



**IES ROAD REPORT**  
**PHOTOMETRIC FILENAME : XMR-2-LED-29-40.IES**

**DESCRIPTIVE INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST]LED-8225\_SCALED  
[TESTLAB]LSI INDUSTRIES, INC  
[ISSUE DATE]11/21/2016  
[TEST DATE]10/17/16  
[MANUFACT]LSI INDUSTRIES, INC  
[LUMCAT]XMR-2-LED-29-40  
[ABSOLUTE]NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED.  
[OTHER]TEST PROCEDURE: IESNA LM-79-08  
[SEARCH\_SOURCETYPE] LED  
[SEARCH\_APPLICATION] Outdoor  
[OTHER]SCALED FROM ORIGINAL TEST DATA

**CHARACTERISTICS**

IES Classification	Type II
Longitudinal Classification	Medium
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	27148
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	113
Total Luminaire Watts	241
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	20872.526
Maximum Candela Angle	82.5H 67.5V
Maximum Candela (<90 Degrees Vertical)	20872.526
Maximum Candela Angle (<90 Degrees Vertical)	82.5H 67.5V
Maximum Candela At 90 Degrees Vertical	0 (0.0% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	1360.913 (5.0% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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**LUMINAIRE CLASSIFICATION SYSTEM (LCS)**

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	1907.4	N.A.	7.0
FM - Front-Medium (30-60)	9451.4	N.A.	34.8
FH - Front-High (60-80)	6078.0	N.A.	22.4
FVH - Front-Very High (80-90)	123.8	N.A.	0.5
BL - Back-Low (0-30)	1556.0	N.A.	5.7
BM - Back-Medium (30-60)	5648.1	N.A.	20.8
BH - Back-High (60-80)	2277.9	N.A.	8.4
BVH - Back-Very High (80-90)	105.5	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	27148.1	N.A.	100.0
BUG Rating	B4-U0-G3		

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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>65.0</b></u>	<u><b>75.0</b></u>	<u><b>82.5</b></u>
<b>0.0</b>	3818.658	3818.658	3818.658	3818.658	3818.658	3818.658	3818.658	3818.658	3818.658	3818.658
<b>2.5</b>	3872.409	3871.630	3860.724	3870.072	3864.619	3854.492	3844.365	3849.818	3835.796	3822.553
<b>5.0</b>	3920.707	3919.149	3911.359	3919.149	3914.475	3902.011	3892.663	3895.000	3876.304	3858.387
<b>7.5</b>	3971.342	3970.563	3965.110	3976.795	3971.342	3958.099	3955.762	3954.983	3937.066	3912.917
<b>10.0</b>	4041.452	4039.894	4039.894	4050.800	4048.463	4038.336	4039.115	4039.115	4021.977	3993.933
<b>12.5</b>	4106.888	4109.225	4113.899	4135.711	4145.838	4145.059	4154.407	4166.092	4134.153	4101.435
<b>15.0</b>	4146.617	4149.733	4161.418	4210.495	4248.666	4274.373	4300.080	4323.450	4286.058	4253.340
<b>17.5</b>	4162.197	4169.208	4192.578	4266.583	4338.251	4409.919	4475.355	4512.747	4470.681	4434.847
<b>20.0</b>	4185.567	4191.799	4229.970	4321.892	4425.499	4537.675	4659.978	4728.530	4684.906	4636.608
<b>22.5</b>	4217.506	4226.075	4274.373	4388.107	4513.526	4653.746	4845.380	4970.799	4934.965	4878.098
<b>25.0</b>	4263.467	4272.036	4328.124	4455.880	4600.774	4765.922	5006.633	5229.427	5221.637	5163.212
<b>27.5</b>	4337.472	4346.820	4406.803	4546.244	4705.160	4885.109	5160.875	5503.635	5577.640	5502.856
<b>30.0</b>	4463.670	4468.344	4529.106	4669.326	4837.590	5037.793	5323.686	5777.843	5953.897	5889.240
<b>32.5</b>	4677.116	4688.022	4721.519	4844.601	5019.876	5227.090	5507.530	6048.935	6351.966	6310.679
<b>35.0</b>	4989.495	4997.285	5003.517	5108.682	5245.786	5454.558	5743.567	6314.574	6759.383	6761.720
<b>37.5</b>	5424.956	5429.630	5429.630	5463.127	5548.817	5745.904	6027.123	6573.202	7195.623	7244.700
<b>40.0</b>	6059.841	6059.062	6049.714	5967.919	5967.919	6136.183	6372.999	6845.073	7615.504	7760.398
<b>42.5</b>	6905.056	6944.006	6866.106	6748.477	6574.760	6659.671	6805.344	7167.579	8020.584	8294.013
<b>45.0</b>	7822.718	7860.110	7783.768	7674.708	7452.693	7405.953	7359.213	7492.422	8416.316	8882.158
<b>47.5</b>	8546.409	8572.895	8526.155	8512.912	8513.691	8463.056	8142.887	7906.850	8837.755	9538.076
<b>50.0</b>	8976.417	8969.406	8969.406	9089.372	9358.906	9778.787	9337.873	8487.205	9328.525	10239.176
<b>52.5</b>	8849.440	8879.821	8963.174	9260.752	9897.974	10815.636	10863.155	9310.608	9905.764	11020.513
<b>55.0</b>	8251.168	8305.698	8469.288	8911.760	9917.449	11606.321	12767.031	10492.351	10535.196	12198.361
<b>57.5</b>	7243.921	7265.733	7518.129	7944.242	9235.045	11539.327	14458.240	12428.945	11536.990	13599.003
<b>60.0</b>	5816.014	5821.467	5889.240	6326.259	7746.376	10471.318	15525.470	14814.243	12654.076	15223.218
<b>62.5</b>	4004.839	3988.480	3813.205	4200.368	5466.243	8336.079	15784.877	17296.916	14410.721	17142.674
<b>65.0</b>	2473.325	2407.889	2299.608	2329.210	3161.182	5156.980	14572.753	18752.088	16322.387	19463.315
<b>67.5</b>	1532.293	1505.028	1479.321	1438.813	1755.866	2594.849	10884.967	18657.829	18297.931	20872.526
<b>70.0</b>	972.192	965.181	983.877	988.551	1165.384	1490.227	5663.330	15969.500	18627.448	19644.822
<b>72.5</b>	603.725	630.990	649.686	719.796	842.878	1014.258	2548.109	10438.600	14822.812	12587.861
<b>75.0</b>	432.345	451.041	444.030	516.477	613.852	768.094	1385.062	5123.483	7932.557	4483.924
<b>77.5</b>	329.517	344.318	339.644	383.268	441.693	570.228	891.955	2465.535	3147.939	1361.692
<b>80.0</b>	278.103	291.346	268.755	289.009	324.843	421.439	545.300	1258.085	1360.913	728.365
<b>82.5</b>	248.501	242.269	201.761	208.772	227.468	310.042	344.318	622.421	665.266	379.373
<b>85.0</b>	174.496	169.043	137.104	135.546	143.336	200.203	207.214	249.280	336.528	188.518
<b>87.5</b>	82.574	83.353	72.447	70.110	67.773	88.027	87.248	83.353	85.690	70.889
<b>90.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

<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>	3818.658	3818.658	3818.658	3818.658	3818.658	3818.658	3818.658	3818.658	3818.658	3818.658
<b>2.5</b>	3819.437	3807.752	3820.216	3807.752	3813.984	3814.763	3809.310	3804.636	3795.288	3785.940
<b>5.0</b>	3853.713	3835.017	3844.365	3819.437	3803.857	3782.824	3754.780	3730.631	3703.366	3671.427
<b>7.5</b>	3906.685	3880.978	3885.652	3842.807	3796.067	3737.642	3666.753	3595.085	3532.765	3481.351
<b>10.0</b>	3987.701	3961.215	3951.867	3882.536	3791.393	3673.764	3543.671	3416.694	3331.783	3264.789
<b>12.5</b>	4093.645	4060.148	4040.673	3938.624	3784.382	3591.969	3398.777	3246.093	3158.066	3112.105
<b>15.0</b>	4235.423	4193.357	4169.987	4012.629	3778.150	3499.268	3263.231	3129.243	3084.840	3073.934
<b>17.5</b>	4403.687	4350.715	4313.323	4099.098	3768.802	3404.230	3164.298	3095.746	3113.663	3145.602
<b>20.0</b>	4599.216	4541.570	4478.471	4191.799	3745.432	3310.750	3124.569	3140.928	3214.154	3276.474
<b>22.5</b>	4832.916	4765.922	4681.011	4308.649	3714.272	3239.861	3153.392	3239.082	3357.490	3448.633
<b>25.0</b>	5120.367	5033.119	4924.059	4441.079	3677.659	3223.502	3237.524	3381.639	3546.008	3675.322
<b>27.5</b>	5452.221	5355.625	5215.405	4597.658	3655.847	3278.811	3369.954	3574.831	3804.636	3990.817

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**CANDELA TABULATION - (Cont.)**

30.0	5857.301	5734.219	5561.281	4762.027	3663.637	3389.429	3566.262	3841.249	4153.628	4390.444
32.5	6281.077	6147.089	5939.096	4938.081	3718.167	3565.483	3821.774	4180.114	4547.023	4825.905
35.0	6739.129	6592.677	6334.828	5093.881	3838.133	3808.531	4133.374	4529.106	4916.269	5201.383
37.5	7229.120	7067.867	6769.510	5242.670	4030.546	4092.866	4434.068	4850.054	5258.250	5528.563
40.0	7751.050	7605.377	7214.319	5390.680	4274.373	4372.527	4681.790	5104.787	5511.425	5773.169
42.5	8294.792	8146.782	7681.719	5537.132	4531.443	4602.332	4864.076	5254.355	5613.474	5787.191
45.0	8875.147	8715.452	8179.500	5669.562	4742.552	4755.016	4951.324	5207.615	5364.973	5378.995
47.5	9522.496	9380.718	8683.513	5777.064	4876.540	4802.535	4849.275	4843.043	4807.209	4744.889
50.0	10247.745	10083.37	9216.349	5853.406	4912.374	4693.475	4501.062	4295.406	4141.164	4031.325
52.5	11086.728	10826.54	29767.881	5897.809	4861.739	4375.643	4034.441	3708.040	3479.014	3366.838
55.0	12264.576	11779.25	910329.54	5944.549	4748.005	3997.828	3499.268	3151.834	2936.051	2820.759
57.5	13689.367	13034.22	810883.40	96009.985	4605.448	3609.107	3048.227	2748.312	2512.275	2465.535
60.0	15291.770	14314.12	511420.91	96107.360	4488.598	3260.115	2715.594	2510.717	2219.371	2168.736
62.5	17147.348	15551.95	612023.08	66140.857	4377.201	2980.454	2471.767	2334.663	1882.843	1795.595
65.0	19042.655	16535.83	311928.04	85921.958	4129.479	2685.992	2221.708	2030.853	1504.249	1366.366
67.5	19968.107	16103.48	810297.60	15073.627	3531.207	2192.106	1798.711	1603.961	1092.158	952.717
70.0	17979.320	12689.13	16693.947	3363.722	2544.214	1592.276	1326.637	1143.572	792.243	715.901
72.5	10804.730	6847.410	3246.093	1875.053	1540.862	1041.523	948.822	807.044	572.565	502.455
75.0	3454.865	2393.867	1545.536	1004.910	912.209	751.735	669.940	552.311	408.196	365.351
77.5	1135.782	885.723	793.801	646.570	617.747	585.808	458.831	387.163	319.390	281.998
80.0	595.156	484.538	443.251	482.201	482.201	401.964	315.495	278.882	352.887	288.230
82.5	313.158	253.954	237.595	355.224	338.086	243.048	219.678	219.678	500.118	479.085
85.0	177.612	136.325	126.977	228.247	143.336	145.673	150.347	252.396	526.604	329.517
87.5	72.447	49.856	44.403	48.298	48.298	45.961	35.055	28.044	107.502	15.580
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**Vert. Horizontal Angles**

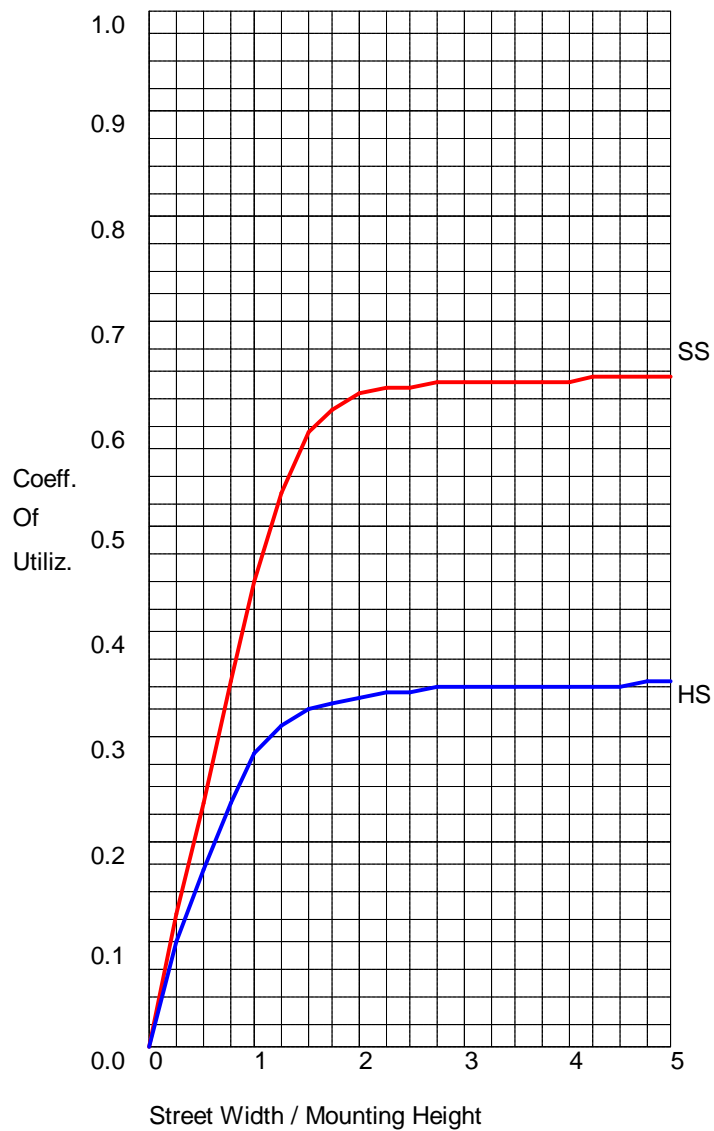
	<b>175.0</b>	<b>180.0</b>
0.0	3818.658	3818.658
2.5	3781.266	3775.034
5.0	3663.637	3656.626
7.5	3460.318	3452.528
10.0	3235.966	3227.397
12.5	3092.630	3084.061
15.0	3073.934	3066.144
17.5	3160.403	3154.171
20.0	3313.866	3300.623
22.5	3501.605	3488.362
25.0	3750.885	3733.747
27.5	4095.982	4111.562
30.0	4513.526	4529.106
32.5	4949.766	4938.081
35.0	5315.117	5298.758
37.5	5624.380	5604.905
40.0	5837.826	5817.572
42.5	5777.843	5747.462
45.0	5332.255	5295.642
47.5	4667.768	4664.652
50.0	3951.867	3954.983
52.5	3281.927	3217.270
55.0	2720.268	2693.782
57.5	2411.005	2386.856
60.0	2086.941	2060.455
62.5	1698.220	1667.839
65.0	1240.947	1205.113

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**CANDELA TABULATION - (Cont.)**

<b>67.5</b>	898.966	880.270
<b>70.0</b>	679.288	645.012
<b>72.5</b>	505.571	503.234
<b>75.0</b>	366.909	392.616
<b>77.5</b>	270.313	275.766
<b>80.0</b>	253.175	255.512
<b>82.5</b>	310.042	305.368
<b>85.0</b>	141.778	134.767
<b>87.5</b>	0.779	0.000
<b>90.0</b>	0.000	0.000

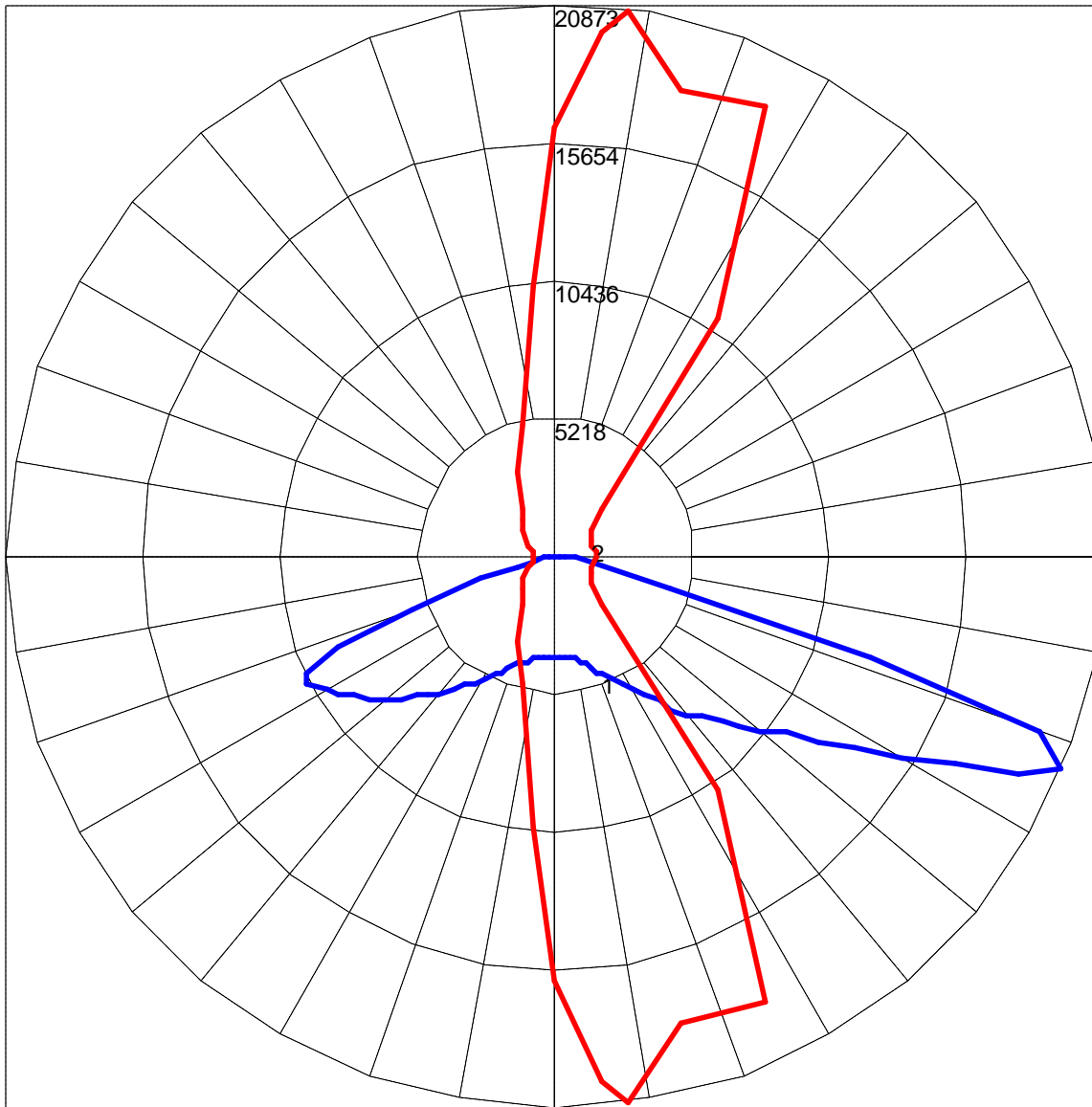
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

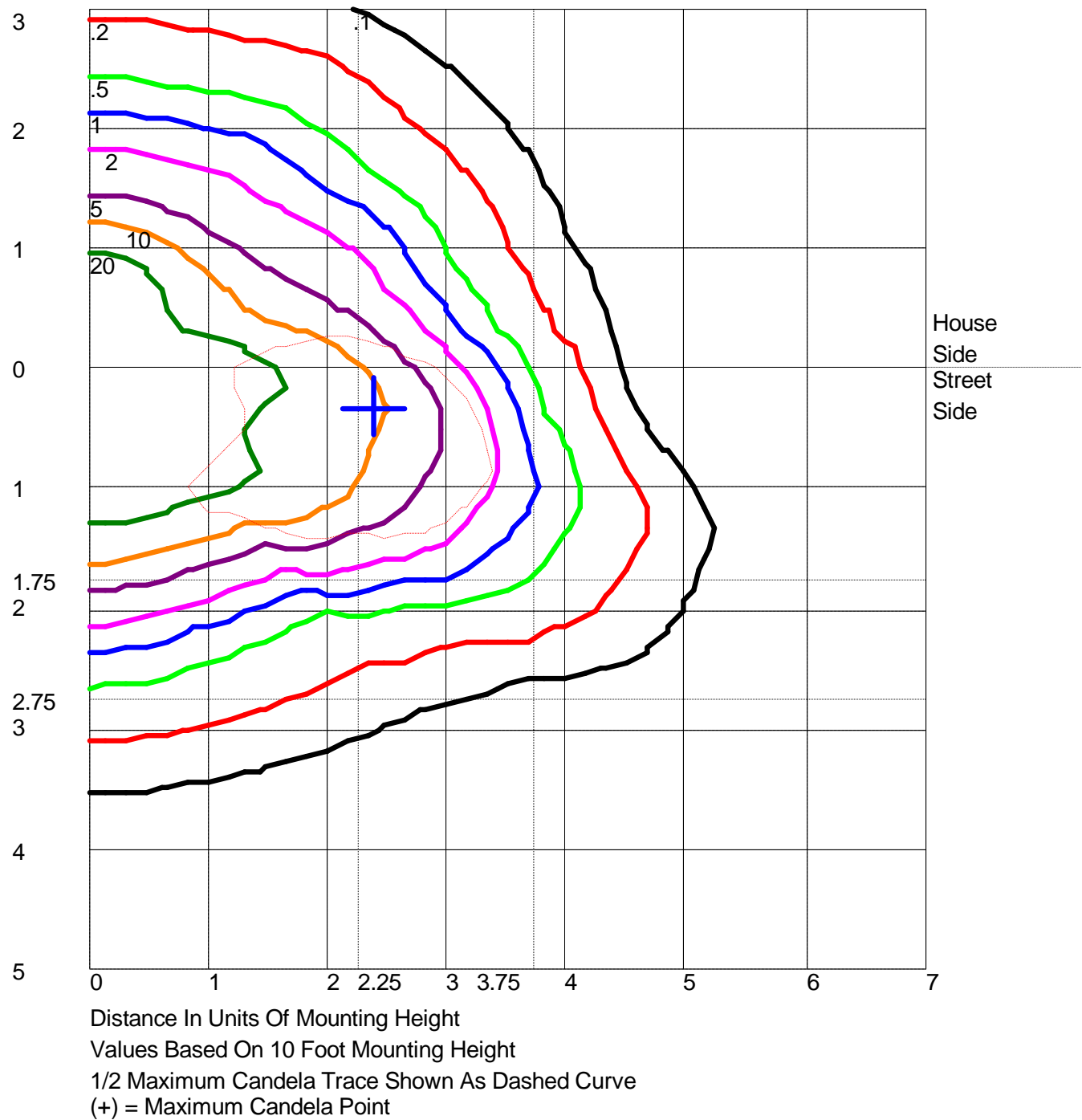
	Lumens	Percent Of Luminaire
Downward Street Side	17560.7	64.7
Downward House Side	9587.5	35.3
Downward Total	27148.2	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	27148.2	100.0

POLAR GRAPH



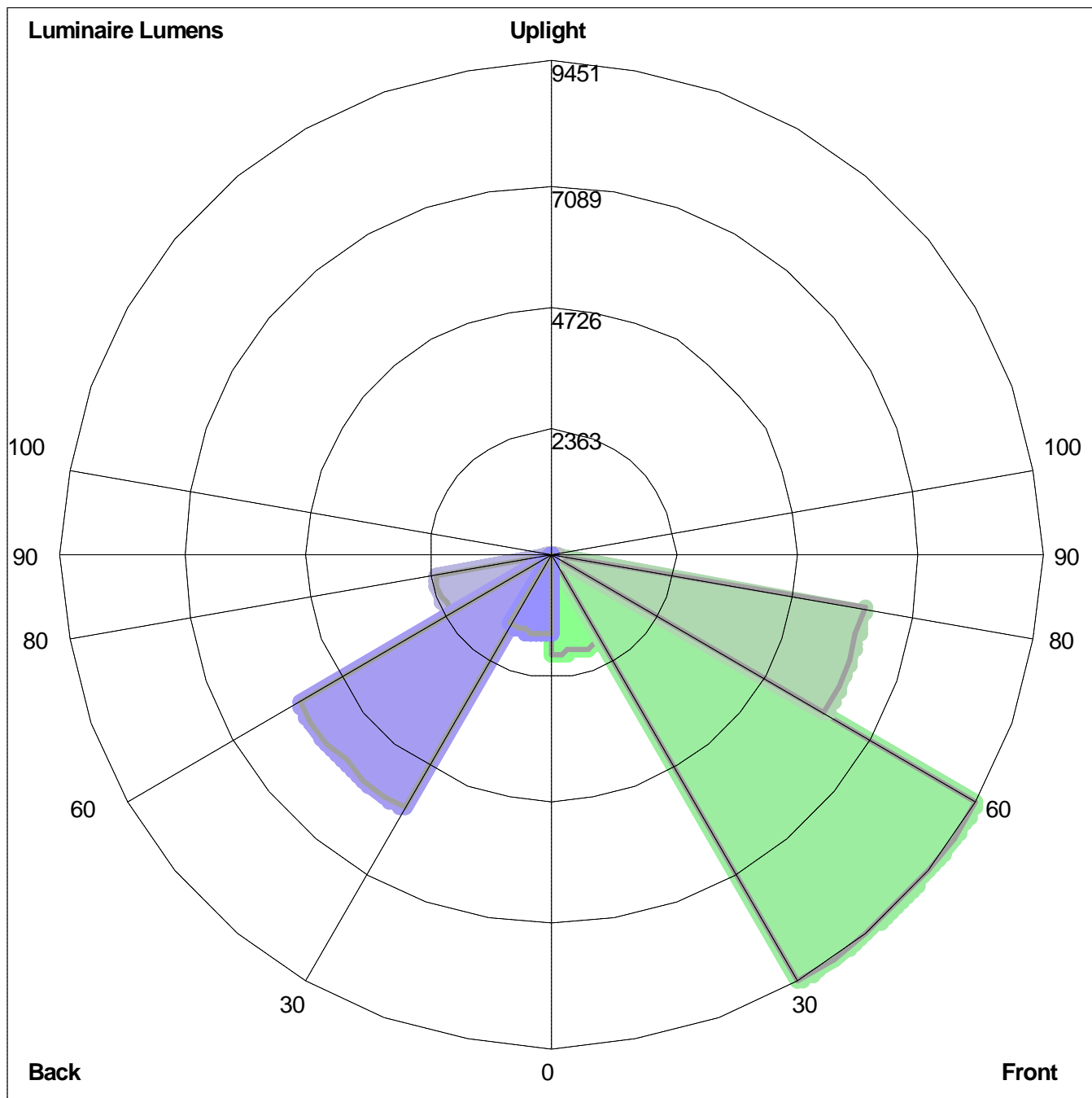
Maximum Candela = 20872.526 Located At Horizontal Angle = 82.5, Vertical Angle = 67.5  
# 1 - Vertical Plane Through Horizontal Angles (82.5 - 262.5) (Through Max. Cd.)  
# 2 - Horizontal Cone Through Vertical Angle (67.5) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE





LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:  
Front: Low=1907.4, Medium=9451.4, High= 6078.0, Very High=123.8  
Back: Low= 1556.0, Medium=5648.1, High=2277.9, Very High=105.5  
Uplight: Low=0.0, High=0.0

BUG Rating : B4-U0-G3