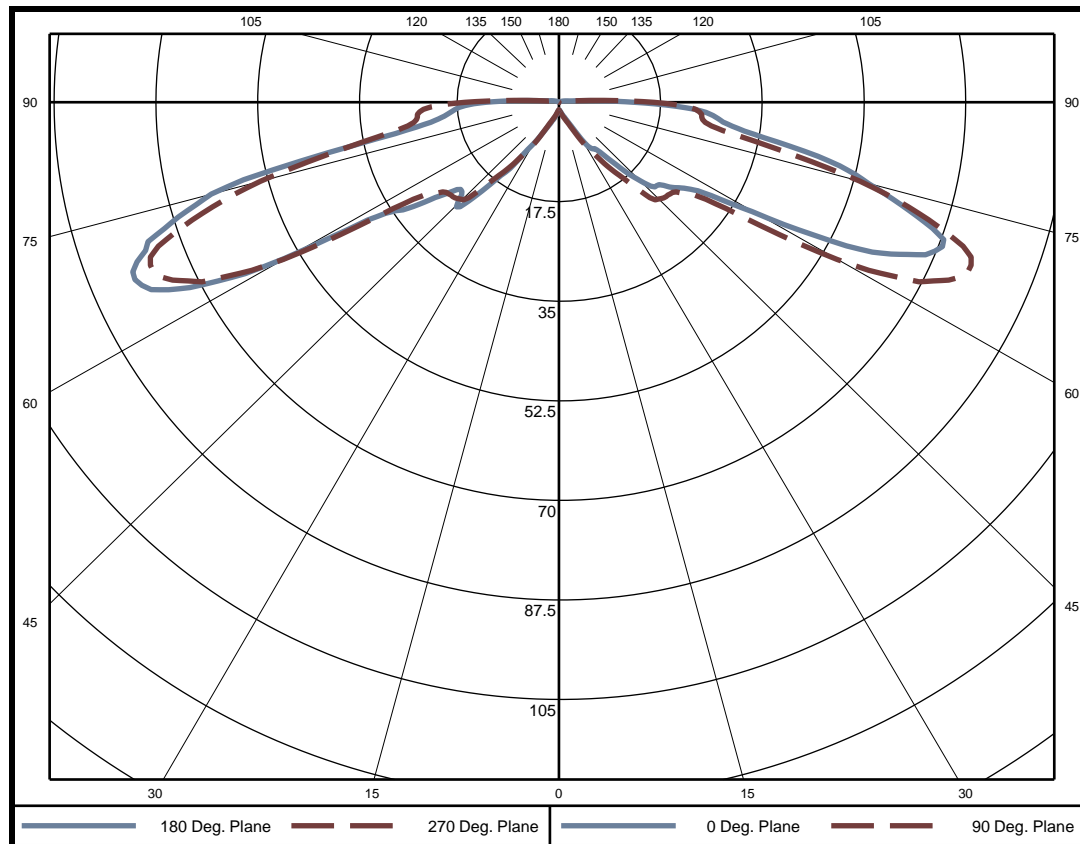
Luminaire Efficacy:

17.8 lm/w

Maximum Candela:

89 Candela

Polar Plot



Zonal Lumen Summary

Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire	Zone	Lumens	% of Luminaire
0-5	0.03	0.0%	60-65	31.89	14.3%	120-125	0.01	0.0%
5-10	0.12	0.1%	65-70	39.27	17.7%	125-130	0	0.0%
10-15	0.26	0.1%	70-75	34.89	15.7%	130-135	0	0.0%
15-20	0.47	0.2%	75-80	23.21	10.4%	135-140	0	0.0%
20-25	0.81	0.4%	80-85	14.58	6.6%	140-145	0	0.0%
25-30	1.55	0.7%	85-90	12.26	5.5%	145-150	0	0.0%
30-35	2.85	1.3%	90-95	4.68	2.1%	150-155	0	0.0%
35-40	4.74	2.1%	95-100	1.12	0.5%	155-160	0	0.0%
40-45	7.83	3.5%	100-105	0.65	0.3%	160-165	0	0.0%
45-50	9.78	4.4%	105-110	0.41	0.2%	165-170	0	0.0%
50-55	12.18	5.5%	110-115	0.22	0.1%	170-175	0	0.0%
55-60	18.36	8.3%	115-120	0.08	0.0%	175-180	0	0.0%

Zone	Lumens	% of Luminaire
0-40	11	4.9%
0-60	59	26.5%
0-90	215	96.8%
90-180	7	3.2%



Candela Tabulation

Horizontal Angle (Degrees)

Vertical Angle (Degrees)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5
	0	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40
	5	1.54	1.34	1.46	1.49	1.55	1.50	1.49	1.46	1.50	1.46	1.49	1.50	1.55	1.49	1.34
	10	1.72	1.65	1.72	1.82	1.89	1.93	1.98	1.97	2.08	1.97	1.98	1.93	1.89	1.82	1.65
	15	2.21	2.19	2.26	2.38	2.49	2.54	2.63	2.64	2.70	2.64	2.63	2.54	2.49	2.38	2.26
	20	2.79	2.91	2.97	3.14	3.27	3.38	3.47	3.51	3.58	3.51	3.47	3.38	3.27	3.14	2.97
	25	3.99	4.16	4.31	4.56	4.68	4.76	4.94	4.96	4.98	4.96	4.94	4.76	4.68	4.56	4.31
	30	6.75	7.36	7.47	7.57	8.02	8.07	8.35	8.70	7.73	8.70	8.35	8.07	8.02	7.57	7.36
	35	9.97	9.89	10.24	10.60	12.13	12.31	12.11	12.52	12.58	12.52	12.11	12.31	12.13	10.60	10.24
	40	12.35	13.98	15.65	18.00	17.75	18.17	19.83	19.74	19.54	19.74	19.83	18.17	17.75	18.00	15.65
	45	19.08	21.30	23.08	24.94	24.07	23.89	25.22	25.84	24.67	25.84	25.22	23.89	24.07	24.94	23.08
	50	22.55	23.04	24.91	24.65	25.02	25.22	26.01	27.24	24.57	27.24	26.01	25.22	25.02	24.65	24.91
	55	26.35	26.65	28.68	29.53	28.30	34.00	36.89	38.64	32.96	38.64	36.89	34.00	28.30	29.53	28.68
	60	38.46	43.22	45.92	49.56	55.25	58.53	56.09	61.73	54.90	61.73	56.09	58.53	55.25	49.56	45.92
	65	63.21	65.68	71.45	73.64	73.94	78.68	80.96	86.21	77.90	86.21	80.96	78.68	73.94	73.64	71.45
	70	70.64	70.13	73.76	73.05	73.95	78.27	79.70	85.81	76.16	85.81	79.70	78.27	73.95	73.05	73.76
	75	55.32	53.22	56.12	57.66	53.59	53.85	58.17	63.62	62.31	63.62	58.17	53.85	53.59	57.66	56.12
	80	35.97	33.26	35.45	31.96	28.63	30.78	28.55	27.16	25.02	27.16	28.55	30.78	28.63	31.96	35.45
	85	26.69	26.40	29.04	26.08	24.65	26.24	23.84	24.70	18.62	24.70	23.84	26.24	24.65	26.08	29.04
	90	13.01	13.38	15.46	14.92	16.31	18.78	18.15	20.44	12.66	20.44	18.15	18.78	16.31	14.92	15.46
	95	3.03	2.88	3.10	3.10	3.12	3.63	3.59	3.87	3.32	3.87	3.59	3.63	3.12	3.10	3.10
	100	1.44	1.41	1.45	1.43	1.42	1.51	1.59	1.67	1.58	1.67	1.59	1.51	1.42	1.43	1.45
	105	0.92	0.90	0.93	0.91	0.92	0.99	1.04	1.08	1.03	1.08	1.04	0.99	0.92	0.91	0.93
	110	0.54	0.54	0.56	0.55	0.57	0.61	0.66	0.68	0.65	0.68	0.66	0.61	0.57	0.55	0.56
	115	0.25	0.24	0.27	0.27	0.27	0.31	0.36	0.37	0.34	0.37	0.36	0.31	0.27	0.27	0.24
	120	0.00	0.00	0.02	0.04	0.04	0.07	0.10	0.10	0.11	0.10	0.10	0.07	0.04	0.04	0.02
	125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	155	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	175	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Average Luminance (cd/m²)

Horizontal Angle (Degrees)

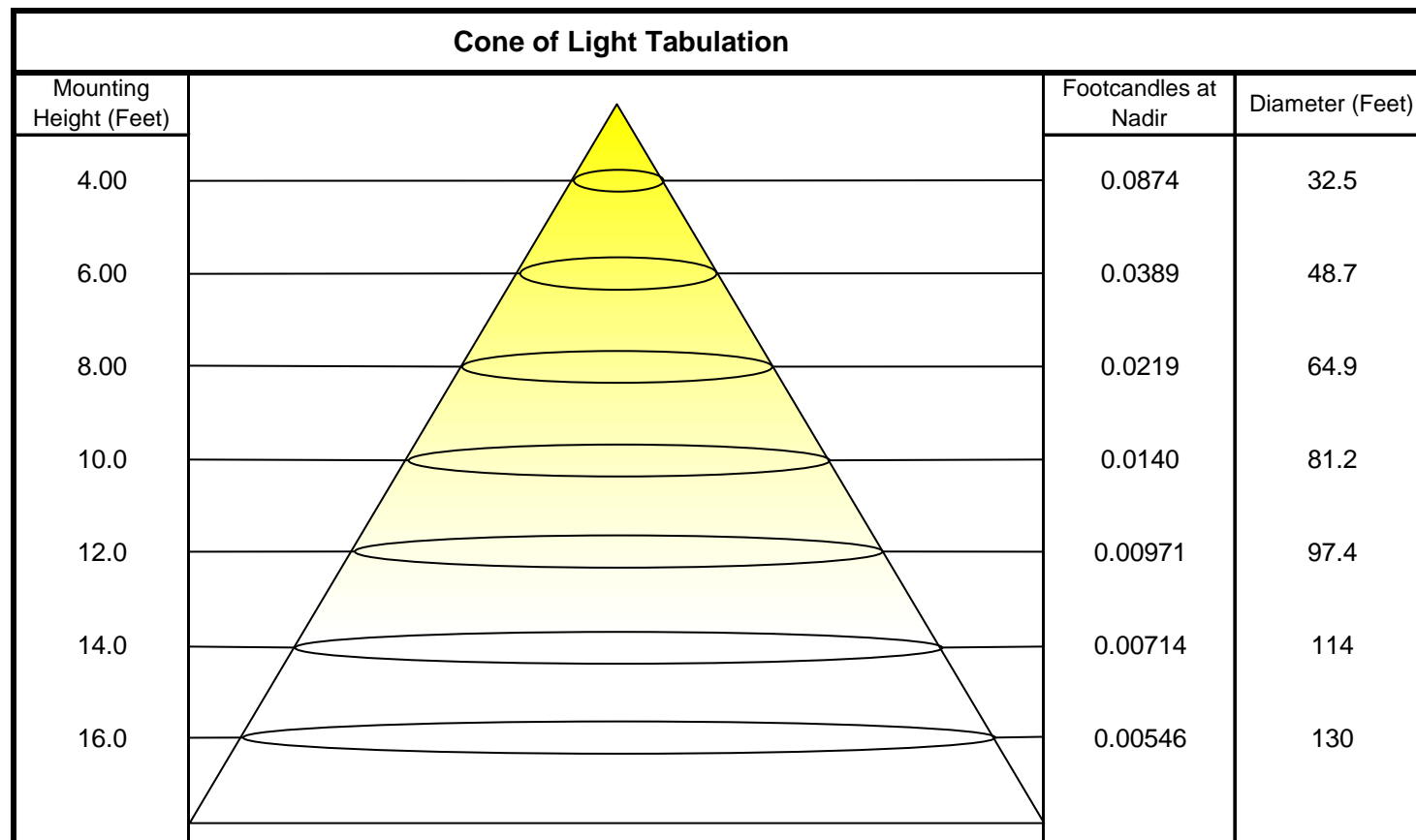
Vertical Angle (Degrees)	0	45	90
	0	91	91
	45	1396	1689
	55	2067	2249
	65	5412	6118
	75	5275	5352
	85	2898	3153



Utilization of Lumens - Zonal Cavity Method

Effective Floor Cavity Reflectance 20%																		
Ceiling Cavity Reflectance	80				70				50			30			10			0
Wall Reflectance	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
Room Cavity Ratio (RCR)	** Values are expressed as Lumens delivered to the task surface **																	
0	263	263	263	263	256	256	256	256	243	243	243	231	231	231	220	220	220	215
1	219	199	182	166	211	193	177	162	181	168	155	170	159	149	161	151	143	136
2	186	156	130	109	178	150	127	107	140	120	103	131	114	99	122	108	95	88
3	161	125	97	75	154	121	95	74	112	89	71	104	84	68	96	80	66	59
4	142	104	75	54	135	100	73	53	92	69	51	85	65	49	79	61	47	40
5	128	88	60	40	121	85	59	39	78	55	38	72	52	36	67	49	35	28
6	116	76	50	31	110	73	48	30	68	46	29	63	43	28	58	41	27	21
7	106	67	42	25	101	65	41	24	60	39	23	56	37	22	52	34	21	16
8	98	60	36	20	93	58	35	20	54	33	19	50	32	18	47	30	17	12
9	91	54	32	17	87	52	31	16	49	29	16	46	28	15	43	26	14	9
10	85	49	28	14	81	48	28	14	45	26	13	42	25	13	39	24	12	8

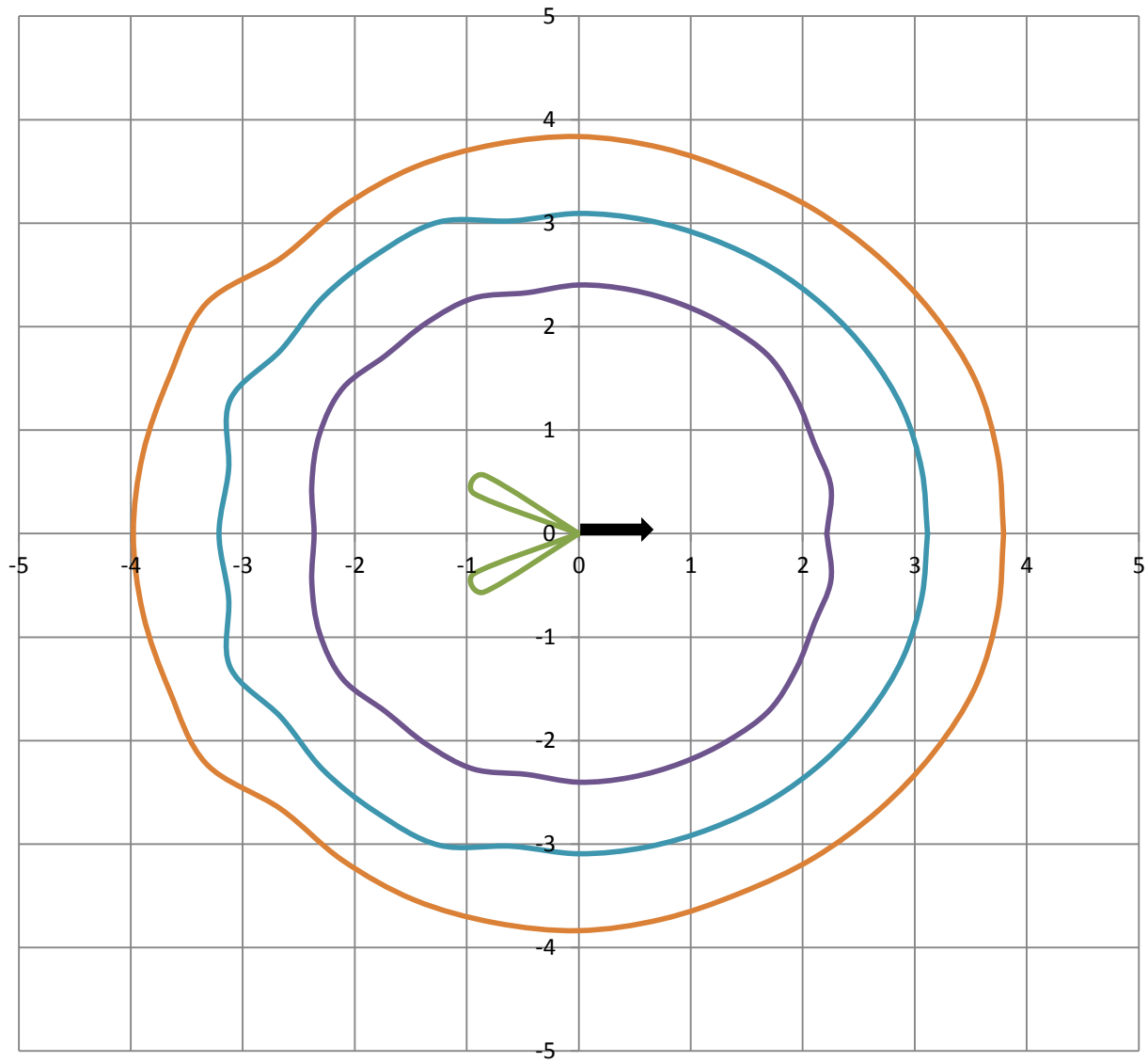
Beam and Field Information	
CIE Type:	Direct
Center Beam Intensity:	1.40 Candela
Central Cone Intensity:	1 Candela
Beam Flux:	221.8 Lumens
Beam Angle (0-180):	217.1 Degrees
Beam Angle (90-270):	216.0 Degrees
Field Angle (0-180):	236.0 Degrees
Field Angle (90-270):	235.7 Degrees





ISOFootcandle Plot

Mounting Height - 3 Feet

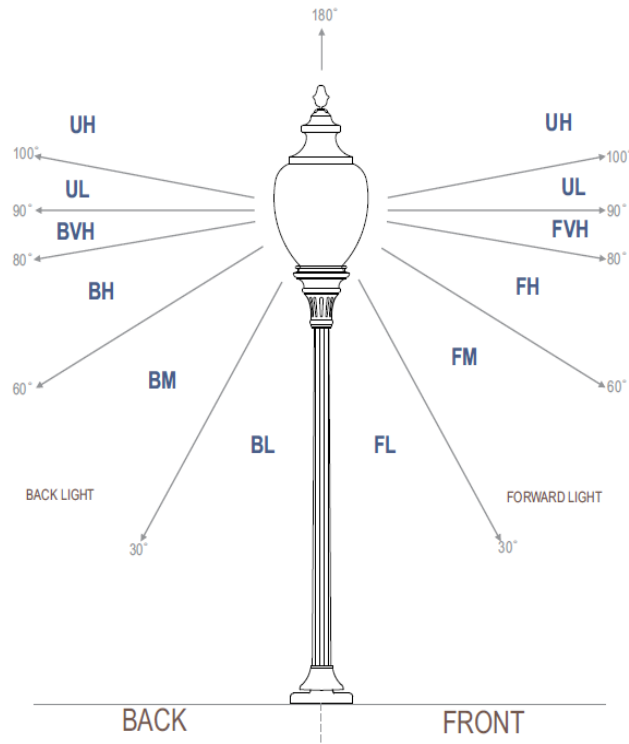


Grid Lines in Units of Mounting Height





IES "BUG" Rating
(Back Light, Uplight, Glare)
Per IES TM-15-11



Luminaire Classification System (LCS)

LCS	Zone	Lumens	Luminaire %
FL	(0-30)	1.5	0.7%
FM	(30-60)	25.6	11.6%
FH	(60-80)	60.5	27.3%
FVH	(80-90)	14.0	6.3%
BL	(0-30)	1.7	0.8%
BM	(30-60)	30.4	13.7%
BH	(60-80)	67.5	30.5%
BVH	(80-90)	12.9	5.8%
UL	(90-100)	6.0	2.7%
UH	(100-180)	1.4	0.6%
Total		221.7	100.0%
BUG Rating	B0 U1 G1		