

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

IF03RMx xx 835 007 DLWFGN MW
Nominal 3" diam round recessed Infinium downlight

Test Number

SP-00761_1_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	509
Efficacy	68.72 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.96
Two luminaires, plane 90°	0.95
Four luminaires	0.88

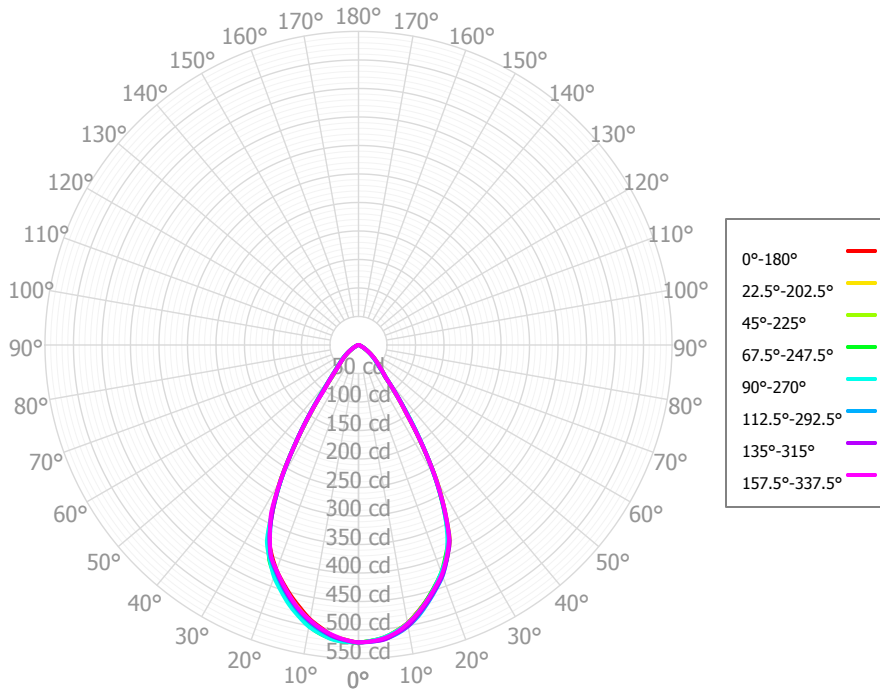
Full Beam Angle

0° - 180°	61°
90° - 270°	61°

IES File Header Contents

Keyword	Value
TEST	SP-00761_1_M-007L
TESTLAB	Spectrum Lighting Photometric lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/8/2019
UPDATE	2/27/2019
LUMCAT	IF03RMx xx 835 007 DLWFGN MW
LUMINAIRE	Nominal 3" diam round recessed Infinium downlight
OTHER	Beam Angle: 61 degrees
OTHER	Wide flood optic, Open aperture / no lens
OTHER	Aluminum bezel
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°	49.23	9.68%	90.00° - 100.00°	0.03	0.01%
10.00° - 20.00°	129.90	25.54%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	165.46	32.54%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	97.01	19.08%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	38.58	7.59%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	19.63	3.86%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	6.40	1.26%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	1.72	0.34%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	0.56	0.11%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	508.49	99.99%	0.00° - 180.00°	508.52	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°	521.67	521.67	521.67	521.67	521.67	521.67	521.67	521.67	521.67	521.67	521.67	521.67	521.67	521.67	521.67	521.67	521.67
2.50°	519.94	519.58	519.35	519.46	519.38	519.22	518.20	517.80	517.82	517.78	519.72	521.00	521.24	521.08	520.75	520.36	519.94
5.00°	516.38	515.37	514.92	515.29	514.80	513.43	513.19	511.04	512.48	512.18	515.65	517.70	518.83	518.05	518.77	516.27	516.38
7.50°	506.45	506.20	506.64	506.95	506.73	505.38	503.16	502.01	500.73	502.72	506.20	511.28	511.09	511.50	510.16	508.51	506.45
10.00°	495.39	495.83	495.65	496.34	496.05	493.73	491.84	489.87	488.65	491.18	495.22	500.62	501.65	501.05	500.55	496.34	495.39
12.50°	479.62	480.22	480.04	480.69	481.28	480.36	477.24	476.35	472.40	475.67	479.91	485.74	487.08	486.71	484.18	481.58	479.62
15.00°	463.43	463.70	463.30	462.81	464.56	463.09	461.08	458.72	456.07	459.22	463.71	468.76	471.29	468.81	467.21	464.24	463.43
17.50°	445.88	445.50	444.94	443.95	445.34	444.36	441.80	439.69	438.42	441.33	445.40	450.09	452.44	450.27	448.88	446.29	445.88
20.00°	427.19	427.11	425.53	424.75	424.79	424.24	421.87	420.45	420.31	422.18	426.79	429.89	433.10	431.24	430.38	427.84	427.19
22.50°	405.72	403.50	404.90	399.80	402.86	403.72	400.87	401.16	398.27	401.45	402.08	408.69	407.03	405.40	405.47	403.61	405.72
25.00°	375.48	379.59	371.59	373.39	368.74	367.27	369.59	367.73	372.27	370.02	376.90	372.12	380.28	375.42	378.63	375.56	375.48
27.50°	328.44	326.62	326.45	323.60	324.15	327.44	324.72	331.69	324.86	327.59	324.38	327.25	326.02	326.74	325.53	328.10	328.44
30.00°	273.73	273.00	271.19	269.43	270.47	269.25	271.31	271.11	273.58	272.87	271.06	270.31	270.49	268.87	271.34	270.23	273.73
32.50°	206.90	207.27	208.04	209.10	210.37	208.48	208.74	207.69	207.58	207.90	208.72	208.25	210.25	209.82	208.60	208.83	206.90
35.00°	149.49	144.37	153.38	148.03	156.05	154.15	153.25	151.80	147.17	152.01	148.06	153.98	151.14	150.33	149.45	145.91	149.49
37.50°	104.07	106.31	104.05	109.45	104.99	100.37	104.08	96.35	103.29	102.31	107.20	102.25	110.33	109.70	108.38	106.77	104.07
40.00°	74.36	72.15	76.80	72.15	76.69	77.65	74.15	75.14	68.79	73.76	70.14	77.10	72.53	74.68	73.36	75.47	74.36
42.50°	60.90	60.51	60.61	59.72	58.75	56.12	58.16	54.75	55.68	56.97	58.36	58.64	59.96	59.35	60.61	60.61	60.90
45.00°	50.67	49.82	50.21	47.73	48.07	47.65	47.33	46.77	44.93	46.82	47.42	49.10	48.31	48.35	49.26	49.95	50.67
47.50°	43.24	42.96	42.18	40.64	40.00	39.33	39.49	38.95	38.43	39.59	40.31	41.12	41.51	41.02	41.83	42.55	43.24
50.00°	36.14	36.06	35.04	33.62	33.30	32.91	32.70	32.69	32.04	32.82	33.42	34.32	34.75	34.24	34.76	35.72	36.14
52.50°	29.26	29.03	28.19	27.23	26.96	26.59	26.41	26.53	25.84	26.22	27.28	27.64	28.17	27.82	28.49	28.52	29.26
55.00°	22.85	22.47	22.18	21.07	21.48	21.08	21.02	20.99	20.47	20.77	21.46	21.67	22.08	21.43	22.49	21.27	22.85
57.50°	16.72	16.99	16.34	16.32	16.16	15.81	15.97	15.76	16.10	15.62	16.44	15.73	17.45	16.92	16.94	16.84	16.72
60.00°	12.29	12.31	12.20	11.85	12.05	11.69	12.12	11.87	12.07	11.80	11.96	12.03	13.04	12.48	12.30	12.57	12.29
62.50°	8.64	9.09	8.32	8.57	8.10	7.98	8.62	8.37	8.38	8.23	8.61	8.38	9.12	8.99	8.95	8.98	8.64
65.00°	6.05	6.26	5.97	5.73	6.10	5.76	6.38	6.11	5.80	6.30	5.80	5.81	5.93	5.64	6.18	5.53	6.05
67.50°	3.84	4.01	3.80	4.17	4.26	3.95	4.40	4.15	4.09	4.58	3.86	3.51	4.00	3.98	4.09	4.22	3.84
70.00°	2.57	2.57	2.73	2.83	3.32	2.98	3.09	2.75	3.01	3.31	2.68	2.64	2.65	2.54	2.63	2.98	2.57
72.50°	1.56	1.81	1.83	1.83	2.46	2.29	2.06	1.86	2.19	2.29	2.13	1.97	1.80	1.78	1.62	1.97	1.56
75.00°	1.22	1.48	1.41	1.40	1.83	1.78	1.69	1.32	1.81	1.90	1.51	1.57	1.20	1.30	1.44	1.31	1.22
77.50°	1.05	1.24	1.17	1.13	1.39	1.44	1.32	1.19	1.46	1.38	1.05	1.15	0.85	1.04	1.25	0.93	1.05
80.00°	0.95	1.02	0.99	0.68	1.03	1.02	0.94	1.06	1.10	0.92	0.81	0.85	0.76	0.76	0.76	0.83	0.95
82.50°	0.63	0.67	0.74	0.41	0.68	0.69	0.58	0.73	0.62	0.62	0.46	0.61	0.56	0.63	0.53	0.72	0.63
85.00°	0.42	0.38	0.52	0.33	0.44	0.44	0.42	0.38	0.46	0.42	0.55	0.38	0.48	0.48	0.45	0.47	0.42
87.50°	0.51	0.36	0.45	0.51	0.45	0.57	0.46	0.34	0.37	0.43	0.48	0.44	0.34	0.40	0.43	0.44	0.51
90.00°	0.46	0.51	0.43	0.58	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.45	0.46
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%	10%	0%
	pw	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	30%
	0	605	605	605	605	591	591	591	591	565	565	565	541	541	541	519	519	519	508
	1	575	560	547	535	563	549	537	527	529	519	510	510	502	495	492	486	481	477
	2	545	518	497	479	533	510	490	473	493	477	463	478	464	453	464	453	443	444
	3	515	481	454	433	505	474	449	429	460	439	422	448	430	416	436	421	409	413
	4	487	447	417	395	478	441	413	392	430	406	387	420	399	383	410	393	378	385
	5	461	417	385	362	453	412	383	361	402	377	357	394	372	354	386	367	351	360
	6	437	389	358	335	429	385	355	333	378	351	331	370	347	329	363	343	327	337
	7	414	365	333	311	407	362	331	310	355	328	308	349	324	306	343	321	305	316
	8	393	343	311	289	387	340	310	289	334	307	288	329	304	286	324	302	285	297
	9	374	323	292	271	368	320	291	270	316	288	269	311	286	268	307	284	267	280
	10	356	305	274	254	351	303	273	254	298	271	253	294	270	252	291	268	251	264

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	17.2 fc	6.5 ft
6.5 ft	12.3 fc	7.6 ft
7.5 ft	9.3 fc	8.8 ft
8.0 ft	8.2 fc	9.4 ft
10.0 ft	5.2 fc	11.8 ft
12.0 ft	3.6 fc	14.1 ft
14.0 ft	2.7 fc	16.5 ft
16.0 ft	2.0 fc	18.8 ft
20.0 ft	1.3 fc	23.5 ft
24.0 ft	0.9 fc	28.2 ft
28.0 ft	0.7 fc	32.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	178,739	178,739	178,739
45.00°	24,552	24,331	23,293
55.00°	13,652	13,246	12,830
65.00°	4,907	4,844	4,943
75.00°	1,619	1,864	2,422
85.00°	1,659	2,042	1,723

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	14.6	15.7	15.0	16.0	16.3	14.3	15.3	14.6	15.6	16.0
	3H	14.7	15.7	15.1	16.0	16.4	14.4	15.3	14.8	15.7	16.0
	4H	14.7	15.5	15.1	15.9	16.3	14.4	15.2	14.8	15.6	16.0
	6H	14.6	15.4	15.1	15.8	16.2	14.3	15.1	14.8	15.5	15.9
	8H	14.6	15.3	15.0	15.7	16.1	14.3	15.1	14.8	15.5	15.9
	12H	14.6	15.3	15.0	15.7	16.1	14.3	15.0	14.7	15.4	15.8
4H	2H	14.6	15.5	15.0	15.8	16.2	14.2	15.1	14.6	15.5	15.8
	3H	14.7	15.4	15.1	15.8	16.2	14.4	15.1	14.8	15.5	15.9
	4H	14.7	15.3	15.1	15.7	16.2	14.4	15.1	14.9	15.5	15.9
	6H	14.7	15.2	15.1	15.7	16.1	14.4	15.0	14.9	15.4	15.9
	8H	14.6	15.1	15.1	15.6	16.1	14.4	14.9	14.9	15.4	15.8
	12H	14.6	15.0	15.1	15.5	16.0	14.4	14.8	14.9	15.3	15.8
8H	4H	14.6	15.1	15.0	15.5	16.0	14.3	14.8	14.8	15.3	15.8
	6H	14.6	15.0	15.1	15.5	16.0	14.4	14.8	14.9	15.3	15.7
	8H	14.6	14.9	15.1	15.4	15.9	14.4	14.7	14.9	15.2	15.7
	12H	14.6	14.9	15.1	15.4	15.9	14.4	14.7	14.9	15.2	15.7
12H	4H	14.5	14.9	15.0	15.4	15.9	14.3	14.7	14.8	15.2	15.7
	6H	14.5	14.9	15.0	15.3	15.9	14.3	14.7	14.8	15.1	15.7
	8H	14.5	14.8	15.1	15.3	15.9	14.3	14.6	14.8	15.1	15.7

Corrected UGR values based on total output lumens

SHR = 1.0