



**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : HLN-3-LED-32L-40.IES**

**DESCRIPTIVE INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST]LED-8448  
[TESTLAB]LSI INDUSTRIES, INC  
[ISSUEDATE]01/12/17  
[TESTDATE]01/12/17  
[MANUFAC]LSI INDUSTRIES, INC  
[LUMCAT]HLN-3-LED-32L-40  
[OTHER]TEST PROCEDURE: IESNA LM-79-08  
[\_ABSOLUTE]NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED  
[\_SEARCH\_SOURCETYPE] 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	32793
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	106
Total Luminaire Watts	309.9
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	26191
Maximum Candela Angle	55H 67.5V
Maximum Candela (<90 Degrees Vertical)	26191
Maximum Candela Angle (<90 Degrees Vertical)	55H 67.5V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	2395 (7.3% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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**LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	1577.4	N.A.	4.8
FM - Front-Medium (30-60)	12921.6	N.A.	39.4
FH - Front-High (60-80)	10059.5	N.A.	30.7
FVH - Front-Very High (80-90)	338.7	N.A.	1.0
BL - Back-Low (0-30)	1517.7	N.A.	4.6
BM - Back-Medium (30-60)	4501.3	N.A.	13.7
BH - Back-High (60-80)	1716.5	N.A.	5.2
BVH - Back-Very High (80-90)	160.2	N.A.	0.5
UL - Uplight-Low (90-100)	0.0	N.A.	0.0
UH - Uplight-High (100-180)	0.0	N.A.	0.0
Total	32792.9	N.A.	100.0
BUG Rating	B3-U0-G4		

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**CANDELA TABULATION**

<b>Vert. Angles</b>	<b>Horizontal Angles</b>									
	<u><b>0.0</b></u>	<u><b>5.0</b></u>	<u><b>15.0</b></u>	<u><b>25.0</b></u>	<u><b>35.0</b></u>	<u><b>45.0</b></u>	<u><b>55.0</b></u>	<u><b>57.5</b></u>	<u><b>65.0</b></u>	<u><b>75.0</b></u>
<b>0.0</b>	2906	2906	2906	2906	2906	2906	2906	2906	2906	2906
<b>2.5</b>	2872	2861	2863	2871	2880	2876	2886	2865	2896	2905
<b>5.0</b>	2784	2776	2782	2800	2823	2832	2855	2837	2876	2894
<b>7.5</b>	2679	2676	2687	2714	2747	2779	2824	2812	2867	2899
<b>10.0</b>	2619	2619	2634	2667	2711	2756	2815	2811	2878	2924
<b>12.5</b>	2616	2623	2636	2678	2735	2792	2856	2854	2924	2982
<b>15.0</b>	2698	2714	2724	2770	2843	2916	2978	2990	3052	3090
<b>17.5</b>	2957	2952	2948	2986	3063	3133	3192	3220	3258	3259
<b>20.0</b>	3314	3305	3322	3361	3410	3460	3514	3527	3539	3484
<b>22.5</b>	3757	3744	3768	3827	3881	3908	3921	3927	3900	3768
<b>25.0</b>	4242	4236	4282	4379	4467	4486	4426	4415	4336	4115
<b>27.5</b>	4774	4777	4869	5023	5124	5161	5063	4996	4835	4506
<b>30.0</b>	5377	5385	5492	5684	5831	5908	5758	5662	5387	4930
<b>32.5</b>	5971	5992	6139	6396	6587	6740	6507	6378	5980	5382
<b>35.0</b>	6580	6609	6795	7139	7387	7569	7296	7144	6607	5858
<b>37.5</b>	7297	7372	7550	7935	8247	8445	8118	7942	7287	6294
<b>40.0</b>	8108	8202	8417	8854	9193	9404	8958	8752	7940	6717
<b>42.5</b>	9124	9293	9483	9943	10405	10452	9828	9611	8590	7163
<b>45.0</b>	10365	10600	10813	11310	11697	11669	10732	10489	9248	7613
<b>47.5</b>	12020	12123	12405	13021	13246	12951	11751	11387	9968	8151
<b>50.0</b>	13814	13918	14180	14641	14820	14309	12784	12371	10778	8909
<b>52.5</b>	15675	15781	16426	17049	16998	16277	13977	13578	11845	9909
<b>55.0</b>	16918	17133	17868	18996	19316	18308	15822	15237	13111	11117
<b>57.5</b>	17206	17500	18450	19978	20965	20366	17818	17204	14615	12602
<b>60.0</b>	15478	15519	17175	19799	22136	22446	20321	19688	17234	14188
<b>62.5</b>	11475	11505	13222	17137	21363	23852	23272	22896	19250	15720
<b>65.0</b>	6623	6473	7975	11893	18377	24126	25487	25140	21215	16248
<b>67.5</b>	2919	3038	4004	6646	12904	21582	26191	25862	22327	15648
<b>70.0</b>	1798	1858	2163	3302	7678	16426	23806	23983	21053	12531
<b>72.5</b>	1251	1308	1548	2249	4227	10531	18599	19052	15704	7500
<b>75.0</b>	886	933	1150	1747	3073	5771	10662	11131	8272	2952
<b>77.5</b>	636	668	834	1412	2507	3432	4629	4564	3038	1363
<b>80.0</b>	460	484	641	1168	2076	2315	2395	2355	1747	827
<b>82.5</b>	317	329	487	862	1560	1542	1352	1360	1126	548
<b>85.0</b>	245	258	358	645	967	927	720	710	626	357
<b>87.5</b>	250	287	257	446	647	412	409	363	341	241
<b>90.0</b>	0	0	0	0	0	0	0	0	0	0

<b>Vert. Angles</b>	<b>Horizontal Angles</b>									
	<u><b>85.0</b></u>	<u><b>90.0</b></u>	<u><b>95.0</b></u>	<u><b>105.0</b></u>	<u><b>115.0</b></u>	<u><b>125.0</b></u>	<u><b>135.0</b></u>	<u><b>145.0</b></u>	<u><b>155.0</b></u>	<u><b>165.0</b></u>
<b>0.0</b>	2906	2906	2906	2906	2906	2906	2906	2906	2906	2906
<b>2.5</b>	2916	2922	2928	2929	2940	2938	2953	2957	2951	2953
<b>5.0</b>	2919	2934	2948	2965	2994	3015	3048	3067	3073	3083
<b>7.5</b>	2933	2953	2973	3005	3062	3101	3152	3196	3227	3256
<b>10.0</b>	2965	2987	3011	3060	3132	3201	3291	3364	3405	3436
<b>12.5</b>	3022	3037	3060	3120	3200	3319	3428	3503	3541	3572
<b>15.0</b>	3115	3120	3131	3187	3280	3425	3539	3616	3661	3701
<b>17.5</b>	3252	3231	3228	3256	3356	3508	3634	3715	3761	3797
<b>20.0</b>	3412	3361	3330	3318	3411	3574	3712	3798	3852	3880
<b>22.5</b>	3594	3520	3436	3366	3447	3633	3776	3868	3924	3952
<b>25.0</b>	3824	3686	3551	3394	3465	3679	3830	3930	3995	4035
<b>27.5</b>	4066	3859	3670	3410	3468	3713	3866	3982	4083	4168

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**CANDELA TABULATION - (Cont.)**

30.0	4323	4034	3780	3407	3456	3731	3886	4037	4228	4391
32.5	4597	4210	3877	3385	3431	3736	3893	4119	4486	4754
35.0	4872	4381	3961	3340	3382	3720	3889	4237	4821	5198
37.5	5145	4542	4024	3287	3312	3682	3873	4331	5174	5696
40.0	5412	4701	4075	3221	3219	3624	3813	4373	5594	6111
42.5	5683	4861	4122	3146	3112	3527	3695	4385	6117	5881
45.0	5992	5057	4189	3071	2987	3394	3547	4363	6520	5238
47.5	6429	5374	4369	3040	2853	3241	3404	4289	6489	4762
50.0	7033	5856	4592	3029	2716	3077	3258	4179	6161	4456
52.5	7664	6269	4754	3008	2571	2910	3112	3946	5675	4192
55.0	8306	6688	4953	2979	2429	2740	2959	3598	5113	3909
57.5	9007	7148	5055	2926	2281	2552	2777	3220	4466	3638
60.0	9958	7636	4824	2760	2113	2322	2575	2816	3792	3425
62.5	11058	7775	4104	2416	1875	2056	2315	2463	3144	3209
65.0	11522	7288	3052	1905	1610	1777	1991	2152	2535	2924
67.5	10446	5978	2056	1421	1333	1470	1641	1850	2022	2578
70.0	7198	4123	1389	1054	1091	1190	1337	1577	1643	2195
72.5	3102	1823	823	783	883	977	1102	1345	1341	1776
75.0	1190	823	519	609	724	823	917	1076	1049	1333
77.5	707	529	404	494	617	696	734	695	644	902
80.0	457	367	330	417	507	501	514	527	475	604
82.5	309	257	264	363	386	330	337	402	315	451
85.0	205	174	221	313	254	243	244	228	186	301
87.5	134	107	177	217	181	165	143	153	122	166
90.0	0	0	0	0	0	0	0	0	0	0

**Vert. Horizontal Angles**  
**Angles**

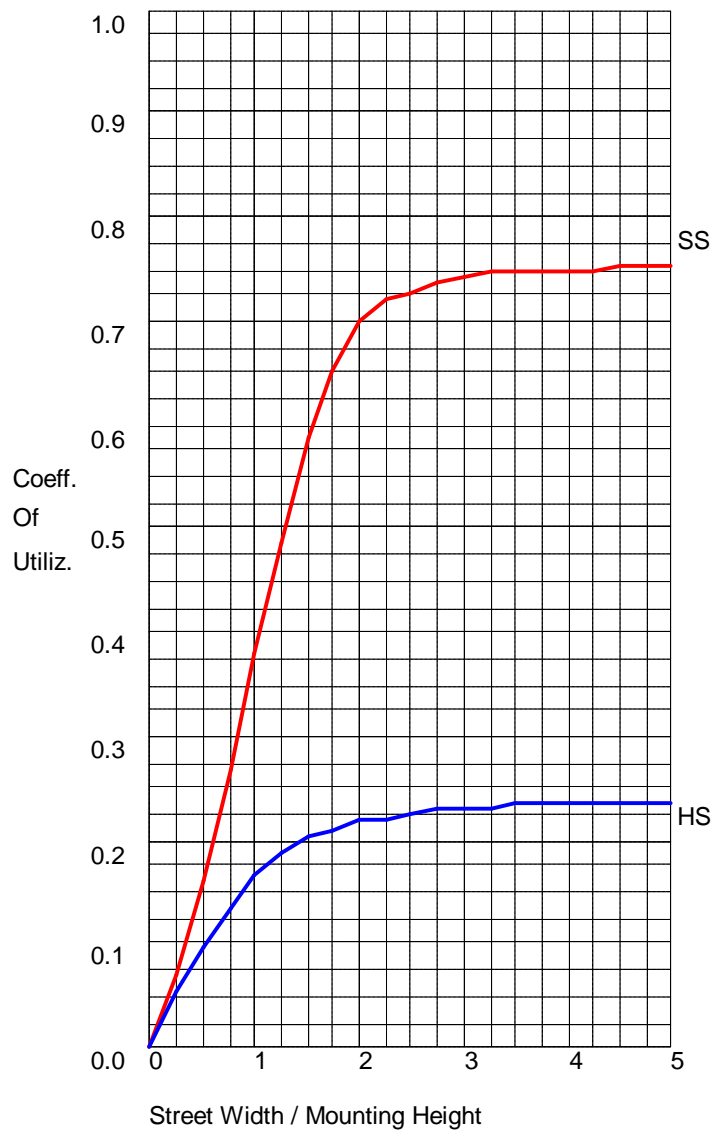
	<b>175.0</b>	<b>180.0</b>
0.0	2906	2906
2.5	2944	2930
5.0	3077	3077
7.5	3261	3265
10.0	3440	3440
12.5	3583	3575
15.0	3705	3696
17.5	3802	3796
20.0	3882	3873
22.5	3956	3945
25.0	4040	4030
27.5	4172	4158
30.0	4388	4372
32.5	4753	4730
35.0	5209	5153
37.5	5527	5433
40.0	5194	4944
42.5	4359	4144
45.0	3833	3665
47.5	3522	3375
50.0	3308	3169
52.5	3128	2978
55.0	2914	2747
57.5	2718	2515
60.0	2597	2377
62.5	2529	2295
65.0	2503	2278

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**CANDELA TABULATION - (Cont.)**

<b>67.5</b>	2525	2351
<b>70.0</b>	2504	2441
<b>72.5</b>	2210	2289
<b>75.0</b>	1745	2013
<b>77.5</b>	1469	1738
<b>80.0</b>	1130	1286
<b>82.5</b>	806	882
<b>85.0</b>	570	601
<b>87.5</b>	513	599
<b>90.0</b>	0	0

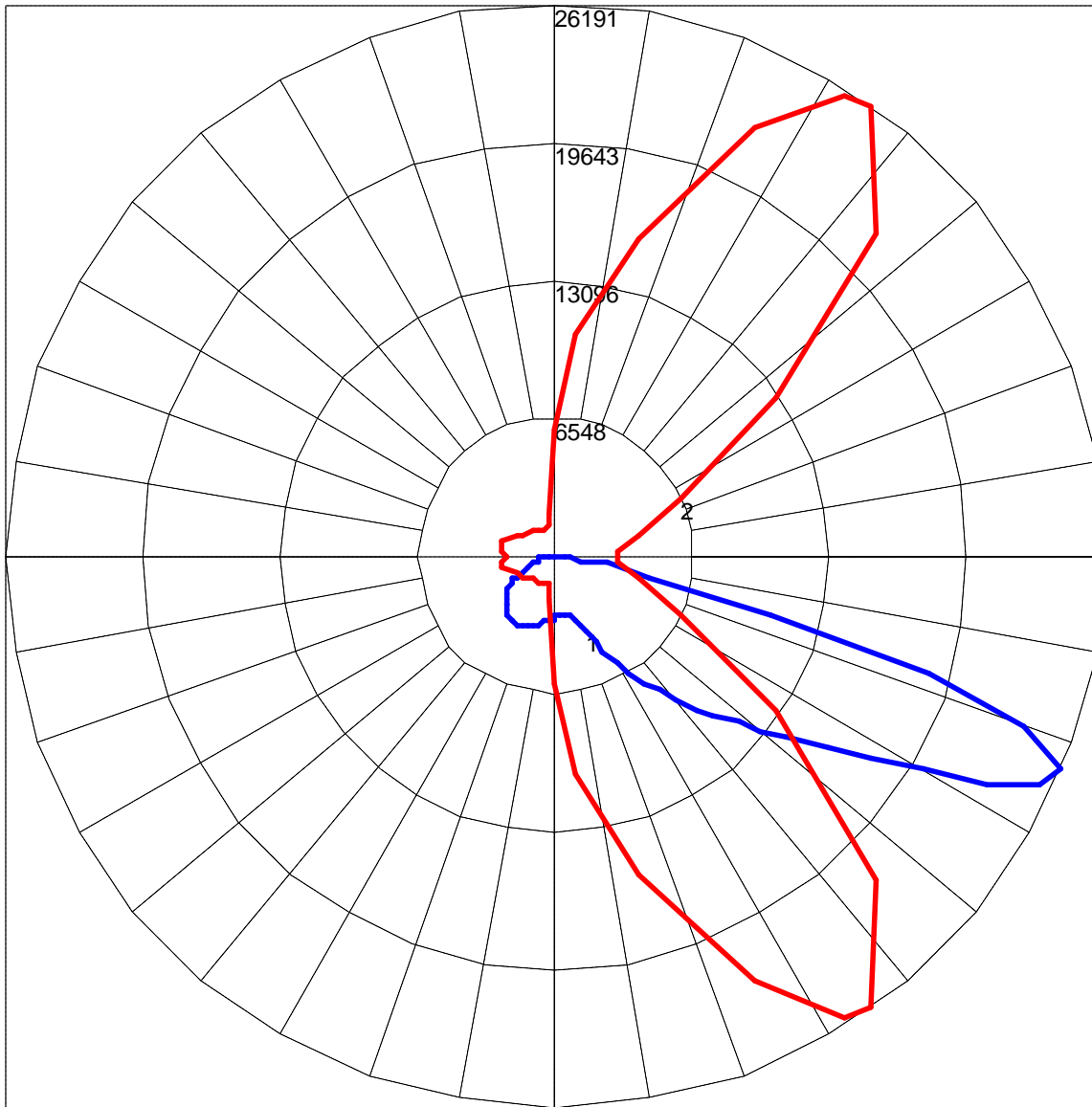
### COEFFICIENTS OF UTILIZATION



### FLUX DISTRIBUTION

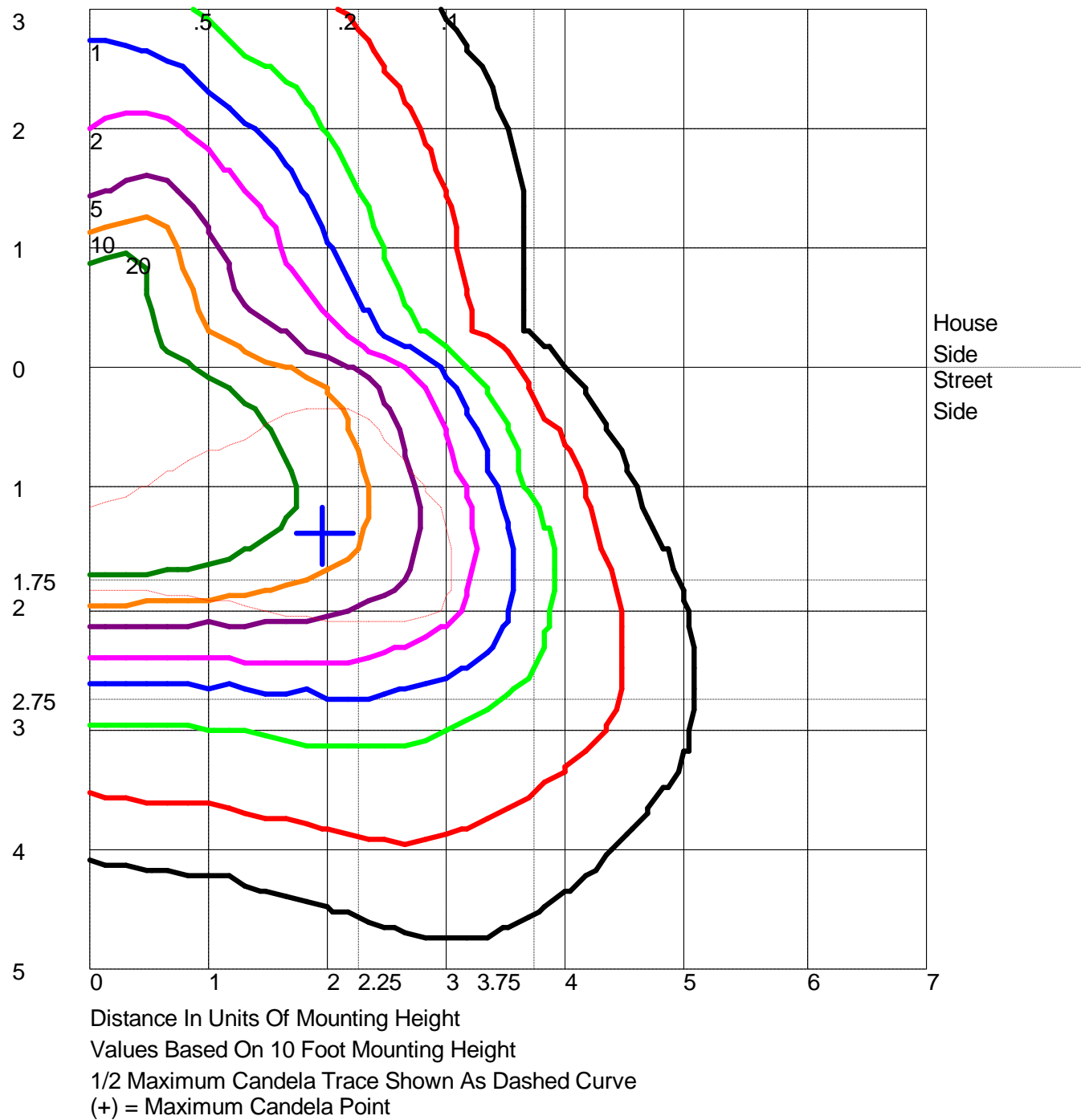
	Lumens	Percent Of Luminaire
Downward Street Side	24897.2	75.9
Downward House Side	7895.8	24.1
Downward Total	32793.0	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	32793.0	100.0

POLAR GRAPH



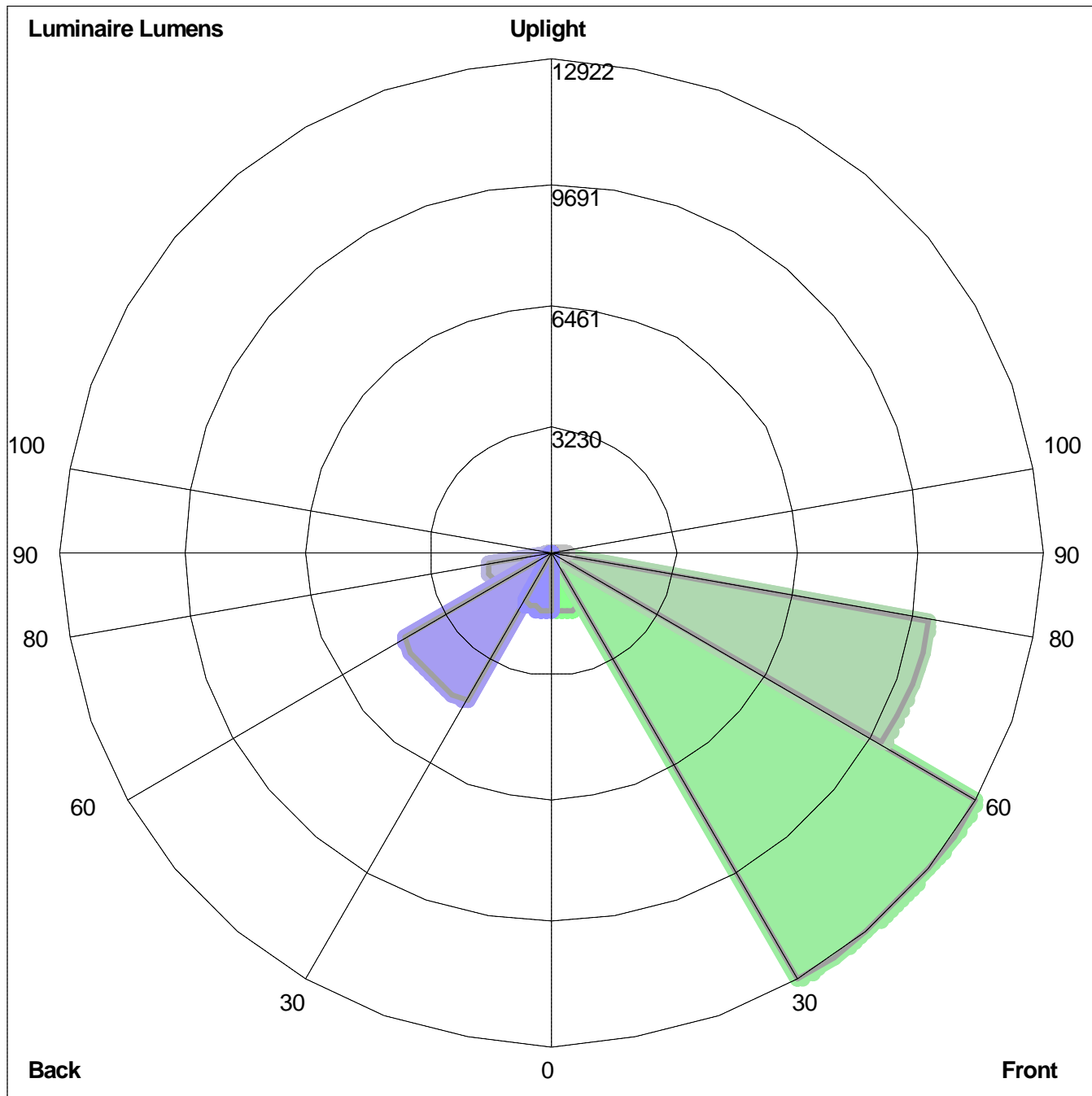
Maximum Candela = 26191 Located At Horizontal Angle = 55, Vertical Angle = 67.5  
# 1 - Vertical Plane Through Horizontal Angles (55 - 235) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (67.5) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE





LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
Front: Low=1577.4, Medium=12921.6, High=10059.5, Very High=338.7  
Back: Low=1517.7, Medium=4501.3, High=1716.5, Very High=160.2  
Uplight: Low=0.0, High=0.0

BUG Rating : B3-U0-G4