

# 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-835-DAO-ITL94331.001.IES

### DESCRIPTION INFORMATION (From Photometric File)

[TEST]ITL94331.001 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]01/11/21

[ISSUEDATE]07/02/2021

[MANUFAC]FINELITE, INC.

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

[\_INPUT\_ELECTRICAL]120.0 VOLTS, 27.3 WATTS

[\_INPUT\_ELECTRICAL]277.0 VOLTS, 27.4 WATTS

[\_ABSOLUTE]LUMENS]3021

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file 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)

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3021
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	111
Total Luminaire Watts	27.3
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.34
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.30
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	9184	9481	7859
55	7889	8433	6989
65	6605	7178	6092
75	5319	5885	5269
85	4168	4533	4607

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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>
<b>0.0</b>	1207.155	1207.155	1207.155	1207.155	1207.155	1207.155	1207.155	1207.155	1207.155
<b>2.5</b>	1232.045	1230.489	1224.267	1215.711	1206.377	1195.488	1187.710	1181.487	1179.154
<b>5.0</b>	1251.490	1248.379	1237.489	1220.378	1200.155	1180.709	1162.042	1151.931	1148.042
<b>7.5</b>	1266.268	1260.824	1246.045	1220.378	1190.043	1159.709	1134.041	1120.041	1114.596
<b>10.0</b>	1276.380	1271.713	1249.156	1215.711	1177.598	1136.375	1106.040	1086.595	1077.261
<b>12.5</b>	1279.491	1275.602	1249.156	1206.377	1162.820	1109.929	1075.706	1051.594	1041.482
<b>15.0</b>	1276.380	1271.713	1243.712	1192.377	1141.819	1080.373	1043.038	1015.815	1004.925
<b>17.5</b>	1266.268	1262.379	1233.600	1176.043	1117.707	1049.260	1005.703	980.036	966.813
<b>20.0</b>	1249.156	1246.823	1218.044	1152.708	1091.262	1014.259	969.146	942.701	931.034
<b>22.5</b>	1225.822	1223.489	1197.043	1128.596	1063.261	977.702	934.145	905.366	896.810
<b>25.0</b>	1196.266	1195.488	1171.376	1100.595	1029.037	941.145	896.810	870.365	863.365
<b>27.5</b>	1161.264	1161.264	1139.486	1067.928	993.258	903.033	857.142	836.141	827.586
<b>30.0</b>	1120.818	1123.152	1103.707	1032.149	953.590	861.809	821.363	801.140	795.696
<b>32.5</b>	1075.706	1078.817	1064.039	994.814	912.366	822.141	783.251	766.139	763.805
<b>35.0</b>	1022.815	1030.593	1022.037	952.035	868.031	780.139	746.694	733.471	730.360
<b>37.5</b>	971.480	980.813	973.035	906.922	821.363	738.916	708.581	700.803	700.025
<b>40.0</b>	913.922	927.145	924.034	860.253	776.250	696.136	670.469	665.802	669.691
<b>42.5</b>	857.142	866.476	873.476	812.807	729.582	654.913	633.912	633.912	637.023
<b>45.0</b>	792.584	808.140	818.252	759.139	678.247	612.133	597.355	602.022	605.911
<b>47.5</b>	733.471	750.583	762.250	708.581	631.578	571.687	558.465	568.576	576.354
<b>50.0</b>	673.580	688.358	704.692	658.024	582.577	531.241	522.686	535.131	543.686
<b>52.5</b>	614.467	627.689	647.912	603.577	534.353	486.907	486.129	500.907	511.019
<b>55.0</b>	552.242	570.132	590.355	549.909	489.240	448.016	449.572	467.461	479.128
<b>57.5</b>	496.240	511.019	532.797	499.351	442.572	407.570	413.015	434.016	445.683
<b>60.0</b>	438.683	456.572	478.351	449.572	399.014	369.458	375.680	396.681	409.126
<b>62.5</b>	388.125	400.570	424.682	398.237	357.013	331.345	341.457	362.458	374.902
<b>65.0</b>	340.679	351.568	370.236	350.013	314.234	296.344	304.122	327.456	339.123
<b>67.5</b>	290.899	300.233	319.678	304.900	273.788	259.787	270.676	292.455	300.233
<b>70.0</b>	248.898	255.898	273.010	260.565	237.231	224.786	235.675	255.898	264.454
<b>72.5</b>	205.341	213.119	228.675	217.786	201.452	191.340	203.007	219.341	228.675
<b>75.0</b>	168.006	174.229	185.896	178.895	166.450	160.228	169.562	185.118	192.896
<b>77.5</b>	133.783	137.672	147.005	143.116	133.783	129.116	138.449	150.117	154.783
<b>80.0</b>	101.115	104.226	111.226	110.448	102.670	100.337	107.337	117.449	120.560
<b>82.5</b>	71.558	72.336	77.781	77.003	74.669	73.114	77.781	84.003	87.114
<b>85.0</b>	44.335	44.335	48.224	48.224	49.002	46.668	49.780	52.113	54.446
<b>87.5</b>	17.112	18.667	20.223	21.779	22.556	21.779	22.556	23.334	24.112
<b>90.0</b>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	435.32	N.A.	14.40
0-30	908.93	N.A.	30.10
0-40	1456.55	N.A.	48.20
0-60	2450.71	N.A.	81.10
0-80	2965.95	N.A.	98.20
0-90	3020.62	N.A.	100.00
10-90	2906.8	N.A.	96.20
20-40	1021.24	N.A.	33.80
20-50	1559.09	N.A.	51.60
40-70	1323.22	N.A.	43.80
60-80	515.24	N.A.	17.10
70-80	186.18	N.A.	6.20
80-90	54.67	N.A.	1.80
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	3020.62	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	113.82
10-20	321.50
20-30	473.61
30-40	547.63
40-50	537.85
50-60	456.31
60-70	329.06
70-80	186.18
80-90	54.67
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

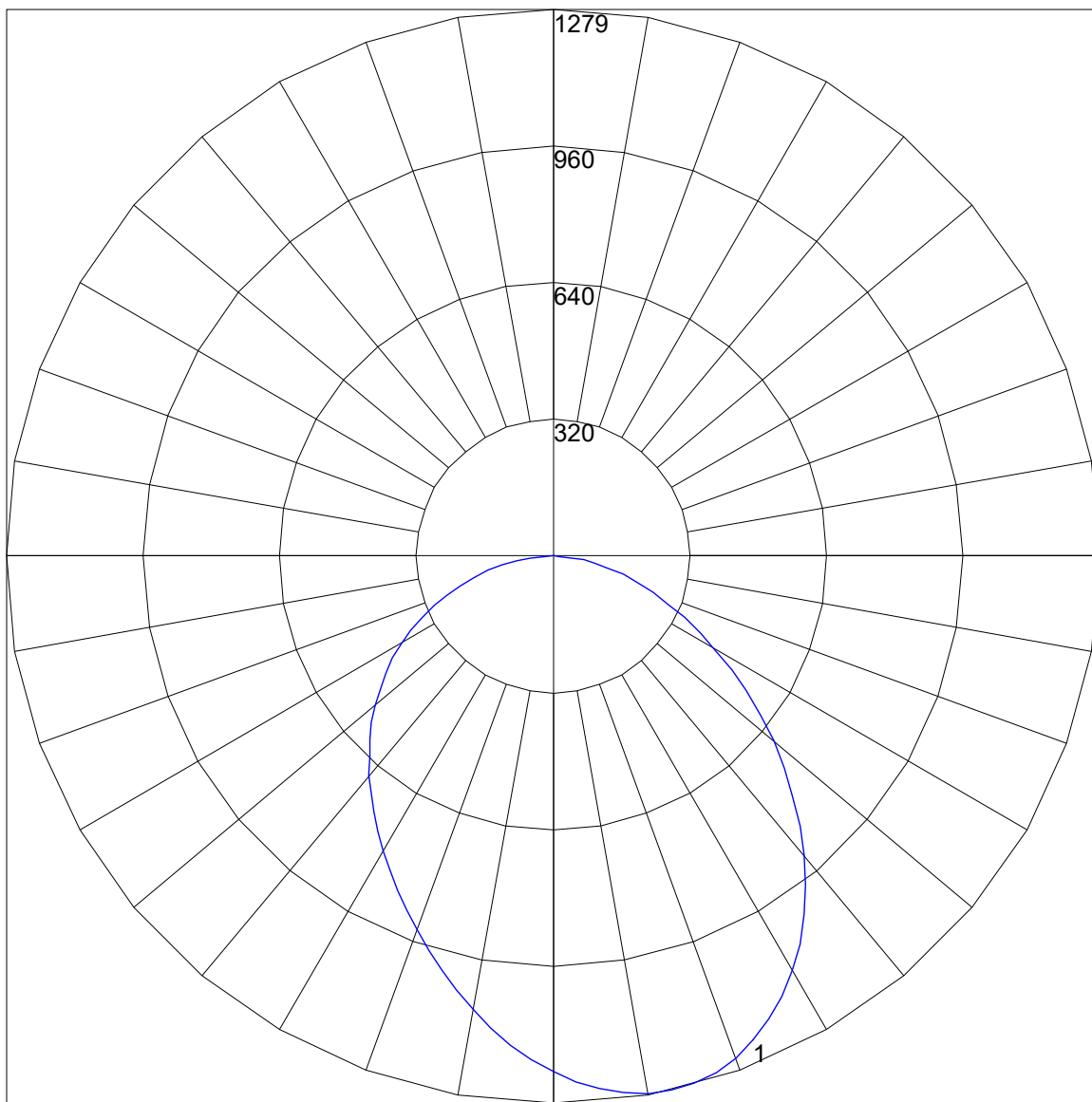
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	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	92	89	90	88	87	84
2	100	92	85	79	97	90	84	78	86	81	77	83	79	75	80	76	73	71
3	91	81	73	66	89	79	72	66	76	70	65	73	68	64	71	66	63	60
4	84	72	63	57	81	71	63	56	68	61	56	66	60	55	64	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	43	54	47	42	52	46	42	40
7	66	53	44	38	64	52	44	38	51	43	38	49	43	38	48	42	37	35
8	62	48	40	34	60	48	40	34	46	39	34	45	39	34	44	38	34	32
9	58	45	36	31	56	44	36	31	43	36	31	42	35	31	41	35	30	29
10	54	41	33	28	53	41	33	28	40	33	28	39	32	28	38	32	28	26

POLAR GRAPH



Maximum Candela = 1279.491 Located At Horizontal Angle = 0, Vertical Angle = 12.5  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)