

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
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Spectrum Lighting Photometric Lab

Luminaire

IF03RMx xx DWDD1015 DLWFGP WWLWMW

Nom 3" diam round recessed Infinium wall wash luminaire with 15L 27HK dim to warm emitter

Test Number

SP-00951_M-15L

Test Date

11/6/2019

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

Summary of Results

Power

Input Watts	17.2 W
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Lumen Output

Output Lumens	726
Efficacy	42.19 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

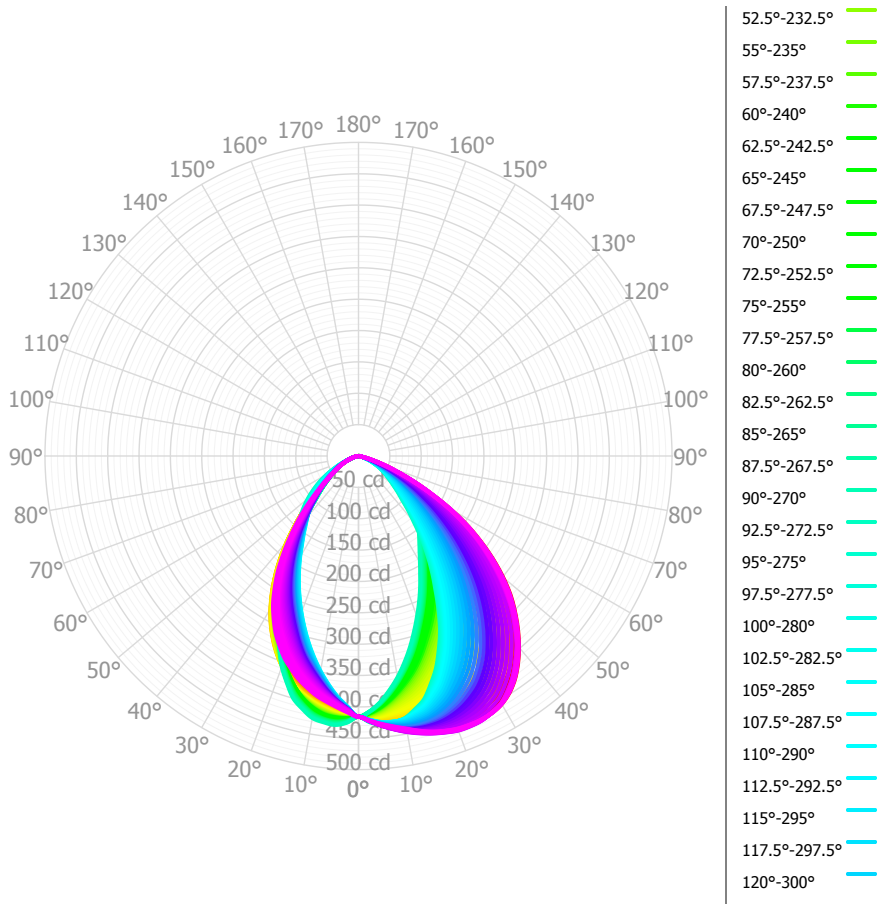
Full Beam Angle

0° - 180°	90°
90° - 270°	55°

IES File Header Contents

Keyword	Value
TEST	SP-00951_M-15L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/6/2019
ISSUEDATE	11/25/2019
LUMCAT	IF03RMx xx DWDD1015 DLWFGP WWLWMW
LUMINAIRE	Nom 3" diam round recessed Infinium wall wash luminaire with 15L 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°	39.52	5.45%	90.00° - 100.00°	0.08	0.01%
10.00° - 20.00°	107.27	14.78%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	148.96	20.53%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	154.46	21.28%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	129.04	17.78%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	88.99	12.26%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	44.46	6.13%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	11.39	1.57%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.52	0.21%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	725.63	99.99%	0.00° - 180.00°	725.70	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°	415.97	415.97	415.97	415.97	415.97	415.97	415.97	415.97	415.97	415.97	415.97	415.97	415.97	415.97	415.97	415.97	415.97	415.97	415.97	415.97	415.97
2.50°	422.75	422.37	421.98	421.60	421.21	420.83	420.45	420.06	419.68	419.29	418.75	418.21	417.67	417.13	416.58	416.04	415.50	414.96	414.42	413.84	413.2
5.00°	428.81	427.93	427.05	426.17	425.28	424.40	423.52	422.64	421.76	420.87	419.66	418.45	417.23	416.02	414.80	413.59	412.38	411.16	409.95	408.83	407.7
7.50°	434.60	433.17	431.74	430.31	428.88	427.45	426.02	424.59	423.16	421.73	419.59	417.46	415.32	413.19	411.05	408.92	406.78	404.64	402.51	400.81	399.1
10.00°	440.82	438.76	436.70	434.65	432.59	430.54	428.48	426.42	424.37	422.31	419.22	416.12	413.03	409.94	406.84	403.75	400.65	397.56	394.46	391.96	389.4
12.50°	448.20	445.33	442.47	439.61	436.74	433.88	431.01	428.15	425.29	422.42	418.34	414.25	410.17	406.09	402.00	397.92	393.84	389.75	385.67	382.34	379.0
15.00°	454.64	451.06	447.48	443.89	440.31	436.73	433.14	429.56	425.98	422.40	417.10	411.80	406.50	401.20	395.90	390.60	385.31	380.01	374.71	370.73	366.7
17.50°	459.04	454.68	450.32	445.96	441.60	437.24	432.88	428.52	424.16	419.80	413.33	406.86	400.39	393.93	387.46	380.99	374.52	368.05	361.58	356.92	352.2
20.00°	462.27	457.20	452.14	447.07	442.00	436.93	431.86	426.79	421.72	416.65	409.04	401.42	393.80	386.18	378.56	370.94	363.33	355.71	348.09	342.64	337.1
22.50°	463.43	457.56	451.68	445.81	439.94	434.06	428.19	422.31	416.44	410.56	402.09	393.61	385.14	376.66	368.19	359.71	351.24	342.76	334.29	328.27	322.2
25.00°	463.46	456.86	450.26	443.65	437.05	430.45	423.85	417.24	410.64	404.04	394.64	385.24	375.84	366.45	357.05	347.65	338.25	328.85	319.45	313.07	306.6
27.50°	461.86	454.51	447.17	439.83	432.48	425.14	417.80	410.45	403.11	395.76	385.56	375.35	365.15	354.94	344.73	334.53	324.32	314.12	303.91	297.27	290.6
30.00°	456.89	449.17	441.44	433.71	425.98	418.25	410.53	402.80	395.07	387.34	376.19	365.04	353.90	342.75	331.60	320.45	309.30	298.15	287.01	280.28	273.5
32.50°	447.97	439.71	431.44	423.17	414.90	406.64	398.37	390.10	381.84	373.57	361.99	350.41	338.83	327.25	315.67	304.09	292.51	280.93	269.35	262.81	256.2
35.00°	434.93	426.56	418.19	409.81	401.44	393.07	384.70	376.32	367.95	359.58	347.57	335.57	323.57	311.56	299.56	287.56	275.55	263.55	251.55	245.26	238.5
37.50°	417.82	409.34	400.85	392.37	383.89	375.41	366.93	358.44	349.96	341.48	329.50	317.52	305.54	293.57	281.59	269.61	257.63	245.65	233.67	227.98	222.2
40.00°	398.22	389.89	381.56	373.23	364.90	356.57	348.24	339.91	331.58	323.25	311.27	299.29	287.32	275.34	263.36	251.39	239.41	227.44	215.46	210.45	205.4
42.50°	376.63	368.46	360.29	352.12	343.94	335.77	327.60	319.43	311.26	303.08	291.31	279.54	267.76	255.99	244.22	232.45	220.67	208.90	197.13	193.03	188.5
45.00°	353.47	345.57	337.67	329.76	321.86	313.96	306.06	298.16	290.26	282.36	270.96	259.57	248.18	236.78	225.39	213.99	202.60	191.21	179.81	176.53	173.2
47.50°	329.27	321.29	313.30	305.31	297.33	289.34	281.36	273.37	265.38	257.40	246.88	236.37	225.85	215.34	204.82	194.31	183.80	173.28	162.77	160.08	157.3
50.00°	301.10	293.46	285.82	278.18	270.54	262.90	255.26	247.62	239.98	232.34	222.79	213.23	203.68	194.13	184.57	175.02	165.46	155.91	146.36	144.18	141.5
52.50°	270.75	263.65	256.54	249.44	242.33	235.22	228.12	221.01	213.91	206.80	198.28	189.75	181.23	172.70	164.18	155.65	147.12	138.60	130.07	128.34	126.6
55.00°	238.61	232.19	225.78	219.37	212.96	206.55	200.14	193.72	187.31	180.90	173.54	166.18	158.81	151.45	144.09	136.73	129.36	122.00	114.64	113.25	111.8
57.50°	205.68	199.90	194.12	188.34	182.56	176.78	171.00	165.22	159.44	153.65	147.62	141.58	135.54	129.50	123.46	117.43	111.39	105.35	99.31	98.14	96.96
60.00°	169.55	164.82	160.09	155.36	150.64	145.91	141.18	136.46	131.73	127.00	122.18	117.36	112.54	107.72	102.90	98.08	93.26	88.44	83.62	82.69	81.76
62.50°	132.34	128.97	125.60	122.23	118.86	115.49	112.12	108.75	105.38	102.01	98.22	94.44	90.65	86.86	83.07	79.28	75.49	71.70	67.91	67.06	66.21
65.00°	100.63	98.13	95.63	93.14	90.64	88.14	85.64	83.14	80.64	78.14	75.31	72.48	69.65	66.82	63.98	61.15	58.32	55.49	52.66	51.89	51.13
67.50°	70.32	68.81	67.30	65.79	64.28	62.77	61.26	59.75	58.24	56.73	54.62	52.50	50.38	48.26	46.14	44.03	41.91	39.79	37.67	37.32	36.97
70.00°	49.20	47.94	46.67	45.41	44.15	42.88	41.62	40.36	39.10	37.83	36.48	35.13	33.78	32.43	31.08	29.74	28.39	27.04	25.69	25.51	25.34
72.50°	30.01	29.11	28.21	27.31	26.40	25.50	24.60	23.70	22.80	21.90	21.19	20.48	19.77	19.06	18.35	17.64	16.93	16.22	15.50	15.54	15.58
75.00°	15.34	14.90	14.46	14.02	13.58	13.14	12.70	12.26	11.81	11.37	11.10	10.82	10.55	10.27	10.00	9.72	9.45	9.17	8.90	8.94	8.99
77.50°	6.31	6.07	5.84	5.60	5.36	5.12	4.89	4.65	4.41	4.17	4.23	4.28	4.34	4.40	4.45	4.51	4.56	4.62	4.68	4.64	4.60
80.00°	1.83	1.82	1.81	1.80	1.78	1.77	1.76	1.75	1.74	1.72	1.77	1.82	1.87	1.92	1.97	2.02	2.07	2.12	2.17	2.21	2.26
82.50°	0.98	1.01	1.04	1.07	1.10	1.13	1.16	1.19	1.22	1.25	1.25	1.26	1.26	1.27	1.28	1.28	1.29	1.29	1.30	1.31	1.33
85.00°	1.03	1.05	1.06	1.08	1.09	1.11	1.13	1.14	1.16	1.17	1.14	1.11	1.08	1.04	1.01	0.98	0.94	0.91	0.88	0.92	0.97
87.50°	0.97	0.99	1.01	1.03	1.05	1.07	1.09	1.11	1.12	1.14	1.15	1.16	1.17	1.18	1.18	1.19	1.20	1.21	1.22	1.21	1.20
90.00°	1.35	1.32	1.29	1.26	1.23	1.20	1.17	1.15	1.12	1.09	1.11	1.12	1.14	1.16	1.18	1.20	1.21	1.23	1.25	1.25	1.25
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.

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	864	864	864	864	844	844	844	844	806	806	806	772	772	772	740	740	726
	1	808	781	757	735	789	765	743	724	735	717	701	707	693	680	682	671	660
	2	749	701	662	629	732	688	652	621	664	633	607	641	616	594	620	599	587
	3	694	631	583	544	678	621	575	539	600	562	530	581	548	521	563	536	525
	4	644	571	517	476	629	562	512	473	545	501	467	529	491	461	514	482	472
	5	599	519	462	421	585	511	458	419	496	450	415	483	442	411	470	435	426
	6	558	473	417	376	545	467	413	375	455	407	372	443	401	369	432	395	387
	7	521	434	378	339	510	429	375	337	418	370	335	409	365	333	399	361	354
	8	488	400	345	307	478	396	343	306	387	339	305	378	335	303	370	331	325
	9	459	371	317	280	449	367	315	280	359	312	279	351	308	277	345	305	300
	10	432	345	292	258	423	341	291	257	334	288	256	328	285	255	322	283	278

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	13.8 fc	11.7 ft
6.5 ft	9.8 fc	13.9 ft
7.5 ft	7.4 fc	16.0 ft
8.0 ft	6.5 fc	17.1 ft
10.0 ft	4.2 fc	21.4 ft
12.0 ft	2.9 fc	25.6 ft
14.0 ft	2.1 fc	29.9 ft
16.0 ft	1.6 fc	34.2 ft
20.0 ft	1.0 fc	42.7 ft
24.0 ft	0.7 fc	51.2 ft
28.0 ft	0.5 fc	59.8 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	117,786	117,786	117,786
45.00°	141,547	72,006	52,426
55.00°	117,795	56,594	41,212
65.00°	67,425	35,280	24,400
75.00°	16,785	9,737	10,070
85.00°	3,350	2,854	3,784

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	28.9	30.3	29.2	30.6	30.9	20.2	21.6	20.5	21.9	22.2
	3H	29.3	30.6	29.7	30.9	31.3	20.9	22.2	21.3	22.5	22.9
	4H	29.3	30.5	29.7	30.9	31.2	21.1	22.2	21.5	22.6	23.0
	6H	29.3	30.3	29.7	30.7	31.1	21.1	22.1	21.5	22.5	22.9
	8H	29.2	30.2	29.7	30.6	31.0	21.1	22.1	21.5	22.5	22.9
	12H	29.2	30.2	29.6	30.5	31.0	21.0	22.0	21.5	22.4	22.8
4H	2H	28.8	29.9	29.2	30.3	30.7	20.4	21.6	20.9	22.0	22.3
	3H	29.4	30.3	29.8	30.7	31.1	21.3	22.3	21.8	22.7	23.1
	4H	29.4	30.2	29.8	30.6	31.1	21.5	22.3	21.9	22.8	23.2
	6H	29.3	30.0	29.8	30.5	30.9	21.5	22.3	22.0	22.7	23.2
	8H	29.2	29.9	29.7	30.4	30.8	21.5	22.2	22.0	22.6	23.1
	12H	29.2	29.8	29.7	30.3	30.8	21.5	22.1	22.0	22.6	23.0
8H	4H	29.3	29.9	29.7	30.4	30.8	21.5	22.2	22.0	22.6	23.1
	6H	29.2	29.7	29.7	30.2	30.7	21.6	22.1	22.1	22.6	23.1
	8H	29.1	29.6	29.6	30.1	30.6	21.6	22.0	22.1	22.6	23.1
	12H	29.1	29.5	29.6	30.0	30.6	21.5	22.0	22.1	22.5	23.0
12H	4H	29.2	29.8	29.7	30.3	30.8	21.5	22.1	22.0	22.6	23.0
	6H	29.1	29.6	29.6	30.1	30.6	21.5	22.0	22.1	22.5	23.1
	8H	29.1	29.5	29.6	30.0	30.6	21.5	22.0	22.0	22.5	23.0

Corrected UGR values based on total output lumens

SHR = 1.0