

# 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-H-835-ITL93249.004.IES

### DESCRIPTION INFORMATION (From Photometric File)

[TEST]ITL93249.004 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-H-835

[\_INPUT\_ELECTRICAL]120.0 VOLTS, 47.7 WATTS

[\_INPUT\_ELECTRICAL]277.0 VOLTS, 48.4 WATTS

[\_ABSOLUTE]LUMENS]5203

[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	5203
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	109
Total Luminaire Watts	47.7
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 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	7600	7807	8218
55	6730	6984	7470
65	5882	6116	6740
75	5003	5139	5842
85	4282	4201	4885

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	899.117	899.117	899.117	899.117	899.117	899.117	899.117	899.117	899.117
2.5	898.339	898.339	899.117	898.339	897.562	897.562	897.562	896.784	896.784
5.0	894.450	894.450	894.450	894.450	893.673	892.895	892.117	891.339	891.339
7.5	888.228	887.450	887.450	887.450	885.895	885.117	883.562	882.784	881.228
10.0	876.562	877.339	877.339	877.339	875.784	874.228	872.673	871.117	870.339
12.5	864.117	863.339	863.339	864.117	863.339	860.228	858.672	855.561	854.784
15.0	846.228	847.783	846.228	848.561	848.561	844.672	841.561	837.672	834.561
17.5	824.450	826.783	826.783	829.117	829.117	825.228	819.783	815.894	812.783
20.0	802.672	805.005	805.783	807.339	808.894	803.450	798.005	791.005	789.450
22.5	777.783	779.339	780.894	784.783	786.339	779.339	773.116	765.338	763.783
25.0	751.338	752.894	754.449	759.894	759.894	754.449	747.449	737.338	733.449
27.5	721.783	722.560	726.449	731.894	732.672	726.449	717.116	709.338	704.671
30.0	692.227	693.782	698.449	702.338	704.671	696.894	688.338	677.449	675.893
32.5	658.782	663.449	666.560	673.560	675.116	665.782	658.782	647.115	643.227
35.0	626.893	630.004	634.671	641.671	641.671	635.449	626.115	616.004	611.337
37.5	595.004	598.115	602.782	609.004	610.560	605.115	594.226	584.115	580.226
40.0	563.115	564.670	569.337	577.893	579.448	572.448	563.115	549.893	546.004
42.5	527.337	530.448	536.670	544.448	546.004	541.337	530.448	518.781	514.115
45.0	493.892	497.003	502.448	509.448	512.559	507.892	495.448	485.337	481.448
47.5	461.225	463.559	469.003	476.781	479.114	473.670	462.003	451.892	449.559
50.0	427.003	431.670	436.336	444.892	446.447	441.003	429.336	420.003	416.114
52.5	395.114	397.447	402.892	411.447	413.003	408.336	398.225	387.336	387.336
55.0	361.669	365.558	370.225	376.447	378.780	376.447	365.558	357.002	353.891
57.5	331.336	334.447	336.780	344.558	346.891	342.224	332.113	325.891	323.558
60.0	301.002	301.780	305.669	312.669	315.780	311.891	302.558	294.780	291.669
62.5	271.446	272.224	274.557	281.557	283.113	280.002	271.446	266.002	262.891
65.0	240.335	241.891	245.002	248.891	252.780	248.891	242.668	236.446	234.891
67.5	213.113	214.668	214.668	219.335	221.668	220.113	211.557	208.446	207.668
70.0	185.890	186.668	185.112	190.557	191.335	189.779	184.335	182.001	179.668
72.5	160.223	159.446	158.668	161.779	162.557	162.557	157.890	155.557	154.001
75.0	133.779	134.556	133.001	133.779	135.334	135.334	133.001	129.890	130.667
77.5	111.223	111.223	107.334	108.890	107.334	109.667	107.334	107.334	108.112
80.0	89.445	89.445	84.778	85.556	82.445	86.334	84.778	86.334	85.556
82.5	70.001	68.445	64.556	63.778	60.667	63.778	64.556	66.112	66.889
85.0	50.556	49.778	45.889	42.778	39.667	43.556	45.889	47.445	49.000
87.5	35.000	33.445	27.222	25.667	21.000	24.111	28.000	31.889	33.445
90.0	24.111	22.556	17.111	14.000	9.333	11.667	15.556	21.000	22.556
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-H-835-ITL93249.004.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-H-835-ITL93249.004.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	322.28	N.A.	6.20
0-30	667.80	N.A.	12.80
0-40	1062.33	N.A.	20.40
0-60	1777.97	N.A.	34.20
0-80	2162.16	N.A.	41.60
0-90	2213.95	N.A.	42.60
10-90	2129.27	N.A.	40.90
20-40	740.04	N.A.	14.20
20-50	1125.84	N.A.	21.60
40-70	958.03	N.A.	18.40
60-80	384.19	N.A.	7.40
70-80	141.81	N.A.	2.70
80-90	51.78	N.A.	1.00
90-110	263.22	N.A.	5.10
90-120	600.24	N.A.	11.50
90-130	1055.56	N.A.	20.30
90-150	2113.61	N.A.	40.60
90-180	2988.86	N.A.	57.40
110-180	2725.64	N.A.	52.40
0-180	5202.8	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	84.68
10-20	237.60
20-30	345.51
30-40	394.53
40-50	385.80
50-60	329.84
60-70	242.38
70-80	141.81
80-90	51.78
90-100	67.09
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

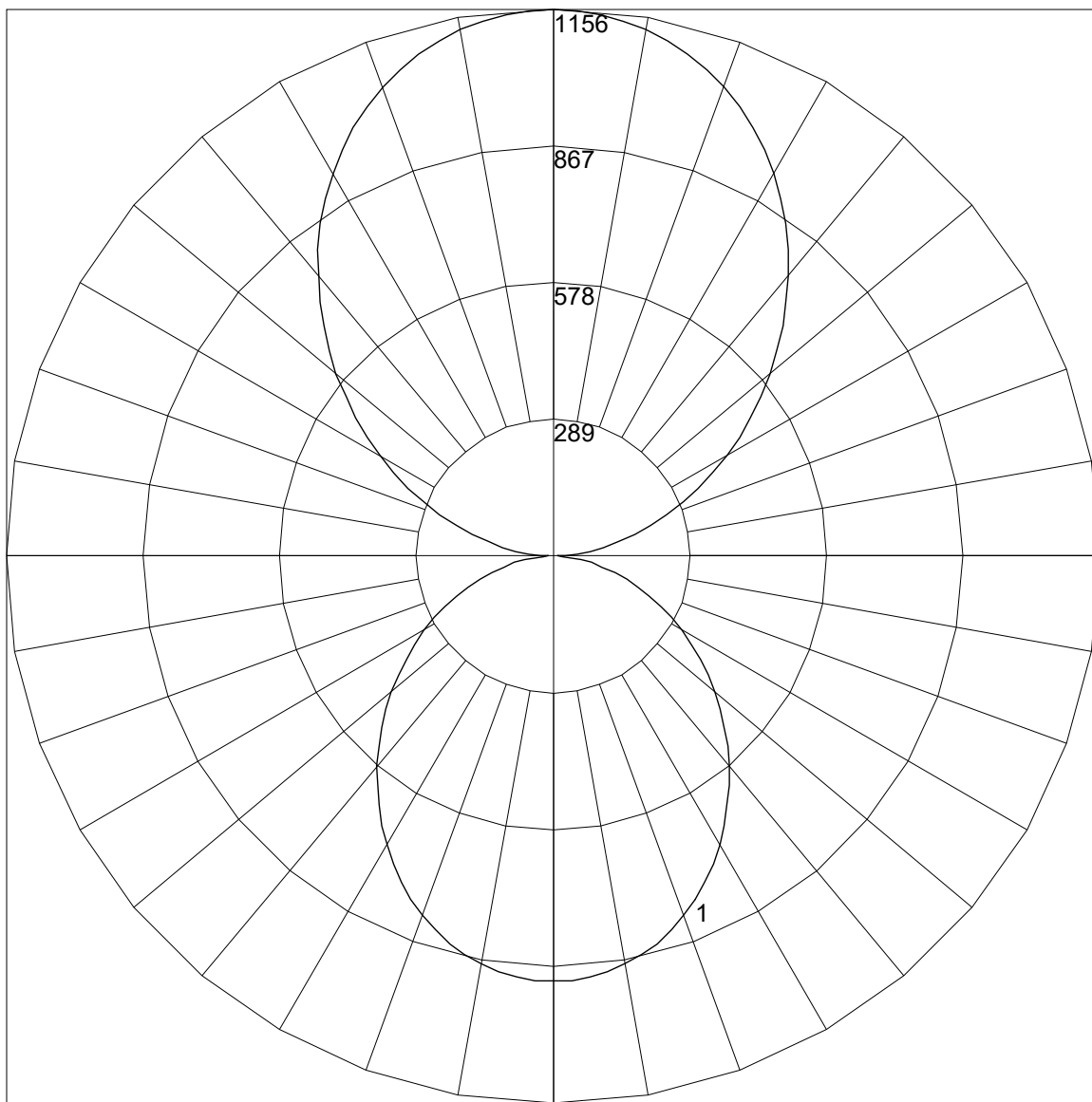
PHOTOMETRIC FILENAME : 4D90 - HP-4C-ID-P-37IN11-16IN-V-H-835-ITL93249.004.IES

## 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	105	105	105	105	96	96	96	96	79	79	79	64	64	64	49	49	49	43
1	96	92	88	84	88	84	81	78	69	67	65	56	54	53	43	42	42	36
2	88	80	74	69	80	73	68	64	61	57	54	49	46	44	38	37	35	30
3	80	70	63	58	73	65	58	53	54	49	45	43	40	37	34	32	30	26
4	73	62	55	49	66	57	51	45	48	43	39	39	35	32	30	28	26	22
5	67	56	48	42	61	51	44	39	43	37	33	35	31	28	27	25	23	19
6	62	50	42	36	56	46	39	34	38	33	29	31	27	24	25	22	20	17
7	57	45	37	32	52	42	35	30	35	29	26	29	25	22	23	20	18	15
8	53	41	33	28	48	38	31	26	32	26	23	26	22	19	21	18	16	13
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14	12
10	46	34	27	22	42	32	25	21	27	22	18	22	18	16	18	15	13	11

POLAR GRAPH



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