

Indoor Distribution Test Report

Spectrum Lighting Inc.

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Spectrum Lighting Photometric Lab

Luminaire

IF03RMx xx DWDD1014 DLFLGPMW

Nom 3" diam Infinium, dim to warm 10L emitter - Flood optic, No lens

Test Number

SP-00942_3_M-10L

Test Date

5/1/2019

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	647
Efficacy	57.26 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

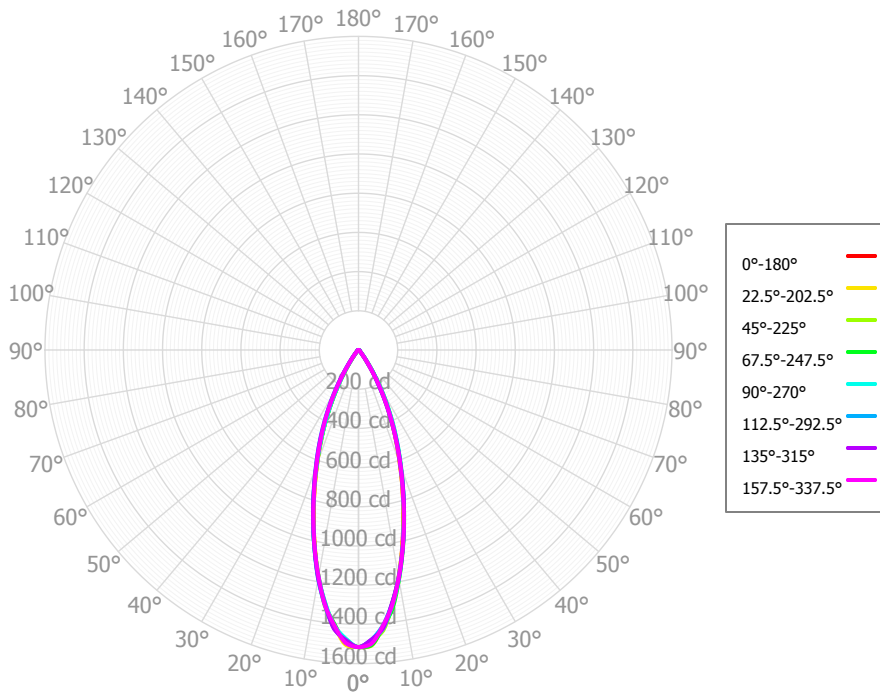
Full Beam Angle

0° - 180°	35°
90° - 270°	35°

IES File Header Contents

Keyword	Value
TEST	SP-00942_3_M-10L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	5/1/2019
ISSUEDATE	11/14/2019
LUMCAT	IF03RMx xx DWDD1014 DLFLGPMW
LUMINAIRE	Nom 3" diam Infinium, dim to warm 10L 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°	129.10	19.95%	90.00° - 100.00°	0.04	0.01%
10.00° - 20.00°	244.36	37.76%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	182.20	28.16%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	59.46	9.19%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	12.87	1.99%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	7.95	1.23%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	6.57	1.02%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	3.65	0.56%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	0.85	0.13%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	647.01	99.99%	0.00° - 180.00°	647.06	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°	1,516.03	1,516.03	1,516.03	1,516.03	1,516.03	1,516.03	1,516.03	1,516.03	1,516.03	1,516.03	1,516.03	1,516.03	1,516.03	1,516.03	1,516.03	1,516.03	1,516.03
2.50°	1,484.73	1,510.00	1,486.98	1,508.33	1,483.14	1,486.64	1,481.78	1,497.08	1,482.56	1,505.52	1,479.49	1,495.22	1,474.97	1,481.60	1,480.45	1,500.86	1,484.73
5.00°	1,430.48	1,418.57	1,437.94	1,421.12	1,428.97	1,424.29	1,429.17	1,410.72	1,426.14	1,412.29	1,425.17	1,404.74	1,413.89	1,414.11	1,427.62	1,414.77	1,430.48
7.50°	1,307.71	1,322.41	1,316.44	1,330.93	1,313.13	1,314.06	1,307.35	1,313.61	1,306.36	1,316.40	1,304.16	1,311.83	1,301.76	1,307.74	1,306.06	1,316.11	1,307.71
10.00°	1,179.64	1,177.43	1,190.17	1,187.84	1,187.09	1,185.95	1,182.75	1,174.36	1,181.18	1,173.60	1,179.47	1,174.05	1,175.71	1,178.20	1,183.26	1,180.08	1,179.64
12.50°	1,030.58	1,032.37	1,038.97	1,044.54	1,039.24	1,038.33	1,036.51	1,033.86	1,030.79	1,030.73	1,035.39	1,036.01	1,037.11	1,039.07	1,040.07	1,039.98	1,030.58
15.00°	880.81	886.73	890.73	898.95	895.44	896.09	892.50	889.45	883.39	886.62	891.00	895.41	895.82	895.09	897.26	895.27	880.81
17.50°	747.94	744.63	754.71	756.13	758.92	758.92	760.95	751.14	747.52	744.06	754.69	756.20	758.92	758.97	760.79	750.24	747.94
20.00°	615.73	620.67	624.06	633.50	632.09	636.37	633.40	628.67	617.46	618.41	619.44	626.65	622.79	626.33	626.33	625.30	615.73
22.50°	502.71	501.03	511.24	514.29	520.65	525.99	523.80	512.84	505.45	495.33	503.24	500.32	504.29	507.30	511.03	501.15	502.71
25.00°	391.04	399.46	403.77	413.27	415.07	422.02	416.91	411.94	397.40	390.84	388.63	391.39	387.97	393.29	398.07	398.79	391.04
27.50°	297.22	301.52	310.86	315.10	317.47	322.62	319.70	313.91	299.46	289.36	291.77	287.10	291.80	294.98	300.37	297.07	297.22
30.00°	206.13	215.72	223.66	228.70	229.39	234.34	228.13	221.33	209.20	204.31	198.62	202.14	197.20	201.40	207.47	212.05	206.13
32.50°	137.58	138.86	149.83	149.81	152.42	152.86	152.95	143.59	135.91	126.61	132.68	126.32	135.26	135.75	139.21	129.97	137.58
35.00°	74.94	86.43	89.16	96.70	94.77	97.58	90.09	89.78	78.27	80.52	73.00	80.96	74.76	76.98	78.98	84.80	74.94
37.50°	48.27	45.12	54.46	52.73	57.14	56.38	57.91	50.90	49.84	41.92	46.80	43.73	50.22	48.99	50.90	43.19	48.27
40.00°	25.25	30.02	29.63	34.36	33.27	34.72	33.00	33.26	29.24	29.03	24.39	29.49	26.45	27.03	27.69	30.03	25.25
42.50°	19.48	18.80	21.33	20.20	21.67	21.94	23.29	21.27	21.09	18.69	18.38	18.33	20.21	19.36	20.13	18.24	19.48
45.00°	14.43	15.27	15.34	15.82	15.25	16.10	15.94	16.16	15.17	15.46	13.44	14.41	14.27	13.76	14.10	14.77	14.43
47.50°	12.02	12.45	12.75	12.48	12.81	12.91	12.76	12.64	12.35	12.57	12.15	11.41	12.38	11.63	12.26	11.69	12.02
50.00°	10.04	10.80	10.88	11.27	11.20	10.94	10.46	10.80	10.34	10.53	10.89	10.22	10.57	9.84	10.51	10.40	10.04
52.50°	9.36	9.45	9.91	10.16	10.15	9.37	9.51	9.42	9.30	9.00	9.69	9.27	9.50	9.21	8.96	9.23	9.36
55.00°	8.81	8.56	9.17	9.26	9.51	8.78	8.68	8.48	8.56	8.53	8.66	8.75	8.57	8.65	7.82	8.45	8.81
57.50°	8.57	7.80	8.69	8.70	9.10	8.44	7.99	7.86	8.13	8.04	8.05	8.11	8.55	8.08	7.45	7.76	8.57
60.00°	8.11	7.21	8.10	8.64	8.86	8.21	7.56	7.50	7.77	7.54	7.39	7.30	8.31	7.50	7.04	7.29	8.11
62.50°	7.18	6.84	7.40	8.46	8.69	8.01	7.44	7.09	7.46	7.09	6.63	6.64	6.99	6.28	6.53	6.86	7.18
65.00°	6.41	6.70	6.95	8.12	8.10	7.43	6.98	6.66	7.06	6.70	5.95	6.18	5.89	5.14	5.98	6.51	6.41
67.50°	5.92	6.16	6.70	7.46	7.32	6.79	6.22	5.83	6.58	6.03	5.39	5.54	5.54	5.02	5.36	5.96	5.92
70.00°	5.28	5.27	6.25	6.49	6.25	5.64	5.40	4.81	5.54	5.11	4.76	4.74	5.03	4.76	4.80	5.04	5.28
72.50°	4.46	4.43	5.68	5.65	5.10	4.56	4.53	4.12	4.36	4.10	4.09	3.90	4.29	4.04	4.28	4.15	4.46
75.00°	3.43	3.58	4.33	4.83	3.98	3.75	3.40	3.31	3.22	3.07	3.04	3.01	3.22	3.16	3.38	3.30	3.43
77.50°	2.33	2.23	3.00	3.18	3.00	2.88	2.41	2.25	2.34	2.07	2.12	2.01	2.30	2.19	2.41	2.22	2.33
80.00°	1.30	1.29	1.91	1.96	2.07	1.88	1.54	1.46	1.67	1.57	1.36	1.44	1.76	1.46	1.48	1.33	1.30
82.50°	0.86	0.76	1.21	1.10	0.73	0.86	0.80	0.86	1.07	0.77	0.83	0.88	0.60	0.96	1.01	0.75	0.86
85.00°	0.58	0.53	0.83	0.61	0.78	0.63	0.60	0.72	0.55	0.66	0.65	0.68	0.80	0.76	0.64	0.53	0.58
87.50°	0.53	0.59	0.62	0.79	0.72	0.81	0.70	0.51	0.51	0.67	0.60	0.64	0.75	0.63	0.43	0.67	0.53
90.00°	0.49	0.62	0.76	0.78	0.69	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.49	0.67	0.49
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	770	770	770	770	752	752	752	752	719	719	719	688	688	688	660	660	647
	1	738	721	707	693	722	707	694	682	681	671	661	658	649	642	635	629	617
	2	706	678	655	635	692	667	646	628	646	629	614	627	613	601	610	599	587
	3	677	640	611	589	664	631	605	584	615	593	575	599	581	566	585	570	559
	4	649	606	575	551	638	599	570	547	585	561	541	573	552	535	561	544	534
	5	623	576	543	518	613	570	539	516	559	532	512	548	525	507	539	519	510
	6	598	548	515	491	589	543	512	489	534	506	486	525	501	483	517	496	488
	7	575	523	489	466	567	519	487	465	511	483	462	504	479	460	497	475	467
	8	553	500	467	444	546	497	465	443	490	462	441	484	458	440	478	455	448
	9	533	479	446	424	526	476	445	423	471	442	422	465	439	421	460	437	430
	10	514	460	428	406	508	457	426	406	452	424	405	448	422	404	443	420	414

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	50.1 fc	3.4 ft
6.5 ft	35.9 fc	4.1 ft
7.5 ft	27.0 fc	4.7 ft
8.0 ft	23.7 fc	5.0 ft
10.0 ft	15.2 fc	6.2 ft
12.0 ft	10.5 fc	7.5 ft
14.0 ft	7.7 fc	8.7 ft
16.0 ft	5.9 fc	10.0 ft
20.0 ft	3.8 fc	12.5 ft
24.0 ft	2.6 fc	15.0 ft
28.0 ft	1.9 fc	17.5 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	429,281	429,281	429,281
45.00°	5,778	6,142	6,108
55.00°	4,348	4,529	4,693
65.00°	4,292	4,657	5,427
75.00°	3,752	4,743	4,355
85.00°	1,897	2,706	2,530

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	8.1	9.1	8.5	9.4	9.7	8.5	9.5	8.9	9.8	10.1
	3H	10.3	11.2	10.7	11.5	11.9	10.7	11.5	11.1	11.9	12.2
	4H	11.0	11.8	11.4	12.1	12.5	11.3	12.1	11.7	12.5	12.9
	6H	11.2	11.9	11.7	12.3	12.7	11.7	12.4	12.1	12.8	13.2
	8H	11.2	11.9	11.7	12.3	12.7	11.7	12.4	12.1	12.8	13.2
	12H	11.2	11.9	11.7	12.3	12.7	11.7	12.3	12.1	12.7	13.2
4H	2H	8.8	9.6	9.2	9.9	10.3	9.1	9.9	9.5	10.2	10.6
	3H	11.2	11.8	11.6	12.2	12.6	11.4	12.0	11.8	12.4	12.8
	4H	11.9	12.5	12.3	12.9	13.3	12.1	12.7	12.5	13.1	13.6
	6H	12.2	12.7	12.7	13.1	13.6	12.5	13.0	13.0	13.5	13.9
	8H	12.2	12.7	12.7	13.1	13.6	12.6	13.0	13.0	13.5	13.9
	12H	12.2	12.6	12.7	13.1	13.6	12.6	13.0	13.1	13.5	13.9
8H	4H	12.2	12.6	12.7	13.1	13.6	12.2	12.7	12.7	13.1	13.6
	6H	12.5	12.9	13.0	13.4	13.9	12.7	13.1	13.3	13.6	14.1
	8H	12.6	12.9	13.1	13.4	13.9	12.8	13.1	13.3	13.6	14.1
	12H	12.6	12.9	13.1	13.4	14.0	12.9	13.1	13.4	13.6	14.2
12H	4H	12.2	12.5	12.6	13.0	13.5	12.2	12.6	12.7	13.1	13.6
	6H	12.5	12.8	13.1	13.3	13.9	12.7	13.0	13.3	13.5	14.1
	8H	12.6	12.9	13.1	13.4	13.9	12.8	13.1	13.3	13.6	14.2

Corrected UGR values based on total output lumens

SHR = 1.0