

# 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-H-H-835-ITL93249.001.IES

### DESCRIPTION INFORMATION (From Photometric File)

[TEST]ITL93249.001 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-H-H-835

[\_INPUT\_ELECTRICAL]120.0 VOLTS, 41.8 WATTS

[\_INPUT\_ELECTRICAL]277.0 VOLTS, 42.5 WATTS

[\_ABSOLUTE]LUMENS]4539

[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	4539
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	109
Total Luminaire Watts	41.8
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

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## 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	33.445	31.889	28.000	23.334	20.222	21.000	26.445	30.334	32.667
95.0	52.889	51.334	46.667	42.000	40.445	39.667	45.111	49.000	51.334
97.5	74.667	73.889	68.445	63.000	61.445	61.445	65.334	70.001	71.556
100.0	100.334	98.001	92.556	88.667	84.778	85.556	87.889	92.556	94.889
102.5	125.223	122.890	119.001	114.334	110.445	111.223	114.334	116.667	119.001
105.0	151.668	150.112	145.445	142.334	138.445	138.445	140.001	145.445	145.445
107.5	179.668	178.890	174.223	170.334	167.223	169.557	168.001	171.890	172.668
110.0	208.446	209.224	203.001	202.224	199.112	199.890	196.001	199.890	203.001
112.5	240.335	238.779	234.891	235.668	231.002	230.224	227.890	231.779	232.557
115.0	270.668	269.113	266.780	266.002	262.891	260.557	261.335	262.891	262.113
117.5	301.780	300.224	299.446	297.113	296.335	292.446	292.446	294.002	293.224
120.0	332.891	335.224	332.891	330.558	329.002	327.447	324.336	325.891	322.780
122.5	367.891	370.225	367.114	363.225	363.225	360.113	357.780	358.558	354.669
125.0	401.336	404.447	402.892	396.669	395.892	393.558	392.003	388.892	386.558
127.5	433.225	439.447	436.336	434.003	429.336	424.670	423.892	419.225	418.447
130.0	467.448	474.448	469.781	469.003	465.892	458.892	455.781	453.447	451.114
132.5	504.003	508.670	504.003	502.448	499.337	492.337	487.670	486.114	483.003

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 4D90 - HP-4C-ID-P-37IN11-16IN-H-H-835-ITL93249.001.IES****CANDELA TABULATION - (Cont.)**

135.0	537.448	541.337	539.004	535.893	534.337	527.337	521.892	520.337	518.781
137.5	570.893	574.004	574.004	569.337	567.004	560.004	556.115	553.004	551.448
140.0	606.671	606.671	605.893	603.560	600.448	594.226	588.004	586.448	583.337
142.5	637.782	638.560	637.782	635.449	635.449	626.893	621.449	618.337	615.226
145.0	668.116	668.893	668.893	665.782	667.338	658.004	654.115	650.227	648.671
147.5	700.005	699.227	697.671	694.560	696.894	688.338	683.671	681.338	679.005
150.0	727.227	727.227	726.449	724.116	724.894	717.116	714.005	711.671	707.783
152.5	752.894	754.449	752.116	750.561	752.116	745.894	741.227	738.894	735.005
155.0	778.561	780.116	777.005	775.450	777.783	771.561	766.894	765.338	763.005
157.5	801.116	802.672	799.561	797.228	800.339	794.116	792.561	790.227	787.116
160.0	819.783	821.339	819.005	819.005	819.783	815.117	813.561	812.005	808.894
162.5	836.894	839.228	838.450	836.117	838.450	835.339	833.783	832.228	830.672
165.0	853.228	854.784	854.006	852.450	854.784	850.895	850.117	849.339	847.783
167.5	868.006	867.228	867.228	866.450	868.006	866.450	865.673	864.895	864.117
170.0	878.895	878.895	878.117	879.673	878.895	877.339	877.339	877.339	877.339
172.5	888.228	887.450	887.450	888.228	887.450	887.450	887.450	886.673	886.673
175.0	894.450	893.673	893.673	893.673	893.673	893.673	893.673	893.673	894.450
177.5	897.562	897.562	897.562	897.562	897.562	897.562	897.562	897.562	897.562
180.0	899.117	899.117	899.117	899.117	899.117	899.117	899.117	899.117	899.117

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 4D90 - HP-4C-ID-P-37IN11-16IN-H-H-835-ITL93249.001.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	322.28	N.A.	7.10
0-30	667.80	N.A.	14.70
0-40	1062.33	N.A.	23.40
0-60	1777.97	N.A.	39.20
0-80	2162.16	N.A.	47.60
0-90	2213.95	N.A.	48.80
10-90	2129.27	N.A.	46.90
20-40	740.04	N.A.	16.30
20-50	1125.84	N.A.	24.80
40-70	958.03	N.A.	21.10
60-80	384.19	N.A.	8.50
70-80	141.81	N.A.	3.10
80-90	51.78	N.A.	1.10
90-110	205.24	N.A.	4.50
90-120	467.37	N.A.	10.30
90-130	821.51	N.A.	18.10
90-150	1644.44	N.A.	36.20
90-180	2325.19	N.A.	51.20
110-180	2119.95	N.A.	46.70
0-180	4539.14	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	52.69
100-110	152.55
110-120	262.13
120-130	354.14
130-140	409.53
140-150	413.40
150-160	355.72
160-170	240.21
170-180	84.83

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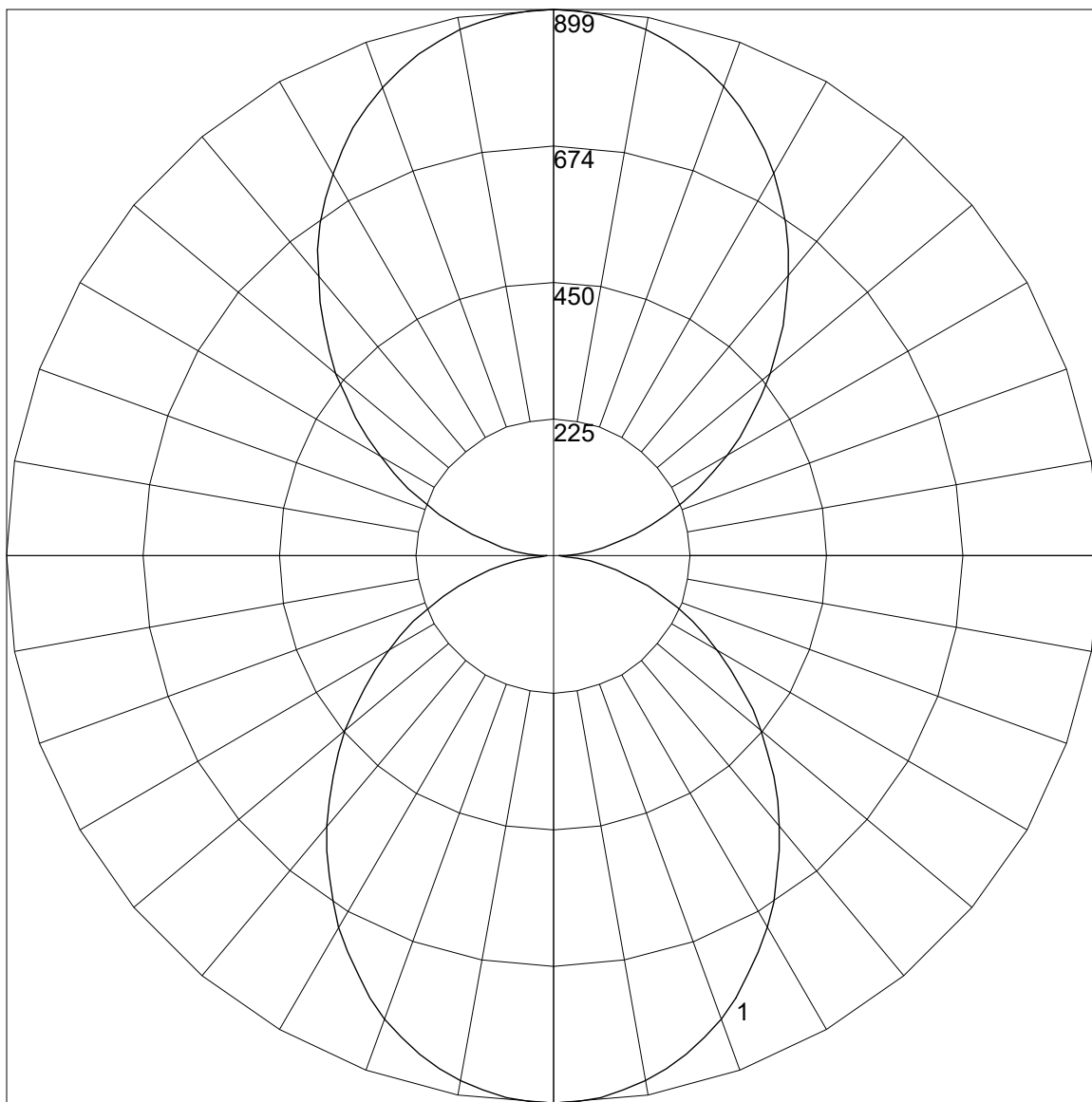
PHOTOMETRIC FILENAME : 4D90 - HP-4C-ID-P-37IN11-16IN-H-H-835-ITL93249.001.IES

## 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	107	107	107	107	98	98	98	98	83	83	83	68	68	68	55	55	55	49
1	97	93	89	86	90	86	83	80	72	70	68	60	58	57	49	47	46	41
2	89	81	75	70	82	75	70	65	63	60	56	53	50	47	43	41	39	34
3	81	72	64	58	74	66	60	55	56	51	47	47	43	40	38	35	33	29
4	74	63	56	49	68	59	52	46	50	45	40	42	38	35	34	31	29	25
5	68	57	48	42	63	52	45	40	45	39	35	37	33	30	31	28	25	22
6	63	51	43	37	58	47	40	35	40	35	30	34	30	26	28	25	22	19
7	58	46	38	32	53	43	36	31	37	31	27	31	27	23	25	22	20	17
8	54	42	34	29	50	39	32	27	33	28	24	28	24	21	23	20	18	15
9	50	38	31	26	46	35	29	24	31	25	21	26	22	19	22	18	16	14
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	20	17	15	13

POLAR GRAPH



Maximum Candela = 899.117 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)