

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-00944_3_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
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Lumen Output

Output Lumens	353
Efficacy	38 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.61
Two luminaires, plane 90°	0.61
Four luminaires	0.67

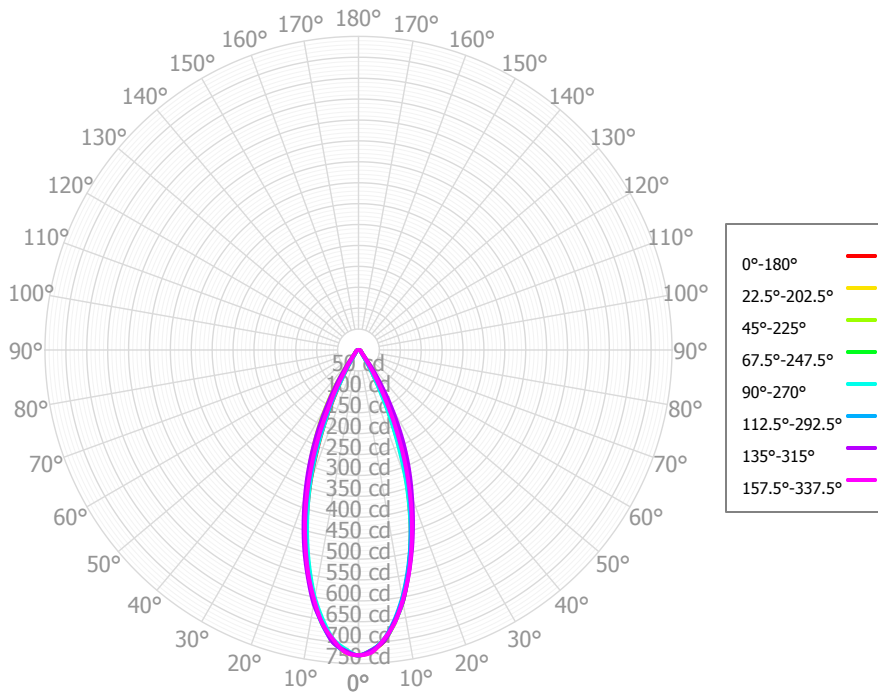
Full Beam Angle

0° - 180°	38°
90° - 270°	38°

IES File Header Contents

Keyword	Value
TEST	SP-00944_3_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 DLFLGPMW
LUMINAIRE	Nom 3" Infinium Square Downlight, 7L dim to warm 27HK emitter
OTHER	Beam angle: 38.0 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°	64.42	18.23%	90.00° - 100.00°	0.03	0.01%
10.00° - 20.00°	132.36	37.45%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	98.41	27.84%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	30.81	8.72%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	10.34	2.93%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	6.82	1.93%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	5.51	1.56%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	3.74	1.06%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.00	0.28%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	353.41	99.99%	0.00° - 180.00°	353.44	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°	730.45	730.45	730.45	730.45	730.45	730.45	730.45	730.45	730.45	730.45	730.45	730.45	730.45	730.45	730.45	730.45	730.45
2.50°	720.36	723.28	718.79	720.06	718.20	723.03	720.04	723.92	720.24	724.59	719.46	721.93	716.14	719.94	718.82	724.03	720.36
5.00°	699.80	696.65	699.07	696.11	698.12	701.15	702.43	695.06	699.27	697.51	701.23	696.80	694.29	695.00	699.34	694.98	699.80
7.50°	658.52	660.57	657.69	658.13	659.25	662.53	660.22	660.64	658.39	662.56	655.49	659.12	651.46	653.11	656.39	659.69	658.52
10.00°	611.58	606.96	611.04	605.80	610.66	612.68	617.04	607.93	609.18	607.17	605.86	605.47	601.62	602.11	610.94	608.19	611.58
12.50°	548.17	548.50	550.74	546.88	547.30	551.43	558.25	552.47	545.28	546.56	545.30	543.32	539.24	542.81	552.54	552.59	548.17
15.00°	481.55	482.80	489.32	482.30	480.06	487.40	499.15	489.15	478.77	480.90	483.80	479.45	473.75	480.00	493.66	488.62	481.55
17.50°	409.69	415.30	425.54	415.85	408.04	421.07	436.64	425.16	408.58	414.29	423.89	414.86	405.51	416.53	432.98	423.64	409.69
20.00°	337.15	345.63	364.17	348.09	331.72	350.64	374.46	356.81	335.14	345.96	364.14	348.21	336.78	352.83	373.89	357.05	337.15
22.50°	261.61	275.89	306.84	278.22	250.98	277.37	314.46	288.31	257.84	277.43	308.99	280.89	262.56	286.68	319.38	289.54	261.61
25.00°	185.86	206.06	250.15	207.16	179.15	208.00	254.80	220.09	187.44	211.84	253.99	215.25	187.71	219.89	264.40	220.79	185.86
27.50°	129.62	146.61	194.31	147.65	114.81	140.78	196.66	153.33	123.72	146.42	201.04	150.04	130.52	159.34	208.39	159.62	129.62
30.00°	74.87	95.71	142.88	93.44	72.03	93.89	141.91	106.82	78.74	102.25	149.13	103.09	74.31	99.90	155.34	106.76	74.87
32.50°	52.59	62.46	96.43	60.81	43.89	55.94	98.71	63.35	48.48	59.37	104.94	59.35	50.70	66.84	107.52	68.82	52.59
35.00°	31.52	40.98	61.89	35.89	28.54	36.36	61.75	44.04	30.93	41.77	64.58	39.88	28.11	36.92	68.84	44.23	31.52
37.50°	24.59	28.40	38.31	25.07	20.40	23.29	40.96	26.89	21.70	25.31	42.90	23.04	22.02	26.79	43.60	28.95	24.59
40.00°	18.21	20.73	24.76	18.03	16.17	17.75	24.93	20.78	16.72	20.20	24.59	18.20	16.20	17.81	26.36	20.63	18.21
42.50°	15.43	16.35	18.71	14.78	13.69	14.22	18.54	15.50	13.95	15.49	18.60	13.93	13.03	14.32	18.66	15.56	15.43
45.00°	12.89	13.41	14.58	12.29	12.05	12.50	13.74	13.30	12.19	13.33	13.60	11.94	10.21	10.94	13.71	12.46	12.89
47.50°	11.46	11.38	11.65	10.48	10.71	11.13	11.61	11.29	10.84	11.29	11.37	10.00	9.46	9.99	11.42	10.78	11.46
50.00°	10.02	9.67	9.81	8.76	9.25	9.90	9.91	9.80	9.53	9.81	9.42	8.97	8.66	9.03	9.64	9.79	10.02
52.50°	8.52	8.93	8.51	8.39	7.77	8.70	8.79	8.54	8.24	8.44	8.07	7.95	7.59	8.10	8.27	8.80	8.52
55.00°	7.35	8.46	7.77	8.12	7.00	7.66	7.91	7.75	7.67	7.41	6.98	6.94	6.64	7.22	7.27	7.81	7.35
57.50°	6.99	7.77	7.27	7.01	6.37	6.63	7.29	7.00	7.27	6.61	6.35	6.05	6.03	6.63	6.52	7.14	6.99
60.00°	6.72	7.06	6.65	5.91	5.81	6.27	6.72	6.29	6.55	6.35	5.93	5.89	5.56	6.11	6.20	6.58	6.72
62.50°	6.61	6.67	6.00	5.64	5.26	5.92	6.21	5.74	5.78	6.07	5.81	5.72	5.44	5.95	6.11	6.29	6.61
65.00°	6.36	6.32	5.52	5.35	4.79	5.31	5.56	5.43	5.53	5.74	5.65	5.50	5.15	5.77	5.70	6.07	6.36
67.50°	5.87	5.72	5.08	4.76	4.32	4.72	4.82	5.19	5.31	5.31	5.45	5.20	4.53	5.57	5.14	5.88	5.87
70.00°	5.28	5.10	4.66	4.16	3.87	4.22	4.51	5.02	4.72	4.74	4.86	4.73	4.20	5.22	4.89	5.70	5.28
72.50°	4.60	4.45	4.22	3.52	3.40	3.55	4.28	4.26	4.03	4.43	4.05	4.39	4.16	4.61	4.72	5.38	4.60
75.00°	3.83	3.83	3.67	2.77	2.87	2.68	3.60	3.39	3.19	4.06	3.62	4.16	3.44	3.96	4.49	4.74	3.83
77.50°	3.02	3.26	2.94	2.02	2.17	2.28	3.01	2.74	2.49	2.91	3.11	2.93	2.59	3.23	3.77	3.58	3.02
80.00°	2.23	2.29	2.10	1.83	1.57	1.78	2.24	2.01	1.76	1.93	2.32	2.17	1.75	2.26	2.54	2.62	2.23
82.50°	1.27	1.50	1.25	1.19	1.12	1.14	1.20	1.30	1.06	1.25	1.14	1.57	1.22	1.58	1.41	1.60	1.27
85.00°	0.76	0.85	0.52	0.66	0.48	0.61	0.70	0.71	0.51	0.67	0.76	0.82	0.52	0.77	0.76	0.78	0.76
87.50°	0.53	0.55	0.51	0.51	0.50	0.52	0.47	0.47	0.61	0.51	0.60	0.49	0.59	0.52	0.43	0.47	0.53
90.00°	0.51	0.46	0.43	0.41	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.59	0.47	0.51
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	421	421	421	421	411	411	411	411	393	393	393	376	376	376	361	361	353
	1	402	392	384	376	393	385	377	370	370	364	359	357	353	348	345	342	338
	2	384	367	354	343	376	361	349	339	350	340	331	340	331	324	330	323	318
	3	367	346	329	316	360	341	326	314	332	319	309	323	313	304	315	307	299
	4	351	326	308	295	345	322	306	293	315	301	290	308	296	286	302	291	283
	5	336	309	291	277	331	306	289	275	300	285	273	294	281	271	289	278	268
	6	322	294	275	261	317	291	273	260	286	270	259	281	267	257	277	265	255
	7	309	280	261	248	305	278	260	247	273	257	246	269	255	244	266	253	243
	8	297	267	248	235	293	265	247	235	262	246	234	258	244	233	255	242	232
	9	286	256	237	225	282	254	236	224	251	235	223	248	233	223	245	232	222
	10	275	245	227	215	272	244	226	214	241	225	214	238	224	213	236	222	213

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	24.1 fc	3.8 ft
6.5 ft	17.3 fc	4.5 ft
7.5 ft	13.0 fc	5.2 ft
8.0 ft	11.4 fc	5.5 ft
10.0 ft	7.3 fc	6.9 ft
12.0 ft	5.1 fc	8.3 ft
14.0 ft	3.7 fc	9.6 ft
16.0 ft	2.9 fc	11.0 ft
20.0 ft	1.8 fc	13.8 ft
24.0 ft	1.3 fc	16.5 ft
28.0 ft	0.9 fc	19.3 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	307,128	307,128	307,128
45.00°	7,666	8,672	7,168
55.00°	5,385	5,699	5,130
65.00°	6,330	5,492	4,764
75.00°	6,214	5,956	4,660
85.00°	3,643	2,489	2,325

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	11.9	12.9	12.3	13.2	13.5	10.8	11.8	11.2	12.1	12.4
	3H	14.3	15.2	14.7	15.5	15.9	13.0	13.9	13.4	14.2	14.6
	4H	15.3	16.1	15.7	16.4	16.8	13.9	14.7	14.3	15.1	15.5
	6H	15.9	16.6	16.3	17.0	17.4	14.5	15.2	14.9	15.6	16.0
	8H	16.0	16.7	16.4	17.1	17.5	14.6	15.3	15.0	15.7	16.1
	12H	16.0	16.7	16.5	17.1	17.5	14.6	15.3	15.1	15.7	16.1
4H	2H	12.4	13.3	12.8	13.6	14.0	11.6	12.5	12.0	12.8	13.2
	3H	15.1	15.8	15.5	16.2	16.6	14.0	14.7	14.4	15.1	15.5
	4H	16.3	16.9	16.7	17.3	17.7	15.1	15.7	15.5	16.1	16.6
	6H	17.0	17.5	17.5	18.0	18.5	15.7	16.2	16.2	16.7	17.1
	8H	17.2	17.6	17.6	18.1	18.6	15.9	16.4	16.4	16.8	17.3
	12H	17.2	17.7	17.7	18.1	18.6	15.9	16.4	16.4	16.8	17.3
8H	4H	16.6	17.1	17.1	17.5	18.0	15.5	16.0	16.0	16.4	16.9
	6H	17.5	17.9	18.0	18.4	18.8	16.3	16.6	16.8	17.1	17.6
	8H	17.7	18.0	18.2	18.6	19.1	16.5	16.8	17.0	17.4	17.9
	12H	17.8	18.1	18.4	18.6	19.2	16.6	16.9	17.2	17.4	18.0
12H	4H	16.6	17.0	17.1	17.5	18.0	15.5	15.9	16.0	16.4	16.9
	6H	17.5	17.8	18.0	18.3	18.9	16.3	16.6	16.8	17.1	17.7
	8H	17.8	18.1	18.3	18.6	19.1	16.6	16.9	17.1	17.4	18.0

Corrected UGR values based on total output lumens

SHR = 1.0