

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 : 2D90 - HP-4C-ID-P-18IN7-8IN-H-S-835-ITL93249.041.IES

DESCRIPTION INFORMATION (From Photometric File)

[TEST]ITL93249.041 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]03/20/20

[ISSUEDATE]09/28/20

[MANUFAC]FINELITE, INC.

[LUMCAT]FINELITE HP-4C-ID-P-18in7-8in-H-S-835

[_INPUT_ELECTRICAL]120.0 VOLTS, 14.0 WATTS

[_INPUT_ELECTRICAL]277.0 VOLTS, 14.6 WATTS

[_ABSOLUTE]LUMENS]1623

[OTHER]see www.finelite.com for source file ITL93249. 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

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1623
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	116
Total Luminaire Watts	14
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 w/Sides
Luminous Length (0-180)	0.33 ft
Luminous Width (90-270)	2.88 ft
Luminous Height	0.02 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1860	1911	2012
55	1647	1709	1828
65	1440	1497	1650
75	1225	1258	1430
85	1048	1028	1196

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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	220.068	220.068	220.068	220.068	220.068	220.068	220.068	220.068	220.068
2.5	219.877	219.877	220.068	219.877	219.687	219.687	219.687	219.497	219.497
5.0	218.925	218.925	218.925	218.925	218.735	218.545	218.354	218.164	218.164
7.5	217.403	217.212	217.212	217.212	216.831	216.641	216.260	216.070	215.689
10.0	214.547	214.737	214.737	214.737	214.357	213.976	213.595	213.214	213.024
12.5	211.501	211.311	211.311	211.501	211.311	210.549	210.168	209.407	209.217
15.0	207.123	207.503	207.123	207.694	207.694	206.742	205.980	205.029	204.267
17.5	201.792	202.363	202.363	202.934	202.934	201.983	200.650	199.698	198.937
20.0	196.462	197.033	197.223	197.604	197.985	196.652	195.320	193.606	193.226
22.5	190.370	190.751	191.131	192.083	192.464	190.751	189.228	187.324	186.943
25.0	183.897	184.278	184.659	185.992	185.992	184.659	182.946	180.471	179.519
27.5	176.663	176.854	177.806	179.138	179.328	177.806	175.521	173.617	172.475
30.0	169.429	169.810	170.952	171.904	172.475	170.571	168.477	165.812	165.431
32.5	161.243	162.386	163.147	164.860	165.241	162.957	161.243	158.388	157.436
35.0	153.438	154.200	155.342	157.055	157.055	155.532	153.248	150.773	149.631
37.5	145.633	146.394	147.537	149.060	149.440	148.108	145.443	142.968	142.016
40.0	137.828	138.209	139.351	141.445	141.826	140.112	137.828	134.592	133.640
42.5	129.071	129.832	131.355	133.259	133.640	132.498	129.832	126.977	125.835
45.0	120.885	121.646	122.979	124.692	125.454	124.312	121.266	118.791	117.839
47.5	112.889	113.460	114.793	116.697	117.268	115.935	113.080	110.605	110.034
50.0	104.513	105.655	106.798	108.892	109.272	107.940	105.084	102.800	101.848
52.5	96.708	97.279	98.612	100.706	101.087	99.944	97.469	94.804	94.804
55.0	88.522	89.474	90.616	92.139	92.710	92.139	89.474	87.380	86.618
57.5	81.098	81.859	82.430	84.334	84.905	83.763	81.288	79.765	79.194
60.0	73.673	73.864	74.815	76.529	77.290	76.338	74.054	72.150	71.389
62.5	66.439	66.629	67.201	68.914	69.295	68.533	66.439	65.106	64.345
65.0	58.824	59.205	59.967	60.918	61.870	60.918	59.395	57.873	57.492
67.5	52.161	52.542	52.542	53.684	54.255	53.875	51.781	51.019	50.829
70.0	45.498	45.689	45.308	46.641	46.831	46.450	45.118	44.547	43.975
72.5	39.216	39.026	38.836	39.597	39.787	39.787	38.645	38.074	37.693
75.0	32.744	32.934	32.553	32.744	33.124	33.124	32.553	31.792	31.982
77.5	27.223	27.223	26.271	26.652	26.271	26.842	26.271	26.271	26.461
80.0	21.892	21.892	20.750	20.941	20.179	21.131	20.750	21.131	20.941
82.5	17.133	16.753	15.801	15.610	14.849	15.610	15.801	16.181	16.372
85.0	12.374	12.184	11.232	10.470	9.709	10.661	11.232	11.613	11.993
87.5	8.567	8.186	6.663	6.282	5.140	5.902	6.853	7.805	8.186
90.0	5.902	5.521	4.188	3.427	2.284	2.856	3.807	5.140	5.521
92.5	15.554	14.831	13.022	10.852	9.405	9.766	12.299	14.107	15.192
95.0	24.597	23.873	21.703	19.533	18.809	18.448	20.980	22.788	23.873
97.5	34.725	34.363	31.831	29.299	28.576	28.576	30.384	32.555	33.278
100.0	46.662	45.577	43.045	41.236	39.428	39.789	40.874	43.045	44.130
102.5	58.237	57.152	55.343	53.173	51.364	51.726	53.173	54.258	55.343
105.0	70.535	69.812	67.642	66.195	64.386	64.386	65.110	67.642	67.642
107.5	83.557	83.196	81.025	79.217	77.770	78.855	78.132	79.940	80.302
110.0	96.941	97.303	94.409	94.047	92.600	92.962	91.153	92.962	94.409
112.5	111.772	111.048	109.239	109.601	107.431	107.069	105.984	107.793	108.154
115.0	125.879	125.155	124.070	123.708	122.261	121.176	121.538	122.261	121.900
117.5	140.347	139.624	139.262	138.177	137.815	136.007	136.007	136.730	136.368
120.0	154.816	155.901	154.816	153.731	153.008	152.284	150.837	151.561	150.114
122.5	171.094	172.179	170.732	168.923	168.923	167.476	166.391	166.753	164.944
125.0	186.648	188.094	187.371	184.477	184.115	183.030	182.307	180.860	179.775
127.5	201.478	204.372	202.925	201.840	199.669	197.499	197.137	194.967	194.605
130.0	217.394	220.649	218.479	218.117	216.670	213.415	211.968	210.883	209.798
132.5	234.395	236.565	234.395	233.671	232.224	228.969	226.798	226.075	224.628

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 2D90 - HP-4C-ID-P-18IN7-8IN-H-S-835-ITL93249.041.IES****CANDELA TABULATION - (Cont.)**

135.0	249.948	251.757	250.672	249.225	248.502	245.246	242.714	241.991	241.267
137.5	265.502	266.949	266.949	264.779	263.694	260.438	258.630	257.183	256.459
140.0	282.142	282.142	281.780	280.695	279.248	276.354	273.460	272.737	271.290
142.5	296.610	296.972	296.610	295.525	295.525	291.546	289.014	287.567	286.120
145.0	310.717	311.079	311.079	309.632	310.356	306.015	304.207	302.398	301.675
147.5	325.548	325.186	324.463	323.016	324.101	320.122	317.952	316.867	315.782
150.0	338.208	338.208	337.846	336.761	337.123	333.506	332.059	330.974	329.165
152.5	350.145	350.868	349.783	349.060	349.783	346.889	344.719	343.634	341.825
155.0	362.082	362.805	361.358	360.635	361.720	358.826	356.656	355.933	354.847
157.5	372.572	373.295	371.848	370.763	372.210	369.316	368.593	367.507	366.061
160.0	381.253	381.976	380.891	380.891	381.253	379.083	378.359	377.636	376.189
162.5	389.211	390.296	389.934	388.849	389.934	388.487	387.764	387.040	386.317
165.0	396.807	397.530	397.168	396.445	397.530	395.722	395.360	394.998	394.275
167.5	403.680	403.318	403.318	402.956	403.680	402.956	402.594	402.233	401.871
170.0	408.744	408.744	408.382	409.105	408.744	408.020	408.020	408.020	408.020
172.5	413.084	412.723	412.723	413.084	412.723	412.723	412.723	412.361	412.361
175.0	415.978	415.616	415.616	415.616	415.616	415.616	415.616	415.616	415.978
177.5	417.425	417.425	417.425	417.425	417.425	417.425	417.425	417.425	417.425
180.0	418.148	418.148	418.148	418.148	418.148	418.148	418.148	418.148	418.148

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 2D90 - HP-4C-ID-P-18IN7-8IN-H-S-835-ITL93249.041.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	78.88	N.A.	4.90
0-30	163.45	N.A.	10.10
0-40	260.01	N.A.	16.00
0-60	435.18	N.A.	26.80
0-80	529.21	N.A.	32.60
0-90	541.89	N.A.	33.40
10-90	521.16	N.A.	32.10
20-40	181.13	N.A.	11.20
20-50	275.56	N.A.	17.00
40-70	234.49	N.A.	14.50
60-80	94.03	N.A.	5.80
70-80	34.71	N.A.	2.10
80-90	12.67	N.A.	0.80
90-110	94.94	N.A.	5.90
90-120	216.85	N.A.	13.40
90-130	381.55	N.A.	23.50
90-150	764.26	N.A.	47.10
90-180	1080.86	N.A.	66.60
110-180	985.92	N.A.	60.80
0-180	1622.74	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	20.73
10-20	58.16
20-30	84.57
30-40	96.56
40-50	94.43
50-60	80.73
60-70	59.33
70-80	34.71
80-90	12.67
90-100	24.00
100-110	70.95
110-120	121.91
120-130	164.70
130-140	190.46
140-150	192.26
150-160	165.43
160-170	111.71
170-180	39.45

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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	103	103	103	103	93	93	93	93	74	74	74	57	57	57	41	41	41	33
1	94	90	86	83	85	81	78	75	65	63	61	50	48	47	36	35	34	28
2	86	78	72	67	77	71	66	62	57	53	50	44	41	39	32	30	29	24
3	78	69	62	56	70	62	56	51	50	46	42	39	36	33	28	26	25	20
4	71	61	53	47	64	55	49	44	44	40	36	34	31	29	25	23	21	17
5	65	54	46	41	59	49	42	37	40	35	31	31	27	25	23	20	19	15
6	60	49	41	35	54	44	37	32	36	31	27	28	24	22	21	18	16	13
7	56	44	36	31	50	40	33	28	32	27	24	25	22	19	19	16	15	12
8	52	40	32	27	46	36	30	25	29	24	21	23	20	17	17	15	13	11
9	48	36	29	24	43	33	27	22	27	22	19	21	18	15	16	14	12	10
10	45	33	26	21	40	30	24	20	25	20	17	20	16	14	15	12	11	9

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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

X=2H	Y=2H	8.1	8.8	9.2	9.9	11.4	8.2	8.9	9.3	10.0	11.5
	3H	9.8	10.4	10.9	11.5	13.0	9.8	10.4	10.9	11.5	13.0
	4H	10.4	11.0	11.5	12.1	13.7	10.4	11.0	11.5	12.1	13.6
	6H	11.0	11.5	12.1	12.6	14.2	10.8	11.3	11.9	12.4	14.0
	8H	11.2	11.7	12.3	12.8	14.3	10.9	11.4	12.0	12.6	14.1
	12H	11.3	11.8	12.5	13.0	14.5	11.0	11.5	12.1	12.6	14.1

UGR Viewed Endwise

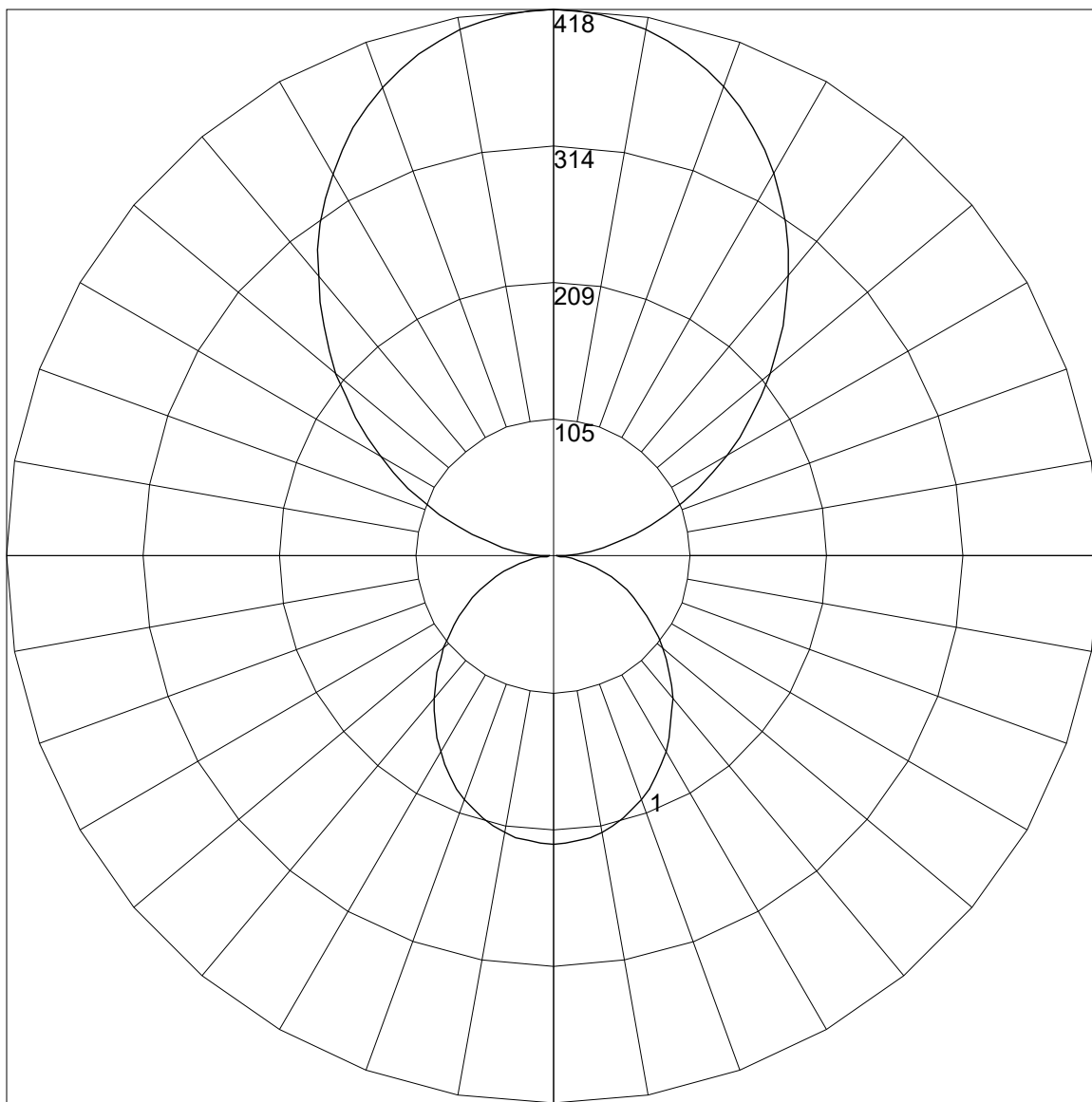
4H	2H	8.6	9.2	9.7	10.3	11.8	8.6	9.3	9.8	10.4	11.9
	3H	10.5	11.0	11.6	12.1	13.6	10.5	11.0	11.6	12.1	13.6
	4H	11.2	11.7	12.4	12.8	14.4	11.2	11.6	12.3	12.8	14.3
	6H	11.9	12.3	13.0	13.5	15.0	11.7	12.1	12.8	13.3	14.8
	8H	12.2	12.6	13.3	13.7	15.3	11.9	12.3	13.0	13.4	15.0
	12H	12.4	12.8	13.6	13.9	15.5	12.0	12.3	13.2	13.5	15.0

8H	4H	11.5	11.8	12.6	13.0	14.5	11.4	11.8	12.5	12.9	14.5
	6H	12.3	12.6	13.4	13.8	15.3	12.1	12.4	13.2	13.6	15.1
	8H	12.7	12.9	13.8	14.1	15.7	12.3	12.6	13.5	13.8	15.3
	12H	13.0	13.2	14.2	14.4	16.0	12.5	12.8	13.7	13.9	15.5

12H	4H	11.5	11.8	12.6	12.9	14.5	11.4	11.7	12.6	12.9	14.4
	6H	12.3	12.6	13.5	13.7	15.3	12.1	12.4	13.3	13.6	15.1
	8H	12.7	13.0	13.9	14.1	15.7	12.4	12.7	13.6	13.8	15.4

Maximum UGR = 16.0

POLAR GRAPH



Maximum Candela = 418.148 Located At Horizontal Angle = 0, Vertical Angle = 180
1 - Vertical Plane Through Horizontal Angles (90 - 270)