

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

IF03RMx xx DWDD1007 DLFLGPMW

Nom 3" diam Infinium, dim to warm 7L emitter - Flood optic, No lens

Test Number

SP-00942_3_M-7L

Test Date

5/1/2019

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	502
Efficacy	53.96 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.55
Two luminaires, plane 90°	0.56
Four luminaires	0.6

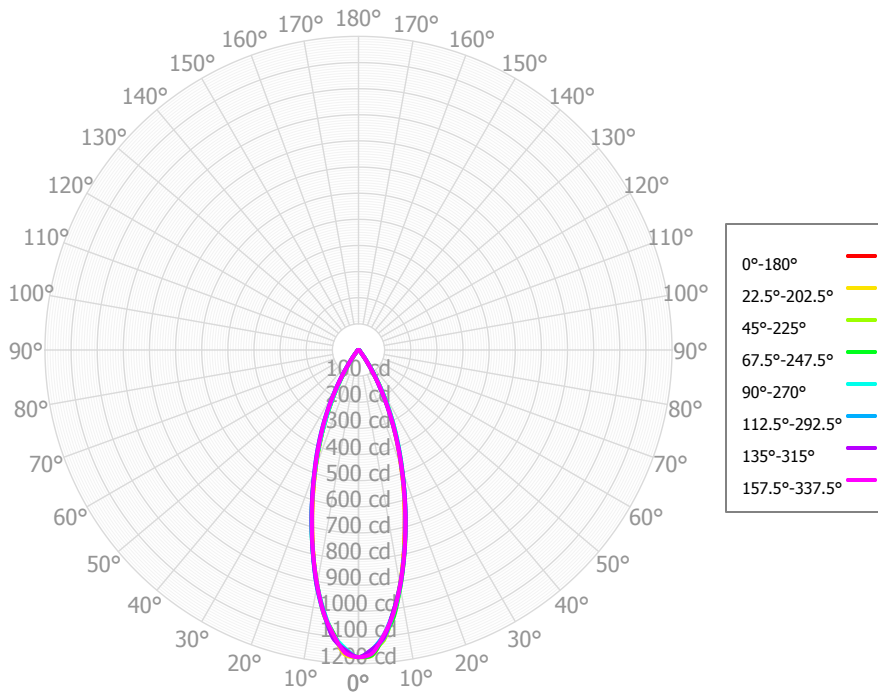
Full Beam Angle

0° - 180°	35°
90° - 270°	35°

IES File Header Contents

Keyword	Value
TEST	SP-00942_3_M-7L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	5/1/2019
ISSUEDATE	11/14/2019
LUMCAT	IF03RMx xx DWDD1007 DLFLGPMW
LUMINAIRE	Nom 3" diam Infinium, dim to warm 7L emitter - Flood optic, No lens
OTHER	Beam Angle: 34.6 degrees
LAMPCAT	N/A
LAMP	N/A
OTHER	CCT Output Multipliers: N/A - dim to warm
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°	100.12	19.95%	90.00° - 100.00°	0.03	0.01%
10.00° - 20.00°	189.50	37.76%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	141.30	28.16%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	46.12	9.19%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	9.98	1.99%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	6.16	1.23%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	5.10	1.02%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	2.83	0.56%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	0.66	0.13%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	501.77	99.99%	0.00° - 180.00°	501.80	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°	1,175.70	1,175.70	1,175.70	1,175.70	1,175.70	1,175.70	1,175.70	1,175.70	1,175.70	1,175.70	1,175.70	1,175.70	1,175.70	1,175.70	1,175.70	1,175.70	1,175.70
2.50°	1,151.42	1,171.02	1,153.17	1,169.72	1,150.19	1,152.91	1,149.14	1,161.00	1,149.74	1,167.55	1,147.36	1,159.56	1,143.86	1,148.99	1,148.11	1,163.93	1,151.42
5.00°	1,109.36	1,100.12	1,115.14	1,102.10	1,108.18	1,104.55	1,108.34	1,094.03	1,105.99	1,095.25	1,105.23	1,089.39	1,096.49	1,096.66	1,107.13	1,097.17	1,109.36
7.50°	1,014.14	1,025.54	1,020.91	1,032.15	1,018.35	1,019.07	1,013.87	1,018.72	1,013.10	1,020.88	1,011.39	1,017.34	1,009.53	1,014.17	1,012.86	1,020.65	1,014.14
10.00°	914.82	913.11	922.99	921.18	920.60	919.72	917.23	910.73	916.02	910.14	914.69	910.48	911.77	913.71	917.63	915.17	914.82
12.50°	799.22	800.61	805.73	810.05	805.94	805.24	803.82	801.77	799.38	799.35	802.96	803.43	804.29	805.81	806.58	806.51	799.22
15.00°	683.08	687.67	690.77	697.15	694.42	694.93	692.14	689.78	685.08	687.58	690.98	694.40	694.72	694.15	695.84	694.29	683.08
17.50°	580.04	577.47	585.29	586.39	588.55	588.55	590.13	582.51	579.71	577.02	585.27	586.44	588.55	588.59	590.00	581.82	580.04
20.00°	477.50	481.33	483.97	491.29	490.19	493.51	491.20	487.54	478.85	479.58	480.38	485.98	482.98	485.72	485.72	484.93	477.50
22.50°	389.85	388.56	396.47	398.84	403.77	407.91	406.21	397.72	391.98	384.13	390.27	388.01	391.08	393.42	396.31	388.64	389.85
25.00°	303.25	309.78	313.13	320.49	321.89	327.28	323.32	319.46	308.19	303.10	301.39	303.53	300.87	305.00	308.70	309.27	303.25
27.50°	230.50	233.83	241.08	244.37	246.20	250.20	247.93	243.44	232.23	224.40	226.27	222.65	226.29	228.76	232.94	230.38	230.50
30.00°	159.86	167.29	173.45	177.36	177.89	181.73	176.92	171.65	162.24	158.45	154.03	156.76	152.93	156.19	160.90	164.45	159.86
32.50°	106.69	107.69	116.19	116.18	118.20	118.55	118.62	111.36	105.40	98.19	102.90	97.97	104.90	105.28	107.96	100.79	106.69
35.00°	58.12	67.03	69.14	75.00	73.50	75.67	69.87	69.63	60.70	62.44	56.61	62.79	57.98	59.70	61.25	65.76	58.12
37.50°	37.43	34.99	42.24	40.89	44.31	43.72	44.91	39.48	38.65	32.51	36.29	33.91	38.95	37.99	39.47	33.49	37.43
40.00°	19.58	23.28	22.98	26.65	25.80	26.93	25.59	25.80	22.67	22.52	18.91	22.87	20.51	20.96	21.47	23.29	19.58
42.50°	15.11	14.58	16.54	15.66	16.81	17.01	18.06	16.49	16.36	14.49	14.26	14.22	15.67	15.02	15.61	14.15	15.11
45.00°	11.19	11.84	11.90	12.27	11.83	12.49	12.36	12.53	11.76	11.99	10.42	11.18	11.06	10.67	10.94	11.45	11.19
47.50°	9.32	9.65	9.89	9.68	9.93	10.01	9.90	9.80	9.58	9.75	9.42	8.85	9.60	9.02	9.51	9.06	9.32
50.00°	7.79	8.37	8.43	8.74	8.68	8.48	8.12	8.37	8.02	8.16	8.44	7.92	8.20	7.63	8.15	8.07	7.79
52.50°	7.26	7.33	7.68	7.88	7.87	7.27	7.38	7.31	7.21	6.98	7.51	7.19	7.36	7.14	6.95	7.15	7.26
55.00°	6.83	6.64	7.11	7.18	7.37	6.81	6.73	6.58	6.63	6.61	6.72	6.79	6.64	6.71	6.06	6.56	6.83
57.50°	6.65	6.05	6.74	6.75	7.06	6.55	6.20	6.10	6.31	6.24	6.24	6.29	6.63	6.26	5.78	6.02	6.65
60.00°	6.29	5.59	6.28	6.70	6.87	6.37	5.87	5.82	6.03	5.85	5.73	5.66	6.44	5.81	5.46	5.65	6.29
62.50°	5.57	5.30	5.74	6.56	6.74	6.21	5.77	5.50	5.79	5.50	5.14	5.15	5.42	4.87	5.06	5.32	5.57
65.00°	4.97	5.20	5.39	6.30	6.28	5.76	5.42	5.16	5.47	5.20	4.61	4.80	4.57	3.98	4.63	5.05	4.97
67.50°	4.59	4.78	5.19	5.79	5.68	5.27	4.82	4.52	5.10	4.68	4.18	4.30	4.30	3.89	4.16	4.63	4.59
70.00°	4.10	4.09	4.84	5.03	4.84	4.37	4.18	3.73	4.30	3.96	3.69	3.68	3.90	3.69	3.72	3.91	4.10
72.50°	3.46	3.43	4.41	4.38	3.95	3.54	3.51	3.20	3.38	3.18	3.17	3.02	3.33	3.13	3.32	3.22	3.46
75.00°	2.66	2.78	3.36	3.75	3.09	2.91	2.64	2.57	2.50	2.38	2.36	2.33	2.50	2.45	2.62	2.56	2.66
77.50°	1.81	1.73	2.32	2.47	2.32	2.24	1.87	1.75	1.81	1.60	1.64	1.56	1.78	1.70	1.87	1.72	1.81
80.00°	1.01	1.00	1.48	1.52	1.60	1.46	1.20	1.13	1.30	1.22	1.05	1.12	1.36	1.13	1.15	1.03	1.01
82.50°	0.66	0.59	0.94	0.85	0.57	0.67	0.62	0.67	0.83	0.60	0.65	0.69	0.47	0.74	0.78	0.58	0.66
85.00°	0.45	0.41	0.65	0.47	0.60	0.49	0.47	0.56	0.43	0.52	0.50	0.53	0.62	0.59	0.50	0.41	0.45
87.50°	0.41	0.46	0.48	0.61	0.56	0.63	0.55	0.39	0.40	0.52	0.47	0.50	0.58	0.49	0.33	0.52	0.41
90.00°	0.38	0.48	0.59	0.61	0.54	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.38	0.52	0.38
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	597	597	597	597	583	583	583	583	558	558	558	534	534	534	512	512	502
	1	572	559	548	538	560	549	538	529	528	520	513	510	504	498	493	488	478
	2	548	526	508	492	537	517	501	487	501	488	476	487	476	466	473	464	455
	3	525	496	474	456	515	489	469	453	477	460	446	465	451	439	454	442	434
	4	503	470	446	427	495	464	442	424	454	435	420	444	428	415	435	422	414
	5	483	446	421	402	475	442	418	400	433	413	397	425	407	393	418	402	395
	6	464	425	399	380	457	421	397	379	414	393	377	407	389	374	401	385	378
	7	446	406	380	361	440	402	378	360	396	375	359	391	371	357	386	368	362
	8	429	388	362	344	423	385	361	344	380	358	342	375	355	341	371	353	347
	9	413	372	346	329	408	369	345	328	365	343	327	361	341	326	357	339	334
	10	398	357	332	315	394	355	331	315	351	329	314	347	327	313	344	326	321

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	38.9 fc	3.4 ft
6.5 ft	27.8 fc	4.1 ft
7.5 ft	20.9 fc	4.7 ft
8.0 ft	18.4 fc	5.0 ft
10.0 ft	11.8 fc	6.2 ft
12.0 ft	8.2 fc	7.5 ft
14.0 ft	6.0 fc	8.7 ft
16.0 ft	4.6 fc	10.0 ft
20.0 ft	2.9 fc	12.5 ft
24.0 ft	2.0 fc	15.0 ft
28.0 ft	1.5 fc	17.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	332,912	332,912	332,912
45.00°	4,481	4,764	4,737
55.00°	3,372	3,512	3,639
65.00°	3,328	3,612	4,208
75.00°	2,909	3,678	3,377
85.00°	1,471	2,098	1,962

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	7.2	8.2	7.6	8.5	8.8	7.6	8.6	8.0	8.9	9.2
	3H	9.4	10.3	9.8	10.6	11.0	9.8	10.6	10.2	11.0	11.3
	4H	10.1	10.9	10.5	11.2	11.6	10.5	11.2	10.9	11.6	12.0
	6H	10.3	11.1	10.8	11.4	11.8	10.8	11.5	11.2	11.9	12.3
	8H	10.4	11.0	10.8	11.4	11.8	10.8	11.5	11.3	11.9	12.3
	12H	10.4	11.0	10.8	11.4	11.8	10.8	11.5	11.3	11.8	12.3
4H	2H	7.9	8.7	8.3	9.0	9.4	8.2	9.0	8.6	9.3	9.7
	3H	10.3	10.9	10.7	11.3	11.7	10.5	11.1	10.9	11.5	11.9
	4H	11.0	11.6	11.5	12.0	12.5	11.2	11.8	11.7	12.2	12.7
	6H	11.3	11.8	11.8	12.2	12.7	11.7	12.1	12.1	12.6	13.1
	8H	11.3	11.8	11.8	12.2	12.7	11.7	12.1	12.2	12.6	13.1
	12H	11.3	11.7	11.8	12.2	12.7	11.7	12.1	12.2	12.6	13.1
8H	4H	11.3	11.7	11.8	12.2	12.7	11.4	11.8	11.8	12.3	12.7
	6H	11.6	12.0	12.1	12.5	13.0	11.9	12.2	12.4	12.7	13.2
	8H	11.7	12.0	12.2	12.5	13.0	11.9	12.2	12.5	12.8	13.3
	12H	11.7	12.0	12.3	12.5	13.1	12.0	12.3	12.5	12.8	13.3
12H	4H	11.3	11.7	11.8	12.1	12.6	11.3	11.7	11.8	12.2	12.7
	6H	11.6	11.9	12.2	12.4	13.0	11.8	12.1	12.4	12.6	13.2
	8H	11.7	12.0	12.2	12.5	13.1	11.9	12.2	12.5	12.7	13.3

Corrected UGR values based on total output lumens

SHR = 1.0