

# 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-B-B-835-ITL93249.018.IES

### DESCRIPTION INFORMATION (From Photometric File)

[TEST]ITL93249.018 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-B-B-835

[\_INPUT\_ELECTRICAL]120.0 VOLTS, 21.2 WATTS

[\_INPUT\_ELECTRICAL]277.0 VOLTS, 22.3 WATTS

[\_ABSOLUTE]LUMENS]2360

[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	2360
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	111
Total Luminaire Watts	21.2
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	3952	4059	4273
55	3499	3631	3884
65	3058	3180	3504
75	2601	2672	3037
85	2226	2184	2540

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	17.389	16.580	14.558	12.132	10.514	10.918	13.749	15.771	16.984
95.0	27.498	26.689	24.263	21.837	21.028	20.624	23.454	25.476	26.689
97.5	38.821	38.417	35.586	32.755	31.947	31.947	33.968	36.395	37.204
100.0	52.166	50.953	48.122	46.100	44.078	44.483	45.696	48.122	49.335
102.5	65.106	63.893	61.871	59.445	57.423	57.827	59.445	60.658	61.871
105.0	78.856	78.047	75.620	74.003	71.981	71.981	72.790	75.620	75.620
107.5	93.413	93.009	90.583	88.561	86.943	88.156	87.348	89.370	89.774
110.0	108.376	108.780	105.545	105.141	103.523	103.927	101.906	103.927	105.545
112.5	124.956	124.147	122.125	122.529	120.103	119.699	118.485	120.507	120.912
115.0	140.727	139.918	138.705	138.300	136.683	135.470	135.874	136.683	136.278
117.5	156.902	156.093	155.689	154.476	154.071	152.049	152.049	152.858	152.454
120.0	173.078	174.291	173.078	171.864	171.056	170.247	168.629	169.438	167.821
122.5	191.275	192.488	190.871	188.849	188.849	187.231	186.018	186.422	184.400
125.0	208.664	210.281	209.472	206.237	205.833	204.620	203.811	202.194	200.980
127.5	225.244	228.479	226.861	225.648	223.222	220.795	220.391	217.965	217.560
130.0	243.037	246.676	244.250	243.845	242.228	238.588	236.971	235.758	234.544
132.5	262.043	264.469	262.043	261.234	259.616	255.977	253.551	252.742	251.124

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 3D90 - HP-4C-ID-P-28IN9-16IN-B-B-835-ITL93249.018.IES****CANDELA TABULATION - (Cont.)**

<b>135.0</b>	279.431	281.453	280.240	278.623	277.814	274.174	271.344	270.535	269.726
<b>137.5</b>	296.820	298.438	298.438	296.011	294.798	291.159	289.137	287.519	286.710
<b>140.0</b>	315.422	315.422	315.017	313.804	312.187	308.952	305.717	304.908	303.290
<b>142.5</b>	331.597	332.002	331.597	330.384	330.384	325.936	323.105	321.488	319.870
<b>145.0</b>	347.368	347.773	347.773	346.155	346.964	342.111	340.089	338.067	337.259
<b>147.5</b>	363.948	363.544	362.735	361.118	362.331	357.882	355.456	354.243	353.030
<b>150.0</b>	378.102	378.102	377.697	376.484	376.889	372.845	371.227	370.014	367.992
<b>152.5</b>	391.447	392.255	391.042	390.233	391.042	387.807	385.381	384.168	382.146
<b>155.0</b>	404.791	405.600	403.983	403.174	404.387	401.152	398.726	397.917	396.704
<b>157.5</b>	416.519	417.327	415.710	414.497	416.114	412.879	412.070	410.857	409.240
<b>160.0</b>	426.224	427.033	425.820	425.820	426.224	423.798	422.989	422.180	420.563
<b>162.5</b>	435.120	436.334	435.929	434.716	435.929	434.312	433.503	432.694	431.885
<b>165.0</b>	443.613	444.421	444.017	443.208	444.421	442.399	441.995	441.591	440.782
<b>167.5</b>	451.296	450.892	450.892	450.487	451.296	450.487	450.083	449.678	449.274
<b>170.0</b>	456.957	456.957	456.553	457.362	456.957	456.149	456.149	456.149	456.149
<b>172.5</b>	461.810	461.406	461.406	461.810	461.406	461.406	461.406	461.001	461.001
<b>175.0</b>	465.045	464.641	464.641	464.641	464.641	464.641	464.641	464.641	465.045
<b>177.5</b>	466.663	466.663	466.663	466.663	466.663	466.663	466.663	466.663	466.663
<b>180.0</b>	467.471	467.471	467.471	467.471	467.471	467.471	467.471	467.471	467.471

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 3D90 - HP-4C-ID-P-28IN9-16IN-B-B-835-ITL93249.018.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	167.56	N.A.	7.10
0-30	347.20	N.A.	14.70
0-40	552.33	N.A.	23.40
0-60	924.41	N.A.	39.20
0-80	1124.16	N.A.	47.60
0-90	1151.08	N.A.	48.80
10-90	1107.05	N.A.	46.90
20-40	384.76	N.A.	16.30
20-50	585.35	N.A.	24.80
40-70	498.10	N.A.	21.10
60-80	199.75	N.A.	8.50
70-80	73.73	N.A.	3.10
80-90	26.92	N.A.	1.10
90-110	106.71	N.A.	4.50
90-120	243.00	N.A.	10.30
90-130	427.12	N.A.	18.10
90-150	854.98	N.A.	36.20
90-180	1208.92	N.A.	51.20
110-180	1102.21	N.A.	46.70
0-180	2360.00	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	27.40
100-110	79.31
110-120	136.29
120-130	184.13
130-140	212.92
140-150	214.94
150-160	184.95
160-170	124.89
170-180	44.10

# IES INDOOR REPORT

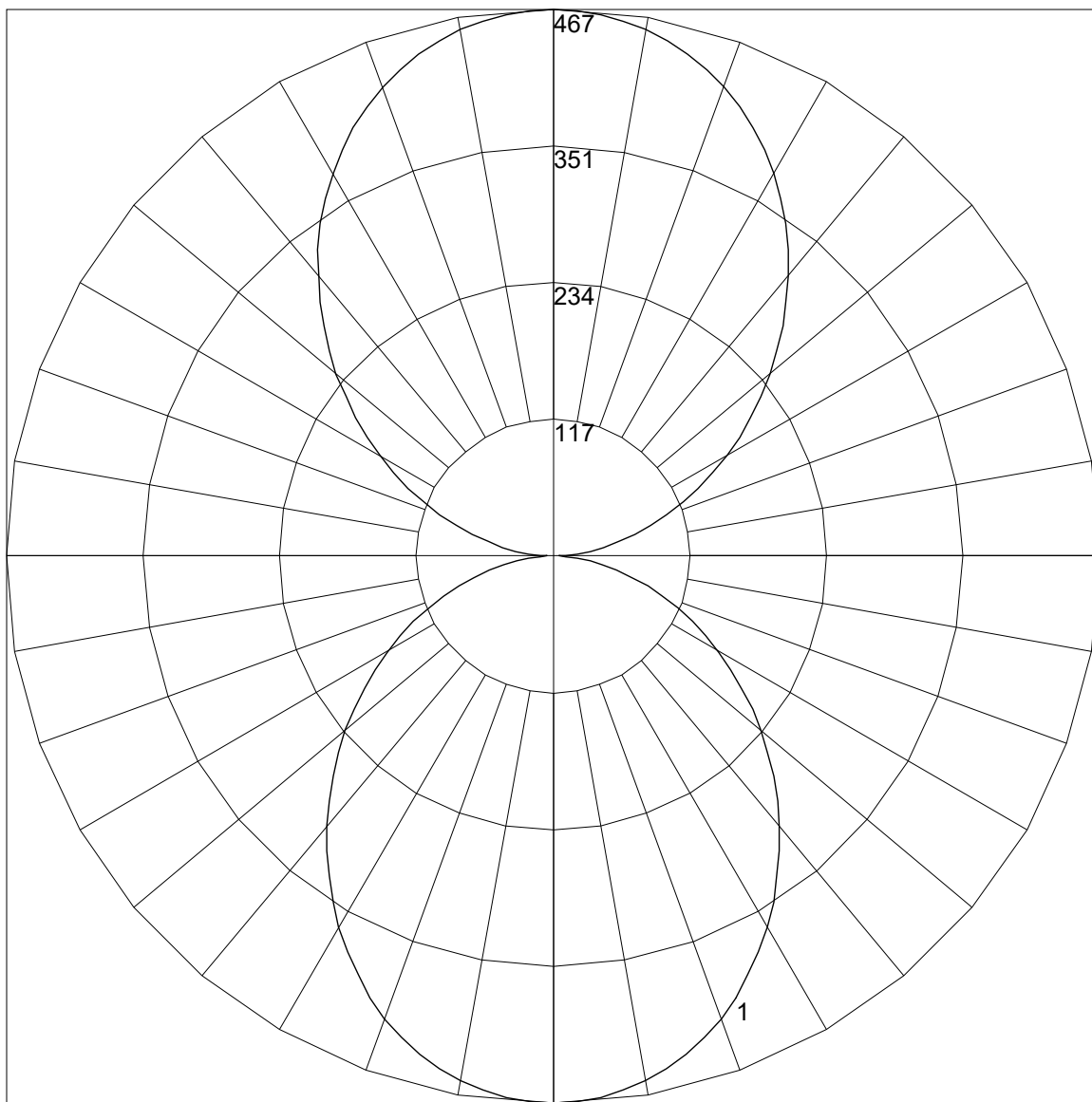
PHOTOMETRIC FILENAME : 3D90 - HP-4C-ID-P-28IN9-16IN-B-B-835-ITL93249.018.IES

## 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 = 467.471 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)