



IES INDOOR REPORT

PHOTOMETRIC FILENAME : VF1-L20-750-HF-XX-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]GEN FROM ATAL009595-R3
 [TESTLAB]ATAL-LABS
 [ISSUE]23 Nov, 2022
 [MANUFAC]WILLIAMS OUTDOOR
 [OTHER]H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMCAT]VF1-L20-750-HF-xx-xxx-xxx-xxx
 [LUMINAIRE]VOLTAIRE SMALL ARCHITECTURAL FLOOD LIGHT WITH
 [MORE]HORIZONTAL FLOOD MOLDED REFRACTIVE CLEAR ACRYLIC LENS AND A
 [MORE]CLEAR GLASS LENS.
 [LAMPCAT]X16-LUXEON TX 5000K LEDS
 [LAMP](16) LUXEON TX 5000K LEDS
 [BALLASTCAT]X1-EUC-018S035DSP
 [BALLAST](1) INVENTRONICS ELECTRONIC DRIVER
 [OTHER]INPUT WATTS: 19, AMPS: 0.1513, VAC: 120.04, TEMP: 24.9 C ,
 [_SEARCH_SOURCE] 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	1912
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	101
Total Luminaire Watts	19
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.70
Spacing Criterion (90-270)	3.12
Spacing Criterion (Diagonal)	2.04
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.00 ft
Luminous Width (90-270)	1.00 ft
Luminous Height	0.00 ft

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LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4162	9166	13029
55	1434	6204	21045
65	1410	1482	17822
75	932	984	1206
85	0	415	325

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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>
0.0	325.793	325.793	325.793	325.793	325.793	325.793	325.793	325.793	325.793	325.793
2.5	334.367	334.501	334.616	334.712	334.789	334.846	334.883	334.900	334.898	334.876
5.0	344.259	344.528	344.758	344.950	345.104	345.111	344.891	344.629	344.320	343.965
7.5	356.460	356.742	356.949	357.090	356.855	356.521	356.115	355.637	354.811	354.510
10.0	369.980	370.220	370.358	370.197	369.853	369.413	368.876	368.243	367.516	366.695
12.5	378.553	379.236	379.750	379.599	379.386	379.114	378.706	378.164	377.625	377.100
15.0	383.829	383.808	383.757	383.667	383.542	383.241	382.629	381.987	381.366	381.516
17.5	390.952	390.894	390.721	390.432	390.028	389.510	388.913	388.360	388.064	387.662
20.0	399.657	399.429	399.350	399.208	398.957	398.338	397.858	398.126	398.040	398.492
22.5	406.252	404.948	405.349	405.709	406.397	406.920	407.700	408.418	409.749	411.327
25.0	417.244	416.923	417.352	417.647	418.320	419.161	420.858	422.670	425.348	428.476
27.5	433.009	432.271	433.015	433.718	434.506	436.342	438.518	442.313	445.244	453.035
30.0	444.503	443.764	445.110	447.106	449.445	453.932	459.521	465.920	474.030	482.307
32.5	447.801	447.851	448.749	451.399	454.976	459.850	468.506	478.617	490.865	505.290
35.0	426.770	427.912	429.669	433.854	440.191	448.930	463.721	480.718	499.761	520.742
37.5	399.657	401.598	403.408	406.964	413.868	424.473	438.551	457.944	479.064	501.983
40.0	368.001	368.558	370.386	374.310	382.291	394.571	410.871	430.834	454.300	479.606
42.5	336.345	335.387	336.985	340.962	349.366	362.252	378.522	398.675	422.086	446.693
45.0	273.693	272.253	275.982	282.838	293.685	311.351	331.470	356.517	383.203	410.396
47.5	211.040	208.884	213.792	221.811	234.856	253.978	275.450	303.729	332.518	347.688
50.0	166.194	164.833	168.516	174.976	185.707	201.319	221.092	247.461	274.220	273.038
52.5	121.348	120.925	123.862	129.177	137.284	148.698	164.039	184.025	199.980	205.032
55.0	76.502	76.953	79.068	82.883	87.459	94.270	103.660	116.807	129.108	138.863
57.5	71.226	70.952	71.728	73.089	74.071	75.504	76.466	78.423	81.739	83.276
60.0	65.950	65.344	65.949	66.970	68.067	69.356	70.102	72.228	74.906	76.112
62.5	60.674	59.735	60.130	60.788	62.124	63.084	63.902	66.031	67.756	68.969
65.0	55.398	54.126	54.275	54.550	56.200	56.728	57.699	59.476	60.573	61.713
67.5	47.154	46.226	46.668	46.729	48.182	48.770	49.950	51.377	52.400	53.640
70.0	38.911	38.307	39.026	38.754	39.846	40.381	41.444	42.234	43.087	44.019
72.5	30.667	30.387	31.403	30.812	31.501	31.979	32.834	32.982	33.741	34.276
75.0	22.423	22.466	23.796	22.816	23.151	23.568	24.134	23.642	24.364	24.432
77.5	16.817	16.843	17.857	17.051	17.352	17.767	18.047	17.318	17.690	17.213
80.0	11.212	11.232	11.935	11.401	11.821	12.373	12.600	12.151	12.408	12.131
82.5	5.606	5.622	5.996	5.749	6.307	6.975	7.147	6.977	7.164	7.090
85.0	0.000	0.011	0.045	0.096	0.801	1.574	1.689	1.796	1.944	2.077
87.5	0.000	0.000	0.000	0.000	0.332	0.676	0.683	0.691	0.702	0.714
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>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>
0.0	325.793	325.793	325.793	325.793	325.793	325.793	325.793	325.793	325.793	325.793
2.5	334.760	334.507	334.266	334.012	333.748	333.474	333.190	332.897	332.596	332.287
5.0	343.562	343.110	342.609	342.059	341.459	340.825	340.196	339.533	338.838	338.111
7.5	353.907	353.245	352.523	351.745	350.911	350.023	349.081	348.089	347.243	345.922
10.0	365.363	364.779	363.686	362.740	361.714	360.598	359.394	358.104	356.695	355.386
12.5	376.658	376.193	375.272	373.982	372.880	372.122	371.155	369.977	368.528	366.912
15.0	381.573	381.589	382.053	382.456	382.596	382.513	383.088	383.219	382.516	381.248
17.5	387.644	388.033	388.136	388.997	391.086	392.695	394.129	396.025	397.716	398.684
20.0	399.184	399.467	401.920	403.037	405.548	408.178	410.052	411.738	414.899	417.215
22.5	413.427	416.851	419.460	423.633	427.082	430.385	433.159	435.044	437.553	439.338
25.0	433.160	437.438	443.161	448.195	453.353	457.531	460.185	462.431	464.051	464.891
27.5	459.891	467.430	473.999	479.973	484.533	487.472	490.598	492.003	492.273	491.507
30.0	493.078	502.352	510.701	517.496	522.835	526.011	527.080	526.034	523.354	521.979

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CANDELA TABULATION - (Cont.)

32.5	520.716	536.671	551.512	560.149	564.831	567.738	568.072	566.377	562.691	558.000
35.0	536.864	553.120	569.535	584.196	597.700	608.381	608.777	607.161	604.730	602.270
37.5	526.010	550.519	575.318	599.282	610.526	620.523	629.376	637.514	640.837	639.510
40.0	505.034	529.553	553.879	576.880	598.289	618.621	632.835	639.710	647.962	659.805
42.5	473.373	499.624	525.796	548.937	570.400	587.814	605.570	621.773	639.566	649.462
45.0	438.877	464.733	487.321	510.086	531.058	552.683	569.932	585.896	602.713	621.918
47.5	367.722	397.108	432.091	465.404	488.826	505.355	522.008	540.202	559.756	579.041
50.0	281.052	312.487	351.962	375.104	404.948	436.958	470.186	487.133	506.559	529.316
52.5	212.827	243.634	266.531	277.075	301.608	333.139	365.994	403.962	445.449	469.478
55.0	153.109	177.535	192.006	205.996	223.656	240.612	258.003	290.883	330.921	375.945
57.5	87.764	104.625	119.397	136.157	154.620	171.180	188.183	205.066	222.410	249.859
60.0	78.137	79.346	79.566	80.556	85.153	103.096	121.159	139.193	156.506	164.580
62.5	70.752	71.611	72.011	72.493	72.251	71.905	71.078	74.642	91.606	104.056
65.0	63.178	64.105	64.147	64.002	63.194	62.432	61.225	60.205	58.236	56.012
67.5	55.081	56.801	56.008	55.112	54.096	52.788	51.318	50.011	48.462	47.012
70.0	44.948	45.873	45.561	45.255	44.761	43.155	41.371	40.429	39.376	38.979
72.5	34.582	34.771	34.706	35.080	35.296	33.984	32.640	31.877	31.049	31.288
75.0	24.020	23.796	23.990	25.290	25.979	25.193	24.470	23.991	23.685	24.085
77.5	16.031	15.175	14.965	16.279	16.947	16.725	16.521	16.354	16.499	17.031
80.0	11.309	10.836	10.869	11.859	12.049	11.545	11.076	10.589	10.429	10.447
82.5	6.696	6.541	6.692	7.344	7.455	7.249	7.062	6.847	6.878	6.968
85.0	2.160	2.276	2.456	2.759	2.936	3.037	3.133	3.203	3.362	3.530
87.5	0.728	0.743	0.761	0.782	0.805	0.831	0.861	0.894	0.932	0.975
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	325.793	325.793	325.793	325.793	325.793	325.793	325.793	325.793	325.793	325.793
2.5	331.971	331.648	331.319	330.985	330.645	330.301	329.750	329.581	329.178	328.769
5.0	337.355	336.345	335.925	335.327	334.712	334.081	333.435	332.776	332.104	331.422
7.5	345.313	344.272	343.182	342.045	340.865	339.642	338.380	337.233	336.273	335.347
10.0	353.978	352.440	350.776	348.992	346.897	345.515	343.976	342.846	341.542	340.037
12.5	365.314	363.478	361.411	359.359	357.457	355.311	353.951	352.348	350.975	349.416
15.0	380.793	379.985	378.482	376.267	373.698	370.755	369.361	367.365	365.066	362.742
17.5	399.605	400.154	399.253	397.863	395.375	393.127	389.916	386.567	383.785	380.587
20.0	418.963	420.564	421.570	421.699	419.997	417.338	414.053	409.758	404.124	400.991
22.5	440.187	442.172	443.447	443.835	443.220	442.024	439.245	436.102	431.172	424.811
25.0	465.347	464.602	464.543	465.356	465.495	465.259	464.875	462.924	459.398	454.376
27.5	491.365	490.403	489.121	488.540	488.680	489.698	490.531	490.752	489.180	487.458
30.0	519.718	517.282	515.618	513.288	513.674	517.486	521.870	525.472	528.648	528.371
32.5	553.029	549.895	548.126	548.264	549.248	551.566	557.000	566.685	575.808	583.484
35.0	597.934	594.582	592.424	590.423	591.401	597.636	606.357	618.276	630.055	640.491
37.5	641.369	642.938	639.365	638.609	640.493	643.393	652.991	665.309	681.876	699.759
40.0	666.818	669.884	676.920	678.943	683.390	687.875	692.906	707.048	726.246	748.002
42.5	662.848	680.405	692.124	708.237	719.928	726.568	735.326	747.602	763.848	781.077
45.0	642.657	665.425	694.036	720.107	743.302	768.312	784.454	797.753	809.251	820.003
47.5	605.849	639.362	673.048	713.436	758.484	794.431	826.999	852.149	878.215	904.583
50.0	557.664	590.876	638.065	690.742	742.994	802.951	854.697	905.189	949.811	986.719
52.5	496.630	533.559	586.324	642.838	712.978	780.175	859.607	928.264	978.826	1015.621
55.0	414.003	441.707	496.869	580.460	650.911	734.605	816.946	889.104	949.950	1007.604
57.5	283.175	319.042	366.763	447.770	558.441	641.090	730.077	816.435	896.489	973.556
60.0	168.724	199.178	247.221	290.304	384.752	485.665	582.788	719.703	822.980	868.517
62.5	113.747	130.604	148.360	193.133	249.852	328.184	416.862	527.275	650.515	669.580
65.0	66.891	84.024	102.090	120.790	148.958	213.750	286.137	338.410	406.494	487.049
67.5	46.867	46.621	56.788	76.210	95.532	114.845	163.790	211.576	249.596	289.766

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70.0	39.041	39.197	40.059	41.443	52.856	70.850	87.265	113.813	147.061	164.877
72.5	31.599	31.725	32.202	33.192	34.330	34.606	46.720	62.593	77.471	93.407
75.0	24.429	24.224	24.028	24.542	25.249	25.719	25.918	25.791	40.782	52.718
77.5	17.320	17.219	17.105	17.042	17.205	17.473	17.942	18.044	18.424	23.347
80.0	10.376	10.399	10.406	10.645	11.057	11.322	11.396	11.352	12.059	12.560
82.5	6.724	6.310	5.792	5.543	5.393	5.791	6.208	6.650	7.080	7.266
85.0	3.534	3.463	3.317	3.318	3.317	3.271	3.167	3.191	3.241	3.585
87.5	1.025	1.082	1.148	1.226	1.319	1.453	1.559	1.670	1.774	1.864
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
Angles

	75.0	77.5	80.0	82.5	85.0	87.5	90.0	92.5	95.0	97.5
0.0	325.793	325.793	325.793	325.793	325.793	325.793	325.793	325.793	325.793	325.793
2.5	328.355	327.935	327.512	327.085	326.656	326.225	325.793	325.505	325.218	324.932
5.0	330.730	329.750	329.237	328.382	327.522	326.658	325.793	325.504	325.211	324.912
7.5	334.367	333.366	332.344	331.315	330.476	329.624	328.761	327.995	327.212	326.367
10.0	339.005	337.802	336.549	335.246	334.051	333.237	332.388	331.494	330.567	329.704
12.5	347.684	346.060	344.627	343.101	341.484	340.226	338.983	338.033	337.034	336.109
15.0	360.317	357.656	355.614	354.256	352.801	351.234	349.535	348.584	347.717	346.905
17.5	377.426	374.089	371.456	369.869	368.451	366.742	364.572	362.384	361.120	360.061
20.0	396.893	393.085	389.853	387.100	385.918	384.249	381.191	378.607	377.647	376.271
22.5	420.981	415.876	411.918	407.284	405.138	402.136	400.976	399.468	398.882	397.998
25.0	448.501	443.050	437.919	434.169	431.280	428.862	427.356	425.769	424.965	424.506
27.5	483.443	478.836	473.574	469.921	466.461	463.834	462.027	460.402	459.609	459.666
30.0	526.087	523.133	519.640	515.766	511.755	508.959	506.826	505.012	503.614	503.769
32.5	586.357	585.502	582.034	576.675	570.709	566.526	563.708	561.651	560.010	561.111
35.0	649.512	655.301	657.276	654.395	648.072	640.321	633.120	627.531	624.266	624.138
37.5	716.983	730.633	739.151	739.686	732.311	719.419	705.665	695.509	690.487	690.076
40.0	765.451	778.356	785.004	784.859	778.320	767.452	756.447	750.040	747.676	748.584
42.5	796.917	809.642	817.877	820.681	819.801	814.059	807.228	804.808	804.494	804.837
45.0	843.027	863.841	878.257	884.901	883.880	873.361	856.691	845.109	839.971	839.186
47.5	928.112	945.475	955.726	958.419	951.505	934.629	906.153	883.470	872.195	869.113
50.0	1012.222	1022.828	1030.097	1032.546	1024.932	1007.819	978.258	950.930	933.969	925.535
52.5	1049.168	1078.318	1097.935	1105.166	1099.100	1080.806	1050.364	1019.501	997.711	989.100
55.0	1064.213	1118.771	1158.270	1176.906	1172.987	1154.121	1122.469	1086.820	1060.264	1051.837
57.5	1052.626	1100.118	1100.848	1078.692	1042.968	1004.384	1016.949	943.267	941.072	967.545
60.0	884.690	913.464	922.334	910.830	881.942	846.654	911.429	793.520	795.068	823.280
62.5	668.904	729.700	739.925	738.215	718.322	687.932	805.909	644.491	648.415	675.912
65.0	480.831	479.957	557.340	561.939	551.842	527.958	700.389	496.153	499.916	523.610
67.5	309.727	278.673	380.713	413.400	419.184	404.988	532.546	377.950	381.180	396.706
70.0	168.914	185.181	191.883	292.303	295.871	283.546	364.704	262.359	271.078	293.465
72.5	109.068	123.292	128.201	180.235	175.636	161.188	196.861	148.678	163.619	193.075
75.0	63.210	70.835	73.243	63.930	62.092	39.009	29.018	36.777	59.761	95.215
77.5	31.406	34.659	30.338	21.058	22.696	22.999	22.423	22.275	21.786	21.058
80.0	12.708	14.280	13.163	14.906	16.098	15.932	15.828	15.852	15.860	15.676
82.5	7.418	7.540	8.139	9.016	9.917	9.710	9.233	10.263	9.976	9.016
85.0	3.866	4.139	4.690	5.095	4.973	3.914	2.638	4.745	4.973	5.095
87.5	1.935	1.973	1.957	2.297	2.831	1.865	1.319	1.865	2.831	2.297
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
Angles

	100.0	102.5	105.0	107.5	110.0	112.5	115.0	117.5	120.0	122.5
0.0	325.793	325.793	325.793	325.793	325.793	325.793	325.793	325.793	325.793	325.793
2.5	324.647	324.365	324.085	323.809	323.536	323.155	322.991	322.706	322.425	322.147

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CANDELA TABULATION - (Cont.)

5.0	324.601	324.172	323.577	322.984	322.391	321.802	321.216	320.636	320.062	319.495
7.5	325.689	324.966	324.231	323.485	322.671	321.971	321.308	320.685	320.025	319.325
10.0	328.825	327.888	326.886	325.886	325.564	325.151	324.474	324.138	323.544	322.869
12.5	335.109	334.037	333.458	333.297	333.055	332.733	332.368	331.626	331.209	330.377
15.0	345.915	345.189	344.778	344.214	343.653	343.194	342.578	341.882	341.758	341.590
17.5	358.975	358.045	357.943	357.782	357.736	357.358	357.637	357.874	357.449	356.772
20.0	375.704	375.261	375.467	375.879	375.992	376.629	376.778	376.328	375.469	374.381
22.5	397.960	397.749	398.696	399.225	400.318	400.784	400.006	398.588	397.269	395.968
25.0	424.660	425.661	426.668	428.210	429.063	428.510	426.722	426.336	424.880	421.971
27.5	459.839	460.935	462.133	463.118	463.014	462.679	462.469	460.905	457.954	452.883
30.0	503.625	503.046	504.257	506.344	507.399	507.975	506.584	503.627	497.731	492.458
32.5	562.237	563.225	563.937	564.003	564.123	562.488	558.244	556.010	552.197	545.948
35.0	625.517	626.643	627.735	628.553	630.258	631.140	629.097	623.124	615.447	606.726
37.5	692.344	695.408	698.582	700.902	702.162	701.158	697.212	691.031	676.055	664.586
40.0	750.589	754.006	759.793	767.741	768.708	759.241	747.656	733.135	720.054	704.539
42.5	802.154	798.010	795.912	798.307	800.336	795.793	783.261	767.436	755.027	740.613
45.0	838.120	834.469	829.433	825.120	829.999	830.004	822.926	812.807	799.881	786.938
47.5	870.590	876.468	884.188	890.020	889.812	883.681	878.815	874.038	864.007	847.544
50.0	924.932	934.002	952.381	966.165	970.150	965.894	957.925	947.539	935.122	917.513
52.5	990.254	1001.839	1016.119	1029.160	1043.062	1051.871	1043.998	1030.516	1012.740	981.960
55.0	1056.059	1066.139	1071.452	1077.075	1085.456	1099.216	1116.236	1109.266	1073.747	1042.012
57.5	1020.187	1084.595	1116.159	1114.139	1118.196	1123.913	1130.323	1128.446	1100.412	994.543
60.0	875.169	936.219	1005.848	1086.760	1133.273	1122.766	1093.456	1054.353	991.470	909.164
62.5	724.656	785.118	856.589	936.818	1016.667	1056.411	988.287	912.946	818.761	707.357
65.0	570.262	631.270	703.173	777.841	820.596	831.557	824.786	722.556	607.198	511.516
67.5	424.950	471.464	535.984	587.980	603.640	597.758	566.968	521.279	421.863	332.320
70.0	325.730	351.558	361.616	379.891	381.041	373.696	346.032	302.037	234.403	177.709
72.5	227.056	249.645	238.415	193.419	201.764	195.312	163.674	129.735	130.030	114.395
75.0	132.129	147.116	125.276	106.210	74.100	55.359	69.407	72.527	66.607	52.117
77.5	49.088	60.615	56.812	35.056	22.425	26.106	32.248	27.062	23.120	23.088
80.0	13.163	18.508	14.215	14.621	14.412	13.829	14.452	14.704	14.472	13.859
82.5	8.139	7.540	7.965	8.248	8.416	8.247	7.956	7.396	6.680	6.699
85.0	4.690	4.139	4.010	4.055	3.931	4.025	4.050	4.027	3.966	3.879
87.5	1.957	1.973	1.947	1.979	1.928	1.822	1.677	1.506	1.317	1.226
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>125.0</u>	<u>127.5</u>	<u>130.0</u>	<u>132.5</u>	<u>135.0</u>	<u>137.5</u>	<u>140.0</u>	<u>142.5</u>	<u>145.0</u>	<u>147.5</u>
0.0	325.793	325.793	325.793	325.793	325.793	325.793	325.793	325.793	325.793	325.793
2.5	321.872	321.601	321.335	321.073	320.816	320.564	320.319	320.080	319.848	319.624
5.0	318.936	318.419	317.992	317.573	317.162	316.760	316.368	315.959	315.616	315.257
7.5	318.585	317.805	316.985	316.180	315.437	314.523	314.070	313.539	312.982	312.403
10.0	322.095	321.219	320.242	319.164	317.950	317.419	316.641	315.760	314.780	313.706
12.5	329.533	328.639	327.557	326.288	325.145	323.973	322.696	321.266	319.687	317.968
15.0	341.009	339.855	338.343	336.689	334.948	332.820	330.268	327.112	325.070	322.554
17.5	355.227	353.291	350.963	348.496	346.094	343.135	338.753	334.234	329.712	325.138
20.0	372.519	370.126	366.879	362.396	357.601	352.371	346.977	341.677	336.243	330.998
22.5	393.297	389.168	383.829	378.470	372.131	365.220	359.364	353.036	346.663	340.501
25.0	417.845	410.567	405.562	399.069	391.727	383.999	376.448	368.901	361.821	354.203
27.5	446.398	440.877	434.373	426.188	417.842	409.235	399.578	390.332	379.723	369.733
30.0	486.937	479.186	469.585	461.670	451.346	438.481	426.128	413.400	400.137	386.655
32.5	537.334	528.042	518.268	504.146	488.192	473.407	456.317	438.980	422.469	405.020
35.0	597.897	584.303	567.863	551.502	531.194	509.826	489.883	469.282	447.296	427.307
37.5	648.403	632.859	611.997	590.735	571.014	546.805	521.445	497.162	473.050	449.702
40.0	686.496	666.455	644.350	622.485	600.209	575.289	549.112	520.489	490.634	461.688

IES INDOOR REPORT
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CANDELA TABULATION - (Cont.)

42.5	722.286	700.354	681.028	657.699	631.596	601.458	568.364	535.677	502.089	468.986
45.0	769.788	749.239	724.912	695.466	662.793	628.414	591.720	536.407	487.796	442.490
47.5	826.846	801.318	767.422	731.022	692.205	628.551	567.816	511.283	459.531	413.763
50.0	885.962	847.015	810.709	738.589	665.789	600.357	537.270	469.442	408.215	363.672
52.5	945.716	878.078	795.710	718.879	638.713	548.224	470.717	399.650	342.001	296.406
55.0	950.574	859.454	774.754	663.080	561.516	471.855	395.314	337.208	287.978	245.995
57.5	906.067	793.150	669.542	562.243	473.130	402.501	341.728	286.318	236.270	195.845
60.0	768.293	650.811	547.608	461.306	394.077	331.426	277.810	228.729	182.198	149.684
62.5	591.652	499.231	419.055	345.736	291.027	247.206	211.382	182.147	150.551	124.573
65.0	428.918	344.196	268.843	217.917	202.184	187.177	160.903	137.684	114.449	95.027
67.5	251.278	202.589	178.312	156.268	139.093	123.425	105.177	87.297	72.427	60.708
70.0	157.688	138.002	116.205	95.076	76.613	60.260	44.625	38.527	39.673	39.972
72.5	93.697	73.224	52.716	32.400	30.980	30.222	29.578	30.315	31.109	31.243
75.0	29.967	28.145	26.573	25.104	23.860	23.062	22.453	22.473	22.708	22.653
77.5	21.522	19.978	18.736	17.622	16.646	15.916	15.345	14.941	14.580	14.586
80.0	12.752	11.622	10.751	10.447	10.429	10.412	10.399	10.405	10.455	10.536
82.5	6.740	6.863	6.946	6.968	6.878	6.787	6.698	6.617	6.566	6.530
85.0	3.781	3.726	3.642	3.530	3.362	3.193	3.025	2.860	2.706	2.555
87.5	1.148	1.082	1.025	0.975	0.932	0.894	0.861	0.831	0.805	0.782
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	325.793	325.793	325.793	325.793	325.793	325.793	325.793	325.793	325.793	325.793
2.5	319.408	319.201	318.980	318.873	318.835	318.817	318.819	318.840	318.880	318.936
5.0	314.911	314.578	314.258	313.954	313.664	313.390	313.131	312.836	312.603	312.603
7.5	311.803	311.186	310.556	309.784	309.321	308.807	308.322	307.863	307.427	307.039
10.0	312.557	311.574	310.463	309.298	308.126	306.962	306.608	306.263	305.927	305.601
12.5	316.117	314.113	312.028	310.248	308.787	307.319	305.849	304.875	304.215	303.540
15.0	319.729	316.365	313.315	310.287	306.977	305.029	302.922	300.868	299.428	298.333
17.5	320.935	316.956	312.942	309.415	306.279	303.143	300.990	299.505	297.954	296.986
20.0	326.100	320.517	316.881	312.713	308.848	305.625	302.051	300.088	297.940	296.601
22.5	334.016	329.052	323.563	318.730	314.267	310.045	306.119	302.502	300.096	297.842
25.0	347.138	339.834	332.747	326.039	320.365	314.938	310.323	306.147	303.187	300.555
27.5	359.948	350.564	341.200	333.700	326.220	320.601	314.764	310.892	307.426	304.645
30.0	373.738	361.843	351.174	340.924	333.623	326.438	320.447	316.144	312.673	310.109
32.5	389.180	374.797	361.508	350.994	341.427	333.406	327.425	322.669	319.433	317.325
35.0	407.942	390.837	375.359	361.164	349.653	340.529	333.666	329.416	327.029	325.655
37.5	425.578	403.240	383.626	368.152	355.605	345.700	338.903	336.090	334.566	334.229
40.0	434.903	409.951	389.445	370.111	352.954	338.956	330.739	325.323	321.928	320.136
42.5	430.377	396.979	368.234	346.393	331.498	319.583	312.069	307.924	305.030	303.668
45.0	403.971	369.102	341.064	319.300	301.944	289.051	279.922	274.594	269.966	266.465
47.5	372.355	334.305	301.878	274.903	257.127	245.814	239.114	234.989	231.055	227.121
50.0	334.933	296.761	261.112	229.322	213.874	205.524	201.459	198.560	195.751	193.183
52.5	279.582	251.504	217.036	192.767	176.775	169.302	165.968	163.428	161.095	159.537
55.0	219.256	196.931	169.940	150.337	137.701	131.691	130.218	128.238	126.282	125.610
57.5	161.679	136.563	116.166	108.083	105.095	103.239	105.367	105.433	105.087	105.225
60.0	124.150	108.250	97.545	91.025	88.153	85.665	87.220	86.910	86.647	86.344
62.5	103.750	89.264	79.674	74.192	71.130	68.766	69.027	68.413	68.264	67.568
65.0	79.486	68.155	60.998	56.905	54.027	51.809	51.083	49.992	49.933	48.886
67.5	51.705	44.846	43.624	42.488	41.488	40.712	40.620	40.333	40.726	40.429
70.0	39.192	37.099	36.081	35.158	34.245	33.617	33.441	32.950	33.039	32.797
72.5	30.915	29.193	28.407	27.793	26.976	26.419	26.405	25.557	25.402	25.161
75.0	22.468	21.143	20.622	20.398	19.682	19.136	19.486	18.155	17.807	17.522
77.5	14.830	14.425	14.443	14.763	14.416	14.118	14.720	13.655	13.485	13.355

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CANDELA TABULATION - (Cont.)

80.0	10.655	10.377	10.278	10.508	10.226	9.985	10.402	9.609	9.472	9.367
82.5	6.520	6.314	6.161	6.242	6.028	5.845	6.030	5.561	5.457	5.377
85.0	2.412	2.237	2.078	1.967	1.824	1.701	1.619	1.510	1.319	1.319
87.5	0.761	0.743	0.728	0.714	0.702	0.691	0.683	0.676	0.670	0.665
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>175.0</u>	<u>177.5</u>	<u>180.0</u>
0.0	325.793	325.793	325.793
2.5	319.009	319.097	319.198
5.0	312.603	312.603	312.603
7.5	307.016	307.002	306.997
10.0	305.289	304.985	304.689
12.5	302.771	302.571	302.381
15.0	297.161	296.775	296.775
17.5	296.060	295.393	295.192
20.0	295.990	295.295	294.357
22.5	296.658	295.456	295.456
25.0	299.046	297.636	297.654
27.5	302.697	301.278	301.109
30.0	308.183	307.161	306.997
32.5	316.039	316.035	316.065
35.0	325.109	325.402	325.500
37.5	334.624	335.026	335.026
40.0	319.248	319.625	319.198
42.5	302.768	303.781	303.370
45.0	264.210	263.734	263.141
47.5	224.634	222.911	222.911
50.0	191.355	190.290	190.376
52.5	158.353	157.309	157.840
55.0	125.341	123.986	125.305
57.5	105.618	105.050	105.850
60.0	86.459	85.916	86.395
62.5	67.295	66.780	66.939
65.0	47.484	47.484	47.484
67.5	40.134	39.958	39.900
70.0	32.529	32.369	32.316
72.5	24.922	24.779	24.731
75.0	17.147	17.147	17.147
77.5	13.244	12.880	12.860
80.0	9.267	8.590	8.574
82.5	5.300	4.299	4.287
85.0	1.306	0.000	0.000
87.5	0.660	0.000	0.000
90.0	0.000	0.000	0.000

IES INDOOR REPORT
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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	132.13	N.A.	6.90
0-30	324.89	N.A.	17.00
0-40	659.94	N.A.	34.50
0-60	1594.75	N.A.	83.40
0-80	1907.25	N.A.	99.80
0-90	1911.87	N.A.	100.00
10-90	1880.31	N.A.	98.30
20-40	527.81	N.A.	27.60
20-50	985.77	N.A.	51.60
40-70	1195.24	N.A.	62.50
60-80	312.51	N.A.	16.30
70-80	52.07	N.A.	2.70
80-90	4.62	N.A.	0.20
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	1911.87	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	31.56
10-20	100.57
20-30	192.76
30-40	335.05
40-50	457.97
50-60	476.84
60-70	260.44
70-80	52.07
80-90	4.62
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
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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	117	117	117	117	115	115	115	115	110	110	110	105	105	105	101	101	101	99
1	108	103	99	96	105	101	97	94	97	94	91	93	91	88	90	88	86	84
2	98	90	83	77	95	88	81	76	84	79	74	81	77	73	78	74	71	69
3	88	78	69	63	86	76	68	62	73	66	61	70	65	60	68	63	59	57
4	80	68	59	52	78	66	58	51	64	56	51	61	55	50	59	54	49	47
5	73	59	50	43	70	58	49	43	56	48	42	54	47	42	52	46	41	39
6	66	52	43	36	64	51	43	36	50	42	36	48	41	36	46	40	35	33
7	61	47	38	31	59	46	37	31	44	36	31	43	36	30	41	35	30	28
8	56	42	33	27	54	41	33	27	40	32	27	39	32	26	37	31	26	24
9	52	38	29	24	50	37	29	23	36	29	23	35	28	23	34	28	23	21
10	48	34	26	21	47	34	26	21	33	26	21	32	25	20	31	25	20	18

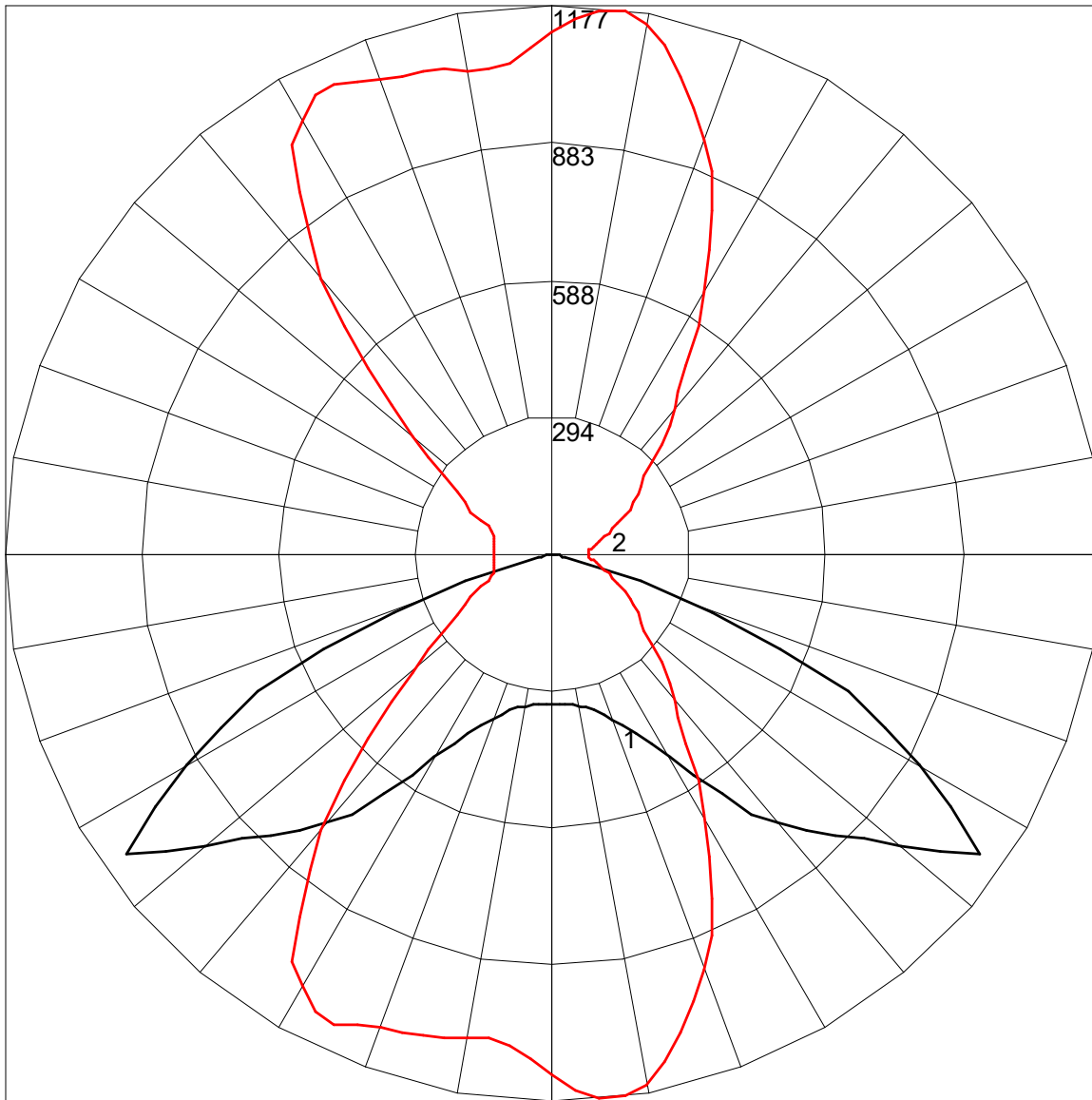
IES INDOOR REPORT
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UGR TABLE - CORRECTED

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	9.3	10.6	9.6	10.9	11.2	2.3	2.3	2.3	2.3	2.3
	3H	10.8	12.0	11.1	12.3	12.7	2.3	2.3	2.3	2.3	2.3
	4H	11.2	12.3	11.6	12.7	13.0	2.3	2.3	2.3	2.3	2.3
	6H	11.4	12.4	11.8	12.8	13.2	2.3	2.3	2.3	2.3	2.3
	8H	11.4	12.4	11.8	12.8	13.2	2.3	2.3	2.3	2.3	2.3
	12H	11.4	12.3	11.8	12.7	13.2	2.3	2.3	2.3	2.3	2.3
4H	2H	9.3	10.4	9.7	10.8	11.2	2.3	2.3	2.3	2.6	3.0
	3H	11.0	12.0	11.5	12.4	12.8	2.3	2.7	2.3	3.1	3.5
	4H	11.6	12.4	12.0	12.8	13.2	2.3	2.6	2.3	3.0	3.5
	6H	11.9	12.6	12.3	13.0	13.5	2.3	2.6	2.3	3.0	3.5
	8H	11.9	12.6	12.4	13.1	13.5	2.3	2.5	2.3	3.0	3.4
	12H	11.9	12.5	12.4	13.0	13.5	2.3	2.5	2.4	2.9	3.4
8H	4H	11.5	12.2	12.0	12.6	13.1	3.2	3.9	3.7	4.3	4.8
	6H	11.9	12.4	12.4	12.9	13.4	3.3	3.9	3.8	4.3	4.8
	8H	11.9	12.5	12.5	13.0	13.5	3.3	3.8	3.8	4.3	4.8
	12H	11.9	12.4	12.4	12.9	13.4	3.4	3.8	3.9	4.3	4.9
12H	4H	11.5	12.1	12.0	12.5	13.0	3.4	4.0	3.9	4.4	4.9
	6H	11.8	12.3	12.3	12.8	13.3	3.5	4.0	4.1	4.5	5.1
	8H	11.9	12.4	12.4	12.9	13.4	3.6	4.1	4.1	4.6	5.1

Maximum UGR = 13.5

POLAR GRAPH



Maximum Candela = 1176.906 Located At Horizontal Angle = 82.5, Vertical Angle = 55
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (55) (Through Max. Cd.)