

# 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 : HPO-ID-4FT-B-S-835-WSO-F-ITL92549.312.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

[TEST]ITL92549.312 Family Correlation File  
[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.  
[TESTDATE]11/20/19  
[ISSUEDATE]09/09/20  
[MANUFAC]FINELITE, INC.  
[LUMCAT]HPO-ID-4ft-B-S-835-WSO-F  
[INPUT\_ELECTRICAL]120.0 VOLTS, 30.7 WATTS  
[INPUT\_ELECTRICAL]277.0 VOLTS, 32.6 WATTS  
[ABSOLUTE LUMENS]3813  
[OTHER]see [www.finelite.com](http://www.finelite.com) for source files ITL92549. 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	3812
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	124
Total Luminaire Watts	30.7
Ballast Factor	1.00
CIE Type	General Diffuse
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)	4.00 ft
Luminous Width (90-270)	0.20 ft
Luminous Height	0.00 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	7250	7250	7195
55	7009	7009	6941
65	6671	6671	6644
75	6144	6230	6252
85	5423	5742	5806

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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>
0.0	562.842	562.842	562.842	562.842	562.842
2.5	561.614	562.024	562.024	562.024	562.433
5.0	559.568	559.977	559.977	559.977	560.386
7.5	556.702	557.112	557.521	557.521	557.521
10.0	552.609	552.199	553.018	553.018	552.199
12.5	548.106	546.059	548.106	548.515	547.287
15.0	541.147	538.691	541.147	541.557	540.329
17.5	533.779	530.095	533.370	533.779	531.732
20.0	525.183	520.271	523.955	524.364	522.727
22.5	515.768	509.628	513.721	514.131	512.494
25.0	503.488	498.576	502.260	502.669	501.441
27.5	490.798	486.705	489.980	490.798	489.161
30.0	477.700	472.788	477.290	476.472	475.653
32.5	462.963	458.461	462.554	462.145	460.917
35.0	447.818	443.724	446.999	446.590	444.952
37.5	431.035	427.351	431.035	430.216	428.988
40.0	413.433	410.159	414.252	413.024	412.205
42.5	395.832	392.966	396.241	395.013	392.966
45.0	377.411	374.546	377.411	375.774	374.546
47.5	357.354	355.307	357.763	356.126	355.716
50.0	337.705	334.840	338.115	336.068	335.249
52.5	316.829	314.782	316.829	315.601	314.373
55.0	295.953	293.906	295.953	294.315	293.087
57.5	274.258	272.620	273.848	273.030	272.211
60.0	252.153	250.516	252.153	250.925	250.925
62.5	229.230	228.002	229.640	228.412	229.230
65.0	207.535	206.307	207.535	206.717	206.717
67.5	184.203	183.384	185.022	184.203	185.431
70.0	162.099	161.689	162.508	162.508	162.508
72.5	138.766	139.176	140.404	140.813	141.222
75.0	117.071	117.071	118.709	119.118	119.118
77.5	95.376	96.195	97.013	98.242	98.242
80.0	74.909	75.318	76.547	76.956	77.775
82.5	54.852	55.261	56.489	57.308	57.308
85.0	34.794	35.203	36.841	37.659	37.250
87.5	15.964	16.374	17.602	18.420	18.830
90.0	0.000	0.000	0.000	0.000	0.000
92.5	7.204	20.069	43.225	22.127	19.040
95.0	19.040	42.710	110.121	50.944	40.138
97.5	32.419	63.808	203.775	98.286	72.042
100.0	45.798	82.848	305.663	170.842	117.325
102.5	59.692	97.256	382.851	292.284	193.484
105.0	74.615	112.179	417.328	474.961	334.994
107.5	89.023	126.588	416.813	687.485	557.809
110.0	102.917	140.996	404.978	815.102	773.420
112.5	117.840	156.434	396.230	854.210	891.775
115.0	133.277	171.871	392.628	850.093	936.544
117.5	149.230	188.338	394.172	826.937	942.204
120.0	162.609	202.232	395.715	795.547	926.766
122.5	175.988	214.582	397.774	764.158	898.979
125.0	187.309	225.388	399.832	732.253	865.016
127.5	197.600	235.165	400.861	700.864	827.452
130.0	206.863	243.398	401.376	672.047	790.402
132.5	215.611	251.117	400.861	643.230	753.352

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CANDELA TABULATION - (Cont.)

135.0	224.359	258.321	398.803	615.958	715.272
137.5	233.107	264.496	395.201	589.199	678.737
140.0	241.855	271.701	390.569	560.897	640.657
142.5	250.088	277.875	384.395	532.080	601.549
145.0	258.836	284.051	378.220	504.807	564.499
147.5	267.069	289.196	372.044	479.078	529.507
150.0	274.273	294.342	365.870	454.378	495.545
152.5	281.992	298.974	360.209	432.251	464.670
155.0	288.682	303.090	354.549	412.182	437.911
157.5	295.371	306.692	349.403	394.172	414.240
160.0	301.546	310.809	344.772	379.249	394.172
162.5	307.207	314.411	340.140	366.384	377.190
165.0	311.323	316.984	336.024	355.063	361.753
167.5	315.440	319.557	332.422	345.286	349.917
170.0	318.528	321.615	329.334	338.082	340.655
172.5	321.101	323.159	327.276	331.907	333.965
175.0	322.644	323.674	325.732	327.276	328.305
177.5	324.188	324.703	325.217	325.732	325.217
180.0	324.188	324.188	324.188	324.188	324.188

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	205.78	N.A.	5.40
0-30	436.94	N.A.	11.50
0-40	715.88	N.A.	18.80
0-60	1269.13	N.A.	33.30
0-80	1598.97	N.A.	41.90
0-90	1639.32	N.A.	43.00
10-90	1586.08	N.A.	41.60
20-40	510.10	N.A.	13.40
20-50	800.00	N.A.	21.00
40-70	757.88	N.A.	19.90
60-80	329.84	N.A.	8.70
70-80	125.21	N.A.	3.30
80-90	40.35	N.A.	1.10
90-110	394.44	N.A.	10.30
90-120	871.03	N.A.	22.80
90-130	1293.18	N.A.	33.90
90-150	1879.44	N.A.	49.30
90-180	2172.92	N.A.	57.00
110-180	1778.48	N.A.	46.70
0-180	3812.24	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	53.24
10-20	152.54
20-30	231.17
30-40	278.94
40-50	289.90
50-60	263.35
60-70	204.63
70-80	125.21
80-90	40.35
90-100	72.78
100-110	321.66
110-120	476.59
120-130	422.15
130-140	337.64
140-150	248.62
150-160	166.57
160-170	95.70
170-180	31.22

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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	105	105	105	105	96	96	96	96	79	79	79	64	64	64	50	50	50	43
1	96	92	88	84	87	84	80	77	69	67	65	56	54	53	43	42	41	36
2	87	80	73	68	79	73	68	63	60	56	53	49	46	44	38	36	35	30
3	79	70	62	57	72	64	58	52	53	48	44	43	39	37	33	31	29	25
4	72	62	54	48	66	57	50	44	47	42	38	38	34	31	30	27	25	21
5	66	55	47	41	60	50	43	38	42	36	32	34	30	27	27	24	22	18
6	61	49	41	35	56	45	38	33	38	32	28	31	27	23	24	21	19	16
7	56	44	36	31	51	41	34	29	34	29	25	28	24	21	22	19	17	14
8	52	40	32	27	48	37	30	25	31	26	22	25	21	18	20	17	15	12
9	49	36	29	24	44	34	27	22	28	23	19	23	19	16	19	16	13	11
10	45	33	26	21	41	31	24	20	26	21	17	22	18	15	17	14	12	10

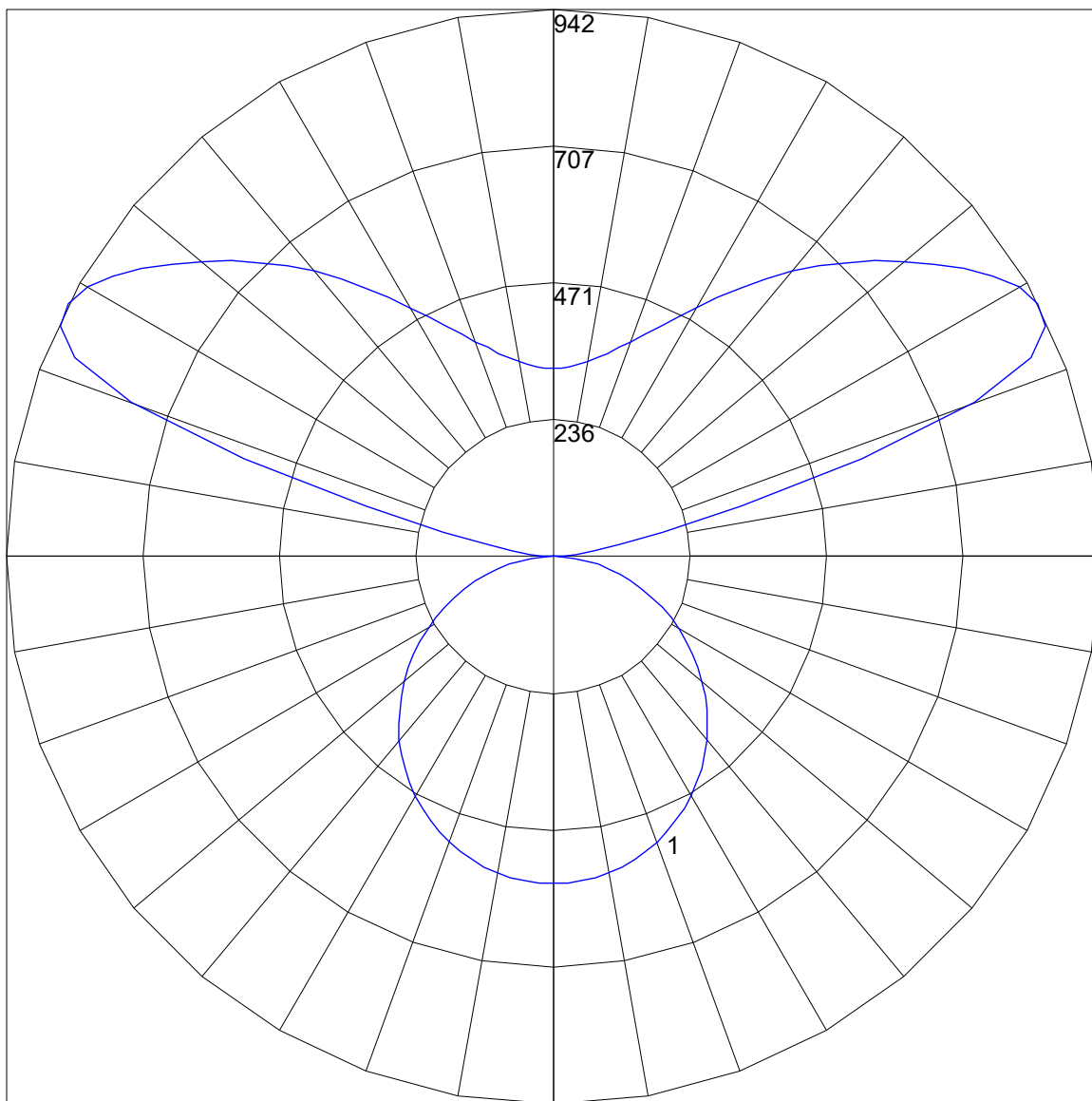
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**UGR TABLE - CORRECTED**

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					UGR Viewed Endwise				
X=2H	Y=2H	14.4	15.2	15.4	16.2	17.6	14.4	15.2	15.4	16.2	17.6
	3H	16.2	17.0	17.2	18.0	19.4	16.2	17.0	17.3	18.0	19.4
	4H	16.9	17.6	18.0	18.7	20.1	17.0	17.7	18.0	18.7	20.1
	6H	17.5	18.1	18.5	19.2	20.6	17.6	18.2	18.6	19.2	20.6
	8H	17.7	18.3	18.7	19.3	20.7	17.8	18.4	18.8	19.4	20.8
	12H	17.8	18.4	18.9	19.4	20.9	17.9	18.5	19.0	19.5	21.0
4H	2H	15.0	15.7	16.0	16.7	18.1	15.0	15.7	16.0	16.7	18.1
	3H	17.0	17.6	18.1	18.7	20.1	17.0	17.6	18.1	18.7	20.1
	4H	17.9	18.4	18.9	19.5	20.9	17.9	18.4	19.0	19.5	20.9
	6H	18.6	19.0	19.6	20.1	21.5	18.6	19.1	19.7	20.2	21.6
	8H	18.8	19.2	19.9	20.3	21.7	18.9	19.3	20.0	20.4	21.8
	12H	19.0	19.4	20.1	20.4	21.9	19.1	19.5	20.2	20.6	22.0
8H	4H	18.2	18.6	19.2	19.7	21.1	18.2	18.6	19.3	19.7	21.1
	6H	19.0	19.4	20.1	20.5	21.9	19.1	19.4	20.2	20.5	22.0
	8H	19.4	19.7	20.5	20.8	22.2	19.5	19.8	20.5	20.9	22.3
	12H	19.6	19.9	20.7	21.0	22.5	19.7	20.0	20.8	21.1	22.6
12H	4H	18.2	18.6	19.3	19.6	21.1	18.2	18.6	19.3	19.7	21.1
	6H	19.1	19.4	20.2	20.5	22.0	19.1	19.5	20.2	20.5	22.0
	8H	19.5	19.7	20.6	20.8	22.3	19.6	19.8	20.7	20.9	22.4

Maximum UGR = 22.6

POLAR GRAPH



Maximum Candela = 942.204 Located At Horizontal Angle = 90, Vertical Angle = 117.5  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)