

# Family Correlated Photometric Data

The following photometric information is developed using correlated data. Finelite considers a family to be a group of luminaires where critical performance metrics such as photometric performance, thermal performance, and electrical performance can be accurately projected via a combination of LM79 tests at the luminaire level and well-documented specifications at the component level.

For more information, please download [Finelite's Family Correlated White Paper](#)

Additional links:

- [Solid-State Lighting: Early Lessons Learned on the Way to Market](#)  
(U.S. Department of Energy)
- [Lighting Facts®](#)
- [Design Lights Consortium®](#)

## IES INDOOR REPORT

PHOTOMETRIC FILENAME : HP-4-P-D-4FT-H-B-835-ASY-DAO-ITL89988-ITL94331.608.IES

### DESCRIPTION INFORMATION (From Photometric File)

[TEST]ITL89988-ITL94331.608 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[ISSUEDATE]01/11/21

[\_REVISED]08/25/2021

[MANUFAC]FINELITE, INC.

[LUMCAT]HP-4-P-D-4ft-H-B-835-ASY-DAO

[\_INPUT\_ELECTRICAL]120.0 VOLTS, 46.9 WATTS

[\_INPUT\_ELECTRICAL]277.0 VOLTS, 48.9 WATTS

[OTHER]see [www.finelite.com](http://www.finelite.com) for source files ITL89988 and ITL94331. For further details on Finelite family correlation files, go to

[more][http://www.finelite.com/download\\_files/series\\_downloads/photometry\\_pdf/FL\\_Family\\_Correlation\\_WhitePaper.pdf](http://www.finelite.com/download_files/series_downloads/photometry_pdf/FL_Family_Correlation_WhitePaper.pdf)

[\_ABSOLUTE LUMENS]5449

[\_CONVERT] Photometric web converted from original test data

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5445
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	116
Total Luminaire Watts	46.9
Ballast Factor	1.00
CIE Type	Semi-Indirect
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.33 ft
Luminous Width (90-270)	4.00 ft
Luminous Height	0.00 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	6077	6274	5200
55	5220	5580	4624
65	4370	4750	4031
75	3519	3894	3487
85	2758	3000	3048

# IES INDOOR REPORT

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## CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>
0.0	798.777	798.777	798.777	798.777	798.777	798.777	798.777	798.777	798.777
2.5	815.247	814.217	810.100	804.439	798.263	791.057	785.910	781.793	780.249
5.0	828.114	826.055	818.850	807.527	794.145	781.278	768.926	762.235	759.662
7.5	837.893	834.290	824.511	807.527	787.454	767.382	750.398	741.133	737.531
10.0	844.583	841.495	826.570	804.439	779.220	751.942	731.869	719.002	712.826
12.5	846.642	844.069	826.570	798.263	769.441	734.443	711.797	695.842	689.151
15.0	844.583	841.495	822.967	788.998	755.544	714.885	690.181	672.167	664.961
17.5	837.893	835.319	816.276	778.190	739.589	694.298	665.476	648.492	639.742
20.0	826.570	825.026	805.983	762.750	722.091	671.138	641.286	623.787	616.067
22.5	811.129	809.585	792.086	746.795	703.562	646.948	618.126	599.083	593.421
25.0	791.572	791.057	775.102	728.266	680.916	622.758	593.421	575.922	571.290
27.5	768.411	768.411	754.000	706.650	657.241	597.539	567.173	553.277	547.615
30.0	741.648	743.192	730.325	682.975	630.993	570.261	543.498	530.116	526.514
32.5	711.797	713.856	704.077	658.271	603.715	544.013	518.279	506.956	505.412
35.0	676.799	681.946	676.284	629.963	574.378	516.220	494.089	485.339	483.281
37.5	642.830	649.006	643.860	600.112	543.498	488.942	468.870	463.723	463.208
40.0	604.744	613.494	611.435	569.232	513.647	460.635	443.651	440.563	443.136
42.5	567.173	573.349	577.981	537.836	482.766	433.357	419.461	419.461	421.520
45.0	524.455	534.748	541.439	502.324	448.798	405.050	395.271	398.359	400.933
47.5	485.339	496.662	504.382	468.870	417.917	378.287	369.537	376.228	381.375
50.0	445.709	455.488	466.296	435.416	385.492	351.524	345.862	354.097	359.759
52.5	406.594	415.344	428.725	399.389	353.582	322.187	321.673	331.451	338.142
55.0	365.420	377.257	390.639	363.876	323.731	296.453	297.483	309.320	317.040
57.5	328.363	338.142	352.553	330.422	292.851	269.690	273.293	287.189	294.909
60.0	290.277	302.115	316.526	297.483	264.029	244.471	248.589	262.485	270.720
62.5	256.823	265.058	281.013	263.514	236.236	219.252	225.943	239.839	248.074
65.0	225.428	232.633	244.986	231.604	207.929	196.092	201.238	216.679	224.399
67.5	192.489	198.665	211.532	201.753	181.166	171.902	179.107	193.518	198.665
70.0	164.696	169.328	180.651	172.417	156.976	148.741	155.947	169.328	174.990
72.5	135.875	141.021	151.315	144.109	133.301	126.610	134.330	145.139	151.315
75.0	111.170	115.287	123.008	118.376	110.141	106.023	112.199	122.493	127.640
77.5	88.524	91.098	97.274	94.700	88.524	85.436	91.612	99.332	102.421
80.0	66.908	68.967	73.599	73.084	67.937	66.393	71.025	77.716	79.775
82.5	47.350	47.865	51.468	50.953	49.409	48.380	51.468	55.585	57.644
85.0	29.337	29.337	31.910	31.910	32.425	30.881	32.939	34.483	36.027
87.5	11.323	12.352	13.382	14.411	14.926	14.411	14.926	15.440	15.955
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92.5	52.108	52.886	45.108	47.441	17.110	45.108	70.773	84.772	90.216
95.0	110.437	112.771	113.548	115.882	44.331	71.551	109.660	129.881	136.102
97.5	174.211	185.877	211.542	175.767	72.329	94.883	144.657	174.211	182.766
100.0	269.872	285.426	309.536	233.318	101.105	120.548	173.433	209.987	222.430
102.5	364.754	382.642	404.418	290.092	131.436	146.213	204.542	237.207	249.651
105.0	452.638	487.635	503.190	346.089	160.990	170.322	228.652	267.538	276.093
107.5	557.631	617.516	606.628	397.419	192.099	192.099	251.984	293.981	301.759
110.0	702.288	761.396	705.399	440.972	223.208	213.875	276.093	321.202	328.979
112.5	878.055	903.720	802.615	479.080	255.095	234.874	300.203	347.644	356.977
115.0	1038.267	1042.933	881.943	514.078	286.982	256.650	321.979	373.309	383.420
117.5	1188.368	1165.036	937.940	544.410	318.868	279.204	342.200	398.974	409.863
120.0	1308.916	1256.031	972.160	573.186	353.866	303.314	360.088	421.529	435.528
122.5	1396.022	1315.916	991.603	602.739	389.642	326.646	377.198	444.083	460.415
125.0	1447.352	1343.914	1001.714	630.737	423.862	349.200	391.975	461.193	482.191
127.5	1465.239	1347.803	1007.936	657.958	458.860	372.532	405.974	475.192	501.635
130.0	1457.462	1336.137	1012.602	686.734	493.080	395.086	419.195	483.747	513.301
132.5	1433.353	1316.694	1018.046	716.288	528.077	417.640	433.195	489.969	517.189

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : HP-4-P-D-4FT-H-B-835-ASY-DAO-ITL89988-ITL94331.608.IES****CANDELA TABULATION - (Cont.)**

<b>135.0</b>	1402.244	1294.139	1025.045	745.841	563.075	444.083	446.416	494.635	518.745
<b>137.5</b>	1370.357	1272.363	1033.601	776.950	598.851	472.859	460.415	499.301	518.745
<b>140.0</b>	1338.470	1252.142	1042.933	808.059	635.404	503.968	473.636	503.190	518.745
<b>142.5</b>	1310.472	1237.365	1053.044	839.168	671.179	536.632	486.858	507.079	518.745
<b>145.0</b>	1288.695	1224.922	1063.154	869.500	706.955	568.519	500.857	512.523	519.522
<b>147.5</b>	1270.030	1215.589	1075.598	899.054	742.730	601.184	517.967	520.300	523.411
<b>150.0</b>	1255.253	1208.589	1088.819	927.052	778.506	636.182	539.743	528.855	529.633
<b>152.5</b>	1242.032	1202.367	1102.041	952.717	811.170	673.513	570.852	539.743	536.632
<b>155.0</b>	1229.588	1198.479	1113.707	975.271	843.057	713.177	608.961	556.076	549.076
<b>157.5</b>	1222.588	1196.923	1122.262	995.492	873.389	753.618	650.181	584.074	569.297
<b>160.0</b>	1217.144	1195.368	1127.706	1012.602	901.387	792.505	692.178	627.626	606.628
<b>162.5</b>	1207.034	1189.924	1128.483	1025.823	927.052	830.614	735.731	676.623	656.402
<b>165.0</b>	1195.368	1178.258	1124.595	1035.934	948.828	865.611	784.727	725.620	707.732
<b>167.5</b>	1175.925	1161.926	1114.484	1041.378	967.494	897.498	831.391	778.506	760.618
<b>170.0</b>	1151.037	1140.149	1101.263	1043.711	983.826	927.052	875.722	837.613	823.614
<b>172.5</b>	1119.928	1112.929	1082.597	1041.378	995.492	952.717	916.164	889.721	880.388
<b>175.0</b>	1089.597	1082.597	1062.377	1035.934	1005.602	976.049	952.717	936.385	930.163
<b>177.5</b>	1050.711	1047.600	1037.489	1025.045	1010.269	995.492	983.826	975.271	972.160
<b>180.0</b>	1012.602	1012.602	1012.602	1012.602	1012.602	1012.602	1012.602	1012.602	1012.602

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : HP-4-P-D-4FT-H-B-835-ASY-DAO-ITL89988-ITL94331.608.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	288.05	N.A.	5.30
0-30	601.44	N.A.	11.00
0-40	963.81	N.A.	17.70
0-60	1621.64	N.A.	29.80
0-80	1962.58	N.A.	36.00
0-90	1998.75	N.A.	36.70
10-90	1923.43	N.A.	35.30
20-40	675.76	N.A.	12.40
20-50	1031.65	N.A.	18.90
40-70	875.58	N.A.	16.10
60-80	340.94	N.A.	6.30
70-80	123.20	N.A.	2.30
80-90	36.17	N.A.	0.70
90-110	449.14	N.A.	8.20
90-120	987.57	N.A.	18.10
90-130	1606.87	N.A.	29.50
90-150	2683.75	N.A.	49.30
90-180	3446.13	N.A.	63.30
110-180	2996.99	N.A.	55.00
0-180	5444.88	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	75.32
10-20	212.73
20-30	313.39
30-40	362.37
40-50	355.90
50-60	301.94
60-70	217.74
70-80	123.20
80-90	36.17
90-100	113.36
100-110	335.78
110-120	538.43
120-130	619.30
130-140	578.16
140-150	498.72
150-160	398.72
160-170	268.16
170-180	95.50

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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

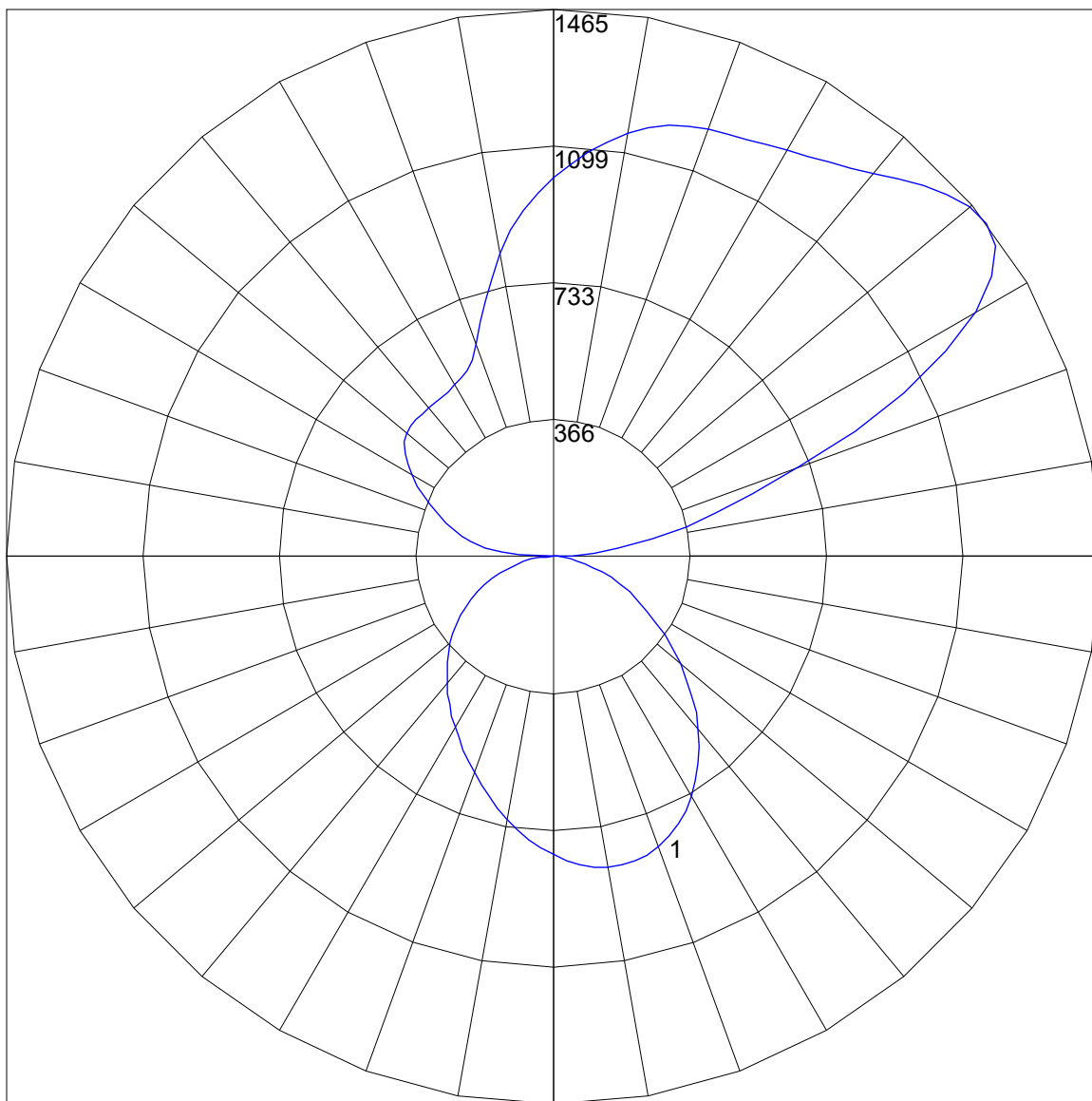
Effective Floor Cavity Reflectance 0.20

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	104	104	104	104	94	94	94	94	76	76	76	59	59	59	44	44	44	37
1	95	91	87	83	86	82	79	76	67	64	62	52	51	49	39	38	37	31
2	86	79	73	68	78	72	67	63	58	55	52	46	43	41	34	33	31	26
3	79	70	62	57	71	63	57	52	52	47	43	41	38	35	30	28	27	22
4	72	62	54	48	65	56	49	44	46	41	37	36	33	30	27	25	23	19
5	66	55	47	41	60	50	43	38	41	36	32	32	29	26	25	22	20	17
6	61	49	41	36	55	45	38	33	37	32	28	29	26	23	22	20	18	15
7	56	44	37	31	51	40	34	29	33	28	24	27	23	20	20	18	16	13
8	52	40	33	27	47	37	30	25	30	25	22	24	21	18	19	16	14	12
9	48	37	29	24	44	34	27	23	28	23	19	22	19	16	17	15	13	11
10	45	33	26	22	41	31	24	20	26	21	17	21	17	14	16	13	12	10

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## POLAR GRAPH



Maximum Candela = 1465.239 Located At Horizontal Angle = 0, Vertical Angle = 127.5

# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)