

# 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 : 3D90 - HP-4C-ID-P-28IN9-16IN-V-B-8TW-ITL93249.921.IES

### DESCRIPTION INFORMATION (From Photometric File)

[TEST]ITL93249.921 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-8TW

[\_INPUT\_ELECTRICAL]120.0 VOLTS, 33.4 WATTS

[\_INPUT\_ELECTRICAL]277.0 VOLTS, 34.2 WATTS

[\_ABSOLUTE]LUMENS]3501

[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	3500
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	105
Total Luminaire Watts	33.4
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	3952	4059	4273
55	3499	3631	3884
65	3058	3180	3504
75	2601	2672	3037
85	2226	2184	2540

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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	467.471	467.471	467.471	467.471	467.471	467.471	467.471	467.471	467.471
2.5	467.067	467.067	467.471	467.067	466.663	466.663	466.663	466.258	466.258
5.0	465.045	465.045	465.045	465.045	464.641	464.236	463.832	463.428	463.428
7.5	461.810	461.406	461.406	461.406	460.597	460.192	459.384	458.979	458.171
10.0	455.744	456.149	456.149	456.149	455.340	454.531	453.722	452.913	452.509
12.5	449.274	448.870	448.870	449.274	448.870	447.252	446.443	444.826	444.421
15.0	439.973	440.782	439.973	441.186	441.186	439.164	437.547	435.525	433.907
17.5	428.650	429.863	429.863	431.077	431.077	429.055	426.224	424.202	422.584
20.0	417.327	418.541	418.945	419.754	420.563	417.732	414.901	411.262	410.453
22.5	404.387	405.196	406.005	408.026	408.835	405.196	401.961	397.917	397.108
25.0	390.638	391.447	392.255	395.086	395.086	392.255	388.616	383.359	381.337
27.5	375.271	375.675	377.697	380.528	380.933	377.697	372.845	368.801	366.375
30.0	359.904	360.713	363.139	365.161	366.375	362.331	357.882	352.221	351.412
32.5	342.516	344.942	346.560	350.199	351.008	346.155	342.516	336.450	334.428
35.0	325.936	327.553	329.980	333.619	333.619	330.384	325.531	320.274	317.848
37.5	309.356	310.974	313.400	316.635	317.444	314.613	308.952	303.695	301.673
40.0	292.776	293.585	296.011	300.459	301.268	297.629	292.776	285.902	283.880
42.5	274.174	275.792	279.027	283.071	283.880	281.453	275.792	269.726	267.300
45.0	256.786	258.403	261.234	264.873	266.491	264.065	257.594	252.338	250.316
47.5	239.802	241.015	243.845	247.889	249.102	246.272	240.206	234.949	233.736
50.0	222.008	224.435	226.861	231.309	232.118	229.287	223.222	218.369	216.347
52.5	205.429	206.642	209.472	213.921	214.730	212.303	207.046	201.385	201.385
55.0	188.040	190.062	192.488	195.723	196.936	195.723	190.062	185.614	183.996
57.5	172.269	173.886	175.100	179.143	180.357	177.930	172.673	169.438	168.225
60.0	156.498	156.902	158.924	162.564	164.181	162.159	157.306	153.263	151.645
62.5	141.131	141.535	142.749	146.388	147.197	145.579	141.131	138.300	136.683
65.0	124.956	125.764	127.382	129.404	131.426	129.404	126.169	122.934	122.125
67.5	110.802	111.611	111.611	114.037	115.250	114.442	109.993	108.376	107.971
70.0	96.648	97.053	96.244	99.075	99.479	98.670	95.840	94.627	93.413
72.5	83.304	82.899	82.495	84.112	84.517	84.517	82.091	80.877	80.069
75.0	69.555	69.959	69.150	69.555	70.363	70.363	69.150	67.533	67.937
77.5	57.827	57.827	55.805	56.614	55.805	57.019	55.805	55.805	56.210
80.0	46.505	46.505	44.078	44.483	42.865	44.887	44.078	44.887	44.483
82.5	36.395	35.586	33.564	33.160	31.542	33.160	33.564	34.373	34.777
85.0	26.285	25.881	23.859	22.241	20.624	22.646	23.859	24.668	25.476
87.5	18.197	17.389	14.153	13.345	10.918	12.536	14.558	16.580	17.389
90.0	12.536	11.727	8.896	7.279	4.853	6.066	8.088	10.918	11.727
92.5	33.797	32.225	28.295	23.579	20.436	21.222	26.724	30.653	33.011
95.0	53.447	51.875	47.159	42.443	40.871	40.085	45.587	49.517	51.875
97.5	75.454	74.668	69.167	63.665	62.093	62.093	66.023	70.739	72.311
100.0	101.392	99.034	93.532	89.602	85.672	86.458	88.816	93.532	95.890
102.5	126.543	124.186	120.256	115.540	111.610	112.396	115.540	117.898	120.256
105.0	153.267	151.695	146.979	143.835	139.905	139.905	141.477	146.979	146.979
107.5	181.562	180.776	176.060	172.131	168.987	171.345	169.773	173.702	174.488
110.0	210.644	211.430	205.142	204.356	201.212	201.998	198.068	201.998	205.142
112.5	242.869	241.297	237.367	238.153	233.437	232.651	230.293	234.223	235.009
115.0	273.522	271.950	269.592	268.807	265.663	263.305	264.091	265.663	264.877
117.5	304.962	303.390	302.604	300.246	299.460	295.530	295.530	297.102	296.316
120.0	336.401	338.759	336.401	334.043	332.471	330.899	327.755	329.327	326.183
122.5	371.770	374.128	370.984	367.055	367.055	363.911	361.553	362.339	358.409
125.0	405.568	408.712	407.140	400.852	400.066	397.708	396.136	392.992	390.634
127.5	437.793	444.081	440.937	438.579	433.863	429.147	428.361	423.645	422.859
130.0	472.376	479.450	474.734	473.948	470.804	463.731	460.587	458.229	455.871
132.5	509.318	514.034	509.318	507.746	504.602	497.528	492.812	491.240	488.096

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 3D90 - HP-4C-ID-P-28IN9-16IN-V-B-8TW-ITL93249.921.IES****CANDELA TABULATION - (Cont.)**

135.0	543.115	547.045	544.687	541.543	539.971	532.897	527.395	525.823	524.251
137.5	576.912	580.056	580.056	575.340	572.982	565.909	561.979	558.835	557.263
140.0	613.067	613.067	612.282	609.924	606.780	600.492	594.204	592.632	589.488
142.5	644.507	645.293	644.507	642.149	642.149	633.503	628.001	624.857	621.713
145.0	675.160	675.946	675.946	672.802	674.374	664.942	661.013	657.083	655.511
147.5	707.386	706.600	705.028	701.884	704.242	695.596	690.880	688.522	686.164
150.0	734.895	734.895	734.109	731.751	732.537	724.677	721.533	719.175	715.245
152.5	760.832	762.404	760.047	758.475	760.047	753.759	749.043	746.685	742.755
155.0	786.770	788.342	785.198	783.626	785.984	779.696	774.980	773.408	771.050
157.5	809.563	811.135	807.992	805.634	808.778	802.490	800.918	798.560	795.416
160.0	828.427	829.999	827.641	827.641	828.427	823.711	822.139	820.567	817.423
162.5	845.719	848.077	847.291	844.933	847.291	844.147	842.575	841.003	839.431
165.0	862.224	863.796	863.010	861.438	863.796	859.866	859.081	858.295	856.722
167.5	877.158	876.372	876.372	875.586	877.158	875.586	874.800	874.014	873.228
170.0	888.162	888.162	887.376	888.948	888.162	886.590	886.590	886.590	886.590
172.5	897.594	896.808	896.808	897.594	896.808	896.808	896.808	896.022	896.022
175.0	903.882	903.096	903.096	903.096	903.096	903.096	903.096	903.096	903.882
177.5	907.025	907.025	907.025	907.025	907.025	907.025	907.025	907.025	907.025
180.0	908.597	908.597	908.597	908.597	908.597	908.597	908.597	908.597	908.597

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 3D90 - HP-4C-ID-P-28IN9-16IN-V-B-8TW-ITL93249.921.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	167.56	N.A.	4.80
0-30	347.20	N.A.	9.90
0-40	552.33	N.A.	15.80
0-60	924.41	N.A.	26.40
0-80	1124.16	N.A.	32.10
0-90	1151.08	N.A.	32.90
10-90	1107.05	N.A.	31.60
20-40	384.76	N.A.	11.00
20-50	585.35	N.A.	16.70
40-70	498.10	N.A.	14.20
60-80	199.75	N.A.	5.70
70-80	73.73	N.A.	2.10
80-90	26.92	N.A.	0.80
90-110	206.28	N.A.	5.90
90-120	471.17	N.A.	13.50
90-130	829.04	N.A.	23.70
90-150	1660.65	N.A.	47.50
90-180	2348.58	N.A.	67.10
110-180	2142.31	N.A.	61.20
0-180	3499.66	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	44.03
10-20	123.54
20-30	179.64
30-40	205.12
40-50	200.59
50-60	171.49
60-70	126.02
70-80	73.73
80-90	26.92
90-100	52.12
100-110	154.16
110-120	264.89
120-130	357.88
130-140	413.85
140-150	417.76
150-160	359.47
160-170	242.74
170-180	85.72

# IES INDOOR REPORT

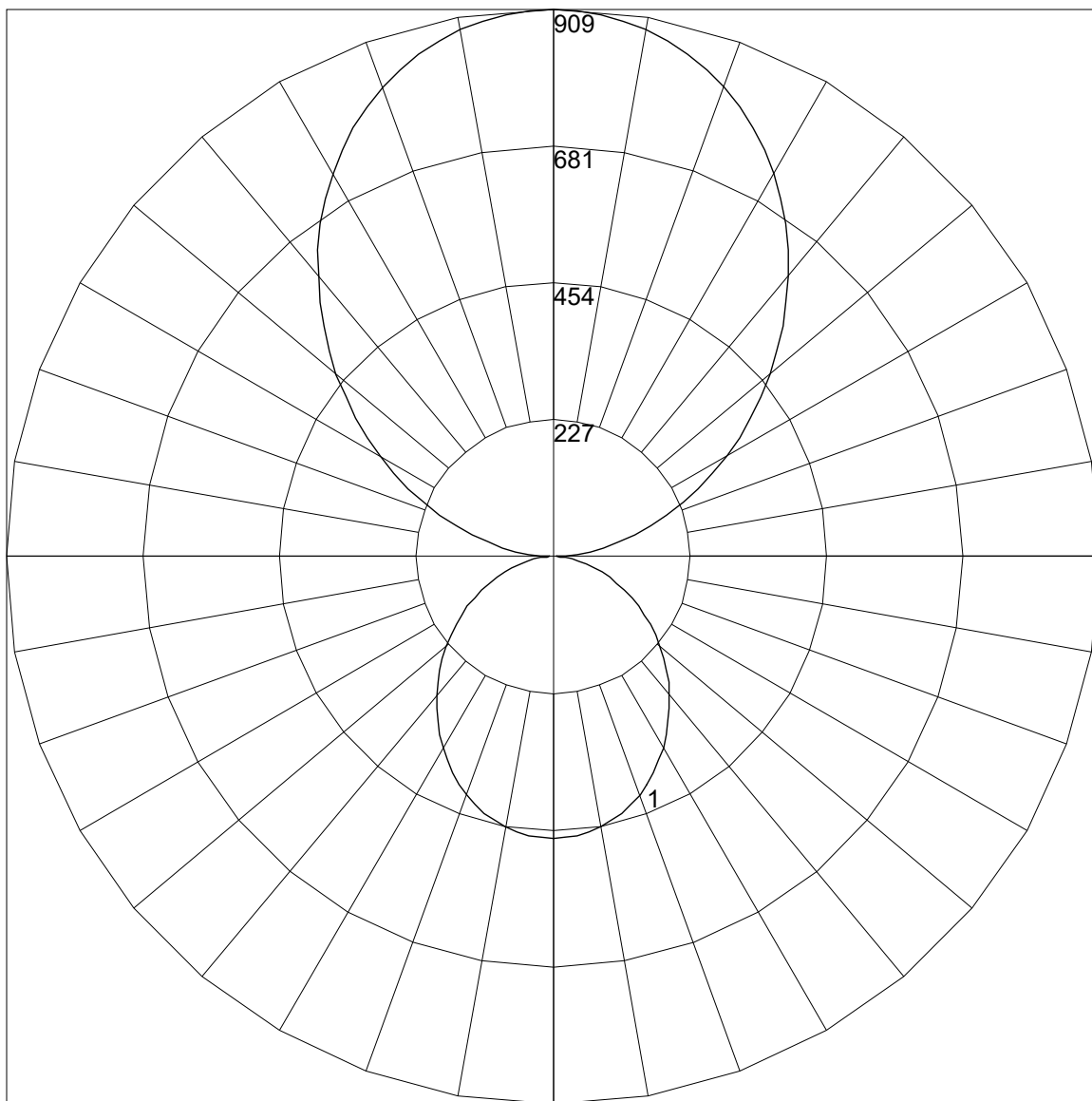
PHOTOMETRIC FILENAME : 3D90 - HP-4C-ID-P-28IN9-16IN-V-B-8TW-ITL93249.921.IES

## 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	51	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 = 908.597 Located At Horizontal Angle = 0, Vertical Angle = 180  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)