

# 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 : HP-4-ID-4FT-S-S-835-WSO-ITL89033.001-GONIOPHOTOMETRY.IES

### DESCRIPTION INFORMATION (From Photometric File)

[TEST]ITL89033.001-GONIOPHOTOMETRY Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]03/27/17

[ISSUEDATE]03/08/17

[MANUFAC]FINELITE, INC.

[LUMCAT]FINELITE HP-4-ID-4ft-S-S-835-WSO

[\_INPUT\_ELECTRICAL]120.0 VOLTS, 28.7 WATTS

[\_INPUT\_ELECTRICAL]277.0 VOLTS, 31.5 WATTS

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL89033. 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)

[\_ABSOLUTE]LUMENS]3266

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3266
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	114
Total Luminaire Watts	28.7
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)	0.32 ft
Luminous Height	0.00 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4102	4063	4015
55	3874	3815	3773
65	3597	3532	3492
75	3226	3187	3160
85	2737	2620	2698

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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	564.120	564.120	564.120	564.120	564.120
2.5	563.301	563.301	563.301	563.301	563.301
5.0	560.845	560.845	560.435	560.845	560.845
7.5	557.160	556.751	556.751	557.160	557.160
10.0	552.248	551.020	551.020	551.839	551.020
12.5	545.698	543.242	544.879	544.879	543.242
15.0	537.920	533.826	535.873	536.282	534.235
17.5	528.504	526.867	526.048	526.048	523.592
20.0	518.270	511.720	514.176	513.767	511.720
22.5	503.942	499.438	503.942	500.257	498.620
25.0	490.023	484.701	487.157	485.929	484.701
27.5	475.285	470.373	473.648	470.782	469.145
30.0	459.320	454.407	456.454	454.816	452.770
32.5	442.535	437.623	439.260	437.623	435.576
35.0	424.932	420.429	421.657	419.610	417.563
37.5	406.101	401.598	403.235	401.598	399.141
40.0	387.679	383.176	383.585	381.948	379.901
42.5	368.029	364.344	364.754	362.298	360.660
45.0	348.379	344.285	345.104	342.648	341.010
47.5	328.319	323.816	324.635	321.360	320.951
50.0	307.851	304.166	304.166	301.710	300.482
52.5	287.791	283.697	283.697	281.241	280.422
55.0	266.913	263.229	262.819	260.363	259.954
57.5	245.625	241.941	241.941	239.894	239.075
60.0	224.747	221.063	221.063	219.016	218.607
62.5	203.869	200.185	200.185	198.547	197.729
65.0	182.582	178.897	179.307	178.078	177.260
67.5	161.294	158.019	158.428	158.019	156.791
70.0	140.416	137.960	137.960	137.550	136.732
72.5	119.947	117.900	117.900	117.900	117.081
75.0	100.297	98.250	99.069	98.660	98.250
77.5	81.056	79.419	80.238	79.828	79.828
80.0	62.634	61.816	62.225	61.816	61.816
82.5	45.441	44.622	44.622	44.622	45.441
85.0	28.656	27.838	27.428	27.428	28.247
87.5	12.281	11.872	11.872	11.463	11.872
90.0	0.000	0.000	0.000	0.000	0.000
92.5	6.550	11.463	12.281	12.281	12.281
95.0	18.422	32.750	33.569	26.200	26.200
97.5	32.341	55.675	85.969	53.628	46.669
100.0	48.716	76.144	136.322	100.706	79.010
102.5	68.366	92.928	201.413	155.972	126.906
105.0	86.378	110.941	251.357	241.122	193.225
107.5	104.800	128.953	274.282	352.882	296.797
110.0	122.403	145.738	285.335	445.810	424.932
112.5	140.416	162.113	298.435	484.292	509.673
115.0	157.610	177.669	320.541	496.163	541.604
117.5	171.528	191.997	338.144	501.895	553.476
120.0	184.219	205.916	349.607	524.410	562.073
122.5	195.272	219.425	356.976	552.248	588.682
125.0	205.916	231.297	362.298	567.395	619.795
127.5	215.741	241.941	366.391	567.804	636.170
130.0	223.929	251.357	369.666	557.979	633.304
132.5	232.525	260.363	372.532	544.470	618.157

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : HP-4-ID-4FT-S-S-835-WSO-ITL89033.001-GONIOPHOTOMETRY.IES****CANDELA TABULATION - (Cont.)**

<b>135.0</b>	240.713	268.551	374.579	529.732	598.507
<b>137.5</b>	248.491	275.919	375.398	513.767	575.992
<b>140.0</b>	256.679	282.879	375.807	497.801	552.248
<b>142.5</b>	264.866	289.429	375.398	481.017	528.504
<b>145.0</b>	273.463	295.979	373.351	465.460	505.170
<b>147.5</b>	280.422	301.301	370.485	449.904	482.654
<b>150.0</b>	287.791	306.622	367.619	434.757	462.185
<b>152.5</b>	295.160	311.126	364.344	420.020	443.354
<b>155.0</b>	301.710	315.629	361.069	406.101	424.523
<b>157.5</b>	307.851	319.313	356.976	393.410	407.738
<b>160.0</b>	313.582	322.997	353.701	381.948	392.591
<b>162.5</b>	318.494	325.863	349.607	371.304	379.491
<b>165.0</b>	323.407	328.319	345.923	361.888	368.029
<b>167.5</b>	327.091	330.366	342.648	353.701	358.204
<b>170.0</b>	329.957	332.413	340.191	347.151	349.607
<b>172.5</b>	332.004	333.641	338.144	341.829	343.466
<b>175.0</b>	334.051	334.460	336.098	337.735	338.963
<b>177.5</b>	334.869	334.869	335.279	335.688	335.688
<b>180.0</b>	335.279	335.279	335.279	335.279	335.279

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : HP-4-ID-4FT-S-S-835-WSO-ITL89033.001-GONIOPHOTOMETRY.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	204.26	N.A.	6.30
0-30	428.40	N.A.	13.10
0-40	691.46	N.A.	21.20
0-60	1191.48	N.A.	36.50
0-80	1473.48	N.A.	45.10
0-90	1504.89	N.A.	46.10
10-90	1451.65	N.A.	44.40
20-40	487.20	N.A.	14.90
20-50	752.59	N.A.	23.00
40-70	677.35	N.A.	20.70
60-80	282.00	N.A.	8.60
70-80	104.67	N.A.	3.20
80-90	31.41	N.A.	1.00
90-110	238.04	N.A.	7.30
90-120	567.04	N.A.	17.40
90-130	915.86	N.A.	28.00
90-150	1463.12	N.A.	44.80
90-180	1761.17	N.A.	53.90
110-180	1523.13	N.A.	46.60
0-180	3266.06	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	53.24
10-20	151.02
20-30	224.14
30-40	263.06
40-50	265.38
50-60	234.64
60-70	177.33
70-80	104.67
80-90	31.41
90-100	39.67
100-110	198.38
110-120	329.00
120-130	348.82
130-140	307.81
140-150	239.44
150-160	167.63
160-170	98.21
170-180	32.21

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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

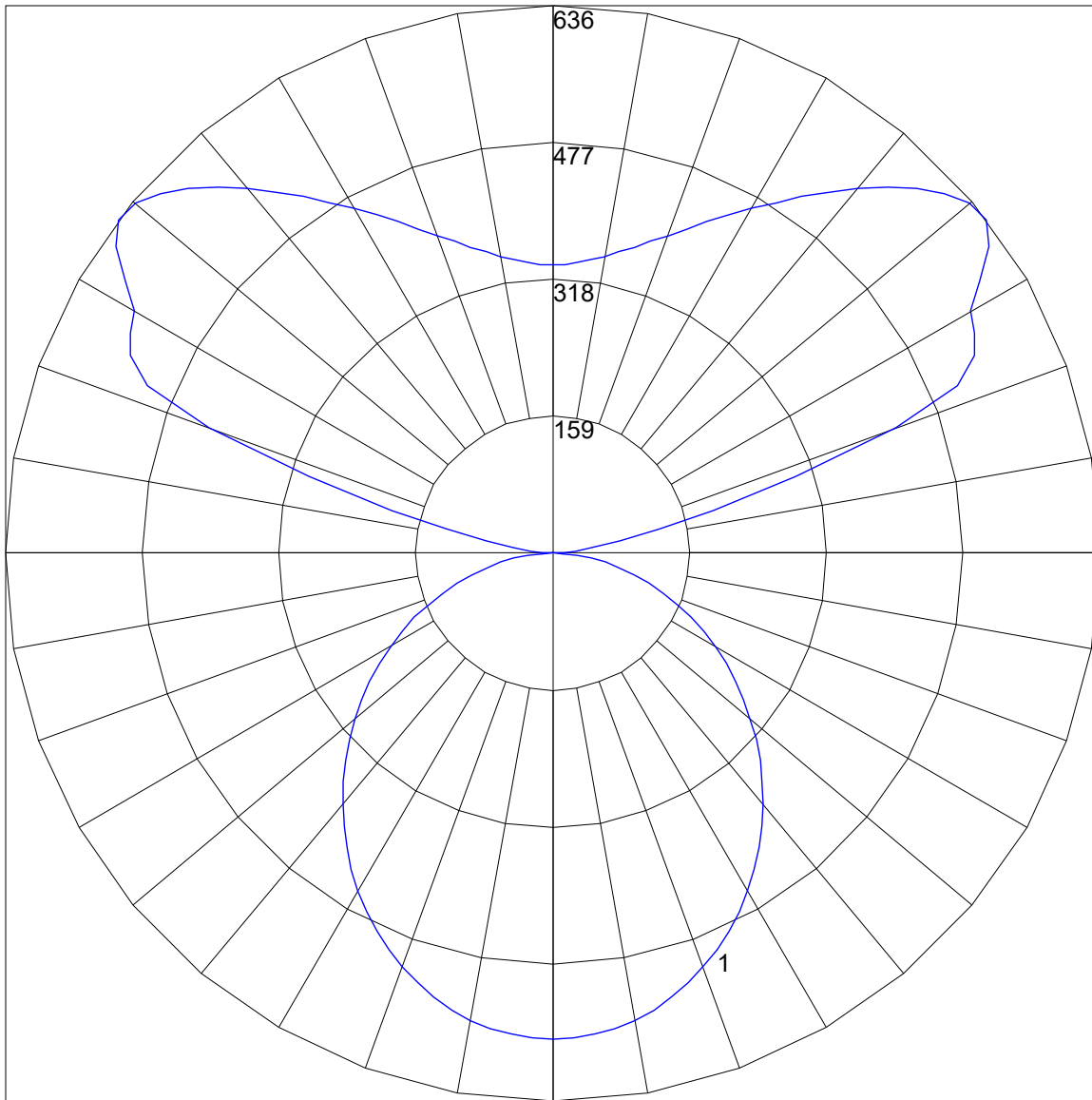
Effective Floor Cavity Reflectance 0.20

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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	53	53	53	46
1	97	92	89	85	89	85	82	79	71	69	66	58	56	55	46	45	44	39
2	88	81	74	69	81	74	69	64	62	58	55	51	48	46	41	39	37	32
3	80	71	63	58	73	65	59	54	55	50	46	45	41	39	36	33	31	27
4	73	63	55	49	67	58	51	45	49	43	39	40	36	33	32	29	27	23
5	67	56	48	42	62	51	44	39	43	38	34	36	32	29	29	26	23	20
6	62	50	42	36	57	46	39	34	39	33	29	32	28	25	26	23	21	18
7	57	45	37	32	52	42	35	30	35	30	26	29	25	22	24	21	18	16
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	16	14
9	49	37	30	25	45	35	28	23	29	24	20	25	21	18	20	17	15	13
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	19	16	13	11

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## POLAR GRAPH



Maximum Candela = 636.17 Located At Horizontal Angle = 90, Vertical Angle = 127.5  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)