

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-V-S-835-ITL93249.038.IES

DESCRIPTION INFORMATION (From Photometric File)

[TEST]ITL93249.038 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-V-S-835

[_INPUT_ELECTRICAL]120.0 VOLTS, 16.5 WATTS

[_INPUT_ELECTRICAL]277.0 VOLTS, 17.2 WATTS

[_ABSOLUTE]LUMENS]1932

[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	1931
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	117
Total Luminaire Watts	16.5
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	19.997	19.067	16.742	13.951	12.091	12.556	15.812	18.137	19.532
95.0	31.623	30.693	27.903	25.112	24.182	23.717	26.973	29.298	30.693
97.5	44.644	44.179	40.924	37.669	36.739	36.739	39.064	41.854	42.784
100.0	59.991	58.596	55.340	53.015	50.690	51.155	52.550	55.340	56.736
102.5	74.872	73.477	71.152	68.362	66.036	66.501	68.362	69.757	71.152
105.0	90.684	89.754	86.963	85.103	82.778	82.778	83.708	86.963	86.963
107.5	107.425	106.960	104.170	101.845	99.985	101.380	100.450	102.775	103.240
110.0	124.632	125.097	121.377	120.912	119.052	119.517	117.191	119.517	121.377
112.5	143.699	142.769	140.444	140.909	138.118	137.653	136.258	138.583	139.048
115.0	161.836	160.906	159.510	159.045	157.185	155.790	156.255	157.185	156.720
117.5	180.438	179.507	179.042	177.647	177.182	174.857	174.857	175.787	175.322
120.0	199.039	200.434	199.039	197.644	196.714	195.784	193.924	194.854	192.994
122.5	219.966	221.361	219.501	217.176	217.176	215.316	213.921	214.386	212.060
125.0	239.963	241.823	240.893	237.173	236.708	235.313	234.383	232.523	231.127
127.5	259.030	262.750	260.890	259.495	256.705	253.915	253.450	250.659	250.194
130.0	279.492	283.678	280.887	280.422	278.562	274.377	272.516	271.121	269.726
132.5	301.349	304.139	301.349	300.419	298.559	294.373	291.583	290.653	288.793

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 2D90 - HP-4C-ID-P-18IN7-8IN-V-S-835-ITL93249.038.IES****CANDELA TABULATION - (Cont.)**

135.0	321.346	323.671	322.276	320.416	319.486	315.300	312.045	311.115	310.185
137.5	341.343	343.203	343.203	340.413	339.018	334.832	332.507	330.647	329.717
140.0	362.735	362.735	362.270	360.875	359.015	355.294	351.574	350.644	348.784
142.5	381.337	381.802	381.337	379.942	379.942	374.826	371.571	369.711	367.851
145.0	399.474	399.939	399.939	398.079	399.009	393.428	391.103	388.778	387.848
147.5	418.541	418.075	417.145	415.285	416.680	411.565	408.775	407.379	405.984
150.0	434.817	434.817	434.352	432.957	433.422	428.772	426.911	425.516	423.191
152.5	450.164	451.094	449.699	448.768	449.699	445.978	443.188	441.793	439.467
155.0	465.510	466.440	464.580	463.650	465.045	461.325	458.534	457.604	456.209
157.5	478.996	479.926	478.066	476.671	478.531	474.811	473.881	472.486	470.625
160.0	490.157	491.087	489.692	489.692	490.157	487.367	486.437	485.507	483.647
162.5	500.388	501.784	501.318	499.923	501.318	499.458	498.528	497.598	496.668
165.0	510.154	511.084	510.619	509.689	511.084	508.759	508.294	507.829	506.899
167.5	518.990	518.525	518.525	518.060	518.990	518.060	517.595	517.130	516.665
170.0	525.501	525.501	525.036	525.966	525.501	524.571	524.571	524.571	524.571
172.5	531.081	530.616	530.616	531.081	530.616	530.616	530.616	530.151	530.151
175.0	534.802	534.337	534.337	534.337	534.337	534.337	534.337	534.337	534.802
177.5	536.662	536.662	536.662	536.662	536.662	536.662	536.662	536.662	536.662
180.0	537.592	537.592	537.592	537.592	537.592	537.592	537.592	537.592	537.592

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 2D90 - HP-4C-ID-P-18IN7-8IN-V-S-835-ITL93249.038.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	78.88	N.A.	4.10
0-30	163.45	N.A.	8.50
0-40	260.01	N.A.	13.50
0-60	435.18	N.A.	22.50
0-80	529.21	N.A.	27.40
0-90	541.89	N.A.	28.10
10-90	521.16	N.A.	27.00
20-40	181.13	N.A.	9.40
20-50	275.56	N.A.	14.30
40-70	234.49	N.A.	12.10
60-80	94.03	N.A.	4.90
70-80	34.71	N.A.	1.80
80-90	12.67	N.A.	0.70
90-110	121.90	N.A.	6.30
90-120	278.63	N.A.	14.40
90-130	490.38	N.A.	25.40
90-150	982.42	N.A.	50.90
90-180	1389.45	N.A.	71.90
110-180	1267.54	N.A.	65.60
0-180	1931.33	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	30.69
100-110	91.21
110-120	156.73
120-130	211.75
130-140	244.86
140-150	247.18
150-160	212.69
160-170	143.62
170-180	50.72

IES INDOOR REPORT

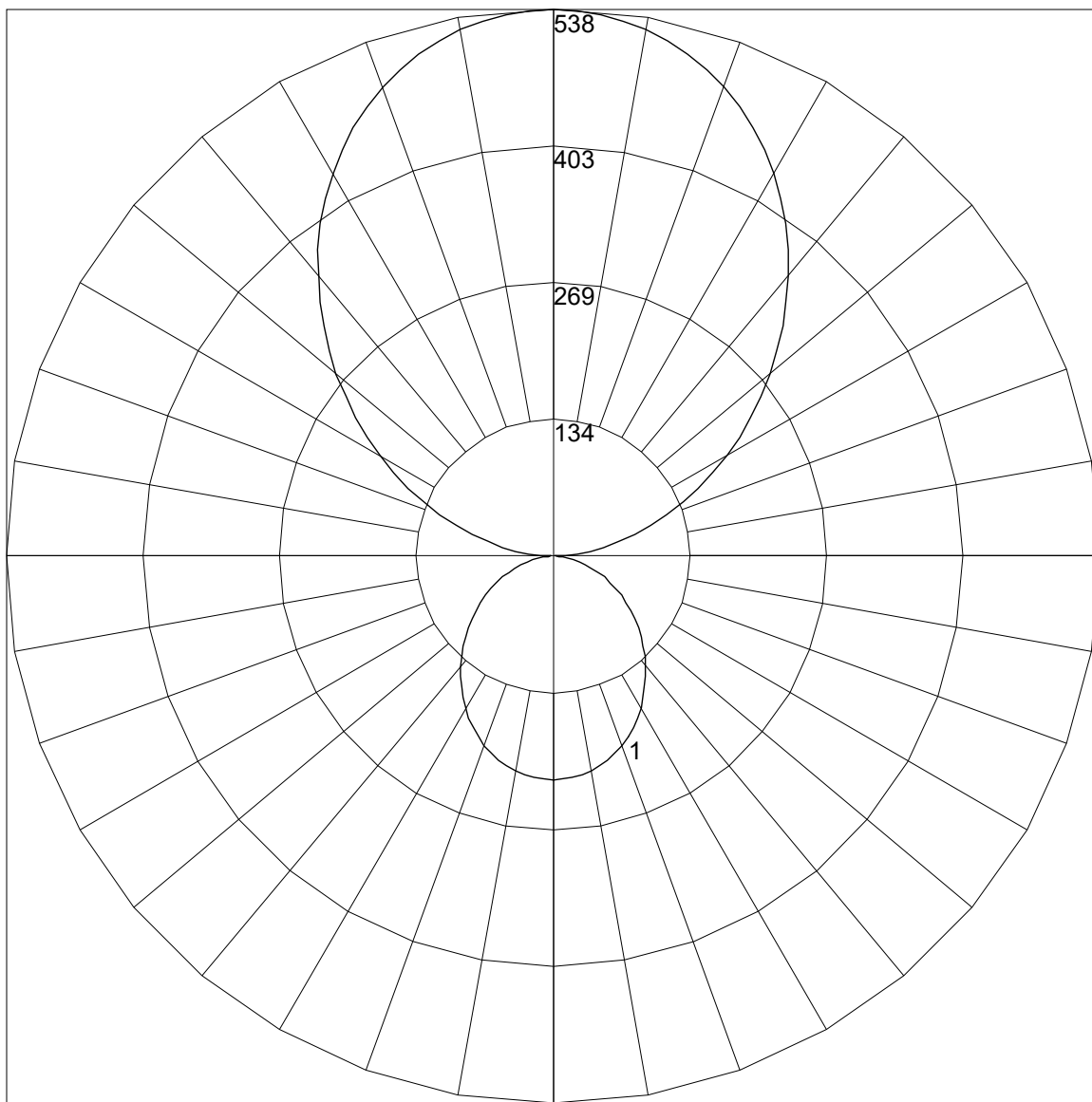
PHOTOMETRIC FILENAME : 2D90 - HP-4C-ID-P-18IN7-8IN-V-S-835-ITL93249.038.IES

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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	28
1	93	89	85	82	83	79	76	73	62	60	58	46	45	44	32	31	30	24
2	85	77	72	67	75	69	64	60	54	51	48	41	38	37	28	27	26	20
3	77	68	61	55	69	61	55	50	48	44	40	36	33	31	25	23	22	17
4	70	60	53	47	63	54	48	43	43	38	34	32	29	26	22	20	19	14
5	65	53	46	40	58	48	41	36	38	33	30	29	25	23	20	18	16	13
6	59	48	40	34	53	43	36	32	34	29	26	26	23	20	18	16	14	11
7	55	43	35	30	49	39	32	28	31	26	23	24	20	18	17	14	13	10
8	51	39	32	26	45	35	29	24	28	23	20	21	18	16	15	13	11	9
9	47	35	28	23	42	32	26	21	26	21	18	20	16	14	14	12	10	8
10	44	32	25	21	39	29	23	19	24	19	16	18	15	13	13	11	9	7

POLAR GRAPH



Maximum Candela = 537.592 Located At Horizontal Angle = 0, Vertical Angle = 180
1 - Vertical Plane Through Horizontal Angles (90 - 270)