

# 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-S-H-835-WSO-DSO-ITL89456-ITL94139.014.IES

### DESCRIPTION INFORMATION (From Photometric File)

[TEST]ITL89456-ITL94139.014 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]07/19/17

[ISSUEDATE]12/15/2020

[MANUFAC]FINELITE, INC.

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

[\_INPUT\_ELECTRICAL]120.0 VOLTS, 41.6 WATTS

[\_INPUT\_ELECTRICAL]277.0 VOLTS, 43.3 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]4191

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4191
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	101
Total Luminaire Watts	41.6
Ballast Factor	1.00
CIE Type	Semi-Direct
Spacing Criterion (0-180)	1.16
Spacing Criterion (90-270)	1.40
Spacing Criterion (Diagonal)	1.42
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>	7.369	12.692	12.692	12.282	12.282
<b>95.0</b>	19.242	33.981	33.981	28.249	27.840
<b>97.5</b>	32.343	55.679	68.371	49.129	46.263
<b>100.0</b>	45.854	72.465	135.923	79.016	69.599
<b>102.5</b>	60.592	88.432	187.918	139.608	110.950
<b>105.0</b>	74.922	105.627	217.805	227.631	187.509
<b>107.5</b>	89.251	122.413	236.228	307.056	286.176
<b>110.0</b>	103.580	137.970	252.605	353.728	357.413
<b>112.5</b>	117.909	153.119	271.847	384.434	399.992
<b>115.0</b>	132.648	167.448	294.774	406.542	429.060
<b>117.5</b>	147.387	181.777	319.748	427.422	451.577
<b>120.0</b>	162.126	196.925	340.218	449.530	474.094
<b>122.5</b>	175.636	209.617	354.957	480.645	497.840
<b>125.0</b>	188.328	221.899	363.145	514.626	531.821
<b>127.5</b>	200.201	233.363	368.058	537.553	569.486
<b>130.0</b>	210.026	243.188	370.924	546.969	596.507
<b>132.5</b>	219.852	252.195	371.743	543.284	605.105

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : HP-2-ID-4FT-S-H-835-WSO-DSO-ITL89456-ITL94139.014.IES****CANDELA TABULATION - (Cont.)**

<b>135.0</b>	228.450	259.565	371.333	531.821	596.507
<b>137.5</b>	236.228	266.525	370.105	516.264	578.494
<b>140.0</b>	244.007	272.666	368.058	499.068	555.567
<b>142.5</b>	251.376	278.397	365.192	479.826	531.002
<b>145.0</b>	259.155	283.720	362.326	461.403	506.028
<b>147.5</b>	265.706	287.814	359.051	442.570	480.645
<b>150.0</b>	272.256	292.317	354.957	425.784	456.899
<b>152.5</b>	278.397	295.593	350.044	409.817	434.791
<b>155.0</b>	284.129	298.049	345.131	394.260	414.321
<b>157.5</b>	289.451	301.324	340.627	379.931	395.897
<b>160.0</b>	293.955	303.371	335.305	366.011	378.702
<b>162.5</b>	298.049	305.009	329.983	354.138	362.736
<b>165.0</b>	301.324	306.647	324.661	342.675	349.225
<b>167.5</b>	304.190	307.875	320.567	332.849	337.352
<b>170.0</b>	306.647	309.103	317.701	325.070	327.936
<b>172.5</b>	307.875	309.922	314.425	318.519	320.976
<b>175.0</b>	309.512	310.331	312.378	314.425	315.244
<b>177.5</b>	310.331	310.331	311.150	311.150	311.560
<b>180.0</b>	310.741	310.741	310.741	310.741	310.741

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : HP-2-ID-4FT-S-H-835-WSO-DSO-ITL89456-ITL94139.014.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	338.20	N.A.	8.10
0-30	725.47	N.A.	17.30
0-40	1188.76	N.A.	28.40
0-60	2051.46	N.A.	48.90
0-80	2500.92	N.A.	59.70
0-90	2546.37	N.A.	60.80
10-90	2460.09	N.A.	58.70
20-40	850.56	N.A.	20.30
20-50	1315.01	N.A.	31.40
40-70	1150.84	N.A.	27.50
60-80	449.46	N.A.	10.70
70-80	161.32	N.A.	3.80
80-90	45.45	N.A.	1.10
90-110	215.26	N.A.	5.10
90-120	499.27	N.A.	11.90
90-130	823.92	N.A.	19.70
90-150	1361.5	N.A.	32.50
90-180	1644.92	N.A.	39.20
110-180	1429.66	N.A.	34.10
0-180	4191.29	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	37.55
100-110	177.71
110-120	284.01
120-130	324.65
130-140	303.43
140-150	234.16
150-160	160.96
160-170	92.50
170-180	29.97

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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

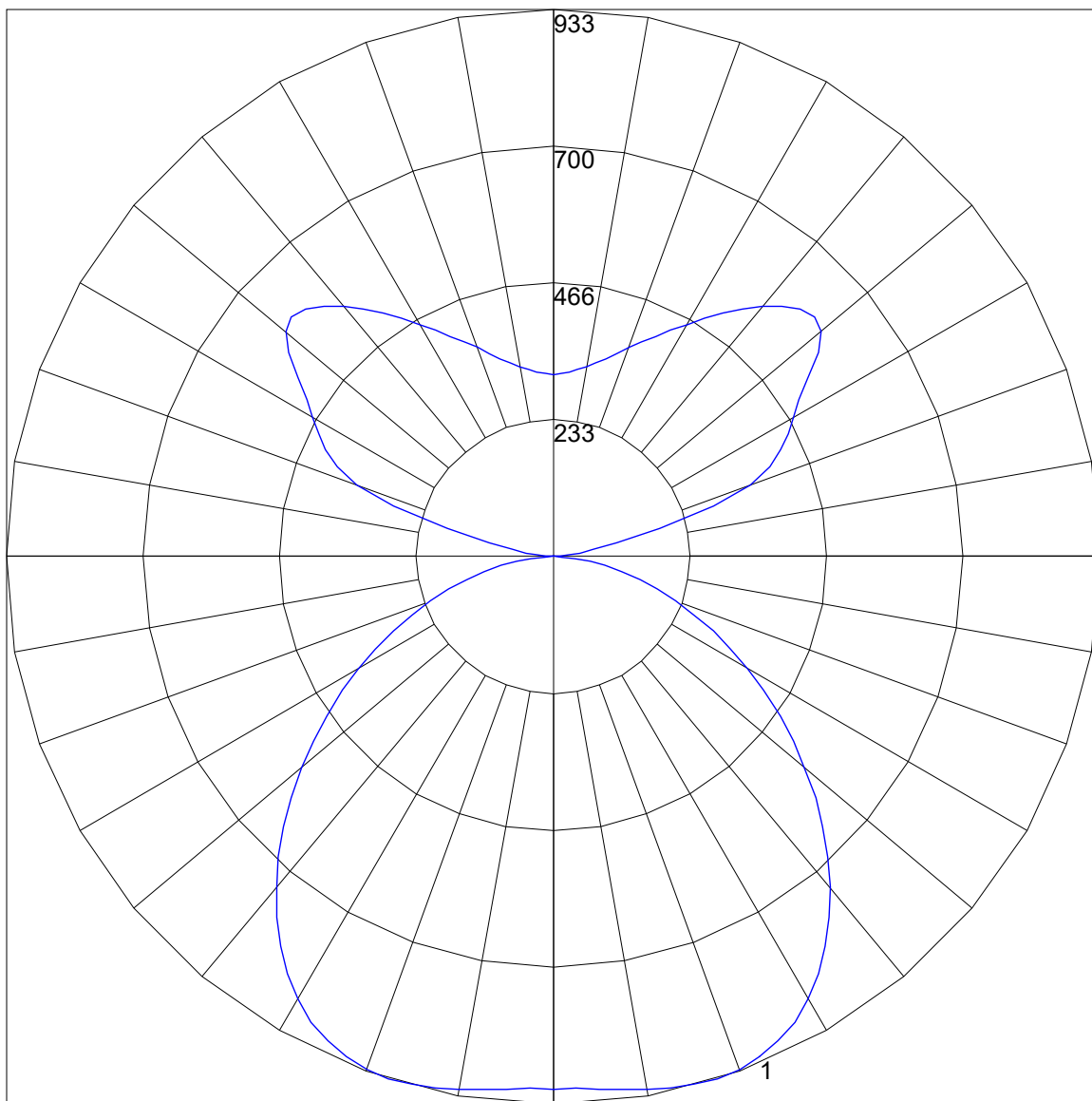
Effective Floor Cavity Reflectance 0.20

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	110	110	110	110	103	103	103	103	89	89	89	77	77	77	66	66	66	61
1	100	96	92	88	94	90	86	83	78	76	73	68	66	64	58	57	56	51
2	91	84	77	72	85	78	73	68	69	64	61	60	56	54	51	49	47	43
3	83	74	66	60	78	69	62	57	61	55	51	53	49	45	45	42	40	36
4	76	65	57	51	71	61	54	48	54	48	44	47	43	39	41	37	34	31
5	70	58	50	44	65	55	47	42	48	42	38	42	37	34	37	33	30	27
6	64	52	44	38	60	49	42	36	43	37	33	38	33	30	33	29	26	24
7	60	47	39	33	56	44	37	32	39	33	29	35	30	26	30	26	23	21
8	55	43	35	29	52	40	33	28	36	30	26	32	27	23	28	24	21	19
9	52	39	31	26	48	37	30	25	33	27	23	29	24	21	26	22	19	17
10	48	36	28	24	45	34	27	23	30	25	21	27	22	19	24	20	17	15

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## POLAR GRAPH



Maximum Candela = 932.678 Located At Horizontal Angle = 90, Vertical Angle = 17.5  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)