

## **Indoor Distribution Test Report**

# **Spectrum Lighting Inc.**

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## **Spectrum Lighting Photometric Lab**

### **Luminaire**

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

### **Test Number**

SP-00758\_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	527
Efficacy	71.23 lm/W

#### Luminous Dimensions

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

#### Spacing Criterion

Two luminaires, plane 0°	0.6
Two luminaires, plane 90°	0.61
Four luminaires	0.64

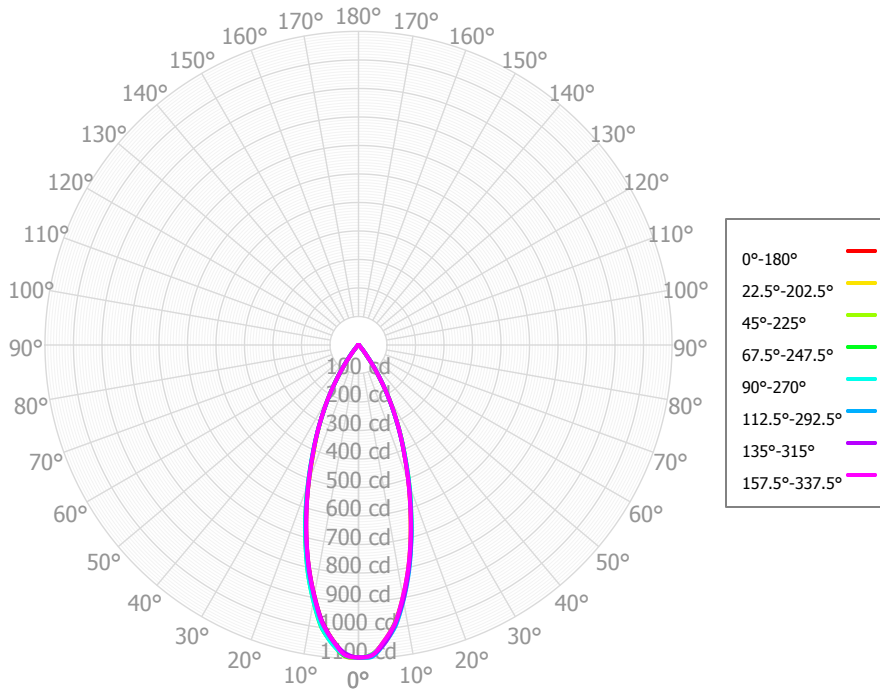
#### Full Beam Angle

0° - 180°	38°
90° - 270°	39°

### IES File Header Contents

Keyword	Value
TEST	SP-00758_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 DLFLGC MW
LUMINAIRE	Nominal 3" diam round recessed Infinium downlight
OTHER	Beam Angle: 38 degrees
OTHER	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°	96.37	18.28%	90.00° - 100.00°	0.03	0.01%
10.00° - 20.00°	194.33	36.86%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	157.16	29.81%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	60.51	11.48%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	9.74	1.85%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	3.93	0.75%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	2.79	0.53%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	1.70	0.32%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	0.58	0.11%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	527.10	99.99%	0.00° - 180.00°	527.13	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°	1,096.34	1,096.34	1,096.34	1,096.34	1,096.34	1,096.34	1,096.34	1,096.34	1,096.34	1,096.34	1,096.34	1,096.34	1,096.34	1,096.34	1,096.34	1,096.34	1,096.34
2.50°	1,087.06	1,092.75	1,085.84	1,089.54	1,086.85	1,087.61	1,082.35	1,089.26	1,085.27	1,093.79	1,086.37	1,092.55	1,089.46	1,095.01	1,088.78	1,089.84	1,087.06
5.00°	1,042.38	1,041.07	1,045.93	1,044.03	1,045.80	1,040.16	1,041.14	1,039.69	1,038.23	1,041.47	1,047.61	1,051.76	1,053.91	1,050.86	1,050.93	1,040.90	1,042.38
7.50°	981.79	986.65	983.26	987.01	984.47	983.55	978.30	981.58	978.36	986.18	987.35	999.23	997.59	995.25	986.92	984.83	981.79
10.00°	898.30	897.18	903.01	902.43	904.33	897.67	893.91	895.02	891.90	897.01	902.88	911.27	912.63	910.14	906.22	895.89	898.30
12.50°	805.22	806.67	808.95	810.15	812.18	808.77	802.86	803.52	801.89	806.36	811.60	819.96	820.46	817.30	810.69	804.79	805.22
15.00°	705.98	705.18	711.00	712.93	715.43	710.48	705.32	705.20	704.67	707.33	712.91	719.24	718.85	715.77	711.35	704.49	705.98
17.50°	604.31	604.59	610.10	614.43	615.81	612.62	607.72	605.78	606.87	608.01	612.81	618.66	618.21	612.14	608.80	605.58	604.31
20.00°	512.52	513.19	516.71	521.19	521.60	516.02	510.09	512.66	507.92	511.13	511.25	518.51	518.77	517.30	513.63	512.18	512.52
22.50°	424.40	423.48	428.71	429.28	430.61	424.25	422.92	420.48	417.43	414.30	421.46	424.26	427.42	424.43	424.40	422.63	424.40
25.00°	347.64	348.53	348.84	350.09	349.32	345.63	344.97	344.71	342.20	341.65	343.42	345.24	345.91	345.61	344.61	347.65	347.64
27.50°	274.99	274.38	274.59	273.85	273.47	270.54	272.10	271.12	270.13	269.29	270.61	270.06	270.36	269.82	272.24	274.16	274.99
30.00°	207.56	206.30	206.29	206.90	206.68	204.82	203.59	206.17	203.64	204.99	202.85	204.19	201.72	204.66	205.73	205.95	207.56
32.50°	141.89	140.42	141.97	141.98	144.86	143.84	143.85	142.27	142.31	140.81	143.18	143.28	142.01	141.61	143.60	141.82	141.89
35.00°	91.99	90.54	91.25	93.36	95.76	94.64	91.31	93.35	89.63	92.47	90.91	94.10	92.15	94.00	93.47	91.35	91.99
37.50°	47.06	45.16	49.13	48.09	53.25	53.65	54.11	46.08	49.06	44.74	53.17	53.21	54.29	49.18	51.88	48.62	47.06
40.00°	27.87	28.91	26.43	29.79	30.51	31.89	28.85	28.38	27.99	28.80	28.28	30.82	29.39	29.95	28.03	30.49	27.87
42.50°	16.58	14.54	15.58	16.54	17.47	15.56	15.25	13.51	13.81	13.22	14.62	14.37	14.81	15.14	16.51	15.87	16.58
45.00°	11.42	11.14	10.18	11.78	11.16	11.65	10.53	10.03	10.32	10.04	10.55	10.44	10.81	10.95	10.42	11.68	11.42
47.50°	8.01	8.03	7.98	8.50	8.09	8.37	7.81	7.57	7.54	6.94	7.69	7.33	8.00	8.41	7.93	8.19	8.01
50.00°	6.26	6.52	6.48	6.74	6.26	6.44	6.53	6.15	5.79	5.66	5.82	5.89	6.35	6.54	6.27	6.67	6.26
52.50°	4.95	5.16	5.36	5.24	5.00	4.96	5.34	4.79	4.51	4.44	4.61	4.70	5.10	4.77	5.16	5.38	4.95
55.00°	4.18	4.58	4.45	4.42	4.17	4.40	4.23	4.03	3.90	4.15	3.91	3.98	4.23	4.08	4.40	4.68	4.18
57.50°	3.55	4.00	3.66	3.70	3.54	3.94	3.58	3.31	3.44	3.87	3.59	3.46	3.60	3.55	3.85	3.95	3.55
60.00°	3.31	3.44	3.35	3.42	3.42	3.68	3.25	3.02	3.19	3.58	3.56	3.31	3.20	3.30	3.54	3.09	3.31
62.50°	3.16	2.96	3.30	3.20	3.50	3.38	3.08	2.77	2.93	3.28	3.36	3.09	2.89	3.09	3.37	2.52	3.16
65.00°	2.88	2.78	2.95	2.92	3.02	3.01	3.02	2.59	2.65	2.83	3.06	2.74	2.67	2.92	3.09	2.67	2.88
67.50°	2.58	2.57	2.44	2.64	2.32	2.65	2.70	2.41	2.36	2.41	2.64	2.38	2.41	2.75	2.75	2.56	2.58
70.00°	2.04	2.25	2.02	2.39	2.19	2.30	2.27	2.19	2.05	2.09	2.16	2.01	2.12	2.36	2.33	1.96	2.04
72.50°	1.56	1.89	1.64	2.03	2.15	1.89	1.94	2.03	1.87	1.86	2.11	1.81	1.89	2.01	1.89	1.69	1.56
75.00°	1.42	1.47	1.40	1.32	1.85	1.49	1.62	1.96	1.69	1.75	1.98	1.66	1.62	1.75	1.69	1.65	1.42
77.50°	1.29	1.15	1.23	1.18	1.50	1.28	1.32	1.28	1.34	1.37	1.56	1.34	1.27	1.30	1.33	1.27	1.29
80.00°	1.07	0.84	1.08	1.10	1.12	1.07	1.09	0.80	1.09	1.07	1.29	1.07	0.99	0.88	0.85	0.95	1.07
82.50°	0.59	0.59	0.75	0.62	0.80	0.68	0.81	0.64	0.64	0.79	0.82	0.64	0.56	0.71	0.67	0.70	0.59
85.00°	0.52	0.44	0.40	0.40	0.44	0.43	0.40	0.49	0.36	0.51	0.48	0.44	0.39	0.48	0.45	0.56	0.52
87.50°	0.42	0.37	0.35	0.46	0.41	0.39	0.37	0.44	0.35	0.40	0.45	0.36	0.40	0.34	0.45	0.40	0.42
90.00°	0.39	0.37	0.43	0.24	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.37	0.45	0.39
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.

<b>RCR</b>	<b>pfc</b>	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	0%
	<b>pcc</b>	80%	80%	80%	80%	70%	70%	70%	70%	50%	50%	50%	30%	30%	30%	10%	10%	0%
	<b>pw</b>	70%	50%	30%	10%	70%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	30%
	<b>0</b>	628	628	628	628	613	613	613	613	586	586	586	561	561	561	538	538	527
	<b>1</b>	601	588	576	565	588	577	566	556	555	547	539	536	529	523	518	513	508
	<b>2</b>	576	553	534	518	564	544	526	512	527	513	501	511	500	490	497	488	479
	<b>3</b>	551	521	498	480	541	514	493	476	501	483	468	488	473	461	477	464	456
	<b>4</b>	528	493	468	448	519	487	464	445	476	456	440	466	449	435	457	442	434
	<b>5</b>	506	468	441	421	498	463	438	419	454	432	416	446	427	412	438	422	414
	<b>6</b>	486	445	417	398	479	441	415	396	433	411	394	426	406	391	420	402	395
	<b>7</b>	466	424	396	377	460	420	394	376	414	391	374	408	387	372	403	384	378
	<b>8</b>	448	404	377	358	442	402	376	357	396	373	356	391	370	355	386	367	362
	<b>9</b>	431	387	360	341	426	384	358	341	380	356	340	375	354	339	371	352	347
	<b>10</b>	415	370	344	326	410	368	343	326	364	341	325	360	339	324	357	337	332

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	36.2 fc	3.8 ft
6.5 ft	25.9 fc	4.5 ft
7.5 ft	19.5 fc	5.2 ft
8.0 ft	17.1 fc	5.6 ft
10.0 ft	11.0 fc	6.9 ft
12.0 ft	7.6 fc	8.3 ft
14.0 ft	5.6 fc	9.7 ft
16.0 ft	4.3 fc	11.1 ft
20.0 ft	2.7 fc	13.9 ft
24.0 ft	1.9 fc	16.7 ft
28.0 ft	1.4 fc	19.5 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	375,635	375,635	375,635
<b>45.00°</b>	5,532	4,932	5,410
<b>55.00°</b>	2,496	2,659	2,494
<b>65.00°</b>	2,338	2,388	2,450
<b>75.00°</b>	1,886	1,854	2,449
<b>85.00°</b>	2,037	1,590	1,712

### 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	4.5	5.5	4.9	5.8	6.1	4.2	5.1	4.6	5.4	5.8
	3H	6.2	7.0	6.6	7.4	7.7	6.0	6.8	6.4	7.1	7.5
	4H	6.8	7.5	7.2	7.9	8.3	6.8	7.5	7.2	7.9	8.3
	6H	7.3	8.0	7.7	8.4	8.8	7.4	8.1	7.8	8.4	8.8
	8H	7.4	8.1	7.9	8.5	8.9	7.5	8.2	8.0	8.6	9.0
	12H	7.5	8.1	8.0	8.5	9.0	7.6	8.2	8.1	8.6	9.0
4H	2H	5.1	5.9	5.5	6.2	6.6	4.9	5.6	5.3	6.0	6.4
	3H	6.9	7.6	7.4	8.0	8.4	6.8	7.4	7.2	7.8	8.2
	4H	7.6	8.2	8.1	8.6	9.1	7.7	8.2	8.1	8.7	9.1
	6H	8.3	8.7	8.7	9.2	9.6	8.4	8.9	8.9	9.3	9.8
	8H	8.4	8.9	8.9	9.3	9.8	8.6	9.0	9.1	9.5	10.0
	12H	8.6	8.9	9.1	9.4	9.9	8.7	9.1	9.2	9.6	10.1
8H	4H	7.9	8.3	8.3	8.8	9.2	8.0	8.4	8.5	8.9	9.4
	6H	8.6	8.9	9.1	9.5	9.9	8.9	9.2	9.4	9.7	10.2
	8H	8.8	9.2	9.4	9.7	10.2	9.1	9.4	9.7	10.0	10.5
	12H	9.1	9.4	9.6	9.9	10.5	9.3	9.6	9.9	10.1	10.7
12H	4H	7.9	8.2	8.4	8.7	9.2	8.0	8.4	8.5	8.9	9.3
	6H	8.6	8.9	9.2	9.4	10.0	8.9	9.2	9.5	9.7	10.3
	8H	8.9	9.2	9.5	9.7	10.3	9.3	9.5	9.8	10.0	10.6

Corrected UGR values based on total output lumens

SHR = 1.0