

## **Indoor Distribution Test Report**

# **Spectrum Lighting Inc.**

994 Jefferson Street  
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## **Spectrum Lighting Photometric Lab**

### **Luminaire**

IF03RMx xx DWDD1010 DLWFGP WWLWMW

Nom 3" diam round recessed Infinium wall wash luminaire with 10L 27HK dim to warm emitter

### **Test Number**

SP-00951\_M-10L

### **Test Date**

11/6/2019

The results contained in this report pertain only to this IES file.

### Summary of Results

#### Power

Input Watts	11.3 W
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#### Lumen Output

Output Lumens	444
Efficacy	39.34 lm/W

#### Luminous Dimensions

0° - 180° Size	-0.22
90° - 270° Size	-0.22
Height	0

#### Spacing Criterion

Two luminaires, plane 0°	1.53
Two luminaires, plane 90°	0.79
Four luminaires	1.11

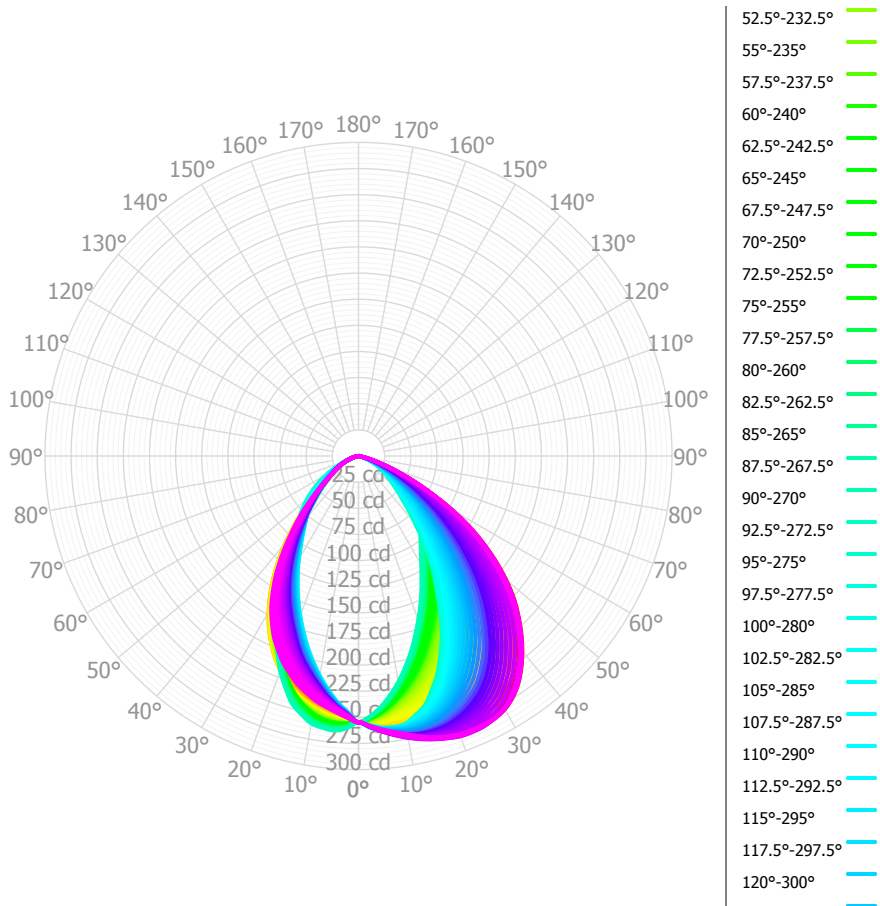
#### Full Beam Angle

0° - 180°	90°
90° - 270°	55°

### IES File Header Contents

Keyword	Value
TEST	SP-00951_M-10L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/6/2019
ISSUEDATE	11/25/2019
LUMCAT	IF03RMx xx DWDD1010 DLWFGP WWLWMW
LUMINAIRE	Nom 3" diam round recessed Infinium wall wash luminaire with 10L 27HK dim to warm emitter
OTHER	Wide Flood Optic
OTHER	Beam Angle: 88 deg x 129 deg
LAMPCAT	N/A
LAMP	N/A
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting

### Candela Polar Plot



### Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	24.21	5.45%	90.00° - 100.00°	0.05	0.01%
10.00° - 20.00°	65.71	14.78%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	91.24	20.53%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	94.61	21.28%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	79.04	17.78%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	54.50	12.26%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	27.23	6.13%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	6.98	1.57%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	0.93	0.21%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	444.45	99.99%	0.00° - 180.00°	444.49	100.00%

	0.00°	2.50°	5.00°	7.50°	10.00°	12.50°	15.00°	17.50°	20.00°	22.50°	25.00°	27.50°	30.00°	32.50°	35.00°	37.50°	40.00°	42.50°	45.00°	47.50°	50.00°
0.00°	254.78	254.78	254.78	254.78	254.78	254.78	254.78	254.78	254.78	254.78	254.78	254.78	254.78	254.78	254.78	254.78	254.78	254.78	254.78	254.78	254.78
2.50°	258.93	258.70	258.46	258.23	257.99	257.76	257.52	257.29	257.05	256.82	256.49	256.15	255.82	255.49	255.16	254.83	254.49	254.16	253.83	253.48	253.14
5.00°	262.65	262.11	261.57	261.03	260.49	259.95	259.41	258.87	258.33	257.78	257.04	256.30	255.55	254.81	254.07	253.32	252.58	251.84	251.09	250.41	249.72
7.50°	266.19	265.32	264.44	263.57	262.69	261.81	260.94	260.06	259.19	258.31	257.00	255.69	254.39	253.08	251.77	250.46	249.15	247.84	246.54	245.50	244.42
10.00°	270.00	268.74	267.48	266.22	264.96	263.70	262.44	261.19	259.93	258.67	256.77	254.88	252.98	251.09	249.19	247.29	245.40	243.50	241.61	240.08	238.51
12.50°	274.52	272.77	271.01	269.26	267.50	265.75	264.00	262.24	260.49	258.73	256.23	253.73	251.23	248.73	246.23	243.73	241.22	238.72	236.22	234.19	232.14
15.00°	278.47	276.27	274.08	271.88	269.69	267.49	265.30	263.11	260.91	258.72	255.47	252.23	248.98	245.74	242.49	239.25	236.00	232.75	229.51	227.07	224.61
17.50°	281.16	278.49	275.82	273.15	270.48	267.81	265.14	262.47	259.80	257.13	253.17	249.20	245.24	241.28	237.32	233.36	229.39	225.43	221.47	218.61	215.74
20.00°	283.14	280.04	276.93	273.83	270.72	267.62	264.51	261.41	258.30	255.20	250.53	245.87	241.20	236.54	231.87	227.20	222.54	217.87	213.20	209.86	206.51
22.50°	283.85	280.25	276.66	273.06	269.46	265.86	262.26	258.67	255.07	251.47	246.28	241.09	235.90	230.71	225.52	220.33	215.13	209.94	204.75	201.07	197.31
25.00°	283.87	279.83	275.78	271.74	267.69	263.65	259.61	255.56	251.52	247.47	241.72	235.96	230.20	224.45	218.69	212.94	207.18	201.42	195.67	191.75	187.81
27.50°	282.89	278.39	273.89	269.39	264.90	260.40	255.90	251.40	246.90	242.41	236.15	229.90	223.65	217.40	211.15	204.90	198.65	192.40	186.14	182.08	178.00
30.00°	279.85	275.11	270.38	265.65	260.91	256.18	251.45	246.71	241.98	237.25	230.42	223.59	216.76	209.93	203.10	196.28	189.45	182.62	175.79	171.67	167.51
32.50°	274.38	269.32	264.26	259.19	254.13	249.07	244.00	238.94	233.87	228.81	221.72	214.63	207.53	200.44	193.35	186.26	179.16	172.07	164.98	160.97	156.91
35.00°	266.40	261.27	256.14	251.01	245.88	240.75	235.63	230.50	225.37	220.24	212.89	205.54	198.18	190.83	183.48	176.13	168.78	161.42	154.07	150.22	146.31
37.50°	255.91	250.72	245.52	240.33	235.13	229.94	224.74	219.55	214.35	209.16	201.82	194.48	187.15	179.81	172.47	165.13	157.80	150.46	143.12	139.64	136.11
40.00°	243.91	238.81	233.71	228.60	223.50	218.40	213.30	208.19	203.09	197.99	190.65	183.32	175.98	168.65	161.31	153.98	146.64	139.30	131.97	128.90	125.81
42.50°	230.69	225.68	220.68	215.67	210.67	205.66	200.66	195.65	190.64	185.64	178.43	171.22	164.01	156.80	149.58	142.37	135.16	127.95	120.74	118.23	115.71
45.00°	216.50	211.66	206.82	201.98	197.14	192.30	187.46	182.62	177.78	172.94	165.96	158.99	152.01	145.03	138.05	131.07	124.09	117.11	110.13	108.12	106.11
47.50°	201.68	196.79	191.90	187.00	182.11	177.22	172.33	167.44	162.55	157.66	151.21	144.77	138.33	131.89	125.45	119.01	112.57	106.13	99.69	98.05	96.40
50.00°	184.42	179.74	175.06	170.38	165.70	161.03	156.35	151.67	146.99	142.31	136.46	130.61	124.75	118.90	113.05	107.20	101.35	95.49	89.64	88.31	86.97
52.50°	165.84	161.48	157.13	152.78	148.43	144.07	139.72	135.37	131.02	126.67	121.44	116.22	111.00	105.78	100.56	95.34	90.11	84.89	79.67	78.61	77.54
55.00°	146.15	142.22	138.29	134.36	130.44	126.51	122.58	118.66	114.73	110.80	106.29	101.78	97.27	92.76	88.25	83.74	79.23	74.72	70.22	69.37	68.51
57.50°	125.98	122.44	118.90	115.36	111.82	108.28	104.74	101.19	97.65	94.11	90.42	86.72	83.02	79.32	75.62	71.92	68.23	64.53	60.83	60.11	59.35
60.00°	103.85	100.95	98.06	95.16	92.27	89.37	86.47	83.58	80.68	77.79	74.84	71.88	68.93	65.98	63.03	60.08	57.12	54.17	51.22	50.65	50.08
62.50°	81.06	78.99	76.93	74.87	72.80	70.74	68.67	66.61	64.55	62.48	60.16	57.84	55.52	53.20	50.88	48.56	46.24	43.92	41.60	41.07	40.55
65.00°	61.64	60.11	58.58	57.05	55.52	53.98	52.45	50.92	49.39	47.86	46.13	44.39	42.66	40.92	39.19	37.46	35.72	33.99	32.25	31.78	31.31
67.50°	43.07	42.15	41.22	40.30	39.37	38.45	37.52	36.60	35.67	34.75	33.45	32.15	30.86	29.56	28.26	26.97	25.67	24.37	23.07	22.86	22.64
70.00°	30.14	29.36	28.59	27.81	27.04	26.27	25.49	24.72	23.95	23.17	22.35	21.52	20.69	19.87	19.04	18.21	17.39	16.56	15.73	15.63	15.52
72.50°	18.38	17.83	17.28	16.72	16.17	15.62	15.07	14.52	13.97	13.42	12.98	12.54	12.11	11.67	11.24	10.80	10.37	9.93	9.50	9.52	9.54
75.00°	9.40	9.13	8.86	8.59	8.32	8.05	7.78	7.51	7.24	6.97	6.80	6.63	6.46	6.29	6.12	5.96	5.79	5.62	5.45	5.48	5.51
77.50°	3.87	3.72	3.57	3.43	3.28	3.14	2.99	2.85	2.70	2.56	2.59	2.62	2.66	2.69	2.73	2.76	2.80	2.83	2.86	2.84	2.82
80.00°	1.12	1.11	1.11	1.10	1.09	1.09	1.08	1.07	1.06	1.06	1.09	1.12	1.15	1.18	1.21	1.24	1.27	1.30	1.33	1.36	1.38
82.50°	0.60	0.62	0.64	0.66	0.67	0.69	0.71	0.73	0.75	0.76	0.77	0.77	0.77	0.78	0.78	0.78	0.79	0.79	0.79	0.80	0.81
85.00°	0.63	0.64	0.65	0.66	0.67	0.68	0.69	0.70	0.71	0.72	0.70	0.68	0.66	0.64	0.62	0.60	0.58	0.56	0.54	0.57	0.59
87.50°	0.60	0.61	0.62	0.63	0.64	0.65	0.67	0.68	0.69	0.70	0.71	0.71	0.71	0.72	0.73	0.73	0.74	0.74	0.74	0.74	0.74
90.00°	0.82	0.81	0.79	0.77	0.75	0.74	0.72	0.70	0.68	0.67	0.68	0.69	0.70	0.71	0.72	0.73	0.74	0.75	0.76	0.76	0.76
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	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	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	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	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	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	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	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	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	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>	529	529	529	529	517	517	517	517	494	494	494	473	473	473	454	454	444
	<b>1</b>	495	478	464	450	483	469	455	443	450	439	429	433	425	416	418	411	404
	<b>2</b>	459	430	405	385	448	422	399	381	406	388	372	393	377	364	380	367	356
	<b>3</b>	425	387	357	333	415	380	352	330	368	344	325	356	336	319	345	328	314
	<b>4</b>	395	350	317	292	385	344	313	290	334	307	286	324	301	282	315	295	279
	<b>5</b>	367	318	283	258	358	313	281	257	304	276	254	296	271	251	288	266	249
	<b>6</b>	342	290	255	230	334	286	253	229	278	249	228	271	246	226	265	242	224
	<b>7</b>	319	266	232	207	312	263	230	207	256	227	205	250	224	204	245	221	203
	<b>8</b>	299	245	211	188	293	242	210	188	237	208	187	232	205	186	227	203	185
	<b>9</b>	281	227	194	172	275	225	193	171	220	191	171	215	189	170	211	187	169
	<b>10</b>	265	211	179	158	259	209	178	157	205	176	157	201	175	156	197	173	156

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	8.4 fc	11.7 ft
6.5 ft	6.0 fc	13.9 ft
7.5 ft	4.5 fc	16.0 ft
8.0 ft	4.0 fc	17.1 ft
10.0 ft	2.5 fc	21.4 ft
12.0 ft	1.8 fc	25.6 ft
14.0 ft	1.3 fc	29.9 ft
16.0 ft	1.0 fc	34.2 ft
20.0 ft	0.6 fc	42.7 ft
24.0 ft	0.4 fc	51.2 ft
28.0 ft	0.3 fc	59.8 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	72,144	72,144	72,144
<b>45.00°</b>	86,697	44,103	32,111
<b>55.00°</b>	72,149	34,664	25,242
<b>65.00°</b>	41,298	21,609	14,945
<b>75.00°</b>	10,281	5,964	6,168
<b>85.00°</b>	2,052	1,748	2,318

### UGR CIE 190:2010

<b>Ceiling reflectance</b>		<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>	<b>0.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.5</b>	<b>0.3</b>
<b>Wall reflectance</b>		<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.3</b>
<b>Plane reflectance</b>		<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>
<b>Room dimensions</b>		<b>Viewed crosswise</b>					<b>Viewed endwise</b>				
<b>2H</b>	<b>2H</b>	27.1	28.5	27.5	28.9	29.2	18.5	19.9	18.8	20.2	20.5
	<b>3H</b>	27.6	28.9	28.0	29.2	29.6	19.2	20.5	19.6	20.8	21.2
	<b>4H</b>	27.6	28.8	28.0	29.2	29.5	19.4	20.5	19.8	20.9	21.3
	<b>6H</b>	27.6	28.6	28.0	29.0	29.4	19.4	20.4	19.8	20.8	21.2
	<b>8H</b>	27.5	28.5	28.0	28.9	29.3	19.3	20.4	19.8	20.7	21.2
	<b>12H</b>	27.5	28.5	27.9	28.8	29.3	19.3	20.3	19.8	20.7	21.1
<b>4H</b>	<b>2H</b>	27.1	28.2	27.5	28.6	29.0	18.7	19.9	19.1	20.3	20.6
	<b>3H</b>	27.7	28.6	28.1	29.0	29.4	19.6	20.6	20.0	21.0	21.4
	<b>4H</b>	27.7	28.5	28.1	28.9	29.4	19.8	20.6	20.2	21.1	21.5
	<b>6H</b>	27.6	28.3	28.1	28.8	29.2	19.8	20.6	20.3	21.0	21.5
	<b>8H</b>	27.5	28.2	28.0	28.7	29.1	19.8	20.5	20.3	20.9	21.4
	<b>12H</b>	27.5	28.1	28.0	28.6	29.1	19.8	20.4	20.3	20.9	21.3
<b>8H</b>	<b>4H</b>	27.5	28.2	28.0	28.7	29.1	19.8	20.5	20.3	20.9	21.4
	<b>6H</b>	27.5	28.0	28.0	28.5	29.0	19.9	20.4	20.4	20.9	21.4
	<b>8H</b>	27.4	27.9	27.9	28.4	28.9	19.8	20.3	20.4	20.9	21.4
	<b>12H</b>	27.4	27.8	27.9	28.3	28.9	19.8	20.3	20.4	20.8	21.3
<b>12H</b>	<b>4H</b>	27.5	28.1	28.0	28.6	29.1	19.8	20.4	20.3	20.9	21.3
	<b>6H</b>	27.4	27.9	27.9	28.4	28.9	19.8	20.3	20.4	20.8	21.3
	<b>8H</b>	27.4	27.8	27.9	28.3	28.9	19.8	20.3	20.3	20.8	21.3

Corrected UGR values based on total output lumens

SHR = 1.0