

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 835 015 DLNFGP MW
Nom 3" Square Infinium recessed downlight

Test Number

SP-00763_2_M-015L

Test Date

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

Summary of Results

Power

Input Watts	12.2 W
-------------	--------

Lumen Output

Output Lumens	724
Efficacy	59.36 lm/W

Luminous Dimensions

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

Spacing Criterion

Two luminaires, plane 0°	0.51
Two luminaires, plane 90°	0.52
Four luminaires	0.57

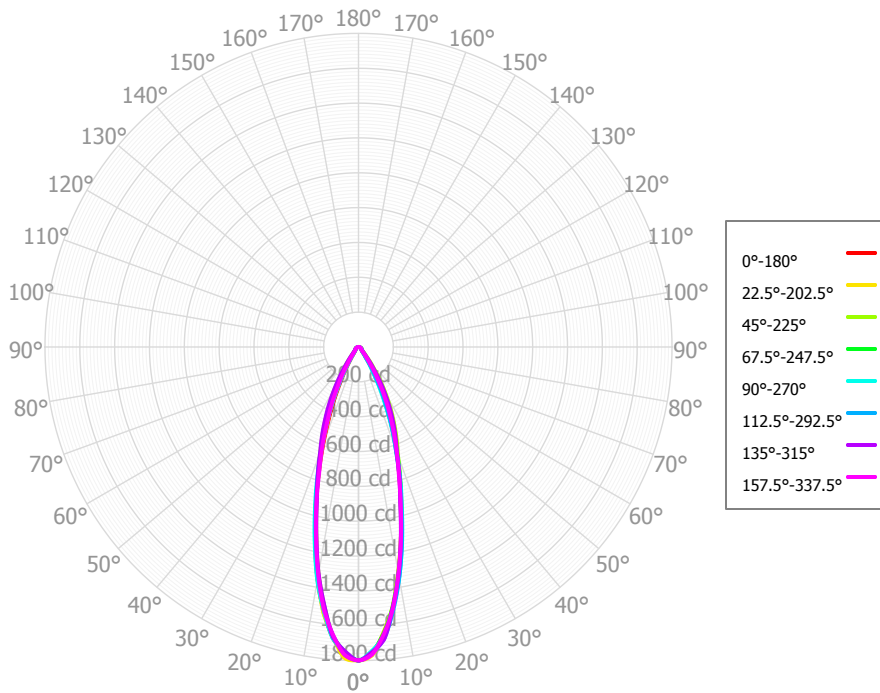
Full Beam Angle

0° - 180°	31°
90° - 270°	32°

IES File Header Contents

Keyword	Value
TEST	SP-00763_2_M-015L
TESTLAB	Spectrum Lighting Photometric Lab, VLS-245-981
MANUFAC	Spectrum Lighting
ISSUEDATE	2/11/2019
UPDATE	2/28/2019
LUMCAT	IF03SMx xx 835 015 DLNFGP MW
LUMINAIRE	Nom 3" Square Infinium recessed downlight
OTHER	Beam Angle: 31 degrees
OTHER	Narrow Flood optic, Solite Lens
OTHER	Aluminum bezel contains lens
LAMPCAT	N/A
LAMP	N/A, CRI: 80, Philips
OTHER	CCT Multiplier: 40K x 1.03
OTHER	Total luminaire wattage is approximate
OTHER	This report prepared by Spectrum Lighting, scaled from 20L

Candela Polar Plot



Zonal Lumen Summary

Zone	Lumens	% Fixture	Zone	Lumens	% Fixture
0.00° - 10.00°	149.51	20.65%	90.00° - 100.00°	0.06	0.01%
10.00° - 20.00°	259.57	35.84%	100.00° - 110.00°	0.00	0.00%
20.00° - 30.00°	182.46	25.20%	100.00° - 120.00°	0.00	0.00%
30.00° - 40.00°	67.03	9.26%	120.00° - 130.00°	0.00	0.00%
40.00° - 50.00°	23.01	3.18%	130.00° - 140.00°	0.00	0.00%
50.00° - 60.00°	18.04	2.49%	140.00° - 150.00°	0.00	0.00%
60.00° - 70.00°	14.84	2.05%	150.00° - 160.00°	0.00	0.00%
70.00° - 80.00°	7.88	1.09%	160.00° - 170.00°	0.00	0.00%
80.00° - 90.00°	1.76	0.24%	170.00° - 180.00°	0.00	0.00%
0.00° - 90.00°	724.12	99.99%	0.00° - 180.00°	724.18	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°	1,799.05	1,799.05	1,799.05	1,799.05	1,799.05	1,799.05	1,799.05	1,799.05	1,799.05	1,799.05	1,799.05	1,799.05	1,799.05	1,799.05	1,799.05	1,799.05	1,799.05
2.50°	1,755.42	1,772.60	1,750.93	1,758.37	1,747.51	1,754.14	1,750.31	1,771.92	1,762.33	1,788.60	1,754.12	1,769.08	1,754.03	1,759.96	1,754.72	1,768.05	1,755.42
5.00°	1,663.88	1,645.05	1,664.79	1,651.69	1,669.47	1,668.93	1,673.36	1,661.68	1,679.39	1,668.70	1,668.91	1,667.71	1,681.19	1,681.08	1,685.34	1,656.32	1,663.88
7.50°	1,510.42	1,507.14	1,501.27	1,508.83	1,512.58	1,508.61	1,499.50	1,520.54	1,529.72	1,541.19	1,502.30	1,522.80	1,527.42	1,524.65	1,506.74	1,514.89	1,510.42
10.00°	1,330.79	1,314.23	1,316.24	1,320.69	1,344.13	1,332.85	1,320.82	1,328.92	1,355.34	1,341.34	1,321.92	1,337.47	1,360.67	1,345.90	1,325.75	1,318.95	1,330.79
12.50°	1,141.96	1,124.06	1,126.09	1,133.72	1,153.54	1,130.83	1,117.00	1,124.22	1,150.01	1,140.95	1,117.52	1,135.04	1,159.03	1,148.51	1,122.97	1,125.41	1,141.96
15.00°	950.14	944.42	934.90	947.95	961.13	943.54	925.17	934.89	951.25	948.10	932.03	947.22	964.87	947.15	924.92	935.51	950.14
17.50°	789.43	777.31	794.84	788.17	795.66	776.45	777.85	748.37	759.36	759.21	773.48	764.34	786.66	783.95	780.01	772.11	789.43
20.00°	636.39	646.31	661.64	649.91	631.42	630.09	642.88	607.81	591.87	611.55	639.53	620.85	621.66	626.34	642.60	641.33	636.39
22.50°	507.94	523.50	570.03	529.20	495.11	507.15	543.75	472.53	445.20	469.40	534.04	487.30	479.07	505.37	554.04	524.70	507.94
25.00°	383.82	419.30	481.74	420.63	361.14	393.49	447.25	367.44	323.77	362.45	434.87	378.98	351.32	387.44	465.87	422.26	383.82
27.50°	283.62	321.59	397.30	321.50	258.20	288.50	356.68	264.23	219.80	261.11	341.74	275.11	244.20	291.23	379.40	327.67	283.62
30.00°	186.04	235.74	313.19	227.64	161.63	203.15	271.20	190.84	146.03	184.78	259.12	197.90	160.08	196.34	294.57	239.66	186.04
32.50°	127.94	162.43	237.10	157.82	111.08	132.68	194.80	119.32	89.61	117.27	184.77	123.83	102.31	136.40	215.30	168.49	127.94
35.00°	71.96	107.55	163.07	98.61	66.34	87.76	131.42	83.75	59.90	78.53	128.25	87.41	64.63	79.11	144.86	108.77	71.96
37.50°	52.99	68.33	115.34	66.99	50.83	58.73	87.28	50.39	42.39	47.92	83.10	53.16	45.69	56.87	97.11	71.13	52.99
40.00°	34.78	48.05	71.11	45.17	37.43	42.53	56.25	39.82	33.97	37.97	56.29	42.51	34.66	36.61	59.28	45.56	34.78
42.50°	29.46	34.99	51.62	34.69	31.64	32.81	40.95	30.31	28.79	30.16	38.99	32.22	29.71	31.07	41.46	32.92	29.46
45.00°	24.36	29.14	34.60	27.24	26.73	27.46	31.11	27.28	24.87	26.68	30.69	28.53	26.29	26.01	28.93	26.08	24.36
47.50°	21.35	25.11	29.21	24.56	24.25	23.84	26.69	24.29	21.30	23.80	26.12	24.99	23.82	23.37	25.18	22.56	21.35
50.00°	18.73	22.57	24.94	22.81	21.87	21.68	24.16	21.45	19.97	21.90	23.59	22.93	21.39	21.02	22.81	20.20	18.73
52.50°	18.49	21.36	24.64	21.67	19.72	19.97	23.19	19.20	19.08	20.51	21.71	21.09	18.98	19.73	22.28	19.54	18.49
55.00°	18.23	21.04	24.02	20.62	18.71	19.73	22.35	18.83	18.95	19.79	20.54	20.52	17.98	18.73	21.22	19.32	18.23
57.50°	17.90	20.42	22.53	20.60	19.71	19.84	21.60	18.42	18.93	18.86	19.54	19.88	17.56	18.58	19.56	18.85	17.90
60.00°	17.49	19.64	20.81	20.65	19.85	18.67	19.55	17.90	17.49	17.71	18.27	18.95	16.82	17.80	17.99	18.33	17.49
62.50°	16.86	17.81	18.59	17.69	18.75	17.31	16.80	16.91	15.94	15.97	16.95	17.64	15.98	15.66	16.49	17.01	16.86
65.00°	16.01	15.53	16.46	14.76	17.13	14.44	14.83	15.01	14.24	13.71	14.42	15.13	14.62	13.63	14.83	15.59	16.01
67.50°	14.60	13.87	14.46	13.77	14.90	11.50	13.18	12.57	12.46	11.90	11.82	12.91	13.15	11.77	13.04	13.87	14.60
70.00°	12.62	12.41	12.66	12.57	12.67	10.34	10.77	9.45	10.23	10.34	9.77	11.21	10.63	9.84	11.31	12.13	12.62
72.50°	9.82	10.61	11.09	10.39	10.44	8.88	8.35	7.27	7.74	8.57	8.16	9.33	8.34	7.82	9.60	10.35	9.82
75.00°	7.80	8.88	10.01	8.70	8.68	6.84	6.37	5.57	4.94	6.80	7.20	7.36	6.69	6.22	8.27	8.43	7.80
77.50°	6.19	7.40	8.82	7.51	6.60	4.90	4.79	4.44	3.46	5.08	5.38	5.48	5.06	4.76	6.37	6.32	6.19
80.00°	4.84	5.19	6.48	5.43	3.61	3.35	3.41	2.72	2.66	3.63	3.43	3.19	3.33	3.39	3.64	4.49	4.84
82.50°	2.93	3.20	3.96	2.73	1.79	2.17	2.19	1.61	1.74	1.70	1.86	1.56	1.64	1.80	2.41	2.79	2.93
85.00°	1.30	1.77	1.81	1.00	0.95	1.16	1.35	0.91	0.96	1.23	1.03	0.94	0.78	0.97	1.36	1.31	1.30
87.50°	0.73	0.90	0.85	0.79	0.81	0.94	1.09	0.86	0.97	0.75	1.02	0.88	0.94	0.89	0.53	1.00	0.73
90.00°	0.81	0.89	0.87	0.94	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92	1.03	0.81
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	862	862	862	862	842	842	842	842	805	805	805	770	770	770	739	739	724
	1	823	804	786	771	805	788	772	758	759	746	735	732	722	713	707	700	686
	2	786	752	724	701	770	740	714	693	716	696	678	695	678	663	675	662	649
	3	751	707	673	647	737	697	666	641	678	653	631	661	640	621	645	627	615
	4	718	668	631	603	706	660	626	599	644	615	592	630	605	585	617	596	585
	5	688	633	594	566	677	626	590	564	614	583	559	602	575	554	591	568	558
	6	660	602	563	535	650	596	560	533	586	553	529	576	548	526	567	542	533
	7	634	574	535	507	625	569	532	506	560	527	504	552	523	501	544	518	510
	8	610	548	510	483	601	544	508	482	537	504	480	530	500	478	523	497	489
	9	587	525	487	462	580	522	486	461	515	483	460	509	480	458	504	477	469
	10	566	504	467	442	559	501	466	442	496	463	441	490	461	439	485	458	452

Cone of Light

Mtg Height	Light Level	Beam Diameter
5.5 ft	59.5 fc	3.1 ft
6.5 ft	42.6 fc	3.7 ft
7.5 ft	32.0 fc	4.3 ft
8.0 ft	28.1 fc	4.5 ft
10.0 ft	18.0 fc	5.7 ft
12.0 ft	12.5 fc	6.8 ft
14.0 ft	9.2 fc	8.0 ft
16.0 ft	7.0 fc	9.1 ft
20.0 ft	4.5 fc	11.4 ft
24.0 ft	3.1 fc	13.6 ft
28.0 ft	2.3 fc	15.9 ft

Average Luminaire Luminance [cd/m²]

	0.00°	45.00°	90.00°
0.00°	756,437	756,437	756,437
45.00°	14,486	20,576	15,895
55.00°	13,364	17,610	13,715
65.00°	15,924	16,374	17,046
75.00°	12,679	16,267	14,109
85.00°	6,277	8,714	4,583

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	16.1	17.1	16.5	17.4	17.7	16.2	17.2	16.6	17.5	17.8
	3H	18.2	19.1	18.6	19.4	19.8	17.9	18.8	18.3	19.2	19.6
	4H	18.8	19.7	19.2	20.0	20.4	18.5	19.4	18.9	19.7	20.1
	6H	19.3	20.0	19.7	20.4	20.8	18.8	19.6	19.3	20.0	20.4
	8H	19.4	20.1	19.8	20.5	20.9	18.9	19.6	19.3	20.0	20.4
	12H	19.4	20.1	19.8	20.4	20.9	18.8	19.5	19.3	19.9	20.3
4H	2H	16.7	17.6	17.2	17.9	18.3	16.7	17.6	17.1	17.9	18.3
	3H	19.0	19.7	19.4	20.1	20.5	18.6	19.3	19.0	19.7	20.1
	4H	19.8	20.4	20.2	20.8	21.2	19.3	19.9	19.7	20.3	20.8
	6H	20.3	20.8	20.8	21.3	21.8	19.6	20.2	20.1	20.6	21.1
	8H	20.4	20.9	20.9	21.4	21.8	19.7	20.2	20.2	20.6	21.1
	12H	20.5	20.9	21.0	21.4	21.9	19.7	20.1	20.2	20.6	21.1
8H	4H	20.0	20.5	20.5	21.0	21.5	19.4	19.9	19.9	20.3	20.8
	6H	20.7	21.1	21.2	21.6	22.1	19.8	20.2	20.3	20.7	21.2
	8H	20.9	21.2	21.4	21.7	22.2	19.9	20.2	20.4	20.8	21.3
	12H	21.0	21.3	21.5	21.8	22.3	19.9	20.2	20.5	20.7	21.3
12H	4H	20.0	20.5	20.5	20.9	21.4	19.4	19.8	19.9	20.3	20.8
	6H	20.7	21.1	21.3	21.5	22.1	19.8	20.2	20.4	20.6	21.2
	8H	21.0	21.2	21.5	21.7	22.3	19.9	20.2	20.4	20.7	21.3

Corrected UGR values based on total output lumens

SHR = 1.0