

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

IF03RMx xx DWDD1007 DLSPGPM

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

Test Number

SP-00942_1_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	485
Efficacy	52.2 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.33
Two luminaires, plane 90°	0.33
Four luminaires	0.37

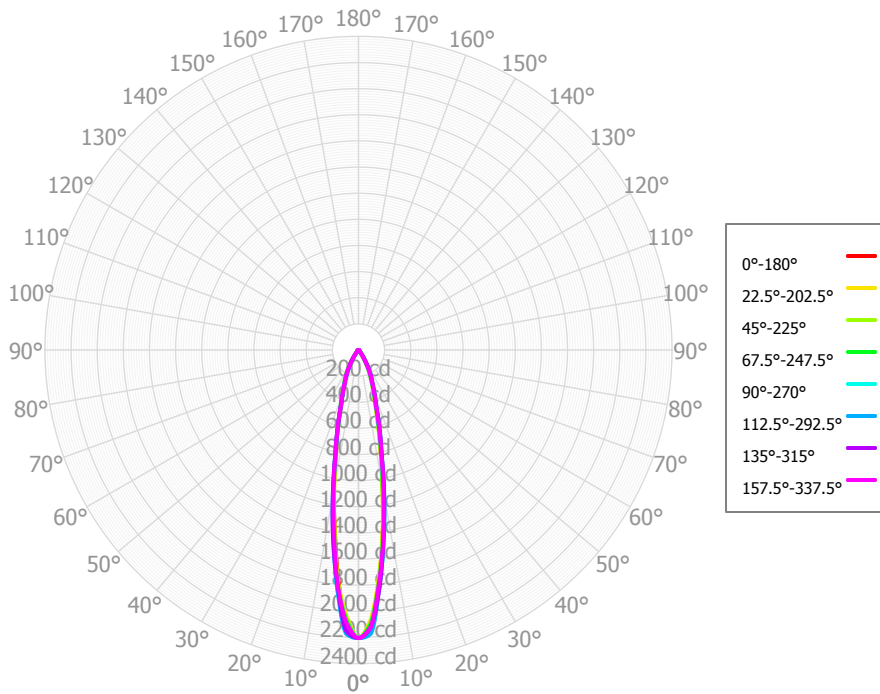
Full Beam Angle

0° - 180°	20°
90° - 270°	20°

IES File Header Contents

Keyword	Value
TEST	SP-00942_1_M-7L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	5/1/2019
ISSUEDATE	11/13/2019
LUMCAT	IF03RMx xx DWDD1007 DLSPGPM
LUMINAIRE	Nom 3" diam Infinium, dim to warm 7L emitter - Spot optic, No lens
OTHER	Beam Angle: 19.8 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°	149.20	30.73%	90.00° - 100.00°	0.03	0.01%
10.00° - 20.00°	169.37	34.89%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	102.91	21.20%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	36.84	7.59%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	9.37	1.93%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	7.82	1.61%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	6.09	1.25%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	3.16	0.65%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	0.70	0.14%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	485.46	99.99%	0.00° - 180.00°	485.49	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°	2,204.73	2,204.73	2,204.73	2,204.73	2,204.73	2,204.73	2,204.73	2,204.73	2,204.73	2,204.73	2,204.73	2,204.73	2,204.73	2,204.73	2,204.73	2,204.73	2,204.73
2.50°	2,144.89	2,075.79	2,101.04	2,101.05	2,128.47	2,173.70	2,153.46	2,094.21	2,115.47	2,045.17	2,061.06	2,075.05	2,094.91	2,173.25	2,129.19	2,122.65	2,144.89
5.00°	1,780.00	1,762.67	1,770.09	1,793.99	1,824.91	1,847.54	1,819.78	1,812.30	1,769.71	1,792.41	1,794.16	1,825.36	1,840.83	1,824.67	1,832.21	1,795.28	1,780.00
7.50°	1,419.31	1,413.09	1,420.92	1,440.50	1,474.37	1,471.29	1,480.53	1,429.32	1,389.23	1,405.13	1,403.77	1,433.31	1,450.63	1,477.00	1,455.28	1,457.64	1,419.31
10.00°	1,084.49	1,043.28	1,055.74	1,064.30	1,093.11	1,132.79	1,128.07	1,106.61	1,085.58	1,070.40	1,076.22	1,088.74	1,108.61	1,133.35	1,127.46	1,103.54	1,084.49
12.50°	773.36	775.81	778.16	797.13	813.13	799.63	822.30	813.45	788.69	809.54	805.21	819.28	825.39	819.42	814.93	809.53	773.36
15.00°	589.73	561.01	571.37	578.43	593.80	609.39	617.17	611.49	610.76	601.13	601.39	600.95	606.48	624.33	617.04	603.87	589.73
17.50°	424.45	424.39	427.08	440.59	450.10	436.27	448.81	450.17	440.44	460.47	453.18	457.91	459.76	452.63	451.54	446.10	424.45
20.00°	344.24	324.39	329.90	335.87	347.82	349.79	353.72	352.07	359.61	356.05	352.64	349.46	353.49	363.52	357.55	352.95	344.24
22.50°	269.50	258.76	259.48	267.32	275.16	271.47	274.86	279.91	282.80	294.67	288.90	287.76	289.59	283.95	281.39	277.96	269.50
25.00°	216.93	207.97	207.59	212.15	217.53	219.64	225.48	228.28	237.77	241.15	236.87	234.05	234.75	234.36	226.96	225.80	216.93
27.50°	164.72	157.12	158.12	161.64	166.03	169.67	177.10	184.25	193.46	196.33	193.15	190.26	188.63	184.67	177.37	173.43	164.72
30.00°	113.84	106.25	110.20	112.69	117.37	124.15	130.40	138.45	145.11	149.86	147.53	145.37	142.59	134.68	129.00	120.82	113.84
32.50°	69.20	69.98	72.99	76.10	79.81	78.85	89.20	92.05	96.98	101.70	100.66	99.22	96.61	89.63	80.86	78.47	69.20
35.00°	44.74	38.96	42.10	43.23	46.91	52.78	56.51	59.94	63.39	64.33	65.19	63.34	61.99	57.32	53.25	47.06	44.74
37.50°	24.92	24.96	25.59	27.70	29.42	27.26	32.66	32.17	30.70	37.08	36.61	38.40	36.78	31.75	29.01	27.19	24.92
40.00°	18.50	16.44	16.83	16.81	17.87	19.72	21.34	20.71	21.67	21.07	21.72	22.14	21.81	21.88	20.00	18.81	18.50
42.50°	13.09	12.92	12.53	13.04	13.36	12.36	13.78	13.62	13.03	14.91	14.54	14.40	14.64	14.40	13.13	13.68	13.09
45.00°	10.40	10.83	10.45	10.98	11.29	10.99	11.11	11.21	11.00	11.43	11.15	10.59	11.03	12.05	11.00	11.54	10.40
47.50°	8.58	9.76	9.52	10.54	10.13	9.64	9.54	9.90	9.12	10.11	9.70	10.39	9.90	10.24	9.41	10.15	8.58
50.00°	8.85	8.96	9.11	10.43	9.25	9.07	9.30	9.57	9.14	9.45	9.22	10.22	9.36	9.46	9.43	9.41	8.85
52.50°	8.96	8.65	8.74	9.52	8.55	8.53	8.88	9.45	9.14	9.31	9.19	10.07	9.22	8.92	9.59	9.15	8.96
55.00°	8.69	8.47	8.38	8.46	7.90	8.50	8.25	9.13	8.91	9.12	9.24	9.82	8.93	8.84	9.17	9.28	8.69
57.50°	8.15	8.15	7.78	7.98	7.36	8.40	7.72	8.77	8.64	8.92	9.31	9.49	8.56	8.55	8.71	8.64	8.15
60.00°	7.06	7.80	7.09	7.58	6.86	7.42	7.28	7.86	8.09	8.21	8.83	8.84	8.35	7.92	7.90	7.43	7.06
62.50°	5.99	6.72	5.83	6.58	6.31	6.46	6.79	6.86	7.49	7.17	8.14	7.95	8.22	7.34	7.07	6.57	5.99
65.00°	4.95	5.52	4.38	5.51	5.75	5.69	6.24	6.46	6.61	6.65	7.25	7.20	7.47	6.81	6.00	5.96	4.95
67.50°	4.09	4.43	3.80	4.70	4.87	4.92	5.37	6.13	5.68	6.44	6.30	6.54	6.39	6.16	4.96	5.08	4.09
70.00°	3.44	3.41	3.42	3.91	3.96	4.10	4.27	4.88	4.52	5.44	5.70	5.85	5.59	5.35	4.52	4.06	3.44
72.50°	2.91	2.76	2.75	3.15	3.09	3.35	3.63	3.70	3.77	4.13	5.15	5.14	4.88	4.62	3.98	3.43	2.91
75.00°	2.41	1.98	2.13	2.41	2.28	2.70	3.05	2.86	3.58	3.55	4.07	4.15	4.00	3.86	3.23	2.73	2.41
77.50°	1.65	1.16	1.55	1.71	1.53	1.92	2.24	2.18	2.84	2.74	3.06	3.11	3.10	2.18	2.38	1.66	1.65
80.00°	0.90	0.77	0.88	1.14	0.81	1.09	1.58	1.54	1.90	1.47	2.12	2.04	2.19	1.46	1.47	0.93	0.90
82.50°	0.44	0.47	0.48	0.58	0.48	0.47	0.89	0.80	0.94	0.95	1.13	1.05	1.07	1.07	0.66	0.59	0.44
85.00°	0.41	0.45	0.49	0.57	0.44	0.49	0.46	0.55	0.49	0.51	0.58	0.59	0.56	0.60	0.50	0.52	0.41
87.50°	0.40	0.51	0.47	0.59	0.41	0.46	0.45	0.47	0.56	0.37	0.63	0.44	0.48	0.67	0.38	0.46	0.40
90.00°	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.48	0.44	0.57	0.42	0.49	0.47	0.58	0.52	0.00	0.00
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	578	578	578	578	565	565	565	565	539	539	539	516	516	516	495	495	485
	1	555	543	533	523	543	533	523	515	513	506	499	495	490	484	479	474	465
	2	533	513	496	482	523	505	489	477	489	477	466	475	465	456	462	454	445
	3	512	486	466	450	503	480	461	447	468	452	440	456	443	433	446	435	427
	4	493	463	441	424	485	458	438	422	448	431	417	439	424	412	430	418	410
	5	476	443	420	403	469	438	417	401	430	412	398	423	407	394	416	402	395
	6	459	424	401	384	453	421	399	383	414	395	381	408	391	378	402	387	381
	7	444	408	385	368	438	405	383	367	399	380	366	394	377	364	389	374	368
	8	430	393	370	354	424	390	369	353	386	366	352	381	364	351	377	361	356
	9	416	379	357	341	412	377	356	341	373	354	340	369	352	339	366	350	344
	10	404	367	345	330	399	365	344	329	361	342	329	358	340	328	355	339	334

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	72.9 fc	1.9 ft
6.5 ft	52.2 fc	2.3 ft
7.5 ft	39.2 fc	2.6 ft
8.0 ft	34.4 fc	2.8 ft
10.0 ft	22.0 fc	3.5 ft
12.0 ft	15.3 fc	4.2 ft
14.0 ft	11.2 fc	4.9 ft
16.0 ft	8.6 fc	5.6 ft
20.0 ft	5.5 fc	7.0 ft
24.0 ft	3.8 fc	8.3 ft
28.0 ft	2.8 fc	9.7 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	624,296	624,296	624,296
45.00°	4,164	4,186	4,519
55.00°	4,289	4,136	3,898
65.00°	3,319	2,932	3,849
75.00°	2,633	2,328	2,493
85.00°	1,333	1,601	1,419

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	9.5	10.4	9.8	10.7	11.1	9.8	10.8	10.2	11.1	11.4
	3H	10.6	11.4	11.0	11.8	12.1	11.5	12.4	11.9	12.7	13.1
	4H	11.0	11.7	11.4	12.1	12.5	12.1	12.9	12.5	13.3	13.6
	6H	11.1	11.8	11.5	12.2	12.6	12.4	13.1	12.8	13.5	13.9
	8H	11.0	11.7	11.5	12.1	12.5	12.5	13.1	12.9	13.5	13.9
	12H	11.0	11.7	11.5	12.0	12.5	12.4	13.1	12.9	13.5	13.9
4H	2H	9.8	10.6	10.2	10.9	11.3	10.4	11.2	10.8	11.5	11.9
	3H	11.1	11.8	11.5	12.2	12.6	12.3	12.9	12.7	13.3	13.8
	4H	11.6	12.2	12.0	12.6	13.0	13.0	13.6	13.4	14.0	14.4
	6H	11.7	12.2	12.2	12.7	13.2	13.4	13.9	13.9	14.3	14.8
	8H	11.7	12.2	12.2	12.6	13.1	13.4	13.9	13.9	14.3	14.8
	12H	11.7	12.1	12.2	12.6	13.1	13.4	13.8	13.9	14.3	14.8
8H	4H	11.7	12.2	12.2	12.7	13.1	13.2	13.7	13.7	14.1	14.6
	6H	12.0	12.3	12.5	12.8	13.3	13.7	14.0	14.2	14.5	15.0
	8H	12.0	12.3	12.5	12.8	13.3	13.7	14.1	14.3	14.6	15.1
	12H	12.0	12.3	12.5	12.8	13.3	13.8	14.0	14.3	14.5	15.1
12H	4H	11.7	12.1	12.2	12.6	13.1	13.2	13.6	13.7	14.1	14.5
	6H	11.9	12.3	12.5	12.7	13.3	13.7	14.0	14.2	14.5	15.0
	8H	12.0	12.2	12.5	12.7	13.3	13.8	14.0	14.3	14.5	15.1

Corrected UGR values based on total output lumens

SHR = 1.0