

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 DWDD1010 DLSPGPMW
Nom 3" Infinium Square Downlight, 10L dim to warm 27HK emitter

Test Number

SP-00944_1_M-10L

Test Date

11/6/2019

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

Summary of Results

Power

Input Watts	11.3 W
-------------	--------

Lumen Output

Output Lumens	427
Efficacy	37.77 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

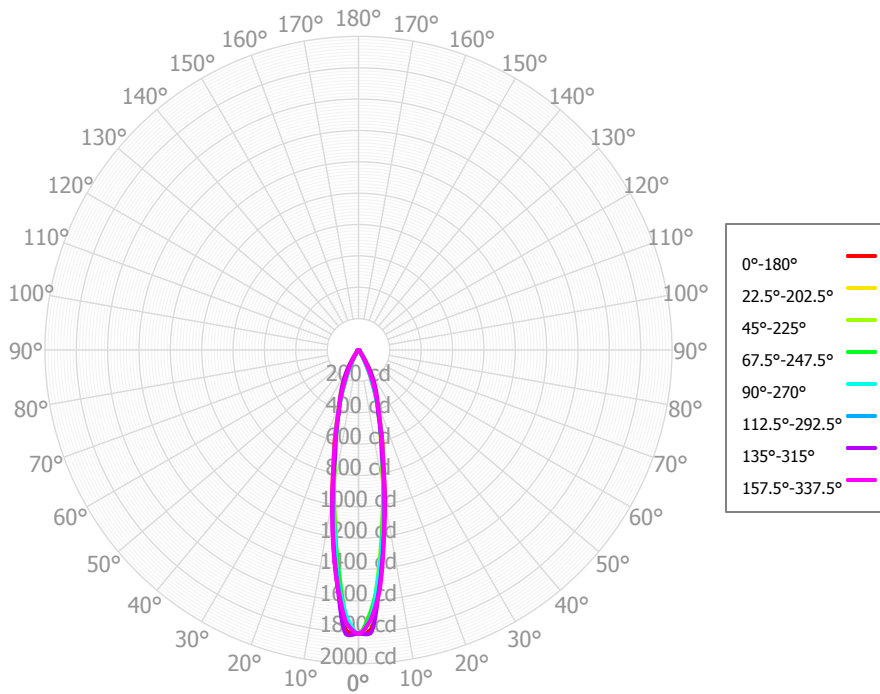
Full Beam Angle

0° - 180°	21°
90° - 270°	20°

IES File Header Contents

Keyword	Value
TEST	SP-00944_1_M-10L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/6/2019
ISSUEDATE	11/13/2019
LUMCAT	IF03SMx xx DWDD1010 DLSPGPMW
LUMINAIRE	Nom 3" Infinium Square Downlight, 10L 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°	123.85	29.02%	90.00° - 100.00°	0.05	0.01%
10.00° - 20.00°	154.78	36.26%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	89.90	21.06%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	25.13	5.89%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	9.07	2.12%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	9.83	2.30%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	8.11	1.90%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	4.84	1.13%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.27	0.30%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	426.77	99.99%	0.00° - 180.00°	426.82	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°	1,808.79	1,808.79	1,808.79	1,808.79	1,808.79	1,808.79	1,808.79	1,808.79	1,808.79	1,808.79	1,808.79	1,808.79	1,808.79	1,808.79	1,808.79	1,808.79	1,808.79
2.50°	1,786.04	1,682.26	1,732.27	1,684.16	1,722.46	1,745.23	1,815.57	1,743.68	1,791.49	1,720.43	1,727.62	1,716.00	1,705.80	1,725.28	1,806.58	1,726.90	1,786.04
5.00°	1,495.22	1,480.44	1,433.98	1,467.10	1,450.44	1,499.40	1,524.93	1,520.63	1,495.00	1,456.57	1,457.29	1,425.95	1,487.46	1,528.28	1,521.80	1,542.11	1,495.22
7.50°	1,204.40	1,183.28	1,144.62	1,156.55	1,182.44	1,223.82	1,234.53	1,244.22	1,195.63	1,188.82	1,131.14	1,151.82	1,170.73	1,211.26	1,228.19	1,233.60	1,204.40
10.00°	964.54	922.94	898.16	902.81	920.48	928.31	961.38	947.43	962.37	918.21	897.40	898.17	919.68	933.58	960.23	949.08	964.54
12.50°	725.09	718.06	669.61	697.76	703.09	710.37	688.63	736.78	730.47	714.45	686.28	691.55	716.88	720.98	693.29	735.78	725.09
15.00°	579.25	546.94	533.84	541.38	554.80	546.69	552.23	560.19	583.08	561.19	546.67	548.14	558.84	545.85	552.09	548.51	579.25
17.50°	434.82	428.98	409.63	427.89	425.44	427.45	415.82	437.64	438.03	440.89	425.75	425.60	435.12	434.55	416.78	441.37	434.82
20.00°	334.40	326.26	348.60	337.08	326.74	340.20	353.46	337.58	336.07	346.20	354.63	331.90	327.29	335.77	355.94	342.42	334.40
22.50°	234.96	248.25	288.97	266.80	237.41	262.40	291.40	258.54	235.79	266.65	297.08	248.41	231.99	258.94	299.47	270.19	234.96
25.00°	165.32	177.84	237.47	200.89	163.73	191.70	238.86	188.55	167.18	199.38	244.31	179.44	156.45	187.56	244.75	200.68	165.32
27.50°	96.67	120.10	185.55	139.12	102.63	132.14	186.47	133.03	100.03	141.33	192.91	120.44	96.93	126.17	190.14	140.33	96.67
30.00°	65.69	74.10	130.97	90.08	63.50	81.18	136.32	84.06	67.64	90.98	141.46	76.26	57.56	76.26	137.12	86.70	65.69
32.50°	36.26	48.59	80.00	53.42	34.62	47.71	86.22	54.06	37.14	56.09	89.99	43.50	35.25	48.06	84.22	57.29	36.26
35.00°	27.25	29.38	53.11	29.75	24.19	28.37	57.58	32.92	27.87	34.67	57.63	28.23	21.92	26.82	55.74	32.23	27.25
37.50°	19.22	21.50	28.59	19.24	16.28	17.23	29.57	21.99	20.01	21.64	31.25	17.20	16.41	19.17	29.38	23.48	19.22
40.00°	15.65	15.43	20.84	12.92	13.06	12.90	21.34	16.06	16.81	16.13	19.94	12.95	12.53	13.48	20.13	15.98	15.65
42.50°	12.34	12.76	13.76	10.96	10.52	10.49	13.93	13.18	13.96	12.61	13.52	10.07	10.10	11.82	12.49	13.51	12.34
45.00°	11.12	10.85	12.06	9.83	9.30	9.72	13.00	11.84	12.71	10.97	11.53	9.44	8.97	10.64	11.94	11.53	11.12
47.50°	10.03	10.41	10.63	9.60	8.65	9.60	12.39	11.38	11.59	10.31	11.07	9.30	9.03	10.46	12.15	11.60	10.03
50.00°	11.06	10.43	11.47	9.72	9.16	10.06	11.98	11.38	11.47	10.62	11.78	10.00	9.35	10.55	12.39	11.64	11.06
52.50°	12.26	11.38	12.22	10.22	9.55	10.14	11.59	11.30	11.45	11.14	12.91	10.78	9.91	11.22	12.64	11.60	12.26
55.00°	10.99	11.73	12.11	10.44	9.66	9.87	10.69	11.18	11.44	11.87	13.40	11.69	10.34	11.54	12.00	11.40	10.99
57.50°	9.49	10.82	11.86	10.35	9.61	9.54	9.77	10.54	11.43	11.95	13.65	11.94	10.64	11.07	11.26	10.49	9.49
60.00°	9.05	9.78	10.26	9.98	9.22	9.15	9.33	9.59	10.35	11.36	11.88	10.97	10.10	10.32	10.09	9.64	9.05
62.50°	8.71	8.46	8.72	9.27	8.83	8.74	8.94	8.81	9.14	10.09	9.32	9.87	8.70	8.93	8.87	9.06	8.71
65.00°	8.69	7.33	7.86	8.34	8.46	8.32	8.15	8.13	8.26	8.11	8.09	8.55	7.77	7.79	8.16	8.48	8.69
67.50°	8.71	6.63	7.03	7.14	7.60	7.47	7.34	7.32	7.41	7.03	7.35	7.17	7.32	7.20	7.51	7.84	8.71
70.00°	7.18	6.30	6.36	6.17	5.91	6.30	6.79	6.46	5.93	6.71	5.93	5.69	6.00	6.42	6.78	7.10	7.18
72.50°	5.76	6.44	5.78	5.36	4.69	5.37	6.11	5.65	4.80	5.81	4.60	4.79	4.14	5.38	6.09	6.12	5.76
75.00°	5.04	5.62	5.34	4.10	3.78	4.45	5.19	4.76	4.43	4.73	4.57	4.22	3.61	4.48	5.72	5.11	5.04
77.50°	4.02	4.42	4.30	2.97	2.89	3.25	4.11	3.71	3.57	3.67	4.14	3.59	3.01	3.54	4.53	4.04	4.02
80.00°	2.89	3.02	2.97	2.19	2.06	2.39	2.74	2.70	2.67	2.88	3.33	2.47	2.16	2.25	2.88	2.54	2.89
82.50°	2.10	1.67	1.57	1.37	1.36	1.69	1.41	1.67	1.69	2.18	2.13	1.45	1.44	1.33	1.78	1.67	2.10
85.00°	0.85	0.65	0.84	0.82	0.88	0.89	0.75	0.85	0.84	1.13	0.87	0.88	0.80	0.79	1.11	0.87	0.85
87.50°	0.76	0.58	0.50	0.52	0.63	0.96	0.84	0.51	0.80	0.70	0.76	0.54	0.70	0.60	0.62	0.69	0.76
90.00°	0.70	0.71	0.69	0.50	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.18	0.87	0.77	0.56	0.70
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	508	508	508	508	496	496	496	496	474	474	474	454	454	454	435	435	427
	1	487	476	466	457	476	467	458	450	449	443	436	434	428	423	419	415	407
	2	466	448	433	420	457	441	427	415	427	416	406	415	405	397	403	396	388
	3	448	424	406	391	440	418	401	388	407	393	382	397	386	376	388	378	371
	4	431	403	383	368	423	399	380	366	390	374	361	382	368	357	374	363	356
	5	415	385	364	349	408	381	362	347	374	357	344	367	353	341	361	348	342
	6	400	369	348	332	395	366	346	331	360	342	329	354	339	327	349	335	330
	7	387	354	333	318	382	351	332	318	347	329	316	342	326	314	337	324	318
	8	374	341	320	306	369	339	319	305	334	317	304	331	315	303	327	313	308
	9	362	329	309	295	358	327	308	294	323	306	293	320	304	293	317	302	298
	10	351	318	298	285	347	316	297	284	313	296	284	310	294	283	307	293	289

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	59.8 fc	2.1 ft
6.5 ft	42.8 fc	2.4 ft
7.5 ft	32.2 fc	2.8 ft
8.0 ft	28.3 fc	3.0 ft
10.0 ft	18.1 fc	3.7 ft
12.0 ft	12.6 fc	4.5 ft
14.0 ft	9.2 fc	5.2 ft
16.0 ft	7.1 fc	6.0 ft
20.0 ft	4.5 fc	7.5 ft
24.0 ft	3.1 fc	9.0 ft
28.0 ft	2.3 fc	10.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	760,533	760,533	760,533
45.00°	6,611	7,171	5,527
55.00°	8,055	8,875	7,081
65.00°	8,648	7,820	8,417
75.00°	8,185	8,668	6,149
85.00°	4,118	4,065	4,252

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	13.6	14.6	14.0	15.0	15.3	13.8	14.8	14.2	15.1	15.4
	3H	15.9	16.7	16.2	17.1	17.5	15.6	16.5	16.0	16.8	17.2
	4H	16.7	17.5	17.1	17.9	18.2	16.1	16.9	16.5	17.3	17.7
	6H	17.2	18.0	17.6	18.4	18.7	16.5	17.2	16.9	17.6	18.0
	8H	17.4	18.1	17.8	18.5	18.9	16.5	17.2	17.0	17.6	18.1
	12H	17.4	18.1	17.8	18.5	18.9	16.6	17.2	17.0	17.6	18.1
4H	2H	14.2	15.0	14.6	15.4	15.8	14.4	15.2	14.8	15.5	15.9
	3H	16.6	17.3	17.0	17.7	18.1	16.3	17.0	16.8	17.4	17.8
	4H	17.6	18.2	18.1	18.7	19.1	17.0	17.6	17.4	18.0	18.5
	6H	18.3	18.8	18.7	19.2	19.7	17.5	18.0	17.9	18.4	18.9
	8H	18.4	18.9	18.9	19.4	19.9	17.6	18.0	18.0	18.5	19.0
	12H	18.5	18.9	19.0	19.4	19.9	17.6	18.0	18.1	18.5	19.0
8H	4H	17.9	18.4	18.4	18.9	19.3	17.3	17.8	17.8	18.3	18.7
	6H	18.7	19.1	19.2	19.6	20.1	17.9	18.3	18.4	18.8	19.3
	8H	18.9	19.2	19.4	19.8	20.3	18.1	18.4	18.6	18.9	19.4
	12H	19.0	19.3	19.5	19.8	20.4	18.2	18.5	18.7	19.0	19.6
12H	4H	17.9	18.3	18.4	18.8	19.3	17.3	17.7	17.8	18.2	18.7
	6H	18.7	19.0	19.2	19.5	20.1	18.0	18.3	18.5	18.8	19.3
	8H	19.0	19.2	19.5	19.7	20.3	18.2	18.5	18.7	19.0	19.5

Corrected UGR values based on total output lumens

SHR = 1.0