

# 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 : 4D90 - HP-4C-ID-P-37IN11-16IN-V-B-835-ITL93249.005.IES

### DESCRIPTION INFORMATION (From Photometric File)

[TEST]ITL93249.005 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]03/20/20

[ISSUEDATE]09/28/20

[MANUFAC]FINELITE, INC.

[LUMCAT]FINELITE HP-4C-ID-P-37in11-16in-V-B-835

[\_INPUT\_ELECTRICAL]120.0 VOLTS, 40.0 WATTS

[\_INPUT\_ELECTRICAL]277.0 VOLTS, 41.0 WATTS

[\_ABSOLUTE]LUMENS]4454

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL93249. 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	4453
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	111
Total Luminaire Watts	40
Ballast Factor	1.00
CIE Type	Semi-Indirect
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	0.33 ft
Luminous Width (90-270)	2.88 ft
Luminous Height	0.02 ft

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

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5029	5166	5438
55	4453	4621	4943
65	3892	4047	4459
75	3310	3400	3865
85	2833	2779	3232

CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>
0.0	594.893	594.893	594.893	594.893	594.893	594.893	594.893	594.893	594.893
2.5	594.378	594.378	594.893	594.378	593.863	593.863	593.863	593.349	593.349
5.0	591.805	591.805	591.805	591.805	591.290	590.776	590.261	589.746	589.746
7.5	587.688	587.173	587.173	587.173	586.144	585.630	584.600	584.086	583.057
10.0	579.969	580.484	580.484	580.484	579.454	578.425	577.396	576.367	575.852
12.5	571.735	571.221	571.221	571.735	571.221	569.162	568.133	566.074	565.560
15.0	559.899	560.928	559.899	561.443	561.443	558.870	556.811	554.238	552.180
17.5	545.490	547.034	547.034	548.577	548.577	546.004	542.402	539.829	537.771
20.0	531.081	532.625	533.139	534.168	535.197	531.595	527.993	523.361	522.332
22.5	514.613	515.642	516.671	519.245	520.274	515.642	511.525	506.379	505.350
25.0	497.116	498.145	499.175	502.777	502.777	499.175	494.543	487.853	485.280
27.5	477.561	478.075	480.649	484.251	484.765	480.649	474.473	469.327	466.239
30.0	458.006	459.035	462.123	464.695	466.239	461.093	455.433	448.228	447.199
32.5	435.877	438.965	441.023	445.655	446.684	440.509	435.877	428.158	425.585
35.0	414.778	416.837	419.924	424.556	424.556	420.439	414.264	407.574	404.486
37.5	393.679	395.737	398.825	402.942	403.971	400.369	393.164	386.474	383.901
40.0	372.580	373.609	376.697	382.358	383.387	378.755	372.580	363.831	361.258
42.5	348.908	350.966	355.083	360.229	361.258	358.171	350.966	343.247	340.159
45.0	326.779	328.838	332.440	337.072	339.130	336.042	327.808	321.118	318.545
47.5	305.166	306.709	310.312	315.458	317.002	313.399	305.680	298.990	297.446
50.0	282.522	285.610	288.698	294.359	295.388	291.786	284.066	277.891	275.318
52.5	261.423	262.967	266.570	272.230	273.260	270.172	263.482	256.277	256.277
55.0	239.295	241.868	244.956	249.073	250.617	249.073	241.868	236.207	234.149
57.5	219.225	221.284	222.827	227.974	229.517	226.430	219.740	215.623	214.079
60.0	199.155	199.670	202.243	206.874	208.933	206.360	200.185	195.038	192.980
62.5	179.600	180.114	181.658	186.290	187.319	185.261	179.600	175.998	173.939
65.0	159.015	160.045	162.103	164.676	167.249	164.676	160.559	156.442	155.413
67.5	141.004	142.033	142.033	145.121	146.665	145.636	139.975	137.916	137.402
70.0	122.993	123.507	122.478	126.080	126.595	125.566	121.963	120.419	118.876
72.5	106.010	105.496	104.981	107.040	107.554	107.554	104.466	102.923	101.893
75.0	88.513	89.028	87.999	88.513	89.543	89.543	87.999	85.940	86.455
77.5	73.590	73.590	71.017	72.046	71.017	72.560	71.017	71.017	71.531
80.0	59.181	59.181	56.093	56.607	54.549	57.122	56.093	57.122	56.607
82.5	46.315	45.286	42.713	42.198	40.140	42.198	42.713	43.742	44.257
85.0	33.450	32.935	30.362	28.304	26.245	28.818	30.362	31.391	32.421
87.5	23.158	22.128	18.012	16.982	13.895	15.953	18.526	21.099	22.128
90.0	15.953	14.924	11.322	9.263	6.175	7.719	10.292	13.895	14.924
92.5	43.000	41.000	36.000	30.000	26.000	27.000	34.000	39.000	42.000
95.0	68.000	66.000	60.000	54.000	52.000	51.000	58.000	63.000	66.000
97.5	96.000	95.000	88.000	81.000	79.000	79.000	84.000	90.000	92.000
100.0	129.000	126.000	119.000	114.000	109.000	110.000	113.000	119.000	122.000
102.5	161.000	158.000	153.000	147.000	142.000	143.000	147.000	150.000	153.000
105.0	195.000	193.000	187.000	183.000	178.000	178.000	180.000	187.000	187.000
107.5	231.000	230.000	224.000	219.000	215.000	218.000	216.000	221.000	222.000
110.0	268.000	269.000	261.000	260.000	256.000	257.000	252.000	257.000	261.000
112.5	309.000	307.000	302.000	303.000	297.000	296.000	293.000	298.000	299.000
115.0	348.000	346.000	343.000	342.000	338.000	335.000	336.000	338.000	337.000
117.5	388.000	386.000	385.000	382.000	381.000	376.000	376.000	378.000	377.000
120.0	428.000	431.000	428.000	425.000	423.000	421.000	417.000	419.000	415.000
122.5	473.000	476.000	472.000	467.000	467.000	463.000	460.000	461.000	456.000
125.0	516.000	520.000	518.000	510.000	509.000	506.000	504.000	500.000	497.000
127.5	557.000	565.000	561.000	558.000	552.000	546.000	545.000	539.000	538.000
130.0	601.000	610.000	604.000	603.000	599.000	590.000	586.000	583.000	580.000
132.5	648.000	654.000	648.000	646.000	642.000	633.000	627.000	625.000	621.000

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 4D90 - HP-4C-ID-P-37IN11-16IN-V-B-835-ITL93249.005.IES****CANDELA TABULATION - (Cont.)**

<b>135.0</b>	691.000	696.000	693.000	689.000	687.000	678.000	671.000	669.000	667.000
<b>137.5</b>	734.000	738.000	738.000	732.000	729.000	720.000	715.000	711.000	709.000
<b>140.0</b>	780.000	780.000	779.000	776.000	772.000	764.000	756.000	754.000	750.000
<b>142.5</b>	820.000	821.000	820.000	817.000	817.000	806.000	799.000	795.000	791.000
<b>145.0</b>	859.000	860.000	860.000	856.000	858.000	846.000	841.000	836.000	834.000
<b>147.5</b>	900.000	899.000	897.000	893.000	896.000	885.000	879.000	876.000	873.000
<b>150.0</b>	935.000	935.000	934.000	931.000	932.000	922.000	918.000	915.000	910.000
<b>152.5</b>	968.000	970.000	967.000	965.000	967.000	959.000	953.000	950.000	945.000
<b>155.0</b>	1001.000	1003.000	999.000	997.000	1000.000	992.000	986.000	984.000	981.000
<b>157.5</b>	1030.000	1032.000	1028.000	1025.000	1029.000	1021.000	1019.000	1016.000	1012.000
<b>160.0</b>	1054.000	1056.000	1053.000	1053.000	1054.000	1048.000	1046.000	1044.000	1040.000
<b>162.5</b>	1076.000	1079.000	1078.000	1075.000	1078.000	1074.000	1072.000	1070.000	1068.000
<b>165.0</b>	1097.000	1099.000	1098.000	1096.000	1099.000	1094.000	1093.000	1092.000	1090.000
<b>167.5</b>	1116.000	1115.000	1115.000	1114.000	1116.000	1114.000	1113.000	1112.000	1111.000
<b>170.0</b>	1130.000	1130.000	1129.000	1131.000	1130.000	1128.000	1128.000	1128.000	1128.000
<b>172.5</b>	1142.000	1141.000	1141.000	1142.000	1141.000	1141.000	1141.000	1140.000	1140.000
<b>175.0</b>	1150.000	1149.000	1149.000	1149.000	1149.000	1149.000	1149.000	1149.000	1150.000
<b>177.5</b>	1154.000	1154.000	1154.000	1154.000	1154.000	1154.000	1154.000	1154.000	1154.000
<b>180.0</b>	1156.000	1156.000	1156.000	1156.000	1156.000	1156.000	1156.000	1156.000	1156.000

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 4D90 - HP-4C-ID-P-37IN11-16IN-V-B-835-ITL93249.005.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	213.24	N.A.	4.80
0-30	441.84	N.A.	9.90
0-40	702.88	N.A.	15.80
0-60	1176.38	N.A.	26.40
0-80	1430.58	N.A.	32.10
0-90	1464.84	N.A.	32.90
10-90	1408.81	N.A.	31.60
20-40	489.64	N.A.	11.00
20-50	744.90	N.A.	16.70
40-70	633.87	N.A.	14.20
60-80	254.20	N.A.	5.70
70-80	93.83	N.A.	2.10
80-90	34.26	N.A.	0.80
90-110	262.44	N.A.	5.90
90-120	599.46	N.A.	13.50
90-130	1054.78	N.A.	23.70
90-150	2112.83	N.A.	47.40
90-180	2988.08	N.A.	67.10
110-180	2725.64	N.A.	61.20
0-180	4452.92	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	56.03
10-20	157.21
20-30	228.61
30-40	261.04
40-50	255.26
50-60	218.24
60-70	160.37
70-80	93.83
80-90	34.26
90-100	66.31
100-110	196.14
110-120	337.02
120-130	455.32
130-140	526.53
140-150	531.51
150-160	457.35
160-170	308.83
170-180	109.06

# IES INDOOR REPORT

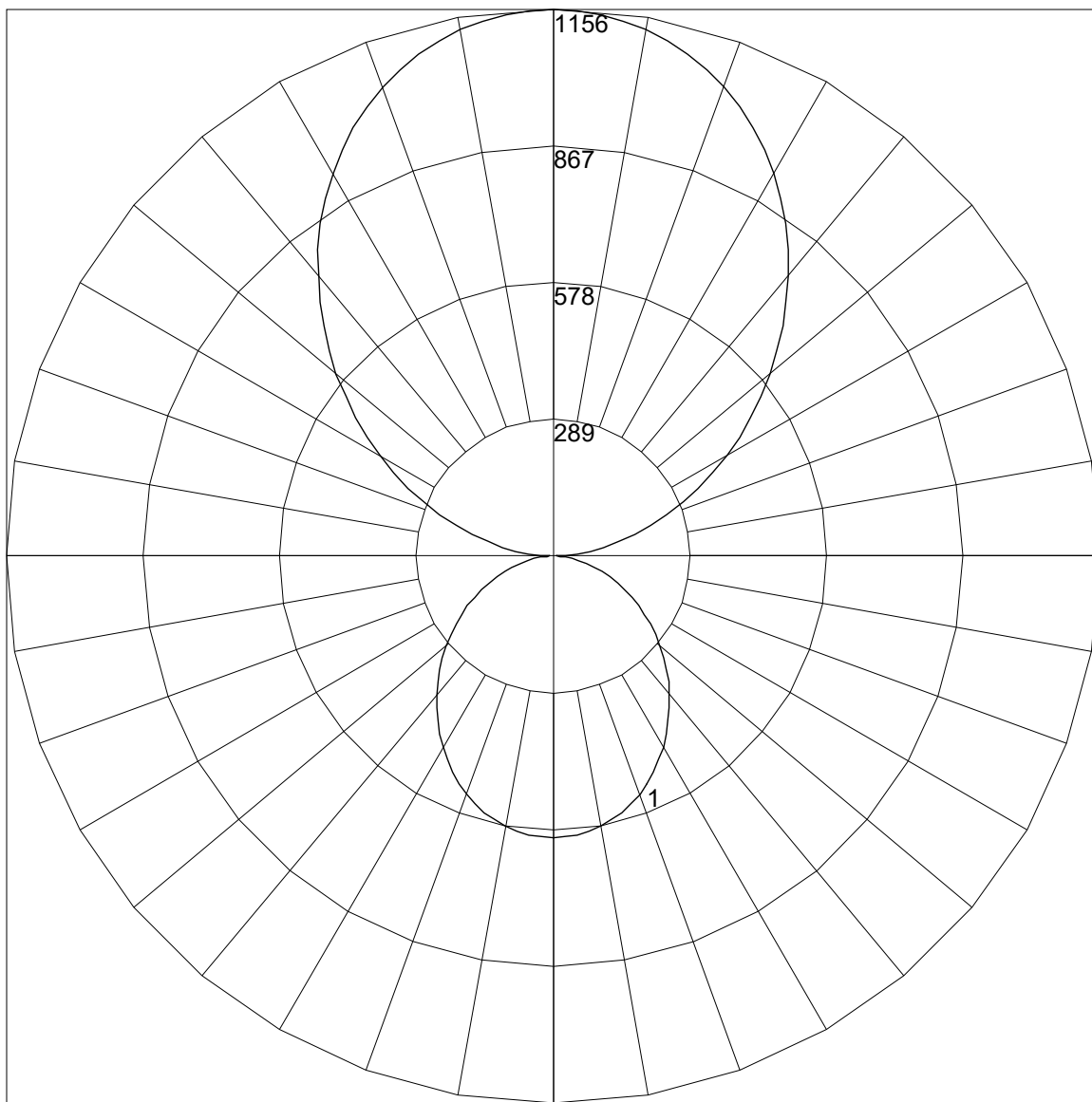
PHOTOMETRIC FILENAME : 4D90 - HP-4C-ID-P-37IN11-16IN-V-B-835-ITL93249.005.IES

## 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	103	103	103	103	93	93	93	93	74	74	74	56	56	56	40	40	40	33
1	94	90	86	82	84	81	78	75	65	62	60	49	48	47	36	35	34	28
2	86	78	72	67	77	71	66	61	57	53	50	43	41	39	31	30	29	23
3	78	69	62	56	70	62	56	51	50	46	42	38	36	33	28	26	24	20
4	71	61	53	47	64	55	49	43	44	40	36	34	31	28	25	23	21	17
5	65	54	46	41	59	49	42	37	40	35	31	31	27	25	22	20	18	15
6	60	49	41	35	54	44	37	32	36	31	27	28	24	21	20	18	16	13
7	56	44	36	31	50	40	33	28	32	27	24	25	22	19	19	16	14	12
8	52	40	32	27	46	36	29	25	29	24	21	23	19	17	17	15	13	10
9	48	36	29	24	43	33	26	22	27	22	19	21	18	15	16	13	12	9
10	45	33	26	21	40	30	24	20	25	20	17	20	16	14	15	12	11	9

POLAR GRAPH



Maximum Candela = 1156 Located At Horizontal Angle = 0, Vertical Angle = 180  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)