

# 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-WS-4W-4D-4ft-V-8-TW-

ITL86713.900.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]ITL86713.900 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]02/11/16

[ISSUEDATE]03/30/31

[MANUFAC]FINELITE, INC.

[LUMCAT]HP-WS-4W-4D-4ft-V-8-TW

[OTHER]ies file is based on 3500K; see luminaire tech sheet at [www.finelite.com](http://www.finelite.com) for lumen adjustment factors for other CCT's & CRI

[OTHER]INPUT ELECTRICAL: 120.0 VOLTS, 40.7 WATTS

[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 41.7 WATTS

[ABSOLUTE]LUMENS]3056

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL86713. 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	3056
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	75
Total Luminaire Watts	40.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.60
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.08
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.32 ft
Luminous Width (90-270)	4.00 ft
Luminous Height	0.36 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	6826	6942	8049
55	5880	6069	7230
65	4805	5016	6293
75	3739	3838	5011
85	2611	2593	2498



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : HP-WS-4W-4D-4ft-V-8-TW-ITL86713.900.IES**

**CANDELA TABULATION**

	<u>0.0</u>	<u>5.0</u>	<u>15.0</u>	<u>25.0</u>	<u>35.0</u>	<u>45.0</u>	<u>55.0</u>	<u>65.0</u>	<u>75.0</u>	<u>85.0</u>
<b>0.0</b>	1246	1246	1246	1246	1246	1246	1246	1246	1246	1246
<b>2.5</b>	1275	1274	1272	1270	1265	1262	1257	1253	1249	1246
<b>5.0</b>	1314	1312	1309	1304	1296	1286	1275	1262	1248	1242
<b>7.5</b>	1343	1340	1338	1331	1320	1308	1291	1271	1249	1234
<b>10.0</b>	1370	1365	1363	1353	1341	1322	1301	1275	1245	1221
<b>12.5</b>	1388	1384	1382	1371	1355	1332	1305	1273	1238	1206
<b>15.0</b>	1401	1397	1396	1382	1365	1337	1306	1266	1227	1189
<b>17.5</b>	1407	1406	1402	1389	1368	1337	1303	1256	1213	1169
<b>20.0</b>	1409	1407	1403	1389	1367	1332	1294	1243	1194	1145
<b>22.5</b>	1407	1404	1400	1384	1359	1324	1282	1227	1174	1119
<b>25.0</b>	1401	1398	1392	1374	1348	1311	1266	1207	1149	1091
<b>27.5</b>	1389	1388	1380	1361	1333	1294	1247	1184	1122	1062
<b>30.0</b>	1375	1373	1364	1344	1314	1273	1223	1159	1093	1030
<b>32.5</b>	1357	1355	1346	1324	1292	1249	1196	1132	1063	994
<b>35.0</b>	1336	1335	1324	1301	1268	1222	1168	1101	1028	957
<b>37.5</b>	1314	1311	1299	1276	1240	1193	1136	1069	996	916
<b>40.0</b>	1285	1283	1270	1246	1209	1160	1101	1033	956	875
<b>42.5</b>	1255	1254	1241	1214	1177	1126	1065	996	918	835
<b>45.0</b>	1225	1221	1207	1180	1141	1091	1027	956	878	793
<b>47.5</b>	1187	1185	1170	1143	1105	1052	987	917	836	749
<b>50.0</b>	1146	1144	1130	1103	1066	1011	946	874	795	704
<b>52.5</b>	1100	1098	1087	1059	1024	969	903	830	751	661
<b>55.0</b>	1049	1046	1034	1012	976	926	860	786	708	616
<b>57.5</b>	994	992	983	959	926	879	814	742	662	571
<b>60.0</b>	940	937	926	904	872	830	769	699	618	524
<b>62.5</b>	883	879	869	847	815	776	720	651	572	479
<b>65.0</b>	826	823	812	790	758	719	669	603	525	434
<b>67.5</b>	769	767	755	733	703	663	615	556	480	390
<b>70.0</b>	712	710	701	676	647	606	559	505	432	346
<b>72.5</b>	656	653	643	620	591	552	503	452	385	302
<b>75.0</b>	599	595	587	565	537	498	449	399	337	258
<b>77.5</b>	543	542	530	509	482	445	399	347	289	215
<b>80.0</b>	489	486	475	455	428	393	345	297	239	173
<b>82.5</b>	434	431	420	402	377	342	296	249	193	130
<b>85.0</b>	375	378	367	349	322	291	247	203	149	87
<b>87.5</b>	321	323	313	295	270	240	201	157	109	46
<b>90.0</b>	265	267	258	241	216	188	151	110	68	23
<b>92.5</b>	234	231	224	207	185	156	121	80	42	9
<b>95.0</b>	197	194	187	171	150	122	90	54	26	3
<b>97.5</b>	162	160	154	138	119	94	64	42	21	2
<b>100.0</b>	131	129	123	109	91	71	55	37	15	1
<b>102.5</b>	103	101	96	86	77	66	51	34	8	0
<b>105.0</b>	90	89	86	81	73	62	48	28	4	0
<b>107.5</b>	86	85	83	78	70	59	45	20	2	0
<b>110.0</b>	82	82	79	75	67	56	38	13	1	0
<b>112.5</b>	79	79	76	72	64	53	29	7	1	0
<b>115.0</b>	76	76	74	69	62	42	20	3	1	0
<b>117.5</b>	74	74	71	66	52	33	14	2	1	0
<b>120.0</b>	71	70	66	55	41	24	8	1	1	0
<b>122.5</b>	59	59	54	44	31	16	3	1	0	0
<b>125.0</b>	47	46	42	34	22	9	1	1	0	0
<b>127.5</b>	36	35	32	24	14	4	1	1	0	0
<b>130.0</b>	26	25	22	16	7	1	1	1	0	0
<b>132.5</b>	17	17	14	8	1	0	0	0	0	0



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : HP-WS-4W-4D-4ft-V-8-TW-ITL86713.900.IES**

**CANDELA TABULATION - (Cont.)**

135.0	9	9	7	2	0	0	0	0	0	0
137.5	2	2	0	0	0	0	0	0	0	0
140.0	0	0	0	0	0	0	0	0	0	0
142.5	0	0	0	0	0	0	0	0	0	0
145.0	0	0	0	0	0	0	0	0	0	0
147.5	0	0	0	0	0	0	0	0	0	0
150.0	0	0	0	0	0	0	0	0	0	0
152.5	0	0	0	0	0	0	0	0	0	0
155.0	0	0	0	0	0	0	0	0	0	0
157.5	0	0	0	0	0	0	0	0	0	0
160.0	0	0	0	0	0	0	0	0	0	0
162.5	0	0	0	0	0	0	0	0	0	0
165.0	0	0	0	0	0	0	0	0	0	0
167.5	0	0	0	0	0	0	0	0	0	0
170.0	0	0	0	0	0	0	0	0	0	0
172.5	0	0	0	0	0	0	0	0	0	0
175.0	0	0	0	0	0	0	0	0	0	0
177.5	0	0	0	0	0	0	0	0	0	0
180.0	0	0	0	0	0	0	0	0	0	0

Vert. Angles	Horizontal Angles				
	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>
0.0	1246	1246	1246	1246	1246
2.5	1245	1234	1214	1195	1187
5.0	1239	1200	1140	1098	1083
7.5	1228	1153	1056	984	963
10.0	1217	1103	964	865	834
12.5	1201	1046	869	752	706
15.0	1182	985	772	634	581
17.5	1158	920	676	517	458
20.0	1131	853	579	404	340
22.5	1101	786	486	298	230
25.0	1069	719	395	198	129
27.5	1036	651	308	109	52
30.0	999	584	225	35	17
32.5	959	518	149	17	11
35.0	919	453	80	11	7
37.5	877	390	28	8	4
40.0	834	329	18	5	2
42.5	789	269	13	3	0
45.0	745	212	9	2	0
47.5	698	158	6	1	0
50.0	653	107	4	1	0
52.5	608	60	2	1	0
55.0	562	26	1	0	0
57.5	516	18	1	0	0
60.0	471	12	1	0	0
62.5	425	8	1	0	0
65.0	381	5	0	0	0
67.5	337	3	0	0	0
70.0	293	1	0	0	0
72.5	250	1	0	0	0
75.0	208	1	0	0	0
77.5	167	1	0	0	0
80.0	128	1	0	0	0



IES INDOOR REPORT  
 PHOTOMETRIC FILENAME : HP-WS-4W-4D-4ft-V-8-TW-ITL86713.900.IES

CANDELA TABULATION - (Cont.)

82.5	90	1	0	0	0
85.0	53	1	0	0	0
87.5	18	0	0	0	0
90.0	0	0	0	0	0
92.5	0	0	0	0	0
95.0	0	0	0	0	0
97.5	0	0	0	0	0
100.0	0	0	0	0	0
102.5	0	0	0	0	0
105.0	0	0	0	0	0
107.5	0	0	0	0	0
110.0	0	0	0	0	0
112.5	0	0	0	0	0
115.0	0	0	0	0	0
117.5	0	0	0	0	0
120.0	0	0	0	0	0
122.5	0	0	0	0	0
125.0	0	0	0	0	0
127.5	0	0	0	0	0
130.0	0	0	0	0	0
132.5	0	0	0	0	0
135.0	0	0	0	0	0
137.5	0	0	0	0	0
140.0	0	0	0	0	0
142.5	0	0	0	0	0
145.0	0	0	0	0	0
147.5	0	0	0	0	0
150.0	0	0	0	0	0
152.5	0	0	0	0	0
155.0	0	0	0	0	0
157.5	0	0	0	0	0
160.0	0	0	0	0	0
162.5	0	0	0	0	0
165.0	0	0	0	0	0
167.5	0	0	0	0	0
170.0	0	0	0	0	0
172.5	0	0	0	0	0
175.0	0	0	0	0	0
177.5	0	0	0	0	0
180.0	0	0	0	0	0



**IES INDOOR REPORT****PHOTOMETRIC FILENAME : HP-WS-4W-4D-4ft-V-8-TW-ITL86713.900.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	413.59	N.A.	13.50
0-30	818.66	N.A.	26.80
0-40	1270.24	N.A.	41.60
0-60	2165.19	N.A.	70.90
0-80	2787.8	N.A.	91.20
0-90	2936.44	N.A.	96.10
10-90	2822.52	N.A.	92.40
20-40	856.65	N.A.	28.00
20-50	1320.68	N.A.	43.20
40-70	1256.14	N.A.	41.10
60-80	622.61	N.A.	20.40
70-80	261.42	N.A.	8.60
80-90	148.64	N.A.	4.90
90-110	91.22	N.A.	3.00
90-120	110.29	N.A.	3.60
90-130	118.41	N.A.	3.90
90-150	119.49	N.A.	3.90
90-180	119.49	N.A.	3.90
110-180	28.27	N.A.	0.90
0-180	3055.93	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	113.92
10-20	299.67
20-30	405.07
30-40	451.58
40-50	464.04
50-60	430.92
60-70	361.19
70-80	261.42
80-90	148.64
90-100	62.47
100-110	28.75
110-120	19.07
120-130	8.12
130-140	1.08
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



**IES INDOOR REPORT**  
**PHOTOMETRIC FILENAME : HP-WS-4W-4D-4ft-V-8-TW-ITL86713.900.IES**

**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

Effective Floor Cavity Reflectance 0.20

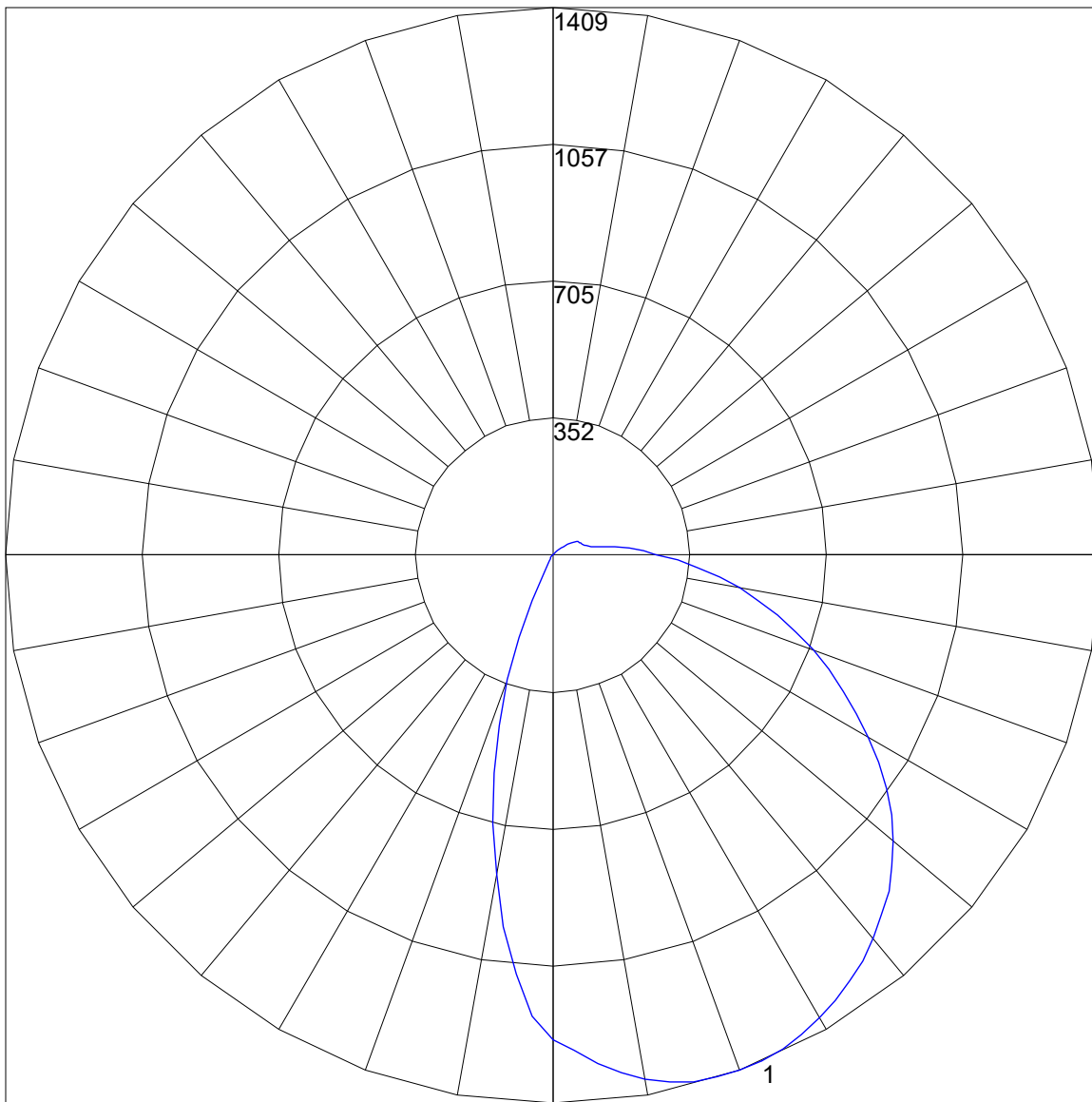
RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	118	118	118	118	115	115	115	115	109	109	109	103	103	103	98	98	98	96
1	106	101	96	92	103	98	94	90	93	90	86	89	86	83	84	82	80	78
2	96	88	80	74	93	85	79	73	81	76	71	77	73	68	74	70	66	64
3	88	77	68	62	85	75	67	61	71	65	59	68	62	58	65	60	56	54
4	80	68	59	52	78	67	58	52	63	56	50	61	54	49	58	53	48	46
5	74	61	52	45	72	60	51	45	57	49	44	55	48	43	52	47	42	40
6	69	55	46	39	66	54	45	39	52	44	38	50	43	38	48	42	37	35
7	64	50	41	35	62	49	41	35	47	40	34	45	39	34	44	38	33	31
8	59	46	37	31	58	45	37	31	43	36	31	42	35	30	40	34	30	28
9	56	42	34	28	54	41	34	28	40	33	28	39	32	27	37	31	27	25
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	35	29	25	23



**IES INDOOR REPORT**

**PHOTOMETRIC FILENAME : HP-WS-4W-4D-4ft-V-8-TW-ITL86713.900.IES**

**POLAR GRAPH**



Maximum Candela = 1409 Located At Horizontal Angle = 0, Vertical Angle = 20

# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)