

# 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-2-ID-4FT-H-H-835-WSO-DSO-ITL89456-ITL94139.001.IES

### DESCRIPTION INFORMATION (From Photometric File)

[TEST]ITL89456-ITL94139.001 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]07/19/17

[ISSUEDATE]12/15/2020

[MANUFAC]FINELITE, INC.

[LUMCAT]HP-2-ID-4ft-H-H-835-WSO-DSO

[\_INPUT\_ELECTRICAL]120.0 VOLTS, 55.2 WATTS

[\_INPUT\_ELECTRICAL]277.0 VOLTS, 56.4 WATTS

[OTHER]see [www.finelite.com](http://www.finelite.com) for source files ITL89456 and ITL94139. 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]5671

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5671
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	103
Total Luminaire Watts	55.2
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)	0.18 ft
Luminous Height	0.00 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	10756	13595	13962
55	9780	12518	12518
65	8774	11122	10814
75	7803	9491	8989
85	6775	7182	6504

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	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
<b>0.0</b>	907.008	907.008	907.008	907.008	907.008
<b>2.5</b>	905.452	905.452	906.230	907.785	907.785
<b>5.0</b>	900.785	901.562	905.452	909.341	910.897
<b>7.5</b>	892.228	895.339	902.340	910.897	915.564
<b>10.0</b>	881.338	885.227	900.785	917.120	922.565
<b>12.5</b>	868.114	872.781	899.229	921.787	928.010
<b>15.0</b>	850.222	858.001	894.562	923.343	931.122
<b>17.5</b>	831.553	841.666	888.338	923.343	932.678
<b>20.0</b>	808.217	822.997	880.560	919.454	929.566
<b>22.5</b>	783.325	801.216	867.336	910.897	922.565
<b>25.0</b>	755.321	779.435	852.556	899.229	910.119
<b>27.5</b>	727.317	756.099	835.443	882.893	893.784
<b>30.0</b>	696.980	731.207	813.662	861.113	869.669
<b>32.5</b>	665.865	703.203	791.104	836.221	843.221
<b>35.0</b>	633.194	673.644	765.433	805.883	810.551
<b>37.5</b>	601.301	644.084	735.096	772.434	774.768
<b>40.0</b>	567.074	612.969	702.425	736.652	735.096
<b>42.5</b>	534.403	580.298	668.976	696.202	693.091
<b>45.0</b>	500.954	546.849	633.194	654.975	650.307
<b>47.5</b>	468.284	513.400	594.300	612.191	607.524
<b>50.0</b>	434.057	479.174	554.628	567.852	560.073
<b>52.5</b>	400.608	443.391	514.178	524.291	516.512
<b>55.0</b>	369.493	408.387	472.951	479.174	472.951
<b>57.5</b>	336.822	373.382	431.723	435.613	425.500
<b>60.0</b>	305.707	337.600	390.495	393.607	383.495
<b>62.5</b>	276.147	303.373	350.824	350.046	342.267
<b>65.0</b>	244.254	270.702	309.596	308.818	301.039
<b>67.5</b>	216.250	237.253	270.702	268.368	260.590
<b>70.0</b>	187.469	205.360	233.364	229.475	222.474
<b>72.5</b>	159.465	174.245	196.804	192.914	186.691
<b>75.0</b>	133.017	143.908	161.799	157.910	153.242
<b>77.5</b>	108.125	115.904	128.350	124.461	120.571
<b>80.0</b>	84.789	88.678	98.013	93.346	90.234
<b>82.5</b>	62.230	63.786	68.453	65.342	63.008
<b>85.0</b>	38.894	40.450	41.228	38.894	37.338
<b>87.5</b>	17.891	17.891	16.335	15.558	14.002
<b>90.0</b>	0.000	0.000	0.000	0.000	0.000
<b>92.5</b>	13.999	24.110	24.110	23.332	23.332
<b>95.0</b>	36.554	64.553	64.553	53.665	52.887
<b>97.5</b>	61.442	105.774	129.884	93.330	87.886
<b>100.0</b>	87.108	137.662	258.213	150.106	132.218
<b>102.5</b>	115.107	167.994	356.987	265.213	210.770
<b>105.0</b>	142.328	200.660	413.763	432.429	356.209
<b>107.5</b>	169.549	232.547	448.762	583.313	543.647
<b>110.0</b>	196.771	262.102	479.872	671.976	678.976
<b>112.5</b>	223.992	290.878	516.426	730.307	759.862
<b>115.0</b>	251.991	318.100	559.980	772.306	815.082
<b>117.5</b>	279.990	345.321	607.423	811.971	857.858
<b>120.0</b>	307.989	374.098	646.310	853.970	900.635
<b>122.5</b>	333.655	398.208	674.309	913.078	945.744
<b>125.0</b>	357.765	421.541	689.864	977.632	1010.297
<b>127.5</b>	380.320	443.317	699.197	1021.186	1081.850
<b>130.0</b>	398.986	461.983	704.641	1039.074	1133.182
<b>132.5</b>	417.652	479.094	706.197	1032.074	1149.514

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : HP-2-ID-4FT-H-H-835-WSO-DSO-ITL89456-ITL94139.001.IES****CANDELA TABULATION - (Cont.)**

<b>135.0</b>	433.985	493.094	705.419	1010.297	1133.182
<b>137.5</b>	448.762	506.315	703.086	980.743	1098.961
<b>140.0</b>	463.539	517.981	699.197	948.077	1055.407
<b>142.5</b>	477.538	528.870	693.753	911.523	1008.742
<b>145.0</b>	492.316	538.981	688.309	876.524	961.299
<b>147.5</b>	504.760	546.758	682.087	840.748	913.078
<b>150.0</b>	517.204	555.313	674.309	808.860	867.969
<b>152.5</b>	528.870	561.535	664.976	778.528	825.971
<b>155.0</b>	539.759	566.202	655.643	748.973	787.083
<b>157.5</b>	549.869	572.424	647.088	721.752	752.084
<b>160.0</b>	558.424	576.313	636.977	695.308	719.419
<b>162.5</b>	566.202	579.424	626.866	672.754	689.087
<b>165.0</b>	572.424	582.535	616.756	650.977	663.421
<b>167.5</b>	577.868	584.868	608.978	632.311	640.866
<b>170.0</b>	582.535	587.201	603.534	617.534	622.978
<b>172.5</b>	584.868	588.757	597.312	605.090	609.756
<b>175.0</b>	587.979	589.534	593.423	597.312	598.867
<b>177.5</b>	589.534	589.534	591.090	591.090	591.868
<b>180.0</b>	590.312	590.312	590.312	590.312	590.312

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : HP-2-ID-4FT-H-H-835-WSO-DSO-ITL89456-ITL94139.001.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	338.20	N.A.	6.00
0-30	725.47	N.A.	12.80
0-40	1188.76	N.A.	21.00
0-60	2051.46	N.A.	36.20
0-80	2500.92	N.A.	44.10
0-90	2546.37	N.A.	44.90
10-90	2460.09	N.A.	43.40
20-40	850.56	N.A.	15.00
20-50	1315.01	N.A.	23.20
40-70	1150.84	N.A.	20.30
60-80	449.46	N.A.	7.90
70-80	161.32	N.A.	2.80
80-90	45.45	N.A.	0.80
90-110	408.93	N.A.	7.20
90-120	948.46	N.A.	16.70
90-130	1565.19	N.A.	27.60
90-150	2586.44	N.A.	45.60
90-180	3124.85	N.A.	55.10
110-180	2715.92	N.A.	47.90
0-180	5671.22	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	86.28
10-20	251.92
20-30	387.27
30-40	463.29
40-50	464.46
50-60	398.24
60-70	288.14
70-80	161.32
80-90	45.45
90-100	71.33
100-110	337.60
110-120	539.53
120-130	616.74
130-140	576.42
140-150	444.83
150-160	305.77
160-170	175.71
170-180	56.93

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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

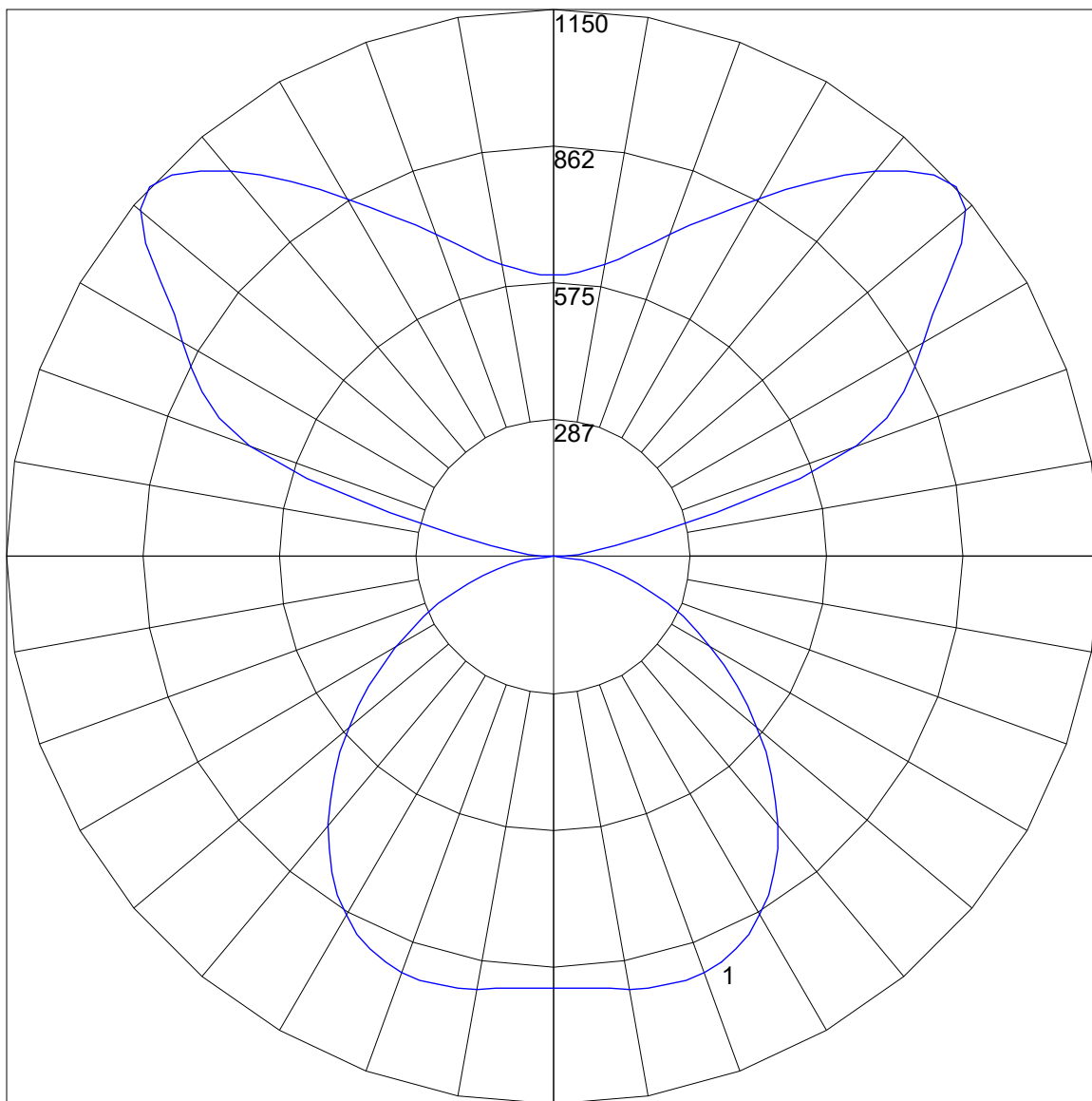
Effective Floor Cavity Reflectance 0.20

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	65	65	65	51	51	51	45
1	97	92	88	85	88	85	81	78	71	68	66	57	56	54	45	44	43	38
2	88	81	75	69	80	74	69	64	62	58	55	50	48	45	40	38	37	32
3	80	71	64	58	73	65	59	54	54	50	46	45	41	38	35	33	31	27
4	73	63	55	49	67	58	51	45	48	43	39	40	36	33	32	29	27	23
5	67	56	48	42	61	51	44	39	43	38	34	36	32	28	28	26	23	20
6	62	50	42	36	57	46	39	34	39	33	29	32	28	25	26	23	20	17
7	57	45	37	32	52	42	35	30	35	30	26	29	25	22	23	20	18	15
8	53	41	33	28	49	38	31	26	32	27	23	27	22	19	22	18	16	14
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	20	17	15	12
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	18	15	13	11

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## POLAR GRAPH



Maximum Candela = 1149.514 Located At Horizontal Angle = 90, Vertical Angle = 132.5  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)