Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

IF03SSx IC 835 007 N11 DLWFGC MW

Nom 3" Square Infinium recessed downlight

Test Number

SP-00765_M-007L

Test Date

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

Summary of Results

Power

Input Watts	5.4 W

Lumen Output

Output Lumens	371
Efficacy	68.78 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.9
Two luminaires, plane 90°	0.9
Four luminaires	0.91

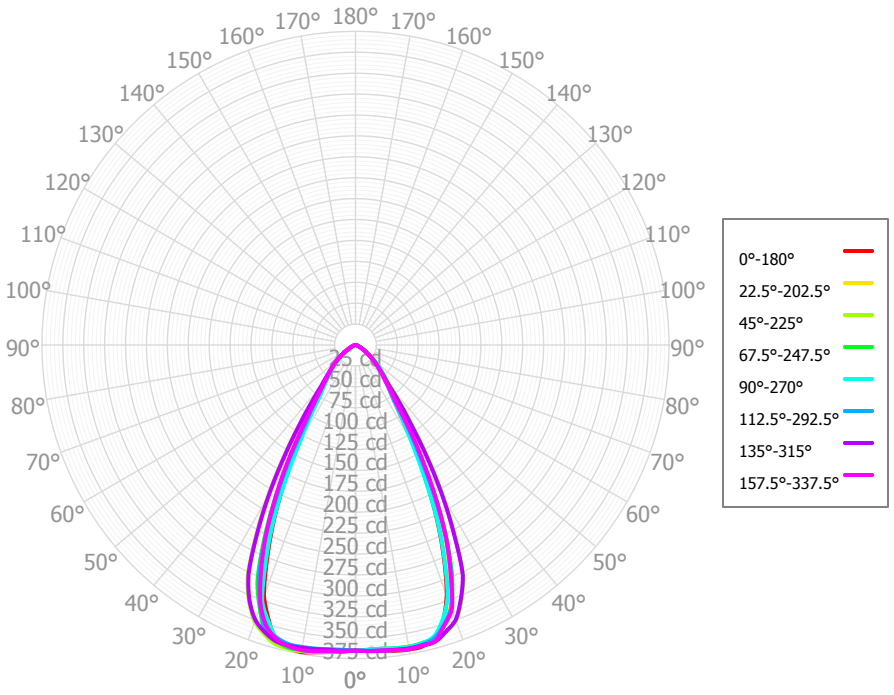
Full Beam Angle

0° - 180°	55°
90° - 270°	54°

IES File Header Contents

Keyword	Value
TEST	SP-00765_M-007L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/11/2019
UPDATE	3/11/2019
LUMCAT	IF03SSx IC 835 007 N11 DLWFGC MW
LUMINAIRE	Nom 3" Square Infinium recessed downlight
OTHER	Beam Angle: 54 degrees
OTHER	Wide 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°	35.64	9.60%	90.00° - 100.00°	0.03	0.01%
10.00° - 20.00°	101.41	27.30%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	116.18	31.28%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	61.16	16.47%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	31.96	8.60%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	16.27	4.38%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	6.06	1.63%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	2.09	0.56%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	0.61	0.16%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	371.39	99.99%	0.00° - 180.00°	371.42	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°	365.64	365.64	365.64	365.64	365.64	365.64	365.64	365.64	365.64	365.64	365.64	365.64	365.64	365.64	365.64	365.64	365.64
2.50°	366.38	366.25	364.76	365.19	364.77	364.96	365.99	366.54	367.21	366.15	366.52	365.72	366.56	366.63	366.40	366.23	366.38
5.00°	367.07	366.90	364.85	365.39	364.56	365.22	366.11	367.57	368.67	367.54	368.33	366.95	368.00	367.09	366.87	366.88	367.07
7.50°	368.84	367.78	365.71	365.78	365.84	366.35	366.97	369.59	370.73	370.32	370.20	368.63	369.33	367.88	367.71	368.12	368.84
10.00°	369.78	368.80	366.49	366.41	366.73	366.76	367.75	370.56	372.95	371.59	371.83	369.82	370.53	368.95	368.53	369.47	369.78
12.50°	369.29	367.45	366.38	365.33	365.70	366.77	368.18	369.12	370.70	371.46	371.79	370.82	367.37	367.20	368.27	368.29	369.29
15.00°	362.51	365.02	365.53	362.52	361.40	362.73	366.96	364.25	367.54	366.25	370.39	365.87	363.13	363.34	367.49	366.80	362.51
17.50°	347.13	350.91	359.53	351.99	345.51	356.79	360.26	353.16	345.08	357.15	362.68	359.06	346.66	351.43	359.52	352.23	347.13
20.00°	319.03	332.61	350.96	334.92	322.07	332.68	350.10	331.84	320.00	332.14	352.23	334.89	326.34	334.65	350.06	336.91	319.03
22.50°	276.64	295.84	330.56	302.34	278.55	301.90	331.24	295.73	276.06	297.17	332.37	306.56	280.44	300.03	329.17	297.72	276.64
25.00°	231.03	254.01	304.15	259.16	232.12	255.84	302.68	255.06	230.77	254.32	304.93	259.97	233.12	256.73	303.68	257.95	231.03
27.50°	182.46	207.95	256.87	211.04	179.49	205.39	255.10	208.99	182.48	207.55	257.45	210.39	179.36	207.03	255.44	209.99	182.46
30.00°	139.90	161.06	209.39	160.19	134.38	157.87	207.19	163.99	134.68	162.07	209.64	160.83	130.68	154.87	207.17	162.75	139.90
32.50°	101.83	122.64	161.39	121.24	102.03	110.94	158.78	120.06	104.35	117.09	161.13	111.27	98.68	116.00	158.80	122.29	101.83
35.00°	79.14	85.29	118.94	87.58	78.66	88.15	117.48	89.51	75.64	89.20	118.72	86.49	72.75	80.99	115.13	85.32	79.14
37.50°	65.79	70.32	87.79	70.10	67.51	68.58	85.41	69.51	64.63	66.53	86.40	62.96	62.30	65.65	84.42	69.31	65.79
40.00°	56.18	56.88	63.92	58.16	58.20	58.28	63.21	56.59	54.15	55.54	62.49	54.72	52.93	54.52	60.02	54.97	56.18
42.50°	48.39	48.66	52.17	49.86	50.96	48.70	51.35	48.21	47.19	47.15	49.92	46.57	45.76	46.22	49.07	47.45	48.39
45.00°	41.50	40.60	42.58	42.51	43.79	42.25	42.28	41.43	40.35	40.48	40.31	39.80	38.96	38.32	39.73	40.13	41.50
47.50°	34.94	35.00	35.89	35.84	36.67	35.87	35.63	35.46	33.99	34.08	33.93	33.09	32.73	32.39	33.14	33.45	34.94
50.00°	28.44	29.38	29.68	29.29	30.16	29.55	29.63	29.35	27.81	27.93	27.87	26.95	26.82	26.62	27.15	27.15	28.44
52.50°	21.95	23.54	23.97	23.50	24.09	23.34	24.07	23.18	22.22	21.81	22.11	21.14	21.32	21.87	21.99	21.80	21.95
55.00°	17.43	17.98	18.87	17.79	18.85	18.48	19.04	18.35	17.11	17.48	17.46	17.03	16.56	17.17	17.50	17.03	17.43
57.50°	13.33	14.14	14.33	13.90	14.12	13.87	14.31	13.95	13.22	13.24	13.63	13.13	12.59	13.48	13.76	13.37	13.33
60.00°	10.25	10.54	10.69	10.12	10.55	10.99	11.06	10.71	9.88	10.40	10.46	10.01	9.55	9.92	10.59	10.08	10.25
62.50°	7.31	8.04	7.69	7.88	7.53	8.23	8.49	7.74	7.62	7.63	7.68	7.22	7.31	7.91	7.93	7.36	7.31
65.00°	5.62	5.84	5.66	5.73	5.55	6.01	6.33	6.15	5.69	5.74	5.79	5.43	5.77	5.97	5.84	5.35	5.62
67.50°	4.04	4.54	4.21	4.75	3.96	4.14	4.31	4.78	4.27	4.06	4.30	3.94	4.70	4.45	4.18	4.20	4.04
70.00°	3.28	3.37	3.28	3.70	2.94	3.12	3.27	3.60	3.28	3.33	3.49	2.98	3.69	3.16	2.99	3.17	3.28
72.50°	2.57	2.39	2.52	2.39	2.09	2.35	2.39	2.57	2.64	2.74	2.81	2.49	2.72	2.44	2.01	2.22	2.57
75.00°	1.98	1.81	2.07	1.62	1.72	1.77	1.74	1.98	1.94	2.31	2.11	2.26	1.86	1.94	1.87	1.79	1.98
77.50°	1.43	1.39	1.52	1.26	1.40	1.24	1.38	1.47	1.46	1.62	1.64	1.30	1.20	1.59	1.52	1.36	1.43
80.00°	1.01	1.05	0.93	0.87	1.07	0.99	1.03	1.00	1.25	1.06	1.22	0.82	0.81	1.10	0.87	0.90	1.01
82.50°	0.78	0.84	0.77	0.59	0.49	0.75	0.64	0.62	0.84	0.70	0.74	0.68	0.67	0.92	0.72	0.81	0.78
85.00°	0.40	0.46	0.35	0.42	0.36	0.51	0.61	0.57	0.37	0.52	0.56	0.51	0.36	0.58	0.69	0.37	0.40
87.50°	0.46	0.39	0.31	0.34	0.39	0.43	0.46	0.56	0.49	0.46	0.43	0.50	0.41	0.35	0.50	0.44	0.46
90.00°	0.33	0.53	0.33	0.43	0.60	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.50	0.46	0.39	0.33
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.

	ρfc	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	ρcc	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	10%	0%
	ρw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	442	442	442	442	432	432	432	432	413	413	413	395	395	395	379	379	379	371
	1	420	409	399	390	411	401	392	384	386	378	372	372	366	361	359	354	350	347
	2	397	378	362	348	389	371	357	344	359	347	337	348	338	329	338	330	322	323
	3	376	350	330	315	368	345	327	312	335	320	307	326	313	302	317	307	297	301
	4	355	325	304	287	348	321	301	285	313	295	282	305	290	278	298	286	275	280
RCR	5	336	303	280	263	330	300	278	262	293	274	260	287	270	257	281	267	255	262
	6	319	284	260	243	313	281	259	243	275	255	241	270	252	239	265	249	238	245
	7	302	266	243	226	297	263	241	225	259	239	224	254	236	223	250	234	222	230
	8	287	250	227	211	282	248	226	210	244	224	209	240	222	209	236	220	208	216
	9	273	236	213	197	269	234	212	197	230	210	196	227	209	196	224	207	195	204
	10	260	223	200	185	256	221	200	185	218	198	185	215	197	184	212	196	184	193

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	12.1 fc	5.7 ft
6.5 ft	8.7 fc	6.7 ft
7.5 ft	6.5 fc	7.7 ft
8.0 ft	5.7 fc	8.2 ft
10.0 ft	3.7 fc	10.3 ft
12.0 ft	2.5 fc	12.4 ft
14.0 ft	1.9 fc	14.4 ft
16.0 ft	1.4 fc	16.5 ft
20.0 ft	0.9 fc	20.6 ft
24.0 ft	0.6 fc	24.7 ft
28.0 ft	0.5 fc	28.8 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	153,740	153,740	153,740
45.00°	24,677	25,320	26,036
55.00°	12,775	13,836	13,820
65.00°	5,587	5,636	5,523
75.00°	3,220	3,366	2,802
85.00°	1,930	1,708	1,727

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	15.8	16.9	16.2	17.2	17.5	15.7	16.8	16.1	17.1	17.4
	3H	16.1	17.1	16.5	17.4	17.8	16.0	17.0	16.4	17.3	17.7
	4H	16.2	17.1	16.6	17.4	17.8	16.1	17.0	16.5	17.3	17.7
	6H	16.2	17.0	16.6	17.4	17.8	16.1	16.9	16.5	17.3	17.7
	8H	16.2	16.9	16.6	17.3	17.7	16.1	16.8	16.5	17.2	17.6
	12H	16.2	16.9	16.6	17.3	17.7	16.0	16.8	16.5	17.1	17.6
4H	2H	15.8	16.7	16.2	17.1	17.5	15.8	16.7	16.2	17.0	17.4
	3H	16.2	17.0	16.7	17.4	17.8	16.2	16.9	16.6	17.3	17.7
	4H	16.3	17.0	16.8	17.4	17.9	16.3	17.0	16.7	17.4	17.8
	6H	16.4	17.0	16.9	17.4	17.9	16.3	16.9	16.8	17.3	17.8
	8H	16.4	16.9	16.9	17.4	17.8	16.3	16.8	16.8	17.3	17.8
	12H	16.4	16.8	16.9	17.3	17.8	16.3	16.8	16.8	17.2	17.7
8H	4H	16.3	16.8	16.8	17.3	17.7	16.3	16.8	16.7	17.2	17.7
	6H	16.4	16.8	16.9	17.3	17.8	16.3	16.7	16.8	17.2	17.7
	8H	16.4	16.8	16.9	17.3	17.8	16.3	16.7	16.9	17.2	17.7
	12H	16.4	16.8	17.0	17.3	17.8	16.4	16.7	16.9	17.2	17.8
12H	4H	16.2	16.7	16.7	17.2	17.7	16.2	16.7	16.7	17.2	17.6
	6H	16.3	16.7	16.9	17.2	17.7	16.3	16.7	16.8	17.1	17.7
	8H	16.4	16.7	16.9	17.2	17.8	16.3	16.7	16.9	17.2	17.7

Corrected UGR values based on total output lumens

SHR = 1.0