

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 835 007 DLNFGC MW
Nom 3" Square Infinium recessed downlight

Test Number

SP-007673_M-007L

Test Date

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

Summary of Results

Power

Input Watts	7.4 W
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Lumen Output

Output Lumens	356
Efficacy	48.09 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.51
Two luminaires, plane 90°	0.51
Four luminaires	0.56

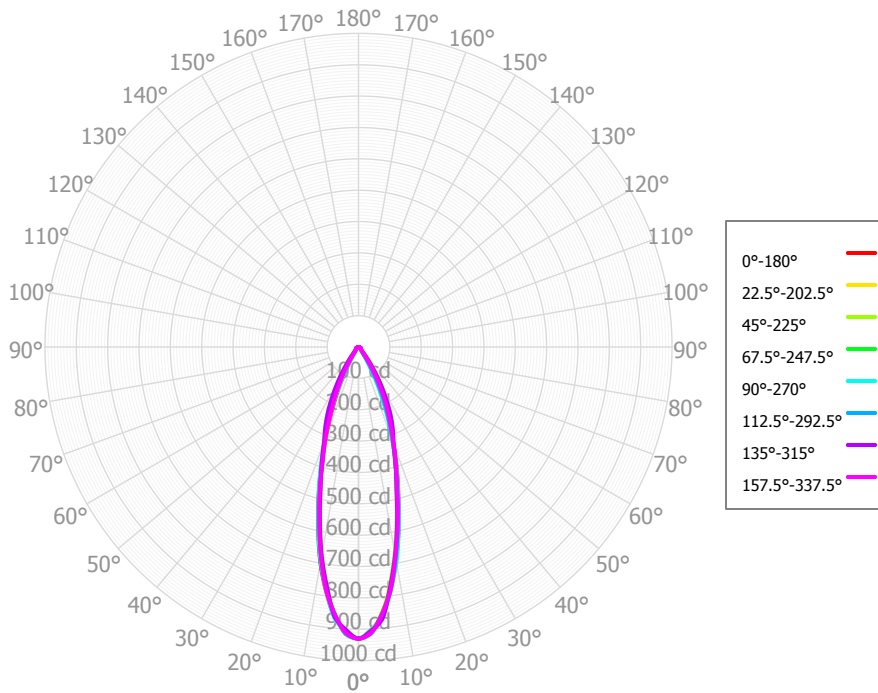
Full Beam Angle

0° - 180°	31°
90° - 270°	31°

IES File Header Contents

Keyword	Value
TEST	SP-007673_M-007L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/11/2019
UPDATE	2/28/2019
LUMCAT	IF03SMx xx 835 007 DLNFGC MW
LUMINAIRE	Nom 3" Square Infinium recessed downlight
OTHER	Beam Angle: 31 degrees
OTHER	Narrow Flood optic, Clear glass lens
OTHER	Aluminum bezel contains lens
LAMPCAT	N/A
LAMP	N/A, CRI: 80, Philips
OTHER	CCT Multiplier: 40K x 1.03
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting, scaled from 20L

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	77.00	21.64%	90.00° - 100.00°	0.03	0.01%
10.00° - 20.00°	131.55	36.97%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	91.18	25.62%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	29.34	8.25%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	9.17	2.58%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	7.24	2.03%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	7.10	2.00%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	2.43	0.68%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	0.82	0.23%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	355.82	99.99%	0.00° - 180.00°	355.85	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°	930.17	930.17	930.17	930.17	930.17	930.17	930.17	930.17	930.17	930.17	930.17	930.17	930.17	930.17	930.17	930.17	930.17
2.50°	906.81	915.44	903.09	911.32	904.14	916.94	903.98	913.27	907.98	917.90	905.68	913.60	906.73	914.79	906.49	912.69	906.81
5.00°	862.12	851.48	862.83	853.94	866.80	858.10	865.43	858.23	865.78	858.17	865.32	858.13	869.94	856.56	871.26	856.24	862.12
7.50°	781.51	777.67	766.49	778.25	782.31	785.22	772.27	785.09	787.87	787.55	770.91	780.89	784.22	784.39	772.34	781.45	781.51
10.00°	689.43	676.54	666.54	678.17	696.14	684.36	677.41	684.99	699.28	684.21	673.67	680.85	695.32	682.34	672.97	678.25	689.43
12.50°	590.54	576.25	565.51	577.26	592.43	577.72	570.08	576.12	593.93	576.47	565.66	571.85	591.31	580.87	568.40	576.72	590.54
15.00°	490.02	477.76	465.45	475.45	489.82	479.83	467.69	476.99	491.16	477.71	465.63	474.73	490.28	480.40	467.80	477.30	490.02
17.50°	404.72	389.80	392.71	391.08	401.30	383.13	389.79	380.26	391.69	379.63	388.48	381.16	399.75	391.43	394.59	393.64	404.72
20.00°	321.97	320.20	322.93	322.52	314.86	317.37	319.35	306.11	303.37	307.09	321.31	311.60	314.04	318.76	326.99	326.31	321.97
22.50°	253.37	257.12	284.37	262.10	243.69	253.89	276.13	235.82	226.74	235.71	276.71	247.53	241.17	253.17	285.98	266.33	253.37
25.00°	186.27	203.35	244.87	207.68	174.97	197.81	231.64	183.00	162.34	183.18	230.58	191.23	173.18	195.73	243.64	212.72	186.27
27.50°	134.74	153.81	199.14	155.73	118.42	142.22	183.67	132.09	108.53	131.67	181.66	136.14	115.52	142.13	196.75	163.26	134.74
30.00°	84.07	109.16	154.28	105.25	68.60	97.38	138.20	92.12	68.72	92.41	136.33	92.54	68.65	92.23	150.92	116.74	84.07
32.50°	54.52	71.79	113.33	67.20	42.72	54.61	98.26	52.75	38.89	55.60	96.23	49.99	40.27	56.37	107.93	77.94	54.52
35.00°	26.17	41.37	75.39	35.22	22.46	36.01	63.99	35.91	23.92	36.08	63.18	33.68	21.81	31.49	69.90	43.53	26.17
37.50°	19.76	24.03	47.32	21.86	17.63	19.25	39.70	19.70	17.48	19.44	38.62	18.59	17.05	19.24	42.37	26.43	19.76
40.00°	13.77	17.01	24.92	15.65	13.75	15.58	22.65	15.84	14.34	16.31	23.03	15.54	13.70	14.99	22.58	17.40	13.77
42.50°	11.63	12.95	17.31	12.91	11.93	12.40	15.87	12.29	12.74	13.54	16.37	12.59	11.94	12.46	15.82	13.22	11.63
45.00°	9.70	10.77	11.77	11.18	10.26	11.54	11.80	11.60	11.40	12.03	12.69	11.16	10.36	10.84	11.38	10.81	9.70
47.50°	8.94	9.42	10.45	10.03	8.84	10.51	10.93	10.82	10.16	10.62	11.42	9.82	8.94	9.76	10.14	9.57	8.94
50.00°	8.09	8.50	9.49	9.00	7.76	8.85	10.15	9.45	8.88	9.48	10.28	9.37	7.71	8.92	9.12	8.64	8.09
52.50°	6.79	8.17	9.11	8.07	7.16	7.66	9.44	8.36	7.60	8.52	9.23	8.91	6.62	7.99	8.33	7.78	6.79
55.00°	5.90	8.08	9.01	7.17	6.87	7.75	9.33	8.40	7.14	7.95	9.10	8.38	6.26	7.05	8.10	6.93	5.90
57.50°	6.24	8.05	9.30	7.77	6.93	7.93	9.69	8.45	6.85	7.96	9.46	8.04	6.37	7.19	8.40	7.46	6.24
60.00°	6.73	8.03	9.24	8.49	7.25	8.33	9.62	8.49	7.52	8.98	9.60	8.47	6.96	7.61	8.41	8.19	6.73
62.50°	7.57	7.94	8.81	8.28	7.81	8.33	9.26	8.32	8.31	9.09	9.64	8.55	7.80	7.70	8.19	8.08	7.57
65.00°	7.71	7.84	7.76	8.00	7.62	7.65	7.75	7.64	7.62	7.95	7.84	7.63	7.42	7.73	7.25	7.91	7.71
67.50°	6.50	6.65	6.16	6.46	6.85	6.25	5.66	6.36	6.70	6.39	5.46	6.28	6.58	6.46	5.85	6.20	6.50
70.00°	5.03	5.27	4.70	4.92	5.01	4.04	3.87	4.19	4.25	4.44	3.93	4.20	4.43	5.04	4.31	4.52	5.03
72.50°	3.27	3.42	3.30	3.38	2.66	2.59	2.33	2.73	2.43	2.91	2.71	2.61	2.40	3.13	2.70	3.10	3.27
75.00°	2.36	2.15	2.54	2.22	1.99	1.59	1.67	1.72	1.59	1.74	2.22	1.41	1.73	1.89	2.00	2.08	2.36
77.50°	1.85	1.87	2.05	1.45	1.55	1.46	1.24	1.44	1.42	1.44	1.57	1.14	1.27	1.54	1.48	1.52	1.85
80.00°	1.69	1.66	1.94	1.38	1.32	1.29	1.02	1.26	1.34	1.20	1.17	0.88	1.01	1.45	1.21	1.72	1.69
82.50°	1.54	1.30	1.30	1.11	0.89	1.12	0.89	0.96	1.03	1.05	0.96	0.72	0.78	1.04	1.00	1.39	1.54
85.00°	0.79	0.79	0.69	0.68	0.47	0.64	0.65	0.55	0.56	0.64	0.65	0.50	0.43	0.65	0.61	0.77	0.79
87.50°	0.45	0.47	0.75	0.48	0.50	0.46	0.46	0.51	0.64	0.51	0.47	0.32	0.46	0.62	0.48	0.58	0.45
90.00°	0.47	0.49	0.56	0.45	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.44	0.44	0.47
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	424	424	424	424	414	414	414	414	395	395	395	379	379	379	363	363	356
	1	405	396	388	380	397	388	381	374	374	368	363	361	356	352	349	345	342
	2	387	371	358	347	380	365	353	343	354	344	336	344	336	329	334	327	322
	3	371	350	334	321	364	345	331	319	336	324	314	328	317	309	320	311	304
	4	355	331	314	300	349	327	311	298	320	306	295	313	301	292	307	297	288
	5	341	315	296	283	335	311	294	281	305	290	279	300	287	277	294	283	274
	6	327	300	281	268	323	297	279	267	292	276	265	287	274	263	283	271	262
	7	315	286	268	254	311	284	266	254	280	264	253	276	262	251	272	259	250
	8	303	274	255	243	299	272	255	242	268	253	241	265	251	240	262	249	239
	9	292	263	245	232	289	261	244	232	258	242	231	255	241	231	252	239	230
	10	282	252	235	223	279	251	234	223	248	233	222	246	232	221	243	230	221

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	30.7 fc	3.1 ft
6.5 ft	22.0 fc	3.7 ft
7.5 ft	16.5 fc	4.2 ft
8.0 ft	14.5 fc	4.5 ft
10.0 ft	9.3 fc	5.6 ft
12.0 ft	6.5 fc	6.8 ft
14.0 ft	4.7 fc	7.9 ft
16.0 ft	3.6 fc	9.0 ft
20.0 ft	2.3 fc	11.3 ft
24.0 ft	1.6 fc	13.5 ft
28.0 ft	1.2 fc	15.8 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	391,105	391,105	391,105
45.00°	5,767	6,998	6,103
55.00°	4,328	6,604	5,033
65.00°	7,673	7,723	7,580
75.00°	3,842	4,119	3,231
85.00°	3,804	3,343	2,254

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	12.0	13.0	12.4	13.3	13.7	12.3	13.3	12.6	13.6	13.9
	3H	14.5	15.4	14.9	15.7	16.1	14.5	15.3	14.9	15.7	16.1
	4H	14.8	15.6	15.2	16.0	16.4	14.6	15.4	15.0	15.8	16.2
	6H	15.0	15.8	15.4	16.1	16.5	14.7	15.4	15.1	15.8	16.2
	8H	15.2	15.9	15.6	16.3	16.7	14.7	15.4	15.2	15.8	16.2
	12H	15.3	15.9	15.7	16.3	16.8	14.7	15.4	15.2	15.8	16.2
4H	2H	13.1	13.9	13.5	14.3	14.7	13.4	14.2	13.8	14.5	14.9
	3H	15.3	16.0	15.7	16.4	16.8	15.2	15.9	15.6	16.3	16.7
	4H	15.6	16.2	16.1	16.6	17.1	15.4	16.0	15.8	16.4	16.8
	6H	15.9	16.4	16.4	16.9	17.4	15.5	16.0	16.0	16.5	16.9
	8H	16.1	16.6	16.6	17.1	17.5	15.5	16.0	16.0	16.5	16.9
	12H	16.3	16.7	16.8	17.2	17.6	15.6	16.0	16.1	16.5	16.9
8H	4H	15.7	16.1	16.2	16.6	17.1	15.4	15.8	15.8	16.3	16.8
	6H	16.1	16.5	16.6	17.0	17.5	15.6	15.9	16.1	16.4	16.9
	8H	16.4	16.7	16.9	17.3	17.8	15.7	16.0	16.2	16.5	17.0
	12H	16.6	16.9	17.2	17.4	18.0	15.8	16.0	16.3	16.5	17.1
12H	4H	15.6	16.1	16.1	16.5	17.0	15.3	15.7	15.8	16.2	16.7
	6H	16.1	16.5	16.7	16.9	17.5	15.5	15.9	16.1	16.3	16.9
	8H	16.5	16.8	17.0	17.3	17.8	15.7	16.0	16.2	16.5	17.1

Corrected UGR values based on total output lumens

SHR = 1.0