



8165 E Kaiser Blvd. Anaheim, CA 92808
www.lightlaboratory.com

Report No: L1041706601



Report No: L041706601

Issue Date: 4/27/2017

Report Prepared For: Leotek Electronics USA, LLC
1955 Lundy Ave, San Jose, 95131

Model Number: ES2-130H-MV-WW-W-DB-450

Test: Electrical and Photometric tests

Standards Used: Appropriate part or all test guidelines were used for test performed:
IESNA LM79: 2008 Approved Methods for Electrical and Photometric Measurements of Solid-State Lighting Products
ANSI NEMA ANSLG C78.377: 2008 Specification of the Chromaticity of Solid State Lighting Products
ANSI C82.77:2002: Harmonic Emission Limits-Related Quality Requirements for Lighting Equipment

Description of Sample: Client submitted the sample. Received in working and undamaged condition. No modifications were necessary.

Testing Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 4/18/17

Date of Tests: 4/24/17 - 4/25/17

Seasoning of Sample: No seasoning was performed in accordance with IESNA LM-79.

Equipment List

Equipment Used	Model No	Stock No	Calibration Due Date
Chroma Programmable AC Source	61604	PS-AC02	--
Yokogawa Digital Power Meter	WT210	MT-EL06-S1	11/28/17
ITECH	IT6122	PS-DC03-S1	11/28/17
Fluke Digital Thermometer	52k/J	MT-TP02-GC	11/28/17
LLI Type C Goniophotometer System	RMG-C-MKII	CD-LL04-GC	--
LLI 2M Sphere	2MR97	CD-SN03-S2	--
LLI Spectroradiometer	SPR-3000	MT-SC01-S2	Before Use

*All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

Test Summary

Manufacturer:	Leotek Electronics USA, LLC	
Model Number:	ES2-130H-MV-WW-W-DB-450	
Driver Model Number:	INVENTRONICS EUD-200S490DT	
Total Lumens:	18972.90	
Input Voltage (VAC/60Hz):	120.00	
Input Current (Amp):	1.55	
Input Power (W):	185.82	
Input Power Factor:	1.00	
Current ATHD @ 120V(%):	5%	
Current ATHD @ 277V(%):	13% (0.7A, 181.19W, 0.94PF)	
Efficacy:	102	
Color Rendering Index (CRI):	73	
Correlated Color Temperature (K):	3073	
Chromaticity Coordinate x:	0.4358	
Chromaticity Coordinate y:	0.4108	
Ambient Temperature (°C):	25.0	
Stabilization Time (Hours):	0:45	
Total Operating Time (Hours):	3:40	

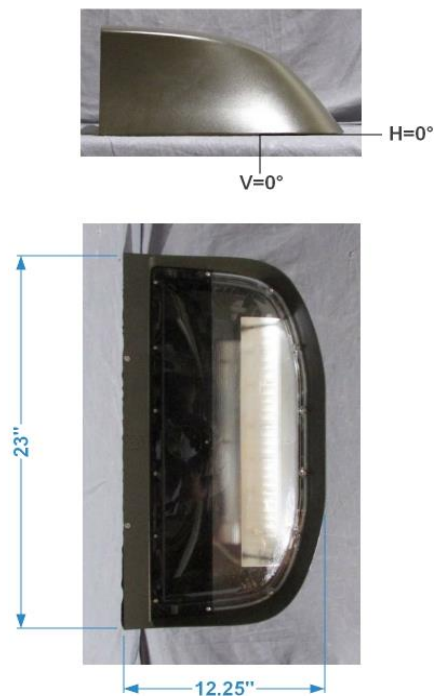
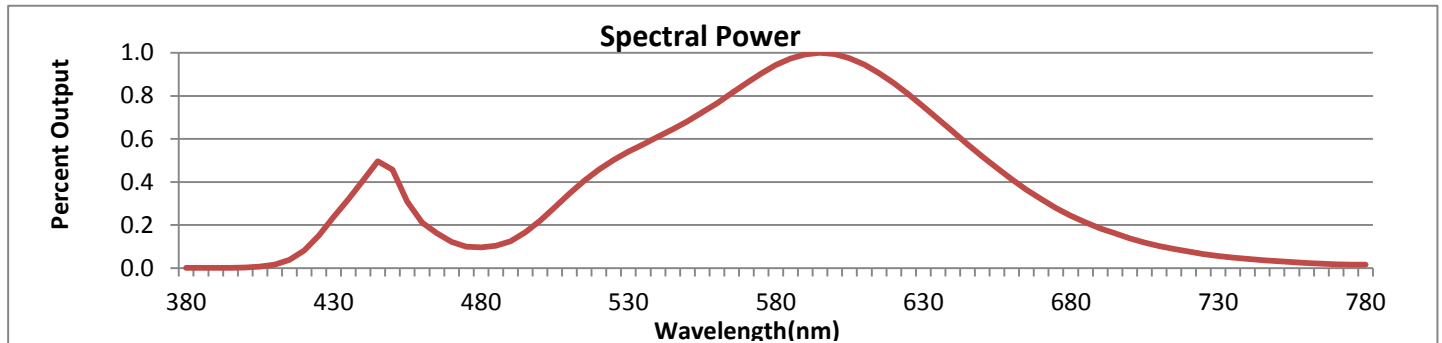


FIG. 1 LUMINAIRE



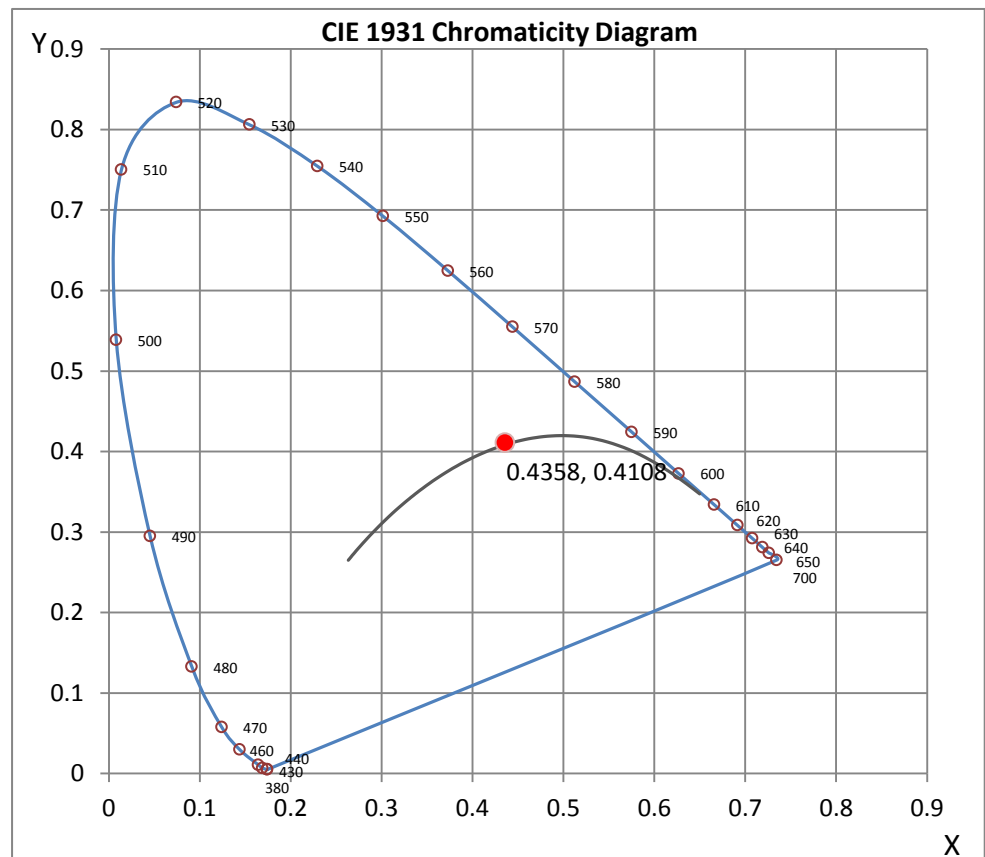
Wavelength	W/m ² nm	440	0.4070	510	0.3463	580	0.9437	650	0.5187	720	0.0764
380	0.0011	450	0.4570	520	0.4572	590	0.9933	660	0.4131	730	0.0566
390	0.0013	460	0.2114	530	0.5404	600	0.9936	670	0.3201	740	0.0422
400	0.0031	470	0.1213	540	0.6102	610	0.9456	680	0.2436	750	0.0317
410	0.0161	480	0.0961	550	0.6818	620	0.8594	690	0.1835	760	0.0241
420	0.0814	490	0.1253	560	0.7659	630	0.7507	700	0.1375	770	0.0183
430	0.2375	500	0.2198	570	0.8596	640	0.6343	710	0.1024	780	0.0159

CRI & CCT

x	0.4358
y	0.4108
u'	0.2470
v'	0.5238
CRI	73.40
CCT	3073
Duv	0.00282

R Values

R1	70.19
R2	80.94
R3	91.14
R4	71.96
R5	68.87
R6	73.38
R7	80.85
R8	49.98
R9	-21.41
R10	56.12
R11	67.69
R12	49.80
R13	71.70
R14	94.61



Test Methods

Photometric Measurements - Goniophotometer

A Custom Light Laboratory Type C Rotating Mirror Goniophotometer was used to measure candelas(intensity) at each angle of distribution as defined by IESNA for the appropriate fixture type.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

Spectral Measurements - Integrating Sphere

A Sensing Spectroradiometer SPR-3000, in conjunction with Light Laboratory 2 meter integrating sphere was used to measure chromaticity coordinates, correlated color temperature(CCT) and the color rendering index(CRI) for each sample.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

Disclaimers:

This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST or any agency of Federal Government.

Report Prepared by : Jeff Ahn

Test Report Released by:



Jeff Ahn
Engineering Manager

Test Report Reviewed by:



Steve Kang
Quality Assurance

**Attached are photometric data reports. Total number of pages: 24*



8165 E. Kaiser Blvd. Anaheim, CA 92808
www.lightlaboratory.com

Photometric Test Report

IES ROAD REPORT

PHOTOMETRIC FILENAME : L041706601.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L041706601
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUEDATE] 4/27/2017
[MANUFAC] Leotek Electronics USA, LLC
[LUMCAT] ES2-130H-MV-WW-W-DB-450
[LUMINAIRE] outdoor wall lighting product
[BALLASTCAT] INVENTRONICS EUD-200S490DT
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 120VAC, 185.82W
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

IES Classification	Type II
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	18973
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	102
Total Luminaire Watts	185.82
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	9138
Maximum Candela Angle	55H 57V
Maximum Candela (<90 Degrees Vertical)	9138
Maximum Candela Angle (<90 Degrees Vertical)	55H 57V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	1340 (7.1% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

IES ROAD REPORT
PHOTOMETRIC FILENAME : L041706601.IES

LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	1823.1	N.A.	9.6
FM - Front-Medium (30-60)	7911.7	N.A.	41.7
FH - Front-High (60-80)	3272.7	N.A.	17.2
FVH - Front-Very High (80-90)	90.5	N.A.	0.5
BL - Back-Low (0-30)	1494.3	N.A.	7.9
BM - Back-Medium (30-60)	3377.5	N.A.	17.8
BH - Back-High (60-80)	973.6	N.A.	5.1
BVH - Back-Very High (80-90)	29.3	N.A.	0.2
UL - Uplight-Low (90-100)	0.0	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	18972.7	N.A.	100.0
BUG Rating	B3-U0-G2		

ZONAL LUMEN SUMMARY

Zone	%
0-20	6.9
0-30	17.5
0-40	33.6
0-60	77
0-80	99.4
0-90	100
10-90	98.5
20-40	26.7
20-50	47.4
40-70	60
60-80	22.4
70-80	5.8
80-90	0.6
90-110	0
90-120	0
90-130	0
90-150	0
90-180	0
110-180	0
0-180	100

IES ROAD REPORT
PHOTOMETRIC FILENAME : L041706601.IES

CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0	5	10	15	20	25	30	35	40	45
0.0	2710	2710	2710	2710	2710	2710	2710	2710	2710	2710
0.5	2731	2737	2732	2736	2731	2730	2731	2731	2732	2737
1.0	2756	2764	2759	2762	2765	2763	2762	2755	2750	2749
1.5	2744	2750	2743	2750	2755	2762	2770	2773	2772	2764
2.0	2725	2730	2729	2734	2736	2747	2760	2768	2772	2779
2.5	2739	2745	2746	2747	2746	2741	2747	2750	2759	2768
3.0	2775	2779	2767	2771	2772	2764	2766	2753	2745	2753
3.5	2805	2812	2803	2807	2804	2799	2792	2776	2761	2763
4.0	2817	2821	2818	2821	2826	2819	2819	2811	2794	2777
4.5	2841	2845	2845	2841	2836	2834	2839	2836	2826	2801
5.0	2881	2880	2877	2875	2862	2854	2853	2844	2844	2827
5.5	2902	2898	2894	2900	2892	2892	2884	2863	2857	2846
6.0	2931	2921	2918	2918	2916	2916	2915	2898	2877	2866
6.5	2938	2927	2938	2942	2945	2944	2938	2926	2908	2887
7.0	2982	2969	2973	2967	2970	2960	2962	2944	2927	2895
7.5	3026	3015	3023	3018	3006	2985	2975	2958	2943	2909
8.0	3049	3036	3043	3046	3039	3030	3008	2979	2958	2933
8.5	3078	3072	3077	3069	3058	3057	3042	3007	2979	2963
9.0	3119	3112	3111	3102	3093	3086	3068	3033	3018	2979
9.5	3226	3214	3199	3173	3141	3111	3085	3061	3027	2998
10.0	3281	3290	3267	3241	3214	3164	3123	3094	3058	3029
10.5	3396	3397	3383	3348	3313	3230	3179	3115	3080	3034
11.0	3502	3528	3503	3436	3400	3344	3257	3172	3107	3058
11.5	3601	3594	3591	3548	3480	3419	3341	3250	3147	3107
12.0	3731	3715	3690	3641	3565	3476	3405	3326	3223	3134
12.5	3828	3831	3793	3749	3678	3583	3476	3378	3269	3174
13.0	3923	3925	3895	3854	3792	3694	3570	3453	3340	3230
13.5	4064	4049	4017	3964	3901	3802	3679	3553	3403	3286
14.0	4171	4151	4118	4082	3999	3902	3789	3633	3476	3343
14.5	4304	4275	4240	4193	4100	4005	3882	3729	3572	3413
15.0	4447	4422	4392	4325	4214	4104	3974	3830	3643	3470
15.5	4561	4546	4504	4435	4328	4218	4081	3946	3775	3584
16.0	4696	4673	4634	4571	4472	4335	4201	4035	3861	3665
16.5	4900	4856	4802	4737	4604	4460	4298	4128	3940	3726
17.0	4988	4964	4937	4874	4736	4579	4402	4196	4013	3792
17.5	5037	5031	5010	4981	4854	4701	4512	4314	4110	3894
18.0	5140	5123	5087	5044	4973	4849	4676	4476	4225	4008
18.5	5285	5262	5225	5146	5066	4936	4790	4556	4307	4062
19.0	5361	5331	5322	5261	5162	5064	4902	4730	4472	4175
19.5	5506	5462	5445	5375	5280	5175	4991	4789	4519	4222
20.0	5614	5589	5546	5467	5380	5242	5088	4880	4635	4313
20.5	5647	5643	5628	5570	5505	5368	5226	5002	4756	4423
21.0	5725	5706	5692	5634	5553	5442	5330	5114	4860	4506
21.5	5816	5792	5779	5727	5632	5519	5364	5184	4894	4610
22.0	5911	5870	5853	5791	5726	5608	5474	5288	5023	4699
22.5	6006	5972	5961	5888	5815	5696	5564	5349	5085	4777
23.0	6125	6094	6070	6003	5902	5778	5620	5422	5173	4846
23.5	6176	6172	6173	6098	6009	5871	5712	5533	5249	4952
24.0	6264	6275	6264	6195	6086	5962	5771	5552	5288	5030
24.5	6332	6345	6362	6296	6201	6063	5867	5624	5384	5139
25.0	6452	6437	6448	6377	6285	6167	5981	5758	5501	5230
25.5	6578	6574	6549	6484	6361	6247	6046	5800	5534	5292
26.0	6749	6723	6706	6608	6492	6325	6106	5868	5583	5353

IES ROAD REPORT
PHOTOMETRIC FILENAME : L041706601.IES

CANDELA TABULATION - (Cont.)

26.5	6797	6827	6842	6748	6591	6414	6225	5951	5690	5439
27.0	6783	6855	6900	6898	6728	6544	6316	6022	5784	5548
27.5	6900	6912	6950	6968	6871	6672	6391	6093	5861	5599
28.0	6953	6982	7023	7046	6965	6818	6541	6226	5959	5685
28.5	7056	7090	7137	7146	7066	6868	6632	6294	6019	5746
29.0	7315	7305	7339	7257	7166	6987	6693	6381	6090	5855
29.5	7282	7313	7437	7449	7309	7149	6832	6517	6225	5965
30.0	7227	7301	7415	7486	7410	7220	6963	6677	6364	6037
30.5	7242	7289	7354	7458	7418	7298	7034	6753	6463	6133
31.0	7273	7306	7379	7482	7469	7400	7119	6811	6565	6210
31.5	7284	7323	7423	7476	7513	7422	7213	6924	6692	6281
32.0	7343	7400	7488	7504	7520	7492	7306	7029	6781	6418
32.5	7395	7465	7600	7627	7560	7559	7339	7149	6843	6518
33.0	7185	7344	7597	7699	7680	7589	7395	7301	6915	6564
33.5	7138	7270	7461	7688	7795	7612	7505	7397	7087	6738
34.0	7201	7298	7392	7608	7747	7755	7571	7400	7253	6810
34.5	7273	7335	7434	7553	7709	7721	7639	7479	7326	6861
35.0	7187	7271	7423	7528	7695	7696	7693	7568	7446	6971
35.5	7199	7274	7412	7557	7622	7695	7718	7621	7461	7077
36.0	7248	7360	7470	7585	7634	7700	7649	7751	7492	7195
36.5	7267	7397	7545	7644	7673	7664	7663	7819	7607	7383
37.0	7296	7431	7532	7661	7721	7643	7712	7807	7723	7428
37.5	7319	7420	7514	7634	7734	7695	7755	7789	7827	7479
38.0	7340	7445	7550	7650	7750	7730	7762	7808	7943	7535
38.5	7376	7478	7602	7701	7796	7759	7742	7911	8010	7598
39.0	7437	7522	7638	7759	7849	7775	7836	7950	7938	7722
39.5	7435	7509	7653	7801	7905	7815	7866	7942	7922	7870
40.0	7385	7480	7640	7866	7938	7859	7893	7944	8010	8034
40.5	7456	7494	7658	7873	8010	7938	7920	7981	8097	8076
41.0	7496	7546	7654	7865	8048	7992	7969	8041	8157	8064
41.5	7471	7540	7655	7873	8062	8046	8029	8094	8199	8026
42.0	7368	7488	7638	7907	8080	8098	8077	8152	8259	8085
42.5	7282	7468	7587	7885	8082	8145	8138	8188	8287	8205
43.0	7244	7427	7520	7859	8077	8183	8233	8244	8287	8315
43.5	7204	7395	7492	7832	8042	8171	8273	8315	8351	8400
44.0	7199	7332	7443	7775	8009	8138	8299	8352	8420	8451
44.5	7191	7281	7393	7720	7997	8138	8349	8418	8474	8437
45.0	7187	7269	7412	7710	7948	8131	8323	8453	8540	8416
45.5	7149	7201	7375	7649	7897	8126	8295	8493	8595	8466
46.0	7054	7122	7335	7599	7888	8106	8284	8524	8656	8575
46.5	7023	7065	7279	7536	7831	8030	8245	8482	8707	8678
47.0	6949	7036	7165	7439	7819	8013	8247	8480	8730	8791
47.5	6922	7010	7138	7401	7747	7956	8231	8479	8738	8833
48.0	6871	6995	7120	7391	7659	7883	8127	8488	8790	8854
48.5	6875	6967	7134	7380	7636	7841	8134	8490	8794	8888
49.0	6907	6976	7109	7366	7611	7833	8107	8444	8799	8891
49.5	7054	7075	7173	7362	7555	7773	8109	8397	8764	8859
50.0	7172	7181	7290	7415	7526	7754	8111	8415	8767	8923
50.5	7071	7145	7364	7514	7566	7677	8056	8402	8746	8928
51.0	6844	6945	7239	7538	7656	7674	8038	8376	8696	8997
51.5	6484	6630	6996	7454	7718	7766	7980	8345	8703	9008
52.0	6267	6430	6675	7206	7748	7906	7988	8317	8673	8938
52.5	6035	6173	6399	6947	7564	7898	8077	8229	8622	8877
53.0	5841	5965	6188	6663	7311	7868	8143	8244	8630	8888
53.5	5629	5783	6051	6399	6966	7736	8118	8244	8608	8890
54.0	5542	5633	5864	6213	6682	7466	8087	8335	8517	8894

IES ROAD REPORT
PHOTOMETRIC FILENAME : L041706601.IES

CANDELA TABULATION - (Cont.)

54.5	5576	5621	5812	6106	6508	7207	7964	8436	8516	8897
55.0	5435	5490	5730	6040	6374	7021	7824	8408	8471	8835
55.5	5201	5237	5543	5949	6274	6723	7580	8282	8533	8776
56.0	4729	4868	5189	5813	6153	6623	7398	8192	8592	8715
56.5	4489	4606	4870	5421	5966	6449	7065	7997	8635	8702
57.0	4253	4333	4624	5112	5753	6286	6856	7790	8516	8685
57.5	4081	4156	4368	4767	5434	6141	6793	7595	8325	8742
58.0	3954	4036	4239	4559	5078	5930	6601	7262	8112	8736
58.5	3990	4040	4212	4436	4840	5675	6421	7115	8031	8690
59.0	3908	3990	4206	4394	4621	5262	6159	7002	7940	8556
59.5	3607	3702	3996	4296	4521	4959	5971	6813	7625	8284
60.0	3329	3413	3684	4102	4458	4851	5592	6483	7466	8209
60.5	3182	3224	3387	3809	4352	4788	5399	6316	7239	8095
61.0	3079	3140	3258	3529	4111	4567	5135	6028	6921	7899
61.5	3011	3069	3182	3396	3817	4375	5019	5807	6682	7724
62.0	2891	2960	3101	3294	3569	4173	4712	5499	6551	7561
62.5	2716	2783	2969	3168	3421	3841	4567	5368	6345	7249
63.0	2560	2603	2799	3059	3322	3665	4384	5110	6175	6963
63.5	2411	2434	2580	2850	3150	3549	4233	4832	5833	6664
64.0	2259	2299	2415	2639	2967	3337	3856	4603	5506	6435
64.5	2139	2178	2296	2486	2781	3197	3695	4519	5312	6370
65.0	1950	2010	2142	2343	2598	2998	3515	4218	5016	6224
65.5	1849	1885	1988	2170	2407	2779	3339	3973	4822	5923
66.0	1735	1765	1870	2030	2289	2662	3097	3751	4573	5430
66.5	1596	1630	1743	1903	2126	2451	2889	3489	4292	5155
67.0	1484	1513	1607	1777	1989	2322	2746	3354	4046	4944
67.5	1386	1415	1502	1639	1850	2144	2523	3110	3853	4837
68.0	1299	1320	1389	1501	1694	1968	2388	2895	3592	4538
68.5	1213	1234	1300	1404	1576	1853	2196	2697	3335	4142
69.0	1124	1138	1193	1297	1474	1736	2054	2499	3095	3882
69.5	1025	1040	1099	1203	1350	1583	1897	2300	2839	3678
70.0	945	972	1022	1113	1255	1487	1803	2132	2698	3303
70.5	872	891	943	1030	1148	1340	1638	1992	2495	3169
71.0	793	812	865	936	1066	1229	1486	1817	2268	2930
71.5	721	735	781	862	1021	1147	1395	1687	2135	2696
72.0	650	664	711	783	886	1068	1270	1570	1962	2533
72.5	576	591	635	700	807	1007	1140	1426	1820	2304
73.0	505	516	556	630	732	869	1091	1323	1666	2110
73.5	444	451	491	555	650	772	1021	1179	1504	1958
74.0	371	385	421	483	572	705	855	1111	1412	1788
74.5	317	331	360	423	506	627	776	1057	1284	1652
75.0	265	275	306	365	433	548	683	872	1160	1507
75.5	223	230	256	309	381	492	625	779	1013	1342
76.0	186	195	217	260	327	423	549	713	954	1229
76.5	158	163	181	220	274	365	486	641	840	1093
77.0	134	139	154	187	239	323	419	565	736	985
77.5	115	119	133	160	205	274	374	510	675	908
78.0	100	104	114	136	172	237	321	453	605	804
78.5	89	91	99	117	151	210	278	393	530	723
79.0	79	81	87	101	130	176	248	353	485	663
79.5	72	73	77	87	109	151	211	306	429	578
80.0	65	66	69	77	96	132	181	258	369	517
80.5	59	60	62	68	83	112	162	230	331	468
81.0	54	54	55	60	71	97	137	201	289	403
81.5	48	49	50	54	62	82	116	169	243	354
82.0	43	44	45	48	55	71	100	148	223	317

IES ROAD REPORT
PHOTOMETRIC FILENAME : L041706601.IES

CANDELA TABULATION - (Cont.)

82.5	39	39	40	42	47	61	85	126	182	264
83.0	34	35	35	37	41	51	70	106	154	230
83.5	30	30	31	32	36	43	59	88	135	195
84.0	26	26	27	28	31	36	49	72	106	155
84.5	22	22	23	24	26	30	39	58	89	129
85.0	18	18	19	19	21	24	31	45	67	99
85.5	15	15	15	16	17	19	24	33	50	76
86.0	11	11	12	12	13	15	18	25	37	56
86.5	8	8	9	9	10	10	13	16	24	36
87.0	6	6	6	6	6	7	8	10	14	21
87.5	3	3	3	4	4	4	5	6	7	10
88.0	2	2	2	2	2	2	3	3	3	4
88.5	1	1	1	1	1	1	2	2	2	3
89.0	1	1	1	1	1	1	1	2	2	2
89.5	1	1	1	1	1	1	1	2	2	2
90.0	0	0	0	0	0	0	0	0	0	0

Vert. Angles	Horizontal Angles									
	<u>50</u>	<u>55</u>	<u>60</u>	<u>65</u>	<u>70</u>	<u>75</u>	<u>80</u>	<u>85</u>	<u>90</u>	<u>95</u>
0.0	2710	2710	2710	2710	2710	2710	2710	2710	2710	2710
0.5	2742	2744	2749	2747	2751	2753	2757	2767	2772	2775
1.0	2749	2739	2739	2743	2748	2749	2748	2757	2762	2768
1.5	2761	2749	2742	2738	2740	2745	2747	2757	2764	2769
2.0	2779	2768	2754	2747	2739	2743	2748	2764	2773	2777
2.5	2779	2773	2761	2752	2752	2752	2758	2770	2769	2772
3.0	2759	2784	2779	2769	2755	2753	2754	2764	2769	2773
3.5	2756	2767	2783	2774	2761	2754	2754	2770	2779	2779
4.0	2766	2768	2779	2774	2772	2752	2758	2774	2784	2777
4.5	2780	2774	2778	2780	2769	2764	2752	2768	2782	2784
5.0	2801	2778	2777	2778	2769	2772	2758	2767	2784	2778
5.5	2828	2793	2773	2774	2781	2778	2765	2767	2783	2777
6.0	2844	2816	2790	2782	2780	2778	2780	2770	2791	2783
6.5	2863	2832	2805	2786	2785	2784	2779	2774	2796	2789
7.0	2874	2851	2826	2790	2787	2786	2791	2781	2797	2793
7.5	2891	2871	2839	2799	2793	2789	2807	2796	2813	2796
8.0	2910	2889	2852	2824	2809	2795	2805	2795	2816	2803
8.5	2931	2899	2875	2839	2807	2799	2804	2792	2821	2811
9.0	2957	2915	2896	2844	2810	2803	2815	2797	2827	2820
9.5	2974	2932	2900	2860	2828	2813	2821	2816	2836	2837
10.0	3004	2958	2911	2874	2838	2825	2823	2829	2842	2844
10.5	3023	2978	2929	2898	2849	2839	2823	2835	2845	2856
11.0	3027	2989	2940	2908	2854	2846	2831	2845	2861	2876
11.5	3049	3015	2960	2932	2869	2864	2835	2863	2871	2886
12.0	3095	3038	2986	2950	2886	2882	2848	2875	2870	2911
12.5	3124	3068	3018	2974	2918	2880	2848	2877	2873	2927
13.0	3157	3080	3041	2979	2949	2878	2864	2875	2889	2930
13.5	3191	3100	3059	2993	2956	2896	2865	2880	2895	2939
14.0	3229	3147	3076	3009	2961	2898	2872	2885	2898	2958
14.5	3275	3174	3088	3025	2976	2905	2884	2894	2903	2948
15.0	3327	3205	3106	3050	2981	2919	2901	2895	2917	2965
15.5	3393	3255	3128	3069	2986	2924	2909	2915	2930	2980
16.0	3461	3281	3144	3084	3006	2939	2921	2921	2931	2990
16.5	3520	3311	3172	3099	3026	2963	2937	2922	2941	3000
17.0	3577	3362	3219	3116	3043	2984	2947	2929	2955	3018
17.5	3659	3403	3260	3138	3067	2998	2965	2949	2966	3018

IES ROAD REPORT
PHOTOMETRIC FILENAME : L041706601.IES

CANDELA TABULATION - (Cont.)

18.0	3735	3462	3280	3157	3078	3014	2976	2956	2971	3034
18.5	3784	3544	3333	3185	3106	3034	2983	2961	2995	3049
19.0	3859	3605	3359	3209	3119	3047	2998	2978	2994	3058
19.5	3946	3679	3419	3278	3149	3074	3014	2992	3011	3079
20.0	4001	3713	3476	3313	3168	3094	3020	2988	3038	3094
20.5	4101	3770	3498	3329	3190	3114	3043	3002	3044	3097
21.0	4173	3862	3606	3385	3211	3129	3066	3026	3059	3119
21.5	4272	3975	3709	3438	3255	3155	3075	3035	3081	3144
22.0	4348	4037	3726	3460	3289	3178	3091	3047	3093	3166
22.5	4474	4142	3804	3512	3301	3187	3105	3059	3113	3192
23.0	4548	4188	3832	3570	3344	3208	3123	3088	3127	3212
23.5	4641	4267	3926	3601	3388	3222	3144	3107	3145	3250
24.0	4739	4387	4034	3657	3416	3245	3156	3120	3159	3266
24.5	4810	4474	4047	3749	3442	3261	3177	3137	3179	3290
25.0	4889	4561	4142	3777	3465	3276	3189	3157	3201	3326
25.5	5010	4674	4246	3798	3490	3304	3206	3172	3219	3346
26.0	5074	4726	4292	3877	3537	3357	3248	3192	3244	3375
26.5	5172	4803	4369	3948	3604	3391	3276	3213	3274	3421
27.0	5277	4894	4470	3954	3601	3389	3277	3220	3286	3427
27.5	5323	4931	4520	4047	3675	3459	3327	3248	3315	3475
28.0	5396	5014	4607	4099	3707	3469	3336	3276	3343	3500
28.5	5487	5130	4703	4174	3777	3520	3365	3292	3359	3517
29.0	5539	5178	4763	4258	3872	3563	3389	3311	3393	3570
29.5	5580	5209	4811	4284	3865	3575	3406	3327	3410	3598
30.0	5668	5306	4900	4359	3910	3609	3426	3357	3431	3619
30.5	5752	5382	4973	4467	4031	3672	3456	3385	3476	3675
31.0	5831	5444	5034	4502	4047	3679	3470	3408	3497	3703
31.5	5884	5475	5052	4571	4109	3724	3488	3437	3503	3712
32.0	5974	5555	5120	4670	4162	3779	3505	3471	3563	3786
32.5	6081	5636	5238	4731	4170	3785	3538	3493	3573	3788
33.0	6116	5660	5263	4799	4266	3857	3581	3530	3616	3840
33.5	6205	5744	5318	4861	4333	3921	3594	3546	3662	3907
34.0	6332	5863	5356	4901	4317	3914	3627	3586	3677	3934
34.5	6375	5885	5411	4952	4404	3968	3674	3626	3723	3980
35.0	6504	5968	5490	5010	4492	4003	3708	3652	3769	4018
35.5	6646	6085	5556	5060	4562	4054	3743	3684	3782	4059
36.0	6722	6125	5607	5093	4612	4105	3789	3699	3796	4094
36.5	6828	6246	5687	5149	4664	4143	3818	3742	3848	4169
37.0	6923	6298	5754	5230	4692	4217	3873	3788	3890	4185
37.5	7016	6417	5839	5309	4761	4238	3899	3809	3926	4212
38.0	7102	6514	5892	5367	4839	4309	3959	3832	3972	4281
38.5	7187	6627	5985	5389	4880	4379	4019	3877	4020	4323
39.0	7351	6720	6058	5511	4928	4392	4044	3906	4059	4344
39.5	7505	6852	6189	5569	4987	4470	4055	3954	4113	4427
40.0	7442	6870	6243	5645	5068	4517	4125	3994	4159	4484
40.5	7558	7060	6342	5712	5075	4563	4188	4027	4191	4528
41.0	7681	7123	6458	5802	5165	4639	4212	4044	4255	4600
41.5	7760	7255	6561	5859	5169	4644	4265	4108	4303	4626
42.0	7937	7424	6692	5959	5220	4720	4313	4185	4368	4719
42.5	8081	7457	6801	6059	5365	4765	4339	4186	4420	4791
43.0	8107	7485	6895	6099	5408	4822	4391	4246	4458	4828
43.5	8104	7616	6975	6164	5434	4870	4452	4312	4529	4918
44.0	8151	7681	7089	6279	5595	4926	4467	4333	4601	4980
44.5	8200	7762	7210	6385	5656	4965	4521	4400	4639	5045
45.0	8281	8020	7324	6480	5699	5002	4576	4472	4704	5130
45.5	8423	8063	7447	6601	5824	5052	4598	4496	4780	5188

IES ROAD REPORT
PHOTOMETRIC FILENAME : L041706601.IES

CANDELA TABULATION - (Cont.)

46.0	8543	8115	7560	6729	5896	5098	4671	4572	4827	5281
46.5	8629	8185	7600	6825	5939	5110	4707	4641	4915	5343
47.0	8655	8243	7649	6882	6005	5201	4780	4683	5003	5406
47.5	8648	8373	7754	7043	6116	5260	4859	4764	5049	5509
48.0	8659	8448	7882	7121	6142	5287	4901	4841	5150	5568
48.5	8762	8559	7967	7189	6255	5415	4933	4903	5219	5637
49.0	8903	8544	8143	7367	6388	5491	5016	4986	5317	5746
49.5	8973	8626	8243	7464	6445	5593	5120	5057	5416	5845
50.0	9033	8693	8337	7567	6468	5607	5146	5120	5464	5909
50.5	9022	8755	8387	7603	6653	5703	5245	5222	5586	6029
51.0	9040	8867	8528	7633	6681	5782	5308	5269	5652	6099
51.5	9033	8937	8555	7784	6885	5867	5354	5343	5747	6165
52.0	9018	9035	8619	7926	6992	5972	5455	5430	5844	6291
52.5	9059	9052	8677	8009	7085	6146	5543	5525	5960	6380
53.0	9104	9080	8706	8179	7231	6186	5605	5592	6002	6442
53.5	9084	9097	8742	8263	7341	6305	5699	5682	6105	6530
54.0	9120	9095	8871	8268	7355	6371	5736	5735	6149	6615
54.5	9119	9086	8903	8360	7507	6476	5806	5782	6231	6628
55.0	9096	9086	8934	8382	7543	6579	5903	5847	6303	6745
55.5	9071	9090	8974	8448	7651	6647	5941	5909	6348	6732
56.0	9045	9133	8989	8597	7838	6784	6051	5950	6382	6819
56.5	9054	9107	8983	8591	7838	6803	6084	5986	6408	6790
57.0	9019	9138	8989	8580	7919	6872	6106	5977	6393	6873
57.5	8964	9080	8982	8656	8052	7086	6205	5991	6445	6822
58.0	8948	9059	8988	8664	8058	7179	6278	6004	6429	6863
58.5	8842	8996	8987	8710	8073	7203	6283	6033	6419	6789
59.0	8812	8984	8967	8699	8137	7271	6340	6073	6322	6776
59.5	8795	8945	8921	8662	8107	7322	6339	5996	6289	6695
60.0	8771	8883	8875	8672	8205	7371	6335	5916	6264	6625
60.5	8671	8817	8813	8636	8146	7396	6346	5928	6134	6507
61.0	8478	8757	8742	8565	8177	7459	6399	5834	6064	6406
61.5	8207	8673	8687	8532	8168	7390	6302	5778	5892	6259
62.0	8014	8608	8558	8447	8131	7366	6287	5738	5709	6111
62.5	7973	8535	8470	8365	8025	7314	6212	5577	5592	5940
63.0	7920	8389	8388	8313	7991	7242	6126	5393	5450	5747
63.5	7788	8089	8258	8180	7867	7090	6075	5254	5235	5600
64.0	7630	7854	8159	8111	7773	6993	5955	5144	5080	5416
64.5	7248	7702	8104	8015	7617	6838	5807	5010	4835	5190
65.0	6874	7583	8053	7861	7517	6625	5580	4806	4601	4955
65.5	6604	7588	7892	7707	7348	6530	5412	4576	4413	4766
66.0	6482	7470	7565	7581	7240	6387	5342	4440	4240	4530
66.5	6304	7135	7360	7391	7019	6169	5188	4213	3997	4321
67.0	6116	6701	7170	7256	6823	6010	4926	4056	3825	4125
67.5	5878	6445	7000	7146	6644	5741	4792	3926	3583	3889
68.0	5355	6154	6954	6982	6396	5568	4598	3699	3395	3663
68.5	5075	6042	6806	6733	6246	5443	4399	3387	3216	3471
69.0	4861	5954	6484	6387	6043	5173	3927	3286	3017	3244
69.5	4720	5597	6118	6161	5853	5037	3495	3212	2842	3052
70.0	4327	5090	5799	5950	5648	4751	3431	3011	2669	2839
70.5	3632	4847	5528	5744	5464	4617	3319	2889	2479	2645
71.0	3417	4628	5325	5594	5291	4415	3233	2690	2359	2470
71.5	3333	4332	5102	5390	5073	4133	3123	2516	2185	2283
72.0	3251	3644	4760	4999	4751	3805	3082	2407	2021	2119
72.5	2932	3565	4393	4706	4491	3435	2902	2203	1903	1962
73.0	2689	3407	3998	4440	4252	3278	2780	2098	1750	1812
73.5	2498	3162	3692	4186	3979	3239	2602	1941	1634	1669

IES ROAD REPORT
PHOTOMETRIC FILENAME : L041706601.IES

CANDELA TABULATION - (Cont.)

74.0	2287	2900	3494	3865	3538	3162	2384	1777	1505	1534
74.5	2112	2675	3232	3597	3411	2963	2259	1675	1397	1408
75.0	1924	2461	2952	3303	3231	2712	2088	1528	1268	1291
75.5	1749	2251	2750	3064	2990	2550	1938	1375	1152	1183
76.0	1622	2068	2494	2820	2775	2404	1796	1314	1063	1074
76.5	1453	1847	2284	2568	2528	2177	1634	1182	973	972
77.0	1334	1718	2105	2367	2341	2043	1511	1054	877	887
77.5	1208	1563	1906	2166	2133	1873	1416	1010	799	798
78.0	1059	1379	1726	1975	1951	1695	1264	896	731	729
78.5	974	1266	1573	1809	1797	1578	1156	791	652	651
79.0	876	1138	1414	1625	1627	1431	1071	755	590	581
79.5	766	1002	1270	1464	1475	1282	945	661	534	522
80.0	702	915	1142	1325	1340	1177	853	574	469	465
80.5	623	811	1011	1173	1192	1048	777	541	418	408
81.0	542	708	893	1034	1055	918	670	465	371	363
81.5	488	633	789	912	938	826	596	414	321	315
82.0	427	553	686	788	814	710	514	353	279	270
82.5	368	481	602	686	699	611	444	293	234	234
83.0	315	411	509	584	600	532	380	261	201	197
83.5	267	350	431	490	502	440	315	214	169	166
84.0	217	293	364	409	413	362	262	179	138	138
84.5	178	237	292	328	334	296	211	145	113	112
85.0	139	184	229	254	257	224	160	111	90	90
85.5	103	141	174	192	191	162	118	84	68	71
86.0	76	100	122	134	131	112	83	60	52	53
86.5	49	66	79	85	82	68	49	38	36	38
87.0	30	40	47	50	46	36	27	23	24	26
87.5	14	19	24	25	23	18	13	13	16	18
88.0	5	7	9	11	12	10	8	9	11	13
88.5	3	4	5	6	6	7	8	8	9	10
89.0	3	4	4	5	5	6	7	7	8	9
89.5	3	4	4	5	5	6	6	7	8	9
90.0	0	0	0	0	0	0	0	0	0	0

**Vert.
Angles**

Horizontal Angles

	<u>100</u>	<u>105</u>	<u>110</u>	<u>115</u>	<u>120</u>	<u>125</u>	<u>130</u>	<u>135</u>	<u>140</u>	<u>145</u>
0.0	2710	2710	2710	2710	2710	2710	2710	2710	2710	2710
0.5	2778	2778	2775	2766	2755	2753	2751	2750	2747	2744
1.0	2772	2772	2764	2759	2750	2744	2746	2754	2765	2772
1.5	2768	2765	2758	2756	2760	2771	2781	2785	2792	2795
2.0	2778	2767	2759	2754	2774	2791	2799	2801	2808	2819
2.5	2769	2769	2764	2779	2790	2805	2816	2827	2836	2843
3.0	2771	2770	2775	2788	2800	2814	2829	2848	2854	2856
3.5	2773	2777	2783	2796	2811	2824	2846	2859	2870	2875
4.0	2784	2789	2786	2813	2830	2843	2859	2879	2898	2924
4.5	2784	2781	2798	2829	2844	2858	2883	2916	2956	2979
5.0	2789	2788	2814	2841	2854	2875	2904	2938	2983	3025
5.5	2796	2798	2841	2851	2873	2906	2954	3002	3046	3090
6.0	2789	2805	2850	2867	2896	2930	2987	3040	3090	3137
6.5	2796	2810	2855	2874	2918	2960	3035	3074	3137	3197
7.0	2819	2819	2868	2890	2933	3001	3080	3144	3211	3256
7.5	2826	2840	2872	2936	2975	3057	3131	3203	3253	3303
8.0	2819	2865	2894	2958	3017	3092	3179	3245	3300	3350
8.5	2828	2876	2916	2973	3053	3116	3214	3291	3365	3400
9.0	2838	2882	2931	2997	3087	3185	3261	3337	3394	3437

IES ROAD REPORT
PHOTOMETRIC FILENAME : L041706601.IES

CANDELA TABULATION - (Cont.)

9.5	2846	2893	2966	3027	3114	3234	3309	3368	3431	3452
10.0	2854	2909	2992	3068	3156	3273	3357	3409	3449	3451
10.5	2873	2926	3024	3104	3206	3312	3393	3446	3455	3456
11.0	2886	2936	3057	3127	3261	3368	3421	3474	3476	3491
11.5	2899	2959	3055	3160	3297	3391	3457	3497	3499	3539
12.0	2931	3004	3082	3197	3338	3418	3479	3498	3509	3575
12.5	2940	3042	3122	3247	3371	3430	3504	3506	3548	3601
13.0	2958	3062	3145	3299	3410	3482	3532	3533	3596	3620
13.5	2967	3073	3157	3348	3439	3526	3538	3574	3634	3643
14.0	2981	3105	3208	3398	3461	3542	3556	3600	3653	3649
14.5	2989	3107	3240	3427	3518	3582	3584	3662	3683	3684
15.0	3020	3146	3313	3449	3566	3607	3606	3691	3699	3689
15.5	3034	3157	3326	3463	3576	3639	3622	3732	3715	3707
16.0	3037	3160	3350	3485	3616	3642	3679	3739	3736	3740
16.5	3067	3196	3415	3529	3657	3656	3753	3743	3764	3751
17.0	3097	3226	3452	3571	3691	3676	3777	3750	3780	3773
17.5	3104	3234	3478	3591	3712	3705	3808	3771	3823	3814
18.0	3134	3266	3496	3618	3729	3753	3815	3785	3843	3851
18.5	3166	3320	3517	3662	3725	3794	3807	3819	3845	3871
19.0	3183	3323	3535	3692	3733	3853	3813	3874	3881	3866
19.5	3217	3380	3562	3713	3745	3874	3823	3906	3896	3862
20.0	3232	3425	3586	3745	3766	3889	3841	3925	3896	3837
20.5	3235	3431	3597	3769	3804	3863	3923	3932	3887	3834
21.0	3270	3473	3651	3799	3845	3878	3946	3934	3887	3821
21.5	3305	3541	3701	3823	3892	3862	4001	3939	3888	3799
22.0	3317	3545	3715	3840	3960	3879	4020	3937	3874	3781
22.5	3332	3598	3745	3854	3979	3921	4018	3939	3859	3762
23.0	3352	3619	3796	3864	4006	3976	4006	3958	3847	3738
23.5	3396	3639	3820	3883	3994	4043	3982	3951	3838	3746
24.0	3452	3708	3866	3916	3987	4096	3993	3936	3832	3746
24.5	3468	3718	3889	3948	3974	4118	3991	3935	3822	3744
25.0	3518	3755	3924	3994	3994	4100	4029	3899	3805	3733
25.5	3574	3815	3979	4037	4036	4073	4042	3880	3801	3724
26.0	3586	3853	4013	4127	4126	4046	4045	3876	3806	3719
26.5	3636	3875	4038	4116	4180	4048	4052	3874	3793	3702
27.0	3662	3889	4062	4142	4244	4069	4028	3856	3789	3665
27.5	3692	3917	4089	4162	4266	4101	3992	3852	3789	3648
28.0	3735	3974	4117	4161	4276	4131	3985	3849	3767	3630
28.5	3754	4006	4154	4163	4260	4145	3989	3835	3735	3613
29.0	3813	4031	4186	4197	4204	4140	3970	3848	3729	3608
29.5	3863	4106	4239	4241	4211	4140	3950	3858	3694	3567
30.0	3907	4157	4285	4287	4214	4130	3946	3825	3681	3524
30.5	3946	4208	4331	4328	4221	4108	3944	3819	3684	3515
31.0	4013	4279	4364	4376	4235	4117	3949	3783	3662	3484
31.5	4022	4309	4372	4416	4245	4111	3945	3735	3605	3437
32.0	4079	4340	4412	4454	4280	4078	3932	3715	3589	3396
32.5	4124	4365	4427	4442	4289	4074	3929	3710	3546	3337
33.0	4166	4388	4462	4486	4306	4057	3905	3692	3515	3313
33.5	4186	4409	4478	4456	4301	4053	3889	3695	3496	3301
34.0	4223	4432	4504	4466	4299	4057	3857	3670	3434	3272
34.5	4248	4461	4530	4491	4320	4052	3806	3604	3372	3203
35.0	4282	4494	4588	4429	4259	4034	3807	3605	3384	3190
35.5	4369	4571	4637	4448	4273	4035	3791	3550	3339	3138
36.0	4368	4597	4652	4465	4253	4025	3777	3517	3301	3099
36.5	4442	4662	4683	4475	4259	4014	3781	3507	3277	3070
37.0	4466	4694	4723	4478	4251	3961	3724	3457	3202	3017

IES ROAD REPORT
PHOTOMETRIC FILENAME : L041706601.IES

CANDELA TABULATION - (Cont.)

37.5	4515	4760	4747	4528	4248	3953	3710	3429	3153	2946
38.0	4617	4793	4758	4545	4241	3933	3675	3427	3132	2926
38.5	4619	4813	4763	4538	4209	3888	3610	3359	3078	2869
39.0	4682	4855	4772	4551	4221	3903	3605	3308	3002	2812
39.5	4753	4887	4804	4546	4203	3889	3576	3276	2996	2794
40.0	4784	4903	4785	4540	4173	3849	3525	3233	2950	2742
40.5	4828	4931	4797	4539	4184	3846	3480	3181	2889	2645
41.0	4871	4971	4838	4514	4155	3813	3478	3138	2866	2601
41.5	4912	5010	4847	4496	4125	3780	3416	3078	2812	2533
42.0	4965	5041	4849	4509	4125	3747	3353	3032	2758	2480
42.5	5010	5080	4843	4484	4071	3724	3354	2991	2719	2447
43.0	5062	5123	4861	4503	4050	3695	3302	2968	2671	2385
43.5	5118	5162	4890	4530	4071	3651	3213	2894	2563	2299
44.0	5165	5207	4883	4487	4014	3611	3179	2870	2538	2262
44.5	5225	5258	4877	4513	3994	3585	3151	2813	2474	2179
45.0	5289	5296	4911	4482	3977	3536	3098	2750	2408	2129
45.5	5344	5319	4914	4463	3951	3486	3052	2683	2348	2072
46.0	5439	5377	4910	4431	3918	3474	3005	2608	2287	1983
46.5	5493	5386	4923	4394	3886	3411	2963	2549	2236	1938
47.0	5548	5369	4938	4347	3846	3340	2918	2502	2191	1883
47.5	5626	5436	4926	4320	3816	3313	2837	2422	2107	1783
48.0	5670	5431	4941	4326	3614	3283	2779	2373	2041	1729
48.5	5746	5413	4949	4291	3582	3225	2719	2332	1957	1680
49.0	5813	5466	4933	4260	3540	3125	2657	2278	1917	1617
49.5	5903	5534	4943	4223	3524	3054	2621	2234	1860	1524
50.0	5955	5508	4981	4175	3490	2996	2533	2141	1769	1485
50.5	6026	5565	4951	4170	3497	2990	2461	2051	1674	1397
51.0	6074	5548	4871	3919	3443	2874	2424	1964	1641	1360
51.5	6158	5606	4903	3926	3428	2813	2375	1909	1572	1301
52.0	6243	5677	4899	3651	3366	2760	2315	1867	1525	1229
52.5	6280	5638	4864	3645	3220	2649	2188	1787	1452	1176
53.0	6367	5691	4821	3582	3193	2621	2153	1705	1385	1130
53.5	6397	5643	4766	3594	3152	2580	2072	1644	1331	1117
54.0	6406	5625	4690	3526	3086	2525	2025	1555	1267	1070
54.5	6485	5687	4627	3519	3007	2430	1910	1516	1216	1031
55.0	6572	5711	4671	3455	2880	2347	1823	1471	1155	1019
55.5	6575	5710	4634	3453	2819	2283	1755	1380	1137	905
56.0	6646	5727	4498	3374	2802	2246	1686	1326	1094	850
56.5	6600	5656	4432	3343	2724	2161	1625	1277	1083	816
57.0	6575	5633	4408	3271	2667	2083	1581	1194	1031	756
57.5	6605	5661	4041	3263	2577	1960	1490	1183	958	704
58.0	6628	5628	4043	3187	2459	1875	1426	1138	881	681
58.5	6559	5576	3968	3173	2388	1799	1371	1113	814	643
59.0	6500	5470	3519	3103	2355	1764	1304	1071	767	599
59.5	6377	5304	3480	2989	2257	1671	1253	1050	721	571
60.0	6361	5339	3475	2975	2227	1606	1226	931	672	531
60.5	6328	5337	3452	2822	2103	1533	1185	865	653	501
61.0	6168	5147	3361	2810	1984	1437	1147	814	604	469
61.5	6114	5163	3288	2665	1954	1397	1129	764	577	438
62.0	5913	4959	3300	2638	1922	1358	1057	714	539	415
62.5	5715	4731	3224	2522	1817	1282	1065	671	508	389
63.0	5603	4741	3244	2416	1719	1241	876	636	478	359
63.5	5490	4618	3234	2346	1589	1177	818	596	447	345
64.0	5259	4459	3135	2319	1529	1175	792	574	424	329
64.5	5135	3968	3033	2179	1496	1163	725	524	394	305
65.0	4910	3520	2995	2073	1410	1101	703	496	365	295

IES ROAD REPORT
PHOTOMETRIC FILENAME : L041706601.IES

CANDELA TABULATION - (Cont.)

65.5	4670	3473	2888	1996	1356	1095	666	466	351	277
66.0	4508	3435	2772	1899	1281	941	609	437	332	256
66.5	4349	3362	2726	1821	1223	819	568	411	311	247
67.0	4098	3292	2601	1739	1222	781	550	398	296	236
67.5	3942	3202	2424	1644	1194	754	501	366	277	220
68.0	3616	3127	2302	1547	1147	704	484	348	257	212
68.5	3506	3019	2221	1496	1129	658	455	323	246	200
69.0	3319	2900	2094	1365	1058	610	419	309	234	192
69.5	3105	2683	1978	1356	853	570	394	289	219	181
70.0	2943	2553	1856	1346	798	537	372	275	210	174
70.5	2748	2359	1747	1268	776	499	346	255	195	163
71.0	2547	2215	1631	1212	709	481	324	243	184	156
71.5	2383	2099	1533	1162	679	435	305	224	174	148
72.0	2212	1916	1414	1111	631	419	285	209	164	139
72.5	2037	1806	1354	1099	573	390	275	201	155	134
73.0	1874	1678	1288	824	552	353	252	185	147	126
73.5	1738	1525	1227	761	512	341	234	171	138	118
74.0	1587	1421	1166	717	461	316	226	163	131	113
74.5	1452	1284	966	656	442	296	206	151	122	106
75.0	1314	1190	893	603	406	274	194	142	114	99
75.5	1201	1090	824	562	378	256	185	135	110	94
76.0	1096	1013	776	522	352	232	166	123	102	88
76.5	990	916	694	474	321	220	158	115	94	82
77.0	906	844	635	439	297	205	147	109	88	77
77.5	815	764	590	411	279	186	132	99	82	72
78.0	734	688	525	364	246	172	123	92	76	66
78.5	668	632	490	333	226	159	114	86	71	62
79.0	596	567	443	311	212	145	103	78	65	57
79.5	532	507	393	274	186	132	94	72	59	52
80.0	478	460	361	248	168	120	86	65	54	48
80.5	422	407	322	223	151	108	78	59	49	43
81.0	372	358	283	203	136	97	70	54	45	39
81.5	325	319	255	177	121	84	61	48	40	35
82.0	281	276	219	154	105	76	55	43	36	31
82.5	242	237	190	135	92	67	49	39	33	28
83.0	206	204	166	117	81	57	42	34	29	25
83.5	172	171	138	98	68	51	37	30	25	22
84.0	144	142	116	84	59	44	33	26	22	19
84.5	118	118	98	70	50	36	28	23	19	17
85.0	94	95	79	57	41	32	24	20	17	14
85.5	75	75	63	47	34	27	21	17	14	12
86.0	57	58	49	38	28	22	18	15	12	10
86.5	41	43	38	29	23	19	15	12	10	9
87.0	29	30	27	23	18	15	13	10	9	7
87.5	19	20	20	17	15	13	11	9	8	7
88.0	13	14	14	13	12	11	10	8	7	6
88.5	11	11	11	12	11	10	9	8	7	6
89.0	10	11	11	11	11	10	9	8	7	6
89.5	9	10	11	11	11	10	9	8	7	6
90.0	0	0	0	0	0	0	0	0	0	0

**Vert.
Angles**

Horizontal Angles

	<u>150</u>	<u>155</u>	<u>160</u>	<u>165</u>	<u>170</u>	<u>175</u>	<u>180</u>
0.0	2710	2710	2710	2710	2710	2710	2710
0.5	2745	2746	2745	2744	2742	2744	2746

IES ROAD REPORT
PHOTOMETRIC FILENAME : L041706601.IES

CANDELA TABULATION - (Cont.)

1.0	2775	2776	2777	2774	2769	2770	2767
1.5	2797	2798	2799	2798	2799	2802	2798
2.0	2827	2831	2833	2832	2832	2840	2836
2.5	2851	2852	2847	2839	2836	2843	2839
3.0	2862	2870	2879	2883	2893	2901	2900
3.5	2893	2920	2934	2940	2948	2950	2950
4.0	2949	2960	2972	2988	3013	3017	3015
4.5	3007	3034	3047	3062	3081	3088	3079
5.0	3059	3098	3115	3119	3124	3133	3135
5.5	3121	3142	3157	3175	3175	3184	3197
6.0	3189	3200	3217	3238	3255	3284	3274
6.5	3234	3264	3292	3311	3342	3371	3365
7.0	3312	3340	3366	3379	3387	3407	3386
7.5	3377	3380	3398	3404	3396	3404	3388
8.0	3396	3416	3413	3398	3379	3370	3361
8.5	3425	3414	3398	3376	3366	3363	3369
9.0	3430	3398	3406	3394	3409	3421	3430
9.5	3422	3411	3443	3472	3493	3515	3523
10.0	3443	3462	3506	3546	3549	3555	3571
10.5	3480	3533	3572	3572	3556	3525	3546
11.0	3545	3572	3579	3547	3534	3511	3527
11.5	3576	3577	3568	3543	3556	3557	3573
12.0	3600	3583	3588	3604	3626	3651	3670
12.5	3609	3577	3624	3666	3679	3678	3693
13.0	3601	3638	3687	3678	3660	3636	3660
13.5	3649	3688	3681	3653	3637	3615	3622
14.0	3679	3697	3670	3644	3664	3672	3679
14.5	3690	3682	3675	3680	3708	3720	3721
15.0	3712	3714	3728	3749	3771	3780	3805
15.5	3721	3722	3772	3808	3795	3769	3776
16.0	3735	3806	3815	3804	3774	3760	3742
16.5	3771	3824	3807	3766	3735	3710	3691
17.0	3829	3831	3777	3721	3705	3685	3655
17.5	3854	3806	3736	3697	3694	3673	3651
18.0	3841	3771	3721	3676	3671	3636	3624
18.5	3825	3749	3700	3649	3641	3615	3616
19.0	3809	3730	3675	3636	3625	3611	3613
19.5	3802	3708	3657	3621	3609	3591	3596
20.0	3771	3684	3634	3616	3601	3585	3592
20.5	3752	3659	3620	3620	3601	3584	3588
21.0	3731	3650	3620	3609	3579	3565	3571
21.5	3698	3647	3616	3593	3563	3538	3554
22.0	3689	3648	3612	3569	3541	3522	3533
22.5	3692	3651	3585	3542	3525	3523	3535
23.0	3686	3639	3570	3534	3517	3517	3527
23.5	3686	3609	3559	3533	3498	3492	3495
24.0	3677	3604	3542	3499	3453	3439	3441
24.5	3668	3580	3526	3449	3387	3385	3397
25.0	3649	3567	3479	3405	3366	3379	3390
25.5	3631	3547	3454	3386	3359	3354	3363
26.0	3623	3527	3421	3366	3333	3315	3302
26.5	3600	3483	3399	3340	3289	3276	3255
27.0	3573	3459	3368	3302	3251	3227	3213
27.5	3552	3435	3337	3257	3205	3181	3161
28.0	3520	3401	3298	3207	3156	3129	3106
28.5	3481	3377	3244	3148	3097	3058	3051

IES ROAD REPORT
PHOTOMETRIC FILENAME : L041706601.IES

CANDELA TABULATION - (Cont.)

29.0	3472	3324	3190	3098	3049	3031	3026
29.5	3443	3280	3147	3061	3026	3020	3009
30.0	3399	3235	3111	3044	3006	2995	2992
30.5	3376	3187	3080	3017	2973	2946	2942
31.0	3320	3164	3049	2988	2936	2909	2910
31.5	3261	3140	3025	2958	2898	2887	2887
32.0	3233	3096	2998	2926	2860	2862	2870
32.5	3222	3064	2972	2895	2838	2830	2828
33.0	3168	3033	2946	2839	2773	2749	2739
33.5	3130	2997	2907	2804	2685	2646	2630
34.0	3081	2957	2838	2717	2632	2616	2598
34.5	3058	2910	2777	2675	2590	2558	2535
35.0	3031	2857	2729	2608	2533	2491	2478
35.5	2977	2823	2680	2542	2474	2438	2424
36.0	2920	2765	2607	2488	2421	2389	2373
36.5	2861	2717	2550	2440	2370	2341	2331
37.0	2814	2664	2492	2385	2323	2299	2283
37.5	2771	2586	2438	2343	2278	2246	2226
38.0	2737	2525	2391	2298	2220	2167	2150
38.5	2663	2467	2346	2240	2169	2120	2102
39.0	2585	2421	2299	2183	2100	2056	2047
39.5	2547	2401	2244	2120	2015	1972	1971
40.0	2478	2340	2181	2046	1962	1922	1922
40.5	2434	2276	2116	1983	1911	1869	1868
41.0	2401	2225	2050	1932	1844	1803	1802
41.5	2329	2141	1988	1876	1789	1746	1737
42.0	2271	2075	1921	1796	1719	1683	1666
42.5	2237	2036	1876	1754	1613	1564	1548
43.0	2131	1929	1776	1648	1551	1524	1512
43.5	2073	1894	1728	1602	1500	1459	1453
44.0	2017	1819	1662	1528	1433	1389	1386
44.5	1949	1751	1593	1455	1371	1330	1325
45.0	1890	1701	1533	1396	1311	1276	1268
45.5	1808	1614	1452	1343	1259	1225	1219
46.0	1746	1544	1392	1282	1204	1176	1165
46.5	1693	1492	1342	1226	1153	1121	1114
47.0	1618	1419	1278	1177	1098	1057	1044
47.5	1550	1365	1227	1121	1046	1006	990
48.0	1497	1316	1178	1073	1005	962	953
48.5	1448	1257	1121	1042	944	901	893
49.0	1371	1189	1056	994	887	860	855
49.5	1309	1146	1033	920	853	826	825
50.0	1268	1091	1007	877	812	783	781
50.5	1194	1056	918	834	773	747	739
51.0	1146	1034	876	797	734	709	707
51.5	1104	1006	836	756	673	646	642
52.0	1062	893	780	700	637	618	612
52.5	1034	860	745	667	607	579	572
53.0	1012	815	701	622	562	536	533
53.5	915	780	660	589	526	499	490
54.0	868	734	623	553	489	462	454
54.5	811	684	587	510	456	428	420
55.0	774	648	553	479	427	397	388
55.5	728	610	515	443	396	371	361
56.0	682	577	480	405	362	340	334
56.5	654	550	447	382	338	318	309

IES ROAD REPORT
PHOTOMETRIC FILENAME : L041706601.IES

CANDELA TABULATION - (Cont.)

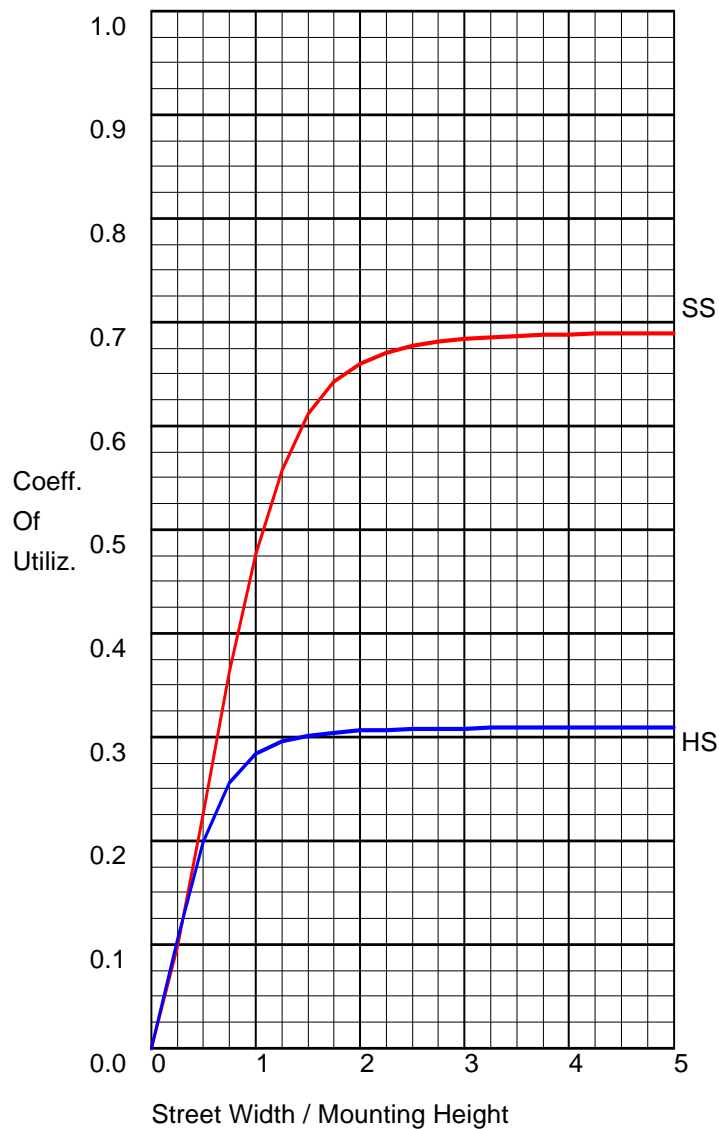
57.0	613	507	417	359	320	303	296
57.5	576	467	388	334	301	285	277
58.0	544	439	366	316	284	270	264
58.5	517	409	343	297	270	258	254
59.0	476	386	324	279	256	246	243
59.5	451	367	305	269	247	237	234
60.0	420	347	291	258	237	228	225
60.5	393	323	275	245	226	217	213
61.0	370	309	262	236	219	210	207
61.5	349	291	250	225	210	203	200
62.0	332	280	240	217	202	195	193
62.5	314	266	230	209	194	187	185
63.0	292	251	221	199	186	180	178
63.5	279	239	213	193	180	173	171
64.0	268	229	204	185	173	166	164
64.5	250	219	196	177	166	160	158
65.0	241	212	188	171	159	154	152
65.5	229	204	181	164	152	148	146
66.0	216	193	172	157	147	143	141
66.5	207	185	166	152	142	137	136
67.0	200	178	160	145	136	131	130
67.5	189	170	153	139	130	126	125
68.0	182	164	147	134	125	121	120
68.5	173	157	140	129	120	117	116
69.0	164	149	134	123	115	112	111
69.5	158	143	129	119	110	107	106
70.0	151	135	122	112	105	103	102
70.5	142	129	118	108	101	98	97
71.0	136	123	112	103	97	94	93
71.5	129	117	106	98	92	90	89
72.0	122	112	102	94	88	86	85
72.5	117	106	97	89	84	82	81
73.0	110	101	91	84	79	77	77
73.5	104	96	87	80	76	74	73
74.0	99	91	83	76	72	70	69
74.5	93	86	78	71	67	66	65
75.0	88	81	74	68	64	62	62
75.5	82	76	69	64	60	59	58
76.0	77	71	64	60	56	55	55
76.5	72	67	61	56	53	52	51
77.0	67	62	57	53	50	48	48
77.5	63	58	53	49	46	45	45
78.0	58	54	49	45	43	42	42
78.5	54	50	46	42	40	38	38
79.0	50	46	42	38	36	35	35
79.5	46	42	38	36	33	33	32
80.0	42	38	35	32	30	30	30
80.5	38	35	32	29	28	27	27
81.0	34	32	29	27	25	24	24
81.5	31	28	26	24	22	22	22
82.0	28	25	23	21	20	19	19
82.5	25	22	20	19	18	17	17
83.0	22	20	18	17	16	15	15
83.5	19	17	16	14	14	13	13
84.0	17	15	14	13	12	12	11
84.5	14	13	12	11	10	10	10

IES ROAD REPORT
PHOTOMETRIC FILENAME : L041706601.IES

CANDELA TABULATION - (Cont.)

85.0	12	11	10	9	9	9	9
85.5	11	10	9	8	8	7	7
86.0	9	8	8	7	6	6	6
86.5	7	7	6	6	5	5	5
87.0	6	6	5	5	5	4	4
87.5	6	5	4	4	4	4	4
88.0	5	4	4	4	3	3	3
88.5	5	4	4	3	3	3	2
89.0	5	4	3	3	3	2	2
89.5	5	4	3	3	3	2	2
90.0	0	0	0	0	0	0	0

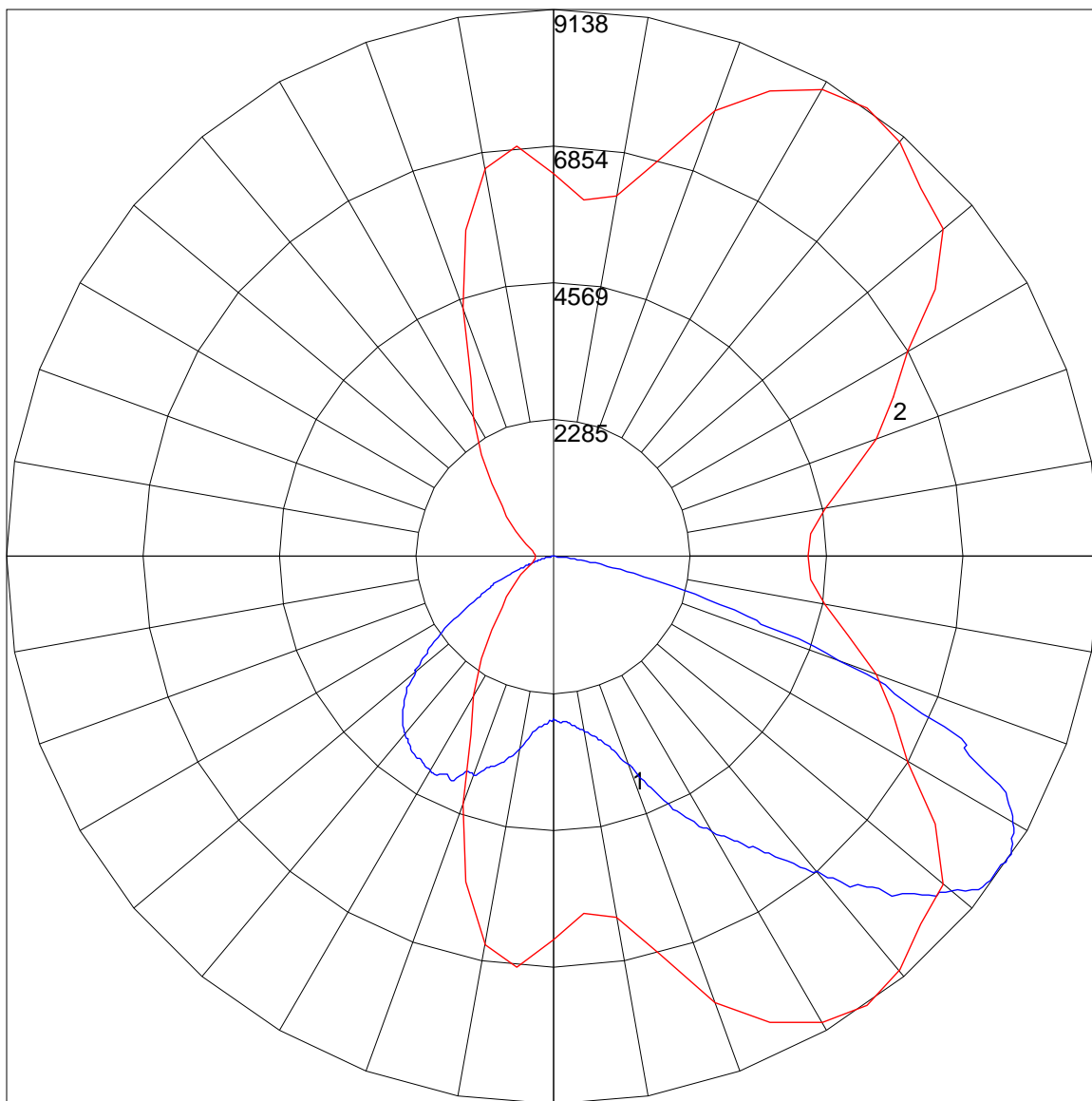
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

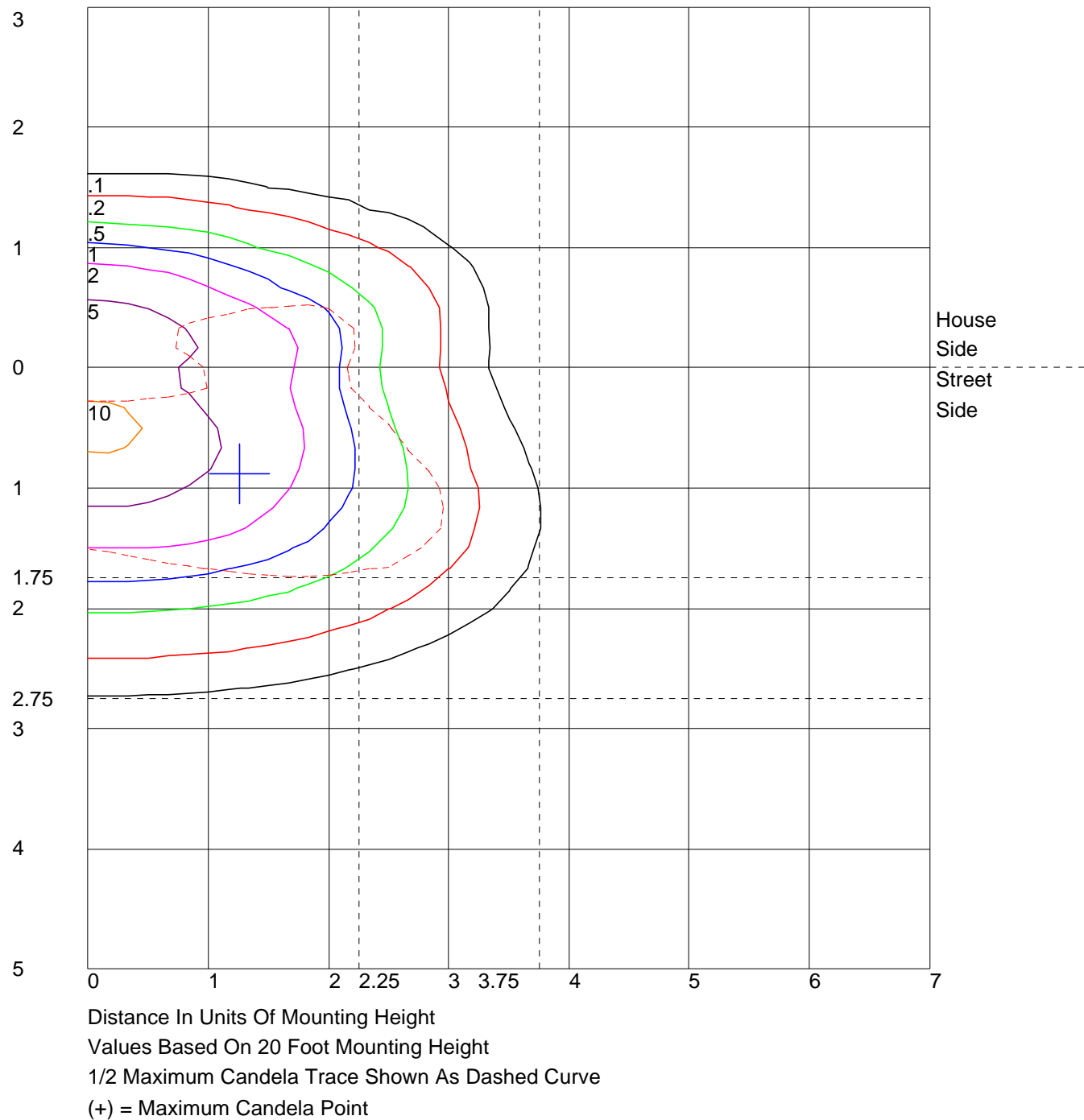
	Lumens	Percent Of Luminaire
Downward Street Side	13098.1	69.0
Downward House Side	5874.8	31.0
Downward Total	18972.9	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	18972.9	100.0

POLAR GRAPH

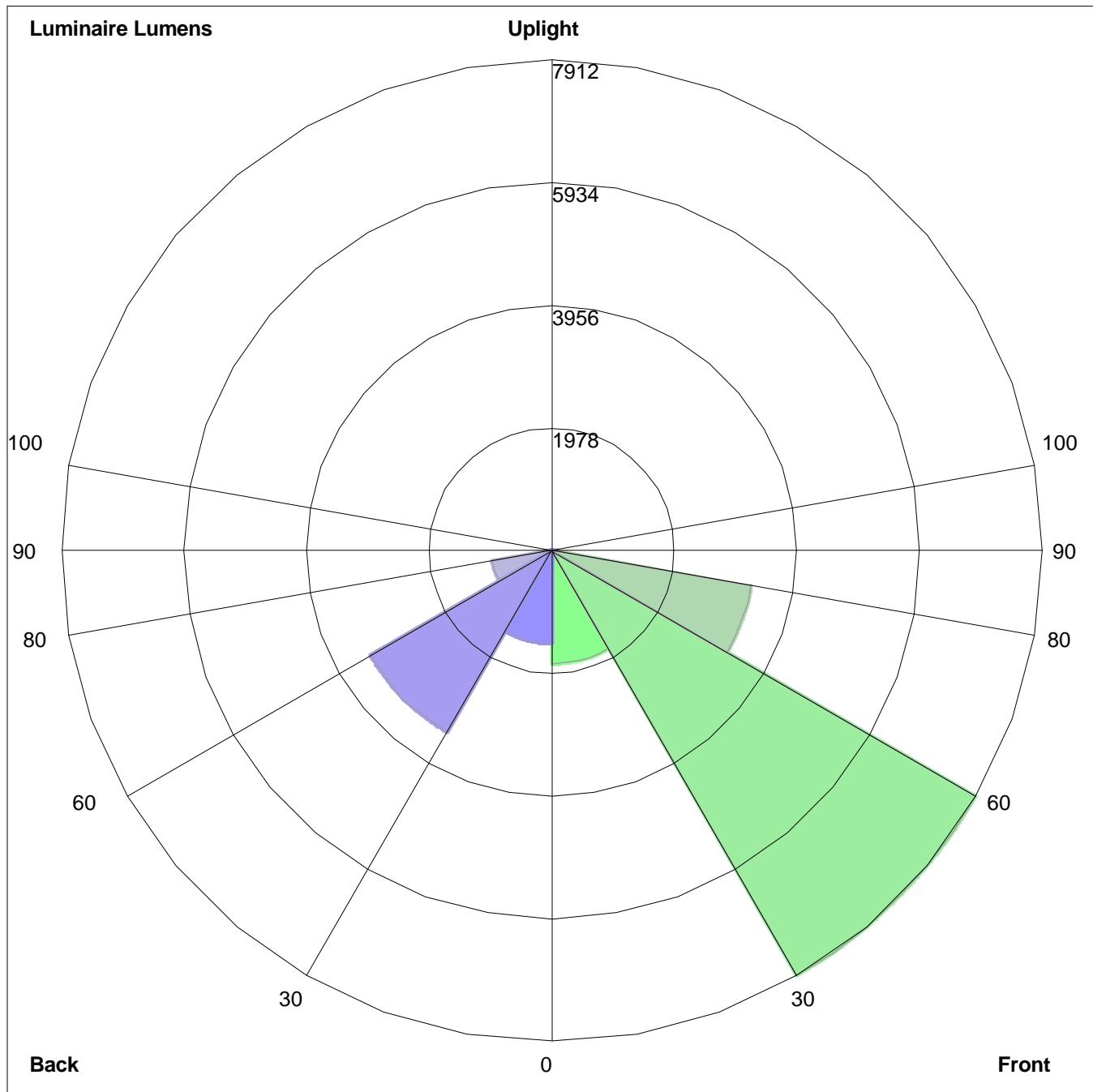


Maximum Candela = 9138 Located At Horizontal Angle = 55, Vertical Angle = 57
1 - Vertical Plane Through Horizontal Angles (55 - 235) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (57) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=1823.1, Medium=7911.7, High=3272.7, Very High=90.5
Back: Low=1494.3, Medium=3377.5, High=973.6, Very High=29.3
Uplight: Low=0.0, High=0.0

BUG Rating : B3-U0-G2