

# 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-H-B-835-WSO-F-ITL92549.308.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

[TEST]ITL92549.308 Family Correlation File  
[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.  
[TESTDATE]11/20/19  
[ISSUE DATE]09/09/20  
[MANUFAC]FINELITE, INC.  
[LUMCAT]HPO-ID-4ft-H-B-835-WSO-F  
[INPUT\_ELECTRICAL]120.0 VOLTS, 43.6 WATTS  
[INPUT\_ELECTRICAL]277.0 VOLTS, 44.7 WATTS  
[ABSOLUTE LUMENS]5346  
[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	5345
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	123
Total Luminaire Watts	43.6
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)	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	9114	9114	9045
55	8811	8811	8726
65	8386	8386	8353
75	7724	7832	7859
85	6817	7218	7298

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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	707.554	707.554	707.554	707.554	707.554
2.5	706.010	706.524	706.524	706.524	707.039
5.0	703.437	703.951	703.951	703.951	704.466
7.5	699.835	700.349	700.864	700.864	700.864
10.0	694.689	694.174	695.203	695.203	694.174
12.5	689.028	686.456	689.028	689.543	687.999
15.0	680.281	677.193	680.281	680.795	679.251
17.5	671.018	666.387	670.503	671.018	668.445
20.0	660.212	654.037	658.668	659.183	657.124
22.5	648.376	640.657	645.803	646.318	644.260
25.0	632.939	626.764	631.395	631.910	630.366
27.5	616.987	611.841	615.958	616.987	614.928
30.0	600.520	594.345	600.005	598.976	597.947
32.5	581.995	576.334	581.480	580.966	579.422
35.0	562.955	557.809	561.926	561.411	559.353
37.5	541.857	537.226	541.857	540.828	539.284
40.0	519.730	515.614	520.759	519.216	518.187
42.5	497.603	494.001	498.118	496.574	494.001
45.0	474.447	470.845	474.447	472.388	470.845
47.5	449.232	446.659	449.747	447.688	447.174
50.0	424.532	420.930	425.047	422.474	421.445
52.5	398.288	395.715	398.288	396.745	395.201
55.0	372.044	369.472	372.044	369.986	368.442
57.5	344.772	342.713	344.257	343.228	342.199
60.0	316.984	314.926	316.984	315.440	315.440
62.5	288.167	286.624	288.682	287.138	288.167
65.0	260.894	259.350	260.894	259.865	259.865
67.5	231.563	230.534	232.592	231.563	233.107
70.0	203.775	203.261	204.290	204.290	204.290
72.5	174.444	174.959	176.502	177.017	177.532
75.0	147.171	147.171	149.230	149.744	149.744
77.5	119.898	120.927	121.956	123.500	123.500
80.0	94.169	94.684	96.227	96.742	97.771
82.5	68.954	69.469	71.013	72.042	72.042
85.0	43.740	44.254	46.313	47.342	46.827
87.5	20.069	20.583	22.127	23.156	23.671
90.0	0.000	0.000	0.000	0.000	0.000
92.5	10.890	30.335	65.338	33.447	28.780
95.0	28.780	64.560	166.456	77.005	60.671
97.5	49.003	96.451	308.021	148.566	108.896
100.0	69.227	125.231	462.032	258.240	177.346
102.5	90.229	147.010	578.707	441.809	292.465
105.0	112.786	169.567	630.822	717.939	506.368
107.5	134.565	191.347	630.044	1039.183	843.170
110.0	155.566	213.126	612.154	1232.086	1169.081
112.5	178.124	236.461	598.930	1291.201	1347.983
115.0	201.458	259.796	593.486	1284.978	1415.654
117.5	225.571	284.686	595.819	1249.976	1424.210
120.0	245.795	305.688	598.153	1202.528	1400.875
122.5	266.018	324.356	601.264	1155.080	1358.872
125.0	283.131	340.690	604.375	1106.855	1307.535
127.5	298.687	355.469	605.931	1059.407	1250.754
130.0	312.688	367.914	606.709	1015.848	1194.750
132.5	325.911	379.582	605.931	972.290	1138.746

CANDELA TABULATION - (Cont.)

135.0	339.135	390.472	602.820	931.065	1081.186
137.5	352.358	399.806	597.375	890.617	1025.960
140.0	365.581	410.695	590.374	847.837	968.401
142.5	378.026	420.029	581.040	804.278	909.285
145.0	391.249	429.363	571.706	763.053	853.281
147.5	403.695	437.142	562.372	724.161	800.389
150.0	414.584	444.920	553.038	686.826	749.052
152.5	426.252	451.920	544.482	653.379	702.382
155.0	436.364	458.143	535.926	623.043	661.935
157.5	446.475	463.588	528.148	595.819	626.155
160.0	455.809	469.810	521.147	573.262	595.819
162.5	464.366	475.255	514.147	553.816	570.151
165.0	470.588	479.144	507.924	536.704	546.816
167.5	476.811	483.034	502.479	521.925	528.926
170.0	481.478	486.145	497.812	511.035	514.925
172.5	485.367	488.478	494.701	501.702	504.813
175.0	487.701	489.256	492.367	494.701	496.257
177.5	490.034	490.812	491.590	492.367	491.590
180.0	490.034	490.034	490.034	490.034	490.034

# **ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	258.68	N.A.	4.80
0-30	549.28	N.A.	10.30
0-40	899.94	N.A.	16.80
0-60	1595.43	N.A.	29.80
0-80	2010.07	N.A.	37.60
0-90	2060.8	N.A.	38.60
10-90	1993.87	N.A.	37.30
20-40	641.26	N.A.	12.00
20-50	1005.69	N.A.	18.80
40-70	952.73	N.A.	17.80
60-80	414.64	N.A.	7.80
70-80	157.40	N.A.	2.90
80-90	50.73	N.A.	0.90
90-110	596.23	N.A.	11.20
90-120	1316.62	N.A.	24.60
90-130	1954.74	N.A.	36.60
90-150	2840.91	N.A.	53.10
90-180	3284.53	N.A.	61.40
110-180	2688.31	N.A.	50.30
0-180	5345.33	N.A.	100.00

Total Luminaire Efficiency = N.A. %

# **ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	66.93
10-20	191.76
20-30	290.60
30-40	350.65
40-50	364.43
50-60	331.06
60-70	257.24
70-80	157.40
80-90	50.73
90-100	110.02
100-110	486.21
110-120	720.40
120-130	638.11
130-140	510.36
140-150	375.81
150-160	251.78
160-170	144.65
170-180	47.19

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	95	95	95	95	77	77	77	61	61	61	46	46	46	39
1	95	91	87	83	86	82	79	76	67	65	63	53	51	50	40	39	38	32
2	86	79	73	68	78	72	67	62	58	55	51	46	44	41	35	33	32	26
3	79	69	62	56	71	63	57	52	51	47	43	41	37	35	31	29	27	22
4	72	61	53	47	65	56	49	44	46	40	36	36	32	30	27	25	23	19
5	66	54	46	40	59	50	42	37	41	35	31	32	28	25	25	22	20	16
6	60	48	40	35	55	44	37	32	36	31	27	29	25	22	22	19	17	14
7	56	44	36	30	50	40	33	28	33	28	24	26	22	20	20	17	15	13
8	52	40	32	27	47	36	29	25	30	25	21	24	20	17	19	16	14	11
9	48	36	29	24	44	33	26	22	27	22	19	22	18	15	17	14	12	10
10	45	33	26	21	41	30	24	20	25	20	17	20	17	14	16	13	11	9

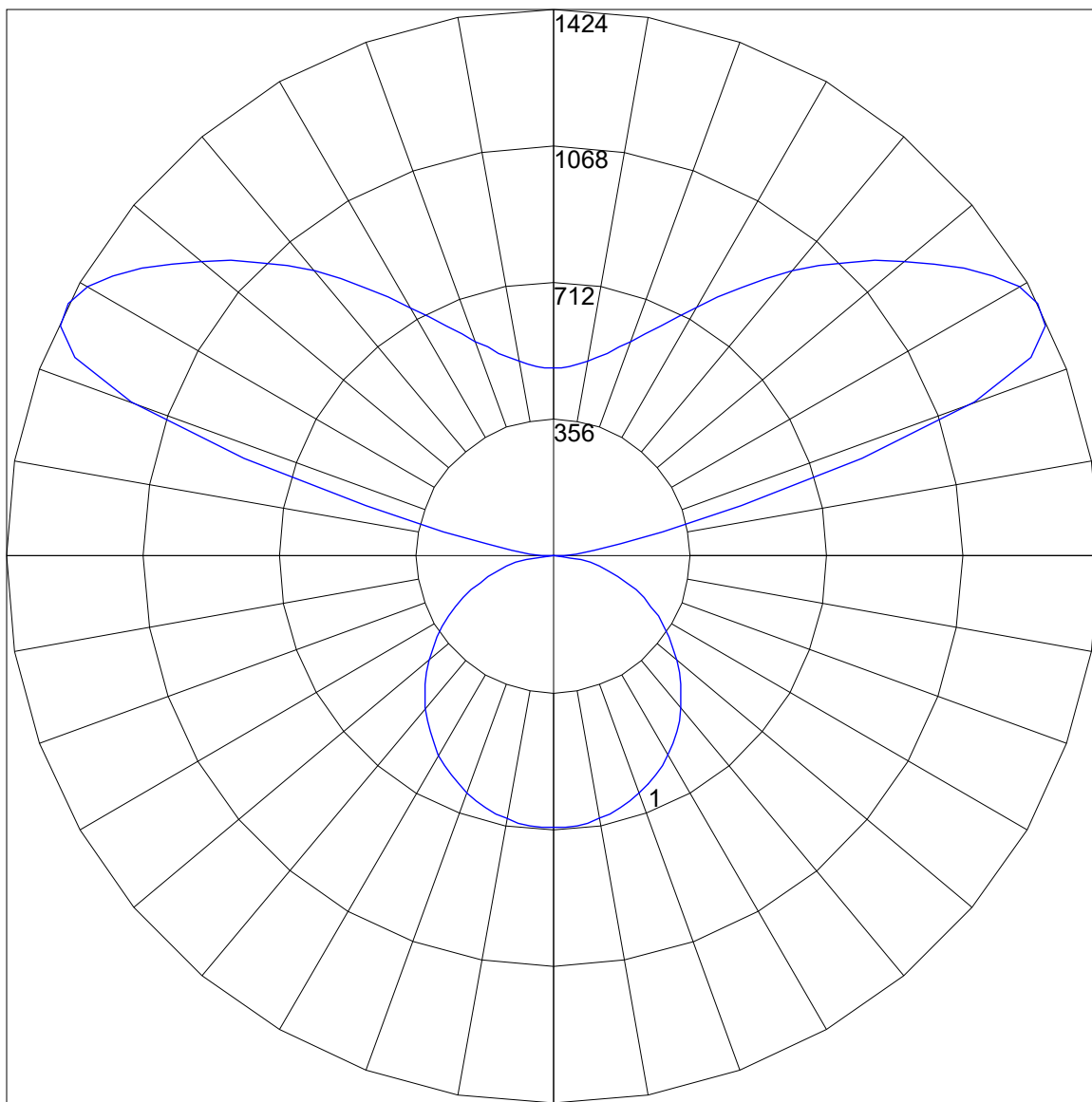
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**UGR TABLE - CORRECTED**

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					UGR Viewed Endwise				
X=2H	Y=2H	14.7	15.5	15.8	16.6	18.0	14.7	15.5	15.8	16.6	18.0
	3H	16.6	17.3	17.6	18.3	19.8	16.6	17.3	17.6	18.4	19.8
	4H	17.3	18.0	18.3	19.0	20.5	17.3	18.0	18.4	19.0	20.5
	6H	17.8	18.5	18.9	19.5	21.0	17.9	18.5	19.0	19.6	21.0
	8H	18.0	18.6	19.1	19.7	21.1	18.1	18.7	19.2	19.8	21.2
	12H	18.2	18.7	19.2	19.8	21.3	18.2	18.8	19.3	19.9	21.4
4H	2H	15.3	16.0	16.4	17.0	18.5	15.3	16.0	16.4	17.0	18.5
	3H	17.4	17.9	18.4	19.0	20.5	17.4	17.9	18.5	19.0	20.5
	4H	18.2	18.7	19.3	19.8	21.3	18.3	18.8	19.3	19.8	21.3
	6H	18.9	19.3	20.0	20.4	21.9	19.0	19.4	20.1	20.5	22.0
	8H	19.1	19.6	20.2	20.7	22.1	19.2	19.7	20.3	20.7	22.2
	12H	19.3	19.7	20.4	20.8	22.3	19.4	19.8	20.5	20.9	22.4
8H	4H	18.5	18.9	19.6	20.0	21.5	18.5	19.0	19.6	20.0	21.5
	6H	19.3	19.7	20.5	20.8	22.3	19.4	19.8	20.5	20.9	22.4
	8H	19.7	20.0	20.8	21.1	22.6	19.8	20.1	20.9	21.2	22.7
	12H	20.0	20.2	21.1	21.3	22.9	20.1	20.3	21.2	21.5	23.0
12H	4H	18.5	18.9	19.6	20.0	21.5	18.5	18.9	19.7	20.0	21.5
	6H	19.4	19.7	20.5	20.8	22.4	19.5	19.8	20.6	20.9	22.4
	8H	19.8	20.1	20.9	21.2	22.7	19.9	20.2	21.0	21.3	22.8

Maximum UGR = 23.0

POLAR GRAPH



Maximum Candela = 1424.21 Located At Horizontal Angle = 90, Vertical Angle = 117.5  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)