



IES ROAD REPORT

PHOTOMETRIC FILENAME : HLN-3-LED-18L-40.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]LED-8431
[TESTLAB]LSI INDUSTRIES, INC
[ISSUE DATE]01/09/17
[TEST DATE]01/09/17
[MANUFACTURER]LSI INDUSTRIES, INC
[LUMCAT]HLN-3-LED-18L-40
[OTHER]TEST PROCEDURE: IESNA LM-79-08
[_ABSOLUTE]NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED
[_SEARCH_SOURCE TYPE] LED
[_SEARCH_APPLICATION] Outdoor

CHARACTERISTICS

IES Classification	Type III
Longitudinal Classification	Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	18585
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	120
Total Luminaire Watts	154.8
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	19576
Maximum Candela Angle	60H 67.5V
Maximum Candela (<90 Degrees Vertical)	19576
Maximum Candela Angle (<90 Degrees Vertical)	60H 67.5V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	1003 (5.4% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	758.0	N.A.	4.1
FM - Front-Medium (30-60)	7296.5	N.A.	39.3
FH - Front-High (60-80)	6359.8	N.A.	34.2
FVH - Front-Very High (80-90)	145.9	N.A.	0.8
BL - Back-Low (0-30)	825.2	N.A.	4.4
BM - Back-Medium (30-60)	2142.2	N.A.	11.5
BH - Back-High (60-80)	976.0	N.A.	5.3
BVH - Back-Very High (80-90)	81.0	N.A.	0.4
UL - Uplight-Low (90-100)	0.0	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	18584.6	N.A.	100.0
BUG Rating	B2-U0-G3		

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CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	<u>0</u>	<u>5</u>	<u>15</u>	<u>25</u>	<u>35</u>	<u>45</u>	<u>55</u>	<u>60</u>	<u>65</u>	<u>75</u>
0.0	1732	1732	1732	1732	1732	1732	1732	1732	1732	1732
2.5	1698	1696	1695	1699	1703	1711	1714	1713	1722	1721
5.0	1626	1624	1624	1636	1651	1671	1685	1688	1704	1714
7.5	1521	1518	1524	1544	1570	1609	1642	1655	1681	1705
10.0	1414	1407	1421	1449	1487	1539	1591	1612	1651	1698
12.5	1314	1310	1326	1360	1407	1470	1543	1569	1619	1686
15.0	1236	1238	1255	1290	1343	1415	1500	1533	1588	1670
17.5	1232	1229	1242	1273	1322	1392	1477	1516	1571	1655
20.0	1366	1360	1361	1365	1394	1455	1523	1556	1603	1680
22.5	1651	1643	1631	1613	1608	1628	1662	1684	1717	1784
25.0	2005	1997	1989	1965	1933	1917	1906	1909	1920	1968
27.5	2416	2411	2401	2377	2340	2301	2245	2225	2207	2216
30.0	2823	2818	2816	2830	2791	2751	2655	2606	2564	2496
32.5	3222	3218	3226	3264	3278	3229	3096	3036	2945	2791
35.0	3597	3592	3610	3679	3735	3708	3547	3453	3307	3083
37.5	3985	3980	4025	4091	4178	4180	3989	3854	3648	3365
40.0	4432	4425	4465	4535	4628	4652	4437	4231	3959	3583
42.5	5004	5028	5026	5069	5138	5176	4860	4601	4241	3751
45.0	5855	5849	5792	5788	5768	5736	5306	4961	4513	3881
47.5	6984	6977	6891	6840	6642	6479	5826	5356	4808	4015
50.0	8705	8717	8691	8425	7944	7435	6441	5840	5162	4190
52.5	10692	10734	10921	10893	10048	8812	7258	6483	5642	4480
55.0	11897	11965	12524	13148	12638	10763	8464	7419	6399	5005
57.5	11786	11867	12821	14112	14590	13082	10142	8807	7610	6044
60.0	9766	9823	11242	13443	15705	15324	12502	11223	9792	7807
62.5	5751	5773	7096	10365	14376	16891	15759	14818	12846	9883
65.0	2083	2200	2976	5584	11212	16408	18284	17588	15498	11843
67.5	960	969	1236	2185	6778	13517	19183	19576	17644	12479
70.0	550	564	675	1099	3011	8973	16464	18079	16620	10432
72.5	384	397	486	735	1649	4647	10933	12995	11967	4974
75.0	287	296	368	591	1262	2270	5608	6559	4909	1257
77.5	227	234	298	518	1044	1402	2119	2177	1519	540
80.0	177	182	244	443	875	1003	993	993	759	311
82.5	125	132	192	340	681	712	549	503	433	225
85.0	93	99	146	280	468	449	307	298	276	166
87.5	79	79	99	212	317	218	172	171	166	118
90.0	0	0	0	0	0	0	0	0	0	0

Vert. Angles	Horizontal Angles									
	<u>85</u>	<u>90</u>	<u>95</u>	<u>105</u>	<u>115</u>	<u>125</u>	<u>135</u>	<u>145</u>	<u>155</u>	<u>165</u>
0.0	1732	1732	1732	1732	1732	1732	1732	1732	1732	1732
2.5	1738	1732	1741	1752	1757	1764	1763	1765	1766	1768
5.0	1740	1739	1754	1777	1792	1807	1811	1820	1821	1821
7.5	1742	1746	1767	1802	1823	1841	1846	1863	1872	1881
10.0	1746	1756	1782	1826	1850	1873	1899	1922	1935	1941
12.5	1749	1762	1792	1843	1870	1916	1948	1971	1983	1986
15.0	1746	1763	1796	1851	1890	1953	1988	2010	2022	2022
17.5	1740	1758	1792	1850	1906	1978	2021	2041	2045	2039
20.0	1751	1762	1791	1845	1913	1994	2041	2053	2054	2045
22.5	1825	1815	1825	1850	1914	2003	2047	2056	2054	2040
25.0	1974	1937	1918	1873	1910	2007	2044	2049	2046	2034
27.5	2162	2089	2036	1912	1900	2006	2037	2038	2043	2040

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CANDELA TABULATION - (Cont.)

30.0	2364	2244	2150	1944	1885	1998	2023	2029	2059	2079
32.5	2576	2396	2250	1960	1864	1988	2004	2038	2121	2201
35.0	2789	2547	2340	1952	1829	1966	1988	2061	2192	2347
37.5	2982	2679	2408	1922	1780	1933	1962	2034	2172	2350
40.0	3138	2776	2441	1866	1716	1885	1897	1949	2113	2218
42.5	3244	2829	2434	1789	1640	1815	1824	1879	2055	2046
45.0	3305	2847	2397	1696	1552	1732	1765	1832	2034	1845
47.5	3353	2862	2361	1603	1460	1647	1715	1808	1994	1759
50.0	3435	2918	2366	1527	1374	1564	1666	1777	1938	1724
52.5	3608	3069	2463	1501	1312	1491	1611	1726	1869	1701
55.0	4059	3488	2764	1538	1274	1432	1548	1673	1760	1663
57.5	4945	4285	3313	1647	1261	1371	1488	1576	1614	1580
60.0	6258	5356	3868	1745	1239	1289	1412	1435	1424	1530
62.5	7968	6258	3858	1641	1168	1168	1290	1270	1221	1471
65.0	9357	6399	3272	1328	1008	1008	1111	1112	1028	1401
67.5	8814	5367	2271	928	798	814	891	956	858	1300
70.0	5520	2984	1182	598	601	630	698	809	745	1120
72.5	1515	804	441	394	456	490	556	689	647	865
75.0	494	335	262	302	368	402	456	552	467	591
77.5	253	203	194	258	301	332	358	376	334	431
80.0	173	156	167	221	252	234	225	292	254	309
82.5	134	117	139	197	187	161	177	214	152	215
85.0	97	89	124	178	126	117	125	115	83	137
87.5	65	69	116	135	82	71	68	68	52	73
90.0	0	0	0	0	0	0	0	0	0	0

Vert. Horizontal Angles
Angles

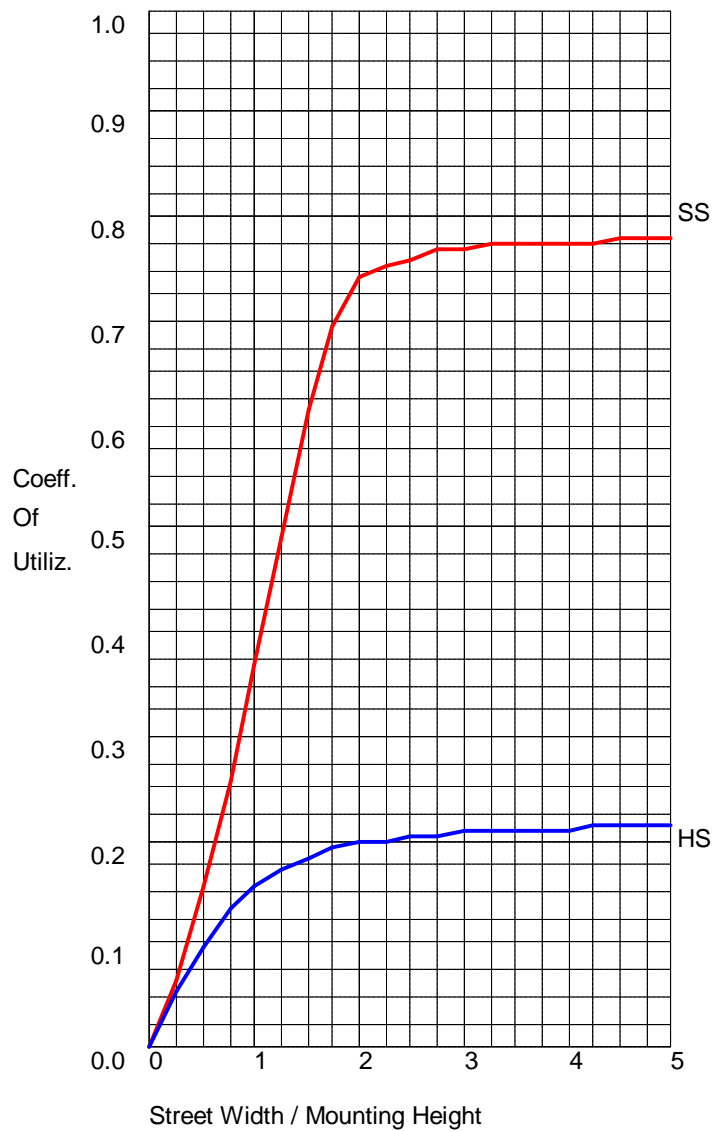
	<u>175</u>	<u>180</u>
0.0	1732	1732
2.5	1768	1763
5.0	1821	1816
7.5	1884	1880
10.0	1943	1938
12.5	1988	1983
15.0	2022	2017
17.5	2037	2031
20.0	2038	2034
22.5	2032	2029
25.0	2027	2023
27.5	2040	2037
30.0	2098	2096
32.5	2275	2279
35.0	2492	2504
37.5	2421	2416
40.0	2183	2161
42.5	1818	1787
45.0	1651	1621
47.5	1581	1549
50.0	1532	1503
52.5	1482	1444
55.0	1403	1353
57.5	1288	1222
60.0	1219	1123
62.5	1167	1039
65.0	1156	997

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CANDELA TABULATION - (Cont.)

67.5	1215	1052
70.0	1288	1168
72.5	1222	1183
75.0	1084	1194
77.5	897	1035
80.0	663	750
82.5	441	499
85.0	295	331
87.5	177	244
90.0	0	0

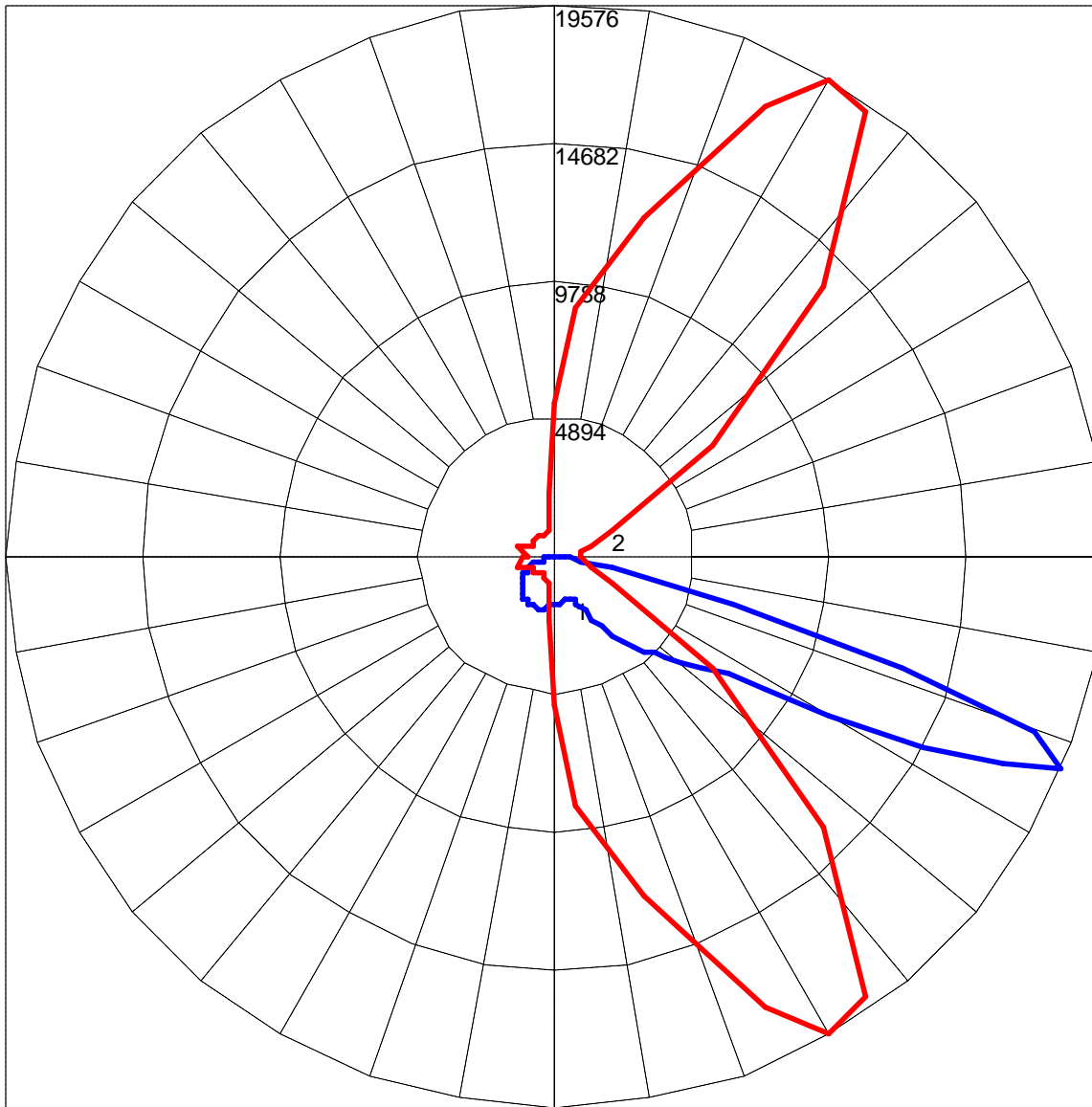
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

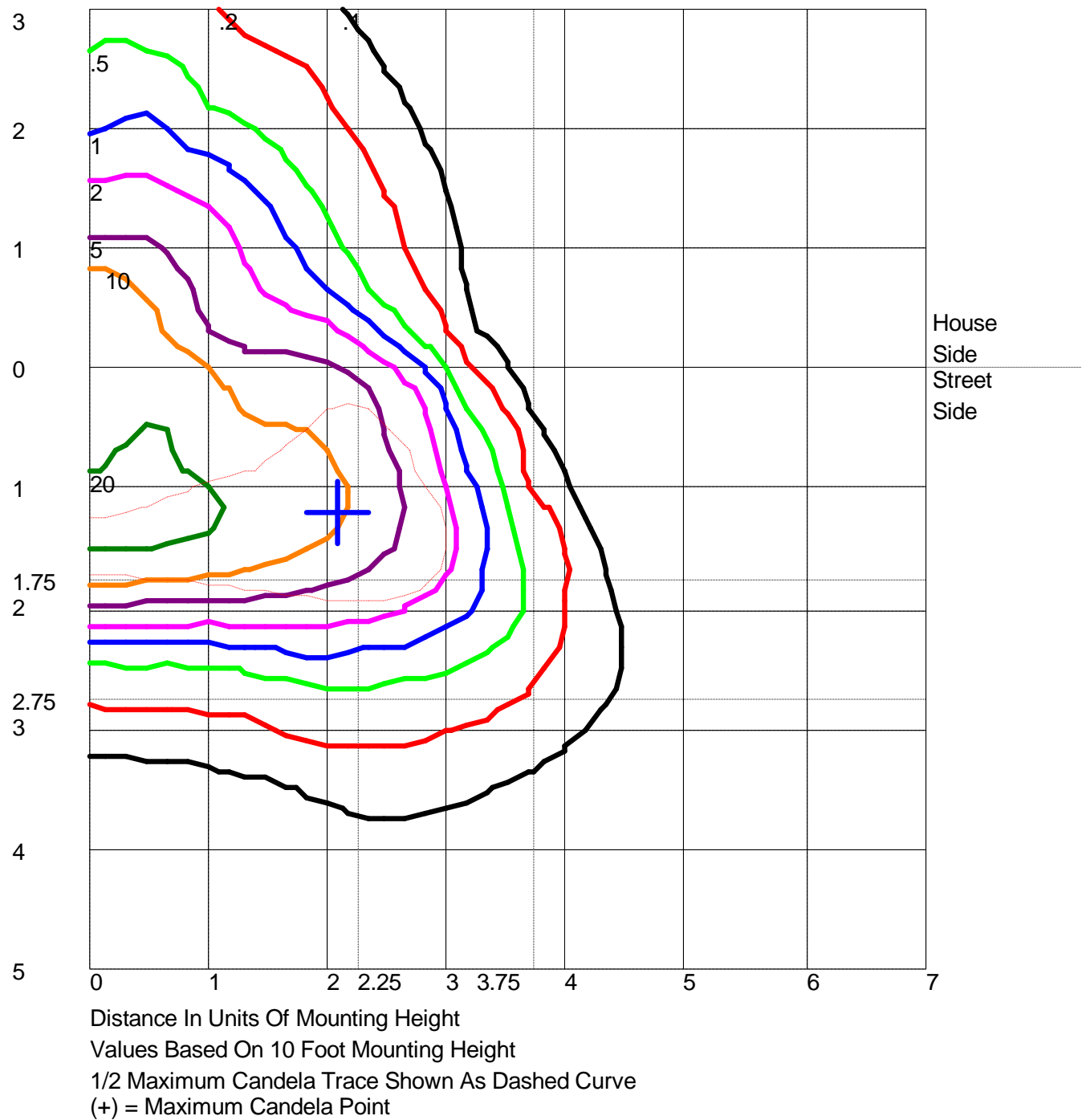
	Lumens	Percent Of Luminaire
Downward Street Side	14560.2	78.3
Downward House Side	4024.4	21.7
Downward Total	18584.6	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	18584.6	100.0

POLAR GRAPH

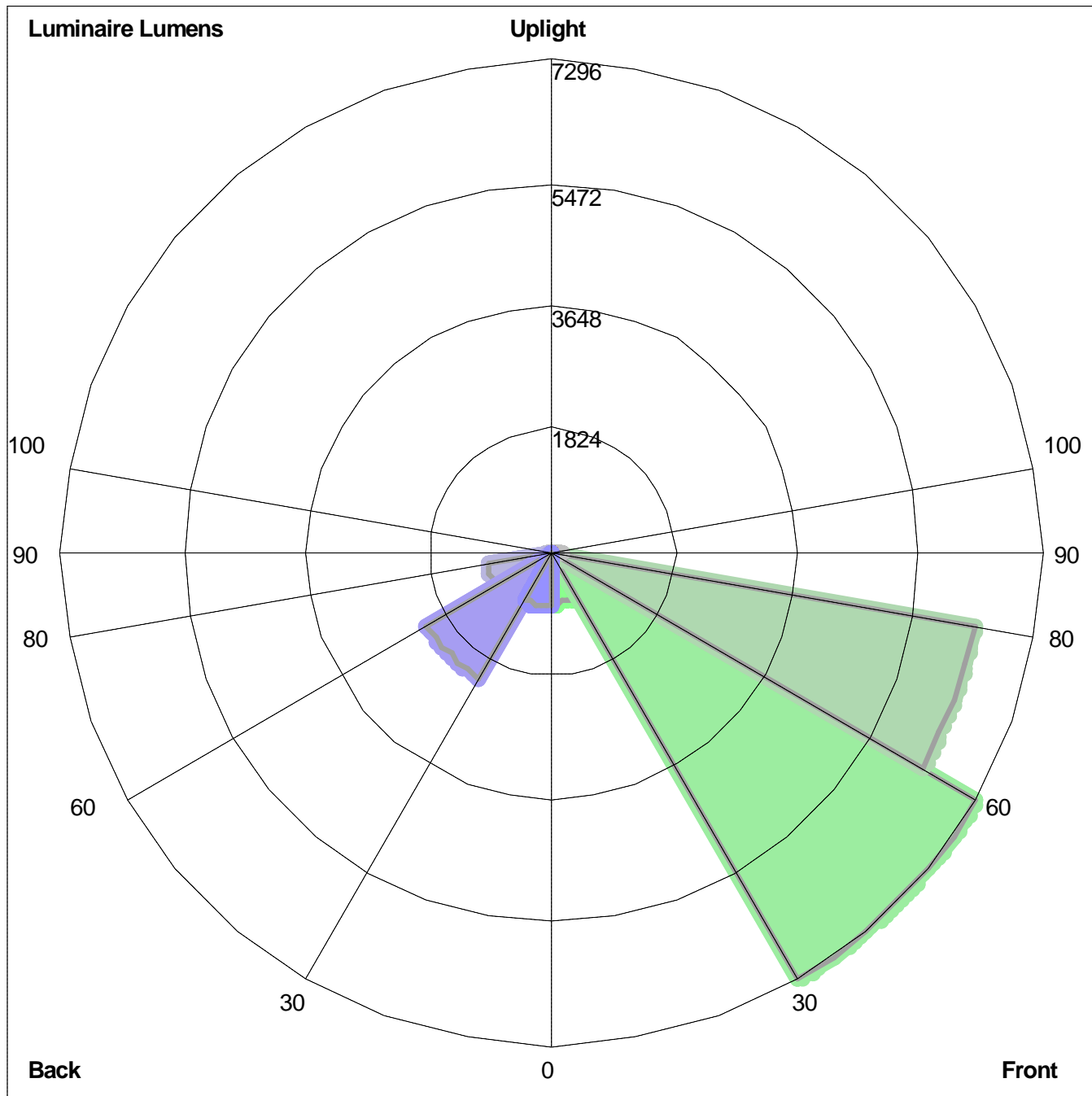


Maximum Candela = 19576 Located At Horizontal Angle = 60, Vertical Angle = 67.5
1 - Vertical Plane Through Horizontal Angles (60 - 240) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (67.5) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=758.0, Medium=7296.5, High=6359.8, Very High=145.9
Back: Low=825.2, Medium=2142.2, High=976.0, Very High=81.0
Uplight: Low=0.0, High=0.0

BUG Rating : B2-U0-G3