

# 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-P-ID-4FT-H-S-835-RT-RB-RE-ITL93794.009.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

[TEST]ITL93794.009 Family Correlation File  
[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.  
[ISSUEDATE]08/19/20  
[TESTDATE]09/04/20  
[MANUFAC]FINELITE, INC.  
[LUMCAT]FINELITE HPO P-ID-4ft-H-S-835-RT-RB-RE  
[INPUT\_ELECTRICAL]120.0 VOLTS, 40.0 WATTS  
[INPUT\_ELECTRICAL]277.0 VOLTS, 41.3 WATTS  
[ABSOLUTE LUMENS]5083  
[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL93794. 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	5084
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	127
Total Luminaire Watts	40
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)	4.00 ft
Luminous Width (90-270)	0.20 ft
Luminous Height	0.04 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	6521	5923	5852
55	6141	5445	5508
65	5649	5026	5375
75	5045	4967	5871
85	4047	6664	8128

CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0.0	546.422	546.422	546.422	546.422	546.422
2.5	545.604	545.604	545.604	545.604	545.604
5.0	543.148	543.557	543.557	543.966	543.966
7.5	539.873	539.464	540.283	540.692	541.101
10.0	534.552	534.143	536.190	537.008	536.599
12.5	528.822	527.185	530.050	531.687	531.278
15.0	521.045	518.590	523.092	525.138	524.729
17.5	512.450	508.766	514.906	517.771	516.952
20.0	501.399	498.534	504.673	508.766	508.357
22.5	489.938	487.073	494.031	498.534	497.715
25.0	476.431	473.975	482.571	486.664	487.482
27.5	462.924	460.468	469.473	473.975	474.794
30.0	447.780	445.733	455.966	461.287	461.696
32.5	431.408	430.589	440.412	446.552	447.780
35.0	415.445	414.626	425.268	430.998	433.045
37.5	398.254	397.844	408.896	415.445	417.491
40.0	379.426	380.654	391.296	399.482	401.528
42.5	361.007	363.054	374.105	382.700	385.565
45.0	342.998	344.226	356.505	364.691	368.784
47.5	322.942	325.397	338.086	347.500	352.002
50.0	302.886	306.160	318.849	329.900	335.221
52.5	283.239	286.923	300.430	313.118	318.439
55.0	263.183	266.048	281.193	295.518	302.476
57.5	243.127	246.402	262.365	278.737	286.104
60.0	221.025	226.346	243.127	263.183	270.960
62.5	200.560	206.290	225.527	247.220	256.634
65.0	179.685	185.825	208.746	232.076	242.718
67.5	159.629	166.178	192.373	218.978	230.029
70.0	139.164	147.350	176.411	206.290	218.160
72.5	119.517	129.340	162.085	195.648	207.927
75.0	99.870	111.331	149.806	185.825	199.741
77.5	81.042	95.368	139.573	178.048	191.964
80.0	62.624	81.452	130.159	171.089	185.825
82.5	45.433	69.991	124.019	166.178	181.322
85.0	29.061	61.805	119.108	162.085	177.638
87.5	12.279	57.303	116.243	160.038	176.411
90.0	0.000	105.777	219.332	303.332	333.665
92.5	28.000	110.444	223.221	306.443	337.554
95.0	61.444	121.333	230.221	311.887	342.998
97.5	94.111	138.444	240.332	320.443	350.776
100.0	127.555	164.110	254.332	333.665	360.887
102.5	162.555	192.110	272.999	346.887	374.109
105.0	202.221	223.221	296.332	363.998	390.442
107.5	239.554	256.665	321.998	384.220	408.331
110.0	278.443	294.776	349.998	408.331	429.331
112.5	317.332	333.665	380.331	433.998	453.442
115.0	358.554	371.776	412.998	460.442	480.664
117.5	402.109	410.665	447.998	489.998	507.886
120.0	441.776	450.331	485.331	521.886	536.664
122.5	480.664	489.220	521.886	554.553	566.997
125.0	522.664	527.331	559.997	586.442	597.330
127.5	563.886	568.553	597.330	618.330	630.775
130.0	602.775	609.775	633.886	652.552	661.886
132.5	643.997	650.997	669.663	689.108	696.108

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CANDELA TABULATION - (Cont.)

135.0	682.108	685.996	703.885	723.330	730.330
137.5	722.552	720.219	740.441	757.552	767.663
140.0	757.552	753.663	773.107	790.218	801.107
142.5	790.996	788.663	805.774	825.996	832.218
145.0	825.218	820.551	839.996	857.107	863.329
147.5	857.885	851.662	872.662	885.884	890.551
150.0	888.218	881.218	902.995	913.884	919.329
152.5	916.218	911.551	930.995	940.329	944.217
155.0	942.662	937.995	955.884	963.662	968.328
157.5	969.884	964.440	981.551	986.217	990.106
160.0	992.439	986.995	1001.773	1004.884	1007.995
162.5	1011.106	1008.773	1018.884	1023.550	1023.550
165.0	1027.439	1025.106	1034.439	1037.550	1035.995
167.5	1041.439	1039.884	1046.883	1049.995	1049.217
170.0	1053.106	1052.328	1056.995	1058.550	1058.550
172.5	1061.661	1063.217	1064.773	1065.550	1066.328
175.0	1069.439	1069.439	1070.217	1070.217	1070.217
177.5	1072.550	1072.550	1073.328	1072.550	1073.328
180.0	1074.106	1074.106	1074.106	1074.106	1074.106

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	199.03	N.A.	3.90
0-30	420.77	N.A.	8.30
0-40	685.89	N.A.	13.50
0-60	1212.08	N.A.	23.80
0-80	1579.01	N.A.	31.10
0-90	1715.35	N.A.	33.70
10-90	1663.72	N.A.	32.70
20-40	486.86	N.A.	9.60
20-50	761.07	N.A.	15.00
40-70	734.31	N.A.	14.40
60-80	366.93	N.A.	7.20
70-80	158.81	N.A.	3.10
80-90	136.34	N.A.	2.70
90-110	552.60	N.A.	10.90
90-120	966.08	N.A.	19.00
90-130	1466.26	N.A.	28.80
90-150	2536.15	N.A.	49.90
90-180	3368.57	N.A.	66.30
110-180	2815.97	N.A.	55.40
0-180	5083.92	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	51.64
10-20	147.39
20-30	221.75
30-40	265.11
40-50	274.21
50-60	251.99
60-70	208.12
70-80	158.81
80-90	136.34
90-100	239.01
100-110	313.58
110-120	413.49
120-130	500.18
130-140	544.24
140-150	525.65
150-160	439.43
160-170	291.29
170-180	101.69

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	34
1	93	88	84	81	84	80	76	73	64	61	59	49	47	45	35	34	33	26
2	84	77	70	65	76	69	64	59	55	51	48	42	40	37	30	28	27	21
3	77	67	60	54	69	61	54	49	48	44	40	37	34	31	27	24	23	18
4	70	59	51	45	63	54	47	41	43	38	34	33	29	26	24	21	19	15
5	64	53	45	39	58	48	41	35	38	33	29	29	26	23	21	19	17	13
6	59	47	39	33	53	43	36	30	34	29	25	26	23	20	19	17	15	11
7	55	42	34	29	49	38	31	27	31	26	22	24	20	17	17	15	13	10
8	50	38	31	25	45	35	28	23	28	23	19	22	18	15	16	13	12	9
9	47	35	27	22	42	32	25	21	26	21	17	20	16	14	15	12	10	8
10	44	32	25	20	39	29	23	18	24	19	15	18	15	12	14	11	9	7

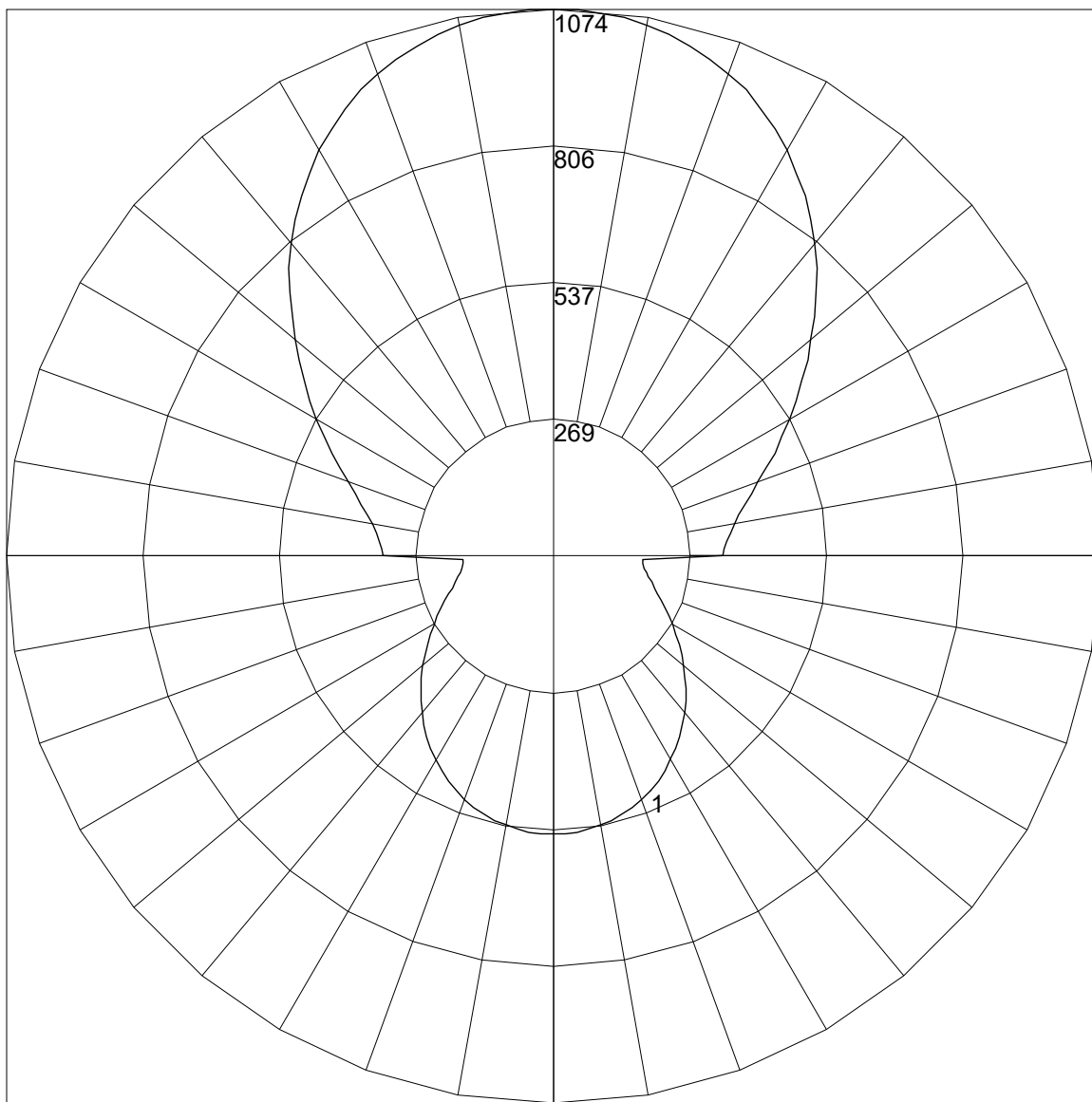
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**UGR TABLE - CORRECTED**

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	11.5	12.3	12.6	13.4	14.9	13.0	13.8	14.1	14.9	16.4
	3H	13.1	13.8	14.2	14.9	16.4	15.5	16.2	16.6	17.3	18.8
	4H	13.7	14.3	14.8	15.4	16.9	16.9	17.5	18.0	18.6	20.1
	6H	14.1	14.7	15.2	15.8	17.3	18.4	19.0	19.5	20.1	21.6
	8H	14.2	14.7	15.3	15.8	17.3	19.3	19.8	20.4	20.9	22.5
	12H	14.2	14.7	15.3	15.9	17.4	20.3	20.8	21.4	21.9	23.5
4H	2H	12.3	12.9	13.4	14.0	15.5	13.4	14.1	14.6	15.2	16.7
	3H	14.1	14.6	15.2	15.8	17.3	16.2	16.7	17.3	17.9	19.4
	4H	14.8	15.3	15.9	16.4	17.9	17.7	18.2	18.8	19.3	20.9
	6H	15.3	15.7	16.4	16.8	18.4	19.5	19.9	20.6	21.0	22.6
	8H	15.4	15.8	16.6	17.0	18.5	20.4	20.9	21.6	22.0	23.5
	12H	15.5	15.9	16.7	17.0	18.6	21.6	22.0	22.7	23.1	24.7
8H	4H	15.4	15.8	16.5	17.0	18.5	17.9	18.3	19.1	19.5	21.0
	6H	16.2	16.5	17.3	17.7	19.2	19.9	20.2	21.0	21.4	22.9
	8H	16.4	16.7	17.6	17.9	19.4	21.1	21.4	22.2	22.5	24.1
	12H	16.6	16.9	17.7	18.0	19.6	22.4	22.7	23.6	23.9	25.5
12H	4H	15.6	16.0	16.8	17.2	18.7	17.9	18.3	19.1	19.4	21.0
	6H	16.5	16.8	17.6	18.0	19.5	19.9	20.2	21.1	21.4	23.0
	8H	16.9	17.2	18.0	18.3	19.9	21.2	21.5	22.3	22.6	24.2

Maximum UGR = 25.5

POLAR GRAPH



Maximum Candela = 1074.106 Located At Horizontal Angle = 0, Vertical Angle = 180  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)