

Indoor Distribution Test Report

Spectrum Lighting Inc.

994 Jefferson Street
Fall River, MA 02721
+1.508.678.2303

Spectrum Lighting Photometric Lab

Luminaire

IF03SMx xx DWDD1015 DLWFGPMW
Nom 3" Infinium Square Downlight, 15L dim to warm 27HK emitter

Test Number

SP-00944_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	15.2 W
-------------	--------

Lumen Output

Output Lumens	805
Efficacy	52.97 lm/W

Luminous Dimensions

0° - 180° Size	0.16
90° - 270° Size	0.16
Height	0

Spacing Criterion

Two luminaires, plane 0°	0.91
Two luminaires, plane 90°	0.9
Four luminaires	0.89

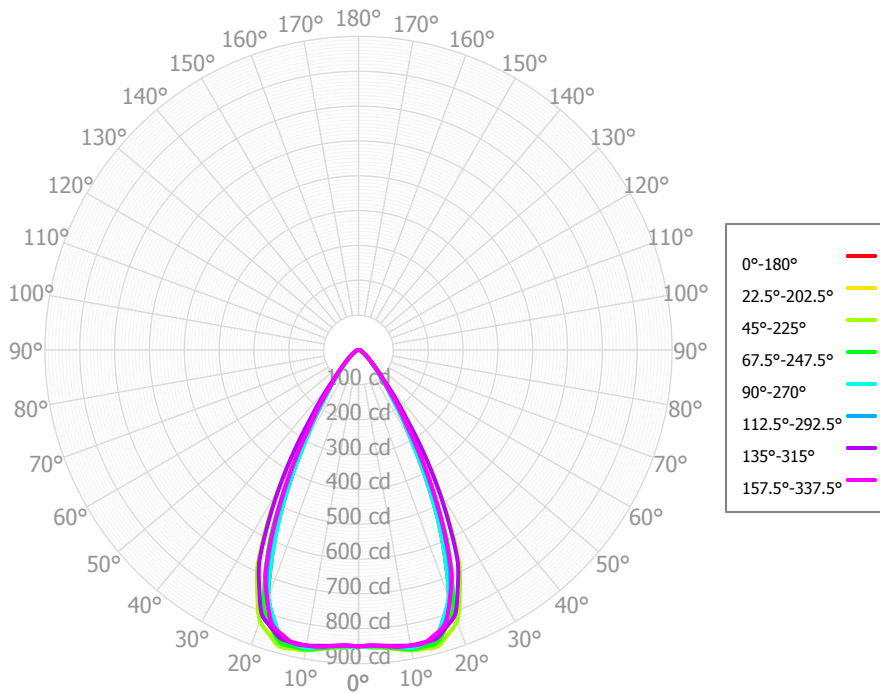
Full Beam Angle

0° - 180°	54°
90° - 270°	54°

IES File Header Contents

Keyword	Value
TEST	SP-00944_M-15L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
TESTDATE	11/6/2019
ISSUEDATE	11/14/2019
LUMCAT	IF03SMx xx DWDD1015 DLWFGPMW
LUMINAIRE	Nom 3" Infinium Square Downlight, 15L dim to warm 27HK emitter
OTHER	Beam angle: 53.6 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°	83.39	10.36%	90.00° - 100.00°	0.08	0.01%
10.00° - 20.00°	238.11	29.57%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	266.34	33.08%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	129.96	16.14%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	48.64	6.04%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	21.63	2.69%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	10.29	1.28%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	5.06	0.63%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.62	0.20%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	805.05	99.99%	0.00° - 180.00°	805.13	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°	850.48	850.48	850.48	850.48	850.48	850.48	850.48	850.48	850.48	850.48	850.48	850.48	850.48	850.48	850.48	850.48	850.48
2.50°	853.92	853.36	855.23	852.30	852.46	850.78	848.63	848.95	853.92	853.36	855.23	852.30	852.46	850.78	848.63	848.95	853.92
5.00°	856.60	858.45	857.95	856.81	853.94	852.68	852.27	853.54	856.60	858.45	857.95	856.81	853.94	852.68	852.27	853.54	856.60
7.50°	863.01	866.62	866.42	864.36	860.25	858.40	856.58	859.67	863.01	866.62	866.42	864.36	860.25	858.40	856.58	859.67	863.01
10.00°	869.73	872.33	875.85	872.74	868.47	862.16	860.99	861.50	869.73	872.33	875.85	872.74	868.47	862.16	860.99	861.50	869.73
12.50°	863.85	876.85	878.49	872.05	863.30	862.82	859.97	862.21	863.85	876.85	878.49	872.05	863.30	862.82	859.97	862.21	863.85
15.00°	856.68	861.43	880.46	869.56	854.09	850.86	858.43	846.02	856.68	861.43	880.46	869.56	854.09	850.86	858.43	846.02	856.68
17.50°	809.84	838.59	855.02	833.89	809.16	822.73	834.76	826.78	809.84	838.59	855.02	833.89	809.16	822.73	834.76	826.78	809.84
20.00°	758.50	775.60	828.16	794.00	756.10	768.33	809.82	765.23	758.50	775.60	828.16	794.00	756.10	768.33	809.82	765.23	758.50
22.50°	651.53	700.90	759.06	699.07	651.57	685.91	743.91	698.97	651.53	700.90	759.06	699.07	651.57	685.91	743.91	698.97	651.53
25.00°	543.12	589.69	687.19	600.61	539.16	583.41	675.07	588.85	543.12	589.69	687.19	600.61	539.16	583.41	675.07	588.85	543.12
27.50°	424.29	470.84	572.72	477.23	423.79	463.56	563.81	476.20	424.29	470.84	572.72	477.23	423.79	463.56	563.81	476.20	424.29
30.00°	312.98	363.44	458.25	354.77	308.17	356.15	452.69	368.27	312.98	363.44	458.25	354.77	308.17	356.15	452.69	368.27	312.98
32.50°	237.64	257.62	343.73	264.93	235.17	257.42	342.63	262.55	237.64	257.62	343.73	264.93	235.17	257.42	342.63	262.55	237.64
35.00°	170.70	194.14	236.79	179.32	164.35	187.99	239.75	197.85	170.70	194.14	236.79	179.32	164.35	187.99	239.75	197.85	170.70
37.50°	132.59	134.09	169.85	136.11	129.01	135.42	173.71	136.52	132.59	134.09	169.85	136.11	129.01	135.42	173.71	136.52	132.59
40.00°	99.10	105.14	111.39	96.04	94.80	101.41	115.51	105.67	99.10	105.14	111.39	96.04	94.80	101.41	115.51	105.67	99.10
42.50°	78.01	77.31	84.49	75.79	75.45	75.83	85.80	77.06	78.01	77.31	84.49	75.79	75.45	75.83	85.80	77.06	78.01
45.00°	59.85	62.53	61.25	57.10	57.06	59.12	60.60	61.31	59.85	62.53	61.25	57.10	57.06	59.12	60.60	61.31	59.85
47.50°	47.79	48.20	48.13	45.11	45.52	45.52	47.71	46.91	47.79	48.20	48.13	45.11	45.52	45.52	47.71	46.91	47.79
50.00°	37.48	39.40	36.98	34.42	34.88	36.44	36.57	37.83	37.48	39.40	36.98	34.42	34.88	36.44	36.57	37.83	37.48
52.50°	30.03	31.00	30.19	27.83	28.63	28.60	29.27	29.60	30.03	31.00	30.19	27.83	28.63	28.60	29.27	29.60	30.03
55.00°	23.79	25.23	24.00	21.93	22.80	23.07	23.07	23.81	23.79	25.23	24.00	21.93	22.80	23.07	23.07	23.81	23.79
57.50°	19.19	19.86	18.87	17.76	18.46	17.98	18.77	18.74	19.19	19.86	18.87	17.76	18.46	17.98	18.77	18.74	19.19
60.00°	15.43	16.32	14.74	14.14	14.58	14.65	15.03	15.33	15.43	16.32	14.74	14.14	14.58	14.65	15.03	15.33	15.43
62.50°	12.61	13.12	12.04	11.57	11.94	11.53	12.08	12.43	12.61	13.12	12.04	11.57	11.94	11.53	12.08	12.43	12.61
65.00°	10.49	11.05	9.73	9.46	9.64	9.88	9.87	10.47	10.49	11.05	9.73	9.46	9.64	9.88	9.87	10.47	10.49
67.50°	9.00	9.06	7.85	8.00	8.04	8.35	8.45	8.84	9.00	9.06	7.85	8.00	8.04	8.35	8.45	8.84	9.00
70.00°	7.41	7.24	6.70	6.80	6.59	7.05	6.95	7.60	7.41	7.24	6.70	6.80	6.59	7.05	6.95	7.60	7.41
72.50°	5.77	6.08	5.95	5.79	5.28	5.80	5.43	6.27	5.77	6.08	5.95	5.79	5.28	5.80	5.43	6.27	5.77
75.00°	4.68	5.27	5.01	4.39	4.17	4.65	5.09	4.93	4.68	5.27	5.01	4.39	4.17	4.65	5.09	4.93	4.68
77.50°	3.71	3.72	4.07	3.28	3.18	3.83	4.31	3.68	3.71	3.72	4.07	3.28	3.18	3.83	4.31	3.68	3.71
80.00°	2.86	2.82	3.08	2.68	2.34	2.90	3.07	2.84	2.86	2.82	3.08	2.68	2.34	2.90	3.07	2.84	2.86
82.50°	2.03	1.94	1.94	1.85	1.87	1.92	1.77	1.96	2.03	1.94	1.94	1.85	1.87	1.92	1.77	1.96	2.03
85.00°	1.26	1.36	1.27	1.43	0.98	1.36	1.33	1.17	1.26	1.36	1.27	1.43	0.98	1.36	1.33	1.17	1.26
87.50°	1.12	1.11	1.03	1.03	0.99	1.15	1.22	1.10	1.12	1.11	1.03	1.03	0.99	1.15	1.22	1.10	1.12
90.00°	0.51	0.65	0.54	0.52	0.76	0.53	0.44	0.57	0.51	0.65	0.54	0.52	0.76	0.53	0.44	0.57	0.51
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	958	958	958	958	936	936	936	936	895	895	895	856	856	856	821	821	805
	1	912	889	868	849	892	871	853	836	839	824	810	809	797	786	781	772	756
	2	865	825	791	763	847	811	781	755	785	760	738	761	740	722	738	722	708
	3	821	768	727	694	805	757	719	689	735	704	677	716	689	667	697	675	662
	4	779	717	672	637	764	708	666	633	690	654	626	674	643	618	659	633	621
	5	740	671	624	588	726	664	619	586	649	610	580	636	602	575	623	594	583
	6	703	630	581	547	691	624	578	545	612	571	541	600	564	537	590	558	548
	7	668	593	544	510	658	588	541	509	577	536	506	568	531	503	559	526	517
	8	636	559	511	478	627	555	509	476	546	504	474	538	500	472	530	496	488
	9	607	529	481	449	598	525	479	448	517	475	446	510	472	445	503	469	461
	10	579	501	454	423	571	497	452	422	491	449	421	484	447	420	479	444	437

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	28.1 fc	5.6 ft
6.5 ft	20.1 fc	6.7 ft
7.5 ft	15.1 fc	7.7 ft
8.0 ft	13.3 fc	8.2 ft
10.0 ft	8.5 fc	10.3 ft
12.0 ft	5.9 fc	12.3 ft
14.0 ft	4.3 fc	14.4 ft
16.0 ft	3.3 fc	16.4 ft
20.0 ft	2.1 fc	20.5 ft
24.0 ft	1.5 fc	24.6 ft
28.0 ft	1.1 fc	28.7 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	357,596	357,596	357,596
45.00°	35,586	36,418	33,928
55.00°	17,436	17,597	16,717
65.00°	10,436	9,679	9,590
75.00°	7,598	8,137	6,780
85.00°	6,079	6,135	4,751

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	15.6	16.6	16.0	16.9	17.3	15.1	16.1	15.5	16.5	16.8
	3H	16.5	17.4	16.9	17.7	18.1	15.9	16.9	16.3	17.2	17.6
	4H	16.8	17.6	17.2	18.0	18.4	16.2	17.1	16.6	17.4	17.8
	6H	17.0	17.8	17.4	18.1	18.5	16.4	17.2	16.8	17.5	17.9
	8H	17.1	17.8	17.5	18.2	18.6	16.5	17.2	16.9	17.6	18.0
	12H	17.1	17.8	17.5	18.2	18.6	16.5	17.2	16.9	17.6	18.0
4H	2H	15.7	16.6	16.1	16.9	17.3	15.3	16.1	15.7	16.5	16.9
	3H	16.8	17.5	17.2	17.9	18.3	16.4	17.0	16.8	17.4	17.9
	4H	17.3	17.9	17.7	18.3	18.7	16.7	17.4	17.2	17.8	18.2
	6H	17.6	18.1	18.0	18.5	19.0	17.0	17.6	17.5	18.0	18.5
	8H	17.7	18.1	18.1	18.6	19.1	17.1	17.6	17.6	18.1	18.5
	12H	17.7	18.1	18.2	18.6	19.1	17.2	17.6	17.7	18.1	18.6
8H	4H	17.4	17.8	17.8	18.3	18.8	16.9	17.4	17.4	17.8	18.3
	6H	17.8	18.1	18.3	18.7	19.1	17.3	17.7	17.8	18.2	18.7
	8H	17.9	18.3	18.4	18.8	19.3	17.4	17.8	18.0	18.3	18.8
	12H	18.0	18.3	18.6	18.8	19.4	17.6	17.9	18.1	18.4	18.9
12H	4H	17.3	17.7	17.8	18.2	18.7	16.9	17.3	17.4	17.8	18.3
	6H	17.8	18.1	18.3	18.6	19.1	17.3	17.6	17.8	18.1	18.7
	8H	17.9	18.2	18.5	18.7	19.3	17.5	17.8	18.0	18.3	18.9

Corrected UGR values based on total output lumens

SHR = 1.0