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Report No: L091604013R01

Date: 11/3/2016



NVLAP LAB CODE 200927-0

Report No: L091604013R01

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

Model Number: GCJ0-15H-MV-CW-4-XX-700

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. Catalog number is GCJ0-15H-MV-CW-4-XX-700. Received in working and undamaged condition. No modifications were necessary.

Testing Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 9/12/16

Date of Tests: 9/22/16 - 9/22/16

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	11/18/16
Xitron Power Analyzer	2503AH	MT-EL01	11/30/16
ITECH DC Power Supply	IT6122	PSDC-03-S1	11/17/16
Fluke Digital Thermometer	52k/J	MT-TP02-GC	11/24/16
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.

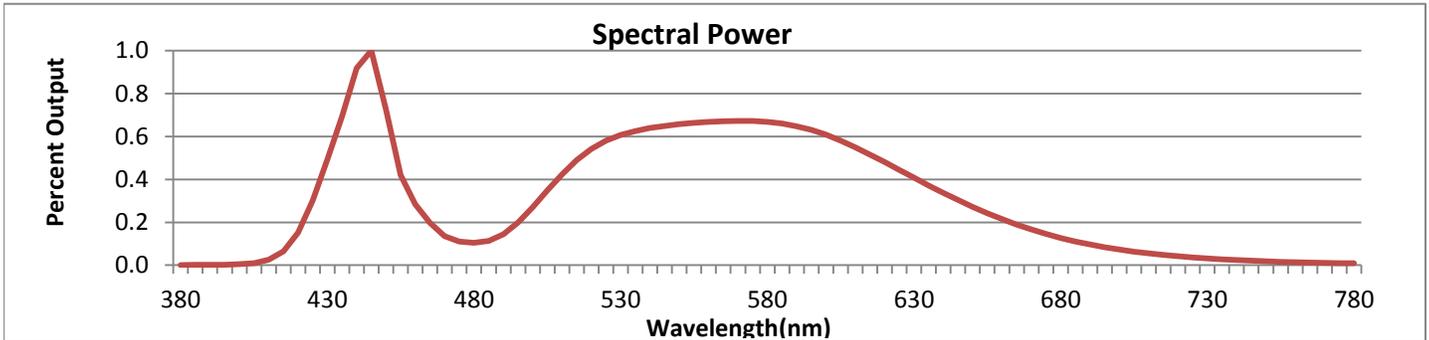
Test Summary

Manufacturer:	Leotek Electronics USA, LLC	
Model Number:	GCJ0-15H-MV-CW-4-XX-700	
Driver Model Number:	LITEON PA-1600-31SL	
Total Lumens:	4278.20	
Input Voltage (VAC/60Hz):	120.00	
Input Current (Amp):	0.30	
Input Power (W):	35.06	
Input Power Factor:	0.99	
Current ATHD @ 120V(%):	11%	
Current ATHD @ 277V(%):	15% (0.13A, 34.28W, 0.93PF)	
Efficacy:	122	
Color Rendering Index (CRI):	72	
Correlated Color Temperature (K):	4856	
Chromaticity Coordinate x:	0.3504	
Chromaticity Coordinate y:	0.3644	
Ambient Temperature (°C):	25.0	
Stabilization Time (Hours):	0:30	
Total Operating Time (Hours):	3:30	
Off State Power(W):	0.00	



FIG. 1 LUMINAIRE

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



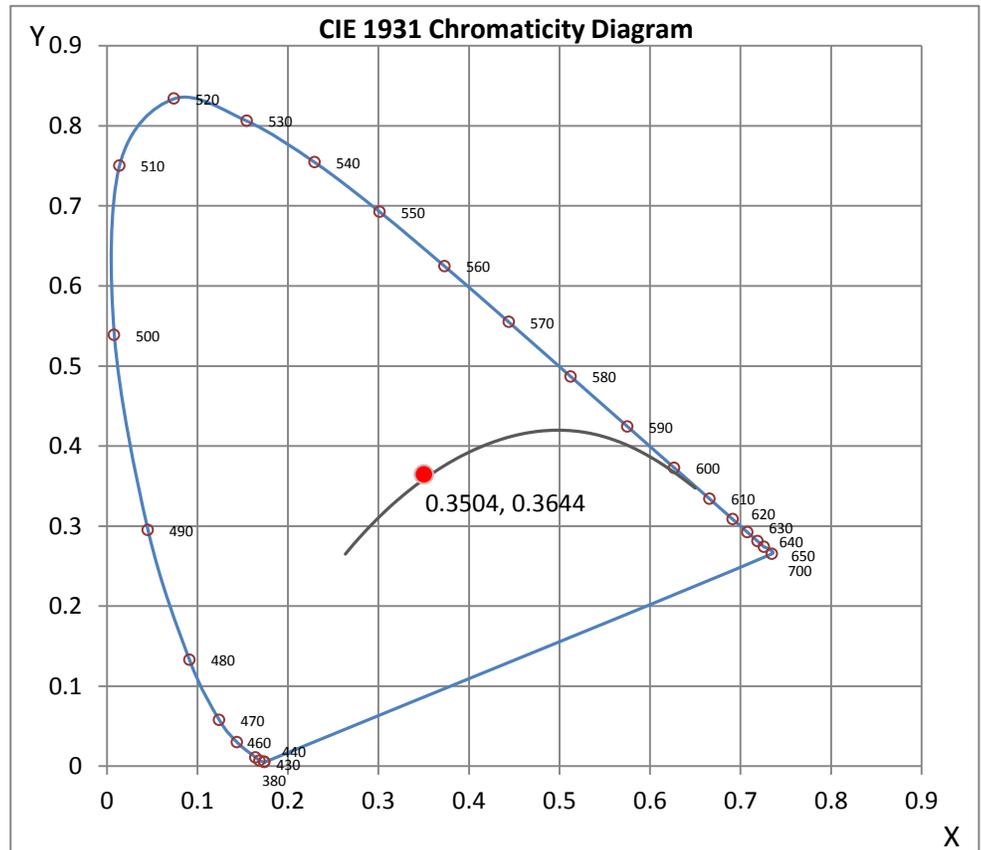
Wavelength	W/m ² nm	440	0.9193	510	0.4242	580	0.6677	650	0.2727	720	0.0415
380	0.0012	450	0.7268	520	0.5418	590	0.6476	660	0.2155	730	0.0315
390	0.0018	460	0.2845	530	0.6076	600	0.6089	670	0.1663	740	0.0238
400	0.0048	470	0.1362	540	0.6396	610	0.5494	680	0.1271	750	0.0182
410	0.0252	480	0.1044	550	0.6573	620	0.4813	690	0.0964	760	0.0139
420	0.1513	490	0.1448	560	0.6688	630	0.4081	700	0.0727	770	0.0107
430	0.4933	500	0.2705	570	0.6731	640	0.3375	710	0.0549	780	0.0093

CRI & CCT

x	0.3504
y	0.3644
u'	0.2101
v'	0.4915
CRI	71.80
CCT	4856
Duv	0.00425

R Values

R1	70.05
R2	75.05
R3	79.57
R4	73.74
R5	70.43
R6	66.70
R7	79.78
R8	58.88
R9	-23.65
R10	41.57
R11	72.34
R12	45.38
R13	69.88
R14	88.04



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

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*

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



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Photometric Test Report

IES ROAD REPORT
PHOTOMETRIC FILENAME : L091604013.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] L091604013
 [TESTLAB] LIGHT LABORATORY, INC.
 [ISSUEDATE] 9/23/2016
 [MANUFAC] Leotek Electronics USA, LLC
 [LUMCAT] GCJ0-15H-MV-CW-4-XX-700
 [LUMINAIRE] 18.25"L. X 9.5"W. X 4.5"H. LED STREET LIGHT
 [BALLASTCAT] LITEON PA-1600-31SL
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
 [_INPUT] 120VAC, 35.06W
 [_TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

IES Classification	Type IV
Longitudinal Classification	Medium
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4278
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	122
Total Luminaire Watts	35.06
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	2121
Maximum Candela Angle	80H 69V
Maximum Candela (<90 Degrees Vertical)	2121
Maximum Candela Angle (<90 Degrees Vertical)	80H 69V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	133 (3.1% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

IES ROAD REPORT
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LUMINAIRE CLASSIFICATION SYSTEM (LCS)

ZONAL LUMEN SUMMARY

	Lumens	% Lamp	% Luminaire	Zone	%
FL - Front-Low (0-30)	417.8	N.A.	9.8		
FM - Front-Medium (30-60)	1180.3	N.A.	27.6	0-20	7.8
FH - Front-High (60-80)	1134.4	N.A.	26.5	0-30	18.1
FVH - Front-Very High (80-90)	11.2	N.A.	0.3	0-40	32.6
BL - Back-Low (0-30)	354.5	N.A.	8.3	0-60	67.1
BM - Back-Medium (30-60)	919.2	N.A.	21.5	0-80	99.7
BH - Back-High (60-80)	257.4	N.A.	6.0	0-90	100
BVH - Back-Very High (80-90)	3.5	N.A.	0.1	10-90	98.1
UL - Uplight-Low (90-100)	0.0	N.A.	0.0	20-40	24.8
UH - Uplight-High (100-180)	0.0	N.A.	0.0	20-50	41.6
				40-70	54.5
Total	4278.2	N.A.	100.0	60-80	32.5
				70-80	12.6
BUG Rating	B1-U0-G1			80-90	0.3
				90-110	0
				90-120	0
				90-130	0
				90-150	0
				90-180	0
				110-180	0
				0-180	100

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CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	<u>0</u>	<u>5</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>	<u>45</u>
0.0	833	833	833	833	833	833	833	833	833	833
0.5	834	834	835	835	834	835	835	834	834	834
1.0	836	835	838	838	836	838	837	836	836	835
1.5	839	837	841	841	838	840	840	838	838	837
2.0	841	839	843	844	840	843	843	840	840	839
2.5	844	841	846	847	842	846	846	842	842	841
3.0	848	846	849	850	845	850	849	845	845	843
3.5	852	850	852	853	849	853	853	848	848	845
4.0	857	855	855	856	853	857	856	851	851	848
4.5	862	861	858	860	857	860	860	855	854	851
5.0	866	866	862	863	860	864	863	858	857	854
5.5	871	870	865	866	864	867	867	862	860	858
6.0	876	875	869	869	867	870	871	866	863	862
6.5	881	879	873	872	870	874	874	870	866	866
7.0	886	884	878	875	873	877	878	874	870	870
7.5	892	888	882	878	877	881	882	879	873	875
8.0	897	894	886	882	881	885	886	882	877	878
8.5	902	899	891	886	885	889	890	886	881	882
9.0	907	905	896	889	889	894	894	889	885	886
9.5	912	910	900	893	893	899	898	893	889	891
10.0	917	915	905	897	898	903	902	898	894	895
10.5	922	920	909	901	903	909	906	903	899	900
11.0	928	925	914	905	908	914	910	909	904	906
11.5	933	930	918	909	914	920	915	915	910	911
12.0	938	934	922	913	919	925	919	922	915	917
12.5	944	939	926	917	924	931	924	928	921	922
13.0	949	943	930	921	929	935	929	933	926	927
13.5	955	947	933	925	934	940	934	938	932	932
14.0	960	952	937	929	939	944	940	942	937	937
14.5	965	956	940	933	944	948	945	947	943	942
15.0	971	960	944	938	949	953	950	952	948	948
15.5	975	964	948	942	952	957	956	956	953	954
16.0	980	969	952	947	956	961	961	960	958	960
16.5	984	973	957	952	960	966	966	965	963	966
17.0	988	977	962	956	963	970	972	969	968	971
17.5	993	982	966	961	966	974	977	973	973	977
18.0	997	986	971	966	970	979	982	978	978	982
18.5	1002	989	976	970	974	983	987	982	983	986
19.0	1007	993	981	975	977	988	992	986	988	991
19.5	1011	997	986	980	981	992	998	991	993	995
20.0	1014	1001	990	985	986	997	1003	996	998	999
20.5	1017	1004	995	991	991	1002	1010	1001	1003	1004
21.0	1018	1008	1000	997	997	1006	1017	1007	1009	1008
21.5	1019	1012	1004	1003	1002	1011	1023	1013	1015	1013
22.0	1020	1015	1008	1009	1009	1016	1030	1019	1021	1017
22.5	1021	1018	1012	1015	1015	1022	1037	1026	1026	1022
23.0	1021	1021	1016	1021	1023	1028	1043	1033	1032	1027
23.5	1020	1023	1020	1026	1031	1035	1049	1041	1038	1032
24.0	1020	1025	1023	1031	1039	1042	1055	1048	1044	1036
24.5	1019	1027	1027	1036	1047	1049	1061	1056	1051	1041
25.0	1018	1028	1030	1041	1055	1057	1066	1064	1057	1046
25.5	1018	1029	1033	1045	1061	1064	1072	1071	1064	1050
26.0	1017	1030	1036	1048	1067	1071	1077	1078	1071	1055

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CANDELA TABULATION - (Cont.)

26.5	1016	1030	1038	1052	1072	1078	1082	1086	1078	1059
27.0	1015	1030	1041	1055	1077	1084	1088	1093	1085	1063
27.5	1014	1029	1042	1057	1081	1091	1093	1100	1092	1068
28.0	1012	1027	1043	1059	1084	1096	1098	1107	1098	1073
28.5	1011	1025	1043	1059	1086	1101	1102	1114	1104	1079
29.0	1009	1022	1043	1060	1087	1105	1107	1121	1110	1085
29.5	1008	1020	1042	1060	1089	1109	1111	1127	1116	1090
30.0	1006	1017	1040	1059	1089	1112	1116	1133	1122	1097
30.5	1004	1014	1038	1057	1089	1114	1120	1138	1128	1103
31.0	1001	1010	1034	1055	1088	1115	1124	1142	1134	1110
31.5	999	1007	1031	1052	1087	1116	1128	1146	1139	1117
32.0	996	1004	1027	1050	1086	1117	1131	1149	1145	1124
32.5	994	1000	1023	1047	1084	1116	1134	1153	1150	1131
33.0	993	997	1020	1044	1082	1114	1136	1156	1154	1137
33.5	992	994	1016	1041	1079	1112	1138	1158	1158	1143
34.0	991	990	1012	1038	1076	1109	1139	1161	1162	1149
34.5	989	987	1008	1035	1073	1106	1139	1163	1165	1154
35.0	988	984	1005	1032	1070	1103	1140	1165	1169	1160
35.5	987	982	1001	1029	1067	1101	1140	1167	1173	1165
36.0	985	980	997	1026	1063	1098	1140	1169	1178	1170
36.5	983	978	994	1023	1059	1096	1140	1171	1181	1175
37.0	981	976	989	1020	1055	1093	1140	1172	1185	1179
37.5	977	973	985	1015	1050	1090	1139	1173	1187	1181
38.0	971	967	978	1009	1044	1086	1137	1172	1186	1182
38.5	964	961	972	1002	1037	1081	1136	1171	1184	1181
39.0	956	955	964	995	1030	1076	1133	1169	1181	1179
39.5	947	948	957	987	1021	1069	1131	1166	1178	1177
40.0	938	940	948	979	1013	1062	1127	1163	1175	1175
40.5	926	930	938	969	1002	1053	1123	1158	1171	1171
41.0	913	919	928	958	991	1042	1117	1152	1168	1167
41.5	900	908	917	948	980	1031	1111	1146	1164	1163
42.0	886	897	906	937	968	1019	1104	1140	1160	1158
42.5	873	886	895	926	956	1008	1097	1133	1156	1154
43.0	861	873	885	915	945	997	1086	1127	1152	1149
43.5	849	861	874	904	933	987	1073	1121	1149	1145
44.0	838	849	864	893	922	977	1061	1115	1146	1141
44.5	827	836	853	883	910	966	1048	1108	1142	1136
45.0	816	825	843	872	899	956	1035	1102	1139	1132
45.5	807	815	833	862	889	944	1023	1095	1135	1129
46.0	798	805	824	852	879	932	1010	1088	1131	1125
46.5	790	796	814	842	869	921	998	1080	1127	1122
47.0	782	787	805	833	860	909	986	1073	1123	1119
47.5	774	779	797	824	851	898	975	1066	1120	1116
48.0	768	773	789	816	843	887	964	1058	1116	1115
48.5	762	767	782	808	835	878	954	1049	1113	1114
49.0	757	762	776	801	827	869	944	1041	1109	1113
49.5	752	757	770	794	820	860	935	1033	1106	1112
50.0	747	753	764	788	814	853	927	1025	1102	1112
50.5	742	747	759	783	808	847	920	1018	1098	1111
51.0	737	742	755	778	804	843	915	1011	1093	1111
51.5	732	737	751	773	800	840	910	1005	1088	1110
52.0	727	732	747	769	796	837	905	999	1083	1110
52.5	723	728	743	765	793	834	901	993	1079	1109
53.0	719	723	739	761	789	830	897	988	1076	1109
53.5	715	719	735	756	785	827	894	984	1073	1108
54.0	711	715	732	753	782	825	891	980	1071	1107

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CANDELA TABULATION - (Cont.)

54.5	708	712	730	749	779	822	888	977	1069	1107
55.0	707	711	728	747	777	821	885	974	1067	1106
55.5	707	712	730	746	776	819	881	971	1064	1107
56.0	710	715	732	746	776	819	878	969	1060	1108
56.5	712	719	734	747	779	822	881	969	1059	1109
57.0	716	723	736	749	782	826	884	969	1059	1111
57.5	719	727	739	750	782	826	883	970	1060	1113
58.0	724	732	743	752	783	827	881	971	1061	1115
58.5	729	737	747	755	787	830	883	969	1063	1119
59.0	735	742	752	759	791	834	887	968	1065	1123
59.5	743	749	758	764	795	839	894	975	1068	1125
60.0	753	756	765	770	800	845	901	983	1071	1129
60.5	763	766	773	777	804	848	906	989	1076	1133
61.0	775	779	782	786	811	853	911	996	1082	1139
61.5	792	796	795	800	821	861	919	1000	1089	1148
62.0	813	817	812	816	835	873	930	1005	1098	1158
62.5	839	842	835	837	852	889	946	1018	1106	1167
63.0	866	869	860	860	872	909	963	1033	1116	1178
63.5	893	896	887	886	896	929	979	1049	1130	1191
64.0	924	927	918	916	924	952	998	1066	1146	1207
64.5	975	974	962	956	959	982	1025	1088	1167	1226
65.0	1031	1027	1011	1001	999	1017	1055	1113	1190	1249
65.5	1087	1081	1068	1055	1047	1058	1091	1146	1218	1276
66.0	1144	1136	1127	1112	1100	1104	1130	1183	1249	1307
66.5	1202	1193	1185	1169	1159	1157	1175	1223	1285	1343
67.0	1262	1252	1243	1228	1221	1215	1225	1266	1325	1382
67.5	1323	1316	1307	1294	1286	1278	1284	1317	1375	1428
68.0	1385	1381	1373	1362	1353	1344	1347	1373	1429	1479
68.5	1453	1450	1442	1431	1424	1418	1416	1438	1489	1536
69.0	1519	1519	1510	1502	1498	1494	1488	1508	1554	1598
69.5	1583	1584	1581	1581	1580	1577	1571	1587	1631	1670
70.0	1638	1639	1643	1654	1659	1659	1655	1670	1712	1741
70.5	1668	1669	1679	1701	1721	1736	1743	1762	1805	1804
71.0	1684	1684	1698	1730	1768	1800	1820	1848	1888	1860
71.5	1678	1680	1694	1728	1777	1826	1866	1915	1941	1910
72.0	1655	1659	1675	1711	1768	1830	1888	1958	1967	1949
72.5	1599	1608	1631	1674	1733	1797	1861	1940	1933	1965
73.0	1523	1539	1572	1625	1684	1746	1813	1890	1871	1956
73.5	1425	1447	1498	1563	1623	1684	1749	1789	1779	1884
74.0	1295	1323	1397	1481	1547	1609	1670	1668	1674	1785
74.5	1066	1106	1221	1351	1446	1514	1569	1534	1560	1658
75.0	815	865	1016	1191	1320	1402	1451	1394	1437	1518
75.5	565	612	771	962	1126	1249	1303	1258	1305	1374
76.0	343	381	532	727	914	1075	1138	1119	1164	1220
76.5	234	255	358	541	706	861	945	969	1009	1041
77.0	163	168	220	381	513	647	747	812	845	855
77.5	126	129	161	274	373	471	555	628	663	659
78.0	104	107	128	192	261	321	383	452	486	476
78.5	85	87	102	145	194	235	276	327	346	343
79.0	71	72	82	113	146	173	196	227	231	237
79.5	58	59	66	90	117	135	149	170	169	176
80.0	49	48	55	73	96	108	116	129	126	133
80.5	40	40	44	58	77	85	90	100	96	102
81.0	33	33	36	45	61	67	71	78	74	78
81.5	28	27	29	36	48	53	56	61	57	60
82.0	24	24	25	29	37	42	45	48	44	47

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CANDELA TABULATION - (Cont.)

82.5	21	21	22	23	29	33	36	38	35	37
83.0	17	17	18	18	23	26	28	30	27	28
83.5	14	14	15	15	18	20	22	23	21	22
84.0	12	12	12	12	14	16	17	18	17	18
84.5	10	10	11	11	12	13	14	14	14	15
85.0	9	9	9	10	10	11	11	12	12	13
85.5	8	8	8	9	9	9	9	10	11	11
86.0	6	7	7	7	8	8	8	9	9	10
86.5	6	6	6	7	7	7	8	8	9	9
87.0	5	5	6	6	7	7	7	8	8	9
87.5	5	5	5	6	6	7	7	7	8	8
88.0	4	4	5	5	6	6	6	6	7	7
88.5	3	4	4	4	5	5	5	5	6	6
89.0	3	3	3	3	4	4	4	4	4	5
89.5	2	2	2	2	2	2	2	2	3	3
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	833	833	833	833	833	833	833	833	833	833
0.5	835	834	834	834	834	833	833	833	834	834
1.0	837	836	835	836	836	834	833	834	835	835
1.5	839	838	837	838	838	835	834	835	836	836
2.0	841	840	838	840	840	836	834	836	838	838
2.5	844	842	840	843	842	837	835	837	839	839
3.0	846	844	842	844	844	839	837	839	840	841
3.5	848	846	844	846	846	842	839	840	841	842
4.0	851	848	845	848	848	844	841	842	842	844
4.5	853	850	847	849	850	847	844	844	844	846
5.0	856	853	849	851	852	850	846	846	846	848
5.5	859	856	852	853	855	852	849	849	848	850
6.0	862	859	855	855	857	855	852	852	851	853
6.5	866	862	857	858	860	857	856	855	855	855
7.0	869	866	860	860	863	859	859	858	858	858
7.5	873	870	864	863	865	862	863	862	862	860
8.0	877	874	868	866	868	864	866	865	865	863
8.5	881	878	872	870	870	867	869	869	868	866
9.0	886	882	876	874	872	870	872	873	872	869
9.5	890	886	880	878	875	873	875	877	876	872
10.0	895	891	885	882	878	876	878	880	879	875
10.5	899	895	890	887	882	880	883	885	884	879
11.0	904	899	894	892	886	885	887	889	888	883
11.5	908	904	899	897	891	890	891	893	893	887
12.0	913	908	904	902	896	895	896	897	897	891
12.5	918	913	909	907	901	900	901	902	902	896
13.0	923	919	915	912	906	906	905	907	906	900
13.5	928	924	920	917	911	911	910	912	911	904
14.0	933	930	926	922	916	916	914	917	915	909
14.5	939	936	932	926	921	922	919	922	920	913
15.0	944	942	937	931	926	927	924	928	924	918
15.5	950	947	942	937	932	932	930	933	930	923
16.0	956	951	948	943	937	937	936	939	936	928
16.5	961	956	953	948	943	942	943	944	943	934
17.0	967	961	958	954	948	947	949	950	949	939
17.5	973	965	962	959	954	953	956	956	955	944

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CANDELA TABULATION - (Cont.)

18.0	977	970	966	963	959	958	962	963	961	949
18.5	982	973	970	967	964	964	969	970	966	953
19.0	986	977	974	970	969	970	975	977	972	958
19.5	990	981	978	974	974	976	982	984	978	963
20.0	994	985	982	977	978	982	989	992	984	968
20.5	998	988	985	980	983	988	997	999	991	974
21.0	1002	992	988	984	987	994	1004	1006	999	981
21.5	1005	995	991	987	991	1000	1012	1013	1007	988
22.0	1009	998	994	991	995	1006	1020	1021	1016	996
22.5	1013	1002	997	994	999	1012	1029	1029	1024	1004
23.0	1017	1007	1000	998	1004	1019	1037	1037	1033	1013
23.5	1021	1012	1003	1001	1009	1025	1045	1046	1041	1022
24.0	1025	1017	1007	1005	1014	1032	1053	1056	1050	1032
24.5	1029	1021	1010	1009	1019	1039	1061	1065	1060	1042
25.0	1033	1026	1013	1013	1024	1046	1069	1074	1070	1052
25.5	1037	1029	1017	1018	1030	1054	1077	1085	1081	1063
26.0	1041	1032	1022	1023	1037	1062	1085	1095	1093	1073
26.5	1044	1035	1026	1029	1043	1070	1093	1105	1105	1084
27.0	1048	1038	1030	1034	1050	1077	1101	1115	1117	1094
27.5	1051	1041	1034	1039	1056	1085	1109	1125	1128	1105
28.0	1055	1044	1038	1044	1061	1092	1117	1134	1138	1114
28.5	1060	1048	1042	1048	1067	1098	1125	1143	1146	1124
29.0	1064	1051	1046	1052	1072	1105	1133	1151	1155	1133
29.5	1069	1055	1049	1056	1076	1111	1140	1159	1163	1143
30.0	1074	1058	1052	1060	1081	1117	1147	1166	1170	1152
30.5	1079	1062	1055	1064	1086	1121	1153	1172	1176	1160
31.0	1084	1065	1057	1068	1090	1126	1158	1178	1182	1169
31.5	1090	1068	1058	1071	1095	1130	1163	1184	1188	1177
32.0	1095	1072	1060	1075	1099	1134	1168	1189	1194	1184
32.5	1100	1075	1062	1077	1103	1138	1172	1194	1199	1191
33.0	1106	1078	1065	1078	1106	1141	1176	1198	1204	1197
33.5	1111	1082	1067	1079	1109	1145	1179	1203	1209	1201
34.0	1116	1085	1070	1080	1112	1149	1183	1207	1213	1206
34.5	1121	1089	1072	1080	1115	1152	1186	1210	1218	1210
35.0	1126	1092	1074	1080	1117	1155	1189	1213	1221	1214
35.5	1131	1096	1074	1080	1118	1157	1191	1216	1224	1218
36.0	1135	1099	1074	1080	1118	1159	1194	1218	1226	1222
36.5	1139	1102	1074	1080	1118	1161	1196	1219	1228	1226
37.0	1143	1104	1073	1079	1118	1162	1198	1220	1230	1230
37.5	1146	1105	1072	1079	1118	1162	1199	1221	1232	1234
38.0	1145	1104	1070	1077	1116	1161	1200	1222	1234	1238
38.5	1143	1101	1068	1075	1115	1160	1200	1223	1236	1242
39.0	1141	1098	1065	1073	1112	1158	1199	1223	1238	1246
39.5	1138	1095	1062	1070	1110	1156	1198	1223	1240	1250
40.0	1135	1091	1059	1068	1108	1154	1197	1222	1241	1253
40.5	1133	1088	1057	1066	1106	1152	1193	1219	1241	1256
41.0	1130	1085	1054	1064	1104	1149	1189	1215	1241	1258
41.5	1128	1082	1051	1062	1102	1147	1184	1210	1239	1260
42.0	1125	1079	1048	1059	1099	1144	1179	1206	1238	1261
42.5	1122	1075	1045	1057	1097	1140	1173	1201	1236	1261
43.0	1117	1071	1041	1053	1092	1134	1168	1197	1233	1259
43.5	1111	1067	1037	1048	1087	1127	1163	1193	1230	1256
44.0	1106	1063	1033	1044	1082	1120	1158	1190	1226	1252
44.5	1100	1059	1030	1039	1077	1113	1152	1186	1222	1249
45.0	1095	1055	1026	1035	1072	1106	1147	1182	1218	1244
45.5	1091	1051	1023	1031	1066	1101	1142	1177	1213	1239

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CANDELA TABULATION - (Cont.)

46.0	1087	1047	1020	1027	1061	1097	1137	1172	1207	1234
46.5	1083	1043	1017	1023	1056	1093	1133	1167	1202	1229
47.0	1079	1040	1015	1019	1051	1089	1129	1162	1197	1224
47.5	1077	1037	1012	1015	1047	1086	1125	1158	1192	1218
48.0	1076	1035	1010	1012	1043	1084	1123	1157	1188	1214
48.5	1076	1033	1008	1010	1040	1081	1122	1156	1186	1210
49.0	1076	1032	1007	1007	1037	1079	1121	1156	1183	1206
49.5	1076	1031	1005	1005	1035	1078	1120	1156	1181	1202
50.0	1076	1030	1003	1003	1032	1076	1120	1156	1180	1198
50.5	1076	1029	1002	1001	1030	1075	1120	1156	1179	1196
51.0	1075	1029	1000	1000	1028	1075	1121	1156	1179	1194
51.5	1075	1030	999	999	1026	1074	1122	1156	1178	1192
52.0	1075	1030	998	998	1025	1074	1123	1156	1179	1191
52.5	1075	1031	997	998	1024	1074	1124	1157	1179	1190
53.0	1076	1033	998	997	1025	1075	1124	1158	1181	1190
53.5	1078	1035	1000	997	1026	1077	1125	1159	1183	1191
54.0	1079	1037	1002	997	1028	1079	1125	1160	1186	1191
54.5	1081	1039	1004	997	1029	1080	1127	1162	1188	1193
55.0	1083	1042	1005	997	1030	1081	1128	1165	1191	1195
55.5	1085	1044	1007	997	1028	1081	1133	1169	1193	1198
56.0	1088	1046	1008	998	1026	1080	1138	1174	1196	1203
56.5	1090	1048	1010	999	1022	1079	1138	1177	1199	1206
57.0	1093	1050	1012	999	1019	1079	1138	1179	1203	1211
57.5	1096	1052	1012	999	1023	1083	1141	1183	1208	1217
58.0	1098	1055	1013	999	1029	1088	1144	1187	1215	1225
58.5	1103	1057	1015	1001	1031	1094	1151	1193	1224	1234
59.0	1109	1060	1017	1003	1032	1099	1157	1199	1234	1245
59.5	1112	1064	1019	1006	1034	1099	1159	1205	1248	1261
60.0	1117	1069	1022	1009	1036	1099	1162	1212	1263	1279
60.5	1124	1077	1026	1012	1041	1103	1166	1225	1283	1303
61.0	1133	1085	1030	1015	1046	1108	1173	1241	1306	1331
61.5	1141	1091	1037	1021	1046	1114	1184	1260	1342	1368
62.0	1150	1097	1045	1028	1046	1120	1198	1284	1383	1410
62.5	1159	1105	1052	1031	1051	1125	1216	1320	1429	1460
63.0	1169	1115	1059	1034	1058	1133	1238	1361	1477	1509
63.5	1183	1131	1068	1041	1070	1152	1269	1408	1531	1547
64.0	1200	1147	1077	1051	1085	1175	1304	1463	1588	1575
64.5	1218	1161	1091	1067	1100	1193	1338	1539	1661	1586
65.0	1238	1175	1107	1084	1114	1213	1389	1626	1729	1585
65.5	1263	1191	1127	1104	1116	1234	1502	1742	1770	1561
66.0	1291	1212	1150	1120	1124	1279	1632	1851	1794	1524
66.5	1325	1251	1173	1115	1160	1423	1773	1905	1787	1470
67.0	1363	1292	1193	1115	1223	1588	1902	1942	1771	1412
67.5	1409	1322	1190	1146	1360	1748	1973	1974	1763	1375
68.0	1457	1344	1194	1207	1516	1888	2027	1998	1748	1331
68.5	1503	1339	1234	1361	1678	1959	2083	2019	1716	1246
69.0	1543	1342	1303	1533	1820	2008	2121	2014	1657	1137
69.5	1560	1393	1455	1688	1877	2054	2110	1928	1514	970
70.0	1577	1470	1620	1817	1908	2082	2070	1806	1342	790
70.5	1624	1614	1765	1863	1932	2063	1986	1643	1148	615
71.0	1687	1761	1878	1879	1940	2016	1866	1447	940	452
71.5	1794	1867	1898	1875	1914	1927	1672	1175	705	328
72.0	1894	1937	1883	1852	1863	1799	1435	891	482	227
72.5	1932	1913	1849	1798	1773	1577	1111	628	331	167
73.0	1934	1854	1794	1722	1651	1324	786	397	214	125
73.5	1872	1776	1703	1616	1459	1046	544	268	154	101

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CANDELA TABULATION - (Cont.)

74.0	1783	1680	1593	1481	1238	773	346	178	117	84
74.5	1676	1556	1461	1272	988	542	233	134	95	71
75.0	1549	1415	1314	1043	733	344	158	108	81	61
75.5	1379	1251	1137	819	490	225	122	91	67	50
76.0	1191	1074	943	601	281	142	103	79	55	42
76.5	985	880	708	406	194	113	87	67	45	36
77.0	780	688	486	242	145	100	77	58	37	31
77.5	601	521	355	173	114	83	64	47	31	28
78.0	439	374	256	134	94	69	53	38	27	26
78.5	318	273	193	110	79	59	44	32	25	24
79.0	220	194	146	94	68	50	37	28	24	23
79.5	167	148	114	81	59	42	31	25	23	22
80.0	130	115	91	72	51	34	27	24	22	20
80.5	102	92	73	59	42	28	23	21	20	19
81.0	80	74	59	48	35	24	21	20	19	18
81.5	63	60	48	39	28	21	19	19	18	17
82.0	51	51	39	31	24	19	18	18	17	16
82.5	41	43	33	26	20	18	18	18	17	15
83.0	32	34	27	21	18	17	17	17	16	15
83.5	25	27	22	18	16	15	16	16	15	14
84.0	19	21	18	16	15	15	15	16	15	13
84.5	16	17	15	15	14	15	15	15	14	13
85.0	13	13	14	14	14	14	15	15	14	12
85.5	11	11	12	13	14	14	14	14	13	12
86.0	10	10	11	12	13	13	13	13	12	11
86.5	9	10	11	12	13	13	13	13	12	11
87.0	9	10	11	12	12	12	12	12	11	10
87.5	9	10	11	11	12	12	11	11	10	9
88.0	8	8	9	10	10	10	10	9	9	8
88.5	6	7	7	8	8	8	8	7	7	6
89.0	5	5	5	5	6	6	5	5	5	4
89.5	3	3	3	3	3	3	3	3	3	2
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	833	833	833	833	833	833	833	833	833	833
0.5	834	834	832	832	831	834	833	832	833	830
1.0	836	835	832	831	830	835	833	831	833	827
1.5	837	836	832	830	829	836	834	831	834	825
2.0	839	837	832	829	828	837	834	831	834	822
2.5	840	839	832	829	827	838	834	830	835	820
3.0	842	840	833	829	826	838	835	830	835	819
3.5	843	841	834	829	826	837	835	830	835	819
4.0	844	842	835	830	826	836	835	830	835	819
4.5	845	843	836	830	826	836	835	830	834	818
5.0	847	845	837	831	826	835	835	830	833	818
5.5	848	845	838	832	827	835	834	830	831	817
6.0	850	846	838	833	828	835	833	830	829	816
6.5	852	847	839	834	828	834	831	830	826	815
7.0	854	848	840	835	829	834	830	830	823	814
7.5	856	849	841	836	831	834	829	830	821	813
8.0	858	850	843	837	832	834	828	829	819	813
8.5	860	852	844	838	835	835	828	829	817	812
9.0	862	854	846	839	837	835	827	829	816	812

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CANDELA TABULATION - (Cont.)

9.5	865	856	847	840	839	835	826	828	815	812
10.0	867	858	849	842	841	835	825	828	814	812
10.5	871	861	851	843	842	835	825	827	814	811
11.0	874	865	852	844	843	835	824	826	814	811
11.5	878	868	854	845	844	834	824	825	814	810
12.0	882	872	856	847	845	834	824	825	814	810
12.5	886	875	858	848	846	834	823	824	814	809
13.0	890	878	860	851	847	833	823	823	813	809
13.5	893	880	863	853	847	833	823	823	813	808
14.0	897	883	866	856	848	833	823	822	812	808
14.5	901	885	869	858	849	832	823	822	812	807
15.0	905	888	872	861	850	832	823	821	811	806
15.5	909	891	875	862	851	832	824	821	811	804
16.0	913	894	879	864	853	832	824	820	810	802
16.5	917	898	883	865	854	832	825	820	810	800
17.0	922	901	886	866	856	832	825	819	809	798
17.5	926	905	890	868	857	832	826	819	808	796
18.0	931	909	892	869	858	833	826	818	807	795
18.5	935	914	895	871	859	834	826	817	805	793
19.0	940	918	897	873	859	835	827	816	803	792
19.5	945	923	900	875	860	837	827	814	802	790
20.0	950	928	903	877	861	838	827	813	800	789
20.5	955	932	906	880	862	839	827	811	798	788
21.0	960	937	909	883	863	840	828	810	796	786
21.5	966	942	913	886	864	842	828	808	794	784
22.0	971	947	917	890	865	843	828	806	792	783
22.5	978	952	921	893	866	844	828	805	791	781
23.0	986	958	926	896	869	844	828	803	789	780
23.5	995	965	932	899	871	844	827	802	788	778
24.0	1004	972	938	903	874	845	826	801	786	776
24.5	1013	979	944	906	877	846	825	800	785	775
25.0	1023	987	950	911	880	846	824	798	783	773
25.5	1032	996	957	916	884	848	823	797	782	772
26.0	1042	1006	965	921	888	851	821	796	780	771
26.5	1052	1015	972	927	893	853	820	794	778	770
27.0	1061	1025	980	933	897	855	818	793	776	769
27.5	1071	1035	988	939	901	858	817	792	775	768
28.0	1081	1043	995	945	905	860	816	792	776	768
28.5	1091	1051	1002	950	908	862	816	793	777	768
29.0	1100	1059	1009	956	911	863	816	793	779	767
29.5	1110	1067	1016	962	914	865	816	794	780	767
30.0	1120	1075	1024	968	917	866	816	795	781	767
30.5	1129	1085	1034	976	922	866	817	795	782	766
31.0	1138	1095	1044	983	928	866	818	796	782	765
31.5	1147	1105	1055	991	933	866	818	797	782	764
32.0	1155	1115	1065	999	939	866	819	797	781	763
32.5	1164	1125	1075	1006	944	866	820	798	781	762
33.0	1171	1133	1083	1013	948	868	821	797	779	760
33.5	1178	1141	1090	1019	951	870	823	797	777	758
34.0	1185	1149	1097	1025	953	872	824	796	774	756
34.5	1192	1157	1104	1031	956	874	825	795	772	754
35.0	1198	1164	1111	1037	958	876	825	794	769	751
35.5	1205	1172	1118	1043	960	877	825	791	766	748
36.0	1211	1180	1124	1048	961	877	824	789	763	745
36.5	1218	1187	1131	1053	962	877	823	786	760	742
37.0	1224	1195	1138	1059	963	877	822	782	757	739

IES ROAD REPORT
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CANDELA TABULATION - (Cont.)

37.5	1230	1202	1144	1063	963	876	820	779	754	735
38.0	1236	1210	1150	1067	962	874	816	776	751	731
38.5	1243	1217	1156	1071	960	871	812	772	747	727
39.0	1248	1224	1162	1075	959	868	808	769	743	722
39.5	1254	1231	1167	1078	957	865	803	765	739	718
40.0	1259	1236	1171	1080	955	862	799	762	735	713
40.5	1262	1238	1173	1079	955	861	796	758	730	708
41.0	1265	1239	1174	1078	956	859	793	754	726	703
41.5	1267	1240	1174	1077	956	857	790	750	721	698
42.0	1268	1240	1174	1075	956	855	787	747	716	693
42.5	1269	1240	1174	1073	955	853	784	743	711	688
43.0	1267	1240	1176	1073	952	849	779	740	708	683
43.5	1265	1240	1178	1073	949	845	775	736	704	679
44.0	1263	1240	1179	1072	945	840	770	733	700	674
44.5	1260	1239	1180	1072	940	835	765	730	697	670
45.0	1256	1238	1180	1071	935	830	760	726	693	664
45.5	1251	1235	1177	1069	931	825	757	722	687	658
46.0	1246	1231	1174	1067	925	820	753	718	681	652
46.5	1240	1227	1170	1064	920	815	750	714	675	645
47.0	1235	1222	1165	1061	914	810	746	709	668	638
47.5	1229	1216	1160	1056	908	805	742	704	661	631
48.0	1223	1209	1155	1047	901	799	737	697	654	625
48.5	1218	1202	1149	1037	894	794	731	690	647	618
49.0	1212	1194	1144	1027	887	787	725	683	639	612
49.5	1207	1187	1138	1016	879	781	719	675	632	606
50.0	1201	1180	1132	1005	871	774	712	667	624	600
50.5	1197	1177	1127	997	862	767	704	658	617	595
51.0	1194	1174	1121	989	853	759	695	649	609	591
51.5	1190	1172	1116	981	844	750	686	640	601	586
52.0	1187	1169	1110	974	835	742	677	630	593	582
52.5	1185	1167	1103	966	826	734	667	620	585	577
53.0	1185	1164	1096	960	821	728	658	610	577	571
53.5	1185	1161	1089	953	816	722	648	600	568	564
54.0	1186	1158	1081	946	812	716	639	589	560	558
54.5	1187	1155	1074	940	807	709	629	579	551	550
55.0	1188	1152	1067	933	802	702	618	568	543	543
55.5	1189	1151	1062	926	794	692	607	559	536	537
56.0	1190	1151	1058	920	786	682	596	549	530	530
56.5	1192	1155	1059	912	780	667	583	541	524	517
57.0	1194	1158	1058	904	772	653	570	533	518	501
57.5	1198	1156	1049	895	762	644	561	526	509	476
58.0	1204	1154	1039	887	752	637	553	520	498	449
58.5	1214	1157	1034	878	742	628	546	512	480	424
59.0	1226	1163	1032	870	732	617	539	502	459	399
59.5	1240	1175	1037	864	722	603	528	491	432	378
60.0	1256	1188	1041	858	712	588	517	476	403	358
60.5	1278	1194	1032	849	699	579	509	452	381	345
61.0	1303	1201	1022	839	685	570	500	427	361	332
61.5	1336	1219	1023	831	673	556	490	400	346	320
62.0	1370	1238	1022	818	657	540	475	375	332	306
62.5	1411	1257	1012	790	627	518	445	352	314	288
63.0	1442	1260	990	755	595	496	410	330	296	270
63.5	1435	1209	937	713	569	476	376	310	273	256
64.0	1411	1143	875	668	541	452	343	290	253	243
64.5	1360	1081	813	621	504	414	317	272	241	233
65.0	1299	1018	748	569	462	371	292	254	231	224

IES ROAD REPORT
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CANDELA TABULATION - (Cont.)

65.5	1243	957	677	500	411	326	262	232	218	209
66.0	1181	890	604	431	359	282	233	211	203	194
66.5	1103	797	532	381	314	246	211	192	186	179
67.0	1023	702	462	334	270	211	189	173	168	162
67.5	958	631	403	286	222	172	159	149	146	141
68.0	886	557	344	239	177	135	130	126	124	119
68.5	774	452	271	192	140	109	107	106	104	99
69.0	649	346	203	149	109	88	87	88	86	82
69.5	503	263	160	121	90	74	72	73	71	69
70.0	364	194	127	99	76	63	60	59	59	58
70.5	270	153	107	83	64	54	51	50	50	50
71.0	196	124	91	70	54	46	44	43	43	43
71.5	155	104	80	60	47	41	39	38	37	38
72.0	127	90	70	53	43	37	35	34	34	34
72.5	105	76	61	48	39	35	33	31	30	31
73.0	88	65	54	44	37	33	31	29	28	28
73.5	75	59	49	40	34	31	29	27	26	26
74.0	65	54	45	36	32	29	27	26	24	23
74.5	59	50	42	33	30	27	25	24	22	21
75.0	54	46	39	31	28	25	24	22	21	20
75.5	48	43	35	29	26	24	23	21	19	18
76.0	43	39	31	27	25	22	21	19	18	17
76.5	38	35	28	25	23	21	19	18	16	16
77.0	34	31	26	23	21	20	17	16	15	15
77.5	31	28	24	21	19	18	16	15	14	13
78.0	28	26	22	20	18	17	15	14	13	12
78.5	26	23	20	18	17	15	13	13	12	11
79.0	23	21	19	17	16	14	12	11	11	10
79.5	21	19	17	16	15	13	11	10	10	8
80.0	20	18	16	15	14	12	10	10	9	7
80.5	18	17	15	14	13	11	10	9	8	7
81.0	17	15	14	13	12	10	9	8	7	6
81.5	16	14	13	12	11	10	9	8	7	6
82.0	15	14	12	12	10	9	8	7	7	6
82.5	14	13	12	11	10	9	8	7	6	6
83.0	13	12	11	10	9	8	8	7	6	5
83.5	12	11	11	10	9	8	7	6	6	5
84.0	12	11	10	9	9	8	7	6	6	5
84.5	11	10	10	9	8	7	7	6	6	5
85.0	11	10	9	8	8	7	7	6	6	5
85.5	11	10	9	8	8	7	7	6	5	5
86.0	10	9	9	8	8	7	7	6	5	5
86.5	10	9	9	8	8	7	6	6	5	5
87.0	9	9	9	8	8	7	6	6	5	5
87.5	8	8	8	8	7	7	6	5	5	4
88.0	7	7	7	7	6	6	5	5	4	4
88.5	6	6	5	5	5	5	4	4	3	3
89.0	4	4	4	4	3	3	3	3	2	2
89.5	2	2	2	2	2	2	1	1	1	1
90.0	0	0	0	0	0	0	0	0	0	0

Vert. 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	833	833	833	833	833	833	833
0.5	831	832	831	830	831	832	834

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CANDELA TABULATION - (Cont.)

1.0	828	831	829	827	828	832	836
1.5	826	830	827	825	826	831	837
2.0	824	829	824	822	824	831	839
2.5	822	828	822	820	822	831	839
3.0	821	826	820	817	821	830	838
3.5	821	825	818	815	819	828	836
4.0	820	823	816	813	817	827	833
4.5	819	821	814	811	816	826	831
5.0	819	820	813	809	814	824	828
5.5	817	817	811	807	812	823	827
6.0	816	815	810	806	810	822	826
6.5	815	813	809	804	808	821	825
7.0	813	810	808	802	807	820	824
7.5	812	808	806	801	805	819	824
8.0	812	807	805	800	804	819	824
8.5	811	806	804	799	803	819	825
9.0	811	805	803	799	802	819	825
9.5	810	804	802	798	802	819	825
10.0	810	803	800	797	801	819	826
10.5	810	802	799	796	801	818	826
11.0	809	801	798	795	801	817	826
11.5	809	800	797	793	801	816	825
12.0	808	799	795	792	800	815	825
12.5	807	798	794	791	800	813	824
13.0	806	797	793	790	799	812	822
13.5	804	796	791	788	797	810	820
14.0	802	795	790	787	795	808	818
14.5	800	793	789	786	794	806	815
15.0	798	792	787	785	792	804	813
15.5	796	791	785	783	790	802	810
16.0	794	790	784	782	787	799	806
16.5	792	788	782	780	785	796	803
17.0	790	787	780	778	783	794	799
17.5	788	786	778	776	781	791	796
18.0	786	784	776	774	779	787	791
18.5	785	782	774	772	777	783	786
19.0	783	779	771	769	775	779	782
19.5	781	777	768	767	773	774	777
20.0	779	775	766	764	770	770	772
20.5	777	772	763	761	767	766	767
21.0	774	769	761	758	764	763	762
21.5	772	766	758	755	760	759	757
22.0	770	763	756	752	757	756	753
22.5	768	760	753	750	754	753	749
23.0	766	759	752	748	752	751	746
23.5	764	757	750	746	750	749	744
24.0	763	756	749	745	748	748	742
24.5	762	755	748	744	747	746	740
25.0	761	754	747	743	745	745	739
25.5	761	753	746	744	745	744	737
26.0	760	753	746	745	744	742	736
26.5	761	752	746	746	743	741	735
27.0	761	752	746	747	742	739	734
27.5	761	751	746	747	741	737	733
28.0	761	751	745	746	739	735	730
28.5	761	750	745	745	736	732	727

IES ROAD REPORT
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CANDELA TABULATION - (Cont.)

29.0	761	749	744	744	733	728	724
29.5	761	748	743	742	730	725	721
30.0	760	747	741	739	727	721	718
30.5	759	746	739	736	723	718	715
31.0	758	744	737	733	720	714	711
31.5	756	743	734	729	716	710	708
32.0	754	741	732	725	712	706	704
32.5	752	739	729	721	708	701	700
33.0	749	736	725	717	704	696	695
33.5	746	733	722	713	699	691	689
34.0	743	730	718	709	695	686	684
34.5	739	727	714	705	690	680	678
35.0	736	723	710	700	685	674	671
35.5	733	719	706	695	679	667	664
36.0	729	715	701	689	673	660	656
36.5	726	710	696	683	666	653	648
37.0	722	705	691	676	659	645	639
37.5	718	700	686	669	651	636	630
38.0	713	694	679	660	641	626	618
38.5	708	688	671	651	630	614	606
39.0	703	681	664	641	619	603	593
39.5	697	674	656	631	608	591	581
40.0	692	667	648	622	598	580	568
40.5	686	661	641	613	588	568	557
41.0	680	654	633	605	579	557	546
41.5	673	647	626	596	570	547	536
42.0	667	641	619	589	562	537	527
42.5	661	634	612	581	554	528	518
43.0	656	628	607	576	550	524	514
43.5	652	622	602	572	546	520	511
44.0	647	616	597	568	544	518	509
44.5	642	611	593	565	541	516	507
45.0	637	605	589	562	539	514	505
45.5	632	601	586	559	537	512	503
46.0	626	598	583	557	535	510	501
46.5	621	595	580	556	534	508	499
47.0	615	592	578	555	533	507	498
47.5	610	589	577	555	533	507	497
48.0	605	588	578	557	535	510	500
48.5	601	588	579	561	539	513	503
49.0	598	587	581	564	543	517	507
49.5	594	587	583	568	546	520	510
50.0	591	587	586	571	549	523	513
50.5	588	589	591	575	551	524	512
51.0	586	590	595	578	552	524	510
51.5	583	591	599	580	552	522	507
52.0	581	592	601	581	551	520	503
52.5	578	590	600	578	546	514	496
53.0	575	585	590	564	531	499	481
53.5	571	578	576	547	513	481	464
54.0	566	569	561	528	494	462	446
54.5	560	559	543	509	475	443	427
55.0	551	545	525	489	456	425	410
55.5	536	522	501	474	439	409	395
56.0	518	497	477	458	424	396	383
56.5	493	473	459	441	411	386	374

**IES ROAD REPORT
PHOTOMETRIC FILENAME : L091604013.IES**

CANDELA TABULATION - (Cont.)

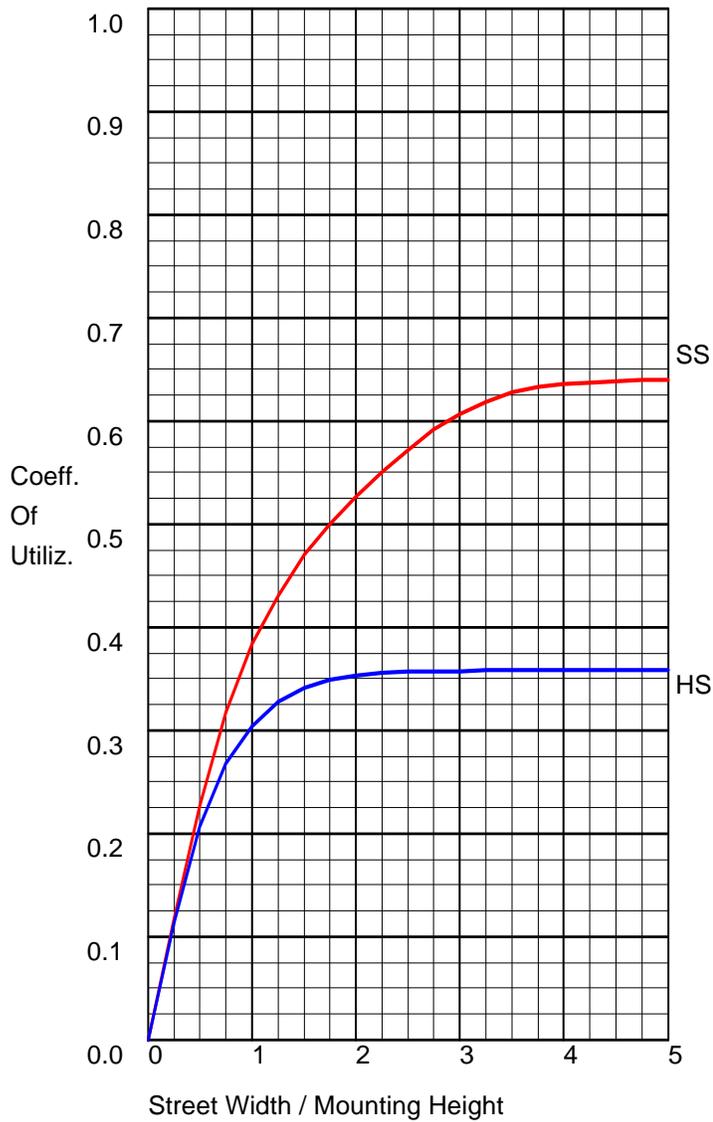
57.0	466	449	442	424	399	377	366
57.5	441	431	425	411	392	371	362
58.0	418	413	409	400	385	365	357
58.5	398	395	392	391	377	357	351
59.0	379	378	377	384	369	350	345
59.5	361	362	369	378	366	349	343
60.0	345	349	362	372	364	349	342
60.5	330	341	356	367	360	346	339
61.0	316	333	347	359	353	340	335
61.5	307	321	334	344	338	329	325
62.0	298	308	319	328	322	316	313
62.5	283	291	304	313	309	305	304
63.0	268	275	289	298	296	293	293
63.5	255	261	274	282	280	277	276
64.0	243	247	258	266	263	260	259
64.5	230	231	241	247	245	243	245
65.0	216	215	223	228	226	227	230
65.5	202	199	205	210	208	208	212
66.0	188	183	186	191	188	188	192
66.5	171	165	165	167	165	165	167
67.0	153	146	145	144	141	141	142
67.5	133	127	124	123	120	121	122
68.0	113	107	105	104	101	102	103
68.5	95	91	88	89	87	87	87
69.0	79	76	74	75	74	74	72
69.5	67	65	64	63	59	57	56
70.0	56	55	54	53	45	42	40
70.5	49	47	44	41	35	30	28
71.0	42	41	36	32	26	21	19
71.5	37	34	30	26	22	18	16
72.0	32	29	25	22	19	15	14
72.5	29	26	23	20	16	13	12
73.0	25	23	21	18	14	12	11
73.5	23	21	19	16	13	10	10
74.0	21	20	18	15	11	10	9
74.5	20	18	16	13	10	9	8
75.0	18	17	15	12	9	8	7
75.5	17	16	14	10	8	7	7
76.0	16	15	13	9	7	7	6
76.5	15	14	11	8	7	6	6
77.0	14	12	10	7	6	5	5
77.5	13	11	9	7	6	5	5
78.0	11	9	7	6	5	5	5
78.5	10	8	6	6	5	4	4
79.0	8	7	6	5	4	4	4
79.5	7	6	6	5	4	4	4
80.0	7	6	5	5	4	3	3
80.5	6	6	5	4	4	3	3
81.0	6	5	4	4	3	3	3
81.5	5	5	4	4	3	3	3
82.0	5	5	4	4	3	3	3
82.5	5	4	4	3	3	3	3
83.0	5	4	4	3	3	3	3
83.5	5	4	4	3	3	3	3
84.0	5	4	4	3	3	3	3
84.5	5	4	4	3	3	3	3

IES ROAD REPORT
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CANDELA TABULATION - (Cont.)

85.0	5	4	4	3	3	3	3
85.5	5	4	4	3	3	3	3
86.0	5	4	4	3	3	3	3
86.5	5	4	4	3	3	3	3
87.0	4	4	4	3	3	3	2
87.5	4	4	4	3	3	2	2
88.0	4	3	3	3	2	2	2
88.5	3	3	3	2	2	2	2
89.0	2	2	2	2	1	1	1
89.5	1	1	1	1	1	1	1
90.0	0	0	0	0	0	0	0

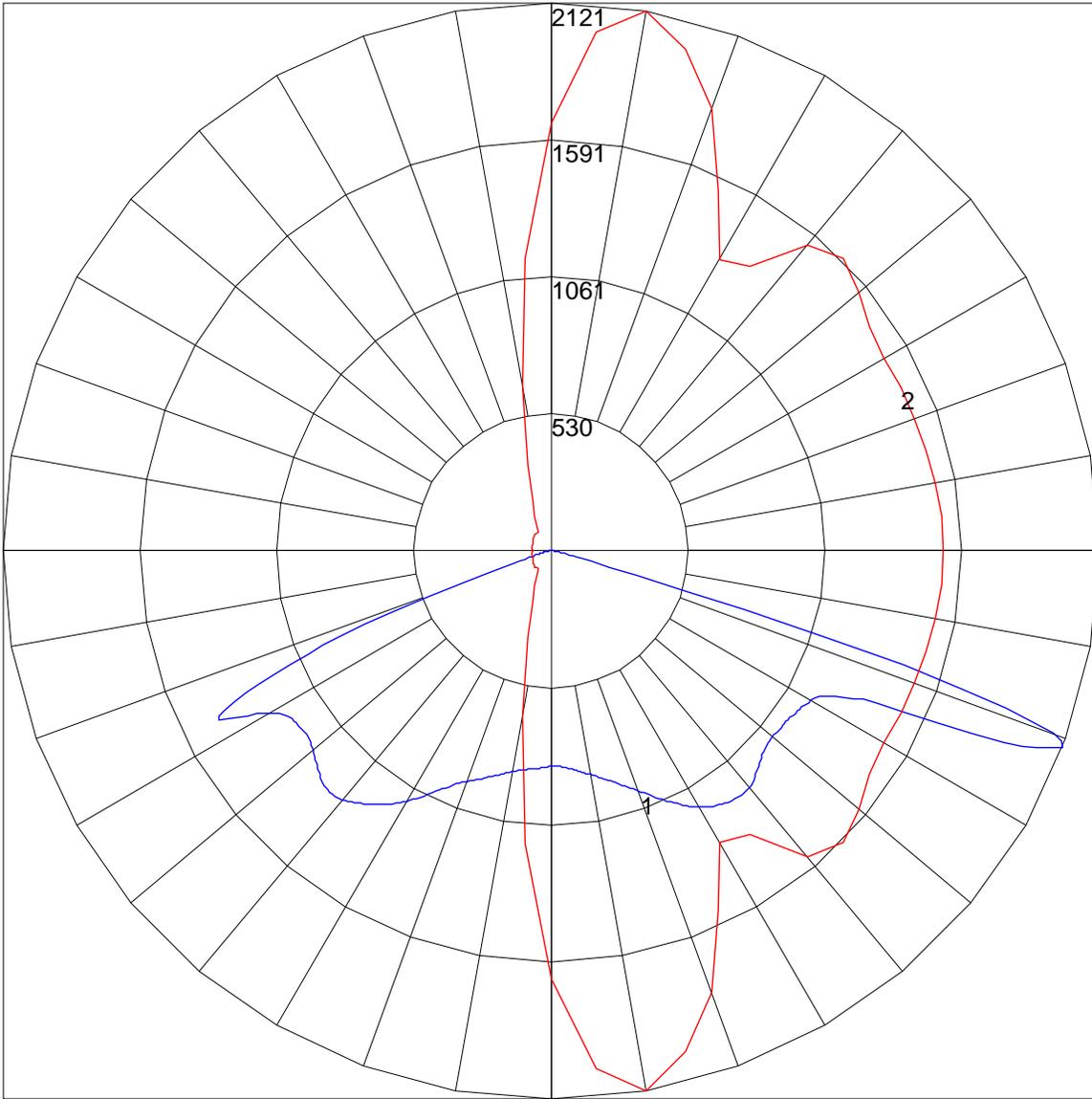
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

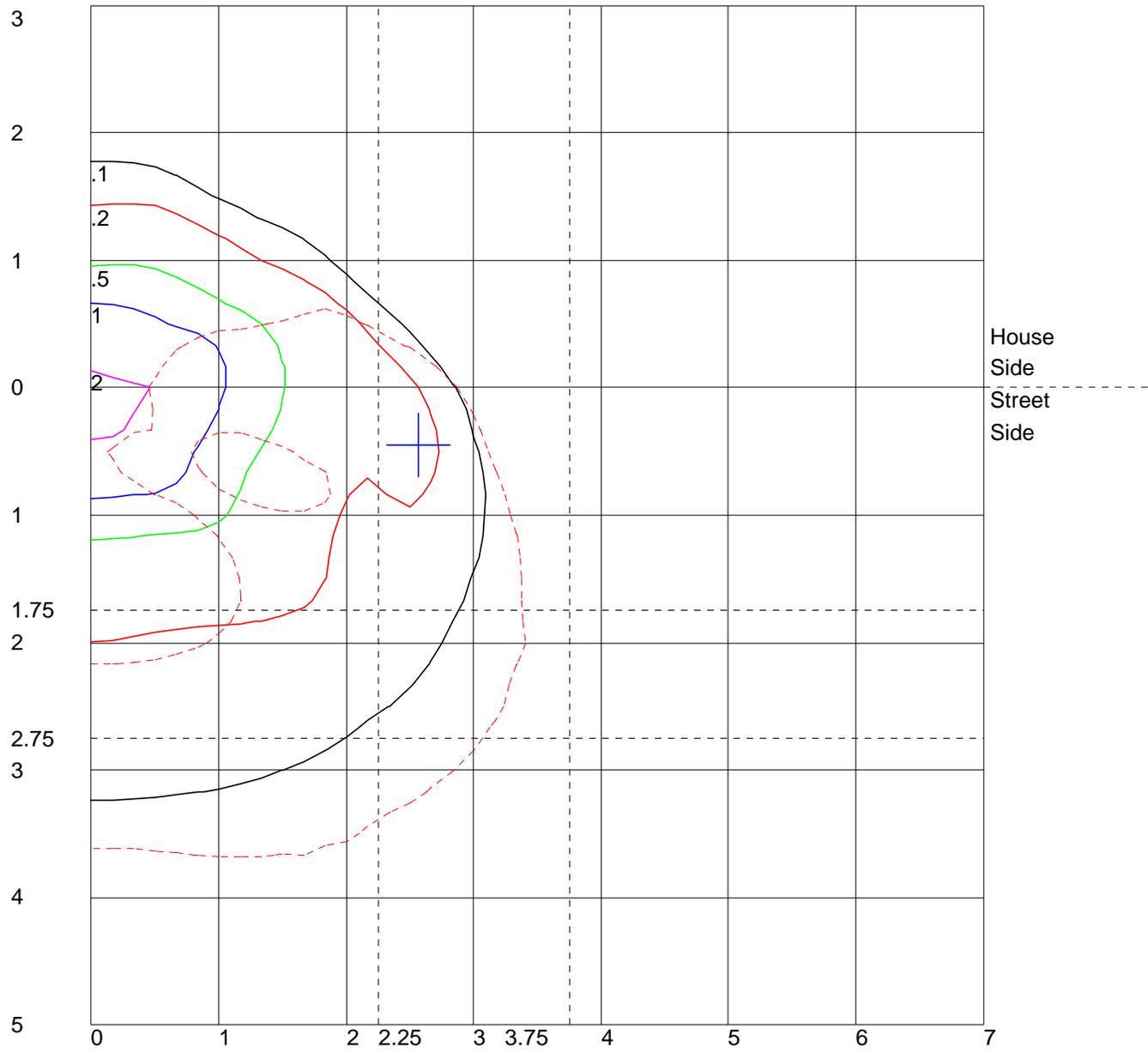
	Lumens	Percent Of Luminaire
Downward Street Side	2743.6	64.1
Downward House Side	1534.6	35.9
Downward Total	4278.2	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	4278.2	100.0

POLAR GRAPH



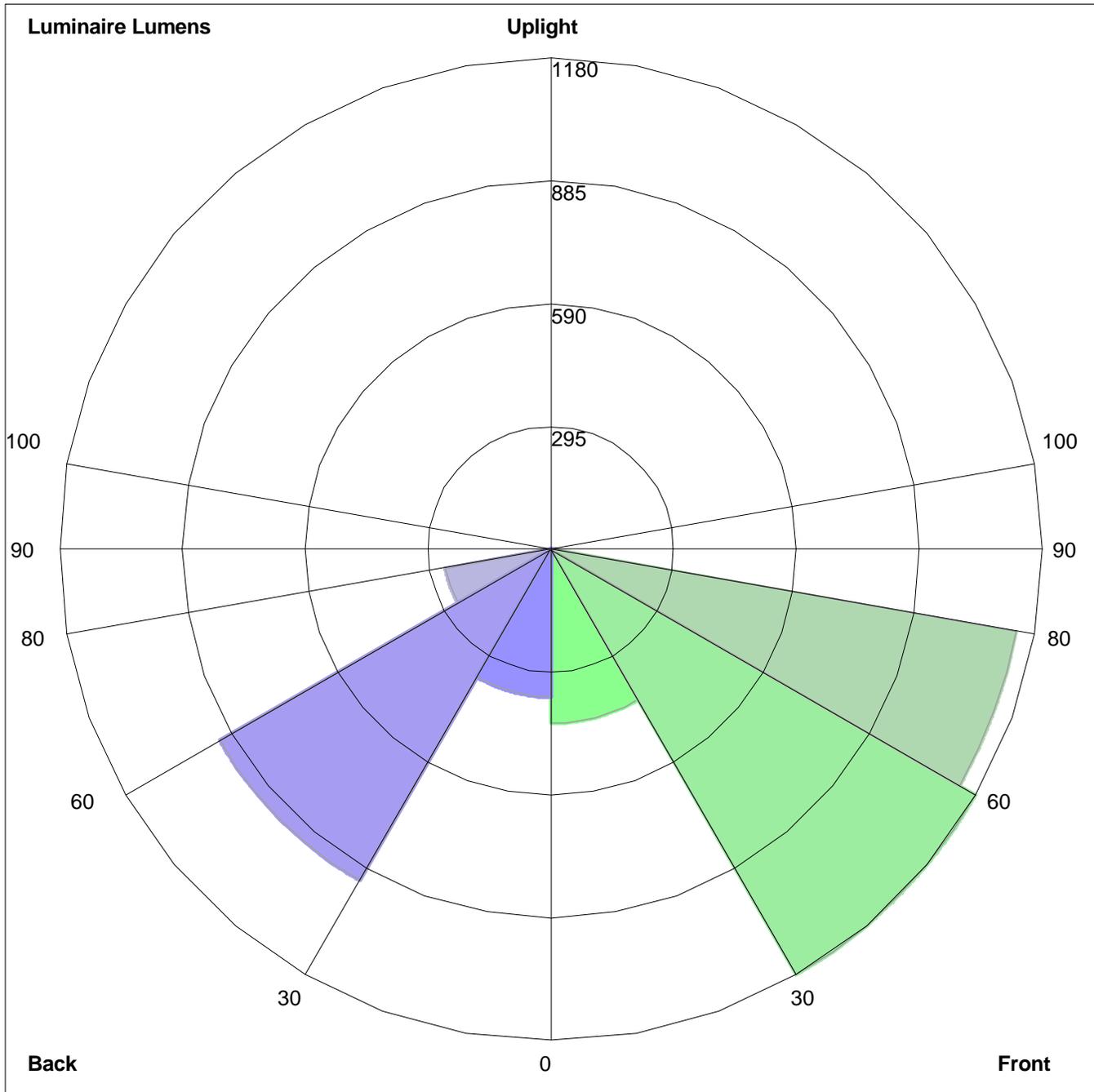
Maximum Candela = 2121 Located At Horizontal Angle = 80, Vertical Angle = 69
1 - Vertical Plane Through Horizontal Angles (80 - 260) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (69) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



Distance In Units Of Mounting Height
 Values Based On 20 Foot Mounting Height
 1/2 Maximum Candela Trace Shown As Dashed Curve
 (+) = Maximum Candela Point

LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=417.8, Medium=1180.3, High=1134.4, Very High=11.2
Back: Low=354.5, Medium=919.2, High=257.4, Very High=3.5
Uplight: Low=0.0, High=0.0

BUG Rating : B1-U0-G1