Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

IF03RMx xx 835 007 DLWFGP MW

Nominal 3" diam round recessed Infinium downlight

Test Number

SP-00761_2_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

Lumen Output

Output Lumens	491
Efficacy	66.4 lm/W

Luminous Dimensions

0° - 180° Size	-0.2
90° - 270° Size	-0.2
Height	0

Spacing Criterion

Two luminaires, plane 0°	0.95
Two luminaires, plane 90°	0.95
Four luminaires	0.89

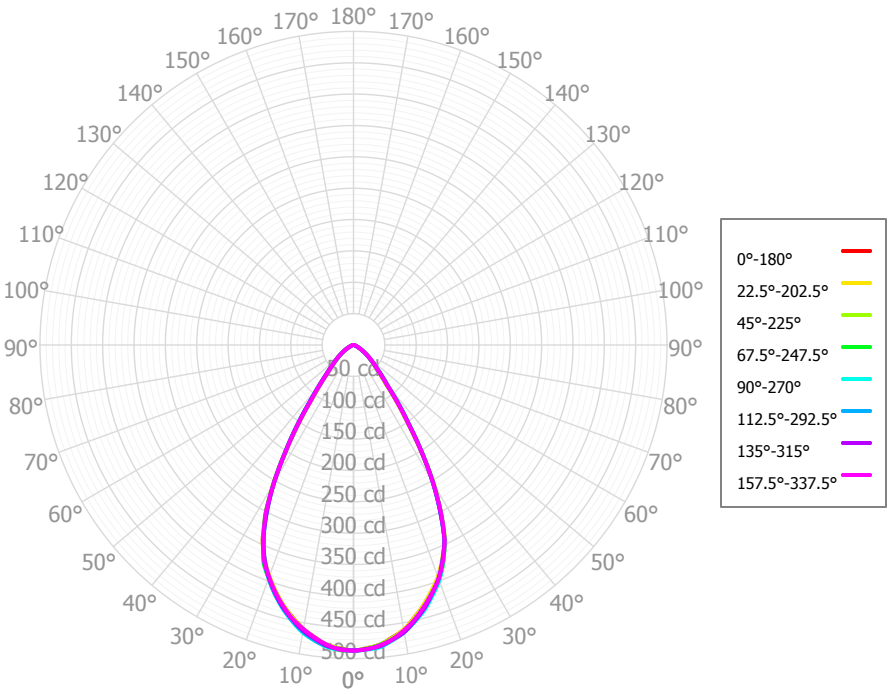
Full Beam Angle

0° - 180°	61°
90° - 270°	61°

IES File Header Contents

Keyword	Value
TEST	SP-00761_2_M-007L
TESTLAB	Spectrum Lighting Photometric lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/8/2019
UPDATE	2/28/2019
LUMCAT	IF03RMx xx 835 007 DLWFGP MW
LUMINAIRE	Nominal 3" diam round recessed Infinium downlight
OTHER	Beam Angle: 61 degrees
OTHER	Wide flood optic, Solite Lens
OTHER	Aluminum bezel contains lens
LAMPCAT	N/A
LAMP	N/A, CRI: 80, Philips
OTHER	CCT Multipliers: 40K x 1.03
OTHER	Total luminaire wattages 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°	45.97	9.36%	90.00° - 100.00°	0.03	0.01%
10.00° - 20.00°	121.14	24.66%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	152.71	31.08%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	97.78	19.90%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	41.97	8.54%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	20.79	4.23%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	7.97	1.62%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	2.36	0.48%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	0.60	0.12%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	491.30	99.99%	0.00° - 180.00°	491.33	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°	487.29	487.29	487.29	487.29	487.29	487.29	487.29	487.29	487.29	487.29	487.29	487.29	487.29	487.29	487.29	487.29	487.29
2.50°	484.16	484.25	484.29	485.62	486.14	486.13	485.19	486.43	484.56	484.50	484.63	487.24	486.30	485.71	485.19	485.78	484.16
5.00°	479.87	479.72	480.10	480.37	483.81	482.15	481.73	479.97	480.49	479.64	480.76	481.99	483.58	482.38	482.15	480.92	479.87
7.50°	470.82	471.46	471.85	473.74	474.63	474.94	472.57	471.13	470.53	471.45	472.79	475.37	475.31	475.02	473.76	473.58	470.82
10.00°	461.35	460.70	462.83	463.87	465.13	464.41	462.51	459.96	460.04	460.20	462.76	463.22	465.83	465.24	465.10	462.27	461.35
12.50°	446.04	446.17	447.79	451.74	451.60	450.84	448.53	448.05	445.82	446.44	448.12	450.08	451.14	451.28	450.27	448.81	446.04
15.00°	430.47	429.59	431.97	435.40	437.77	434.75	433.48	431.50	430.90	430.20	432.06	433.43	435.42	435.27	435.19	432.55	430.47
17.50°	412.98	411.81	414.04	418.10	419.07	416.76	414.96	413.84	412.69	412.28	413.46	416.38	416.36	416.88	416.08	415.23	412.98
20.00°	394.46	393.51	395.96	399.31	399.56	395.67	394.78	393.49	393.41	392.34	393.63	395.91	395.52	397.58	396.32	396.79	394.46
22.50°	370.89	369.41	371.51	374.69	373.03	372.68	370.45	372.69	370.54	371.27	372.04	375.24	370.28	371.13	371.16	372.74	370.89
25.00°	343.30	343.32	346.30	342.79	343.79	339.16	340.42	338.94	342.52	339.52	342.32	340.08	339.72	342.56	343.13	343.77	343.30
27.50°	300.94	300.67	301.66	302.40	299.55	300.43	299.01	303.91	300.72	303.12	302.85	304.13	298.60	299.18	299.38	302.70	300.94
30.00°	255.18	253.76	256.26	253.27	253.85	253.10	253.83	253.27	254.96	254.61	256.19	253.55	253.75	252.54	253.95	252.97	255.18
32.50°	200.01	201.07	202.29	203.47	202.44	202.37	202.53	201.92	200.90	201.96	202.51	203.32	202.88	202.92	202.03	202.15	200.01
35.00°	150.06	147.29	150.56	153.10	154.61	157.93	156.09	155.77	152.13	154.87	155.31	156.45	156.87	152.87	153.65	150.72	150.06
37.50°	111.41	111.64	113.34	114.54	117.36	115.39	115.99	110.85	112.19	109.25	113.41	112.64	117.19	118.25	115.92	113.60	111.41
40.00°	80.75	78.20	80.03	84.13	85.86	88.32	86.01	86.46	81.88	84.62	84.86	87.19	86.89	85.00	84.34	83.27	80.75
42.50°	64.26	63.51	64.40	64.86	67.75	64.74	66.93	63.44	64.98	63.90	65.16	64.43	66.79	68.44	66.99	65.35	64.26
45.00°	51.08	49.97	50.46	51.89	52.70	52.88	52.61	52.66	51.74	52.83	52.19	52.80	52.33	52.59	52.60	52.04	51.08
47.50°	42.66	42.01	42.26	42.54	43.32	42.88	42.52	42.50	42.64	42.94	42.80	42.30	42.86	43.71	43.62	43.30	42.66
50.00°	35.02	34.21	34.51	34.82	35.10	35.42	34.84	35.75	35.02	35.63	35.16	35.43	35.08	34.97	35.39	35.86	35.02
52.50°	28.31	28.34	27.88	28.62	28.65	28.20	28.89	29.21	28.78	28.49	28.29	28.91	28.53	28.29	28.29	29.32	28.31
55.00°	22.53	22.55	21.99	22.96	22.83	23.14	23.34	23.50	23.29	23.20	22.97	23.24	22.73	21.88	22.21	22.96	22.53
57.50°	17.67	17.59	17.59	18.17	17.79	18.18	18.02	18.23	18.37	17.97	18.16	18.10	17.39	17.46	17.37	18.00	17.67
60.00°	13.58	12.97	13.40	13.62	13.77	14.42	13.96	14.25	14.26	13.94	14.44	13.98	13.58	13.26	13.34	13.25	13.58
62.50°	10.09	10.58	9.55	10.41	10.78	10.75	10.51	10.63	10.63	10.05	10.99	10.36	10.49	10.18	10.10	9.98	10.09
65.00°	7.51	8.11	6.75	7.47	8.17	8.47	7.81	7.85	7.78	7.70	7.99	7.51	8.22	7.41	7.30	6.84	7.51
67.50°	5.51	5.33	5.35	5.40	5.88	6.32	5.39	5.67	5.28	5.54	5.06	5.37	6.24	5.75	4.87	5.06	5.51
70.00°	4.10	3.27	4.17	3.51	4.17	4.74	3.74	4.38	3.71	4.11	3.77	3.95	4.42	4.23	3.53	3.46	4.10
72.50°	2.91	2.62	3.18	2.85	2.78	3.48	2.40	3.10	2.47	2.99	2.63	2.99	2.85	2.92	2.72	2.75	2.91
75.00°	2.16	2.10	2.43	2.13	2.13	2.63	1.92	1.91	1.95	2.18	1.83	2.17	2.02	2.16	1.99	2.01	2.16
77.50°	1.55	1.61	1.75	1.32	1.59	1.78	1.42	1.61	1.40	1.56	1.60	1.27	1.56	1.63	1.39	1.26	1.55
80.00°	1.08	0.93	1.14	0.93	1.13	1.13	0.98	1.04	0.94	0.97	1.17	1.10	1.11	1.11	0.98	0.93	1.08
82.50°	0.60	0.67	0.73	0.67	0.79	0.70	0.66	0.60	0.67	0.60	0.64	0.72	0.64	0.65	0.65	0.70	0.60
85.00°	0.49	0.47	0.49	0.59	0.51	0.50	0.48	0.48	0.40	0.54	0.46	0.46	0.47	0.49	0.61	0.43	0.49
87.50°	0.39	0.39	0.32	0.38	0.51	0.48	0.62	0.38	0.42	0.37	0.40	0.45	0.53	0.42	0.41	0.40	0.39
90.00°	0.36	0.38	0.52	0.40	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.48	0.30	0.36
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	585	585	585	585	571	571	571	571	546	546	546	523	523	523	501	501	501	491
	1	555	540	527	515	543	530	518	507	510	500	492	491	484	477	474	469	463	459
	2	525	499	477	459	514	490	471	454	474	458	444	459	446	435	446	435	425	426
	3	496	461	435	414	486	455	430	411	441	421	404	429	412	398	418	404	391	396
	4	468	428	399	377	459	422	395	374	412	388	370	402	382	365	392	375	361	368
RCR	5	442	398	368	345	434	394	365	343	385	359	340	376	354	337	368	349	334	343
	6	419	372	340	318	411	368	338	317	360	334	314	353	330	312	346	326	310	320
	7	397	348	316	294	390	345	315	293	338	311	292	332	308	290	326	305	289	300
	8	376	326	295	274	370	324	294	273	318	291	272	313	288	271	308	286	270	281
	9	357	307	276	256	352	305	275	255	300	273	254	295	271	253	291	269	252	265
	10	340	290	259	239	335	287	259	239	283	257	238	279	255	238	276	253	237	249

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	16.1 fc	6.5 ft
6.5 ft	11.5 fc	7.7 ft
7.5 ft	8.7 fc	8.8 ft
8.0 ft	7.6 fc	9.4 ft
10.0 ft	4.9 fc	11.8 ft
12.0 ft	3.4 fc	14.1 ft
14.0 ft	2.5 fc	16.5 ft
16.0 ft	1.9 fc	18.9 ft
20.0 ft	1.2 fc	23.6 ft
24.0 ft	0.8 fc	28.3 ft
28.0 ft	0.6 fc	33.0 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	166,959	166,959	166,959
45.00°	24,753	24,453	25,537
55.00°	13,459	13,133	13,636
65.00°	6,089	5,470	6,623
75.00°	2,866	3,212	2,823
85.00°	1,923	1,935	2,022

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	15.1	16.2	15.5	16.5	16.8	15.2	16.3	15.6	16.6	16.9
	3H	15.4	16.3	15.7	16.6	17.0	15.6	16.5	16.0	16.9	17.2
	4H	15.4	16.3	15.8	16.6	17.0	15.6	16.5	16.0	16.8	17.2
	6H	15.4	16.2	15.8	16.5	16.9	15.6	16.4	16.0	16.8	17.2
	8H	15.3	16.1	15.8	16.5	16.9	15.6	16.3	16.0	16.7	17.1
	12H	15.3	16.0	15.7	16.4	16.8	15.5	16.2	15.9	16.6	17.1
4H	2H	15.1	16.0	15.5	16.3	16.7	15.3	16.2	15.7	16.5	16.9
	3H	15.4	16.1	15.8	16.6	17.0	15.7	16.4	16.1	16.8	17.2
	4H	15.5	16.1	15.9	16.5	17.0	15.8	16.4	16.2	16.8	17.3
	6H	15.5	16.0	16.0	16.5	17.0	15.8	16.3	16.3	16.8	17.3
	8H	15.5	16.0	15.9	16.4	16.9	15.8	16.3	16.2	16.7	17.2
	12H	15.4	15.9	15.9	16.4	16.8	15.7	16.2	16.2	16.7	17.1
8H	4H	15.4	15.9	15.9	16.4	16.8	15.7	16.2	16.2	16.6	17.1
	6H	15.4	15.8	15.9	16.3	16.8	15.7	16.1	16.2	16.6	17.1
	8H	15.4	15.8	15.9	16.3	16.8	15.7	16.1	16.2	16.6	17.1
	12H	15.4	15.7	15.9	16.2	16.8	15.7	16.0	16.2	16.5	17.1
12H	4H	15.4	15.8	15.8	16.3	16.8	15.6	16.1	16.1	16.6	17.0
	6H	15.4	15.7	15.9	16.2	16.8	15.7	16.0	16.2	16.5	17.1
	8H	15.4	15.7	15.9	16.2	16.8	15.7	16.0	16.2	16.5	17.1

Corrected UGR values based on total output lumens

SHR = 1.0