

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : HP3-P-D-4FT-B-835-DAO-120-KPL2008-115.002.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
[TEST] KPL2008-115.002 Family Correlation File  
[TESTLAB] Northern Lights Testing Laboratories  
[ISSUE DATE] 1/29/2025  
[TEST DATE] 1/29/2025  
[MANUFAC] Finelite, Inc.  
[LUMCAT] HP3-P-D-4ft-B-835-DAO  
[LUMINAIRE] HP3 Series  
[LAMPCAT] 160 757HT-V2H6 LEDs with 80CRI  
[LAMP] Nichia  
[BALLAST] Osram  
[BALLASTCAT] OTi50, 700mA

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3076
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	105
Total Luminaire Watts	29.3
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.44
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.10 m
Luminous Width (90-270)	1.22 m
Luminous Height	0.00 m

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	9566	10155	7588
55	7959	8945	6843
65	6480	7563	6030
75	5141	6071	5103
85	3888	4562	4127

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**CANDELA TABULATION**

	<u>0</u>	<u>5</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>	<u>45</u>
<b>0.0</b>	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286
<b>2.5</b>	1214.429	1213.922	1216.583	1218.358	1217.787	1215.062	1214.492	1214.238	1211.767	1211.323
<b>5.0</b>	1254.356	1253.849	1256.258	1256.891	1255.560	1251.250	1248.526	1245.990	1240.857	1237.498
<b>7.5</b>	1290.988	1290.291	1292.446	1292.446	1289.974	1284.080	1279.517	1274.256	1266.651	1260.820
<b>10.0</b>	1322.803	1322.233	1324.134	1322.740	1319.888	1312.219	1305.565	1298.339	1288.072	1279.263
<b>12.5</b>	1347.774	1347.076	1348.534	1347.203	1342.830	1334.782	1326.162	1317.226	1304.424	1292.762
<b>15.0</b>	1362.984	1362.097	1363.935	1361.653	1357.407	1348.471	1338.774	1328.951	1314.944	1301.191
<b>17.5</b>	1368.181	1367.104	1369.322	1366.786	1362.224	1353.731	1343.147	1332.437	1316.973	1302.206
<b>20.0</b>	1362.731	1361.463	1363.935	1361.653	1357.534	1349.484	1338.711	1327.873	1311.965	1295.804
<b>22.5</b>	1345.619	1345.175	1347.520	1346.063	1342.577	1336.049	1325.655	1314.691	1299.353	1282.496
<b>25.0</b>	1318.240	1317.860	1320.775	1320.268	1317.859	1312.409	1303.727	1293.523	1279.199	1262.088
<b>27.5</b>	1281.101	1280.784	1284.207	1284.777	1283.192	1279.517	1272.989	1264.243	1251.504	1234.899
<b>30.0</b>	1234.709	1234.456	1238.449	1240.476	1239.526	1238.765	1234.012	1227.167	1216.393	1201.690
<b>32.5</b>	1180.458	1181.092	1185.085	1188.000	1188.951	1189.901	1188.318	1183.120	1175.008	1161.952
<b>35.0</b>	1118.730	1120.441	1125.321	1129.250	1131.912	1135.398	1136.221	1133.116	1127.792	1116.765
<b>37.5</b>	1052.944	1055.162	1059.219	1065.746	1069.232	1075.380	1078.675	1077.725	1074.683	1066.000
<b>40.0</b>	983.990	986.652	990.708	998.630	1003.764	1011.432	1016.946	1018.531	1017.073	1011.369
<b>42.5</b>	912.881	915.036	919.979	928.915	933.986	943.492	950.654	956.421	956.738	953.760
<b>45.0</b>	841.392	843.610	848.427	858.060	864.207	873.777	883.538	891.143	893.995	893.234
<b>47.5</b>	768.889	771.994	777.635	785.811	794.556	804.253	815.661	824.724	829.414	830.681
<b>50.0</b>	699.174	702.660	706.716	715.842	725.666	735.236	747.341	757.798	763.756	765.657
<b>52.5</b>	632.248	635.734	639.663	648.156	658.233	667.676	680.161	690.492	698.730	701.836
<b>55.0</b>	567.858	571.216	574.828	582.878	592.447	601.764	613.298	624.326	634.276	638.206
<b>57.5</b>	506.888	509.677	512.846	520.198	529.071	538.387	548.844	561.203	570.139	575.843
<b>60.0</b>	447.695	450.420	453.969	460.750	468.799	478.496	488.066	498.713	508.410	514.747
<b>62.5</b>	392.683	394.712	398.514	403.584	411.760	421.076	430.266	439.456	448.582	455.236
<b>65.0</b>	340.676	342.704	344.992	350.322	357.332	365.983	374.621	382.771	390.794	397.564
<b>67.5</b>	292.522	294.177	296.446	300.971	306.966	314.083	322.031	330.048	336.037	341.931
<b>70.0</b>	246.346	248.919	250.915	254.483	259.268	265.828	272.654	279.619	285.405	289.912
<b>72.5</b>	204.327	206.932	207.781	210.329	215.069	219.759	226.592	231.852	237.277	241.650
<b>75.0</b>	165.528	167.151	168.919	170.515	174.318	178.305	182.823	188.179	192.330	195.467
<b>77.5</b>	129.390	130.823	133.155	134.638	136.311	140.215	143.745	147.250	150.818	153.562
<b>80.0</b>	97.157	97.645	99.356	101.093	102.373	104.502	107.665	110.530	113.178	115.289
<b>82.5</b>	68.283	68.460	69.037	70.716	72.364	73.384	74.677	76.952	79.088	80.292
<b>85.0</b>	42.146	42.241	42.938	43.641	44.377	45.910	47.026	47.938	48.648	49.453
<b>87.5</b>	19.203	19.241	19.216	19.577	19.989	20.249	20.813	21.783	22.417	22.968
<b>90.0</b>	1.508	1.540	1.572	1.597	1.610	1.648	1.686	1.737	1.806	1.882
<b>92.5</b>	1.116	1.116	1.135	1.141	1.141	1.147	1.166	1.179	1.204	1.217
<b>95.0</b>	1.014	1.008	1.014	1.021	1.021	1.021	1.033	1.033	1.052	1.065
<b>97.5</b>	0.964	0.964	0.964	0.964	0.964	0.970	0.970	0.976	0.989	1.002
<b>100.0</b>	0.938	0.938	0.944	0.944	0.938	0.938	0.938	0.951	0.951	0.964
<b>102.5</b>	0.925	0.925	0.938	0.932	0.932	0.925	0.932	0.932	0.932	0.938
<b>105.0</b>	0.925	0.925	0.925	0.932	0.919	0.925	0.919	0.919	0.925	0.932
<b>107.5</b>	0.925	0.925	0.932	0.925	0.919	0.919	0.919	0.919	0.919	0.925
<b>110.0</b>	0.913	0.919	0.925	0.925	0.919	0.919	0.906	0.906	0.913	0.925
<b>112.5</b>	0.913	0.925	0.932	0.925	0.925	0.925	0.906	0.913	0.913	0.913
<b>115.0</b>	0.925	0.913	0.925	0.919	0.913	0.913	0.900	0.906	0.906	0.913
<b>117.5</b>	0.951	0.957	0.957	0.964	0.957	0.951	0.944	0.944	0.944	0.951
<b>120.0</b>	1.052	1.052	1.052	1.046	1.040	1.040	1.033	1.033	1.046	1.040
<b>122.5</b>	1.191	1.191	1.198	1.185	1.191	1.185	1.185	1.179	1.179	1.198
<b>125.0</b>	1.369	1.362	1.375	1.369	1.369	1.362	1.356	1.362	1.369	1.375
<b>127.5</b>	1.585	1.578	1.585	1.578	1.572	1.572	1.566	1.578	1.578	1.585
<b>130.0</b>	1.775	1.775	1.787	1.787	1.781	1.787	1.787	1.794	1.800	1.813
<b>132.5</b>	1.990	1.990	1.996	1.996	2.002	2.002	2.002	2.022	2.034	2.053

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**CANDELA TABULATION - (Cont.)**

135.0	2.231	2.231	2.237	2.237	2.237	2.250	2.256	2.269	2.294	2.313
137.5	2.472	2.478	2.484	2.491	2.484	2.497	2.516	2.528	2.554	2.585
140.0	2.725	2.725	2.738	2.738	2.751	2.757	2.770	2.789	2.814	2.858
142.5	2.966	2.966	2.985	2.991	2.985	3.010	3.023	3.048	3.074	3.118
145.0	3.194	3.200	3.213	3.219	3.226	3.238	3.251	3.283	3.315	3.366
147.5	3.410	3.404	3.423	3.435	3.442	3.461	3.480	3.505	3.536	3.581
150.0	3.600	3.600	3.619	3.619	3.644	3.650	3.676	3.707	3.752	3.802
152.5	3.777	3.771	3.796	3.802	3.821	3.834	3.853	3.891	3.930	3.987
155.0	3.917	3.923	3.949	3.955	3.968	3.987	4.012	4.056	4.107	4.158
157.5	4.069	4.082	4.094	4.094	4.113	4.158	4.189	4.227	4.284	4.335
160.0	4.233	4.252	4.265	4.271	4.290	4.322	4.360	4.398	4.436	4.468
162.5	4.385	4.392	4.417	4.417	4.443	4.487	4.519	4.538	4.551	4.576
165.0	4.551	4.557	4.582	4.601	4.620	4.627	4.639	4.639	4.646	4.652
167.5	4.753	4.760	4.791	4.791	4.779	4.766	4.747	4.734	4.734	4.728
170.0	4.994	4.981	4.968	4.924	4.892	4.861	4.829	4.804	4.791	4.785
172.5	5.045	5.038	5.019	4.968	4.924	4.892	4.855	4.836	4.823	4.817
175.0	4.855	4.892	4.930	4.911	4.892	4.861	4.842	4.823	4.817	4.804
177.5	4.741	4.734	4.760	4.772	4.772	4.772	4.760	4.753	4.747	4.753
180.0	4.682	4.682	4.682	4.682	4.682	4.682	4.682	4.682	4.682	4.682

Vert. Angles	Horizontal Angles									
	<u>50</u>	<u>55</u>	<u>60</u>	<u>65</u>	<u>70</u>	<u>75</u>	<u>80</u>	<u>85</u>	<u>90</u>	<u>95</u>
0.0	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286
2.5	1210.626	1204.098	1197.507	1192.817	1185.402	1179.952	1178.177	1172.473	1167.783	1164.551
5.0	1233.948	1224.189	1214.492	1206.063	1195.162	1185.592	1180.205	1170.952	1162.016	1155.234
7.5	1253.913	1241.047	1227.738	1215.506	1201.056	1187.557	1178.494	1165.438	1152.573	1142.496
10.0	1269.693	1253.405	1236.674	1221.210	1202.894	1185.846	1172.790	1156.375	1140.088	1125.891
12.5	1280.594	1261.518	1241.237	1222.541	1200.612	1179.508	1162.840	1143.383	1123.166	1105.864
15.0	1286.234	1264.813	1240.983	1218.865	1193.958	1169.368	1148.770	1126.398	1103.139	1082.922
17.5	1286.298	1262.278	1235.914	1210.752	1182.994	1155.234	1131.405	1106.054	1079.626	1057.381
20.0	1279.010	1254.166	1225.837	1197.951	1167.783	1137.109	1110.301	1082.224	1053.324	1028.671
22.5	1265.510	1240.096	1210.246	1180.775	1148.326	1114.800	1085.013	1055.162	1024.297	997.489
25.0	1245.166	1219.943	1188.444	1158.213	1124.687	1088.435	1056.240	1025.058	992.609	964.280
27.5	1218.612	1194.084	1162.269	1130.518	1096.611	1059.155	1024.678	992.102	957.879	928.408
30.0	1185.909	1162.333	1130.771	1097.942	1064.099	1025.819	989.694	955.787	921.310	891.270
32.5	1147.376	1126.018	1094.900	1060.930	1026.896	989.187	952.048	917.508	882.777	851.786
35.0	1102.948	1083.872	1054.402	1019.988	986.018	949.450	911.803	877.137	841.836	811.542
37.5	1054.592	1037.480	1008.834	976.068	941.845	905.973	869.024	834.230	800.007	770.093
40.0	1001.482	986.969	960.540	928.155	894.819	860.405	823.646	790.247	756.784	727.694
42.5	945.330	932.338	909.269	878.214	844.878	812.112	777.254	744.932	712.420	684.344
45.0	886.833	874.728	855.462	826.118	793.352	762.297	729.658	698.287	667.422	641.058
47.5	825.484	815.724	798.612	771.931	741.320	711.786	681.492	651.578	622.108	597.138
50.0	763.502	755.516	740.813	716.920	688.463	660.387	632.501	603.982	576.920	553.598
52.5	700.949	694.357	681.302	661.338	634.973	608.926	583.511	557.020	532.303	510.501
55.0	638.776	632.565	621.918	604.616	581.483	556.830	533.380	510.437	488.256	468.039
57.5	576.476	571.977	562.534	548.274	527.866	506.065	485.087	464.743	444.653	426.400
60.0	516.142	512.719	504.543	492.312	475.074	455.870	437.364	419.302	401.429	384.761
62.5	456.757	454.286	447.695	436.857	422.724	406.626	390.902	374.558	358.390	344.396
65.0	399.972	398.387	391.714	382.714	371.674	358.067	344.739	331.994	316.979	304.837
67.5	344.701	344.200	338.971	331.487	322.170	311.327	300.362	289.829	277.096	266.583
70.0	292.364	292.015	289.018	282.091	274.961	266.215	257.640	248.717	237.904	229.076
72.5	243.881	243.463	241.143	235.781	229.767	223.670	216.559	209.556	200.132	192.545
75.0	197.856	198.325	196.151	192.558	187.114	182.703	177.462	172.620	164.279	157.865
77.5	155.090	155.546	154.545	151.649	148.169	144.182	141.096	137.496	130.918	125.556
80.0	116.176	116.519	116.353	114.389	111.905	109.319	107.170	104.863	99.419	94.932

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82.5	81.585	81.864	81.135	80.159	79.082	77.478	75.945	74.829	70.659	66.711
85.0	50.169	50.619	50.714	50.055	49.478	48.699	48.274	47.678	44.744	40.954
87.5	23.398	23.741	23.646	23.608	23.570	23.570	23.190	23.398	20.870	17.784
90.0	1.990	2.041	2.181	2.288	2.263	2.282	2.358	2.351	2.244	1.547
92.5	1.236	1.261	1.274	1.267	1.248	1.242	1.242	1.242	1.210	1.173
95.0	1.090	1.097	1.103	1.097	1.090	1.090	1.090	1.097	1.071	1.027
97.5	1.014	1.021	1.027	1.021	1.014	1.014	1.027	1.040	1.027	0.989
100.0	0.964	0.983	0.983	0.976	0.983	0.995	1.002	1.021	1.014	1.002
102.5	0.951	0.957	0.964	0.964	0.970	0.976	0.983	1.008	1.021	1.002
105.0	0.932	0.951	0.951	0.957	0.951	0.970	0.995	1.014	1.021	1.014
107.5	0.932	0.938	0.938	0.944	0.964	0.970	0.995	1.021	1.040	1.027
110.0	0.925	0.938	0.944	0.938	0.951	0.964	0.995	1.021	1.052	1.046
112.5	0.932	0.925	0.944	0.938	0.957	0.976	1.008	1.033	1.065	1.071
115.0	0.919	0.925	0.938	0.938	0.951	0.970	1.002	1.027	1.059	1.059
117.5	0.951	0.964	0.970	0.970	0.995	1.027	1.052	1.084	1.071	1.027
120.0	1.046	1.059	1.078	1.084	1.103	1.128	1.173	1.198	1.109	0.989
122.5	1.198	1.210	1.242	1.242	1.261	1.299	1.337	1.381	1.191	0.970
125.0	1.388	1.400	1.432	1.445	1.464	1.502	1.553	1.591	1.305	0.976
127.5	1.604	1.629	1.661	1.673	1.705	1.762	1.806	1.863	1.470	1.021
130.0	1.838	1.869	1.901	1.926	1.964	2.015	2.079	2.142	1.642	1.071
132.5	2.079	2.117	2.155	2.193	2.244	2.301	2.370	2.434	1.832	1.160
135.0	2.351	2.389	2.434	2.478	2.541	2.605	2.681	2.751	2.053	1.274
137.5	2.630	2.674	2.732	2.770	2.833	2.909	2.979	3.067	2.288	1.445
140.0	2.896	2.947	3.010	3.061	3.131	3.188	3.270	3.366	2.535	1.629
142.5	3.162	3.219	3.277	3.334	3.410	3.480	3.562	3.650	2.776	1.832
145.0	3.404	3.467	3.536	3.587	3.663	3.739	3.821	3.904	3.004	2.015
147.5	3.631	3.695	3.777	3.828	3.898	3.968	4.056	4.145	3.226	2.231
150.0	3.853	3.910	3.987	4.044	4.113	4.183	4.271	4.347	3.435	2.434
152.5	4.037	4.107	4.183	4.233	4.297	4.360	4.436	4.513	3.638	2.668
155.0	4.227	4.278	4.341	4.385	4.436	4.494	4.563	4.633	3.809	2.871
157.5	4.373	4.417	4.468	4.500	4.544	4.601	4.665	4.734	3.968	3.080
160.0	4.500	4.532	4.563	4.595	4.639	4.690	4.753	4.817	4.113	3.289
162.5	4.601	4.620	4.652	4.671	4.709	4.753	4.810	4.855	4.233	3.486
165.0	4.665	4.684	4.715	4.722	4.747	4.791	4.848	4.886	4.360	3.688
167.5	4.741	4.753	4.779	4.785	4.823	4.848	4.886	4.924	4.487	3.904
170.0	4.798	4.810	4.836	4.836	4.861	4.880	4.918	4.943	4.582	4.101
172.5	4.817	4.823	4.836	4.836	4.861	4.874	4.911	4.930	4.665	4.265
175.0	4.810	4.810	4.823	4.810	4.829	4.842	4.867	4.880	4.722	4.436
177.5	4.747	4.753	4.772	4.760	4.766	4.779	4.785	4.798	4.760	4.582
180.0	4.682	4.682	4.682	4.682	4.682	4.682	4.682	4.682	4.682	4.682

**Vert.  
Angles**

**Horizontal Angles**

	<u>100</u>	<u>105</u>	<u>110</u>	<u>115</u>	<u>120</u>	<u>125</u>	<u>130</u>	<u>135</u>	<u>140</u>	<u>145</u>
0.0	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286
2.5	1163.220	1157.453	1155.868	1156.185	1154.284	1154.411	1154.347	1150.228	1145.854	1144.080
5.0	1150.165	1140.974	1136.095	1133.496	1128.743	1126.335	1123.673	1117.335	1111.251	1107.448
7.5	1134.067	1121.961	1113.976	1108.272	1101.301	1096.611	1091.604	1083.238	1076.013	1070.309
10.0	1114.230	1099.716	1088.942	1080.830	1071.957	1065.429	1058.775	1049.142	1040.522	1035.135
12.5	1091.160	1074.429	1061.690	1051.550	1040.586	1032.410	1025.629	1014.538	1006.489	999.897
15.0	1065.493	1046.923	1032.854	1020.748	1008.327	1000.024	992.165	981.011	972.709	965.420
17.5	1037.797	1017.390	1001.609	987.856	975.815	967.322	958.386	947.168	938.739	932.275
20.0	1007.566	985.892	968.969	954.900	942.731	933.859	924.099	913.452	905.403	898.748
22.5	975.181	951.985	935.063	920.613	908.508	899.572	889.812	879.671	872.510	866.806
25.0	940.197	917.190	900.459	885.692	873.905	865.158	855.842	846.399	840.314	835.688
27.5	904.135	880.875	864.525	850.202	838.540	830.174	821.999	813.506	808.309	804.507

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : HP3-P-D-4FT-B-835-DAO-120-KPL2008-115.002.IES**

**CANDELA TABULATION - (Cont.)**

30.0	866.426	843.610	828.146	813.443	803.113	795.570	787.395	780.994	777.064	774.149
32.5	827.322	806.091	790.183	776.620	767.748	760.967	753.615	748.608	745.693	743.918
35.0	787.775	767.368	751.714	739.228	731.750	725.982	719.898	716.286	714.638	713.307
37.5	746.644	727.757	713.244	702.089	695.562	690.365	685.992	683.013	682.886	682.760
40.0	705.005	687.703	674.203	664.444	659.057	654.747	651.895	650.184	650.944	651.768
42.5	663.873	647.395	634.973	626.798	622.424	619.509	617.101	616.911	618.242	619.700
45.0	622.552	607.278	595.363	588.708	585.856	583.701	581.990	583.321	585.159	587.504
47.5	580.786	566.906	556.196	551.189	549.161	547.767	547.007	549.034	551.569	554.295
50.0	539.147	526.155	517.092	513.353	512.275	511.262	511.578	513.860	516.712	520.641
52.5	496.811	486.164	478.749	475.644	474.820	474.693	475.834	477.989	481.791	486.291
55.0	456.124	446.491	440.470	438.315	437.808	437.618	439.773	442.308	446.427	451.054
57.5	415.943	406.816	402.444	401.049	400.479	400.986	403.458	406.309	410.492	416.006
60.0	375.248	366.939	363.613	362.738	362.129	363.131	365.964	368.854	373.632	379.450
62.5	336.170	329.294	326.245	325.530	325.441	326.993	329.275	333.090	337.945	343.826
65.0	298.075	292.244	289.487	288.714	289.107	290.830	293.537	297.726	302.828	307.626
67.5	260.568	255.428	253.317	252.798	253.222	255.206	258.514	262.101	267.039	271.690
70.0	223.949	220.108	218.099	217.459	218.555	220.761	223.359	227.567	231.801	236.675
72.5	188.686	185.751	183.514	183.255	184.528	186.696	189.751	193.408	197.660	201.862
75.0	154.722	151.921	150.894	150.685	151.864	154.095	156.991	160.255	164.197	167.759
77.5	122.977	120.942	119.992	119.871	121.335	123.338	125.594	128.877	131.507	134.175
80.0	93.215	91.313	90.717	91.193	92.004	93.709	95.971	97.651	100.173	102.651
82.5	65.100	64.093	63.890	64.321	65.170	66.330	67.725	69.360	70.919	72.851
85.0	40.143	39.509	39.389	39.528	40.022	40.510	41.620	42.589	43.736	44.548
87.5	17.226	17.011	16.947	17.042	17.188	17.384	17.511	17.594	17.644	18.030
90.0	1.578	1.591	1.604	1.623	1.629	1.629	1.597	1.572	1.528	1.489
92.5	1.185	1.191	1.204	1.217	1.229	1.229	1.191	1.173	1.135	1.097
95.0	1.059	1.052	1.065	1.084	1.090	1.084	1.071	1.033	1.008	0.983
97.5	1.014	1.014	1.027	1.040	1.046	1.052	1.027	1.008	0.976	0.951
100.0	1.021	1.027	1.046	1.046	1.059	1.065	1.040	1.014	0.989	0.970
102.5	1.027	1.027	1.040	1.059	1.065	1.059	1.040	1.021	0.989	0.970
105.0	1.040	1.040	1.059	1.059	1.065	1.065	1.059	1.027	1.014	0.983
107.5	1.059	1.052	1.065	1.071	1.071	1.084	1.065	1.046	1.021	0.995
110.0	1.065	1.071	1.084	1.084	1.090	1.103	1.084	1.059	1.046	1.014
112.5	1.097	1.097	1.116	1.122	1.122	1.128	1.109	1.090	1.078	1.046
115.0	1.090	1.097	1.103	1.116	1.122	1.128	1.109	1.097	1.071	1.046
117.5	1.052	1.059	1.071	1.078	1.078	1.090	1.078	1.059	1.046	1.027
120.0	1.014	1.014	1.040	1.046	1.046	1.059	1.040	1.033	1.014	0.995
122.5	0.995	1.002	1.027	1.040	1.040	1.065	1.046	1.040	1.021	1.002
125.0	1.014	1.021	1.040	1.059	1.065	1.078	1.071	1.065	1.059	1.040
127.5	1.046	1.052	1.065	1.084	1.097	1.116	1.116	1.109	1.097	1.084
130.0	1.097	1.109	1.135	1.147	1.173	1.198	1.198	1.198	1.198	1.185
132.5	1.185	1.191	1.223	1.255	1.261	1.293	1.293	1.293	1.293	1.286
135.0	1.312	1.312	1.343	1.369	1.381	1.413	1.407	1.407	1.413	1.413
137.5	1.477	1.489	1.508	1.528	1.547	1.559	1.566	1.572	1.578	1.585
140.0	1.654	1.673	1.686	1.705	1.718	1.737	1.737	1.762	1.762	1.762
142.5	1.850	1.863	1.869	1.888	1.907	1.926	1.939	1.945	1.952	1.964
145.0	2.047	2.047	2.066	2.079	2.098	2.111	2.123	2.130	2.142	2.149
147.5	2.256	2.250	2.263	2.269	2.307	2.294	2.307	2.332	2.339	2.345
150.0	2.459	2.453	2.472	2.478	2.497	2.503	2.516	2.510	2.528	2.535
152.5	2.681	2.674	2.681	2.694	2.706	2.713	2.719	2.725	2.725	2.732
155.0	2.884	2.871	2.884	2.896	2.903	2.896	2.903	2.909	2.909	2.915
157.5	3.086	3.080	3.086	3.093	3.105	3.099	3.099	3.093	3.086	3.099
160.0	3.296	3.289	3.283	3.289	3.308	3.302	3.302	3.296	3.296	3.283
162.5	3.486	3.480	3.467	3.467	3.486	3.480	3.473	3.467	3.461	3.461
165.0	3.701	3.682	3.669	3.663	3.669	3.657	3.650	3.650	3.644	3.631
167.5	3.910	3.891	3.885	3.872	3.872	3.847	3.828	3.828	3.809	3.809

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : HP3-P-D-4FT-B-835-DAO-120-KPL2008-115.002.IES**

**CANDELA TABULATION - (Cont.)**

<b>170.0</b>	4.094	4.075	4.075	4.063	4.063	4.044	4.012	3.993	3.974	3.955
<b>172.5</b>	4.265	4.246	4.233	4.233	4.240	4.221	4.189	4.177	4.145	4.120
<b>175.0</b>	4.443	4.424	4.417	4.411	4.424	4.398	4.385	4.379	4.360	4.328
<b>177.5</b>	4.595	4.570	4.563	4.557	4.570	4.557	4.551	4.544	4.538	4.513
<b>180.0</b>	4.682	4.682	4.682	4.682	4.682	4.682	4.682	4.682	4.682	4.682

<b>Vert. Angles</b>	<b>Horizontal Angles</b>									
	<b>150</b>	<b>155</b>	<b>160</b>	<b>165</b>	<b>170</b>	<b>175</b>	<b>180</b>	<b>185</b>	<b>190</b>	<b>195</b>
<b>0.0</b>	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286
<b>2.5</b>	1140.785	1137.933	1137.679	1135.968	1132.165	1129.567	1130.264	1129.567	1132.165	1135.968
<b>5.0</b>	1102.758	1098.639	1097.688	1094.709	1090.970	1088.055	1088.055	1088.055	1090.970	1094.709
<b>7.5</b>	1065.049	1059.535	1058.395	1054.909	1050.790	1047.747	1048.127	1047.747	1050.790	1054.909
<b>10.0</b>	1028.417	1022.586	1020.748	1017.833	1013.587	1010.735	1011.242	1010.735	1013.587	1017.833
<b>12.5</b>	993.180	987.603	985.701	982.343	977.716	975.181	975.624	975.181	977.716	982.343
<b>15.0</b>	958.893	953.252	951.224	947.992	942.922	940.704	941.527	940.704	942.922	947.992
<b>17.5</b>	925.240	920.296	918.331	914.592	910.726	908.318	908.952	908.318	910.726	914.592
<b>20.0</b>	892.727	888.228	886.706	883.664	880.115	877.833	878.658	877.833	880.115	883.664
<b>22.5</b>	860.912	857.743	856.666	854.194	851.088	849.250	849.758	849.250	851.088	854.194
<b>25.0</b>	830.174	828.400	827.766	825.865	823.266	821.682	821.999	821.682	823.266	825.865
<b>27.5</b>	800.324	799.373	799.880	798.105	795.760	794.683	795.381	794.683	795.760	798.105
<b>30.0</b>	771.107	771.234	772.311	770.600	769.396	768.509	768.889	768.509	769.396	770.600
<b>32.5</b>	741.954	743.348	744.932	743.665	743.348	742.651	743.031	742.651	743.348	743.665
<b>35.0</b>	712.547	714.892	716.920	716.920	716.983	716.159	717.046	716.159	716.983	716.920
<b>37.5</b>	683.267	686.118	688.590	689.224	690.048	689.541	690.555	689.541	690.048	689.224
<b>40.0</b>	653.226	656.902	659.691	660.705	661.592	661.909	663.176	661.909	661.592	660.705
<b>42.5</b>	622.742	627.051	630.030	631.361	632.755	633.452	634.657	633.452	632.755	631.361
<b>45.0</b>	590.990	596.123	599.102	600.813	602.524	603.348	604.236	603.348	602.524	600.813
<b>47.5</b>	558.858	564.118	566.717	569.315	571.216	572.167	573.434	572.167	571.216	569.315
<b>50.0</b>	525.712	530.338	533.254	536.549	538.704	539.718	541.365	539.718	538.704	536.549
<b>52.5</b>	491.932	496.305	499.474	503.149	505.114	506.572	508.283	506.572	505.114	503.149
<b>55.0</b>	456.821	461.384	465.186	468.799	470.827	472.411	474.313	472.411	470.827	468.799
<b>57.5</b>	421.520	426.020	430.519	433.942	435.780	437.364	439.456	437.364	435.780	433.942
<b>60.0</b>	385.015	390.339	394.838	398.007	400.162	401.747	402.951	401.747	400.162	398.007
<b>62.5</b>	348.554	352.934	357.908	360.780	363.619	365.102	365.533	365.102	363.619	360.780
<b>65.0</b>	312.423	317.354	321.448	324.192	327.145	328.723	329.066	328.723	327.145	324.192
<b>67.5</b>	276.482	281.565	285.070	288.010	290.228	292.332	292.079	292.332	290.228	288.010
<b>70.0</b>	241.282	245.281	247.867	251.454	253.311	255.264	254.369	255.264	253.311	251.454
<b>72.5</b>	205.886	208.960	212.217	214.854	217.225	217.389	217.700	217.389	217.225	214.854
<b>75.0</b>	171.079	174.153	177.056	179.312	180.808	180.295	181.815	180.295	180.808	179.312
<b>77.5</b>	137.097	139.759	141.958	144.417	144.772	144.512	146.160	144.512	144.772	144.417
<b>80.0</b>	105.073	107.145	109.059	110.080	109.743	110.504	112.215	110.504	109.743	110.080
<b>82.5</b>	74.468	76.173	76.579	76.908	77.225	78.162	79.398	78.162	77.225	76.908
<b>85.0</b>	45.106	45.600	45.841	46.246	46.842	47.596	47.647	47.596	46.842	46.246
<b>87.5</b>	18.196	18.671	18.633	18.715	19.007	19.133	19.127	19.133	19.007	18.715
<b>90.0</b>	1.451	1.432	1.407	1.400	1.381	1.369	1.369	1.369	1.381	1.400
<b>92.5</b>	1.071	1.052	1.033	1.021	1.014	0.995	0.989	0.995	1.014	1.021
<b>95.0</b>	0.951	0.938	0.925	0.906	0.906	0.894	0.887	0.894	0.906	0.906
<b>97.5</b>	0.925	0.900	0.900	0.887	0.881	0.862	0.862	0.862	0.881	0.887
<b>100.0</b>	0.938	0.925	0.900	0.900	0.894	0.875	0.875	0.875	0.894	0.900
<b>102.5</b>	0.951	0.932	0.919	0.900	0.900	0.887	0.887	0.887	0.900	0.900
<b>105.0</b>	0.964	0.944	0.925	0.919	0.906	0.900	0.900	0.900	0.906	0.919
<b>107.5</b>	0.976	0.964	0.944	0.938	0.932	0.913	0.913	0.913	0.932	0.938
<b>110.0</b>	1.002	0.976	0.957	0.944	0.932	0.919	0.913	0.919	0.932	0.944
<b>112.5</b>	1.033	1.008	0.983	0.976	0.964	0.951	0.951	0.951	0.964	0.976
<b>115.0</b>	1.033	1.014	0.995	0.976	0.976	0.964	0.964	0.964	0.976	0.976

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : HP3-P-D-4FT-B-835-DAO-120-KPL2008-115.002.IES**

**CANDELA TABULATION - (Cont.)**

117.5	1.008	0.989	0.970	0.964	0.957	0.938	0.938	0.938	0.957	0.964
120.0	0.983	0.964	0.951	0.944	0.944	0.932	0.925	0.932	0.944	0.944
122.5	0.989	0.976	0.964	0.951	0.944	0.932	0.938	0.932	0.944	0.951
125.0	1.027	1.014	0.995	0.989	0.989	0.970	0.964	0.970	0.989	0.989
127.5	1.084	1.084	1.078	1.078	1.084	1.065	1.065	1.065	1.084	1.078
130.0	1.191	1.179	1.179	1.173	1.173	1.166	1.166	1.166	1.173	1.173
132.5	1.293	1.286	1.274	1.280	1.280	1.267	1.255	1.267	1.280	1.280
135.0	1.413	1.413	1.413	1.419	1.426	1.413	1.419	1.413	1.426	1.419
137.5	1.585	1.591	1.585	1.591	1.597	1.585	1.585	1.585	1.597	1.591
140.0	1.768	1.781	1.775	1.787	1.794	1.787	1.775	1.787	1.794	1.787
142.5	1.977	1.977	1.983	1.990	1.996	1.990	1.990	1.990	1.996	1.990
145.0	2.155	2.168	2.181	2.181	2.193	2.187	2.181	2.187	2.193	2.181
147.5	2.351	2.364	2.377	2.377	2.383	2.383	2.396	2.383	2.383	2.377
150.0	2.547	2.560	2.566	2.579	2.592	2.579	2.573	2.579	2.592	2.579
152.5	2.744	2.757	2.757	2.776	2.789	2.776	2.764	2.776	2.789	2.776
155.0	2.928	2.941	2.941	2.947	2.966	2.947	2.953	2.947	2.966	2.947
157.5	3.099	3.118	3.124	3.131	3.137	3.143	3.143	3.143	3.137	3.131
160.0	3.277	3.289	3.296	3.308	3.327	3.334	3.321	3.334	3.327	3.308
162.5	3.461	3.454	3.454	3.461	3.473	3.467	3.473	3.467	3.473	3.461
165.0	3.638	3.625	3.619	3.619	3.631	3.631	3.625	3.631	3.631	3.619
167.5	3.802	3.809	3.802	3.796	3.809	3.790	3.777	3.790	3.809	3.796
170.0	3.961	3.955	3.949	3.942	3.942	3.923	3.917	3.923	3.942	3.942
172.5	4.107	4.101	4.101	4.107	4.094	4.063	4.044	4.063	4.094	4.107
175.0	4.309	4.290	4.290	4.290	4.290	4.259	4.246	4.259	4.290	4.290
177.5	4.500	4.474	4.449	4.443	4.468	4.468	4.474	4.468	4.468	4.443
180.0	4.682	4.682	4.682	4.682	4.682	4.682	4.682	4.682	4.682	4.682

**Vert.  
Angles**

**Horizontal Angles**

	<u>200</u>	<u>205</u>	<u>210</u>	<u>215</u>	<u>220</u>	<u>225</u>	<u>230</u>	<u>235</u>	<u>240</u>	<u>245</u>
0.0	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286
2.5	1137.679	1137.933	1140.785	1144.080	1145.854	1150.228	1154.347	1154.411	1154.284	1156.185
5.0	1097.688	1098.639	1102.758	1107.448	1111.251	1117.335	1123.673	1126.335	1128.743	1133.496
7.5	1058.395	1059.535	1065.049	1070.309	1076.013	1083.238	1091.604	1096.611	1101.301	1108.272
10.0	1020.748	1022.586	1028.417	1035.135	1040.522	1049.142	1058.775	1065.429	1071.957	1080.830
12.5	985.701	987.603	993.180	999.897	1006.489	1014.538	1025.629	1032.410	1040.586	1051.550
15.0	951.224	953.252	958.893	965.420	972.709	981.011	992.165	1000.024	1008.327	1020.748
17.5	918.331	920.296	925.240	932.275	938.739	947.168	958.386	967.322	975.815	987.856
20.0	886.706	888.228	892.727	898.748	905.403	913.452	924.099	933.859	942.731	954.900
22.5	856.666	857.743	860.912	866.806	872.510	879.671	889.812	899.572	908.508	920.613
25.0	827.766	828.400	830.174	835.688	840.314	846.399	855.842	865.158	873.905	885.692
27.5	799.880	799.373	800.324	804.507	808.309	813.506	821.999	830.174	838.540	850.202
30.0	772.311	771.234	771.107	774.149	777.064	780.994	787.395	795.570	803.113	813.443
32.5	744.932	743.348	741.954	743.918	745.693	748.608	753.615	760.967	767.748	776.620
35.0	716.920	714.892	712.547	713.307	714.638	716.286	719.898	725.982	731.750	739.228
37.5	688.590	686.118	683.267	682.760	682.886	683.013	685.992	690.365	695.562	702.089
40.0	659.691	656.902	653.226	651.768	650.944	650.184	651.895	654.747	659.057	664.444
42.5	630.030	627.051	622.742	619.700	618.242	616.911	617.101	619.509	622.424	626.798
45.0	599.102	596.123	590.990	587.504	585.159	583.321	581.990	583.701	585.856	588.708
47.5	566.717	564.118	558.858	554.295	551.569	549.034	547.007	547.767	549.161	551.189
50.0	533.254	530.338	525.712	520.641	516.712	513.860	511.578	511.262	512.275	513.353
52.5	499.474	496.305	491.932	486.291	481.791	477.989	475.834	474.693	474.820	475.644
55.0	465.186	461.384	456.821	451.054	446.427	442.308	439.773	437.618	437.808	438.315
57.5	430.519	426.020	421.520	416.006	410.492	406.309	403.458	400.986	400.479	401.049
60.0	394.838	390.339	385.015	379.450	373.632	368.854	365.964	363.131	362.129	362.738
62.5	357.908	352.934	348.554	343.826	337.945	333.090	329.275	326.993	325.441	325.530

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : HP3-P-D-4FT-B-835-DAO-120-KPL2008-115.002.IES**

**CANDELA TABULATION - (Cont.)**

65.0	321.448	317.354	312.423	307.626	302.828	297.726	293.537	290.830	289.107	288.714
67.5	285.070	281.565	276.482	271.690	267.039	262.101	258.514	255.206	253.222	252.798
70.0	247.867	245.281	241.282	236.675	231.801	227.567	223.359	220.761	218.555	217.459
72.5	212.217	208.960	205.886	201.862	197.660	193.408	189.751	186.696	184.528	183.255
75.0	177.056	174.153	171.079	167.759	164.197	160.255	156.991	154.095	151.864	150.685
77.5	141.958	139.759	137.097	134.175	131.507	128.877	125.594	123.338	121.335	119.871
80.0	109.059	107.145	105.073	102.651	100.173	97.651	95.971	93.709	92.004	91.193
82.5	76.579	76.173	74.468	72.851	70.919	69.360	67.725	66.330	65.170	64.321
85.0	45.841	45.600	45.106	44.548	43.736	42.589	41.620	40.510	40.022	39.528
87.5	18.633	18.671	18.196	18.030	17.644	17.594	17.511	17.384	17.188	17.042
90.0	1.407	1.432	1.451	1.489	1.528	1.572	1.597	1.629	1.629	1.623
92.5	1.033	1.052	1.071	1.097	1.135	1.173	1.191	1.229	1.229	1.217
95.0	0.925	0.938	0.951	0.983	1.008	1.033	1.071	1.084	1.090	1.084
97.5	0.900	0.900	0.925	0.951	0.976	1.008	1.027	1.052	1.046	1.040
100.0	0.900	0.925	0.938	0.970	0.989	1.014	1.040	1.065	1.059	1.046
102.5	0.919	0.932	0.951	0.970	0.989	1.021	1.040	1.059	1.065	1.059
105.0	0.925	0.944	0.964	0.983	1.014	1.027	1.059	1.065	1.065	1.059
107.5	0.944	0.964	0.976	0.995	1.021	1.046	1.065	1.084	1.071	1.071
110.0	0.957	0.976	1.002	1.014	1.046	1.059	1.084	1.103	1.090	1.084
112.5	0.983	1.008	1.033	1.046	1.078	1.090	1.109	1.128	1.122	1.122
115.0	0.995	1.014	1.033	1.046	1.071	1.097	1.109	1.128	1.122	1.116
117.5	0.970	0.989	1.008	1.027	1.046	1.059	1.078	1.090	1.078	1.078
120.0	0.951	0.964	0.983	0.995	1.014	1.033	1.040	1.059	1.046	1.046
122.5	0.964	0.976	0.989	1.002	1.021	1.040	1.046	1.065	1.040	1.040
125.0	0.995	1.014	1.027	1.040	1.059	1.065	1.071	1.078	1.065	1.059
127.5	1.078	1.084	1.084	1.084	1.097	1.109	1.116	1.116	1.097	1.084
130.0	1.179	1.179	1.191	1.185	1.198	1.198	1.198	1.198	1.173	1.147
132.5	1.274	1.286	1.293	1.286	1.293	1.293	1.293	1.293	1.261	1.255
135.0	1.413	1.413	1.413	1.413	1.413	1.407	1.407	1.413	1.381	1.369
137.5	1.585	1.591	1.585	1.585	1.578	1.572	1.566	1.559	1.547	1.528
140.0	1.775	1.781	1.768	1.762	1.762	1.762	1.737	1.737	1.718	1.705
142.5	1.983	1.977	1.977	1.964	1.952	1.945	1.939	1.926	1.907	1.888
145.0	2.181	2.168	2.155	2.149	2.142	2.130	2.123	2.111	2.098	2.079
147.5	2.377	2.364	2.351	2.345	2.339	2.332	2.307	2.294	2.307	2.269
150.0	2.566	2.560	2.547	2.535	2.528	2.510	2.516	2.503	2.497	2.478
152.5	2.757	2.757	2.744	2.732	2.725	2.725	2.719	2.713	2.706	2.694
155.0	2.941	2.941	2.928	2.915	2.909	2.909	2.903	2.896	2.903	2.896
157.5	3.124	3.118	3.099	3.099	3.086	3.093	3.099	3.099	3.105	3.093
160.0	3.296	3.289	3.277	3.283	3.296	3.296	3.302	3.302	3.308	3.289
162.5	3.454	3.454	3.461	3.461	3.461	3.467	3.473	3.480	3.486	3.467
165.0	3.619	3.625	3.638	3.631	3.644	3.650	3.650	3.657	3.669	3.663
167.5	3.802	3.809	3.802	3.809	3.809	3.828	3.828	3.847	3.872	3.872
170.0	3.949	3.955	3.961	3.955	3.974	3.993	4.012	4.044	4.063	4.063
172.5	4.101	4.101	4.107	4.120	4.145	4.177	4.189	4.221	4.240	4.233
175.0	4.290	4.290	4.309	4.328	4.360	4.379	4.385	4.398	4.424	4.411
177.5	4.449	4.474	4.500	4.513	4.538	4.544	4.551	4.557	4.570	4.557
180.0	4.682	4.682	4.682	4.682	4.682	4.682	4.682	4.682	4.682	4.682

**Vert. Horizontal Angles**

	<u>250</u>	<u>255</u>	<u>260</u>	<u>265</u>	<u>270</u>	<u>275</u>	<u>280</u>	<u>285</u>	<u>290</u>	<u>295</u>
0.0	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286
2.5	1155.868	1157.453	1163.220	1164.551	1167.783	1172.473	1178.177	1179.952	1185.402	1192.817
5.0	1136.095	1140.974	1150.165	1155.234	1162.016	1170.952	1180.205	1185.592	1195.162	1206.063
7.5	1113.976	1121.961	1134.067	1142.496	1152.573	1165.438	1178.494	1187.557	1201.056	1215.506
10.0	1088.942	1099.716	1114.230	1125.891	1140.088	1156.375	1172.790	1185.846	1202.894	1221.210



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : HP3-P-D-4FT-B-835-DAO-120-KPL2008-115.002.IES**

**CANDELA TABULATION - (Cont.)**

12.5	1061.690	1074.429	1091.160	1105.864	1123.166	1143.383	1162.840	1179.508	1200.612	1222.541
15.0	1032.854	1046.923	1065.493	1082.922	1103.139	1126.398	1148.770	1169.368	1193.958	1218.865
17.5	1001.609	1017.390	1037.797	1057.381	1079.626	1106.054	1131.405	1155.234	1182.994	1210.752
20.0	968.969	985.892	1007.566	1028.671	1053.324	1082.224	1110.301	1137.109	1167.783	1197.951
22.5	935.063	951.985	975.181	997.489	1024.297	1055.162	1085.013	1114.800	1148.326	1180.775
25.0	900.459	917.190	940.197	964.280	992.609	1025.058	1056.240	1088.435	1124.687	1158.213
27.5	864.525	880.875	904.135	928.408	957.879	992.102	1024.678	1059.155	1096.611	1130.518
30.0	828.146	843.610	866.426	891.270	921.310	955.787	989.694	1025.819	1064.099	1097.942
32.5	790.183	806.091	827.322	851.786	882.777	917.508	952.048	989.187	1026.896	1060.930
35.0	751.714	767.368	787.775	811.542	841.836	877.137	911.803	949.450	986.018	1019.988
37.5	713.244	727.757	746.644	770.093	800.007	834.230	869.024	905.973	941.845	976.068
40.0	674.203	687.703	705.005	727.694	756.784	790.247	823.646	860.405	894.819	928.155
42.5	634.973	647.395	663.873	684.344	712.420	744.932	777.254	812.112	844.878	878.214
45.0	595.363	607.278	622.552	641.058	667.422	698.287	729.658	762.297	793.352	826.118
47.5	556.196	566.906	580.786	597.138	622.108	651.578	681.492	711.786	741.320	771.931
50.0	517.092	526.155	539.147	553.598	576.920	603.982	632.501	660.387	688.463	716.920
52.5	478.749	486.164	496.811	510.501	532.303	557.020	583.511	608.926	634.973	661.338
55.0	440.470	446.491	456.124	468.039	488.256	510.437	533.380	556.830	581.483	604.616
57.5	402.444	406.816	415.943	426.400	444.653	464.743	485.087	506.065	527.866	548.274
60.0	363.613	366.939	375.248	384.761	401.429	419.302	437.364	455.870	475.074	492.312
62.5	326.245	329.294	336.170	344.396	358.390	374.558	390.902	406.626	422.724	436.857
65.0	289.487	292.244	298.075	304.837	316.979	331.994	344.739	358.067	371.674	382.714
67.5	253.317	255.428	260.568	266.583	277.096	289.829	300.362	311.327	322.170	331.487
70.0	218.099	220.108	223.949	229.076	237.904	248.717	257.640	266.215	274.961	282.091
72.5	183.514	185.751	188.686	192.545	200.132	209.556	216.559	223.670	229.767	235.781
75.0	150.894	151.921	154.722	157.865	164.279	172.620	177.462	182.703	187.114	192.558
77.5	119.992	120.942	122.977	125.556	130.918	137.496	141.096	144.182	148.169	151.649
80.0	90.717	91.313	93.215	94.932	99.419	104.863	107.170	109.319	111.905	114.389
82.5	63.890	64.093	65.100	66.711	70.659	74.829	75.945	77.478	79.082	80.159
85.0	39.389	39.509	40.143	40.954	44.744	47.678	48.274	48.699	49.478	50.055
87.5	16.947	17.011	17.226	17.784	20.870	23.398	23.190	23.570	23.570	23.608
90.0	1.604	1.591	1.578	1.547	2.244	2.351	2.358	2.282	2.263	2.288
92.5	1.204	1.191	1.185	1.173	1.210	1.242	1.242	1.242	1.248	1.267
95.0	1.065	1.052	1.059	1.027	1.071	1.097	1.090	1.090	1.090	1.097
97.5	1.027	1.014	1.014	0.989	1.027	1.040	1.027	1.014	1.014	1.021
100.0	1.046	1.027	1.021	1.002	1.014	1.021	1.002	0.995	0.983	0.976
102.5	1.040	1.027	1.027	1.002	1.021	1.008	0.983	0.976	0.970	0.964
105.0	1.059	1.040	1.040	1.014	1.021	1.014	0.995	0.970	0.951	0.957
107.5	1.065	1.052	1.059	1.027	1.040	1.021	0.995	0.970	0.964	0.944
110.0	1.084	1.071	1.065	1.046	1.052	1.021	0.995	0.964	0.951	0.938
112.5	1.116	1.097	1.097	1.071	1.065	1.033	1.008	0.976	0.957	0.938
115.0	1.103	1.097	1.090	1.059	1.059	1.027	1.002	0.970	0.951	0.938
117.5	1.071	1.059	1.052	1.027	1.071	1.084	1.052	1.027	0.995	0.970
120.0	1.040	1.014	1.014	0.989	1.109	1.198	1.173	1.128	1.103	1.084
122.5	1.027	1.002	0.995	0.970	1.191	1.381	1.337	1.299	1.261	1.242
125.0	1.040	1.021	1.014	0.976	1.305	1.591	1.553	1.502	1.464	1.445
127.5	1.065	1.052	1.046	1.021	1.470	1.863	1.806	1.762	1.705	1.673
130.0	1.135	1.109	1.097	1.071	1.642	2.142	2.079	2.015	1.964	1.926
132.5	1.223	1.191	1.185	1.160	1.832	2.434	2.370	2.301	2.244	2.193
135.0	1.343	1.312	1.312	1.274	2.053	2.751	2.681	2.605	2.541	2.478
137.5	1.508	1.489	1.477	1.445	2.288	3.067	2.979	2.909	2.833	2.770
140.0	1.686	1.673	1.654	1.629	2.535	3.366	3.270	3.188	3.131	3.061
142.5	1.869	1.863	1.850	1.832	2.776	3.650	3.562	3.480	3.410	3.334
145.0	2.066	2.047	2.047	2.015	3.004	3.904	3.821	3.739	3.663	3.587
147.5	2.263	2.250	2.256	2.231	3.226	4.145	4.056	3.968	3.898	3.828
150.0	2.472	2.453	2.459	2.434	3.435	4.347	4.271	4.183	4.113	4.044

**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : HP3-P-D-4FT-B-835-DAO-120-KPL2008-115.002.IES**

**CANDELA TABULATION - (Cont.)**

152.5	2.681	2.674	2.681	2.668	3.638	4.513	4.436	4.360	4.297	4.233
155.0	2.884	2.871	2.884	2.871	3.809	4.633	4.563	4.494	4.436	4.385
157.5	3.086	3.080	3.086	3.080	3.968	4.734	4.665	4.601	4.544	4.500
160.0	3.283	3.289	3.296	3.289	4.113	4.817	4.753	4.690	4.639	4.595
162.5	3.467	3.480	3.486	3.486	4.233	4.855	4.810	4.753	4.709	4.671
165.0	3.669	3.682	3.701	3.688	4.360	4.886	4.848	4.791	4.747	4.722
167.5	3.885	3.891	3.910	3.904	4.487	4.924	4.886	4.848	4.823	4.785
170.0	4.075	4.075	4.094	4.101	4.582	4.943	4.918	4.880	4.861	4.836
172.5	4.233	4.246	4.265	4.265	4.665	4.930	4.911	4.874	4.861	4.836
175.0	4.417	4.424	4.443	4.436	4.722	4.880	4.867	4.842	4.829	4.810
177.5	4.563	4.570	4.595	4.582	4.760	4.798	4.785	4.779	4.766	4.760
180.0	4.682	4.682	4.682	4.682	4.682	4.682	4.682	4.682	4.682	4.682

**Vert.  
Angles**

**Horizontal Angles**

	<u>300</u>	<u>305</u>	<u>310</u>	<u>315</u>	<u>320</u>	<u>325</u>	<u>330</u>	<u>335</u>	<u>340</u>	<u>345</u>
0.0	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286	1176.286
2.5	1197.507	1204.098	1210.626	1211.323	1211.767	1214.238	1214.492	1215.062	1217.787	1218.358
5.0	1214.492	1224.189	1233.948	1237.498	1240.857	1245.990	1248.526	1251.250	1255.560	1256.891
7.5	1227.738	1241.047	1253.913	1260.820	1266.651	1274.256	1279.517	1284.080	1289.974	1292.446
10.0	1236.674	1253.405	1269.693	1279.263	1288.072	1298.339	1305.565	1312.219	1319.888	1322.740
12.5	1241.237	1261.518	1280.594	1292.762	1304.424	1317.226	1326.162	1334.782	1342.830	1347.203
15.0	1240.983	1264.813	1286.234	1301.191	1314.944	1328.951	1338.774	1348.471	1357.407	1361.653
17.5	1235.914	1262.278	1286.298	1302.206	1316.973	1332.437	1343.147	1353.731	1362.224	1366.786
20.0	1225.837	1254.166	1279.010	1295.804	1311.965	1327.873	1338.711	1349.484	1357.534	1361.653
22.5	1210.246	1240.096	1265.510	1282.496	1299.353	1314.691	1325.655	1336.049	1342.577	1346.063
25.0	1188.444	1219.943	1245.166	1262.088	1279.199	1293.523	1303.727	1312.409	1317.859	1320.268
27.5	1162.269	1194.084	1218.612	1234.899	1251.504	1264.243	1272.989	1279.517	1283.192	1284.777
30.0	1130.771	1162.333	1185.909	1201.690	1216.393	1227.167	1234.012	1238.765	1239.526	1240.476
32.5	1094.900	1126.018	1147.376	1161.952	1175.008	1183.120	1188.318	1189.901	1188.951	1188.000
35.0	1054.402	1083.872	1102.948	1116.765	1127.792	1133.116	1136.221	1135.398	1131.912	1129.250
37.5	1008.834	1037.480	1054.592	1066.000	1074.683	1077.725	1078.675	1075.380	1069.232	1065.746
40.0	960.540	986.969	1001.482	1011.369	1017.073	1018.531	1016.946	1011.432	1003.764	998.630
42.5	909.269	932.338	945.330	953.760	956.738	956.421	950.654	943.492	933.986	928.915
45.0	855.462	874.728	886.833	893.234	893.995	891.143	883.538	873.777	864.207	858.060
47.5	798.612	815.724	825.484	830.681	829.414	824.724	815.661	804.253	794.556	785.811
50.0	740.813	755.516	763.502	765.657	763.756	757.798	747.341	735.236	725.666	715.842
52.5	681.302	694.357	700.949	701.836	698.730	690.492	680.161	667.676	658.233	648.156
55.0	621.918	632.565	638.776	638.206	634.276	624.326	613.298	601.764	592.447	582.878
57.5	562.534	571.977	576.476	575.843	570.139	561.203	548.844	538.387	529.071	520.198
60.0	504.543	512.719	516.142	514.747	508.410	498.713	488.066	478.496	468.799	460.750
62.5	447.695	454.286	456.757	455.236	448.582	439.456	430.266	421.076	411.760	403.584
65.0	391.714	398.387	399.972	397.564	390.794	382.771	374.621	365.983	357.332	350.322
67.5	338.971	344.200	344.701	341.931	336.037	330.048	322.031	314.083	306.966	300.971
70.0	289.018	292.015	292.364	289.912	285.405	279.619	272.654	265.828	259.268	254.483
72.5	241.143	243.463	243.881	241.650	237.277	231.852	226.592	219.759	215.069	210.329
75.0	196.151	198.325	197.856	195.467	192.330	188.179	182.823	178.305	174.318	170.515
77.5	154.545	155.546	155.090	153.562	150.818	147.250	143.745	140.215	136.311	134.638
80.0	116.353	116.519	116.176	115.289	113.178	110.530	107.665	104.502	102.373	101.093
82.5	81.135	81.864	81.585	80.292	79.088	76.952	74.677	73.384	72.364	70.716
85.0	50.714	50.619	50.169	49.453	48.648	47.938	47.026	45.910	44.377	43.641
87.5	23.646	23.741	23.398	22.968	22.417	21.783	20.813	20.249	19.989	19.577
90.0	2.181	2.041	1.990	1.882	1.806	1.737	1.686	1.648	1.610	1.597
92.5	1.274	1.261	1.236	1.217	1.204	1.179	1.166	1.147	1.141	1.141
95.0	1.103	1.097	1.090	1.065	1.052	1.033	1.033	1.021	1.021	1.021
97.5	1.027	1.021	1.014	1.002	0.989	0.976	0.970	0.970	0.964	0.964

# IES INDOOR REPORT

PHOTOMETRIC FILENAME : HP3-P-D-4FT-B-835-DAO-120-KPL2008-115.002.IES

## CANDELA TABULATION - (Cont.)

100.0	0.983	0.983	0.964	0.964	0.951	0.951	0.938	0.938	0.938	0.944
102.5	0.964	0.957	0.951	0.938	0.932	0.932	0.932	0.925	0.932	0.932
105.0	0.951	0.951	0.932	0.932	0.925	0.919	0.919	0.925	0.919	0.932
107.5	0.938	0.938	0.932	0.925	0.919	0.919	0.919	0.919	0.919	0.925
110.0	0.944	0.938	0.925	0.925	0.913	0.906	0.906	0.919	0.919	0.925
112.5	0.944	0.925	0.932	0.913	0.913	0.913	0.906	0.925	0.925	0.925
115.0	0.938	0.925	0.919	0.913	0.906	0.906	0.900	0.913	0.913	0.919
117.5	0.970	0.964	0.951	0.951	0.944	0.944	0.944	0.951	0.957	0.964
120.0	1.078	1.059	1.046	1.040	1.046	1.033	1.033	1.040	1.040	1.046
122.5	1.242	1.210	1.198	1.198	1.179	1.179	1.185	1.185	1.191	1.185
125.0	1.432	1.400	1.388	1.375	1.369	1.362	1.356	1.362	1.369	1.369
127.5	1.661	1.629	1.604	1.585	1.578	1.578	1.566	1.572	1.572	1.578
130.0	1.901	1.869	1.838	1.813	1.800	1.794	1.787	1.787	1.781	1.787
132.5	2.155	2.117	2.079	2.053	2.034	2.022	2.002	2.002	2.002	1.996
135.0	2.434	2.389	2.351	2.313	2.294	2.269	2.256	2.250	2.237	2.237
137.5	2.732	2.674	2.630	2.585	2.554	2.528	2.516	2.497	2.484	2.491
140.0	3.010	2.947	2.896	2.858	2.814	2.789	2.770	2.757	2.751	2.738
142.5	3.277	3.219	3.162	3.118	3.074	3.048	3.023	3.010	2.985	2.991
145.0	3.536	3.467	3.404	3.366	3.315	3.283	3.251	3.238	3.226	3.219
147.5	3.777	3.695	3.631	3.581	3.536	3.505	3.480	3.461	3.442	3.435
150.0	3.987	3.910	3.853	3.802	3.752	3.707	3.676	3.650	3.644	3.619
152.5	4.183	4.107	4.037	3.987	3.930	3.891	3.853	3.834	3.821	3.802
155.0	4.341	4.278	4.227	4.158	4.107	4.056	4.012	3.987	3.968	3.955
157.5	4.468	4.417	4.373	4.335	4.284	4.227	4.189	4.158	4.113	4.094
160.0	4.563	4.532	4.500	4.468	4.436	4.398	4.360	4.322	4.290	4.271
162.5	4.652	4.620	4.601	4.576	4.551	4.538	4.519	4.487	4.443	4.417
165.0	4.715	4.684	4.665	4.652	4.646	4.639	4.639	4.627	4.620	4.601
167.5	4.779	4.753	4.741	4.728	4.734	4.734	4.747	4.766	4.779	4.791
170.0	4.836	4.810	4.798	4.785	4.791	4.804	4.829	4.861	4.892	4.924
172.5	4.836	4.823	4.817	4.817	4.823	4.836	4.855	4.892	4.924	4.968
175.0	4.823	4.810	4.810	4.804	4.817	4.823	4.842	4.861	4.892	4.911
177.5	4.772	4.753	4.747	4.753	4.747	4.753	4.760	4.772	4.772	4.772
180.0	4.682	4.682	4.682	4.682	4.682	4.682	4.682	4.682	4.682	4.682

## Vert. Horizontal Angles

	<u>350</u>	<u>355</u>	<u>360</u>
0.0	1176.286	1176.286	1176.286
2.5	1216.583	1213.922	1214.429
5.0	1256.258	1253.849	1254.356
7.5	1292.446	1290.291	1290.988
10.0	1324.134	1322.233	1322.803
12.5	1348.534	1347.076	1347.774
15.0	1363.935	1362.097	1362.984
17.5	1369.322	1367.104	1368.181
20.0	1363.935	1361.463	1362.731
22.5	1347.520	1345.175	1345.619
25.0	1320.775	1317.860	1318.240
27.5	1284.207	1280.784	1281.101
30.0	1238.449	1234.456	1234.709
32.5	1185.085	1181.092	1180.458
35.0	1125.321	1120.441	1118.730
37.5	1059.219	1055.162	1052.944
40.0	990.708	986.652	983.990
42.5	919.979	915.036	912.881
45.0	848.427	843.610	841.392

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : HP3-P-D-4FT-B-835-DAO-120-KPL2008-115.002.IES****CANDELA TABULATION - (Cont.)**

47.5	777.635	771.994	768.889
50.0	706.716	702.660	699.174
52.5	639.663	635.734	632.248
55.0	574.828	571.216	567.858
57.5	512.846	509.677	506.888
60.0	453.969	450.420	447.695
62.5	398.514	394.712	392.683
65.0	344.992	342.704	340.676
67.5	296.446	294.177	292.522
70.0	250.915	248.919	246.346
72.5	207.781	206.932	204.327
75.0	168.919	167.151	165.528
77.5	133.155	130.823	129.390
80.0	99.356	97.645	97.157
82.5	69.037	68.460	68.283
85.0	42.938	42.241	42.146
87.5	19.216	19.241	19.203
90.0	1.572	1.540	1.508
92.5	1.135	1.116	1.116
95.0	1.014	1.008	1.014
97.5	0.964	0.964	0.964
100.0	0.944	0.938	0.938
102.5	0.938	0.925	0.925
105.0	0.925	0.925	0.925
107.5	0.932	0.925	0.925
110.0	0.925	0.919	0.913
112.5	0.932	0.925	0.913
115.0	0.925	0.913	0.925
117.5	0.957	0.957	0.951
120.0	1.052	1.052	1.052
122.5	1.198	1.191	1.191
125.0	1.375	1.362	1.369
127.5	1.585	1.578	1.585
130.0	1.787	1.775	1.775
132.5	1.996	1.990	1.990
135.0	2.237	2.231	2.231
137.5	2.484	2.478	2.472
140.0	2.738	2.725	2.725
142.5	2.985	2.966	2.966
145.0	3.213	3.200	3.194
147.5	3.423	3.404	3.410
150.0	3.619	3.600	3.600
152.5	3.796	3.771	3.777
155.0	3.949	3.923	3.917
157.5	4.094	4.082	4.069
160.0	4.265	4.252	4.233
162.5	4.417	4.392	4.385
165.0	4.582	4.557	4.551
167.5	4.791	4.760	4.753
170.0	4.968	4.981	4.994
172.5	5.019	5.038	5.045
175.0	4.930	4.892	4.855
177.5	4.760	4.734	4.741
180.0	4.682	4.682	4.682

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : HP3-P-D-4FT-B-835-DAO-120-KPL2008-115.002.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	431.45	N.A.	14.00
0-30	911.80	N.A.	29.60
0-40	1473.57	N.A.	47.90
0-60	2494.42	N.A.	81.10
0-80	3013.41	N.A.	98.00
0-90	3065.46	N.A.	99.60
10-90	2953.99	N.A.	96.00
20-40	1042.12	N.A.	33.90
20-50	1595.15	N.A.	51.90
40-70	1355.14	N.A.	44.10
60-80	518.99	N.A.	16.90
70-80	184.70	N.A.	6.00
80-90	52.05	N.A.	1.70
90-110	2.27	N.A.	0.10
90-120	3.26	N.A.	0.10
90-130	4.37	N.A.	0.10
90-150	7.57	N.A.	0.20
90-180	10.82	N.A.	0.40
110-180	8.55	N.A.	0.30
0-180	3076.28	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

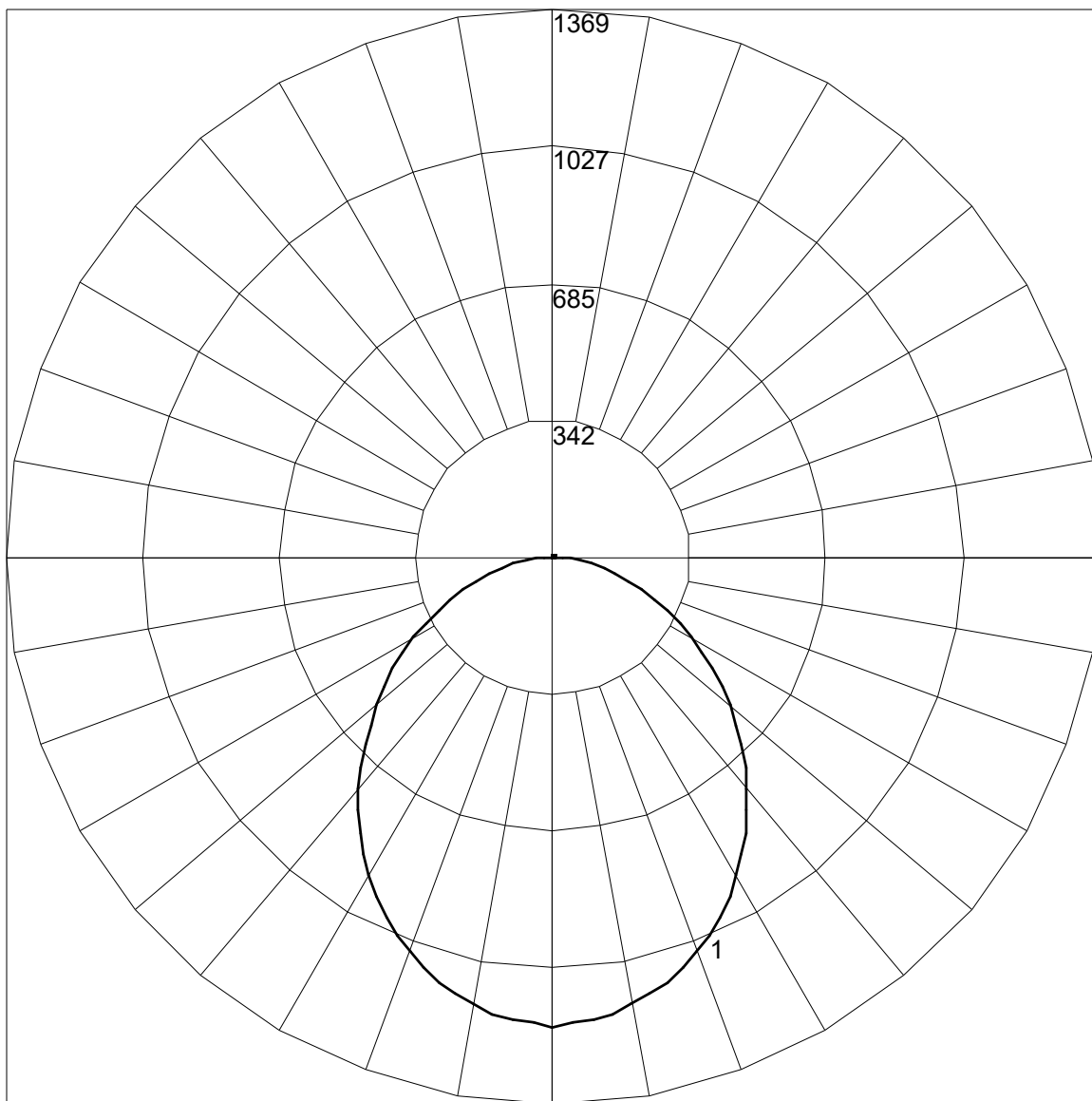
Zone	Lumens
0-10	111.46
10-20	319.98
20-30	480.35
30-40	561.77
40-50	553.03
50-60	467.82
60-70	334.29
70-80	184.70
80-90	52.05
90-100	1.24
100-110	1.03
110-120	0.99
120-130	1.11
130-140	1.47
140-150	1.73
150-160	1.64
160-170	1.17
170-180	0.43

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	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	97	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	100	92	85	79	97	90	84	78	86	81	77	83	78	75	80	76	73	71
3	91	81	73	66	89	79	72	66	76	70	65	73	68	63	71	66	62	60
4	84	72	63	57	81	70	62	56	68	61	55	66	60	55	63	58	54	52
5	77	64	56	49	75	63	55	49	61	54	48	59	53	48	57	52	47	45
6	71	58	49	43	69	57	49	43	55	48	42	54	47	42	52	46	42	40
7	66	53	44	38	64	52	44	38	50	43	38	49	42	37	48	42	37	35
8	62	48	40	34	60	48	40	34	46	39	34	45	38	34	44	38	33	31
9	58	44	36	31	56	44	36	31	43	35	31	41	35	30	40	35	30	28
10	54	41	33	28	53	40	33	28	39	33	28	38	32	28	38	32	27	26

POLAR GRAPH



Maximum Candela = 1369.322 Located At Horizontal Angle = 10, Vertical Angle = 17.5  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)