

# 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-6W-4D-4'-V-8-TW-ITL86716.900.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]ITL86716.900 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]02/12/16

[ISSUEDATE]03/30/16

[MANUFAC]FINELITE, INC.

[LUMCAT]HP-WS-6W-4D-4'-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, 41.4 WATTS

[OTHER]INPUT ELECTRICAL: 277.0 VOLTS, 41.7 WATTS

[ABSOLUTE]LUMENS]3037

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL86716. 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	3037
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	73
Total Luminaire Watts	41.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.58
Spacing Criterion (90-270)	1.20
Spacing Criterion (Diagonal)	1.08
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.49 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	5500	5413	5401
55	4861	4865	4828
65	4094	4107	4183
75	3262	3148	3289
85	2416	2205	1554

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**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>
0.0	1281	1281	1281	1281	1281	1281	1281	1281	1281	1281
2.5	1305	1305	1303	1301	1296	1293	1288	1286	1283	1282
5.0	1345	1345	1342	1336	1327	1317	1305	1292	1280	1277
7.5	1376	1375	1372	1364	1352	1338	1320	1299	1279	1268
10.0	1402	1401	1397	1386	1374	1354	1331	1305	1274	1254
12.5	1420	1419	1414	1402	1388	1364	1335	1304	1267	1238
15.0	1433	1430	1426	1413	1396	1368	1337	1299	1255	1219
17.5	1437	1435	1431	1417	1398	1367	1332	1289	1242	1197
20.0	1438	1435	1429	1416	1395	1362	1323	1276	1223	1172
22.5	1434	1431	1424	1410	1387	1352	1310	1259	1204	1145
25.0	1424	1422	1414	1399	1374	1337	1293	1238	1180	1116
27.5	1411	1410	1401	1383	1357	1318	1271	1214	1153	1085
30.0	1394	1393	1383	1364	1336	1295	1246	1186	1123	1049
32.5	1375	1372	1362	1342	1312	1271	1219	1156	1090	1013
35.0	1352	1350	1338	1317	1285	1241	1187	1126	1056	975
37.5	1326	1324	1312	1289	1255	1211	1153	1091	1019	934
40.0	1296	1294	1283	1259	1223	1176	1118	1055	981	892
42.5	1264	1263	1251	1225	1188	1142	1081	1017	942	850
45.0	1228	1227	1214	1187	1150	1103	1040	976	900	805
47.5	1190	1189	1177	1149	1111	1063	999	934	858	761
50.0	1146	1146	1134	1107	1069	1022	956	891	812	716
52.5	1096	1095	1083	1061	1027	977	911	846	767	673
55.0	1040	1040	1029	1009	978	931	866	799	723	628
57.5	987	983	972	952	924	882	819	752	678	582
60.0	930	924	915	896	866	829	771	705	630	536
62.5	869	865	855	832	806	771	720	657	583	491
65.0	811	806	796	773	746	711	670	608	536	446
67.5	751	746	736	713	684	649	611	557	488	400
70.0	692	687	676	653	624	588	550	504	439	354
72.5	633	628	618	597	566	528	490	447	390	309
75.0	575	571	560	540	506	471	431	388	341	262
77.5	519	515	505	486	453	416	375	330	289	220
80.0	464	461	450	431	403	364	323	275	234	177
82.5	412	411	398	381	353	316	275	225	180	133
85.0	360	359	346	330	304	268	229	181	131	86
87.5	311	310	300	282	256	224	185	141	93	38
90.0	260	259	251	234	210	181	144	105	64	14
92.5	198	198	190	174	151	125	92	58	31	4
95.0	136	133	128	116	100	80	62	43	20	2
97.5	101	100	97	91	82	70	54	35	11	1
100.0	94	93	90	84	76	64	48	28	5	0
102.5	88	88	85	79	71	59	43	17	2	0
105.0	84	84	81	75	67	55	31	9	1	0
107.5	81	80	78	72	62	42	19	3	1	0
110.0	78	77	74	65	49	30	11	2	1	0
112.5	69	67	61	51	36	19	4	1	0	0
115.0	53	51	46	37	24	10	1	1	0	0
117.5	38	37	33	25	14	3	1	1	0	0
120.0	26	26	22	15	6	1	1	1	0	0
122.5	16	16	12	7	1	1	1	1	0	0
125.0	6	6	3	0	0	0	0	0	0	0
127.5	0	0	0	0	0	0	0	0	0	0
130.0	0	0	0	0	0	0	0	0	0	0
132.5	0	0	0	0	0	0	0	0	0	0

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**CANDELA TABULATION - (Cont.)**

135.0	0	0	0	0	0	0	0	0	0	0
137.5	0	0	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

<b>Vert. Angles</b>	<b>Horizontal Angles</b>				
	<b>90.0</b>	<b>112.5</b>	<b>135.0</b>	<b>157.5</b>	<b>180.0</b>
0.0	1281	1281	1281	1281	1281
2.5	1280	1270	1255	1236	1229
5.0	1274	1239	1188	1135	1126
7.5	1263	1198	1096	1016	997
10.0	1248	1142	1001	892	859
12.5	1231	1081	901	767	725
15.0	1211	1017	799	642	591
17.5	1186	950	696	519	461
20.0	1159	881	594	401	340
22.5	1128	812	496	288	226
25.0	1095	741	400	185	122
27.5	1063	674	309	101	38
30.0	1022	603	223	34	22
32.5	981	534	143	23	17
35.0	940	466	74	18	13
37.5	895	399	32	14	11
40.0	851	334	24	12	9
42.5	805	272	19	9	7
45.0	758	212	15	7	5
47.5	711	156	12	5	3
50.0	663	104	9	3	0
52.5	616	59	7	2	0
55.0	569	33	5	1	0
57.5	523	22	3	0	0
60.0	476	16	2	0	0
62.5	430	12	1	0	0
65.0	384	9	1	0	0
67.5	339	6	1	0	0
70.0	294	4	1	0	0
72.5	250	3	1	0	0
75.0	207	1	1	0	0
77.5	165	1	1	0	0
80.0	125	1	0	0	0

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CANDELA TABULATION - (Cont.)

82.5	86	0	0	0	0
85.0	50	0	0	0	0
87.5	15	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

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	424.20	N.A.	14.00
0-30	837.02	N.A.	27.60
0-40	1296.89	N.A.	42.70
0-60	2201.56	N.A.	72.50
0-80	2813.36	N.A.	92.60
0-90	2953.14	N.A.	97.30
10-90	2835.9	N.A.	93.40
20-40	872.69	N.A.	28.70
20-50	1343.5	N.A.	44.20
40-70	1263.67	N.A.	41.60
60-80	611.80	N.A.	20.10
70-80	252.80	N.A.	8.30
80-90	139.78	N.A.	4.60
90-110	72.46	N.A.	2.40
90-120	82.40	N.A.	2.70
90-130	83.49	N.A.	2.70
90-150	83.49	N.A.	2.70
90-180	83.49	N.A.	2.70
110-180	11.02	N.A.	0.40
0-180	3036.62	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	117.24
10-20	306.96
20-30	412.83
30-40	459.86
40-50	470.80
50-60	433.87
60-70	359.00
70-80	252.80
80-90	139.78
90-100	48.87
100-110	23.59
110-120	9.94
120-130	1.08
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

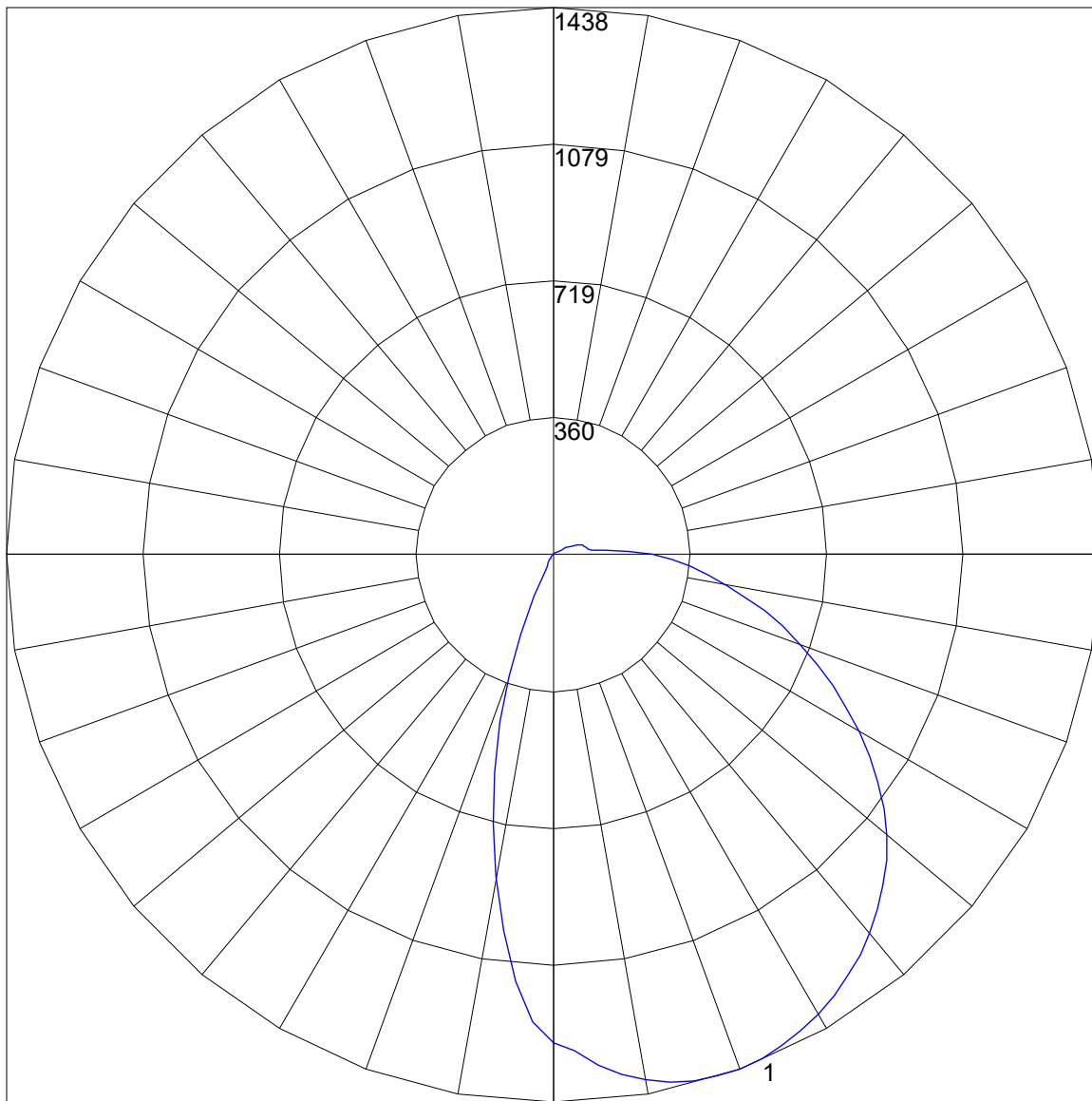
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**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

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	118	118	118	118	115	115	115	115	110	110	110	104	104	104	100	100	100	97
1	107	102	97	93	104	99	95	91	94	91	87	90	87	84	86	83	81	79
2	97	88	81	75	94	86	79	74	82	76	72	78	74	70	75	71	68	65
3	88	77	69	62	86	76	68	61	72	65	60	69	63	59	66	61	57	55
4	81	69	60	53	78	67	59	52	64	57	51	62	55	50	59	54	49	47
5	75	61	52	46	72	60	52	45	58	50	44	55	49	44	53	48	43	41
6	69	56	46	40	67	54	46	40	52	45	39	50	44	39	49	43	38	36
7	64	51	42	36	62	50	41	35	48	40	35	46	39	34	44	39	34	32
8	60	46	38	32	58	45	37	32	44	37	31	42	36	31	41	35	31	29
9	56	43	34	29	54	42	34	29	41	33	28	39	33	28	38	32	28	26
10	53	39	32	26	51	39	31	26	38	31	26	36	30	26	35	30	25	24

POLAR GRAPH



Maximum Candela = 1438 Located At Horizontal Angle = 0, Vertical Angle = 20  
# 1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)