

# 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-H-835-ITL93249.020.IES

### DESCRIPTION INFORMATION (From Photometric File)

I  
[TEST]ITL93249.020 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, 36.9 WATTS  
[\_INPUT\_ELECTRICAL]277.0 VOLTS, 37.3 WATTS  
[\_ABSOLUTE]LUMENS]4090  
[OTHER]see 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	4089
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	111
Total Luminaire Watts	36.9
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	5973	6135	6458
55	5289	5488	5870
65	4622	4807	5296
75	3932	4038	4591
85	3365	3301	3839

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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	706.554	706.554	706.554	706.554	706.554	706.554	706.554	706.554	706.554
2.5	705.943	705.943	706.554	705.943	705.332	705.332	705.332	704.721	704.721
5.0	702.887	702.887	702.887	702.887	702.276	701.664	701.053	700.442	700.442
7.5	697.997	697.386	697.386	697.386	696.164	695.552	694.330	693.719	692.496
10.0	688.829	689.440	689.440	689.440	688.218	686.995	685.773	684.551	683.939
12.5	679.050	678.439	678.439	679.050	678.439	675.994	674.771	672.327	671.715
15.0	664.992	666.215	664.992	666.826	666.826	663.770	661.325	658.269	655.824
17.5	647.878	649.712	649.712	651.546	651.546	648.490	644.211	641.155	638.710
20.0	630.765	632.598	633.209	634.432	635.654	631.376	627.097	621.596	620.374
22.5	611.206	612.428	613.651	616.707	617.929	612.428	607.539	601.427	600.204
25.0	590.425	591.647	592.870	597.148	597.148	592.870	587.369	579.423	576.367
27.5	567.199	567.810	570.866	575.145	575.756	570.866	563.532	557.420	553.753
30.0	543.973	545.196	548.863	551.919	553.753	547.641	540.917	532.360	531.138
32.5	517.692	521.359	523.803	529.304	530.527	523.192	517.692	508.523	505.467
35.0	492.632	495.077	498.744	504.245	504.245	499.355	492.021	484.075	480.408
37.5	467.573	470.017	473.685	478.574	479.797	475.518	466.961	459.016	455.960
40.0	442.513	443.736	447.403	454.126	455.349	449.848	442.513	432.123	429.067
42.5	414.398	416.842	421.732	427.844	429.067	425.399	416.842	407.674	404.007
45.0	388.116	390.561	394.839	400.340	402.785	399.118	389.338	381.392	378.337
47.5	362.445	364.279	368.557	374.669	376.503	372.224	363.056	355.111	353.277
50.0	335.552	339.219	342.887	349.610	350.832	346.554	337.386	330.051	326.995
52.5	310.493	312.326	316.605	323.328	324.550	320.883	312.938	304.381	304.381
55.0	284.211	287.267	290.934	295.824	297.657	295.824	287.267	280.543	278.099
57.5	260.374	262.819	264.652	270.764	272.598	268.931	260.985	256.095	254.262
60.0	236.537	237.148	240.204	245.705	248.150	245.094	237.759	231.647	229.202
62.5	213.311	213.922	215.756	221.257	222.479	220.034	213.311	209.032	206.588
65.0	188.863	190.085	192.530	195.586	198.642	195.586	190.696	185.807	184.584
67.5	167.470	168.693	168.693	172.360	174.194	172.971	166.248	163.803	163.192
70.0	146.078	146.689	145.467	149.745	150.357	149.134	144.856	143.022	141.189
72.5	125.908	125.297	124.686	127.131	127.742	127.742	124.075	122.241	121.019
75.0	105.127	105.739	104.516	105.127	106.350	106.350	104.516	102.071	102.683
77.5	87.403	87.403	84.346	85.569	84.346	86.180	84.346	84.346	84.958
80.0	70.289	70.289	66.621	67.233	64.788	67.844	66.621	67.844	67.233
82.5	55.008	53.786	50.730	50.119	47.674	50.119	50.730	51.953	52.564
85.0	39.728	39.117	36.061	33.616	31.172	34.227	36.061	37.284	38.506
87.5	27.504	26.282	21.392	20.170	16.503	18.947	22.003	25.059	26.282
90.0	18.947	17.725	13.447	11.002	7.335	9.168	12.224	16.503	17.725
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-H-835-ITL93249.020.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-H-835-ITL93249.020.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	253.26	N.A.	6.20
0-30	524.78	N.A.	12.80
0-40	834.81	N.A.	20.40
0-60	1397.19	N.A.	34.20
0-80	1699.1	N.A.	41.60
0-90	1739.79	N.A.	42.50
10-90	1673.24	N.A.	40.90
20-40	581.55	N.A.	14.20
20-50	884.72	N.A.	21.60
40-70	752.85	N.A.	18.40
60-80	301.91	N.A.	7.40
70-80	111.44	N.A.	2.70
80-90	40.69	N.A.	1.00
90-110	206.89	N.A.	5.10
90-120	471.78	N.A.	11.50
90-130	829.66	N.A.	20.30
90-150	1661.26	N.A.	40.60
90-180	2349.19	N.A.	57.50
110-180	2142.31	N.A.	52.40
0-180	4088.98	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	66.55
10-20	186.72
20-30	271.51
30-40	310.03
40-50	303.17
50-60	259.20
60-70	190.47
70-80	111.44
80-90	40.69
90-100	52.73
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

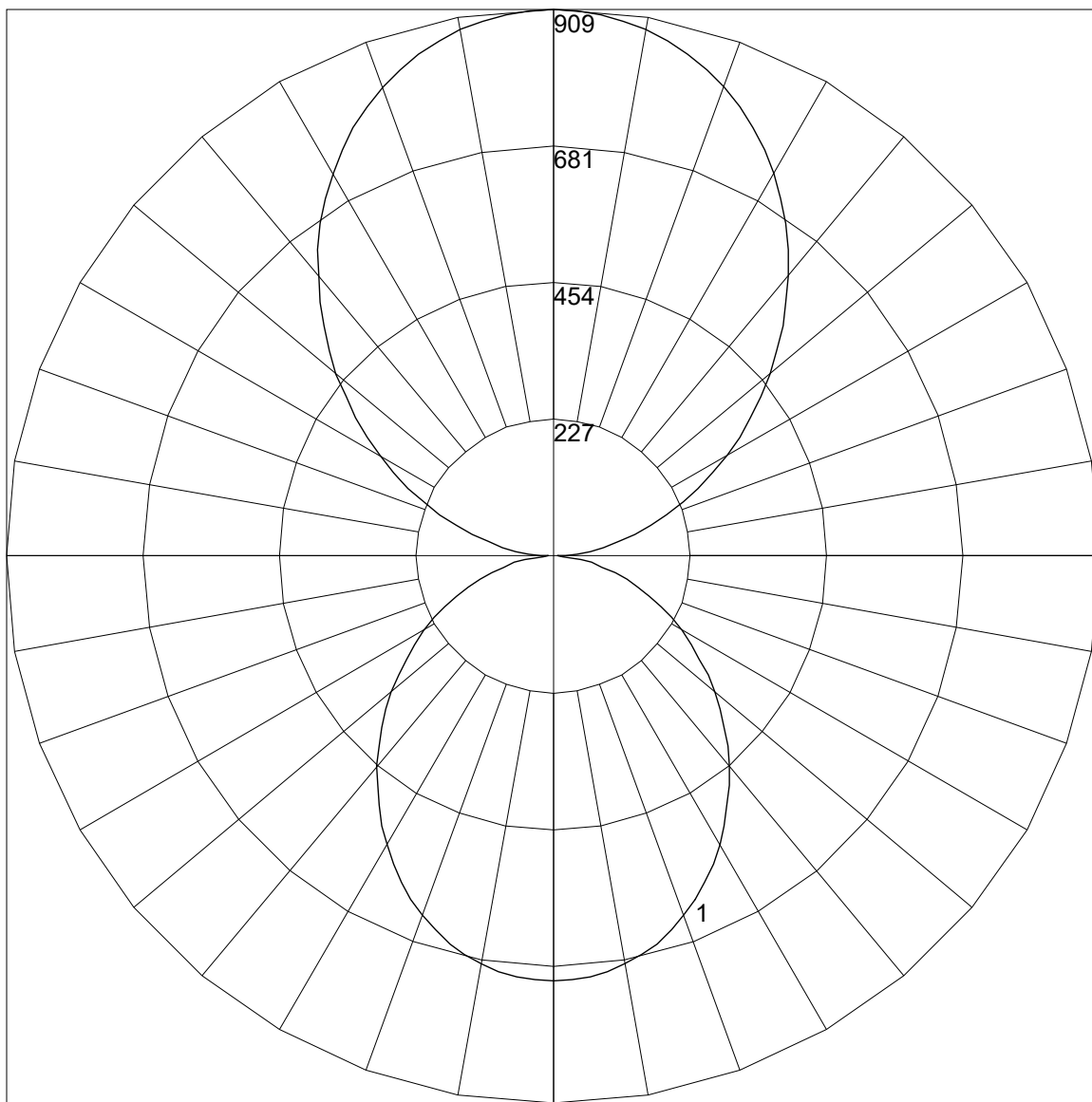
PHOTOMETRIC FILENAME : 3D90 - HP-4C-ID-P-28IN9-16IN-V-H-835-ITL93249.020.IES

## 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	41	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	25
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 = 908.597 Located At Horizontal Angle = 0, Vertical Angle = 180  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)