



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : VF1-L20-750-HS-XX-DIM-UNV\_.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002  
 [TEST]GEN. FROM ATAL009593-R3  
 [TESTLAB]ATAL-LABS  
 [ISSUE DATE]03-09-2022  
 [MANUFACT]WILLIAMS OUTDOOR  
 [MANUFACT]H.E. WILLIAMS, INC. - CARTHAGE, MO.  
 [LUMCAT]VF1-L20-750-HS-xx-DIM-UNV  
 [LUMINAIRE]\*\*\*THIS IS A REVISION OF ATAL009593-R2 TO UPDATE CATALOG  
 [MORE]NUMBER\*\*\*VOLTAIRE SMALL ARCHITECTURAL FLOOD LIGHT WITH  
 [MORE]HORIZONTAL SPOT MOLDED REFRACTIVE CLEAR ACRYLIC LENS AND A  
 [MORE]CLEAR GLASS LENS.  
 [LAMP CAT]X16-LUXEON TX 3000K LEDS  
 [LAMP](16) LUXEON TX 3000K LEDS  
 [BALLAST CAT]X1-EUC-018S035DSP  
 [BALLAST](1) INVENTRONICS ELECTRONIC DRIVER  
 [OTHER]INPUT WATTS: 36,  
 [SEARCH\_SOURCE TYPE] LED  
 [SEARCH\_APPLICATION] Outdoor, Architectural, Facade, Landscape, Parking, Site, Flood, Wet Location  
 [SEARCH\_MOUNTING] Arm, Ground, Pole, Post Top, Wall  
 [SEARCH\_CERTIFICATION] DLC  
 [SEARCH\_CLASSIFICATION] IP66

Note: Candela values converted from Type-B to Type-C

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1950
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	103
Total Luminaire Watts	19
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.40
Spacing Criterion (90-270)	3.30
Spacing Criterion (Diagonal)	1.76
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.00 ft
Luminous Width (90-270)	0.48 ft (Diameter)
Luminous Height	0.00 ft

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : VF1-L20-750-HS-XX-DIM-UNV\_.IES**

**LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	18864	42399	101497
55	8560	30588	170782
65	8907	9328	182408
75	6324	6223	9169
85	0	2393	2817

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : VF1-L20-750-HS-XX-DIM-UNV\_.IES**

**CANDELA TABULATION**

	<u>0.0</u>	<u>2.5</u>	<u>5.0</u>	<u>7.5</u>	<u>10.0</u>	<u>12.5</u>	<u>15.0</u>	<u>17.5</u>	<u>20.0</u>	<u>22.5</u>
<b>0.0</b>	424.032	424.032	424.032	424.032	424.032	424.032	424.032	424.032	424.032	424.032
<b>2.5</b>	425.062	425.060	425.055	425.047	425.036	425.021	425.003	424.982	424.958	424.931
<b>5.0</b>	426.777	426.774	426.764	426.748	426.725	426.696	426.844	426.924	426.984	427.024
<b>7.5</b>	429.521	429.521	429.521	429.521	429.561	429.590	429.600	429.588	429.521	429.473
<b>10.0</b>	428.149	428.162	428.200	428.469	428.853	429.260	429.689	430.140	430.612	431.103
<b>12.5</b>	422.660	422.692	422.787	423.073	423.436	423.904	424.566	425.432	426.369	427.377
<b>15.0</b>	417.171	417.199	417.283	417.423	417.619	418.016	418.755	419.544	420.328	421.738
<b>17.5</b>	413.054	413.054	413.114	413.177	413.191	413.616	414.185	415.227	416.687	418.196
<b>20.0</b>	414.426	414.378	414.789	415.185	415.408	415.281	415.728	417.374	418.704	420.211
<b>22.5</b>	421.288	421.235	422.311	423.294	423.601	423.691	424.953	426.449	428.024	429.558
<b>25.0</b>	428.149	428.092	428.830	429.603	431.012	432.419	434.513	436.755	439.461	442.030
<b>27.5</b>	427.169	427.361	428.660	430.260	432.383	435.543	439.157	443.658	448.066	454.173
<b>30.0</b>	419.573	419.969	421.713	424.036	426.816	432.222	438.165	443.585	449.292	455.309
<b>32.5</b>	404.992	405.198	405.915	408.189	411.499	416.218	421.496	427.923	436.683	445.973
<b>35.0</b>	383.169	383.412	384.139	386.430	390.131	395.112	400.731	408.837	418.662	429.062
<b>37.5</b>	359.536	359.785	360.533	361.894	365.325	369.983	375.216	383.794	393.090	404.345
<b>40.0</b>	323.857	326.009	327.879	328.669	332.281	337.108	343.764	352.944	363.566	377.886
<b>42.5</b>	288.177	292.235	294.595	294.286	297.121	300.946	307.319	316.382	329.034	347.745
<b>45.0</b>	223.681	227.243	230.293	232.867	238.305	244.651	253.937	266.369	286.823	311.434
<b>47.5</b>	159.184	161.846	164.775	168.597	174.459	180.826	189.131	199.062	214.426	232.398
<b>50.0</b>	133.568	134.731	136.102	137.913	140.602	143.300	146.324	148.846	151.353	156.451
<b>52.5</b>	107.952	108.002	109.091	110.758	113.069	115.719	118.404	120.956	124.303	129.871
<b>55.0</b>	82.336	81.239	82.073	83.489	85.500	88.082	90.418	93.410	96.867	101.826
<b>57.5</b>	77.533	76.548	76.681	76.697	76.927	77.364	76.799	77.176	76.720	76.425
<b>60.0</b>	72.731	72.087	72.213	71.936	72.090	72.508	71.685	72.271	71.498	71.167
<b>62.5</b>	67.928	67.625	67.745	67.119	67.248	67.644	66.761	67.026	66.302	65.999
<b>65.0</b>	63.125	63.162	63.274	62.254	62.401	62.557	61.858	61.849	61.102	60.759
<b>67.5</b>	54.205	54.274	54.481	53.813	53.945	54.214	53.997	54.168	53.997	54.117
<b>70.0</b>	45.285	45.348	45.536	45.143	44.924	44.999	44.849	44.741	44.761	44.663
<b>72.5</b>	36.365	36.421	36.589	36.432	35.896	35.787	35.682	35.311	35.592	35.106
<b>75.0</b>	27.445	27.494	27.640	27.704	26.861	26.579	26.500	25.880	26.479	25.466
<b>77.5</b>	20.584	20.615	20.711	20.703	20.162	19.982	19.863	19.127	19.541	18.126
<b>80.0</b>	13.723	13.748	13.825	13.820	13.712	13.840	13.842	13.393	13.634	12.716
<b>82.5</b>	6.861	6.881	6.939	6.960	7.279	7.736	7.814	7.651	7.817	7.405
<b>85.0</b>	0.000	0.013	0.052	0.116	0.855	1.658	1.781	1.902	2.060	2.162
<b>87.5</b>	0.000	0.000	0.000	0.000	0.345	0.703	0.710	0.719	0.730	0.742
<b>90.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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

	<u>25.0</u>	<u>27.5</u>	<u>30.0</u>	<u>32.5</u>	<u>35.0</u>	<u>37.5</u>	<u>40.0</u>	<u>42.5</u>	<u>45.0</u>	<u>47.5</u>
<b>0.0</b>	424.032	424.032	424.032	424.032	424.032	424.032	424.032	424.032	424.032	424.032
<b>2.5</b>	424.901	424.868	424.832	424.793	424.752	424.707	424.661	424.611	424.559	424.505
<b>5.0</b>	427.041	427.035	427.004	426.947	426.862	426.737	426.550	426.353	426.146	425.930
<b>7.5</b>	429.588	429.807	429.947	430.002	429.967	429.838	429.614	429.269	429.381	429.224
<b>10.0</b>	431.723	431.976	432.251	432.751	433.249	433.732	434.199	434.650	435.011	435.459
<b>12.5</b>	428.624	430.102	431.366	432.386	433.597	435.240	436.872	438.487	439.905	440.795
<b>15.0</b>	423.079	424.457	426.600	429.044	431.752	434.320	437.676	440.826	443.429	445.631
<b>17.5</b>	419.957	422.022	424.118	426.725	430.024	433.339	436.763	440.725	444.491	448.548
<b>20.0</b>	421.700	422.758	425.008	426.740	430.431	434.563	438.410	442.722	448.204	453.668
<b>22.5</b>	430.966	432.401	433.336	436.022	439.085	442.460	445.763	448.678	455.405	462.023
<b>25.0</b>	444.680	447.244	450.101	452.548	455.296	457.690	460.247	464.203	468.971	473.627
<b>27.5</b>	458.731	462.590	466.534	470.726	474.493	478.112	481.410	485.168	488.445	492.142
<b>30.0</b>	461.927	469.282	478.093	486.502	493.606	498.348	503.207	508.099	513.229	517.517

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : VF1-L20-750-HS-XX-DIM-UNV\_.IES**

**CANDELA TABULATION - (Cont.)**

32.5	456.139	469.876	483.063	492.017	501.027	510.434	520.579	529.448	535.204	541.994
35.0	441.236	454.686	468.397	483.138	498.600	515.111	525.218	536.625	549.487	562.244
37.5	418.651	433.390	449.348	466.411	482.336	498.940	516.520	535.171	551.518	565.927
40.0	392.397	407.342	423.629	441.124	459.824	480.036	500.885	520.414	541.016	562.419
42.5	361.487	375.624	392.568	413.026	432.981	454.357	476.960	501.094	525.899	548.267
45.0	326.968	336.926	353.831	374.031	397.180	422.675	451.388	476.496	502.732	529.999
47.5	251.876	273.108	300.070	331.346	355.871	382.930	412.544	443.945	477.346	506.535
50.0	172.657	194.411	219.024	252.082	287.142	326.962	371.548	403.434	437.452	474.235
52.5	138.360	146.204	158.125	175.775	202.259	238.103	284.124	335.318	390.964	430.609
55.0	108.464	115.892	127.953	141.769	154.159	170.086	192.552	239.613	294.198	354.576
57.5	78.080	85.190	94.768	106.590	119.276	135.160	154.361	176.096	202.179	243.056
60.0	71.816	72.853	74.297	77.958	83.401	96.532	112.208	130.788	152.929	170.595
62.5	66.406	67.394	68.960	71.581	73.370	75.346	76.175	80.360	97.627	115.471
65.0	60.846	61.885	62.858	64.210	64.580	65.373	65.667	66.207	66.103	65.885
67.5	54.691	56.328	56.062	55.769	55.159	54.999	55.044	55.339	55.553	55.709
70.0	45.004	46.150	46.336	46.090	45.354	44.688	44.319	44.898	45.479	46.034
72.5	35.169	35.780	36.004	36.079	35.951	35.455	35.094	35.454	35.975	36.676
75.0	25.208	25.455	25.719	26.391	26.724	26.382	26.252	26.525	27.010	27.789
77.5	17.426	17.028	16.784	17.391	17.621	17.446	17.430	17.611	18.157	19.022
80.0	12.342	12.131	12.090	12.585	12.536	12.012	11.524	11.016	10.850	10.869
82.5	7.306	7.278	7.373	7.749	7.756	7.542	7.347	7.123	7.155	7.250
85.0	2.303	2.455	2.638	2.891	3.054	3.160	3.259	3.332	3.497	3.672
87.5	0.757	0.773	0.792	0.813	0.837	0.864	0.895	0.930	0.970	1.015
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**Vert.  
Angles**

**Horizontal Angles**

	<u>50.0</u>	<u>52.5</u>	<u>55.0</u>	<u>57.5</u>	<u>60.0</u>	<u>62.5</u>	<u>65.0</u>	<u>67.5</u>	<u>70.0</u>	<u>72.5</u>
0.0	424.032	424.032	424.032	424.032	424.032	424.032	424.032	424.032	424.032	424.032
2.5	424.449	424.391	424.330	424.268	424.204	424.138	424.032	424.012	423.968	423.927
5.0	425.705	425.405	425.365	425.322	425.291	425.272	425.263	425.263	425.272	425.286
7.5	429.404	429.383	429.290	429.126	428.893	428.595	428.233	427.971	427.860	427.957
10.0	435.605	435.703	435.754	435.757	435.661	435.385	434.863	434.673	434.269	433.728
12.5	441.755	442.643	443.456	443.943	443.972	443.611	443.708	443.397	443.027	442.562
15.0	448.094	450.494	452.287	453.428	454.460	455.529	455.566	455.414	455.201	454.833
17.5	453.246	457.950	461.336	464.392	466.517	469.019	470.395	471.287	471.379	471.092
20.0	459.304	465.694	472.070	478.527	482.781	487.098	490.432	491.938	492.896	493.378
22.5	468.194	475.978	483.450	491.055	498.570	506.293	512.061	517.402	519.718	521.302
25.0	479.159	486.203	496.559	506.561	516.525	526.413	535.948	543.784	550.267	553.848
27.5	498.229	504.129	511.724	523.445	536.190	549.603	562.211	573.394	582.563	591.598
30.0	521.284	527.145	535.684	544.575	558.147	575.227	593.405	610.232	625.471	637.121
32.5	549.132	554.928	562.698	574.453	588.966	605.978	626.299	649.830	673.191	694.970
35.0	570.500	580.799	591.897	603.691	619.156	639.888	664.287	692.992	722.497	750.556
37.5	581.236	595.772	610.439	627.478	645.601	667.071	695.551	728.530	765.566	802.338
40.0	581.254	599.145	619.546	639.261	663.558	690.109	718.950	756.540	799.610	844.458
42.5	571.049	594.143	617.726	645.890	675.217	705.739	740.083	781.145	828.873	878.212
45.0	557.326	583.429	611.221	641.274	676.990	719.470	763.844	810.150	858.971	909.224
47.5	537.214	569.268	600.094	633.556	673.269	722.087	775.191	835.160	900.900	967.045
50.0	514.299	547.546	583.390	620.950	662.275	710.873	779.791	858.921	940.940	1020.148
52.5	471.243	513.113	561.382	600.574	640.539	691.360	759.718	855.970	948.413	1035.657
55.0	404.923	439.210	496.388	562.801	598.598	649.539	719.092	801.104	909.027	1019.768
57.5	289.399	336.385	379.672	440.441	522.371	571.005	640.176	732.166	840.232	973.303
60.0	189.563	224.552	264.816	301.244	366.159	423.373	489.401	627.804	755.819	858.226
62.5	134.186	150.744	166.283	200.757	241.307	290.039	326.455	407.265	588.267	667.612
65.0	79.240	97.469	113.698	124.050	138.605	184.338	233.519	263.323	349.639	495.528
67.5	56.087	56.421	65.311	78.920	87.110	89.433	135.088	186.426	221.758	298.751

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : VF1-L20-750-HS-XX-DIM-UNV\_.IES**

**CANDELA TABULATION - (Cont.)**

<b>70.0</b>	46.595	47.013	47.306	47.702	53.486	62.661	73.010	98.520	142.842	182.522
<b>72.5</b>	37.457	37.812	38.106	38.482	38.789	38.789	46.030	57.096	70.700	104.844
<b>75.0</b>	28.557	28.808	29.118	29.492	29.617	29.642	29.630	29.577	41.281	50.524
<b>77.5</b>	19.679	19.977	20.320	20.713	20.943	20.924	20.964	20.922	21.419	25.393
<b>80.0</b>	10.934	11.294	11.686	12.386	13.167	13.587	13.550	13.116	13.855	14.503
<b>82.5</b>	6.995	6.565	6.025	5.975	6.168	7.055	7.787	8.107	8.232	8.108
<b>85.0</b>	3.676	3.602	3.450	3.578	3.763	3.960	4.171	4.187	4.090	4.166
<b>87.5</b>	1.066	1.126	1.194	1.275	1.372	1.552	1.743	1.895	2.006	2.059
<b>90.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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

	<u><b>75.0</b></u>	<u><b>77.5</b></u>	<u><b>80.0</b></u>	<u><b>82.5</b></u>	<u><b>85.0</b></u>	<u><b>87.5</b></u>	<u><b>90.0</b></u>	<u><b>92.5</b></u>	<u><b>95.0</b></u>	<u><b>97.5</b></u>
<b>0.0</b>	424.032	424.032	424.032	424.032	424.032	424.032	424.032	424.032	424.032	424.032
<b>2.5</b>	423.890	423.856	423.823	423.791	423.759	423.725	423.689	423.875	424.058	424.239
<b>5.0</b>	425.305	425.323	425.182	424.911	424.626	424.332	424.032	424.332	424.632	424.930
<b>7.5</b>	427.930	427.872	427.783	427.669	427.636	427.564	427.463	427.905	428.326	428.747
<b>10.0</b>	433.714	433.582	433.373	433.093	432.788	432.545	432.266	432.545	432.788	433.430
<b>12.5</b>	442.002	441.522	441.148	440.686	440.138	439.660	439.128	439.660	440.211	441.137
<b>15.0</b>	454.193	453.312	452.641	452.224	451.661	451.405	451.478	452.317	453.225	454.194
<b>17.5</b>	470.436	469.054	468.923	469.227	469.551	469.415	468.494	469.415	470.339	471.089
<b>20.0</b>	493.230	492.658	492.403	492.334	493.418	493.896	492.875	494.020	494.461	494.568
<b>22.5</b>	522.617	523.289	522.983	521.795	522.514	522.578	521.464	522.626	523.269	523.590
<b>25.0</b>	556.930	559.144	560.478	560.613	561.417	562.474	561.488	562.681	563.055	563.606
<b>27.5</b>	598.208	603.495	607.322	609.717	611.399	612.725	612.622	612.906	612.410	612.614
<b>30.0</b>	646.656	655.671	663.812	670.383	675.086	677.687	678.589	677.761	675.368	673.325
<b>32.5</b>	712.259	726.827	739.325	749.671	756.855	761.176	762.641	761.527	758.374	754.374
<b>35.0</b>	776.124	798.857	820.333	840.209	856.304	867.480	871.546	868.069	860.093	848.426
<b>37.5</b>	837.075	869.371	901.339	932.257	959.344	979.122	986.664	980.262	966.151	944.793
<b>40.0</b>	885.001	922.453	958.389	992.785	1022.100	1041.321	1047.731	1038.657	1022.410	999.524
<b>42.5</b>	922.886	964.171	1006.380	1046.653	1081.799	1103.119	1108.797	1095.563	1073.987	1046.273
<b>45.0</b>	967.594	1020.189	1070.995	1120.039	1164.350	1193.097	1203.484	1189.899	1162.814	1125.131
<b>47.5</b>	1031.932	1091.511	1145.696	1197.427	1246.420	1282.794	1298.170	1285.028	1253.484	1209.014
<b>50.0</b>	1090.893	1158.239	1223.367	1287.514	1348.039	1394.632	1412.984	1398.987	1359.465	1303.155
<b>52.5</b>	1122.542	1209.948	1294.859	1375.915	1449.766	1505.413	1527.797	1512.515	1465.491	1395.254
<b>55.0</b>	1131.152	1243.614	1353.592	1456.426	1550.657	1615.235	1642.611	1625.341	1568.914	1478.889
<b>57.5</b>	1113.903	1215.569	1276.597	1328.074	1377.061	1478.801	1555.128	1535.736	1447.626	1342.466
<b>60.0</b>	939.150	1009.002	1068.689	1120.687	1169.022	1286.836	1467.646	1437.949	1212.892	1123.131
<b>62.5</b>	740.418	811.973	865.491	915.553	962.216	1034.873	1380.164	1338.045	951.221	906.494
<b>65.0</b>	557.905	617.433	669.342	713.679	757.307	789.102	1292.681	1234.012	734.820	696.097
<b>67.5</b>	394.014	442.607	488.024	531.790	570.857	600.518	979.460	937.615	551.532	516.094
<b>70.0</b>	243.738	300.996	340.778	371.580	394.873	414.952	666.239	637.181	382.009	363.124
<b>72.5</b>	138.558	181.606	212.333	225.910	229.799	230.969	353.017	292.552	223.016	221.982
<b>75.0</b>	70.295	90.037	108.995	103.298	79.899	52.617	39.796	52.118	78.552	102.649
<b>77.5</b>	31.486	38.477	37.648	26.723	28.864	30.613	30.876	30.613	28.864	26.723
<b>80.0</b>	14.900	15.849	14.945	18.132	20.660	21.587	21.957	21.587	20.660	18.933
<b>82.5</b>	8.224	8.671	9.494	10.148	12.727	13.069	13.037	13.069	12.789	10.901
<b>85.0</b>	4.132	4.306	5.027	5.787	5.458	5.687	4.117	5.687	6.174	5.301
<b>87.5</b>	2.026	2.053	2.036	2.390	2.959	1.941	2.059	2.431	2.946	2.390
<b>90.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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

	<u><b>100.0</b></u>	<u><b>102.5</b></u>	<u><b>105.0</b></u>	<u><b>107.5</b></u>	<u><b>110.0</b></u>	<u><b>112.5</b></u>	<u><b>115.0</b></u>	<u><b>117.5</b></u>	<u><b>120.0</b></u>	<u><b>122.5</b></u>
<b>0.0</b>	424.032	424.032	424.032	424.032	424.032	424.032	424.032	424.032	424.032	424.032
<b>2.5</b>	424.420	424.599	424.779	424.960	425.142	425.405	425.483	425.618	425.749	425.877

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : VF1-L20-750-HS-XX-DIM-UNV\_.IES**

**CANDELA TABULATION - (Cont.)**

<b>5.0</b>	425.227	425.576	425.999	426.408	426.800	427.173	427.525	427.853	428.155	428.431
<b>7.5</b>	429.144	429.527	429.868	430.161	430.315	430.681	431.246	431.909	432.513	433.055
<b>10.0</b>	434.188	434.900	435.564	436.210	437.115	437.918	438.474	439.265	439.883	440.440
<b>12.5</b>	441.975	442.721	443.764	445.051	446.233	447.307	448.271	448.887	449.907	450.520
<b>15.0</b>	454.996	456.066	457.417	458.585	459.567	460.362	460.969	461.350	461.269	461.481
<b>17.5</b>	471.851	473.039	475.400	476.685	477.490	478.031	478.066	477.642	476.179	475.264
<b>20.0</b>	495.884	497.467	499.220	500.419	501.000	500.492	499.762	497.543	494.273	490.898
<b>22.5</b>	525.377	526.853	528.758	529.810	528.681	527.016	523.411	519.518	513.175	506.533
<b>25.0</b>	564.707	565.366	565.611	563.621	560.725	555.242	548.502	540.564	532.091	522.397
<b>27.5</b>	612.545	611.417	608.481	603.794	595.758	587.202	576.797	564.896	551.675	539.591
<b>30.0</b>	669.716	664.384	657.987	651.047	641.291	626.534	610.123	591.933	576.218	564.022
<b>32.5</b>	748.483	739.528	727.405	711.841	690.706	668.151	645.167	625.871	610.520	598.395
<b>35.0</b>	833.587	815.242	793.856	768.472	740.658	712.200	684.517	662.286	644.533	630.259
<b>37.5</b>	918.068	888.247	856.647	820.858	784.169	748.560	717.785	691.831	671.869	654.615
<b>40.0</b>	971.870	940.760	904.303	862.887	818.891	778.781	744.245	716.583	690.571	663.436
<b>42.5</b>	1015.899	981.729	941.280	897.616	851.742	807.183	766.990	732.728	699.999	668.517
<b>45.0</b>	1083.955	1037.999	986.909	933.131	885.386	837.786	791.650	745.475	701.021	663.490
<b>47.5</b>	1162.617	1111.632	1055.043	992.788	928.046	863.643	802.700	747.973	697.254	655.048
<b>50.0</b>	1242.862	1179.981	1116.430	1045.257	967.665	884.005	804.878	736.677	686.730	642.798
<b>52.5</b>	1315.456	1229.229	1142.331	1056.404	969.644	877.026	781.995	714.913	663.117	621.781
<b>55.0</b>	1371.720	1258.237	1144.290	1032.426	922.515	817.933	739.274	671.778	619.625	581.272
<b>57.5</b>	1285.927	1223.571	1117.575	978.477	849.612	743.995	655.453	590.129	540.099	449.581
<b>60.0</b>	1069.131	1009.898	939.110	860.801	759.572	633.949	501.895	436.033	372.467	302.299
<b>62.5</b>	859.952	805.554	740.352	669.742	589.186	413.342	334.481	293.823	244.980	208.344
<b>65.0</b>	660.242	614.041	557.772	496.855	355.522	269.148	236.547	190.431	148.634	133.613
<b>67.5</b>	479.308	440.447	395.603	304.214	226.730	188.405	141.289	99.857	95.471	85.442
<b>70.0</b>	337.707	301.348	248.615	186.811	143.879	102.340	78.842	68.625	58.566	51.496
<b>72.5</b>	211.574	184.379	142.226	104.592	70.982	59.188	48.834	41.589	41.590	40.830
<b>75.0</b>	109.451	92.973	70.417	49.526	40.714	30.326	31.035	31.182	30.862	30.182
<b>77.5</b>	39.472	38.994	30.838	24.827	21.487	21.678	21.995	21.699	21.276	20.757
<b>80.0</b>	15.751	15.225	14.035	14.461	14.541	14.388	14.409	14.063	13.381	12.437
<b>82.5</b>	8.765	7.845	8.193	8.581	8.756	8.580	8.071	7.138	6.168	5.975
<b>85.0</b>	4.880	4.306	4.172	4.219	4.090	4.187	4.171	3.960	3.763	3.578
<b>87.5</b>	2.036	2.053	2.026	2.059	2.006	1.895	1.743	1.552	1.369	1.275
<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>									
	<b>125.0</b>	<b>127.5</b>	<b>130.0</b>	<b>132.5</b>	<b>135.0</b>	<b>137.5</b>	<b>140.0</b>	<b>142.5</b>	<b>145.0</b>	<b>147.5</b>
<b>0.0</b>	424.032	424.032	424.032	424.032	424.032	424.032	424.032	424.032	424.032	424.032
<b>2.5</b>	426.001	426.122	426.239	426.351	426.459	426.563	426.661	426.755	426.843	426.926
<b>5.0</b>	428.677	428.911	429.167	429.406	429.626	429.828	430.011	430.147	430.412	430.660
<b>7.5</b>	433.531	433.938	434.275	434.582	434.918	435.131	435.592	435.977	436.324	436.633
<b>10.0</b>	440.935	441.366	441.734	442.037	442.092	442.312	442.346	442.268	442.082	441.791
<b>12.5</b>	450.656	450.446	450.140	449.739	449.701	449.024	448.260	447.356	446.318	445.327
<b>15.0</b>	461.421	460.644	459.290	457.832	456.593	454.669	451.811	448.730	446.641	444.555
<b>17.5</b>	473.516	471.395	467.546	463.610	459.977	456.056	451.929	448.272	444.576	440.715
<b>20.0</b>	485.810	480.312	474.399	468.923	463.494	457.785	453.445	449.285	444.599	440.634
<b>22.5</b>	499.241	491.443	483.040	477.118	470.500	463.736	461.521	458.863	455.873	452.816
<b>25.0</b>	512.587	502.670	495.291	490.156	486.335	482.324	478.754	476.264	474.421	472.189
<b>27.5</b>	528.971	522.467	517.724	512.707	509.167	506.073	502.709	499.906	495.002	490.759
<b>30.0</b>	556.875	549.654	544.027	540.492	536.101	529.981	524.355	518.653	512.976	505.351
<b>32.5</b>	588.117	580.936	575.273	566.280	557.438	550.374	540.559	529.334	518.840	509.073
<b>35.0</b>	618.981	607.051	594.649	584.301	569.734	555.222	542.616	531.000	514.493	498.533
<b>37.5</b>	635.145	617.454	601.212	584.939	569.964	552.284	532.736	514.408	496.979	479.205
<b>40.0</b>	640.930	618.617	597.971	578.034	557.329	537.190	516.943	495.937	475.766	456.728

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : VF1-L20-750-HS-XX-DIM-UNV\_.IES**

**CANDELA TABULATION - (Cont.)**

42.5	639.059	613.828	588.561	564.147	540.511	517.699	494.637	472.481	451.655	430.389
45.0	631.808	602.556	575.200	547.132	520.067	494.746	469.936	435.530	406.246	381.725
47.5	618.892	586.993	554.860	524.381	495.203	458.714	422.654	383.254	347.321	325.854
50.0	602.240	564.497	530.572	487.668	446.083	409.286	375.478	328.673	285.856	257.453
52.5	579.435	527.931	483.616	438.427	393.662	340.817	295.674	255.128	218.526	192.543
55.0	507.875	446.658	409.129	369.677	310.942	255.779	210.898	189.844	171.378	154.891
57.5	381.530	341.981	305.404	270.439	231.673	196.427	168.300	148.624	131.546	115.884
60.0	271.654	238.798	210.456	192.803	174.830	146.333	122.811	104.799	89.547	83.168
62.5	178.454	163.694	147.293	128.385	108.730	87.968	82.596	81.168	78.207	75.635
65.0	121.575	105.214	86.668	72.534	72.088	71.593	70.514	69.734	68.237	67.222
67.5	70.192	60.512	60.648	60.501	59.868	59.087	58.284	57.782	57.470	57.648
70.0	50.574	49.945	49.570	48.978	48.079	46.970	45.919	46.060	46.726	47.462
72.5	40.081	39.605	39.174	38.001	37.347	36.826	36.467	36.827	37.323	37.451
75.0	29.529	29.605	29.572	28.892	28.315	27.898	27.624	27.754	28.096	27.763
77.5	20.533	20.365	20.164	19.731	19.288	18.984	18.803	18.818	18.993	18.726
80.0	11.732	11.370	10.972	11.118	11.682	12.176	12.616	13.045	13.517	13.519
82.5	6.025	6.565	6.995	7.338	7.610	7.827	8.000	8.148	8.323	8.280
85.0	3.450	3.602	3.676	3.688	3.651	3.574	3.467	3.337	3.204	3.017
87.5	1.194	1.126	1.066	1.015	0.970	0.930	0.895	0.864	0.837	0.813
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Vert. Angles	Horizontal Angles									
	<u>150.0</u>	<u>152.5</u>	<u>155.0</u>	<u>157.5</u>	<u>160.0</u>	<u>162.5</u>	<u>165.0</u>	<u>167.5</u>	<u>170.0</u>	<u>172.5</u>
0.0	424.032	424.032	424.032	424.032	424.032	424.032	424.032	424.032	424.032	424.032
2.5	427.004	427.076	427.142	427.202	427.256	427.304	427.346	427.382	427.411	427.434
5.0	430.893	431.108	431.306	431.486	431.648	431.792	431.917	432.023	432.266	432.266
7.5	436.904	437.136	437.329	437.755	437.827	437.970	438.094	438.200	438.287	438.354
10.0	441.423	441.445	441.329	441.056	440.778	440.500	440.500	440.500	440.500	440.500
12.5	444.368	443.183	441.857	440.863	440.102	439.306	438.487	438.004	437.791	437.626
15.0	442.548	440.417	438.654	436.964	435.241	434.057	432.955	431.997	431.232	430.545
17.5	437.840	435.744	433.680	431.919	430.410	428.950	427.413	426.589	425.816	425.923
20.0	439.117	436.970	436.113	434.804	433.605	432.918	432.052	431.504	431.002	430.662
22.5	450.017	448.921	447.257	446.162	445.334	444.634	444.116	443.300	442.213	441.152
25.0	469.669	466.764	463.404	460.080	457.774	455.760	454.219	452.832	451.686	450.580
27.5	486.310	482.016	477.957	472.705	465.684	461.481	457.089	454.284	451.825	449.949
30.0	496.579	487.749	479.975	472.502	466.050	459.897	453.418	447.867	443.588	440.525
32.5	499.620	486.457	473.206	461.731	451.323	442.708	435.035	428.472	423.905	420.406
35.0	483.333	469.202	456.037	443.792	431.338	421.577	413.165	405.443	400.140	395.948
37.5	463.177	446.986	431.882	418.405	405.984	395.259	386.777	379.404	373.816	369.697
40.0	438.632	421.302	405.317	389.986	376.660	362.038	351.514	342.704	335.637	330.391
42.5	406.569	386.236	368.119	348.129	339.957	323.866	310.077	301.635	295.006	289.469
45.0	359.843	341.727	328.255	306.532	291.392	277.159	259.228	249.952	242.915	236.879
47.5	303.030	280.685	261.953	243.597	226.092	214.371	201.507	193.869	188.036	182.717
50.0	234.034	211.585	191.805	179.177	171.687	164.322	159.494	155.970	153.049	150.117
52.5	177.438	164.553	153.461	145.869	139.002	132.886	128.173	124.911	122.304	119.754
55.0	140.828	129.035	119.246	111.848	105.879	100.657	96.760	93.642	91.518	89.274
57.5	102.445	92.224	83.786	81.729	81.588	80.987	81.364	80.978	81.263	80.830
60.0	79.075	77.449	76.275	75.398	75.146	74.819	75.440	74.889	75.044	74.630
62.5	72.389	70.640	69.784	69.183	68.708	68.636	69.314	68.907	68.819	68.427
65.0	65.049	63.637	63.135	62.865	62.366	62.343	63.158	62.990	62.586	62.219
67.5	57.115	56.376	55.792	55.302	54.588	54.077	54.408	54.029	53.344	52.817
70.0	47.325	46.234	45.665	45.328	44.986	44.576	44.609	44.253	43.630	43.150
72.5	37.172	36.026	35.500	35.325	35.267	35.157	34.882	34.464	33.907	33.479
75.0	27.044	25.843	25.303	25.301	25.452	25.806	25.215	24.663	24.177	23.804
77.5	18.068	17.486	17.426	17.908	18.405	19.127	18.776	18.484	18.250	18.069

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : VF1-L20-750-HS-XX-DIM-UNV\_.IES**

**CANDELA TABULATION - (Cont.)**

<b>80.0</b>	12.983	12.510	12.342	12.621	12.909	13.325	13.109	12.872	12.682	12.536
<b>82.5</b>	7.873	7.513	7.306	7.376	7.453	7.596	7.435	7.256	7.112	7.002
<b>85.0</b>	2.743	2.501	2.303	2.161	2.023	1.896	1.757	1.637	1.372	1.372
<b>87.5</b>	0.792	0.773	0.757	0.742	0.730	0.719	0.710	0.703	0.697	0.692
<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>		
	<b><u>175.0</u></b>	<b><u>177.5</u></b>	<b><u>180.0</u></b>
<b>0.0</b>	424.032	424.032	424.032
<b>2.5</b>	427.450	427.460	427.463
<b>5.0</b>	432.266	432.266	432.266
<b>7.5</b>	438.403	438.432	438.441
<b>10.0</b>	440.500	440.500	440.500
<b>12.5</b>	437.507	437.436	437.412
<b>15.0</b>	429.722	429.521	429.521
<b>17.5</b>	425.945	425.937	425.954
<b>20.0</b>	430.532	430.324	430.208
<b>22.5</b>	441.872	441.812	440.500
<b>25.0</b>	450.223	449.810	449.648
<b>27.5</b>	448.369	446.991	447.557
<b>30.0</b>	438.000	436.134	436.383
<b>32.5</b>	417.920	417.076	415.799
<b>35.0</b>	392.841	392.453	390.946
<b>37.5</b>	366.150	366.039	365.025
<b>40.0</b>	326.505	326.407	324.543
<b>42.5</b>	286.086	285.860	284.061
<b>45.0</b>	233.071	231.981	229.856
<b>47.5</b>	179.363	177.023	175.651
<b>50.0</b>	148.132	147.157	145.918
<b>52.5</b>	117.918	116.961	116.186
<b>55.0</b>	87.693	86.453	86.453
<b>57.5</b>	80.522	80.339	80.278
<b>60.0</b>	74.336	74.161	74.103
<b>62.5</b>	68.148	67.982	67.927
<b>65.0</b>	61.752	61.752	61.752
<b>67.5</b>	52.443	52.220	52.146
<b>70.0</b>	42.811	42.608	42.541
<b>72.5</b>	33.176	32.995	32.935
<b>75.0</b>	23.329	23.329	23.329
<b>77.5</b>	17.941	17.770	17.497
<b>80.0</b>	12.433	12.187	11.665
<b>82.5</b>	6.923	6.609	5.832
<b>85.0</b>	1.372	1.022	0.000
<b>87.5</b>	0.689	0.514	0.000
<b>90.0</b>	0.000	0.000	0.000

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : VF1-L20-750-HS-XX-DIM-UNV\_.IES**

**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	167.54	N.A.	8.60
0-30	398.22	N.A.	20.40
0-40	761.17	N.A.	39.00
0-60	1659.25	N.A.	85.10
0-80	1945.23	N.A.	99.70
0-90	1950.45	N.A.	100.00
10-90	1909.35	N.A.	97.90
20-40	593.63	N.A.	30.40
20-50	1044.25	N.A.	53.50
40-70	1132.01	N.A.	58.00
60-80	285.98	N.A.	14.70
70-80	52.06	N.A.	2.70
80-90	5.21	N.A.	0.30
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1950.45	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	41.10
10-20	126.44
20-30	230.68
30-40	362.95
40-50	450.63
50-60	447.46
60-70	233.93
70-80	52.06
80-90	5.21
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : VF1-L20-750-HS-XX-DIM-UNV\_.IES**

**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	117	117	117	117	111	111	111	107	107	107	102	102	102	100
1	110	106	102	98	107	103	100	96	99	96	93	95	93	91	92	90	88	86
2	100	92	85	80	97	90	84	79	87	81	77	83	79	75	80	77	74	71
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	59
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	55	46	39	67	54	45	39	52	45	39	51	44	38	49	43	38	36
7	63	49	40	34	62	49	40	34	47	39	34	46	39	33	44	38	33	31
8	59	45	36	30	57	44	35	30	42	35	29	41	34	29	40	34	29	27
9	54	40	32	26	53	40	32	26	39	31	26	38	31	26	36	30	26	24
10	51	37	29	23	49	36	28	23	35	28	23	34	28	23	33	27	23	21

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : VF1-L20-750-HS-XX-DIM-UNV\_.IES**

**UGR TABLE - CORRECTED**

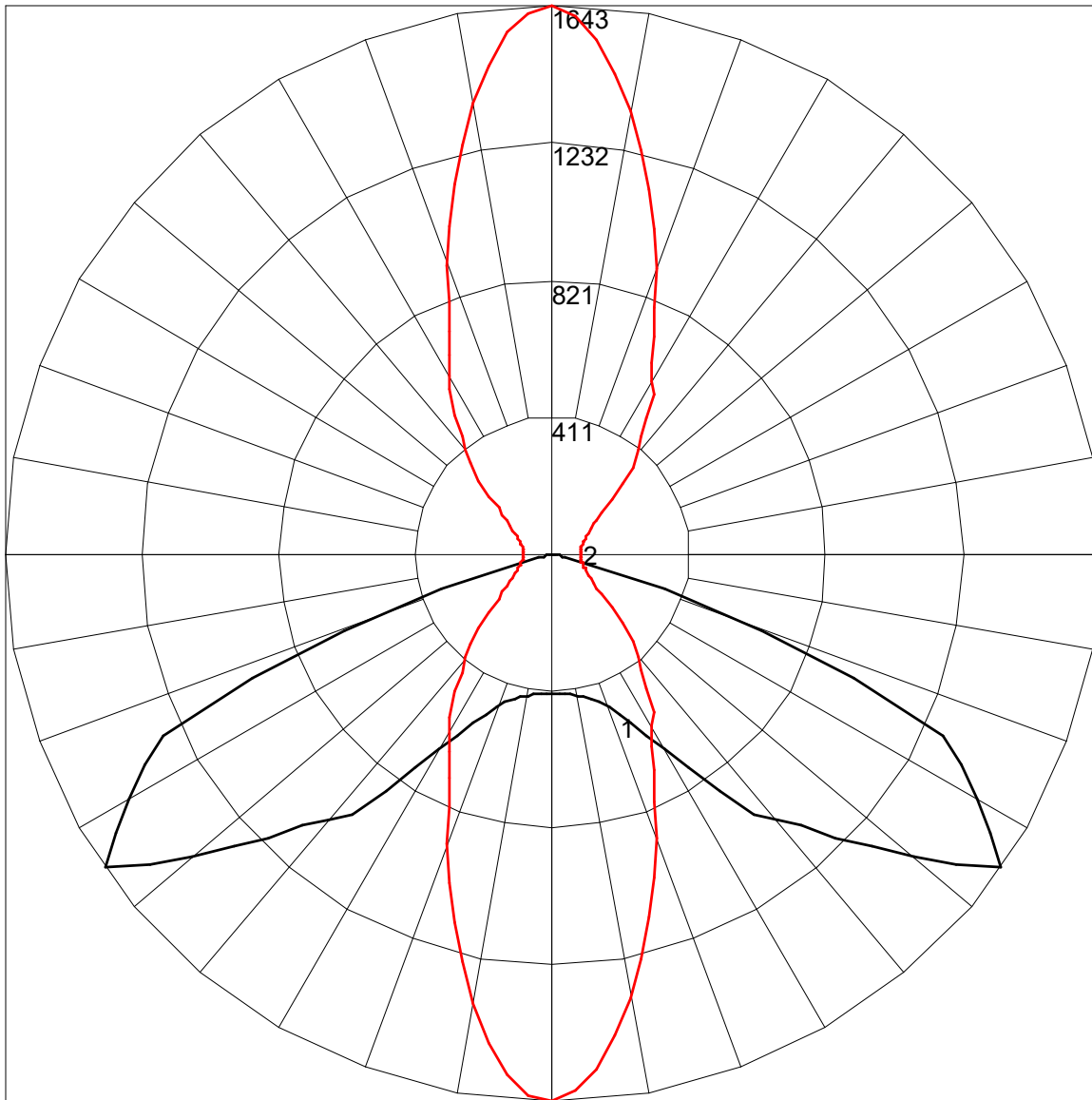
Reflectances

Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	14.1	15.4	14.4	15.7	16.0	2.7	4.0	3.1	4.3	4.6
	3H	16.1	17.3	16.5	17.6	18.0	3.0	4.1	3.3	4.5	4.8
	4H	16.6	17.8	17.0	18.1	18.5	3.0	4.1	3.4	4.5	4.8
	6H	17.0	18.0	17.4	18.4	18.7	3.1	4.1	3.5	4.5	4.8
	8H	17.0	18.0	17.5	18.4	18.8	3.1	4.1	3.5	4.5	4.9
	12H	17.0	17.9	17.4	18.3	18.7	3.2	4.0	3.6	4.4	4.9
4H	2H	14.2	15.3	14.6	15.7	16.1	7.5	8.6	7.9	8.9	9.3
	3H	16.5	17.4	16.9	17.8	18.2	8.1	9.0	8.5	9.4	9.8
	4H	17.1	17.9	17.5	18.3	18.7	8.2	9.0	8.6	9.4	9.8
	6H	17.5	18.2	17.9	18.6	19.1	8.2	8.9	8.6	9.3	9.8
	8H	17.6	18.2	18.0	18.7	19.1	8.2	8.8	8.6	9.3	9.7
	12H	17.6	18.1	18.0	18.6	19.1	8.2	8.7	8.7	9.2	9.7
8H	4H	17.0	17.7	17.5	18.1	18.6	9.3	9.9	9.8	10.4	10.8
	6H	17.5	18.0	18.0	18.5	19.0	9.4	9.9	9.9	10.4	10.9
	8H	17.6	18.1	18.1	18.6	19.1	9.4	9.9	9.9	10.4	10.9
	12H	17.6	18.0	18.1	18.5	19.1	9.5	9.9	10.0	10.4	10.9
12H	4H	17.0	17.5	17.5	18.0	18.5	9.5	10.0	9.9	10.5	11.0
	6H	17.4	17.9	18.0	18.4	18.9	9.6	10.1	10.1	10.5	11.1
	8H	17.6	18.0	18.1	18.5	19.0	9.7	10.1	10.2	10.6	11.1

Maximum UGR = 19.1

POLAR GRAPH



Maximum Candela = 1642.611 Located At Horizontal Angle = 90, Vertical Angle = 55  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)  
# 2 - Horizontal Cone Through Vertical Angle (55) (Through Max. Cd.)