

## Indoor Distribution Test Report

# Spectrum Lighting Inc.

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## Spectrum Lighting Photometric Lab

### Luminaire

IF03SMx xx DWDD1007 WWWFLWMW

Nom 3" square recessed Infinium wall wash luminaire with 7L 27HK dim to warm emitter

### Test Number

SP-00950\_M-7L

### Test Date

11/6/2019

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

### Summary of Results

#### Power

Input Watts	9.3 W
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#### Lumen Output

Output Lumens	257
Efficacy	27.65 lm/W

#### Luminous Dimensions

0° - 180° Size	0.13
90° - 270° Size	0.13
Height	0

#### Spacing Criterion

Two luminaires, plane 0°	1.53
Two luminaires, plane 90°	0.71
Four luminaires	1.09

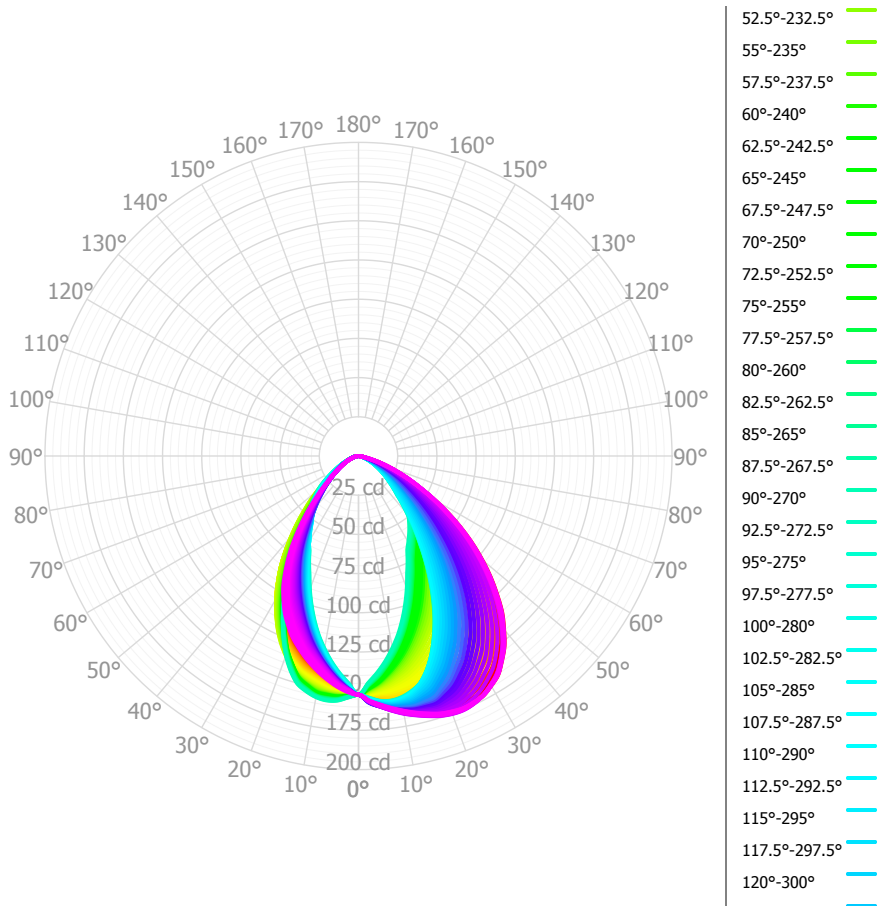
#### Full Beam Angle

0° - 180°	86°
90° - 270°	51°

### IES File Header Contents

Keyword	Value
TEST	SP-00950_M-7L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/6/2019
ISSUEDATE	11/27/2019
LUMCAT	IF03SMx xx DWDD1007 WWWFLWMW
LUMINAIRE	Nom 3" square recessed Infinium wall wash luminaire with 7L 27HK dim to warm emitter
OTHER	Wide Flood Optic
OTHER	Beam Angle: 86 deg x 128 deg
LAMPCAT	N/A
LAMP	N/A
OTHER	CCT Output Multipliers: N/A, dim to warm emitter
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°	14.49	5.64%	90.00° - 100.00°	0.03	0.01%
10.00° - 20.00°	39.31	15.29%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	53.91	20.97%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	54.70	21.27%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	44.16	17.17%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	29.35	11.41%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	15.21	5.92%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	5.14	2.00%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	0.85	0.33%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	257.13	100.00%	0.00° - 180.00°	257.13	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°	152.36	152.36	152.36	152.36	152.36	152.36	152.36	152.36	152.36	152.36	152.36	152.36	152.36	152.36	152.36	152.36	152.36	152.36	152.36	152.36	152.36
2.50°	156.27	155.93	155.59	155.24	154.90	154.56	154.22	153.87	153.53	153.19	152.88	152.58	152.28	151.97	151.67	151.36	151.06	150.75	150.45	150.17	149.85
5.00°	159.04	158.47	157.89	157.32	156.75	156.18	155.61	155.04	154.47	153.89	153.26	152.64	152.01	151.38	150.75	150.12	149.49	148.86	148.23	147.76	147.25
7.50°	161.96	161.21	160.46	159.71	158.95	158.20	157.45	156.70	155.95	155.20	154.15	153.11	152.07	151.03	149.99	148.94	147.90	146.86	145.82	144.98	144.15
10.00°	164.76	163.77	162.78	161.79	160.80	159.81	158.82	157.83	156.84	155.85	154.39	152.93	151.48	150.02	148.56	147.10	145.65	144.19	142.73	141.58	140.42
12.50°	167.47	166.18	164.88	163.59	162.30	161.00	159.71	158.41	157.12	155.82	154.01	152.21	150.40	148.59	146.78	144.97	143.16	141.35	139.54	138.00	136.46
15.00°	169.87	168.31	166.75	165.18	163.62	162.06	160.49	158.93	157.37	155.80	153.51	151.21	148.91	146.62	144.32	142.02	139.73	137.43	135.13	133.31	131.48
17.50°	172.09	170.28	168.47	166.66	164.84	163.03	161.22	159.41	157.60	155.79	152.99	150.20	147.40	144.61	141.81	139.02	136.22	133.43	130.63	128.47	126.30
20.00°	173.29	171.22	169.15	167.08	165.01	162.94	160.87	158.80	156.72	154.65	151.41	148.17	144.93	141.68	138.44	135.20	131.96	128.71	125.47	123.03	120.55
22.50°	174.04	171.68	169.32	166.97	164.61	162.25	159.89	157.53	155.18	152.82	149.20	145.57	141.95	138.33	134.71	131.09	127.47	123.84	120.22	117.49	114.76
25.00°	173.44	170.82	168.19	165.57	162.95	160.32	157.70	155.08	152.46	149.83	145.81	141.79	137.77	133.75	129.73	125.71	121.69	117.67	113.65	110.80	107.95
27.50°	172.39	169.49	166.59	163.69	160.80	157.90	155.00	152.10	149.20	146.31	141.93	137.56	133.18	128.80	124.43	120.05	115.68	111.30	106.93	104.00	101.08
30.00°	169.29	166.21	163.12	160.03	156.94	153.85	150.77	147.68	144.59	141.50	136.78	132.06	127.35	122.63	117.91	113.19	108.47	103.75	99.03	96.31	93.59
32.50°	165.74	162.47	159.19	155.91	152.64	149.36	146.09	142.81	139.54	136.26	131.26	126.25	121.25	116.24	111.24	106.23	101.23	96.22	91.21	88.83	86.44
35.00°	159.55	156.26	152.97	149.67	146.38	143.09	139.80	136.51	133.21	129.92	124.79	119.65	114.52	109.38	104.25	99.12	93.98	88.85	83.71	81.71	79.70
37.50°	153.01	149.71	146.41	143.11	139.81	136.51	133.21	129.91	126.61	123.31	118.12	112.92	107.72	102.53	97.33	92.14	86.94	81.74	76.55	74.95	73.34
40.00°	144.46	141.21	137.95	134.70	131.44	128.18	124.93	121.67	118.42	115.16	110.18	105.21	100.23	95.25	90.28	85.30	80.33	75.35	70.37	69.01	67.65
42.50°	135.78	132.56	129.34	126.11	122.89	119.67	116.45	113.22	110.00	106.78	102.07	97.36	92.65	87.94	83.23	78.52	73.81	69.10	64.39	63.22	62.04
45.00°	125.07	122.02	118.98	115.94	112.89	109.85	106.81	103.76	100.72	97.68	93.36	89.05	84.73	80.42	76.10	71.78	67.47	63.15	58.84	57.80	56.76
47.50°	114.31	111.44	108.58	105.71	102.85	99.98	97.12	94.25	91.39	88.53	84.60	80.67	76.75	72.82	68.89	64.97	61.04	57.12	53.19	52.30	51.41
50.00°	102.93	100.28	97.63	94.98	92.33	89.68	87.03	84.38	81.73	79.08	75.56	72.03	68.51	64.99	61.47	57.95	54.43	50.91	47.38	46.63	45.87
52.50°	91.49	89.06	86.63	84.21	81.78	79.35	76.92	74.49	72.06	69.63	66.56	63.48	60.40	57.33	54.25	51.17	48.10	45.02	41.95	41.27	40.59
55.00°	79.65	77.51	75.36	73.21	71.06	68.92	66.77	64.62	62.47	60.33	57.73	55.14	52.54	49.94	47.35	44.75	42.16	39.56	36.97	36.31	35.64
57.50°	67.86	66.00	64.14	62.27	60.41	58.55	56.69	54.83	52.96	51.10	48.98	46.86	44.74	42.62	40.50	38.37	36.25	34.13	32.01	31.36	30.71
60.00°	56.26	54.72	53.19	51.65	50.12	48.58	47.05	45.51	43.97	42.44	40.73	39.02	37.32	35.61	33.91	32.20	30.49	28.79	27.08	26.50	25.93
62.50°	45.38	44.13	42.89	41.64	40.40	39.15	37.91	36.66	35.42	34.17	32.84	31.51	30.17	28.84	27.51	26.17	24.84	23.51	22.18	21.68	21.19
65.00°	36.48	35.50	34.52	33.53	32.55	31.56	30.58	29.60	28.61	27.63	26.48	25.33	24.19	23.04	21.89	20.74	19.59	18.44	17.29	16.99	16.69
67.50°	28.30	27.53	26.76	25.99	25.22	24.46	23.69	22.92	22.15	21.38	20.47	19.56	18.65	17.75	16.84	15.93	15.03	14.12	13.21	13.02	12.82
70.00°	21.27	20.65	20.04	19.43	18.81	18.20	17.59	16.98	16.36	15.75	15.06	14.37	13.67	12.98	12.29	11.59	10.90	10.21	9.52	9.42	9.32
72.50°	14.87	14.42	13.97	13.52	13.07	12.63	12.18	11.73	11.28	10.83	10.42	10.01	9.60	9.19	8.78	8.37	7.96	7.55	7.14	7.03	6.93
75.00°	8.95	8.67	8.40	8.13	7.85	7.58	7.30	7.03	6.76	6.48	6.32	6.16	6.00	5.83	5.67	5.51	5.35	5.19	5.02	4.96	4.89
77.50°	4.15	4.08	4.01	3.94	3.87	3.80	3.73	3.66	3.59	3.52	3.48	3.44	3.41	3.37	3.33	3.29	3.25	3.22	3.18	3.12	3.06
80.00°	1.61	1.61	1.60	1.59	1.58	1.57	1.56	1.56	1.55	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.54	1.52	1.49
82.50°	0.57	0.58	0.59	0.60	0.60	0.61	0.62	0.63	0.64	0.65	0.66	0.67	0.68	0.69	0.70	0.70	0.71	0.72	0.73	0.72	0.72
85.00°	0.37	0.39	0.40	0.42	0.43	0.45	0.46	0.48	0.50	0.51	0.50	0.49	0.49	0.48	0.47	0.46	0.45	0.45	0.44	0.45	0.46
87.50°	0.49	0.48	0.48	0.47	0.47	0.46	0.46	0.46	0.45	0.45	0.45	0.45	0.46	0.46	0.47	0.47	0.48	0.48	0.48	0.48	0.48
90.00°	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	306	306	306	306	299	299	299	299	286	286	286	274	274	274	262	262	262	257
	1	286	277	268	260	280	271	263	256	260	254	248	250	245	241	241	237	234	233
	2	266	249	235	223	259	244	231	220	235	224	215	227	218	210	220	212	206	208
	3	246	224	207	193	241	220	204	191	213	199	188	206	195	185	200	190	182	186
	4	229	203	184	169	223	200	182	168	194	178	166	188	175	164	183	171	162	168
	5	213	185	165	150	208	182	163	150	177	161	148	172	158	147	168	155	145	152
	6	199	169	149	135	194	167	148	134	162	145	133	158	143	132	154	141	131	138
	7	186	155	135	121	182	153	134	121	149	133	120	146	131	119	143	129	119	127
	8	174	143	124	110	170	141	123	110	138	121	109	135	120	109	132	119	108	117
	9	164	133	114	101	160	131	113	101	128	112	100	126	111	100	123	110	99	108
	10	154	123	105	93	151	122	105	93	120	104	92	118	103	92	115	102	92	100

### Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	5.0 fc	10.9 ft
6.5 ft	3.6 fc	12.9 ft
7.5 ft	2.7 fc	14.9 ft
8.0 ft	2.4 fc	15.8 ft
10.0 ft	1.5 fc	19.8 ft
12.0 ft	1.1 fc	23.8 ft
14.0 ft	0.8 fc	27.7 ft
16.0 ft	0.6 fc	31.7 ft
20.0 ft	0.4 fc	39.6 ft
24.0 ft	0.3 fc	47.5 ft
28.0 ft	0.2 fc	55.4 ft

### Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
<b>0.00°</b>	97,039	97,039	97,039
<b>45.00°</b>	112,654	52,999	38,073
<b>55.00°</b>	88,449	41,049	27,582
<b>65.00°</b>	54,981	26,064	16,647
<b>75.00°</b>	22,021	12,361	7,311
<b>85.00°</b>	2,702	3,207	3,066

### 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>	28.5	29.9	28.8	30.2	30.5	19.9	21.3	20.3	21.6	21.9
	<b>3H</b>	29.2	30.5	29.6	30.8	31.2	20.7	22.0	21.1	22.3	22.7
	<b>4H</b>	29.3	30.5	29.7	30.8	31.2	21.0	22.1	21.4	22.5	22.8
	<b>6H</b>	29.3	30.4	29.7	30.7	31.1	21.0	22.1	21.4	22.5	22.9
	<b>8H</b>	29.3	30.3	29.7	30.7	31.1	21.0	22.0	21.5	22.4	22.8
	<b>12H</b>	29.2	30.2	29.7	30.6	31.0	21.0	22.0	21.4	22.4	22.8
<b>4H</b>	<b>2H</b>	28.4	29.6	28.8	29.9	30.3	20.2	21.3	20.6	21.7	22.1
	<b>3H</b>	29.3	30.2	29.7	30.6	31.0	21.2	22.1	21.6	22.5	22.9
	<b>4H</b>	29.4	30.3	29.8	30.7	31.1	21.5	22.3	21.9	22.8	23.2
	<b>6H</b>	29.4	30.1	29.8	30.6	31.0	21.7	22.4	22.1	22.8	23.3
	<b>8H</b>	29.3	30.0	29.8	30.5	30.9	21.7	22.4	22.2	22.8	23.3
	<b>12H</b>	29.3	29.9	29.8	30.4	30.9	21.7	22.3	22.2	22.8	23.2
<b>8H</b>	<b>4H</b>	29.3	30.0	29.8	30.4	30.9	21.6	22.3	22.1	22.7	23.2
	<b>6H</b>	29.3	29.8	29.8	30.3	30.8	21.9	22.4	22.4	22.9	23.4
	<b>8H</b>	29.2	29.7	29.8	30.2	30.7	21.9	22.4	22.4	22.9	23.4
	<b>12H</b>	29.2	29.6	29.7	30.1	30.7	21.9	22.4	22.5	22.9	23.4
<b>12H</b>	<b>4H</b>	29.3	29.9	29.8	30.4	30.8	21.6	22.2	22.1	22.7	23.1
	<b>6H</b>	29.2	29.7	29.8	30.2	30.7	21.9	22.4	22.4	22.8	23.4
	<b>8H</b>	29.2	29.6	29.7	30.1	30.7	21.9	22.4	22.5	22.9	23.4

Corrected UGR values based on total output lumens

SHR = 1.0