

# 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-2-C-D-P-28IN-9-16IN-S-835-ITL94330.007.IES

### DESCRIPTION INFORMATION (From Photometric File)

[TEST]ITL94330.007 Family Correlation File

[TESTLAB]INDEPENDENT TESTING LABORATORIES, INC.

[TESTDATE]12/28/20

[ISSUEDATE]02/18/2021

[MANUFAC]FINELITE, INC.

[LUMCAT]3D90 HP-2-P-D-28IN-9-16IN-S-835

[\_INPUT\_ELECTRICAL]120.0 VOLTS, 7.1 WATTS

[\_INPUT\_ELECTRICAL]277.0 VOLTS, 7.7 WATTS

[\_ABSOLUTE]LUMENS]636

[OTHER]see [www.finelite.com](http://www.finelite.com) for source file ITL94330. 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	636
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	90
Total Luminaire Watts	7.1
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.12
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.71 ft
Luminous Width (90-270)	2.02 ft
Luminous Height	0.00 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1457	1509	1583
55	1314	1371	1456
65	1173	1226	1313
75	989	1044	1115
85	746	769	816

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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	262.091	262.091	262.091	262.091	262.091	262.091	262.091	262.091	262.091
2.5	261.000	261.272	261.818	261.545	261.818	261.818	261.818	261.818	261.545
5.0	259.363	259.363	260.182	259.909	260.182	260.454	260.454	260.454	260.454
7.5	256.363	256.636	257.182	257.454	258.000	258.272	258.272	258.272	258.272
10.0	252.272	252.818	253.636	254.182	255.000	255.272	255.000	255.272	254.727
12.5	247.636	247.909	249.272	250.091	251.182	252.000	251.727	251.454	250.909
15.0	241.091	242.454	243.545	244.909	246.545	246.818	246.545	246.000	245.454
17.5	234.818	236.182	237.273	238.909	241.909	241.091	240.545	239.727	239.454
20.0	227.454	229.091	231.000	232.636	235.091	235.091	234.273	232.909	232.091
22.5	220.363	221.182	223.636	225.545	228.545	228.273	226.909	225.273	224.454
25.0	211.909	213.273	215.454	217.909	221.182	220.909	219.545	216.818	216.273
27.5	203.454	204.545	207.273	210.545	213.273	212.727	211.363	208.636	208.091
30.0	194.454	195.818	198.818	202.363	204.818	204.545	202.091	199.909	198.545
32.5	185.454	186.545	189.818	193.363	196.363	196.363	193.636	190.909	189.545
35.0	176.182	177.545	180.818	184.363	187.636	187.091	184.636	181.091	180.545
37.5	166.909	168.273	171.545	175.636	178.636	177.818	175.636	171.818	170.182
40.0	157.636	158.727	162.273	166.363	169.091	168.818	165.545	162.545	160.909
42.5	148.363	149.182	153.000	157.091	159.818	159.545	156.273	153.000	151.363
45.0	138.273	139.909	143.182	147.545	150.273	149.454	146.727	142.636	141.273
47.5	129.273	130.091	133.636	138.000	140.454	139.909	137.182	133.364	131.727
50.0	119.454	120.818	124.636	128.727	131.182	130.636	127.364	123.818	122.454
52.5	110.727	111.818	115.364	118.909	121.636	120.545	117.818	114.545	113.182
55.0	101.182	102.818	105.545	109.909	112.091	111.545	108.545	105.000	103.909
57.5	92.727	93.545	96.545	100.636	102.818	101.727	99.000	95.727	94.364
60.0	83.454	84.545	87.273	91.091	92.727	92.454	90.000	87.000	85.636
62.5	75.273	76.091	78.545	81.545	83.454	83.182	80.727	78.273	76.909
65.0	66.545	67.364	69.545	72.545	74.454	73.909	71.727	69.000	68.454
67.5	58.364	58.909	61.091	63.818	64.909	64.909	63.000	60.545	59.727
70.0	50.182	50.727	52.364	54.818	55.909	55.909	54.545	52.636	51.545
72.5	42.545	42.818	44.455	46.091	47.182	47.182	46.091	44.455	43.909
75.0	34.364	35.182	36.273	37.909	38.727	39.000	38.182	36.545	36.273
77.5	27.273	27.818	28.909	30.273	30.818	30.818	30.273	29.182	28.636
80.0	20.727	20.727	21.273	22.636	22.909	23.182	22.909	22.091	21.818
82.5	14.455	14.455	14.727	15.545	15.818	16.091	16.091	15.818	15.545
85.0	8.727	8.727	9.000	9.273	9.545	9.818	9.818	9.818	9.818
87.5	3.545	3.545	3.818	3.545	3.818	4.364	4.364	4.364	4.364
90.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**IES INDOOR REPORT****PHOTOMETRIC FILENAME : 3D90 - HP-2-C-D-P-28IN-9-16IN-S-835-ITL94330.007.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	93.63	N.A.	14.70
0-30	193.69	N.A.	30.40
0-40	307.94	N.A.	48.40
0-60	515.78	N.A.	81.10
0-80	625.39	N.A.	98.30
0-90	636.23	N.A.	100.00
10-90	611.59	N.A.	96.10
20-40	214.31	N.A.	33.70
20-50	326.22	N.A.	51.30
40-70	277.99	N.A.	43.70
60-80	109.61	N.A.	17.20
70-80	39.45	N.A.	6.20
80-90	10.85	N.A.	1.70
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	636.23	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	24.65
10-20	68.98
20-30	100.06
30-40	114.25
40-50	111.91
50-60	95.93
60-70	70.16
70-80	39.45
80-90	10.85
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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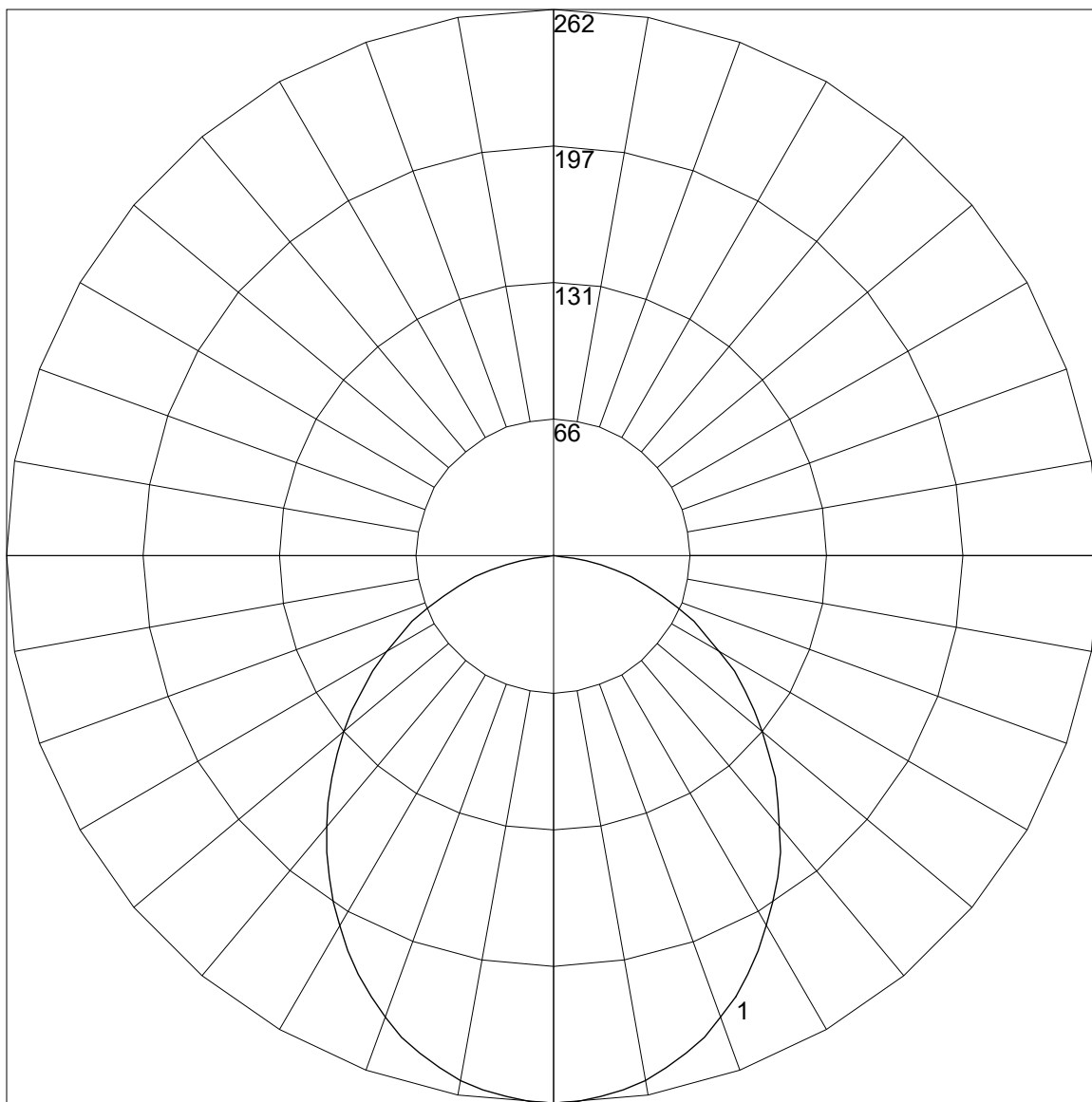
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## COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	105	100	97	106	102	99	95	98	95	92	94	92	89	91	89	87	85
2	100	92	85	79	97	90	84	79	86	81	77	83	79	75	80	76	73	71
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	67	63	60
4	84	72	63	57	81	71	63	56	68	61	56	66	60	55	64	59	54	52
5	77	65	56	49	75	63	55	49	61	54	48	59	53	48	58	52	47	45
6	71	58	50	43	69	57	49	43	56	48	43	54	47	42	52	47	42	40
7	66	53	44	38	65	52	44	38	51	43	38	49	43	38	48	42	37	36
8	62	49	40	34	60	48	40	34	47	39	34	45	39	34	44	38	34	32
9	58	45	37	31	56	44	36	31	43	36	31	42	35	31	41	35	31	29
10	54	41	34	28	53	41	33	28	40	33	28	39	33	28	38	32	28	26

POLAR GRAPH



Maximum Candela = 262.091 Located At Horizontal Angle = 0, Vertical Angle = 0  
# 1 - Vertical Plane Through Horizontal Angles (90 - 270)