

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

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

Test Number

SP-00759_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	522
Efficacy	70.58 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.46
Two luminaires, plane 90°	0.47
Four luminaires	0.48

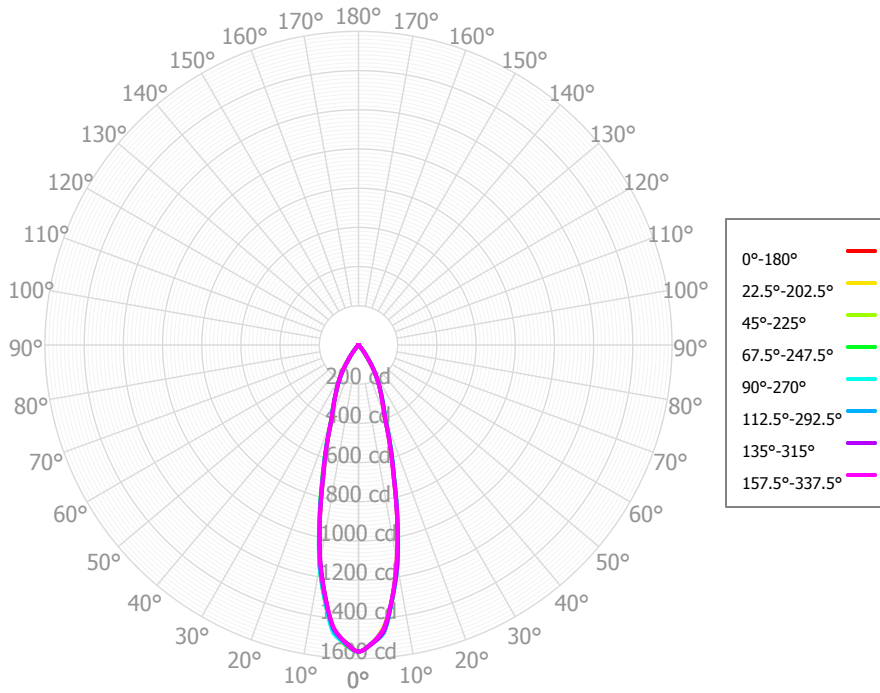
Full Beam Angle

0° - 180°	28°
90° - 270°	28°

IES File Header Contents

Keyword	Value
TEST	SP-00759_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 DLNFGC MW
LUMINAIRE	Nominal 3" diam round recessed Infinium downlight
OTHER	Beam Angle: 28 degrees
OTHER	Narrow flood optic, Clear glass 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°	129.31	24.76%	90.00° - 100.00°	0.03	0.01%
10.00° - 20.00°	194.31	37.20%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	125.49	24.03%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	54.79	10.49%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	9.04	1.73%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	4.39	0.84%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	2.94	0.56%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	1.46	0.28%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	0.53	0.10%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	522.26	99.99%	0.00° - 180.00°	522.28	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°	1,564.59	1,564.59	1,564.59	1,564.59	1,564.59	1,564.59	1,564.59	1,564.59	1,564.59	1,564.59	1,564.59	1,564.59	1,564.59	1,564.59	1,564.59	1,564.59	1,564.59
2.50°	1,524.17	1,526.38	1,526.34	1,527.17	1,526.45	1,525.13	1,518.21	1,522.58	1,519.15	1,530.39	1,523.11	1,531.50	1,525.91	1,524.99	1,528.63	1,525.05	1,524.17
5.00°	1,472.05	1,449.08	1,475.47	1,457.92	1,476.93	1,460.63	1,452.95	1,449.14	1,463.02	1,450.71	1,469.91	1,461.24	1,475.58	1,462.21	1,471.33	1,455.46	1,472.05
7.50°	1,306.24	1,312.72	1,311.78	1,315.43	1,315.46	1,307.15	1,297.16	1,300.13	1,295.95	1,308.73	1,304.23	1,315.28	1,312.09	1,309.64	1,311.59	1,308.42	1,306.24
10.00°	1,133.73	1,118.26	1,142.09	1,128.50	1,144.27	1,139.29	1,119.39	1,128.68	1,127.93	1,131.50	1,137.86	1,144.02	1,146.13	1,126.91	1,141.52	1,118.16	1,133.73
12.50°	912.38	913.06	921.08	922.41	925.31	918.54	911.18	909.67	909.03	912.62	918.22	923.66	924.16	917.49	916.37	909.74	912.38
15.00°	687.47	696.78	696.62	704.04	701.48	709.37	694.98	706.60	690.52	712.87	698.60	719.87	704.19	698.50	700.64	690.62	687.47
17.50°	533.87	525.83	541.75	538.62	546.41	546.07	540.43	539.26	540.15	536.89	546.13	550.09	549.59	539.76	540.20	526.69	533.87
20.00°	386.53	404.18	392.54	408.86	399.39	401.09	403.30	401.48	389.78	405.23	393.65	411.23	396.60	404.04	392.69	397.05	386.53
22.50°	323.35	317.25	327.18	324.58	330.50	334.73	330.13	334.09	331.42	331.49	332.84	339.58	334.56	326.13	329.44	316.41	323.35
25.00°	268.82	270.02	269.90	272.58	272.00	272.07	276.38	273.45	273.69	271.49	273.14	275.80	272.59	271.71	268.30	267.86	268.82
27.50°	221.63	221.41	221.76	223.05	224.32	226.61	227.43	229.89	230.56	230.37	228.54	230.14	224.53	222.21	222.51	219.73	221.63
30.00°	175.31	171.16	174.64	175.38	178.26	180.76	180.04	184.36	187.73	185.39	184.32	183.31	176.47	174.84	176.42	171.88	175.31
32.50°	124.77	122.46	125.43	128.51	131.63	132.88	131.78	133.45	135.45	134.80	134.66	133.64	129.66	128.53	127.88	124.32	124.77
35.00°	73.67	75.71	75.96	82.28	84.90	87.21	83.22	86.42	82.86	89.28	84.79	88.13	82.85	82.72	80.98	76.98	73.67
37.50°	45.47	41.39	46.92	49.27	53.48	53.91	51.10	50.70	51.38	51.48	54.28	53.50	52.16	50.78	50.16	45.12	45.47
40.00°	20.72	23.58	20.80	27.20	24.86	24.21	25.08	21.95	20.87	24.82	24.79	25.79	21.80	25.58	21.36	25.09	20.72
42.50°	13.79	12.10	13.47	14.65	15.75	16.75	14.66	14.92	14.53	16.07	16.63	17.28	14.86	14.20	15.60	13.98	13.79
45.00°	9.90	9.49	9.15	10.38	10.55	9.94	10.40	9.20	9.63	9.96	9.88	10.46	8.70	9.90	10.08	10.05	9.90
47.50°	7.98	7.56	7.42	7.91	8.33	7.68	8.08	7.89	7.72	8.33	7.98	8.64	7.66	7.65	8.01	7.64	7.98
50.00°	6.43	6.64	6.16	7.07	6.76	5.65	6.57	6.63	6.02	6.86	6.46	6.97	6.86	6.51	6.00	6.50	6.43
52.50°	5.82	5.81	5.43	5.98	5.58	5.47	5.64	5.55	5.42	5.66	5.75	5.75	5.66	5.51	5.13	5.47	5.82
55.00°	5.40	5.11	4.81	4.66	4.49	5.23	4.97	4.58	4.91	4.69	5.12	4.68	4.43	4.60	4.29	4.55	5.40
57.50°	4.90	4.54	4.33	4.00	4.20	4.29	4.42	4.04	4.35	4.17	4.38	4.09	3.87	3.95	3.86	3.94	4.90
60.00°	4.37	4.17	3.88	4.03	4.11	3.43	3.93	3.60	3.80	3.69	3.64	3.56	3.36	3.45	3.44	3.63	4.37
62.50°	3.70	3.77	3.38	3.88	3.67	3.40	3.42	3.57	3.50	3.32	3.60	3.19	2.90	3.07	3.21	3.24	3.70
65.00°	3.00	3.32	2.88	3.53	3.13	3.34	2.91	3.41	3.23	2.94	3.66	2.80	2.44	2.77	2.97	2.76	3.00
67.50°	2.49	2.69	2.41	3.10	2.55	2.84	2.61	2.70	2.72	2.56	2.68	2.30	1.96	2.37	2.27	2.27	2.49
70.00°	2.03	1.75	1.95	2.56	1.95	2.33	2.43	2.04	2.17	2.15	1.56	1.83	1.48	1.90	1.57	1.76	2.03
72.50°	1.68	1.15	1.49	2.05	1.72	1.71	2.06	1.64	1.80	1.70	1.31	1.50	1.53	1.55	1.43	1.41	1.68
75.00°	1.36	1.22	1.02	1.57	1.61	1.13	1.59	1.31	1.44	1.32	1.20	1.19	1.64	1.29	1.28	1.24	1.36
77.50°	1.23	1.14	0.98	1.21	1.28	1.06	1.27	1.26	1.21	1.10	1.11	0.98	1.23	1.12	1.05	0.95	1.23
80.00°	1.14	0.82	1.06	0.98	0.89	0.95	1.01	1.07	0.98	0.88	0.98	0.75	0.81	1.00	0.83	0.57	1.14
82.50°	0.73	0.50	0.66	0.67	0.60	0.70	0.56	0.63	0.66	0.68	0.65	0.48	0.53	0.61	0.59	0.44	0.73
85.00°	0.42	0.28	0.34	0.40	0.40	0.48	0.35	0.40	0.48	0.38	0.41	0.37	0.58	0.44	0.45	0.40	0.42
87.50°	0.33	0.28	0.22	0.32	0.33	0.44	0.35	0.39	0.43	0.32	0.40	0.41	0.32	0.55	0.33	0.36	0.33
90.00°	0.27	0.30	0.54	0.40	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.43	0.42	0.27
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	622	622	622	622	607	607	607	607	580	580	580	556	556	556	533	533	522
	1	597	584	573	563	584	573	563	554	552	544	537	533	527	521	515	510	506
	2	573	551	533	518	562	542	526	512	526	513	501	511	500	491	497	488	479
	3	550	522	500	483	541	515	495	479	502	485	471	490	476	464	478	467	458
	4	529	496	472	453	520	490	468	451	480	461	446	470	454	441	460	447	439
	5	509	473	447	429	501	468	444	427	459	439	423	451	433	420	443	428	421
	6	490	452	426	407	483	448	424	406	440	419	403	434	415	401	427	411	404
	7	472	432	406	388	466	429	405	387	423	401	385	417	398	384	412	395	388
	8	456	415	389	372	450	412	388	371	407	385	369	402	382	368	397	380	374
	9	440	399	373	356	435	396	372	356	392	370	355	388	368	354	384	366	360
	10	425	384	359	342	421	382	358	342	378	356	341	374	354	340	371	353	348

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	51.7 fc	2.7 ft
6.5 ft	37.0 fc	3.2 ft
7.5 ft	27.8 fc	3.7 ft
8.0 ft	24.4 fc	4.0 ft
10.0 ft	15.6 fc	5.0 ft
12.0 ft	10.9 fc	6.0 ft
14.0 ft	8.0 fc	7.0 ft
16.0 ft	6.1 fc	8.0 ft
20.0 ft	3.9 fc	10.0 ft
24.0 ft	2.7 fc	12.0 ft
28.0 ft	2.0 fc	14.0 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	536,069	536,069	536,069
45.00°	4,799	4,434	5,111
55.00°	3,228	2,873	2,682
65.00°	2,428	2,336	2,542
75.00°	1,806	1,348	2,130
85.00°	1,652	1,331	1,554

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	5.4	6.3	5.8	6.7	7.0	5.1	6.0	5.4	6.3	6.6
	3H	6.6	7.4	7.0	7.8	8.2	6.4	7.2	6.8	7.5	7.9
	4H	7.0	7.8	7.4	8.1	8.5	6.9	7.6	7.3	8.0	8.4
	6H	7.5	8.1	7.9	8.5	8.9	7.3	8.0	7.7	8.3	8.7
	8H	7.6	8.3	8.1	8.7	9.1	7.4	8.0	7.8	8.4	8.8
	12H	7.7	8.3	8.1	8.7	9.1	7.5	8.1	7.9	8.5	8.9
4H	2H	5.8	6.5	6.2	6.9	7.3	5.7	6.4	6.1	6.8	7.2
	3H	7.1	7.7	7.5	8.1	8.5	7.1	7.7	7.5	8.1	8.5
	4H	7.6	8.1	8.0	8.5	9.0	7.6	8.2	8.1	8.6	9.0
	6H	8.1	8.6	8.6	9.0	9.5	8.1	8.6	8.6	9.0	9.5
	8H	8.3	8.7	8.8	9.2	9.7	8.2	8.7	8.7	9.1	9.6
	12H	8.4	8.8	8.9	9.3	9.8	8.4	8.8	8.9	9.2	9.7
8H	4H	7.7	8.1	8.1	8.6	9.0	7.8	8.2	8.3	8.7	9.1
	6H	8.3	8.7	8.8	9.2	9.6	8.4	8.8	8.9	9.3	9.7
	8H	8.5	8.9	9.1	9.4	9.9	8.6	8.9	9.2	9.4	9.9
	12H	8.7	9.0	9.3	9.5	10.1	8.9	9.1	9.4	9.6	10.2
12H	4H	7.7	8.0	8.2	8.5	9.0	7.8	8.2	8.3	8.6	9.1
	6H	8.3	8.7	8.9	9.1	9.7	8.4	8.8	9.0	9.2	9.8
	8H	8.6	8.9	9.2	9.4	10.0	8.7	9.0	9.2	9.5	10.0

Corrected UGR values based on total output lumens

SHR = 1.0