

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

IF03SMx xx DWDD1007 DLSPGPMW
Nom 3" Infinium Square Downlight, 7L dim to warm 27HK emitter

Test Number

SP-00944_1_M-7L

Test Date

11/6/2019

The results contained in this report pertain only to this IES file.

Summary of Results

Power

Input Watts	9.3 W
-------------	-------

Lumen Output

Output Lumens	331
Efficacy	35.59 lm/W

Luminous Dimensions

0° - 180° Size	0.16
90° - 270° Size	0.16
Height	0

Spacing Criterion

Two luminaires, plane 0°	0.35
Two luminaires, plane 90°	0.34
Four luminaires	0.4

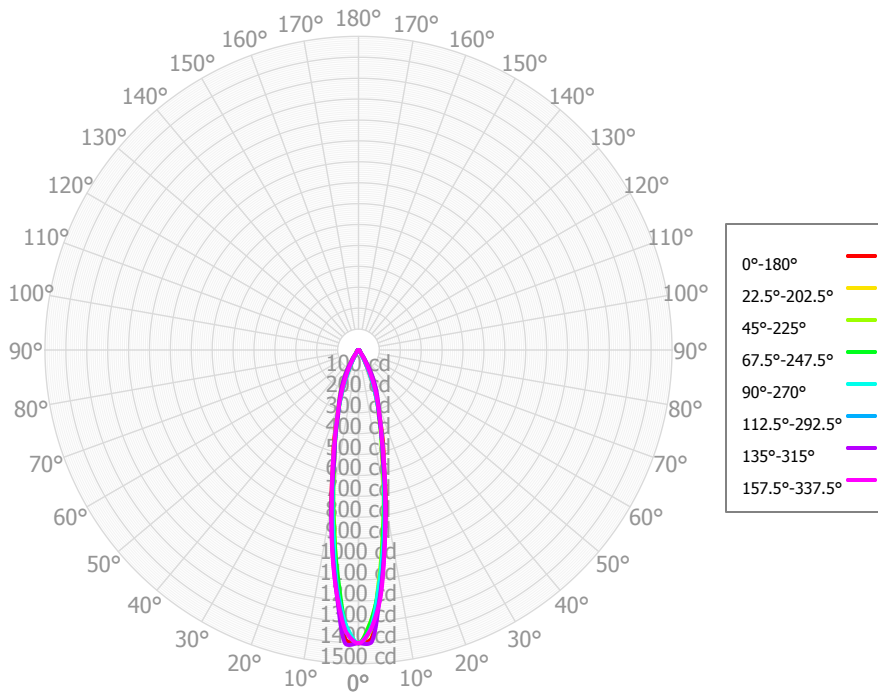
Full Beam Angle

0° - 180°	21°
90° - 270°	20°

IES File Header Contents

Keyword	Value
TEST	SP-00944_1_M-7L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/6/2019
ISSUEDATE	11/13/2019
LUMCAT	IF03SMx xx DWDD1007 DLSPGPMW
LUMINAIRE	Nom 3" Infinium Square Downlight, 7L dim to warm 27HK emitter
OTHER	Beam angle: 21.0 degrees
LAMPCAT	N/A
LAMP	N/A
OTHER	CCT Output Multipliers: N/A dim to warm
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	96.05	29.02%	90.00° - 100.00°	0.04	0.01%
10.00° - 20.00°	120.03	36.26%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	69.72	21.06%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	19.49	5.89%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	7.03	2.12%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	7.63	2.30%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	6.29	1.90%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	3.75	1.13%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	0.99	0.30%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	330.97	99.99%	0.00° - 180.00°	331.01	100.00%

Candela Distribution

	0.00°	22.50°	45.00°	67.50°	90.00°	112.50°	135.00°	157.50°	180.00°	202.50°	225.00°	247.50°	270.00°	292.50°	315.00°	337.50°	360.00°
0.00°	1,402.73	1,402.73	1,402.73	1,402.73	1,402.73	1,402.73	1,402.73	1,402.73	1,402.73	1,402.73	1,402.73	1,402.73	1,402.73	1,402.73	1,402.73	1,402.73	1,402.73
2.50°	1,385.10	1,304.61	1,343.39	1,306.09	1,335.78	1,353.44	1,407.99	1,352.24	1,389.32	1,334.21	1,339.78	1,330.78	1,322.86	1,337.97	1,401.02	1,339.23	1,385.10
5.00°	1,159.56	1,148.10	1,112.06	1,137.75	1,124.83	1,162.80	1,182.60	1,179.26	1,159.39	1,129.58	1,130.14	1,105.84	1,153.54	1,185.20	1,180.18	1,195.92	1,159.56
7.50°	934.03	917.65	887.66	896.92	916.99	949.08	957.39	964.91	927.22	921.94	877.21	893.25	907.91	939.34	952.47	956.67	934.03
10.00°	748.01	715.75	696.53	700.14	713.84	719.92	745.56	734.74	746.33	712.08	695.94	696.54	713.22	724.00	744.67	736.02	748.01
12.50°	562.31	556.86	519.29	541.12	545.26	550.90	534.04	571.38	566.49	554.06	532.22	536.30	555.95	559.13	537.65	570.61	562.31
15.00°	449.21	424.16	414.00	419.85	430.25	423.96	428.26	434.44	452.18	435.21	423.95	425.09	433.38	423.31	428.15	425.37	449.21
17.50°	337.21	332.68	317.67	331.84	329.93	331.49	322.47	339.39	339.70	341.91	330.18	330.06	337.44	337.00	323.22	342.28	337.21
20.00°	259.33	253.02	270.34	261.41	253.39	263.83	274.11	261.80	260.63	268.48	275.02	257.40	253.82	260.39	276.04	265.55	259.33
22.50°	182.22	192.52	224.10	206.91	184.12	203.49	225.98	200.50	182.86	206.79	230.39	192.65	179.91	200.81	232.24	209.54	182.22
25.00°	128.21	137.91	184.16	155.79	126.97	148.67	185.24	146.22	129.65	154.62	189.47	139.16	121.33	145.45	189.80	155.63	128.21
27.50°	74.97	93.14	143.90	107.89	79.59	102.47	144.61	103.17	77.58	109.60	149.60	93.40	75.17	97.85	147.45	108.83	74.97
30.00°	50.95	57.47	101.57	69.86	49.24	62.95	105.72	65.19	52.46	70.55	109.70	59.14	44.64	59.14	106.34	67.24	50.95
32.50°	28.12	37.68	62.04	41.43	26.85	37.00	66.87	41.93	28.80	43.50	69.79	33.74	27.34	37.27	65.31	44.43	28.12
35.00°	21.13	22.78	41.19	23.07	18.76	22.00	44.65	25.53	21.62	26.88	44.69	21.89	17.00	20.80	43.23	24.99	21.13
37.50°	14.90	16.68	22.17	14.92	12.62	13.36	22.93	17.05	15.52	16.78	24.24	13.34	12.73	14.87	22.78	18.21	14.90
40.00°	12.13	11.97	16.16	10.02	10.13	10.00	16.55	12.46	13.04	12.51	15.46	10.04	9.71	10.46	15.61	12.39	12.13
42.50°	9.57	9.90	10.67	8.50	8.16	8.14	10.80	10.22	10.83	9.78	10.48	7.81	7.84	9.17	9.69	10.48	9.57
45.00°	8.62	8.41	9.35	7.62	7.21	7.54	10.08	9.18	9.86	8.50	8.94	7.32	6.95	8.25	9.26	8.94	8.62
47.50°	7.78	8.07	8.24	7.45	6.71	7.45	9.61	8.83	8.99	8.00	8.58	7.21	7.01	8.11	9.42	8.99	7.78
50.00°	8.58	8.09	8.90	7.54	7.11	7.80	9.29	8.83	8.90	8.23	9.13	7.76	7.25	8.18	9.61	9.03	8.58
52.50°	9.51	8.82	9.48	7.92	7.40	7.86	8.99	8.77	8.88	8.64	10.01	8.36	7.68	8.70	9.80	8.99	9.51
55.00°	8.52	9.09	9.39	8.10	7.49	7.66	8.29	8.67	8.87	9.21	10.39	9.07	8.02	8.95	9.31	8.84	8.52
57.50°	7.36	8.39	9.20	8.03	7.46	7.40	7.58	8.17	8.86	9.27	10.59	9.26	8.25	8.58	8.73	8.14	7.36
60.00°	7.02	7.58	7.96	7.74	7.15	7.09	7.24	7.44	8.02	8.81	9.21	8.50	7.83	8.01	7.83	7.48	7.02
62.50°	6.75	6.56	6.76	7.19	6.85	6.78	6.93	6.84	7.09	7.82	7.23	7.65	6.75	6.93	6.88	7.03	6.75
65.00°	6.74	5.69	6.10	6.47	6.56	6.45	6.32	6.30	6.41	6.29	6.27	6.63	6.03	6.04	6.32	6.57	6.74
67.50°	6.76	5.14	5.45	5.54	5.90	5.79	5.69	5.68	5.74	5.45	5.70	5.56	5.68	5.58	5.83	6.08	6.76
70.00°	5.57	4.88	4.93	4.79	4.59	4.88	5.26	5.01	4.60	5.20	4.60	4.42	4.65	4.98	5.25	5.50	5.57
72.50°	4.47	4.99	4.48	4.16	3.63	4.17	4.74	4.38	3.72	4.50	3.57	3.72	3.21	4.17	4.72	4.75	4.47
75.00°	3.91	4.36	4.14	3.18	2.94	3.45	4.03	3.69	3.44	3.67	3.54	3.27	2.80	3.47	4.43	3.97	3.91
77.50°	3.12	3.43	3.34	2.31	2.24	2.52	3.18	2.88	2.77	2.84	3.21	2.78	2.33	2.74	3.52	3.13	3.12
80.00°	2.24	2.34	2.31	1.70	1.60	1.85	2.13	2.10	2.07	2.23	2.58	1.92	1.67	1.75	2.23	1.97	2.24
82.50°	1.63	1.30	1.22	1.06	1.05	1.31	1.09	1.30	1.31	1.69	1.65	1.13	1.12	1.03	1.38	1.29	1.63
85.00°	0.66	0.50	0.65	0.64	0.68	0.69	0.58	0.66	0.65	0.88	0.68	0.69	0.62	0.61	0.86	0.67	0.66
87.50°	0.59	0.45	0.39	0.40	0.49	0.74	0.65	0.39	0.62	0.55	0.59	0.42	0.54	0.46	0.48	0.54	0.59
90.00°	0.55	0.55	0.54	0.39	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.14	0.68	0.60	0.43	0.55
92.50°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
97.50°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
102.50°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
107.50°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
110.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112.50°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Coefficients of Utilization – Zonal Cavity Method

Values are lumens delivered to the workplane.

RCR	pfc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	pcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	0	394	394	394	394	385	385	385	385	368	368	368	352	352	352	338	338	331
	1	377	369	361	355	369	362	355	349	349	343	338	336	332	328	325	322	319
	2	362	347	335	326	355	342	331	322	331	322	315	322	314	308	313	307	301
	3	347	329	315	303	341	324	311	301	316	305	296	308	299	291	301	293	288
	4	334	313	297	285	328	309	295	284	302	290	280	296	285	277	290	281	276
	5	322	299	282	270	317	296	280	269	290	277	267	285	273	265	280	270	265
	6	310	286	270	258	306	283	268	257	279	265	255	275	263	254	271	260	256
	7	300	275	258	247	296	273	257	246	269	255	245	265	253	244	262	251	247
	8	290	264	248	237	286	263	247	237	259	246	236	256	244	235	253	242	239
	9	281	255	239	229	278	254	239	228	251	237	228	248	236	227	246	234	231
	10	272	246	231	221	269	245	230	221	243	229	220	241	228	219	238	227	224

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	46.4 fc	2.1 ft
6.5 ft	33.2 fc	2.4 ft
7.5 ft	24.9 fc	2.8 ft
8.0 ft	21.9 fc	3.0 ft
10.0 ft	14.0 fc	3.7 ft
12.0 ft	9.7 fc	4.5 ft
14.0 ft	7.2 fc	5.2 ft
16.0 ft	5.5 fc	6.0 ft
20.0 ft	3.5 fc	7.5 ft
24.0 ft	2.4 fc	9.0 ft
28.0 ft	1.8 fc	10.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	589,801	589,801	589,801
45.00°	5,127	5,562	4,287
55.00°	6,247	6,883	5,491
65.00°	6,707	6,064	6,527
75.00°	6,348	6,722	4,768
85.00°	3,193	3,153	3,297

UGR CIE 190:2010

Ceiling reflectance		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall reflectance		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Plane reflectance		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
2H	2H	12.8	13.8	13.1	14.1	14.4	12.9	13.9	13.3	14.2	14.6
	3H	15.0	15.9	15.4	16.2	16.6	14.7	15.6	15.1	15.9	16.3
	4H	15.8	16.6	16.2	17.0	17.4	15.2	16.1	15.6	16.4	16.8
	6H	16.3	17.1	16.8	17.5	17.9	15.6	16.3	16.0	16.7	17.1
	8H	16.5	17.2	16.9	17.6	18.0	15.7	16.4	16.1	16.8	17.2
	12H	16.5	17.2	17.0	17.6	18.0	15.7	16.4	16.1	16.7	17.2
4H	2H	13.3	14.1	13.7	14.5	14.9	13.5	14.3	13.9	14.7	15.0
	3H	15.7	16.4	16.2	16.8	17.2	15.5	16.1	15.9	16.5	16.9
	4H	16.7	17.3	17.2	17.8	18.2	16.1	16.7	16.6	17.1	17.6
	6H	17.4	17.9	17.9	18.4	18.8	16.6	17.1	17.1	17.5	18.0
	8H	17.6	18.0	18.0	18.5	19.0	16.7	17.2	17.2	17.6	18.1
	12H	17.6	18.0	18.1	18.5	19.0	16.7	17.2	17.2	17.6	18.1
8H	4H	17.0	17.5	17.5	18.0	18.5	16.4	16.9	16.9	17.4	17.8
	6H	17.8	18.2	18.3	18.7	19.2	17.0	17.4	17.5	17.9	18.4
	8H	18.0	18.4	18.6	18.9	19.4	17.2	17.5	17.7	18.1	18.6
	12H	18.1	18.4	18.6	18.9	19.5	17.3	17.6	17.8	18.1	18.7
12H	4H	17.0	17.4	17.5	17.9	18.4	16.4	16.9	16.9	17.4	17.8
	6H	17.8	18.2	18.4	18.6	19.2	17.1	17.4	17.6	17.9	18.4
	8H	18.1	18.4	18.6	18.9	19.4	17.3	17.6	17.8	18.1	18.7

Corrected UGR values based on total output lumens

SHR = 1.0