

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

IF03SSx IC 835 020 N11 DLNFGP MW
Nom 3" Square Infinium recessed downlight

Test Number

SP-00779_2_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
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Lumen Output

Output Lumens	371
Efficacy	68.77 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°	0.52
Four luminaires	0.57

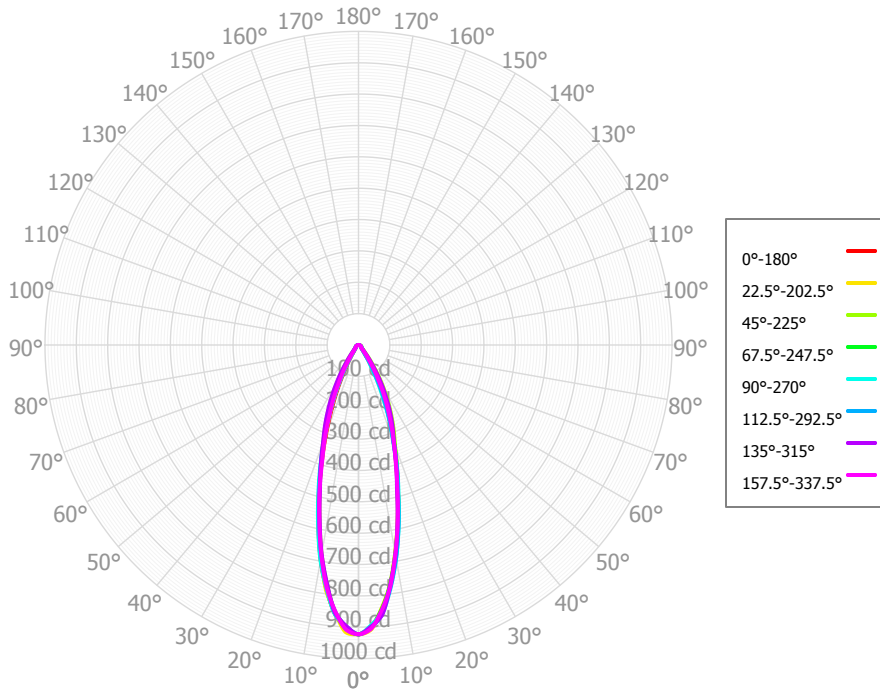
Full Beam Angle

0° - 180°	31°
90° - 270°	32°

IES File Header Contents

Keyword	Value
TEST	SP-00779_2_M-007L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/11/2019
UPDATE	3/11/2019
LUMCAT	IF03SSx IC 835 020 N11 DLNFGP MW
LUMINAIRE	Nom 3" Square Infinium recessed downlight
OTHER	Beam Angle: 31 degrees
OTHER	Narrow Flood optic, Solite Lens
OTHER	Aluminum bezel
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°	76.67	20.65%	90.00° - 100.00°	0.03	0.01%
10.00° - 20.00°	133.11	35.84%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	93.57	25.20%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	34.38	9.26%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	11.80	3.18%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	9.25	2.49%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	7.61	2.05%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	4.04	1.09%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	0.90	0.24%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	371.34	99.99%	0.00° - 180.00°	371.37	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°	922.59	922.59	922.59	922.59	922.59	922.59	922.59	922.59	922.59	922.59	922.59	922.59	922.59	922.59	922.59	922.59	922.59
2.50°	900.22	909.03	897.91	901.73	896.16	899.56	897.60	908.68	903.76	917.23	899.55	907.22	899.50	902.54	899.86	906.69	900.22
5.00°	853.27	843.61	853.74	847.02	856.14	855.86	858.14	852.14	861.23	855.75	855.85	855.23	862.15	862.09	864.28	849.40	853.27
7.50°	774.57	772.89	769.88	773.76	775.68	773.65	768.97	779.76	784.47	790.35	770.41	780.93	783.29	781.87	772.69	776.87	774.57
10.00°	682.46	673.96	674.99	677.27	689.30	683.51	677.34	681.50	695.05	687.87	677.91	685.88	697.78	690.21	679.87	676.39	682.46
12.50°	585.62	576.44	577.48	581.40	591.56	579.91	572.82	576.52	589.75	585.10	573.09	582.07	594.37	588.98	575.88	577.13	585.62
15.00°	487.25	484.32	479.44	486.13	492.89	483.87	474.45	479.43	487.82	486.20	477.96	485.75	494.80	485.72	474.32	479.75	487.25
17.50°	404.83	398.62	407.61	404.19	408.03	398.18	398.90	383.78	389.41	389.34	396.66	391.97	403.42	402.02	400.00	395.95	404.83
20.00°	326.35	331.44	339.30	333.29	323.81	323.12	329.68	311.70	303.52	313.61	327.97	318.38	318.80	321.20	329.54	328.89	326.35
22.50°	260.48	268.46	292.32	271.39	253.90	260.07	278.85	242.32	228.31	240.72	273.87	249.90	245.68	259.17	284.12	269.08	260.48
25.00°	196.83	215.03	247.04	215.71	185.20	201.79	229.36	188.43	166.03	185.87	223.01	194.35	180.17	198.69	238.91	216.54	196.83
27.50°	145.45	164.92	203.74	164.87	132.41	147.95	182.91	135.50	112.72	133.90	175.25	141.08	125.23	149.35	194.56	168.04	145.45
30.00°	95.40	120.89	160.61	116.74	82.89	104.18	139.08	97.87	74.89	94.76	132.88	101.49	82.09	100.69	151.06	122.90	95.40
32.50°	65.61	83.30	121.59	80.93	56.96	68.04	99.90	61.19	45.96	60.14	94.75	63.50	52.47	69.95	110.41	86.41	65.61
35.00°	36.90	55.16	83.63	50.57	34.02	45.01	67.39	42.95	30.72	40.27	65.77	44.83	33.14	40.57	74.29	55.78	36.90
37.50°	27.17	35.04	59.15	34.36	26.07	30.12	44.76	25.84	21.74	24.57	42.62	27.26	23.43	29.16	49.80	36.48	27.17
40.00°	17.84	24.64	36.47	23.16	19.20	21.81	28.85	20.42	17.42	19.47	28.87	21.80	17.77	18.77	30.40	23.36	17.84
42.50°	15.11	17.94	26.47	17.79	16.22	16.83	21.00	15.54	14.76	15.47	20.00	16.52	15.24	15.93	21.26	16.88	15.11
45.00°	12.49	14.94	17.74	13.97	13.71	14.08	15.95	13.99	12.75	13.68	15.74	14.63	13.48	13.34	14.83	13.37	12.49
47.50°	10.95	12.88	14.98	12.59	12.44	12.23	13.69	12.45	10.92	12.21	13.40	12.81	12.22	11.98	12.91	11.57	10.95
50.00°	9.60	11.57	12.79	11.70	11.22	11.12	12.39	11.00	10.24	11.23	12.10	11.76	10.97	10.78	11.70	10.36	9.60
52.50°	9.48	10.95	12.64	11.11	10.11	10.24	11.89	9.85	9.78	10.52	11.14	10.82	9.73	10.12	11.43	10.02	9.48
55.00°	9.35	10.79	12.32	10.57	9.59	10.12	11.46	9.66	9.72	10.15	10.53	10.52	9.22	9.60	10.88	9.91	9.35
57.50°	9.18	10.47	11.56	10.56	10.11	10.17	11.07	9.45	9.71	9.67	10.02	10.19	9.01	9.53	10.03	9.67	9.18
60.00°	8.97	10.07	10.67	10.59	10.18	9.58	10.02	9.18	8.97	9.08	9.37	9.72	8.63	9.13	9.23	9.40	8.97
62.50°	8.65	9.13	9.54	9.07	9.62	8.87	8.61	8.67	8.17	8.19	8.69	9.05	8.19	8.03	8.46	8.72	8.65
65.00°	8.21	7.96	8.44	7.57	8.79	7.41	7.61	7.70	7.30	7.03	7.40	7.76	7.50	6.99	7.60	7.99	8.21
67.50°	7.49	7.11	7.41	7.06	7.64	5.90	6.76	6.45	6.39	6.10	6.06	6.62	6.74	6.04	6.69	7.11	7.49
70.00°	6.47	6.36	6.49	6.45	6.50	5.30	5.52	4.85	5.25	5.30	5.01	5.75	5.45	5.04	5.80	6.22	6.47
72.50°	5.04	5.44	5.69	5.33	5.35	4.55	4.28	3.73	3.97	4.39	4.19	4.79	4.28	4.01	4.93	5.31	5.04
75.00°	4.00	4.55	5.14	4.46	4.45	3.51	3.27	2.85	2.53	3.48	3.69	3.78	3.43	3.19	4.24	4.32	4.00
77.50°	3.17	3.80	4.52	3.85	3.38	2.51	2.45	2.28	1.78	2.61	2.76	2.81	2.60	2.44	3.27	3.24	3.17
80.00°	2.48	2.66	3.32	2.79	1.85	1.72	1.75	1.40	1.36	1.86	1.76	1.63	1.71	1.74	1.87	2.30	2.48
82.50°	1.50	1.64	2.03	1.40	0.92	1.12	1.12	0.83	0.89	0.87	0.95	0.80	0.84	0.92	1.23	1.43	1.50
85.00°	0.67	0.91	0.93	0.51	0.49	0.60	0.69	0.46	0.49	0.63	0.53	0.48	0.40	0.50	0.70	0.67	0.67
87.50°	0.38	0.46	0.44	0.41	0.42	0.48	0.56	0.44	0.50	0.39	0.52	0.45	0.48	0.46	0.27	0.51	0.38
90.00°	0.41	0.46	0.45	0.48	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.47	0.53	0.41
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	442	442	442	442	432	432	432	432	413	413	413	395	395	395	379	379	371
	1	422	412	403	395	413	404	396	389	389	383	377	375	370	366	363	359	352
	2	403	386	371	359	395	379	366	355	367	357	348	356	348	340	346	339	333
	3	385	363	345	332	378	358	342	329	348	335	324	339	328	319	331	322	315
	4	368	342	324	309	362	338	321	307	330	315	304	323	310	300	316	306	300
	5	353	325	305	290	347	321	303	289	315	299	286	309	295	284	303	291	286
	6	338	309	289	274	333	306	287	273	300	284	271	295	281	270	291	278	273
	7	325	294	274	260	320	292	273	260	287	270	258	283	268	257	279	266	261
	8	313	281	261	248	308	279	260	247	275	258	246	272	257	245	268	255	251
	9	301	269	250	237	297	268	249	236	264	247	236	261	246	235	258	244	241
	10	290	258	239	227	287	257	239	227	254	237	226	251	236	225	249	235	232

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	30.5 fc	3.1 ft
6.5 ft	21.8 fc	3.7 ft
7.5 ft	16.4 fc	4.3 ft
8.0 ft	14.4 fc	4.5 ft
10.0 ft	9.2 fc	5.7 ft
12.0 ft	6.4 fc	6.8 ft
14.0 ft	4.7 fc	8.0 ft
16.0 ft	3.6 fc	9.1 ft
20.0 ft	2.3 fc	11.4 ft
24.0 ft	1.6 fc	13.6 ft
28.0 ft	1.2 fc	15.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	387,916	387,916	387,916
45.00°	7,429	10,552	8,151
55.00°	6,853	9,031	7,034
65.00°	8,166	8,397	8,742
75.00°	6,502	8,342	7,235
85.00°	3,219	4,469	2,350

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	13.8	14.8	14.1	15.1	15.4	13.9	14.9	14.2	15.2	15.5
	3H	15.9	16.8	16.2	17.1	17.5	15.6	16.5	16.0	16.9	17.2
	4H	16.5	17.3	16.9	17.7	18.1	16.2	17.0	16.6	17.4	17.8
	6H	16.9	17.7	17.4	18.1	18.5	16.5	17.3	16.9	17.7	18.1
	8H	17.0	17.8	17.5	18.1	18.6	16.5	17.3	17.0	17.6	18.1
	12H	17.1	17.7	17.5	18.1	18.6	16.5	17.2	16.9	17.6	18.0
4H	2H	14.4	15.3	14.8	15.6	16.0	14.4	15.2	14.8	15.6	16.0
	3H	16.7	17.3	17.1	17.8	18.2	16.3	17.0	16.7	17.4	17.8
	4H	17.4	18.1	17.9	18.5	18.9	17.0	17.6	17.4	18.0	18.4
	6H	18.0	18.5	18.5	19.0	19.4	17.3	17.9	17.8	18.3	18.8
	8H	18.1	18.6	18.6	19.0	19.5	17.4	17.8	17.8	18.3	18.8
	12H	18.1	18.6	18.6	19.1	19.5	17.3	17.8	17.8	18.3	18.7
8H	4H	17.7	18.2	18.2	18.7	19.1	17.1	17.6	17.6	18.0	18.5
	6H	18.4	18.8	18.9	19.3	19.8	17.5	17.9	18.0	18.4	18.9
	8H	18.6	18.9	19.1	19.4	19.9	17.6	17.9	18.1	18.4	18.9
	12H	18.7	18.9	19.2	19.4	20.0	17.6	17.9	18.1	18.4	19.0
12H	4H	17.7	18.1	18.2	18.6	19.1	17.0	17.5	17.5	18.0	18.4
	6H	18.4	18.8	18.9	19.2	19.8	17.5	17.8	18.0	18.3	18.9
	8H	18.6	18.9	19.2	19.4	20.0	17.6	17.9	18.1	18.4	19.0

Corrected UGR values based on total output lumens

SHR = 1.0