

# 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-S-S-835-RT-RB-RE-ITL93794.001.IES

### DESCRIPTION INFORMATION (From Photometric File)

[TEST]ITL93794.001 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-S-S-835-RT-RB-RE

[\_INPUT\_ELECTRICAL]120.0 VOLTS, 27.0 WATTS

[\_INPUT\_ELECTRICAL]277.0 VOLTS, 29.2 WATTS

[\_ABSOLUTE]LUMENS]3475

[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	3476
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	129
Total Luminaire Watts	27
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 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	6522	5924	5853
55	6142	5445	5508
65	5650	5026	5375
75	5046	4967	5871
85	4048	6665	8129

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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	546.478	546.478	546.478	546.478	546.478
2.5	545.660	545.660	545.660	545.660	545.660
5.0	543.204	543.613	543.613	544.022	544.022
7.5	539.929	539.519	540.338	540.748	541.157
10.0	534.607	534.198	536.245	537.063	536.654
12.5	528.876	527.239	530.104	531.742	531.333
15.0	521.099	518.643	523.146	525.192	524.783
17.5	512.503	508.818	514.959	517.824	517.005
20.0	501.450	498.585	504.725	508.818	508.409
22.5	489.988	487.123	494.082	498.585	497.766
25.0	476.480	474.024	482.620	486.714	487.532
27.5	462.972	460.515	469.521	474.024	474.843
30.0	447.826	445.779	456.013	461.334	461.744
32.5	431.452	430.633	440.457	446.598	447.826
35.0	415.487	414.669	425.312	431.042	433.089
37.5	398.295	397.885	408.938	415.487	417.534
40.0	379.465	380.693	391.336	399.523	401.569
42.5	361.044	363.091	374.143	382.740	385.605
45.0	343.033	344.261	356.541	364.728	368.822
47.5	322.975	325.431	338.121	347.536	352.038
50.0	302.917	306.192	318.881	329.934	335.255
52.5	283.268	286.952	300.461	313.151	318.472
55.0	263.210	266.076	281.221	295.549	302.507
57.5	243.152	246.427	262.391	278.765	286.134
60.0	221.047	226.369	243.152	263.210	270.988
62.5	200.580	206.311	225.550	247.246	256.661
65.0	179.703	185.844	208.767	232.100	242.743
67.5	159.645	166.195	192.393	219.001	230.053
70.0	139.178	147.365	176.429	206.311	218.182
72.5	119.529	129.354	162.101	195.668	207.948
75.0	99.881	111.342	149.821	185.844	199.761
77.5	81.051	95.378	139.587	178.066	191.984
80.0	62.630	81.460	130.172	171.107	185.844
82.5	45.438	69.998	124.032	166.195	181.341
85.0	29.064	61.811	119.120	162.101	177.657
87.5	12.280	57.309	116.255	160.055	176.429
90.0	0.000	55.671	115.436	159.645	175.610
92.5	14.736	58.127	117.483	161.283	177.657
95.0	32.338	63.858	121.167	164.148	180.522
97.5	49.531	72.864	126.488	168.651	184.616
100.0	67.133	86.372	133.856	175.610	189.937
102.5	85.554	101.109	143.681	182.569	196.896
105.0	106.430	117.483	155.961	191.574	205.492
107.5	126.079	135.085	169.470	202.217	214.907
110.0	146.546	155.143	184.206	214.907	225.960
112.5	167.014	175.610	200.171	228.416	238.649
115.0	188.709	195.668	217.363	242.333	252.976
117.5	211.632	216.135	235.784	257.889	267.304
120.0	232.509	237.012	255.433	274.672	282.449
122.5	252.976	257.479	274.672	291.864	298.414
125.0	275.081	277.537	294.730	308.648	314.379
127.5	296.777	299.233	314.379	325.431	331.980
130.0	317.244	320.928	333.618	343.442	348.354
132.5	338.939	342.624	352.448	362.682	366.366

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : HPO-P-ID-4FT-S-S-835-RT-RB-RE-ITL93794.001.IES****CANDELA TABULATION - (Cont.)**

<b>135.0</b>	358.997	361.044	370.459	380.693	384.377
<b>137.5</b>	380.283	379.055	389.698	398.704	404.026
<b>140.0</b>	398.704	396.657	406.891	415.897	421.627
<b>142.5</b>	416.306	415.078	424.084	434.727	438.001
<b>145.0</b>	434.317	431.861	442.095	451.100	454.375
<b>147.5</b>	451.510	448.235	459.287	466.246	468.702
<b>150.0</b>	467.474	463.790	475.252	480.983	483.848
<b>152.5</b>	482.211	479.755	489.988	494.901	496.947
<b>155.0</b>	496.129	493.673	503.088	507.181	509.637
<b>157.5</b>	510.456	507.590	516.596	519.052	521.099
<b>160.0</b>	522.327	519.461	527.239	528.876	530.514
<b>162.5</b>	532.151	530.923	536.245	538.701	538.701
<b>165.0</b>	540.748	539.519	544.432	546.069	545.250
<b>167.5</b>	548.116	547.297	550.981	552.619	552.209
<b>170.0</b>	554.256	553.847	556.303	557.121	557.121
<b>172.5</b>	558.759	559.577	560.396	560.806	561.215
<b>175.0</b>	562.852	562.852	563.262	563.262	563.262
<b>177.5</b>	564.490	564.490	564.899	564.490	564.899
<b>180.0</b>	565.308	565.308	565.308	565.308	565.308

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	199.05	N.A.	5.70
0-30	420.82	N.A.	12.10
0-40	685.96	N.A.	19.70
0-60	1212.21	N.A.	34.90
0-80	1579.17	N.A.	45.40
0-90	1702.62	N.A.	49.00
10-90	1650.98	N.A.	47.50
20-40	486.91	N.A.	14.00
20-50	761.15	N.A.	21.90
40-70	734.39	N.A.	21.10
60-80	366.97	N.A.	10.60
70-80	158.83	N.A.	4.60
80-90	123.45	N.A.	3.60
90-110	290.83	N.A.	8.40
90-120	508.45	N.A.	14.60
90-130	771.70	N.A.	22.20
90-150	1334.79	N.A.	38.40
90-180	1772.9	N.A.	51.00
110-180	1482.06	N.A.	42.60
0-180	3475.52	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	51.64
10-20	147.40
20-30	221.77
30-40	265.14
40-50	274.24
50-60	252.02
60-70	208.14
70-80	158.83
80-90	123.45
90-100	125.79
100-110	165.04
110-120	217.62
120-130	263.25
130-140	286.44
140-150	276.65
150-160	231.28
160-170	153.31
170-180	53.52

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	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49
1	96	91	87	83	88	84	80	77	71	68	65	58	56	54	47	45	44	39
2	87	79	73	67	80	73	67	62	61	57	53	50	47	44	40	38	36	31
3	79	69	61	55	73	64	57	51	54	48	44	44	40	37	36	33	30	26
4	72	61	53	46	66	56	49	43	48	42	37	39	35	32	32	29	26	22
5	66	54	46	40	61	50	43	37	42	37	32	35	31	27	28	25	22	19
6	61	49	40	34	56	45	38	32	38	32	28	32	27	24	26	22	20	17
7	56	44	36	30	52	41	33	28	35	29	24	29	24	21	23	20	17	15
8	52	40	32	26	48	37	30	25	31	26	22	26	22	19	22	18	16	13
9	49	36	29	23	45	34	27	22	29	23	19	24	20	17	20	16	14	12
10	45	33	26	21	42	31	24	20	26	21	17	22	18	15	18	15	13	11

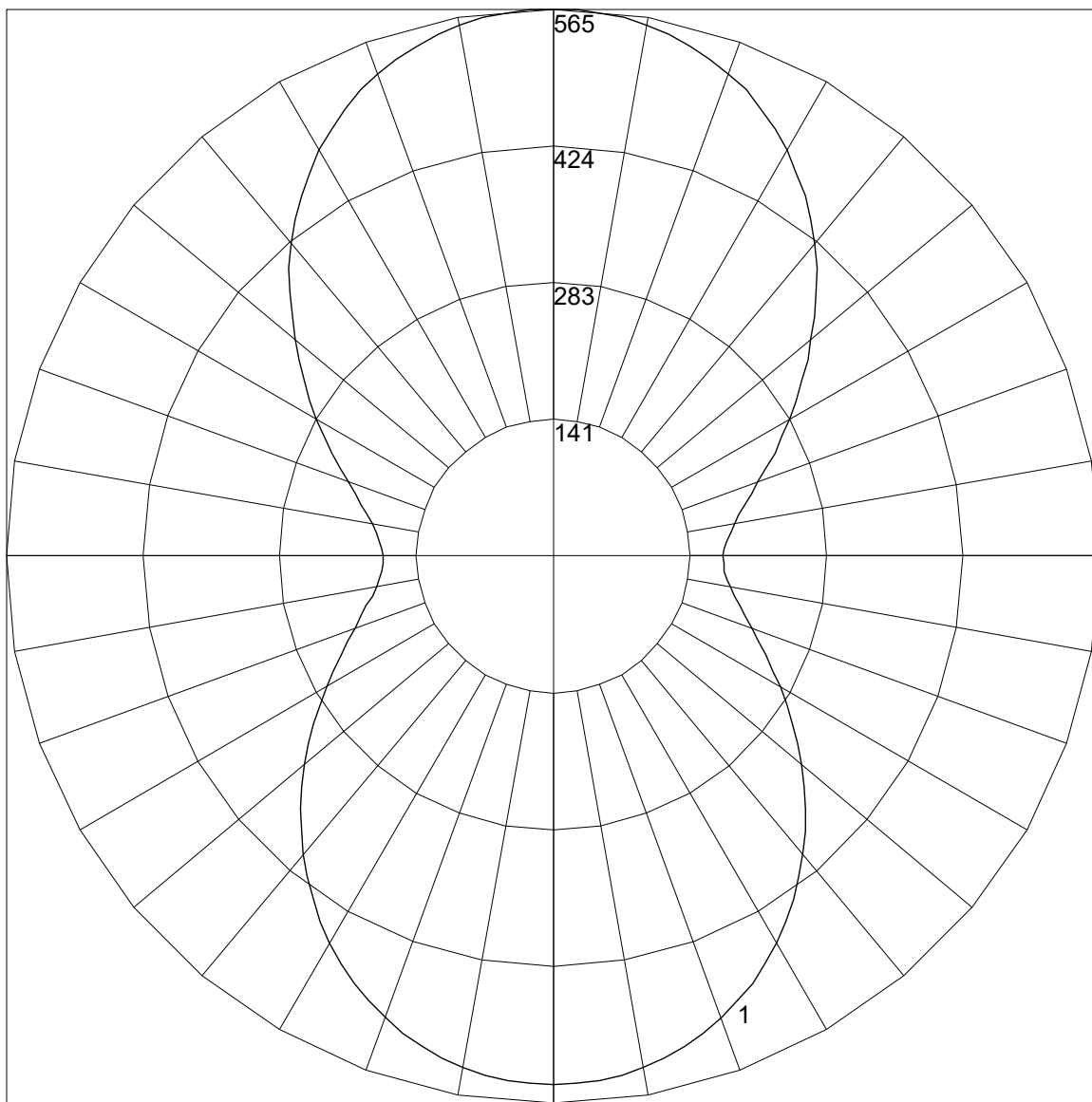
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**UGR TABLE - CORRECTED**

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	13.1	14.0	14.1	15.0	16.3	14.6	15.5	15.6	16.5	17.8
	3H	14.7	15.5	15.7	16.5	17.8	17.1	17.9	18.1	18.9	20.2
	4H	15.3	16.0	16.2	17.0	18.3	18.5	19.2	19.4	20.2	21.5
	6H	15.7	16.4	16.6	17.4	18.7	20.0	20.7	21.0	21.7	23.0
	8H	15.7	16.4	16.7	17.4	18.8	20.9	21.5	21.8	22.5	23.9
	12H	15.8	16.4	16.8	17.5	18.8	21.9	22.5	22.9	23.5	24.9
4H	2H	13.9	14.6	14.9	15.6	16.9	15.0	15.8	16.0	16.8	18.1
	3H	15.7	16.3	16.7	17.4	18.7	17.8	18.4	18.8	19.5	20.8
	4H	16.4	17.0	17.4	18.0	19.3	19.3	19.9	20.3	20.9	22.3
	6H	16.9	17.4	17.9	18.4	19.8	21.1	21.6	22.1	22.6	24.0
	8H	17.0	17.5	18.1	18.6	19.9	22.1	22.5	23.1	23.6	24.9
	12H	17.1	17.6	18.2	18.6	20.0	23.2	23.7	24.3	24.7	26.1
8H	4H	17.0	17.5	18.1	18.6	19.9	19.5	20.0	20.6	21.1	22.4
	6H	17.8	18.2	18.8	19.2	20.6	21.5	21.9	22.6	23.0	24.4
	8H	18.0	18.4	19.1	19.5	20.8	22.7	23.1	23.7	24.1	25.5
	12H	18.2	18.6	19.3	19.6	21.0	24.1	24.4	25.1	25.5	26.9
12H	4H	17.3	17.7	18.3	18.8	20.1	19.5	20.0	20.6	21.0	22.4
	6H	18.1	18.5	19.2	19.6	20.9	21.6	21.9	22.6	23.0	24.4
	8H	18.5	18.8	19.6	19.9	21.3	22.8	23.1	23.9	24.2	25.6

Maximum UGR = 26.9

POLAR GRAPH



Maximum Candela = 565.308 Located At Horizontal Angle = 0, Vertical Angle = 180  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)